

ALUMINIUM - Schneckengetriebe

Aluminum worm gearboxes

This range is



certified



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Aluminum worm gearboxes

Type <i>Tipo</i>	Torque <i>Coppia</i>	Center distance <i>Interasse</i>	Input power <i>Potenza in entrata</i>	Hollow output shaft <i>Albero cavo in uscita</i>
Z30	21 Nm	30 mm	0.06 ÷ 0.18 kW	ø14 mm
Z45	41 Nm	45 mm	0.09 ÷ 0.37 kW	ø18 mm
Z50	72 Nm	50 mm	0.12 ÷ 0.75 kW	ø25 mm
Z63	147 Nm	63 mm	0.37 ÷ 1.8 kW	ø25 mm
Z85	347 Nm	85 mm	0.55 ÷ 4.0 kW	ø35 mm



This product is:



Twin viton seals with stainless steel 316L shield.



NTT™ stands for a special surface treatment which results in modified external properties of the complete unit in order to get a smooth surface and an higher corrosion resistance.



Output shaft and hollow shaft in AISI 316L.



All stainless steel 316L hardware.



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.



Housing with special smooth surfaces.

Z30

21 nm

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Input speed (n_1) = 1400 min⁻¹

Output speed n_2 [min ⁻¹]	ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f_s	Nominal power P_{1R} [kW]	Nominal torque M_{2r} [Nm]	B5 motor flanges		B14 motor flanges		Dynamic efficiency η_d	Tooth module m [mm]	ratio code
							-	-	-O	-p			
280	5	0.18	5	3.3	0.60	17	-	-	-O	-p	rd	1.26	09
200	7	0.18	7	2.4	0.44	17	-	-	56	63	rd	1.44	01
140	10	0.18	10	1.8	0.32	17	-	-	c		rd	1.44	02
93	15	0.18	13	1.4	0.25	19	-	-	c		rd	1.44	03
70	20	0.18	17	1.1	0.20	19	-	-	c		rd	1.09	04
47	30	0.12	15	1.4	0.17	21	-	-	c		rd	1.44	05
35	40	0.12	19	1.1	0.13	20	-	-	c		rd	1.09	06
23	61	0.09	19	1.1	0.10	20	-	-	c		rd	0.72	07
17.5	80	0.06	16	1.0	0.06	16	-	-	c		rd	0.56	08
14	100	0.06*	16	0.5	0.03	8	-	-	c		rd	0.45	10

* 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

Lubrication

Lubrificazione

ø

unit Z30 is supplied with synthetic oil to assure long life lubrication.
Food grade oil is available on request.

See Table 1 for lubrication and recommended quantity.

See Table 2 for possible radial and axial loads on the gearbox.

Il riduttore tipo Z30 viene fornito con olio sintetico e lubrificazione tipo "long life".

Disponibile a richiesta olio alimentare.

Vedi Tabella 1 per oli e quantità consigliati.

Vedi Tabella 2 per i carichi radiali e assiali applicabili al riduttore.

Oil quantity for all positions: 0.025Lt.	Agip Telium VSF 320	Shell Omala S4 WE 320
Quantità olio per tutte le posizioni: 0.025Lt.		

Tab. 1

radial and axial loads

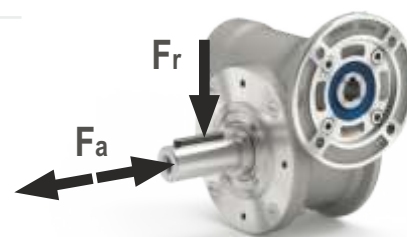
Carichi radiali e assiali

ø

Output shaft

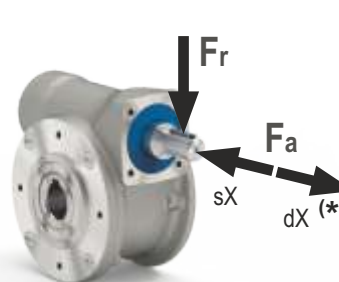
Albero di uscita

n_2 [min ⁻¹]	F_A [n]	F_R [n]
200	120	600
150	140	700
100	160	800
75	180	900
50	200	1000
25	250	1250
15	280	1400



Input shaft

Albero in entrata



n_1 [min ⁻¹]	F_A [n]	F_R [n]
1400	20	100

* Strong axial loads in the DX direction are not allowed.

* Non sono consentiti forti carichi assiali con direzione DX

Tab. 2

21
nm

Z30

1.25 kg

Aluminium

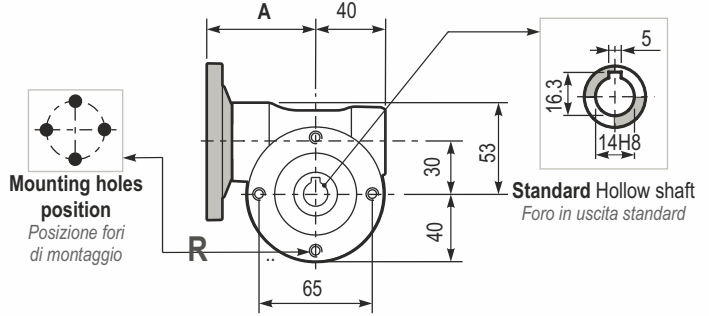
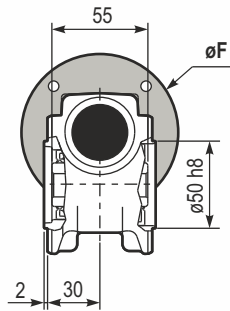
PZ30UN..

