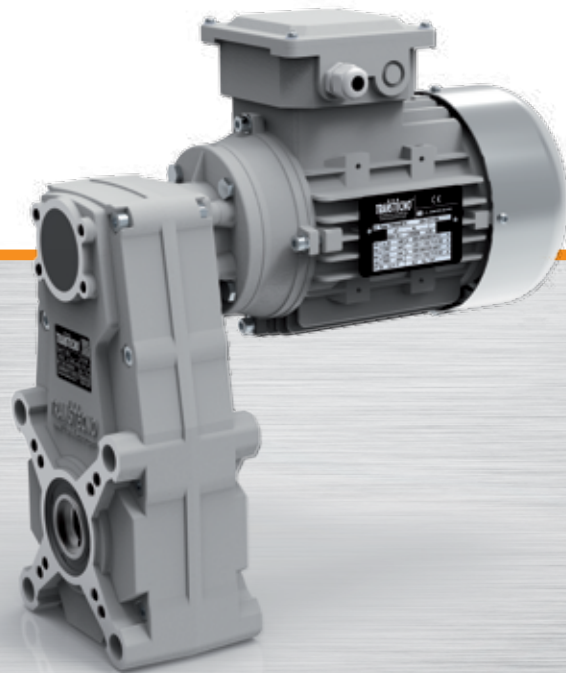
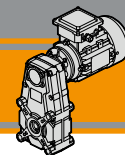




Motoriduttori pendolari
Helical parallel gearmotors

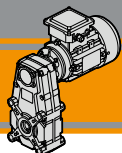




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Caratteristiche tecniche

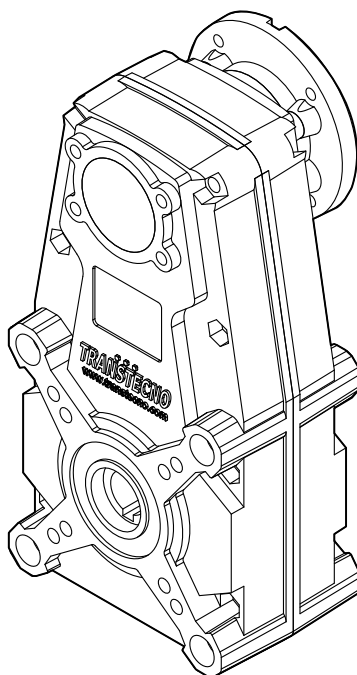
Technical features

I motoriduttori pendolari della serie FT hanno le seguenti caratteristiche principali:

- Carcasa in pressofusione di alluminio
- Lubrificazione permanente con olio sintetico.
- Ingranaggi cilindrici a denti elicoidali, induriti e rettificati.


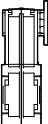
FT helical parallel gearmotors range has the following main features:

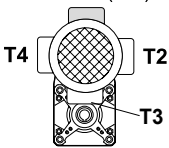
- Die-cast aluminum housings
- Permanent synthetic oil long-life lubrication.
- Ground-hardened helical gears.

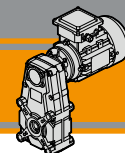


Designazione

Classification

RIDUTTORE / GEARBOX						
FT	146	U	60.63	O20	56	B5
Tipo Type	Grandezza Size	Versione Version	Rapporto Ratio	Albero cavo uscita Hollow output shaft	IEC 	Forma costruttiva Version
	105/3 105/4 146 196	U...	vedi tabelle see tables	vedi tabelle see tables	56 63 71 80 90	B5 B14

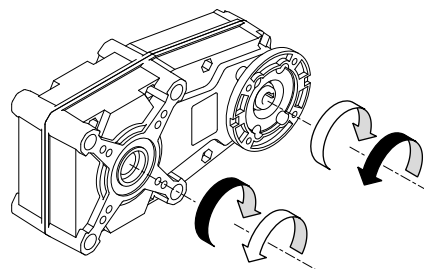
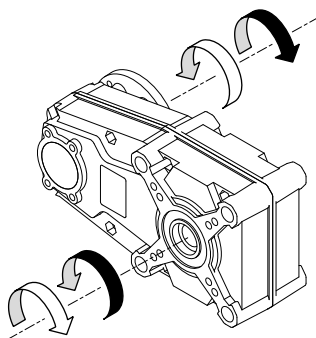
MOTORE / MOTOR					
0.09kW	4p	3ph	230/400V	50Hz	T1
Potenza Power	Poli Poles	Fasi Phases	Tensione Voltage	Frequenza Frequency	Pos. morsetteria Terminal box pos.
vedi tabelle see tables	2p 4p 6p 8p	1ph 3ph	230V 230/400V	50Hz 60Hz	T1 (Std) 



