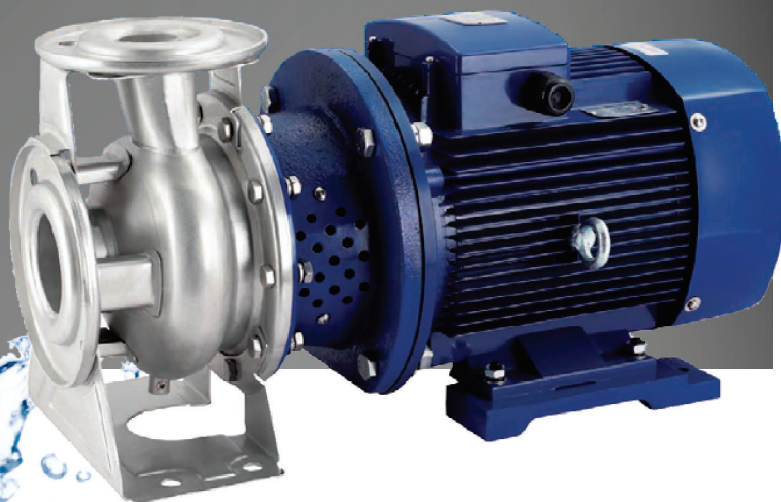




END-SUCTION P R O D U C T R A N G E

**DZA(S)
FLANGE STUB SHAFT
STAINLESS STEEL**

**DZA(S) MOTOR
SINGLE-PHASE FLANGED
THREE-PHASE FLANGED**



2014 PRODUCT CATALOGUE
Q/S&M/End-Suction/Flanged Stub-Shaft DZA Cat/14/03



DZA(S)

APPLICATIONS

The pumps are suitable for transporting clean media which is non-aggressive to stainless steel SUS304 or SUS316. Main applications are water supply systems, pressure boiler feed, pure water treating systems, refining chemical industries, washing and irrigation.

PERFORMANCE LIMITS

Maximum working pressure: 10bar

To avoid overload and damage the pump should be operated within performance ranges.

Media temperature:

With NBR/ceramic/carbon: -20°C to +80°C (Standard)

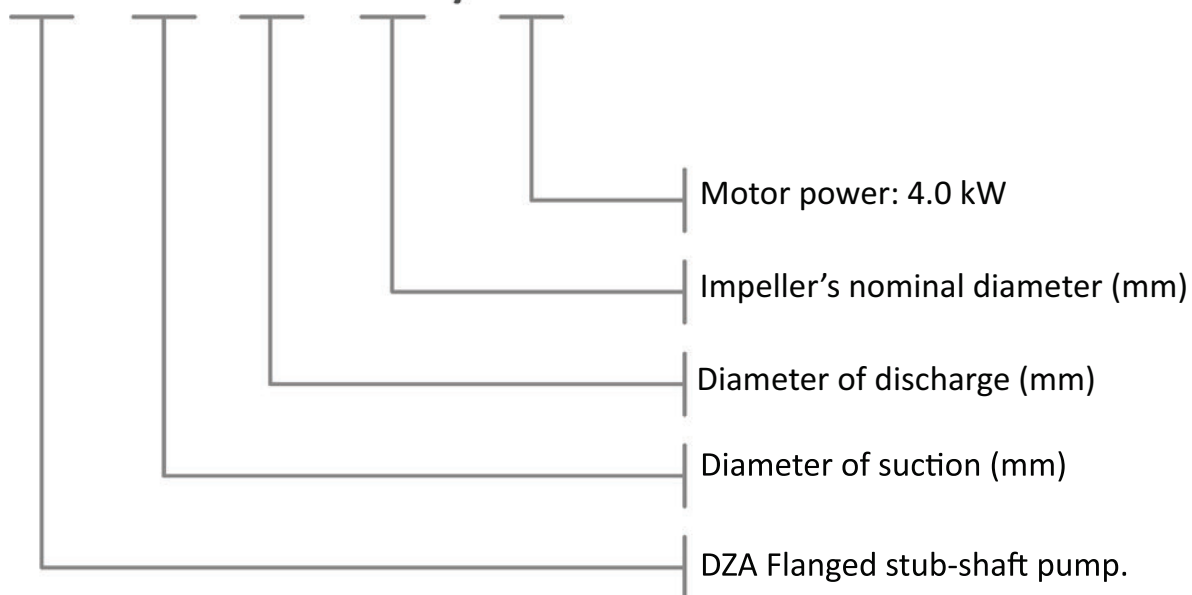
With Viton/ceramic/carbon: -20°C to +110°C

With silicone rubber/ceramic/carbon: -20°C to +110°C

SYMBOLS

Typical example:

