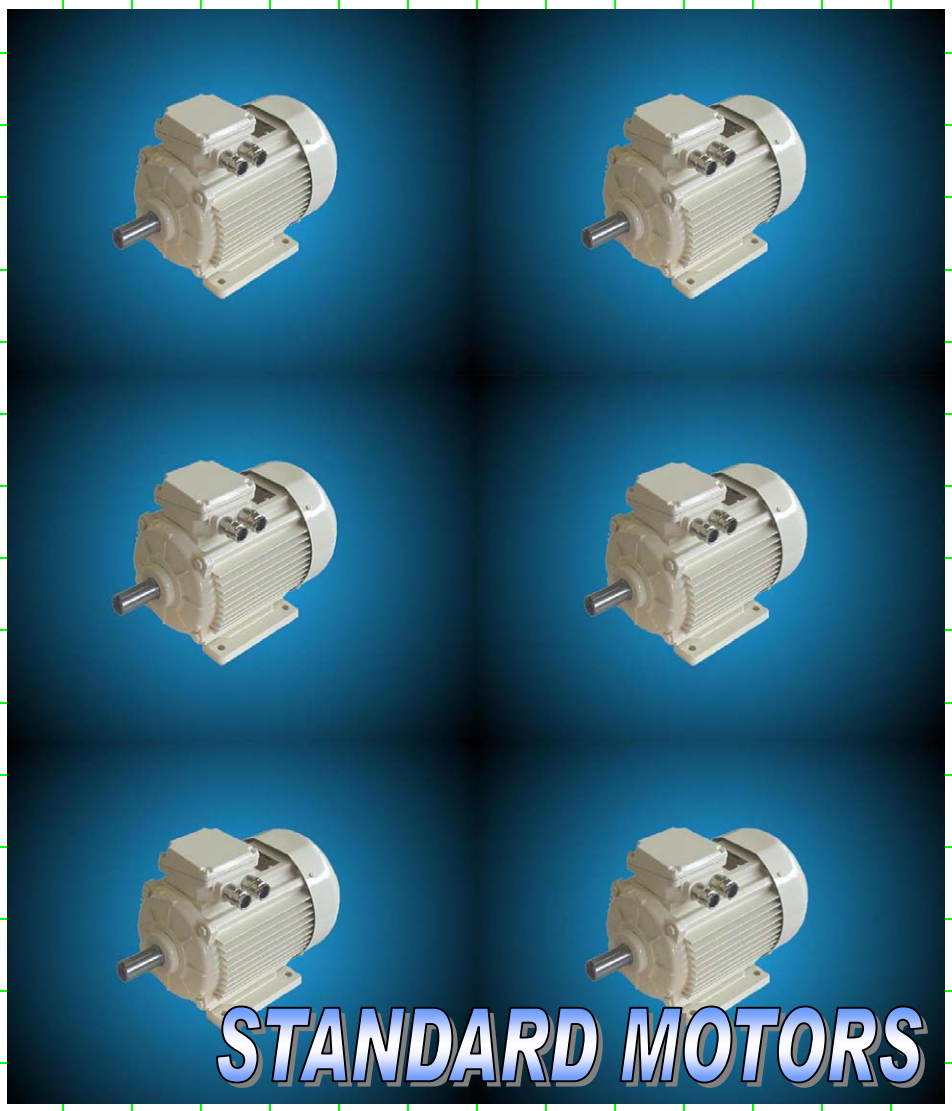
FFD AUSTRIA



EFF 2

INTRODUCTION

FFD offers a full range of low voltage electric motors, single phase motors as well as three phase squirrel cage induction motors for continuous duty. All motors are manufactured according to the ISO 9001 certification.

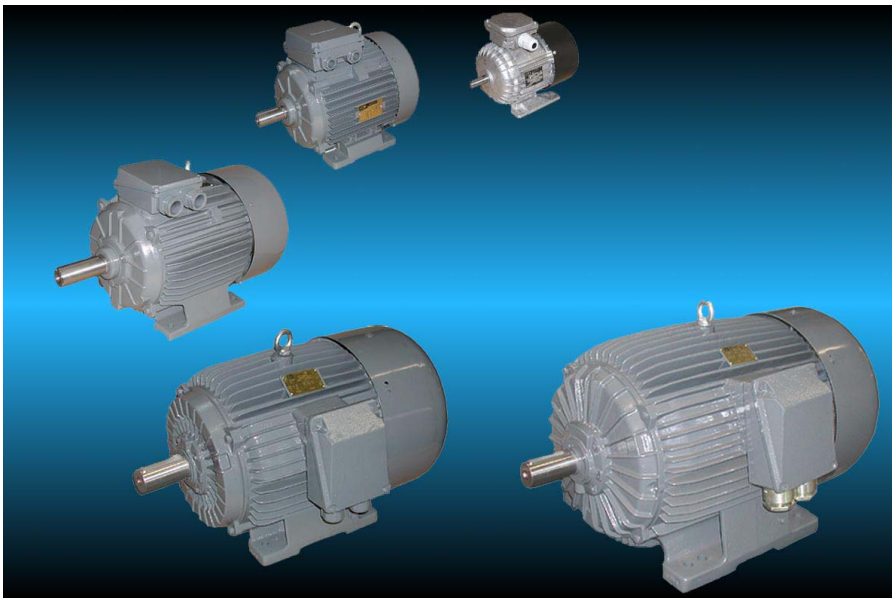
The three phase induction motors in this catalogue are available in the frame sizes 56 to 315 with the outputs 0,06kW to 160kW acc. efficiency class EFF2 and 110kW to 200kW acc. efficiency class EFF1 (only frame size 315).

We offer the single phase motors in two groups:

a.) Motor types NPEKg, NPEKh and NPEg with a low starting torque.
These motors have built on a running capacitor.
They are available in the frame sizes 56 to 100 with the outputs 0,04kW to 2,7kW and with the starting torque ratio 0,4 to 1,4.

b.) Motor types FDEB and FDET with a high starting torque.
These motors have built on a starting and a running capacitor. There is also a centrifugal switch built in it.
They are available in the frame sizes 63 to 112 with the outputs 0,12kW to 4,0kW and with the starting torque ratio 1,5 to 2,55.

This catalogue also includes cooling medium pumps of the types DKP and EKP.



CONSTRUCTION OF THE MOTORS

1.) **Housing:**

The housing for motors of the frame sizes 56 to 112 is made of die-casted aluminium alloy.
The housing for motors of the frame sizes 132 to 315 is made of cast iron.

The feet of the motors are detachable for the frame sizes 56 to 132 as well as the motor series SEE 315 while the motors of the frame sizes 160 to 315 have integrated feet.

2.) **End-shields and flanges:**

End-shields and flanges for motors of the frame sizes 56 to 80 are made of aluminium alloy.
End-shields and flanges for motors of the frame sizes 90 to 315 are made of cast iron.

3.) **Rotor:**
The winding of the rotor is made of die-casted aluminium. The rotor together with the shaft is dynamically balanced with half key acc. to DIN ISO 8821.

4.) **Terminal boxes:**
The motors of the frame size 56 to 180 have their terminal box on the top of the housing.
The terminal box can be rotated in steps of 90 deg.
The motors of the frame size 200 to 315 (DPIG series) have their terminal box on the right side of the housing.
Motors with the terminal box on the left side also are available on request.
The SEE motor series of the frame size 315 have their terminal box on the top as a standard. Motors with their terminal box on the side (right or left hand side) is available too.

5.) **Fan:**
The fan for the motors of the frame size 56 to 315 is made of plastic.
On request the fan for the motors of the frame size 200 to 315 can be made of steel welded construction.

6.) **Cooling:**
The motors are surface cooled (IC411).

7.) **Fan cover:**
The fan cover for all motors is made of sheet steel.

8.) **The shaft ends:**
Motors in their standard version have one shaft end with the dimensions acc. to EN.
Shaft ends of the motors of the frame size 63 and above have a drilled and tapped hole.
On request, with an extra charge motors are available with a special shaft end and/or two shaft ends too.

9.) **Degree of protection:**
All motors of this catalogue are manufactured with the degree of protection IP 55 (**IP**…**I**nternational **P**rotection).
On request the motors are available with a higher degree of protection.

IP	protection of work equipment	protection of people	**IP**	protection of work equipment
First prefix	against penetrate of solid foreign bodies	against access of dangerous parts with	**Second prefix**	against penetrate of water with detrimental action
0.	(no protection)	(no protection)	**.0**	(no protection)
1.	≥ 50 mm diameter	back of the hand	**.1**	drip - proof vertical
2.	≥ 12,5 mm diameter	finger	**.2**	drip - proof (15° inclination)
3.	≥ 2,5 mm diameter	tool	**.3**	spray - proof
4.	≥ 1,0 mm diameter	wire	**.4**	splash - proof
5.	**dustproof**	**wire**	**.5**	**jet - proof**
6.	dust - tight	wire	**.6**	strong jet -proof
			.7	short-time immersion
			.8	permanent immersion

10.) **Nominal voltage and frequency:**
The nominal voltage of three phase motors is 400 V ± 10% at the nominal frequency of 50Hz.
Motors for another nominal voltage and/or another nominal frequency are available on request.

11.) **Nominal output:**

The motors will properly operate with the nominal output at continuous duty (S1) when the following conditions are observed:

- motor is supplied with nominal voltage and frequency
- ambient temperature is not higher than + 40°C
- altitude of site is up to 1000m above sea level

With an ambient temperature higher than + 40°C or an altitude of site higher than 1000m the output on the shaft reduces as follows:

Ambient temperature °C		30	40	45	50	55	60
Rated output reduced to %		100	100	96	90	86	82

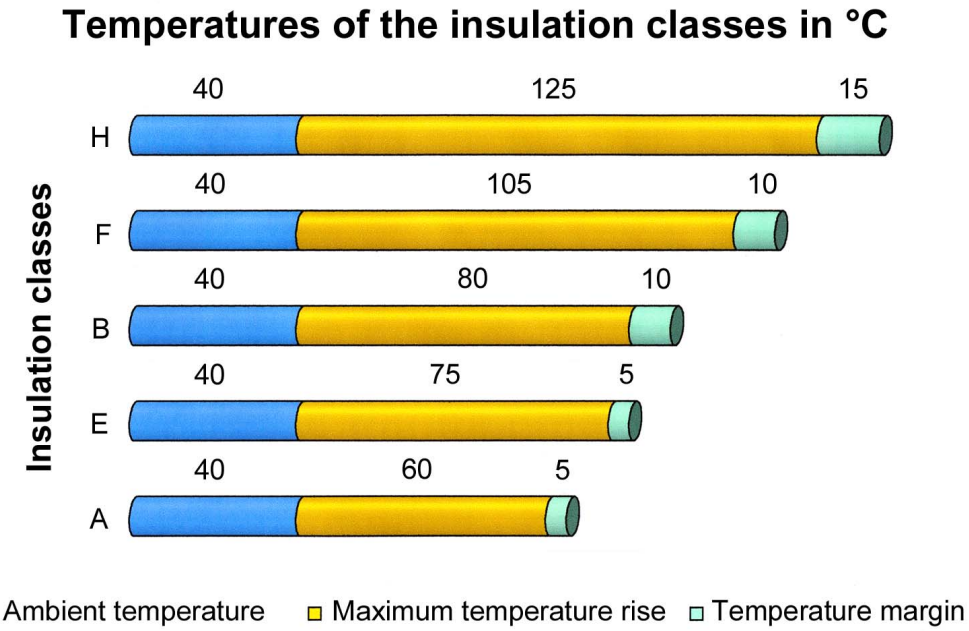
Altitude of site m	1.000	1.500	2.000	2.500	3.000	3.500	4.000
Rated output reduced to %	100	97	94	90	86	82	77

Example: The permissible output of a motor rated at 30kW at the ambient temperature of + 55°C at the altitude of site of 2500m over the sea level amounts to:

$P_{per} = 30 \cdot 0{,}86 \cdot 0{,}90 = 23kW$

12.) **Insulation:**

The standard motors (DPIG and DPIH series) are manufactured in the insulation class F while the motor types SEE 315 M.C and M.D are manufactured in the insulation class H.



13.) **Options:**

The motors can be equipped with optional accessories (e.g. PTC, Pt100, anti-condensation heater, external fan), suitable for frequency inverter drive or tacho generator.

