

# Motors for Hazardous Areas

D5, D6 SERIES

II 2G  
Ex d/de IIC



IIC



**MarelliMotori**

This catalogue refers to ATEX Motors belonging to Group II Category 2G as described.

## STANDARDS

The ATEX Motors described in this catalogue are manufactured in accordance with IEC 60034-1-5-6-7-8-9-12-14, IEC 60072-1, EN 50347, EN 60079-0-1-7.

## EUROPEAN DIRECTIVES

Title	Directive
Equipment and protective system intended for use in potentially explosive atmospheres (ATEX)	94/9/EC
Electromagnetic Compatibility (EMC)	2004/108/IEC
Low Voltage Directive (LVD)	2006/95/EC
Machinery Directive (MD)	98/37/EC

## CERTIFICATES

Frame size	Number	Temperature Limits
71-132	BVI 08 ATEX 0001	-20°C +60°C*
160-315	CESI 03 ATEX 134	-20°C +60°C*

(\*) Limit +60°C for temperature class T3 only. The minimum ambient temperature for Ex d protection is -50°C (heating required before starting the motor).

## GROUPS

The electrical motors are subdivided into two groups, depending on the environment they are meant for:

GROUP	Description
I	equipment used in <b>mines</b> and on the surface of mines
II	equipment used in explosive atmosphere other than mines ( <b>surface industries</b> )

## EQUIPMENT AND AREAS CLASSIFICATIONS

The table on the right defines the EQUIPMENT CATEGORY suitable for each CLASSIFIED AREA. Dangerous environments are classified by ZONE, according to the risk generated by explosive GAS (zone 0, 1 and 2) or DUST (zone 20, 21 and 22). The equipment is classified by CATEGORY according to the level of protection the apparatus must have (specified by a number) and the atmosphere in which it will operate (specified by the letter G, D or GD). In the areas and equipment classification lower numbers stand for higher danger and requirement for higher protection. In zone 0/20 the use of electric motors is not allowed.

D \ G	SAFE	Zone 2	Zone 1	Zone 0
SAFE	Standard Industrial	3G	2G	
Zone 22	3D	3GD	2GD	
Zone 21	2D	2GD	2GD	
Zone 20	MOTORS NOT PERMITTED			

## TYPES OF PROTECTION

The types of protection are defined as follows:

GAS environments	
PROTECTION	The equipment must be designed in such a way that:
<b>Ex d</b>	• no internal explosion can be spread to the surrounding explosive atmosphere
<b>Ex e</b>	• no sparks, arcs, or hot spots can occur in service, including starting and locked rotor situation, in all internal and external parts of the machine
<b>Ex de</b>	• an "Ex d" flameproof enclosure is combined with the terminal box featuring an "Ex e" increased safety protection

## GROUP (IIA, IIB, IIC)

Gas atmospheres are furtherly divided into 3 sub-groups (IIA, IIB and IIC), according to the severity of the environment. **This catalogue refers to motors belonging to group IIC**, which are suitable for medium-danger environment (some examples of IIC atmosphere are: hydrogen, acetylene, water gas, carbon sulphur).

## NOMENCLATURE

The data sheets included in this catalogue refer to the series shown in this table.

Series	Frame size where applicable	Ex	Group	Category	Protection	Group	Temperature Class
D6K	71 - 132	⊕	II	2G	Ex d	II C	T3-T4-T5
D6Y					Ex de		T3-T4-T5
D5K	160 - 315	⊕	II	2G	Ex d	II C	T3-T4
D5Y					Ex de		T3-T4

## MATERIALS

Size (mm)	71-80	90-132	160	180-225	250-315
Protection Mode	Ex d - Ex de				
Frame	Cast Iron		Steel		
Frame endshields	Cast Iron		Steel		
Fan cowl	Steel				
Fan	Thermoplastic				
Terminal Box	*	Cast Iron			

(\*) Terminal box casted with frame for Ex d execution

## BEARINGS

The regreasing system is standard for frame sizes 280 and 315 and available on request for frame sizes 180 to 250. Bearings without screen only will be used whenever the regreasing nipples are mounted.

