

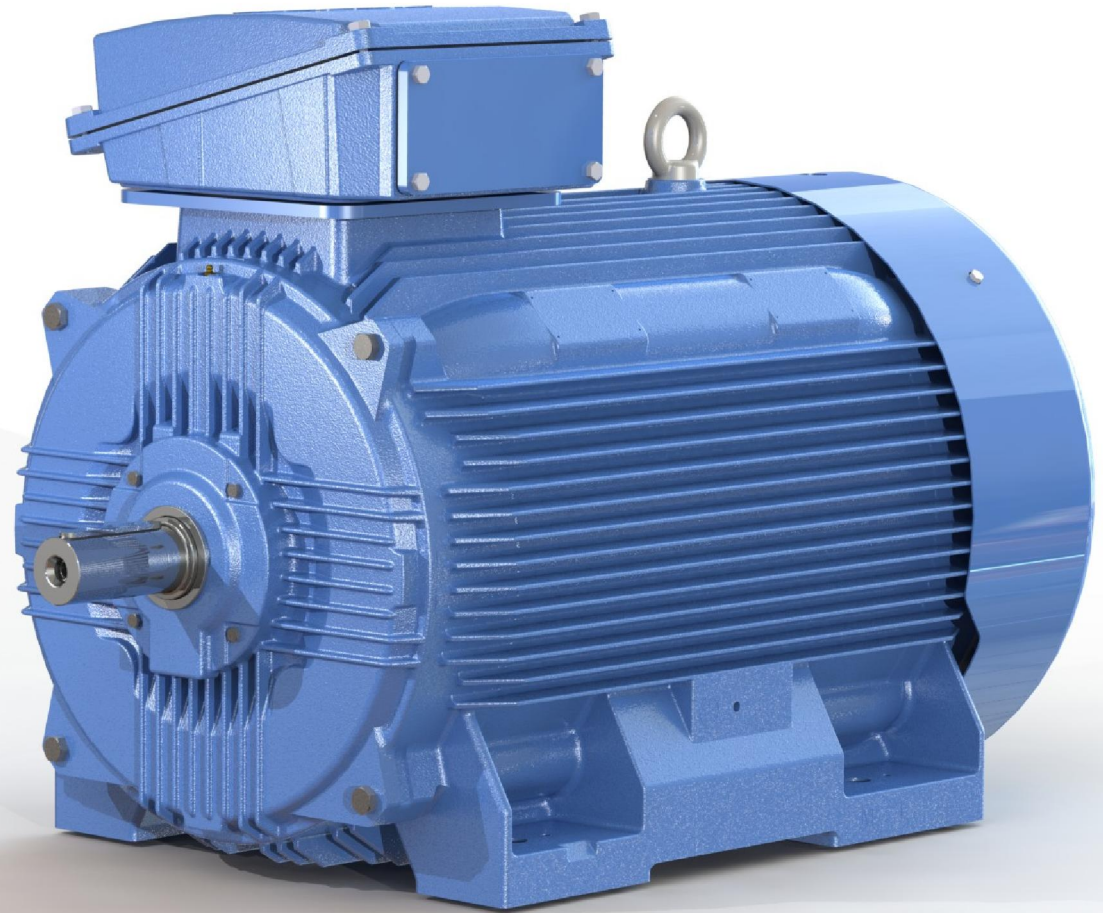


marathon™

— ELECTRIC MOTORS

IEC IE3 Motor Range

© 2014 Marathon



A Regal Brand

REGAL

REGAL

Regal Beloit is a leading manufacturer of electrical and mechanical motion control and power generation products serving markets throughout the world. Regal Beloit products can be found in a vast variety of applications that virtually affect every aspect of life.

A relatively unknown brand, Regal Beloit stands at the forefront of some well-known brands such as Leeson and Marathon Motors, GE Commercial Motors, CMG, etc. Through these brands, RBC has gained a substantial market share and 3.5 billion-plus in turnover worldwide, thereby turning RBC into a major player in the electrical market. All brands represented by RBC have the same characteristics, and deliver the same level of excellence in terms of quality and reliability.

The extensive range of solutions reflects the slogan that Regal Beloit products are **“at the heart of what drives our world”**

Our Business Approach Makes the Difference !

In our main location in Eibergen as well as in the other locations in the EU you will find professional and dedicated staff working closely together to meet our customers' needs and requirements! Our service is not just limited to shipping product. We provide solutions not just products!

We believe that the lines of communication in our organisation are short, allowing us to serve the market quickly and always find the correct solution for all our customers effectively. Our employees' years of experience and their commitment to help and serve have earned Marathon the loyalty of their customers.

MARATHON - A Global Promise !



REGAL - Truly Global Electric Motors Manufacturing and Logistics !



Customer Service

Our future depends on the success of our customers. We will create closer relationships with our customers, actively listen to their feedback and respond promptly.

Globalisation

We want to be active at a global level for three reasons.

1. We want to be part of global markets with a strong growth.
2. Many of our customers are global players themselves, and we want to serve customers wherever they operate.
3. We want to use our global capabilities to find the best talent available and remain globally competitive.

Innovation

The future of the company is based on products that are new and in demand. Innovation involves a certain degree of risk, and we accept that. Still, we are committed to investing in new products, technologies and processes that deliver real value to our customers.

Sustainability

Our company's long-term sustainability requires not only continuous growth in profitability, but also personal responsibility for the impact we have on our world, and for the just and fair treatment of our employees.

Simplicity

Complexity is a serious disadvantage in business. We want to simplify every aspect of our business operations in order to eliminate complexities, so we can work faster, improve our flexibility and drive down our costs.

Integrity

We are a company that is honest, trustworthy, open, transparent and just.

High Energy Level

Our culture encourages a strong work ethic with teams that have an abundance of energy, creating a culture of commitment and respect for all.

Performance

We expect a high level of performance from everyone, and our shareholders count on us to achieve results, keep our promises and continue to improve.



One Regal

As a company, we are in the midst of simplification. While our customers know us best by our individual brand names, within our company we are one Regal, operating with a single vision and common initiatives.

We are consolidating our product lines, standardizing our computer systems, reducing the number of legal entities and streamlining our product brands - all with the idea of making it easier for customers to do business with us.

We are becoming a more dynamic enterprise-continuously innovating and growing to reach more people in more markets around the world.

And we are doing so with the confidence that comes with our years of industry experience.



European Headquarters of Regal Europe is located in 20,000m² facility in Eibergen, the Netherlands. This factory is ideally located due to its central location on an international network of motorways, railways, waterways and airports. Marathon, Leeson & 'rotor' motors are available at short lead times.



Regal UK 1,500m² facility is located in Wellingborough in Northamptonshire and distributes Marathon, Leeson and 'rotor' motors throughout the United Kingdom and Republic of Ireland.





Marathon - Quality not compromised !

Our skilful and well trained staff can produce or modify motors to Customers' requirements and specifications in short lead time. Extensive stock of motors manufactured at other Regal facilities all over the world is also held at our premises in Eibergen. The stock control in our Oracle ERP system combined with product barcoding enable stock visibility worldwide and efficient distribution of Marathon motors directly to customers.

Our testing laboratory approved by a number marine accreditation bureaus can test low voltage (max 1000V) motors up to 1MW (1.6MW short term) at 50Hz and 60Hz.



BASIC DIMENSIONS

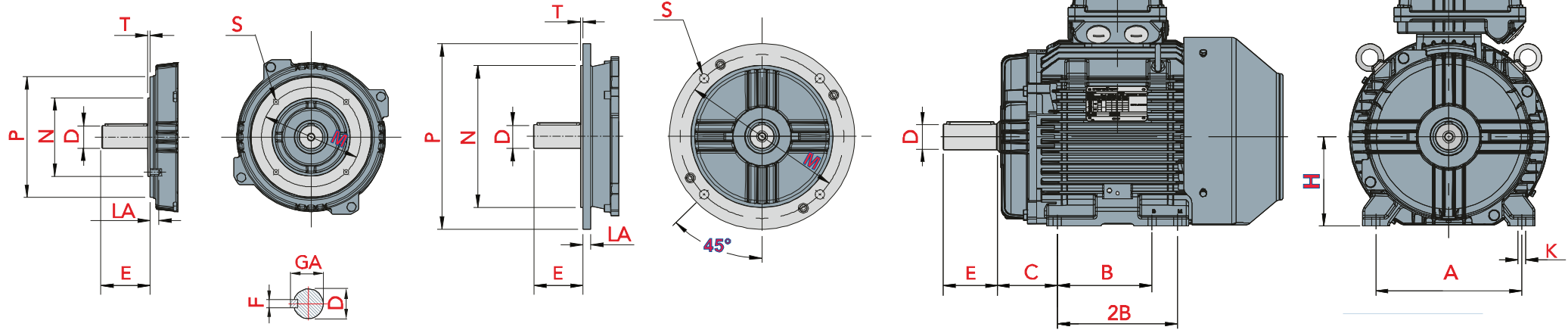
B14A - flange ("C" face)

The flange is smaller than the motor frame.
The holes are tapped.
Available for frame sizes 63 to 160 mm.

B5 - flange ("D" flange)

The flange is bigger than the motor frame.
The holes are not tapped.
B5 flanges are available for all motor sizes.

B3 - foot mounted motor



B14B - flange

The flange is bigger than B14A but smaller than B5 flange.
The holes are tapped. Available for frame sizes 63 to 160 mm.

SIZE	Shaft				B5 FLANGE ("D" flange)				B14A FLANGE ("C" face)				B14B FLANGE			
	Diameter		Length		PCD	Spigot	Diameter	Hole Dia	PCD	Spigot	Diameter	Hole	PCD	Spigot	Diameter	Hole
	D	E			M	N	P	S	M	N	P	S	M	N	P	S
63 frame	11	23			115	95	140	10	75	60	90	M5	100	80	120	M6
71 frame	14	30			130	110	160	10	85	70	105	M6	115	95	140	M8
80 frame	19	40			165	130	200	12	100	80	120	M6	130	110	160	M8
90 frame	24	50			165	130	200	12	115	95	140	M8	130	110	160	M8
100 frame	28	60			215	180	250	14.5	130	110	160	M8	165	130	200	M10
112 frame	28	60			215	180	250	14.5	130	110	160	M8	165	130	200	M10
132 frame	38	80			265	230	300	14.5	165	130	200	M10	215	180	215	M12
160 frame	42	110			300	250	350	18.5	215	180	250	M12	265	230	300	M12
180 frame	48	110			300	250	350	18.5	--	--	--	--	--	--	--	--
200 frame	55	110			350	300	400	18.5	--	--	--	--	--	--	--	--
Poles	2p	4-8p	2p	4-8p												
225 frame	55	60	110	140	400	350	450	18.5	--	--	--	--	--	--	--	--
250 frame	60	65	140		500	450	550	18.5	--	--	--	--	--	--	--	--
280 frame	65	75	140		500	450	550	18.5	--	--	--	--	--	--	--	--
315 frame	65	80	140	170	600	550	660	24	--	--	--	--	--	--	--	--
355 frame	75	95	140	170	740	680	800	24	--	--	--	--	--	--	--	--

MOUNTING POSITIONS

1st digit	IM1... Foot mounted	IM2... Foot & Flange mounted			IM3... Flange mounted		
2nd digit	IM10	IM20	IM21	IM21	IM30	IM36	IM36
3rd digit	IM1001	IM2001	IM2101	IM2101	IM3001	IM3601	IM3601
4th digit	IM1011	IM2011	IM2111	IM2111	IM3011	IM3611	IM3611
0	 B3	 B3/B5	 B3/B14A	 B3/B14B	 B5	 B14A	 B14B
1	 V5	 V15	 V15	 V15	 V1	 V18	 V18
3	 V6	 V36	 V36	 V36	 V3	 V19	 V19
5	 B6						
6	 B7						
7	 B8						

4th digit
 1: Standard IEC shaft
 2: 2nd shaft end
 3: Conical shaft at DE
 4: Special shaft end(s)

