

**50Hz**



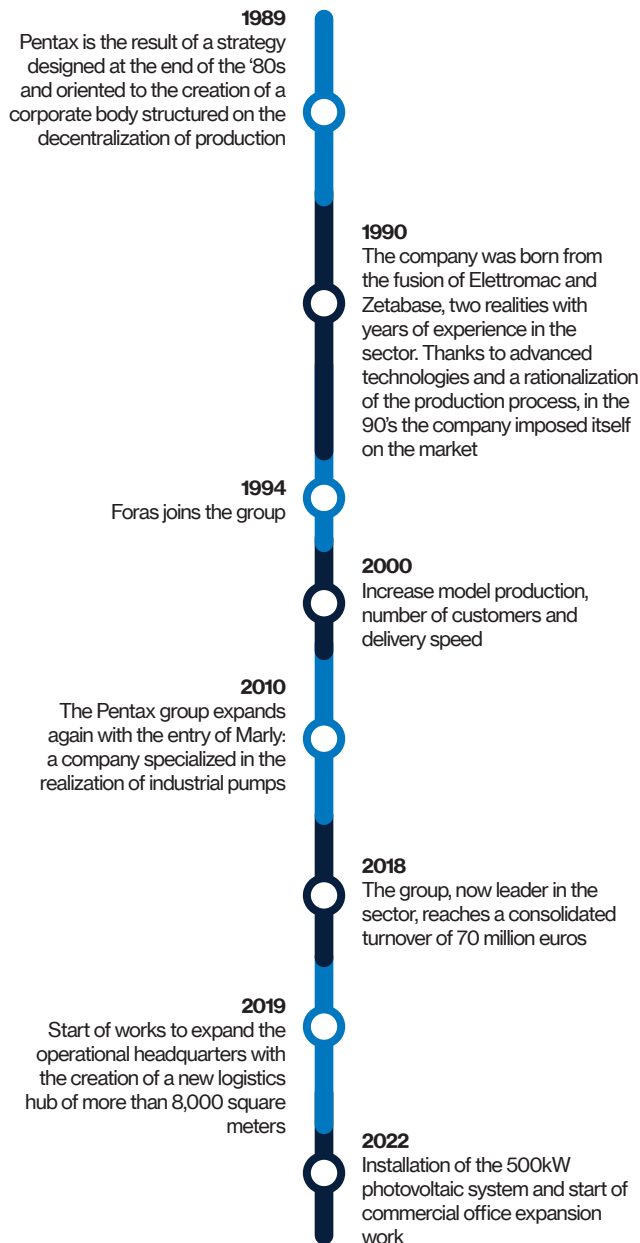
# **GENERAL CATALOGUE**

[www.pentax-pumps.it](http://www.pentax-pumps.it)



# HISTORY

For many years **Pentax** has held a large share of the world market for motorized pumps. The sales department is constantly working to better serve existing customers and to open up new markets. This is possible thanks to the wide range of products available which allows to cover most of the applications in the pump field. Special attention is also paid to market surveys, so that any new requirements can be immediately transferred to the research and development department: the best way to properly develop and forecast future scenarios.

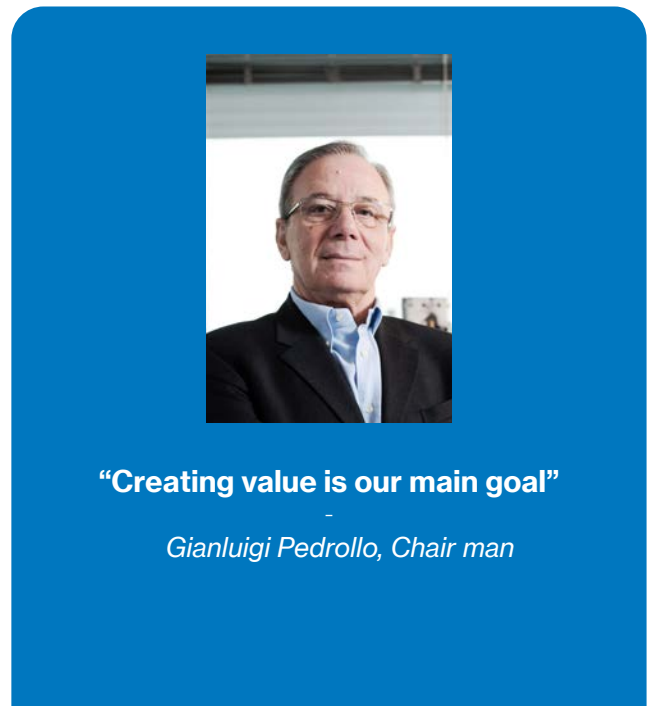


# MISSION

After more than **20 years of activity** we can finally trace the guidelines that have governed and directed the industrial development of **Pentax Industries SpA**. Actions and processes that have intersected with the obvious aim of creating value, benefits to be redistributed to the various components of the production and distribution process.

