



**NINGBO TIME MACHINERY INDUSTRIAL CO., LTD.**

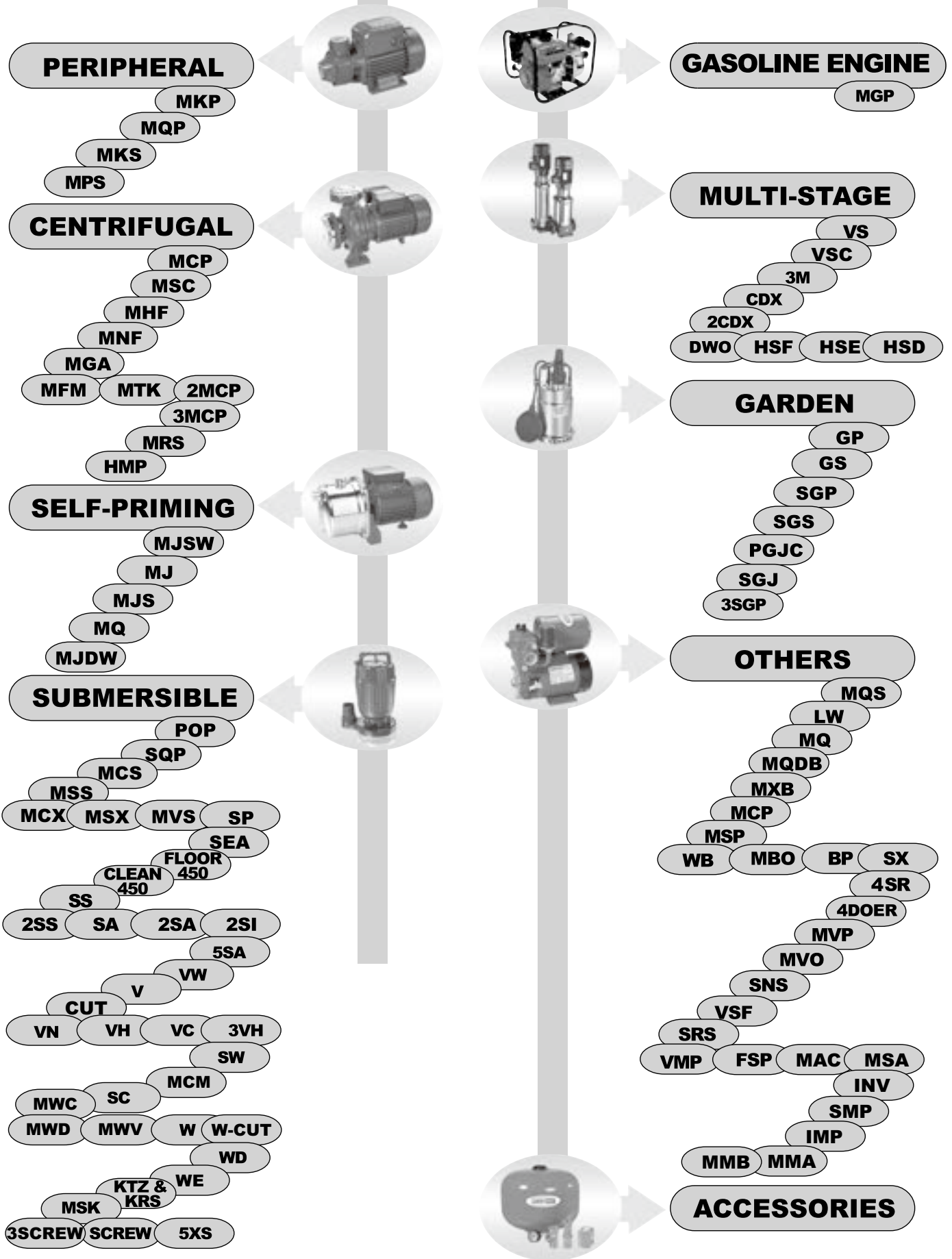
Add:10/F Dong cheng International Great Mansion,  
NO.796,yaoga Road,Ningbo,China

Tel:86-574-87857728 87857729 87857735

Fax:86-574-87857737

E-mail: [manager@lucky-pro.com](mailto:manager@lucky-pro.com)

# LUCKY PRO®



<b>I. PERIPHERAL PUMP</b>	
<b>MKP</b>	END-SUCTION PERIPHERAL PUMPS ..... 4
<b>MQP</b>	SIDE-SUCTION PERIPHERAL PUMPS ..... 6
<b>MKS</b>	SELF-PRIMING PERIPHERAL PUMPS ..... 8
<b>MPS</b>	SELF-PRIMING PERIPHERAL PUMPS ..... 10
<b>II. CENTRIFUGAL PUMP</b>	
<b>MCP</b>	CENTRIFUGAL PUMPS ..... 14
<b>MSC</b>	CENTRIFUGAL PUMPS ..... 18
<b>MHF</b>	CENTRIFUGAL PUMPS (HIGH FLOW) ..... 22
<b>MNF</b>	CENTRIFUGAL PUMPS WITH FLANGED CONNECTIONS ..... 26
<b>MGA</b>	CENTRIFUGAL PUMPS WITH OPEN IMPELLER ..... 28
<b>MCP</b>	CENTRIFUGAL PUMPS ..... 30
<b>MFM</b>	STANDARDIZED CENTRIFUGAL PUMPS ..... 32
<b>MTK</b>	SELF-PRIMING CENTRIFUGAL PUMPS ..... 34
<b>2MCP</b>	TWO-STAGE CENTRIFUGAL PUMPS ..... 36
<b>3MCP</b>	MULTISTAGE CENTRIFUGAL PUMPS ..... 40
<b>MRS</b>	MULTISTAGE CENTRIFUGAL PUMPS ..... 42
<b>HMP</b>	MULTISTAGE CENTRIFUGAL PUMPS ..... 48
<b>III. SELF-PRIMING JET PUMP</b>	
<b>MJSW</b>	SELF-PRIMING JET PUMPS ..... 56
<b>MJSW</b>	SELF-PRIMING JET PUMPS (HIGH HEAD) ..... 60
<b>MJ</b>	SELF-PRIMING JET PUMPS ..... 62
<b>MJS</b>	SELF-PRIMING JET PUMPS WITH STAINLESS STEEL PUMP BODY ..... 64
<b>MQ</b>	SELF-PRIMING JET PUMPS FOR DEEP WELL ..... 66
<b>MJDW</b>	SELF-PRIMING JET PUMPS FOR DEEP WELL ..... 70
<b>IV. SUBMERSIBLE PUMP</b>	
<b>POP</b>	SUBMERSIBLE DRAINAGE PUMPS ..... 76
<b>SQP</b>	SUBMERSIBLE VORTEX PUMPS ..... 78
<b>POP VORTEX</b>	SUBMERSIBLE VORTEX PUMPS ..... 80
<b>MCS</b>	DOUBLE-CHANNEL SUBMERSIBLE PUMPS (FOR SEWAGE WATER) ..... 82
<b>MSS</b>	DOUBLE-CHANNEL SUBMERSIBLE PUMPS (FOR SEWAGE WATER) ..... 84
<b>MCX</b>	VORTEX SUBMERSIBLE PUMPS (FOR SEWAGE WATER) ..... 86
<b>MSX</b>	VORTEX SUBMERSIBLE PUMPS (FOR SEWAGE WATER) ..... 88
<b>MVS</b>	SUBMERSIBLE SINGLE VANE PUMPS ..... 90
<b>SP</b>	PLASTIC SUBMERSIBLE PUMPS ..... 92
<b>SEA</b>	PLASTIC SUBMERSIBLE PUMPS (FOR SEA WATER) ..... 94
<b>FLOOR450</b>	SUBMERSIBLE DRAINAGE PUMP (FOR CLEAR WATER) ..... 96
<b>CLEAN450</b>	SUBMERSIBLE VORTEX PUMP (FOR CLEAR WATER) ..... 98
<b>SS</b>	STAINLESS STEEL SUBMERSIBLE PUMPS ..... 100
<b>2SS</b>	TWO-STAGE STAINLESS STEEL SUBMERSIBLE PUMPS ..... 102
<b>SA</b>	ALUMINUM COVER SUBMERSIBLE PUMPS ..... 104
<b>2SA</b>	TWO-STAGE SUBMERSIBLE PUMPS ..... 106
<b>QDX</b>	SUBMERSIBLE DRAINAGE PUMPS ..... 108
<b>SS</b>	SUBMERSIBLE DRAINAGE PUMPS ..... 110
<b>2SI</b>	MULTI-STAGE SUBMERSIBLE PUMPS ..... 112
<b>5SA</b>	5-STAGE, 6-STAGE SUBMERSIBLE PUMPS (HIGH HEAD) ..... 114
<b>VW</b>	ALUMINUM COVER SEWAGE PUMPS ..... 116
<b>V</b>	STAINLESS STEEL SEWAGE PUMPS ..... 118
<b>CUT</b>	SUBMERSIBLE PUMPS WITH REAMER CUTTING SYSTEM (FOR SEWAGE WATER) ..... 124
<b>VN</b>	STAINLESS STEEL SEWAGE PUMPS ..... 126
<b>VH</b>	STAINLESS STEEL HIGH HEAD SUBMERSIBLE PUMPS ..... 128
<b>VC</b>	STAINLESS STEEL HIGH HEAD SUBMERSIBLE PUMPS ..... 132
<b>3VH</b>	MULTISTAGE SUBMERSIBLE PUMPS ..... 134
<b>SW</b>	ALUMINUM COVER SEWAGE PUMPS ..... 136
<b>MCM</b>	SUBMERSIBLE DOUBLE-CHANNEL PUMPS (FOR SEWAGE) ..... 140
<b>SC</b>	CAST IRON SEWAGE PUMPS ..... 142
<b>MWC</b>	CAST IRON SEWAGE PUMPS WITH REAMER CUTTING SYSTEM ..... 144
<b>MWD</b>	CAST IRON SEWAGE PUMPS WITH DOUBLE-CHANNEL ..... 146
<b>MWV</b>	CAST IRON SEWAGE PUMPS WITH VORTEX IMPELLER ..... 148
<b>W</b>	CAST IRON SEWAGE PUMPS ..... 150
<b>W-CUT</b>	CAST IRON SEWAGE PUMPS ..... 154
<b>WD</b>	CAST IRON SEWAGE PUMPS ..... 156
<b>WE</b>	CAST IRON SEWAGE PUMPS ..... 158
<b>KTZ &amp; KRS</b>	CAST IRON SEWAGE PUMPS ..... 160
<b>MSK</b>	4" PERIPHERAL SUBMERSIBLE PUMPS ..... 164
<b>3SCREW</b>	SCREW SUBMERSIBLE PUMPS ..... 166
<b>SCREW</b>	SCREW SUBMERSIBLE PUMPS ..... 168
<b>5XS</b>	5" STAINLESS STEEL MULTISTAGE SUBMERSIBLE PUMPS ..... 170
<b>MGP</b>	GASOLINE ENGINE PUMPS ..... 172
<b>V. MULTI-STAGE PUMP</b>	
<b>VS</b>	VERTICAL MULTISTAGE IN-LINE STAINLESS STEEL CENTRIFUGAL PUMPS ..... 174
<b>VSC</b>	VERTICAL MULTISTAGE PUMPS ..... 176
<b>3M</b>	CLOSE-COUPLED COMPLETE CENTRIFUGAL PUMPS ..... 178
<b>CDX</b>	END SUCTION CENTRIFUGAL PUMPS ..... 180
<b>2CDX</b>	TWO-STAGE CENTRIFUGAL PUMPS ..... 182
<b>DWO</b>	OPEN IMPELLER CENTRIFUGAL PUMPS ..... 183
<b>HSF</b>	HORIZONTAL MULTISTAGE STAINLESS STEEL CENTRIFUGAL PUMPS ..... 184
<b>HSE</b>	STAINLESS STEEL HORIZONTAL MULTI-STAGE CENTRIFUGAL PUMPS ..... 186
<b>HSD</b>	STAINLESS STEEL HORIZONTAL MULTI-STAGE CENTRIFUGAL PUMPS ..... 188
<b>VI. GARDEN PUMP</b>	
<b>GP</b>	GARDEN SUBMERSIBLE PUMPS ..... 192
<b>GS</b>	GARDEN SUBMERSIBLE PUMPS ..... 193
<b>SGP</b>	GARDEN SUBMERSIBLE PUMPS ..... 194
<b>SGS</b>	GARDEN SUBMERSIBLE PUMPS ..... 195
<b>PGJC</b>	GARDEN JET PUMPS ..... 196
<b>SGJ</b>	GARDEN JET PUMPS ..... 197
<b>3SGP</b>	GARDEN MULTISTAGE SUBMERSIBLE PUMPS ..... 198
<b>VII. VARIABLE FREQUENCY PUMP AND OTHER PUMPS</b>	
<b>MAC</b>	PERMANENT MAGNET INTELLIGENT BOOSTER ..... 200
<b>INV</b>	PERMANENT MAGNET VARIABLE FREQUENCY PUMPS ..... 202
<b>IMP</b>	STAINLESS STEEL MULTISTAGE VARIABLE FREQUENCY PUMPS ..... 204
<b>SMP</b>	STAINLESS STEEL MULTISTAGE SMART PUMPS ..... 206
<b>MSA</b>	AUTOMATIC TYPE SELF-PRIMING PERIPHERAL PUMPS ..... 208
<b>MMA/MMB</b>	AUTOMATIC TYPE SELF-PRIMING PERIPHERAL PUMPS ..... 209
<b>OTHER PUMPS</b>	..... 210
<b>VIII. ACCESSORIES</b> ..... 218	

# MKP

## END-SUCTION PERIPHERAL PUMPS

### PERFORMANCE RANGE

- ☒ flow rate up to 90 l/min.(5.4 m<sup>3</sup>/h)
- ☒ head up to 100 m

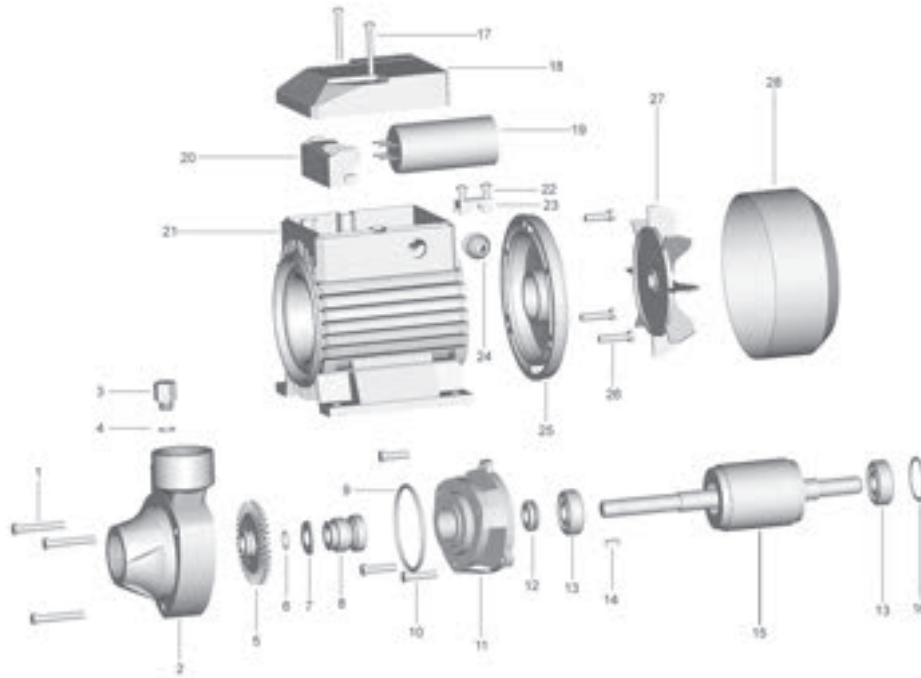
### OPERATING LIMITS

- ☒ suction lift up to 8 m
- ☒ fluid temperature up to 60°C
- ☒ maximum ambient temperature 40°C



**MKP60-1**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Bolt	13	Bearing	25	Driving cap
2	Pump casing	14	Key	26	Bolt
3	Charge plug	15	Rotor	27	Fan
4	"O" ring	16	Split ring	28	Fan cover
5	Impeller	17	Bolt		
6	Snap ring	18	Terminal cover		
7	Washer	19	Capacitor		
8	Mechanical seal	20	Terminal board		
9	"O" ring	21	Casing with wound stator		
10	Bolt	22	Screw		
11	Pump support	23	Cable presser		
12	Drops guard	24	Fairlead		

### PUMPS INSTALLATION AND APPLICATIONS

These pumps are suitable for handling clean water not containing abrasive particles and fluids which are not chemically aggressive to the pump components. Reliable, economical and simple to use, they are suitable for domestic applications and the automatic distribution of water from surge tanks, watering gardens and for boosting insufficient mains water pressure. These pumps should be installed in a covered area, protected against the weather.

### PERFORMANCE

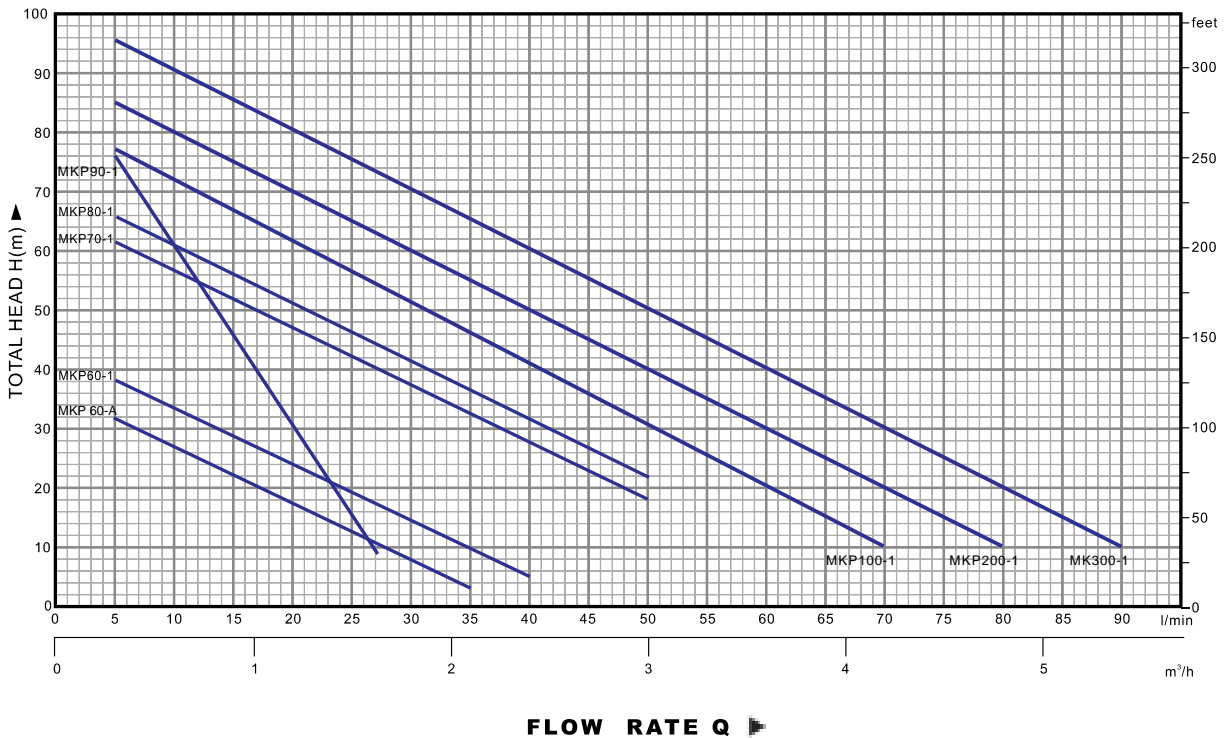
- high heads with respect to power requirements.
- stable operating curves, with small variations in delivery rates with respect to large variations in the pressure demand.
- high tolerance of the presence of entrained air in the liquid being pumped.

### STRUCTURAL CHARACTERISTICS

- cast iron pump body
- stainless steel mechanical seal (graphite to ceramic)
- brass impeller with radial peripheral blades
- protection IP44
- 45# steel shaft
- with thermal overload protector in single phase motor
- NSK bearing or local bearing

**WARRANTY: 1 YEAR (according to our general sales conditions)**

**PERFORMANCE CHART AT n=2900rpm**



PUMP MODEL		POWER		Q	0	0.3	0.6	0.9	1.2	1.5	1.8	2.1	2.4	3.0	3.6	4.2	4.8	5.4
Single phase	Three phase	KW	HP	l/min	0	5	10	15	20	25	30	35	40	50	60	70	80	90
MKP 60-A	MK 60-A	0.37	0.50	H m	35	32	26.5	22	16.5	12.5	8	2.5						
MKP 60-1	MK 60-1	0.37	0.50		40	38	33.5	29	24	19.5	15	10	5					
MKP 70-1	MK 70-1	0.60	0.80		65	62	57	52	47	42	37	32	27	18				
MKP 80-1	MK 80-1	0.75	1		70	66	61	56	51	46	41	36	31	22				
MKP 90-1	MK 90-1	0.75	1.0		90	75	60	50	35	25	15	5						
MKP 100-1	MK 100-1	1.1	1.5		85	80	75	65	60	55	50	45	40	30	18	10		
MKP 200-1	MK 200-1	1.5	2.0		90	86	80	75	70	65	60	55	50	40	30	20	10	
—	MK 300-1	2.2	3.0		100	96	90	85	80	75	70	65	60	50	40	30	20	10

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**

# MQP

## SIDE-SUCTION PERIPHERAL PUMPS

### PERFORMANCE RANGE

- ☒ flow rate up to 50 l/min.(3.0m<sup>3</sup>/h)
- ☒ head up to 70 m

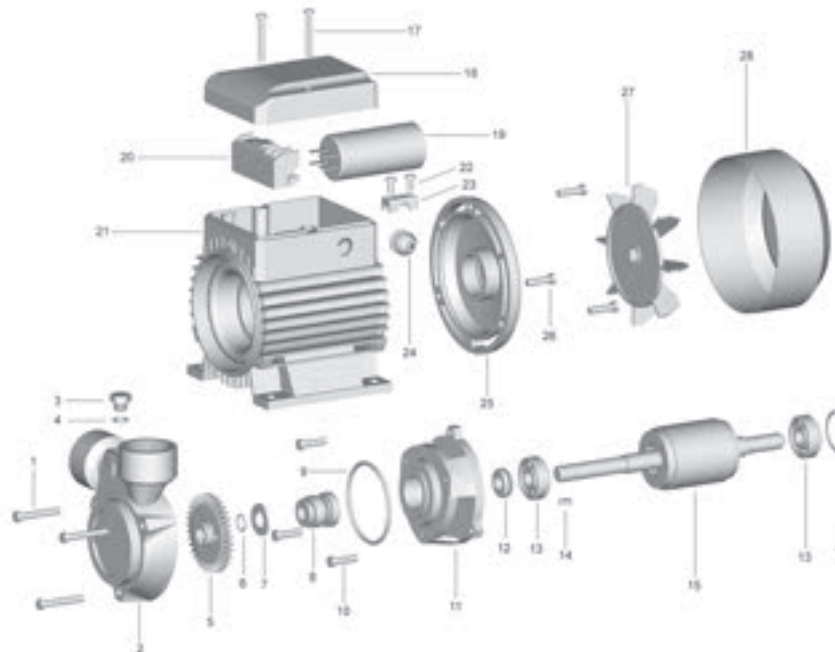
### OPERATING LIMITS

- ☒ suction lift up to 8 m
- ☒ fluid temperature up to 60 °C
- ☒ maximum ambient temperature 40 °C



**MQP60**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Bolt	13	Bearing	25	Driving cap
2	Pump casing	14	Key	26	Bolt
3	Charge plug	15	Rotor	27	Fan
4	"O" ring	16	Split ring	28	Fan cover
5	Impeller	17	Bolt		
6	Snap ring	18	Terminal cover		
7	Washer	19	Capacitor		
8	Mechanical seal	20	Terminal board		
9	"O" ring	21	Casing with wound stator		
10	Bolt	22	Screw		
11	Pump support	23	Cable presser		
12	Drops guard	24	Fairlead		

### PUMPS INSTALLATION AND APPLICATIONS

These pumps are suitable for handling clean water not containing abrasive particles and fluids which are not chemically aggressive to the pump components. Reliable, economical and simple to use, they are suitable for domestic applications and the automatic distribution of water from surge tanks, watering gardens and for boosting insufficient mains water pressure and for sanitary applications. The hydraulic performance of these sturdy and compact pumps also makes them ideally suited for industrial applications, since they can be installed in conditions prohibitive for other pump types. These pumps should be installed in a covered area, protected against the weather.

### PERFORMANCE

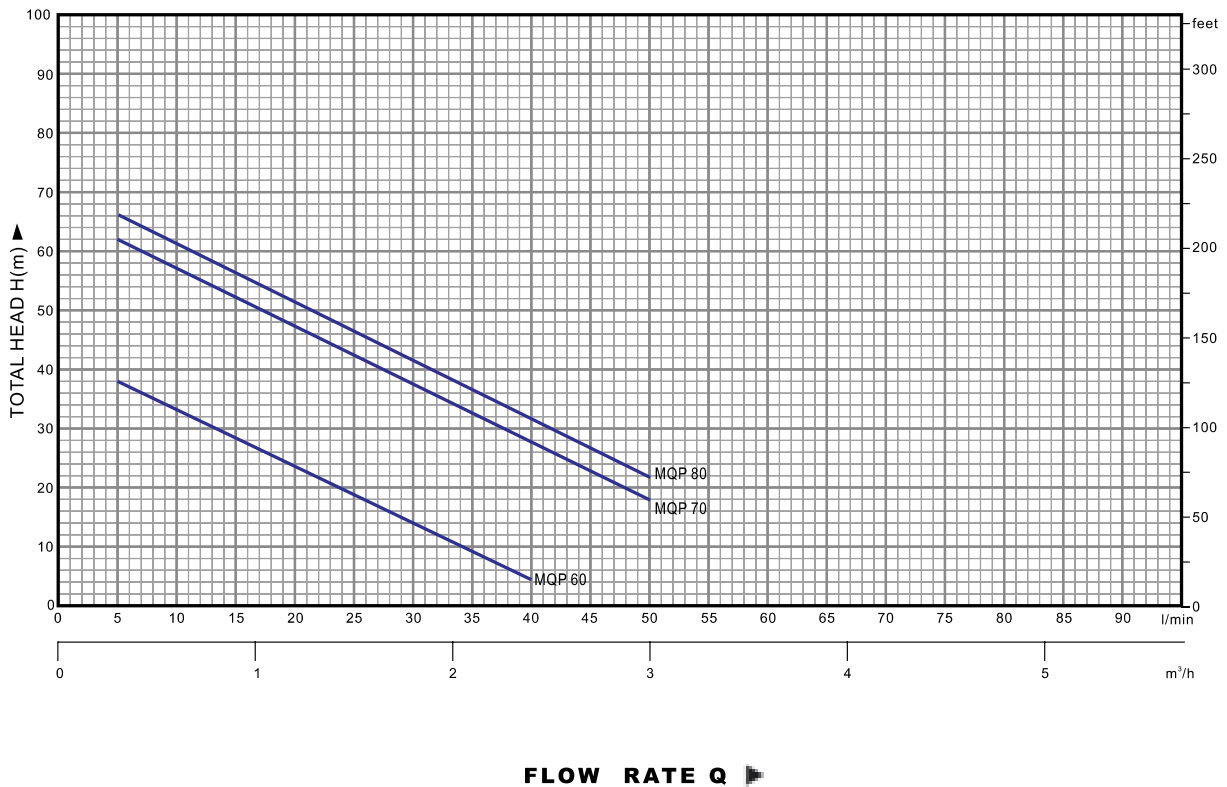
- ✦ high heads with respect to power requirements.
- ✦ stable operating curves, with small variations in delivery rates with respect to large variations in the pressure demand.
- ✦ high tolerance of the presence of entrained air in the liquid being pumped.

### STRUCTURAL CHARACTERISTICS

- ✦ cast iron pump body
- ✦ stainless steel mechanical seal (graphite to ceramic)
- ✦ brass impeller with radial peripheral blades
- ✦ protection IP44
- ✦ 45# steel shaft
- ✦ with thermal overload protector in single phase motor
- ✦ NSK bearing or local bearing

**WARRANTY: 1 YEAR (according to our general sales conditions)**

**PERFORMANCE CHART AT n = 2900rpm**



PUMP MODEL		POWER		Q	0	0.3	0.6	0.9	1.2	1.5	1.8	2.1	2.4	3.0
Single phase	Three phase	KW	HP	l/min	0	5	10	15	20	25	30	35	40	50
MQP 60	MQ 60	0.37	0.50	H m	40	38	33.5	29	24	19.5	15	10	5	
MQP 70	MQ 70	0.60	0.80		65	62	57	52	47	42	37	32	27	18
MQP 80	MQ 80	0.75	1		70	66	61	56	51	46	41	36	31	22

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**

### PERFORMANCE RANGE

- ☒ flow rate up to 50 l/min.(3.0m<sup>3</sup>/h)
- ☒ head up to 70 m

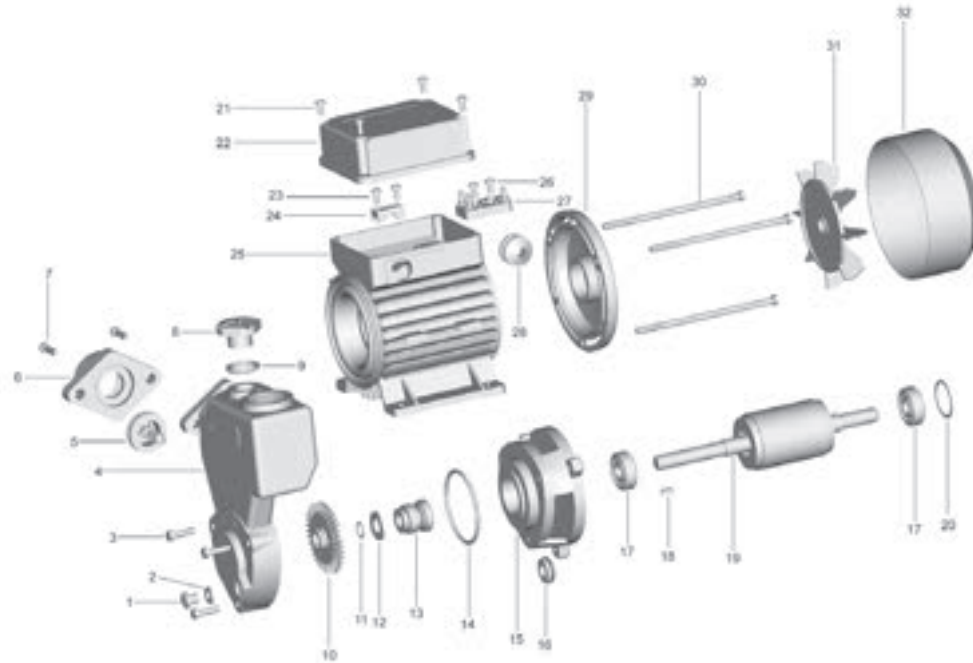
### OPERATING LIMITS

- ☒ suction lift up to 9 m
- ☒ fluid temperature up to 60 °C
- ☒ maximum ambient temperature 40 °C



**MKS60-1**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Discharge plug	13	Mechanical seal	25	Casing with wound stator
2	"O" ring	14	"O" ring	26	Screw
3	Bolt	15	Pump support	27	Terminal board
4	Pump casing	16	Drops guard	28	Fairlead
5	Check valve	17	Bearing	29	Driving cap
6	Suction flange	18	Key	30	Tie-rod
7	Bolt	19	Rotor	31	Fan
8	Charge plug	20	Split ring	32	Fan cover
9	"O" ring	21	Bolt		
10	Impeller	22	Terminal cover		
11	Snap ring	23	Screw		
12	Washer	24	Cable presser		

### PUMPS INSTALLATION AND APPLICATIONS

These pumps are suitable for handling clean water not containing abrasive particles and fluids which are not chemically aggressive to the pump components. Reliable, compact, economical and simple to use, they are particularly suitable for domestic and industrial applications such as water supply for recirculation in air conditioners and refrigerators, industrial water uses in general, and the automatic distribution of water from surge tanks, watering gardens, lifting water from tanks or wells down to 9m depth. The pump is supplied with a check valve on the suction side so that no foot valve is required. These pumps should be installed in a covered area, protected against the weather.

### PERFORMANCE

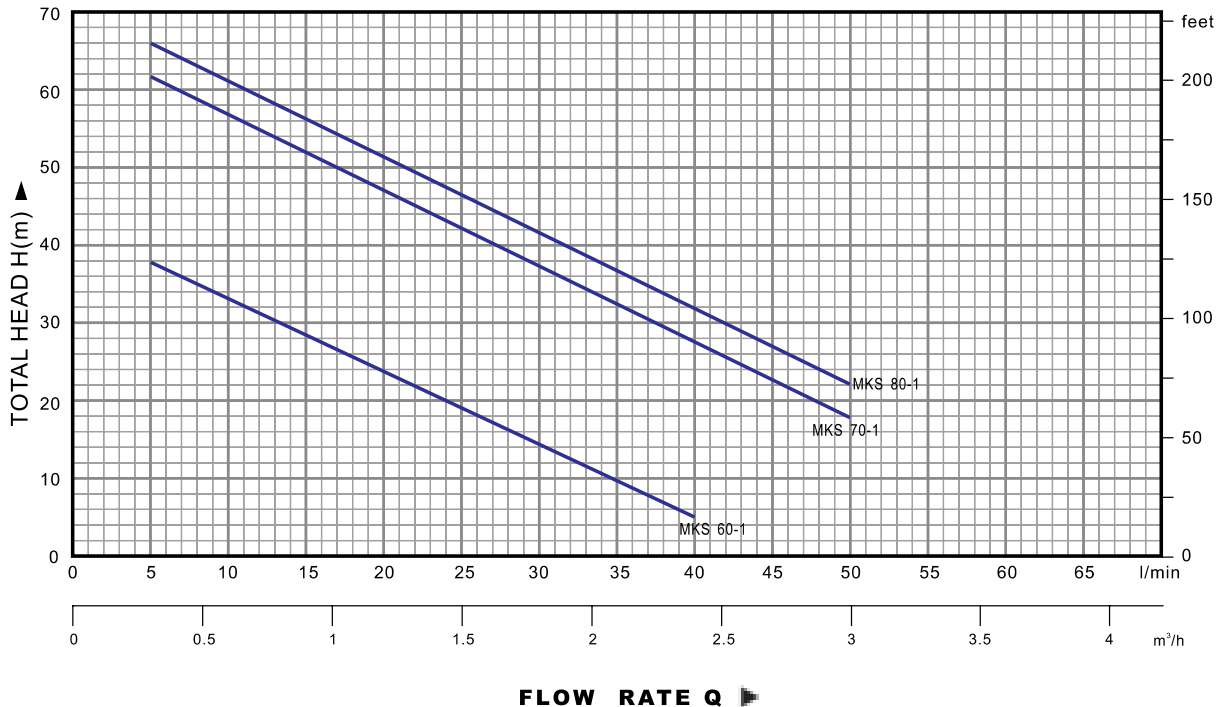
- ✘ high heads with respect to power requirements.
- ✘ stable operating curves, with small variations in delivery rates with respect to large variations in the pressure demand.
- ✘ high tolerance of the presence of entrained air in the liquid being pumped.
- ✘ suction capacity up to 9 meters.

### STRUCTURAL CHARACTERISTICS

- ✘ cast iron pump body
- ✘ stainless steel mechanical seal (graphite to ceramic)
- ✘ brass impeller with radial peripheral blades
- ✘ protection IP44
- ✘ 45# steel shaft
- ✘ with thermal overload protector in single phase motor
- ✘ NSK bearing or local bearing

**WARRANTY:1 YEAR**(according to our general sales conditions)

**PERFORMANCE CHART AT  $n=2900$**



PUMP MODEL		POWER		Q	0	0.3	0.6	0.9	1.2	1.5	1.8	2.1	2.4	3.0
Single phase	Three phase	KW	HP	Q	0	5	10	15	20	25	30	35	40	50
				l/min										
MKS60-1	KS 60-1	0.37	0.50	H	40	38	33.5	29	24	19.5	15	10	5	
MKS70-1	KS 70-1	0.60	0.80	m	65	62	57	52	47	42	37	32	27	18
MKS80-1	KS 80-1	0.75	1		70	66	61	56	51	46	41	36	31	22

**H=TOTAL HEAD IN METERS. Q=FLOW RATE**

# MPS

## SELF-PRIMING PERIPHERAL PUMPS

### PERFORMANCE RANGE

- ☒ flow rate up to 40l/min. (2.4 m<sup>3</sup>/h)
- ☒ head up to 40m

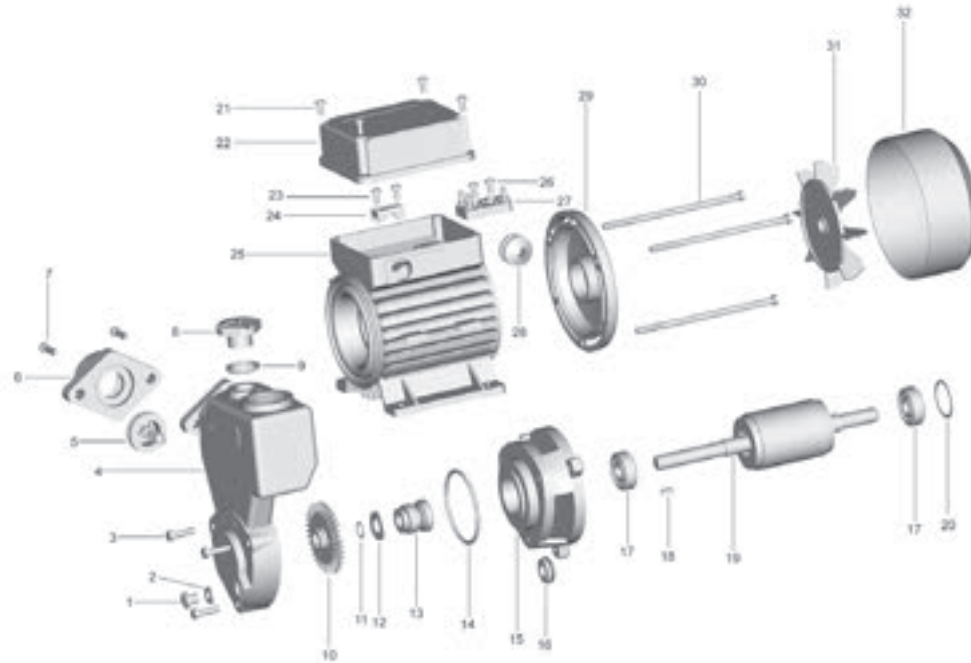
### OPERATION LIMITS

- ☒ suction lift up to 9m
- ☒ fluid temperature up to 60°C
- ☒ maximum ambient temperature up to 40°C



**MPS 60**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Discharge plug	13	Mechanical seal	25	Casing with wound stator
2	"O" ring	14	"O" ring	26	Screw
3	Bolt	15	Pump support	27	Terminal board
4	Pump casing	16	Drops guard	28	Fairlead
5	Check valve	17	Bearing	29	Driving cap
6	Suction flange	18	Key	30	Tie-rod
7	Bolt	19	Rotor	31	Fan
8	Charge plug	20	Split ring	32	Fan cover
9	"O" ring	21	Bolt		
10	Impeller	22	Terminal cover		
11	Snap ring	23	Screw		
12	Washer	24	Cable presser		

### PUMPS INSTALLATION AND APPLICATIONS

These pumps are suitable for handling clean water not containing abrasive particles and fluids which are not chemically aggressive to the pump components. Reliable, compact, economical and simple to use, they are particularly suitable for domestic and industrial applications such as water supply for recirculation in air conditioners and refrigerators, industrial water uses in general, and the automatic distribution of water from surge tanks, watering gardens, lifting water from tanks or wells down to 9m depth. The pump is supplied with a check valve on the suction side so that no foot valve is required. These pumps should be installed in a covered area, protected against the weather.

### PERFORMANCE

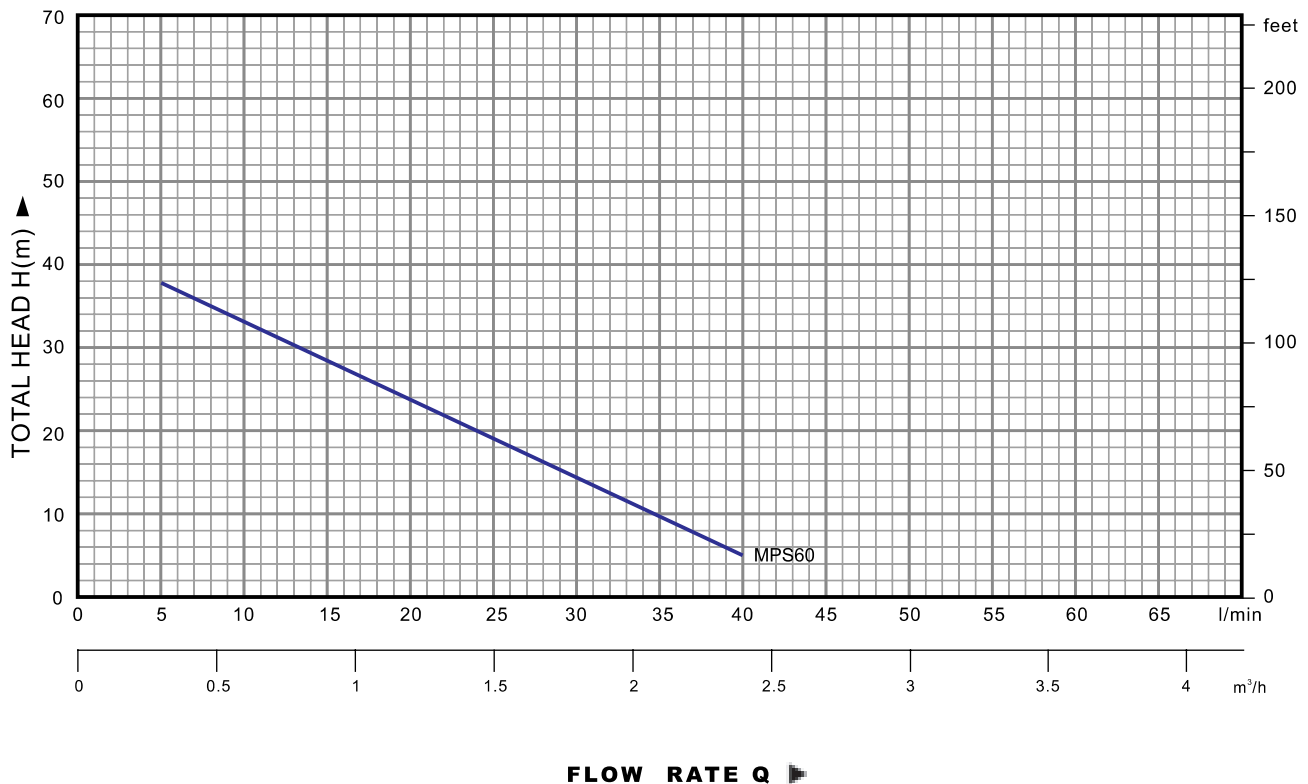
- high heads with respect to power requirements.
- stable operating curves, with small variations in delivery rates with respect to large variations in the pressure demand.
- high tolerance of the presence of entrained air in the liquid being pumped.
- suction capacity up to 9 meters.

### STRUCTURAL CHARACTERISTICS

- cast iron pump body
- stainless steel mechanical seal (graphite to ceramic)
- brass impeller with radial peripheral blades
- protection IP44
- 45# steel shaft
- with thermal overload protector in single phase motor
- NSK bearing or local bearing

**WARRANTY: 1 YEAR (according to our general sales conditions)**

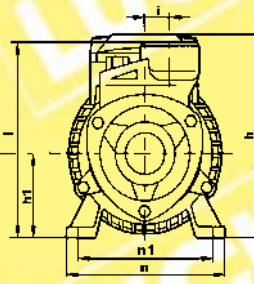
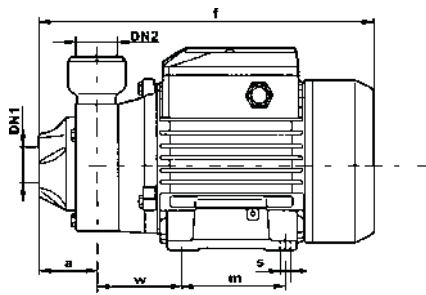
### PERFORMANCE CHART AT n=2900



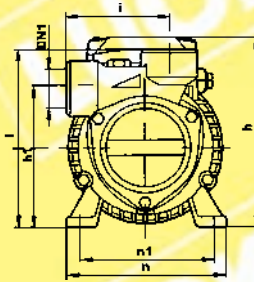
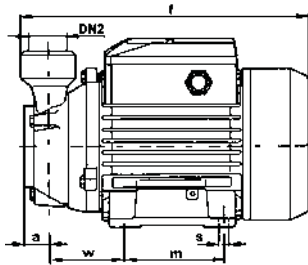
PUMP MODEL		POWER		Q	0	0.3	0.6	0.9	1.2	1.5	1.8	2.1	2.4
Single phase	Three phase	KW	HP	m³/h	0	5	10	15	20	25	30	35	40
MPS 60	MP 60	0.37	0.50	Hm	40	38	33.5	29	24	19.5	15	10	5

**H=TOTAL HEAD IN METERS.**

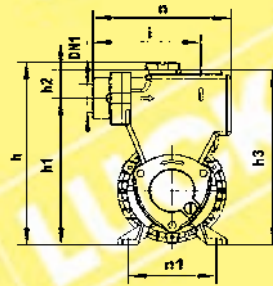
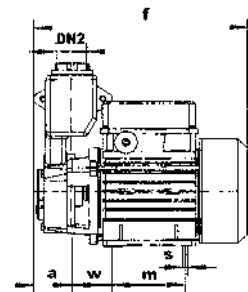
**Q=FLOW RATE**



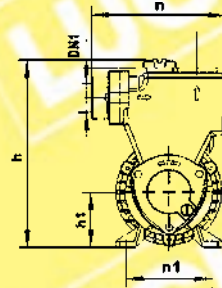
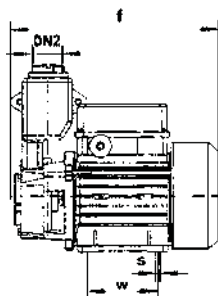
PUMP MODEL		DIMENSIONS mm												
Single phase	Three phase	DN1	DN2	a	f	h	h1	i	l	m	n	n1	w	s
MKP 60 -1	MK 60 -1	1"	1"	42	243	152	63	20	138	80	120	100	55	7
MKP 70 -1	MK 70 -1	1"	1"	55	281	179	71	20	156	90	134	112	62	7
MKP 80 -1	MK 80 -1	1"	1"	55	302	179	71	20	163	90	134	112	62	7
MKP 90 -1	MK 90 -1	3/4"	3/4"	58	288	179	71	20	166	90	134	112	62	7
MKP 100 -1	MK 100 -1	1"	1"	55	322	203	80	20	174	100	152	125	85	9
MKP 200 -1	MK 200 -1	1"	1"	55	342	203	80	20	174	100	152	125	95	9
—	MK 300 -1	1"	1"	55	322	203	80	20	174	100	152	125	85	9



PUMP MODEL		DIMENSIONS mm												
Single phase	Three phase	DN1	DN2	a	f	h	h1	i	l	m	n	n1	w	s
MQP 60	MQ 60	1"	1"	22	225	153	108	78	138	80	120	100	55	7
MQP 70	MQ 70	1"	1"	22	253	179	121	83	151	90	134	112	62	7
MQP 80	MQ 80	1"	1"	22	253	179	121	83	151	90	134	112	62	7



PUMP MODEL		DIMENSIONS mm													
Single phase	Three phase	DN1	DN2	a	f	h	h1	h2	h3	i	m	n	n1	w	s
MKS 60-1	KS 60-1	1"	1"	43.5	227	212	169	33	202	119	80	152	100	35.5	7
MKS 70-1	KS 70-1	1"	1"	43.5	246	237	192	35	227	127	77	162	100	46.5	9
MKS 80-1	KS 80-1	1"	1"	43.5	265	253	207	36	243	134	90	177	106	48	9



PUMP MODEL		DIMENSIONS mm								
Single phase	Three phase	DN1	DN2	f	h	h1	n	n1	w	s
MPS 60	MP 60	1"	1"	227	196	63	148	98	80	7

# MCP

## CENTRIFUGAL PUMPS

### PERFORMANCE RANGE

- ☒ flow rate up to 90 l/min. (5.4m<sup>3</sup>/h)
- ☒ head up to 36 m

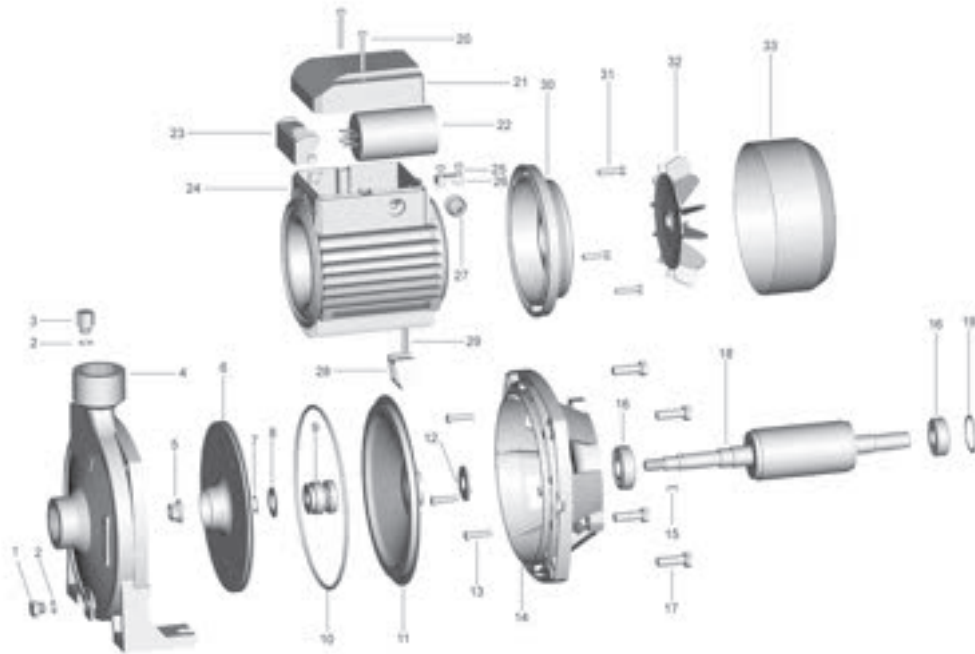
### OPERATING LIMITS

- ☒ suction lift up to 7 m
- ☒ fluid temperature up to 60°C
- ☒ maximum ambient temperature 40°C



**MCP158**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Discharge plug	13	Bolt	25	Screw
2	"O" ring	14	Pump support	26	Cable presser
3	Charge plug	15	Key	27	Fairlead
4	Pump casing	16	Bearing	28	Stand
5	Nut	17	Bolt	29	Stand pin
6	Impeller	18	Rotor	30	Driving cap
7	Snap ring	19	Split ring	31	Bolt
8	Washer	20	Bolt	32	Fan
9	Mechanical seal	21	Terminal cover	33	Fan cover
10	"O" ring	22	Capacitor		
11	Pump casing cover	23	Terminal board		
12	Drops guard	24	Casing with wound stator		

### PUMPS INSTALLATION AND APPLICATIONS

These pumps are suitable for handling clean water which are not chemically aggressive to the pump components. They are extremely reliable, simple to use, quiet and virtually maintenance-free, finding many uses in domestic and civil applications, and in particular the automatic distribution of water from small and medium-sized surge tanks, transferring water, watering gardens, etc.

### PERFORMANCE

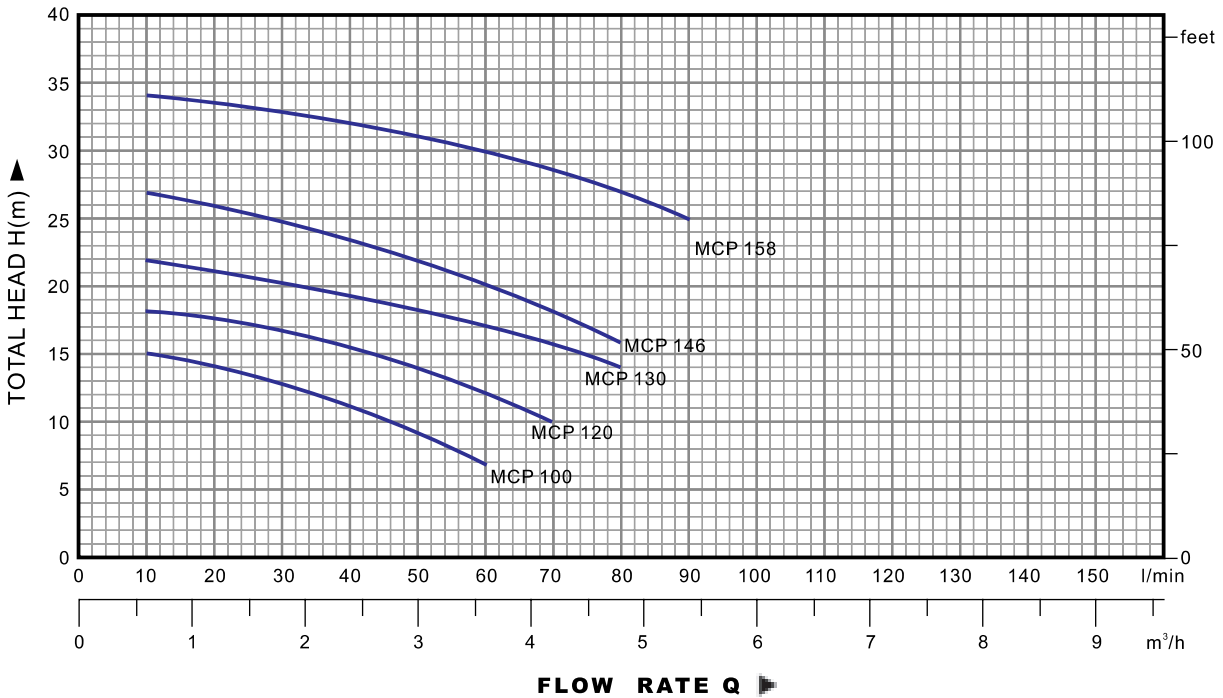
- ☒ ample and stable characteristic curves;
- ☒ outputs having good absolute values and tendentially flat curves;
- ☒ flat absorption curves at high delivery rates, preventing motor overloading even during prolonged use;
- ☒ good suction capacities both at low and high delivery rates.

### STRUCTURAL CHARACTERISTICS

- ☒ cast iron pump body
- ☒ stainless steel pump body cover
- ☒ stainless steel mechanical seal (graphite to ceramic)
- ☒ brass impeller with centrifugal radial flow type
- ☒ 45# steel shaft
- ☒ protection IP44
- ☒ with thermal overload protector in single phase motor
- ☒ NSK bearing or local bearing

**WARRANTY: 1 YEAR (according to our general sales conditions)**

**PERFORMANCE CHART AT n=2900**



PUMP MODEL		POWER		Q	0	0.6	1.2	1.8	2.4	3.0	3.6	4.2	4.8	5.4	
Single phase	Three phase	KW	HP	l/min	0	10	20	30	40	50	60	70	80	90	
MCP 100	MC 100	0.25	0.33	H m	16	15	14	12.5	11	9	7				
MCP 120	MC 120	0.30	0.40		19	18	17.5	16.5	15.5	14	12	10			
MCP 130	MC 130	0.37	0.50		23	22	21	20	19	18	17	16	14		
MCP 146	MC 146	0.60	0.80		28	27	26	25	23.5	22	20	18	16		
MCP 158	MC 158	0.75	1		36	34	33.5	33	32.5	31.5	30	29	27	25	

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**

# MCP

## CENTRIFUGAL PUMPS

### PERFORMANCE RANGE

- ☒ flow rate up to 160 l/min.(9.6m³/h)
- ☒ head up to 55 m

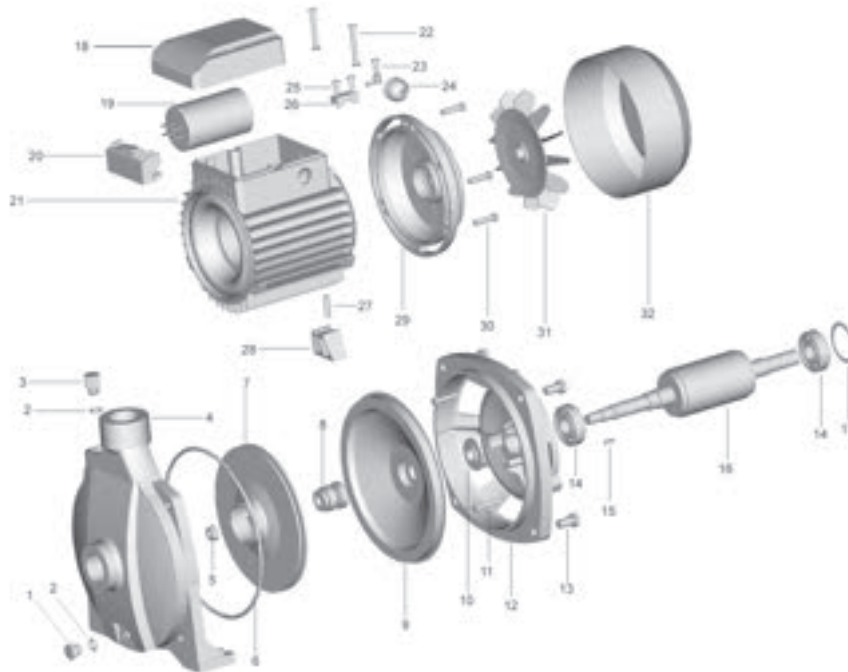
### OPERATING LIMITS

- ☒ suction lift up to 7 m
- ☒ fluid temperature up to 60°C
- ☒ maximum ambient temperature 40°C



**MCP150-1**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Discharge plug	13	Bolt	25	Screw
2	"O" ring	14	Bearing	26	Cable presser
3	Charge plug	15	Key	27	Stand pin
4	Pump casing	16	Rotor	28	Stand
5	Nut	17	Split ring	29	Driving cap
6	"O" ring	18	Terminal cover	30	Bolt
7	Impeller	19	Capacitor	31	Fan
8	Mechanical seal	20	Terminal board	32	Fan cover
9	Pump casing cover	21	Casing with wound stator		
10	Drops guard	22	Bolt		
11	Bolt	23	Screw		
12	Pump support	24	Fairlead		

### PUMPS INSTALLATION AND APPLICATIONS

These pumps are suitable for handling clean water which are not chemically aggressive to the pump components. They are extremely reliable, simple to use, quiet and virtually maintenance-free, finding many uses in domestic and civil applications, and in particular the automatic distribution of water from small and medium-sized surge tanks, transferring water, watering gardens, etc.

### PERFORMANCE

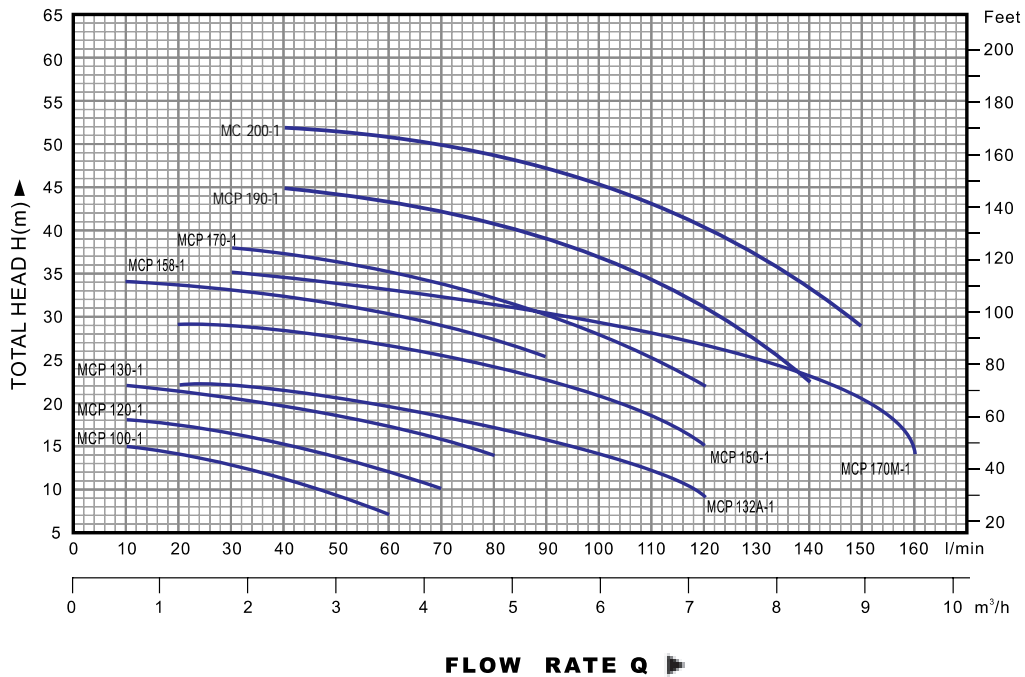
- ☒ ample and stable characteristic curves;
- ☒ outputs having good absolute values and tendentially flat curves;
- ☒ flat absorption curves at high delivery rates, preventing motor overloading even during prolonged use;
- ☒ good suction capacities both at low and high delivery rates.

### STRUCTURAL CHARACTERISTICS

- ☒ cast iron pump body
- ☒ cast iron pump body cover (stainless steel up to 1.1kw)
- ☒ stainless steel mechanical seal (graphite to ceramic or graphite to SiC)
- ☒ brass impeller with centrifugal radial flow type
- ☒ stainless steel shaft (45# steel up to 0.75kw)
- ☒ protection IP44
- ☒ with thermal overload protector in single phase motor
- ☒ NSK bearing or local bearing

**WARRANTY: 1 YEAR (according to our general sales conditions)**

**PERFORMANCE CHART AT n=2900 rpm**



PUMP MODEL		POWER		Q m³/h	H																		
Single phase	Three phase	KW	HP		0	0.6	1.2	1.8	2.4	3.0	3.6	4.2	4.8	5.4	6.0	6.6	7.2	7.8	8.4	9.0	9.6		
				l/min	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160		
MCP 100-1	MC 100-1	0.25	0.33	H m	16	15	14	12.5	11	9	7												
MCP 120-1	MC 120-1	0.30	0.40		19	18	17.5	16.5	15.5	14	12	10											
MCP 130-1	MC 130-1	0.37	0.50		23	22	21	20	19	18	17	16	14										
MCP 132A-1	MC 132A-1	0.60	0.80		23	-	22	21.5	21	20	19	18	17	16	14	12	9						
MCP 150-1	MC 150-1	0.75	1		29.5	-	29	28.5	28	27.5	26.5	26	24.5	23	21	18	15						
MCP 158-1	MC 158-1	0.75	1		36	34	33.5	33	32.5	31.5	30	29	27	25									
MCP 170-1	MC 170-1	1.1	1.5		41	-	-	38	37	36	35	33.5	32	30	28	25	22						
MCP 170M-1	MC 170M-1	1.1	1.5		36	-	-	35	34.5	33.5	33	32	31	30.5	29	28	26.5	25	23	21	19		
MCP 190-1	MC 190-1	1.5	2		48	-	-	45.5	44.5	43.5	42.5	41.5	40.5	39	37	34.5	31	27	22				
-	MC 200-1	2.2	3		55	-	-	53	52.5	51.5	50.5	49.5	48.5	47	45.5	43.5	40	36.5	32.5	28			

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**

# MSC

## CENTRIFUGAL PUMPS

### PERFORMANCE RANGE

- ☒ flow rate up to 450 l/min.(27m<sup>3</sup>/h)
- ☒ head up to 34 m

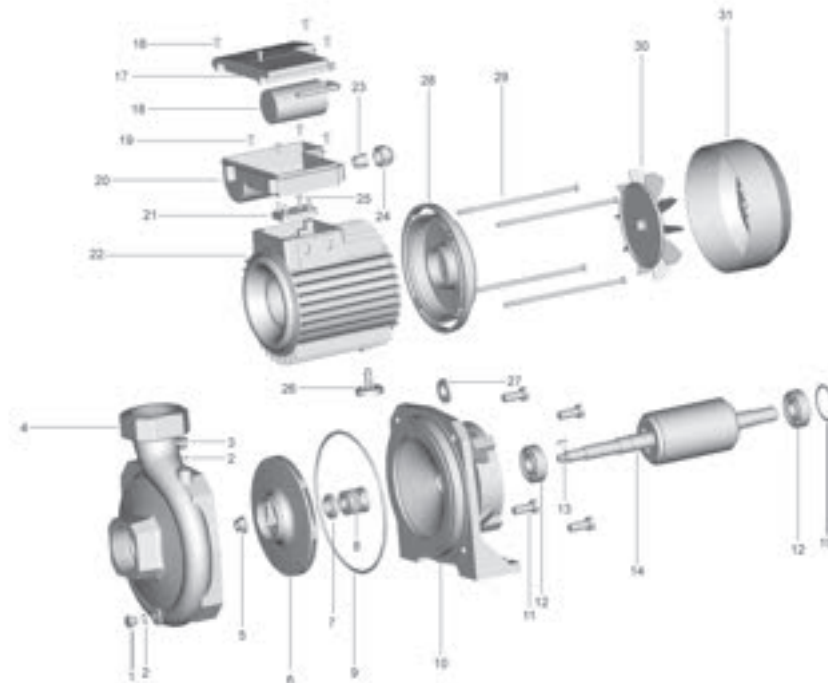
### OPERATING LIMITS

- ☒ suction lift up to 7 m
- ☒ fluid temperature up to 60 °C
- ☒ maximum ambient temperature 40 °C



**MSC 70**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Discharge plug	13	Key	25	Screw
2	"O" ring	14	Rotor	26	Stand
3	Charge plug	15	Split ring	27	Drops guard
4	Pump casing	16	Screw	28	Driving cap
5	Nut	17	Terminal cover	29	Tie-rod
6	Impeller	18	Capacitor	30	Fan
7	Washer	19	Screw	31	Fan cover
8	Mechanical seal	20	Terminal box		
9	"O" ring	21	Terminal board		
10	Pump support	22	Casing with wound stator		
11	Bolt	23	Fairlead		
12	Bearing	24	Nut		

**PUMPS INSTALLATION AND APPLICATIONS**

These pumps are suitable for handling clean water which are not chemically aggressive to the pump components. They are extremely reliable, simple to use, quiet and virtually maintenance-free, finding many uses in domestic and civil applications, and in particular the automatic distribution of water from small and medium-sized surge tanks, transferring water, watering gardens, etc.

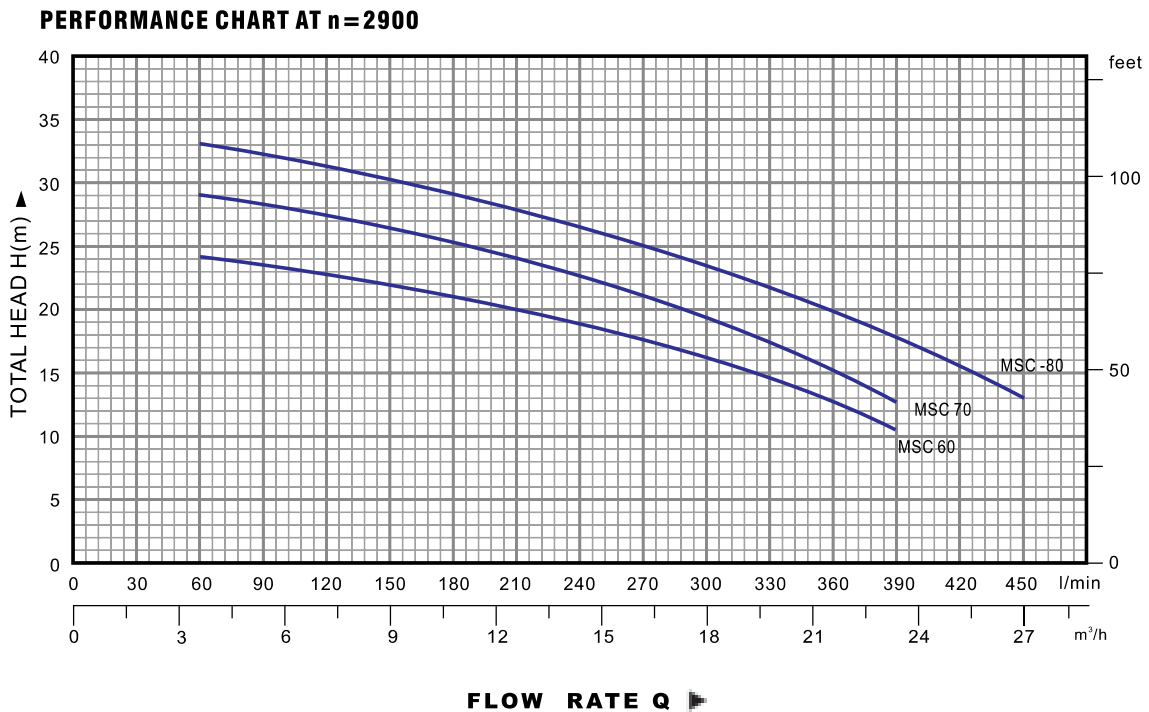
**PERFORMANCE**

- ample and stable characteristic curves;
- outputs having good absolute values and tendentially flat curves;
- flat absorption curves at high delivery rates, preventing motor overloading even during prolonged use;
- good suction capacities both at low and high delivery rates.

**STRUCTURAL CHARACTERISTICS**

- cast iron pump body
- cast iron motor support
- stainless steel mechanical seal (graphite to ceramic or graphite to SiC)
- brass impeller with centrifugal radial flow type
- stainless steel shaft
- protection IP44
- with thermal overload protector in single phase motor
- NSK bearing or local bearing

**WARRANTY: 1 YEAR (according to our general sales conditions)**



PUMP MODEL		POWER		Q	0	3.6	7.2	10.8	14.4	18	21.6	23.4	25.2	27
Single phase	Three phase	KW	HP	l/min	0	60	120	180	240	300	360	390	420	450
MSC 60	MS 60	1.1	1.5	H m	25	24	22.5	21	18.5	16	12.5	10.5		
MSC 70	MS 70	1.5	2		30	29	27.5	25.5	22.5	19	15	13		
MSC 80	MS 80	2.2	3		34	33	31.5	29.5	27	23.5	20	17.5	15.5	13

**H=TOTAL HEAD IN METERS. Q=FLOW RATE**

# MSC

## CENTRIFUGAL PUMPS

### PERFORMANCE RANGE

- ☒ flow rate up to 900 l/min. (54m<sup>3</sup>/h)
- ☒ head up to 56.5 m

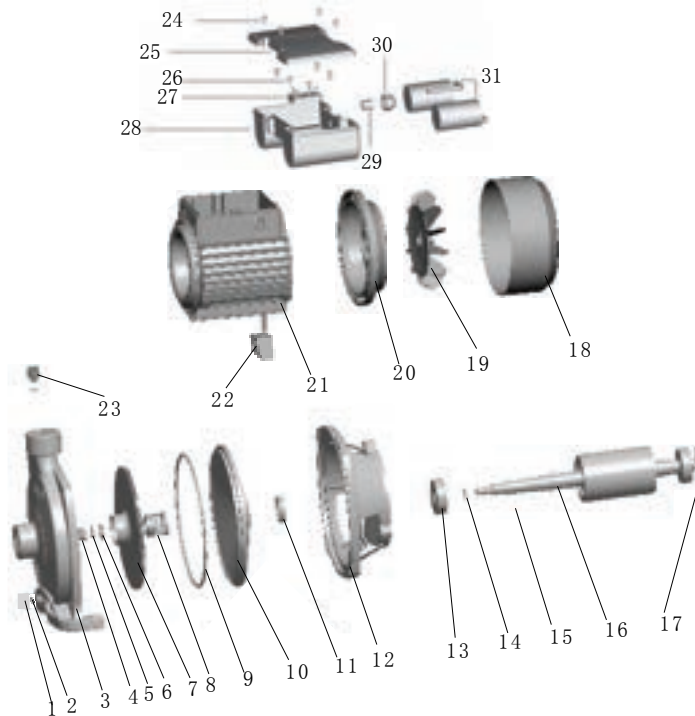
### OPERATING LIMITS

- ☒ suction lift up to 7 m
- ☒ fluid temperature up to 60 °C
- ☒ maximum ambient temperature 40 °C



MSC 90A

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Discharge plug	13	Bearing	25	Terminal cover
2	"O" ring	14	Retainer spring	26	Screw
3	Pump casing	15	Key	27	Terminal board
4	Nut	16	Rotor	28	Terminal box
5	Snap ring	17	Split ring	29	Fairlead
6	Washer	18	Fan cover	30	Nut
7	Impeller	19	Fan	31	Capacitor
8	Mechanical seal	20	Driving cap		
9	"O" ring	21	Casing with wound stator		
10	Pump casing cover	22	Stand		
11	Drops guard	23	Charge plug		
12	Pump support	24	Screw		

## PUMPS INSTALLATION AND APPLICATIONS

These pumps are suitable for handling clean water which are not chemically aggressive to the pump components. They are extremely reliable, simple to use, quiet and virtually maintenance-free, finding many uses in domestic and civil applications, and in particular the automatic distribution of water from small and medium-sized surge tanks, transferring water, watering gardens, etc.

## PERFORMANCE

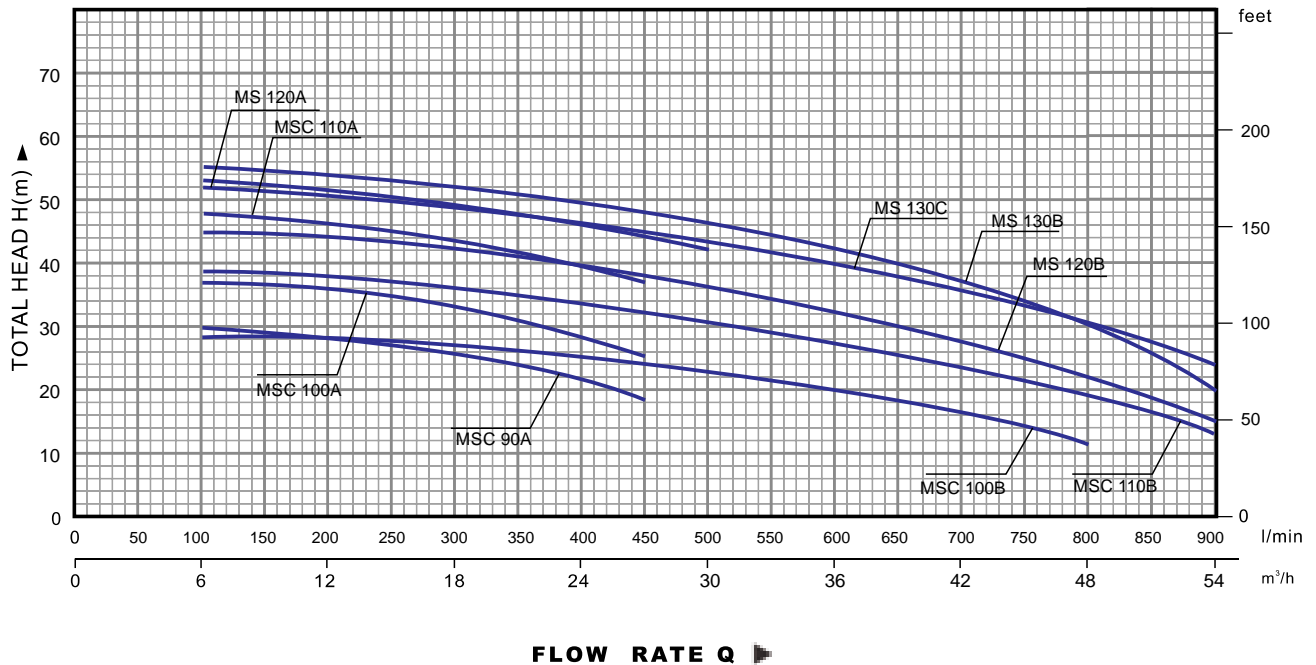
- ☒ ample and stable characteristic curves;
- ☒ outputs having good absolute values and tendentially flat curves;
- ☒ flat absorption curves at high delivery rates, preventing motor overloading even during prolonged use;
- ☒ good suction capacities both at low and high delivery rates.

## STRUCTURAL CHARACTERISTICS

- ☒ cast iron pump body
- ☒ cast iron pump body cover
- ☒ stainless steel mechanical seal (graphite to ceramic or graphite to SiC)
- ☒ brass impeller with centrifugal radial flow type
- ☒ stainless steel shaft
- ☒ protection IP44
- ☒ NSK bearing or local bearing

**WARRANTY: 1 YEAR (according to our general sales conditions)**

**PERFORMANCE CHART AT n=2900**



PUMP MODEL		POWER		Q	Flow Rate (l/min)															
Single phase	Three phase	KW	HP	m³/h	0	6	9	12	15	18	24	27	30	36	42	48	54			
				l/min	0	100	150	200	250	300	400	450	500	600	700	800	900			
MSC 90A	MS 90A	2.2	3	H m	31	30	29.5	28.5	27.5	26	21.5	18.5								
MSC 100A	MS 100A	3	4		38	37.5	37	36	34.5	33	28.5	25.5								
MSC 110A	MS 110A	4	5.5		49	48	47	46	45	43.5	39.5	37								
—	MS 120A	5.5	7.5		54	52.5	52	51	50	49	46	44	42							
MSC 100B	MS 100B	3	4		30	29.5	29	28.5	28	27	25	23.5	22	19.5	15.5	11.5				
MSC 110B	MS 110B	4	5		39	38.5	38	37.5	37	36	34	32.5	31	28	24	18.5	13			
—	MS 120B	5.5	7.5		46.5	45.5	45	44.5	43.5	42.5	40	38.5	37	33	28	22	15			
—	MS 130B	7.5	10		56.5	55	55	54.5	53.5	52.5	50	48.5	46.5	42	36.5	30.5	20			
—	MS 130C	7.5	10		52.5	52	52	51.5	51	50.5	48	46.5	44.5	40	35.5	30.5	24			

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**

# MHF

## CENTRIFUGAL PUMPS

### PERFORMANCE RANGE

- ☒ flow rate up to 600 l/min.(36m<sup>3</sup>/h)
- ☒ head up to 22.5 m

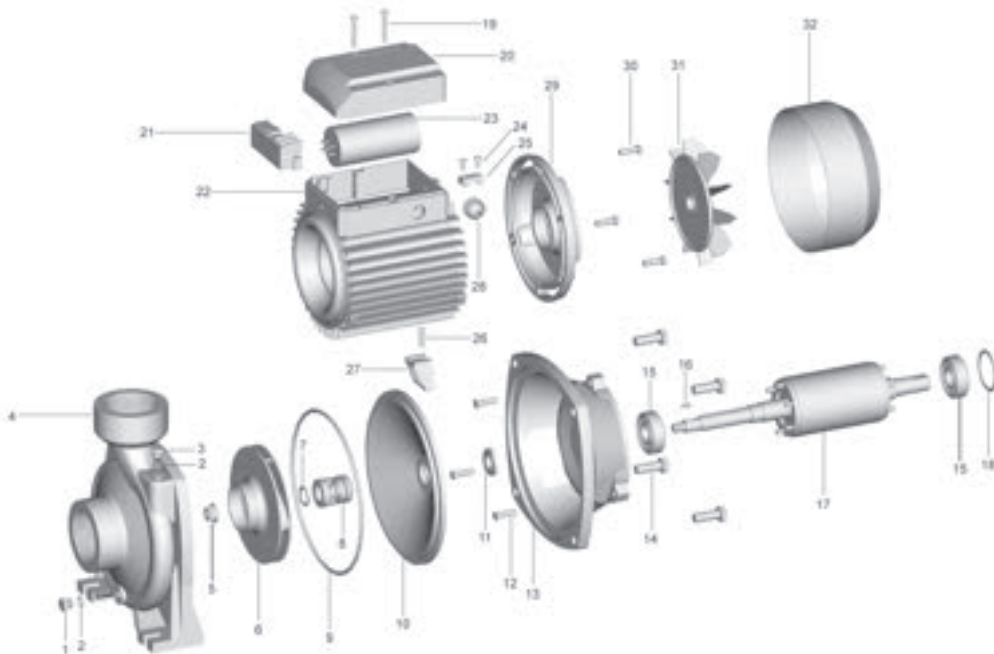
### OPERATING LIMITS

- ☒ suction lift up to 7 m
- ☒ fluid temperature up to 60 °C
- ☒ maximum ambient temperature 40 °C



**MHF/5AM**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Discharge plug	13	Pump support	25	Cable presser
2	"O" ring	14	Bolt	26	Stand pin
3	Charge plug	15	Bearing	27	Stand
4	Pump casing	16	Key	28	Fairlead
5	Nut	17	Rotor	29	Driving cap
6	Impeller	18	Split ring	30	Bolt
7	Snap ring	19	Bolt	31	Fan
8	Mechanical seal	20	Terminal cover	32	Fan cover
9	"O" ring	21	Terminal board		
10	Pump casing cover	22	Casing with wound stator		
11	Drops guard	23	Capacitor		
12	Bolt	24	Screw		

### PUMP INSTALLATION AND APPLICATIONS

**MHF** pumps are specifically designed for domestic, agricultural and industrial use. Their performance levels, mechanical design and structural materials are explicitly selected for these uses. The shapes of their volutes and impellers, with ample passages, make them suitable for pumping even fairly dirty water. They can achieve high delivery rates under continuous or heavy duty, making them advantageous for rain and gravity irrigation, for pumping water from lakes, rivers, wells, and for a wide variety of industrial uses where high delivery rates must be achieved at low to average heads. The pumps should be installed in a covered area, protected against the weather.

### PERFORMANCE

**MHF** pumps come in a wide and well-diversified range.

Characteristic curves for the different models are distributed in a rational and complementary manner, making it easy to select the model most suited to each specific user requirement.

Special design efforts were made to unify the entire **MHF** series, which is distinctive for its:

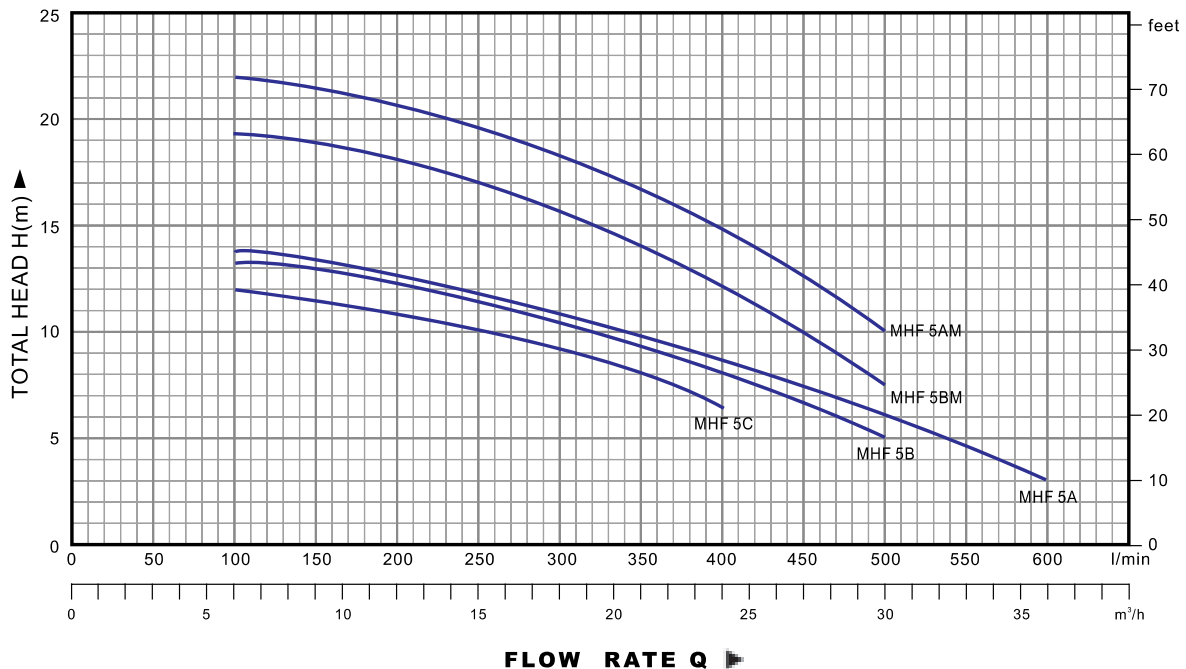
- ❖ especially ample characteristic curves;
- ❖ no surging phenomena even when pumping near minimum forecast delivery rates;
- ❖ performance characterized by high absolute values over the majority of the characteristic curve;
- ❖ flat absorption curves at high delivery rates, to prevent motor overloading even during prolonged use;
- ❖ good suction capacities at both low and high delivery rates.

### STRUCTURAL CHARACTERISTICS

- ❖ cast iron pump body
- ❖ brass impeller with centrifugal radial flow type
- ❖ stainless steel shaft (45# steel up to 0.75kw)
- ❖ with thermal overload protector in single phase motor  
all three phase motors require an adequate external motor protector, and connections are to be according to current standards
- ❖ stainless steel mechanical seal (graphite to ceramic or graphite to SiC)
- ❖ protection IP 44.
- ❖ NSK bearing or local bearing

**WARRANTY: 1 YEAR (according to our general sales conditions)**

**PERFORMANCE CHART AT n=2900 rpm**



PUMP MODEL		POWER		Q	0	6	9	12	15	18	21	24	30	36	
Single phase	Three phase	KW	HP	m³/h	0	100	150	200	250	300	350	400	500	600	
MHF/5C	MH/5C	0.60	0.80	H m	12.5	12	11.7	11	10.2	9.2	8	6.5			
MHF/5B	MH/5B	0.75	1		13.7	13.2	13	12.5	11.6	10.5	9.2	8	5		
MHF/5A	MH/5A	1.1	1.5		14.5	13.8	13.5	13.2	12.6	11.5	10.5	9.2	6.5	3	
MHF/5BM	MH/5BM	1.1	1.5		20.2	19.2	19	18	17	15.6	14	12	7.5		
MHF/5AM	MH/5AM	1.5	2		22.5	22	21.5	21	20	18.5	16.6	14.5	10		

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**

# MHF

## CENTRIFUGAL PUMPS (HIGH FLOW)

### PERFORMANCE RANGE

- ☒ flow rate up to 1200 l/min. (72m<sup>3</sup>/h)
- ☒ head up to 21.8 m

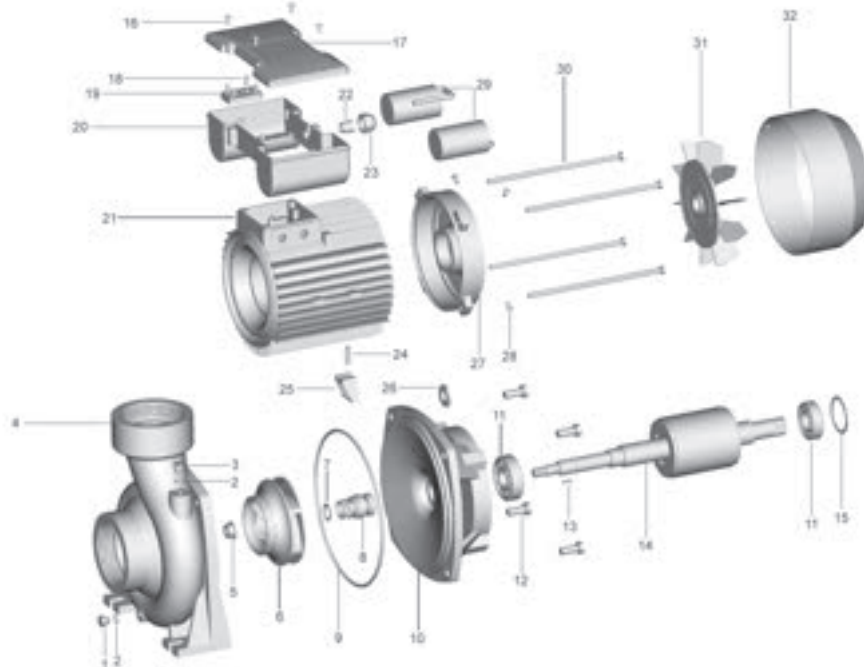
### OPERATING LIMITS

- ☒ suction lift up to 7 m
- ☒ fluid temperature up to 60 °C
- ☒ maximum ambient temperature 40 °C



**MHF/6A**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Discharge plug	13	Key	25	Stand
2	"O" ring	14	Rotor	26	Drops guard
3	Charge plug	15	Split ring	27	Driving cap
4	Pump casing	16	Screw	28	Screw
5	Nut	17	Terminal cover	29	Capacitor
6	Impeller	18	Screw	30	Tie-rod
7	Snap ring	19	Terminal board	31	Fan
8	Mechanical seal	20	Terminal box	32	Fan cover
9	"O" ring	21	Casing with wound stator		
10	Pump support	22	Fairlead		
11	Bearing	23	Nut		
12	Bolt	24	Stand pin		

### PUMP INSTALLATION AND APPLICATIONS

**MHF** pumps are specifically designed for domestic, agricultural and industrial use. Their performance levels, mechanical design and structural materials are explicitly selected for these uses. The shapes of their volutes and impellers, with ample passages, make them suitable for pumping even fairly dirty water. They can achieve high delivery rates under continuous or heavy duty, making them advantageous for rain and gravity irrigation, for pumping water from lakes, rivers, wells, and for a wide variety of industrial uses where high delivery rates must be achieved at low to average heads.

The pumps should be installed in a covered area, protected against the weather.

### PERFORMANCE

**MHF** pumps come in a wide and well-diversified range.

Characteristic curves for the different models are distributed in a rational and complementary manner, making it easy to select the model most suited to each specific user requirement.

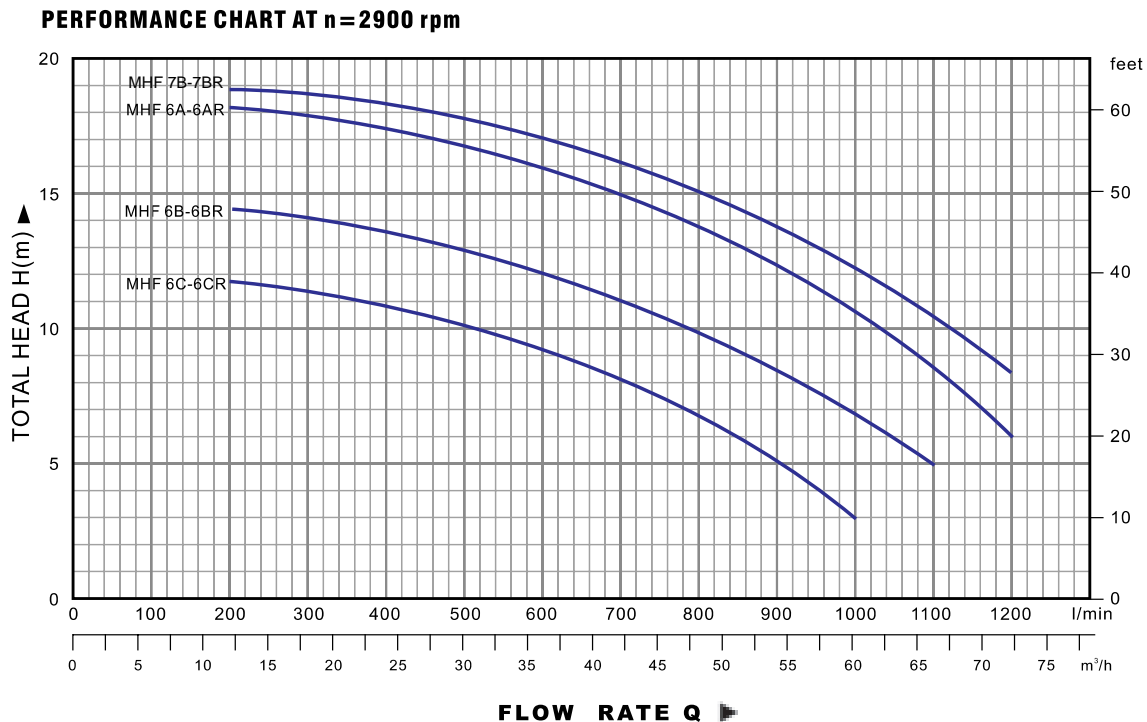
Special design efforts were made to unify the entire **MHF** series, which is distinctive for its:

- ✦ especially ample characteristic curves;
- ✦ no surging phenomena even when pumping near minimum forecast delivery rates;
- ✦ performance characterized by high absolute values over the majority of the characteristic curve;
- ✦ flat absorption curves at high delivery rates, to prevent motor overloading even during prolonged use;
- ✦ good suction capacities at both low and high delivery rates.

