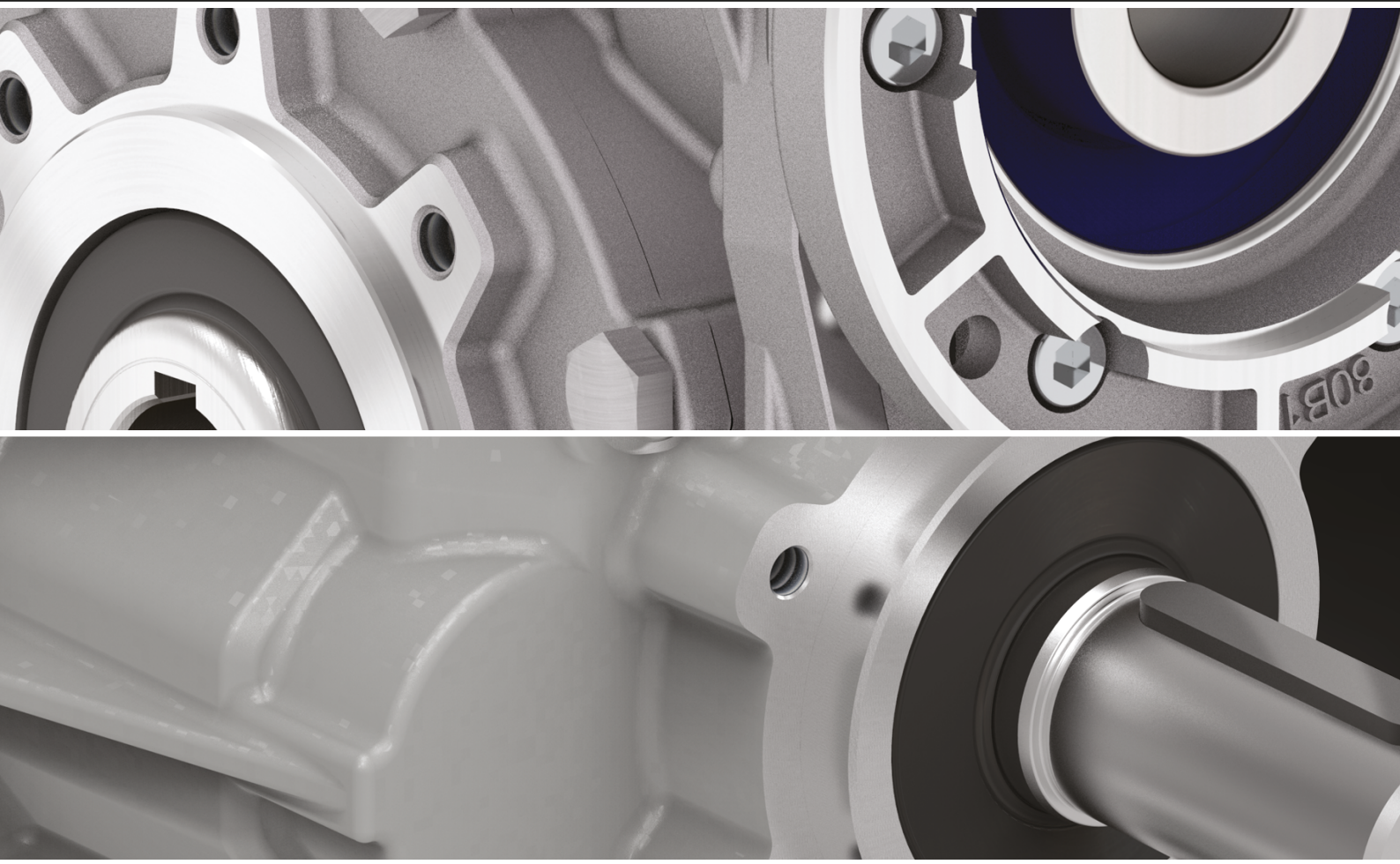


GENERAL CATALOGUE

Imperial



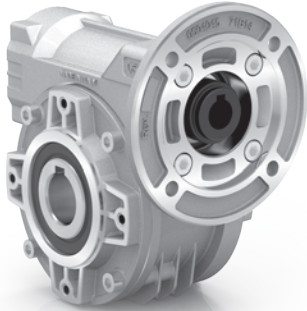
Edition 2024

HYDRO • MEC
HIGH EFFICIENCY GEARBOXES

In this catalogue

Rightangle-gear

Worm gearboxes



345÷2921lb in Paragraph **1**

M Square gear

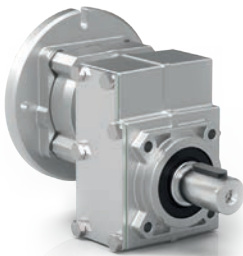
Square worm gearboxes



345÷2921lb in Paragraph **2**

One step-gear

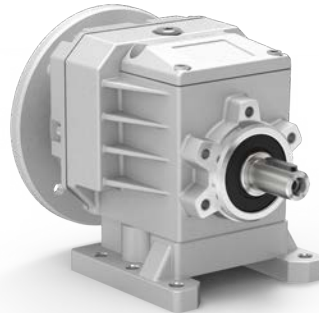
One step gearboxes



177÷970lb in Paragraph **4**

Coaxial-gear

Aluminum gearboxes



620÷4690lb in Paragraph **5**

Compact-gear

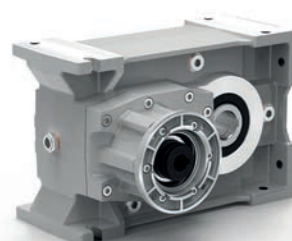
Shaft mounted gearboxes



2832÷18587lb in Paragraph **7**

Cube-gear

Parallel shaft gearboxes

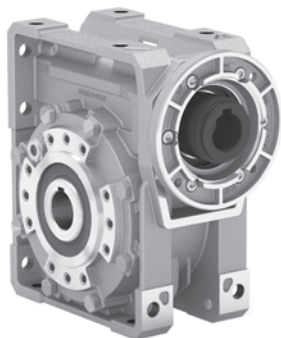


5974÷18587lb in Paragraph **8**

In this catalogue

Q Square gear

Square worm gearboxes



1240÷2924lb in Paragraph 3

Paragraph 1

Paragraph 2

Paragraph 3

Paragraph 4

Coaxial-gear

Cast iron gearboxes



5974÷40713lb in Paragraph 6

Paragraph 5

Paragraph 6

Paragraph 7

Paragraph 8

Angletech-gear

Helical bevel gearboxes



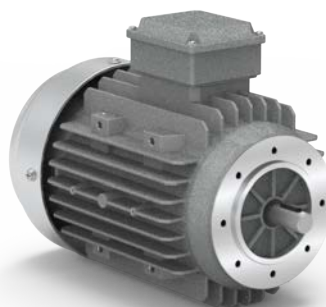
443÷8851lb in Paragraph 9

Paragraph 9

Paragraph M

Electric motors

Aluminum electric motors



Paragraph M

Worm gearboxes

A modular and compact product

Single-piece aluminum alloy housing

Is vacuum impregnated (MIL-STD 276) for protection and sealing. No secondary finish required but readily accepts paint. Combines light weight with high tensile strength. Precision machined for alignment of bearings and gearing.

Single piece alloy steel input shaft and worm shaft.

High helix angle worm is case-hardened (Rc 58-60), ground, teeth are profiled and radiused, for noise reduction and enhanced efficiency.

Flange

Fully modular to IEC and compact integrated motor. NEMA C flange.

Oversized bearings

Support positively-retained, high speed shaft for higher shock load capacity - ideal for frequent starting and reversing application. Premium, Nitrile® high temperature seals each end.

Premium, high temperature

Nitrile® output seals

Bronze alloy worm gears.

Is centrifugally cast onto an iron hub for maximum strength and superior life.

Standard hollow output shaft mounting

Reduces total drive envelope size, weight and cost. Single and double solid output shaft is available.

Impregnated and machined bearing caps

With exterior machined surfaces enable a variety of mounting accessories. Extra-deep thread engagement provided for greater support strength. Zinc plated hardware.

Oversize bearing

For radial load capability and maximum hollow output shaft diameter.

Vent Free Design.

No breather or vents to leak! Factory lubricated for life with synthetic, semi-fluid gear lubricant with an operating range of -15°C to 130°C.

oil free

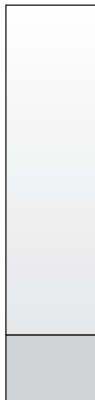
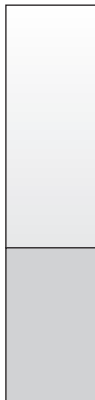


vent free



Specific type datasheet on page...

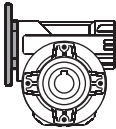
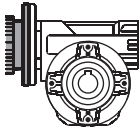
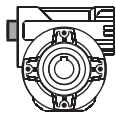
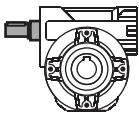
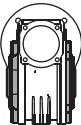
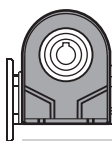
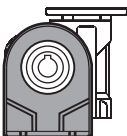
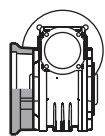
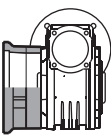
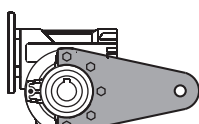
On page / A pagina / En la página

1-5	1-7	1-9	1-11
			
045 345 lb in	050 611 lb in	063 1240 lb in	085 2921lb in



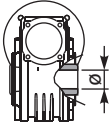
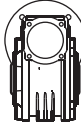
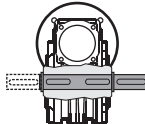
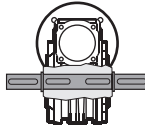
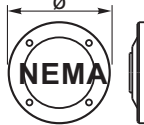
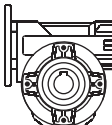
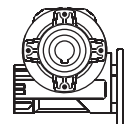
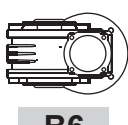
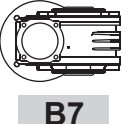
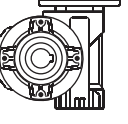
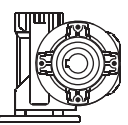
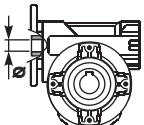
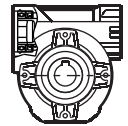
Types / tipi / Tipos ➡

1

Type - Tipo	Size - Grandezza Tamaño	Mounting - Montaggio - Tipo de montaje
P	045	PA
Worm gearboxes Riduttori a vite senza fine Reductores de corona sin fin  P  M  B  R	045 050 063 085	 FB  PB  PA  PV  FC  FL F1 F2 F3 F4  BR



On request we can deliver our products according to the ATEX
A richiesta possiamo fornire i nostri prodotti secondo le normative ATEX
A pedido, se pueden enviar nuestros productos de acuerdo con las normas ATEX.

Ratio Rapporto Relación	Hub Mozzo corona Nucleo corona	Output shaft Albero lento Eje solida	Motor size Grandezza motore Tamaño motor	Mounting position Posizione montaggio Position de montage	Input bore Foro entrata Eingangshohlwelle Trou d'entree Eje hueco de entrada	Terminal box position Posizione morsettiara Posición caja de bornes
10	U	Ø	-W	B3	UW	
See technical data table Vedi tabelle dati tecnici. Ver tabla datos técnicos	 U INCH 045 ⇒ Ø0.750" 050 ⇒ Ø1.000" 063 ⇒ Ø1.125" 085 ⇒ Ø1.500"	 Ø  S  D	 NEMA With Flange for type P -W ⇒ 56C -X ⇒ 143/5TC -Y ⇒ 182/4TC -N without flange Senza flangia For Modular Base type B 045 ⇒ Ø0.625 050 ⇒ Ø0.625 063 ⇒ Ø0.875 085 ⇒ Ø1.125 -Z For Type - R	 B3  B8  B6  B7  V5  V6	 Standard bore UW = Ø0.625" UX = Ø0.875" UY = Ø1.125" ST standard type R Tipo R standard COUPLING -W = Ø0.625" -X = Ø0.875" -Y = Ø1.125" -0 Ready for input coupling Predisposto per giunto 	With Type M specify terminal box position Con tipo M specificare posizione morsettiara  A  B STANDARD  C  D

1

POTENZA RICHIESTA / REQUIRED POWER / POTENCIA NECESARIA

Lifting / sollevamento / elevación

$$P [KW] = \frac{M [Kg] \cdot g [9.81] \cdot v [m / s]}{1000}$$

Rotation / rotazione / rotation

$$P [KW] = \frac{M [Nm] \cdot n [rpm]}{9550}$$

Linear movement / traslazione / translacion

$$P [KW] = \frac{F [N] \cdot v [m / s]}{1000}$$

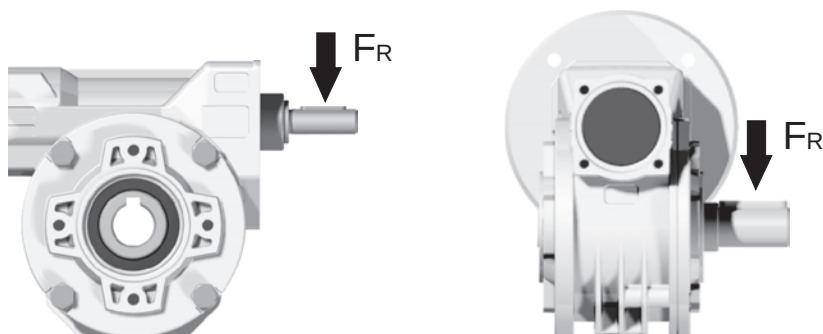
TORQUE / COPPIA / PAR

$$M [Nm] = \frac{9550 \cdot P [KW]}{n [rpm]}$$

$$M [lb in] = \frac{63030 \cdot P [HP]}{n [rpm]}$$

RADIAL LOADS / CARICHI RADIALI / CARGA RADIAL Y AXIAL

- Radial load generated by external transmissions keyed onto input and/or output shafts.
- Forza radiale generata da organi di trasmissione calettati sugli alberi di ingresso e/o uscita.
- Cargas radiales, generada por transmisiones externas, aplicadas sobre los ejes de entrada y/o salida



$F_R \text{ [N]} = \frac{M \text{ [Nm]} \cdot 2000}{d \text{ [mm]}} \cdot f_k$		$F_R \text{ [N]} = \frac{M \text{ [lb in]} \cdot 8.9}{d \text{ [in]}} \cdot f_k$	
M	Momento torcente / Output torque / Par torsion		
d	Diametro primitivo / Diam. of driving element / Diámetro primitivo		
f _k	Coefficiente di trasformazione / Factor / Coeficiente de transmisión 1.15 Ingranaggi / Gearwheels / Engranaje 1.25 Catena / Chain sprockets / Cadena 1.75 Cinghia Trapezoidale / Narrow v-belt pulley / Correa trapezoidal 2.50 Cinghia piatta / Flat-belt pulley / Correa plana		

- If your application requires higher radial loads, contact our technical office. Higher load may be possible.
- Nel caso la vostra applicazione richieda carichi radiali superiori consultare il nostro ufficio tecnico, valori maggiori possono essere accettati.
- En el caso en que una aplicación exija una carga radial superior a la especificada en el catálogo, consultar a nuestra oficinas técnica.

How to select a gearbox / Come selezionare un riduttore Cómo seleccionar un reductor

1

B Output speed
Velocità in uscita
Velocidad de salida

Nominal power
Potenza nominale
Potencia nominal

Gear size
Grandezza riduttore
Tamaño reductor

Motor power
Potenza motore
Potencia motor

A Nominal torque
Momento torcente nominale
Par de torsión nominal

Flange code
Codice flangia
Código bridas

Dynamic efficiency
Rendimento dinamico
Rendimiento dinámico

Input speed
Velocità in entrata
Velocidad de entrada

045

Rightangle - Gear 345lb in

Rating - Alluminum WORM GEARBOXES

▪ QUICK SELECTION / Selezione veloce							input speed (n _i) = 1750 min ⁻¹				
Output Speed	Ratio	Motor power	Output torque	Service factor	Nominal power	Nominal torque	Available NEMA motor flanges		Dynamic efficiency	Tooth Module	
n ₂ ⁻¹ [min ⁻¹]	i	P _{1M} [HP]	M _{2M} [lb in]	f.s.	P _{1R} [HP]	M _{2R} [lb in]	-W	-	RD	 [mm]	Ratios code
250.0	7	1	202	1.3	1.29	257			80	2.2	01
175.0	10	0.75	213	1.2	0.91	257			79	2.2	02
125.0	14	0.5	194	1.3	0.67	257			77	2.4	03

C Ratio
Rapporto
Relación

Transmitted torque
Momento torcente trasmesso
Par transmitido

Service factor
Fattore di servizio
Factor de servicio

Nominal module
Modulo nominale
Módulo nominal

Notes
Note
Notas

fs					
Type of load and starts per hour Tipo di carico e avviamenti per ora		Oper. hours per day Ore di funz. giorn.			
		<2 h	2 - 8 h	8 - 16 h	
Continuous or intermittent appl. with start / hour Applicazione cont. o interm. con n.ro operazioni/ora	≤ 10	Uniform / Uniforme	0.9	1	1.25
		Moderate / Moderato	1	1.25	1.5
		Heavy / Forte	1.25	1.5	1.75
Intermittent application with start / hour Applicazione intermittente con n.ro operazioni/ora	> 10	Uniform / Uniforme	1.25	1.5	1.75
		Moderate / Moderato	1.5	1.75	2
		Heavy / Forte	1.75	2	2.25

D	Motor flange available Flange disponibili Bridas disponibles
B)	Mounting with reduction ring Montaggio con boccia di riduzione Montaje con casquillo de reducción
C)	Motor flangeholes position/terminal box position Posizione fori flangia/basetta motore Posición agujeros brida / base motor
B)	Available without reduction bushes Disponibile anche senza boccia Disponibile tambien sin casquillo

A	Select required torque (according to service factor)	Seleziona la coppia desiderata (comprensiva del fattore di servizio)	Seleccionar el par deseado (incluyendo el factor de servicio)
B	Select ouput speed	Seleziona la velocità in uscita	Seleccionar la velocidad de salida
C	On the same line of selected geared motor, you can find the gear ratio	Sulla riga corrispondente alla motorizzazione prescelta si può rilevare il rapporto di riduzione	En la línea correspondiente al motor preseleccionado es posible encontrar la relación de reducción
D	Select motor flange available (if requested)	Scegli la flangia disponibile (se richiesta)	Seleccionar la brida disponible (sobre pedido)



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges		Dynamic efficiency	Tooth Module [mm]	Ratio code
							-W	-			
							56C	-	RD		
250.0	7	1	202	1.3	1.29	257			80	2.2	01
175.0	10	0.75	213	1.2	0.91	257			79	2.2	02
125.0	14	0.5	194	1.3	0.67	257			77	2.4	03
83.3	21	0.5	253	1.4	0.69	345			67	1.6	04
62.5	28	0.5	328	1.1	0.53	345			65	2.5	05
47.3	37	0.33	277	1.2	0.42	345			63	1.8	06
38.0	46	0.33	323	1.1	0.36	345			59	1.5	07
29.2	60	0.25	303	1.1	0.29	345			56	1.2	08
25.0	70	0.25	340	0.8	0.19	257			54	1.0	09
17.2	102	0.25*	450	<0.8	0.14	248			49	0.72	10

A) Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

* Power higher than the maximum one which can be supported by the gearbox. Select according to the torque M_{2R}
Potenza superiore a quella massima sopportabile dal riduttore. Selezionare in base al momento torcente M_{2R}

EN Unit 045 is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us.
See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore tipo 045 viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico.
Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

E El reductor tamaño 045 se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico.
Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

LUBRICATION 045 Oil Quantity 3.17 ounces

SHELL Omala S4 WE 320

ENI Telium VSF 320

For all details on lubrication and plugs check our website

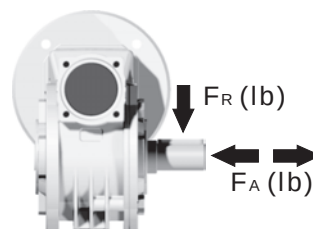
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

tab. 1

RADIAL AND AXIAL LOADS

Output shaft

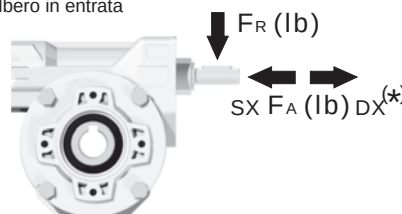
Albero di uscita



n_2 [min ⁻¹]	FA [lb]	FR [lb]
200	40	202
150	45	225
100	49	247
75	54	270
50	58	315
25	67	405
15	90	450

Input shaft

albero in entrata



n_1 [min ⁻¹]	FA [lb]	FR [lb]
1750	9	47

*Strong axial loads in the DX direction are not allowed.
Non sono consentiti forti carichi assiali con direzione DX

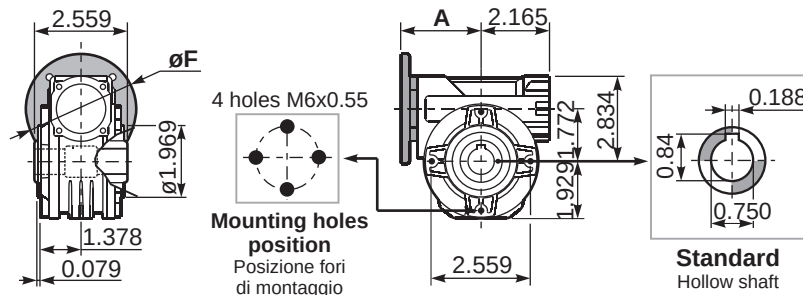
tab. 2

P045FB...

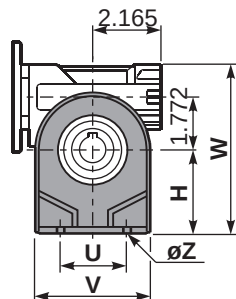
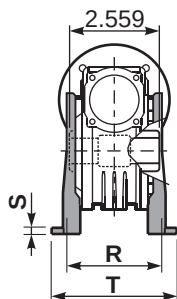
Basic wormbox
Riduttore baseGearbox
weight
peso riduttore

5.30 lb

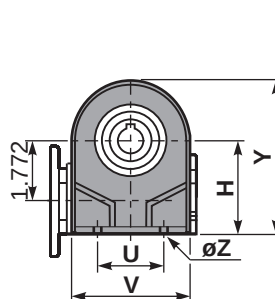
M. flanges	Kit code	øF	A
56C	KU050.4.041	6.5	3.709



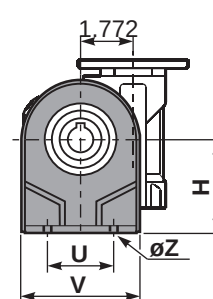
P045PA...

Feet
Piedini

P045PB...

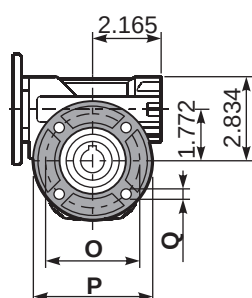
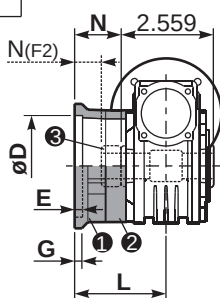
Feet
Piedini

P045PV...

Feet
Piedini

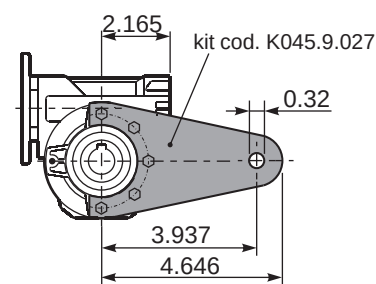
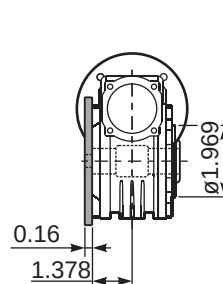
	H	R	S	T	U	V	Y	W	øZ	kit code
type B	2.835	3.189	0.118	3.937	2.047	3.858	4.764	5.669	0.41	K045.9.022
type S	2.795	3.307	0.315	3.937	2.756	3.543	4.724	5.630	0.31	KS045.9.023

P045FC...

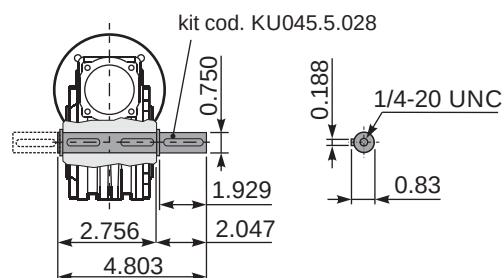
Output flange
Flangia uscita

type B	øD	E	G	L	N	O	P	Q	kit code
FC	2.3681 2.3642	0.35	0.35	2.382	1.102	3.425	4.331	0.33	1 K045.9.010 2 -
FL	2.3681 2.3642	0.35	0.35	3.563	2.283	3.425	4.331	0.33	1 K045.9.010 2 K045.0.200
type S	øD	E	G	L	N	O	P	Q	kit code
F1	3.7480 3.7461	0.16	0.43	2.894	1.614	4.528	5.512	0.35	1 KS045.9.013 2 -
F2	2.3681 2.3642	0.35	0.35	2.382	0.748	3.425	4.331	0.33	1 KS045.9.010 2 S045.0.204
F3	3.1555 3.1535	0.12	0.31	2.028	0.748	3.937	4.724	0.35	1 KS045.9.014 2 -

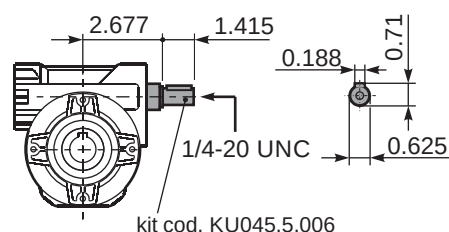
P045BR...

Reaction arm
Braccio di reazione

P045.....S...

Single Shaft
Albero lento sempliceOn request : Special Hollow Shafts
Mozzo Uscita SpecialeOn request : Double extended worm shaft
Vite bisporgente

R045FB...

Input shaft
Albero in entrata



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges		Dynamic efficiency	Tooth Module [mm]	Ratio code
							-W	-			
							56C	-	RD		
250.0	7	2	413	1.2	2.34	478			82	2.5	01
175.0	10	1.5	432	1.2	1.84	522			80	2.4	02
125.0	14	1	398	1.4	1.46	575			79	2.6	03
97.2	18	1	486	1.1	1.09	522			75	2.0	04
67.3	26	0.75	485	1.2	0.87	558			69	2.7	05
58.3	30	0.75	567	1.1	0.82	611			70	2.5	12
48.6	36	0.5	447	1.4	0.69	611			69	2.1	06
40.7	43	0.5	511	1.1	0.57	575			66	1.8	07
35.0	50	0.5	558	1.0	0.51	558			62	1.5	13
29.2	60	0.33	414	1.3	0.42	522			58	1.3	08
25.7	68	0.33	461	1.1	0.35	487			57	1.2	09
21.9	80	0.25	389	1.2	0.31	478			54	1.0	10
17.5	100	0.25	450	1.0	0.24	434			50	0.8	11

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit 050 is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us.
See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore tipo 050 viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

E El reductor tamaño 050 se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico.
Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

LUBRICATION 050 Oil Quantity 4.93 ounces

SHELL Omala S4 WE 320

ENI Telium VSF 320

For all details on lubrication and plugs check our website

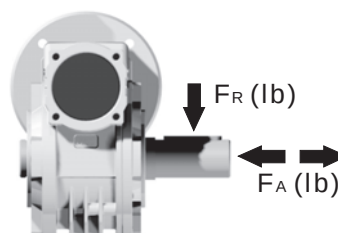
tab. 1

Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

RADIAL AND AXIAL LOADS

Output shaft

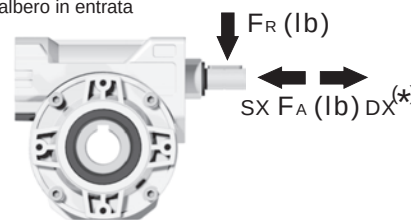
Albero di uscita



n_2 [min ⁻¹]	FA [lb]	FR [lb]
200	54	270
150	63	315
100	67	337
75	76	382
50	85	427
25	108	562
15	126	629

Input shaft

albero in entrata



n_1 [min ⁻¹]	FA [lb]	FR [lb]
1750	17	85

***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

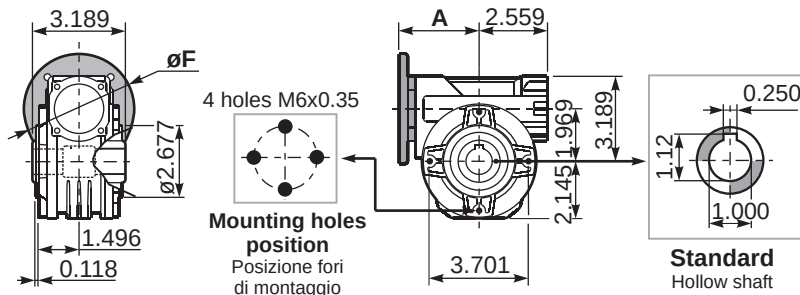
tab. 2

P050FB...

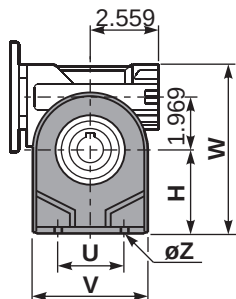
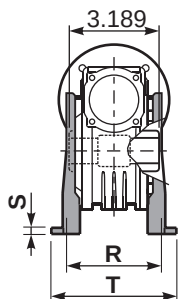
Basic wormbox
Riduttore baseGearbox
weight
peso riduttore

8.40 lb

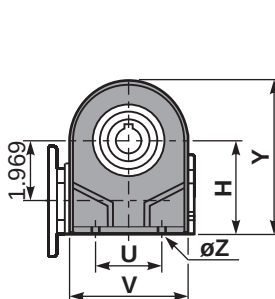
M. flanges	Kit code	øF	A
56C	KU050.4.041	6.5	3.886



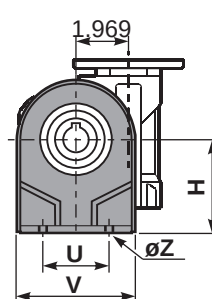
P050PA...

Feet
Piedini

P050PB...

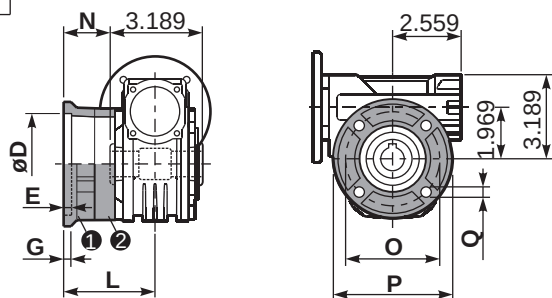
Feet
Piedini

P050PV...

Feet
Piedini

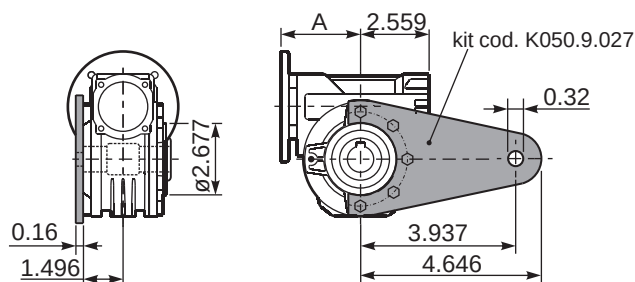
	H	R	S	T	U	V	Y	W	øZ	kit code
type B	3.228	3.878	0.138	4.843	2.480	4.449	5.453	6.417	0.41	K050.9.022
type S	3.346	3.780	0.394	4.488	3.346	4.331	5.492	6.535	0.39	KS050.9.023

P050FC...

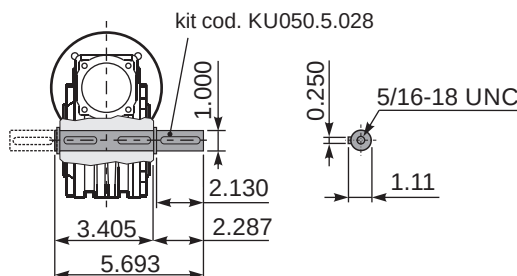
Output flange
Flangia uscita

type B	øD	E	G	L	N	O	P	Q	kit code
FC	2.7638 2.7618	0.35	0.47	3.346	1.752	3.543	4.843	0.41	1 K050.9.010 2 -
FL	2.7638 2.7618	0.35	0.47	4.508	2.913	3.543	4.843	0.41	1 K050.9.010 2 K050.0.200
type S	øD	E	G	L	N	O	P	Q	kit code
F1	4.3386 4.3366	0.16	0.43	3.287	1.693	5.118	6.299	0.39	1 KS050.9.012 2 -
F2	2.7638 2.7618	0.35	0.47	3.012	1.417	3.543	4.843	0.41	1 KS050.9.014 2 -
F3	3.7415 3.7402	0.16	0.39	2.618	1.024	4.528	5.512	0.39	1 KS050.9.013 2 -

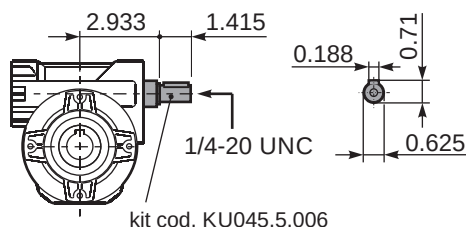
P050BR...

Reaction arm
Braccio di reazione

P050.....S...

Single Shaft
Albero lento sempliceOn request : Special Hollow Shafts
Mozzo Uscita SpecialeOn request : Double extended worm shaft
Vite bisporgente

R050FB...

Input shaft
Albero in entrata



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges		Dynamic efficiency RD	Tooth Module [mm]	Ratios code
							-W 56C	-X 143-5TC			
250.0	7	2	419	2.5	5.10	1053	B		83	3.1	01
175.0	10	2	583	1.9	3.93	1133	B		81	3.1	02
116.7	15	2	854	1.4	2.75	1159	B		79	3.1	03
92.1	19	2	1068	1.1	2.20	1159	B		78	2.6	04
72.9	24	1.5	972	1.2	1.87	1195	B		75	2.0	05
58.3	30	1.5	1199	1.0	1.56	1230	B		74	3.2	06
48.6	36	1	882	1.4	1.42	1239	B		68	2.7	07
43.8	40	1	951	1.2	1.25	1177	B		66	2.5	13
38.9	45	1	1070	1.1	1.08	1142	B		66	2.1	08
29.2	60	0.75	1005	1.1	0.83	1097	B		62	1.6	12
26.1	67	0.5	724	1.4	0.73	1044	B		60	1.5	09
21.9	80	0.5	821	1.2	0.62	1000	B		57	1.3	10
18.6	94	0.5	880	1.1	0.58	1000	B		52	1.1	11

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit 063 is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore tipo 063 viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

E El reductor tamaño 063 se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

LUBRICATION 063 Oil Quantity 14.08 ounces

SHELL Omala S4 WE 320

ENI Telium VSF 320

For all details on lubrication and plugs check our website

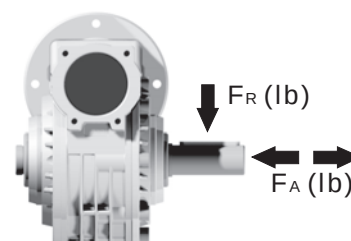
tab. 1

Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

RADIAL AND AXIAL LOADS

Output shaft

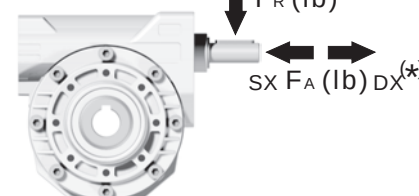
Albero di uscita



n_2 [min ⁻¹]	FA [lb]	FR [lb]
200	81	404.5
150	90	450
100	103.5	517
75	112.5	562
50	135	674.5
25	157	854
15	180	899

Input shaft

albero in entrata



n_1 [min ⁻¹]	FA [lb]	FR [lb]
1750	20	101

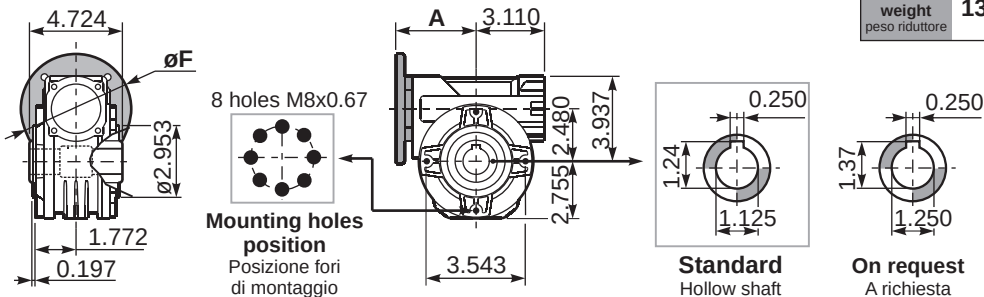
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

P063FB...

Basic wormbox
Riduttore baseGearbox weight
peso riduttore 13.23 lb

M. flanges	Kit code	øF	A
56C	KU063.4.041	6.50	4.409
143/5 TC	KU063.4.041	6.50	4.409

Standard
Hollow shaftOn request
A richiesta

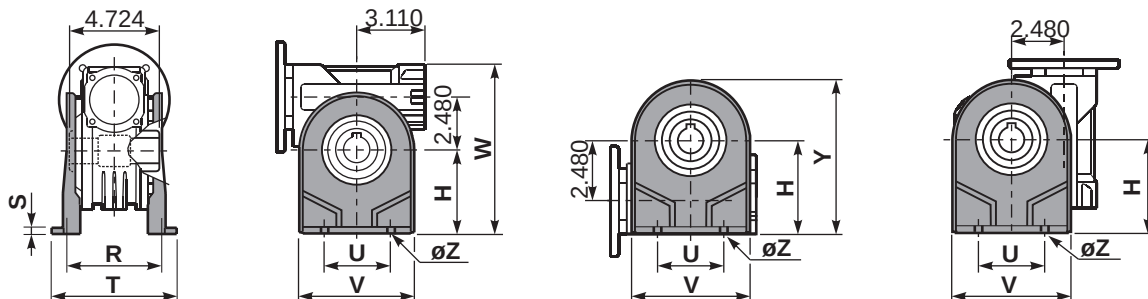
P063PA...

Feet
Piedini

P063PB...

Feet
Piedini

P063PV...

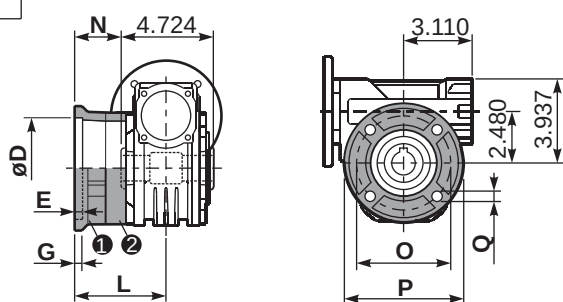
Feet
Piedini

	H	R	S	T	U	V	Y	W	øZ	kit code
type B	3.937	4.370	0.157	5.669	3.740	5.236	6.693	7.874	0.41	K063.9.022
type S	-	-	-	-	-	-	-	-	-	-

P063FC...

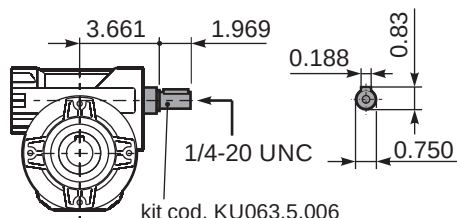
Output flange
Flangia uscita

P063BR...

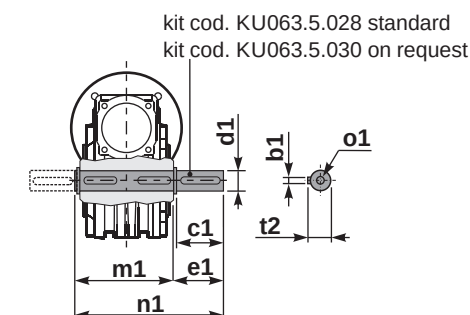
Reaction arm
Braccio di reazione

type B	øD	E	G	L	N	O	P	Q	kit code
FC	4.5354	0.28	0.51	3.386	1.024	5.906	6.890	0.43	1 K063.9.010
	4.5335								2 -
FL	4.5354	0.28	0.51	4.567	2.205	5.906	6.890	0.43	1 K063.9.010
	4.5335								2 K063.0.200
type S	øD	E	G	L	N	O	P	Q	kit code
F1	5.1260	0.28	0.51	4.016	1.654	6.496	7.874	0.51	1 KS070.9.013
	5.1240								2 -
F2	4.5354	0.28	0.51	4.567	2.205	5.906	6.890	0.43	1 KS063.9.013
	4.5354								2 -
F3	4.3321	0.20	0.43	3.228	0.866	5.118	6.299	0.39	1 KS063.9.011
	4.3307								2 -

R063FB...

Input shaft
Albero in entrata

P063.....S...

Single Shaft
Albero lento semplice

	b1	c1	d1	e1	m1	n1	t2	o1	kit code
Standard	0.250	2.240	1.125	2.437	4.992	7.429	1.23	5/16-18	KU063.5.028
On request	0.250	2.362	1.250	2.559	4.992	7.551	1.36	5/16-18	KU063.5.030

On request : Special Hollow Shafts
Mozzo Uscita SpecialeOn request : Double extended worm shaft
Vite bisporgente



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges			Dynamic efficiency RD	Tooth Module [mm]	Ratios code
							-W	-X	-Y			
							56C	143-5TC	182-4TC			
250.0	7	5	1109	2.0	9.90	2168	B	B		88	4.23	01
175.0	10	5	1441	1.7	8.40	2390	B	B		80	4.2	02
125.0	14	5	1967	1.3	6.61	2567	B	B		78	4.5	03
87.5	20	3	1707	1.5	4.41	2478	B	B		79	3.4	04
79.5	22	3	1854	1.3	4.06	2478	B	B		78	3.1	05
62.5	28	3	2269	1.3	3.91	2921	B	B		75	4.7	06
46.1	38	3	2915	1.0	2.95	2832	B	B		71	3.5	07
38.0	46	2	2253	1.2	2.47	2744	B	B		68	3.1	08
33.7	52	2	2472	1.0	1.99	2434	B	B		66	2.7	09
26.1	67	1.5	2353	1.0	1.57	2434	B	B		65	2.1	10
23.6	74	1.5	2319	1.0	1.48	2257	B	B		58	1.9	11
18.2	96	1	1833	1.1	1.13	2036	B	B		53	1.5	12

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit 085 is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us.
See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore tipo 085 viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

E El reductor tamaño 085 se suministra, lubricado de por vida con aceites sintéticos. Para las posiciones V5 y V6 contactar con nuestro servicio técnico.
Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

LUBRICATION 085 Oil Quantity 42.23 ounces

SHELL Omala S4 WE 320

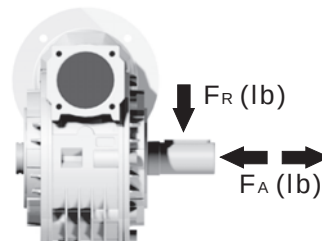
ENI Telium VSF 320

For all details on lubrication and plugs check our website **tab. 1**
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

RADIAL AND AXIAL LOADS

Output shaft

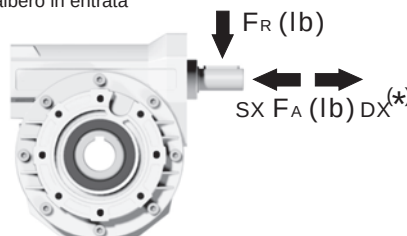
Albero di uscita



n_2 [min ⁻¹]	FA [lb]	FR [lb]
200	112	562
150	130	652
100	135	674
75	157	787
50	180	899
25	225	1124
15	261	1304

Input shaft

albero in entrata



n_1 [min ⁻¹]	FA [lb]	FR [lb]
1750	29	146

***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

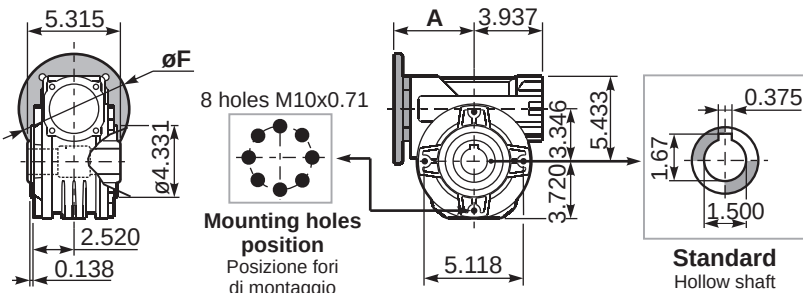
tab. 2

P085FB...

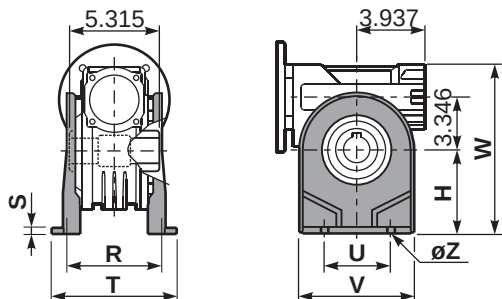
Basic wormbox
Riduttore baseGearbox
weight
peso riduttore

24.25 lb

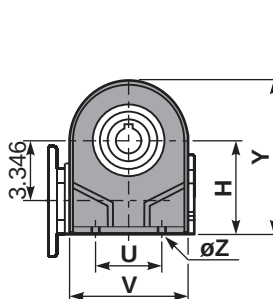
M. flanges	Kit code	øF	A
56C	KU085.4.041	6.50	4.823
143/5 TC	KU085.4.041	6.50	4.823
182/4 TC	KU085.4.042	8.88	5.527



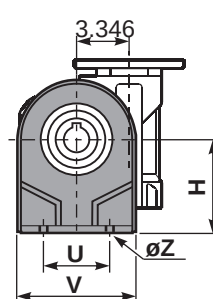
P085PA...

Feet
Piedini

P085PB...

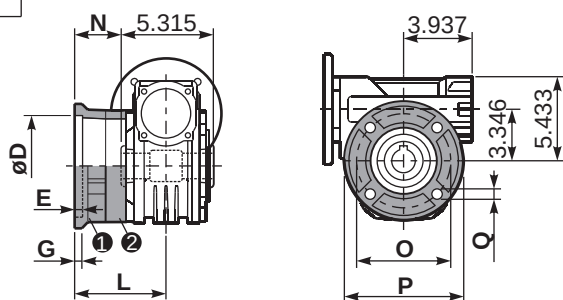
Feet
Piedini

P085PV...

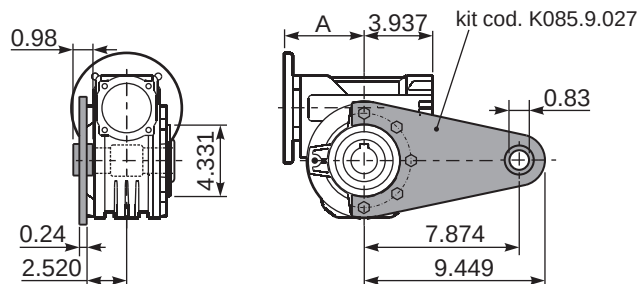
Feet
Piedini

	H	R	S	T	U	V	Y	W	øZ	kit code
type B	5.591	5.709	0.197	7.165	5.512	7.087	9.311	11.024	0.41	K085.9.022
type S	-	-	-	-	-	-	-	-	-	-

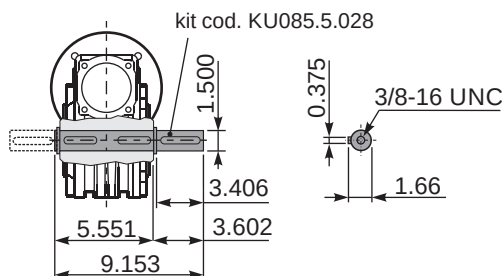
P085FC...

Output flange
Flangia uscita

P085BR...

Reaction arm
Braccio di reazione

P085.....S...

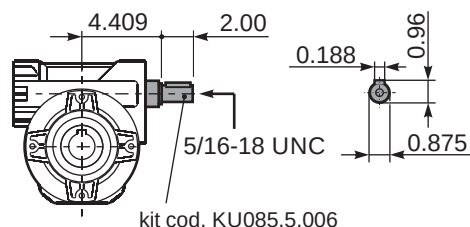
Single Shaft
Albero lento semplice

type B	øD	E	G	L	N	O	P	Q	kit code
FC	5.9867	0.20	0.63	4.252	1.594	6.929	8.071	0.51	1 K085.9.010
	5.9843								2 -
FL	5.9867	0.20	0.63	5.846	3.189	6.929	8.071	0.51	1 K085.9.010
	5.9843								2 K085.0.201

type S	øD	E	G	L	N	O	P	Q	kit code
F1	5.1197	0.20	0.51	4.626	1.969	6.496	7.874	0.45	1 KS085.9.012
	5.1181								2 -
F2	5.9867	0.20	0.59	5.807	3.150	7.087	8.071	0.49	1 KS085.9.013
	5.9843								2 -
F4	5.1197	0.20	0.51	4.193	1.535	6.496	7.874	0.51	1 KS085.9.015
	5.1181								2 -

On request : Special Hollow Shafts
Mozzo Uscita SpecialeOn request : Double extended worm shaft
Vite bisporgente

R085FB...

Input shaft
Albero in entrata

Worm gearboxes type M45 ÷ M85

A modular and compact product

Single-piece aluminum alloy housing

Is vacuum impregnated (MIL-STD 276) for protection and sealing. No secondary finish required but readily accepts paint. Combines light weight with high tensile strength. Precision machined for alignment of bearings and gearing.

Single piece alloy steel input shaft and worm shaft.

High helix angle worm is case-hardened (Rc 58-60), ground, teeth are profiled and radiused, for noise reduction and enhanced efficiency.

Oversized bearings

Support positively-retained, high speed shaft for higher shock load capacity - ideal for frequent starting and reversing application. Premium, Nitrile® high temperature seals each end.

Flange

Fully modular to IEC and compact integrated motor. NEMA C flange.

Premium, high temperature

Nitrile® output seals

Bronze alloy worm gears.

Is centrifugally cast onto an iron hub for maximum strength and superior life.

Oversize bearing

For radial load capability and maximum hollow output shaft diameter.

Standard hollow output shaft mounting

Reduces total drive envelope size, weight and cost. Single and double solid output shaft is available.

Impregnated and machined bearing caps

With exterior machined surfaces enable a variety of mounting accessories. Extra-deep thread engagement provided for greater support strength. Zinc plated hardware.

Vent Free Design.

No breather or vents to leak! Factory lubricated for life with synthetic, semi-fluid gear lubricant with an operating range of -15°C to 130°C.

oil free



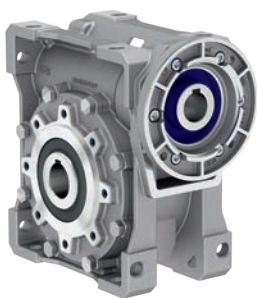
vent free



Specific type datasheet on page...

On page / A pagina / En la página

2-5	2-7	2-9	2-11
-----	-----	-----	------



Types / tipi / Tipos ➡



M45
416 lb in



M50
779 lb in



M63
1416 lb in



M85
3222 lb in

Type - Tipo - Typ
Type - Tipo

Size - Grandezza
Grösse - Taille
Tamaño

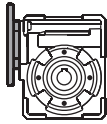
Mounting - Montaggio - Montage Fixation
Fixation - Tipo de montaje

P

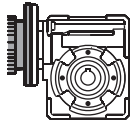
M45

FC

Worm gearboxes
Riduttori a vite senza fine
Schneckengetriebe
Reducteurs a vis sans fin
Reductores de corona sin fin



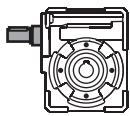
P



M

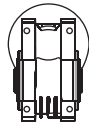


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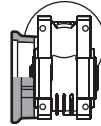


R

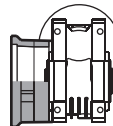
M45
M50
M63
M85



FB

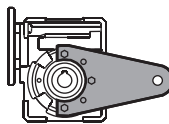


FC



FL

F1
F2
F3
F4

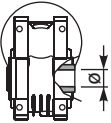
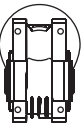
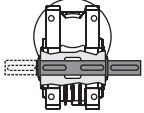
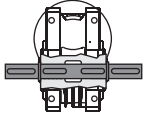
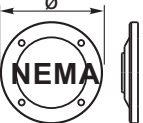
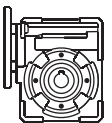
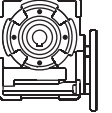
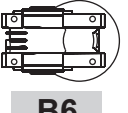
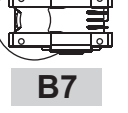
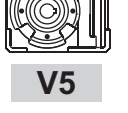
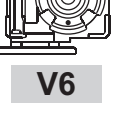
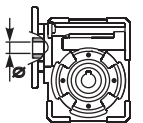
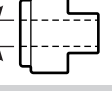
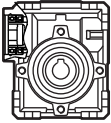


BR



On request we can deliver our products according to the ATEX
A richiesta possiamo fornire i nostri prodotti secondo le normative ATEX
Auf Anfrage können wir unsere Produkte den Richtlinien ATEX entsprechend liefern
Sur demande nos produits peuvent se conformer à la réglementation ATEX
A pedido, se pueden enviar nuestros productos de acuerdo con las normas ATEX.

CODIFICA / HOW TO ORDER / CODIFICACIÓN

Ratio Rapporto Relación	Hub Mozzo corona Nucleo corona	Output shaft Albero lento Eje solida	Motor size Grandezza motore Tamaño motor	Mounting position Posizione montaggio Position de montage	Input bore Foro entrata Eingangshohlwelle Trou d'entree Eje hueco de entrada	Terminal box position Posizione morsettiara Posición caja de bornes
10	U	Ø	-W	B3	UW	
See technical data table Vedi tabelle dati tecnici. Ver tabla datos técnicos	 U INCH M45 ⇒ Ø0.750" M50 ⇒ Ø1.000" M63 ⇒ Ø1.125" M85 ⇒ Ø1.500"	 Ø  S  D	 With Flange for type P -W ⇒ 56C -X ⇒ 143/5TC -Y ⇒ 182/4TC -N without flange Senza flangia For Modular Base type B M45 ⇒ Ø0.625 M50 ⇒ Ø0.625 M63 ⇒ Ø0.875 M85 ⇒ Ø1.125 -Z For Type - R	 B3  B8  B6  B7  V5  V6	 Standard bore UW = Ø0.625" UX = Ø0.875" UY = Ø1.125" ST standard type R Tipo R standard COUPLING  -W = Ø0.625" -X = Ø0.875" -Y = Ø1.125" -0 Ready for input coupling Predisposto per giunto 	With Type M specify terminal box position Con tipo M specificare posizione morsettiara  A  B STANDARD  C  D

POTENZA RICHIESTA / REQUIRED POWER / POTENCIA NECESARIA

Lifting / sollevamento / elevación

$$P [KW] = \frac{M [Kg] \cdot g [9.81] \cdot v [m / s]}{1000}$$

Rotation / rotazione / rotation

$$P [KW] = \frac{M [Nm] \cdot n [rpm]}{9550}$$

Linear movement / traslazione / translacion

$$P [KW] = \frac{F [N] \cdot v [m / s]}{1000}$$

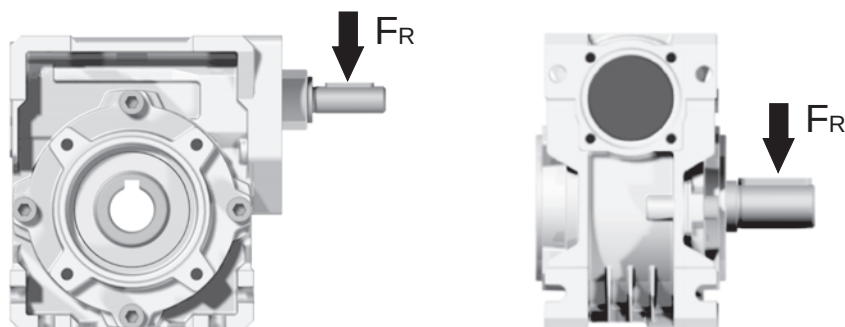
TORQUE / COPPIA / PAR

$$M [Nm] = \frac{9550 \cdot P [KW]}{n [rpm]}$$

$$M [lb in] = \frac{63030 \cdot P [HP]}{n [rpm]}$$

RADIAL LOADS / CARICHI RADIALI / CARGA RADIAL Y AXIAL

- Radial load generated by external transmissions keyed onto input and/or output shafts.
- Forza radiale generata da organi di trasmissione calettati sugli alberi di ingresso e/o uscita.
- Cargas radiales, generada por transmisiones externas, aplicadas sobre los ejes de entrada y/o salida



$F_R [N] = \frac{M [Nm] \cdot 2000}{d [mm]} \cdot f_k$		$F_R [N] = \frac{M [lb\ in] \cdot 8.9}{d [in]} \cdot f_k$	
M	Momento torcente / Output torque / Par torsion		
d	Diametro primitivo / Diam. of driving element / Diámetro primitivo		
f _k	Coefficiente di trasformazione / Factor / Coeficiente de transmisión 1.15 Ingranaggi / Gearwheels / Engranaje 1.25 Catena / Chain sprockets / Cadena 1.75 Cinghia Trapezoidale / Narrow v-belt pulley / Correa trapezoidal 2.50 Cinghia piatta / Flat-belt pulley / Correa plana		

- If your application requires higher radial loads, contact our technical office. Higher load may be possible.
- Nel caso la vostra applicazione richieda carichi radiali superiori consultare il nostro ufficio tecnico, valori maggiori possono essere accettati.
- En el caso en que una aplicación exija una carga radial superior a la especificada en el catálogo, consultar a nuestra oficinas técnica.

How to select a gearbox / Come selezionare un riduttore Cómo seleccionar un reductor

B Output speed
Velocità in uscita
Velocidad de salida

Nominal power
Potenza nominale
Potencia nominal

Gear size
Grandezza riduttore
Tamaño reductor

Motor power
Potenza motore
Potencia motor

A Nominal torque
Momento torcente nominale
Par de torsión nominal

Flange code
Codice flangia
Código bridas

Dynamic efficiency
Rendimento dinamico
Rendimiento dinámico

Input speed
Velocità in entrata
Velocidad de entrada

M45

M Square- Gear

416lb in

Rating - Alluminum WORM GEARBOXES

QUICK SELECTION / Selezione veloce

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges	Dynamic efficiency RD	Tooth Module [mm]	Ratios code
250.0	7	1	202	1.8	1.34	363	-W	80	2.2	01
175.0	10	1	285	1.4	1.02	389	-	79	2.2	02
125.0	14	0.75	291	1.3	0.75	389	56C	77	2.4	03

input speed (n_1) = 1750 min⁻¹

C Ratio
Rapporto
Relación

Transmitted torque
Momento torcente trasmesso
Par transmitido

Service factor
Fattore di servizio
Factor de servicio

Nominal module
Modulo nominale
Módulo nominal

Notes
Note
Notas

fs

Type of load and starts per hour Tipo di carico e avviamenti per ora		Oper. hours per day Ore di funz. giorn.		
		<2 h	2 - 8 h	8 - 16 h
Continuous or intermittent appl. with start / hour Applicazione cont. o interm. con n.ro operazioni/ora	Uniform / Uniforme	0.9	1	1.25
	Moderate / Moderato	1	1.25	1.5
	Heavy / Forte	1.25	1.5	1.75
Intermittent application with start / hour Applicazione intermittente con n.ro operazioni/ora	Uniform / Uniforme	1.25	1.5	1.75
	Moderate / Moderato	1.5	1.75	2
	Heavy / Forte	1.75	2	2.25

D

D	Motor flange available Flange disponibili Bridas disponibles
B)	Mounting with reduction ring Montaggio con boccia di riduzione Montaje con casquillo de reducción
C)	Motor flangeholes position/terminal box position Posizione fori flangia/basetta motore Posición agujeros brida / base motor
B)	Available without reduction bushes Disponibile anche senza boccia Disponibile tambien sin casquillo

A	Select required torque (according to service factor)	Seleziona la coppia desiderata (comprensiva del fattore di servizio)	Seleccionar el par deseado (incluyendo el factor de servicio)
B	Select ouput speed	Seleziona la velocità in uscita	Seleccionar la velocidad de salida
C	On the same line of selected geared motor, you can find the gear ratio	Sulla riga corrispondente alla motorizzazione prescelta si può rilevare il rapporto di riduzione	En la línea correspondiente al motor preseleccionado es posible encontrar la relación de reducción
D	Select motor flange available (if requested)	Scegli la flangia disponibile (se richiesta)	Seleccionar la brida disponible (sobre pedido)



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges		Dynamic efficiency	Tooth Module [mm]	Ratio code
							-W	-			
							56C	-	RD		
250.0	7	1	202	1.8	1.34	363			80	2.2	01
175.0	10	1	285	1.4	1.02	389			79	2.2	02
125.0	14	0.75	291	1.3	0.75	389			77	2.4	03
83.3	21	0.75	380	1.0	0.55	372			67	1.6	04
62.5	28	0.5	328	1.3	0.47	416			65	2.5	05
47.3	37	0.33	277	1.3	0.32	363			63	1.8	06
38.0	46	0.33	323	1.1	0.28	363			59	1.5	07
29.2	60	0.25	303	1.2	0.22	363			56	1.2	08
25.0	70	0.25	340	0.8	0.15	266			54	1.0	09
17.2	102	0.25*	450	<0.8	0.11	257			49	0.72	10

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

* Power higher than the maximum one which can be supported by the gearbox. Select according to the torque M_{2R}
Potenza superiore a quella massima sopportabile dal riduttore. Selezionare in base al momento torcente M_{2R}

EN Unit M45 is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us.
See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore tipo M45 viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico.
Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

E El reductor tamaño M45 se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico.
Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

LUBRICATION M45 Oil Quantity 3.17 ounces

SHELL Omala S4 WE 320

ENI Telium VSF 320

For all details on lubrication and plugs check our website

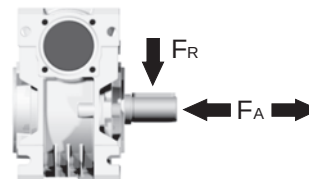
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

tab. 1

RADIAL AND AXIAL LOADS

Output shaft

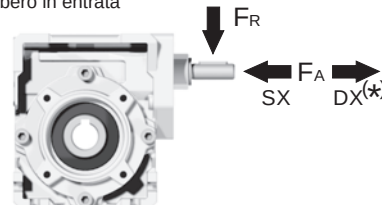
Albero di uscita



n_2 [min ⁻¹]	FA [lb]	FR [lb]
200	40	202
150	45	225
100	49	247
75	54	270
50	58	315
25	67	405
15	90	450

Input shaft

albero in entrata



n_1 [min ⁻¹]	FA [lb]	FR [lb]
1750	9	47

*Strong axial loads in the DX direction are not allowed.
Non sono consentiti forti carichi assiali con direzione DX

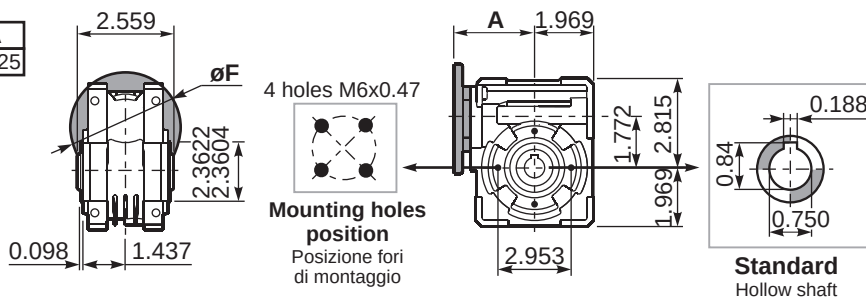
tab. 2

PM45FB...

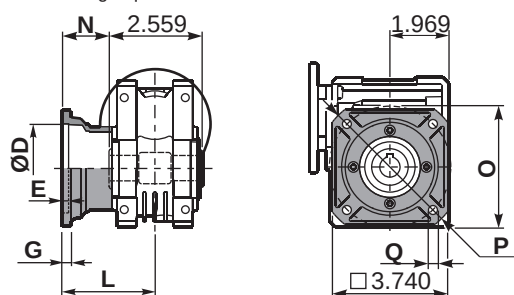
Basic wormbox
Riduttore baseGearbox
weight
peso riduttore

5.07 lb

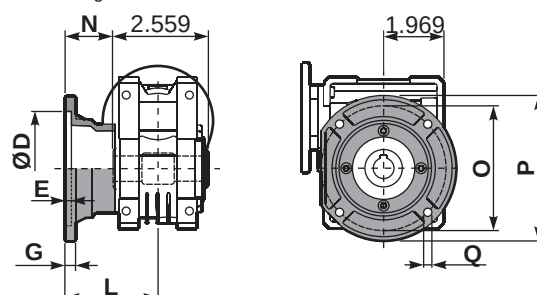
M. flanges	Kit code	øF	A
56C	KU050.4.041	6.5	3.925



PM45FC...

Square flange
Flangia quadrata

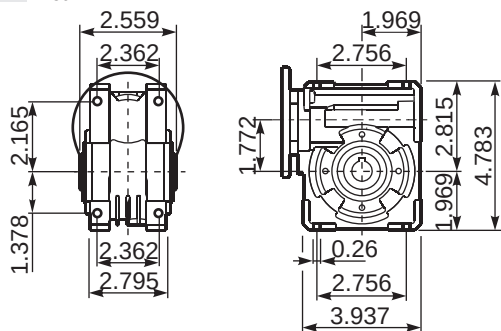
PM45F1...

Round flange
Flangia rotonda

type B	øD	E	G	L	N	O	P	Q	kit code
FC	2.3640 2.3622	0.16	0.28	2.638	1.358	2.953	4.331	0.35	KM45.9.010
FL	2.3640 2.3622	0.16	0.28	3.819	2.539	2.953	4.331	0.35	KM45.9.011

type S	øD	E	G	L	N	O	P	Q	kit code
F1	3.7423 3.7402	0.20	0.35	3.150	1.870	4.528	5.512	0.37	KM45.9.012
F2	-	-	-	-	-	-	-	-	-

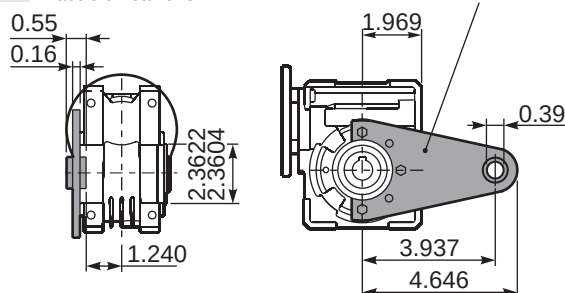
PM45FB...

Feet
Piedini

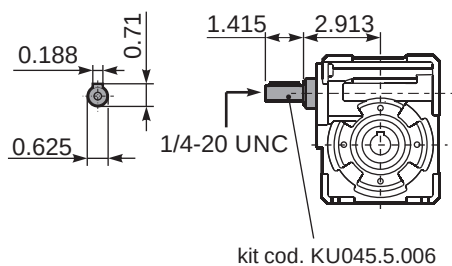
PM45BR...

Reaction arm
Braccio di reazione

kit cod. KM45.9.027



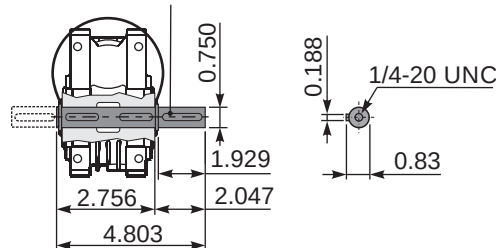
RM45FB...

Input shaft
Albero in entrata

PM45.....S...

Single Shaft
Albero lento semplice

kit cod. KU045.5.028

On request : Special Hollow Shafts
Mozzo Uscita SpecialeOn request : Double extended worm shaft
Vite bisporgente



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges		Dynamic efficiency	Tooth Module  [mm]	Ratio code 
							-W	-			
							56C	-	RD		
250.0	7	2	413	1.6	3.25	664			82	2.5	01
175.0	10	2	576	1.2	2.43	690			80	2.4	02
125.0	14	1.5	598	1.2	1.78	699			79	2.6	03
97.2	18	1	486	1.4	1.38	664			75	2.0	04
67.3	26	1	646	1.0	0.99	628			69	2.7	05
58.3	30	1	756	1.0	1.04	779			70	2.5	12
48.6	36	0.75	671	1.1	0.82	726			69	2.1	06
40.7	43	0.5	511	1.4	0.72	726			66	1.8	07
35.0	50	0.5	558	1.2	0.61	673			62	1.5	13
29.2	60	0.5	627	1.0	0.51	628			58	1.3	08
25.7	68	0.33	461	1.3	0.42	584			57	1.2	09
21.9	80	0.33	513	1.1	0.37	575			54	1.0	10
17.5	100	0.25	450	1.1	0.27	487			50	0.8	11

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit M50 is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us.
See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore tipo M50 viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

E El reductor tamaño M50 se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico.
Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

LUBRICATION M50 Oil Quantity 4.93 ounces

SHELL Omala S4 WE 320

ENI Telium VSF 320

For all details on lubrication and plugs check our website

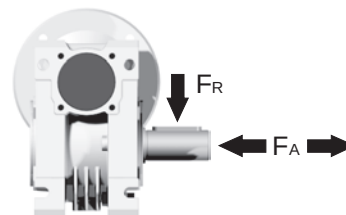
tab. 1

Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

RADIAL AND AXIAL LOADS

Output shaft

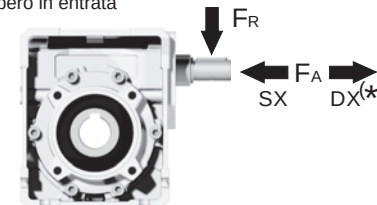
Albero di uscita



n_2 [min ⁻¹]	FA [lb]	FR [lb]
200	54	270
150	63	315
100	67	337
75	76	382
50	85	427
25	108	562
15	126	629

Input shaft

albero in entrata



n_1 [min ⁻¹]	FA [lb]	FR [lb]
1750	17	85

*Strong axial loads in the DX direction are not allowed.
Non sono consentiti forti carichi assiali con direzione DX

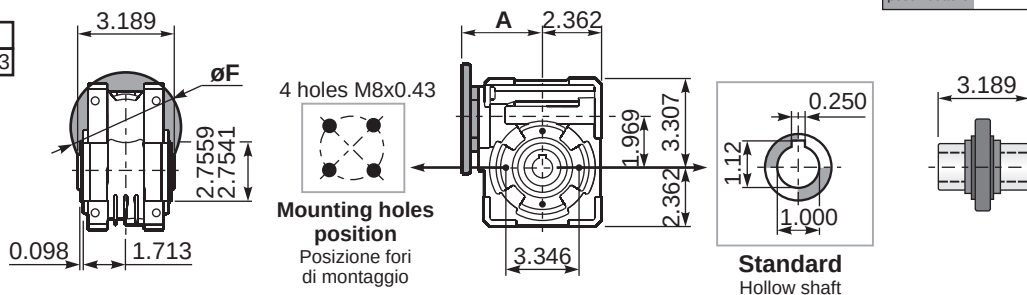
tab. 2

PM50FB...

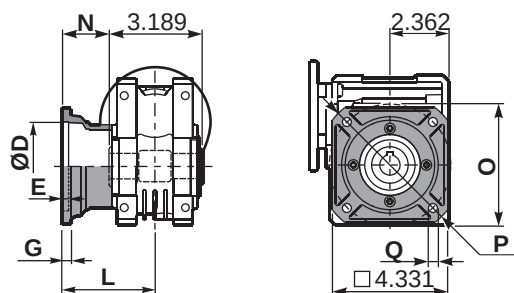
Basic wormbox
Riduttore baseGearbox
weight
peso riduttore

7.165 lb

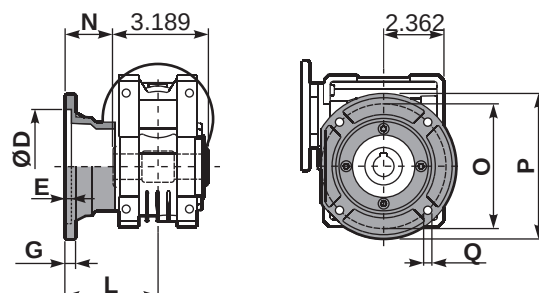
M. flanges	Kit code	øF	A
56C	KU050.4.041	6.5	4.083



PM50FC...

Square flange
Flangia quadrata

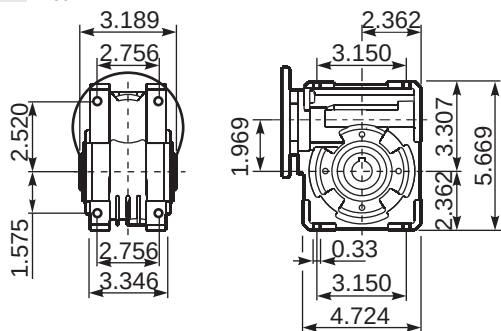
PM50F1...

Round flange
Flangia rotonda

type B	øD	E	G	L	N	O	P	Q	kit code
FC	2.7577 2.7559	0.20	0.35	3.543	1.949	3.346	4.921	0.43	KM50.9.010
FL	2.7577 2.7559	0.20	0.35	4.724	3.130	3.346	4.921	0.43	KM50.9.011

type S	øD	E	G	L	N	O	P	Q	kit code
F1	4.3328 4.3307	0.20	0.39	3.504	1.909	5.118	6.299	0.37	KM50.9.012
F2	3.7423 3.7402	0.20	0.57	2.835	1.240	4.528	5.512	0.43	KM50.9.013

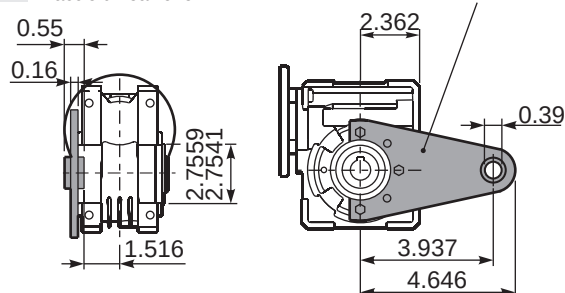
PM50FB...

Feet
Piedini

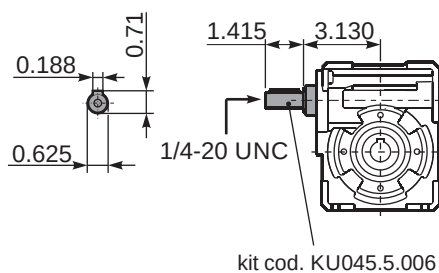
PM50BR...

Reaction arm
Braccio di reazione

kit cod. KM50.9.027



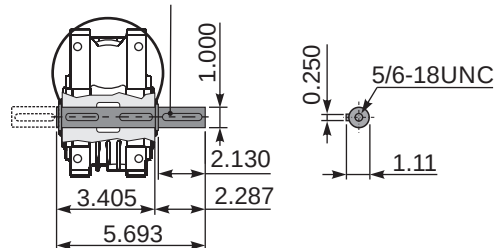
RM50FB...

Input shaft
Albero in entrata

PM50.....S...

Single Shaft
Albero lento semplice

kit cod. KU050.5.028

On request : Special Hollow Shafts
Mozzo Uscita SpecialeOn request : Double extended worm shaft
Vite bisporgente



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges		Dynamic efficiency	Tooth Module  [mm]	Ratio code 
							-W 56C	-X 143-5TC	RD		
250.0	7	2	419	2.7	5.49	1133	B		83	3.1	01
175.0	10	2	583	2.0	4.12	1186	B		81	3.1	02
116.7	15	2	854	1.5	3.11	1310	B		79	3.1	03
92.1	19	2	1068	1.2	2.44	1283	B		78	2.6	04
72.9	24	1.5	972	1.3	1.96	1257	B		75	2.0	05
58.3	30	1.5	1199	1.2	1.79	1416	B		74	3.2	06
48.6	36	1.5	1323	1.0	1.50	1301	B		68	2.7	07
43.8	40	1	951	1.4	1.40	1310	B		66	2.5	13
38.9	45	1	1070	1.1	1.13	1195	B		66	2.1	08
29.2	60	0.75	1005	1.2	0.90	1195	B		62	1.6	12
26.1	67	0.75	1086	1.0	0.77	1097	B		60	1.5	09
21.9	80	0.5	821	1.3	0.67	1080	B		57	1.3	10
18.6	94	0.5	880	1.2	0.61	1053	B		52	1.1	11

 Motor Flanges Available
Flange Motore Disponibili

 B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

 C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit M63 is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore tipo M63 viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

E El reductor tamaño M63 se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

LUBRICATION M63 Oil Quantity 10.56 ounces

SHELL Omala S4 WE 320

ENI Telium VSF 320

For all details on lubrication and plugs check our website

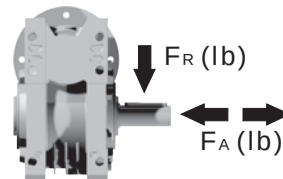
tab. 1

Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

RADIAL AND AXIAL LOADS

Output shaft

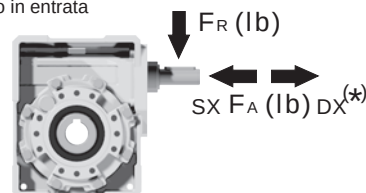
Albero di uscita



n_2 [min ⁻¹]	FA [lb]	FR [lb]
200	81	404.5
150	90	450
100	103.5	517
75	112.5	562
50	135	674.5
25	157	854
15	180	899

Input shaft

albero in entrata



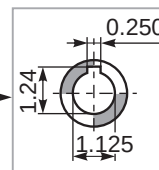
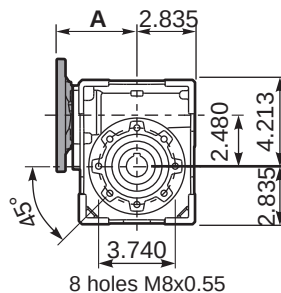
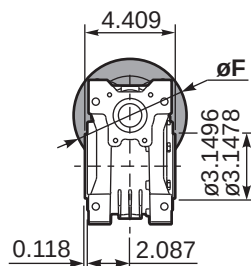
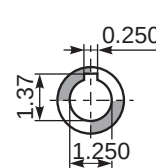
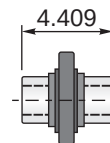
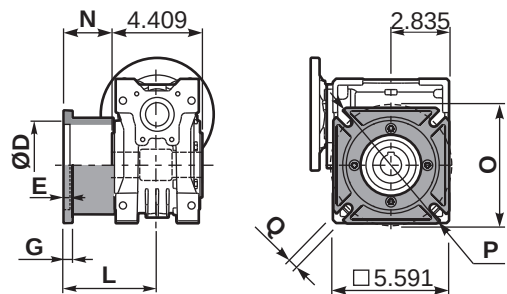
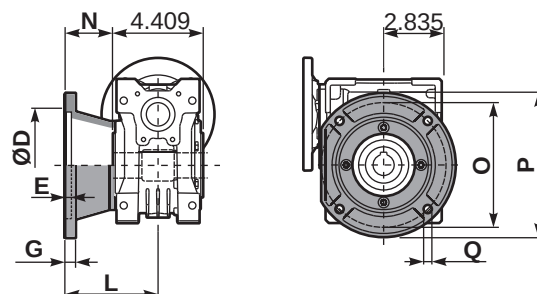
n_1 [min ⁻¹]	FA [lb]	FR [lb]
1750	20	101

***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

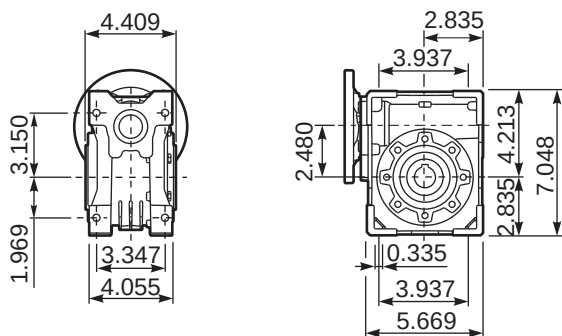
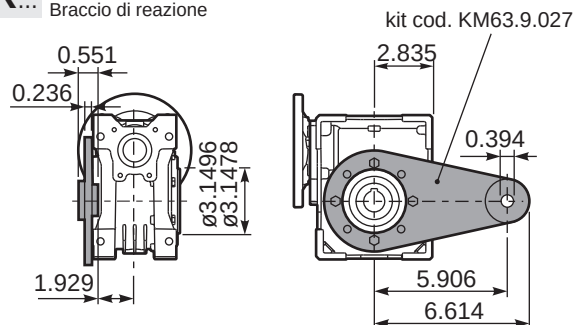
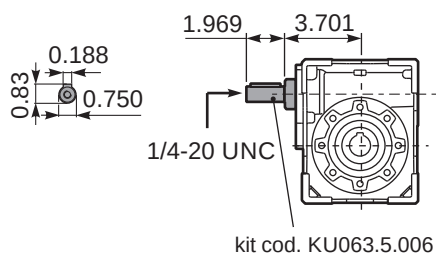
PM63FB...Basic wormbox
Riduttore baseGearbox
weight
peso riduttore **13.23 lb**

M. flanges	Kit code	øF	A
56C	KU063.4.041	6.50	4.449
143/5 TC	KU063.4.041	6.50	4.449

**Standard**
Hollow shaft**On request**
A richiesta**PM63FC...**Square flange
Flangia quadrata**PM63F1...**Round flange
Flangia rotonda

type B	øD	E	G	L	N	O	P	Q	kit code
FC	4.5296 4.5276	0.24	0.39	3.228	1.024	5.906	7.087	0.43	KM63.9.010
FL	4.5296 4.5276	0.24	0.39	4.409	2.205	5.906	7.087	0.43	KM63.9.011

type S	øD	E	G	L	N	O	P	Q	kit code
F1	5.1205 5.1181	0.20	0.39	3.858	1.653	6.496	7.874	0.43	KM63.9.012
F2	5.1205 5.1181	0.20	0.39	4.213	2.008	6.496	7.874	0.43	KM63.9.013
F3	4.3327 4.3307	0.20	0.65	3.169	0.965	5.118	6.299	0.43	KM63.9.014

PM63FB...Feet
Piedini**PM63BR...**Reaction arm
Braccio di reazione**RM63FB...**Input shaft
Albero in entrata



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges			Dynamic efficiency RD	Tooth Module [mm]	Ratios code 
							-W 56C	-X 143-5TC	-Y 182-4TC			
250.0	7	5	1109	2.2	10.91	2390	B	B		88	4.23	01
175.0	10	5	1441	1.8	9.27	2638	B	B		80	4.2	02
125.0	14	5	1967	1.4	7.30	2832	B	B		78	4.5	03
87.5	20	5	2845	1.0	4.87	2735	B	B		79	3.4	04
79.5	22	3	1854	1.5	4.48	2735	B	B		78	3.1	05
62.5	28	3	2269	1.4	4.32	3222	B	B		75	4.7	06
46.1	38	3	2915	1.1	3.26	3124	B	B		71	3.5	07
38.0	46	2	2253	1.3	2.72	3027	B	B		68	3.1	08
33.7	52	2	2472	1.1	2.20	2682	B	B		66	2.7	09
26.1	67	1.5	2353	1.1	1.73	2682	B	B		65	2.1	10
23.6	74	1.5	2319	1.1	1.63	2487	B	B		58	1.9	11
18.2	96	1	1833	1.2	1.24	2248	B	B		53	1.5	12

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit M85 is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us.
See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore tipo M85 viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

E El reductor tamaño M85 se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico.
Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

LUBRICATION M85 Oil Quantity 42.23 ounces

SHELL Omala S4 WE 320

ENI Telium VSF 320

For all details on lubrication and plugs check our website

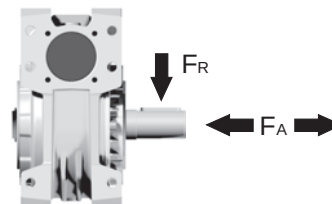
tab. 1

Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

RADIAL AND AXIAL LOADS

Output shaft

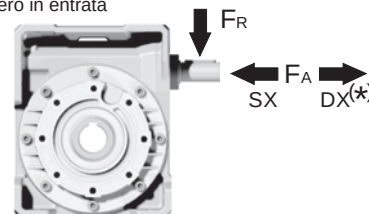
Albero di uscita



n_2 [min ⁻¹]	FA [lb]	FR [lb]
200	112	562
150	130	652
100	135	674
75	157	787
50	180	899
25	225	1124
15	261	1304

Input shaft

albero in entrata



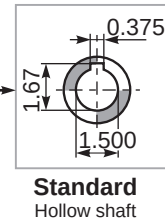
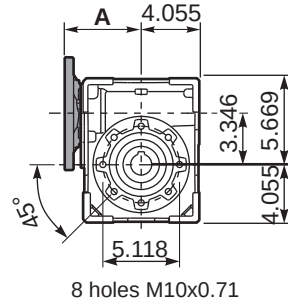
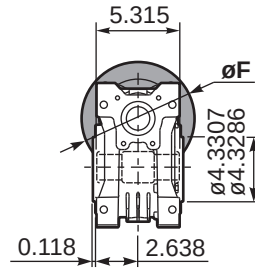
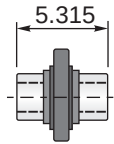
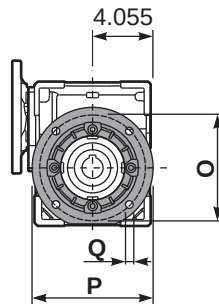
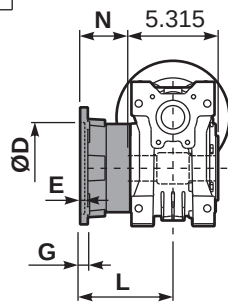
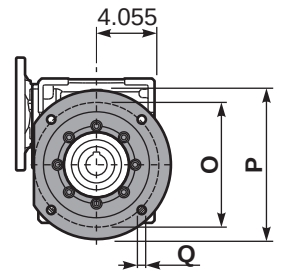
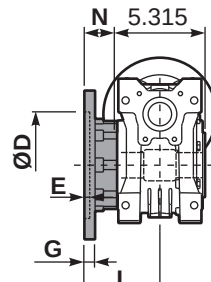
n_1 [min ⁻¹]	FA [lb]	FR [lb]
1750	29	146

*Strong axial loads in the DX direction are not allowed.
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

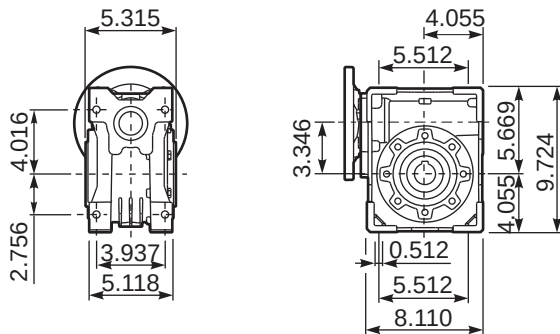
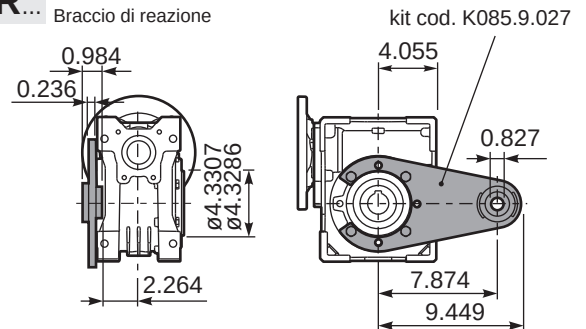
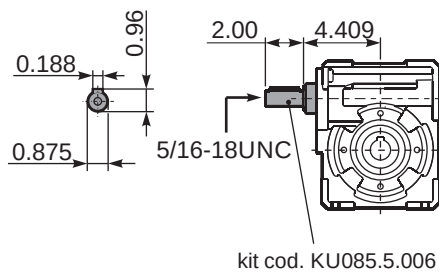
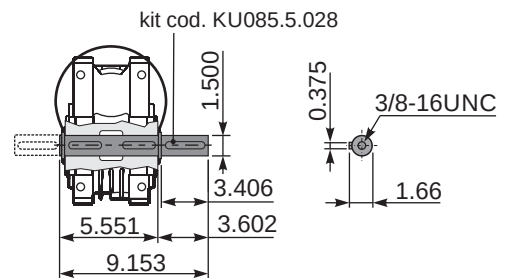
PM85FB... Basic wormbox
Riduttore base

M. flanges	Kit code	øF	A
56C	KU085.4.041	6.50	4.823
143/5 TC	KU085.4.041	6.50	4.823
182/4 TC	KU085.4.042	8.88	5.528

Standard
Hollow shaftGearbox
weight
peso riduttore **41.23 lb****PM85FC...** Output flange
Flangia uscita**PM85F1...** Output flange
Flangia uscita

type B	øD	E	G	L	N	O	P	Q	kit code
FC	5.9867 5.9843	0.20	0.63	4.370	1.713	6.929	8.071	0.51	K085.9.010
FL	7.0891 7.0866	0.24	0.71	4.803	2.146	8.465	9.843	0.55	KM85.9.011

type S	øD	E	G	L	N	O	P	Q	kit code
F1	5.1200 5.1181	0.20	0.51	4.311	1.654	6.496	7.874	0.51	KS085.9.015
F2	5.9867 5.9843	0.20	0.63	5.965	3.307	6.929	8.071	0.51	K085.9.010 K085.0.201

PM85FB... Feet
Piedini**PM85BR...** Reaction arm
Braccio di reazione**RM85FB...** Input shaft
Albero in entrata**PM85.....S...** Single Shaft
Albero lento semplice

Q Square worm gearboxes

A modular and compact product

Single-piece aluminum alloy housing

Is vacuum impregnated (MIL-STD 276) for protection and sealing. No secondary finish required but readily accepts paint. Combines light weight with high tensile strength. Precision machined for alignment of bearings and gearing.

Single piece alloy steel input shaft and worm shaft.

High helix angle worm is case-hardened (Rc 58-60), ground, teeth are profiled and radiused, for noise reduction and enhanced efficiency.

Oversized bearings

Support positively-retained, high speed shaft for higher shock load capacity - ideal for frequent starting and reversing application. Premium, Nitrile® high temperature seals each end.

Flange

Fully modular to IEC and compact integrated motor. NEMA C flange.