14.) **Ordering:**

When ordering motors please specify the following information:

a) quantity
b) motor size
c) nominal output, kW
d) rated speed
e) type of mounting
f) nominal voltage and nominal frequency
g) any special features or options

STANDARDS

Technical information

The motors are manufactured in accordance with the following standards:

Subject	European Norm (EN)	Subject	European Norm (EN)
Nominal data	EN 60034-1	Direction of rotation	EN 60034-8
Losses and efficiency	EN 60034-2	Noise limits	EN 60034-9
Degree of protection	EN 60034-5	Vibration limits	EN 60034-14
Methods of cooling	EN 60034-6	Mounting dimensions	EN 60072-1
Type of mounting	EN 60034-7		

The motors comply with national standards of other European countries too:

Belgium:	NBNC 51-101/1976	Germany:	VDE 0530	Netherlands:	NEN 3173/1977
Denmark:	DS 5002/1958	Great Britain:	BS 4999.1987	Norway:	NEK 41.69-49.72
France:	NF C51-111/11.1975		BS 5000 part 16:1985	Sweden:	SEN 260101/1974

BEARINGS

The exact bearing type for each motor is specified in the table below:

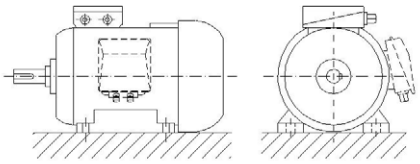
Motor		Type of bearing				
Size	Nr of poles	DE		NDE		
DPIG 56	2,4	6201 ZZ				
DPIG 63	2,4,6,8	6202 ZZ				
DPIH 71	2,4,6,8	6203 ZZ				
DPIH 80	2,4,6,8	6204 ZZ				
DPIH 90 S,L	2,4,6,8	6205 ZZ C3 (6205 2RS at IMV1)				
DPIG 100 L	2,4,6,8	6206 ZZ C3 (6206 2RS at IMV1)				
DPIG 112 M	2,4,6,8	6306 ZZ C3 (6306 2RS at IMV1)				
DPIG 132 S,M	2,4,6,8	6308 ZZ C3 (6308 2RS at IMV1)				
DPIG 160 M,L	2,4,6,8	6309 ZZ C3 (6309 2RS at IMV1)				
DPIG 180 M,L	2,4,6,8	6311 ZZ C3 (6311 2RS at IMV1)				
		Standard		Strengthened version on request		
		DE	NDE	DE / NDE	DE	NDE
DPIG 200	2	6212 C3	6212 C3	6312 C3	--	--
DPIG 200	4,6,8	NU 212	6212 C3	6312 C3	NU 312	6312 C3
DPIG 225	2	6213 C3	6213 C3	6313 C3	--	--
DPIG 225	4,6,8	NU 213	6213 C3	6313C3	NU 313	6313C3
DPIG 250	2	6215 C3	6215 C3	6315 C3	--	--
DPIG 250	4,6,8	NU 215	6215 C3	6315 C3	NU 315	6315 C3
DPIG 280	2	6217 C3	6217 C3	6315 C3	--	--
DPIG 280	4,6,8	NU 217	6217 C3	6317 C3	NU 317	6317 C3
DPIG 315	2	6315 C3	6315 C3	--	--	--
DPIG 315	4,6,8	NU 318	6318 C3	6318 C3	--	--
SEE 315 MC	2	6315 C3	6315 C3	--	--	--
SEE 315 MC,D	4,6,8	6320 C3	6318 C3	--	NU 320	6318 C3

The quality of the bearings and a perfect grease ensures the lifetime of the bearing system of about 10 000 hours at 2-pole motors and of about 20 000 hours at 4-, 6- and 8-pole motors

TYPES OF MOUNTING

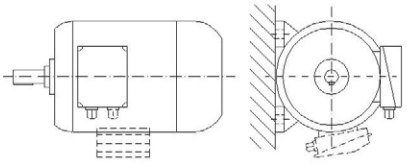
according to IEC CODE I / IEC CODE II

IM B3/IM 1001



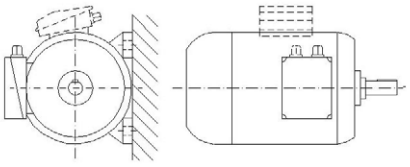
Foot mounted, frame size 56 to 315

IM B6/IM 1051



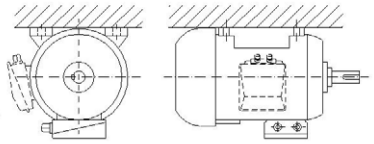
Foot wall mounted, with feet on left-hand side when viewed from D.E., frame size 56 to 315 excl. SEE 315 series

IM B7/IM 1061



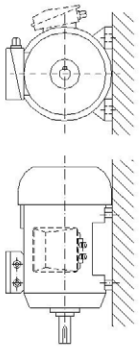
Foot wall mounted, with feet on right-hand side when viewed from D.E., frame size 56 to 315 excl. SEE 315 series

IM B8/IM 1071



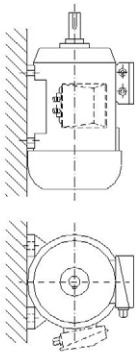
Ceiling mounted, with feet above motor, frame size 56 to 315 excl. SEE 315 series

IM V5/IM 1011



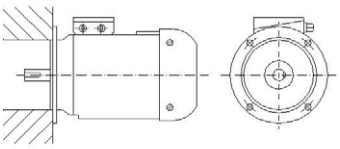
Vertical feet, wall mounted, shaft down frame size 56 to 315

IM V6/IM 1031



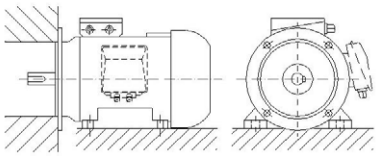
Vertical feet, wall mounted, shaft up frame size 56 to 315

IM B5/IM 3001



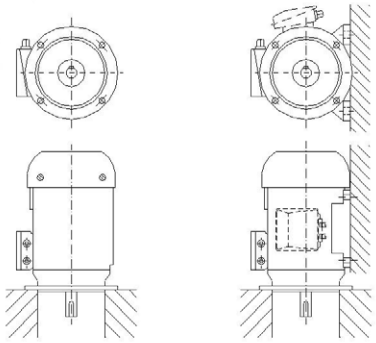
´D´ type flange at D.E. side, no feet frame size 56 to 315

IM B35/IM 2001



´D´ type flange at D.E. side, with feet, frame size 56 to 315

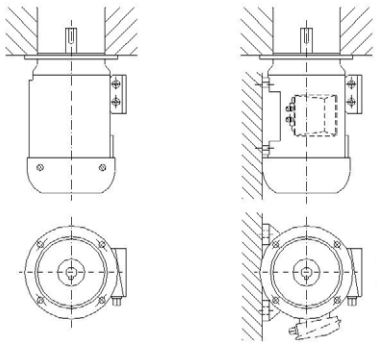
IM V1/IM 3011 IM V15/IM 2011



´D´ type flange at D.E. side, shaft down, no feet, frame size 56 to 315

´D´ type flange at D.E. side, shaft down, with feet, frame size 56 to 315

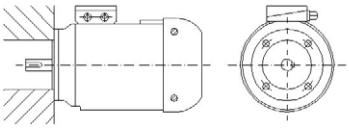
IM V3/IM 3031 IM V36/IM 2031



´D´ type flange at D.E. side, shaft up, no feet, frame size 56 to 315 excl. SEE 315 series

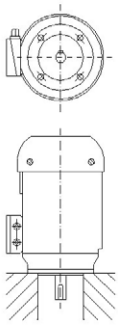
´D´ type flange at D.E. side, shaft up, with feet, frame size 56 to 315

IM B14/IM 3601



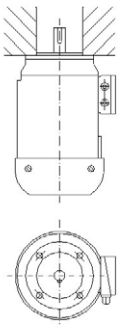
´C´ type flange at D.E. side, no feet, frame size 56 to 132

IM V18/IM 3611



´C´ type flange at D.E. side, shaft down, no feet, frame size 56 to 180

IM V19/IM 3631



´C´ type flange at D.E. side, shaft up, no feet, frame size 56 to 180

Performance data of three phase motors

EFF 2

Type	Rated speed	Nominal output		Nominal current in A at		Efficiency η in %			Power factor cos φ			Nominal torque T_N	Start / nominal torque (DOL)	Start / nominal current (DOL)	Start / nominal torque (Y-Δ)	Start / nominal current (Y-Δ)	Break down / nominal torque	Noise level	Moment of inertia	Weight in B3
	min^{-1}	kW	HP	380V	400V	4 / 4	3 / 4	2 / 4	4 / 4	3 / 4	2 / 4	Nm	T_S/T_N	I_S/I_N	T_S/T_N	I_S/I_N	T_B/T_N	dB(A)	kgm^2	kg
2 pole; 50 Hz; 3000 min^{-1}																				
DPIG 56 A / 2	2800	0,09	0,12	0,34	0,32	58,0	50,0	43,0	0,75	0,69	0,57	0,31	2,1	4,5	—	—	2,1	60	0,000076	3,00
DPIG 56 B / 2	2800	0,12	0,17	0,37	0,35	63,0	58,0	50,0	0,83	0,68	0,57	0,41	1,8	4,8	—	—	2,1	60	0,000095	3,40
DPIG 63 A / 2	2760	0,18	0,25	0,58	0,55	65,0	63,0	58,0	0,80	0,69	0,57	0,62	1,9	3,8	—	—	1,9	60	0,000175	3,60
DPIG 63 B / 2	2760	0,25	0,33	0,68	0,65	68,0	65,0	62,0	0,83	0,72	0,60	0,87	2,0	4,0	—	—	2,0	60	0,000235	4,20
DPIH 71 A / 2	2800	0,37	0,50	1,05	1,00	71,0	69,0	67,0	0,77	0,72	0,63	1,26	2,2	4,4	—	—	2,2	60	0,000389	5,00
DPIH 71 B / 2	2790	0,55	0,75	1,42	1,35	75,0	72,0	69,0	0,82	0,78	0,68	1,88	2,0	4,0	—	—	2,1	60	0,000484	6,00
DPIH 80 A / 2	2800	0,75	1,00	2,00	1,90	74,0	72,0	66,0	0,80	0,59	0,48	2,56	2,7	4,5	—	—	2,6	65	0,000829	7,80
DPIH 80 B / 2	2780	1,10	1,50	2,63	2,50	77,0	75,0	69,0	0,84	0,81	0,68	3,78	2,6	5,1	—	—	2,6	65	0,00101	9,10
DPIH 90 S / 2 I	2835	1,50	2,00	3,40	3,23	81,1	82,1	80,7	0,83	0,77	0,65	5,05	3,0	6,2	—	—	3,1	69	0,00130	14,0
DPIH 90 L / 2 I	2855	2,20	3,00	4,90	4,66	83,2	83,9	82,2	0,82	0,75	0,62	7,36	3,4	7,1	—	—	3,5	71	0,00200	16,8
DPIG 100 L / 2 I	2905	3,00	4,00	6,40	6,08	83,4	83,2	80,9	0,86	0,80	0,69	9,86	2,7	7,5	—	—	2,8	71	0,00480	25,0
DPIG 112 M / 2 I	2865	4,00	5,50	7,90	7,51	85,4	86,4	85,7	0,90	0,88	0,83	13,3	2,1	6,4	—	—	2,3	71	0,00790	34,0
2DPIG 132 SA / 2 I	2910	5,50	7,50	10,9	10,4	87,0	87,5	86,4	0,88	0,83	0,73	18,1	2,4	7,0	0,80	2,33	3,2	70	0,0150	60,0
2DPIG 132 SB / 2 I	2920	7,50	10,0	14,6	13,9	88,5	89,2	88,1	0,88	0,80	0,71	24,5	2,5	7,5	0,83	2,50	3,2	74	0,0180	71,0
DPIG 160 MA / 2	2930	11,0	15,0	20,9	19,9	89,5	89,6	88,3	0,89	0,85	0,79	35,9	2,4	6,1	0,80	2,03	2,9	75	0,0420	100
DPIG 160 MB / 2	2920	15,0	20,0	27,6	26,2	90,5	90,8	90,0	0,91	0,89	0,83	49,1	2,4	6,2	0,80	2,07	2,7	75	0,0480	115
DPIG 160 L / 2	2930	18,5	25,0	33,8	32,1	91,0	91,4	90,7	0,91	0,89	0,83	60,3	2,8	6,5	0,93	2,17	3,0	75	0,0590	130
DPIG 180 M / 2	2920	22,0	30,0	42,5	40,4	90,6	90,8	89,5	0,88	0,86	0,80	72,0	2,5	6,0	0,83	2,00	2,5	81	0,0760	165
DPIG 200 LA / 2	2960	30,0	40,0	55,0	52,0	92,9	93,0	92,3	0,89	0,85	0,78	97,0	1,9	6,0	0,63	2,00	2,3	78	0,150	245
DPIG 200 LB / 2	2960	37,0	50,0	67,4	64,0	93,7	93,8	93,4	0,89	0,86	0,79	119	2,2	6,7	0,73	2,23	2,5	78	0,180	265
DPIG 225 M / 2	2968	45,0	60,0	81,0	77,0	94,5	94,6	93,8	0,89	0,87	0,82	145	2,4	7,0	0,80	2,33	2,5	79	0,260	335
DPIG 250 M / 2	2970	55,0	75,0	99,0	94,0	93,5	93,0	91,6	0,90	0,88	0,85	177	2,0	6,9	0,67	2,30	2,4	81	0,360	410
DPIG 280 S / 2	2977	75,0	100	135	128	94,0	93,8	92,5	0,90	0,87	0,80	241	2,1	7,5	0,70	2,50	3,3	82	0,760	535
DPIG 280 M / 2	2970	90,0	125	159	151	94,7	94,2	93,0	0,91	0,88	0,82	290	2,0	7,0	0,67	2,33	3,2	82	0,870	605
DPIG 315 S / 2	2975	110	150	191	181	95,4	95,3	94,6	0,92	0,90	0,85	353	1,8	8,0	0,60	2,67	2,6	82	0,910	690
DPIG 315 MA / 2	2975	132	180	232	220	95,0	95,1	94,5	0,91	0,88	0,82	424	2,1	8,5	0,70	2,83	2,8	82	0,980	725
DPIG 315 MB / 2	2975	160	217	280	266	95,9	95,9	95,5	0,91	0,89	0,84	514	1,9	7,9	0,63	2,63	2,7	82	1,20	790
EFF 1 SEE,K,L 315 M2C	2971	200	270	340	323	96,0	96,3	96,0	0,93	0,91	0,87	643	1,8	6,5	0,60	2,17	2,5	82	1,51	1030

We reserve the right to change technical data or dimensions due to modifications!

