

N VFN series Full stainless steel round worm gearboxes

Riduttori a vite senza fine tondo completamente in acciaio inox

Section **3**
Sezione 3

The best solution for the resistance to the corrosion. Suitable for all applications.

*La migliore soluzione per la resistenza alla corrosione.
Adatto a tutte le applicazioni.*

AISI 316L

IP66

CE















NSF
COMPONENT






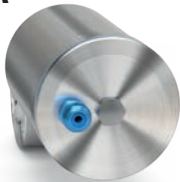



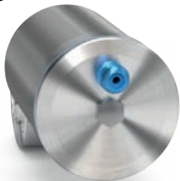



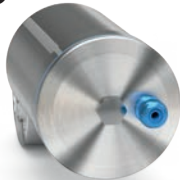


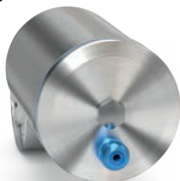
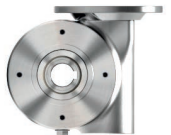
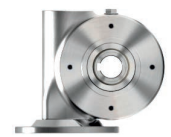
On req.
A rich.

IP69k



How to order Codifica

P	N45	UNI	N	10	0	IB	I
Type <i>Tipo</i>	Size <i>Grandezza</i>	Mounting <i>Montaggio</i>	Position <i>Posizione</i>	Ratio <i>Rapporto</i>	Hub Output shaft <i>Mozzo corona Albero uscita</i>	Diameter <i>Diametro</i>	Input / output shaft material <i>Materiale albero in entrata e uscita</i>
P  Worm gearboxes <i>Riduttori a vite senza fine</i>	N45 N50 N63 N85	UNI 	N 	See technical data table <i>Vedi tabelle dati tecnici</i>	0 Hollow <i>Mozzo</i> 	→ Standard N45 IB → ø0.750	I Stainless steel <i>Acciaio inox</i> The quill input hollow bore is always in carbon steel <i>Il foro cavo in entrata è sempre in acciaio</i>
M 		FLL 			S Solid output shaft <i>Albero in uscita</i> 	N50 ID → ø1.000 N63 IE → ø1.125" IF → ø1.250" N85 IH → ø1.500	
B 		BRI Stainless steel <i>Acciaio inox</i> 	Select L or R position for output flange <i>Selezionare la posizione L o R per la flangia in uscita</i>		L Left <i>Sinistra</i> 	Output male shaft is available only for standard bore <i>Albero maschio in uscita è disponibile solo per fori standard</i>	
		PAI Stainless steel <i>Acciaio inox</i> 	R Right <i>Destra</i> 				
		PVI Stainless steel <i>Acciaio inox</i> 					

N		C		-W		B3		UW		For M type specify terminal box position		
Protection cap <i>Coperchio di protezione</i>				Motor size <i>Grandezza motore</i>				Mounting position <i>Posizione di montaggio</i>		Input bore <i>Foro entrata</i>		<i>Per tipo M specificare posizione morsettiera</i>
Left <i>Sinistra</i>		Right <i>Destra</i>		Motor flanges <i>Flange motore</i>		B3		Standard bore <i>Foro standard</i>		A		
												
N Without protection cap <i>Senza coperchietto di protezione</i>		N Without protection cap <i>Senza coperchietto di protezione</i>		NEMA		B8		UW → $\varnothing 0.625''$ UX → $\varnothing 0.875''$ UY → $\varnothing 1.125''$		B		
				Without flange <i>Senza flangia</i>				With coupling <i>Con giunto</i>				
C Closed <i>Chiuso</i>		C Closed <i>Chiuso</i>				B6				C		
				-N → Nema				-W → $\varnothing 0.625''$ -X → $\varnothing 0.875''$ -Y → $\varnothing 1.125''$				
						B7		Ready for input coupling <i>Predisposto per giunto</i>		D		
												
						V5		-0 Type B <i>Tipo B</i>				
												
						V6						
												

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]	Ratio code
							-W 56C	- -			
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

* 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}

The nominal power should be reduced if the ambient temperature is $\geq 30^\circ\text{C}$, or when a cooler gearbox is required.

