

W30 Smart EC

Industrial Motors
**Commercial &
Appliance Motors**

Automation

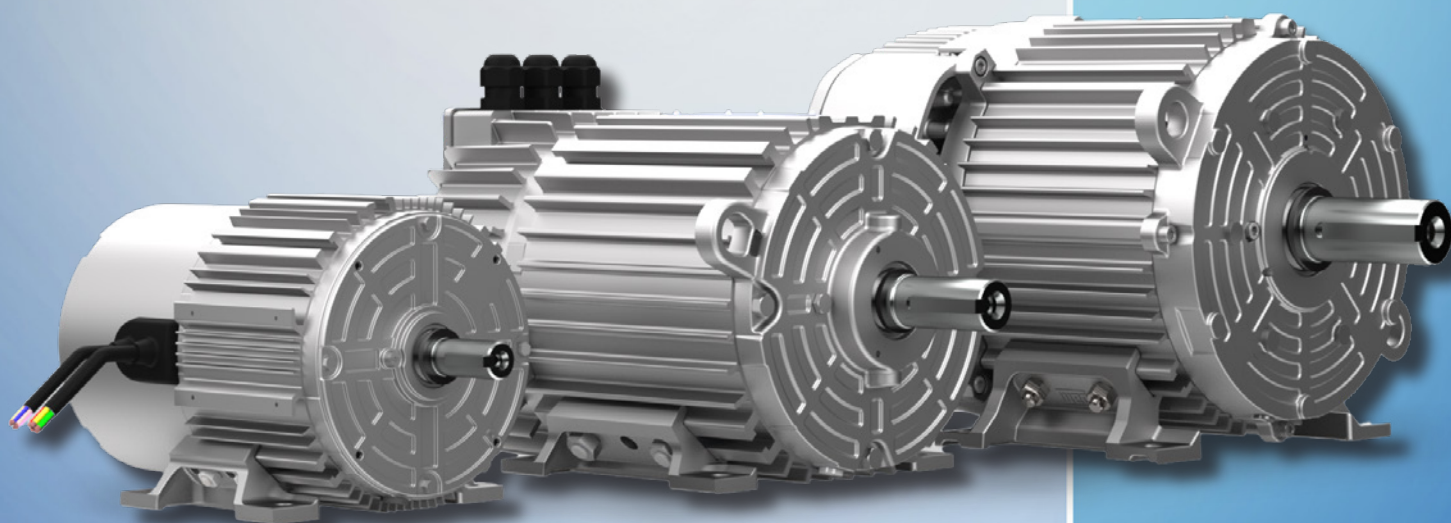
Digital &
Systems

Energy

Transmission &
Distribution

Coatings

**Moving air
with efficiency**

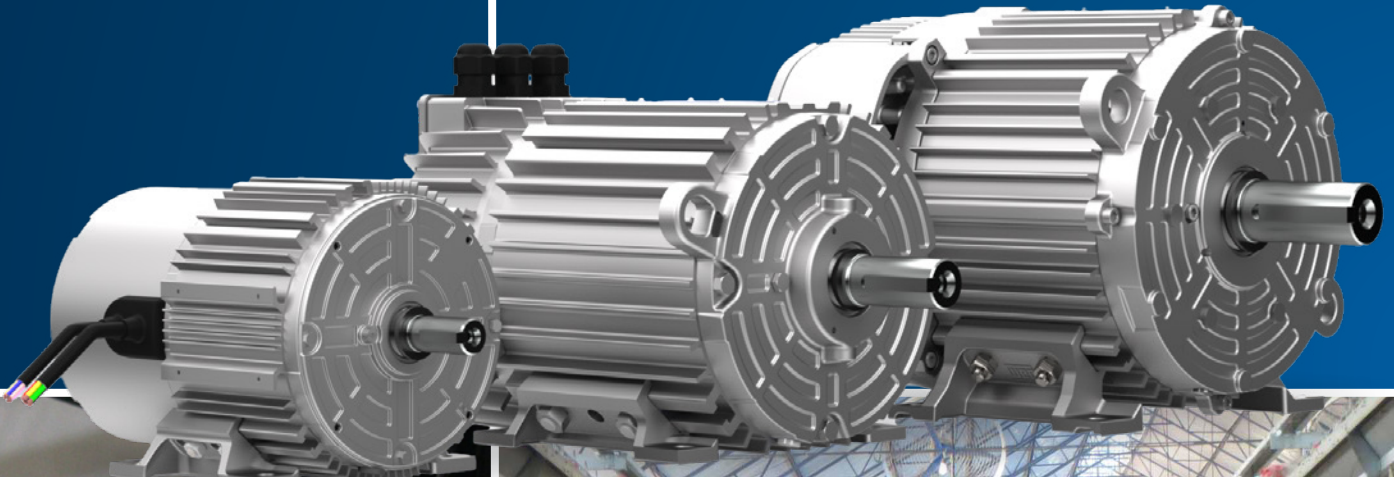


Driving efficiency and sustainability

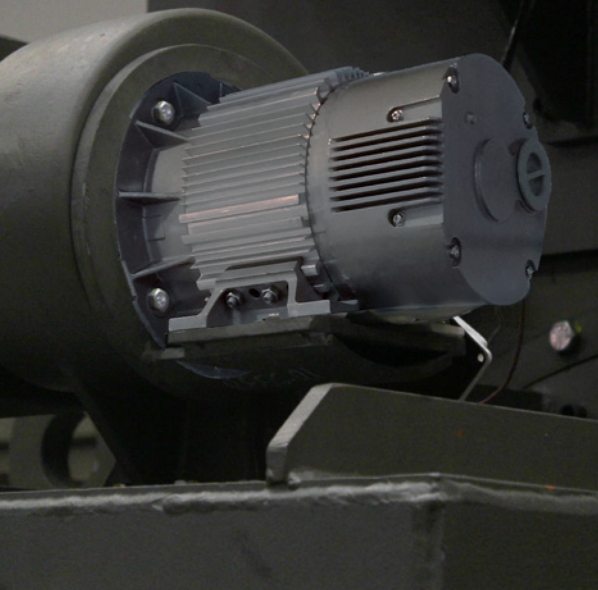


W30 Smart EC

Moving air with efficiency



Radial fans



Axial fans

Interchangeable motor with builtin drive and permanent magnets.

A complete and versatile solution for motor fan applications.

- Speed variation for airflow rate with energy savings
- IEC standard: interchangeability with induction motors.
- Automatic control of temperature and air quality levels.

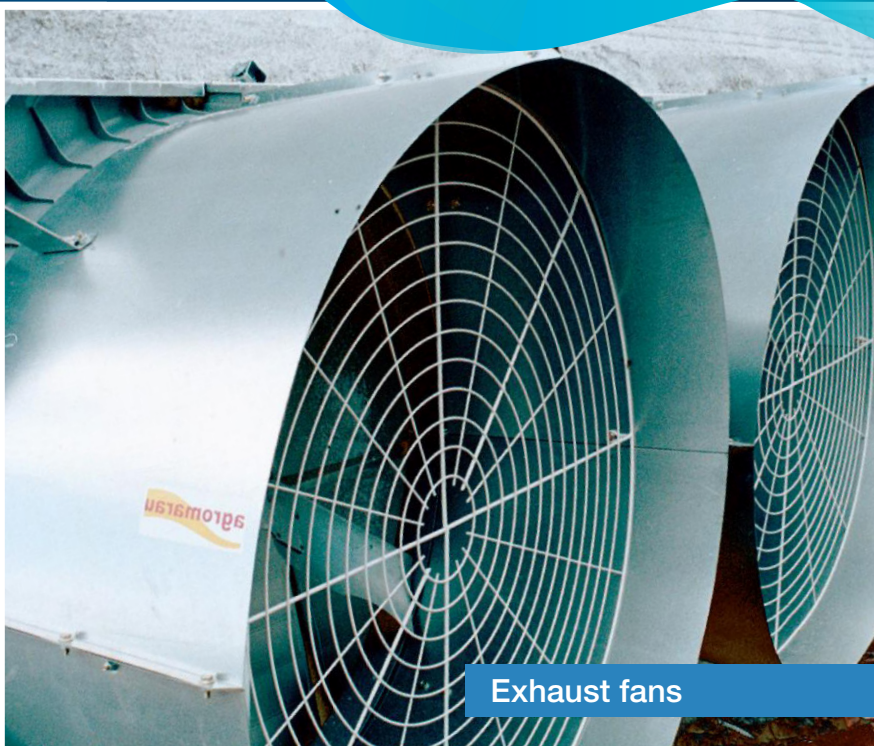
Join this movement for efficiency too.

