# **PRODUCT INFORMATION PACKET**

Model No: TCA1103A3133GACD01 Catalog No: TCA1103A3133GACD01 Cast Iron Motor, 150 HP, 3 Ph, 50 Hz, 415 V, 1000 RPM, 315L Frame, TEFC



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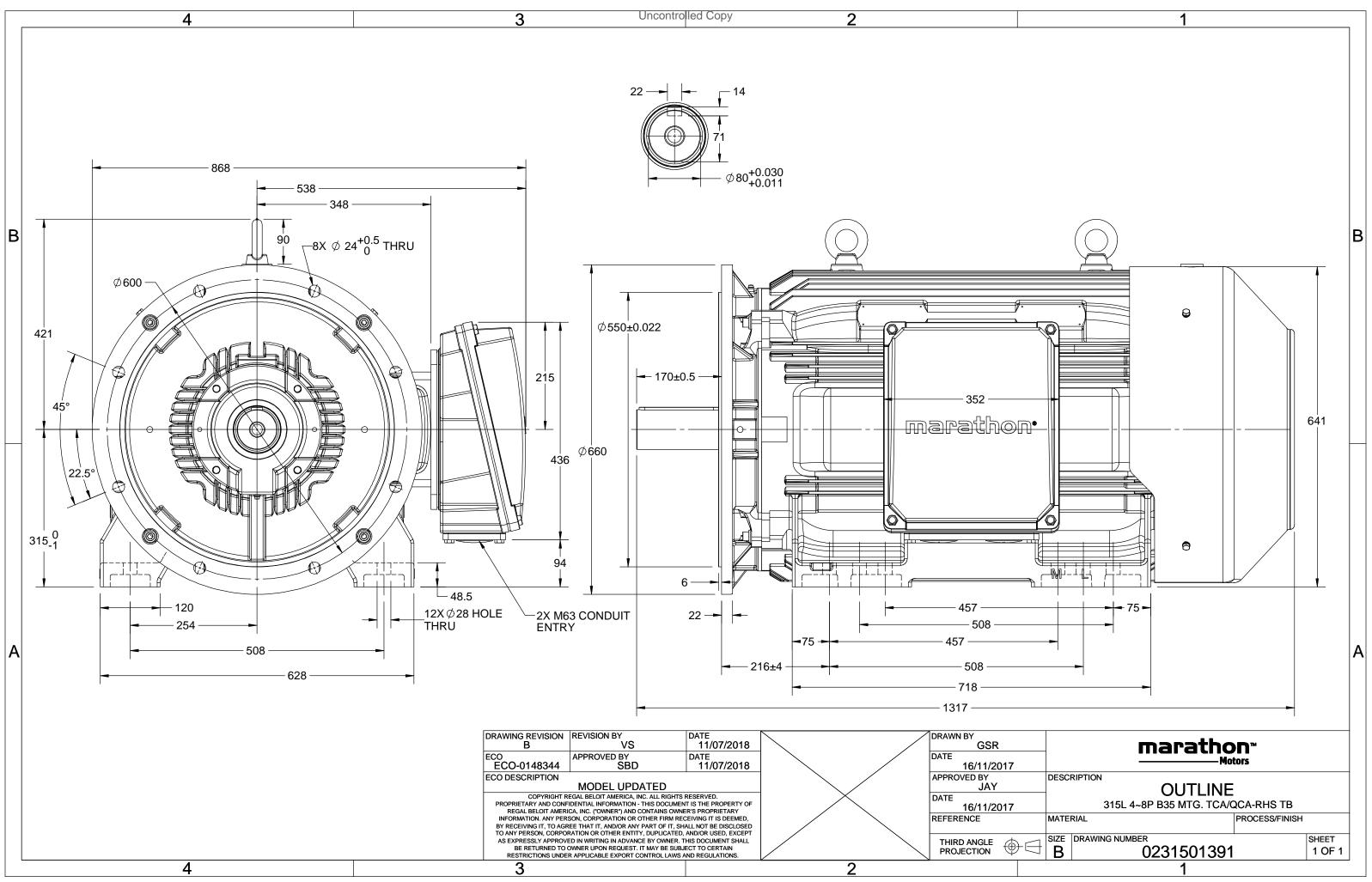
## Nameplate Specifications