A rational allocation of available resources, together with a refined program of production decentralization have allowed the company to adapt to changing market conditions, each time with extreme rapidity.

Maximum attention to the markets, therefore, with the commitment to respond in real time to the specific needs of the different markets, paying particular attention to technological progress. All this in the perspective of a careful policy for **customer satisfaction**.



**“Creating value is our main goal”**

*Gianluigi Pedrollo, Chair man*

# VALUES



## Reliability

Choosing Pentax means choosing safety at every stage

## Quality

Where there is control, there is reliability: the basis for success

## Speed

Impeccable delivery time

## Flexibility

Pentax studies each case thoroughly, identifies the best solution and then takes action with security

## Variety

The best service: a wide range of Pentax products, one for every need



# OFFICIAL JOURNAL OF THE EUROPEAN UNION

## Regulation UE 547/2012

### ANNEX II

«The benchmark for most efficient water pumps is  $MEI \geq 0,70$ ».

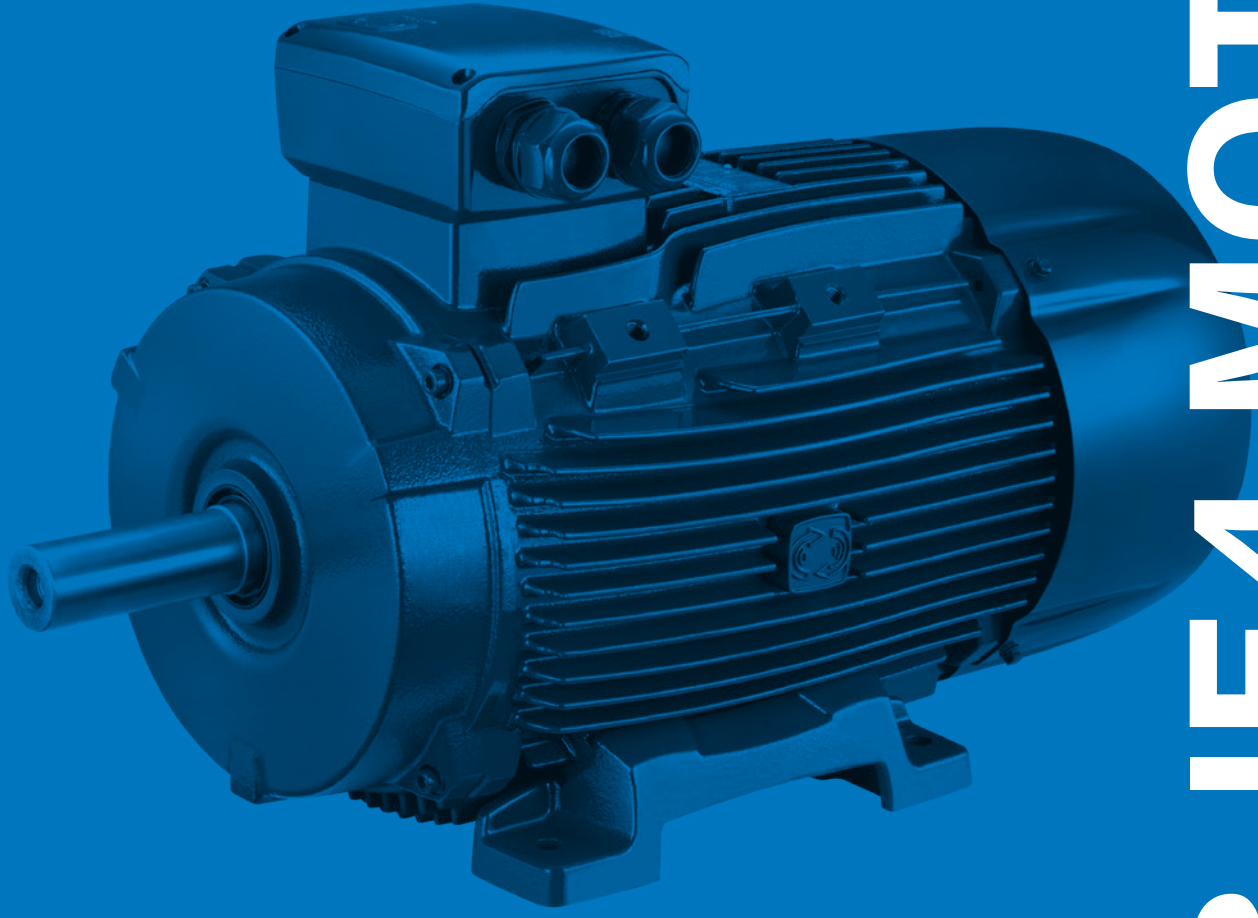
«The efficiency of a pump with a trimmed impeller is usually lower than that of a pump with the full impeller diameter. The trimming of the impeller will adapt the pump to a fixed duty point, leading to reduced energy consumption. The minimum efficiency index (MEI) is based on the full impeller diameter».