Basic gearbox
Riduttore

base

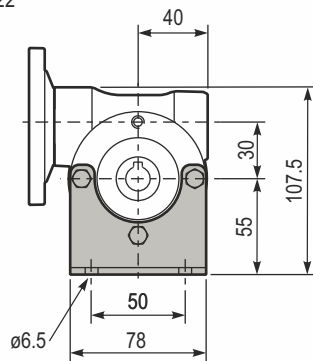
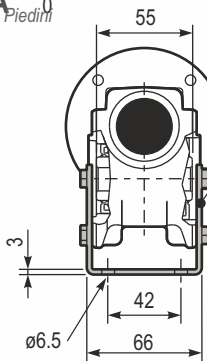
Gearbox weight
Peso riduttore

M. flanges	Kit code	øF	A
56B14	KZ304046	80	62
63B14	KZ304045	90	63

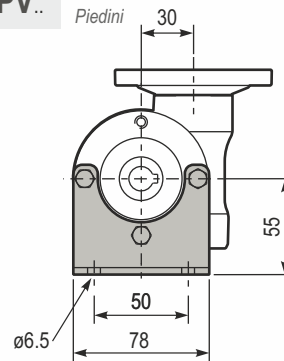


PZ30P .. A Feet
Piedini

kit cod. KIZ309022



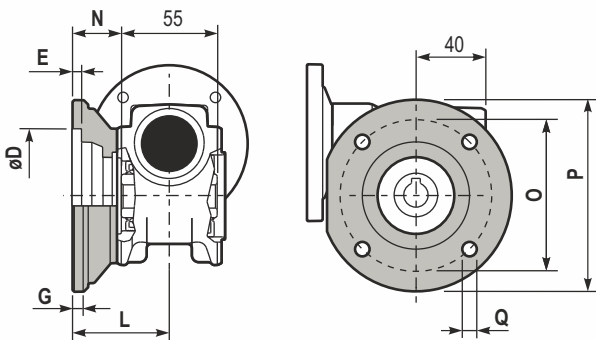
PZ3 PV.. Feet
Piedini



FC..

Output flange
Flangia

uscita cod. KIZ459027

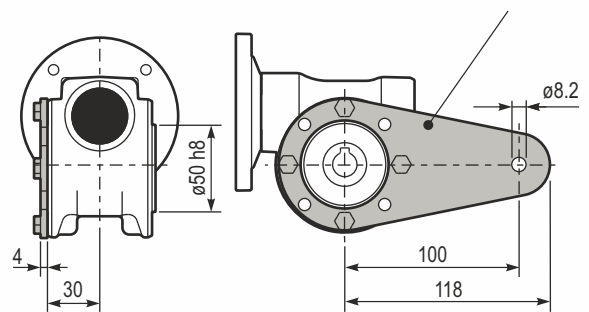


PZ3 BR..

Reaction arm
Braccio

di reazione shaft in entrata
Albero

kit

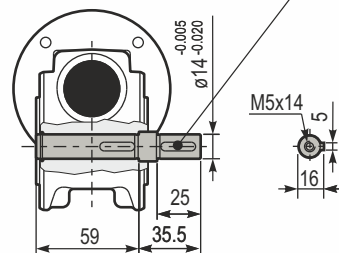


S..

Single output shaft
Albero

semplice in uscita Z30..

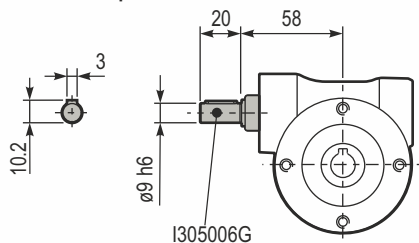
kit cod. KI0305028



Type	øD	E	G	L	N	O	P	Q	Kit code
FC	50 ^{+0.15} / _{+0.05}	6	6	50.5	23	68	80	7 0	KZ309010
FL	60 ^{+0.15} / _{+0.05}	6	6	55.5	28	87	110	8.5	KZ459010

Input

Z30UN



Z45

41 nm

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Aluminum worm gearboxes

Aluminium

Input speed (n₁) = 1400 min⁻¹

Output speed n ₂ [min ⁻¹]	ratio i	Motor power p _{1M} [kw]	Output torque M _{2M} [Nm]	Service factor f.s	Nominal power p _{1R} [kw]	Nominal torque M _{2r} [Nm]	B5 motor flanges		B14 motor flanges			Dynamic efficiency rd	Tooth module [mm]	ratio code
							-	-	-O	-p	-Q			
200	7	0.37	14	2.2	0.80	30	-	-	56	63	71	80	2.2	01
140	10	0.37	20	1.5	0.57	30	-	-	c	c		79	2.2	02
100	14	0.37	27	1.1	0.41	30	-	-	c	c		77	2.4	03
67	21	0.37	36	1.2	0.43	41	-	-	c	c		67	1.6	04
50	28	0.25	31	1.3	0.33	41	-	-	c	c		65	2.5	05
38	37	0.25	40	1.0	0.26	41	-	-	c	c		63	1.8	06
30	46	0.25	46	0.9	0.22	41	-	-	c	c		59	1.6	07
23	60	0.18	41	1.0	0.18	41	-	-	c	c		56	1.2	08
20	70	0.12	31	1.0	0.12	30	-	-	c	c		54	1.0	09
13.7	102	0.09	31	1.0	0.09	29	-	-	c	c		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

Lubrication

Lubrificazione

unit Z45 is supplied with synthetic oil to assure long life lubrication.
Food grade oil is available on request.

