



Toase-eh Park Sanati Gohar Ofogh
Petrochemical Co.
**CONCEPTUAL, BASIC and DETAIL DESIGN
ENGINEERING OF STYRENE PARK OFFSITE**



Document Title: Electrical Motor Data Sheet

Document No.: EI027-DMF-VD-EL-DSH-017-R2

Rev. R2

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STYRENE PARK OFFSITE

Document Title:
Electrical Motor Data Sheet

R2	06-10-2024	IFA	F.Aghaienezhad	J.Beigloo	A.Gholizadeh
R1	11-08-2024	IFA	F.Aghaienezhad	J.Beigloo	A.Gholizadeh
R0	22-06-2024	IFA	F.Aghaienezhad	J.Beigloo	A.Gholizadeh
Rev.	Issued Date	DESCRIPTION	PREPARED	CHECKED	APPROVED



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REVISION RECORD SHEET

Page Page	Revisions							Page	Revisions						
	R0	R1	R2	R3	R4	R5	R6		R0	R1	R2	R3	R4	R5	R6
1	X	X	X					41							
2	X	X	X					42							
3	X	X	X					43							
4		X	X					44							
5		X	X					45							
6		X	X					46							
7		X	X					47							
8		X	X					48							
9		X	X					49							
10		X	X					50							
11		X						51							
12		X						52							
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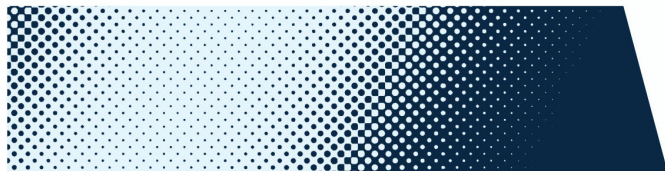
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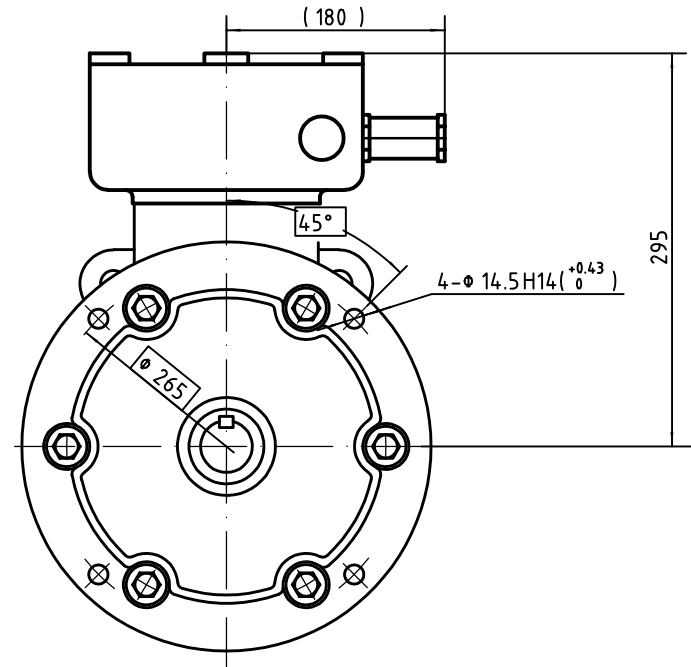
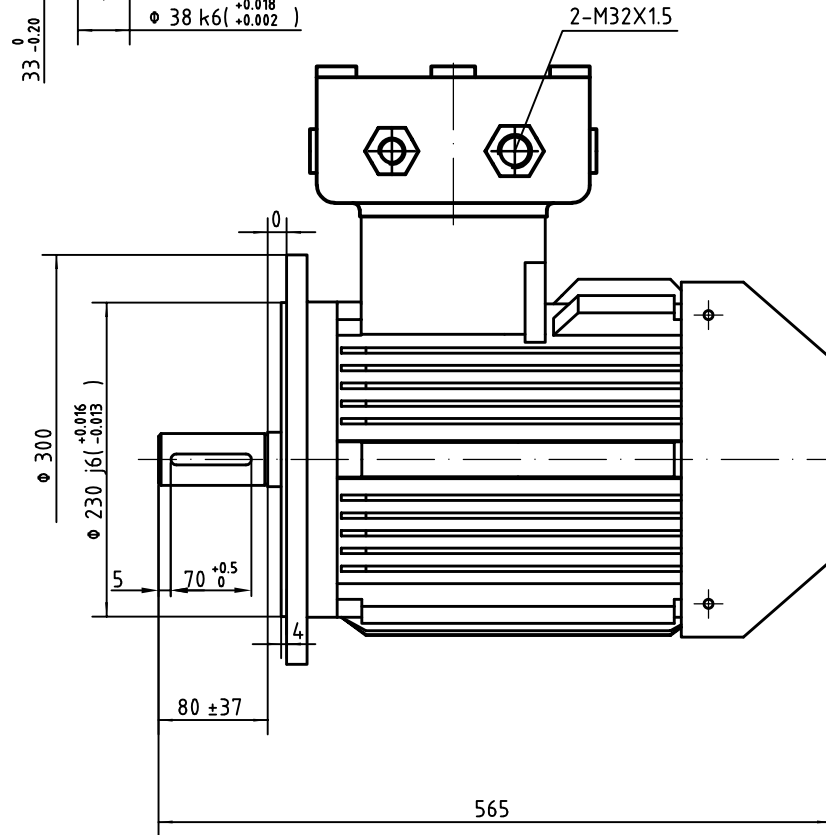
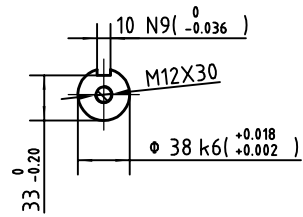
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MOTOR BASIC DATA (1158)

