

# PRODUCT INFORMATION PACKET

**marathon®**  
Motors

Model No: 1011536-BR

Catalog No: 1011536

TerraMAX® Cast Iron Motor, 300 HP, 3 Ph, 60 Hz, 380 V, 1800 RPM, 355M/L Frame, TEFC



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**RegalRexnord**

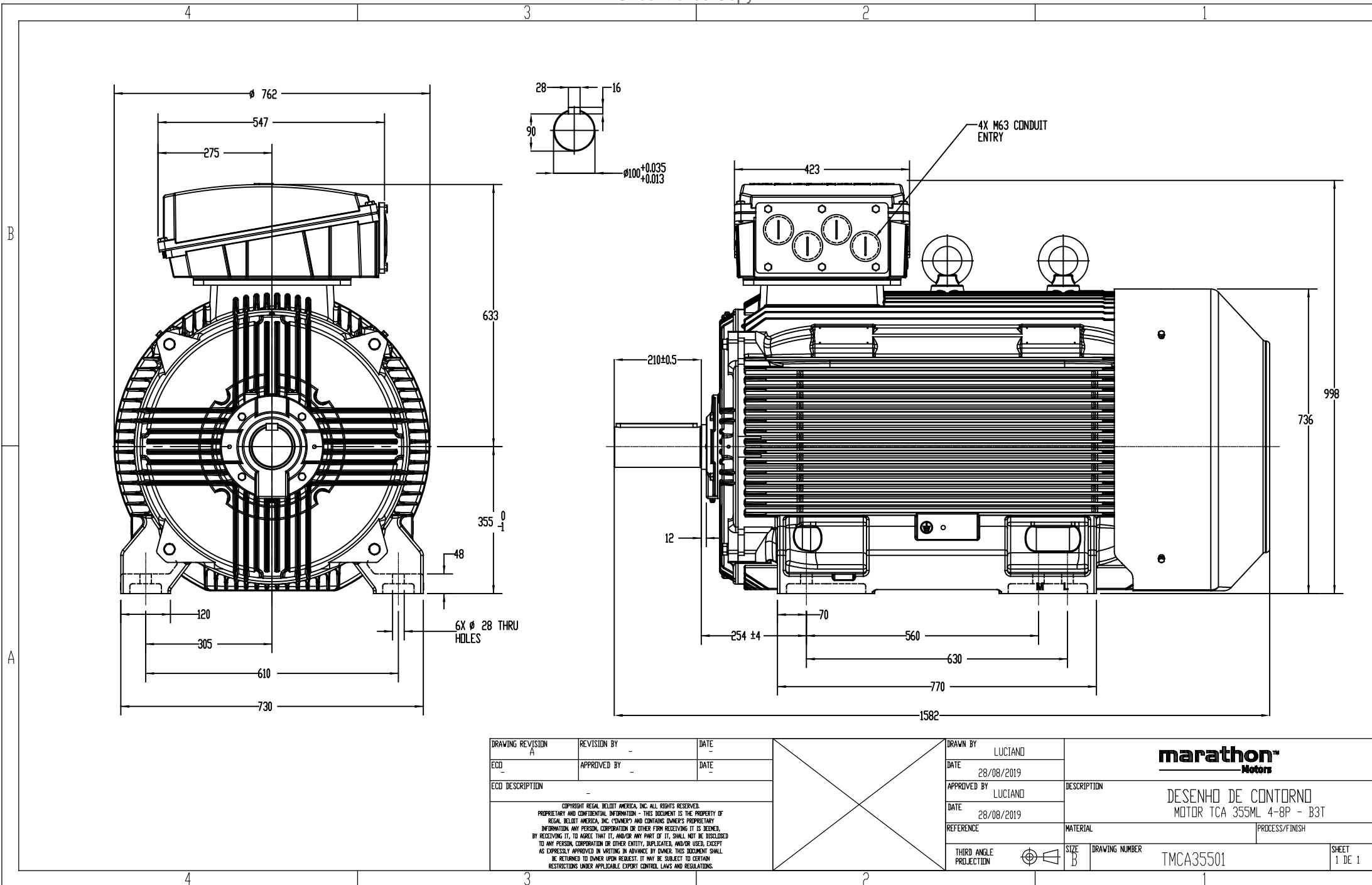
### Nameplate Specifications


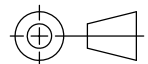
Output HP	300 Hp	Output KW	220.0 kW
Frequency	60 Hz	Voltage	380 V
Current	6.9 A	Speed	1791 rpm
Service Factor	1.25	Phase	3
Efficiency	96.2 %	Power Factor	0.9
Duty	S1	Insulation Class	F
Frame	355M/L	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6322	Opp Drive End Bearing Size	6322
UL	No	CSA	No
CE	No	IP Code	55
Number of Speeds	1		

