

# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

Customer : MGE  
Customer reference : MGE

Product line : W20 Three-Phase Product code : 15991542

Frame	: 160M	Locked rotor time	: 25s (cold) 14s (hot)
Output	: 15 kW (20 HP)	Temperature rise	: 80 K
Poles	: 2	Duty cycle	: S1
Frequency	: 50 Hz	Ambient temperature	: -20°C to +40°C
Rated voltage	: 400/690 V	Altitude	: 1000 m.a.s.l.
Rated current	: 27.1/15.7 A	Protection degree	: IP55
L. R. Amperes	: 217/126 A	Cooling method	: IC411 - TEFC
LRC	: 8.0	Mounting	: B3T
No load current	: 9.50/5.51 A	Rotation <sup>1</sup>	: Both (CW and CCW)
Rated speed	: 2940 rpm	Noise level <sup>2</sup>	: 70.0 dB(A)
Slip	: 2.00 %	Starting method	: Direct On Line
Rated torque	: 48.7 Nm	Approx. weight <sup>3</sup>	: 114 kg
Locked rotor torque	: 280 %		
Breakdown torque	: 320 %		
Insulation class	: F		
Service factor	: 1.00		
Moment of inertia (J)	: 0.0565 kgm <sup>2</sup>		
Design	: N		

Output	50%	75%	100%	Foundation loads	
Efficiency (%)	90.5	91.5	91.9	Max. traction	: 1896 N
Power Factor	0.75	0.84	0.87	Max. compression	: 3016 N

Losses at normative operating points (speed;torque), in percentage of rated output power

P1 (0,9;1,0)	P2 (0,5;1,0)	P3 (0,25;1,0)	P4 (0,9;0,5)	P5 (0,5;0,5)	P6 (0,5;0,25)	P7 (0,25;0,25)
8.3	6.5	6.2	4.4	2.7	1.8	1.1

	Drive end	Non drive end
Bearing type	: 6209 ZZ C3	: 6209 ZZ C3
Sealing	: V'Ring	: V'Ring
Lubrication interval	: -	: -
Lubricant amount	: -	: -
Lubricant type	: Mobil Polyrex EM	

Notes

This revision replaces and cancel the previous one, which must be eliminated.

- (1) Looking the motor from the shaft end.
- (2) Measured at 1m and with tolerance of +3dB(A).
- (3) Approximate weight subject to changes after manufacturing process.
- (4) At 100% of full load.

These are average values based on tests with sinusoidal power supply, subject to the tolerances stipulated in IEC 60034-1.

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
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## Three Phase Induction Motor - Squirrel Cage

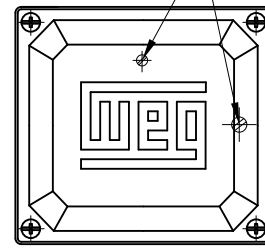
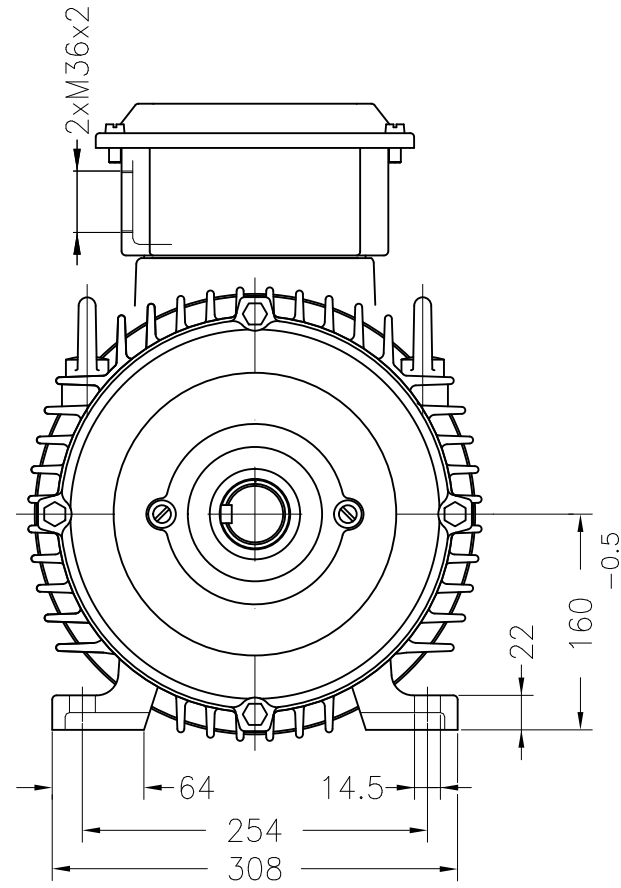
Customer : MGE  
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### Thermal protection

