Process performance Non-sparking motors - Variant codes

Code [1]	/ Variant	80	90	100	112	132	160	180	200	225	250	280	315	355	400	450
Balancing																
052	Vibration acc. to Grade A (IEC 60034-14).	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
417	Vibration acc. to Grade B (IEC 60034-14).	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
424	Full key balancing.	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Bearings and Lubrication																
036	Transport lock for bearings.	NA	NA	NA	NA	NA	M	M	M	M	M	P	P	P	P	P
037	Roller bearing at D-end.	NA	NA	NA	NA	NA	M	M	M	M	M	M	M	NA	NA	NA
040	Heat resistant grease.	NA	NA	NA	NA	NA	S	S	S	S	S	S	S	S	S	S
041	Bearings regreasable via grease nipples.	NA	NA	NA	NA	NA	S	S	S	S	S	S	S	S	S	S
043	SPM nipples.	NA	NA	NA	NA	NA	S	S	S	S	S	S	S	S	S	S
058	Angular contact bearing at D-end, shaft force away from bearing.	NA	NA	NA	NA	NA	P	P	P	P	P	P	P	P	P	P
107	Pt100 2-wire in bearings.	NA	NA	NA	NA	NA	P	P	P	P	P	P	P	P	P	P
130	Pt100 3-wire in bearings.	NA	NA	NA	NA	NA	P	P	P	P	P	P	P	P	P	P
194	2Z bearings greased for life at both ends.	S	S	S	S	S	M	M	M	M	M	NA	NA	NA	NA	NA
433	Outlet grease collector.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	P	P	P	P	P
796	Grease nipples JIS B 1575 PT 1/8 Type A.	NA	NA	NA	NA	NA	P	P	P	P	P	P	P	P	P	P
797	Stainless steel SPM nipples.	NA	NA	NA	NA	NA	M	M	M	M	M	M	M	P	P	P
798	Stainless steel grease nipples.	NA	NA	NA	NA	NA	M	M	M	M	M	M	M	P	P	P
Brakes																
412	Built-on brake.	NA	NA	NA	NA	NA	R	R	R	R	R	R	R	R	R	R
Branch standard designs																
142	“Manilla connection”	NA	NA	NA	NA	NA	R	R	R	R	R	R	R	R	R	R
178	Stainless steel / acid proof bolts.	P	P	P	P	P	M	M	M	M	M	M	M	P	P	P
204	Jacking bolts for foot mounted motors	NA	NA	NA	NA	NA	P	P	P	P	P	P	P	S	S	S
209	Non-standard voltage or frequency, (special winding).	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
396	Motor designed for ambient temperature -20°C to -40°C, wtih space heaters (code 450/451 must be added).	R	R	R	R	R	P	P	P	P	P	P	P	P	P	P
397	Motor designed for ambient temperature -40°C to -55°C, wtih space heaters (code 450/451 must be added).	R	R	R	R	R	P	P	P	P	P	P	P	P	P	P
398	Motor designed for ambient temperature -20°C to -40°C.	R	R	R	R	R	P	P	P	P	P	P	P	P	P	P
399	Motor designed for ambient temperature -40°C to -55°C.	R	R	R	R	R	P	P	P	P	P	P	P	P	P	P
425	Corrosion protected stator and rotor core.	S	S	S	S	S	S	S	S	S	S	P	P	P	P	P
786	Special design shaft upwards (V3, V36, V6) for outdoor mounting.	R	R	R	R	R	P	P	P	P	P	NA	NA	NA	NA	NA
Cooling system																
044	Unidirectional fan for reduced noice level. Rotation clockwise seen from D-end. Available only for 2-pole motors.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	P	P	P	S	S
045	Unidirectional fan for reduced noice level. Rotation counter clockwise seen from D-end. Available only for 2-pole motors.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	P	P	P	S	S
068	Metal fan.	P	P	P	P	P	M	M	M	M	M	M	M	P	P	P
075	Cooling method IC418 (without fan).	R	R	R	R	R	R	R	R	R	R	R	R	R	NA	NA
183	Separate motor cooling (fan axial, N-end).	NA	NA	NA	NA	NA	P	P	P	P	P	P	P	P	P	P
422	Separate motor cooling (fan top or side, N-end).	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	P	P	P	P	P
791	Stainless steel fan cover.	NA	NA	NA	NA	NA	NA	NA	NA	P	P	P	P	P	P	P

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Coupling																
035	Assembly of customer supplied coupling-half.	R	R	R	R	R	P	P	P	P	P	P	P	P	P	P
Documentation																
141	Binding dimension drawing.	P	P	P	P	P	M	M	M	M	M	M	M	M	M	M
Drain holes																
065	Plugged existing drain holes.	P	P	P	P	P	M	M	M	M	M	M	M	P	P	P
