

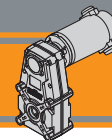


Ferrite

Motoriduttori CC pendolari  
**DC helical parallel gearmotors**



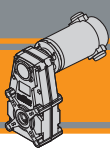




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## Caratteristiche tecniche

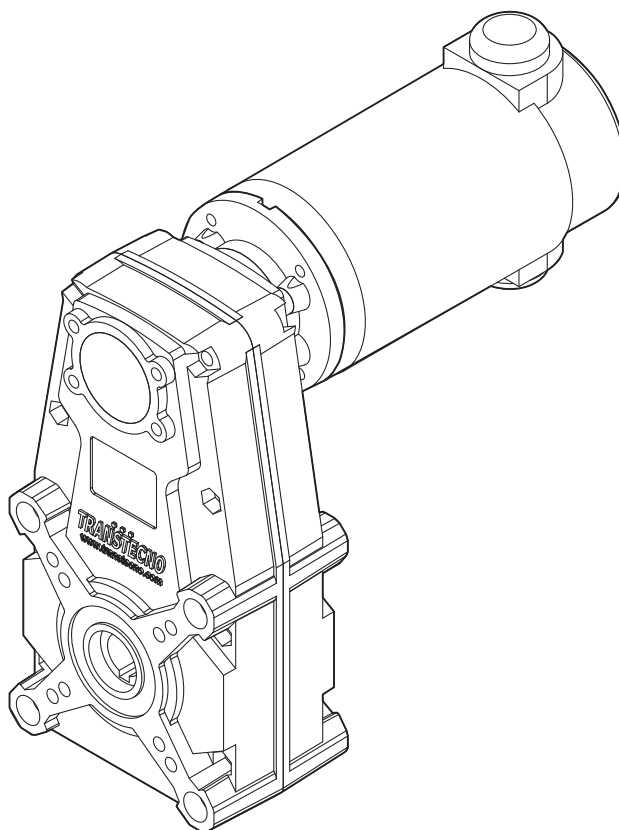
## Technical features

I motoriduttori CC pendolari a magneti permanenti in ferrite ECFT hanno le seguenti caratteristiche principali:

ECFT ferrite permanent magnets DC helical parallel gearmotors range has the following main features:

- Alimentazione in bassa tensione 12/24 Vcc
- Possibilità di montaggio encoder e freno
- Potenze motore disponibili da 100 a 800W S2
- Magneti in ferrite
- Carcasa pressofusione di alluminio
- Lubrificazione permanente con olio sintetico.
- Ingranaggi cilindrici a denti elicoidali.

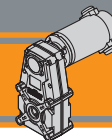
- Low voltage power supply 12/24 Vdc
- Suitable for encoder and brake assembly
- Motor power ratings available from 100 to 800W S2
- Ferrite magnets
- Die-cast aluminum housings
- Permanent synthetic oil long-life lubrication.
- helical gears.



## Designazione

## Classification

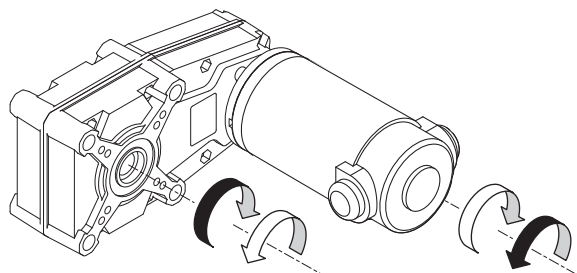
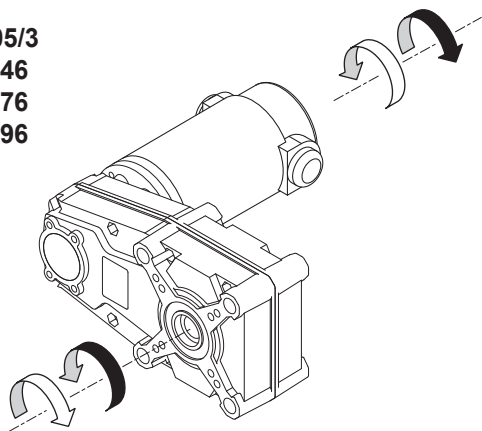
MOTORIDUTTORE / GEARMOTORS							U	60.63	O20	240
ECFT	180/146						U	60.63	O20	240
Tipo Type	Grandezza Size						Versione Version	Rapporto Ratio	Albero cavo uscita Hollow output shaft	Versione motore Motor version
	070/105/3	100/105/3	180/105/3	250/146	350/146	600/146	U...	vedi tabelle see tables	vedi tabelle see tables	120
	070/105/4	100/146	180/146	250/176	350/176	600/176				
	070/146		180/176	250/196	350/196	600/196				
			180/196							



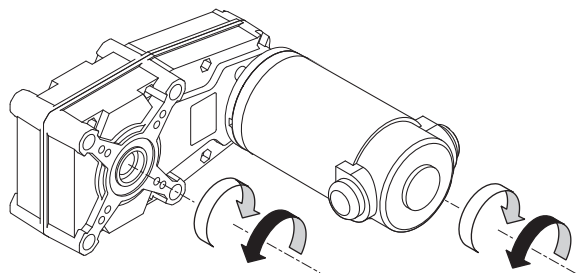
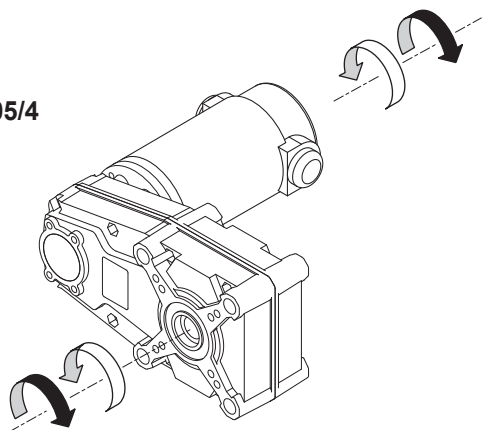
Sensi di rotazione

Direction of rotation

FT105/3  
FT146  
FT176  
FT196



FT105/4



Simbologia

Symbols

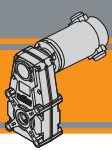
$n_1$	[ $\text{min}^{-1}$ ]	Velocità in ingresso / <i>Input speed</i>
$n_2$	[ $\text{min}^{-1}$ ]	Velocità in uscita / <i>Output speed</i>
$i$		Rapporto di riduzione / <i>Ratio</i>
$P_1$	[kW]	Potenza in entrata / <i>Input power</i>
$M_2$	[Nm]	Coppia nominale in uscita in funzione di $P_1$ / <i>Output torque referred to <math>P_1</math></i>
$P_{n1}$	[kW]	Potenza nominale in entrata / <i>Nominal input power</i>
$M_{n2}$	[Nm]	Coppia nominale in uscita in funzione di $P_{n1}$ / <i>Nominal output torque referred to <math>P_{n1}</math></i>
$sf$		Fattore di servizio / <i>Service factor</i>
$R_2$	[N]	Carico radiale ammissibile in uscita / <i>Permitted output radial load</i>
$A_2$	[N]	Carico assiale ammissibile in uscita / <i>Permitted output axial load</i>

Lubrificazione

Lubrication

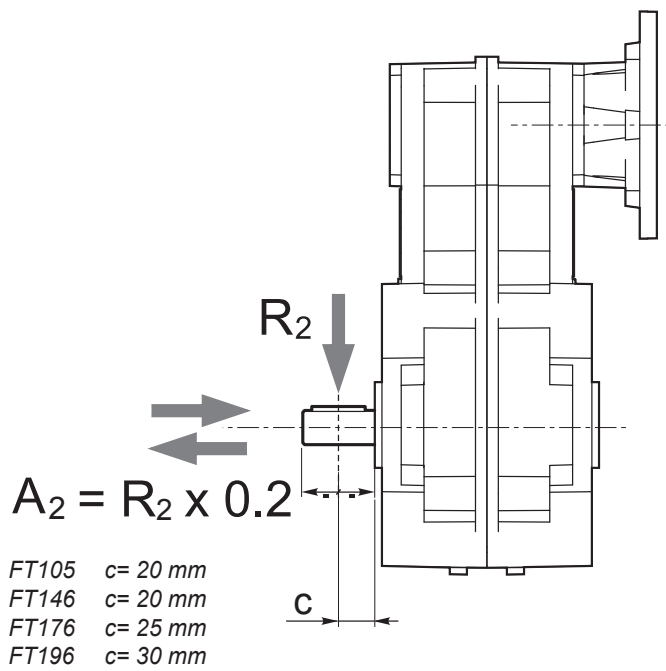
Tutti i motoriduttori sono forniti completi di lubrificante sintetico viscosità 320, pertanto possono essere installati in qualunque posizione di montaggio e non necessitano di manutenzione.

*Permanent synthetic oil long-life lubrication ( viscosity grade 320) makes it possible to use the gearmotors in all mounting positions; for this reason they can be installed in any assembly position and do not require maintenance.*



**Carichi radiali**

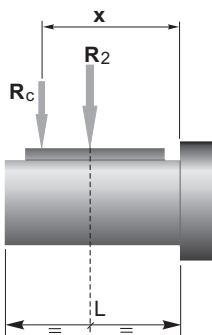
**Radial loads**



n <sub>2</sub> [min <sup>-1</sup> ]	R <sub>2</sub> [N]			
	FT105	FT146	FT176	FT196
70	1500	2500	3000	3500
40	1700	2700	3500	4000
30	1850	2850	4000	4600
20	2000	3000	4500	5500
10	2000	3000	5000	7000
5	2000	3000	5000	7000

Quando il carico radiale risultante non è applicato sulla mezza-  
ria dell'albero occorre calcolare quello effettivo con la seguente  
formula:

When the resulting radial load is not applied on the centre line  
of the shaft it is necessary to calculate the effective load with the  
following formula:



	FT105	FT146	FT176	FT196
a	82	82,5	115	132
b	62	62,5	90	102
R <sub>2MAX</sub>	2000	3000	5000	7000

$$R_c = \frac{R_2 \cdot a}{(b + x)} \leq R_{2MAX}$$

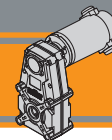
$$R \leq R_c$$

a, b = valori riportati nella tabella  
a, b = values given in the table











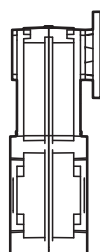
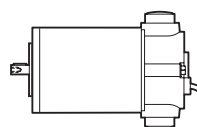
Dati tecnici