Frame Size (mm)	D - end		N - end
	2 poles	≥ 4 poles	
71		6202-2Z	6202-2Z
80		6204-2Z	6204-2Z
90		6205-2Z	6205-2Z
100		6206-2Z	6206-2Z
112		6206-2Z	6206-2Z
132		6308-2Z	6308-2Z
160	NU210-EC-C3	NU210-EC-C3	6209-2Z-C3
180	NU210-EC-C3	NU210-EC-C3	6209-2Z-C3
200	NU212-EC-C3	NU212-EC-C3	6210-2Z-C3
225	NU213-EC-C3	NU213-EC-C3	6213-2Z-C3
250	NU214-EC-C3	NU214-EC-C3	6213-2Z-C3
280	6314-2-C3	NU2217-EC-C3	6314-Z-C3
315	6316-C3	NU2219-EC-C3	6316-C3

## TERMINAL BOX AND CABLE ENTRY

The terminal box is located on top of the motor (referred to a B3 mounting) for all sizes from 71 to 315, usually equipped with 6 terminals, and it can be rotated by steps of 90° (from size 90). For 71 + 80 frame size the cable entry is on the right side of the motor (seen from the D side).

Frame Size (mm)	Threaded terminals	Cable entries for Main Connection	Cable entries for Auxiliary Connection
71 - 80	M6	M25 x 1,5*	-
90 - 132	M6	M32 x 1,5	M20 x 1,5
160 - 200	M6	2 x M40 x 1,5	M20 x 1,5
225 - 250	M8	2 x M50 x 1,5	M20 x 1,5
280 - 315	M12	2 x M75 x 1,5	M20 x 1,5

(\*) Valid for Ex d protection. For Ex de cable entry is M32 x 1,5 + M20 x 1,5.

## SURFACE PROTECTION

The following table shows the available external protection. Different colours RAL or MUNSSELL are available on request.

	Standard	Special
Surface	Sanding and/or degreasing	Sanding and/or degreasing
Undercoating	Epoxy-Vinyl	Epoxy-Vinyl
Coat	-	Polyurethane
Finishing	Polyurethane	Polyacrylic
Total thickness (µm)	> 50	180
Colour	RAL5010	RAL5010

**DRAINAGE HOLE** A drainage hole is available on request from frame size 132 (only for horizontal mounting).

**THERMAL PROTECTION** Motors with a frame size ≥ 90 mm are provided with 3 PTC in their standard configuration. PTC, PT100 and Space Heaters are available on request according to the following table:

Frame size	Type of protection	PTC	PT 100	Anticondensation Heaters	PTC + Heaters	PT100 + Heaters
71 - 80	d de	optional	-	-	-	-
90 - 132	d de	standard	optional*	optional	optional	-
160 - 180	d de	standard	optional	optional	optional	optional
200 - 225	d de	standard	optional	optional	optional	optional
250 - 315	d de	standard	optional	optional	optional	optional

(\*) PT100 optional for Ex d from frame size 132. For Ex de please contact Marelli Motori sales department.

**OPTIONS** Other options are available on request. Please contact Marelli Motori for more information and/or quotation.

## FREQUENCY CONVERTER SUPPLY

Please contact Marelli Motori for specific data sheet and quotation relevant to Ex d/de IIC motors fed by frequency converter.

**Ex d IIC, Ex de IIC**

All rated values refer to: Ambient Temperature ≤ 40°C, Installation ≤ 1000 m a.s.l, Insulation cl. F, duty S1.