448	Draining holes with metal plugs.	NA	NA	NA	NA	NA	P	P	P	P	P	P	P	P	P	P
Earthing Bolt																
067	External earthing bolt.	M	M	M	M	M	S	S	S	S	S	S	S	S	S	S
Hazardous Environments																
407	Ex N design, fulfilling BS5000/16, certificate provided.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
449	Ex n design, according to Australian Standard AS 2380.9	NA	NA	NA	NA	NA	M	M	M	M	M	M	M	NA	NA	NA
452	DIP/Ex tD acc. to ATEX directive 94/9/EC, T= 125°C, cat. 3D, IP55.	M	M	M	M	M	M	M	M	M	M	M	M	P	P	P
453	DIP/Ex tD acc. to ATEX directive 94/9/EC, T= 125°C, cat. 2D, IP65.	M	M	M	M	M	M	M	M	M	M	M	M	P	P	NA
456	Ex nA design, fulfilling IEC 60079-15, with certificate.	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
480	Ex nA II acc. to ATEX directive 94/9/EC, temp. class T3.	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
804	DIP/Ex tD, IEC 61241, T125 °C, IP55 (zone 22).	M	M	M	M	M	M	M	M	M	M	M	M	P	P	P
805	DIP/Ex tD, IEC 61241, T125 °C, IP65 (zone 21).	M	M	M	M	M	M	M	M	M	M	M	M	P	P	NA
806	DIP/Ex tD, IEC 61241, T125 °C, IP65 (zone 22).	M	M	M	M	M	M	M	M	M	M	M	M	P	P	NA
807	CSA design, Class I, Div 2 Group A, B, C, D T3.	NA	NA	NA	NA	NA	P	P	P	P	P	P	P	P	P	P
814	Ex tD (DIP) motors, temperature class T 150C.	M	M	M	M	M	M	M	M	M	M	M	M	P	P	P
Heating elements																
450	Heating element, 100-120V.	P	P	P	P	P	M	M	M	M	M	M	M	P	P	P
451	Heating element, 200-240V.	P	P	P	P	P	M	M	M	M	M	M	M	P	P	P
Insulation system																
014	Winding insulation class H.	NA	NA	NA	NA	NA	P	P	P	P	P	P	P	P	P	P
405	Special winding insulation for frequency converter supply.	NA	NA	NA	NA	NA	P	P	P	P	P	P	P	P	P	P
406	Winding for supply >690<=1000 Volts.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	P	P	P	P	P
Mounting arrangements																
008	IM 2101 foot/flange mounted, IEC flange, from IM 1001 (B34 from B3).	P	P	P	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
009	IM 2001 foot/flange mounted, IEC flange, from IM 1001 (B35 from B3).	P	P	P	P	P	M	M	M	M	M	M	M	P	P	P
047	IM 3601 flange mounted, IEC flange, from IM 3001 (B14 from B5).	P	P	P	P	P	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
066	Modified for non-standard mounting position (please specify IM xxxx), (must be ordered for all mounting arrangements exluding IM B3 (1001) and IM B5 (3001).	P	P	P	P	P	M	M	M	M	M	M	M	M	P	P
228	Flange FF 130.	P	P	P	P	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
305	Additional lifting lugs.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	P	P	P	P	P
Noise reduction																
055	Noise reducing cover.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	P	P	P	P	P
Painting																
106	Paint thickness = 80 µm.	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
109	Paint thickness = 120 µm.	NA	NA	NA	NA	NA	M	M	M	M	M	M	M	P	P	P

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110	Paint thickness = 160 µm.	NA	NA	NA	NA	NA	M	M	M	M	M	M	M	P	P	P
111	Offshore two-pack polyamide cured epoxy paint 160 µm.	P	P	P	P	P	M	M	M	M	M	P	P	P	P	P
114	Special paint colour, standard grade.	P	P	P	P	P	M	M	M	M	M	M	M	P	P	P
115	Offshore zink primer painting.	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
179	Special paint specification.	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Protection																
005	Metal protective roof, vertical motor, shaft down.	P	P	P	P	P	M	M	M	M	M	M	M	M	M	M
072	Radial seal at D-end.	P	P	P	P	P	M	M	M	M	M	P	P	P	P	P
073	Sealed against oil at D-end.	NA	NA	NA	NA	NA	P	P	P	P	P	P	P	P	P	P
076	Draining holes with plugs. Felt plugs.	P	P	P	P	P	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
157	Terminal box degree of protection IP65.	M	M	M	M	M	M	M	M	M	M	M	M	P	P	NA