Diminuire la potenza nominale in caso di temperatura ambiente $\geq 30^\circ\text{C}$ o se è richiesta una bassa temperatura di utilizzo del riduttore.

-  **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 N45 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.

I riduttore tipo N45 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: 4.58 oz. <i>Quantità olio per tutte le posizioni: 4.58 oz.</i>	Shell <i>Omala S4 WE 320</i>	Eni <i>Telium VSF 320</i>
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Tab. 1

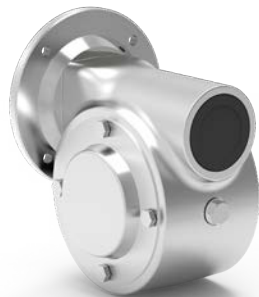
Suggested

Suggerito

Stainless steel protection cap (on request).

Coperchio di protezione in acciaio inox a richiesta.

Kit cod. KN300209



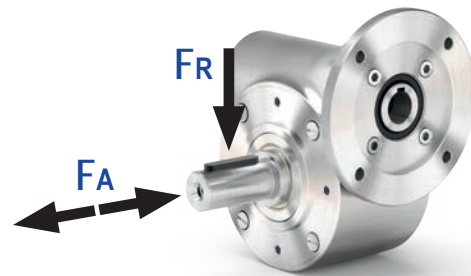
Radial and axial loads

Carichi radiali e assiali

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

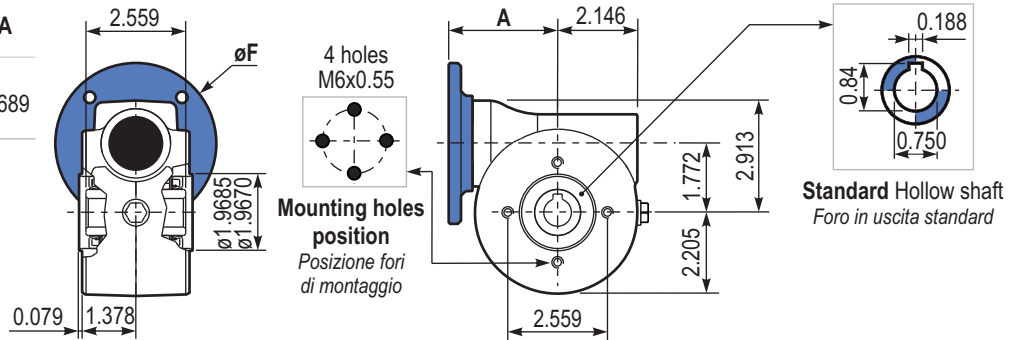


Tab. 2

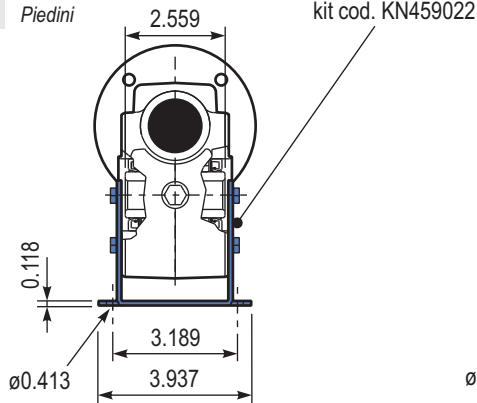
PN45**UNI**.. Basic gearbox
Riduttore base

Gearbox weight
Peso riduttore 9.04 lb

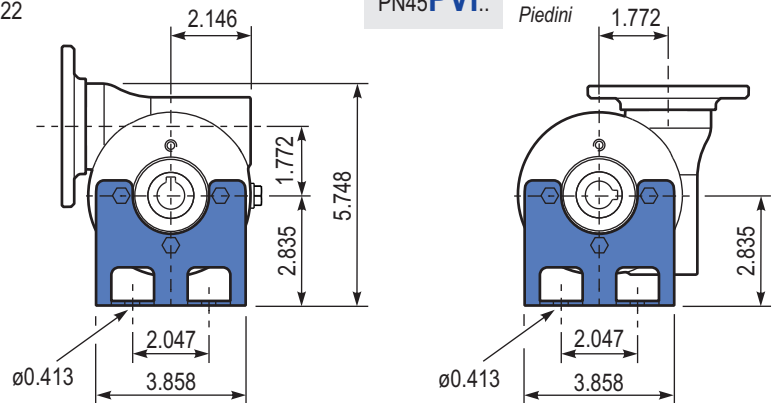
M. flanges	Kit code	øF	A
56C	KUI504041	6.5	3.689