RATED OUTPUT [kW]	MOTOR TYPE  SERIES FRAME SIZE		PERFORMANCE AT RATED OUTPUT			PERFORMANCE AT RATED VOLTAGE					MOMENT OF INERTIA J [kgm <sup>2</sup> ]	WEIGHT IM 1001 Approx. [kg]
			SPEED [rpm]	EFFICIENCY η [%]	POWER FACTOR cos φ	400V 50Hz						
						RATED CURRENT I [A]	RATED TORQUE T <sub>n</sub> [Nm]	STARTING CURRENT I <sub>s</sub> /I <sub>n</sub> p.u.	STARTING TORQUE T <sub>s</sub> /T <sub>n</sub> p.u.	BREAKDOWN TORQUE T <sub>MAX</sub> /T <sub>n</sub> p.u.		
50 Hz			50 Hz									

**2 poles = 3000 rpm**

**T4**

0,37	D6• 71 MA2	2840	75,4	0,81	0,9	1,24	5,6	2,6	-	0,00048	18
0,55	D6• 71 MB2	2840	76,8	0,81	1,3	1,85	5,8	2,8	-	0,00048	18
0,75	D6• 80 MA2	2860	79,6	0,80	1,7	2,50	6,2	2,8	2,9	0,00092	23
1,1	D6• 80 MB2	2870	80,9	0,81	2,4	3,66	6,4	3,1	3,2	0,00092	23
1,5	D6• 90 S2	2870	82,6	0,84	3,1	4,99	7,3	2,9	3,3	0,00175	35
2,2	D6• 90 L2	2870	83,8	0,86	4,4	7,32	7,5	3,7	3,9	0,00175	35
3	D6• 100 LA2	2880	84,6	0,89	5,8	9,95	7,7	3,1	3,3	0,0037	53
4	D6• 112 M2	2890	86,5	0,90	7,4	13,2	7,5	2,7	2,9	0,0060	62
5,5	D6• 132 SA2	2920	87,9	0,89	10,2	18,0	7,2	2,7	2,9	0,0171	99
7,5	D6• 132 SB2	2920	88,8	0,90	13,6	24,5	7,2	2,7	2,9	0,0171	99
9	D6• 132 MB2	2928	89,1	0,90	16,2	29,4	7,3	2,9	3,0	0,0171	99
11,0	D5• 160 MA2	2920	88,4	0,82	21,9	36	6,2	2,2	2,8	0,030	155
15,0	D5• 160 MB2	2925	89,8	0,83	29,0	49	6,4	2,2	3,0	0,035	160
18,5	D5• 160 L2	2925	90,0	0,81	36,7	60	6,8	2,3	3,0	0,040	165
22,0	D5• 180 M2	2930	90,5	0,84	41,8	72	6,8	2,4	3,0	0,048	188
30,0	D5• 200 LA2	2945	92,0	0,87	54	97	6,7	2,3	2,9	0,165	250
37,0	D5• 200 LB2	2945	92,2	0,87	67	120	6,9	2,4	3,0	0,180	260
45,0	D5• 225 M2	2960	92,5	0,88	80	145	6,6	2,4	3,0	0,225	320
55,0	D5• 250 M2	2960	93,0	0,87	98	177	6,7	2,4	3,0	0,250	360
75,0	D5• 280 S2	2960	93,6	0,87	133	242	6,8	2,3	2,7	0,350	575
90,0	D5• 280 M2	2960	94,2	0,88	157	290	7,2	2,3	2,7	0,416	630
110	D5• 315 SM2	2975	94,3	0,87	194	353	6,4	2,4	2,4	0,95	1050
132	D5• 315 MA2	2970	94,3	0,86	235	424	6,5	2,5	2,5	0,95	1050
160	D5• 315 MC2	2975	94,4	0,87	281	513	6,5	2,5	2,5	1,12	1115
200	D5• 315 MD2	2980	94,7	0,87	351	640	6,5	2,5	2,5	1,30	1195

I<sub>s</sub> = Starting current, T<sub>s</sub> = Starting torque, T<sub>MAX</sub> = Breakdown torque.