«The operation of this water pump with variable duty points may be more efficient and economic when controlled, for example, by the use of a variable speed drive that matches the pump duty to the system».

Information on benchmark efficiency is available at:

[www.europump.org/efficiencycharts](http://www.europump.org/efficiencycharts).





# IE3-IE4 MOTORS

# 80-132 (0,75 kW-7,5 kW)





Construction features	
<b>Frame</b>	aluminum alloy
<b>Multiple voltage/ Multi-frequency</b>	50/60 Hz
<b>Duty service</b>	S1 continuous
<b>Winding</b>	tropicalized suitable for inverter power supply
<b>ATEX (dust and gas)</b>	version available: II 3G Ex nA IIB T4 Gc II 3D Ex tc IIIB T125°C Dc

Motor	
<b>Motor</b>	closed and externally ventilated
<b>Insulation class</b>	F (on request H)
<b>Protection degree</b>	IPX5 (on request IP56, IP66, IP67)
<b>Efficiency class</b>	IE3-IE4, IEC60034-30-1

## VOLTAGES AND FREQUENCIES TOLERANCE

Data at 400V - 50Hz

SIZE	Hz	V	
			
80-112	50 ±5%	230	400
		220	380
		240	415



# 160-355 (11 kW-315 kW)





Construction features	
<b>Frame</b>	cast iron
<b>Multiple voltage/ Multi-frequency</b>	50/60 Hz
<b>Duty service</b>	S1 continuous
<b>Winding</b>	tropicalized and reinforced insulation for inverter power supply (P >110kW we recommend to order the motor with insulated bearings option). Windings with PTC (n° 3) thermistor as standard.
<b>ATEX (dust and gas)</b>	version available: II 3G Ex nA IIB T4 Gc II 3D Ex tc IIIB T125°C Dc

Motor	
<b>Motor</b>	closed and externally ventilated
<b>Insulation class</b>	F (on request H)
<b>Protection degree</b>	IPX5 (on request IP56, IP66, IP67)
<b>Efficiency class</b>	IE3-IE4, IEC60034-30-1

## VOLTAGES AND FREQUENCIES TOLERANCE

Data at 400V - 50Hz

SIZE	Hz	V	
			
132-355	50 ±5%	400	690
		380	660
		415	720





## 2 POLES IE3-IE4

Data at 400V - 50Hz

TYPE	kW	HP	rpm	In (A)	Is (A)	Is In	Cn (Nm)	Cs (Nm)	Cs Cn	Cmax (Nm)	Cmax Cn
80A-2	0,75	1	2892	1,74	11,84	6,8	2,48	8,60	3,5	9,18	3,7
80B-2	1,1	1,5	2885	2,26	16,74	7,4	3,64	10,90	3,0	12,74	3,5
90S-2	1,5	2	2902	3,26	25,07	7,7	4,93	19,12	3,9	18,74	3,8
90L-2	2,2	3	2918	5,02	38,59	7,7	7,35	30,97	4,2	30,44	4,1
100L-2	3	4	2903	6,09	48,24	7,9	9,87	35,19	3,6	40,74	4,1
112M-2	4	5,5	2943	7,56	74,38	9,8	12,97	45,92	3,5	61,86	4,8
132SA-2	5,5	7,5	2940	10,14	70,59	7,0	17,87	37,70	2,1	35,79	2,0
132SB-2	7,5	10	2925	13,35	95,00	7,1	24,49	53,50	2,2	78,50	3,2
160MA-2	11	15	2937	19,72	123,05	6,2	35,77	73,32	2,1	100,15	2,8
160MB-2	15	20	2938	26,29	150,23	5,7	48,76	95,08	2,0	121,89	2,5
160L-2	18,5	25	2942	32,15	192,92	6,0	60,05	124,31	2,1	179,00	2,1
180M-2	22	30	2950	37,53	304,03	8,1	71,22	163,81	2,3	220,80	3,1
200LA-2	30	40	2940	51,51	386,34	7,5	97,45	224,13	2,3	223,37	2,3
200LB-2	37	50	2960	63,26	474,46	7,5	119,38	274,56	2,3	275,49	2,3
225M-2	45	60	2960	76,69	582,87	7,6	145,19	333,93	2,3	332,80	2,3
250M-2	55	75	2970	94,39	707,92	7,5	176,85	406,76	2,3	406,76	2,3
280S-2	75	100	2970	125,82	868,14	6,9	241,16	530,56	2,2	554,67	2,3
280M-2	90	125	2970	150,67	1069,73	7,1	289,39	636,67	2,2	665,61	2,3
315S-2	110	150	2970	183,76	1304,72	7,1	353,70	707,41	2,0	778,15	2,2
315MA-2	132	180	2970	220,06	1562,41	7,1	424,44	848,89	2,0	933,78	2,2
315LA-2	160	215	2970	263,53	1871,07	7,1	514,48	1028,96	2,0	1131,85	2,2
315LB-2	200	270	2970	328,73	2333,99	7,1	643,10	1286,20	2,0	1414,81	2,2
355M-2	250	335	2980	410,91	2917,49	7,1	801,17	1602,35	2,0	1762,58	2,2
355L-2	315	423	2980	517,75	3676,03	7,1	1009,48	2018,96	2,0	2220,86	2,2