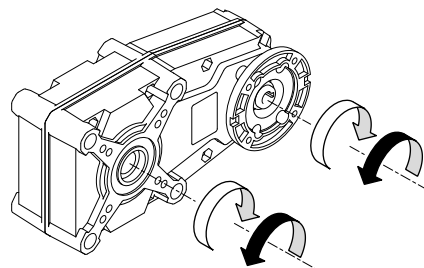
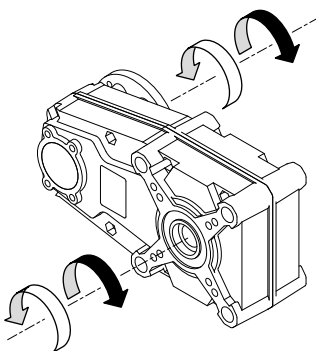
Sensi di rotazione

Direction of rotation

FT105/3
FT146
FT196



FT105/4



FT

Simbologia

Symbols

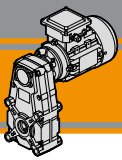
n_1	[min ⁻¹]	Velocità in ingresso / <i>Input speed</i>
n_2	[min ⁻¹]	Velocità in uscita / <i>Output speed</i>
i		Rapporto di riduzione / <i>Ratio</i>
P_1	[kW]	Potenza in entrata / <i>Input power</i>
M_2	[Nm]	Coppia nominale in uscita in funzione di P_1 / <i>Output torque referred to P_1</i>
P_{n1}	[kW]	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 P_{n1}</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

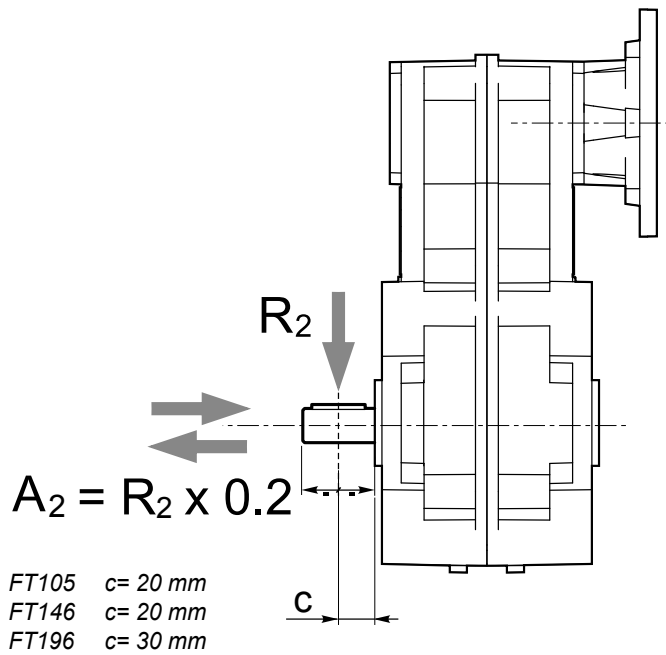
Tutti i motoriduttori sono forniti completi di lubrificante sintetico viscosità 320, pertanto possono essere installati in qualunque posizione di montaggio e non necessitano di manutenzione.

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

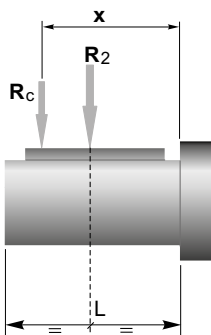
Radial loads



n_2 [min ⁻¹]	R_2 [N]		
	FT105	FT146	FT196
70	1500	2500	3500
40	1700	2700	4000
30	1850	2850	4600
20	2000	3000	5500
10	2000	3000	7000
5	2000	3000	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:

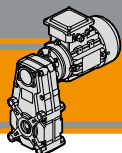


	FT105	FT146	FT196
a	82	82,5	132
b	62	62,5	102
R_{2MAX}	2000	3000	7000

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





$$R \leq R_c$$

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



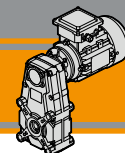
Dati tecnici

Technical data

P_1 [kW]	n_2 [min ⁻¹]	M_2 [Nm]	sf	i			P_1 [kW]	n_2 [min ⁻¹]	M_2 [Nm]	sf	i						
0.09							0.12										
56B4 (1400 min ⁻¹)	68	12	3.4	20.57	FT105/3	B14	63A4 (1400 min ⁻¹)	75	14	5.6	18.75	FT146	B5/B14				
	42	19	2.6	33.32			B14		53	20	4.0			26.17	B5/B14		
	32	26	2.5	44.36			B14		50	22	3.7			28.26	B5/B14		
	26	32	2.1	54.87			B14		40	27	3.7			35.07	B5/B14		
	20	41	1.6	71.84			B14		35	30	3.3			39.44	B5/B14		
	18	44	1.5	77.07			B14		30	36	2.8			46.44	B5/B14		
	16	51	1.3	88.87			B14		26	41	2.5			52.86	B5/B14		
	11	72	0.90	124.81			B14		23	47	2.4			60.63	B5/B14		
	7.7	105	0.62	181.35			B14		20	54	2.0			70.00	B5/B14		
	6.2	110	0.59	224.32			B14		17	65	1.7			84.63	B5/B14		
	4.4	110	0.59	315.05	B14		15	74	1.5	95.61	B5/B14						
							12	87	1.3	113.40	B5/B14						
	3.8	120	0.54	368.19	FT105/4	B14	10	103	1.1	133.45	B5/B14						
	2.6	120	0.54	534.98			B14		9.3	116	0.95	150.18	B5/B14				
	2.1	120	0.54	661.76			B14		8.7	123	0.97	160.43	B5/B14				
	1.5	120	0.54	929.40			B14		7.8	138	0.87	178.83	B5/B14				
							6.3	172	0.70	223.92	B5/B14						
	75	11	7.4	18.75	FT146	B5/B14	0.18										
	53	15	5.3	26.17			63B4 (1400 min ⁻¹)	B5/B14	75	22	3.7	18.75	FT146	B5/B14			
	50	16	4.9	28.26					53	30	2.6	26.17			B5/B14		
	40	20	4.9	35.07					50	33	2.5	28.26			B5/B14		
	35	23	4.4	39.44					40	40	2.5	35.07			B5/B14		
	30	27	3.7	46.44					35	46	2.2	39.44			B5/B14		
	27	31	3.3	52.86					30	54	1.9	46.44			B5/B14		
	23	35	3.1	60.63					26	61	1.6	52.86			B5/B14		
	20	40	2.7	70.00					23	70	1.6	60.63			B5/B14		
	17	49	2.3	84.63					20	81	1.4	70.00			B5/B14		
	15	55	2.0	95.61					17	98	1.1	84.63			B5/B14		
	12	65	1.7	113.40					15	110	1.0	95.61			B5/B14		
	10	77	1.4	133.45					12	131	0.84	113.40			B5/B14		
	9.3	87	1.3	150.18					10	154	0.72	133.45			B5/B14		
	8.7	93	1.3	160.43					0.22								
	7.8	103	1.2	178.83					63C4 (1400 min ⁻¹)	B5/B14	75	26			3.0	18.75	FT146
	6.3	129	0.94	223.92	53	37					2.2	26.17			B5/B14		
	5.9	137	0.88	236.83	50	40	2.0	28.26			B5/B14						
	4.7	170	0.70	300.07	40	49	2.0	35.07			B5/B14						
	3.5	170	0.70	397.38	35	56	1.8	39.44			B5/B14						
					30	66	1.5	46.44			B5/B14						
					26	75	1.3	52.86			B5/B14						
					23	86	1.3	60.63			B5/B14						
					20	99	1.1	70.00			B5/B14						
					17	119	0.93	84.63			B5/B14						
					15	135	0.82	95.61	B5/B14								