Vertical motors with shaft down are to be specified as

Motor without Canopy

Motor with Canopy

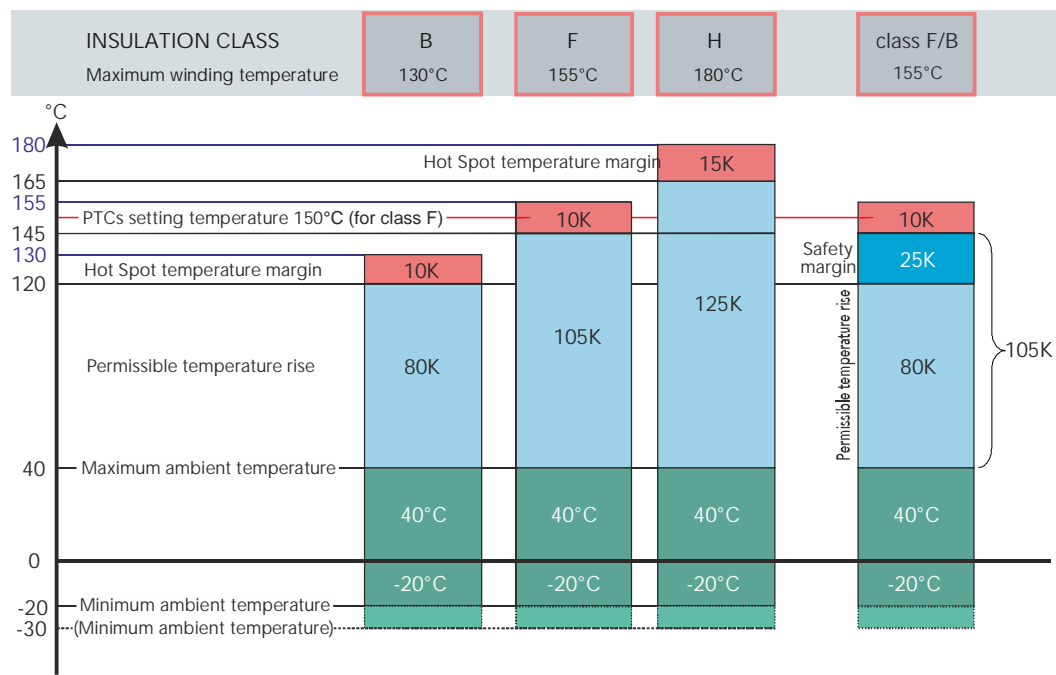
No motor should be exposed to direct sunlight!

The specified mounting is to be mentioned when ordering an electric motor. The actual motor mounting may influence the protection class and bearing design. Flange-mounted electric motors need further specification of the required pitch circle diameter of the fixing holes in the flange (FF or FT type of flange + Dimension M).

FF (Flange Free holes) - B5 flanges,
FT (Flange Tapped holes) - B14A & B14B flanges
 The pitch circle diameter (M) is specified in the Standard

Abbreviated mounting positions:
 IM B35 B3/B5
 IM B34A B3/B14A
 IM B34B B3/B14B

INSULATION (TEMPERATURE) CLASSES



Various insulation materials are used in electric motors and each has its own function.

- Wire insulation
- Slot and phase insulation materials (insulation between the winding and the stator lamination pack and phase insulation between the windings heads).
- Winding impregnation.
- Insulating sleeve used to cover wire/lead connections.
- Insulation of winding leads (between the winding and the terminal board).

These materials are specified in thermal classes referenced as Y-A-E-B-F-H-C.

Every thermal class has its own temperature limit. Each material of a specific class needs to retain its mechanical and electrical properties within the temperature limit.

The maximum permissible temperature rise of the winding is determined based on the thermal class temperature limits. The temperature of the winding increases as a result of the copper and iron losses in the electric motor during operation. The winding temperature rise is determined through measuring the winding resistance, which increases with increasing temperature. To allow for any Hot Spots in winding lower temperature limits are specified for the insulation materials.

Marathon produce motors with insulation class F with winding temperature rise in accordance with the class B (max 80K). This means that the motors have a temperature reserve of 25K. This reserve can be utilised for short-term overload, a higher ambient temperature (above 40°C), for supply voltage/frequency fluctuation etc.

DEGREE OF PROTECTION

Motor	Degree of protection	Protection against mechanical particles		Protection against water
		accidental contact	solid foreign particles	
Open-circuit cooling	IP 23	against contact with fingers	against solid bodies larger than 12mm in diameter	against spraying water at up to 60° from the vertical
Totally enclosed fan cooled (TEFC)	IP 44	against contact with tools or similar objects	against solid bodies larger than 1mm in diameter	against splashing water from all directions
	IP 54	complete protection against accidental contact	against harmful dust deposits	against water jets from all directions
	IP 55			against non heavy seas, strong jets
	IP 56			against heavy seas, strong jets
	IP 65	against the ingress of dust	against the ingress of dust	against water jets from all directions
	IP 67			against submersion for specific time and pressure
IP 68	against continuous submersion under conditions specified by the manufacturer			

Depending on the operating conditions and the environment, the most suitable degree of protection must be chosen to prevent any damage due to water, foreign objects or dust, and to prevent accidental contact with internal rotating parts or with live parts. The degrees of protection for electrical machines are designated by a code with two letters and two numerals and in some cases, an extra letter:

IP (International Protection). Protection against contact with live or moving parts and the ingress of foreign bodies and water (not oil!).

[0 to 6] The 1st numeral denotes the degree of protection against contact with live or moving parts and against the ingress of foreign bodies.

[0 to 8] The 2nd numeral denotes the degree of protection against the ingress of water. W, S and M are extra letters for denoting special degrees of protection.

W for weather-protected machines; The extra letter W is inserted between the letters IP and the figures denoting the degree of protection, e.g. IPW23.

For special applications (such as open-circuit air cooled machines on ships' decks having the air inlets and outlets covered when not in use) an extra letter can be inserted after the figures denoting the degree of protection to indicate whether the protection against harmful water ingress with the machine stationary (letter S) or moving (letter M) has been certified or tested.

Standards

All electric motors featured in this catalogue meet the relevant IEC, EN, ISO, DIN and NEN standards. The most important standards are listed in the table below.

Description	EN-IEC	ISO	DIN
Nominal operation and properties	IEC 60034-1		
Degree of protection	IEC 60034-5		DIN 40050
Cooling method	IEC 60034-6		
Mountings	IEC 60034-7		
Direction of rotation & connection terminals marking	IEC 60034-8		
Noise	IEC 60034-9		
Voltage	IEC 60038		
Dimensions & tolerances	EN 50347		
Balancing		ISO 2373	DIN 45665
Energy Efficiency	IEC 60034-30-1		

ErP Directive 2009/125/EC Implementations Dates

- 16 Jun 2011: IE2 minimum efficiency for motors from 0.75 kW – 375 kW
- 01 Jan 2015: IE3 minimum efficiency for motors from 7.5 kW – 375 kW (IE2 motors can be used with frequency inverters)
- 01 Jan 2017: IE3 minimum efficiency for motors from 0.75 kW – 375 kW (IE2 motors can be used with frequency inverters)

ErP Regulation does not apply to:

- motors operating wholly immersed in a liquid
- motors completely integrated into a product
- motors specifically designed to operate:
 - at altitudes exceeding 4000 metres a.s.l.
 - where ambient temperatures is outside of -30°C to +60°C
 - in maximum operating temperature > 400°C
 - where ambient temperatures < -15°C (any motor) or < 0°C for a motor with air cooling
 - where water coolant temperature < 5°C or > 25°C
 - in potentially explosive atmospheres
- brake motors
- motors made solely for converter operation

ErP Regulation applies to:

- Single speed, three-phase 50Hz or 50/60Hz induction motors
- have 2 to 6 poles
- have a rated voltage of U_n up to 1000 V
- have a rated output P_n between 0.75 kW and 375 kW
- are rated on the basis of S1 continuous duty operation

EFFICIENCY		
HIGH	IE4 Super Premium Efficiency	
	IE3 Premium Efficiency	NEMA Premium EISA 2007 from Dec 2010
	IE2 High Efficiency	NEMA Energy Efficient EPart
LOW	IE1 Standard Efficiency	
	IEC Motors	NEMA Motors

The mechanical and electrical performance of the basic Marathon motors is adapted for marine and offshore application. Due to often aggressive “salty” environment, almost all sizes of TCA series can be supplied in Marine Execution for below deck as well as above deck applications. The electric motor windings are based on ambient temperatures of up to 50°C and relative air humidity up to 96%. These electric motors meet various criteria set out by a number of Marine Classification Societies and are suitable for “essential service” when supplied with a marine certificate.

The rating plate specifies the Marine Classification Society and the ambient temperature specified by the society's regulations (usually IEC92.301 C). Classification Society” logo and the date of production would be specified on the rating plate. A 2.1 or 2.2 class certificate can, in most cases, be issued for marine motors.

EN 10204-2.1

The Declaration of Compliance 2.1 (factory declaration) is issued based on the electric motor serial number, invoice number and the customer order number. No testing is involved when issuing this document.

EN 10204-2.2

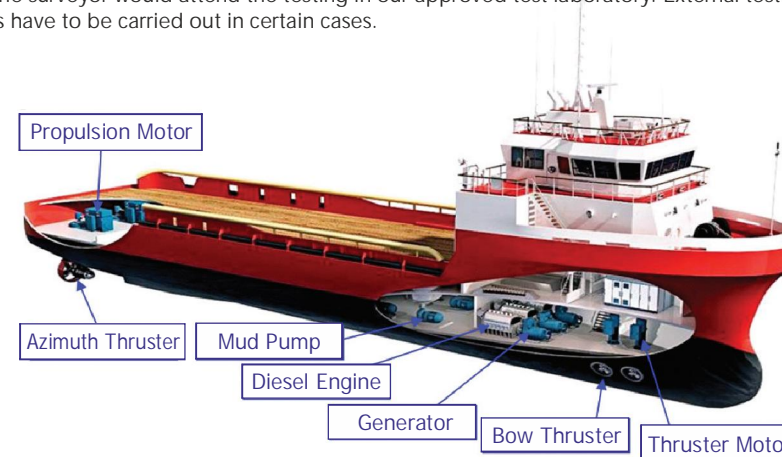
Test Certificate 2.2 (factory issued certificate) is issued based on the electric motor data set out in the Type Test Report (when the motor prototype have been tested) amended with certain other data (historical test data). The invoice number and the customer order number are also marked in the Test Certificate. A number of motor serial numbers of the same type can be included in one Test Certificate.

EN 10204-3.1

The relevant no-load and full-load tests are carried out on specific electric motor when the Inspection Certificate 3.1 (inspection report) is issued. A request for Inspection Certificate 3.1 must be made at the point of the order placement. This test is also referred to as the “routine test” and provides a reasonable guarantee of the correct performance of the electric motor when the tested data comply with the Type Test data. The invoice number and the customer order number are also marked in the Inspection Certificate. One Inspection Certificate is issued for each electric motor.

EN 10204-3.2

Inspection Certificate 3.2 is issued based on the test witnessed by an independent inspector (classified inspection report). The inspector (surveyor) can be appointed by the customer or by ourselves. In majority of the cases the surveyor would attend the testing in our approved test laboratory. External testing by certified laboratories have to be carried out in certain cases.



PAINT SPECIFICATION

Universal (standard paint finish)

Motor coating for non-special anti-corrosion requirements.

Motor coating for motors installed indoor and in general outdoor areas (max. temperature <150°C) with no industry gas concentration.

TH (optional paint finish available on request)

Motor coating for motors installed outdoor areas of tropical and humid environment with high humidity and temperature (max. temperature <150°C) and sunshine exposure as well as in areas with chemical gas pollution, but not severe industry gas concentration.

Surface Pre-treatment:

Universal

The surface of motor components must be clean, dry, de-greased, free of dirt and impurities, with roughness 25 µm. If there is small defect on the surface, such as a small pit, then sanding of the surface is carried out and then the surface is filled with filler (G07-5 perchloroethylene filler) in max thickness 100 µm.

The filler is then sanded down after it has hardened and is cleaned.

