

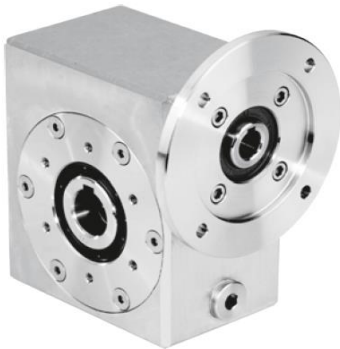


*"The Washdown Champion"*

# *Stallion Stainless Steel Gearboxes*

## Stainless Steel One-Step Gearboxes

**Worm gearboxes**



**Coaxial gearboxes**



**Stainless steel  
motors**

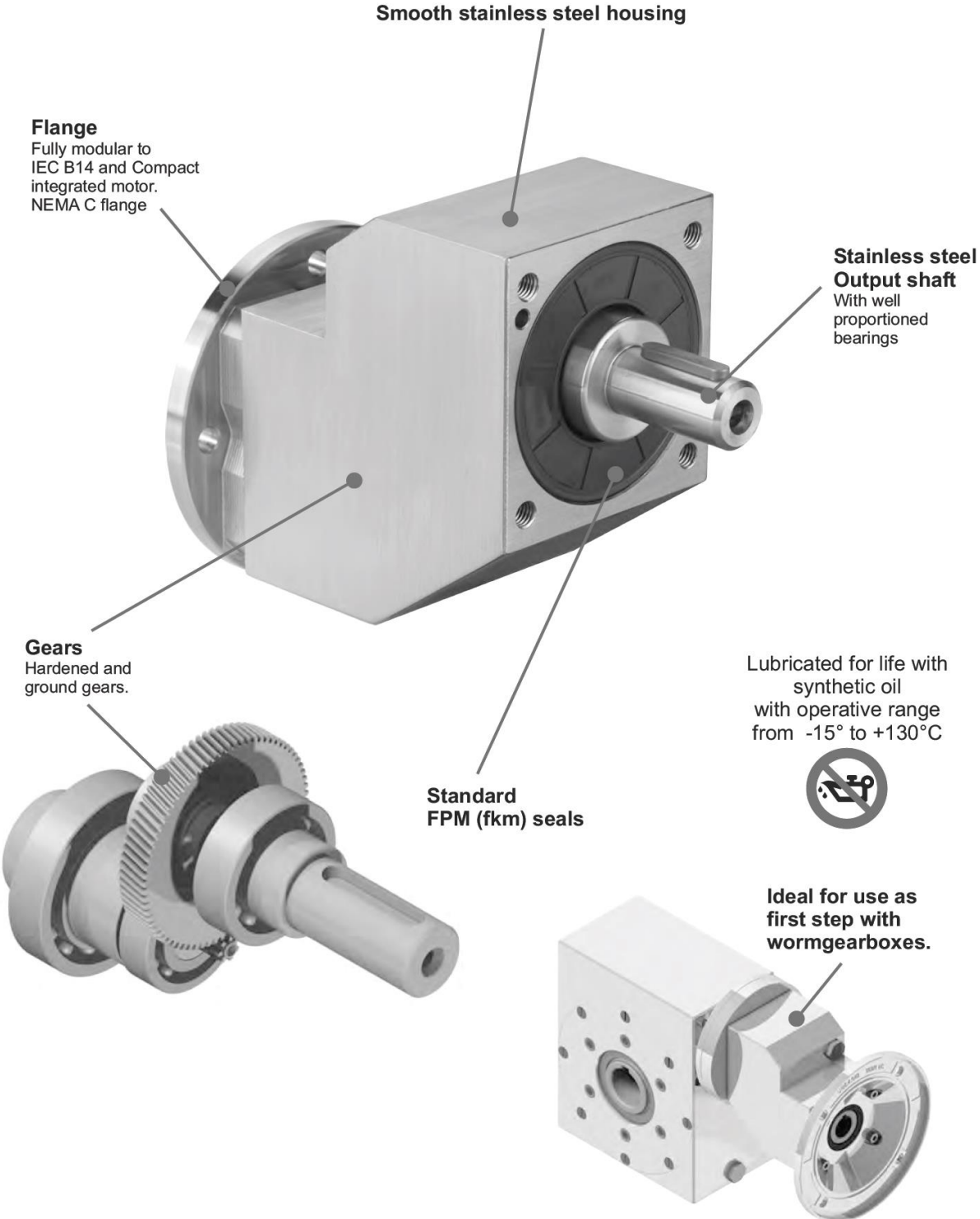


**Made in Italy**



# Stainless steel one step gearboxes

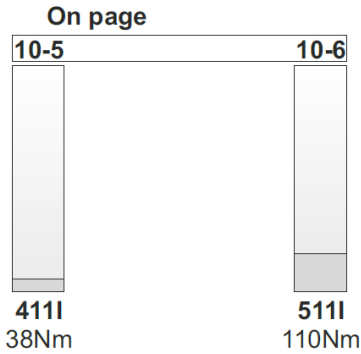
A modular and compact product



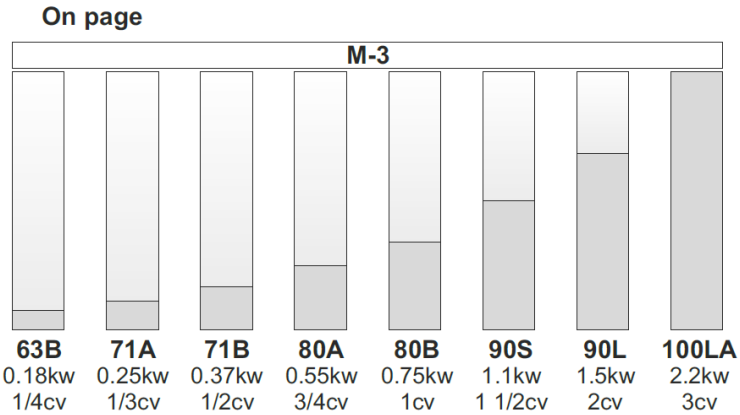
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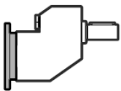
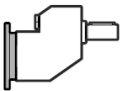
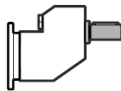
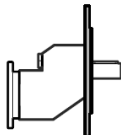
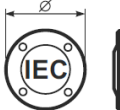
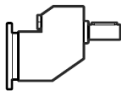
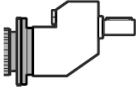
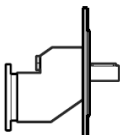



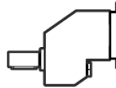
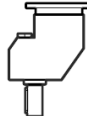



Types



Types