Premium, high temperature

Nitrile® output seals

Bronze alloy worm gears.

CuSn12Ni (C91700) Nickel bronze worm gears are centrifugally cast onto an iron hub for maximum strength and superior life. Removable hollow shaft with key for safe torque transmissions.

Oversize bearing

For radial load capability and maximum hollow output shaft diameter.

Standard hollow output shaft mounting

Reduces total drive envelope size, weight and cost. Single and double solid output shaft is available.

Impregnated and machined bearing caps

With exterior machined surfaces enable a variety of mounting accessories. Extra-deep thread engagement provided for greater support strength. Zinc plated hardware.

Vent Free Design.

No breather or vents to leak! Factory lubricated for life with synthetic, semi-fluid gear lubricant with an operating range of -15°C to 130°C.

oil free



vent free



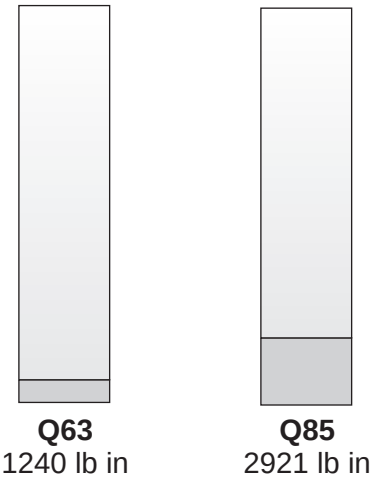
Specific type datasheet on page...

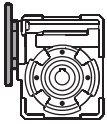
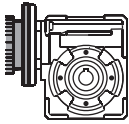
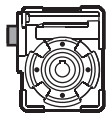
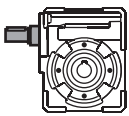
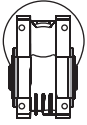
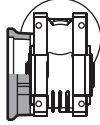
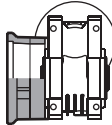
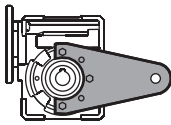
On page / A pagina / En la página

3-5	3-7
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Types / tipi / Tipos ➡

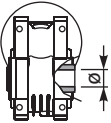
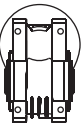
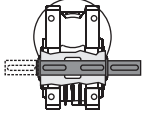
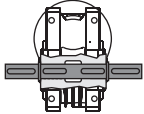
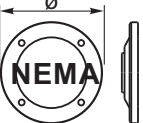
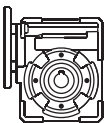
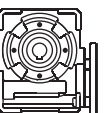
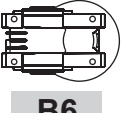
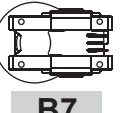
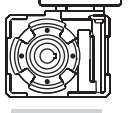
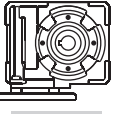
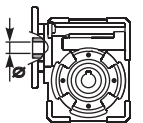
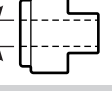
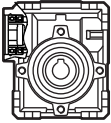


Type - Tipo	Size - Grandezza Tamaño	Mounting - Montaggio - Tipo de montaje
P	Q63	FC
Worm gearboxes Riduttori a vite senza fine Reductores de corona sin fin  P  M  B  R	Q63 Q85	 FB  FC  FL F1 F2 F3 F4  BR



On request we can deliver our products according to the ATEX
A richiesta possiamo fornire i nostri prodotti secondo le normative ATEX
A pedido, se pueden enviar nuestros productos de acuerdo con las normas ATEX.

CODIFICA / HOW TO ORDER / CODIFICACIÓN

Ratio Rapporto Relación	Hub Mozzo corona Nucleo corona	Output shaft Albero lento Eje solida	Motor size Grandezza motore Tamaño motor	Mounting position Posizione montaggio Position de montage	Input bore Foro entrata Eingangshohlwelle Trou d'entree Eje hueco de entrada	Terminal box position Posizione morsettiara Posición caja de bornes
10	U	Ø	-X	B3	UX	
See technical data table Vedi tabelle dati tecnici. Ver tabla datos técnicos	 U INCH Q63 ⇒ Ø1.125" Q85 ⇒ Ø1.500"	 Ø  S  D	 With Flange for type P -W ⇒ 56C -X ⇒ 143/5TC -Y ⇒ 182/4TC -N without flange Senza flangia For Modular Base type B Q63 ⇒ Ø0.875 Q85 ⇒ Ø1.125 -Z For Type - R	 B3  B8  B6  B7  V5  V6	 Standard bore UW = Ø0.625" UX = Ø0.875" UY = Ø1.125" ST standard type R Tipo R standard COUPLING  -W = Ø0.625" -X = Ø0.875" -Y = Ø1.125" -0 Ready for input coupling Predisposto per giunto 	With Type M specify terminal box position Con tipo M specificare posizione morsettiara  A  B STANDARD  C  D

POTENZA RICHIESTA / REQUIRED POWER / POTENCIA NECESARIA

Lifting / sollevamento / elevación

$$P [KW] = \frac{M [Kg] \cdot g [9.81] \cdot v [m / s]}{1000}$$

Rotation / rotazione / rotation

$$P [KW] = \frac{M [Nm] \cdot n [rpm]}{9550}$$

Linear movement / traslazione / translacion

$$P [KW] = \frac{F [N] \cdot v [m / s]}{1000}$$

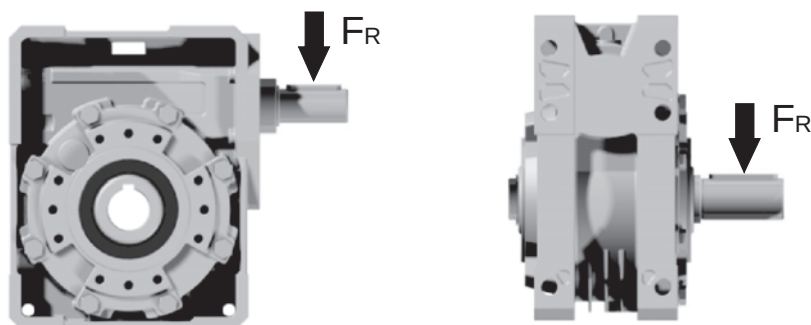
TORQUE / COPPIA / PAR

$$M [Nm] = \frac{9550 \cdot P [KW]}{n [rpm]}$$

$$M [lb in] = \frac{63030 \cdot P [HP]}{n [rpm]}$$

RADIAL LOADS / CARICHI RADIALI / CARGA RADIAL Y AXIAL

- Radial load generated by external transmissions keyed onto input and/or output shafts.
- Forza radiale generata da organi di trasmissione calettati sugli alberi di ingresso e/o uscita.
- Cargas radiales, generada por transmisiones externas, aplicadas sobre los ejes de entrada y/o salida



$F_R \text{ [N]} = \frac{M \text{ [Nm]} \cdot 2000}{d \text{ [mm]}} \cdot f_k$		$F_R \text{ [N]} = \frac{M \text{ [lb in]} \cdot 8.9}{d \text{ [in]}} \cdot f_k$	
M	Momento torcente / Output torque / Par torsion		
d	Diametro primitivo / Diam. of driving element / Diámetro primitivo		
f _k	Coefficiente di trasformazione / Factor / Coeficiente de transmisión 1.15 Ingranaggi / Gearwheels / Engranaje 1.25 Catena / Chain sprockets / Cadena 1.75 Cinghia Trapezoidale / Narrow v-belt pulley / Correa trapezoidal 2.50 Cinghia piatta / Flat-belt pulley / Correa plana		

- If your application requires higher radial loads, contact our technical office. Higher load may be possible.
- Nel caso la vostra applicazione richieda carichi radiali superiori consultare il nostro ufficio tecnico, valori maggiori possono essere accettati.
- En el caso en que una aplicación exija una carga radial superior a la especificada en el catálogo, consultar a nuestra oficinas técnica.

How to select a gearbox / Come selezionare un riduttore Cómo seleccionar un reductor

B Output speed
Velocità in uscita
Velocidad de salida

Nominal power
Potenza nominale
Potencia nominal

Gear size
Grandezza riduttore
Tamaño reductor

Motor power
Potenza motore
Potencia motor

A Nominal torque
Momento torcente nominale
Par de torsión nominal

Flange code
Codice flangia
Código bridas

Dynamic efficiency
Rendimento dinamico
Rendimiento dinámico

Input speed
Velocità in entrata
Velocidad de entrada

Q63

Q Square - Gear
1240lb in

Rating - Alluminum **WORM GEARBOXES**

QUICK SELECTION / Selezione veloce							input speed (n ₁) = 1750 min ⁻¹				
Output Speed	Ratio	Motor power	Output torque	Service factor	Nominal power	Nominal torque	Available NEMA motor flanges		Dynamic efficiency	Tooth Module	
n ₂ [min ⁻¹]	i	P _{1M} [HP]	M _{2M} [lb in]	f.s.	P _{1R} [HP]	M _{2R} [lb in]	-W	-X			Ratios code
							56C	143-5TC	RD	[mm]	
250.0	7	2	419	2.5	5.10	1053	B		83	3.1	01
175.0	10	2	583	1.9	3.93	1133	B		81	3.1	02
116.7	15	2	854	1.4	2.75	1159	B		79	3.1	03

C Ratio
Rapporto
Relación

Transmitted torque
Momento torcente trasmesso
Par transmitido

Service factor
Fattore di servizio
Factor de servicio

Nominal module
Modulo nominale
Módulo nominal

Notes
Note
Notas

fs				
Type of load and starts per hour Tipo di carico e avviamenti per ora		Oper. hours per day Ore di funz. giorn.		
		<2 h	2 - 8 h	8 - 16 h
Continuous or intermittent appl. with start / hour Applicazione cont. o interm. con n.ro operazioni/ora	Uniform / Uniforme	0.9	1	1.25
	Moderate / Moderato	1	1.25	1.5
	Heavy / Forte	1.25	1.5	1.75
Intermittent application with start / hour Applicazione intermittente con n.ro operazioni/ora	Uniform / Uniforme	1.25	1.5	1.75
	Moderate / Moderato	1.5	1.75	2
	Heavy / Forte	1.75	2	2.25

D	Motor flange available Flange disponibili Bridas disponibles
B)	Mounting with reduction ring Montaggio con boccia di riduzione Montaje con casquillo de reducción
C)	Motor flangeholes position/terminal box position Posizione fori flangia/basetta motore Posición agujeros brida / base motor
B)	Available without reduction bushes Disponibile anche senza boccia Disponibile tambien sin casquillo

A	Select required torque (according to service factor)	Seleziona la coppia desiderata (comprensiva del fattore di servizio)	Seleccionar el par deseado (incluyendo el factor de servicio)
B	Select ouput speed	Seleziona la velocità in uscita	Seleccionar la velocidad de salida
C	On the same line of selected geared motor, you can find the gear ratio	Sulla riga corrispondente alla motorizzazione prescelta si può rilevare il rapporto di riduzione	En la línea correspondiente al motor preseleccionado es posible encontrar la relación de reducción
D	Select motor flange available (if requested)	Scegli la flangia disponibile (se richiesta)	Seleccionar la brida disponible (sobre pedido)



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges		Dynamic efficiency	Tooth Module  [mm]	Ratio code 
							-W 56C	-X 143-5TC	RD		
250.0	7	2	419	2.5	5.10	1053	B		83	3.1	01
175.0	10	2	583	1.9	3.93	1133	B		81	3.1	02
116.7	15	2	854	1.4	2.75	1159	B		79	3.1	03
92.1	19	2	1068	1.1	2.20	1159	B		78	2.6	04
72.9	24	1.5	972	1.2	1.87	1195	B		75	2.0	05
58.3	30	1.5	1199	1.0	1.56	1230	B		74	3.2	06
48.6	36	1	882	1.4	1.42	1239	B		68	2.7	07
43.8	40	1	951	1.2	1.25	1177	B		66	2.5	13
38.9	45	1	1070	1.1	1.08	1142	B		66	2.1	08
29.2	60	0.75	1005	1.1	0.83	1097	B		62	1.6	12
26.1	67	0.5	724	1.4	0.73	1044	B		60	1.5	09
21.9	80	0.5	821	1.2	0.62	1000	B		57	1.3	10
18.6	94	0.5	880	1.1	0.58	1000	B		52	1.1	11

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit Q63 is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore tipo Q63 viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

E El reductor tamaño Q63 se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

LUBRICATION Q63 Oil Quantity 10.56 ounces

SHELL Omala S4 WE 320

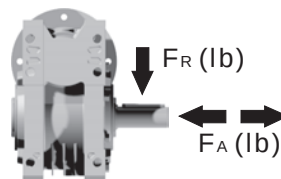
ENI Telium VSF 320

For all details on lubrication and plugs check our website **tab. 1**
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

RADIAL AND AXIAL LOADS

Output shaft

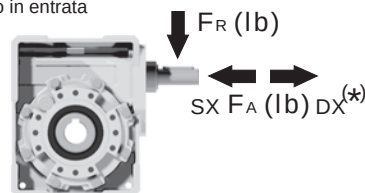
Albero di uscita



n_2 [min ⁻¹]	FA [lb]	FR [lb]
200	81	404.5
150	90	450
100	103.5	517
75	112.5	562
50	135	674.5
25	157	854
15	180	899

Input shaft

albero in entrata



n_1 [min ⁻¹]	FA [lb]	FR [lb]
1750	20	101

*Strong axial loads in the DX direction are not allowed.
Non sono consentiti forti carichi assiali con direzione DX

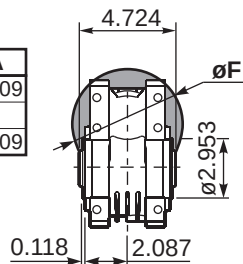
tab. 2

PQ63FB...

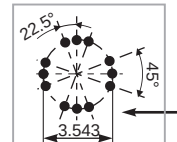
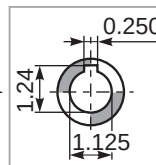
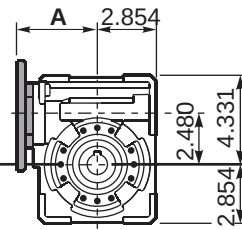
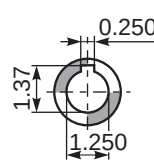
Basic wormbox
Riduttore baseGearbox
weight
peso riduttore

13.23 lb

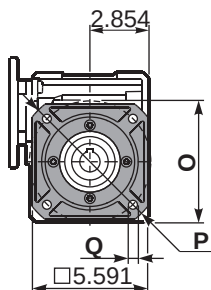
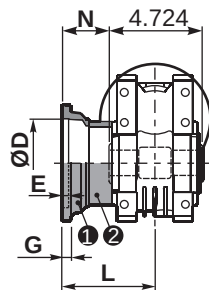
M. flanges	Kit code	øF	A
56C	KU063.4.041	6.50	4.409
143/5 TC	KU063.4.041	6.50	4.409



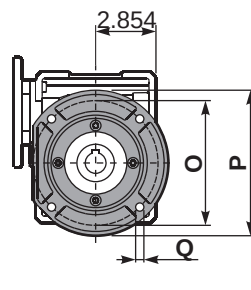
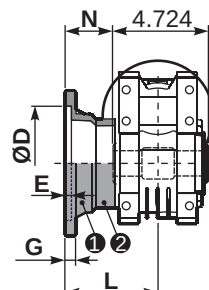
12 holes M8x0.55

Mounting holes
position
Posizione fori
di montaggioStandard
Hollow shaftOn request
A richiesta

PQ63FC...

Square flange
Flangia quadrata

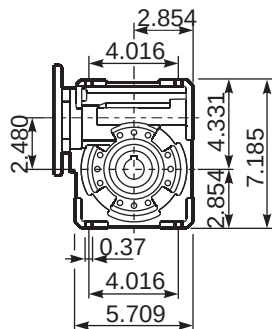
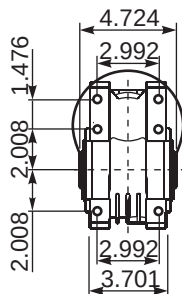
PQ63F1...

Round flange
Flangia rotonda

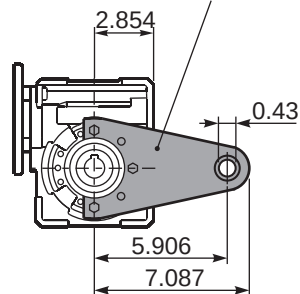
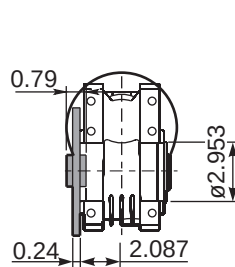
type B	øD	E	G	L	N	O	P	Q	kit code
FC	4.5354 4.5335	0.24	0.47	3.386	1.024	5.906	7.087	0.43	① KQ63.9.010 ② -
FL	4.5354 4.5335	0.24	0.47	4.567	2.205	5.906	7.087	0.43	① KQ63.9.010 ② K063.0.200

type S	øD	E	G	L	N	O	P	Q	kit code
F1	5.1260 5.1240	0.28	0.51	4.331	1.969	6.496	7.874	0.51	① KS070.9.013 ② -
F2	4.5354 4.5335	0.28	0.51	4.882	2.520	5.906	6.890	0.43	① KS063.9.013 ② -
F3	4.3321 4.3307	0.20	0.43	3.543	1.181	5.118	6.299	0.39	① KS063.9.011 ② -

PQ63FB...

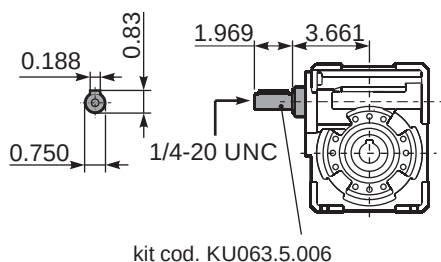
Feet
Piedini

PQ63BR...

Reaction arm
Braccio di reazione

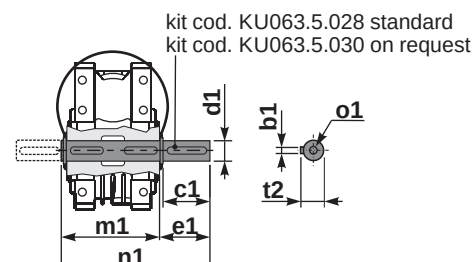
kit cod. K063.9.027

RQ63FB...

Input shaft
Albero in entrata

kit cod. KU063.5.006

PQ63.....S...

Single Shaft
Albero lento semplicekit cod. KU063.5.028 standard
kit cod. KU063.5.030 on request

	b1	c1	d1	e1	m1	n1	t2	o1	kit code
Standard	0.250	2.240	1.125	2.437	4.992	7.429	1.23	5/16-18	KU063.5.028
On request	0.250	2.362	1.250	2.559	4.992	7.551	1.36	5/16-18	KU063.5.030

On request : Special Hollow Shafts
Mozzo Uscita SpecialeOn request : Double extended worm shaft
Vite bisporgente



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges			Dynamic efficiency RD	Tooth Module  [mm]	 Ratios code
							-W	-X	-Y			
							56C	143-5TC	182-4TC			
250.0	7	5	1109	2.0	9.90	2168	B	B		88	4.23	01
175.0	10	5	1441	1.7	8.40	2390	B	B		80	4.2	02
125.0	14	5	1967	1.3	6.61	2567	B	B		78	4.5	03
87.5	20	3	1707	1.5	4.41	2478	B	B		79	3.4	04
79.5	22	3	1854	1.3	4.06	2478	B	B		78	3.1	05
62.5	28	3	2269	1.3	3.91	2921	B	B		75	4.7	06
46.1	38	3	2915	1.0	2.95	2832	B	B		71	3.5	07
38.0	46	2	2253	1.2	2.47	2744	B	B		68	3.1	08
33.7	52	2	2472	1.0	1.99	2434	B	B		66	2.7	09
26.1	67	1.5	2353	1.0	1.57	2434	B	B		65	2.1	10
23.6	74	1.5	2319	1.0	1.48	2257	B	B		58	1.9	11
18.2	96	1	1833	1.1	1.13	2036	B	B		53	1.5	12

 Motor Flanges Available
Flange Motore Disponibili

 B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

 C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit Q85 is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us.
See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore tipo Q85 viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

E El reductor tamaño Q85 se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico.
Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

LUBRICATION Q85 Oil Quantity 42.23 ounces

SHELL Omala S4 WE 320

ENI Telium VSF 320

For all details on lubrication and plugs check our website

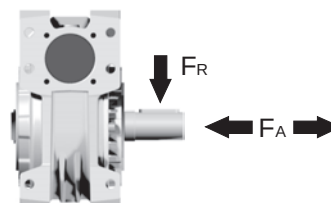
tab. 1

Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

RADIAL AND AXIAL LOADS

Output shaft

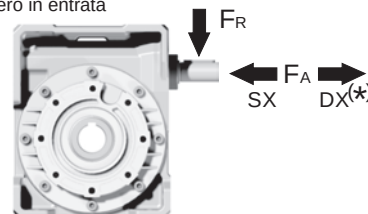
Albero di uscita



n_2 [min ⁻¹]	FA [lb]	FR [lb]
200	112	562
150	130	652
100	135	674
75	157	787
50	180	899
25	225	1124
15	261	1304

Input shaft

albero in entrata



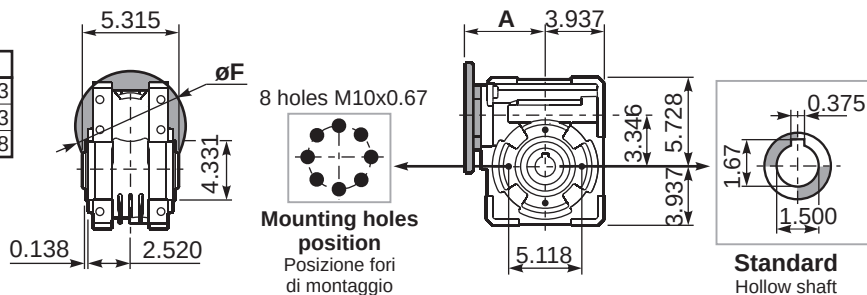
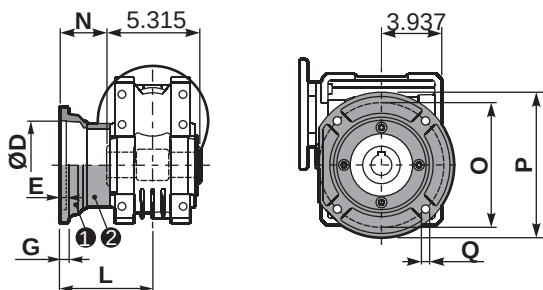
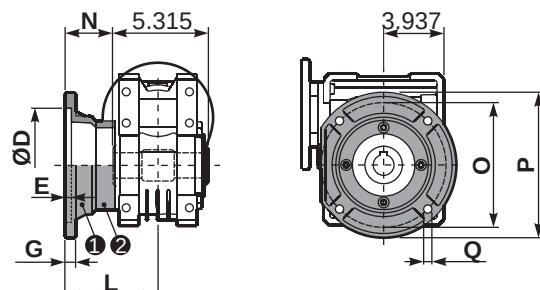
n_1 [min ⁻¹]	FA [lb]	FR [lb]
1750	29	146

***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

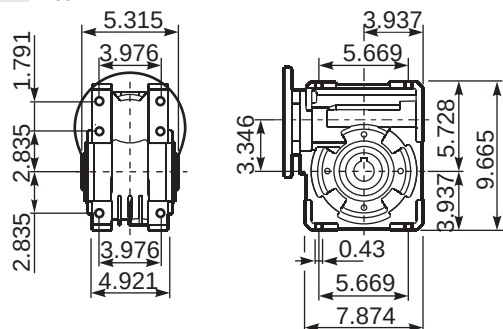
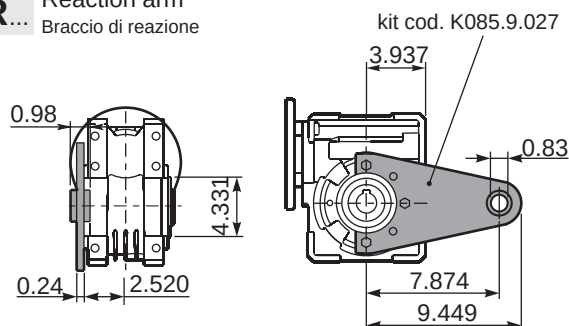
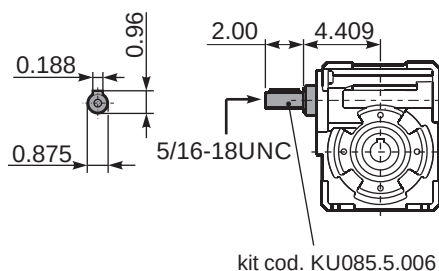
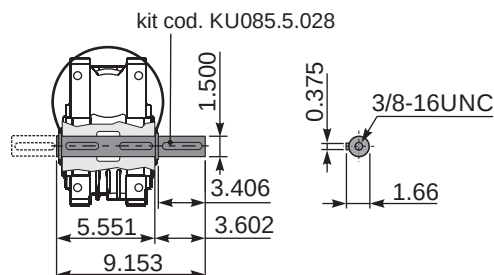
PQ85FB...Basic wormbox
Riduttore baseGearbox
weight
peso riduttore **41.23 lb**

M. flanges	Kit code	øF	A
56C	KU085.4.041	6.50	4.823
143/5 TC	KU085.4.041	6.50	4.823
182/4 TC	KU085.4.042	8.88	5.528

**PQ85FC...**Output flange
Flangia uscita**PQ85F1...**Output flange
Flangia uscita

type B	øD	E	G	L	N	O	P	Q	kit code
FC	5.9867 5.9843	0.20	0.63	4.252	1.594	6.929	8.071	0.51	① K085.9.010 ② -
FL	5.9867 5.9843	0.20	0.63	5.846	3.189	6.929	8.071	0.51	① K085.9.010 ② K085.0.201

type S	øD	E	G	L	N	O	P	Q	kit code
F1	5.1200 5.1181	0.20	0.51	4.626	1.969	6.496	7.874	0.45	① KS085.9.012 ② -
F2	5.9867 5.9843	0.20	0.59	5.807	3.150	7.087	8.071	0.49	① KS085.9.013 ② -
F4	5.1200 5.1181	0.20	0.51	4.193	1.535	6.496	7.874	0.51	① KS085.9.015 ② -

PQ85FB...Feet
Piedini**PQ85BR...**Reaction arm
Braccio di reazione**RQ85FB...**Input shaft
Albero in entrata**PQ85.....S...**Single Shaft
Albero lento semplice**On request : Special Hollow Shafts**
Mozzo Uscita Speciale**On request : Double extended worm shaft**
Vite bisporgente

Aluminum one step gearboxes

A modular and compact product

Flange

Fully modular to IEC and Compact integrated motor.
NEMA C flange

Alloy housing

Is vacuum impregnated (MIL-STD 276) for protection and sealing. No secondary finish required but readily accepts paint

Gears

Hardened and ground gears.

Removable inspection cover

Allows periodic inspection of gearing during routine maintenance

Output shaft

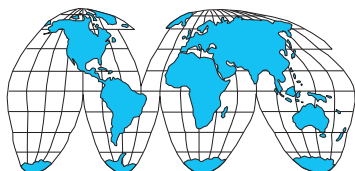
With well proportioned bearings

Feet

Removable feet.

Single-piece aluminum alloy housing

Combines light weight with high tensile strength. Precision machined for alignment of bearings and gearing

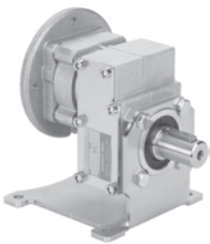


World wide sales network.

Lubricated for life with synthetic oil with operative range from -15° to +130°C



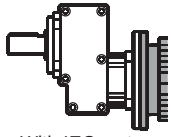
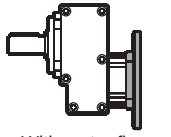
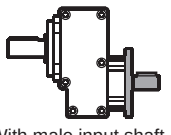
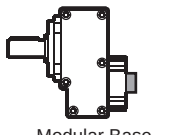
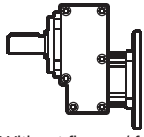
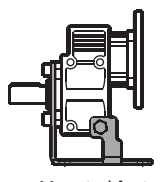
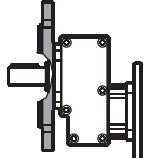
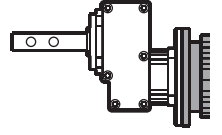
Specific type datasheet on page...



Types / Tipi /
Tipos

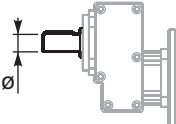
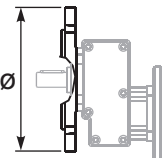
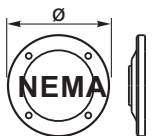
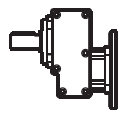
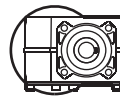
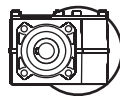
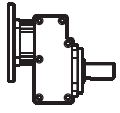
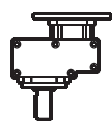
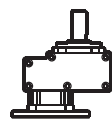
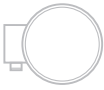


On page / A pagina / En la página			
4-5	4-7	4-9	4-11
211A 177lb in	311A 266lb in	411A 336lb in	511A 970lb in

Type - Tipo - Tipo	Size - Grandezza - Tamaño	Mounting - Montaggio Tipo de montaje
P	311A	-F
Aluminum one step gear Riduttori in alluminio a uno stadio  With IEC motor M  With motor flange P  With male input shaft R  Modular Base B	1 Stages Riduzioni Etapas 211A 311A 411A 511A	 Without flange / feet -N  Mounted feet H1  Output flange mounted -F
Special output shaft Albero uscita speciale  Only on request for Q.ty A richiesta per quantità		



On request we can deliver our products according to the ATEX
A richiesta possiamo fornire i nostri prodotti secondo le normative ATEX
A pedido, se pueden enviar nuestros productos de acuerdo con las normas ATEX.

Output shaft Albero uscita Eje en salida	Output flange Flangia uscita Brida en salida	Motor size - Grandezza motore Tamaño motor	Mounting position Posizione montaggio Position de montage	Input bore Foro entrata Eingangshohlwelle Trou d'entree Eje hueco de entrada	Terminal box position Posizione morsettiere Posición caja de bornes
X	U	-W	B3	ST	
Output shaft diameter Diametro albero uscita  → STANDARD 211A X → ø0.625 311A X → ø0.625 O → ø0.750 W → ø0.875 411A X → ø0.625 O → ø0.750 W → ø0.875 511A Y → ø1.125	Output flange diameter Diametro flangia uscita  N Senza flangia Without flange 211A I → ø4.13 Flangia integrata Integrated flange 311A U → ø6.50 2 → ø5.51 3 → ø6.30 4 → ø7.87 411A U → ø6.50 2 → ø5.51 3 → ø6.30 4 → ø7.87 511A U → ø6.50 2 → ø5.51 3 → ø6.30 4 → ø7.87 5 → ø9.84	 With Flange for type P -W → 56C -X → 143/5TC -Y → 182/4TC → STANDARD Without flange Senza flangia  211A 311A -K → ø0.625 411A -K → ø0.625 -N → ø0.875 511A -K → ø0.625 -N → ø0.875 -S → ø1.125 Type R Tipo R  211A 311A -K → ø0.625 411A -J → ø0.750 511A -J → ø0.750 -N → ø0.875	 B3 STANDARD  B6  B7  B8  V5  V6 Specify only for vertical positions Specificare solo per posizione verticale	ST Nothing indication: standard bore Nessuna indicazione: foro standard	With Type M specify terminal box position Con tipo M specificare posizione morsettiere  A  B STANDARD  C  D

POTENZA RICHIESTA / REQUIRED POWER / POTENCIA NECESARIA

Lifting / sollevamento / elevación

$$P [KW] = \frac{M [Kg] \cdot g [9.81] \cdot v [m / s]}{1000}$$

Rotation / rotazione / rotation

$$P [KW] = \frac{M [Nm] \cdot n [rpm]}{9550}$$

Linear movement / traslazione / translacion

$$P [KW] = \frac{F [N] \cdot v [m / s]}{1000}$$

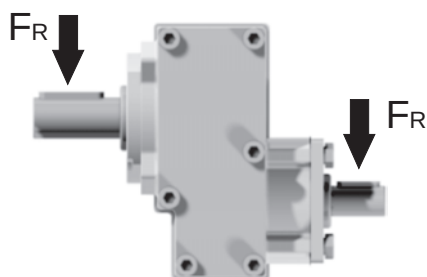
TORQUE / COPPIA / PAR

$$M [Nm] = \frac{9550 \cdot P[KW]}{n [rpm]}$$

$$M [lb in] = \frac{63030 \cdot P[HP]}{n [rpm]}$$

RADIAL LOADS / CARICHI RADIALI / CARGA RADIAL Y AXIAL

- Radial load generated by external transmissions keyed onto input and/or output shafts.
- Forza radiale generata da organi di trasmissione calettati sugli alberi di ingresso e/o uscita.
- Cargas radiales, generada por transmisiones externas, aplicadas sobre los ejes de entrada y/o salida



$F_R \text{ [N]} = \frac{M \text{ [Nm]} \cdot 2000}{d \text{ [mm]}} \cdot f_k$		$F_R \text{ [N]} = \frac{M \text{ [lb in]} \cdot 8.9}{d \text{ [in]}} \cdot f_k$	
M	Momento torcente / Output torque / Par torsion		
d	Diametro primitivo / Diam. of driving element / Diámetro primitivo		
f _k	Coefficiente di trasformazione / Factor / Coeficiente de transmisión 1.15 Ingranaggi / Gearwheels / Engranaje 1.25 Catena / Chain sprockets / Cadena 1.75 Cinghia Trapezoidale / Narrow v-belt pulley / Correa trapezoidal 2.50 Cinghia piatta / Flat-belt pulley / Correa plana		

- If your application requires higher radial loads, contact our technical office. Higher load may be possible.
- Nel caso la vostra applicazione richieda carichi radiali superiori consultare il nostro ufficio tecnico, valori maggiori possono essere accettati.
- En el caso en que una aplicación exija una carga radial superior a la especificada en el catálogo, consultar a nuestra oficinas técnica.

How to select a gearbox / Come selezionare un riduttore Cómo seleccionar un reductor

B Output speed
Velocità in uscita
Velocidad de salida

Nominal power
Potenza nominale
Potencia nominal

Gear size
Grandezza riduttore
Tamaño reductor

Motor power
Potenza motore
Potencia motor

A Nominal torque
Momento torcente nominale
Par de torsión nominal

Flange code
Codice flangia
Código bridas

Preferential ratio
Rapporto preferenziale
Relación preferente

Input speed
Velocità in entrata
Velocidad de entrada

311A

One step
266lb in

Rating - Alluminum ONE STEP GEARBOXES

QUICK SELECTION / Selezione veloce							input speed (n _i) = 1750 min ⁻¹		
Output Speed n ₂ [min ⁻¹]	Ratio i	Motor power P _{1M} [HP]	Output torque M _{2M} [lb in]	Service factor f.s.	Nominal power P _{1R} [HP]	Nominal torque M _{2R} [lb in]	Available NEMA motor flanges		Output Shaft
							-W	-	
							56C	-	
1113.6	1.57	0.75	56	2.1	2.07	115			2844
615.7	2.84	0.75	100	2.0	2.03	204			1954
531.3	3.29	0.75	115	2.0	1.98	230			1756
									standard ø0.625

C Ratio
Rapporto
Relación

Transmitted torque
Momento torcente trasmesso
Par transmitido

Service factor
Fattore di servizio
Factor de servicio

Output Shaft diam.
Diam. albero uscita
Díametro eje de salida

Notes
Note
Notas

fs		Oper. hours per day Ore di funz. giorn.		
Type of load and starts per hour Tipo di carico e avviamenti per ora		3 h	10 h	24 h
Continuous or intermittent appl. with start / hour Applicazione cont. o interm. con n.ro operazioni/ora	Uniform / Uniforme	0.8	1	1.25
	Moderate / Moderato	1	1.25	1.5
	Heavy / Forte	1.25	1.5	1.75
Intermittent application with start / hour Applicazione intermittente con n.ro operazioni/ora	Uniform / Uniforme	1	1.25	1.5
	Moderate / Moderato	1.25	1.5	1.75
	Heavy / Forte	1.5	1.75	2.15

D	Motor flange available Flange disponibili Bridas disponibles
B)	Mounting with reduction ring Montaggio con boccola di riduzione Montaje con casquillo de reducción
C)	Motor flangeholes position/terminal box position Posizione fori flangia/basetta motore Posición agujeros brida / base motor
B)	Available without reduction bushes Disponibile anche senza boccola Disponibile también sin casquillo

A	Select required torque (according to service factor)	Seleziona la coppia desiderata (comprensiva del fattore di servizio)	Seleccionar el par deseado (incluyendo el factor de servicio)
B	Select output speed	Seleziona la velocità in uscita	Seleccionar la velocidad de salida
C	On the same line of selected geared motor, you can find the gear ratio	Sulla riga corrispondente alla motorizzazione prescelta si può rilevare il rapporto di riduzione	En la línea correspondiente al motor preseleccionado es posible encontrar la relación de reducción
D	Select motor flange available (if requested)	Scegli la flangia disponibile (se richiesta)	Seleccionar la brida disponible (sobre pedido)



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges	Output Shaft	Ratios code
							-W 56C		
853	2.05	0.75	54	1.6	1.22	89		1939	01
744	2.35	0.75	62	1.7	1.28	106		1740	02
625	2.80	0.75	74	1.7	1.25	124		1542	03
517	3.38	0.75	90	1.7	1.26	150		1344	04
372	4.70	0.75	124	1.4	1.07	177		1047	05
281	6.22	0.75	165	1.2	0.93	204		956	06
211	8.29	0.5	146	1.2	0.61	177		758	07
178	9.83	0.33	115	1.2	0.41	142		659	08

The dynamic efficiency is **0.98** for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit **211A** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore **211A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

E El reductor tamaño **211A** se suministra, lubricado de por vida con aceites sintéticos y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

LUBRICATION 211A Oil Quantity 1.76 ounces

SHELL Omala S4 WE 320

ENI Telium VSF 320

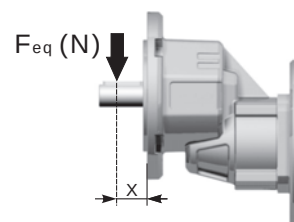
For all details on lubrication and plugs check our website **tab. 1**
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita

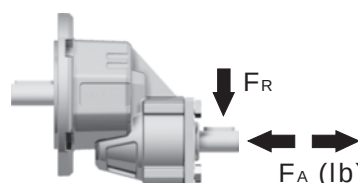
$$F_{eq} = F_R \cdot \frac{1.54}{X+0.77}$$



n_2	FA	FR
700	22.7	113.3
600	27.0	134.9
400	31.0	156.5
300	33.9	170.0
200	39.3	196.9
140	43.2	215.8

Input shaft

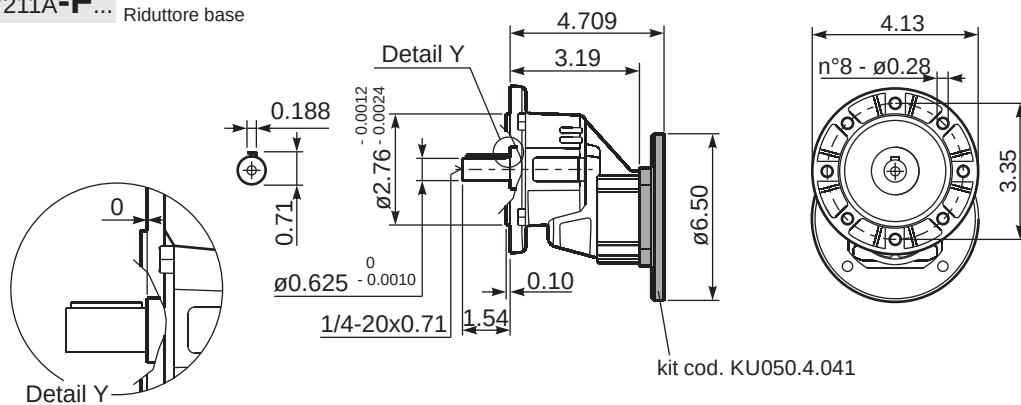
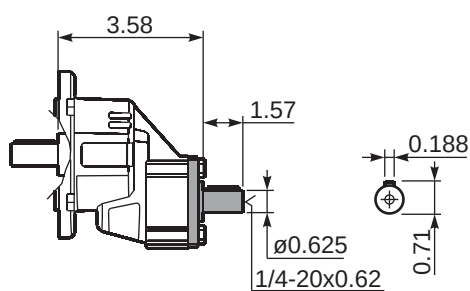
albero in entrata



n_2	FA	FR
1750	37.8	188.8
1140	43.2	215.8

*Strong axial loads in the DX direction are not allowed.
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

P211A-F... Basic wormbox
Riduttore baseGearbox
weight
peso riduttore **3.09 lb****R211A-F...** Basic wormbox
Riduttore base



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges		Output Shaft		Ratios code
							-W	-			
							56C	-			
1114	1.57	1	55	2.1	2.07	115			2844	standard ø0.625 On request ø0.750 ø0.875	01
616	2.84	1	100	2.0	2.03	204			1954		02
531	3.29	1	116	2.0	1.98	230			1756		03
453	3.87	1	136	1.8	1.82	248			1558		04
379	4.62	1	163	1.6	1.63	266			1360		05
278	6.30	1	222	1.4	1.39	310			1063		06
213	8.22	0.75	218	1.5	1.16	336			974		07
161	10.86	0.50	192	1.3	0.65	248			776		08

The dynamic efficiency is **0.98** for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit **311A** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore **311A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

E El reductor tamaño **311A** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

LUBRICATION 311A Oil Quantity 3.52 Ounces

SHELL Omala S4 WE 320

ENI Telium VSF 320

For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

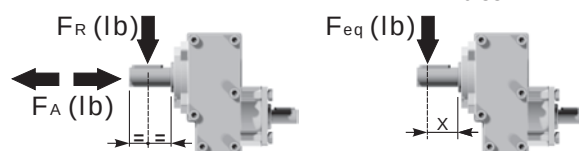
tab. 1

RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita

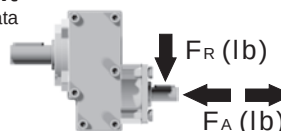
$$F_{eq} = F_R \cdot \frac{1.61}{X+0.83}$$



n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
700	18.9	94.4	400	25.8	130.3	200	32.8	164.0
600	22.5	112.3	300	28.3	141.5	140	35.9	179.7

Input shaft

Albero in entrata

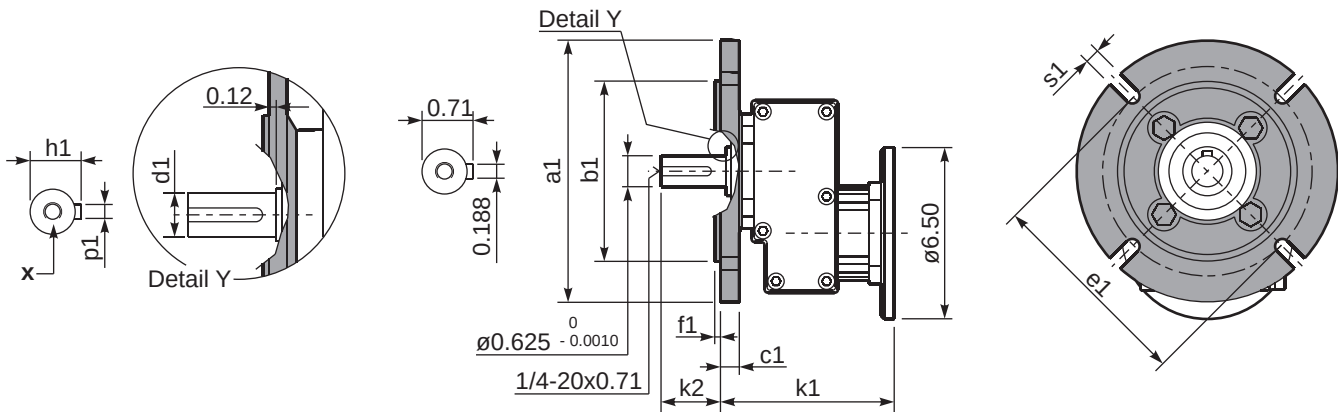


n_1	FA	FR
1750	31.4	157.3
1140	35.9	179.7

tab. 2

P311-F...	Output flange flange di uscita
-----------	-----------------------------------

Gearbox weight peso riduttore	Mold base	4.41 lb
	With flange	5.29 lb



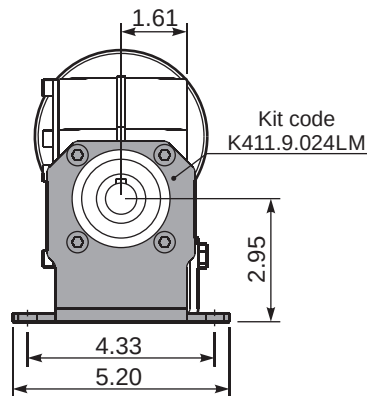
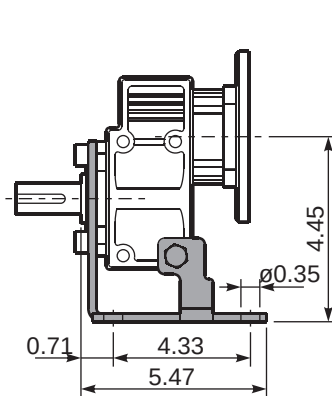
***Available output shaft / Albero di uscita**

	Shaft - d1	p1	h1	x
Standard	Ø0.625x2.06	0.188	0.71	1/4-20x0.71
On request A richiesta	Ø0.750x2.125	0.188	0.83	1/4-20x0.71
	Ø0.875x2.125	0.188	0.96	1/4-20x0.71

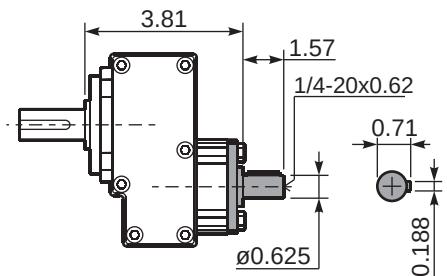
Available output flanges / flange di uscita

a1 ø	b1	c1	e1	f1	k1	k2	s1	kit code	Type
6.50	4.50 ^{-0.0017} _{-0.0033}	0.39	5.87	0.13	5.19	1.84	0.41	KU311.9.012	Nema
5.51	3.74 ^{-0.0014} _{-0.0028}	0.45	4.53	0.12	5.09	1.92	0.35	KC30.9.011	Metric
6.30	4.33 ^{-0.0014} _{-0.0028}	0.45	5.12	0.14	5.09	1.92	0.35	KC30.9.012	
7.87	5.12 ^{-0.0017} _{-0.0033}	0.45	6.50	0.14	5.09	1.92	0.43	KC30.9.013	

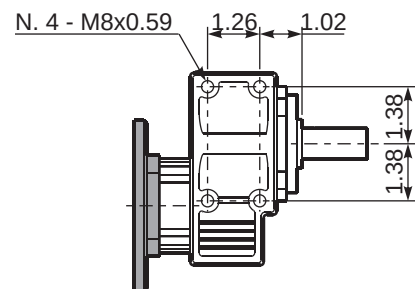
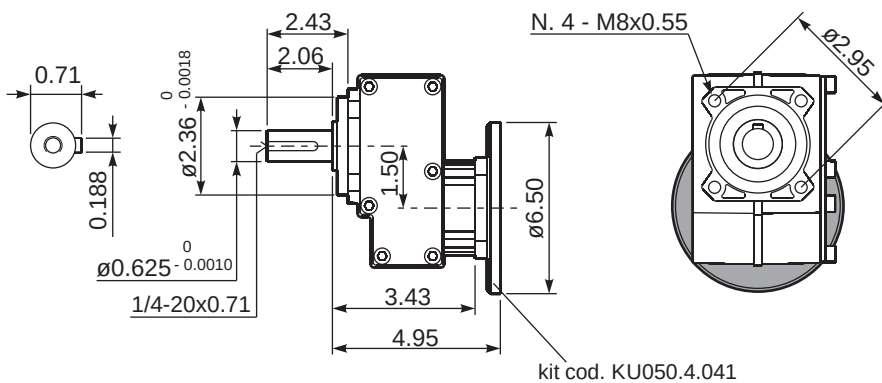
P311-H1... With feet
Con piedini



R311-N...	Input Shaft Albero in entrata
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P311-N...	Basic gearbox Riduttore base
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QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges		Output Shaft		
							-W	-X			
							56C	143/5TC			Ratios code
1114	1.57	2	111	1.6	3.19	177			2844	standard ø0.750	01
616	2.84	2	201	1.5	3.09	310			1954		02
531	3.29	2	233	1.4	2.89	336			1756		03
453	3.87	2	273	1.3	2.59	354			1558		04
379	4.62	2	326	1.3	2.55	416			1360		05
278	6.30	1.5	334	1.2	1.83	407			1063		06
213	8.22	0.75	218	1.5	1.16	336			974		07
161	10.86	0.5	192	1.3	0.65	248			776		08

The dynamic efficiency is **0.98** for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit **411A** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore **411A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

E El reductor tamaño **411A** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

LUBRICATION 411A Oil Quantity 3.52 Ounces

SHELL Omala S4 WE 320

ENI Telium VSF 320

For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

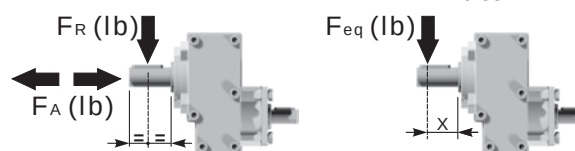
tab. 1

RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita

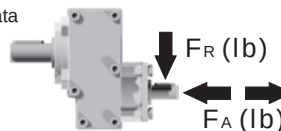
$$F_{eq} = F_R \cdot \frac{1.81}{X+0.83}$$



n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
700	40.9	204.4	400	51.7	258.4	200	65.1	325.8
600	44.9	224.7	300	56.2	280.8	140	71.9	359.5

Input shaft

Albero in entrata



n_1	FA	FR
1750	53.9	269.6
1140	62.9	314.5

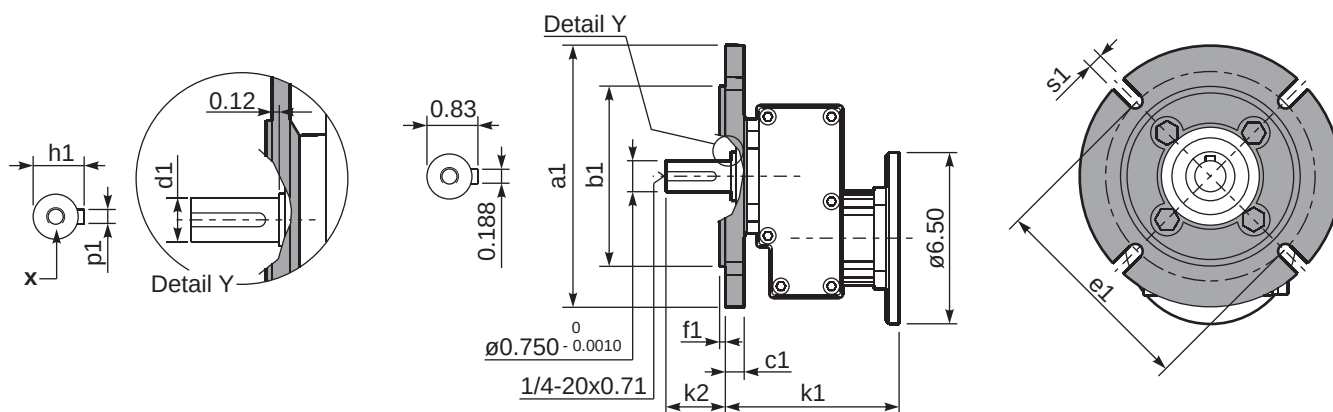
tab. 2

P411-F... Output flange
flange di uscita

Gearbox weight
peso riduttore

Mold base **6.39 lb**

With flange **7.27 lb**



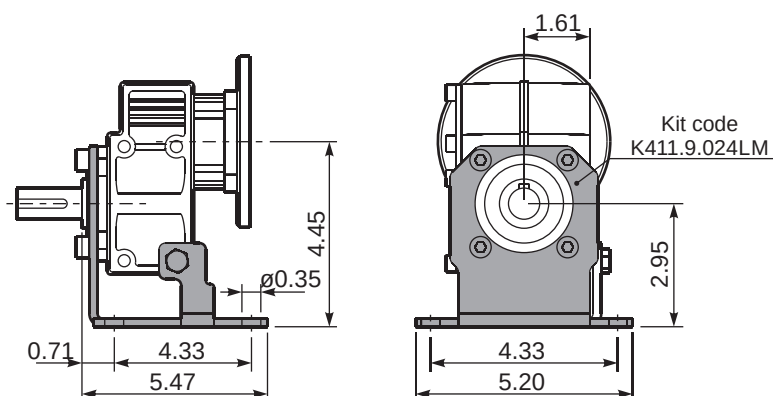
***Available output shaft / Albero di uscita**

	Shaft - d1	p1	h1	x
Standard	Ø0.750x2.125	0.188	0.83	1/4-20x0.71
On request A richiesta	Ø0.625x2.06	0.188	0.71	1/4-20x0.71
	Ø0.875x2.125	0.188	0.96	1/4-20x0.71

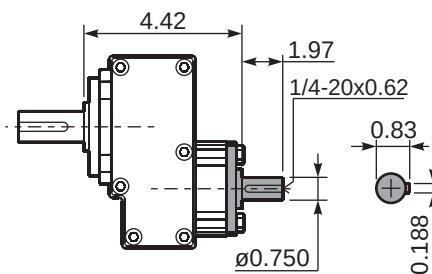
Available output flanges / flange di uscita

a1 Ø	b1	c1	e1	f1	k1	k2	s1	kit code	Type
6.50	4.50 ^{-0.0017} _{-0.0033}	0.39	5.87	0.13	5.51	1.91	0.41	KU311.9.012	Nema
5.51	3.74 ^{-0.0014} _{-0.0028}	0.45	4.53	0.12	5.42	1.99	0.35	KC30.9.011	Metric
6.30	4.33 ^{-0.0014} _{-0.0028}	0.45	5.12	0.14	5.42	1.99	0.35	KC30.9.012	
7.87	5.12 ^{-0.0017} _{-0.0033}	0.45	6.50	0.14	5.42	1.99	0.43	KC30.9.013	

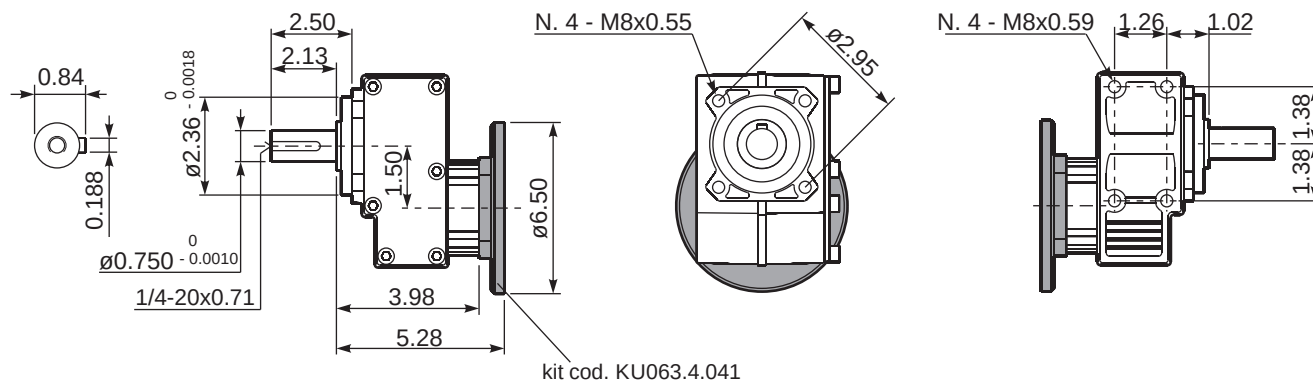
P411-H1... With feet
Con piedini



R411-N... Input Shaft
Albero in entrata



P411-N... Basic gearbox
Riduttore base





QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges		Output Shaft		Ratios code
							-X	-Y			
							143/5TC	182/4TC			
1346	1.30	5	229	1.5	7.72	354			3039		01
714	2.45	5	432	1.4	7.16	620			2049		02
528	3.31	5	585	1.4	6.81	797			1653		03
406	4.31	3	456	2.1	6.40	974			1356		04
332	5.27	3	558	1.7	5.23	974			1158		05
230	7.63	2	538	1.8	3.62	974			861		06
167	10.50	1.5	556	1.3	1.91	708			663		07

The dynamic efficiency is **0.98** for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit **511A** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore **511A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

E El reductor tamaño **511A** se suministra, lubricado de por vida con aceites sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

LUBRICATION 511A Oil Quantity 10.21 Ounces

SHELL Omala S4 WE 320

ENI Telium VSF 320

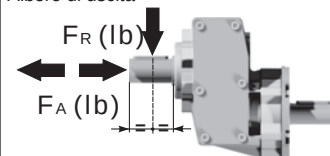
For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

tab. 1

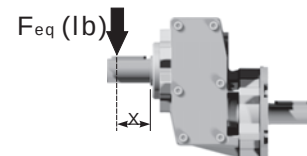
RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita



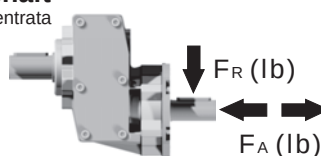
$$F_{eq} = F_R \cdot \frac{1.88}{X+0.90}$$



n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
700	66.0	330.3	400	83.1	415.6	200	103.3	516.7
600	71.9	359.5	300	89.9	449.3	140	114.6	572.9

Input shaft

Albero in entrata



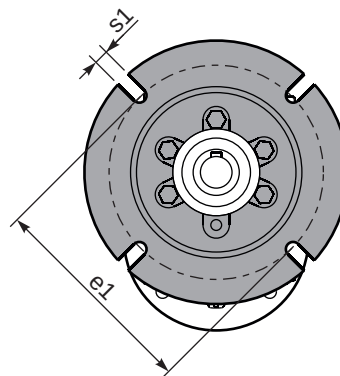
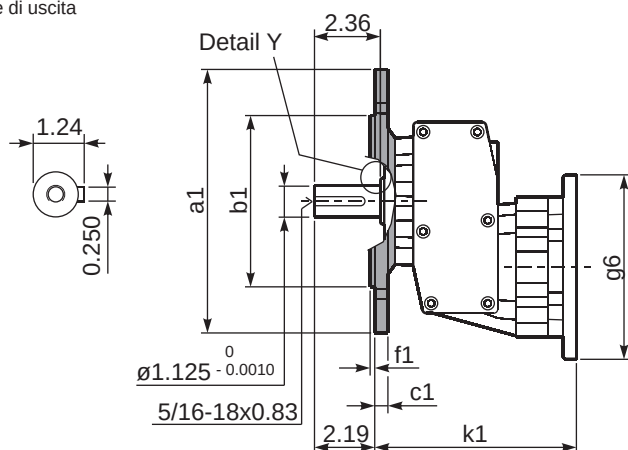
n_1	FA	FR
1750	89.9	449.3
1140	98.8	494.3

tab. 2

P511-F... Output flanges
flange di uscitaGearbox weight
peso riduttore

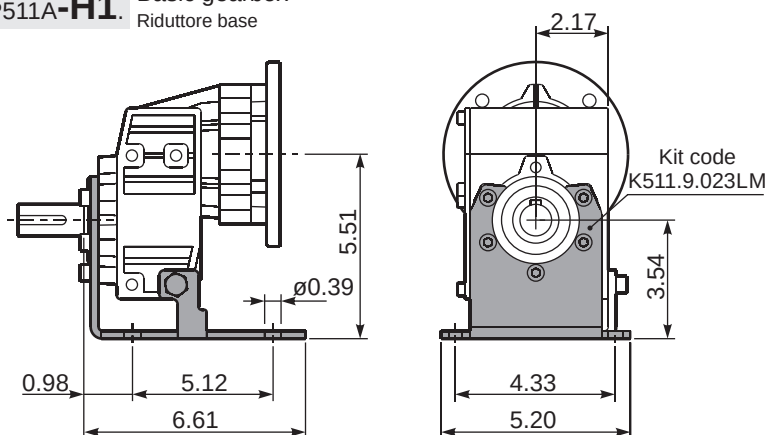
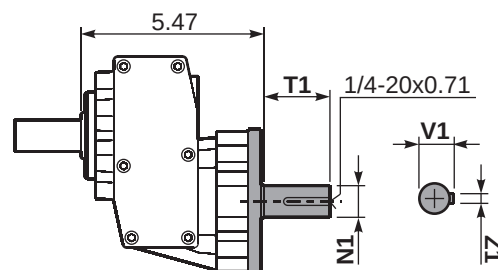
Mold base 10.8 lb

With flange 12.8 lb

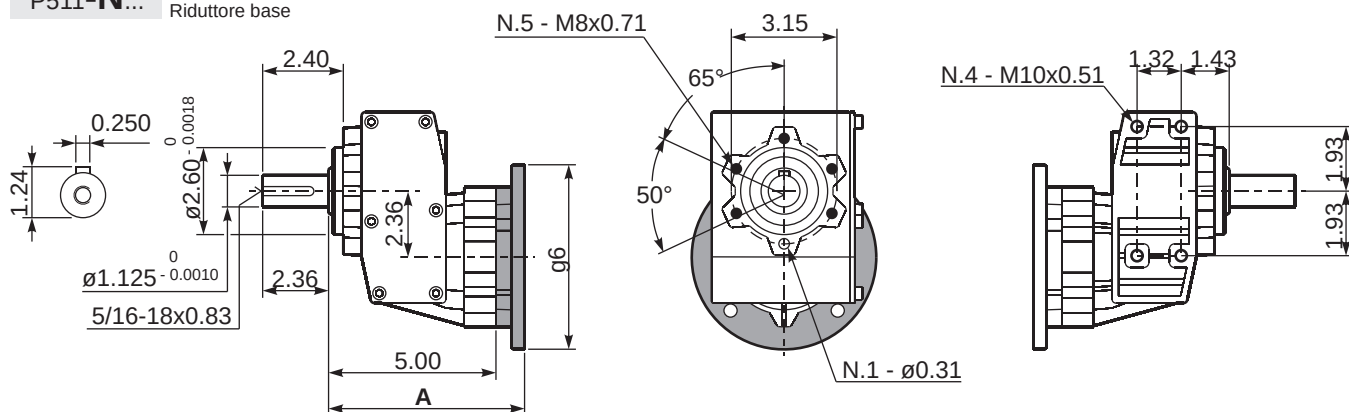


Available output flanges / flange di uscita

a1 Ø	b1	c1	e1	f1	s1	kit code	Type
6.50	4.50 ^{+0.0017} _{-0.0033}	0.61	5.87	0.13	0.41	KU511.9.012	Nema
5.51	3.74 ^{+0.0014} _{-0.0028}	0.39	4.53	0.12	0.35	KC40.9.011	Metric
6.30	4.33 ^{+0.0014} _{-0.0028}	0.39	5.12	0.14	0.35	KC40.9.012	
7.87	5.12 ^{+0.0014} _{-0.0028}	0.43	6.50	0.14	0.43	KC40.9.013	
9.84	7.09 ^{+0.0017} _{-0.0033}	0.45	8.46	0.14	0.55	KC40.9.014	

P511A-H1. Basic gearbox
Riduttore base**R511A-N...** Input Shaft
Albero in entrata

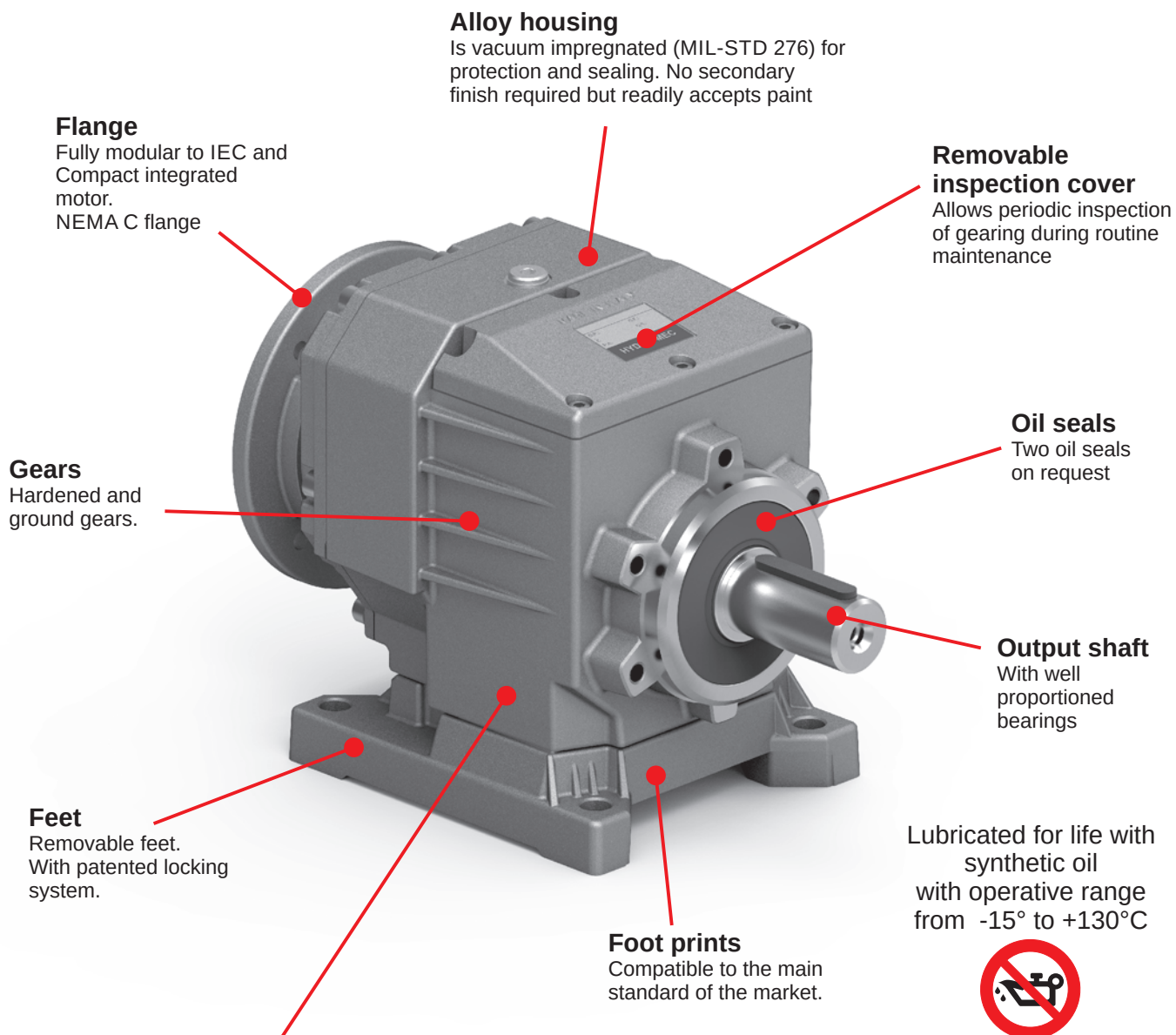
Input shaft	N1	T1	V1	Z1	kit code
Standard	0.875	1.97	0.96	0.188	KC50.5.070U
On request	0.750	1.97	0.83	0.188	KC50.5.069U

P511-N... Basic gearbox
Riduttore base

Nema flanges	A	k1	g6	kit code
143/5TC	5.98	6.15	6.50	KU085.4.041
182/4TC	6.69	6.86	8.88	KU085.4.042

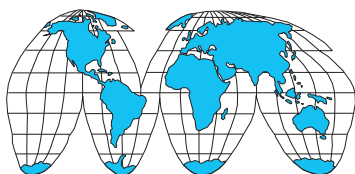
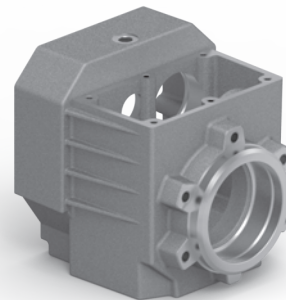
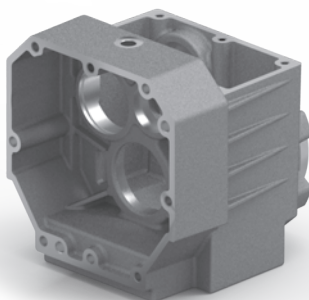
Aluminum in line gearboxes

A modular and compact product



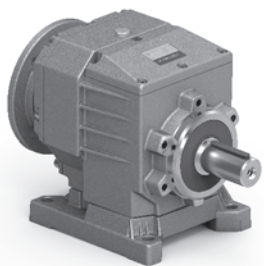
Single-piece aluminum alloy housing

Combines light weight with high tensile strength. Precision machined for alignment of bearings and gearing



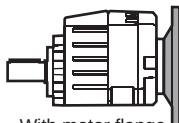
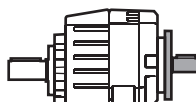
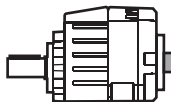
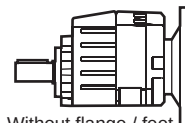
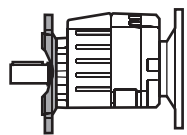
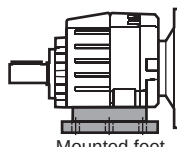
World wide sales network.

Specific type datasheet on page...



Types / Tipi /
Tipos ➡

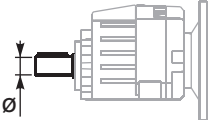
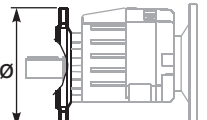
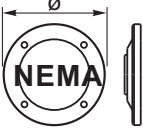
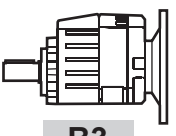
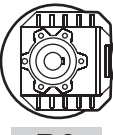
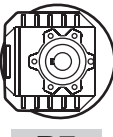
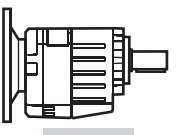
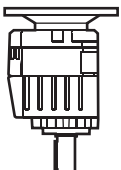
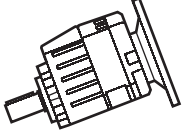
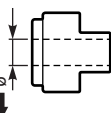
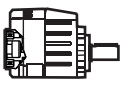
On page / A pagina / En la página								
5-5	5-7	5-9	5-11	5-13	5-15	5-17	5-19	5-21
202A 620lb in	302A 1062lb in	412A 1550lb in	413A 1550lb in	452A 2600lb in	512A 3180lb in	513A 3180lb in	612A 4690lb in	613A 4690lb in

Type - Tipo - Typ Type - Tipo	Size - Grandezza - Grösse Taille - Tamaño	Mounting - Montaggio Montage - Fixation Tipo de montaje	Ratio - Rapporto Untersetzung Reduction - Relación																																																																
P	402A	-F	7.33																																																																
Aluminum coaxial gear boxes Riduttori coassiali in alluminio  With IEC motor M  With motor flange P  With male input shaft R  Modular base B	2 Stages Riduzioni Stufen Trains Etapas 202A 302A 412A 452A 512A 612A 3 Stages Riduzioni Stufen Trains Etapas 413A 513A 613A	 Without flange / feet -N  Output flange mounted -F  Mounted feet B.. Feet / piedini <table><tr><th>Feet Code</th><th>Market reference</th><th>G</th><th>H</th><th>R</th><th>L</th><th>L1</th><th>S</th></tr><tr><td>B1</td><td>112</td><td>18</td><td>85</td><td>110</td><td>87</td><td>50</td><td></td></tr><tr><td>B2</td><td>212/3</td><td>18</td><td>100</td><td>130</td><td>107.5</td><td></td><td></td></tr><tr><td>S1</td><td>17</td><td>18</td><td>75</td><td>110</td><td>90+20</td><td></td><td></td></tr><tr><td>S2</td><td>27</td><td>25</td><td>90</td><td>110</td><td>130</td><td></td><td></td></tr><tr><td>M1</td><td>42/3</td><td>25</td><td>80</td><td>110+120</td><td>85</td><td></td><td></td></tr><tr><td>L4</td><td>04</td><td>13</td><td>80</td><td>105</td><td></td><td></td><td></td></tr><tr><td>L5</td><td>05</td><td>16</td><td>100</td><td>125</td><td></td><td></td><td></td></tr></table> You see feet code in the chart of the dimensions Vedi codice piede nella tabella delle dimensioni	Feet Code	Market reference	G	H	R	L	L1	S	B1	112	18	85	110	87	50		B2	212/3	18	100	130	107.5			S1	17	18	75	110	90+20			S2	27	25	90	110	130			M1	42/3	25	80	110+120	85			L4	04	13	80	105				L5	05	16	100	125				See technical data table Vedi tabelle dati tecnici Ver tabla datos técnicos
Feet Code	Market reference	G	H	R	L	L1	S																																																												
B1	112	18	85	110	87	50																																																													
B2	212/3	18	100	130	107.5																																																														
S1	17	18	75	110	90+20																																																														
S2	27	25	90	110	130																																																														
M1	42/3	25	80	110+120	85																																																														
L4	04	13	80	105																																																															
L5	05	16	100	125																																																															



On request we can deliver our products according to the ATEX
A richiesta possiamo fornire i nostri prodotti secondo le normative ATEX
Auf Anfrage können wir unsere Produkte den Richtlinien ATEX entsprechend liefern
Sur demande nos produits peuvent se conformer à la réglementation ATEX
A pedido, se pueden enviar nuestros productos de acuerdo con las normas ATEX.

CODIFICA / HOW TO ORDER / CODIFICACIÓN

Output shaft Albero uscita Eje en salida	Output flange Flangia uscita Brida en salida	Motor size - Grandezza motore Tamaño motor	Mounting position Posizione montaggio Posición de montaje	Input bore Foro entrata Eingangshohlwelle Trou d'entree Eje hueco de entrada	Terminal box position Posizione morsettiera Posición caja de bornes
X	U	-W	B3	ST	
Output shaft diameter Diametro albero uscita  → STANDARD 202A X → ø0.625 O → ø0.750 302A O → ø0.750 X → ø0.625 412A 413A Q → ø1.000 O → ø0.750 452A 512A 513A T → ø1.250 612A 613A Z → ø1.375 T → ø1.250	Output flange diameter Diametro flangia uscita  N Senza flangia Without flange 202A 302A U → ø6.50 2 → ø5.51 3 → ø6.30 4 → ø7.87 412A 413A U → ø6.50 2 → ø5.51 3 → ø6.30 4 → ø7.87 452A 512A 513A 612A 613A U → ø6.50 2 → ø5.51 3 → ø6.30 4 → ø7.87 5 → ø9.84	 With Flange for type P -W → 56C -X → 143/5TC -Y → 182/4TC → STANDARD Without flange Senza flangia  -M With coupling Con giunto 202A 413A -K → ø0.625 302A 412A 513A 613A -K → ø0.625 -N → ø0.875 452A 512A 612A -K → ø0.625 -N → ø0.875 -S → ø1.125 Type R Tipo R  202A 413A -K → ø0.625 302A -J → ø0.750 412A 513A 613A -K → ø0.625 -J → ø0.750 452A 512A 612A -J → ø0.750 -N → ø0.875	 B3 STANDARD  B6  B7  B8  V5  V6  V8 Specify only for vertical positions Specificare solo per posizione verticale	ST Nothing indication: standard bore Nessuna indicazione: foro standard COUPLING  -W = ø0.625" -X = ø0.875" -Y = ø1.125" 0 Ready for input coupling Predisposto per giunto 	With Type M specify terminal box position Con tipo M specificare posizione morsettiera A B STANDARD C D

POTENZA RICHIESTA / REQUIRED POWER / ERFORDERLICHE LEISTUNG / PUISSANCE NECESSAIRE / POTENCIA NECESARIA

Lifting / sollevamento / hubantriebe / levage / elevación

$$P [KW] = \frac{M [Kg] \cdot g [9.81] \cdot v [m / s]}{1000}$$

Rotation / rotazione / drehung / rotation / rotation

$$P [KW] = \frac{M [Nm] \cdot n [rpm]}{9550}$$

Linear movement / traslazione / linearbewegung / translation / translacion

$$P [KW] = \frac{F [N] \cdot v [m / s]}{1000}$$

TORQUE / COPPIA / DREHMOMENT / COUPLE / PAR

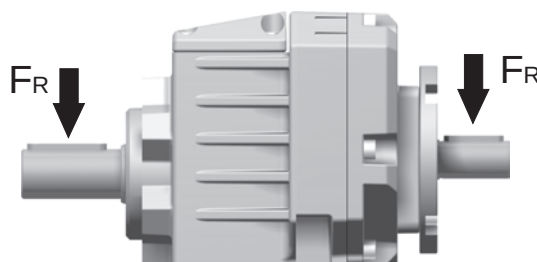
$$M [Nm] = \frac{9550 \cdot P[KW]}{n [rpm]}$$

$$M [lb in] = \frac{63030 \cdot P[HP]}{n [rpm]}$$

5

RADIAL LOADS / CARICHI RADIALI / RADIALE - UND AXIALLASTEN / CHARGES RADIALES / CARGA RADIAL Y AXIAL

- Radial load generated by external transmissions keyed onto input and/or output shafts.
- Forza radiale generata da organi di trasmissione calettati sugli alberi di ingresso e/o uscita.
- Belastungen der Antriebs- bzw. Abtriebswellen durch von aussen eingebrachte Radiallasten.
- Charge radiale générée par la transmissions calés sur les entrées et / ou des arbres de sortie
- Cargas radiales, generada por transmisiones externas, aplicadas sobre los ejes de entrada y/o salida



$F_R \text{ [N]} = \frac{M \text{ [Nm]} \cdot 2000}{d \text{ [mm]}} \cdot f_k$		$F_R \text{ [N]} = \frac{M \text{ [lb in]} \cdot 8.9}{d \text{ [in]}} \cdot f_k$	
M	Momento torcente / Output torque / Abtriebsdrehmoment / Couple / Par torsion		
d	Diametro primitivo / Diam. of driving element / Durchmesser der Abtriebseinheit / Diamètre primitif / Diámetro primitivo		
f _k	Coefficiente di trasformazione / Factor / Faktor / Coefficient de transmission / Coeficiente de transmisión 1.15 Ingranaggi / Gearwheels / Zahnrad / Engrenage / Engranaje 1.25 Catena / Chain sprockets / Antriebskette / Chaîne / Cadena 1.75 Cinghia Trapezoidale / Narrow v-belt pulley / Keilriemen / Courroie trap. / Correa trapezoidal 2.50 Cinghia piatta / Flat-belt pulley / Flachzahnriem. / Courroie crantée / Correa plana		

- If your application requires higher radial loads, contact our technical office. Higher load may be possible.
- Nel caso la vostra applicazione richieda carichi radiali superiori consultare il nostro ufficio tecnico, valori maggiori possono essere accettati.
- Wenn Ihre Anwendung höhere Radialbelastungen erfordert, so wenden Sie sich bitte an unser technischen Büro.
- Si votre application demande des charges radiales supérieures, s'adresser à notre bureau technique.
- En el caso en que una aplicación exija una carga radial superior a la especificada en el catálogo, consultar a nuestra oficinas técnica.

How to select a gearbox / Come selezionare un riduttore Cómo seleccionar un reductor

B Output speed
Velocità in uscita
Velocidad de salida

Nominal power
Potenza nominale
Potencia nominal

Gear size
Grandezza riduttore
Tamaño reductor

Motor power
Potenza motore
Potencia motor

A Nominal torque
Momento torcente nominale
Par de torsión nominal

Flange code
Codice flangia
Código bridas

Preferential ratio
Rapporto preferenziale
Relación preferente

Input speed
Velocità in entrata
Velocidad de entrada

412A

Coaxial - Gear

1550lb in

Rating - Alluminum

COAXIAL GEAR BOXES

QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges		Output Shaft		Ratio code
							-W 56C	-X 143/5 TC			
498	3.52	2	243	2.9	5.82	708			2821		01
401	4.37	2	302	2.6	5.28	797			2818		02
315	5.56	2	385	2.3	4.60	885			2813		03
275	6.36	2	410	2.1	4.23	929			1921		04
239	7.33	2	507	2.1	4.19	1062			2812		05

C Ratio
Rapporto
Relación

Transmitted torque
Momento torcente trasmesso
Par transmitido

Service factor
Fattore di servizio
Factor de servicio

Output Shaft diam.
Diam. albero uscita
Díametro eje de salida

Notes
Note
Notas

fs		Oper. hours per day Ore di funz. giorn.		
Type of load and starts per hour Tipo di carico e avviamenti per ora		3 h	10 h	24 h
Continuous or intermittent appl. with start / hour Applicazione cont. o interm. con n.ro operazioni/ora	Uniform / Uniforme	0.8	1	1.25
	Moderate / Moderato	1	1.25	1.5
	Heavy / Forte	1.25	1.5	1.75
Intermittent application with start / hour Applicazione intermittente con n.ro operazioni/ora	Uniform / Uniforme	1	1.25	1.5
	Moderate / Moderato	1.25	1.5	1.75
	Heavy / Forte	1.5	1.75	2.15

D	Motor flange available Flange disponibili Bridas disponibles
B)	Mounting with reduction ring Montaggio con boccola di riduzione Montaje con casquillo de reducción
C)	Motor flangeholes position/terminal box position Posizione fori flangia/basetta motore Posición agujeros brida / base motor
B)	Available without reduction bushes Disponibile anche senza boccola Disponibile tambien sin casquillo

A	Select required torque (according to service factor)	Seleziona la coppia desiderata (comprensiva del fattore di servizio)	Seleccionar el par deseado (incluyendo el factor de servicio)
B	Select output speed	Seleziona la velocità in uscita	Seleccionar la velocidad de salida
C	On the same line of selected geared motor, you can find the gear ratio	Sulla riga corrispondente alla motorizzazione prescelta si può rilevare il rapporto di riduzione	En la línea correspondiente al motor preseleccionado es posible encontrar la relación de reducción
D	Select motor flange available (if requested)	Scegli la flangia disponibile (se richiesta)	Seleccionar la brida disponible (sobre pedido)



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges		Output Shaft	Output Shaft	Output Shaft
							-W	-			
							56C	-			
508	3.44	1	119	1.9	1.86	221			2821		01
409	4.28	1	148	1.8	1.80	266			2818		02
321	5.45	1	188	1.9	1.88	354			2815		03
281	6.23	1	215	1.9	1.85	398			1921		04
243	7.20	1	249	1.8	1.78	443			2812		05
226	7.74	1	268	1.7	1.65	443			1918		06
178	9.85	1	341	1.6	1.56	531			1915		07
153	11.42	1	395	1.3	1.34	531			1715		08
134	13.03	0.75	338	1.6	1.18	531			1912	standard ø0.625	09
116	15.10	0.75	392	1.4	1.02	531			1712		10
108	16.20	0.75	420	1.3	0.95	531			1910	On request ø0.750	11
93	18.78	0.75	487	1.1	0.82	531			1710		12
83	21.15	0.75	549	1.0	0.73	531			1312		13
80	21.84	0.5	378	1.4	0.70	531			1015		14
67	26.31	0.5	455	1.2	0.58	531			1310		15
61	28.88	0.5	499	1.2	0.62	620			1012		16
48.7	35.91	0.5	621	1.0	0.50	620			1010		17
46.4	37.69	0.33	430	1.4	0.48	620			912		18
37.3	46.87	0.33	535	1.2	0.38	620			910		19
35.2	49.76	0.33	568	1.1	0.36	620			712		20
28.3	61.89	0.25	535	1.2	0.29	620			710		21

The dynamic efficiency is **0.96** for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit **202A** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore **202A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

E El reductor tamaño **202A** se suministra, lubricado de por vida con aceites sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

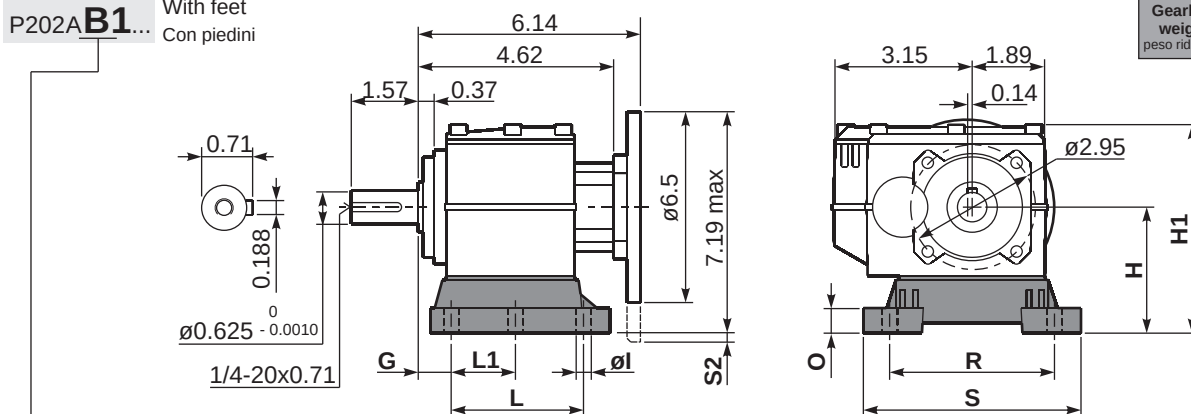
Standard supplied	Oil capacities for all mounting positions is 5.28 Ounces					
AGIP Telium VSF 320			SHELL Omala S4 WE 320			

For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web **tab. 1**

RADIAL AND AXIAL LOADS								
Output shaft Albero di uscita			$F_{eq} = F_R \cdot \frac{1.52}{X+0.73}$					
n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	31.4	157.3	140	55.3	296.6	70	76.4	381.9
250	33.9	169.8	120	60.7	303.3	40	85.4	426.9
200	41.6	207.6	85	67.4	337.0	15	-	-
Input shaft Albero in entrata								
n_1	FA	FR	n_1	FA	FR	n_1	FA	FR
1750	31.5	157.4	1750	31.5	157.4	1140	36.0	179.8
1140	36.0	179.8	1140	36.0	179.8	1140	36.0	179.8

tab. 2

P202A-B1...

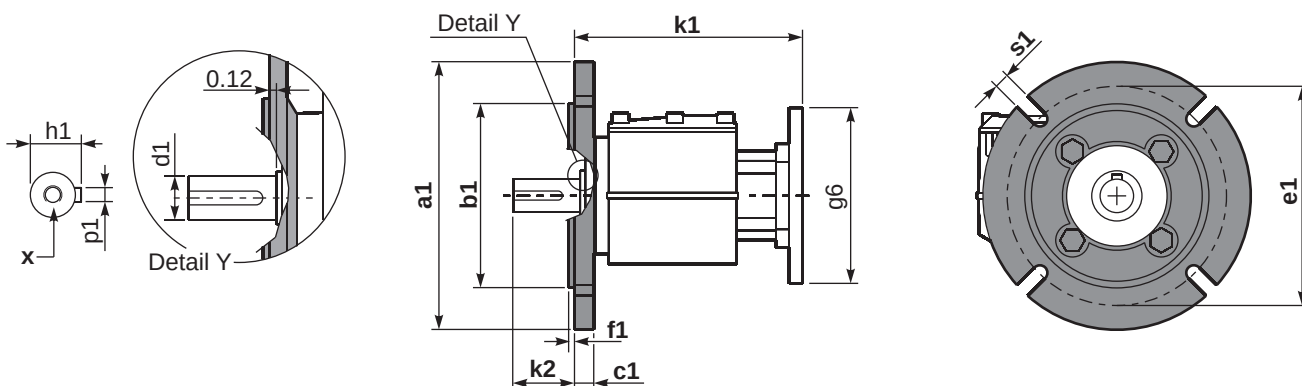
With feet
Con piediniGearbox weight
peso riduttore With flange 7.27 lb
With feet 7.05 lb

Feet Code	Market reference	G	H	R	L	L1	S	H1	O	Ø	S2 only with motor flange
B1	112	0.71	3.35	4.33	3.43	1.97	5.24	4.92	0.59	0.35	-
B2	212/3	0.71	3.94	5.12	4.23	2.36	6.10	5.71	0.20	0.43	-
S1	17-32	0.71	2.95	4.33	4.33	1.97	4.84	4.55	0.59	0.35	0.30

Other feet are available, see
www.hydromec.com
Sono disponibili altri piedini in
www.hydromec.com

Most popular types
Tipi più diffusi

P202A-F...

Output flanges
flange di uscita

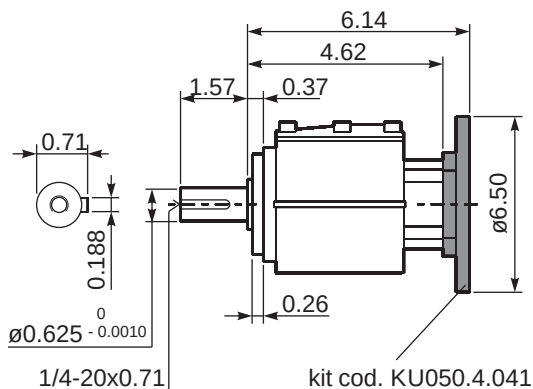
*Available output shaft / Albero di uscita

	Shaft - d1	p1	h1	x
Standard	Ø0.625x1.57	0.188	0.71	1/4-20x0.71
On request A richiesta	Ø0.750x1.57	0.188	0.83	1/4-20x0.71

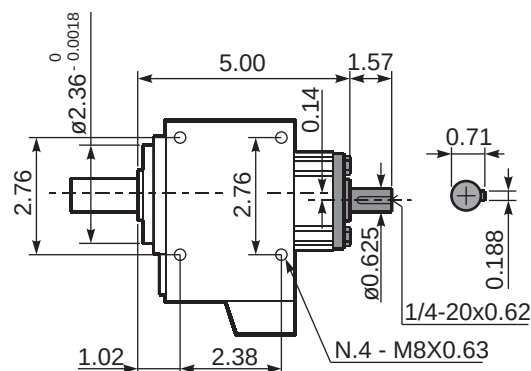
Available output flanges / flange di uscita

Standard output ranges (1 range at a time)										
a1 Ø	b1	c1	e1	f1	k1	k2	s1	kit code	Type	 With flange and feet only on request. Ask for compatibility
6.50	4.50 ^{-0.0017/-0.0033}	0.39	5.87	0.13	6.38	1.33	0.41	KU311.9.012	Nema	
5.51	3.74 ^{-0.0014/-0.0028}	0.45	4.53	0.12	6.28	1.44	0.35	KC30.9.011		
6.30	4.33 ^{-0.0014/-0.0028}	0.45	5.12	0.14	6.28	1.44	0.35	KC30.9.012	Metric	
7.87	5.12 ^{-0.0017/-0.0033}	0.45	6.50	0.14	6.28	1.44	0.43	KC30.9.013		

P202A-N...