TH

All outer parts made of cast iron and/or steel are sand blasted or ball blasted.

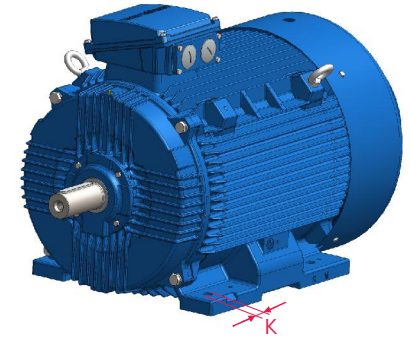
Any surface imperfections such as burr, sand burning, welding slag etc is removed. The surface must be clean and smooth with no visual imperfections, like oxidation, rust, grease or dust deposits, etc. The surface of motor components must be clean, dry, de-greased, free of dirt and impurities. The primer paint must be dry before the intermediate and top coats are applied.

Anticorrosion requirement	Thickness of primer (µm)	Primer Material	Thickness of intermediate coat (µm)	Intermediate coat Material	Thickness of top coat (µm)	Top coat Material	Total thickness (µm)
[Universal] Suitable for both indoor & outdoor installation Medium anti-corrosion protection	30-50	iron red epoxy resin ester	n/a	n/a	20-50	water based polyurethane paint	70-100
[TH] Installation in tropical and humid environment	35-50	epoxy zinc rich primer	35-50	water based epoxy mio barrier paint	30-50		120-150

FEET TIGHTENING TORQUE & BEARING SIZES

Frame-poles	Hole in the foot K [mm]	Bolt size
56	6	M5
63	7	M6
71	7	M6
80	10	M8
90	10	M8
100	12	M10
112	12	M10
132	12	M10
160	15	M12
180-2	15	M12
180-4/6/8	15	M12
200-2	19	M16
200-4/6/8	19	M16
225-2	19	M16
225-4/6/8	19	M16
250-2	24	M20
250-4/6/8	24	M20
280-2	24	M20
280-4/6/8	24	M20
315-2	28	M24
315-4/6/8	28	M24
355-2	28	M24
355-4/6/8	28	M24

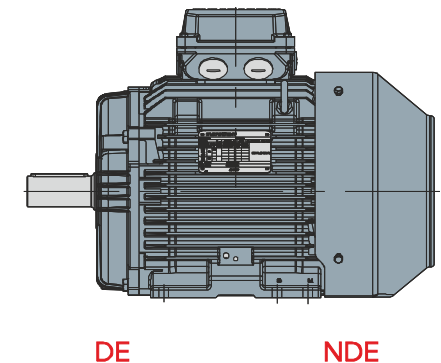
Bolt Size	Grade<8.8 Tightening Torque Nm	Grade 8.8 Tightening Torque Nm
M4	1.3 Nm	3 Nm
M5	2.6 Nm	5 Nm
M6	4.5 Nm	8 Nm
M8	10 Nm	20 Nm
M10	20 Nm	40 Nm
M12	34 Nm	70 Nm
M16	83 Nm	170 Nm
M20	160 Nm	340 Nm
M24	280 Nm	600 Nm
M30	570 Nm	1200 Nm



Bearing Sizes

These bearing sizes are listed for standard motor execution! Customer specific motors can be fitted with a different bearing arrangement (such as roller bearing at DE and/or insulated bearing at NDE). Always check the motor's nameplate for correct bearing. More information (such as re-lubrication periods) can be found in Maintenance Manual which is available for download in a number of different languages from our website.

Standard Bearing sizes			
Frame Size	Standard Execution		Optional
	Ball Bearings		Roller bearing
	DE	NDE	DE
80	6204 2Z	6204 2Z	---
90	6205 2Z	6205 2Z	
100	6206 2Z	6206 2Z	
112	6306 2Z	6206 2Z	
132	6308 2Z	6208 2Z	
160	6309 2Z	6209 2Z	NU309
180	6311 2Z	6211 2Z	NU311
200	6312	6212	NU312
225	6313	6213	NU313
250	6314	6314	NU314
280 2p	6314	6314	NU314
280 4-8p	6317	6317	NU317
315 2p	6316	6316	NU316
315 4-8p	6319	6319	NU319
355 2p	6317	6317	NU317
355 4-8p	6322	6322	NU322

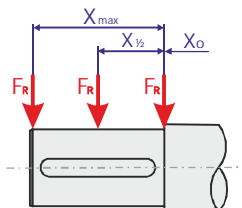


PERMISSIBLE SHAFT FORCES

Standard Ball Bearing				
Maximum Radial Forces Fr [N]				
Size	Poles	Xo	X1/2	Xmax
80	2	709	629	575
	4	664	598	544
90	2	705	633	571
	4	655	589	531
100	2	1084	963	865
	4	1003	892	803
112	2	1579	1409	1271
	4	1467	1311	1186
132	2	2314	2060	1855
	4	2149	1908	1721
160	2	2903	2568	2305
	4	2675	2377	2127
180	2	4018	3630	3304
	4	3714	3358	3059
200	2	4147	3755	3411
	4	4423	4000	3656
225	2	4941	4499	4125
	4	4477	3973	3572
250	2	5427	4869	4410
	4	4655	4169	3763
280	2	6047	5525	5083
	4	5560	4976	4504
315	2	6042	5601	5226
	4	6078	5850	5610
355	2	8490	7879	7366
	4	5877	5507	5168
355	2	8490	7879	7366
	4	9302	8642	8062
355	2	10751	9984	9324
	4	10751	9984	9324



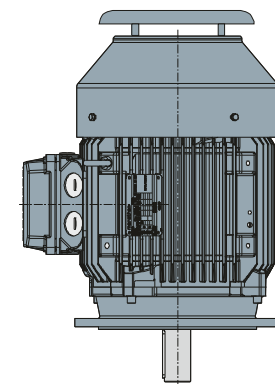
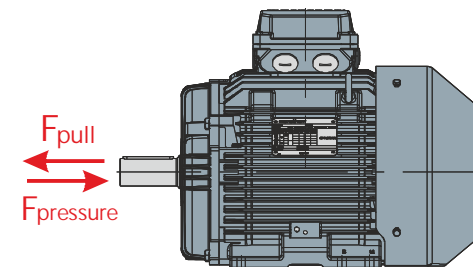
Optional Roller Bearing				
Maximum Radial Forces Fr [N]				
Size	Poles	Xo	X1/2	Xmax
160	2	7514	6666	5993
	4	7295	6466	5806
	6	8231	7295	6550
180	2	10639	9623	8780
	4	10095	9128	8330
	6	11696	10577	9654
200	2	12762	11540	10532
	4	11036	9988	9123
	6	10983	9944	9079
225	2	13596	12303	11237
	4	12454	11273	10296
	6	13596	12303	11237
250	2	13738	12530	11522
	4	13235	11785	10622
	6	15143	13489	12155
280	2	16548	14737	13284
	4	15232	13725	12485
	6	16731	15107	13761
315	2	18041	16294	14853
	4	15183	13930	12847
	6	21484	19687	18184
355	2	24440	22420	20699
	4	26777	24561	22674
	6	19263	17903	16722
355	2	24543	22492	20757
	4	28048	25693	23713
	6	30830	28248	26077
355	2	21627	20333	19183
	4	33523	31142	29073
	6	37193	34540	32262
355	2	41220	38268	35753
	4	41220	38268	35753
	6	41220	38268	35753



The table shows the Permissible Radial Forces in [N], assuming zero axial force and standard ball bearings or optional roller bearings when higher radial forces are required. The values are based on normal conditions at 50Hz and calculated for 20,000 working hours for 2pole motors and 40,0000 working hours for 4, 6 & 8p motors. Reduce the values by 10% for 60Hz speeds.

Maximum Axial Forces [N]					
Frame size	Poles	B3 Fpressure	B3 Fpull	V1 Load up	V1 Load down
80	2	659	392	694	369
	4	633	375	691	339
90	2	785	334	847	294
	4	763	312	843	290
100	2	997	553	1084	495
	4	959	513	1097	419
112	2	1117	669	1244	584
	4	1240	794	1378	709
132	2	1356	908	1454	847
	4	1302	856	1458	758
160	2	1534	1088	1682	1003
	4	1712	1266	1877	1173
180	2	1922	1333	2105	1215
	4	1842	1249	2145	1057
200	2	2149	1565	2439	1382
	4	2421	1824	2698	1654
225	2	2234	1833	2693	1543
	4	2123	1721	2751	1320
250	2	2488	2087	3193	1650
	4	2840	2439	3523	2020
280	2	2939	2493	3523	2123
	4	2796	2350	3554	1873
315	2	3300	2854	4227	2274
	4	3759	3313	4629	2778
355	2	3166	2720	4004	2180
	4	3099	2653	4183	1958
355	2	3692	3246	4901	2484
	4	4169	3723	5525	2885
355	2	3723	3077	4851	2350
	4	3500	2836	4909	1944
355	2	4165	3514	5792	2484
	4	4704	4053	6341	3037
355	2	4085	3434	5663	2426
	4	4165	3068	6055	1565
355	2	4486	3839	6992	2256
	4	5039	4383	7705	2711
355	2	3933	3277	6171	1855
	4	4646	3755	8017	1552
355	2	5560	4655	9123	2368
	4	6314	5413	10033	3050
355	2	4562	3679	7897	1516
	4	5204	4000	9623	1079
355	2	6252	5048	10889	2042
	4	7143	5931	11750	2988
355	2	4522	3621	9498	375
	4	6403	5003	13547	2725*
355	2	7326	5922	15241	3665*
	4	8432	7028	16343	5262*

The table shows the Permissible Axial Forces in [N] (assuming zero radial force) when standard ball bearings are fitted. When higher Axial Forces are required Angular Contact Bearings should be fitted. The values are based on normal conditions at 50Hz and calculated at 20,000 working hours for 2pole motors and 40,000 hours for 4, 6 & 8pole motors. Reduce the values by 10% for 60Hz speeds. Fpressure is calculated for fixed bearing at the DE.