Efficiency
above
standard | E5

Air coolers



Exhaust fans



Driving efficiency and sustainability



W30 Smart

Electronically Controlled
WEG Motor.



Single-Phase Motors

- Voltage: 220 V
- Frequency: 50/60 Hz
- Output Power: 0.16 to 1.5 hp
- Aluminum Housing
- Protection Rating: IP55
- Construction Type: IEC80 B3D (B3L)
- Ambient Temperature:
 - -20 to 40°C (TENV)¹
 - -20 to 60°C (TEAO)²
- Vibration Grade: A
- Bidirectional Rotation (selectable)
- Continuous Speed Adjustment (200 to 1500, 200 to 1800 rpm, and 500 to 3000 rpm) by:
 - Buttons (located on the rear cover)
 - DC Voltage (remote): 2 to 10 VDC
 - DC Current (remote): 4 to 20 mA DC
 - Frequency (remote): 10 to 95%
 - Optically Isolated Local Controls
 - With Drain Plug and V-ring Seal
 - ZZ Bearings
 - Front Bearing Locking Ring
 - Power and Control Cables with 500 mm Length
 - Electronic Protection: Overload, Overtemperature, and Locked Rotor
 - Fire Mode (Operation at maximum speed with electronic protections disabled.)

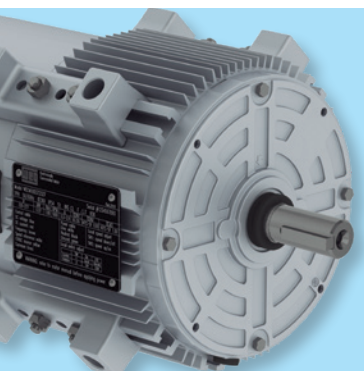
Optional

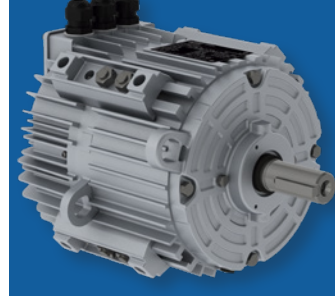
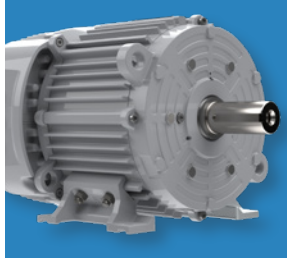
- Passive Power Factor Correction (PFC)
- IEC80: Pad mounting (4x90° or 3x120°), T-slot (4x90° or 3x120°), and flanges FF-165 and FC-120
- Sealing with slinger for vertical mounting with shaft up 115 V power supply (up to 3/4 hp)
- Decentralized mounting (motor and drive separate)
 - Custom cable lengths.
 - Customized shaft ends.
 - Double shaft end (only in the version with decentralized drive).
 - External controller with display to adjust the maximum and instantaneous speed values.
 - Forced ventilation (TEBC)
 - Modbus communication

Notes:

1. Non-ventilated (TENV). Consult WEG for electrical data.

2. Air over (TEAO). Minimum air flow over the motor housing and drive cover of 5 m/s.





Three-Phase Motors

Commercial Motors (Frames 80 to 100)

- Permanent Magnet, Electronically Commutated Motor
- Voltage: 380-480 VAC
- Frequency: 50/60 Hz input
- Output power: 0,10 to 4 kW at 1500, 1800 or 3000 rpm
- Aluminium frame / drive housing
- Degree of protection IP55
- Mounting: IEC80 and IEC100, B3T
- Ambient temperature:
 - -20 to 40 °C (TEAO)¹
 - -20 to 40 °C (TENV)² with de-rating
 - -20 to 60 °C (TEAO) with de-rating
- Vibration Grade A
- Direction of rotation CW/CCW (selectable)
- Continuous speed adjustment (200 to 1500/1800 rpm and 500 to 3000 rpm) by:
 - Tact buttons (local)
 - DC voltage (remote): 2 to 10 VDC
 - DC current (remote): 4 to 20 mA DC
 - PWM (remote): 10 to 95%
 - Modbus Communication
- Alarm relay (NO & NC)
- Local controls optically isolated
- With drain plug and 'V' ring sealing
- Sealed for life bearings
- Drive-end bearing cap
- Connection box with push-in terminals
- Electronic protection: overload, over temperature and locked-rotor.
- Fire mode (Override & Maximum speed mode)

Notes:

¹ Totally Enclosed, Air Over rated. Minimum airflow over motor frame and drive cover 5m/s.

² Totally Enclosed, Non-ventilated. Refer to WEG for electrical data.

³ The WECM reaches the future IE6 level of efficiency, the highest in the market - considering 20% less losses than IE5 according to the standard IEC TS 60034-30-2 - for variable speed electric motor.

Industrial Motors (Frame 132S)

- Voltage: 380-480 V
- Frequency: 50/60 Hz
- Output Power: 4 to 10 hp
- Aluminum Housing
- Protection Rating: IP55
- Construction Type:
 - -10 to 50°C (TEAO)¹
 - -10 to 40°C (TENV)² with reduced output power
- Vibration Grade: A
- Bidirectional Rotation (selectable)
- Continuous Speed Adjustment (200 to 900, 200 to 1200, 200 to 1500, and 200 to 1800) by:
 - DC Voltage (remote): 2 to 10 VDC
 - DC Current (remote): 4 to 20 mA DC
- Frequency (remote) 80 Hz - Duty Cycle: 10% to 95%.
- Alarm Relay (NO & NC)
- Optically Isolated Local Controls
- With Drain Plug and V-ring Seal
- ZZ Bearings
- Front Bearing Locking Ring
- Junction Box with Spring Terminals
- Electronic Protection: Overload, Overtemperature, and Locked Rotor
- Fire Mode (Operation at maximum speed with electronic protections disabled.)

Optional

- IEC132S: Pad Mounting (4 x 90 degrees), Flange FF - 265 C-200 and FC-184
- Slinger Seal for Vertical Mounting with Shaft Up
- Custom Shaft Ends.
- External Controller with Display for Adjusting.

Notes:

¹ Air over (TEAO). Minimum air flow over the motor frame and drive end cover of 6 m/s.

² Non-ventilated (TENV). Consult WEG for electrical data.



