END SUCTION

CATALOGUE 2019

VERSION 1

HYDRO PUMPS

WATER TECHNOLOGIES

INDEX

HYDRO PUMPS
WATER TECHNOLOGIES

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PERIPHERAL VANE PUMP

QB

RANGE OF PERFORMANCE

Flow rate:	max 50 L/min (3m^3/h)
Head:	max 60m

LIMITS OF USE

Liquid temperature:	40º C
Ambient temperature:	40ºC

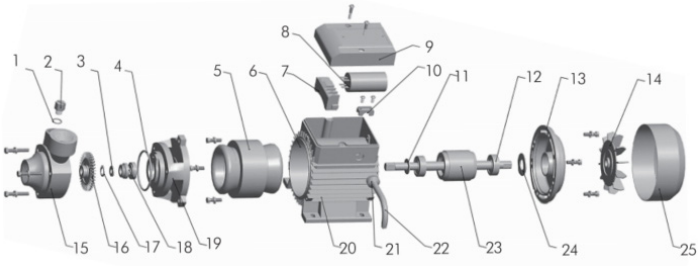
USES AND INSTALLATIONS

The QB range is recommended for pumping clean water without abrasive particles and liquids that are chemically non aggressive for the materials of which the pump is made. Due to their reliablity, simplicity of use and economy, they are suitable for domesitc use and in particular for high pressure applications. The pump must be installed under a vented cover and protected against exposure to rain or water spray.

CONSTRUCTION CHARACTERISTICS

Pump Body:	Cast Iron (Brass inserts front and back of volute - QB 60)
Impeller:	Brass, with radial peripheral vanes
Motor Shaft:	Stainless Steel 304
Mechanical Seal:	Ceramic-graphite
Electric Motor:	Single-phase 220V - 50Hz with capacitor and thermal overload protector.
Insulation:	Class B
Protection:	IP 44

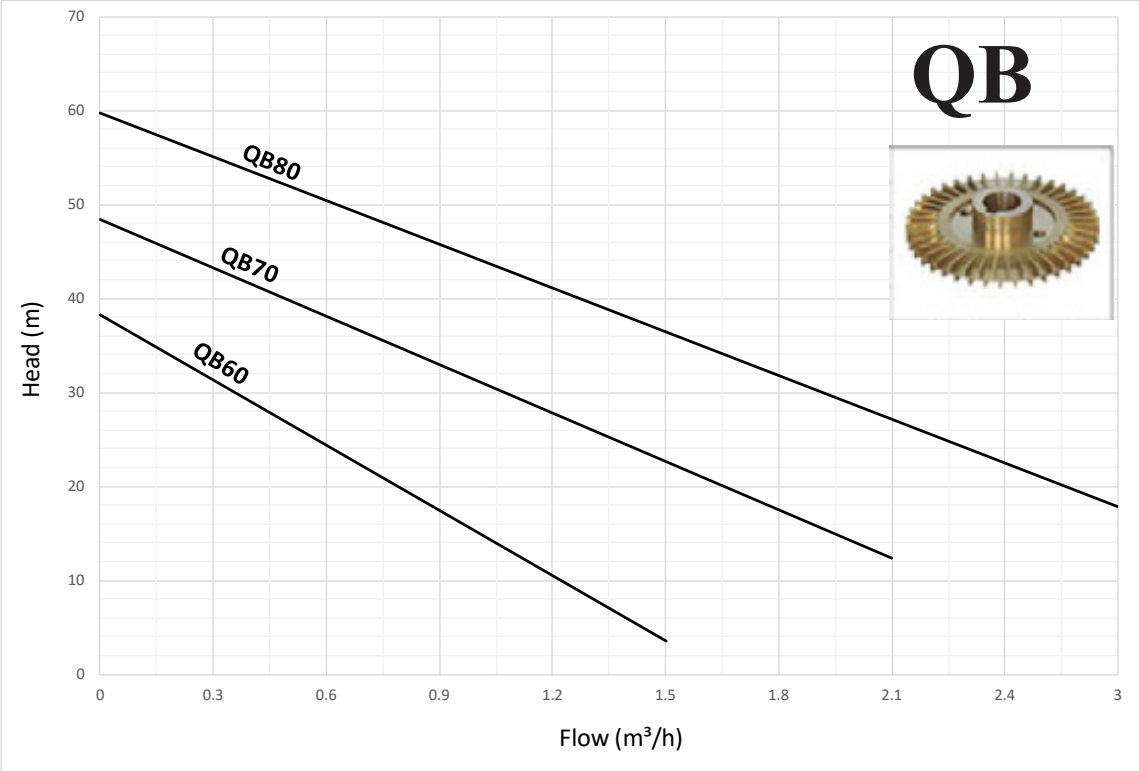
DIAGRAM



NO.	DESCRIPTION	NO.	DESCRIPTION	NO.	DESCRIPTION	NO.	DESCRIPTION
1	O-Ring	7	Terminal board	13	End Cover	19	Coupling
2	Brass air vent screw	8	Capacitor	14	Fan	20	Fan Cover
3	Flat washer	9	Capacitor cover	15	Pump body	21	Cable protector
4	O-Ring	10	Cable Fixer	16	Impeller	22	Cable
5	Stator	11	Water proof ring	17	Shaft circlip	23	Rotor
6	Motor bracket	12	Bearing	18	Mechanical Seal	24	Wave spring

PERFORMANCE CURVE

HYDRAULIC PERFORMANCE CURVE

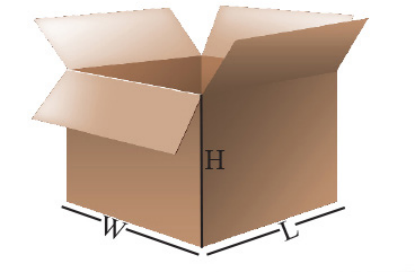


TECHNICAL DATA

NO	MODE	POWER		Q (m³/h)	0	0.3	0.6	0.9	1.2	1.5	1.8	2.1	2.4	3	3.6	4.2
	Single-phase	kW	HP	Q (l/min)	0	5	10	15	20	25	30	35	40	50	60	70
1	QB60	0.37	0.5	H (m)	38	27.5	22	16	11	5.5						
2	QB70	0.55	0.75		48	45	41	35	29	23	17	10				
3	QB80	0.75	1		60	57	53	49	43	38	32.5	27	21	15		

DIMENSION

No	Model	Freq.	Suct. Max	Size	Start-up Amps	Running Amps	Dimension	N/W
	Single-phase	Hz	m	inch	A	A	L x W x H mm	kg
1	QB60	50	8	1″x 1″	6.2	1.9	280x140x170	5.5
2	QB70	50	8	1″x 1″	14	4.2	335x190x210	8.5
3	QB80	50	8	1″x 1″	16	5.2	340x190x210	9.0



SINGLE STAGE PUMPS

CPM

RANGE OF PERFORMANCE

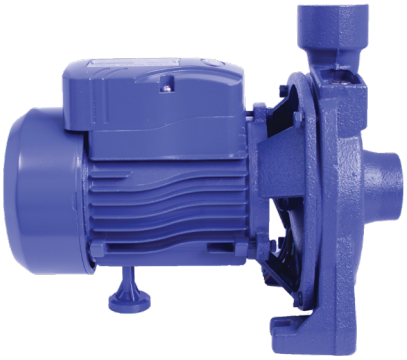
Flow rate:	max 120 L/min (7.2m³/h)
Head:	max 59m

LIMITS OF USE

Suction height:	max 7m
Liquid temperature:	40ºC
Ambient temperature:	40ºC

USES AND INSTALLATIONS

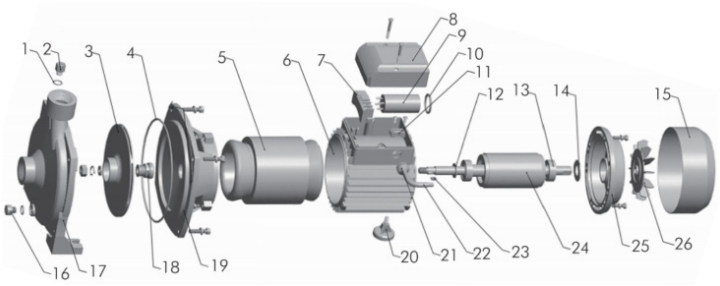
This range is recommended for pumping clean water without abrasive particles and liquids that are chemically non aggressive for the materials of which the pump is made. Due to their reliablity, simplicity of use and economy, they are suitable for domesitc use and in particular for irrigating and pressure boosting systems. The pump must be installed under a vented cover and protected against exposure to rain or water spray.



CONSTRUCTION CHARACTERISTICS

Pump Body:	Cast Iron
Impeller:	Brass
Motor Shaft:	Stainless Steel 304
Mechanical Seal:	Ceramic-graphite
Electric Motor:	Single-phase 230V - 50Hz with capacitor and thermal overload protector.
CP:	three-phase380/400v -50Hz
Insulation:	Class B
Protection:	IP 44

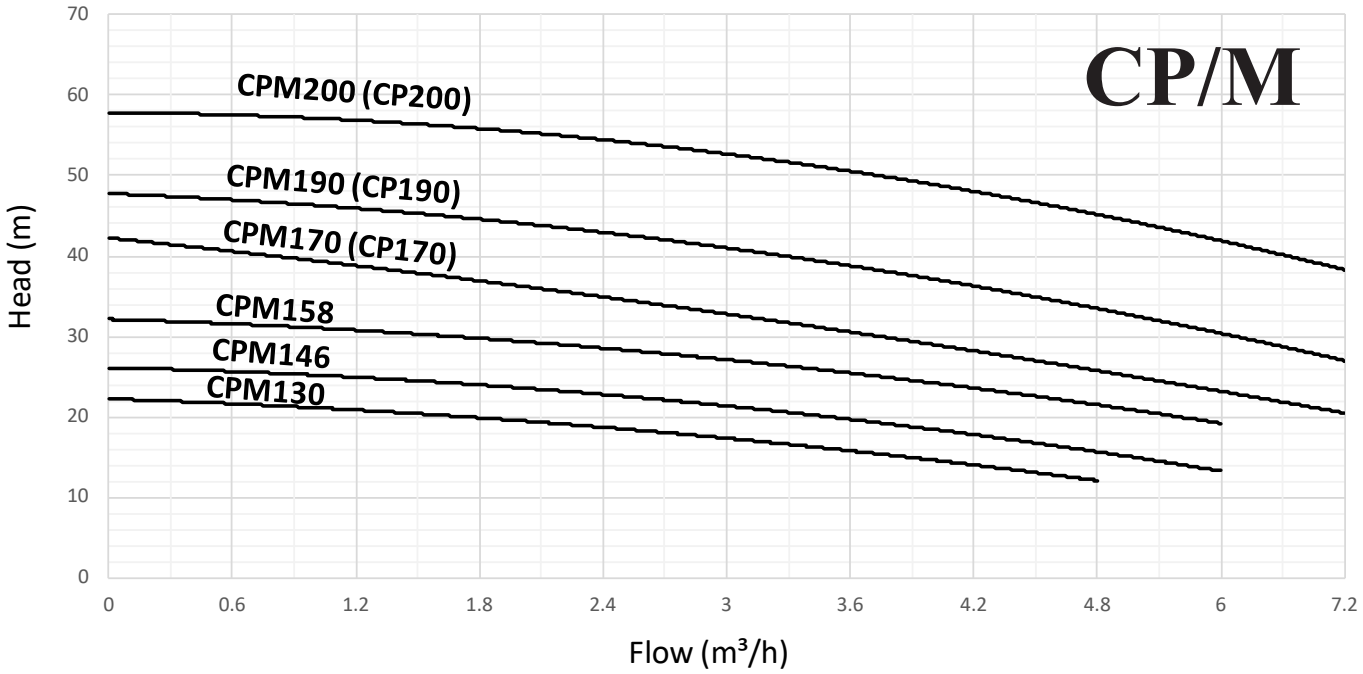
DIAGRAM



NO.	DESCRIPTION	NO.	DESCRIPTION	NO.	DESCRIPTION	NO.	DESCRIPTION
1	O-Ring	7	Terminal board	14	Wave spring	21	Cable protector
2	Brass air vent screw	8	Capacitor cover	15	Fan cover	22	Cable
3	Impeller	9	Capacitor	16	Water vent screw	23	Key
4	O-Ring	10	O-Ring	17	Pump Body	24	Rotor
5	Stator	11	Cable Fixer	18	Mechanical Seal	25	End Cover
6	Motor bracket	12	Water proof ring	19	Coupling	26	Fan
		13	Bearing	20	Foot		

PERFORMANCE CURVE

HYDRAULIC PERFORMANCE CURVE



TECHNICAL DATA

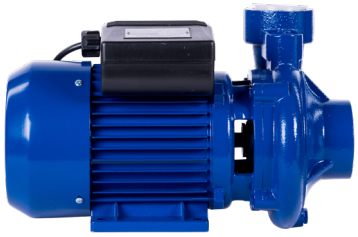
NO	MODE	POWER		Q (m³/h)	0	0.6	1.2	1.8	2.4	3	3.6	4.8	6	7.2
	1ph / 3ph	kW	HP	Q (l/min)	0	10	20	30	40	50	60	80	100	120
1	CPM130	0.37	0.5	H (m)	22	21.5	21	20.5	19	17	15	12.6		
2	CPM146	0.55	0.75		26	25.5	25	24.5	23	21	19	16.4	13	
3	CP/M158	0.75	1		32	31.5	31	30	28.5	27	25	22	19	
4	CP/M170	1.1	1.5		44	39.1	37.8	36.9	35.1	32.8	29.9	27.4	23.6	19.1
5	CP/M190	1.5	2.2		52	48	36.3	45.2	43.6	42.2	39	36	32	23.3
6	CP/M200	2.2	3		59	57	56.2	55.5	54	52.6	50.3	47	42	37

DIMENSION

NO	MODEL	FREQ.	SUCT. MAX	SIZE	Start-up Amps (1ph)	Running Amps (1ph)	DIMENSION	N/W
	1ph / 3ph	Hz	m	inch	A	A	L x W x H mm	kg
1	CPM130	50	8	1"X 1"	9	2.8	285x185x230	9
2	CPM146	50	8	1"X 1"	14	4.2	340x210x265	12
3	CPM158	50	8	1"X 1"	19	5.8	340x210x265	13
4	CPM170	50	8	1"X 1"	23	7.8	390x240x290	19
5	CPM190	50	8	1"X 1"	33	10	390x260x320	23
6	CPM200	50	8	1"X 1"	30.5	13.5	455x280x340	30.5

SINGLE STAGE PUMPS

CPM



RANGE OF PERFORMANCE

Flow rate:	max 450 L/min (27m³/h)
Head:	max 34m

LIMITS OF USE

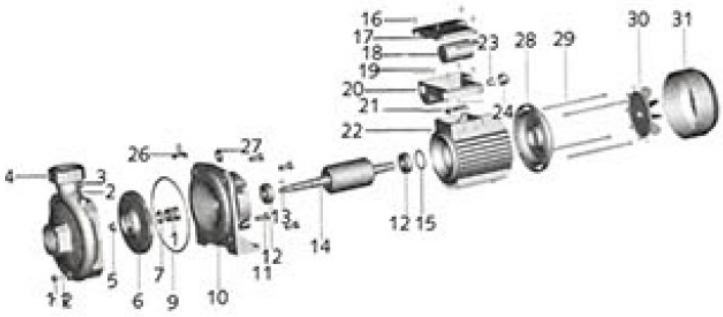
Suction height:	max 7m
Liquid temperature:	40ºC
Ambient temperature:	40ºC

USES AND INSTALLATIONS

They are recommended for pumping clean water without abrasive particles and liquids that are chemically non aggressive for the materials of which the pump is made. Due to their reliablity, simplicity of use and economy, they are suitable for high flow requirements & specifically for centre pivot/greenhouse irrigation. The pump must be installed under a vented cover and protected against exposure to rain or water spray.