Performance data of three phase motors

EFF 2

Type	Rated speed	Nominal output		Nominal current in A at		Efficiency η in %			Power factor cos φ			Nominal torque T_N	Start / nominal torque (DOL)	Start / nominal current (DOL)	Start / nominal torque (Y-Δ)	Start / nominal current (Y-Δ)	Brake down / nominal torque	Noise level	Moment of inertia	Weight in B3
	min^{-1}	kW	HP	380V	400V	4 / 4	3 / 4	2 / 4	4 / 4	3 / 4	2 / 4	Nm	T_S/T_N	I_S/I_N	T_S/T_N	I_S/I_N	T_B/T_N	dB(A)	kgm^2	kg
4 pole; 50 Hz; 1500 min^{-1}																				
DPIG 56 A / 4	1400	0,06	0,08	0,26	0,25	55,0	52,0	44,0	0,66	0,50	0,40	0,41	1,8	3,3	—	—	2,0	49	0,000145	2,7
DPIG 56 B / 4	1380	0,09	0,12	0,36	0,34	61,0	58,0	54,0	0,65	0,52	0,40	0,62	1,9	3,2	—	—	2,0	49	0,000186	2,9
DPIG 63 A / 4	1380	0,12	0,17	0,42	0,40	64,0	60,0	56,0	0,72	0,62	0,55	0,83	2,0	3,2	—	—	2,0	51	0,000240	3,6
DPIG 63 B / 4	1380	0,18	0,25	0,68	0,65	64,0	62,0	60,0	0,70	0,60	0,53	1,25	2,0	3,2	—	—	2,0	51	0,000307	4,2
DPIH 71 A / 4	1380	0,25	0,33	0,89	0,85	66,0	63,0	60,0	0,68	0,58	0,51	1,73	2,0	3,0	—	—	2,0	51	0,000606	4,8
DPIH 71 B / 4	1360	0,37	0,50	1,26	1,20	68,0	65,0	62,0	0,72	0,69	0,66	2,59	2,1	3,1	—	—	2,0	56	0,000770	5,9
DPIH 80 A / 4	1400	0,55	0,75	1,80	1,70	70,0	68,0	62,0	0,68	0,63	0,50	3,75	2,1	3,6	—	—	2,1	58	0,00158	7,5
DPIH 80 B / 4	1390	0,75	1,00	2,11	2,00	75,0	73,0	67,0	0,73	0,69	0,65	5,15	2,1	4,0	—	—	2,1	58	0,00187	8,8
DPIH 90 S / 4 I	1405	1,10	1,50	2,70	2,57	76,7	77,8	75,5	0,80	0,72	0,59	7,48	2,2	4,9	—	—	2,8	60	0,00230	14,0
DPIH 90 L / 4 I	1410	1,50	2,00	3,70	3,52	79,0	80,0	78,1	0,78	0,70	0,57	10,2	2,5	5,3	—	—	2,8	61	0,00280	16,5
DPIG 100 LA / 4 I	1425	2,20	3,00	5,10	4,85	82,0	82,3	80,2	0,80	0,72	0,59	14,7	2,5	6,1	—	—	2,8	61	0,00580	25,0
DPIG 100 LB / 4 I	1415	3,00	4,00	6,90	6,56	82,7	83,1	81,1	0,81	0,73	0,60	20,3	2,6	6,1	—	—	2,7	66	0,00650	26,0
DPIG 112 M / 4 I	1435	4,00	5,50	8,70	8,27	85,1	85,6	84,0	0,82	0,75	0,61	26,6	2,6	6,3	—	—	3,0	66	0,0118	34,0
2DPIG 132 S / 4 I	1450	5,50	7,50	11,6	11,0	85,9	86,9	84,3	0,84	0,78	0,66	36,2	2,2	6,9	0,73	2,30	3,1	65	0,0290	62,0
2DPIG 132 M / 4 I	1450	7,50	10,0	15,4	14,6	87,0	87,8	87,0	0,85	0,79	0,68	49,4	2,4	6,7	0,80	2,23	3,1	65	0,0350	73,0
DPIG 160 M / 4	1460	11,0	15,0	22,0	20,9	89,0	89,3	88,2	0,85	0,80	0,70	72,0	2,3	7,0	0,77	2,33	3,1	63	0,0610	105
DPIG 160 L / 4	1460	15,0	20,0	29,2	27,7	89,5	89,9	89,1	0,87	0,82	0,73	98,0	2,4	7,3	0,80	2,43	3,2	72	0,0750	125
DPIG 180 M / 4	1470	18,5	25,0	34,5	32,8	90,5	90,9	90,0	0,90	0,87	0,79	120	2,4	6,8	0,80	2,27	2,9	69	0,135	165
DPIG 180 L / 4	1465	22,0	30,0	40,8	38,8	91,0	91,3	90,4	0,90	0,87	0,79	143	2,7	7,3	0,90	2,43	2,8	69	0,155	175
DPIG 200 L / 4	1472	30,0	40,0	55,8	53,0	92,5	92,5	91,7	0,88	0,84	0,76	195	2,9	7,1	0,97	2,37	2,5	69	0,310	265
DPIG 225 S / 4	1475	37,0	50,0	69,5	66,0	92,6	93,0	92,0	0,88	0,86	0,82	240	2,1	6,3	0,70	2,10	2,2	73	0,440	320
DPIG 225 M / 4	1480	45,0	60,0	83,2	79,0	94,0	94,3	93,9	0,88	0,85	0,70	291	2,4	7,0	0,80	2,33	2,3	73	0,530	345
DPIG 250 M / 4	1483	55,0	75,0	98,0	93,0	93,5	93,9	93,2	0,91	0,89	0,84	354	2,4	7,3	0,80	2,43	2,6	75	0,790	425
DPIG 280 S / 4	1485	75,0	100	134	128	94,2	93,5	92,5	0,90	0,88	0,83	483	2,5	7,3	0,83	2,43	2,5	75	1,37	575
DPIG 280 M / 4	1485	90,0	125	159	151	94,8	94,3	93,5	0,91	0,89	0,84	579	2,6	7,3	0,87	2,43	2,6	75	1,63	635
DPIG 315 S / 4	1480	110	150	193	183	94,2	94,4	94,1	0,92	0,90	0,85	710	2,3	6,8	0,77	2,27	2,3	76	1,67	720
DPIG 315 MA / 4	1487	132	180	235	223	94,9	95,0	94,5	0,90	0,88	0,83	848	2,3	7,6	0,77	2,53	2,5	76	1,84	750
DPIG 315 MB / 4	1483	160	217	279	265	95,6	96,0	96,1	0,91	0,90	0,87	1030	2,5	6,7	0,83	2,23	2,4	76	2,10	800
EFF 1 SEE,K,L 315 M4C	1483	200	270	349	332	95,5	95,5	94,7	0,91	0,90	0,88	1288	1,7	6,6	0,57	2,20	2,0	81	2,25	1000

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Performance data of three phase motors

EFF 2

Type	Rated speed	Nominal output		Nominal current in A at		Efficiency η in %			Power factor cos φ			Nominal torque T_N	Start / nominal torque (DOL)	Start / nominal current (DOL)	Start / nominal torque (Y-Δ)	Start / nominal current (Y-Δ)	Break down / nominal torque	Noise level	Moment of inertia	Weight in B3
	min^{-1}	kW	HP	380V	400V	4 / 4	3 / 4	2 / 4	4 / 4	3 / 4	2 / 4	Nm	T_S/T_N	I_S/I_N	T_S/T_N	I_S/I_N	T_B/T_N	dB(A)	kgm^2	kg
6 pole; 50 Hz; 1000 min^{-1}																				
DPIG 56 B / 6	900	0,06	0,08	0,37	0,35	40,0	36,0	34,0	0,65	0,61	0,47	0,64	1,5	1,8	—	—	1,6	55	0,000186	3,4
DPIG 63 A / 6	820	0,09	0,12	0,47	0,45	40,0	32,0	26,0	0,75	0,69	0,63	1,05	1,2	1,9	—	—	1,3	50	0,000240	3,6
DPIG 63 B / 6	880	0,12	0,17	0,53	0,50	53,0	46,0	40,0	0,70	0,64	0,59	1,30	1,1	2,6	—	—	1,6	55	0,000307	4,2
DPIH 71 A / 6	890	0,18	0,25	0,79	0,75	57,0	54,0	47,0	0,68	0,57	0,43	1,91	1,9	2,6	—	—	1,9	50	0,000736	4,9
DPIH 71 B / 6	860	0,25	0,33	1,15	1,00	55,0	520	45,0	0,79	0,72	0,63	2,78	1,6	2,3	—	—	1,6	50	0,000946	5,8
DPIH 80 A / 6	910	0,37	0,50	1,47	1,40	64,0	63,0	61,0	0,65	0,57	0,51	3,88	2,0	3,0	—	—	2,1	52	0,00169	7,3
DPIH 80 B / 6	900	0,55	0,75	1,89	1,80	67,0	65,0	62,0	0,70	0,66	0,62	5,84	1,9	2,7	—	—	2,0	58	0,00207	8,6
DPIH 90 S / 6 I	915	0,75	1,00	2,20	2,09	72,4	73,3	70,2	0,72	0,62	0,48	7,83	1,9	3,7	—	—	2,2	55	0,00200	13,5
DPIH 90 L / 6 I	920	1,10	1,50	3,10	2,95	75,4	76,2	73,5	0,71	0,62	0,48	11,4	2,2	4,0	—	—	2,3	61	0,00280	16,5
DPIG 100 L / 6 I	945	1,50	2,00	4,10	3,90	76,7	76,9	74,0	0,73	0,64	0,51	15,2	1,9	4,6	—	—	2,3	61	0,00900	24,0
DPIG 112 M / 6 I	960	2,20	3,00	5,10	4,85	83,8	83,8	81,6	0,78	0,69	0,56	21,9	2,2	5,9	—	—	2,8	61	0,0177	33,0
2DPIG 132 S / 6 I	950	3,00	4,00	7,20	6,80	81,0	81,5	79,2	0,78	0,71	0,58	30,2	2,1	5,4	0,70	1,80	2,8	65	0,0250	54,0
2DPIG 132 MA/6I	950	4,00	5,50	9,10	8,60	84,0	84,8	83,5	0,79	0,72	0,59	40,2	2,4	6,0	0,80	2,00	3,1	65	0,0320	66,0
2DPIG 132 MB/6I	950	5,50	7,50	12,4	11,8	85,0	85,9	84,8	0,79	0,71	0,59	55,3	2,7	6,3	0,90	2,10	3,1	65	0,0400	72,0
DPIG 160 M / 6	960	7,50	10,0	16,0	15,2	87,5	87,9	86,6	0,81	0,75	0,62	74,6	2,3	6,5	0,77	2,17	3,1	69	0,0720	100
DPIG 160 L / 6	960	11,0	15,0	23,0	21,9	88,5	89,2	88,3	0,82	0,76	0,65	109	2,4	7,0	0,80	2,33	3,1	69	0,0960	125
DPIG 180 L / 6	975	15,0	20,0	30,5	29,0	89,0	89,2	88,0	0,84	0,80	0,70	147	2,8	6,0	0,93	2,00	2,4	65	0,220	170
DPIG 200 LA / 6	980	18,5	25,0	36,0	34,5	90,5	90,8	90,0	0,86	0,83	0,76	180	2,5	6,8	0,83	2,27	2,4	63	0,410	250
DPIG 200 LB / 6	981	22,0	30,0	42,1	40,0	90,5	90,8	90,0	0,88	0,86	0,80	214	2,4	6,9	0,80	2,30	2,2	63	0,470	265
DPIG 225 M / 6	982	30,0	40,0	56,8	54,0	91,9	92,5	92,3	0,88	0,87	0,82	292	2,1	6,3	0,70	2,10	2,2	63	0,760	325
DPIG 250 M / 6	985	37,0	50,0	68,0	65,0	92,5	92,8	92,0	0,89	0,89	0,82	359	2,6	6,8	0,87	2,27	2,3	68	1,23	430
DPIG 280 S / 6	985	45,0	60,0	84,2	80,0	93,0	93,0	91,8	0,87	0,84	0,75	436	2,0	6,5	0,67	2,17	2,3	68	1,35	525
DPIG 280 M / 6	985	55,0	75,0	100	95,0	93,5	93,5	93,2	0,89	0,88	0,84	533	2,2	6,2	0,73	2,07	2,2	68	1,61	565
DPIG 315 S / 6	985	75,0	100	137	130	93,5	93,6	93,2	0,89	0,87	0,79	727	2,3	6,6	0,77	2,20	2,2	68	2,16	730
DPIG 315 MA / 6	984	90,0	125	166	158	93,7	93,8	92,8	0,88	0,84	0,77	873	2,5	6,8	0,83	2,27	2,0	68	2,29	740
DPIG 315 MB / 6	985	110	150	193	183	94,2	94,0	93,0	0,89	0,87	0,80	1066	2,3	7,2	0,77	2,40	2,1	68	2,86	840
EFF 1 SEE,K,L 315 M6C	985	132	180	247	235	94,3	94,0	93,6	0,86	0,82	0,74	1280	2,9	6,9	0,97	2,30	2,7	78	3,46	1050
EFF 1 SEE,K,L 315 M6D	980	160	217	297	282	94,2	94,9	95,0	0,87	0,85	0,79	1559	2,7	6,0	0,90	2,00	2,3	82	3,69	1085

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Performance data of three phase motors

