

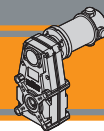


Neodymium

Motoriduttori CC pendolari  
**DC helical parallel gearmotors**





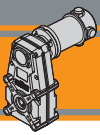


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**NDFT**

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# NDFT Motoriduttori CC pendolari DC Helical parallel gearmotors

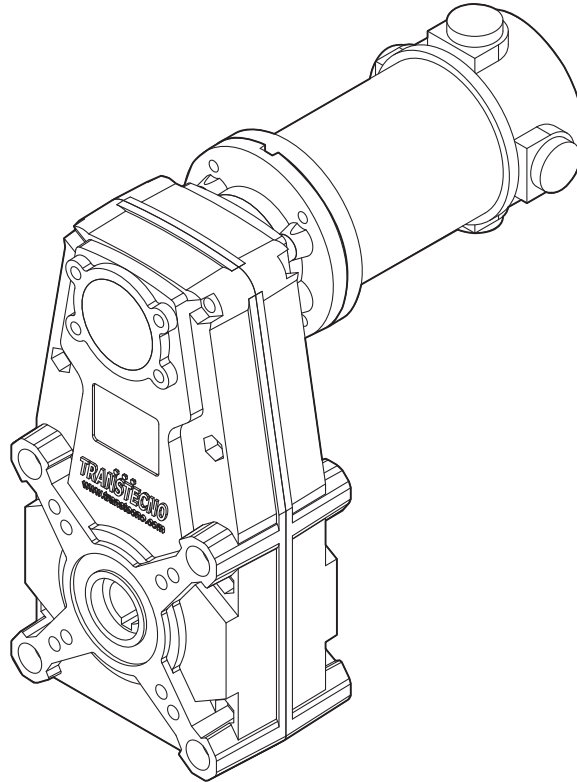
## Caratteristiche tecniche

## Technical features

I motoriduttori CC pendolari a magneti permanenti in neodimio NDFT hanno le seguenti caratteristiche principali:

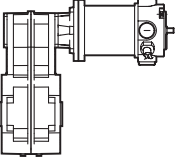
NDFT neodymium permanent magnets DC helical parallel gearmotors range has the following main features:

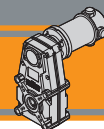
- Alimentazione in bassa tensione 12/24 Vcc
  - Possibilità di montaggio encoder e freno
  - Potenze motore disponibili da 160 a 250W S2
  - Magneti in Neodimio
  - Carcasse dei riduttori in pressofusione di alluminio
  - Lubrificazione permanente con olio sintetico
  - Ingranaggi cilindrici a denti elicoidali.
- Low voltage power supply 12/24 Vdc
  - Suitable for encoder and brake assembly
  - Motor power ratings available from 160 to 250W S2
  - Neodymium magnets
  - Die-cast aluminum housing
  - Permanent synthetic oil long-life lubrication
  - helical gears.



## Designazione

## Classification

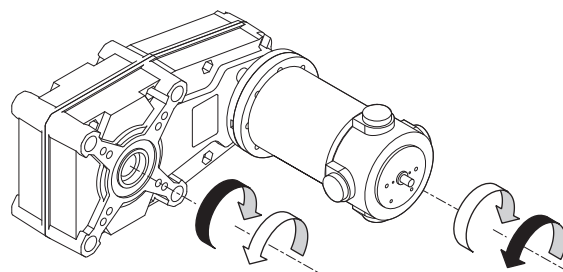
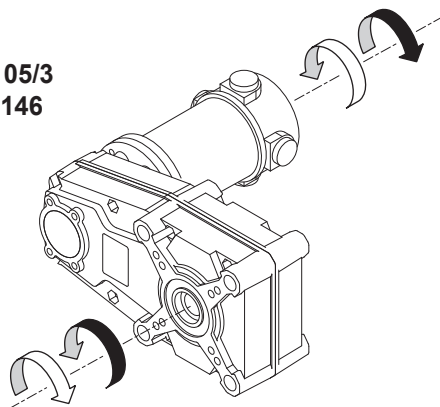
MOTORIDUTTORE / GEARMOTOR						
NDFT	120/146		U	60.63	O20	240
Tipo Type	Grandezza Size		Versione Riduttore Gearbox Version	Rapporto Ratio	Albero di uscita Output shaft	Versione Motore Motor Version
NDFT 	120/105/3 120/105/4 120/146	180/105/3 180/146	U...	Vedere tabella See tables	Vedere tabella See tables	120  240