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



Dati tecnici

Technical data

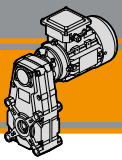
P ₁ [kW]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i				
0.25								
71A4 (1400 min ⁻¹)	75	30	2.7	18.75	FT146	B5/B14		
	53	42	1.9	26.17		B5/B14		
	50	45	1.8	28.26		B5/B14		
	40	56	1.8	35.07		B5/B14		
	35	63	1.6	39.44		B5/B14		
	30	74	1.3	46.44		B5/B14		
	26	85	1.2	52.86		B5/B14		
	23	97	1.1	60.63		B5/B14		
	20	112	0.98	70.00		B5/B14		
	17	136	0.81	84.63		B5/B14		
	15	153	0.72	95.61		B5/B14		
	69	33	10.7	20.41		FT196	B5/B14	
		40	56	7.2			34.81	B5/B14
		33	68	6.6			42.61	B5/B14
24		95	5.3	59.36	B5/B14			
19		117	4.7	72.68	B5/B14			
15		149	3.7	92.82	B5/B14			
11		199	2.8	123.95	B5/B14			
8.9		253	2.2	158.02	B5/B14			
6.9	323	1.7	201.80	B5/B14				
	5.2	432	1.3	269.47	B5/B14			

P ₁ [kW]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		
0.75						
80B4 (1400 min ⁻¹)	69	98	3.6	20.41	FT196	B5/B14
	40	167	2.4	34.81		B5/B14
	33	205	2.2	42.61		B5/B14
	24	285	1.8	59.36		B5/B14
	19	350	1.6	72.68		B5/B14
	15	446	1.2	92.82		B5/B14
	11	596	0.92	123.95		B5/B14
1.1						
90S4 (1400 min ⁻¹)	69	144	2.4	20.41	FT196	B5/B14
	40	246	1.6	34.81		B5/B14
	33	301	1.5	42.61		B5/B14
	24	419	1.2	59.36		B5/B14
	19	513	1.1	72.68		B5/B14
	15	655	0.84	92.82		B5/B14
1.5						
90L4 (1400 min ⁻¹)	69	196	1.8	20.41	FT196	B5/B14
	40	335	1.2	34.81		B5/B14
	33	410	1.1	42.61		B5/B14
	24	571	0.88	59.36		B5/B14
	19	699	0.79	72.68		B5/B14

0.37								
71B4 (1400 min ⁻¹)	75	44	1.8	18.75	FT146	B5/B14		
	53	62	1.3	26.17		B5/B14		
	50	67	1.2	28.26		B5/B14		
	40	83	1.2	35.07		B5/B14		
	35	94	1.1	39.44		B5/B14		
	30	110	0.91	46.44		B5/B14		
	26	125	0.80	52.86		B5/B14		
	23	144	0.76	60.63		B5/B14		
	69	48	7.2	20.41		FT196	B5/B14	
		40	83	4.8			34.81	B5/B14
		33	101	4.5			42.61	B5/B14
		24	141	3.6			59.36	B5/B14
		19	172	3.2			72.68	B5/B14
		15	220	2.5			92.82	B5/B14
11		294	1.9	123.95	B5/B14			
8.9		375	1.5	158.02	B5/B14			
6.9	479	1.1	201.80	B5/B14				
	5.2	639	0.86	269.47	B5/B14			

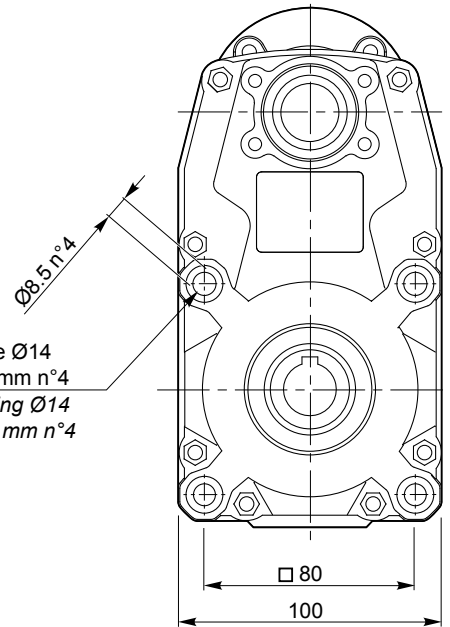
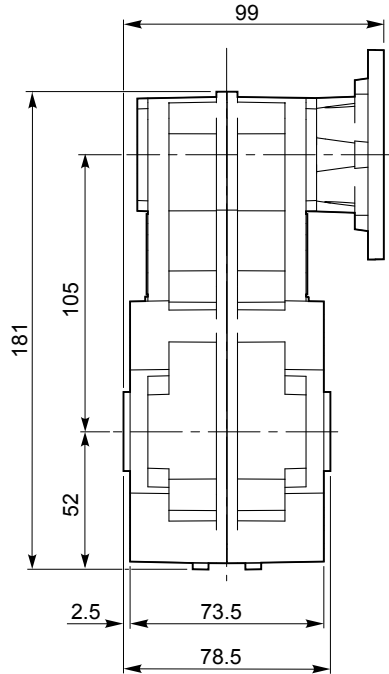
0.55						
80A4 (1400 min ⁻¹)	69	72	4.9	20.41	FT196	B5/B14
	40	123	3.2	34.81		B5/B14
	33	150	3.0	42.61		B5/B14
	24	209	2.4	59.36		B5/B14
	19	255	2.1	72.68		B5/B14
	15	327	1.7	92.82		B5/B14
	11	437	1.3	123.95		B5/B14
	8.9	557	1.0	158.02		B5/B14
	6.9	712	0.77	201.80		B5/B14