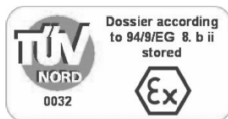
# HOW TO ORDER

Type	Size	Mounting	Ratio	Output shaft	Output flange	Motor size	Mounting position
<b>P</b>	<b>411I</b> <b>511I</b>	<b>-F</b>	<b>1.57</b>	<b>C</b>	<b>4</b>	<b>-Q</b>	<b>B3</b>
			See technical data table				
<b>P</b>		<b>-N</b>		<b>N</b> Without flange			<b>B3</b> STANDARD
				<b>→ STANDARD</b>			
<b>M</b>		<b>-F</b>		411I	411I	411I	
				<b>C → ø19</b>	<b>4 → ø200</b>	<b>-Q 71B14</b> (ø105)	
				511I	511I	<b>-R 80B14</b> (ø120)	<b>B6</b>
				<b>G → ø28</b>	<b>5 → ø250</b>	<b>-T 90B14</b> (ø140)	
<b>B</b>						511I	<b>B7</b>
						<b>-D 80B5</b> (ø200)	
						<b>-E 90B5</b> (ø200)	<b>B8</b>
						<b>-U 100-112</b> B14 (ø160)	
						Without flange 	<b>V5</b>
						411I	
						<b>-1 → ø14</b> (71B5)	<b>V6</b>
						<b>-2 → ø19</b> (80B5)	
						<b>-3 → ø24</b> (90B5)	<b>V8</b>
						511I	
						<b>-2 → ø19</b> (80B5)	
						<b>-3 → ø24</b> (90B5)	
						<b>-4 → ø28</b> (100B5)	