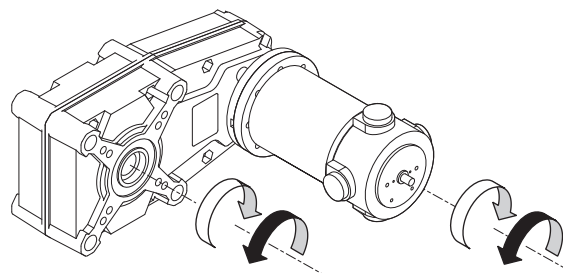
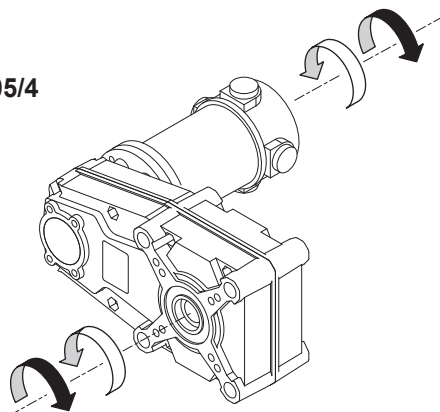
**Sensi di rotazione**

**Direction of rotation**

**FT105/3  
FT146**



**FT105/4**



**NDFT**

**Simbologia**

**Symbols**

$n_1$	[min <sup>-1</sup> ]	Velocità in ingresso / <i>Input speed</i>
$n_2$	[min <sup>-1</sup> ]	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**

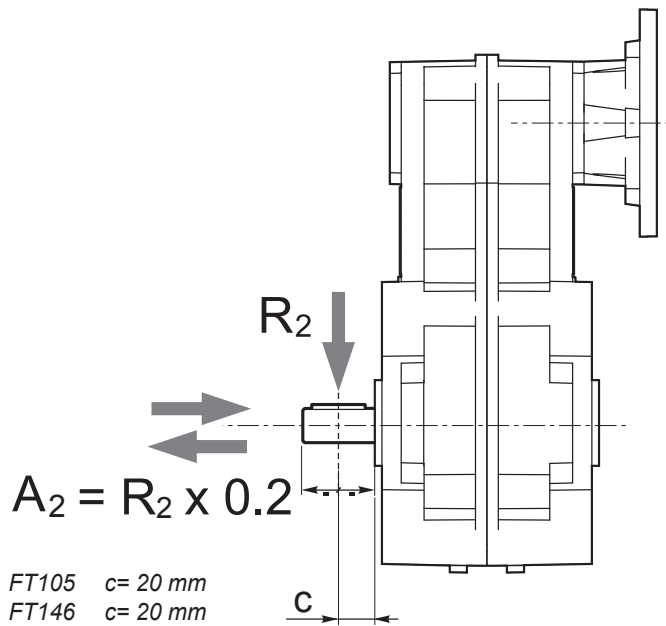
Tutti i motoriduttori sono forniti completi di lubrificante sintetico viscosità 320, pertanto possono essere installati in qualunque posizione di montaggio e non necessitano di manutenzione.

*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

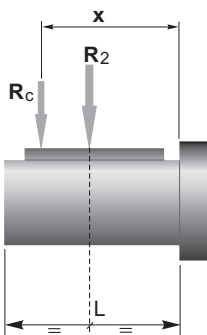
## Radial loads



$n_2$ [min <sup>-1</sup> ]	$R_2$ [N]	
	FT105	FT146
70	1500	2500
40	1700	2700
30	1850	2850
20	2000	3000
10	2000	3000
5	2000	3000

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:

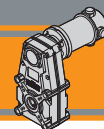


	FT105	FT146
<b>a</b>	82	82,5
<b>b</b>	62	62,5
<b>R<sub>2MAX</sub></b>	2000	3000

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



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

$$R \leq R_c$$



## Dati tecnici

## Technical data

$P_1$ [W]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i		Versione motore Motor version	$P_1$ [W]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i		Versione motore Motor version		
<b>160</b>							<b>250</b>								
(3000 min <sup>-1</sup> )	<b>146</b>	10	3.2	20.57	<b>120/105/3</b>	120/240	(3000 min <sup>-1</sup> )	<b>146</b>	15	2.0	20.57	<b>180/105/3</b>	120/240		
	<b>90</b>	16	2.4	33.32				<b>90</b>	25	1.6	33.32				
	<b>68</b>	21	2.4	44.36				<b>68</b>	33	1.5	44.36				
	<b>55</b>	26	1.9	54.87				<b>55</b>	41	1.2	54.87				
	<b>42</b>	34	1.5	71.84				<b>42</b>	54	0.9	71.84				
	<b>39</b>	37	1.4	77.07				<b>39</b>	58	0.9	77.07				
	<b>34</b>	43	1.2	88.87				<b>34</b>	66	0.8	88.87				
	<b>24</b>	60	0.8	124.81											
	<b>17</b>	86	0.6	181.35				<b>160</b>	14	4.4	18.75			<b>180/146</b>	120/240
	<b>13</b>	86	0.6	224.32				<b>115</b>	20	3.2	26.17				
	<b>9.5</b>	86	0.6	315.05		<b>106</b>	21	3.0	28.26						
						<b>86</b>	26	3.0	35.07						
	<b>8.1</b>	86	0.6	368.19	<b>120/105/4</b>	120/240	<b>76</b>	30	2.6	39.44					
	<b>5.6</b>	86	0.6	534.98				<b>65</b>	35	2.2	46.44				
	<b>4.5</b>	86	0.6	661.76				<b>57</b>	40	2.0	52.86				
	<b>3.2</b>	86	0.6	929.40				<b>49</b>	45	1.9	60.63				
	<b>160</b>	9	7.0	18.75	<b>120/146</b>	120/240	<b>43</b>	52	1.6	70.00					
	<b>115</b>	13	5.0	26.17				<b>35</b>	63	1.4	84.63				
	<b>106</b>	14	4.6	28.26				<b>31</b>	72	1.2	95.61				
	<b>86</b>	17	4.6	35.07				<b>26</b>	85	1.0	113.40				
	<b>76</b>	19	4.1	39.44				<b>22</b>	100	0.9	133.45				
	<b>65</b>	22	3.5	46.44				<b>20</b>	112	0.8	150.18				
	<b>57</b>	25	3.1	52.86				<b>19</b>	120	0.8	160.43				
	<b>49</b>	29	3.0	60.63				<b>17</b>	134	0.7	178.83				
	<b>43</b>	34	2.6	70.00											
	<b>35</b>	41	2.1	84.63											
	<b>31</b>	46	1.9	95.61											
	<b>26</b>	54	1.6	113.40											
	<b>22</b>	64	1.3	133.45											
	<b>20</b>	72	1.2	150.18											
	<b>19</b>	77	1.2	160.43											
	<b>17</b>	86	1.1	178.83											
	<b>13</b>	107	0.9	223.92											
	<b>13</b>	113	0.8	236.83											
	<b>10</b>	134	0.7	300.07											
	<b>7.5</b>	134	0.7	397.38											

N.B.

Verificare sempre che la coppia  $M_2$  utilizzata non ecceda il valore indicato nelle caselle in grigio

N.B.