CONSTRUCTION CHARACTERISTICS

Pump Body:	Cast Iron
Impeller:	Brass
Motor Shaft:	Stainless Steel 304
Mechanical Seal:	Ceramic-graphite
Electric Motor:	Single-phase 230V - 50Hz with capacitor and thermal overload protector.
CP:	three-phase380/400v -50Hz
Insulation:	Class B
Protection:	IP 44

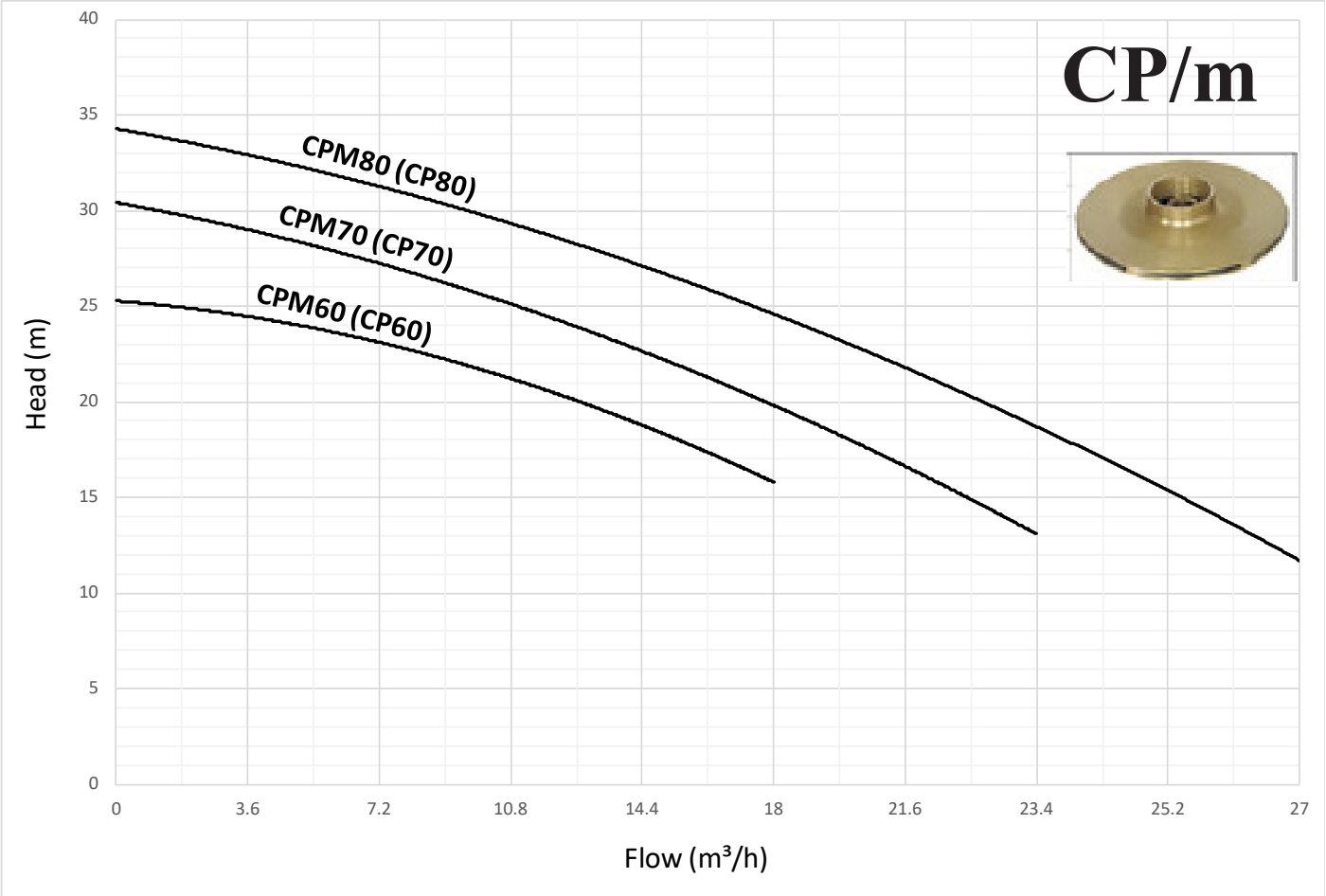


DIAGRAM

NO.	DESCRIPTION	NO.	DESCRIPTION	NO.	DESCRIPTION	NO.	DESCRIPTION
1	Water vent screw	9	O-Ring	17	Terminal cover	25	Screw
2	O-Ring	10	Pump Support	18	Capacitor	26	Stand
3	Air vent screw	11	Bolt	19	Screw	27	Drop guard
4	Pump body	12	Bearing	20	Terminal box	28	Driving cap
5	Nut	13	Key	21	Terminal board	29	Bolt
6	Impeller	14	Rotor	22	Motor Bracket	30	Fan
7	Washer	15	Split ring	23	Cable Fixer	31	Fan Cover
8	Mechanical Seal	16	Screw	24	Nut		

PERFORMANCE CURVE

HYDRAULIC PERFORMANCE CURVE



TECHNICAL DATA

NO	MODE	POWER		Q (m³/h)	0	3.6	7.2	10.8	14.4	18	21.6	23.4	25.2	27
	1ph / 3ph	kW	HP	Q (l/min)	0	60	120	180	240	300	360	390	420	450
1	CP/M60	1.1	1.5	H (m)	25	24.9	23.2	21	18.5	16	13.4	10.5		
2	CP/M70	1.5	2		30	29.4	27.5	25.2	22.5	19.5	16.4	13.4		
3	CP/M80	2.2	3		34	33	31.5	29.5	27.3	24.4	21.5	18.5	15.5	11.8

DIMENSION

NO	MODEL	FREQ.	SUCT. MAX	SIZE	Start-up Amps (1ph)	Running Amps (1ph)	DIMENSION	N/W
	1ph / 3ph	Hz	m	inch	A	A	L x W x H mm	kg
1	CPM60	50	7	2″ x 2″	23.5	7.5	403x245x310	21.2
2	CPM70	50	7	2″ x 2″	30.5	10.2	403x245x310	23.6
3	CPM80	50	7	2″ x 2″	16	5.2	440x242x295	29.8

TWIN STAGE PUMPS

2CPM

RANGE OF PERFORMANCE

Flow rate:	max 180 L/min (10.8m³/h)
Head:	max 70m

LIMITS OF USE

Suction height:	max 7m
Liquid temperature:	60ºC
Environmental temperature:	40ºC

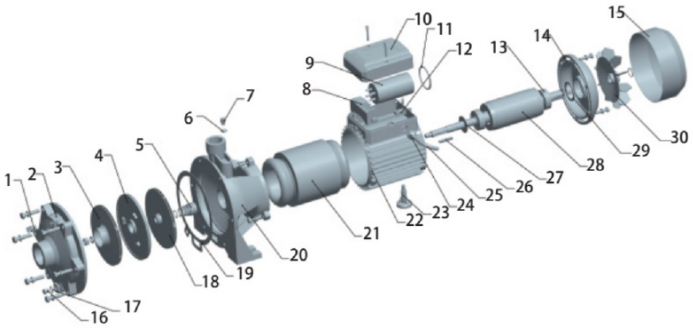
USES AND INSTALLATIONS

They are recommended for pumping clean water without abrasive particles and liquids that are chemically non aggressive for the aterials of which the pump is made. The high head and adaptability to the most varied, even unusual applications make them the ideal choice in the domestic, civil and industrial field and specifically for increase pressure in the mains for fire-fighting sets. The pump must be installed under a vented cover and protected against exposure to rain or water spray.

CONSTRUCTION CHARACTERISTICS

Pump Body:	Cast Iron
Impellers:	Brass / Brass
Motor Shaft:	Stainless Steel 304
Mechanical Seal:	Ceramic-graphite
Electric Motor:	Single-phase 230V - 50Hz with capacitor and thermal overload protector.
CP:	three-phase380/400v -50Hz
Insulation:	Class F
Protection:	IP 44

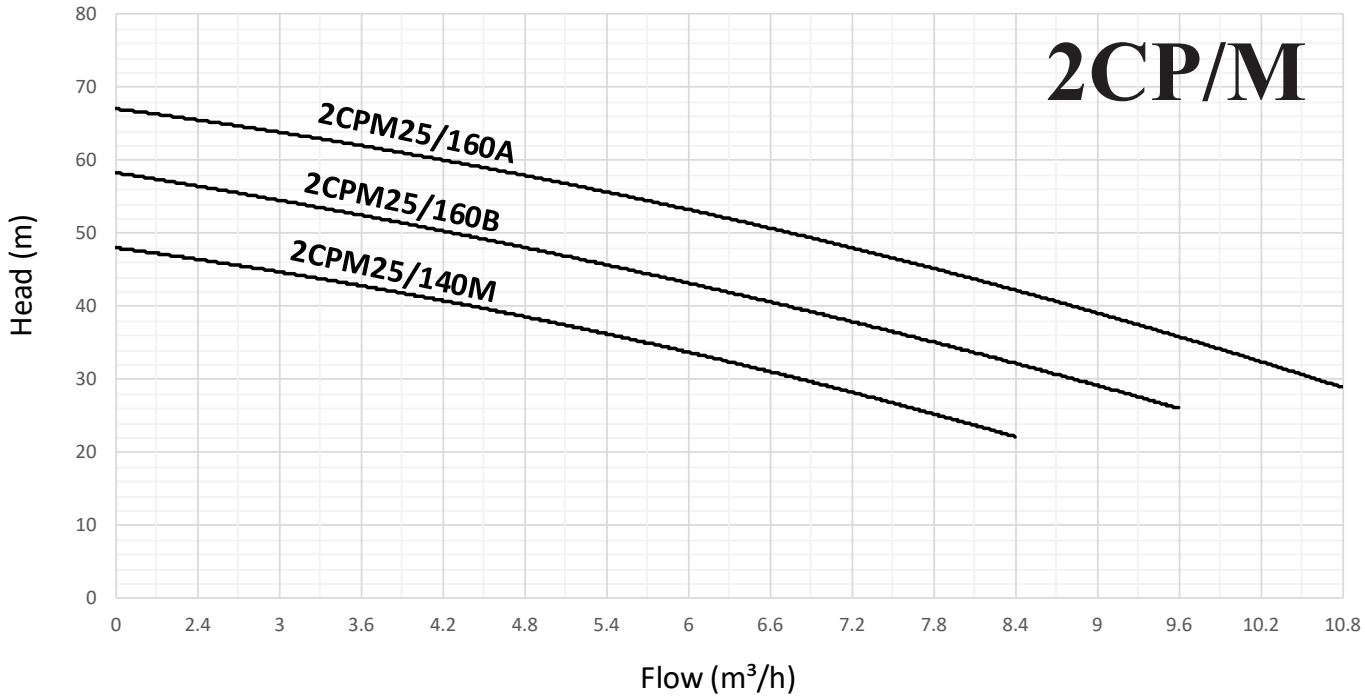
DIAGRAM



NO.	DESCRIPTION	NO.	DESCRIPTION	NO.	DESCRIPTION	NO.	DESCRIPTION
1	Air vent screw	9	Capacitor	17	O-Ring	25	Cable
2	Pump body	10	Capacitor cover	18	Impeller	26	Key
3	Impeller	11	O-Ring	19	Gasket	27	Water proof ring
4	Pump Cover	12	Cable fixer	20	Coupling	28	Rotor
5	Mechanical Seal	13	Bearing	21	Stator	29	Wave spring
6	O-Ring	14	End Cover	22	Motor bracket	30	Fan
7	Air vent screw	15	Fan Cover	23	Foot		
8	Terminal Board	16	Water vent screw	24	Cable protector		

PERFORMANCE CURVE

HYDRAULIC PERFORMANCE CURVE



TECHNICAL DATA

NO	MODE	POWER		Q (m³/h)	0	2.4	3	4.2	4.8	6	6.6	8.4	9.6	10.8
	1ph / 3ph	kW	HP	Q (l/min)	0	40	50	70	80	100	110	140	160	180
1	2CP/ M25/140M	1.1	1.5	H (m)	47	46.7	45.4	41.7	38	34	30	23		
2	2CP/M25/160B	1.5	2		58	56.4	54.3	51.4	48	44	39	33	26	
3	2CP/M25/160A	2.2	3		68	66	63	60	57	54	50	43.5	36.2	28

DIMENSION

No	Model	Freq.	Suct. Max	Size	Start-up Amps (1ph)	Running Amps (1ph)	Dimension	N/W
	1ph / 3ph	Hz	m	inch	A	A	L x W x H mm	kg
1	2CP/M25/140M	50	7	1.5″ x 1″	28	9	410x242x280	20.5
2	2CP/M25/160B	50	7	1.5″ x 1″	30.5	9.7	435x250x305	25
3	2CP/M25/160A	50	7	1.5″ x 1″	35	13.3	518x278x345	27

SELF-PRIMING JET PUMPS

JSWM

RANGE OF PERFORMANCE

Flow rate:	max 50 L/min (3m³/h)
Head:	max 70m

LIMITS OF USE

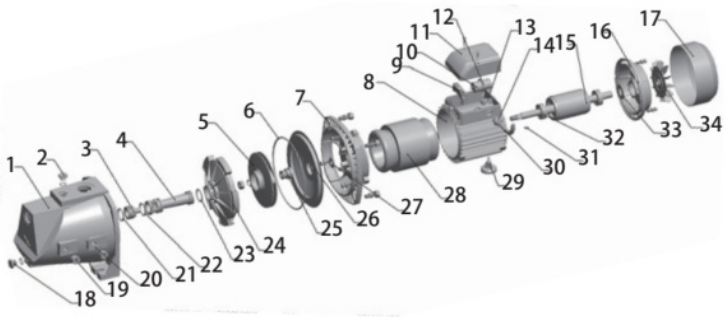
Suction height:	max 7m
Liquid temperature:	40°C
Ambient temperature:	40°C

USES AND INSTALLATIONS

This range is recommended for pumping clean water without abrasive particles and liquids that are chemically non aggressive for the materials of which the pump is made. Due to their reliablity, simplicity of use and economy, they are suitable for domesitc use, irrigation applications and specifically for the extraction of water from well points. The pump must be installed under a vented cover and protected against exposure to rain or water spray.