FT



FT 105

FT 105...U



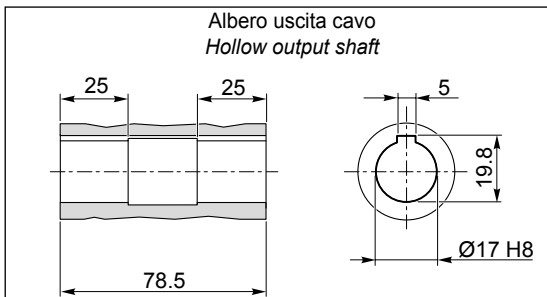
Kg 4.2

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

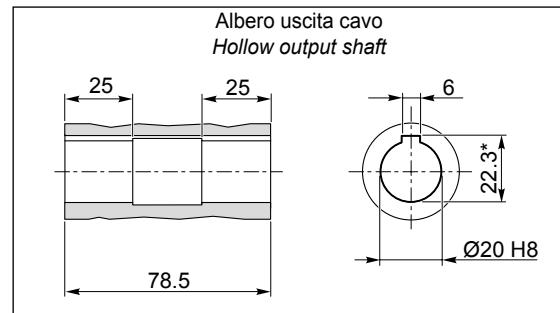
IEC Motori applicabili
IEC Motor adapters