### STRUCTURAL CHARACTERISTICS

- ✦ Cast iron pump body
- ✦ brass impeller with centrifugal radial flow type
- ✦ stainless steel shaft
- ✦ with thermal overload protector in single phase motor, all three phase motors require an adequate external motor protector, and connections are to be according to current standards
- ✦ stainless steel mechanical seal (graphite to SiC)
- ✦ protection IP 44.
- ✦ NSK bearing or local bearing

**WARRANTY: 1 YEAR (according to our general sales conditions)**



PUMP MODEL		POWER		Q	0	6	9	12	15	18	21	24	30	36	42	48	54	60	66	72		
Single phase	Three phase	KW	HP	l/min	0	100	150	200	250	300	350	400	500	600	700	800	900	1000	1100	1200		
MHF/6C	MH/6C	1.1	1.5	H	11.9	-	-	11.7	11.5	11.3	11	10.7	10.2	9	8	6.7	5	3				
MHF/6B	MH/6B	1.5	2		14.7	-	-	14.5	14.2	14	13.7	13.5	13	12	11	9.7	8.2	6.7	5			
MHF/6A	MH/6A	2.2	3		18.5	-	-	18.1	18	17.8	17.5	17.2	16.8	16	15	13.8	12.2	10.5	8.3	6		
MHF/7B	MH/7B	3.0	4		21.8	-	-	18.8	18.7	18.6	18.5	18.4	17.9	11	16.2	15	13.8	12.2	10.3	8.2		
MHF/6CR	MH/6CR	1.1	1.5		m	11.9	-	-	11.7	11.5	11.3	11	10.7	10.2	9	8	6.7	5	3			
MHF/6BR	MH/6BR	1.5	2			14.7	-	-	14.5	14.2	14	13.7	13.5	13	12	11	9.7	8.2	6.7	5		
MHF/6AR	MH/6AR	2.2	3			18.5	-	-	18.1	18	17.8	17.5	17.2	16.8	16	15	13.8	12.2	10.5	8.3	6	
MHF/7BR	MH/7BR	3.0	4			21.8	-	-	18.8	18.7	18.6	18.5	18.4	17.9	11	16.2	15	13.8	12.2	10.3	8.2	

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**

# MNF

## CENTRIFUGAL PUMPS (WITH FLANGED CONNECTIONS)

### PERFORMANCE RANGE

- ☒ flow rate up to 2200 l/min.(130m<sup>3</sup>/h)
- ☒ head up to 22.5 m

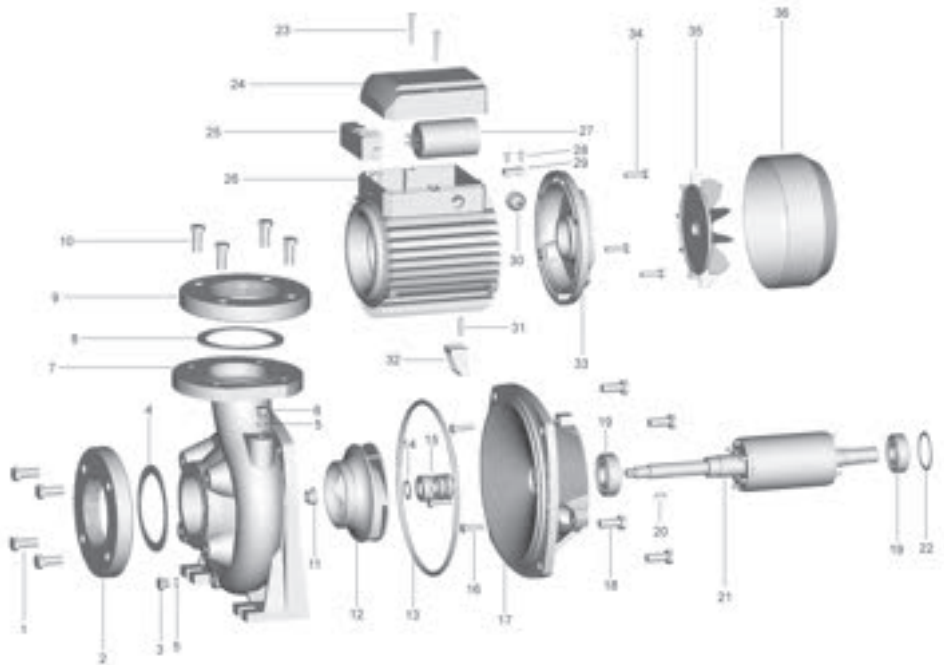
### OPERATING LIMITS

- ☒ suction lift up to 7 m
- ☒ fluid temperature up to 60 °C
- ☒ maximum ambient temperature 40 °C



**MNF/129A**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Bolt	13	"O" ring	25	Terminal board
2	Suction flange	14	Snap ring	26	Casing with wound stator
3	Discharge plug	15	Mechanical seal	27	Capacitor
4	Suction gasket	16	Bolt	28	Screw
5	"O" ring	17	Pump support	29	Cable presser
6	Charge plug	18	Bolt	30	Fairlead
7	Pump casing	19	Bearing	31	Stand pin
8	Delivery gasket	20	Key	32	Stand
9	Delivery flange	21	Rotor	33	Driving cap
10	Bolt	22	Split ring	34	Bolt
11	Nut	23	Bolt	35	Fan
12	Impeller	24	Terminal cover	36	Fan cover

### PUMP INSTALLATION AND APPLICATIONS

MNF pumps are specifically designed for domestic, agricultural and industrial use. Their performance levels, mechanical design and structural materials are explicitly selected for these uses. The shapes of their volutes and impellers, with ample passages, make them suitable for pumping even fairly dirty water. They can achieve high delivery rates under continuous or heavy duty, making them advantageous for rain and gravity irrigation, for pumping water from lakes, rivers, wells, and for a wide variety of industrial uses where high delivery rates must be achieved at low to average heads.

The pumps should be installed in a covered area, protected against the weather.

### PERFORMANCE

MNF pumps come in a wide and well-diversified range.

Characteristic curves for the different models are distributed in a rational and complementary manner, making it easy to select the model most suited to each specific user requirement.

Special design efforts were made to unify the entire MNF series, which is distinctive for its:

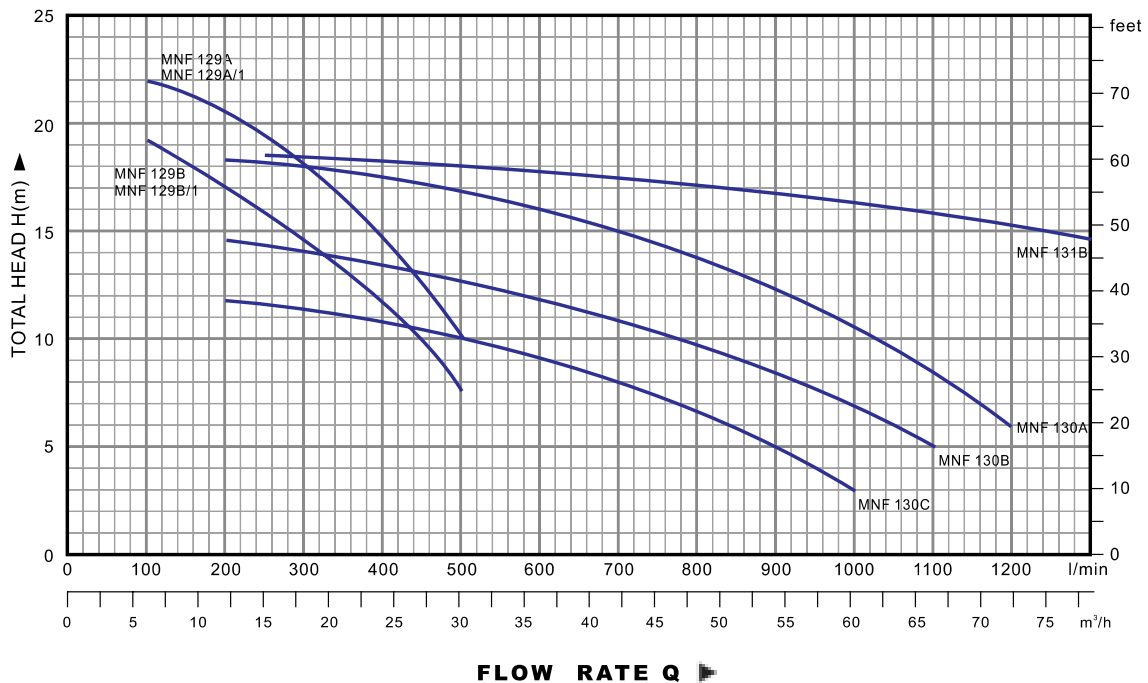
- ❖ especially ample characteristic curves;
- ❖ no surging phenomena even when pumping near minimum forecast delivery rates;
- ❖ performance characterized by high absolute values over the majority of the characteristic curve;
- ❖ flat absorption curves at high delivery rates, to prevent motor overloading even during prolonged use;
- ❖ good suction capacities at both low and high delivery rates.

### STRUCTURAL CHARACTERISTICS

- ❖ cast iron pump body
- ❖ brass impeller with centrifugal radial flow type
- ❖ stainless steel shaft
- ❖ with thermal overload protector in single phase motor all three phase motors require an adequate external motor protector, and connections are to be according to current standards
- ❖ stainless steel mechanical seal (graphite to SiC)
- ❖ protection IP 44.
- ❖ NSK bearing or local bearing

**WARRANTY: 1 YEAR (according to our general sales conditions)**

**PERFORMANCE CHART AT n=2900 rpm**



PUMP MODEL		POWER		Q m³/h	H																
Single phase	Three phase	KW	HP		0	6	12	18	24	30	36	42	48	54	60	66	72	96	120	130	
MNF/129B	MN/129B	1.1	1.5	H	20.2	19.2	18	16	12	7.5											
MNF/129B-1	MN/129B-1	1.1	1.5		20.2	19.2	18	16	12	7.5											
MNF/129A	MN/129A	1.5	2		22.5	22	21	18.5	14.5	10											
MNF/129A-1	MN/129A-1	1.5	2		22.5	22	21	18.5	14.5	10											
MNF/130C	MN/130C	1.1	1.5		11.9	-	11.7	11.3	10.7	10.2	9.1	8	6.7	5	3						
MNF/130B	MN/130B	1.5	2		14.7	-	14.5	14	13.5	13.2	12	11	9.7	8.2	6.7	5					
MNF/130A	MN/130A	2.2	3		18.5	-	18.1	17.8	17.2	16.8	16	15	13.8	12.2	10.5	8.3	6				
MNF/131B	MN/131B	4.0	5.5		18.8	-	-	18.3	-	12.9	12.6	-	17	-	16.4	-	15.3	12.2	8	5	
					m																

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**

# MGA

## CENTRIFUGAL PUMPS WITH OPEN IMPELLER

### PERFORMANCE RANGE

- ☒ flow rate up to 250 l/min.(15m³/h)
- ☒ head up to 20 m

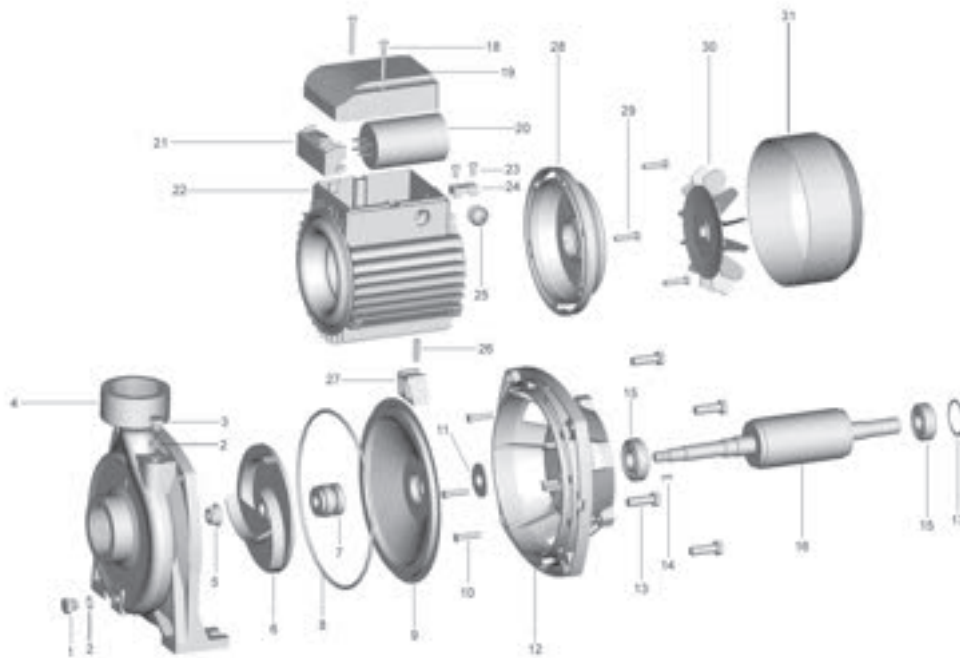
### OPERATING LIMITS

- ☒ suction lift up to 7 m
- ☒ fluid temperature up to 60°C
- ☒ maximum ambient temperature 40°C



**MGA/1A**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Discharge plug	13	Bolt	25	Fairlead
2	"O" ring	14	Key	26	Stand pin
3	Charge plug	15	Bearing	27	Stand
4	Pump casing	16	Rotor	28	Driving cap
5	Nut	17	Split ring	29	Bolt
6	Impeller	18	Bolt	30	Fan
7	Mechanical seal	19	Terminal cover	31	Fan cover
8	"O" ring	20	Capacitor		
9	Pump casing cover	21	Terminal board		
10	Bolt	22	Casing with wound stator		
11	Drops guard	23	Screw		
12	Pump support	24	Cable presser		

**PUMPS INSTALLATION AND APPLICATIONS**

**MGA** pumps are recommended for pumping water and fluids which are not chemically aggressive to the pump components. The open impeller design enables fairly large amounts of impurities to be pumped without danger of clogging.

**MGA** pumps are very dependable, simple to use, and virtually maintenance-free. They suit a wide range of industrial applications, watering gardens and transferring water from canals, rivers, tanks, tubs, etc.

These pumps should be installed in a covered area, protected against the weather.

**PERFORMANCE**

Special attention was given, when designing performance levels for the **MGA** range, to typical requirements for pumps having to perform the functions described above.

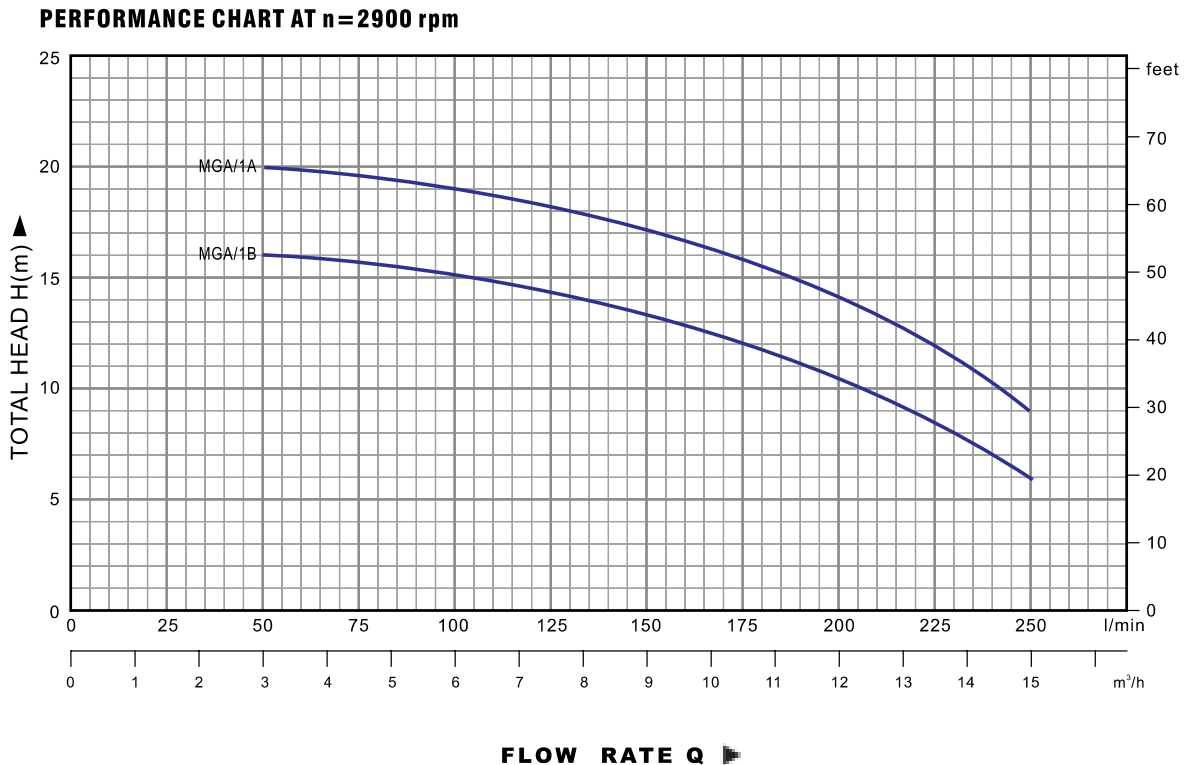
The result is a series of pumps characterized by:

- ☒ especially wide and flat characteristic curves, making it possible to handle large quantities of water;
- ☒ efficiencies with high absolute values over much of the characteristic curve (efficiency curves that tend to be flat);
- ☒ flat absorption curves at high delivery rates, to prevent motor overloading even during prolonged use at high rates.

**STRUCTURAL CHARACTERISTICS**

- ☒ cast iron pump body
- ☒ stainless steel pump body cover
- ☒ stainless steel mechanical seal (graphite to ceramic)
- ☒ brass impeller with open type
- ☒ 45# steel shaft
- ☒ protection IP44
- ☒ with thermal overload protector in single phase motor
- ☒ NSK bearing or local bearing

**WARRANTY: 1 YEAR (according to our general sales conditions)**



PUMP MODEL		POWER		Q	0	3.0	4.5	6.5	7.5	9.0	10.5	12.0	13.5	15.0
Single phase	Three phase	KW	HP	m³/h	0	50	75	100	125	150	175	200	225	250
MGA/1B	MG/1B	0.60	0.80	H	16	16	15.5	15	14.2	13	12	10.5	8.5	6
MGA/1A	MG/1A	0.75	1	m	20	20	19.5	19	18	16.7	15.2	13.5	11.5	9

**H=TOTAL HEAD IN METERS. Q=FLOW RATE**

# MCP

## CENTRIFUGAL PUMPS

### PERFORMANCE RANGE

- ☒ flow rate up to 220 l/min.(13.2m³/h)
- ☒ head up to 38 m

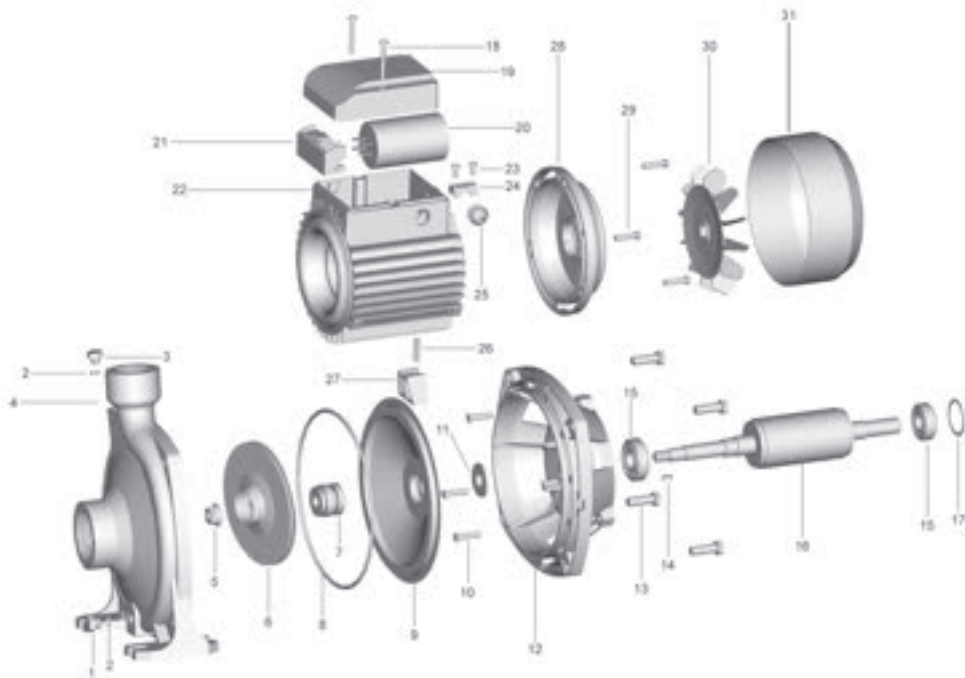
### OPERATING LIMITS

- ☒ suction lift up to 7 m
- ☒ fluid temperature up to 60°C
- ☒ maximum ambient temperature 40°C



**MCP25/160A**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Discharge plug	13	Bolt	25	Fairlead
2	"O" ring	14	Key	26	Stand pin
3	Charge plug	15	Bearing	27	Stand
4	Pump casing	16	Rotor	28	Driving cap
5	Nut	17	Split ring	29	Bolt
6	Impeller	18	Bolt	30	Fan
7	Mechanical seal	19	Terminal cover	31	Fan cover
8	"O" ring	20	Capacitor		
9	Pump casing cover	21	Terminal board		
10	Bolt	22	Casing with wound stator		
11	Drops guard	23	Screw		
12	Pump support	24	Cable presser		

### PUMPS INSTALLATION AND APPLICATIONS

These pumps are suitable for handling clean water which are not chemically aggressive to the pump components.

They are extremely reliable, simple to use, quiet and virtually maintenance-free, finding many uses in domestic and civil applications, and in particular the automatic distribution of water from small and medium-sized surge tanks, transferring water, watering gardens, etc.

### PERFORMANCE

- ✘ ample and stable characteristic curves;
- ✘ outputs having good absolute values and tendentially flat curves;
- ✘ flat absorption curves at high delivery rates, preventing motor overloading even during prolonged use;
- ✘ good suction capacities both at low and high delivery rates.

### STRUCTURAL CHARACTERISTICS

- ✘ cast iron pump body
- ✘ stainless steel pump body cover
- ✘ stainless steel mechanical seal (graphite to SiC)
- ✘ brass impeller with centrifugal radial flow type
- ✘ stainless steel shaft
- ✘ protection IP44
- ✘ with thermal overload protector in single phase motor
- ✘ NSK bearing or local bearing

**WARRANTY: 1 YEAR (according to our general sales conditions)**

### PERFORMANCE CHART AT n=2900 rpm



PUMP MODEL		POWER		Q	0	3.0	3.6	4.2	4.8	5.4	6.0	6.6	7.5	8.4	9.6	10.8	12.0	13.2
Single phase	Three phase	KW	HP	l/min	0	50	60	70	80	90	100	110	125	140	160	180	200	220
MCP25/160B	MC25/160B	1.1	1.5	H m	33	32.5	32	31.5	31	30.5	30	29	28	26.5	24	21.5	18	
MCP40/160B	MC40/160B	1.1	1.5		33	32.5	32	31.5	31	30.5	30	29	28	26.5	24	21.5	18	
MCP25/160A	MC25/160A	1.5	2		38	37	36.8	36.5	36	35.5	35	34	33	32	29.5	27.5	24	20
MCP40/160A	MC40/160A	1.5	2		38	37	36.8	36.5	36	35.5	35	34	33	32	29.5	27.5	24	20

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**

# MFM

## STANDARDIZED CENTRIFUGAL PUMPS

### PERFORMANCE RANGE

- ☒ flow rate up to 450 l/min.(27m<sup>3</sup>/h)
- ☒ head up to 99 m

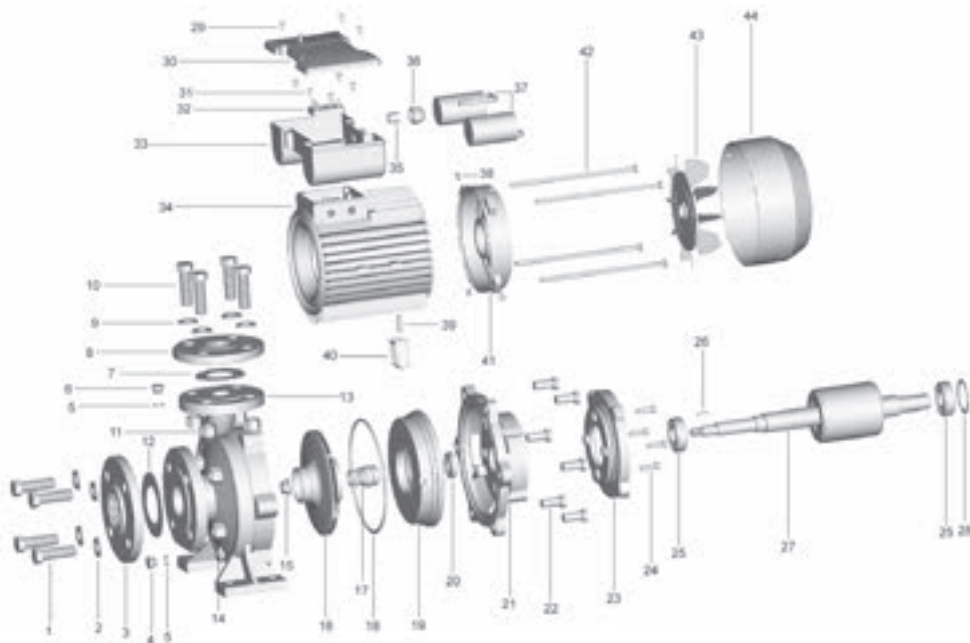
### OPERATING LIMITS

- ☒ suction lift up to 7 m
- ☒ fluid temperature up to 60 °C
- ☒ maximum ambient temperature 40 °C



**MFM 32/160B-1**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Bolt	13	Pump casing	25	Bearing	37	Capacitor
2	Washer	14	Nut	26	Key	38	Screw
3	Suction flange	15	Nut	27	Rotor	39	Stand pin
4	Discharge plug	16	Impeller	28	Split ring	40	Stand
5	"O" ring	17	Mechanical seal	29	Screw	41	Driving cap
6	Charge plug	18	"O" ring	30	Terminal cover	42	Tie-rod
7	Delivery gasket	19	Seal hold disc	31	Screw	43	Fan
8	Delivery flange	20	Water retaining ring	32	Terminal board	44	Fan cover
9	Washer	21	Pump support	33	Terminal box		
10	Bolt	22	Bolt	34	Casing with wound stator		
11	Nut	23	Connector	35	Fairlead		
12	Suction gasket	24	Bolt	36	Nut		

### PUMP INSTALLATION AND APPLICATIONS

These pumps are recommended for clean water and fluids which are not chemically aggressive to the pump components. They are principally used for civil, industrial and agricultural applications, where they make the most of their sturdiness and dependability. They are manufactured to EN 733-DIN 24255 standards. Overall dimensions, sizes and positions of suction and delivery openings, support feet and other dimensional characteristics comply with these standards. This means that users can be sure these pumps will meet even the most demanding heavy-duty needs and that they can be perfectly interchanged with other standardized pumps. Their structural shape allows dismantling without disconnecting the pump body from the pipeline (back pull-out), making them easy to use in widely varying conditions. They should be installed in a covered area, protected against the weather.

### PERFORMANCE

**MFM** pumps come in a wide and well-diversified range. Characteristic curves for the different models are distributed in a rational manner, making it easy to select the model most suited to each specific user requirement. This together with high performance efficiency, means big savings in operating costs since these are powerful machines often intended for continuous duty.

This series of pumps is characterized by:

- ☒ highly stable and broad characteristic curves;
- ☒ performance characterized by high absolute values over the majority of the curve;
- ☒ flat absorption curves at high delivery rates, preventing motor overloading even during prolonged use;
- ☒ good suction capacities at both low and high delivery rates.

### STRUCTURAL CHARACTERISTICS

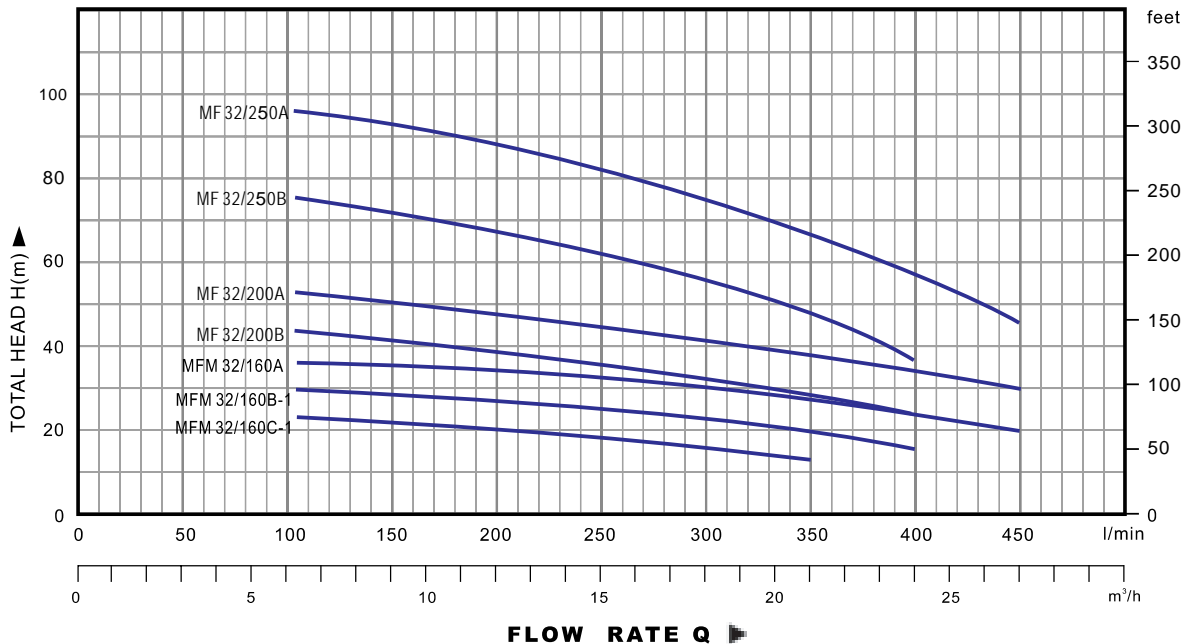
- ☒ cast iron pump body, built with flanged suction and delivery openings.
- ☒ cast iron pump body cover which closes the rear pump body and houses the mechanical seal.
- ☒ brass impeller with centrifugal radial flow type.
- ☒ stainless steel shaft
- ☒ stainless steel mechanical seal (graphite to SiC)
- ☒ protection IP 44.
- ☒ with thermal overload protector in single phase motor up to 1.5 KW.

The remaining single phase motors and all three phase motors require an adequate external motor protector, and connections are to be according to current standards.

- ☒ NSK bearing or local bearing

### WARRANTY: 1 YEAR (according to our general sales conditions)

**PERFORMANCE CHART AT n = 2900 rpm**



PUMP MODEL		POWER		Q m³/h	H										
Single phase	Three phase	KW	HP		0	6	9	12	15	18	21	24	27		
MFM32/160C-1	MF32/160C-1	1.5	2	0	100	150	200	250	300	350	400	450			
MFM32/160B-1	MF32/160B-1	2.2	3	25	24	23	21	19	16	13					
MFM32/160A	MF32/160A	3	4	31	30	29	28	26	23.5	20	16				
—	MF32/200B	3	4	38	37	36	34	32	30	27.5	24	20			
—	MF32/200A	4	5.5	44	43	41	39	35.5	32	28	24				
—	MF32/250B	5.5	7.5	54	52	50	48	45	42	38	34	30			
—	MF32/250A	7.5	10	79	75	71	67	62	56	48	37				
—				99	95.5	92	88	83	76	68	58	46			

**H = TOTAL HEAD IN METERS.**

**Q = FLOW RATE**

### PERFORMANCE RANGE

- ☒ flow rate up to 400l/min. (24 m<sup>3</sup>/h)
- ☒ head up to 20m

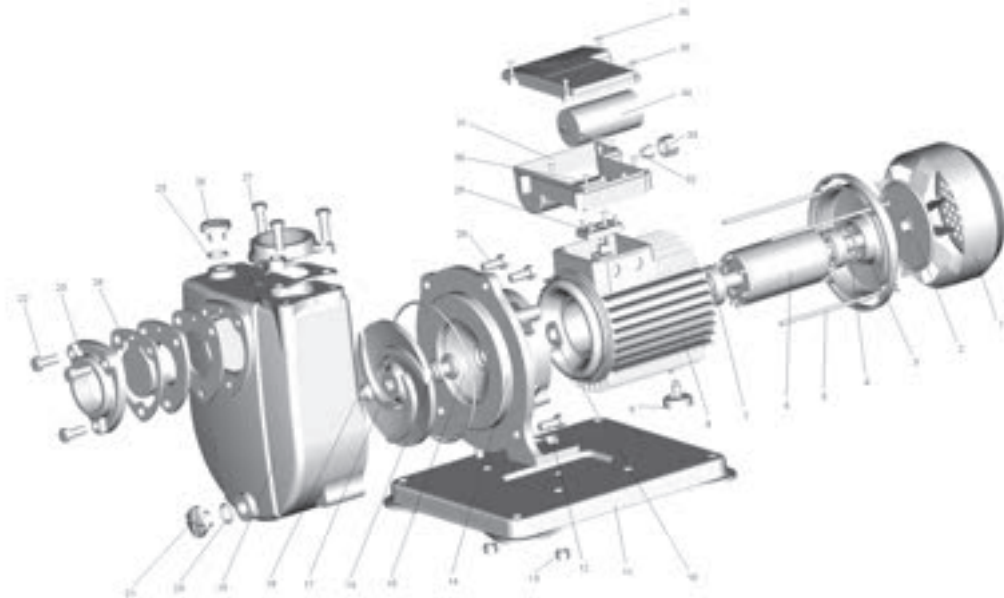
### OPERATION LIMITS

- ☒ suction lift up to 9m
- ☒ fluid temperature up to 60°C
- ☒ maximum ambient temperature up to 40°C
- ☒ maximum passage for suspended solids 5mm



**MTK 1500**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Fan cover	13	Nut	25	"O"ring
2	Fan	14	Pump frame	26	Charge Plug
3	Driving cap	15	"O"ring	27	Bolt
4	Split ring	16	Mechanical seal	28	Bolt
5	Tie rod	17	Impeller	29	Terminal board
6	Rotor	18	Nut	30	Screw
7	Bearing	19	Pump casing	31	Terminal box
8	Casing with wound stator	20	"O"ring	32	Fairlead
9	Stand	21	Discharge plug	33	Nut
10	Drops guard	22	Bolt	34	Capacitor
11	Pump base	23	Filling connector	35	Terminal cover
12	Screw	24	Check valve	36	Screw

**PUMPS INSTALLATION AND APPLICATIONS**

These pumps are suitable to handling clean water which are not chemically aggressive to the pump components and charged with small solid impurities.

They are extremely reliable, simple to use , quite and virtually maintenance-free, finding many uses in flow irrigation systems with high flow rates , in gardening and agriculture and in industrial fittings.

**PERFORMANCE**

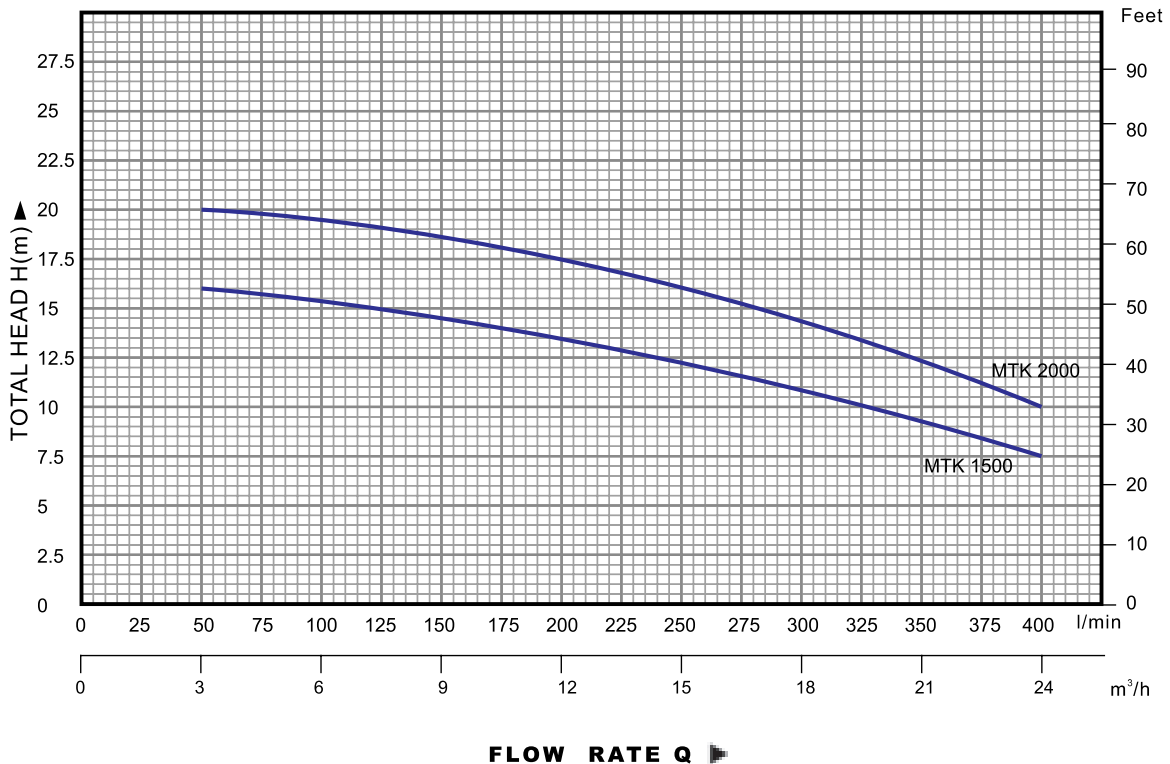
- ☒ middle head and big flow
- ☒ highly stable and broad characteristic curves
- ☒ good suction capacities at both low and high delivery rates

**STRUCTURE CHARACTERISTICS**

- ☒ cast iron pump body
- ☒ stainless steel mechanical seal (graphite to ceramic)
- ☒ cast iron open impeller
- ☒ stainless steel shaft
- ☒ protection IP44
- ☒ with thermal overload protector
- ☒ NSK bearing or local bearing

**WARRANTY:1 YEAR(according to our general sales conditions)**

**PERFORMANCE CHART AT n=2900 rpm**



PUMP MODEL		POWER		Q	3	6	9	12	15	18	21	24
Single phase	Three phase	KW	HP	l/min	50	100	150	200	250	300	350	400
MTK 1500	MT 1500	1.1	1.5	H	16	15.5	14.5	13.5	12.5	11.5	9.5	7.5
MTK 2000	MT 2000	1.5	2	m	20	19.5	18.5	17.5	16.5	14.5	12	10

**H=TOTAL HEAD IN METERS. Q=FLOW RATE**

# 2MCP

## TWO-STAGE CENTRIFUGAL PUMPS (BACK TO BACK IMPELLER)

### PERFORMANCE RANGE

- ☒ flow rate up to 250 l/min.(15m<sup>3</sup>/h)
- ☒ head up to 82 m

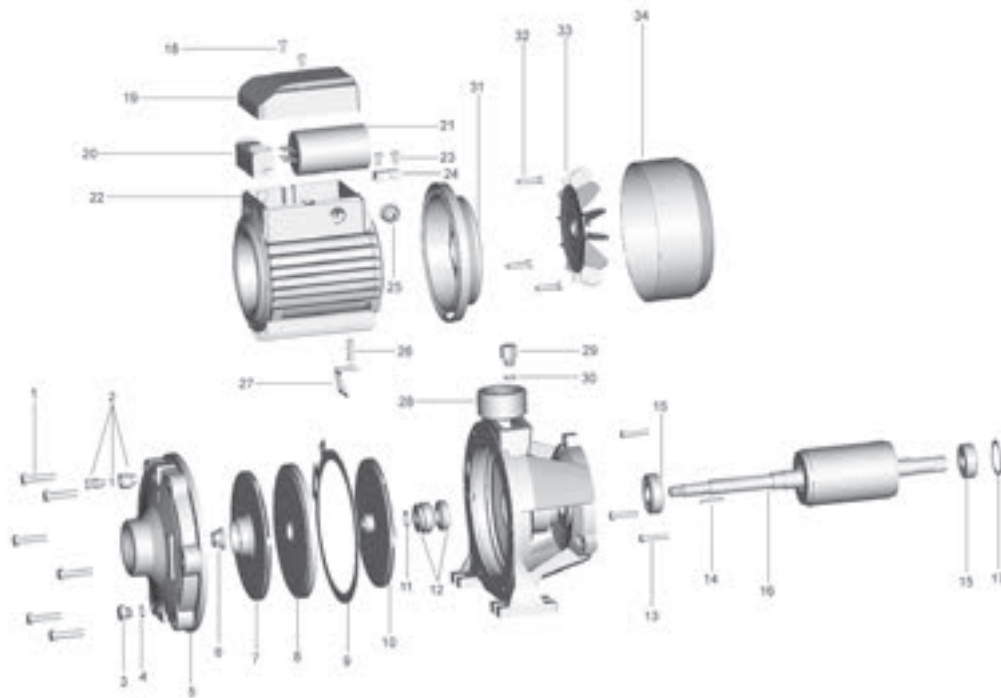
### OPERATING LIMITS

- ☒ suction lift up to 7 m
- ☒ fluid temperature up to 60 °C
- ☒ maximum ambient temperature 40 °C



**2MCP25/130**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Bolt	13	Bolt	25	Fairlead
2	Air valve assembly	14	Key	26	Stand pin
3	Discharge pulg	15	Bearing	27	Stand
4	"O" ring	16	Rotor	28	Pump support
5	Pump casing	17	Split ring	29	Charge plug
6	Nut	18	Bolt	30	"O" ring
7	Impeller	19	Terminal cover	31	Driving cap
8	Disc	20	Terminal board	32	Bolt
9	Gasket	21	Capacitor	33	Fan
10	Impeller	22	Casing with wound stator	34	Fan cover
11	Snap ring	23	Screw		
12	Mechanical seal	24	Cable presser		

### PUMP INSTALLATION AND APPLICATIONS

These pumps are suitable for pumping clean water and fluids which are not chemically aggressive to the pump components. These pumps are an obvious choice wherever there is a need for high head values hard to reach with single impeller pumps, all thanks to the following features: extremely high outputs, suitable for continuous and heavy-duty use and particularly adaptable to a wide range of particular applications.

**2MCP** series pumps are extremely reliable, simple to use, quiet and virtually maintenance-free, finding many uses in domestic, civil and industrial applications, the automatic distribution of water from surge tanks, watering gardens, increasing the mains supply pressure, feeding boilers, cooling systems and fire-fighting units.

These pumps should be installed in a covered area, protected against the weather.

### PERFORMANCE

- ☒ particularly ample and stable characteristic curves (high ratio between minimum and maximum head values);
- ☒ outputs having high absolute values and tendentially flat curves;
- ☒ flat absorption curves at high delivery rates, preventing motor overloading even during prolonged use;
- ☒ good suction capacities both at low and high delivery rates.

### STRUCTURAL CHARACTERISTICS

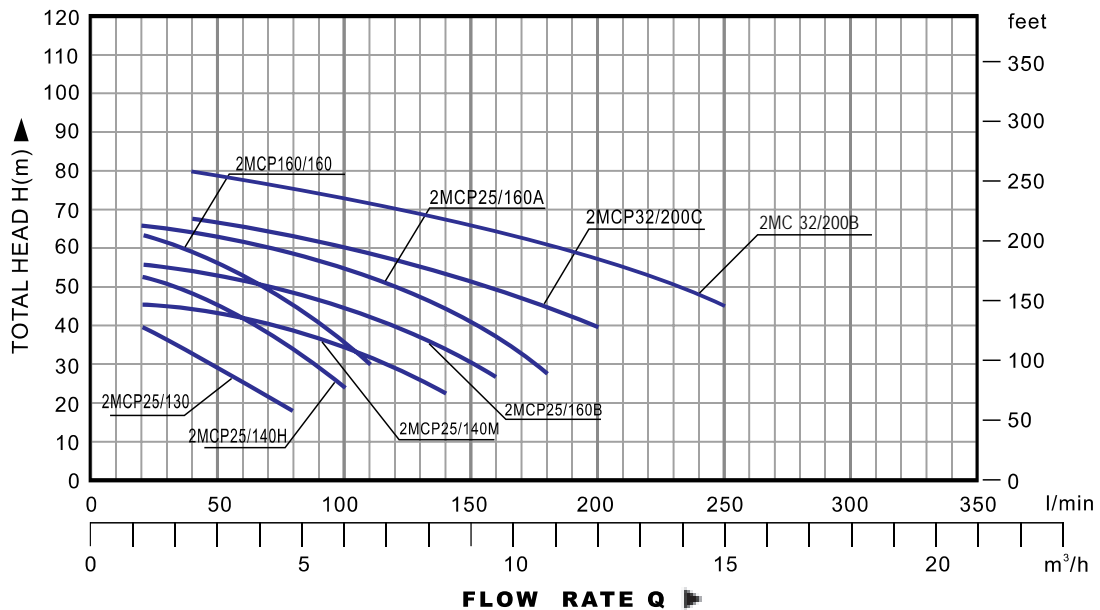
- ☒ cast iron suction body
- ☒ cast iron delivery body
- ☒ brass impellers with centrifugal radial flow type
- ☒ stainless steel shaft (45# steel up to 0.75kw)
- ☒ stainless steel mechanical seal (graphite to ceramic or graphite to SiC)
- ☒ protection IP 44
- ☒ with thermal overload protector in single phase motor up to 1.5KW

The remaining single phase motors and all three phase motors require an adequate external motor protector, with connections according to current standards.

- ☒ NSK bearing or local bearing

### WARRANTY: 1 YEAR (according to our general sales conditions)

#### PERFORMANCE CHART AT n=2900 rpm



PUMP MODEL		POWER		Q m³/h	H (m)																	
Single phase	Three phase	KW	HP		0	1.2	1.8	2.4	3.0	3.6	4.2	4.8	5.4	6.0	6.6	7.5	8.4	9.6	10.8	12.0	15	
				l/min	0	20	30	40	50	60	70	80	90	100	110	125	140	160	180	200	250	
2MCP 25/130	2MC 25/130	0.75	1	H m	44	40	37	34	30	26	22	18										
2MCP 25/140H	2MC 25/140H	1.1	1.5		54	53	51	49	46	42	38	34	29	24								
2MCP 25/140M	2MC 25/140M	1.1	1.5		47	46	45.5	44	43	42	41	38	36	34	31	28	22					
2MCP 160/160	2MC 160/160	1.5	2		66	64	62	60	57	53	49	44	39.5	35	30							
2MCP 25/160B	2MC 25/160B	1.5	2		58	56	55	54	53	52	50	48	46	44	41	39	33	26				
2MCP 25/160A	2MC 25/160A	2.2	3		68	66.5	65.5	65	63	62	60	58	56	54	51	48	42	35	28			
2MCP 32/200C	2MC 32/200C	3	4		70	-	-	66	65.5	65	63	63	61	60	59	57	53	48	45	40		
—	2MC 32/200B	4	5.5		82	-	-	79.5	78.5	77.5	76.5	75.5	74.5	73.5	72	71	67.5	64.5	61	57	45.5	

H=TOTAL HEAD IN METERS.

Q=FLOW RATE

# 2MCP

## TWO-STAGE CENTRIFUGAL PUMPS

### PERFORMANCE RANGE

- ☒ flow rate up to 185 l/min.(11.1m<sup>3</sup>/h)
- ☒ head up to 58 m

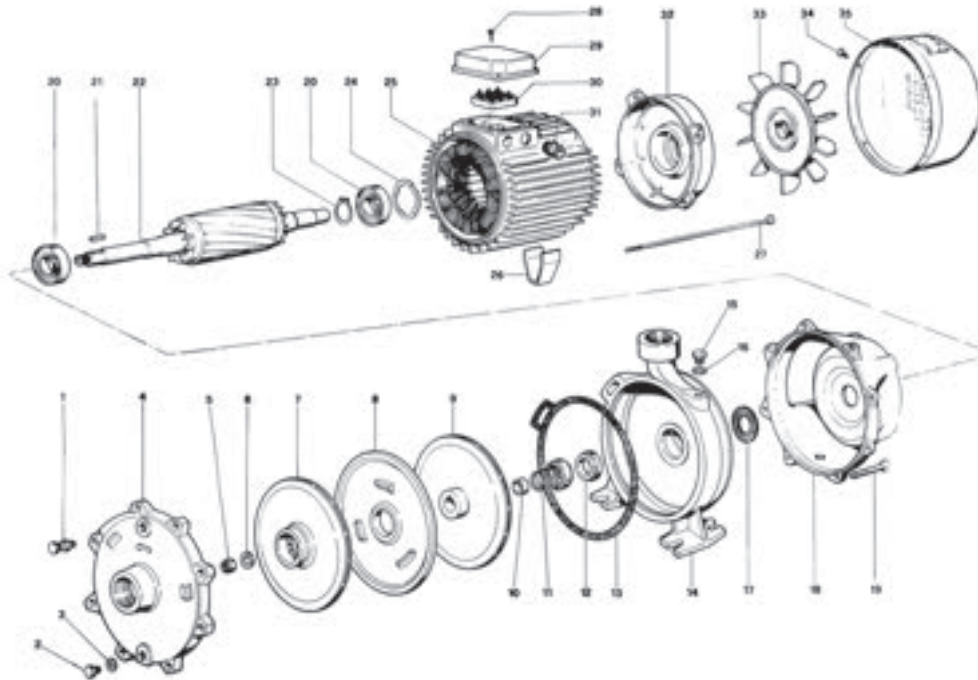
### OPERATING LIMITS

- ☒ suction lift up to 7m
- ☒ maximum fluid temperature up to 60°C
- ☒ maximum ambient temperature up to 40°C



**2MCP50/160B**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Air valve	13	Gasket	25	Casing with wound stator
2	Discharge plug	14	Pump casing	26	Stand
3	Washer	15	Charge plug	27	Tie rod
4	Pump cover	16	Washer	28	Screw
5	Nut	17	Drops guard	29	Terminal cover
6	Washer	18	Pump support	30	Terminal board
7	Impeller left rotation	19	Screw	31	Fairlead
8	Disc	20	Bearing	32	Driving cap
9	Impeller right rotation	21	Key	33	Fan
10	Spacer	22	Rotor	34	Screw
11	Rolling seal member	23	Snap ring	35	Fan cover
12	Fixed seal member	24	Split ring		

### PUMP INSTALLATION AND APPLICATIONS

These pumps are suitable for pumping clean water and fluids which are not chemically aggressive to the pump components. These pumps are an obvious choice wherever there is a need for high head values hard to reach with single impeller pumps, all thanks to the following features: extremely high outputs, suitable for continuous and heavy-duty use and particularly adaptable to a wide range of particular applications.

**2MCP** series pumps are extremely reliable, simple to use, quiet and virtually maintenance-free, finding many uses in domestic, civil and industrial applications, the automatic distribution of water from surge tanks, watering gardens, increasing the mains supply pressure, feeding boilers, cooling systems and fire-fighting units.

These pumps should be installed in a covered area, protected against the weather.

### PERFORMANCE

- ☒ particularly ample and stable characteristic curves (high ratio between minimum and maximum head values);
- ☒ outputs having high absolute values and tendentially flat curves;
- ☒ flat absorption curves at high delivery rates, preventing motor overloading even during prolonged use;
- ☒ good suction capacities both at low and high delivery rates.

### STRUCTURAL CHARACTERISTICS

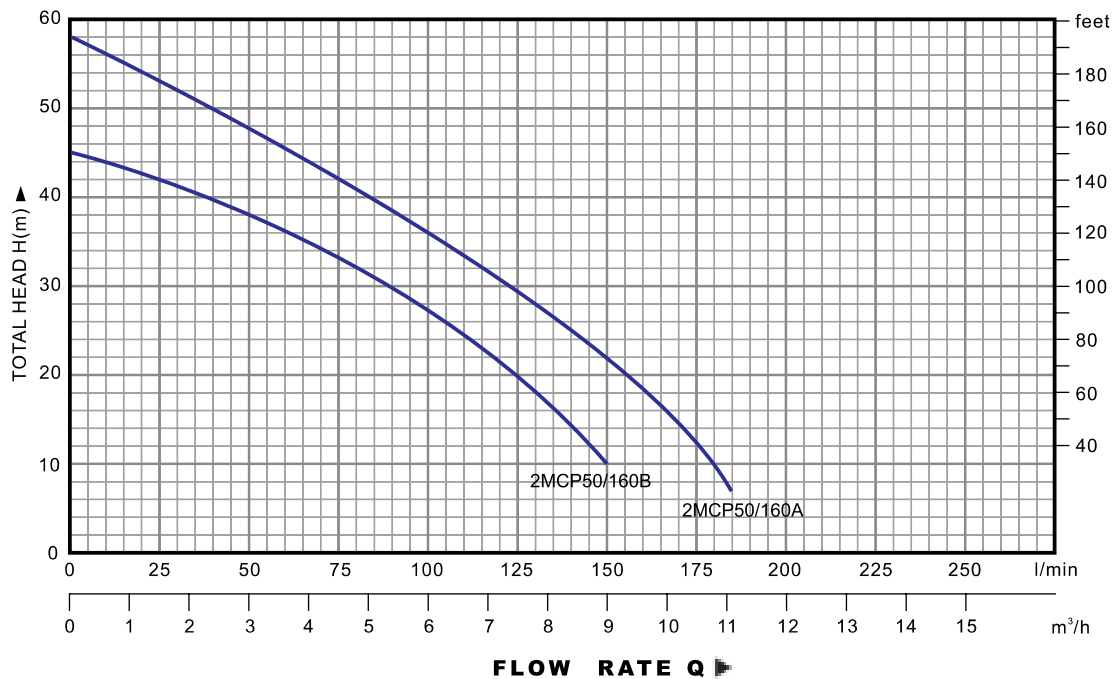
- ☒ cast iron suction body
- ☒ cast iron delivery body
- ☒ brass impellers with centrifugal radial flow type
- ☒ stainless steel shaft
- ☒ stainless steel mechanical seal (graphite to ceramic or graphite to SiC)
- ☒ protection IP 44
- ☒ with thermal overload protector in single phase motor up to 1.5KW

The remaining single phase motors and all three phase motors require an adequate external motor protector, with connections according to current standards.

- ☒ NSK bearing or local bearing

**WARRANTY: 1 YEAR (according to our general sales conditions)**

### PERFORMANCE CHART AT n=2900 rpm



PUMP MODEL		POWER		Q m³/h	0	1.8	3.6	5.4	7.2	9	11.1
Single phase	Three phase	KW	HP		0	30	60	90	120	150	185
2MCP50/160B	2MC50/160B	1.5	2	Hm	45	41	36	30	22	10	
2MCP50/160A	2MC50/160A	2	3		58	54	50	45	38	28	7

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**

# 3MCP

## MULTISTAGE CENTRIFUGAL PUMPS

### PERFORMANCE RANGE

- ☒ flow rate up to 90l/min. (5.4 m<sup>3</sup>/h)
- ☒ head up to 46m

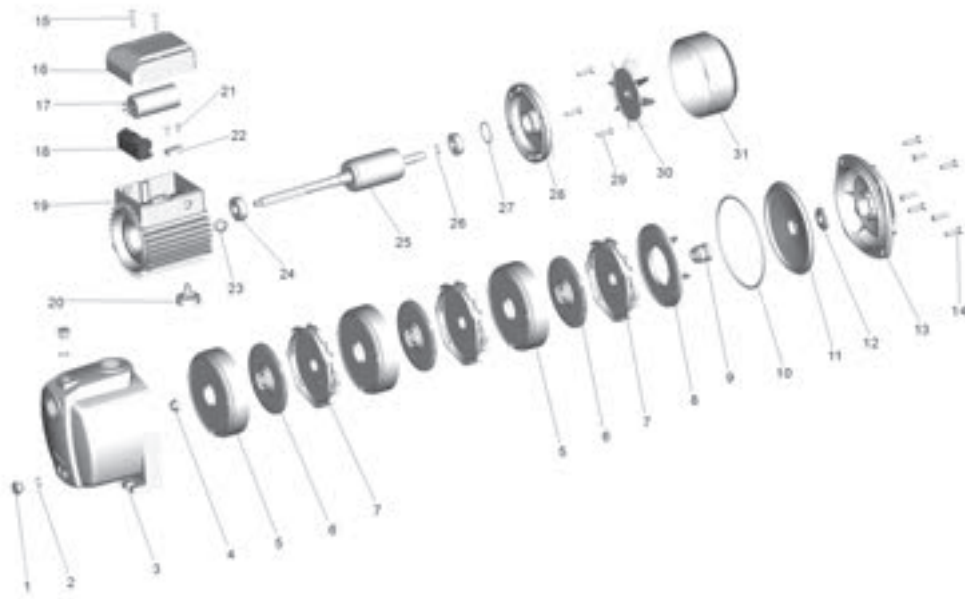
### OPERATION LIMITS

- ☒ suction lift up to 8m
- ☒ fluid temperature up to 35°C
- ☒ maximum ambient temperature up to 40°C



**3MCP 80**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Discharge plug	13	Pump support	25	Rotor
2	"O" ring	14	Bolt	26	Snap ring
3	Pump body	15	Screw	27	Split ring
4	Nut	16	Terminal box	28	Driving cap
5	Diffuser	17	Capacitor	29	Bolt
6	Impeller	18	Terminal board	30	Fan
7	Diffuser	19	Casing with wound stator	31	Fan cover
8	Guide vane	20	Stand		
9	Mechanical seal	21	Screw		
10	"O" ring	22	Cable presser		
11	Pump casing cover	23	Fairlead		
12	Drops guard	24	Bearing		

### PUMPS INSTALLATION AND APPLICATIONS

These pumps are suitable for pumping clean water and fluids which are not chemically aggressive to the pump components. They are extremely reliable, simple to use, quiet and virtually maintenance-free, finding many uses in domestic applications, in particular the automatic distribution of water from small and medium-sized surge tanks, watering gardens, etc. The form of construction used for this series, with the various stages completely enclosed in a sturdy cast-iron body and high performance allow these pumps to find reliable applications in equipping industrial machinery or complete units (washing systems, boilers, etc.) These pumps should be installed in a covered area, protected against the weather.

### PERFORMANCE

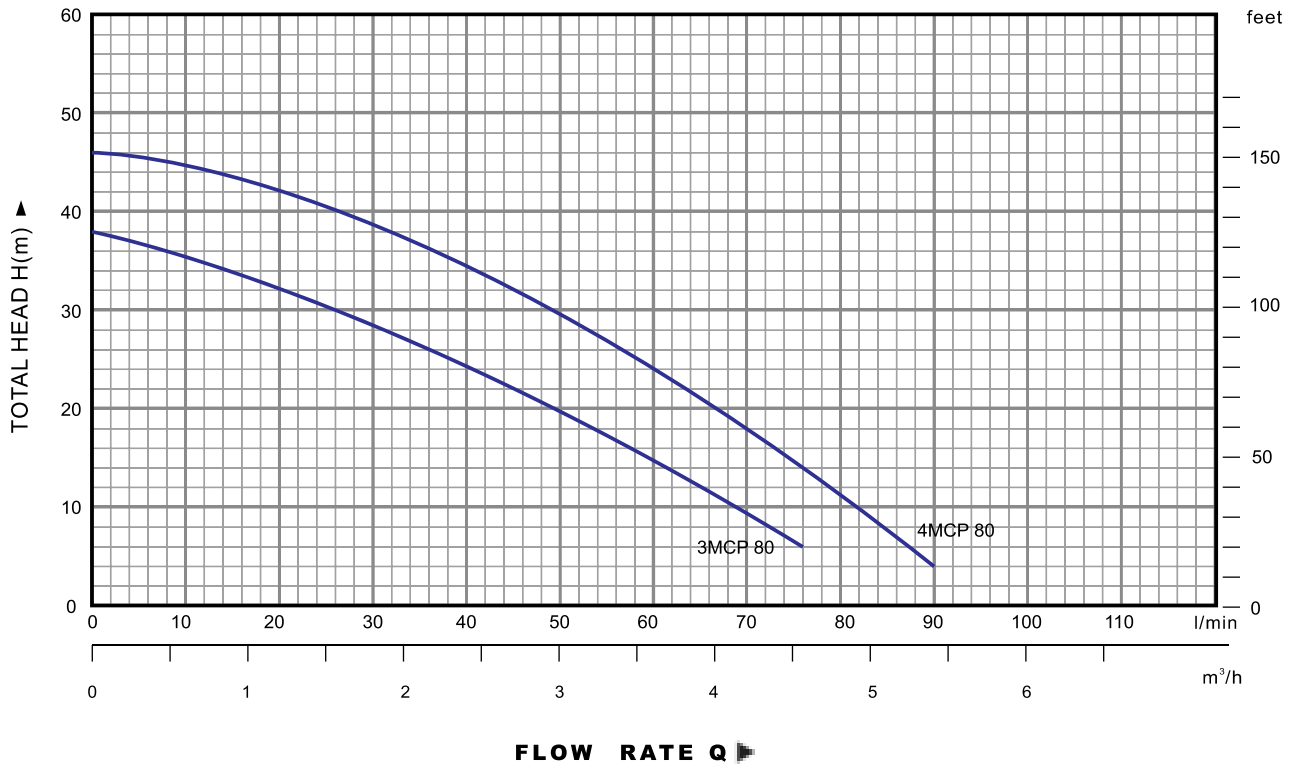
- ☒ Particularly stable characteristic curves (very high ratio between maximum and minimum head values)
- ☒ Very low noise levels at any capacity
- ☒ Low installed power level compared with guaranteed head values
- ☒ Good suction capacities

### STRUCTURE CHARACTERISTICS

- ☒ cast iron pump body
- ☒ stainless steel pump body cover
- ☒ stainless steel mechanical seal (graphite to ceramic)
- ☒ noryl impeller with centrifugal radial flow type
- ☒ 45# steel shaft
- ☒ protection IP44
- ☒ with thermal overload protector
- ☒ NSK bearing or local bearing

**WARRANTY:1 YEAR(according to our general sales condition)**

**PERFORMANCE CHART AT n=2900 rpm**



PUMP MODEL		POWER		Q	0	0.9	1.8	2.7	3.6	4.5	5.4
Single phase	Three phase	KW	HP	m³/h	0	15	30	45	60	75	90
3MCP 80	3MC 80	0.45	0.6	H	38	36	29	21	15	6	
4MCP 80	4MC 80	0.6	0.8	m	46	44	39	32	23	13	4

**H=TOTAL HEAD IN METERS. Q=FLOW RATE**

# MRS

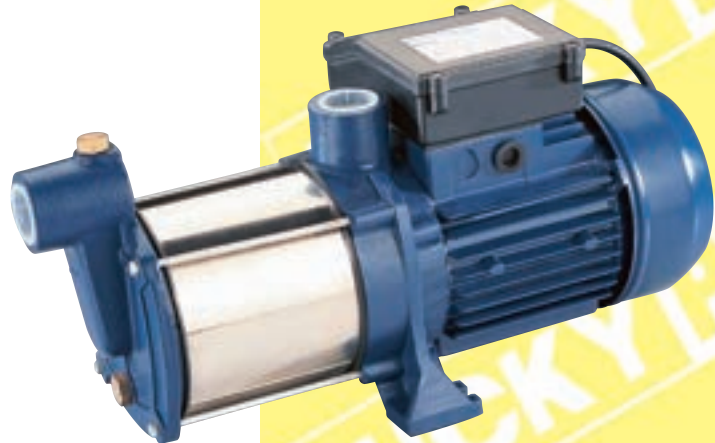
## MULTISTAGE CENTRIFUGAL PUMPS

### PERFORMANCE RANGE

- ✘ flow rate up to 100l/min. (6 m<sup>3</sup>/h)
- ✘ head up to 55m

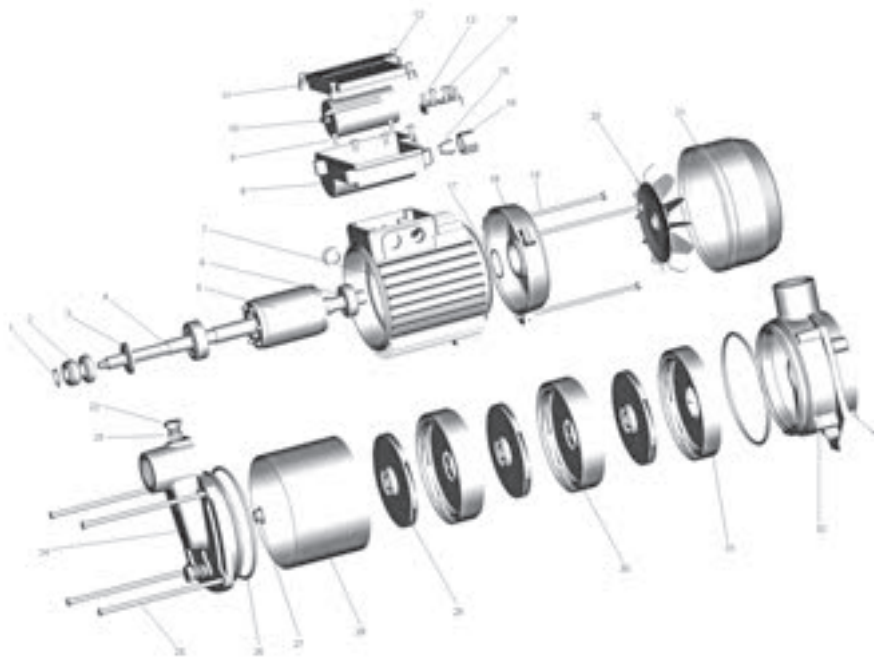
### OPERATION LIMITS

- ✘ suction lift up to 8m
- ✘ fluid temperature up to 35°C
- ✘ maximum ambient temperature up to 40°C



**MRS3**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Snap ring	13	Terminal board	25	Tie rod
2	Mechanical seal	14	Screw	26	"O" ring
3	Drops guard	15	Fairlead	27	Nut
4	Shaft sleeve	16	Nut	28	Pump casing
5	Rotor	17	Split ring	29	Impeller
6	Bearing	18	Driving cap	30	Diffuser
7	Casing with wound stator	19	Tie rod	31	Guide vane
8	Terminal box	20	Fan	32	Pump support
9	Screw	21	Fan cover		
10	Capacitor	22	Charge plug		
11	Terminal cover	23	"O" ring		
12	Screw	24	Inlet casing		

**PUMPS INSTALLATION AND APPLICATIONS**

These pumps are suitable to handling clean water which are not chemically aggressive to the pump components. They are extremely reliable, simple to use, quite and virtually maintenance-free, finding many uses in flow irrigation systems in gardening, agriculture and industrial fittings.

**PERFORMANCE**

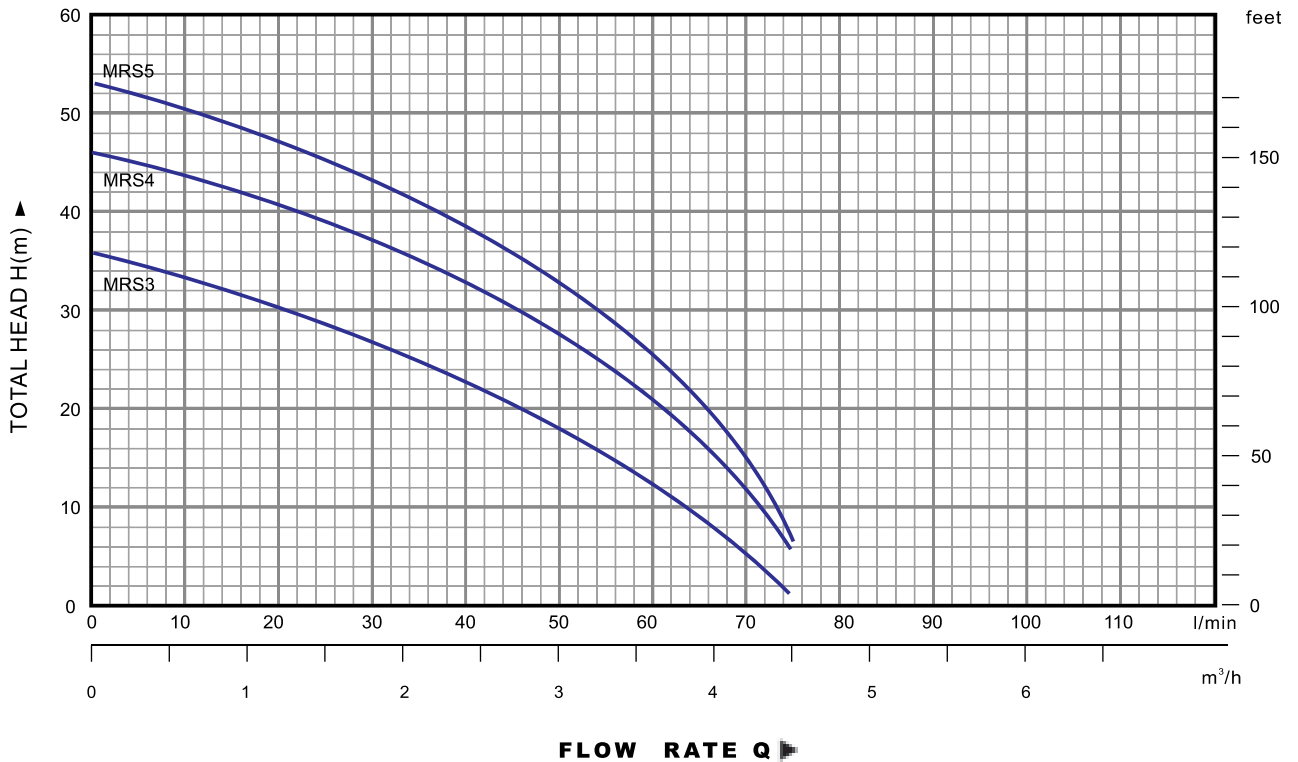
- ✘ particularly ample and stable characteristic curves (high ratio between minimum and maximum head values);
- ✘ outputs having high absolute values and tendentially flat curves;
- ✘ flat absorption curves at high delivery rates, preventing motor overloading even during prolonged use;
- ✘ good suction capacities both at low and high delivery rates.

**STRUCTURE CHARACTERISTICS**

- ✘ stainless steel pump body
- ✘ cast iron pump inlet
- ✘ cast iron motor support
- ✘ stainless steel mechanical seal (graphite to ceramic)
- ✘ noryl impeller with centrifugal radial flow type
- ✘ 45# steel shaft
- ✘ protection IP44
- ✘ with thermal overload protector
- ✘ NSK bearing or local bearing

**WARRANTY:1YEAR(according to our general sales conditions)**

**PERFORMANCE CHART AT n=2900 rpm**



PUMP MODEL		POWER		Q	0	1	2	3	4	4.5
Single phase	Three phase	KW	HP	m³/h	0	16.7	33.3	50	66.7	75
MRS 3	MR 3	0.6	0.8	H m	36	32	25	18	9	1.5
MRS 4	MR 4	0.75	1		46	41	35	27	17	6
MRS 5	MR 5	0.9	1.25		53	48.5	42.5	33	21	7

**H=TOTAL HEAD IN METERS. Q=FLOW RATE**

# MRS

## MULTISTAGE CENTRIFUGAL PUMPS

### PERFORMANCE RANGE

- ✘ flow rate up to 66.7l/min. (4 m<sup>3</sup>/h)
- ✘ head up to 55m

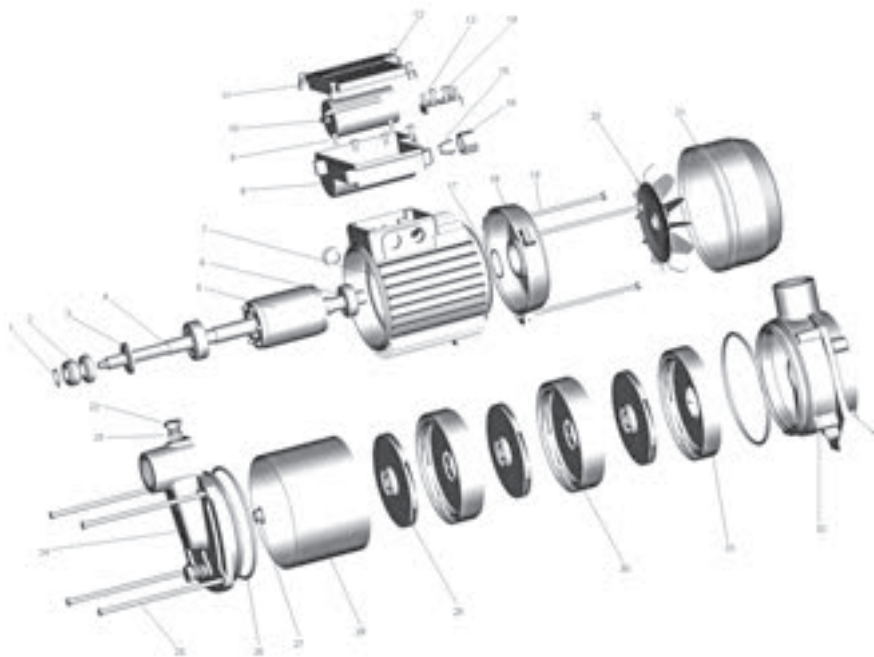
### OPERATION LIMITS

- ✘ suction lift up to 8m
- ✘ fluid temperature up to 35°C
- ✘ maximum ambient temperature up to 40°C



**MRS 370**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Snap ring	13	Terminal board	25	Tie rod
2	Mechanical seal	14	Screw	26	"O" ring
3	Drops guard	15	Fairlead	27	Nut
4	Shaft sleeve	16	Nut	28	Pump casing
5	Rotor	17	Split ring	29	Impeller
6	Bearing	18	Driving cap	30	Diffuser
7	Casing with wound stator	19	Tie rod	31	Guide vane
8	Terminal box	20	Fan	32	Pump support
9	Screw	21	Fan cover		
10	Capacitor	22	Charge plug		
11	Terminal cover	23	"O" ring		
12	Screw	24	Inlet casing		

**PUMPS INSTALLATION AND APPLICATIONS**

These pumps are suitable to handling clean water which are not chemically aggressive to the pump components. They are extremely reliable, simple to use, quite and virtually maintenance-free, finding many uses in flow irrigation systems in gardening, agriculture and industrial fittings.

**PERFORMANCE**

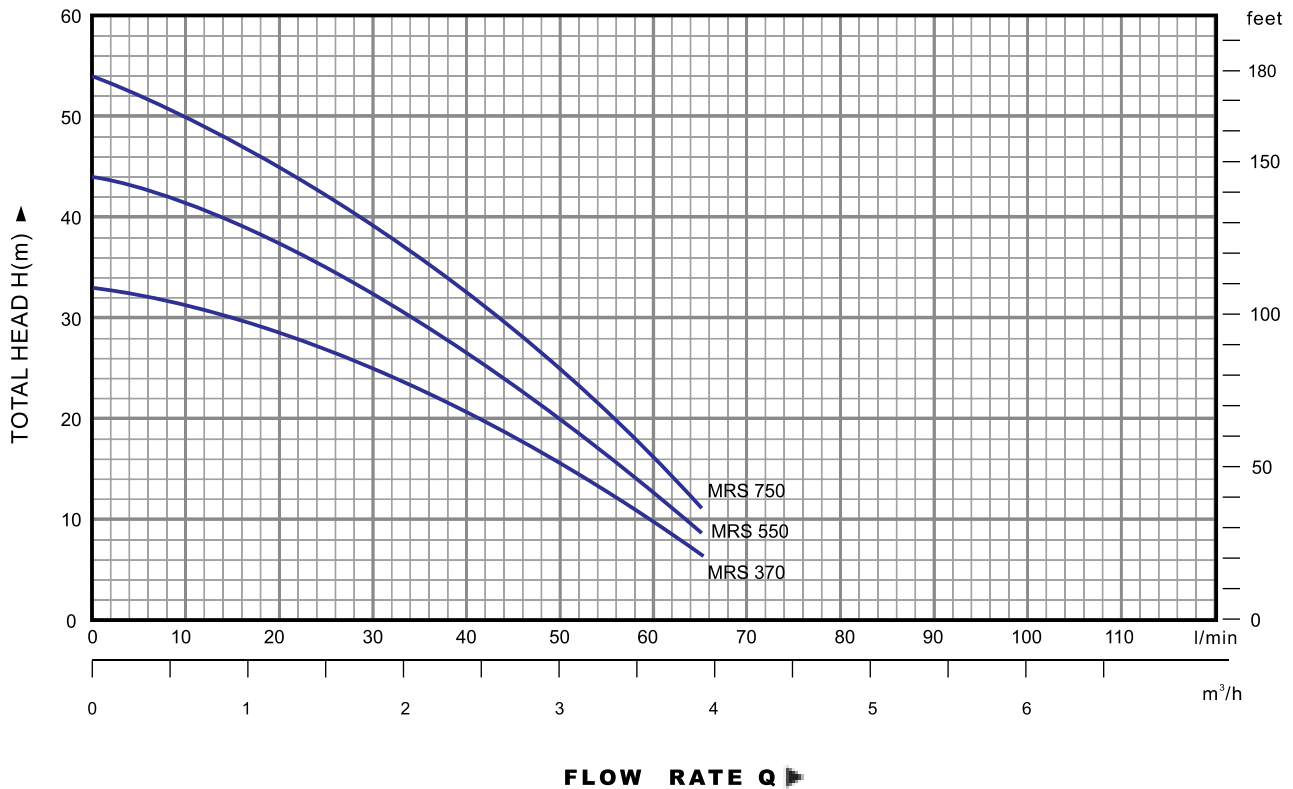
- ☒ particularly ample and stable characteristic curves (high ratio between minimum and maximum head values);
- ☒ outputs having high absolute values and tendentially flat curves;
- ☒ flat absorption curves at high delivery rates, preventing motor overloading even during prolonged use;
- ☒ good suction capacities both at low and high delivery rates.

**STRUCTURE CHARACTERISTICS**

- ☒ stainless steel pump body
- ☒ cast iron pump inlet
- ☒ cast iron motor support
- ☒ stainless steel mechanical seal (graphite to ceramic)
- ☒ stainless steel impeller with centrifugal radial flow type
- ☒ 45# steel shaft
- ☒ protection IP44
- ☒ with thermal overload protector
- ☒ NSK bearing or local bearing

**WARRANTY:1YEAR(according to our general sales conditions)**

**PERFORMANCE CHART AT n=2900 rpm**



PUMP MODEL		POWER		Q	0.6	1.2	1.8	2.1	2.4	3.0	3.6	3.9
Single phase	Three phase	KW	HP	m³/h	10	20	30	35	40	50	60	65
MRS 370	MR 370	0.37	0.5	H m	32	30	26	24	22	17	10.5	7
MRS 550	MR 550	0.5	0.75		43	39	35	32	27	21.5	14	9
MRS 750	MR 750	0.75	1		51	47	42	38	34	25	17	12

**H=TOTAL HEAD IN METERS. Q=FLOW RATE**

# MRSS

## SELF-PRIMING MULTISTAGE CENTRIFUGAL PUMPS

### PERFORMANCE RANGE

- ☒ flow rate up to 75 l/min.(4.5m<sup>3</sup>/h)
- ☒ head up to 53 m

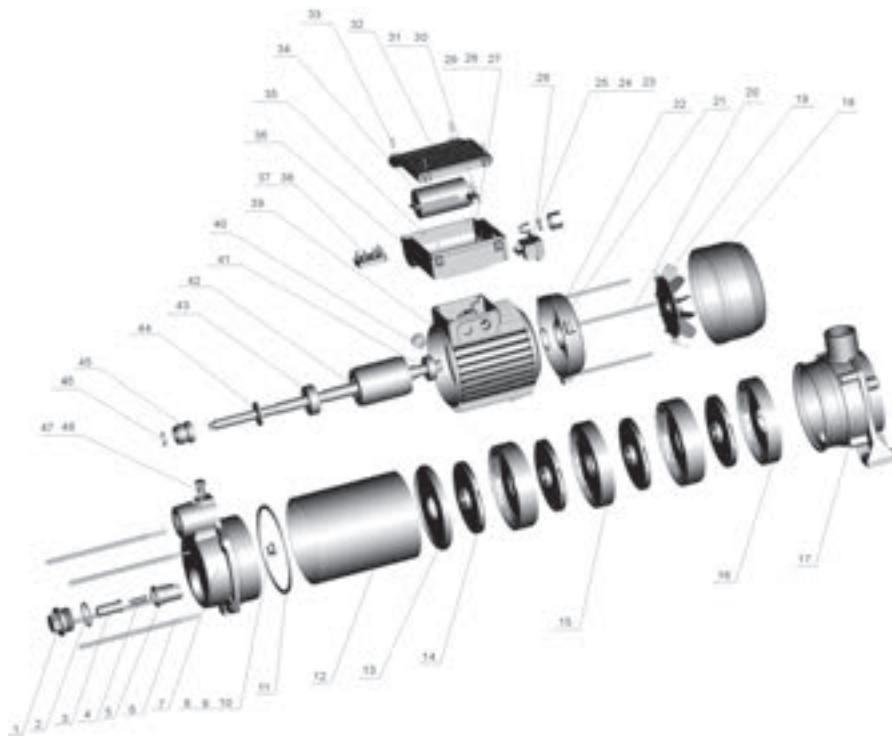
### OPERATING LIMITS

- ☒ suction lift up to 8m
- ☒ fluid temperature up to 35 °C
- ☒ maximum ambient temperature up to 35 °C



**MRSS4**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Plug	15	Diffuser	29	Spring washer	43	Bearing
2	"O" ring	16	Guide vane	30	Screw	44	Drops guard
3	Handspike	17	Pump support	31	Cable presser	45	Mechanical seal
4	Spring	18	Fan cover	32	Terminal cover	46	Snap ring
5	Nozzle	19	Fan	33	Screw	47	Charge plug
6	Suction part	20	Bolt	34	Capacitor	48	"O" ring
7	Inlet casing	21	Driving cap	35	Screw		
8	Nut	22	Split ring	36	Terminal box		
9	Spring washer	23	Nut	37	Screw		
10	Washer	24	Washer	38	Terminal board		
11	Gasket	25	Fairlead	39	Casing with wound stator		
12	Pump casing	26	Switch	40	Stem		
13	Pump cover	27	Screw	41	Bearing		
14	Impeller	28	Washer	42	Rotor		

**PUMPS INSTALLATION AND APPLICATIONS**

These pumps are suitable to handling clean water which are not chemically aggressive to the pump components. They are extremely reliable, simple to use, quite and virtually maintenance-free, finding many uses in flow irrigation systems in gardening, agriculture and industrial fittings.

**PERFORMANCE**

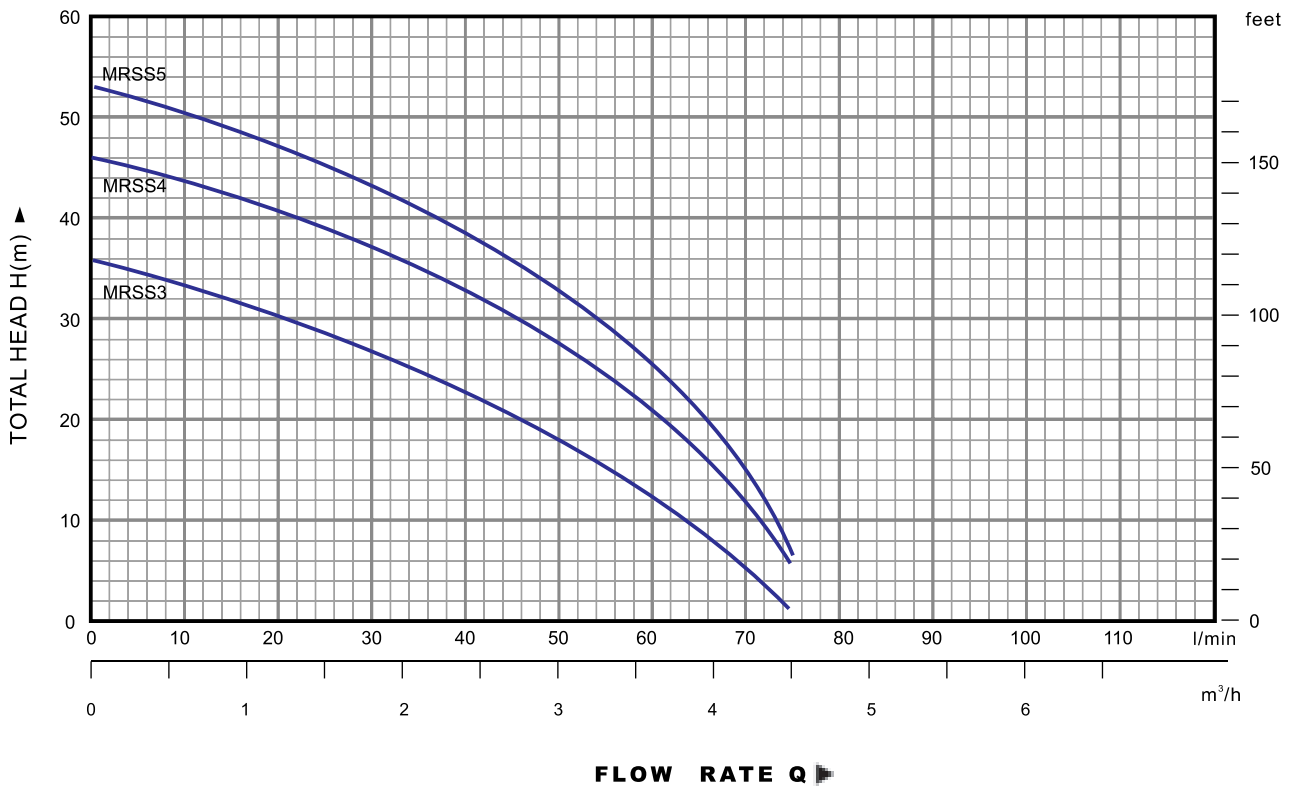
- ☒ particularly ample and stable characteristic curves (high ratio between minimum and maximum head values);
- ☒ outputs having high absolute values and tendentially flat curves;
- ☒ flat absorption curves at high delivery rates, preventing motor overloading even during prolonged use;
- ☒ good suction capacities both at low and high delivery rates.

**STRUCTURE CHARACTERISTICS**

- ☒ stainless steel pump body
- ☒ cast iron pump inlet
- ☒ cast iron motor support
- ☒ stainless steel mechanical seal (graphite to ceramic)
- ☒ noryl impeller with centrifugal radial flow type
- ☒ 45# steel shaft
- ☒ protection IP44
- ☒ with thermal overload protector
- ☒ NSK bearing or local bearing

**WARRANTY:1YEAR(according to our general sales conditions)**

**PERFORMANCE CHART AT n=2900 rpm**



PUMP MODEL		POWER		Q	0	1	2	3	4	4.5
Single phase	Three phase	KW	HP	m³/h	l/min					
MRSS 3	MRSS 3T	0.6	0.8	H m	36	32	25	18	9	1.5
MRSS 4	MRSS 4T	0.75	1		46	41	35	27	17	6
MRSS 5	MRSS 5T	0.9	1.25		53	48.5	42.5	33	21	7

**H=TOTAL HEAD IN METERS. Q=FLOW RATE**

# HMP

## MULTISTAGE CENTRIFUGAL PUMPS

### PERFORMANCE RANGE

- ☒ flow rate up to 100l/min. (6.0 m<sup>3</sup>/h)
- ☒ head up to 55m

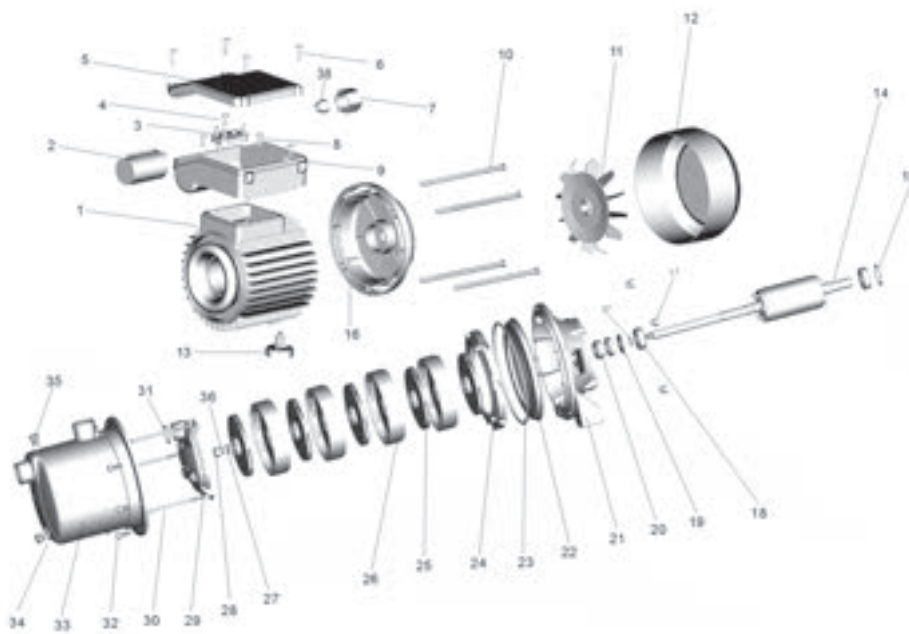
### OPERATIONLIMITS

- ☒ suction lift up to 8m
- ☒ fluid temperature up to 35°C
- ☒ maximum ambient temperature up to 40°C



**HMP 4**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Casing with wound stator	14	Rotor	27	Washer
2	Capacitor	15	Split ring	28	Nut
3	Terminal board	16	Driving cap	29	Circumfluent implement
4	Screw	17	Screw	30	Bolt
5	Terminal cover	18	Bearing	31	"O"ring
6	Bolt	19	Drops guard	32	Bolt
7	Nut	20	Mechanical seal	33	Pump casing
8	Screw	21	Pump support	34	"O"ring
9	Terminal box	22	Pump casing cover	35	Charge plug
10	Tie rod	23	"O"ring	36	Spring washer
11	Fan	24	Guide vane	37	Snap ring
12	Fan cover	25	Impeller	38	Fairlead
13	Stand	26	Diffuser		

### PUMPS INSTALLATION AND APPLICATIONS

These pumps are suitable to handling clean water which are not chemically aggressive to the pump components. They are extremely reliable, simple to use, quite and virtually maintenance-free, finding many uses in flow irrigation systems in gardening, agriculture and industrial fittings.

### PERFORMANCE

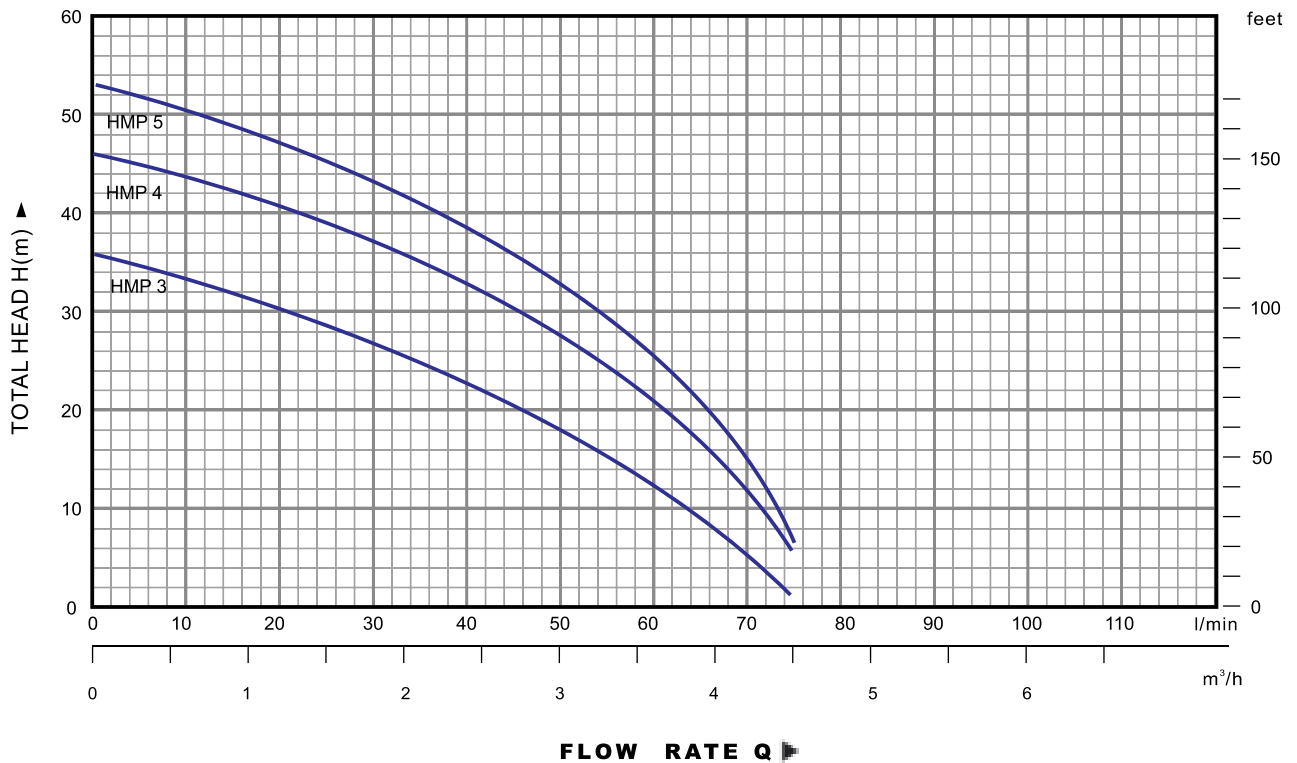
- particularly ample and stable characteristic curves (high ratio between minimum and maximum head values);
- outputs having high absolute values and tendentially flat curves;
- flat absorption curves at high delivery rates, preventing motor overloading even during prolonged use;
- good suction capacities both at low and high delivery rates.