158	Degree of protection IP65.	P	P	P	P	P	M	M	M	M	M	M	M	P	P	NA
211	Weather protected, IP xx W	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
403	Degree of protection IP56.	P	P	P	P	P	M	M	M	M	M	M	M	P	P	P
404	Degree of protection IP56, without fan and fan cover	NA	NA	NA	NA	NA	P	P	P	P	P	P	P	NA	NA	NA
434	Degree of protection IP56, open deck.	R	R	R	R	R	P	P	P	P	P	P	P	P	P	NA
783	Labyrinth sealing at D-end.	NA	NA	NA	NA	NA	P	P	P	P	P	P	P	S	S	S
Rating & instruction plates																
002	Restamping voltage, frequency and output, continuous duty.	P	P	P	P	P	M	M	M	M	M	M	M	P	P	P
095	Restamping output (maintained voltage, frequency), intermittent duty.	R	R	R	R	R	M	M	M	M	M	R	R	R	R	R
098	Stainless rating plate.	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
135	Mounting of additional identification plate, stainless.	P	P	P	P	P	M	M	M	M	M	M	M	P	P	P
139	Additional identification plate delivered loose.	P	P	P	P	P	M	M	M	M	M	M	M	P	P	P
161	Additional rating plate delivered loose.	P	P	P	P	P	M	M	M	M	M	M	M	P	P	P
163	Frequency converter rating plate. Rating data according to quotation.	P	P	P	P	P	M	M	M	M	M	M	M	P	P	P
Shaft & rotor																
069	Two shaft extensions as per basic catalogue.	NA	NA	NA	NA	NA	P	P	P	P	P	P	P	P	P	P
070	One or two special shaft extensions, standard shaft material.	NA	NA	NA	NA	NA	P	P	P	P	P	P	P	P	P	P
164	Shaft extension with closed key-way.	R	R	R	R	R	S	S	S	S	S	R	R	R	R	R
165	Shaft extension with open key-way.	S	S	S	S	S	R	R	R	R	R	S	S	S	S	S
410	Stainless steel shaft (standard or non-standard design).	NA	NA	NA	NA	NA	R	R	R	R	R	P	P	P	P	P
Standards and Regulations																
152	Classified shaft material.	NA	NA	NA	NA	NA	R	R	R	R	R	R	R	R	R	R
421	VIK design (Verband der Industriellen Energie- und Kraftwirtschaft e.V.).	P	P	P	P	P	P	P	P	P	P	P	P	P	P	R
758	Saudi Aramco design.	NA	NA	NA	NA	NA	P	P	P	P	P	P	P	P	NA	NA
773	EEMUA No 132 1988 design.	NA	NA	NA	NA	NA	P	P	P	R	R	R	R	R	R	R
774	Design according to NORSOK (Norwegian Territorial Waters).	R	R	R	R	R	P	P	P	P	P	P	P	P	P	R
775	Design according to SHELL DEP 33.66.05.31-Gen. January 1999 design.	P	P	P	P	P	M	M	M	M	M	M	M	P	P	NA
778	GOST Export/Import Certificate (Russia).	P	P	P	P	P	M	M	M	M	M	M	M	P	P	P
779	SASO Export/Import Certificate (Saudi Arabia).	NA	NA	NA	NA	NA	M	M	M	M	M	M	M	P	P	P
782	Fulfilling CQST Certification requirements (China).	P	P	P	P	P	M	M	M	M	M	M	M	P	P	P

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Stator winding temperature sensors																
120	KTY 84-130 (1 per phase) in stator winding	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
435	PTC -thermistors (3 in series), 130°C, in stator winding.	P	P	P	P	P	M	M	M	M	M	M	M	P	P	P
436	PTC -thermistors (3 in series), 150°C, in stator winding.	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
438	PTC -thermistors (3 in series), 190°C, in stator winding.	NA	NA	NA	NA	NA	P	P	P	P	P	P	P	P	P	P
439	PTC -thermistors (2x3 in series), 150°C, in stator winding.	P	P	P	P	P	M	M	M	M	M	M	M	P	P	P
441	PTC - thermistors (3 in series, 130°C & 3 in series, 150°C), in stator winding.	P	P	P	P	P	M	M	M	M	M	M	M	P	P	NA
445	Pt-100 2-wire in stator winding, 1 per phase	NA	NA	NA	NA	NA	P	P	P	P	P	P	P	P	P	P
446	Pt-100 2-wire in stator winding, 2 per phase	NA	NA	NA	NA	NA	P	P	P	P	P	P	P	P	P	P
502	Pt-100 3-wire in stator winding, 1 per phase	NA	NA	NA	NA	NA	P	P	P	P	P	P	P	P	P	P
503	Pt-100 3-wire in stator winding, 2 per phase	NA	NA	NA	NA	NA	P	P	P	P	P	P	P	P	P	P
Terminal box																
021	Terminal box LHS (seen from D-end).	NA	NA	NA	NA	NA	P	P	P	P	P	P	P	P	P	NA
022	Cable entry LHS (seen from D-end).	P	P	P	P	P	M	M	M	M	M	M	M	P	P	P
137	Extended cable connection, low terminal box, “Flying leads”.	NA	NA	NA	NA	NA	P	P	P	P	P	P	P	P	P	NA