TYPE	η%				Fatt. pot. cos φ			ΔT (°C)	LwA (dB)	J Kgm2	Kg
	100%	IE	75%	50%	100%	75%	50%				
80A-2	80,9	IE3	79,6	76,4	0,770	0,700	0,566	35	65	0,00158	17
80B-2	84,5	IE3	84,7	82,8	0,830	0,770	0,652	41	65	0,00185	18
90S-2	85,3	IE3	83,4	81,3	0,786	0,726	0,582	43	71	0,00383	23
90L-2	86,2	IE3	87,0	84,9	0,730	0,675	0,498	48	71	0,00726	26
100L-2	87,1	IE3	87,3	84,9	0,812	0,766	0,618	49	75	0,01439	35
112M-2	89,6	IE3	89,8	88,9	0,856	0,805	0,665	44	77	0,01663	43
132SA-2	91,0	IE3	89,7	87,4	0,860	0,840	0,761	48	78	0,03300	44,8
132SB-2	91,6	IE3	92,4	92,9	0,885	0,850	0,760	60	78	0,03960	73
160MA-2	91,4	IE3	91,2	89,7	0,881	0,864	0,812	49	81	0,04976	120
160MB-2	92,0	IE3	92,6	91,8	0,895	0,877	0,841	61	81	0,06587	132
160L-2	93,0	IE3	93,7	93,0	0,893	0,875	0,827	58	81	0,07260	150
180M-2	94,0	IE3	93,9	93,0	0,900	0,880	0,870	41	83	0,09900	205
200LA-2	93,4	IE3	94,4	90,7	0,900	0,881	0,820	65	84	0,16368	250
200LB-2	93,8	IE3	93,6	90,2	0,900	0,887	0,840	65	84	0,18348	270
225M-2	94,1	IE3	93,9	90,7	0,900	0,878	0,816	65	86	0,30756	315
250M-2	94,5	IE3	92,6	88,5	0,890	0,872	0,825	65	89	0,41184	420
280S-2	95,6	IE4	93,7	89,5	0,900	0,896	0,875	55	91	0,76428	550,8
280M-2	95,8	IE4	95,7	93,7	0,900	0,894	0,857	65	91	0,89100	625
315S-2	96,0	IE4	95,9	93,9	0,900	0,894	0,857	65	92	1,55760	968
315MA-2	96,2	IE4	96,2	94,2	0,900	0,894	0,857	65	92	2,40240	1100
315LA-2	96,3	IE4	96,2	94,2	0,910	0,904	0,867	65	92	2,74560	1160,5
315LB-2	96,5	IE4	96,5	94,5	0,910	0,904	0,867	65	92	3,14160	1221
355M-2	96,5	IE4	96,5	94,5	0,910	0,904	0,867	65	100	3,96000	2090
355L-2	96,5	IE4	96,5	94,5	0,910	0,904	0,867	65	100	4,62000	2530