## On request

<b>B</b> Food lube
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On request we can deliver our products according to the ATEX



- B3 is supplied with standard oil quantity

- Please specify in the order if you required other mounting positions

## USEFUL FORMULAS

### REQUIRED POWER

Lifting

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

Rotation

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

Linear movement

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

### TORQUE

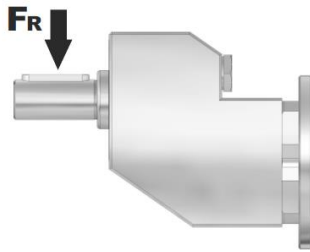
AR

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

$$M \text{ [lbin]} = \frac{63030 \cdot P \text{ [HP]}}{n \text{ [rpm]}}$$

## RADIAL LOADS

- Radial load generated by external transmissions keyed onto input and/or output shafts.



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

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

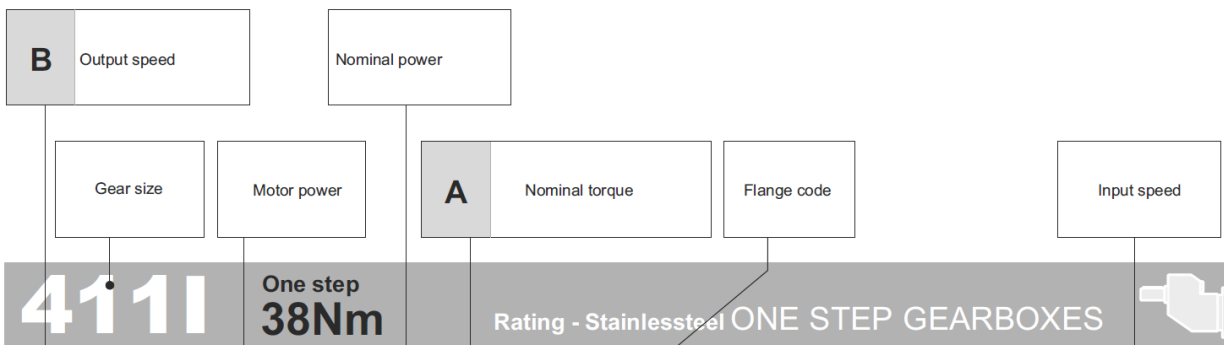
**M** Output torque

**d** Diam. of driving element

**f<sub>k</sub>** Coefficient factor  
 1.15 Gear wheels  
 1.25 Chain sprochets  
 1.75 Narrow V-belt pulley  
 2.50 Flat belt pulley

— If your application requires higher radial loads, contact our technical office. Higher load may be possible.

# How to select a gearbox



**QUICK SELECTION** input speed (n<sub>1</sub>) = 1400 min<sup>-1</sup>

Output Speed n <sub>2</sub> [min <sup>-1</sup> ]	Ratio i	Motor power P <sub>1M</sub> [kW]	Output torque M <sub>2M</sub> [Nm]	Service factor f.s.	Nominal power P <sub>1R</sub> [kW]	Nominal torque M <sub>2R</sub> [Nm]	B5 motor flanges not available				Available B14 motor flanges			Output Shaft		
							-	-	-	-	Q	R	T			
892	1.57	1.5	15.7	1.3	1.90	20	-	-	-	-	71	80	90	2844	standard ø19	01
493	2.84	1.5	28.4	1.2	1.84	35	-	-	-	-	C	C	C	1954		02
426	3.29	1.5	32.9	1.2	1.73	38	-	-	-	-	C	C	C	1756		03
362	3.87	1.5	38.7	1.0	1.54	40	-	-	-	-	C	C	C	1558		04