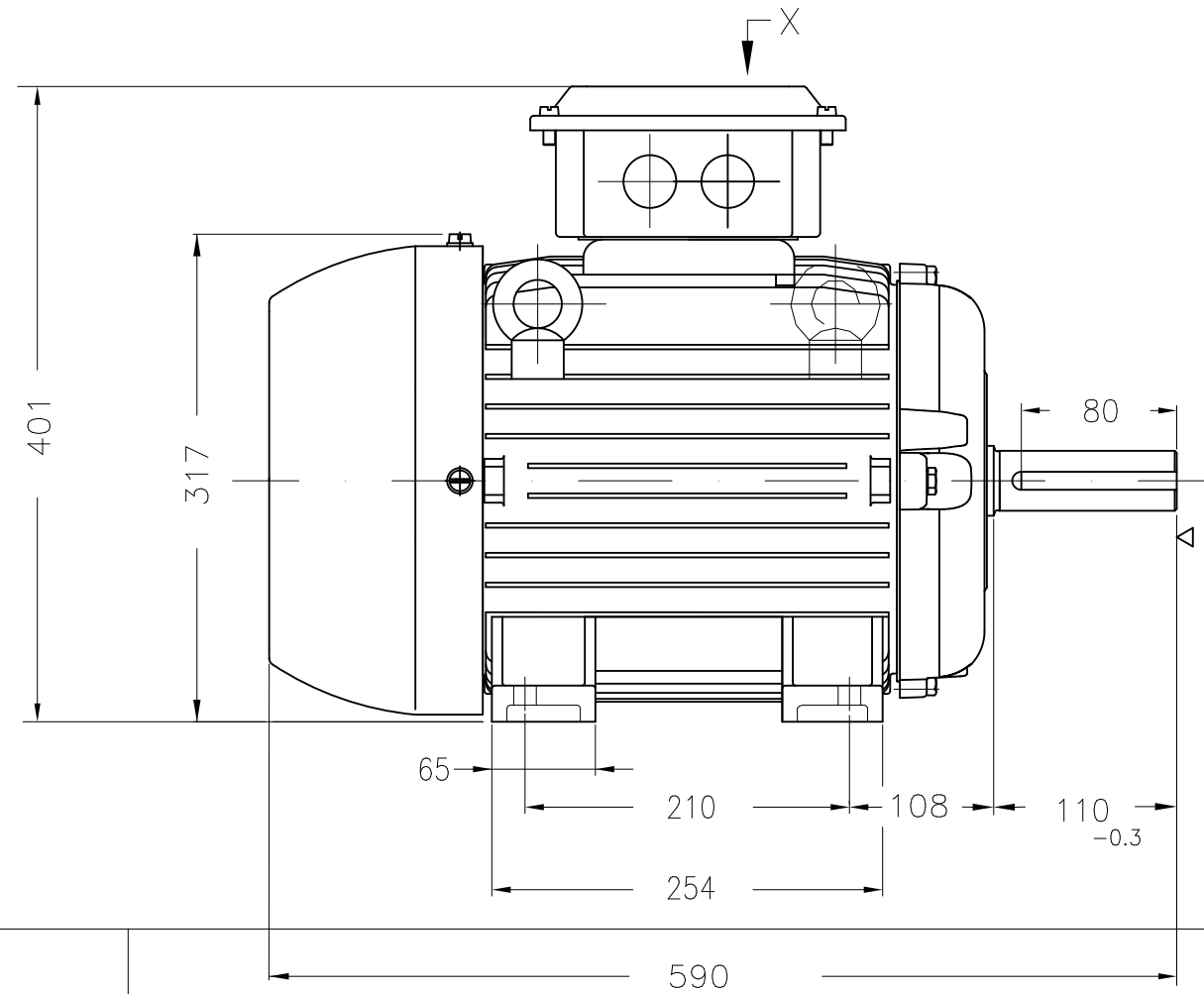
ID	Application	Type	Quantity	Sensing Temperature
1	Winding	Thermistor - 2 wires	1 x Phase	155 °C

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Grounding for leads 5.2–25 mm<sup>2</sup> / 10–4 AWG



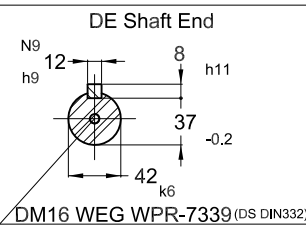
View X



15 kW 02 Poles 50 Hz

Dimensions in mm

Thermal protection to switch off - thermistors 155°C  
Color RAL 5009  
Painting plan 201A  
Mounting B3T



ECM		LOC	SUMMARY OF MODIFICATIONS		HYBRISUSER						00
EXECUTED	HYBRISUSER		THREE PH. MOTOR W20 GB3		EXECUTED	CHECKED	RELEASED	DATE	VER		
CHECKED			FRAME 160M IP55 TEFC							PREVIEW	
RELEASED										WDD   00	
REL. DATE		WMO	Jaragua do Sul	Product Engineering						SHEET 1 / 1	