Electrical Data

Single-Phase Motors

Power		Frame	Nominal torque (kgfm)	Inertia (kgm²)	Weight (kg)	Noise pressure level dB(A)	Service Factor	100% load		Rated current In (A)
								Efficiency	Power factor	
kW	cv									
1500RPM										
0.12	0.16	80	0.08	0.0014	5.8	45	1.00	83.0	0.47	1.11
0.18	0.25	80	0.12	0.0016	6.4	45	1.00	83.5	0.56	1.39
0.25	0.33	80	0.16	0.0019	7.7	45	1.00	84.1	0.57	1.88
0.37	0.5	80	0.24	0.0028	9.2	45	1.00	85.2	0.56	2.80
0.55	0.75	80	0.36	0.0031	9.9	45	1.00	86.7	0.60	3.82
0.75	1	80	0.49	0.0040	11.7	45	1.00	88.2	0.60	5.12
1.1	1.5	80	0.71	0.0040	11.7	45	1.00	89.5	0.63	7.07
1800 RPM										
0.12	0.16	80	0.06	0.0012	5.2	45	1.00	83.1	0.47	1.11
0.18	0.25	80	0.10	0.0014	5.8	45	1.00	83.5	0.52	1.50
0.25	0.33	80	0.14	0.0016	6.4	45	1.00	84.1	0.54	1.99
0.37	0.5	80	0.20	0.0019	7.7	45	1.00	85.3	0.56	2.80
0.55	0.75	80	0.30	0.0028	9.2	45	1.00	86.8	0.62	3.69
0.75	1	80	0.41	0.0031	9.9	45	1.00	88.2	0.57	5.39
1.1	1.5	80	0.60	0.0040	11.7	45	1.00	89.7	0.62	7.14
3000 RPM										
0.12	0.16	80	0.04	0.0012	5.2	45	1.00	73.0	0.51	1.10
0.18	0.25	80	0.06	0.0012	5.2	45	1.00	76.7	0.50	1.60
0.25	0.33	80	0.08	0.0012	5.2	45	1.00	82.3	0.50	2.19
0.37	0.5	80	0.12	0.0019	7.7	45	1.00	83.3	0.57	2.81
0.55	0.75	80	0.18	0.0028	9.2	45	1.00	84.6	0.62	3.79
0.75	1	80	0.24	0.0028	9.6	45	1.00	86.3	0.62	5.06
1.1	1.5	80	0.36	0.0028	9.6	45	1.00	87.8	0.66	6.85

Three-Phase Motors - IE5

Power		Frame	Nominal torque (kgfm)	Inertia (kgm²)	Weight (kg)	Noise pressure level dB(A)	Service Factor	100% load		Rated current In (A)
								Efficiency	Power factor	
kW	cv									
900RPM										
4	5.5	132S	4.33	0.0230	38.0	65	1.00	89.4	0.90	7.55
5.5	7.5	132S	5.95	0.0340	47.0	65	1.00	90.4	0.92	10.00
7.5	10	132S	8.12	0.0460	56.0	65	1.00	90.6	0.94	13.40
1200RPM										
4	5.5	132S	3.25	0.0230	38.0	65	1.00	90.6	0.90	7.45
5.5	7.5	132S	4.46	0.0340	47.0	65	1.00	91.2	0.92	9.96
7.5	10	132S	6.09	0.0460	56.0	65	1.00	91.4	0.94	13.30
1500 RPM										
0.12	0.16	80	0.08	0.0020	11.3	45	1.00	79.5	0.89	0.40
0.18	0.25	80	0.12	0.0020	10.8	45	1.00	81.1	0.90	0.57
0.25	0.33	80	0.16	0.0014	6.5	45	1.00	83.3	0.90	0.51
0.37	0.5	80	0.24	0.0019	8.0	45	1.00	83.6	0.90	0.75
0.55	0.75	80	0.36	0.0023	8.5	45	1.00	84.1	0.90	1.10
0.75	1	80	0.49	0.0023	8.5	45	1.00	84.6	0.90	1.49
1.1	1.5	80	0.71	0.0031	10.0	45	1.00	85.6	0.90	2.16
1.5	2	80	0.97	0.0040	11.5	45	1.00	86.7	0.90	2.91
2.2	3	100L	1.43	0.0014	21.0	50	1.00	88.1	0.90	4.20
3	4	100L	1.95	0.0017	22.5	50	1.00	89.1	0.90	5.66
3.7	5	100L	2.40	0.0021	26.0	50	1.00	89.7	0.90	6.96
4	5.5	100L	2.60	0.0021	26.0	50	1.00	89.9	0.90	7.48
4	5.5	132S	2.60	0.0230	38.0	65	1.00	90.6	0.90	7.45
5.5	7.5	132S	3.57	0.0340	47.0	65	1.00	91.0	0.92	9.98
7.5	10	132S	4.87	0.0340	47.0	65	1.00	91.4	0.94	13.30
1800 RPM										
0.12	0.16	80	0.07	0.0020	11.1	45	1.00	79.8	0.89	0.34
0.18	0.25	80	0.10	0.0020	11.3	45	1.00	82.1	0.90	0.48
0.25	0.33	80	0.14	0.0020	12.2	45	1.00	82.9	0.90	0.64
0.37	0.5	80	0.20	0.0014	6.5	45	1.00	83.6	0.90	0.75
0.55	0.75	80	0.30	0.0019	8.0	45	1.00	84.1	0.90	1.10
0.75	1	80	0.41	0.0023	8.5	45	1.00	84.6	0.90	1.49
1.1	1.5	80	0.60	0.0023	8.5	45	1.00	85.6	0.90	2.16
1.5	2	80	0.81	0.0031	10.0	45	1.00	86.7	0.90	2.91
2.2	3	100L	1.19	0.0011	19.5	50	1.00	88.1	0.90	4.20
3	4	100L	1.62	0.0014	21.0	50	1.00	89.1	0.90	5.68
3.7	5	100L	2.00	0.0017	22.5	50	1.00	89.7	0.90	6.94
4	5.5	100L	2.16	0.0017	22.5	50	1.00	89.9	0.90	7.48
4	5.5	132S	2.16	0.0230	38.0	65	1.00	90.0	0.90	7.50
5.5	7.5	132S	2.98	0.0230	38.0	65	1.00	90.4	0.92	10.00
7.5	10	132S	4.06	0.0340	47.0	65	1.00	91.0	0.94	13.30
3000 RPM										
0.12	0.16	80	0.04	0.0012	6.0	45	1.00	70.0	0.60	0.33
0.18	0.25	80	0.06	0.0012	6.0	45	1.00	72.0	0.61	0.55
0.25	0.33	80	0.08	0.0012	6.0	45	1.00	75.0	0.56	0.65
0.37	0.5	80	0.12	0.0012	6.0	45	1.00	79.2	0.90	0.79
0.55	0.75	80	0.18	0.0014	6.5	45	1.00	80.3	0.90	1.15
0.75	1	80	0.24	0.0014	6.5	45	1.00	81.5	0.90	1.55
1.1	1.5	80	0.36	0.0023	8.0	45	1.00	86.6	0.90	3.25
1.5	2	80	0.49	0.0023	8.0	45	1.00	86.6	0.90	4.42
2.2	3	100L	0.71	0.0083	17.5	50	1.00	86.4	0.90	4.28
3	4	100L	0.97	0.0083	17.5	50	1.00	87.7	0.90	5.75
3.7	5	100L	1.20	0.0110	19.5	50	1.00	88.4	0.90	7.04
4	5.5	100L	1.30	0.0110	19.5	50	1.00	88.7	0.90	7.58

Mechanical Data

External dimensions of single-phase motors (in mm)

Model	Weight (kg) ⁶	LC	LD ⁵	L ^{1,2,3}	L ⁴
A1	5.2	90	75	245	258
A2	5.8				
A3	6.4				
A4	7.7				
B	9.2	110	95	265	278
C	9.6			285	298
D	9.9	115		290	303
E	11.7	135		310	323

1. Foot mounting;

2. Pad mounting (4x90°);

3. Pad mounting (3x120°);

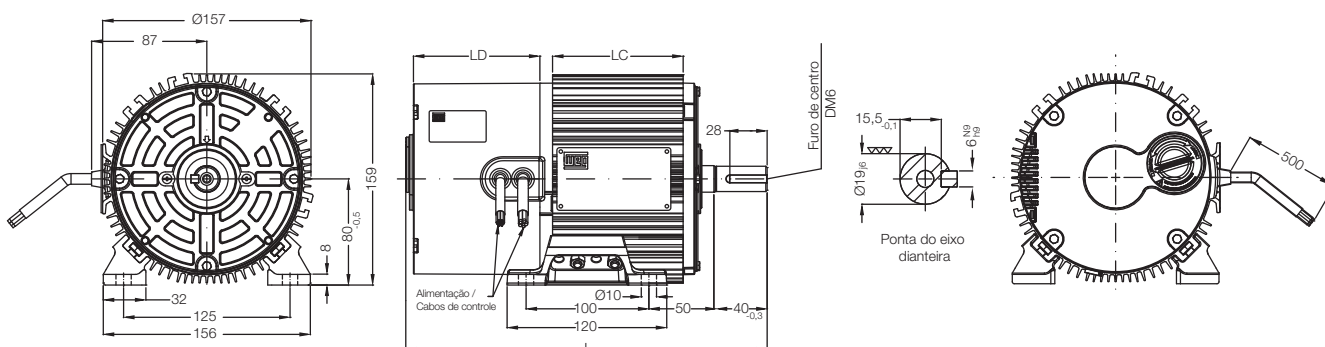
4. Flange mounting FF-165.