157	Terminal box degree of protection IP65.	P	P	P	P	P	M	M	M	M	M	M	M	P	P	NA
180	Terminal box RHS (seen from D-end).	P	P	P	P	P	P	P	P	P	P	P	P	P	P	NA
187	Cable glands of non-standard design.	NA	NA	NA	NA	NA	R	R	R	R	R	R	R	R	R	R
380	Separate terminal box for temperature detectors, std. material.	NA	NA	NA	NA	NA	P	P	P	P	P	P	P	P	P	P
400	4 x 90 degr turnable terminal box	S	S	S	S	S	M	M	S	S	S	S	S	S	S	NA
402	Terminal box adapted for Al cables.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	S	S	S	S	S
413	Extended cable connection, no terminal box.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	P	P	P	P	NA
418	Separate terminal box for auxiliaries, std. Material.	NA	NA	NA	NA	NA	P	P	P	P	P	P	P	P	P	P
447	Top mounted separate terminal box for monitoring equipment.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	M	M	P	NA	NA
466	Terminal box at N-end.	NA	NA	NA	NA	NA	R	R	R	R	R	P	P	P	P	NA
468	Cable entry from D-end.	P	P	P	P	P	M	M	M	M	M	P	P	P	P	NA
469	Cable entry from N-end.	P	P	P	P	P	M	M	M	M	M	P	P	P	P	NA
567	Separate terminal box material: Cast Iron.	NA	NA	NA	NA	NA	P	P	P	P	P	P	P	P	P	P
568	Separate terminal box for heating elements, std. material.	NA	NA	NA	NA	NA	P	P	P	P	P	P	P	P	P	P
569	Separate terminal box for brakes.	NA	NA	NA	NA	NA	P	P	P	P	P	P	P	P	P	P
729	Cable flanges without holes/ Blank gland plates.	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
730	Prepared for NPT cable glands.	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
732	Standard cable gland, Ex d IIB, armoured cable.	NA	NA	NA	NA	NA	M	M	M	M	M	M	M	P	P	P
733	Standard cable gland, Ex d IIB, non-armoured cable.	NA	NA	NA	NA	NA	M	M	M	M	M	M	M	P	P	P
736	Standard cable gland Ex e acc. to EN-standards.	P	P	P	P	P	S	S	S	S	S	S	S	S	S	S
737	Standard cable gland Ex e with clamping device acc. to EN-standards.	P	P	P	P	P	M	M	M	M	M	M	M	P	P	P
741	Motor equipped with E x e terminal box (EN 50019)	NA	NA	NA	NA	NA	M	M	M	M	M	M	M	P	P	P
743	Painted flange for cable glands.	NA	NA	NA	NA	NA	M	M	M	M	M	M	M	P	P	P
744	Stainless steel flange for cable glands.	NA	NA	NA	NA	NA	M	M	M	M	M	M	M	P	P	P
745	Painted steel flange equipped with brass cable glands.	P	P	P	P	P	M	M	M	M	M	M	M	P	P	P
746	Stainless steel cable flange equipped with standard brass cable glands.	NA	NA	NA	NA	NA	P	P	P	P	P	P	P	P	P	P

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Testing																
145	Type test report from a catalogue motor, 400V 50Hz.	P	P	P	P	P	M	M	M	M	M	M	M	P	P	P
146	Type test with report for motor from specific delivery batch.	R	R	R	R	R	P	P	P	P	P	P	P	P	P	P
148	Routine test report.	P	P	P	P	P	M	M	M	M	M	M	M	P	P	P
150	Customer witnessed testing. Specify test procedure with other codes.	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
221	Type test and multi-point load test with report for motor from specific delivery batch.	P	P	P	P	P	P	P	P	P	P	P	P	P	P	R
222	Torque/speed curve, type test and multi-point load test with report for motor from specific delivery batch.	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
760	Vibration level test	P	P	P	P	P	M	M	M	M	M	M	M	P	P	P
761	Vibration spectrum test.	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
762	Noise level test.	P	P	P	P	P	M	M	M	M	M	M	M	P	P	P
763	Noise spectrum test.	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
764	Test with ABB frequency converter available at ABB test field. ABB standard test procedure.	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Variable speed drives																
182	Pulse sensor mounted as specified.	NA	NA	NA	NA	NA	P	P	P	P	P	P	P	P	P	P
429	Separate motor cooling (fan top, N-end) and 1024 pulse tacho (Leine & Linde 861) mounted.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	P	P	P	P	P