EFF 2

Type	Rated speed	Nominal output		Nominal current in A at		Efficiency η in %			Power factor cos φ			Nominal torque T_N	Start / nominal torque (DOL)	Start / nominal current (DOL)	Start / nominal torque (Y-Δ)	Start / nominal current (Y-Δ)	Break down / nominal torque	Noise level	Moment of inertia	Weight in B3
	min^{-1}	kW	HP	380V	400V	4 / 4	3 / 4	2 / 4	4 / 4	3 / 4	2 / 4	Nm	T_S/T_N	I_S/I_N	T_S/T_N	I_S/I_N	T_B/T_N	dB(A)	kgm^2	kg
8 pole; 50 Hz; 750 min^{-1}																				
DPIG 63 A / 8	670	0,04	0,06	0,37	0,35	35,0	31,0	20,0	0,60	0,56	0,48	0,57	1,6	1,7	—	—	1,7	50	0,000240	3,6
DPIG 63 B / 8	670	0,06	0,08	0,47	0,45	38,0	34,0	25,0	0,60	0,55	0,46	0,86	1,6	1,7	—	—	1,7	50	0,000307	4,2
DPIH 71 A / 8	680	0,09	0,12	0,79	0,75	35,0	31,0	25,0	0,50	0,45	0,38	1,26	1,9	1,9	—	—	1,9	50	0,000736	4,9
DPIH 71 B / 8	670	0,12	0,17	0,74	0,70	47,0	45,0	40,0	0,63	0,54	0,37	1,71	1,7	1,9	—	—	1,8	50	0,000946	5,8
DPIH 80 A / 8	680	0,18	0,25	0,95	0,90	53,0	51,0	43,0	0,60	0,50	0,46	2,53	1,8	2,3	—	—	2,0	53	0,00169	7,5
DPIH 80 B / 8	680	0,25	0,33	1,26	1,20	57,0	55,0	52,0	0,60	0,52	0,48	3,51	1,7	2,5	—	—	1,7	53	0,00207	8,9
DPIH 90 S / 8 I	695	0,37	0,50	1,50	1,43	63,4	60,8	54,2	0,59	0,50	0,40	5,08	1,7	3,0	—	—	2,3	51	0,00210	13,4
DPIH 90 L / 8 I	675	0,55	0,75	2,00	1,90	65,0	65,3	60,4	0,64	0,55	0,43	7,78	1,7	2,8	—	—	1,9	52	0,00240	15,3
DPIG 100 LA / 8 I	710	0,75	1,00	2,40	2,28	71,1	70,5	65,9	0,66	0,57	0,45	10,1	1,5	3,5	—	—	1,9	67	0,00900	23,6
DPIG 100 LB / 8 I	705	1,10	1,50	3,60	3,42	72,2	71,8	67,6	0,65	0,58	0,44	14,9	1,6	3,6	—	—	1,9	61	0,0100	26,3
DPIG 112 M / 8 I	720	1,50	2,00	4,20	3,99	76,8	76,2	72,5	0,71	0,62	0,48	19,9	1,9	4,6	—	—	2,3	57	0,0192	31,0
2DPIG 132 S / 8 I	710	2,20	3,00	5,80	5,50	78,0	78,2	75,4	0,74	0,64	0,51	29,6	2,0	4,7	0,67	1,57	2,4	60	0,0330	53,0
2DPIG 132 M / 8 I	710	3,00	4,00	7,70	7,30	80,0	80,7	78,5	0,74	0,65	0,51	40,4	2,3	5,0	0,77	1,67	3,0	61	0,0440	65,0
DPIG 160 MA / 8	705	4,00	5,50	9,80	9,30	81,5	82,7	81,5	0,76	0,67	0,53	54,2	2,2	5,0	0,73	1,67	2,7	62	0,0600	85,0
DPIG 160 MB / 8	710	5,50	7,50	13,4	12,7	83,0	83,7	82,1	0,75	0,67	0,53	74,0	2,7	5,5	0,90	1,83	3,0	62	0,0770	95,0
DPIG 160 L / 8	705	7,50	10,0	17,2	16,3	84,5	85,5	84,5	0,78	0,70	0,56	102	2,7	5,8	0,90	1,93	3,0	62	0,102	115
DPIG 180 L / 8	730	11,0	15,0	24,7	23,5	89,0	89,2	87,7	0,76	0,70	0,58	144	2,0	5,5	0,67	1,83	2,4	66	0,213	165
DPIG 200 L / 8	733	15,0	20,0	30,6	29,1	89,5	90,0	88,8	0,83	0,81	0,73	196	2,2	5,5	0,73	1,83	2,1	60	0,450	255
DPIG 225 S / 8	735	18,5	25,0	39,0	37,0	89,5	90,0	88,8	0,81	0,75	0,63	240	2,0	5,6	0,67	1,87	2,0	60	0,580	280
DPIG 225 M / 8	735	22,0	30,0	46,3	44,0	90,4	90,8	90,0	0,80	0,78	0,68	286	2,0	5,2	0,67	1,73	1,8	60	0,680	315
DPIG 250 M / 8	738	30,0	40,0	59,0	56,0	91,5	92,0	91,0	0,84	0,77	0,67	388	2,5	6,3	0,83	2,10	2,1	65	1,27	430
DPIG 280 S / 8	737	37,0	50,0	73,0	69,0	92,8	93,1	92,0	0,83	0,78	0,70	479	2,0	5,3	0,67	1,77	1,8	65	1,47	535
DPIG 280 M / 8	737	45,0	60,0	88,0	84,0	92,5	92,8	92,0	0,84	0,82	0,75	583	2,1	5,4	0,70	1,80	2,0	65	1,80	590
DPIG 315 S / 8	735	55,0	75,0	110	106	92,7	93,0	92,0	0,81	0,78	0,68	715	2,0	5,3	0,67	1,77	1,9	65	2,16	720
DPIG 315 MA / 8	737	75,0	100	149	142	93,2	93,5	92,5	0,82	0,79	0,68	972	2,5	6,2	0,83	2,07	1,9	65	2,29	750
DPIG 315 MB / 8	737	90,0	125	179	170	93,2	93,5	92,5	0,82	0,78	0,68	1166	2,4	6,5	0,80	2,17	1,9	65	2,86	840
EFF 1 SEE,K,L 315 M8C	737	110	150	226	215	93,3	93,4	92,6	0,79	0,75	0,65	1425	2,3	5,4	0,77	1,80	2,2	75	3,46	1035
EFF 1 SEE,K,L 315 M8D	737	132	180	281	267	92,6	93,3	92,7	0,77	0,77	0,68	1711	2,3	5,4	0,77	1,80	2,2	74	3,69	1100

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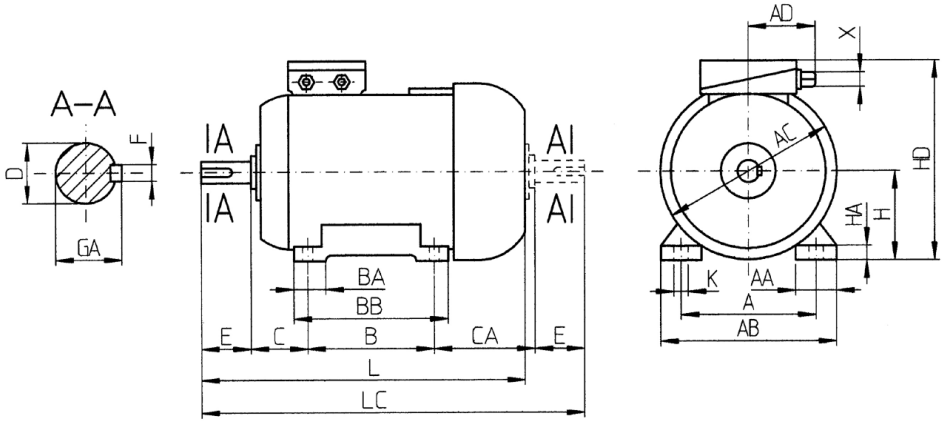
FFD

Dimensions of three phase motors
Foot mounted IMB3/IM1001

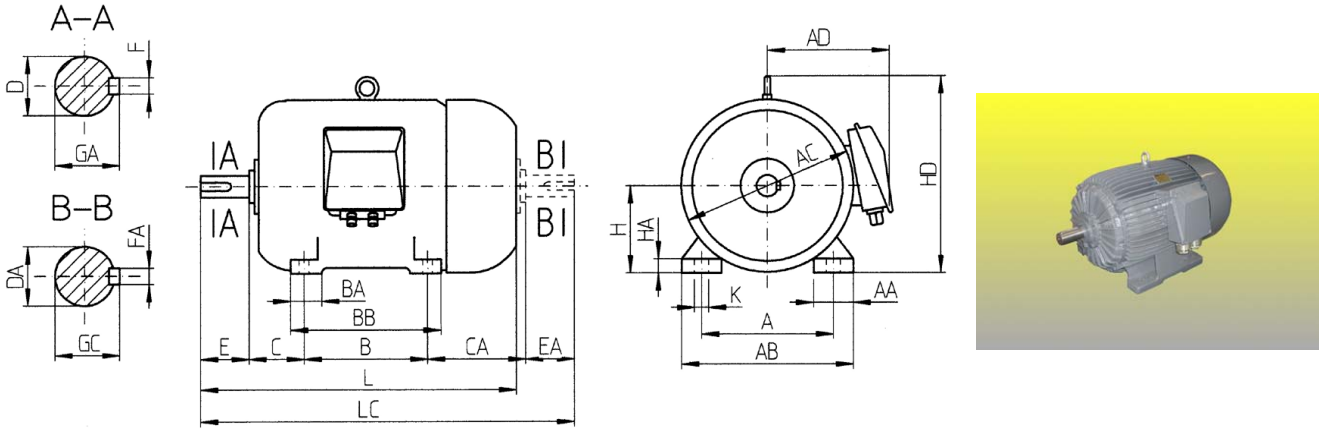


Frame size 56 to 180

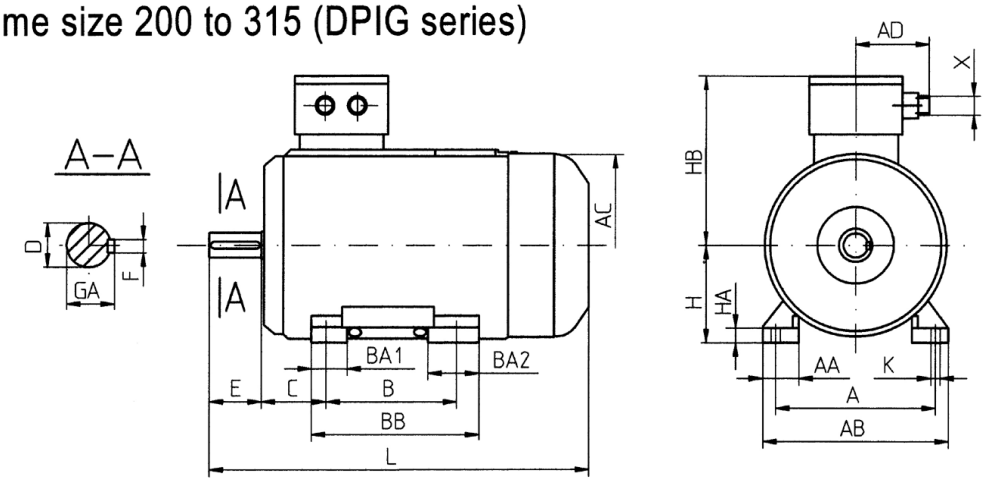
*Note: Shaft on NDE side only on request!

Type		Poles	Mounting dimensions in mm											Overall dimensions in mm								
			A	B	C	*CA	H -0,5	K	X	Shaft end D	E	F	GA	AA	AB	AC	AD	BB	HA	HD	L	*LC
DPIG 56	A	2/4	90	71	36	66,5/24	56	5,8	M 20 x 1,5	9j6	20	3h9	10,2	30	110	117	74	92	7	154	188/149	213,5/171
	B	2,6/4				74,5/32															196/157	221,5/179
DPIG 63	A	2 - 8	100	80	40	67	63	7	M 20 x 1,5	11j6	23	4h9	12,5	36	124	126	70	106	8,5	165	202	233
	B	2 - 8				79															214	245
DPIH 71	A	2 - 8	112	90	45	65	71	7	M 20 x 1,5	14j6	30	5h9	16	45	142	141	70	116	8	182	223	261
	B	2 - 8				88															245	283
DPIH 80	A	2 - 8	125	100	50	87	80	10	M 20 x 1,5	19j6	40	6h9	21,5	55	160	150	70	130	9	200	266	317
	B	2 - 8				99															278	329
DPIH 90	SI	2 - 8	140	100	56	104	90	10	M 20 x 1,5	24j6	50	8h9	27	50	170	185	—	153	10	220	305	360
	LI	2 - 8		125																	330	385
DPIG 100	LI	2 - 8	160	140	63	116	100	12	M 20 x 1,5	28j6	60	8h9	31	45	200	206	—	172	14	240	376	441
DPIG 112	MI	2 - 8	190	140	70	119	112	12	M 25 x 1,5	28j6	60	8h9	31	54	230	245	—	174	14	276	384	449
2DPIG 132	SI	2A,4-8	216	140	89	160	132	12	M 25 x 1,5	38k6	80	10h9	41	56	278	274	—	182	16	310	463	549
		2B		140		198												220			501	587
	MI	4 - 8		178		160												220			501	587
DPIG 160	M	2 - 8	254	210	108	200	160	15	M 40 x 1,5	42k6	110	12h9	45	60	305	323	—	256	20	370	612	738
	L	2 - 8		254														300			656	782
DPIG 180	M	2 - 4	279	241	121	243	180	15	M 40 x 1,5	48k6	110	14h9	51,5	70	350	360	—	320	26	408	705	825
	L	4 - 8		279		205																

Dimensions of three phase motors
Foot mounted IMB3/IM1001



Frame size 200 to 315 (DPIG series)

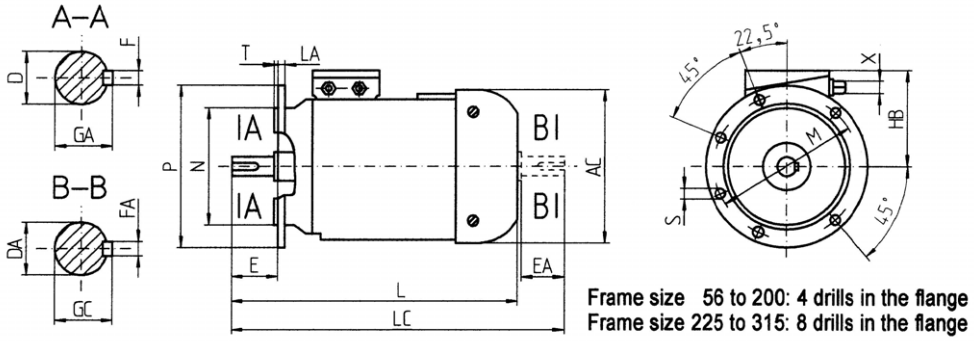


Frame size 315 (SEE series)

*Note: Shaft on NDE side only on request!