### STRUCTURE CHARACTERISTICS

- stainless steel pump body
- cast iron motor support
- stainless steel mechanical seal (graphite to ceramic)
- noryl impeller with centrifugal radial flow type
- 45# steel shaft
- protection IP44
- with thermal overload protector
- NSK bearing or local bearing

**WARRANTY: 1 YEAR (according to our general sales conditions)**

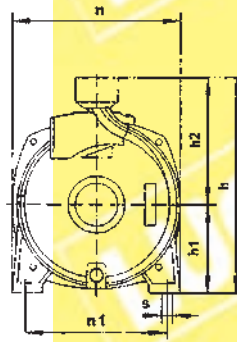
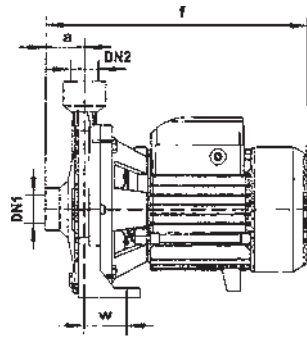
**PERFORMANCE CHART AT n=2900 rpm**



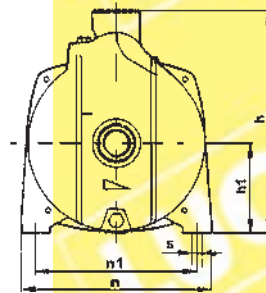
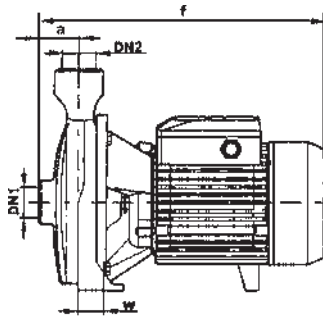
PUMP MODEL		POWER		Q	0	1	2	3	4	4.5
Single phase	Three phase	KW	HP	m³/h	0	16.7	33.3	50	66.7	75
HMP3	HM3	0.6	0.8	H m	36	32	25	18	9	1.5
HMP4	HM4	0.75	1		46	41	35	27	17	6
HMP5	HM5	0.9	1.25		53	48.5	42.5	33	21	7

**H=TOTAL HEAD IN METERS.**

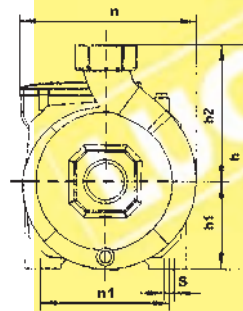
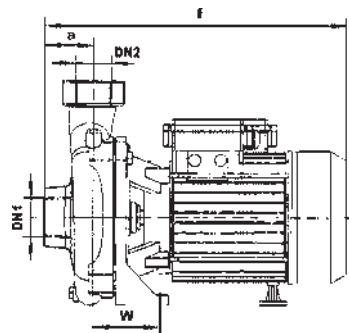
**Q=FLOW RATE**



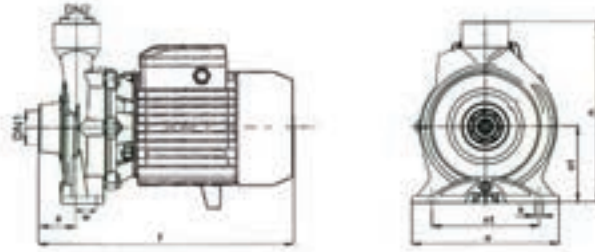
PUMP MODEL		DN1	DN2	DIMENSIONS mm								
Single phase	Three phase			a	f	h	h1	h2	n	n1	w	s
MCP 100	MC100	1"	1"	44	263	211	82	129	165	135	35.5	10
MCP 120	MC120	1"	1"	44	263	211	82	129	165	135	35.5	10
MCP 130	MC130	1"	1"	44	263	211	82	129	165	135	35.5	10
MCP 146	MC146	1"	1"	44	299	248	100	148	190	160	44	10
MCP 158	MC158	1"	1"	44	299	248	100	148	190	160	44	10



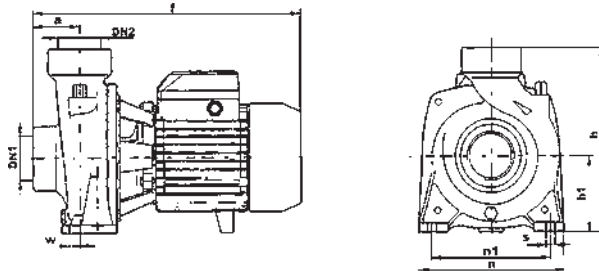
PUMP MODEL		DN1	DN2	DIMENSIONS mm							
Single phase	Three phase			a	f	h	h1	n	n1	w	s
MCP 100-1	MC 100-1	1"	1"	34	247	187	77	148	118	45	10
MCP 120-1	MC 120-1	1"	1"	42	259	211	82	165	135	41	10
MCP 130-1	MC 130-1	1"	1"	42	259	211	82	165	135	41	10
MCP 132A-1	MC 132A-1	1"	1"	42	266	211	82	165	135	41	10
MCP 150-1	MC 150-1	1"	1"	44	298	242	97	190	160	42.5	10
MCP 158-1	MC 158-1	1"	1"	44	298	242	97	190	160	42.5	10
MCP 170-1	MC 170-1	1"	1"	51	341	260	110	206	165	44.5	11
MCP 170M-1	MC 170M-1	1 1/4"	1"	51	341	260	110	206	165	44.5	11
MCP 190-1	MC 190-1	1 1/4"	1"	51.5	338	290	115	242	206	32.5	11
MCP 200-1	MC 200-1	1 1/4"	1"	51.5	358	290	115	242	206	32.5	11



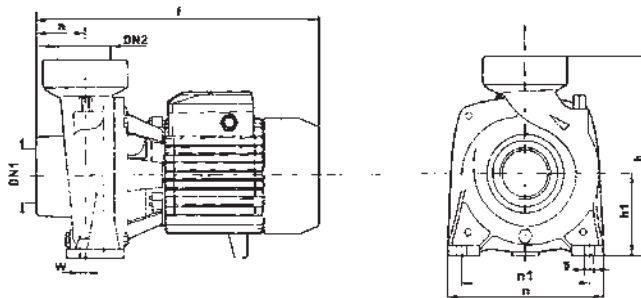
PUMP MODEL		DN1	DN2	DIMENSIONS mm								
Single phase	Three phase			a	f	h	h1	h2	n	n1	w	s
MSC 60	MS 60	2"	2"	59.8	372	277	108	169	212.5	145	80	12
MSC 70	MS 60	2"	2"	59.8	372	277	108	169	212.5	145	80	12
MSC 80	MS 80	2"	2"	59.8	442	277	108	169	212.5	145	80	12



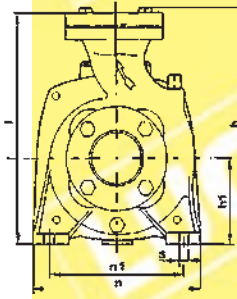
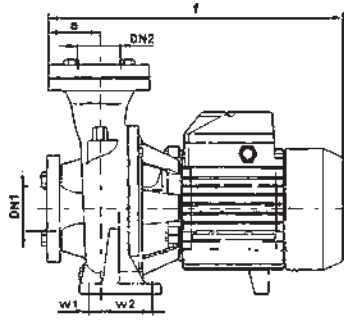
PUMP MODEL		DN1	DN2	DIMENSIONS mm							
Single phase	Three phase			a	f	h	h1	n	n1	w	s
MSC 90A	MS 90A	2"	2"	65	444	315	132	255	186	40	14
MSC 100A	MS 100A			65	444	315	132	255	186	40	14
MSC 110A	MS 110A			70	496.5	326	136	280	195	40	14
—	MS 120A			70	496.5	326	136	280	195	40	14
MSC 100B	MS 100B			65	444	315	132	255	186	40	14
MSC 110B	MS 110B			70	496.5	326	136	280	195	40	14
—	MS 120B			70	496.5	326	136	280	195	40	14
—	MS 130B			85	515	360	150	290	216	40	14
—	MS 130C	4"	3"	95	525	360	150	290	216	40	14



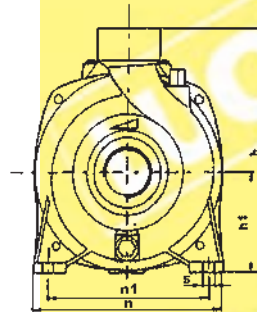
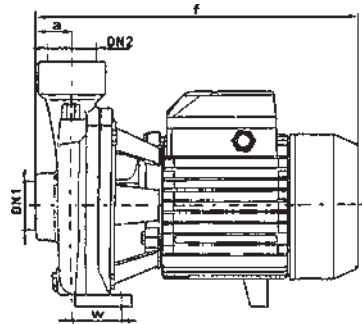
PUMP MODEL		DN1	DN2	DIMENSIONS mm							
Single phase	Three phase			a	f	h	h1	n	n1	w	s
MHF/5C	MH/5C	2"	2"	62	332	238	97	196	160	14	10
MHF/5B	MH/5B	2"	2"	62	332	242	102	190	160	14	10
MHF/5A	MH/5A	2"	2"	62	332	242	102	190	160	14	10
MHF/5BM	MH/5BM	2"	2"	58	374	260	110	206	164	7	10
MHF/5AM	MH/5AM	2"	2"	58	374	260	110	206	164	7	10



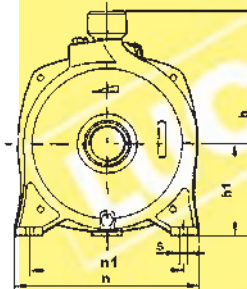
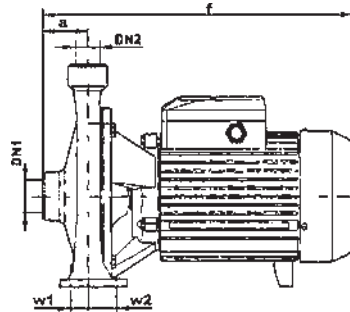
PUMP MODEL		DN1	DN2	DIMENSIONS mm							
Single phase	Three phase			a	f	h	h1	n	n1	w	s
MHF/6C	MH/6C	3"	3"	68	398	312	120	240	190	10	12
MHF/6B	MH/6B	3"	3"	68	398	312	120	240	190	10	12
—	MH/6A	3"	3"	68	398	312	120	240	190	10	12
MHF/6A	—	3"	3"	68	405	312	120	240	190	10	12
MHF/7B	MH/7BR	3"	3"	71	453	312	120	240	190	10	12
MHF/6CR	MH/6CR	4"	4"	68	387	312	120	240	190	10	12
MHF/6BR	MH/6BR	4"	4"	68	407	312	120	240	190	10	12
—	I/6AR	4"	4"	68	407	312	120	240	190	10	12
MHF/6AR	—	4"	4"	68	448	312	120	240	190	10	12
MHF/7BR	MH/7BR	4"	4"	78	460	312	120	240	190	10	12



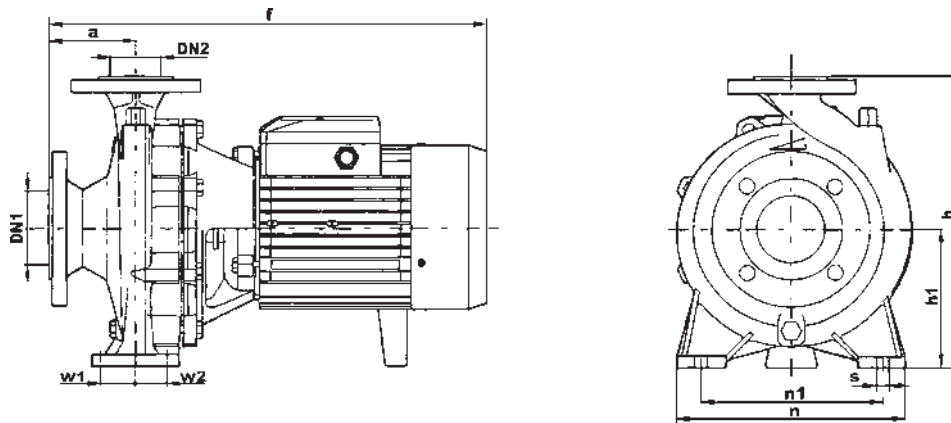
PUMP MODEL		DN1	DN2	DIMENSIONS mm									
Single phase	Three phase			a	f	h	h1	l	n	n1	w1	w2	s
MNF/129B	MN/129B	2"	2"	56	372	276	110	269	206	160	1	62	11
MNF/129B-1	MN/129B-1	2 1/2"	2 1/2"	56	372	276	110	269	206	160	1	62	11
MNF/129A	MN/129A	2"	2"	58	392	262	110	269	206	160	1	62	11
MNF/129A-1	—	2 1/2"	2 1/2"	56	392	276	110	269	206	160	1	62	11
—	MN/129A-1	2 1/2"	2 1/2"	56	372	276	110	269	206	160	1	62	11
MNF/130C	MN/130C	3"	3"	58	390	320	120	313	240	190	6	66	12
MNF/130B	MN/130B	3"	3"	58	390	320	120	313	240	190	6	66	12
—	MN/130A	3"	3"	58	390	320	120	313	240	190	6	66	12
MNF/130A	—	3"	3"	58	410	320	120	313	240	190	6	66	12
MNF/131B	MN/131B	4"	4"	111	557	433	161	423	267	227	20	20	16



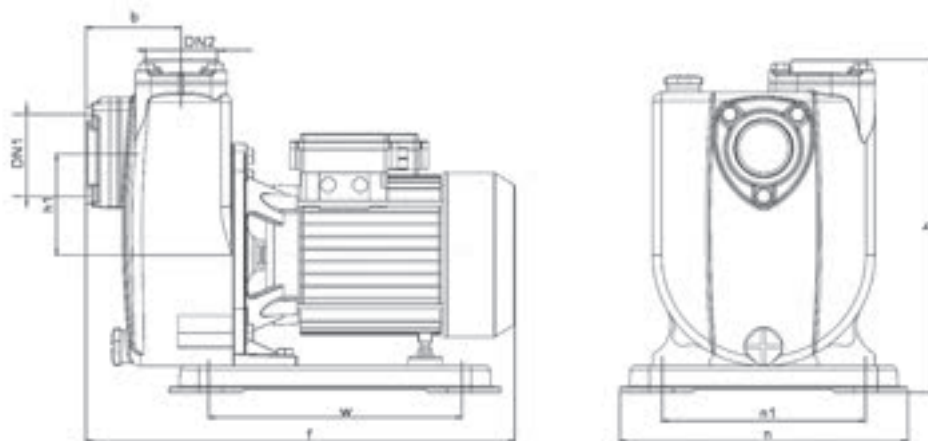
PUMP MODEL		DN1	DN2	DIMENSIONS mm							
Single phase	Three phase			a	f	h	h1	n	n1	w	s
MGA/1B	MGA/1B	1 1/2"	1 1/2"	37	290	236	97	190	160	51	10
MGA/1A	MGA/1A	1 1/2"	1 1/2"	37	290	236	97	190	160	51	10



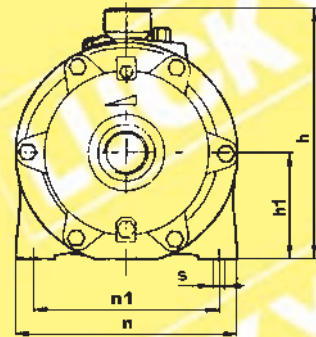
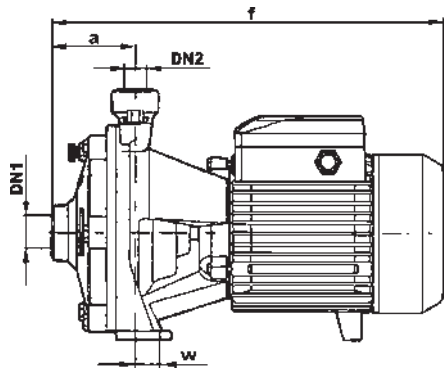
PUMP MODEL		DN1	DN2	DIMENSIONS mm								
Single phase	Three phase			a	f	h	h1	n	n1	w1	w2	s
MCP 25/160B	MC 25/160B	1 1/2"	1"	56	360	260	105	206	148	28	28	10
MCP 40/160B	MC 40/160B	1 1/2"	1 1/2"	56	360	260	105	206	150	28	27.5	10
MCP 25/160A	MC 25/160A	1 1/2"	1"	56	360	260	106	206	148	28	28	10
MCP 40/160A	MC 40/160A	1 1/2"	1 1/2"	56	360	260	105	206	150	27.5	27.5	10



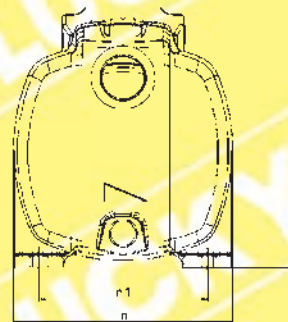
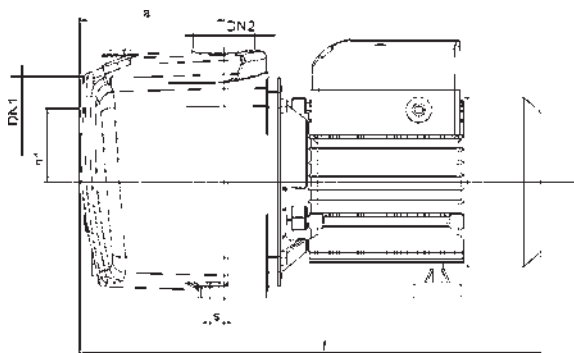
PUMP MODEL		DN1	DN2	DIMENSIONS mm								
Single phase	Three phase			a	f	h	h1	n	n1	w1	w2	s
MFM32/160C-1	MF32/160C-1	50	32	80	400	292	132	240	190	35	35	14
MFM32/160B-1	MF32/160B-1	50	32	80	466	292	132	240	190	35	35	14
MFM32/160A	MF32/160A	50	32	80	466	292	132	240	190	35	35	14
MFM32/200B	MF32/200B	50	32	80	490	340	132	240	190	35	35	14
---	MF32/200A	50	32	80	490	340	132	240	190	35	35	14
---	MF32/250B	50	32	100	557	405	180	320	254	47.5	47.5	14
---	MF32/250A	50	32	100	587	405	180	320	254	47.5	47.5	14



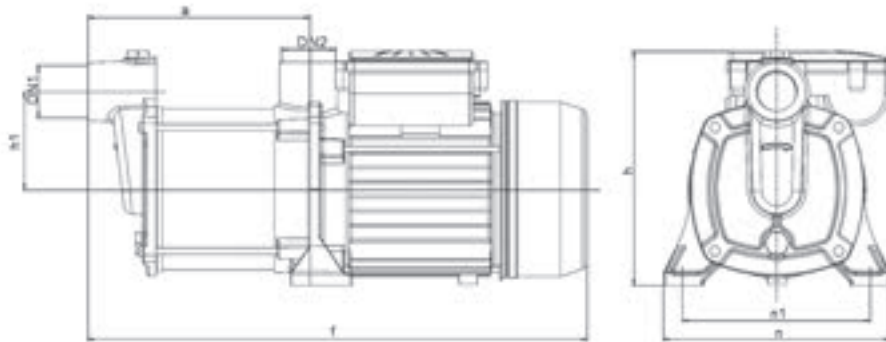
PUMP MODEL		DN1	DN2	DIMENSIONS mm						
Single phase	Three phase			b	f	h	h1	n	n1	w
MTK1500	MT1500	2"	2"	92	431.5	335.5	108	269.5	205	255
MTK2000	MT2000	2"	2"	92	431.5	335.5	108	269.5	205	255



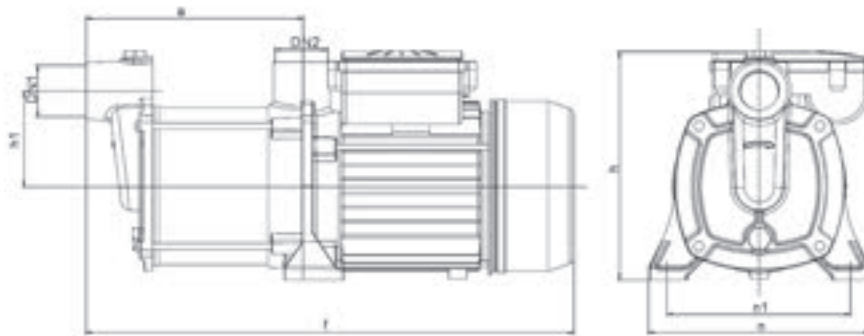
PUMP MODEL		DN1	DN2	DIMENSIONS mm							
Single phase	Three phase			a	f	h	h1	n	n1	w	s
2MCP 25/130	2MC 25/130	1 1/4"	1"	69	335	213	90	181	145	14	10
2MCP 25/140H	2MC 25/140H	1 1/4"	1"	76	356	225	93	200	162	23	10
2MCP 25/140M	2MC 25/140M	1 1/2"	1"	76	377	225	93	200	162	23	10
2MCP 160/160	2MC 160/160	1 1/4"	1"	84	399	263	110	225	185	26	11
2MCP 25/160B	2MC 25/160B	1 1/2"	1"	86	400	263	110	225	185	26	11
2MCP 25/160A	2MC 25/160A	1 1/2"	1"	86	464	263	110	225	185	26	11
2MCP 32/200C	2MC 32/200C	1 1/2"	1 1/4"	97	466	310	132	250	202	26	11
—	2MC 32/200B	1 1/2"	1 1/4"	97	480	310	132	281	232	26	11



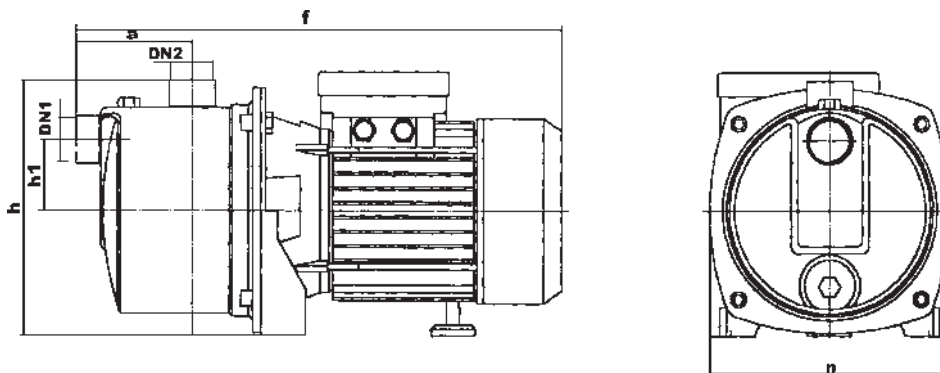
PUMP MODEL		DN1	DN2	DIMENSIONS mm						
Single phase	Three phase			a	f	h	h1	n	n1	s
3MCP80	3MC80	1"	1"	101.5	324.5	182	52	148	116	10
4MCP80	4MC80	1"	1"	126.5	356.5	182	52	148	116	10



PUMP MODEL		DN1	DN2	DIMENSIONS mm					
Single phase	Three phase			a	f	h	h1	n	n1
MRS3	MR3	1"	1"	171.5	387	183.5	76	176	140
MRS4	MR4	1"	1"	195.5	411	183.5	76	176	140
MRS5	MR5	1"	1"	219.5	435	183.5	76	176	140



PUMP MODEL		DN1	DN2	DIMENSIONS mm					
Single phase	Three phase			a	f	h	h1	n	n1
MRS370	MR370	1"	1"	187	389	162	110	121	102
MRS550	MR550	1"	1"	211	413	162	110	121	102
MRS750	MR750	1"	1"	235	437	162	110	121	102



PUMP MODEL		DN1	DN2	DIMENSIONS mm				
Single phase	Three phase			a	f	h	h1	n
HMP3	HM3	1"	1"	76.5	367.5	266	50	230
HMP4	HM4	1"	1"	100.5	391.5	266	50	230
HMP5	HM5	1"	1"	124.5	415.5	266	50	230

# MJSW

## SELF-PRIMING “JET” PUMPS

### PERFORMANCE RANGE

- ☒ flow rate up to 50 l/min.(3.0m<sup>3</sup>/h)
- ☒ head up to 41 m

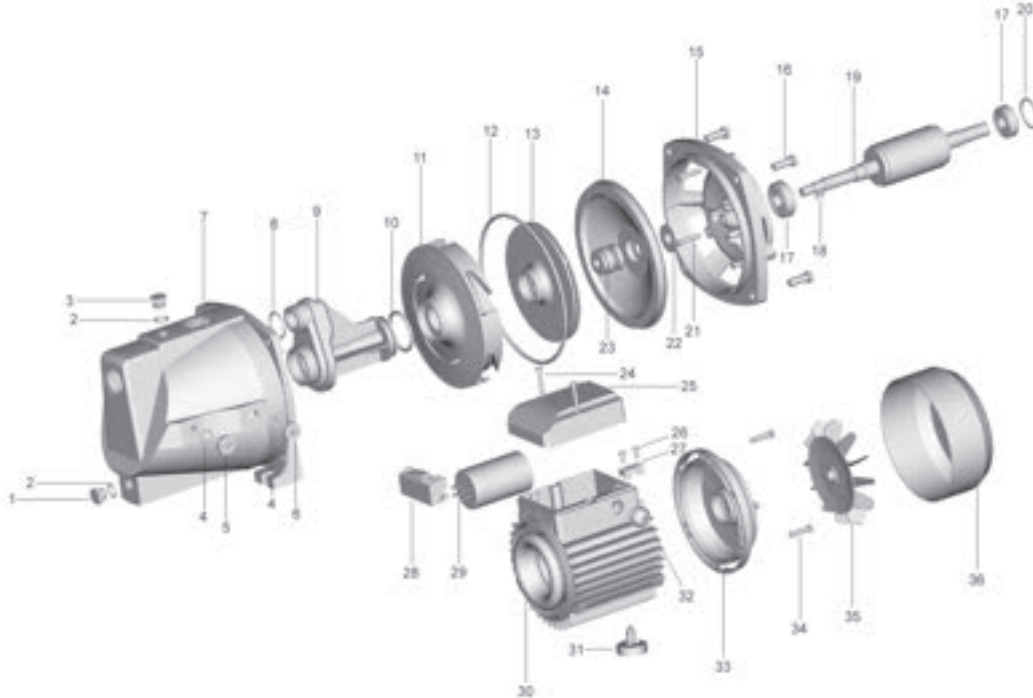
### OPERATING LIMITS

- ☒ suction lift up to 9 m
- ☒ fluid temperature up to 40°C
- ☒ maximum ambient temperature 40°C



**MJSW/1C-E**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Discharge plug	13	Impeller	25	Terminal cover
2	“O” ring	14	Pump casing cover	26	Screw
3	Charge plug	15	Pump support	27	Cable presser
4	“O” ring	16	Bolt	28	Terminal board
5	Gauge plug	17	Bearing	29	Capacitor
6	Switch plug	18	Key	30	Casing with wound stator
7	Pump casing	19	Rotor	31	Stand
8	“O” ring	20	Split ring	32	Fairlead
9	Venturi pipe	21	Bolt	33	Driving cap
10	“O” ring	22	Drops guard	34	Bolt
11	Diffuser	23	Mechanical seal	35	Fan
12	“O” ring	24	Bolt	36	Fan cover

### PUMPS INSTALLATION AND APPLICATIONS

These pumps are suitable for pumping clean water and fluids which are not chemically aggressive to the pump components. They are extremely reliable, economical and simple to use, being particularly suitable for domestic applications such as the automatic distribution of water from small and medium-sized surge tanks, watering gardens, etc. These pumps should be installed in a covered area, protected against the weather. N.B. It is always advisable to install a foot valve or a non-return valve on the suction opening.

### PERFORMANCE

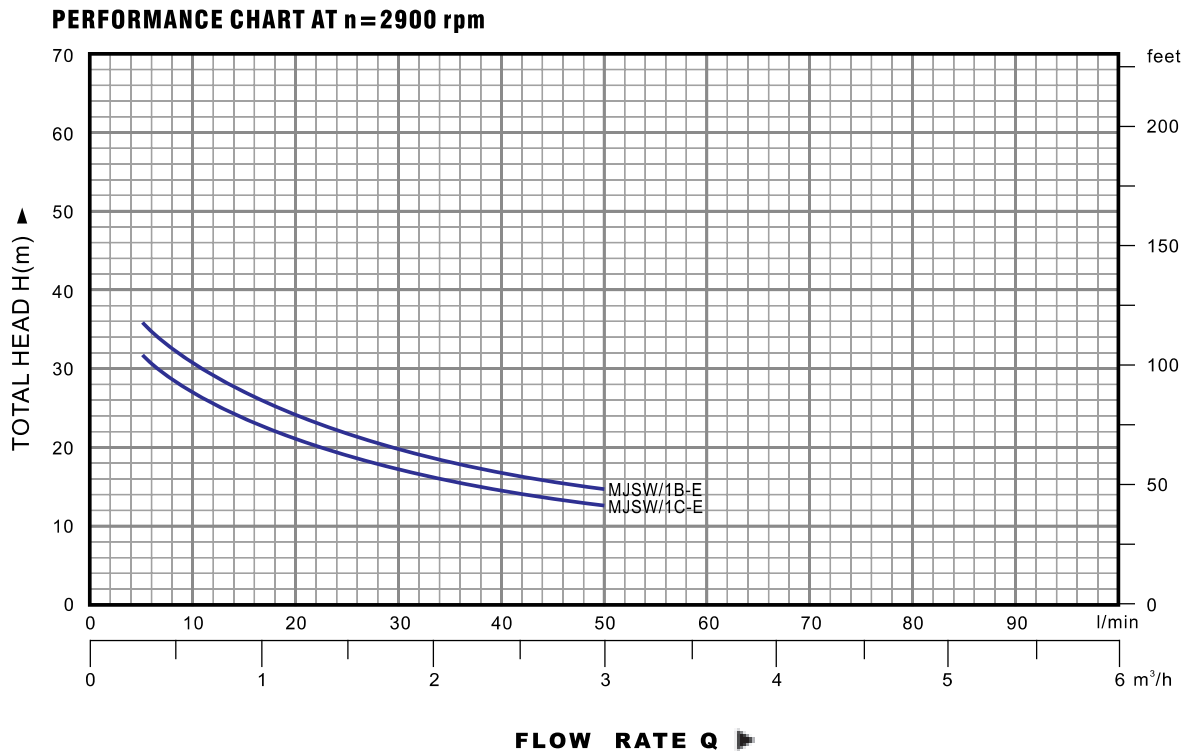
The wide range of pumps in the **MJSW** series satisfies the most varied requirements with features such as :

- ✘ high heads with respect to power requirements;
- ✘ flat operating and power absorption curves, giving moderate curve variations with respect to large variations in delivery demand;
- ✘ high tolerance of the presence of entrained air in the fluid to be pumped;
- ✘ suction capacity up to 9 meters.

### STRUCTURAL CHARACTERISTICS

- ✘ cast iron pump body
- ✘ stainless steel pump body cover
- ✘ stainless steel mechanical seal (graphite to ceramic)
- ✘ brass impeller with centrifugal radial flow type
- ✘ 45# steel
- ✘ protection IP44
- ✘ with thermal overload protector in single phase motor
- ✘ NSK bearing or local bearing

**WARRANTY: 1 YEAR (according to our general sales conditions)**



PUMP MODEL		POWER		Q m³/h	0	0.3	0.6	0.9	1.2	1.5	1.8	2.4	2.7	3.0
Single phase	Three phase	KW	HP		0	5	10	15	20	25	30	40	45	50
MJSW/1C-E	MJS/1C-E	0.37	0.50	H	35	32	27	24	21	19	17	15	14	13
MJSW/1B-E	MJS/1B-E	0.50	0.70	m	41	36	31	27	24	22	20	17	16	15

**H = TOTAL HEAD IN METERS.**

**Q = FLOW RATE**

# MJSW

## SELF-PRIMING "JET" PUMPS

### PERFORMANCE RANGE

- ☒ flow rate up to 80 l/min.(4.8m<sup>3</sup>/h)
- ☒ head up to 72 m

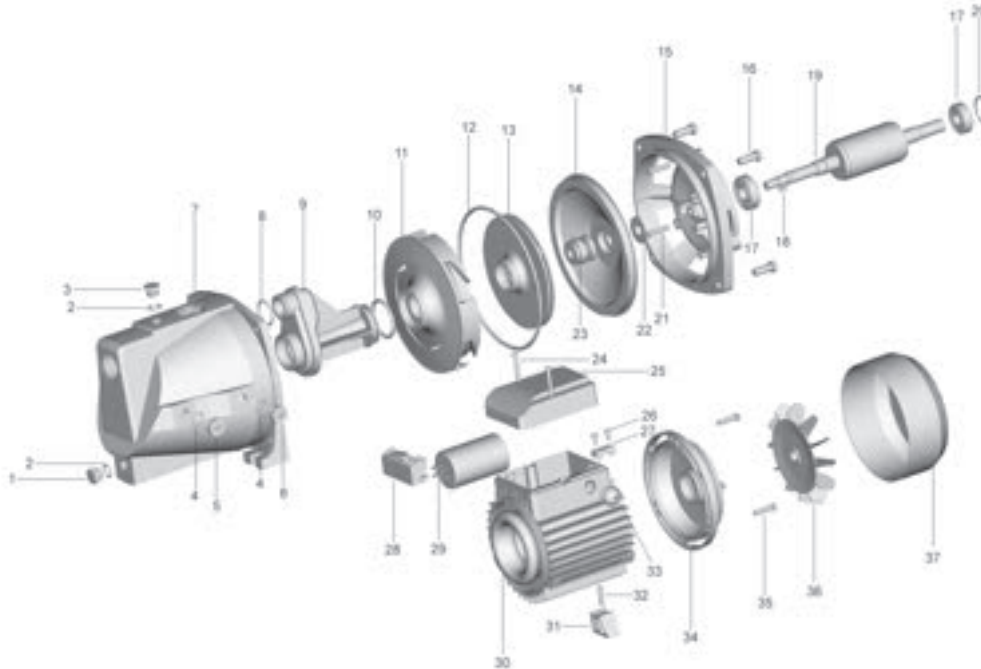
### OPERATING LIMITS

- ☒ suction lift up to 9 m
- ☒ fluid temperature up to 40 °C
- ☒ maximum ambient temperature 40 °C



**MJSW/10M**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Discharge plug	13	Impeller	25	Terminal cover	37	Fan cover
2	"O" ring	14	Pump casing cover	26	Screw		
3	Charge plug	15	Pump support	27	Cable presser		
4	"O" ring	16	Bolt	28	Terminal board		
5	Gauge plug	17	Bearing	29	Capacitor		
6	Switch plug	18	Key	30	Casing with wound stator		
7	Pump casing	19	Rotor	31	Stand		
8	"O" ring	20	Split ring	32	Stand pin		
9	Venturi pipe	21	Bolt	33	Fairlead		
10	"O" ring	22	Drops guard	34	Driving cap		
11	Diffuser	23	Mechanical seal	35	Bolt		
12	"O" ring	24	Bolt	36	Fan		

### PUMPS INSTALLATION AND APPLICATIONS

These pumps are suitable for pumping clean water and fluids which are not chemically aggressive to the pump components. They are extremely reliable, economical and simple to use, being particularly suitable for domestic applications such as the automatic distribution of water from small and medium-sized surge tanks, watering gardens, etc. These pumps should be installed in a covered area, protected against the weather. N.B. It is always advisable to install a foot valve or a non-return valve on the suction opening.

### PERFORMANCE

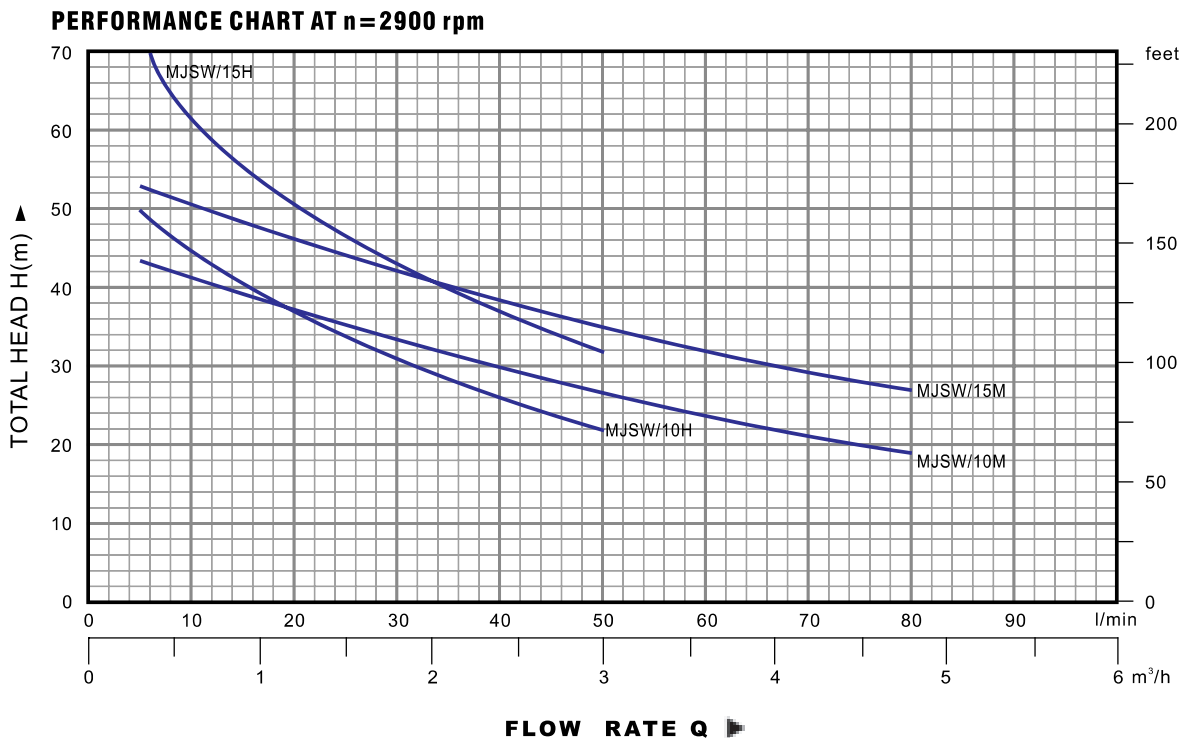
The wide range of pumps in the **MJSW** series satisfies the most varied requirements with features such as :

- ❖ high heads with respect to power requirements;
- ❖ flat operating and power absorption curves, giving moderate curve variations with respect to large variations in delivery demand;
- ❖ high tolerance of the presence of entrained air in the fluid to be pumped;
- ❖ suction capacity up to 9 meters.

### STRUCTURAL CHARACTERISTICS

- ❖ cast iron pump body
- ❖ stainless steel pump body cover
- ❖ stainless steel mechanical seal (graphite to ceramic or graphite to SiC)
- ❖ brass impeller with centrifugal radial flow type
- ❖ stainless steel shaft (Hi-Cr plated 45# steel up to 0.75kw)
- ❖ protection IP44
- ❖ with thermal overload protector in single phase motor
- ❖ NSK bearing or local bearing

**WARRANTY: 1 YEAR (according to our general sales conditions)**



PUMP MODEL		POWER		Q m³/h	Flow Rate (m³/h)															
Single phase	Three phase	KW	HP		0	0.3	0.6	0.9	1.2	1.5	1.8	2.4	2.7	3.0	3.6	4.2	4.8			
MJSW/10M	MJS/10M	0.75	1	H m	46	44	41	39	37	35	32	30	28	25	22	21	19			
MJSW/15M	MJS/15M	1.1	1.5		55	53	50	48	47	44	41	39	36	34	31	29	27			
MJSW/10H	MJS/10H	0.75	1		56	50	45	41	37	34	31	26	24	22						
MJSW/15H	MJS/15H	1.1	1.5		72	67	61	55.5	51	47	43.5	37	34.5	32						

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**

# MJSW

## SELF-PRIMING “JET” PUMPS (HIGH HEAD)

### PERFORMANCE RANGE

- ☒ flow rate up to 160 l/min.(9.6m³/h)
- ☒ head up to 76 m

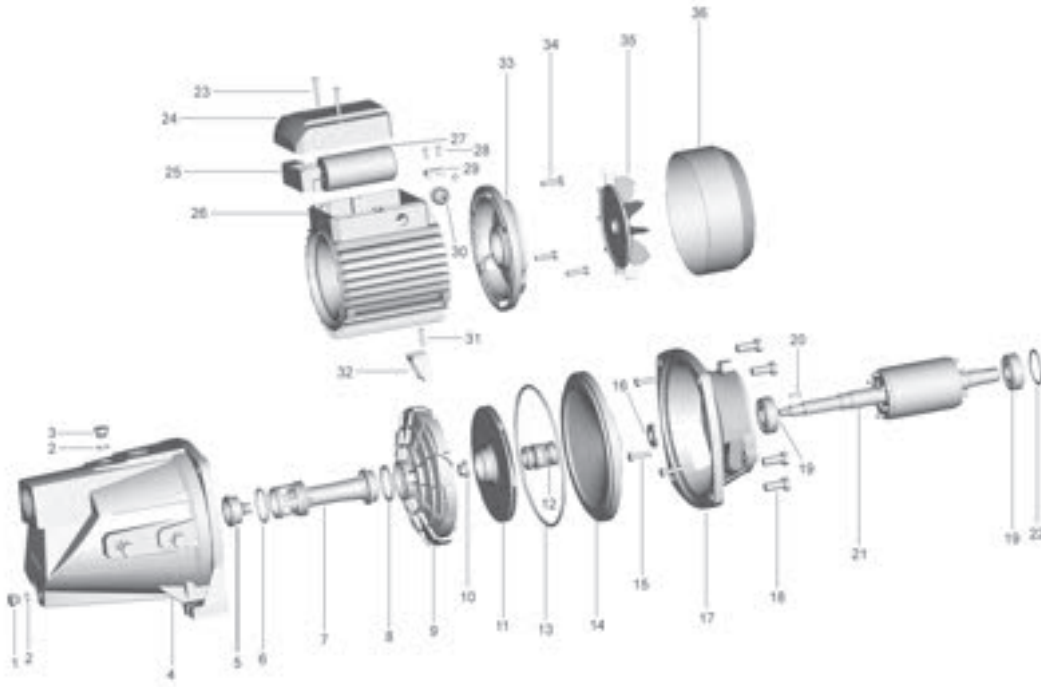
### OPERATING LIMITS

- ☒ suction lift up to 9 m
- ☒ fluid temperature up to 40 °C
- ☒ maximum ambient temperature 40 °C



MJSW/3BH

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Discharge plug	13	“O” ring	25	Terminal board
2	“O” ring	14	Pump casing cover	26	Casing with wound stator
3	Charge plug	15	Bolt	27	Capacitor
4	Pump casing	16	Drops guard	28	Screw
5	Nozzle	17	Pump support	29	Cable presser
6	“O” ring	18	Bolt	30	Fairlead
7	Venturi pipe	19	Bearing	31	Stand pin
8	“O” ring	20	Key	32	Stand
9	Diffuser	21	Rotor	33	Driving cap
10	Nut	22	Split ring	34	Bolt
11	Impeller	23	Bolt	35	Fan
12	Mechanical seal	24	Terminal cover	36	Fan cover

### PUMPS INSTALLATION AND APPLICATIONS

These pumps are suitable for pumping clean water and fluids which are not chemically aggressive to the pump components. They are extremely reliable, economical and simple to use, being particularly suitable for domestic applications such as the automatic distribution of water from small and medium-sized surge tanks, watering gardens, etc. These pumps should be installed in a covered area, protected against the weather. N.B. It is always advisable to install a foot valve or a non-return valve on the suction opening.

### PERFORMANCE

The wide range of pumps in the **MJSW** series satisfies the most varied requirements with features such as :

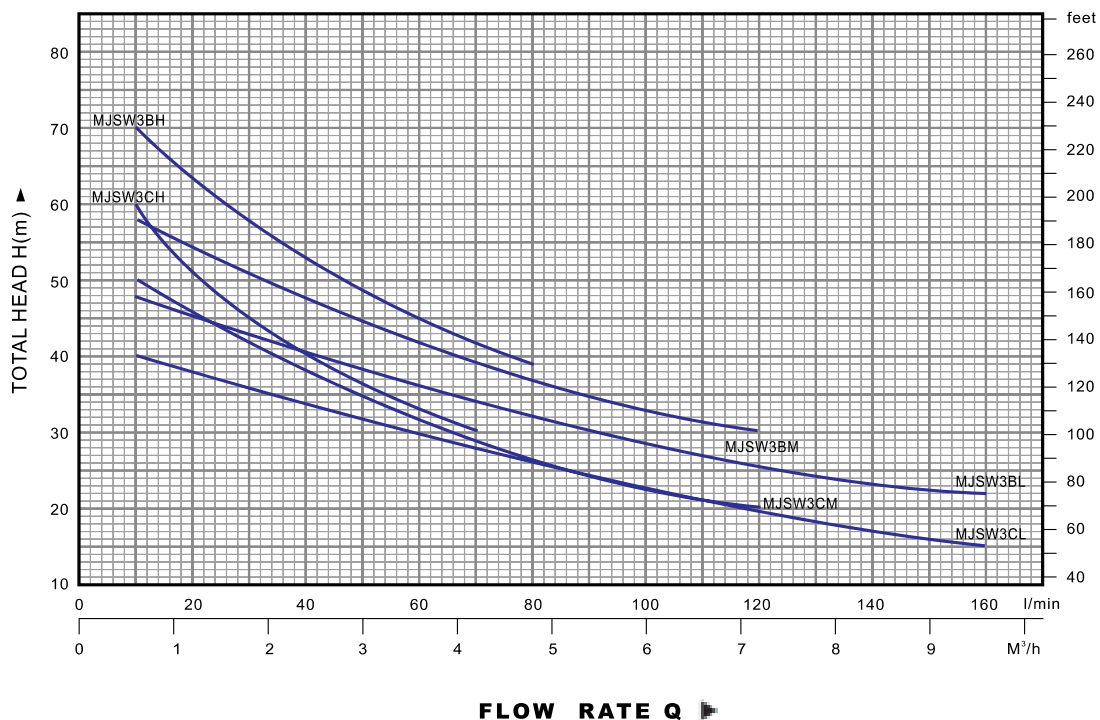
- ✘ high heads with respect to power requirements;
- ✘ flat operating and power absorption curves, giving moderate curve variations with respect to large variations in delivery demand;
- ✘ high tolerance of the presence of entrained air in the fluid to be pumped;
- ✘ suction capacity up to 9 meters.

### STRUCTURAL CHARACTERISTICS

- ✘ cast iron pump body
- ✘ stainless steel pump body cover
- ✘ stainless steel mechanical seal (graphite to SiC)
- ✘ brass impeller with centrifugal radial flow type
- ✘ stainless steel shaft
- ✘ protection IP44
- ✘ with thermal overload protector in single phase motor
- ✘ NSK bearing or local bearing

### WARRANTY: 1 YEAR (according to our general sales conditions)

**PERFORMANCE CHART AT n=2900 rpm**



PUMP MODEL		POWER		Q	0	0.6	0.9	1.2	1.5	1.8	2.1	2.4	2.7	3.0	3.6	4.2	4.8	6.0	7.2	8.4	9.6		
Single phase	Three phase	KW	HP	m³/h	0	10	15	20	25	30	35	40	45	50	60	70	80	100	120	140	160		
MJSW/3CH	MJS/3CH	1.1	1.5	H m	64	60	55	51	48	45	42.5	40	39	37	34	31							
MJSW/3BH	MJS/3BH	1.5	2		76	70	67	64	61	58	55.5	53	50	48	45	41	39						
MJSW/3CM	MJS/3CM	1.1	1.5		52	50	48	45	44	42	40	38	38	35	32	31	28	24	20				
MJSW/3BM	MJS/3BM	1.5	2		60	58	56	54	52	51	49	47	46	45	42	40	37	33	30				
MJSW/3CL	MJS/3CL	1.1	1.5		42	40	39	38	37	36	35	34	33	32	30	28	26	23	20	17	15		
MJSW/3BL	MJS/3BL	1.5	2		51	48	46	45	44	43	42	41	40	39	37	35	33	30	27	24	22		

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**

# MJ

## SELF-PRIMING "JET" PUMPS

### PERFORMANCE RANGE

- ✦ flow rate up to 60 l/min.(3.6m<sup>3</sup>/h)
- ✦ head up to 45 m

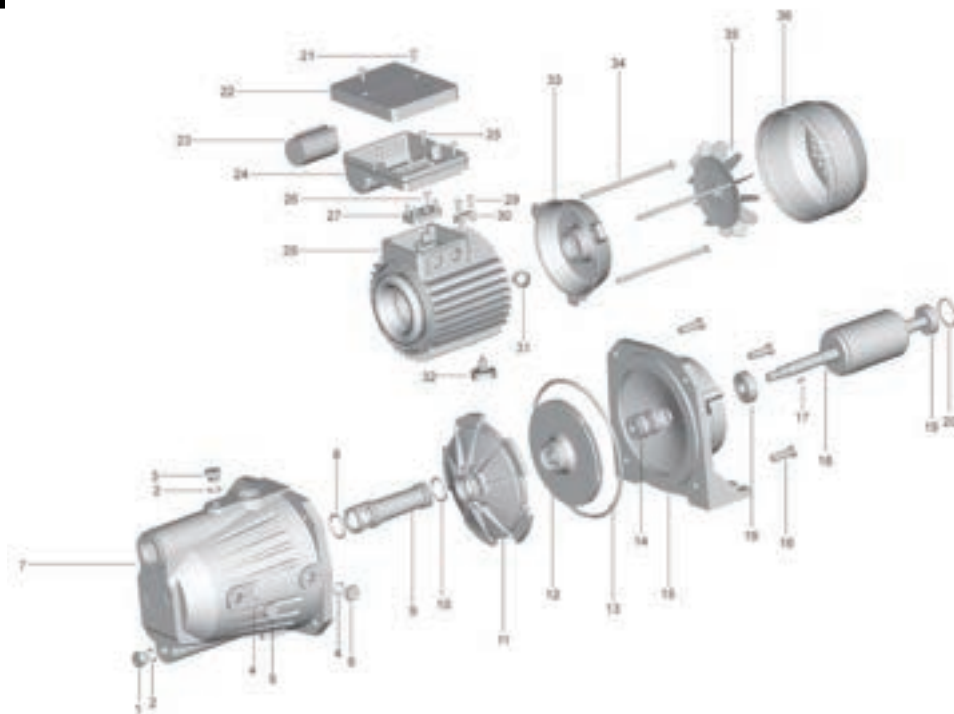
### OPERATING LIMITS

- ✦ suction lift up to 9 m
- ✦ fluid temperature up to 40°C
- ✦ maximum ambient temperature 40°C



**MJ100L**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Discharge plug	13	"O" ring	25	Screw
2	"O" ring	14	Mechanical seal	26	Screw
3	Charge plug	15	Pump support	27	Terminal board
4	"O" ring	16	Bolt	28	Casing with wound stator
5	Gauge plug	17	Key	29	Screw
6	Switch plug	18	Rotor shaft	30	Cable presser
7	Pump casing	19	Bearing	31	Fairlead
8	"O" ring	20	Split ring	32	Stand
9	Venturi pipe	21	Screw	33	Driving cap
10	"O" ring	22	Terminal cover	34	Tie-rod
11	Diffuser	23	Capacitor	35	Fan
12	Impeller	24	Terminal box	36	Fan cover

### PUMP INSTALLATION AND APPLICATIONS

These pumps are suitable for pumping clean water and fluids which are not chemically aggressive to the pump components. They are extremely reliable, economical and simple to use, being particularly suitable for domestic applications such as the automatic distribution of water from small and medium-sized surge tanks, watering gardens, etc. These pumps should be installed in a covered area, protected against the weather. N.B. it is always advisable to install a foot valve or a non-return valve on the suction opening.

### PERFORMANCE

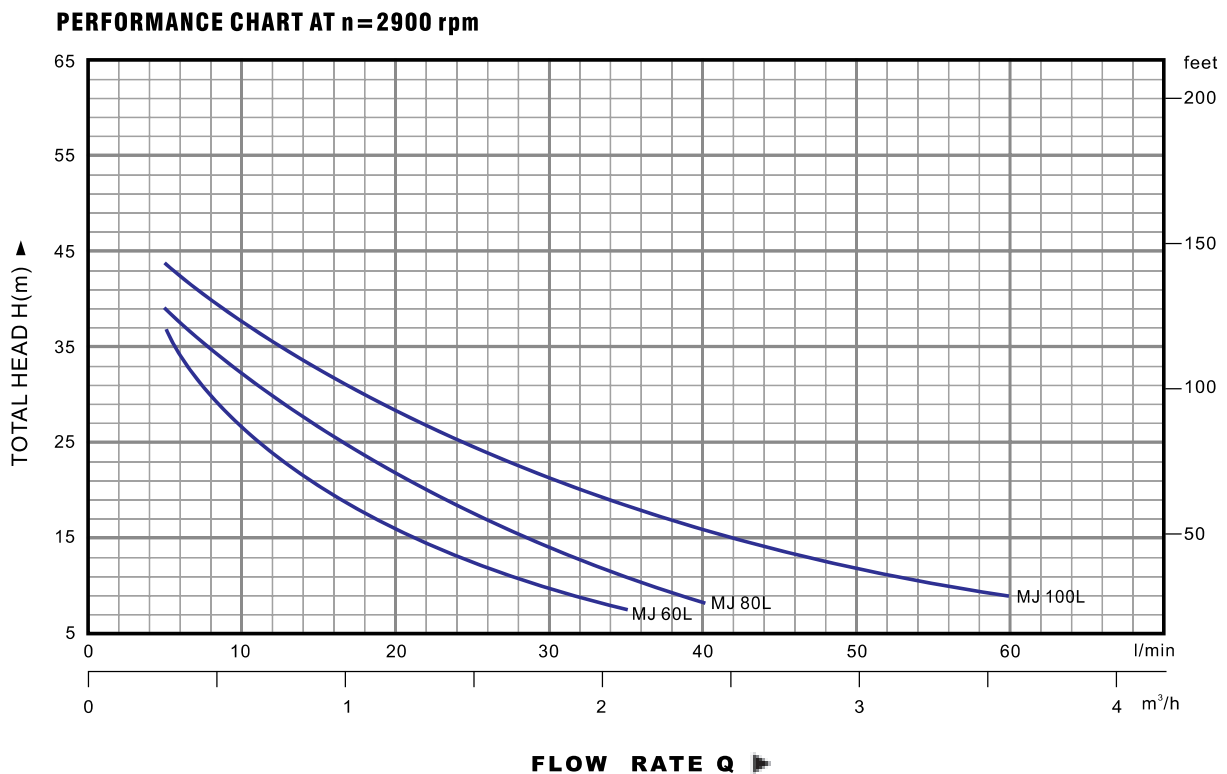
The wide range of pumps in the MJ series satisfies the most varied requirements with features such as:

- ❖ high heads with respect to power requirements;
- ❖ flat operating and power absorption curves, giving moderate curve variations with respect to large variations in delivery demand; .
- ❖ high tolerance of the presence of entrained air in the fluid to be pumped;
- ❖ suction capacity up to 9 meters.

### STRUCTURAL CHARACTERISTICS

- ❖ cast iron pump body
- ❖ stainless steel mechanical seal (graphite to ceramic)
- ❖ brass impeller with centrifugal radial flow type
- ❖ 45# steel shaft
- ❖ protection IP44
- ❖ with thermal overload protector in single phase motor
- ❖ NSK bearing or local bearing

**WARRANTY: 1 YEAR (according to our general sales conditions)**



PUMP MODEL		POWER		Q	0	0.3	0.6	0.9	1.2	1.5	1.8	2.1	2.4	3.0	3.6	
Single phase	Three phase	KW	HP	l/min	0	5	10	15	20	25	30	35	40	50	60	
MJ 60L	M 60L	0.45	0.6	H m	38	37	26	20	16	12	8	7.5				
MJ 80L	M 80L	0.6	0.8		42	41	32	26	22	18	14	10.5	8			
MJ 100L	M 100L	0.75	1		45	44	38	31.5	28.5	24	21	18	15.5	11.5	9	

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**

# MJS

## SELF-PRIMING "JET" PUMPS (STAINLESS STEEL PUMP BODY)

### PERFORMANCE RANGE

- ☒ flow rate up to 80 l/min.(4.8m³/h)
- ☒ head up to 47 m

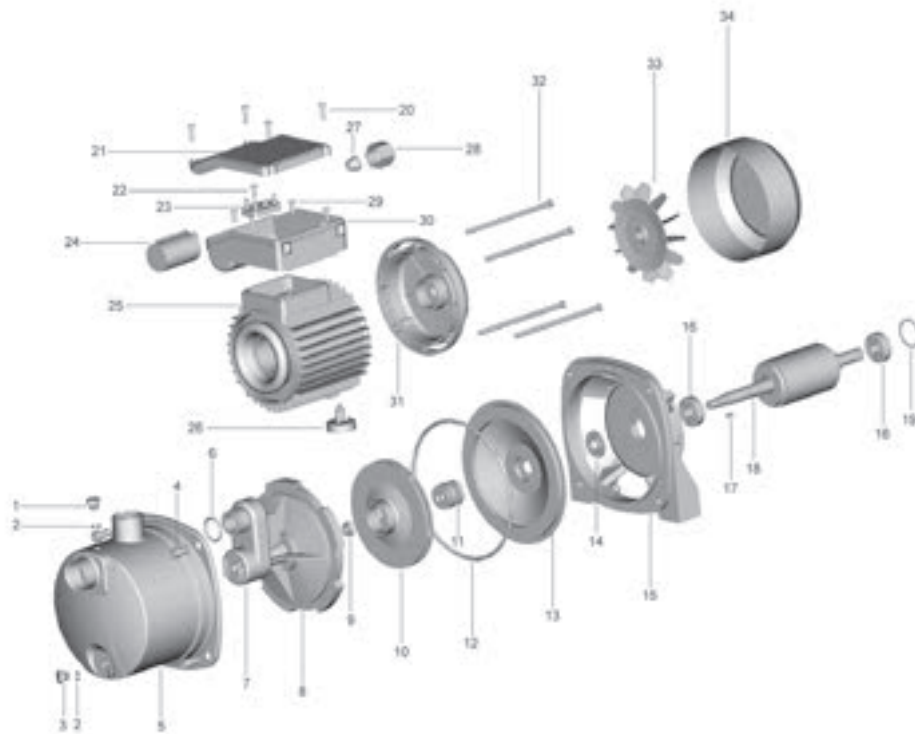
### OPERATING LIMITS

- ☒ suction lift up to 9 m
- ☒ fluid temperature up to 40°C
- ☒ maximum ambient temperature 40°C



**MJS 100**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Charge plug	13	Pump casing cover	25	Casing with wound stator
2	"O" ring	14	Drops guard	26	Stand
3	Discharge plug	15	Pump support	27	Fairlead
4	Bolt	16	Bearing	28	Nut
5	Pump casing	17	Key	29	Screw
6	"O" ring	18	Rotor	30	Terminal box
7	Venturi pipe	19	Split ring	31	Driving cap
8	Diffuser	20	Screw	32	Tie-rod
9	Nut	21	Terminal cover	33	Fan
10	Impeller	22	Screw	34	Fan cover
11	Mechanical seal	23	Terminal board		
12	"O" ring	24	Capacitor		

### PUMP INSTALLATION AND APPLICATIONS

These pumps are suitable for pumping clean water and fluids which are not chemically aggressive to the pump components. They are extremely reliable, light, economical and simple to use, finding many uses in domestic applications, in particular the automatic distribution of water from small and medium-sized surge tanks, watering gardens, etc. These pumps should be installed in a covered area, protected against the weather. N.B. it is always advisable to install a foot valve or a non-return valve on the suction opening.

### PERFORMANCE

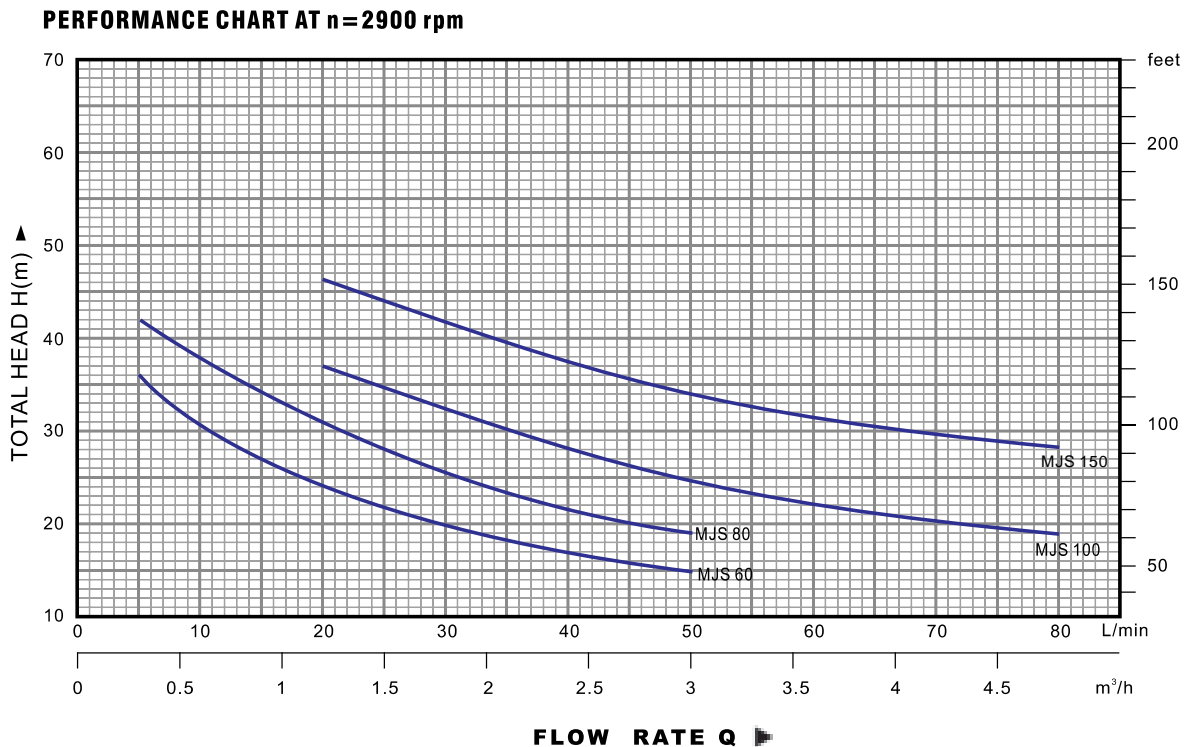
The wide range of pumps in the **MJS** series satisfies the most various operating requirements with features such as:

- ❖ high heads with respect to power requirements;
- ❖ flat operating and power absorption curves, giving moderate curve variations with respect to large variations in delivery demand;
- ❖ very low noise levels within the field of application;
- ❖ high tolerance of the presence of entrained air in the fluid to be pumped;
- ❖ suction capacity up to 9 meters.

### STRUCTURAL CHARACTERISTICS

- ❖ stainless steel pump body
- ❖ stainless steel pump body cover
- ❖ stainless steel mechanical seal (graphite to ceramic)
- ❖ brass impeller with centrifugal radial flow type
- ❖ 45# steel shaft
- ❖ protection IP44
- ❖ with thermal overload protector in single phase motor
- ❖ NSK bearing or local bearing

### WARRANTY: 1 YEAR (according to our general sales conditions)



PUMP MODEL		POWER		Q	0	0.3	0.6	0.9	1.2	1.5	1.8	2.1	2.4	3.0	3.6	4.2	4.8
Single phase	Three phase	KW	HP	$\frac{Q}{m^3/h}$	0	5	10	15	20	25	30	35	40	50	60	70	80
MJS 60	MJ 60	0.50	0.70	H m	41	36	31	27	24	22	20	19	17	15			
MJS 80	MJ 80	0.60	0.80		47	42	38	34	31	29	26	24	22	19			
MJS 100	MJ 100	0.75	1		46	44	41	39	37	35	32	30	28	25	22	21	19
MJS 150	MJ 150	1.1	1.5		55	53	50	48	47	44	41	39	36	34	31	29	27

**H = TOTAL HEAD IN METERS.**

**Q = FLOW RATE**

# MQ

## SELF-PRIMING "JET" PUMPS (FOR DEEP WELL)

### PERFORMANCE RANGE

- ☒ flow rate up to 66 l/min.(4m<sup>3</sup>/h)
- ☒ head up to 50 m

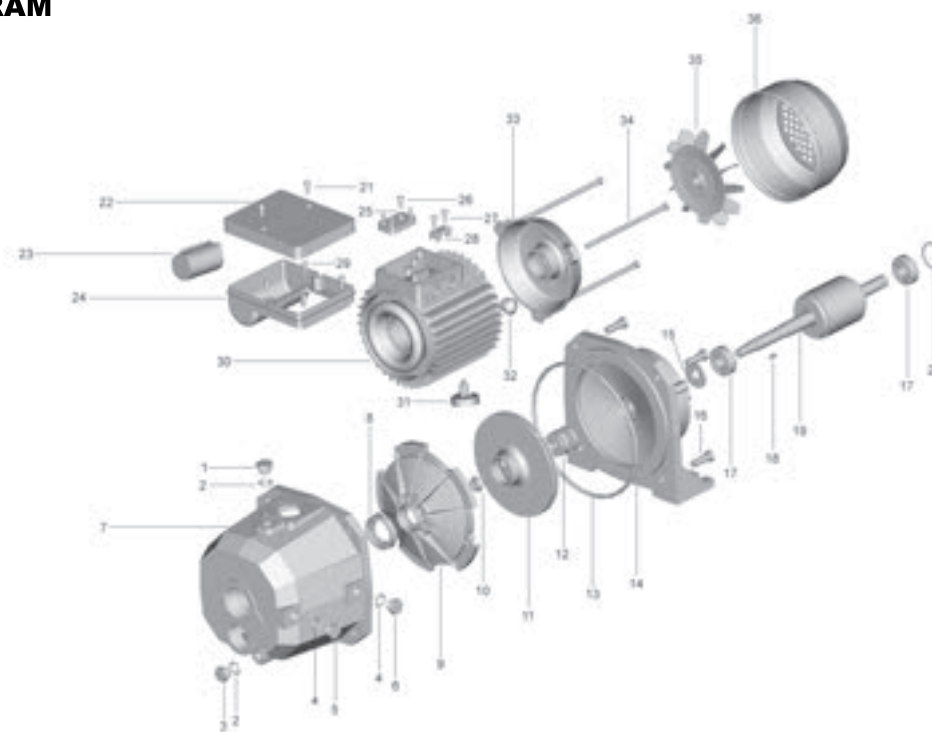
### OPERATING LIMITS

- ☒ suction lift up to 50 m
- ☒ fluid temperature up to 40°C
- ☒ maximum ambient temperature 40°C



**MQ255A-DP**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Charge plug	13	"O" ring	25	Terminal board
2	"O" ring	14	Pump support	26	Screw
3	Discharge plug	15	Drops guard	27	Screw
4	"O" ring	16	Bolt	28	Cable presser
5	Gauge plug	17	Bearing	29	Screw
6	Switch plug	18	Key	30	Casing with wound stator
7	Pump casing	19	Rotor	31	Stand
8	"O" ring	20	Split ring	32	Fairlead
9	Diffuser	21	Screw	33	Driving cap
10	Nut	22	Terminal cover	34	Tie-rod
11	Impeller	23	Capacitor	35	Fan
12	Mechanical seal	24	Terminal box	36	Fan cover

### WORKING PRINCIPLE

The **MQ** series are self-priming centrifugal pumps suitable for suction from deep wells. Self-priming is achieved using an ejector, housed in the jet body, which can be installed directly on the pump body or more often lowered in a well and connected to the pump body by two pipes. The total delivery produced by the closed centrifugal impeller is sent only partly to the delivery opening. The remaining (driving) water is recirculated through the ejector, which is connected to the suction chamber where it generates the necessary vacuum to draw up water from the point where the jet body is immersed. The water from the jet body opening mixes in the diffuser with recirculating water from the pump, thus increasing its pressure at the expense of the recirculating water, and is drawn into the pump through the suction pipe. When the jet body is directly installed on the pump body the **MQ** series works like the **MJ, MJSW** series.

### PUMP INSTALLATION AND APPLICATIONS

These pumps are suitable for pumping clean water and fluids which are not chemically aggressive to the pump components. The **MQ** series installed above ground with the jet body submerged guarantees functioning even when the static level of the well water falls as far as 50 meters below the level of the installed pump. For this reason these pumps are extremely reliable, economical and simple to use and find many uses in domestic applications and the automatic distribution of water from small and medium-sized surge tanks, watering gardens, etc. In all cases where the suction depth exceeds the normal capacity (9 meters) for surface pumps. Always install a retention valve on the jet body opening. It is advisable to install a valve on the pump delivery opening, to ensure adequate counter-pressure when working. Fill the pump body and the piping connecting the pump to the jet body with water before starting up. When drawing water from depths not exceeding 9 meters the jet body (4" ejector only) can be installed directly onto the pump body. In this case, when first starting up fill the pump body with water, without bothering to fill the suction piping. These pumps should be installed in a covered area, protected against the weather.

### PERFORMANCE

The wide range of pumps in the **MQ** series satisfies the most varied requirements with features such as:

- ✘ high heads compared to required power levels;
- ✘ high tolerance of the presence of entrained air in the fluid to be pumped;
- ✘ suction depth down to 50 meters in installations with submerged jet systems.

### STRUCTURAL CHARACTERISTICS

- ✘ cast iron body
- ✘ cast iron jet body
- ✘ brass impeller with centrifugal radial flow type
- ✘ stainless steel shaft (45# steel up to 0.75kw)
- ✘ stainless steel mechanical seal (graphite to ceramic or graphite to SiC)
- ✘ protection IP44
- ✘ with thermal overload protector in single phase motor
- ✘ NSK bearing or local bearing

**WARRANTY: 1 YEAR (according to our general sales conditions)**

### OPERATING DATA N=2900MIN<sup>-1</sup> LIFT H=METRES WITH EXTERNAL EJECTOR

PUMP MODEL	POWER		DISCHARGE HEAD (m) SUCTION DEPTH (m)	10	20	30	40	50
	KW	HP						
FLOW RATE LITRES/HOUR								
MQ195A-DP	0.4	0.55	10	2000	1300	500		
			15	1300	800	200		
			20	600	500	300		
			25	400	300	100		
MQ255A-DP	0.55	0.75	10	3000	2000	700		
			15	2000	1200	300		
			20	1000	800	400		
MQ370A-DP	0.75	1	30		1100	1000	700	
			40		900	800	200	
			10		4000	3000	2000	1700
			20		3300	2100	1700	1500
MQ505A-DP	1.1	1.5	30		2000	1800	1600	1100
			35		1300	1200	1100	900
			40		1100	1000	900	500
			50		900	800	700	400

# MQ

## SELF-PRIMING "JET" PUMPS (FOR DEEP WELL)

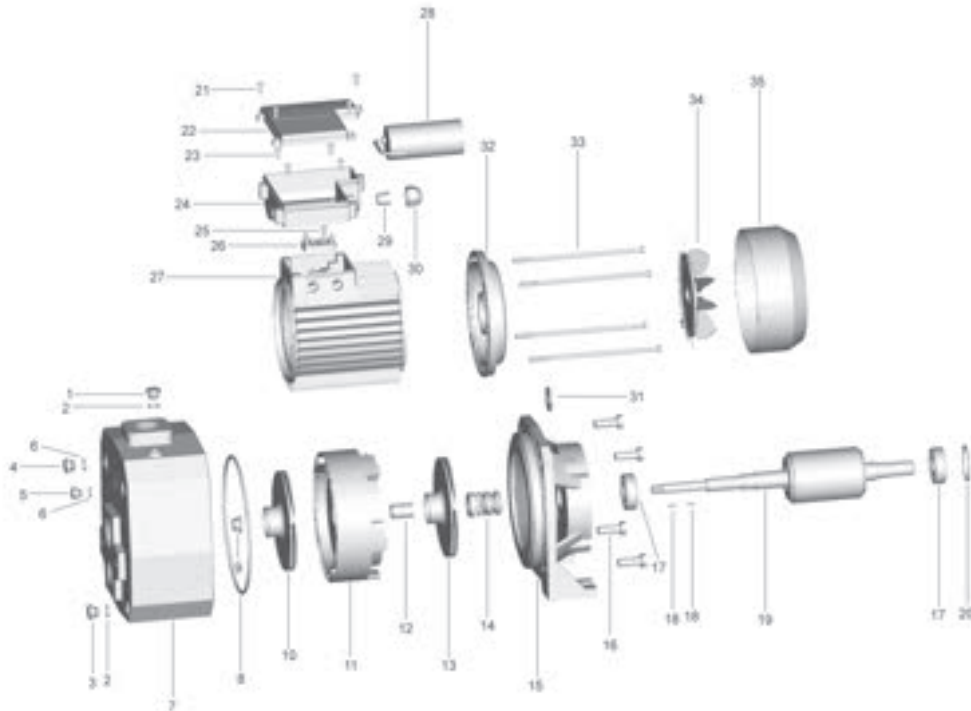
### STRUCTURAL CHARACTERISTICS

- ❖ cast iron body
- ❖ cast iron jet body
- ❖ stainless steel mechanical seal (graphite to SiC)
- ❖ stainless steel shaft
- ❖ protection IP44
- ❖ two brass or nylon impeller centrifugal radial type
- ❖ with thermal overload protector in single phase motor
- ❖ NSK bearing or local bearing

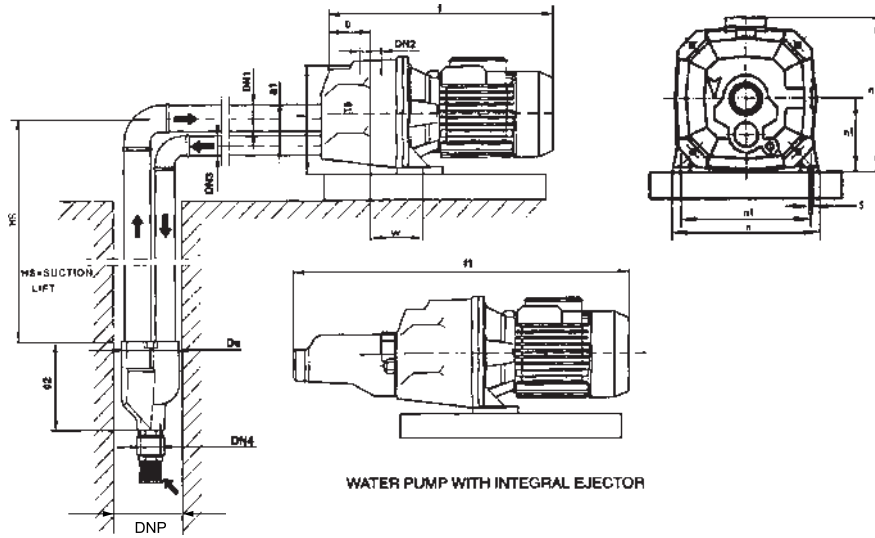


**MQ505A-DP**

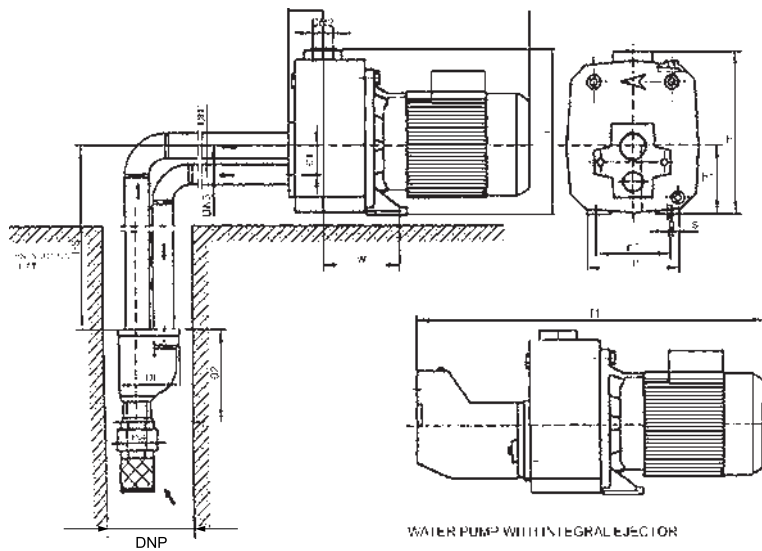
### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Charge plug	13	Impeller	25	Screw
2	"O" ring	14	Mechanical seal	26	Terminal board
3	Discharge plug	15	Pump support	27	Casing with wound stator
4	Switch plug	16	Bolt	28	Capacitor
5	Gauge plug	17	Bearing	29	Faillead
6	"O" ring	18	Key	30	Nut
7	Pump casing	19	Rotor	31	Drops guard
8	"O" ring	20	Split ring	32	Driving cap
9	Nut	21	Screw	33	Tie-rod
10	Impeller	22	Terminal cover	34	Fan
11	Diffuser	23	Screw	35	Fan cover
12	Shaft sleeve	24	Terminal box		



PUMP MODEL	DNP	DN1	DN2	DN3	DN4	DE	DIMENSION mm											
							O	O1	O2	f	f1	h	h1	l	n	n1	w	s
MQ195A-DP	4"	1 1/4"	1"	1"	1"	97	91	45	142	375	515	193	94	177	184	142	100	10
MQ255A-DP	4"	1 1/4"	1"	1"	1"	97	91	45	142	375	515	193	94	177	184	142	100	10
MQ370A-DP	4"	1 1/4"	1"	1"	1"	97	91	45	142	375	515	193	94	177	184	142	100	10



PUMP MODEL	DNP	DN1	DN2	DN3	DN4	DE	DIMENSION mm											
							O	O1	O2	f	f1	h	h1	l	n	n1	w	s
MQ505A-DP	4"	1 1/4"	1"	1"	1"	97	55	55	142	384	455	255	221	255	198	145	120	10

# MJDW

## SELF-PRIMING “JET” PUMPS (FOR DEEP WELLS)

### PERFORMANCE RANGE

☒ flow rate up to 60 l/min.(3.6m<sup>3</sup>/h)

### OPERATING LIMITS

☒ suction lift up to 45 m

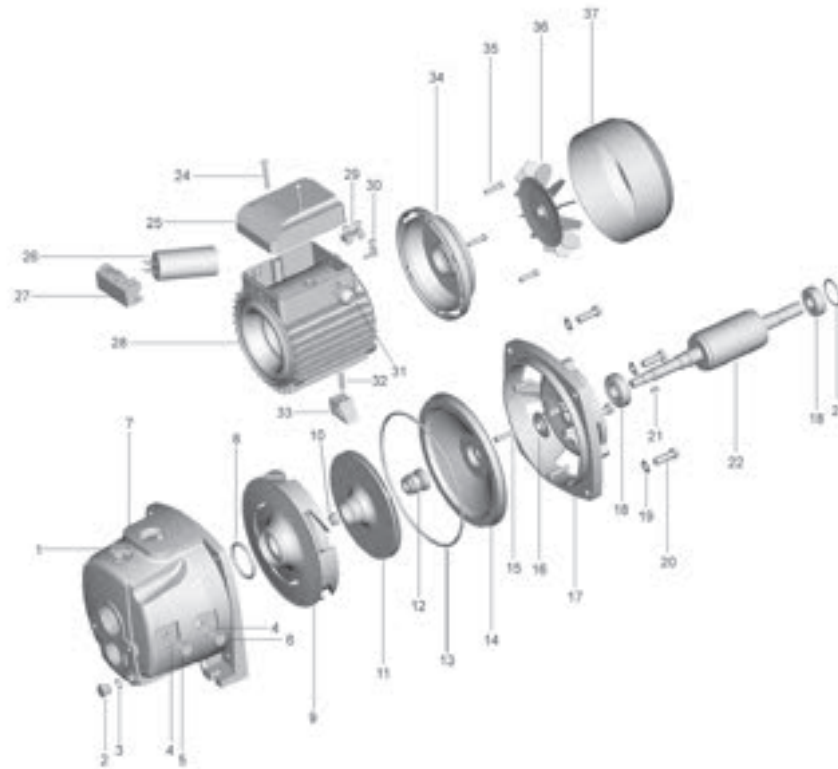
☒ fluid temperature up to 40°C

☒ maximum ambient temperature 40°C



**MJDW/1A**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Charge plug	13	“O” ring	25	Terminal cover	37	Fan cover
2	Discharge plug	14	Pump casing cover	26	Capacitor		
3	“O” ring	15	Bolt	27	Terminal board		
4	“O” ring	16	Drops guard	28	Casing with wound stator		
5	Gauge plug	17	Pump support	29	Cable presser		
6	Switch plug	18	Bearing	30	Screw		
7	Pump casing	19	Washer	31	Fairlead		
8	“O” ring	20	Bolt	32	Stand pin		
9	Diffuser	21	Key	33	Stand		
10	Nut	22	Rotor	34	Driving cap		
11	Impeller	23	Split ring	35	Bolt		
12	Mechanical seal	24	Bolt	36	Fan		

## **WORKING PRINCIPLE**

The **MJDW** series are self-priming centrifugal pumps suitable for suction from deep wells. Self-priming is achieved using an ejector, housed in the jet body, which can be installed directly on the pump body (only for 4" ejector) or more often lowered in a well and connected to the pump body by two pipes. The total delivery produced by the closed centrifugal impeller is sent only partly to the delivery opening. The remaining (driving) water is recirculated through the pump body by two pipes. The total delivery suction chamber where it generates the necessary vacuum to the delivery opening. The remaining (driving) water is recirculated through the ejector, which is connected to the diffuser with recirculating water from the pump, thus increasing its pressure at the expense of the recirculating water, and is drawn into the pump through the suction pipe. When the jet body is directly installed on the pump body (only for 4" ejector) the **MJDW** series works like the **MJSW** series.

## **PUMP INSTALLATION AND APPLICATIONS**

These pumps are suitable for pumping clean water and fluids which are not chemically aggressive to the pump components.

The **MJDW** series installed above ground with the jet body submerged guarantees functioning even when the static level of the well falls as far as 45 meter below the level of the installed pump. For this reason these pumps are extremely reliable, economical and simple to use and find many uses in domestic applications and the automatic distribution of water from small and medium-sized surge tanks, watering gardens, etc. In all cases where the suction depth exceeds the normal capacity (9 meters) for surface pumps. Always install a retention valve on the jet body opening. It is advisable to install a valve on the pump delivery opening, to ensure adequate counter pressure when working. Fill the pump body and the piping connecting the pump to the jet body with water before starting up. Only 4" ejector can be installed directly onto the pump body. In this case, when first starting up fill the pump body with water, without bothering to fill the suction piping.

These pumps should be installed in a covered area, protected against the weather.

## **PERFORMANCE**

The wide range of pumps in the **MJDW** series satisfies the most varied requirements with features such as:

- ❖ high heads compared required power levels;
- ❖ high tolerance of the presence of entrained air in the fluid to be pumped;
- ❖ suction depth down to 45 meters in installations with submerged jet systems.

In order to enhance performance in installations with different suction depths and well diameters, pumps can be supplied with:

- ❖ 3 different ejectors for depths down to 15m (P10), 20m (P20) and 45m (P30) for 4" wells;
- ❖ ejector for depths down to 45m and 2" wells.

## **STRUCTURAL CHARACTERISTICS**

- ❖ cast iron pump body,
- ❖ cast iron jet body.
- ❖ brass impeller with centrifugal radial flow type (technopolymer on request).
- ❖ 45# steel shaft
- ❖ stainless steel mechanical seal (graphite to SiC).
- ❖ with thermal overload protector in single phase motor
- ❖ protection IP44.
- ❖ NSK bearing or local bearing

**WARRANTY: 1 YEAR (according to our general sales conditions)**

# MJDW pumps for 2" wells (with submerged ejector)



## 2" EJECTOR

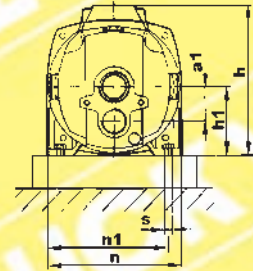
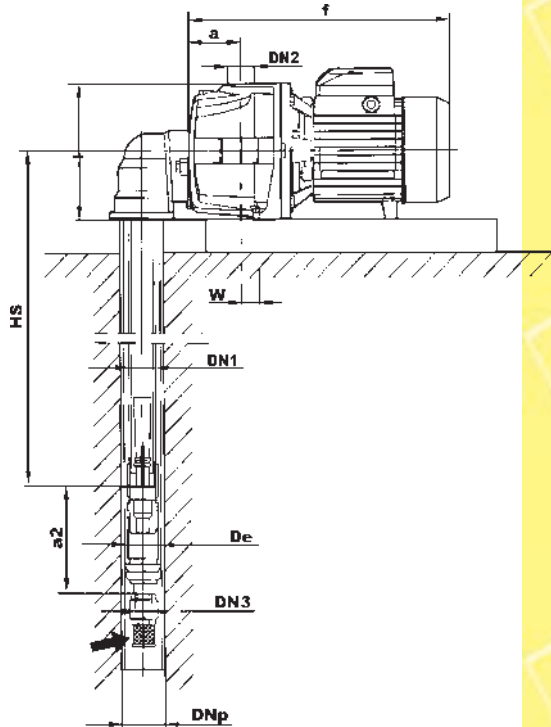
(WITH EXTERNAL EJECTOR)

### PERFORMANCE RANGE

- ☒ suction lift down to 35 m
- ☒ flow rate up to 1200 l/h

PUMP MODEL		POWER		HS m	FLOW RATE LITRES/HOUR										
Single phase	Three phase	KW	HP		0	120	240	360	480	600	720	840	960	1080	1200
					TOTAL DYNAMIC HEAD IN METERS										
MJDW/1A-2"	MJD/1A-2"	0.75	1	15	54	50	46	43	39	36	34	31	28	25	23
				20	40	35	31	28	25	23	20	18	16		
				25	35	31	28	26	23	20	17				
				30	28	24	21	17							
				35	23	18	15								

HS = SUCTION LIFE



PUMP MODEL		DIMENSIONS mm															
Single phase	Three phase	DNP	DN1	DN2	DN3	De	a	a1	a2	f	h	h1	l	n	n1	w	s
MJDW/1A	MJD/1A	2"	1 1/4"	1"	1"	49	75	46	123	374	206	97	184	190	149	24	10

# MJDW pumps for 4" wells (with submerged ejector)



## 4" EJECTOR

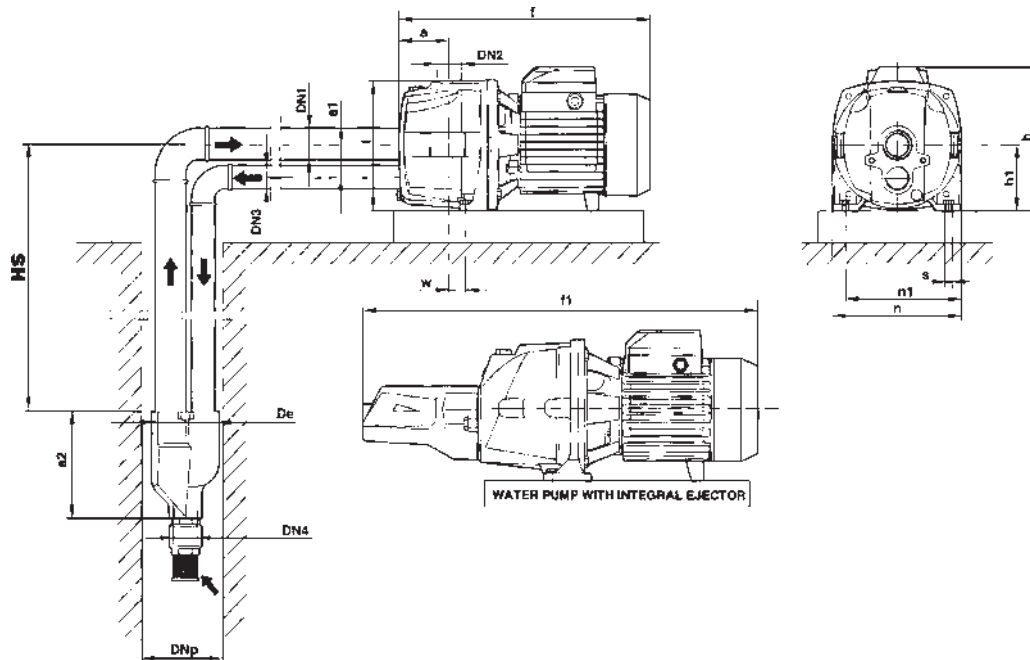
### PERFORMANCE RANGE

- ☒ suction lift down to 45m
- ☒ flow rate up to 1440 l/h

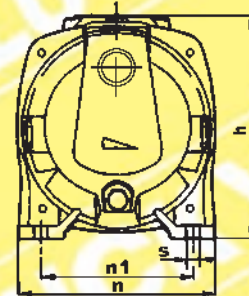
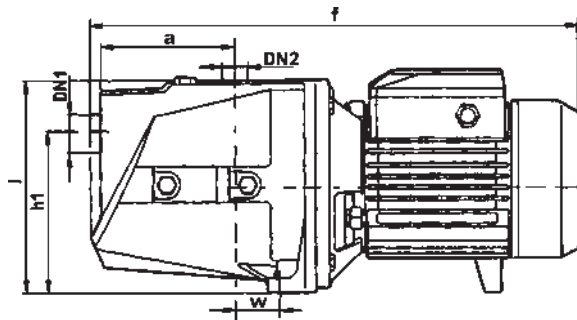
(WITH EXTERNAL EJECTOR)

PUMP MODEL		POWER		HS m	FLOW RATE LITRES/HOUR																									
Single phase	Three phase	KW	HP		0	120	240	360	480	600	720	840	960	1080	1200	1440	1560	1680	1800	1920	2040	2160	2400	2700	3000	3300	3600			
					TOTAL DYNAMIC HEAD IN METERS																									
MJDW/1A-4"	MJD/1A-4"	0.75	1	15	53	50	46	42	39	37	34	31	29	27	24	20														
				20	46	42	38	34	31	28	25	22	20	18	16															
				30	32	27	22	18	15.5																					
				35	25	18.5	14																							

HS = SUCTION LIFE

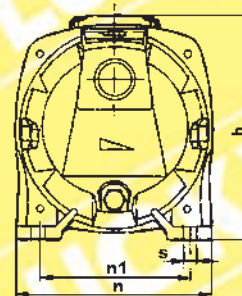
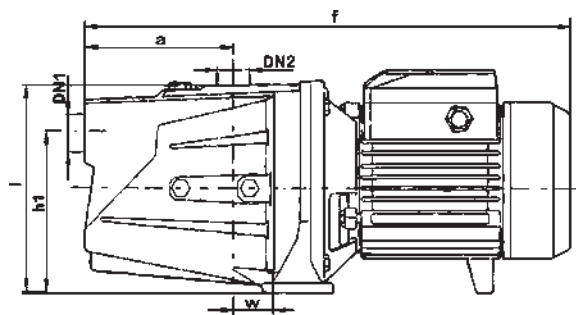


PUMP MODEL		DNP	DN1	DN2	DN3	De	DIMENSIONS mm											
Single phase	Three phase						a	a1	a2	f	f1	h	h1	l	n	n1	w	s
MJDW/1A	MJD/1A	4"	1 1/4"	1"	1"	96	75	46	148	350	-	201	92	181	180	144	24	10



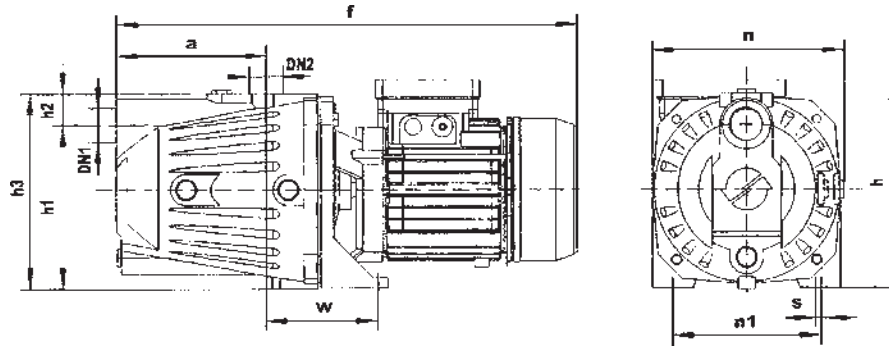
PUMP MODEL	
Single phase	Three phase
MJSW/1C-E	MJS/1C-E
MJSW/1B-E	MJS/1B-E
MJSW/10	MJS/10
MJSW/15	MJS/15

DN1	DN2	DIMENSIONS mm									
		a	f	h	h1	l	n	n1	w	s	
1"	1"	115	379	171	127	162	160	124	24	9	
1"	1"	115	379	171	127	162	160	124	24	9	
1"	1"	113.5	402	201	147	182	180	142	22	10	
1"	1"	113.5	402	201	147	182	180	142	22	10	

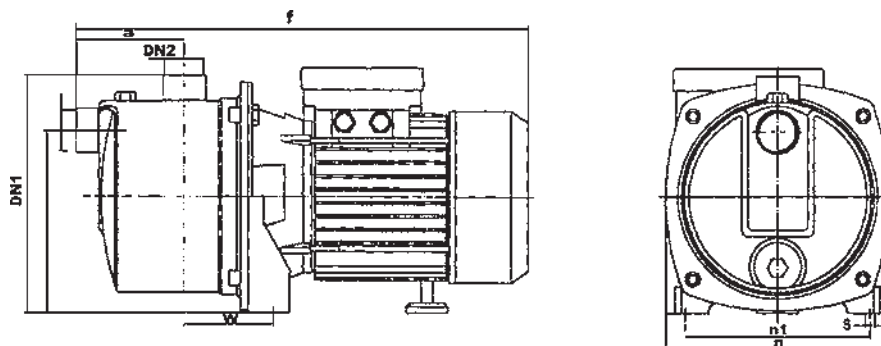


PUMP MODEL	
Single phase	Three phase
MJSW/3C	MJS/3C
MJSW/3B	MJS/3B

DN1	DN2	DIMENSIONS mm									
		a	f	h	h1	l	n	n1	w	s	
1 1/4"	1"	158	497	233	165	208	206	164	30	12	
1 1/4"	1"	158	513	241	176	216	206	165	30	12	



PUMP MODEL		DN1	DN2	DIMENSIONS mm									
Single phase	Three phase			a	f	h	h1	h2	h3	n	n1	w	s
MJ 60L	M 60L	1"	1"	138	406	190	154	24	178	180	142	103	10
MJ 80L	M 80L	1"	1"	138	432.5	197	154	24	178	180	142	108	10
MJ 100L	M 100L	1"	1"	138	432.5	197	154	24	178	180	142	108	10



PUMP MODEL		DN1	DN2	DIMENSIONS mm							
Single phase	Three phase			a	f	h	h1	n	n1	w	s
MJS60	MJ60	1"	1"	90	345	174	122	160	120	95	9
MJS80	MJ80	1"	1"	90	353	174	122	160	120	95	9
MJS100	MJ100	1"	1"	90	374	194	150	186	152	73.5	6

# POP

## SUBMERSIBLE DRAINAGE PUMPS (FOR CLEAR WATER)

### PERFORMANCE RANGE

- ❖ flow rate up to 140 l/min.(8.4m<sup>3</sup>h)
- ❖ dynamic head up to 9 m

### OPERATING LIMITS

- ❖ maximum operating depth 5m below water level
- ❖ maximum fluid temperature 40°C
- ❖ maximum passage for suspended solids  $\phi$ 10 mm
- ❖ maximum emptying level 14 mm from the bottom

**Innovative design and advanced technology are the main features behind these pumps, designed to be easy to use and extremely reliable.**



**POP2**

### WORKING PRINCIPLE

**POP** pumps are open impeller centrifugal submersible drainage pumps, designed for automatic use. The impeller, mounted on the end of the drive shaft, consists of a back disk and blades. The fluid enters the rotating blade channel via the suction strainer, where it moves radially from the centre outwards, acquiring energy both in the form of disk and increased speed. When it leaves the impeller the fluid is conveyed into the volute. Here part of the kinetic energy is transformed into pressure energy, and the fluid leaves the pump via the vertical delivery opening in the pump body. Correct motor cooling is ensured by the fluid being pumped.

### PUMP INSTALLATION AND APPLICATIONS

**POP** pumps are suitable for lifting clear water not containing abrasive substances. These pumps have been designed for easy use and are extremely reliable even when subjected to continuous use (e.g. in fountains), since the motor is fully cooled and has an ample reserve of power plus a double mechanical seal. The motor and the pump are easily removed, making maintenance and repair more simple.