INSTALLATION SITE		
QUANTITY	4	
BRAND-MODEL	Marathon	
RATED POWER	7.5 kw	
SUPPLY VOLTS	400±5%	
FREQUENCY	50±2%	
NUMBER OF POLE	4	
WINDING CONNECTIONS/ROTATION	Delta	
COUPLING TYPE	V-Belt(Belt & Pulley)	
NOMIAL SPEED	1500 rpm	
DUTY CATEGORY	S1	
INVERTER DUTY	YES	
ALTITUDE	20 m	
AMBIENT TEMPRATURE MIN/MAX	5/48 C	
RELATIVE HUMIDITY (RH)	65%	
STARTING METHOD	2-DOL /2-VFD	
CABLE GLAND SUPLIED	YES	
DIRECTION OR ROTATION	Both	
ISULATION CLASS/TEMP. RISE	F/B	
COOLING	(IC 411)	
AREA CLASSIFICATION	Exe IIB T3	
WINDING TEMPERATURE . DETECTORS (PTC RELAY)	N.A	
ANTI-CONDANATION HEATER (SPACE HEATER)	N.A	
MOUNTING (TYPE OF INSTALATION)	IMV3	
PROTECTION DEGREE FOR MOTOR/FOR TERMINAL BOX	IP55//IP55	
ROTOR CAGE MATERIAL (AL)	CAST IRON	
PAINT SYSTEM	STANDARD COLOR-RAL (5015)	
CABLE TYPE AND SIZE (FEEDER CABLE BY CLIENT)	MAIN	18~21 mm
	HEATER	N.A
	PTC	N.A
THERED (GLAND) ENTRY	MAIN	2XM32
	HEATER	N.A
	PTC	N.A
EARTH TERMINALS	IN & EXT	
MAX NOISE LEVEL (AT ONE METER)	< 85	
LIFTING DEVICE	YES	
DRAIN PLUGS	NO	
NO OF PHASE	3	
IE (EFFICIENCY CLASS)	IE=2 (MINIMUM)	
PF (COS &)	0.84	
TYPE TEST	NO	
MOTOR SUITABLE FOR VCDS (Y/N)	NO	
CURVE & OUTLINE & COMPLETE CATALOGUE (Y/N)	YES	