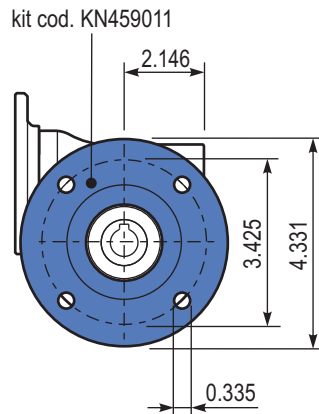
PN45**PAI**.. Feet
Piedini



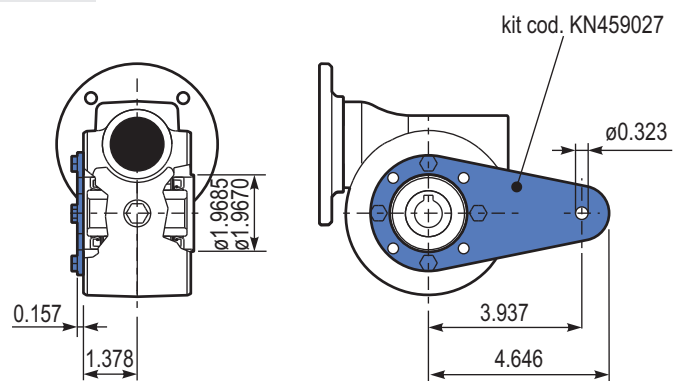
PN45**PVI**.. Feet
Piedini



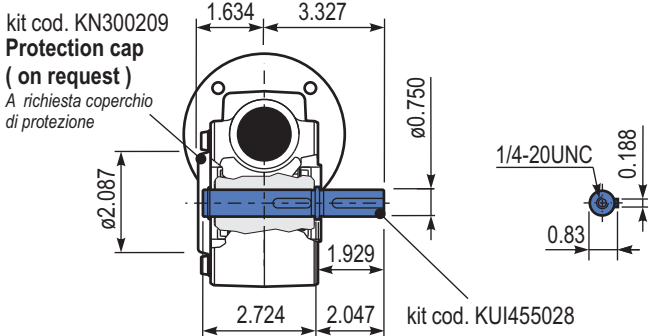
PN45**FLL**.. Output flange
Flangia uscita





PN45**BRI**.. Reaction arm
Braccio di reazione



PN45..**SIB** Single output shaft
Albero semplice in uscita



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]	Ratio code 
							-W 56C	- -			
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

The nominal power should be reduced if the ambient temperature is $\geq 30^\circ\text{C}$, or when a cooler gearbox is required.

Diminuire la potenza nominale in caso di temperatura ambiente $\geq 30^\circ\text{C}$ o se è richiesta una bassa temperatura di utilizzo del riduttore.

-  **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 N50 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 N50 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: 6.34 oz. Quantità olio per tutte le posizioni: 0.34 oz.	Shell Omala S4 WE 320	Eni Telium VSF 320
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Tab. 1

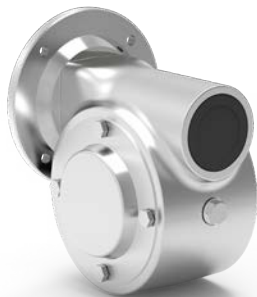
Suggested

Suggerito

Stainless steel protection cap (on request).

Coperchio di protezione in acciaio inox a richiesta.