**These pumps are particularly suitable for draining flooding in confined areas (basements, garages, etc.), emptying swimming pools, tanks and aquariums, waste household water disposal (dishwashers, washing machines), supplying garden fountains, small-scale irrigation for gardens in general from collection tanks and emptying sump pits.**

### PERFORMANCE

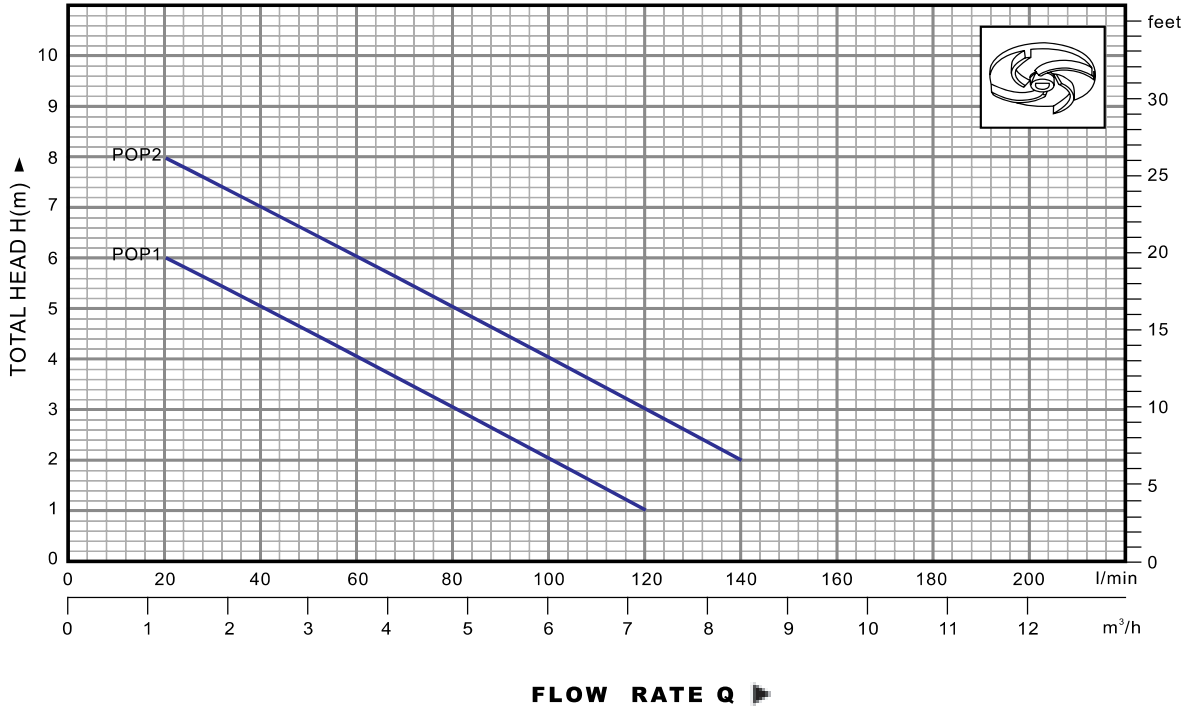
When designing performance levels for **POP** pumps, special attention was given to typical requirements for domestic usage.

- ❖ **performance curves specially designed for high delivery rates at the low installed power rating.**

### STRUCTURAL CHARACTERISTICS

- ❖ **delivery body** made from fiberglass reinforced technopolymer, particularly resistant to mechanical stress, knocks and corrosion,
- ❖ **suction strainer** made from fiberglass reinforced technopolymer, providing the support base for the pump.
- ❖ Technopolymer **hose joint** with screw fitting.
- ❖ **general electric Noryl gfn2v** technopolymer open **impeller**.
- ❖ **external float switch** for automatic pump operation.
- ❖ **45# steel shaft or stainless steel shaft.**
- ❖ **double mechanical seal** carbon/alumina on the pump side and sealing ring on the motor side (with barrier oil chamber to lubricate and cool the sealing surfaces in the absence of water).
- ❖ sealed induction **motor**, suitable for continuous duty with built-in thermal cutout relay (motor protector). **Insulation Class F** (provides the motor with a considerable overload tolerance and substantially increases the service life of motor itself). Cooling of motor assured by the liquid in which the pump is immersed.
- ❖ **protection IP 68**
- ❖ H05 RN-F Neoprene submersible **supply cable**. Supplied standard with 5 meters of cable and plug (10 meters on request).
- ❖ **construction and safety standards** in compliance with the EN 60 335-1 (IEC 335-1, CEI 61-150) EN 60034-1 (IEC34-1, CEI 2-3).

**PERFORMANCE CHART AT n=2900 rpm**

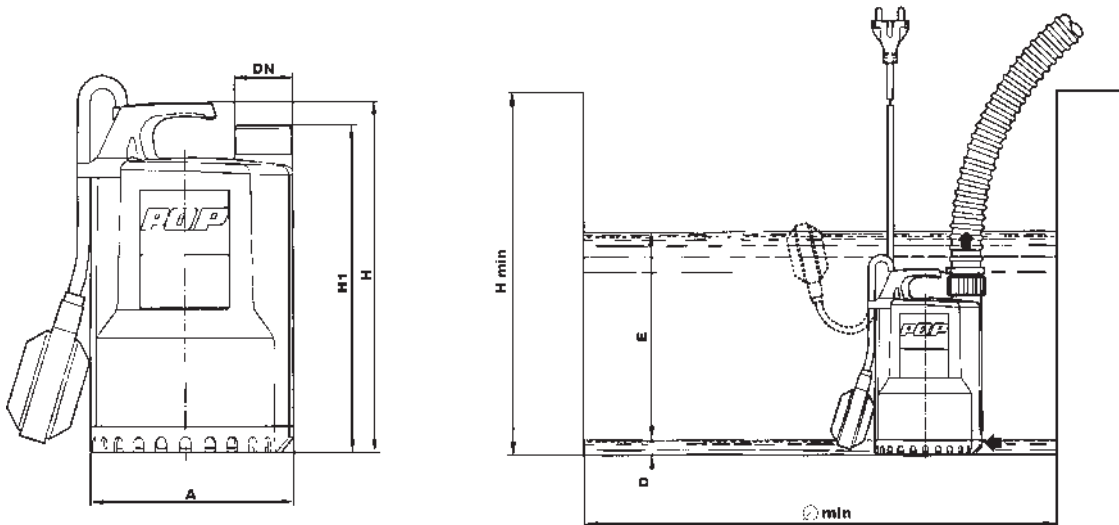


**PERFORMANCE DATA AT n=2900 1/min**

PUMP MODEL	POWER		Q m³/h	0	1.2	2.4	3.6	4.8	6.0	7.2	8.4
	KW	HP		0	20	40	60	80	100	120	140
POP 1	0.25	0.33	H	7	6	5	4	3	2	1	
POP 2	0.37	0.50	m	9	8	7	6	5	4	3	2

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**



PUMP MODEL	DN	DIMENSIONS mm						
		A	H	H1	Dmin	E	Hmin	∅ min
POP 1	1 1/4"	152	234	217	14	Adjustable	350	350
POP 2	1 1/4"	152	254	237	14	Adjustable	350	350

# SQP

# SUBMERSIBLE PERIPHERAL PUMP

## PERFORMANCE RANGE

- ※ Flow rate up to 40 l/min. (2.4m<sup>3</sup>/h)
- ※ Dynamic head up to 40m

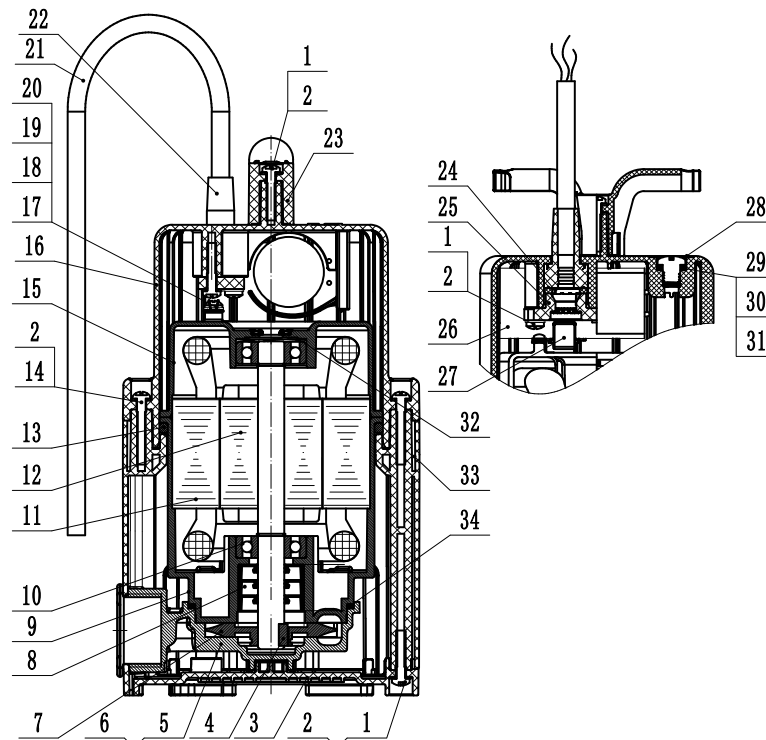
## OPERATING LIMITS

- ※ Maximum operating depth 5m below water level
- ※ Maximum fluid temperature 40°C



**SQP 50**

## DIAGRAM



No.	DESCRIPTION	No.	DESCRIPTION	No.	DESCRIPTION
1	Screw	13	"O" ring	25	Cable plate
2	Washer	14	Screw	26	Capacitor
3	Pedestal	15	Bearing cover	27	Capacitor clamp
4	Shaft key	16	Top cap	28	Label
5	Pump body subassembly	17	Serrated lock washer	29	"O" ring
6	Hexagon socket cap screw	18	Cold compacting	30	Screw
7	Impeller	19	Screw	31	Glue
8	Framework oil seal	20	Spring washer	32	Spring washer
9	Motor casing subassembly	21	Cable	33	Plastic support
10	Bearing	22	Cable jacket	34	"O" ring
11	Winding	23	Handle		
12	Rotor	24	Cable clamp		

## PUMPS INSTALLATION AND APPLICATIONS

These pumps are suitable for handling clean water not containing abrasive particles and fluids which are not chemically aggressive to the pump components. Reliable, economical and simple to use, they are suitable for domestic applications and the automatic distribution of water from surge tanks, watering gardens and for boosting insufficient mains water pressure and for sanitary applications. The hydraulic performance of these sturdy and compact pumps also makes them ideally suited for industrial applications, since they can be installed in conditions prohibitive for other pump types.

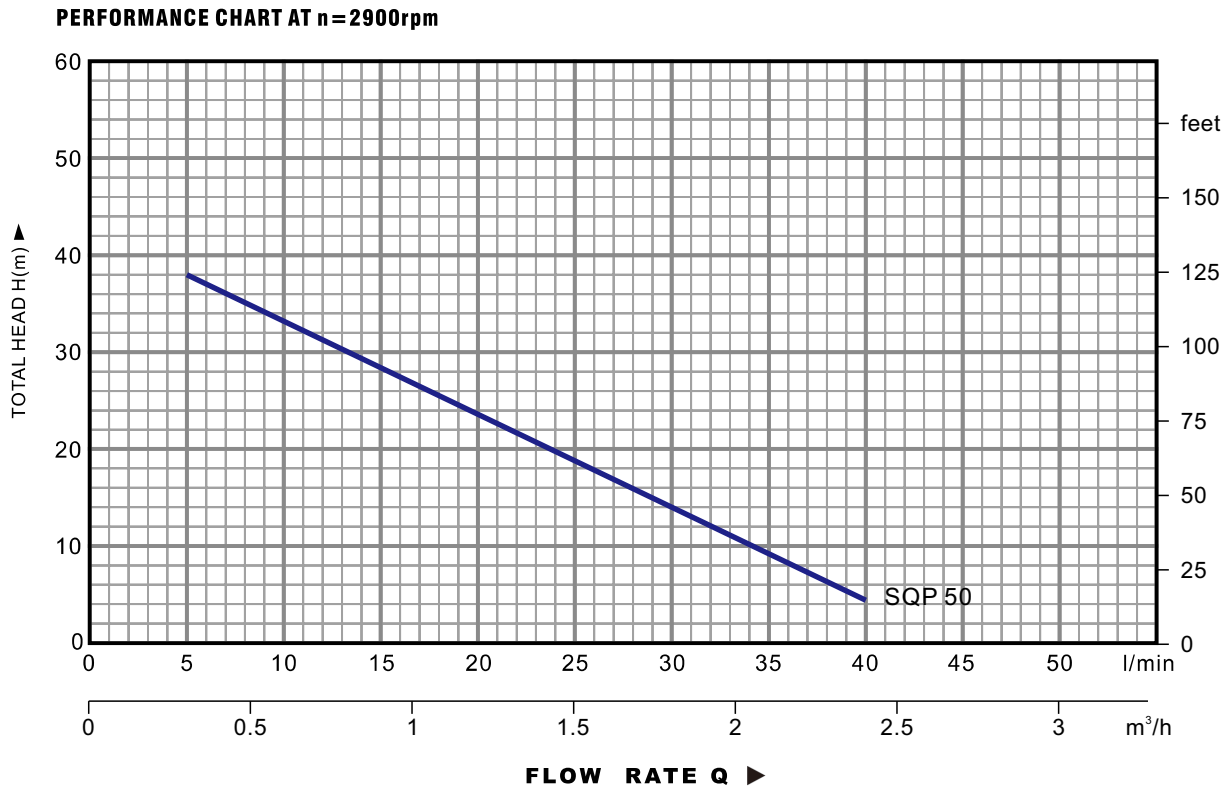
## PERFORMANCE

- ※ high heads with respect to power requirements.
- ※ stable operating curves, with small variations in delivery rates with respect to large variations in the pressure demand.
- ※ high tolerance of the presence of entrained air in the liquid being pumped.

## STRUCTURAL CHARACTERISTICS

- ※ plastic pump body
- ※ stainless steel mechanical seal (graphite to ceramic)
- ※ brass impeller with radial peripheral blades
- ※ protection IP68
- ※ 45# steel shaft
- ※ with thermal overload protector in single phase motor
- ※ NSK bearing or local bearing

**WARRANTY: 1 YEAR (according to our general sales conditions)**



PUMP MODEL	POWER		Q	0	0.3	0.6	0.9	1.2	1.5	1.8	2.1	2.4	3.0
	KW	HP	$\frac{Q}{m^3/h}$	0	5	10	15	20	25	30	35	40	50
SQP 50	0.37	0.5	H(m)	40	38	33.5	29	24	19.5	15	10	5	

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**

# POP VORTEX

## SUBMERSIBLE VORTEX PUMP (FOR DIRTY WATER)

### PERFORMANCE RANGE

- ❖ flow rate up to 180 l/min.(10.8m<sup>3</sup>/h)
- ❖ dynamic head up to 7 m

### OPERATING LIMITS

- ❖ maximum operating depth 5 m below water level
- ❖ maximum fluid temperature 40°C
- ❖ maximum passage for suspended solids  $\phi$  20mm
- ❖ maximum emptying level 25 mm from the bottom

**Design, technology and innovative materials are the main features behind pop vortex pump, designed to be easy to use and extremely reliable.**

**The vortex system permits to drain dirty water without fear of impeller clogging.**



**POP VORTEX**

### WORKING PRINCIPLE

**POP VORTEX** pump is a submersible vortex pump, for dirty water, designed mainly for domestic use.

Their operating principle is that of a centrifugal pump with a retracted **VORTEX** impeller. A large sized ring chamber with a threaded delivery opening is machined in the pump body and closed at the front by a cover, housing the suction opening, which is shaped to prevent suspended solid over a certain sized from entering the pump. Since the impeller is retracted with respect to the cover, water entering the front chamber lying between these two components assumes a vortex motion and is centrifuged into the ring chamber, leaving the pump via the delivery opening. This principle does not require the pumped liquid to pass directly through the impeller, enabling the pump to handle suspended solids without risk of clogging.

### PUMP INSTALLATION AND APPLICATIONS

**POP VORTEX** pump is suitable for lifting dirty water, not chemically aggressive to the pump components. This pump has been designed for easy use and it is extremely reliable even when subjected to continuous use. Since the motor is fully cooled. It is particularly suited for domestic use, to drain dirty water in all cases where suspended solids up to 20 mm have to be dealt with. **Recommended applications therefore include emptying of pools and tanks, disposal of domestic sewage, emptying of sump pits.**

### PERFORMANCE

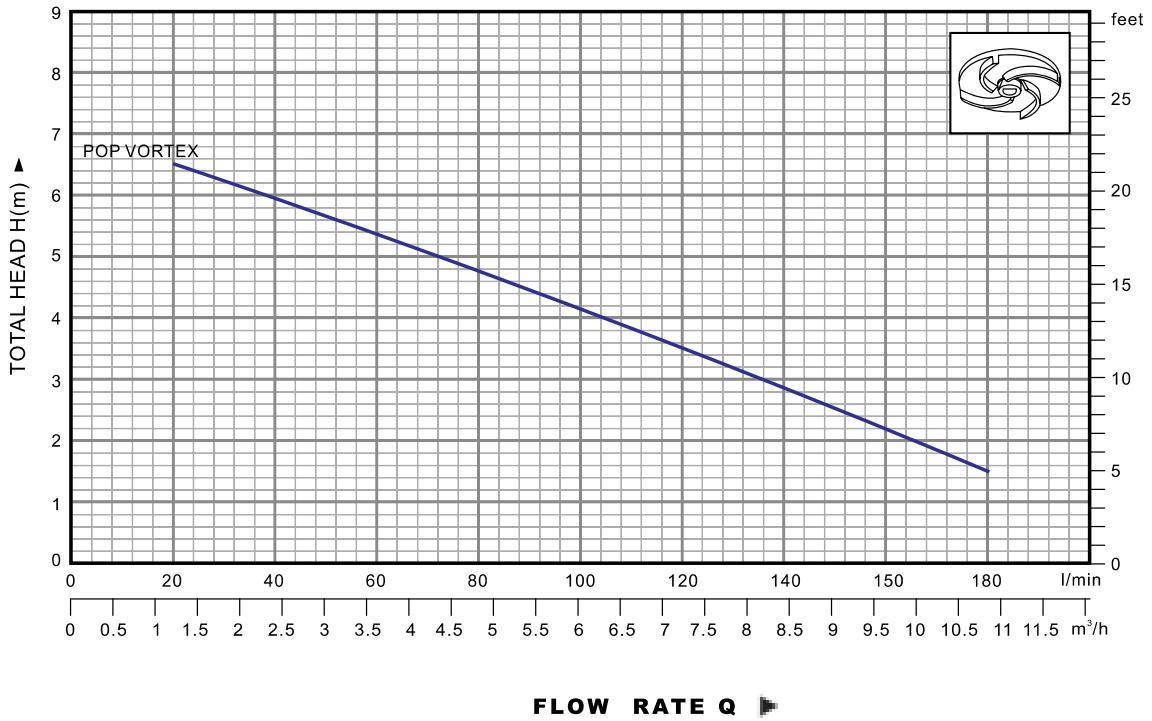
When designing performance levels for **POP VORTEX** pump, special attention was given to typical requirements for domestic usage.

- ❖ **performance curves specially designed for high delivery rates at the low installed power rating.**

### STRUCTURAL CHARACTERISTICS

- ❖ **delivery body** made from fibreglass reinforced technopolymer, particularly resistant to mechanical stress, knocks and corrosion, fitted with UNI 338 11/4 gas threaded vertical delivery opening.
- ❖ **suction strainer** made from fibreglass reinforced technopolymer, providing the support base for the pump.
- ❖ technopolymer **hose joint** with screw fitting.
- ❖ **general electric Noryl gfn2v** technopolymer open **impeller**.
- ❖ **external float switch** for automatic pump operation.
- ❖ **45# steel shaft or stainless steel shaft.**
- ❖ **double mechanical seal** carbon/alumina on the pump side and sealing ring on the motor side (with barrier oil chamber to lubricate and cool the sealing surfaces in the absence of water).
- ❖ sealed induction **motor**, suitable for continuous duty with built-in thermal cutout relay (motor protector). Insulation class F (provides the motor with a considerable overload tolerance and substantially increases the service life of the motor itself) cooling of motor assured by the liquid in which the pump is immersed.
- ❖ **protection IP 68.**
- ❖ "H05 RN-F" neoprene submersible **supply cable**, supplied standard with 5 metres of cable and plug (10 metres on request).
- ❖ **construction and safety standards** in compliance with the ne 60 335-1 (IEC335-1, CEI 61-50) IEC 34.

## PERFORMANCE CHART AT n=2900 rpm

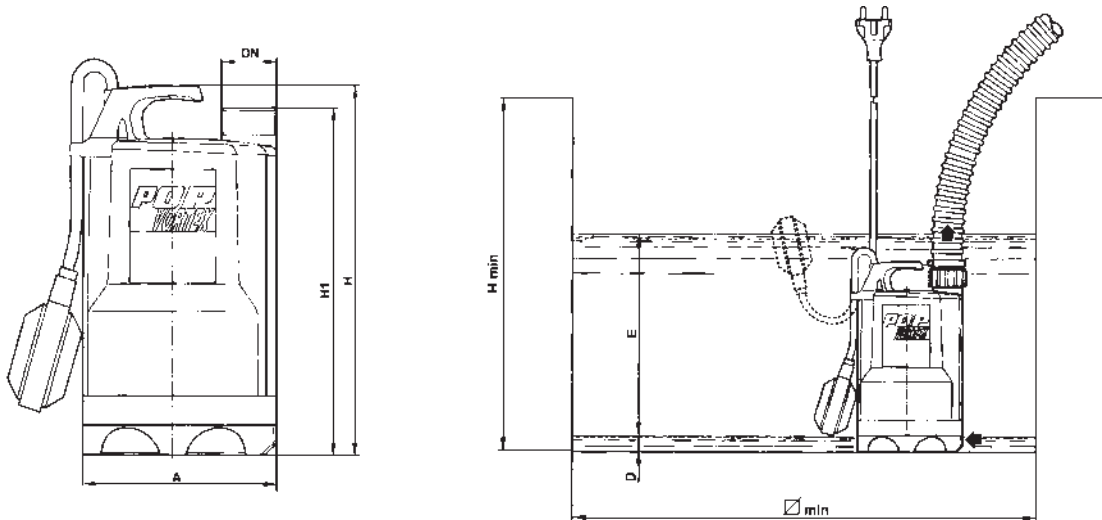


## PERFORMANCE DATA AT n=2900 1/min

PUMP MODEL	POWER		Q	0	1.2	2.4	3.6	4.8	6.0	7.2	8.4	9.6	10.8
	KW	HP	m³/h	0	20	40	60	80	100	120	140	160	180
POP VORTEX	0.37	0.50	H(m)	7	6.5	6	5.4	4.8	4.2	3.5	3	2.5	1.5

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**



PUMP MODEL	DN	DIMENSIONS mm						
		A	H	H1	Dmin	E	Hmin	Ø min
POP VORTEX	1 1/4"	152	285	268	25	Adjustable	350	350

# MVS

## SUBMERSIBLE SINGLE VANE PUMP (FOR SEWAGE)

### PERFORMANCE RANGE

- ❖ flow rate up to 500 l/min.(30m<sup>3</sup>h)
- ❖ dynamic head up to 12 m

### OPERATING LIMITS

- ❖ maximum operating depth 5 m below water level
- ❖ maximum fluid temperature 50 °C
- ❖ maximum passgae for suspended solids ⌀ 50 mm

**Submersible high efficiency single vane pump for professional use. Built completely in stainless steel and oversized, extremely reliable and suitable for continuous heavy duty service.**



**MVS10-1**

### WORKING PRINCIPLE

The **MVS 10-1** SINGLE VANE PUMP is designed for automatic use (single phase version).

The operating principle is that of pumps with a **single vane impeller**. This is mounted on the end of the drive shaft and enclosed in a large ring chamber, formed by the pump body and the base. The suction opening is in direct with the liquid to be pumped. The rotating impeller transmits kinetic energy to the liquid, which is centrifuged in the ring chamber, where part of the kinetic energy is transformed into pressure energy. The particular shape of the impeller optimizes efficiency.

### PUMP INSTALLATION AND APPLICATIONS

The **MVS10-1** submersible pump is designed to handle dirty water and sewage in domestic and civil applications. It is fitted with a **stainless steel single vane** impeller, and is suitable for pumping liquids containing suspended solids, including short fibres. **It is particularly recommended for the transfer of domestic sludge, reflux and surface water, water mixed with mud in areas such as: domestic housing, industrial applications and underground car parks.**

This pump is particularly dependable in fixed installations intended for automatic use. A purposely built pit with minimum dimensions **500x500x500 mm** is recommended for fixed installations, to give total drainage, and to allow correct operation of the automatic float switch. This system (standard equipment on the single phase pump) automatically starts the pump when the fluid reaches a preset level, stopping it once the fluid has been emptied.

### PERFORMANCE

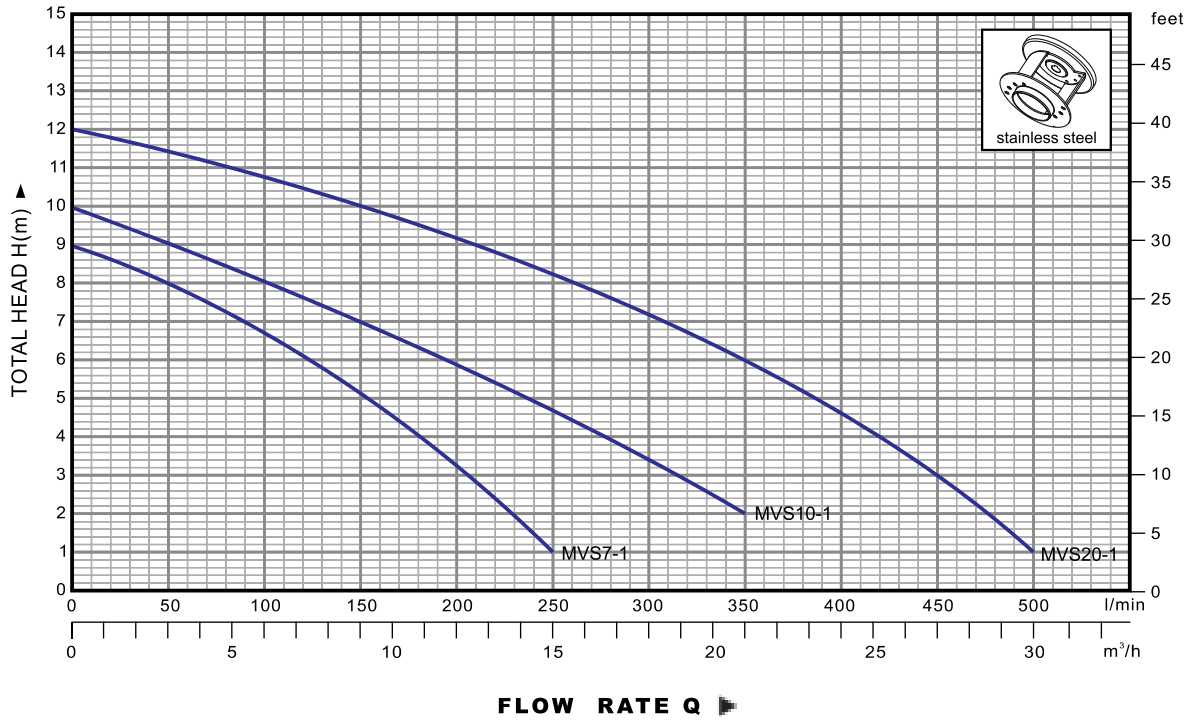
The **MVS10-1** pump has the following feature:

- ❖ a performance curve with particularly high delivery rates.

### STRUCTURAL CHARACTERISTICS

- ❖ stainless steel pump body.
- ❖ stainless steel motor sleeve.
- ❖ stainless steel base.
- ❖ stainless steel single vane impeller.
- ❖ stainless steel motor shaft.
- ❖ double mechanical seal silicon carbide/silicon carbide on the pump side and sealing ring on the motor side (with barrier oil chamber to lubricate and cool the sealing surfaces in the absence of water).
- ❖ sealed induction motor with double impregnated class F winding (ensuring extended motor life and wide range of use), designed for continuous duty, **even with the pump partially submerged (min. 250mm)**. The thermal cutout relay (motor protector) is incorporated in the single phase model.
- ❖ protection Ip68.
- ❖ Neoprene H07 RN-F submerged supply cable. Supplied standard with 5 meters of cable and plug on the single phase version (10 meters on request).
- ❖ construction and safety standards in compliance with EN 60 335-1 (IEC 335-1, CE61-150) EN 60034-1 (IEC 34-1, CEI 2-3).

## PERFORMANCE CHART AT n=2900 rpm

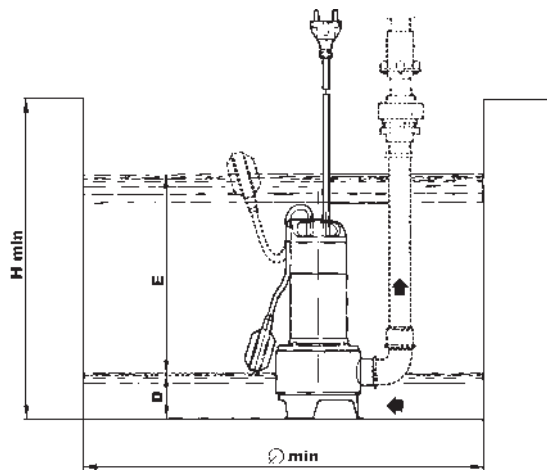
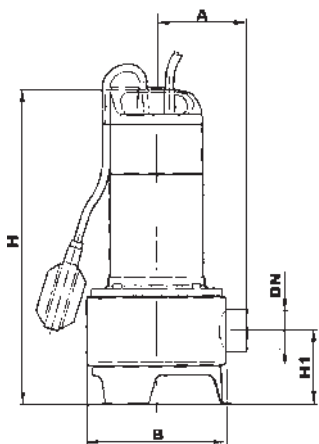


## PERFORMANCE DATA AT n=2900 1/min

PUMP MODEL		POWER		Q	0	3	6	9	12	15	18	21	24	27	30	
Single phase	Three phase	KW	HP	m³/h	0	50	100	150	200	250	300	350	400	450	500	
MVS7-1	MV7-1	0.55	0.75	H m	9	8	6.5	5	2.5	1						
MVS10-1	MV10-1	0.75	1		10	8.7	7.5	6.7	5.8	4.8	3.9	2				
MVS20-1	MV20-1	1.5	2		12	10.7	9.5	8.7	7.8	6.8	5.9	4.3	3	2	1	

H=TOTAL HEAD IN METERS.

Q=FLOW RATE



PUMP MODEL		DN	maximum suspended solids size	DIMENSIONS mm							
Single phase	Three phase			A	B	H	H1	Dmin	E	Hmin	Ø min
MVS7-1	MV7-1	2"	Ø 50mm	118	166	370	109	55	Adjustable	500	500
MVS10-1	MV10-1	2"	Ø 50mm	118	166	410	109	55	Adjustable	500	500
MVS20-1	MV20-1	2"	Ø 50mm	118	166	480	109	55	Adjustable	500	500

### PERFORMANCE RANGE

- ☒ flow rate up to 50 l/min.(3.0m<sup>3</sup>h)
- ☒ head up to 6 m

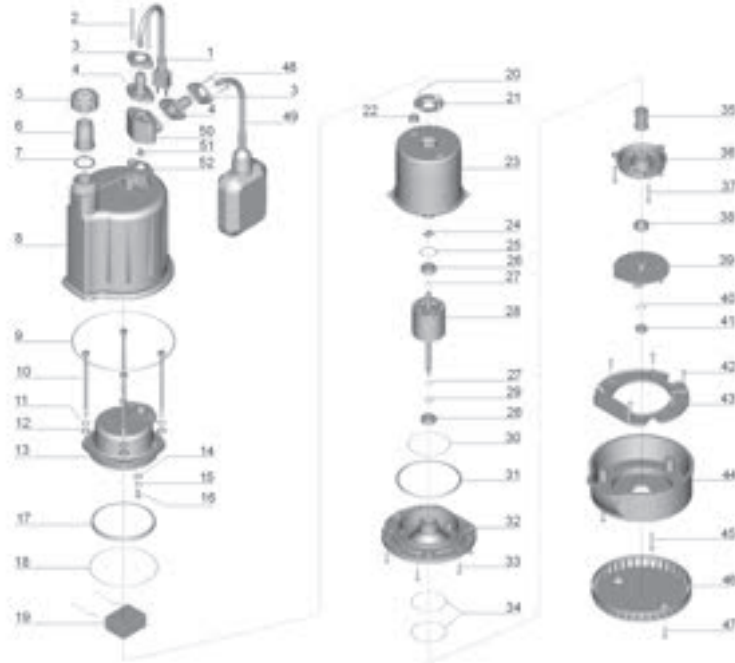
### OPERATING LIMITS

- ☒ maximum operating depth 5 m below water level
- ☒ maximum fluid temperature 40 °C
- ☒ maximum passgae for suspended solids  $\varnothing$  4 mm
- ☒ house connection:1"(1/2", 3/4")
- ☒ PH value in water: 6.5-8.0



**SP100F**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Cable	14	Washer	27	Snap ring	40	Washer
2	Screw	15	Stretching washer	28	Rotor	41	Nut
3	Flange	16	Screw	29	Word ring	42	Screw
4	Cable protector	17	Rubber washer	30	"O" ring	43	Pump cover
5	Nut	18	"O" ring	31	Rubber washer	44	Pump casing
6	Out-let connector	19	Capacitor	32	Connection part	45	Screw
7	Rubber washer	20	Screw	33	Screw	46	Fitter mesh
8	Motor shell	21	Press plate	34	"O" ring	47	Screw
9	"O" ring	22	Line protector	35	Mechanical seal	48	Screw
10	Bolt	23	Stator	36	Oil chamber cover	49	Float switch
11	Stretching washer	24	Thermal protector	37	Screw	50	Tees
12	Washer	25	Undulated washer	38	Oil seal	51	Hole bead
13	Capacitor cover	26	Bearing	39	Impeller	52	Rubber washer

### WORKING PRINCIPLE

**SP** pumps are half open impeller centrifugal submersible pumps, designed for automatic and non-automatic use. The impeller, mounted on the end of drive shaft, consists of a back disk and blades. The fluid enters the rotating blades channel via the suction strainer, where it moves radially from the centre outwards, acquiring energy both in the form of pressure and increased speed. When it leaves the impeller the fluid is conveyed into volute. Here part of the kinetic energy is transformed into pressure energy, and the fluid leaves the pump via the vertical delivery opening in the pump body. correct motor cooling is ensured by the fluid being pumped.

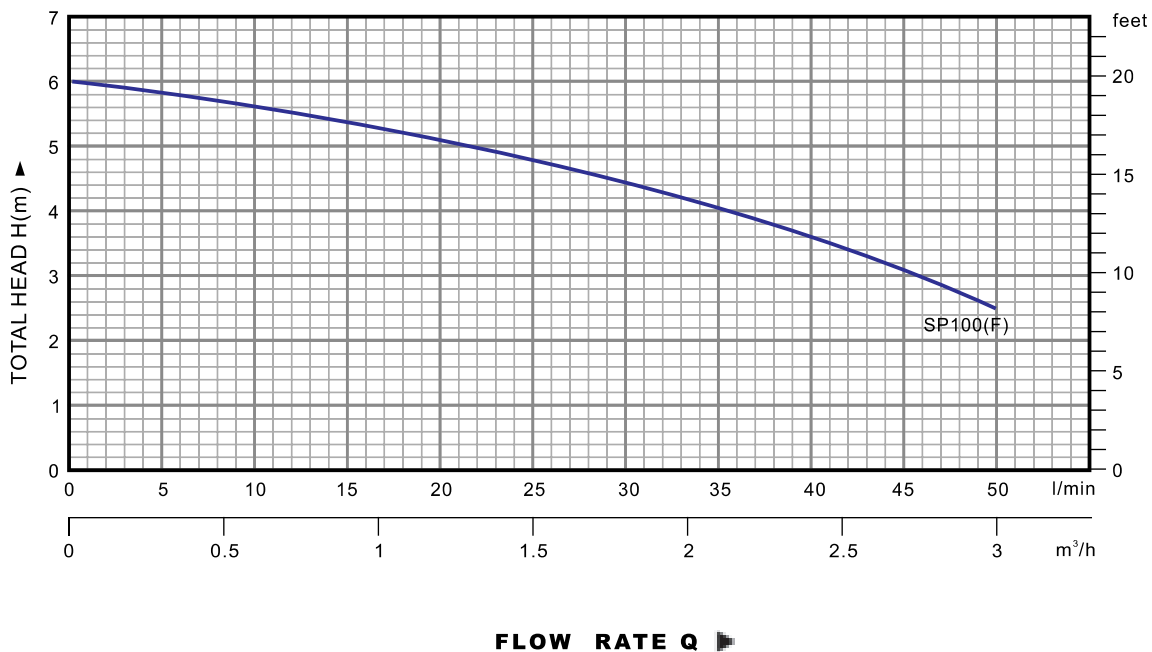
### PUMPS INSTALLATION AND APPLICATIONS

**SP** pumps are suitable for lifting clean water not containing abrasive substances. These pumps have been designed for easy use and are reliable even when subjected to continuous use. And the motor and the pump are easily removed, making maintenance and repair more simple. and these pumps are characterized by less in volume, light in weight and convenient in operation, it is fitted with multiple outlet pipes, and self-regulated according to the requirement of its discharge head and capacity, and can be used in a deadlock. (if it is fitted with float switch, it is possible to carry out the automatic control of open-shut action under no one's care ) single-phase capacitor-running asynchronous motor is used for this pump, and installed with a built-in thermal protector, and can be automatically cut off in the case of overheat or overcurrent. this ensuring safe and reliable running under worse circumstances. These pumps are suitable for draining flooding in confined areas, emptying swimming pools, tanks and aquariums, waste household water disposal, supplying garden fountains, small-scale irrigation for gardens in general from collection tanks and emptying sump pits.

### STRUCTURAL CHARACTERISTICS

- ❖ plastic pump body
- ❖ stainless steel mechanical seal (graphite to ceramic)
- ❖ with float switch or without
- ❖ light in weight
- ❖ reinforced nylon impeller with fibre half open type
- ❖ with thermal overload protector in single phase motor

**PERFORMANCE CHART AT n=2900 rpm**



PUMP MODEL	POWER		Q m³/h	0	0.5	1.0	1.5	2.0	2.5	3.0
	KW	HP		0	8.3	16.6	25	33.3	41.7	50
SP100(F)	0.1	0.15	H m	6	5.9	5.7	5.3	5.0	4.6	4.1

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**

# SEA

## PLASTIC SEWAGE PUMP FOR SEA WATER

### PERFORMANCE RANGE

- ☒ Flow rate up to 250 l/min. (15m<sup>3</sup>/h)
- ☒ Dynamic head up to 10m

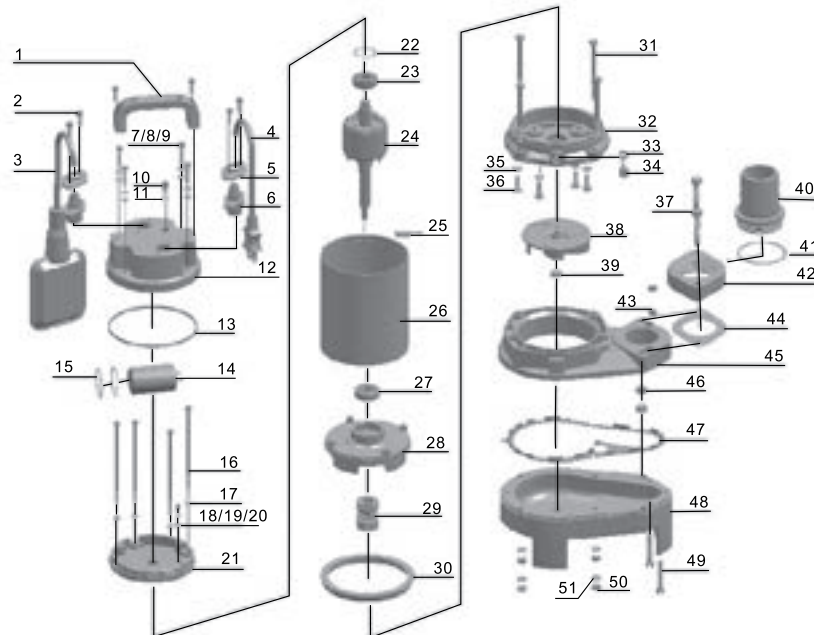
### OPERATING LIMITS

- ☒ Maximum operating depth 5m below water level
- ☒ Maximum fluid temperature 40°C
- ☒ Maximum passage for suspended solids Ø10mm



**SEA 200**

### DIAGRAM



No.	DESCRIPTION	No.	DESCRIPTION	No.	DESCRIPTION	No.	DESCRIPTION	No.	DESCRIPTION
1	Handle	12	Capacitor cover	23	Bearing	34	Screw	45	Upper pump body
2	Screw	13	Seal washer	24	Rotor	35	"O" ring	46	Nut
3	Float switch	14	Capacitor	25	Thermal protector	36	Screw	47	Rubber washer
4	Cable	15	"O" ring	26	Stator	37	Bolt	48	Lower pump body
5	Flange	16	Screw	27	Bearing	38	Impeller	49	Screw
6	Cable protector	17	Washer	28	Lower cover	39	Nut	50	Nut
7	Bolt	18	Screw	29	Mechanical seal	40	Out-let connector	51	Washer
8	Washer	19	Stretching washer	30	Seal washer	41	"O" ring		
9	"O" ring	20	Washer	31	Bolt	42	Connection nut		
10	Screw	21	Upper cover	32	Connection part	43	Nut		
11	"O" ring	22	Undulated washer	33	"O" ring	44	Rubber washer		

### WORKING PRINCIPLE

The **SEA** pump is submersible pump, for dirty water and sea water, designed mainly for domestic, aquatic farm, and industrial use. Being equipment with overload protection device, it is also featured by its long durable and safety for use.

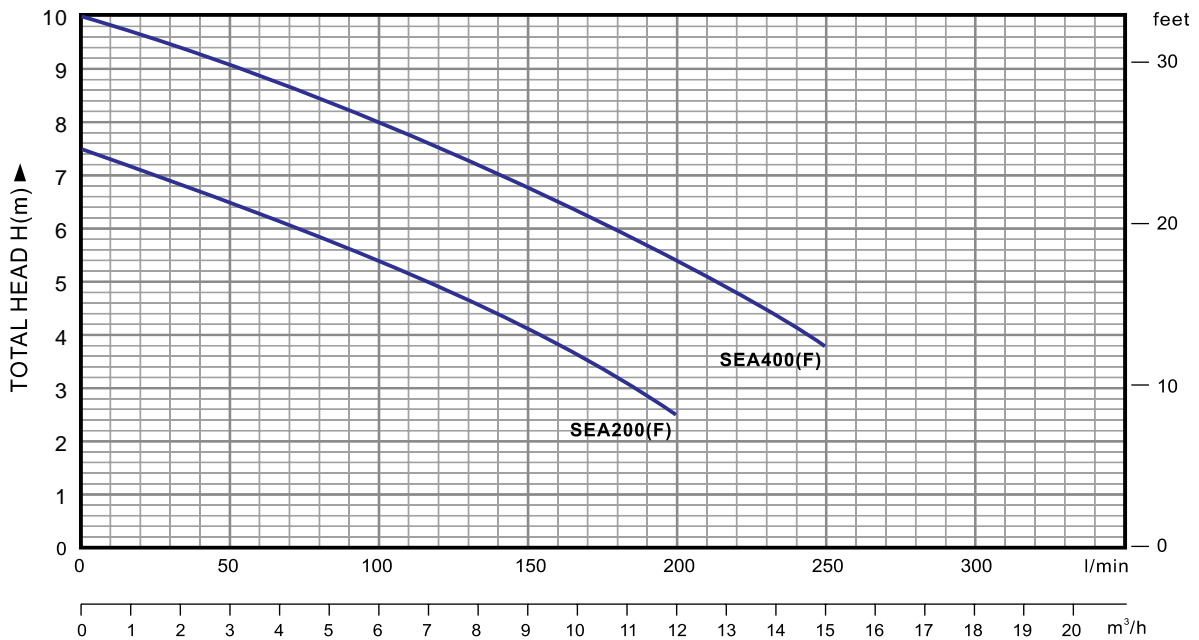
### PUMP INSTALLATION AND APPLICATIONS

The **SEA** pump is designed to handle dirty water, and sea water, which is not high chemically aggressive to the pump components, in all cases where suspended solids up to 10mm have to be dealt with. Recommended applications therefore including draining floods in confined areas such as baserooms and garages, and also pump domestic waste and the disposal of waste water, and for aquatic farms, low chemically liquids in factories, SEA pump is also widely used. These pumps are easy to install and dependable when automatically in fitted installation.

### STRUCTURE CHARACTERISTICS

- ☒ Reinforced polypropylene pump body and base
- ☒ Reinforced polypropylene impeller
- ☒ Stainless steel motor shaft
- ☒ Double mechanical seal
- ☒ Protection IP68
- ☒ With thermal overload protector in single phase motor

### PERFORMANCE CHART AT n = 2900 rpm



### FLOW RATE Q

MODEL	POWER		OUTLET	Q	m <sup>3</sup> /h					
	KW	HP			0	3	6	9	12	15
SEA200(F)	0.2	0.27	2"	H (m)	0	50	100	150	200	250
SEA400(F)	0.4	0.54			7.5	6.5	5.5	4.5	2.5	

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**

# FLOOR 450

## SUBMERSIBLE DRAINAGE PUMP (FOR CLEAR WATER)

### PERFORMANCE RANGE

- ☒ flow rate up to 75 l/min.(4.5m<sup>3</sup>/h)
- ☒ dynamic head up to 10m

### OPERATION LIMITS

- ☒ maximum operating depth 5m below water level
- ☒ maximum fluid temperature 40°C
- ☒ maximum passage for suspended solids  $\Phi$ 5mm
- ☒ maximum emptying level 10mm from the bottom

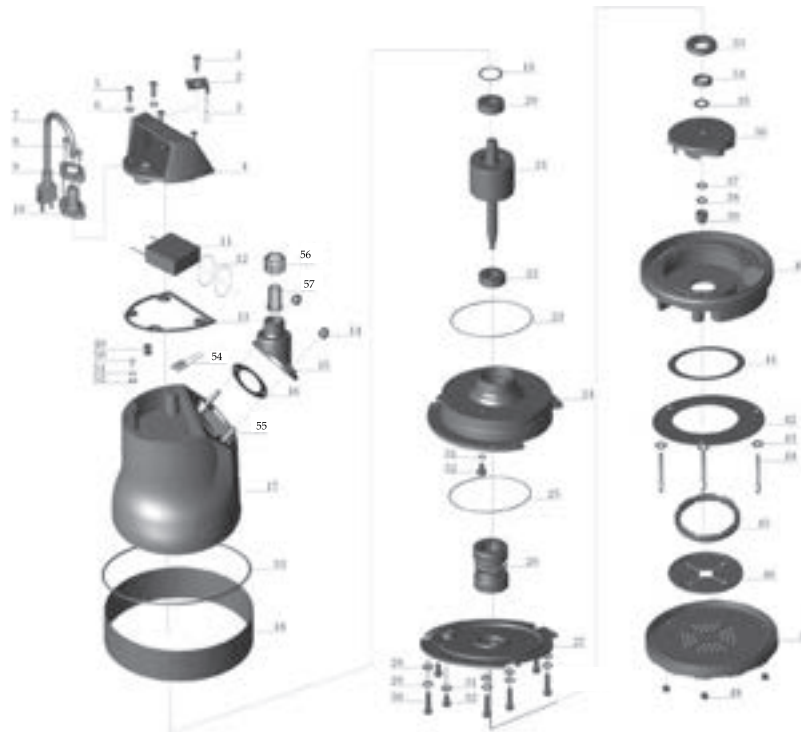
**Design, technology and innovative materials are the main features behind FLOOR pump, designed to be easy to use and extremely reliable.**

**The votex system permits to drain dirty water without fear of impeller clogging.**



**FLOOR 450**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Bolt	16	Gasket	31	"O"ring	46	Valve seat
2	Cable presser	17	Stator	32	Screw	47	Base plate
3	Cable clip	18	Pump casing guard	33	Oil seal	48	Nut
4	Handle	19	Undulated washer	34	Lop seal	49	Line protector
5	Bolt	20	Bearing	35	Washer	50	Screw
6	Washer	21	Rotor	36	Impeller	51	Spring
7	Cable	22	Bearing	37	Washer	52	Washer
8	Screw	23	"O"ring	38	Spring washer	53	"O"ring
9	Flange	24	Oil chamber	39	Nut	54	Thermal protector
10	Cable protector	25	"O"ring	40	Pump casing	55	Screw
11	Capacitor	26	Mechanical seal	41	Gasket	56	Nut
12	"O"ring	27	Oil chamber cover	42	Pump cover	57	Connector
13	Gasket	28	Washer	43	Gasket		
14	Nut	29	Spring washer	44	Bolt		
15	Outlet connector	30	Screw	45	Valve		

**PUMP INSTALLATION AND APPLICATION**

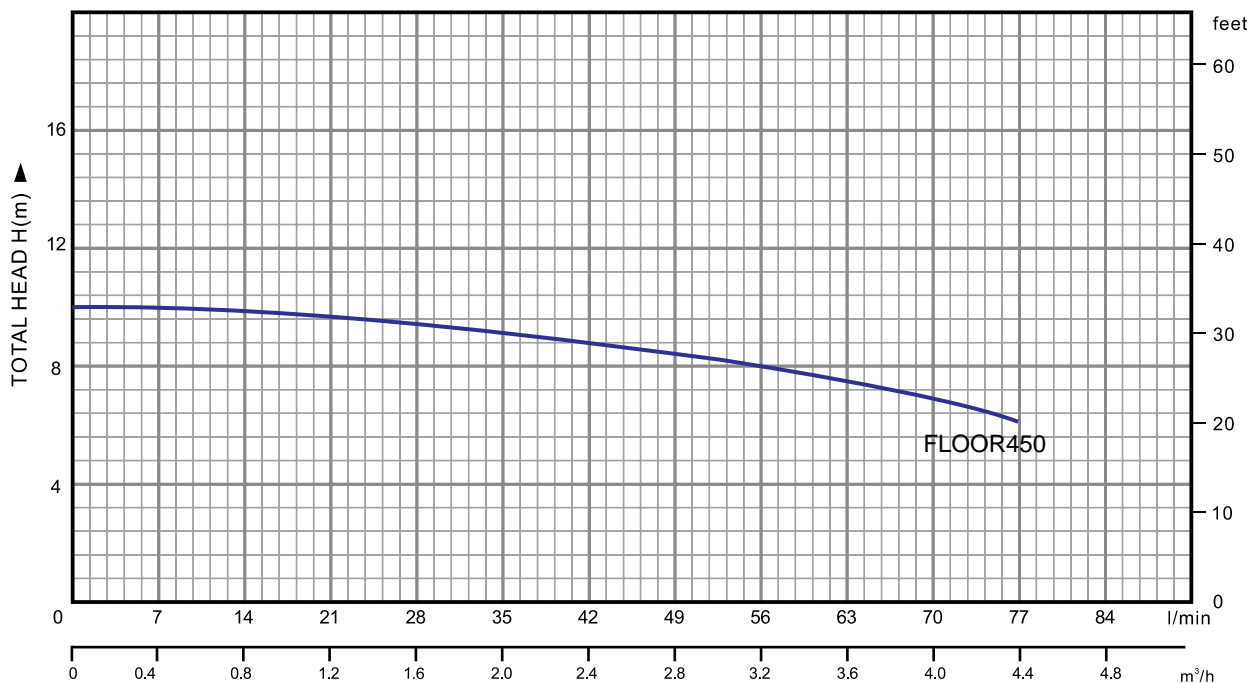
FLOOR pump is suitable for lifting clear and slightly dirty water not containing abrasive substances.

These pumps are designed for easy use and are extremely reliable even when subjected to continuous use, since the motor is fully cooled plus a double mechanical seal. Thanks to the capacity to drain water to 10mm , these pumps are suitable for domestic emergency use, for small flooded area and those applications where maximum drainage potential is requested.

**STRUCTURAL CHARACTERISTIC**

- ☒ Aluminum pump body
- ☒ Stainless steel mechanical seal (graphite to ceramic)
- ☒ With float switch or without
- ☒ Impeller: stainless steel impeller with rubber covered
- ☒ With thermal overload protection in single phase motor

**PERFORMANCE CHART AT n=2900 rpm**



**FLOW RATE Q**

PUMP MODEL	POWER		Q m³/h	0	0.75	1.5	2.25	3	3.75	4.5
	KW	HP		l/min	12.5	25	37.5	50	62.5	75
FLOOR450	0.45	0.6	H m	10	9.6	9.2	8.7	8.2	7.5	6.4

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**

# CLEAN450

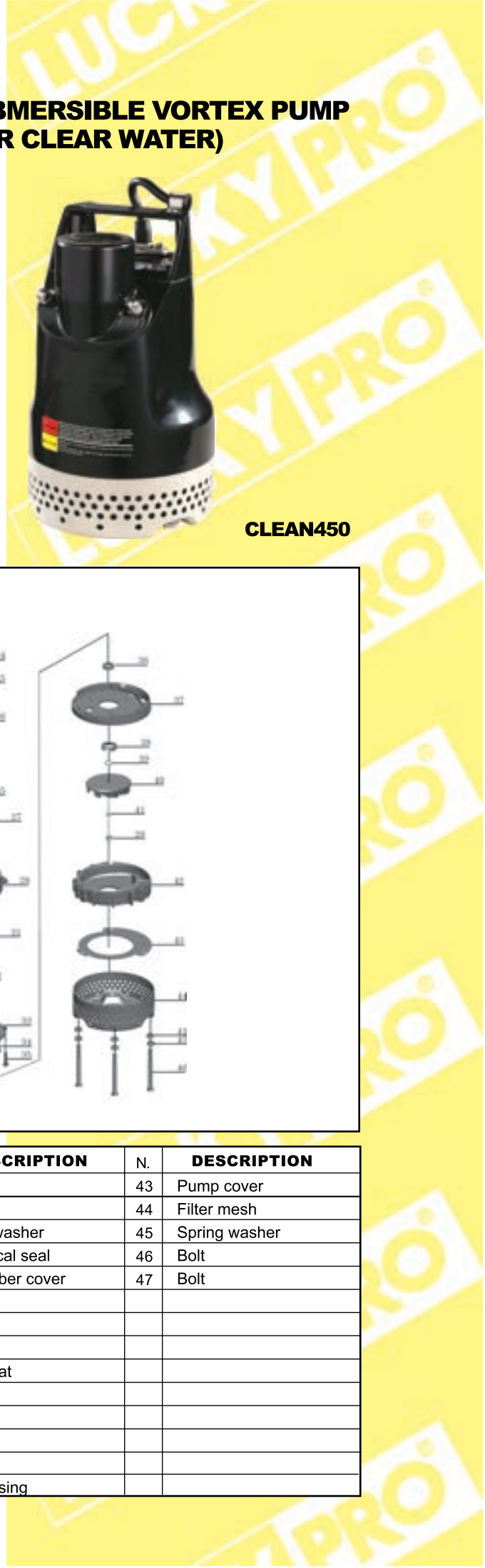
## SUBMERSIBLE VORTEX PUMP (FOR CLEAR WATER)

### PERFORMANCE RANGE

- ☒ flow rate up to 250 l/min. (15.0m³/h)
- ☒ dynamic head up to 11m

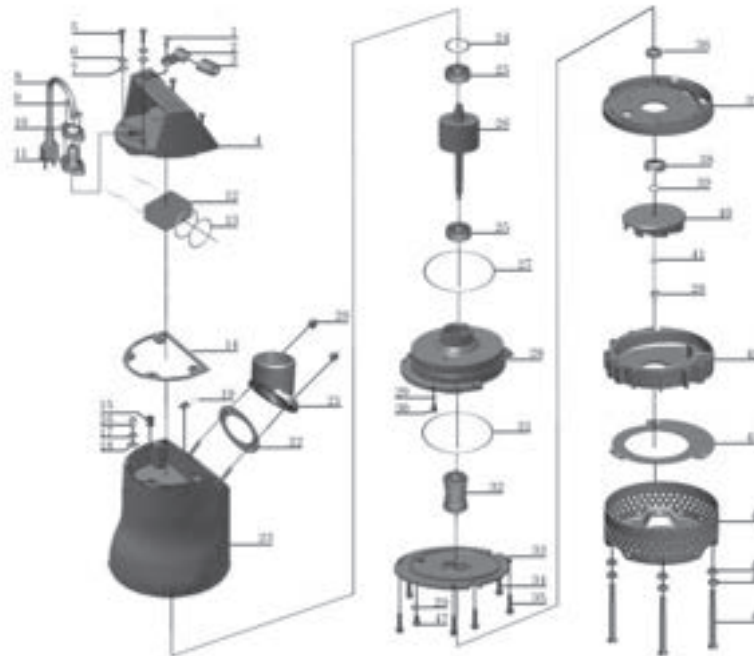
### OPERATION LIMITS

- ☒ maximum operating depth 5m below water level
- ☒ maximum fluid temperature 40°C



**CLEAN450**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Screw	15	Line protector	29	"O"ring	43	Pump cover
2	Cable presser	16	Screw	30	Bolt	44	Filter mesh
3	Protector	17	Spring washer	31	Rubber washer	45	Spring washer
4	Handle	18	Washer	32	Mechanical seal	46	Bolt
5	Bolt	19	Thermal protector	33	Oil chamber cover	47	Bolt
6	Spring washer	20	Nut	34	Screw		
7	Washer	21	Outlet connector	35	Screw		
8	Cable	22	Gasket	36	Oil seal		
9	Screw	23	Stator	37	Pump seat		
10	Flange	24	Undulated washer	38	Lip seal		
11	Cable protector	25	Bearing	39	Washer		
12	Capacitor	26	Rotor	40	Impeller		
13	"O"ring	27	"O"ring	41	Washer		
14	Gasket	28	Oil chamber	42	Pump casing		

**WORKING PRINCIPLE**

**CLEAN** pumps are half open impeller centrifugal submersible pumps, designed for automatic and non-automatic use. The Impeller, mounted on the end of drives shaft, consists of a back disk and blades. The fluid enters the rotating blades channel via the suction strainer, where it moves radially from the centre outwards, acquiring energy both in the form of pressure and increased speed. When it leaves the impeller the fluid is conveyed into volute. Here part pf the kinetic energy is transformed into pressure energy, and the fluid leaves the pump via the vertical delivery opening in the pump body. Correct motor cooling is ensured by the fluid being pumped.

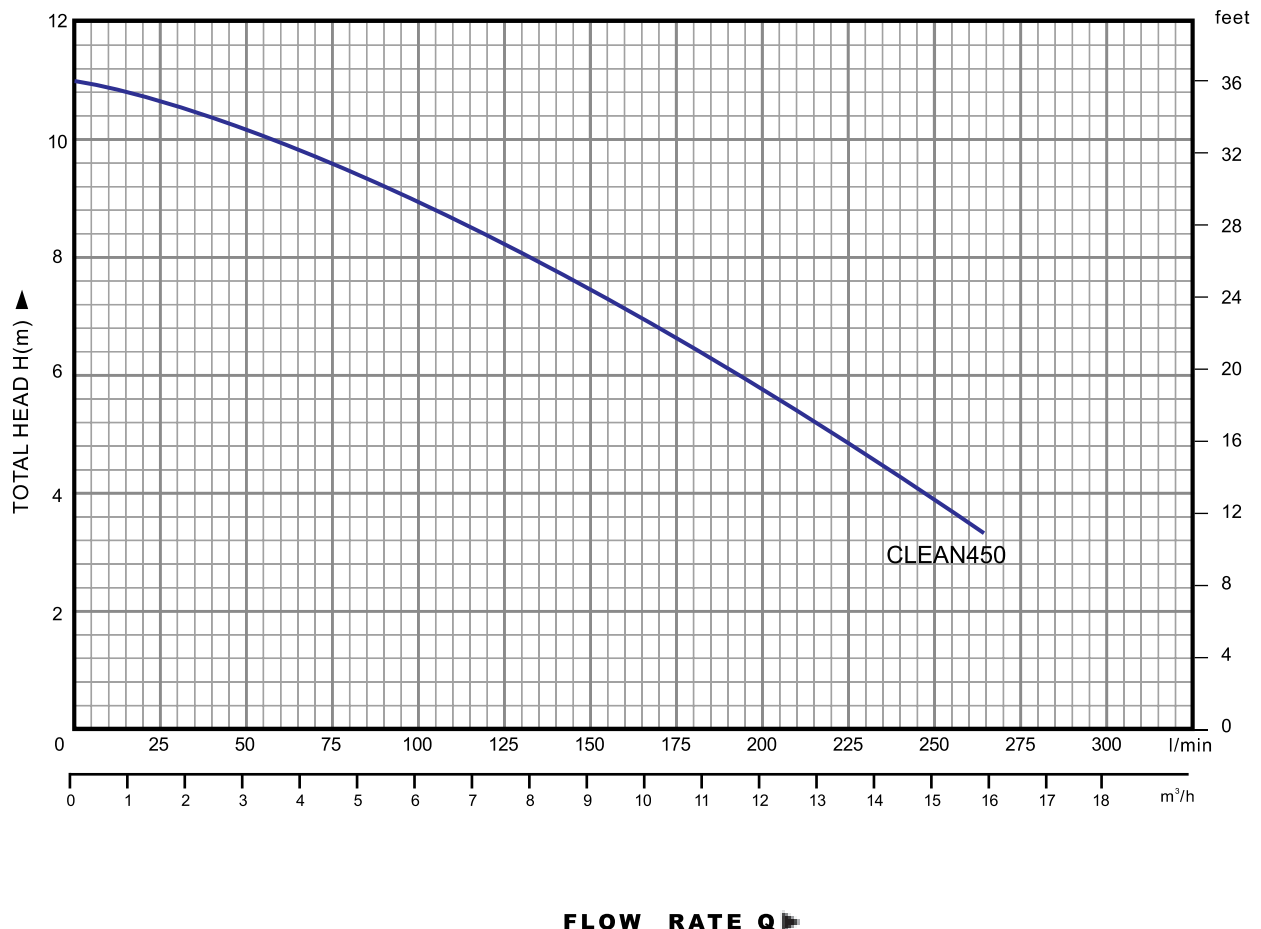
**PUMP INSTALLATION AND APPLICATION**

**CLEAN** pump is suitable for lifting clear water not containing abrasive substances. These pumps are designed for easy use and are extremely reliable even when subjected to continuous use, since the motor is fully cooled plus a double mechanical seal. These pumps are suitable for domestic emergency use, for small flooded area and for all those applications where maximum drainage potential is requested.

**STRUCTURAL CHARACTERISTIC**

- ⊗ Aluminum pump body
- ⊗ Stainless steel mechanical seal (graphite to ceramic)
- ⊗ With float switch or without
- ⊗ Impeller: stainless steel impeller with rubber covered
- ⊗ With thermal overload protection in single phase motor

**PERFORMANCE CHART AT n=2900 rpm**



PUMP MODEL	POWER		Q m³/h	0	3	6	9	12	15
	KW	HP		0	50	100	150	200	250
CLEAN450	0.45	0.6	H m	11	10.2	9	7.6	5.8	3.5

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**

# SS

## STAINLESS STEEL SUBMERSIBLE PUMPS

### PERFORMANCE RANGE

- ☒ flow rate up to 333 l/min.(20 m<sup>3</sup>/h)
- ☒ head up to 12 m

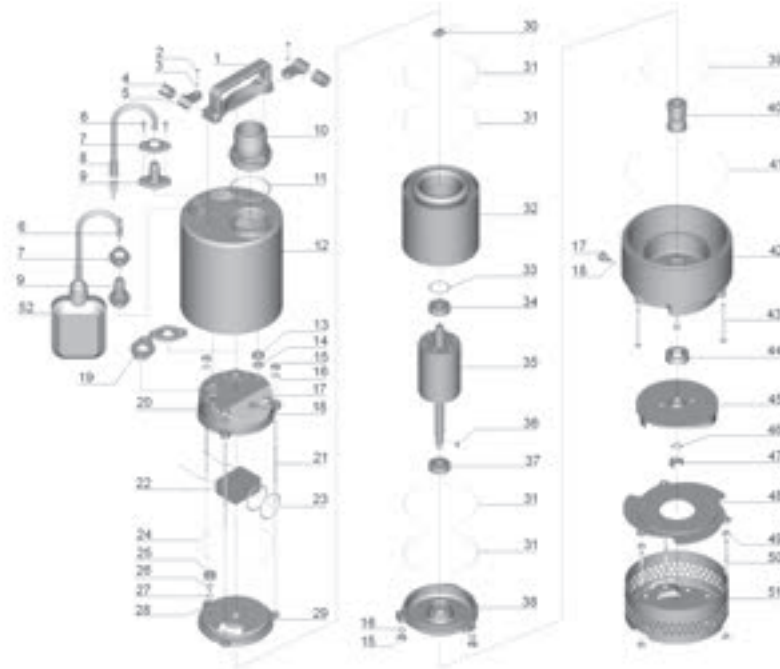
### OPERATING LIMITS

- ☒ maximum operating depth 5 m below water level
- ☒ maximum fluid temperature up to 40 °C
- ☒ for clean water usage
- ☒ for the full stainless steel type can be used in sea water
- ☒ can run till the pool is empty



**SS700**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Handle	14	Washer	27	Stretching washer	40	Mechanical seal
2	Bolt	15	Nut	28	Washer	41	"O"ring
3	Washer	16	Washer	29	Upper cover	42	Pump casing
4	Protector	17	Screw	30	Thermal protector	43	Screw
5	Cable presser	18	"O"ring	31	"O"ring	44	Oil seal
6	Screw	19	Rubber washer	32	Stator	45	Impeller
7	Flange	20	Capacitor cover	33	Undulated washer	46	Washer
8	Cable	21	Bilateral bolt	34	Bearing	47	Nut
9	Cable protector	22	Capacitor	35	Rotor	48	Pump cover
10	Out-let connector	23	"O"ring	36	Key	49	Nut
11	"O"ring	24	"O"ring	37	Bearing	50	Bilateral bolt
12	Motor shell	25	Line Protector	38	Lower cover	51	Filter mesh
13	Rubber washer	26	Screw	39	"O"ring	52	Float switch

### WORKING CONDITION

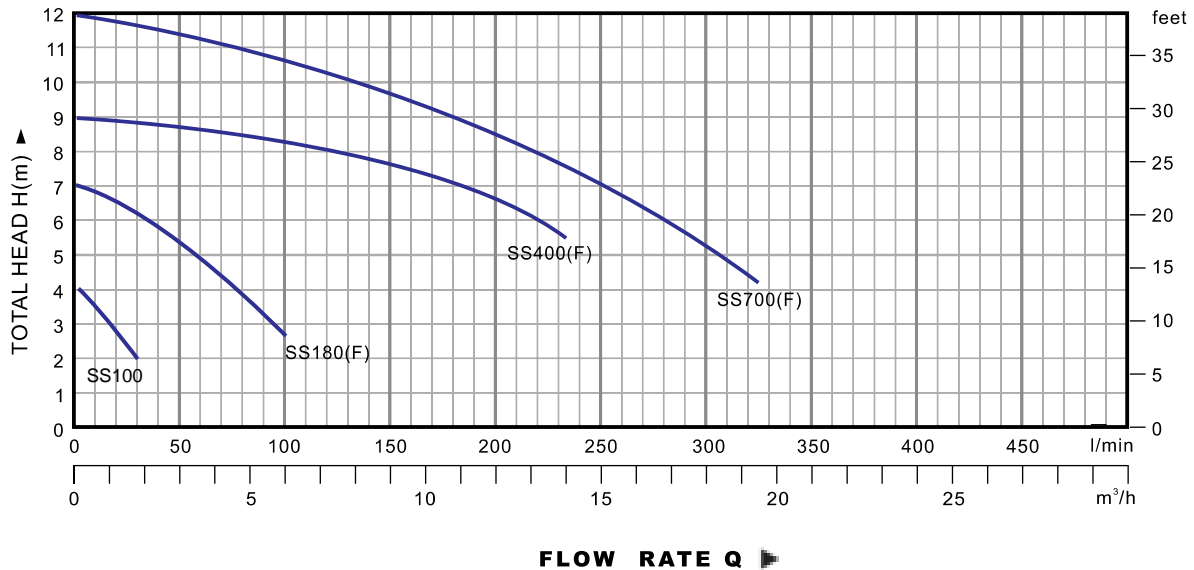
- ☒ sea level elevation:below 1000 m
- ☒ viscosity should be less than 0.5 pa.s
- ☒ volume ratio of mixed sandy soil should be below than 2%

**SS** series stainless steel submersible pumps can be used for garden watering,oxygenating of water cluster box,or in supplying and draining water for ordinary places,and characterized by corrosion resistance,small volume,light weight and convenient operation. It is fitted with multiple water-outlet pipes,and self-regulated according to the requirements of its lift and flow,and can be used at a deadlock (It is fitted with a floating switch. So it is possible to carry out the automatic control of start-stop action under no one's care.)Single-phase capacitor-running asynchronous motor is equipped in this pump and installed with a built-in thermal protector,and can be automatically cut-off in the case of overheat or overcurrent,thus ensuring safe and reliable running under worse circumstances.

### STRUCTURAL CHARACTERISTICS

- ☒ stainless steel pump body
- ☒ stainless steel mechanical seal (graphite to ceramic or SiC to graphite)
- ☒ stainless steel shaft
- ☒ with float switch or without
- ☒ stainless steel impeller or cast iron impeller
- ☒ with thermal overload protector in single phase motor

**PERFORMANCE CHART AT n=2900 rpm**



PUMP MODEL	POWER		Q m³/h	Flow Rate (l/min)															
	KW	HP		0	1	2	3	4	5	6	8	10	12	14	16	18	20		
Single phase			l/min	0	16.6	33.3	50	66.7	83.3	100	133.4	166.6	200	233.1	266.8	299.7	333.2		
SS100	0.1	0.13	H M	4	3.2	2													
SS180 (F)	0.18	0.25		7	6.5	6	5.4	4.7	3.8	2.8									
SS400 (F)	0.37	0.5		9	8.8	8.7	8.6	8.5	8.4	8.3	8	7.2	6.5	5.5					
SS400S (F)	0.37	0.5		9	8.8	8.7	8.6	8.5	8.4	8.3	8	7.2	6.5	5.5					
SS700 (F)	0.75	1		12	11.8	11.6	11.5	11.2	10.9	10.5	9.9	9.2	8.4	7.6	6.5	5.4	4.2		
SS700S (F)	0.75	1		12	11.8	11.6	11.5	11.2	10.9	10.5	9.9	9.2	8.4	7.6	6.5	5.4	4.2		

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**

# 2SS

## TWO-STAGE STAINLESS STEEL SUBMERSIBLE PUMPS (HIGH HEAD)

### PERFORMANCE RANGE

- ☒ flow rate up to 266.7l/min. (16 m<sup>3</sup>/h)
- ☒ head up to 38m

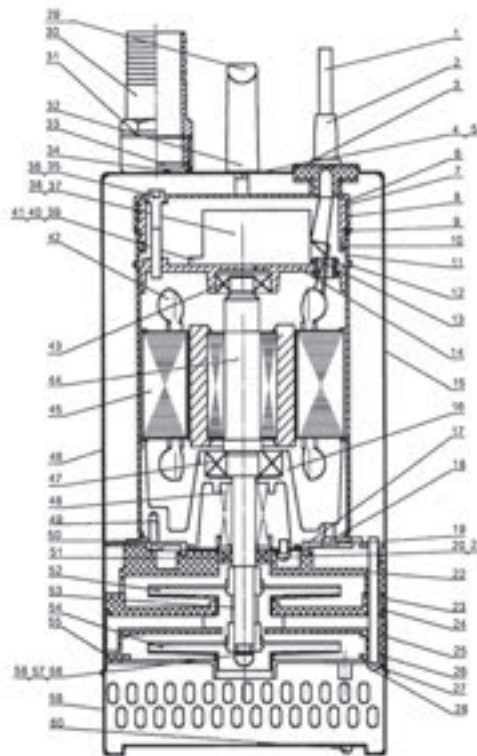
### OPERATION LIMITS

- ☒ maximum operating depth up to 5m below water level
- ☒ fluid temperature up to 40°C
- ☒ maximum ambient temperature up to 40°C



**2SS 750**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Cable	16	Lower bearing seat	31	Connection nut	46	Nameplate
2	Cable protector	17	Washer	32	Screw	47	Bearing
3	Press plate	18	Screw	33	Gasket	48	Mechanical seal
4	Cable presser	19	"O"ring	34	Screw	49	Screw
5	Washer	20	"O"ring	35	Screw	50	Washer
6	Screw	21	Screw	36	"O"ring	51	Oil seal
7	Capacitor cover	22	Upper diffuser	37	Capacitor	52	Impeller
8	Terminal box	23	Plate	38	Terminal board	53	Shaft sleeve
9	"O"ring	24	"O"ring	39	Earthing terminal	54	Impeller
10	"O"ring	25	Lower diffuser	40	Screw	55	"O"ring
11	Motor cover	26	Washer	41	Washer	56	Washer
12	Snap ring	27	Impeller cover	42	Thermal protector	57	Washer
13	Line protector	28	Screw	43	Bearing	58	Nut
14	Upper bearing seat	29	Handle	44	Rotor	59	Filter mesh
15	Pump shell	30	Out-let connector	45	Stator	60	Bolt

### PUMPS INSTALLATION AND APPLICATIONS

These pumps are suitable to handling clean water which are not chemically aggressive to the pump components.

It is mainly used in water-saving projects like trickle irrigation, sprinkler irrigation and micro-irrigation, deep water supply, high building water supply and in purifier.

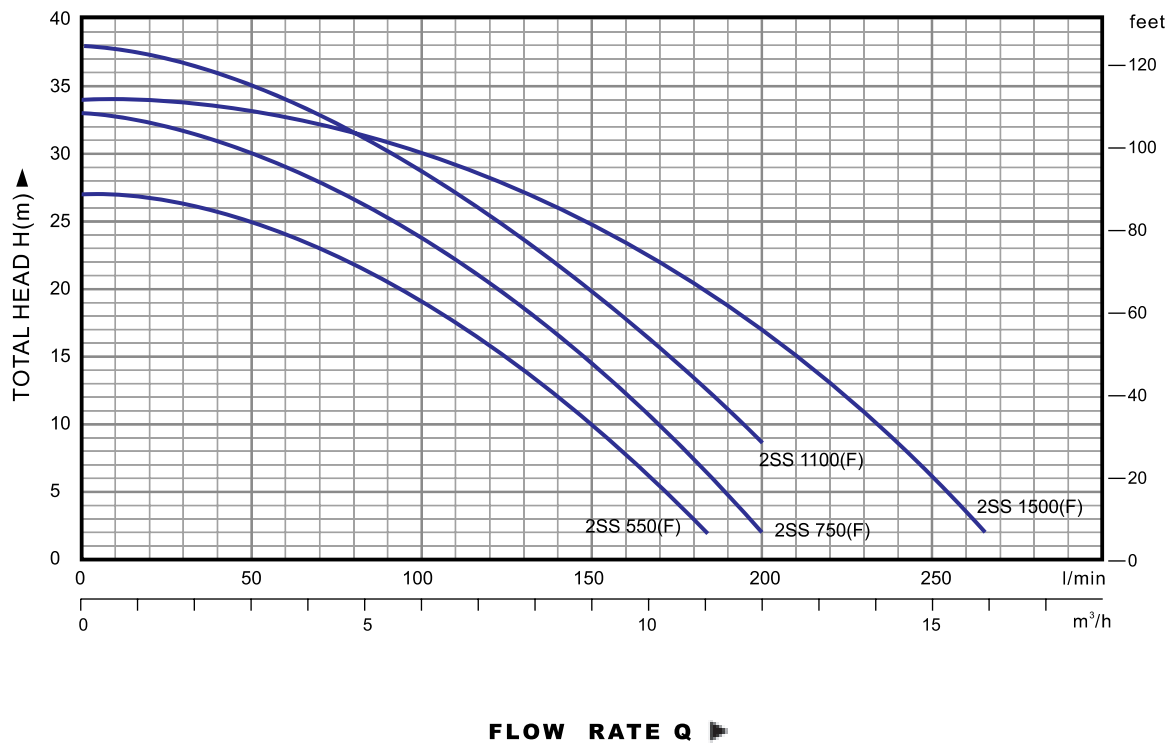
### PERFORMANCE

- ☒ High head and big flow
- ☒ Reliable even with considerable water depth
- ☒ Stable operating curves

### STRUCTURE CHARACTERISTICS

- ☒ stainless steel pump body
- ☒ stainless steel mechanical seal (sic to sic)
- ☒ stainless steel impeller with centrifugal radial flow type
- ☒ stainless steel shaft
- ☒ protection IP68
- ☒ with thermal overload protector in single phase motor

**PERFORMANCE CHART AT n = 2900 rpm**



PUMP MODEL		POWER		Q	0	1.5	3	4.5	6	9	12	16
Single phase	Three phase	KW	HP	m³/h	0	25	50	75	100	150	200	266.7
2SS 550(F)	2SS 550	0.55	0.75	H	27	26.5	25	22	19	10		
2SS 750(F)	2SS 750	0.75	1		33	32	30	27	24	15	2	
2SS 1100(F)	2SS 1100	1.1	1.5		38	37	35	32	28.5	20	8	
2SS 1500(F)	2SS 1500	1.5	2		34	33.5	32.5	31	30	23.5	16	2

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**

# SA

## ALUMINUM COVER SUBMERSIBLE PUMPS

### PERFORMANCE RANGE

- ✘ flow rate up to 533 l/min.(32 m³/h)
- ✘ head up to 12 m

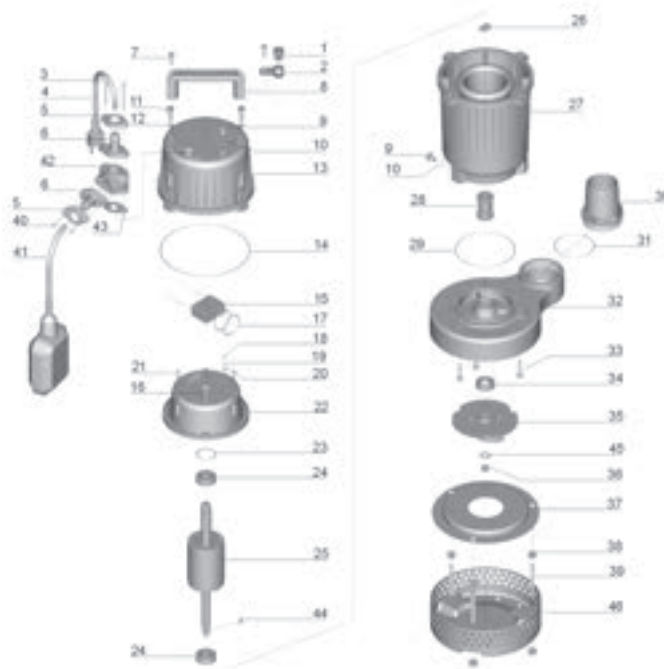
### OPERATING LIMITS

- ✘ maximum operating depth 5 m below water level
- ✘ maximum passage for suspended solids  $\phi$  2 mm
- ✘ maximum fluid temperature 40°C
- ✘ PH value in water: 6.5-8.0



**SA750**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Protector	14	"O"ring	27	Stator	40	Screw
2	Cable presser	15	Capacitor	28	Mechanical seal	41	Float switch
3	Screw	16	Line protector	29	"O"ring	42	Tees
4	Cable	17	"O"ring	30	Out-let connector	43	Rubber washer
5	Flange	18	Screw	31	"O"ring	44	Key
6	Cable protector	19	Stretching washer	32	Pump casing	45	Washer
7	Screw	20	Washer	33	Screw	46	Filter mesh
8	Handle	21	Screw	34	Oil seal		
9	Bolt	22	Motor Cover	35	Impeller		
10	"O"ring	23	Undulated washer	36	Nut		
11	Bolt	24	Bearing	37	Pump cover		
12	Washer	25	Rotor	38	Nut		
13	Capacitor cover	26	Thermal protector	39	Bilateral bolt		

## WORKING PRINCIPLE

**SA** pumps are half open impeller centrifugal submersible pumps, designed for automatic and non-automatic use. The impeller, mounted on the end of the drive shaft, consists of a rear disk and blades, which are enclosed by the pump body cover. Fluid enters the rotating blade channel via the suction strainer, which forms the support base for the pump. Here the fluid moves radially from the centre outwards, acquiring energy both in the form of pressure and increased speed. When it leaves the impeller the fluid is conveyed towards the volute. Here part of the kinetic energy is transformed into pressure energy and the fluid leaves the pump via the side opening machined in the pump body.

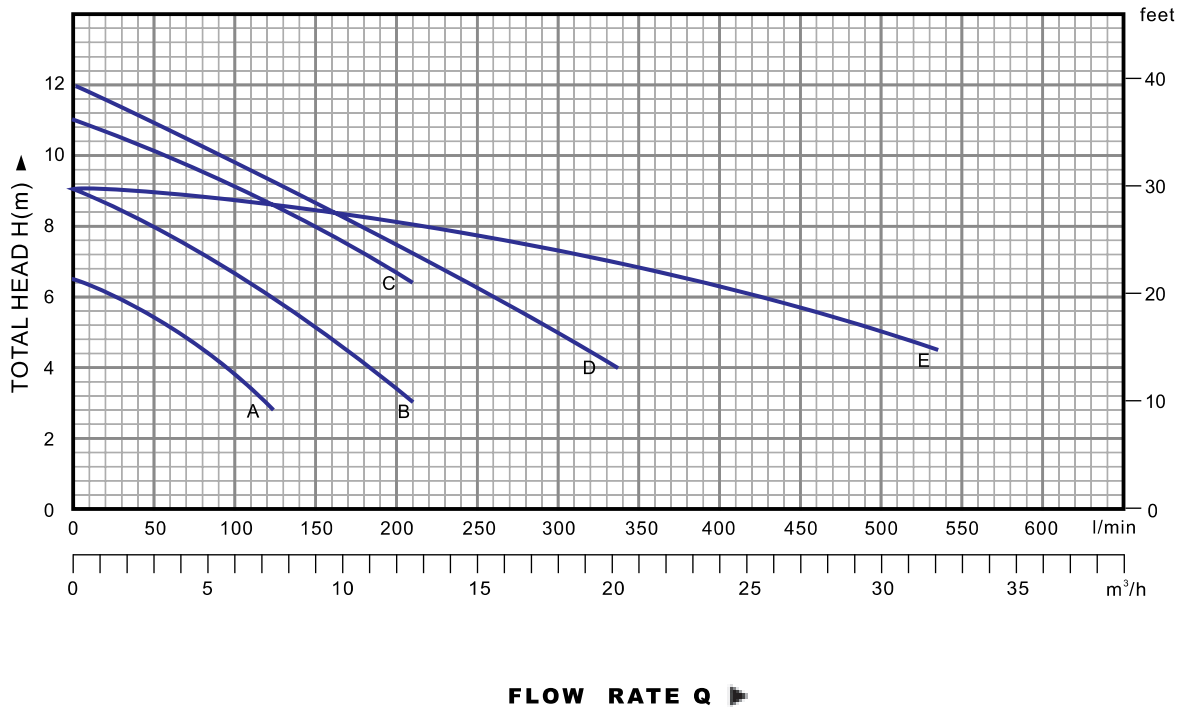
## PUMP INSTALLATION AND APPLICATIONS

As portable electric drainage & irrigation devices, **SA** series single-phase vertical submersible pumps with lower water input are widely suitable for water cluster boxes, farmland, industrial & mining enterprises, construction sites, ship and family, and characterized by less volume, light weight and convenient operation etc. (the pump is fitted with a floating switch, so it is possible to achieve the automatic control of start-stop action under no one's care.) single-phase capacitor-running asynchronous or 3-phase asynchronous motor is equipped in this pump and installed with a built-in thermal protector, and can be automatically cut-off in the case of overheat or overcurrent, thus assuring safe and reliable running under worse circumstances.

## STRUCTURAL CHARACTERISTIC

- ❑ aluminum pump body
- ❑ stainless steel mechanical seal (graphite to ceramic or SiC to graphite)
- ❑ with float switch or without
- ❑ round shape or square shape
- ❑ cast iron impeller or nylon impeller with technopolymer half open type
- ❑ with thermal overload protector in single phase motor

**PERFORMANCE CHART AT n=2900 rpm**



No.	PUMP MODEL	Discharge mm	POWER kw	Speed r/min	Flow rate Max m³/h	Head Max m	Wt kg	PackingDimensions cm
A	SA 250 (F)	40	0.25	2900	7	7.5	7.5	20 x 18.5 x 32.5
B	SA 370 (F)	50	0.37		12.5	9	12.5	25 x 22 x 40.5
C	SA 550 (F)	50	0.55		12.6	11	13.3	25 x 22.5 x 40.5
D	SA 750 (F)	50	0.75		20	12	16	27 x 23.5 x 41
E	SA 1100 (F)	76	1.1		32	9	20.5	45 x 31.5 x 26.5

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**

# 2SA

## TWO-STAGE SUBMERSIBLE PUMPS (HIGH HEAD)

### PERFORMANCE RANGE

- ☒ flow rate up to 300 l/min.(18 m³/h)
- ☒ head up to 30 m

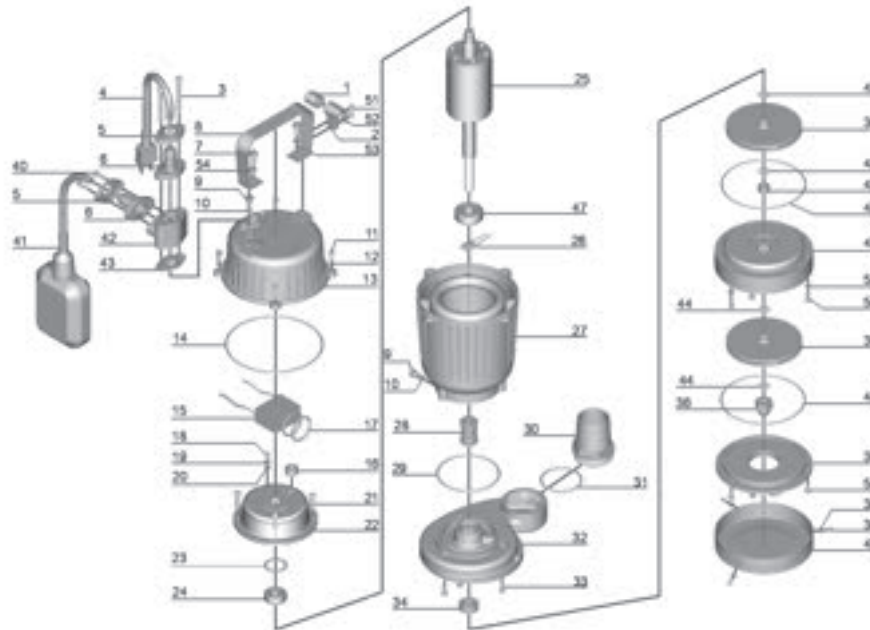
### OPERATING LIMITS

- ☒ maximum operating depth 5 m below water level
- ☒ maximum passgae for suspended solids  $\phi$  2 mm
- ☒ maximum fluid temperature 40°C
- ☒ PH value in water: 6.5-8.0



**2SA 1100**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Protector	16	Line Protector	31	"O"ring	46	Filter mesh
2	Cable presser	17	"O"ring	32	Pump casing	47	Bearing
3	Screw	18	Screw	33	Screw	48	"O"ring
4	Cable	19	Stretching washer	34	Oil seal	49	Diffuser
5	Flange	20	Washer	35	Impeller	50	Stretching washer
6	Cable protector	21	Screw	36	Nut	51	Screw
7	Bolt	22	Motor Cover	37	Pump cover	52	Washer
8	Handle	23	Undulated washer	38	Washer	53	Nut
9	Bolt	24	Bearing	39	Screw	54	Washer
10	"O"ring	25	Rotor	40	Screw	55	Screw
11	Screw	26	Thermal protector	41	Float switch	56	Screw
12	Washer	27	Stator	42	Tees		
13	Capacitor cover	28	Mechanical seal	43	Rubber washer		
14	"O"ring	29	"O"ring	44	Rubber washer		
15	Capacitor	30	Out-let connector	45	Shaft sleeve		

### WORKING PRINCIPLE

**2SA1100(F)** pump consists of two-stage centrifugal pumps, designed for permanently or partially immersed operation to produce higher dynamic head. The working principle is that of two-stage centrifugal pumps. The two impellers are installed on the same shaft and rotate inside vane diffuser, channelling the fluid from each impeller to the suction opening of the next. The fluid passes through the two impellers and leaves the pump via the delivery opening machined in the pump body. Between impellers and vane diffuser form a pumping stage and increase the liquid pressure efficiently, following the principle of centrifugal machine.

### PUMP INSTALLATION AND APPLICATIONS

This pump is suitable for pumping clean water or fluids. Their higher performance and dependability make them suitable for use in domestic, civil and industrial fields, for the automatic distribution of water working in conjunction with surge tanks, for emptying basins, tank, sump pits, swimming pools and aquariums, for irrigation gardens, for washing and pressure-boosting system, and for fire-fighting purposes, etc, where need higher dynamic head.