See Table 1 for lubrication and recommended quantity.

See Table 2 for possible radial and axial loads on the gearbox.

Il riduttore tipo Z45 viene fornito con olio sintetico e lubrificazione tipo "long life".

Disponibile a richiesta olio alimentare.

Vedi Tabella 1 per oli e quantità consigliati.

Vedi Tabella 2 per i carichi radiali e assiali applicabili al riduttore.

Oil quantity for all positions:
0.08Lt.

Quantità olio per tutte le posizioni: 0.08Lt.

Agip
Telium VSF 320

Shell
Omala S4 WE 320

Tab. 1

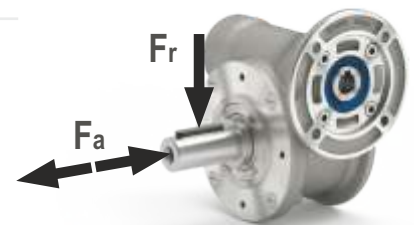
radial and axial loads

Carichi radiali e assiali

Output shaft

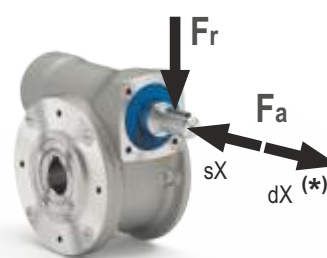
Albero di uscita

n ₂ [min ⁻¹]	F _A [n]	F _R [n]
200	180	900
150	200	1000
100	220	1100
75	240	1200
50	260	1400
25	300	1800
15	400	2000



Input shaft

Albero in entrata



n ₁ [min ⁻¹]	F _A [n]	F _R [n]
1400	42	210

* Strong axial loads in the DX direction are not allowed.

* Non sono consentiti forti carichi assiali con direzione DX

Tab. 2

41
nm

Z45

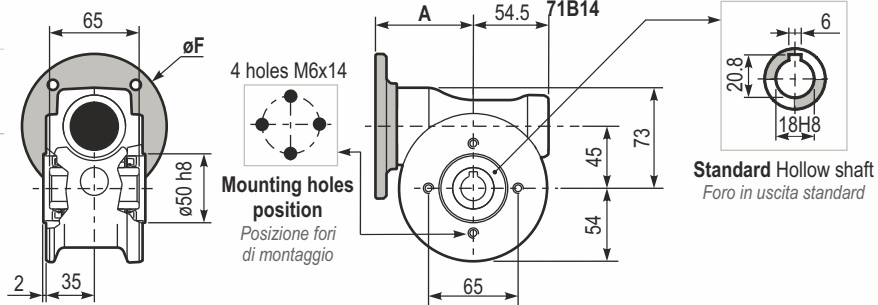
2.50 kg

Aluminium

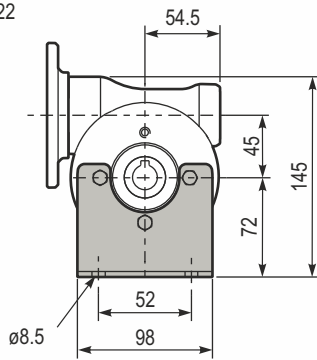
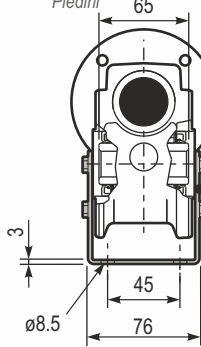
PZ45UN.. Basic gearbox
Riduttore base

Gearbox weight
Peso riduttore

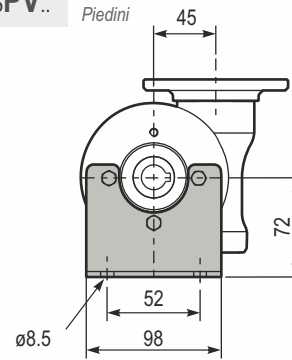
M. flanges	Kit code	øF	A
56B14	KZ454049	80	71.5
63B14	KZ454047	90	74
	KZ454045	105	71.5



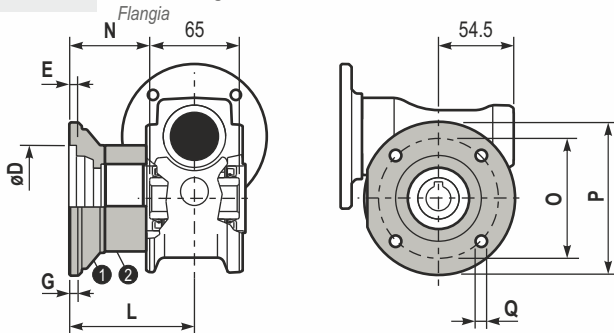
PZ45P.. A Feet
Piedini kit cod. KIZ459022



PZ45PV.. Feet
Piedini

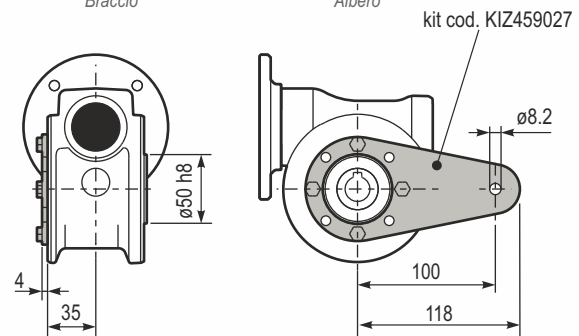


PZ45FC.. Output flange uscita

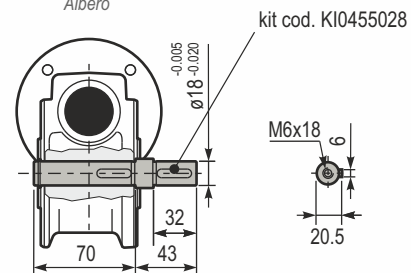


Type	øD	EG	L	N	O	P	Q	Kit code
FC	60 ^{+0.15} / _{-0.05}	9	9	60.5	28	87	110	1 KZ459010 2
FL	60 ^{+0.15} / _{-0.05}	9	9	90.5	58	87	110	1 KZ459010 2 KZ450200