* Valid for 20K hours of Bearing life

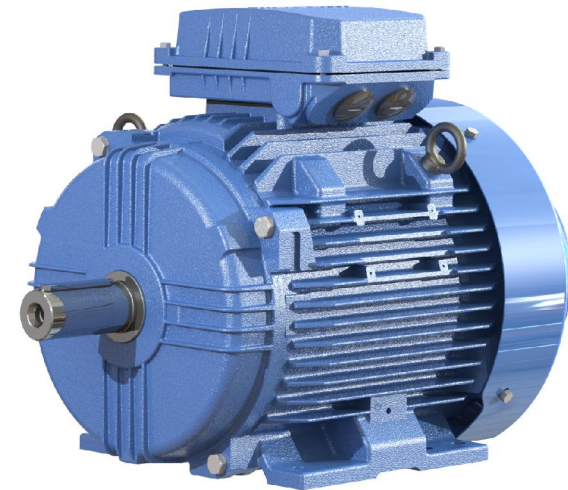
TECHNICAL DATA - 2 POLE MOTORS

Material	TYPE	Frame Size	Nominal Output 50Hz kW	Speed 50Hz rpm	Rated current 50Hz			Power Factor 50Hz cosφ	Efficiency at 50Hz				Rated torque 50Hz Nm	Ratios at 50Hz			Nominal Output 60Hz kW	Speed 60Hz Nominal rpm	60Hz Current 460 V Nominal A	Power Factor 60Hz cosφ	Efficiency at 60Hz (nominal)				Rated torque 60Hz Nominal Nm	Ratios at 60Hz (nominal)		
					380 V A	400V A	415 V A		Class	100% Load %	75% Load %	50% Load %		Starting current	Starting torque	B/down torque					Class	100% Load %	75% Load %	50% Load %		Starting current	Starting torque	B/down torque
3000/3600rpm, 2-pole, 50/60Hz, IP55, Insulation F/B																												
	TCA 80MA02	80M	0.75	2882	1.68	1.59	1.54	0.83	IE3	81.4	81.4	78.2	2.47	7.0	3.1	3.4	0.75	3495	1.50	0.82	IE3	77.0	77.0	75.8	2.04	8.4	3.6	4.0
	TCA 80MB02	80M	1.1	2883	2.43	2.31	2.23	0.83	IE3	83.0	83.0	80.4	3.70	7.6	3.5	3.5	1.1	3496	2.03	0.81	IE3	84.0	82.4	78.8	3.05	9.2	4.2	4.1
	TCA 90S02	90S	1.5	2901	3.20	3.04	2.93	0.84	IE3	84.8	84.8	82.7	4.91	7.8	3.5	3.6	1.5	3505	2.61	0.85	IE3	85.5	84.4	81.2	4.07	9.4	3.7	4.0
	TCA 90L02	90L	2.2	2901	4.56	4.33	4.17	0.85	IE3	86.2	86.2	85.1	7.36	8.4	3.6	3.6	2.2	3503	3.69	0.86	IE3	86.5	86.5	84.2	6.10	10.2	4.1	4.0
	TCA 100LA02	100L	3	2906	6.04	5.73	5.53	0.87	IE3	87.2	87.2	85.9	9.80	8.4	3.6	3.9	3	3507	4.74	0.89	IE3	88.5	88.5	86.8	8.12	9.9	3.4	4.0
	TCA 112M02	112M	4	2918	7.65	7.27	7.00	0.90	IE3	88.1	88.1	87.9	13.4	8.4	2.5	3.5	4	3527	6.35	0.89	IE3	88.5	88.5	86.3	11.1	9.7	2.6	4.1
	TCA 132SA02	132S	5.5	2941	10.7	10.2	9.83	0.87	IE3	89.2	89.2	87.9	18.2	8.1	2.4	3.5	5.5	3547	8.93	0.86	IE3	89.5	89.0	86.4	15.1	9.2	2.6	4.1
	TCA 132SB02	132S	7.5	2938	14.2	13.5	13.0	0.89	IE3	90.1	90.1	89.6	24.2	8.2	2.5	3.5	7.5	3545	11.8	0.88	IE3	90.2	90.2	88.4	20.1	9.4	2.7	4.0
	TCA 132MB02	132M	11	2930	20.6	19.6	18.9	0.89	IE3	91.2	91.2	91.2	36.5	7.7	2.5	3.2	11	3538	17.0	0.89	IE3	91.0	91.0	91.0	30.2	8.8	2.7	3.6
	TCA 160MB02	160M	11	2956	21.0	19.9	19.2	0.87	IE3	91.2	91.2	90.2	36.1	7.9	2.3	3.6	11	3560	17.3	0.88	IE3	91.0	91.0	89.4	30.0	9.2	2.5	4.0
	TCA 160MC02	160M	15	2955	27.8	26.4	25.5	0.89	IE3	91.9	91.9	91.5	48.2	8.2	2.4	3.5	15	3560	23.4	0.89	IE3	91.0	91.0	90.6	40.0	9.3	2.7	4.0
	TCA 160LA02	160L	18.5	2954	33.7	32.0	30.8	0.90	IE3	92.4	92.4	92.3	60.3	8.2	2.4	3.5	18.5	3559	28.2	0.90	IE3	91.7	91.7	91.6	50.0	9.3	2.8	3.9
	TCA 160LB02	160L	22	2954	39.9	37.9	36.6	0.90	IE3	92.7	92.7	92.7	72.3	8.2	2.4	3.3	22	3558	33.4	0.90	IE3	91.7	91.7	91.7	60.0	9.6	2.9	3.8
	TCA 180M02	180M	22	2963	40.8	38.7	37.3	0.88	IE3	92.7	92.7	91.7	72.1	7.8	2.1	3.4	22	3567	34.3	0.88	IE3	91.7	91.7	90.8	59.9	8.8	2.4	3.7
	TCA 180L02	180L	30	2958	54.1	51.4	49.5	0.90	IE3	93.3	93.3	92.7	96.3	7.1	1.9	3.0	30	3563	45.4	0.90	IE3	92.4	92.4	92.1	80.0	7.9	2.2	3.3
	TCA 200LA02	200L	30	2973	57.2	54.3	52.4	0.85	IE3	93.3	93.3	92.0	95.8	7.5	2.1	3.3	30	3576	48.1	0.85	IE3	92.4	92.4	91.1	79.7	8.4	2.5	3.6
	TCA 200LB02	200L	37	2973	69.0	65.5	63.1	0.87	IE3	93.7	93.7	92.7	120	7.4	2.1	3.1	37	3576	57.8	0.86	IE3	93.0	93.0	91.9	99.6	8.3	2.5	3.5
	TCA 200LC02	200L	45	2972	83.3	79.1	76.3	0.87	IE3	94.0	94.0	93.3	144	7.3	2.2	3.1	45	3575	69.2	0.87	IE3	93.6	93.6	92.5	120	8.2	2.3	3.5
	TCA 225MA02	225M	45	2976	82.0	77.9	75.1	0.89	IE3	94.0	94.0	93.1	144	7.2	1.7	3.1	45	3578	68.8	0.88	IE3	93.6	93.6	92.3	119	8.1	2.0	3.4
	TCA 225MB02	225M	55	2975	99.2	94.3	90.9	0.89	IE3	94.3	94.3	93.7	179	7.2	1.8	3.1	55	3578	83.4	0.88	IE3	93.6	n/a	93.0	149	8.2	2.1	3.4
	TCA 250MA02	250M	55	2980	98.2	93.3	90.0	0.90	IE3	94.3	94.3	93.7	179	7.5	1.8	3.2	55	3582	82.4	0.90	IE3	93.6	93.6	92.9	149	8.4	2.0	3.5
	TCA 250MB02	250M	75	2981	134	128	123	0.90	IE3	94.8	94.8	94.0	239	8.2	2.1	3.5	75	3583	113	0.88	IE3	94.1	94.1	93.3	199	9.1	2.4	3.8
	TCA 280S02	280S	75	2982	133	126	122	0.90	IE3	94.8	94.8	93.8	239	7.5	1.8	3.2	75	3583	112	0.90	IE3	94.1	94.1	92.9	199	8.4	2.0	3.5
	TCA 280MA02	280M	90	2981	159	151	145	0.91	IE3	95.0	95.0	94.3	287	7.3	1.8	3.0	90	3583	132	0.90	IE3	95.0	94.8	93.5	239	8.2	2.0	3.3
	TCA 280MB02	280M	110	2983	194	184	177	0.91	IE3	95.3	95.3	94.7	353	8.0	2.0	3.3	110	3584	162	0.90	IE3	95.0	95.0	94.0	298	9.0	2.3	3.6
	TCA 315S02	315S	110	2983	196	186	180	0.89	IE3	95.3	95.3	94.0	358	6.9	1.7	3.0	110	3584	163	0.89	IE3	95.0	93.6	91.5	298	7.7	2.0	3.3
	TCA 315MB02	315M	132	2983	235	224	216	0.89	IE3	95.5	95.5	94.4	418	7.1	1.8	3.1	132	3585	195	0.89	IE3	95.4	94.1	92.2	348	8.0	2.1	3.4
	TCA 315LA02	315L	160	2983	284	270	260	0.89	IE3	95.7	95.7	94.4	513	7.1	1.8	3.1	160	3585	236	0.89	IE3	95.4	94.7	93.1	427	8.0	2.1	3.4
	TCA 315LC02	315L	200	2984	356	339	326	0.89	IE3	95.8	95.8	94.9	644	7.1	1.9	3.1	200	3585	297	0.89	IE3	95.8	95.2	93.8	536	8.1	2.2	3.4
	TCA 355M02	355M	250	2983	443	420	405	0.90	IE3	95.8	95.8	94.7	800	6.8	1.7	2.8	250	3585	366	0.89	IE3	95.8	94.8	93.2	665	7.6	1.9	3.1
	TCA 355LB02	355L	315	2983	554	526	507	0.90	IE3	95.8	95.8	94.8	1014	6.9	1.8	2.8	315	3585	458	0.90	IE3	95.8	95.3	94.0	844	7.8	2.1	3.1
	TCA 355LC02	355L	355	2986	626	595	573	0.90	IE3	95.8	95.8	95.0	1133	7.9	2.2	3.2	355	3588	519	0.90	IE3	95.8	95.5	94.2	943	9.1	2.6	3.6
	TCA 355LD02	355L	375	2986	659	626	603	0.90	IE3	95.8	95.8	95.2	1200	7.8	2.2	3.1	375	3587	546	0.90	IE3	95.8	95.7	94.5	999	8.8	2.5	3.4

Cast iron motors

TYPE	Increased Output 60Hz kW	Speed 60Hz rpm	60Hz		Power Factor 60Hz cosφ	Efficiency at 60Hz (60Hz Output)			Rated torque 60Hz at 60Hz Nm	Ratios 60Hz (60Hz Output)			Moment of Inertia kgm ²	Weight kg
			460 V 60Hz A	60Hz		Class	100% Load %	75% Load %		50% Load %	Starting current	Starting torque		
3000/3600rpm, 2-pole, 50/60Hz, IP55, Insulation F/B														
TCA 80MA02	0.86	3477	1.66	0.84	IE3	77.0	77.0	77.0	2.36	7.6	3.1	3.4	0.0012	18.7
TCA 80MB02	1.27	3481	2.31	0.84	IE2	82.5	82.5	80.2	3.48	8.4	3.7	3.6	0.0014	19.8
TCA 90S02	1.73	3488	2.97	0.87	IE2	84.0	84.0	82.6	4.73	8.4	3.2	3.5	0.0020	25.6
TCA 90L02	2.53	3489	4.16	0.88	IE3	86.5	86.5	85.1	6.93	9.2	3.6	3.6	0.0025	28.7
TCA 100LA02	3.45	3491	5.44	0.91	IE2	87.5	87.5	87.5	9.44	8.7	3.0	3.5	0.0037	39.3
TCA 112M02	4.6	3517	7.21	0.91	IE2	88.5	88.5	87.1	12.5	8.8	2.3	3.6	0.0089	44.7
TCA 132SA02	6.3	3540	10.0	0.88	IE3	89.5	89.4	87.3	17.0	8.4	2.3	3.6	0.0169	70.9
TCA 132SB02	8.6	3536	13.3	0.90	IE3	90.2	90.2	89.3	23.2	8.3	2.4	3.4	0.0196	77.3
TCA 132MB02	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.0261	91.0
TCA 160MB02	12.7	3554	19.7	0.89	IE3	91.0	91.0	90.1	34.1	8.2	2.2	3.5	0.0640	135
TCA 160MC02	17.3	3553	26.3	0.90	IE3	91.7	91.7	91.4	46.5	8.3	2.3	3.4	0.0784	150
TCA 160LA02	21.3	3552	32.1	0.91	IE3	91.7	91.7	91.7	57.2	8.4	2.5	3.4	0.0917	163
TCA 160LB02	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.0995	171
TCA 180M02	24.5	3564	37.8	0.89	IE3	91.7	91.7	91.3	65.6	8.1	2.2	3.4	0.1470	211
TCA 180L02	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.1714	230
TCA 200LA02	33.5	3573	52.3	0.87	IE3	93.0	93.0	91.6	89.5	7.7	2.0	3.3	0.2356	272
TCA 200LB02	41.5	3573	63.4	0.88	IE3	93.6	93.5	92.2	111	7.7	2.0	3.2	0.2742	291
TCA 200LC02	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.2907	304
TCA 225MA02	52.0	3575	78.4	0.89	IE3	93.6	93.6	92.9	139	7.1	1.7	3.0	0.4032	379
TCA 225MB02	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.4582	409
TCA 250MA02	62	3580	92.4	0.90	IE3	93.6	93.6	93.3	165	7.6	1.8	3.2	0.6618	492
TCA 250MB02	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.7385	527
TCA 280S02	84	3581	123	0.90	IE3	95.0	94.6	93.4	224	7.5	1.7	3.1	1.0851	698
TCA 280MA02	101	3580	147	0.91	IE3	95.0	95.0	93.9	269	7.3	1.7	3.0	1.1746	718
TCA 280MB02	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1.3550	779
TCA 315S02	127	3582	188	0.90	IE2	94.5	94.2	92.5	338	6.9	1.7	2.9	2.1990	963
TCA 315MB02	152	3582	223	0.90	IE2	95.0	94.7	93.2	405	6.9	1.8	2.9	2.3779	1007
TCA 315LA02	184	3583	269	0.90	IE2	95.4	95.1	93.9	490	7.0	1.9	2.9	2.6217	1065
TCA 315LC02	230	3583	335	0.90	IE3	95.8	95.6	94.5	613	7.2	2.0	3.0	2.9086	1180
TCA 355M02	280	3583	409	0.90	IE2	95.4	95.2	93.9	746	6.9	1.7	2.8	3.8130	1612
TCA 355LB02	353	3583	510	0.91	IE3	95.8	95.6	94.6	940	7.1	1.9	2.8	4.5200	1771
TCA 355LC02	408	3586	591	0.91	IE3	95.8	95.8	94.8	1086	8.2	2.3	3.1	5.5809	2002
TCA 355LD02	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5.5809	2008