### Technical Specifications

Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	4	Rotation	Clockwise
Mounting	B3	Motor Orientation	Horizontal
Drive End Bearing	C3	Opp Drive End Bearing	C3
Frame Material	Cast	Shaft Type	Keyed
Overall Length	1582 mm	Frame Length	1010 mm
Shaft Diameter	100 mm	Shaft Extension	210 mm
Assembly/Box Mounting	TOP		
Outline Drawing	TMCA35501		

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NOTES FOR CE2D013		REV	REFERENCE ECN	REFERENCE PROJECT	REV BY	DATE	APPD	DATE															
		A		0701478	Carlos	08-23-2007	J. RUP	08-23-2007															
B	<p>1. MOTOR WEIGHT: 5.4#'S</p> <p>2. 42 X 42 X 45</p> <p>3. GROUND WASHER LOCATION: ES20T1-13</p> <p>4. CLASS "B" INSULATED MOTOR APPROVED FOR CLASS "A" UL LOCKED ROTOR &amp; IDLE TEMPS.</p> <p>5. DO NOT POLISH SHAFT AFTER PHOSPHATE HAS BEEN APPLIED.</p> <p>6. MOTOR LONGER THAN STANDARD.</p> <p>7. CAPACITOR CANNOT OVERHANG FACE OF MTG. LUGS.</p> <p>8. MOTOR MOUNTS HORIZONTAL; ENVIRONMENT: N/A; APPLICATION: UNIT HEATER</p> <p>9. MOTOR TEST DATA</p> <p>TEST @ 115 VOLTS 60 HZ</p> <p>SPECS BELOW @ ROOM AMBIENT</p> <p>L.V.S. 75 C.S. TORQUE 27.5 OZ. IN.</p> <p>LOCK WATTS: 111-135 LRA 1.05</p> <p>IDLE WATTS: 63-77</p> <p>SPECS BELOW @ 25 DEG C</p> <p>TORQUE OZ. IN.</p> <p>15.75-19.25 @ 1550 RPM 74.7-91.3 WATTS</p>				<p>NOTES FOR 129TP1-163</p> <p>1. WINDING HEIGHT F=1.000</p> <p>2. WINDING HEIGHT G=1.000</p> <p>3. OVER WEIGHT ES129T10-40 C=270</p> <p>4. LEAD TIE ES129T11-5 A=50, B=180</p>																		
	<p>TEST DATA @ 115 VOLTS 60 HZ</p> <p>SPECS BELOW @ ROOM AMBIENT</p> <p>L.V.S. 75 C.S. TORQUE 10 OZ. IN.</p> <p>LOCK WATTS: 50-61 LRA .5</p> <p>IDLE WATTS: 30-40</p> <p>SPECS BELOW @ 25 DEG C</p> <p>TORQUE OZ. IN.</p> <p>10.35-12.65 @ 1000 RPM 43.7-53.4 WATTS</p> <p>PER SAMPLE 0603002A 08-13-2007 EMD</p> <p>USE 7.5 MFD 370 VAC CAPACITOR</p>				<p>NOTES FOR 229TP1-163</p> <p>1. MAGNETIC WIRES 125HTN29 H1</p> <p>MAGNETIC WIRES 160HTN29 H2</p> <p>MAGNETIC WIRES 50HTN31 L1</p> <p>MAGNETIC WIRES 100HTN31 L2</p> <p>MAGNETIC WIRES 140HTN30 A1</p> <p>MAGNETIC WIRES 185HTN30 A2</p> <p>2. COIL C2F2*71</p> <p>3. REVERSE WOUND AUX.</p> <p>4. COLD RESISTENCE @ 25 DEG C</p> <p>H: 48.93-54.08</p> <p>L: 91.68-101.33</p> <p>A: 71.25-78.75</p> <p>60 HZ GFW N/A</p>																		
A	<p>GEOMETRIC CHARACTERISTICS &amp; SYMBOLS</p> <p>▮ FLATNESS</p> <p>— STRAIGHTNESS</p> <p>∠ ANGULARITY</p> <p>⊥ PERPENDICULARITY (SQUARENESS)</p> <p>// PARALLELISM</p> <p>○ ROUNDNESS (CIRCULARITY)</p> <p>⊘ CYLINDRICITY</p> <p>△ PROFILE OF ANY SURFACE</p> <p>⌒ PROFILE OF ANY LINE</p> <p>↗ RUNOUT</p> <p>⊕ TRUE POSITION</p> <p>◎ CONCENTRICITY</p> <p>≡ SYMMETRY</p>		<p>UNLESS OTHERWISE SPECIFIED</p> <p>DIM. TOLERANCES ARE AS FOLLOWS:</p> <table><tr><td></td><td>X</td><td>XX</td><td>XXX</td><td>XXXX</td></tr><tr><td>INCH</td><td>±.1</td><td>±.02</td><td>±.005</td><td>±.0005</td></tr><tr><td>mm</td><td>±0.5</td><td>±0.13</td><td>±0.013</td><td></td></tr></table> <p>ANG. ±.50 DEG</p> <p>REMOVE BURRS &amp; BREAK SHARP EDGES:</p> <p>INCH .003-.015 mm 0.1-0.4</p> <p>CORNER FILLETS TO:</p> <p>INCH .020 mm 0.5</p> <p>MACHINE SURFACES:</p> <p>INCH <u>125</u> mm <u>3.2</u></p> <p>METRIC DIMS. SHOWN IN [BRACKETS]</p>			X	XX	XXX	XXXX	INCH	±.1	±.02	±.005	±.0005	mm	±0.5	±0.13	±0.013		DR BY:		<p><b>A.O. SMITH</b> A DIVISION OF A. O. SMITH CORPORATION</p> <p>ELECTRICAL PRODUCTS COMPANY TIPP CITY, OHIO</p> <p> COPYRIGHT 1995</p>	