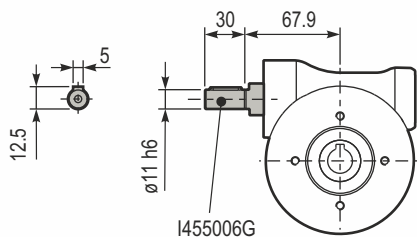
BR.. Reaction arm di reazione P output shaft semplice in uscita Z45..
Braccio Albero



S..R Input Single shaft in entrata
Albero



Z45UN



Z50

72 mm

ALUMINIUM - Schneckengetriebe

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Input speed (n_1) = 1400 min⁻¹

Output speed n_2 [min ⁻¹]	ratio i	Motor power p_{1M} [kw]	Output torque M_{2M} [Nm]	Service factor $f.s$	Nominal power p_{1R} [kw]	Nominal torque M_{2r} [Nm]	B5 motor flanges			B14 motor flanges				Dynamic efficiency η	Tooth module m [mm]	ratio code
							-	-	-	-O	-p	-Q	-r			
200	7	0.75	29	1.9	1.5	57	-	-	-	56	63	71	80	82	2.5	01
140	10	0.75	41	1.5	1.1	62	-	-	-		c			80	2.4	02
100	14	0.75	57	1.2	0.90	68	-	-	-		c			79	2.6	03
78	18	0.55	51	1.2	0.67	62	-	-	-		c			75	2.0	04
54	26	0.55	67	1.0	0.54	66	-	-	-		c			69	2.7	05
47	30	0.55	79	0.9	0.50	72	-	-	-		c			70	2.5	12
39	36	0.37	63	1.2	0.43	72	-	-	-	c	c			69	2.1	06
33	43	0.37	72	1.0	0.35	68	-	-	-	c	c			66	1.8	07
28	50	0.25	53	1.2	0.31	66	-	-	-	c	c			62	1.5	13
23	60	0.25	59	1.0	0.26	62	-	-	-	c	c			58	1.3	08
21	68	0.25	66	0.9	0.22	58	-	-	-	c	c			57	1.2	09
17.5	80	0.18	53	1.1	0.19	57	-	-	-	c	c			54	1.0	10
14	100	0.12	41	1.3	0.15	51	-	-	-	c	c			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

Lubrication

Lubrificazione

unit Z50 is supplied with synthetic oil to assure long life lubrication.

Food grade oil is available on request.

See Table 1 for lubrication and recommended quantity.

See Table 2 for possible radial and axial loads on the gearbox.

Il riduttore tipo Z50 viene fornito con olio sintetico e lubrificazione tipo "long life".

Disponibile a richiesta olio alimentare.

Vedi Tabella 1 per oli e quantità consigliati.

Vedi Tabella 2 per i carichi radiali e assiali applicabili al riduttore.

all positions:

0.12Lt.

Agip

Telium VSF 320

Shell

Omala S4 WE 320

Quantità olio per tutte le posizioni: 0.12Lt.

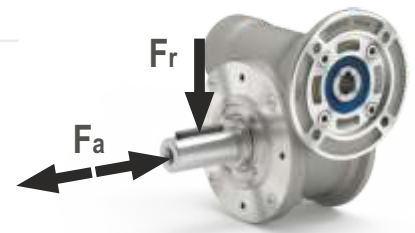
radial and axial loads

Carichi radiali e assiali

Output shaft

Albero di uscita

n_2 [min ⁻¹]	F_A [n]	F_R [n]
200	240	1200
150	280	1400
100	300	1500
75	340	1700
50	380	1900
25	480	2500
15	560	2800



Input shaft

Albero in entrata

n_1 [min ⁻¹]	F_A [n]	F_R [n]
1400	76	380

* Strong axial loads in the DX direction are not allowed.

* Non sono consentiti forti carichi assiali con direzione DX

Tab. 1

Tab. 2

72
mm

Z50

PZ50UN..

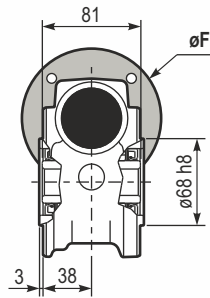
Basic gearbox
Riduttore

base

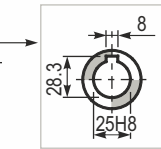
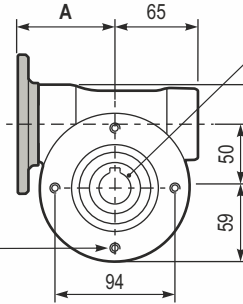
Gearbox weight
Peso riduttore

3.70 kg

M. flanges	Kit code 56B14	øF	A
63B14	KZ504049	80	76
71B14	KZ504047	90	78.5
71B14	KZ504045	105	76
80B14	KZ504046	120	76.5



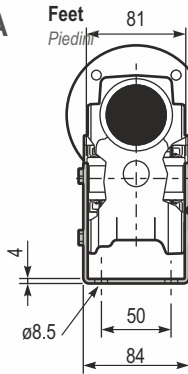
4 holes M6x9
Mounting holes
position
Posizione fori
di montaggio