CONSTRUCTION CHARACTERISTICS

Pump Body:	Cast Iron
Impeller:	Brass
Motor Shaft:	Stainless Steel 304
Mechanical Seal:	Ceramic-graphite
Electric Motor:	Single-phase 230V - 50Hz with capacitor and thermal overload protector.
CP:	three-phase380/400v -50Hz
Insulation:	Class b
Protection:	IP 44

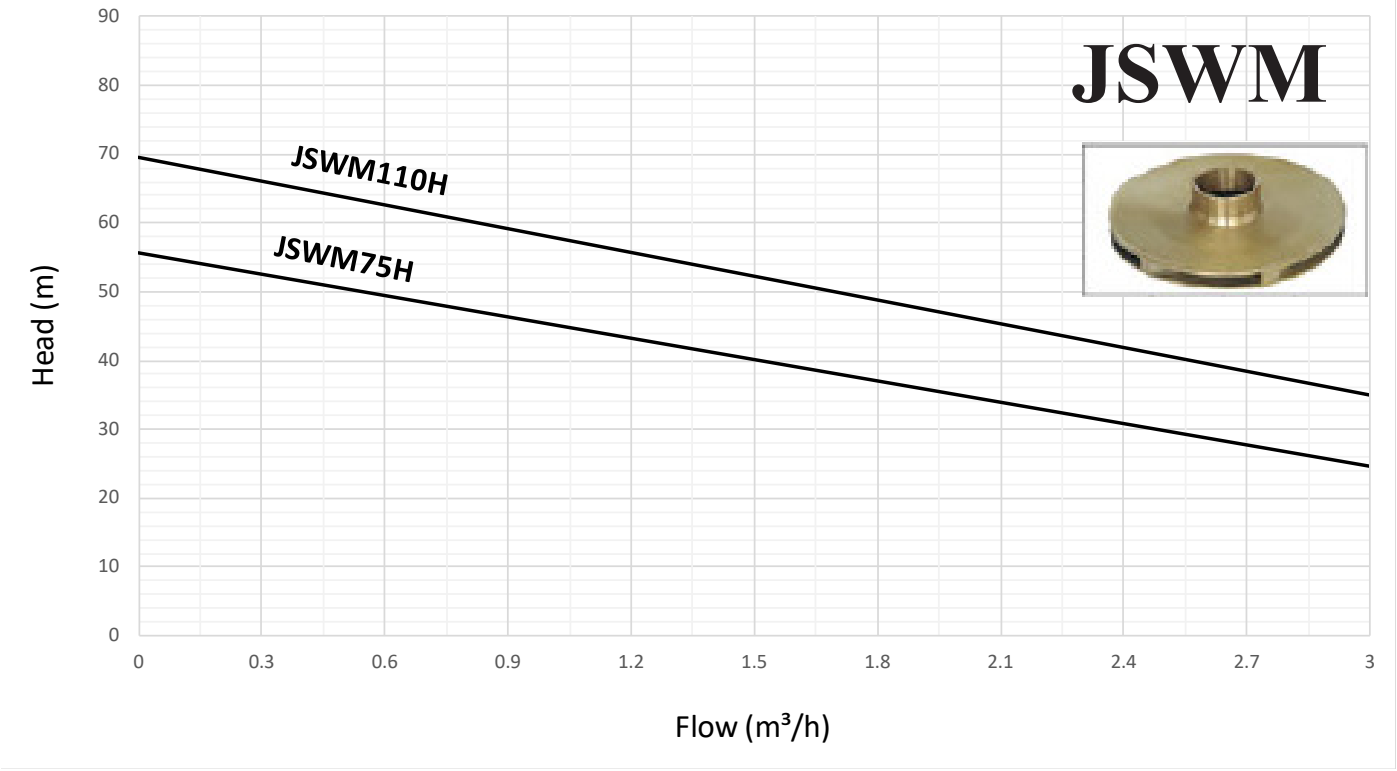


DIAGRAM

NO.	DESCRIPTION	NO.	DESCRIPTION	NO.	DESCRIPTION	NO.	DESCRIPTION
1	Pump body	10	Capacitor	19	Air vent screw	28	Stator
2	Air vent screw	11	Capacitor cover	20	O-Ring	29	Foot
3	Nozzle	12	O-Ring	21	O-Ring	30	Cable
4	Injection pipe	13	Cable fixer	22	O-Ring	31	Key
5	Impeller	14	Cable protector	23	O-Ring	32	Bearing
6	O-Ring	15	Rotor	24	Guide vane	33	Wave Spring
7	Coupling	16	End Cover	25	Mechanical Seal	34	Fan
8	Motor bracket	17	Fan Cover	26	Pump cover		
9	Terminal board	18	Water vent screw	27	Water proof ring		

PERFORMANCE CURVE

HYDRAULIC PERFORMANCE CURVE



TECHNICAL DATA

NO	MODE	POWER		Q (m³/h)	0	0.3	0.9	1.2	1.5	2.4	3	3.6	4.2	4.8
	Single-phase	kW	HP	Q (l/min)	0	5	15	20	25	40	50	60	70	80
1	JSWM75H	0.75	1	H (m)	56	50	45	41	36	32	28			
2	JSWM110H	1.1	1.5		70	64	58	53	48	43	38			

DIMENSION

No	Model	Freq.	Suct. Max	Size	Start-up Amps	Running Amps	Dimension	N/W
	Single-phase	Hz	m	inch	A	A	L x W x H mm	kg
1	JSWM75H	50	7	1″x 1″	16	5.2	438x196x235	15
2	JSWM110H	50	7	1″x 1″	23	7.5	438x196x235	15.5

SELF-PRIMING JET PUMPS

JSPM

RANGE OF PERFORMANCE

Flow rate:	max 63 L/min (3.8m³/h)
Head:	max 44m

LIMITS OF USE

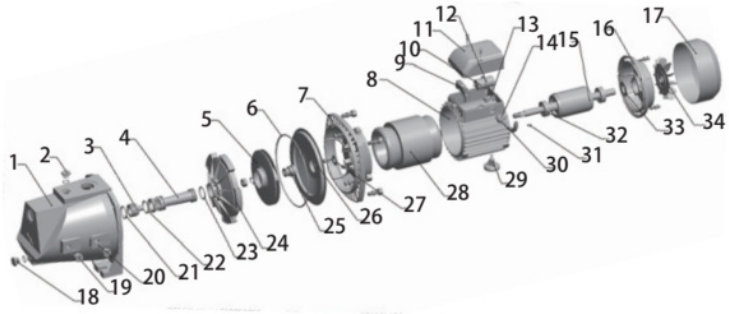
Suction height:	max 7m
Liquid temperature:	40ºC
Ambient temperature:	40ºC

USES AND INSTALLATIONS

The JSPM range is recommended for pumping clean water without abrasive particles and liquids that are chemically non aggressive for the materials used in the construction. Due to their reliability, simplicity of use and economy, they are suitable for domestic use, irrigation applications and specifically for the extraction of water from well points. The pump must be installed under a vented cover and protected against exposure to rain or water spray.

CONSTRUCTION CHARACTERISTICS

Pump Body:	Polypropylene
Impeller:	Noryl
Motor Shaft:	Stainless Steel 304
Mechanical Seal:	Ceramic-graphite
Electric Motor:	Single-phase 230V - 50Hz with capacitor and thermal overload protection.
Insulation:	Class b
Protection:	IP 44

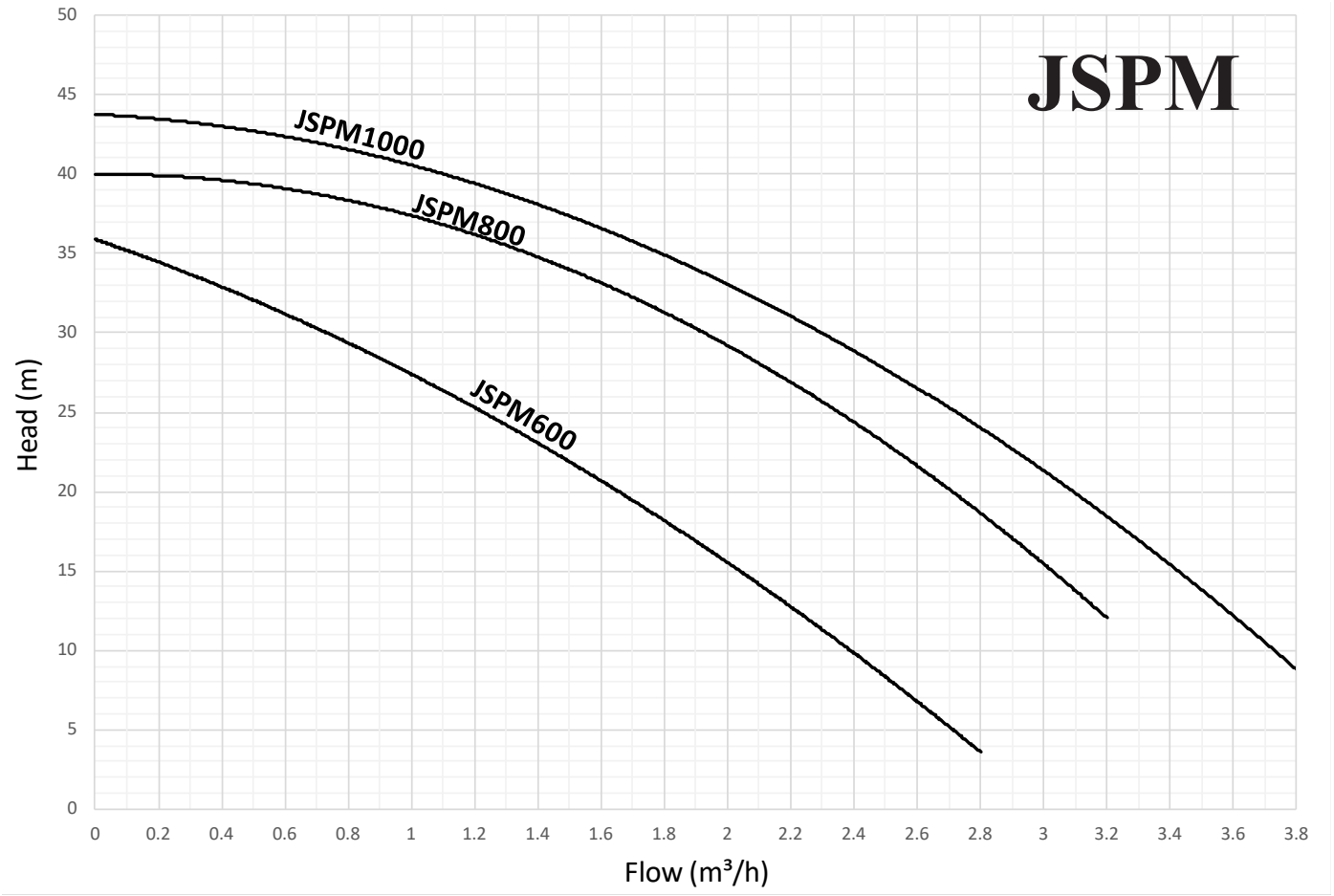


DIAGRAM

NO.	DESCRIPTION	NO.	DESCRIPTION	NO.	DESCRIPTION	NO.	DESCRIPTION
1	Pump body	10	Capacitor	19	Air vent screw	28	Stator
2	Air vent screw	11	Capacitor cover	20	O-Ring	29	Foot
3	Nozzle	12	O-Ring	21	O-Ring	30	Cable
4	Venturi	13	Cable fixer	22	O-Ring	31	Key
5	Impeller	14	Cable protector	23	O-Ring	32	Bearing
6	O-Ring	15	Rotor	24	Guide vane	33	Wave Spring
7	Coupling	16	End Cover	25	Mechanical Seal	34	Fan
8	Motor bracket	**17**	Fan Cover	**26**	Pump cover		
9	Terminal board	**18**	Water vent screw	**27**	Water proof ring		

PERFORMANCE CURVE

HYDRAULIC PERFORMANCE CURVE



TECHNICAL DATA

NO	MODE	POWER		Q (m³/h)	0	0.6	1.2	1.8	2.4	3.0	3.6	3.8
	Single-phase	kW	HP	Q (l/min)	0	10	20	30	40	50	60	63
1	JSPM600	0.6	0.8	H (m)	36	30	25.34	20	9			
2	JSPM800	0.8	1.1		40	37.87	35.74	31.66	25	15		
3	JSPM1000	1	1.3		44	41.99	40	35	30	20	12.5	10

DIMENSION

No	Model	Freq.	Suct. Max	Size	Start-up Amps	Running Amps	Dimension	N/W
	Single-phase	Hz	m	inch	A	A	L x W x H mm	kg
1	JSPM600	50	7	1″x 1″	8.5	2.7	438x196x235	13
2	JSPM800	50	7	1″x 1″	13	4.2	438x196x235	13.5
3	JSPM1000	50	7	1″x 1″	16.5	5.3	438x196x235	14

AUTOMATIC SELF-PRIMING PUMP

ITB 50 (INCL. WEATHER PROOF COVER - IP54)

RANGE OF PERFORMANCE

Flow rate:	max 35 L/min (2.1m^3/h)
Head:	max 34m

LIMITS OF USE

Suction height:	max 7m
Liquid temperature:	40°C
Ambient temperature:	40°C

USES AND INSTALLATIONS

The new designed YZN Series is an automatic cold & hot water turbine selfpriming pump. This YZN pump is widely used in household hot and cold water boosting and irrigation.

When the YZN pump is connected, just twist the water tap and the pump will switch on or off automatically. If pumping water from a tank the pressure sensor on the MIT pump will run or stop automatically based on the water level of the tank.

FUNCTIONS

1. DELAYED START

Pump will delay the start by 3 seconds after the power is turned on in order to protect the motor from excessive on/off switching.

2. DRY RUN PROTECTION

The pump will automatically power off after running without water for 8 mins. Sufficient water is stored in volute to prevent seal damage.

3. ELECTRONIC FLOW CONTROL

PC-Board can detect the flow and automatically control the pump's on/off switching.

4. INTELLIGENT FLOW CONTROL

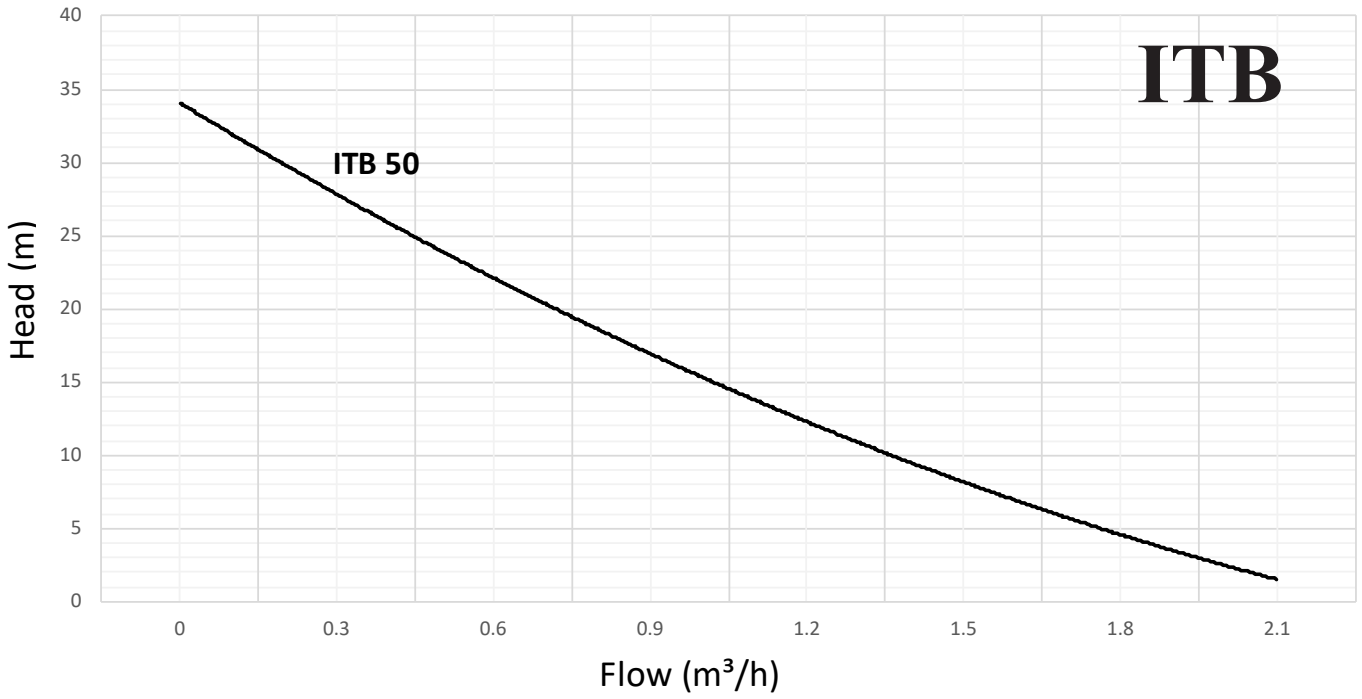
When the flow is very low, the PC-Board will automatically detect\ and switch to small-flow mode. To ensure the pump works well in small flow conditions. This feature prevents the pump from switching on/off frequently to prolong the life of the pressure sensor.