470	Prepared for hollow shaft pulse tacho (L&L equivalent).	NA	NA	NA	NA	NA	P	P	P	P	P	P	P	P	P	P
472	1024 pulse tacho (L&L 861).	NA	NA	NA	NA	NA	P	P	P	P	P	P	P	P	P	P
473	2048 pulse tacho (L&L 861).	NA	NA	NA	NA	NA	P	P	P	P	P	P	P	P	P	P
474	Separate motor cooling (fan axial, N-end) and prepared for hollow shaft tacho (L&L equivalent).	NA	NA	NA	NA	NA	P	P	P	P	P	P	P	P	P	P
476	Separate motor cooling (fan axial, N-end) and 1024 pulse tacho (L&L 861).	NA	NA	NA	NA	NA	R	R	R	R	R	R	R	R	R	R
477	Separate motor cooling (fan axial, N-end) and 2048 pulse tacho (L&L 861).	NA	NA	NA	NA	NA	R	R	R	R	R	R	R	R	R	R
478	Separate motor cooling (fan top, N-end) and prepared for hollow shaft tacho (L&L equivalent).	NA	NA	NA	NA	NA	NA	NA	P	P	P	P	P	P	P	P
479	Mounting of other type of pulse tacho with shaft extension, tacho not included.	NA	NA	NA	NA	NA	R	R	R	R	R	P	P	P	P	P
486	Separate motor cooling (fan top, N-end) and prepared for DC-tacho.	NA	NA	NA	NA	NA	NA	NA	P	P	P	P	P	P	P	P
510	Separate motor cooling (fan top, N-end) and 2048 pulse tacho (Leine & Linde 861) mounted	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	P	P	P	P	P
680	2048 pulse tacho, Ex d, tD, L&L 841910001	NA	NA	NA	NA	NA	R	R	R	R	R	R	R	R	R	R
701	Insulated bearing at N-end.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	M	M	P	P	P
704	EMC cable gland.	NA	NA	NA	NA	NA	M	M	M	M	M	M	M	P	P	P
747	1024 pulse tacho, Ex d, tD, L&L 841910002	NA	NA	NA	NA	NA	R	R	R	R	R	R	R	R	R	R
Y/D starting																
117	Terminals for Y/D start at both speeds (two speed windings).	NA	NA	NA	NA	NA	R	R	R	R	R	P	P	R	R	R
118	Terminals for Y/D start at high speed (two speed windings).	NA	NA	NA	NA	NA	R	R	R	R	R	P	P	R	R	R
119	Terminals for Y/D start at low speed (two speed windings).	NA	NA	NA	NA	NA	R	R	R	R	R	P	P	R	R	R

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General purpose Non-sparking aluminum motors - Variant codes

Code [1] / Variant	90	100	112	132	160	180	200	225	250	280
Balancing										
052 Vibration acc. to Grade A (IEC 60034-14).	S	S	S	S	S	S	S	S	S	S
417 Vibration acc. to Grade B (IEC 60034-14).	P	P	P	P	R	R	R	R	R	R
423 Balanced without key	P	P	R	R	R	R	R	R	R	R
424 Full key balancing.	P	P	P	P	P	P	P	P	P	P
Bearings and Lubrication										
036 Transport lock for bearings.	M	M	M	M	M	M	M	M	M	M
037 Roller bearing at D-end.	M	M	P	P	M	M	M	M	M	M
040 Heat resistant grease.	M	M	M	P	S	S	S	S	S	S
041 Bearings regreasable via grease nipples.	M	M	P	P	M	M	S	S	S	S
043 SPM nipples.	NA	NA	NA	NA	M	M	M	M	M	M
058 Angular contact bearing at D-end, shaft force away from bearing.	P	P	P	P	M	M	M	M	M	M
107 Pt100 2-wire in bearings	NA	NA	NA	NA	NA	NA	R	R	R	R
188 63-series bearings	M	M	M	M	S	S	S	S	S	S
194 2Z bearings greased for life at both ends	S	S	S	S	S	S	R	R	R	R
796 Grease nipples JIS B 1575 PT 1/8 Type A	NA	NA	M	M	M	M	M	M	M	M
797 Stainless steel SPM Nipples	NA	NA	NA	NA	P	P	P	P	P	P
798 Stainless steel grease nipples	NA	NA	NA	NA	P	P	P	P	P	P
Branch standard designs										
142 “Manilla connection”	P	P	P	P	P	P	P	P	P	P
178 Stainless steel / acid proof bolts.	M	M	M	M	M	M	M	M	M	M
209 Non-standard voltage or frequency, (special winding).	P	P	P	P	P	P	P	P	P	P
217 Cast iron D-end shield (on aluminium motor).	M	M	M	M	R	R	R	R	R	S
232 Cast iron N-end shield (on aluminium motor).	NA	NA	NA	NA	R	R	R	R	R	R
425 Corrosion protected stator and rotor core.	P	P	P	P	P	P	P	P	P	P
Cooling system										
068 Metal fan.	M	M	M	M	M	M	M	M	M	M
075 Cooling method IC418 (without fan).	P	P	P	P	NA	NA	NA	NA	NA	NA
183 Separate motor cooling (fan axial, N-end).	M	M	M	P	NA	NA	NA	NA	NA	NA
Documentation										
141 Binding dimension drawing.	M	M	M	M	M	M	M	M	M	M
Drain holes										