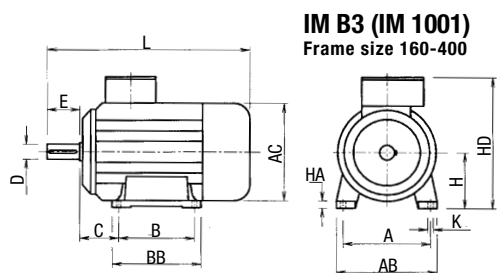
Detailed data for 440V/60Hz on request.

Higher output available for Temperature Class T3 and/or Maximum Surface Temperature T150°C.

Motor not multivoltage. Output values at 440V/60Hz refer to motors with dedicated winding.

**SERIES SELECTION**

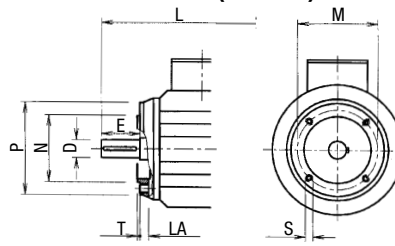
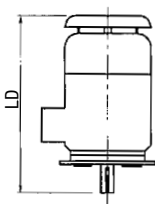
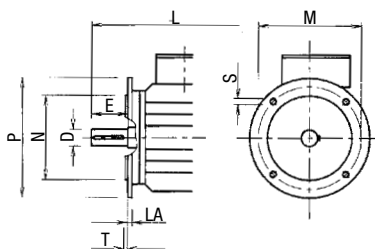
- D6• { • = K for 2G Ex d IIC
- D5• { • = Y for 2G Ex de IIC



**IM B5 (IM 3001)**

**IM V1 (IM 3011)**

**IM B14 (IM 3601)**



FRAME SIZE			A
IEC	POLES	A	
71 M	2 - 8	112	125
80 M	2 - 8	125	
90	S	2 - 8	140
	L	2 - 8	
100 L	2 - 8	160	190
112 M	2 - 8	190	
132	S	2 - 8	216
	M	2 - 8	
			<b>A</b>
D5_160	M	2 - 8	254
	L	2 - 8	
D5_180	M	2 - 4	279
	L	4 - 8	
D5_200	L	2 - 8	318
	S	4 - 8	
D5_225	M	2	356
	M	4 - 8	
D5_250	M	2	406
	M	4 - 8	

**Ex d IIC, Ex de IIC**

All rated values refer to: Ambient Temperature ≤ 40°C, Installation ≤ 1000 m a.s.l, Insulation cl. F, duty S1.

RATED OUTPUT [kW]	MOTOR TYPE		PERFORMANCE AT RATED OUTPUT					PERFORMANCE AT RATED VOLTAGE					MOMENT OF INERTIA J [kgm <sup>2</sup> ]	WEIGHT IM 1001 Approx. [kg]
			SPEED [rpm]	EFFICIENCY η [%]	POWER FACTOR cos φ	400V 50Hz								
						RATED CURRENT I [A]	RATED TORQUE T <sub>n</sub> [Nm]	STARTING CURRENT I <sub>s</sub> /I <sub>n</sub> p.u.	STARTING TORQUE T <sub>s</sub> /T <sub>n</sub> p.u.	BREAKDOWN TORQUE T <sub>MAX</sub> /T <sub>n</sub> p.u.				