CONSTRUCTION CHARACTERISTICS

Pump Body:	Cast Iron
Impeller:	Brass, with radial peripheral vanes
Motor Shaft:	Stainless Steel 304
Mechanical Seal:	Ceramic-graphite
Electric Motor:	Single-phase 230V - 50Hz with capacitor and thermal overload protector built into the copper winding.
Insulation:	Class B
Protection:	IP 54

PERFORMANCE CURVE

HYDRAULIC PERFORMANCE CURVE

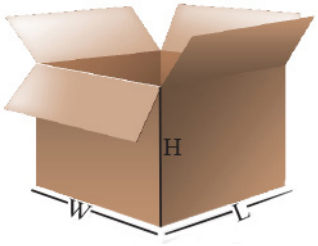


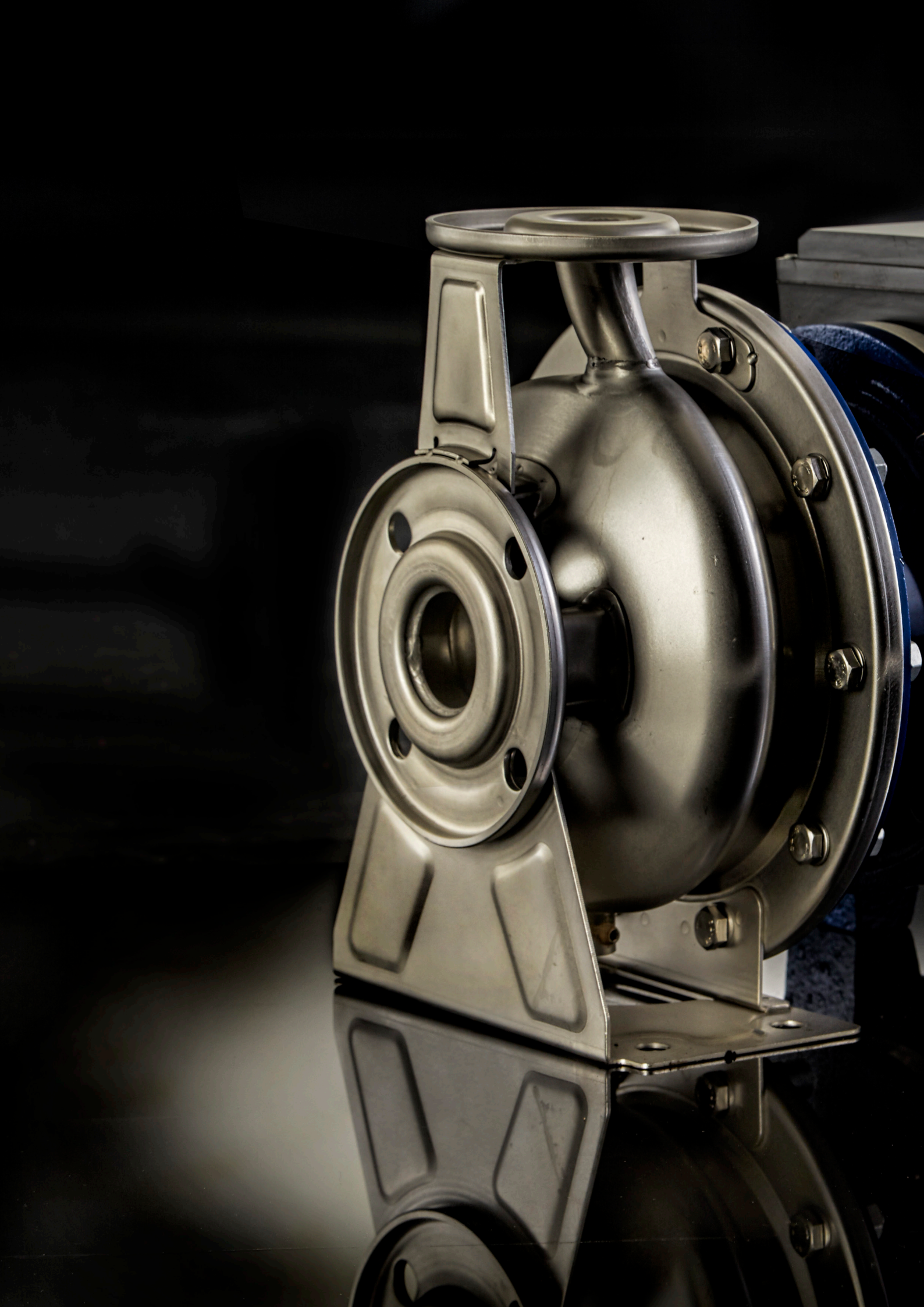
TECHNICAL DATA

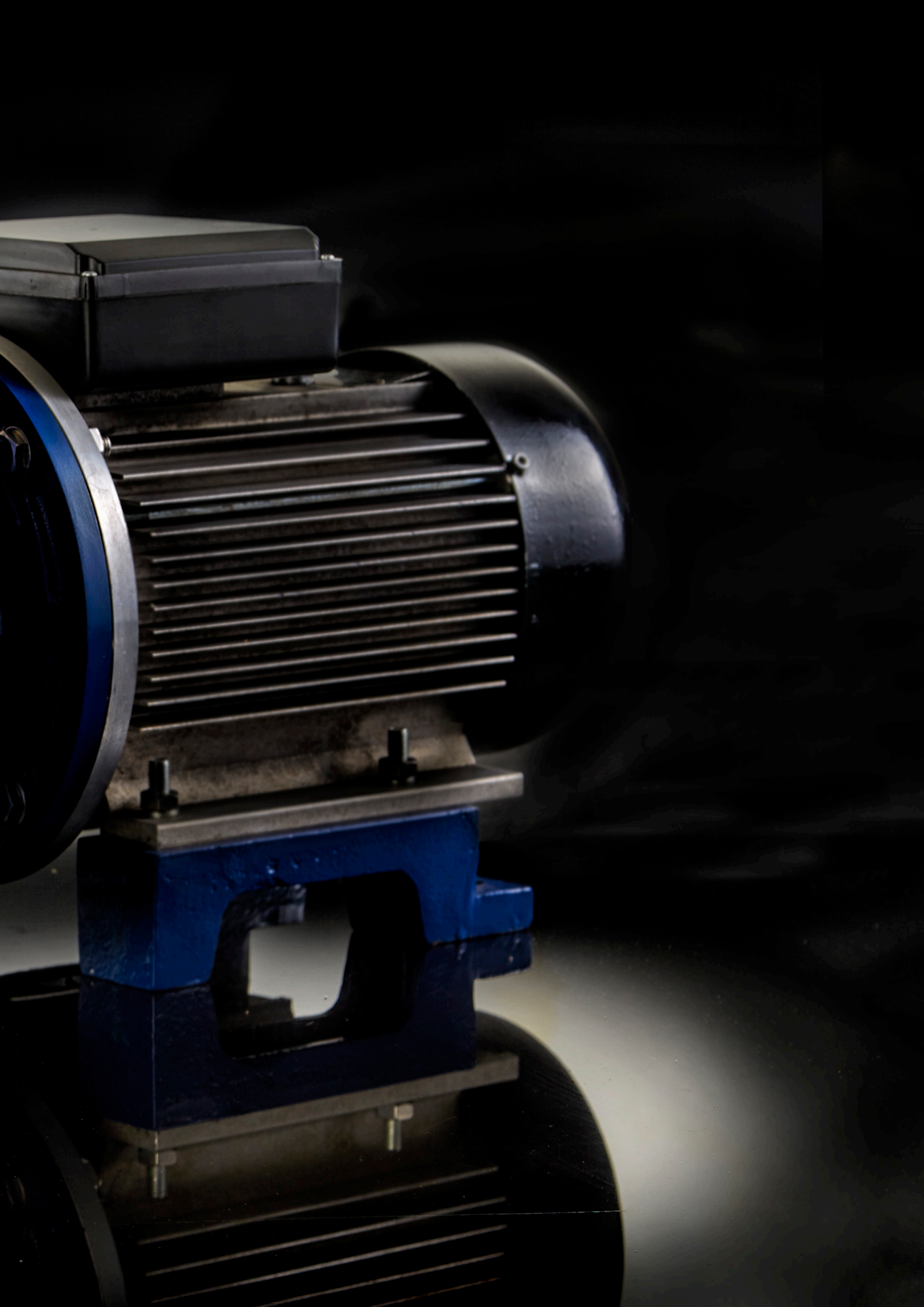
NO	MODE	POWER		Q (m³/h)	0	0.42	0.96	1.2	1.5	1.98
	Single-phase	kW	HP	Q (l/min)	0	7	16	20	25	33
1	ITB 50	0.37	0.5	H (m)	34	22	15.5	13	8	3

DIMENSION

NO	Model	Freq.	Suct. Max	Size	Start-up Amps	Running Amps	Dimension	N/W
	Single-phase	Hz	m	inch	A	A	L x W x H mm	kg
1	ITB 50	50	7	1"x 1"	6.2	1.9	330x310x360	12.5







DZA(S) FLANGED
STUB-SHAFT PUMP

APPLICATIONS

The DZA range of flanged end sucion pumps (according to DIN24255) are suitable for applications in irrigation, transfer and pressure boosting.
Pumped liquids include water containing >0.001kg/litre grit and liquids compatible with 304S/S.

PERFORMANCE LIMITS

Maximum working pressure:	10bar
Operating temperature range:	-20°C to +110°C
Mechanical seal construction:	Viton/Carbon/Sil.Carbide
Casing:	304S/S
Impeller:	304S/S
Shaft:	316L S/S

SYMBOLS

Typical example:

DZA-65-40-160/4.0

- Motor power: 4.0 kW
- Impeller's nominal diameter (mm)
- Diameter of discharge (mm)
- Diameter of suction (mm)
- DZA Flanged stub-shaft pump.

PERFORMANCE CURVE

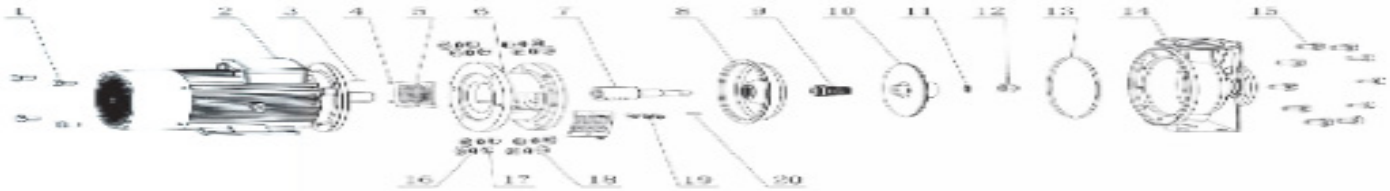
MODEL	HIGHEST EFFICIENCY DUTY POINT		RPM	PUMP EFFICIENCY %	EQUIPPED MOTOR POWER	
	CAPACITY m³/h	HEAD m			kW	HP
50-32-125/1.1	12.5	20	2900	61	1.1	1.5
50-32-160/1.5	10	25		56	1.5	2.0
50-32-160/2.2	12.5	32		62	2.2	3.0
50-32-200/3.0	10	40		48	3.0	4.0
50-32-200/4.0	12.5	50		50.5	4.0	5.5
65-40-125/1.5	20	17		68	1.5	2.0
65-40-125/2.2	25	20		74	2.2	3.0
65-40-160/3.0	20	27		66	3.0	4.0
65-40-160/4.0	25	32		66	4.0	5.5
65-40-200/5.5	20	42		57	5.5	7.5
65-40-200/7.5	25	50		62	7.5	10
65-50-125/3.0	40	18		70	3.0	4.0
65-50-125/4.0	50	20		74	4.0	5.5
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
80-65-125/4.0	75	11		72	4.0	5.5
80-65-125/5.5	75	15		74	5.5	7.5
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														
THREE PHASE 380V/50HZ	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	42	48	60	72
			HEAD (m)															
50-32-125/1.1	1.1	1.5	HEAD (m)	24	21.5	20.5	19.5	16	13									
50-32-160/1.5	1.5	2.0		29.5	27	26	25	21	18									
50-32-160/2.2	2.2	3.0		37	33	32	31	29	27									
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								
65-40-125/1.5	1.5	2.0		20			19	18	17	16.5	15	14	12.5	10	7			
65-40-125/2.2	2.2	3.0		26			23.5	22.5	22	21.5	21	20.5	19.5	16.5	13			
65-40-160/3.0	3.0	4.0		31			29	27.5	27	26.5	25.5	25	24	22	19			
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			
65-50-125/3.0	3.0	4.0		22.5							20	19.5	19	18.5	17.5	16	13	9
65-50-125/4.0	4.0	5.5		25.5							23	22.5	22	21.5	20.5	20	17	13.5
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		CAPACITY											
THREE PHASE 380V/50HZ	kW	HP	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
			HEAD (m)												
80-65-125/4.0	4.0	5.5	HEAD (m)	18	17.5	17	16	14	11.5	8	4.5				
80-65-125/5.5	5.5	7.5		22.5	22	21.5	20.5	18.5	16	12.5	8.5	7			
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