Motors marked in red are Higher Output Motors



Standard voltages

Up to 2.2kW inclusive – 230V Delta / 400V Star ± 10% 3ph 50Hz
– 460V Star ± 5% 3ph 60Hz

From 3kW inclusive – 400V Delta / 690V Star ± 10% 3ph 50Hz
– 460V Delta ± 5% 3ph 60Hz

Insulation class F/B – inverter ready
3x PTCs in winding as standard
Tropical windings
Ambient temperature -20°C to +40°C
Altitude up to 1000m
Continuous duty cycle - S1

To download DataSheets, 2D Drawings and 3D Drawings go to: www.regalbeloit.eu/tmax/documents.html



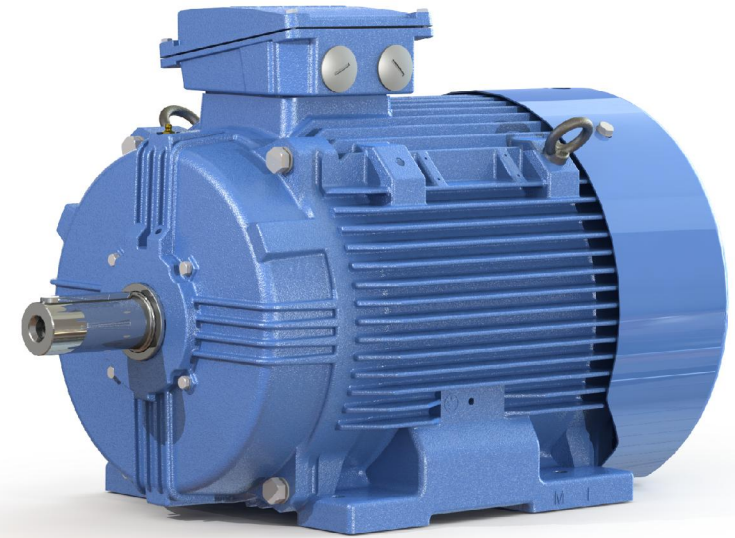
TECHNICAL DATA - 4 POLE MOTORS

Material	TYPE	Frame Size	Nominal Output 50Hz kW	Speed 50Hz rpm	Rated current 50Hz			Power Factor 50Hz cosφ	Efficiency at 50Hz			Rated torque 50Hz Nm	Ratios at 50Hz			Nominal Output 60Hz kW	Speed 60Hz Nominal rpm	60Hz			Power Factor 60Hz cosφ	Efficiency at 60Hz (nominal)				Rated torque 60Hz Nominal Nm	Ratios at 60Hz (nominal)		
					380 V A	400V A	415 V A		Class	100% Load %	75% Load %		50% Load %	Starting current	Starting torque			B/down torque	Current 460 V Nominal A	Class		100% Load %	75% Load %	50% Load %	Starting current		Starting torque	B/down torque	
1500/1800rpm, 4-pole, 50/60Hz, IP55, Insulation F/B																													
	TCA 80MB04	80M	0.75	1441	1.79	1.70	1.64	0.77	IE3	82.9	82.9	80.1	4.94	6.3	2.8	2.8	0.75	1748	1.51	0.75	IE3	85.5	82.4	78.7	4.07	7.3	3.1	3.2	
	TCA 90S04	90S	1.1	1450	2.55	2.42	2.33	0.78	IE3	84.5	84.5	81.6	7.36	7.2	3.0	3.4	1.1	1756	2.15	0.76	IE3	86.5	83.9	80.3	6.09	8.5	3.3	4.0	
	TCA 90L04	90L	1.5	1449	3.40	3.23	3.11	0.78	IE3	85.6	85.6	83.2	9.83	7.4	3.2	3.5	1.5	1754	2.85	0.76	IE3	86.5	85.3	82.2	8.12	8.7	3.5	4.0	
	TCA 100LA04	100L	2.2	1462	4.75	4.51	4.35	0.81	IE3	86.9	86.9	85.8	14.6	8.0	2.7	3.2	2.2	1766	3.96	0.79	IE3	89.5	87.3	84.8	12.1	9.2	2.9	3.7	
	TCA 100LB04	100L	3	1460	6.28	5.97	5.75	0.83	IE3	87.8	87.8	87.3	19.5	8.1	2.9	3.3	3	1764	5.19	0.81	IE3	89.5	88.5	86.5	16.1	9.4	3.0	3.7	
	TCA 112MB04	112M	4	1459	8.36	7.94	7.65	0.82	IE3	88.7	88.7	88.2	26.9	8.0	2.7	3.1	4	1762	6.88	0.82	IE3	89.5	89.7	88.3	22.2	9.6	3.2	3.9	
	TCA 132S04	132S	5.5	1470	11.4	10.8	10.4	0.82	IE3	89.6	89.6	89.6	36.4	6.9	2.2	2.8	5.5	1773	9.31	0.81	IE3	91.7	91.0	89.5	30.1	7.8	2.5	3.1	
	TCA 132M04	132M	7.5	1467	15.2	14.4	13.9	0.83	IE3	90.4	90.4	90.4	48.6	6.8	2.3	2.7	7.5	1771	12.5	0.82	IE3	91.7	91.7	90.6	40.2	7.7	2.5	2.9	
	TCA 132MC04	132M	11	1468	22.8	21.6	20.9	0.80	IE3	91.4	91.4	91.4	72.8	7.4	2.8	2.9	11	1772	18.5	0.81	IE3	92.4	92.3	91.2	60.3	8.6	3.1	3.2	
	TCA 160MB04	160M	11	1476	21.7	20.7	19.9	0.84	IE3	91.4	91.4	91.4	72.4	7.3	2.4	3.2	11	1778	18.0	0.83	IE3	92.4	92.2	90.6	60.1	8.3	2.7	3.6	
	TCA 160LA04	160L	15	1476	29.2	27.8	26.8	0.85	IE3	92.1	92.1	92.1	96.5	7.5	2.5	3.2	15	1778	24.2	0.84	IE3	93.0	92.8	91.3	80.1	8.5	2.9	3.6	
	TCA 160LB04	160L	18.5	1474	35.5	33.7	32.5	0.86	IE3	92.6	92.6	92.5	121	7.1	2.4	3.0	18.5	1777	29.5	0.85	IE2	92.4	92.4	91.9	100	8.1	2.8	3.4	
	TCA 180M04	180M	18.5	1477	36.8	35.0	33.7	0.83	IE3	92.6	92.6	92.3	121	7.1	2.2	3.1	18.5	1780	30.5	0.81	IE3	93.6	93.1	91.8	100	8.0	2.5	3.5	
	TCA 180LA04	180L	22	1478	43.8	41.6	40.1	0.82	IE3	93.0	93.0	92.7	145	7.5	2.4	3.3	22	1781	36.4	0.81	IE3	93.6	93.4	92.2	120	8.4	2.8	3.7	
	TCA 180LB04	180L	30	1475	57.8	54.9	53.0	0.84	IE3	93.6	93.6	93.4	193	6.9	2.2	3.0	30	1778	48.4	0.84	IE2	93.0	93.0	93.0	160	7.7	2.6	3.3	
	TCA 200LA04	200L	30	1482	57.1	54.2	52.3	0.85	IE3	93.6	93.6	93.5	192	8.0	2.6	3.1	30	1784	47.4	0.85	IE3	94.1	94.0	93.0	160	9.1	2.9	3.5	
	TCA 200LB04	200L	37	1481	69.8	66.3	63.9	0.86	IE3	93.9	93.9	93.8	240	7.7	2.6	3.0	37	1783	58.3	0.86	IE2	93.0	93.0	93.0	200	8.6	2.7	3.3	
	TCA 225S04	225S	37	1483	70.8	67.2	64.8	0.85	IE3	93.9	93.9	93.8	240	7.1	2.2	2.8	37	1785	59.1	0.84	IE3	94.5	94.3	93.3	199	8.1	2.4	3.1	
	TCA 225MA04	225M	45	1484	85.0	80.7	77.8	0.85	IE3	94.2	94.2	94.2	288	7.5	2.4	2.9	45	1786	70.2	0.85	IE3	95.0	94.6	93.7	239	8.5	2.7	3.2	
	TCA 225MB04	225M	55	1485	104	99.0	95.4	0.85	IE3	94.6	94.6	94.5	360	8.0	2.7	3.1	55	1786	86.6	0.85	IE2	94.1	94.1	94.1	299	9.1	2.9	3.4	
	TCA 250MA04	250M	55	1488	103	97.7	94.2	0.86	IE3	94.6	94.6	94.2	359	7.1	2.0	3.1	55	1789	85.1	0.85	IE3	95.4	94.8	93.6	299	8.0	2.3	3.4	
	TCA 250MB04	250M	75	1487	140	133	128	0.86	IE3	95.0	95.0	94.5	479	7.0	2.0	3.0	75	1788	116	0.86	IE2	94.5	94.5	94.1	398	7.8	2.4	3.3	
	TCA 280S04	280S	75	1489	137	130	126	0.87	IE3	95.0	95.0	94.2	478	6.3	2.1	2.5	75	1790	113	0.87	IE3	95.4	94.7	93.4	398	7.2	2.4	2.8	
	TCA 280MA04	280M	90	1489	163	155	149	0.88	IE3	95.2	95.2	94.8	574	6.1	2.0	2.4	90	1790	135	0.88	IE3	95.4	95.2	94.1	477	7.0	2.4	2.6	
	TCA 280MB04	280M	110	1488	198	188	181	0.88	IE3	95.5	95.5	95.1	718	6.0	2.1	2.2	110	1789	164	0.89	IE2	95.0	95.0	94.6	597	6.9	2.4	2.5	
	TCA 315S04	315S	110	1489	204	194	187	0.86	IE3	95.5	95.5	94.7	717	7.1	2.0	3.1	110	1790	169	0.85	IE3	95.8	94.8	93.3	597	8.1	2.3	3.4	
	TCA 315MB04	315M	132	1489	243	231	223	0.86	IE3	95.6	95.6	95.0	837	7.3	2.1	3.1	132	1790	201	0.86	IE3	96.2	95.1	93.7	696	8.3	2.4	3.5	
	TCA 315LA04	315L	160	1489	290	275	265	0.88	IE3	95.9	95.9	95.4	1028	7.3	2.2	3.1	160	1790	240	0.87	IE3	96.2	95.5	94.3	855	8.3	2.5	3.4	
	TCA 315LC04	315L	200	1489	363	345	332	0.87	IE3	96.0	96.0	95.5	1291	7.2	2.2	3.0	200	1790	303	0.87	IE3	96.2	95.8	94.8	1074	8.3	2.5	3.3	
	TCA 355M04	355M	250	1491	446	424	408	0.89	IE3	96.0	96.0	96.0	1600	7.1	1.9	2.5	250	1792	368	0.89	IE3	96.2	96.0	95.1	1331	8.0	2.0	2.7	
	TCA 355LB04	355L	315	1491	557	529	510	0.90	IE3	96.0	96.0	96.0	2030	7.1	1.9	2.4	315	1792	460	0.89	IE3	96.2	96.2	95.6	1689	8.0	2.0	2.6	
	TCA 355LC04	355L	355	1491	629	598	576	0.89	IE3	96.0	96.0	96.0	2268	7.2	2.0	2.3	355	1792	518	0.89	IE3	96.2	96.2	95.8	1888	8.1	2.1	2.6	
	TCA 355LD04	355L	375	1491	663	630	607	0.90	IE3	96.0	96.0	96.0	2403	6.8	1.9	2.2	375	1792	544	0.90	IE3	96.2	96.2	96.0	1999	7.9	2.1	2.6	

