

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W21 Explosion Proof NEMA Premium Efficiency Three-Phase Product code : 14454602

Frame : 284TSC	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> : 213 kg
Protection degree : IP55	Moment of inertia (J) : 0.1086 kgm <sup>2</sup>
Design : B	

Output [HP]	25	25	25	25
Poles	2	2	2	2
Frequency [Hz]	60	50	50	50
Rated voltage [V]	230/460	380	400	415
Rated current [A]	57.1/28.6	34.7	33.1	31.7
L. R. Amperes [A]	383/191	184	195	275
LRC [A]	6.7x(Code G)	5.3x(Code E)	5.9x(Code F)	8.7x(Code J)
No load current [A]	12.6/6.30	6.00	6.50	7.00
Rated speed [RPM]	3545	2920	2930	2940
Slip [%]	1.53	2.67	2.33	2.00
Rated torque [kgfm]	5.12	6.21	6.19	6.17
Locked rotor torque [%]	240	180	210	229
Breakdown torque [%]	240	180	200	220
Service factor	1.15	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K
Locked rotor time	59s (cold) 33s (hot)	45s (cold) 25s (hot)	45s (cold) 25s (hot)	25s (cold) 14s (hot)
Noise level <sup>2</sup>	75.0 dB(A)	70.0 dB(A)	70.0 dB(A)	70.0 dB(A)
Efficiency (%)	25%			
	50%	91.7	91.7	91.7
	75%	92.4	91.7	91.7
	100%	92.4	91.7	92.4
Power Factor	25%			
	50%	0.78	0.82	0.77
	75%	0.85	0.87	0.85
	100%	0.88	0.89	0.88

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

Losses (%)	P1 (0,9;1,0)	7.8	9.3	8.6	7.8
	P2 (0,5;1,0)	5.9	7.1	6.5	5.9
	P3 (0,25;1,0)	5.0	6.0	5.5	5.0
	P4 (0,9;0,5)	3.7	4.5	4.1	3.7
	P5 (0,5;0,5)	2.1	2.5	2.3	2.1
	P6 (0,5;0,25)	1.2	1.5	1.4	1.2
	P7 (0,25;0,25)	0.7	0.8	0.8	0.7

	<u>Drive end</u>	<u>Non drive end</u>	Foundation loads
Bearing type :	6311 C3	6211 C3	Max. traction : 88 kgf
Sealing :	Oil Seal	Lip Seal	Max. compression : 300 kgf
Lubrication interval :	11517 h	14226 h	
Lubricant amount :	18 g	11 g	
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  
USABLE @208V 62.8A SF 1.10 SFA 69.0A

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## Three Phase Induction Motor - Squirrel Cage