Technical data

P <sub>1</sub> [W]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		Versione motore Motor version	P <sub>1</sub> [W]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		Versione motore Motor version
<b>800</b>							<b>800</b>						
(3000 min <sup>-1</sup> )	<b>207</b>	35	3.1	14.49	<b>600/176</b>	120/240	(3000 min <sup>-1</sup> )	<b>147</b>	49	5.6	20.41	<b>600/196</b>	120/240
	<b>173</b>	41	2.8	17.31		120.66/240.66		<b>86</b>	83	3.7	34.81		120.66/240.66
	<b>143</b>	50	2.5	20.97				<b>70</b>	102	3.4	42.61		
	<b>122</b>	59	2.4	24.56				<b>51</b>	142	2.7	59.36		
	<b>102</b>	70	2.0	29.33				<b>41</b>	174	2.5	72.68		
	<b>87</b>	83	1.8	34.62				<b>32</b>	222	1.9	92.82		
	<b>80</b>	90	1.7	37.50				<b>24</b>	297	1.4	123.95		
	<b>73</b>	99	1.6	41.35				<b>19</b>	378	1.1	158.02		
	<b>67</b>	107	1.5	44.79				<b>15</b>	483	0.9	201.80		
	<b>60</b>	120	1.4	50.10									
	<b>55</b>	130	1.4	54.26									
	<b>47</b>	152	1.2	63.55									
	<b>40</b>	182	1.1	75.90									
	<b>35</b>	204	1.0	85.40									
	<b>33</b>	214	1.0	89.60									
	<b>28</b>	256	0.9	107.02									
	<b>24</b>	304	0.8	126.92									

Motori applicabili

Motor adapters

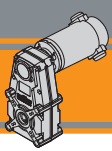


		EC					
		070.12E 070.24E	100.120 100.240 100.24E	180.120 180.240	180.24E	250.120 250.240	350.120 350.240
FT	105/3	20.57 - 315.05					
	105/4	368.19 - 929.4					
	146	18.75 - 397.38	* 18.75 - 397.38		18.75 - 397.38	18.75 - 397.38	
	176			* 14.49 - 390.11	14.49 - 390.11		
	196			* 20.41 - 269.47	20.41 - 269.47		

20.57 - 315.05

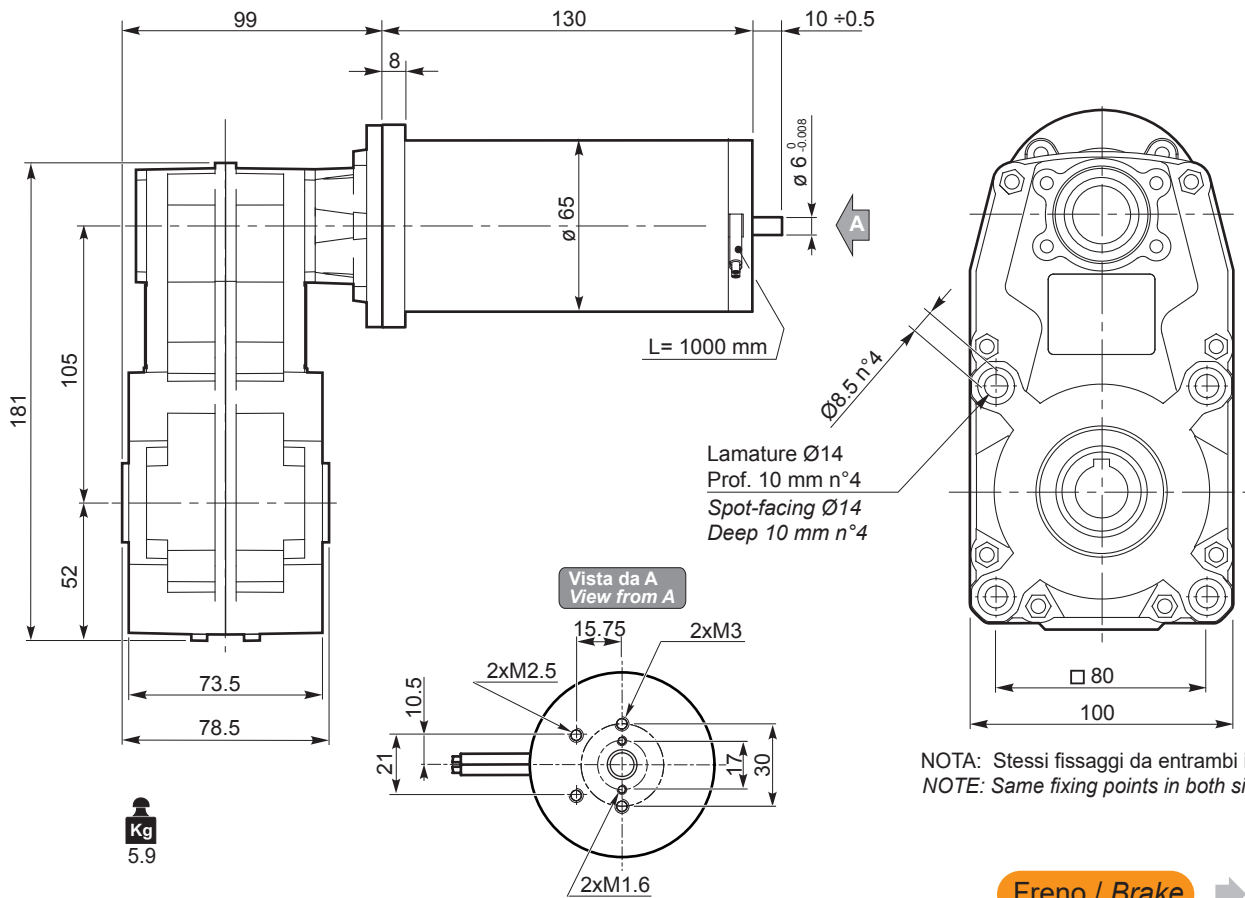
Rapporti di riduzione i  
Ratio i

\*: Motore inclinato con portaspazzole a 45°  
Motor assembly with brush holder inclined 45°