**4 poles = 1500 rpm**

**T4**

0,25	D6• 71 MA4	1410	68,6	0,65	0,8	1,69	4,2	2,5	2,0	0,00097	19
0,37	D6• 71 MB4	1410	71,0	0,68	1,1	2,51	4,4	2,6	2,0	0,00097	19
0,55	D6• 80 MA4	1410	72,0	0,80	1,4	3,72	5,9	2,7	2,5	0,00245	24
0,75	D6• 80 MB4	1420	73,7	0,81	1,8	5,04	5,9	2,7	2,5	0,00245	24
1,1	D6• 90 S4	1420	78,2	0,79	2,6	7,40	6,1	3,0	3,0	0,0034	36
1,5	D6• 90 L4	1420	79,3	0,81	3,4	10,1	6,2	3,2	3,2	0,0034	36
2,2	D6• 100 LA4	1440	84,2	0,82	4,6	14,6	5,9	2,8	2,9	0,0075	56
3	D6• 100 LB4	1440	84,4	0,81	6,3	19,9	5,9	2,7	2,9	0,0075	56
4	D6• 112 M4	1445	85,7	0,82	8,2	26,4	6,8	2,8	3,0	0,0125	68
5,5	D6• 132 SA4	1450	87,9	0,82	11,0	36,2	6,2	2,5	2,6	0,032	101
7,5	D6• 132 MA4	1450	88,2	0,82	15,0	49,4	6,3	2,6	2,8	0,032	101
11,0	D5• 160 M4	1455	88,60	0,81	22,10	72	5,2	2,0	2,1	0,034	165
15,0	D5• 160 L4	1460	89,40	0,81	29,90	98	5,8	2,2	2,4	0,075	182
18,50	D5• 180 M4	1460	90,0	0,82	36,20	121	6,2	2,3	2,5	0,090	190
22,0	D5• 180 L4	1465	90,50	0,84	41,80	143	6,3	2,4	2,5	0,110	240
30,0	D5• 200 L4	1470	91,60	0,84	56	195	6,4	2,4	2,8	0,180	270
37,0	D5• 225 S4	1475	92,50	0,86	67	239	6,5	2,3	2,8	0,320	325
45,0	D5• 225 M4	1475	92,50	0,86	82	291	6,5	2,4	2,8	0,410	342
55,0	D5• 250 M4	1475	93,0	0,87	98	356	6,4	2,3	2,6	0,520	410
75,0	D5• 280 S4	1480	93,70	0,86	134	483	7,0	2,5	2,3	0,885	608
90,0	D5• 280 M4	1480	93,90	0,88	157	580	7,1	2,7	2,4	1,060	665
110	D5• 315 SM4	1488	93,60	0,85	200	705	6,5	2,6	2,6	2,10	1080
132	D5• 315 MA4	1485	94,50	0,85	237	848	6,5	2,5	2,5	2,10	1080
160	D5• 315 MC4	1485	94,80	0,85	287	1028	6,2	2,5	2,5	2,50	1210
200	D5• 315 MD4	1485	95,30	0,86	353	1285	6,5	2,5	2,6	3,10	1370

I<sub>s</sub> = Starting current, T<sub>s</sub> = Starting torque, T<sub>MAX</sub> = Breakdown torque.

Detailed data for 440V/60Hz on request.

Higher output available for Temperature Class T3 and/or Maximum Surface Temperature T150°C.

Motor not multivoltage. Output values at 440V/60Hz refer to motors with dedicated winding.

**SERIES SELECTION** D6• { = K for 2G Ex d IIC  
D5• { = Y for 2G Ex de IIC

DIMENSIONS														SHAFT EXTENSION								FLANGE B5					FLANGE B14								
AA	AB	AC	AD	B	BB	BC	C	CA	H	HA	HD	K	L	LC	LD	W	D	DA	E	EA	F	FA	GA	GC	M	N	P	S	T	LA	M	N	P	S	T
29	138	146	119	179	90	112	11	45	120	71	190	176	7	280	315	295	131	14	14	30	30	5	5	16	16	130	110	160	10	7	85	70	105	M6	2,5
31	156	166	133	193	100	126	13	50	150	80	213	199	8	335	380	350	141	19	19	40	40	6	6	21,5	21,5	165	130	200	12	10	100	80	120	M6	3
34	172	184	208	268	125	152	13,5	56	184	90	298	284	10	385	440	400	160	24	24	50	50	8	8	27	27	165	130	200	12	10	115	95	140	M8	3
36	196	204	215	275	140	172	16	63	187	100	315	301	12	445	510	460	175	28	28	60	60	8	8	31	31	215	180	250	14,5	4	130	110	160	M10	3,5
40	225	228	226	286	140	172	16	70	195	112	338	324	12	460	525	475	175	28	28	60	60	8	8	31	31	215	180	250	14,5	4	130	110	160	M10	3,5
45	255	386	241	301	140	214	18	89	246	132	373	359	12	550	635	565	205	38	38	80	80	10	10	41	41	265	230	300	14,5	4	165	130	200	M10	3,5