Output HP	150 Hp	Output KW	110.0 kW
Frequency	50 Hz	Voltage	415 V
Current	198.7 A	Speed	991 rpm
Service Factor	1	Phase	3
Efficiency	95.1 %	Power Factor	0.81
Duty	S1	Insulation Class	F
Frame	315L	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	50 °C
Drive End Bearing Size	6319	Opp Drive End Bearing Size	6319
Drive End Bearing Size	6319 No	Opp Drive End Bearing Size CSA	6319 No

# **Technical Specifications**

Electrical Type	Squirrel Cage	Starting Method	Direct On Line	
Poles	6	Rotation	Bi-Directional	
Mounting	B35	Motor Orientation	Horizontal	
Drive End Bearing	C3	Opp Drive End Bearing	СЗ	
Frame Material	Cast Iron	Shaft Type	Keyed	
Overall Length	1317 mm	Frame Length	840 mm	
Shaft Diameter	80 mm	Shaft Extension	170 mm	
Assembly/Box Mounting	R Side			
Outline Drawing	0231501391	Connection Drawing	8442000085	

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### Model No. TCA1103A3133GACD01

415   Δ   50   110   150   198.7   991   1078.55   IE3   -   95.1   95.1   94.9   0.81   0.77   0.66   5.6   1.9   2     Motor type   TCA   Degree of protection   IP 55     Enclosure   TEFC   Mounting type   IM B35     Frame Material   Cast Iron   Ooling method   IC 411     Voltage variation *   ± 10%   Motor inertia   4.7728   k     Voltage variation *   ± 5%   IO3   Offer to provide   Customer to Provide   Z.8   m	U Z	Δ/Υ	f	Р	Р	1	n	т	IE	ç	6 EFF at	load		PF	at_lo	ad	I <sub>A</sub> /I <sub>N</sub>	$T_A/T_N$	$T_{\rm K}/T_{\rm N}$
Motor type   TCA   Degree of protection   IP 55     Enclosure   TEFC   Mounting type   IM B35     Frame Material   Cast Iron   Cooling method   IC 411     Frame size   315L   Motor weight - approx.   1035     Duty   S1   Gross weight - approx.   1080     Voltage variation *   ± 10%   Motor inertia   4.7728   kg     Frequency variation *   ± 5%   Costomer to Provide   2.8   m     Design   N   Noise level (Imeter distance from motor)   66   dd     Service factor   1.0   No. of starts hot/cold/Equally spread   2/3/4   Targe method   DOL     Tamperature rise (by resistance)   70 [ Class B ]   K   K   Rwithstand time (hot/cold)   15/30     Temperature class   NA   Caccessories   Accessory - 1   -   -     Temperature class   NA   Accessory - 2   -   -     Bearing type   Antl-friction ball bearing   Accessory - 2   -   -     D/ NDE bearing   G31 G3 ( S131 G	(V) (	Conn	[Hz]	[kW]	[hp]	[A]	[RPM]	[Nm]	Class	5/4FL	FL		1/2FL	FL	3/4FL	1/2FL	[pu]	[pu]	[pu]
BackgroupTEFCBackgroupIM B35Eradesure315LCooling methodIC 411Frame size315LMotor weight - approx.1035Duty51Motor weight - approx.1080Voltage variation *± 10%Motor inertiaCustomer to ProvideFrequency variation *10%Motor inertiaCustomer to ProvideCombined variation *10%Vibration level2.8mDesignNNo. of starts hot/cold/Equally spread2/3/4ditteretInsulation classFStarting methodDDLditteretAmbient temperature-20 to +50°CType of couplingDirectType of couplingDirectHazardous area classificationNADirect on of cotationBi-directionalStandard rotationStandard rotationStandard rotationStandard rotationStandard rotationEi-directionalKotor typeAluminum Die castNAAccessory - 1-Accessory - 2-Bearing typeArti-friction ball bearingAccessory - 3-Terminal box positionRHSLubrication methodRegreasableMaximum cable size/conduit sizeIR x 3C x 240mm²/2 x M63 x 1.5	415	Δ	50	110	150	198.7	991	1078.55	IE3	-	95.1	95.1	94.9	0.81	0.77	0.66	5.6	1.9	2.3
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Lubrication method Regreasable   Maximum cable size/conduit size 1R x 3C x 240mm²/2 x M63 x 1.5	Bearing t	type			Anti-	friction ba	ll bearing				Ac	cessory	- 3				-		
	DE / NDE	E bearii	ng		63	19 C3/6	319 C3			Т	erminal b	oox posi	tion						
Type of grease     Shell Gadus S5 V100 or Equivalent     Auxiliary terminal box     NA	Lubricatio	ion me	thod			Regrease	ble			N	1aximum	cable si	ze/cond	uit size	1R	x 3C x 2	40mm²/2 x M	63 x 1.5	
	Type of g	grease		Sh	ell Gadı	us S5 V100	) or Equiv	alent		A	uxiliary t	erminal	box				NA		