Kit cod. KN500209



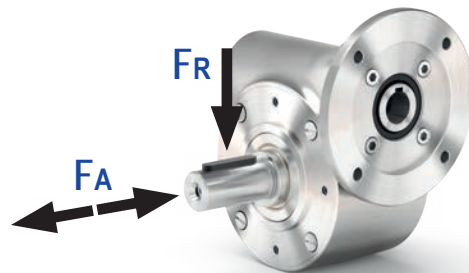
Radial and axial loads

Carichi radiali e assiali

Output shaft

Albero di uscita

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

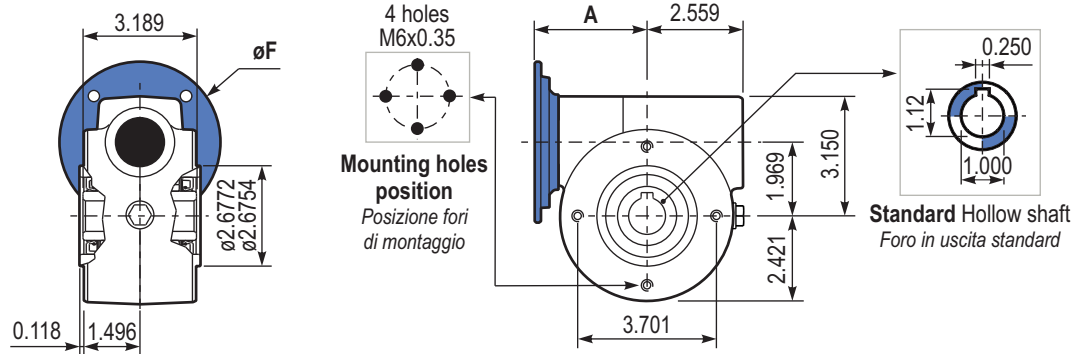


Tab. 2

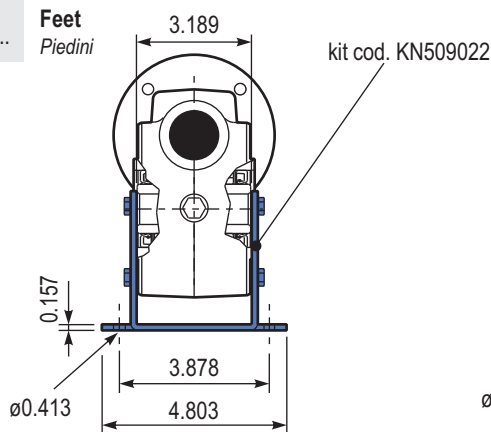
PN50**UNI**.. Basic gearbox
Riduttore base