5. LD is the dimension of the drive for decentralized motors;

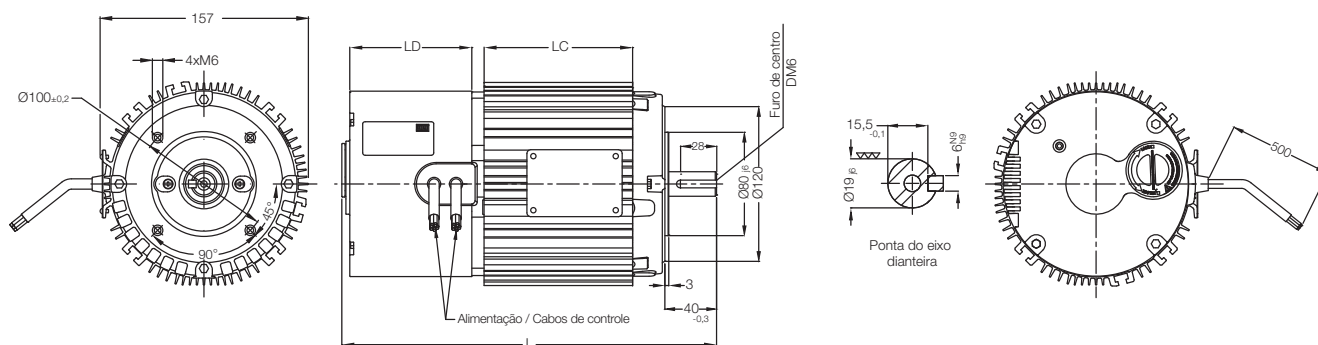
6. Approximate mass, subject to change without prior notice.

7. Dimensions for decentralized motors and forced ventilation (TEBC) can be provided upon request to WEG.

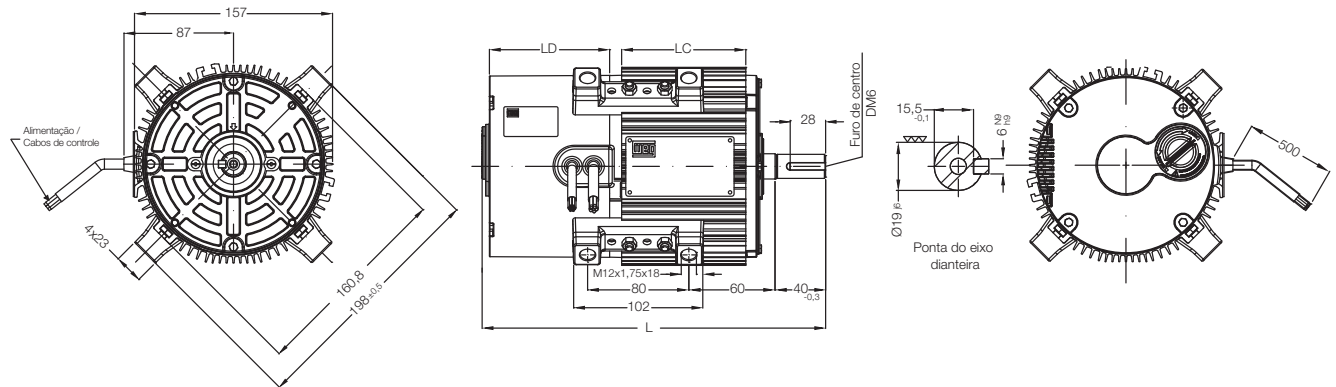
Motos B3D (L)



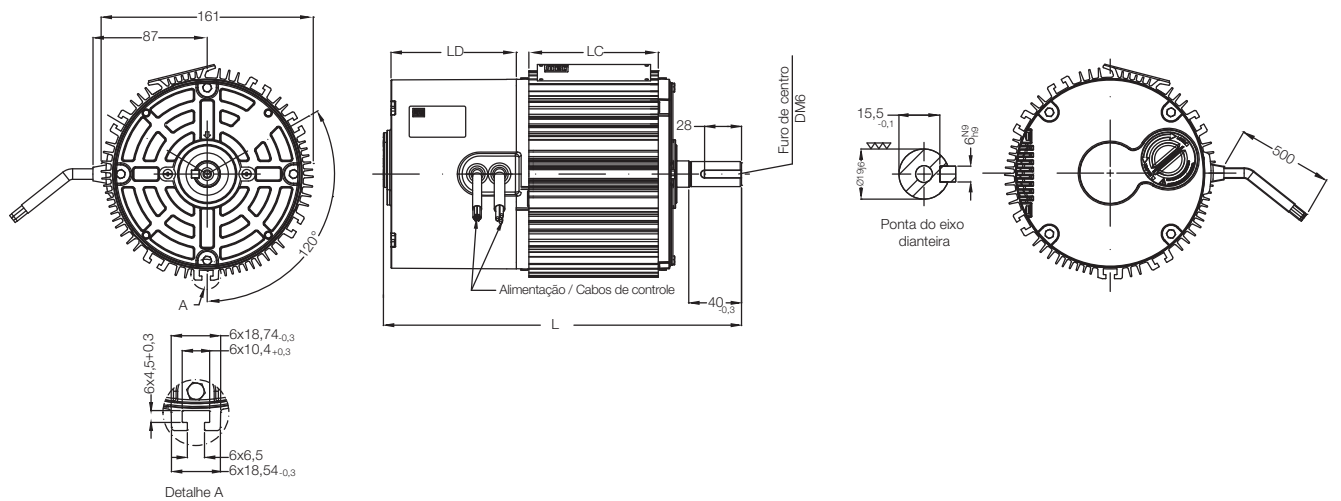
Motors B14D (L) (FC-120)



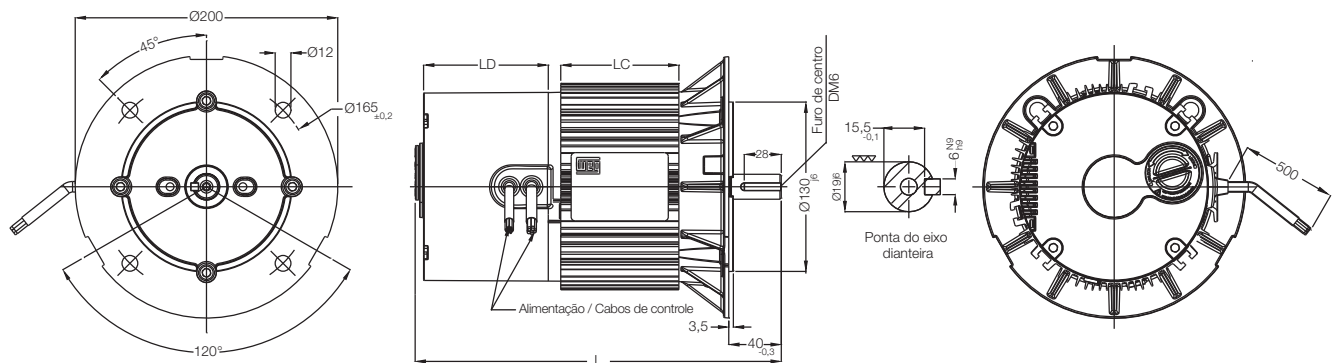
Motors B30D (L) (4 x 90°)