**ECFT 070/105**

**ECFT 070/105...U**

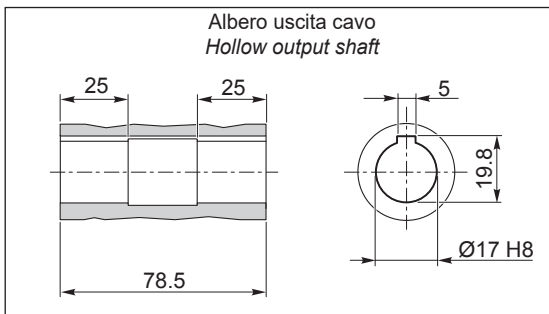


Freno / Brake → H23

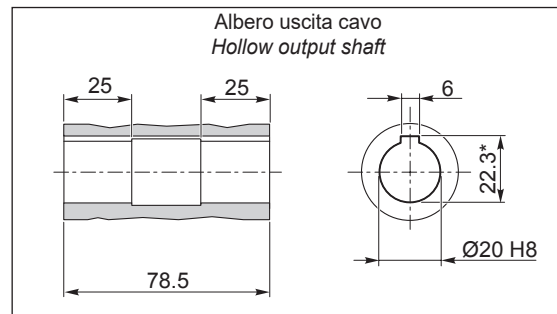
Encoder → H24

Motori / Motors IP66 → I2

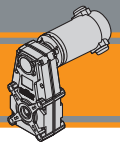
**O17**



**O20**



\*: Sede linguetta ribassata / Special keyway

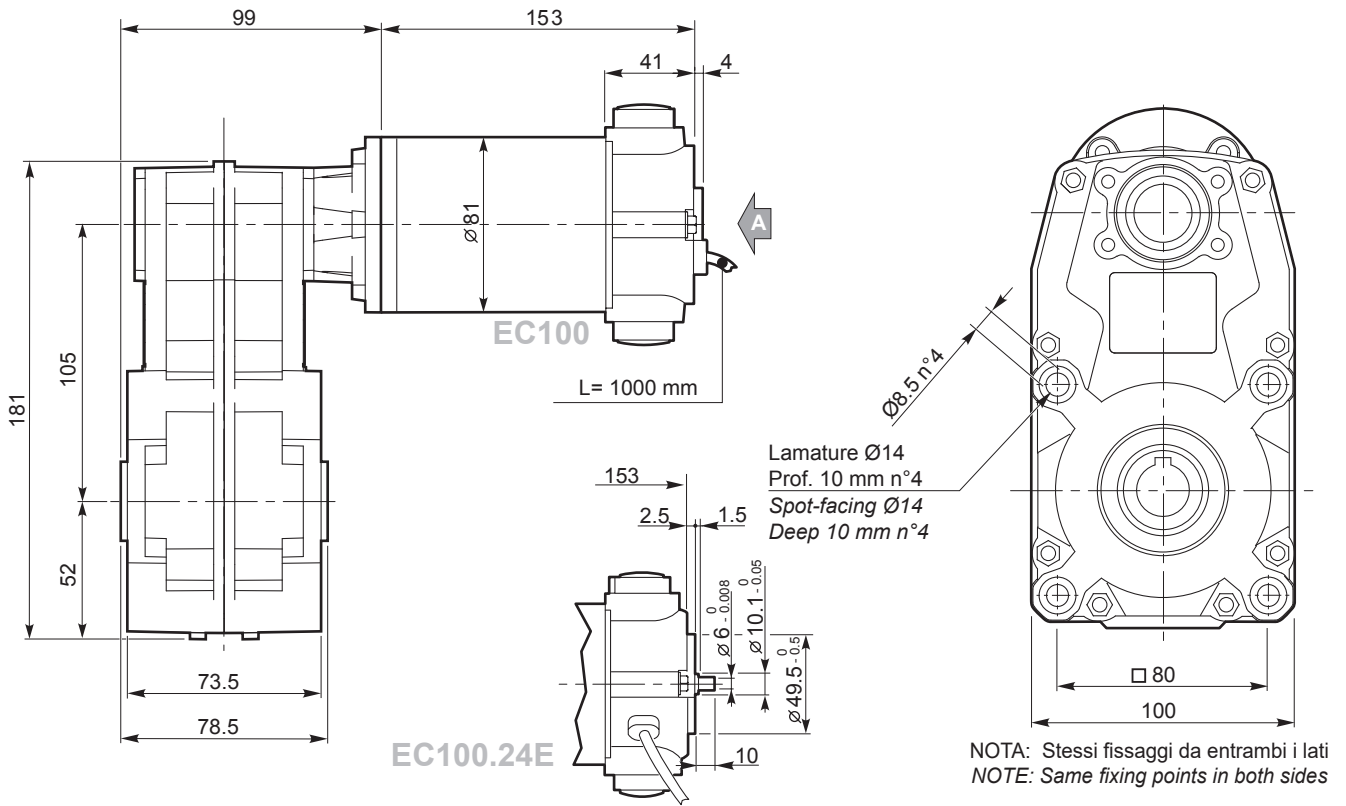


Dimensioni

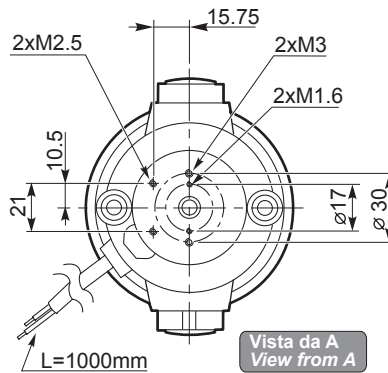
Dimensions

ECFT 100/105

ECFT 100/105...U



**Kg**  
6.9



Freno / Brake

H23

Encoder

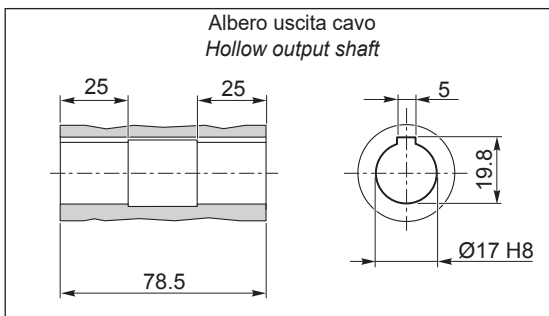
H24

Motori / Motors IP66

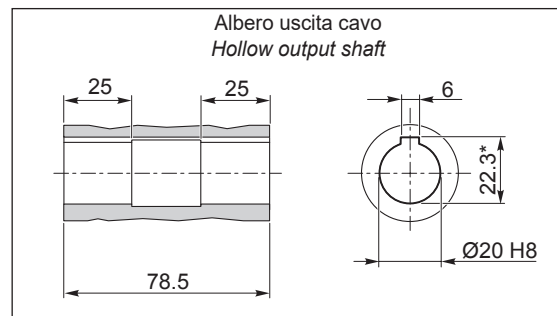
I4

ECFT

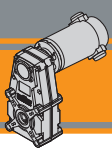
O17



O20

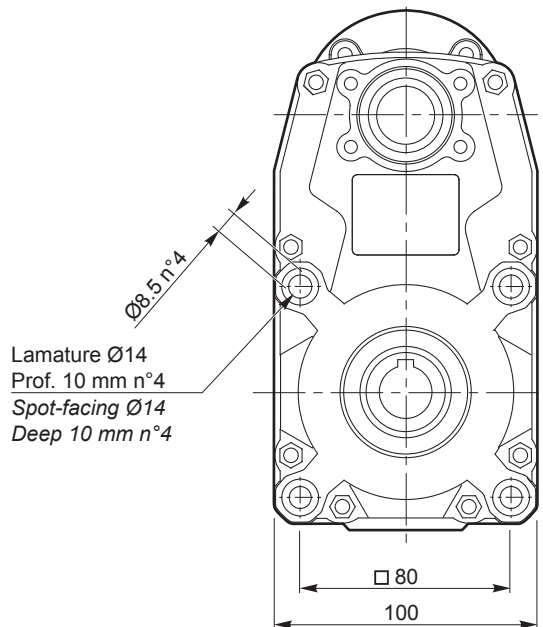
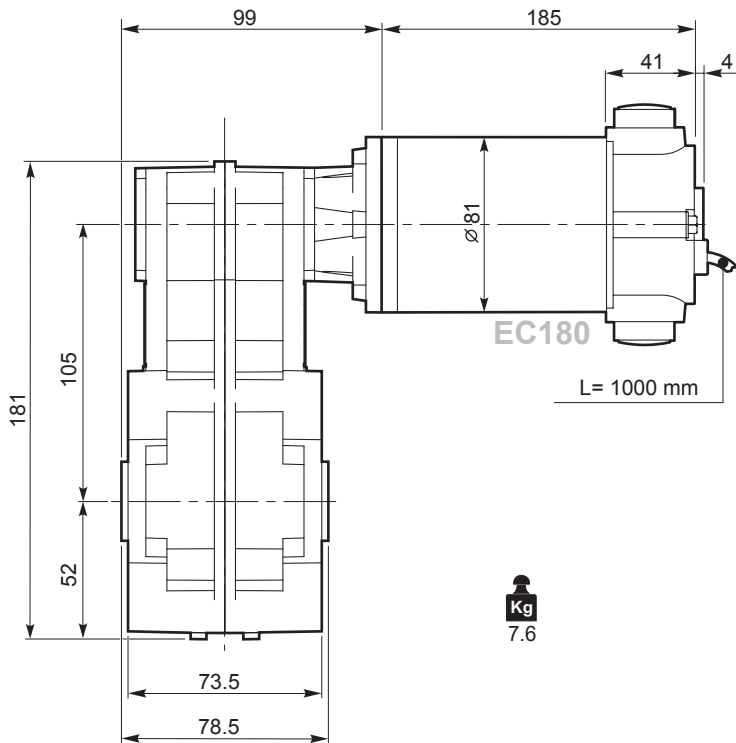


\*: Sede linguetta ribassata / Special keyway



### ECFT 180/105

#### ECFT 180/105...U



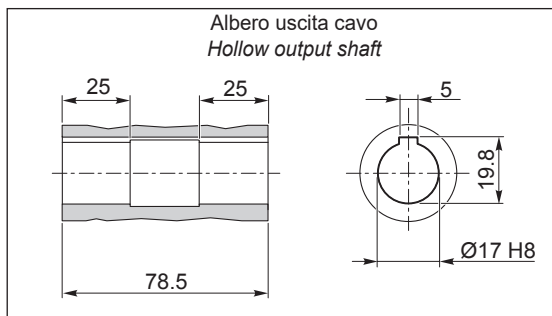
NOTA: Stessi fissaggi da entrambi i lati  
NOTE: Same fixing points in both sides

Freno / Brake → H23

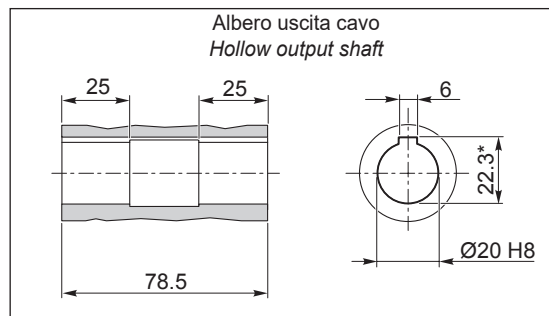
Encoder → H24

Motori / Motors IP66 → I6

#### O17

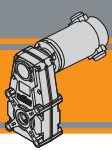


#### O20



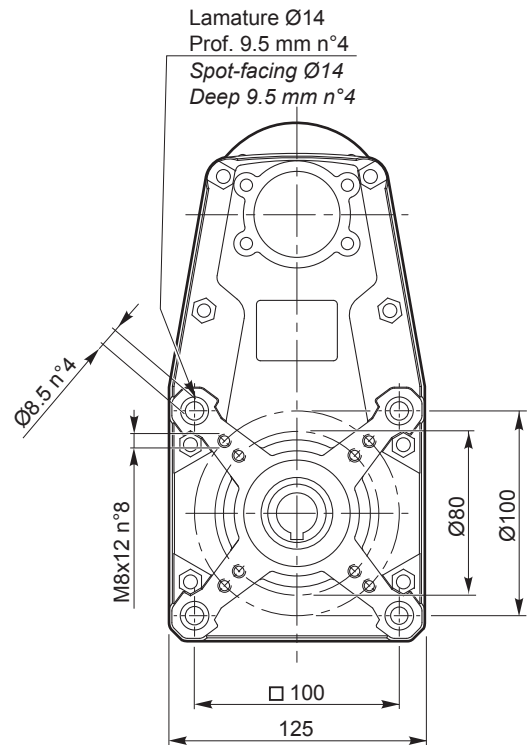
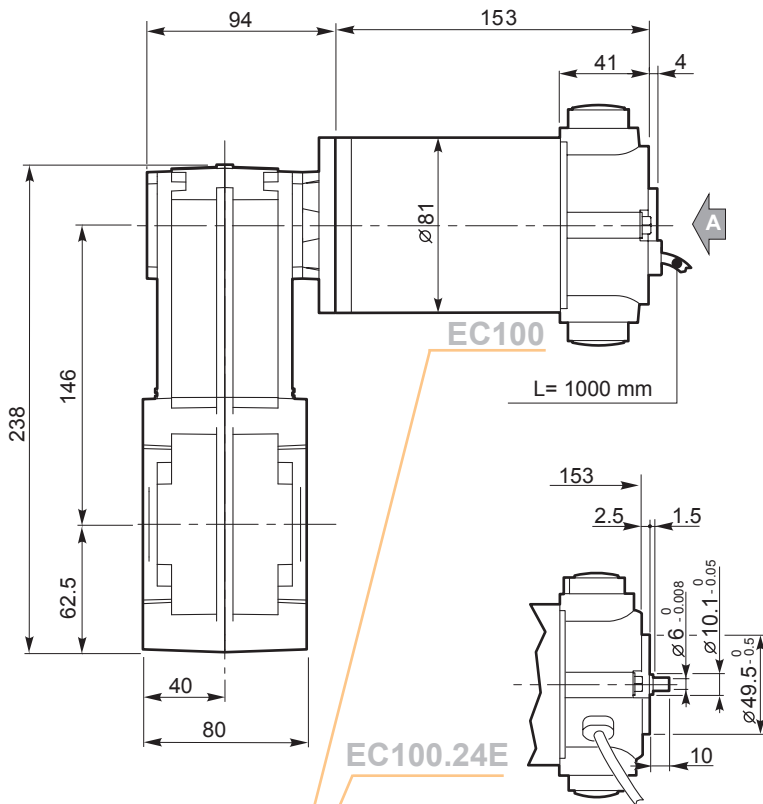
\*: Sede linguetta ribassata / Special keyway





## ECFT 100/146

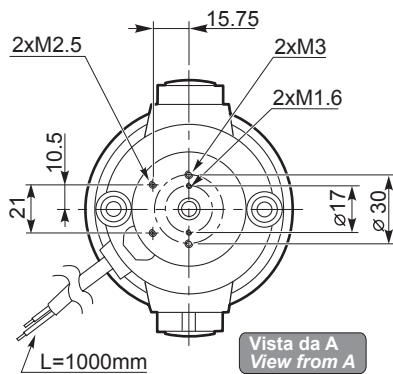
### ECFT 100/146 U



NOTA: Stessi fissaggi da entrambi i lati  
NOTE: Same fixing points in both sides