065 Plugged existing drain holes.	M	M	M	M	S	S	S	S	S	S
Earthing Bolt										
067 External earthing bolt.	M	M	M	M	S	S	S	S	S	S
Hazardous Environments										
094 Ex n design.	M	M	M	M	NA	NA	NA	NA	NA	NA
452 DIP/Ex tD acc. to ATEX directive 94/9/EC, T= 125 °C, cat. 3D, IP55	M	M	M	M	M	M	M	M	M	M
453 DIP/Ex tD acc. to ATEX directive 94/9/EC, T= 125 °C, cat. 2D, IP65	P	P	P	P	NA	NA	NA	NA	NA	NA
456 Ex nA design, fulfilling IEC 60079-15, with certificate.	NA	NA	NA	NA	M	M	M	M	M	M

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480	Ex nA II acc. to ATEX directive 94/9/EC, temp. class T3	NA	NA	NA	NA	M	M	M	M	M	M
Heating elements											
450	Heating element, 100-120V.	M	M	M	M	M	M	M	M	M	M
451	Heating element, 200-240V.	M	M	M	M	M	M	M	M	M	M
Insulation system											
014	Winding insulation class H.	P	P	P	P	NA	NA	NA	NA	NA	NA
405	Special winding insulation for frequency converter supply.	P	P	P	P	P	P	P	P	P	P
Mounting arrangements											
007	IM 3001 flange mounted, IEC flange, from IM 1001 (B5 from B3).	M	M	M	NA	NA	NA	M	M	M	M
008	IM 2101 foot/flange mounted, IEC flange, from IM 1001 (B34 from B3).	M	M	M	M	M	NA	NA	NA	NA	NA
009	IM 2001 foot/flange mounted, IEC flange, from IM 1001 (B35 from B3).	M	M	M	M	M	M	M	M	M	M
047	IM 3601 flange mounted, IEC flange, from IM 3001 (B14 from B5).	M	M	M	M	M	NA	NA	NA	NA	NA
048	IM 3001 flange mounted, IEC flange, from IM 3601 (B5 from B14).	M	M	M	M	NA	NA	NA	NA	NA	NA
066	Modified for non-standard mounting position (please specify IM xxxx), (must be ordered for all mounting arrangements exluding IM B3 (1001) and IM B5 (3001).	M	M	M	M	NA	NA	NA	NA	NA	NA
091	(IM 2001) foot/flange mounted, DIN A-flange, from IM 1001 (B35 from B3).	M	M	NA	NA	NA	NA	NA	NA	NA	NA
093	IM 3601 flange mounted, IEC flange, from IM 1001 (B14 from B3).	M	M	M	NA	NA	NA	NA	NA	NA	NA
200	Flange ring holder.	M	M	M	M	NA	NA	NA	NA	NA	NA
218	Flange ring FT 85.	M	NA	NA	NA	NA	NA	NA	NA	NA	NA
219	Flange ring FT 100.	M	NA	NA	NA	NA	NA	NA	NA	NA	NA
220	Flange ring FF 100.	M	NA	NA	NA	NA	NA	NA	NA	NA	NA
223	Flange ring FF 115.	M	NA	NA	NA	NA	NA	NA	NA	NA	NA
224	Flange ring FT 115.	M	NA	NA	NA	NA	NA	NA	NA	NA	NA
226	Flange ring FF 130.	M	M	M	NA	NA	NA	NA	NA	NA	NA
227	Flange ring FT 130.	M	M	M	NA	NA	NA	NA	NA	NA	NA
229	Flange FT 130.	M	M	M	NA	NA	NA	NA	NA	NA	NA
233	Flange ring FF 165.	M	M	M	NA	NA	NA	NA	NA	NA	NA
234	Flange ring FT 165.	M	M	M	NA	NA	NA	NA	NA	NA	NA
235	Flange FF 165.	M	M	M	NA	NA	NA	NA	NA	NA	NA
236	Flange FT 165.	NA	NA	NA	M	NA	NA	NA	NA	NA	NA
243	Flange ring FF 215.	P	M	M	M	NA	NA	NA	NA	NA	NA
244	Flange ring FT 215.	NA	M	M	M	NA	NA	NA	NA	NA	NA
245	Flange FF 215.	NA	M	M	NA	NA	NA	NA	NA	NA	NA
253	Flange ring FF 265.	NA	NA	NA	M	NA	NA	NA	NA	NA	NA
254	Flange ring FT 265.	NA	NA	NA	M	NA	NA	NA	NA	NA	NA
255	Flange FF 265.	NA	NA	NA	M	NA	NA	NA	NA	NA	NA
260	Flange FT 115.	M	M	NA	NA	NA	NA	NA	NA	NA	NA
306	IM 1001 foot mounted, from IM 3601 (B3 from B14).	M	M	M	NA	NA	NA	NA	NA	NA	NA

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307	IM 2101 foot/flange mounted, IEC flange, from IM 3601 (B34 from B14).	M	M	M	NA	NA	NA	NA	NA	NA	NA
308	IM 2001 foot/flange mounted, IEC flange, from IM 3601 (B35 from B14).	M	M	M	NA	NA	NA	NA	NA	NA	NA
309	IM 1001 foot mounted, from IM 3001 (B3 from B5).	M	M	M	NA	NA	NA	NA	NA	NA	NA
310	IM 2101 foot/flange mounted, IEC flange, from IM 3001 (B34 from B5).	M	M	M	NA	NA	NA	NA	NA	NA	NA
311	IM 2001 foot/flange mounted, IEC flange, from IM 3001 (B35 from B5).	M	M	M	NA	NA	NA	NA	NA	NA	NA
312	IM 1001 foot mounted, from IM 2101 (B3 from B34).	M	M	M	NA	NA	NA	NA	NA	NA	NA
313	IM 3601 flange mounted, IEC flange, from IM 2101 (B14 from B34).	M	M	M	NA	NA	NA	NA	NA	NA	NA
314	IM 3001 flange mounted, IEC flange, from IM 2101 (B5 from B34).	M	M	M	NA	NA	NA	NA	NA	NA	NA
