

Micra®

Pompa · Yangın Söndürme Sistemleri · Hidrofor

MİCRA POMPA VE MAKİNA İMALAT LTD. ŞTİ.



SGW SERIES SUBMERSIBLE SEWAGE PUMPS



Dağyaka mah. 614. cadde No:134 Kahramankazan / Ankara

+ 90 312 250 99 99

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GENERAL INFORMATION

Discharge Flange	DN 50 - DN 400
Capacity	1600 m ³ /H
Head	100 m
Frequency	three-phase 50 Hz
Protection Class	IP 68
Thermistor Protection	PT100
Insulation	Class F
Fluid Temperature	up to 40 °C

Depending on the type of liquid, operating temperature and pressure. The pump material changes. Please contact our company for detailed information.

Transferable Liquids

Domestic and industrial waste water, raw sewage, liquids with fibrous and solid substances.

Shaft Sealing

- Double mechanical seal is used in standard production.

Applications

Iron and Steel Industry
Energy Industry
Mining
Food and Beverage Industry
Waste Water
Building Systems

Design Features

Vertical, wide volute casing, single stage, end suction submersible type centrifugal pump with enclosed, semi-open or vortex types impeller. 20 basic sizes covering wide range of operational area. Electric motor isolation class is IP 68. Discharge flanges conform to EN 1092-2 / PN 10. (EN 1092-1 / PN 10 for steel or stainless steel casing) All impellers are balanced dynamically or statically according to ISO 1940 class 6.3. Axial thrust is balanced by impeller back ribs. (Except double suction impellers.) In case of request motor cooling jacket is also applicable. Upon request, the pumps having 30 kw or larger motor can be manufactured with cooling jacket. These pumps can also operate in dry surroundings. Bearings of DPT type pumps are "life time grease lubricated" ball bearings.



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MATERIAL OPTIONS

Part List	0.6025	0.7040	1.0619	1.4308	1.4309	1.4408	1.4409	1.4517	1.4317	2.1050.01	2.0975.01	1.4021
Valute Casing	●	○	○	○	○	○	○	○	○	○		
Motor Casing	●	○		○		○						
Impeller	●	○	○	○	○	○	○	○	○	○	○	
Rotor Shaft												●
Oil Chamber	●	○										
Mechanical Seal (*)	EN 12756 / DIN 24250											

(*) Options: Different brand and type seal can be use can according to customer request.

● Standard Manufacturing

○ Optional

DESCRIPTIONS DIN EN AISI /SAE/ASTM

Cast Iron	0.6025	EN-GJL-250 (GG 25)	A 48 Class 40-8
Ductile Iron Casting	0.7040	EN-GJS-400-15 (GGG 40)	A 536 60-40-18
Steel Casting	1.0619	GP 240 GH (GSC 25)	A216 WCB
Chrome Nickel Steel Casting	1.4308	G-X5 Cr Ni 19-10	A 351 CF8
Chrome Nickel Steel Casting (Low Carbon)	1.4309	G-X2 Cr Ni 19-11	A 351 CF3
Chrome Nickel Molybdenum Steel Casting	1.4408	G-X5 Cr Ni Mo 19-11-2	A 351 CF8M
Chrome Nickel Molybdenum Steel Casting (L.C.)	1.4409	G-X2 Cr Ni Mo 19-11-2	A 351 CF3M
Austenitic - Ferritic Steel Casting (Duplex)	1.4517	G-X2 Cr Ni Mo Cu N 25-6-3-3	A 890 CD4MCuN
Martensitic Stainless Steel Casting	1.4317	G-X4 Cr Ni 13-4	A 352 CA6NM
Bronze Casting (Tinned)	2.1050.01	G-Cu Sn 10	B 427 C90700
Bronze Casting (Nickel Alloy)	2.0975.01	G-Cu Al10 Ni	B 148 C95500
Chromium Steel	1.4021	X20 Cr13	A 276 Type 420