M. flanges	Kit code	øF	A
56C	KUI504041	6.5	3.866

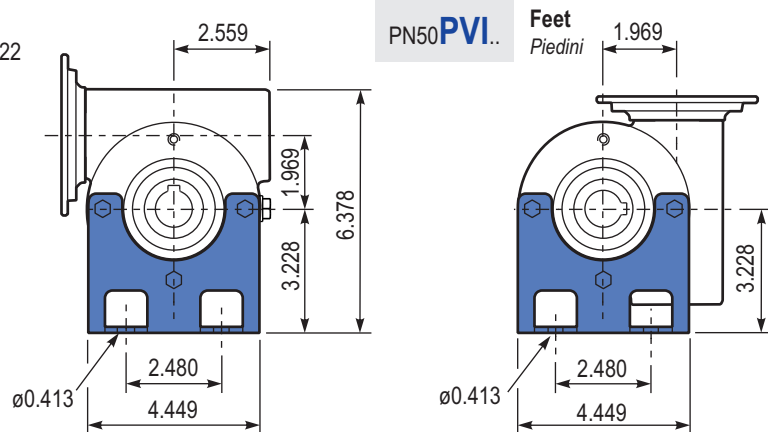
Gearbox weight
Peso riduttore 11.68 lb



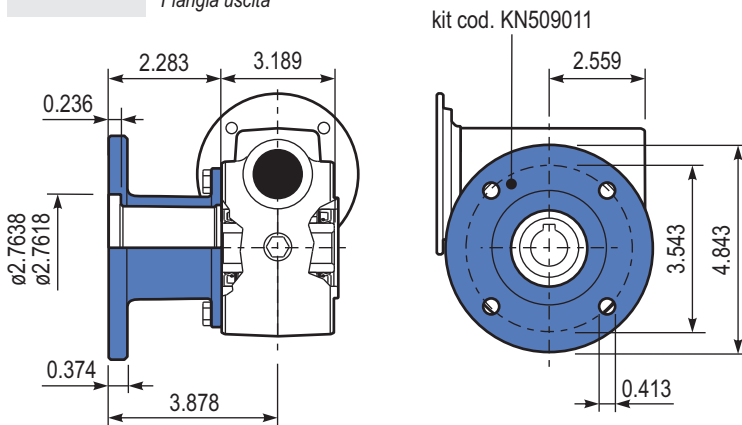
PN50**PAI**.. Feet
Piedini



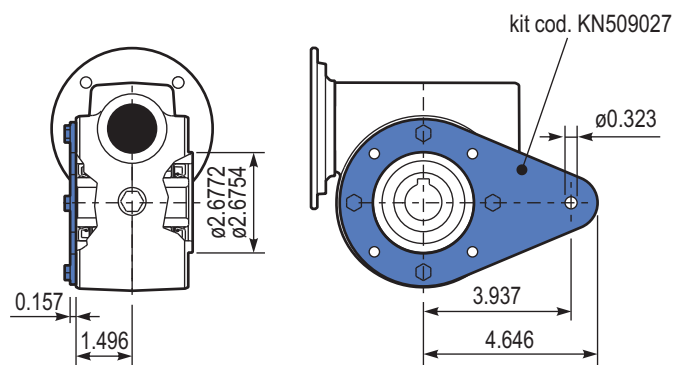
PN50**PVI**.. Feet
Piedini



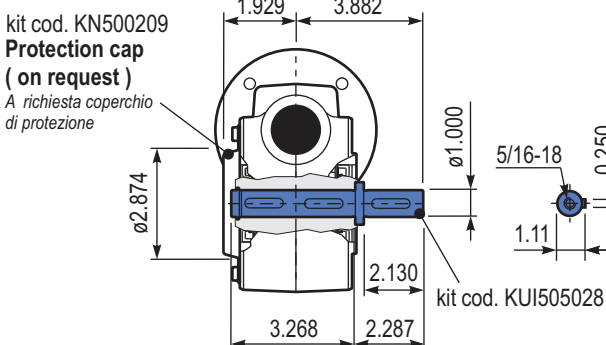
PN50**FLL**.. Output flange
Flangia uscita



PN50**BRI**.. Reaction arm
Braccio di reazione



PN50..**SID** Single output shaft
Albero semplice in uscita



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]	Ratio 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

The nominal power should be reduced if the ambient temperature is $\geq 30^\circ\text{C}$, or when a cooler gearbox is required.

Diminuire la potenza nominale in caso di temperatura ambiente $\geq 30^\circ\text{C}$ o se è richiesta una bassa temperatura di utilizzo del riduttore.

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 N45 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 N45 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:
15.85 oz.**

Quantità olio per tutte
le posizioni: 15.85 oz.

Shell
Omala S4 WE 320

Eni
Telium VSF 320

Tab. 1

Suggested

Suggerito

Stainless steel protection cap
(on request).

Coperchio di protezione in
acciaio inox a richiesta.

Kit cod. KN630209



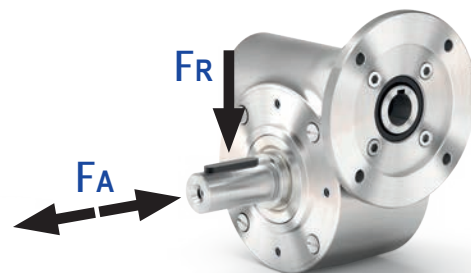
Radial and axial loads

Carichi radiali e assiali

Output shaft

Albero di uscita

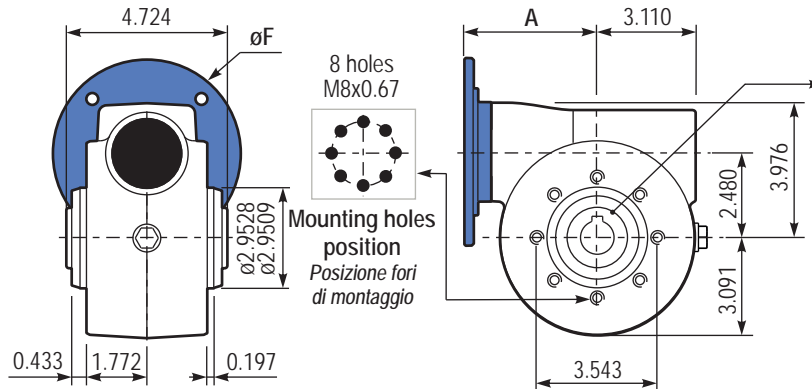
n_2 [min ⁻¹]	F_A [lb]	F_R [lb]
200	81	404.5
150	90	450
100	103.5	517
75	112.5	562
50	135	674.5
25	157	854
15	180	899