315	IM 2001 foot/flange mounted, IEC flange, from IM 2101 (B35 from B34).	M	M	M	NA	NA	NA	NA	NA	NA	NA
316	IM 1001 foot mounted, from IM 2001 (B3 from B35).	M	M	M	M	NA	NA	NA	NA	NA	NA
317	IM 3601 flange mounted, IEC flange, from IM 2001 (B14 from B35).	M	M	M	NA	NA	NA	NA	NA	NA	NA
318	IM 3001 flange mounted, IEC flange, from IM 2001 (B5 from B35).	M	M	M	NA	NA	NA	NA	NA	NA	NA
319	IM 2101 foot/flange mounted, IEC flange, from IM 2001 (B34 from B35).	M	M	M	NA	NA	NA	NA	NA	NA	NA
Painting											
114	Special paint colour, standard grade.	M	M	M	M	M	M	M	M	M	M
179	Special paint specification.	P	P	P	P	R	R	R	R	R	R
Protection											
005	Metal protective roof, vertical motor, shaft down.	M	M	M	M	M	M	M	M	M	M
072	Radial seal at D-end.	M	M	M	M	M	M	M	M	M	M
158	Degree of protection IP65.	M	M	M	P	NA	NA	NA	NA	NA	NA
211	Weather protected, IP xx W	P	P	P	P	NA	NA	NA	NA	NA	NA
403	Degree of protection IP56.	M	M	P	P	M	M	NA	NA	NA	NA
404	Degree of protection IP56, without fan and fan cover	P	P	P	P	NA	NA	NA	NA	NA	NA
784	Gamma-seal at D-end.	M	M	NA	NA	M	M	M	M	M	M
Rating & instruction plates											
002	Restamping voltage, frequency and output, continuous duty.	M	M	M	M	M	M	M	M	M	M
003	Individual serial number.	M	M	M	M	S	S	S	S	S	S
004	Additional text on std rating plate (max 12 digits on free text line)	NA	NA	M	M	NA	NA	NA	NA	NA	NA
095	Restamping output (maintained voltage, frequency), intermittent duty.	M	M	M	M	R	R	R	R	R	R
098	Stainless rating plate.	M	M	M	M	NA	NA	NA	NA	NA	NA
135	Mounting of additional identification plate, stainless.	M	M	M	M	NA	NA	NA	NA	NA	NA
138	Mounting of additional identification plate, aluminium.	M	M	M	M	M	M	M	M	M	M
139	Additional identification plate delivered loose.	M	M	M	M	M	M	M	M	M	M
160	Additional rating plate affixed.	M	M	M	M	M	M	M	M	M	M
161	Additional rating plate delivered loose.	M	M	M	M	M	M	M	M	M	M
162	Rating plate fixed to stator.	M	M	M	M	S	S	S	S	S	S
163	Frequency converter rating plate. Rating data according to quotation.	NA	NA	NA	NA	M	M	M	M	M	M

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198	Aluminium rating plate.	M	M	M	M	S	S	S	S	S	S
Shaft & rotor											
069	Two shaft extensions as per basic catalogue.	P	P	P	P	R	R	R	R	R	R
070	One or two special shaft extensions, standard shaft material.	P	P	P	P	R	R	R	R	R	R
131	Motor delivered with half key (Key not exceeding shaft diameter)	NA	NA	NA	NA	M	M	M	M	M	M
164	Shaft extension with closed key-way.	S	S	S	S	S	S	S	S	S	S
165	Shaft extension with open key-way.	P	P	NA	NA	NA	NA	NA	NA	NA	NA
410	Stainless steel shaft (standard or non-standard design).	P	P	P	P	NA	NA	NA	NA	NA	NA
Stator winding temperature sensors											
121	Bimetal detectors, break type (NCC), (3 in series), 130°C, in stator winding.	M	M	M	M	M	M	M	M	M	M
122	Bimetal detectors, break type (NCC), (3 in series), 150°C, in stator winding.	M	M	M	M	M	M	M	M	M	M
123	Bimetal detectors, break type (NCC), (3 in series), 170°C, in stator winding.	M	M	P	P	NA	NA	NA	NA	NA	NA
124	Bimetal detectors, break type (NCC), (3 in series), 140°C, in stator winding.	NA	NA	NA	NA	M	M	M	M	M	M
125	Bimetal detectors, break type (NCC), (2x3 in series), 150°C, in stator winding.	M	M	P	P	M	M	M	M	M	M
127	Bimetal detectors, break type (NCC), (3 in series, 130°C & 3 in series, 150°C), in stator winding.	M	M	P	P	M	M	M	M	M	M
321	Bimetal detectors, closing type (NO), (3 in parallel), 130°C, in stator winding.	M	M	M	M	NA	NA	NA	NA	NA	NA
322	Bimetal detectors, closing type (NO), (3 in parallel), 150°C, in stator winding.	M	M	M	M	NA	NA	NA	NA	NA	NA
323	Bimetal detectors, closing type (NO), (3 in parallel), 170°C, in stator winding.	P	P	P	P	NA	NA	NA	NA	NA	NA