Type		Poles	Mounting dimensions in mm											Overall dimensions in mm								
			A	B	C	*CA	H –0,5	K	X	Shaft end D / *DA	Shaft end E / *EA	Shaft end F / *FA	Shaft end GA / *GC	AA	AB	AC	AD	BA	BB	HA	HD	L	*LC
DPIG 200	L	2 - 8	318	305	133	265	200	19	M 50 x 1,5	55/55	110/110	16/16	59/59	80	400	450	355	100	380	32	485	825	923
DPIG 225	S	4 - 8	356	286	149	290	225	19	M 50 x 1,5	60/55	140/110	18/16	64/59	85	445	505	375	110	355	34	535	865	970
	M	2		311						55/48	110/110	16/14	59/51,5						380			860	965
		4 - 8								60/55	140/110	18/16	64/59									890	995
DPIG 250	M	2	406	349	168	330	250	24	M 63 x 1,5	60/55	140/110	18/16	64/59	90	495	540	415	120	420	36	590	965	1097
		4 - 8								65/60	140/140	18/18	69/64										1127
DPIG 280	S	2	457	368	190	350	280	24	M 63 x 1,5	65/60	140/140	18/18	69/64	100	560	620	450	165	520	40	660	1040	1188
		4 - 8								75/65		20/18	79,5/69										
	M	2		419		299				65/60		18/18	69/64										
		4 - 8								75/65		20/18	79,5/69										
DPIG 315	S	2	508	406	216	421	315	28	M 63 x 1,5	65/65	140/140	18/18	69/69	105	610	620	450	190	560	46	695	1180	1323
		4 - 8								80/65	170/140	22/18	85/69									1210	1353
	M	2		457		370				65/65	140/140	18/18	69/69									1180	1323
		4 - 8								80/65	170/140	22/18	85/69									1210	1353
SEE 315	MC	2	508	457	216	—	315	28	M 76 x 3	65/—	140/—	18/—	69/—	120	610	620	250	117 + 168	550	46	805	1225	—
		4 - 6								80/—	170/—	22/—	85/—									1200	—
		8								90/—	170/—	25/—	95/—									1255	—
	MD	6 - 8								90/—	170/—	25/—	95/—									1255	—

Flange motors IMB5/IM3001 (flange type FF)

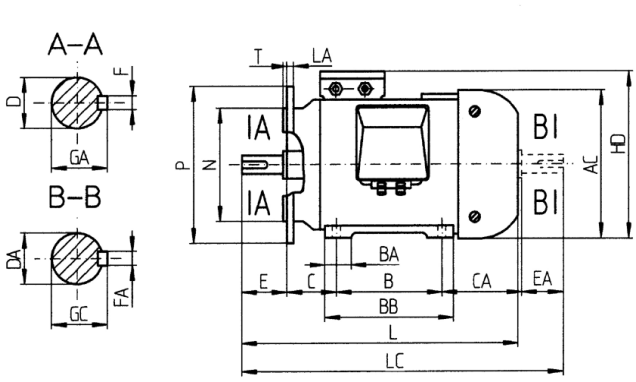


Frame size 56 to 200: 4 drills in the flange
Frame size 225 to 315: 8 drills in the flange

*Note: Shaft on NDE side only on request!

Type		Poles	Mounting dimensions in mm													Overall dimensions in mm			
			Type DIN	M	N /j6/	P	LA	S		T	X	Shaft end				AC	HB	L	*LC
								ø	Qty			D / *DA	E / *EA	F / *FA /h9/	GA / *GC				
DPIG 56	A	2/4	FF100	100	80	120	8	7	4	3,0	M 20 x 1,5	9j6	20	3	10,2	117	98	188/149	213,5/171
	B	2,6/4																196/157	221,5/179
DPIG 63	A	2 - 8	FF115	115	95	140	9	10	4	3,0	M 20 x 1,5	11j6	23	4	12,5	126	102	202	233
	B	2 - 8																214	245
DPIH 71	A	2 - 8	FF130	130	110	160	9	10	4	3,5	M 20 x 1,5	14j6	30	5	16,0	141	111	223	261
	B	2 - 8																245	283
DPIH 80	A	2 - 8	FF165	165	130	200	10	12	4	3,5	M 20 x 1,5	19j6	40	6	21,5	150	120	266	317
	B	2 - 8																278	329
DPIH 90	SI	2 - 8	FF165	165	130	200	8	12	4	3,5	M 20 x 1,5	24j6	50	8	27,0	185	130	305	360
	LI	2 - 8																330	385
DPIG 100	LI	2 - 8	FF215	215	180	250	11	12	4	4,0	M 20 x 1,5	28j6	60	8	31,0	206	140	376	441
DPIG 112	MI	2 - 8	FF215	215	180	250	12	15	4	4,0	M 25 x 1,5	28j6	60	8	31,0	245	164	384	449
2DPIG 132	SI	2A,4-8	FF265	265	230	300	12	15	4	4,0	M 25 x 1,5	38k6	80	10	41,0	274	178	463	549
		2B																501	587
	MI	4 - 8																501	587
DPIG 160	M	2 - 8	FF300	300	250	350	13	19	4	5,0	M 40 x 1,5	42k6	110	12	45,0	323	210	612	738
	L	2 - 8																656	782
DPIG 180	M	2 - 8	FF300	300	250	350	13	19	4	5,0	M 40 x 1,5	48k6	110	14	51,5	360	228	705	825
	L	4 - 8																	
DPIG 200	L	2 - 8	FF350	350	300	400	16,5	18	4	5,0	M 50 x 1,5	55/55	110/110	16/16	59/59	450	340	825	923
DPIG 225	S	4 - 8	FF400	400	350	450	18	18	8	5,0	M 50 x 1,5	60/55	140/110	18/16	64/59	505	360	865	970
	M	2										55/48	110/110	16/14	59/51,5			860	965
		4 - 8										60/55	140/110	18/16	64/59			890	995
DPIG 250	M	2	FF500	500	450	550	19	18	8	5,0	M 63 x 1,5	60/55	140/110	18/16	64/59	540	405	965	1097
		4 - 8										65/60	140/140	18/18	69/64				1124
DPIG 280	S	2	FF500	500	450	550	20	18	8	5,0	M 63 x 1,5	65/60	140/140	18/18	69/64	620	440	1040	1188
		4 - 8										75/65		20/18	79,5/69				
	M	2										65/60		18/18	69/64				
		4 - 8										75/65		20/18	79,5/69				
DPIG 315	S	2	FF600	600	550	660	22	22	8	6,0	M 63 x 1,5	65/65	140/140	18/18	69/69	620	440	1180	1323
		4 - 8										80/65	170/140	22/18	85/69			1210	1353
	M	2										65/65	140/140	18/18	69/69			1180	1323
		4 - 8										80/65	170/140	22/18	85/69			1210	1353
SEEK 315	MC	2	FF600	600	550	660	22	24	8	6,0	M 76 x 3	65/—	140/—	18/—	69/—	620	490	1225	—
		4 - 6										80/—	170/—	22/—	85/—			1200	—
		8										90/—	170/—	25/—	95/—			1255	—
	MD	4 - 6										90/—	170/—	25/—	95/—			1255	—

Foot/flange motors IMB35/IM2001



Frame size 56 to 180: Terminal box on the top
Frame size 200 to 315: Terminal box on the right side

Frame size 56 to 200: 4 drills in the flange
Frame size 225 to 315: 8 drills in the flange

*Note: Shaft on NDE side only on request!

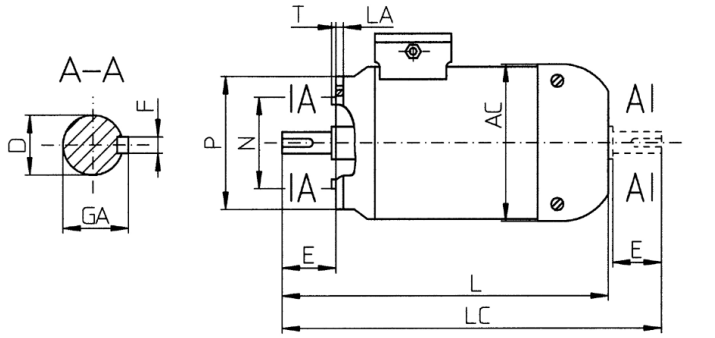
Type		Poles	Mounting dimensions in mm																		
										Flange								Shaft end			
			A	B	C	*CA	H –0,5	K	X	Type DIN	M	N /j6/	P	LA	S ø	S Qty	T	D / *DA	E / *EA	F / *FA /h9/	GA / *GC
DPIG 56	A	2/4	90	71	36	66,5/24	56	5,8	M 20 x 1,5	FF100	100	80	120	8	7	4	3	9j6	20	3	10,2
	B	2,6/4				74,5/32															
DPIG 63	A	2 - 8	100	80	40	67	63	7	M 20 x 1,5	FF115	115	95	140	9	10	4	3	11j6	23	4	12,5
	B	2 - 8				79															
DPIH 71	A	2 - 8	112	90	45	65	71	7	M 20 x 1,5	FF130	130	110	160	9	10	4	3,5	14j6	30	5	16
	B	2 - 8				88															
DPIH 80	A	2 - 8	125	100	50	87	80	10	M 20 x 1,5	FF165	165	130	200	10	12	4	3,5	19j6	40	6	21,5
	B	2 - 8				99															
DPIH 90	SI	2 - 8	140	100	56	104	90	10	M 20 x 1,5	FF165	165	130	200	8	12	4	3,5	24j6	50	8	27
	LI	2 - 8		125																	
DPIG 100	LI	2 - 8	160	140	63	116	100	12	M 20 x 1,5	FF215	215	180	250	11	12	4	4	28j6	60	8	31
DPIG 112	MI	2 - 8	190	140	70	119	112	12	M 25 x 1,5	FF215	215	180	250	12	15	4	4	28j6	60	8	31
2DPIG 132	SI	2A,4-8	216	140	89	160	132	12	M 25 x 1,5	FF265	265	230	300	12	15	4	4	38k6	80	10	41
		2B		140		198															
	MI	4 - 8		178		160															
DPIG 160	M	2 - 8	254	210	108	200	160	15	M 40 x 1,5	FF300	300	250	350	13	19	4	5	42k6	110	12	45
	L	2 - 8		254																	
DPIG 180	M	2 - 8	279	241	121	243	180	15	M 40 x 1,5	FF300	300	250	350	13	19	4	5	48k6	110	14	51,5
	L	4 - 8		279		205															
DPIG 200	L	2 - 8	318	305	133	265	200	19	M 50 x 1,5	FF350	350	300	400	16,5	18	4	5	55/55	110/110	16/16	59/59
DPIG 225	S	4 - 8	356	286	149	290	225	19	M 50 x 1,5	FF400	400	350	450	18	18	8	5	60/55	140/110	18/16	64/59
	M	2		311														55/48	110/110	16/14	59/51,5
		4 - 8																60/55	140/110	18/16	64/59
DPIG 250	M	2	406	349	168	330	250	24	M 63 x 1,5	FF500	500	450	550	19	18	8	5	60/55	140/110	18/16	64/59
		4 - 8																65/60	140/140	18/18	69/64
DPIG 280	S	2	457	368	190	350	280	24	M 63 x 1,5	FF500	500	450	550	20	18	8	5	65/60	140/140	18/18	69/64
		4 - 8																75/65		20/18	79,5/69
	M	2		419		299												65/60		18/18	69/64
		4 - 8																75/65		20/18	79,5/69

Foot/flange motors IMB35/IM2001

Type		Poles	Mounting dimensions in mm																	
										Flange								Shaft end			
			A	B	C	*CA	H –0,5	K	X	Typ DIN	M	N /j6/	P	LA	S ø	S Qty	T	D / *DA	E / *EA	F / *FA /h9/	GA / *GC
DPIG 315	S	2	508	406	216	421	315	28	M 63 x 1,5	FF600	600	550	660	22	22	8	6	65/65	140/140	18/18	69/69
		4 - 8																80/65	170/140	22/18	85/69
	M	2		457		370												65/65	140/140	18/18	69/69
		4 - 8																80/65	170/140	22/18	85/69
SEEL 315	MC	2	508	457	216	—	315	28	M 76 x 3	FF600	600	550	660	22	24	8	6	65/—	140/—	18/—	69/—
		4 - 6																80/—	170/—	22/—	85/—
		8																90/—	170/—	25/—	95/—
	MD	6 - 8																90/—	170/—	25/—	95/—

Type		Poles	Overall dimensions in mm									
			AA	AB	AC	AD	BA	BB	HA	HD	L	*LC
DPIG 56	A	2 / 4	30	110	117 / —	74	—	92	7	154	188 / 149	213,5 / 171
	B	2 , 6 / 4			117 / —						196 / 157	221,5 / 179
DPIG 63	A	2 - 8	36	124	126	70	—	106	8,5	165	202	233
	B	2 - 8									214	245
DPIH 71	A	2 - 8	45	142	141	70	—	116	8	182	223	261
	B	2 - 8									245	283
DPIH 80	A	2 - 8	55	160	150	70	—	130	9	200	266	317
	B	2 - 8									278	329
DPIH 90	SI	2 - 8	50	170	185	—	—	153	10	220	305	360
	LI	2 - 8									330	385
DPIG 100	LI	2 - 8	45	200	206	—	—	172	14	240	376	441
DPIG 112	MI	2 - 8	54	230	245	—	—	174	14	276	384	449
2DPIG 132	SI	2A, 4 - 8	56	278	274	—	—	182	16	310	463	549
		2B						220			501	587
	MI	4 - 8						220			501	587
DPIG 160	M	2 - 8	60	305	323	—	—	256	20	370	612	738
	L	2 - 8						300			656	782
DPIG 180	M	2 - 4	70	350	360	—	—	320	26	408	705	825
	L	4 - 8										
DPIG 200	L	2 - 8	80	400	450	355	100	380	32	485	825	923
DPIG 225	S	4 - 8	85	445	505	375	110	355	34	535	865	970
	M	2						380			860	965
		4 - 8									890	995
DPIG 250	M	2	90	495	540	415	120	420	36	590	965	1097
		4 - 8										1127
DPIG 280	S,M	2	100	560	620	450	165	520	40	660	1040	1188
		4 - 8										
DPIG 315	S,M	2	105	610	620	450	190	560	46	695	1180	1323
		4 - 8									1210	1353
SEEL 315	MC	2	120	610	620	250	117 + 168	550	46	805	1225	—
		4 - 6									1200	—
		8									1255	—
	MD	6 - 8									1255	—

Flange motors IMB14/IM3601
up to frame size 112 (flange type FT)



*Note: Shaft on NDE side only on request!