**fs**

Type of load and starts per hour		Oper. hours per day		
		3 h	10 h	24 h
Continuous or intermittent appl. with start / hour ≤ 10	Uniform	0.8	1	1.25
	Moderate	1	1.25	1.5
	Heavy	1.25	1.5	1.75
Intermittent application with start / hour > 10	Uniform	1	1.25	1.5
	Moderate	1.25	1.5	1.75
	Heavy	1.5	1.75	2.15

**D** Motor flange available

<b>B)</b> Mounting with reduction ring	
<b>C)</b> Motor flangeholes position/terminal box position	
<b>B)</b> Available without reduction bushes	

<b>A</b>	Select required torque (according to service factor)
<b>B</b>	Select output speed
<b>C</b>	On the same line of selected geared motor, you can find the gear ratio
<b>D</b>	Select motor flange available (if requested)



### QUICK SELECTION

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

Output Speed $n_2$ [min <sup>-1</sup> ]	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 not available				Available B14 motor flanges			Output Shaft		
							-	-	-	-	Q	R	T			Ratio code
891	1.57	1.5	16	1.3	1.9	20	-	-	-	-	C	C	-	standard ø19		01
493	2.84	1.5	28	1.2	1.8	35	-	-	-	-	C	C	-			02
425	3.29	1.5	33	1.2	1.7	38	-	-	-	-	C	C	-			03
362	3.87	1.5	39	1.0	1.5	40	-	-	-	-	C	C	-			04
303	4.62	1.5	46	1.0	1.5	47	-	-	-	-	C	C	-			05
222	6.30	1.1	46	1.0	1.1	46	-	-	-	-	C	C	-			06
170	8.22	0.55	30	1.3	0.69	38	-	-	-	-	C	C	-			07
129	10.86	0.37	27	1.0	0.39	28	-	-	-	-	C	C	-			08

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

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

Motor Flanges Available Supplied with Reduction Bushing **B**) Available on Request without reduction bushing C) Motor Flange Holes Position

**EN** Unit 4111 is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary.

### LUBRICATION 4111 Oil Quantity 0.14 Lt.

AGIP Telium VSF 320

SHELL Omala S4 WE 320

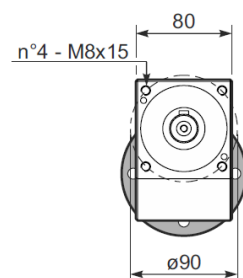
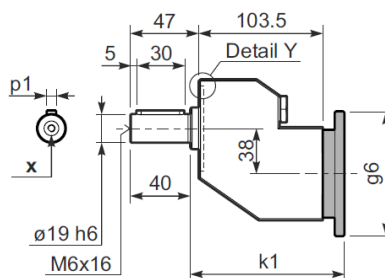
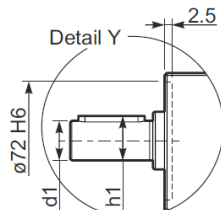
For all details on lubrication and plugs check our website

**Output shaft**

$n_2$	FA	FR	$n_2$	FA	FR	$n_2$	FA	FR
700	182	910	400	230	1150	200	290	1450
600	100	1000	300	250	1250	140	320	1600

P4111-N... Basic gearbox

Gearbox weight  
peso motore **5.5 kg**



Output shafts

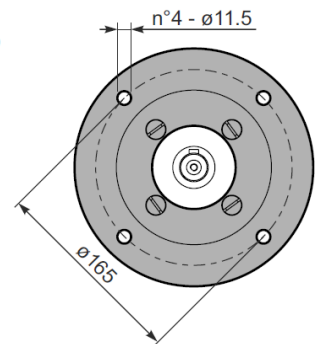
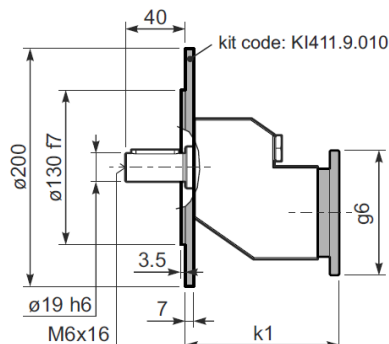
	Shaft - d1	p1	h1	x
Standard	ø 19x40	6	21.5	M6x16