Tab. 2

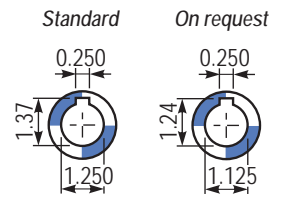
PN63 **UNI..** Basic gearbox
Riduttore base

M. flanges	Kit code	øF	A
56C	KUI634041	6.50	4.390
143/5 TC	KUI634041	6.50	4.390

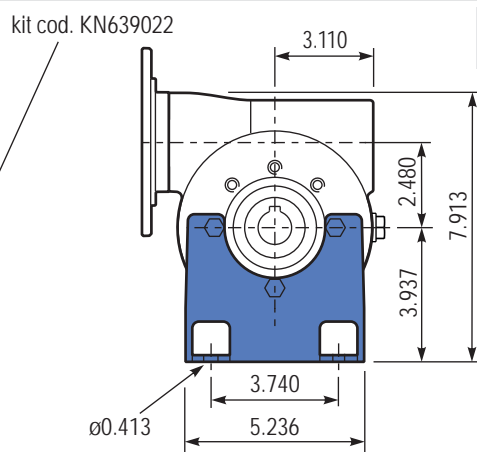
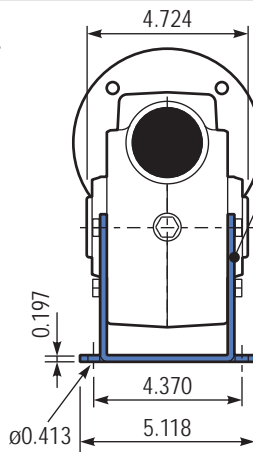


Gearbox weight
Peso riduttore 22.05 lb

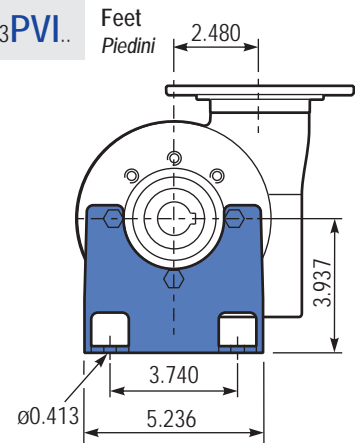
Hollow shaft *Foro in uscita*



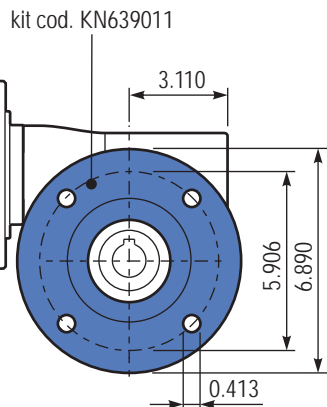
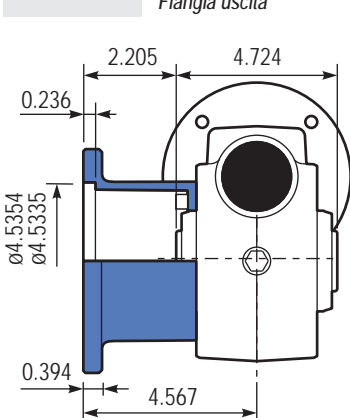
PN63 **PAI..** Feet
Piedini



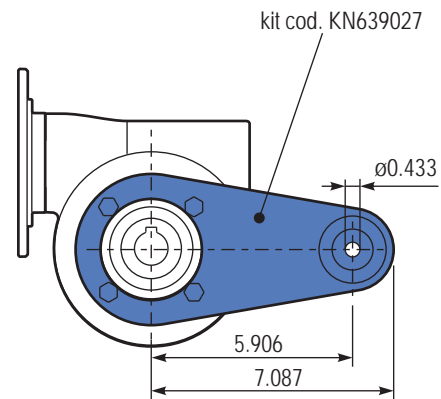
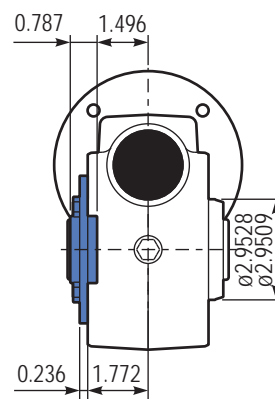
PN63 **PVI..** Feet
Piedini