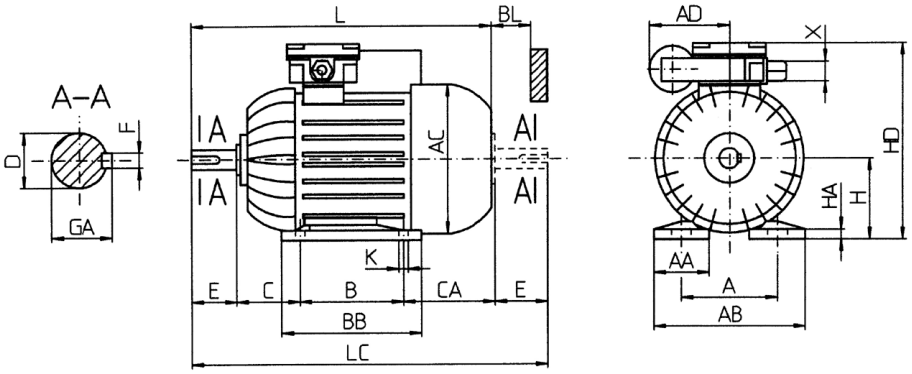
Type		Poles	Mounting dimensions in mm							Overall dimensions in mm														
			Flange C1							Flange C2								Shaft end						
			DIN	M	N /j6/	P	S		T	DIN	M	N /j6/	P	S		T	X	D /j6/	E	F /h9/	GA	AC	HB	L	*LC
							ø	Qty						ø	Qty										
DPIG 56	A	2 / 4	FT85	85	70	105	M6	4	2,5	FT65	65	50	80	M5	4	2,5	M 20 x 1,5	9	20	3	10,2	117/-	98	188/ 149	213,5/ 171
	B	2,6/ 4	C105							C80												117/-		196/ 157	221,5/ 179
DPIG 63	A	2 - 8	FT100	100	80	120	M6	4	3	FT75	75	60	90	M5	4	2,5	M 20 x 1,5	11	23	4	12,5	126	102	202	233
	B	2 - 8	C120							C90														214	245
DPIH 71	A	2 - 8	FT115	115	95	140	M8	4	3	FT85	85	70	105	M6	4	2,5	M 20 x 1,5	14	30	5	16	141	111	223	261
	B	2 - 8	C140							C105														245	283
DPIH 80	A	2 - 8	FT130	130	110	160	M8	4	3,5	FT100	100	80	120	M6	4	3	M 20 x 1,5	19	40	6	21,5	150	120	266	317
	B	2 - 8	C160							C120														278	329
DPIH 90	SI	2 - 8	FT130	130	110	160	M8	4	3,5	FT115	115	95	140	M8	4	3	M 20 x 1,5	24	50	8	27	185	130	305	360
	LI	2 - 8	C160							C140														330	385
DPIG 100	LI	2 - 8	FT165	165	130	200	M10	4	3,5	FT130	130	110	160	M8	4	3,5	M 20 x 1,5	28	60	8	31	206	140	376	441
			C200							C160															
DPIG 112	MI	2 - 8	FT165	165	130	200	M10	4	3,5	FT130	130	110	160	M8	4	3,5	M 25 x 1,5	28	60	8	31	245	164	384	449
			C200							C160															
2DPIG 132		2A	FT215	215	180	250	M12	4	4	FT165	165	130	200	M12	4	3,5	M25 x 1,5	38 k6	80	10	41	274	178	463	549
	SI	4 , 8																						463	549
		2B	C250							C200														501	587
	MI	4 - 8																						501	587

Performance data of single phase motors

Type	Rated speed	Nominal output		Nominal current in A at		Efficiency	Power factor cos phi	Nominal torque T_N	Start / Nominal torque	Start / Nominal current	Break down / Nominal torque	Moment of inertia	Running capacitor (450V)	Starting capacitor (450V)	Weight
	min^{-1}	kW	HP	220V	230V	%	—	Nm	T_S/T_N	I_S/I_N	T_B/T_N	kgm^2	µF	µF	kg
2 pole; 50Hz; 3000rpm															
Low starting torque															
NPEKg 56 - 2A	2800	0,06	0,08	0,73	0,70	50	0,78	0,205	1,00	2,4	2,3	0,000070	3	--	3,1
NPEKg 56 - 2B	2790	0,09	0,12	0,89	0,85	53	0,90	0,307	1,00	2,5	2,0	0,000090	5	--	3,5
NPEKg 56 - 2C	2800	0,12	0,17	1,20	1,15	57	0,84	0,409	0,75	3,0	2,0	0,000100	5	--	3,9
NPEKg 63 - 2B	2760	0,18	0,25	1,88	1,80	52	0,84	0,614	0,80	2,7	2,0	0,000235	8	--	4,4
NPEKg 63 - 2C	2800	0,25	0,33	1,88	1,80	65	0,95	0,847	0,70	3,1	2,0	0,000310	10	--	5,2
NPEKh 71 - 2B	2800	0,37	0,50	3,14	3,00	64	0,90	1,260	0,70	2,7	1,8	0,000536	12	--	6,3
NPEKh 71 - 2C	2780	0,55	0,75	3,76	3,60	70	0,98	1,890	0,65	3,2	1,6	0,000691	20	--	7,7
NPEKh 80 - 2B	2800	0,75	1,00	5,23	5,00	70	0,94	2,560	0,65	3,4	1,9	0,001110	25	--	9,7
NPEKh 80 - 2C	2800	1,10	1,50	7,53	7,20	71	0,95	3,750	0,60	3,5	1,8	0,001420	30	--	11,6
NPEh 90 - 2S	2800	1,50	2,00	9,41	9,00	77	0,99	5,120	0,40	3,3	1,6	0,001200	40	--	12,4
NPEh 90 - 2L	2780	2,00	2,80	13,6	13,0	74	0,99	6,870	0,40	2,5	1,4	0,001600	50	--	15,2
NPEg 100L – 2	2830	2,70	3,60	17,5	16,7	71	0,99	9,100	0,50	4,4	1,5	0,005200	60	--	24,0
High starting torque															
FDEB 63 - 2A	2820	0,18	0,25	1,52	1,45	57	0,95	0,610	1,80	4,0	1,7	0,000175	8	25	4,0
FDEB 63 - 2B	2850	0,25	0,33	1,93	1,85	66	0,94	0,838	1,90	4,1	1,9	0,000235	10	30	4,6
FDEB 63 - 2C	2850	0,37	0,50	2,56	2,45	72	0,95	1,240	1,70	4,5	1,6	0,000310	12	40	5,4
FDEB 71 - 2B	2820	0,55	0,75	3,97	3,80	68	0,96	1,860	1,70	3,6	1,6	0,000530	14	25	6,5
FDEB 71 - 2C	2820	0,75	1,00	5,12	4,90	71	0,98	2,540	1,70	4,0	1,5	0,000690	25	70	8,1
FDEB 80 - 2B	2780	1,10	1,50	7,32	7,00	72	0,97	3,780	1,70	3,5	1,4	0,001110	25	70	10,6
FDEB 80 - 2C	2800	1,50	2,00	9,93	9,50	75	0,96	5,120	1,90	3,7	1,7	0,001420	40	60	12,2
FDET 90S - 2	2880	1,50	2,00	9,50	9,09	75	0,96	4,900	1,80	5,5	2,0	0,002100	25	125	16,0
FDET 90L - 2	2880	2,20	3,00	13,7	13,1	77	0,95	7,300	1,60	5,3	2,0	0,002600	35	160	19,0
FDET 100L - 2	2915	3,00	4,00	18,4	17,6	79	0,94	9,800	1,60	6,4	2,1	0,005200	40	250	27,0
FDEB 112M - 2F	2840	4,00	5,40	26,1	25,0	74	0,96	13,45	1,7	4,0	1,4	0,007900	75	625	35,0
4 pole; 50Hz; 1500rpm															
Low starting torque															
NPEKg 56 - 4A	1390	0,04	0,06	0,52	0,50	40	0,84	0,275	1,40	2,0	2,10	0,000200	3	--	3,1
NPEKg 56 - 4B	1390	0,06	0,08	0,76	0,73	44	0,85	0,412	1,10	2,1	2,20	0,000250	4	--	3,5
NPEKg 56 - 4C	1360	0,09	0,12	1,15	1,10	50	0,86	0,632	1,10	2,0	1,80	0,000300	5	--	4,0
NPEKg 63 - 4B	1360	0,12	0,17	1,31	1,25	53	0,88	0,843	1,00	2,2	1,90	0,000307	6	--	4,3
NPEKg 63 - 4C	1350	0,18	0,25	1,80	1,72	58	0,78	1,273	0,80	2,3	1,60	0,000380	8	--	5,1
NPEKh 71 - 4B	1340	0,25	0,33	2,72	2,60	56	0,82	1,780	1,00	2,0	1,70	0,000852	10	--	6,3
NPEKh 71 - 4C	1340	0,37	0,50	3,14	3,00	63	0,88	2,640	0,80	2,3	1,50	0,001099	16	--	7,7
NPEKh 80 - 4B	1360	0,55	0,75	4,40	3,90	66	0,94	3,860	0,60	3,2	1,60	0,002080	20	--	10,0
NPEKh 80 - 4C	1340	0,75	1,00	5,85	5,60	65	0,90	5,350	0,65	2,5	1,50	0,002650	25	--	11,4
NPEh 90 - 4S	1370	1,10	1,50	7,53	7,20	72	0,93	7,700	0,40	2,6	1,40	0,002400	30	--	12,3
NPEh 90 - 4L	1370	1,30	1,80	9,41	9,00	72	0,91	9,100	0,38	2,8	1,40	0,003200	40	--	14,0
NPEg 100L - 4	1370	2,20	3,00	14,8	14,2	73	0,92	15,30	0,40	3,6	1,80	0,007900	45	--	23,0
High starting torque															
FDEB 63 - 4A	1400	0,12	0,17	1,15	1,10	54	0,92	0,819	1,70	3,3	1,60	0,000240	6	14	3,8
FDEB 63 - 4B	1380	0,18	0,25	1,52	1,45	57	0,95	1,250	1,50	3,2	1,50	0,000307	8	16	4,4
FDEB 63 - 4C	1400	0,25	0,33	1,88	1,80	68	0,92	1,710	1,60	3,3	1,40	0,000380	10	20	5,2
FDEB 71 - 4B	1360	0,37	0,50	3,24	3,10	62	0,87	2,600	1,80	3,5	1,30	0,000850	10	25	6,5
FDEB 71 - 4C	1350	0,55	0,75	4,29	4,10	65	0,90	3,860	1,90	3,6	1,40	0,001010	18	60	8,0
FDEB 80 - 4B	1370	0,75	1,00	5,12	4,90	70	0,95	5,230	1,80	3,0	1,40	0,002080	20	60	10,4
FDEB 80 - 4C	1400	1,10	1,50	7,74	7,40	74	0,91	7,500	1,9	3,6	1,5	0,002650	30	75	12,2
FDET 90S - 4	1430	1,10	1,50	7,00	6,70	74	0,96	7,300	1,90	5,5	1,80	0,003800	25	125	16,0
FDET 90L - 4	1440	1,50	2,00	9,30	8,90	76	0,96	9,900	1,80	5,5	1,80	0,004700	30	160	18,5
FDET 100L - 4A	1435	2,20	3,00	13,9	13,3	75	0,96	14,60	1,90	5,4	2,10	0,007900	40	160	26,0
FDET 100L - 4B	1440	3,00	4,00	18,5	17,7	81	0,91	19,90	1,85	5,5	1,40	0,009400	40	250	30,5
FDEB 112M - 4F	1400	4,00	5,40	25,1	24,0	78	0,95	27,30	1,70	4,0	1,40	0,011800	70	500	35,0

Dimensions of single phase motors (low starting torque)

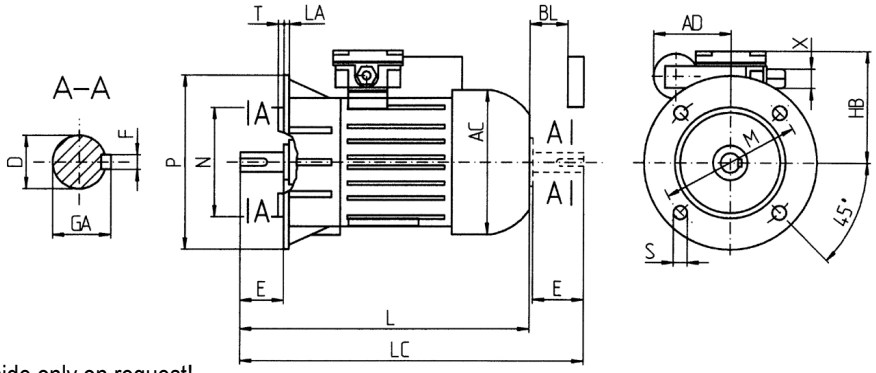
Foot mounted IMB3/IM1001



*Note: Shaft on NDE side only on request!