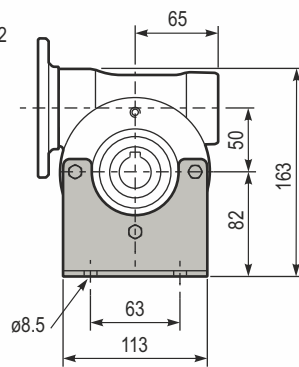
Standard Hollow shaft
Foro in uscita standard

PZ50P .. A

Feet
Piedini

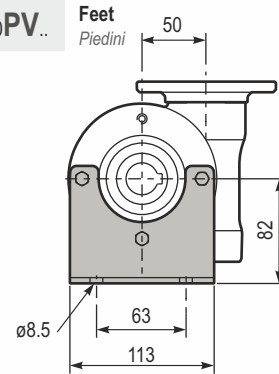


kit cod. KIZ509022



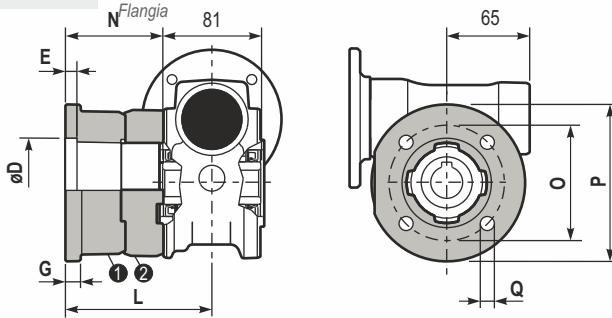
PZ50PV..

Feet
Piedini



FC

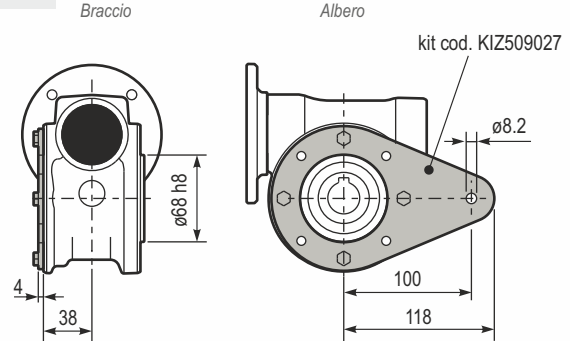
Output
flange uscita



Type	øD	E	G	L	N	O	P	Q	Kit code
FC	70 ^{+0.20} / _{+0.15}	9	12	85	44.5	90	123	10.5	● KZ509010 ● KZ509010 ● KZ500200
FL	70 ^{+0.20} / _{+0.15}	9	12	114.5	74	90	123	10.5	

BR..

Reaction
arm di reazione
P output shaft
Albero semplice in uscita Z50..

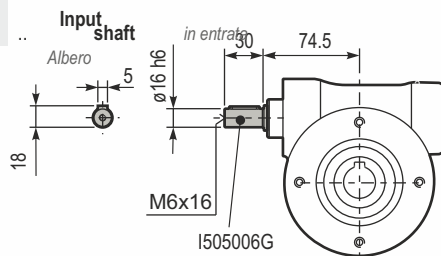


kit cod. KIZ509027

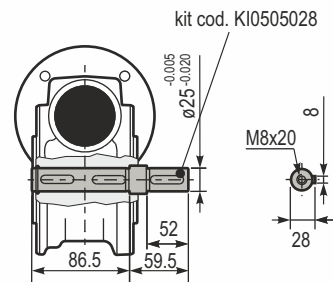
Single

S.R

Input
shaft



M6x16
I505006G



kit cod. KI0505028

Aluminium

Z63

147 nm

ALUMINIUM - Schneckengetriebe

Aluminum worm gearboxes

Input speed (n₁) = 1400 min⁻¹

Output speed n ₂ [min ⁻¹]	ratio i	Motor power P _{1M} [kw]	Output torque M _{2M} [Nm]	Service factor f.s	Nominal power P _{1R} [kw]	Nominal torque M _{2r} [Nm]	B5 motor flanges			B14 motor flanges			Dynamic efficiency rd	Tooth module [mm]	ratio code
							-	-	-	-Q	-r	-T			
200	7	1.8	71	1.8	3.2	125	-	-	-	71	80	90	83	3.1	01
140	10	1.8	99	1.4	2.4	134	-	-	-	c	c		81	3.1	02
93	15	1.5	121	1.1	1.7	138	-	-	-	c	c		79	3.1	03
74	19	1.1	111	1.2	1.4	138	-	-	-	c	c		78	2.6	04
58	24	1.1	135	1.0	1.2	142	-	-	-	c	c		75	2.0	05
47	30	1.1	167	0.9	0.96	146	-	-	-	c	c		74	3.2	06
39	36	0.75	125	1.2	0.88	147	-	-	-	c	c		68	2.7	07
35	40	0.75	135	1.0	0.78	140	-	-	-	c	c		66	2.5	13
31	45	0.55	111	1.2	0.67	135	-	-	-	c	c		66	2.1	08
23	60	0.55	140	0.9	0.51	130	-	-	-	c	c		62	1.6	12
21	67	0.55	151	0.8	0.45	124	-	-	-	c	c		60	1.5	09
17.5	80	0.37	115	1.0	0.38	119	-	-	-	c	c		57	1.3	10
14.9	94	0.37	123	1.0	0.36	119	-	-	-	c	c		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

Lubrication

Lubrificazione

unit Z63 is supplied with synthetic oil to assure long life lubrication.
Food grade oil is available on request.