**Kg**  
7.4

**Nota:** Motore inclinato con portaspazzole a 45°  
**Note:** Motor assembly with brush holder inclined 45°

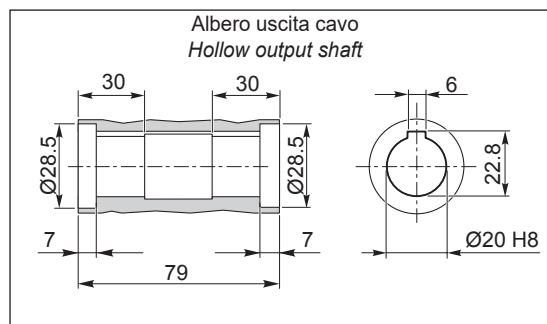


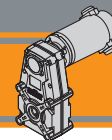
Freno / Brake → **H23**

Encoder → **H24**

Motori / Motors IP66 → **I4**

### O20



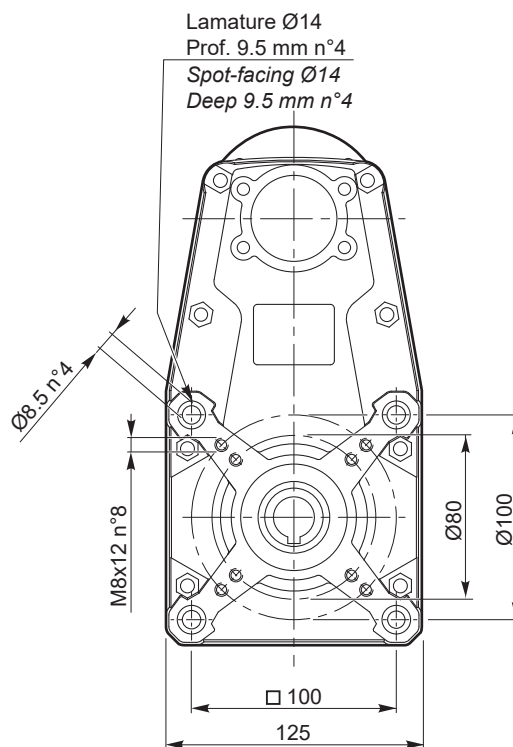
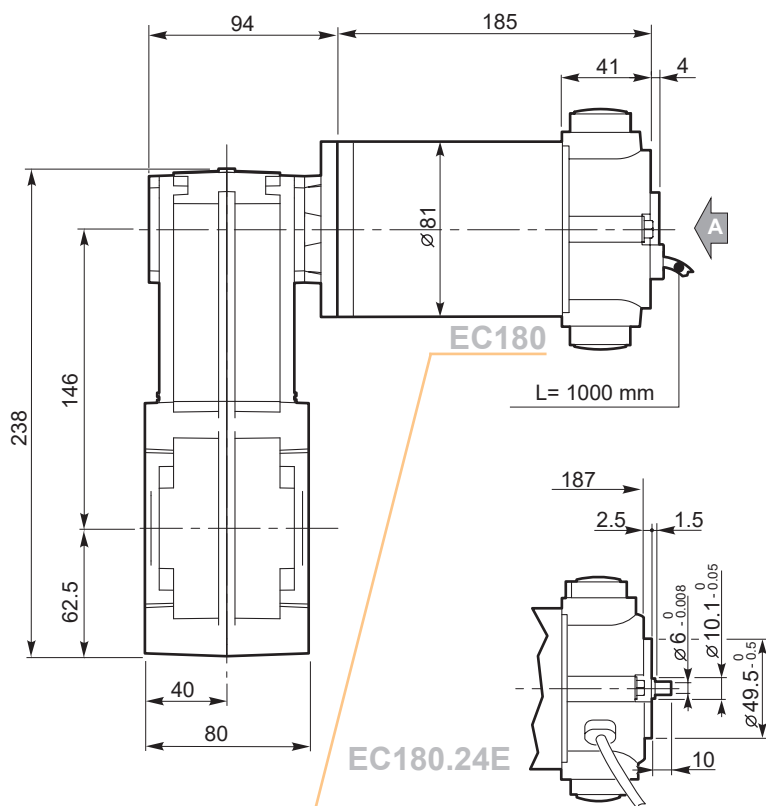


Dimensioni

Dimensions

ECFT 180/146

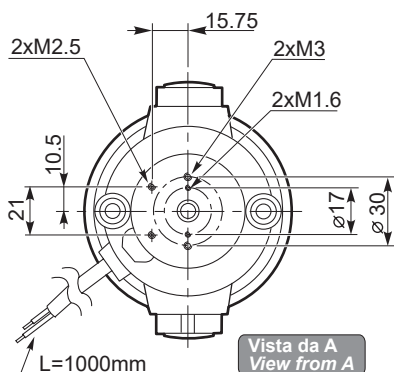
ECFT 180/146 U



NOTA: Stessi fissaggi da entrambi i lati  
NOTE: Same fixing points in both sides

**Kg**  
8.1

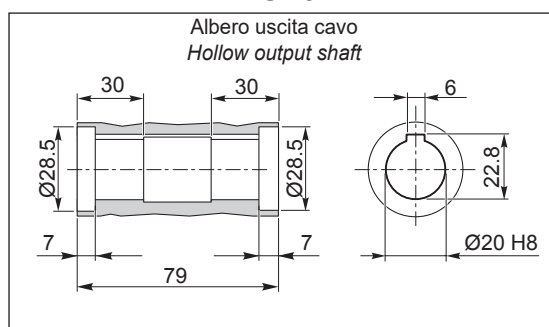
**Nota:** Motore inclinato con portaspazzole a 45°  
**Note:** Motor assembly with brush holder inclined 45°

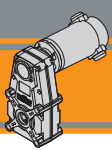


- Freno / Brake → H23
- Encoder → H24
- Motori / Motors IP66 → I6

ECFT

O20



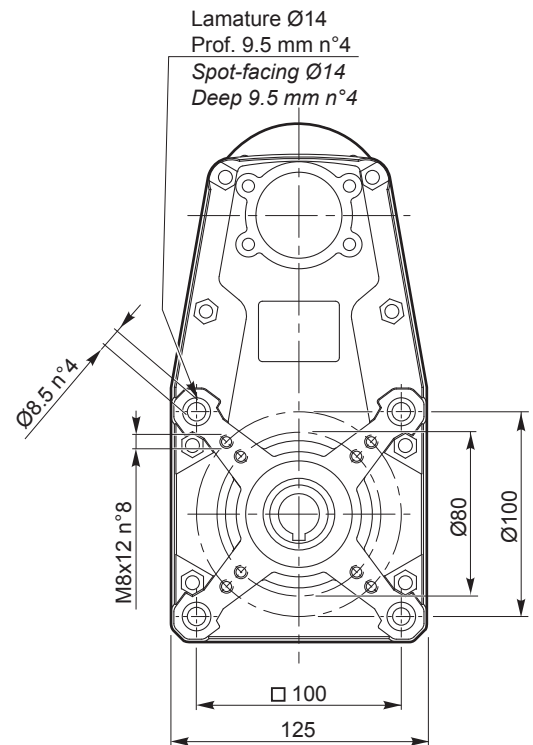
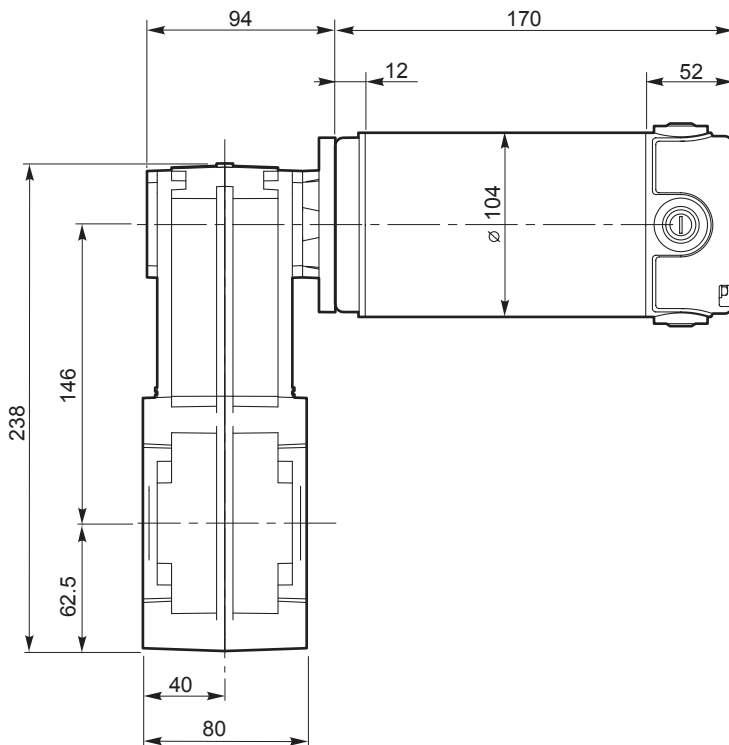


Dimensioni

Dimensions

**ECFT 250/146**

**ECFT 250/146 U**



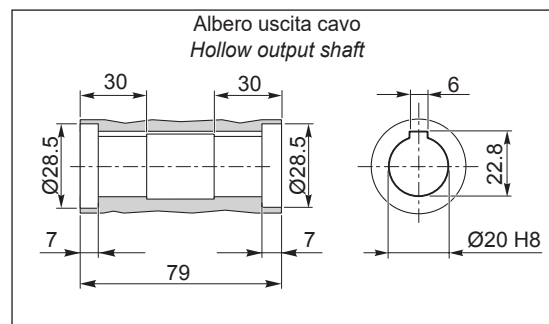
**Kg**  
8.9

NOTA: Stessi fissaggi da entrambi i lati  
NOTE: Same fixing points in both sides

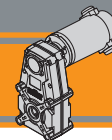
Motori / Motors IP66

18

**O20**





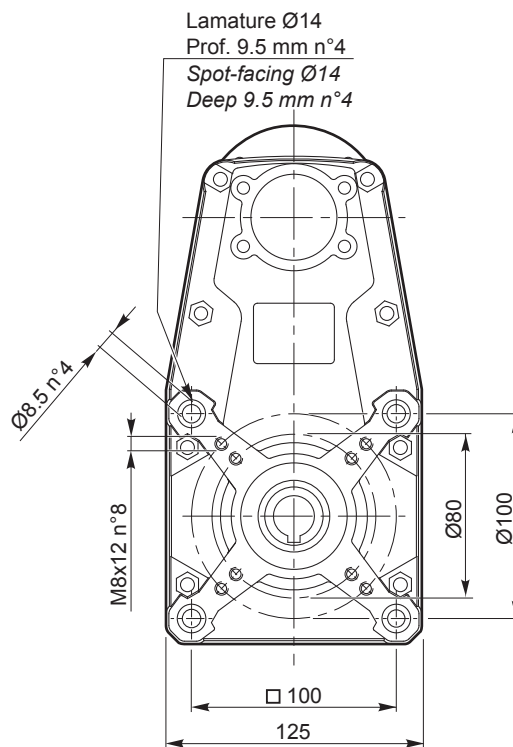
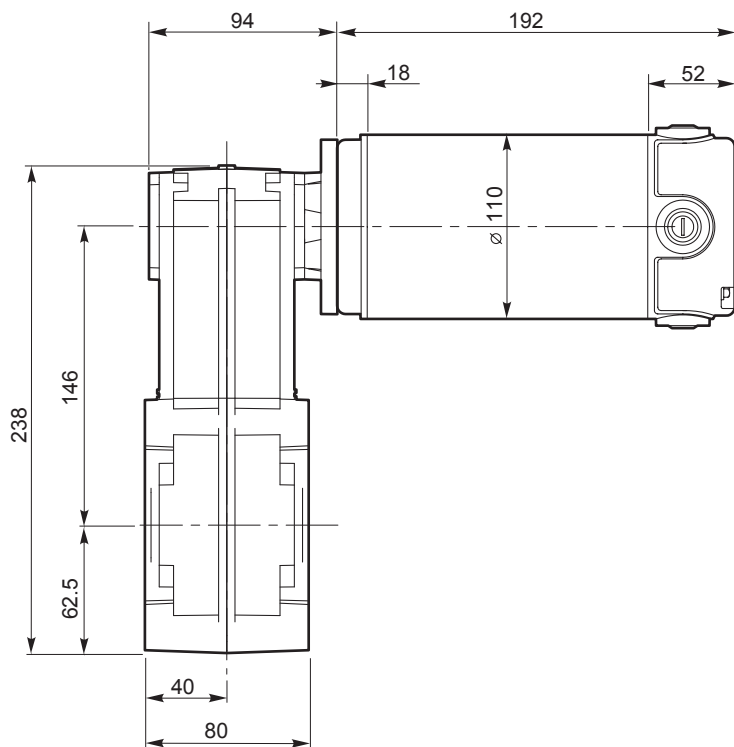