DZA-60-50-160/4.0



PERFORMANCE DATA

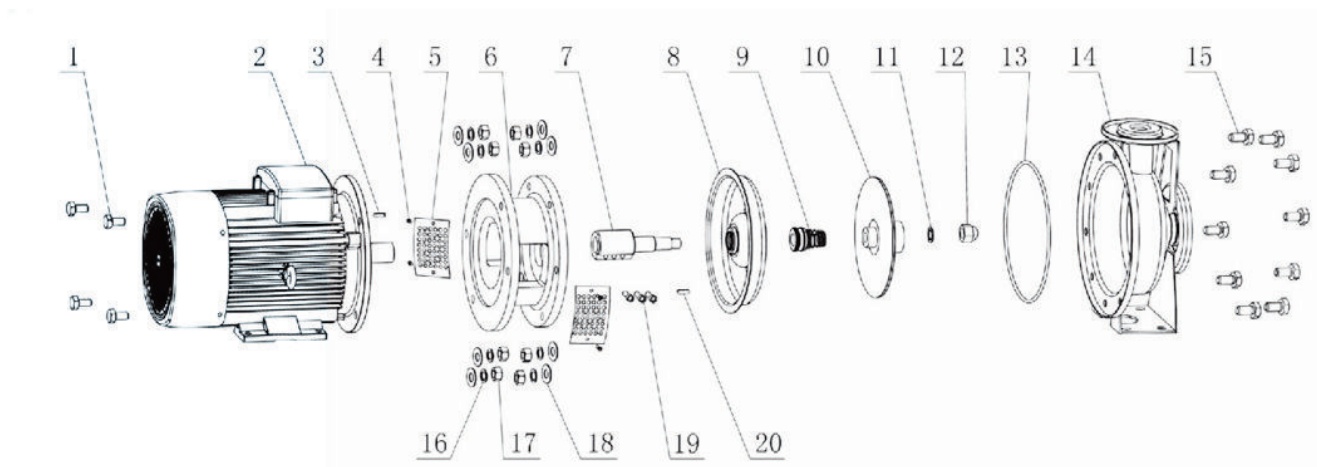
MODEL	CAPACITY m ³ /h	HEAD m	RPM	PUMP EFFICIENCY %	EQUIPPED MOTOR POWER	
					kW	HP
50-32-160/2.2	12.5	32	2900	62	2.2	3.0
50-32-200/3.0	10	40		48	3.0	4.0
50-32-200/4.0	12.5	50		50.5	4.0	5.5
65-40-160/4.0	25	32		66	4.0	5.5
65-40-200/5.5	25	42		57	5.5	7.5
65-40-200/7.5	25	50		62	7.5	10
65-50-160/5.5	40	28		71	5.5	7.5
65-50-160/7.5	50	32		72	7.5	10.0
65-50-200/9.2	40	47		73	9.2	12.5
65-50-200/11	50	50		72	11	15
80-65-125/7.5	75	21		74	7.5	10
80-65-160/9.2	100	21		74	9.2	12.5
80-65-160/11	100	26		74	11	15
80-65-200/15	100	34		75	15	20
80-65-200/18.5	100	43		75	18.5	25
80-65-200/22	100	50		75	22	30

OPERATING PERFORMANCE DATA

MODEL	POWER		CAPACITY															
	kW	HP	l/min	0	100	150	200	300	333	360	400	450	500	600	700	800	1000	1200
			m³/h	0	6	9	12	18	20	22	24	27	30	36	39	42	48	72
			HEAD (m)															
50-32-160/2.2	2.2	3.0		24	21.5	20.5	19.5	16	13									
50-32-200/3.0	3.0	4.0		45	41	40	38	34	32									
50-32-200/4.0	4.0	5.5		55	51	50	49	46	45	43								
65-40-160/4.0	4.0	5.5		39			35.5	34.5	34	33.5	32.5	32	31	29	26			
65-40-200/5.5	5.5	7.5		47			43	42.5	42	41.5	41	40.5	39	37	33			
65-40-200/7.5	7.5	10		57			53	52.5	52	51	50	49	48	46.5	44.5			
65-50-160/5.5	5.5	7.5		33							29.5	29	28.5	28	27	26	24	20
65-50-160/7.5	7.5	10		39							36	35	34.5	34	33.5	32.5	29	24
65-50-160/9.2	9.2	12.5		53									47	46.5	45	43.5	39	32
65-50-200/11	11	15		57.5									52	51	50.5	50	47	41

MODEL	POWER		51C47A45.5P44A CITY												
THREE PHASE 380V/50HZ			l/min	600	650	700	800	1000	1200	1500	1800	1900	2000	2100	2200
			m3/h	36	39	42	48	60	72	90	108	114	120	126	132
	kW	HP	HEAD (m)												
80-65-125/7.5	7.5	10		27.5	27	26.5	26	24	21.5	18	14	12	10.5		
80-65-160/9.2	9.2	12.5				31	30	28	26	23	18	16	14.5	13	
80-65-160/11	11	15				36	35	33	31	28	23	21	19.5	18	16.5
80-65-200/15	15	20				44	43	41	39	36	32	30	28	26	23
80-65-200/18.5	18.5	25				51	50	49	48	45	41	39	37	35	33
80-65-200/22	22	30				57	56	55	54	51	47	45.5	44	42	40