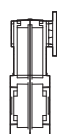
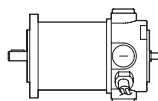
Please check that the output torque  $M_2$  does not exceed the value in the grey areas

**NOTA:** per servizio continuo o altamente intermittente, contattare il servizio tecnico

**NOTE:** for continuous or highly intermittent duty, please contact our technical service

## Motori applicabili

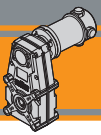
## Motor adapters



		ND	
		120.120 120.240	180.120 180.240
FT	<b>105/3</b>	20.57 - 315.05	20.57 - 315.05
	<b>105/4</b>	368.19 - 929.4	368.19 - 929.4
	<b>146</b>	18.75 - 397.38	18.75 - 397.38

18.75 - 397.38

Rapporti di riduzione  $i$   
Ratio  $i$

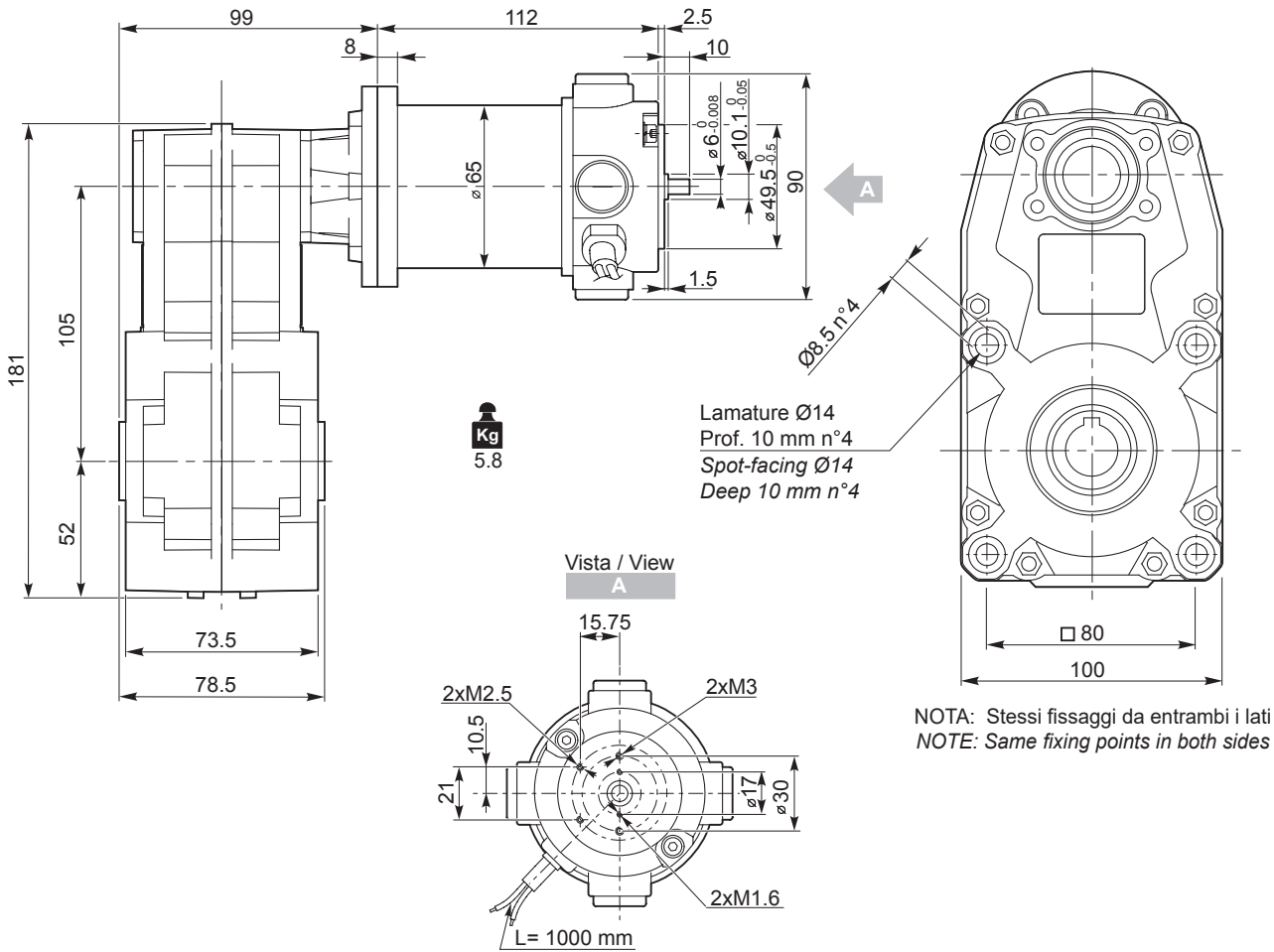


Dimensioni

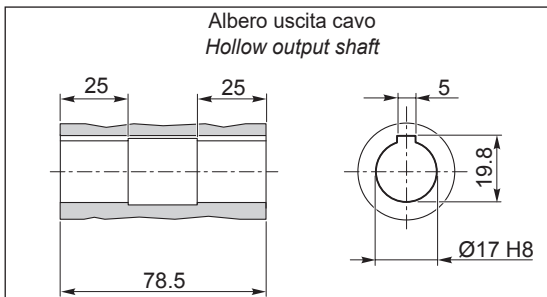
Dimensions

## NDFT 120/105

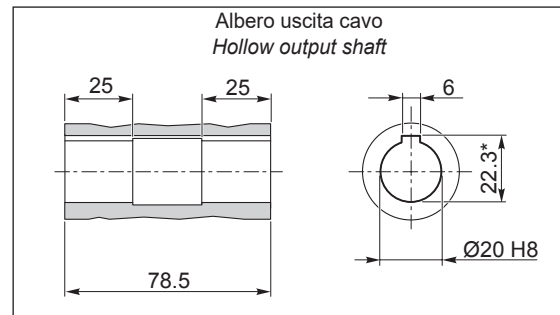
### NDFT 120/105...U



### O17



### O20



\*: Sede linguetta ribassata / Special keyway

Freno / Brake



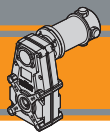
B9

Encoder



B9