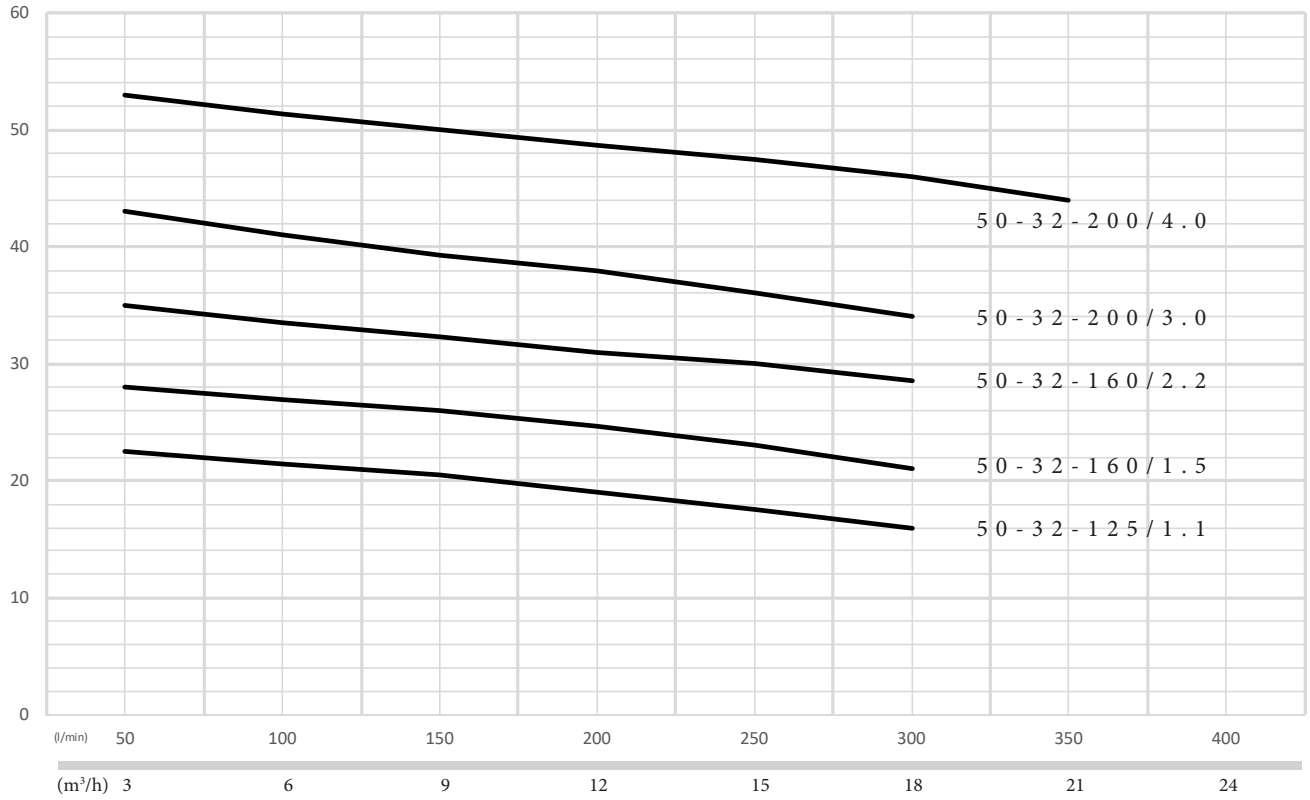


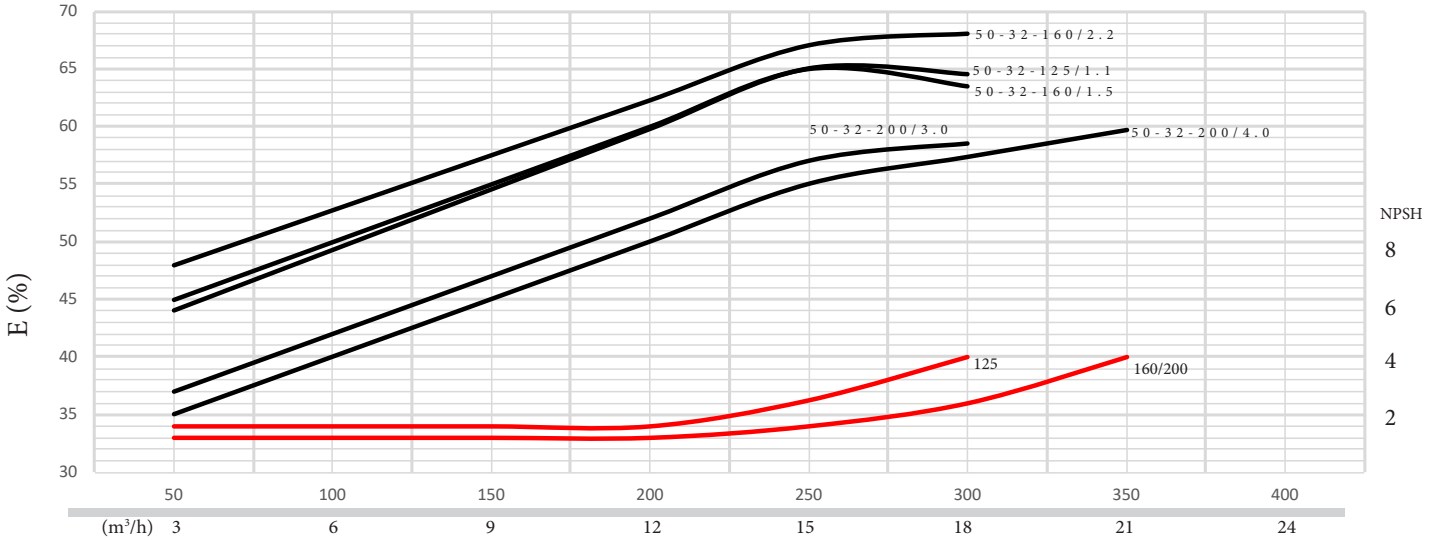
PARTS LIST

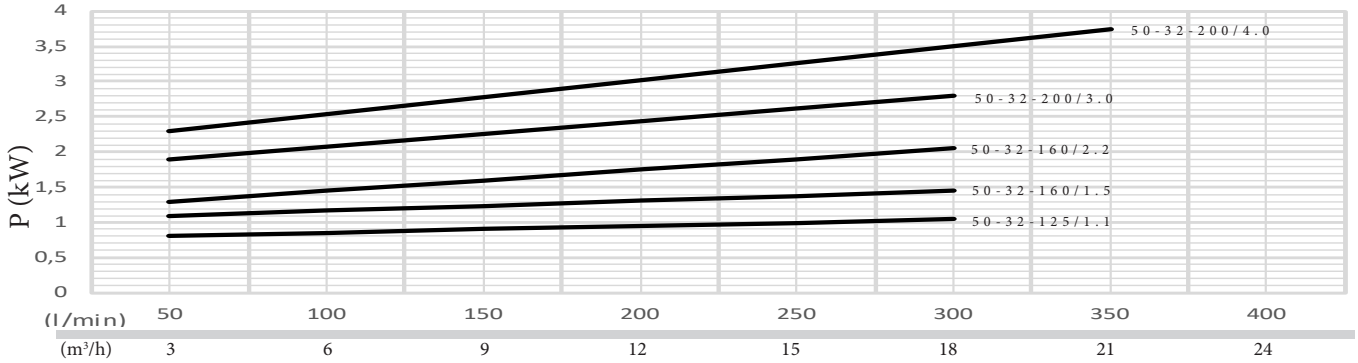
NO.	DESCRIPTION	NO.	DESCRIPTION	NO.	DESCRIPTION
1	Fan Cover Screew	6	Motor Bracket	11	Spring Washer
2	Electric Motor	7	Shaft and coupling	12	Impeller Nut
3	Key	8	Backing Plate	13	O-ring
4	Shield Screew	9	Mechanical Seal	14	Pump Casing
5	Shield	10	Impeller	15	Casing Bolts