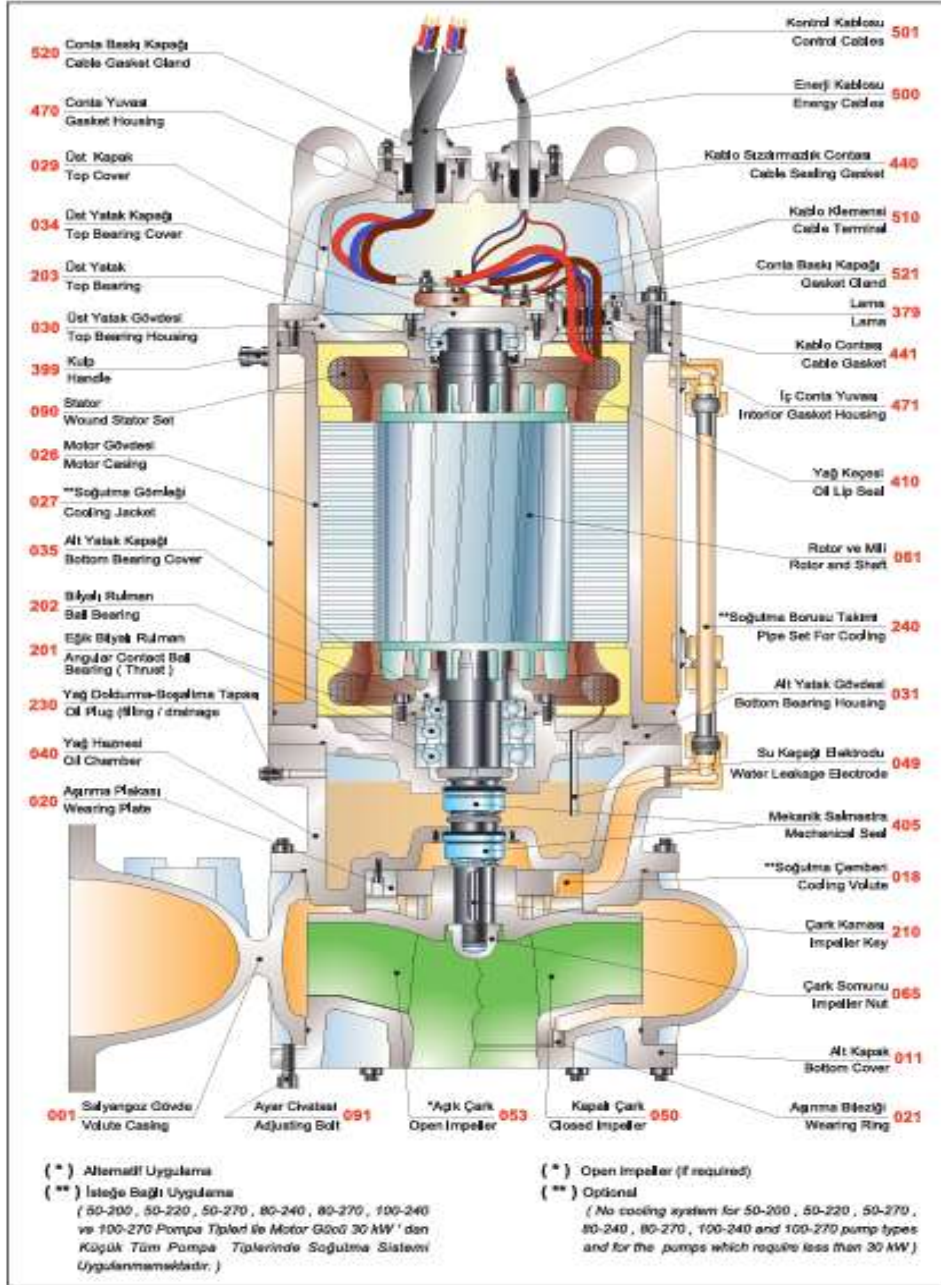
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SECTIONAL DRAWING



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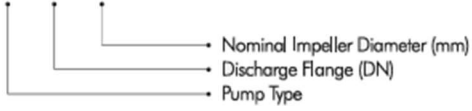
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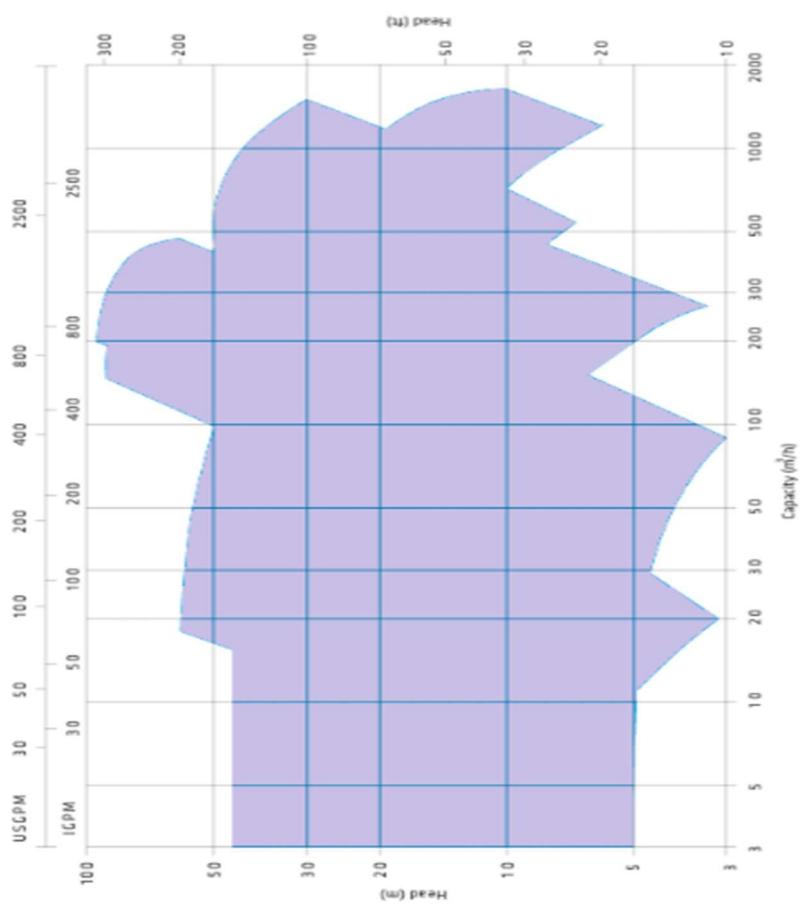
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PUMP CODE