Basic gearbox
Riduttore base

R202A-N...

Input Shaft
Albero in entrata



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges		Output Shaft 	Output Shaft ϕ 	Ratios code 
							-W 56C	-X 143/5 TC			
508	3.44	2	238	1.2	2.47	294			2821		01
409	4.28	2	296	1.1	2.27	336			2818		02
321	5.45	2	377	1.2	2.32	437			2815		03
281	6.23	2	431	1.4	2.73	589			1921		04
243	7.20	2	498	1.2	2.36	589			2812		05
226	7.74	2	535	1.3	2.51	673			1918		06
178	9.85	2	681	1.2	2.34	799			1915		07
153	11.42	2	790	1.2	2.45	967			1715		08
134	13.03	1.5	676	1.4	2.13	959			1912	standard $\phi 0.750$	09
116	15.10	1.5	783	1.2	1.84	959			1712		10
108	16.20	1	560	1.6	1.61	900			1910	On request $\phi 0.625$	11
93	18.78	1	649	1.4	1.39	900			1710		12
83	21.15	1	731	1.3	1.31	959			1312		13
80	21.84	1	755	1.3	1.33	1001			1015		14
67	26.31	0.75	682	1.3	0.99	900			1310		15
61	28.88	0.75	749	1.3	0.96	959			1012		16
48.7	35.91	0.5	621	1.4	0.72	900			1010		17
46.4	37.69	0.5	652	1.3	0.66	858			912		18
37.3	46.87	0.5	810	1.1	0.56	900			910		19
35.2	49.76	0.33	568	1.5	0.49	849			712		20
28.3	61.89	0.33	706	1.3	0.42	900			710		21

The dynamic efficiency is **0.96** for all ratios

*With "P" mounting, it's not possible to use these flanges; possibly, mount a B14 flange
Nel montaggio P non è possibile utilizzare queste flange; eventualmente utilizzare la flangia B14

A Motor Flanges Available
Flange Motore Disponibili

B Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit **302A** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore **302A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

E El reductor tamaño **302A** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

Standard supplied	Oil capacities for all mounting positions is 5.28 Ounces					
						
B3	B6	B7	B8	V5	V6	V8
SHELL Omala S4 WE 320			AGIP Telium VSF 320			

For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

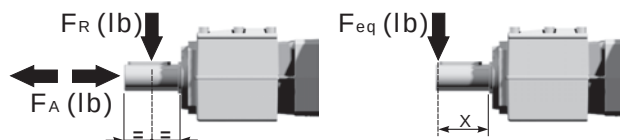
tab. 1

RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita

$$F_{eq} = F_R \cdot \frac{1.52}{X+0.73}$$



n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	31.4	157.3	140	55.3	296.6	70	76.4	381.9
250	33.9	169.8	120	60.7	303.3	40	85.4	426.9
200	41.6	207.6	85	67.4	337.0	15	-	-

Input shaft

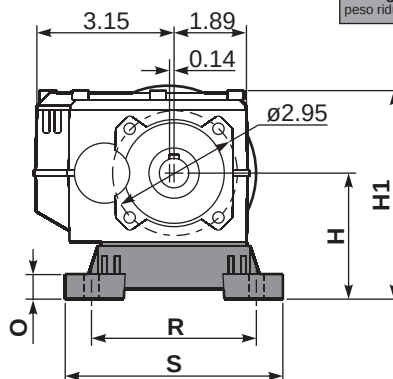
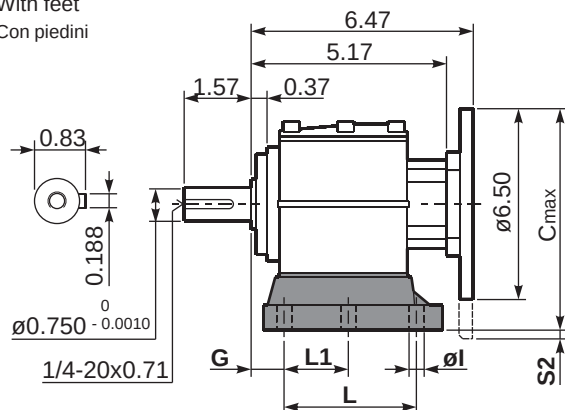
Albero in entrata



n_1	FA	FR
1750	31.5	157.4
1140	36.0	179.8

tab. 2

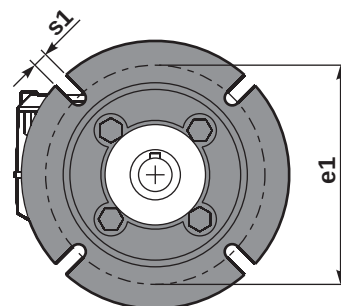
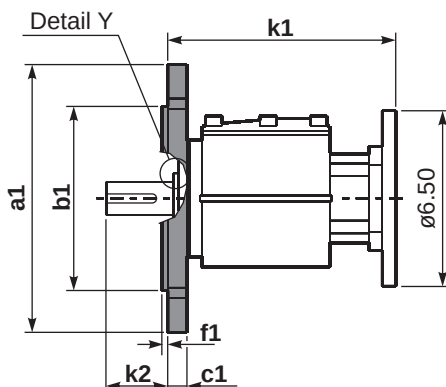
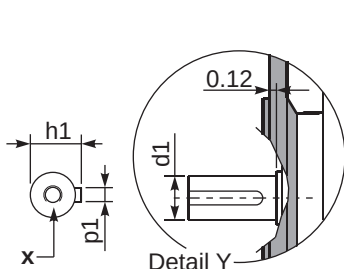
P302A-B1...

With feet
Con piediniGearbox
weight
peso riduttoreWith flange **8.37 lb**
With feet **8.37 lb**

Feet Code	Market reference	G	H	R	L	L1	S	H1	O	Ø1	S2 only with motor flange
B1	112	0.71	3.35	4.33	3.42	1.97	5.12	5.24	0.59	0.35	-
B2	212/3	0.71	3.94	5.12	4.23	2.36	6.10	5.71	0.20	0.43	-
S1	17-32	0.71	2.95	4.33	4.33	1.97	5.12	4.84	0.59	0.35	0.3

Other feet are available, see
www.hydromec.comSono disponibili altri piedini in
www.hydromec.comMost popular types
Tipi più diffusi

P302A-F...

Output flanges
flange di uscita

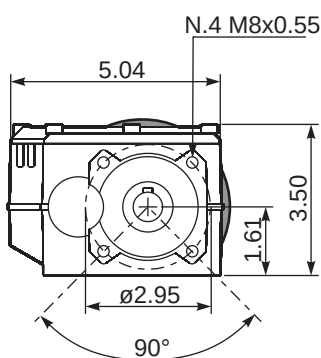
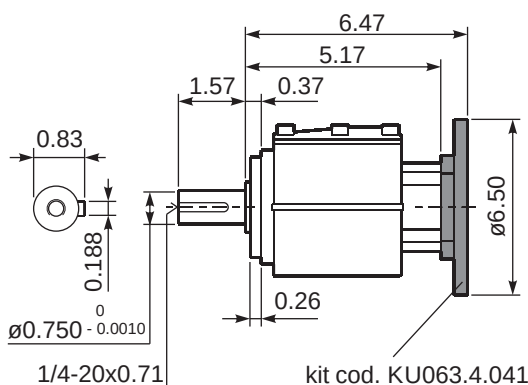
*Available output shaft / Albero di uscita

	Shaft - d1	p1	h1	x
Standard	Ø0.750x1.57	0.188	0.83	1/4-20x0.71
On request A richiesta	Ø0.625x1.57	0.188	0.71	1/4-20x0.71

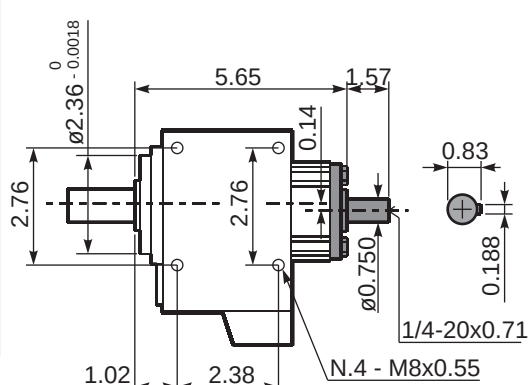
Available output flanges / flange di uscita

Variable Output Ranges - Range 1 (standard)										
a1 ø	b1	c1	e1	f1	k1	k2	s1	kit code	Type	 With flange and feet only on request. Ask for compatibility
6.50	4.50 ^{-0.0017} _{-0.0033}	0.39	5.87	0.13	6.70	1.33	0.41	KU311.9.012	Nema	
5.51	3.74 ^{-0.0014} _{-0.0028}	0.45	4.53	0.12	6.60	1.44	0.35	KC30.9.011	Metric	
6.30	4.33 ^{-0.0014} _{-0.0028}	0.45	5.12	0.14	6.60	1.44	0.35	KC30.9.012		
7.87	5.12 ^{-0.0017} _{-0.0033}	0.45	6.50	0.14	6.60	1.44	0.43	KC30.9.013		

P302A-N...

Basic gearbox
Riduttore base

R302A-N...

Input Shaft
Albero in entrata



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges		Output Shaft		
							-W	-X			Ratios code
							56C	143/5 TC			
498	3.52	2	243	2.9	5.82	708			2821		01
401	4.37	2	302	2.6	5.28	797			2818		02
315	5.56	2	385	2.3	4.60	885			2813		03
275	6.36	2	440	2.1	4.23	929			1921		04
239	7.33	2	507	2.1	4.19	1062			2812		05
222	7.89	2	546	2.1	4.22	1151			1918		06
174	10.06	2	695	2.1	4.20	1460			1913		08
150	11.66	2	806	1.8	3.62	1460			1713		09
132	13.26	2	917	1.6	3.18	1460			1912	standard ø1.00	10
128	13.68	2	946	1.5	3.09	1460			1513		25
114	15.37	2	1063	1.4	2.75	1460			1712	On request ø0.750	11
107	16.33	2	1129	1.3	2.59	1460			1313		26
97	18.04	2	1248	1.2	2.34	1460			1512		23
81	21.54	1.5	1117	1.3	1.96	1460			1312		14
79	22.29	1.5	1156	1.3	1.89	1460			1013		15
67	26.31	1	910	1.5	1.51	1372			1310		16
60	29.40	1	1017	1.4	1.44	1460			1012		17
48.7	35.91	0.75	931	1.5	1.10	1372			1010		18
45.6	38.37	0.75	995	1.5	1.10	1460			912		19
37.3	46.87	0.75	1215	1.1	0.85	1372			910		20
34.5	50.67	0.5	876	1.4	0.69	1213			712		21
28.3	61.89	0.5	1070	1.3	0.64	1372			710		22

The dynamic efficiency is **0.96** for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit **412A** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore **412A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

E El reductor tamaño **412A** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

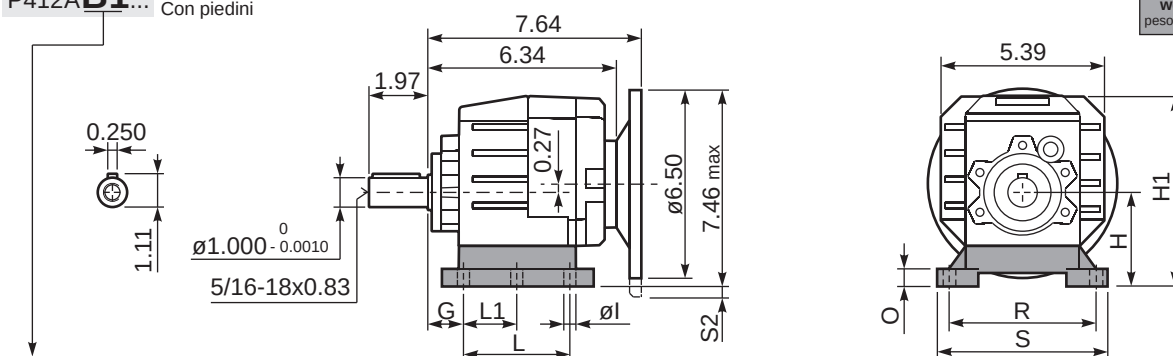
Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio					
B3	B6	B7	B8	V5	V6	V8
8.80 oz	12.32 oz	14.08 oz	15.85 oz	14.08 oz	17.61 oz	Ask
SHELL Omala S4 WE 320				ENI Telium VSF 320		

For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

tab. 1

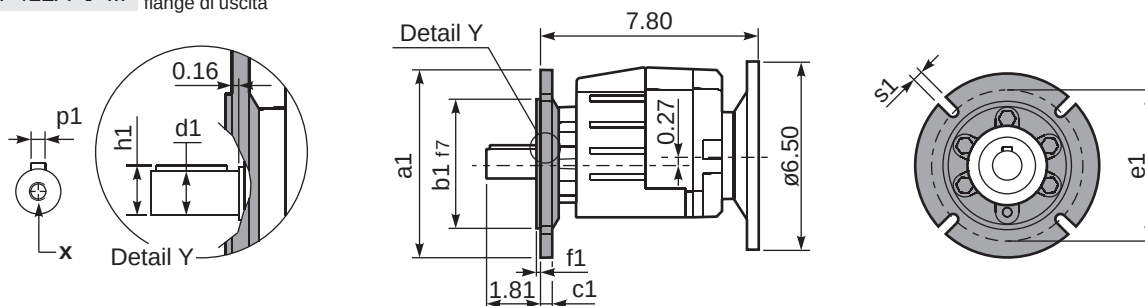
RADIAL AND AXIAL LOADS								
Output shaft Albero di uscita			$F_{eq} = F_R \cdot \frac{1.81}{X+0.83}$					
n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	69.6	348.2	140	91.2	456.1	70	121.3	606.6
250	74.1	370.7	120	100.6	503.3	40	134.8	674.0
200	80.9	404.4	85	107.8	539.2	15	134.8	674.0
Input shaft Albero in entrata								
n_1	FA	FR	n_1	FA	FR	n_1	FA	FR
1750	53.9	269.8	1750	53.9	269.8	1140	62.9	314.7
1140	62.9	314.7	1140	62.9	314.7	1140	62.9	314.7

tab. 2

P412A **B1**... With feet
Con piediniGearbox weight
peso riduttore With flange **13.11lb**
With feet **14.10lb**

Feet / piedini

Feet Code	Market reference	G	H	R	L	L1	S	H1	O	Ø	S2 only with motor flange	kit code
B1	112	0.71	3.35	4.33	3.43	1.97	5.12	6.59	0.59	-	-	KC35.9.021
B2	212/3	0.71	3.94	5.12	4.23	2.36	6.10	7.18	0.67	0.43	-	KC40.9.025
S1	17	0.71	2.95	4.33	4.33	1.97	5.71	6.12	0.59	0.35	0.03	KC40.9.022
S2	27	0.98	3.54	4.33	5.12	-	5.71	6.79	0.79	0.35	-	KC40.9.024

Other feet are available, see
www.hydromec.comSono disponibili altri piedini in
www.hydromec.comMost popular types
Tipi più diffusiP412A-**F**... Output flanges
flange di uscita

*Available output shaft / Albero di uscita

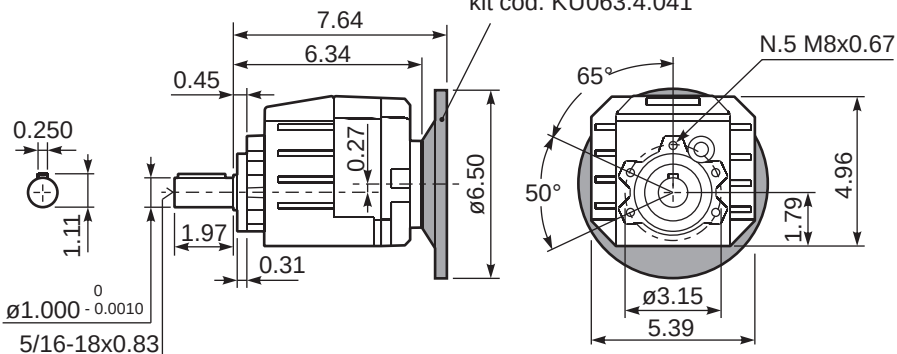
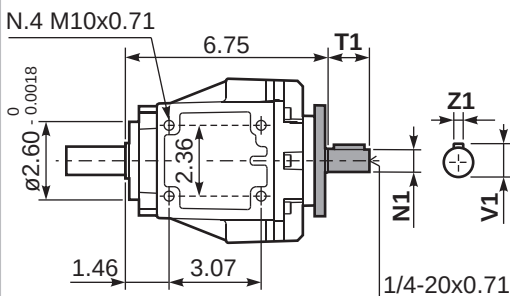
	Shaft - d1	p1	h1	x
Standard	Ø1.000x1.97	0.250	1.11	5/16-18x0.83
On request A richiesta	Ø0.750x1.57	0.188	0.83	1/4-20x0.71

Available output flanges / flange di uscita

a1 Ø	b1	c1	e1	f1	s1	kit code	Type	
6.50	4.500 ^{-0.0017} _{-0.0033}	0.39	5.87	0.13	3/8-16	KU511.9.012	Nema	
5.51	3.740 ^{-0.0014} _{-0.0028}	0.39	4.53	0.12	0.35	KC40.9.011	Metric	With flange and feet only on request. Ask for compatibility
6.30	4.331 ^{-0.0014} _{-0.0028}	0.39	5.12	0.14	0.35	KC40.9.012		
7.87	5.118 ^{-0.0014} _{-0.0028}	0.39	6.50	0.14	0.43	KC40.9.013		
9.84	7.087 ^{-0.0017} _{-0.0033}	0.45	8.46	0.14	0.55	KC40.9.014		

P412A-**N**... Basic gearbox
Riduttore base

kit cod. KU063.4.041

R412A-**N**... Input Shaft
Albero in entrata

Nema flanges	N1	T1	V1	Z1	kit code
Standard	0.750	1.97	0.83	0.188	KC40.5.070U
On request	0.625	1.57	0.71	0.188	KC40.5.069U



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges		Output Shaft		
							-W	-			Ratio code
							56C	-			
45.6	38.40	0.75	975	1.5	1.12	1460			171713	standard ø1.00 On request ø0.750	02
40.1	43.69	0.75	1109	1.3	0.99	1460			191712		03
34.6	50.64	0.75	1286	1.1	0.85	1460			171712		04
32.8	53.36	0.50	903	1.6	0.78	1416			191710		05
28.6	61.21	0.50	1036	1.5	0.73	1505			191312		06
28.3	61.85	0.50	1047	1.4	0.68	1416			171710		07
24.7	70.95	0.50	1201	1.3	0.63	1505			131712		08
23.8	73.43	0.50	1243	1.2	0.62	1549			101713		09
23.4	74.77	0.50	1266	1.1	0.56	1416			191310		10
20.2	86.66	0.33	968	1.5	0.48	1416			131710		11
18.1	96.85	0.33	1082	1.4	0.46	1505			101712		12
17.0	102.89	0.33	1150	1.3	0.44	1549			101313		13
13.8	126.40	0.33	1412	1.1	0.35	1505			91712		17
12.9	135.69	0.25	1149	1.3	0.33	1505			101312		15
10.6	165.74	0.25	1403	1.0	0.25	1416			101310		16
9.9	177.09	0.25	1499	1.0	0.25	1505			91312		18
8.1	216.31	0.25	1831	0.8	0.19	1416			91310		19

The dynamic efficiency is **0.94** for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit **413A** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore **413A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

E El reductor tamaño **413A** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

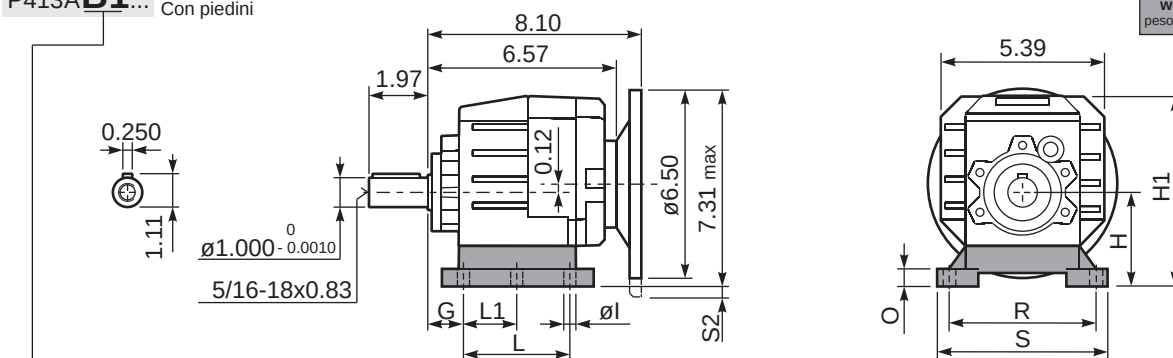
Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio						
B3	B6	B7	B8	V5	V6	V8	
10.56 oz	12.32 oz	15.85 oz	15.85 oz	15.85 oz	19.37 oz	Ask	
SHELL Omala S4 WE 320				ENI Telium VSF 320			

For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

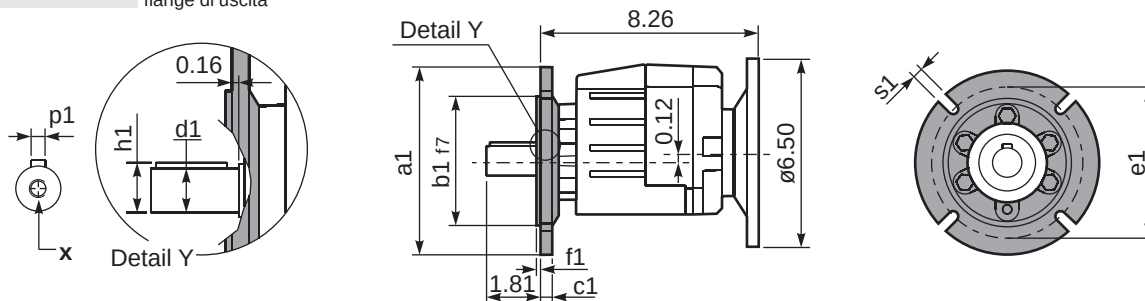
tab. 1

RADIAL AND AXIAL LOADS									
Output shaft Albero di uscita					$F_{eq} = F_R \cdot \frac{1.81}{X+0.83}$				
n_2	F_A	F_R	n_2	F_A	F_R	n_2	F_A	F_R	
300	69.6	348.2	140	91.2	456.1	70	121.3	606.6	
250	74.1	370.7	120	100.6	503.3	40	134.8	674.0	
200	80.9	404.4	85	107.8	539.2	15	134.8	674.0	
Input shaft Albero in entrata									
n_1	F_A	F_R	n_1	F_A	F_R	n_1	F_A	F_R	
1750	31.5	157.4	1140	36.0	179.8				

tab. 2

P413A-B1... With feet
Con piediniGearbox weight
peso riduttore With flange 14.65lb
With feet 15.42lb

Feet Code	Market reference	G	H	R	L	L1	S	H1	O	Ø	S2 only with motor flange	kit code
B1	112	0.71	3.35	4.33	3.43	1.97	5.12	6.59	0.59	-	-	KC35.9.021
B2	212/3	0.71	3.94	5.12	4.23	2.36	6.10	7.19	0.67	0.43	-	KC40.9.025
S1	17	0.71	2.95	4.33	4.33	1.97	5.71	6.12	0.59	0.35	0.03	KC40.9.022
S2	27	0.98	3.54	4.33	5.12	-	5.71	6.79	0.79	0.35	-	KC40.9.024

Other feet are available, see
www.hydromec.comSono disponibili altri piedini in
www.hydromec.comMost popular types
Tipi più diffusiP413A-F... Output flanges
flange di uscita

*Available output shaft / Albero di uscita

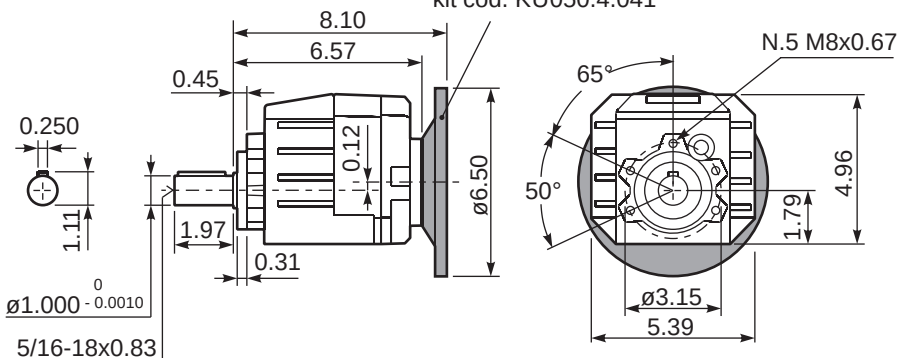
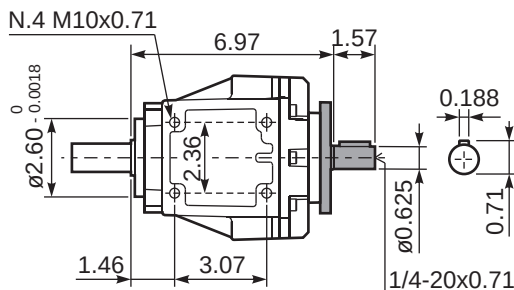
	Shaft - d1	p1	h1	x
Standard	Ø1.000x1.97	0.250	1.11	5/16-18x0.83
On request A richiesta	Ø0.750x1.57	0.188	0.83	1/4-20x0.71

Available output flanges / flange di uscita

a1 Ø	b1	c1	e1	f1	s1	kit code	Type
6.50	4.50 ^{-0.0017} _{-0.0033}	0.39	5.87	0.13	3/8-16	KU511.9.012	Nema
5.51	3.74 ^{-0.0014} _{-0.0028}	0.39	4.53	0.12	0.35	KC40.9.011	Metric
6.30	4.33 ^{-0.0014} _{-0.0028}	0.39	5.12	0.14	0.35	KC40.9.012	
7.87	5.12 ^{-0.0014} _{-0.0028}	0.39	6.50	0.14	0.43	KC40.9.013	
9.84	7.09 ^{-0.0017} _{-0.0033}	0.45	8.46	0.14	0.55	KC40.9.014	

With flange and feet only on request.
Ask for compatibilityP413A-N... Basic gearbox
Riduttore base

kit cod. KU050.4.041

R413A-N... Input Shaft
Albero in entrata



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges			Output Shaft 	Ratios code 
							-W	-X	-Y		
							56C	143/5TC	182/4TC		
485	3.61	5	624	2.1	10.31	1288				3018	01
414	4.23	5	730	2.0	9.99	1459				3016	02
349	5.01	5	867	2.0	9.90	1717				3014	03
288	6.07	5	1049	2.0	10.23	2146				3012	04
257	6.81	5	1177	2.0	10.11	2378				2018	05
220	7.96	5	1377	1.9	9.35	2576				2016	06
185	9.45	5	1634	1.6	7.99	2610				2014	07
153	11.43	5	1977	1.3	6.52	2576				2012	08
123	14.21	3	1474	1.5	4.63	2275				2010	09
105	16.62	3	1724	1.5	4.54	2610				1314	10
87	20.10	3	2085	1.2	3.71	2576				1312	11
70	24.98	2	1728	1.3	2.63	2275				1310	12
60	29.41	2	2034	1.3	2.57	2610				814	13
49.2	35.58	2	2461	1.0	2.09	2576				812	14
43.2	40.50	1.5	2101	1.2	1.78	2490				614	15
39.6	44.23	1.5	2294	1.0	1.49	2275				810	16
35.7	49.00	1	1694	1.5	1.52	2576				612	17
28.7	60.90	1	2106	1.1	1.08	2275				610	18

The dynamic efficiency is 0.96 for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

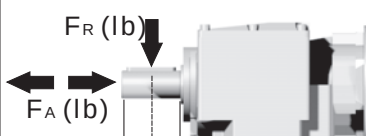
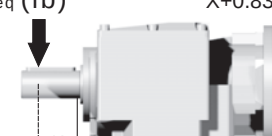
EN Unit 452A is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore 452A viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

E El reductor tamaño 452A se suministra, lubricado de por vida con aceites sintéticos y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

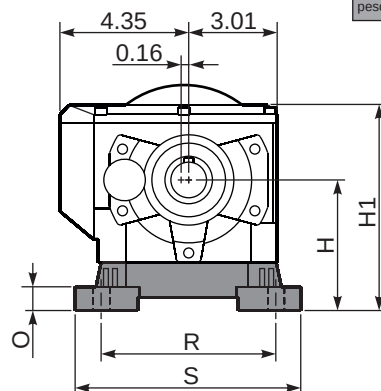
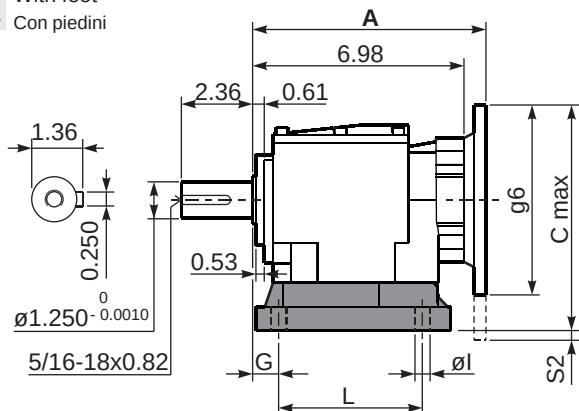
Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio					
						
10.91 oz	10.91 oz	10.91 oz	10.91 oz	10.91 oz	10.91 oz	Ask
SHELL Omala S4 WE 320				AGIP Telium VSF 320		

For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web **tab. 1**

RADIAL AND AXIAL LOADS					
Output shaft / Albero di uscita			$F_{eq} = F_R \cdot \frac{2.01}{X+0.83}$		
	F_R (lb)	F_A (lb)		F_{eq} (lb)	X
n_2	FA	FR	n_2	FA	FR
300	93.2	465.1	140	121.3	606.7
250	96.6	485.3	120	125.8	626.8
200	105.6	525.7	85	141.5	707.7
n_2	FA	FR	n_2	FA	FR
70	157.3	788.6	40	181.9	909.9
15	202.2	1011			
Input shaft / Albero in entrata					
	F_R (lb)	F_A (lb)	n_1	FA	FR
			1750	89.9	449.6
			1140	98.9	494.6

tab. 2

P452A-B1...

With feet
Con piediniGearbox
weight
peso riduttoreWith flange 19.16lb
With feet 19.71lb

Feet / piedini

Feet Code	Market reference	G	H	R	L	S	H1	O	Øl	S2 only with motor flange
B3	312/3	0.71	4.33	6.30	5.12	7.48	6.81	0.79	0.43	0.11 182/4TC
B4	30/35	0.79	5.12	7.09	5.89	8.50	7.60	0.71	0.55	-
S4	47-57	1.18	4.53	5.31	6.50	6.69	7.01	0.94	0.53	-
H3	023-233	1.18	5.12	5.31	5.31	7.28	7.60	0.98	0.55	-
M2	52/3	1.18	4.33	5.31-5.91	3.94	7.48	6.81	0.71	0.43	-

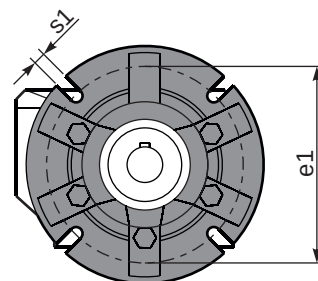
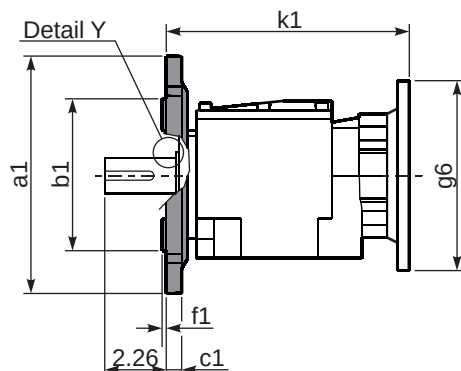
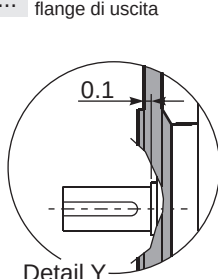
Other feet are available, see
www.hydromec.comSono disponibili altri piedini in
www.hydromec.com

Dimension (A) see on page bottom

Most popular types
Tipi più diffusi

5

P452A-F...

Output flanges
flange di uscita

Available output flanges / flange di uscita

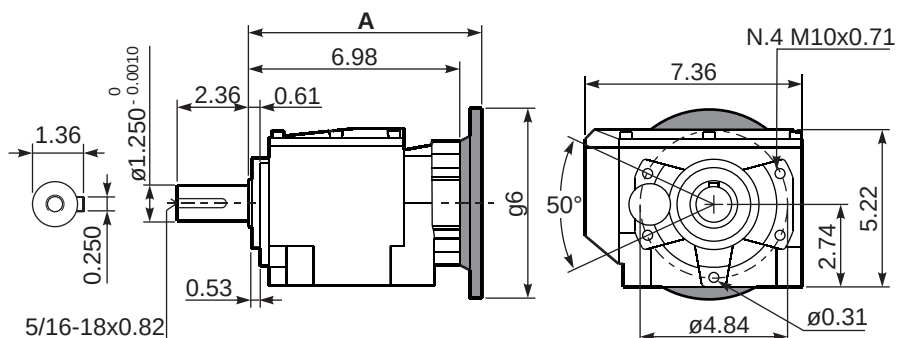
a1 Ø	b1	c1	e1	f1	s1	kit code	Type
7.87	5.12	0.43	6.50	0.18	0.43	KC50.9.012	Metric
9.87	9.84	0.61	8.46	0.16	0.55	KC50.9.013	



With flange and feet only on request. Ask for compatibility

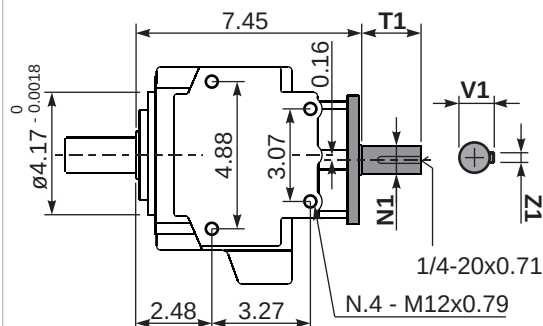
Nema flanges	k1	g6	kit code
56C-143/5TC	8.06	6.50	KU085.4.041
182/4TC	8.76	8.88	KU085.4.042

P452A-N...

Basic gearbox
Riduttore base

Nema flanges	A	g6	kit code
56C-143/5TC	7.96	6.50	KU085.4.041
182/4TC	8.67	8.88	KU085.4.042

R452A-N...

Input Shaft
Albero in entrata

Nema flanges	N1	T1	V1	Z1	kit code
Standard	0.875	1.97	0.96	0.188	KC50.5.070U
On request	0.750	1.97	0.83	0.188	KC50.5.069U



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges			Output Shaft  standard ø1.250	Ratios code 
							-W	-X	-Y		
							56C	143/5TC	182/4TC		
485	3.61	5	624	2.1	10.66	1331				3018	01
414	4.23	5	730	2.1	10.58	1545				3016	02
349	5.01	5	867	2.1	10.40	1803				3014	03
288	6.07	5	1049	2.1	10.44	2189				3012	04
257	6.81	5	1177	2.2	10.95	2576				2018	05
220	7.96	5	1377	2.1	10.45	2876				2016	07
185	9.45	5	1634	1.9	9.46	3091				2014	08
153	11.43	5	1977	1.4	7.17	2833				2012	09
125	14.00	5	2420	1.3	6.38	3091				1316	21
105	16.62	5	2873	1.1	5.38	3091				1314	11
87	20.10	3	2085	1.4	4.08	2833				1312	12
71	24.61	3	2552	1.1	3.33	2833				1112	20
60	29.41	3	3051	1.0	3.04	3091				814	14
49.2	35.58	2	2461	1.2	2.30	2833				812	15
43.2	40.50	1.5	2101	1.3	1.96	2747				614	16
39.6	44.23	1.5	2294	1.0	1.43	2189				810	17
35.7	49.00	1.5	2541	1.1	1.67	2833				612	18
28.7	60.90	1	2106	1.0	1.04	2189				610	19

The dynamic efficiency is **0.96** for all ratios

 **Motor Flanges Available**
Flange Motore Disponibili

 **B) Supplied with Reduction Bushing**
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

 **C) Motor Flange Holes Position**
Posizione Fori Flangia Motore

EN Unit **512A** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore **512A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

E El reductor tamaño **512A** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

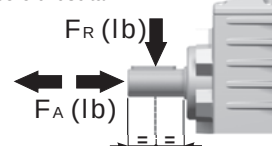
Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio					
						
B3	B6	B7	B8	V5	V6	V8
24.65 oz	28.17 oz	40.49 oz	42.25 oz	40.49 oz	44.01 oz	Ask
SHELL Omala S4 WE 320				ENI Telium VSF 320		

For all details on lubrication and plugs check our website **tab. 1**
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

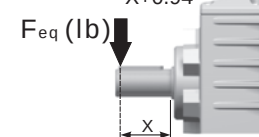
RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita



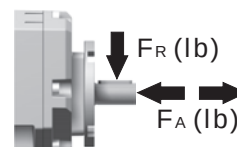
$$F_{eq} = F_R \cdot \frac{2.13}{X+0.94}$$



n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	103.3	516.7	140	134.8	674.0	70	175.2	876.2
250	107.8	539.2	120	139.3	696.5	40	202.2	1011
200	116.8	584.1	85	157.3	786.3	15	224.7	1123.3

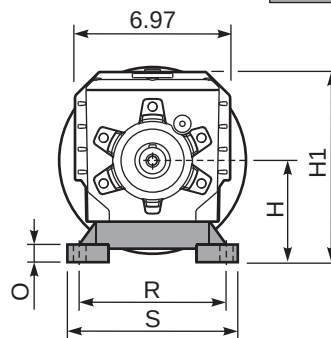
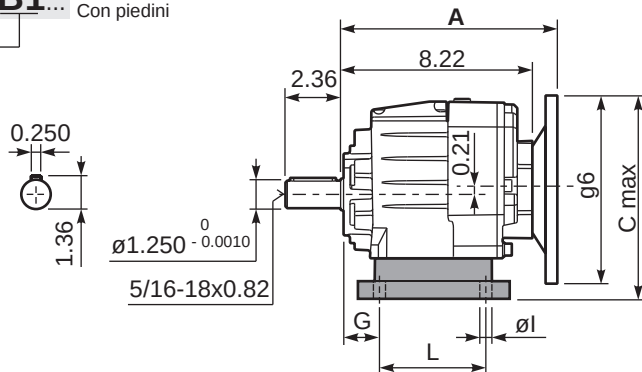
Input shaft

Albero in entrata



n_1	FA	FR
1750	101.2	505.8
1140	112.4	562

tab. 2

P512A-B1... With feet
Con piediniGearbox weight
peso riduttore With flange 25.55lb
With feet 25.99lb

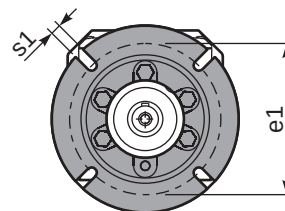
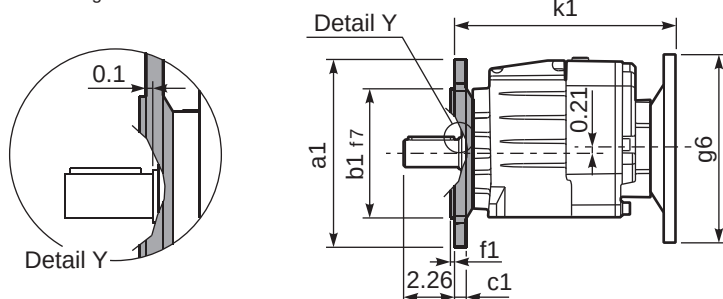
Feet / piedini

Feet Code	Market reference	G	H	R	L	S	H1	O	ØI	kit code
B3	312/3	0.71	4.33	6.30	5.12	7.48	8.31	0.79	0.43	KC50.9.024
B4	30/35	0.79	5.12	7.09	5.89	8.50	9.09	0.71	0.55	KC60.9.024
S4	47-57	1.18	4.53	5.31	6.50	6.69	8.50	0.98	0.53	KC50.9.022

Nema flanges	C max	g6	kit code
56C-143/5TC	8.58	6.50	KU085.4.041
182/4TC	9.77	8.88	KU085.4.042

Other feet are available, see
www.hydromec.comSono disponibili altri piedini in
www.hydromec.com

Dimension (A) see on page bottom

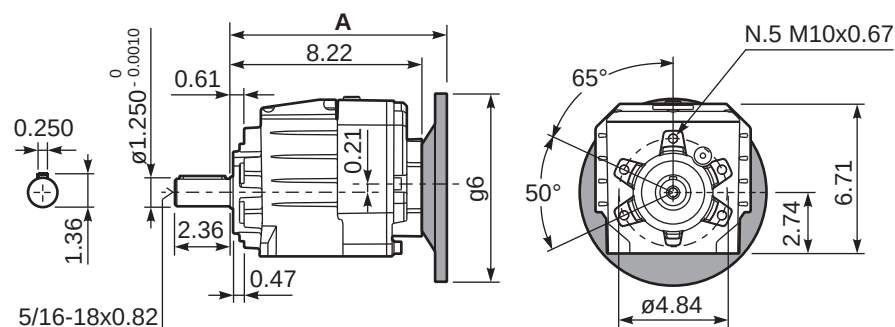
Most popular types
Tipi più diffusiP512A-F... Output flanges
flange di uscita

Available output flanges / flange di uscita

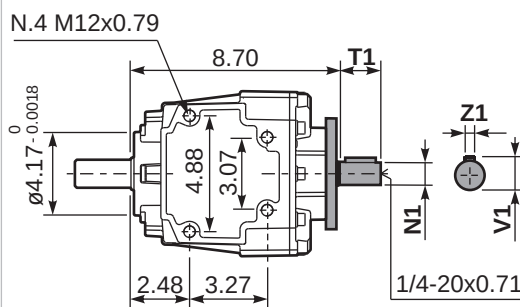
a1 Ø	b1	c1	e1	f1	s1	kit code	Type
7.87	5.118 -0.0017 -0.0033	0.51	6.50	0.14	0.43	KC50.9.012	Metric
9.84	7.087 -0.0017 -0.0033	0.61	8.46	0.16	0.55	KC50.9.013	

With flange and feet only on request. Ask for compatibility

Nema flanges	k1	g6	kit code
56C-143/5TC	9.31	6.50	KU085.4.041
182/4TC	10.01	8.88	KU085.4.042

P512A-N... Basic gearbox
Riduttore base

Nema flanges	A	g6	kit code
56C-143/5TC	9.21	6.50	KU085.4.041
182/4TC	9.91	8.88	KU085.4.042

R512A-N... Input Shaft
Albero in entrata

Nema flanges	N1	T1	V1	Z1	kit code
Standard	0.875	1.97	0.96	0.188	KC50.5.070U
On request	0.750	1.97	0.83	0.188	KC50.5.069U



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges		Output Shaft		
							-W 56C	-X 143/5 TC			Ratio code
44.0	39.79	1.5	2021	1.5	2.29	3091			191316		01
37.1	47.22	1.5	2398	1.3	1.93	3091			191314		02
32.0	54.73	1.5	2780	1.1	1.67	3091			171314		03
26.4	66.22	1	2242	1.3	1.26	2833			171312		04
22.8	76.69	1	2596	1.2	1.19	3091			131314		05
20.9	83.59	1	2830	1.1	1.09	3091			190814		06
18.9	92.78	0.75	2356	1.2	0.90	2833			131312		07
16.7	104.68	0.75	2658	1.2	0.87	3091			101314		08
14.9	117.22	0.75	2976	1.0	0.71	2833			170812	standard Ø1.250	09
13.8	126.65	0.5	2144	1.3	0.66	2833			101312		10
12.8	136.62	0.5	2313	1.3	0.67	3091			91314		11
10.6	165.29	0.5	2798	1.0	0.51	2833			91312		12
9.7	180.40	0.5	3054	1.0	0.51	3091			71314		13
8.0	218.26	0.33	2438	1.2	0.38	2833			71312		14
7.2	241.82	0.33	2702	1.1	0.38	3091			90814		15
6.0	292.57	0.25	2476	1.1	0.29	2833			90812		16
5.5	319.32	0.25	2703	1.1	0.29	3091			70814		17
4.5	386.33	0.25	3270	0.9	0.22	2833			70812		18
3.6	480.16	0.25	4064	0.5	0.13	2189			70810		19

The dynamic efficiency is **0.94** for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit **513A** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore **513A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

E El reductor tamaño **513A** se suministra, lubricado de por vida con aceites sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

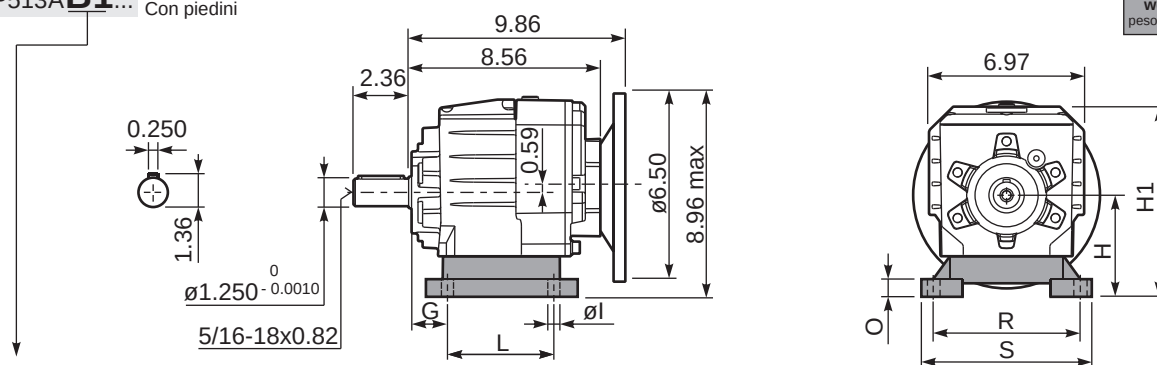
Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio						
B3	B6	B7	B8	V5	V6	V8	
35.21 oz	31.69 oz	44.01 oz	40.49 oz	51.06 oz	49.30 oz	Ask	
SHELL Omala S4 WE 320				ENI Telium VSF 320			

For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

tab. 1

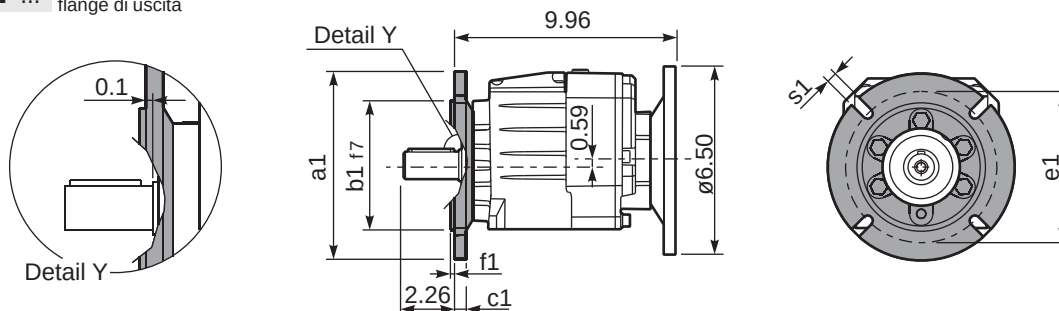
RADIAL AND AXIAL LOADS									
Output shaft Albero di uscita					$F_{eq} = F_R \cdot \frac{2.13}{X+0.94}$				
n_2	FA	FR	n_2	FA	FR	n_2	FA	FR	
300	103.3	516.7	140	134.8	674.0	70	175.2	876.2	
250	107.8	539.2	120	139.3	696.5	40	202.2	1011	
200	116.8	584.1	85	157.3	786.3	15	224.7	1123.3	
Input shaft Albero di entrata									
n_1	FA	FR	n_1	FA	FR	n_1	FA	FR	
1750	89.9	449.3	1140	98.9	494.6				

tab. 2

P513A-B1... With feet
Con piediniGearbox
weight
peso riduttore With flange 27.53lb
With feet 27.09lb

Feet / piedini

Feet Code	Market reference	G	H	R	L	S	H1	O	Øl	kit code
B3	312/3	0.71	4.33	6.30	5.12	7.48	8.31	0.79	0.43	KC50.9.024
B4	30/35	0.79	5.12	7.09	5.89	8.50	9.09	0.71	0.55	KC60.9.024
S4	47-57	1.18	4.53	5.31	6.50	6.69	8.50	0.98	0.55	KC50.9.022

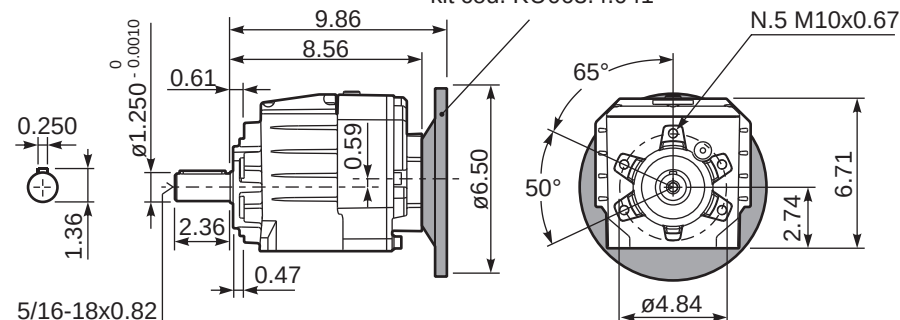
Other feet are available, see
www.hydromec.comSono disponibili altri piedini in
www.hydromec.comMost popular types
Tipi più diffusiP513A-F... Output flanges
flange di uscita

Available output flanges / flange di uscita

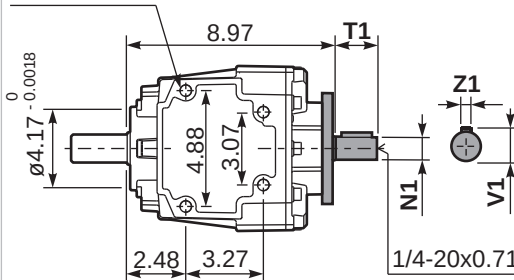
a1 Ø	b1	c1	e1	f1	s1	kit code	Type		With flange and feet only on request. Ask for compatibility
7.87	5.118 ^{-0.0017} _{-0.0033}	0.51	6.50	0.18	0.43	KC50.9.012	Metric		
9.84	7.087 ^{-0.0017} _{-0.0033}	0.61	8.46	0.16	0.55	KC50.9.013			

P513A-N... Basic gearbox
Riduttore base

kit cod. KU063.4.041

R513A-N... Input Shaft
Albero in entrata

N.4 M12x0.79



Nema flanges	N1	T1	V1	Z1	kit code
Standard	0.750	1.97	0.83	0.188	KC40.5.070U
On request	0.625	1.57	0.71	0.188	KC40.5.069U



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges					Output Shaft $\varnothing$	Ratios code
							-W	-X	-Y				
							56C	143/5TC	182/4TC				
485	3.61	5	624	2.6	13.06	1631				3018			01
414	4.23	5	730	2.7	13.52	1975				3016			02
349	5.01	5	867	2.6	12.87	2232				3014			03
288	6.07	5	1049	2.5	12.69	2661				3012			04
257	6.81	5	1177	2.6	12.77	3005				2018			05
220	7.96	5	1377	2.3	11.54	3177				2016			07
185	9.45	5	1634	2.2	10.77	3520				2014			08
153	11.43	5	1977	1.8	9.23	3649				2012		standard $\varnothing 1.375$	09
125	14.00	5	2420	1.5	7.71	3735				1316			10
105	16.62	5	2873	1.5	7.70	4421				1314			11
87	20.10	5	3475	1.3	6.55	4550				1312		On request 1.250	12
71	24.61	5	4254	1.1	5.35	4550				1112			20
60	29.41	3	3051	1.3	3.80	3863				814			14
49.2	35.58	3	3691	1.2	3.70	4550				812			15
43.2	40.50	2	2801	1.0	1.96	2747				614			16
39.6	44.23	2	3058	1.2	2.30	3520				810			17
35.7	49.00	2	3388	1.0	2.03	3434				612			18
28.7	60.90	1.5	3159	1.1	1.64	3520				610			19

The dynamic efficiency is 0.96 for all ratios

A) Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit 612A is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore 612A viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

E El reductor tamaño 612A se suministra, lubricado de por vida con aceites sintéticos y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio					
B3	B6	B7	B8	V5	V6	V8
28.17 oz	35.21 oz	42.25 oz	42.25 oz	45.77 oz	47.54 oz	Ask
SHELL Omala S4 WE 320				ENI Telium VSF 320		

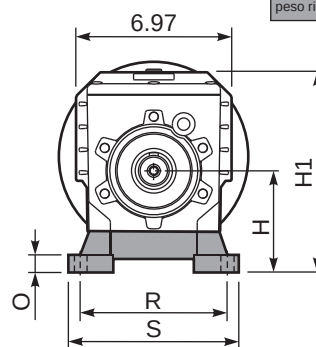
For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

tab. 1

RADIAL AND AXIAL LOADS								
Output shaft Albero di uscita			$F_{eq} = F_R \cdot \frac{2.38}{X+1.01}$					
n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	125.8	629.1	140	166.3	831.3	70	200.0	943.6
250	134.8	674.0	120	170.7	853.7	40	260.6	1303.1
200	143.8	718.9	85	188.7	898.7	15	292.1	1460.3
Input shaft Albero in entrata								
n_1	FA	FR						
1750	101.2	505.8						
1140	112.4	562						

tab. 2

Gearbox weight peso riduttore	With flange	31.50lb
	With feet	32.60lb

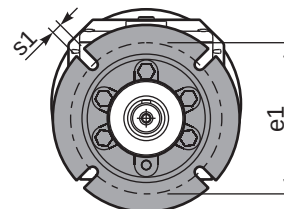
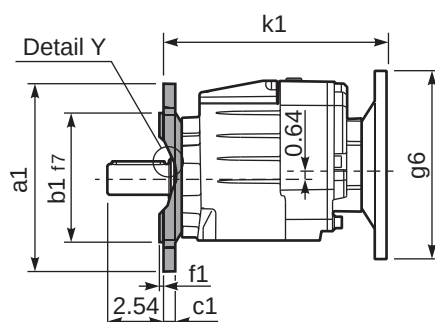


Feet Code	Market reference	G	H	R	L	S	H1	O	Øl	kit code
B4	412/3	0.79	5.12	7.09	5.89	8.50	9.53	0.71	0.55	KC60.9.024
S4	47-57	1.18	4.53	5.31	6.50	6.69	8.94	0.98	0.55	KC50.9.022
S7	77	1.38	5.51	6.69	8.07	8.03	9.92	0.31	0.55	KC60.9.029LM

Nema flanges	C max	g6	kit code
56C-143/5TC	9.40	6.50	KU085.4.041
182/4TC	10.59	8.88	KU085.4.042

Sono disponibili altri piedini in
www.hydromec.com

Most popular types
Tipi più diffusi



	Shaft - d1	p1	h1	x
Standard	Ø1.375x2.64	0.313	1.51	3/8-16x0.88
On request A richiesta	Ø1.250x2.64	0.250	1.36	5/16-18x0.82

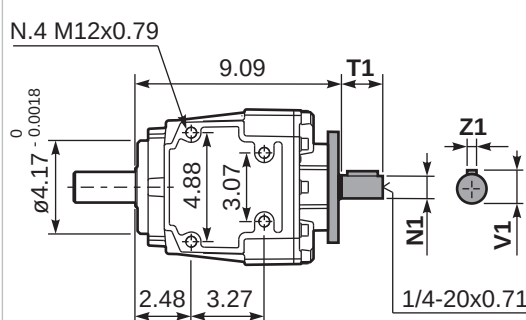
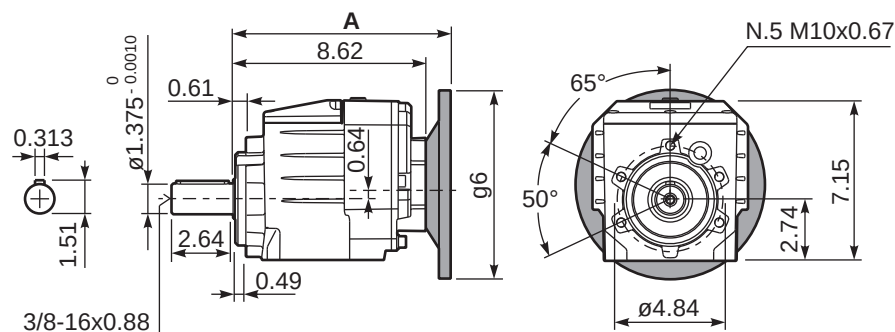
a1 Ø	b1	c1	e1	f1	s1	kit code	Type
7.87	5.118 ^{+0.0017} _{-0.0033}	0.51	6.50	0.14	0.43	KC50.9.012	Metric
9.84	7.087 ^{+0.0017} _{-0.0023}	0.61	8.46	0.16	0.55	KC50.9.013	



With flange and feet only on request. Ask for compatibility

Nema flanges	k1	g6	kit code
56C-143/5TC	9.70	6.50	KU085.4.041
182/4TC	10.41	8.88	KU085.4.042

R612A-N... Input Shaft
Albero in entrata



Nema flanges	A	g6	kit code
56C-143/5TC	9.60	6.50	KU085.4.041
182/4TC	10.31	8.88	KU085.4.042

Nema flanges	N1	T1	V1	Z1	kit code
Standard	0.875	1.97	0.96	0.188	KC50.5.070U
On request	0.750	1.97	0.83	0.188	KC50.5.069U



■ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges			Output Shaft 	Ratios code
							-W 56C	-X 143/5 TC			
44.0	39.79	2	2694	1.4	2.77	3726			191316		05
37.1	47.22	2	3198	1.4	2.77	4421			191314		06
32.0	54.73	2	3706	1.2	2.39	4421			171314		07
30.6	57.13	2	3869	1.2	2.35	4550			191312		08
26.4	66.22	2	4484	1.0	2.03	4550			171312		09
24.6	71.01	1.5	3606	1.0	1.55	3735			191310		10
22.8	76.69	1.5	3894	1.1	1.70	4421			131314		11
21.3	82.30	1	2786	1.3	1.34	3735			171310		12
20.9	83.59	1	2830	1.3	1.33	3777			190814		13
18.9	92.78	1	3141	1.4	1.45	4550			131312		14
16.7	104.68	1	3544	1.2	1.25	4421			101314	standard Ø1.375	15
14.9	117.22	1	3968	1.1	1.15	4550			170812	On request 1.250	16
13.8	126.65	1	4288	1.1	1.06	4550			101312		17
12.9	135.74	0.75	3447	1.1	0.82	3777			130814		18
12.0	145.68	0.75	3699	1.0	0.76	3735			170810		19
11.1	157.40	0.5	2665	1.4	0.70	3735			101310		20
10.6	165.29	0.5	2798	1.6	0.81	4507			91312		21
9.4	185.29	0.5	3137	1.2	0.60	3777			100814		22
8.5	205.43	0.5	3478	1.1	0.54	3735			91310		23
7.8	224.18	0.5	3795	1.2	0.60	4550			100812		24
7.2	241.82	0.33	2702	1.4	0.46	3777			90814		25
6.3	278.62	0.33	3113	1.2	0.40	3735			100810		26
6.0	292.57	0.33	3269	1.4	0.46	4550			90812		27
4.8	363.63	0.25	3078	1.2	0.30	3735			90810		28

The dynamic efficiency is 0.94 for all ratios

Motor Flanges Available
Flange Motore Disponibili B) Supplied with Reduction Bushing
Fornito con Bussola di RiduzioneB) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit 613A is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore 613A viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

E El reductor tamaño 613A se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio					
B3	B6	B7	B8	V5	V6	V8
36.97 oz	38.73 oz	44.01 oz	44.01 oz	47.54 oz	52.82 oz	Ask
SHELL Omala S4 WE 320				ENI Telium VSF 320		

For all details on lubrication and plugs check our website

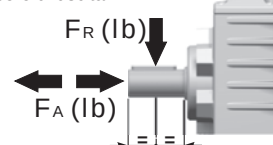
tab. 1

Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

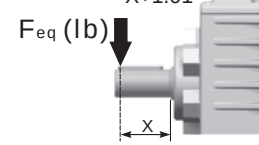
RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita



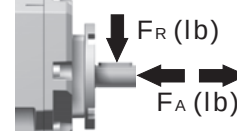
$$F_{eq} = F_R \cdot \frac{2.38}{X+1.01}$$



n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	125.8	629.1	140	166.3	831.3	70	200.0	943.6
250	134.8	674.0	120	170.7	853.7	40	260.6	1303.1
200	143.8	718.9	85	188.7	898.7	15	292.1	1460.3

Input shaft

Albero in entrata



n_1	FA	FR
1750	89.9	449.3
1140	98.9	494.6

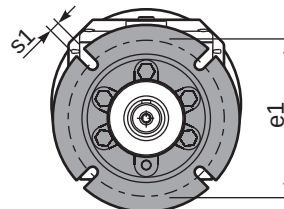
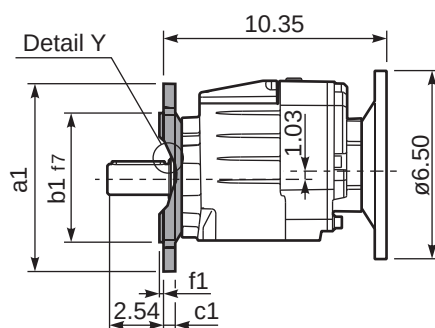
tab. 2

Gearbox weight	With flange	31.94lb
peso riduttore	With feet	34.80lb



Sono disponibili altri piedini in
www.hydromec.com

 Most popular types
Tipi più diffusi



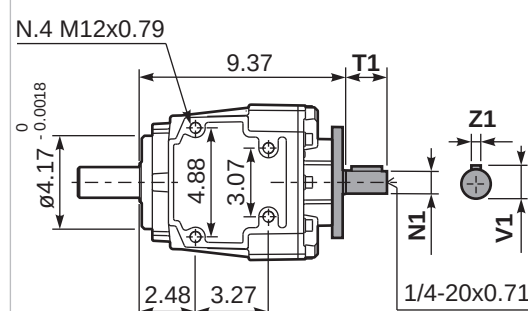
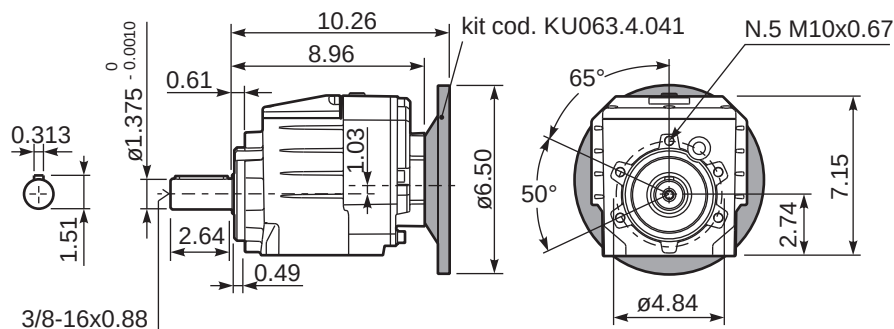
Available output flanges / flange di uscita

a1 $\emptyset$	b1	c1	e1	f1	s1	kit code	Type
7.87	5.118 ^{-0.0017} _{-0.0033}	0.51	6.50	0.14	0.43	KC50.9.012	Metric
9.84	7.087 ^{-0.0017} _{-0.0033}	0.61	8.46	0.16	0.55	KC50.9.013	



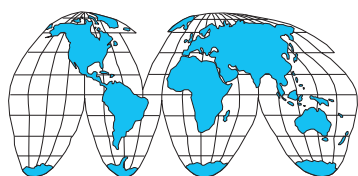
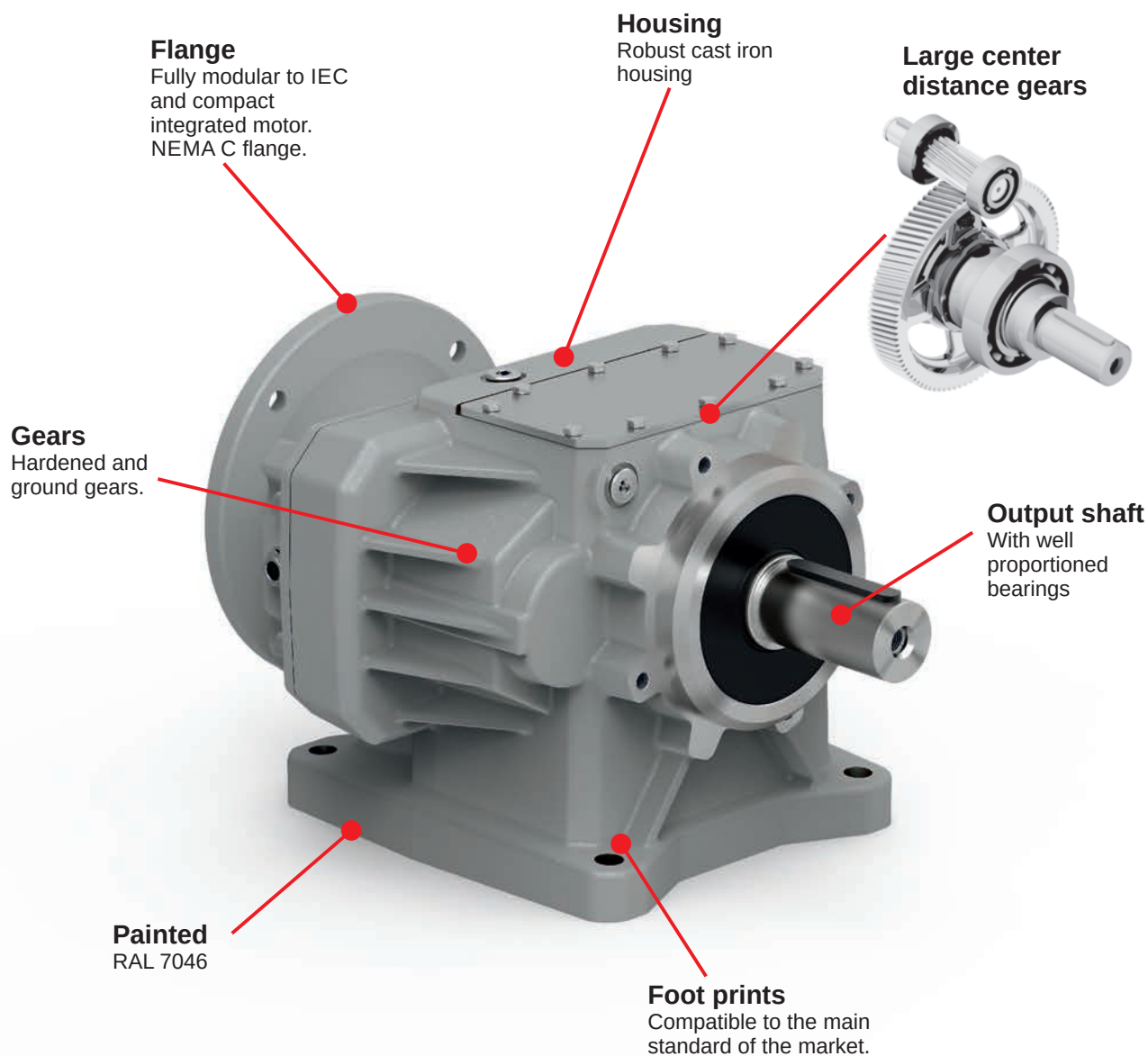
With flange and feet only on request. Ask for compatibility

R613A-N... Input Shaft
Albero in entrata

5-22

Cast iron in line gearboxes

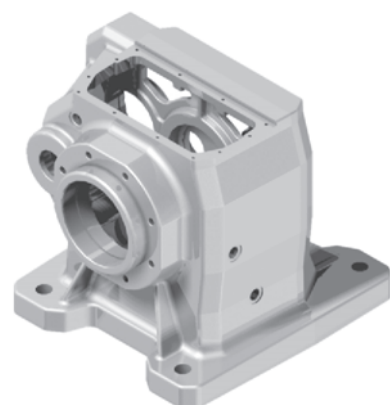
A modular and compact product



World wide sales network.

Single-piece Cast Iron housing

with high tensile strength.
Precision machined for alignment of bearings and gearing



Specific type datasheet on page...

On page / A pagina / Auf Seite / À la page / En la página

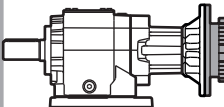
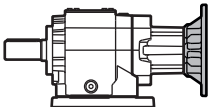
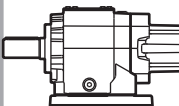
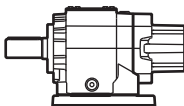
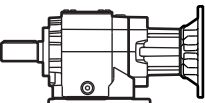
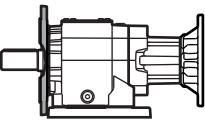
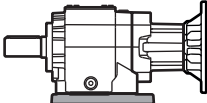
2 and 3 Stages



Types / Tipi
Tipen / Types
Tipos



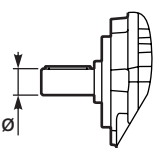
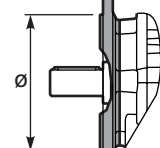
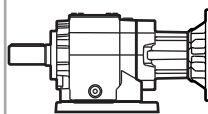
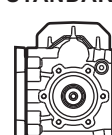
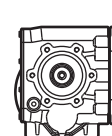
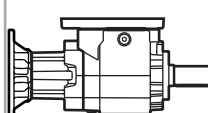
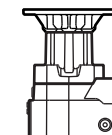
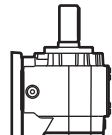
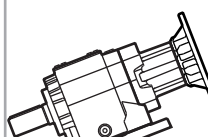
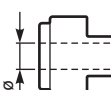
6-5	6-7	6-9	6-11	6-13	6-15	6-17	6-19	6-21	6-23
712C 5974 lb in	713C 5974 lb in	812C 7656 lb in	813C 7956 lb in	862C 14161 lb in	863C 15931 lb in	1002 25667 lb in	1003 26552 lb in	1102 39828 lb in	1103 40713 lb in

Type - Tipo - Typ	Size - Grandezza - Tomaño	Mounting - Montaggio Tipo de montaje																																																														
P	702C	-F																																																														
Cast iron coaxial gear boxes Riduttori coassiali in Ghisa  With IEC motor M  With motor flange P  With male input shaft R  Modular base B 2 Stages Riduzioni Etapas 712C 812C 862C 1002 1102 3 Stages Riduzioni Etapas 713C 813C 863C 1003 1103  Without flange / feet -N  Output flange mounted -F  Mounted feet B.. Feet / piedini <table><tr><th>Feet Code</th><th>Market reference</th><th>G</th><th>H</th><th>R</th><th>L</th><th>L1</th><th>S</th></tr><tr><td>B1</td><td>112</td><td>18</td><td>85</td><td>110</td><td>87</td><td>50</td><td></td></tr><tr><td>B2</td><td>212/3</td><td>18</td><td>100</td><td>130</td><td>107.5</td><td></td><td></td></tr><tr><td>S1</td><td>17</td><td>18</td><td>75</td><td>110</td><td>90+20</td><td></td><td></td></tr><tr><td>S2</td><td>27</td><td>25</td><td>90</td><td>110</td><td>130</td><td></td><td></td></tr><tr><td>M1</td><td>42/3</td><td>25</td><td>80</td><td>110+120</td><td>85</td><td></td><td></td></tr><tr><td>L4</td><td>04</td><td>13</td><td>80</td><td>105</td><td></td><td></td><td></td></tr><tr><td>L5</td><td>05</td><td>16</td><td>100</td><td>125</td><td></td><td></td><td></td></tr></table> You see feet code in the chart of the dimensions Vedi codice piede nella tabella delle dimensioni	Feet Code	Market reference	G	H	R	L	L1	S	B1	112	18	85	110	87	50		B2	212/3	18	100	130	107.5			S1	17	18	75	110	90+20			S2	27	25	90	110	130			M1	42/3	25	80	110+120	85			L4	04	13	80	105				L5	05	16	100	125			
Feet Code	Market reference	G	H	R	L	L1	S																																																									
B1	112	18	85	110	87	50																																																										
B2	212/3	18	100	130	107.5																																																											
S1	17	18	75	110	90+20																																																											
S2	27	25	90	110	130																																																											
M1	42/3	25	80	110+120	85																																																											
L4	04	13	80	105																																																												
L5	05	16	100	125																																																												



On request we can deliver our products according to the ATEX
A richiesta possiamo fornire i nostri prodotti secondo le normative ATEX
A pedido, se pueden enviar nuestros productos de acuerdo con las normas ATEX.

CODIFICA / HOW TO ORDER / CODIFICACIÓN

Ratio - Rapporto Relación	Output shaft Albero uscita Eje en salida	Output flange Flangia uscita Brida en salida	Motor size Grandezza motore Tamaño motor	Mounting position Posizione montaggio Posición de montaje	Input bore Foro entrata Eingangshohlwelle Trou d'entree Eje hueco de entrada	Terminal box position Posizione morsettiera Posición caja de bornes
6.57	H	4	-W	B3	ST	
See technical data table Vedi tabelle dati tecnici. Ver tabla datos técnicos	 → STANDARD 712C 713C Z → ø1.375 812C 813C 0 → ø1.625 862C 863C 1 → ø2.125 1002 1003 3 → ø2.375 1102 1103 4 → ø2.875	 N Senza flangia Without flange 712C 713C 4 → ø7.874 5 → ø9.843 812C 813C 5 → ø9.843 6 → ø11.811 862C 863C 6 → ø11.811 7 → ø13.780 1002 1003 6 → ø11.811 7 → ø13.780 8 → ø17.717 1102 1103 7 → ø13.780 8 → ø17.717 → STANDARD	Flange Flangia  Nema -W=56C -X=143/5TC -Y=182/4TC AA=213/5TC AB=254/6TC AC=284/6TC AD=324/6TC Type R Tipo R  713C 813C -K → ø0.625 -J → ø0.750 712C 812C 863C -J → ø0.750 -N → ø0.875 Without flange Senza flangia  -M With coupling Con giunto 713C 813C -K → ø0.625 -N → ø0.875 712C 812C 863C -K → ø0.625 -N → ø0.875 -S → ø1.125 862C 1003 1103 -S → ø1.125 UA → ø1.375 UB → ø1.625 1002 1102 UC → ø1.875 UD → ø2.125	 B3 STANDARD  B6  B7  B8  V5  V6  V8	ST Nothing indication: standard bore Nessuna indicazione: foro standard COUPLING  -W = ø0.625" -X = ø0.875" -Y = ø1.125" -0 Ready for input coupling Predisposto per giunto 	With Type M specify terminal box position Con tipo M specificare posizione morsettiera A B STANDARD C D

POTENZA RICHIESTA / REQUIRED POWER / ERFORDERLICHE LEISTUNG / PUISSANCE NECESSAIRE / POTENCIA NECESARIA

Lifting / sollevamento / hubantriebe / levage / elevación

$$P [KW] = \frac{M [Kg] \cdot g [9.81] \cdot v [m / s]}{1000}$$

Rotation / rotazione / drehung / rotation / rotation

$$P [KW] = \frac{M [Nm] \cdot n [rpm]}{9550}$$

Linear movement / traslazione / linearbewegung / translation / translacion

$$P [KW] = \frac{F [N] \cdot v [m / s]}{1000}$$

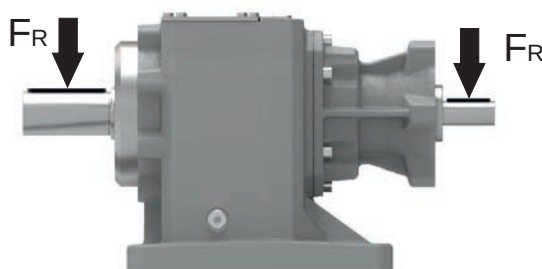
TORQUE / COPPIA / DREHMOMENT / COUPLE / PAR

$$M [Nm] = \frac{9550 \cdot P[KW]}{n [rpm]}$$

$$M [lb in] = \frac{63030 \cdot P[HP]}{n [rpm]}$$

RADIAL LOADS / CARICHI RADIALI / RADIALE - UND AXIALLASTEN / CHARGES RADIALES / CARGA RADIAL Y AXIAL

- Radial load generated by external transmissions keyed onto input and/or output shafts.
- Forza radiale generata da organi di trasmissione calettati sugli alberi di ingresso e/o uscita.
- Belastungen der Antriebs- bzw. Abtriebswellen durch von aussen eingebrachte Radiallasten.
- Charge radiale générée par la transmissions calés sur les entrées et / ou des arbres de sortie
- Cargas radiales, generada por transmisiones externas, aplicadas sobre los ejes de entrada y/o salida



$F_R [N] = \frac{M [Nm] \cdot 2000}{d [mm]} \cdot f_k$		$F_R [N] = \frac{M [lb\ in] \cdot 8.9}{d [in]} \cdot f_k$	
M	Momento torcente / Output torque / Abtriebsdrehmoment / Couple / Par torsion		
d	Diametro primitivo / Diam. of driving element / Durchmesser der Abtriebseinheit / Diamètre primitif / Diámetro primitivo		
f _k	Coefficiente di trasformazione / Factor / Faktor / Coefficient de transmission / Coeficiente de transmisión 1.15 Ingranaggi / Gearwheels / Zahnrad / Engrenage / Engranaje 1.25 Catena / Chain sprockets / Antriebskette / Chaîne / Cadena 1.75 Cinghia Trapezoidale / Narrow v-belt pulley / Keilriemen / Courroie trap. / Correa trapezoidal 2.50 Cinghia piatta / Flat-belt pulley / Flachzahnriem. / Courroie crantée / Correa plana		

- If your application requires higher radial loads, contact our technical office. Higher load may be possible.
- Nel caso la vostra applicazione richieda carichi radiali superiori consultare il nostro ufficio tecnico, valori maggiori possono essere accettati.
- Wenn Ihre Anwendung höhere Radialbelastungen erfordert, so wenden Sie sich bitte an unser technischen Büro.
- Si votre application demande des charges radiales supérieures, s'adresser à notre bureau technique.
- En el caso en que una aplicación exija una carga radial superior a la especificada en el catálogo, consultar a nuestra oficinas técnica.

How to select a gearbox / Come selezionare un riduttore / Wie wählt man ein Getriebe
Comment sélectionner un réducteur / Cómo seleccionar un reductor

B Output speed
Velocità in uscita
Abtriebsdrehzahl
Vitesse de sortie
Velocidad de salida

Nominal power
Potenza nominale
Max. mögliche Leistung
Poissance nominale
Potencia nominal

A Nominal torque
Momento torcente nominale
Nenn Drehmoment
Couple nominal
Par de torsión nominal

Flange code
Codice flangia
Flanschtype
Code bride
Código bridas

Input speed
Velocità in entrata
Eintriebsdrehzahl
Vitesse en entrée
Velocidad de entrada

Gear size
Grandezza riduttore
Getriebegröße
Taille réducteur
Tamaño reductor

Motor power
Potenza motore
Motorleistung
Puissance moteur
Potencia motor

712C

Coaxial - Gear
5974lb in

Rating - Cast Iron **COAXIAL GEARBOXES**

■ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges			Output Shaft 	Ratios code
							-X	-Y	AA		
							143/5TC	182/4TC	213/5TC		
455.4	3.84	10	1329	2.3	23.31	3098				3317	01
321.9	5.44	10	1880	1.7	16.95	3186				3313	02
291.7	6.00	10	2075	1.6	16.21	3363				3312	03
234.4	7.47	10	2582	1.4	14.40	3717				3310	04
206.4	8.48	10	2932	1.4	14.49	4248				2513	05

C Ratio
Rapporto
Untersetzung
Rapport de réduction
Relación

Transmitted torque
Momento torcente trasmesso
Mögliche Drehmomente
Couple de sortie
Par transmitido

Service factor
Fattore di servizio
Betriebsfaktor
Facteur de service
Factor de servicio

Output shaft diam.
Diam. albero uscita
Durchmesser abtriebswelle
Diametre arbre lent
Diametro eje de salida

Notes
Note
Anmerkungen
Note
Notas

fs		Oper. hours per day Ore di funz. giorn.		
Type of load and starts per hour Tipo di carico e avviamenti per ora		3 h	10 h	24 h
Continuous or intermittent appl. with start / hour Applicazione cont. o interm. con n.ro operazioni/ora	Uniform / Uniforme	0.8	1	1.25
	Moderate / Moderato	1	1.25	1.5
	Heavy / Forte	1.25	1.5	1.75
Intermittent application with start / hour Applicazione intermittente con n.ro operazioni/ora	Uniform / Uniforme	1	1.25	1.5
	Moderate / Moderato	1.25	1.5	1.75
	Heavy / Forte	1.5	1.75	2.15

D	Motor flange available Flange disponibili Erhältliche Motorflansche Bridas disponibles Bridas disponibles	
B)	Mounting with reduction ring Montaggio con boccia di riduzione Reduzierhülsen Montage avec douille de réduction Montaje con casquillo de reducción	
C)	Motor flangeholes position/terminal box position Posizione fori flangia/basetta motore Bohrungsposition am Motorflansch/-sockel Position trous bride/barrette à bornes moteur Posición agujeros brida / base motor	
B)	Available without reduction bushes Disponibile anche senza boccia Auch ohne Reduzierbuchse verfügbar Disponible aussi sans douille de réduction Disponible tambien sin casquillo	

A	Select required torque (according to service factor)	Seleziona la coppia desiderata (comprensiva del fattore di servizio)	Max. Drehmoment in Bezug zum Betriebsfaktor	Sélectionner le couple souhaité (comprenant le facteur de service)	Seleccionar el par deseado (incluyendo el factor de servicio)
B	Select output speed	Seleziona la velocità in uscita	Ausgewählte Abtriebsdrehzahl	Sélectionner la vitesse de sortie	Seleccionar la velocidad de salida
C	On the same line of selected geared motor, you can find the gear ratio	Sulla riga corrispondente alla motorizzazione prescelta si può rilevare il rapporto di riduzione	Auf der gleichen Linie wie die ausgewählte Motorleistung steht auch die Getriebeuntersetzung	Sur la ligne correspondante à la motorisation pré-choisie on peut relever le rapport de réduction	En la línea correspondiente al motor preseleccionado es posible encontrar la relación de reducción
D	Select motor flange available (if requested)	Scegli la flangia disponibile (se richiesta)	Erhältliche Motorflansche (auf Anfrage)	Choisir la bride disponible (si elle est demandée)	Seleccionar la brida disponible (sobre pedido)



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges			Output Shaft  standard ø1.375	Ratios code 
							-X	-Y	AA		
							143/5TC	182/4TC	213/5TC		
455.4	3.84	10	1329	2.3	23.31	3098				3317	01
321.9	5.44	10	1880	1.7	16.95	3186				3313	02
291.7	6.00	10	2075	1.6	16.21	3363				3312	03
234.4	7.47	10	2582	1.4	14.40	3717				3310	04
206.4	8.48	10	2932	1.4	14.49	4248				2513	05
187.0	9.36	10	3236	1.4	13.67	4425				2512	06
150.2	11.65	10	4027	1.3	13.41	5399				2510	07
121.6	14.39	10	4975	1.1	11.21	5576				1713	08
110.2	15.88	10	5492	1.1	10.64	5841				1712	09
88.5	19.76	7.5	5125	1.2	8.74	5974				1710	10
79.2	22.08	7.5	5727	1.0	7.82	5974				1213	11
71.8	24.38	7.5	6321	0.9	7.09	5974				1212	12
57.7	30.33	5	5244	1.1	5.70	5974				1210	13
51.5	34.00	5	5878	1.0	5.08	5974				912	14
45.1	38.81	5	6710	0.9	4.45	5974				812	15
41.4	42.31	3	4389	1.4	4.08	5974				910	16
36.2	48.30	3	5010	1.2	3.58	5974				810	17

The dynamic efficiency is 0.96 for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

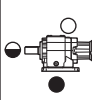
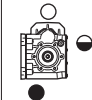
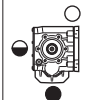
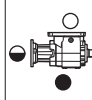
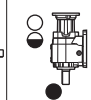
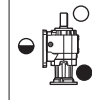
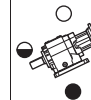
B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit 712C is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore 712C viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño 712C se suministra, lubricado de por vida con aceites sintéticos y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

						
B3	B6	B7	B8	V5	V6	V8
52.82 oz	80.99 oz	66.90 oz	59.86 oz	91.55 oz	70.42 oz	Ask
SHELL Omala S4 WE 320				ENI Telium VSF 320		

For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

tab. 1

RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita

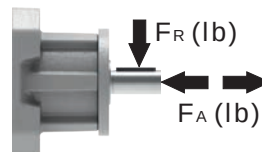
$$F_{eq} = F_R \cdot \frac{3.07}{X+1.50}$$



n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	153	764	140	216	1079	70	292	1461
250	171	854	120	234	1169	40	328	1641
200	202	1012	85	252	1259	15	405	2023

Input shaft

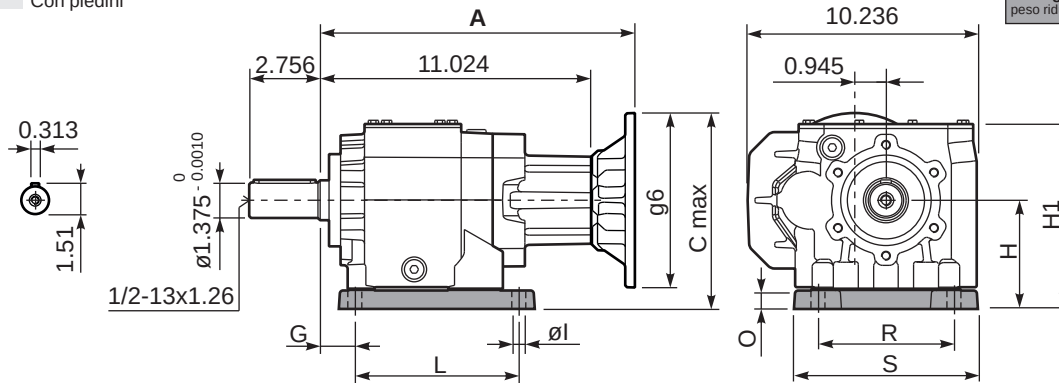
Albero in entrata



n_1	FA	FR
1750	101	506
1140	112	562

tab. 2

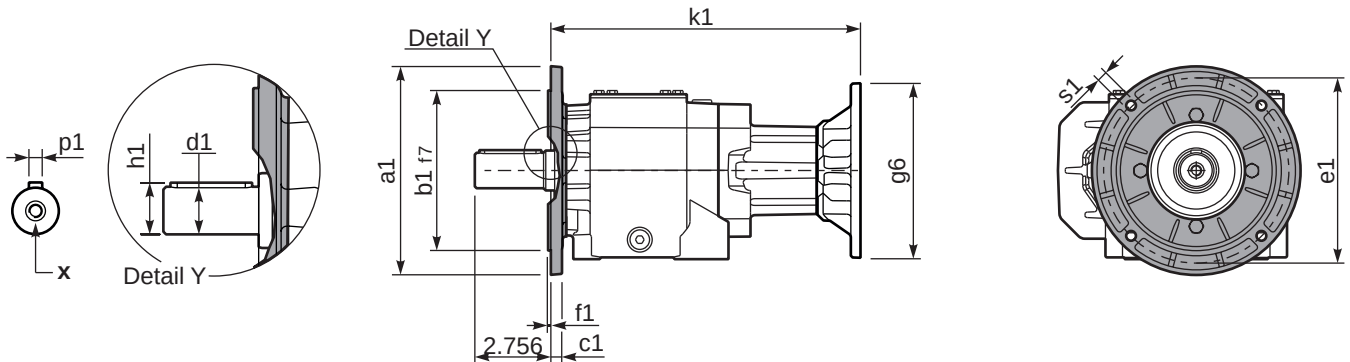
P712C-S6...

With feet
Con piediniGearbox
weight
peso riduttoreWith flange **73.4 lb**
With feet **77.2 lb**

Feet / piedini

Feet Code	Market reference	G	H	R	L	S	H1	O	Øl	B5 max. Flange	kit code
B4	412/3	0.768	5.118	7.087	5.886	8.661	8.661	0.984	0.551	-	KC71.9.022
S6	67	1.181	5.118	5.906	7.677	8.628	8.661	0.984	0.551	-	KC71.9.024

P712C-F...

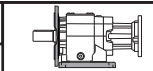
Output flanges
flange di uscita

Output shaft / Albero di uscita

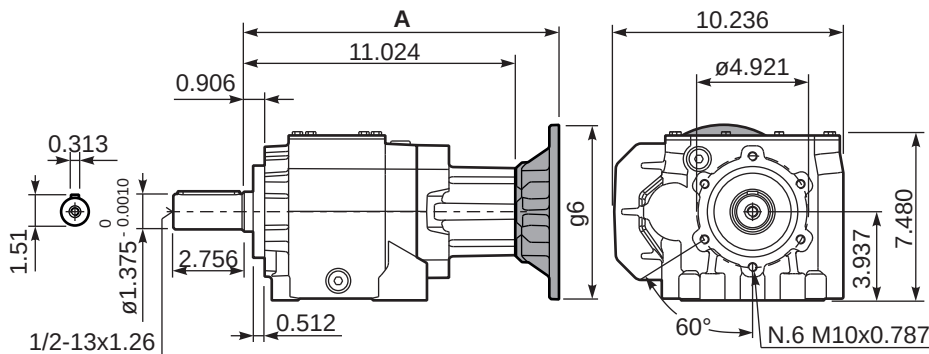
	Shaft - d1	p1	h1	x
Standard	Ø 1.375	0.313	1.51	1/2-13x1.26

Available output flanges / flange di uscita

a1 Ø	b1	c1	e1	f1	s1	kit code
7.874	5.118 ^{-0.0017} _{-0.0033}	0.433	6.496	0.138	0.433	KC71.9.012
9.843	7.087 ^{-0.0017} _{-0.0033}	0.512	8.465	0.157	0.551	KC81.9.013
-	-	-	-	-	-	-

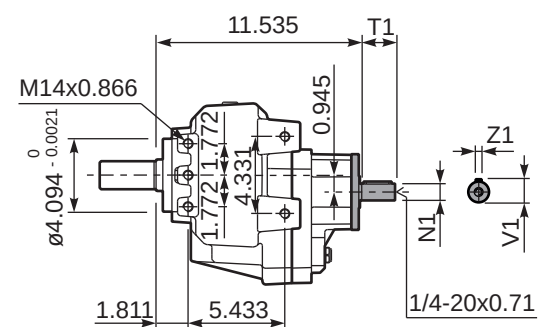
With flange and feet
only on request.
Ask for compatibility

P712C-N...