Motors B30D (L) (3 x 120°)



Motors B5D (L) (FF-165)



External dimensions of three-phase motors (in mm)

Model	Weight (kg) ²	LC	LD ¹	L		
				B3/B30	B14	B5
80-A	5.8	90	90.1	256.1		269.1
80-B	6.4					
80-C	8.1					
80-D	8.5	100		266.1		279.1
80-E	9.9	115		281.1		294.1
80-F	11.7	135		301.1		314.1
100-A	17.5	105	95.3	315.8		
100-B	19.5	120		330.8		
100-C	21.0	135		345.8		
100-D	22.5	150		360.8		
100-E	26.0	175		385.8		
132S-A	38.0	140	105	361.5		
132S-B	47.5	170		391.5		
132S-C	56.0	200		421.5		

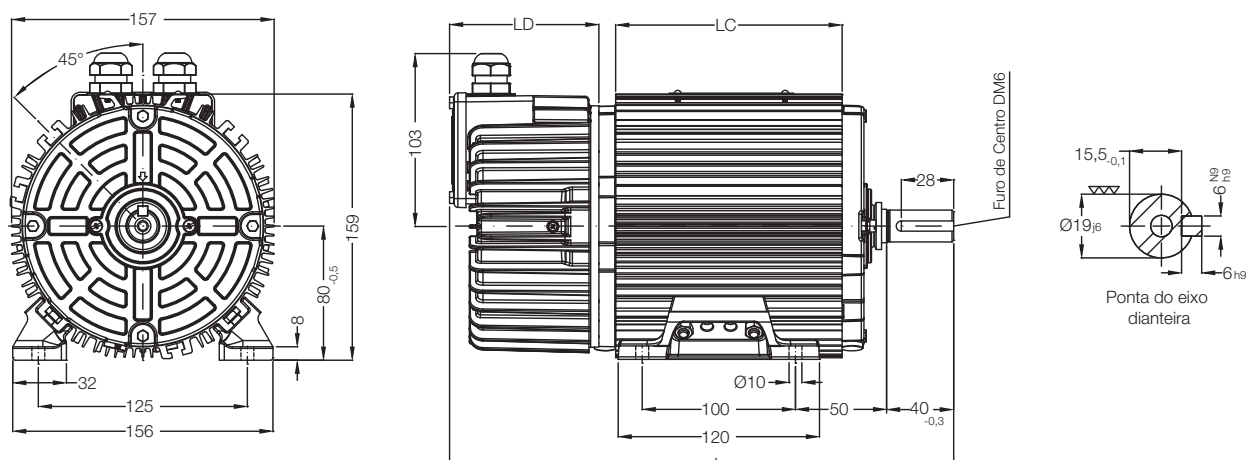
1) LD is the dimension of the drive for decentralized motors.

2) Approximate mass, subject to change without prior notice.

3) Dimensions for decentralized motors can be provided upon request to WEG.

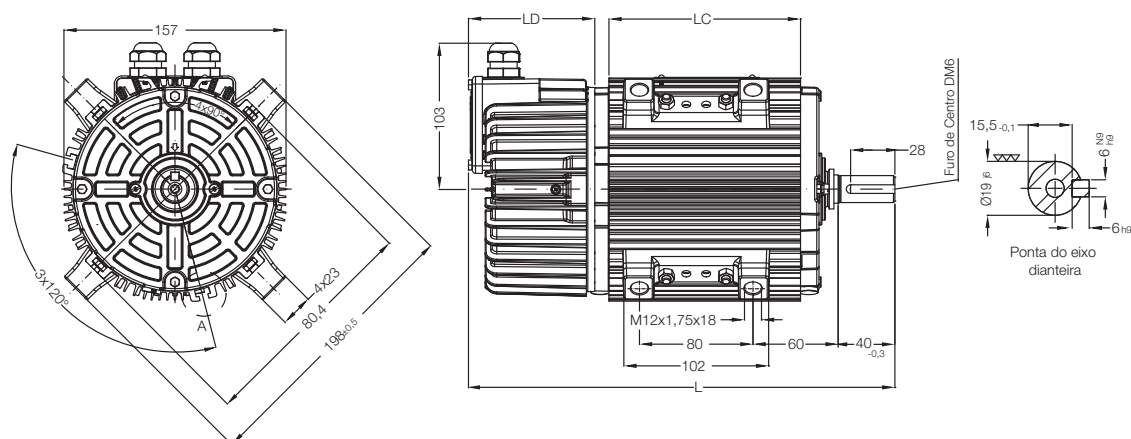
Motors B3T

Frame 80



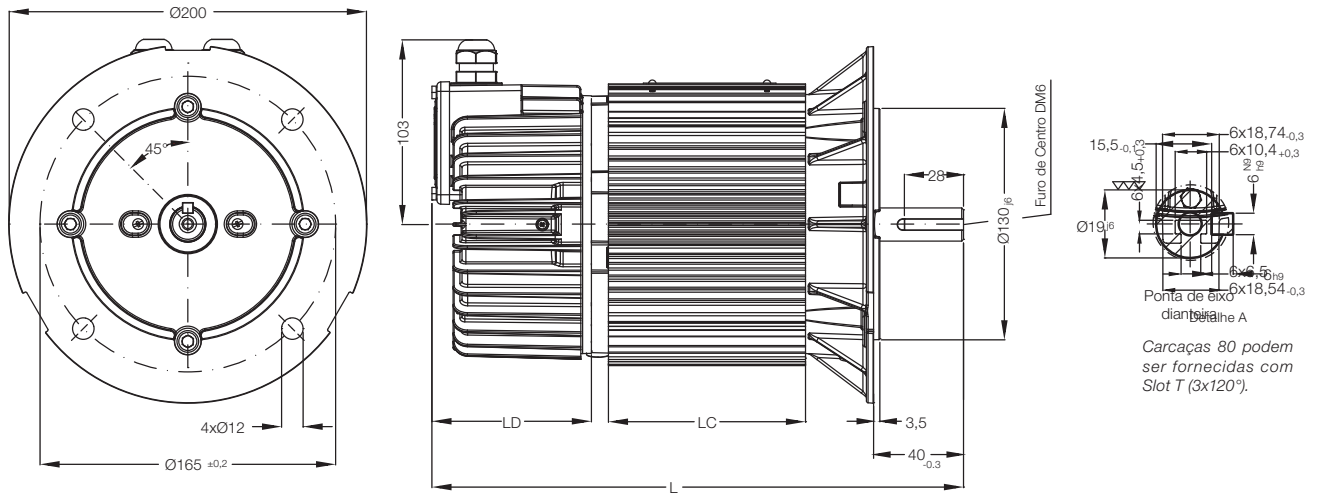
Motors B30T (4 x 90°)