325	Bimetal detectors, closing type (NO), (2x3 in parallel), 150°C, in stator winding.	P	P	P	P	NA	NA	NA	NA	NA	NA
327	Bimetal detectors, closing type (NO), (3 in parallel, 130°C & 3 in parallel, 150°C), in stator winding.	P	P	P	P	NA	NA	NA	NA	NA	NA
435	PTC - thermistors (3 in series), 130°C, in stator winding.	M	M	M	M	M	M	M	M	M	M
436	PTC - thermistors (3 in series), 150°C, in stator winding.	M	M	M	M	M	M	S	S	S	S
437	PTC - thermistors (3 in series), 170°C, in stator winding.	M	M	M	M	NA	NA	NA	NA	NA	NA
439	PTC - thermistors (2x3 in series), 150°C, in stator winding.	M	M	M	P	M	M	M	M	M	M
441	PTC - thermistors (3 in series, 130°C & 3 in series, 150°C), in stator winding.	M	M	P	M	M	M	M	M	M	M
442	PTC - thermistors (3 in series, 150°C & 3 in series, 170°C), in stator winding.	NA	NA	NA	NA	M	M	M	M	M	M
445	Pt-100 2-wire in stator winding, 1 per phase	NA	NA	NA	NA	M	M	M	M	M	M
446	Pt-100 2-wire in stator winding, 2 per phase	NA	NA	NA	NA	M	M	M	M	M	M
Terminal box											
015	Motor supplied in D connection.	M	M	NA	NA	M	M	M	M	M	M
016	9 terminals in terminal box	P	P	P	P	NA	NA	NA	NA	NA	NA
017	Motor supplied in Y connection.	M	M	NA	NA	M	M	M	M	M	M

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018	D connection in terminal box (reconnection from Y), single phase Steinmetz.	M	M	NA	NA	NA	NA	NA	NA	NA	NA
019	Larger than standard terminal box	NA	NA	NA	NA	R	R	R	R	R	NA
021	Terminal box LHS (seen from D-end).	P	P	NA	NA	NA	NA	P	P	P	P
022	Cable entry LHS (seen from D-end).	NA	NA	NA	NA	P	P	P	P	P	P
136	Extended cable connection, standard terminal box.	M	M	NA	NA	R	R	R	R	R	R
137	Extended cable connection, low terminal box, “Flying leads”.	P	P	P	P	NA	NA	NA	NA	NA	NA
180	Terminal box RHS (seen from D-end).	P	P	P	NA	NA	NA	P	P	P	P
187	Cable glands of non-standard design.	NA	NA	NA	NA	R	R	R	R	R	R
230	Standard metal cable glands.	M	M	M	M	M	M	M	M	M	M
375	Standard plastic cable gland	M	M	M	M	NA	NA	NA	NA	NA	NA
376	Two standard plastic cable glands	M	M	M	M	NA	NA	NA	NA	NA	NA
418	Separate terminal box for auxiliaries, std. material	NA	NA	NA	NA	M	M	M	M	M	M
731	Two standard metal cable glands.	M	M	M	M	M	M	M	M	M	M
Testing											
140	Test confirmation	M	M	M	M	M	M	M	M	M	M
145	Type test report from a catalogue motor, 400V 50Hz.	M	M	M	M	M	M	M	M	M	M
146	Type test with report for motor from specific delivery batch.	M	M	M	M	M	M	M	M	M	M
147	Type test with report for motor from specific delivery batch, customer witnessed.	M	M	M	M	M	M	M	M	M	M
148	Routine test report.	M	M	M	M	M	M	M	M	M	M
149	Test according to separate test specification.	M	M	M	M	R	R	R	R	R	R
153	Reduced test for classification society.	M	M	M	M	M	M	M	M	M	M
221	Type test and multi-point load test with report for motor from specific delivery batch.	M	M	M	M	M	M	M	M	M	M
222	Torque/speed curve, type test and multi-point load test with report for motor from specific delivery batch.	M	M	M	M	M	M	M	M	M	M
760	Vibration level test	M	M	M	M	M	M	M	M	M	M
761	Vibration spectrum test.	NA	NA	NA	NA	R	R	R	R	R	R
762	Noise level test.	M	M	M	M	M	M	M	M	M	M
763	Noise spectrum test.	NA	NA	NA	NA	R	R	R	R	R	R
764	Complete test with ABB frequency converter.	NA	NA	NA	NA	R	R	R	R	R	R
Variable speed drives											
182	Pulse sensor mounted as specified.	NA	NA	NA	NA	R	R	R	R	R	R
470	Prepared for hollow shaft pulse tacho (L&L equivalent).	NA	NA	NA	NA	M	M	M	M	M	M
472	1024 pulse tacho (L&L 861).	NA	NA	NA	NA	R	R	R	R	R	R
473	2048 pulse tacho (L&L 861).	NA	NA	NA	NA	R	R	R	R	R	R
570	Prepared for hollow shaft pulse tacho (L&L 503).	NA	NA	NA	NA	M	M	M	M	M	M
704	EMC cable gland.	P	P	P	P	M	M	M	M	M	M
Y/D starting											
118	Terminals for Y/D start at high speed (two speed windings).	P	P	P	P	NA	NA	NA	NA	NA	NA

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