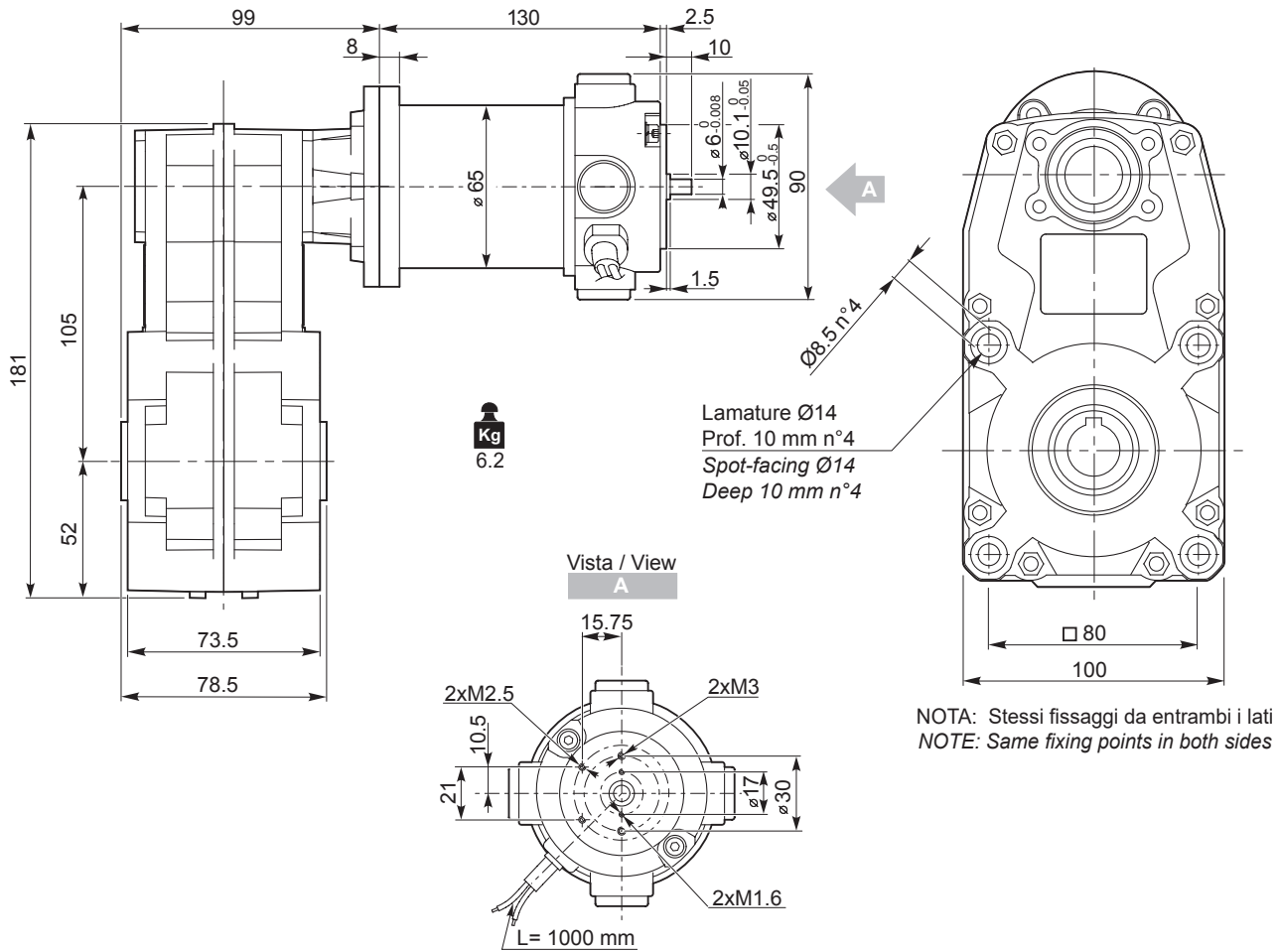


Dimensioni

Dimensions

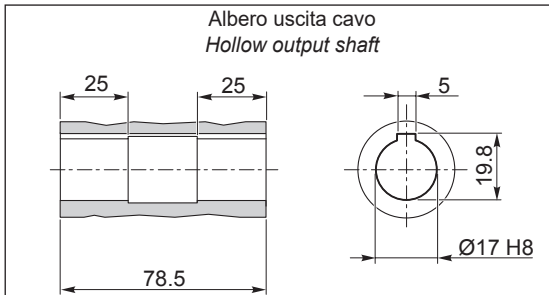
**NDFT 180/105**

**NDFT 180/105...U**

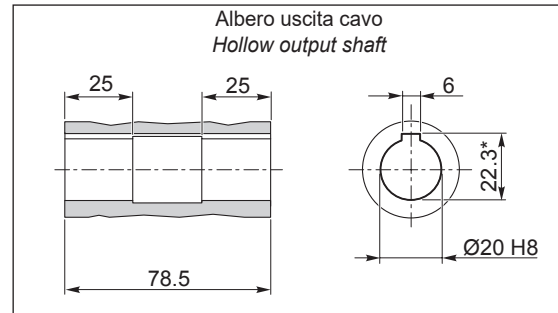


**NDFT**

**O17**

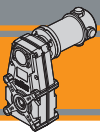


**O20**



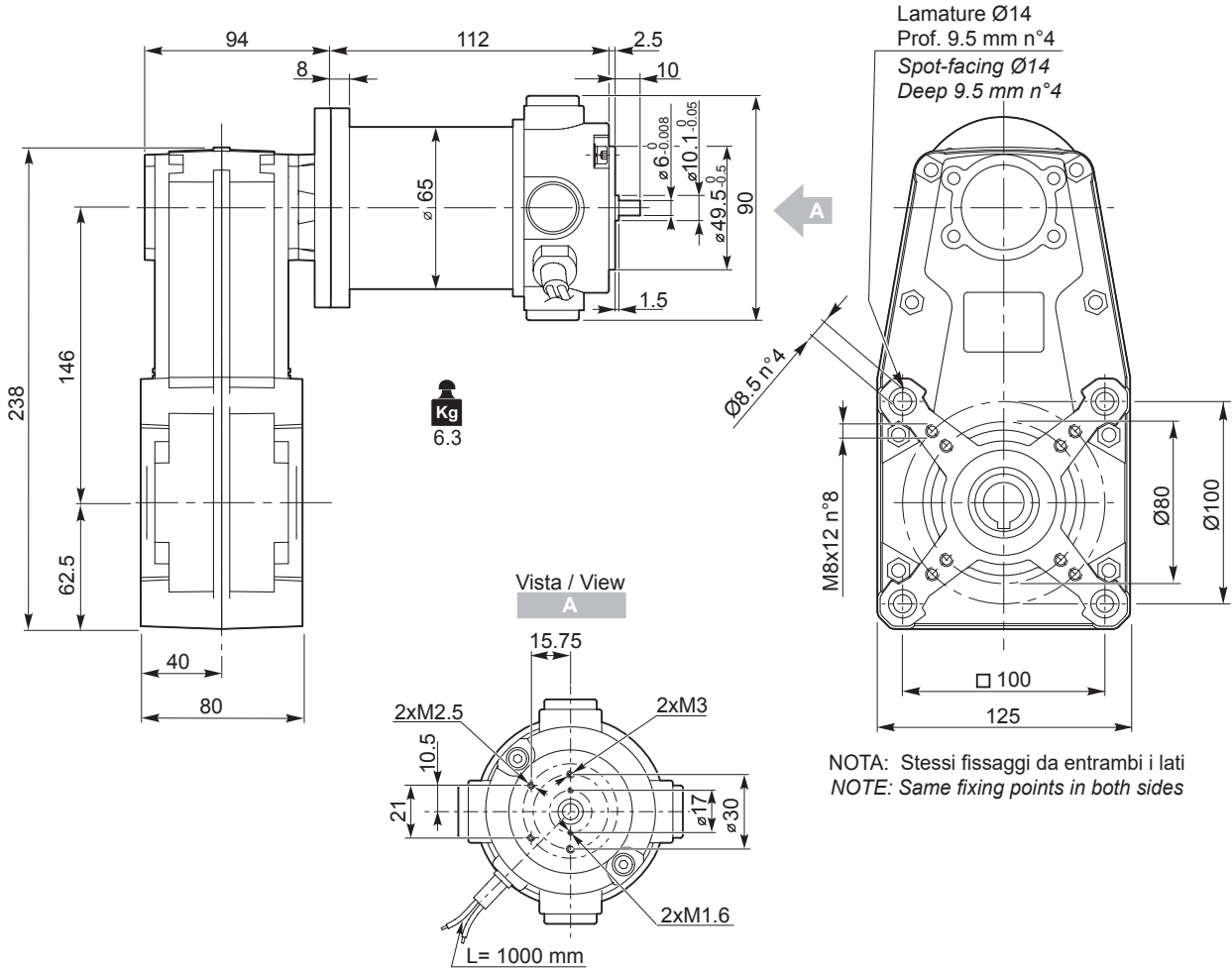
\*: Sede linguetta ribassata / Special keyway