Frame 80



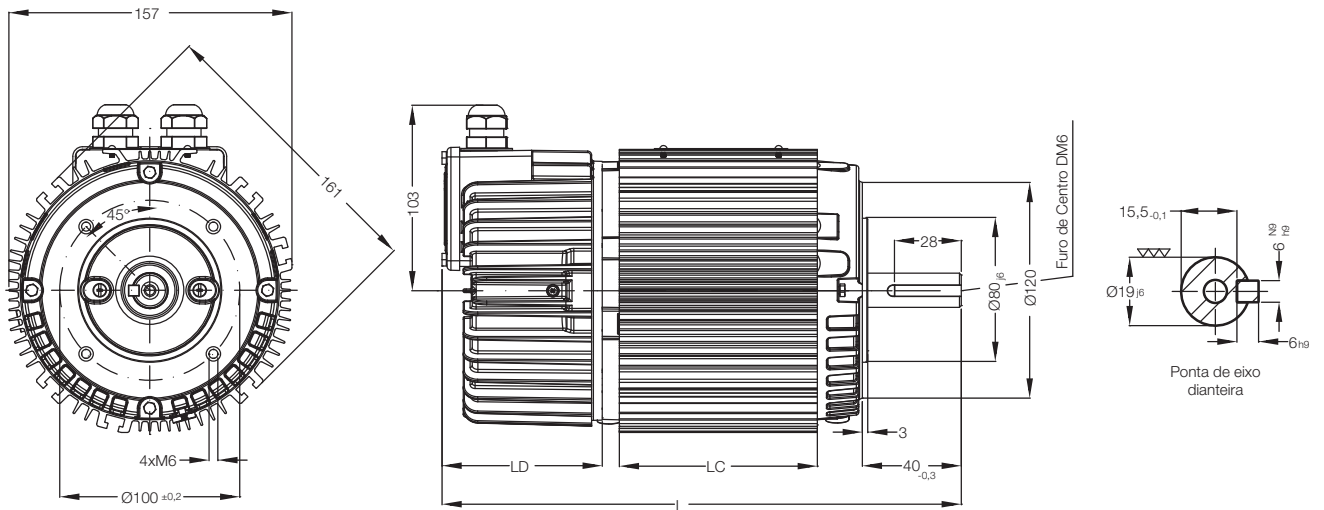
Motors B5T

Frame 80 (FF-165)



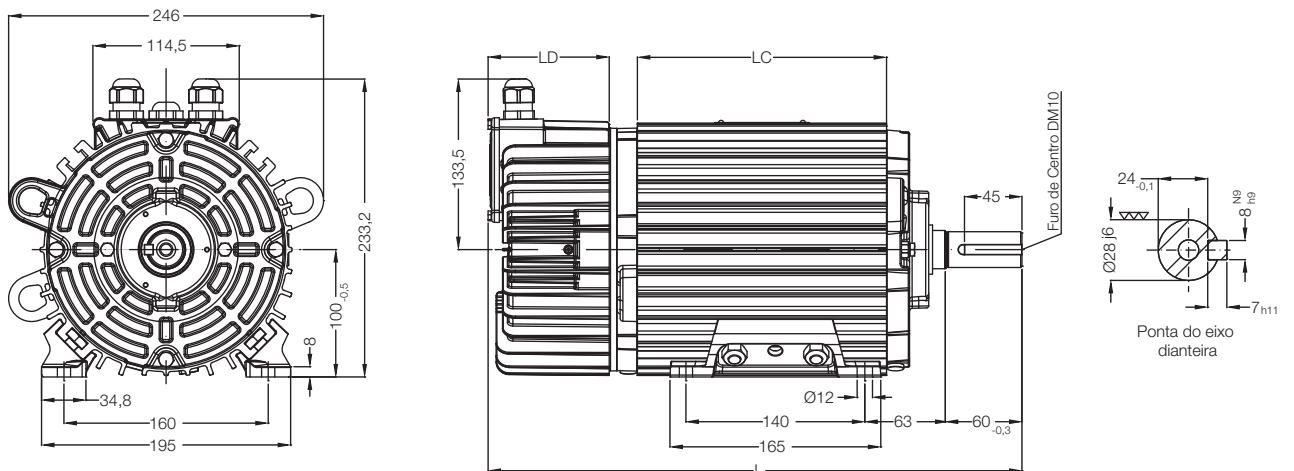
Motors B14T

Frame 80 (FC-120)



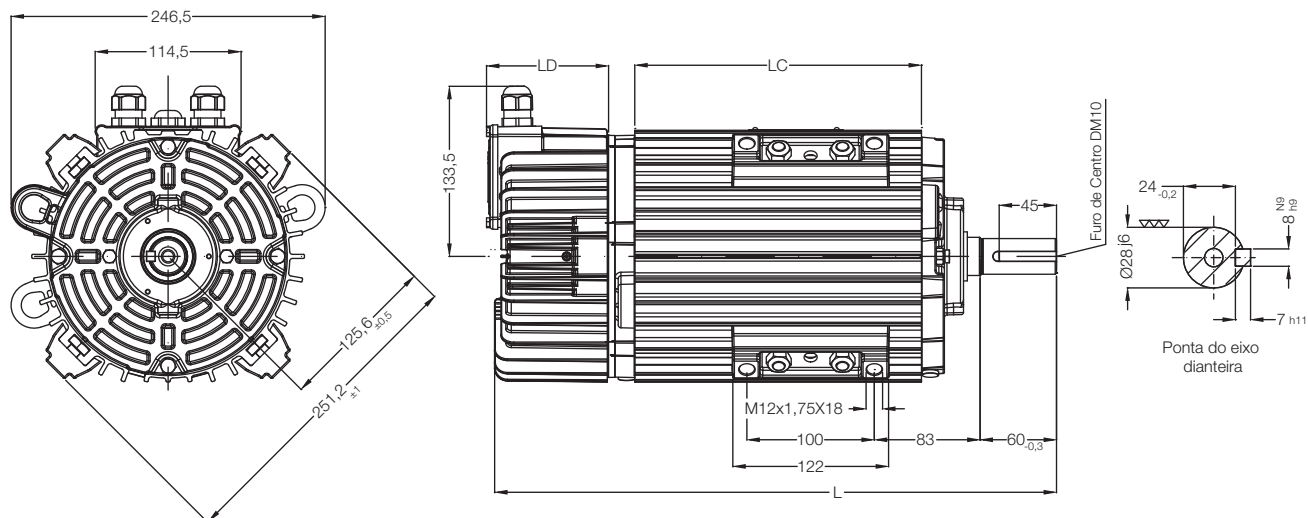
Motors B3T

Frame 100



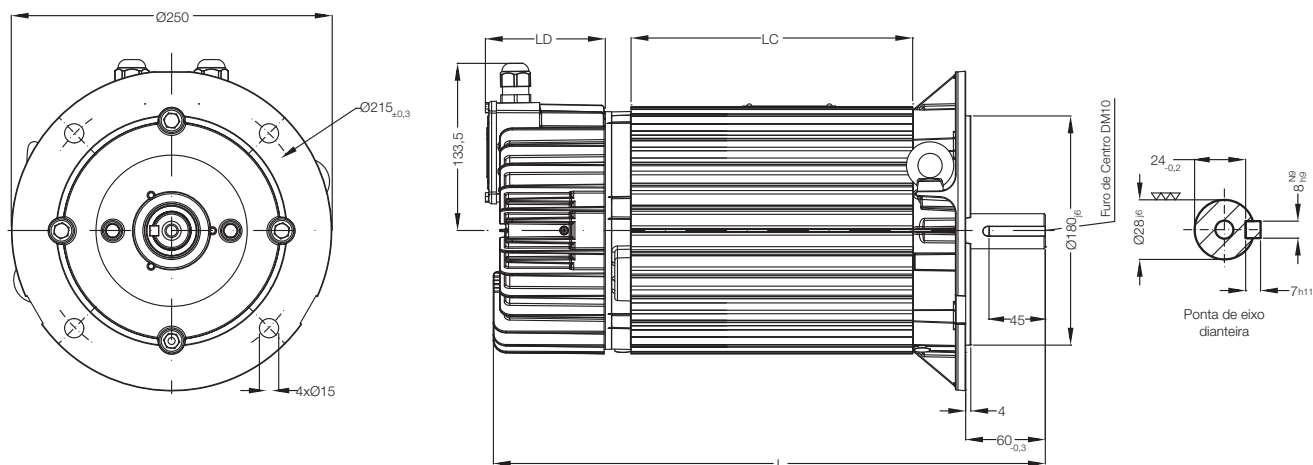
Motors B30T (4 x 90°)