Cast iron motors

TYPE	Increased Output 60Hz kW	Speed 60Hz rpm	60Hz		Power Factor 60Hz cosφ	Efficiency at 60Hz (60Hz Output)			Rated torque 60Hz at 60Hz Nm	Ratios 60Hz (60Hz Output)			Moment of Inertia kgm ²	Weight kg
			460 V 60Hz A	60Hz 60Hz A		Class	100% Load %	75% Load %		50% Load %	Starting current	Starting torque		
1500/1800rpm, 4-pole, 50/60Hz, IP55, Insulation F/B														
TCA 80MB04	0.86	1739	1.65	0.78	IE3	83.5	83.2	80.4	4.72	6.6	2.6	2.8	0.0022	22.5
TCA 90S04	1.3	1748	2.44	0.80	IE2	84.0	84.0	82.1	7.10	7.7	2.8	3.4	0.0036	27.3
TCA 90L04	1.7	1748	3.18	0.80	IE2	84.0	84.0	83.5	9.29	8.0	3.1	3.5	0.0043	29.8
TCA 100LA04	2.5	1762	4.35	0.82	IE2	87.5	87.5	85.9	13.5	8.6	2.6	3.3	0.0113	39.7
TCA 100LB04	3.5	1758	5.94	0.85	IE2	87.5	87.5	87.5	19.0	8.4	2.6	3.1	0.0130	43.9
TCA 112MB04	4.6	1757	7.88	0.84	IE1	87.0	87.0	87.0	25.0	8.8	2.9	3.4	0.0194	52.3
TCA 132S04	6.3	1769	10.6	0.83	IE2	89.5	89.5	89.5	34.0	7.1	2.2	2.7	0.0428	80.9
TCA 132M04	8.6	1766	14.3	0.85	IE2	89.5	89.5	89.5	46.5	6.8	2.2	2.6	0.0493	88.7
TCA 132MC04	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.0614	102.0
TCA 160MB04	12.7	1775	20.2	0.85	IE3	92.4	92.4	91.3	68.3	7.5	2.4	3.2	0.1289	150
TCA 160LA04	17.3	1775	27.3	0.86	IE2	92.4	92.4	92.1	93.1	7.5	2.5	3.1	0.1603	170
TCA 160LB04	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.1728	177
TCA 180M04	21.3	1777	34.5	0.84	IE2	92.4	92.4	92.4	114	7.2	2.2	3.0	0.2030	206
TCA 180LA04	25.3	1778	40.8	0.83	IE3	93.6	93.6	92.7	136	7.7	2.5	3.3	0.2323	222
TCA 180LB04	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.2650	240
TCA 200LA04	34.5	1781	53.5	0.87	IE2	93.0	93.0	93.0	185	7.6	2.3	2.9	0.4814	282
TCA 200LB04	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.5235	293
TCA 225S04	42.5	1783	66.3	0.86	IE2	93.6	93.6	93.6	228	7.2	2.1	2.7	0.6189	354
TCA 225MA04	52	1783	80.1	0.87	IE2	94.1	94.1	94.1	278	7.4	2.2	2.7	0.7446	389
TCA 225MB04	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.8702	427
TCA 250MA04	63	1787	96.8	0.87	IE2	94.1	94.1	94.1	336	7.2	2.1	3.0	1.4804	517
TCA 250MB04	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1.6310	553
TCA 280S04	86	1789	130	0.88	IE2	94.5	94.5	94.0	459	6.3	2.1	2.4	2.3240	722
TCA 280MA04	104	1788	155	0.89	IE2	95.0	95.0	94.6	555	6.1	2.0	2.3	4.5070	783
TCA 280MB04	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2.8547	802
TCA 315S04	127	1789	192	0.87	IE2	95.0	95.0	94.1	678	7.4	2.0	3.0	3.4650	867
TCA 315MB04	152	1789	228	0.88	IE2	95.0	95.0	94.4	811	7.4	2.1	3.0	3.9660	993
TCA 315LA04	184	1789	274	0.89	IE2	95.0	95.0	94.8	982	7.5	2.2	3.0	4.8832	1165
TCA 315LC04	230	1789	342	0.89	IE2	95.4	95.4	95.2	1227	7.4	2.2	2.9	5.2344	1223
TCA 355M04	288	1791	419	0.90	IE3	96.2	96.2	95.5	1535	7.3	1.8	2.4	9.3060	1692
TCA 355LB04	362	1791	523	0.90	IE3	96.2	96.2	96.0	1930	7.2	1.9	2.4	18.067	1879
TCA 355LC04	408	1791	590	0.90	IE3	96.2	96.2	96.1	2175	7.3	1.9	2.3	11.900	1953
TCA 355LD04	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11.900	1972

Motors marked in red are Higher Output Motors



Standard voltages

Up to 2.2kW inclusive – 230V Delta / 400V Star ± 10% 3ph 50Hz
– 460V Star ± 5% 3ph 60Hz

From 3kW inclusive – 400V Delta / 690V Star ± 10% 3ph 50Hz
– 460V Delta ± 5% 3ph 60Hz

Insulation class F/B – inverter ready
3x PTCs in winding as standard
Tropical windings
Ambient temperature -20°C to +40°C
Altitude up to 1000m
Continuous duty cycle - S1

To download DataSheets, 2D Drawings and 3D Drawings go to: www.regalbelloit.eu/tmax/documents.html



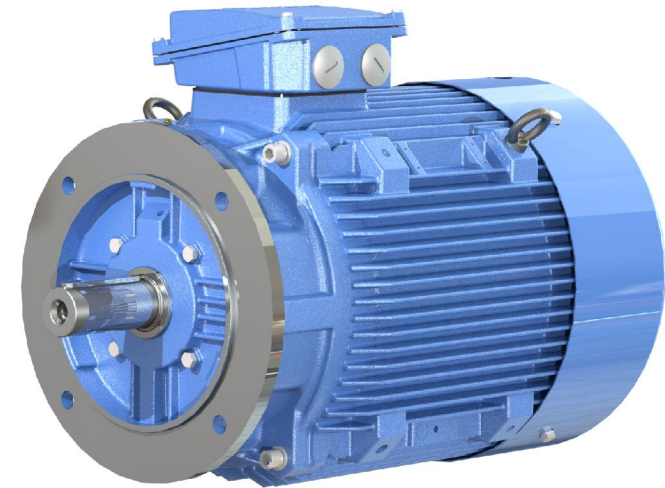
TECHNICAL DATA - 6 POLE MOTORS

Material	TYPE	Frame Size	Nominal Output 50Hz kW	Speed 50Hz rpm	Rated current 50Hz			Power Factor 50Hz cosφ	Efficiency at 50Hz			Rated torque 50Hz Nm	Ratios at 50Hz			Nominal Output 60Hz kW	Speed 60Hz Nominal rpm	60Hz Current 460 V Nominal A	Power Factor 60Hz cosφ	Efficiency at 60Hz (nominal)				Rated torque 60Hz Nominal Nm	Ratios at 60Hz (nominal)			
					380 V A	400V A	415 V A		Class	100% Load %	75% Load %		50% Load %	Starting current	Starting torque					B/down torque	Class	100% Load %	75% Load %		50% Load %	Starting current	Starting torque	B/down torque
1000/1200rpm, 6-pole, 50/60Hz, IP55, Insulation F/B																												
	TCA 90S06	90S	0.75	953	2.10	2.00	1.92	0.69	IE3	78.9	78.9	76.2	7.47	5.6	3.2	3.4	0.75	1158	1.74	0.66	IE3	82.5	79.8	75.1	6.15	6.5	3.6	4.0
	TCA 90L06	90L	1.1	947	2.99	2.84	2.74	0.69	IE3	81.0	81.0	77.3	11.3	5.4	3.2	3.2	1.1	1154	2.54	0.66	IE1	82.5	81.3	77.2	9.26	6.3	3.6	3.8
	TCA 100L06	100L	1.5	972	3.82	3.62	3.49	0.72	IE3	82.5	82.5	78.8	14.7	6.6	2.6	3.1	1.5	1175	3.22	0.70	IE1	83.7	82.3	78.2	12.1	7.9	2.8	3.5
	TCA 112M06	112M	2.2	963	5.31	5.04	4.86	0.75	IE3	84.3	84.3	83.7	22.2	6.5	2.7	3.0	2.2	1167	4.34	0.73	IE2	87.5	85.7	83.3	18.3	7.5	2.8	3.4
	TCA 132SA06	132S	3	973	6.95	6.60	6.37	0.77	IE3	85.6	85.6	85.6	29.3	5.6	1.9	2.4	3	1177	5.74	0.75	IE2	88.1	88.1	86.4	24.3	6.3	2.1	2.7
	TCA 132MA06	132M	4	975	9.14	8.68	8.37	0.77	IE3	86.8	86.8	86.8	40.2	6.0	2.1	2.6	4	1178	7.52	0.75	IE3	89.5	89.1	87.5	33.3	6.8	2.3	2.9
	TCA 132MB06	132M	5.5	975	12.4	11.8	11.4	0.77	IE3	88.0	88.0	88.0	54.9	6.2	2.2	2.7	5.5	1178	10.3	0.75	IE2	89.8	89.8	88.4	45.4	7.0	2.5	3.0
	TCA 160M06	160M	7.5	978	15.7	14.9	14.4	0.82	IE3	89.1	89.1	89.1	72.8	5.6	1.8	2.4	7.5	1181	12.9	0.80	IE3	91.0	90.4	88.8	60.3	6.3	2.0	2.8
	TCA 160LA06	160L	9.3	980	19.6	18.7	18.0	0.80	IE3	89.8	89.8	89.3	90.9	6.1	2.0	2.7	9.3	1182	16.2	0.79	IE3	91.7	90.6	88.8	75.3	6.9	2.3	3.0
	TCA 160LB06	160L	11	980	23.0	21.9	21.1	0.80	IE3	90.3	90.3	89.9	109	6.1	2.1	2.7	11	1182	19.1	0.79	IE3	91.7	91.1	89.4	90.4	6.9	2.4	3.0
	TCA 180LA06	180L	15	984	31.9	30.3	29.2	0.78	IE3	91.2	91.2	90.6	145	6.9	2.4	2.9	15	1186	26.7	0.77	IE3	91.7	91.8	90.1	120	7.8	2.7	3.3
	TCA 180LB06	180L	18.5	983	38.7	36.7	35.4	0.79	IE3	91.7	91.7	91.1	181	6.6	2.3	2.8	18.5	1185	32.2	0.79	IE2	91.7	91.7	90.8	150	7.5	2.6	3.1
	TCA 200LA06	200L	18.5	986	38.6	36.6	35.3	0.80	IE3	91.7	91.7	91.7	181	6.3	2.1	2.6	18.5	1187	31.8	0.79	IE3	93.0	92.8	91.5	150	7.1	2.4	2.9
	TCA 200LB06	200L	22	985	45.3	43.0	41.4	0.80	IE3	92.2	92.2	92.2	217	6.1	2.1	2.5	22	1187	37.5	0.79	IE3	93.0	93.0	92.0	180	7.0	2.4	2.8
	TCA 200LC06	200L	30	985	62.0	58.9	56.8	0.79	IE3	92.9	92.9	92.4	289	6.2	2.2	2.6	30	1187	51.4	0.79	IE2	93.0	93.0	92.2	240	7.1	2.6	2.9
	TCA 225MA06	225M	30	987	58.8	55.9	53.9	0.83	IE3	92.9	92.9	92.4	289	6.8	2.1	2.8	30	1189	48.7	0.82	IE3	94.1	93.3	92.0	240	7.7	2.4	3.2
	TCA 225MB06	225M	37	987	72.3	68.7	66.2	0.83	IE3	93.3	93.3	92.7	361	6.9	2.2	2.9	37	1189	60.4	0.83	IE2	93.0	93.0	92.4	300	7.9	2.5	3.2
	TCA 250MA06	250M	37	987	72.0	68.4	65.9	0.84	IE3	93.3	93.3	93.2	361	6.6	2.2	2.7	37	1188	60.0	0.82	IE3	94.1	94.0	92.9	300	7.5	2.5	3.0
	TCA 250MB06	250M	45	987	87.0	82.6	79.6	0.84	IE3	93.7	93.7	93.4	433	6.6	2.2	2.7	45	1188	72.6	0.83	IE2	93.6	93.6	93.2	360	7.5	2.5	3.0
	TCA 280S06	280S	45	989	88.6	84.1	81.1	0.82	IE3	93.7	93.7	92.8	432	6.0	1.7	2.5	45	1190	73.0	0.82	IE3	94.5	93.7	92.4	359	6.8	1.9	2.7
	TCA 280MA06	280M	55	989	106	101	97.3	0.84	IE3	94.1	94.1	93.5	533	6.0	1.8	2.4	55	1190	87.8	0.83	IE3	94.5	94.3	93.1	443	6.9	1.9	2.7
	TCA 280MB06	280M	75	990	143	136	131	0.84	IE3	94.6	94.6	94.1	719	6.6	2.0	2.6	75	1191	118	0.84	IE3	95.0	94.8	93.7	598	7.5	2.3	2.8
	TCA 315S06	315S	75	991	147	139	135	0.82	IE3	94.6	94.6	94.4	720	6.0	1.8	2.4	75	1192	122	0.81	IE3	95.0	95.0	94.0	598	6.9	2.1	2.6
	TCA 315MA06	315M	90	992	176	168	161	0.82	IE3	95.0	95.0	94.7	864	6.1	1.9	2.4	90	1192	145	0.82	IE3	95.0	95.0	94.3	718	7.0	2.2	2.6
	TCA 315LA06	315L	110	992	214	203	196	0.82	IE3	95.3	95.3	94.8	1080	6.4	2.0	2.5	110	1193	176	0.82	IE3	95.8	95.8	94.6	897	7.3	2.3	2.7
	TCA 315LC06	315L	132	992	257	244	235	0.82	IE3	95.5	95.5	95.1	1258	6.5	2.1	2.5	132	1193	212	0.82	IE3	95.8	95.8	94.8	1046	7.4	2.4	2.7
	TCA 355MA06	355M	160	992	302	287	277	0.84	IE3	95.8	95.8	95.4	1543	6.6	2.0	2.7	160	1193	252	0.83	IE3	95.8	95.4	94.3	1284	7.5	2.2	3.0
	TCA 355MB06	355M	200	992	378	359	346	0.84	IE3	95.8	95.8	95.6	1938	6.8	2.1	2.7	200	1193	314	0.83	IE3	95.8	95.7	94.7	1612	7.8	2.4	3.0
	TCA 355LB06	355L	250	992	470	446	430	0.84	IE3	95.8	95.8	95.7	2404	6.9	2.2	2.7	250	1193	391	0.84	IE3	95.8	95.8	95.0	2000	7.9	2.4	3.0