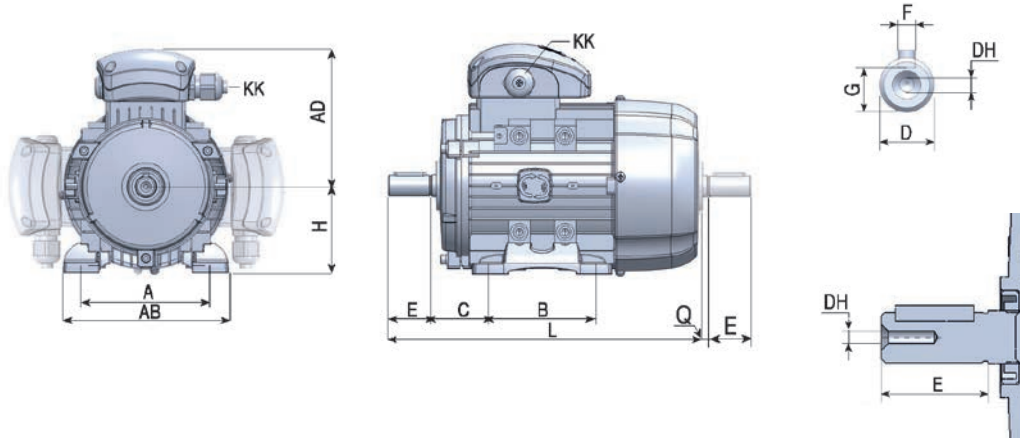


TYPE	kW	HP	rpm	In (A)	Is (A)	Is In	Cn (Nm)	Cs (Nm)	Cs Cn	Cmax (Nm)	Cmax Cn
80B-4	0,75	1	1426	1,87	11,24	6,0	5,01	15,52	3,1	15,41	3,1
90S-4	1,1	1,5	1436	2,61	16,60	6,4	7,36	24,26	3,3	24,70	3,4
90L-4	1,5	2	1427	3,59	24,34	6,8	10,03	41,06	4,1	38,49	3,8
100LA-4	2,2	3	1438	4,77	33,83	7,1	14,74	52,18	3,5	54,71	3,7
100LB-4	3	4	1447	6,48	49,52	7,6	19,76	69,03	3,5	77,85	3,9
112M-4	4	5,5	1460	8,79	62,51	7,1	26,17	83,57	3,2	108,56	4,1
132S-4	5,5	7,5	1454	10,64	68,01	6,4	36,12	75,86	2,1	101,15	2,8
132M-4	7,5	10	1460	14,39	94,37	6,6	49,06	91,80	1,9	132,46	2,7
160M-4	11	15	1468	20,76	121,31	5,8	71,56	121,50	1,7	193,21	2,7
160L-4	15	20	1460	28,19	140,97	5,0	98,12	166,60	1,7	255,10	2,6
180M-4	18,5	25	1477	33,53	206,45	6,2	120,94	202,50	1,7	384,23	3,2
180L-4	22	30	1470	39,62	261,96	6,6	142,93	235,19	1,6	401,22	2,8
200L-4	30	40	1480	53,48	385,07	7,2	193,58	425,88	2,2	445,24	2,3
225S-4	37	50	1480	65,37	490,30	7,5	238,75	525,25	2,2	549,13	2,3
225M-4	45	60	1480	77,39	588,17	7,6	290,37	638,82	2,2	667,85	2,3
250M-4	55	75	1480	93,89	713,58	7,6	354,90	780,78	2,2	816,27	2,3
280S-4	75	100	1480	126,70	874,24	6,9	483,95	1064,70	2,2	1113,09	2,3
280M-4	90	120	1485	153,61	1075,26	7,0	578,79	1273,33	2,2	1331,21	2,3
315S-4	110	150	1480	187,35	1292,74	6,9	709,80	1561,55	2,2	1632,53	2,3
315M-4	132	180	1480	224,59	1549,68	6,9	851,76	1873,86	2,2	1959,04	2,3
315LA-4	160	220	1480	271,67	1874,51	6,9	1032,43	2271,35	2,2	2374,59	2,3
315LB-4	200	270	1480	339,23	2340,72	6,9	1290,54	2839,19	2,2	2968,24	2,3
355M-4	250	335	1490	414,62	2860,88	6,9	1602,35	3525,17	2,2	3685,40	2,3
355L-4	315	423	1490	522,42	3604,71	6,9	2018,96	4441,71	2,2	4643,61	2,3

