

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W21 Explosion Proof NEMA Premium Efficiency Three-Phase Product code : 14636474

Frame : 213/5TC	Cooling method : IC411 - TEFC
Insulation class : F	Mounting : F-1
Duty cycle : Cont.(S1)	Rotation <sup>1</sup> : Both (CW and CCW)
Ambient temperature : -20°C to +40°C	Starting method : Direct On Line
Altitude : 1000 m.a.s.l.	Approx. weight <sup>3</sup> : 96.6 kg
Protection degree : IP55	Moment of inertia (J) : 0.0620 kgm <sup>2</sup>
Design : B	

Output [HP]	5	5	5	5
Poles	6	6	6	6
Frequency [Hz]	60	50	50	50
Rated voltage [V]	230/460	380	400	415
Rated current [A]	13.7/6.83	8.10	7.82	7.55
L. R. Amperes [A]	92.9/46.4	44.5	47.7	49.1
LRC [A]	6.8x(Code J)	5.5x(Code G)	6.1x(Code H)	6.5x(Code J)
No load current [A]	6.90/3.45	3.41	3.68	3.90
Rated speed [RPM]	1170	960	965	970
Slip [%]	2.50	4.00	3.50	3.00
Rated torque [kgfm]	3.10	3.78	3.76	3.74
Locked rotor torque [%]	170	140	160	190
Breakdown torque [%]	260	200	229	250
Service factor	1.15	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K
Locked rotor time	102s (cold) 57s (hot)	54s (cold) 30s (hot)	54s (cold) 30s (hot)	54s (cold) 30s (hot)
Noise level <sup>2</sup>	55.0 dB(A)	53.0 dB(A)	53.0 dB(A)	53.0 dB(A)
Efficiency (%)	25%			
	50%	88.5	88.5	87.5
	75%	89.5	88.5	88.5
	100%	89.5	86.8	88.5
Power Factor	25%			
	50%	0.58	0.65	0.58
	75%	0.70	0.76	0.71
	100%	0.76	0.80	0.77

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

Losses (%)	P1 (0,9;1,0)	11.1	11.1	11.1	11.1
	P2 (0,5;1,0)	9.1	9.1	9.1	9.1
	P3 (0,25;1,0)	8.9	8.9	8.9	8.9
	P4 (0,9;0,5)	5.7	5.7	5.7	5.7
	P5 (0,5;0,5)	3.9	3.9	3.9	3.9
	P6 (0,5;0,25)	2.8	2.8	2.8	2.8
	P7 (0,25;0,25)	2.0	2.0	2.0	2.0

	<u>Drive end</u>	<u>Non drive end</u>	Foundation loads
Bearing type	: 6308 2RS	6207 2RS	Max. traction : 123 kgf
Sealing	: Oil Seal	Lip Seal	Max. compression : 222 kgf
Lubrication interval	: -	-	
Lubricant amount	: -	-	
Lubricant type	: Mobil Polyrex EM		

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.

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

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## Three Phase Induction Motor - Squirrel Cage



Customer :