DIMENSIONS														FLANGE B5 - V1								FLANGE B14				
AB	AC	AD	B	BB	C	H	HA	HD	K	L	LD	D	E	M	N	P	LA	S	T	M	N	P	S	T		
300	314		210	296	108	160	22	446	14	648	710	42	110	300	250	350	15	18	5							
324	354		254	283	121	180	24	466	14	723	790	48	110	300	250	350	15	18	5							
368			241	321	133	200	24	488	18	830		55	140	350	300	400	18	18	5							
406	411		286	360	149	225	28	593	18	800		60	140	400	350	450	16	18	5							
465			311	406	168	250	28	618	22	830		60	140	500	450	550	18	18	5							

## Ex d IIC, Ex de IIC

All rated values refer to: Ambient Temperature ≤ 40°C, Installation ≤ 1000 m a.s.l, Insulation cl. F, duty S1.

RATED OUTPUT [kW]	MOTOR TYPE		PERFORMANCE AT RATED OUTPUT					PERFORMANCE AT RATED VOLTAGE					MOMENT OF INERTIA J [kgm <sup>2</sup> ]	WEIGHT IM 1001 Approx. [kg]
			SPEED [rpm]	EFFICIENCY η [%]	POWER FACTOR cos φ	400V 50Hz								
						RATED CURRENT I [A]	RATED TORQUE T <sub>n</sub> [Nm]	STARTING CURRENT I <sub>s</sub> /I <sub>n</sub> p.u.	STARTING TORQUE T <sub>s</sub> /T <sub>n</sub> p.u.	BREAKDOWN TORQUE T <sub>MAX</sub> /T <sub>n</sub> p.u.				
50 Hz	SERIES	FRAME SIZE	50 Hz	η [%]	cos φ									

### 6 poles = 1000 rpm

T4

0,37	D6• 80 MA6	930	64,5	0,60	1,4	3,8	3,7	2,0	1,8	0,0029	25
0,55	D6• 80 MB6	930	66,9	0,69	1,7	5,6	3,9	2,0	1,9	0,0029	25
0,75	D6• 90 S6	920	66,7	0,72	2,3	7,8	4,0	2,1	2,3	0,0037	42
1,1	D6• 90 L6	920	69,9	0,74	3,1	11,4	4,2	2,3	2,4	0,0037	42
1,5	D6• 100 LA6	930	76,6	0,77	3,7	15,4	3,8	2,0	1,9	0,0075	56
2,2	D6• 112 M6	940	80,3	0,77	5,1	22,3	4,0	1,5	1,6	0,0125	71
3	D6• 132 SA6	950	84,7	0,75	6,8	30,2	4,5	2,0	2,3	0,039	106
4	D6• 132 MA6	950	85,0	0,75	9,1	40,2	4,6	2,0	2,4	0,039	106
5,5	D6• 132 MB6	960	85,4	0,76	12,2	54,7	4,6	1,9	2,5	0,039	106
7,50	D5• 160 M6	965	86,0	0,82	15,4	74	5,0	2,2	2,3	0,087	175
11,0	D5• 160L6	967	88,0	0,82	22,0	108	5,5	2,3	2,5	0,110	182
15,0	D5• 180 L6	970	88,2	0,82	30,0	147	5,2	2,3	2,2	0,130	231
18,50	D5• 200 LA6	970	88,2	0,83	36,5	182	5,2	2,1	2,3	0,170	250
22,0	D5• 200 LB6	972	89,0	0,83	43	216	5,5	2,4	2,4	0,220	270
30,0	D5• 225 M6	975	90,5	0,84	58	294	6,2	2,4	2,4	0,470	330
37,0	D5• 250 M6	975	91,0	0,84	70	362	6,5	2,6	2,6	0,570	400
45,0	D5• 280 S6	980	92,5	0,84	85	440	6,0	2,5	2,5	0,850	560
55,0	D5• 280 M6	980	93,0	0,83	103	535	6,0	2,5	2,5	1,075	665
75,0	D5• 315 SM6	985	94,0	0,83	136	730	6,3	2,6	2,6	2,60	1000
90,0	D5• 315 MA6	985	94,0	0,85	163	872	6,0	2,5	2,5	2,60	1000
110	D5• 315 MB6	985	94,0	0,84	199	1065	6,0	2,5	2,5	3,00	1070
132	D5• 315 MC6	985	93,3	0,85	238	1278	6,3	2,5	2,5	3,60	1180
143	D5• 315 MD6	985	94,8	0,86	253	1385	6,3	2,7	2,5	4,40	1310