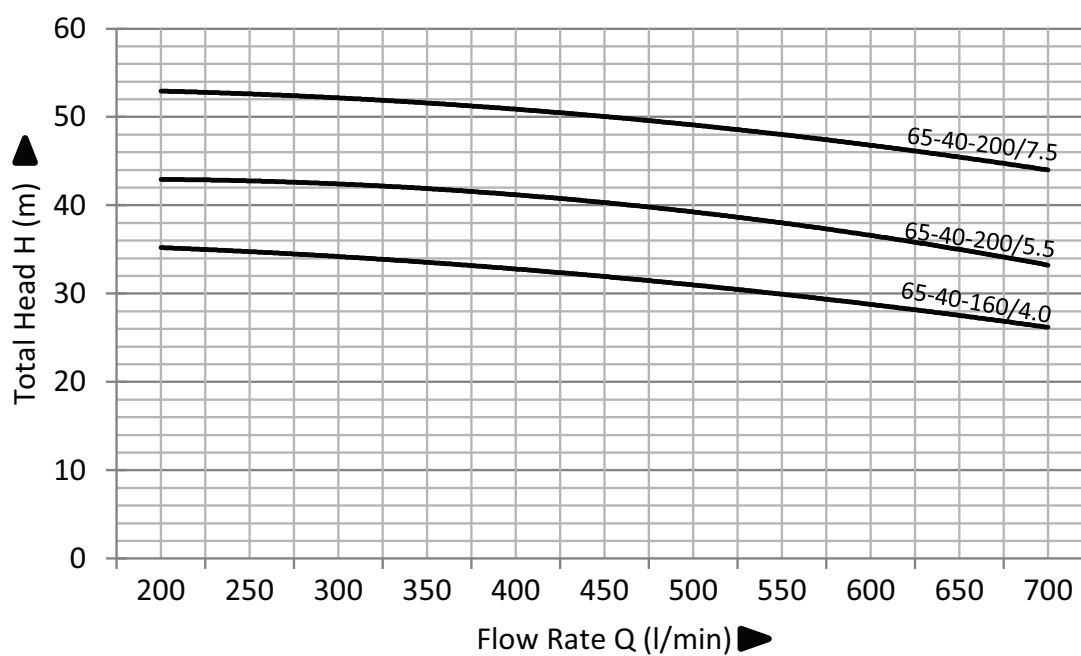
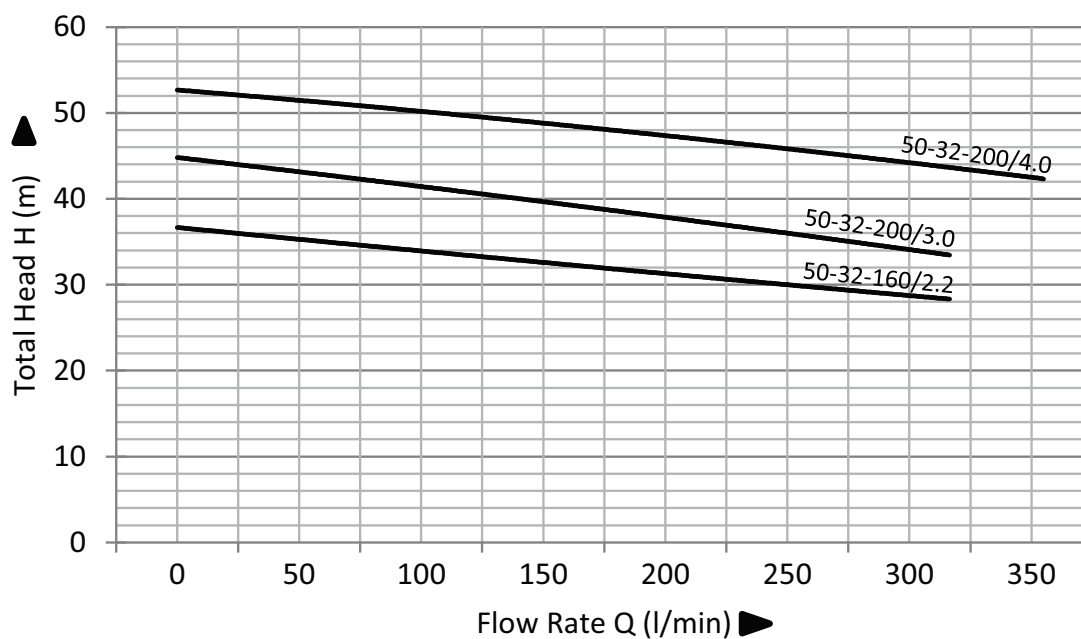
EXPLODED VIEW