TYPE	η %				Fatt. pot. cos φ			ΔT (°C)	LwA (dB)	J Kgm2	Kg
	100%	IE	75%	50%	100%	75%	50%				
80B-4	83,1	IE3	82,6	81,6	0,690	0,619	0,531	46	56	0,00277	12
90S-4	84,8	IE3	84,9	79,3	0,723	0,609	0,510	36	61	0,00304	25
90L-4	85,3	IE3	85,1	83,0	0,708	0,592	0,483	41	61	0,00356	30
100LA-4	86,7	IE3	87,8	85,8	0,771	0,663	0,543	41	64	0,00713	36
100LB-4	89,0	IE3	89,4	86,8	0,745	0,648	0,519	46	64	0,00893	40
112M-4	89,1	IE3	89,2	87,2	0,736	0,674	0,505	46	77	0,01663	43
132S-4	89,9	IE3	92,1	92,4	0,830	0,770	0,675	61	71	0,02853	70
132M-4	90,5	IE3	90,8	89,9	0,831	0,790	0,699	46	71	0,03946	56,5
160M-4	91,8	IE3	91,7	90,4	0,833	0,790	0,675	52	73	0,08133	125
160L-4	92,3	IE3	93,1	92,3	0,832	0,780	0,680	61	75	0,12239	150
180M-4	92,6	IE3	92,1	90,2	0,870	0,817	0,724	40	76	0,18531	170,6
180L-4	93,2	IE3	91,7	91,0	0,860	0,832	0,761	59	76	0,21065	189,3
200L-4	93,6	IE3	93,8	92,8	0,865	0,818	0,767	80	79	0,34930	254,8
225S-4	93,9	IE3	92,7	92,0	0,870	0,839	0,776	75	81	0,54128	268,3
225M-4	94,3	IE3	93,3	92,8	0,890	0,872	0,807	80	81	0,62527	353
250M-4	95,0	IE3	94,2	93,5	0,890	0,862	0,800	75	83	0,87991	450
280S-4	96,0	IE4	94,5	92,0	0,890	0,863	0,843	70	86	1,71600	605
280M-4	96,1	IE4	94,4	92,9	0,880	0,872	0,838	65	86	1,96680	700
315S-4	96,3	IE4	94,7	93,2	0,880	0,872	0,838	65	87	4,13160	925
315M-4	96,4	IE4	94,8	93,3	0,880	0,872	0,838	55	87	4,81800	1180
315LA-4	96,6	IE4	95,0	93,5	0,880	0,872	0,838	75	87	5,42784	1160,5
315LB-4	96,7	IE4	95,0	93,4	0,880	0,872	0,838	70	87	6,34920	1240,8
355M-4	96,7	IE4	95,1	93,5	0,900	0,892	0,857	75	94	8,61960	1870
355L-4	96,7	IE4	95,0	93,4	0,900	0,892	0,857	70	94	10,87680	2090