Dimensioni

Dimensions

**ECFT 350/146**

**ECFT 350/146 U**



NOTA: Stessi fissaggi da entrambi i lati  
NOTE: Same fixing points in both sides

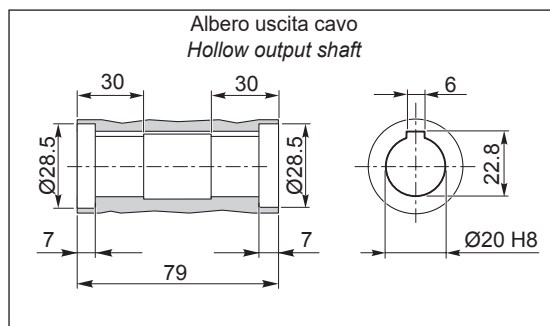
**Kg**  
10.0

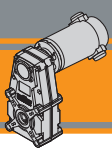
Freno / Brake → **H23**

Motori / Motors IP66 → **I10**

ECFT

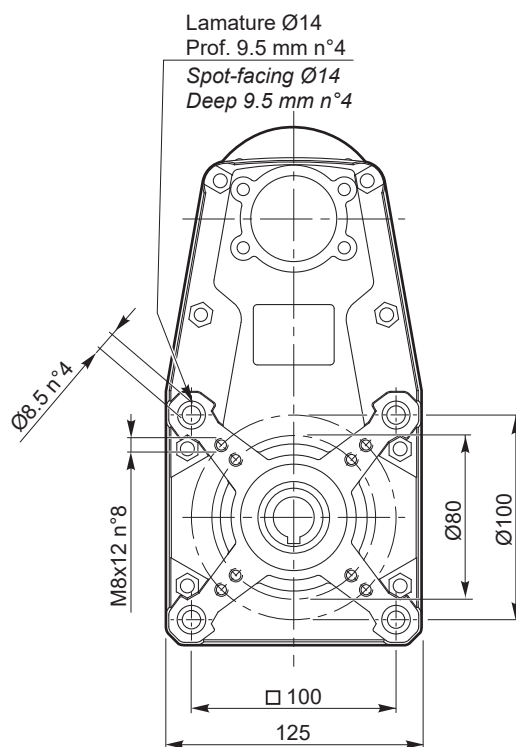
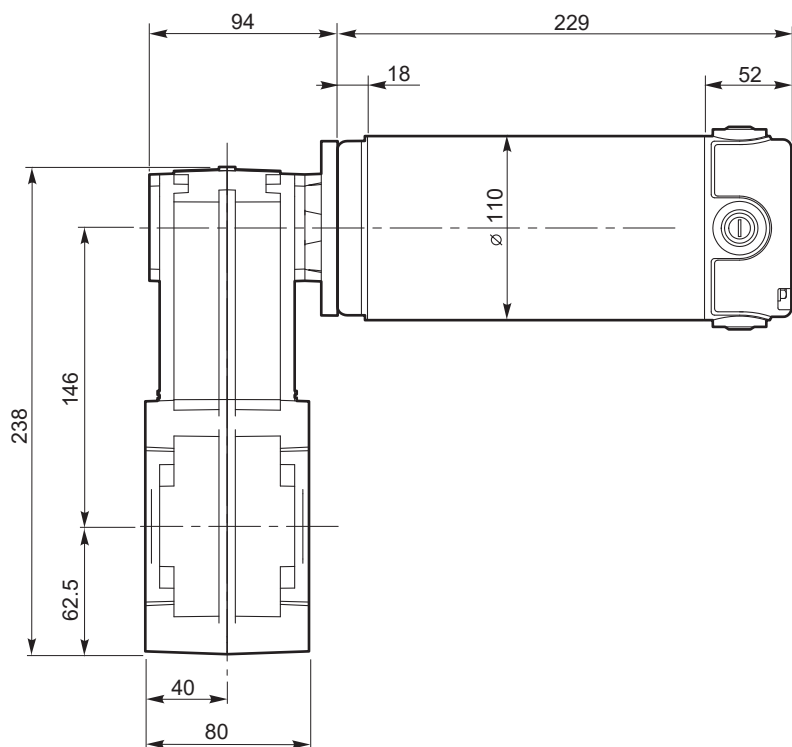
**O20**





**ECFT 600/146**

**ECFT 600/146 U**



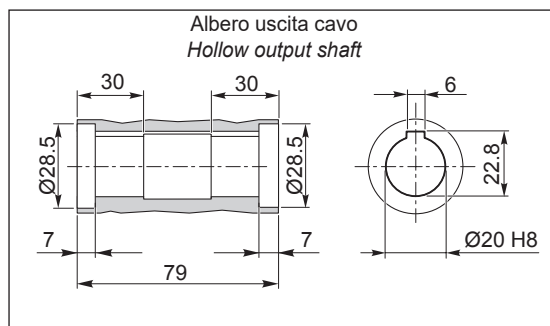
**Kg**  
11.8

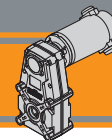
NOTA: Stessi fissaggi da entrambi i lati  
NOTE: Same fixing points in both sides

Freno / Brake → **H23**

Motori / Motors IP66 → **I10**

**O20**



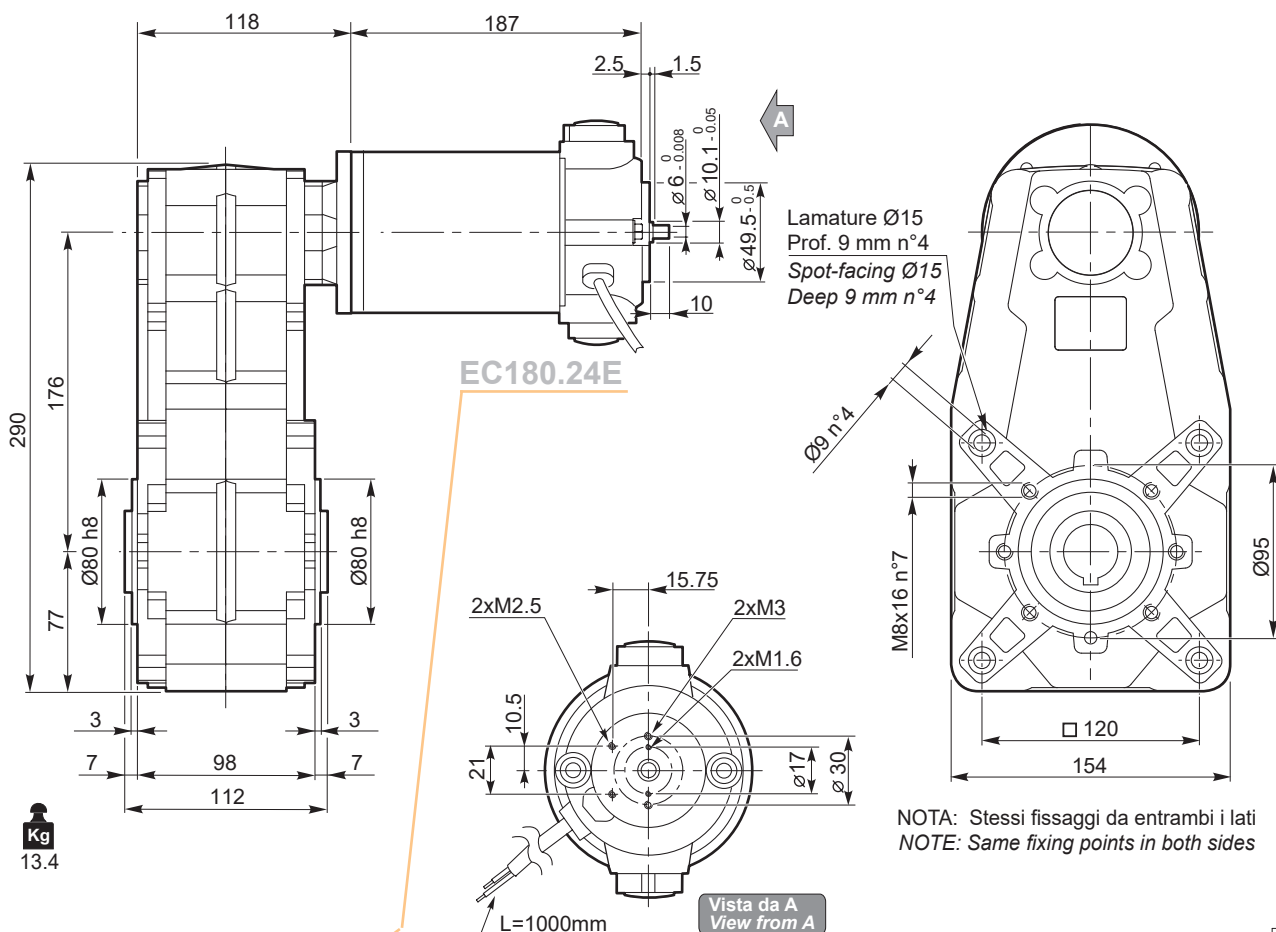


Dimensioni

Dimensions

ECFT 180/176.24E

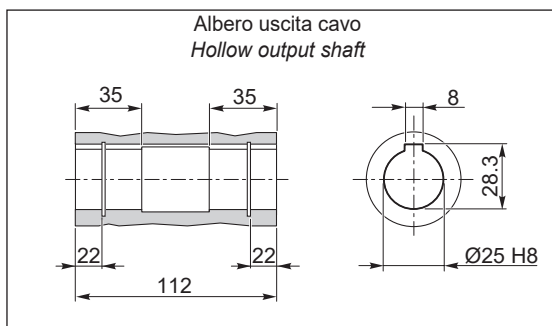
ECFT 180/176.24E U



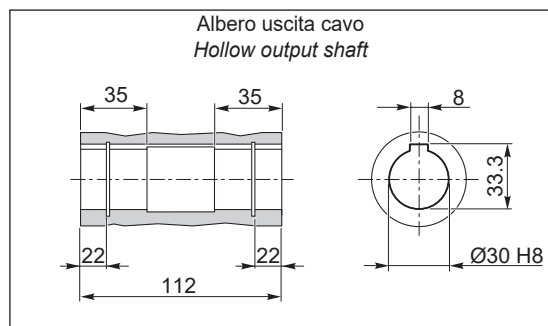
Encoder → H24

Nota: Motore inclinato con portaspazzole a 45°  
Note: Motor assembly with brush holder inclined 45°