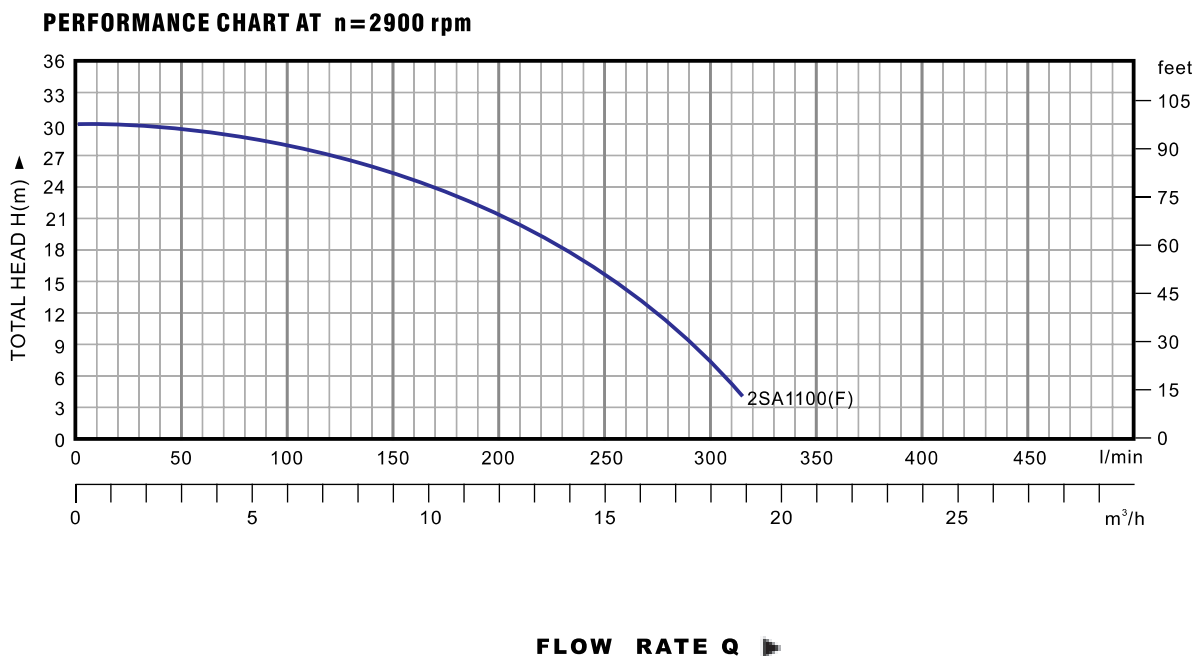
### PERFORMANCE

**2SA1100(F)** pump combines the advantages of a submersible pump with the performance of a centrifugal pump. In fact they assure:

- outputs having higher absolute values
- ample and particularly stable curves

### STRUCTURAL CHARACTERISTIC

- aluminum pump body
- stainless steel mechanical seal(graphite to ceramic or SiC to graphite)
- with float switch or without
- cast iron impeller or nylon impeller with technopolymer, half open type
- with thermal overload protector in single phase motor



PUMP MODEL	POWER		Q m <sup>3</sup> /h	0	3	4.2	6.0	9.0	10.2	12.0	13.2	15.0	18.0
	KW	HP		l/min	50	70	100	150	170	200	220	250	300
2SA 1100(F)	1.1	1.5	H m	30	29	28.5	27	24	22.5	19	18	14	6.5

**H=TOTAL HEAD IN METERS. Q=FLOW RATE**

# QDX

## SUBMERSIBLE DRAINAGE PUMPS

### PERFORMANCE RANGE

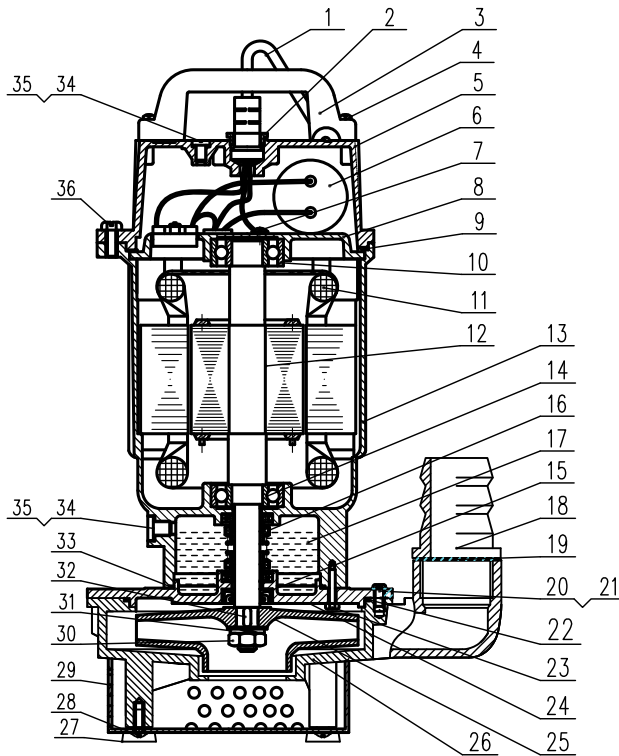
- ☒ flow rate up to 1000 l/min (60m<sup>3</sup>/h)
- ☒ head up to 36m

### OPERATING LIMITS

- ☒ maximum operating depth 5 m below water level
- ☒ maximum passage for suspended solids  $\pm$  2 mm
- ☒ maximum fluid temperature 40°C

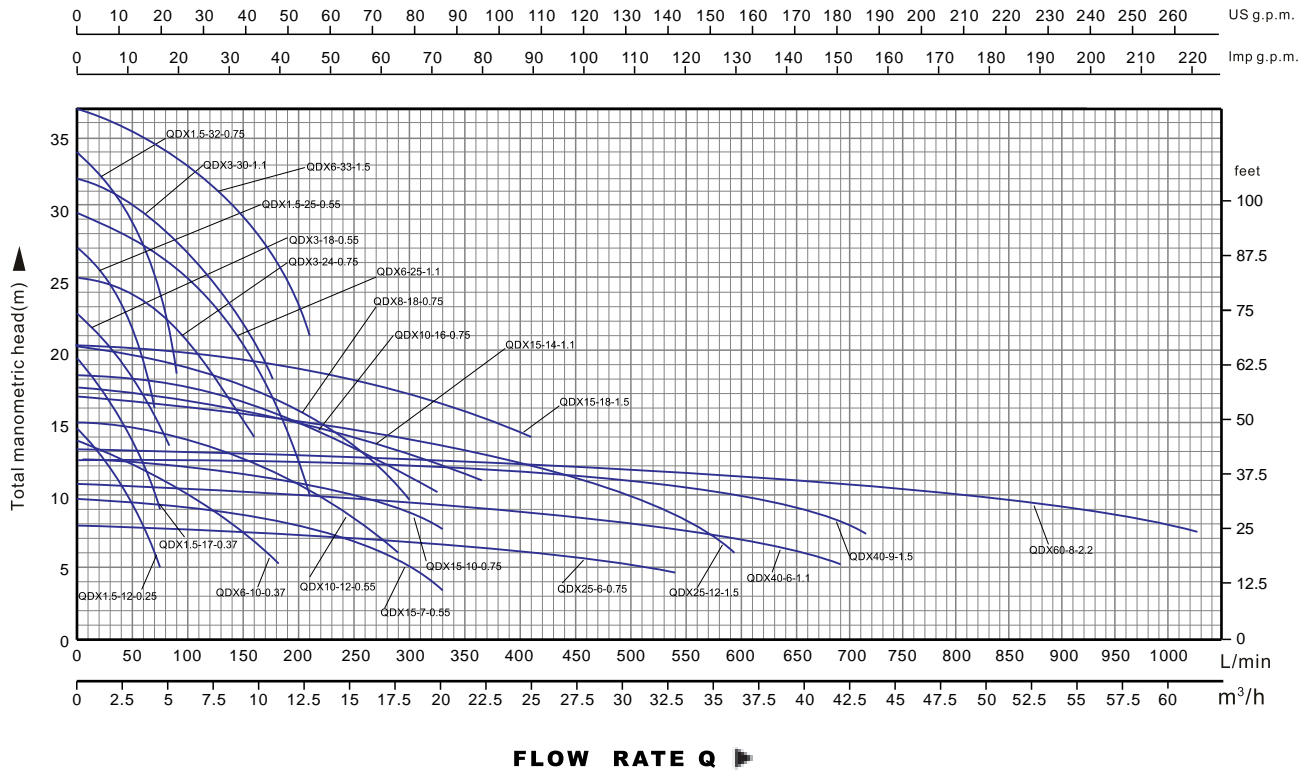


### DIAGRAM



No.	DESCRIPTION	No.	DESCRIPTION	No.	DESCRIPTION	No.	DESCRIPTION
1	Cable	12	Rotor	23	Screw	34	Bolt
2	Cable protector	13	Motor cover	24	Oil chamber cover	35	"O" ring
3	Handle	14	Bearing	25	Impeller	36	Screw
4	Bolt	15	Oil seal	26	Pump casing		
5	Capacitor cover	16	Machanical seal	27	Stand		
6	Capacitor	17	Oil chamber	28	Screw		
7	Nut	18	Out-let connector	29	Filter mesh		
8	Upper cover	19	"O" ring	30	Nut		
9	"O" ring	20	Screw	31	Washer		
10	Bearing	21	Washer	32	Key		
11	Stator	22	"O" ring	33	"O" ring		

## PERFORMANCE CHART AT n=2900 rpm



### FLOW RATE Q

Model		Power		Outlet	Q.rat (m³/h)	H.rat (m)
Single-phase	Three-phase	KW	HP			
QDX1.5-12-0.25(F)	-	0.25	0.37	1"	1.5	12
QDX1.5-17-0.37(F)	-	0.37	0.5	1"	1.5	17
QDX6-10-0.37(F)	-	0.37	0.5	1 1/2"	6	10
QDX1.5-25-0.55(F)	QX1.5-25-0.55	0.55	0.75	1"	1.5	25
QDX3-18-0.55(F)	QX3-18-0.55	0.55	0.75	1 1/4"	3	18
QDX10-12-0.55(F)	QX10-12-0.55	0.55	0.75	1 1/2"	10	12
QDX15-7-0.55(F)	QX15-7-0.55	0.55	0.75	2"	15	7
QDX1.5-32-0.75(F)	QX1.5-32-0.75	0.75	1	1"	1.5	32
QDX3-24-0.75(F)	QX3-24-0.75	0.75	1	1 1/4"	3	24
QDX8-18-0.75(F)	QX8-18-0.75	0.75	1	1 1/2"	8	18
QDX10-16-0.75(F)	QX10-16-0.75	0.75	1	2"	10	16
QDX15-10-0.75(F)	QX15-10-0.75	0.75	1	2 1/2"	15	10
QDX25-6-0.75(F)	QX25-6-0.75	0.75	1	3"	25	6
QDX3-30-1.1(F)	QX3-30-1.1	1.1	1.5	1"	3	30
QDX6-25-1.1(F)	QX6-25-1.1	1.1	1.5	1 1/2"	6	25
QDX15-14-1.1(F)	QX15-14-1.1	1.1	1.5	2" or 2 1/2"	15	14
QDX40-6-1.1(F)	QX40-6-1.1	1.1	1.5	3"	40	6
QDX6-33-1.5(F)	QX6-33-1.5	1.5	2	1 1/2"	6	33
QDX15-18-1.5(F)	QX15-18-1.5	1.5	2	2"	15	18
QDX25-12-1.5(F)	QX25-12-1.5	1.5	2	2 1/2"	25	12
QDX40-9-1.5(F)	QX40-9-1.5	1.5	2	3"	40	9
QDX60-8-2.2(F)	QX60-8-2.2	2.2	3	4"	60	8
QDX1.5-17-0.37T(F)	-	0.37	0.5	1"	1.5	17
QDX1.5-25-0.55T(F)	QX1.5-25-0.55T	0.55	0.75	1"	1.5	25
QDX3-18-0.55T(F)	QX3-18-0.55T	0.55	0.75	1 1/4"	3	18
QDX10-12-0.55T(F)	QX10-12-0.55T	0.55	0.75	1 1/2"	10	12
QDX15-7-0.55T(F)	QX15-7-0.55T	0.55	0.75	2"	15	7
QDX1.5-32-0.75T(F)	QX1.5-32-0.75T	0.75	1	1"	1.5	32
QDX3-24-0.75T(F)	QX3-24-0.75T	0.75	1	1 1/4"	3	24
QDX8-18-0.75T(F)	QX8-18-0.75T	0.75	1	1 1/2"	8	18
QDX10-16-0.75T(F)	QX10-16-0.75T	0.75	1	2"	10	16
QDX15-10-0.75T(F)	QX15-10-0.75T	0.75	1	2 1/2"	15	10

H=TOTAL HEAD IN METERS.

Q=FLOW RATE

# SS

## SUBMERSIBLE DRAINAGE PUMPS

### PERFORMANCE RANGE

- ☒ flow rate up to 700 l/min (42m<sup>3</sup>/h)
- ☒ head up to 36m

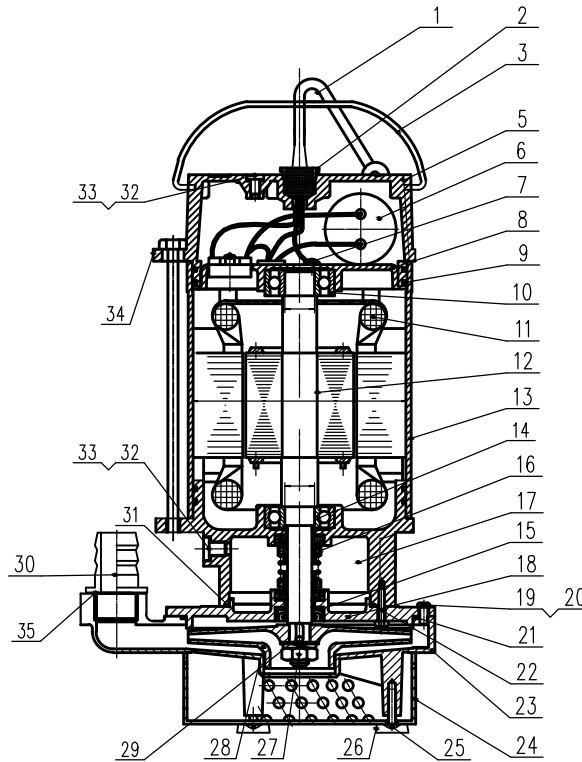
### OPERATING LIMITS

- ☒ maximum operating depth 5 m below water level
- ☒ maximum passage for suspended solids  $\phi$  2 mm
- ☒ maximum fluid temperature 40°C



SS1.5-32-0.75

### DIAGRAM

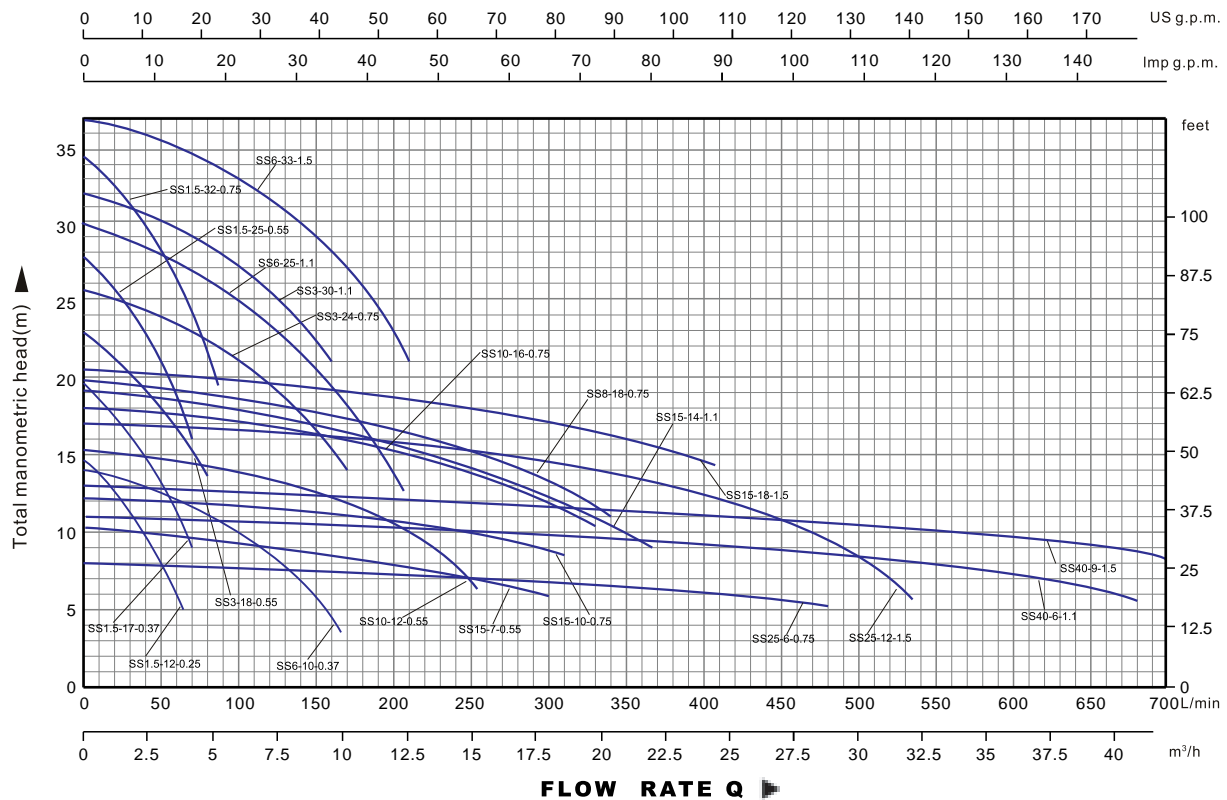


NO.	DESCRIPTION	NO.	DESCRIPTION	NO.	DESCRIPTION	NO.	DESCRIPTION
1	Cable	12	Rotor	23	Pump casing	34	Bolt
2	Cable protector	13	Motor cover	24	Filter mesh	35	"O" ring
3	Handle	14	Bearing	25	Screw		
4	Bolt	15	Oil seal	26	Stand		
5	Capacitor cover	16	Machanical seal	27	Nut		
6	Capacitor	17	Oil chamber	28	Impeller		
7	Nut	18	Oil chamber cover	29	Key		
8	Upper cover	19	Screw	30	Out-let connector		
9	"O" ring	20	washer	31	"O" ring		
10	Bearing	21	"O" ring	32	Bolt		
11	Stator	22	Screw	33	"O" ring		

### STRUCTURAL CHARACTERISTIC

- stainless steel pump body
- stainless steel mechanical seal (graphite to ceramic or SiC to graphite)
- with float switch or without
- aluminum impeller
- with thermal overload protector in single phase motor

### PERFORMANCE CHART AT n=2900 rpm



Model		Power		Outlet	Q.rat (m³/h)	H.rat (m)
Single-phase	Three-phase	KW	HP			
SS1.5-12-0.25(F)	-	0.25	0.37	1"	1.5	12
SS1.5-17-0.37(F)	-	0.37	0.5	1"	1.5	17
SS6-10-0.37(F)	-	0.37	0.5	1 1/2"	6	10
SS1.5-25-0.55(F)	S1.5-25-0.55	0.55	0.75	1"	1.5	25
SS3-18-0.55(F)	S3-18-0.55	0.55	0.75	1 1/4"	3	18
SS10-12-0.55(F)	S10-12-0.55	0.55	0.75	1 1/2"	10	12
SS15-7-0.55(F)	S15-7-0.55	0.55	0.75	2"	15	7
SS1.5-32-0.75(F)	S1.5-32-0.75	0.75	1	1"	1.5	32
SS3-24-0.75(F)	S3-24-0.75	0.75	1	1 1/4"	3	24
SS8-18-0.75(F)	S8-18-0.75	0.75	1	1 1/2"	8	18
SS10-16-0.75(F)	S10-16-0.75	0.75	1	2"	10	16
SS15-10-0.75(F)	S15-10-0.75	0.75	1	2 1/2"	15	10
SS25-6-0.75(F)	S25-6-0.75	0.75	1	3"	25	6
SS3-30-1.1(F)	S3-30-1.1	1.1	1.5	1"	3	30
SS6-25-1.1(F)	S6-25-1.1	1.1	1.5	1 1/2"	6	25
SS15-14-1.1(F)	S15-14-1.1	1.1	1.5	2" or 2 1/2"	15	14
SS40-6-1.1(F)	S40-6-1.1	1.1	1.5	3"	40	6
SS6-33-1.5(F)	S6-33-1.5	1.5	2	1 1/2"	6	33
SS15-18-1.5(F)	S15-18-1.5	1.5	2	2"	15	18
SS25-12-1.5(F)	S25-12-1.5	1.5	2	2 1/2"	25	12
SS40-9-1.5(F)	S40-9-1.5	1.5	2	3"	40	9

H=TOTAL HEAD IN METERS.

Q=FLOW RATE

# 5SA

## 5-STAGE,6-STAGE SUBMERSIBLE PUMPS (HIGH HEAD)

### PERFORMANCE RANGE

- ☒ Flow rate up to 100 l/min.(6.0m³/h)
- ☒ Dynamic head up to 65m

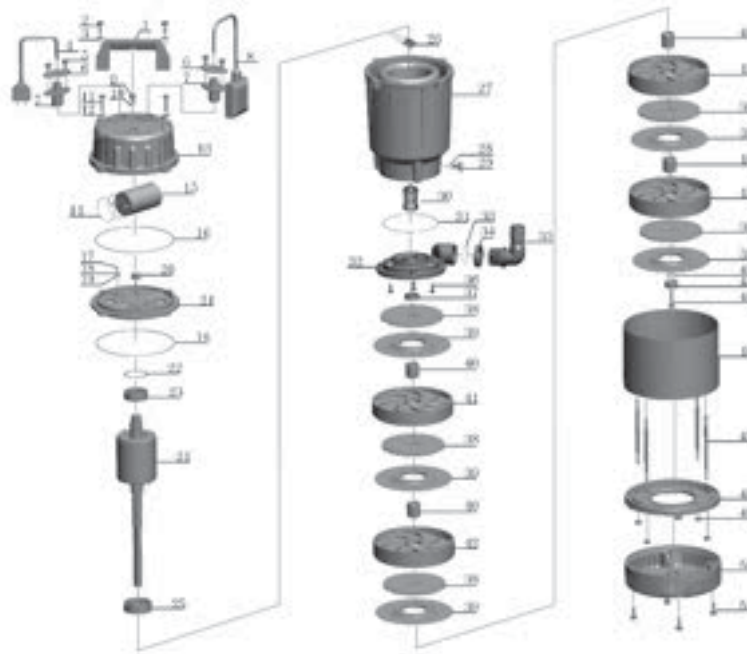
### OPERATION LIMITS

- ☒ Maximum operating depth up to 5m below water level
- ☒ Fluid temperature up to 40°C
- ☒ Maximum ambient temperature up to 40°C



**5SA900**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Handle	15	Capacitor	29	Bolt	43	Washer
2	Screw	16	"O"ring	30	Mechanical seal	44	Shaft sleeve II
3	Washer	17	Screw	31	"O"ring	45	Bolt
4	Cable	18	Stretching washer	32	Pump body cover	46	Machine canister
5	Screw	19	Washer	33	"O"ring	47	Bilateral bolt
6	Flange	20	Line protector	34	Out-let connector	48	Base plate
7	Cable protertor	21	Motor cover	35	Out-let connector	49	Nut
8	Float switch	22	Undulated washer	36	Screw	50	Filter mesh
9	Screw	23	Ball bearing	37	Oil seal	51	Screw
10	"O"ring	24	Rotor	38	Impeller		
11	Bolt	25	Ball bearing	39	Guide leaf cover		
12	Washer	26	Thermal protector	40	Shaft sleeve I		
13	Capacitor cover	27	Motor stator	41	Upper guide leaf		
14	"O"ring	28	"O"ring	42	Lower guide leaf		

**WORKING PRINCIPLE**

Pump consists centrifugal pumps , designed for permanently or partially immersed operation to produce higher dynamic head. The working principle is that of multi-stage centrifugal pumps. The 5 or 6 impellers are installed on the same shaft and rotate inside vane diffuser, channeling the fluid from each impeller to the suction opening of the next. The fluid passes through the three impellers and leaves the pump via the delivery opening machined in the pump body. Between impellers and vane diffuser form a pumping stage and increase the liquid pressure efficiently, following the principle of centrifugal machine.

**PUMP INSTALLATION AND APPLICATION**

This pump is suitable for pumping fluids. Their higher performance and dependability make them suitable for use in domestic , civil and industrial fields, for the automatic distribution of water working in conjunction with surge tanks, for emptying basins, tank, sump pits, for washing and pressure-boosting system, and for fire-fighting purposes, etc, where need higher dynamic head.

**PERFORMANCE**

Pump combines the advantages of a submersible pump with the performance of a centrifugal pump. In fact they assure:

- ☒ outputs having higher absolute values
- ☒ ample and particularly stable curves

**STRUCTURAL CHARACTERISTIC**

- ☒ stainless steel pump casing
- ☒ aluminum motor shell
- ☒ stainless steel mechanical seal(graphite to ceramic or SIC to graphite)
- ☒ stainless steel impeller with centrifugal radial flow type
- ☒ with or without float switch
- ☒ 45#steel shaft
- ☒ with thermal overload protector in single phase motor



PUMP MODEL		POWER		Q	0	1.5	3	4.5	6
Single phase	Three phase	KW	HP	m³/h	0	25	50	75	100
5SA900(F)	5SA900	0.9	1.2	H m	55	53	44	36	24
6SA1100(F)	6SA1100	1.1	1.5		65	62	53	42	26
7SA1300(F)	7SA1300	1.3	1.8		77	74	66	53	33

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**

### PERFORMANCE RANGE

- ☒ Flow rate up to 250 l/min.(15m<sup>3</sup>/h)
- ☒ Dynamic head up to 18m

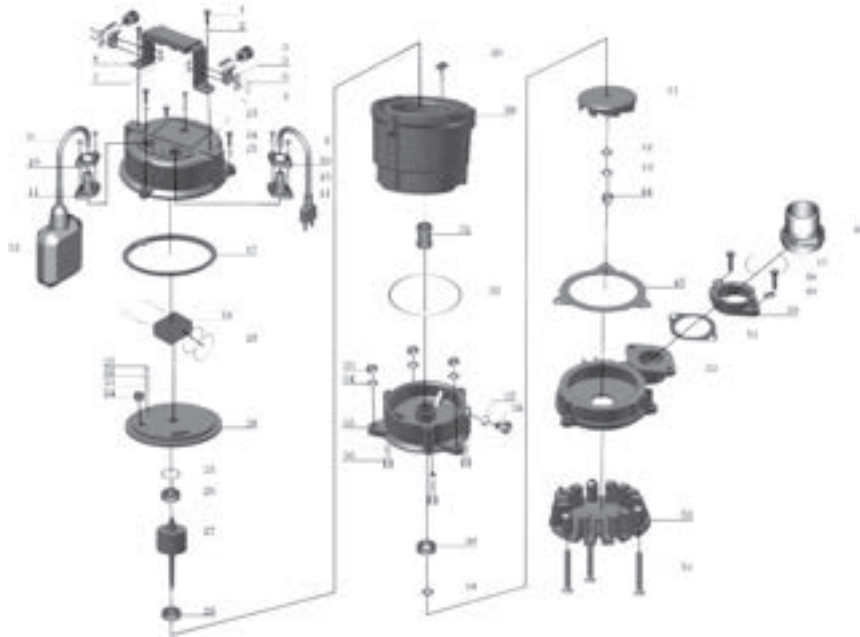
### OPERATION LIMITS

- ☒ Maximum operating depth up to 5m below water level
- ☒ Fluid temperature up to 40°C
- ☒ Maximum passage for suspended solids  $\phi$ 10mm
- ☒ Maximum emptying level 90mm from the bottom



**VW500**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Bolt	15	Washer	29	Thermal protector	43	Spring washer
2	Washer	16	Cable	30	Stator	44	Nut
3	Protector	17	Gasket	31	Mechanical seal	45	Gasket
4	Cable presser	18	Capacitor	32	"O"ring	46	Outlet connector
5	Washer	19	"O"ring	33	Nut	47	"O"ring
6	Screw	20	Upper cover	34	Washer	48	Bolt
7	Nut	21	Screw	35	Connection part	49	Washer
8	Handle	22	Spring washer	36	Screw	50	Flange
9	Screw	23	Washer	37	"O"ring	51	Gasket
10	Flange	24	Line protector	38	Bolt	52	Pump casing
11	Cable protector	25	Undulated washer	39	Oil seal	53	Base plate
12	Float switch	26	Bearing	40	Washer	54	Bolt
13	Capacitor cover	27	Rotor	41	Impeller		
14	Bolt	28	Bearing	42	Washer		

**WORKING PRINCIPLE**

Pumps are submersible vortex , for dirty water, designed mainly for domestic use and industrial use. Their operating principle is that of a centrifugal pump with a retracted vortex impeller. A large sized ring chamber with a threaded delivery opening is machined in the pump body and closed by a cover, housing the suction opening , which is shaped to prevent suspended solid over a certain size from entering the pump . since the impeller is retracted with respect to the cover, water entering the front chamber lying between these two components assumes a vortex motion and is centrifuged into the ring chamber,leaving the pump via the delivery opening.

**PUMP INSTALLATION AND APPLICATION**

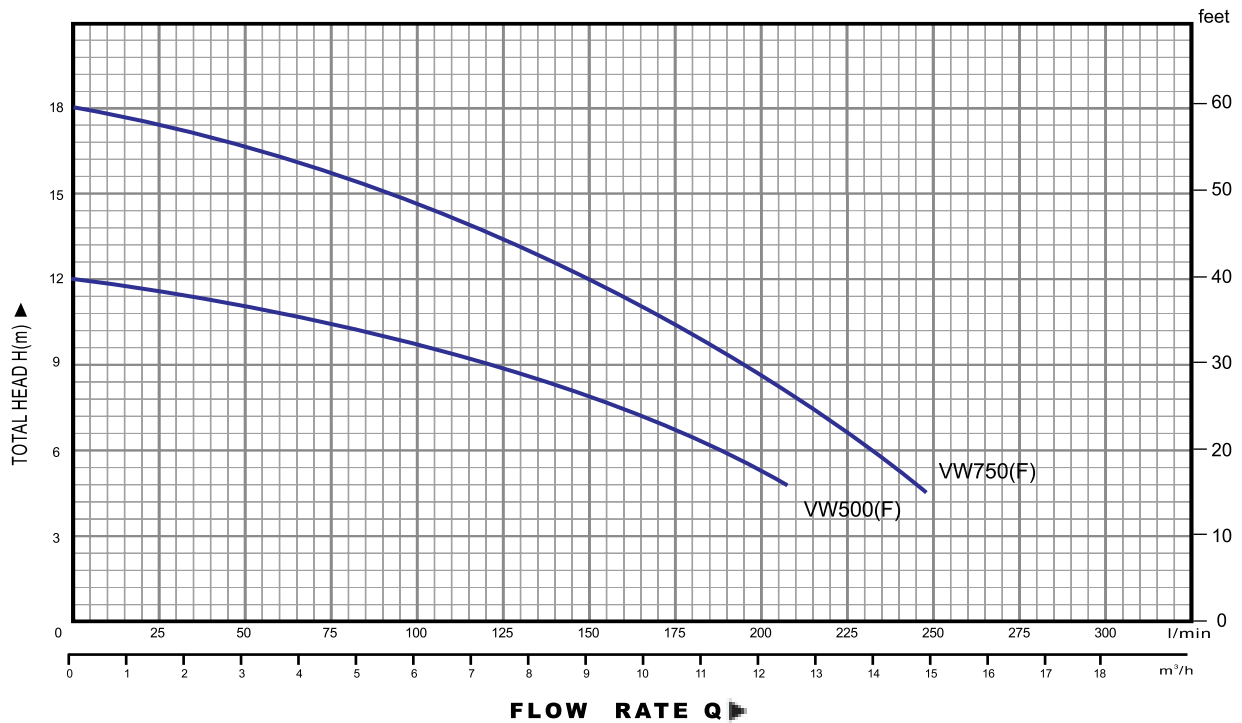
Pumps are designed to lift dirty water which is not chemically aggressive to the pump components. In all cases where suspended solids up to 10 mm have to be dealt with.

Recommended applications therefore include draining flooding in confined areas such as basements and garages, and also pumping domestic waste and the disposal of waste water, containing fibrous matter and is also widely used in many factories. These pumps are easy to install and dependable when used automatically in fixed installations. A purposely built pit with minimum dimensions 450\*450\*450 mm is recommended for fixed installations, to provide total drainage and allow correct operation of the float switch. This system automatically starts the pump when the fluid reaches a preset level, stopping it once the fluid has been emptied. Installing a suitable non-return valve on the delivery pipe prevents reverse flow when the pump stops.

**STRUCTURAL CHARACTERISTIC**

- ❖ aluminum pump body
- ❖ stainless steel mechanical seal (graphite to ceramic)
- ❖ 45# steel shaft
- ❖ stainless steel impeller with rubber covered
- ❖ with thermal overload protector in single phase motor
- ❖ double side mechanical seal provides longest operational life

**PERFORMANCE CHART AT n=2900 rpm**



PUMP MODEL	POWER		Q m <sup>3</sup> /h	0	3	6	9	12	15
	KW	HP		0	50	100	150	200	250
VW500(F)	0.5	0.66	H	12	11	9.8	7.8	5.2	
VW750(F)	0.75	1	m	18	16.5	14.7	12.2	8.5	4.5

**H=TOTAL HEAD IN METERS. Q=FLOW RATE**

# V

## STAINLESS STEEL SEWAGE PUMPS

### PERFORMANCE RANGE

- ☒ flow rate up to 400 l/min. (24 m<sup>3</sup>/h)
- ☒ head up to 15 m

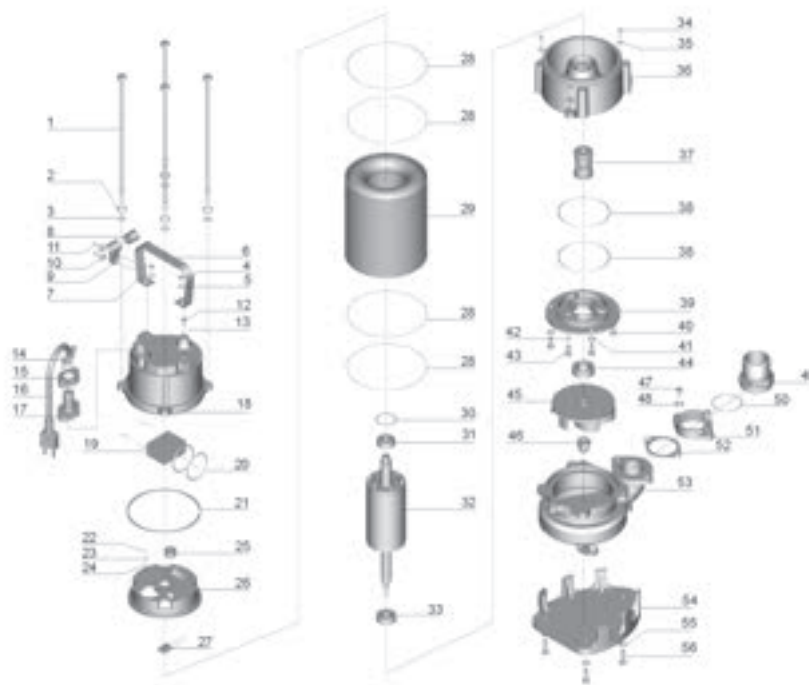
### OPERATING LIMITS

- ☒ maximum operating depth 5 m below water level
- ☒ maximum fluid temperature up to 40°C
- ☒ maximum passgae for suspended solids  $\phi$  30 mm
- ☒ maximum emptying level 40 mm from the bottom



**V450**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Tie rod	16	Cable	31	Bearing	46	Nut
2	Stretching washer	17	Cable protector	32	Rotor	47	Bolt
3	Washer	18	Capacitor cover	33	Bearing	48	Washer
4	Bolt	19	Capacitor	34	Screw	49	Out-let connector
5	Washer	20	"O"ring	35	Washer	50	"O"ring
6	Handle	21	Rubber washer	36	Connection part	51	Connection nut
7	Nut	22	Screw	37	Mechanical seal	52	Gasket
8	Protector	23	Stretching washer	38	"O"ring	53	Pump casing
9	Cable presser	24	Washer	39	Oil chamber cover	54	Base plate
10	Washer	25	Line protector	40	Screw	55	Washer
11	Screw	26	Motor cover	41	Washer	56	Screw
12	Bolt	27	Thermal protector	42	"O"ring		
13	"O"ring	28	"O"ring	43	Screw		
14	Screw	29	Stator	44	Oil seal		
15	Flange	30	Undulated washer	45	Impeller		

### WORKING PRINCIPLE

V pumps are submersible vortex pumps, for dirty water, designed mainly for domestic use and industrial use. Their operating principle is that of a centrifugal pump with a retracted vortex impeller. A large sized ring chamber with a threaded delivery opening is machined in the pump body and closed by a cover, housing the suction opening, which is shaped to prevent suspended solid over a certain size from entering the pump. Since the impeller is retracted with respect to the cover, water entering the front chamber lying between these two components assumes a vortex motion and is centrifuged into the ring chamber, leaving the pump via the delivery opening.

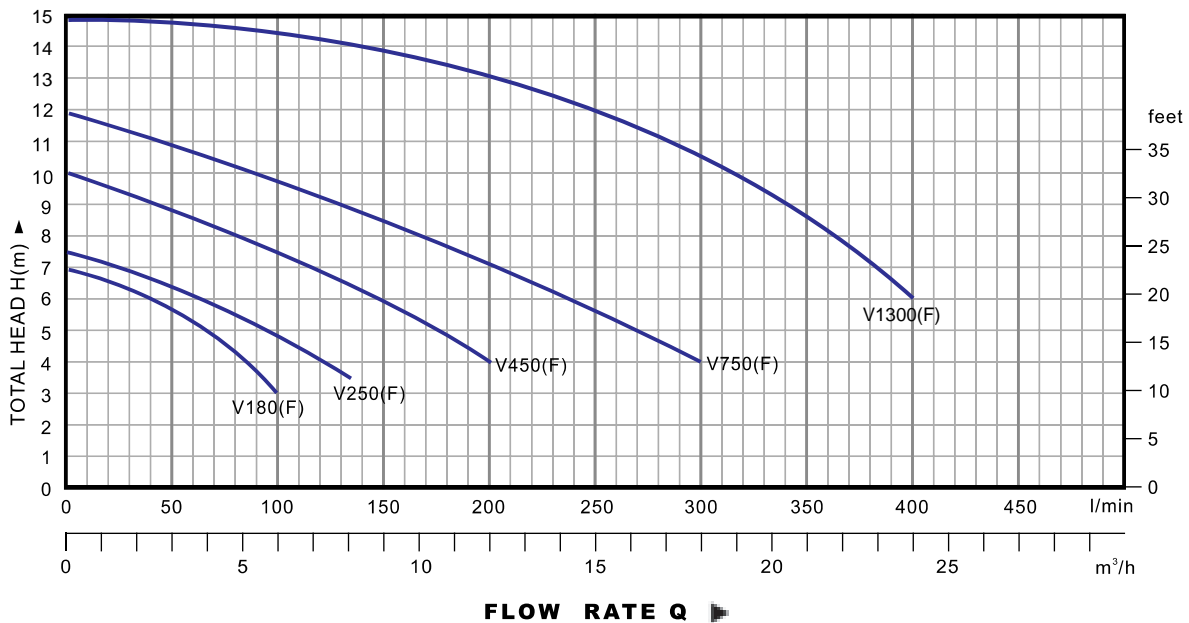
### PUMP INSTALLATION AND APPLICATIONS

V pumps are designed to lift dirty water which is not chemically aggressive to the pump components. In all cases where suspended solids up to  $\varnothing$  30mm have to be dealt with. Recommended applications therefore include draining flooding in confined areas such as basements and garages, and also pumping domestic waste and the disposal of waste water, containing fibrous matter and is also widely used in many factories. These pumps are easy to install and dependable when used automatically in fixed installations. A purposely built pit with minimum dimensions 450x450x450 mm is recommended for fixed installations, to provide total drainage and allow correct operation of the float switch. This system automatically starts the pump when the fluid reaches a preset level, stopping it once the fluid has been emptied. Installing a suitable non-return valve on the delivery pipe prevents reverse flow when the pump stops.

### STRUCTURAL CHARACTERISTICS

- ❖ stainless steel pump body
- ❖ stainless steel mechanical seal (graphite to ceramic or SiC to graphite)
- ❖ stainless steel shaft
- ❖ with float switch or without
- ❖ cast iron impeller or nylon impeller with technopolymer open type.
- ❖ with thermal overload protector in single phase motor

**PERFORMANCE CHART AT n=2900 rpm**



PUMP MODEL	POWER		Q m <sup>3</sup> /h	0	2	4	6	8	10	12	14	16	18	20	22	24
	KW	HP		l/min												
Single phase			H m	0	33.3	66.7	100	133.4	166.6	200	233.1	266.8	299.7			
V180(F)	0.18	0.24		7.0	6.2	4.9	3.0									
V250(F)	0.25	0.33		7.5	7.0	6.0	4.8	3.5								
V450(F)	0.45	0.6		10	9.01	8.3	7.5	6.3	5.0	4.0						
V750(F)	0.75	1		12	11.2	10.5	9.9	9.0	8.0	7.0	6.0	5.0	4.0			
V1300(F)	1.5	2	15	14.9	14.7	14.4	14	13.5	13	12.3	11.5	10.5	9.2	7.7	6	

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**

# V

## STAINLESS STEEL SEWAGE PUMP

### PERFORMANCE RANGE

- ☒ flow rate up to 330l/min. (20 m³/h)
- ☒ head up to 9m

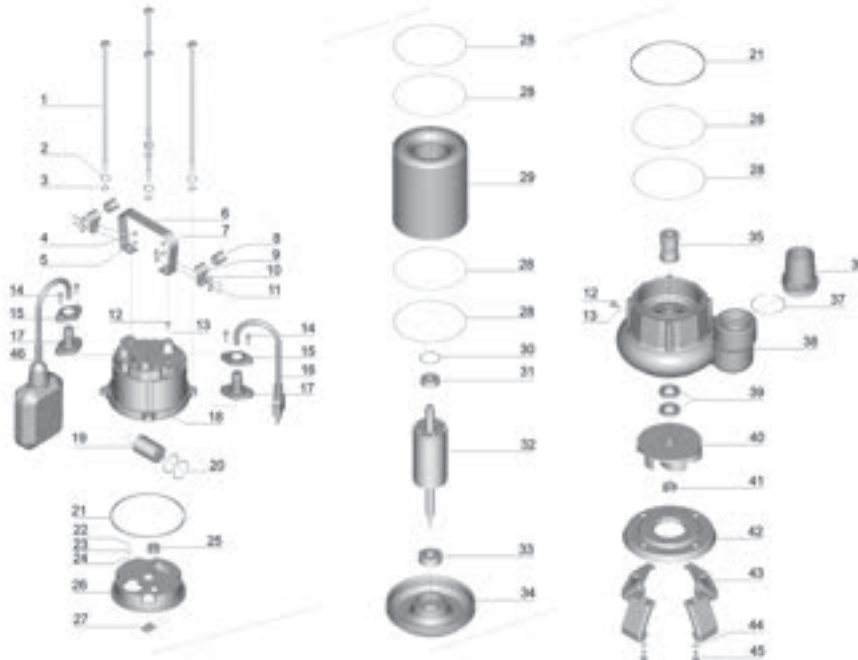
### OPERATION LIMITS

- ☒ maximum operating depth up to 5m below water level
- ☒ fluid temperature up to 40 °C
- ☒ maximum passage for suspended solids 35mm
- ☒ maximum emptying level 40mm from the bottom



**V1100**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Tie rod	14	Screw	27	Thermal protector	40	Impeller
2	Stretching washer	15	Flange	28	"O"ring	41	Nut
3	Washer	16	Cable	29	Stator	42	Pump cover
4	Bolt	17	Cable protector	30	Undulated washer	43	Base plate
5	Washer	18	Capacitor cover	31	Bearing	44	Washer
6	Handle	19	Capacitor	32	Rotor	45	Bolt
7	Nut	20	"O"ring	33	Bearing	46	Float switch
8	Protector	21	Rubber washer	34	Lower cover		
9	Cable presser	22	Screw	35	Mechanical seal		
10	Washer	23	Stretching washer	36	Out-let connector		
11	Screw	24	Washer	37	"O"ring		
12	Bolt	25	Line Protector	38	Pump casing		
13	"O"ring	26	Upper cover	39	Oil seal		

### WORKING PRINCIPLE

V pumps are submersible vortex pumps, for dirty water, designed mainly for domestic use and industrial use. Their operating principle is that of a centrifugal pump with a retracted vortex impeller. A large sized ring chamber with a threaded delivery opening is machined in the pump body and closed by a cover, housing the suction opening, which is shaped to prevent suspended solid over a certain size from entering the pump. Since the impeller is retracted with respect to the cover, water entering the front chamber lying between these two components assumes a vortex motion and is centrifuged into the ring chamber, leaving the pump via the delivery opening.

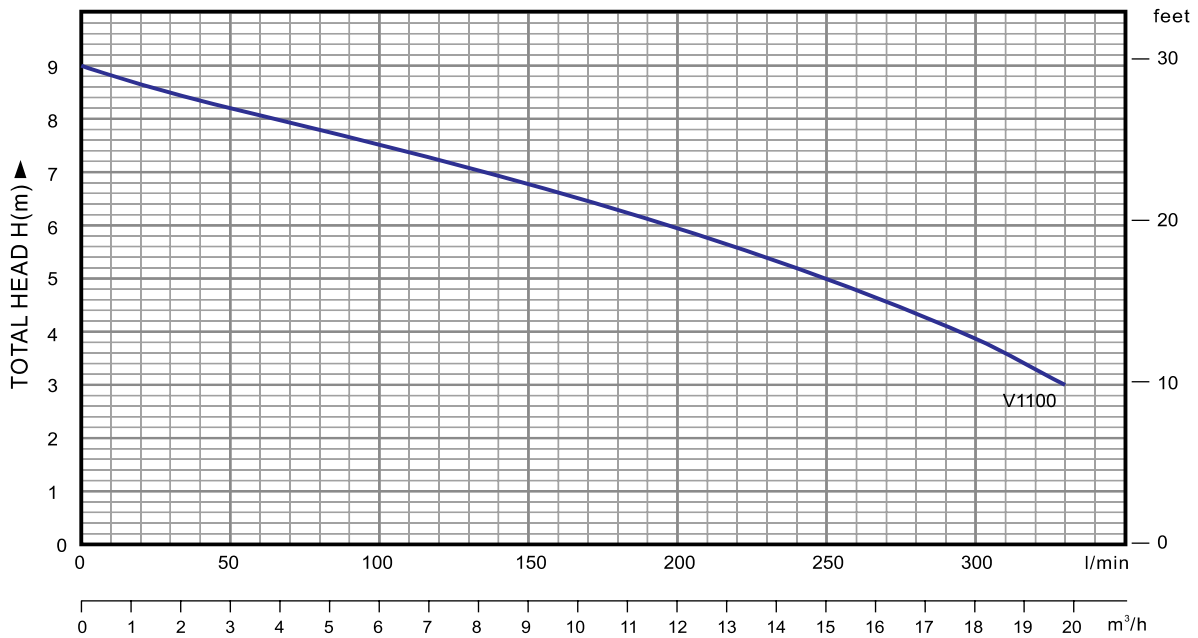
### PUMP INSTALLATION AND APPLICATIONS

V pumps are designed to lift dirty water which is not chemically aggressive to the pump components. In all cases where suspended solids up to  $\varnothing$  35mm have to be dealt with. Recommended applications therefore include draining flooding in confined areas such as basements and garages, and also pumping domestic waste and the disposal of waste water, containing fibrous matter and is also widely used in many factories. These pumps are easy to install and dependable when used automatically in fixed installations. This system with float switch automatically starts the pump when the fluid reaches a preset level, stopping it once the fluid has been emptied. Installing a suitable non-return valve on the delivery pipe prevents reverse flow when the pump stops.

### STRUCTURE CHARACTERISTICS

- ❑ stainless steel pump body
- ❑ stainless steel mechanical seal (graphite to ceramic or SIC to graphite)
- ❑ stainless steel shaft
- ❑ with float switch or without
- ❑ cast iron open impeller
- ❑ with thermal overload protector in single phase motor

**PERFORMANCE CHART AT n = 2900 rpm**



**FLOW RATE Q**

PUMP MODEL		POWER		Q	0	3.0	6.0	9.0	12.0	15.0	18.0	20
Single phase	Three phase	KW	HP	m³/h	0	50	100	150	200	250	300	330
V 1100(F)	V 1100	1.1	1.5	H m	9	8.2	7.5	6.8	5.8	4.9	3.8	3

**H = TOTAL HEAD IN METERS.**

**Q = FLOW RATE**

# V1300D

## S/S SEWAGE PUMPS WITH CUTTING SYSTEM

### PERFORMANCE RANGE

- ☒ flow rate up to 550 l/min.(33m³/h)
- ☒ head up to 12 m

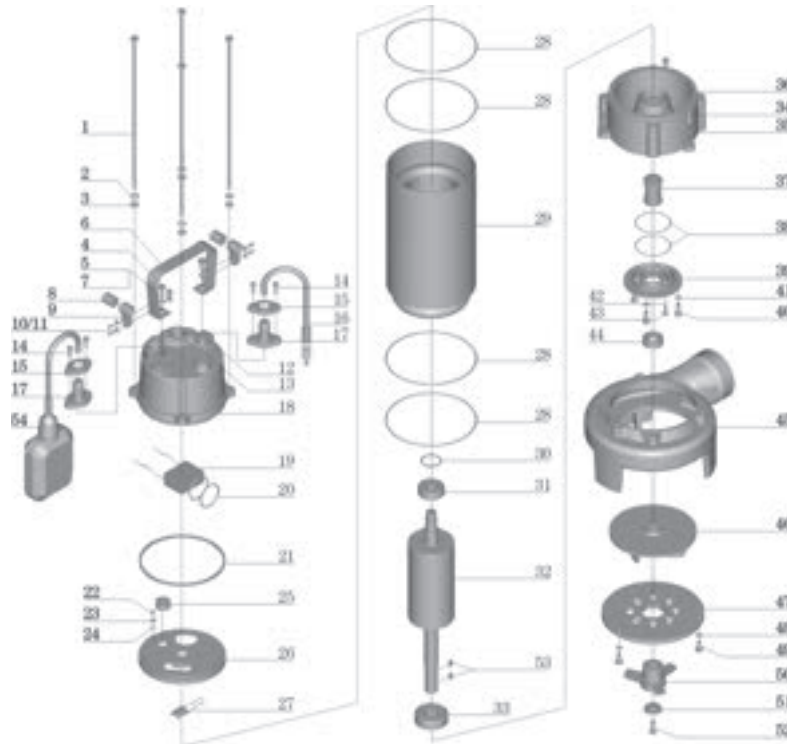
### OPERATING LIMITS

- ☒ maximum operating depth 5 m below water level
- ☒ maximum fluid temperature up to 40°C
- ☒ maximum passage for suspended solids  $\phi$  5mm
- ☒ PH value in water:4-10
- ☒ maximum fluid density:1.2 x 103 Kg/m³



V1300DF

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Bolt	15	Flange	29	Stator	43	Screw
2	Stretching washer	16	Cable	30	Undulated washer	44	Oil seal
3	Washer	17	Cable protector	31	Bearing	45	Pump casing
4	Bolt	18	Capacitor cover	32	Rotor	46	Impeller
5	Washer	19	Capacitor	33	Bearing	47	Fixed Cutter
6	Handle	20	"O" ring	34	Screw	48	Washer
7	Nut	21	Gasket	35	Washer	49	Screw
8	Protector	22	Screw	36	Connection part	50	Rotation cutter
9	Cable presser	23	Spring washer	37	Mechanical seal	51	Washer
10	Washer	24	Washer	38	"O" ring	52	Screw
11	Screw	25	Line protector	39	Oil chamber cover	53	Key
12	Bolt	26	Upper cover	40	Screw	54	Float switch
13	"O" ring	27	Thermal protector	41	Washer		
14	Screw	28	"O" ring	42	"O" ring		

**WORKING PRINCIPLE**

V1100/1300/1800/2200DF is submersible pump with cutting system, for dirty water, designed mainly for industrial and civil fields, are fitted with a cast iron impeller with cutter.

Being equipment with overload protection device, it is also featured by its long durable and safety for use.

**PUMP INSTALLATION AND APPLICATIONS**

V1100/1300/1800/2200DF are designed to lift dirty water, for dirty water with long fibre or firm sundries, it is easy to cut off them and avoid the impeller is blocked by the entanglement, are used in industrial, mining, and architectural operation. Pumps are particularly suitable for installation in kitchen, family.

**PERFORMANCE**

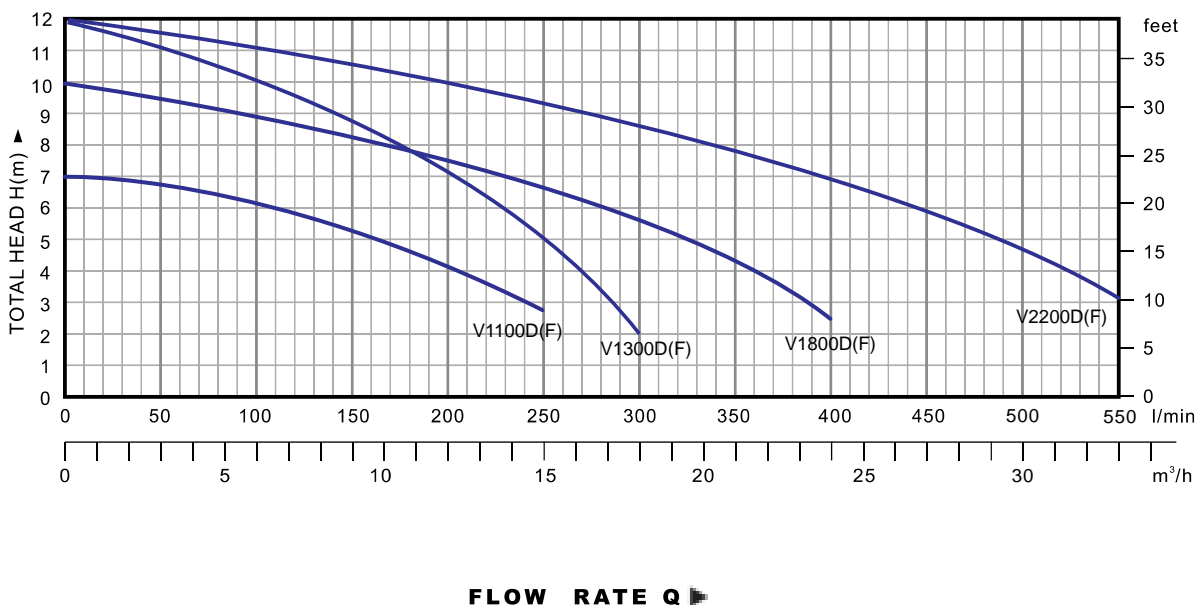
Exceptional sturdiness, even under severe working conditions.

Long and stable performance curves

**STRUCTURE CHARACTERISTICS**

- ☒ stainless steel pump body
- ☒ stainless steel mechanical seal
- ☒ cast iron impeller with cutter
- ☒ stainless steel shaft

**PERFORMANCE CHART AT n=2900 rpm**



PUMP MODEL		POWER		Q		Hm												
Single phase	Three phase	KW	HP	m³/h	l/min	0	3	6	9	12	15	18	21	24	27	30	33	
						0	50	100	150	200	250	300	350	400	450	500	550	
V1100D(F)	V1100D	1.1	1.5	Hm	7	6.7	6.2	5.4	4.3	2.8								
V1300D(F)	V1300D	1.3	1.75		12	10.6	10	8.3	6.5	4.4	2							
V1800D(F)	V1800D	1.8	2.5		10	9.5	8.8	8	7	5.9	4.8	3.5	2.2					
V2200D(F)	V2200D	2.2	3.0		12	11.5	11	10.5	10	9.5	8.5	8	7	6	4.5	3		

**H=TOTAL HEAD IN METERS. Q=FLOW RATE**

# CUT

## SEWAGE PUMP WITH REAMER CUTTING SYSTEM

### PERFORMANCE RANGE

- ☒ Flow rate up to 400 l/min. (24m<sup>3</sup>/h)
- ☒ Dynamic head up to 25m

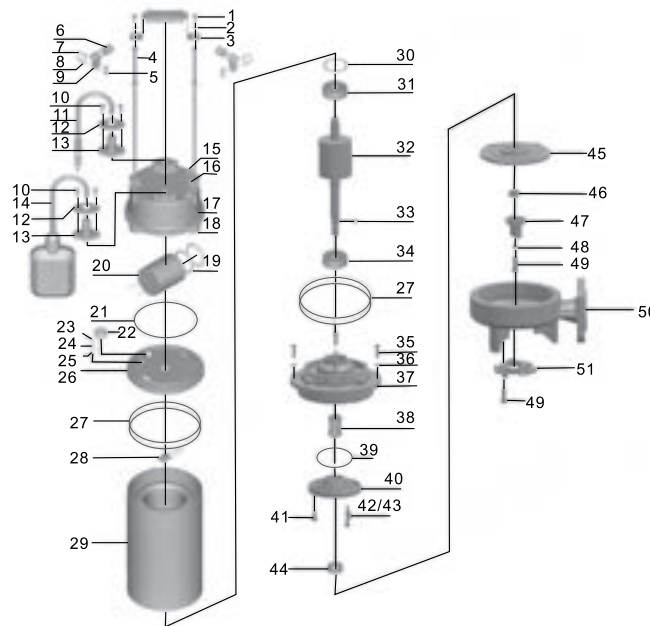
### OPERATING LIMITS

- ☒ Maximum operating depth 5m below water level
- ☒ Maximum fluid temperature 40°C
- ☒ Maximum passage for suspended solids Ø2mm
- ☒ PH value in water: 4-10



**CUT 1800F**

### DIAGRAM



No.	DESCRIPTION	No.	DESCRIPTION	No.	DESCRIPTION	No.	DESCRIPTION	No.	DESCRIPTION
1	Bolt	12	Flange	23	Screw	34	Bearing	45	Impeller
2	Washer	13	Cable protector	24	Stretching washer	35	Bolt	46	Word ring
3	Handle	14	Float switch	25	Washer	36	Washer	47	Rotation cutter
4	Blot	15	Bolt	26	Motor cover	37	Connection part	48	Stretching washer
5	Nut	16	"O" ring	27	"O" ring	38	Mechanical seal	49	Screw
6	Protector	17	Stretching washer	28	Thermal protector	39	"O" ring	50	Pump body
7	Screw	18	Capacitor cover	29	Stator	40	Oil chamber cover	51	Fixed cutter
8	Washer	19	"O" ring	30	Undulated washer	41	Screw		
9	Cable presser	20	Capacitor	31	Bearing	42	Screw		
10	Screw	21	"O" ring	32	Rotor	43	"O" ring		
11	Cable	22	Line protector	33	Key	44	Oil seal		

### WORKING PRINCIPLE

The **CUT** pump is submersible pump with REAMER cutting system, for dirty water, designed mainly for industrial and civil fields, are fitted with a cast iron impeller with a 3Cr13 cutter. Being equipment with overload protection device, it is also featured by its long durable and safety for use.

### PUMP INSTALLATION AND APPLICATIONS

The **CUT** pump is designed to handle dirty water, and dirty water with long fibre or firm sundries, it is easy to cut off them and avoid the impeller is blocked by the entanglement, are used in industrial, mining, and architectural operation. CUT pumps are particularly suitable for installation in kitchen, sanitation, factory, mine and family.

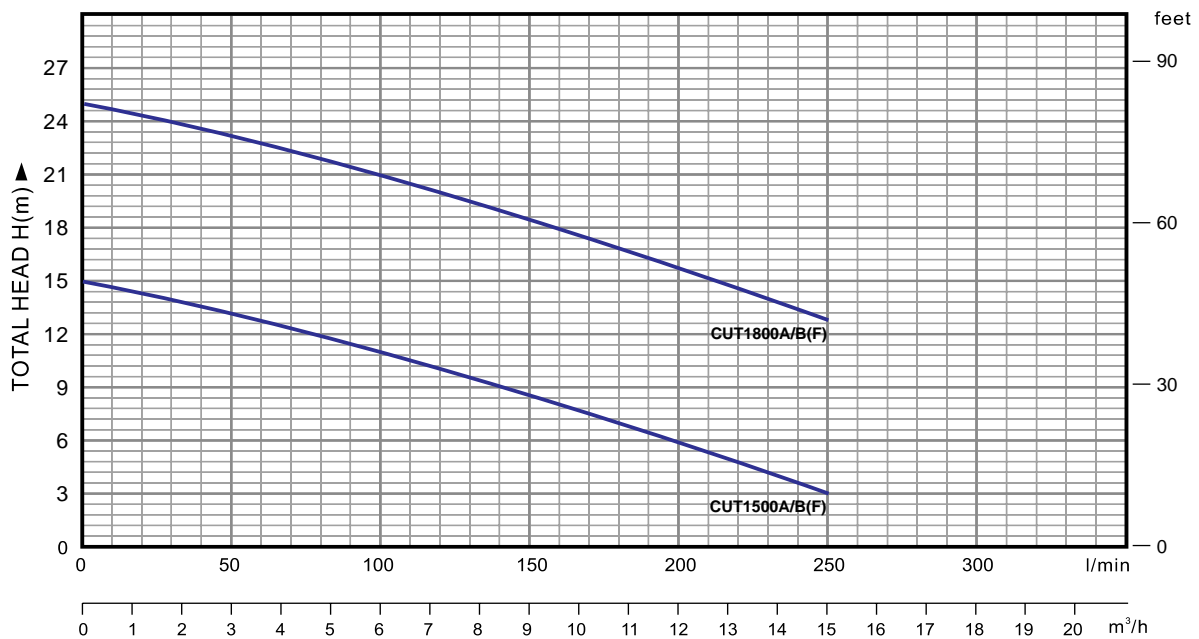
### PERFORMANCE

Exceptional sturdiness, even under severe working conditions.  
Long and stable performance curves.

### STRUCTURE CHARACTERISTICS

- ☒ Stainless steel pump body
- ☒ Cast iron impeller with cutter
- ☒ Stainless steel motor shaft
- ☒ Double mechanical seal
- ☒ Protection IP68
- ☒ With thermal overload protector in single phase motor

### PERFORMANCE CHART AT n=2900 rpm



### FLOW RATE Q

MODEL	POWER		OUTLET	Q	H (m)											
	KW	HP			0	3	6	9	12	15	18	21	24			
					l/min	0	50	100	150	200	250	300	350	400		
CUT1500A(F)	1.5	2	DN50	H (m)	15	13	11	8.5	6.0	3						
CUT1500B(F)	1.5	2			15	13	11	8.5	6.0	3						
CUT1800A(F)	1.8	2.5			25	23	21	19	16	13	10	6	1			
CUT1800B(F)	1.8	2.5			25	23	21	19	16	13	10	6	1			

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**

### PERFORMANCE RANGE

- ☒ flow rate up to 733l/min. (44 m<sup>3</sup>/h)
- ☒ head up to 22.3m

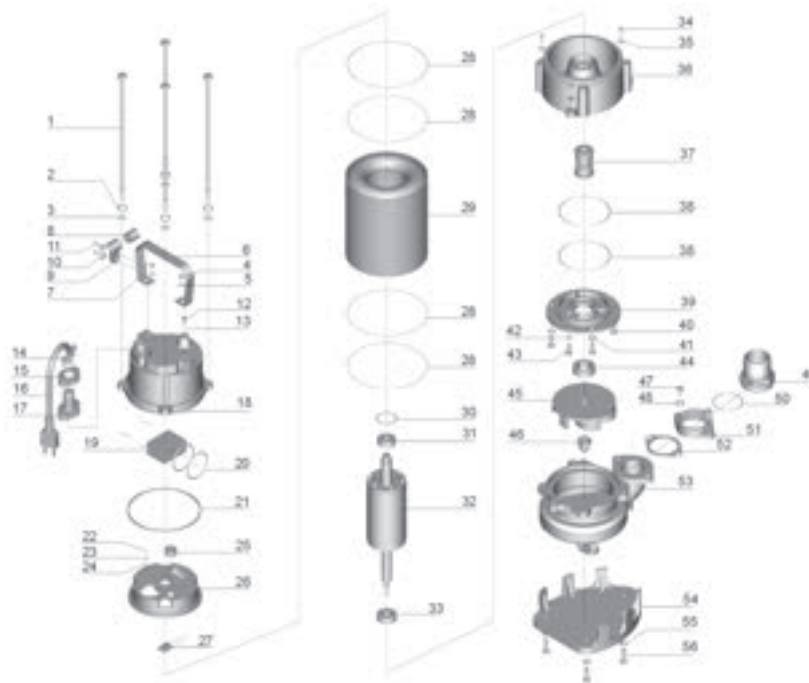
### OPERATION LIMITS

- ☒ maximum operating depth up to 5m below water level
- ☒ fluid temperature up to 40°C
- ☒ the trans medium' PH scope is from 4—10
- ☒ the kinemaics viscosity of the trans medium is from 7x10<sup>-7</sup> –23x10<sup>-6</sup> m<sup>2</sup>/s
- ☒ the maximum density of the trans medium is 1.2x10<sup>3</sup> kg/m<sup>3</sup>
- ☒ maximum passage for suspended solids ϕ 25mm
- ☒ maximum emptying level 40mm from the bottom



**VN 750**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Tie rod	16	Cable	31	Bearing	46	Nut
2	Stretching washer	17	Cable protector	32	Rotor	47	Bolt
3	Washer	18	Capacitor cover	33	Bearing	48	Washer
4	Bolt	19	Capacitor	34	Screw	49	Out-let connector
5	Washer	20	"O"ring	35	Washer	50	"O"ring
6	Handle	21	Rubber washer	36	Connection part	51	Connection nut
7	Nut	22	Screw	37	Mechanical seal	52	Gasket
8	Protector	23	Stretching washer	38	"O"ring	53	Pump casing
9	Cable presser	24	Washer	39	Oil chamber cover	54	Base plate
10	Washer	25	Line protector	40	Screw	55	Washer
11	Screw	26	Motor cover	41	Washer	56	Screw
12	Bolt	27	Thermal protector	42	"O"ring		
13	"O"ring	28	"O"ring	43	Screw		
14	Screw	29	Stator	44	Oil seal		
15	Flange	30	Undulated washer	45	Impeller		

**WORKING PRINCIPLE**

**VN** pumps are submersible vortex pumps, for fluid which PH scope is from 4—10 , designed mainly for industrial use.

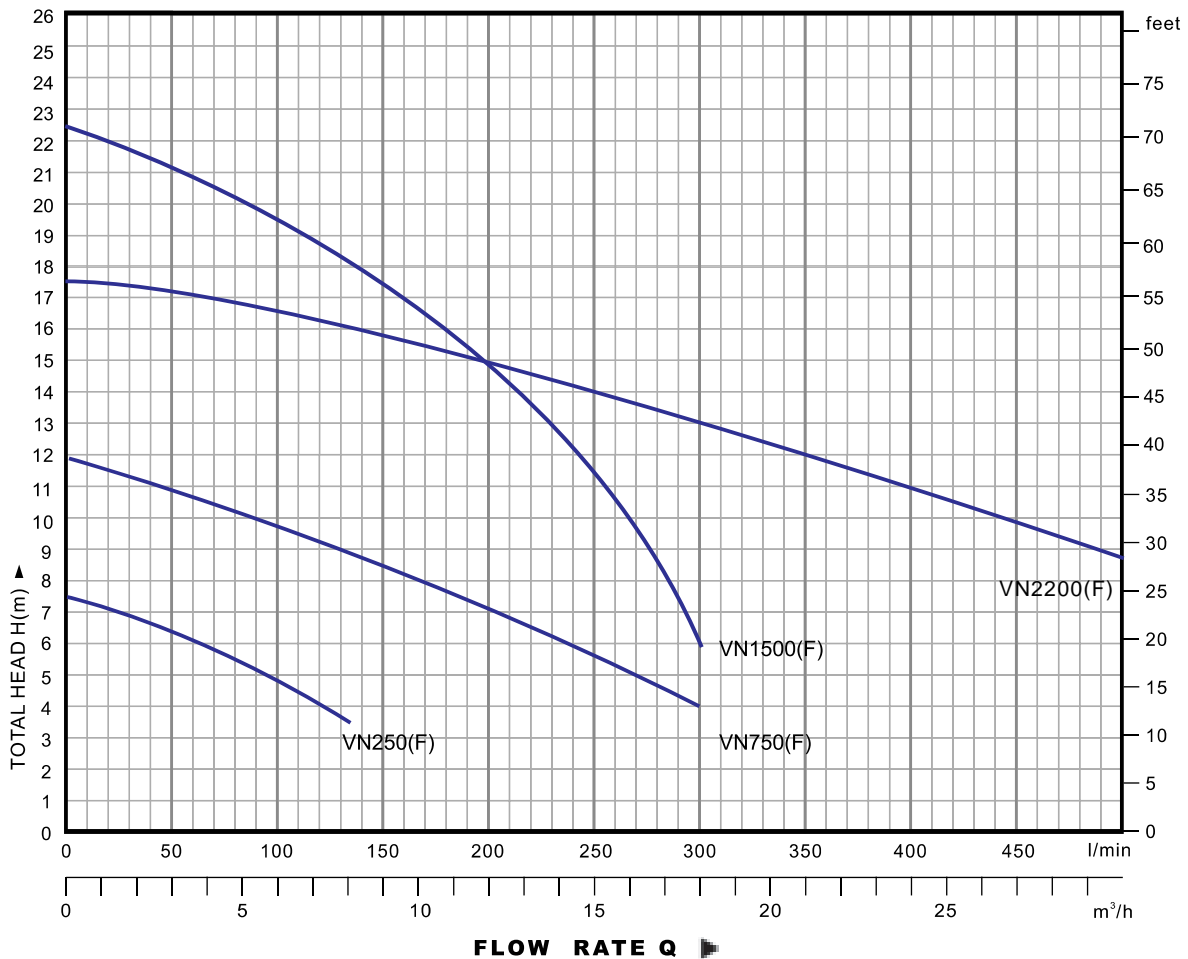
**PUMPS INSTALLATION AND APPLICATIONS**

**VN** pumps are designed for transportation of mine enterprises, construction sites, breed aquatics industry, fluid drug, drink, milk products, seawater. In all cases, for VN250, where suspended solids up to 15mm have to be dealt. for VN750, where suspended solids up to 25mm have to be dealt.

**STRUCTURE CHARACTERISTICS**

- ❖ stainless steel pump body
- ❖ stainless steel mechanical seal (graphite to ceramic or SIC to graphite)
- ❖ stainless steel shaft
- ❖ stainless steel open impeller
- ❖ with thermal overload protector in single phase motor

**PERFORMANCE CHART AT n=2900 rpm**



PUMP MODEL	POWER		Q m³/h	Q														
	KW	HP		0	1	2	3	4	5	6	8	10	12	14	16	18		
Single phase			l/min	0	16.6	33.3	50	66.7	83.3	100	133.4	166.6	200	233.1	266.8	300		
VN250(F)	0.25	0.35	Hm	7.5	7.2	7.0	6.5	6.0	5.3	4.8	3.5							
VN750(F)	0.75	1		12	11.5	11.2	11.0	10.5	10.1	9.9	9.0	8.0	7.0	6.0	5.0	4.0		
VN1500(F)	1.5	2		22.3	22	21.7	21.3	20.8	20.2	19.5	18.1	16.6	14.9	12.1	10.5	10.5		
PUMP MODEL	POWER		Q m³/h	Q														
Single phase	KW	HP		l/min	0	66.7	133.3	200	266.7	333.3	400	466.7	533.3	600	666.7	733.3	800	
VN2200(F)	2.2	3	Hm	17.5	17.3	16	15	14	12.5	11	9.5	7.8	6	4.2	2.2			

**H=TOTAL HEAD IN METERS. Q=FLOW RATE**

# VH

## STAINLESS STEEL HIGH HEAD SUBMERSIBLE PUMP (FOR DIRTY WATER)

### PERFORMANCE RANGE

- ☒ flow rate up to 300l/min. (18 m<sup>3</sup>/h)
- ☒ head up to 22.5m

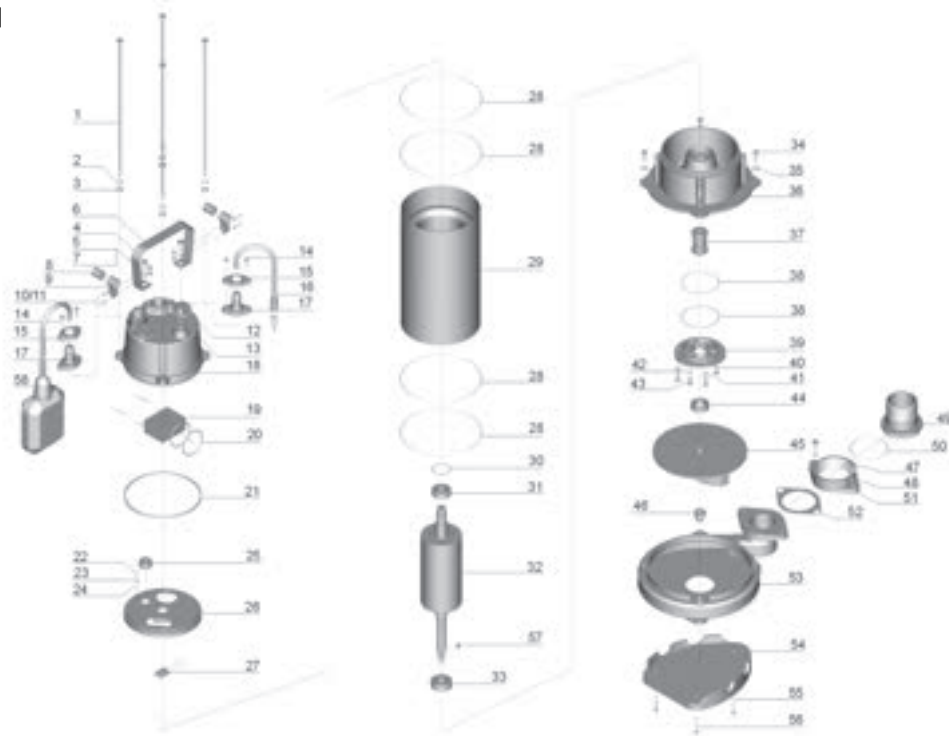
### OPERATION LIMITS

- ☒ maximum operating depth up to 5m below water level
- ☒ fluid temperature up to 40 °C
- ☒ maximum passage for suspended solids 10mm
- ☒ maximum emptying level 40mm from the bottom



VH 1500

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Tie rod	16	Cable	31	Bearing	46	Nut
2	Stretching washer	17	Cable protector	32	Rotor	47	Screw
3	Washer	18	Capacitor cover	33	Bearing	48	Washer
4	Bolt	19	Capacitor	34	Screw	49	Out-let connector
5	Washer	20	"O"ring	35	Washer	50	"O"ring
6	Handle	21	"O"ring	36	Lower cover	51	Connection nut
7	Nut	22	Screw	37	Mechanical seal	52	Gasket
8	Protector	23	Stretching washer	38	"O"ring	53	Pump casing
9	Cable presser	24	Washer	39	Oil chamber cover	54	Base plate
10	Washer	25	Line Protector	40	Screw	55	Washer
11	Screw	26	Upper cover	41	Washer	56	Screw
12	Bolt	27	Thermal protector	42	Screw	57	Key
13	"O"ring	28	"O"ring	43	Washer	58	Float switch
14	Screw	29	Stator	44	Oil seal		
15	Flange	30	Undulated washer	45	Impeller		

**WORKING PRINCIPLE**

Pumps are half open impeller centrifugal submersible pumps, designed for automatic and non-automatic use. The impeller, mounted on the end of the drive shaft, consists of a rear disk and blades, which are enclosed by the pump body cover. Fluid enters the rotating blade channel via the suction strainer, which forms the support base for the pump. Here the fluid moves radially from the centre outwards, acquiring energy both in the form of pressure and increased speed. When it leaves the impeller the fluid is conveyed towards the volute. Here part of the kinetic energy is transformed into pressure energy and the fluid leaves the pump via the side opening machined in the pump body.

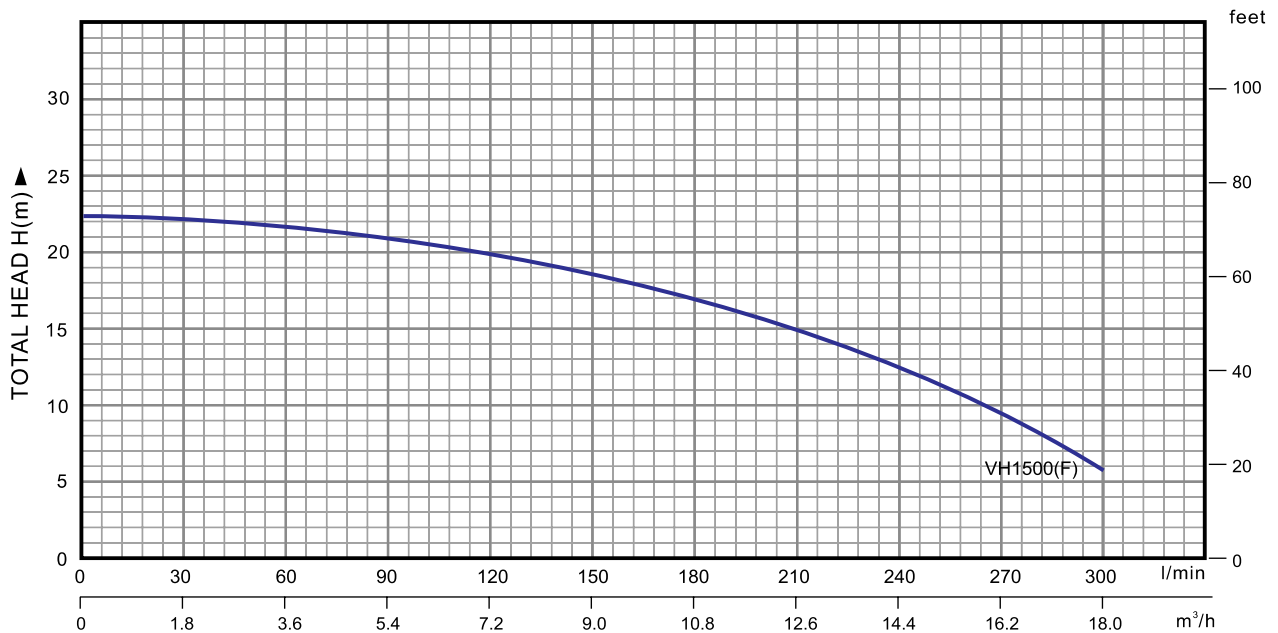
**PUMP INSTALLATION AND APPLICATIONS**

As portable electric drainage & irrigation devices, series single-phase vertical submersible pumps with lower water input are widely suitable for water cluster boxes, farmland, industrial & mining enterprises, construction sites, ship and family, and characterized by less volume, light weight and convenient operation etc. (the pump is fitted with a floating switch, so it is possible to achieve the automatic control of start-stop action under no one's care.) single-phase capacitor-running asynchronous or 3-phase asynchronous motor is equipped in this pump and installed with a built-in thermal protector, and can be automatically cut-off in the case of overheat or overcurrent, thus assuring safe and reliable running under worse circumstances.

**STRUCTURE CHARACTERISTICS**

- ❖ stainless steel pump body
- ❖ stainless steel mechanical seal (graphite to ceramic or SIC to graphite)
- ❖ stainless steel shaft
- ❖ with float switch or without
- ❖ cast iron open impeller
- ❖ with thermal overload protector in single phase motor

**PERFORMANCE CHART AT n=2900 rpm**



**FLOW RATE Q**

PUMP MODEL		POWER		Q	0	3	6	9	12	15	18
Single phase	Three phase	KW	HP	m³/h	0	50	100	150	200	250	300
VH 1500(F)	VH 1500	1.5	2	H m	22.5	21.5	19.5	18	15	11	5.8

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**

# VH

## STAINLESS STEEL HIGH HEAD SUBMERSIBLE PUMP (FOR DIRTY WATER)

### PERFORMANCE RANGE

- ☒ flow rate up to 800l/min. (48 m³/h)
- ☒ head up to 23m

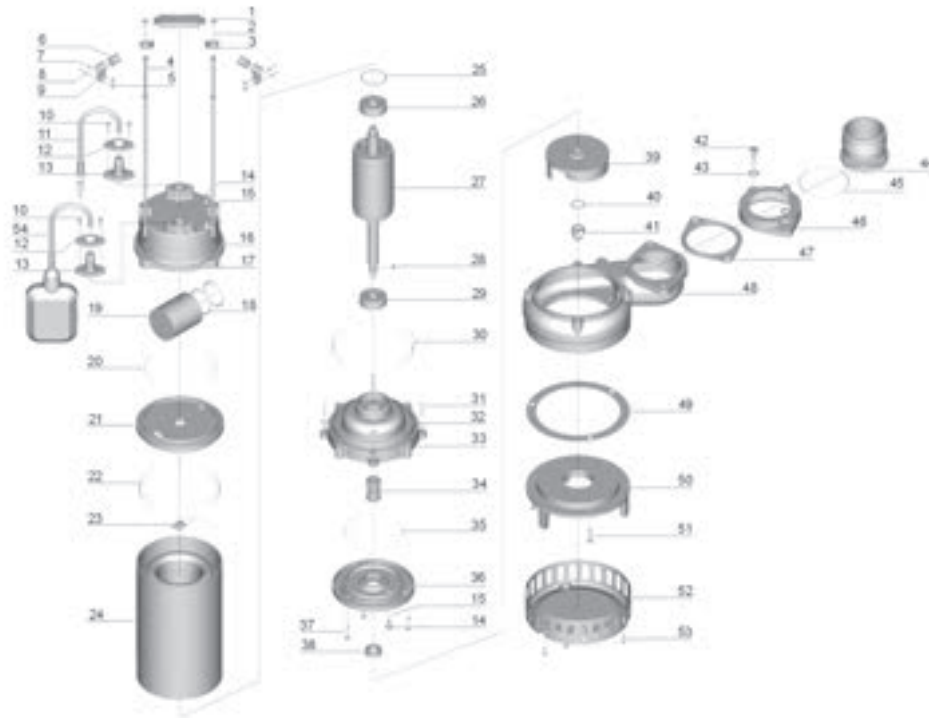
### OPERATION LIMITS

- ☒ maximum operating depth up to 5m below water level
- ☒ fluid temperature up to 40°C
- ☒ maximum passage for suspended solids 25mm
- ☒ maximum emptying level 40mm from the bottom



**VH 2200**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Bolt	16	Stretching washer	31	Screw	46	Connection nut
2	Stretching washer	17	Capacitor cover	32	Washer	47	Gasket
3	Washer	18	"O"ring	33	Connection part	48	Pump casing
4	Tie rod	19	Capacitor	34	Mechanical seal	49	Gasket
5	Nut	20	"O"ring	35	"O"ring	50	Pump cover
6	Protector	21	Motor cover	36	Oil chamber cover	51	Bolt
7	Screw	22	"O"ring	37	Bolt	52	Filter mesh
8	Washer	23	Thermal protector	38	Oil seal	53	Screw
9	Cable presser	24	Stator	39	Impeller	54	Float switch
10	Screw	25	Undulated washer	40	Washer		
11	Cable	26	Bearing	41	Nut		
12	Flange	27	Rotor	42	Bolt		
13	Cable protector	28	Key	43	Washer		
14	Bolt	29	Bearing	44	Out-let connector		
15	"O"ring	30	"O"ring	45	"O"ring		

### WORKING PRINCIPLE

Pumps are submersible vortex pumps, for dirty water, designed mainly for domestic use and industrial use. Their operating principle is that of a centrifugal pump with a retracted vortex impeller. A large sized ring chamber with a threaded delivery opening is machined in the pump body and closed by a cover, housing the suction opening, which is shaped to prevent suspended solid over a certain size from entering the pump. Since the impeller is retracted with respect to the cover, water entering the front chamber lying between these two components assumes a vortex motion and is centrifuged into the ring chamber, leaving the pump via the delivery opening.

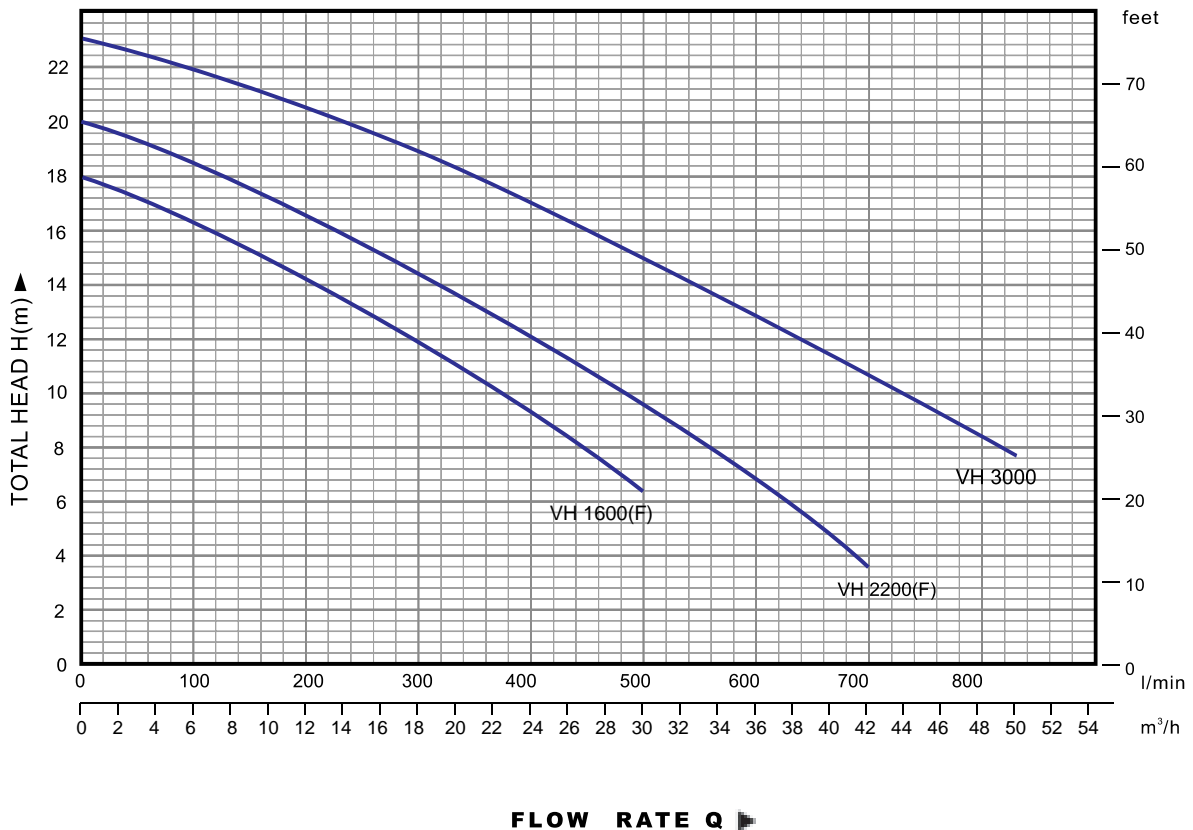
### PUMP INSTALLATION AND APPLICATIONS

Pumps are designed to lift dirty water which is not chemically aggressive to the pump components. In all cases where suspended solids up to  $\varnothing$  25mm have to be dealt with. Recommended applications therefore include draining flooding in confined areas such as basements and garages, and also pumping domestic waste and the disposal of waste water, containing fibrous matter and is also widely used in many factories. These pumps are easy to install and dependable when used automatically in fixed installations.

### STRUCTURE CHARACTERISTICS

- ✘ stainless steel pump body
- ✘ stainless steel mechanical seal (graphite to ceramic or SIC to graphite)
- ✘ stainless steel shaft
- ✘ with float switch or without
- ✘ cast iron open impeller
- ✘ with thermal overload protector in single phase motor

**PERFORMANCE CHART AT n=2900 rpm**



PUMP MODEL		POWER		Q	0	6	12	18	24	30	36	42	48
Single phase	Three phase	KW	HP	m³/h	0	100	200	300	400	500	600	700	800
VH 1600(F)	VH 1600	1.6	2.1	H m	18	17	14.8	12	9	6.4			
VH 2200(F)	VH 2200	2.2	3		20	18.5	16.6	14.5	12.2	9.8	6.8	3.6	
—	VH 3000	3	4		23	21.8	20.5	19	17	14.8	13	11	8.5

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**

# VC

## STAINLESS STEEL HIGH HEAD SUBMERSIBLE PUMPS (FOR CLEAR WATER)

### PERFORMANCE RANGE

- ✘ flow rate up to 250 l/min.(15 m<sup>3</sup>/h)
- ✘ head up to 36 m

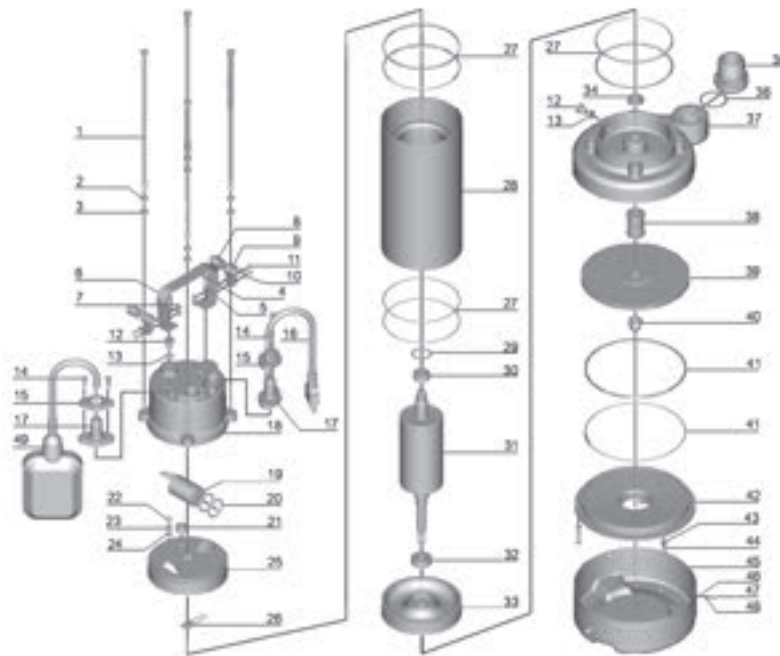
### OPERATING LIMITS

- ✘ maximum operating depth 5 m below water level
- ✘ maximum passgae for suspended solids  $\phi$  2 mm
- ✘ maximum fluid temperature 40°C
- ✘ PH value in water: 6.5-8.0



**VC 1100**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Tie rod	14	Screw	27	"O" ring	40	Nut
2	Stretching washer	15	Flange	28	Stator	41	"O" ring
3	Washer	16	Cable	29	Undulated washer	42	Pump cover
4	Bolt	17	Cable protector	30	Bearing	43	Washer
5	Washer	18	Capacitor cover	31	Rotor	44	Washer
6	Handle	19	Capacitor	32	Bearing	45	Screw
7	Nut	20	"O" ring	33	Lower cover	46	Filter mesh
8	Protector	21	Line protector	34	Oil seal	47	Screw
9	Cable presser	22	Screw	35	Out-let connector	48	Stretching washer
10	Washer	23	Stretching washer	36	"O" ring	49	Float switch
11	Screw	24	Washer	37	Pump casing		
12	Bolt	25	Upper cover	38	Meceanical seal		
13	"O" ring	26	Thermal protector	39	Impeller		

### WORKING PRINCIPLE

**VC** pumps are half open impeller centrifugal submersible pumps, designed for automatic and non-automatic use. The impeller, mounted on the end of the drive shaft, consists of a rear disk and blades, which are enclosed by the pump body cover. Fluid enters the rotating blade channel via the suction strainer, which forms the support base for the pump. Here the fluid moves radially from the centre outwards, acquiring energy both in the form of pressure and increased speed. When it leaves the impeller the fluid is conveyed towards the volute. Here part of the kinetic energy is transformed into pressure energy and the fluid leaves the pump via the side opening machined in the pump body.

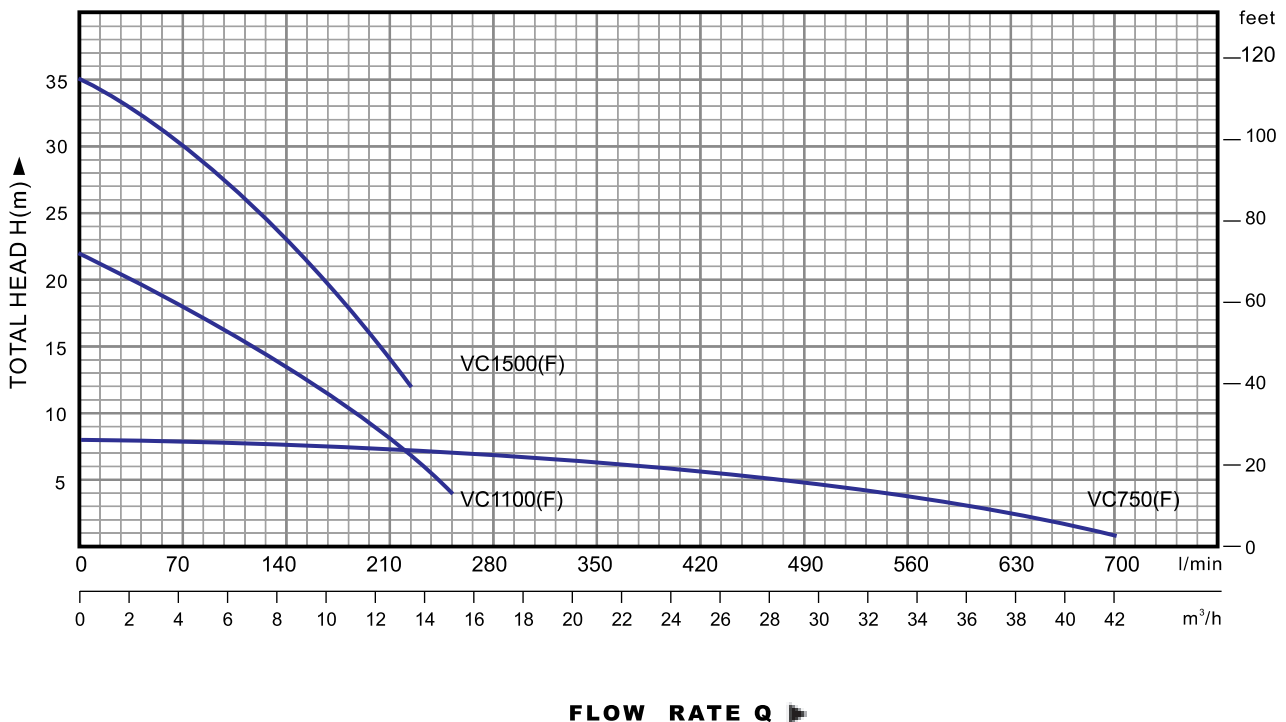
### PUMP INSTALLATION AND APPLICATIONS

As portable electric drainage & irrigation devices, **VC** series single-phase vertical submersible pumps with lower water input are widely suitable for water cluster boxes, farmland, industrial & mining enterprises, construction sites, ship and family, and characterized by less volume, light weight and convenient operation etc. (the pump is fitted with a floating switch, so it is possible to achieve the automatic control of start-stop action under no one's care.) single-phase capacitor-running asynchronous or 3-phase asynchronous motor is equipped in this pump and installed with a built-in thermal protector, and can be automatically cut-off in the case of overheat or overcurrent, thus assuring safe and reliable running under worse circumstances.

### STRUCTURAL CHARACTERISTIC

- ✦ stainless steel pump body
- ✦ stainless steel mechanical seal (graphite to ceramic or SIC to graphite)
- ✦ stainless steel shaft
- ✦ with float switch or without
- ✦ cast iron open impeller
- ✦ with thermal overload protector in single phase motor

**PERFORMANCE CHART AT n=2900 rpm**



PUMP MODEL		POWER		Q	0	6	12	18	24	30	36	42
Single phase	Three phase	KW	HP	m³/h	l/min							
VC750(F)	VC750	0.75	1	Hm	8	7.8	7.5	7.1	6.4	5.4	4.2	2.5

PUMP MODEL		POWER		Q	0	3	6	9	12	15
Single phase	Three phase	KW	HP	m³/h	l/min					
VC 1100(F)	VC 1100	1.1	1.5	H	22	21.5	21	16.5	11.5	5
VC 1500(F)	VC 1500	1.5	2	m	36	34	31	24	13	8

**H=TOTAL HEAD IN METERS. Q=FLOW RATE**

# 3 VH

## MULTISTAGE SUBMERSIBLE PUMPS (HIGH HEAD)

### PERFORMANCE RANGE

- ⊗ flow rate up to 240l/min. (14.4 m<sup>3</sup>/h)
- ⊗ head up to 54 m

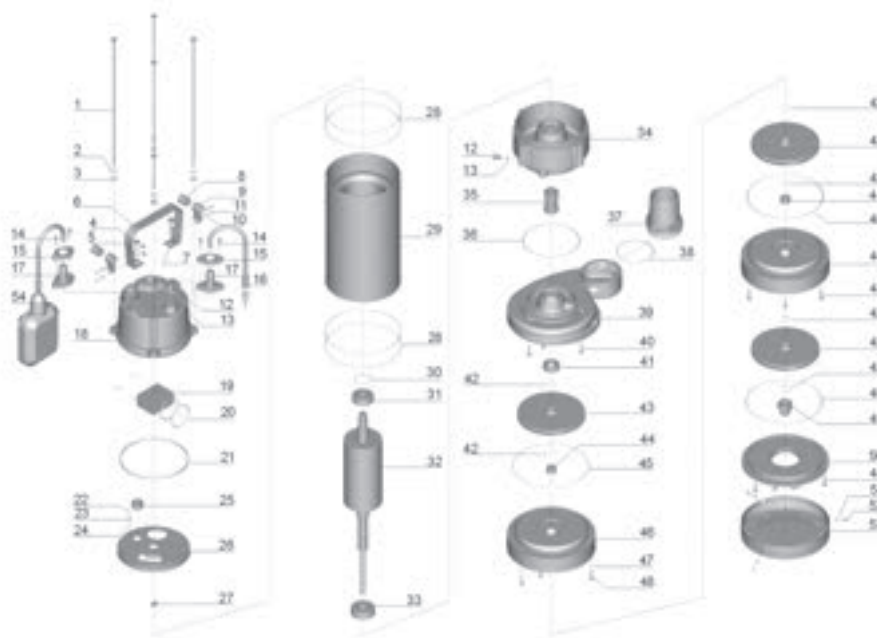
### OPERATION LIMITS

- ⊗ maximum operating depth up to 5m below water level
- ⊗ fluid temperature up to 40 °C
- ⊗ maximum ambient temperature up to 40 °C



**3VH 1500**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Tie rod	16	Cable	31	Bearing	46	Diffuser
2	Stretching washer	17	Cable protector	32	Rotor	47	Stretching washer
3	Washer	18	Capacitor cover	33	Bearing	48	Screw
4	Bolt	19	Capacitor	34	Connection part	49	Nut
5	Washer	20	"O"ring	35	Mechanical seal	50	Pump cover
6	Handle	21	Rubber washer	36	"O"ring	51	Washer
7	Nut	22	Screw	37	Out-let connector	52	Screw
8	Protector	23	Stretching washer	38	"O"ring	53	Filter mesh
9	Cable presser	24	Washer	39	Pump casing	54	Float switch
10	Washer	25	Line Protector	40	Screw		
11	Screw	26	Motor Cover	41	Oil seal		
12	Bolt	27	Thermal protector	42	Rubber washer		
13	"O"ring	28	"O"ring	43	Impeller		
14	Screw	29	Stator	44	Shaft sleeve		
15	Flange	30	Undulated washer	45	"O"ring		

**WORKING PRINCIPLE**

Pump consists centrifugal pumps, designed for permanently or partially immersed operation to produce higher dynamic head. The working principle is that of three-stage centrifugal pumps. The three impellers are installed on the same shaft and rotate inside vane diffuser, channelling the fluid from each impeller to the suction opening of the next. The fluid passes through the three impellers and leaves the pump via the delivery opening machined in the pump body. Between impellers and vane diffuser form a pumping stage and increase the liquid pressure efficiently, following the principle of centrifugal machine.