Notes

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Customer : \_\_\_\_\_

Thermal protection

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

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# LOAD PERFORMANCE CURVE

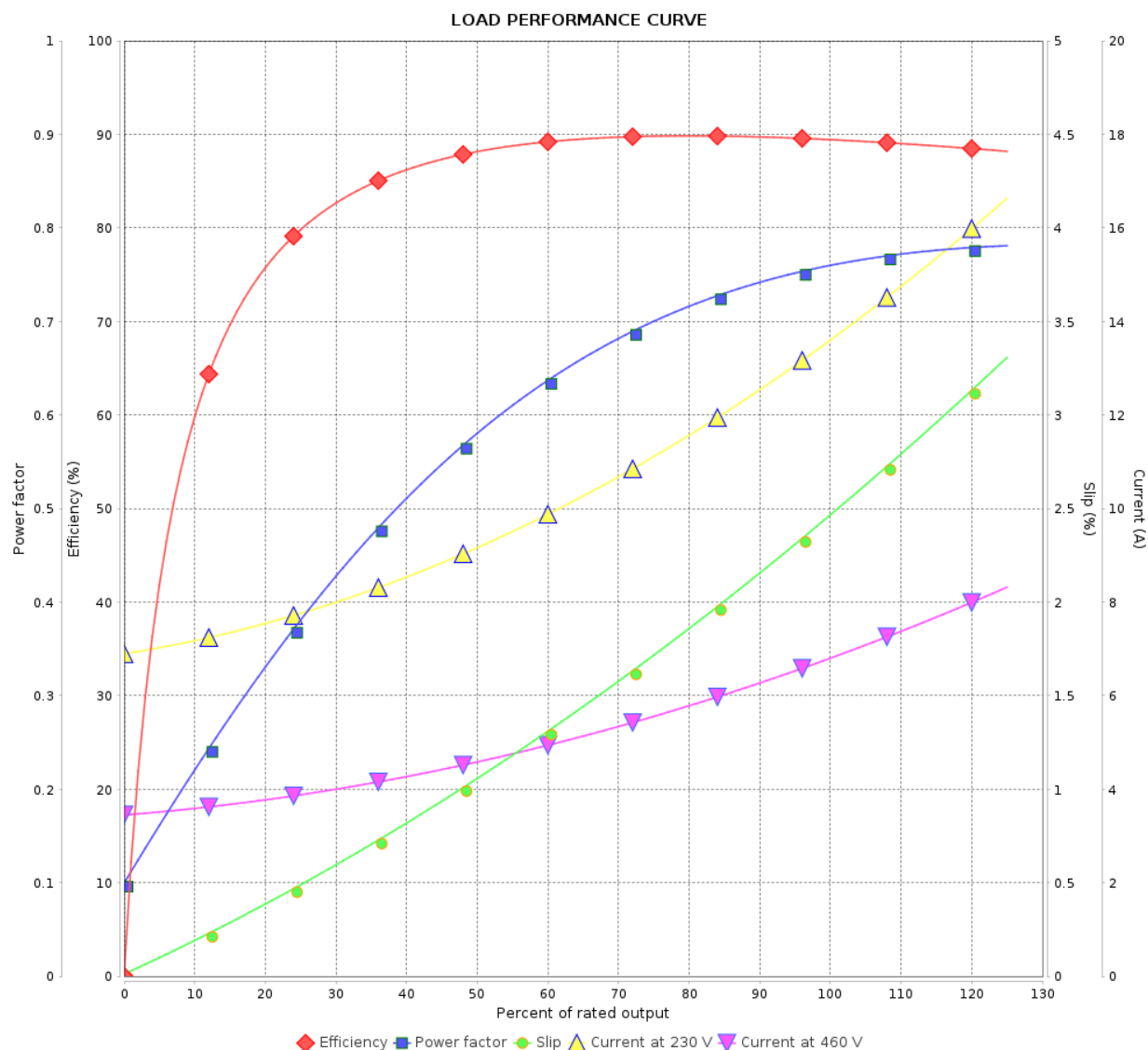
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W21 Explosion Proof NEMA  
Premium Efficiency Three-Phase

Product code : 14636474



Performance : 230/460 V 60 Hz 6P

Rated current : 13.7/6.83 A  
LRC : 6.8  
Rated torque : 3.10 kgfm  
Locked rotor torque : 170 %  
Breakdown torque : 260 %  
Rated speed : 1170 rpm

Moment of inertia (J) : 0.0620 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.15  
Temperature rise : 80 K  
Design : B