SGW 150-315



FIELD CHART



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TECHNICAL DATA

Pump Type	Impeller Type	Rated Power (kW)			Pump Type	Impeller Type	Rated Power (kW)		
		Rated Speed					Rated Speed		
		1000 (rpm)	1500 (rpm)	3000 (rpm)			1000 (rpm)	1500 (rpm)	3000 (rpm)
50-240	D	-	-	5,5	150-315	AB	7,5	11	-
50-240	D	-	-	7,5	150-315	AB	11	15	-
50-240	D	-	-	11	150-315	AB	15	18,5	-
50-270	Vx	-	3	-	150-315	AB	18,5	22	-
50-270	Vx	-	4	-	150-315	AB	-	30	-
50-270	Vx	-	5,5	-	150-315	AB	-	37	-
50-270	Vx	-	7,5	-	150-315	AB	-	45	-
80-270	D	-	-	11	150-315	AB	-	55	-
80-270	D	-	-	15	150-315	B	7,5	11	-
80-270	D	-	-	18,5	150-315	B	11	15	-
80-270	D	-	-	22	150-315	B	15	18,5	-
80-270	D	-	-	30	150-315	B	18,5	22	-
80-315	AB	7,5	11	-	150-315	B	-	30	-
80-315	AB	-	15	-	150-315	B	-	37	-
80-315	AB	-	18,5	-	150-315	B	-	45	-
100-270	D	-	-	11	150-315	B	-	55	-
100-270	D	-	-	15	150-500	AB	45	75	-
100-270	D	-	-	18,5	150-500	AB	55	90	-
100-270	D	-	-	22	150-500	AB	-	110	-
100-270	D	-	-	30	150-500	AB	-	132	-
100-270	B	-	11	-	150-500	AB	-	160	-
100-270	B	-	15	-	150-500	AB	-	185	-
100-270	B	-	18,5	-	150-500	AB	-	200	-
100-315	AB	7,5	11	-	200-315	AB	15	-	-
100-315	AB	11	15	-	200-315	AB	18,5	30	-
100-315	AB	-	18,5	-	200-315	AB	22	37	-
100-315	AB	-	22	-	200-315	AB	-	45	-
100-315	AB	-	30	-	200-315	AB	-	55	-
100-315	B	-	11	-	200-315	AB	-	75	-
100-315	B	-	15	-	200-315	G2K	15	22	-
100-315	B	-	18,5	-	200-315	G2K	18,5	30	-
100-315	B	-	22	-	200-315	G2K	22	37	-
100-315	B	-	30	-	200-315	G2K	-	45	-
					200-315	G2K	-	55	-



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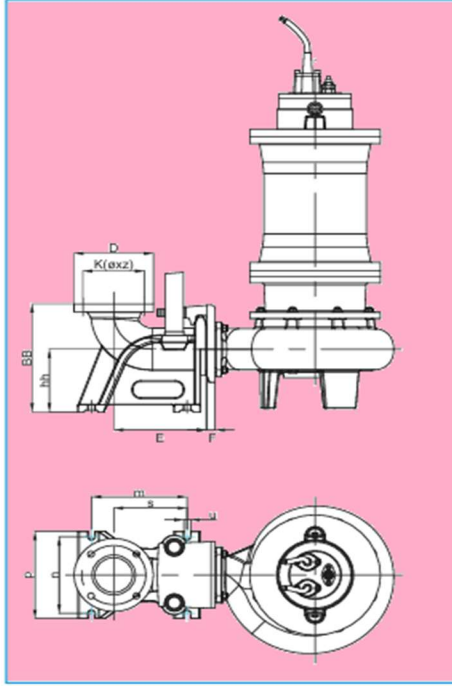
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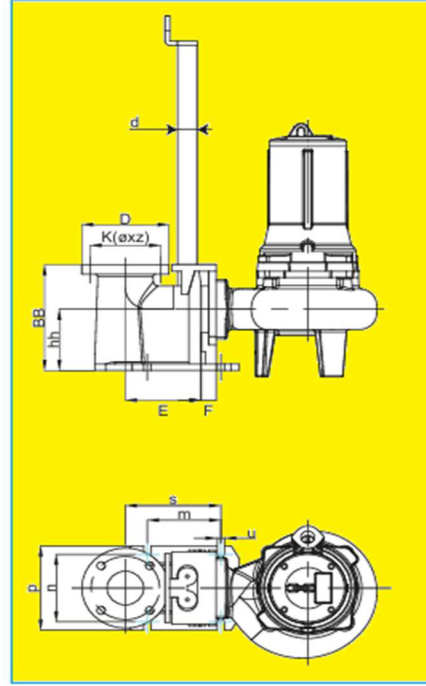
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DIMENSIONS