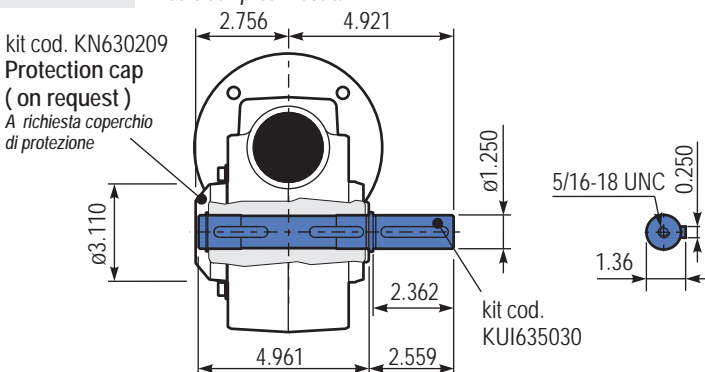
PN63 **FLL..** Output flange
Flangia uscita



PN63 **BRI..** Reaction arm
Braccio di reazione



PN63 **SIF** Single output shaft
Albero semplice in uscita



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]	Ratio code
							-W 56C	-X 143-5TC	-Y 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

The nominal power should be reduced if the ambient temperature is $\geq 30^\circ\text{C}$, or when a cooler gearbox is required.

Diminuire la potenza nominale in caso di temperatura ambiente $\geq 30^\circ\text{C}$ o se è richiesta una bassa temperatura di utilizzo del riduttore.

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 N85 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.

I riduttore tipo N85 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:
35.21 oz.

Quantità olio per tutte le posizioni: 35.21 oz

Shell
Omala S4 WE 320

Eni
Telium VSF 320

Tab. 1

Suggested

Suggerito

Stainless steel protection cap (on request).

Coperchio di protezione in acciaio inox a richiesta.