Cast iron motors

TYPE	Increased Output 60Hz kW	Speed 60Hz rpm	60Hz		Power Factor 60Hz cosφ	Efficiency at 60Hz (60Hz Output)			Rated torque 60Hz at 60Hz Nm	Ratios 60Hz (60Hz Output)			Moment of Inertia kgm ²	Weight kg
			460 V	60Hz A		Class	100% Load %	75% Load %		50% Load %	Starting current	Starting torque		
1000/1200rpm, 6-pole, 50/60Hz, IP55, Insulation F/B														
TCA 90S06	0.86	1151	2.09	0.71	IE2	73.0	73.0	73.0	7.13	6.1	3.1	3.4	0.0042	28.0
TCA 90L06	1.27	1147	3.05	0.70	IE1	75.0	75.0	75.0	10.6	5.9	3.2	3.3	0.0047	29.7
TCA 100L06	1.73	1171	3.76	0.75	IE1	77.0	77.0	77.0	14.1	7.3	2.4	3.0	0.0153	37.8
TCA 112M06	2.53	1162	5.34	0.76	IE1	78.5	78.5	78.5	20.8	6.9	2.5	3.0	0.0168	48.2
TCA 132SA06	3.45	1172	6.34	0.78	IE2	87.5	87.5	87.4	28.1	5.7	1.8	2.4	0.0413	66.3
TCA 132MA06	4.6	1175	8.75	0.78	IE1	85.0	85.0	85.0	37.4	6.3	2.1	2.6	0.0542	75.9
TCA 132MB06	6.3	1175	11.4	0.78	IE2	89.5	89.5	89.1	51.3	6.5	2.2	2.7	0.0610	86.0
TCA 160M06	8.6	1177	14.6	0.83	IE2	89.5	89.5	89.5	69.8	5.7	1.7	2.4	0.2077	140
TCA 160LA06	10.7	1180	18.2	0.82	IE2	90.2	90.2	89.7	86.6	6.3	2.0	2.7	0.1857	152
TCA 160LB06	12.7	1180	21.6	0.82	IE2	90.2	90.2	90.2	103	6.3	2.1	2.7	0.1548	163
TCA 180LA06	18	1183	30.5	0.81	IE2	91.7	91.7	91.1	145	6.8	2.3	2.7	0.3370	222
TCA 180LB06	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.3740	234
TCA 200LA06	22	1185	37.0	0.81	IE2	91.7	91.7	91.7	177	6.3	2.0	2.4	0.5810	262
TCA 200LB06	26	1184	42.9	0.82	IE2	93.0	93.0	92.6	210	6.2	2.0	2.4	0.6381	275
TCA 200LC06	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.7371	298
TCA 225MA06	36	1186	57.2	0.85	IE2	93.0	93.0	92.8	290	6.6	2.0	2.6	1.0179	374
TCA 225MB06	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1.1593	400
TCA 250MA06	44.5	1186	70.4	0.85	IE2	93.6	93.6	93.5	358	6.5	2.1	2.5	1.8915	490
TCA 250MB06	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2.1067	518
TCA 280S06	54	1188	85.8	0.84	IE2	93.6	93.6	93.2	434	5.8	1.5	2.3	2.2340	599
TCA 280MA06	66	1188	103	0.85	IE2	94.1	94.1	93.8	530	5.9	1.6	2.2	2.7010	648
TCA 280MB06	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3.5553	753
TCA 315S06	86	1191	136	0.83	IE3	95.0	95.0	94.5	690	5.9	1.8	2.3	3.8280	812
TCA 315MA06	104	1191	164	0.84	IE2	95.0	95.0	94.8	834	6.0	1.9	2.3	4.4480	877
TCA 315LA06	127	1192	200	0.84	IE2	95.0	95.0	95.0	1018	6.4	2.1	2.4	5.4100	973
TCA 315LC06	152	1192	238	0.84	IE2	95.0	95.0	95.0	1218	6.4	2.1	2.3	6.4560	1121
TCA 355MA06	192	1191	294	0.86	IE3	95.8	95.7	94.9	1539	6.4	1.8	2.5	9.5950	1577
TCA 355MB06	230	1192	353	0.85	IE3	95.8	95.8	95.1	1842	7.0	2.1	2.6	11.214	1710
TCA 355LB06	288	1192	440	0.86	IE3	95.8	95.8	95.4	2307	7.0	2.1	2.6	13.263	1875

Motors marked in red are Higher Output Motors



Standard voltages

Up to 2.2kW inclusive – 230V Delta / 400V Star ± 10% 3ph 50Hz
 – 460V Star ± 5% 3ph 60Hz

From 3kW inclusive – 400V Delta / 690V Star ± 10% 3ph 50Hz
 – 460V Delta ± 5% 3ph 60Hz

Insulation class F/B – inverter ready

3x PTCs in winding as standard

Tropical windings

Ambient temperature -20°C to +40°C

Altitude up to 1000m

Continuous duty cycle - S1



To download DataSheets, 2D Drawings and 3D Drawings go to: www.regalbeloit.eu/tmax/documents.html