Basic gearbox
Riduttore base

Nema flanges	A	C _{max}	g6	k1	kit code
56C-143/5TC	12.008	8.368	6.50	12.008	KU085.4.041
182/4TC	12.713	9.559	8.88	12.713	KU085.4.042
213/5TC	13.248	9.559	8.88	13.248	KUC50.4.041C

R712C-N...

Input Shaft
Albero in entrata

Nema flanges	N1	T1	V1	Z1	kit code
Standard	0.875	1.97	0.96	0.188	KC81.5.070U
On request	0.750	1.97	0.83	0.188	KC81.5.069U



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges				
							-W	-X			
							56C	143/5 TC			
27.9	62.76	2	4250	1.4	2.81	5974			191213	standard Ø1.375	01
25.3	69.28	2	4691	1.3	2.55	5974			191212		02
24.1	72.75	2	4926	1.2	2.43	5974			171213		03
21.8	80.29	2	5437	1.1	2.20	5974			171212		04
20.5	85.39	2	5782	1.0	2.07	5974			151213		05
18.6	94.25	1.5	4786	1.2	1.87	5974			151212		06
17.2	101.92	1.5	5176	1.2	1.73	5974			131213		07
15.6	112.50	1.5	5713	1.0	1.57	5974			131212		08
14.9	117.29	1.5	5956	1.0	1.50	5974			151210		09
12.6	139.13	1.5	7065	0.8	1.27	5974			101213		10
11.4	153.56	1	5199	1.1	1.15	5974			101212		11
9.6	181.57	1	6147	1.0	0.97	5974			91213		12
8.7	200.42	0.75	5089	1.2	0.88	5974			91212		13
7.0	249.41	0.75	6333	0.9	0.71	5974			91210		14
5.3	329.33	0.55	6132	1.0	0.54	5974			71210		15

The dynamic efficiency is **0.94** for all ratios

A) Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit **713C** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore **713C** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione.

Vedi tab.1 per oli e quantità consigliati.

In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño **713C** se suministra, lubricado de por vida con aceites sintéticos y no requieren mantenimiento alguna.

Ver tabla 1, para cantidades y aceites recomendados.

En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

B3	B6	B7	B8	V5	V6	V8
56.34 oz	77.46 oz	63.38 oz	59.86 oz	98.59 oz	66.90 oz	Ask
SHELL Omala S4 WE 320				ENI Telium VSF 320		

For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

tab. 1

RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita

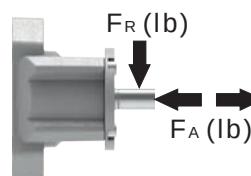
$$F_{eq} = F_R \cdot \frac{3.07}{X+1.50}$$



n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	153	764	140	216	1079	70	292	1461
250	171	854	120	234	1169	40	328	1641
200	202	1012	85	252	1259	15	405	2023

Input shaft

Albero in entrata



n_1	FA	FR
1750	90	450
1140	99	495

tab. 2

Gearbox weight peso riduttore	With flange	76.1 lb
	With feet	79.8 lb



Feet Code	Market reference	G	H	R	L	S	H1	O	øI	B5 max. Flange	kit code
B4	412/3	0.768	5.118	7.087	5.886	8.661	8.661	0.984	0.551	-	KC71.9.022
S6	67	1.181	5.118	5.906	7.677	8.628	8.661	0.984	0.551	-	KC71.9.024

Available output flanges / flange di uscita

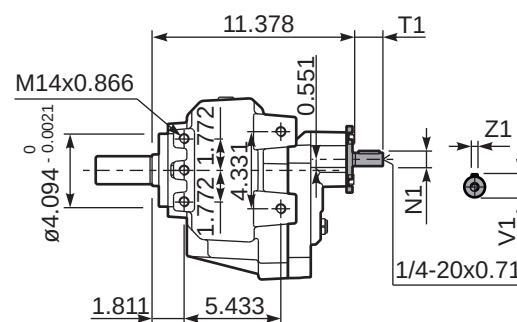
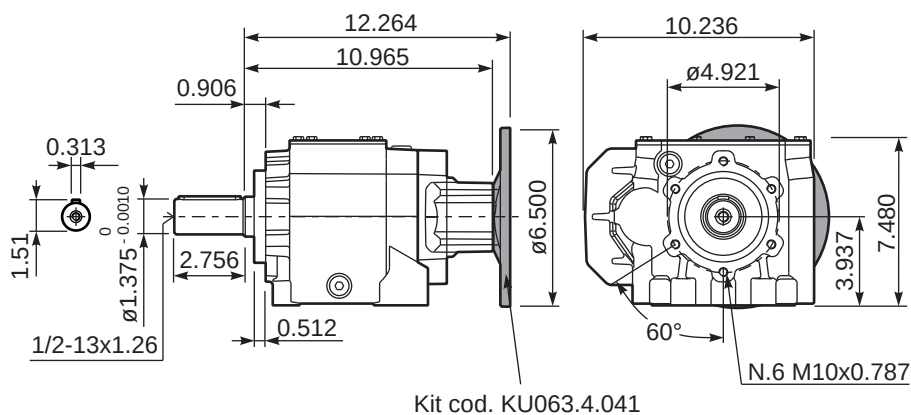
	Shaft - d1	p1	h1	x
Standard	Ø 1.375	0.313	1.51	1/2-13x1.26

a1 ø	b1	c1	e1	f1	s1	kit code
7.874	5.118 ^{-0.0017 -0.0033}	0.433	6.496	0.138	0.433	KC71.9.012
9.843	7.087 ^{-0.0017 -0.0033}	0.512	8.465	0.157	0.551	KC81.9.013
-	-	-	-	-	-	-



With flange and feet
only on request.
Ask for compatibility

Input Shaft
Albero in entrata



Nema flanges	N1	T1	V1	Z1	kit code
Standard	0.750	1.97	0.83	0.188	KC40.5.070U
On request	0.625	1.57	0.71	0.188	KC40.5.069U



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges			Output Shaft  standard ø1.625	Ratios code 
							-X	-Y	AA		
							143/5TC	182/4TC	213/5TC		
455.4	3.84	10	1329	3.3	32.64	4337				3317	01
321.9	5.44	10	1880	2.4	24.49	4602				3313	02
291.7	6.00	10	2075	2.3	23.46	4868				3312	03
234.4	7.47	10	2582	2.1	20.57	5310				3310	04
206.4	8.48	10	2932	1.9	19.17	5620				2513	05
187.0	9.36	10	3236	1.8	17.50	5664				2512	06
150.2	11.65	10	4027	1.5	14.50	5841				2510	07
121.6	14.39	10	4975	1.3	12.81	6373				1713	08
110.2	15.88	10	5492	1.2	12.09	6638				1712	09
88.5	19.76	10	6834	1.1	10.62	7258				1710	10
79.2	22.08	10	7636	1.0	10.03	7656				1213	11
71.8	24.38	7.5	6321	1.2	9.08	7656				1212	12
57.7	30.33	7.5	7866	1.0	7.30	7656				1210	13
51.5	34.00	7.5	8817	0.9	6.51	7656				912	14
45.1	38.81	5	6710	1.1	5.58	7488				812	15
41.4	42.31	5	7315	1.0	5.23	7656				910	16
36.2	48.30	5	8350	0.9	4.58	7656				810	17

The dynamic efficiency is **0.96** for all ratios

A) Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

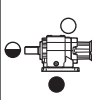
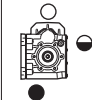
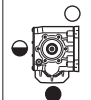
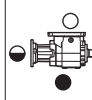
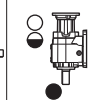
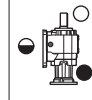
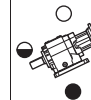
B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit **812C** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore **812C** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño **812C** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

						
B3	B6	B7	B8	V5	V6	V8
52.82 oz	80.99 oz	66.90 oz	59.86 oz	91.55 oz	70.42 oz	Ask
SHELL Omala S4 WE 320				ENI Telium VSF 320		

For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

tab. 1

RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita

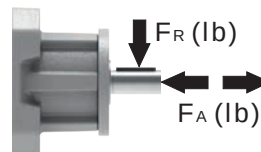
$$F_{eq} = F_R \cdot \frac{3.07}{X+1.50}$$



n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	292	1461	140	400	2001	70	495	2473
250	319	1596	120	427	2136	40	531	2653
200	360	1798	85	459	2293	15	540	2698

Input shaft

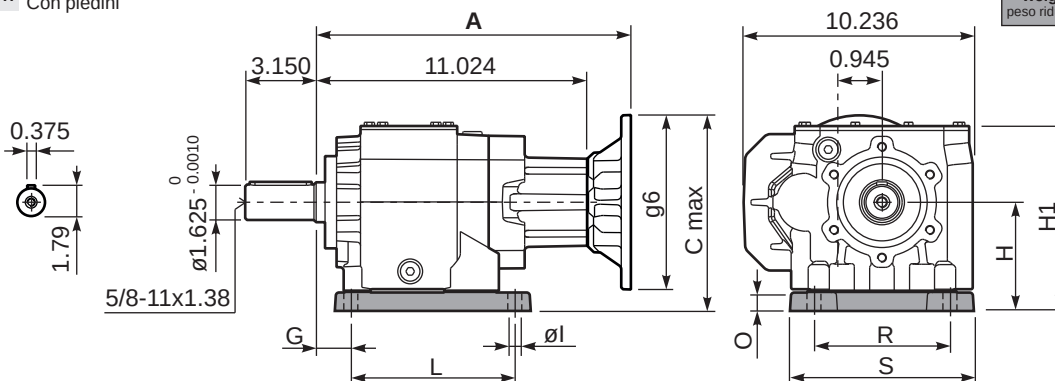
Albero in entrata



n_1	FA	FR
1750	101	506
1140	112	562

tab. 2

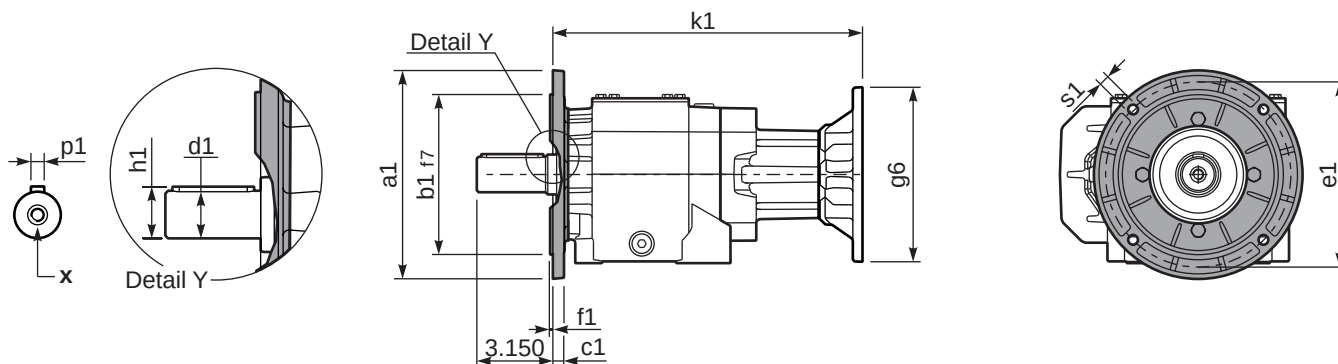
P812C-S7...

With feet
Con piediniGearbox
weight
peso riduttoreWith flange **74.3 lb**
With feet **86.4 lb**

Feet / piedini

Feet Code	Market reference	G	H	R	L	S	H1	O	Øl	B5 max. Flange	kit code
B5	512/3	0.984	6.102	8.858	6.142	10.630	9.665	1.181	0.709	-	KC81.9.022
S7	77	1.378	5.512	6.693	8.071	9.055	9.075	1.181	0.689	-	KC81.9.024

P812C-F...

Output flanges
flange di uscita

Output shaft / Albero di uscita

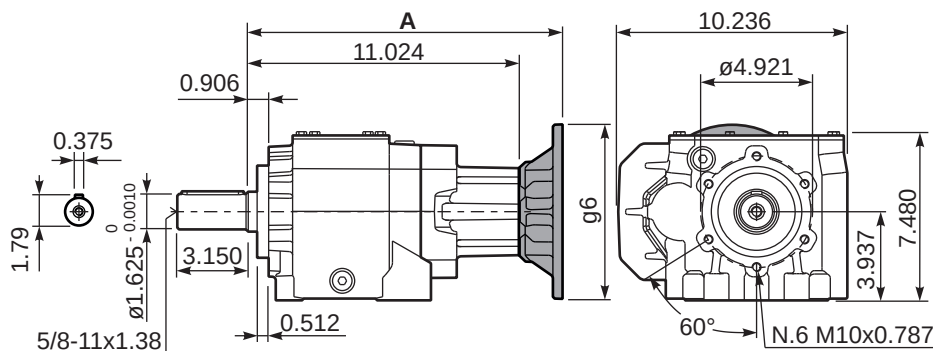
	Shaft - d1	p1	h1	x
Standard	Ø 1.625	0.375	1.79	5/8-11x1.38

Available output flanges / flange di uscita

a1 Ø	b1	c1	e1	f1	s1	kit code
9.843	7.087 ^{-0.0017} _{-0.0033}	0.512	8.465	0.157	0.551	KC81.9.013
11.811	9.055 ^{-0.0020} _{-0.0038}	0.630	10.433	0.157	0.551	KC81.9.014
-	-	-	-	-	-	-

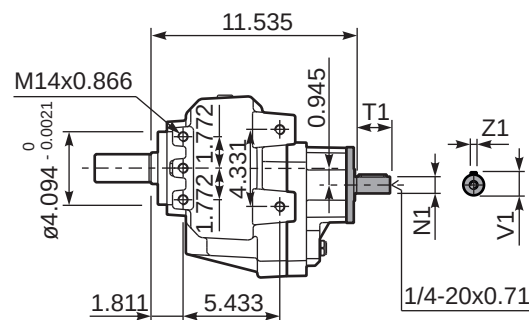
With flange and feet only on request. Ask for compatibility

P812C-N...

Basic gearbox
Riduttore base

Nema flanges	A	C _{max}	g6	k1	kit code
56C-143/5TC	12.008	9.352	6.50	12.008	KU085.4.041
182/4TC	12.713	10.543	8.88	12.713	KU085.4.042
213/5TC	13.248	10.543	8.88	13.248	KUC50.4.041C

R812C-N...

Input Shaft
Albero in entrata

Nema flanges	N1	T1	V1	Z1	kit code
Standard	0.875	1.97	0.96	0.188	KC81.5.070U
On request	0.750	1.97	0.83	0.188	KC81.5.069U



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges			Output Shaft 	Ratios code
							-W	-X			
							56C	143/5 TC			
27.9	62.76	2	4250	1.8	3.60	7656				191213	01
25.3	69.28	2	4691	1.6	3.26	7656				191212	02
24.1	72.75	2	4926	1.6	3.11	7656				171213	03
21.8	80.29	2	5437	1.4	2.82	7656				171212	04
20.5	85.39	2	5782	1.3	2.65	7656				151213	05
18.6	94.25	2	6382	1.2	2.40	7656				151212	06
17.2	101.92	2	6901	1.1	2.22	7656				131213	07
15.6	112.50	2	7618	1.0	2.01	7656				131212	08
14.9	117.29	2	7942	1.0	1.93	7656				151210	09
12.6	139.13	1.5	7065	1.1	1.63	7656				101213	10
11.4	153.56	1.5	7799	1.0	1.47	7656				101212	11
9.6	181.57	1	6147	1.2	1.25	7656				91213	12
8.7	200.42	1	6785	1.1	1.13	7656				91212	13
7.0	249.41	0.75	6333	1.2	0.91	7656				91210	14
5.3	329.33	0.75	8362	0.9	0.69	7656				71210	15

The dynamic efficiency is **0.94** for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit **813C** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore **813C** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione.

Vedi tab.1 per oli e quantità consigliati.

In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño **813C** se suministra, lubricado de por vida con aceites sintético y no requieren mantenimiento alguna.

Ver tabla 1, para cantidades y aceites recomendados.

En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

B3	B6	B7	B8	V5	V6	V8
56.34 oz	77.46 oz	63.38 oz	59.86 oz	98.59 oz	66.90 oz	Ask
SHELL Omala S4 WE 320				ENI Telium VSF 320		

For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

tab. 1

RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita

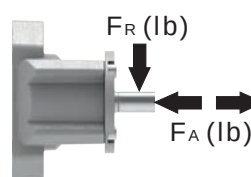
$$F_{eq} = F_R \cdot \frac{3.07}{X+1.50}$$



n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	292	1461	140	400	2001	70	495	2473
250	319	1596	120	427	2136	40	531	2653
200	360	1798	85	459	2293	15	540	2698

Input shaft

Albero in entrata

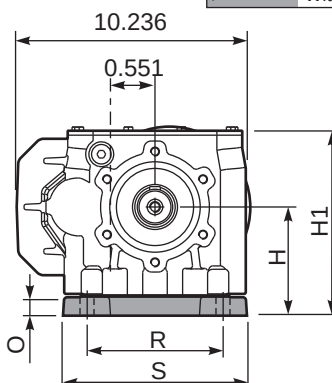


n_1	FA	FR
1750	90	450
1140	99	495

tab. 2

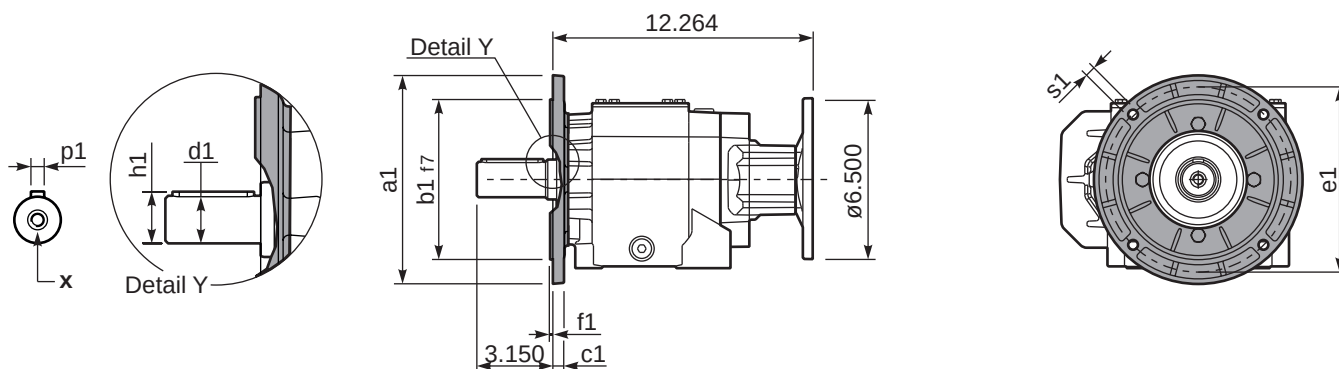
With feet
Con piedini

With flange **76.7 lb**
With feet **88.8 lb**



Feet Code	Market reference	G	H	R	L	S	H1	O	Øl	B5 max. Flange	kit code
B5	512/3	0.984	6.102	8.858	6.142	10.630	9.665	1.181	0.709	-	KC81.9.022
S7	77	1.378	5.512	6.693	8.071	9.055	9.075	1.181	0.689	-	KC81.9.024

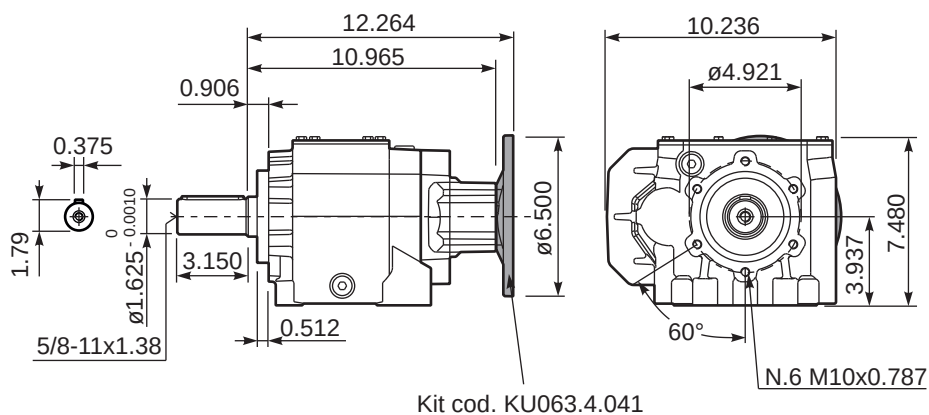
Output flanges
flange di uscita



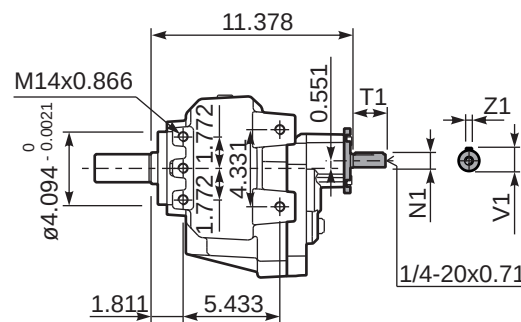
	Shaft - d1	p1	h1	x
Standard	ø 1.625	0.375	1.79	5/8-11x1.38

a1 ø	b1	c1	e1	f1	s1	kit code	 With flange and feet only on request. Ask for compatibility
9.843	7.087 ^{-0.0017} _{-0.0033}	0.512	8.465	0.157	0.551	KC81.9.013	
11.811	9.055 ^{-0.0020} _{-0.0038}	0.630	10.433	0.157	0.551	KC81.9.014	
-	-	-	-	-	-	-	

Basic gearbox
Riduttore base



Input Shaft
Albero in entrata



Nema flanges	N1	T1	V1	Z1	kit code
Standard	0.750	1.97	0.83	0.188	KC40.5.070U
On request	0.625	1.57	0.71	0.188	KC40.5.069U



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges			Output Shaft  $\varnothing$	Ratios code 
							-Y	AA	AB		
							182/4TC	213/5TC	254/6TC		
396	4.42	20	3057	2.0	40.54	6196				3015	01
330	5.30	20	3665	1.7	33.81	6196				3013	02
274	6.38	20	4413	1.6	32.09	7081				3011	03
210	8.33	20	5760	1.2	24.58	7081				2015	04
175	9.99	20	6907	1.2	23.06	7966				2013	05
155	11.26	20	7788	1.3	25.00	9736				1615	06
146	12.03	20	8317	1.3	25.54	10621				2011	07
130	13.50	20	9339	1.3	26.54	12391				1613	08
119	14.65	20	10128	1.3	26.22	13276				1315	09
108	16.26	20	11245	1.2	23.61	13276				1611	10
100	17.56	20	12145	1.1	21.86	13276				1313	11
81	21.50	20	14865	1.0	19.05	14161				1113	12
68	25.88	15	13425	1.1	15.82	14161				1111	13
56	31.09	10	10749	1.2	12.02	12922				813	14
46.8	37.43	10	12943	1.1	10.94	14161				811	15

The dynamic efficiency is **0.96** for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

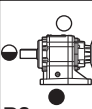
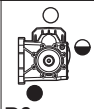
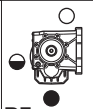
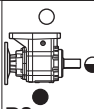
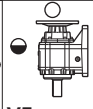
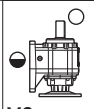
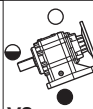
C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit **862C** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug.

See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

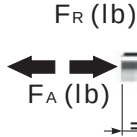
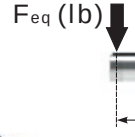
I Il riduttore tipo **862C** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso. Tab.1 per oli e quantità consigliati. Tab.2 carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño **862C** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

						
B3	B6	B7	B8	V5	V6	V8
109.15 oz	158.45 oz	88.03 oz	109.15 oz	172.54 oz	147.89 oz	Ask
SHELL Omala S2 GX 460				ENI Blasias 460		

For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

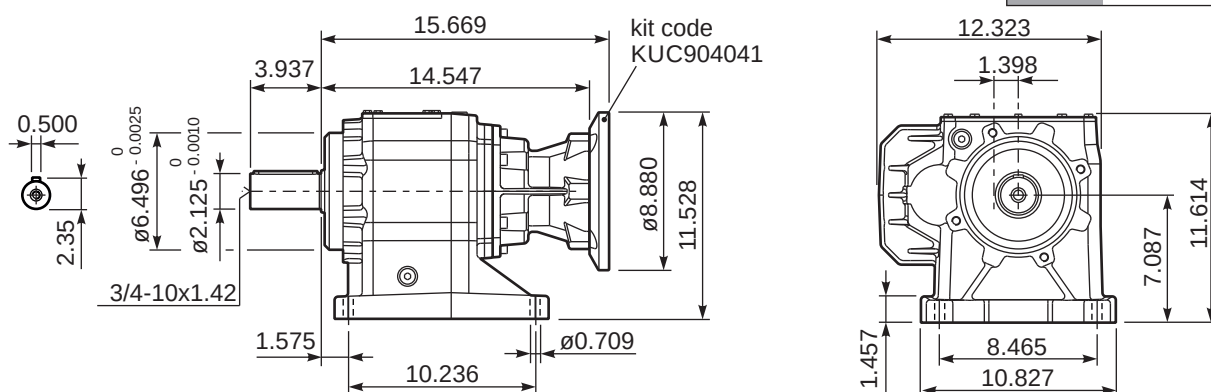
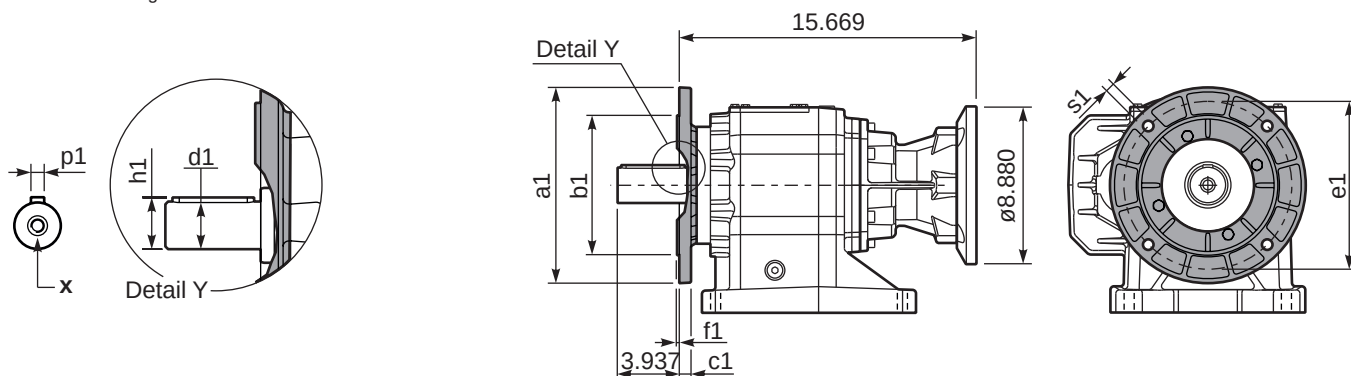
tab. 1

RADIAL AND AXIAL LOADS								
Output shaft Albero di uscita			$F_{eq} = F_R \cdot \frac{3.48}{X+1.52}$					
								
F_R (lb)			F_{eq} (lb)					
F_A (lb)								
n_2	F_A	F_R	n_2	F_A	F_R	n_2	F_A	F_R
300	405	2023	140	540	2698	70	674	3372
250	450	2248	120	585	2923	40	719	3597
200	495	2473	85	629	3147	15	899	4496

On request reinforced bearings to increase loads.

A richiesta cuscinetti rinforzati per aumentare i carichi.

tab. 2

P862C**S8**... With foot
Con piedinoGearbox
weight
peso riduttore With flange **185 lb**
With feet **164 lb**P862C-**F**... Output flanges
flange di uscita

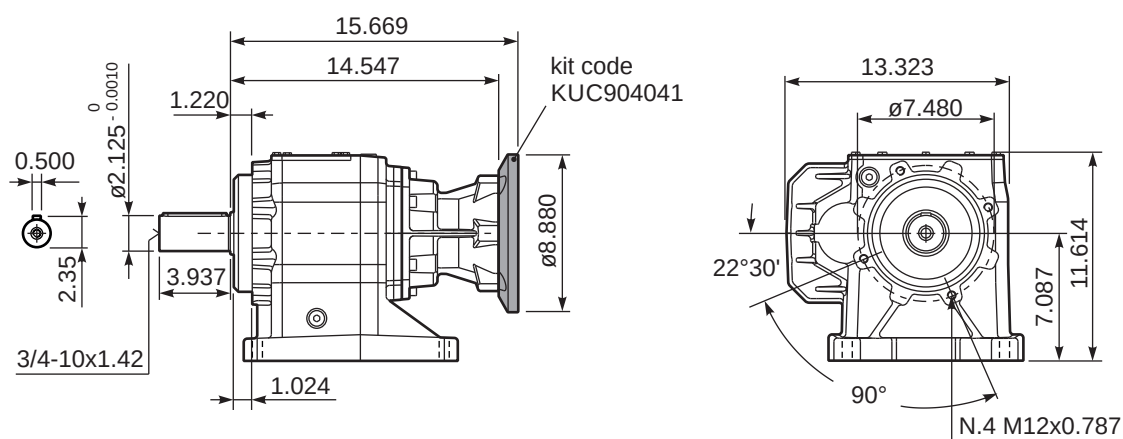
*Available output shaft / Albero di uscita

	Shaft - d1	p1	h1	x
Standard	Ø 2.125	0.500	2.35	3/4-10x1.42

Available output flanges / flange di uscita

a1 Ø	b1	c1	e1	f1	s1	kit code
11.811	9.055 -0.0020 -0.0038	0.827	10.433	0.157	0.551	KC90.9.014
13.780	9.843 -0.0020 -0.0038	0.827	11.811	0.197	0.709	KC90.9.015
-	-	-	-	-	-	-

All flanges are compatible with the foot

P862C**S8**... Basic gearbox
Riduttore base



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges				Output Shaft 	
							-X	-Y	AA			
							143/5TC	182/4TC	213/5TC			
40.7	43.03	10	14567	1.0	9.72	14161					201313	01
36.1	48.52	7.5	12319	1.1	8.35	13719					161315	02
33.8	51.81	7.5	13156	1.1	8.07	14161					201311	03
30.1	58.17	7.5	14772	1.0	7.19	14161					161313	04
27.7	63.09	7.5	16020	0.9	6.42	13719					131315	05
25.0	70.05	7.5	17787	0.9	6.72	15931					161311	06
23.1	75.65	5	12806	1.2	6.22	15931					131313	07
19.2	91.09	5	15420	1.0	5.17	15931					131311	08
15.7	111.50	3	11325	1.4	4.22	15931					111311	09
13.1	133.91	3	13601	1.2	3.51	15931					81313	10
10.9	161.24	3	16377	1.0	2.92	15931					81311	11
9.5	184.40	2	12486	1.0	2.06	12834					61313	12
7.9	222.04	2	15035	1.0	2.06	15489					61311	13

The dynamic efficiency is **0.94** for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit **863C** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore tipo **863C** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso.
Tab.1 per oli e quantità consigliati.
Tab.2 carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño **863C** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

B3	B6	B7	B8	V5	V6	V8
109.15 oz	161.97 oz	91.55 oz	109.15 oz	197.18 oz	151.41 oz	Ask
SHELL Omala S2 GX 460				ENI Blasias 460		

For all details on lubrication and plugs check our website

Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

tab. 1

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

$$F_{eq} = F_R \cdot \frac{3.48}{X+1.52}$$

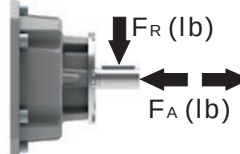


n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	405	2023	140	540	2698	70	674	3372
250	450	2248	120	585	2923	40	719	3597
200	495	2473	85	629	3147	15	899	4496

On request reinforced bearings to increase loads.

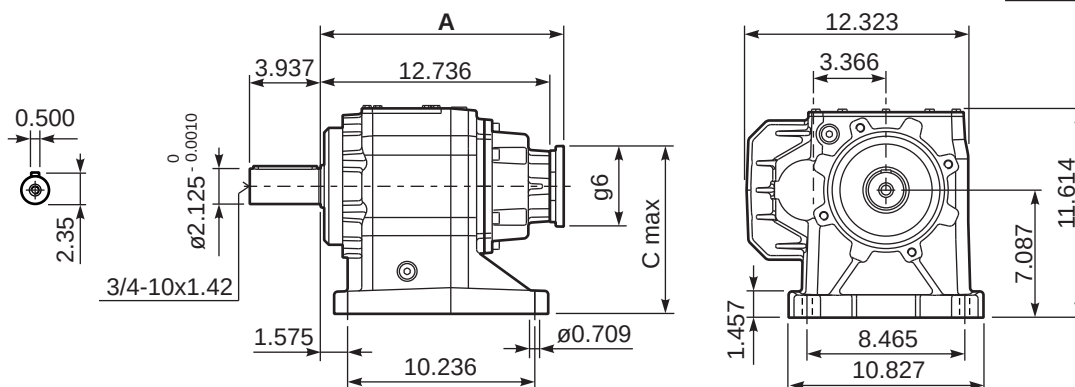
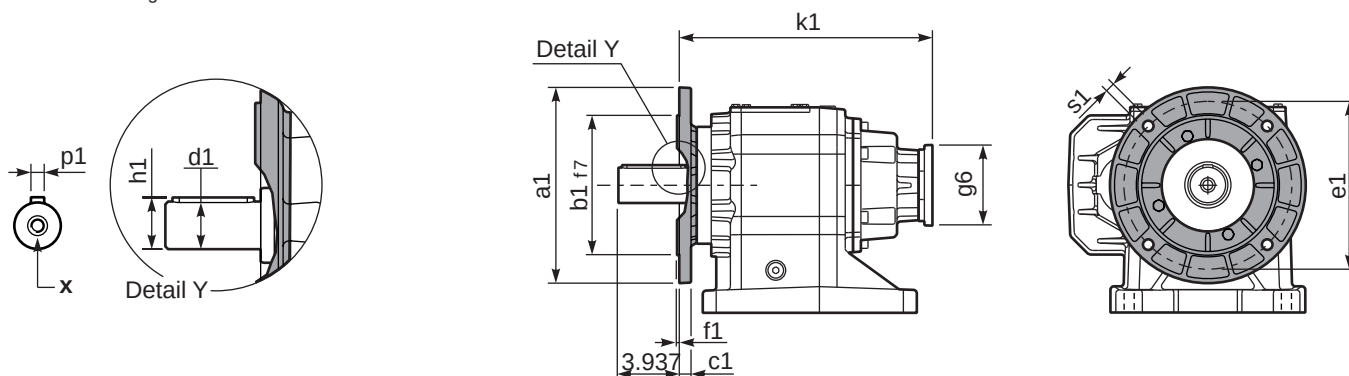
A richiesta cuscinetti rinforzati per aumentare i carichi.

Input shaft
Albero in entrata



n_1	FA	FR
1750	101	506
1140	112	562

tab. 2

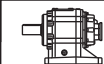
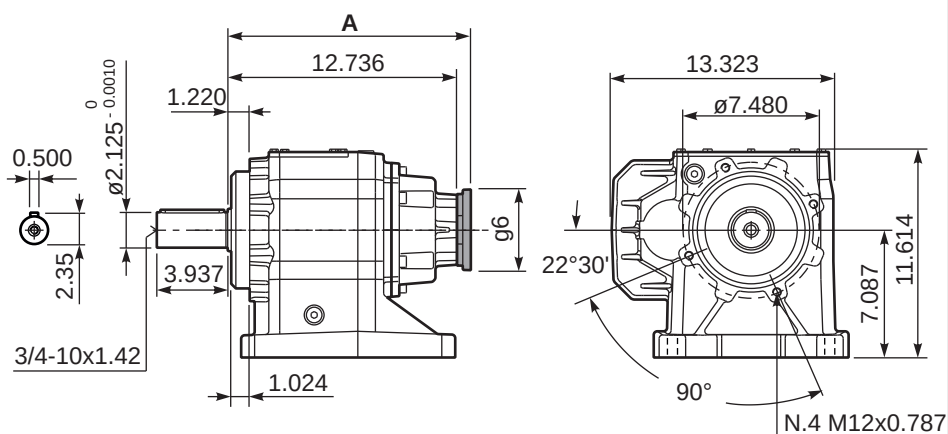
P863C**S8**...With foot
Con piedinoGearbox
weight
peso riduttoreWith flange **173 lb**
With feet **152 lb**P863C-**F**...Output flanges
flange di uscita

Output shaft / Albero di uscita

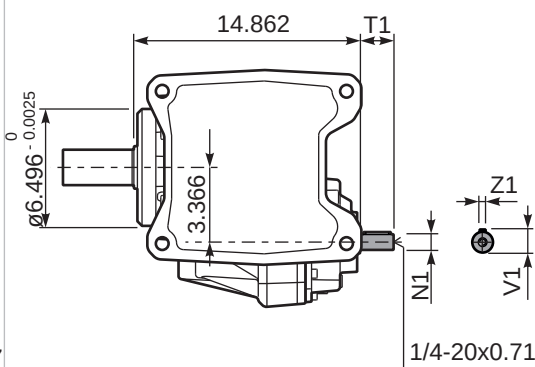
	Shaft - d1	p1	h1	x
Standard	Ø 2.125	0.500	2.35	3/4-10x1.42

Available output flanges / flange di uscita

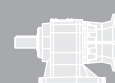
a1 Ø	b1	c1	e1	f1	s1	kit code
11.811	9.055 ^{-0.0020} _{-0.0038}	0.827	10.433	0.157	0.551	KC90.9.014
13.780	9.843 ^{-0.0020} _{-0.0038}	0.827	11.811	0.197	0.709	KC90.9.015
-	-	-	-	-	-	-

All flanges are
compatible
with the footP863C**S8**...Basic gearbox
Riduttore base

Nema flanges	A	C _{max}	g6	k1	kit code
56C-143/5TC	13.720	10.337	6.50	13.720	KU085.4.041
182/4TC	14.425	11.528	8.88	14.425	KU085.4.042
213/5TC	14.941	11.528	8.88	14.941	KUC50.4.041

R863C**S8**...Input Shaft
Albero in entrata

Nema flanges	N1	T1	V1	Z1	kit code
Standard	0.875	1.97	0.96	0.188	KC50.5.070U
On request	0.750	1.97	0.83	0.188	KC50.5.069U



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges		Output Shaft  standard ø2.375	Ratios code 
							AC	AD		
							284/6 TC	324/6 TC		
368	4.75	50	8220	1.8	88.83	14604			3914	01
336	5.21	50	9002	1.7	86.03	15489			3913	02
275	6.36	50	10994	1.5	76.48	16816			3911	03
235	7.45	50	12872	1.4	72.20	18587			3014	04
215	8.15	50	14097	1.3	65.93	18587			3013	05
176	9.96	50	17215	1.1	56.55	19472			3011	06
150	11.69	50	20201	1.0	50.38	20357			2214	07
137	12.80	40	17699	1.2	46.01	20357			2213	08
112	15.63	40	21615	1.0	39.31	21242			2211	09
99	17.65	40	24407	0.9	37.71	23012			1614	10
91	19.33	40	26730	1.0	38.41	25667			1613	11
84	20.77	30	21545	1.2	35.74	25667			1414	12
77	22.75	30	23596	1.1	32.63	25667			1413	13
74	23.60	30	24483	1.0	31.45	25667			1611	14
63	27.78	25	24013	1.1	26.72	25667			1411	15
57	30.76	25	26593	1.0	24.13	25667			1014	16
52	33.69	25	29124	0.9	22.03	25667			1013	17
42.5	41.15	25*	35567	0.7	18.04	25667			1011	18

The dynamic efficiency is **0.96** for all ratios

* Power higher than the maximum one which can be supported by the gearbox. Select according to the torque M_{2R}
Potenza superiore a quella massima sopportabile dal riduttore. Selezionare in base al momento torcente M_{2R}
Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit **1002** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore tipo **1002** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso.
Tab.1 per oli e quantità consigliati.
Tab.2 carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño **1002** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

						
B3	B6	B7	B8	V5	V6	V8
158.4 oz	281.6 oz	193.6 oz	211.2 oz	352.0 oz	264.0 oz	Ask
SHELL Omala S2 GX 460				ENI Blasias 460		

For all details on lubrication and plugs check our website

Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

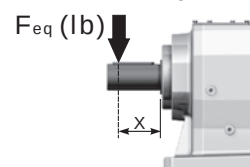
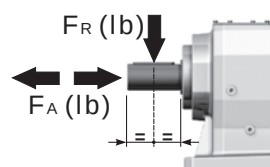
tab. 1

RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita

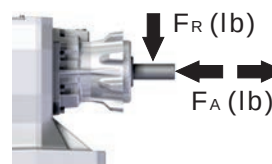
$$F_{eq} = F_R \cdot \frac{4.84}{X+2.48}$$



n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	517	2585	140	670	3350	70	823	4114
250	557	2788	120	715	3574	40	949	4743
200	602	3012	85	773	3867	15	1084	5418

Input shaft

Albero in entrata



n_1	FA	FR
1750	252	1259
1140	274	1371

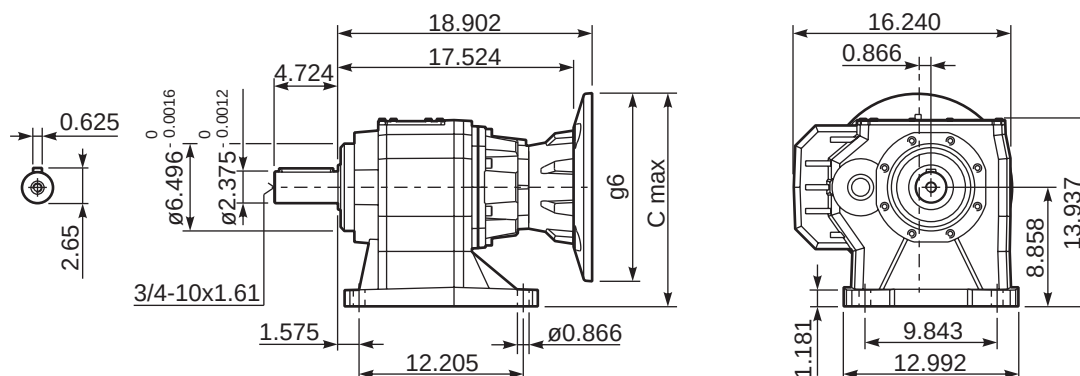
tab. 2

P1002**S9**...

With foot
Con piedino

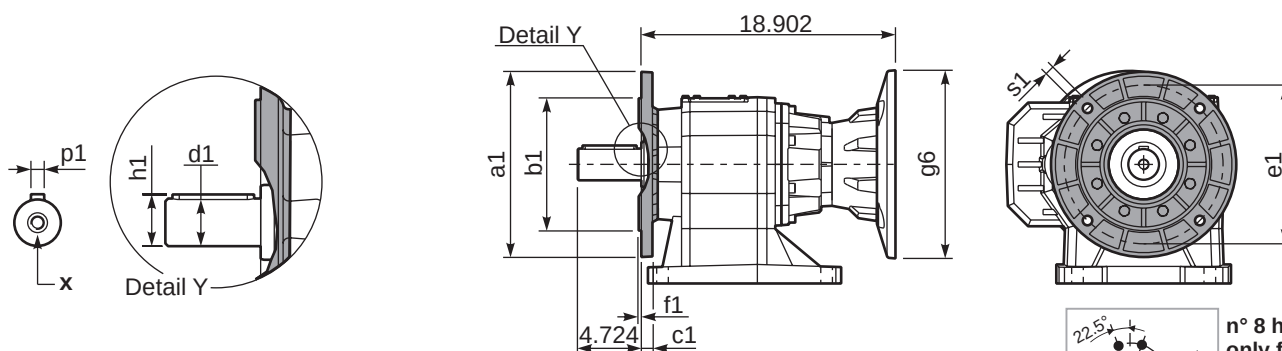
Gearbox weight
peso riduttore

269 lb



P1002-F...

Output flanges
flange di uscita



**n° 8 holes
only for
Kit KC909016**
Solo per il
kit KC909016

Output shaft / Albero di uscita

	Shaft - d1	p1	h1	x
Standard	ø 2.375	0.625	2.65	3/4-10x1.61

Available output flanges / flange di uscita

a1 ø	b1	c1	e1	f1	s1	kit code
11.811	9.055 ^{-0.0020} _{-0.0038}	0.827	10.433	0.157	0.551	KC90.9.014
13.780	9.843 ^{-0.0020} _{-0.0038}	0.827	11.811	0.197	0.709	KC90.9.015
17.717	13.780 ^{-0.0024} _{-0.0047}	0.866	15.748	0.197	0.709	KC90.9.016

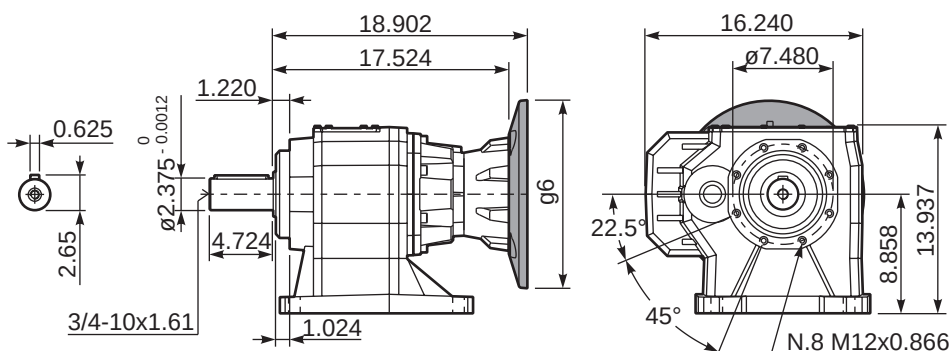


All flanges are compatible with the foot

All flanges are compatible with the foot

P1002**S9**...

Basic gearbox
Riduttore base



NEMA Motor Flanges	C _{max}	g6	kit code
284/6 TC	14.488	11.250	UC110.4.042
324/6 TC	15.866	14.000	UC110.4.043



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges			Output Shaft  $\varnothing$ standard ø2.375	Ratios code 
							-Y	AA	AB		
							182/4TC	213/5TC	254/6TC		
48.5	36.11	20	24453	1.0	20.99	25667				301411	01
34.4	50.89	15	25843	1.0	15.41	26552				201414	02
31.4	55.73	15	28302	0.9	14.07	26552				201413	03
25.4	68.80	10	23294	1.1	11.40	26552				161414	04
23.2	75.35	10	25511	1.0	10.41	26552				161413	05
19.6	89.47	10	30292	0.9	8.77	26552				131414	06
19.0	92.02	7.5	23365	1.1	8.52	26552				161411	07
17.9	97.99	7.5	24881	1.1	8.00	26552				131413	08
16.0	109.52	7.5	27809	1.0	7.16	26552				111414	09
14.6	119.94	5	20304	1.3	6.54	26552				111413	10
11.9	146.47	5	24795	1.1	5.35	26552				111411	11
11.0	158.37	5	26810	1.0	4.95	26552				81414	12
10.1	173.45	5	29361	0.9	4.52	26552				81413	13
8.3	211.82	3	21514	1.2	3.70	26552				81411	14

The dynamic efficiency is **0.94** for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit **1003** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore tipo **1003** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso. Tab.1 per oli e quantità consigliati. Tab.2 carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño **1003** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

						
B3	B6	B7	B8	V5	V6	V8
176.0 oz	316.8 oz	228.8 oz	228.8 oz	387.1 oz	316.8 oz	Ask
SHELL Omala S2 GX 460				ENI Blasias 460		

For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

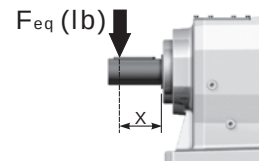
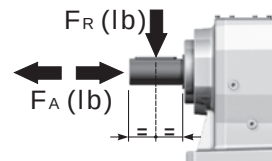
tab. 1

RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita

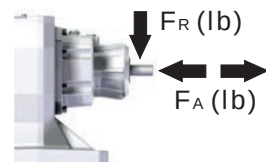
$$F_{eq} = F_R \cdot \frac{4.84}{X+2.48}$$



n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	517	2585	140	670	3350	70	823	4114
250	557	2788	120	715	3574	40	949	4743
200	602	3012	85	773	3867	15	1084	5418

Input shaft

Albero in entrata



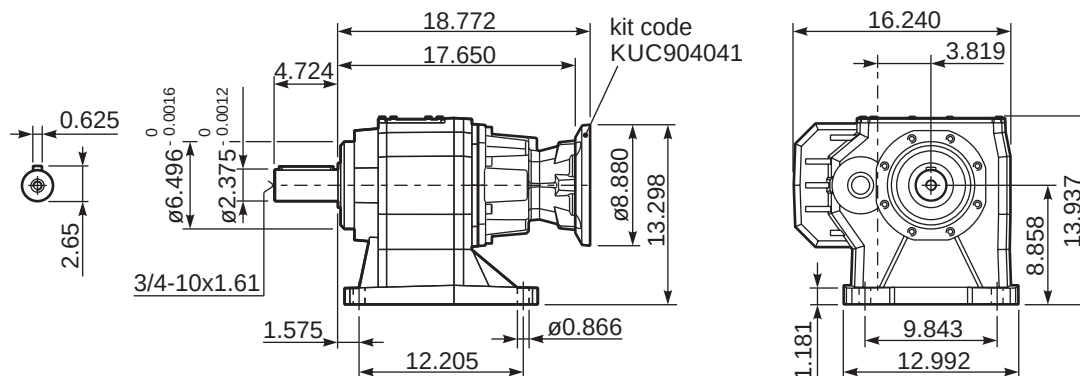
n_1	FA	FR
1750	157	787
1140	189	944

tab. 2

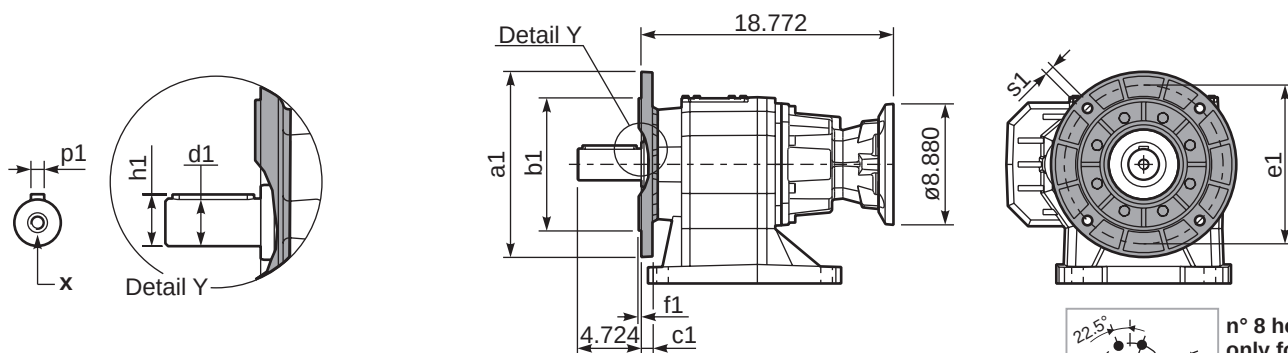
P1003S9...

With foot
Con piedinoGearbox
weight
peso riduttore

246 lb



P1003-F...

Output flanges
flange di uscita

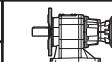
Output shaft / Albero di uscita

	Shaft - d1	p1	h1	x
Standard	Ø 2.375	0.625	2.65	3/4-10x1.61

Available output flanges / flange di uscita

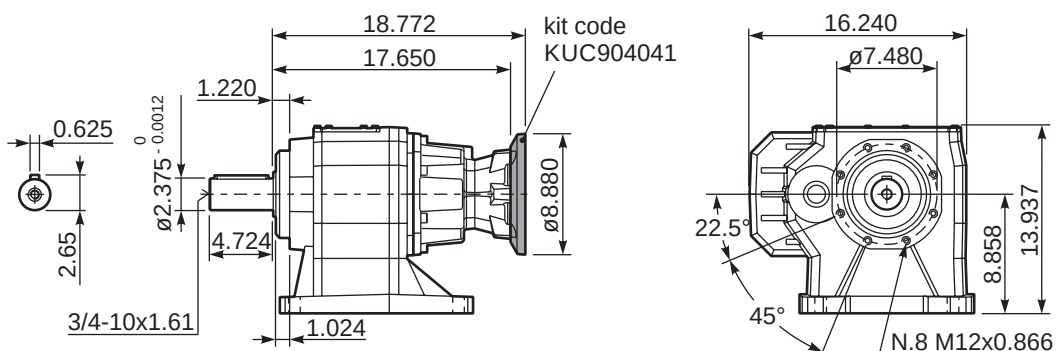
a1 Ø	b1	c1	e1	f1	s1	kit code
11.811	9.055 -0.0020 -0.0038	0.827	10.433	0.157	0.551	KC90.9.014
13.780	9.843 -0.0020 -0.0038	0.827	11.811	0.197	0.709	KC90.9.015
17.717	13.780 -0.0024 -0.0047	0.866	15.748	0.197	0.709	KC90.9.016

n° 8 holes
only for
Kit KC909016
Solo per il
kit KC909016



All flanges are
compatible
with the foot

P1003S9...

Basic gearbox
Riduttore base



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges		Output Shaft  $\varnothing$	Ratios code 
							AC	AD		
							284/6 TC	324/6 TC		
368	4.75	50	8820	2.9	145.36	23897			3914	01
336	5.21	50	9002	2.8	137.65	24782			3913	02
275	6.36	50	10994	2.4	120.76	26552			3911	03
235	7.45	50	12872	2.3	113.46	29207			3014	04
215	8.15	50	14097	2.1	106.74	30093			3013	05
176	9.96	50	17215	1.9	92.54	31863			3011	06
150	11.69	50	20201	1.7	83.24	33633			2214	07
137	12.80	50	22124	1.6	80.01	35403			2213	08
112	15.63	50	27018	1.4	70.43	38058			2211	09
99	17.65	50	30509	1.3	65.27	39828			1614	10
91	19.33	50	33413	1.2	59.60	39828			1613	11
84	20.77	50	35908	1.1	55.46	39828			1414	12
77	22.75	50	39326	1.0	50.64	39828			1413	13
74	23.60	40	32643	1.2	48.80	39828			1611	14
63	27.78	40	38420	1.0	41.47	39828			1411	15
57	30.76	30	31912	1.2	37.44	39828			1014	16
52	33.69	30	34949	1.1	34.19	39828			1013	17
42.5	41.15	25	35567	1.1	28.00	39828			1011	18

The dynamic efficiency is **0.96** for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit **1102** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore tipo **1102** è fornito privo di lubrificazione con tappi di sfato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso.
Tab.1 per oli e quantità consigliati.
Tab.2 carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño **1102** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

						
B3	B6	B7	B8	V5	V6	V8
228.8 oz	439.9 oz	264.0 oz	299.2 oz	510.3 oz	404.7 oz	Ask
SHELL Omala S2 GX 460				ENI Blasias 460		

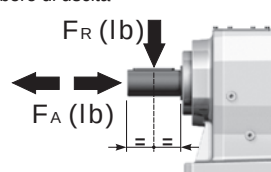
For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

tab. 1

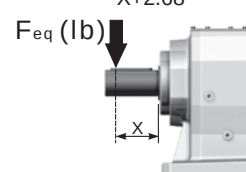
RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita



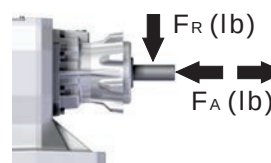
$$F_{eq} = F_R \cdot \frac{5.43}{X+2.68}$$



n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	584	2922	140	742	3709	70	967	4833
250	607	3035	120	787	3934	40	1124	5620
200	674	3372	85	877	4384	15	1326	6632

Input shaft

Albero in entrata



n_1	FA	FR
1750	252	1258
1140	274	1371

tab. 2



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges			Output Shaft  $\varnothing$ standard ø2.875	Ratios code 
							-Y	AA	AB		
							182/4TC	213/5TC	254/6TC		
48.5	36.11	20	24453	1.6	32.58	39828				301411	01
34.4	50.89	20	34457	1.2	23.63	40713				201414	02
31.4	55.73	20	37737	1.1	21.58	40713				201413	03
25.4	68.80	15	34941	1.2	17.48	40713				161414	04
23.2	75.35	15	38266	1.1	15.96	40713				161413	05
19.6	89.47	15	45438	0.9	13.44	40713				131414	06
19.0	92.02	10	31154	1.3	12.78	39828				161411	07
17.9	97.99	10	33175	1.2	12.27	40713				131413	08
16.0	109.52	10	37078	1.1	10.98	40713				111414	09
14.6	119.94	10	40607	1.0	10.03	40713				111413	10
11.9	146.47	7.5	37192	1.1	8.03	39828				111411	11
11.0	158.37	7.5	40215	1.0	7.59	40713				81414	12
10.1	173.45	7.5	44042	0.9	6.93	40713				81413	13
8.3	211.82	5	35856	1.1	5.55	39828				81411	14

The dynamic efficiency is **0.94** for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

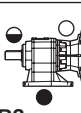
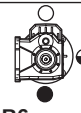
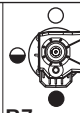
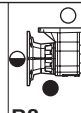
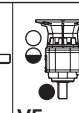
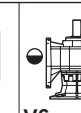
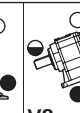
C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit **1103** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug.

See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore tipo **1103** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso. Tab.1 per oli e quantità consigliati. Tab.2 carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño **1103** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

						
B3	B6	B7	B8	V5	V6	V8
246.4 oz	457.5 oz	281.6 oz	316.8 oz	563.1 oz	475.1 oz	Ask
SHELL Omala S2 GX 460				ENI Blasias 460		

For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

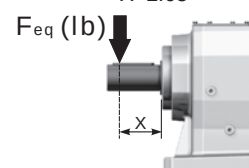
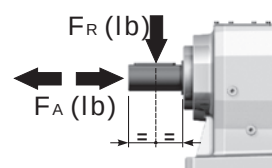
tab. 1

RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita

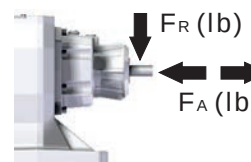
$$F_{eq} = F_R \cdot \frac{5.43}{X+2.68}$$



n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	584	2922	140	742	3709	70	967	4833
250	607	3035	120	787	3934	40	1124	5620
200	674	3372	85	877	4384	15	1326	6632

Input shaft

Albero in entrata



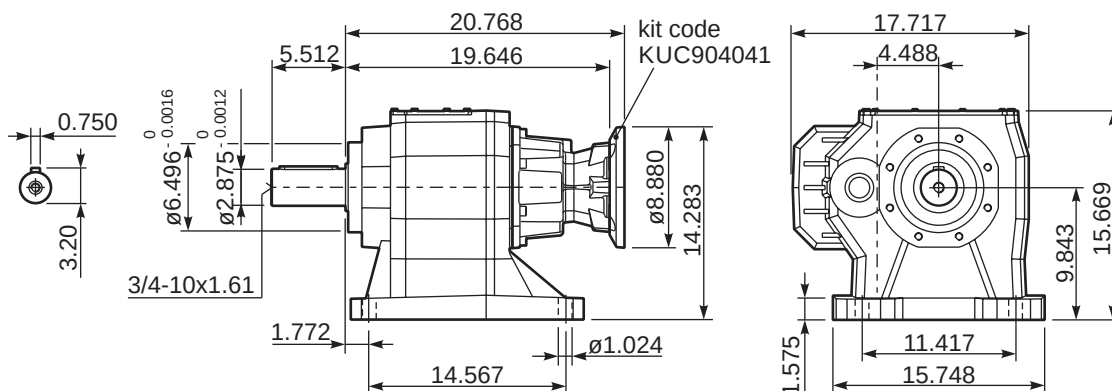
n_1	FA	FR
1750	157	787
1140	189	944

tab. 2

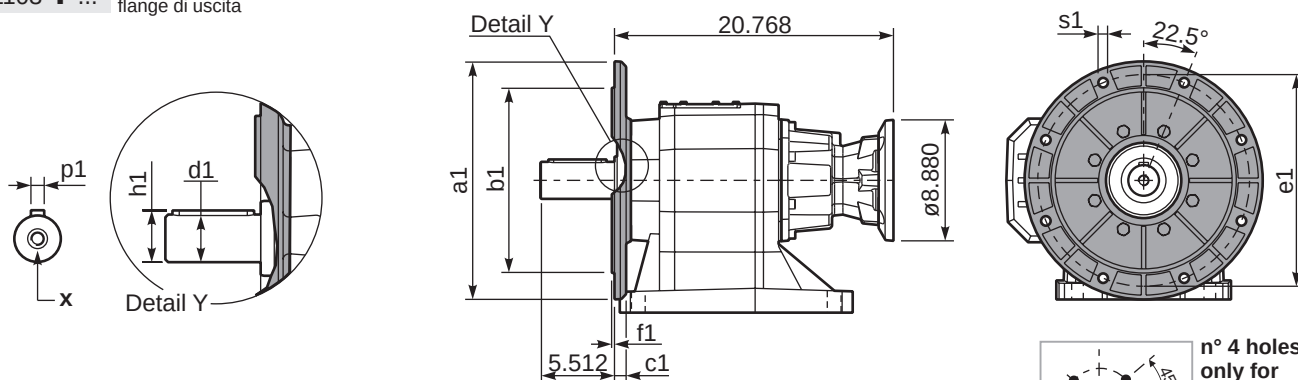
P1103S0...

With foot
Con piedinoGearbox
weight
peso riduttore

364 lb



P1103-F...

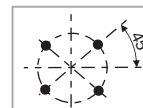
Output flanges
flange di uscita

Output shaft / Albero di uscita

	Shaft - d1	p1	h1	x
Standard	Ø 2.875	0.750	3.20	3/4-10x1.61

Available output flanges / flange di uscita

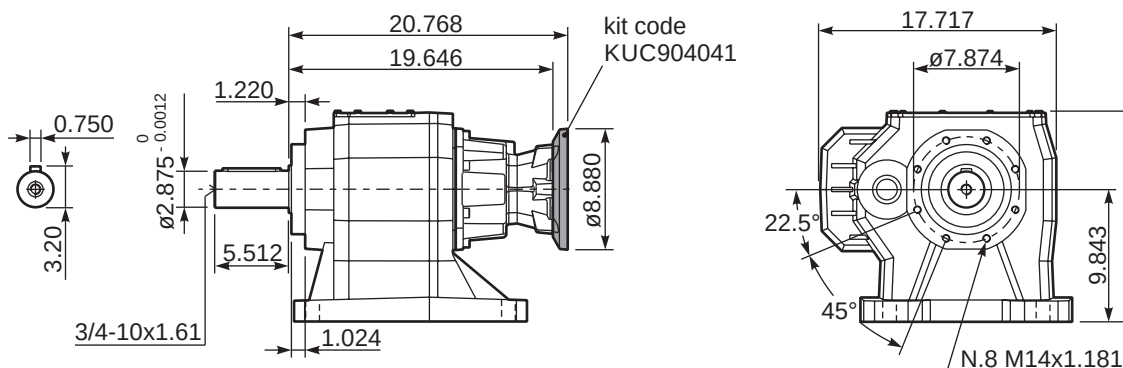
a1 Ø	b1	c1	e1	f1	
13.780	9.843 -0.0020 -0.0038	0.827	11.811	0.197	0.709 KC110.9.015
17.717	13.780 -0.0024 -0.0047	0.866	15.748	0.197	0.709 KC110.9.016
-	-	-	-	-	-



n° 4 holes
only for
Kit KC1109015
Solo per il
kit KC1109015

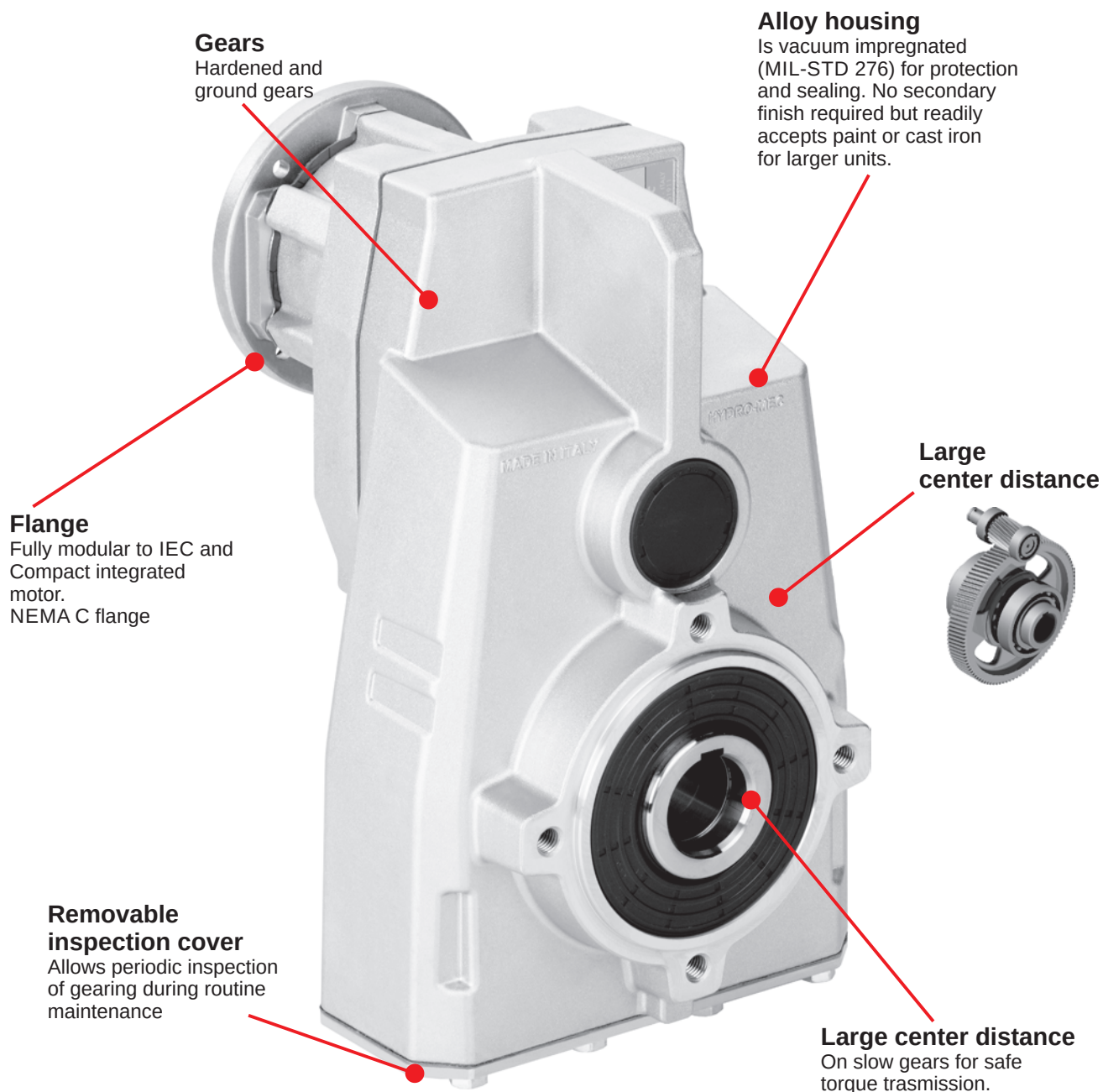
All flanges are
compatible with the foot

P1103S0...

Basic gearbox
Riduttore base

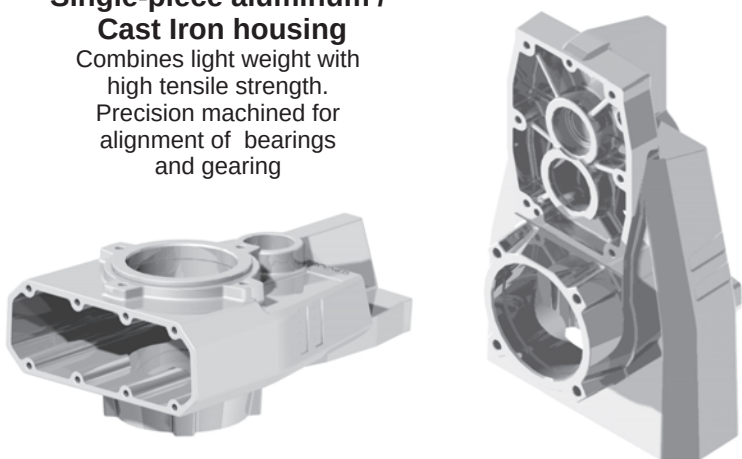
Aluminum & cast iron shaft mounted gearboxes

A modular and compact product



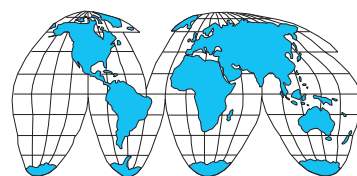
Single-piece aluminum / Cast Iron housing

Combines light weight with high tensile strength. Precision machined for alignment of bearings and gearing



Painting

Cast iron gearboxes are painted RAL 7046



World wide sales network.

Specific type datasheet on page...

On page / A pagina /Auf Seite / À la page / En la página

2 and 3 Stage



Types / Tipi / Tipos ➡

7-5	7-7	7-9	7-11
FA42 2832lb in	FA43 2832lb in	FA52 4337lb in	FA53 4514lb in

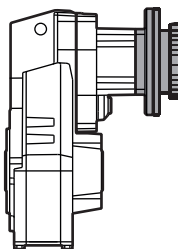
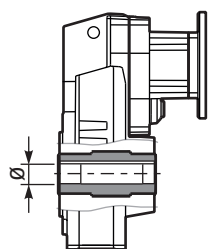
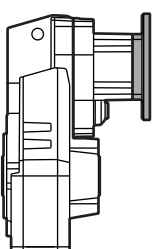
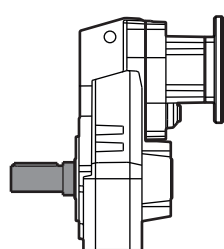
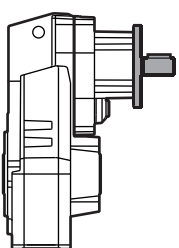
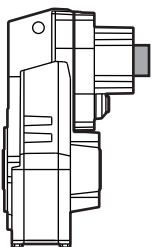
On page / A pagina /Auf Seite / À la page / En la página

2 and 3 Stage



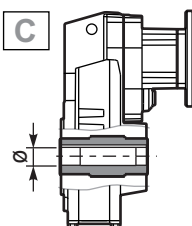
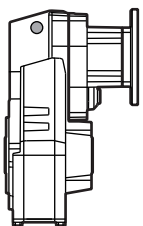
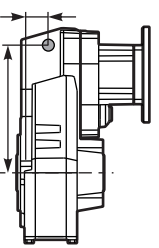
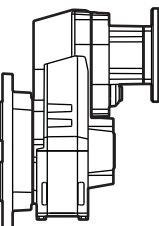
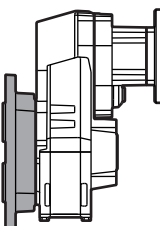
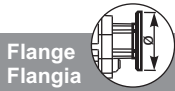
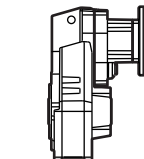
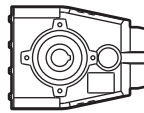
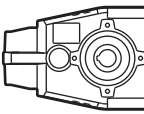
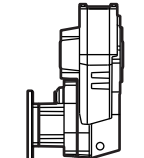
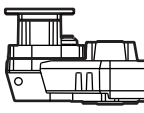
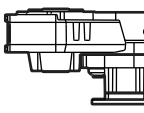
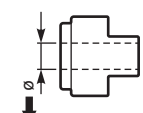
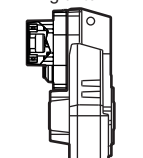
Types / Tipi / Tipos ➡

7-13	7-15	7-17	7-19	7-21	7-23
FC62 5974lb in	FC63 5974lb in	FC72 7966lb in	FC73 7966lb in	FC82 18587lb in	FC83 18587lb in

Type - Tipo - Typ	Size - Grandezza - Tamaño	Mounting - Montaggio Tipo de montaje	Rapporto - Ratio Relacion
M	FA42	C	10.04
Shaft mounted helical Riduttori ad assi paralleli 	2 Stages Riduzioni Etapas 3 Stages Riduzioni Etapas Aluminum / Alluminio Aluminio FA42 FA52 FA43 FA53	 Hollow output shaft C	See technical data table Vedi tabelle dati tecnici. Ver tabla datos técnicos
With IEC motor M			
	Cast Iron / Ghisa Fundicion FC62 FC72 FC82 FC63 FC73 FC83	 Single output shaft A	
With motor flange P			
			
With male input shaft R			
			
Modular base B			



On request we can deliver our products according to the ATEX
 A richiesta possiamo fornire i nostri prodotti secondo le normative ATEX
 A pedido, se pueden enviar nuestros productos de acuerdo con las normas ATEX.

Output shaft Albero uscita Eje en salida	Type - Tipo Typ	Output flange Flangia uscita Brida en salida	Motor size Grandezza motore Tamaño motor	Mounting position Posizione montaggio Position de montage	Input bore Foro entrata Eingangshohlwelle Trou d'entree Eje hueco de entrada	Terminal box position Posizione morsetti Posición caja de bornes
UF	ST	N	-W	H1	ST	
 C → STANDARD Only on request for Q.ty A richiesta per quantità FA42 FA43 UF → ø1.250 FA52 FA53 UG → ø1.375 FC62 FC63 FC72 FC73 UH → ø1.500 FC82 FC83 UL → ø2.000	 ST Foro standard Standard bore  Available torque arms, see our web site. Bracci di reazione disponibili, vedi il nostro sito web. S..  -F Whit output flange con flangia uscita	 N Senza flangia Without flange FA42 FA43 2 → ø6.299 3 → ø7.874 4 → ø9.843 FA52 FA53 FC62 FC63 4 → ø9.843 FC72 FC73 4 → ø9.843 5 → ø11.811 FC82 FC83 5 → ø11.811 6 → ø13.780	 Flange Flangia Nema -W=56C -X=143/5TC -Y=182/4TC AA=213/5TC AB=254/6TC AC=284/6TC AD=324/6TC  Type R Tipo R FA43 -K → ø0.625 FA42 FA53 FC63 FC73 -K → ø0.625 -J → ø0.750 FA52 FC62 FC72 FC83 -J → ø0.750 -N → ø0.875  Without flange Senza flangia -M With coupling Con giunto FA43 -K → ø0.625 FA42 FA53 FC63 FC73 -K → ø0.625 -N → ø0.875 FA52 FC62 FC72 -K → ø0.625 -N → ø0.875 -S → ø1.125 FC82 -S → ø1.125 UA → ø1.375 UB → ø1.625	 H1 STANDARD  H4  H3  H2  H5  H6 Specify only for vertical positions Specificare solo per posizione verticale	ST Nothing indication: standard bore Nessuna indicazione: foro standard COUPLING  -W = ø0.625" -X = ø0.875" -Y = ø1.125" -0 Ready for input coupling Predisposto per giunto 	With Type M specify terminal box position Con tipo M specificare posizione morsetti  A  B STANDARD  C  D

POTENZA RICHIESTA / REQUIRED POWER / POTENCIA NECESARIA

Lifting / sollevamento / elevación

$$P [KW] = \frac{M [Kg] \cdot g [9.81] \cdot v [m / s]}{1000}$$

Rotation / rotazione / rotation

$$P [KW] = \frac{M [Nm] \cdot n [rpm]}{9550}$$

Linear movement / traslazione / translacion

$$P [KW] = \frac{F [N] \cdot v [m / s]}{1000}$$

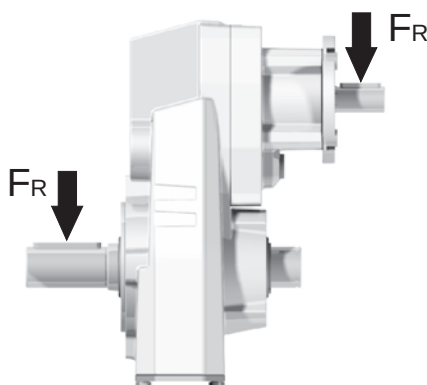
TORQUE / COPPIA / PAR

$$M [Nm] = \frac{9550 \cdot P [KW]}{n [rpm]}$$

$$M [lb in] = \frac{63030 \cdot P [HP]}{n [rpm]}$$

RADIAL LOADS / CARICHI RADIALI / CARGA RADIAL Y AXIAL

- Radial load generated by external transmissions keyed onto input and/or output shafts.
- Forza radiale generata da organi di trasmissione calettati sugli alberi di ingresso e/o uscita.
- Cargas radiales, generada por transmisiones externas, aplicadas sobre los ejes de entrada y/o salida



$$F_R [N] = \frac{M [Nm] \cdot 2000}{d [mm]} \cdot f_k$$

$$F_R [N] = \frac{M [lb in] \cdot 8.9}{d [in]} \cdot f_k$$

M	Momento torcente / Output torque / Par torsion
d	Diametro primitivo / Diam. of driving element / Diámetro primitivo
f_k	Coefficiente di trasformazione / Factor / Coeficiente de transmisión 1.15 Ingranaggi / Gearwheels / Engranaje 1.25 Catena / Chain sprockets / Cadena 1.75 Cinghia Trapezoidale / Narrow v-belt pulley / Correa trapezoidal 2.50 Cinghia piatta / Flat-belt pulley / Correa plana

- If your application requires higher radial loads, contact our technical office. Higher load may be possible.
- Nel caso la vostra applicazione richieda carichi radiali superiori consultare il nostro ufficio tecnico, valori maggiori possono essere accettati.
- En el caso en que una aplicación exija una carga radial superior a la especificada en el catálogo, consultar a nuestra oficinas técnica.

How to select a gearbox / Come selezionare un riduttore Cómo seleccionar un réductor

B Output speed
Velocità in uscita
Velocidad de salida

Nominal power
Potenza nominale
Potencia nominal

A Nominal torque
Momento torcente nominale
Par de torsión nominal

Flange code
Codice flangia
Código bridas

Input speed
Velocità in entrata
Velocidad de entrada

Gear size
Grandezza riduttore
Tamaño reductor

Motor power
Potenza motore
Potencia motor

FA42 Compact gear **2832lb in**

Rating - Aluminum
SHAFT MOUNTED HELICAL

QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges		Output Shaft		Notes
							-W	-X			Ratio code
209	8.38	2	580	3.4	6.87	1991			2821		01
174	10.04	2	694	3.1	6.12	2124			2818		02
142	12.33	2	853	2.7	5.40	2301			2813		03
115	15.16	2	1048	2.2	4.39	2301			1921		04

C Ratio
Rapporto
Relación

Transmitted torque
Momento torcente trasmesso
Par transmitido

Service factor
Fattore di servizio
Factor de servicio

Output shaft diam.
Diam. albero uscita
Diametro eje de salida

Notes
Note
Notas

fs		Oper. hours per day Ore di funz. giorn.		
Type of load and starts per hour Tipo di carico e avviamenti per ora		3 h	10 h	24 h
Continuous or intermittent appl. with start / hour Applicazione cont. o interm. con n.ro operazioni/ora	Uniform / Uniforme	0.8	1	1.25
	Moderate / Moderato	1	1.25	1.5
	Heavy / Forte	1.25	1.5	1.75
Intermittent application with start / hour Applicazione intermittente con n.ro operazioni/ora	Uniform / Uniforme	1	1.25	1.5
	Moderate / Moderato	1.25	1.5	1.75
	Heavy / Forte	1.5	1.75	2.15

D	Motor flange available Flange disponibili Bridas disponibles
B)	Mounting with reduction ring Montaggio con boccola di riduzione Montaje con casquillo de reducción
C)	Motor flangeholes position/terminal box position Posizione fori flangia/basetta motore Posición agujeros brida / base motor
B)	Available without reduction bushes Disponibile anche senza boccola Disponibile tambien sin casquillo

A	Select required torque (according to service factor)	Seleziona la coppia desiderata (comprensiva del fattore di servizio)	Max. Drehmoment in Bezug zum Betriebsfaktor
B	Select output speed	Seleziona la velocità in uscita	Ausgewählte Abtriebsdrehzahl
C	On the same line of selected geared motor, you can find the gear ratio	Sulla riga corrispondente alla motorizzazione prescelta si può rilevare il rapporto di riduzione	Auf der gleichen Linie wie die ausgewählte Motorleistung steht auch die Getriebeuntersetzung
D	Select motor flange available (if requested)	Scegli la flangia disponibile (se richiesta)	Erhältliche Motorflansche (auf Anfrage)



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges				
							-W	-X			
							56C	143/5 TC			
209	8.38	2	580	3.4	6.87	1991			2821	standard Ø1.250	01
174	10.04	2	694	3.1	6.12	2124			2818		02
142	12.33	2	853	2.7	5.40	2301			2813		03
115	15.16	2	1048	2.2	4.39	2301			1921		04
100	17.57	2	1215	2.0	3.93	2390			1721		05
96	18.16	2	1256	2.0	4.09	2567			1918		06
83	21.05	2	1455	1.9	3.89	2832			1718		07
78	22.30	2	1542	1.8	3.67	2832			1913		08
71	24.70	2	1708	1.7	3.32	2832			1518		09
68	25.85	2	1787	1.6	3.17	2832			1713		10
59	29.49	2	2039	1.4	2.78	2832			1318		11
58	30.34	2	2098	1.3	2.70	2832			1513		12
52	33.60	2	2324	1.0	1.90	2213			1021		13
48.3	36.21	2	2504	1.1	2.26	2832			1313		14
43.5	40.25	2	2783	1.0	1.91	2655			1018		15
35.4	49.43	1.5	2564	1.1	1.66	2832			1013		16
33.3	52.53	1	1816	1.3	1.27	2301			918		17
27.1	64.51	1	2231	1.2	1.25	2788			913		18
25.2	69.37	0.75	1799	0.9	0.70	1682			718		19
20.6	85.19	0.75	2208	0.9	0.69	2036			713		20

The dynamic efficiency is 0.96 for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit FA42 is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore FA42 viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño FA42 se suministra, lubricado de por vida con aceites sintéticos y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio				
H1	H4	H3	H2	H5	H6
40.47 oz	24.64 oz	24.64 oz	24.64 oz	42.23 oz	28.16 oz
SHELL Omala S4 WE 320			ENI Telium VSF 320		

For all details on lubrication and plugs check our website

Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

tab. 1

RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita

$$F_{eq} = F_R \cdot \frac{4.67}{X+3.66}$$

F_R (lb)
 F_A (lb)

F_{eq} (lb)
 X

n_2 [min ⁻¹]	FA	FR	n_2 [min ⁻¹]	FA	FR	n_2 [min ⁻¹]	FA	FR
300	67	337	140	88	438	70	110	550
250	72	359	120	92	461	40	133	663
200	79	393	85	103	517	15	180	899

On request reinforced bearings to increase loads.

A richiesta cuscinetti rinforzati per aumentare i carichi.

Input shaft

Albero in entrata

F_R (lb)
 F_A (lb)

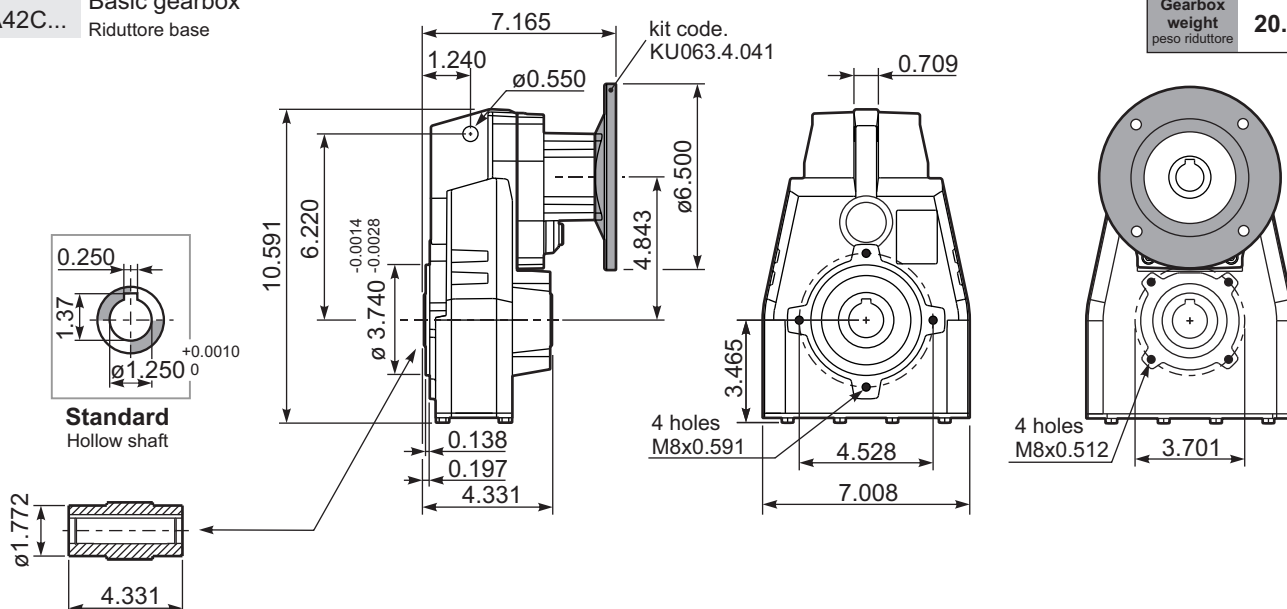
n_1	FA	FR
1750	54	270
1140	63	315

tab. 2

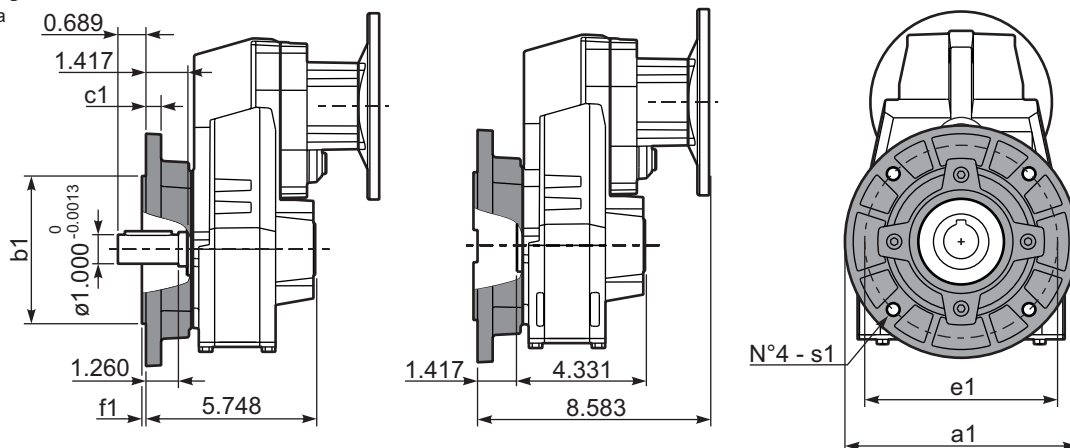
PFA42C...

Basic gearbox
Riduttore baseGearbox
weight
peso riduttore

20.0 lb



PFA42...-F...

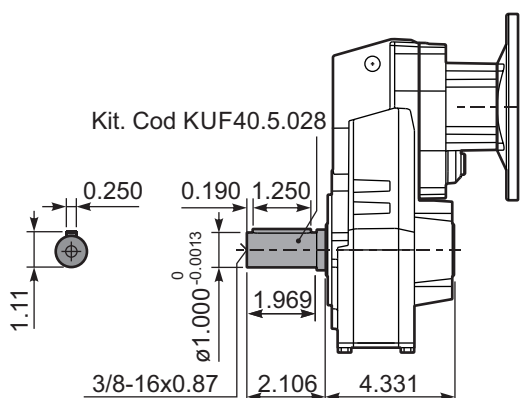
Output flange
Flangia uscita

Available output flanges

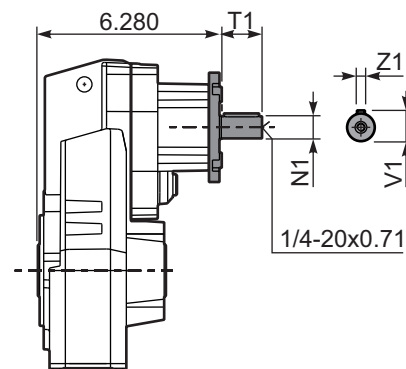
Flange di uscita

a1 ϕ	b1	c1	e1	f1	s1	Kit code
6.299	4.331 $\begin{smallmatrix} -0.0014 \\ -0.0028 \end{smallmatrix}$	0.394	5.118	0.118	0.354	KX5A.9.010
7.874	5.118 $\begin{smallmatrix} -0.0017 \\ -0.0033 \end{smallmatrix}$	0.512	6.496	0.138	0.433	KX5A.9.011
9.843	7.087 $\begin{smallmatrix} -0.0017 \\ -0.0033 \end{smallmatrix}$	0.551	8.465	0.157	0.551	KX5A.9.012

PFA42 A...

Single output shaft
Albero uscita semplice

RFA42C...