Accreditation (National)	IEC 60079									
Hazardous Classification	Ex db IIB T4									
Series Model Type	E3ABL									
Frame Size	132M									
Rated Output Power	7.5 kW									
Rated Speed	1465 r/min									
Number of Poles	4 Pole									
Number of Phases	3 Phase									
Voltage	400 V									
Frequency	50 Hz									
Duty Cycle	S1									
Service Factor	1.00									
Operating Altitude	1000 masl									
Insulation Class	F (155°C)									
Temperature Rise	80K (B class)									
Ambient Temperature	-15°C ~ 50°C									
Method of Cooling	IC411 (TEFC - Totally Enclosed Fan Cooled)									
Degree of Protection (Ingress Level)	IP55									
Material of Construction	Cast Iron									
Connection	Δ/Y									
Full Load Current [I_N]	14.43									
Locked Rotor Current [I_L / I_N]	7.50									
Full Load Torque [T_N]	48.89 Nm									
Locked Rotor Torque [T_L / T_N]	2.0									
Breakdown Torque [T_B / T_N]	2.3									
Efficiency Class	IE3									
Load										
Efficiency	<table border="1"><thead><tr><th>100% load</th><th>75% load</th><th>50% load</th></tr></thead><tbody><tr><td>90.4%</td><td>90.3%</td><td>89.7%</td></tr><tr><td>0.84</td><td>0.79</td><td>0.69</td></tr></tbody></table>	100% load	75% load	50% load	90.4%	90.3%	89.7%	0.84	0.79	0.69
100% load	75% load	50% load								
90.4%	90.3%	89.7%								
0.84	0.79	0.69								
Power Factor (cos φ)										
Bearing Configuration (DE / NDE)	Ball Bearing / Ball Bearing									
Bearing Series Type	DE: 6208-2Z/C3 NDE: 6208-2Z/C3									
Bearing Lubrication Type	Grease - ESSO UNIREX N2									
Vibration	1.6 mm/sec									
Moment of inertia (kg.m²)	0.0488									
Direction of Rotation	CW or CCW									
Sound Pressure Level	75 dB(A)									
Final Colour	RAL 5010									
Paint Specification	2 Pack Epoxy									
Mounting Options	B5 /V3									
Terminal Box Position	Top Terminal Box									