See Table 1 for lubrication and recommended quantity.

See Table 2 for possible radial and axial loads on the gearbox.

Il riduttore tipo Z63 viene fornito con olio sintetico e lubrificazione tipo "long life".

Disponibile a richiesta olio alimentare.

Vedi Tabella 1 per oli e quantità consigliati.

Vedi Tabella 2 per i carichi radiali e assiali applicabili al riduttore.

all positions: 0.30Lt.	Agip Telium VSF 320	Shell Omala S4 WE 320
Quantità olio per tutte le posizioni: 0.30Lt.		

Tab. 1

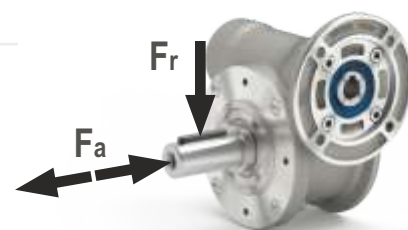
radial and axial loads

Carichi radiali e assiali

Output shaft

Albero di uscita

n ₂ [min ⁻¹]	FA [n]	FR [n]
200	360	1800
150	400	2000
100	460	2300
75	500	2500
50	600	3000
25	700	3800
15	800	4000



Input shaft

Albero in entrata

n ₁ [min ⁻¹]	FA [n]	FR [n]
1400	90	450

* Strong axial loads in the DX direction are not allowed.

* Non sono consentiti forti carichi assiali con direzione DX

Tab. 2

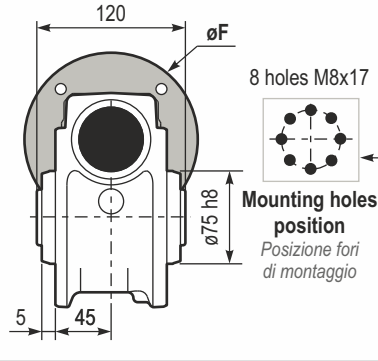
147
nm

Z63

PZ63UN.. Basic gearbox
Riduttore

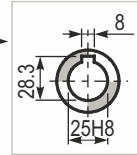
M. flanges	Kit code	øF	A
70B14	KZ634047	105	97.5
80B14	KZ634046	120	99.5
90B14	KZ634041	140	99.5