Frame 100



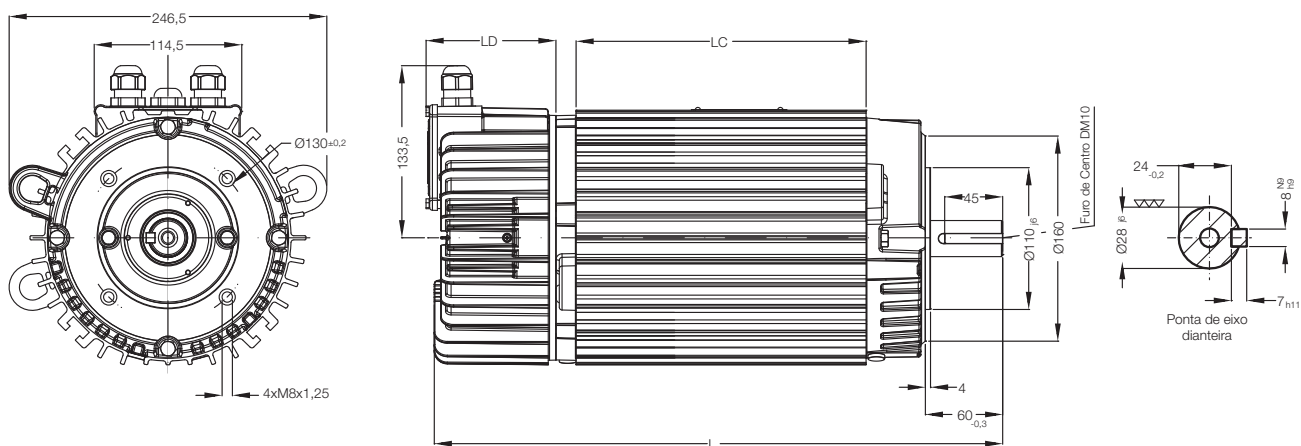
Motors B5T

Frame 100 (FF-215)

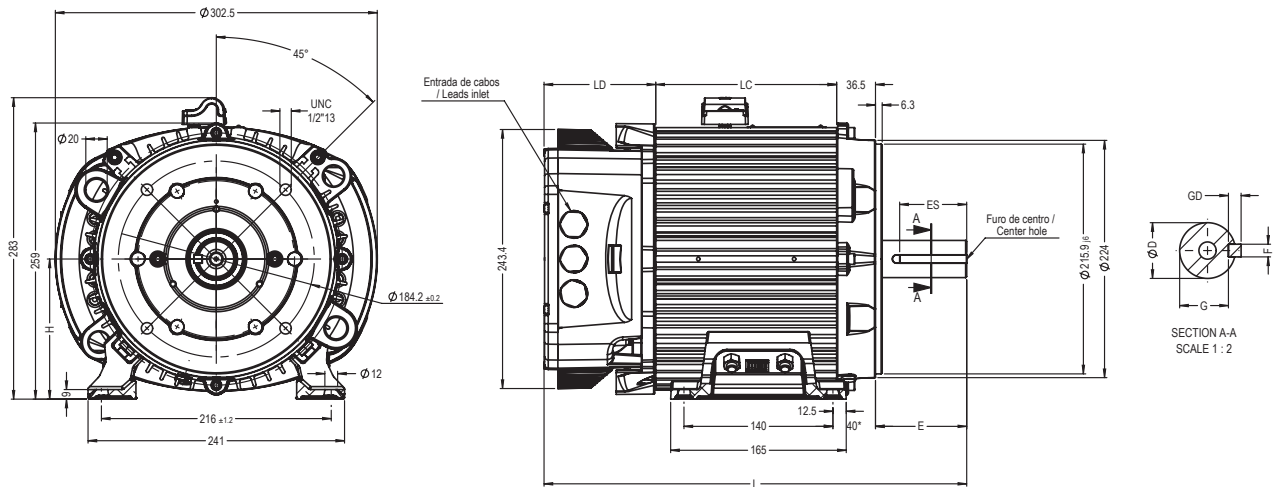


Motors B14T

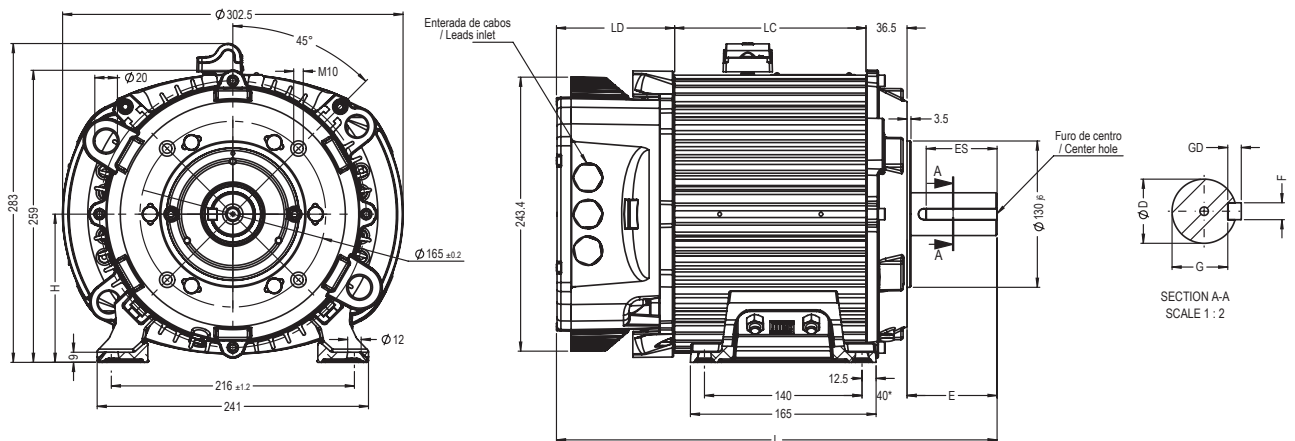
Frame 100 (FC-160)



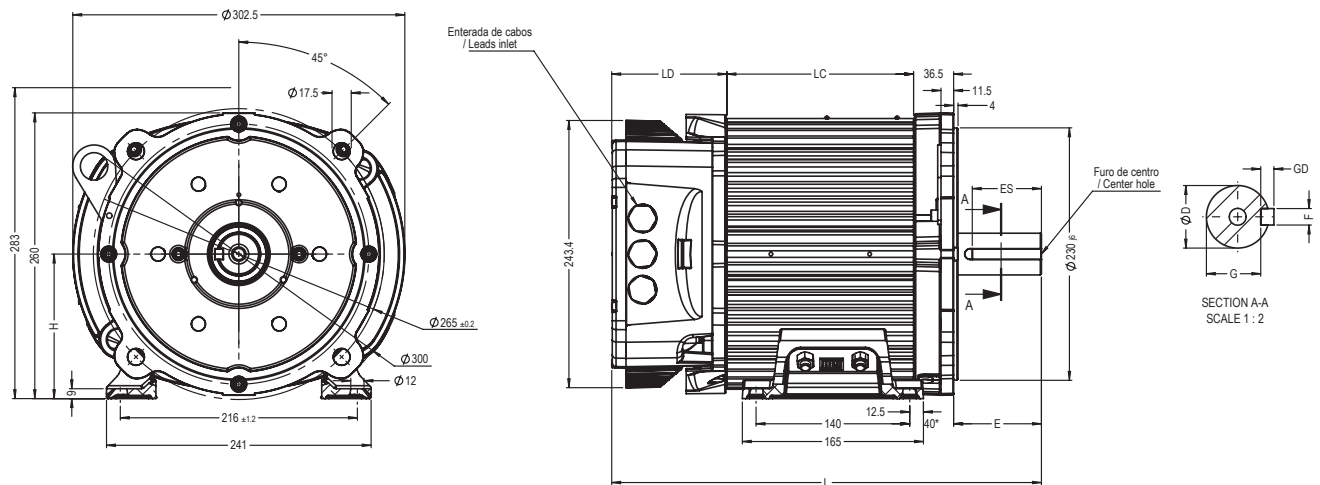
Frame 132S (Flange FC-184)