**PUMP INSTALLATION AND APPLICATIONS**

This pump is suitable for pumping or fluids. Their higher performance and dependability make them suitable for use in domestic, civil and industrial fields, for the automatic distribution of water working in conjunction with surge tanks, for emptying basins, tank, sump pits, swimming pools and aquariums, for irrigation gardens, for washing and pressure-boosting system, and for fire-fighting purposes, etc, where need higher dynamic head.

**PERFORMANCE**

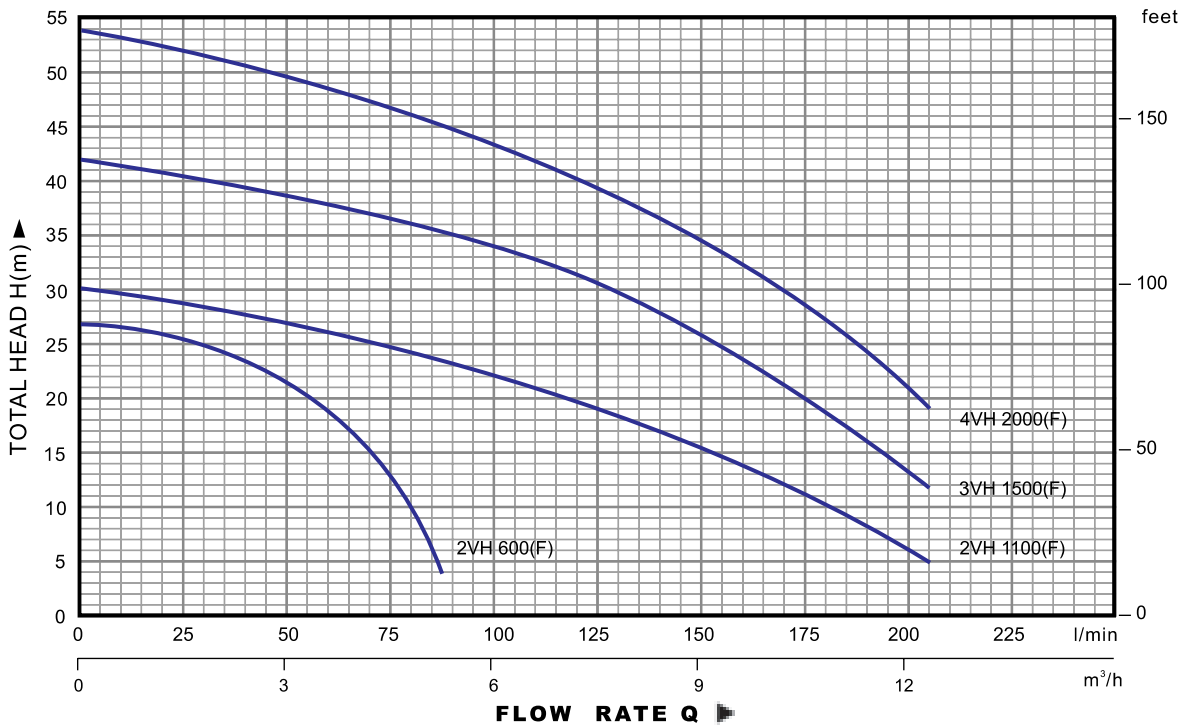
Pump combines the advantages of a submersible pump with the performance of a centrifugal pump. In fact they assure:

- ☒ outputs having higher absolute values
- ☒ ample and particularly stable curves

**STRUCTURAL CHARACTERISTIC**

- ☒ stainless steel pump body
- ☒ stainless steel mechanical seal (graphite to ceramic or Sic to graphite)
- ☒ cast iron impeller with centrifugal radial flow type
- ☒ with or without float switch
- ☒ 45# steel shaft
- ☒ with thermal overload protector in single phase motor

**PERFORMANCE CHART AT n = 2900 rpm**



PUMP MODEL		POWER		Q	0	1.8	3.6	5.4	7.2	9.0	10.8	12.6
Single phase	Three phase	KW	HP	m³/h	0	30	60	90	120	150	180	210
2VH 600(F)	2VH 600	0.6	0.8	H m	27	25	19.2	3				
2VH 1100(F)	2VH 1100	1.1	1.5		30	29	27	24.5	21	16	10	3.5
3VH 1500(F)	3VH 1500	1.5	2		42	40	37.5	35	31	25	18	10
4VH 2000(F)	4VH 2000	2.0	2.7		54	51.5	48.5	45	40	34.5	27	16.5

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**

# SW

## ALUMINUM COVER SEWAGE PUMPS

### PERFORMANCE RANGE

- ☒ flow rate up to 260l/min. (15.6 m<sup>3</sup>/h)
- ☒ head up to 9.5m

### OPERATION LIMITS

- ☒ maximum operating depth up to 5m below water level
- ☒ fluid temperature up to 40°C
- ☒ maximum passage for suspended solids 15mm
- ☒ maximum emptying level 40mm from the bottom



**SW 550**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Protector	16	Line Protector	31	"O"ring	46	Bolt
2	Cable presser	17	"O"ring	32	Pump casing	47	Washer
3	Screw	18	Screw	33	Screw	48	Gasket
4	Cable	19	Stretching washer	34	Oil seal	49	Rubber mat
5	Flange	20	Washer	35	Impeller	50	Bolt
6	Cable protector	21	Rubber washer	36	Nut	51	Washer
7	Screw	22	Motor Cover	37	Bolt	52	Connection nut
8	Handle	23	Undulated washer	38	Washer	53	Gasket
9	Screw	24	Bearing	39	Connection part	54	Washer
10	"O"ring	25	Rotor	40	Screw	55	Nut
11	Bolt	26	Thermal protector	41	Float switch		
12	Washer	27	Stator	42	3 way		
13	Capacitor cover	28	Mechanical seal	43	Gasket		
14	"O"ring	29	"O"ring	44	Key		
15	Capacitor	30	Out-let connector	45	Bearing		

### WORKING PRINCIPLE

Pumps are submersible vortex pumps, for dirty water, designed mainly for domestic use and industrial use. Their operating principle is that of a centrifugal pump with a retracted vortex impeller. A large sized ring chamber with a threaded delivery opening is machined in the pump body and closed by a cover, housing the suction opening, which is shaped to prevent suspended solid over a certain size from entering the pump. Since the impeller is retracted with respect to the cover, water entering the front chamber lying between these two components assumes a vortex motion and is centrifuged into the ring chamber, leaving the pump via the delivery opening.

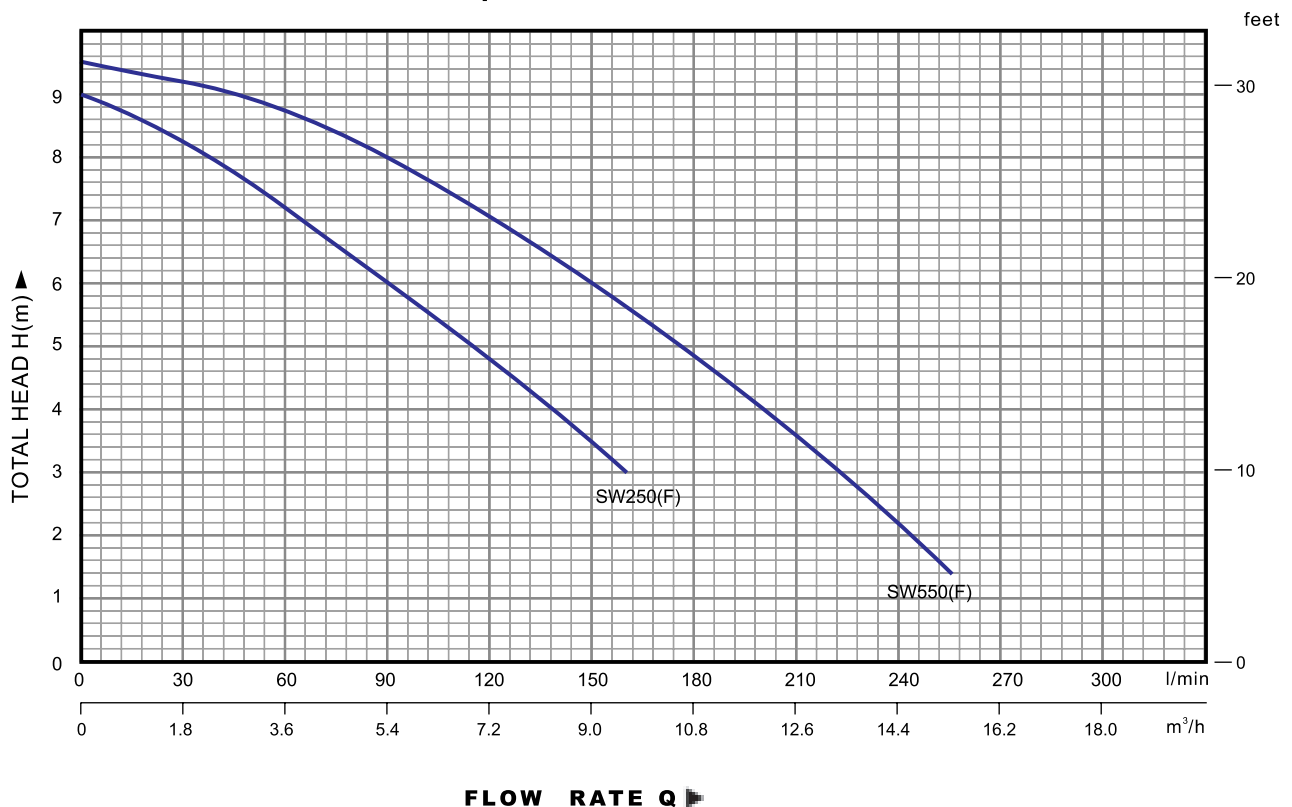
### PUMP INSTALLATION AND APPLICATIONS

Pumps are designed to lift dirty water which is not chemically aggressive to the pump components. In all cases where suspended solids up to  $\varnothing$  15mm have to be dealt with. Recommended applications therefore include draining flooding in confined areas such as basements and garages, and also pumping domestic waste and the disposal of waste water, containing fibrous matter and is also widely used in many factories. These pumps are easy to install and dependable when used automatically in fixed installations. A purposely built pit with minimum dimensions 450x450x450 mm is recommended for fixed installations, to provide total drainage and allow correct operation of the float switch. This system automatically starts the pump when the fluid reaches a preset level, stopping it once the fluid has been emptied. Installing a suitable non-return valve on the delivery pipe prevents reverse flow when the pump stops.

### STRUCTURE CHARACTERISTICS

- ☒ aluminum pump body
- ☒ stainless steel mechanical seal (graphite to ceramic or SIC to graphite)
- ☒ 45# steel shaft
- ☒ cast iron open impeller
- ☒ with thermal overload protector in single phase motor

**PERFORMANCE CHART AT n=2900 rpm**



PUMP MODEL	POWER		Q m³/h	0	1.8	3.6	5.4	7.2	9.0	10.8	12.6	14.4	15.6
	KW	HP		0	30	60	90	120	150	180	210	240	260
SW 250(F)	0.25	0.33	H	9	8.3	7.2	6	4.8	3.5				
SW 550(F)	0.55	0.75	m	9.5	9.2	8.8	8	7	6	4.8	3.5	2.2	1.5

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**

# SW

## CAST IRON SEWAGE PUMPS WITH GRINDING SYSTEM

### PERFORMANCE RANGE

- ☒ flow rate up to 1000 l/min.(60m<sup>3</sup>/h)
- ☒ head up to 17 m

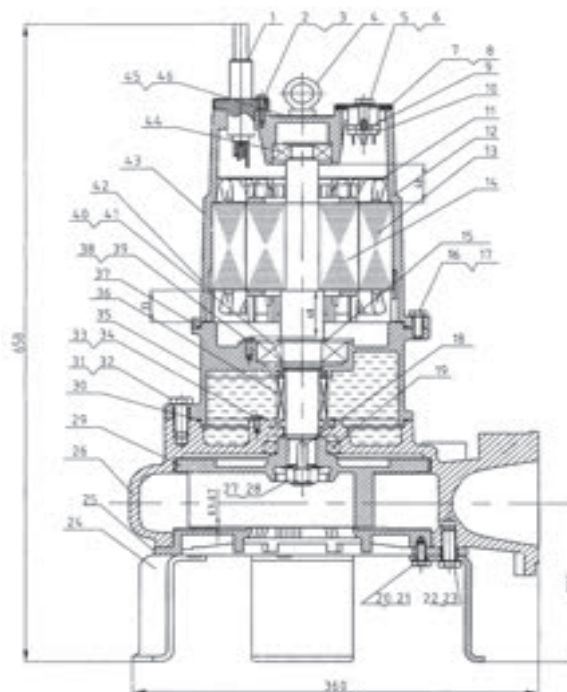
### OPERATING LIMITS

- ☒ maximum operating depth 5 m below water level
- ☒ maximum fluid temperature up to 40 °C
- ☒ for sewage water usage
- ☒ maximum passage for suspended solids  $\phi$  53 mm
- ☒ with coupling system



**SW2200**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Cable	15	Gasket	29	Impeller	43	Motor frame
2	Bolt	16	Bolt	30	"O" ring	44	Bearing
3	Spring washer	17	Spring washer	31	Bolt	45	Nameplate
4	Handle grip	18	Key	32	Spring washer	46	Rivets
5	Bolt	19	Lip seal	33	Screw		
6	Spring washer	20	Bolt	34	Washer		
7	Washer	21	Spring washer	35	Connection part		
8	Pressed board	22	Bolt	36	Mechanical seal		
9	Screw	23	Spring washer	37	"O" ring		
10	Thermal protector	24	Foot	38	Bolt		
11	Plate	25	Base plate	39	Washer		
12	Motor frame	26	Pump casing	40	Close ring for shaft		
13	Stator	27	Nut	41	Bearing		
14	Rotor	28	Washer	42	Close ring for stator		

**WORKING PRINCIPLE**

SW pumps are submersible pumps with grinding system, for dirty water, designed mainly for industrial and civil fields, are fitted with a cast iron impeller with grinder.

**PUMP INSTALLATION AND APPLICATIONS**

SW pumps are designed to lift dirty water, for dirty water with long fibre or firm sundries, it is easy to cut off them and avoid the impeller is blocked by the entanglement, are used in industrial, mining, and architectural operation. SW pumps are particularly suitable for installation in kitchen, sanitation, factory, mine and family.

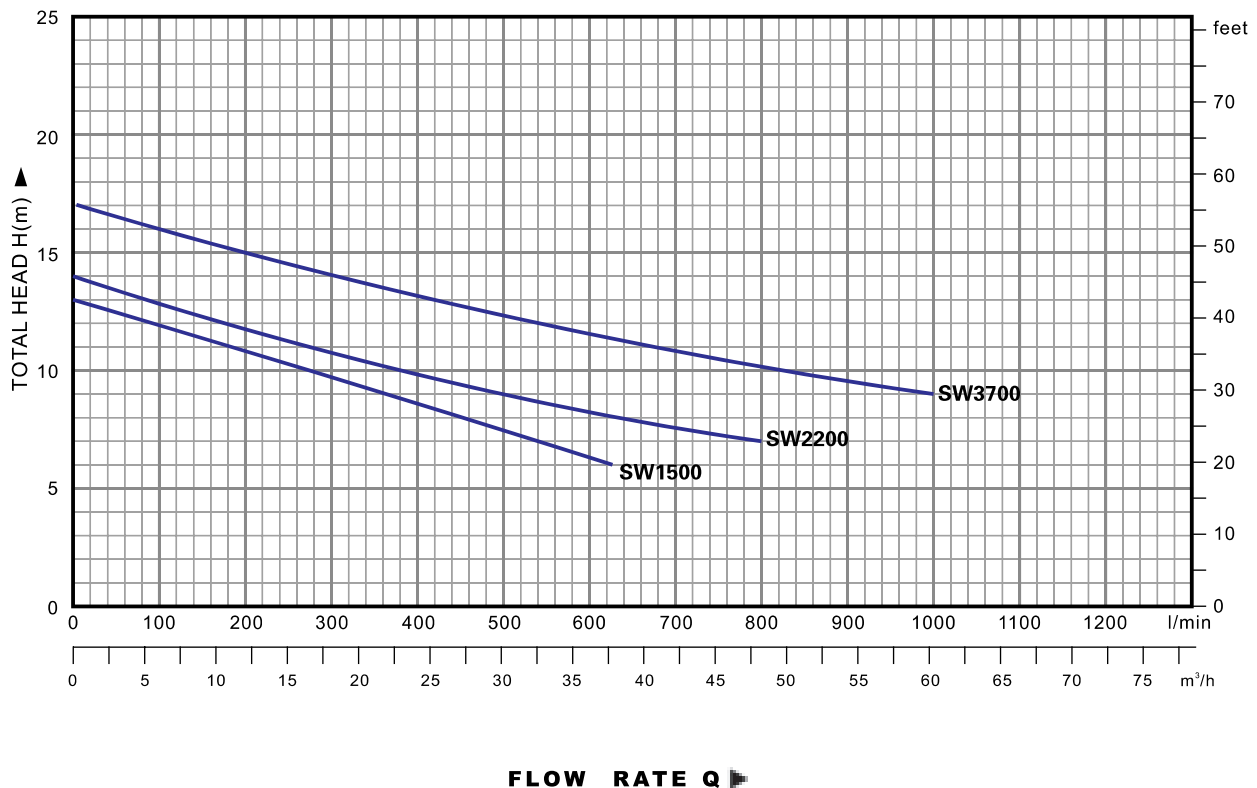
**PERFORMANCE**

Exceptional sturdiness, even under severe working conditions.  
Long and stable performance curves

**STRUCTURE CHARACTERISTICS**

- ☒ cast iron pump body
- ☒ SIC-SIC mechanical seal
- ☒ cast iron impeller with grinder
- ☒ stainless steel shaft
- ☒ 4-pole motor for SW2200 and SW3700

**PERFORMANCE CHART**



PUMP MODEL	POWER		Q m³/h	0	6	12	18	24	30	36	42	48	60
	KW	HP		0	100	200	300	400	500	600	700	800	1000
SW 1500	1.5	2	Hm	13	12	11	9	8	7	6			
SW 2200	2.2	3		14	12.5	11.5	10	9.5	9	8	7.5	7	
SW 3700	3.7	5		17	16	15	14	13.5	13	12	11.5	11	9

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**

# MCM

## SUBMERSIBLE DOUBLE-CHANNEL PUMP (FOR SEWAGE)

### PERFORMANCE RANGE

- ✦ Flow rate up to 1100 l/min. (66m<sup>3</sup>/h)
- ✦ Dynamic head up to 24m

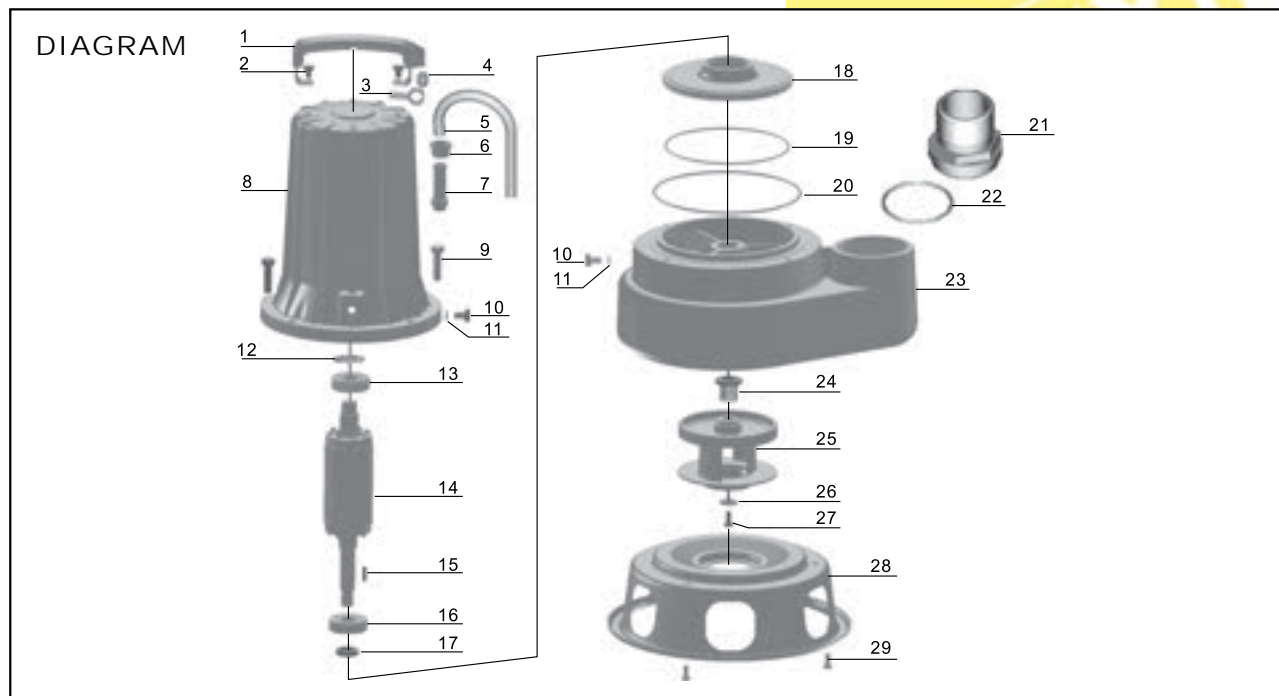
### OPERATING LIMITS

- ✦ Maximum operating depth 10m below water level
- ✦ Maximum fluid temperature 50°C
- ✦ Maximum passage for suspended solids Ø50m

Submersible high efficiency double-channel pump for professional use. Built using high quality materials and oversized extremely reliable and suitable for continuous heavy duty service.



MCM20



No.	DESCRIPTION	No.	DESCRIPTION	No.	DESCRIPTION
1	Handle	12	Undulated washer	23	Pump casing
2	Bolt	13	Bearing	24	Mechanical seal
3	Cable presser	14	Rotor	25	Impeller
4	Protector	15	Key	26	Washer
5	Cable	16	Bearing	27	Bolt
6	Gland nut	17	Oil seal	28	Base
7	Cable protector	18	Lower cover	29	Bolt
8	Stator	19	"O" ring		
9	Bolt	20	"O" ring		
10	Bolt	21	Out-let connector		
11	Seal washer	22	"O" ring		

**WORKING PRINCIPLE**

The MCM double-channel pump is designed for automatic use (single phase version). The operating principle is that of pumps with a double-channel impeller. This is mounted on the end of the drive shaft and enclosed in a large ring chamber, formed by the pump body and the base. The suction opening is in direct with the liquid to be pumped. The rotating impeller transmits kinetic energy to the liquid, which is centrifuged in the ring chamber, where part of the kinetic energy is transformed into pressure energy. The particular shape of the impeller optimizes efficiency.

**PUMP INSTALLATION AND APPLICATIONS**

The MCM submersible pump is made from heavy gauge cast iron offering exceptional sturdiness, abrasion resistance and durability, come equipped with a **DOUBLE-CHANNEL** impeller and are capable of pumping liquids containing short fibred suspended solids. It is ideal for pumping sewage, waste water, water mixed with mud, groundwater and surface water in locations such as apartment blocks, public buildings, factories, tower garages, underground car parks and cleaning areas, etc.

This pump is particularly dependable in fixed installations intended for automatic use. A purposely built pit with minimum dimensions 500 x 500 x 500 mm is recommended for fixed installations, to give total drainage, and to allow correct operation of the automatic float switch. This system (standard equipment on the single phase pump) automatically starts the pump when the fluid reaches a present level. Stopping it once the fluid has been emptied.

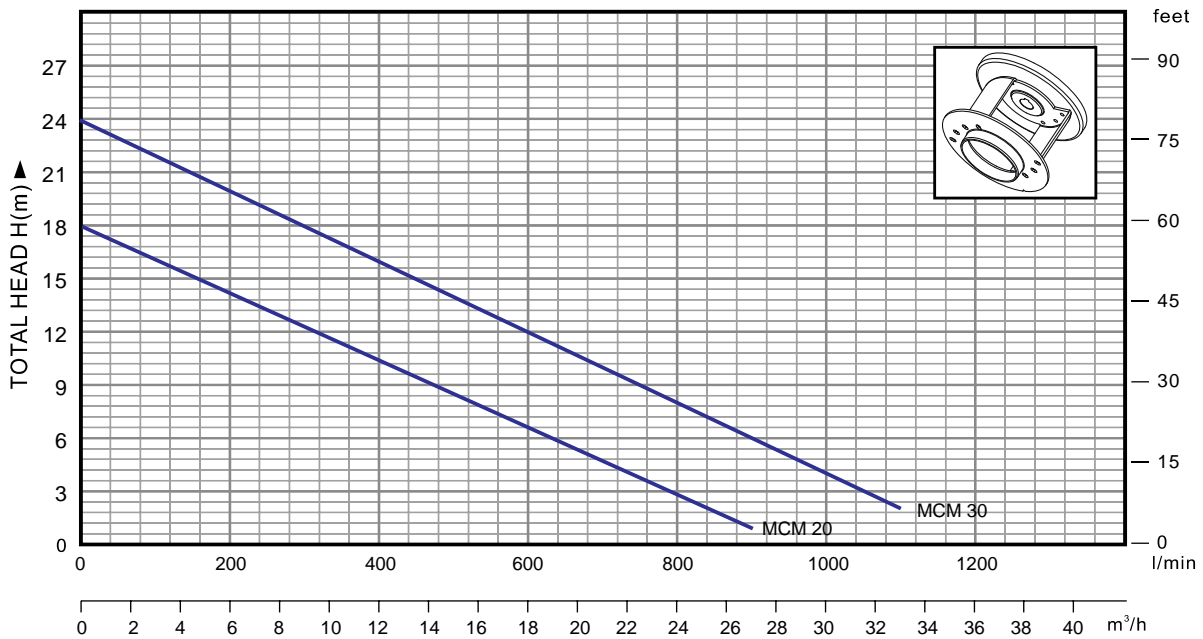
**PERFORMANCE**

The MCM pump has the following feature:  
 A performance curve with particularly high delivery rates.

**STRUCTURE CHARACTERISTICS**

- ✘ Cast iron pump body
- ✘ Stainless steel base
- ✘ Stainless steel double-channel impeller
- ✘ Stainless steel motor shaft
- ✘ Double seal

**PERFORMANCE CHART AT n=2900 rpm**



**FLOW RATE Q**

MODEL	POWER		OUTLET	Q	H (m)													
	KW	HP			0	6	12	18	24	30	36	42	48	54	60	66		
MCM 20	1.5	2	2 1/2"	Q	0	100	200	300	400	500	600	700	800	900	1000	1100		
MCM 30	2.2	3			18	22	20	18	16	14	12	10	8	6	4	2		

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**

# SC

## CAST IRON SEWAGE PUMPS WITH GRINDING SYSTEM

### PERFORMANCE RANGE

- ☒ flow rate up to 100m<sup>3</sup>/h
- ☒ head up to 25 m

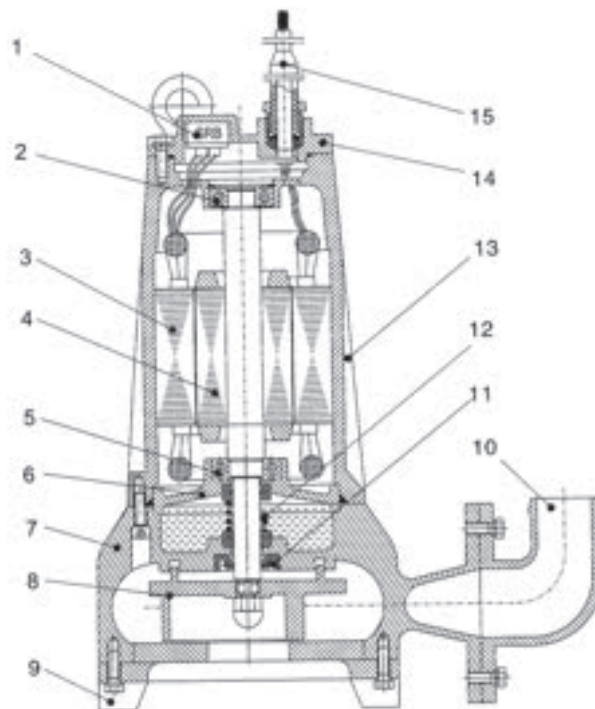
### OPERATING LIMITS

- ☒ maximum operating depth 5 m below water level
- ☒ maximum fluid temperature up to 40°C
- ☒ maximum passage for suspended solids  $\phi$  50 mm



**SC2200**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Motor Protector	6	Bearing bracket	11	Oil seal bracket
2	Bearing	7	Pump casing	12	Mechanical seal
3	Stator	8	Impeller	13	Motor Body
4	Rotor	9	Base plate	14	Upper cover
5	Bearing	10	Discharge adapter	15	Cable

**WORKING PRINCIPLE**

SC pumps are submersible pumps with grinding system, for dirty water, designed mainly for industrial and civil fields, are fitted with a cast iron impeller with grinder.

**PUMP INSTALLATION AND APPLICATIONS**

SC pumps are designed to lift dirty water, for dirty water with long fibre or firm sundries, it is easy to cut off them and avoid the impeller is blocked by the entanglement, are used in industrial, mining, and architectural operation. SC pumps are particularly suitable for installation in kitchen, sanitation, factory, mine and family.

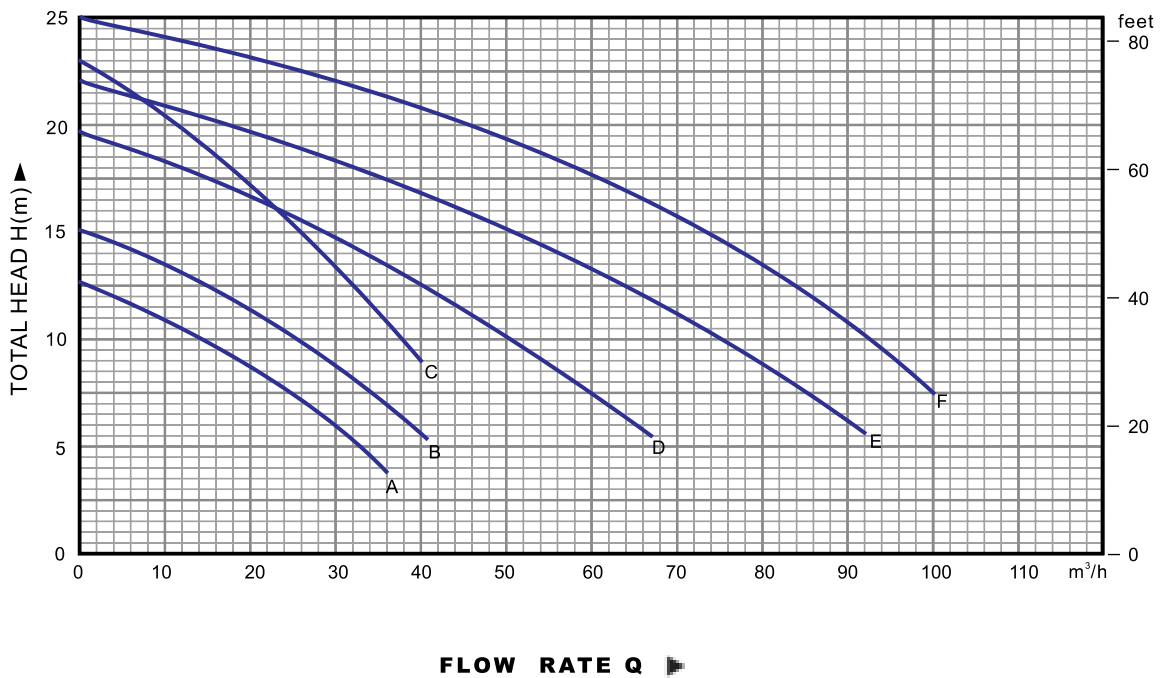
**PERFORMANCE**

Exceptional sturdiness, even under severe working conditions.  
Long and stable performance curves

**STRUCTURAL CHARACTERISTICS**

- ☒ cast iron pump body
- ☒ graphite to ceramic mechanical seal or graphite to SIC mechanical seal
- ☒ cast iron impeller with grinder
- ☒ 45# steel shaft or stainless steel shaft

**PERFORMANCE CHART AT n=2860 rpm**



No.	PUMP MODEL	Power		Rated capacity	Rated head	Outlet	Speed	Impeller passage
		KW	HP	m³/h	m	mm	r/min	mm
A	SC1500	1.5	2	25	7	80	2860	25
B	SC2200	2.2	3	25	10	80	2860	25
C	SC3000	3	4	25	15	80	2860	25
D	SC4000	4	5.5	50	10	80	2860	30
E	SC5500	5.5	7.5	65	12	100	2860	50
F	SC7500	7.5	10	85	13	100	2860	50

# MWC

## CAST IRON SEWAGE PUMPS WITH REAMER CUTTING SYSTEM

### PERFORMANCE RANGE

- ※ Flow rate up to 440 l/min. (26.5m<sup>3</sup>/h)
- ※ Dynamic head up to 33m

### OPERATING LIMITS

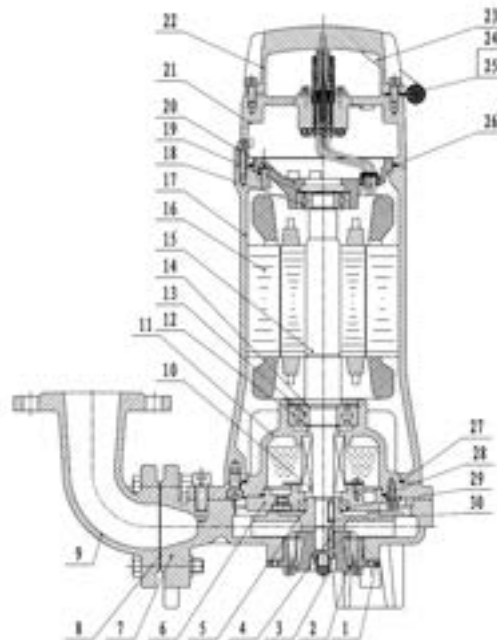
- ※ Maximum operating depth 5m below water level
- ※ Maximum fluid temperature 40°C



Cutter



### DIAGRAM



No.	DESCRIPTION	No.	DESCRIPTION	No.	DESCRIPTION
1	Cutter knife seat	11	Oil chamber	21	Upper cover
2	Cutter knife	12	Snap ring	22	Handle
3	Nut	13	Bearing	23	Cable
4	Key	14	Bearing pressure plate	24	Cable protector
5	Impeller	15	Rotor	25	Wire clip
6	Pump cover	16	Stator	26	"O" ring
7	Pump casing	17	Machine barrel	27	"O" ring
8	Flange gasket	18	Bearing	28	"O" ring
9	Flange elbow	19	Wave washer	29	Oil seal
10	Mechanical seal	20	Upper bearing cover	30	Key

## WORKING PRINCIPLE

The MWC pump is submersible pump with REAMER cutting system, for dirty water, designed mainly for industrial and civil fields, are fitted with a cast iron impeller with a 108Cr17 cutter. Being equipment with overload protection device, it is also featured by its long durable and safety for use.

## PUMP INSTALLATION AND APPLICATIONS

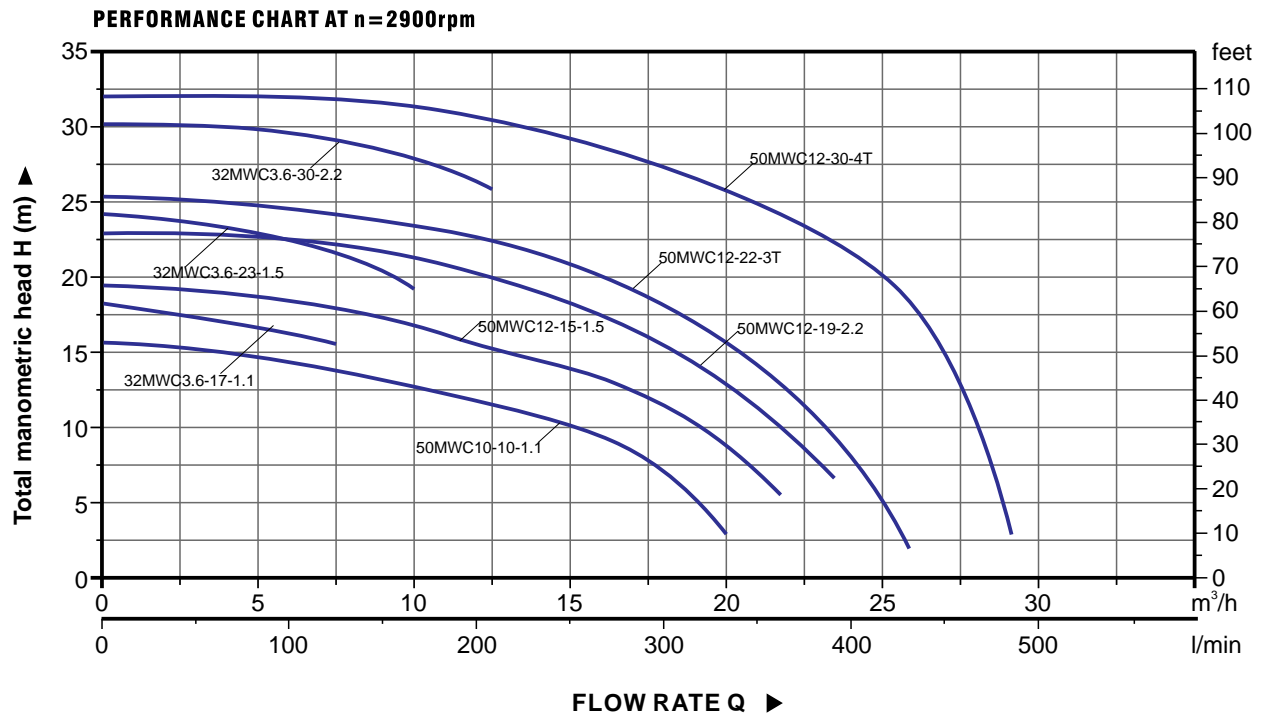
The MWC pump is designed to handle dirty water, and dirty water with long fibre or firm sundries, it is easy to cut off them and avoid the impeller is blocked by the entanglement, are used in industrial, mining, and architectural operation. MWC pumps are particularly suitable for installation in kitchen, sanitation, factory, mine and family.

## PERFORMANCE

Exceptional sturdiness, even under severe working conditions.  
Long and stable performance curves.

## STRUCTURE CHARACTERISTICS

- ☒ Cast iron pump body
- ☒ Graphite to ceramic mechanical seal or graphite to SIC mechanical seal
- ☒ Cast iron impeller with 108Cr17 cutter
- ☒ #45 steel shaft or stainless steel shaft



MODEL		POWER		RATED FLOW (m <sup>3</sup> /h)	MAX. FLOW (m <sup>3</sup> /h)	RATED HEAD (m)	MAX. HEAD (m)	DISCHARGE (inch)
SINGLE PHASE	THREE PHASE	kW	HP					
32MWC3.6-17-1.1	32MWC3.6-17-1.1T	1.1	1.5	3.6	8	17	18	1¼"
32MWC3.6-23-1.5	32MWC3.6-23-1.5T	1.5	2.0	3.6	10	23	23.2	1¼"
32MWC3.6-30-2.2	32MWC3.6-30-2.2T	2.2	3.0	3.6	12	30	30.2	1¼"
50MWC10-10-1.1	50MWC10-10-1.1T	1.1	1.5	10	20.5	10	17.5	2"
50MWC12-15-1.5	50MWC12-15-1.5T	1.5	2.0	12	21.5	15	19.5	2"
50MWC12-19-2.2	50MWC12-19-2.2T	2.2	3.0	12	24.5	19	23	2"
-	50MWC12-22-3T	3.0	4.0	12	26	22	25.5	2"
-	50MWC12-30-4T	4.0	5.5	12	26.5	30	33	2"

# MWD

## CAST IRON SEWAGE PUMPS WITH DOUBLE-CHANNEL IMPELLER

### PERFORMANCE RANGE

- ※ Flow rate up to 1400 l/min. (85m<sup>3</sup>/h)
- ※ Dynamic head up to 31.5m

### OPERATING LIMITS

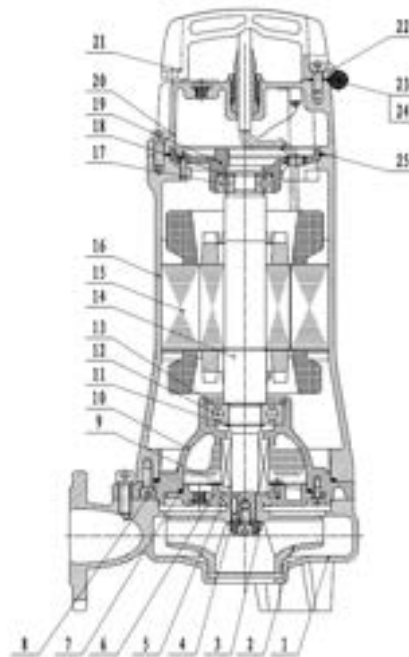
- ※ Maximum operating depth 5m below water level
- ※ Maximum fluid temperature 40°C



Impeller



### DIAGRAM



No.	DESCRIPTION	No.	DESCRIPTION	No.	DESCRIPTION
1	Pump casing	11	Snap ring	21	Handle
2	Impeller	12	Bearing	22	Cable
3	Washer	13	Snap ring	23	Cable protector
4	Key	14	Rotor	24	Wire clip
5	Oil seal	15	Stator	25	"O" ring
6	Pump cover	16	Machine barrel		
7	"O" ring	17	Bearing		
8	"O" ring	18	Wave washer		
9	Mechanical seal	19	Upper bearing cover		
10	Oil chamber	20	Top cover		

## WORKING PRINCIPLE

MWD pumps are submersible DOUBLE-CHANNEL pumps, for dirty water, designed mainly for industrial and civil fields. Are fitted with a double-channel impeller. Being made of hard alloy and reliable well-sealed and equipment with overhead protection device, it is also featured by its long durable and safety for use.

## PUMP INSTALLATION AND APPLICATIONS

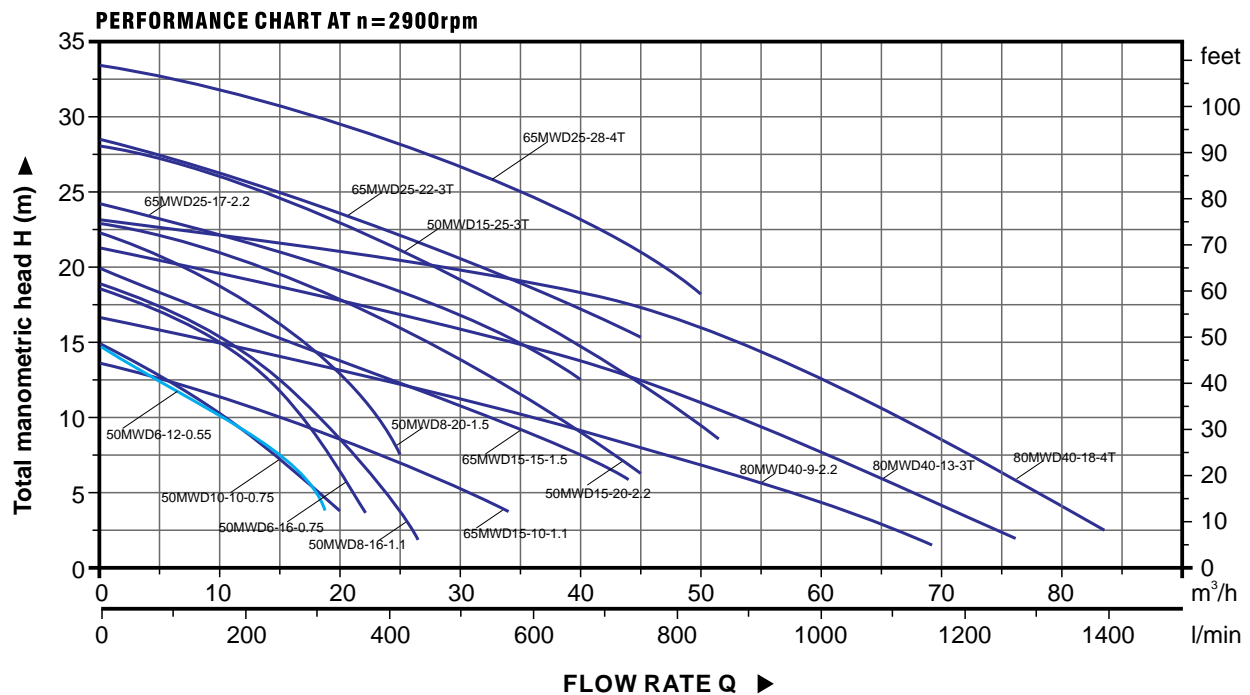
MWD pumps are designed to lift dirty water, for dirty water, are used in industrial, mining, and architectural operation. MWD pumps are particularly suitable for installation in sewers, galleries, excavation sites, wells, channels, underground car parks, ect.

## PERFORMANCE

- ☒ Exceptional sturdiness, even under severe working conditions
- ☒ Long and stable performance curves

## STRUCTURE CHARACTERISTICS

- ☒ cast iron pump body
- ☒ stainless steel mechanical seal (graphite to ceramic or Sic to graphite)
- ☒ cast iron double-channel impeller
- ☒ 45# steel shaft or stainless steel shaft



MODEL		POWER		RATED FLOW	MAX. FLOW	RATED HEAD	MAX. HEAD	MAX. SOLID DIA	DISCHARGE
SINGLE PHASE	THREE PHASE	kW	HP	(m³/h)	(m³/h)	(m)	(m)	(mm)	(inch)
50MWD6-12-0.55	50MWD6-12-0.55T	0.55	0.75	6	19	12	15	20	2"
50MWD6-16-0.75	50MWD6-16-0.75T	0.75	1	6	22	16	19	20	2"
50MWD10-10-0.75	50MWD10-10-0.75T	0.75	1	10	20	10	15	20	2"
50MWD8-16-1.1	50MWD8-16-1.1T	1.1	1.5	8	26	16	19	15	2"
50MWD8-20-1.5	50MWD8-20-1.5T	1.5	2	8	25	20	22	15	2"
50MWD15-20-2.2	50MWD 5-20-2.2T	2.2	3	15	45	20	23	25	2"
-	50MWD15-25-3T	3.0	4	15	51	25	27	25	2"
65MWD15-10-1.1	65MWD15-10-1.1T	1.1	1.5	15	34	10	14	25	2½"
65MWD15-15-1.5	65MWD15-15-1.5T	1.5	2	15	44	15	20	25	2½"
65MWD25-17-2.2	65MWD25-17-2.2T	2.2	3	25	40	17	24	25	2½"
-	65MWD25-22-3T	3.0	4	25	45	22	28.5	25	2½"
-	65MWD25-28-4T	4.0	5.5	25	50	28	31.5	25	2½"
80MWD40-9-2.2	80MWD40-9-2.2T	2.2	3	40	69.5	9	17	30	3"
-	80MWD40-13-3T	3.0	4	40	76	13	21	30	3"
-	80MWD40-18-4T	4.0	5.5	40	83	18	23	30	3"

### PERFORMANCE RANGE

- ※ Flow rate up to 900 l/min. (54m<sup>3</sup>/h)
- ※ Dynamic head up to 24m

### OPERATING LIMITS

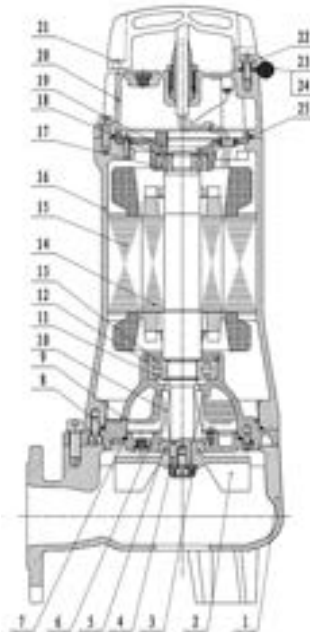
- ※ Maximum operating depth 5m below water level
- ※ Maximum fluid temperature 40°C



Impeller



### DIAGRAM



No.	DESCRIPTION	No.	DESCRIPTION	No.	DESCRIPTION
1	Pump casing	11	Snap ring	21	Handle
2	Impeller	12	Bearing	22	Cable
3	Washer	13	Snap ring	23	Cable protector
4	Key	14	Rotor	24	Wire clip
5	Oil seal	15	Stator	25	"O" ring
6	Pump cover	16	Machine barrel		
7	"O" ring	17	Bearing		
8	"O" ring	18	Wave washer		
9	Oil chamber	19	Upper bearing cover		
10	Mechanical seal	20	Upper cover		

## WORKING PRINCIPLE

**MWV** pumps are submersible VORTEX pumps, for dirty water, designed mainly for industrial and civil fields. Are fitted with a vortex open impeller.

Being made of hard alloy and reliable well-sealed and equipment with overhead protection device, it is also featured by its long durable and safely for use.

## PUMP INSTALLATION AND APPLICATIONS

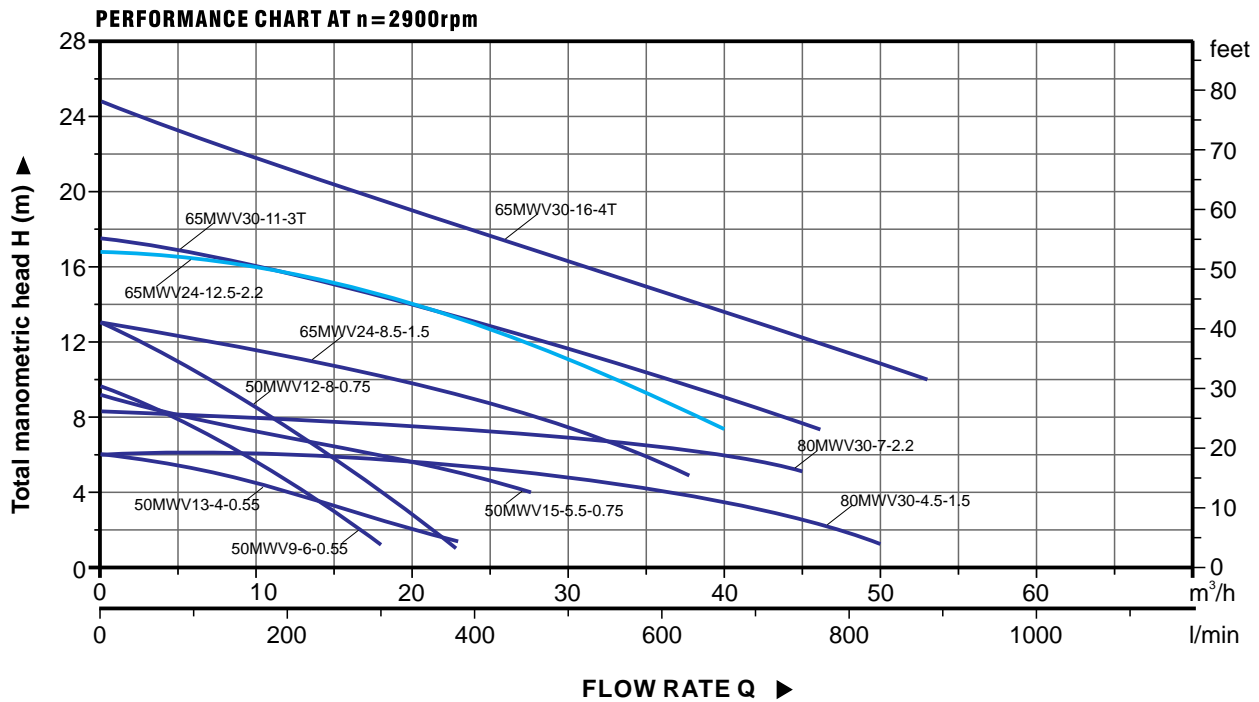
**MWV** pumps are designed to lift dirty water, for dirty water, are used in industrial, mining, and architectural operation. MWV pumps are particularly suitable for installation in sewers, galleries, excavation sites, wells, channels, underground car parks, ect.

## PERFORMANCE

- ☒ Exceptional sturdiness, even under severe working conditions
- ☒ Long and stable performance curves

## STRUCTURE CHARACTERISTICS

- ☒ Cast iron pump body
- ☒ Stainless steel mechanical seal (graphite to ceramic or Sic to graphite)
- ☒ Cast iron vortex open impeller
- ☒ #45 steel shaft or stainless steel shaft



MODEL		POWER		RATED FLOW	MAX. FLOW	RATED HEAD	MAX. HEAD	MAX. SOLID DIA	DISCHARGE
SINGLE PHASE	THREE PHASE	kW	HP	(m <sup>3</sup> /h)	(m <sup>3</sup> /h)	(m)	(m)	(mm)	(inch)
50MWV9-6-0.55	50MWV9-6-0.55T	0.55	0.75	9	19	6	9.5	35	2"
50MWV13-4-0.55	50MWV13-4-0.55T	0.55	0.75	13	22	4	6	50	2"
50MWV12-8-0.75	50MWV12-8-0.75T	0.75	1.0	12	22.5	8	13	35	2"
50MWV15-5.5-0.75	50MWV15-5.5-0.75T	0.75	1.0	15	27	5.5	9	50	2"
65MWV24-8.5-1.5	65MWV24-8.5-1.5T	1.5	2.0	24	38	8.5	13	55	2½"
65MWV24-12.5-2.2	65MWV24-12.5-2.2T	2.2	3.0	24	40	12.5	17	55	2½"
-	65MWV30-11-3T	3	4.0	30	46	11	18	55	2½"
-	65MWV30-16-4T	4	5.5	30	54	16	24	55	2½"
80MWV30-4.5-1.5	80MWV30-4.5-1.5T	1.5	2.0	30	50	4.5	6	76	3"
80MWV30-7-2.2	80MWV30-7-2.2T	2.2	3.0	30	45	7	8	76	3"

# W

## CAST IRON SEWAGE PUMPS

### PERFORMANCE RANGE

- ☒ flow rate up to 1833l/min. (110 m<sup>3</sup>/h)
- ☒ head up to 40m

### OPERATION LIMITS

- ☒ maximum operating depth up to 5m below water level
- ☒ fluid temperature up to 40 °C



### WORKING PRINCIPLE

W pumps are submersible DOUBLE-CHANNEL pumps, for dirty water, designed mainly for industrial and civil fields. Are fitted with a double-channel impeller. Being made of hard alloy and reliable well-sealed and equipment with overhead protection device, it is also featured by its long durable and safety for use.

### PUMP INSTALLATION AND APPLICATIONS

W pumps are designed to lift dirty water, for dirty water, are used in industrial, mining, and architectural operation. W pumps are particularly suitable for installation in sewers, galleries, excavation sites, wells, channels, underground car parks, ect.

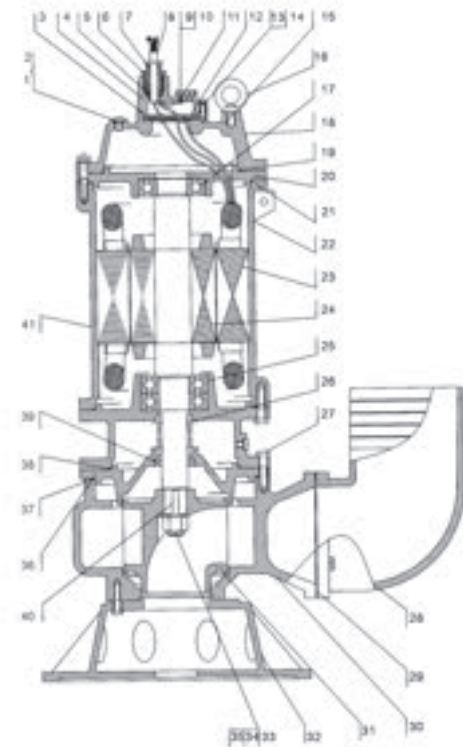
### PERFORMANCE

- ☒ Exceptional sturdiness, even under severe working conditions
- ☒ Long and stable performance curves

### STRUCTURE CHARACTERISTICS

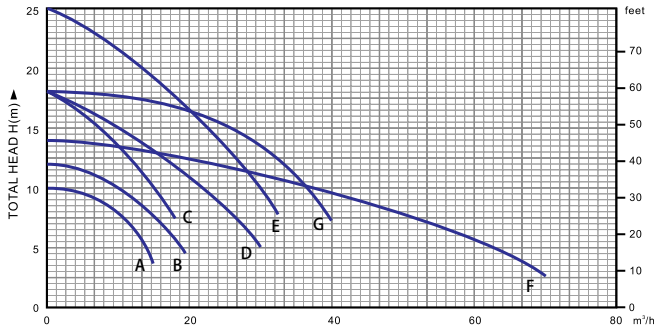
- ☒ cast iron pump body
- ☒ stainless steel mechanical seal (graphite to ceramic or Sic to graphite)
- ☒ cast iron double-channel impeller
- ☒ 45# steel shaft or stainless steel shaft

### DIAGRAM

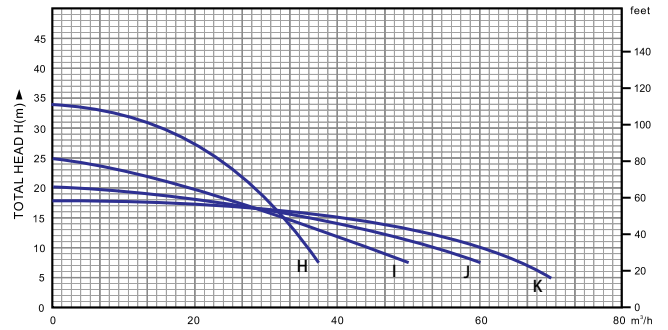


N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Screw	12	Terminal board	23	Stator	34	Washer
2	"O"ring	13	Bolt	24	Rotor	35	Gasket
3	"O"ring	14	Washer	25	Oil chamber	36	Oil chamber cover
4	Cable holder	15	Upper cover	26	Mechanical seal	37	"O"ring
5	Washer	16	Lifting ring	27	Bolt	38	"O"ring
6	Nut	17	Bearing	28	Out-let connector	39	Oil seal
7	Cable protector	18	Nameplate	29	Gasket	40	Key
8	Cable	19	"O"ring	30	Pump casing	41	Label
9	Nut	20	Motor cover	31	Impeller		
10	Gasket	21	"O"ring	32	Base plate		
11	Screw	22	Motor shell	33	Nut		

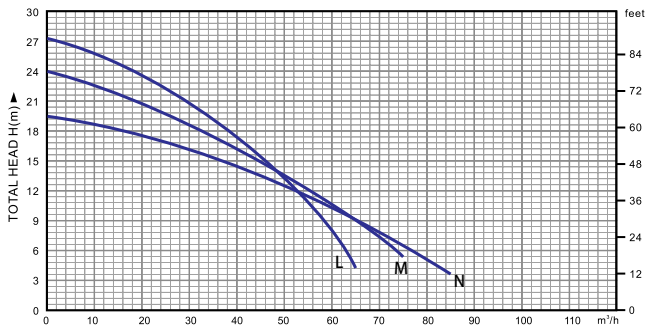
PERFORMANCE CHART AT n=2900 rpm



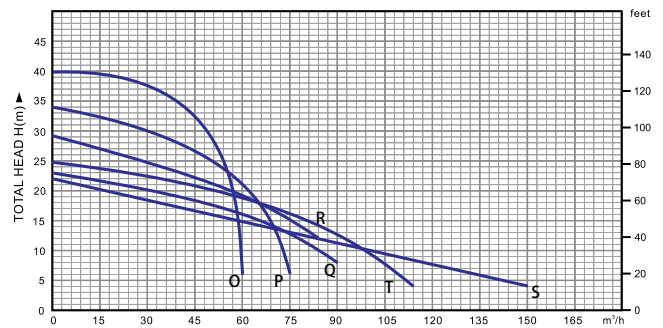
PERFORMANCE CHART AT n=2900 rpm



PERFORMANCE CHART AT n=2900 rpm



PERFORMANCE CHART AT n=2900 rpm



**FLOW RATE Q**

No.	PUMP MODEL	POWER		Speed (r/min)	Rated capacity (m³/h)	Rated head (m)	Dimensions (inch)
		KW	HP				
A	W 55	0.55	0.75	2900	10	8	2"
B	W 75	0.75	1		10	10	2"
C	W 110	1.1	1.5		7	15	2"
D	W 150	1.5	2		10	15	2"
E	W 220A	2.2	3		9	22	2"
F	W 220B	2.2	3		45	9	3"
G	W 220C	2.2	3		25	15	2.5"
H	W 300	3.0	4		15	30	2"
I	W 300A	3.0	4		25	20	2.5"
J	W 300B	3.0	4		43	13	3"
K	W 300C	3.0	4		50	10	4"
L	W 400	4.0	5.5		25	22	2"
M	W 400A	4.0	5.5		40	16	3"
N	W 400B	4.0	5.5		60	10	4"
O	W 550	5.5	7.5		15	40	2"
P	W 550A	5.5	7.5		30	30	3"
Q	W 550B	5.5	7.5		65	15	4"
R	W 750A	7.5	10		45	22	3"
S	W 750B	7.5	10		100	10	6"
T	W 750C	7.5	10		80	15	4"

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**

# W

## CAST IRON SEWAGE PUMPS (4-pole)

### PERFORMANCE RANGE

- ☒ flow rate up to 400 m<sup>3</sup>/h
- ☒ head up to 33m

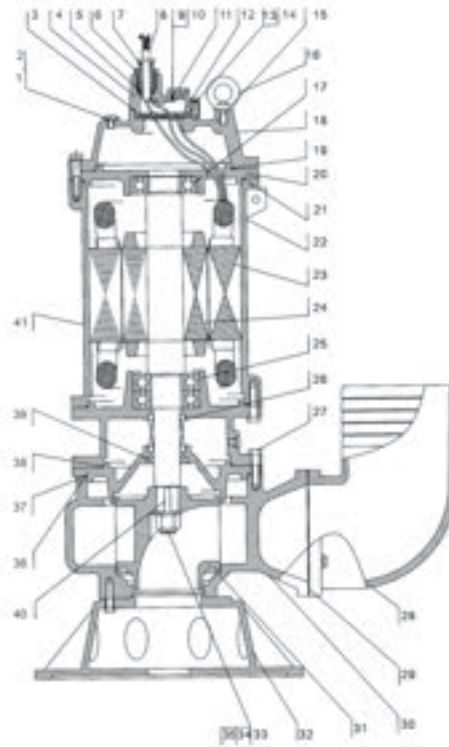
### OPERATION LIMITS

- ☒ maximum operating depth up to 5m below water level
- ☒ fluid temperature up to 40 °C



**W 550A-4**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Screw	12	Terminal board	23	Stator	34	Washer
2	"O"ring	13	Bolt	24	Rotor	35	Gasket
3	"O"ring	14	Washer	25	Oil chamber	36	Oil chamber cover
4	Cable holder	15	Upper cover	26	Mechanical seal	37	"O"ring
5	Washer	16	Lifting ring	27	Bolt	38	"O"ring
6	Nut	17	Bearing	28	Out-let connector	39	Oil seal
7	Cable protector	18	Nameplate	29	Gasket	40	Key
8	Cable	19	"O"ring	30	Pump casing	41	Label
9	Nut	20	Motor cover	31	Impeller		
10	Gasket	21	"O"ring	32	Base plate		
11	Screw	22	Motor shell	33	Nut		

### WORKING PRINCIPLE

**W** pumps are submersible DOUBLE-CHANNEL pumps, for dirty water, designed mainly for industrial and civil fields. Are fitted with a double-channel impeller.

Being made of hard alloy and reliable well-sealed and equipment with overhead protection device, it is also featured by its long durable and safety for use.

### PUMP INSTALLATION AND APPLICATIONS

**W** pumps are designed to lift dirty water , for dirty water, are used in industrial , mining, and architectural operation . W pumps are particularly suitable for installation in sewers, galleries, excavation sites, wells, channels, underground car parks, ect.

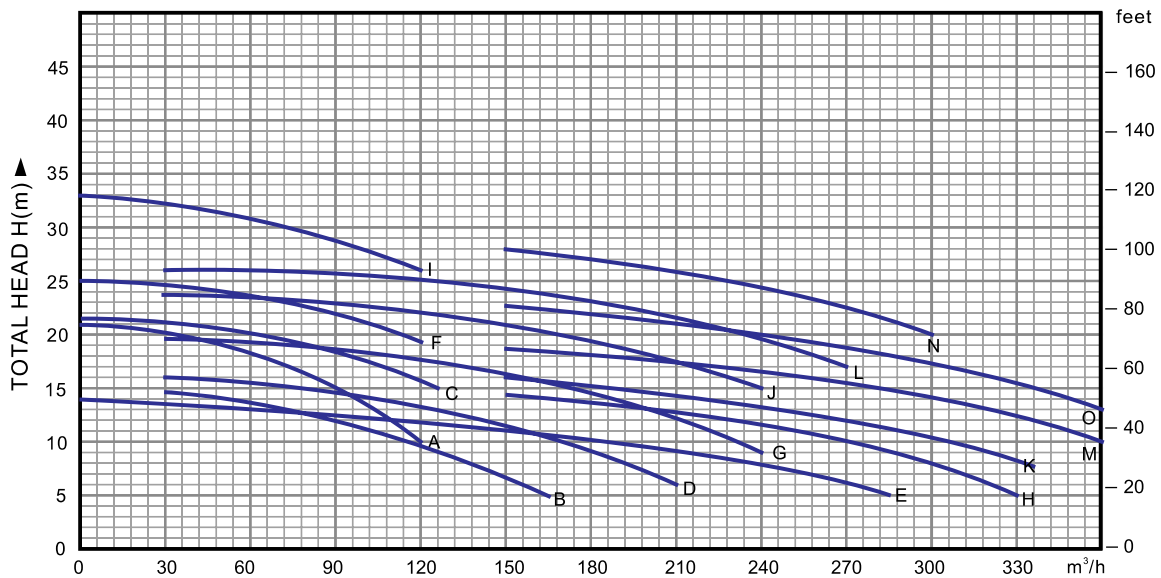
### PERFORMANCE

- ❖ Exceptional sturdiness , even under severe working conditions
- ❖ Long and stable performance curves

### STRUCTURE CHARACTERISTICS

- ❖ cast iron pump body
- ❖ stainless steel mechanical seal (graphite to ceramic or Sic to graphite)
- ❖ cast iron double-channel impeller
- ❖ 45# steel shaft
- ❖ 4-pole motor

**PERFORMANCE CHART AT n=1450rpm**



No.	PUMP MODEL	POWER		Speed (r/min)	Rated capacity (m³/h)	Rated head (m)	Dimensions
		KW	HP				
A	W 550A-4	5.5	7.5	1450	65	15	4"
B	W 550B-4	5.5	7.5		110	10	6"
C	W 750A-4	7.5	10		100	15	4"
D	W 750B-4	7.5	10		150	10	6"
E	W 750C-4	7.5	10		250	6	6"
F	W 1100A-4	11	15		100	25	4"
G	W 1100B-4	11	15		130	15	6"
H	W 1100C-4	11	15		300	7	8"
I	W 1500A-4	15	20		100	30	4"
J	W 1500B-4	15	20		130	20	6"
K	W 1500C-4	15	20		250	11	8"
L	W 1850A-4	18.5	25		180	20	6"
M	W 1850B-4	18.5	25		250	15	8"
N	W 2200A-4	22	30		180	25	6"
O	W 2200B-4	22	30		300	15	8"

# W-CUT

## CAST IRON SEWAGE PUMP WITH KNIFE

### PERFORMANCE RANGE

- ☒ Flow rate up to 10750 l/min. (645m<sup>3</sup>/h)
- ☒ Dynamic head up to 32m

### OPERATING LIMITS

- ☒ Maximum operating depth 5m below water level
- ☒ Maximum fluid temperature 40°C



### WORKING PRINCIPLE

W-CUT pumps are submersible pumps with spiral impeller, for dirty water, designed mainly for farming, civil, and domestic fields. Are fitted with a spiral impeller.

Being made of hard alloy and reliable well-sealed and equipment with overhead protection device, it is also featured by its long durable and safety for use.

### PUMP INSTALLATION AND APPLICATIONS

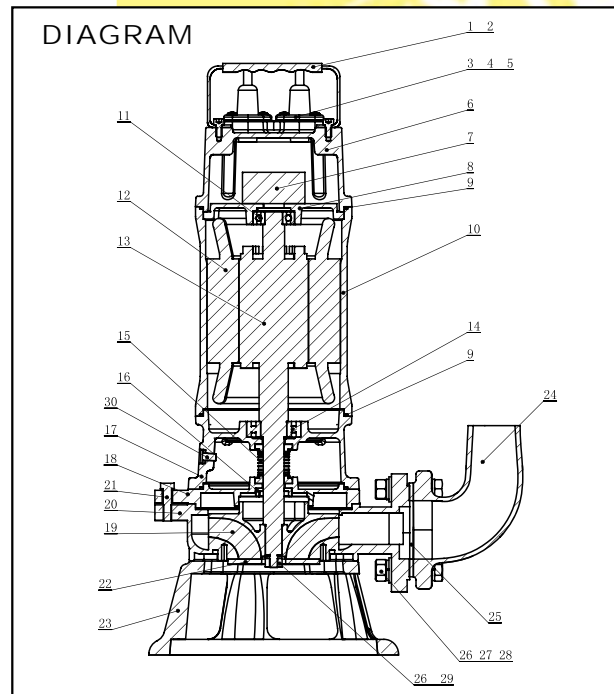
W-CUT pumps are designed to lift dirty water, for dirty water, are used in farming, mining, civil construction, and architectural operation. W-CUT pumps are particularly suitable for installation in sewers, galleries, excavation sites, wells channels, underground car parks, ect.

### PERFORMANCE

- ☒ Exceptional sturdiness, even under severe working conditions
- ☒ Long and stable performance curves

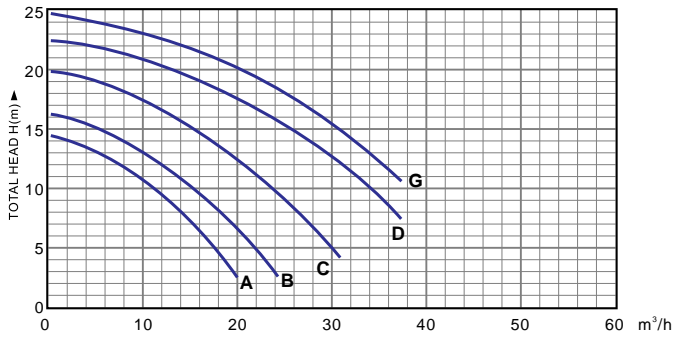
### STRUCTURE CHARACTERISTICS

- ☒ cast iron pump body
- ☒ stainless steel mechanical seal (graphite to ceramic or Sic to graphite)
- ☒ stainless steel alloy spiral impeller
- ☒ 45# steel shaft or stainless steel shaft

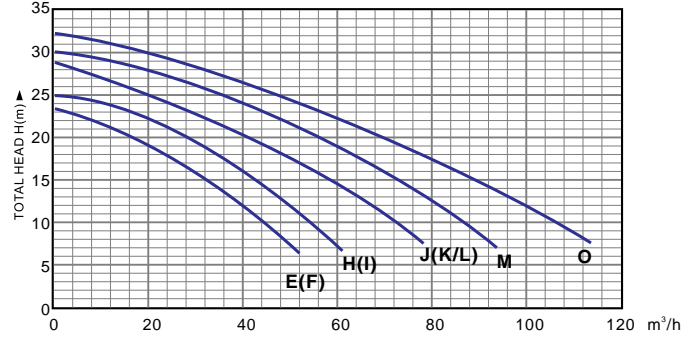


No.	DESCRIPTION	No.	DESCRIPTION	No.	DESCRIPTION
1	Handle	12	Stator	23	Base
2	Screw	13	Rotor	24	Out-let connector
3	Cable presser	14	Bearing	25	Out-let gasket
4	Screw	15	Mechanical seal	26	Nut
5	Sable / Float switch	16	Oil seal	27	Bolt
6	Capacitor cover	17	Oil chamber	28	Gasket
7	Capacitor	18	Oil chamber cover	29	Gasket
8	Motor cover	19	Impeller	30	Oil filling screw
9	"O" ring	20	Pump casing		
10	Motor casing	21	Bolt		
11	Bearing	22	Cutter		

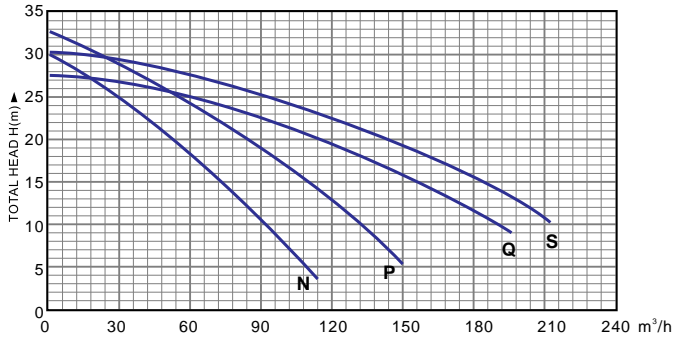
PERFORMANCE CHART AT n=2900 rpm



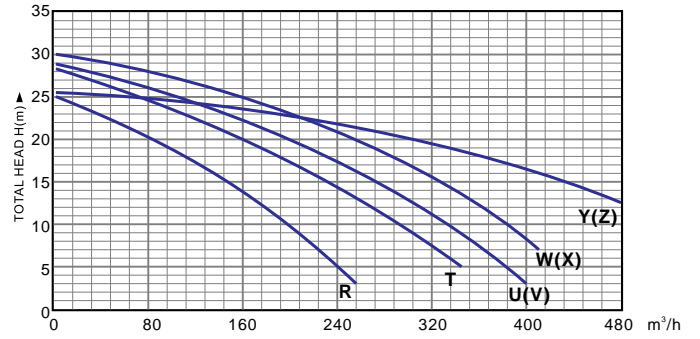
PERFORMANCE CHART AT n=2900 rpm



PERFORMANCE CHART AT n=2900 rpm/1450 rpm



PERFORMANCE CHART AT n=1450 rpm



**FLOW RATE Q**

NO.	Model	Outlet	Power		Speed	Rated Flow	Rated Head	Phase
		mm	KW	HP				
A	W-CUT-75	50	0.75	1	2900	10	10	1
	W-CUT-75T	50	0.75	1		10	10	3
B	W-CUT-110	50	1.1	1.5		12	10	1
	W-CUT-110T	50	1.1	1.5		12	10	3
C	W-CUT-150	50	1.5	2		15	15	1
	W-CUT-150T	50	1.5	2		15	15	3
D	W-CUT-220AT	50	2.2	3		9	22	
E	W-CUT-220BT	65	2.2	3		25	15	
F	W-CUT-220CT	80	2.2	3		45	9	
G	W-CUT-300AT	50	3	4		20	22	
H	W-CUT-300BT	65	3	4		35	15	
I	W-CUT-300CT	80	3	4		43	13	
J	W-CUT-400AT	65	4	5.5		25	22	
K	W-CUT-400BT	80	4	5.5		45	17	
L	W-CUT-400CT	100	4	5.5		65	12	
M	W-CUT-550AT	80	5.5	7.5		45	20	
N	W-CUT-550BT	100	5.5	7.5		65	15	
O	W-CUT-750AT	80	7.5	10		45	22	
P	W-CUT-750BT	100	7.5	10		100	15	
Q	W-CUT-1100A-4	100	11	15		80	25	
R	W-CUT-1100B-4	150	11	15		150	15	
S	W-CUT-1500A-4	100	15	20		80	30	
T	W-CUT-1500B-4	150	15	20		200	15	
U	W-CUT-1850A-4	150	18.5	25		250	15	
V	W-CUT-1850B-4	200	18.5	25	350	12		
W	W-CUT-2200A-4	150	22	30	300	15		
X	W-CUT-2200B-4	200	22	30	400	10		
Y	W-CUT-3000A-4	200	30	40	450	15		
Z	W-CUT-3000B-4	250	30	40	600	10		

# WD

## CAST IRON SEWAGE PUMPS

### PERFORMANCE RANGE

- ☒ flow rate up to 1333 l/min.(80m³/h)
- ☒ head up to 31 m

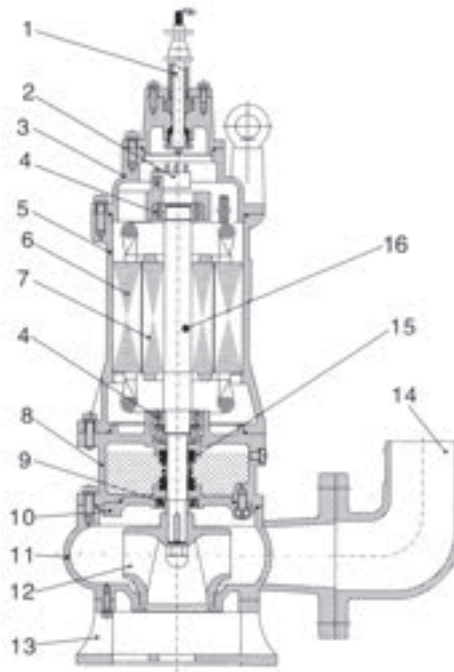
### OPERATING LIMITS

- ☒ maximum operating depth 5 m below water level
- ☒ maximum fluid temperature up to 40 °C



**WD2200A**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Cable	8	Oil chamber	15	Mechanical seal
2	Motor protector	9	Oil seal bracket	16	Shaft
3	Bearing bracket	10	Plate		
4	Bearing	11	Pump casing		
5	Frame	12	Impeller		
6	Stator	13	Stand foot		
7	Rotor	14	Discharge adapter		

### WORKING PRINCIPLE

**WD** pumps are submersible VORTEX pumps, for dirty water, designed mainly for industrial and civil fields. Are fitted with a vortex open impeller.

Being made of hard alloy and reliable well-sealed and equipment with overhead protection device, it is also featured by its long durable and safety for use.

### PUMP INSTALLATION AND APPLICATIONS

**WD** pumps are designed to lift dirty water , for dirty water, are used in industrial, mining, and architectural operation. WD pumps are particularly suitable for installation in sewers, galleries, excavation sites, wells, channels, underground car parks, ect.

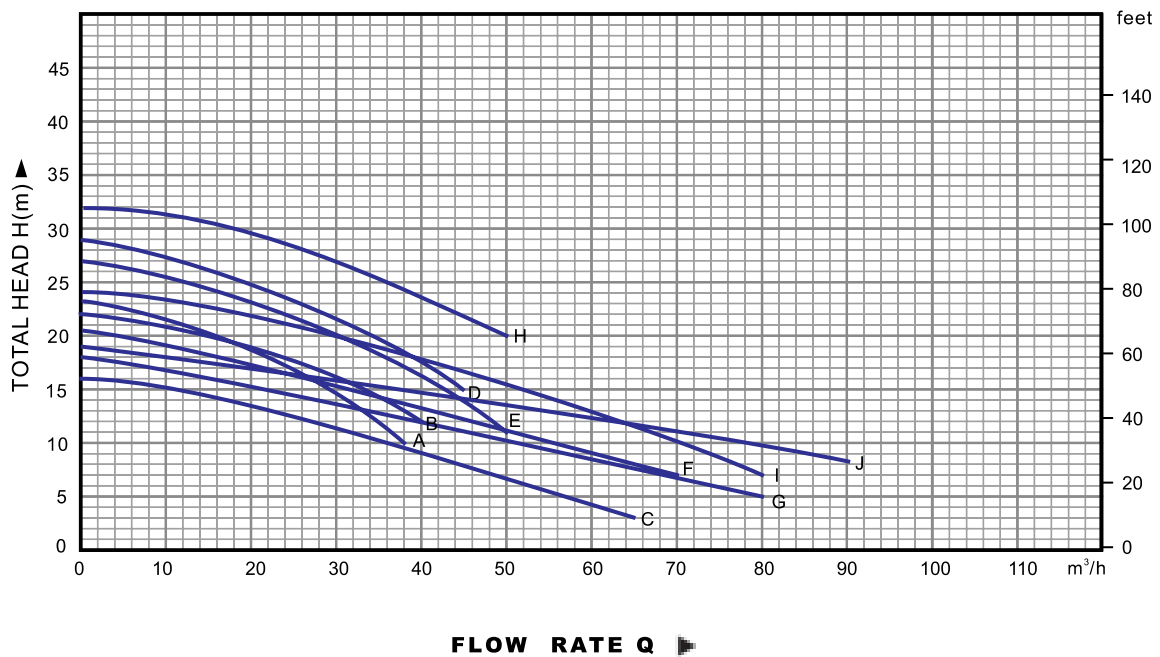
### PERFORMANCE

- ☒ Exceptional sturdiness , even under severe working conditions
- ☒ Long and stable performance curves

### STRUCTURE CHARACTERISTICS

- ☒ cast iron pump body
- ☒ stainless steel mechanical seal (graphite to ceramic or Sic to graphite)
- ☒ cast iron open impeller
- ☒ 45# steel shaft or stainless steel shaft

**PERFORMANCE CHART AT n=2900 rpm**



No.	PUMP MODEL	Power		Rated capacity m <sup>3</sup> /h	Rated head m	Outlet mm	Speed r/min	Impeller passage mm
		KW	HP					
A	WD2200A	2.2	3	15	20	50	2860	25
B	WD2200B	2.2	3	25	17	65	2860	25
C	WD2200C	2.2	3	40	9	80	2860	30
D	WD3000A	3	4	15	26	50	2860	25
E	WD3000B	3	4	25	22	65	2860	30
F	WD3000C	3	4	40	13	80	2860	30
G	WD3000D	3	4	60	9	100	2860	30
H	WD4000A	4	5.5	25	28	65	2860	30
I	WD4000B	4	5.5	40	18	80	2860	30
J	WD4000C	4	5.5	60	13	100	2860	30

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**

# WE

## CAST IRON SEWAGE PUMPS

### PERFORMANCE RANGE

- ※ Flow rate up to 1500 l/min. (90m<sup>3</sup>/h)
- ※ Dynamic head up to 35m

### OPERATING LIMITS

- ※ Maximum operating depth 5m below water level
- ※ Maximum fluid temperature 40°C



### WORKING PRINCIPLE

**WE** pumps are submersible DOUBLE-CHANNEL pumps, for dirty water, designed mainly for industrial and civil fields. Are fitted with a double-channel impeller. Being made of hard alloy and reliable well-sealed and equipment with overhead protection device, it is also featured by its long durable and safety for use.

### PUMP INSTALLATION AND APPLICATIONS

**WE** pumps are designed to lift dirty water, for dirty water, are used in industrial, mining, and architectural operation. **WE** pumps are particularly suitable for installation in sewers, galleries, excavation sites, wells, channels, underground car parks, etc.

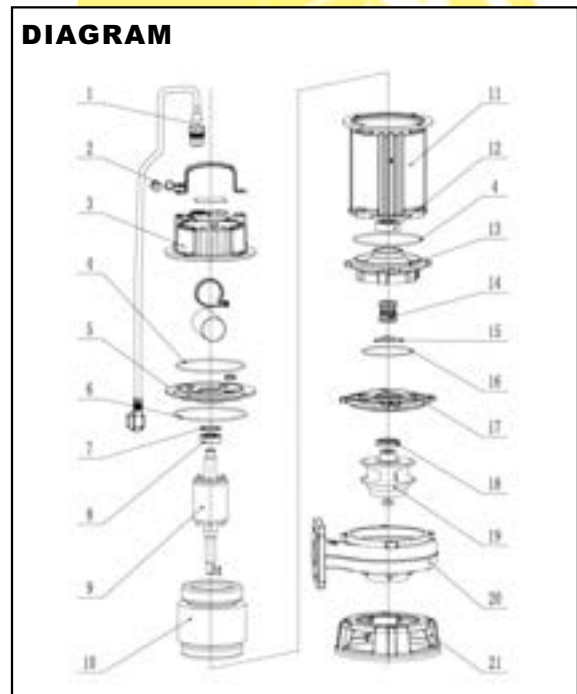
### PERFORMANCE

- ※ Exceptional sturdiness, even under severe working conditions
- ※ Long and stable performance curves

### STRUCTURE CHARACTERISTICS

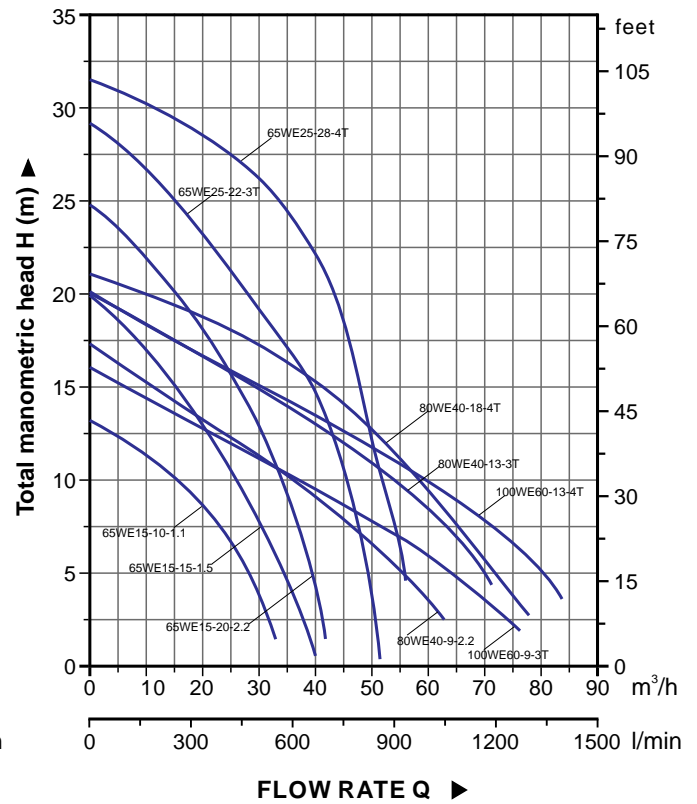
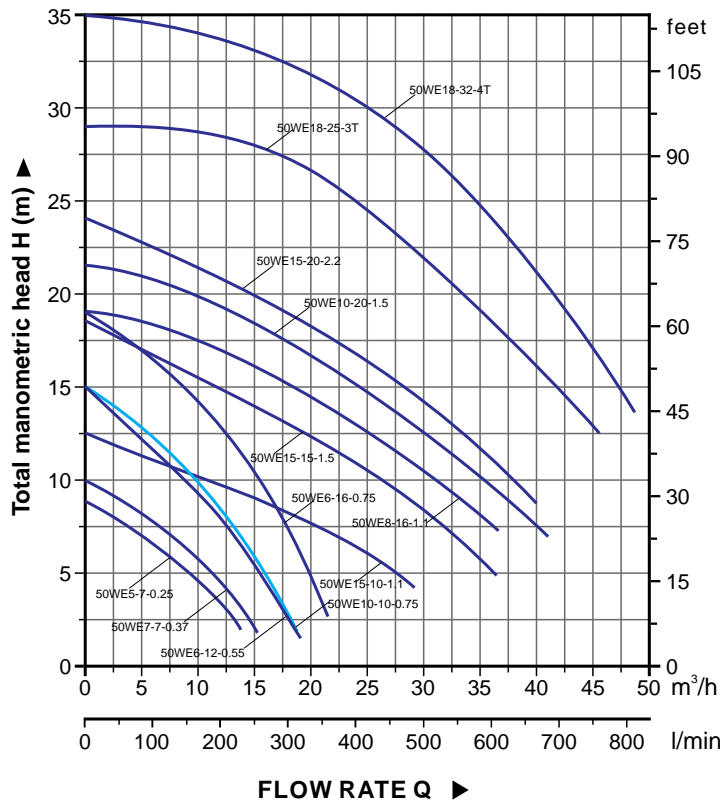
- ※ cast iron pump body
- ※ stainless steel mechanical seal (graphite to ceramic or Sic to graphite)
- ※ cast iron double-channel impeller
- ※ 45# steel shaft or stainless steel shaft

### DIAGRAM



No.	DESCRIPTION	No.	DESCRIPTION	No.	DESCRIPTION
1	Cable	9	Rotor	17	Cylinder
2	Handle	10	Stator	18	Oil seal
3	Top cover	11	Motor casing	19	Impeller
4	"O" ring	12	Bearing	20	Pump body
5	End cover	13	Oil chamber	21	Base
6	"O" ring	14	Mechanical seal		
7	Wave spring washer	15	Pressing		
8	Bearing	16	"O" ring		

**PERFORMANCE CHART AT n=2900rpm**



MODEL		POWER		OUTLET (inch)	MAX. FLOW (m³/h)	MAX. HEAD (m)	SPEED (r.p.m)	SOLID PASSAGE (mm)
SINGLE PHASE	THREE PHASE	kW	HP					
50WE5-7-0.25	50WE5-7-0.25T	0.25	0.33	2"	14	8	2900	20
50WE7-7-0.37	50WE7-7-0.37T	0.37	0.55	2"	15	10		20
50WE6-12-0.55	50WE6-12-0.55T	0.55	0.75	2"	19	15		20
50WE6-16-0.75	50WE6-16-0.75T	0.75	1.0	2"	22	19		20
50WE10-10-0.75	50WE10-10-0.75T	0.75	1.0	2"	19	15		20
50WE8-16-1.1	50WE8-16-1.1T	1.1	1.5	2"	30	19		25
50WE15-10-1.1	50WE15-10-1.1T	1.1	1.5	2"	27	12.5		25
65WE15-10-1.1	65WE15-10-1.1T	1.1	1.5	2½"	31.5	13		25
50WE10-20-1.5	50WE10-20-1.5T	1.5	2.0	2"	33	21.6		25
50WE15-15-1.5	50WE15-15-1.5T	1.5	2.0	2"	32	18.5		25
65WE15-15-1.5	65WE15-15-1.5T	1.5	2.0	2½"	39.7	20		25
50WE15-20-2.2	50WE15-20-2.2T	2.2	3.0	2"	36	24		20
65WE15-20-2.2	65WE15-20-2.2T	2.2	3.0	2½"	41.6	24.6		25
80WE40-9-2.2	80WE40-9-2.2T	2.2	3.0	3"	63	17		30
-	50WE18-25-3T	3.0	4.0	2"	42	29		20
-	65WE25-22-3T	3.0	4.0	2½"	50	29		25
-	80WE40-13-3T	3.0	4.0	3"	70	20		30
-	100WE60-9-3T	3.0	4.0	4"	75	16		30
-	50WE18-32-4T	4.0	5.5	2"	45	36		20
-	65WE25-28-4T	4.0	5.5	2½"	51	31.5		25
-	80WE40-18-4T	4.0	5.5	3"	79	21	30	
-	100WE60-13-4T	4.0	5.5	4"	85	20	30	

\*Less than 0.75kw, thread connection can be provided at the same time.



# KTZ&KRS(4POLE)

## CAST IRON SEWAGE PUMPS

### PERFORMANCE RANGE

#### KTZ

- ❖ Flow rate up to 2450l/min.(147m<sup>3</sup>/h)
- ❖ Head up to 48.5m.

#### KRS(4 POLE)

- ❖ Flow rate up to 2850l/min.(171m<sup>3</sup>/h)
- ❖ Head up to 21.5m

### OPERATION LIMITS

- ❖ KTZ : maximum operating depth up to 50m below water level
- ❖ Maximum passage for suspended solids  $\Phi$ 19.5mm
- ❖ KRS:maximum operating depth up to 30m below water level
- ❖ Maximum passage for suspended solids  $\Phi$ 30mm
- ❖ Fluid temperature up to 40°C



KTZ

KRS

### WORKING PRINCIPLE

KRS\*&KTZ pumps are sewage submersible pumps for dirty water, designed mainly for industrial and civil engineering. The cast iron construction extends pump lift by preventing premature wear and failure from the abrasive material found in mining, aggregate, and construction applications. KRS pumps build in extra powered with a 4pole motor for an increased lifetime and greater convenience. KTZ pumps fitted with semi-open impeller

### PUMP INSTALLATION AND APPLICATION

KRS&KTZ pumps are designed to withstand the most rigorous conditions, including those found in most aggressive mining , aggregate, and construction applications. KRS&KTZ pumps particularly suitable for civil engineering, sewage treatment plants, mine, quarry, coal ore , slurry,ect.

Pumping fluid suitable for sludge, liquids containing mud and/or bentonite.

### STRUCTURAL CHARACTERISTIC

Cast iron pump body

Stainless steel shaft

Stainless steel mechanical seal

KRS: Sic to Sic/Sic to Sic

KTZ: Sic to Sic/graphite to ceramic

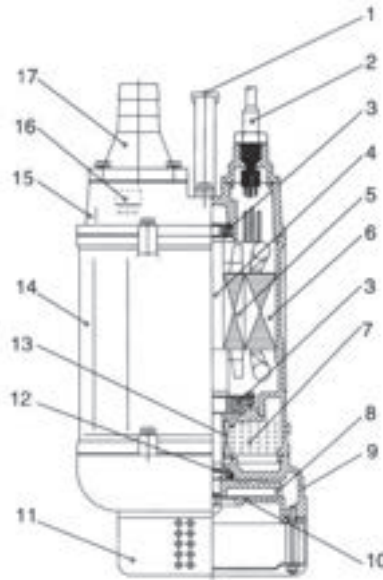
Impeller

KRS: chromium irons casting

KTZ: nodular cast iron semi-open impeller (or high chrome alloy)

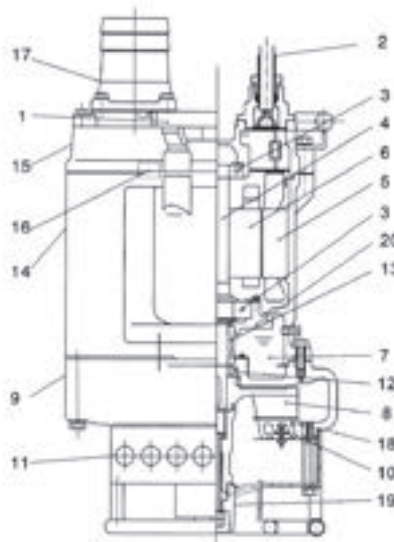
KRS pumps is 4 pole motors reduce impeller tip speed and extend parts wear life ,build in extra powered agitator.