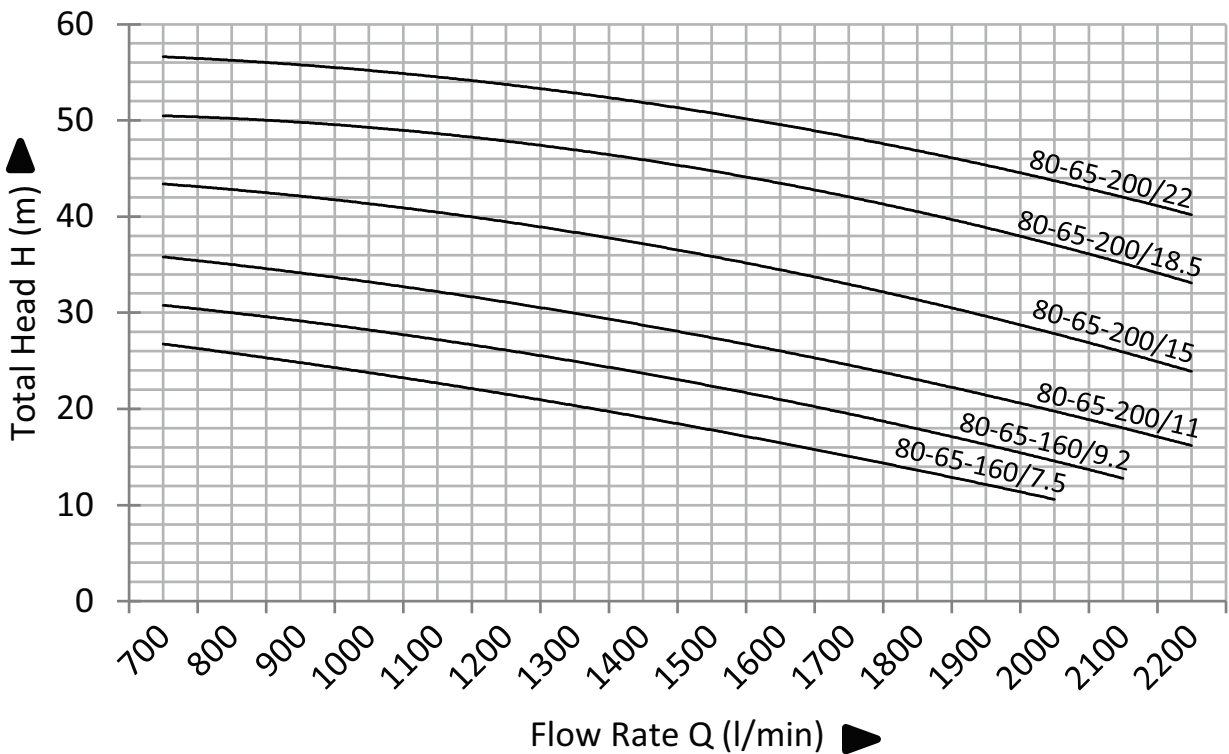
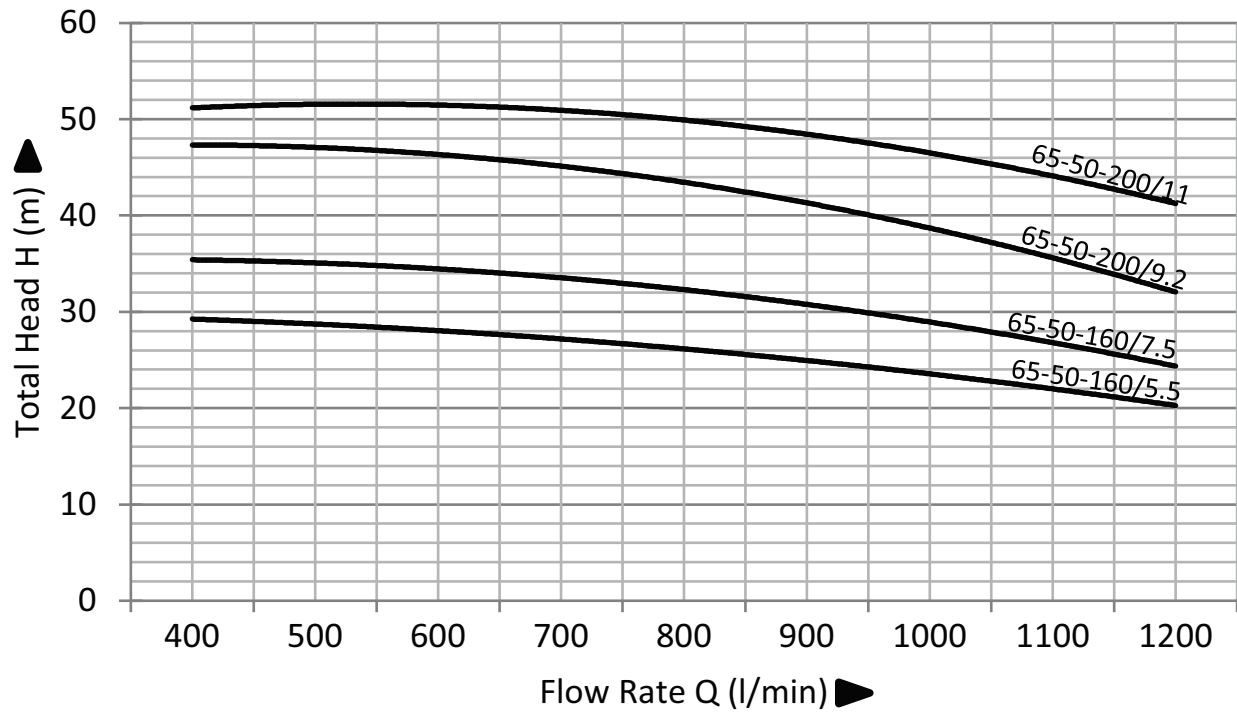
PARTS LIST

NO.	DESCRIPTION	NO.	DESCRIPTION	NO.	DESCRIPTION
1	Pump Body	6	Mechanical Seal	11	Inner Hexad Bolt
2	Screw Bolt	7	O-Ring	12	Key
3	Impeller Nut	8	Pump Cover	13	Electric Motor
4	Spring Washer	9	Universal Joint	14	Bottom Foot
5	Impeller	10	Screw Nut	-	-