 $\rm I_A/\rm I_N$  - Locked Rotor Current / Rated Current

 $T_A/T_N$  - Locked Rotor Torque / Rated Torque

 $T_{\rm K}/T_{\rm N}$  - Breakdown Torque / Rated Torque

## NOTE

All performance values at rated voltage and frequency.

All performance parameters are subjected to standard tolerance as per IEC 60034-1

\* Voltage, Frequency and combine variation are as per IEC60034-1

Technical data are subject to change. There may be discrepancies between calculated and name plate values.

Efficiency	Europe	China	India	Aus/Nz	Brazil	Global IEC
Standards	-	-	IS 12615 : 2018	-	-	-



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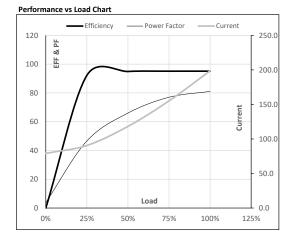


Model No. TCA1103A3133GACD01

Enclosure	U	$\Delta / Y$	f	Р	Р	1	n	Т	Т	IE	Amb	Duty	Elevation	Inertia	Weight
	(V)	Conn	[Hz]	[kW]	[hp]	[A]	[RPM]	[kgm]	[Nm]	Class	[°C]		[m]	[kg-m <sup>2</sup> ]	[kg]
TEFC	415	Δ	50	110	150.0	198.7	991	109.98	1078.55	IE3	50	S1	1000	4.7728	1035

#### Motor Load Data

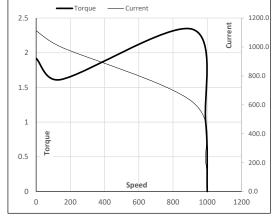
Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	А	79.1	90.6	118.2	155.1	198.7	
Torque	Nm	0.0	267.7	536.6	806.8	1078.6	
Speed	r/min	1000	998	996	993	991	
Efficiency	%	0.0	92.2	94.9	95.1	95.1	
Power Factor	%	3.8	46.6	66.0	77.0	81.0	



#### Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL	
Speed	r/min	0	143	912	991	1000	
Current	А	1112.5	1001.3	621.8	198.7	79.1	
Torque	pu	1.9	1.6	2.3	1	0	
	P4						

### Starting Characteristics Chart



NOTE Refer data sheet for applicable standard and tolerances on performance parameters

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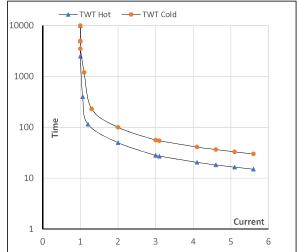
Model No. TCA1103A3133GACD01

1						n	1	1	IE	Amb	Duty	Elevation	Inertia	Weight
(V)	Conn	[Hz]	[kW]	[hp]	[A]	[rpm]	[kgm]	[Nm]	Class	[°C]		[m]	[kg-m <sup>2</sup> ]	[kg]
TEFC 415	Δ	50	110	150	198.7	991	109.90	1078.55	IE3	50	S1	1000	4.7728	1035

#### Motor Speed Torque Data

Load		FL	$I_1$	$I_2$	$I_3$	$I_4$	ا5	LR
TWT Hot	S	10000	50	28	21	17	16	15
TWT Cold	s	10000	100	56	42	34	31	30
Current	pu	1	2	3	4	5	5.5	5.6

Thermal Characteristics Chart



**NOTE** Refer data sheet for applicable standard and tolerances on performance parameters

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