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

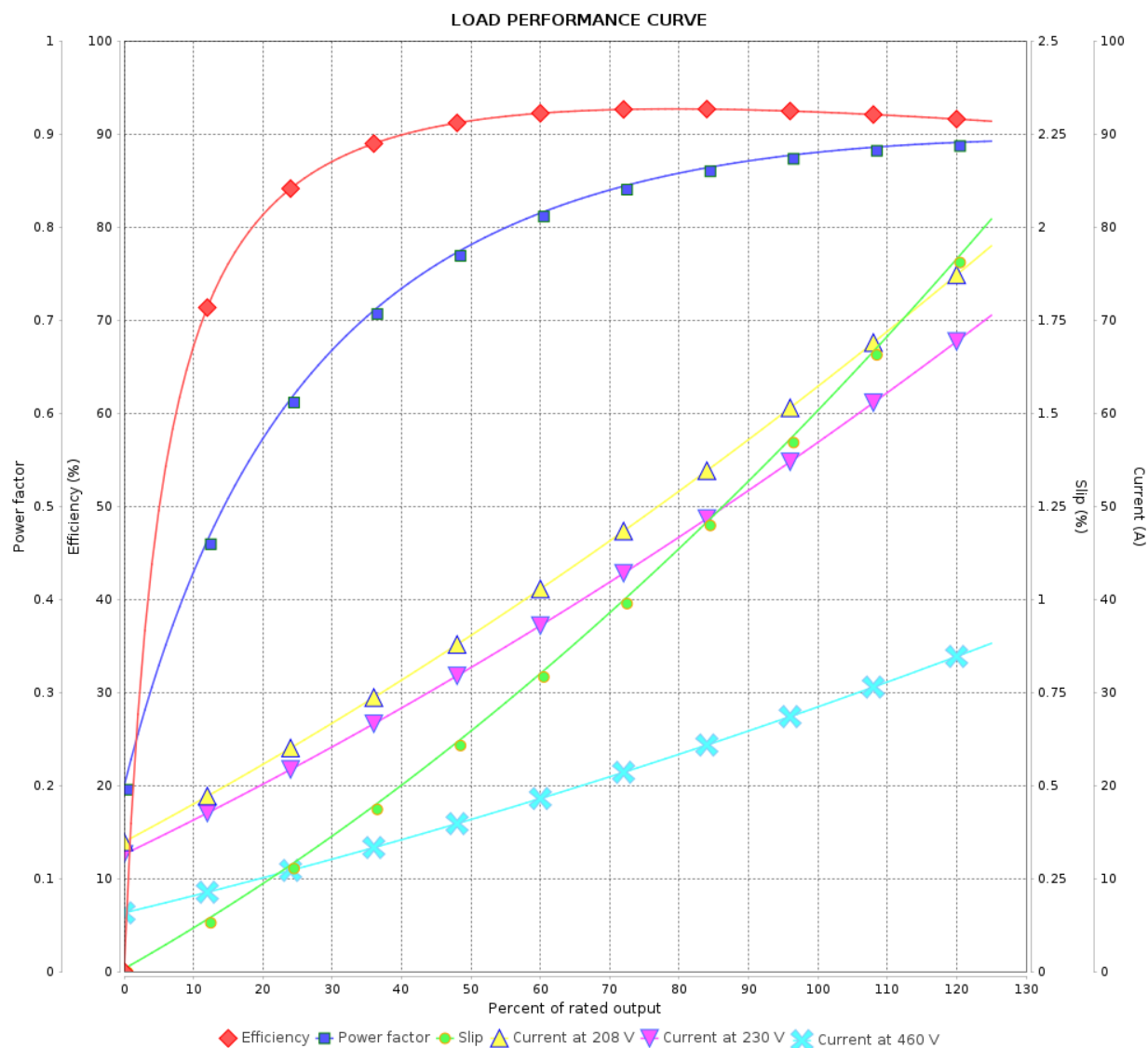
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 14454602



Performance : 230/460 V 60 Hz 2P

Rated current : 57.1/28.6 A  
LRC : 6.7  
Rated torque : 5.12 kgfm  
Locked rotor torque : 240 %  
Breakdown torque : 240 %  
Rated speed : 3545 rpm

Moment of inertia (J) : 0.1086 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