PERFORMANCE CURVES

50 - 32 RANGE

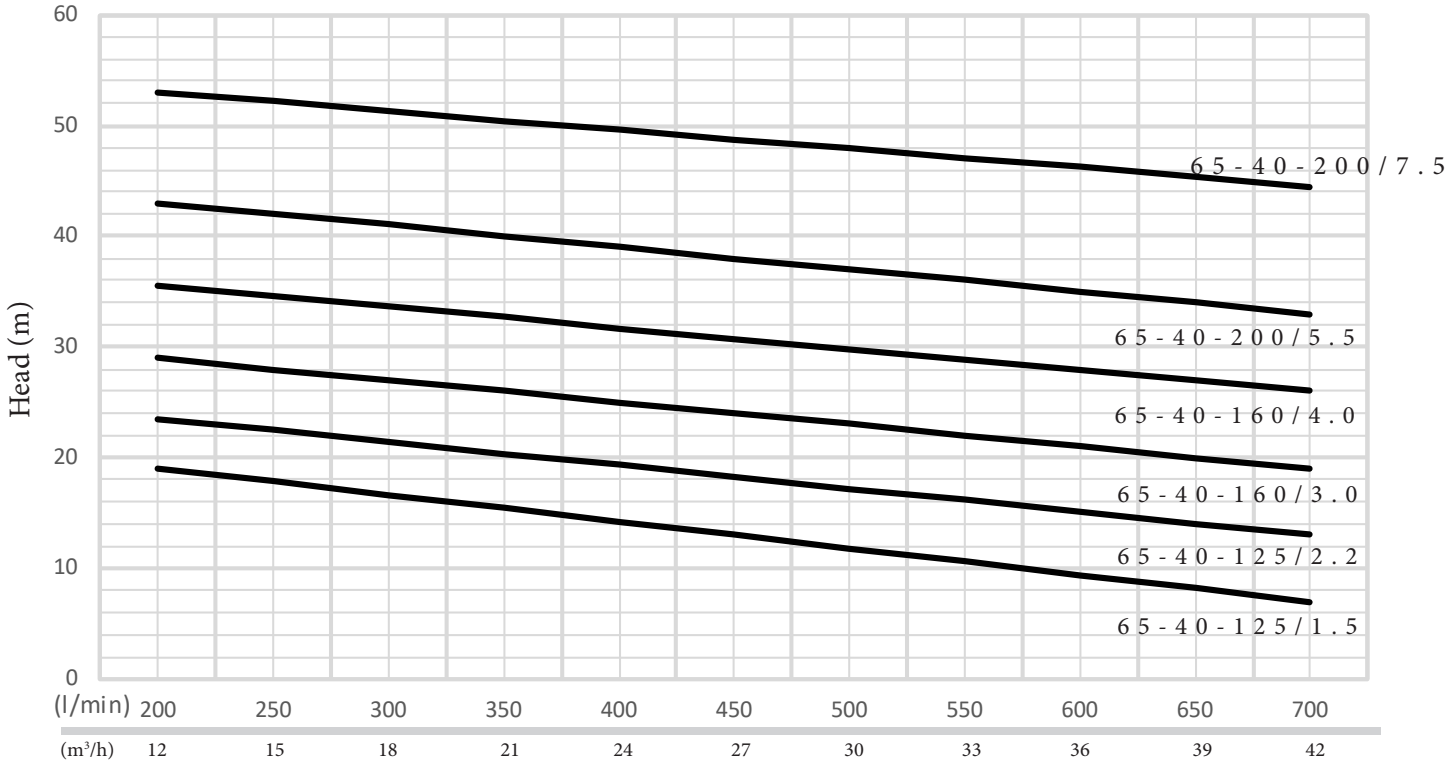


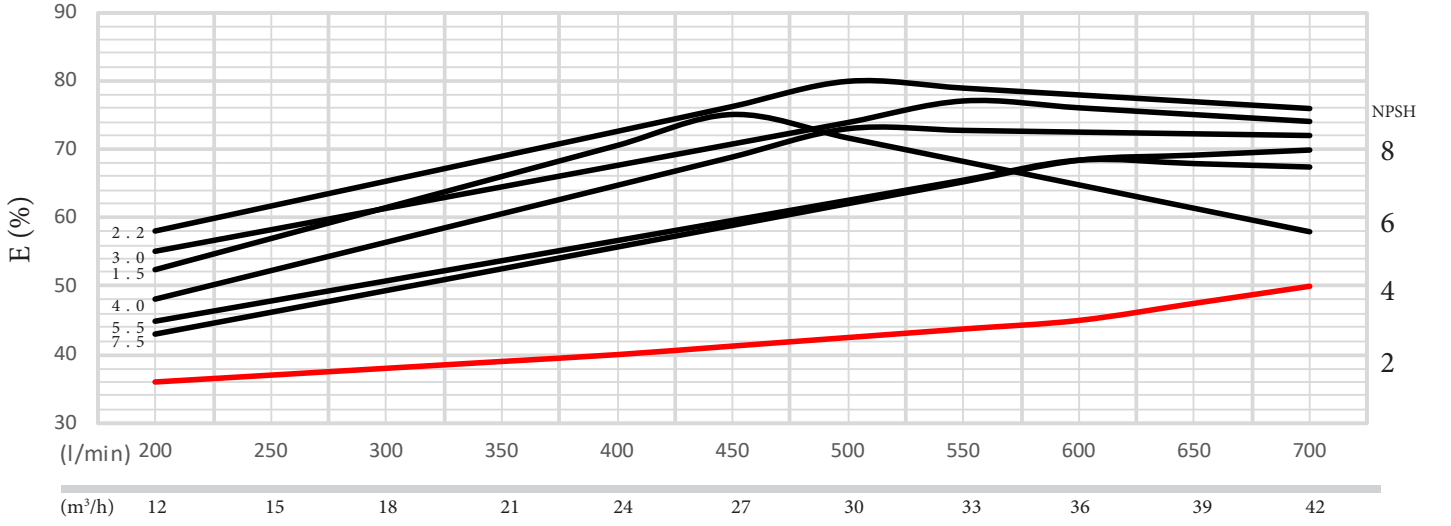


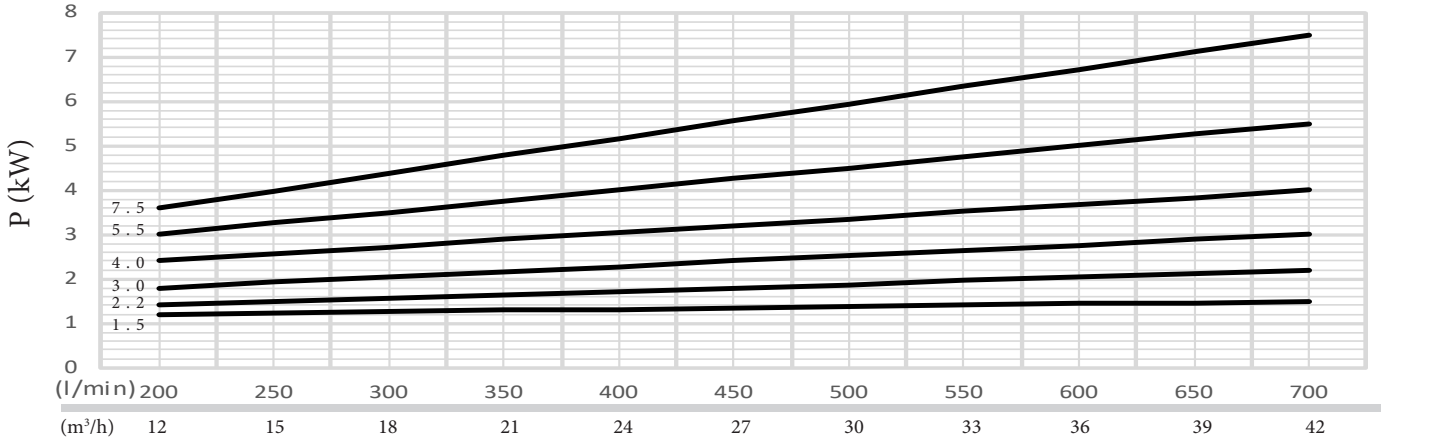


PERFORMANCE CURVES

65 - 40 RANGE

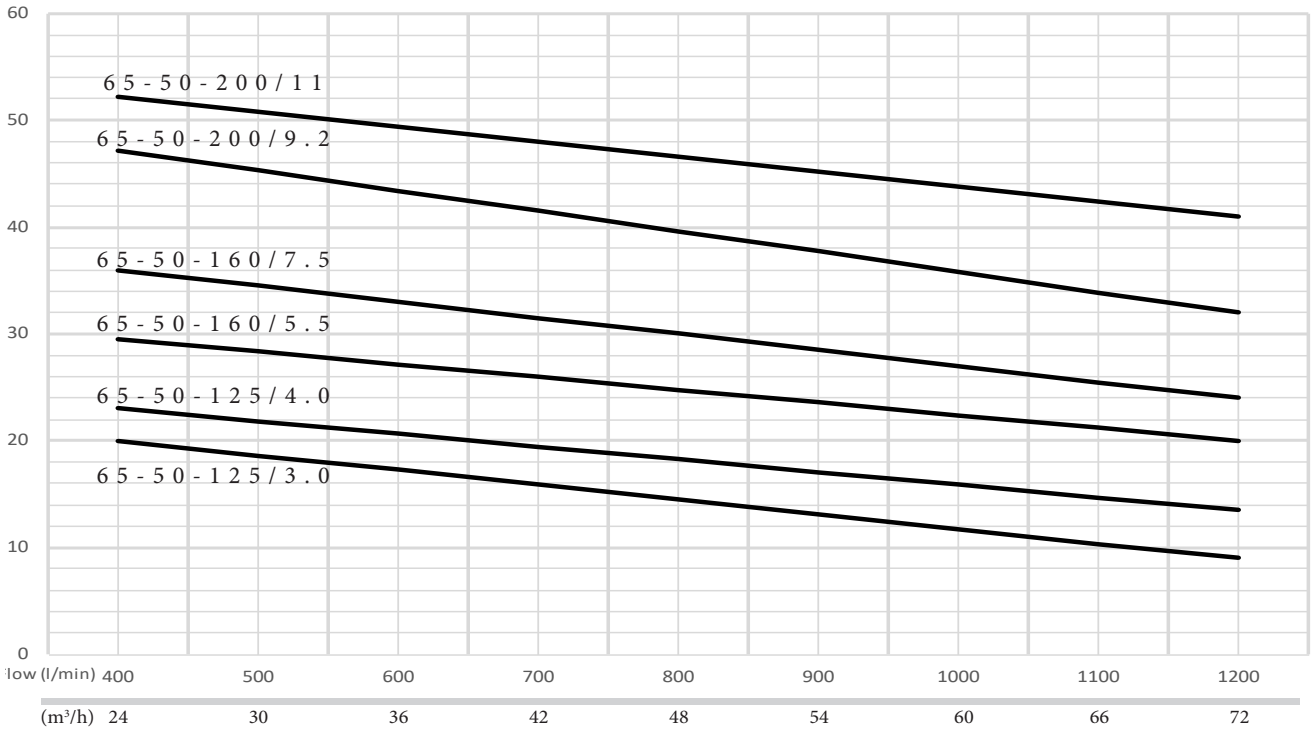


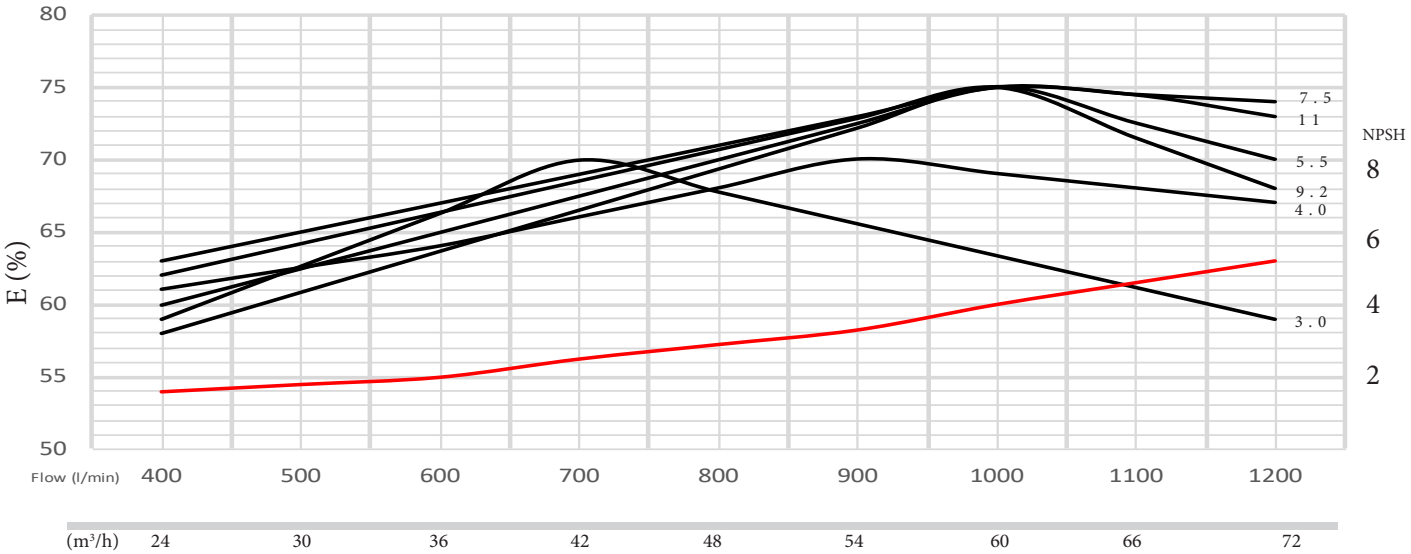


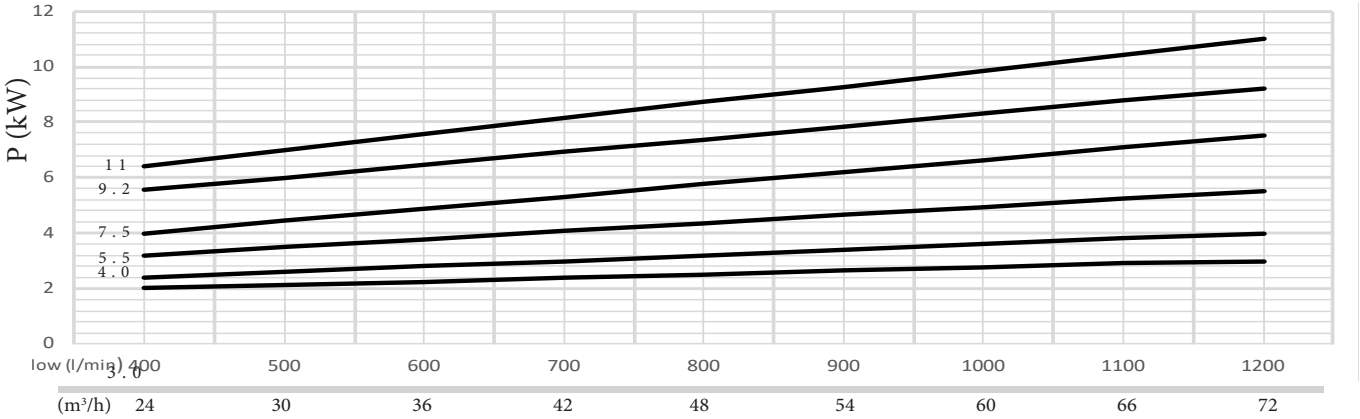


PERFORMANCE CURVES

65 - 50 RANGE

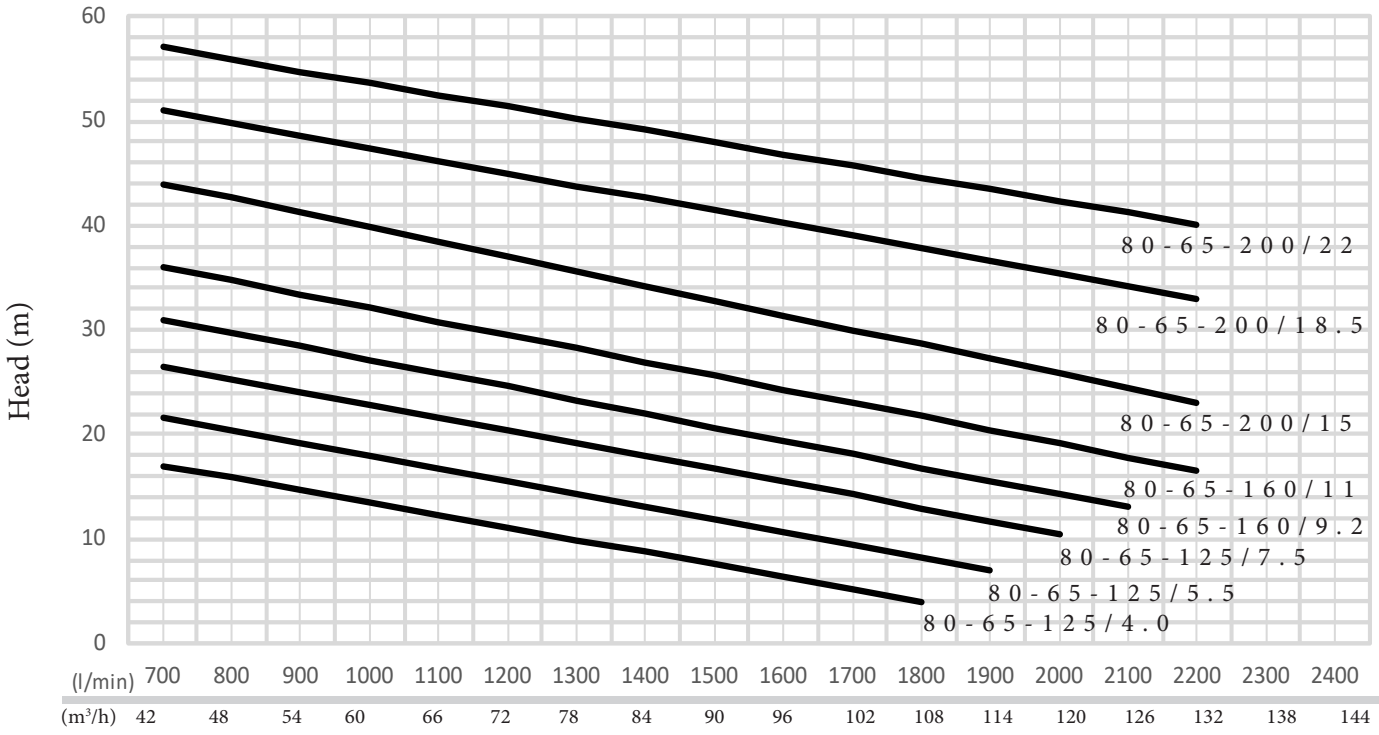


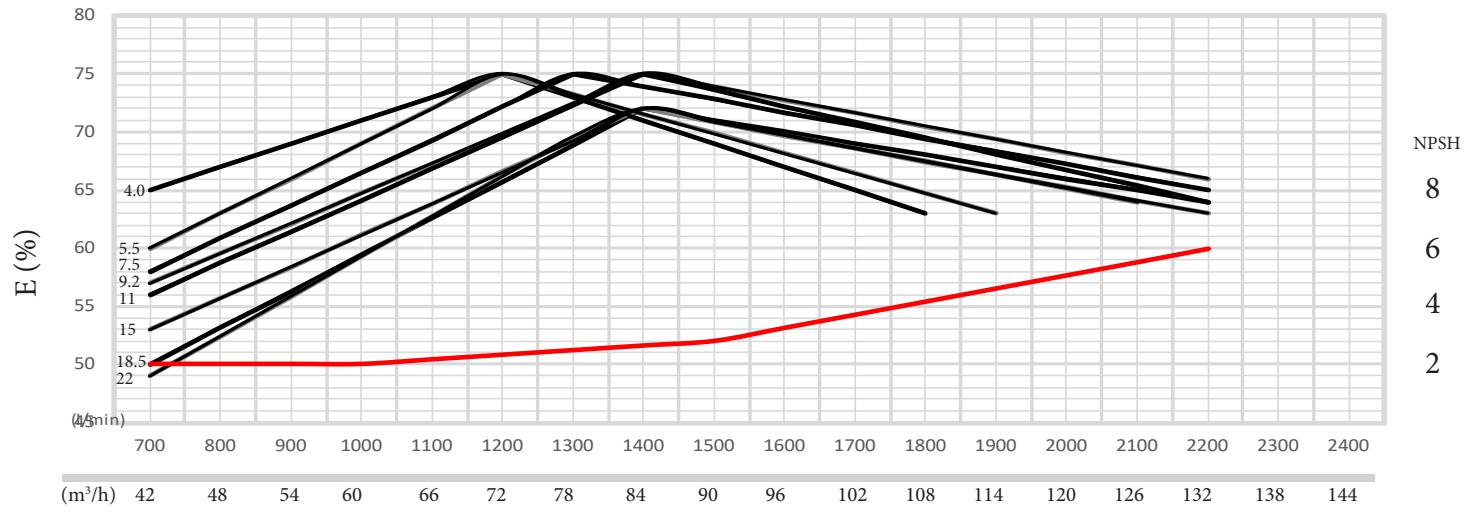


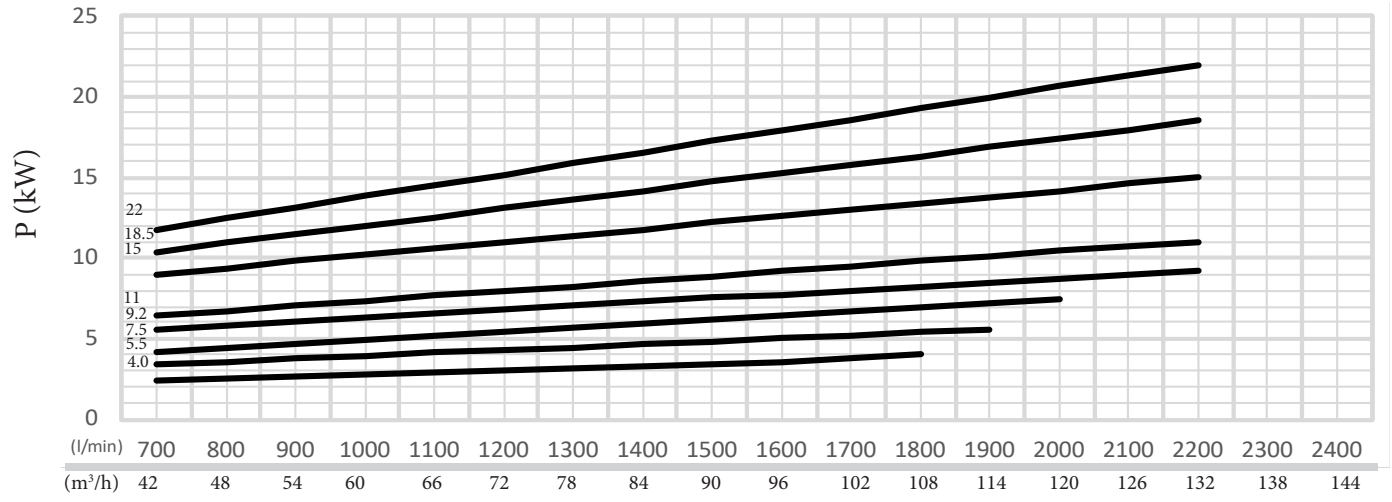


PERFORMANCE CURVES

80 - 65 RANGE



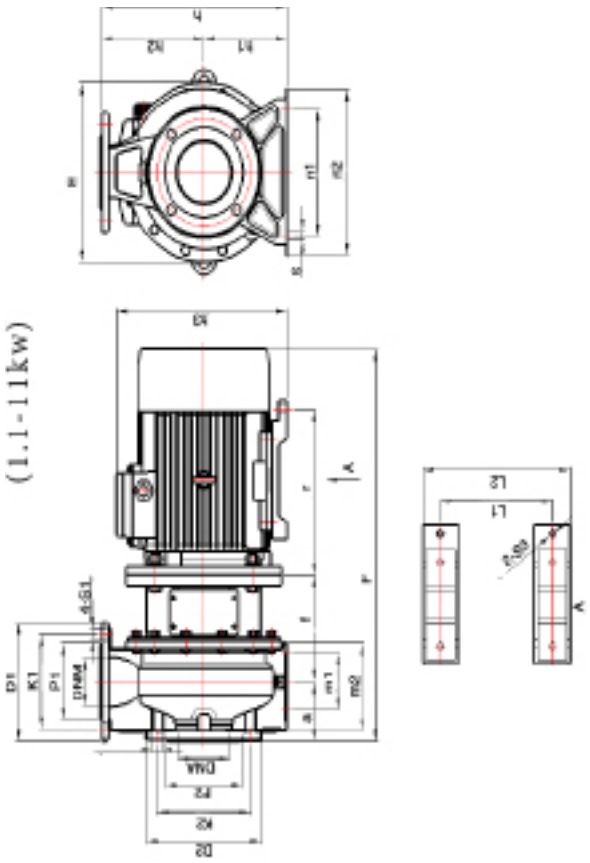




DZA(S) 50 & 65

1.1~11kW

PUMP OUTLINE DIAGRAM & DIMENSIONS

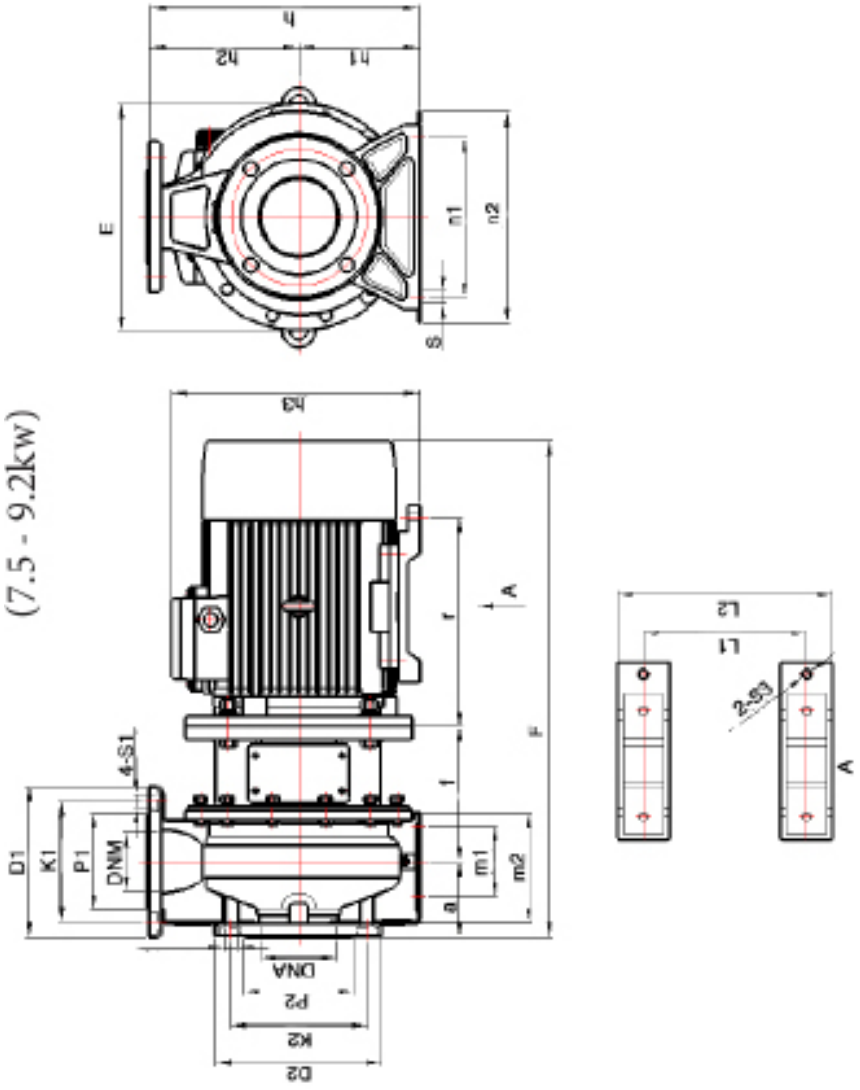


MODEL	Φ E	F	h	h1	h2	h3	a	m1	m2	n1	n2	S	L1	L2	L3	S3	r	f	D2	K2	P2	S2	n	D1	K1	P1	S1	DNA	DNM
50-32-125/1.1	209	444	252	112	140	221	80	70	122	140	190	15	125	165	/	12	186	128	165	125	99	18	4	140	100	76	18	50	32
50-32-160/1.5	244	488	292	132	160	254	80	70	123	190	240	15	140	186	/	12	212	130	165	125	99	18	4	140	100	76	18	50	32
50-32-160/2.2	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	248	165	165	125	99	18	4	140	100	76	18	50	32
50-32-200/4.0	295	557	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
65-40-125/1.5	209	486	252	112	140	234	80	70	121	160	210	15	140	211	/	12	214	128	185	145	118	18	4	150	125	99	18	65	40
65-40-125/2.2	209	486	252	112	140	234	80	70	121	160	210	15	140	211	/	12	214	128	185	145	118	18	4	150	125	99	18	65	40
65-40-160/3.0	244	592	292	132	160	259	80	70	123	190	240	15	160	212	/	12	248	142	185	145	118	18	4	150	125	99	18	65	40
65-40-160/4.0	244	617	292	132	160	281	80	70	123	190	240	15	190	252	/	12	255	142	185	145	118	18	4	150	125	99	18	65	40
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	125	99	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	165	125	99	18	65	40
65-50-125/3.0	250	577	292	132	160	259	100	70	148	190	240	15	160	212	/	12	245	152	185	160	132	18	4	165	145	118	18	65	50
65-50-125/4.0	250	557	292	132	160	281	100	70	148	190	240	15	190	252	/	12	255	152	185	160	132	18	4	165	145	118	18	65	50
65-50-160/5.5	300	644	340	160	180	327	100	70	150	212	265	15	216	286	/	12	278	165	185	160	132	18	4	165	145	118	18	65	50
65-50-160/7.5	300	644	340	160	180	327	100	70	150	212	265	15	216	286	/	12	278	165	185	160	132	18	4	165	145	118	18	65	50
65-50-200/9.2	300	651	360	160	200	327	100	70	152	212	265	15	216	286	/	12	278	172	185	160	132	18	4	165	145	118	18	65	50
65-50-200/11	300	792	360	160	200	411	100	70	152	212	265	15	254	314	/	15	318	198	185	160	132	18	4	165	145	118	18	65	50

DZA(S)

1.1~9.2kW

PUMP OUTLINE DIAGRAM & DIMENSIONS

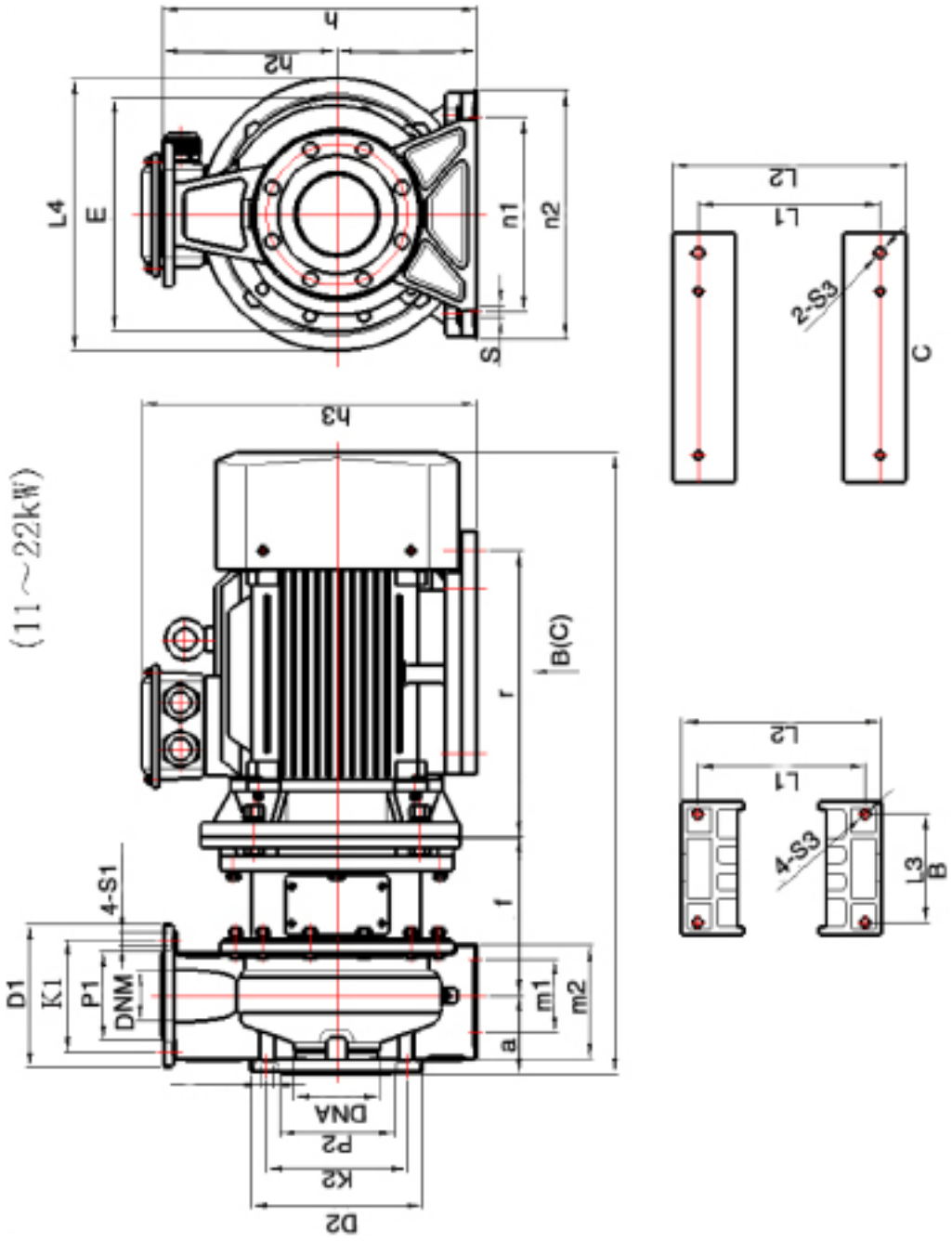


MODEL	Φ E	F	h	h1	h2	h3	a	m1	m2	n1	n2	S	L1	L2	L3	S3	r	f	D2	K2	P2	S2	n	D1	K1	P1	S1	DNA	DNM
80-65-125/7.5	245	644	340	160	180	327	100	95	155	212	280	15	216	286	/	12	278	165	220	180	152	18	4	200	160	132	18	80	65
80-65-160/5.5	300	644	340	160	180	327	100	70	150	212	265	15	216	286	/	12	278	165	220	180	152	18	4	200	160	132	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	220	152	132	18	4	200	160	132	18	80	65
80-65-160/9.2	301	658	360	160	180	327	100	95	155	212	280	15	216	286	/	12	278	165	220	152	132	18	4	200	160	132	18	80	65

DZA(S)

11~22kW

PUMP OUTLINE DIAGRAM & DIMENSIONS

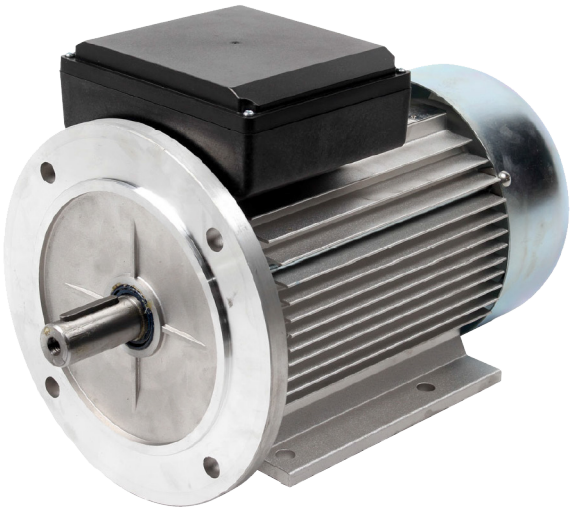


MODEL	Φ E	F	h	h1	h2	h3	a	m1	m2	n1	n2	S	L1	L2	L3	S3	r	f	D2	K2	P2	S2	n	D1	K1	P1	S1	DNA	DNM
80-65-160/11	301	840	405	180	225	432	100	95	155	250	320	15	254	348	/	15	368	15	220	180	152	18	8	200	160	132	18	80	65
80-65-200/15	301	840	405	180	225	432	100	95	155	250	320	15	254	348	/	15	368	205	220	180	152	18	8	200	160	132	18	80	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	200	160	132	18	80	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	200	160	132	18	80	65

DZA(S) SINGLE PHASE
