

Motors for Hazardous Areas

D5, D6 SERIES

II 2G
Ex d/de IIC



FKI Energy Technology



IIC

NEW
D6
SERIES



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 mines and on the surface of mines
II	equipment used in explosive atmosphere other than mines (surface industries)

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:
Ex d	• no internal explosion can be spread to the surrounding explosive atmosphere
Ex e	• 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
Ex de	• 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 further 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

Ex d IIC, Ex de IIC

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

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

2 poles = 3000 rpm

T4

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

I_s = Starting current, T_s = Starting torque, T_{max} = Breakdown torque.

Detailed data for 440V/60Hz on request.

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

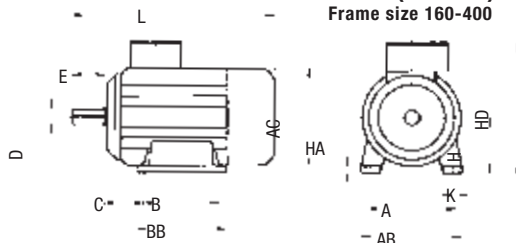
Motor not multivoltage. Output values at 440V/60Hz refer to motors with dedicated winding.

SERIES SELECTION

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

FRAME SIZE				A	AA
IEC	POLES				
71 M	2 - 8	112	29		
80 M	2 - 8	125	31		
90 S	2 - 8	140	34		
90 L	2 - 8				
100 L	2 - 8	160	36		
112 M	2 - 8	190	40		
132 S	2 - 8	216	45		
132 M	2 - 8				
				A	
D5_160 M	2 - 8	254			
D5_160 L	2 - 8				
D5_180 M	2 - 4	279			
D5_180 L	4 - 8				
D5_200 L	2 - 8	318			
D5_225 S	4 - 8				
D5_225 M	2	356			
	4 - 8				
D5_250 M	2	406			
	4 - 8				

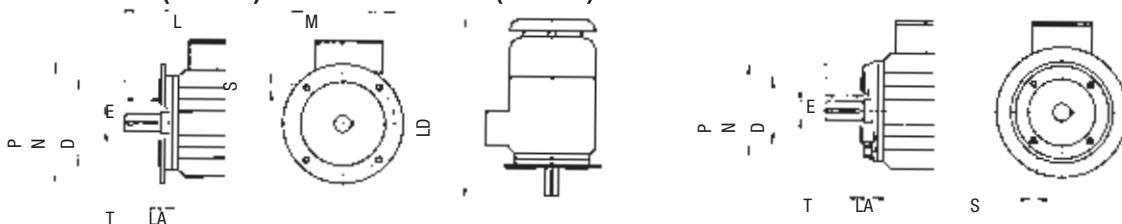
IM B3 (IM 1001)
Frame size 160-400



IM B5 (IM 3001)

IM V1 (IM 3011)

IM B14 (IM 3601)



Ex d IIC, Ex de IIC

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

RATED OUTPUT [kW]	MOTOR TYPE		PERFORMANCE AT RATED OUTPUT					PERFORMANCE AT RATED VOLTAGE			MOMENT OF INERTIA	WEIGHT IM 1001
			SPEED [rpm]	EFFICIENCY	POWER FACTOR	400V 50Hz						
	RATED CURRENT	RATED TORQUE				STARTING CURRENT	STARTING TORQUE	BREAKDOWN TORQUE				
									J	Approx.		
50 Hz	SERIES	FRAME SIZE	50 Hz	η [%]	$\cos \varphi$	I [A]	T _n [Nm]	I _s /I _n p.u.	T _s /T _n p.u.	T _{MAX} /T _n p.u.	[kgm ²]	[kg]

4 poles = 1500 rpm

T4

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

Is = Starting current, Ts = Starting torque, Tmax = 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				
A	AB	AC	AD Ex d	AD Ex e	B	BB	BC	C	CA	H	HA	HD Ex d	HD Ex e	K	L	LC	LD	W	D	DA	E	EA	F	FA	GA	GC	M	N	P	S	T	LA	M	N	P	S	T
	138	146	119	179	90	112	11	45	120	71	8	190	176	7	280	315	295	131	14	14	30	30	5	5	16	16	130	110	160	10	3,5	7	85	70	105	M6	2,5
	156	166	133	193	100	126	13	50	150	80		213	199			335	380	350	141	19	19	40	40	6	6	21,5	21,5							100	80		
	172	184	208	268	125	152	13,5	56	184 159	90	10	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	
	196	204	215	275		140	172	16	63	187	100	12	315		301	445	510	460	175	28	28	60			60	31	31	215	180	250		14,5	4	14			130
	225	228	226	286	140			70	195	112	13	338	324	12	460	525	475																				3,5
	255	386	241	301	178	214	18	89	246 208	132	15	373	359		550	635	565	205	38	38	80	80	10	10	41	41	265	230	300								

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			254					241				283													466	48	350	400	18
	354		279	321	488	55	400	450	16																				
368	411		286	350	133	200	508	18	830	895	60	140	400	350	450	16													
406			311	360	149	225	593		800		55	110																	
465		349	406	168	250	618	22		830		60	140	500	450	550	18													
								65																					

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 ²]	WEIGHT IM 1001 Approx. [kg]
			SPEED [rpm]	EFFICIENCY	POWER FACTOR	400V 50Hz						
						RATED CURRENT I [A]	RATED TORQUE T _n [Nm]	STARTING CURRENT I _s /I _n p.u.	STARTING TORQUE T _s /T _n p.u.	BREAKDOWN TORQUE T _{MAX} / T _n p.u.		
50 Hz	SERIES	FRAME SIZE	50 Hz	η [%]	cos φ							

6 poles = 1000 rpm

T4

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

I_s = Starting current, T_s = Starting torque, T_{max} = 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	457	540	490	368	480	190	280	40	710	22	960	1045	65	140	500	450	550	18	18	5	
					4 - 8																	75
	M				2									419								65
					4 - 8																	75
D5_315	SM	508	590	604	457	520	216	315	45	820	27	1102	1177	65	600	550	660	22	22	6		
	SM											4 - 8	1132	1207							80	170
	MA											2	1102	1177							65	140
	MA-MC											4 - 8	1132	1207							80	170
	MD											2	1102	1177							70	140
	MD-ME											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 ≤ 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 ²]	WEIGHT IM 1001 Approx. [kg]
			SPEED [rpm]	EFFICIENCY	POWER FACTOR	400V 50Hz						
						RATED CURRENT I [A]	RATED TORQUE T _n [Nm]	STARTING CURRENT I _s /I _n p.u.	STARTING TORQUE T _s /T _n p.u.	BREAKDOWN TORQUE T _{MAX} /T _n p.u.		
50 Hz	SERIES	FRAME SIZE	50 Hz	η [%]	cos φ							

8 poles = 750 rpm

T4

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

I_s = Starting current, T_s = Starting torque, T_{max} = 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.

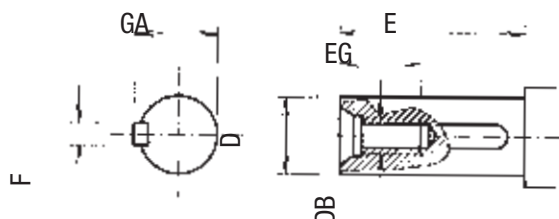
SERIES SELECTION

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	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						

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	-
160 - 200	M6	2 x M40 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

SURFACE PROTECTION

The following table shows the available external protection. Different colours RAL or MUNSELL 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 from frame size 132.

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.



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