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# LOAD PERFORMANCE CURVE

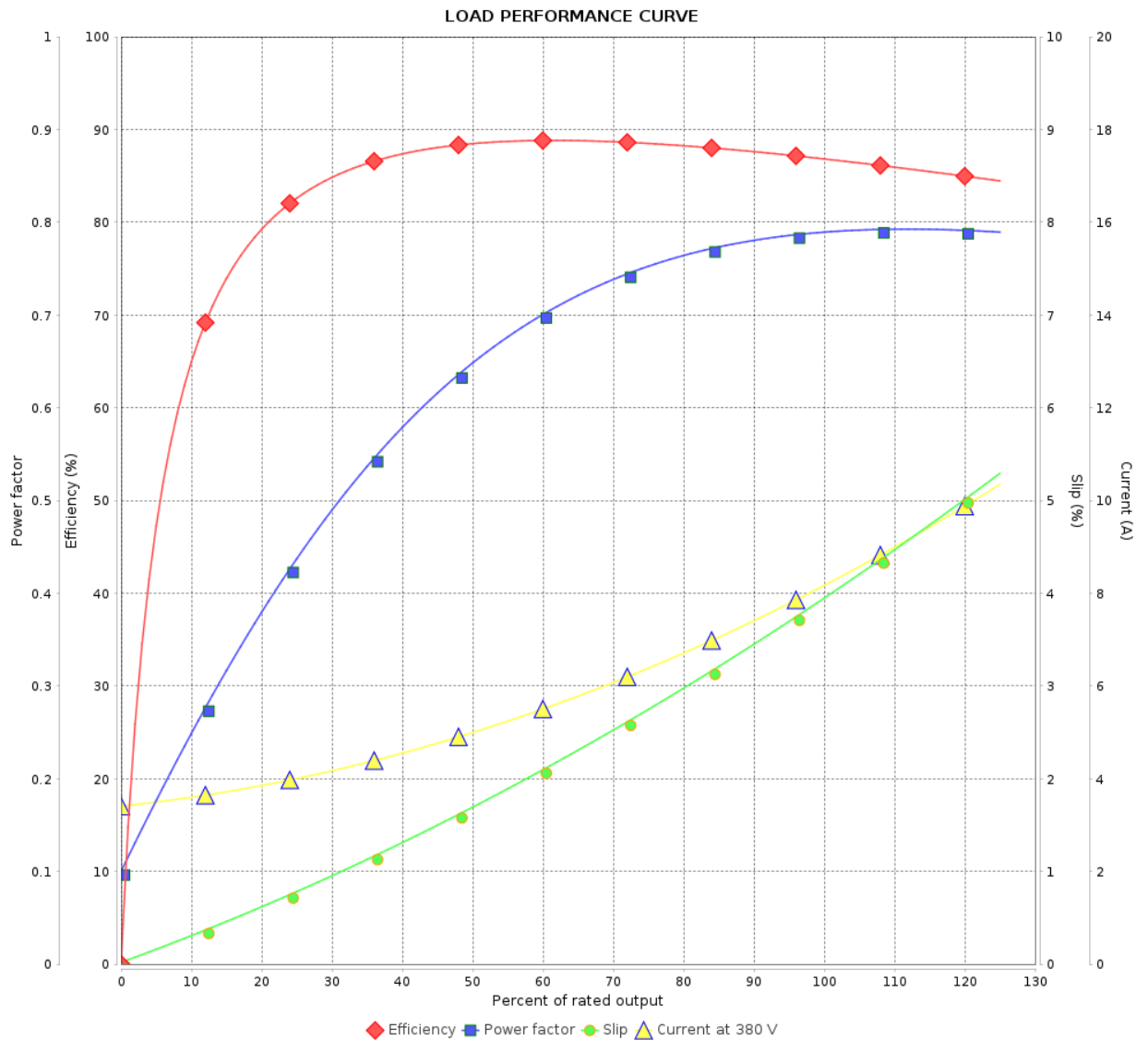
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W21 Explosion Proof NEMA  
Premium Efficiency Three-Phase

Product code : 14636474



Performance : 380 V 50 Hz 6P IE3

Rated current	: 8.10 A	Moment of inertia (J)	: 0.0620 kgm <sup>2</sup>
LRC	: 5.5	Duty cycle	: Cont.(S1)
Rated torque	: 3.78 kgfm	Insulation class	: F
Locked rotor torque	: 140 %	Service factor	: 1.00
Breakdown torque	: 200 %	Temperature rise	: 80 K
Rated speed	: 960 rpm	Design	: B