FLANGED MOTOR

APPLICATIONS

These motors are suitable for the occasion requiring low starting torque and long-term continuous working, such as home electric appliances, pumps, fans, and recording meters, etc.



FEATURES

Running single or dual capacitors.

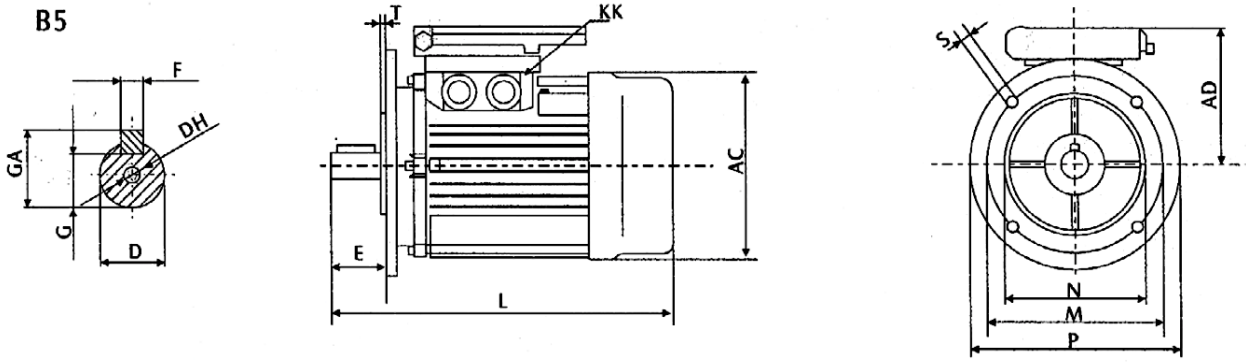
Frame Size:	80-90
Rated Power Range:	2 pole 1.1kW -2.2kW
Housing Material:	Aluminium (plastic terminal box)
Rated Voltage:	220V ~ 240V± 5%, 50Hz
Protection Class:	IP54/IP55
Insulation Class:	Class B/F

PERFORMANCE DATA

FRAME SIZE	POWER (kW)	RATED SPEED (rpm)	CURRENT FULL LOAD 400V I_{FL} - 400v	CURRENT STARTING ÷ CURRENT FULL LOAD	EFFICIENCY %	POWER FACTOR	RATED TORQUE (Nm)	LOCKED ROTOR TORQUE ÷ TORQUE FULL LOAD	TORQUE BREAK-DOWN ÷ TORQUE FULL LOAD	STARTING CAPACITOR 250V
90L	2.2	2800	13.7	4.8	77	0.95	22.47	0.30	1.7	40

OUTLINE AND INSTALLATION DIMENSIONS

Flange Specification: B5



FRAME SIZE	A	AB	AC	AD	B	C	D	DH	E	F	G	H	K	KK	L	M	N	P	S	T	GA
90L	140	174	175	158	125	56	24	M8X19	50	8	20	90	10	2-M20X1.5	350	165	130	200	12	3.5	27

DZA(S) SINGLE PHASE
FLANGED MOTOR C/I

FEATURES

Frame Size Range: H80~H355
Housing Material: Frame, flange and bracket, grey cast iron, conduit box-steel
Standard Mounting Construction: IEC60034-7
Protection Enclosed Class: IP55 (IEC60034-5)
Cooling Method: IC411 (IEC60034-6)
The special winding design can work for multi-frequencies (50Hz or 60Hz)
Can withstand 1.5 times the rated current for 2 minutes (IEC60034-1)
Anti-condensation heater is available.

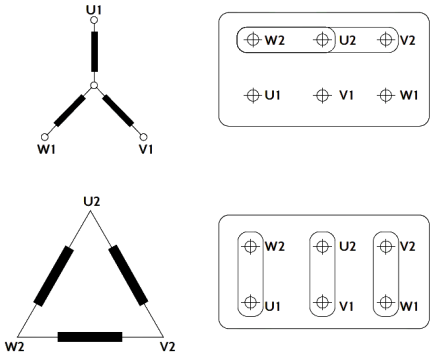
PTC or Pt100 thermistors are available to protect the winding and bearings.

WIRING

Standard 3-phase motors can be connected using the star or delta method.

Star connection is achieved by wiring W2,U2, V2 to each other; and U1, V1, W1 leads to voltage supply.

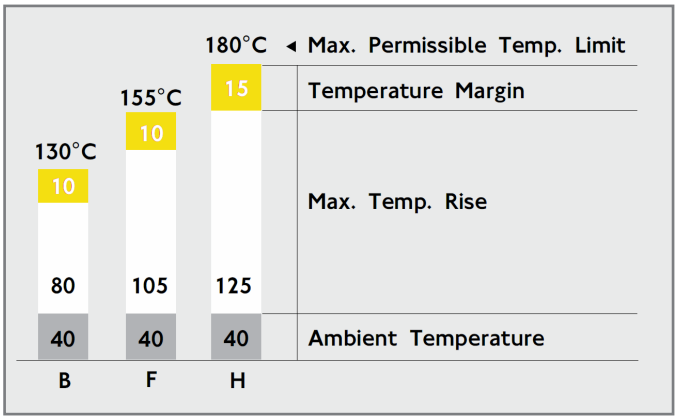
Delta connection is achieved by wiring the end of a phase to the head of another.



INSULATION CLASSIFICATION

The motors have insulation class F while the temperature rise is for class B ensuring a longer service life.

Class H insulation motors can be manufactured at the customer's request.
Under specified measuring conditions in accordance with IEC 60034-1 standard, insulation class F for an electric motor means that at the ambient temperature of 400C the temperature rise of its windings may be maximum 165K with the additional temperature margin of 10K.



DEGREE OF PROTECTION

According to IEC 60034-5 standard, electric motors are provided with IP code which determines the degree of protection ensured by the housing against access to dangerous parts, introducing foreign matter and/or water.

Our motors comply with IP55 protection class as standard.

THE FIRST CHARACTERISTIC NUMERAL: PROTECTION FROM INTRODUCTION OF SOLID FOREIGN MATTER		THE SECOND CHARACTERISTIC NUMERAL: PROTECTION AGAINST PENETRATION OF WATER AND ITS HARMFUL EFFECTS	
0	Non-protected machine	0	Non-protected machine
1	Machine protected against solid objects greater than 50mm	1	Machine protected against dripping water
2	Machine protected against solid objects greater than 12mm	2	Machine protected against dripping water when tilted up to 15º
3	Machine protected against solid objects greater than 2.5mm	3	Machine protected against spraying water
4	Machine protected against solid objects greater than 1mm	4	Machine protected against splashing water
5	Dust protected machine	5	Machine protected against water jets
6	Dust-tight machine	6	Machine protected against heavy seas

NUMBER OF STARTS PER HOUR

The number of starts per hour is dependant on the inertia of the driven load and the load torque demand. A guide to generally acceptable starts per hour would be as per table.