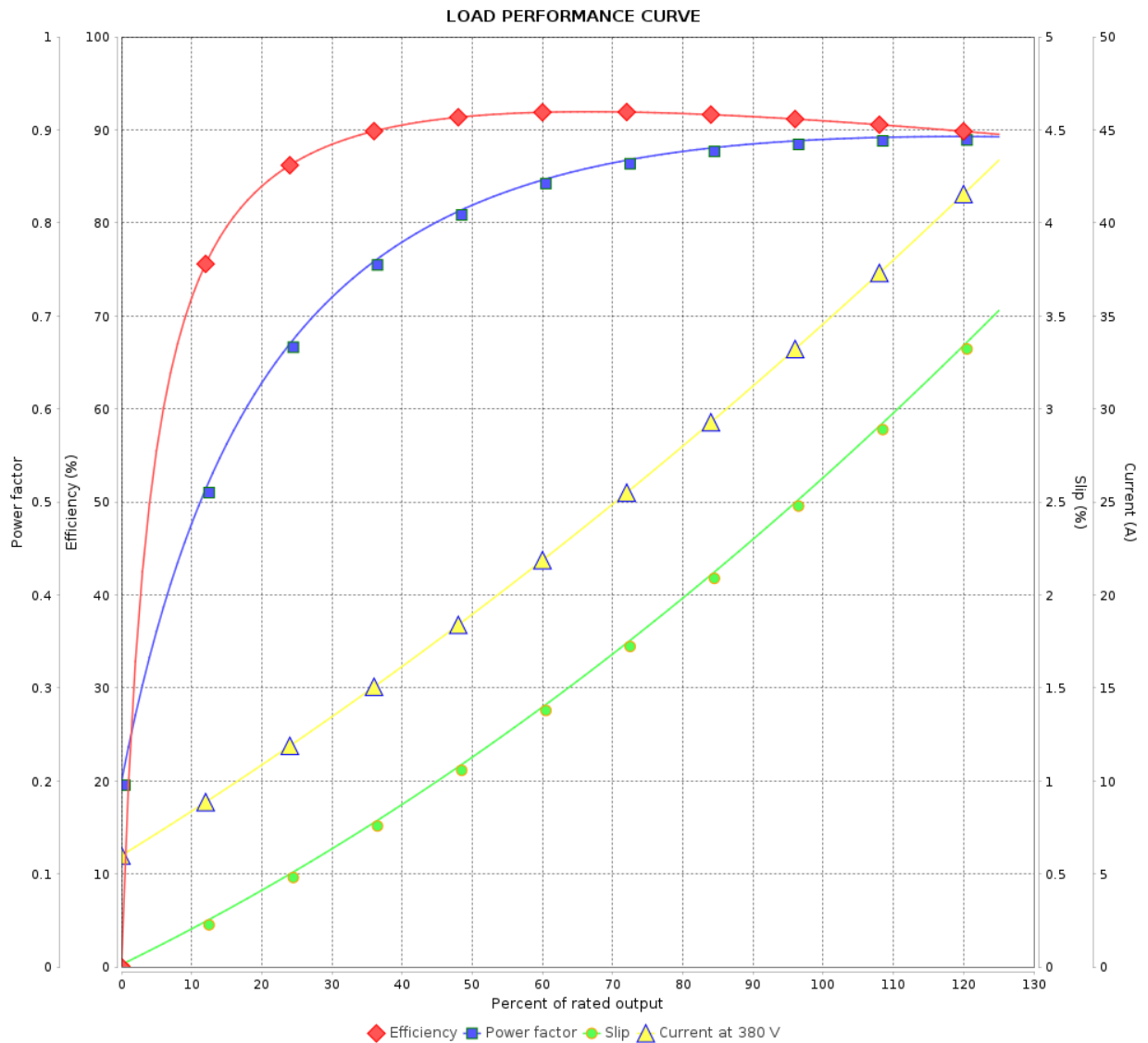
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 14454602



Performance : 380 V 50 Hz 2P IE2

Rated current	: 34.7 A	Moment of inertia (J)	: 0.1086 kgm <sup>2</sup>
LRC	: 5.3	Duty cycle	: Cont.(S1)
Rated torque	: 6.21 kgfm	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.00
Breakdown torque	: 180 %	Temperature rise	: 80 K
Rated speed	: 2920 rpm	Design	: B