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P4111-F... Output flange

Input flanges

	k1	g6	kit code
71 B14	128.5	105	KI63.4.047
80 B14	129.5	120	KI63.4.046
90 B14	130.5	140	KI63.4.041





### QUICK SELECTION

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

Output Speed $n_2$ [min <sup>-1</sup> ]	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]	Available B5 motor flanges		Available B14 motor flanges	Output Shaft		
							D	E	U			
							80	90	100 - 112			Ratios code
1077	1.30	4	34	1.2	4.6	40				standard ø28		01
571	2.45	4	64	1.1	4.3	70			3039			02
423	3.31	4	87	1.0	4.1	90			2049			03
325	4.31	4	113	1.0	3.8	110			1653			04
266	5.27	3	104	1.1	3.1	110			1356			05
184	7.63	2.2	111	1.0	2.2	110			1158			06
133	10.50	1.1	77	1.0	1.1	80			861			07
									663			

The dynamic efficiency is 0.98 for all ratios

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

Motor Flanges Available Supplied with Reduction Bushing **B)** Available on Request without reduction bushing **C)** Motor Flange Holes Position

**EN** Unit 511I is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary.

### LUBRICATION 511I Oil Quantity 0.45 Lt.

AGIP Telium VSF 320

SHELL Omala S4 WE 320

For all details on lubrication and plugs check our website

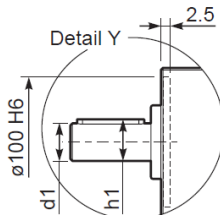
Output shaft / Albero di uscita

$F_R$  (N)  $F_{eq}$  (N)  $F_{eq} = F_R \cdot \frac{65.5}{X+35.5}$

$n_2$	FA	FR	$n_2$	FA	FR	$n_2$	FA	FR
700	294	1470	400	370	1850	200	460	2300
600	320	1600	300	400	2000	140	510	2550

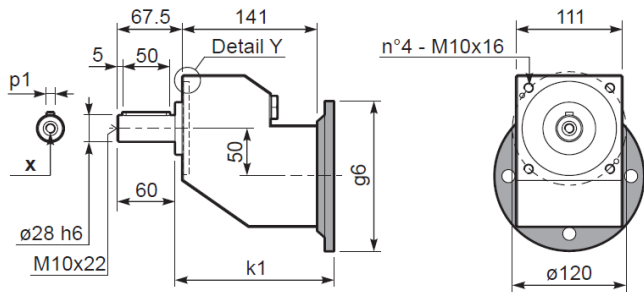
### P511I-N... Basic gearbox

Gearbox weight **12.0 kg**



### Output shafts

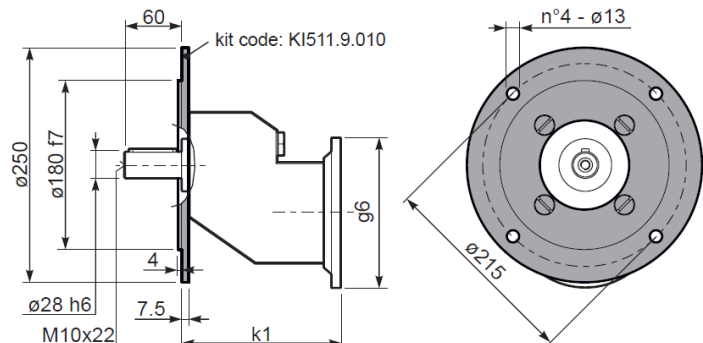
	Shaft - d1	p1	h1	x
Standard	ø 28x60	8	31	M10x22



### P511I-F... Output flange

### Input flanges

	k1	g6	kit code
80-90B5	168.5	200	KI85.4.042
100-112B14	166.5	160	KI85.4.041



10





*"The Washdown Champion"*

# *Stallion Stainless Steel Electric Motors*

## **Contact Us**

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