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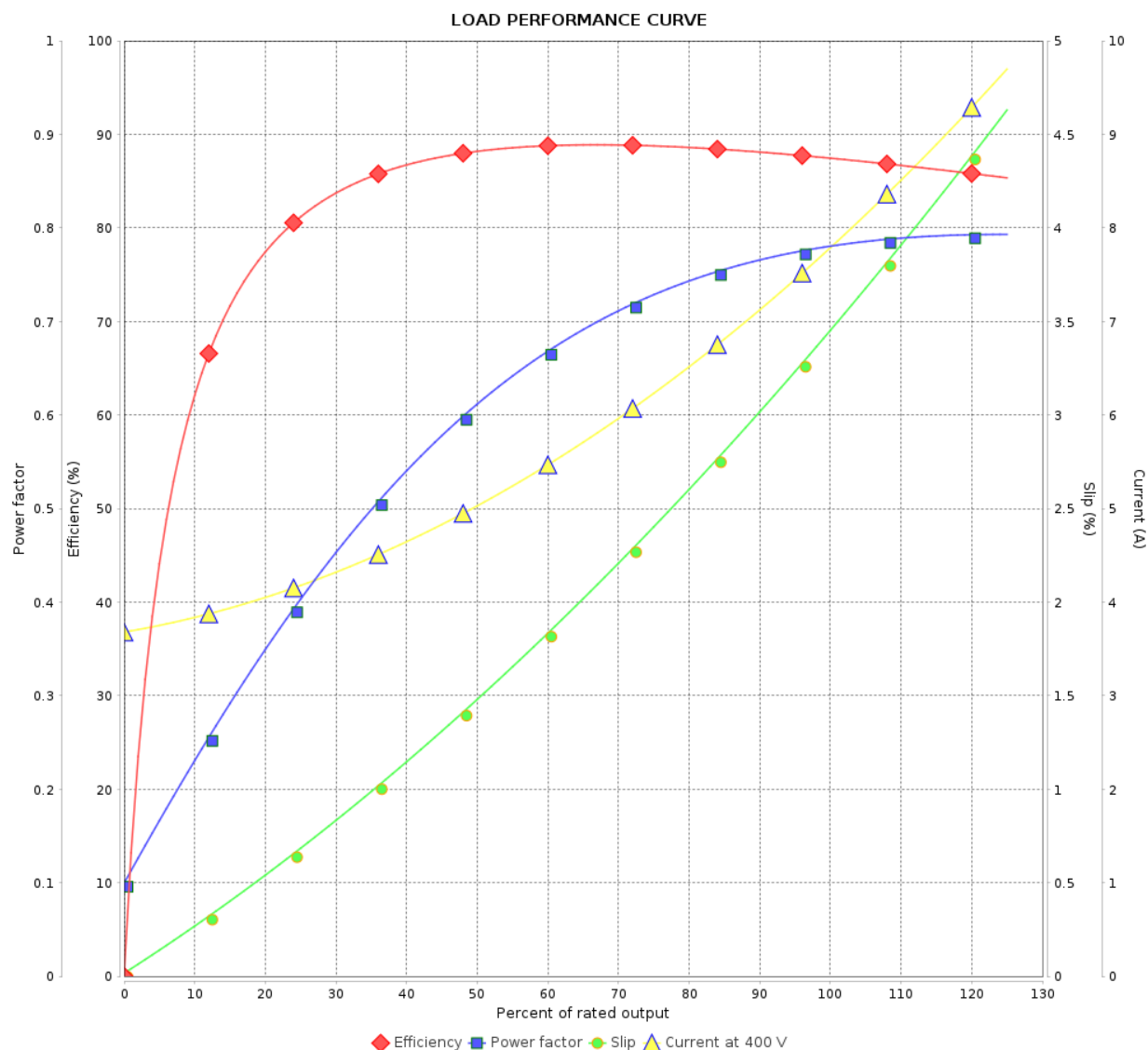
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W21 Explosion Proof NEMA  
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Performance : 400 V 50 Hz 6P IE3

Rated current : 7.82 A  
LRC : 6.1  
Rated torque : 3.76 kgfm  
Locked rotor torque : 160 %  
Breakdown torque : 229 %  
Rated speed : 965 rpm

Moment of inertia (J) : 0.0620 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 80 K  
Design : B