Type		Poles	Mounting dimensions in mm										Overall dimensions in mm									
									Shaft end															
			A	B	C	H -0,5	K	X	D /j6/	E	F /h9/	GA	AA	AB	AC	AD max	BB	BL min	*CA	HA	HD	L	*LC
NPEKg 56	A	2 - 4	90	71	36	56	5,8	M 20 x 1,5	9	20	3	10,2	30	110	117	74	92	11	66,5	7	154	188	213,5
	B	2 - 4																	74,5			196	221,5
	C	2 - 4																	82,5			204	229,5
NPEKg 63	B	2 - 4	100	80	40	63	7	M 20 x 1,5	11	23	4	12,5	36	124	126	74	106	11	79	8,5	165	214	245
	C	2 - 4																	94			228	260
NPEKh 71	B	2 - 4	112	90	45	71	7	M 20 x 1,5	14	30	5	16	45	142	141	90	116	12	88	8	182	245	283
	C	2 - 4																	106			263	301
NPEKh 80	B	2 - 4	125	100	50	80	10	M 20 x 1,5	19	40	6	21,5	55	160	150	95	130	15	98	9	200	278	329
	C	2 - 4																	120			306	357
NPEh 90	S	2 - 4	140	100	56	90	10	M 20 x 1,5	24	50	8	27	60	170	157	95	153	15	114	12	208	316	376
	L	2 - 4		125															107			328	388
NPEg 100	L	2 - 4	160	140	63	100	10	M 20 x 1,5	28	60	8	31	32	188	206	110	170	15	—	4	255	399	—

Flange mounted IMB5/IM3001



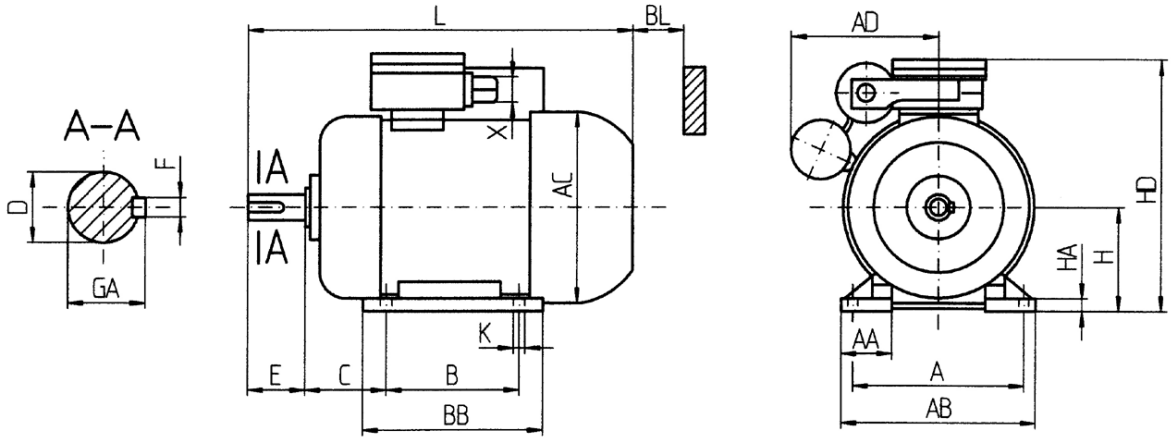
*Note: Shaft on NDE side only on request!

Type		Poles	Mounting dimensions in mm														Overall dimensions in mm					
			Shaft end				Flange															
			D /j6/	E	F /h9/	GA	DIN 42948	IEC Publ72	M	N /j6/	P	LA	S ø	S Qty	T	X	AC	AD max	BL min	HB	L	*LC
NPEKg 56	A	2 - 4	9	20	3	10,2	A120	F100	100	80	120	8	7	4	3	M 20 x 1,5	117	74	11	98	188	213,5
	B	2 - 4																			196	221,5
	C	2 - 4																			204	229,5
NPEKg 63	B	2 - 4	11	23	4	12,5	A140	F115	115	95	140	9	10	4	3	M 20 x 1,5	126	74	11	102	214	245
	C	2 - 4																			228	260
NPEKh 71	B	2 - 4	14	30	5	16	A160	F130	130	110	160	9	10	4	3,5	M 20 x 1,5	141	90	12	111	245	283
	C	2 - 4																			263	301
NPEKh 80	B	2 - 4	19	40	6	21,5	A200	F165	165	130	200	10	12	4	3,5	M 20 x 1,5	150	95	15	120	278	329
	C	2 - 4																			306	357

Type		Poles	Mounting dimensions in mm														Overall dimensions in mm					
			Shaft end				Flange															
			D /j6/	E	F /h9/	GA	DIN 42948	IEC Publ72	M	N /j6/	P	LA	S ø	S Qty	T	X	AC	AD max	BL min	HB	L	*LC
NPEh 90	S	2 - 4	24	50	8	27	A200	FF165	165	130	200	10	12	4	3,5	M 20 x 1,5	157	95	15	118	316	376
	L	2 - 4																			328	388
NPEg 100	L	2 - 4	28	60	8	31	A250	FF215	215	180	250	11	12	4	4	M 20 x 1,5	206	110	15	155	399	—

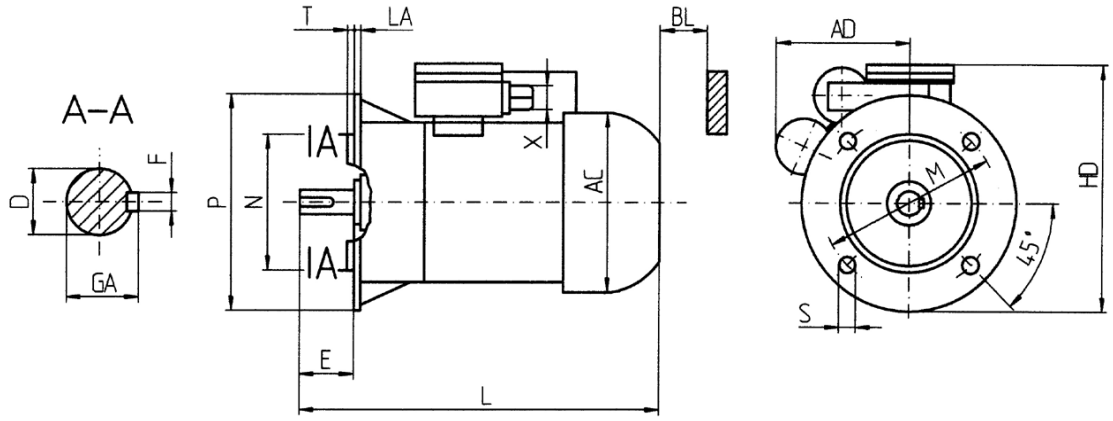
Dimensions of single phase motors (high starting torque)

Foot mounted IMB3/IM1001



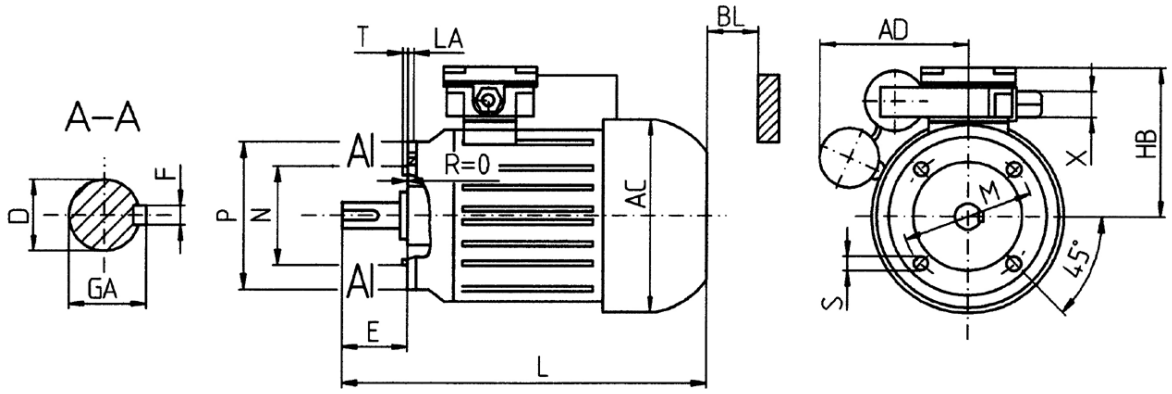
Type		Poles	Mounting dimensions in mm										Overall dimensions in mm								
			A	B	C	H -0,5	K	X	Shaft end D /j6/	Shaft end E	Shaft end F /h9/	Shaft end GA	AA	AB	AC	AD max	BB	BL min	HA	HD	L
FDEB 63	A	2 - 4	100	80	40	63	7	M 20 x 1,5	11	23	4	12,5	36	124	126	100	106	11	8,5	165	245
	B	2 - 4																			257
	C	2 - 4																			271
FDEB 71	B	2 - 4	112	90	45	71	7	M 20 x 1,5	14	30	5	16	45	142	141	100	116	12	8	182	285
	C	2 - 4																			303
FDEB 80	B	2 - 4	125	100	50	80	10	M 20 x 1,5	19	40	6	21,5	55	160	150	120	130	15	9	200	315
	C	2 - 4																			343
FDET 90	S	2 - 4	140	100	56	90	8	M 20 x 1,5	24	50	8	27	45	170	180	132	126	15	10	232	348
	L	2 - 4		125													151				373
FDET 100	L	2 - 4	160	140	63	100	10	M 20 x 1,5	28	60	8	31	32	188	206	145	170	15	4	255	422
FDEB 112	M	2 - 4	190	140	70	112	12	M 20 x 1,5	28	60	8	31	54	230	233	115	174	15	14	276	440

Flange mounted IMB5/IM3001

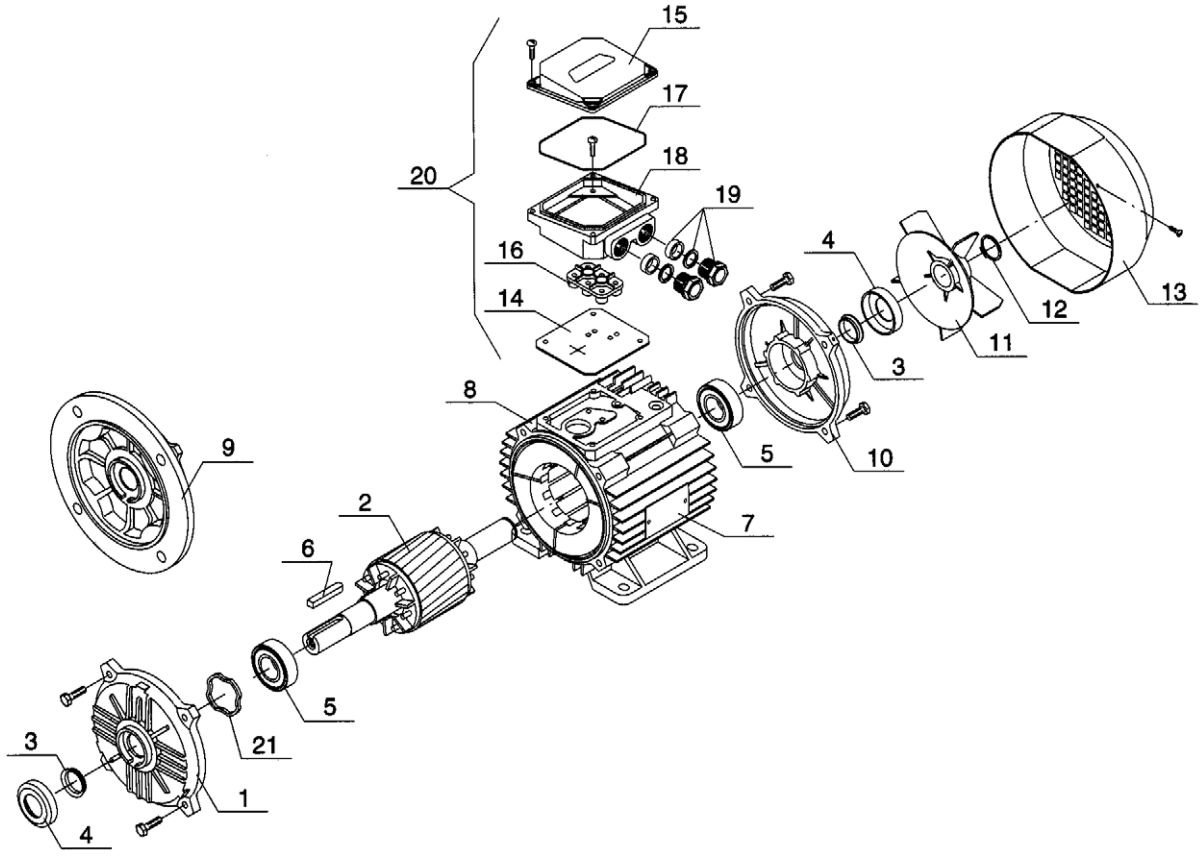


Type		Poles	Mounting dimensions in mm														Overall dimensions in mm				
			Shaft end				Flange														
			D /j6/	E	F /h9/	GA	DIN 42948	IEC Publ72	M	N /j6/	P	LA	S ø	S Qty	T	X	AC	AD max	BL min	HD	L
FDEB 63	A	2 - 4	11	23	4	12,5	A140	F115	115	95	140	9	10	4	3	M 20 x 1,5	126	100	11	165	245
	B	2 - 4																			257
	C	2 - 4																			271
FDEB 71	B	2 - 4	14	30	5	16	A160	F130	130	110	160	9	10	4	3,5	M 20 x 1,5	141	100	12	182	285
	C	2 - 4																			303
FDEB 80	B	2 - 4	19	40	6	21,5	A200	F165	165	130	200	10	12	4	3,5	M 20 x 1,5	150	120	15	200	315
	C	2 - 4																			343
FDET 90	S	2 - 4	24	50	8	27	A200	FF165	165	130	200	10	10	4	3,5	M 20 x 1,5	180	132	15	232	348
	L	2 - 4																			373
FDET 100	L	2 - 4	28	60	8	31	A250	FF215	215	180	250	11	12	4	4	M 20 x 1,5	206	145	15	270	422
FDEB 112	M	2 - 4	28	60	8	31	A250	FF215	215	180	250	11	14	4	4	M 20 x 1,5	233	115	15	289	440