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# LOAD PERFORMANCE CURVE

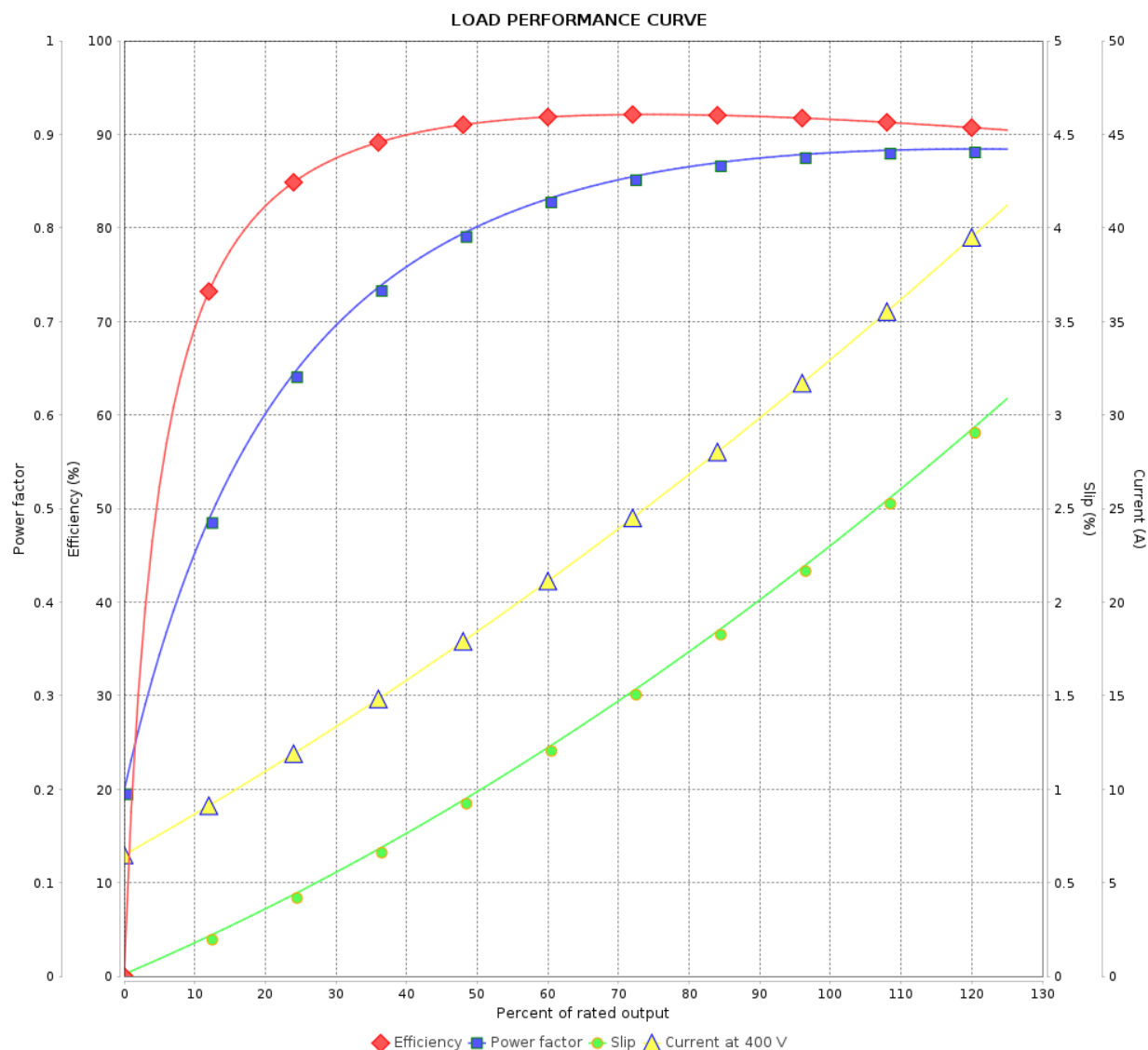
## Three Phase Induction Motor - Squirrel Cage



Customer :

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Performance : 400 V 50 Hz 2P IE2

Rated current : 33.1 A  
LRC : 5.9  
Rated torque : 6.19 kgfm  
Locked rotor torque : 210 %  
Breakdown torque : 200 %  
Rated speed : 2930 rpm