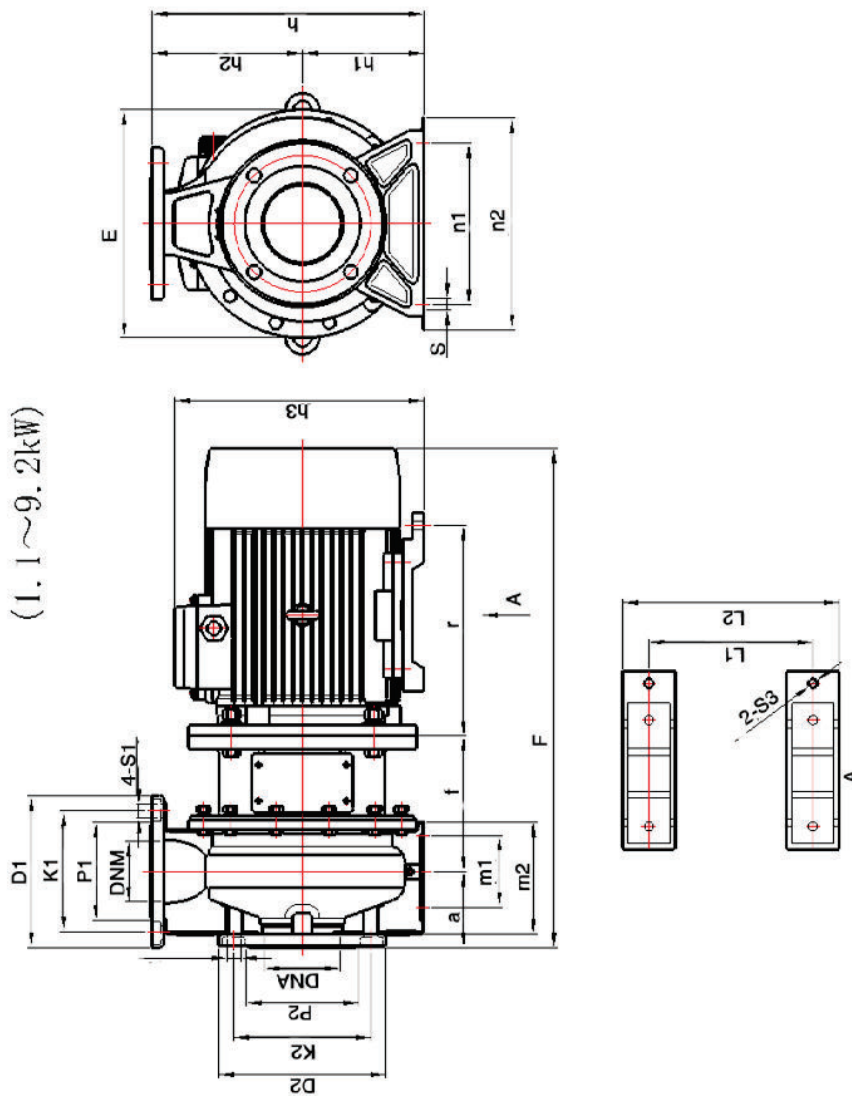
PERFORMANCE CURVES



PERFORMANCE CURVES

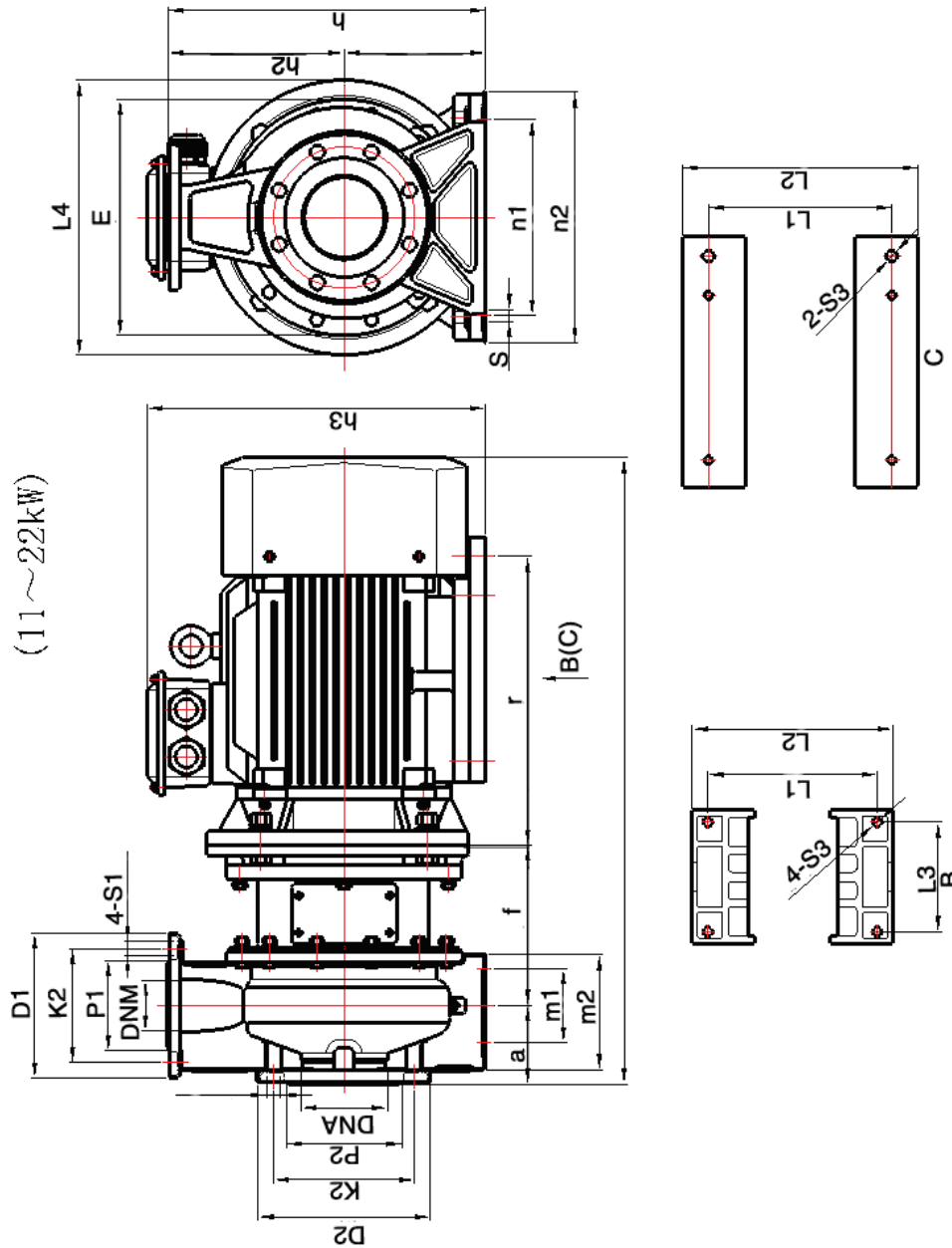


DZA(S) 1.1~9.2kW PUMP OUTLINE DIAGRAM & DIMENSIONS



MODEL	ΦE	F	h	h1	h2	h3	a	m1	m2	n1	n2	S	L1	L2	L3	S3	r	f	D2	K2	P2	S2	n	D1	K1	P1	S1	DNA	DNM
50-32-160/2.2	244	488	292	132	160	254	80	70	123	190	240	15	140	186	/	12	212	130	165	125	99	18	4	140	100	76	18	50	32
50-32-200/3.0	295	547	340	160	180	287	80	70	124	190	240	15	160	212	/	12	142	165	165	125	99	18	4	140	100	76	18	50	32
50-32-200/4.0	295	527	340	160	180	309	80	70	124	190	240	15	190	252	/	12	255	142	165	125	99	18	4	140	100	76	18	50	32
65-40-200/5.5	300	644	340	160	180	327	100	70	146	212	265	15	216	286	/	12	278	165	185	145	118	18	4	150	110	84	18	65	40
65-40-200/7.5	300	644	340	160	180	327	100	70	146	212	265	15	216	286	/	12	278	165	185	145	118	18	4	150	110	84	18	65	40
80-65-160/5.5	300	644	340	160	180	327	100	70	150	212	265	15	216	286	/	12	278	165	200	160	132	18	4	185	145	118	18	80	65
80-65-160/7.5	300	644	340	160	180	327	100	70	150	212	265	15	216	286	/	12	278	165	200	160	132	18	4	185	145	118	18	80	65
80-65-200/9.2	300	651	360	160	200	327	100	70	146	212	265	15	216	286	/	12	278	172	200	160	132	18	4	165	125	99	18	80	50

DZA(S) 11~22kW PUMP OUTLINE DIAGRAM & DIMENSIONS