I<sub>s</sub> = Starting current, T<sub>s</sub> = Starting torque, T<sub>MAX</sub> = Breakdown torque.

Detailed data for 440V/60Hz on request.

Higher output available for Temperature Class T3 and/or Maximum Surface Temperature T150°C.

Motor not multivoltage. Output values at 440V/60Hz refer to motors with dedicated winding.

SERIES SELECTION D6• { • = K for 2G Ex d IIC  
D5• { • = Y for 2G Ex de IIC

### DIMENSIONS

FRAME SIZE		A	AB	AC	B	BB	C	H	HA	HD	K	L	LD	D	E	FLANGE B5 V1						
IEC	POLES															M	N	P	LA	S	T	
D5_280	S	2	457	540	490	368	480	190	280	40	710	22	960	1045	140	500	450	550	18	18	5	
		4 - 8				419																
	M	2				65																
		4 - 8				75																
D5_315	SM	2	508	590	604	457	520	216	315	45	820	27	1102	1177	65	600	550	660	22	22	6	
		4 - 8											1132	1207	80							170
	MA	2											1102	1177	65							140
		4 - 8											1132	1207	80							170
	MD	2											1102	1177	70							140
		4 - 8											1132	1207	90							170



## Ex d IIC, Ex de IIC

All rated values refer to: Ambient Temperature  $\leq 40^{\circ}\text{C}$ , Installation  $\leq 1000$  m a.s.l., Insulation cl. F, duty S1.

RATED OUTPUT [kW]	MOTOR TYPE		PERFORMANCE AT RATED OUTPUT				PERFORMANCE AT RATED VOLTAGE					MOMENT OF INERTIA J [kgm <sup>2</sup> ]	WEIGHT IM 1001 Approx. [kg]
			SPEED [rpm]	EFFICIENCY $\eta$ [%]	POWER FACTOR $\cos \varphi$	400V 50Hz							
						RATED CURRENT I [A]	RATED TORQUE T <sub>n</sub> [Nm]	STARTING CURRENT I <sub>s</sub> /I <sub>n</sub> p.u.	STARTING TORQUE T <sub>s</sub> /T <sub>n</sub> p.u.	BREAKDOWN TORQUE T <sub>MAX</sub> /T <sub>n</sub> p.u.			