						X	XX	XXX	XXXX														
INCH	±.1	±.02	±.005	±.0005																			
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APPD:		EDS DATE 01-21-2007																					
		THIRD ANGLE PROJECTION 		FORMAT REV E		DESCRIPTION																	
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NOTAS POR CE2D013		REVISION: A	ECN REFERENCIA:	PROYECTO REFERENCIA: 0701478	REVISADO POR: Carlos	FECHA: 08-23-2007	APROBADO POR: J. RUP	FECHA: 08-23-2007
1. PESO DEL MOTOR: 5.4#’S 2. 42 X 42 X 45 3. LOCALIZACION DE ARANDELA DE TIERRA: ES20T1-13 4. LA INSOLACION DEL MOTOR CLASE "B" ES APROVADA POR POR CLASE "A" EL ROTOR Y LA CORRIENTE EN VACIO ES BLOQUEADO. 5. NO PULIR LA FLECHA DESPUES DE HABER APLICADO EL FOSFATO. 6. EL MOTOR ES MAS GRANDE QUE EL ESTANDAR. 7. EL CAPACITOR NO DEBE SOBRESALIR LA CARA DEL MONTAJE DE LAS TERMINALES. 8. EL MOTOR ESTA VA MONTADO HORIZONTALMENTE; MEDIO: N/A; APLICACION: CALENTADOR 9. DATOS DE PRUEBA DEL MOTOR. PRUEBA @ 115 VOLTS 60 HZ ESPECIFICACIONES ABAJO @ AMBIENTE DE CUARTO L.V.S. 75 C.S. TORQUE 27.5 OZ. IN. WATTS CERRADOS: 111-135 LRA 1.05 WATTS EN CORRIENTE EN VACIO: 63-77 ESPECIFICACIONES ABAJO @ 25 GRADOS C TORQUE OZ. IN. 15.75-19.25 @ 1550 RPM 74.7-91.3 WATTS  DATOS DE PRUEBA@ 115 VOLTS 60 HZ ESPECIFICACIONES ABAJO @ AMBIENTE DE CUARTO L.V.S. 75 C.S. TORQUE 10 OZ. IN. WATTS CERRADOS: 50-61 LRA .5 WATTS DE CORRIENTE EN VACIO: 30-40 ESPECIFICACIONES ABAJO @ 25 GRADOS C TORQUE OZ. IN. 10.35-12.65 @ 1000 RPM 43.7-53.4 WATTS POR MUESTRA 0603002A 08-13-2007 EMD USAR 7.5 MFD 370 VAC CAPACITOR				NOTAS POR 129TP1-163 1. ALTURA DE BOBINADO F=1.000 2. ALTURA DE BOBINADO G=1.000 3. ENROLLADO POR ENCIMA ES129T10-40 C=270 4. CORBATA DE CABLE ES129T11-5 A=50, B=180  NOTAS POR 229TP1-163 1.ALAMBRE MAGNETICO 125HTN29 H1 ALAMBRE MAGNETICO 160HTN29 H2 ALAMBRE MAGNETICO 50HTN31 L1 ALAMBRE MAGNETICO 100HTN31 L2 ALAMBRE MAGNETICO 140HTN30 A1 ALAMBRE MAGNETICO 185HTN30 A2 2. BOBINA C2F2*71 3. BOBINA DE REVERSA AUXILIAR. 4. RESISTENCIA EN FRIO @ 25 GRADOS C H: 48.93-54.08 L: 91.68-101.33 A: 71.25-78.75 60 HZ GFW N/A				
CARACTERISTICAS DE GEOMETRIA Y SIMBOLOS ∇ PLANICIDAD — RECTITUD ∠ ANGULARIDAD ⊥ PERPENDICULARIDAD (A ESCUADRA) // PARALELISMO ○ REDONDEZ (CIRCULARIDAD) ⌢ CILINDRICIDAD △ PERFIL DE CUALQUIER SUPERFICIE ∩ PERFIL DE CUALQUIER LINEA ↗ VARIACION ⊕ POSICION REAL ◎ CONCENTRICIDAD ≡ SIMETRIA		A MENOS QUE SE ESPECIFIQUE DE OTRA MANERA, LAS TOLERANCIAS DE LAS DIMS; SON LAS SIGUIENTES: PULG X XX XXX XXXX ±.1 ±.02 ±.005 ±.0005 mm ±0.5 ±0.13 ±0.013 ANG. ±.50 GRADOS ELIMINAR REBABAS Y ORILLAS FILOSAS DEL BORDE. PULG .003-.015 mm 0.1-0.4 FILETEAR ESQUINA: PULG .020 mm 0.5 MAQUINAR SUPERFICIES PULG 125 mm 3.2 DIMS METRICAS MOSTRADAS [PARENTESIS]		DIBUJADO POR: . APROBADO POR:  TERCER ANGULO DE PROYECCION ⊕ FECHA EDS: 01-21-2007 REV. FORMATO: E CONFIDENCIAL: ESTE DIBUJO Y SU INFORMACION SON PROPIEDAD DE USO EXCLUSIVO Y CONFIDENCIAL DE A.O.SMITH CORP. Y NO DEBERAN SER REVELADOS, DUPLICADOS, DISTRIBUIDOS O USARSE DE OTRA MANERA SIN EL CONSENTIMIENTO ESCRITO DE A.O. SMITH CORP. -TODOS LOS DERECHOS RESERVADOS.ASME Y14.5M 1994		A.O.SMITH ELECTRICAL PRODUCTS COMPANY TIPP CITY, OHIO A DIVISION OF A. O. SMITH CORPORATION COPYRIGHT 1995 DESCRIPCION: ELECTRICAL INSPECTION TAMAÑO: B NUMERO DE DIBUJO: 1011536 ESCALA:NONE HOJA: 1		
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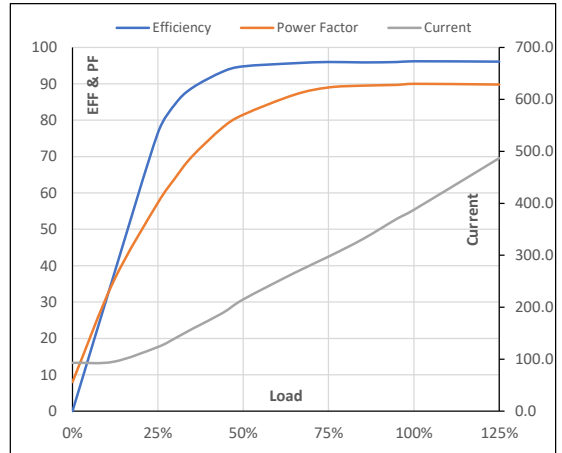
Model No. 1011536