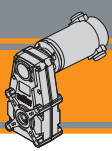
O25



O30

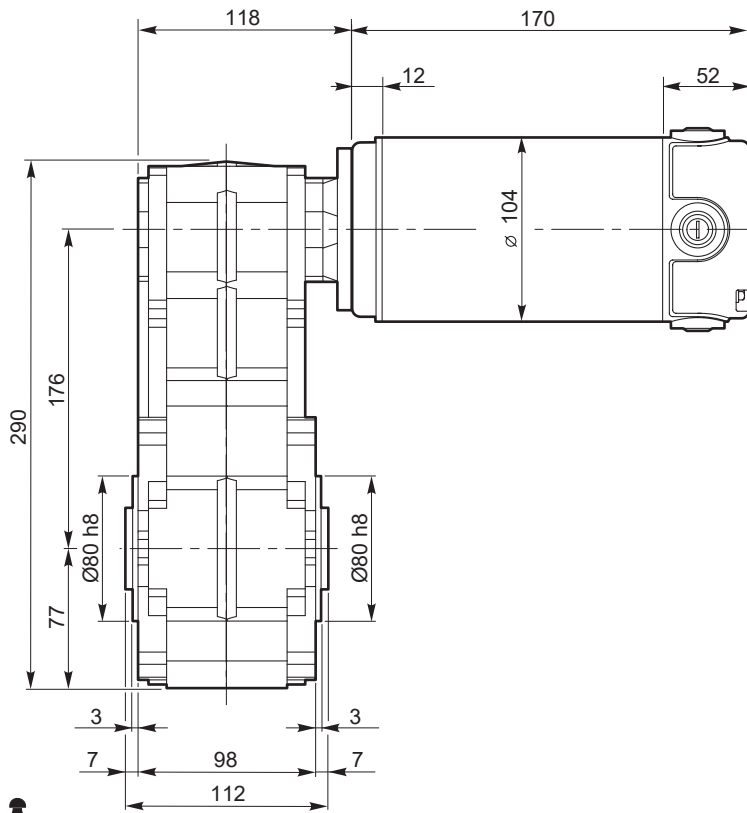


ECFT

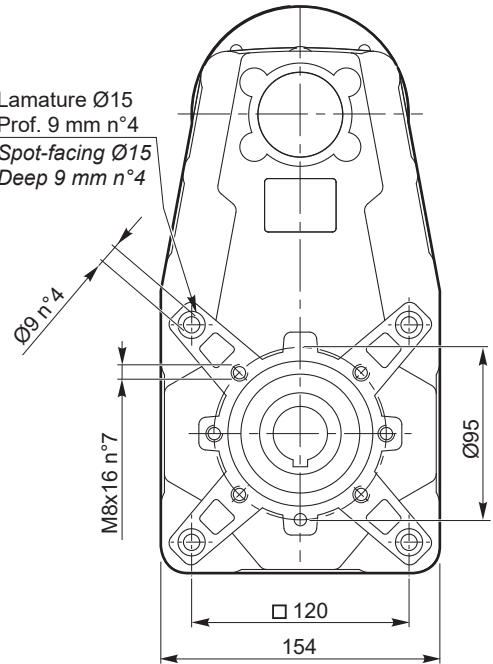


## ECFT 250/176

### ECFT 250/176 U



Lamature Ø15  
Prof. 9 mm n°4  
Spot-facing Ø15  
Deep 9 mm n°4



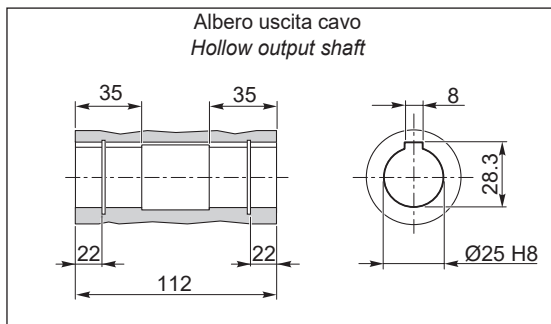
**Kg**  
14.2

Motori / Motors IP66

110

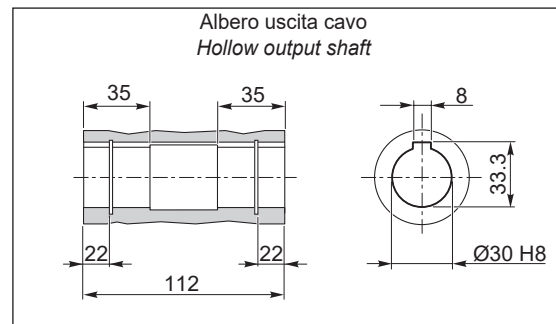
### O25

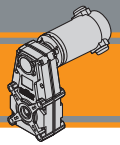
Albero uscita cavo  
Hollow output shaft