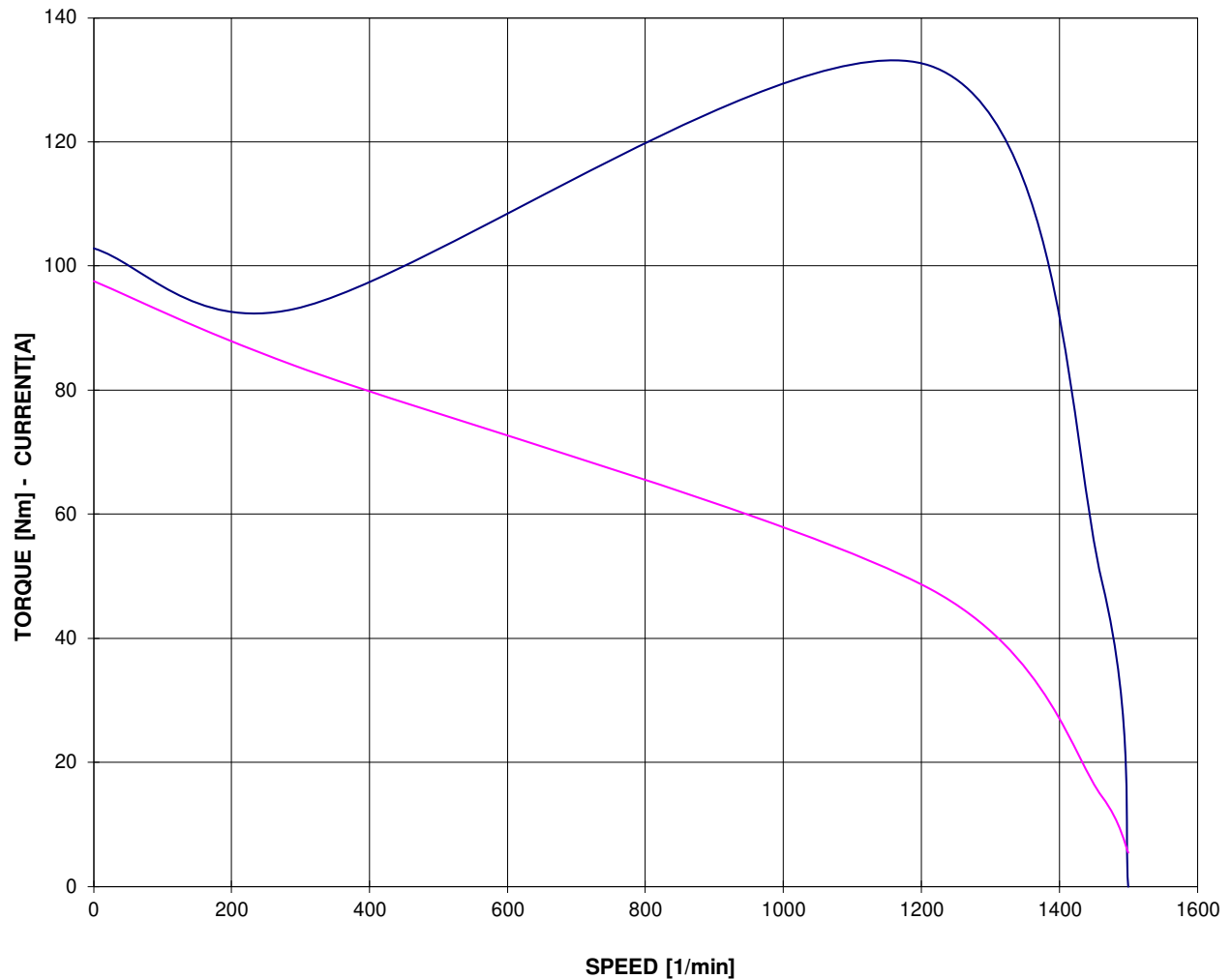
Note: Cable Gland not Included

DRAWING REVISION	REVISION BY	DATE		DRAWN BY			
ECD	APPROVED BY	DATE		DATE			
ECD DESCRIPTION				APPROVED BY			
<small>COPYRIGHT REGAL BELLOIT AMERICA, INC. ALL RIGHTS RESERVED. PROPRIETARY AND CONFIDENTIAL INFORMATION - THIS DOCUMENT IS THE PROPERTY OF REGAL BELLOIT AMERICA, INC. (OWNER) AND CONTAINS OWNER'S PROPRIETARY INFORMATION. ANY PERSON, CORPORATION OR OTHER FIRM RECEIVING IT IS DEEMED BY RECEIVING IT, TO AGREE THAT IT, AND/OR ANY PART OF IT, SHALL NOT BE DISCLOSED TO ANY PERSON, CORPORATION OR OTHER ENTITY, DUPLICATED, AND/OR USED, EXCEPT AS EXPRESSLY APPROVED IN WRITING IN ADVANCE BY OWNER. THIS DOCUMENT SHALL BE RETURNED TO OWNER UPON REQUEST. IT MAY BE SUBJECT TO CERTAIN RESTRICTIONS UNDER APPLICABLE EXPORT CONTROL LAWS AND REGULATIONS.</small>			DATE	DESCRIPTION	E3ABL 132M B5		
			REFERENCE	MATERIAL		PROCESS/FINISH	
			FIRST ANGLE PROJECTION		SIZE	DRAWING NUMBER	SHEET

TORQUE/CURRENT-SPEED DIAGRAM

Motore / Motor	E3ABL 132M 4	
Potenza nominale / Rated power	7.50	kW
Poli / Pole	4	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	14.43	A
Velocità / Speed	1462	rpm
Coppia / Torque	48.99	Nm