MODEL	ΦE	F	h	h1	h2	h3	a	m1	m2	n1	n2	S	L1	L2	L3	S3	r	f	D2	K2	P2	S2	n	D1	K1	P1	S1	DNA	DNM
80-65-200/11	300	792	360	160	200	411	100	70	146	212	265	15	254	314	210	15	318	198	200	160	132	18	4	165	125	99	18	80	50
80-65-200/15	301	840	405	180	225	432	100	95	155	250	320	15	254	348	/	15	368	205	220	180	152	18	8	185	145	118	18	100	65
80-65-200/18.5	301	840	405	180	225	432	100	95	155	250	320	15	254	348	/	15	368	205	220	180	152	18	8	185	145	118	18	100	65
80-65-200/22	301	840	405	180	225	432	100	95	155	250	320	15	254	348	/	15	368	205	220	180	152	18	8	185	145	118	18	100	65

DZA SINGLE PHASE FLANGED MOTOR

APPLICATIONS

These motors are suitable for applications requiring low starting torque and long-term continuous performance, such as home electrical appliances, pumps, fans, recording meters, etc.

FEATURES

Running dual capacitors
 Frame Size: H60-H100
 Rated Power Range: 2 pole 0.18kW-2.22kW
 House Material: Aluminium (plastic terminal box)
 Rated Voltage: 220V $\pm$ 5%, 50Hz
 Protection Class: IP54/IP55
 Insulation Class: Class B/F

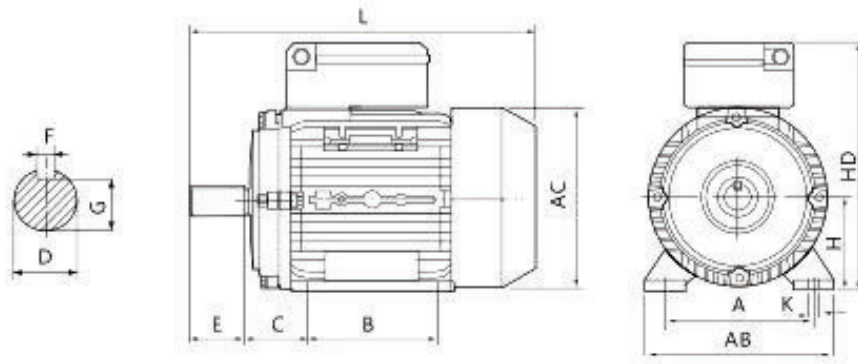
TECHNICAL DATA

MODEL	OUTPUT kW	VOLTAGE V	CURRENT A	SPEED RPM	EFF %	POWER FACTOR	T _{Start} / T _n TIME	T _{max} / T _n Time	STARTING CURRENT (A)
90L	2.2	220	13.67	2800	77	0.95	0.3	1.7	65