### O30

Albero uscita cavo  
Hollow output shaft



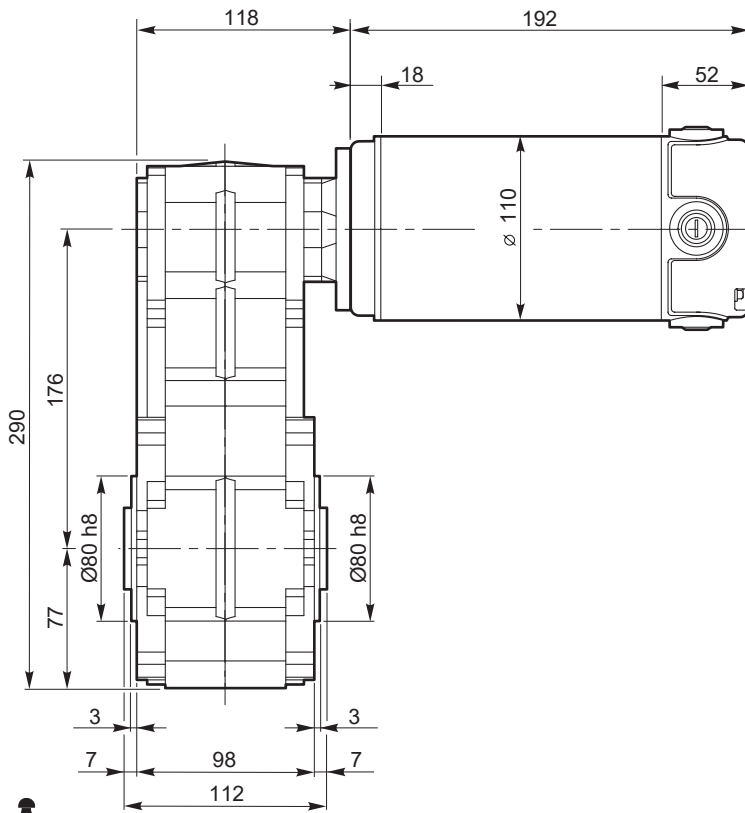


Dimensioni

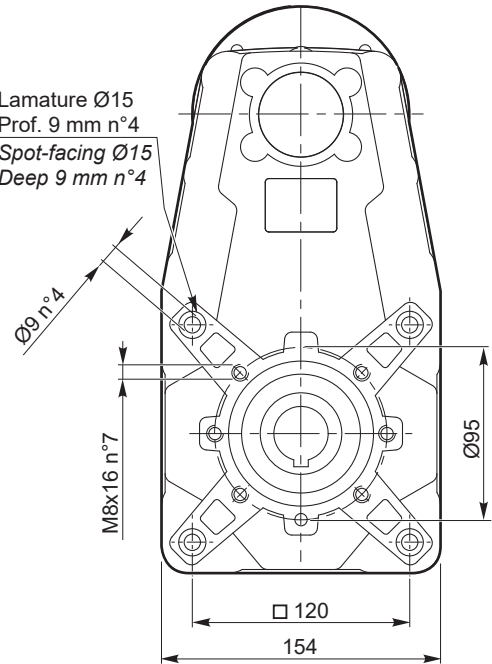
Dimensions

**ECFT 350/176**

**ECFT 350/176 U**



Lamature Ø15  
Prof. 9 mm n°4  
Spot-facing Ø15  
Deep 9 mm n°4



**Kg**  
15.3

Freno / Brake

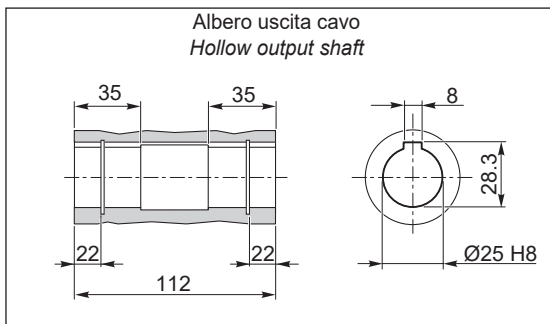
H23

Motori / Motors IP66

I10

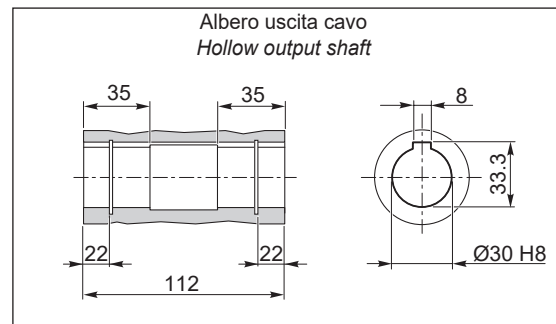
**O25**

Albero uscita cavo  
Hollow output shaft

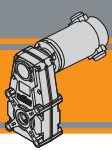


**O30**

Albero uscita cavo  
Hollow output shaft

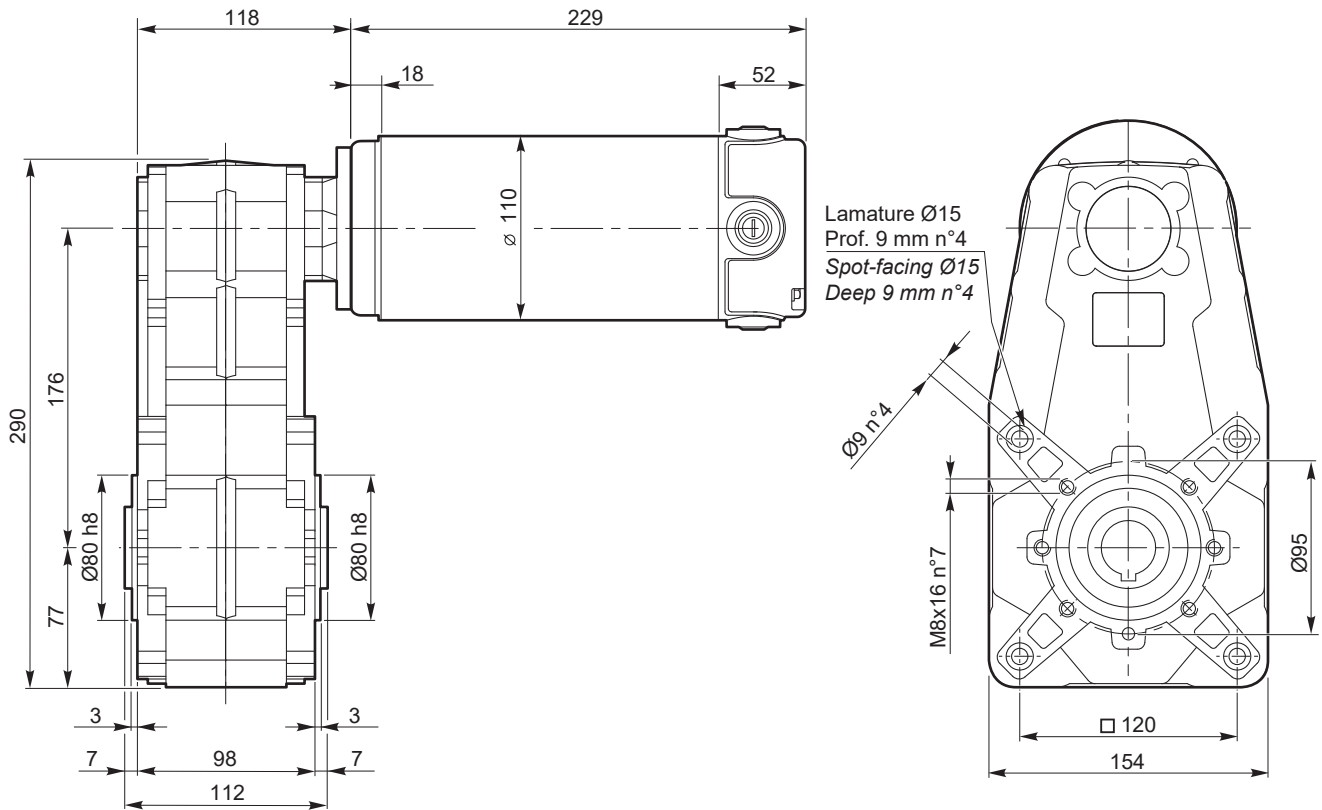


ECFT



### ECFT 600/176

#### ECFT 600/176 U



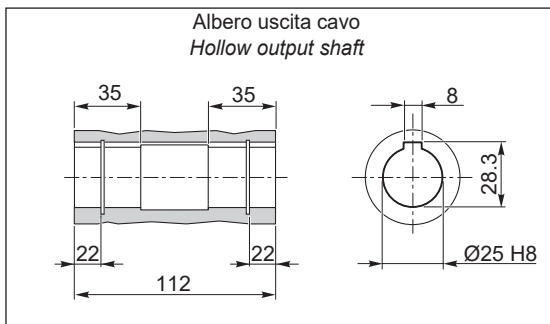
**Kg**  
17.1

Freno / Brake → **H23**

Motori / Motors IP66 → **I10**

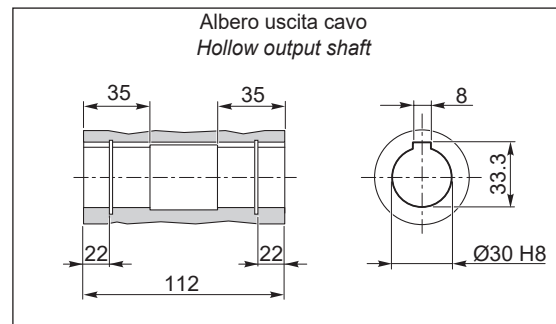
#### O25

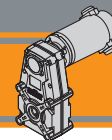
Albero uscita cavo  
Hollow output shaft



#### O30

Albero uscita cavo  
Hollow output shaft



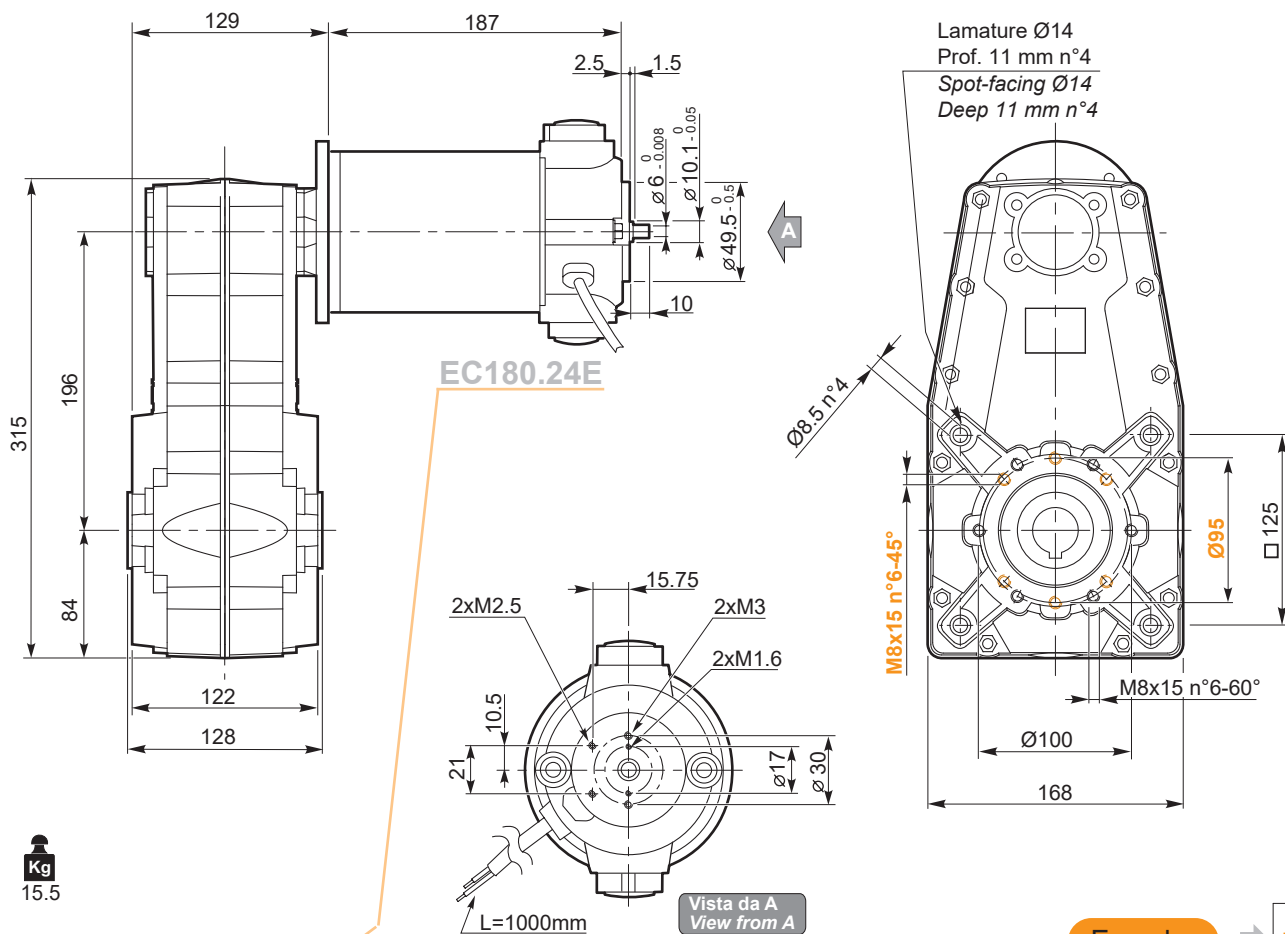


Dimensioni

Dimensions

ECFT 180/196.24E

ECFT 180/196.24E U

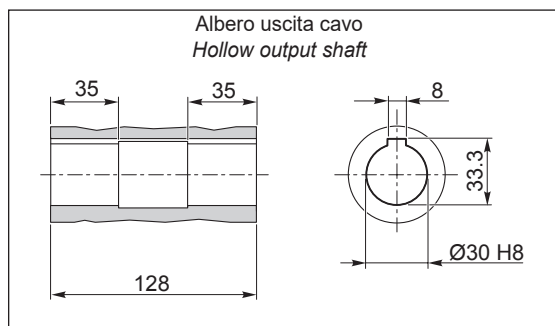


**Nota:** Motore inclinato con portaspazzole a 45°  
**Note:** Motor assembly with brush holder inclined 45°

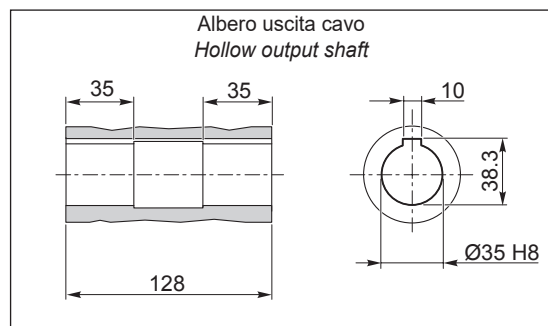
Encoder

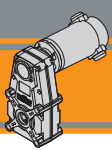
H24

O30



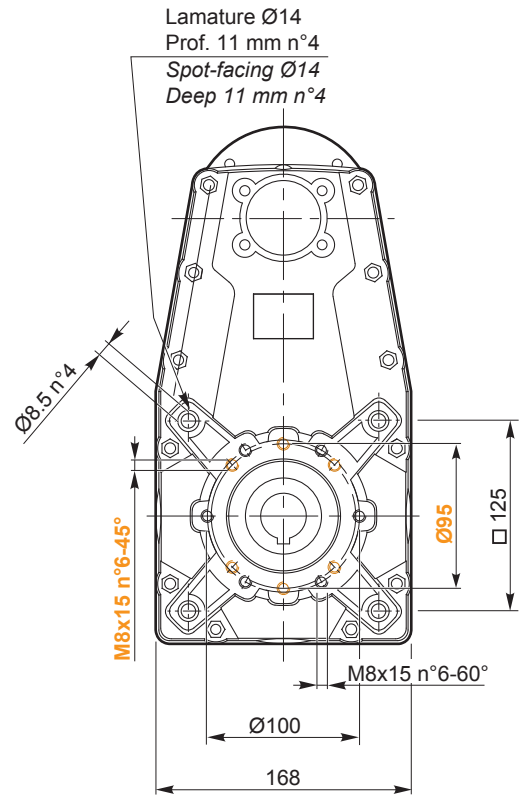
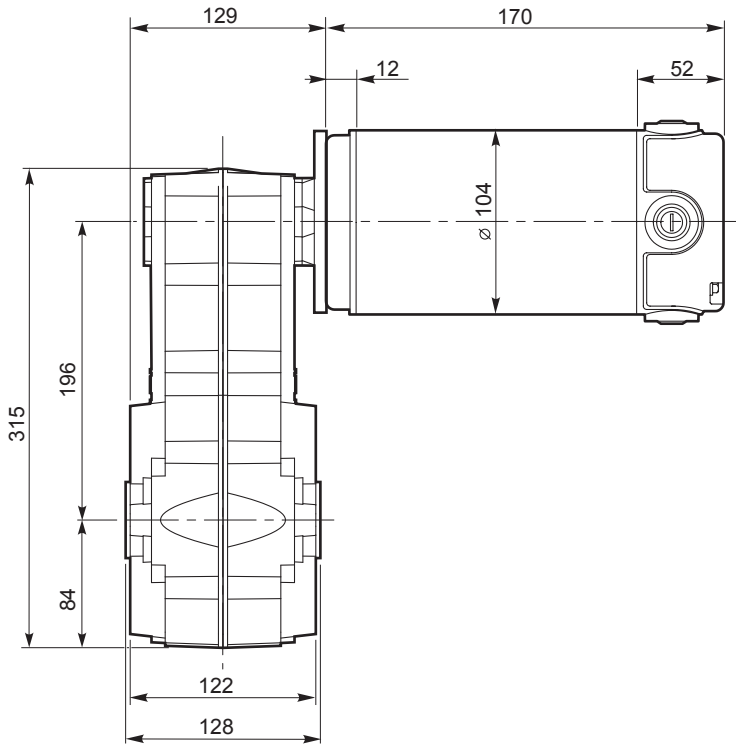
O35