STARTS PER HOUR	
FRAME SIZE	2 POLE
80	16
90	14
100	12
112	10
132	8
160	6
180	4

BEARINGS

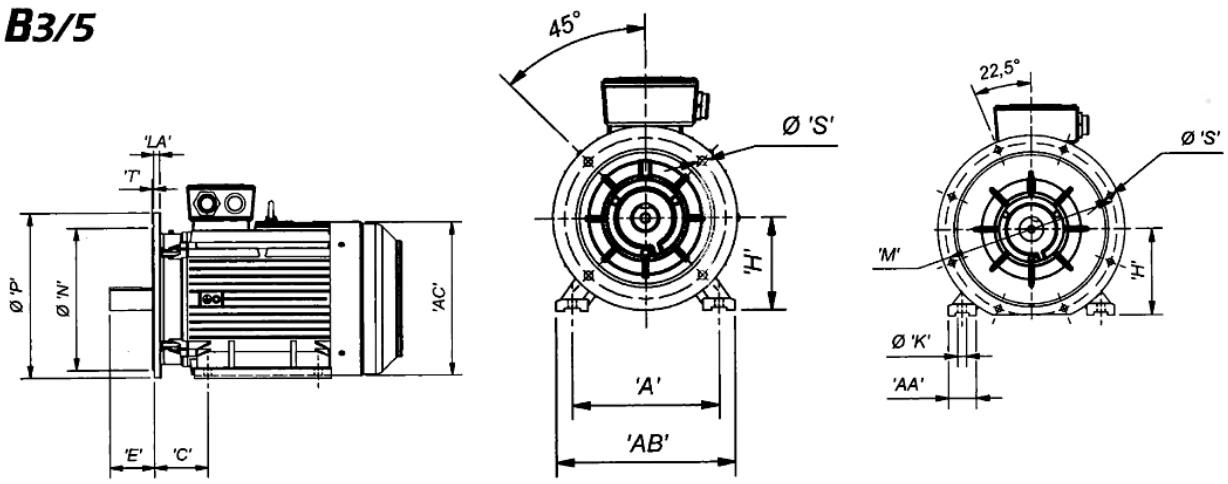
FRAME SIZE	DRIVING END	NON DRIVING END
	2 POLE	2 POLE
80	6206 2Z/C3	6206 2Z/C3
90	6206 2Z/C3	6206 2Z/C3
100	6206 2Z/C3	6206 2Z/C3
112	6207 2Z/C3	6207 2Z/C3
132	6208 2Z/C3	6208 2Z/C3
160	6209 2Z/C3	6209 2Z/C3
180	6211/C3	6211/C3

PERFORMANCE DATA

NET WEIGHT kg	17	22	24	30	38	43	57	61	73	101	111	126	176
NOISE LEVEL LW db(A)	50	60	72	76	77	78	80	80	83	86	86	86	89
TORQUE MAXIMUM ÷ TORQUE FULL LOAD	2.2	2.2	2.9	2.9	2.9	3.2	2.6	2.8	2.4	2.9	2.9	2.8	2.8
TORQUE STARTING ÷ TORQUE FULL LOAD	2.6	2.7	2.7	2.7	2.6	2.7	2.3	2.5	2.2	2.6	2.6	2.5	2.6
RATED TORQUE (Nm)	7	7	7.4	10	13.3	13.3	18.1	24.5	36.2	35.8	48.8	60.4	71.4
POWER FACTOR	0.84	0.84	0.85	0.87	0.88	0.88	0.88	0.88	0.88	0.89	0.89	0.90	0.90
EFFICIENCY %	77.3	79.3	81.7	83.1	84.2	85.7	85.9	87.2	88.4	88.7	89.5	90.2	90.6
CURRENT FULL LOAD 415V	3.5	4.7	4.4	5.8	7.6	10.2	10.2	13.5	19.7	19.4	26.2	31.8	37.6
CURRENT FULL LOAD 400V	2.5	3.3	4.6	6	7.8	10.5	10.5	14.2	20.4	20.1	27.2	32.9	38.9
CURRENT FULL LOAD 380V	2.7	3.1	4.8	6.3	8.2	11.1	11.1	16.9	21.4	21.1	28.6	34.6	41
RATED SPEED (rpm)	2830	2840	2851	2880	2880	2880	2900	2900	2910	2930	2930	2930	2940
POWER (kW)	1.1	1.5	2.2	3	4	5.5	5.5	7.5	9.2/11	11	15	18.5	22
FRAME SIZE	80	90L	90L	100L	112M	112M	132S	132S	160M	160M	160M	160L	180M

OUTLINE AND INSTALLATION
DIMENSIONS

Flange Specification: B3B5



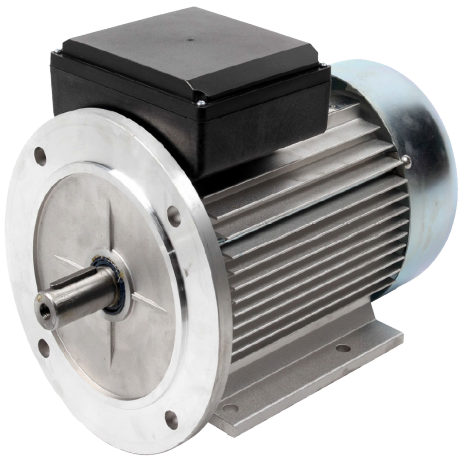
FRAME SIZE	A	AA	AB	AC	C	E	H	ΦK	LA	ΦM	ΦN	ΦP	T	ΦS	NO. OF HOLES
80	125	34	156	175	50	40	80	10	12	165	130	200	3.5	12	4
90L	140	36	176	190	56	50	90	10	12	165	130	200	3.5	12	4
100L	160	40	198	215	63	60	100	12	14	215	180	250	4	15	4
112M	190	45	226	236	70	60	112	12	14	215	180	250	4	15	4
132S	216	52	260	275	89	80	132	12	14	265	230	300	4	15	4
132M	216	52	260	275	89	80	132	12	14	265	230	300	4	15	4
160M	254	65	314	330	108	110	160	14.5	16	300	250	350	5	19	4
160L	254	65	314	330	108	110	160	14.5	16	300	250	350	5	19	4
180M	279	70	345	380	121	110	180	14.5	16	300	250	350	5	19	4
180L	279	70	345	380	121	110	180	14.5	18	300	250	350	5	19	4

DZA(S) THREE PHASE
FLANGED MOTOR ALUMINIUM

FEATURES

Three-phase removable feet standard efficiency aluminium induction motors. Position of the terminal box can be changed according to the user's requirements. Efficiency indicator reaches IE1 standard.

Characteristics for all standard 3-phase aluminium induction motors are as follows:
1. IP55 protection, class F insulation, B temperature rise and S1 duty.
2. Rated voltage 400V or 525V, rated frequency 50Hz.
3. Y-connection for motors up to 3kW and Δ-connection for 4kW and above.
4. Cooling method is Ic411.



OPERATION CONDITIONS

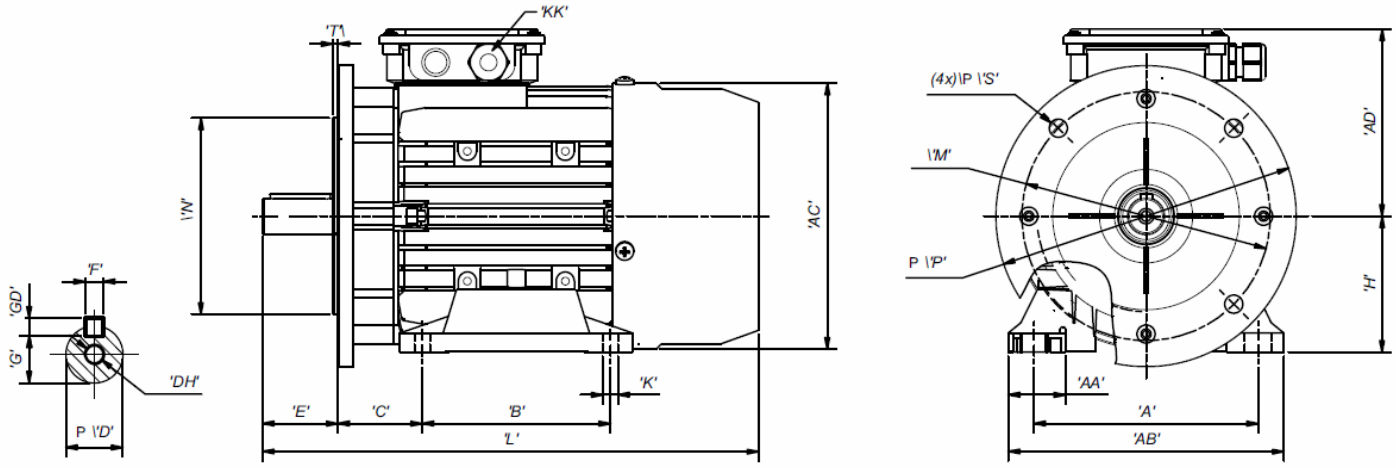
Ambient temperature: -200C to 400C.

PERFORMANCE DATA

FRAME SIZE	POWER	RATED SPEED	CURRENT FULL LOAD I_n(A)	FULL LOAD POWER FACTOR	EFFICIENCY η% OF % FULL LOAD			LOCKED ROTOR ÷ CURRENT	LOCKED ROTOR ÷ TORQUE	BREAKDOWN ÷ TORQUE	MOMENT OF INERTIA	NETT WEIGHT kg
	(kW)	(rpm)	400V	COSφ	100	75	50	Is/In	Ms/Mn	Mk/Mn	J(Kgm²)	kg
80	1.1	2830	2.5	0.84	74.3	77.0	77.3	7.0	2.2	2.8	0.0014	11
90L	1.5	2840	3.3	0.85	76.5	78.7	79.3	7.0	2.2	2.8	0.0014	13.2
90L	2.2	2840	4.67	0.85	80.0	80.8	79.5	7.0	2.5	2.8	0.0014	14.0
100L	3	2870	6.07	0.87	82.0	82.1	80.3	7.5	2.2	2.5	0.0029	20.5
112M	4	2880	7.81	0.88	84.0	84.8	84.1	7.5	2.3	2.3	0.0050	26.0
132S	5.5	2910	10.6	0.88	85.0	85.0	83.5	7.5	2.2	2.5	0.0104	40.0
132S	7.5	2905	14.3	0.88	86.3	86.6	85.6	7.5	2.2	2.4	0.0121	44.0
132M	9.2/11	2910	20.3	0.89	87.8	87.4	85.9	7.5	2.2	2.4	0.0178	65.0

OUTLINE AND INSTALLATION
DIMENSIONS

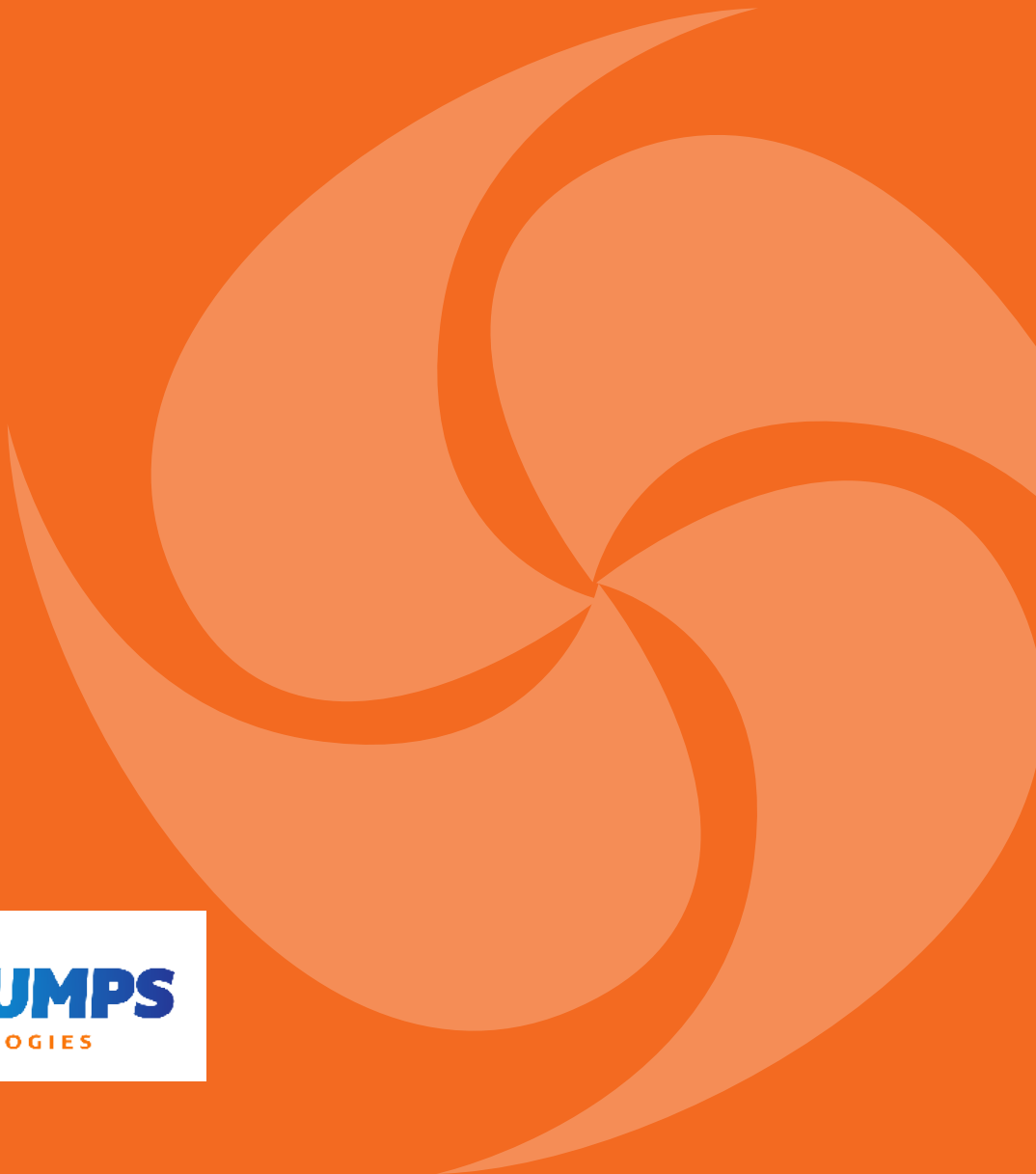
Flange Specification: B5



FRAME SIZE	kW	MOUNTING DIMENSIONS (mm)															
		AC	AD	D	DH	E	F	G	GD	KK	L	M	N	P(max)	S(min)	T	kg
80	1.1	165	100	19	M6X16	40	6	15.5	6	M25X1.5	310	165	130	200	12	3.5	13.63
90L	2.2	175	123	24	M8x19	50	8	27	7	M20x1.5	330	165	130	200	12	3.5	14.0
100L	3.0	196	139	28	M10x22	60	8	31	7	M20x1.5	370	215	180	250	15	4	20.5
112M	4.0	220	156	28	M10x22	60	8	31	7	M25x1.5	395	215	180	250	15	4	26.0
132S	5.5	260	185	38	M12x28	80	10	41	8	M25x1.5	472	265	230	300	15	4	40.0
132S	7.5	260	185	38	M12x28	80	10	41	8	M25x1.5	472	265	230	300	15	4	44.0
132M	9.2/11	260	185	38	M12x28	80	10	41	8	M25x1.5	510	265	230	300	15	4	65.0

NOTES

NOTES



HYDRO PUMPS
WATER TECHNOLOGIES