Input Shaft
Albero in entrata

Nema flanges	N1	T1	V1	Z1	kit code
Standard	0.750	1.97	0.83	0.188	KC40.5.070U
On request	0.625	1.57	0.71	0.188	KC40.5.069U



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges		Output Shaft	Ratio code
							-W	-		
							56C	-		
23.5	74.33	1	2517	1.1	1.13	2832			191313	01
21.2	82.56	1	2795	1.0	1.01	2832			151318	02
20.0	87.48	0.75	2221	1.3	0.96	2832			131713	03
17.3	101.40	0.75	2575	1.1	0.83	2832			151313	04
14.3	122.57	0.75	3112	0.9	0.68	2832			131313	05
12.6	138.59	0.5	2346	1.2	0.60	2832			101318	06
10.9	160.82	0.5	2722	1.0	0.52	2832			91713	07
10.3	170.20	0.5	2881	1.0	0.49	2832			101313	08
9.5	183.48	0.5	3106	0.9	0.46	2832			91318	09
8.2	214.15	0.33	2393	1.2	0.39	2832			71713	10
7.8	225.33	0.33	2517	1.1	0.37	2832			91313	11
7.2	244.32	0.33	2730	1.0	0.34	2832			71318	12
6.9	254.15	0.33	2840	1.0	0.33	2832			61713	13
6.0	289.96	0.25	2454	1.2	0.29	2832			61318	14
5.8	300.05	0.25	2540	1.1	0.28	2832			71313	15
4.9	356.09	0.25	3014	0.9	0.23	2832			61313	16

The dynamic efficiency is **0.94** for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit **FA43** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore **FA43** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño **FA43** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio				
H1	H4	H3	H2	H5	H6
45.75 oz	24.64 oz	24.64 oz	24.64 oz	47.51 oz	31.68 oz
SHELL Omala S4 WE 320			ENI Telium VSF 320		

For all details on lubrication and plugs check our website

Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

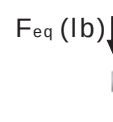
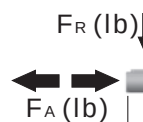
tab. 1

RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita

$$F_{eq} = F_R \cdot \frac{4.67}{X+3.66}$$



n_2 [min ⁻¹]	FA	FR	n_2 [min ⁻¹]	FA	FR	n_2 [min ⁻¹]	FA	FR
300	67	337	140	88	438	70	110	550
250	72	359	120	92	461	40	133	663
200	79	393	85	103	517	15	180	899

On request reinforced bearings to increase loads.

A richiesta cuscinetti rinforzati per aumentare i carichi.

Input shaft

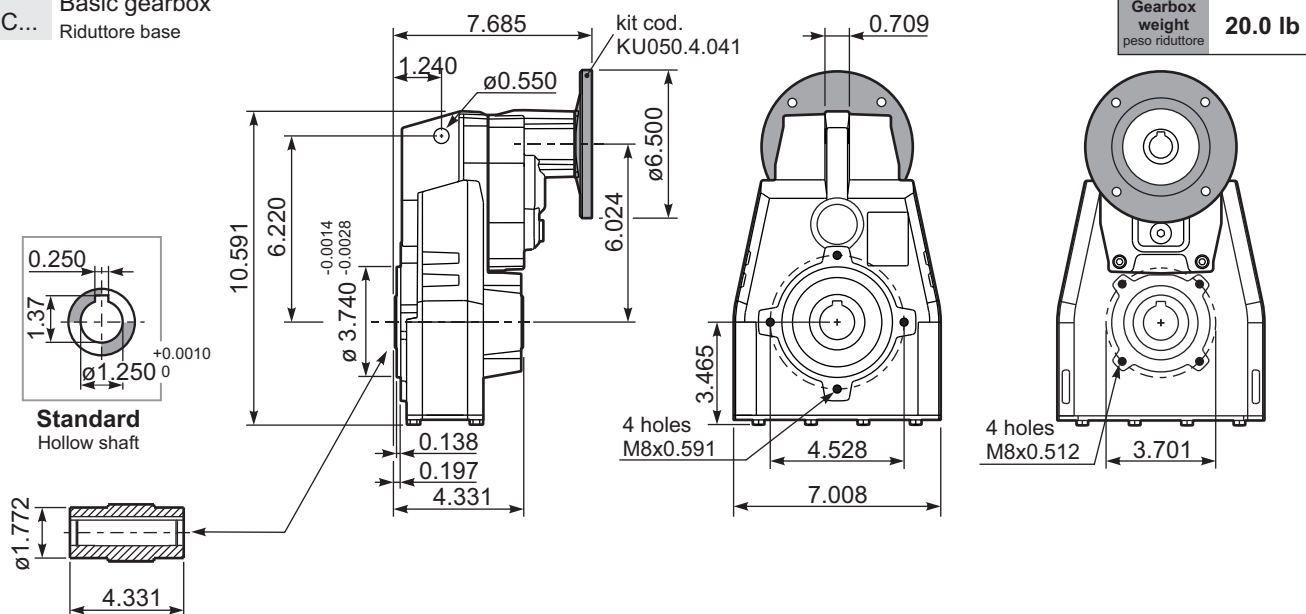
Albero in entrata



n_1	FA	FR
1750	31	157
1140	36	180

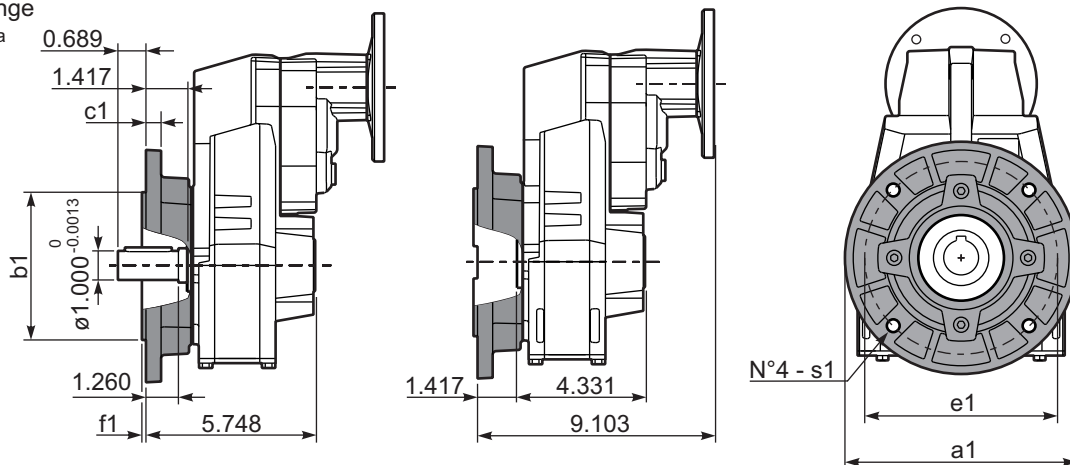
tab. 2

PFA43C...

Basic gearbox
Riduttore baseGearbox
weight
peso riduttore

20.0 lb

PFA43...-F...

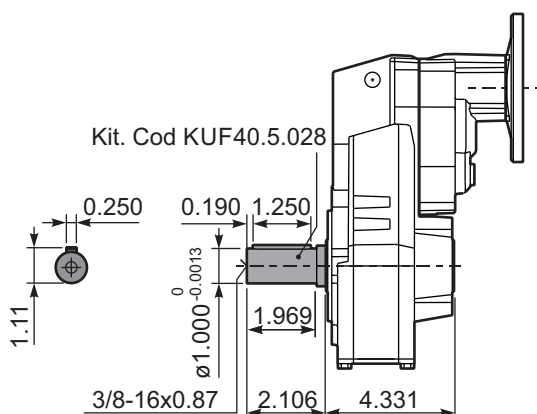
Output flange
Flangia uscita

Available output flanges

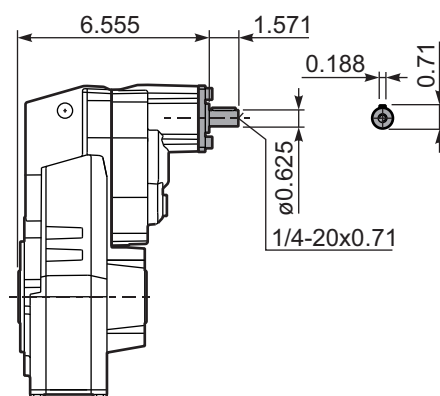
Flange di uscita

a1 ϕ	b1	c1	e1	f1	s1	Kit code
6.299	4.331 $\begin{smallmatrix} -0.0014 \\ -0.0028 \end{smallmatrix}$	0.394	5.118	0.118	0.354	KX5A.9.010
7.874	5.118 $\begin{smallmatrix} -0.0017 \\ -0.0033 \end{smallmatrix}$	0.512	6.496	0.138	0.433	KX5A.9.011
9.843	7.087 $\begin{smallmatrix} -0.0017 \\ -0.0033 \end{smallmatrix}$	0.551	8.465	0.157	0.551	KX5A.9.012

PFA43 A...

Single output shaft
Albero uscita semplice

RFA43C...

Input Shaft
Albero in entrata



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges				Output Shaft  standard Ø1.375	Ratios code 
							-W	-X	-Y	AA		
							56C	143/5TC	182/4TC	213/5TC		
266	6.57	10	2272	1.1	10.91	2478					3018	01
232	7.56	10	2613	1.0	9.82	2567					3016	02
198	8.82	10	3050	0.9	9.29	2832					3014	03
141	12.39	7.5	3212	1.2	9.30	3983					2018	04
123	14.24	7.5	3693	1.1	8.09	3983					2016	05
104	16.75	7.5	4343	1.0	7.18	4160					1618	06
91	19.25	7.5	4993	0.9	6.51	4337					1616	07
80	21.78	5	3765	1.2	5.76	4337					1318	08
70	25.04	5	4329	1.0	5.01	4337					1316	09
60	29.23	5	5053	0.9	4.29	4337					1314	10
57	30.65	3	3179	1.4	4.09	4337					1116	11
48.9	35.78	3	3711	1.2	3.51	4337					1114	12
45.4	38.55	3	3999	1.1	3.25	4337					818	13
39.5	44.32	3	4597	0.9	2.83	4337					816	14
33.8	51.74	2	3578	1.2	2.42	4337					814	15
28.7	61.03	2	4220	1.0	2.01	4248					616	16
24.6	71.25	1.5	3695	1.2	1.76	4337					614	17

The dynamic efficiency is 0.96 for all ratios

 Motor Flanges Available
Flange Motore Disponibili

 B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

 B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

 C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit FA52 is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore FA52 viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño FA52 se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio				
					
65.11 oz	40.47 oz	40.47 oz	45.75 oz	73.91 oz	45.75 oz
SHELL Omala S4 WE 320			ENI Telium VSF 320		

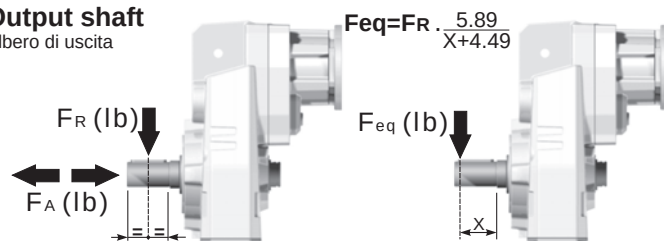
For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

tab. 1

RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita



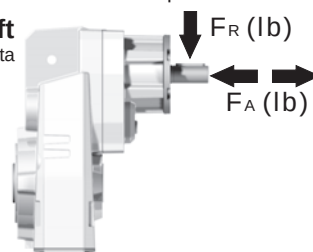
n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	90	449	140	103	517	70	130	652
250	94	472	120	112	562	40	175	876
200	99	494	85	124	618	15	256	1281

On request reinforced bearings to increase loads.

A richiesta cuscinetti rinforzati per aumentare i carichi.

Input shaft

Albero in entrata



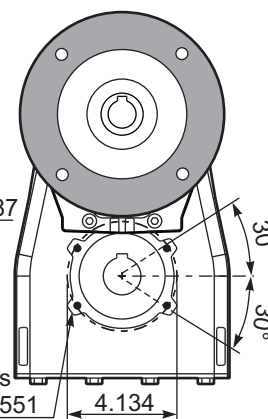
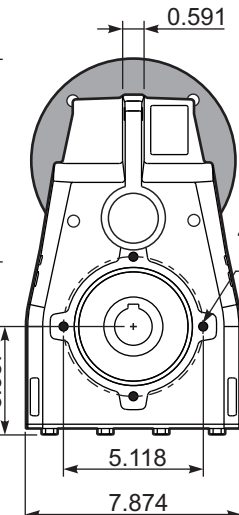
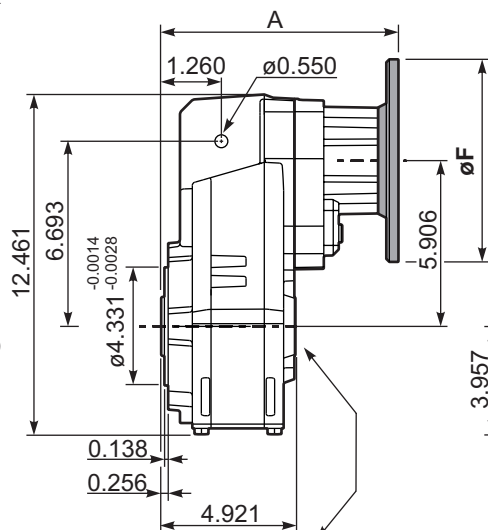
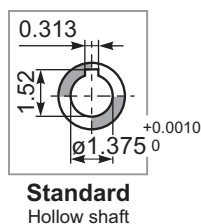
n_1	FA	FR
1750	90	449
1140	99	494

tab. 2

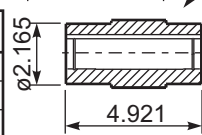
PFA52C...

Basic gearbox
Riduttore baseGearbox
weight
peso riduttore

34.0 lb



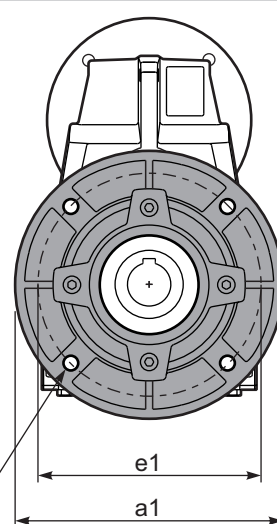
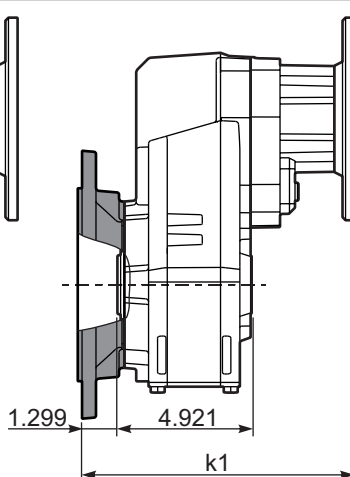
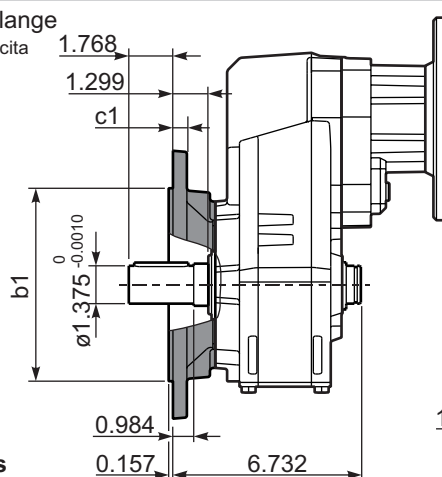
Nema flange	A	øF	kit code
56C-143/5TC	9.195	6.50	KU085.4.041
182/4TC	9.898	8.88	KU085.4.042
213/5TC	10.413	8.88	KUC50.4.041



PFA52...-F...

Output flange
Flangia uscita

Nema flange	k1
56C-143/5TC	10.492
182/4TC	11.197
213/5TC	11.712

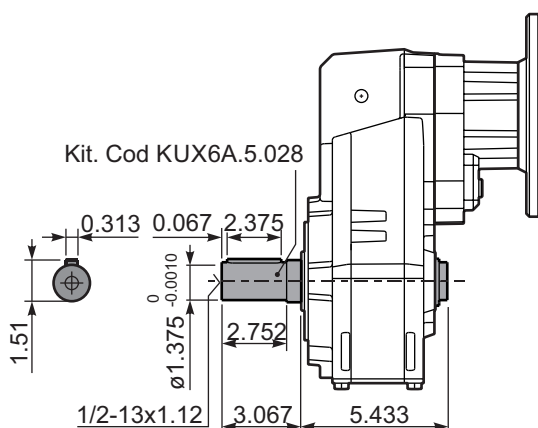


Available output flanges

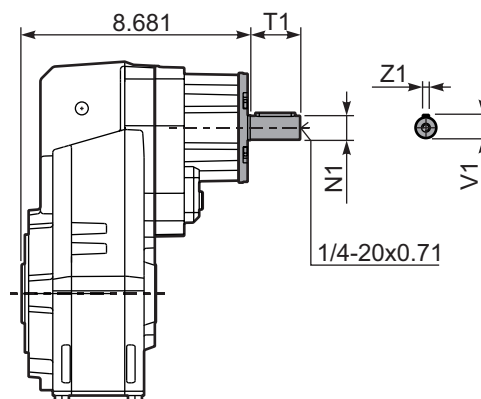
Flange di uscita

a1 ø	b1	c1	e1	s1	Kit code
9.843	7.087 ^{-0.0017} _{-0.0033}	0.512	8.465	0.551	KF60.9.011
-	-	-	-	-	-

PFA52 A...

Single output shaft
Albero uscita semplice

RFA52C...

Input Shaft
Albero in entrata

Nema flanges	N1	T1	V1	Z1	kit code
Standard	0.875	1.97	0.96	0.188	KC50.5.070U
On request	0.750	1.97	0.83	0.188	KC50.5.069U



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges				
							-W	-X			
							56C	143/5 TC			
28.3	61.89	2	4191	1.1	2.15	4514			191318	standard Ø1.375	01
24.6	71.16	2	4819	0.9	1.87	4514			191316		02
21.2	82.48	1.5	4189	1.1	1.62	4514			171316		03
18.2	96.29	1.5	4890	0.9	1.38	4514			171314		04
17.4	100.51	1.5	5104	0.9	1.33	4514			131318		05
15.1	115.56	1	3912	1.2	1.15	4514			131316		06
13.9	125.96	1	4265	1.1	1.06	4514			190816		07
13.0	134.91	1	4568	1.0	0.99	4514			131314		08
11.9	147.05	1	4979	0.9	0.91	4514			190814		09
10.3	170.44	0.75	4328	1.0	0.78	4514			170814		10
9.5	184.15	0.75	4676	1.0	0.72	4514			101314		11
8.5	205.87	0.75	5228	0.9	0.65	4514			91316		12
7.3	240.34	0.5	4069	1.1	0.55	4514			91314		13
6.3	279.22	0.5	4727	1.0	0.48	4514			100816		14
5.4	325.97	0.33	3642	1.2	0.41	4514			100814		15
4.8	364.41	0.33	4071	1.1	0.37	4514			90816		16
4.1	425.43	0.33	4753	0.9	0.31	4514			90814		17
3.6	481.19	0.25	4073	1.1	0.28	4514			70816		18
3.1	561.76	0.25	4755	0.9	0.24	4514			70814		19

The dynamic efficiency is **0.94** for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit **FA53** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore **FA53** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño **FA53** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio				
H1	H4	H3	H2	H5	H6
75.67 oz	43.99 oz	43.99 oz	51.03 oz	82.71 oz	51.03 oz
SHELL Omala S4 WE 320			ENI Telium VSF 320		

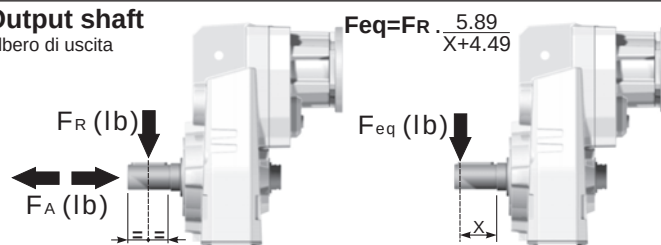
For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

tab. 1

RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita



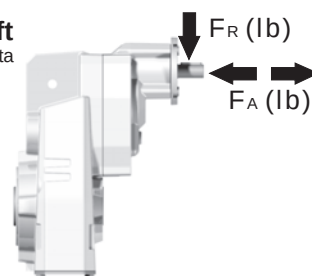
n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	90	449	140	103	517	70	130	652
250	94	472	120	112	562	40	175	876
200	99	494	85	124	618	15	256	1281

On request reinforced bearings to increase loads.

A richiesta cuscinetti rinforzati per aumentare i carichi.

Input shaft

Albero in entrata



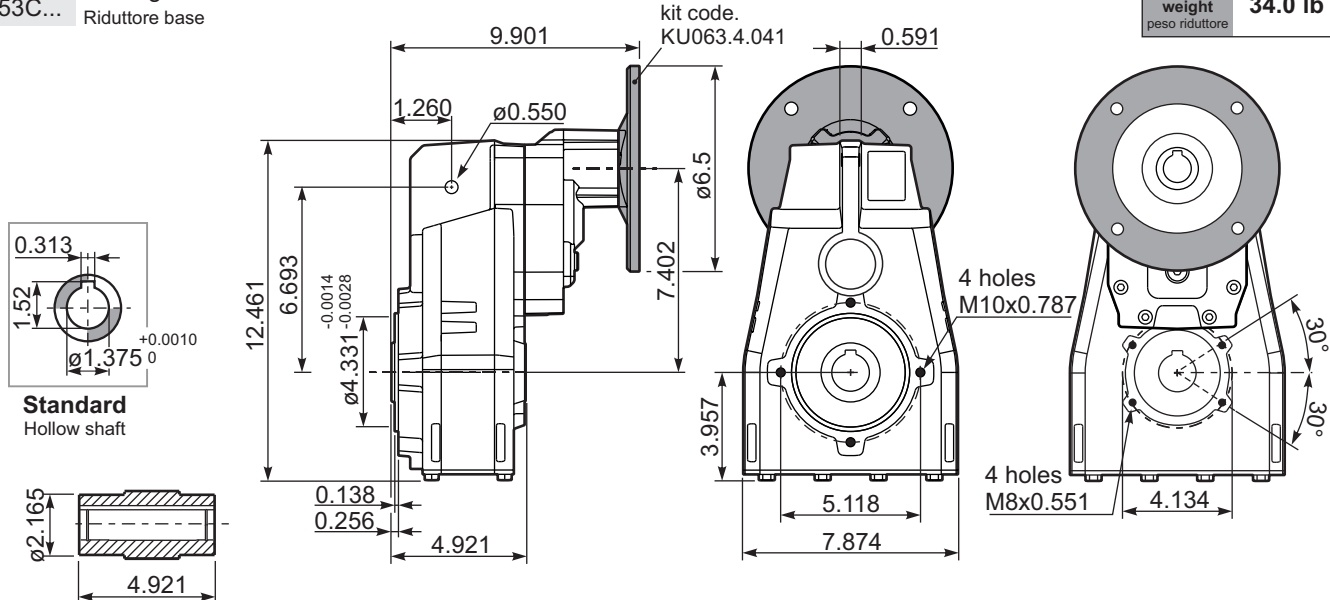
n_1	FA	FR
1750	54	270
1140	63	315

tab. 2

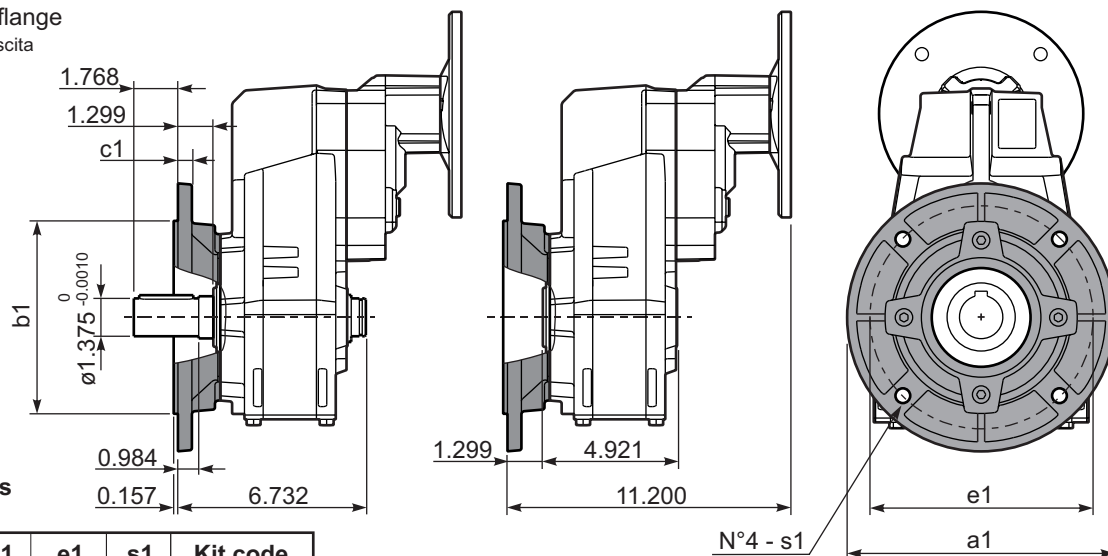
PFA53C...

Basic gearbox
Riduttore baseGearbox
weight
peso riduttore

34.0 lb

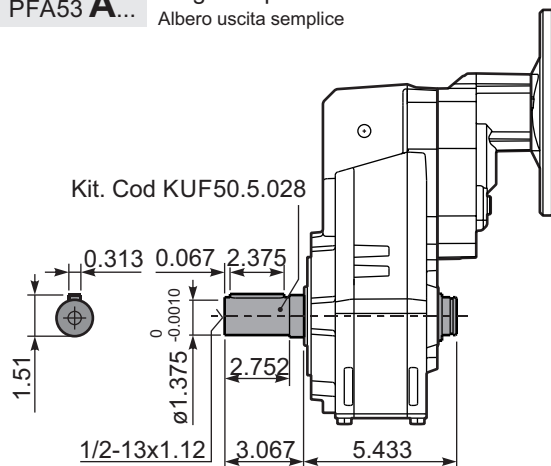


PFA53...-F...

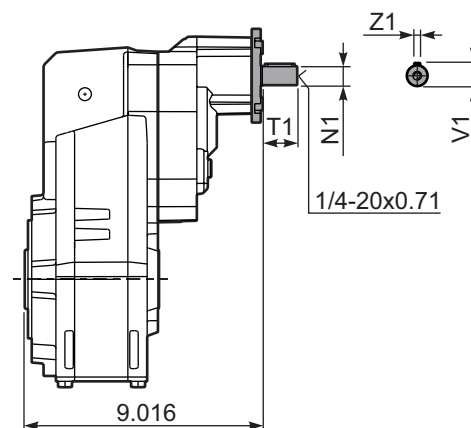
Output flange
Flangia uscitaAvailable output flanges
Flange di uscita

a1 ø	b1	c1	e1	s1	Kit code
9.843	7.087 ^{-0.0017} _{-0.0033}	0.512	8.465	0.551	KF60.9.011
-	-	-	-	-	-

PFA53 A...

Single output shaft
Albero uscita semplice

RFA53C...

Input Shaft
Albero in entrata

Nema flanges	N1	T1	V1	Z1	kit code
Standard	0.750	1.97	0.83	0.188	KC40.5.070U
On request	0.625	1.57	0.71	0.188	KC40.5.069U



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges				Output Shaft 	Ratios code 
							-W	-X	-Y	AA		
							56C	143/5TC	182/4TC	213/5TC		
266	6.57	10	2272	1.5	14.80	3363					3018	01
232	7.56	10	2613	1.3	13.21	3452					3016	02
198	8.82	10	3050	1.2	11.90	3629					3014	03
141	12.39	10	4283	1.2	11.99	5133					2018	04
123	14.24	10	4924	1.1	10.79	5310					2016	05
104	16.75	10	5790	1.0	10.16	5886					1618	06
91	19.25	10	6657	0.9	8.97	5974					1616	07
80	21.78	7.5	5647	1.1	7.93	5974					1318	08
70	25.04	7.5	6493	0.9	6.90	5974					1316	09
60	29.23	5	5053	1.2	5.91	5974					1314	10
57	30.65	5	5298	1.1	5.64	5974					1116	11
48.9	35.78	5	6186	1.0	4.83	5974					1114	12
45.4	38.55	3	3999	1.3	3.85	5133					818	13
39.5	44.32	3	4597	1.3	3.84	5886					816	14
33.8	51.74	3	5367	1.1	3.34	5974					814	15
28.7	61.03	2	4220	1.0	2.01	4248					616	16
24.6	71.25	2	4927	1.0	2.01	4956					614	17

The dynamic efficiency is 0.96 for all ratios

 **Motor Flanges Available**
Flange Motore Disponibili

 **B) Supplied with Reduction Bushing**
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

 **C) Motor Flange Holes Position**
Posizione Fori Flangia Motore

EN Unit **FC62** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore **FC62** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño **FC62** se suministra, lubricado de por vida con aceites sintéticos y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

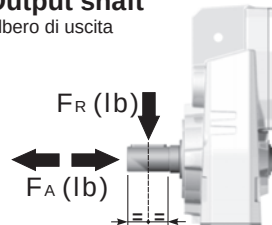
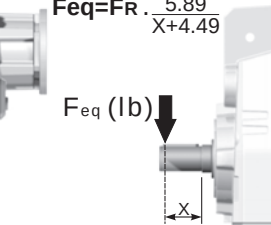
Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio				
					
H1	H4	H3	H2	H5	H6
72.15 oz	44.00 oz	44.00 oz	49.27 oz	77.43 oz	49.27 oz
SHELL Omala S4 WE 320			ENI Telium VSF 320		

For all details on lubrication and plugs check our website

Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

tab. 1

RADIAL AND AXIAL LOADS

Output shaft Albero di uscita			Feq=Fr · $\frac{5.89}{X+4.49}$		
					
n_2	FA	FR	n_2	FA	FR
300	135	674	140	162	809
250	144	719	120	166	832
200	155	778	85	193	967
n_2	FA	FR	n_2	FA	FR
70	211	1057	40	274	1371
15	292	1461			

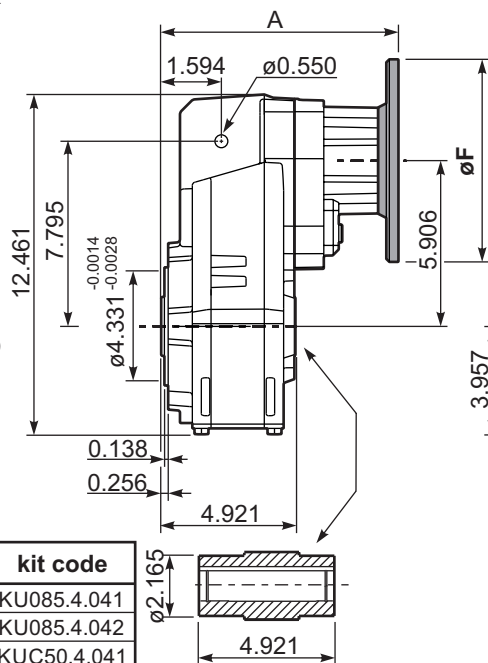
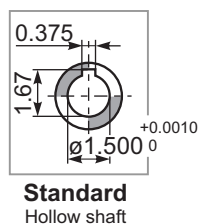
On request reinforced bearings to increase loads.

A richiesta cuscinetti rinforzati per aumentare i carichi.

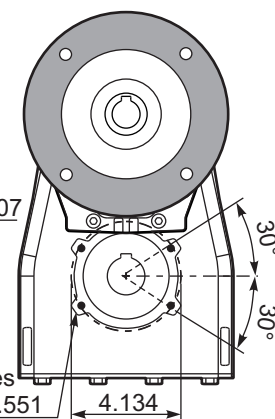
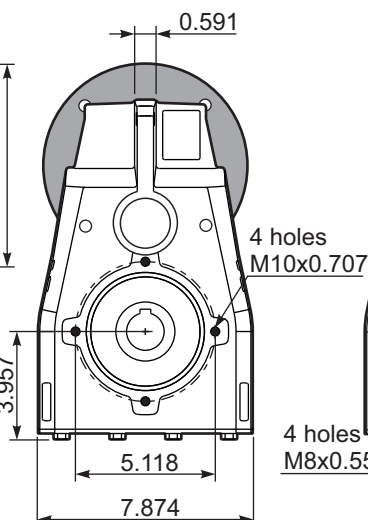
Input shaft Albero in entrata					
					
n_1	FA	FR	n_1	FA	FR
1750	101	506			
1140	112	562			

tab. 2

PFC62C...

Basic gearbox
Riduttore baseGearbox weight
peso riduttore **46.0 lb**

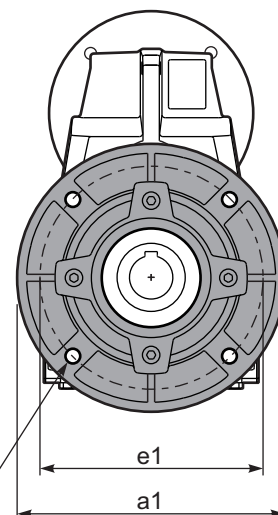
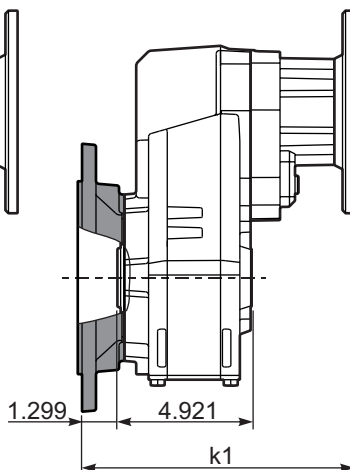
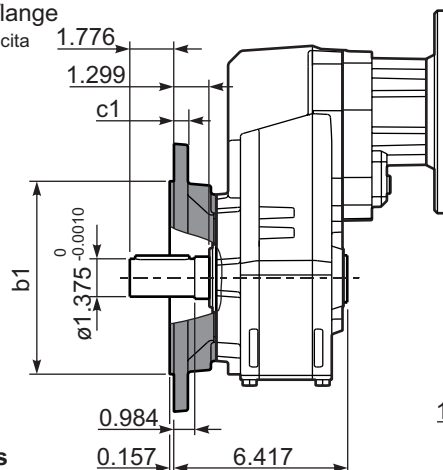
Nema flange	A	ØF	kit code
56C-143/5TC	9.193	6.50	KU085.4.041
182/4TC	9.898	8.88	KU085.4.042
213/5TC	10.413	8.88	KUC50.4.041



PFC62...-F...

Output flange
Flangia uscita

Nema flange	k1
56C-143/5TC	10.492
182/4TC	11.197
213/5TC	11.712

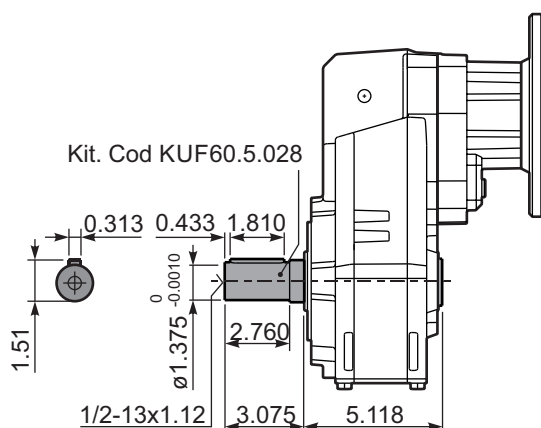


Available output flanges

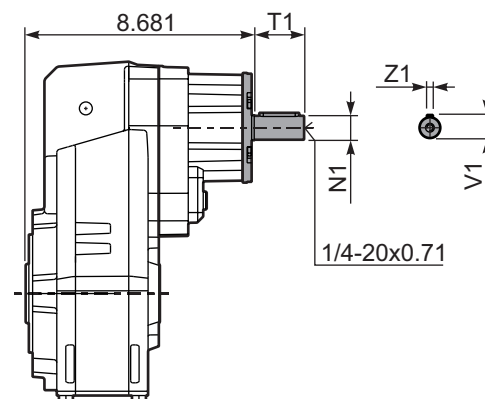
Flange di uscita

a1 Ø	b1	c1	e1	s1	Kit code
9.843	7.087 ^{-0.0017} _{-0.0033}	0.512	8.465	0.551	KF60.9.011
-	-	-	-	-	-

PFC62 A...

Single output shaft
Albero uscita semplice

RFC62C...

Input Shaft
Albero in entrata

Nema flanges	N1	T1	V1	Z1	kit code
Standard	0.875	1.97	0.96	0.188	KC50.5.070U
On request	0.750	1.97	0.83	0.188	KC50.5.069U



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges				
							-W	-X			
							56C	143/5 TC			
28.3	61.89	2	4191	1.4	2.85	5974			191318	standard Ø1.500	01
24.6	71.16	2	4819	1.2	2.48	5974			191316		02
21.2	82.48	2	5585	1.1	2.14	5974			171316		03
18.2	96.29	1.5	4890	1.2	1.83	5974			171314		04
17.4	100.51	1.5	5104	1.2	1.76	5974			131318		05
15.1	115.56	1.5	5869	1.0	1.53	5974			131316		06
13.9	125.96	1.5	6397	0.9	1.38	5886			190816		07
13.0	134.91	1.5	6851	0.9	1.31	5974			131314		08
11.9	147.05	1	4979	1.2	1.20	5974			190814		09
10.3	170.44	1	5770	1.0	1.04	5974			170814		10
9.5	184.15	1	6235	1.0	0.96	5974			101314		11
8.5	205.87	0.75	5228	1.1	0.86	5974			91316		12
7.3	240.34	0.75	6103	1.0	0.73	5974			91314		13
6.3	279.22	0.5	4727	1.2	0.62	5886			100816		14
5.4	325.97	0.5	5518	1.1	0.54	5974			100814		15
4.8	364.41	0.5	6169	1.0	0.48	5886			90816		16
4.1	425.43	0.33	4753	1.3	0.41	5974			90814		17
3.6	481.19	0.33	5376	1.1	0.36	5886			70816		18
3.1	561.76	0.33	6276	1.0	0.31	5974			70814		19

The dynamic efficiency is **0.94** for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit **FC63** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore **FC63** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño **FC63** se suministra, lubricado de por vida con aceites sintéticos y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio				
H1	H4	H3	H2	H5	H6
80.95 oz	47.51 oz	47.51 oz	54.55 oz	86.23 oz	54.55 oz
SHELL Omala S4 WE 320			ENI Telium VSF 320		

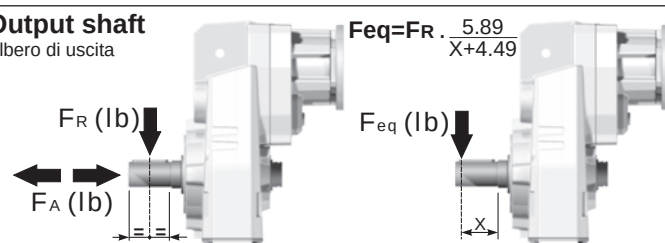
For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

tab. 1

RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita



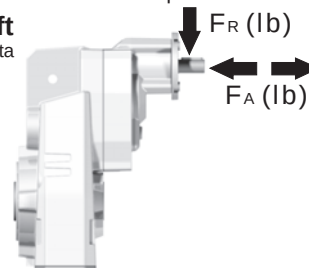
n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	135	674	140	162	809	70	211	1056
250	144	719	120	166	831	40	274	1370
200	155	777	85	193	966	15	292	1460

On request reinforced bearings to increase loads.

A richiesta cuscinetti rinforzati per aumentare i carichi.

Input shaft

Albero in entrata



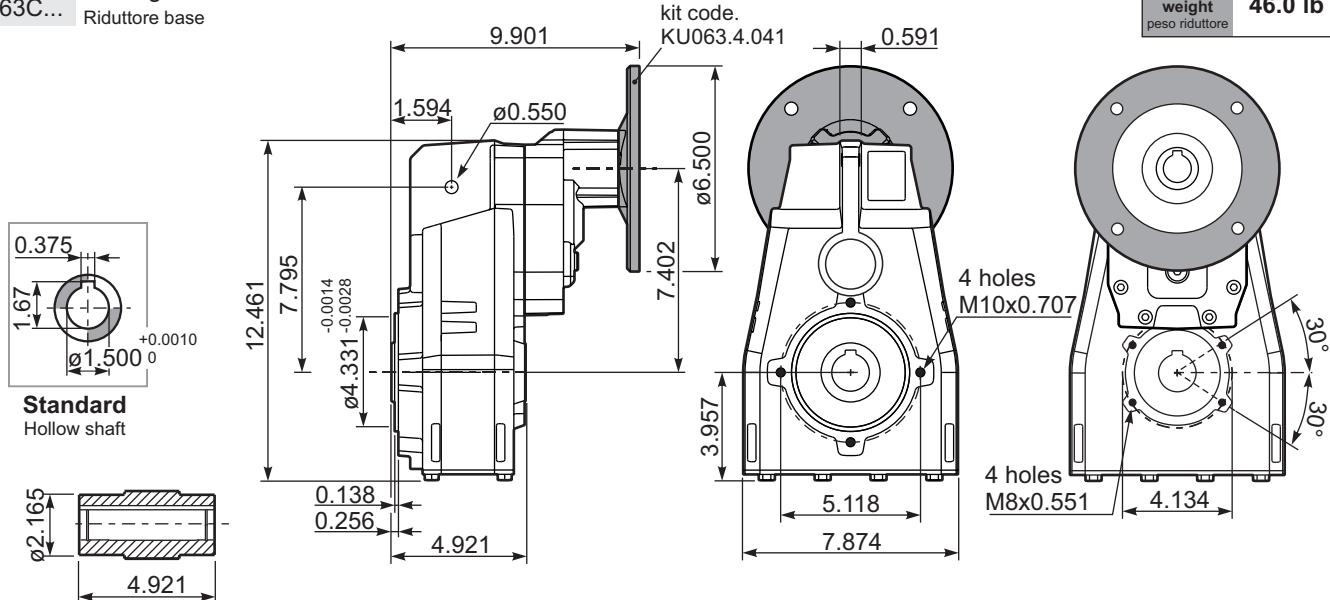
n_1	FA	FR
1750	90	449
1140	99	494

tab. 2

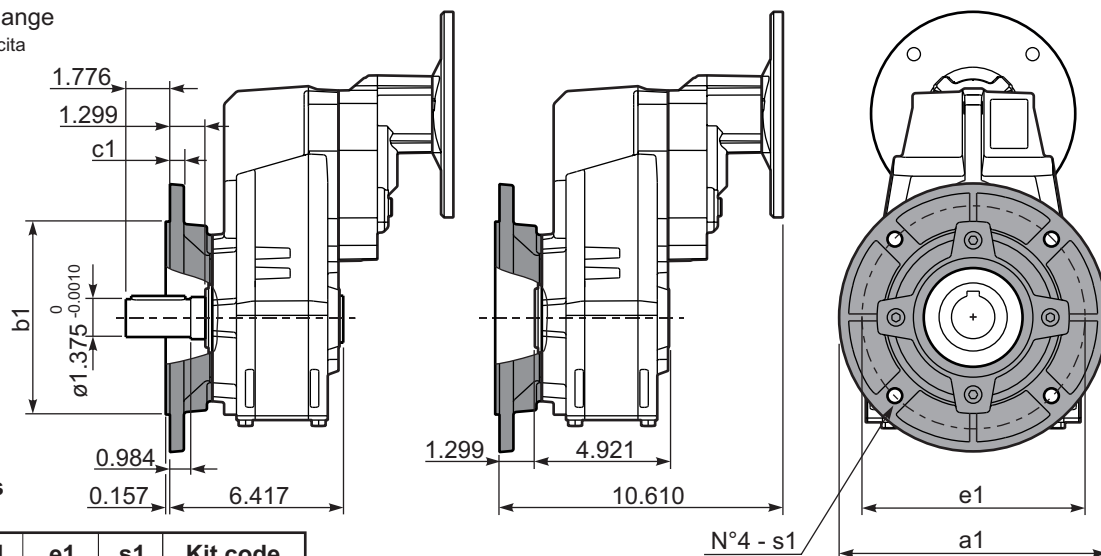
PFC63C...

Basic gearbox
Riduttore baseGearbox
weight
peso riduttore

46.0 lb



PFC63...-F...

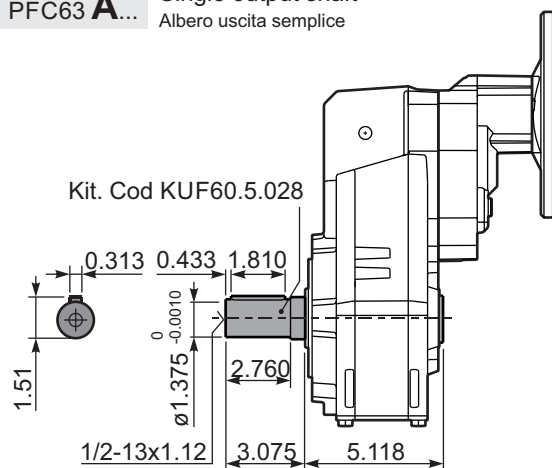
Output flange
Flangia uscita

Available output flanges

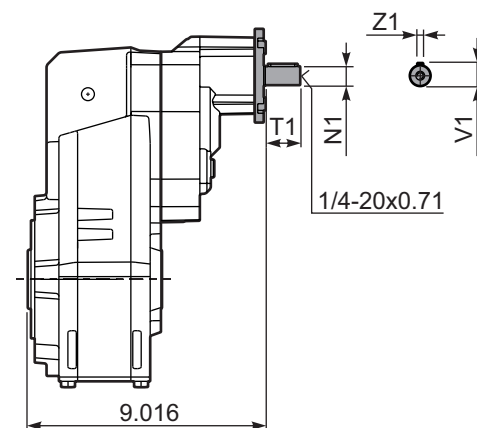
Flange di uscita

a1 ø	b1	c1	e1	s1	Kit code
9.843	7.087 ^{-0.0017} _{-0.0033}	0.512	8.465	0.551	KF60.9.011
-	-	-	-	-	-

PFC63 A...

Single output shaft
Albero uscita semplice

RFC63C...

Input Shaft
Albero in entrata

Nema flanges	N1	T1	V1	Z1	kit code
Standard	0.750	1.97	0.83	0.188	KC40.5.070U
On request	0.625	1.57	0.71	0.188	KC40.5.069U



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges				Output Shaft  $\varnothing$	Ratios code 
							-W	-X	-Y	AA		
							56C	143/5TC	182/4TC	213/5TC		
218	8.02	10	2772	1.7	16.60	4602					3018	01
191	9.18	10	3175	1.6	16.45	5222					3016	02
164	10.68	10	3692	1.6	16.30	6019					3014	03
116	15.11	10	5224	1.3	13.13	6859					2018	04
101	17.30	10	5983	1.3	13.09	7833					2016	05
87	20.13	10	6959	1.1	11.45	7966					2014	06
75	23.39	10	8089	1.0	9.85	7966					1616	07
64	27.21	7.5	7056	1.1	8.47	7966					1614	08
58	30.42	7.5	7889	1.0	7.57	7966					1316	09
49.5	35.38	5	6117	1.3	6.51	7966					1314	10
47.0	37.24	5	6438	1.2	6.15	7921					1116	11
40.4	43.31	5	7488	1.1	5.32	7966					1114	12
37.2	47.02	3	4877	1.3	3.84	6240					818	13
32.5	53.85	3	5586	1.3	3.85	7169					816	14
27.9	62.63	3	6497	1.2	3.68	7966					814	15
23.6	74.16	2	5128	1.0	2.02	5178					616	16
20.3	86.25	2	5964	1.0	2.02	6019					614	17

The dynamic efficiency is 0.96 for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit **FC72** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore tipo **FC72** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso. Tab.1 per oli e quantità consigliati. Tab.2 carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño **FC72** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

					
H1	H4	H3	H2	H5	H6
123.18 oz	66.87 oz	66.87 oz	63.35 oz	126.70 oz	66.87 oz
SHELL Omala S2 GX 460			ENI Blasias 460		

For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

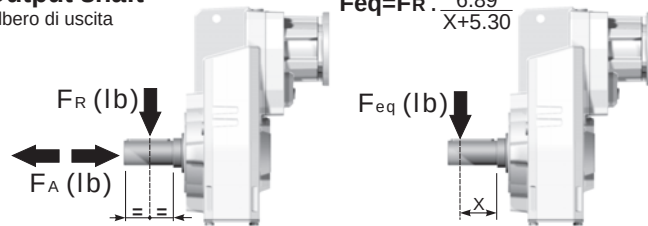
tab. 1

RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita

$$F_{eq} = F_R \cdot \frac{6.89}{X+5.30}$$



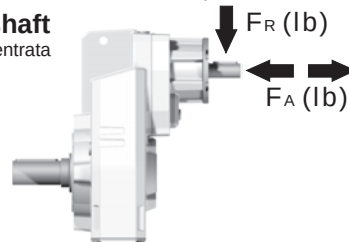
n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	166	831	140	193	966	70	229	1146
250	180	899	120	202	1011	40	292	1460
200	186	932	85	218	1090	15	382	1910

On request reinforced bearings to increase loads.

A richiesta cuscinetti rinforzati per aumentare i carichi.

Input shaft

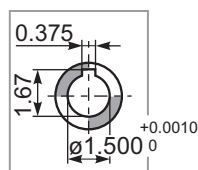
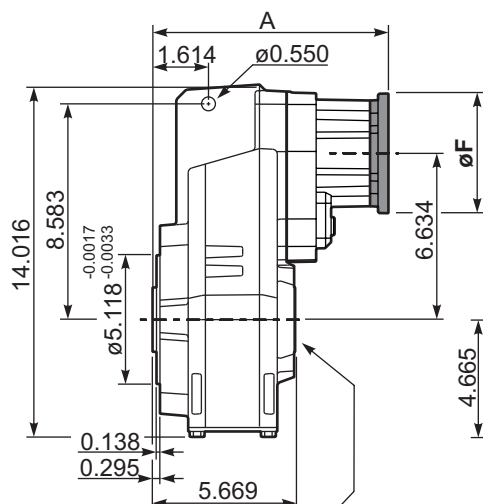
Albero in entrata



n_1	FA	FR
1750	101	506
1140	112	562

tab. 2

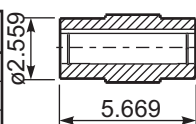
PFC72C...

Basic gearbox
Riduttore baseStandard
Hollow shaftGearbox
weight
peso riduttore

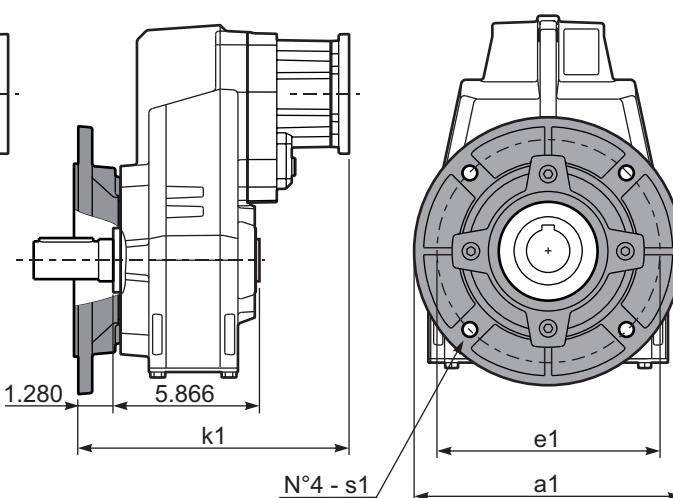
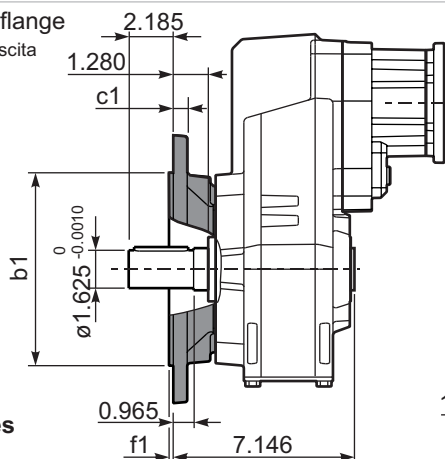
67.0 lb

4 holes
M12x0.7484.724
N°4-M8x0.512

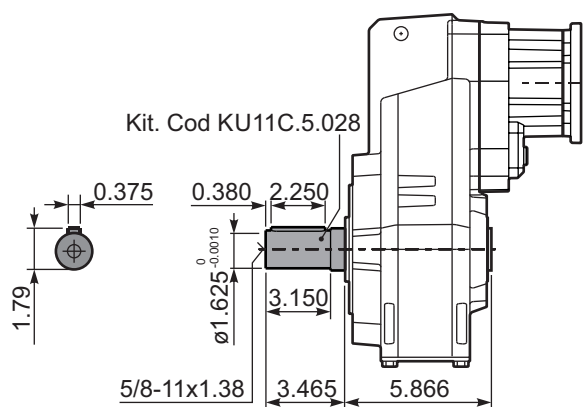
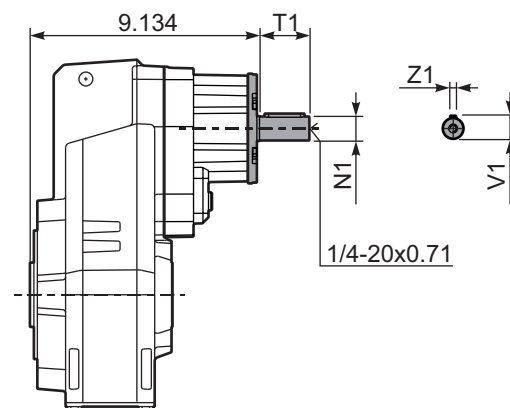
Nema flange	A	øF	kit code
56C-143/5TC	9.646	6.50	KU085.4.041
182/4TC	10.350	8.88	KU085.4.042
213/5TC	10.866	8.88	KUC50.4.041

PFC72...-F... Output flange
Flangia uscita

Nema flange	k1
56C-143/5TC	10.925
182/4TC	11.630
213/5TC	12.146

Available output flanges
Flange di uscita

a1 ø	b1	c1	e1	f1	s1	Kit code
9.843	7.087 ^{-0.0017} _{-0.0033}	0.512	8.465	0.118	0.551	KF70.9.011
11.811	9.055 ^{-0.0020} _{-0.0038}	0.630	10.433	0.157	0.551	KF70.9.012
-	-	-	-	-	-	-

PFC72 A... Single output shaft
Albero uscita sempliceRFC72C... Input Shaft
Albero in entrata

Nema flanges	N1	T1	V1	Z1	kit code
Standard	0.875	1.97	0.96	0.188	KC50.5.070U
On request	0.750	1.97	0.83	0.188	KC50.5.069U



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges				
							-W	-X			
							56C	143/5 TC			
23.2	75.50	2	5112	1.4	2.86	7302			191318	standard ø1.500	01
20.2	86.47	2	5855	1.4	2.72	7966			191316		02
17.5	100.22	2	6786	1.2	2.35	7966			171316		03
15.0	116.56	2	7893	1.0	2.02	7966			171314		04
12.8	136.82	1.5	6948	1.1	1.72	7966			151314		05
11.4	153.05	1.5	7773	0.9	1.38	7169			190816		06
10.7	163.31	1.5	8294	1.0	1.44	7966			131314		07
9.8	178.01	1.5	9040	0.9	1.32	7966			190814		08
9.1	191.67	1	6489	1.2	1.23	7966			101316		09
8.5	206.32	1	6985	1.1	1.14	7966			170814		10
7.9	222.92	1	7547	1.1	1.06	7966			101314		11
7.2	242.18	1	8199	1.0	0.97	7966			150814		12
7.0	250.15	1	8469	0.9	0.94	7966			91316		13
6.1	289.08	0.75	7340	1.1	0.81	7966			130814		14
5.3	330.31	0.75	8387	0.9	0.70	7877			71316		15
4.4	394.59	0.5	6680	1.2	0.60	7966			100814		16
3.4	514.99	0.5	8718	0.9	0.46	7966			90814		17
2.6	680.03	0.33	7598	1.0	0.35	7966			70814		18

The dynamic efficiency is 0.94 for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit **FC73** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore tipo **FC73** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso.
Tab.1 per oli e quantità consigliati.
Tab.2 carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño **FC73** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

124.94 oz	68.63 oz	68.63 oz	68.63 oz	131.98 oz	70.39 oz
SHELL Omala S2 GX 460			ENI Blasias 460		

For all details on lubrication and plugs check our website

Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

tab. 1

RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita

$$F_{eq} = F_R \cdot \frac{6.89}{X+5.30}$$



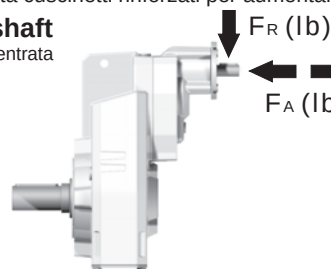
n_2	F_A	F_R	n_2	F_A	F_R	n_2	F_A	F_R
300	166	831	140	193	966	70	229	1146
250	180	899	120	202	1011	40	292	1460
200	186	932	85	218	1090	15	382	1910

On request reinforced bearings to increase loads.

A richiesta cuscinetti rinforzati per aumentare i carichi.

Input shaft

Albero in entrata



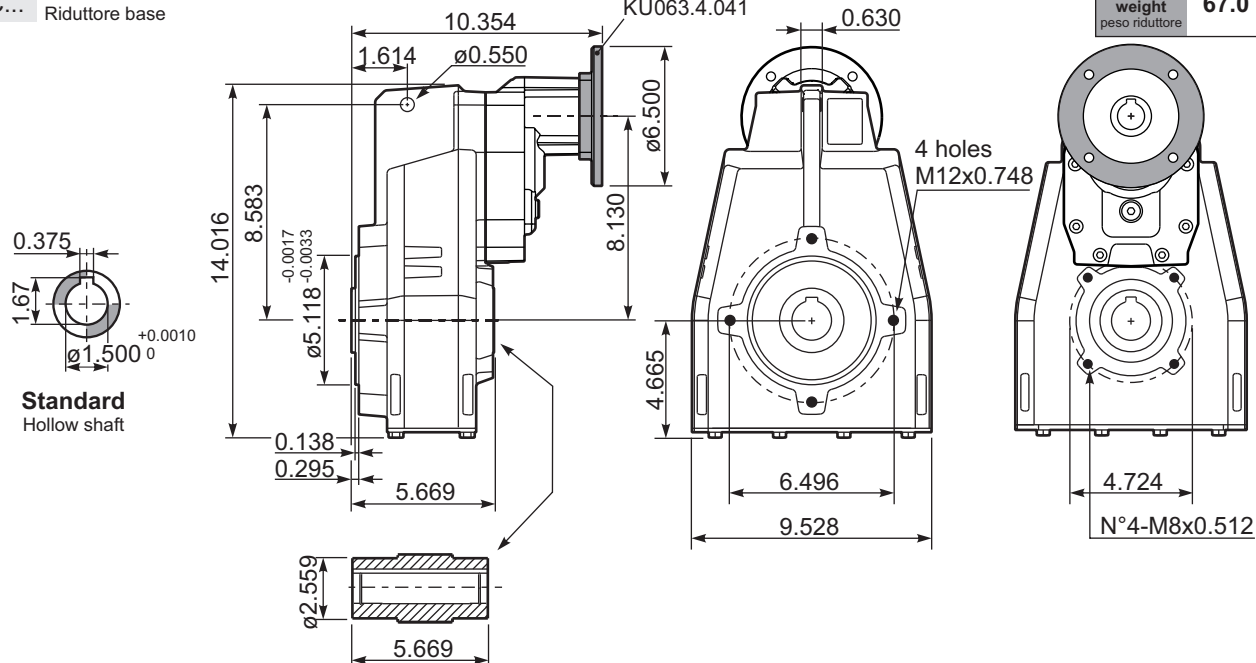
n_1	F_A	F_R
1750	90	449
1140	99	494

tab. 2

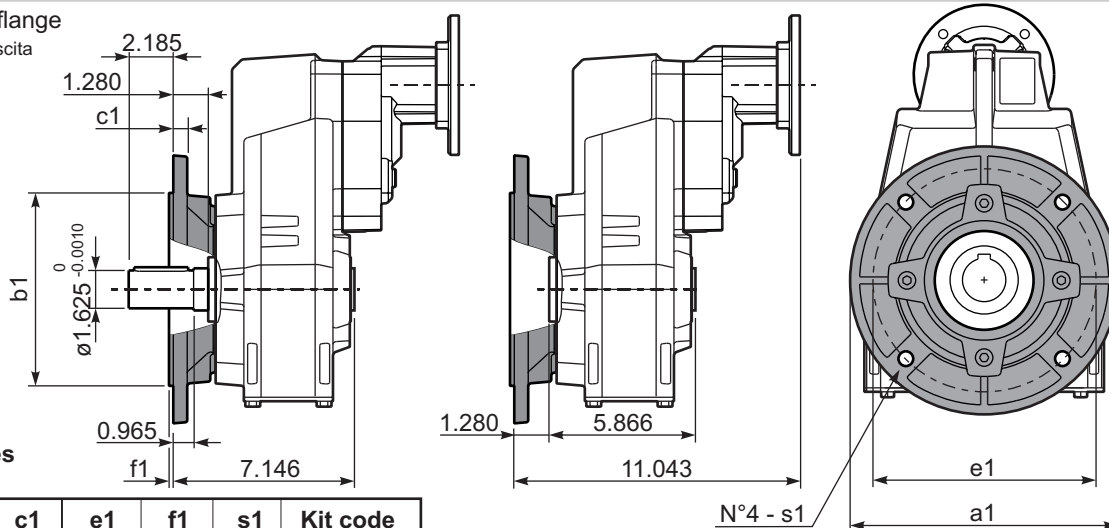
PFC73C...

Basic gearbox
Riduttore basekit code.
KU063.4.041Gearbox
weight
peso riduttore

67.0 lb



PFC73...-F...

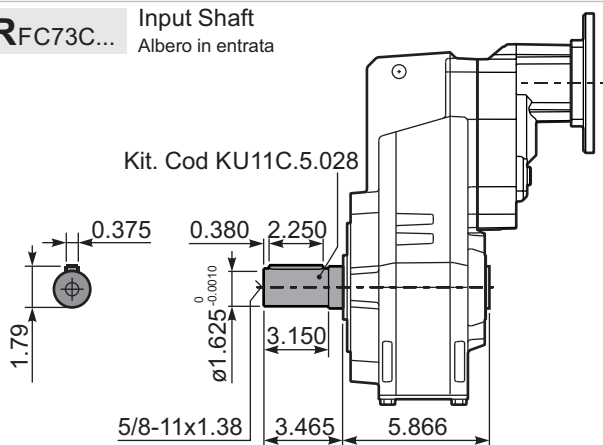
Output flange
Flangia uscitaAvailable output flanges
Flange di uscita

a1 ϕ	b1	c1	e1	f1	s1	Kit code
9.843	7.087 ^{-0.0017} _{-0.0033}	0.512	8.465	0.118	0.551	KF70.9.011
11.811	9.055 ^{-0.0020} _{-0.0038}	0.630	10.433	0.157	0.551	KF70.9.012
-	-	-	-	-	-	-

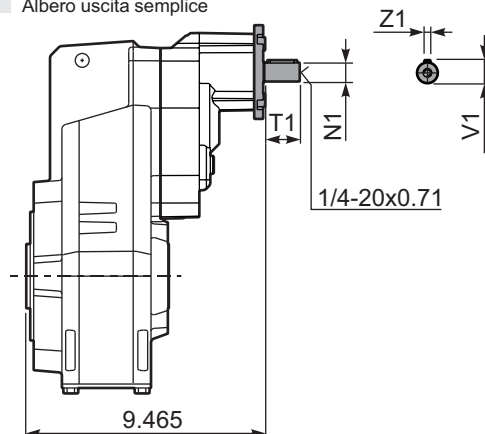
RFC73C...

Input Shaft
Albero in entrata

Kit. Cod KU11C.5.028



PFC73 A...

Single output shaft
Albero uscita semplice

Nema flanges	N1	T1	V1	Z1	kit code
Standard	0.750	1.97	0.83	0.188	KC40.5.070U
On request	0.625	1.57	0.71	0.188	KC40.5.069U



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges			Output Shaft  $\varnothing$	Ratios code 
							-Y	AA	AB		
							182/4TC	213/5TC	254/6TC		
293	5.98	20	4135	2.1	42.81	8851				3015	01
246	7.10	20	4910	2.1	42.36	10400				3013	02
203	8.63	20	5966	2.0	40.06	11949				3011	03
155	11.27	20	7794	1.7	34.07	13276				2015	04
131	13.38	20	9253	1.6	32.52	15046				2013	05
115	15.24	20	10537	1.6	31.92	16816				1615	06
108	16.26	20	11244	1.7	33.06	18587				2011	07
97	18.09	20	12511	1.5	29.71	18587				1613	08
88	19.82	20	13703	1.3	26.61	18233				1315	09
80	21.98	20	15202	1.2	24.45	18587				1611	10
74	23.53	20	16269	1.1	22.85	18587				1313	11
72	24.25	20	16773	1.0	20.47	17170				1115	12
61	28.80	20	19914	0.9	18.67	18587				1113	13
50	34.99	15	18148	1.0	15.36	18587				1111	14
42.0	41.64	10	14399	1.2	12.05	17347				813	15
34.6	50.60	10	17469	1.1	10.62	18587				811	16

The dynamic efficiency is **0.96** for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit **FC82** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore tipo **FC82** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso.
Tab.1 per oli e quantità consigliati.
Tab.2 carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño **FC82** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

					
H1	H4	H3	H2	H5	H6
200.61 oz	126.70 oz	126.70 oz	126.70 oz	232.29 oz	158.38 oz
SHELL Omala S2 GX 460			ENI Blasias 460		

For all details on lubrication and plugs check our website

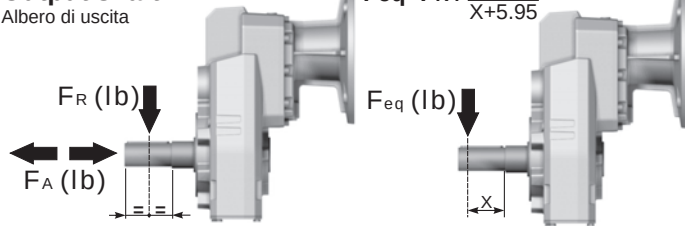
tab. 1

Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

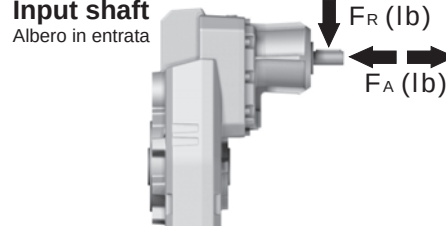
RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

$F_{eq} = F_R \cdot \frac{7.60}{X+5.95}$



Input shaft
Albero in entrata



n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	207	1033	140	252	1258	70	315	1573
250	225	1123	120	256	1281	40	404	2022
200	238	1191	85	292	1460	15	539	2696

On request reinforced bearings to increase loads.
A richiesta cuscinetti rinforzati per aumentare i carichi.

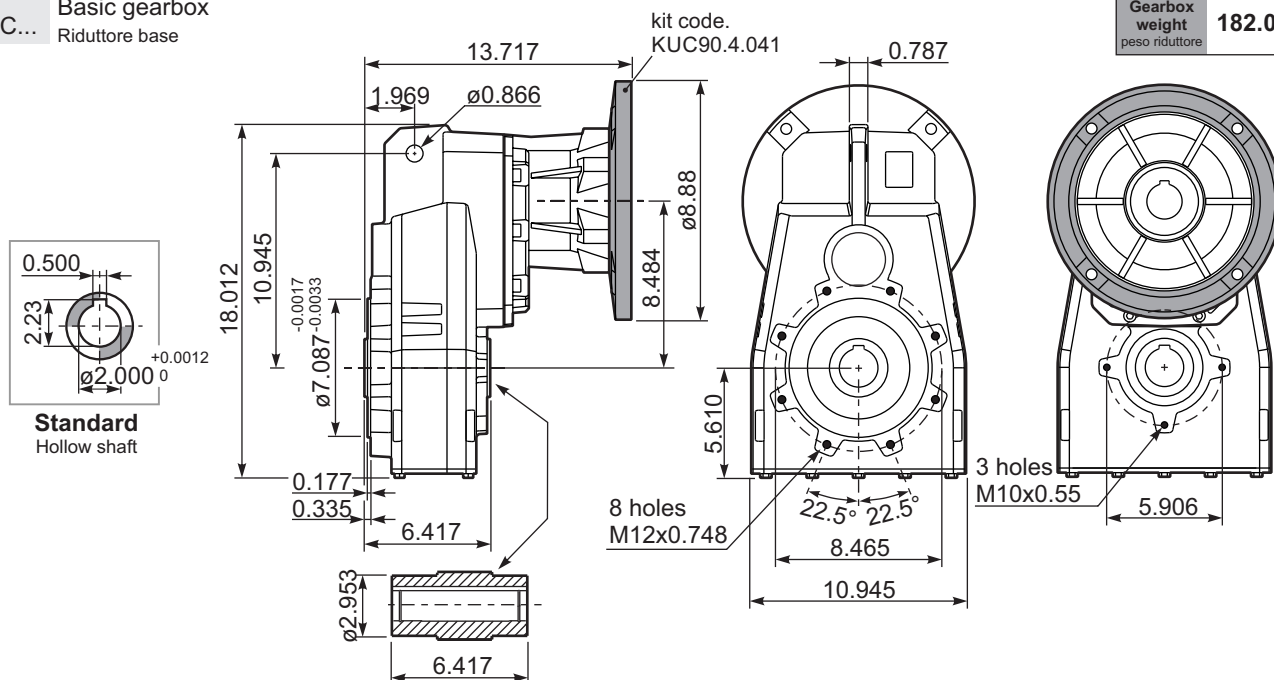
n_1	FA	FR
1750	157	786
1140	189	944

tab. 2

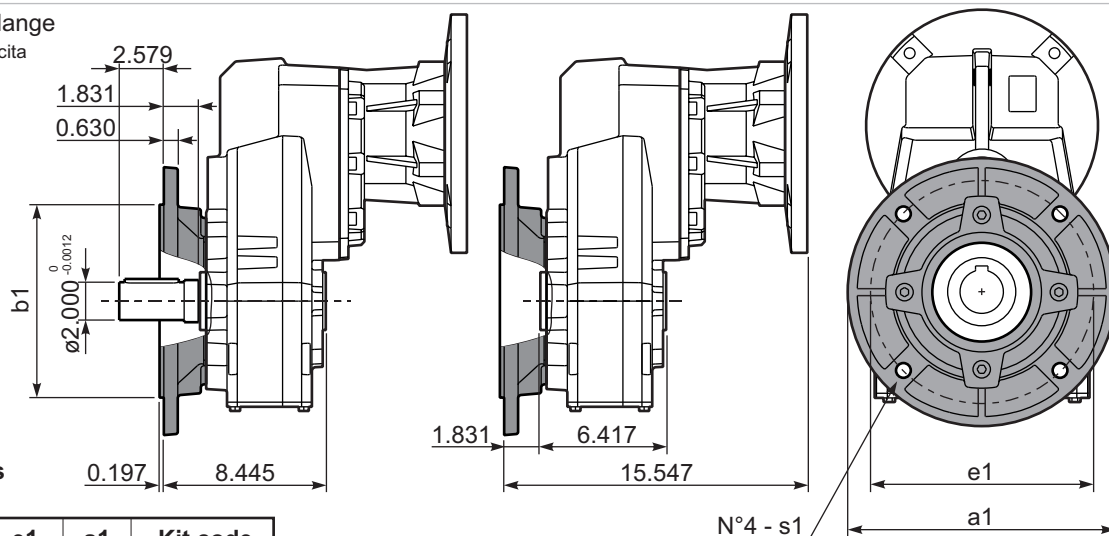
PFC82C...

Basic gearbox
Riduttore baseGearbox
weight
peso riduttore

182.0 lb

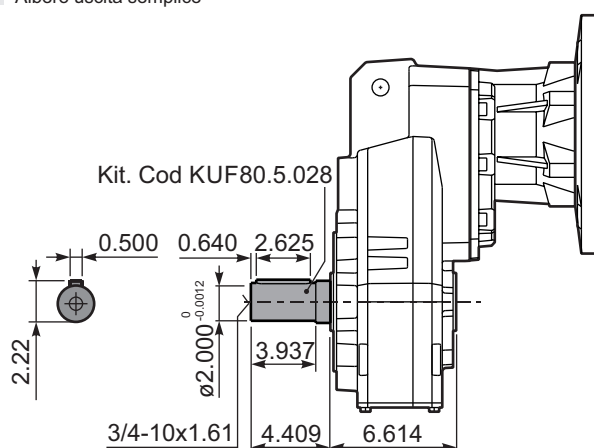


PFC82...-F...

Output flange
Flangia uscitaAvailable output flanges
Flange di uscita

a1 ϕ	b1	e1	s1	Kit code
11.811	9.055 (-0.0020 to -0.0038)	10.433	0.551	KF80.9.011
13.780	9.843 (-0.0020 to -0.0038)	11.811	0.709	KF80.9.012

PFC82 A...

Single output shaft
Albero uscita semplice



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges				Output Shaft  standard ø2000	Ratios code 
							-W	-X	-Y	AA		
							56C	143/5TC	182/4TC	213/5TC		
36.0	48.55	10	16436	1.1	11.31	18587					201315	01
30.4	57.64	10	19515	1.0	9.52	18587					201313	02
26.7	65.64	7.5	16667	1.1	8.36	18587					161315	03
25.0	70.04	7.5	17784	1.0	7.84	18587					201311	04
22.5	77.93	7.5	19789	0.9	7.04	18587					161313	05
20.5	85.36	7.5	21674	0.9	6.43	18587					131315	06
18.5	94.70	5	16030	1.2	5.80	18587					161311	07
17.3	101.35	5	17156	1.1	5.42	18587					131313	08
14.2	123.15	5	20846	0.9	4.46	18587					131311	09
11.6	150.73	3	15310	1.2	3.64	18587					111311	10
9.8	179.39	3	18220	1.0	3.06	18587					81313	11
8.0	217.98	2	14760	1.3	2.52	18587					81311	12
7.1	247.03	2	16727	1.0	2.06	17259					61313	13
5.8	300.17	1.5	15244	1.2	1.83	18587					61311	14

The dynamic efficiency is 0.94 for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

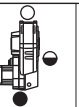
B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit **FC83** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore tipo **FC83** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso.
Tab.1 per oli e quantità consigliati.
Tab.2 carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño **FC83** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

					
H1	H4	H3	H2	H5	H6
204.13 oz	137.26 oz	137.26 oz	137.26 oz	239.33 oz	172.46 oz
SHELL Omala S2 GX 460			ENI Blasias 460		

For all details on lubrication and plugs check our website

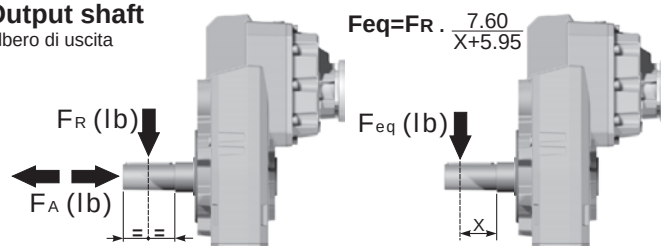
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

tab. 1

RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita



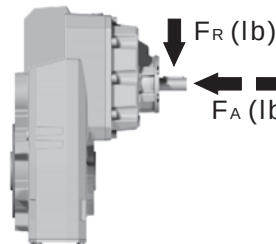
n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	207	1033	140	252	1258	70	315	1573
250	225	1123	120	256	1281	40	404	2022
200	238	1191	85	292	1460	15	539	2696

On request reinforced bearings to increase loads.

A richiesta cuscinetti rinforzati per aumentare i carichi.

Input shaft

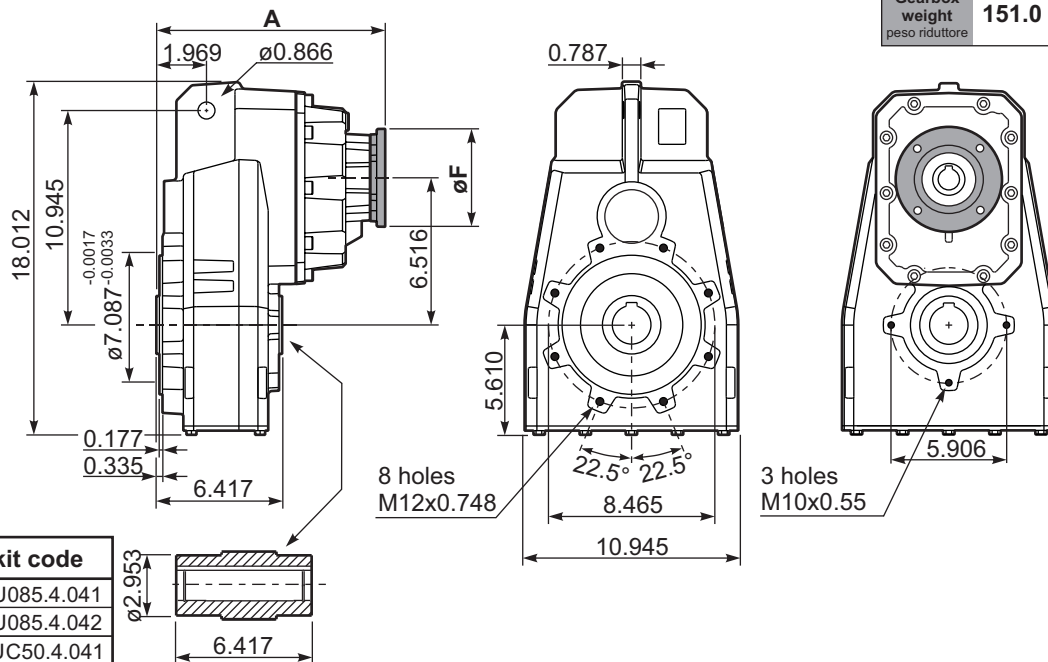
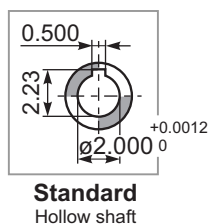
Albero in entrata



n_1	FA	FR
1750	101	506
1140	112	562

tab. 2

PFC83C...

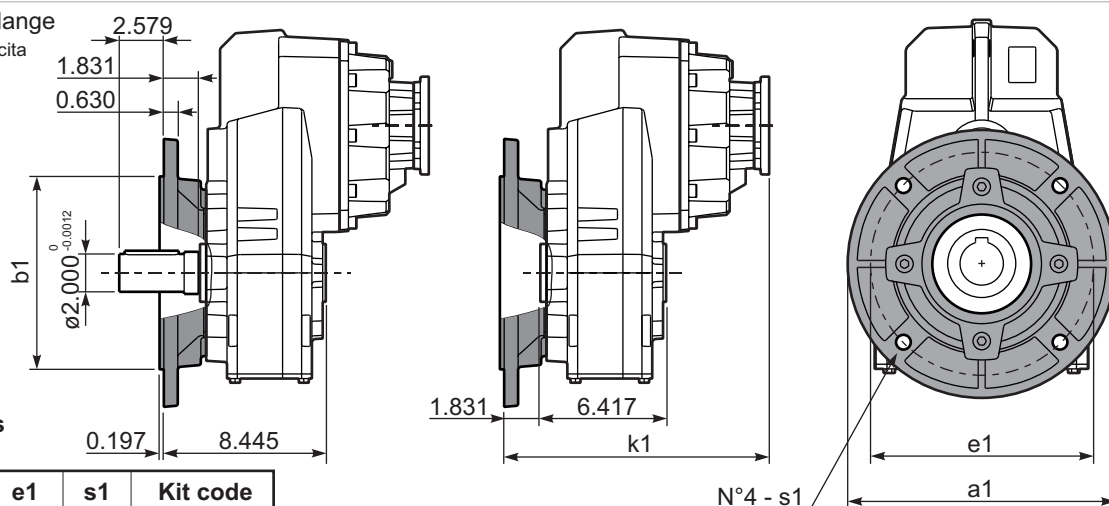
Basic gearbox
Riduttore baseGearbox
weight
peso riduttore **151.0 lb**

Nema flange	A	øF	kit code
56C-143/5TC	11.768	6.50	KU085.4.041
182/4TC	12.472	8.88	KU085.4.042
213/5TC	12.988	8.88	KUC50.4.041

PFC83...-F...

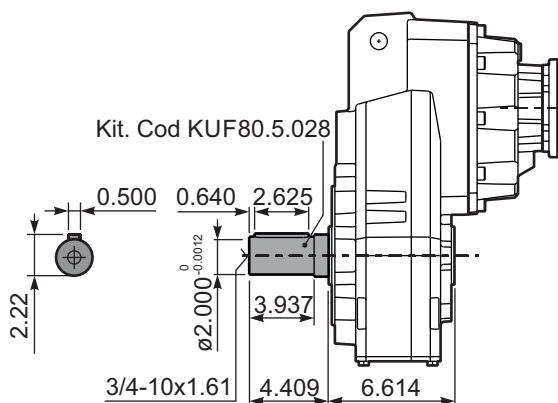
Output flange
Flangia uscita

Nema flange	k1
56C-143/5TC	13.599
182/4TC	14.303
213/5TC	14.819

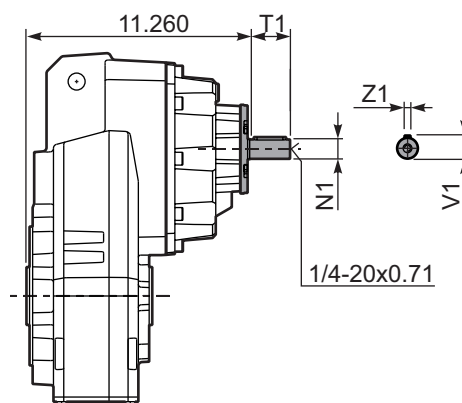
Available output flanges
Flange di uscita

a1 ø	b1	e1	s1	Kit code
11.811	9.055 ^{-0.0020} _{-0.0038}	10.433	0.551	KF80.9.011
13.780	9.843 ^{-0.0020} _{-0.0038}	11.811	0.709	KF80.9.012

PFC83 A...

Single output shaft
Albero uscita semplice

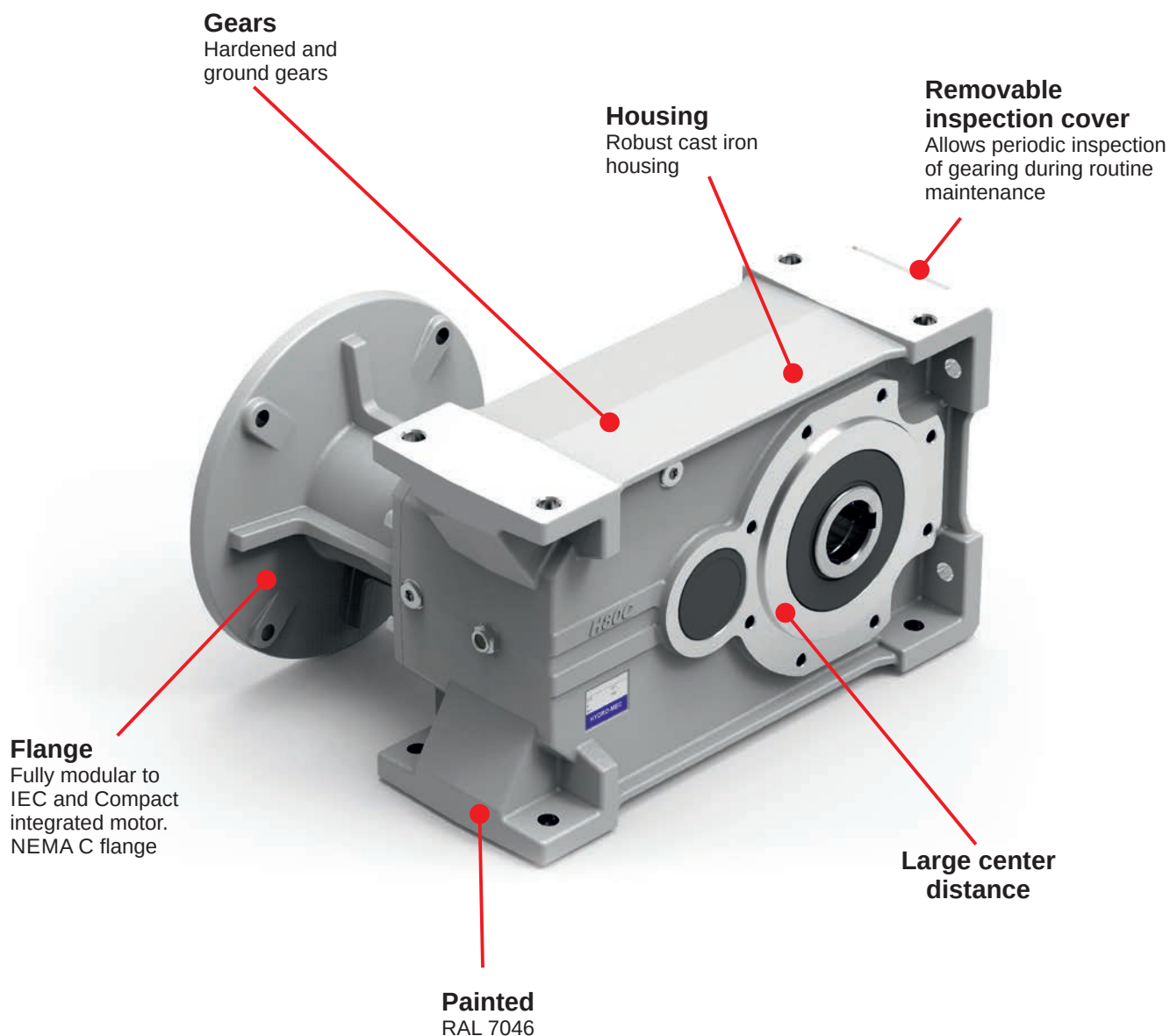
RFC83C...

Input Shaft
Albero in entrata

Nema flanges	N1	T1	V1	Z1	kit code
Standard	0.875	1.97	0.96	0.188	KC50.5.070U
On request	0.750	1.97	0.83	0.188	KC50.5.069U

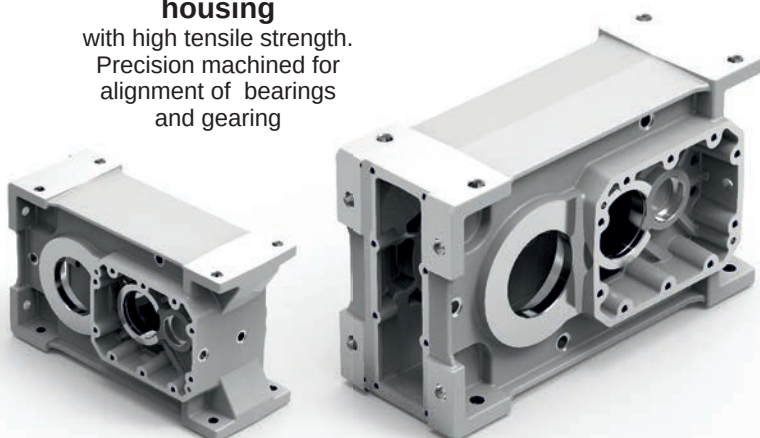
Cast iron parallel shaft gearboxes

A modular and compact product



Single-piece Cast Iron housing

with high tensile strength.
Precision machined for
alignment of bearings
and gearing



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Specific type datasheet on page...

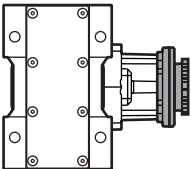
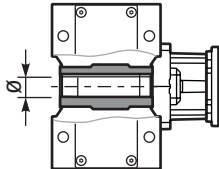
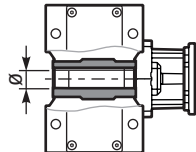
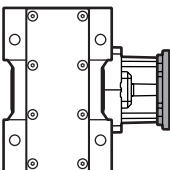
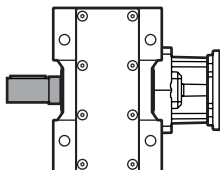
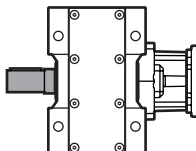
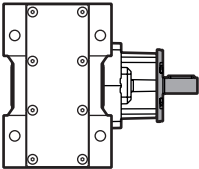
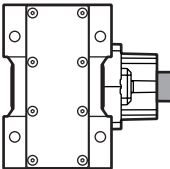
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2 and 3 Stage



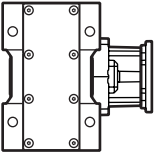
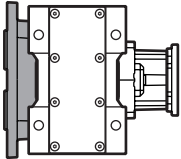
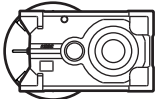
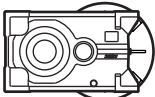
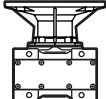
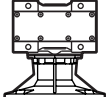
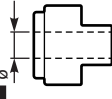
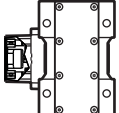
Types / Tipi /
Tipen / Types /
Tipos

8-5	8-7	8-9	8-11	8-13	8-15
H62C 5974lb in	H63C 5974lb in	H72C 7966lb in	H73C 7966lb in	H82C 18587lb in	H83C 18587lb in

Type Tipo Tipo	Size Grandezza Tamaño	Mounting Montaggio Tipo de montaje	Ratio Rapporto Relacion	Output shaft Albero uscita Eje en salida
M Parallel shaft helical Riduttori ad assi paralleli	H62C 2 Stages Riduzioni Etapas	C	12.39	-UH
 With IEC motor M	Cast Iron/Ghisa/Fundicion H62C H72C H82C	 Hollow output shaft C	See technical data table Vedi tabelle dati tecnici. Ver tabla datos técnicos	 STANDARD Only on request for Q.ty A richiesta per quantità H62C H63C H72C H73C UH → Ø1.500 H82C H83C UL → Ø2.000
 With motor flange P		 Single output shaft A		 Single output shaft UG H62/3C ⇒ Ø1.375 UI H72/3C ⇒ Ø1.625 UL H82/3C ⇒ Ø2.000
 With male input shaft R	H63C H73C H83C			
 Modular base B				



On request we can deliver our products according to the ATEX
A richiesta possiamo fornire i nostri prodotti secondo le normative ATEX
A pedido, se pueden enviar nuestros productos de acuerdo con las normas ATEX.