### 8 poles = 750 rpm

T4

0,18 0,25	D6• 80 MA8 D6• 80 MB8	680 690	49,3 53,8	0,65 0,68	0,8 1,0	2,5 3,5	2,6 2,7	1,9 1,9	- -	0,0029 0,0029	25 25
0,37 0,55	D6• 90 S8 D6• 90 L8	675 680	55,9 60,9	0,66 0,69	1,4 1,9	5,2 7,7	2,8 2,9	2,0 2,0	2,0 2,1	0,0037 0,0037	42 42
0,75 1,1	D6• 100 LA8 D6• 100 LB8	680 695	67,6 70,2	0,66 0,66	2,4 3,4	10,5 15,1	2,7 2,7	1,5 1,4	1,9 1,8	0,0075 0,0075	56 56
1,5	D6• 112 M8	700	75,8	0,71	4,0	20,5	2,8	1,2	1,7	0,0132	71
2,2 3	D6• 132 SA8 D6• 132 MA8	710 710	80,7 81,0	0,70 0,70	5,6 7,6	29,6 40,3	3,2 3,1	1,5 1,4	1,7 1,6	0,039 0,039	106 106
4 5,5 7,5	D5• 160 MA8 D5• 160 MB8 D5• 160 L8	710 720 720	81,0 82,4 84,7	0,73 0,74 0,74	9,8 13,0 17,3	54 73 99	4,2 4,2 4,2	1,9 1,9 2,0	2,1 2,1 2,1	0,080 0,092 0,110	140 151 184
11	D5• 180 L8	725	86,7	0,75	24,4	145	4,5	2,0	2,2	0,160	255
15	D5• 200 L8	725	88,0	0,75	32,8	197	5,0	2,1	2,3	0,220	280
18,5 22	D5• 225 S8 D5• 225 M8	730 730	89,0 90,0	0,76 0,76	39,5 46,4	242 288	5,2 5,3	2,2 2,2	2,4 2,4	0,420 0,520	324 340
30	D5• 250 M8	730	91,0	0,76	63,0	392	5,5	2,3	2,5	0,620	405
37 45	D5• 280 S8 D5• 280 M8	735 735	92,5 93,0	0,80 0,80	72,0 87,0	480 569	6,0 6,0	2,5 2,5	2,5 2,5	1,050 1,250	505 640
55 75 90 110 132	D5• 315 SM8 D5• 315 MA8 D5• 315 MC8 D5• 315 MD8 D5• 315 ME8	740 740 740 740 740	93,5 93,8 94,4 94,5 94,6	0,82 0,82 0,83 0,83 0,83	104 139 166 202 243	709 967 1160 1418 1702	6,5 6,0 6,2 6,2 6,2	2,3 2,1 2,2 2,2 2,2	2,4 2,2 2,3 2,3 2,3	2,80 2,80 3,50 4,00 4,30	1050 1050 1280 1370 1440

I<sub>s</sub> = Starting current, T<sub>s</sub> = Starting torque, T<sub>MAX</sub> = Breakdown torque.

Detailed data for 440V/60Hz on request.

Higher output available for Temperature Class T3 and/or Maximum Surface Temperature T150°C.

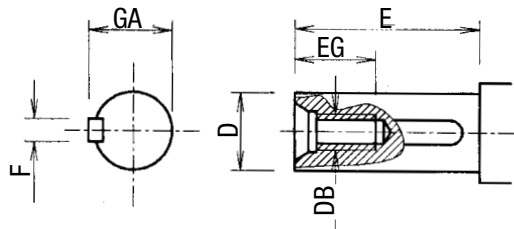
Motor not multivoltage. Output values at 440V/60Hz refer to motors with dedicated winding.

SERIES SELECTION

D6•	• = K for 2G Ex d IIC
D5•	• = Y for 2G Ex de IIC

### SHAFT EXTENSION

Tapped holes as per DIN 332



D	14	19	24	28	38	42	48	55	60	65	70	75	80	90
toll.	j6			k6			m6							
E	30	40	50	60	80	110	110	140	140	140	140	170	170	
F h9	5	6	8	8	10	12	14	16	18	18	20	20	22	25
GA	16	21,5	27	31	41	45	51,5	59	64	69	74,5	79,5	85	95
DB	M5	M6	M8	M10	M12	M16			M20					
EG	12,5	19	19	22	28	36			42					


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