Type of mounting IMB14/IM3601

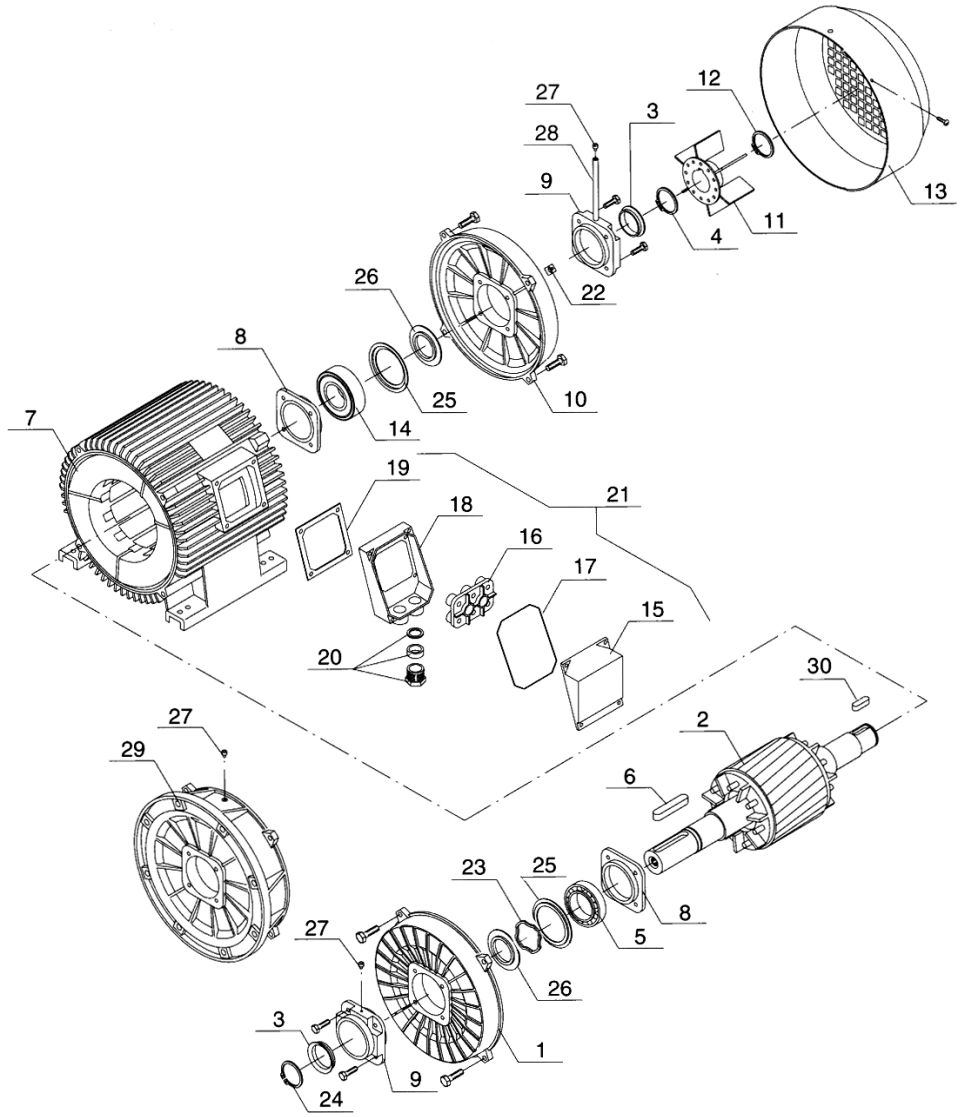


Type		Poles	Mounting dimensions in mm																Overall dim. in mm			
			Flange C1						Flange C2						X	Shaft end				AC	AD max	HB	L
			DIN	M	N /j6/	P	S	T	DIN	M	N /j6/	P	S	T		D /j6/	E	F /h6/	GA				
FDEB 63	A	2 - 4	FT100	100	80	120	M6	3,0	FT75	75	60	90	M5	2,5	M 20 x 1,5	11	23	4	12,5	126	100	102	245
	B	2 - 4																					257
	C	2 - 4																					271
FDEB 71	B	2 - 4	FT115	115	95	140	M8	3,0	FT85	85	70	105	M6	2,5	M 20 x 1,5	14	30	5	16	141	100	111	285
	C	2 - 4																					303
FDEB 80	B	2 - 4	FT130	130	110	160	M8	3,5	FT100	100	80	120	M6	3,0	M 20 x 1,5	19	40	6	21,5	150	120	120	315
	C	2 - 4																					343
FDET 90	S	2 - 4	FT130	130	110	160	M8	3,5	FT115	115	95	140	M8	3	M 20 x 1,5	24	50	8	27	180	132	142	348
	L	2 - 4																					373
FDET 100	L	2 - 4	FT165	165	130	200	M10	3,5	FT130	130	110	160	M8	3,5	M 20 x 1,5	28	60	8	31	206	145	155	422
FDEB 112	M	2 - 4	FT165	165	130	200	M10	3,5	FT130	130	110	160	M8	3,5	M 20 x 1,5	28	60	8	31	233	115	164	440



Part No.	Description	Part No.	Description
1	drive end shield (DE)	11	fan
2	rotor with shaft	12	circlip
3	sealing ring (V - ring)	13	fan cover
4	covering cap of the V - ring	14	terminal box gasket
5	bearing	15	terminal box cover
6	key	16	terminal board
7	name plate	17	terminal box cover gasket
8	frame with stator	18	terminal box
9	flange B5	19	cable gland
10	non drive end shield (NDE)	20	complete terminal box
		21	bearing loading washer

Notes: 1. When ordering spare parts please specify:
a) description of the part
b) type of motor and its serial number
c) type of mounting
d) quantity
2. Bearing and standard screws are not delivered as a spare part.



Part No.	Description	Part No.	Description
1	drive end shield (DE)	16	terminal board
2	rotor with shaft	17	terminal box cover gasket
3	labyrinth sealing	18	terminal box
4	circlip	19	terminal box gasket
5	bearing DE	20	cable gland
6	key	21	complete terminal box
7	frame with stator	22	fan cover fixings
8	inside bearing cover	23	bearing loading washer
9	outside bearing cover	24	circlip
10	non drive end shield (NDE)	25	cover ring of the bearing
11	fan	26	grease shield
12	seher´s ring	27	* grease nipple
13	fan cover	28	* pipe for regreasable setting-up
14	bearing NDE	29	flange B5
15	terminal box cover	30	key

* only at motors with regreasable setting-up

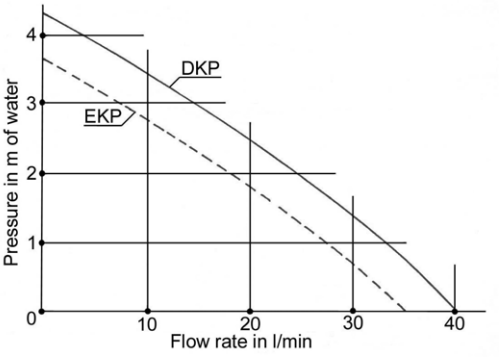
Notes: 1. When ordering spare parts please specify:
a) description of the part
b) type of motor and its serial number
c) type of mounting
d) quantity
2. Bearing and standard screws are not delivered as a spare part.

FFD COOLING MEDIUM PUMPS are used for pumping of cooling water or other coolants which are typically drilling-, cutting- and shaving machines. These pumps are well known in the industry and have been built in all types of machine tools for many years.

FFD COOLING MEDIUM PUMPS work like centrifugal pumps, so the flow rate of the coolant is affected by pump parts, stuffing-box and sucking up inlets. These pumps are quite resistant to the pollution of coolants.

FFD COOLING MEDIUM PUMPS are manufactured in with 5 different dip length. The dimensions of these pumps are according to DIN 54440. By fully opened valve the pump has the maximum flow rate and the motor is fully loaded, when the valve is closed the load of the motor is lower. It´s not possible to overload the motor in these pumps.

FFD COOLING MEDIUM PUMPS have the advantage of an easy exchangeability of the stator. It´s not necessary to disassemble the pump, it´s enough to come loose of only two screws to exchange the stator.



INSTALLATION

At commisioning check the direction of rotation (it has to be the same like shown by The arrow on the frame). The max. level of the cooling medium should be a few cm below the flange and the min. level should flow in a ½inch pipe. The values in the tables below were attained for such a design. Safety valves are not necessary.

MOTOR

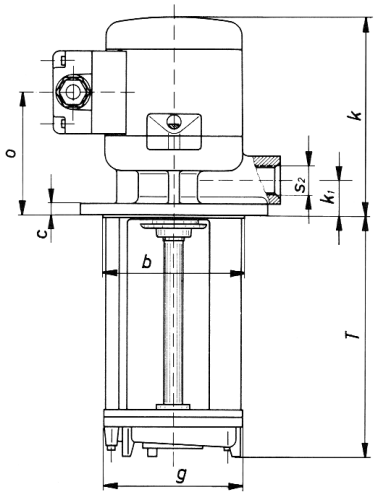
Motors are manufactured acc. to VDE 0530/11.72 with insulation class E. The Insulation system is tropicalized. The winding for 230/400V is so designed that motors work properly within the range of voltage 220 – 250V and 380 – 440V both 50 Hz and 60 Hz. Single phase motors have built on the running capacitor on the frame.

COOLING MEDIUM PUMPS DKP and EKP

Duty: S1
Degree of protection: IP54
Nominal voltage: 220–250/380–440V, 50/60Hz, 2800/3400rpm

Type	Dip length mm	Flow rate in l/min at oil emulsion 3-5 E° 0m	1m	2m	3m	4m	Consumption of power W
DKP 1086	86	40	30	24	16	5,5	115
DKP 112	120						
DKP 117	170						
DKP 122	220						
DKP 127	270						

Nominal current I_N = 0,42–0,57A at 220–250V, 50/60Hz
I_N = 0,24–0,32A at 380–440V, 50/60Hz



Single phase pumps 220–250V, 50/60Hz, 2800/3400rpm

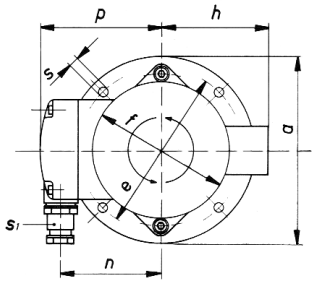
With running capacitor 4µF / 450V

EKP 1086	86	35	27	22	14	4	100
EKP 112	120						
EKP 117	170						
EKP 122	220						
EKP 127	270						

Nominal current I_N = 0,6–0,8A at 220–250V, 50/60Hz

Mounting dimensions

Type	a	b	c	e	f	g	h	k	k1	o	p	n	s	X	s_2	T
DKP u. EKP 1086	130	100	8	115	98	98	75	169	25	118	85	72	6,5	M16 x1,5	R½"	86
DKP u. EKP 112								139	23	88						120
DKP u. EKP 117																170
DKP u. EKP 122																220
DKP u. EKP 127																270



OTHER SPECIAL MOTORS AVAILABLE ON REQUEST

- High efficiency motors (EFF1)
- Explosion-proof motors acc. to ATEX
- Submersible motors
- Brake motors (with DC or AC brake)
- Multiple-speed motors
- Slip-ring motors for low and high voltage
- Lift motors
- Progressive motors (motors with increased output)
- Motors to be built in

SPECIAL EXTRAS OF THE MOTORS

- Insulation class “H” or “C”
- Windings thermal protection (PTC or Pt100)
- Bearings thermal protection (PTC or Pt100)
- Anti-condensation heater
- External fan
- Special shafts
- Special flanges
- Motors in special design acc. to the customer´s specification (by larger number of pieces)

FRANK & DVORAK

Elektromaschinenbau- und Vertriebsgesellschaft m.b.H. u. Co.KG

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