Type Tipo Tipo	Output flange Flangia uscita Brida en salida	Motor size Grandezza motore Tamaño motor	Mounting position Posizione montaggio Position de montaje	Input bore Foro entrata Eje hueco de entrada	Terminal box position Posizione morsettiera Posición caja de bornes
-N	N	-Y	B3	ST	
 -N Senza flangia Without flange  -F Whit output flange con flangia uscita	N Senza flangia Without flange H62C H63C 4 → ø9.843 H72C H73C 4 → ø9.843 5 → ø11.811 H82C H83C 5 → ø11.811 6 → ø13.780	Flange Flangia  -W=56C -X=143/5TC -Y=182/4TC AA=213/5TC AB=254/6TC AC=284/6TC AD=324/6TC Type R Tipo R  H63C H73C -K → ø0.625 -J ø0.750 H62C H72C H83C -J → ø0.750 -N ø0.875 Without flange Senza flangia  -M With coupling Con giunto H63C H73C -K → ø0.625 -N → ø0.875 H62C H72C H83C -K → ø0.625 -N → ø0.875 -S → ø1.125	 B3 STANDARD  B6  B7  B8  V5  V6  V8	ST Nothing indication: standard bore Nessuna indicazione: foro standard COUPLING  -W = ø0.625" -X = ø0.875" -Y = ø1.125" -0 Ready for input coupling Predisposto per giunto 	With Type M specify terminal box position Con tipo M specificare posizione morsettiera  A  B STANDARD  C  D

POTENZA RICHIESTA / REQUIRED POWER / POTENCIA NECESARIA

Lifting / sollevamento / elevación

$$P [KW] = \frac{M [Kg] \cdot g [9.81] \cdot v [m / s]}{1000}$$

Rotation / rotazione / rotation

$$P [KW] = \frac{M [Nm] \cdot n [rpm]}{9550}$$

Linear movement / traslazione / translacion

$$P [KW] = \frac{F [N] \cdot v [m / s]}{1000}$$

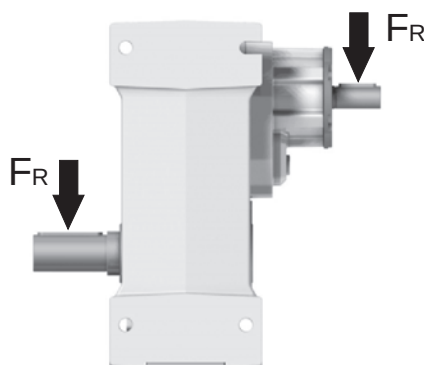
TORQUE / COPPIA / PAR

$$M [Nm] = \frac{9550 \cdot P [KW]}{n [rpm]}$$

$$M [lb in] = \frac{63030 \cdot P [HP]}{n [rpm]}$$

RADIAL LOADS / CARICHI RADIALI / RADIALE - UND AXIALLASTEN /
CHARGES RADIALES / CARGA RADIAL Y AXIAL

- Radial load generated by external transmissions keyed onto input and/or output shafts.
- Forza radiale generata da organi di trasmissione calettati sugli alberi di ingresso e/o uscita.
- Cargas radiales, generada por transmisiones externas, aplicadas sobre los ejes de entrada y/o salida



$$F_R [N] = \frac{M [Nm] \cdot 2000}{d [mm]} \cdot f_k$$

$$F_R [N] = \frac{M [lb in] \cdot 8.9}{d [in]} \cdot f_k$$

M

Momento torcente / Output torque / Par torsion

d

Diametro primitivo / Diam. of driving element / Diámetro primitivo

f_k

Coefficiente di trasformazione / Factor / Coeficiente de transmisión
1.15 Ingranaggi / Gearwheels / Engranaje
1.25 Catena / Chain sprockets / Cadena
1.75 Cinghia Trapezoidale / Narrow v-belt pulley / Correa trapezoidal
2.50 Cinghia piatta / Flat-belt pulley / Correa plana

- If your application requires higher radial loads, contact our technical office. Higher load may be possible.
- Nel caso la vostra applicazione richieda carichi radiali superiori consultare il nostro ufficio tecnico, valori maggiori possono essere accettati.
- En el caso en que una aplicación exija una carga radial superior a la especificada en el catálogo, consultar a nuestra oficinas técnica.

How to select a gearbox / Come selezionare un riduttore Cómo seleccionar un réductor

B Output speed
Velocità in uscita
Velocidad de salida

Nominal power
Potenza nominale
Potencia nominal

Gear size
Grandezza riduttore
Tamaño reductor

Motor power
Potenza motore
Potencia motor

A Nominal torque
Momento torcente nominale
Par de torsión nominal

Flange code
Codice flangia
Código bridas

Input speed
Velocità in entrata
Velocidad de entrada

H62C

Cube gear **5974lb in**

Rating - Cast Iron
PARALLEL SHAFT GEARBOXES

QUICK SELECTION / Selezione veloce

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges				Output Shaft		Ratios code	
							-W	-X	-Y	AA				
266	6.57	10	2272	1.5	14.80	3363						3018	standard Ø1.500	01
232	7.56	10	2613	1.3	13.21	3452						3016		02
198	8.82	10	3050	1.2	11.90	3629						3014		03
141	12.39	10	4083	1.2	11.99	5133						2018		04

input speed (n_1) = 1750 min⁻¹

C Ratio
Rapporto
Relación

Transmitted torque
Momento torcente trasmesso
Par transmitido

Service factor
Fattore di servizio
Factor de servicio

Output shaft diam.
Diam. albero uscita
Díametro eje de salida

Notes
Note
Notas

fs

Type of load and starts per hour Tipo di carico e avviamenti per ora		Oper. hours per day Ore di funz. giorn.		
		3 h	10 h	24 h
Continuous or intermittent appl. with start / hour Applicazione cont. o interm. con n.ro operazioni/ora	Uniform / Uniforme	0.8	1	1.25
	Moderate / Moderato	1	1.25	1.5
	Heavy / Forte	1.25	1.5	1.75
Intermittent application with start / hour Applicazione intermittente con n.ro operazioni/ora	Uniform / Uniforme	1	1.25	1.5
	Moderate / Moderato	1.25	1.5	1.75
	Heavy / Forte	1.5	1.75	2.15

D Motor flange available
Flange disponibili
Bridas disponibles

B) Mounting with reduction ring
Montaggio con boccia di riduzione
Montaje con casquillo de reducción

C) Motor flangeholes position/terminal box position
Posizione fori flangia/basetta motore
Posición agujeros brida / base motor

B) Available without reduction bushes
Disponibile anche senza boccia
Disponibile tambien sin casquillo

A	Select required torque (according to service factor)	Seleziona la coppia desiderata (comprensiva del fattore di servizio)	Seleccionar el par deseado (incluyendo el factor de servicio)
B	Select output speed	Seleziona la velocità in uscita	Seleccionar la velocidad de salida
C	On the same line of selected geared motor, you can find the gear ratio	Sulla riga corrispondente alla motorizzazione prescelta si può rilevare il rapporto di riduzione	En la línea correspondiente al motor preseleccionado es posible encontrar la relación de reducción
D	Select motor flange available (if requested)	Scegli la flangia disponibile (se richiesta)	Seleccionar la brida disponible (sobre pedido)



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges				Output Shaft  $\varnothing$	Ratios code 
							-W	-X	-Y	AA		
							56C	143/5TC	182/4TC	213/5TC		
266	6.57	10	2272	1.5	14.80	3363					3018	01
232	7.56	10	2613	1.3	13.21	3452					3016	02
198	8.82	10	3050	1.2	11.90	3629					3014	03
141	12.39	10	4283	1.2	11.99	5133					2018	04
123	14.24	10	4924	1.1	10.79	5310					2016	05
104	16.75	10	5790	1.0	10.16	5886					1618	06
91	19.25	10	6657	0.9	8.97	5974					1616	07
80	21.78	7.5	5647	1.1	7.93	5974					1318	08
70	25.04	7.5	6493	0.9	6.90	5974					1316	09
60	29.23	5	5053	1.2	5.91	5974					1314	10
57	30.65	5	5298	1.1	5.64	5974					1116	11
48.9	35.78	5	6186	1.0	4.83	5974					1114	12
45.4	38.55	3	3999	1.3	3.85	5133					818	13
39.5	44.32	3	4597	1.3	3.84	5886					816	14
33.8	51.74	3	5367	1.1	3.34	5974					814	15
28.7	61.03	2	4220	1.0	2.01	4248					616	16
24.6	71.25	2	4927	1.0	2.01	4956					614	17

The dynamic efficiency is 0.96 for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit H62C is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore H62C viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño H62C se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio					
						
B3	B6	B7	B8	V5	V6	V8
79.23 oz	112.68 oz	105.63 oz	79.23 oz	153.17 oz	82.75 oz	Ask
SHELL Omala S4 WE 320				ENI Telium VSF 320		

For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

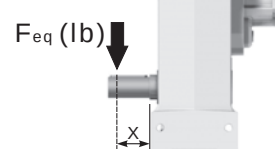
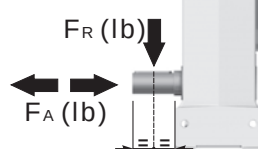
tab. 1

RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita

$$F_{eq} = F_R \cdot \frac{5.89}{X+4.49}$$



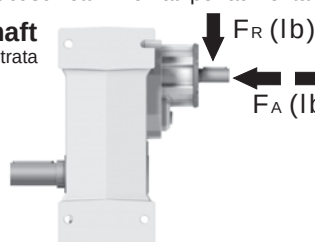
n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	135	674	140	162	809	70	211	1057
250	144	719	120	166	832	40	274	1371
200	155	778	85	193	967	15	292	1461

On request reinforced bearings to increase loads.

A richiesta cuscinetti rinforzati per aumentare i carichi.

Input shaft

Albero in entrata



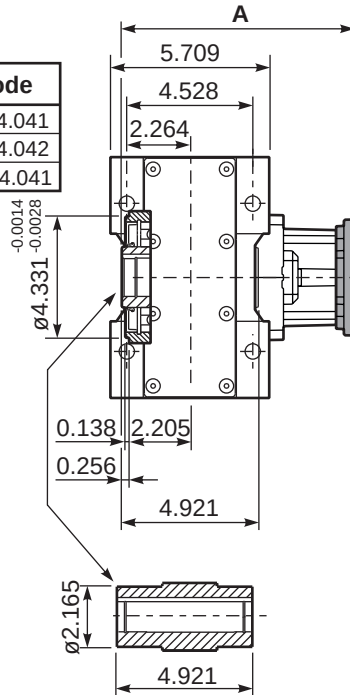
n_1	FA	FR
1750	101	506
1140	112	562

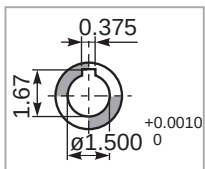
tab. 2

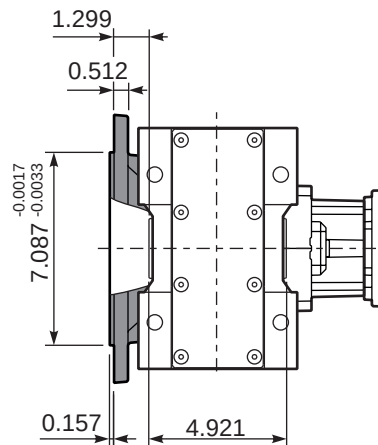
PH62C...

Basic gearbox
Riduttore base

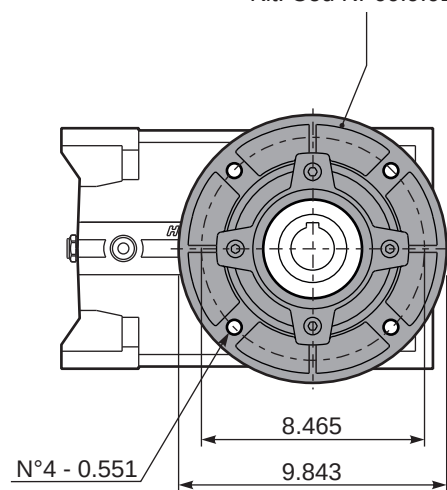
Nema flange	A	øF	kit code
56C-143/5TC	9.193	6.50	KU085.4.041
182/4TC	9.898	8.88	KU085.4.042
213/5TC	10.413	8.88	KUC50.4.041

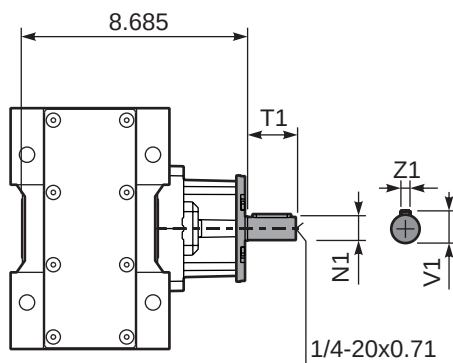

Gearbox weight
peso riduttore **75.0 lb**

Standard
Hollow shaft

PH62C...-F

Output flange
Flangia uscita


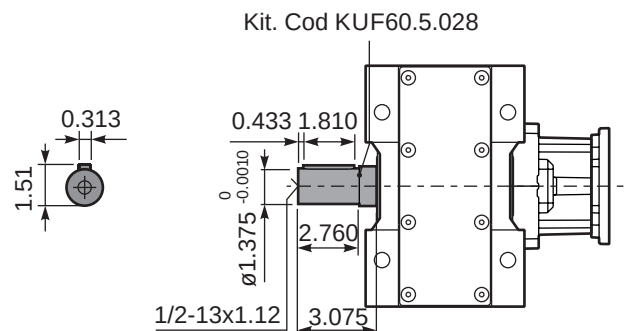
Kit. Cod KF60.9.011


RH62C...

Input Shaft
Albero in entrata


Nema flanges	N1	T1	V1	Z1	kit code
Standard	0.875	1.97	0.96	0.188	KC50.5.070U
On request	0.750	1.97	0.83	0.188	KC50.5.069U

PH62C A...

Single output shaft
Albero uscita semplice


Kit. Cod KUF60.5.028



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges		Output Shaft	
							-W	-X		
							56C	143/5 TC		Ratio code
28.3	61.89	2	4191	1.4	2.85	5974			191318	01
24.6	71.16	2	4819	1.2	2.48	5974			191316	02
21.2	82.48	2	5585	1.1	2.14	5974			171316	03
18.2	96.29	1.5	4890	1.2	1.83	5974			171314	04
17.4	100.51	1.5	5104	1.2	1.76	5974			131318	05
15.1	115.56	1.5	5869	1.0	1.53	5974			131316	06
13.9	125.96	1.5	6397	0.9	1.38	5886			190816	07
13.0	134.91	1.5	6851	0.9	1.31	5974			131314	08
11.9	147.05	1	4979	1.2	1.20	5974			190814	09
10.3	170.44	1	5770	1.0	1.04	5974			170814	10
9.5	184.15	1	6235	1.0	0.96	5974			101314	11
8.5	205.87	0.75	5228	1.1	0.86	5974			91316	12
7.3	240.34	0.75	6103	1.0	0.73	5974			91314	13
6.3	279.22	0.5	4727	1.2	0.62	5886			100816	14
5.4	325.97	0.5	5518	1.1	0.54	5974			100814	15
4.8	364.41	0.5	6169	1.0	0.48	5886			90816	16
4.1	425.43	0.33	4753	1.3	0.41	5974			90814	17
3.6	481.19	0.33	5376	1.1	0.36	5886			70816	18
3.1	561.76	0.33	6276	1.0	0.31	5974			70814	19

The dynamic efficiency is **0.94** for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit **H63C** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore **H63C** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño **H63C** se suministra, lubricado de por vida con aceites sintéticos y no requieren mantenimiento alguna.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio						
B3	B6	B7	B8	V5	V6	V8	
82.75 oz	135.56 oz	110.92 oz	82.75 oz	160.21 oz	88.03 oz	Ask	
SHELL Omala S4 WE 320				ENI Telium VSF 320			

For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

tab. 1

RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita

$$F_{eq} = F_R \cdot \frac{5.89}{X+4.49}$$



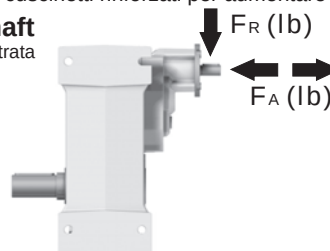
n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	135	674	140	162	809	70	211	1056
250	144	719	120	166	831	40	274	1370
200	155	777	85	193	966	15	292	1460

On request reinforced bearings to increase loads.

A richiesta cuscinetti rinforzati per aumentare i carichi.

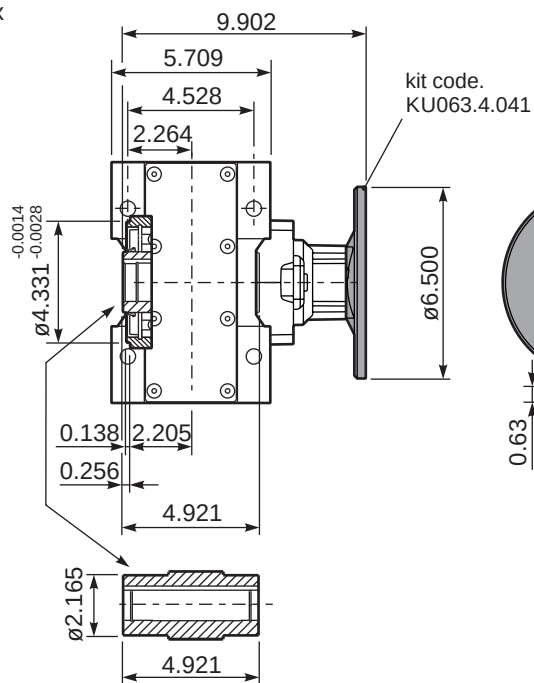
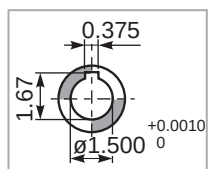
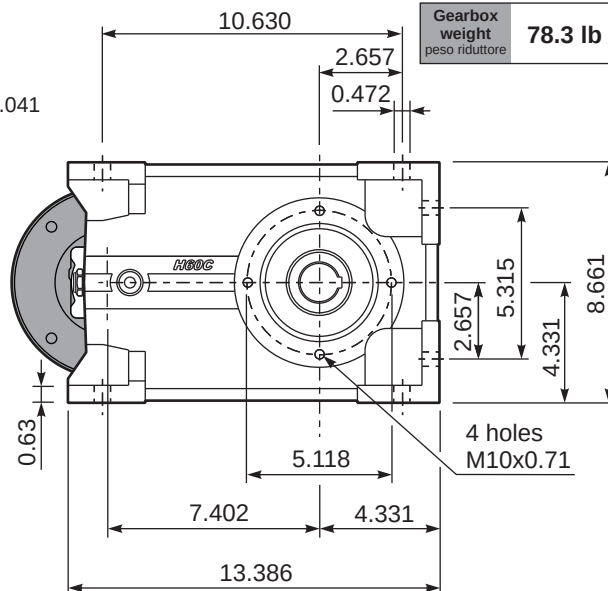
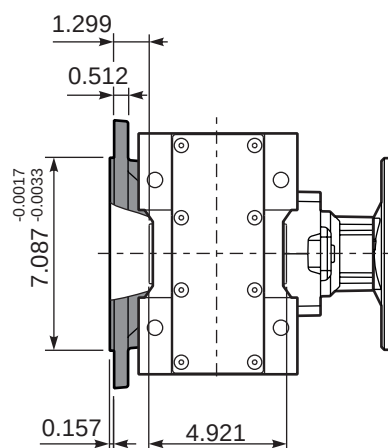
Input shaft

Albero in entrata

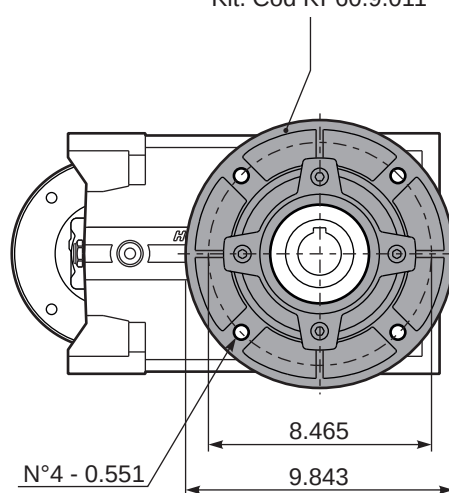
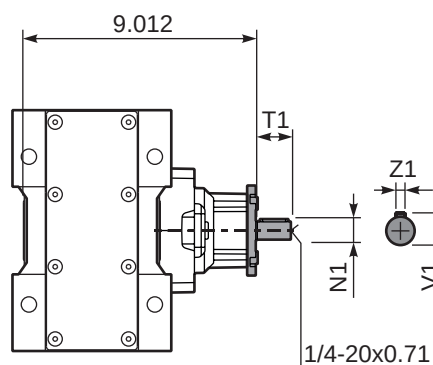


n_1	FA	FR
1750	90	449
1140	99	494

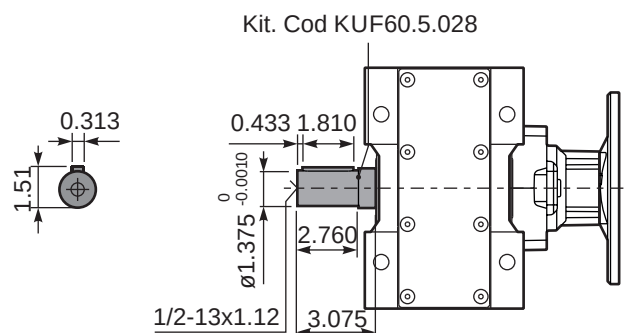
tab. 2

PH63C...Basic gearbox
Riduttore baseStandard
Hollow shaftGearbox
weight
peso riduttore**78.3 lb****PH63C...-F**Output flange
Flangia uscita

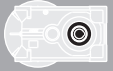
Kit. Cod KF60.9.011

**R**H63C...Input Shaft
Albero in entrata

Nema flanges	N1	T1	V1	Z1	kit code
Standard	0.750	1.97	0.83	0.188	KC40.5.070U
On request	0.625	1.57	0.71	0.188	KC40.5.069U

PH63C A...Single output shaft
Albero uscita semplice

Kit. Cod KUF60.5.028



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges				Output Shaft  $\varnothing$	Ratios code 
							-W	-X	-Y	AA		
							56C	143/5TC	182/4TC	213/5TC		
218	8.02	10	2772	1.7	16.60	4602					3018	01
191	9.18	10	3175	1.6	16.45	5222					3016	02
164	10.68	10	3692	1.6	16.30	6019					3014	03
116	15.11	10	5224	1.3	13.13	6859					2018	04
101	17.30	10	5983	1.3	13.09	7833					2016	05
87	20.13	10	6959	1.1	11.45	7966					2014	06
75	23.39	10	8089	1.0	9.85	7966					1616	07
64	27.21	7.5	7056	1.1	8.47	7966					1614	08
58	30.42	7.5	7889	1.0	7.57	7966					1316	09
49.5	35.38	5	6117	1.3	6.51	7966					1314	10
47.0	37.24	5	6438	1.2	6.15	7921					1116	11
40.4	43.31	5	7488	1.1	5.32	7966					1114	12
37.2	47.02	3	4877	1.3	3.84	6240					818	13
32.5	53.85	3	5586	1.3	3.85	7169					816	14
27.9	62.63	3	6497	1.2	3.68	7966					814	15
23.6	74.16	2	5128	1.0	2.02	5178					616	16
20.3	86.25	2	5964	1.0	2.02	6019					614	17

The dynamic efficiency is 0.96 for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit H72C is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore tipo H72C è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso.
Tab.1 per oli e quantità consigliati.
Tab.2 carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño H72C se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

						
B3	B6	B7	B8	V5	V6	V8
112.68 oz	163.73 oz	140.85 oz	112.68 oz	218.31 oz	109.15 oz	Ask
SHELL Omala S2 GX 460				ENI Blasla 460		

For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

tab. 1

RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita

$$F_{eq} = F_R \cdot \frac{6.89}{X+5.30}$$

F_R (lb)
 F_A (lb)

F_{eq} (lb)
 X

n_2	F_A	F_R	n_2	F_A	F_R	n_2	F_A	F_R
300	166	831	140	193	966	70	229	1146
250	180	899	120	202	1011	40	292	1460
200	186	932	85	218	1090	15	382	1910

On request reinforced bearings to increase loads.

A richiesta cuscinetti rinforzati per aumentare i carichi.

Input shaft

Albero in entrata

F_R (lb)

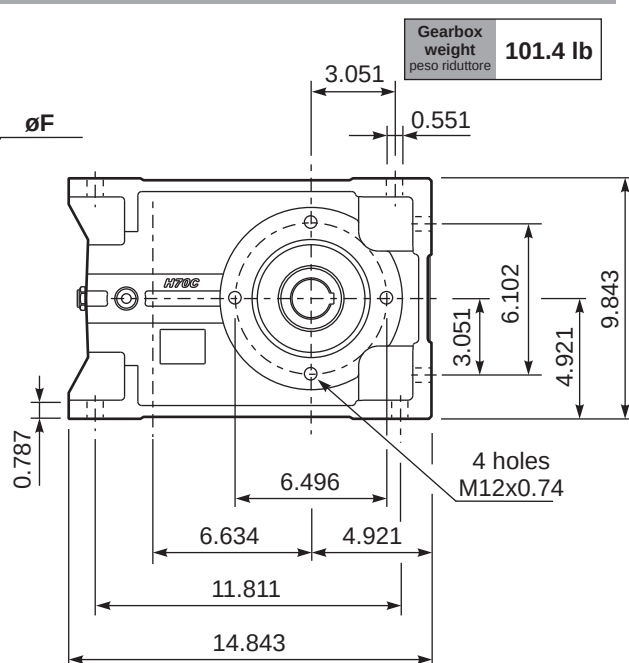
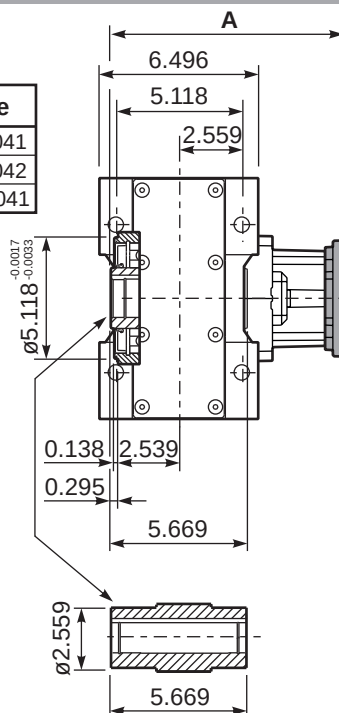
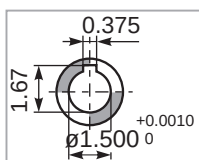
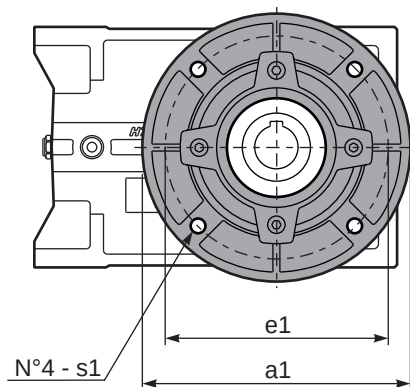
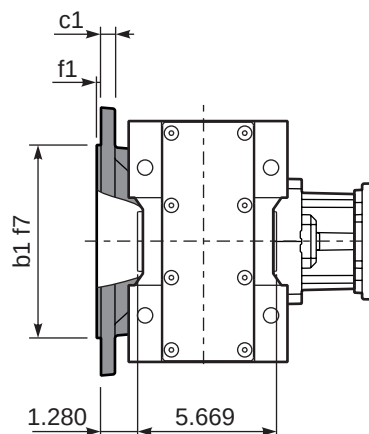
F_A (lb)

n_1	F_A	F_R
1750	101	449
1140	112	494

tab. 2

PH72C...Basic gearbox
Riduttore base

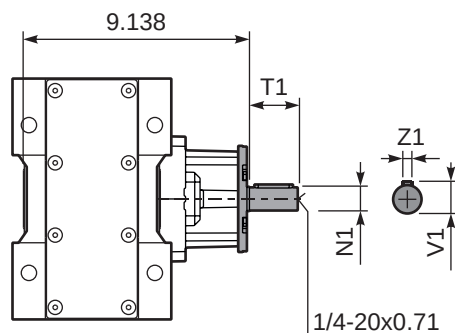
Nema flange	A	øF	kit code
56C-143/5TC	9.646	6.50	KU085.4.041
182/4TC	10.350	8.88	KU085.4.042
213/5TC	10.866	8.88	KUC50.4.041

Standard
Hollow shaftGearbox weight
peso riduttore **101.4 lb****PH72C...-F**Output flange
Flangia uscita

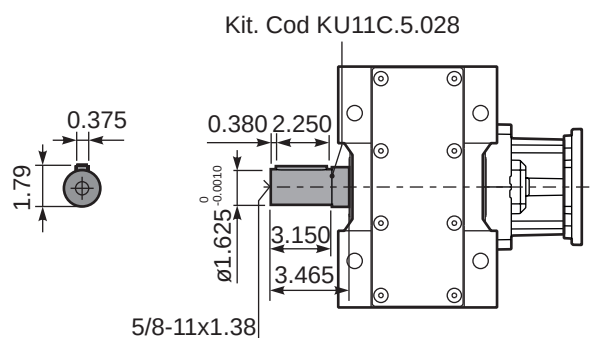
Available output flanges

Flange di uscita

a1 ø	b1	c1	e1	f1	s1	Kit code
9.843	7.087 ^{-0.0017} _{-0.0033}	0.512	8.465	0.118	0.551	KF70.9.011
11.811	9.055 ^{-0.0020} _{-0.0038}	0.630	10.433	0.157	0.551	KF70.9.012

RH72C...Input Shaft
Albero in entrata

Nema flanges	N1	T1	V1	Z1	kit code
Standard	0.875	1.97	0.96	0.188	KC50.5.070U
On request	0.750	1.97	0.83	0.188	KC50.5.069U

PH72C A...Single output shaft
Albero uscita semplice



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges		Output Shaft		Ratio code
							-W	-X			
							56C	143/5 TC			
23.2	75.50	2	5112	1.4	2.86	7302					01
20.2	86.47	2	5855	1.4	2.72	7966					02
17.5	100.22	2	6786	1.2	2.35	7966					03
15.0	116.56	2	7893	1.0	2.02	7966					04
12.8	136.82	1.5	6948	1.1	1.72	7966					05
11.4	153.05	1.5	7773	0.9	1.38	7169					06
10.7	163.31	1.5	8294	1.0	1.44	7966					07
9.8	178.01	1.5	9040	0.9	1.32	7966					08
9.1	191.67	1	6489	1.2	1.23	7966					09
8.5	206.32	1	6985	1.1	1.14	7966					10
7.9	222.92	1	7547	1.1	1.06	7966					11
7.2	242.18	1	8199	1.0	0.97	7966					12
7.0	250.15	1	8469	0.9	0.94	7966					13
6.1	289.08	0.75	7340	1.1	0.81	7966					14
5.3	330.31	0.75	8387	0.9	0.70	7877					15
4.4	394.59	0.5	6680	1.2	0.60	7966					16
3.4	514.99	0.5	8718	0.9	0.46	7966					17
2.6	680.03	0.33	7598	1.0	0.35	7966					18

The dynamic efficiency is **0.94** for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit **H73C** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore tipo **H73C** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso.
Tab.1 per oli e quantità consigliati.
Tab.2 carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño **H73C** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

B3	B6	B7	B8	V5	V6	V8
116.20 oz	200.70 oz	146.13 oz	116.20 oz	225.35 oz	114.44 oz	Ask
SHELL Omala S2 GX 460				ENI Blasias 460		

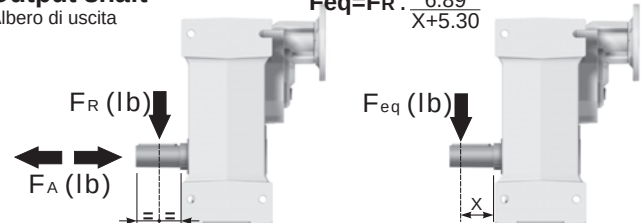
For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

tab. 1

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

$$F_{eq} = F_R \cdot \frac{6.89}{X+5.30}$$

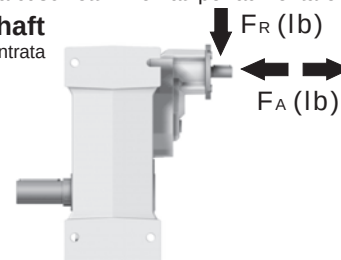


n_2	F_A	F_R	n_2	F_A	F_R	n_2	F_A	F_R
300	166	831	140	193	966	70	229	1146
250	180	899	120	202	1011	40	292	1460
200	186	932	85	218	1090	15	382	1910

On request reinforced bearings to increase loads.

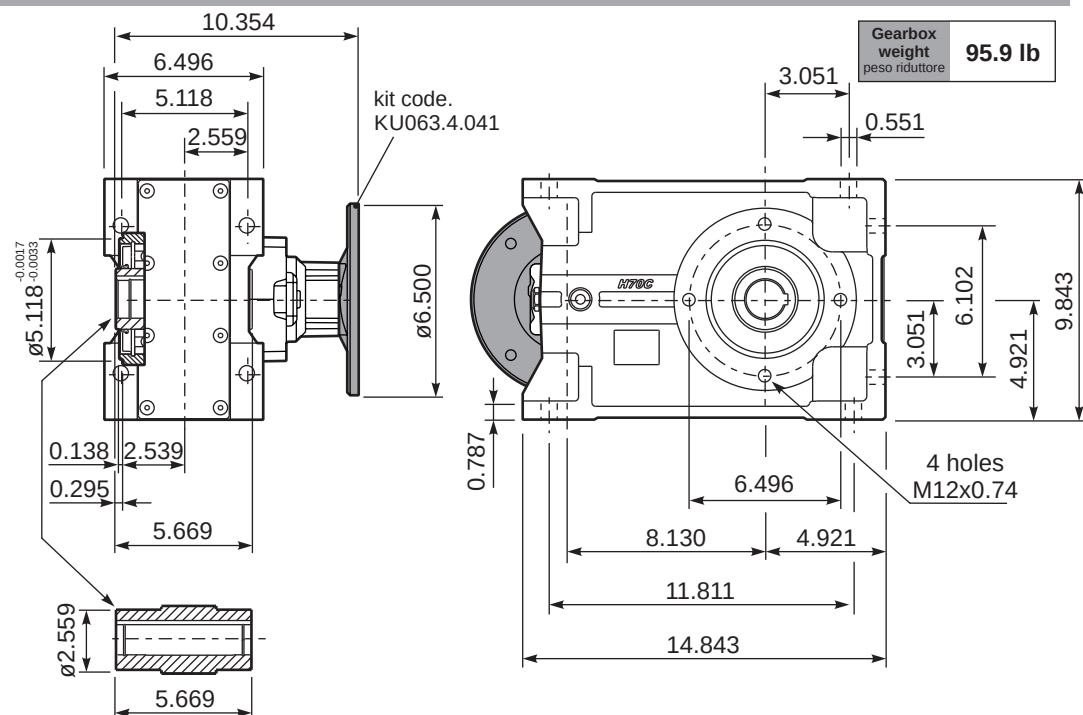
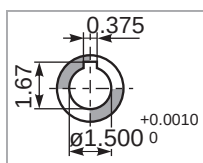
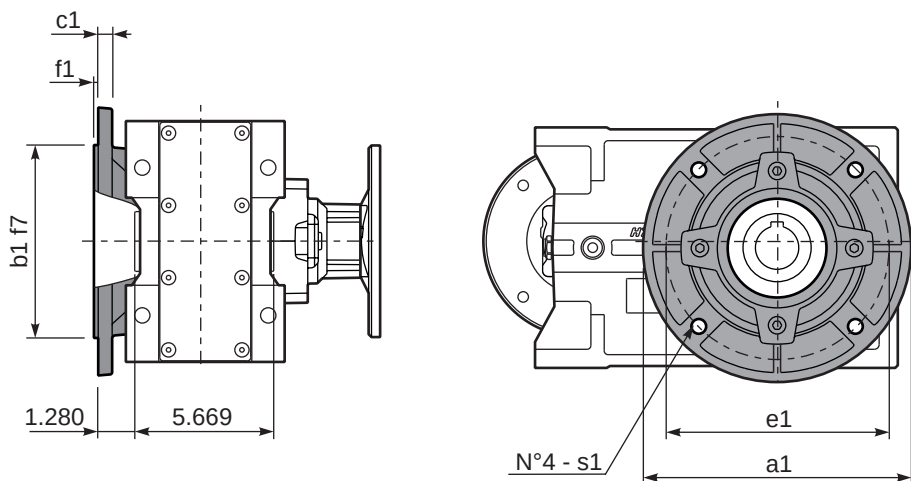
A richiesta cuscinetti rinforzati per aumentare i carichi.

Input shaft
Albero in entrata



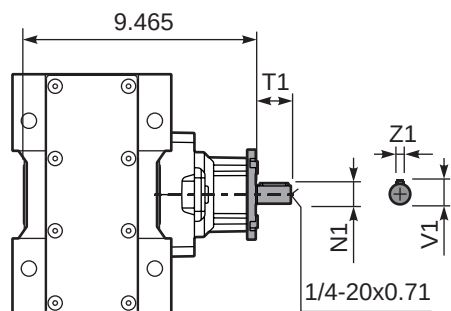
n_1	F_A	F_R
1750	90	449
1140	99	494

tab. 2

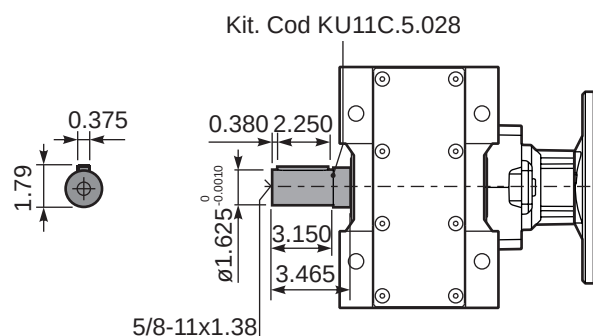
PH73C...Basic gearbox
Riduttore base**Standard**
Hollow shaft**PH73C...-F**Output flange
Flangia uscita**Available output flanges**

Flange di uscita

a1 ø	b1	c1	e1	f1	s1	Kit code
9.843	7.087 ^{-0.0017} _{-0.0033}	0.512	8.465	0.118	0.551	KF70.9.011
11.811	9.055 ^{-0.0020} _{-0.0038}	0.630	10.433	0.157	0.551	KF70.9.012

RH73C...Input Shaft
Albero in entrata

Nema flanges	N1	T1	V1	Z1	kit code
Standard	0.750	1.97	0.83	0.188	KC40.5.070U
On request	0.625	1.57	0.71	0.188	KC40.5.069U

PH73C A...Single output shaft
Albero uscita semplice



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges			Output Shaft  $\varnothing$	Ratios code 
							-Y	AA	AB		
							182/4TC	213/5TC	254/6TC		
293	5.98	20	4135	2.1	42.81	8851				3015	01
246	7.10	20	4910	2.1	42.36	10400				3013	02
203	8.63	20	5966	2.0	40.06	11949				3011	03
155	11.27	20	7794	1.7	34.07	13276				2015	04
131	13.38	20	9253	1.6	32.52	15046				2013	05
115	15.24	20	10537	1.6	31.92	16816				1615	06
108	16.26	20	11244	1.7	33.06	18587				2011	07
97	18.09	20	12511	1.5	29.71	18587				1613	08
88	19.82	20	13703	1.3	26.61	18233				1315	09
80	21.98	20	15202	1.2	24.45	18587				1611	10
74	23.53	20	16269	1.1	22.85	18587				1313	11
72	24.25	20	16773	1.0	20.47	17170				1115	12
61	28.80	20	19914	0.9	18.67	18587				1113	13
50	34.99	15	18148	1.0	15.36	18587				1111	14
42.0	41.64	10	14399	1.2	12.05	17347				813	15
34.6	50.60	10	17469	1.1	10.62	18587				811	16

The dynamic efficiency is 0.96 for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit **H82C** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore tipo **H82C** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso.
Tab.1 per oli e quantità consigliati.
Tab.2 carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño **H82C** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

						
B3	B6	B7	B8	V5	V6	V8
197.18 oz	239.44 oz	274.65 oz	197.18 oz	352.11 oz	193.66 oz	Ask

SHELL Omala S2 GX 460

ENI Blasias 460

For all details on lubrication and plugs check our website

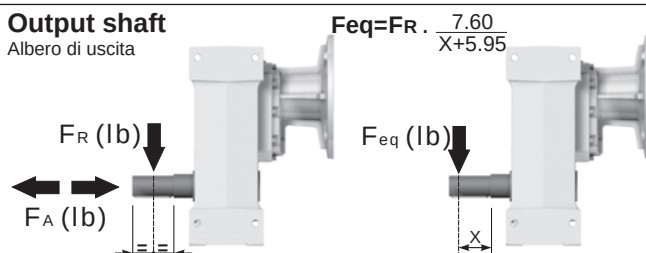
tab. 1

Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita



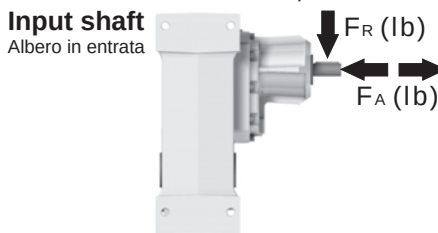
n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	207	1033	140	252	1258	70	315	1573
250	225	1123	120	256	1281	40	404	2022
200	238	1191	85	292	1460	15	539	2696

On request reinforced bearings to increase loads.

A richiesta cuscinetti rinforzati per aumentare i carichi.

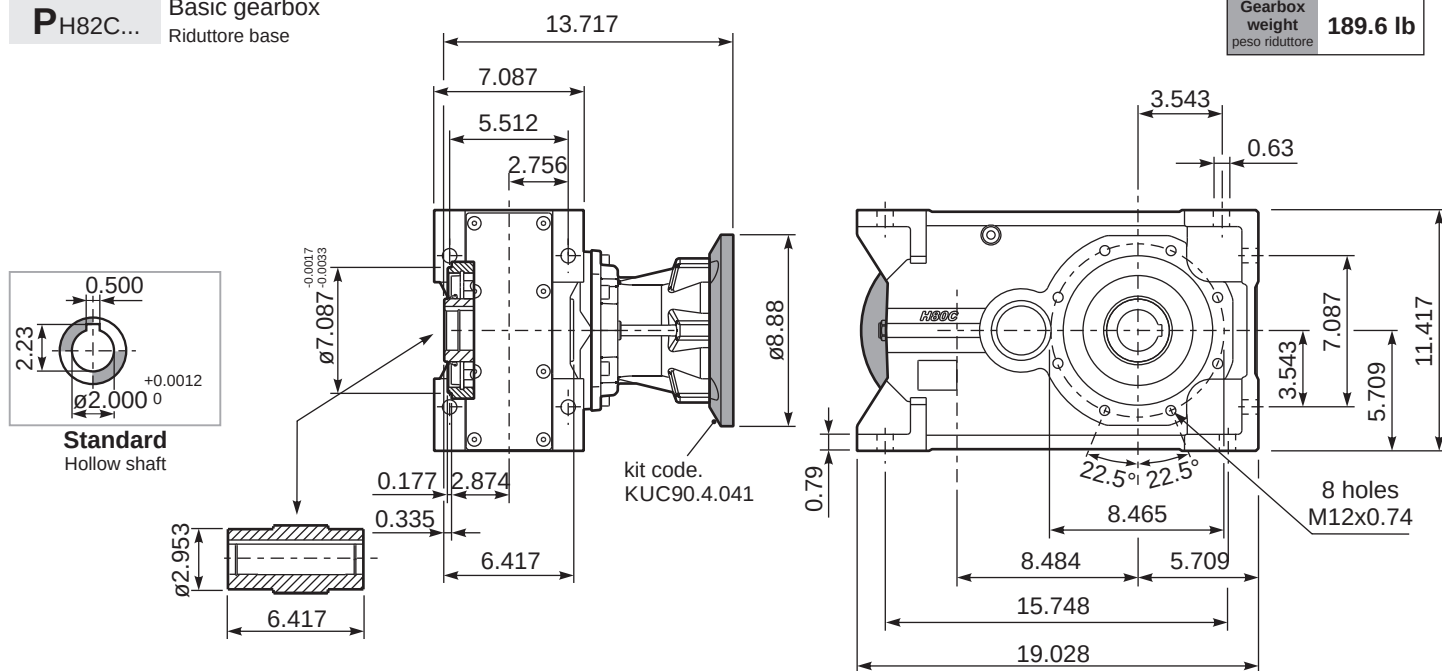
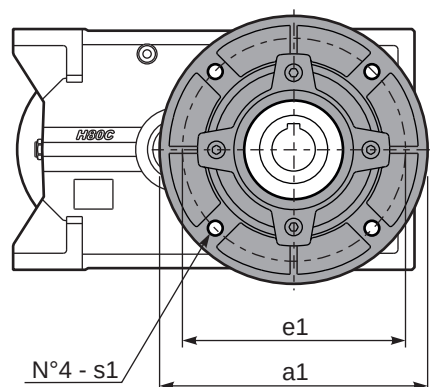
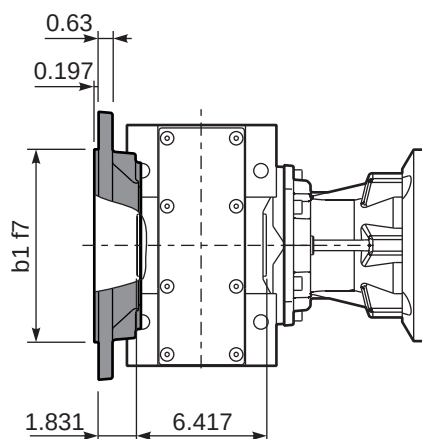
Input shaft

Albero in entrata



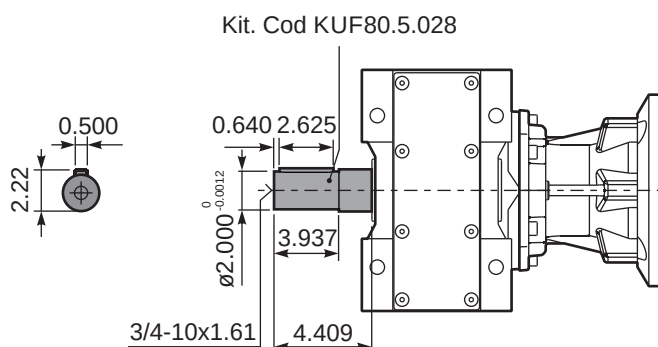
n_1	FA	FR
1750	157	786
1140	189	944

tab. 2

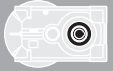
PH82C...Basic gearbox
Riduttore baseGearbox
weight
peso riduttore **189.6 lb****PH82C...-F**Output flange
Flangia uscita**Available output flanges**

Flange di uscita

a1 $\varnothing$	b1	e1	s1	Kit code
11.811	9.055 -0.0020 -0.0038	10.433	0.551	KF80.9.011
13.780	9.843 -0.0020 -0.0038	11.811	0.709	KF80.9.012

PH82C A...Single output shaft
Albero uscita semplice

Kit. Cod KUF80.5.028



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges				Output Shaft  $\varnothing$	Ratios code 
							-W	-X	-Y	AA		
							56C	143/5TC	182/4TC	213/5TC		
36.0	48.55	10	16436	1.1	11.31	18587					201315	01
30.4	57.64	10	19515	1.0	9.52	18587					201313	02
26.7	65.64	7.5	16667	1.1	8.36	18587					161315	03
25.0	70.04	7.5	17784	1.0	7.84	18587					201311	04
22.5	77.93	7.5	19789	0.9	7.04	18587					161313	05
20.5	85.36	7.5	21674	0.9	6.43	18587					131315	06
18.5	94.70	5	16030	1.2	5.80	18587					161311	07
17.3	101.35	5	17156	1.1	5.42	18587					131313	08
14.2	123.15	5	20846	0.9	4.46	18587					131311	09
11.6	150.73	3	15310	1.2	3.64	18587					111311	10
9.8	179.39	3	18220	1.0	3.06	18587					81313	11
8.0	217.98	2	14760	1.3	2.52	18587					81311	12
7.1	247.03	2	16727	1.0	2.06	17259					61313	13
5.8	300.17	1.5	15244	1.2	1.83	18587					61311	14

The dynamic efficiency is **0.94** for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit **H83C** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore tipo **H83C** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso.
Tab.1 per oli e quantità consigliati.
Tab.2 carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño **H83C** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

						
B3	B6	B7	B8	V5	V6	V8
204.23 oz	250 oz	288.73 oz	204.23 oz	380.29 oz	211.27 oz	Ask
SHELL Omala S2 GX 460				ENI Blasias 460		

For all details on lubrication and plugs check our website

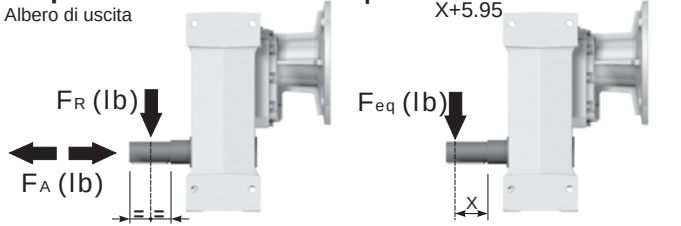
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

tab. 1

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

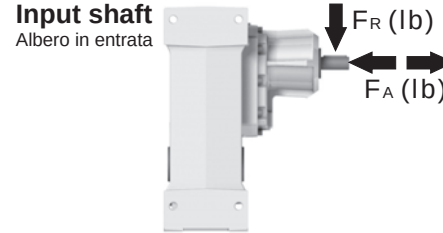
$F_{eq} = F_R \cdot \frac{7.60}{X+5.95}$



n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	207	1033	140	252	1258	70	315	1573
250	225	1123	120	256	1281	40	404	2022
200	238	1191	85	292	1460	15	539	2696

On request reinforced bearings to increase loads.
A richiesta cuscinetti rinforzati per aumentare i carichi.

Input shaft
Albero in entrata

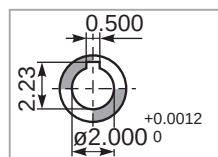
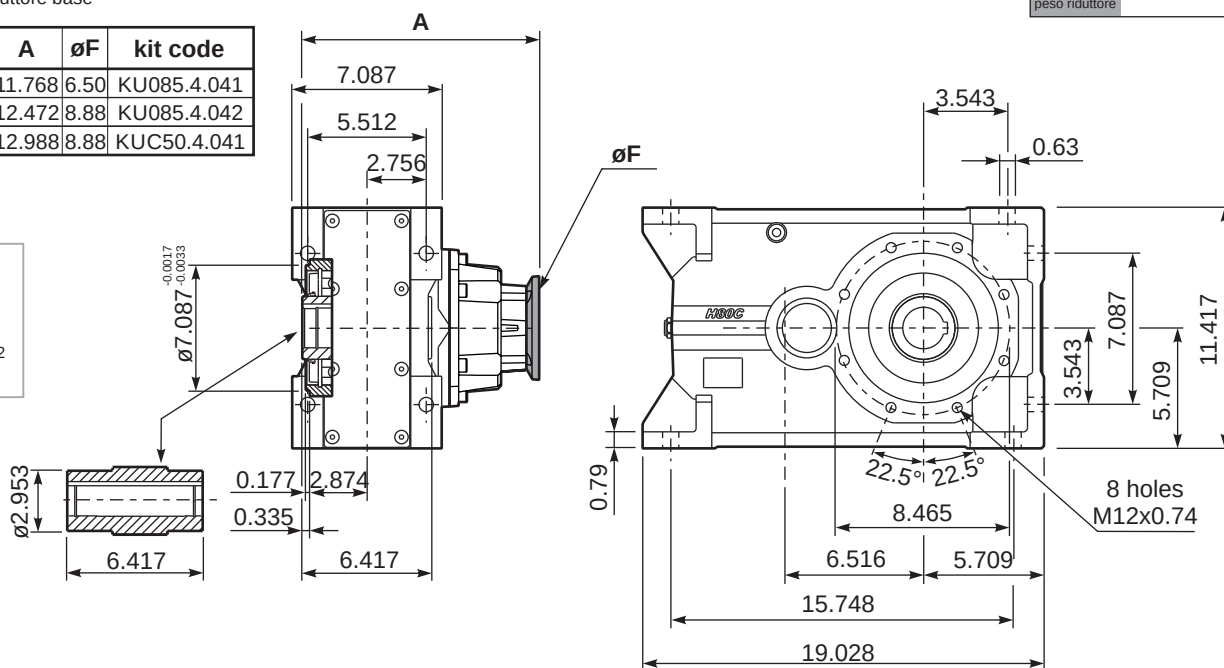
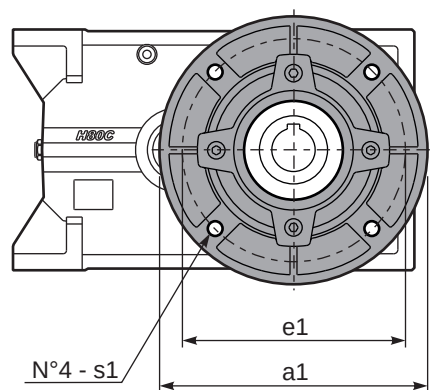
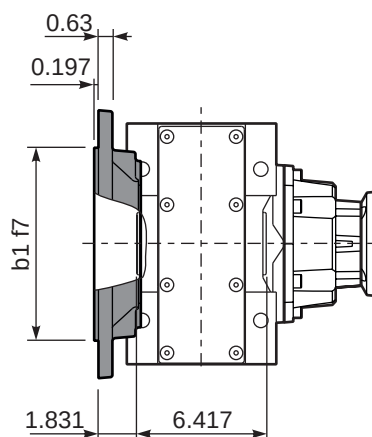


n_1	FA	FR
1750	101	506
1140	112	562

tab. 2

PH83C...Basic gearbox
Riduttore baseGearbox
weight
peso riduttore **178.6 lb**

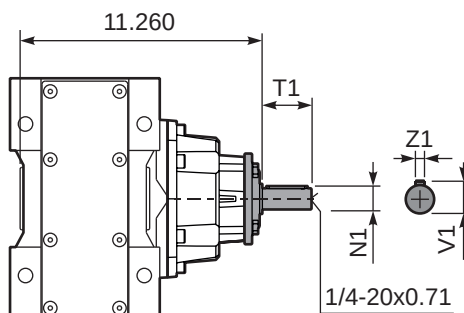
Nema flange	A	øF	kit code
56C-143/5TC	11.768	6.50	KU085.4.041
182/4TC	12.472	8.88	KU085.4.042
213/5TC	12.988	8.88	KUC50.4.041

Standard
Hollow shaft**PH83C...-F**Output flange
Flangia uscita

Available output flanges

Flange di uscita

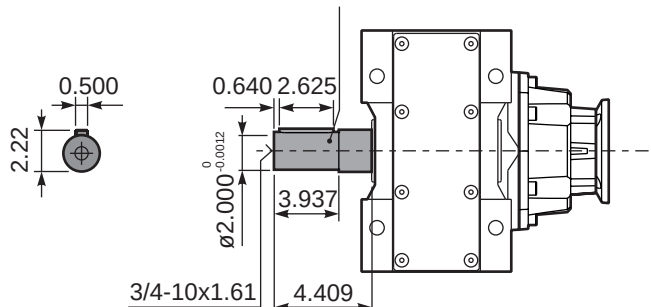
a1 ø	b1	e1	s1	Kit code
11.811	9.055 ^{-0.0020} / _{-0.0038}	10.433	0.551	KF80.9.011
13.780	9.843 ^{-0.0020} / _{-0.0038}	11.811	0.709	KF80.9.012

RH83C...Input Shaft
Albero in entrata

Nema flanges	N1	T1	V1	Z1	kit code
Standard	0.875	1.97	0.96	0.188	KC50.5.070U
On request	0.750	1.97	0.83	0.188	KC50.5.069U

PH83C A...Single output shaft
Albero uscita semplice

Kit. Cod KUF80.5.028



Aluminum and cast iron helical bevel gearbox

A modular and compact product
Very energy efficient drive

Removable inspection cover

Allows periodic inspection of gearing during routine maintenance

Gears

Hardened and ground gears

Alloy housing

Is vacuum impregnated (MIL-STD 276) for protection and sealing. No secondary finish required but readily accepts paint.

Oil seals

Two oil seals on request

Single-piece aluminum

Combines light weight with high tensile strength. Precision machined for alignment of bearings and gearing

Flange

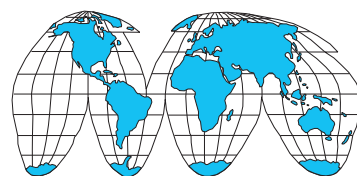
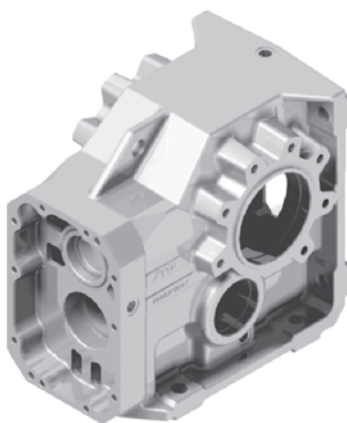
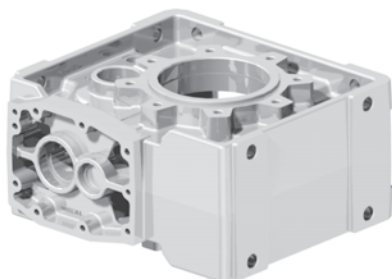
Fully modular to IEC and Compact integrated motor. NEMA C flange

Cast Iron housing

With high tensile strength. Precision machined for alignment of bearings and gearing

Painting

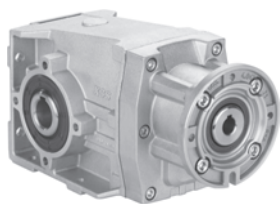
Cast iron gearboxes are painted RAL 7046



World wide sales network.

Specific type datasheet on page...

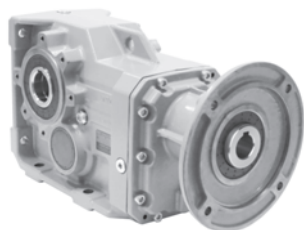
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Types / Tipi / Tipos →

9-5	9-7	9-9	9-11	9-13	9-15	9-17	9-19	9-21
X22S 443lb in	X32S 797lb in	X33S 885lb in	X42A 1328lb in	X43A 1416lb in	X52A 2213lb in	X53A 2213lb in	X62A 3629lb in	X63A 3629lb in

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Types / Tipi / Tipos →

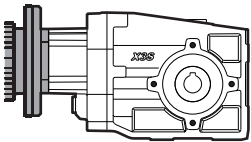
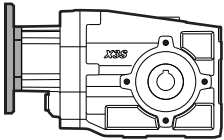
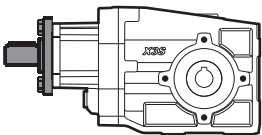
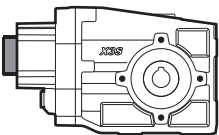
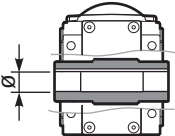
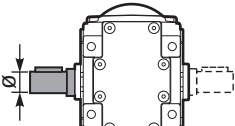
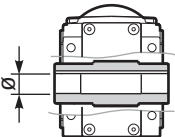
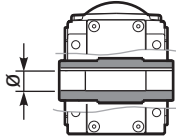
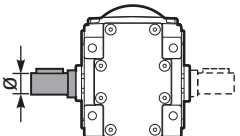
9-23	9-25	9-27	9-29	9-31	9-33	9-35	9-37	9-39	9-41
X73C 5974lb in	X74C 5974lb in	X83C 8851lb in	X84C 8851lb in	X93C 14161lb in	X94C 14604lb in	X103 25667lb in	X104 26552lb in	X113 39828lb in	X114 40713lb in

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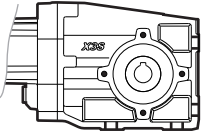
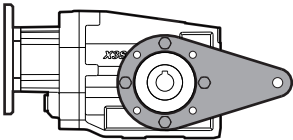
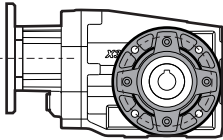
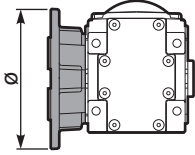
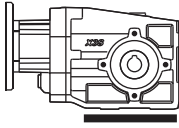
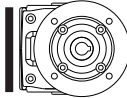
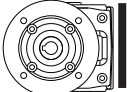
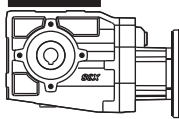
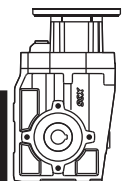
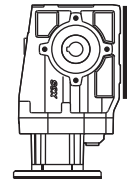
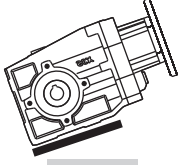
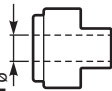
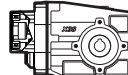
Types / Tipi / Tipos →

9-43	9-45	9-47	9-49
113C 5974lb in	114C 5974lb in	133C 8851lb in	134C 8851lb in

Type - Tipo - Typ	Size - Grandezza - Tamaño	Mounting - Montaggio Tipo de montaje	Rapporto - Ratio Relacion	Output shaft - Albero uscita Brida en solida
M Helical-bevel gear Riduttori ortogonali  With IEC motor M  With motor flange P  With male input shaft R  Modular base B	2 Stages Riduzioni Stufen Trains Etapas Aluminum Alluminio Aluminio X22S X32S X42A X52A X62A X33S X43A X53A X63A 3 Stages Riduzioni Stufen Trains Etapas Cast Iron Ghisa Fundicion X73C X83C X93C X103 X113 113C 133C X74C X84C X94C X104 X114 114C 134C	C  Hollow output shaft C  Single output shaft A  Stainless steel hub I Stainless steel hub Mozzo in acciaio Inox Edelstahlhohlwelle Moyeu en acier Inox Nucleo corona de acero Inox Only on request for Q.ty A richiesta per quantità	4.83 See technical data table Vedi tabelle dati tecnici. Ver tabla datos técnicos	UB  → STANDARD Hollow output shaft X22S X32S X33S UB → Ø0.750 X42A X43A UD → Ø1.000 X52A X53A UF → Ø1.250 X62A X63A UG → Ø1.375 X73/4C X83/4C 113C 114C UH → Ø1.500 133C 134C UI → Ø1.625 X93C X94C UL → Ø2.000 X103 X104 UO → Ø2.375 X113 X114 UQ → Ø2.750  Single and double output shaft UB X22S X32/3S ⇒ Ø0.750 UD X42/3A ⇒ Ø1.000 UF X52/3A ⇒ Ø1.250 UG X62/3A X73/4C ⇒ Ø1.375 UI X83/4C 113/4C ⇒ Ø1.625 UL X93/4C ⇒ Ø2.000 UO X103/4 ⇒ Ø2.375 UR X113/4 ⇒ Ø2.875



On request we can deliver our products according to the ATEX
 A richiesta possiamo fornire i nostri prodotti secondo le normative ATEX
 A pedido, se pueden enviar nuestros productos de acuerdo con las normas ATEX.

Type - Tipo - Typ	Output flange Flangia di uscita Brida en salida	Motor size Grandezza motore Tamaño motor	Mounting position Posizione montaggio Position de montage	Input bore Foro entrata Eingangshohlwelle Trou d'entree Eje hueco de entrada	Terminal box position Posizione morsettieria Posición caja de bornes
BR	N	-W	B3	ST	
 FB Forma base Universal  BR Braccio d reazione Reaction arm  -F Flangia uscita output flange	 N Senza flangia Without flange X22S 1 ⇒ Ø4.724 X32S X33S 1 ⇒ Ø4.724 2 ⇒ Ø6.299 X42-3A X52-3A X62-3A 2 ⇒ Ø6.299 3 ⇒ Ø7.874 X73/4C X83/4C 4 ⇒ Ø9.843 113C 114C X93C X94C C ⇒ Ø11.024 L ⇒ Ø11.024 133C 134C C ⇒ Ø12.598 X103 X104 6 ⇒ Ø13.780 X113 X114 7 ⇒ Ø17.717	 Flange Flangia Nema -W=56C -X=143/5TC -Y=182/4TC AA=213/5TC AB=254/6TC AC=284/6TC AD=324/6TC  Type R Tipo R X22S X33S X43A -K ⇒ Ø0.625 X32S X42A X53A X63A X74C X84C 114C 134C -K ⇒ Ø0.625 -J ⇒ Ø0.750 X52A X62A X73C X83C X94C 113C 133C -J ⇒ Ø0.750 -N ⇒ Ø0.875  Without flange Senza flangia -M With coupling Con giunto X22S X33S X43A -K ⇒ Ø0.625 X32S X42A X5/63A X7/84C 114C 134C -K ⇒ Ø0.625 -N ⇒ Ø0.875 X5/62A X7/83C 113C 133C X94C -K ⇒ Ø0.625 -N ⇒ Ø0.875 -S ⇒ Ø1.125	 B3 STANDARD  B6  B7  B8  V5  V6  V8 Specify only for vertical positions Specificare solo per posizione verticale	ST Nothing indication: standard bore Nessuna indicazione: foro standard COUPLING  -W = Ø0.625" -X = Ø0.875" -Y = Ø1.125" -0 Ready for input coupling Predisposto per giunto 	With Type M specify terminal box position Con tipo M specificare posizione morsettieria  A  B STANDARD  C  D

POTENZA RICHIESTA / REQUIRED POWER / POTENCIA NECESARIA

Lifting / sollevamento / elevación

$$P [KW] = \frac{M [Kg] \cdot g [9.81] \cdot v [m / s]}{1000}$$

Rotation / rotazione / rotation

$$P [KW] = \frac{M [Nm] \cdot n [rpm]}{9550}$$

Linear movement / traslazione / translacion

$$P [KW] = \frac{F [N] \cdot v [m / s]}{1000}$$

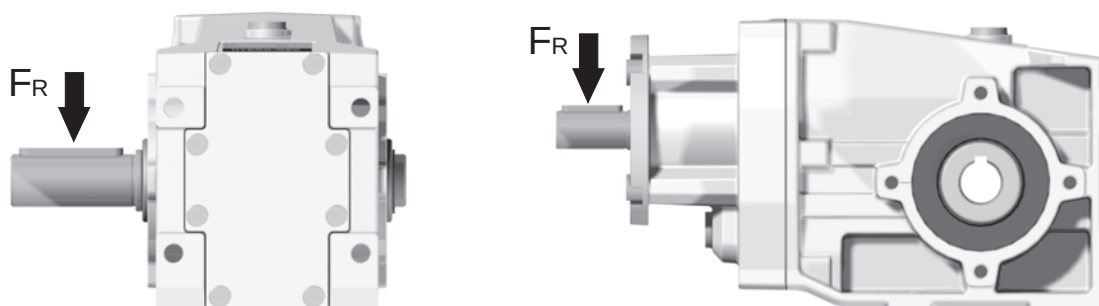
TORQUE / COPPIA / PAR

$$M [Nm] = \frac{9550 \cdot P[KW]}{n [rpm]}$$

$$M [lb in] = \frac{63030 \cdot P[HP]}{n [rpm]}$$

RADIAL LOADS / CARICHI RADIALI / CARGA RADIAL Y AXIAL

- Radial load generated by external transmissions keyed onto input and/or output shafts.
- Forza radiale generata da organi di trasmissione calettati sugli alberi di ingresso e/o uscita.
- Cargas radiales, generada por transmisiones externas, aplicadas sobre los ejes de entrada y/o salida



$$F_R [N] = \frac{M [Nm] \cdot 2000}{d [mm]} \cdot f_k$$

$$F_R [N] = \frac{M [lb in] \cdot 8.9}{d [in]} \cdot f_k$$

M

Momento torcente / Output torque / Par torsion

d

Diametro primitivo / Diam. of driving element / Diámetro primitivo

f_k

Coefficiente di trasformazione / Factor / Coeficiente de transmisión
1.15 Ingranaggi / Gearwheels / Engranaje
1.25 Catena / Chain sprockets / Cadena
1.75 Cinghia Trapezoidale / Narrow v-belt pulley / Correa trapezoidal
2.50 Cinghia piatta / Flat-belt pulley / Correa plana

- If your application requires higher radial loads, contact our technical office. Higher load may be possible.
- Nel caso la vostra applicazione richieda carichi radiali superiori consultare il nostro ufficio tecnico, valori maggiori possono essere accettati.
- En el caso en que una aplicación exija una carga radial superior a la especificada en el catálogo, consultar a nuestra oficinas técnica.

How to select a gearbox / Come selezionare un riduttore Cómo seleccionar un réductor

B Output speed
Velocità in uscita
Velocidad de salida

Nominal power
Potenza nominale
Potencia nominal

A Nominal torque
Momento torcente nominale
Par de torsión nominal

Flange code
Codice flangia
Código bridas

Input speed
Velocità in entrata
Velocidad de entrada

Gear size
Grandezza riduttore
Tamaño reductor

Motor power
Potenza motore
Potencia motor

X22S Angletech Gear **443lb in**

Rating - Aluminum
HELICAL-BEVEL GEARBOXES

QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges		Output Shaft	Ratio code
							-W	-		
							56C	-		
362	4.83	1	167	1.6	1.59	266			289	01
237	7.40	1	256	1.0	1.04	266			287	02
183	9.58	1	331	1.1	1.07	354			199	03
159	10.98	1	380	1.0	1.05	398			179	04

C Ratio
Rapporto
Relación

Transmitted torque
Momento torcente trasmesso
Par transmitido

Service factor
Fattore di servizio
Factor de servicio

Output shaft diam.
Diam. albero uscita
Díametro eje de salida

Notes
Note
Notas

fs		Oper. hours per day Ore di funz. giorn.		
Type of load and starts per hour Tipo di carico e avviamenti per ora		3 h	10 h	24 h
Continuous or intermittent appl. with start / hour Applicazione cont. o interm. con n.ro operazioni/ora	Uniform / Uniforme	0.8	1	1.25
	Moderate / Moderato	1	1.25	1.5
	Heavy / Forte	1.25	1.5	1.75
Intermittent application with start / hour Applicazione intermittente con n.ro operazioni/ora	Uniform / Uniforme	1	1.25	1.5
	Moderate / Moderato	1.5	1.5	1.75
		1.5	1.75	2.15

D	Motor flange available Flange disponibili Bridas disponibles
B)	Mounting with reduction ring Montaggio con boccola di riduzione Montaje con casquillo de reducción
C)	Motor flangeholes position/terminal box position Posizione fori flangia/basetta motore Posición agujeros brida / base motor
B)	Available without reduction bushes Disponibile anche senza boccola Disponibile tambien sin casquillo

A	Select required torque (according to service factor)	Seleziona la coppia del fattore di servizio)	Max. Drehmoment in Bezug zum Betriebsfaktor
B	Select output speed	Seleziona la velocità in uscita	Ausgewählte Abtriebsdrehzahl
C	On the same line of selected geared motor, you can find the gear ratio	Sulla riga corrispondente alla motorizzazione prescelta si può rilevare il rapporto di riduzione	Auf der gleichen Linie wie die ausgewählte Motorleistung steht auch die Getriebeuntersetzung
D	Select motor flange available (if requested)	Scegli la flangia disponibile (se richiesta)	Erhältliche Motorflansche (auf Anfrage)



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges	Output Shaft	Ratio code
							-W 56C		
362	4.83	1	167	1.6	1.59	266		289	01
237	7.40	1	256	1.0	1.04	266		287	02
183	9.58	1	331	1.1	1.07	354		199	03
159	10.98	1	380	1.0	1.05	398		179	04
134	13.07	0.75	339	1.2	0.88	398		159	05
119	14.66	0.75	380	1.0	0.79	398		197	06
111	15.79	0.75	410	1.0	0.73	398		139	07
104	16.81	0.75	436	0.9	0.69	398		177	08
88	20.00	0.5	346	1.2	0.61	425		157	09
80	21.93	0.5	379	1.2	0.58	443		109	10
72	24.18	0.5	418	1.1	0.53	443		137	11
60	29.04	0.5	502	0.9	0.44	443		99	12
52	33.57	0.33	383	1.2	0.38	443		107	13
45.3	38.67	0.33	441	1.0	0.33	443		79	14
39.4	44.44	0.25	384	1.2	0.29	443		97	15
29.6	59.18	0.25	512	0.9	0.22	443		77	16
24.9	70.24	0.25*	607	0.7	0.18	443		67	17

The dynamic efficiency is 0.96 for all ratios

* Power higher than the maximum one which can be supported by the gearbox. Select according to the torque M_{2R}
Potenza superiore a quella massima sopportabile dal riduttore. Selezionare in base al momento torcente M_{2R}

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit X22S is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore X22S viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño X22S se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio					
B3	B6	B7	B8	V5	V6	V8
8.80 oz	8.80 oz	8.80 oz	8.80 oz	15.13 oz	10.91 oz	Ask
SHELL Omala S4 WE 320				ENI Telium VSF 320		

For all details on lubrication and plugs check our website

Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

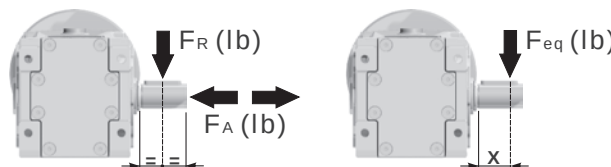
tab. 1

RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita

$$F_{eq} = F_R \cdot \frac{4.00}{X+3.22}$$

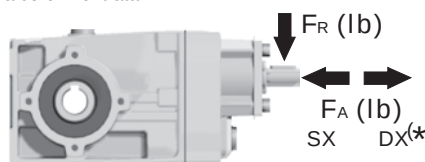


n_2 [min ⁻¹]	FA	FR	n_2 [min ⁻¹]	FA	FR	n_2 [min ⁻¹]	FA	FR
400	81	405	100	99	495	25	99	495
250	85	427	75	99	495	15	99	495
150	94	472	50	99	495			

F_R On request taper roller bearings to increase radial loads.
A richiesta cuscinetti a rulli conici per aumentare i carichi radiali.

Input shaft

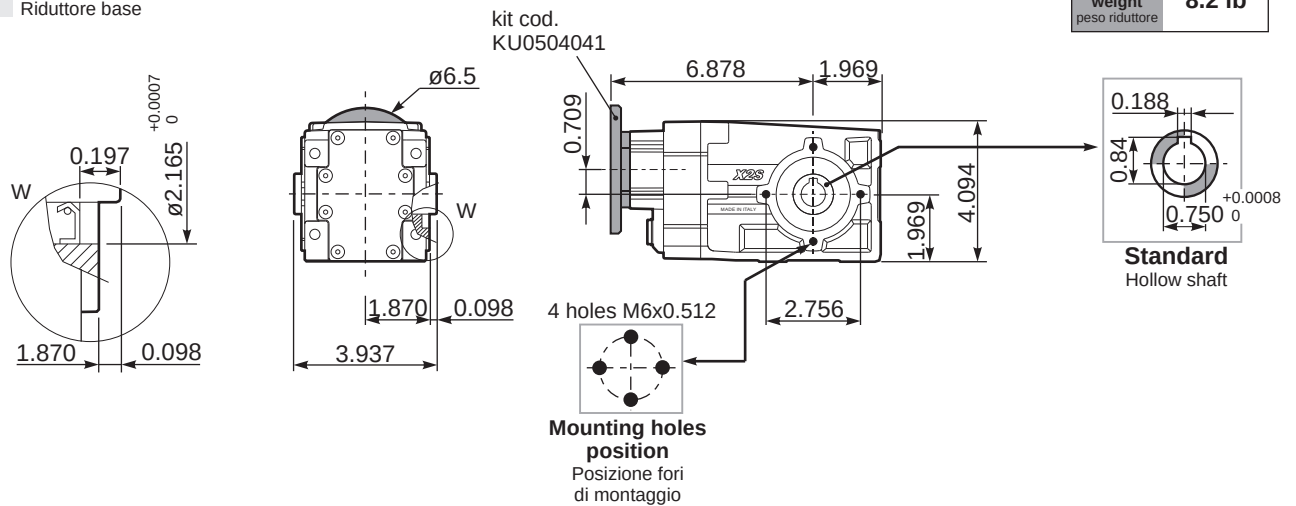
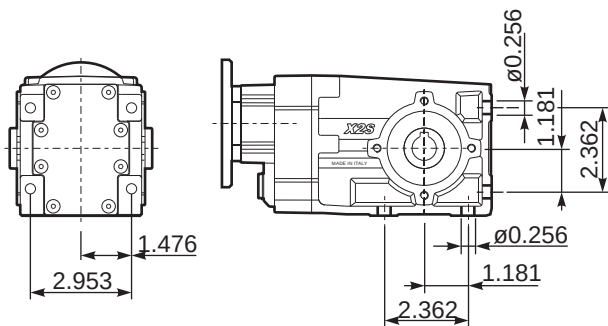
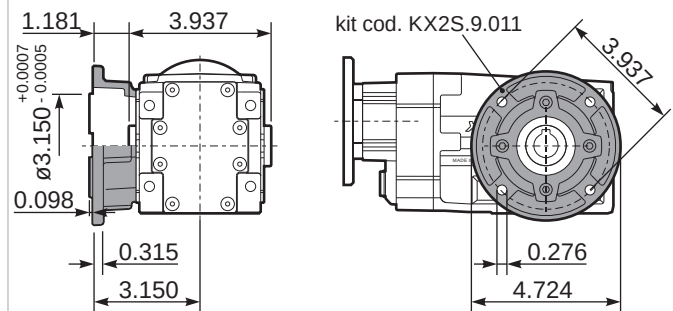
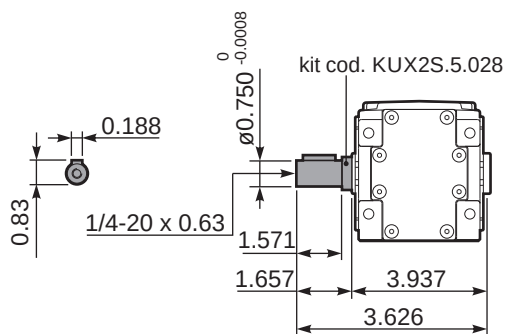
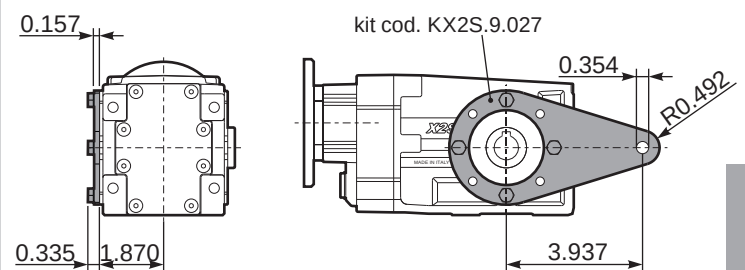
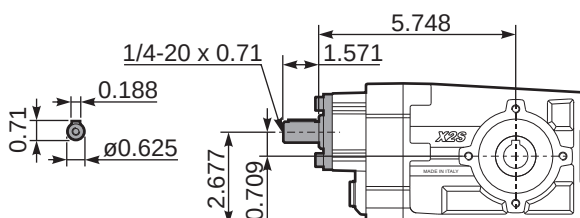
albero in entrata



n_1 [min ⁻¹]	FA	FR
1750	31	157
1140	36	180

*Strong axial loads in the DX direction are not allowed.
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

PX22SC...Basic Gearbox
Riduttore baseGearbox
weight
peso riduttore**8.2 lb****PX22S..-N..**Feet
Piedini**PX22S..-F1..**Output flange
Flangia uscita**PX22S..A..**Single output shaft
Albero semplice in uscita**PX22SBR..**Reaction Arm
Braccio di reazione**RX22S..**Input shaft
Albero in entrata



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges		Output Shaft	Ratio code
							-W 56C	-X 143/5 TC		
239	7.33	2	507	1.2	2.44	620			289	01
156	11.22	2	776	1.0	1.94	752			287	02
132	13.26	1.5	688	1.1	1.64	752			199	03
114	15.37	1.5	797	1.0	1.50	797			179	04
97	18.04	1.5	936	0.9	1.28	797			159	05
86	20.30	1	702	1.1	1.13	797			197	06
81	21.54	1	745	1.1	1.07	797			139	07
74	23.53	1	814	1.0	0.98	797			177	08
63	27.62	0.75	716	1.1	0.83	797			157	09
60	29.40	0.75	762	1.0	0.78	797			109	10
53	32.97	0.75	855	0.9	0.70	797			137	11
45.6	38.37	0.5	663	1.2	0.60	797			99	12
38.9	45.00	0.5	778	1.0	0.51	797			107	13
34.5	50.67	0.5	876	0.9	0.45	797			79	14
29.8	58.73	0.33	670	1.2	0.39	797			97	15
22.6	77.55	0.33	885	0.9	0.30	797			77	16

The dynamic efficiency is **0.96** for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit **X32S** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore **X32S** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño **X32S** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio					
B3	B6	B7	B8	V5	V6	V8
14.08 oz	21.12 oz	14.08 oz	21.12 oz	29.92 oz	21.12 oz	Ask
SHELL Omala S4 WE 320				ENI Telium VSF 320		

For all details on lubrication and plugs check our website

Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

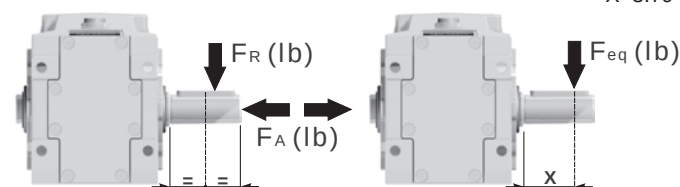
tab. 1

RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita

$$F_{eq} = F_R \cdot \frac{4.57}{X+3.79}$$

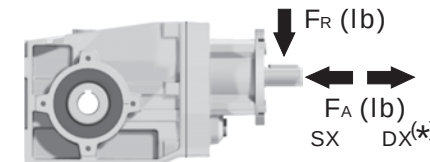


n_2 [min ⁻¹]	FA	FR	n_2 [min ⁻¹]	FA	FR	n_2 [min ⁻¹]	FA	FR
250	90	450	75	126	629	15	126	629
150	101	506	50	126	629			
100	112	562	25	126	629			

F_R On request taper roller bearings to increase radial loads.
A richiesta cuscinetti a rulli conici per aumentare i carichi radiali.

Input shaft

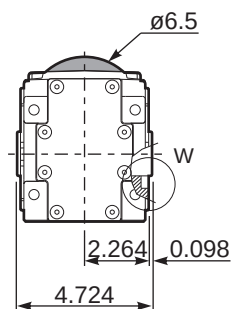
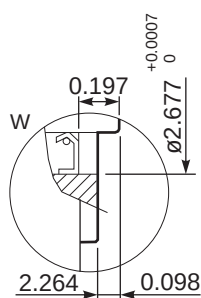
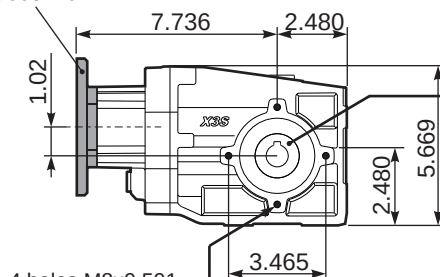
albero in entrata



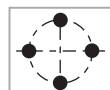
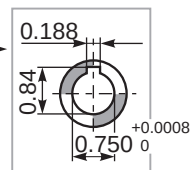
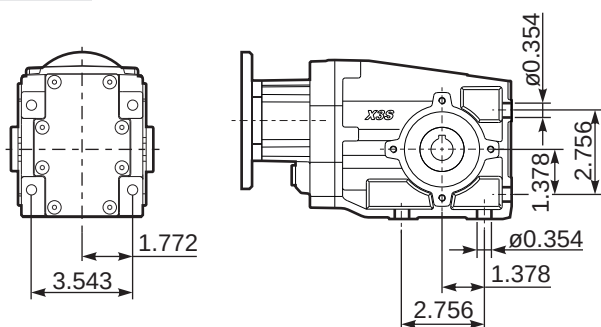
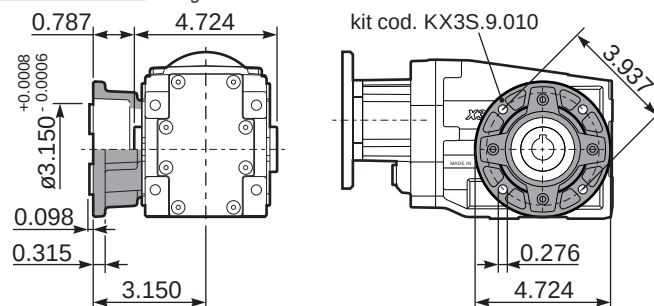
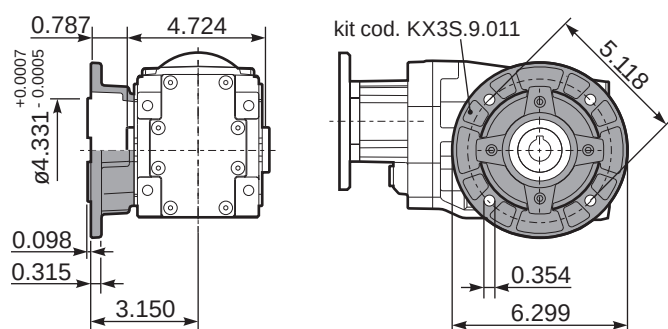
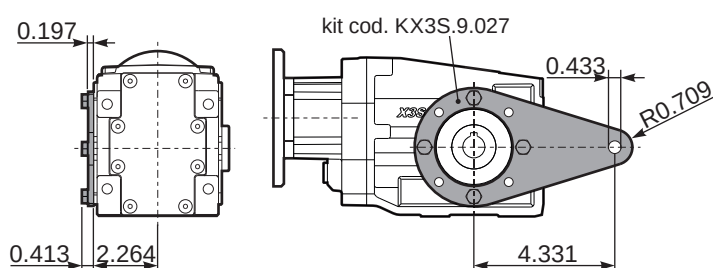
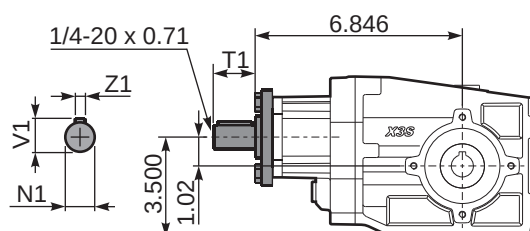
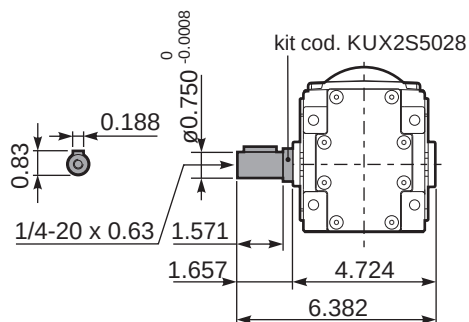
n_1 [min ⁻¹]	FA	FR
1750	54	270
1140	63	315

*Strong axial loads in the DX direction are not allowed.
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

PX32SC...Basic Gearbox
Riduttore baseGearbox
weight
peso riduttore**13.9 lb**kit code.
KU063.4.041

4 holes M8x0.591

Mounting holes
position
Posizione fori
di montaggioStandard
Hollow shaft**PX32S..-N..**Feet
Piedini**PX32S-F1..**Output flange
Flangia uscita**PX32S-F2..**Output flange
Flangia uscita**PX32SBR..**Reaction Arm
Braccio di reazione**RX32S...**Input shaft
Albero in entrata**PX32S..A..**Single output shaft
Albero semplice in uscita

Nema flanges	N1	T1	V1	Z1	kit code
Standard	0.750	1.97	0.83	0.188	KC40.5.070U
On request	0.625	1.57	0.71	0.188	KC40.5.069U



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges		Output Shaft	Ratios code
							-W	-		
							56C	-		
48.4	36.17	0.75	918	1.0	0.72	885			17179	02
39.6	44.21	0.5	748	1.2	0.59	885			19139	03
34.5	50.68	0.5	858	1.0	0.52	885			17139	04
31.6	55.36	0.5	937	0.9	0.47	885			17177	05
29.0	60.31	0.33	674	1.3	0.43	885			15139	06
26.6	65.88	0.33	736	1.2	0.40	885			15177	07
24.2	72.25	0.33	807	1.1	0.36	885			10179	08
22.0	79.64	0.33	890	1.0	0.33	885			13177	09
19.0	92.31	0.25	781	1.1	0.28	885			15137	10
18.3	95.65	0.25	810	1.1	0.27	885			9179	11
17.3	101.23	0.25	857	1.0	0.26	885			10139	12
13.7	127.37	0.25*	1078	0.8	0.21	885			7179	13
11.6	151.16	0.25*	1279	0.7	0.17	885			6179	14
9.8	178.46	0.25*	1511	0.6	0.15	885			7139	15
8.3	211.79	0.25*	1793	0.5	0.12	885			6139	16
7.6	231.37	0.25*	1958	0.5	0.11	885			6177	17
6.4	273.16	0.25*	2312	0.4	0.10	885			7137	18
5.4	324.18	0.25*	2802	0.3	0.08	885			6137	19

The dynamic efficiency is 0.94 for all ratios

* Power higher than the maximum one which can be supported by the gearbox. Select according to the torque M_{2R}
Potenza superiore a quella massima sopportabile dal riduttore. Selezionare in base al momento torcente M_{2R}

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit X33S is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore X33S viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño X33S se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio					
B3	B6	B7	B8	V5	V6	V8
24.64 oz	22.88 oz	14.08 oz	22.88 oz	33.44 oz	22.88 oz	Ask
SHELL Omala S4 WE 320				ENI Telium VSF 320		

For all details on lubrication and plugs check our website

tab. 1

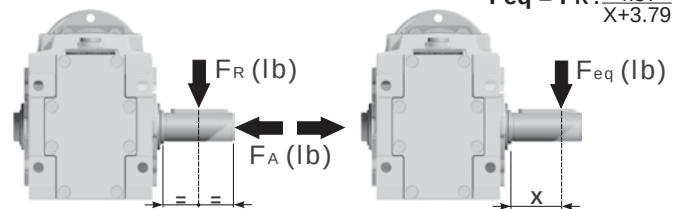
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita

$$F_{eq} = F_R \cdot \frac{4.57}{X+3.79}$$

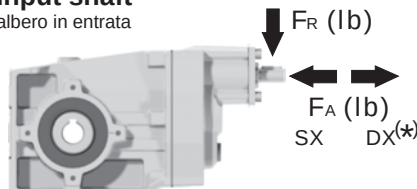


n_2 [min ⁻¹]	FA	FR	n_2 [min ⁻¹]	FA	FR	n_2 [min ⁻¹]	FA	FR
250	90	450	75	126	629	15	126	629
150	101	506	50	126	629			
100	112	562	25	126	629			

F_R On request taper roller bearings to increase radial loads.
A richiesta cuscinetti a rulli conici per aumentare i carichi radiali.