- Freno / Brake → B9
- Encoder → B9

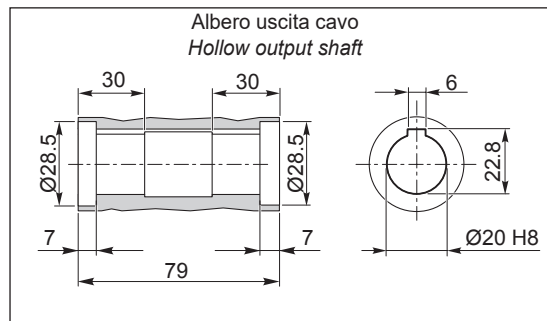


**NDFT 120/146**

**NDFT 120/146...U**



**O20**



Freno / Brake

B9

Encoder

B9

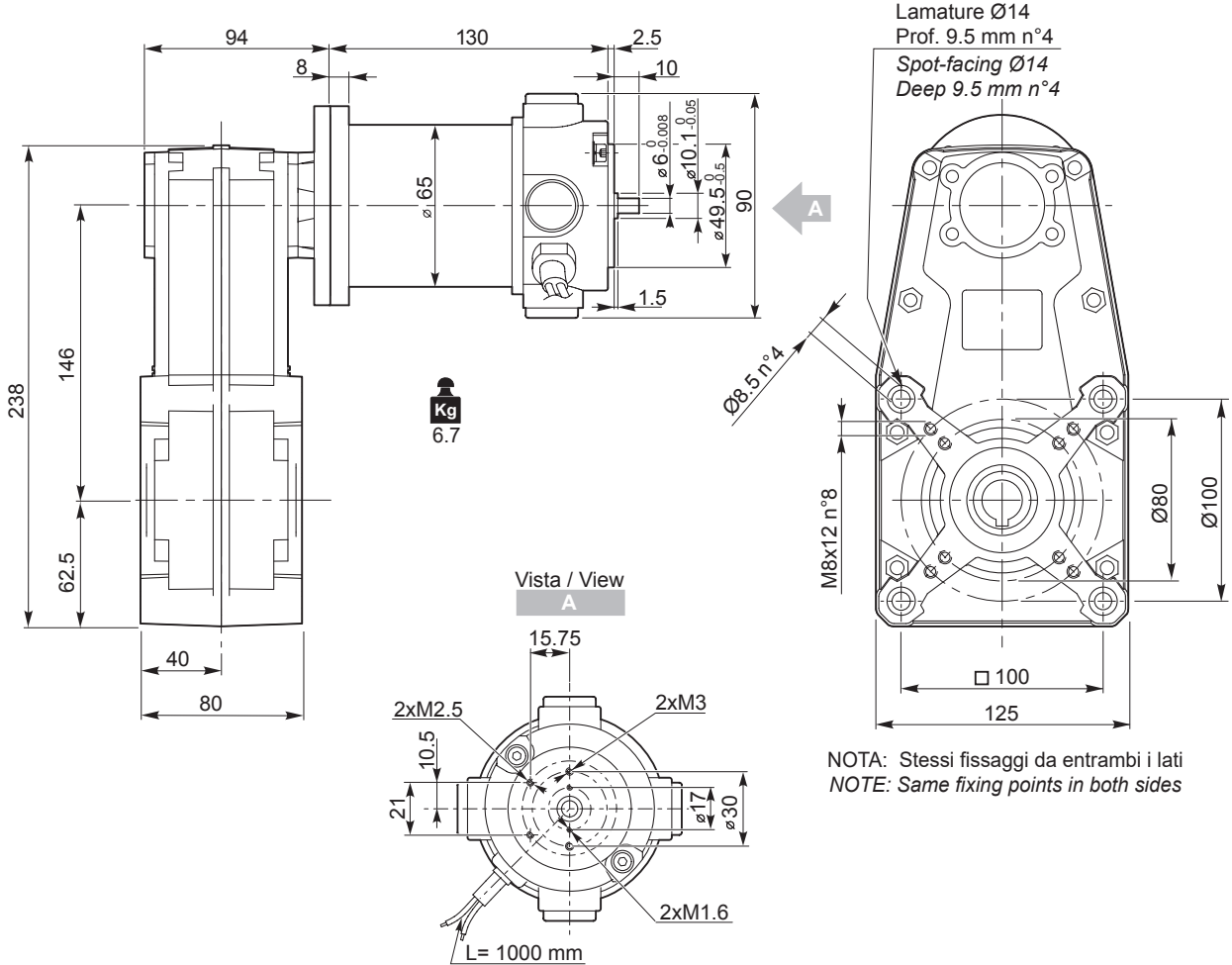


Dimensioni

Dimensions

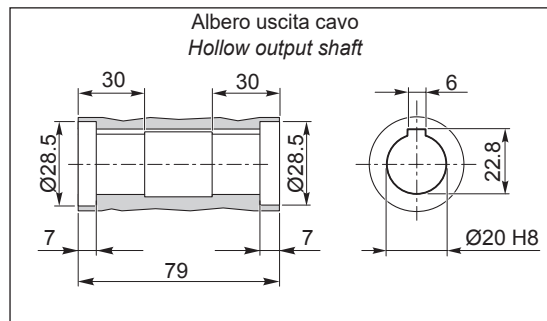
**NDFT 180/146**

**NDFT 180/146...U**



**NDFT**

**O20**



- Freno / Brake → B9
- Encoder → B9



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