base

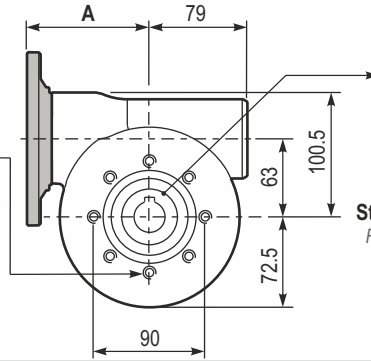


Gearbox weight
Peso riduttore

6.70 kg

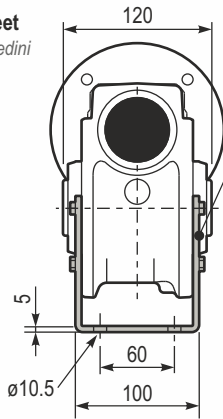


Standard Hollow shaft
Foro in uscita standard

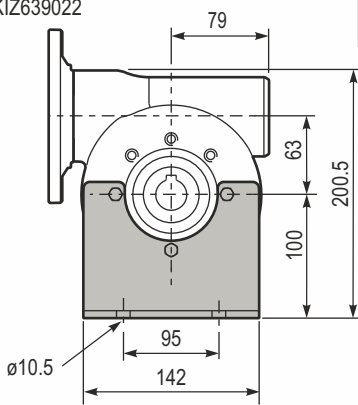


PZ63P.. A Feet

Piedini

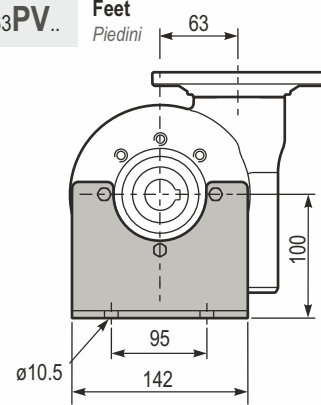


kit cod. KIZ639022



PZ63PV.. Feet

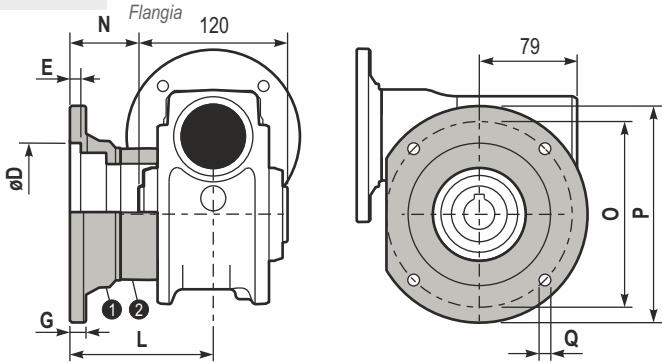
Piedini



PZ63 Output flange

Flangia

uscita



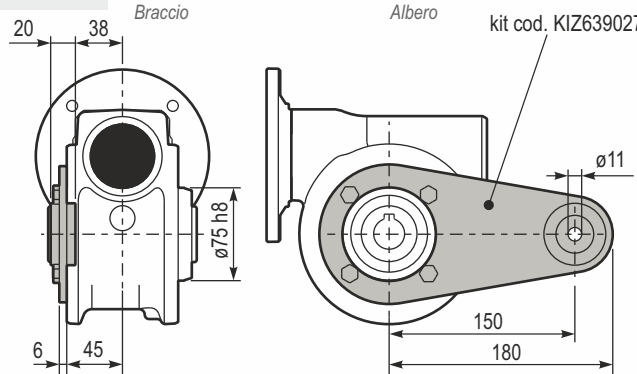
BR.. Reaction arm

Braccio

di reazione

Albero

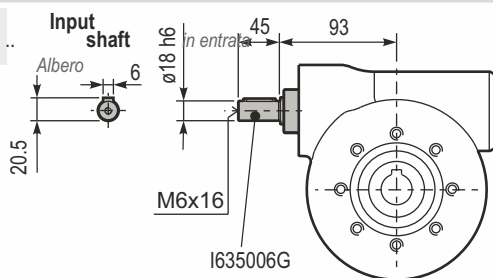
output shaft semplice in uscita Z63..



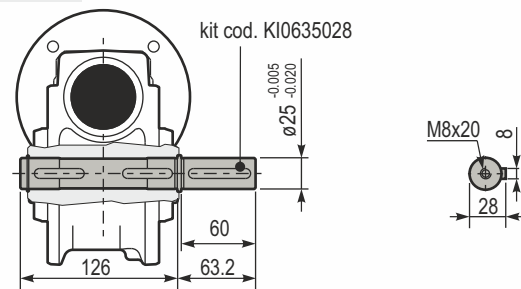
Type	øD	E	G	L	N	O	P	Q	Kit code
FC	1 ^{+0.20} / _{+0.15}	7	13	86	26	150	175	11	① KZ639010 ② - 15
FL	115 ^{+0.20} / _{+0.15}	7	13	116	56	150	175	11	① KZ639010 ② KZ630200

S.R

Input shaft



Single



Aluminium

Z85

347 Nm

ALUMINIUM - Schneckengetriebe

Aluminum worm gearboxes

Aluminium

Input speed (n_1) = 1400 min⁻¹

Output speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor $f.s$	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	B5 motor flanges			B14 motor flanges			Dynamic efficiency RD	Tooth module [mm]	Ratio code
							-	-	-	-R	-T	-U			
200	7	4.0	168	1.5	6.1	257	-	-	-	-R	-T	-U	88	4.23	01
140	10	4.0	218	1.3	5.2	284	-	-	-	80	90	100 112	80	4.2	02
100	14	3.0	223	1.4	4.1	305	-	-	-	-	-	-	78	4.5	03
70	20	2.2	237	1.2	2.7	294	-	-	-	-	-	-	79	3.4	04
64	22	2.2	258	1.1	2.5	294	-	-	-	-	-	-	78	3.1	05
50	28	2.2	315	1.1	2.4	347	-	-	-	-	-	-	75	4.7	06
37	38	1.5	276	1.2	1.8	336	-	-	-	-	-	-	71	3.5	07
30	46	1.5	320	1.0	1.5	326	-	-	-	-	-	-	68	3.1	08
27	52	1.1	258	1.1	1.2	289	-	-	-	-	-	-	66	2.7	09
21	67	1.1	327	0.9	0.97	289	-	-	-	-	-	-	65	2.1	10
18.9	74	0.75	220	1.2	0.91	268	-	-	-	-	-	-	58	1.9	11
14.6	96	0.55	191	1.3	0.70	242	-	-	-	-	-	-	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

Lubrication

Lubrificazione

Unit Z85 is supplied with synthetic oil to assure long life lubrication. Food grade oil is available on request.

See Table 1 for lubrication and recommended quantity.

See Table 2 for possible radial and axial loads on the gearbox.

Il riduttore tipo Z85 viene fornito con olio sintetico e lubrificazione tipo "long life".

Disponibile a richiesta olio alimentare.

Vedi Tabella 1 per oli e quantità consigliati.

Vedi Tabella 2 per i carichi radiali e assiali applicabili al riduttore.

all positions: 0.95Lt.	Agip Telium VSF 320	Shell Omala S4 WE 320
Quantità olio per tutte le posizioni: 0.95Lt.		

Tab. 1

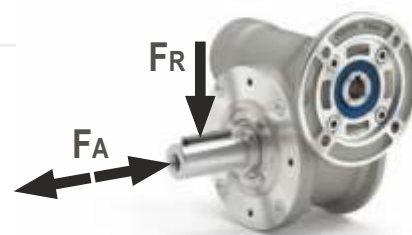
Radial and axial loads

Carichi radiali e assiali

Output shaft

Albero di uscita

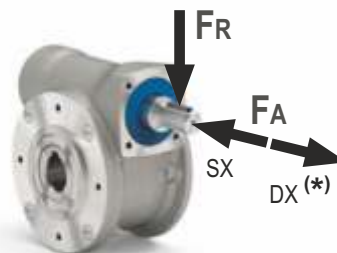
n_2 [min ⁻¹]	F_A [N]	F_R [N]
200	500	2500
150	580	2900
100	600	3000
75	700	3500
50	800	4000
25	1000	5000
15	1160	5800



Input shaft

Albero in entrata

n_1 [min ⁻¹]	F_A [N]	F_R [N]
1400	130	650



* Strong axial loads in the DX direction are not allowed.