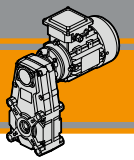
O17



O20

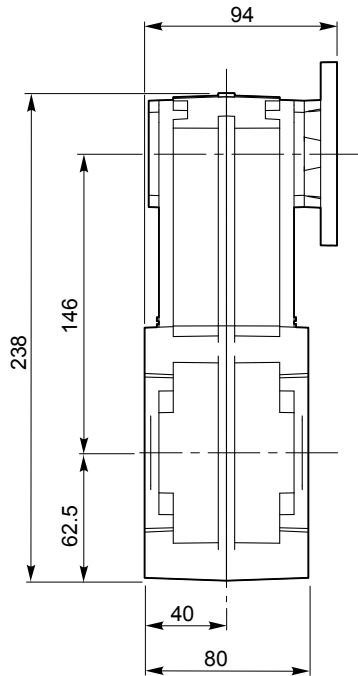


*: Sede linguetta ribassata / Special keyway

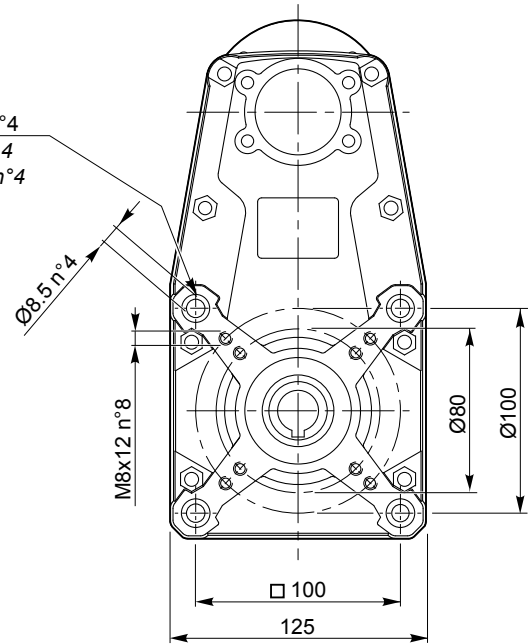


FT 146

FT 146 U



Lamature Ø14
Prof. 9.5 mm n°4
Spot-facing Ø14
Deep 9.5 mm n°4



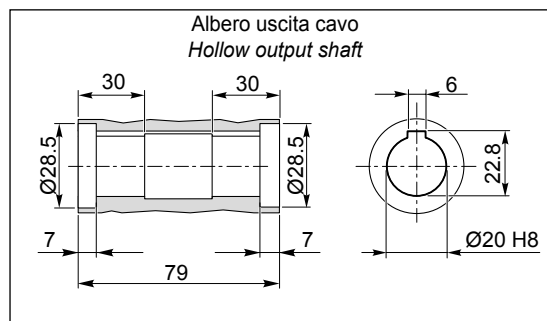
Kg 4.7

IEC Motori applicabili
IEC Motor adapters

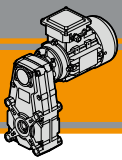


NOTA: Stessi fissaggi da entrambi i lati
NOTE: Same fixing points in both sides

O20

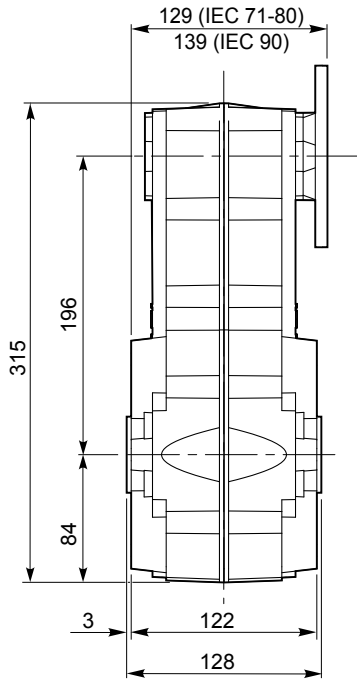


FT

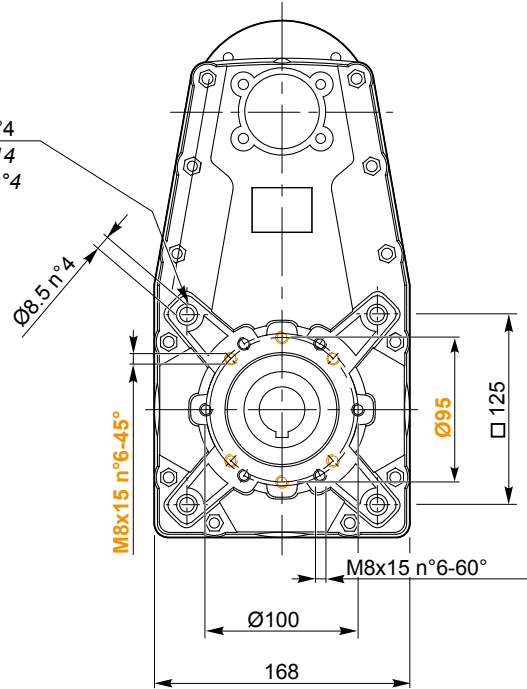


FT 196

FT 196 U

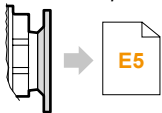


Lamature Ø14
Prof. 11 mm n°4
Spot-facing Ø14
Deep 11 mm n°4



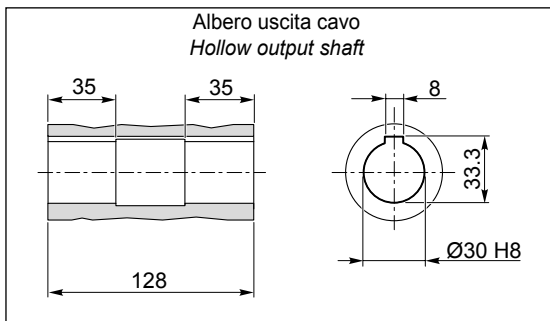
Kg 12.1

IEC Motori applicabili
IEC Motor adapters

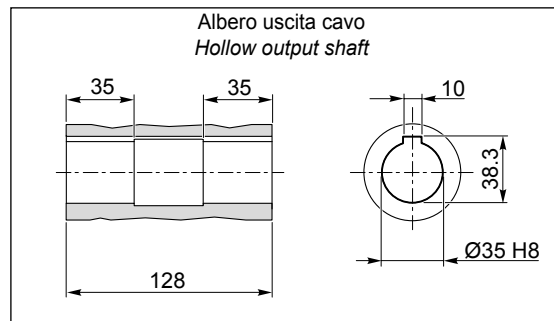


NOTA: Stessi fissaggi da entrambi i lati
NOTE: Same fixing points in both sides

O30



O35



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