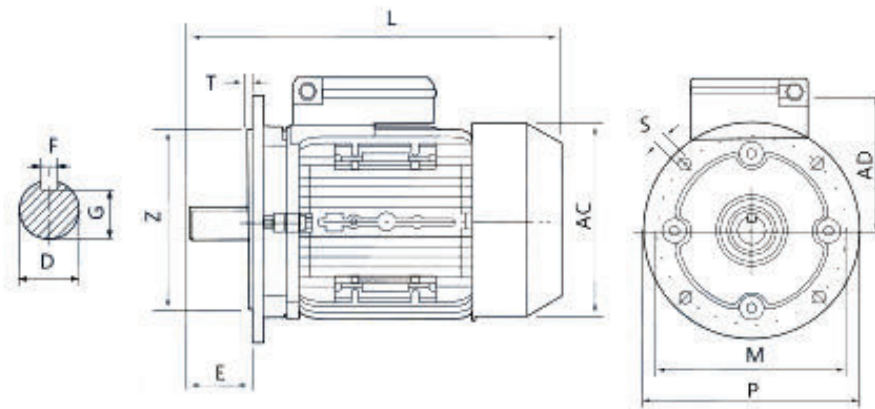


OUTLINE AND INSTALLATION DIMENSIONS

FLANGE SPECIFICATION: B3



FLANGE SPECIFICATION: B5



FRAME SIZE	INSTALLATION SIZE (mm) B3										OUTLINE DIMENSION (mm)				
	A	B	C	D	E	F	G	H	K		AB	AC	AD	HD	L
90L	140	125	56	24	50	8	20	90	10		180	185	145	265	360

FRAME SIZE	INSTALLATION SIZE (mm) B5							OUTLINE DIMENSION (mm)				
	M	N	P	R	S	T		AB	AC	AD	HD	L
90L	165	130	200	0	12	3.5		180	185	145	265	360

DZA THREE PHASE FLANGED MOTOR

FEATURES

Frame Size Range: H80~H355

Housing Material: Frame, flange and bracket, grey cast iron, conduit box-steel

Standard Mounting Construction: IEC60034-7

Protect Enclosed Class: IP55 (IEC60034-5)

Cooling Method: IC411 (IEC60034-6)

The special winding design can work for multi-voltages (50Hz or 60Hz)

Can withstand 50% more than the rated current for 2 minutes (IEC60034-1)

Anti-condensation heater is available

PTC or Pt100 thermistor are available to protect the winding and bearing



BEARING SPECIFICATIONS

FRAME SIZE	POLES	DRIVE-END BEARING		NON-DRIVE-END BEARING	
		HORIZONTAL MOUNTING	VERTICAL MOUNTING	HORIZONTAL MOUNTING	VERTICAL MOUNTING
90	2	6205 2Z		6205 RZ	
100	2	6206 2Z		6206 RZ	
112	2	6206 2Z		6206 RZ	
132	2	6208 2Z		6208 RZ	
160	2	6209 2Z		6209 RZ	
180	2	6211		6211	

MECHANICAL FEATURES

FRAME SIZE	PROTECTION DEGREE	ROTATION OF CONDUIT BOX	NUMBER OF CABLE GRAB	TERMINAL BUS	CABLE ENTRY SIZE	LXWXH
90	IP55	4X90°	1	M4	M24x1.5	110x110x60
100	IP55	4X90°	1	M4	M24x1.5	110x110x60
112	IP55	4X90°	2	M5	2-M30x1.5	125x125x75
132	IP55	4X90°	2	M5	2-M30x1.5	125x125x75
160	IP55	4X90°	2	M6	2-M36x2	165x157x83
180	IP55	4X90°	2	M6	2-M36x2	165x157x83

REFERENCE STANDARDS

This series comply with the following electrical and mechanical standards.

TITLE	IEC STANDARD
Rotating electrical machine - Part 1: Rating and Performance	IEC 60034-1
Rotating electrical machines - Part 2-1: Standard methods for determining losses and efficiency from tests (excluding machines for traction vehicles)	IEC 60034-2
Rotating electrical machines - Part 5: Degrees of protection provided by the integral design of rotating electrical machines (IP Code) - Classification	IEC 60034-5
Rotating electrical machines - Part 6: Methods of Cooling (IC Cooling)	IEC 60034-6
Rotating electrical machines - Part 7: Classification types of construction, mounting arrangements and terminal box position (IM Code)	IEC 60034-7
Rotating electrical machines- Part 8: Terminal markings and direction of rotation	IEC 60034-8
Rotating electrical machines- Part 9: Noise Limits	IEC 60034-9
Rotating electrical machines-Part 14: Mechanical vibration of certain machines with shaft heights 56mm and higher- Measurements, evaluation and limits of vibration severity	IEC 60034-14
Rotating electrical machines- Part 1: Frame numbers 56 to 400 and flange numbers 55 to 1080	IEC 60072-1
Electrical insulation- Thermal classification	IEC 60085
Classification of environmental conditions Part 2-1: Environmental conditions appearing in nature- Temperature and humidity	IEC 60072-2-1
Standard voltages	IEC60038

OPERATING ENVIRONMENT

Suitable for IP55 installations

Ambient temperature: -15°C - 40°C

Relative Humidity

TEMPERATURE	RELATIVE HUMIDITY
-15°C ≤ T ≤ 20°C	100%
20°C ≤ T ≤ 30°C	95%
30°C ≤ T ≤ 40°C	55%

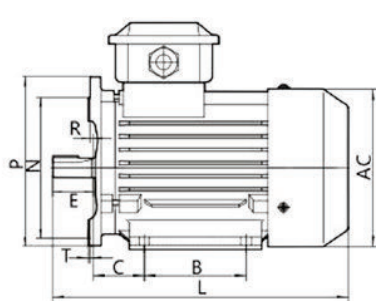
If environmental conditions vary from those listed above, please consult chart below.