— COPPIA - TORQUE — CORRENTE - CURRENT

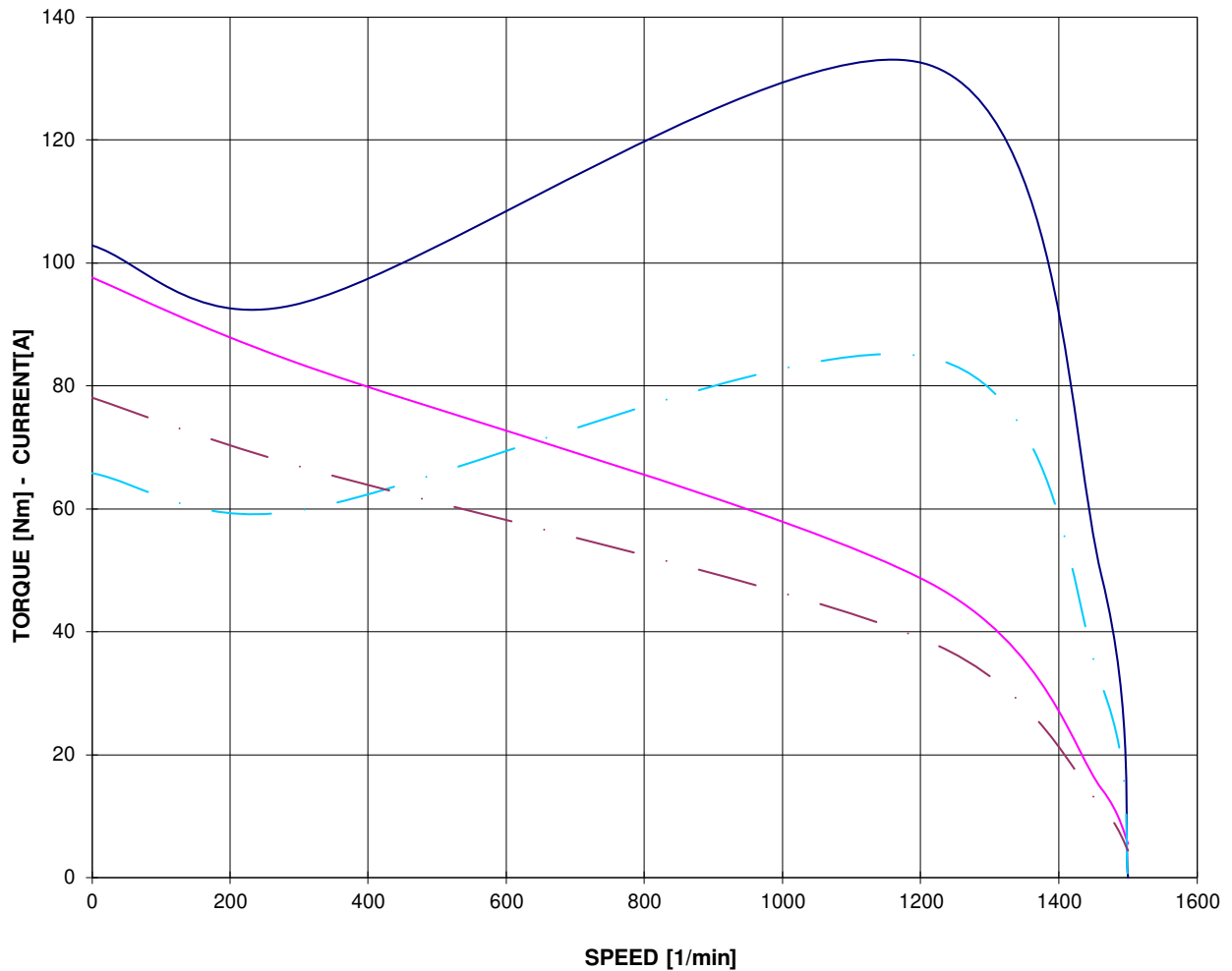


Data obtained by calculation method

TORQUE/CURRENT-SPEED DIAGRAM (Reduced voltage)