Moment of inertia (J) : 0.1086 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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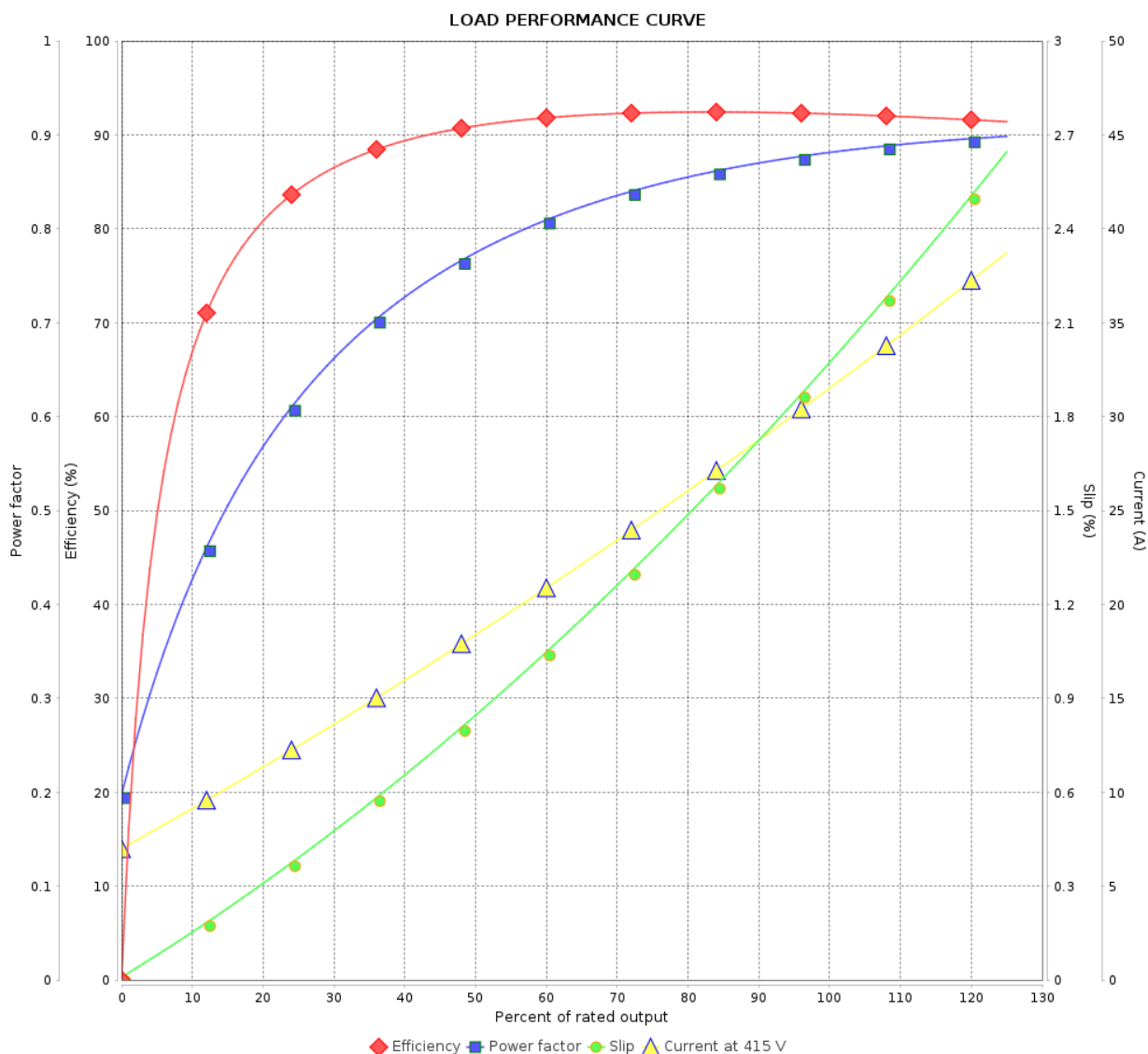
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 14454602



Performance : 415 V 50 Hz 2P IE3

Rated current : 31.7 A  
LRC : 8.7  
Rated torque : 6.17 kgfm  
Locked rotor torque : 229 %  
Breakdown torque : 220 %  
Rated speed : 2940 rpm

Moment of inertia (J) : 0.1086 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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