

Electromechanical Characteristics

The table below, describes the electromechanical tolerances concerning electric motors, according to the EN 60034-1 standard.

Parameter	Tolerance	
Efficiency	- 0.15 (1 - η)	Rated power \leq 150 kW
Power Factor	$\cos\varphi$	- (1 - $\cos\varphi$) / 6 min 0,02 - max 0,07
Slip	\pm 30%	Rated power <1kW
	\pm 20%	Rated power \geq 1kW
Locked Rotor Current	+20%	
Moment of Inertia	\pm 10%	of the guaranteed value
Locked Rotor Torque	- 15%	of the guaranteed value
	+25%	of the guaranteed value (Upon request it is possible to exceed the +25% value)

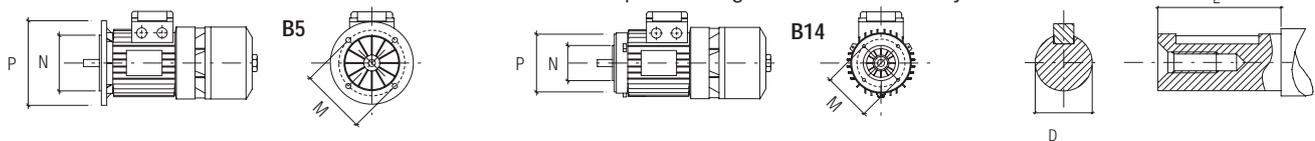
Mechanical tolerances

The table below describes the mechanical tolerances.

Dimension	Tolerance	
Shaft Height	-0.5 mm -1.0 mm	for motors up to 250 frame size for motors of 280 frame size and above
Flange Spigot	j6 h6	for motors up to 132 frame size for motors of 160 frame size and above
Shaft End Diameter	j6 k6 m6	\varnothing from 9 mm up to 28 mm \varnothing from 38 mm up to 48 mm \varnothing from 55 mm up to 75 mm

Standard and special flange

The table below shows the dimension of the standard and special flange and shaft sorted by frame size.



Motor frame size	Shaft drive end dimension (DxE) (mm)	Flange type	Flange dimension (P/M/N) (mm)
IEC 56	9x20	B5 (standard)	120/100/80
IEC 56	9x20	B14 (standard)	80/65/50
IEC 63	11x23	B5 (standard)	140/115/95
IEC 63	11x23	B14 (standard)	90/75/60
IEC 63	11x23	B14-R (56)	(80) 90/65/50 ***
IEC 71	14x30	B5 (standard)	160/130/110
IEC 71	14x30	B5-R (56)*	120/100/80
IEC 71	14x30	B5-R/M (63)*	140/115/95
IEC 71	14x30	B5-M	200/165/130
IEC 71	14x30	B14 (standard)	105/85/70
IEC 71	14x30	B14-R	(90) 105/75/60 ***
IEC 80	19x40	B5 (standard)	200/165/130
IEC 80	19x40	B5-R	160/130/110
IEC 80	19x40	B14	120/100/80
IEC 80	19x40	B14-R	(105) 120/85/70 ***
IEC 90	24x50	B5 (standard)	200/165/130
IEC 90	24x50	B5-R	160/130/110
IEC 90	24x50	B14 (standard)	140/115/95
IEC 90	24x50	B14-R	(120) 140/100/80 ***
IEC 100	28x60	B5 (standard)	250/215/180
IEC 100	28x60	B5-R **	200/165/130
IEC 100	28x60	B14 (standard)	160/130/110
IEC 112	28x60	B5 (standard)	250/215/180
IEC 112	28x60	B14 (standard)	160/130/110
IEC 132	38x80	B5 (standard)	300/265/230
IEC 132	38x80	B5-R	250/215/180
IEC 132	38x80	B14 (standard)	200/165/130
IEC 160	42x110	B5 (standard)	350/300/250
IEC 180	48x110	B5 (standard)	350/300/250
IEC 200	55x110	B5 (standard)	400/350/300
IEC 225	60x140 (4/6/8 Poles)	B5 (standard)	450/400/350
IEC 225	55x110 (2 Poles)	B5 (standard)	450/400/350
IEC 250	65x140 (4-6-8 Poles)	B5 (standard)	550/500/450
IEC 280	75x170 (4-6-8 Poles)	B5 (standard)	550/500/450

Notes: * This type of flange requires a special shaft therefore it isn't interchangeable with the standard one. This flange increases the motor length (Q) by 25mm.

** This type of flange requires a non standard bearing while the shaft remains the standard one.

*** The difference between the dimension of the reduced flange and the standard one (in brackets) doesn't affect the correct motor assembly.

Nema sizes motors are available on request.