Input shaft

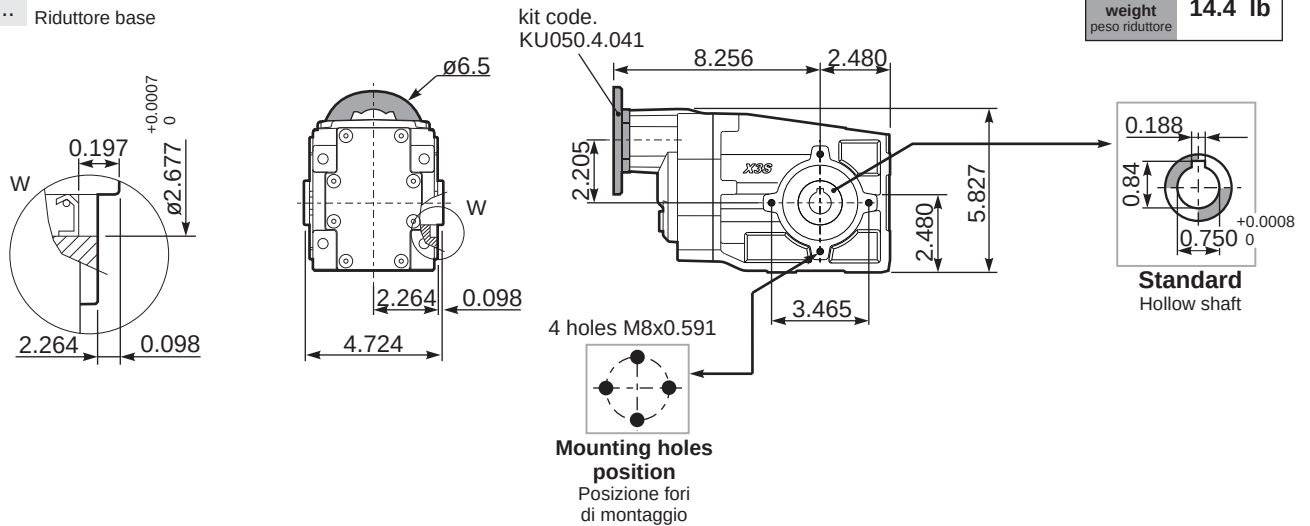
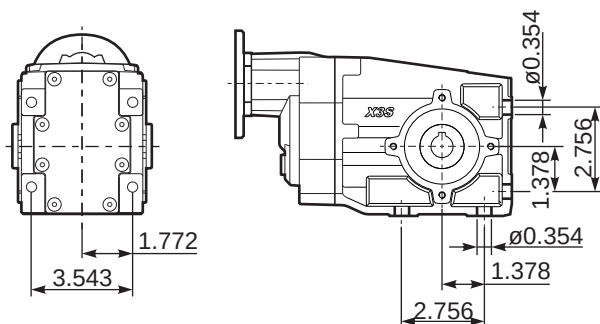
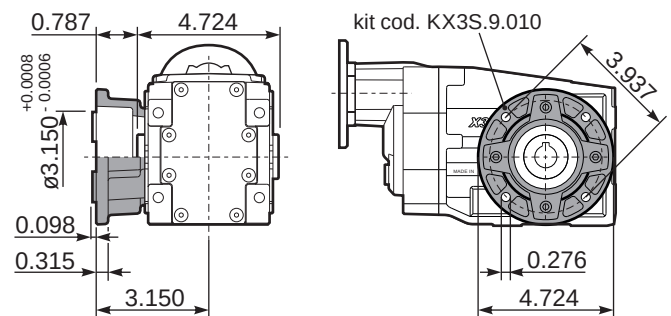
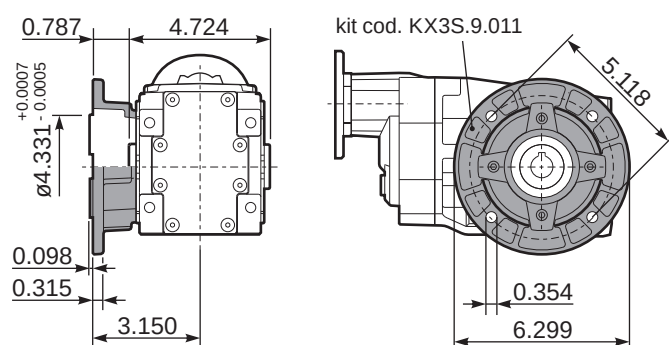
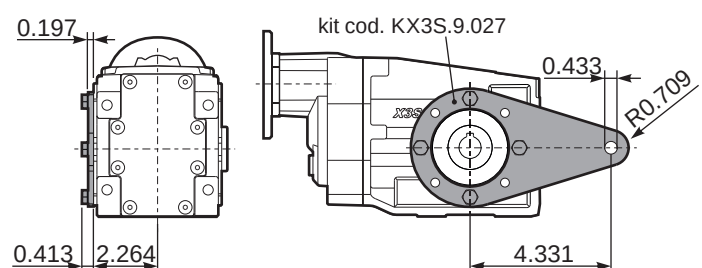
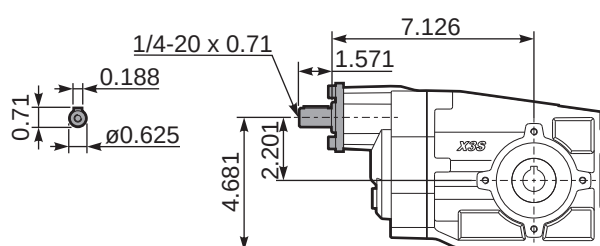
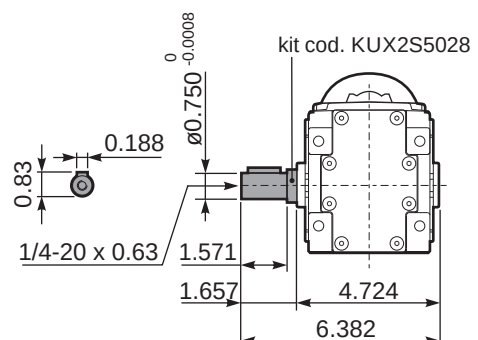
albero in entrata



n_1 [min ⁻¹]	FA	FR
1750	31	157
1140	36	180

*Strong axial loads in the DX direction are not allowed.
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

PX33SC...Basic Gearbox
Riduttore baseGearbox
weight
peso riduttore**14.4 lb****PX33S-N..**Feet
Piedini**PX33S-F1..**Output flange
Flangia uscita**PX33S-F2..**Output flange
Flangia uscita**PX33SBR..**Reaction Arm
Braccio di reazione**RX33S...**Input shaft
Albero in entrata**PX33S..A..**Single output shaft
Albero semplice in uscita



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges		Output Shaft	Ratio code
							-W 56C	-X 143/5 TC		
240	7.29	2	504	1.7	3.34	841			2811	01
156	11.20	2	774	1.7	3.43	1328			288	02
133	13.18	2	911	1.5	2.91	1328			1911	03
115	15.27	2	1056	1.3	2.51	1328			1711	04
98	17.93	2	1240	1.1	2.14	1328			1511	05
86	20.25	1.5	1050	1.3	1.90	1328			198	06
82	21.40	1.5	1110	1.2	1.79	1328			1311	07
75	23.47	1.5	1217	1.1	1.64	1328			178	08
64	27.55	1.5	1429	0.9	1.39	1328			158	09
60	29.21	1	1010	1.3	1.31	1328			1011	10
53	32.88	1	1137	1.2	1.17	1328			138	11
45.9	38.12	1	1318	1.0	1.01	1328			911	12
39.0	44.89	0.75	1164	1.1	0.86	1328			108	13
34.8	50.34	0.75	1305	0.9	0.67	1159			711	14
29.9	58.58	0.75	1519	0.9	0.66	1328			98	15
22.6	77.36	0.5	1337	1.0	0.50	1328			78	16

The dynamic efficiency is **0.96** for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit **X42A** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore **X42A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño **X42A** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio						
B3	B6	B7	B8	V5	V6	V8	
21.12 oz	26.40 oz	17.60 oz	24.64 oz	38.71 oz	21.12 oz	Ask	
SHELL Omala S4 WE 320				ENI Telium VSF 320			

For all details on lubrication and plugs check our website

Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

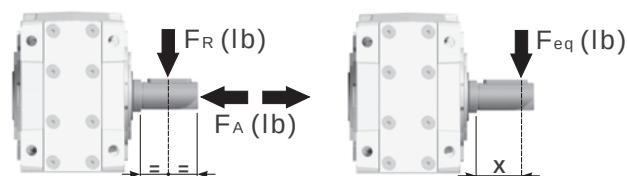
tab. 1

RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita

$$F_{eq} = F_R \cdot \frac{4.75}{X+3.69}$$

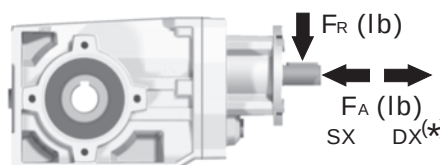


n_2 [min ⁻¹]	FA	FR	n_2 [min ⁻¹]	FA	FR	n_2 [min ⁻¹]	FA	FR
250	112	562	75	180	899	15	216	1079
150	135	674	50	216	1079			
100	157	786	25	216	1079			

F_R On request taper roller bearings to increase radial loads.
A richiesta cuscinetti a rulli conici per aumentare i carichi radiali.

Input shaft

albero in entrata



n_1 [min ⁻¹]	FA	FR
1750	54	270
1140	63	315

*Strong axial loads in the DX direction are not allowed.
Non sono consentiti forti carichi assiali con direzione DX

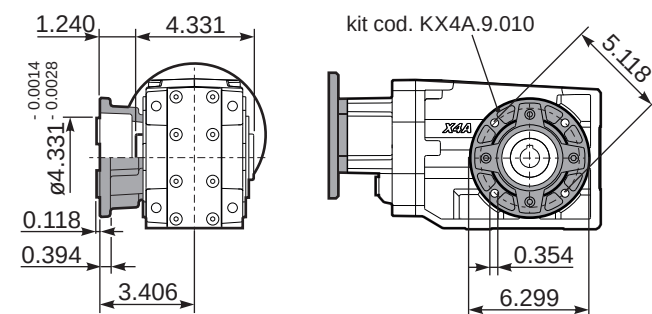
tab. 2

Gearbox weight peso riduttore	17.2 lb
---	----------------



**Mounting holes
position**
Posizione fori
di montaggio

PX42A-**F2**.. Output flange
Flangia uscita



kit cod. KX4A.9.011

Technical drawing of the KX4A.9.011 kit, showing a side view and a top view with dimensions:

- Top view dimensions:
 - Overall width: 6.496
 - Overall height: 7.874
 - Inner width: 0.433

Technical drawing of the KX4A 1/2 HP motor, showing front and side views with dimensions in millimeters.

Front View Dimensions:

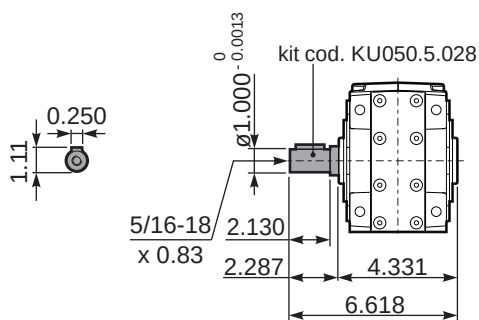
- Overall width: 0.787
- Mounting flange diameter: 1.969

Side View Dimensions:

- Motor body height: 4.252
- Base height: 1.181
- Base width: 4.646
- Base length: 5.827
- Base hole diameter: $\varnothing 4.33$

kit cod. KX4A.9.027

PX42A..**A**.. Single output shaft
Albero semplice in uscita



Nema flanges	N1	T1	V1	Z1	kit code
Standard	0.750	1.97	0.83	0.188	KC40.5.070U
On request	0.625	1.57	0.71	0.188	KC40.5.069U



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges		Output Shaft	Ratio code
							-W	-		
							56C	-		
34.8	50.35	0.75	1278	1.0	0.78	1328			171311	01
31.7	55.22	0.75	1402	0.9	0.71	1328			17178	02
29.2	59.92	0.75	1521	0.9	0.65	1328			151311	03
26.6	65.72	0.5	1112	1.2	0.60	1328			15178	04
24.4	71.78	0.5	1215	1.1	0.55	1328			101711	05
22.0	79.44	0.5	1345	1.0	0.49	1328			13178	06
19.0	92.08	0.33	1029	1.3	0.43	1328			15138	07
18.4	95.03	0.33	1062	1.3	0.41	1328			91711	08
13.8	126.55	0.33	1414	1.0	0.33	1416			71711	09
13.1	133.15	0.25	1127	1.3	0.31	1416			91311	10
11.7	150.18	0.25	1271	1.1	0.28	1416			61711	11
9.9	177.30	0.25	1501	0.9	0.24	1416			71311	12
8.3	210.42	0.25*	1781	0.8	0.20	1416			61311	13
7.6	230.79	0.25*	1953	0.7	0.18	1416			6178	14
6.4	272.47	0.25*	2306	0.6	0.15	1416			7138	15
5.4	323.37	0.25*	2737	0.5	0.13	1416			6138	16

The dynamic efficiency is 0.94 for all ratios * Power higher than the maximum one which can be supported by the gearbox. Select according to the torque M_{2R}
Potenza superiore a quella massima sopportabile dal riduttore. Selezionare in base al momento torcente M_{2R}

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit **X43A** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore **X43A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño **X43A** se suministra, lubricado de por vida con aceites sintético y no requieren mantenimiento alguna.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio					
B3	B6	B7	B8	V5	V6	V8
28.16 oz	28.16 oz	21.12 oz	28.16 oz	42.23 oz	24.64 oz	Ask
SHELL Omala S4 WE 320				ENI Telium VSF 320		

For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

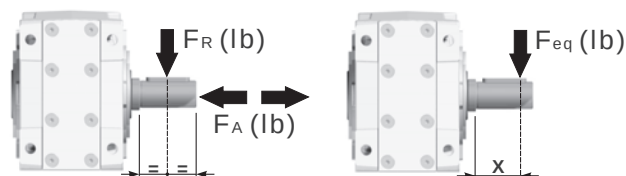
tab. 1

RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita

$$F_{eq} = F_R \cdot \frac{4.75}{X+3.69}$$

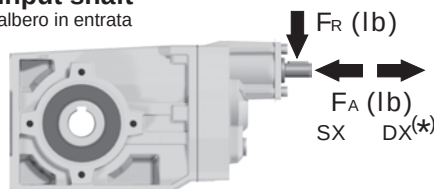


n_2 [min ⁻¹]	FA	FR	n_2 [min ⁻¹]	FA	FR	n_2 [min ⁻¹]	FA	FR
250	112	562	75	180	899	15	216	1079
150	135	674	50	216	1079			
100	157	786	25	216	1079			

F_R On request taper roller bearings to increase radial loads.
A richiesta cuscinetti a rulli conici per aumentare i carichi radiali.

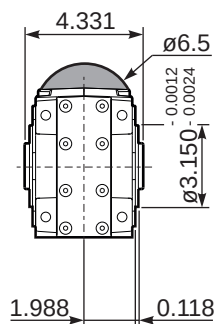
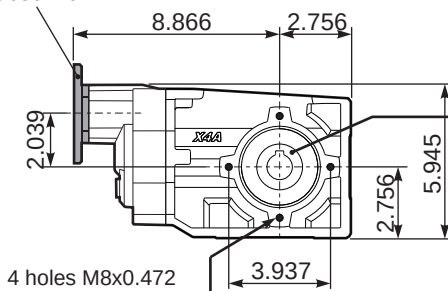
Input shaft

albero in entrata

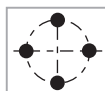
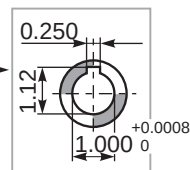
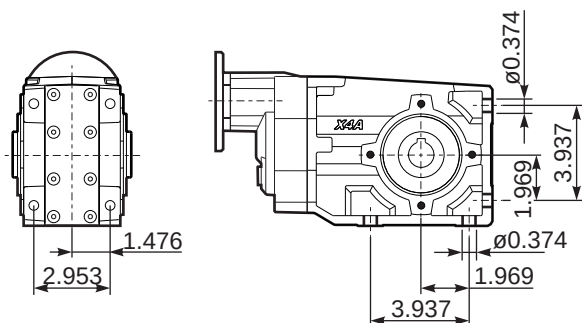
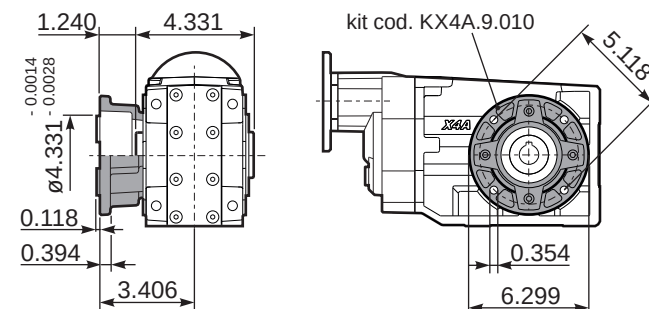


n_1 [min ⁻¹]	FA [N]	FR [N]
1750	31	157
1140	36	180

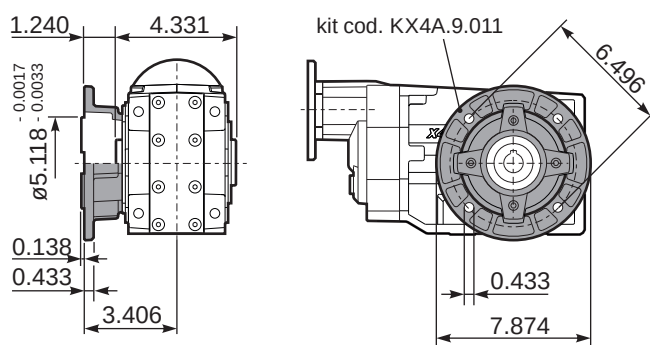
*Strong axial loads in the DX direction are not allowed.
Non sono consentiti forti carichi assiali con direzione DX

PX43AC...Basic Gearbox
Riduttore baseGearbox
weight
peso riduttore**17.5 lb**kit code.
KU050.4.041

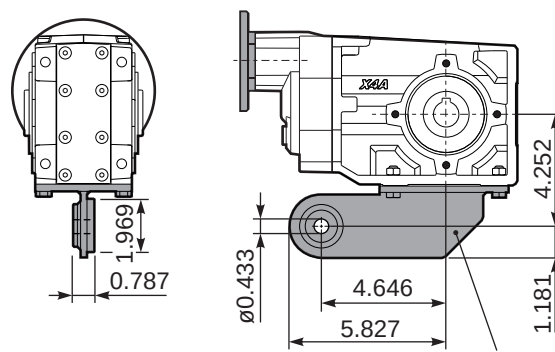
4 holes M8x0.472

Mounting holes
position
Posizione fori
di montaggioStandard
Hollow shaft**PX43A-N..**Feet
Piedini**PX43A-F2..**Output flange
Flangia uscita

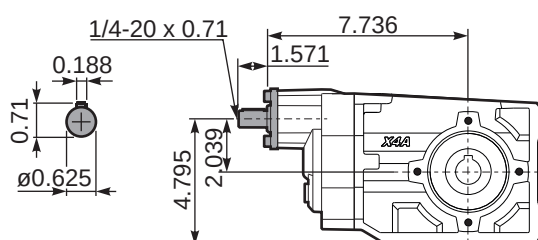
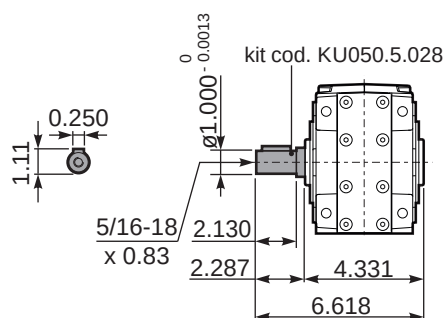
kit cod. KX4A.9.010

PX43A-F3..Output flange
Flangia uscita

kit cod. KX4A.9.011

PX43ABR..Reaction Arm
Braccio di reazione

kit cod. KX4A.9.027

RX43A...Input shaft
Albero in entrata**PX43A..A..**Single output shaft
Albero semplice in uscita

kit cod. KU050.5.028



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges				Output Shaft $\varnothing$	
							-W	-X	-Y			
							56C	143/5TC	182/4TC			
290	6.03	5	1042	1.1	5.73	1195				3011		01
189	9.26	5	1601	0.9	4.28	1372				308		02
154	11.36	5	1964	1.0	5.18	2036				2011		03
114	15.36	3	1593	1.4	4.17	2213				1611		04
100	17.46	3	1811	1.2	3.67	2213				208		05
88	19.97	3	2072	1.1	3.20	2213				1311		06
74	23.60	3	2448	0.9	2.71	2213				168	standard $\varnothing 1.250$	07
72	24.45	3	2536	0.9	2.62	2213				1111		08
57	30.69	2	2122	1.0	2.09	2213				138		09
49.5	35.35	1.5	1834	1.2	1.81	2213				811		10
46.6	37.57	1.5	1948	1.1	1.70	2213				118		11
35.9	48.68	1	1683	1.3	1.31	2213				611		12
32.2	54.33	1	1878	1.2	1.18	2213				88		13
23.4	74.81	0.75	1940	1.0	0.72	1859				68		14

The dynamic efficiency is **0.96** for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit **X52A** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore **X52A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño **X52A** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio					
B3	B6	B7	B8	V5	V6	V8
31.68 oz	52.79 oz	26.40 oz	49.27 oz	68.63 oz	40.47 oz	Ask
SHELL Omala S4 WE 320				ENI Telium VSF 320		

For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

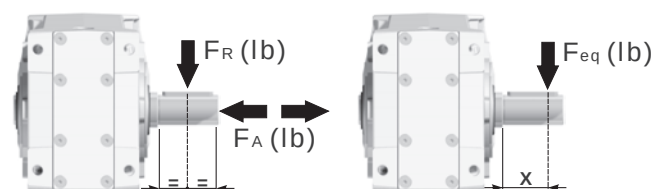
tab. 1

RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita

$$F_{eq} = F_R \cdot \frac{5.76}{X+4.51}$$

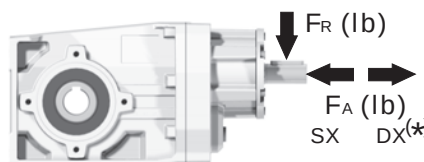


n_2 [min ⁻¹]	FA	FR	n_2 [min ⁻¹]	FA	FR	n_2 [min ⁻¹]	FA	FR
250	135	674	75	184	921	15	373	1866
150	157	787	50	216	1079			
100	180	899	25	303	1517			

F_R On request taper roller bearings to increase radial loads.
A richiesta cuscinetti a rulli conici per aumentare i carichi radiali.

Input shaft

albero in entrata



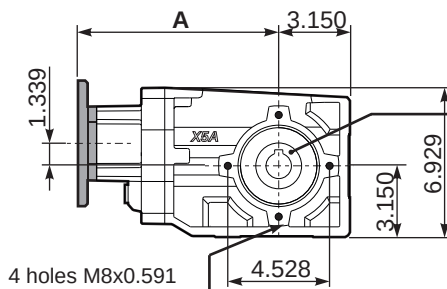
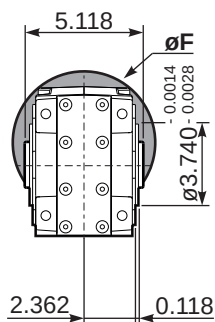
n_1 [min ⁻¹]	FA	FR
1750	101	506
1140	112	562

***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

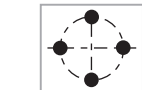
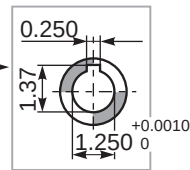
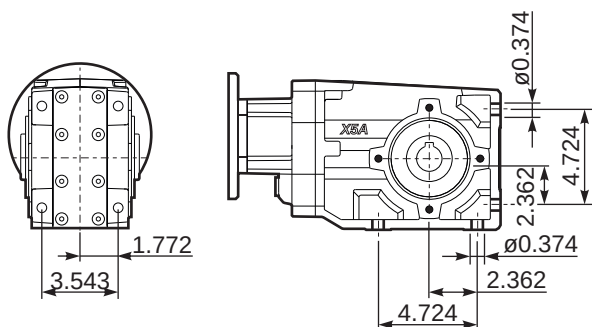
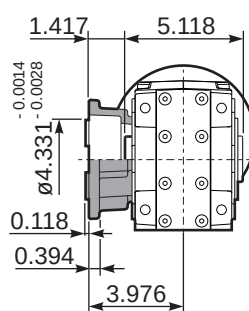
tab. 2

PX52AC...Basic Gearbox
Riduttore baseGearbox
weight
peso riduttore**28.2 lb**

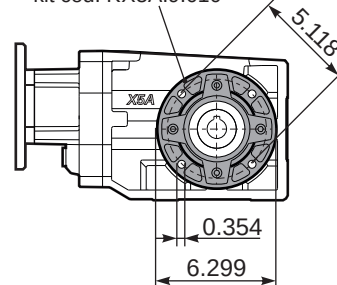
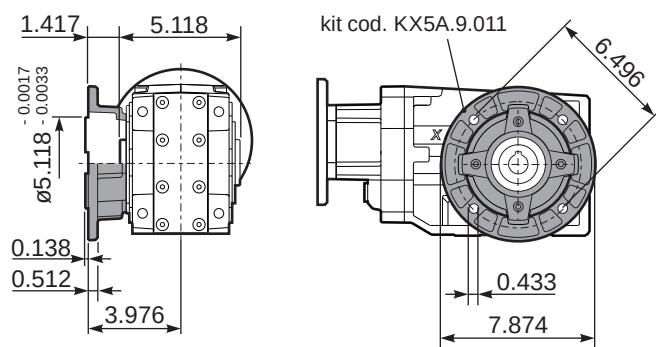
Nema flange	A	øF	kit code
56C-143/5TC	9.469	6.50	KU085.4.041
182/4TC	10.173	8.88	KU085.4.042



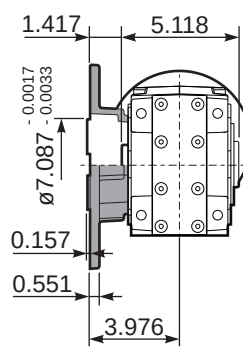
4 holes M8x0.591

Mounting holes
positionPosizione fori
di montaggioStandard
Hollow shaft**PX52A-N..**Feet
Piedini**PX52A-F2..**Output flange
Flangia uscita

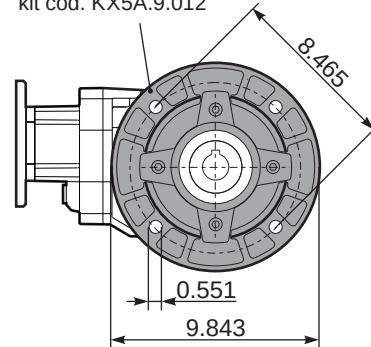
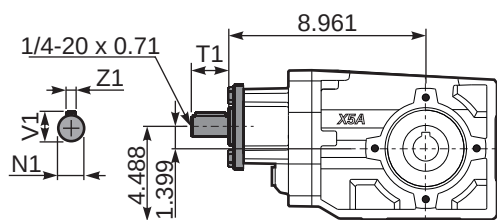
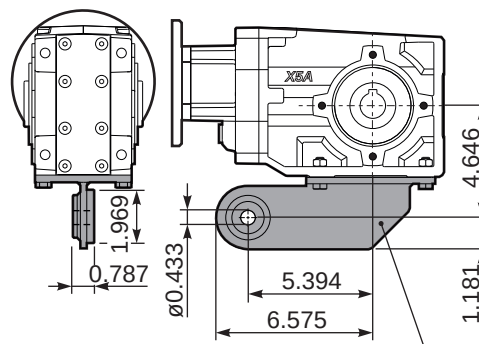
kit cod. KX5A.9.010

**PX52A-F3..**Output flange
Flangia uscita

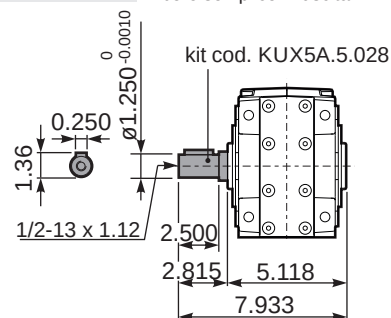
kit cod. KX5A.9.011

PX52A-F4..Output flange
Flangia uscita

kit cod. KX5A.9.012

**RX52A...**Input shaft
Albero in entrata**PX52ABR..**Reaction Arm
Braccio di reazione

kit cod. KX5A.9.027

PX52A..A..Single output shaft
Albero semplice in uscita

kit cod. KUX5A.5.028

Nema flanges	N1	T1	V1	Z1	kit code
Standard	0.875	1.97	0.96	0.188	KC50.5.070U
On request	0.750	1.97	0.83	0.188	KC50.5.069U



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges					Output Shaft $\phi 1.250$		Ratios code
							-W	-X						
							56C	143/5 TC						
30.8	56.76	1	1922	1.2	1.15	2213					191311			01
26.6	65.79	1	2227	1.0	0.99	2213					171311			02
22.7	77.23	0.75	1961	1.1	0.85	2213					151311			03
20.1	87.23	0.75	2215	1.0	0.75	2213					19138			04
19.0	92.18	0.75	2341	0.9	0.71	2213					131311			05
17.4	100.47	0.5	1701	1.3	0.65	2213					19811			06
15.0	116.45	0.5	1971	1.1	0.56	2213					17811			07
13.9	125.82	0.5	2130	1.0	0.52	2213					101311			08
12.4	141.66	0.5	2398	0.9	0.46	2213					13138	standard		09
10.7	163.16	0.33	1823	1.2	0.40	2213					13811	$\phi 1.250$		10
9.8	178.96	0.33	1999	1.1	0.37	2213					1788			11
9.1	193.36	0.33	2160	1.0	0.34	2213					10138			12
8.1	216.84	0.25	1835	1.2	0.30	2213					71311			13
6.9	252.36	0.25	2136	1.0	0.26	2213					9138			14
6.0	290.67	0.25	2460	0.9	0.22	2213					9811			15
5.3	333.23	0.25*	2820	0.8	0.20	2213					7138			16
4.6	383.82	0.25*	3249	0.7	0.17	2213					7811			17
3.9	446.70	0.25*	3781	0.6	0.15	2213					988			18
3.0	589.85	0.25*	4992	0.4	0.11	2213					788			19

The dynamic efficiency is 0.94 for all ratios * Power higher than the maximum one which can be supported by the gearbox. Select according to the torque M_{2R}
Potenza superiore a quella massima sopportabile dal riduttore. Selezionare in base al momento torcente M_{2R}

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit X53A is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore X53A viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño X53A se suministra, lubricado de por vida con aceites sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio						
B3	B6	B7	B8	V5	V6	V8	
45.75 oz	54.55 oz	29.92 oz	51.03 oz	73.91 oz	43.99 oz	Ask	
SHELL Omala S4 WE 320				ENI Telium VSF 320			

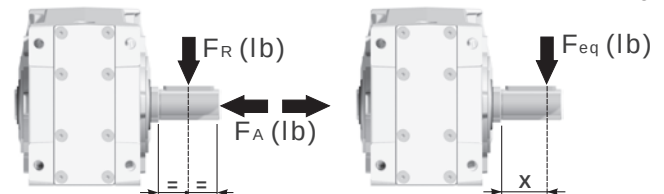
For all details on lubrication and plugs check our website **tab. 1**
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita

$$F_{eq} = F_R \cdot \frac{5.76}{X+4.51}$$

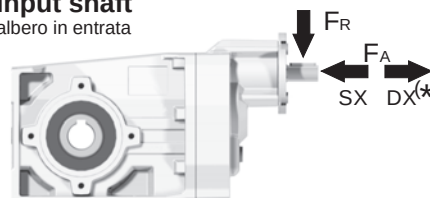


n_2 [min ⁻¹]	FA	FR	n_2 [min ⁻¹]	FA	FR	n_2 [min ⁻¹]	FA	FR
250	135	674	75	184	921	15	373	1866
150	157	787	50	216	1079			
100	180	899	25	303	1517			

F_R On request taper roller bearings to increase radial loads.
A richiesta cuscinetti a rulli conici per aumentare i carichi radiali.

Input shaft

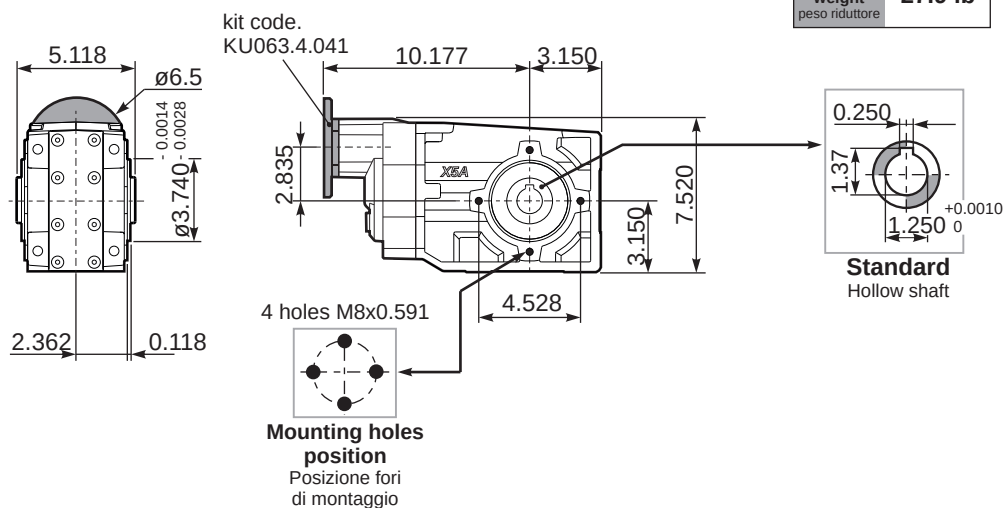
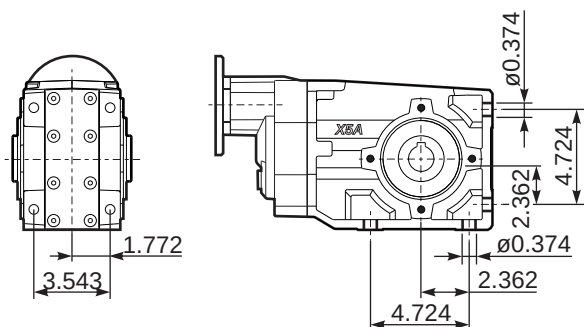
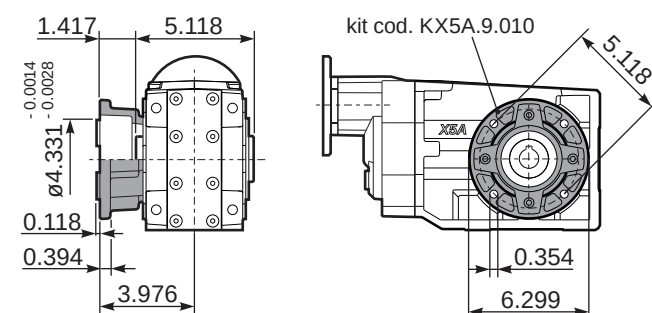
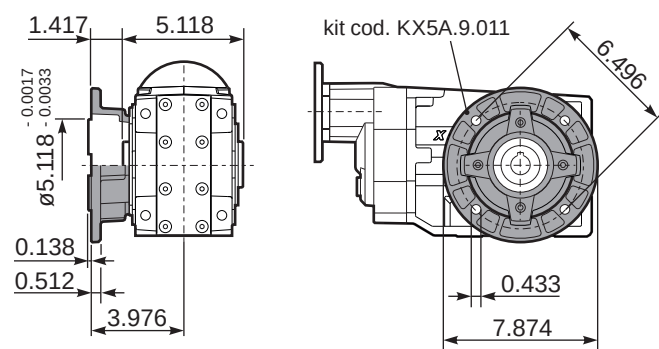
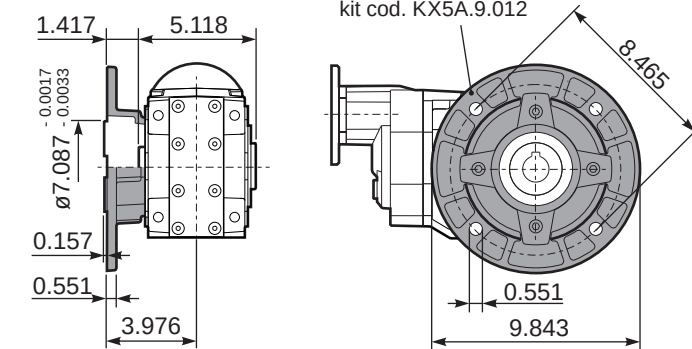
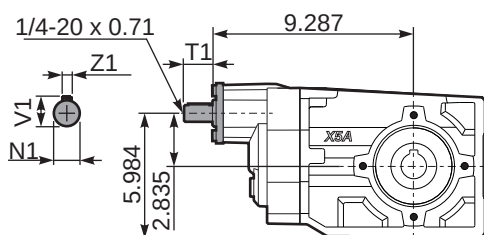
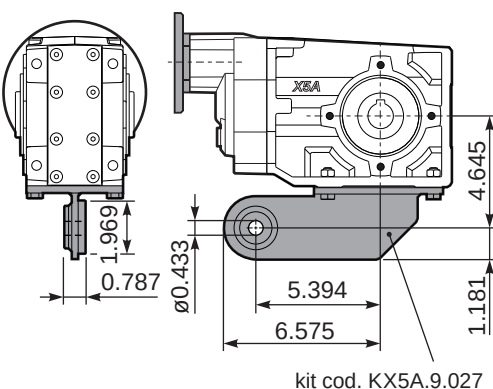
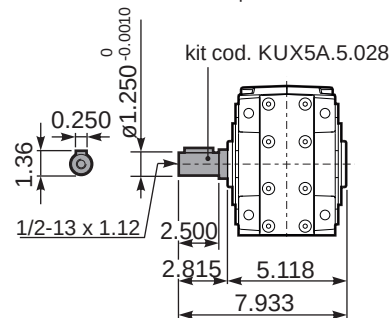
albero in entrata



n_1 [min ⁻¹]	FA [N]	FR [N]
1750	90	450
1140	99	495

*Strong axial loads in the DX direction are not allowed.
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

PX53AC...Basic Gearbox
Riduttore baseGearbox
weight
peso riduttore**27.9 lb****PX53A-N..**Feet
Piedini**PX53A-F2..**Output flange
Flangia uscita**PX53A-F3..**Output flange
Flangia uscita**PX53A-F4..**Output flange
Flangia uscita**RX53A...**Input shaft
Albero in entrata**PX53ABR..**Reaction Arm
Braccio di reazione**PX53A..A..**Single output shaft
Albero semplice in uscita

Nema flanges	N1	T1	V1	Z1	kit code
Standard	0.750	1.97	0.83	0.188	KC40.5.070U
On request	0.625	1.57	0.71	0.188	KC40.5.069U



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges				Output Shaft 	Ratios code 
							-W	-X	-Y	AA		
							56C	143/5TC	182/4TC	213/5TC		
290	6.03	10	2084	1.0	10.19	2124					3011	01
189	9.26	7.5	2402	1.0	7.46	2390					308	02
154	11.36	7.5	2946	1.1	7.89	3098					2011	03
114	15.36	5	2655	1.3	6.42	3408					1611	04
100	17.46	5	3018	1.2	5.87	3540					208	05
88	19.97	5	3453	1.1	5.25	3629					1311	06
74	23.60	5	4080	0.9	4.45	3629					168	07
72	24.45	5	4226	0.9	4.29	3629					1111	08
57	30.69	3	3184	1.1	3.42	3629					138	09
49.5	35.35	3	3667	1.0	2.97	3629					811	10
46.6	37.57	3	3897	0.9	2.79	3629					118	11
35.9	48.68	2	3366	1.0	1.92	3231					611	12
32.2	54.33	2	3757	1.0	1.93	3629					88	13
23.4	74.81	1	2587	1.2	1.23	3186					68	14

The dynamic efficiency is **0.96** for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit **X62A** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore **X62A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño **X62A** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio						
							
B3	B6	B7	B8	V5	V6	V8	
43.99 oz	59.83 oz	33.44 oz	56.31 oz	86.23 oz	52.79 oz	Ask	
SHELL Omala S4 WE 320				ENI Telium VSF 320			

For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

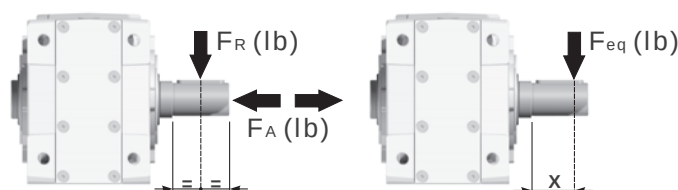
tab. 1

RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita

$$F_{eq} = F_R \cdot \frac{6.60}{X+5.22}$$

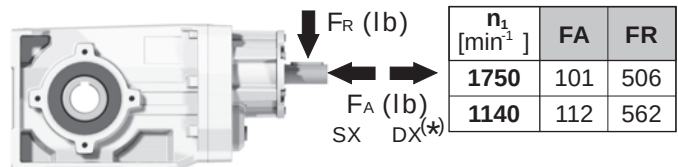


n_2 [min ⁻¹]	FA	FR	n_2 [min ⁻¹]	FA	FR	n_2 [min ⁻¹]	FA	FR
250	135	674	75	200	1000	15	373	1866
150	157	787	50	256	1281			
100	175	877	25	299	1495			

F_R On request taper roller bearings to increase radial loads.
A richiesta cuscinetti a rulli conici per aumentare i carichi radiali.

Input shaft

albero in entrata

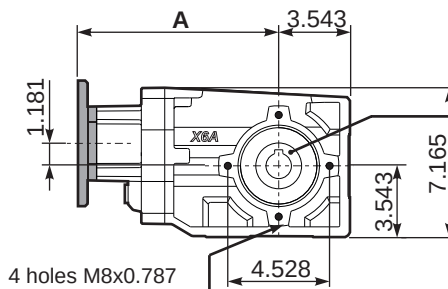
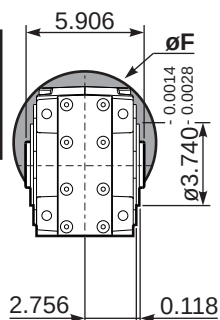


*Strong axial loads in the DX direction are not allowed.
Non sono consentiti forti carichi assiali con direzione DX

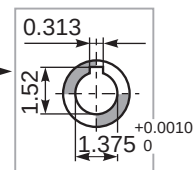
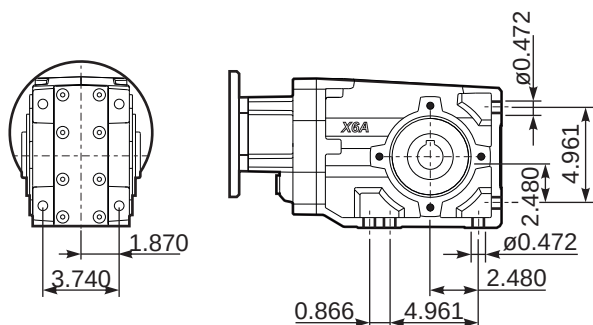
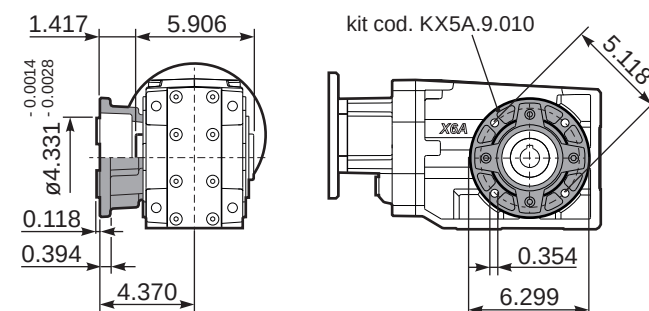
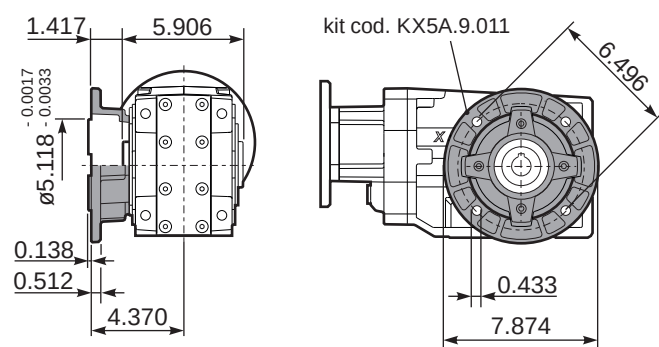
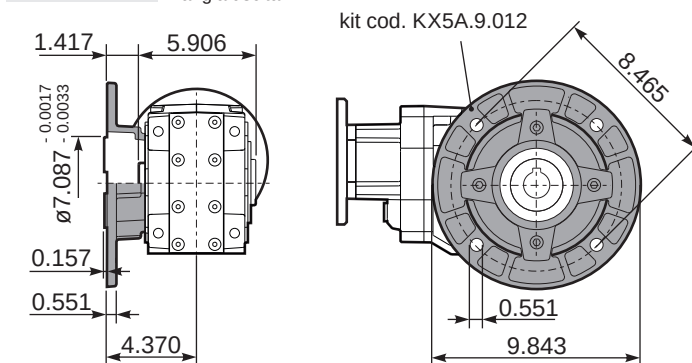
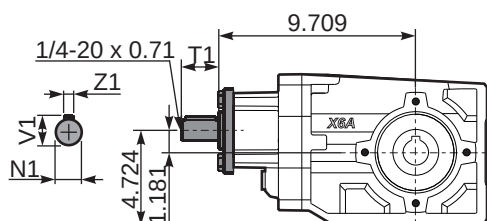
tab. 2

PX62AC...Basic Gearbox
Riduttore baseGearbox
weight
peso riduttore**34.8 lb**

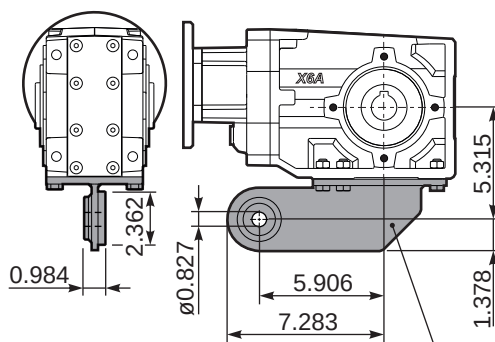
Nema flange	A	øF	kit code
56C-143/5TC	10.216	6.50	KU085.4.041
182/4TC	10.921	8.88	KU085.4.042
213/5TC	11.437	8.88	KUC50.4.041



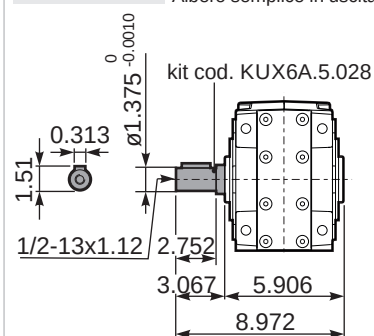
4 holes M8x0.787

Mounting holes
position
Posizione fori
di montaggio**Standard**
Hollow shaft**PX62A-N..**Feet
Piedini**PX62A-F2..** Output flange
Flangia uscita**PX62A-F3..** Output flange
Flangia uscita**PX62A-F4..** Output flange
Flangia uscita**RX62A...**Input shaft
Albero in entrata

Nema flanges	N1	T1	V1	Z1	kit code
Standard	0.875	1.97	0.96	0.188	KC50.5.070U
On request	0.750	1.97	0.83	0.188	KC50.5.069U

PX62ABR..Reaction Arm
Braccio di reazione

kit cod. KX6A.9.027

PX62A..A..Single output shaft
Albero semplice in uscita



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges				
							-W	-X			
							56C	143/5 TC			
30.8	56.76	1.5	2883	1.3	1.89	3629			191311	standard ø1.375	01
26.6	65.79	1.5	3341	1.1	1.63	3629			171311		02
22.7	77.23	1.5	3922	0.9	1.39	3629			151311		03
20.1	87.23	1	2953	1.2	1.23	3629			19138		04
19.0	92.18	1	3121	1.2	1.16	3629			131311		05
17.4	100.47	1	3402	1.1	1.07	3629			19811		06
15.0	116.45	1	3943	0.9	0.92	3629			17811		07
13.9	125.82	0.75	3195	1.1	0.85	3629			101311		08
12.4	141.66	0.75	3597	1.0	0.76	3629			13138		09
10.7	163.16	0.5	2762	1.3	0.66	3629			13811		10
9.8	178.96	0.5	3030	1.2	0.60	3629			1788		11
9.1	193.36	0.5	3273	1.1	0.55	3629			10138		12
8.1	216.84	0.5	3671	1.0	0.49	3629			71311		13
6.9	252.36	0.33	2819	1.3	0.42	3629			9138		14
6.0	290.67	0.33	3248	1.1	0.37	3629			9811		15
5.3	333.23	0.33	3723	1.0	0.32	3629			7138		16
4.6	383.82	0.25	3249	1.1	0.28	3629			7811		17
3.9	446.70	0.25	3781	1.0	0.24	3629			988		18
3.0	589.85	0.25*	4992	0.7	0.18	3629			788		19

The dynamic efficiency is 0.94 for all ratios * Power higher than the maximum one which can be supported by the gearbox. Select according to the torque M_{2R}

Potenza superiore a quella massima sopportabile dal riduttore. Selezionare in base al momento torcente M_{2R}

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit X63A is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore X63A viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño X63A se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio					
B3	B6	B7	B8	V5	V6	V8
63.35 oz	63.35 oz	36.95 oz	59.83 oz	91.51 oz	58.07 oz	Ask
SHELL Omala S4 WE 320				ENI Telium VSF 320		

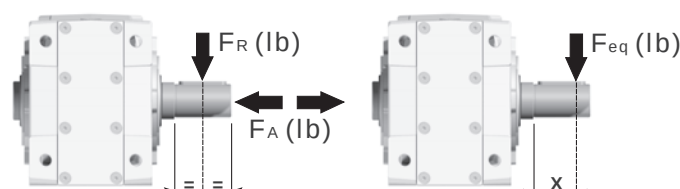
For all details on lubrication and plugs check our website **tab. 1**
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita

$$F_{eq} = F_R \cdot \frac{6.60}{X+5.22}$$

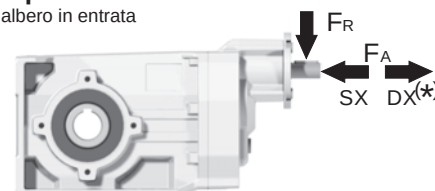


n_2 [min ⁻¹]	FA	FR	n_2 [min ⁻¹]	FA	FR	n_2 [min ⁻¹]	FA	FR
250	135	674	75	200	1000	15	373	1866
150	157	787	50	256	1281			
100	175	877	25	299	1495			

F_R On request taper roller bearings to increase radial loads.
A richiesta cuscinetti a rulli conici per aumentare i carichi radiali.

Input shaft

albero in entrata



n_1 [min ⁻¹]	FA [N]	FR [N]
1750	90	450
1140	99	495

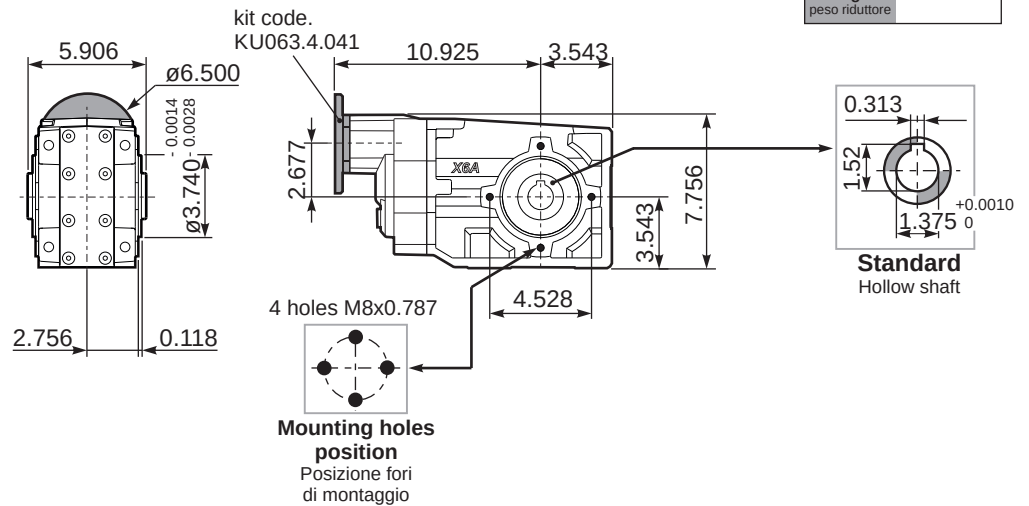
*Strong axial loads in the DX direction are not allowed.
Non sono consentiti forti carichi assiali con direzione DX

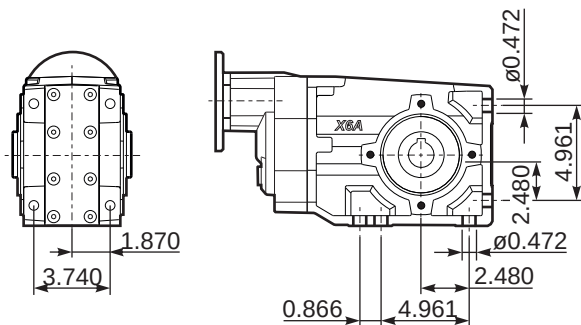
tab. 2

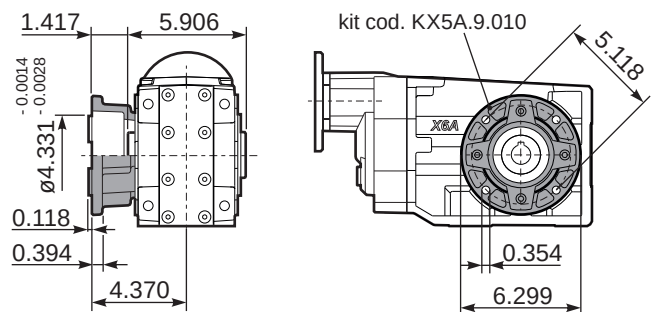
PX63AC...

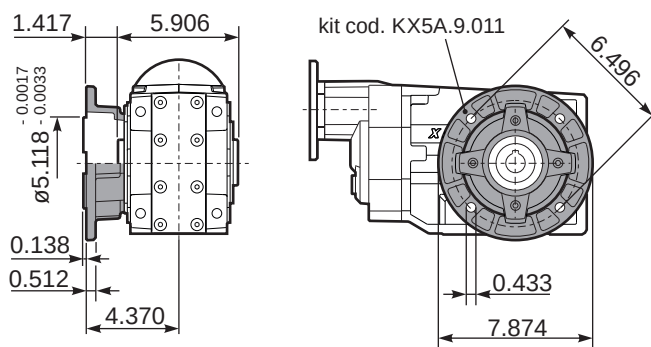
Basic Gearbox
Riduttore base

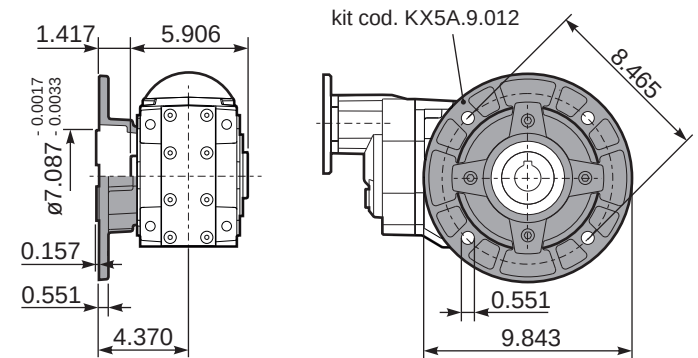
Gearbox
weight
peso riduttore

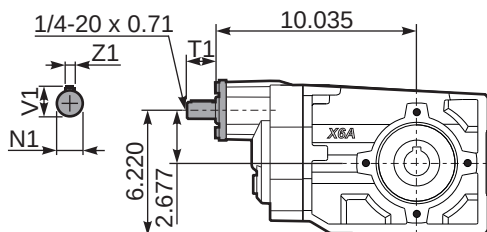
35.2 lb

PX63A-N..

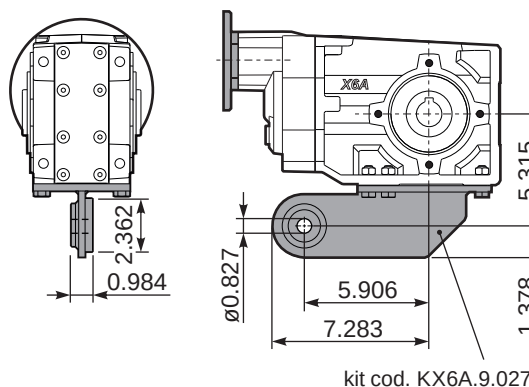
Feet
Piedini

PX63A-F2..

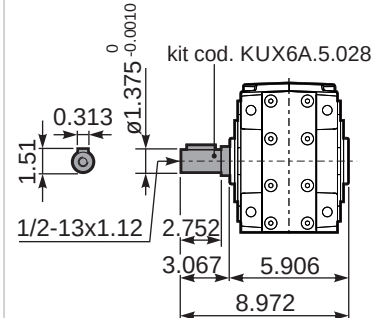
Output flange
Flangia uscita

PX63A-F3..

Output flange
Flangia uscita

PX63A-F4..

Output flange
Flangia uscita

RX63A...

Input shaft
Albero in entrata

PX63ABR..

Reaction Arm
Braccio di reazione

PX63A..A..

Single output shaft
Albero semplice in uscita


Nema flanges	N1	T1	V1	Z1	kit code
Standard	0.750	1.97	0.83	0.188	KC40.5.070U
On request	0.625	1.57	0.71	0.188	KC40.5.069U



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges				Output Shaft 	Ratios code 
							-W	-X	-Y	AA		
							56C	143/5TC	182/4TC	213/5TC		
220	7.94	10	2689	1.3	12.51	3363					302418	01
192	9.13	10	3091	1.1	11.17	3452					302416	02
164	10.66	10	3609	1.0	10.06	3629					302414	03
117	14.97	10	5067	1.0	10.13	5133					202418	04
102	17.21	7.5	4369	1.2	9.12	5310					202416	05
86	20.24	7.5	5138	1.2	8.72	5974					162418	06
75	23.27	7.5	5908	1.0	7.58	5974					162416	07
67	26.31	5	4455	1.3	6.71	5974					132418	08
58	30.25	5	5122	1.2	5.83	5974					132416	09
49.5	35.32	5	5979	1.0	5.00	5974					132414	10
47.3	37.03	5	6269	1.0	4.76	5974					112416	11
40.5	43.23	3	4391	1.4	4.08	5974					112414	12
37.6	46.58	3	4731	1.3	3.79	5974					82418	13
32.7	53.55	3	5439	1.1	3.30	5974					82416	14
28.0	62.52	3	6350	0.9	2.82	5974					82414	15
23.7	73.75	2	4994	1.0	2.06	5133					62416	16
20.3	86.09	2	5830	1.0	2.05	5974					62414	17

The dynamic efficiency is 0.94 for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit **X73C** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore **X73C** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño **X73C** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio					
						
B3	B6	B7	B8	V5	V6	V8
86.27 oz	89.79 oz	63.38 oz	68.66 oz	142.61 oz	89.79 oz	Ask
SHELL Omala S4 WE 320				ENI Telium VSF 320		

For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

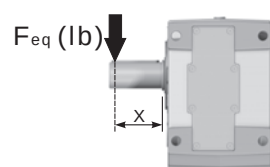
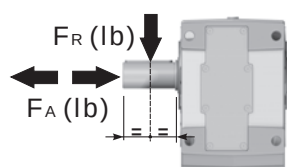
tab. 1

RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita

$$F_{eq} = F_R \cdot \frac{7.03}{X+5.65}$$



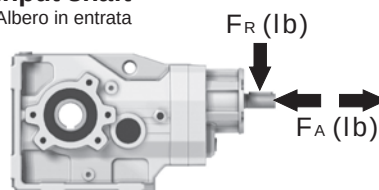
n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	306	1529	140	333	1664	70	387	1934
250	315	1574	120	342	1709	40	414	2068
200	324	1619	85	351	1754	15	432	2158

On request reinforced bearings to increase loads.

A richiesta cuscinetti rinforzati per aumentare i carichi.

Input shaft

Albero in entrata



n_1	FA	FR
1750	101	506
1140	112	562

tab. 2

90.4 lb

9-24



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges		Output Shaft	Ratios code
							-W 56C	-X 143/5 TC		
23.4	74.79	2	4956	1.2	2.41	5974			19132418	01
20.4	85.99	2	5699	1.0	2.10	5974			19132416	02
17.6	99.66	1.5	4954	1.2	1.81	5974			17132416	03
15.0	116.35	1.5	5783	1.0	1.55	5974			17132414	04
14.4	121.45	1.5	6037	1.0	1.48	5974			13132418	05
12.5	139.64	1	4627	1.3	1.29	5974			13132416	06
11.5	152.21	1	5043	1.2	1.18	5974			19082416	07
10.7	163.02	1	5402	1.1	1.11	5974			13132414	08
9.8	177.69	1	5888	1.0	1.01	5974			19082414	09
8.5	205.95	0.75	5118	1.2	0.88	5974			17082414	10
7.9	222.52	0.75	5530	1.1	0.81	5974			10132414	11
7.0	248.76	0.75	6182	1.0	0.72	5974			9132416	12
6.0	290.41	0.5	4812	1.2	0.62	5974			9132414	13
5.2	337.39	0.5	5590	1.1	0.53	5974			10082416	14
4.4	393.88	0.5	6526	0.9	0.46	5974			10082414	15
4.0	440.33	0.33	4815	1.2	0.41	5974			9082416	16
3.4	514.06	0.33	5621	1.1	0.35	5974			9082414	17
3.0	581.44	0.25	4817	1.2	0.31	5974			7082416	18
2.6	678.79	0.25	5623	1.1	0.27	5974			7082414	19

The dynamic efficiency is **0.92** for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit **X74C** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore **X74C** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño **X74C** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio					
B3	B6	B7	B8	V5	V6	V8
125 oz	93.31 oz	66.90 oz	72.18 oz	149.65 oz	93.31 oz	Ask
SHELL Omala S4 WE 320				ENI Telium VSF 320		

For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

tab. 1

RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita

$$F_{eq} = F_R \cdot \frac{7.03}{X+5.65}$$



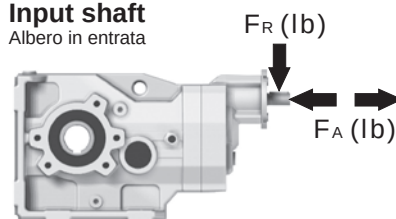
n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	306	1529	140	333	1664	70	387	1933
250	315	1574	120	342	1709	40	414	2068
200	324	1619	85	351	1754	15	432	2158

On request reinforced bearings to increase loads.

A richiesta cuscinetti rinforzati per aumentare i carichi.

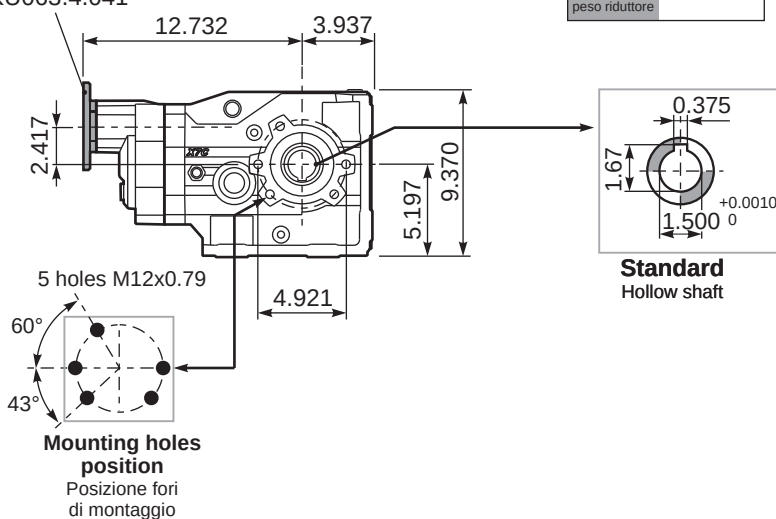
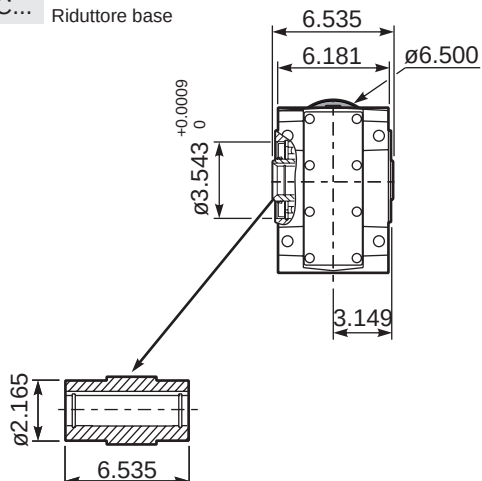
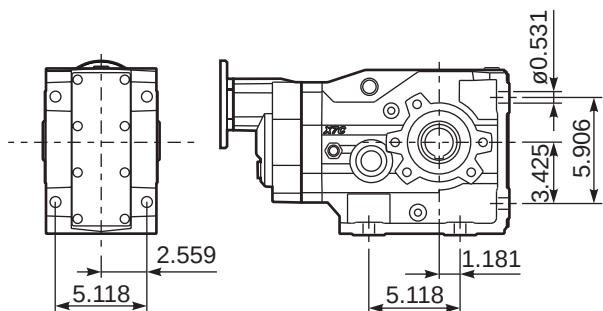
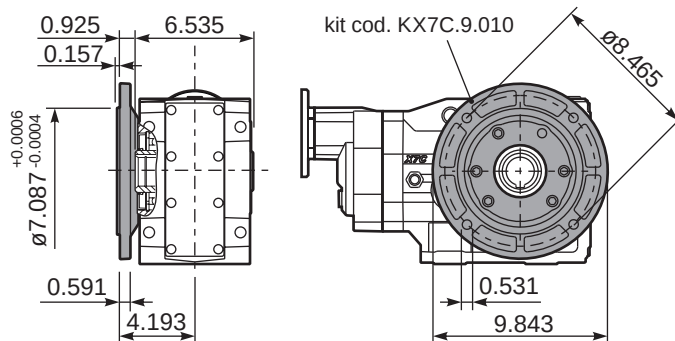
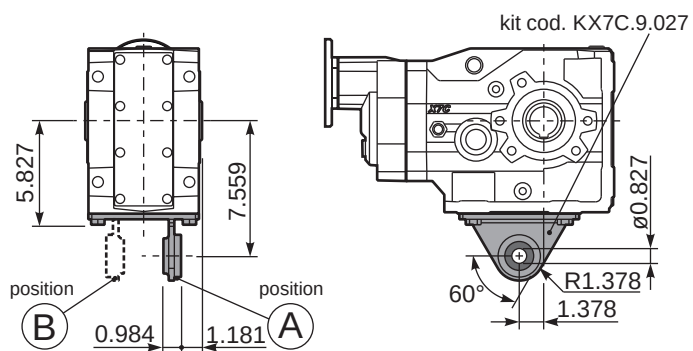
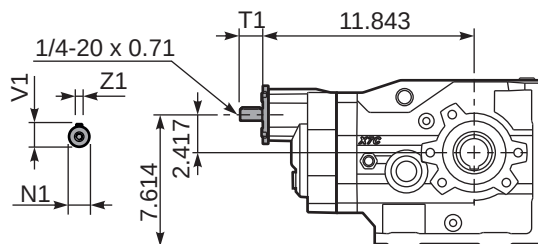
Input shaft

Albero in entrata

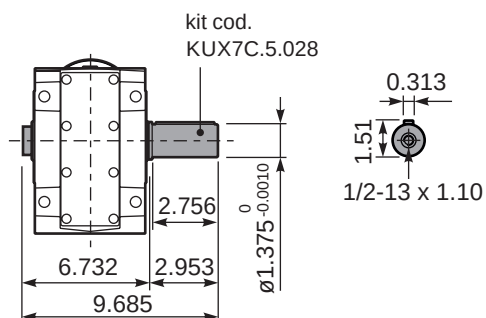


n_1	FA	FR
1750	90	450
1140	99	495

tab. 2

PX74CC...Basic Gearbox
Riduttore basekit code.
KU063.4.041Gearbox
weight
peso riduttore**86.0 lb****PX74C...FB..**Feet
Piedini**PX74C...-F4..**Output flange
Flangia uscita**PX74C...BR..**Reaction Arm
Braccio di reazione**RX74C...**Input shaft
Albero in entrata

Nema flanges	N1	T1	V1	Z1	kit code
Standard	0.750	1.97	0.83	0.188	KC40.5.070U
On request	0.625	1.57	0.71	0.188	KC40.5.069U

PX74CA...Single shaft
Albero lento semplice



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges					Output Shaft 	 Ratios code
							-W	-X	-Y	AA			
							56C	143/5TC	182/4TC	213/5TC			
181	9.69	10	3280	2.0	20.38	6682					302418	standard ø1.500	01
158	11.09	10	3756	1.6	16.02	6019					302416		02
136	12.90	10	4369	1.6	16.01	6992					302414		03
96	18.26	10	6181	1.3	13.38	8273					202418		04
84	20.91	10	7079	1.3	12.50	8851					202416		05
72	24.32	10	8233	1.1	10.75	8851					202414		06
62	28.27	7.5	7178	1.2	9.25	8851					162416		07
53	32.88	7.5	8349	1.1	7.95	8851					162414		08
47.6	36.76	7.5	9334	0.9	7.11	8851					132416		09
40.9	42.76	5	7238	1.2	6.11	8851					132414		10
38.9	45.00	5	7617	1.2	5.81	8851					112416		11
33.4	52.33	5	8859	1.0	5.00	8851					112414		12
30.8	56.82	3	5771	1.3	3.91	7523					82418		13
26.9	65.07	3	6609	1.3	3.92	8629					82416		14
23.1	75.68	3	7687	1.2	3.45	8851					82414		15
19.5	89.61	2	6067	1.0	2.07	6284					62416		16
16.8	104.22	2	7057	1.0	2.06	7258					62414		17

The dynamic efficiency is 0.94 for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit X83C is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore tipo X83C è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso.
Tab.1 per oli e quantità consigliati.
Tab.2 carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño X83C se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos.
La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

B3	B6	B7	B8	V5	V6	V8
98.59 oz	109.15 oz	70.42 oz	88.03 oz	174.30 oz	98.59 oz	Ask
SHELL Omala S2 GX 460				ENI Blasias 460		

For all details on lubrication and plugs check our website

tab. 1

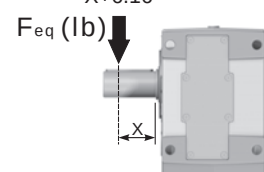
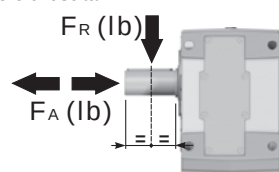
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita

$$F_{eq} = F_R \cdot \frac{7.73}{X+6.16}$$



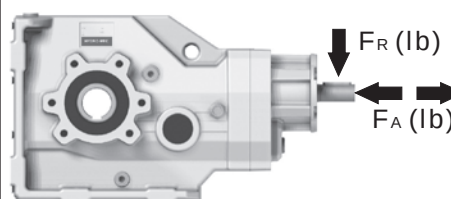
n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	382	1911	140	418	2091	70	486	2428
250	396	1978	120	427	2136	40	517	2585
200	405	2023	85	441	2203	15	540	2698

On request reinforced bearings to increase loads.

A richiesta cuscinetti rinforzati per aumentare i carichi.

Input shaft

Albero in entrata



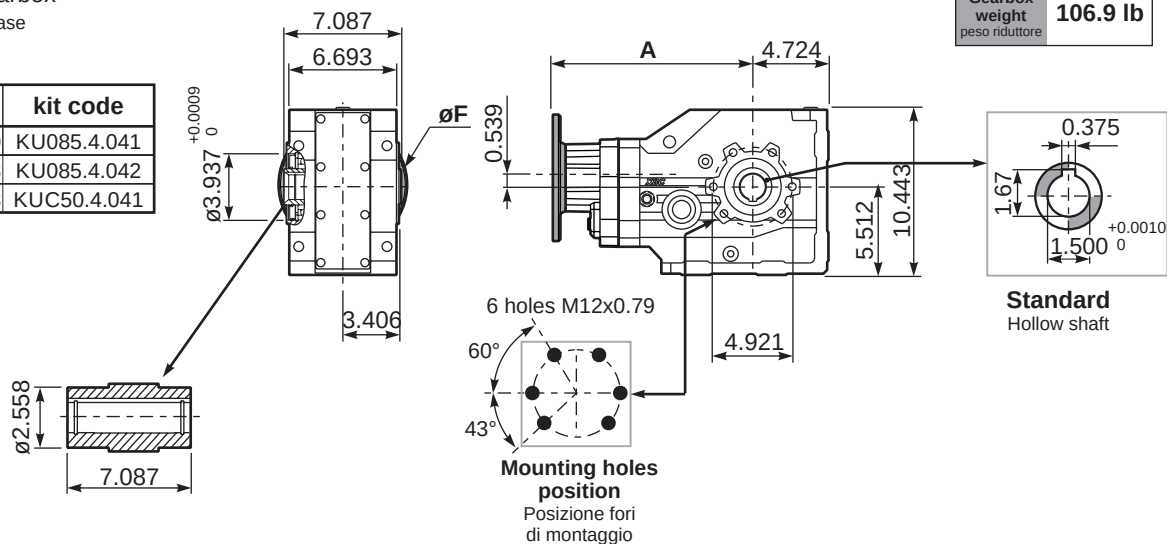
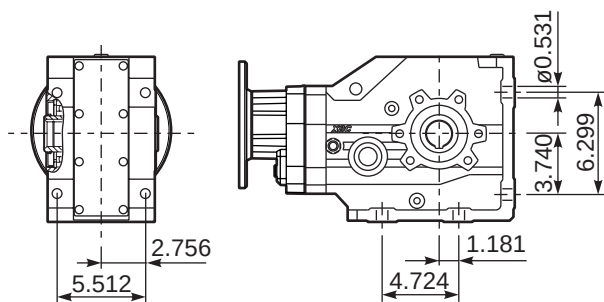
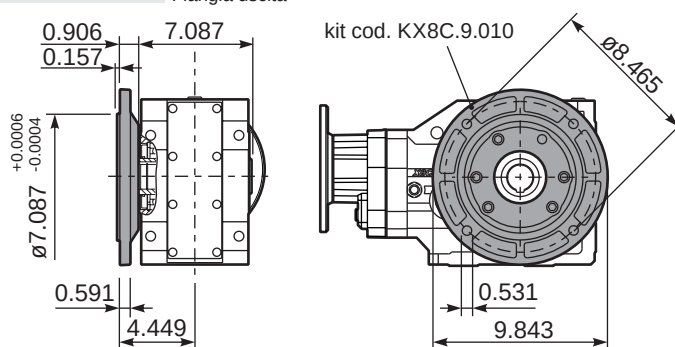
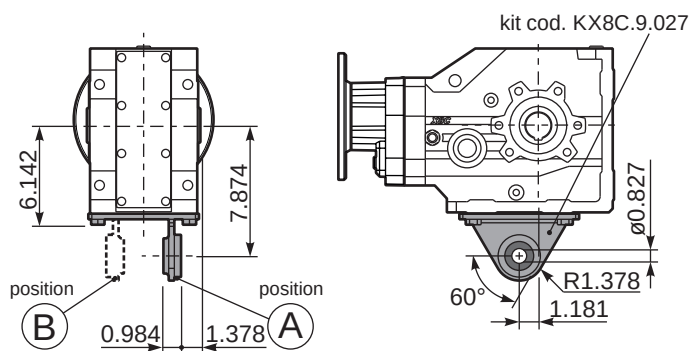
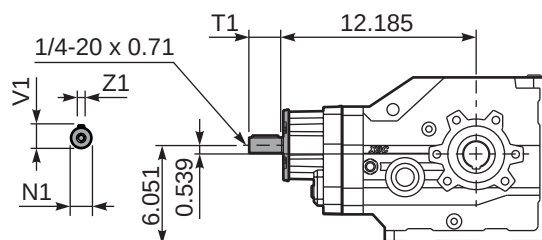
n_1	FA	FR
1750	101	506
1140	115	562

tab. 2

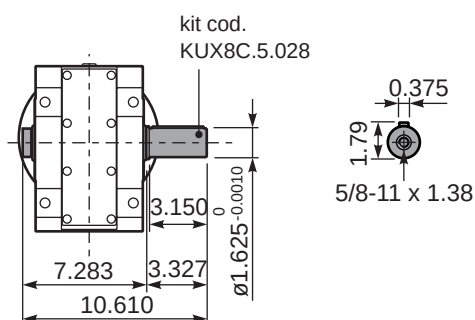
PX83CC...Basic gearbox
Riduttore baseGearbox
weight
peso riduttore

106.9 lb

Nema flange	A	øF	kit code
56C-143/5TC	12.685	6.50	KU085.4.041
182/4TC	13.390	8.88	KU085.4.042
213/5TC	13.906	8.88	KUC50.4.041

**PX83C...FB..**Feet
Piedini**PX83C...-F4..**Output flange
Flangia uscita**PX83C...BR..**Reaction Arm
Braccio di reazione**RX83C...**Input shaft
Albero in entrata

Nema flanges	N1	T1	V1	Z1	kit code
Standard	0.875	1.97	0.96	0.188	KC50.5.070U
On request	0.750	1.97	0.83	0.188	KC50.5.069U

PX83CA...Single shaft
Albero lento semplice



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges		Output Shaft	Ratios code
							-W 56C	-X 143/5 TC		
19.2	91.23	2	6046	1.5	2.93	8851			19132418	01
16.7	104.48	2	6924	1.3	2.56	8851			19132416	02
14.5	121.10	2	8025	1.1	2.21	8851			17132416	03
12.4	140.84	1.5	7001	1.3	1.90	8851			17132414	04
10.6	165.32	1.5	8217	1.1	1.62	8851			15132414	05
9.5	184.94	1.5	9192	1.0	1.44	8851			19082416	06
8.9	197.34	1.5	9808	0.9	1.35	8851			13132414	07
8.1	215.10	1	7127	1.2	1.24	8851			19082414	08
7.6	231.60	1	7674	1.2	1.15	8851			10132416	09
7.0	249.31	1	8261	1.1	1.07	8851			17082414	10
6.5	269.37	1	8926	1.0	0.99	8851			10132414	11
6.0	292.64	0.75	7273	1.2	0.91	8851			15082414	12
5.8	302.26	0.75	7512	1.2	0.88	8851			9132416	13
5.0	349.30	0.75	8681	1.0	0.76	8851			13082414	14
4.4	399.12	0.5	6613	1.3	0.67	8851			7132416	15
3.7	476.80	0.5	7900	1.1	0.56	8851			10082414	16
2.8	622.28	0.33	6805	1.3	0.43	8851			9082414	17
2.1	821.70	0.25	6807	1.3	0.33	8851			7082414	18

The dynamic efficiency is **0.92** for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit **X84C** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore tipo **X84C** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso.
Tab.1 per oli e quantità consigliati.
Tab.2 carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño **X84C** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos.
La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

						
B3	B6	B7	B8	V5	V6	V8
149.65 oz	112.68 oz	73.94 oz	91.55 oz	183.10 oz	102.11 oz	Ask
SHELL Omala S2 GX 460				ENI Blasias 460		

For all details on lubrication and plugs check our website

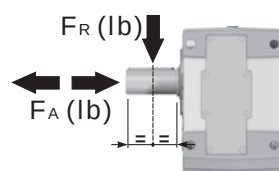
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

tab. 1

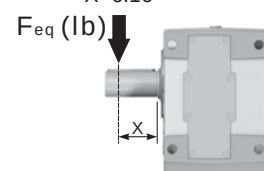
RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita



$$F_{eq} = F_R \cdot \frac{7.73}{X+6.16}$$



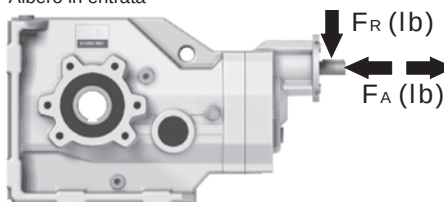
n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	382	1911	140	418	2091	70	486	2428
250	396	1978	120	427	2136	40	517	2585
200	405	2023	85	441	2203	15	540	2698

On request reinforced bearings to increase loads.

A richiesta cuscinetti rinforzati per aumentare i carichi.

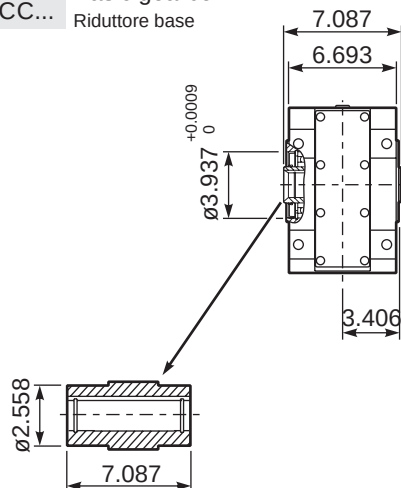
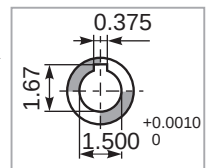
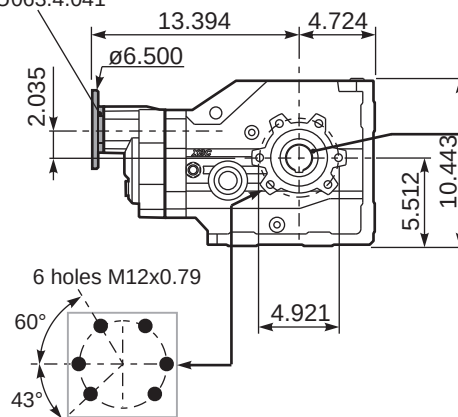
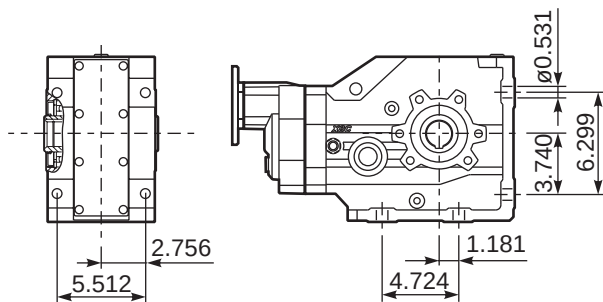
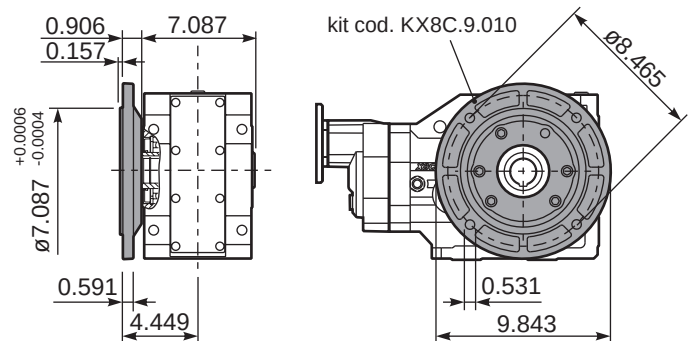
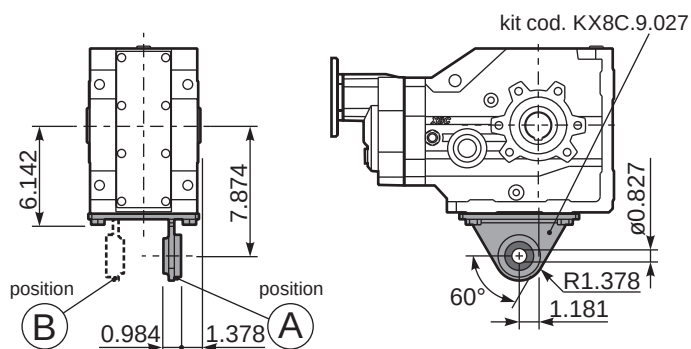
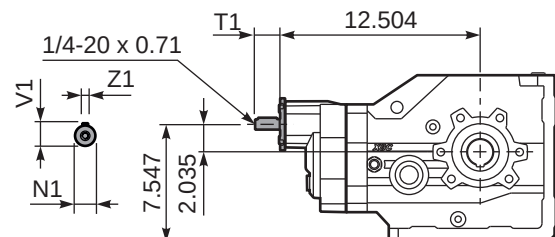
Input shaft

Albero in entrata

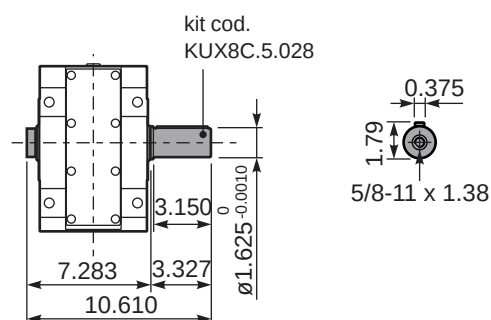


n_1	FA	FR
1750	90	450
1140	99	495

tab. 2

PX84CC...Basic gearbox
Riduttore basekit code.
KU063.4.041Gearbox
weight
peso riduttore **102.5 lb****Standard**
Hollow shaft**Mounting holes position**
Posizione fori di montaggio**PX84C...FB..**Feet
Piedini**PX84C...-F4..**Output flange
Flangia uscita**PX84C...BR..**Reaction Arm
Braccio di reazione**Rx84C...**Input shaft
Albero in entrata

Nema flanges	N1	T1	V1	Z1	kit code
Standard	0.750	1.97	0.83	0.188	KC40.5.070U
On request	0.625	1.57	0.71	0.188	KC40.5.069U

PX84CA...Single shaft
Albero lento semplice



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges				Output Shaft 	 Ratios code
							-Y	AA	AB			
							182/4TC	213/5TC	254/6TC			
294	5.94	20	4025	1.8	35.18	7081				302915	standard ø2.000	01
246	7.13	20	4826	1.5	30.08	7258				302913		02
204	8.58	20	5811	1.4	28.94	8408				302911		03
156	11.20	20	7585	1.2	23.34	8851				202915		04
130	13.43	20	9096	1.3	26.27	11949				202913		05
116	15.15	20	10256	1.2	24.16	12391				162915		06
108	16.17	20	10952	1.2	23.44	12834				202911		07
96	18.16	20	12298	1.1	22.31	13719				162913		08
89	19.70	20	13337	1.0	20.57	13719				132915		09
80	21.87	15	11106	1.3	19.13	14161				162911		10
74	23.62	15	11994	1.2	17.71	14161				132913		11
61	28.91	15	14681	1.0	14.47	14161				112913		12
50	34.81	10	11785	1.2	12.02	14161				112911		13
41.9	41.81	10	14154	1.0	10.01	14161				82913		14
34.8	50.34	7.5	12782	1.1	8.31	14161				82911		15

The dynamic efficiency is **0.94** for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit **X93C** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore tipo **X93C** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso.
Tab.1 per oli e quantità consigliati.
Tab.2 carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño **X93C** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio						
B3	B6	B7	B8	V5	V6	V8	
147.82 oz	126.70 oz	154.86 oz	179.49 oz	242.96 oz	175.98 oz	Ask	
SHELL Omala S2 GX 460				ENI Blasias 460			

For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

tab. 1

RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita

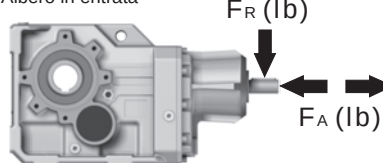


$$F_{eq} = F_R \cdot \frac{8.58}{X+6.61}$$

n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	405	2023	140	607	3035	70	679	3395
250	540	2698	120	629	3147	40	719	3597
200	585	2923	85	652	3260	15	786	3934

Input shaft

Albero in entrata



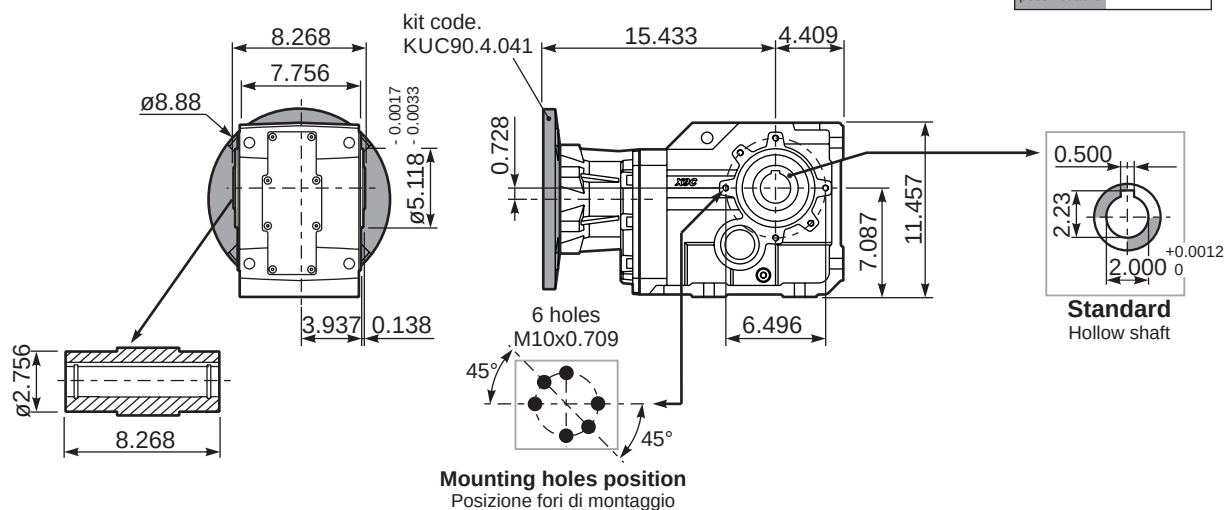
n_1	FA	FR
1750	157	787
1140	189	944

tab. 2

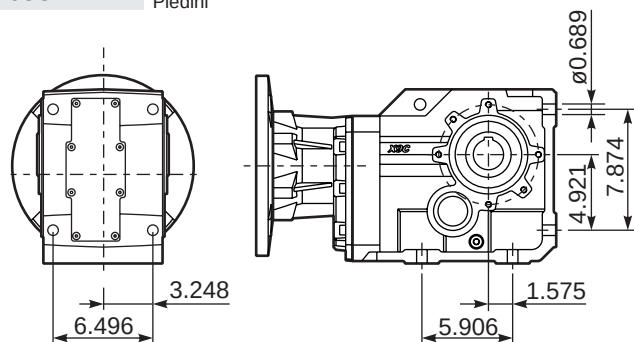
PX93CC...