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# LOAD PERFORMANCE CURVE

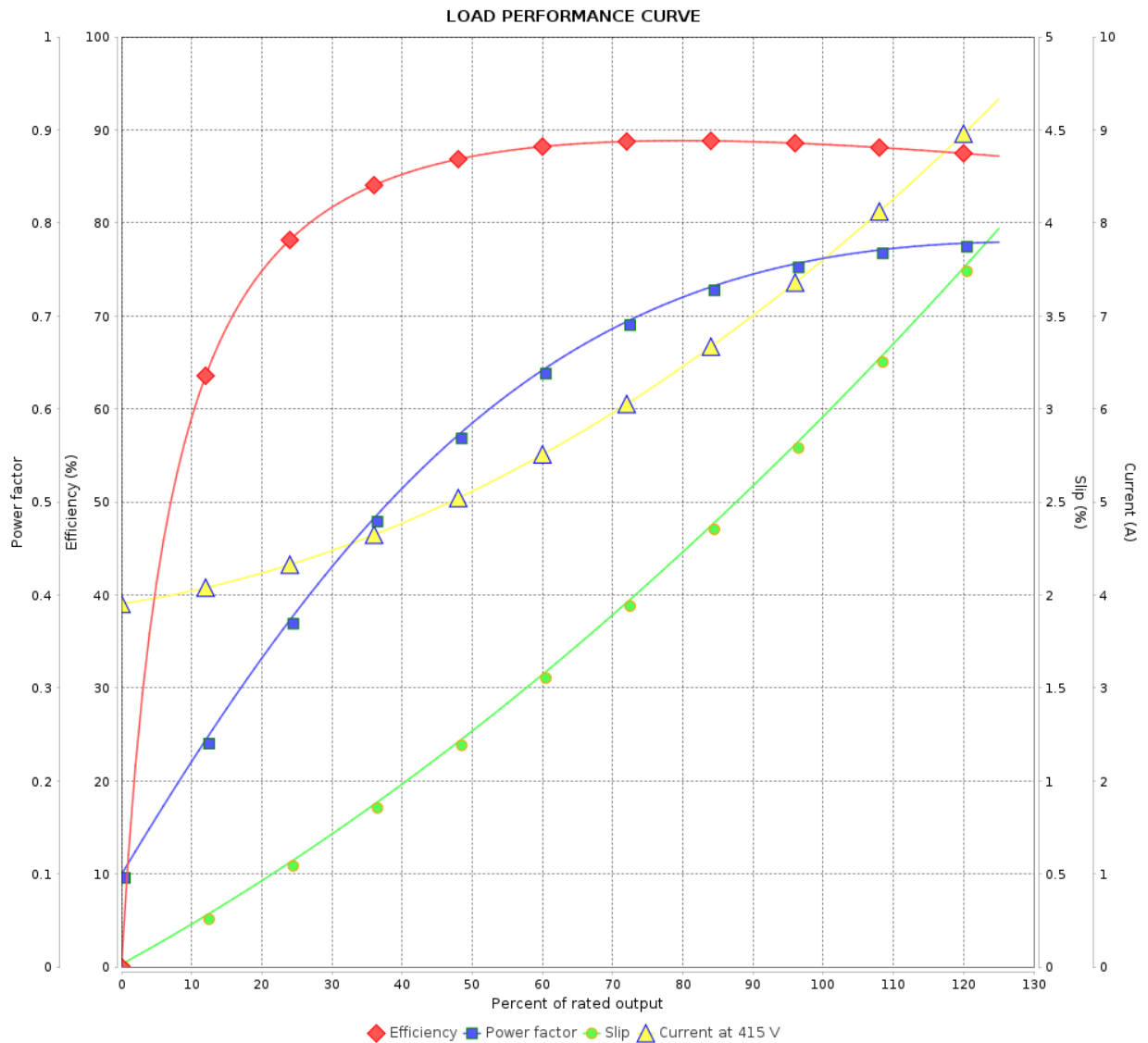
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W21 Explosion Proof NEMA  
Premium Efficiency Three-Phase

Product code : 14636474



Performance : 415 V 50 Hz 6P IE3

Rated current	: 7.55 A	Moment of inertia (J)	: 0.0620 kgm <sup>2</sup>
LRC	: 6.5	Duty cycle	: Cont.(S1)
Rated torque	: 3.74 kgfm	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 970 rpm	Design	: B

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