Enclosure	U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [RPM]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m <sup>2</sup> ]	Weight [kg]
TEFC	380	Δ	60	220	300	387.5	1791	119.82	1175.02	IR3	40	S1	1000	39.932	1911

**Motor Load Data**

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	93.0	123.5	215.0	297.4	387.5	487.0
Torque	Nm	0.0	297.1	594.9	893.6	1175.0	1493.6
Speed	r/min	1800	1798	1795	1793	1791	1788
Efficiency	%	0.0	76.5	94.8	96.0	96.2	96.1
Power Factor	%	8.0	57.3	81.5	89.0	90.0	89.8

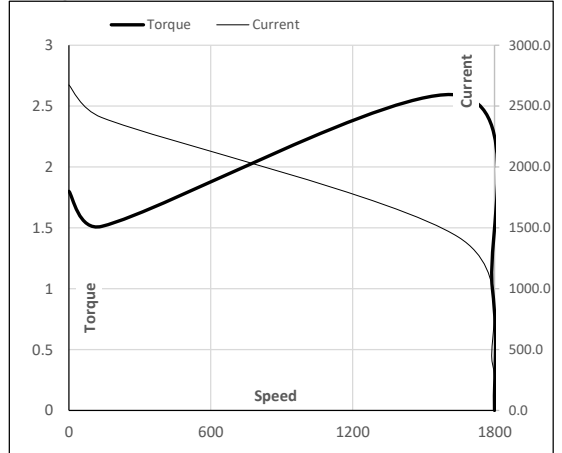
**Performance vs Load Chart**



**Motor Speed Torque Data**

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	138	1648	1791	1800
Current	A	2673.8	2406.4	1423.1	387.5	93.0
Torque	pu	1.8	1.5	2.6	1	0

**Starting Characteristics Chart**



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

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