ALTITUDE	<30 °C	30 °-40 °C	45 °C	50 °C	55 °C	60 °C
1000m	1.07	1.00	0.96	0.92	0.87	0.82
1500m	1.04	0.97	0.93	0.89	0.84	0.79
2000m	1.00	0.94	0.90	0.86	0.82	0.77
2500m	0.96	0.90	0.86	0.83	0.78	0.74
3000m	0.92	0.86	0.82	0.79	0.75	0.70
3500m	0.88	0.82	0.79	0.75	0.71	0.67
4000m	0.82	0.77	0.74	0.71	0.67	0.63

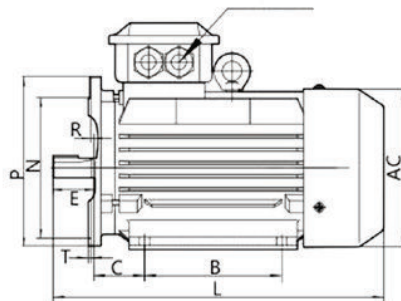
TECHNICAL DATA

MODEL	OUTPUT		FULL LOAD					START TORQUE ÷ RATED TORQUE	START CURRENT ÷ RATED CURRENT	MAX TORQUE ÷ RATED TORQUE	MIN TORQUE ÷ RATED TORQUE
	kW	HP	SPEED RPM	VOLTAGE V	CUR- RENT A	POWER FACTOR COSφ	EFF %				
90L	2.2	3	2840	380	4.93	0.85	79.7	2.2	7.0	2.3	1.4
100L	3	4	2880	380	6.43	0.87	81.5	2.2	7.5	2.3	1.4
112M	4	5.5	2890	380	8.31	0.88	83.1	2.2	7.5	2.3	1.4
132S	5.5	7.5	2900	380	11.2	0.88	84.7	2.2	7.5	2.3	1.2
132s	7.5	10	2900	380	15.1	0.88	86.0	2.2	7.5	2.3	1.2
132M	9.2	12.3	2900	380	16.6	0.86	88.0	2.2	7.5	2.2	1.2
160M	11	15	2930	380	21.4	0.89	87.6	2.2	7.5	2.3	1.2
160M	15	20	2930	380	28.9	0.89	88.7	2.2	7.5	2.3	1.2
160L	18.5	25	2930	380	35.0	0.90	89.3	2.2	7.5	2.3	1.1
180M	22	30	2940	380	41.3	0.90	89.9	2.0	7.5	2.3	1.1

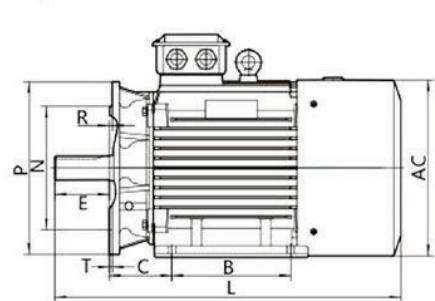
OUTLINE



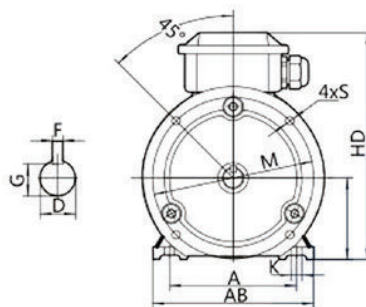
80~90 (without lifting bolts)



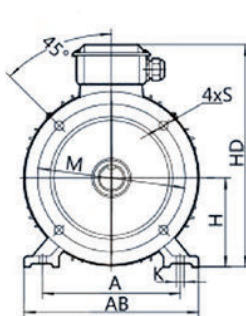
100~132



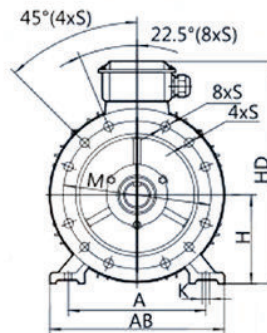
160~355



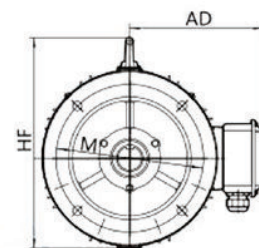
80~132



160



180~200 (4xS)
225~355 (8xS)



B5, B14, HF, AD
Dimensions HF, AD, B5, B14

DIMENSIONS

Frame Size	MOUNTING DIMENSIONS (mm)															OUTLINE DIMENSIONS (mm)					
	A	B	C	D	E	F	G	H	K	M	N	P	R	S	T	AB	AC	AD	HD	HF	L
90L	140	125	56	24	50	8	20	90	10	165	130	200	0	12	3.5	180	195	155	250	195	345
100L	160	140	63	28	60	8	24	100	12	215	180	250	0	15	4	205	215	180	270	245	385
112M	190	140	70	28	60	8	24	112	12	215	180	250	0	15	4	230	240	190	300	265	400
132S	216	140	89	38	80	10	33	132	12	265	230	300	0	15	4	270	275	210	345	315	470
132M	216	178	89	38	80	10	33	132	12	265	230	300	0	15	4	270	275	210	345	315	510
160M	254	210	108	42	110	12	37	160	15	300	250	350	0	19	5	320	330	255	420	385	615
160L	254	254	108	42	110	12	37	160	15	300	250	350	0	19	5	320	330	255	420	385	670
180M	279	241	121	48	110	14	42.5	180	15	300	250	350	0	19	5	355	380	280	455	430	700