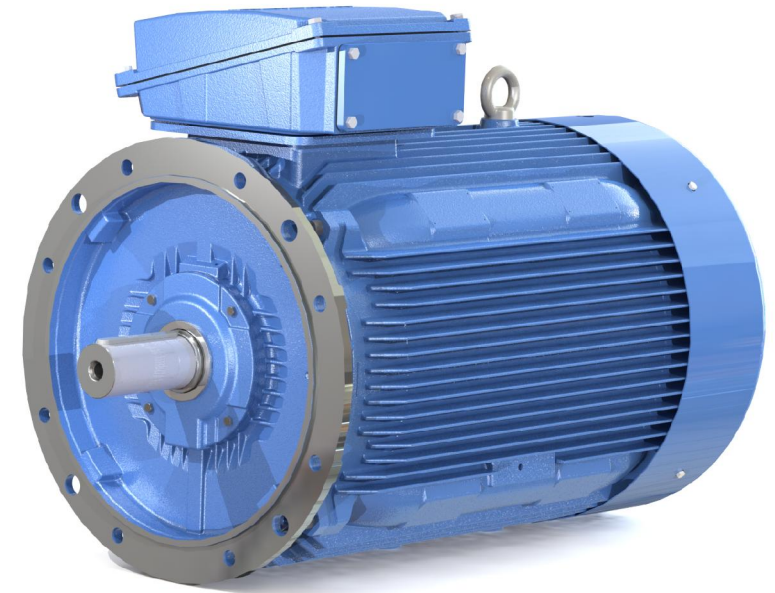
TECHNICAL DATA - 8 POLE MOTORS

Material	TYPE	Frame Size	Nominal Output 50Hz kW	Speed 50Hz rpm	Rated current 50Hz			Power Factor 50Hz cosφ	Efficiency at 50Hz				Rated torque 50Hz Nm	Ratios at 50Hz			Nominal Output 60Hz kW	Speed 60Hz Nominal rpm	60Hz Current 460 V Nominal A	Power Factor 60Hz Nominal cosφ	Efficiency at 60Hz (nominal)				Rated torque 60Hz Nominal Nm	Ratios at 60Hz (nominal)		
					380 V A	400V A	415 V A		Class	100% Load %	75% Load %	50% Load %		Starting current	Starting torque	B/down torque					Class	100% Load %	75% Load %	50% Load %		Starting current	Starting torque	B/down torque
750/900rpm, 8-pole, 50/60Hz, IP55, Insulation F/B																												
	TCA 100LA08	100L	0.75	721	2.17	2.06	1.99	0.70	IE3	75.0	75.0	73.8	9.88	5.1	1.9	2.7	0.75	875	1.89	0.66	IE3	75.5	75.5	73.7	8.14	5.7	2.0	3.3
	TCA 100LB08	100L	1.1	719	3.03	2.88	2.77	0.71	IE3	77.7	77.7	74.8	14.9	5.0	1.9	2.6	1.1	873	2.61	0.67	IE3	78.5	78.5	74.9	12.2	5.9	2.2	3.1
	TCA 112M08	112M	1.5	710	3.93	3.74	3.60	0.73	IE3	79.7	79.7	79.1	20.1	5.0	1.8	2.3	1.5	865	3.20	0.70	IE3	84.0	81.6	78.2	16.5	5.6	1.9	2.6
	TCA 132S08	132S	2.2	725	5.67	5.38	5.19	0.72	IE3	81.9	81.9	81.9	29.5	5.0	1.8	2.3	2.2	879	4.67	0.69	IE3	85.5	85.5	84.8	24.4	5.6	2.0	2.6
	TCA 132M08	132M	3	725	7.57	7.19	6.93	0.72	IE3	83.6	83.6	83.6	39.4	5.0	1.8	2.3	3	878	6.25	0.70	IE3	86.5	86.5	85.7	32.5	5.7	2.1	2.6
	TCA 160MB08	160M	4	730	9.94	9.45	9.11	0.72	IE3	85.0	85.0	85.0	53.8	5.3	1.7	2.3	4	882	8.27	0.70	IE3	86.5	86.5	84.7	44.5	5.9	1.7	2.5
	TCA 160MC08	160M	5.5	730	13.2	12.6	12.1	0.73	IE3	86.5	86.5	86.5	73.4	5.3	1.7	2.3	5.5	881	11.1	0.72	IE3	86.5	86.5	86.2	60.7	5.9	1.7	2.4
	TCA 160L08	160L	7.5	728	17.5	16.7	16.1	0.74	IE3	87.8	87.8	87.7	98.0	5.4	1.8	2.2	7.5	881	14.5	0.73	IE3	89.5	88.8	87.2	81.0	6.0	1.8	2.4
	TCA 180LA08	180L	11	730	25.0	23.7	22.9	0.75	IE3	89.3	89.3	89.1	147	6.4	1.7	2.6	11	882	21.1	0.73	IE3	89.5	89.5	88.7	121	7.0	1.6	2.8
	TCA 180LB08	180L	15	730	33.6	31.9	30.7	0.75	IE3	90.4	90.4	89.7	195	6.6	1.8	2.6	15	883	28.2	0.74	IE3	90.2	90.2	89.3	162	7.2	1.7	2.9
	TCA 200LA08	200L	15	739	34.7	32.9	31.8	0.73	IE3	90.4	90.4	88.7	193	5.5	1.9	2.5	15	890	29.4	0.71	IE3	90.2	90.2	87.9	160	6.1	2.1	2.7
	TCA 200LB08	200L	18.5	738	42.2	40.0	38.6	0.73	IE3	91.1	91.1	89.2	242	5.2	1.8	2.3	18.5	889	35.5	0.73	IE3	90.2	90.2	88.7	200	5.9	2.1	2.6
	TCA 225S08	225S	18.5	738	39.1	37.1	35.8	0.79	IE3	91.1	91.1	90.5	241	5.2	1.7	2.2	18.5	890	33.1	0.78	IE3	90.2	90.2	90.0	200	5.9	1.9	2.5
	TCA 225MA08	225M	22	738	45.7	43.4	41.9	0.80	IE3	91.5	91.5	91.1	290	5.2	1.7	2.2	22	890	38.2	0.79	IE3	91.7	91.7	90.6	240	5.9	1.9	2.4
	TCA 225MB08	225M	30	739	62.7	59.5	57.4	0.79	IE3	92.4	92.4	91.4	386	5.6	1.9	2.4	30	890	52.6	0.78	IE3	91.7	91.7	91.0	320	6.3	2.1	2.6
	TCA 250MA08	250M	30	739	61.1	58.0	55.9	0.81	IE3	92.4	92.4	92.2	386	5.3	1.8	2.2	30	890	51.6	0.80	IE3	91.7	91.7	91.7	320	6.0	2.0	2.4
	TCA 250MB08	250M	37	740	76.1	72.3	69.7	0.80	IE3	92.9	92.9	92.4	482	5.7	2.0	2.4	37	891	63.9	0.79	IE3	92.4	92.4	92.0	400	6.6	2.3	2.6
	TCA 280S08	280S	37	742	75.7	71.9	69.3	0.80	IE3	92.9	92.9	92.0	480	5.8	1.8	2.2	37	893	63.8	0.79	IE3	92.4	92.4	91.5	399	6.4	2.0	2.4
	TCA 280M08	280M	45	742	92.0	87.4	84.2	0.80	IE3	93.5	93.5	92.6	576	5.6	1.8	2.2	45	893	77.6	0.79	IE3	92.4	92.4	92.0	479	6.4	2.0	2.4
	TCA 280MB08	280M	55	741	112	106	103	0.79	IE3	93.9	93.8	93.0	721	5.5	1.8	2.2	55	892	92.8	0.80	IE3	93.6	93.6	92.3	599	6.3	2.0	2.3
	TCA 315SA08	315S	55	742	121	115	111	0.75	IE3	92.5	92.5	91.4	720	5.2	1.7	2.2	55	893	98	0.75	IE3	93.6	92.8	90.9	598	5.1	2.0	2.2
	TCA 315SB08	315S	75	743	163	154	149	0.75	IE3	93.1	93.1	92.1	960	5.3	1.8	2.2	75	894	132	0.76	IE3	93.6	93.2	91.7	798	5.1	2.1	2.2
	TCA 315SC08	315S	90	743	194	184	177	0.76	IE3	93.4	93.4	92.6	1151	5.4	1.9	2.2	90	894	156	0.77	IE3	94.1	93.6	92.2	957	5.2	2.1	2.2
	TCA 315LA08	315L	110	742	230	219	211	0.78	IE3	93.7	93.7	93.3	1440	5.3	1.8	2.2	110	893	187	0.79	IE3	94.1	94	92.8	1196	5.2	2.0	2.2
	TCA 315LB08	315L	132	743	266	253	244	0.80	IE3	94.0	94.0	93.8	1679	5.3	1.7	2.2	132	893	218	0.81	IE3	94.5	94.3	93.3	1395	5.1	2.0	2.2
	TCA 355MA08	355M	110	743	216	206	198	0.82	IE3	93.7	93.7	93.3	1439	6.1	1.4	2.4	110	893	177	0.83	IE3	94.1	94.1	93.2	1196	6.9	1.5	2.6
	TCA 355MB08	355M	132	742	254	242	233	0.84	IE3	94.0	94.0	93.5	1679	5.9	1.4	2.3	132	893	209	0.84	IE3	94.5	94.5	93.6	1396	6.7	1.5	2.5
	TCA 355MC08	355M	150	742	288	274	264	0.84	IE3	94.2	94.2	93.8	1920	5.9	1.4	2.3	150	893	237	0.84	IE3	94.5	94.5	93.9	1595	6.7	1.6	2.5
	TCA 355MD08	355M	160	742	308	292	282	0.84	IE3	94.3	94.3	93.7	2444	6.2	1.5	2.3	160	893	253	0.84	IE3	94.5	94.5	94.0	1755	7.0	1.6	2.5
	TCA 355ME08	355M	185	742	352	335	323	0.84	IE3	94.5	94.5	94.0	2399	6.1	1.5	2.3	185	893	290	0.84	IE3	95.0	95.0	94.3	1994	7.0	1.7	2.5
	TCA 355LA08	355L	200	742	380	361	348	0.85	IE3	94.6	94.6	94.0	2591	6.3	1.6	2.4	200	893	313	0.85	IE3	95.0	95.0	94.3	2153	7.2	1.8	2.6
	TCA 355LB08	355L	220	743	418	397	382	0.85	IE3	94.6	94.6	94.0	2878	6.5	1.6	2.4	220	893	344	0.85	IE3	95.0	95.0	94.4	2392	7.4	1.8	2.6

Cast iron motors

TYPE	Increased Output 60Hz kW	Speed 60Hz rpm	60Hz		Power Factor 60Hz cosφ	Efficiency at 60Hz (60Hz Output)			Rated torque 60Hz at 60Hz Nm	Ratios 60Hz (60Hz Output)			Moment of Inertia kgm ²	Weight kg
			460 V 60Hz A	60Hz		Class	100% Load %	75% Load %		50% Load %	Starting current	Starting torque		
750/900rpm, 8-pole, 50/60Hz, IP55, Insulation F/B														
TCA 100LA08	0.86	872	2.07	0.69	IE3	75.5	75.5	72.1	9.41	5.1	1.6	2.7	0.0136	34.8
TCA 100LB08	1.3	871	2.90	0.70	IE3	78.5	78.5	75.4	13.9	5.2	1.7	2.6	0.0161	37.9
TCA 112M08	1.7	864	3.98	0.71	IE1	77.0	77.0	77.0	19.1	5.0	1.7	2.3	0.0315	51.6
TCA 132S08	2.5	873	5.24	0.72	IE2	84.0	84.0	82.8	27.7	4.6	1.8	2.2	0.0603	82.1
TCA 132M08	3	873	7.02	0.72	IE2	85.5	85.5	84.5	37.8	4.8	1.9	2.3	0.0716	93.4
TCA 160MB08	4.6	880	9.14	0.73	IE3	86.5	86.5	85.6	50.0	5.4	1.6	2.2	0.1290	127
TCA 160MC08	6.3	878	12.2	0.75	IE3	86.5	86.5	86.5	68.6	5.3	1.5	2.1	0.1640	143
TCA 160L08	8.6	877	16.2	0.75	IE2	88.5	88.5	88.1	93.7	5.4	1.6	2.1	0.1990	159
TCA 180LA08	12.7	880	23.4	0.76	IE3	89.5	89.5	89.4	138	6.4	1.4	2.5	0.3250	211
TCA 180LB08	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.4160	302
TCA 200LA08	18	888	33.2	0.76	IE3	90.2	90.2	89.2	194	5.4	1.8	2.3	0.7390	285
TCA 200LB08	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.7820	297
TCA 225S08	22	888	37.4	0.81	IE3	91.7	91.7	90.9	237	5.2	1.6	2.1	0.8750	342
TCA 225MA08	26.5	887	44.7	0.81	IE3	91.7	91.7	91.4	285	5.1	1.6	2.0	1.0380	373
TCA 225MB08	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1.1670	422
TCA 250MA08	36	888	59.7	0.82	IE3	92.4	92.4	92.4	387	5.1	1.7	2.0	2.1990	551
TCA 250MB08	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2.4220	603
TCA 280S08	44.5	891	74.5	0.81	IE3	92.4	92.4	92.3	477	5.6	1.7	2.1	3.4620	702
TCA 280M08	54	891	89.3	0.81	IE3	93.6	93.6	92.8	579	5.5	1.7	2.0	3.7390	733
TCA 280MB08	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4.1400	774
TCA 315SA08	66	892	115	0.78	IE2	93.0	93.0	91.7	707	4.8	1.7	1.8	3.8320	786
TCA 315SB08	86	892	150	0.78	IE1	92.5	92.5	92.4	921	4.9	1.8	1.8	4.8690	886
TCA 315SC08	104	892	178	0.78	IE2	93.6	93.6	92.8	1113	5.0	1.8	1.8	5.7120	1020
TCA 315LA08	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	6.8930	1134
TCA 315LB08	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8.2700	1272
TCA 355MA08	127	892	202	0.84	IE3	94.1	94.1	93.6	1359	6.0	1.4	2.3	8.0510	1428
TCA 355MB08	152	892	238	0.85	IE3	94.5	94.5	94.1	1627	5.9	1.3	2.2	8.4710	1516
TCA 355MC08	173	892	274	0.85	IE2	93.6	93.6	93.6	1853	5.8	1.3	2.1	10.163	1605
TCA 355MD08	192	892	304	0.85	IE2	93.6	93.6	93.6	2056	5.8	1.4	2.1	10.826	1658
TCA 355ME08	213	892	336	0.85	IE2	93.6	93.6	93.6	2280	6.0	1.5	2.2	12.381	1787
TCA 355LA08	230	892	357	0.85	IE3	95.0	95.0	94.7	2462	6.3	1.5	2.2	13.491	1873
TCA 355LB08	253	892	392	0.85	IE3	95.0	95.0	94.8	2707	6.4	1.6	2.3	15.045	1998

Motors marked in red are Higher Output Motors



Standard voltages

Up to 2.2kW inclusive – 230V Delta / 400V Star ± 10% 3ph 50Hz
 – 460V Star ± 5% 3ph 60Hz

From 3kW inclusive – 400V Delta / 690V Star ± 10% 3ph 50Hz
 – 460V Delta ± 5% 3ph 60Hz

Insulation class F/B – inverter ready
 3x PTCs in winding as standard
 Tropical windings
 Ambient temperature -20°C to +40°C
 Altitude up to 1000m
 Continuous duty cycle - S1

To download DataSheets, 2D Drawings and 3D Drawings go to: www.regalbeloit.eu/tmax/documents.html



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