**KTZ**



N.	Part name	material	Item No.	Part name	material
1	Handle	Rubber & steel	10	End plate	nodular iron
2	Cable	2 PNCT-F	11	Filter steel	Steel
3	Bearing	Ball Bearing	12	Oil seal bracket	Ball Bearing
4	Shaft	AISI420SS	13	Mechanical seal	SIC-SIC/carbon-ceramics
5	Rotor		14	Motor body	cast iron
6	Stator		15	Upper cover	cast iron
7	Lube oil		16	Motor protector	
8	Impeller	High chrome alloy or nodular iron	17	Hose coupling	cast iron
9	Pump body	Cast iron			

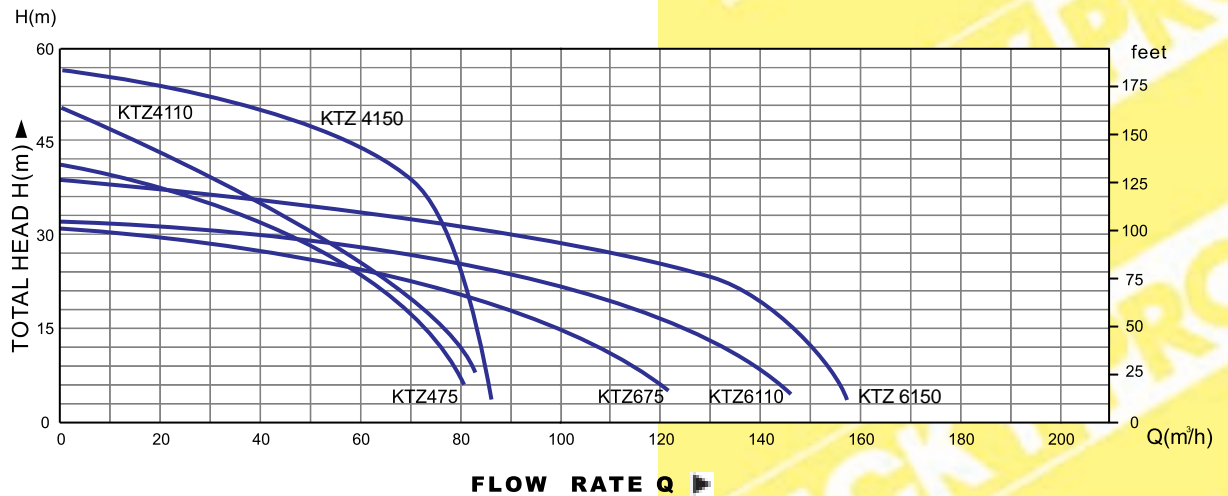
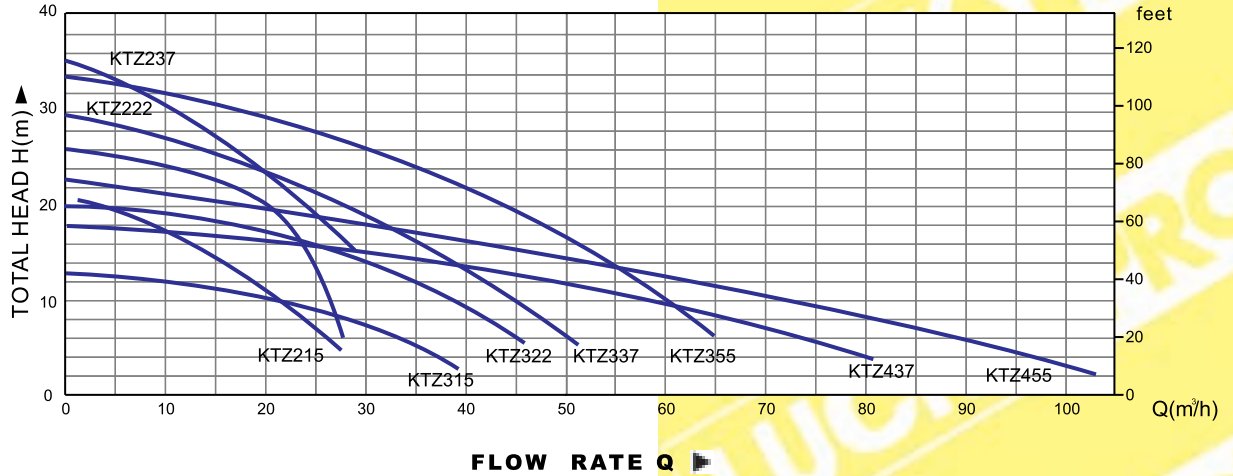
**KRS**



N.	Part name	material	Item No.	Part name	material
1	Handle	Rubber & steel	11	Filter steel	Steel
2	Cable	2 PNCT-F	12	Oil seal bracket	
3	Bearing	Ball Bearing	13	Mechanical seal	SIC-SIC/SIC-SIC
4	Shaft	AISI420SS	14	Motor body	Cast iron
5	Rotor		15	Upper cover	Cast iron
6	Stator		16	Motor protector	
7	Lube oil		17	Hose coupling	Cast iron
8	Impeller	High chrome alloy or nodular iron	18	Suction plate	Chromium iron casting
9	Pump body	Cast iron	19	Agitator	Chromium iron casting
10	End plate	ductile iron	20	Bearing house	Cast iron

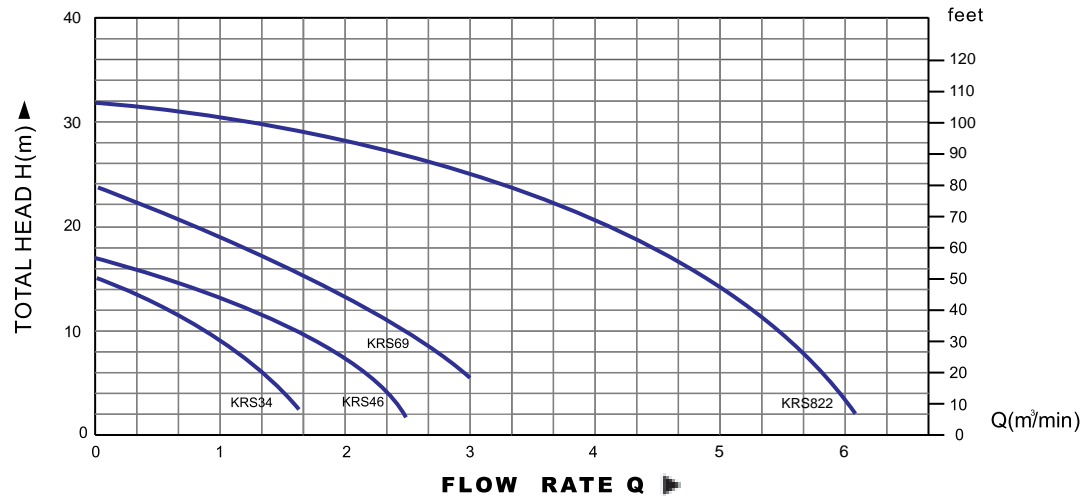
# KTZ

H(m) PERFORMANCE CHART AT n=2900 rpm



Model(50Hz)	Outlet	Motor power		Max head	Max capacity		Impeller passage	N.W	G.W	Packing Dimension
	mm	KW	HP	m	m³/h	m³/min	mm	kg	kg	mm
KTZ 215	50	1.5	2	22	27.0	0.45	8.5	34.5	37.5	585X270X270
KTZ 222	50	2.2	3	26.0	27.0	0.45	8.5	36	39	585X270X270
KTZ 237	50	3.7	5	34.0	29.0	0.48	8.5	60	65	685X325X300
KTZ 315	80	1.5	2	14.5	40.0	0.67	8.5	34.5	37	585X270X270
KTZ 322	80	2.2	3	21.0	50.0	0.83	8.5	36	39	585X270X270
KTZ 337	80	3.7	5	29.0	55.0	0.92	8.5	60	65	685X325X300
KTZ 355	80	5.5	7.5	32.0	70.0	1.17	8.5	77	84	725X355X370
KTZ 437	100	3.7	5	18.0	90	1.50	8.5	61	66	685X325X300
KTZ 455	100	5.5	7.5	23	105.0	1.75	8.5	78	85	725X355X370
KTZ 475	100	7.5	10	40.0	84.0	1.40	11.5	105	114	805X365X390
KTZ 4110	100	11	15	48.5	86.4	1.44	11.5	130	140	855X415X440
KTZ 4150	100	15	20	56	86.4	1.44	11.5	142	153	895X415X440
KTZ 675	150	7.5	10	31.0	124.8	2.08	19.5	106	114	835X365X390
KTZ 6110	150	11	15	32	147	2.45	19.5	133	143	855X415X440
KTZ 6150	150	15	20	40	156	2.60	19.5	145	156	895X415X440

H(m) **PERFORMANCE CHART AT n=1450 rpm**



Model(50Hz)	Outlet	Motor power	Max head	Max capacity	Impler passage	N.W	G.W	Packing Dimension
	mm		m	m³/min				
KRS34	80	4	14.8	1.65	30	105	113	855X415X400
KRS46	100	6	16.9	2.50	30	145	156	415X475X990
KRS69	150	9	21.5	2.85	30	170	184	475X475X1050
KRS822	200	22	32	6	30	400	420	660X570X1450

# MSK

## 4" PERIPHERAL SUBMERSIBLE PUMPS

### PERFORMANCE RANGE

- ✿ flow rate up to 40l/min. (2.4 m<sup>3</sup>/h)
- ✿ head up to 140m

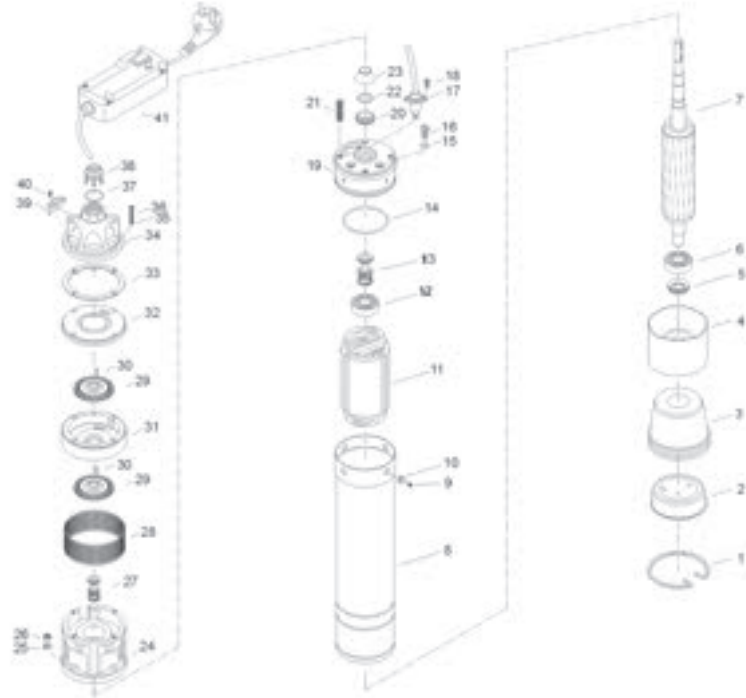
### OPERATION LIMITS

- ✿ maximum operating depth 40m
- ✿ fluid temperature up to 40°C



**MSK-1**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Clamping spring	12	Ball bearing	23	Sand proof cap	34	Discharge chamber
2	End cover	13	Mechanical seal	24	Suction chamber	35	Spring gasket
3	Expand sleeve	14	"O"ring	25	Washer	36	Screw
4	Bearing seat	15	washer	26	Nut	37	"O"ring
5	Thrust bearing	16	Screw	27	Mechanical seal	38	Valve
6	ball bearing	17	Cable/cable shield sleeve	28	Strainer	39	Cable presser
7	Rotor of motor	18	Screw	29	Impeller	40	Screw
8	Motor shell	19	Motor cover	30	Key	41	Stating controller
9	Screw	20	Static ring	31	Pump body		
10	Locking ring	21	Double head bolt	32	Pump cover		
11	Stator of motor	22	Flat gasket	33	Gasket		

### PUMPS INSTALLATION AND APPLICATIONS

These pumps are suitable to handling clean water which are not containing abrasive substances.

Their dependability and economical nature make them particularly suitable for domestic use, especially for the automatic distribution of water working in conjunction with small surge tanks and for irrigating gardens in general, ect. Can be installed in wells with a diameter of no less than 4".

### PERFORMANCE

MSK pumps combine the advantages of submersible pumps with the useful performance of peripheral pumps:

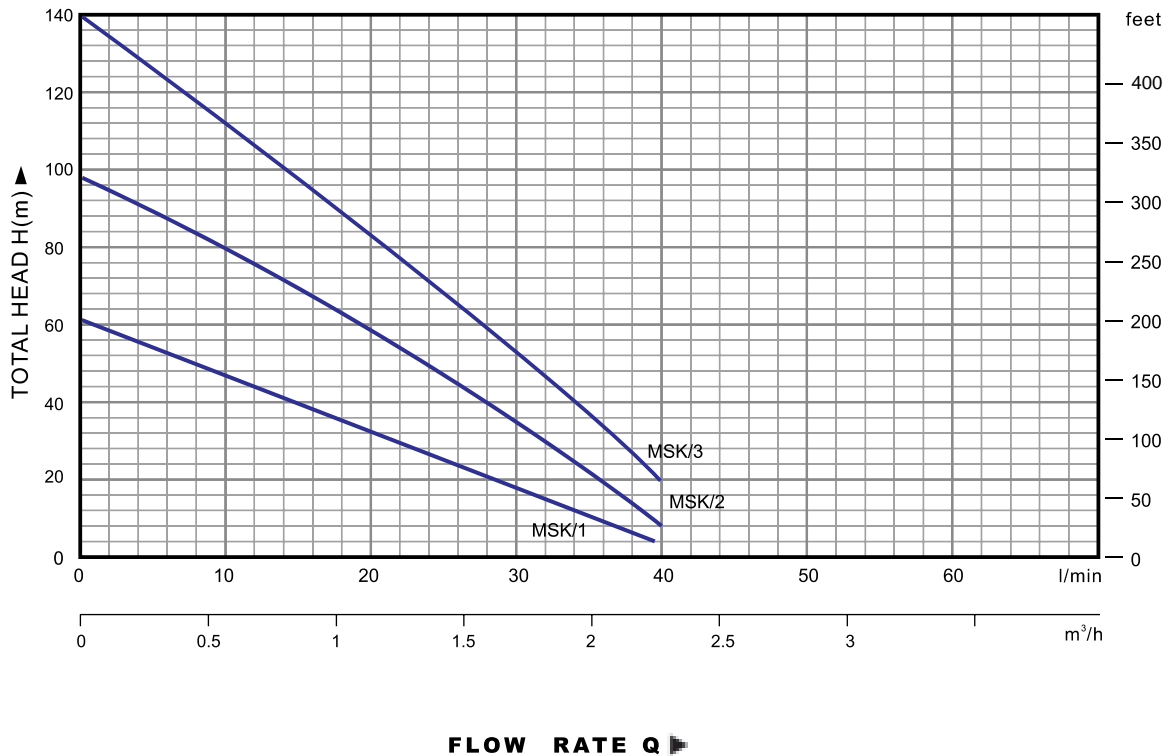
High head levels compared to the power required

Stable operating curves

### STRUCTURE CHARACTERISTICS

- ❖ stainless steel pump body
- ❖ brass discharge head
- ❖ stainless steel mechanical seal (graphite to ceramic)
- ❖ brass impeller with radial peripheral blades
- ❖ stainless steel shaft
- ❖ protection IP68
- ❖ with thermal overload protector

**PERFORMANCE CHART AT n=2900 rpm**



PUMP MODEL		POWER		Q	0	0.5	1	1.5	2	2.4
Single phase	Three phase	KW	HP	m³/h	0	8.3	17	25	33.3	40
MSK/1	MSK/1	0.75	1	H m	61	50	38	23	10	4
MSK/2	MSK/2	1.1	1.5		99	82	62	44	24	8
MSK/3	MSK/3	1.5	2		140	115	90	66	42	20

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**

# 3SCREW

## 3" SCREW SUBMERSIBLE PUMPS

### PERFORMANCE RANGE

- ☒ Flow rate up to 33l/min(2.0m<sup>3</sup>/h)
- ☒ Head up to 100m

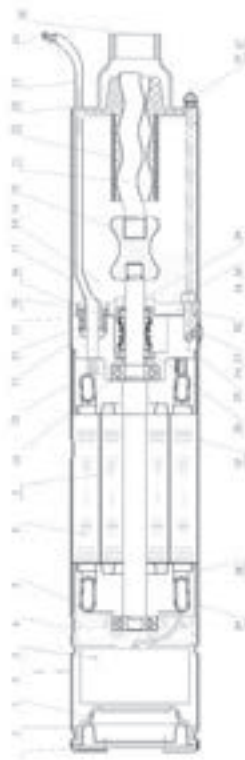
### OPERATION LIMITS

- ☒ Maximum operating depth 40m
- ☒ Fluid temperature up to 40°C
- ☒ Maximum sand content :20g/m<sup>3</sup>



3SCREW1.2-50-0.37

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Clamping spring	14	Socket Sleeve	27	Hexagon bolt
2	End cover	15	Oil Chamber Gasket	28	Spring washer
3	Oil sac	16	Oil Chamber Cover	29	Oil seal
4	Capacitor	17	Pump Casing	30	(slotted pan head)screw
5	Motor casing	18	Hexagon Bolt	31	"O" ring
6	Bearing bracket	19	Spring Washer	32	(hexagon socket)screw
7	Ball bearing	20	Universel Coupling	33	Locating sleeve
8	Stator	21	Bolt	34	(cross recessed countersunk head) screw
9	Rotor	22	Rubber Stator	35	"O" ring
10	Bearing	23	Cable Presser	36	Mechanical seal
11	Oil chamber	24	Cable	37	Nameplate
12	Rubber washer	25	Groud Sign	38	Insulation paper
13	Coil out nut	26	Discharge Chamber	39	Warning label

**WORKING PRINCIPLE**

**3SCREW** pumps are one kind of internal gearing and off-centre whirling pumps. A rotor with single screw and a stator made from rubber with double screw channel are the main parts of the pumps. When the rotor housed in the cavity makes planetary turns around the axes of the stator, the hermetic wrist between rotor and stator moves along the rotor spiral, then the medium will be transferred from the inlet to the outlet continuously, uniformly in constant capacity.

When there is a requirement for sending medium in stable pressure condition and keep the structure of the medium as well as possible, single screw pump is the most desirable one for choosing.

**Features:**

Given the special structure and working principle, screw pump has the following advantages:

Conveying medium with high purity of water;

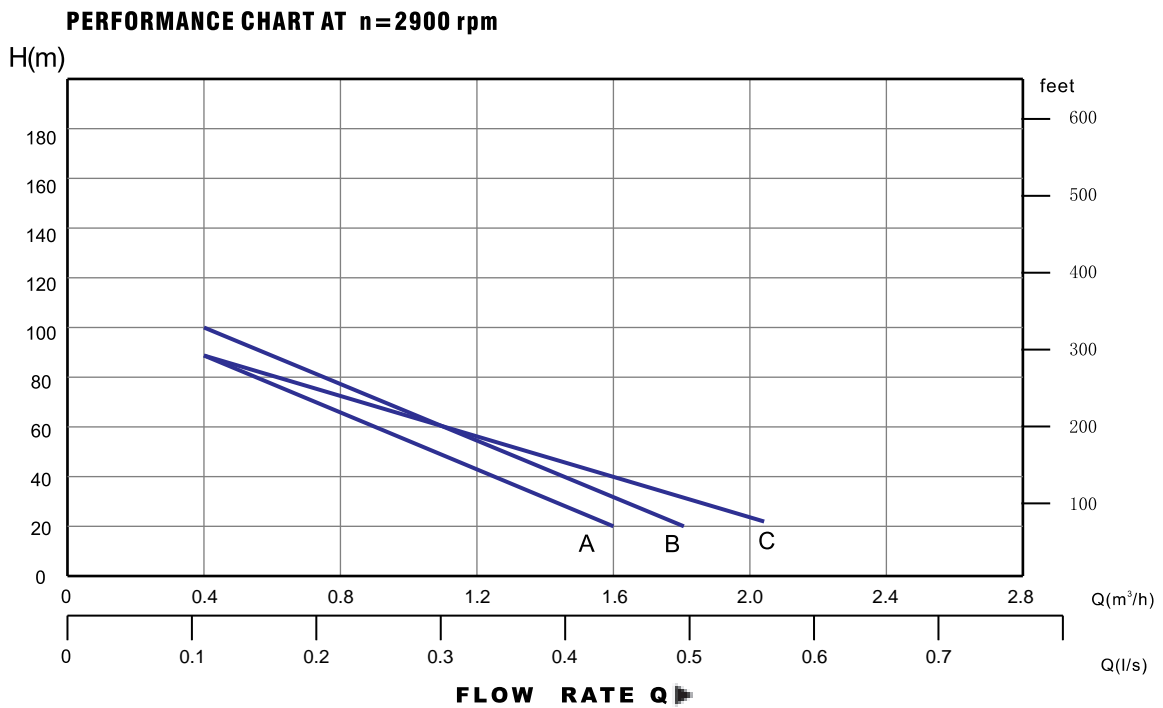
Uniform flow rate and steady pressure, which is especially obvious in low speed;

The flow rate is in proportion to the speed of the pump, so it is extremely adjustable; can be installed aslant at random;

small volume and weight, low noise, in simple structure, convenient maintenance.

**Application:**

Single screw pump can be widely used in industrial sectors, conveying various mediums. It can be used in chemical industry, exploration and mining, shipbuilding, ceramic industry, energy industry, handling river water, paper-making industry, medical, food, cosmetics industry, other applications in agricultural fields and so on..



No.	PUMPMODEL	Power		Rated capacity	Rated head	Outlet	Speed
		KW	HP	m³/h	m	inch	r/min
A	3SCREW1.2-50-0.37	0.37	0.5	1.2	50	1"	2900
B	3SCREW1.2-60-0.5	0.5	0.7	1.2	60	1"	2900
C	3SCREW1.5-50-0.55	0.55	0.75	1.5	50	1"	2900

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**

# SCREW

## SCREW SUBMERSIBLE PUMPS

### PERFORMANCE RANGE

- ☒ Flow rate up to 70l/min(4.2m³/h)
- ☒ Head up to 200m

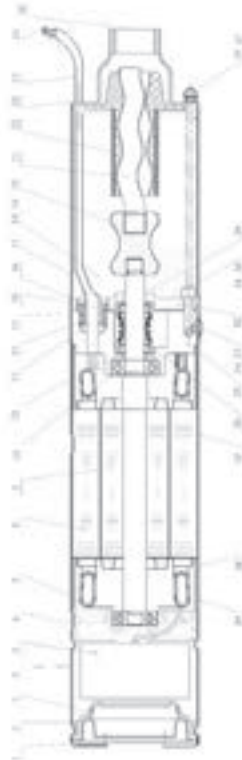
### OPERATION LIMITS

- ☒ Maximum operating depth 40m
- ☒ Fluid temperature up to 40°C
- ☒ Maximum sand content :20g/m³



**SCREW1.8-50-0.5**

### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Clamping spring	14	Socket Sleeve	27	Hexagon bolt
2	End cover	15	Oil Chamber Gasket	28	Spring washer
3	Oil sac	16	Oil Chamber Cover	29	Oil seal
4	Capacitor	17	Pump Casing	30	(slotted pan head)screw
5	Motor casing	18	Hexagon Bolt	31	"O" ring
6	Bearing bracket	19	Spring Washer	32	(hexagon socket)screw
7	Ball bearing	20	Universel Coupling	33	Locating sleeve
8	Stator	21	Bolt	34	(cross recessed countersunk head) screw
9	Rotor	22	Rubber Stator	35	"O" ring
10	Bearing	23	Cable Presser	36	Mechanical seal
11	Oil chamber	24	Cable	37	Nameplate
12	Rubber washer	25	Groud Sign	38	Insulation paper
13	Coil out nut	26	Discharge Chamber	39	Warning label

**WORKING PRINCIPLE**

Screw pumps are one kind of internal gearing and off-centre whirling pumps. A rotor with single screw and a stator made from rubber with double screw channel are the main parts of the pumps. When the rotor housed in the cavity makes planetary turns around the axes of the stator, the hermetic wrist between rotor and stator moves along the rotor spiral, then the medium will be transferred from the inlet to the outlet continuously, uniformly in constant capacity.

When there is a requirement for sending medium in stable pressure condition and keep the structure of the medium as well as possible, single screw pump is the most desirable one for choosing.

**Features:**

Given the special structure and working principle, screw pump has the following advantages:

Conveying medium with high purity of water;

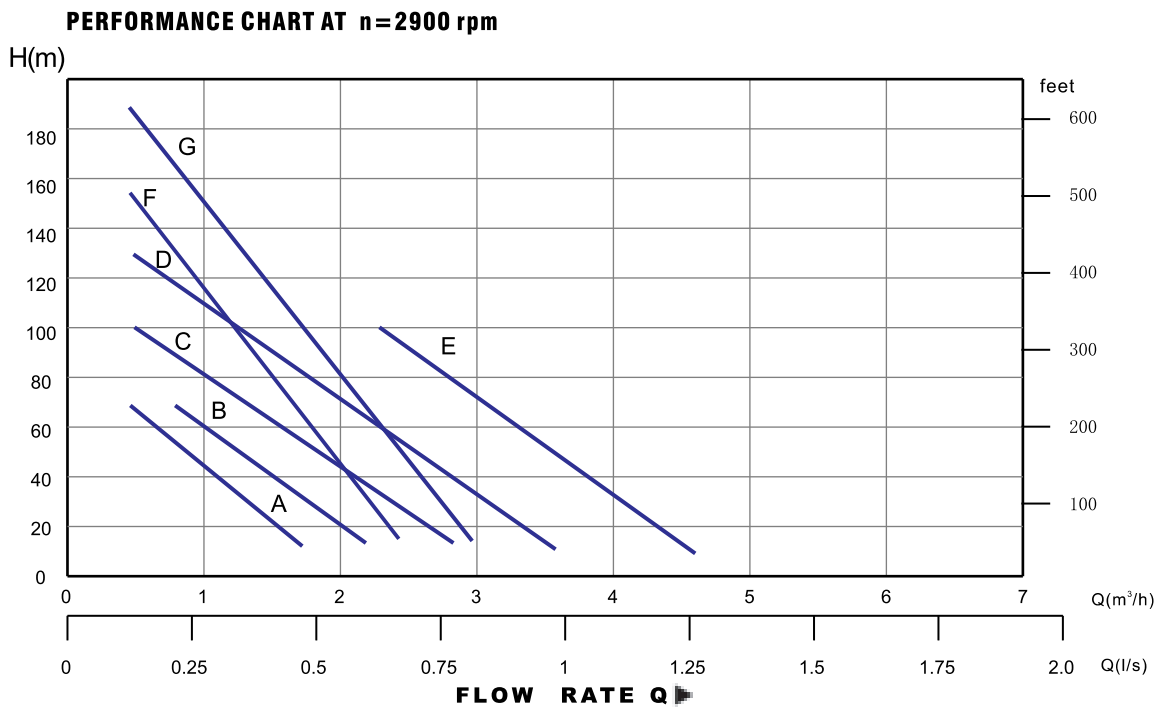
Uniform flow rate and steady pressure, which is especially obvious in low speed;

The flow rate is in proportion to the speed of the pump, so it is extremely adjustable; can be installed aslant at random;

small volume and weight, low noise, in simple structure, convenient maintenance.

**Application:**

Single screw pump can be widely used in industrial sectors, conveying various mediums. It can be used in chemical industry, exploration and mining, shipbuilding, ceramic industry, energy industry, handling river water, paper-making industry, medical, food, cosmetics industry, other applications in agricultural fields and so on.



No.	PUMPMODEL	Power		Rated capacity	Rated head	Outlet	Speed
		KW	HP	m³/h	m	inch	r/min
A	SCREW1-50-0.25	0.25	0.33	1	50	1"	2900
B	SCREW1.2-50-0.37	0.37	0.5	1.2	50	1"	2900
C	SCREW1.8-50-0.5	0.5	0.7	1.8	50	1"	2900
D	SCREW2.5-50-0.55	0.55	0.75	2.5	50	1 1/4"	2900
E	SCREW3.5-50-0.75	0.75	1.0	3.5	50	1 1/4"	2900
F	SCREW1.2-100-0.55	0.55	0.75	1.2	100	1"	2900
G	SCREW1.8-100-0.75	0.75	1.0	1.8	100	1"	2900

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**

# 5XS 5"STAINLESS STEEL MULTISTAGE SUBMERSIBLE PUMPS

## PERFORMANCE RANGE

- ☒ Flow rate up to 183 l/min (11m<sup>3</sup>/h)
- ☒ Head up to 88m

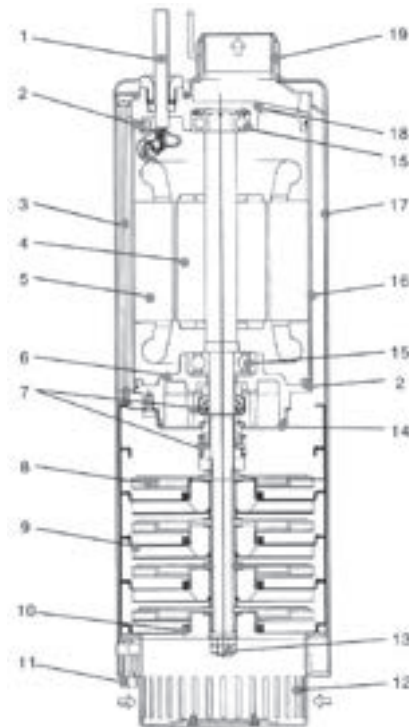
## OPERATION LIMITS

- ☒ Water temperature up to 40°C
- ☒ Minimum internal diameter of well:  $\Phi$ 132mm
- ☒ Minimum immersion depth: 100mm
- ☒ Maximum immersion depth: 20m (with suitable cable length)



**5XS205**

## DIAGRAM



N.	DESCRIPTION	MATERIAL	N.	DESCRIPTION	MATERIAL
1	Cable		11	Bolt	AISI304SS
2	"O"ring	NBR	12	Suction screen	AISI304SS
3	Bolt	AISI304SS	13	Nut	AISI304SS
4	Rotor	(shaft:aisi420ss)	14	Plate	AISI304SS
5	Stator		15	Ball bearing	
6	Bearing house	cast-cu or AISI304SS	16	Motor casing	AISI304SS
7	Mechanical seal	carbon vs ceramics	17	Pump casing	AISI304SS
8	Impeller	AISI304SS	18	Up-bearing house	cast-cu or AISI304SS
9	Diffuser	AISI304SS	19	Discharge head	AISI304SS
10	Seal ring	F4			

### CONSTRUCTION

- ☒ Close coupled multi-stage submersible pumps in stainless steel.
- ☒ Hydraulic part under the motor and motor cooled by the pumped water for safe operation also with the pump only partially immersed.,
- ☒ Double shaft seals with interposed oil chamber.
- ☒ The suction strainer prevents the entrance of solids with diameter bigger than:
  - $\Phi$  2,5mm for 5XS203,204,205,206,404,405,803,804
  - $\Phi$  2mm for 5XS207,208,406,407,408

### PUMP APPLICATIONS

- ☒ For water supply from wells, tanks or reservoirs.
- ☒ For domestic use, for civil and industrial applications, for garden use and irrigation. Utilization of rain water.
- ☒ Continuously duty

### MOTOR

2 Pole induction motor

5XS:three phase 230V  $\pm$ 10% ,50HZ;220V  $\pm$ 10%,60HZ;  
400V  $\pm$ 10%, 50HZ;380v  $\pm$ 10%,60HZ;

5XSM:single phase 230V  $\pm$ 10%,with thermal protector up to 1.1 kw.

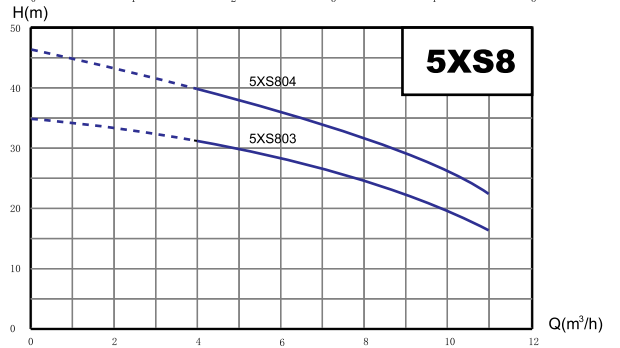
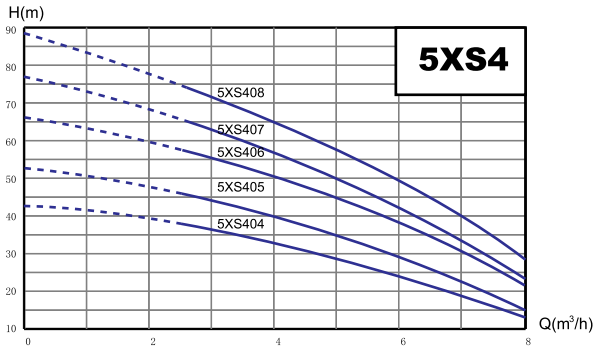
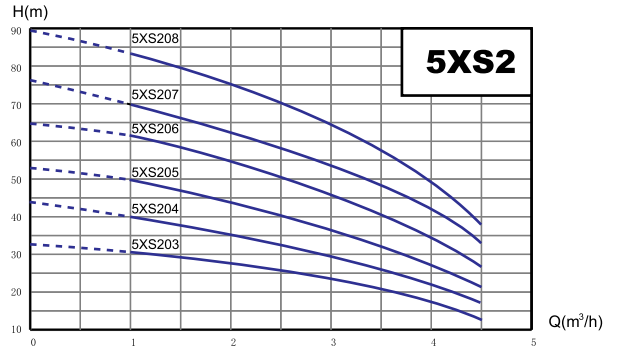
Control box with capacitor. Float switch(on demand )

Cable: length 15m.

Insulation class F.

Protection class:IP68(for continuous immersion).

**PERFORMANCE CHART AT n=2900 rpm**



PUMP	MODEL	P1		P2		Qm³/h	H (m)											
		KW	KW	HP	HP		0	1	1.5	2	2.5	3	3.5	4	4.5			
three phase	single phase					l/min	0	16.6	25	33.3	41.6	50	58.3	66.6	75			
5XS203	5XSM203	0.8	0.55	0.75		H (m)	33	31	29.5	27.5	25	22	19	16	12			
5XS204	5XSM204	0.85	0.55	0.75	44		41.5	39.5	36.5	33.5	29.5	25.5	21	16				
5XS205	5XSM205	1.1	0.75	1	53		49.5	47	44	40	36	31	27	21				
5XS206	5XSM206	1.3	0.9	1.2	65		61	58	54	51	45	40	35	27				
5XS207	5XSM207	1.35	0.9	1.2	76.5		71	67.5	62.5	57.5	52.5	46	40	32.5				
5XS208	5XSM208	1.35	1.1	1.5	87.5		81	77	71.5	66	60	52.5	46	37				

PUMP	MODEL	P1		P2		Qm³/h	H (m)											
		KW	KW	HP	HP		0	2.5	3	3.5	4	4.5	5	6	7	8		
three phase	single phase					l/min	0	41.6	50	58.3	66.6	75	83.3	100	116	133		
5XS404	5XSM404	1.3	0.9	1.2		H (m)	43	39	38	36.5	35	33	30	25.5	19.5	13		
5XS405	5XSM405	1.55	1.1	1.5	53		48	46.5	45	43	40	37.5	32	24	15			
5XS406	5XSM406	1.65	1.1	1.5	66		60	58	56	54	51.5	49	42	34	20.5			
5XS407	5XSM407	1.95	1.5	2	77		70	68	65.5	63	60	57	49	39.5	24			
5XS408	5XSM408	2.2	1.5	2	88		80	77.5	75	72	68.5	65	56	45	27.5			

PUMP	MODEL	P1		P2		Qm³/h	H (m)										
		KW	KW	HP	HP		0	5	6	7	8	9	10	11			
three phase	single phase					l/min	0	83.3	100	116	133	150	166	183			
5XS803	5XSM803	1.55	1.1	1.5		H (m)	34.5	29.5	28	26.5	24.5	22.5	20	16.5			
5XS804	5XSM804	1.95	1.5	2	45.5		39	37	35	32.5	30	26.5	22.5				

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**

### PERFORMANCE RANGE

- ☒ Flow rate up to 1330 l/min.(80m<sup>3</sup>/h )
- ☒ Dynamic head up to 28m

### OPERATION LIMITS

- ☒ Maximum working pressure 4 bar
- ☒ Suction lift up to 8m
- ☒ Fluid temperature up to 40°C
- ☒ Maximum ambient temperature 40°C
- ☒ Continuous duty

### APPLICATIONS

Centrifugal hand-carry motor pumps, particularly suitable to supply and distribute clean water for agricultural and gardening purposes, when an electrical connection is not possible.

### MATERIAL

Pump body: aluminum

Pump support: aluminum

Impeller: cast iron

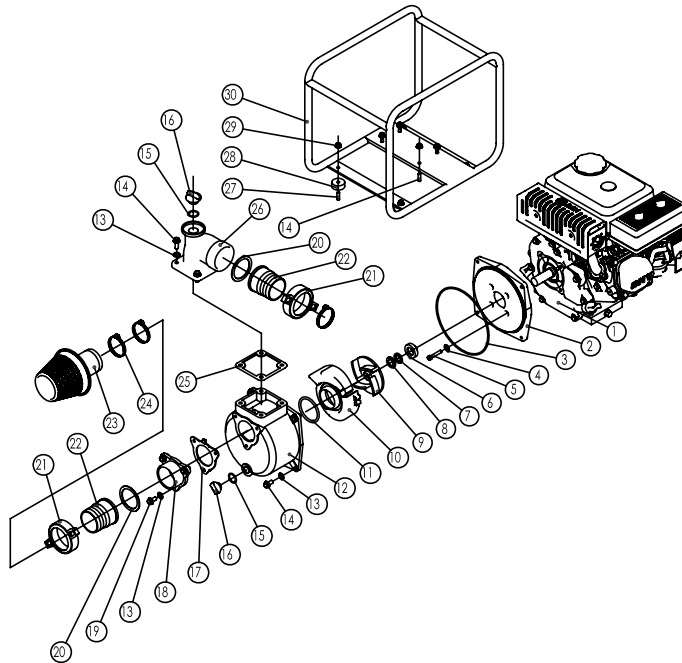
Motor shaft: ≤5.5HP,nodular cast iron;>5.5HP,40Cr.

Mechanical seal: graphite to ceramic

Frame: full steel frame protection

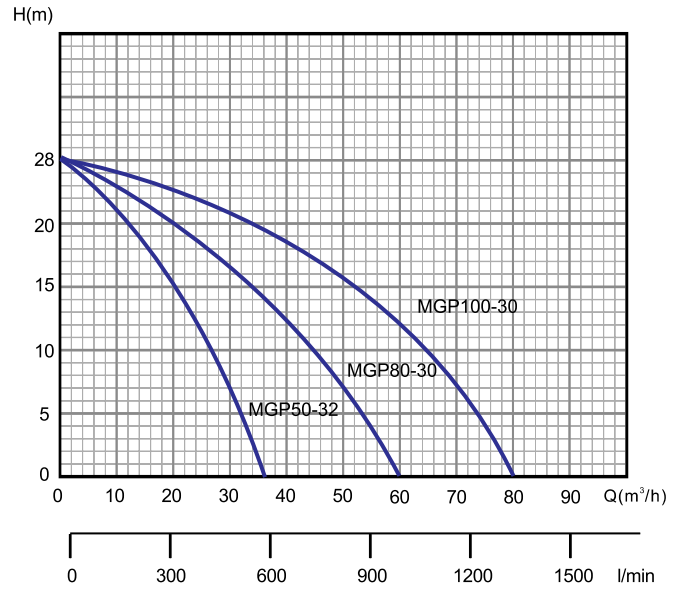
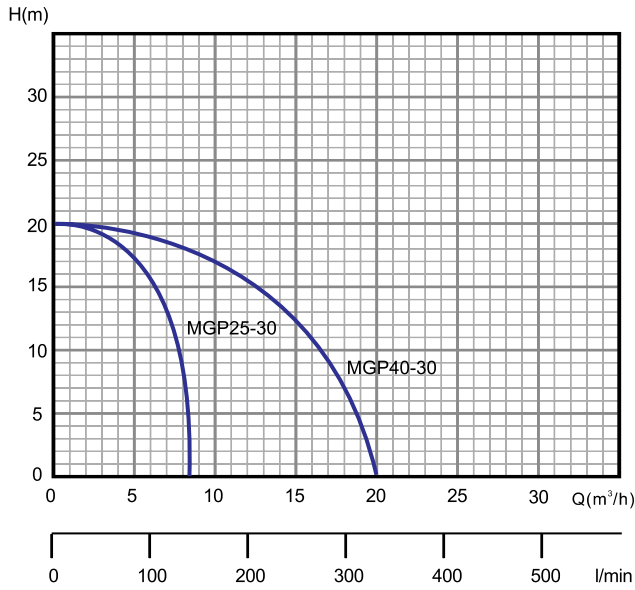


### DIAGRAM



N.	DESCRIPTION	N.	DESCRIPTION	N.	DESCRIPTION
1	Engine	11	"O"seal	21	Joint
2	Pump cover	12	Pump body	22	Head
3	"O" seal	13	Packing8	23	Strainer
4	Washer	14	Flange bolt M8X20	24	Tabc clip
5	Hexagon screws M8X55	15	"O" seal	25	Seal packing
6	Casing wear ring	16	Plug	26	Elbow draft tube
7	Impeller wear ring	17	Non-return vale	27	Flange bolt M8x25
8	Impeller seals	18	Flume	28	Flame rubber
9	Impeller	19	Flange boltM8X20	29	Nut M8
10	Spiral case	20	Seal packing	30	Flame

**PERFORMANCE CHART AT n = 3600 rpm**



MODEL	POWER	INLET/OULET	Q m³/h	0	2	4	6	8	10	12	14	16	18	20
MGP25-30	1.5HP	1"x1"	H	20	18	15	11	2						
MGP40-30	4 HP	1.5"x1.5"	m	20	19.5	19	18	17	15.5	14	12	9.5	6.5	2
MODEL	POWER	INLET/OULET	Q m³/h	0	10	20	30	40	50	60	70	80		
MGP50-32	5.5HP	2"x2"	H	28	25	19	7							
MGP80-30	5.5HP	3"x3"	m	28	27	25	22	17	10	2				
MGP100-30	9HP	4"x4"		28	27	26	24	22	19	15	10	2		

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**

**CHARACTERISTIC**

PARAMETER	MGP25-30	MGP40-30	MGP50-32	MGP80-30	MGP100-30
INLET/OUTLET	1**1"	1.5**1.5"	2**2"	3**3"	4**4"
MAX.SUCTION	7m	7m	8m	8m	8m
FLOW RATE MAX	8m3/h	21m3/h	36m3/h	60m3/h	80m3/h
HEAD MAX	20m	20 m	28m	28m	28m
ENGINE TYPE	2-stroke singl cylinder	4-stoke OHV	4-stoke OHV	4-stoke OHV	4-stoke OHV
DISPLACEMENT	42.73cc	80.7cc	173cc	173cc	284cc
MAX.OUTPUT	1.5HP	2.5HP	5.5HP	5.5HP	9HP
FULE TANK CAPACITY	1.2L	1.6L	3.6L	3.6L	5.9L
BORE*STROKE	40*34mm	52*38mm	70*45mm	70*45mm	79*58mm
IGNITION SYSTEM	C.D.L.	T.C.L			
STRTING SYSTEM	recoil	recoil/electric			
FULE CONSUMPTION	610g	450g	340g	340g	340g
OIL CAPACITY		0.37L	0.6L	0.6L	1.1L

# VS

## Vertical multistage in - line Stainless steel centrifugal pump

### 1.Applications

**VS** vertical multistage in-line stainless steel centrifugal pumps are designed for the following applications:

a. Pumped liquids

Thin, non-explosive liquids, not containing solid particles. The liquid must not attack the pump materials chemically. When pumping liquids with a density or viscosity higher than that of water, motor with correspondingly higher outputs must be used, if required.

b. Application

- Municipal water supply and pressure boosting
- Domestic water supply
- Boiler feed and condensate systems
- Cooling water systems
- Irrigation and dewatering
- Fire fighting
- washing plants and washdown

### 2. Technical Data

a. Ambient Temperature

Maximum: +40°C

b. Liquid Temperature

Standard design: -15°C to +90°C

For hot water design: -15°C to +120°C

c. Min suction pressure

According to NPSH add 0.5m water head

d. Electric Motor standard be supplied as:

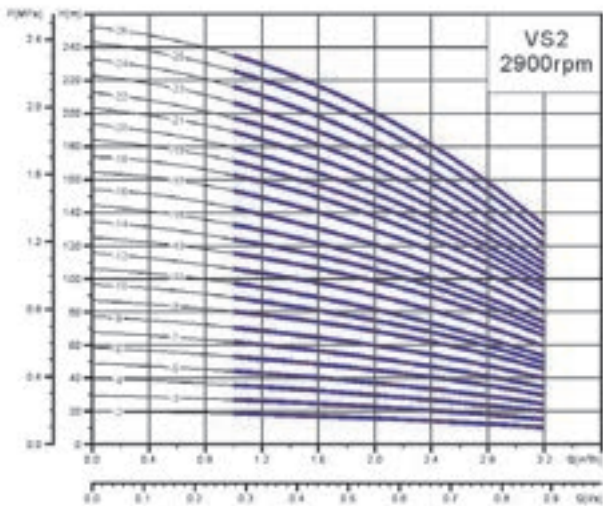
50Hz, single phase 220v or three phase 380v, aluminum casing, IP54, class F

60Hz, single phase 110v or three phase 220v, aluminum casing, IP54, class F.

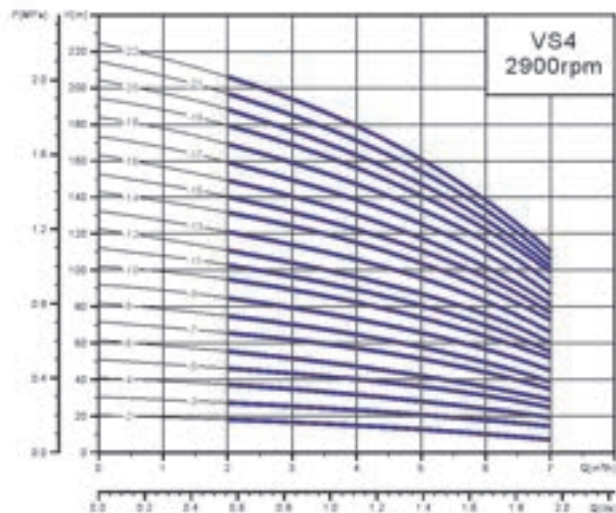
e. PUMP'S material can be supplied in 304 or 316 stainless steel



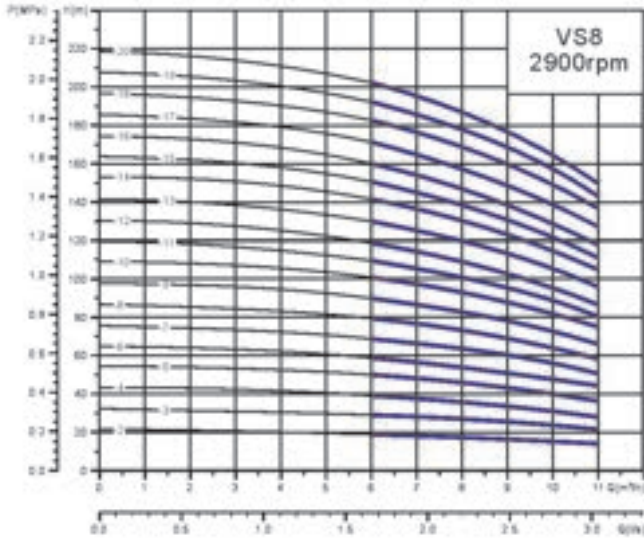
**VS**



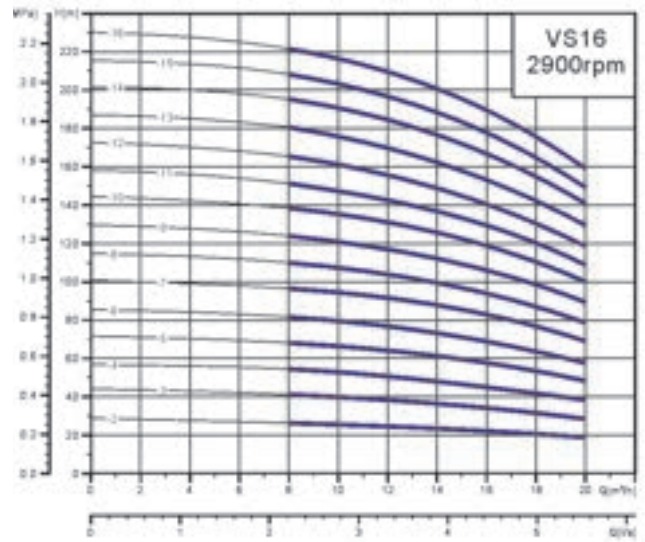
**VS2(0.5HP--4HP)**



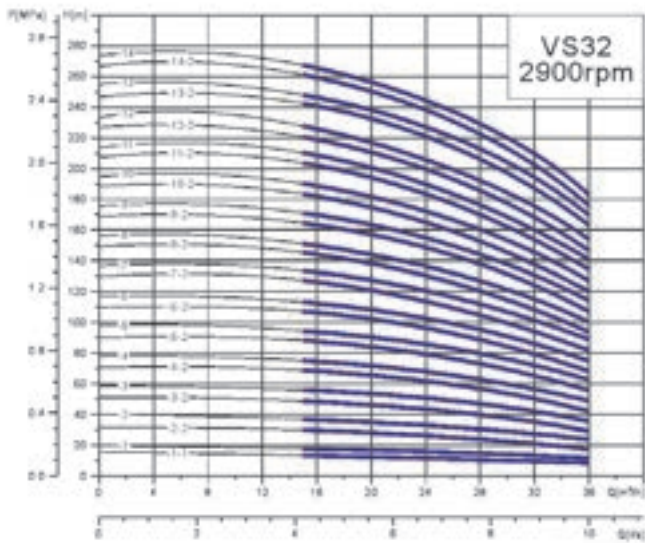
**VS4(0.5HP--5.5HP)**



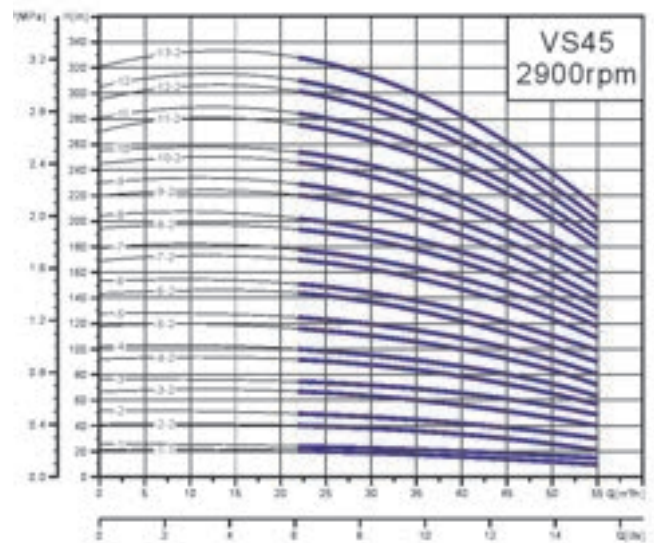
**VS8(1HP--10HP)**



**VS16(3HP--20HP)**



**VS32(2HP--40HP)**



**VS45(4HP--60HP)**

# VSC

## VERTICAL MULTISTAGE PUMPS

### PERFORMANCE RANGE

- ☒ Flow rate up to 267.2 l/min. (16 m<sup>3</sup>/h)
- ☒ Dynamic head up to 150 m.

### OPERATING LIMITS

- ☒ Suction lift up to 7 m
- ☒ Fluid temperature up to 35°C
- ☒ Maximum ambient temperature up to 40°C
- ☒ Maximum working pressure 15 bar

### INSTALLATION AND USE

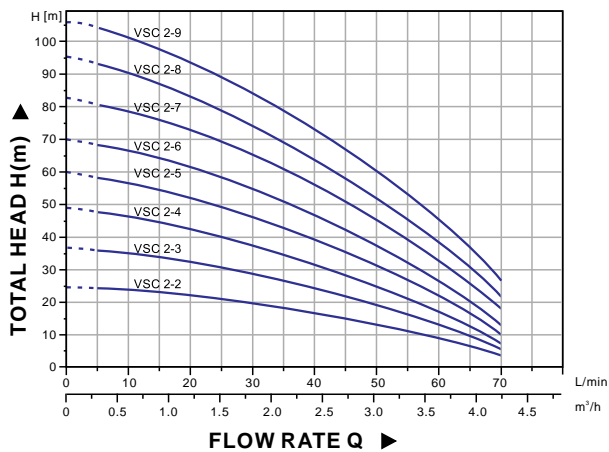
Suitable for use with clean water and liquids that are not chemically aggressive towards the materials from which the pump is made. The high efficiency and adaptability of these pumps to even the most unusual of applications, makes them ideal for use in the domestic, civil and industrial sectors; in particular for the distribution of water in combination with pressure sets and for pressure boosting. The pump should be installed in an enclosed environment, or at least sheltered from inclement weather.

### STRUCTURE CHARACTERISTICS

- ☒ Stainless steel pump body
- ☒ Cast iron pump inlet
- ☒ Cast iron motor support
- ☒ Stainless steel mechanical seal (graphite to ceramic)
- ☒ Noryl impeller with centrifugal radial flow type
- ☒ Stainless steel shaft
- ☒ Protection IP44
- ☒ With thermal overload protector in single phase motor
- ☒ NSK bearing or local bearing

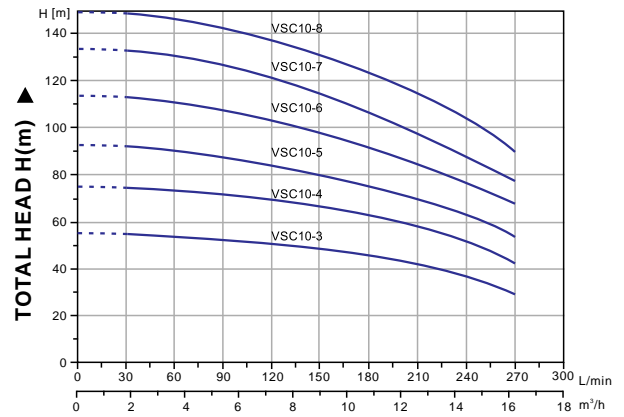
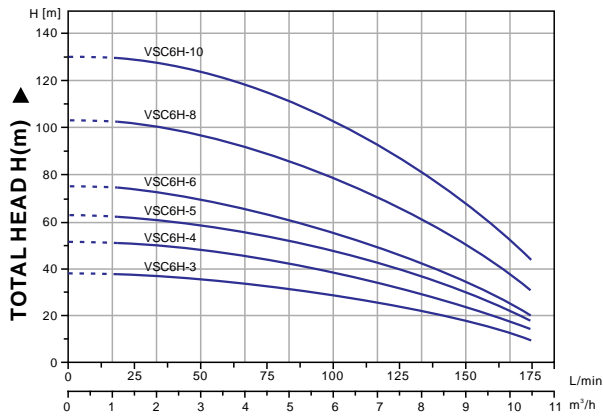
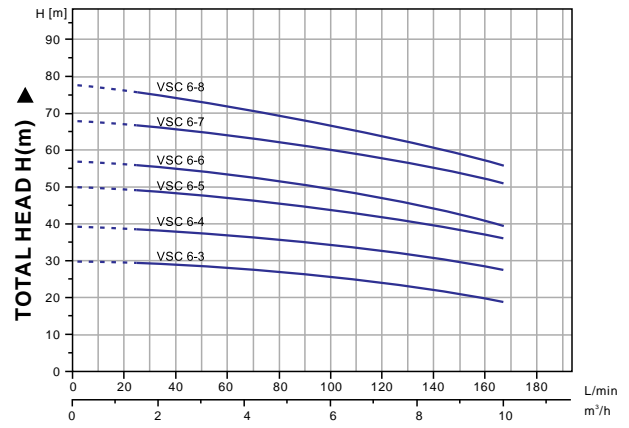
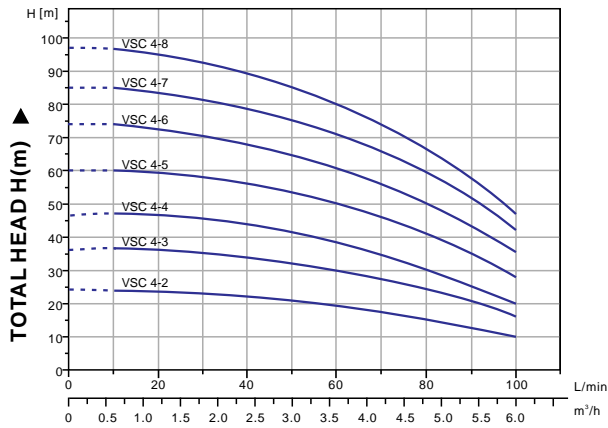


**VSC**



Model		Power		Q(m <sup>3</sup> /h)	0	1	2	3	4
Single-phase	Three-phase	kW	HP	Q(l/min)	0	16.7	33.3	50	66.7
VSCm2-2	VSC2-2	0.37	0.5	H(m)	24	23	18	13	6
VSCm2-3	VSC2-3	0.55	0.75		36	33	26	20	9
VSCm2-4	VSC2-4	0.75	1.0		48	45	35	26	11
VSCm2-5	VSC2-5	1.0	1.33		59	57	44	33	15
VSCm2-6	VSC2-6	1.0	1.33		70	65	52	37	18
VSCm2-7	VSC2-7	1.1	1.5		82	75	62	45	25
VSCm2-8	VSC2-8	1.5	2.0		94	87	72	52	28
VSCm2-9	VSC2-9	1.5	2.0		105	98	82	60	35

H=TOTAL HEAD IN METERS. Q=FLOW RATE Q



### FLOW RATE Q ▶

Model		Power		Q(m³/h)	0	1	2	3	4	5	6
Single-phase	Three-phase	KW	HP	Q(l/min)	0	16.7	33.3	50	66.7	83.3	100
VSCm4-2	VSC4-2	0.55	0.75	H(m)	24	23	22	21	18	15	10
VSCm4-3	VSC4-3	0.75	1.0		37	36	34	33	29	24	16
VSCm4-4	VSC4-4	1.0	1.33		48	46	45	41	36	28	20
VSCm4-5	VSC4-5	1.5	2.0		60	58	57	55	48	39	29
-	VSC4-6	1.5	2.0		73	72	69	66	57	47	36
-	VSC4-7	2.2	3.0		86	83	81	77	68	57	43
-	VSC4-8	2.2	3.0		98	95	92	86	76	63	47

Model		Power		Q(m³/h)	0	1	2	3	4	5	6	7	8	9	10
Single-phase	Three-phase	KW	HP	Q(l/min)	0	16.7	33.3	50	66.7	83.3	100	116.7	133.3	150	166.7
VSCm6-3	VSC6-3	1.1	1.5	H(m)	30	29.5	29	28.5	28	27	26	24.5	23	21	19
VSCm6-4	VSC6-4	1.5	2.0		40	38.5	37.5	37.3	38	36	34	33.5	32	30	27
-	VSC6-5	2.2	3.0		50	49	48.5	48.3	48	45	43	42	41	39	36
-	VSC6-6	2.2	3.0		58	56	54	53.5	53	52	51	48	45	41	40
-	VSC6-7	3.0	4.0		68	67	66.5	65	63.5	62	60	58	56	54	51
-	VSC6-8	3.0	4.0		78	75	73	72	71	70	68	65	62	59	55

Model		Power		Q(m³/h)	0	1	2	3	4.5	6	7.5	9	10.5
Single-phase	Three-phase	KW	HP	Q(l/min)	0	16.7	33.3	50	70	100	125	150	175
VSCm6H-3	VSC6H-3	0.75	1.0	H(m)	39	38	37	35	33	29	24	18	10
VSCm6H-4	VSC6H-4	1.1	1.5		52	51	49	47	44	39	32	25	14
VSCm6H-5	VSC6H-5	1.5	2.0		64	62	60	58	54	47	38	28	16
-	VSC6H-6	2.2	3.0		76	74	71	68	63	56	45	34	20
-	VSC6H-8	3.0	4.0		103	100	97	95	90	80	66	50	31
-	VSC6H-10	4.0	5.5		130	127	124	121	114	103	86	66	41

Model		Power		Q(m³/h)	0	2	4	6	8	10	12	14	16
Single-phase	Three-phase	KW	HP	Q(l/min)	0	33.3	66.7	100	133.6	167	200.4	233.8	267.2
-	VSC10-3	3.0	4.0	H(m)	56	55	54	52	49	46	42	39	29
-	VSC10-4	4.0	5.5		75	74	72	70	67	64	60	53	43
-	VSC10-5	5.5	7.5		93	91	87	84	81	77	72	64	55
-	VSC10-6	5.5	7.5		113	110	107	104	100	96	87	78	68
-	VSC10-7	7.5	10		132	128	124	120	116	112	103	93	80
-	VSC10-8	7.5	10		150	147	143	139	134	127	120	108	92

H=TOTAL HEAD IN METERS. Q=FLOW RATE Q

# 3M

## CLOSE-COUPLED COMPLETE CENTRIFUGAL PUMPS

### PERFORMANCE RANGE

- ☒ Flow rate up to 1200l/min.(72m<sup>3</sup>/h)
- ☒ Head up to 55m

### OPERATION LIMITS

- ☒ Maximum working pressure: 10 bar
- ☒ Fluid temperature from -5°C to+105°C
- ☒ Maximum ambient temperature 40°C



### PUMPS INSTALLATION AND APPLICATIONS

3M end suction centrifugal pumps in accordance with EN773(ex DIN24255) made of stainless steel AISI304, applications include water boosting, heating systems, air- conditioning, washing systems and many other industrial application.

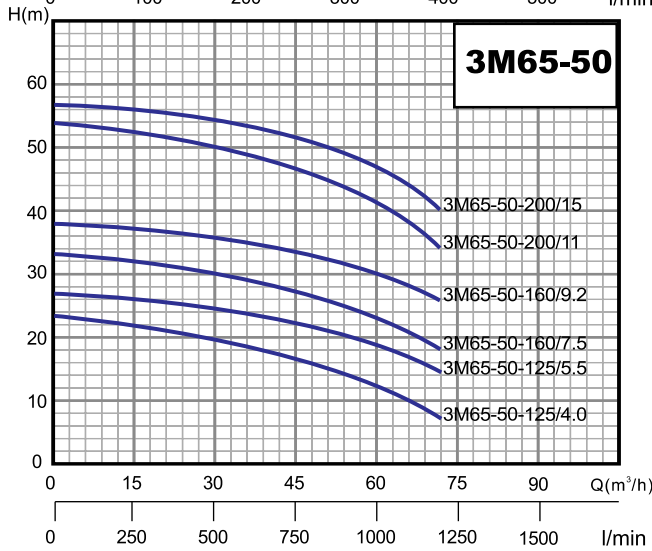
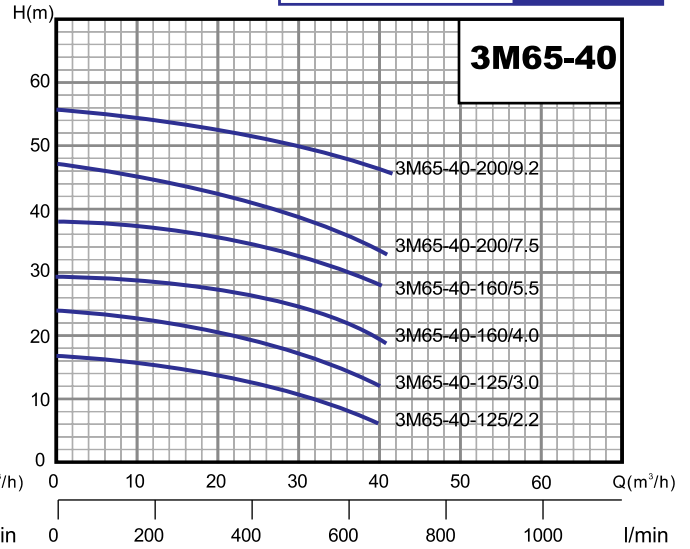
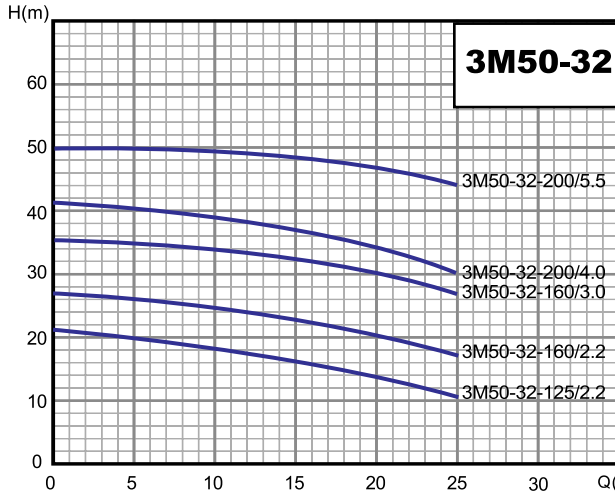
### PERFORMANCE

- ☒ Ample and stable characteristic curves;
- ☒ Performance characterized by high absolute values over the majority of the curve;
- ☒ Flat absorption curves at high delivery rates, preventing motor overloading even during prolonged use;
- ☒ Good suction capacities both at low and high delivery rates.

### STRUCTURAL CHARACTERISTIC

- ☒ 304 stainless steel pump body
- ☒ 304 stainless steel pump body cover
- ☒ 304 stainless steel impeller
- ☒ 304 stainless steel shaft
- ☒ Stainless steel mechanical seal (EPDM/Carbon/SiC)
- ☒ Aluminum motor casing(cast iron motor casing up 11kw )
- ☒ Protection IP54 for single phase ,IP55 for three phase. Insulation class F
- ☒ With thermal overload protector in single phase motor
- ☒ NSK bearing

**PERFORMANCE CHART AT n=2900 rpm**



**FLOW RATE Q**

PUMP MODEL		POWER		Q	3.0	6.0	9.0	12	15	18	20	24	27	30	33	36	39	42	48	60	70	
Single phase	Three phase	KW	HP	m³/h																		
				l/min	50	100	150	200	250	300	330	400	450	500	550	600	650	700	800	1000	1200	
	3M50-32-125/2.2	2.2	3.0	H m	21	20.5	20	19	17.5	16.5	15	11										
	3M50-32-160/2.2	2.2	3.0		26	25.5	25	24	23.5	21.5	20	18										
	3M50-32-160/3.0	3.0	4.0		35	34	33	32	31	30	29	27										
	3M50-32-200/4.0	4.0	5.5		40.5	40	38.5	37.5	36	34	33	30										
	3M50-32-200/5.5	5.5	7.5		50	49.5	49	48.5	48	47.5	47	44.5										
	3M65-40-125/2.2	2.2	3.0					15.5	15	14.5	14	13	12	11	10	8	6					
	3M65-40-125/3.0	3.0	4.0					21.8	21.5	21.3	21.1	20.7	20.2	19.5	18.4	16	14.5	12.5				
	3M65-40-160/4.0	4.0	5.5					28.5	28	27.4	27.1	26.3	25.4	24.3	22.9	21.7	20.5	19				
	3M65-40-160/5.5	5.5	7.5					36	35	34.5	33.8	33	32	31.5	31	30.5	29.8	29				
	3M65-40-200/7.5	7.5	10					44.5	43.5	42.5	42	41.8	41	40	38.5	37	35	33				
	3M65-40-200/9.2	9.2	12.5					53.5	52.8	52	51.5	51	50.5	50	49.5	49	47	45.5				
	3M65-50-125/4.0	4.0	5.5									21.6	21.2	21.5	20	19.2	18.2	17.5	15.5	11	8	
	3M65-50-125/5.5	5.5	7.5									25.6	25.4	24.9	24.5	23.8	23.3	22.6	21	19	14	
	3M65-50-160/7.5	7.5	10									30	29.8	29.5	28.8	28	27	26.5	24.8	23	19	
	3M65-50-160/9.2	9.2	12.5									37	36.5	36	35.3	34.5	34	33.8	32	30	27.5	
	3M65-50-200/11	11	15								52	51	50	49.5	49	48.5	48	46	41	33		
	3M65-50-200/15	15	20								55	54.8	54.5	54.3	54	53.5	53	51	46.8	40		

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**

### PERFORMANCE RANGE

- ❖ Flow rate up to 260l/min.(15.6m<sup>3</sup>/h)
- ❖ Head up to 37m

### OPERATION LIMITS

- ❖ Suction lift up to 8m
- ❖ Fluid temperature from -5 °C to +105 °C
- ❖ Maximum ambient temperature 40 °C

### PUMPS INSTALLATION AND APPLICATIONS

CDX single impeller end suction centrifugal pumps with hydraulic components constructed in stainless steel AISI304, suitable for pressure boosting, water supply, water treatment and irrigation. Air conditioning systems and general water pumping including moderately aggressive liquids.

They are designed for dependable performance, and rugged continuous duty.

### PERFORMANCE

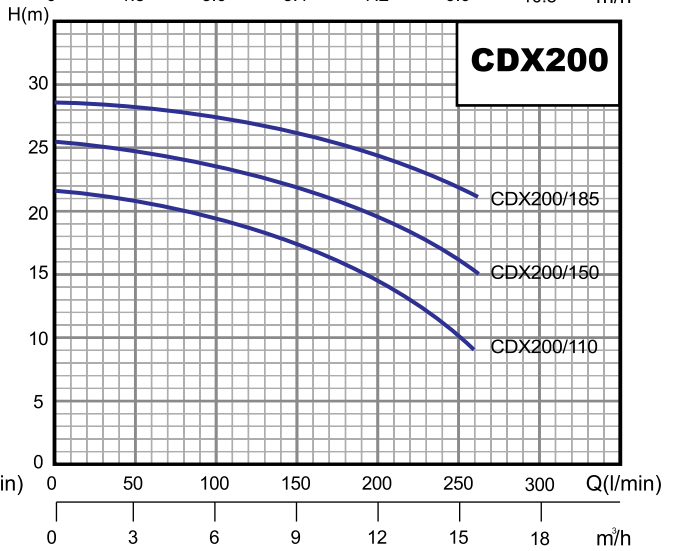
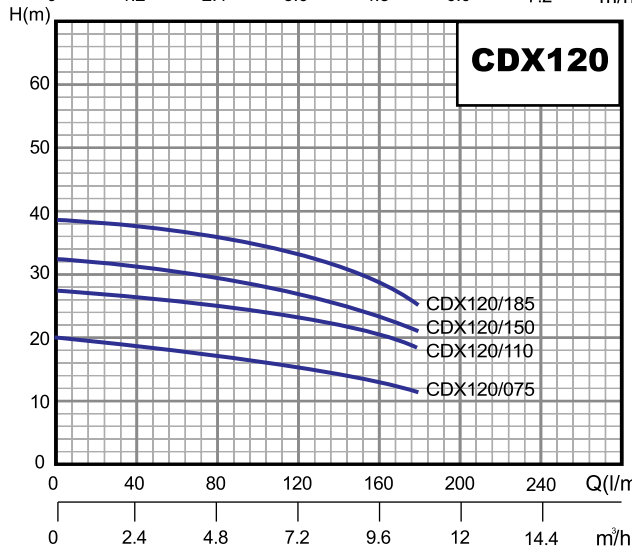
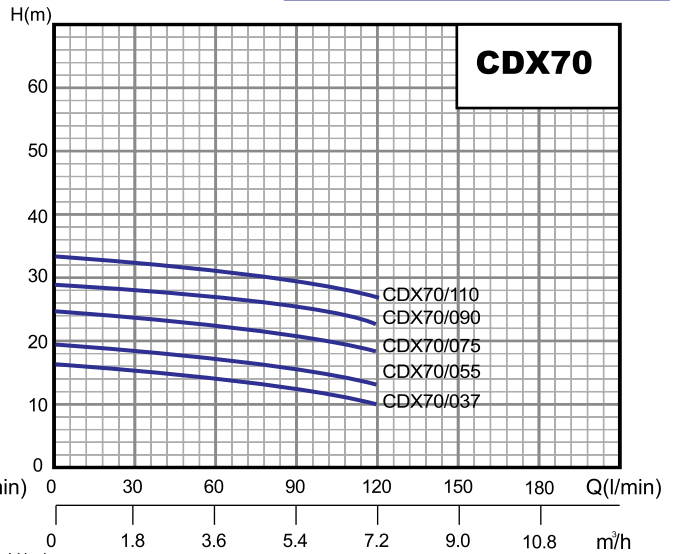
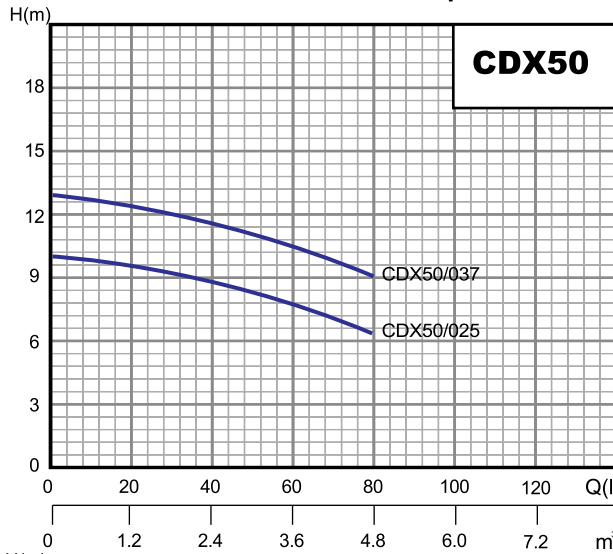
- ❖ Ample and stable characteristic curves;
- ❖ Performance characterized by high absolute values over the majority of the curve
- ❖ Flat absorption curves at high delivery rates, preventing motor overloading even during prolonged use;
- ❖ Good suction capacities both at low and high delivery rates.

### STRUCTURAL CHARACTERISTIC

- ❖ 304 stainless steel pump body
- ❖ 304 stainless steel pump body cover
- ❖ 304 stainless steel closed type impeller
- ❖ 304 stainless steel shaft
- ❖ Stainless steel mechanical seal (EPDM/Carbon/ SIC)
- ❖ Aluminum bracket and motor casing
- ❖ Protection IP54, insulation class B
- ❖ With thermal overload protector in single phase motor
- ❖ Local bearing



## PERFORMANCE CHART AT n=2900 rpm



### FLOW RATE Q

PUMP MODEL		POWER		Q	1.2	1.4	3.6	4.8	6.0	7.2	8.4	9.6	10.8	12	13.2	14.4	15.6	
Single phase	Three phase	KW	HP	l/min	20	40	60	80	100	120	140	160	180	200	220	240	260	
CDX50/025D	CDX50/025	0.25	0.33	H m	9.5	8.5	7.5	6.5										
CDX50/037D	CDX50/037	0.37	0.5		12.5	11.5	10	9										
CDX70/037D	CDX70/037	0.37	0.5		16	15	13.5	13	11.5	10								
CDX70/055D	CDX70/055	0.55	0.75		19	18	17	16	15	14								
CDX70/075D	CDX70/075	0.75	1.0		25	24	22.5	22	20	19								
CDX70/090D	CDX70/090	0.90	1.2		29	28	27	26	24	23								
CDX70/110D	CDX70/110	1.10	1.5		33	32	31	30	28.5	27								
CDX120/075D	CDX120/075	0.75	1.0			19	17.5	17	15.8	15	14	12	11					
CDX120/110D	CDX120/110	1.10	1.5			26	25	24	23	22	21	20	18					
CDX120/150D	CDX120/150	1.50	2.0			31	30	29	28	27	25	24	21					
CDX120/185D	CDX120/185	1.85	2.5			37	35.5	34	33	32	30	28	25					
CDX200/110D	CDX200/110	1.10	1.5					21	20.5	20	19	18	17	16	15	13	12	9
CDX200/150D	CDX200/150	1.50	2.0					25.5	25	24	23	22	21.5	21	20	18	17	15
CDX200/185D	CDX200/185	1.85	2.5					28.5	28	27.5	27	26.5	26	25	24	23	22	21

H=TOTAL HEAD IN METERS.

Q=FLOW RATE

# 2CDX

## TWO-STAGE CENTRIFUGAL PUMPS



### PERFORMANCE RANGE

- ❖ Flow rate up to 100l/min.(6.0m<sup>3</sup>/h)
- ❖ Head up to 61m.

### OPERATION LIMITS

- ❖ Suction lift up to 8m
- ❖ Fluid temperature -5°C to +105°C
- ❖ Maximum ambient temperature 40°C

### PUMPS INSTALLATION AND APPLICATIONS

2CDX twin impeller end suction centrifugal pumps with hydraulic components constructed in stainless steel AISI304, suitable for pressure boosting, water supply, water treatment and irrigation. Air conditioning systems and general water pumping including moderately aggressive liquids. They are designed for dependable performance, and rugged continuous duty.

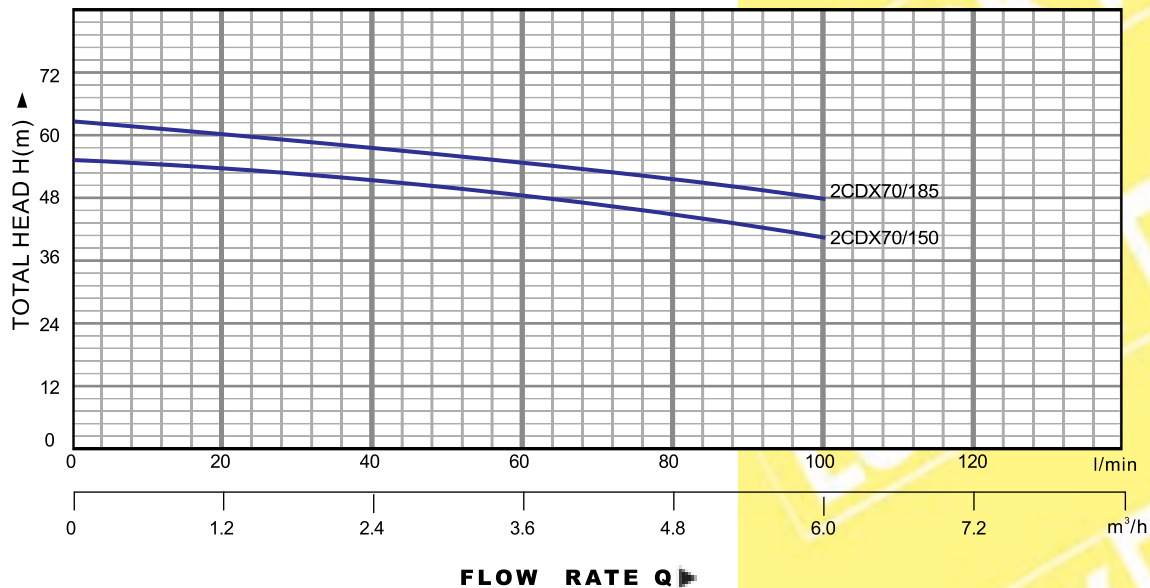
### PERFORMANCE

- ❖ Ample and stable characteristic curves;
- ❖ Performance characterized by high absolute values over the majority of the curve;
- ❖ Flat absorption curves at high delivery rates, preventing motor overloading even during prolonged use;
- ❖ Good suction capacities both at low and high delivery rates.

### STRUCTURAL CHARACTERISTIC

- ❖ 304 stainless steel pump body
- ❖ 304 stainless steel pump body cover
- ❖ 304 stainless steel closed type impeller, two-stage .
- ❖ 304 stainless steel shaft
- ❖ Stainless steel mechanical seal (EPDM/Carbon/SIC)
- ❖ Aluminum motor casing
- ❖ Protection IP54 for single phase, IP55 for three phase. Insulation class F
- ❖ With thermal overload protector in single phase motor
- ❖ NSK bearing

PERFORMANCE CHART AT n=2900 rpm



PUMP MODEL		POWER		Q	1.2	2.4	3.6	4.8	6.0	7.2	8.4	9.6	10.8	12	13.2	14.4	15.6
Single phase	Three phase	KW	HP	l/min	20	40	60	80	100	120	140	160	180	200	220	240	260
2CDX70/150D	2CDX70/150	1.5	2	H	54	52	50	47	43								
2CDX70/185D	2CDX70/185	1.85	2.5	m	61	58	56	52	48								

H=TOTAL HEAD IN METERS.

Q=FLOW RATE

## OPEN IMPELLER CENTRIFUGAL PUMPS

### PERFORMANCE RANGE

- ❖ Flow rate up to 1100l/min.(66m<sup>3</sup>/h)
- ❖ Head up to 17.5m

### OPERATION LIMITS

- ❖ Suction lift up to 8m
- ❖ Fluid temperature -5°C to +105°C
- ❖ Maximum ambient temperature 40°C
- ❖ Maximum passage for suspended solids  $\Phi$ 19mm



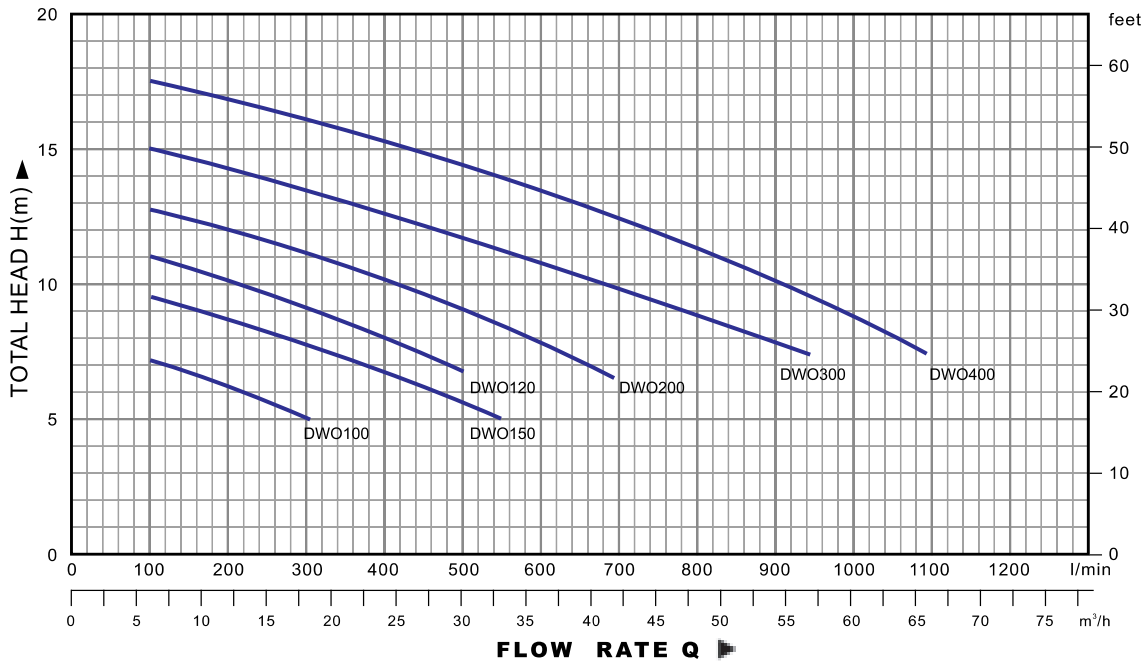
### PUMPS INSTALLATION AND APPLICATIONS

DWO open impeller centrifugal pumps with the hydraulic element manufactured from stainless steel Aisi 304, suitable for suspended solids handling food process e.g. washing vegetables, meats, and fish, industrial washing machines that contain solids e.g. bottles, jars, glasses & crates, Process applications such as paint plants & general dirty liquid handling.

### STRUCTURAL CHARACTERISTIC

- ❖ 304 stainless steel pump body
- ❖ 304 stainless steel pump body cover
- ❖ 304 stainless steel semi-open type impeller
- ❖ 304 stainless steel shaft
- ❖ Stainless steel mechanical seal (EPDM/Carbon/SIC)
- ❖ Aluminum motor casing
- ❖ Protection IP54 for single phase, IP55 for three phase. Insulation class F
- ❖ With thermal overload protector in single phase motor
- ❖ NSK bearing

**PERFORMANCE CHART AT n=2900 rpm**



PUMP MODEL		POWER		Q	6	12	18	24	33	42	48	57	66
Single phase	Three phase	KW	HP	l/min	100	200	300	400	550	700	800	950	1100
DWO100D	DWO100	0.75	1.0	H m	7	6	5						
DWO120D	DWO120	0.9	1.2		11	10	9	8					
DWO150D	DWO150	1.1	1.5		9.5	8.8	7.8	6.7	5				
DWO200D	DWO200	1.5	2.0		12.7	12	11.2	10	8.3	6.5			
	DWO300	2.2	3.0		15	14	13.5	12.7	11.2	9.8	8.9	7.5	
	DWO400	3.0	4.0		17.5	16.8	16	15.2	14	12.5	11.5	9.7	7.5

**H=TOTAL HEAD IN METERS.**

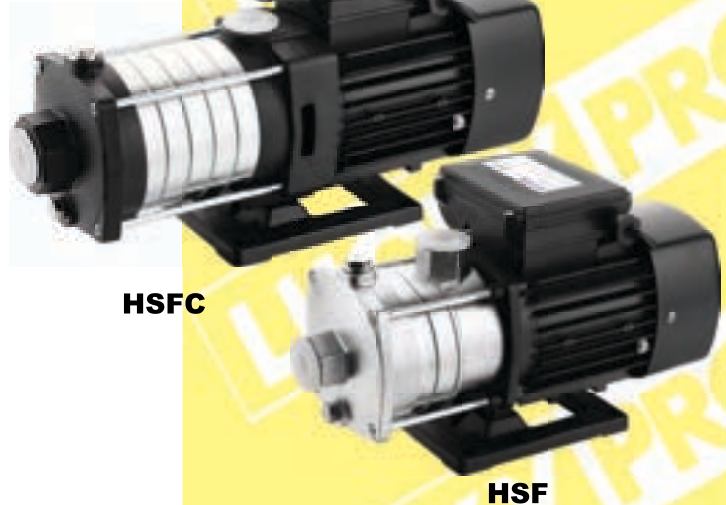
**Q=FLOW RATE**

# HSF

## Horizontal multistage Stainless steel centrifugal pump

### PERFORMANCE RANGE

- ❖ Flow rate up to 333 l/min.(20m<sup>3</sup>/h)
- ❖ Head up to 56m



### Applications

**HSF** horizontal multistage stainless steel centrifugal pumps are designed for the following applications:

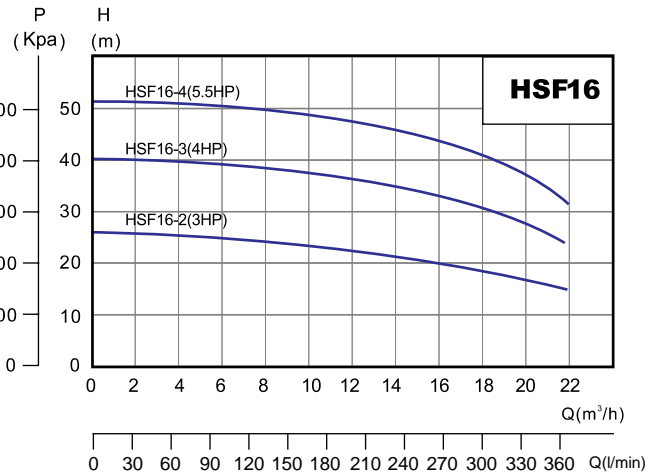
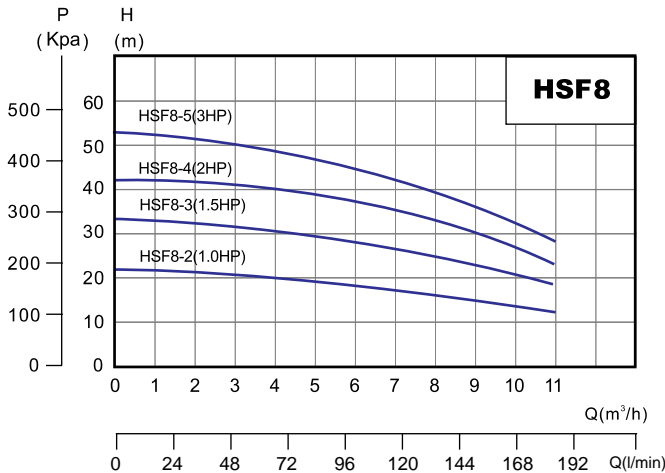
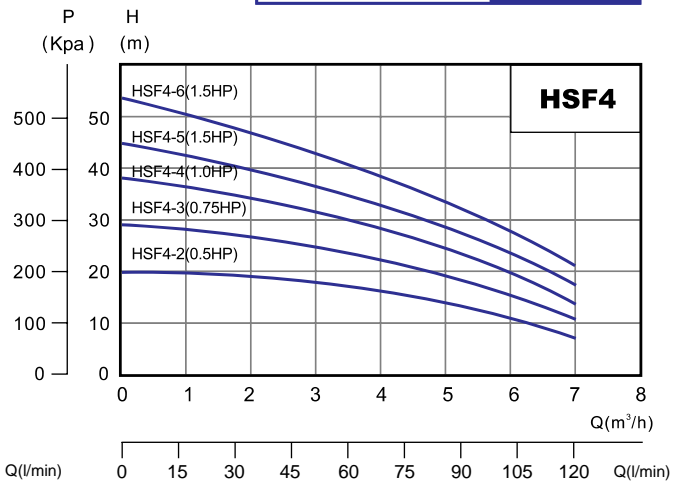
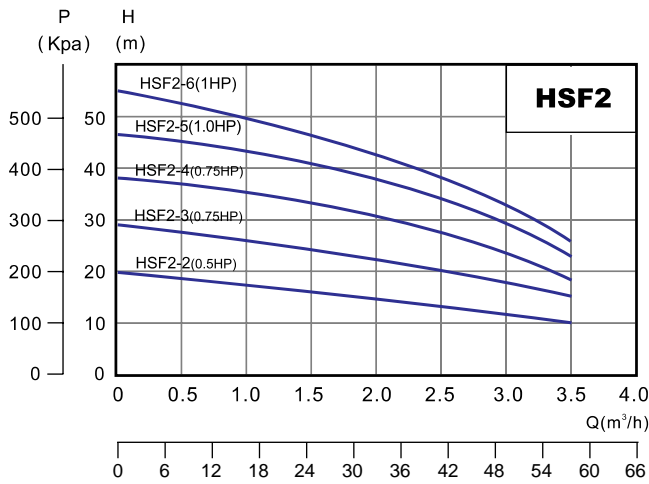
Mainly applicable for conveying of industrial liquid and pressure for demineralized water, soft water purified solution, light oil, etc.