Kit cod. KN850209



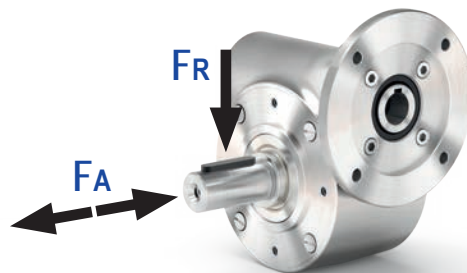
Radial and axial loads

Carichi radiali e assiali

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

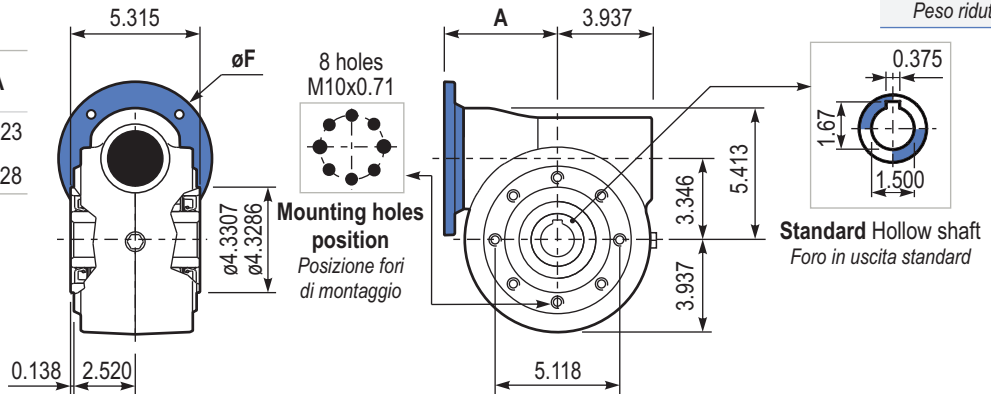


Tab. 2

PN85 **UNI..** Basic gearbox
Riduttore base

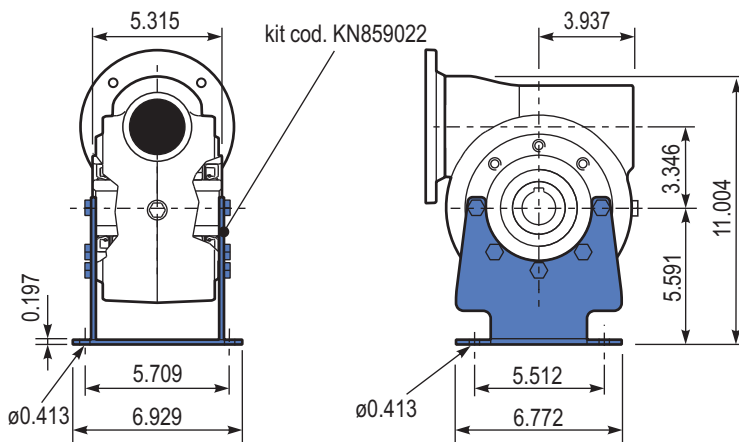
Gearbox weight
Peso riduttore **46.30 lb**

M. flanges	Kit code	øF	A
56C-143/5TC	KUI854041	6.50	4.823
182/4TC	KUI854042	8.88	5.528

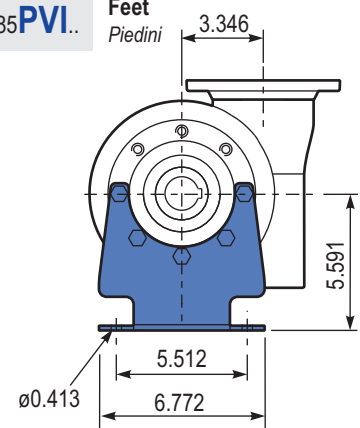


PN85 **PAI..** Feet
Piedini

kit cod. KN859022

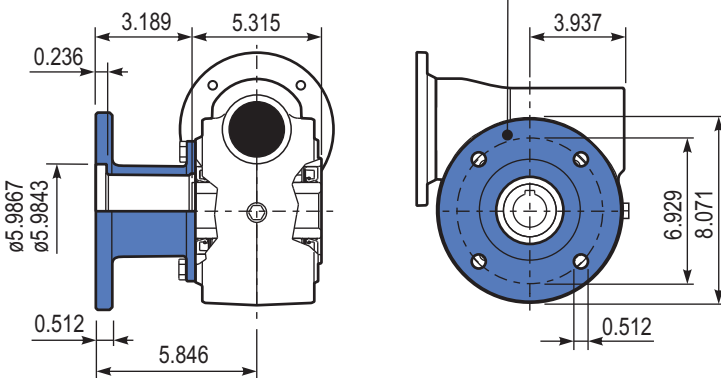


PN85 **PVI..** Feet
Piedini



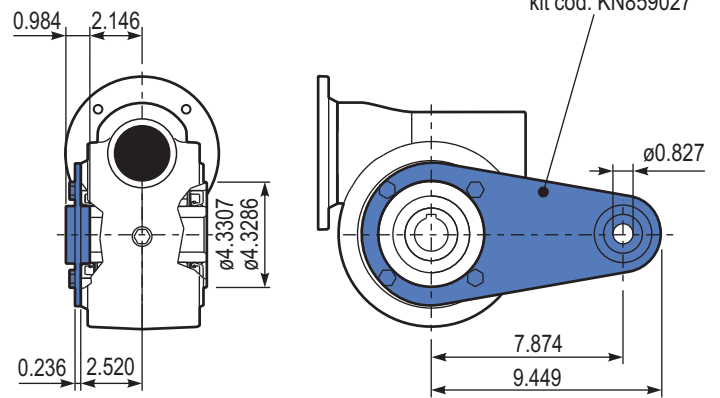
PN85 **FLL..** Output flange
Flangia uscita

kit cod. KN859011



PN85 **BRI..** Reaction arm
Braccio di reazione

kit cod. KN859027



PN85 **SIH** Single output shaft
Albero semplice in uscita

kit cod. KN850209
Protection cap
(on request)
A richiesta coperchio di protezione