Basic Gearbox
Riduttore baseGearbox
weight
peso riduttore

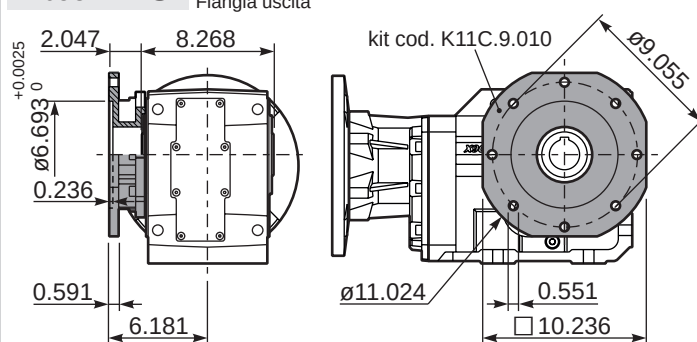
364.0 lb



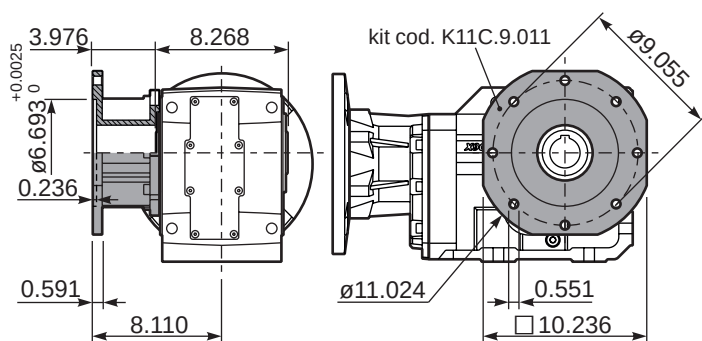
PX93C...FB..

Feet
Piedini

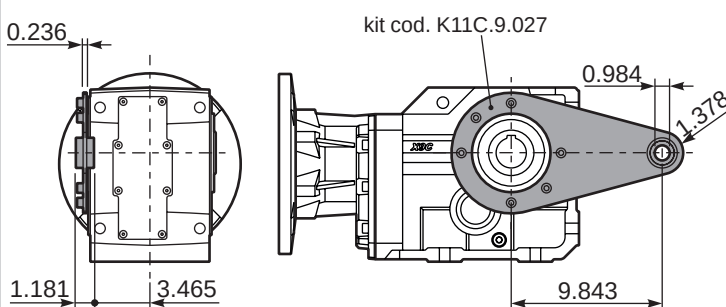
PX93C...-FC..

Output flange
Flangia uscita

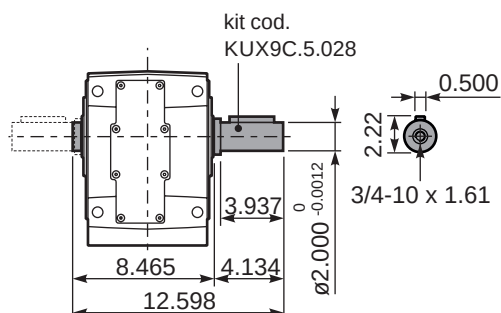
PX93C...-FL..

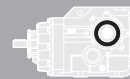
Output flange
Flangia uscita

PX93C...BR..

Reaction Arm
Braccio di reazione

PX93CA...

Single shaft
Albero lento semplice



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges				Output Shaft  standard ø2.000	Ratios code 
							-W	-X	-Y	AA		
							56C	143/5TC	182/4TC	213/5TC		
57.0	30.70	10	10174	1.4	13.92	14161					30132913	01
47.3	36.97	10	12250	1.2	11.56	14161					30132911	02
36.3	48.26	7.5	11993	1.2	8.86	14161					20132915	03
30.2	57.86	7.5	14380	1.0	7.39	14161					20132913	04
26.8	65.24	7.5	16215	0.9	6.55	14161					16132915	05
25.1	69.68	5	11544	1.3	6.33	14604					20132911	06
22.4	78.23	5	12962	1.1	5.63	14604					16132913	07
20.6	84.85	5	14057	1.0	5.04	14161					13132915	08
18.6	94.20	5	15608	0.9	4.68	14604					16132911	09
17.2	101.74	5	16856	0.9	4.33	14604					13132913	10
14.3	122.51	3	12178	1.2	3.60	14604					13132911	11
11.7	149.95	3	14906	1.0	2.94	14604					11132911	12
9.7	180.09	2	11935	1.2	2.45	14604					8132913	13
8.5	206.81	2	13706	1.0	2.07	14161					6132915	14
8.1	216.85	2	14371	1.0	2.03	14604					8132911	15
7.1	247.99	1.5	12326	1.2	1.78	14604					6132913	16
5.9	298.61	1.5	14842	1.0	1.48	14604					6132911	17

The dynamic efficiency is 0.92 for all ratios

 Motor Flanges Available
Flange Motore Disponibili

 B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

 B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

 C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit X94C is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore tipo X94C è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso.
Tab.1 per oli e quantità consigliati.
Tab.2 carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño X94C se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio					
						
B3	B6	B7	B8	V5	V6	V8
158.38 oz	133.74 oz	158.38 oz	186.53 oz	267.48 oz	186.53 oz	Ask
SHELL Omala S2 GX 460				ENI Blasias 460		

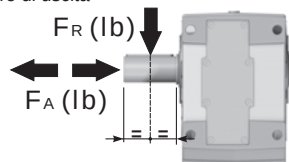
For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

tab. 1

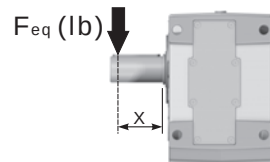
RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita



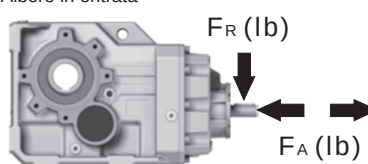
$$F_{eq} = F_R \cdot \frac{8.58}{X+6.61}$$



n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	405	2023	140	607	3035	70	679	3395
250	540	2698	120	629	3147	40	719	3597
200	585	2923	85	652	3260	15	786	3934

Input shaft

Albero in entrata

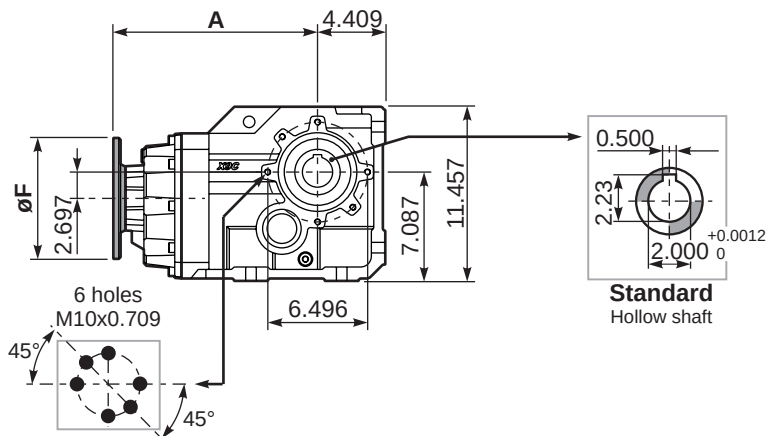
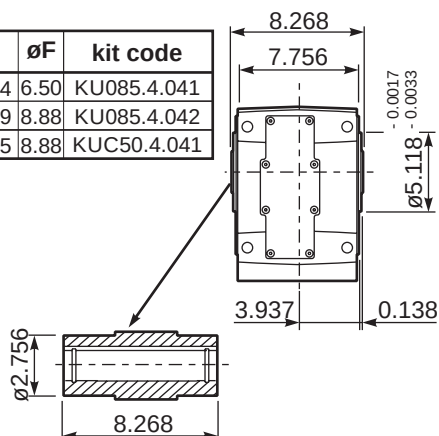
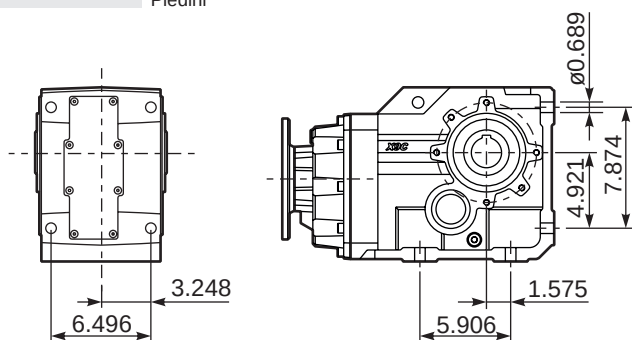
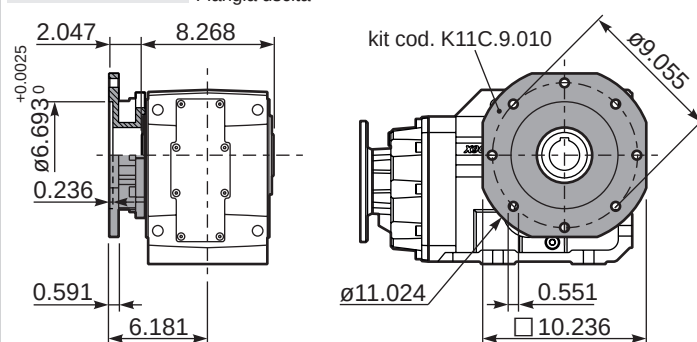
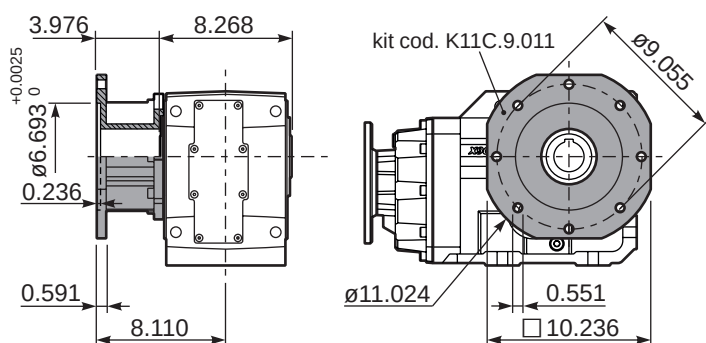
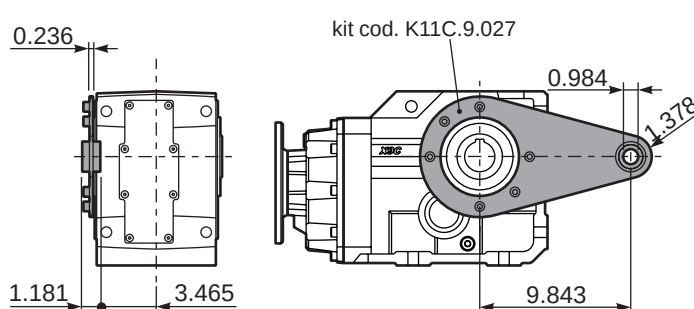
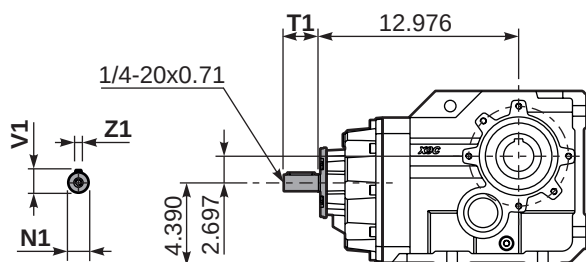
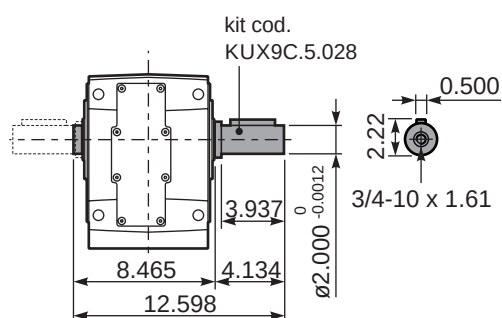


n_1	FA	FR
1750	101	506
1140	112	562

tab. 2

PX94CC...Basic Gearbox
Riduttore baseGearbox
weight
peso riduttore**333.0 lb**

Nema flanges	A	ØF	kit code
56C-143/5TC	13.484	6.50	KU085.4.041
182/4TC	14.189	8.88	KU085.4.042
213/5TC	14.705	8.88	KUC50.4.041

Mounting holes position
Posizione fori di montaggio**PX94C...FB..**Feet
Piedini**PX94C...-FC..**Output flange
Flangia uscita**PX94C...-FL..**Output flange
Flangia uscita**PX94C...BR..**Reaction Arm
Braccio di reazione**RX94C...**Input shaft
Albero in entrata**PX94CA...**Single shaft
Albero lento semplice

Nema flanges	N1	T1	V1	Z1	kit code
Standard	0.875	1.97	0.96	0.188	KC50.5.070U
On request	0.750	1.97	0.83	0.188	KC50.5.069U



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges		Output Shaft standard ø2.375	Ratios code
							AC	AD		
							284/6 TC	324/6 TC		
274	6.39	40	8659	1.3	53.15	11506			392914	01
250	7.00	40	9483	1.3	52.26	12391			392913	02
205	8.55	40	11581	1.1	45.85	13276			392911	03
175	10.01	40	13559	1.0	41.78	14161			302914	04
160	10.97	40	14850	1.0	40.53	15046			302913	05
131	13.39	40	18135	1.0	41.00	18587			302911	06
111	15.71	30	15961	1.2	36.60	19472			222914	07
102	17.21	30	17480	1.2	34.94	20357			222913	08
83	21.02	30	21347	1.0	29.85	21242			222911	09
74	23.73	30	24105	1.0	28.64	23012			162914	10
67	25.99	30	26399	0.9	28.16	24782			162913	11
63	27.93	30	28371	0.9	27.14	25667			142914	12
57	30.59	25	25892	1.0	24.78	25667			142913	13
55	31.74	25	26866	1.0	23.88	25667			162911	14
46.8	37.36	25*	31620	0.8	20.29	25667			142911	15
42.3	41.37	25*	35018	0.7	18.32	25667			102914	16
38.6	45.31	25*	38351	0.7	16.73	25667			102913	17
31.6	55.33	25*	46853	0.6	14.17	26552			102911	18

The dynamic efficiency is **0.94** for all ratios

* Power higher than the maximum one which can be supported by the gearbox. Select according to the torque M_{2R}
Potenza superiore a quella massima sopportabile dal riduttore. Selezionare in base al momento torcente M_{2R}
Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit **X103** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore tipo **X103** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso.
Tab.1 per oli e quantità consigliati.
Tab.2 carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño **X103** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio					
B3	B6	B7	B8	V5	V6	V8
404.7oz	193.6 oz	369.5 oz	264.0 oz	475.1 oz	334.4 oz	Ask
SHELL Omala S2 GX 460				ENI Blasla 460		

For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

tab. 1

RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita

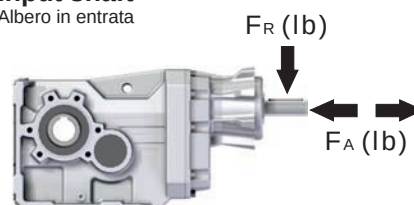


$$F_{eq} = F_R \cdot \frac{9.96}{X+7.60}$$

n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	450	2248	140	629	3147	70	787	3934
250	562	2810	120	674	3372	40	944	4721
200	607	3035	85	719	3597	15	1214	6070

Input shaft

Albero in entrata

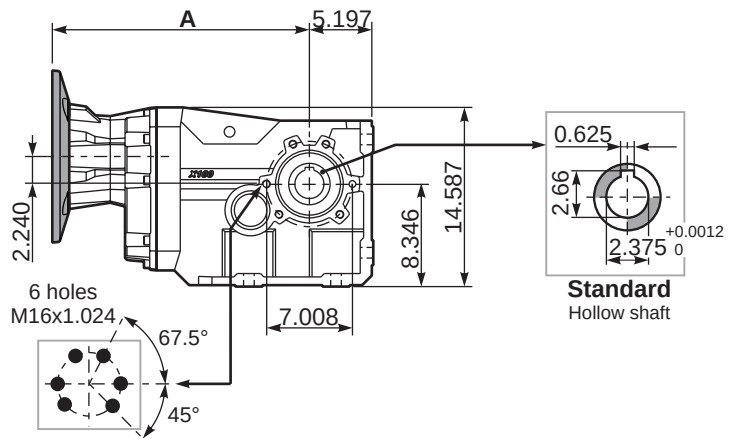
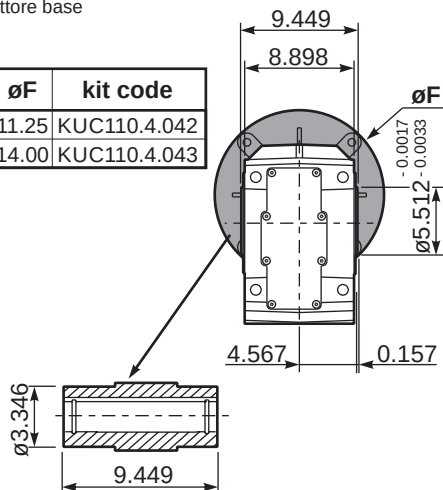
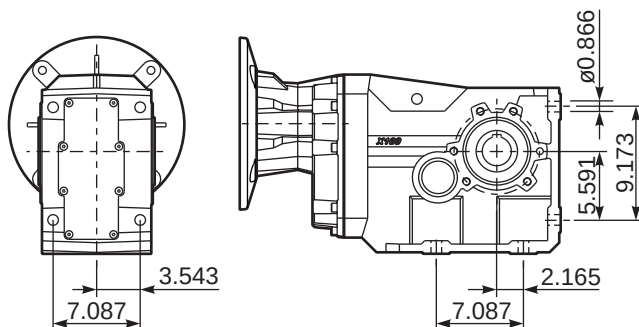
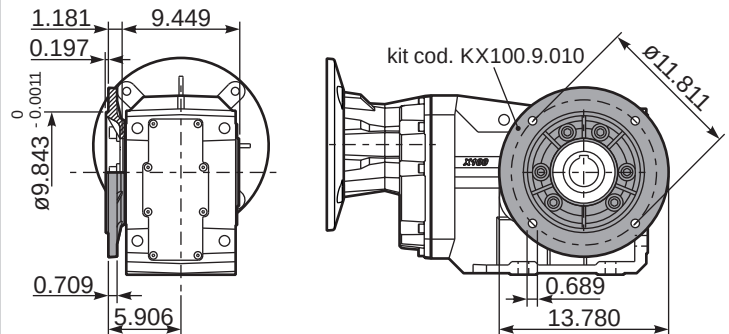
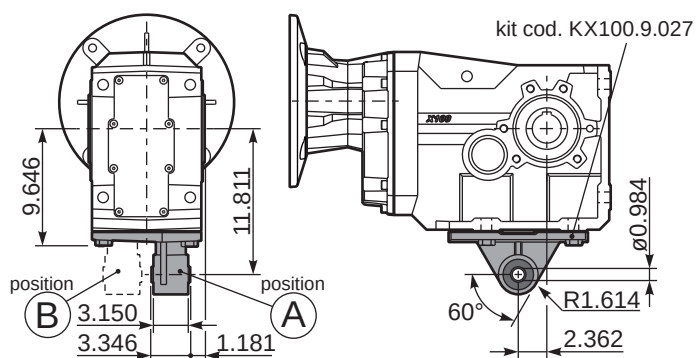
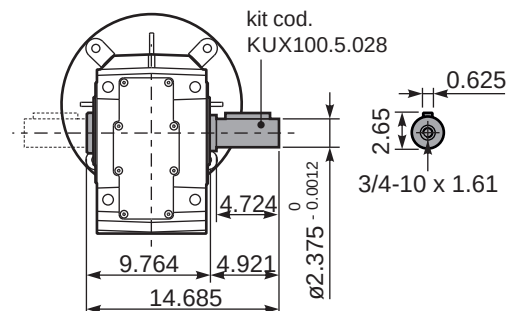


n_1	FA	FR
1750	252	1259
1140	274	1371

tab. 2

PX103C...Basic Gearbox
Riduttore baseGearbox
weight
peso riduttore**298 lb**

Nema flanges	A	ØF	kit code
284/6TC	20.933	11.25	KUC110.4.042
324/6TC	20.933	14.00	KUC110.4.043

Mounting holes position
Posizione fori di montaggio**PX103...FB..**Feet
Piedini**PX103...-F6..**Output flange
Flangia uscita**PX103...BR..**Reaction Arm
Braccio di reazione**PX103A...**Single shaft
Albero lento semplice



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges				Output Shaft 	Ratios code
							-Y	AA	AB			
							182/4TC	213/5TC	254/6TC			
36.0	48.57	15	24139	1.1	15.95	25667				30142911	standard ø2.375	01
25.6	68.43	10	22676	1.2	11.71	26552				20142914		02
23.3	74.95	10	24835	1.1	10.69	26552				20142913		03
18.9	92.53	7.5	22995	1.2	8.66	26552				16142914		04
17.3	101.33	7.5	25183	1.1	7.91	26552				16142913		05
14.5	120.33	5.0	19935	1.3	6.66	26552				13142914		06
14.1	123.75	5.0	20503	1.3	6.48	26552				16142911		07
13.3	131.78	5.0	21833	1.2	6.08	26552				13142913		08
11.9	147.28	5.0	24401	1.1	5.44	26552				11142914		09
10.8	161.30	5.0	26724	1.0	4.97	26552				11142913		10
8.9	196.98	3.0	19581	1.4	4.07	26552				11142911		11
8.2	212.99	3.0	21172	1.3	3.76	26552				8142914		12
7.5	233.26	3.0	23188	1.1	3.44	26552				8142913		13
6.1	284.86	3.0	28317	0.9	2.81	26552				8142911		14

The dynamic efficiency is **0.92** for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit **X104** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore tipo **X104** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso.
Tab.1 per oli e quantità consigliati.
Tab.2 carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño **X104** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

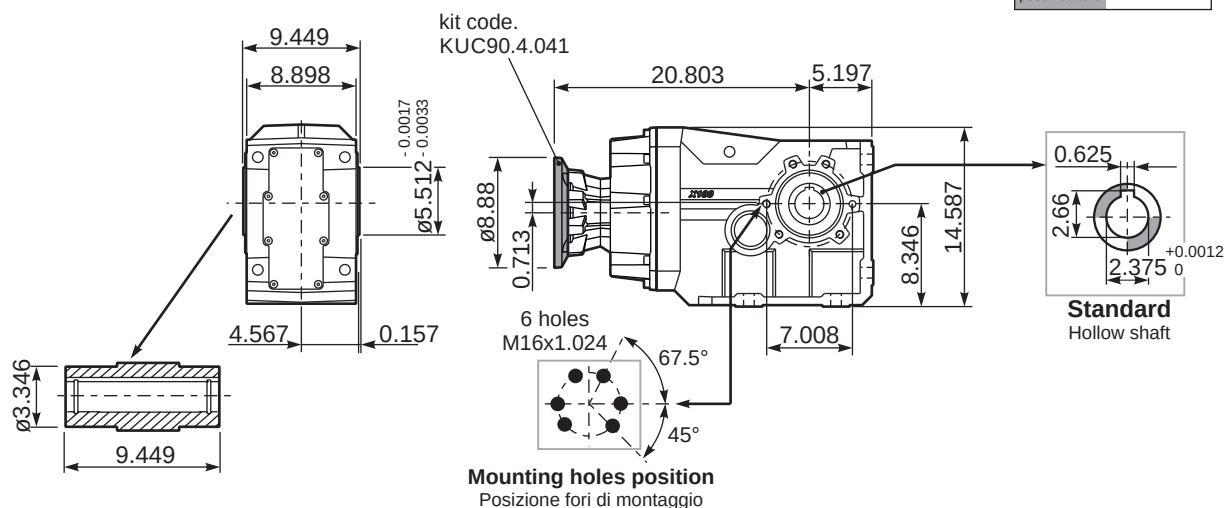
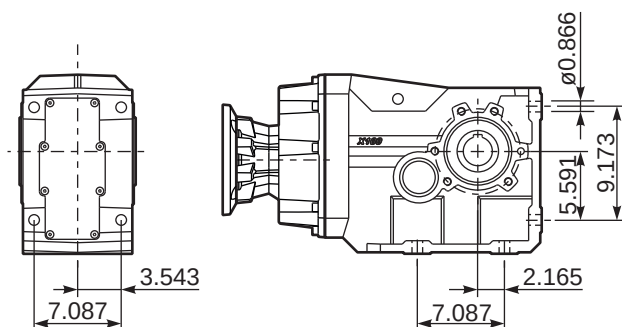
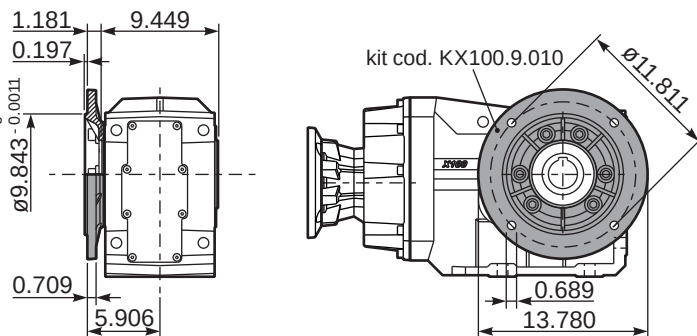
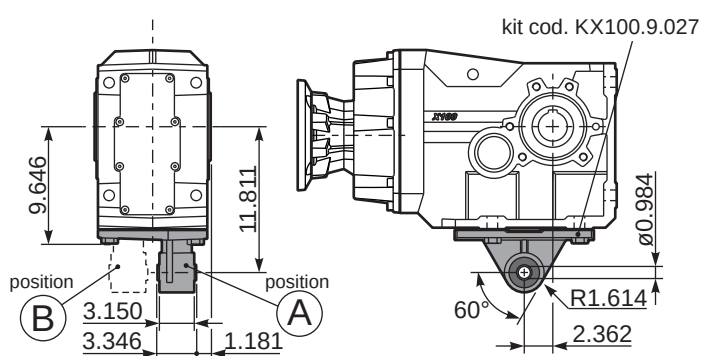
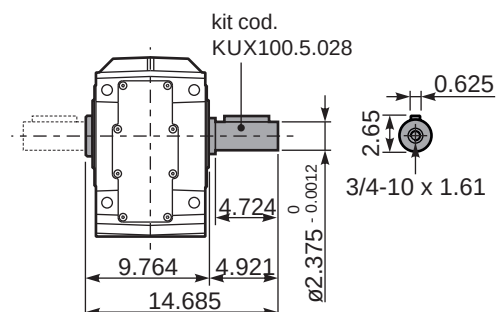
Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio					
B3	B6	B7	B8	V5	V6	V8
422.3 oz	211.2 oz	404.7 oz	281.6 oz	510.3 oz	387.1 oz	Ask
SHELL Omala S2 GX 460				ENI Blasias 460		

For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

tab. 1

RADIAL AND AXIAL LOADS									
Output shaft Albero di uscita			$F_{eq} = F_R \cdot \frac{9.96}{X+7.60}$						
n_2	FA	FR	n_2	FA	FR	n_2	FA	FR	
300	450	2248	140	629	3147	70	787	3934	
250	562	2810	120	674	3372	40	944	4721	
200	607	3035	85	719	3597	15	1214	6070	
Input shaft Albero in entrata									
n_1	FA	FR							
1750	157	787							
1140	189	944							

tab. 2

PX104C...Basic Gearbox
Riduttore baseGearbox
weight
peso riduttore**274 lb****PX104...FB..**Feet
Piedini**PX104...-F6..**Output flange
Flangia uscita**PX104...BR..**Reaction Arm
Braccio di reazione**PX104A...**Single shaft
Albero lento semplice



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges		Output Shaft 	Ratios code
							AC	AD		
							284/6 TC	324/6 TC		
274	6.39	50	10824	2.0	102.2	22127			392914	01
250	7.00	50	11854	2.0	98.9	23454			392913	02
205	8.55	50	14476	1.7	85.6	24782			392911	03
175	10.01	50	16949	1.7	83.6	28322			302914	04
160	10.97	50	18563	1.5	76.3	28322			302913	05
131	13.39	50	22669	1.3	66.4	30093			302911	06
111	15.71	50	26601	1.2	58.2	30978			222914	07
102	17.21	50	29133	1.1	56.2	32748			222913	08
83	21.02	50	35578	1.0	49.8	35403			222911	09
74	23.73	40	32140	1.1	45.2	36288			162914	10
67	25.99	40	35199	1.1	43.2	38058			162913	11
63	27.93	40	37828	1.0	40.2	38058			142914	12
57	30.59	40	41428	1.0	38.5	39828			142913	13
55	31.74	30	32239	1.2	37.1	39828			162911	14
46.8	37.36	30	37944	1.0	31.5	39828			142911	15
42.3	41.37	30	42022	0.9	28.4	39828			102914	16
38.6	45.31	25	38351	1.0	26.0	39828			102913	17
31.6	55.33	25	46835	0.9	21.3	39828			102911	18

The dynamic efficiency is **0.94** for all ratios

Motor Flanges Available
Flange Motore Disponibili

 B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

 C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit **X113** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore tipo **X113** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso.
Tab.1 per oli e quantità consigliati.
Tab.2 carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño **X113** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio					
B3	B6	B7	B8	V5	V6	V8
475.1 oz	281.6 oz	545.5 oz	510.3 oz	774.3 oz	457.5 oz	Ask
SHELL Omala S2 GX 460				ENI Blasias 460		

For all details on lubrication and plugs check our website

tab. 1

Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

RADIAL AND AXIAL LOADS

Output shaft

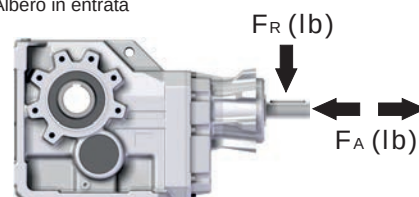
Albero di uscita



n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	472	2360	140	697	3484	70	944	4721
250	584	2922	120	728	3642	40	1259	6295
200	674	3372	85	809	4046	15	1798	8992

Input shaft

Albero in entrata

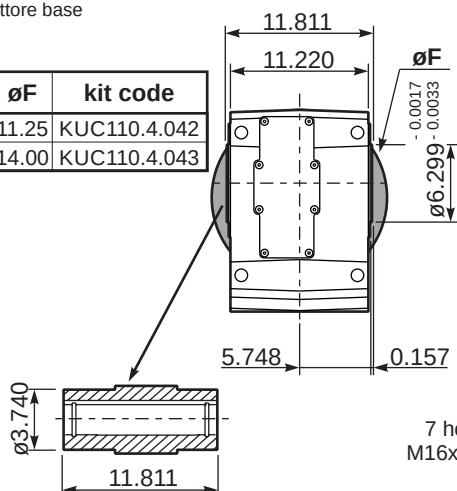
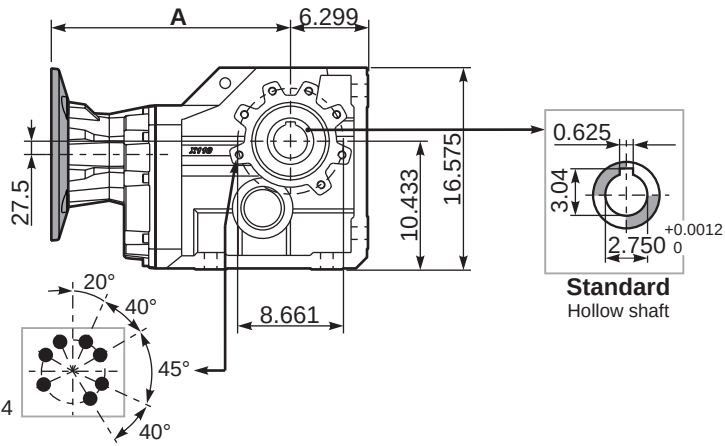
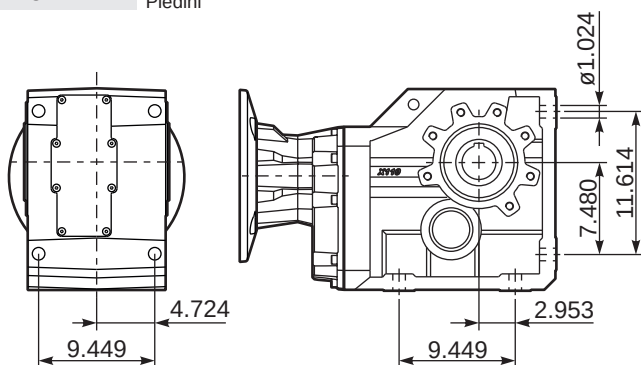
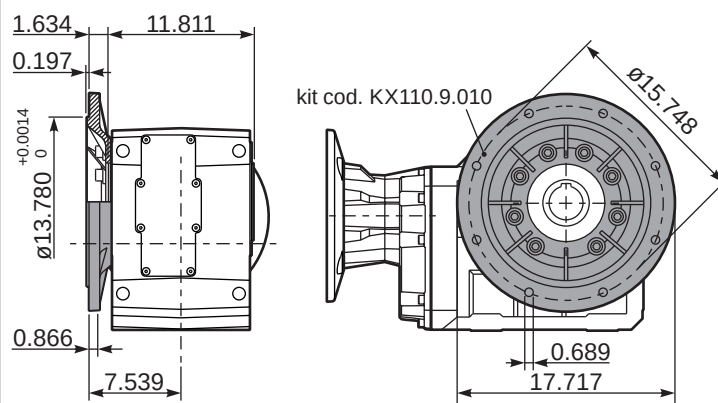


n_1	FA	FR
1750	252	1259
1140	274	1371

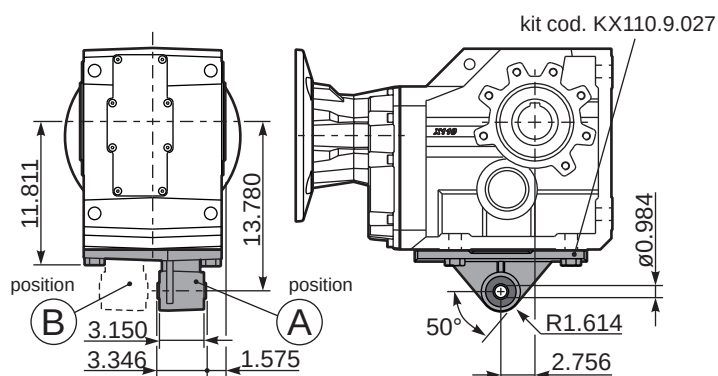
tab. 2

PX113C...Basic Gearbox
Riduttore baseGearbox
weight
peso riduttore**377 lb**

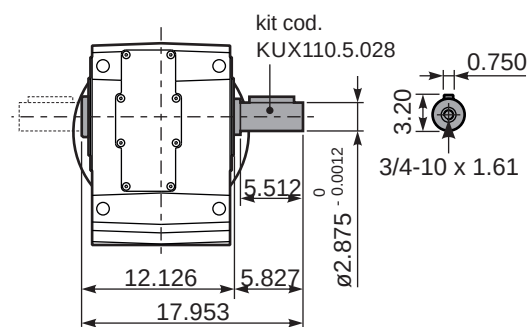
Nema flanges	A	ØF	kit code
284/6TC	19.48	11.25	KUC110.4.042
324/6TC	19.48	14.00	KUC110.4.043

7 holes
M16x1.024Mounting holes position
Posizione fori di montaggioStandard
Hollow shaft**PX113...FB..**Feet
Piedini**PX113...-F7..**Output flange
Flangia uscita

kit cod. KX110.9.010

PX113...BR..Reaction Arm
Braccio di reazione

kit cod. KX110.9.027

PX113A...Single shaft
Albero lento semplicekit cod.
KUX110.5.028



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges			Output Shaft 	Ratios code 
							-Y	AA	AB		
							182/4TC	213/5TC	254/6TC		
36.0	48.57	20	32185	1.2	24.75	39828				30142911	01
25.6	68.43	15	34015	1.2	17.95	40713				20142914	02
23.3	74.95	15	37252	1.1	16.39	40713				20142913	03
18.9	92.53	10	30660	1.3	13.28	40713				16142914	04
17.3	101.33	10	33578	1.2	12.13	40713				16142913	05
14.5	120.33	10	39871	1.0	10.21	40713				13142914	06
14.1	123.75	10	41005	1.0	9.71	39828				16142911	07
13.3	131.78	10	43665	0.9	9.32	40713				13142913	08
11.9	147.28	7.5	36602	1.1	8.34	40713				11142914	09
10.8	161.30	7.5	40086	1.0	7.62	40713				11142913	10
8.9	196.98	5	32635	1.2	6.10	39828				11142911	11
8.2	212.99	5	35287	1.2	5.77	40713				8142914	12
7.5	233.26	5	38646	1.1	5.27	40713				8142913	13
6.1	284.86	3	28317	1.4	4.22	39828				8142911	14

The dynamic efficiency is **0.92** for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit **X114** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore tipo **X114** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso. Tab.1 per oli e quantità consigliati. Tab.2 carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño **X114** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio					
						
B3	B6	B7	B8	V5	V6	V8
510.3 oz	299.2 oz	580.7 oz	563.1 oz	809.5 oz	510.3 oz	Ask
SHELL Omala S2 GX 460				ENI Blasias 460		

For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

tab. 1

RADIAL AND AXIAL LOADS

Output shaft

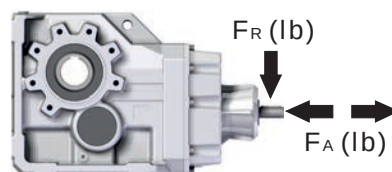
Albero di uscita



n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	472	2360	140	697	3484	70	944	4721
250	584	2922	120	728	3642	40	1259	6295
200	674	3372	85	809	4046	15	1798	8992

Input shaft

Albero in entrata



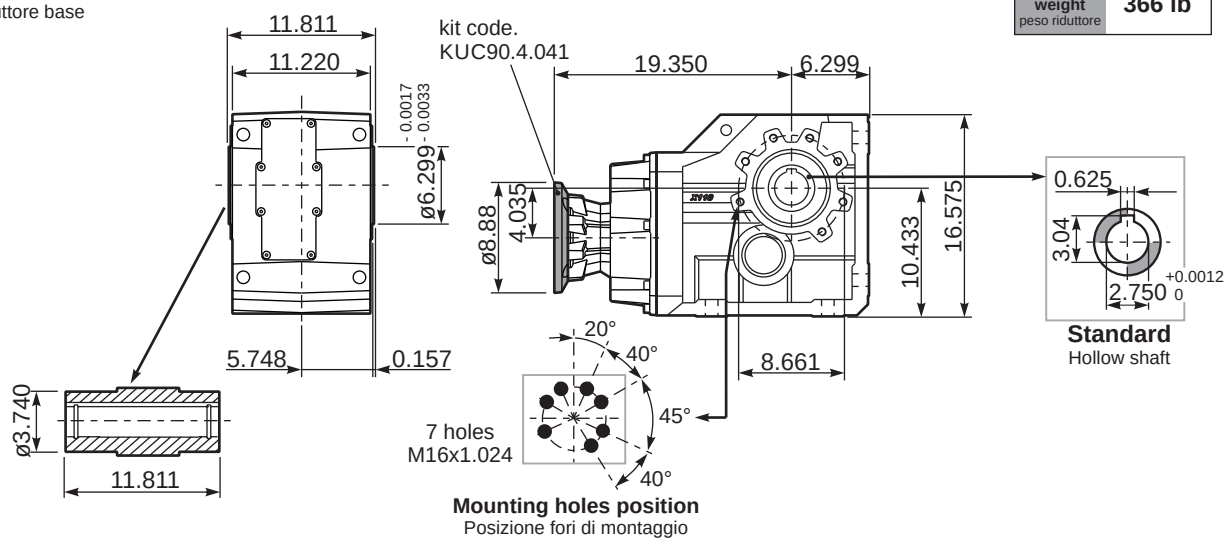
n_1	FA	FR
1750	157	787
1140	189	944

tab. 2

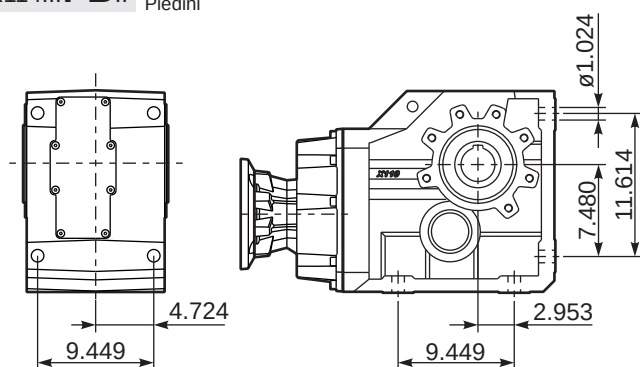
PX114C...

Basic Gearbox
Riduttore baseGearbox
weight
peso riduttore

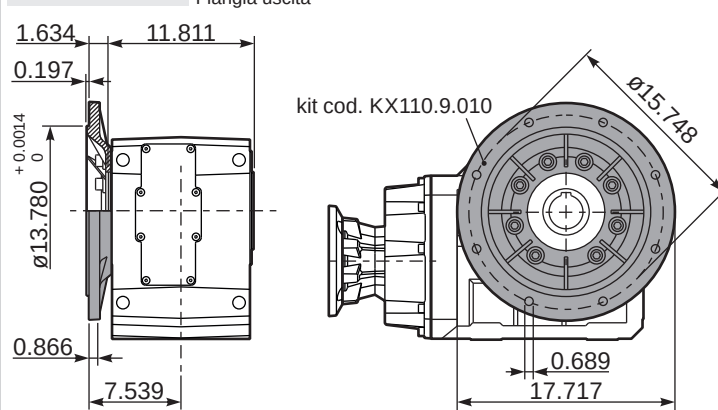
366 lb



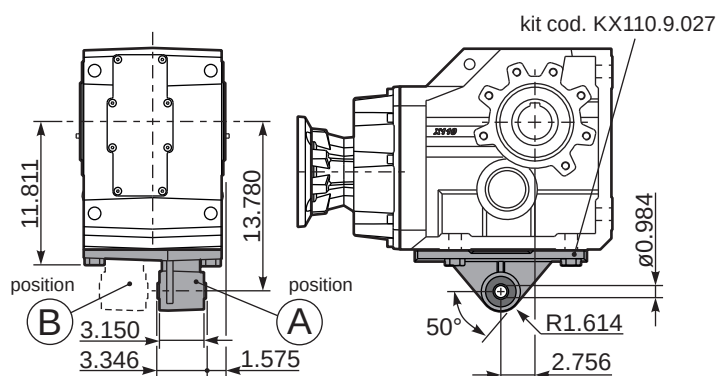
PX114...FB..

Feet
Piedini

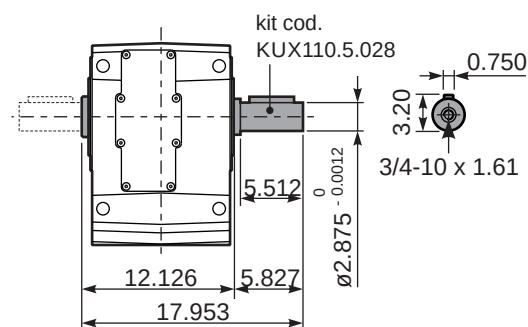
PX114...-F7..

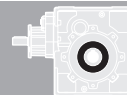
Output flange
Flangia uscita

PX114...BR..

Reaction Arm
Braccio di reazione

PX114A...

Single shaft
Albero lento semplice



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges				Output Shaft 	Ratios code
							-W	-X	-Y	AA		
							56C	143/5TC	182/4TC	213/5TC		
220	7.94	10	2689	1.3	12.51	3363					302418	01
192	9.13	10	3091	1.1	11.17	3452					302416	02
164	10.66	10	3609	1.0	10.06	3629					302414	03
117	14.97	10	5067	1.0	10.13	5133					202418	04
102	17.21	7.5	4369	1.2	9.12	5310					202416	05
86	20.24	7.5	5138	1.2	8.72	5974					162418	06
75	23.27	7.5	5908	1.0	7.58	5974					162416	07
67	26.31	5	4455	1.3	6.71	5974					132418	08
58	30.25	5	5122	1.2	5.83	5974					132416	09
49.5	35.32	5	5979	1.0	5.00	5974					132414	10
47.3	37.03	5	6269	1.0	4.76	5974					112416	11
40.5	43.23	3	4391	1.4	4.08	5974					112414	12
37.6	46.58	3	4731	1.3	3.79	5974					82418	13
32.7	53.55	3	5439	1.1	3.30	5974					82416	14
28.0	62.52	3	6350	0.9	2.82	5974					82414	15
23.7	73.75	2	4994	1.0	2.06	5133					62416	16
20.3	86.09	2	5830	1.0	2.05	5974					62414	17

The dynamic efficiency is **0.94** for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit **113C** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore **113C** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño **113C** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

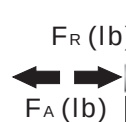
Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio					
B3	B6	B7	B8	V5	V6	V8
140.78 oz	91.51 oz	91.51 oz	91.51 oz	181.25 oz	77.43 oz	Ask
SHELL Omala S4 WE 320				ENI Telium VSF 320		

For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

tab. 1

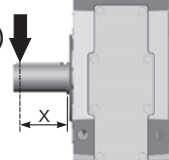
RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



$$F_{eq} = F_R \cdot \frac{6.89}{X+5.30}$$

F_{eq} (lb)



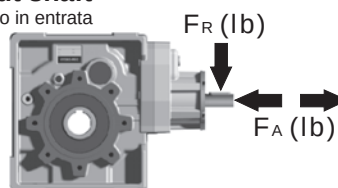
n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	144	719	140	193	967	70	243	1214
250	157	787	120	202	1012	40	292	1461
200	166	831	85	225	1124	15	414	2068

On request reinforced bearings to increase loads.

A richiesta cuscinetti rinforzati per aumentare i carichi.

Input shaft

Albero in entrata

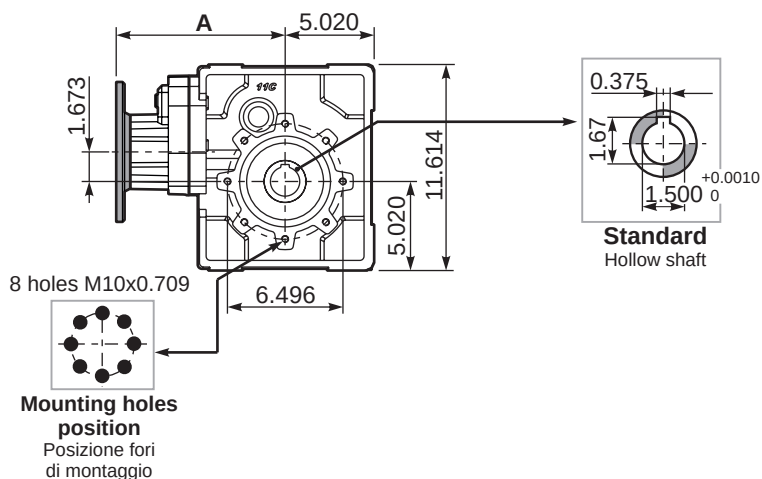
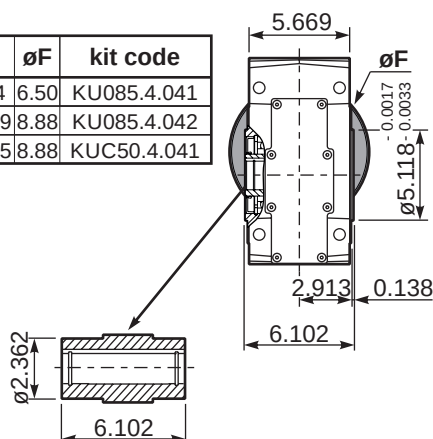
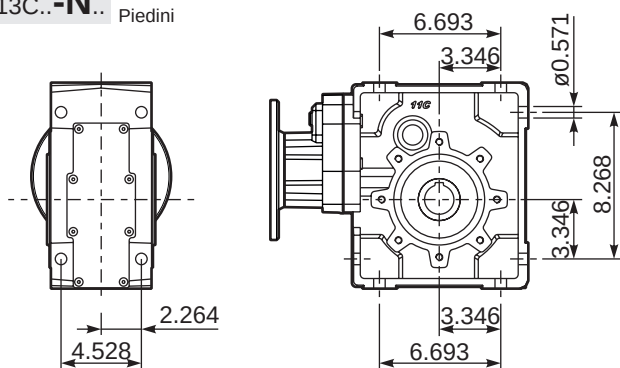
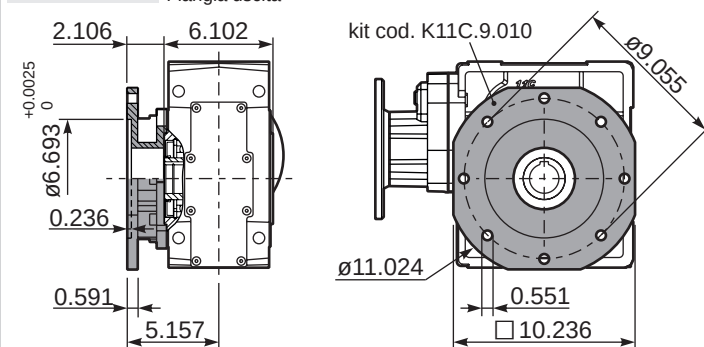
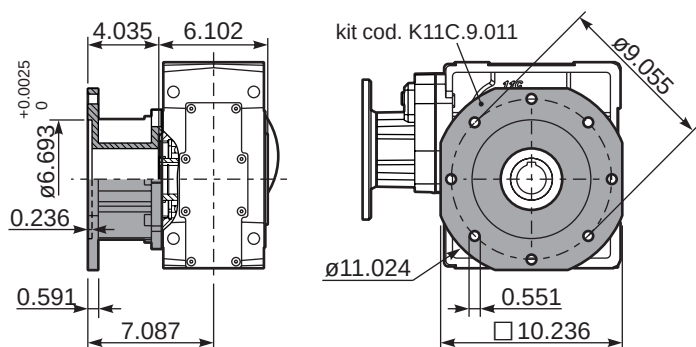
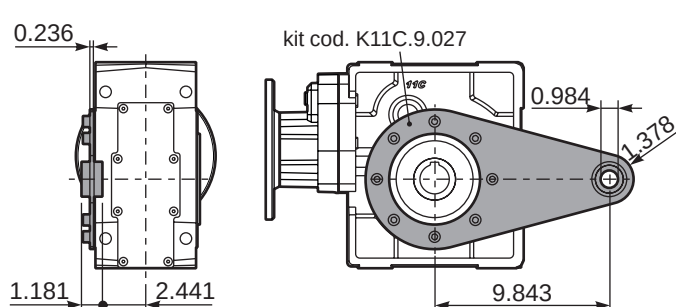
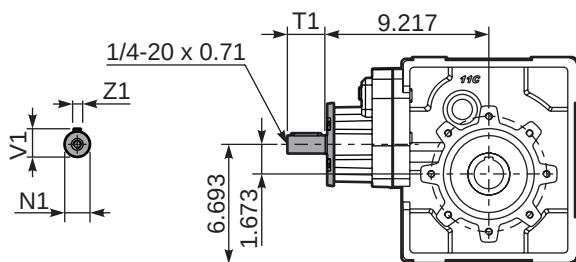


n_1	FA	FR
1750	101	506
1140	112	562

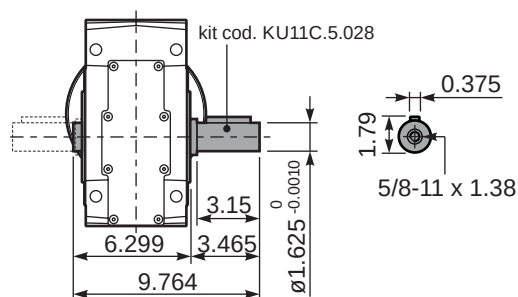
tab. 2

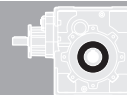
P113CC...Basic Gearbox
Riduttore baseGearbox
weight
peso riduttore**83.8 lb**

Nema flange	A	øF	kit code
56C-143/5TC	9.724	6.50	KU085.4.041
182/4TC	10.429	8.88	KU085.4.042
213/5TC	10.945	8.88	KUC50.4.041

**P113C..-N..**Feet
Piedini**P113C-FC..**Output flange
Flangia uscita**P113C-FL..**Output flange
Flangia uscita**P113C BR..**Reaction Arm
Braccio di reazione**R113C...**Input shaft
Albero in entrata

Nema flanges	N1	T1	V1	Z1	kit code
Standard	0.875	1.97	0.96	0.188	KC50.5.070U
On request	0.750	1.97	0.83	0.188	KC50.5.069U

P113C..A..Single shaft
Albero lento semplice



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges			Output Shaft 	Ratios code
							-W	-X			
							56C	143/5 TC			
23.4	74.79	2	4956	1.2	2.41	5974					01
20.4	85.99	2	5699	1.0	2.10	5974					02
17.6	99.66	1.5	4954	1.2	1.81	5974					03
15.0	116.35	1.5	5783	1.0	1.55	5974					04
14.4	121.45	1.5	6037	1.0	1.48	5974					05
12.5	139.64	1	4627	1.3	1.29	5974					06
11.5	152.21	1	5043	1.2	1.18	5974					07
10.7	163.02	1	5402	1.1	1.11	5974					08
9.8	177.69	1	5888	1.0	1.01	5974					09
8.5	205.95	0.75	5118	1.2	0.88	5974					10
7.9	222.52	0.75	5530	1.1	0.81	5974					11
7.0	248.76	0.75	6182	1.0	0.72	5974					12
6.0	290.41	0.5	4812	1.2	0.62	5974					13
5.2	337.39	0.5	5590	1.1	0.53	5974					14
4.4	393.88	0.5	6526	0.9	0.46	5974					15
4.0	440.33	0.33	4815	1.2	0.41	5974					16
3.4	514.06	0.33	5621	1.1	0.35	5974					17
3.0	581.44	0.25	4817	1.2	0.31	5974					18
2.6	678.79	0.25	5623	1.1	0.27	5974					19

The dynamic efficiency is **0.92** for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit **114C** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore **114C** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño **114C** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio					
B3	B6	B7	B8	V5	V6	V8
144.30 oz	95.03 oz	95.03 oz	95.03 oz	186.53 oz	82.71 oz	Ask
SHELL Omala S4 WE 320				ENI Telium VSF 320		

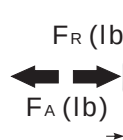
For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

tab. 1

RADIAL AND AXIAL LOADS

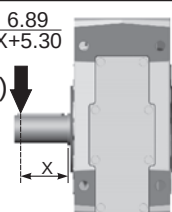
Output shaft

Albero di uscita



$$F_{eq} = F_R \cdot \frac{6.89}{X+5.30}$$

F_{eq} (lb)



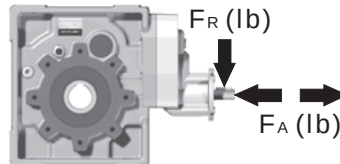
n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	144	719	140	193	967	70	243	1214
250	157	787	120	202	1012	40	292	1461
200	166	831	85	225	1124	15	414	2068

On request reinforced bearings to increase loads.

A richiesta cuscinetti rinforzati per aumentare i carichi.

Input shaft

Albero in entrata

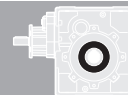


n_1	FA	FR
1750	90	450
1140	99	495

tab. 2

83.8 lb

**Mounting holes
position**
Posizione fori
di montaggio



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges				Output Shaft  standard ø1.625	Ratios code 
							-W	-X	-Y	AA		
							56C	143/5TC	182/4TC	213/5TC		
181	9.69	10	3280	2.0	20.38	6682					302418	01
158	11.09	10	3756	1.6	16.02	6019					302416	02
136	12.90	10	4369	1.6	16.01	6992					302414	03
96	18.26	10	6181	1.3	13.38	8273					202418	04
84	20.91	10	7079	1.3	12.50	8851					202416	05
72	24.32	10	8233	1.1	10.75	8851					202414	06
62	28.27	7.5	7178	1.2	9.25	8851					162416	07
53	32.88	7.5	8349	1.1	7.95	8851					162414	08
47.6	36.76	7.5	9334	0.9	7.11	8851					132416	09
40.9	42.76	5	7238	1.2	6.11	8851					132414	10
38.9	45.00	5	7617	1.2	5.81	8851					112416	11
33.4	52.33	5	8859	1.0	5.00	8851					112414	12
30.8	56.82	3	5771	1.3	3.91	7523					82418	13
26.9	65.07	3	6609	1.3	3.92	8629					82416	14
23.1	75.68	3	7687	1.2	3.45	8851					82414	15
19.5	89.61	2	6067	1.0	2.07	6284					62416	16
16.8	104.22	2	7057	1.0	2.06	7258					62414	17

The dynamic efficiency is 0.94 for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit 133C is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore tipo 133C è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso.
Tab.1 per oli e quantità consigliati.
Tab.2 carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño 133C se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos.
La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

						
B3	B6	B7	B8	V5	V6	V8
211.17 oz	151.34 oz	151.34 oz	116.14 oz	260.44 oz	109.10 oz	Ask
SHELL Omala S2 GX 460				ENI Blasias 460		

For all details on lubrication and plugs check our website

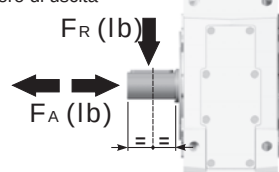
tab. 1

Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

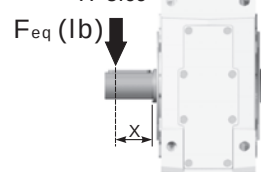
RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita



$$F_{eq} = F_R \cdot \frac{7.28}{X+5.69}$$



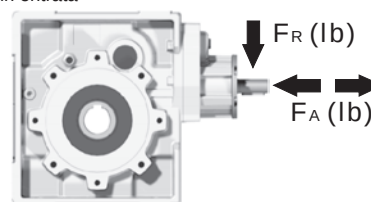
n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	180	899	140	252	1259	70	315	1574
250	202	1012	120	270	1349	40	382	1911
200	216	1079	85	292	1461	15	540	2698

On request reinforced bearings to increase loads.

A richiesta cuscinetti rinforzati per aumentare i carichi.

Input shaft

Albero in entrata

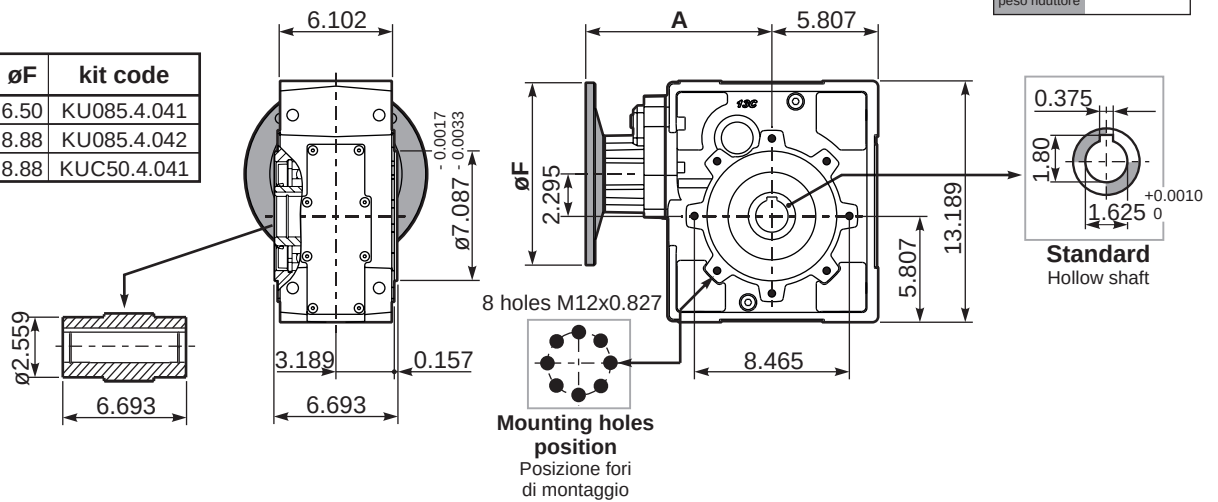
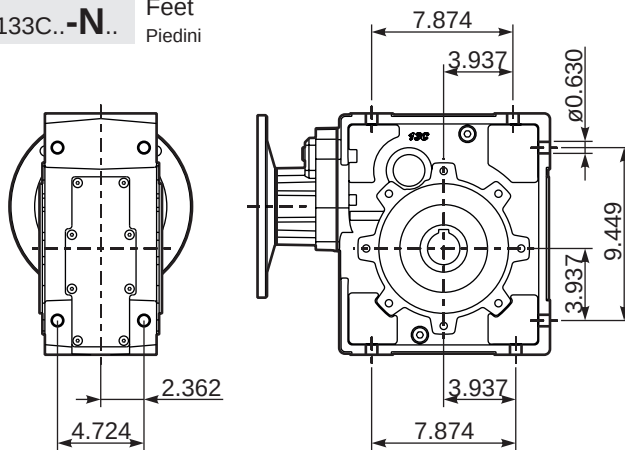
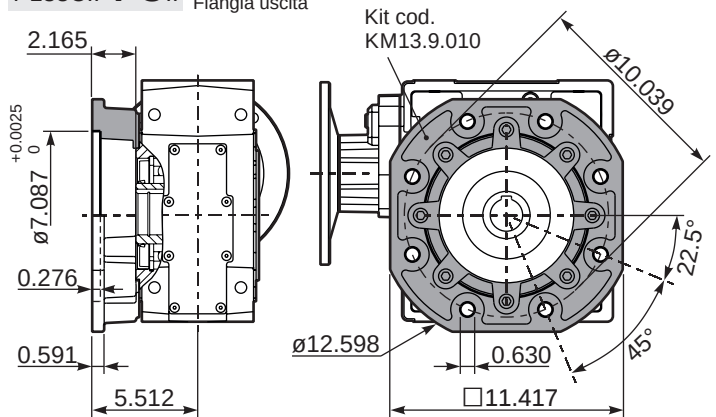
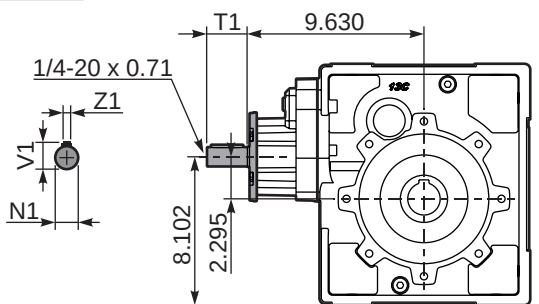


n_1	FA	FR
1750	101	506
1140	112	562

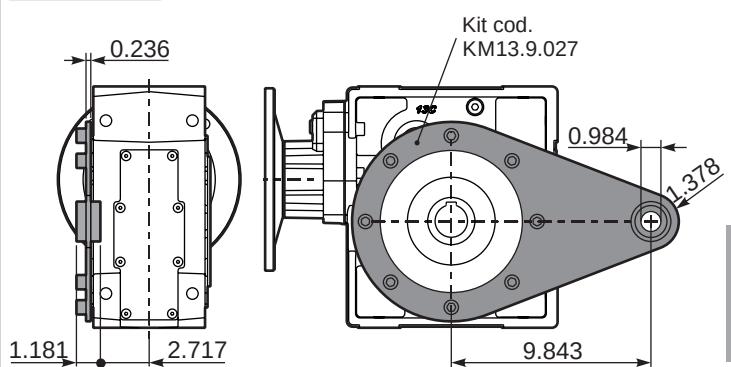
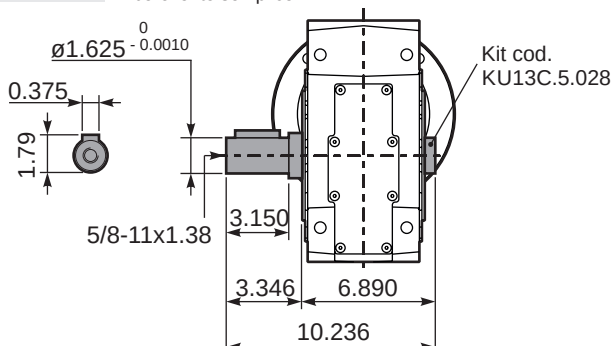
tab. 2

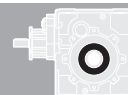
P133CC...Basic gearbox
Riduttore baseGearbox weight
peso riduttore **117.9 lb**

Nema flange	A	øF	kit code
56C-143/5TC	10.138	6.50	KU085.4.041
182/4TC	10.843	8.88	KU085.4.042
213/5TC	11.359	8.88	KUC50.4.041

**P133C..-N..**Feet
Piedini**P133C..-FC..**Output flange
Flangia uscita**R133C...**Input Shaft
Albero in entrata

Nema flanges	N1	T1	V1	Z1	kit code
Standard	0.875	1.97	0.96	0.188	KC50.5.070U
On request	0.750	1.97	0.83	0.188	KC50.5.069U

P133CBR..Reaction arm
Braccio di reazione**P133C..A..**Single output Shaft
Albero lento semplice



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1750 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [HP]	Output torque M_{2M} [lb in]	Service factor f.s.	Nominal power P_{1R} [HP]	Nominal torque M_{2R} [lb in]	Available NEMA motor flanges		Output Shaft standard Ø1.625	Ratios code
							-W	-X		
							56C	143/5 TC		
19.2	91.23	2	6046	1.5	2.93	8851			19132418	01
16.7	104.48	2	6924	1.3	2.56	8851			19132416	02
14.5	121.10	2	8025	1.1	2.21	8851			17132416	03
12.4	140.84	1.5	7001	1.3	1.90	8851			17132414	04
10.6	165.32	1.5	8217	1.1	1.62	8851			15132414	05
9.5	184.94	1.5	9192	1.0	1.44	8851			19082416	06
8.9	197.34	1.5	9808	0.9	1.35	8851			13132414	07
8.1	215.10	1	7127	1.2	1.24	8851			19082414	08
7.6	231.60	1	7674	1.2	1.15	8851			10132416	09
7.0	249.31	1	8261	1.1	1.07	8851			17082414	10
6.5	269.37	1	8926	1.0	0.99	8851			10132414	11
6.0	292.64	0.75	7273	1.2	0.91	8851			15082414	12
5.8	302.26	0.75	7512	1.2	0.88	8851			9132416	13
5.0	349.30	0.75	8681	1.0	0.76	8851			13082414	14
4.4	399.12	0.5	6613	1.3	0.67	8851			7132416	15
3.7	476.80	0.5	7900	1.1	0.56	8851			10082414	16
2.8	622.28	0.33	6805	1.3	0.43	8851			9082414	17
2.1	821.70	0.25	6807	1.3	0.33	8851			7082414	18

The dynamic efficiency is 0.92 for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit 134C is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.

I Il riduttore tipo 134C è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso.
Tab.1 per oli e quantità consigliati.
Tab.2 carichi radiali e assiali applicabili al riduttore.

E El reductor tamaño 134C se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

B3	B6	B7	B8	V5	V6	V8
214.69 oz	154.86 oz	154.86 oz	119.66 oz	263.96 oz	112.62 oz	Ask
SHELL Omala S2 GX 460				ENI Blasias 460		

For all details on lubrication and plugs check our website

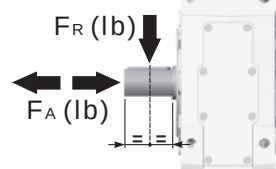
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

tab. 1

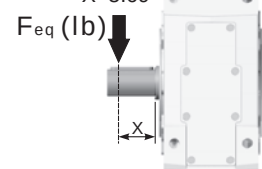
RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita



$$F_{eq} = F_R \cdot \frac{7.28}{X+5.69}$$



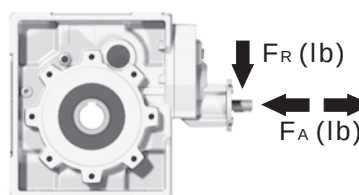
n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	180	899	140	252	1259	70	315	1574
250	202	1012	120	270	1349	40	382	1911
200	216	1079	85	292	1461	15	540	2698

On request reinforced bearings to increase loads.

A richiesta cuscinetti rinforzati per aumentare i carichi.

Input shaft

Albero in entrata



n_1	FA	FR
1750	90	450
1140	99	495

tab. 2

Quotations:

Unless differently agreed, the validity of all quotations is 2 months. The quotations are provided according the RFQ (request for quotation) which shall contain the complete and detailed specification of the Product, the correctness of which is fully under responsibility of RFQ applicant.

Orders:

Only official orders issued on the Customer's letter-head are accepted. The Order Confirmation (OC) is issued within 2 working days from the order receipt unless the Products configuration issues arise. The OC shall be confirmed in writing within 2 working days from the OC date and in all its parts the product code and description, quantities and price, other specific information, if any. The OC is considered confirmed by tacit approval in case no written confirmation is provided by the Customer.

Production time:

An average production time for the standard Products is 3-4 weeks and 2-3 weeks for kits from the OC confirmation date and/or payment receipt in case of advanced payment term. For some configurations of the standard Products the production time can be different and shall be advised in the quotation and/or in any case in OC. In the period of Christmas holidays and August holidays the days of company closure are excluded from the abovementioned production term.

Delivery terms:

FCA Sovizzo, Italy (Incoterms 2016)

Packaging:

The products are packed in wooden boxes as a standard packaging. Europallets can be also used on request. The prices and details of the packaging are indicated in the apposite section of the Price List.

Payment terms:

The payment should be performed in terms indicated in the invoice and by wire transfer.

Prices:

The prices are indicated in the invoice and intended ex-works, unless differently specified, and do not include any kind of taxes, shipment or other type of costs.

Standard Products orders cancellation:

Modification or cancellation of the orders is accepted only if notified to Hydro-Mec S.p.A. in writing and not later than 3 days from the Order Confirmation and in any case before the production of the ordered Products is launched.

Special execution of customized products:

The Products that are not included in the catalogue or configurations of the products that can not be realized using catalogue, options and accessories brochure and/or online configurator (www.cleangeartech.com) are considered Customized Products.

(a) Hydro-Mec S.p.A. is entitled to examine feasibility of Special Execution of Customized Products and define the minimum quantity, production time and eventually other special sales and production conditions issuing thereafter a Special Execution Quotation that shall be confirmed by the Customer in writing.

(b) Once the Quotation is confirmed, Hydro-Mec S.p.A. shall realize a Special Execution (SE) data sheet with its unique code for each Customized product. The SE data sheet shall be confirmed in full and in writing by The Customer.

(c) The production time of SE is definitely settled by Hydro-Mec S.p.A. and notified to the Customer after the SE data sheet confirmation. As a rule, the production time for SE of Customized products is longer than standard.

(d) The orders of Special Execution of Customized products can not be cancelled unless special written agreement is made before the production of SE is launched.

WARRANTY Conditions:

(a) Warranty period is 12 months form the shipment date.

(b) Warranty period could be extended to 18 months prior written agreement of the parties and in any case excluding wearable parts.

(c) Warranty covers only manufacturing defects. Wearable parts (for example, oil seals or lubricants leakages caused by normal wear) and failures due to the wrong assembling by the Customer are not covered by warranty.

(d) This warranty is also void in any case in which the products have been misused, used in improper environment conditions, configured beyond design limits indicated in the catalogue (especially service factor, loads and type of motors) or damaged, even accidentally or whenever installation instructions have not been strictly followed and in case of any natural disasters, in case of negligence of the Customer and the end user.

(e) The Customer is fully responsible to assure the compatibility of applications and correct mechanical couplings and electrical connections with the specifications of the Products according to Hydro-Mec S.p.A. catalogues and technical documentation

(f) The liability of Hydro-Mec S.p.A. is strictly limited to the above-stated obligations and it is therefore clearly agreed that Hydro-Mec S.p.A. take on no responsibility for any damage to persons and/or property deriving from accidents of any nature that may occur during use of the Products, whether the warranty is confirmed or otherwise, also in cases of the choice of the Product configuration being recommended by Hydro-Mec S.p.A.

WARRANTY Procedure:

(a) The Customer shall fill in the COMPLAINT FORM and forward it to Hydro-Mec S.p.A. along with other relevant information.

(b) Hydro-Mec S.p.A. examines the COMPLAINT FORM and confirms or declines the warranty.

(c) Hydro-Mec S.p.A. has the right to ask the Customer to send the malfunctioning product to Hydro-Mec S.p.A. for further examination. In case the warranty is not confirmed the Product will be shipped back to the Customer at the Customer expense. If the warranty is confirmed, Hydro-Mec S.p.A. shall compensate the shipment costs to the Customer within the limits of the best shipment quotation.

(d) In case the warranty is confirmed the Products shall be substituted at Hydro-Mec S.p.A. expense using ordinary shipment procedure. The express shipment can be used prior the agreement of the parties.

(e) In case the Product can not be substituted Hydro-Mec S.p.A. shall reimburse the value of the Product by issuing of Credit Note or in any other way agreed by the Parties.

WARNING (Please Read Carefully):

The following WARNING and CAUTION information is supplied to you for your protection and to provide you with many years of trouble free and safe operation of your product. Read ALL instructions prior to operating reducer. Injury to personnel or reducer failure may be caused by improper installation, maintenance or operation.

- (a) Written authorization is required to operate or use reducers in man lift or people moving devices.
- (b) Check to make sure that certain applications do not exceed the allowable load capacities published in the current catalog.
- (c) Buyer shall be solely responsible for determining the adequacy of the product for any and all uses to which Buyer shall apply the product. The application by Buyer shall not be subject to any implied warranty of fitness for a particular purpose.
- (d) For safety, Buyer or User should provide protective guards over all shaft extensions and any moving apparatus mounted thereon. The User is responsible for checking all applicable safety codes in his area and providing suitable guards. Failure to do so may result in bodily injury and/or damage to equipment.
- (e) Gearboxes operating in high position should have a protective shield for any possible parts falling down for casual accidents where people are moving under them.
- (f) Hot oil and reducers can cause severe burns. Use extreme care when removing lubrication plugs and vents.
- (g) Make certain that the power supply is disconnected before attempting to service or remove any components. Lock out the power supply and tag it to prevent unexpected application power.
- (h) Reducers are not to be considered fail safe or self-locking devices. If these features are required, a properly sized, independent holding device should be utilized. Reducers should not be used as a brake.
- (i) Any brakes that are used in conjunction with a reducer must be sized or positioned in such a way so as to not subject the reducer to loads beyond the catalog rating.
- (l) Lifting supports including eyebolts are to be used for vertically lifting the gearbox only and not other associated attachments or motors.
- (m) Use of an oil with an EP additive on units with backstops may prevent proper operation of the back-stop. Injury to personnel, damage to the reducer or other equipment may result.
- (n) Overhung loads subject shaft bearings and shafts to stress which may cause premature bearing failure and or shaft breakage from bending fatigue, if not sized properly.

Our company will not be responsible for any direct or indirect damages, caused by a wrong use of the products or for not observing the catalogue/web indication.

1) Definizioni

1.1 Ai fini delle presenti condizioni generali di vendita (di seguito denominate “Condizioni di Vendita”), i seguenti termini avranno il significato di seguito ad essi attribuito:

- “HM”: Hydro-Mec S.p.A.;
- “Cliente”: qualunque società, ente o entità giuridica che acquisti i Prodotti di HM da quest’ultima;
- “Prodotti”: i beni prodotti, assemblati e/o venduti da HM;
- “Ordine/i”: ciascuna proposta di acquisto dei Prodotti inoltrata dal Cliente ad HM esclusivamente tramite e-mail, fax o web;
- “Vendita/e”: ciascun contratto di vendita concluso tra HM e il Cliente a seguito del ricevimento da parte del Cliente dell’accettazione scritta dell’Ordine da parte di HM;

2) Scopi

2.1 Le presenti Condizioni di Vendita si applicano a tutte le Vendite di Prodotti. Nel caso di contrasto tra le condizioni e i termini di cui alle presenti Condizioni di Vendita e le condizioni e i termini pattuiti nella singola Vendita, quest’ultimi prevarranno. HM non sarà vincolata da condizioni generali di acquisto del Cliente (di seguito, “CGA”), neanche nell’ipotesi in cui si faccia loro riferimento o siano contenute negli ordini o in qualsiasi altra documentazione di provenienza del Cliente, senza il preventivo consenso scritto di HM. Le CGA non saranno vincolanti per HM neppure per effetto di tacito consenso.

2.2 HM si riserva il diritto di aggiungere, modificare o eliminare qualsiasi previsione delle presenti Condizioni di Vendita, restando inteso che tali aggiunte, modifiche o cancellazioni si applicheranno a tutte le Vendite concluse a partire dal trentesimo giorno successivo alla notifica al Cliente delle nuove Condizioni di Vendita.

3) Ordini e Vendite

3.1 Il Cliente dovrà inoltrare a HM Ordini specifici contenenti la descrizione dei Prodotti, la quantità richiesta, il prezzo ed i termini richiesti per la consegna.

3.2 La Vendita dovrà ritenersi conclusa: (i) nel momento in cui il Cliente riceva da parte di HM una conferma scritta (tale conferma potrà essere inviata via e-mail, fax o mezzi telematici) conforme ai termini e alle condizioni dell’Ordine (ii) o, nel caso in cui il Cliente riceva da parte di HM una conferma scritta contenente termini difforni da quelli contenuti nell’Ordine, decorsi tre giorni lavorativi dalla data di ricezione della conferma contenente termini difforni senza che nel suddetto periodo pervenga a HM contestazione scritta da parte del Cliente; (iii) o, in assenza di conferma scritta da parte di HM, nel momento in cui i Prodotti saranno consegnati al Cliente.

3.3 Gli Ordini regolarmente accettati da HM non potranno essere annullati dal Cliente senza il consenso scritto di HM.

4) Prezzo dei Prodotti

4.1 I prezzi dei Prodotti saranno quelli indicati nel listino prezzi di HM in vigore al momento dell'inoltro dell'Ordine da parte del Cliente o, qualora il Prodotto non sia inserito nel listino prezzi o il listino prezzi non sia disponibile, quelli indicati nell'Ordine e confermati per iscritto da HM al momento dell'accettazione dell'Ordine. Eccetto quanto diversamente concordato per iscritto tra le parti, i predetti prezzi saranno calcolati franco fabbrica, al netto dell'IVA e degli sconti. Tali prezzi non comprendono i costi di imballaggio, spedizione e trasporto dai locali di HM a quelli del Cliente. Tali costi dovranno essere sostenuti separatamente dal Cliente.

4.2 HM manterrà la proprietà dei Prodotti fino alla completa corresponsione del prezzo degli stessi. Il Cliente dovrà compiere tutti gli adempimenti richiesti dalle leggi locali al fine di rendere valida ed eseguibile nei confronti di tutti i terzi la presente clausola di riserva della proprietà anche operando l'iscrizione in ogni apposito registro, ove localmente richiesto.

5) Termini di consegna

5.1 Eccetto quanto eventualmente diversamente concordato per iscritto tra le parti, HM consegnerà i prodotti franco fabbrica presso i propri stabilimenti, così come questo termine è definito negli INCOTERMS 2010 pubblicati dalla Camera di Commercio internazionale nella loro versione più aggiornata, in vigore al momento della consegna. Se richiesto, HM si occuperà del trasporto dei Prodotti a rischio, costi e spese del Cliente.

5.2 La consegna dovrà avvenire entro il termine indicato nell'Ordine come accettato nella conferma d'ordine. I termini di consegna sono indicativi e non sono termini essenziali ai sensi dell'art. 1457 del Codice Civile e, in ogni caso, non includono i tempi di trasporto.

5.3 Salvo quanto previsto dal precedente art. 5.2, HM non sarà considerata responsabile dei ritardi o della mancata consegna ascrivibili a circostanze che siano fuori dal suo controllo, quali a titolo meramente esemplificativo e senza pretesa di esaustività:

- a) dati tecnici inadeguati o imprecisioni o ritardi del Cliente nella trasmissione a HM di informazioni o dati necessari alla spedizione dei Prodotti;
- b) difficoltà nell'ottenere rifornimenti delle materie prime;
- c) problemi legati alla produzione o alla pianificazione degli ordini;
- d) scioperi parziali o totali, mancanza di energia elettrica, calamità naturali, misure imposte dalle autorità pubbliche, difficoltà nel trasporto, cause di forza maggiore, disordini, attacchi terroristici e tutte le altre cause di forza maggiore;
- e) ritardi da parte dello spedizioniere.

5.4 Il verificarsi di alcuni degli eventi sopra elencati non darà diritto al Cliente di richiedere il risarcimento degli eventuali danni o indennizzi di alcun genere.

6) Trasporto

6.1 Eccetto quanto eventualmente diversamente concordato per iscritto tra le parti, il trasporto avverrà sempre a spese e rischio del Cliente. Nel caso in cui a HM, ai sensi dell'art. 5.1, venga richiesto di occuparsi del trasporto dei Prodotti, HM sceglierà il mezzo di trasporto che riterrà più appropriato in mancanza di specifiche istruzioni del Cliente.

7) Pagamenti

7.1 Salvo diverso accordo scritto tra le parti, HM emetterà le fatture al momento della consegna dei Prodotti.

7.2 Il mancato pagamento nel tempo concordato darà diritto a HM di chiedere al Cliente il pagamento degli interessi scaduti al tasso stabilito dal Decreto Legislativo n. 231/02.

7.3 Il mancato pagamento o il ritardo nei pagamenti superiore a 30 giorni daranno a HM il diritto di sospendere la consegna dei Prodotti e risolvere ogni singola Vendita sottoscritta. La sospensione della consegna dei Prodotti o la risoluzione delle Vendite non darà il diritto al Cliente di pretendere alcun risarcimento dei danni.

7.4 Ogni reclamo relativo ai Prodotti e/o alla consegna dei medesimi non potrà in alcun caso giustificare la sospensione o il ritardo nel pagamento.

8) Non-conformità

8.1 Qualsiasi difformità dei Prodotti consegnati al Cliente rispetto al tipo ed alla quantità indicata nell'Ordine dovrà essere denunciata per iscritto a HM entro cinque giorni dalla data di consegna. Qualora la denuncia non venga comunicata entro il predetto termine, i Prodotti consegnati verranno considerati come conformi a quelli ordinati dal Cliente.

9) Garanzia

9.1 Salvo diverso accordo scritto tra le parti, HM garantisce che i Prodotti sono esenti da vizi/difetti (con esclusione di quelle parti dei Prodotti che non sono prodotte da HM) per un periodo di 12 mesi decorrente dalla data di consegna dei medesimi al Cliente.

9.2 La garanzia non opererà con riferimento a quei Prodotti i cui difetti sono dovuti a

- danni causati durante il trasporto;
- un uso negligente o improprio degli stessi;
- inosservanza delle istruzioni di HM relative al funzionamento, manutenzione ed alla conservazione dei Prodotti;
- riparazioni o modifiche apportate dal Cliente o da soggetti terzi senza la previa autorizzazione scritta di HM.

9.3 A condizione che il reclamo del Cliente sia coperto dalla garanzia e notificato nei termini di cui al presente articolo, HM si impegnerà, a sua discrezione, a sostituire o riparare ciascun Prodotto o le parti di questo che presentino vizi o difetti.

9.4 Il Cliente dovrà denunciare per iscritto a HM, la presenza di vizi o difetti entro 8 giorni dalla consegna dei Prodotti se si tratta di vizi o difetti palesi, oppure, entro 8 giorni dalla scoperta in caso di vizi o difetti occulti o non rilevabili da una persona di media diligenza.

9.5 I Prodotti oggetto di denuncia dovranno essere immediatamente inviati presso la fabbrica di HM, o in qualsiasi altro luogo che quest'ultima indicherà di volta in volta, a costi e spese a carico del Cliente salvo diverso accordo tra le parti, al fine di consentire a HM l'espletamento dei necessari controlli. La garanzia non copre danni e/o difetti dei Prodotti derivanti da anomalie causate da, o connesse a, parti assemblate/aggiunte direttamente dal Cliente o dal consumatore finale. Qualora, nell'ambito della presente garanzia, un Prodotto o un componente difettoso venisse sostituito, la proprietà del Prodotto o del componente sostituito sarà ritrasferita dal Cliente a HM.

9.6 In ogni caso il Cliente non potrà far valere i diritti di garanzia verso HM se il prezzo dei Prodotti non sia stato corrisposto alle condizioni e nei termini pattuiti, anche nel caso in cui la mancata corresponsione del prezzo alle condizioni e nei termini pattuiti si riferisca a Prodotti diversi da quelli per i quali il Cliente intende far valere la garanzia.

9.7 HM non riconosce alcuna garanzia circa la conformità dei Prodotti alle norme e ai regolamenti di Paesi che non rientrano o non appartengono all'Unione Europea. Nessun'altra garanzia, espressa o implicita, quale, a titolo esemplificativo, la garanzia di buon funzionamento o di idoneità per uno scopo specifico, è concessa con riferimento ai Prodotti.

9.8 Senza pregiudizio a quanto indicato nel precedente art. 9.3 e salvo il caso di dolo o colpa grave, HM non sarà responsabile per qualsivoglia danno derivante e/connesso ai vizi dei Prodotti. In ogni caso, HM non sarà ritenuto responsabile per danni indiretti o consequenziali di qualsiasi natura quali, a titolo esemplificativo, le perdite derivanti dall'inattività del Cliente o il mancato guadagno.

10) Diritti di Proprietà Intellettuale

10.1 I Diritti di Proprietà Intellettuale sono di totale ed esclusiva proprietà di HM e la loro comunicazione o utilizzo nell'ambito delle presenti Condizioni di Vendita non crea, in relazione ad essi, alcun diritto o pretesa in capo al Cliente. Il Cliente si obbliga a non compiere alcun atto incompatibile con la titolarità dei Diritti di Proprietà Intellettuale.

11) Clausola risolutiva espressa

11.1 HM avrà facoltà di risolvere, ai sensi e per gli effetti dell'art. 1456 del Codice Civile Italiano, in qualsiasi momento mediante comunicazione scritta da inviare al Cliente, la singola Vendita nel caso di inadempimento delle obbligazioni previste dagli articoli: 4 (Prezzo dei Prodotti); 7 (Pagamenti); 10 (Diritti di Proprietà Intellettuale).

12) Mutamento nelle condizioni patrimoniali del Cliente

12.1 HM avrà diritto a sospendere l'adempimento delle obbligazioni derivanti dalla Vendita dei prodotti, in base all'art. 1461 del Codice Civile Italiano, nel caso in cui le condizioni patrimoniali del Cliente divenissero tali da porre in serio pericolo il conseguimento della controprestazione salvo che sia prestata idonea garanzia.

13) Domicilio legale, legge applicabile e giurisdizione

13.1 HM è legalmente domiciliata presso la sua sede principale.

13.2 Le Condizioni di Vendita e ogni singola Vendita saranno regolate e interpretate in conformità alla Legge Italiana.

13.3 Tutte le controversie derivanti da o connesse alle presenti Condizioni di Vendita e/o ad ogni Vendita saranno soggette alla esclusiva giurisdizione del Tribunale di Vicenza.

13.4 Salvo quanto pattuito nel precedente art. 13.3, HM si riserva il diritto, quando promotore di una azione legale in qualità di attore, di promuovere tale azione nel luogo di residenza del Cliente.

14) ATTENZIONE (Leggere attentamente):

Le seguenti raccomandazioni sono fondamentali per la vostra protezione e per garantirvi molti anni di sicuro funzionamento del vostro prodotto senza alcun problema.

Leggere attentamente tutte le istruzioni prima di azionare il riduttore. L'inappropriata installazione, manutenzione o funzionamento del riduttore può causare incidenti al personale addetto e danni al riduttore stesso.

14.1 E' richiesta autorizzazione scritta per azionare riduttori in ascensori o dispositivi per il movimento delle persone.

14.2 Controllare che alcune applicazioni non eccedano la massima capacità di carico ammessa pubblicata in questo catalogo.

14.3 L'acquirente è l'unico responsabile per la determinazione dell'adeguatezza del prodotto per qualcuna o tutte le utilizzazioni che l'acquirente stesso farà del riduttore. L'applicazione dell'acquirente non potrà essere soggetta ad alcuna implicita garanzia di montaggio per uno scopo particolare.

14.4 Per ragioni di sicurezza l'acquirente dovrà provvedere a porre protezioni adeguate su tutta la lunghezza dell'albero a tutti gli organi in movimento. L'utilizzatore è responsabile del controllo di tutti i codici di sicurezza e la predisposizione di protezioni adeguate. In assenza di tali precauzioni si possono verificare incidenti alle persone e danni agli apparati.

14.5 Su riduttori installati in posizioni elevate utilizzare protezioni adeguate per qualsiasi distacco accidentale di parti nel caso di passaggio di persone al di sotto.

14.6 Olio e riduttori bollenti possono causare gravi ustioni. Usare estrema cautela nella rimozione dei tappi e delle ventole.

14.7 Assicurarsi che la corrente di alimentazione sia scollegata prima di riparare o rimuovere alcun componente. Chiudere l'alimentazione e contrassegnare tale operazione per evitare accensioni accidentali.

14.8 I riduttori non devono essere considerati esenti da guasti o a bloccaggio automatico. Se sono indispensabili queste caratteristiche, deve essere utilizzato un dispositivo indipendente della dimensione adatta. I riduttori non devono essere utilizzati come freni.

14.9 Qualsiasi freno sia utilizzato insieme al riduttore deve essere della giusta grandezza e posizionato in modo da non causare carichi eccessivi non previsti dai dati forniti nel catalogo.

14.10 I dispositivi di sollevamento come le golfare devono essere usati solo per sollevare verticalmente il riduttore e non altri dispositivi associati o motori.

14.11 L'utilizzo di un olio con un additivo EP su gruppi provvisti di dispositivo di arresto possono inficiare l'uso corretto del freno e provocare danni alle persone, alle cose ed al riduttore stesso nonché ad altri apparecchi.

14.12 I Carichi sospesi assoggettano i cuscinetti della vite e la vite stessa a sollecitazioni che possono causare, se non adeguatamente dimensionati, l'usura prematura dei cuscinetti e/o la rottura della vite a causa della resistenza alla flessione.

La nostra ditta non si ritiene responsabile per eventuali danni diretti o indiretti derivanti da un uso improprio dei prodotti e dalla mancata osservanza delle indicazioni riportate a catalogo o web.

HYDRO • MEC

HIGH EFFICIENCY GEARBOXES

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