- Cooling water systems
- Domestic water supply
- Industrial cleaning
- Aquiculture
- Pesticide dosing systems
- Environmental protection
- Boosting & circulation systems

### Technical Date

- Ambient Temperature  
Maximum: +40℃
- Liquid Temperature  
Standard design: -15℃ to +90℃  
For hot water design: -15℃ to +120℃
- Max operating pressure: 10 bar  
Max suction pressure is limited by max operating pressure  
Axial inlet and radial outlet
- Electric Motor standard be supplied as:  
50Hz, single phase 220v or three phase 380v, aluminum casing, IP54, class F  
60Hz, single phase 110v or three phase 220v, aluminum casing, IP54, class F.
- Pump's material can be supplied in 304 or 316 stainless steel.
- Stainless steel pump head and support : **HSF**  
Cast iron pump head and support : **HSFC**  
The performance curve of HSF and HSFC is the same

**PERFORMANCE CHART AT n=2900 rpm**



**FLOW RATE Q**

PUMP MODEL		POWER		Q m³/h	Q						DN1xDN2	
Single phase	Three phase	KW	HP		1.0	1.2	1.6	2.0	2.4	2.8		3.2
HSF2-2	HSF2-2T	0.37	0.5	H m	18	17	16	15	13	12	10	1"x1"
HSF2-3	HSF2-3T	0.55	0.75		27	26	24	22	20	18	15	
HSF2-4	HSF2-4T	0.55	0.75		36	35	33	30	26	24	17	
HSF2-5	HSF2-5T	0.75	1		45	43	40	37	33	30	24	
HSF2-6	HSF2-6T	0.75	1		53	52	50	45	40	36	30	
Single phase	Three phase	KW	HP	Q m³/h	2.0	3.0	4.0	5.0	6.0	7.0		DN1xDN2
HSF4-2	HSF4-2T	0.37	0.5	H m	18	17	15	13	10	8		1 1/4"x1"
HSF4-3	HSF4-3T	0.55	0.75		27	26	24	20	18	14		
HSF4-4	HSF4-4T	0.75	1		36	34	32	37	24	18		
HSF4-5	HSF4-5T	1.1	1.5		45	43	40	34	31	23		
HSF4-6	HSF4-6T	1.1	1.5		54	52	48	41	37	28		
Single phase	Three phase	KW	HP	Q m³/h	6.0	7.0	8.0	9.0	10.0	11.0		DN1xDN2
HSF8-2	HSF8-2T	0.75	1	H m	20	19	18	17	16	14		1 1/2"x1 1/2"
HSF8-3	HSF8-3T	1.1	1.5		30	29	28	26	24	21		
HSF8-4	HSF8-4T	1.5	2		40	39	37	35	32	28		
HSF8-5	HSF8-5T	2.2	3		50	48	46	44	41	36		
Single phase	Three phase	KW	HP	Q m³/h	8.0	10.0	12.0	14.0	16.0	18.0	20.0	DN1xDN2
HSF16-2	HSF16-2T	1.5	2	H m	28	27	26	25	23	21	18	2"x2"
HSF16-3	HSF16-3T	2.2	3		42	41	39	37	35	32	27	
HSF16-4	HSF16-4T	3	4		56	54	52	50	47	44	27	

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**

# HSE

## STAINLESS STEEL HORIZONTAL MULTI-STAGE CENTRIFUGAL PUMPS

### PERFORMANCE RANGE

- ※ Flow rate up to 466 l/min. (28m<sup>3</sup>/h)
- ※ Dynamic head up to 65m



### APPLICATIONS

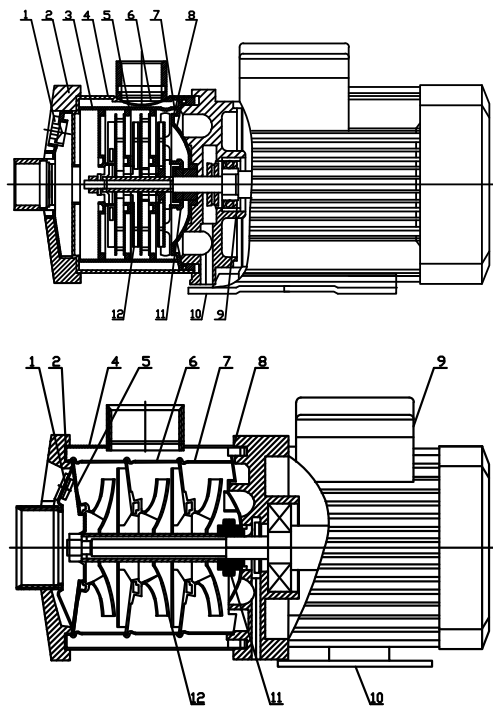
HSE horizontal multistage stainless steel centrifugal pumps are designed for the following applications:

- Mainly applicable for conveying of industrial liquid and pressure for demineralized water, soft water purified solution, light oil, etc.
- Cooling water systems
- Domestic water supply
- Industrial cleaning
- Aquiculture
- Pesticide dosing systems
- Environmental protection
- Boosting & circulation systems

### APPLICATIONS

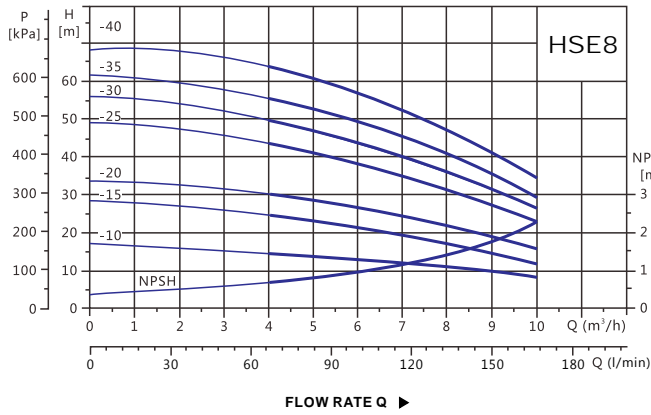
- a. Ambient Temperature  
Maximum: +40°C
- b. Liquid Temperature  
Standard design: -15°C to +90°C  
For hot water design: -15°C to +120°C
- c. Max operating pressure: 10 bar  
Max suction pressure is limited by max operating pressure  
Axial inlet and radial outlet
- d. Electric Motor standard be supplied as:  
50Hz, single phase 220v or three phase 380v, aluminum casing, IP 54, class F  
60Hz, single phase 110v or three phase 220v, aluminum casing, IP 54, class F
- e. Pump's material can be supplied in 304 or 316 stainless steel

### DIAGRAM

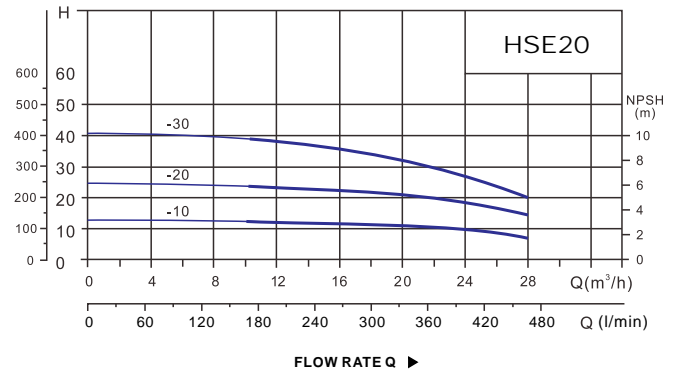
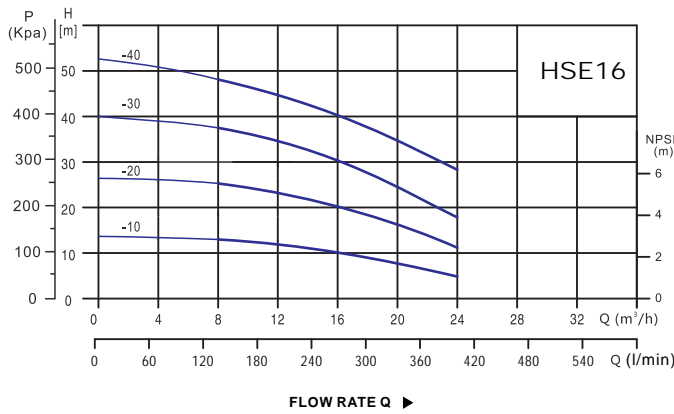
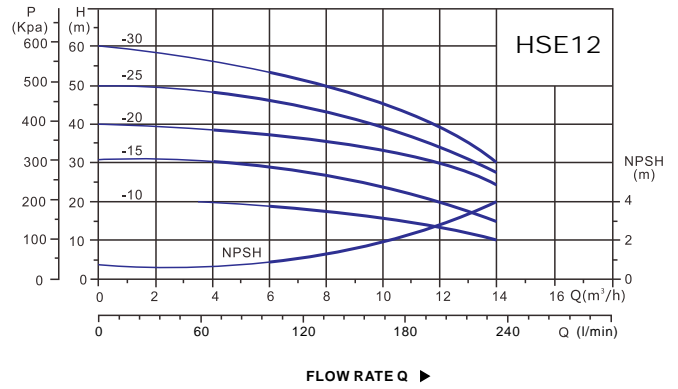


No.	DESCRIPTION	No.	DESCRIPTION
1	Plug	7	Discharge diffuser
2	Clamp plate	8	Seal base
3	Inletsectional	9	Motor
4	Inlet/Outlet section	10	Base frame
5	Inducer	11	Mechanical seal
6	Guide vane	12	Impeller

PERFORMANCE CHART AT n=2900 rpm



PERFORMANCE CHART AT n=2900 rpm



MODEL	POWER	Q (m³/h)	4	5	6	7	8	9	10			
HSE8-10	0.55	H (m)	15	14	13	12.5	10	9	8			
HSE8-15	0.75		25	23	22	21	17	14	12			
HSE8-20	1.0		32	29	27	25	20	21	17			
HSE8-25	1.5		43	40	38	34	30	25	20			
HSE8-30	1.85		50	46	44	40	32	30	26			
HSE8-35	2.2		56	51	48	44	42	35	28			
HSE8-40	2.2		65	57.5	57	50	43	42	34			

MODEL	POWER	Q (m³/h)	6	7	8	9	10	11	12	13	14	
HSE12-10	1.0	H (m)	19	18	17.5	16	15.5	14	13.5	12	10.5	
HSE12-15	1.5		28	27	26	25	24	22	20	18	15	
HSE12-20	1.85		38	36	35	32	31	29	28	24	20	
HSE12-25	2.2		47	45	43	41.5	39	36	33.5	30.5	27	
HSE12-30	3.0		53.5	52	50	47.5	45	42	39	35	30	

MODEL	POWER	Q (m³/h)	8	10	12	14	16	18	20	22	24	
HSE16-10	1.0	H (m)	12	11.5	11	10.5	10	9	8	7	6	
HSE16-20	1.5		24	23	22	21	20	19	16	14	12	
HSE16-30	2.2		38	36	34	33	30	28	26	23	20	
HSE16-40	3.0		50	48	46	44	40	38	36	32	28	

MODEL	POWER	Q (m³/h)	10	12	14	16	18	20	22	24	26	28
HSE20-10	1.0	H (m)	13	12.5	12	11.5	11	10.5	10	9	8.5	7.5
HSE20-20	1.85		25	24	23	22	21	20	18	16	14	12
HSE20-30	3.0		39	38	36	35	33	31.5	30	27	24	21

# HSD

## STAINLESS STEEL HORIZONTAL MULTI-STAGE CENTRIFUGAL PUMPS

### PERFORMANCE RANGE

- ※ Flow rate up to 333 l/min. (20m<sup>3</sup>/h)
- ※ Dynamic head up to 76.5m



### APPLICATIONS

HSD horizontal multistage stainless steel centrifugal pumps are designed for the following applications:

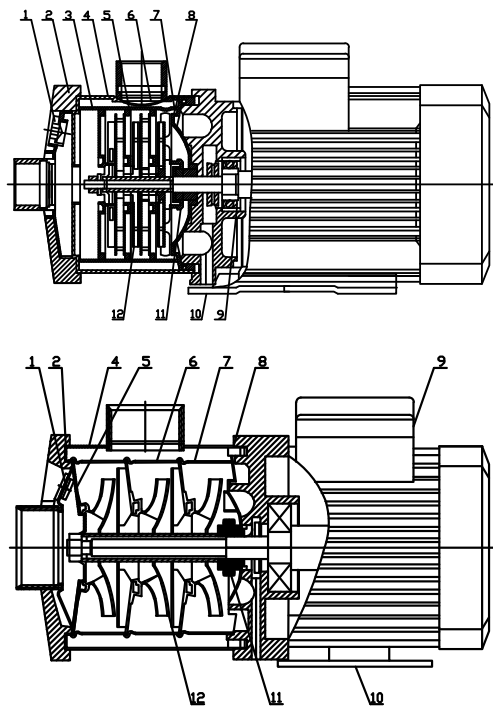
Mainly applicable for conveying of industrial liquid and pressure for demineralized water, soft water purified solution, light oil, etc.

- Cooling water systems
- Domestic water supply
- Industrial cleaning
- Aquiculture
- Pesticide dosing systems
- Environmental protection
- Boosting & circulation systems

### APPLICATIONS

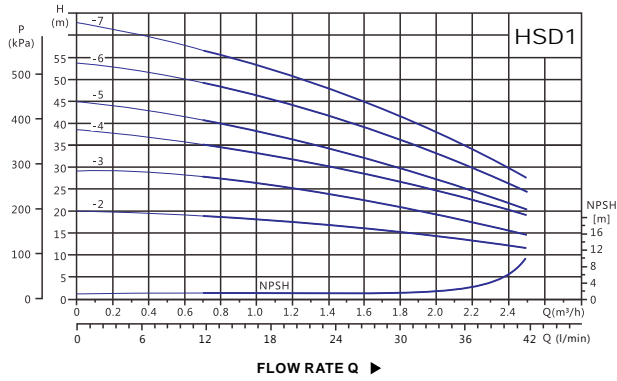
- a. Ambient Temperature  
Maximum: +40°C
- b. Liquid Temperature  
Standard design: -15°C to +90°C  
For hot water design: -15°C to +120°C
- c. Max operating pressure: 10 bar  
Max suction pressure is limited by max operating pressure  
Axial inlet and radial outlet
- d. Electric Motor standard be supplied as:  
50Hz, single phase 220v or three phase 380v, aluminum casing, IP 54, class F  
60Hz, single phase 110v or three phase 220v, aluminum casing, IP 54, class F
- e. Pump's material can be supplied in 304 stainless steel

### DIAGRAM

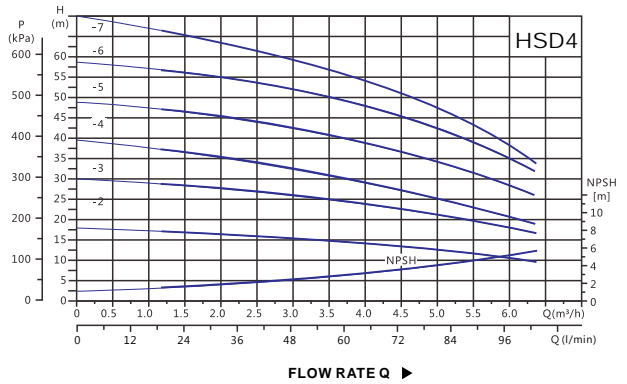
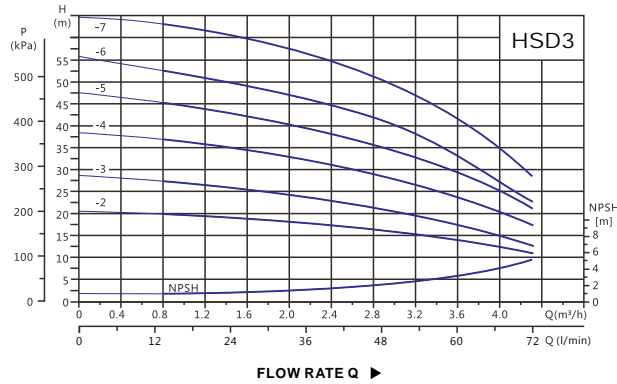
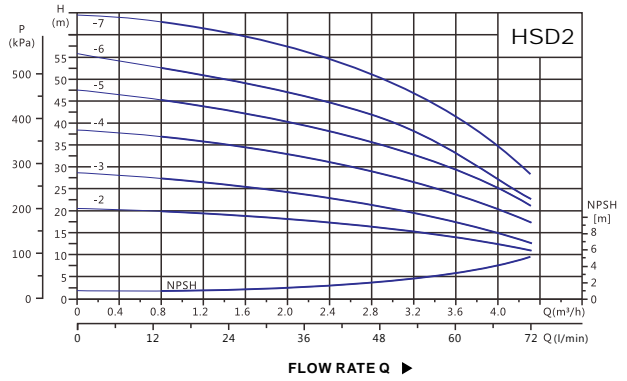


No.	DESCRIPTION	No.	DESCRIPTION
1	Plug	7	Discharge diffuser
2	Clamp plate	8	Seal base
3	Inletsectional	9	Motor
4	Inlet/Outlet section	10	Base frame
5	Inducer	11	Mechanical seal
6	Guide vane	12	Impeller

PERFORMANCE CHART AT n=2900 rpm



PERFORMANCE CHART AT n=2900 rpm



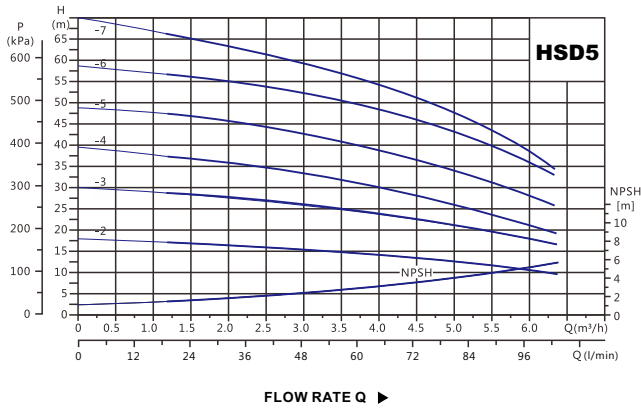
MODEL	POWER	Q (m³/h)	0.4	0.6	0.8	1.0	1.2	1.4	1.6	1.8	2.0	2.2	2.4
HSD1-2	0.25	H (m)	19.5	19	18.5	18	17.5	17	16	15	14	13	12
HSD1-3	0.25		29	28.5	26	25	24.5	23.5	22	21	19	17	16
HSD1-4	0.37		37	36	35	33	32	30	28	27	26	22	20
HSD1-5	0.37		43	42	41	38	36	34	32	29	27	25	22
HSD1-6	0.37		51	50	49	46	44	42	40	36	32	30	26
HSD1-7	0.55		60	58	56	53	51	49	45	42	38	34	30

MODEL	POWER	Q (m³/h)	0.8	1.2	1.6	2.0	2.4	2.8	3.2	3.6	4.0		
HSD2-2	0.25	H (m)	19.5	19	18.5	18	17	16.5	14.5	13.5	12		
HSD2-3	0.37		27	26	25	24	23	22	20	17	15		
HSD2-4	0.55		36	35	34	32	31	29	27	23	20		
HSD2-5	0.55		44	43	42	40	38	36	33	28.5	24		
HSD2-6	0.75		53	51.5	49	47	44	41	37	32	27		
HSD2-7	1.0		63	61	59	56	54	51	47	41	35		

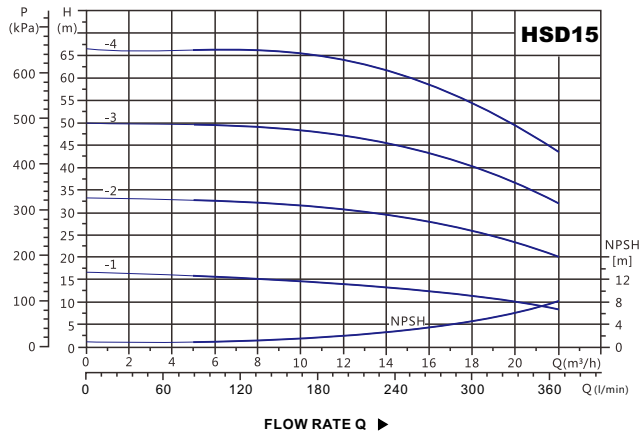
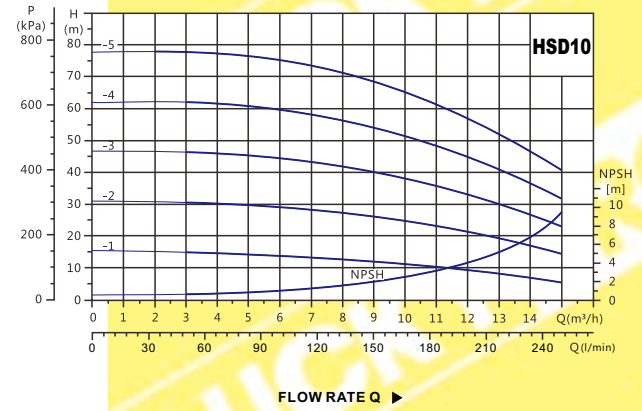
MODEL	POWER	Q (m³/h)	0.8	1.2	1.6	2.0	2.4	2.8	3.0	3.2	3.6	4.0	
HSD3-2	0.25	H (m)	19.5	19	18.5	18	17	16.5	15	14.5	13.5	12	
HSD3-3	0.37		27	26	25	24	23	22	21	20	17	15	
HSD3-4	0.55		36	35	34	32	31	29	28	27	23	20	
HSD3-5	0.55		44	43	42	40	38	36	34	33	28.5	24	
HSD3-6	0.75		53	51.5	49	47	44	41	38	37	32	27	
HSD3-7	1.0		63	61	59	56	54	51	49	47	41	35	

MODEL	POWER	Q (m³/h)	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
HSD4-2	0.37	H (m)	18.5	18	17.5	17	16	15.5	15	13.5	13	11	10
HSD4-3	0.55		29	28.5	28	27	26.5	25.5	25	23	22	20	18
HSD4-4	0.75		38	37	36	34	33.5	32	30	28	27	24	20
HSD4-5	1.0		47	46	45	44	42.5	41	40	36	35	32	27
HSD4-6	1.3		56.5	55	54	53	52.5	51	49	45	44	42	36
HSD4-7	1.5		67	65	64	61	59	57	55	51	49	44	38

PERFORMANCE CHART AT n=2900 rpm



PERFORMANCE CHART AT n=2900 rpm



MODEL	POWER	Q (m³/h)	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
HSD5-2	0.37	H (m)	18.5	18	17.5	17	16	15.5	15	13.5	13	11	10
HSD5-3	0.55		29	28.5	28	27	26.5	25.5	25	23	22	20	18
HSD5-4	0.75		38	37	36	34	33.5	32	30	28	27	24	20
HSD5-5	1.0		47	46	45	44	42.5	41	40	36	35	32	27
HSD5-6	1.3		56.5	55	54	53	52.5	51	49	45	44	42	36
HSD5-7	1.5		67	65	64	61	59	57	55	51	49	44	38

MODEL	POWER	Q (m³/h)	4	5	6	7	8	9	10	11	12	13	14
HSD10-1	0.65	H (m)	14.5	14	13.5	13	12.5	12	11	10	9	8	7
HSD10-2	1.2		30	29.5	29	28	27	26	24	23	21	19	16
HSD10-3	2.2		45.5	45	44	43	42	40	38	36	33	30	26
HSD10-4	3.0		61	60.5	60	58	56	54	52	48	45	41	36
HSD10-5	3.0		76.5	76	75	74	71	68	63	61	57	52	46

MODEL	POWER	Q (m³/h)	6	8	10	12	14	15	16	17	18	19	20
HSD15-1	1.2	H (m)	15.5	15	14.5	14	13	12	11.5	11	11	10.5	10
HSD15-2	2.2		32	31.5	31	30.5	29.5	29	28	27	26	24	22
HSD15-3	4.0		49	48	47.5	47	46	44	43	42	40	37	36
HSD15-4	5.5		67	66	65	64	62	61	57	56	54	52	49

### PERFORMANCE RANGE

- ☒ flow rate up to 233 l/min.(14m<sup>3</sup>/h)
- ☒ head up to 9 m

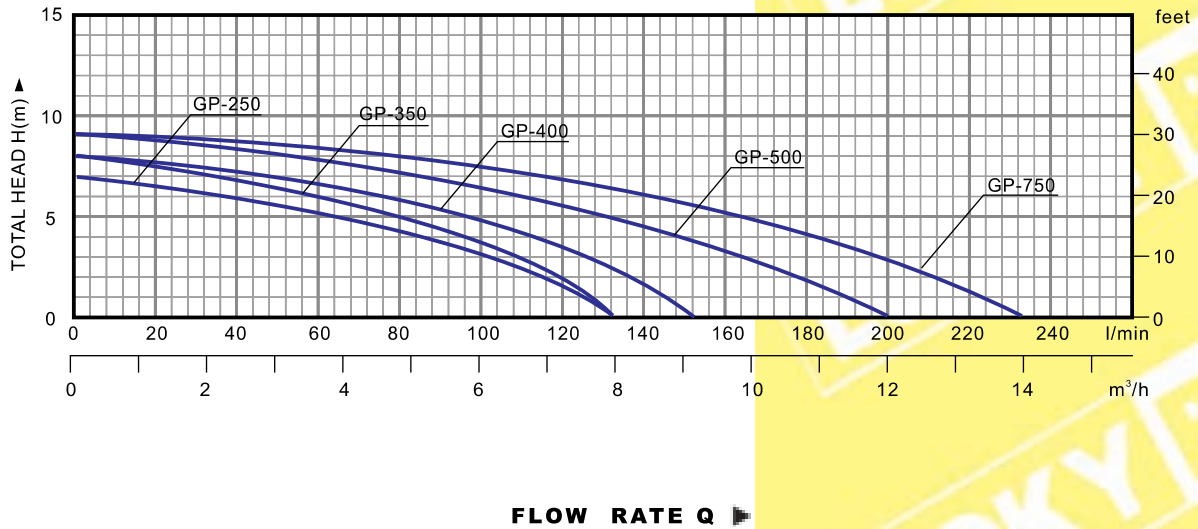
### OPERATING LIMITS

- ☒ fluid temperature up to 35 °C
- ☒ maximum ambient temperature 40 °C



**GP250**

### PERFORMANCE CHART AT n=2900 rpm



MODEL	INPUT POWER (W)	MAX.FLOW (m <sup>3</sup> /h)	MAX.HEAD (m)
GP 250	250	8	7
GP 350	350	8	8
GP 400	400	9	8
GP 500	500	12	9
GP 750	750	14	9

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**

# GS

## GARDEN SUBMERSIBLE PUMPS (FOR SEWAGE)

**LUCKY PRO®**

### PERFORMANCE RANGE

- ☒ flow rate up to 225 l/min.(13.5m<sup>3</sup>/h)
- ☒ head up to 8 m

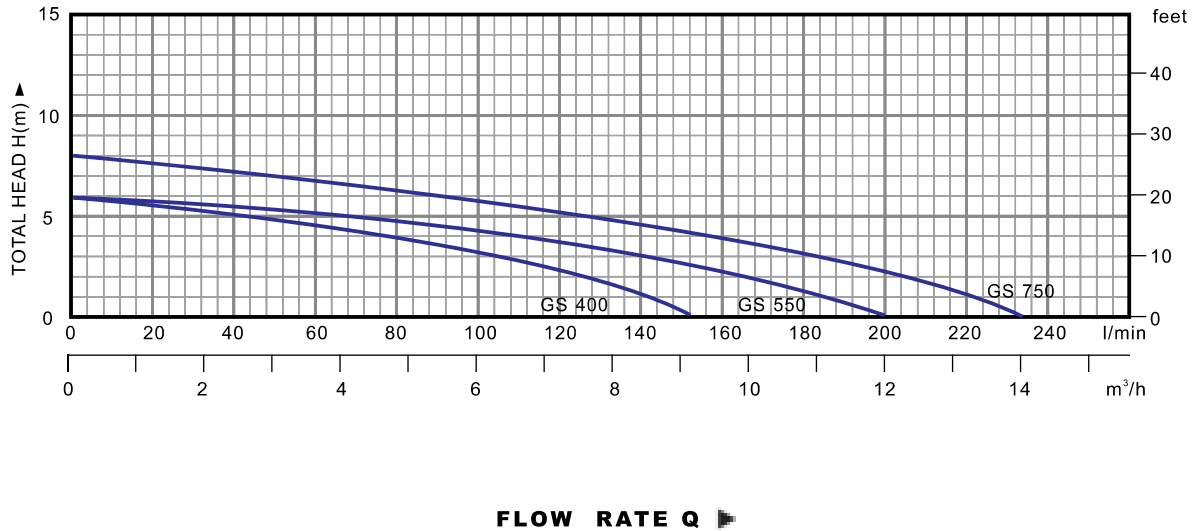
### OPERATING LIMITS

- ☒ fluid temperature up to 35 °C
- ☒ maximum ambient temperature 40 °C



**GS 400**

### PERFORMANCE CHART AT n=2900 rpm



MODEL	INPUT POWER (W)	MAX.FLOW (m <sup>3</sup> /h)	MAX.HEAD (m)
GS 400	400	9	6
GS 550	550	12	6
GS 750	750	13.5	8

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**

# SGP

## GARDEN SUBMERSIBLE PUMPS

### PERFORMANCE RANGE

- ☒ flow rate up to 192 l/min.(11.5m<sup>3</sup>/h)
- ☒ head up to 9 m

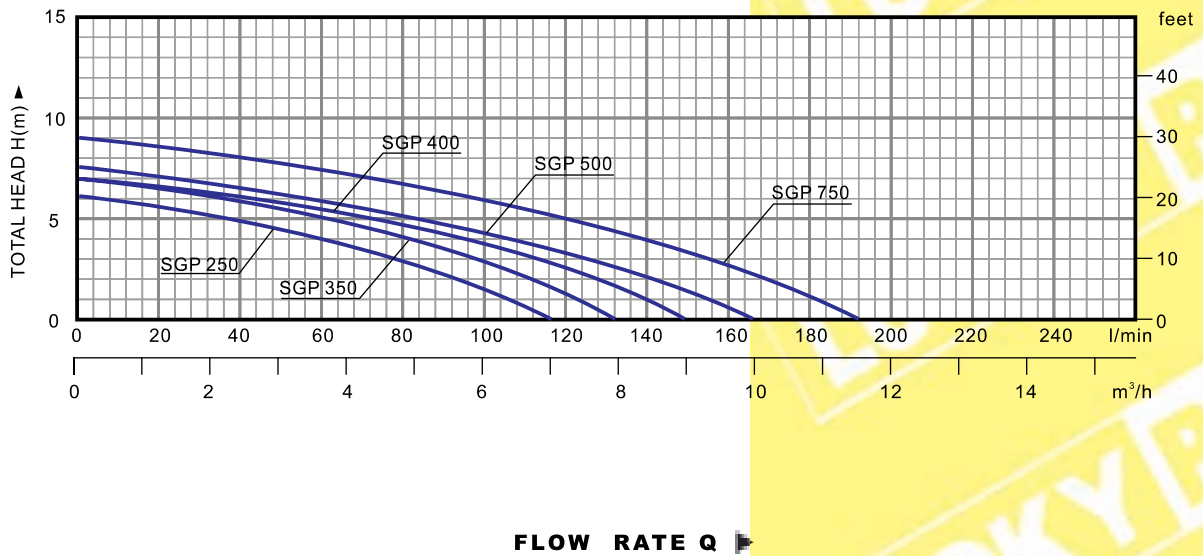
### OPERATING LIMITS

- ☒ fluid temperature up to 35°C
- ☒ maximum ambient temperature 40°C



**SGP 250**

### PERFORMANCE CHART AT n=2900 rpm



MODEL	INPUT POWER (W)	MAX.FLOW (m <sup>3</sup> /h)	MAX.HEAD (m)
SGP 250	250	7	6
SGP 350	350	8	7
SGP 400	400	9	7
SGP 500	500	10	7.5
SGP 750	750	11.5	9

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**

### PERFORMANCE RANGE

- ✘ flow rate up to 233 l/min.(14m<sup>3</sup>/h)
- ✘ head up to 8 m

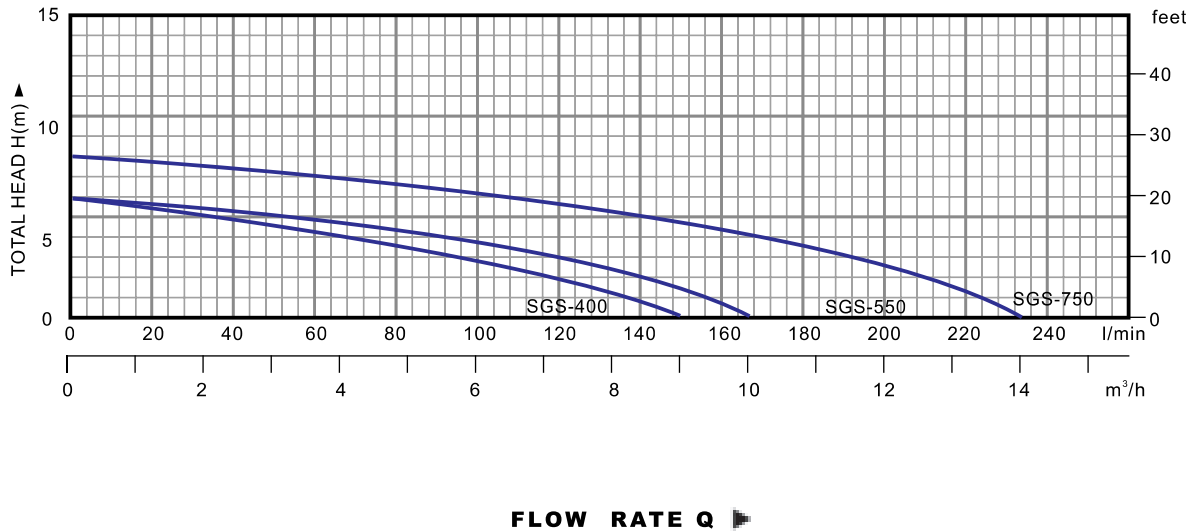
### OPERATING LIMITS

- ✘ fluid temperature up to 35 °C
- ✘ maximum ambient temperature 40 °C



SGS550

### PERFORMANCE CHART AT n=2900 rpm



MODEL	INPUT POWER (W)	MAX.FLOW (m <sup>3</sup> /h)	MAX.HEAD (m)
SGS 400	400	9	6
SGS 550	550	10	6
SGS 750	750	14	8

H=TOTAL HEAD IN METERS.

Q=FLOW RATE

# PGJC

## GARDEN JET PUMPS

### PERFORMANCE RANGE

- ✦ flow rate up to 65 l/min.(3.9m<sup>3</sup>/h)
- ✦ head up to 46 m

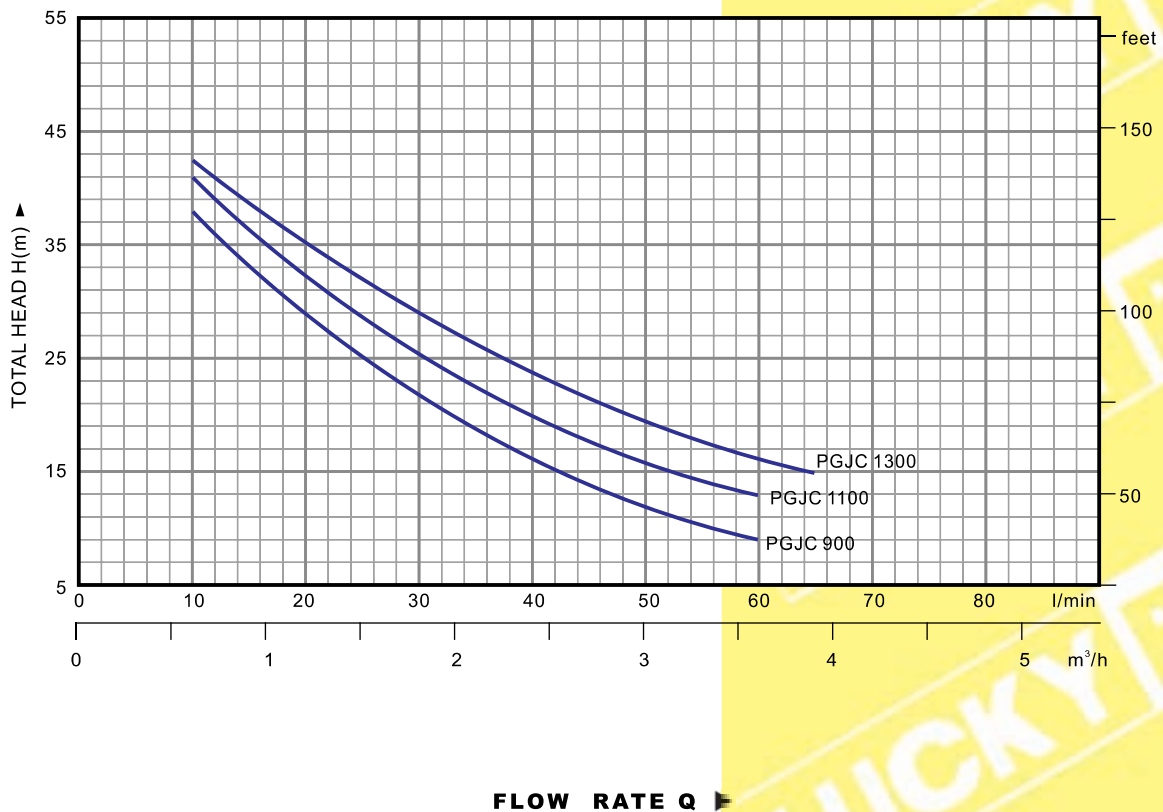
### OPERATING LIMITS

- ✦ suction lift up to 9 m
- ✦ fluid temperature up to 35°C
- ✦ maximum ambient temperature 40°C



**PGJC 1100**

**PERFORMANCE CHART AT n=2900 rpm**



MODEL	INPUT POWER (W)	INLET/OUTLET	MAX.FLOW (l/min)	MAX.HEAD (m)	MAX.SUCK (m)
PGJC 900	900	1" x 1"	60	42	9
PGJC 1100	1100	1" x 1"	60	45	9
PGJC 1300	1300	1" x 1"	65	46	9

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**

# SGJ

## GARDEN JET PUMPS



### PERFORMANCE RANGE

- ☒ flow rate up to 60 l/min. (3.6m<sup>3</sup>/h)
- ☒ head up to 40 m

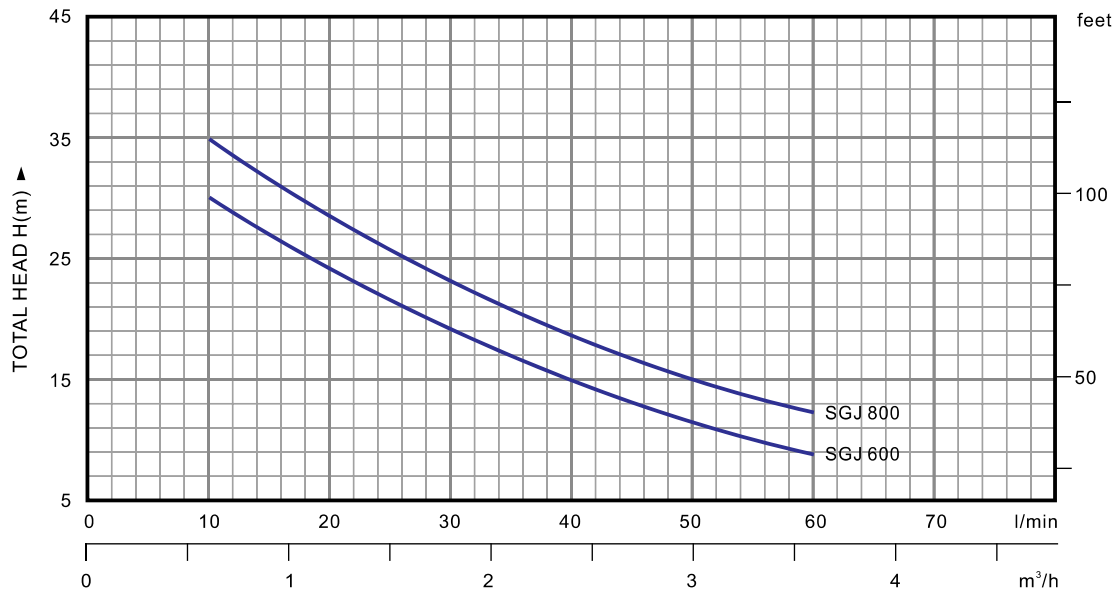
### OPERATING LIMITS

- ☒ suction lift up to 9 m
- ☒ fluid temperature up to 35 °C
- ☒ maximum ambient temperature 40 °C



**SGJ 600**

### PERFORMANCE CHART AT n=2900 rpm



**FLOW RATE Q**

MODEL	INPUT POWER (W)	INLET/OUTLET	MAX.FLOW (l/min)	MAX.HEAD (m)	MAX.SUCK (m)
SGJ 600	600	1" x 1"	60	35	9
SGJ 800	800	1" x 1"	60	40	9

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**

# 3SGP

## GARDEN MULTISTAGE SUBMERSIBLE PUMPS

### PERFORMANCE RANGE

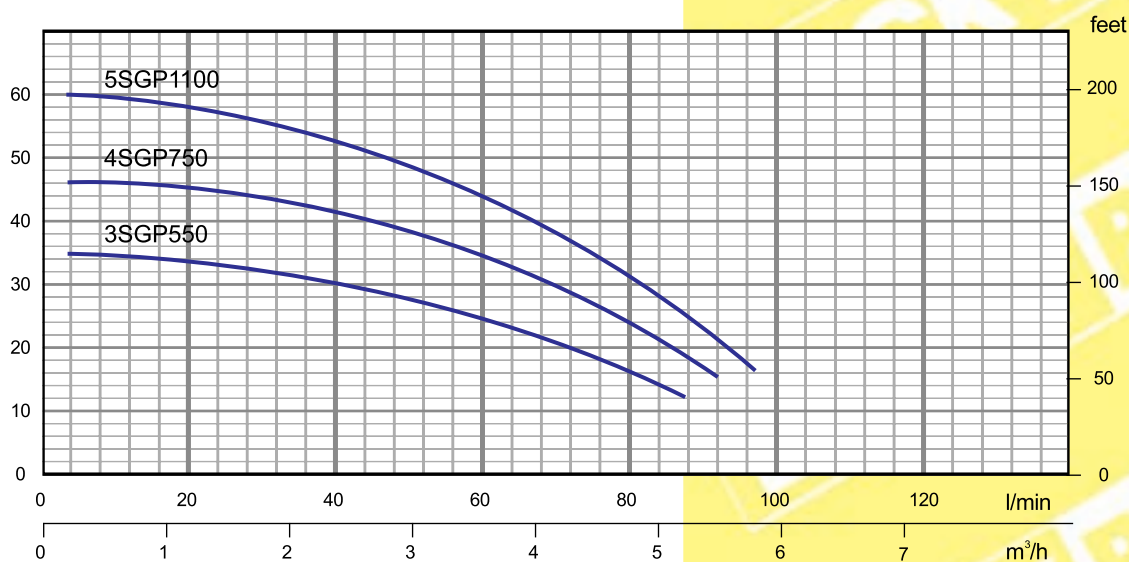
- ☒ Flow rate up to 100l/min.(6m<sup>3</sup>/h)
- ☒ Head up to 60m

### OPERATION LIMITS

- ☒ Fluid temperature up to 35°C
- ☒ Maximum ambient temperature 40°C



**PERFORMANCE CHART AT n=2900 rpm**



### FLOW RATE Q

MODEL	POWER	FLOW MAX	HEAD MAX	OUTLET
3SGP550	550W	100l/min	36M	1"
4SGP750	750W	100l/min	48M	1"
5SGP1100	1100W	100l/min	60M	1"

**H=TOTAL HEAD IN METERS.**

**Q=FLOW RATE**

# MAC

## PERMANENT MAGNET INTELLIGENT BOOSTER

### PERFORMANCE RANGE

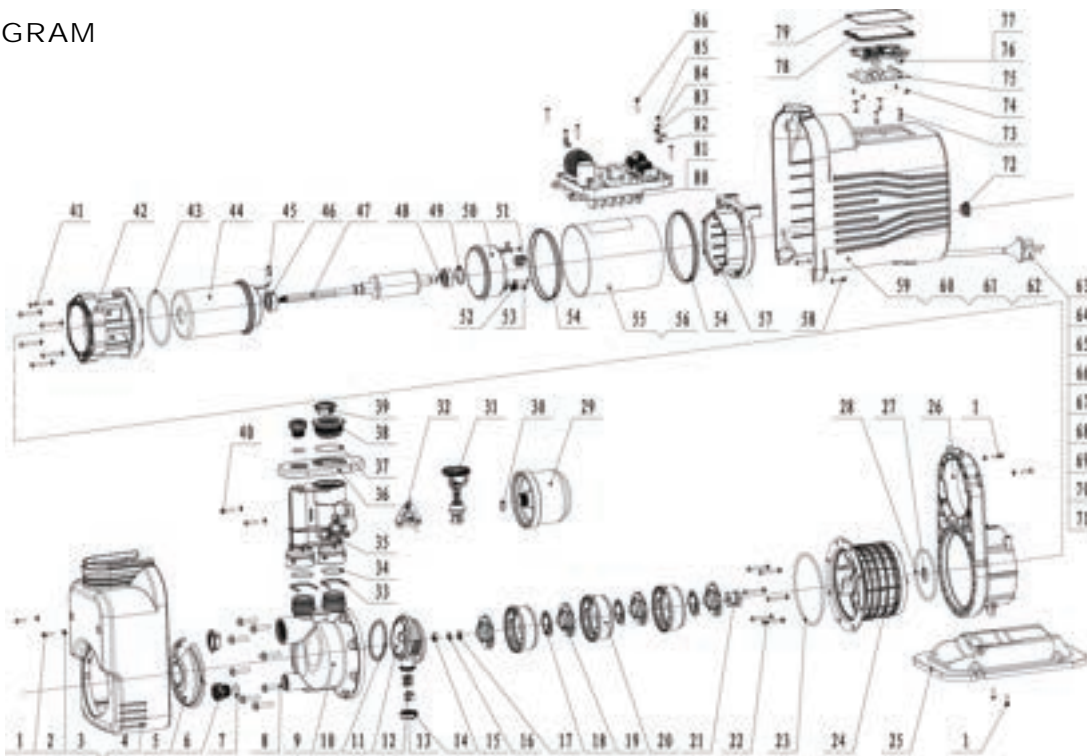
- ☒ Flow rate up to 60 l/min. (4.8m<sup>3</sup>/h)
- ☒ Dynamic head up to 40m

### OPERATING LIMITS

- ☒ Suction lift up to 6m
- ☒ Maximum fluid temperature 40°C
- ☒ Maximum ambient temperature 50°C



### DIAGRAM



No.	DESCRIPTION	No.	DESCRIPTION	No.	DESCRIPTION	No.	DESCRIPTION	No.	DESCRIPTION	No.	DESCRIPTION
1	Screw	16	Spring washer	31	Check valve assembly	46	Bearing	61	Rear shell paste	76	Light barrier
2	Flat washer	17	Flat washer	32	Pressure sensor assembly	47	Rotor	62	Warning paste	77	Light barrier face paste
3	Front shell	18	Clip-on type wear-ring	33	Bolt	48	Bearing	63	Plug cord	78	Touch screen
4	Front shell paste	19	Impeller	34	"O" ring	49	Wave spring	64	Plug jacket	79	Sealing gasket
5	Inlet cover	20	Diversion shell assembly	35	Outlet pipe	50	End plate	65	Plug spring	80	Communication line
6	Water injection plug	21	Mechanical seal	36	Outlet cover	51	Outlet mouth	66	Connection terminal	81	Controller assembly
7	"O" ring	22	Screw	37	"O" ring	52	Cable clip	67	Insulating bush	82	Serrated lock washer
8	Screw	23	"O" ring	38	Adapater	53	Screw	68	Heat-shrinkable tube	83	Connection terminal
9	Pump body	24	Bracket	39	Dust cap	54	Cylinder sealing gasket	69	Insulating bush	84	Spring washer
10	Sealing gasket	25	Base plate	40	Screw	55	Cylinder	70	Line	85	Screw
11	Recirculation cover	26	Moter base	41	Screw	56	Thermal silica film	71	Magnetic ring	86	Screw
12	Self suction valve spring	27	Waterproof ring	42	Support frame	57	Rear and cover bracket	72	Core plug		
13	Rubber suction valve	28	"O" ring	43	"O" ring	58	Screw	73	Screw		
14	Self suction valve nut	29	Pressure tank	44	Stator	59	Rear shell	74	Screw		
15	Hex nut	30	"O" ring	45	Insulating bush	60	Nameplate	75	Display		

### MULTIPLE PROTECTION

For longer using life, MAC550 have multiple protection such as: Pressure setted protection, Blocking protection, Leakage protection, Dry-running protection, Over-heating protection, Over/Under-voltage protection.

### ENERGY EFFICIENT

MAC550 can adjust performance by adjusting motor speed automatically according to water demand, provide constant pressure to all taps. Permanent magnet frequency-converting motor helps reduce power consumption, can automatically adjust RPM to match required outlet water. Helps to reduce energy bills.

### LOW NOISE DESIGN

Thanks to water cooled motor and centrifugal impellers, MAC550 are working quietly with sound level less than 47 dB(A) in typical use.

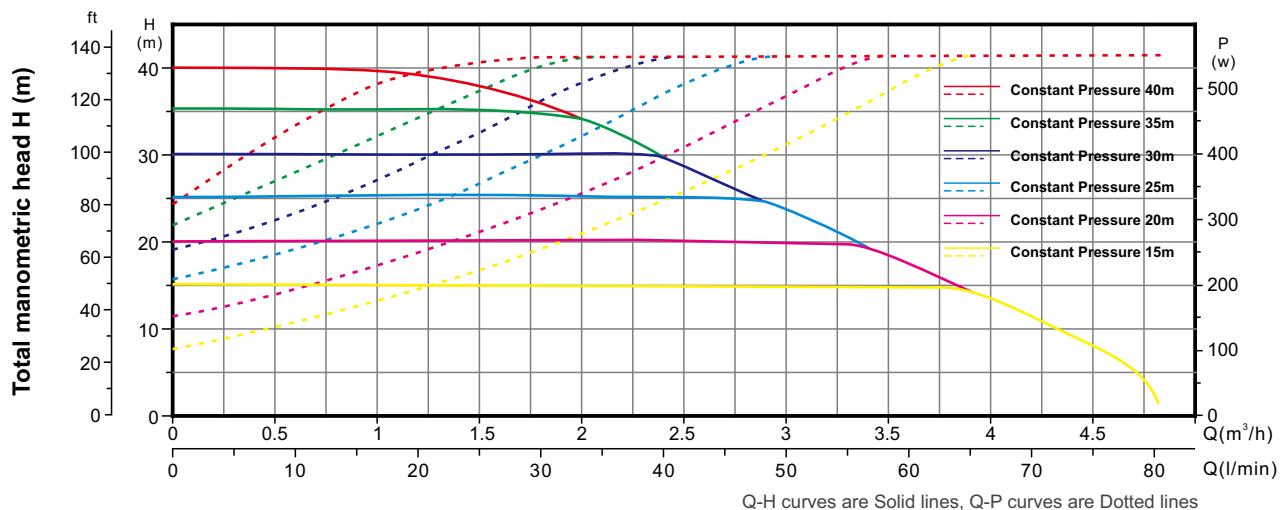
### EASY INSTALLATION

Compact all-in-one solution, integrating high efficiency pump, non return valve, sensor, speed controller and pressure vessel together.

- ※ Ambient temperature: Max. +50°C
- ※ Liquid temperature: Max. +40°C
- ※ Liquid PH value: 6.5 ~ 8.5
- ※ System pressure: Max. 10bar
- ※ Insulation protection: F
- ※ Sound pressure level: 45dB(A) in typical use
- ※ Protection class: IPX4 (Suitable for outdoor installation)

### Technical Details

<b>Model</b>	MAC550
<b>Voltage</b>	220 ~ 240 V
<b>Frequency</b>	50/60 Hz
<b>Max. Power</b>	550 W
<b>Max. Flow</b>	4.8 m <sup>3</sup> /h
<b>Max. Head</b>	40 m
<b>Max. Speed</b>	5200 rpm
<b>Max. Current</b>	2.7 A
<b>Max. Suction</b>	6 m
<b>Connection Size</b>	G1"



FLOW RATE Q ►

# INV

## PERMANENT MAGNET VARIABLE FREQUENCY PUMPS

### PERFORMANCE RANGE

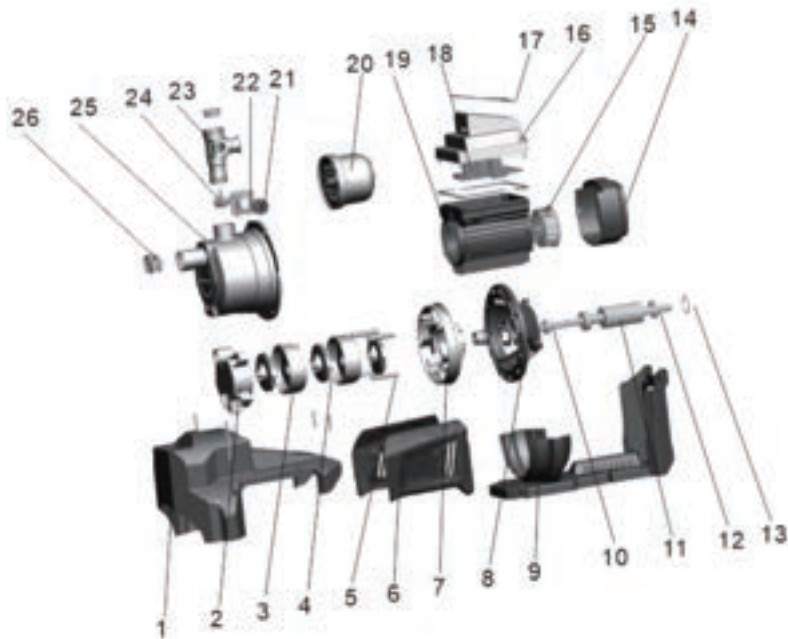
- ☒ Flow rate up to 92 l/min. (5.5m<sup>3</sup>/h)
- ☒ Dynamic head up to 58m

### OPERATING LIMITS

- ☒ Maximum ambient temperature 50°C
- ☒ Maximum fluid temperature 40°C



### DIAGRAM



No.	DESCRIPTION	No.	DESCRIPTION	No.	DESCRIPTION
1	Hull	10	Water proof gland	19	Stator
2	Water inlet Guide glade	11	Rotor	20	Overhead tank
3	Guide glade	12	Bearing	21	Transducer
4	Impeller	13	Spring washer	22	Sensor bracket
5	Prop	14	Fan cover	23	Bottom bracket
6	Radiation fin	15	Fan	24	Check valve
7	Seal holder	16	Capacitor box	25	Pump body
8	Pump support	17	Gland	26	Check valve
9	Motherboard	18	Controller		

### MULTIPLE PROTECTION

For longer using life, INV have multiple protection such as:  
 Pressure setted protection, Blocking protection, Leakage protection, Dry-running protection, Over-heating protection,  
 Over/Under-voltage protection.

### ENERGY EFFICIENT

INV can adjust performance by adjusting motor speed automatically according to water demand,  
 provide constant pressure to all taps. Permanent magnet frequency-converting motor helps reduce  
 power consumption, can automatically adjust RPM to match required outlet water. Helps to reduce energy bills.

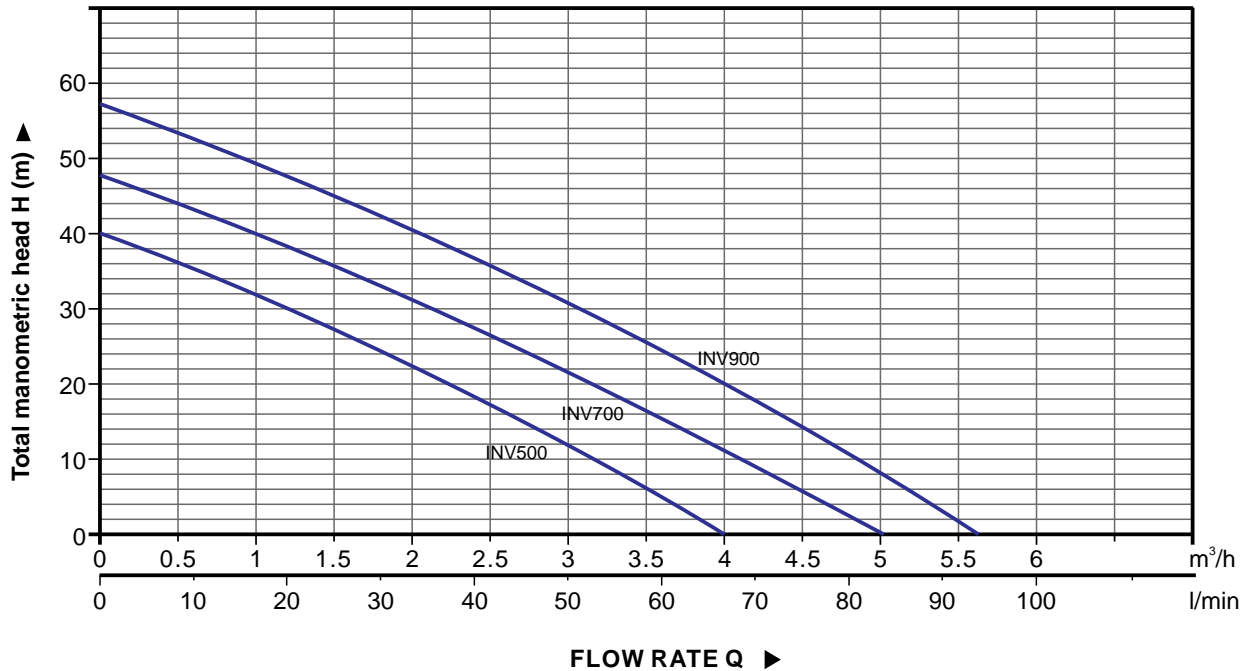
### EASY INSTALLATION

Compact all-in-one solution, integrating high efficiency pump, non return valve, sensor, speed controller  
 and pressure vessel together.

### STRUCTURE CHARACTERISTICS

- Ambient temperature: Max.+50°C
- Liquid temperature: Max.+40°C
- Liquid PH value: 6.5 ~ 8.5
- System pressure: Max.10bar
- Insulation protection: F
- Sound pressure level: 48dB(A) in typical use
- Protection class: IPX4 (Suitable for outdoor installation)

WARRANTY: 1YEAR(according to our general sales conditions)



Model	Voltage	Power	Max.Flow	Max.Head	Rated Flow	Rated Head	Dimensions
	(V)	(kW)	(m³/h)	(m)	(m³/h)	(m)	(inch)
INV500	160~260V 50/60Hz	0.37	4	40	1.8	25	1"
INV700		0.55	5	48	3	24	1"
INV900		0.75	5.5	58	3	30	1"

# IMP

## STAINLESS STEEL MULTISTAGE VARIABLE FREQUENCY PUMPS

### PERFORMANCE RANGE

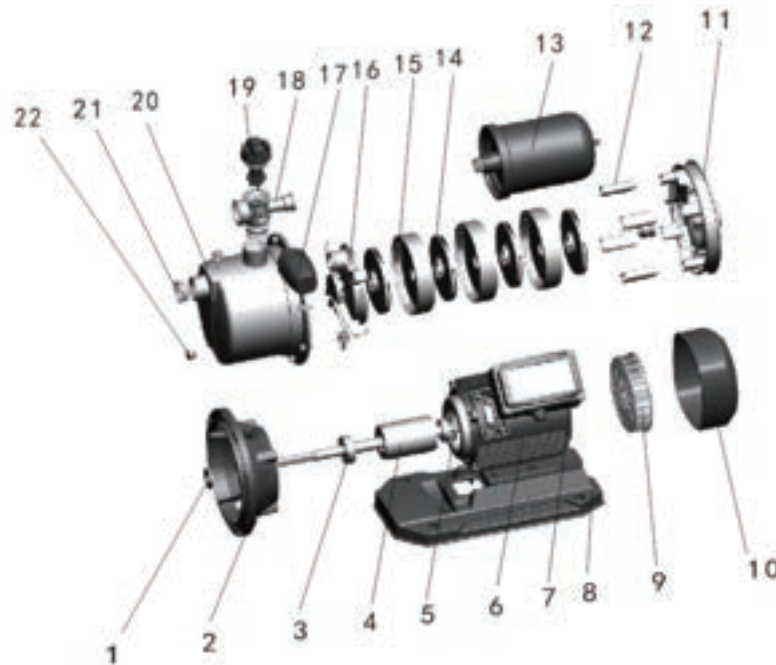
- ☒ Flow rate up to 100 l/min. (6.0m<sup>3</sup>/h)
- ☒ Dynamic head up to 45m

### OPERATING LIMITS

- ☒ Suction lift up to 6m
- ☒ Maximum fluid temperature 40°C
- ☒ Maximum ambient temperature 40°C



DIAGRAM



No.	DESCRIPTION	No.	DESCRIPTION	No.	DESCRIPTION
1	Water proof gland	9	Fan	17	Pressure switch
2	Pump support	10	Fan cover	18	Bottom bracket
3	Bearing	11	Seal holder	19	Water flow switch
4	Rotor	12	Prop	20	Pump body
5	Spring washer	13	Overhead tank	21	Dust cap
6	Stator	14	Impeller	22	Drain plug
7	Controller	15	Guide glade		
8	Motherboard	16	Water inlet Guide glade		

### MULTIPLE PROTECTION

For longer using life, IMP have multiple protection such as:  
 Pressure setted protection, Blocking protection, Leakage protection, Dry-running protection, Over-heating protection,  
 Over/Under-voltage protection.

### ENERGY EFFICIENT

IMP can adjust performance by adjusting motor speed automatically according to water demand,  
 provide constant pressure to all taps. Permanent magnet frequency-converting motor helps reduce  
 power consumption, can automatically adjust RPM to match required outlet water. Helps to reduce energy bills.

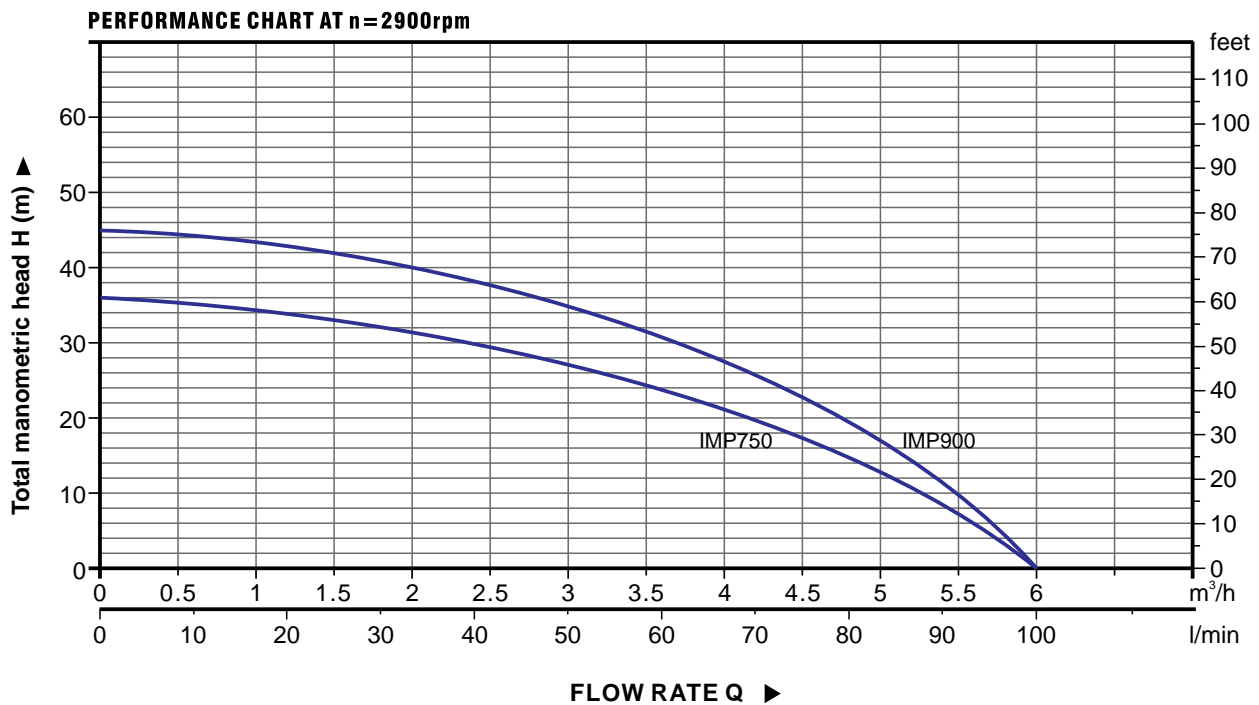
### EASY INSTALLATION

Compact all-in-one solution, integrating high efficiency pump, non return valve, sensor, speed controller  
 and pressure vessel together.

### STRUCTURE CHARACTERISTICS

- stainless steel pump body
- aluminum motor support
- stainless steel mechanical seal (graphite to ceramic)
- noryl impeller with centrifugal radial flow type
- SS shaft
- protection IPX4
- with thermal overload protector
- NSK bearing or local bearing

WARRANTY: 1YEAR(according to our general sales conditions)



Model	Voltage	Power	Max.Flow	Max.Head	Rated Flow	Rated Head	Dimensions	Max. Suction
	(V)	(kW)	(m <sup>3</sup> /h)	(m)	(m <sup>3</sup> /h)	(m)	(inch)	(m)
IMP750	220	0.75	6.0	35	3.0	22	1"	8
IMP900	220	0.9	6.0	45	3.0	25	1"	8

# SMP

## STAINLESS STEEL MULTISTAGE SMART PUMPS

### PERFORMANCE RANGE

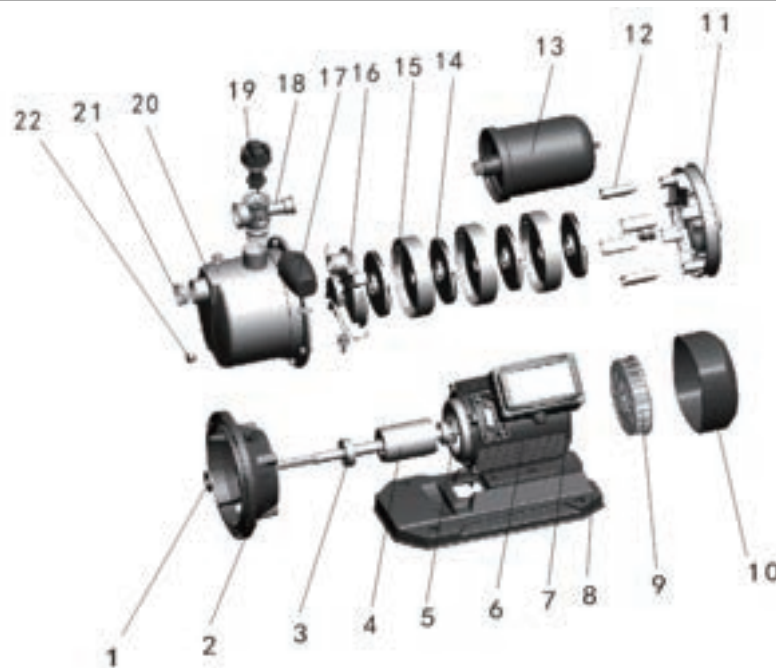
- ☒ Flow rate up to 100 l/min. (6.0m<sup>3</sup>/h)
- ☒ Dynamic head up to 45m

### OPERATING LIMITS

- ☒ Maximum suction lift up to 9m
- ☒ Maximum fluid temperature 40°C
- ☒ Maximum ambient temperature 40°C



DIAGRAM



No.	DESCRIPTION	No.	DESCRIPTION	No.	DESCRIPTION
1	Water proof gland	9	Fan	17	Pressure switch
2	Pump support	10	Fan cover	18	Bottom bracket
3	Bearing	11	Seal holder	19	Water flow switch
4	Rotor	12	Prop	20	Pump body
5	Spring washer	13	Overhead tank	21	Dust cap
6	Stator	14	Impeller	22	Drain plug
7	Controller	15	Guide glade		
8	Motherboard	16	Water inlet Guide glade		

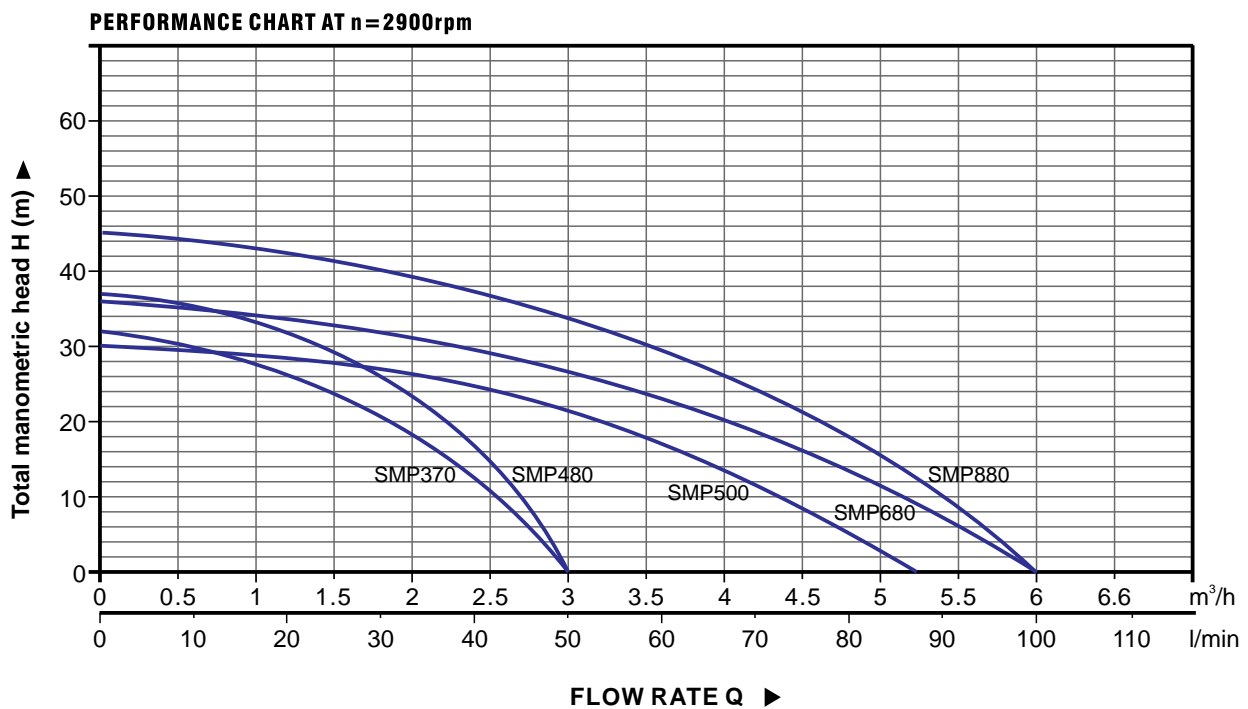
### MULTIPLE PROTECTION

- with automatic control inside
- have dry-running protector
- delay in starting for 3 seconds
- if pump don't use for long time, pump will run automatically 10 seconds for each 3 day to avoid impeller stuck
- automatic water checking if dry-running happened

### STRUCTURE CHARACTERISTICS

- stainless steel pump body
- aluminum motor support
- stainless steel mechanical seal (graphite to ceramic)
- noryl impeller with centrifugal radial flow type
- SS shaft
- protection IPX4
- with thermal overload protector
- NSK bearing or local bearing

WARRANTY: 1YEAR(according to our general sales conditions)



Model	Voltage	Power	Max.Flow	Max.Head	Rated Flow	Rated Head	Dimensions	Max. Suction
	(V)	(kW)	(m³/h)	(m)	(m³/h)	(m)	(inch)	(m)
SMP370	220	0.37	3.0	32	1.5	16	1"	9.8
SMP480	220	0.48	3.0	36	1.8	19.5	1"	9.8
SMP500	220	0.50	5.2	30	2.5	20	1"	6.0
SMP680	220	0.68	6.0	35	3.0	22	1"	6.0
SMP880	220	0.88	6.0	45	3.0	25	1"	6.0

# MSA

## AUTOMATIC TYPE SELF-PRIMING PERIPHERAL PUMPS



### STRUCTURE CHARACTERISTICS

- ※ With automatic control inside
- ※ Have dry-running protector
- ※ Delay in starting for 3 seconds
- ※ If pump don't use for long time, pump will run automatically 10 seconds for each 3 day to avoid impeller stuck
- ※ Automatic water checking if dry-running happened

MODEL	POWER W	INLET/OUTLET mm	MAX. HEAD m	MAX. FLOW m <sup>3</sup> /h
MSA 200A	200	25	25	1.8
MSA 200	200	25	25	1.8
MSA 300A	300	25	30	2.0
MSA 300	300	25	30	2.0
MSA 400A	400	25	35	2.5
MSA 400	400	25	35	2.5
MSA 600A	600	25	40	3.0
MSA 600	600	25	40	3.0
MSA 800A	800	25	45	3.5
MSA 800	800	25	45	3.5
MSA 1100A	1100	40	50	5.0
MSA 1100	1100	40	50	5.0
MSA 1500A	1500	40	60	6.0
MSA 1500	1500	40	60	6.0

# MMA/MMB



## AUTOMATIC TYPE SELF-PRIMING PERIPHERAL PUMPS



MMA



MMB

### STRUCTURE CHARACTERISTICS

- ※ With automatic control inside
- ※ Have dry-running protector
- ※ Delay in starting for 3 seconds
- ※ If pump don't use for long time, pump will run automatically 10 seconds for each 3 day to avoid impeller stuck
- ※ Automatic water checking if dry-running happened

MODEL	POWER W	INLET/OUTLET inch	MAX. HEAD m	MAX. FLOW m <sup>3</sup> /h
MMA 200	200	1"	25	1.8
MMB 200	200	1"	25	1.8
MMA 300	300	1"	30	1.8
MMB 300	300	1"	30	1.8
MMA 400	400	1"	35	2.0
MMB 400	400	1"	35	2.0
MMA 600	600	1"	45	2.8
MMB 600	600	1"	45	2.8
MMA 800	800	1"	55	3.0
MMB 800	800	1"	55	3.0



**AUTOMATIC TYPE SELF- PRIMING PERIPHERAL PUMP**

MODEL	POWER	INLET/OUTLET	HEAD MAX	FLOW RATE MAX.
MQS125 AUTO	125W	1" x 1"	23m	36 l/min



**SELF- PRIMING PERIPHERAL PUMP**

MODEL	POWER	INLET/OUTLET	HEAD MAX	FLOW RATE MAX.
MQS125B	125W	1" x 1"	30m	36 l/min



**SELF- PRIMING PERIPHERAL PUMP**

MODEL	POWER	INLET/OUTLET	HEAD MAX	FLOW RATE MAX.
MQS126B	125W	1" x 1"	30m	36 l/min



**AUTOMATIC TYPE SELF- PRIMING PERIPHERAL PUMP**

MODEL	POWER	INLET/OUTLET	HEAD MAX	FLOW RATE MAX.
MQS130B AUTO	125W	1" x 1"	32m	40 l/min



**AUTOMATIC TYPE SELF- PRIMING PERIPHERAL PUMP**

MODEL	POWER	INLET/OUTLET	HEAD MAX	FLOW RATE MAX.
MQS136B AUTO	125W	1" x 1"	32m	40 l/min

## OTHER PUMPS



### AUTOMATIC TYPE SELF- PRIMING PERIPHERAL PUMP

MODEL	POWER	INLET/OUTLET	HEAD MAX	FLOW RATE MAX.
MQS138B AUTO	125W	1" x 1"	32m	40 l/min



### AUTOMATIC TYPE SELF-PRIMING PERIPHERAL PUMPS

MODEL	POWER	INLET/OUTLET	HEAD MAX	FLOW RATE MAX.
MQS250 AUTO	250W	1" x 1"	40m	40 l/min



### AUTOMATIC TYPE SELF-PRIMING PERIPHERAL PUMPS

MODEL	POWER	INLET/OUTLET	HEAD MAX	FLOW RATE MAX.
MQS 1500	250W	1" x 1"	40m	40 l/min



### AUTOMATIC TYPE SELF-PRIMING PERIPHERAL PUMPS

MODEL	POWER	INLET/OUTLET	HEAD MAX	FLOW RATE MAX.
MAZ125	125W	1" x 1"	24m	30 l/min
MAZ250	250W	1" x 1"	28m	33 l/min
MAZ370	370W	1" x 1"	32m	37 l/min
MAZ550	550W	1" x 1"	38m	47 l/min
MAZ750	750W	1" x 1"	44m	50 l/min
MAZ1100	1100W	1.5" x 1.5"	50m	75 l/min



### STEEL SHELL END-SUCTION PERIPHERAL PUMP

MODEL	POWER	INLET/OUTLET	HEAD MAX	FLOW RATE MAX.
MXB60	370W	1" x 1"	40m	40 l/min



**PORTABLE SELF-PRIMING JET PUMPS**

MODEL	POWER	SUCTION LIFT	HEAD MAX	FLOW RATE MAX.
MJ60S	460W	9m	40m	2.1 m <sup>3</sup> /h
MJ80S	600W	9m	42m	2.4 m <sup>3</sup> /h
MJ100S	750W	9m	45m	3.6 m <sup>3</sup> /h



**HOUSE WATER WORKS WITH SHORT HEAD**

MODEL	POWER	SUCTION LIFT	HEAD MAX	FLOW RATE MAX.
MJ60S AUTO	460W	9m	40m	2.1 m <sup>3</sup> /h
MJ80S AUTO	600W	9m	42m	2.4 m <sup>3</sup> /h
MJ100S AUTO	750W	9m	45m	3.6 m <sup>3</sup> /h



**HOUSE WATER WORKS WITH LONG HEAD**

MODEL	POWER	SUCTION LIFT	HEAD MAX	FLOW RATE MAX.
MJ60L AUTO	460W	9m	38m	2.1 m <sup>3</sup> /h
MJ80L AUTO	600W	9m	42m	2.4 m <sup>3</sup> /h
MJ100L AUTO	750W	9m	45m	3.6 m <sup>3</sup> /h



**HOUSE WATER WORKS WITH STAINLESS STEEL HEAD**

MODEL	POWER	SUCTION LIFT	HEAD MAX	FLOW RATE MAX.
MJS60 AUTO	460W	9m	41m	3.0 m <sup>3</sup> /h
MJS80 AUTO	600W	9m	47m	3.0 m <sup>3</sup> /h
MJS100 AUTO	750W	9m	46m	4.8 m <sup>3</sup> /h

## OTHER PUMPS



### SWIMMING POOL PUMPS

MODEL	POWER	HEAD MAX	FLOW RATE MAX.
MSP550	550W	10m	20m <sup>3</sup> /h
MSP750	750W	13m	23m <sup>3</sup> /h
MSP1100	1100W	16m	28m <sup>3</sup> /h
MSP1500	1500W	18m	32m <sup>3</sup> /h
MSP2200	2200W	22m	35m <sup>3</sup> /h



### SWIMMING POOL PUMPS

MODEL	INPUT POWER	HEAD MAX	FLOW RATE MAX.
MSP300	300W	9m	7.8m <sup>3</sup> /h
MSP350	350W	10m	9.0m <sup>3</sup> /h
MSP450	450W	11m	9.6m <sup>3</sup> /h



### WHIRLPOOL BATHTUB PUMPS

MODEL	POWER	HEAD MAX	FLOW RATE MAX.
WB250	250W	10m	16m <sup>3</sup> /h
WB370	370W	11m	16m <sup>3</sup> /h
WB550	550W	12m	16m <sup>3</sup> /h
WB750	750W	12.5m	17m <sup>3</sup> /h
WB1100	1100W	14m	19m <sup>3</sup> /h



### MSP-G SWIMMING POOL PUMPS

MODEL	INPUT POWER	HEAD MAX.	FLOW RATE MAX.	INLET/OUTLET
MSP800G	800W	11m	19m <sup>3</sup> /h	2 1/2"
MSP900G	900W	11m	20m <sup>3</sup> /h	
MSP1100G	1100W	11m	22m <sup>3</sup> /h	
MSP1600G	1600W	16m	27m <sup>3</sup> /h	



**AUTOMATIC TYPE HOME BOOSTING PUMP**

MODEL	POWER	HEAD MAX	FLOW RATE MAX.
UPA90	120W	9m	1.8m <sup>3</sup> /h



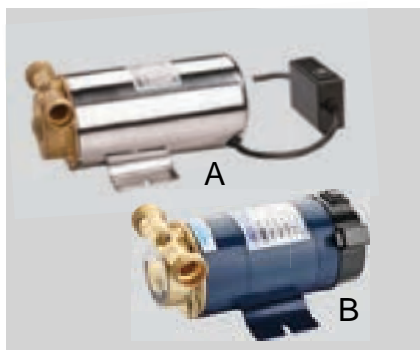
**HOT WATER BOOSTING PUMPS(MAX 100°C)**

MODEL	POWER	HEAD MAX	FLOW RATE MAX.
UPA120	270W	12.5m	3.5m <sup>3</sup> /h



**HOT WATER BOOSTING PUMPS(MAX 110°C)  
(MANUAL 3-SPEED CONTROL)**

MODEL	SPEED	POWER	HEAD MAX	FLOW RATE MAX.	DINMENSION
BP15/6	HIGH	93W	6m	2.4m <sup>3</sup> /h	1"or 1 1/2"
	MIDDLE	67W	5m	2.1m <sup>3</sup> /h	
	LOW	46W	3m	1.5m <sup>3</sup> /h	



**PERIPHERAL BOOSTING PUMPS**

MODEL	POWER	FLOW MAX.	HEAD MAX.
15WBX-8	80W	15 l/min	10 m
15WBX-10	90W	20 l/min	10 m
15WBX-15	150W	25 l/min	12 m



**WCP PUMP FOR BATHROOM**

MODEL	INPUT POWER	HEAD MAX.	FLOW RATE MAX.	INLET
WCP600N	600W	8.5m	6.6m <sup>3</sup> /h	4"

## OTHER PUMPS



### VANE OIL PUMPS

MODEL	POWER	HEAD MAX	FLOW RATE MAX.
MVP 370	370W	26m	2.6 m <sup>3</sup> /h



### VANE OIL PUMPS(DC12V/24V)

MODEL	POWER	HEAD MAX	FLOW RATE MAX.
MVO 400	180W / 400W	15m / 17m	2.4m <sup>3</sup> /h / 3.6m <sup>3</sup> /h
MVO 400A	180W / 400W	15m / 17m	2.4m <sup>3</sup> /h / 3.6m <sup>3</sup> /h



### PERIPHERAL OIL PUMPS

MODEL	POWER	HEAD MAX	FLOW RATE MAX.
MPO 400	400W	20m	30 l/min
MPO 600	600W	28m	30 l/min



### SUBMERSIBLE OIL PUMPS (DC12V/24V)

MODEL	POWER	HEAD MAX	FLOW RATE MAX.
SOP12	70W	3 m	35 l/min
SOP24	80W	3.5 m	40 l/min



### LITER COUNTERS

MODEL	CONNECTION	ACCURACY
LC1	1"	± 2 %
LC2	1"	± 2 %



### NOZZLES SERIES

MODEL	INLET SIZE	OUTLET SIZE
MN12AP	3/4"	13/16"
MN12A	3/4" or 1"	13/16" or 15/16"
AN13A	3/4" or 1"	13/16" or 15/16"
AN15A	3/4" or 1"	13/16" or 15/16"

### 4DOER DEEP WELL PUMPS

NO.	MODEL		POWER		Q-H m <sup>3</sup> /h-m	Outlet mm	Well Diameter mm
	Single-phase	Three-phase	HP	KW			
1	4DOERm2/4		0.5	0.37	2m <sup>3</sup> /h-30m	1 1/4"	100
2	4DOERm2/6		0.75	0.55	2m <sup>3</sup> /h-40m		
3	4DOERm2/8	4DOER2/8	1	0.75	2m <sup>3</sup> /h-50m		
4	4DOERm2/10	4DOER2/10	1.5	1.1	2m <sup>3</sup> /h-70m		
5	4DOERm3.2/5		0.75	0.55	3.2m <sup>3</sup> /h-32m		
6	4DOERm3.2/7	4DOER3/2/7	1	0.75	3.2m <sup>3</sup> /h-45m	1 1/4"	
7	4DOERm3.2/9	4DOER3/2/9	1.5	1.1	3.2m <sup>3</sup> /h-60m		
8	4DOERm5/6		0.75	0.55	5m <sup>3</sup> /h-25m	1 1/2"	
9	4DOERm5/8	4DOER5/8	1	0.75	5m <sup>3</sup> /h-35m		
10	4DOERm5/10	4DOER5/10	1.5	1.1	5m <sup>3</sup> /h-45m		
11	4DOERm8/4	4DOER8/4	1	0.75	8m <sup>3</sup> /h-20m	1 1/2"	
12	4DOERm8/6	4DOER8/6	1.5	1.1	8m <sup>3</sup> /h-28m		
13	4DOERm10/4	4DOER10/4	1	0.75	10m <sup>3</sup> /h-13m	1 1/2"	
14	4DOERm10/6	4DOER10/6	1.5	1.1	10m <sup>3</sup> /h-19m		



### MULTISTAGE SUBMERSIBLE PUMP

MODEL	POWER	HEAD MAX	FLOW RATE MAX.
SX6	2200W	85m	13 m <sup>3</sup> /h



VMP60

VMP650

### CANNED SUBMERSIBLE PUMP

MODEL	POWER	HEAD MAX	FLOW RATE MAX.
VMP60	180W	60m	1.08 m <sup>3</sup> /h
VMP650(60Hz)	430W	100m	1.6 m <sup>3</sup> /h



### FOUNTAIN PUMPS

MODEL	POWER	HEAD MAX	FLOW RATE MAX.
FSP-2503	55W	2.5m	2m <sup>3</sup> /h
FSP-3503	85W	3.5m	3m <sup>3</sup> /h
FSP-4503	100W	4.5m	4.5m <sup>3</sup> /h
FSP-5003	150W	5.0m	5.5m <sup>3</sup> /h



### FOUNTAIN PUMPS

MODEL	POWER	HEAD MAX	FLOW RATE MAX.
FSP743	8W	1.0m	0.6m <sup>3</sup> /h
FSP943	16W	1.3m	0.8m <sup>3</sup> /h
FSP1143	22W	1.6m	1m <sup>3</sup> /h
FSP1543	28W	2.0m	1.4m <sup>3</sup> /h
FSP1843	40W	2.5m	1.8m <sup>3</sup> /h

**24 SF AUTO 24 SF WITH AUTO SET**

- ❖ 24SF, spherical tank
- ❖ pressure gauge, back connection
- ❖ pressure switch(1.4-2.8 bar)
- ❖ 3-way connector or 5-way connector
- ❖ foot valve

**24 CL AUTO 24 CL WITH AUTO SET**

- ❖ 24CL, cylindrical tank
- ❖ pressure gauge, back connection
- ❖ pressure switch(1.4-2.8 bar)
- ❖ 3-way connector or 5-way connector
- ❖ foot valve
- ❖ 1" gas flexible hose

**24 CLS/SAUTO 24 CLS/SWITH AUTO SET**

- ❖ 24CLS/S, cylindrical tank
- ❖ pressure gauge, back connection
- ❖ pressure switch(1.4-2.8 bar)
- ❖ 3-way connector or 5-way connector
- ❖ foot valve
- ❖ 1" gas flexible hose



**STAINLESS STEEL CYLINDRICAL TANK  
(WITH INTERCHANGEABLE MEMBRANE)**

MODEL	CONNECTION	MEMBRANE	CAPACITY
24CL(S/S)	1"	for alimentary liquids	24 liters
50CL(S/S)	1"	for alimentary liquids	50 liters
100CL(S/S)	1"	for alimentary liquids	100 liters



**CYLINDRICAL TANK  
(WITH INTERCHANGEABLE MENMBRANE)**

MODEL	CONNECTION	MEMBRANE	CAPACITY
24CL	1"	for alimentary liquids	24 liters
50CL	1"	for alimentary liquids	50 liters
60CL	1"	for alimentary liquids	60 liters
80CL	1"	for alimentary liquids	80 liters
100CL	1"	for alimentary liquids	100 liters
150CL	1" or 1 1/4"	for alimentary liquids	150 liters
200CL	1 1/4" or 1 1/2"	for alimentary liquids	200 liters
300CL	1 1/4" or 1 1/2"	for alimentary liquids	300 liters



**SPHERICAL TANK  
(WITH INTERCHANGEABLE MENMBRANE)**

MODEL	CONNECTION	MEMBRANE	CAPACITY
24SF	1"	for alimentary liquids	24 liters



**VERTICAL TANKS  
(WITH INTERCHANGEABLE MENMBRANE)**

MODEL	CONNECTION	MEMBRANE	CAPACITY
2 VT	1/2 "	for alimentary liquids	2 liters
4 VT	1"	for alimentary liquids	4 liters
8 VT	1"	for alimentary liquids	8 liters
18 VT	1"	for alimentary liquids	18 liters



### VERTICAL TANKS (WITH INTERCHANGEABLE MEMBRANE)

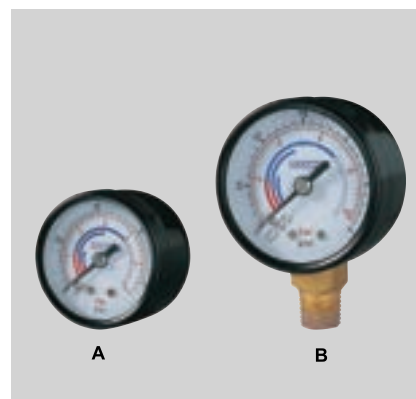
MODEL	CONNECTION	MEMBRANE	CAPACITY
50 VT	1"	for alimentary liquids	50 liters
60 VT	1"	for alimentary liquids	60 liters
80 VT	1"	for alimentary liquids	80 liters
100 VT	1"	for alimentary liquids	100 liters
150 VT	1" or 1 1/4"	for alimentary liquids	150 liters
200 VT	1 1/4" or 1 1/2"	for alimentary liquids	200 liters
300 VT	1 1/4" or 1 1/2"	for alimentary liquids	300 liters



PS-02A	PS-02B	PS-02C
■ 1.4-2.8 bar	■ 1.4-2.8 bar	■ 1.4-2.8 bar
■ 2.1-3.5 bar	■ 2.1-3.5 bar	■ female/male
■ 2.8-4.3 bar	■ 2.8-4.3 bar	
■ female/male	■ 3.5-5.6 bar	
	■ 4.9-7.2 bar	
	■ female/male	



PS/03A	PS/03B
■ 0.7-1.6 bar	■ 0.7-1.6 bar
■ 1.0-1.6 bar	■ 1.0-1.6 bar
■ 1.1-1.8 bar	■ 1.1-1.8 bar
■ 1.6-2.6 bar	■ 1.6-2.6 bar
■ female/male	■ female/male



### PG PRESSURE GAUGE

MODEL	PG-P	PG-SS	PG-S
40mm	PG-P40	PG-SS40	PG-S40
50mm	PG-P50	PG-SS50	PG-S50

- THREE TYPE SHELL:  
(1) PG-P: plastic (2) PG-SS: stainless steel (3) PG-S: steel
- TWO TYPE CONNECTION:  
A: BACK CONNECTION B: BOTTOM CONNECTION
- THE CONNECTION HAVE TWO TYPE: (1) G 1/4" (2) M10 x 1
- FOR 40MM GAUGE, THE SCALE IS 0-6 BAR
- FOR 50MM GAUGE, THE SCALE IS 0-10 BAR OR 0-6 BAR

## ACCESSORIES



### PRESSURE CONTROL

MODEL	VOLTAGE	FREQUENCY	CURRENT	CONNECTIONS	PROPECTION
PS-01	220-240V 110-115V	50/60Hz	10A	1" x 1"	IP 65



### PRESSURE CONTROL

MODEL	VOLTAGE	FREQUENCY	CURRENT	CONNECTIONS	PROPECTION
PS-01A	220-240V 110-115V	50/60Hz	10A	1" x 1"	IP 65



### PRESSURE CONTROL

MODEL	VOLTAGE	FREQUENCY	CURRENT	CONNECTIONS	PROPECTION
PS-01B	220-240V 110-115V	50/60Hz	10A	1" x 1"	IP 65



### PRESSURE CONTROL

MODEL	VOLTAGE	FREQUENCY	CURRENT	CONNECTIONS	PROPECTION
PS-01C	220-240V 110-115V	50/60Hz	10A	1" x 1"	IP 65



### PRESSURE CONTROL

MODEL	VOLTAGE	FREQUENCY	CURRENT	CONNECTIONS	PROPECTION
PS-01D	220-240V 110-115V	50/60Hz	10A	1" x 1"	IP 65



### PRESSURE CONTROL

MODEL	VOLTAGE	FREQUENCY	CURRENT	CONNECTIONS	PROPECTION
PS-01E	220-240V 110-115V	50/60Hz	10A	1" x 1"	IP 65



### PRESSURE CONTROL

MODEL	VOLTAGE	FREQUENCY	CURRENT	CONNECTIONS	PROPECTION
PS-01F	220-240V 110-115V	50/60Hz	10A	1" x 1"	IP 65



### PRESSURE CONTROL

MODEL	VOLTAGE	FREQUENCY	CURRENT	CONNECTIONS	PROPECTION
PS-01G	220-240V 110-115V	50/60Hz	10A	1" x 1"	IP 65
PS-01H	220-240V 110-115V	50/60Hz	10A	1" x 1"	IP 65



MODEL	VOLTAGE	FREQUENCY	CURRENT	CONNECTIONS	PROPECTION
PS-01I	220-240V 110-115V	50/60Hz	16A	1" x 1" or 1 1/4" x 1 1/4"	IP65



MODEL	VOLTAGE	FREQUENCY	CURRENT	CONNECTIONS	PROPECTION
PS-01J	220-240V 110-115V	50/60Hz	10A	1" x 1"	IP65



MODEL	VOLTAGE	FREQUENCY	CURRENT	CONNECTIONS	PROPECTION
PS-01K	220-240V 110-115V	50/60Hz	10A	1" x 1"	IP65



MODEL	VOLTAGE	FREQUENCY	CURRENT	CONNECTIONS	PROPECTION
PS-01L	220-240V 110-115V	50/60Hz	10A	1" x 1"	IP65

# ACCESSORIES



### RC RUNNING CAPACITOR WITH ROUND SHAPE

MODEL	VOLTAGE	FREQUENCY
8UF	250V/450V	50/60Hz
10UF	250V/450V	50/60Hz
12.5UF	250V/450V	50/60Hz
20UF	250V/450V	50/60Hz
25UF	250V/450V	50/60Hz
30UF	250V/450V	50/60Hz
40UF	250V/450V	50/60Hz
50UF	250V/450V	50/60Hz
60UF	250V/450V	50/60Hz



### MS MECHANICAL SEAL

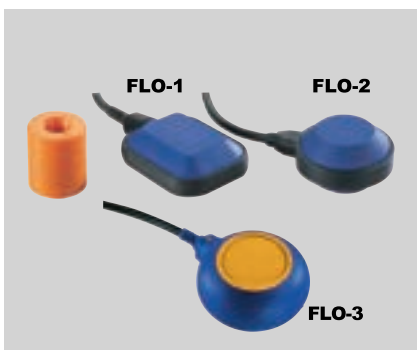
MODEL	SHAFT DIA.
MS301-12	12mm
MS301-14	14mm
MS155-15	15mm
MS155-17	17mm
MS155-20	20mm
MS155-22	22mm
MS155-24	24mm

- graphite to ceramic or graphite to SiC
- stainless steel spring and cover



### FH ANTI VIBRATION FLEXIBLE HOSE WITH ELBOW

MODEL	CONNECTION	LENGTH
FH50	1" x 1"	50cm
FH60	1" x 1"	60cm
FH100	1" x 1"	100cm



### FLOAT SWITCH

MODEL	VOLTAGE	CURRENT	AMBIENT TEMPERATURE
FLO-1	220-240V	8A	0-80°C
FLO-2	220-240V	8A	0-80°C
FLO-3	220-240V	16A	0-80°C



### FLOW SWITCH

MODEL	VOLTAGE	FREQUENCY	CURRENT	CONNECTIONS	PROPECTION
FS-01	220-240V 110-115V	50/60Hz	10A	1" x 1"	IP 55



**FV FOOT VALVES**

MODEL	FVA1/FVB1	FVA1.25/FVB1.25	FVA1.5/FVB1.5	FVA2/FVB2	FVA3/FVB3
CONNECTION	1"	1 1/4"	1 1/2"	2"	3"

■ stainless steel mesh



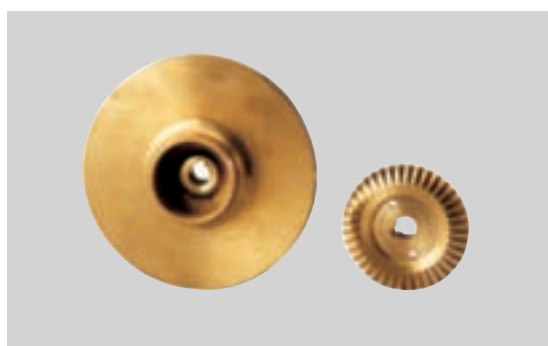
**CV CHECK VALVES**

MODEL	CVA1/CVB1	CVB1.25	CVB1.5	CVB2	CVB3
CONNECTION	1"	1 1/4"	1 1/2"	2"	3"



**CONNECTORS**

MODEL	CONNECTION
3way	1"
4way	1"
5way	1"



**BI BRASS IMPELLERS**

- casting impeller
- hot press impeller
- forging impeller



**PID PLASTIC IMPELLER & DIFFUSER**

- nylon
- P.C.
- P.P.O.

Note: LUCKYPRO reserves rights to modify design and technical specifications without notification.