## ECFT 250/196

### ECFT 250/196 U



**Kg**  
16.3

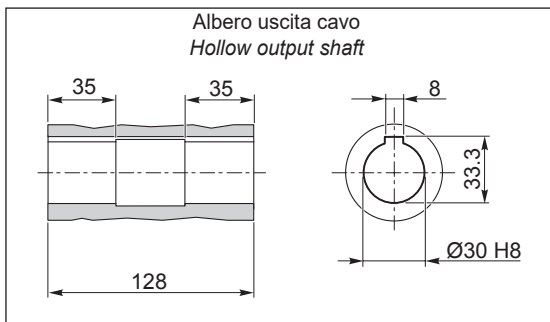
NOTA: Stessi fissaggi da entrambi i lati  
NOTE: Same fixing points in both sides

Motori / Motors IP66

18

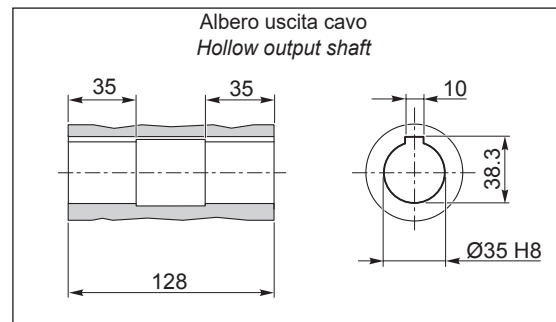
### O30

Albero uscita cavo  
Hollow output shaft

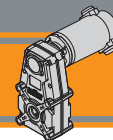


### O35

Albero uscita cavo  
Hollow output shaft





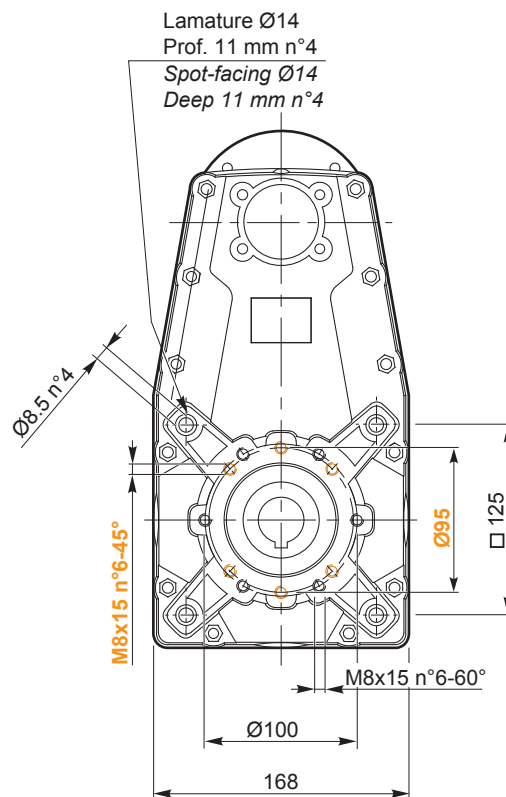
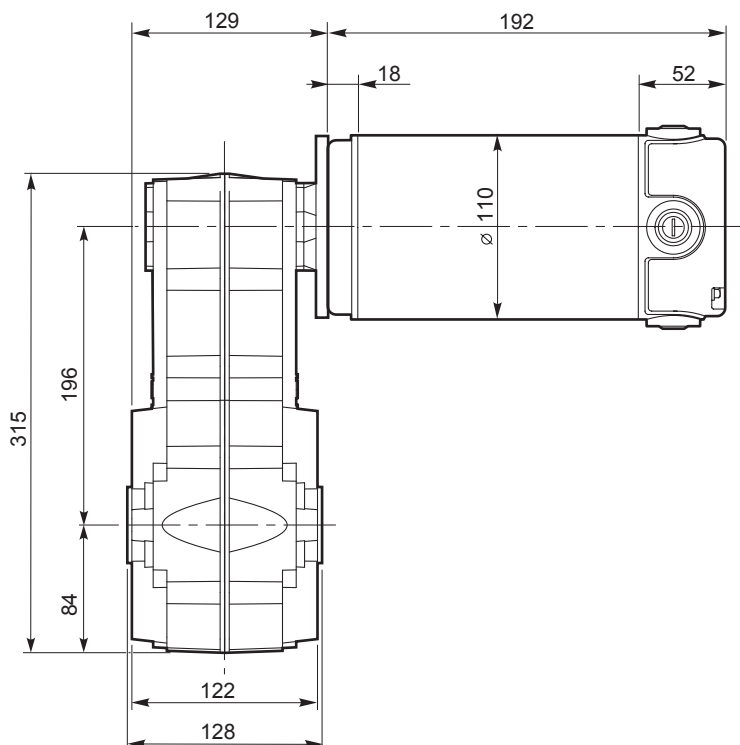


Dimensioni

Dimensions

ECFT 350/196

ECFT 350/196 U



**Kg**  
17.4

NOTA: Stessi fissaggi da entrambi i lati  
NOTE: Same fixing points in both sides

Freno / Brake

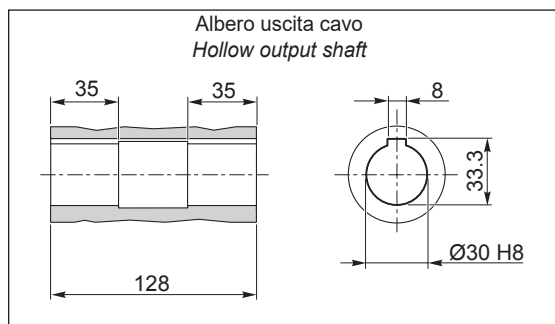
H23

Motori / Motors IP66

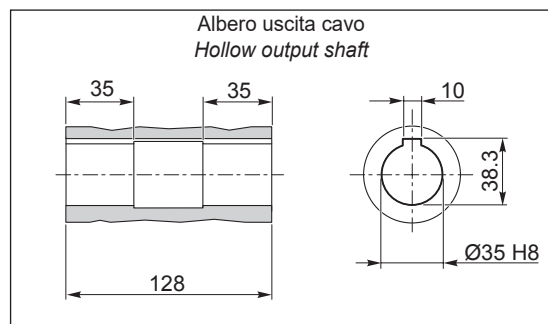
I10

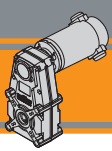
ECFT

O30



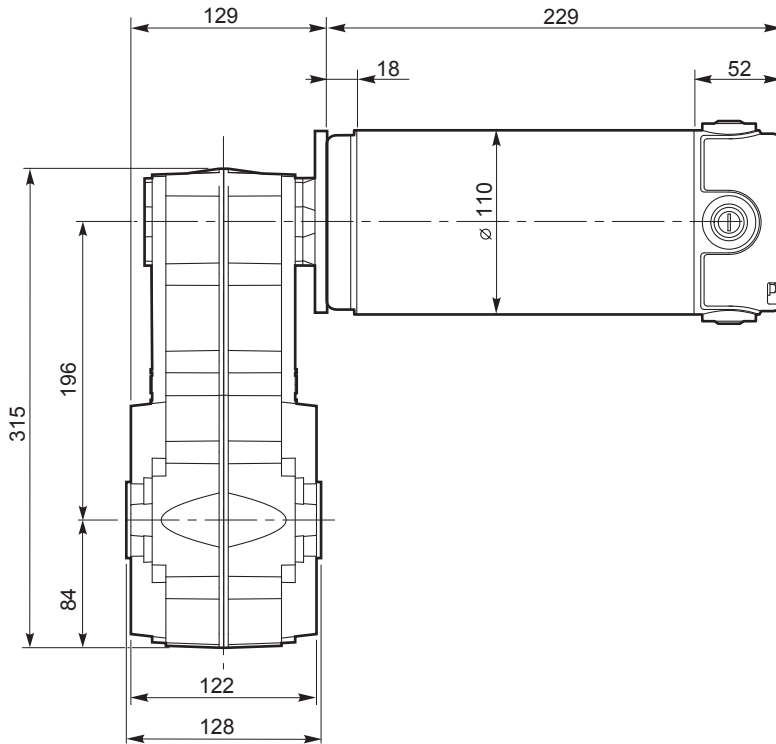
O35



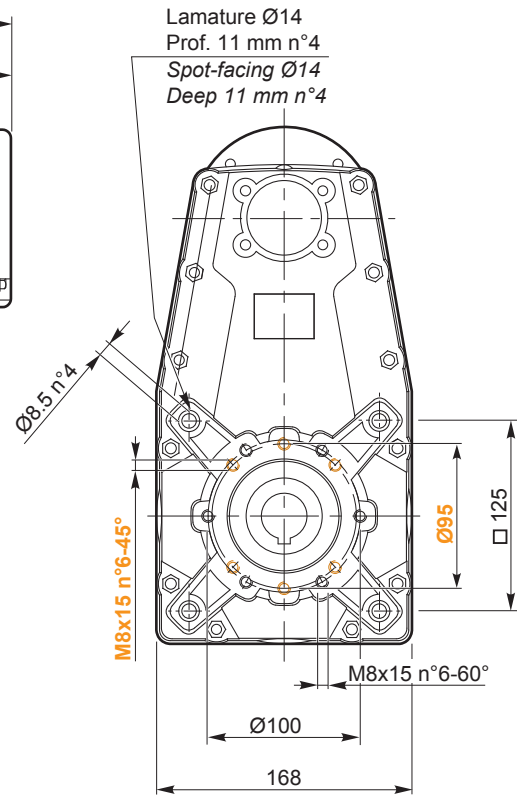


### ECFT 600/196

#### ECFT 600/196 U



**Kg**  
19.2



NOTA: Stessi fissaggi da entrambi i lati  
NOTE: Same fixing points in both sides

Freno / Brake

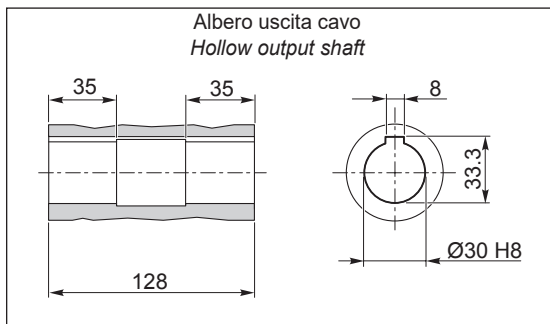
H23

Motori / Motors IP66

I12

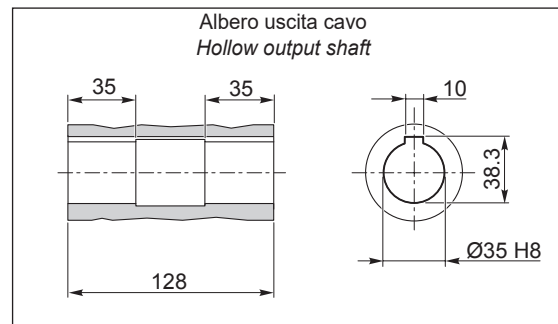
#### O30

Albero uscita cavo  
Hollow output shaft



#### O35

Albero uscita cavo  
Hollow output shaft



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