Motore / Motor	E3ABL 132M 4	
Potenza nominale / Rated power	7.50	kW
Poli / Pole	4	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	14.43	A
Velocità / Speed	1462	rpm
Coppia / Torque	48.99	Nm

— COPPIA - TORQUE — CORRENTE - CURRENT
— COPPIA - TORQUE 80% Un — CORRENTE - CURRENT 80% Un



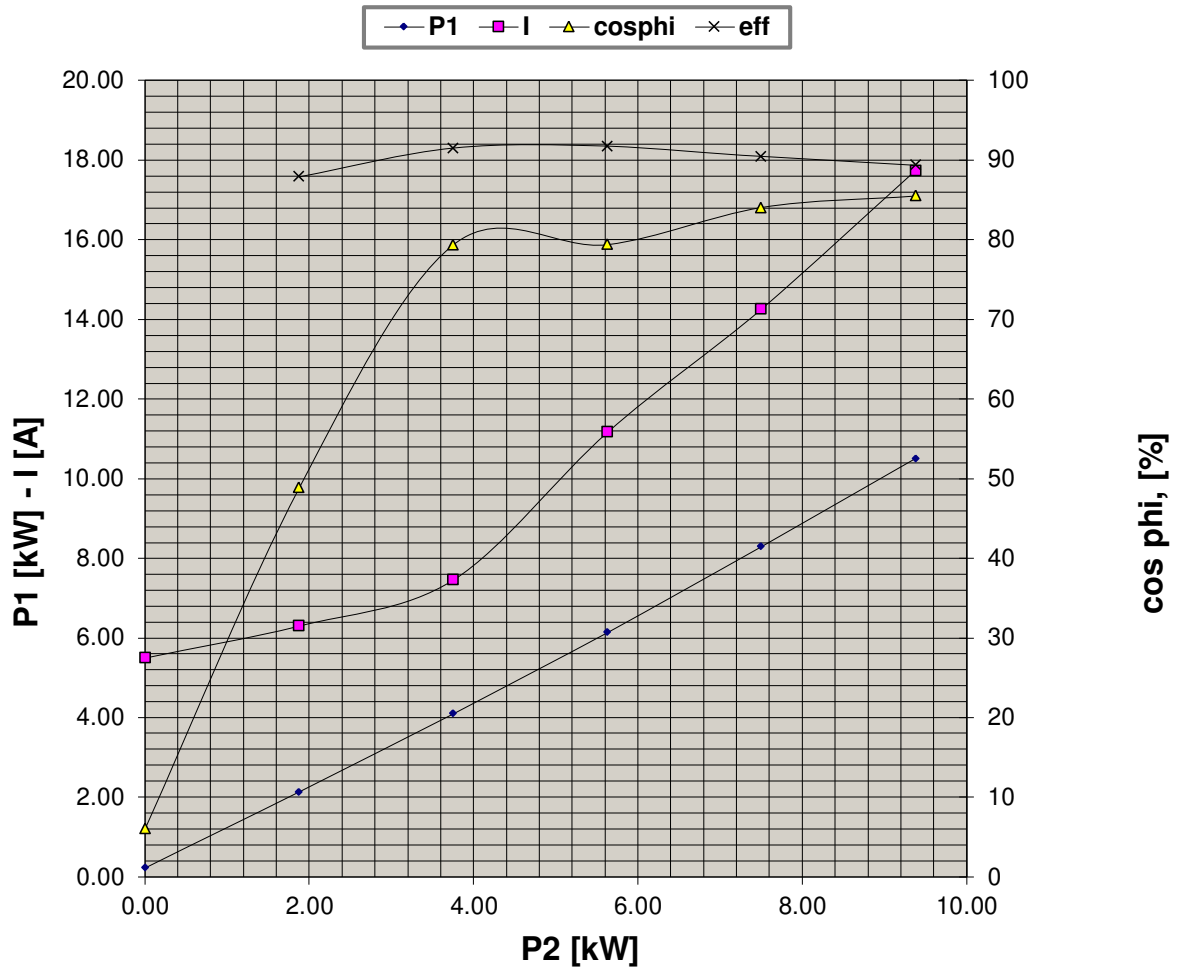
Data obtained by calculation method

PERFORMANCE CURVES

Motore / Motor

E3ABL 132M 4

Potenza nominale / Rated power	7.50	kW
Poli / Pole	4	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	14.43	A
Velocità / Speed	1462	rpm
Coppia / Torque	48.99	Nm