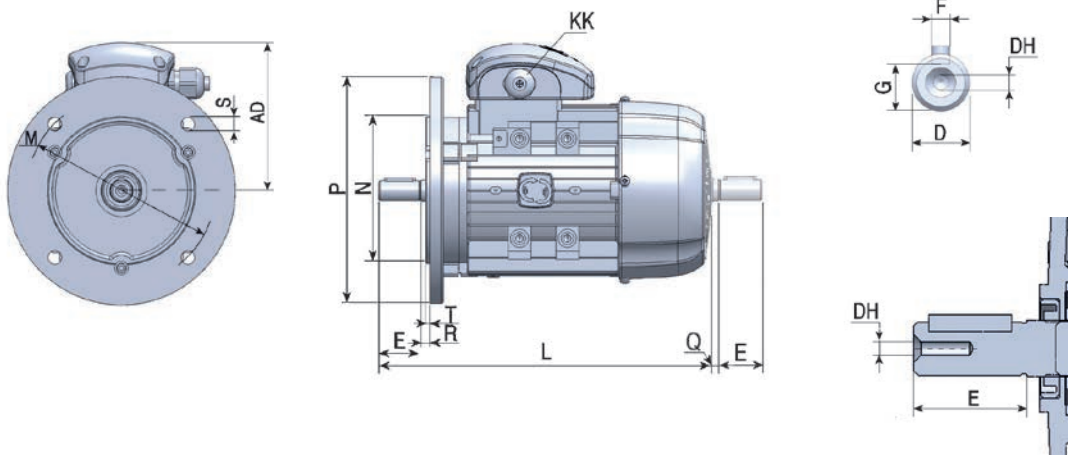






DIMENSIONS (mm)																
TYPE	POLES	AD	H	KK	L	D	DH	E	Q	F	G	B3				
												A	AB	B	C	K
80	2-8	130	80	M20	283	19	M6×16	40	3	6	15,5	125	157	100	50	10
90S	2-8	145	90	M20	330	24	M8×19	50	5	8	20	140	173	100	56	10
90L	2-8	145	90	M20	358	24	M8×19	50	5	8	20	140	173	125	56	10
100	2-8	157	100	M20	393	28	M10×22	60	5	8	24	160	196	140	63	12
112M	2-8	177	112	M25	410	28	M10×22	60	5	8	24	190	227	140	70	12
132S	2-8	197	132	M32	480	38	M12×28	80	5	10	33	216	262	140	89	12
132M	2-8	197	132	M32	516	38	M12×28	80	5	10	33	216	262	178	89	12
160M	2-8	255	160	2×M40	613	42	M16×36	110	5	12	37	254	320	210	108	15
160L	2-8	252	160	2×M40	708	42	M16×36	110	5	12	37	254	320	254	108	15
180M	2-8	270	180	2×M40	730	48	M16×36	110	8	14	42,5	279	355	241	121	15
180L	2-8	270	180	2×M40	780	48	M16×36	110	8	14	42,5	279	355	279	121	15
200L	2-8	303	200	2×M50	771	55	M20×42	110	12	16	49	318	395	305	133	19
225S	2-8	312	225	2×M50	815	60	M20×42	140	12	18	53	356	435	286	149	19
225M	2	312	225	2×M50	820	55	M20×42	110	12	16	49	356	435	286/311	149	19
225M	4-8	312	225	2×M50	850	60	M20×42	140	12	18	53	356	435	286/311	149	19
250M	2	355	250	2×M63	910	60	M20×42	140	12	18	53	406	490	349	168	24
250M	4-8	355	250	2×M63	910	65	M20×42	140	12	18	58	406	490	349	168	24
280S	2	398	280	2×M63	985	65	M20×42	140	12	18	58	457	550	368	190	24
280S	4-8	398	280	2×M63	985	75	M20×42	140	12	20	67,5	457	550	368	190	24
280M	2	398	280	2×M63	1035	65	M20×42	140	12	18	58	457	550	368/419	190	24
280M	4-8	398	280	2×M63	1035	75	M20×42	140	12	20	67,5	457	550	368/419	190	24
315S	2	540	315	2×M63	1160	65	M20×42	140	15	18	58	508	630	406	216	28
315S	4-8	540	315	2×M63	1270	80	M20×42	170	15	22	71	508	630	406	216	28
315M	2	540	315	2×M63	1290	65	M20×42	140	15	18	58	508	630	457	216	28
315M	4-8	540	315	2×M63	1325	80	M20×42	170	15	22	71	508	630	457	216	28
315L	2	540	315	2×M63	1320	65	M20×42	140	15	18	58	508	630	508	216	28
315L	4-8	540	315	2×M63	1350	80	M20×42	170	15	22	71	508	630	508	216	28
355M	2	655	355	2×M63	1500	75	M20×42	140	15	20	67,5	610	730	560/630	254	28
355M	4-8	655	355	2×M63	1530	95	M20×42	170	15	25	86	610	730	560/630	254	28
355L	2	655	355	2×M63	1500	75	M20×42	140	15	20	67,5	610	730	560/630	254	28
355L	4-8	655	355	2×M63	1530	95	M20×42	170	15	25	86	610	730	560/630	254	28

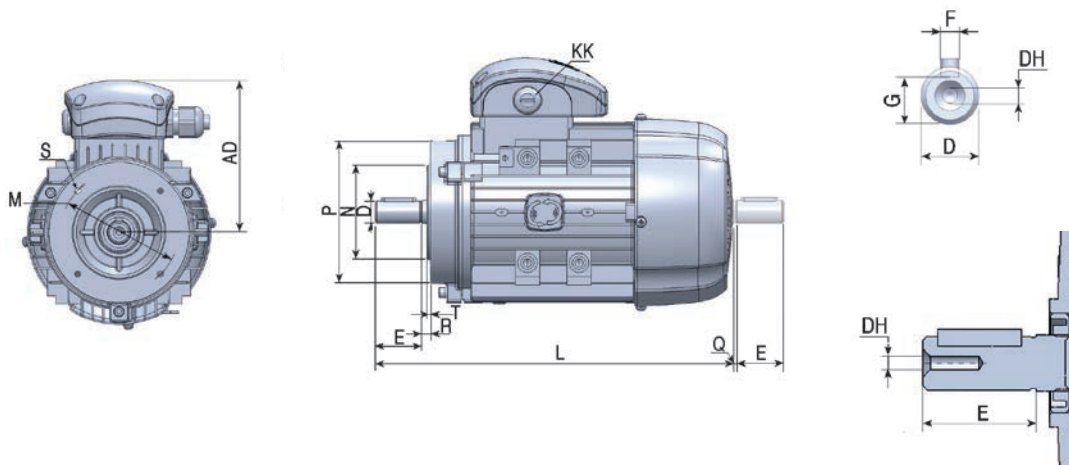




DIMENSIONS (mm)