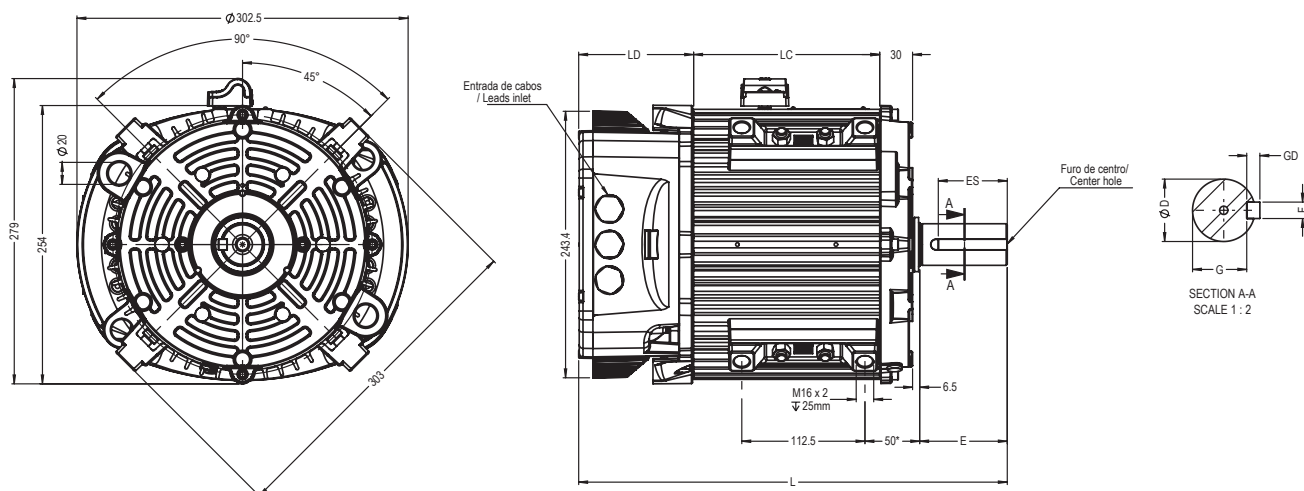
Frame 132S (Flange C-200)



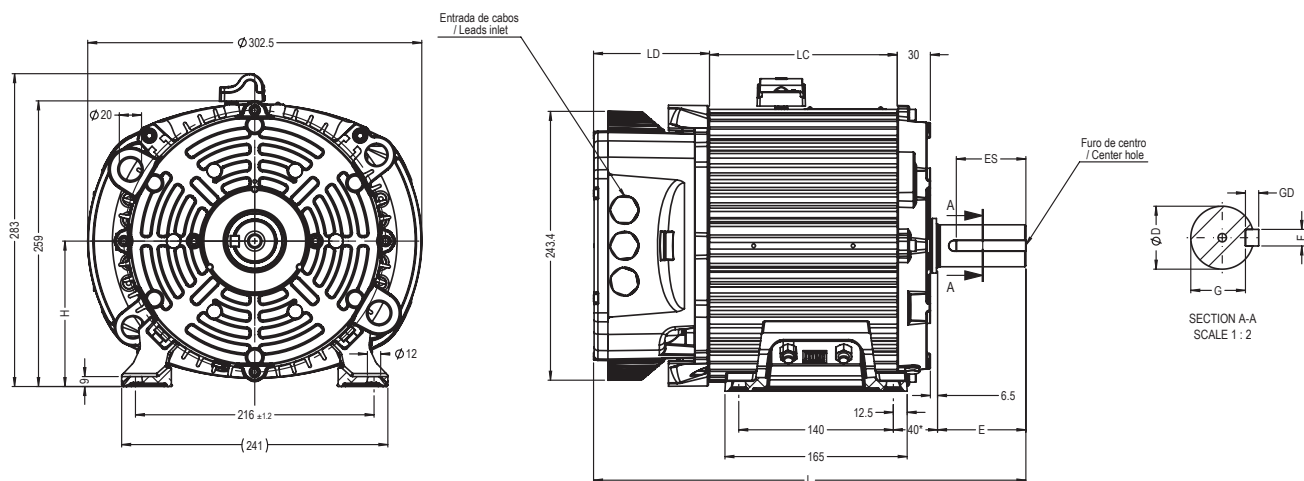
Frame 132S (Flange FF-265)



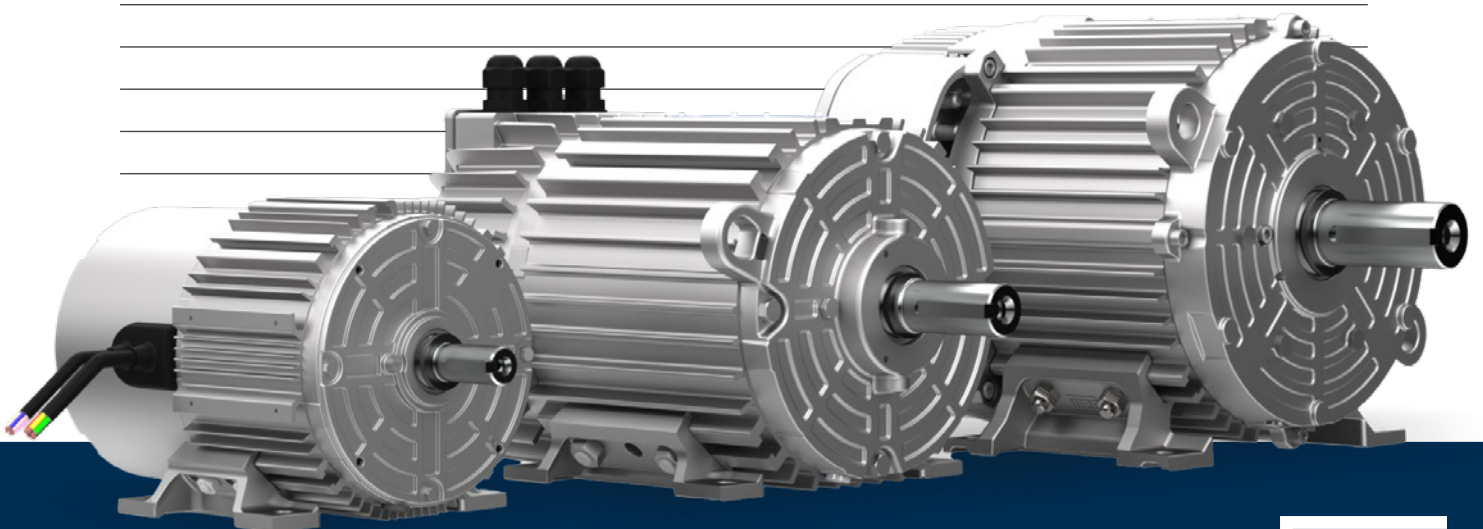
Frame 132S (PAD)



Frame 132S (Cover)



Notes



Driving efficiency and sustainability

The scope of solutions from the WEG Group is not limited to the products and solutions presented in this catalog. To learn about our full portfolio, please consult us

**Explore WEG's
global operations.**



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