Data obtained by calculation method

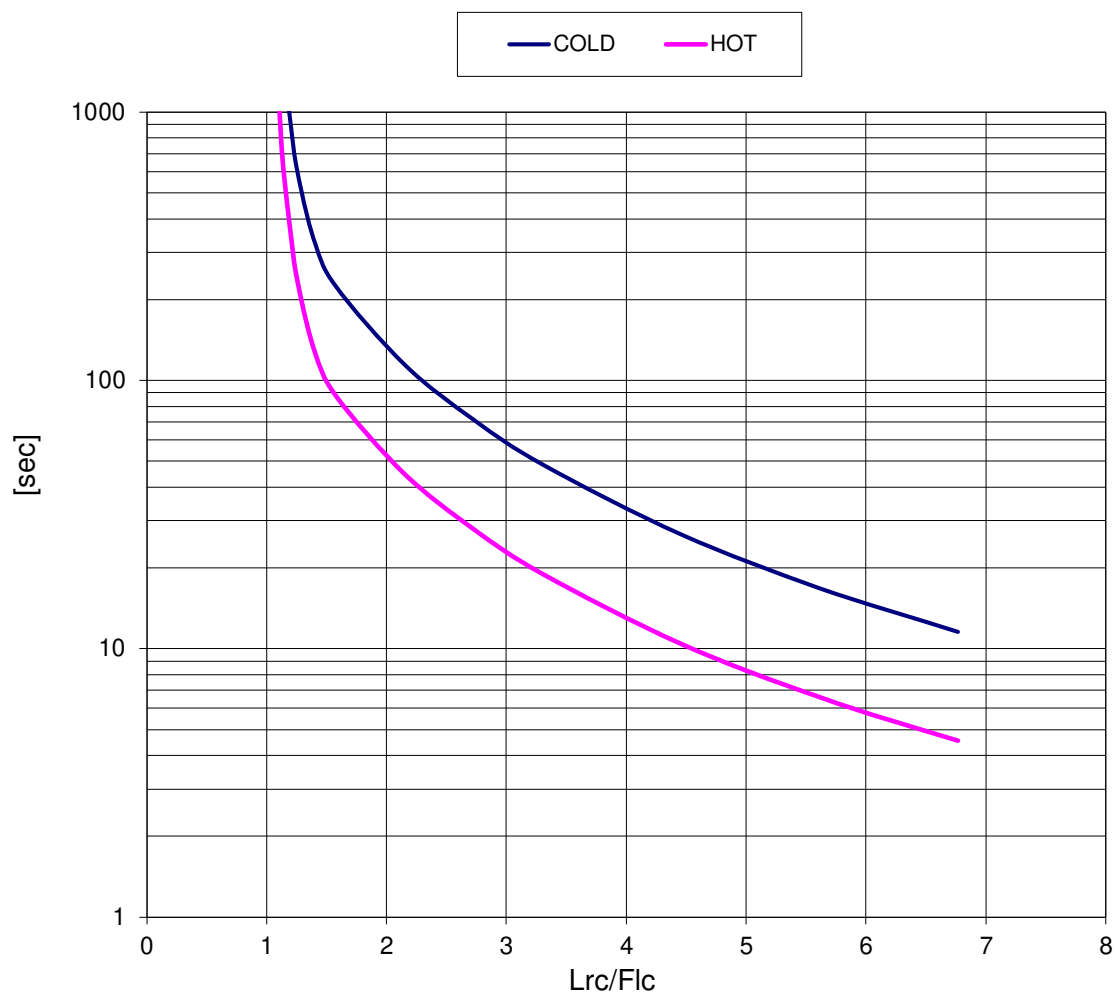
THERMAL WITHSTAND CURVE

Cliente / Customer 0

Impianto / Plant -
ITEM -

Numero d'offerta / Offer Number 2024
-

Motore / Motor E3ABL 132M 4
 Potenza nominale / Rated power 7.50 kW
 Poli / Pole 4
 Tensione - Frequenza / Voltage - Frequency 400 - 50 V - Hz
 Corrente / Rated current 14.43 A
 Velocità / Speed 1462 rpm
 Coppia / Torque 48.99 Nm