* Non sono consentiti forti carichi assiali con direzione DX

Tab. 2

347
Nm

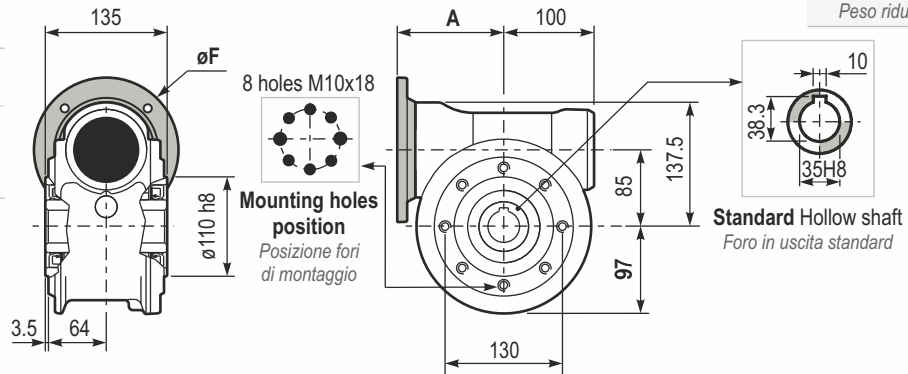
Z85

Aluminium

PZ85UN.. Basic gearbox
Riduttore base

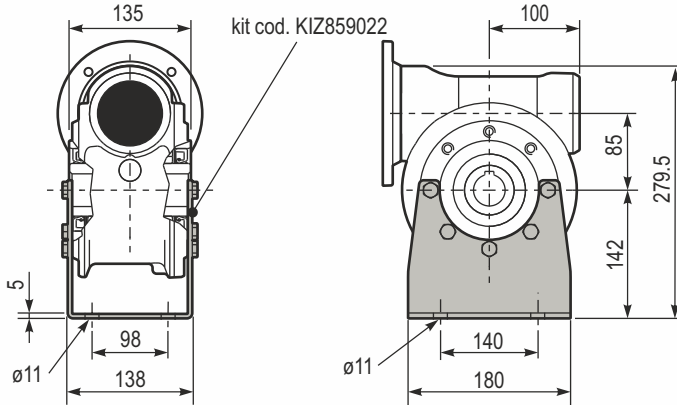
Gearbox weight
Peso riduttore 13.00 kg

M. flanges	Kit code	øF	A
80B14	KZ854046	120	118.5
90B14	KZ854045	140	118.5
100/112B14	KZ854047	160	127.5

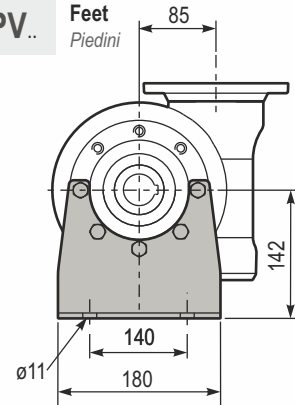


PZ85PA.. Feet
Piedini

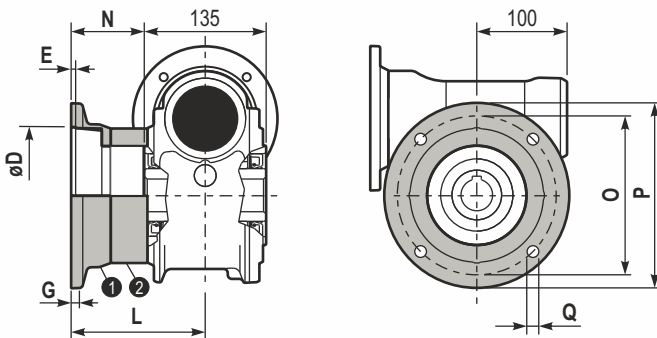
kit cod. KIZ859022



PZ85PV.. Feet
Piedini

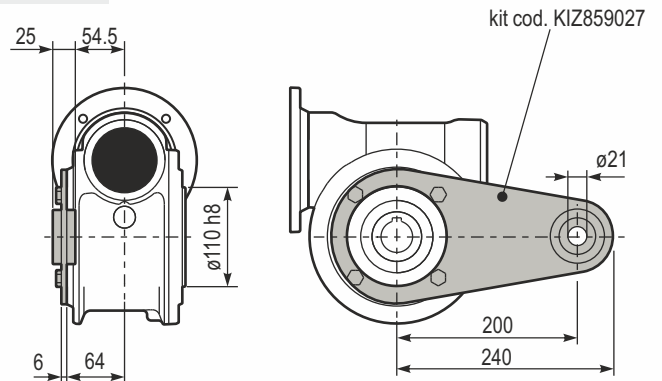


PZ85FC.. Output flange
Flangia uscita

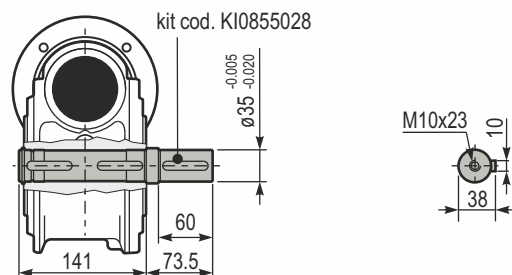


Type	øD	E	G	L	N	O	P	Q	Kit code
FC	152 ^{+0.06} / _{-0.00}	5	16	108	40.5	176	205	13	1 KZ859010 2 -
FL	152 ^{+0.06} / _{-0.00}	5	16	148.5	81	176	205	13	3 KZ859010 2 KZ850201

PZ85BR.. Reaction arm
Braccio di reazione



PZ85..S.. Single output shaft
Albero semplice in uscita



RZ85UN.. Input shaft
Albero in entrata