TYPE	POLES	AD	H	KK	L	D	DH	E	Q	F	G	B5				
												M	N	P	S	T
80	2-8	130	80	M20	283	19	M6×16	40	3	6	15,5	165	130	200	12×4	3,5
90S	2-8	145	90	M20	330	24	M8×19	50	5	8	20	165	130	200	12×4	3,5
90L	2-8	145	90	M20	358	24	M8×19	50	5	8	20	165	130	200	12×4	3,5
100	2-8	157	100	M20	393	28	M10×22	60	5	8	24	215	180	250	15×4	4
112M	2-8	177	112	M25	410	28	M10×22	60	5	8	24	215	180	250	15×4	4
132S	2-8	197	132	M32	480	38	M12×28	80	5	10	33	265	230	300	15×4	4
132M	2-8	197	132	M32	516	38	M12×28	80	5	10	33	265	230	300	15×4	4
160M	2-8	255	160	2×M40	613	42	M16×36	110	5	12	37	300	250	350	19×4	5
160L	2-8	252	160	2×M40	708	42	M16×36	110	5	12	37	300	250	350	19×4	5
180M	2-8	270	180	2×M40	730	48	M16×36	110	8	14	42,5	300	250	350	19×4	5
180L	2-8	270	180	2×M40	780	48	M16×36	110	8	14	42,5	300	250	350	19×4	5
200L	2-8	303	200	2×M50	771	55	M20×42	110	12	16	49	350	300	400	19×4	5
225S	2-8	312	225	2×M50	815	60	M20×42	140	12	18	53	400	350	450	19×8	5
225M	2	312	225	2×M50	820	55	M20×42	110	12	16	49	400	350	450	19×8	5
225M	4-8	312	225	2×M50	850	60	M20×42	140	12	18	53	400	350	450	19×8	5
250M	2	355	250	2×M63	910	60	M20×42	140	12	18	53	500	450	550	19×8	5
250M	4-8	355	250	2×M63	910	65	M20×42	140	12	18	58	500	450	550	19×8	5
280S	2	398	280	2×M63	985	65	M20×42	140	12	18	58	500	450	550	19×8	5
280S	4-8	398	280	2×M63	985	75	M20×42	140	12	20	67,5	500	450	550	19×8	5
280M	2	398	280	2×M63	1035	65	M20×42	140	12	18	58	500	450	550	19×8	5
280M	4-8	398	280	2×M63	1035	75	M20×42	140	12	20	67,5	500	450	550	19×8	5
315S	2	540	315	2×M63	1160	65	M20×42	140	15	18	58	600	550	660	24×8	6
315S	4-8	540	315	2×M63	1270	80	M20×42	170	15	22	71	600	550	660	24×8	6
315M	2	540	315	2×M63	1290	65	M20×42	140	15	18	58	600	550	660	24×8	6
315M	4-8	540	315	2×M63	1325	80	M20×42	170	15	22	71	600	550	660	24×8	6
315L	2	540	315	2×M63	1320	65	M20×42	140	15	18	58	600	550	660	24×8	6
315L	4-8	540	315	2×M63	1350	80	M20×42	170	15	22	71	600	550	660	24×8	6
355M	2	655	355	2×M63	1500	75	M20×42	140	15	20	67,5	740	680	800	24×8	6
355M	4-8	655	355	2×M63	1530	95	M20×42	170	15	25	86	740	680	800	24×8	6
355L	2	655	355	2×M63	1500	75	M20×42	140	15	20	67,5	740	680	800	24×8	6
355L	4-8	655	355	2×M63	1530	95	M20×42	170	15	25	86	740	680	800	24×8	6

## B5R/B14



## B14

DIMENSIONS (mm)																
TYPE	POLES	AD	H	KK	L	D	DH	E	Q	F	G	B14				
												M	N	P	S	T
80	2-8	130	80	M20	283	19	M6×16	40	3	6	15,5	100	80	120	M6	3
90S	2-8	145	90	M20	330	24	M8×19	50	5	8	20	115	95	140	M8	3
90L	2-8	145	90	M20	358	24	M8×19	50	5	8	20	115	95	140	M8	3
100	2-8	157	100	M20	393	28	M10×22	60	5	8	24	130	110	160	M8	3,5
112M	2-8	177	112	M25	410	28	M10×22	60	5	8	24	130	110	160	M8	3,5
132S	2-8	197	132	M32	480	38	M12×28	80	5	10	33	165	130	200	M10	3,5
132M	2-8	197	132	M32	516	38	M12×28	80	5	10	33	165	130	200	M10	3,5
160M	2-8	255	160	2×M40	613	42	M16×36	110	5	12	37	215	180	250	M12	4
160L	2-8	252	160	2×M40	708	42	M16×36	110	5	12	37	215	180	250	M12	4

## B5R/B14

DIMENSIONS (mm)																
TYPE	POLES	AD	H	KK	L	D	DH	E	Q	F	G	B5R / B14B				
												M	N	P	S	T
80	2-8	130	80	M20	283	19	M6×16	40	3	6	15,5	130	110	160	M8	3,5
90S	2-8	145	90	M20	330	24	M8×19	50	5	8	20	130	110	160	M8	3,5
90L	2-8	145	90	M20	358	24	M8×19	50	5	8	20	130	110	160	M8	3,5
100	2-8	157	100	M20	393	28	M10×22	60	5	8	24	165	130	200	M10	3,5
112M	2-8	177	112	M25	410	28	M10×22	60	5	8	24	165	130	200	M10	3,5
132S	2-8	197	132	M32	480	38	M12×28	80	5	10	33	215	180	250	M10	4
132M	2-8	197	132	M32	516	38	M12×28	80	5	10	33	215	180	250	M10	4
160M	2-8	255	160	2×M40	613	42	M16×36	110	5	12	37	265	230	300	14×4	5
160L	2-8	252	160	2×M40	708	42	M16×36	110	5	12	37	265	230	300	14×4	5