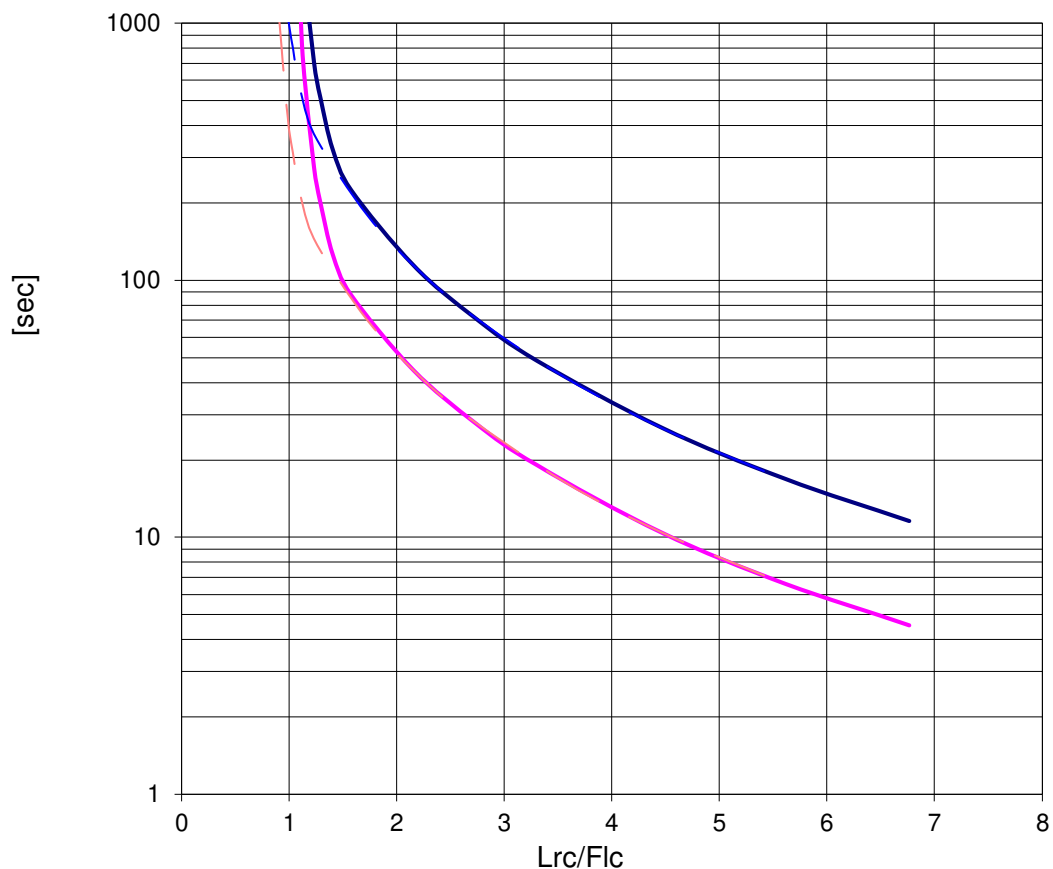


Data obtained by calculation method

THERMAL WITHSTAND CURVE (Reduced voltage)

Motore / Motor	E3ABL 132M 4	
Potenza nominale / Rated power	7.50	kW
Poli / Pole	4	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	14.43	A
Velocità / Speed	1462	rpm
Coppia / Torque	48.99	Nm

— COLD (100% Un)
 — HOT (100% Un)
 — COLD (80% Un)
 — HOT (80% Un)



Data obtained by calculation method