DN 100 and above



DN 50 and DN 80



Elbow No.	Guide Rail Pipe System Dimensions												Rail Pipe Diameter d
	F	E	hh	BB	s	m	u	p	n	D	K		
50	29	126	101	167	150	130	12	145	108	150	125(ø18/4 Ad.)		¾"
80	30	165	145	250	208	160	16	200	160	190	150(ø18/4 Ad.)		1 ¼"
100	21	245	180	310	193	253	18	250	220	190	170(ø18/4 Ad.)		1 ½"
150	33	371	270	466	295	385	27	375	330	285	240(ø22/8 Ad.)		2"
200	53	488	300	650	389	510	33	510	450	340	295(ø22/8 Ad.)		2"
250	55	610	365	800	485	635	41	640	565	395	350(ø23/12Ad.)		2 ½"
300	65	730	445	965	580	760	46	750	660	445	400(ø23/12Ad.)		2 ½"



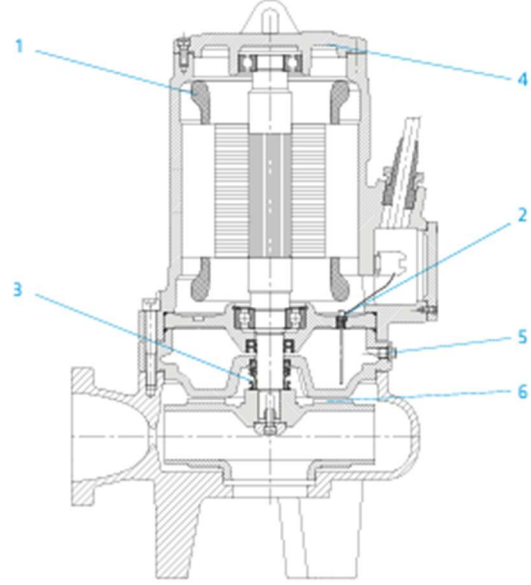
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- 1 - Temperature **SENSOR** (130°C) in F class winding head protection for overheating.
- 2 - Signaling **ELECTRODE** in case of leakage into the motor or into the oil chamber.
- 3 - **MECHANICAL SEAL** running in pumping liquid.
- 4 - Demountable **TOP COVER** for easy motor winding.
- 5 - Oil filling and inspection **PLUG**.
- 6 - **BACK VANES** for reducing axial load and sealing pressure.



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IMPELLER TYPE



B TYPE IMPELLER : Enclosed type impellers with wide channels capable of pumping large size solid particles without clogging, for big capacity and low pressure. It is mainly used for 4 pole motors.



D Type Impeller: It is also enclosed type like B type but suitable for high speed motors (2 pole). It is convenient for high pressure, small capacity and smaller size solid particles.



VX Type Impeller: Semi-open free vortex type impeller is placed on top of the volute. It creates a forced vortex motion in the casing. It is mostly suitable for fibrous materials. They are suitable for low head applications but pump efficiency is lower compare to other impeller types. The increased clearances limit the head that can be generated and reduce the attainable efficiency. Recessed type impellers are also possible for some models. With this type of design solid particles up to pump flanges size can pass through the pump. Please ask for more information.



F Type Impeller: Semi-open type impeller with cutter. The cutting system is placed in front of the impeller and it breaks up the solid particles into smaller sizes that makes passing possible through the smaller pipes without sticking. F type impeller is suitable for small capacity, high pressure, but the pump efficiency is also low.



AB Type Impeller: Semi-open type impellers with wide channels capable of pumping large size solid particles without clogging, for big capacity and low pressure. It is more suitable for 4 pole motors. Designed for aggressive applications. Impeller works against a wear plate. Clearance between the wear plate and impeller blades is between 0.25 - 0.40 mm.



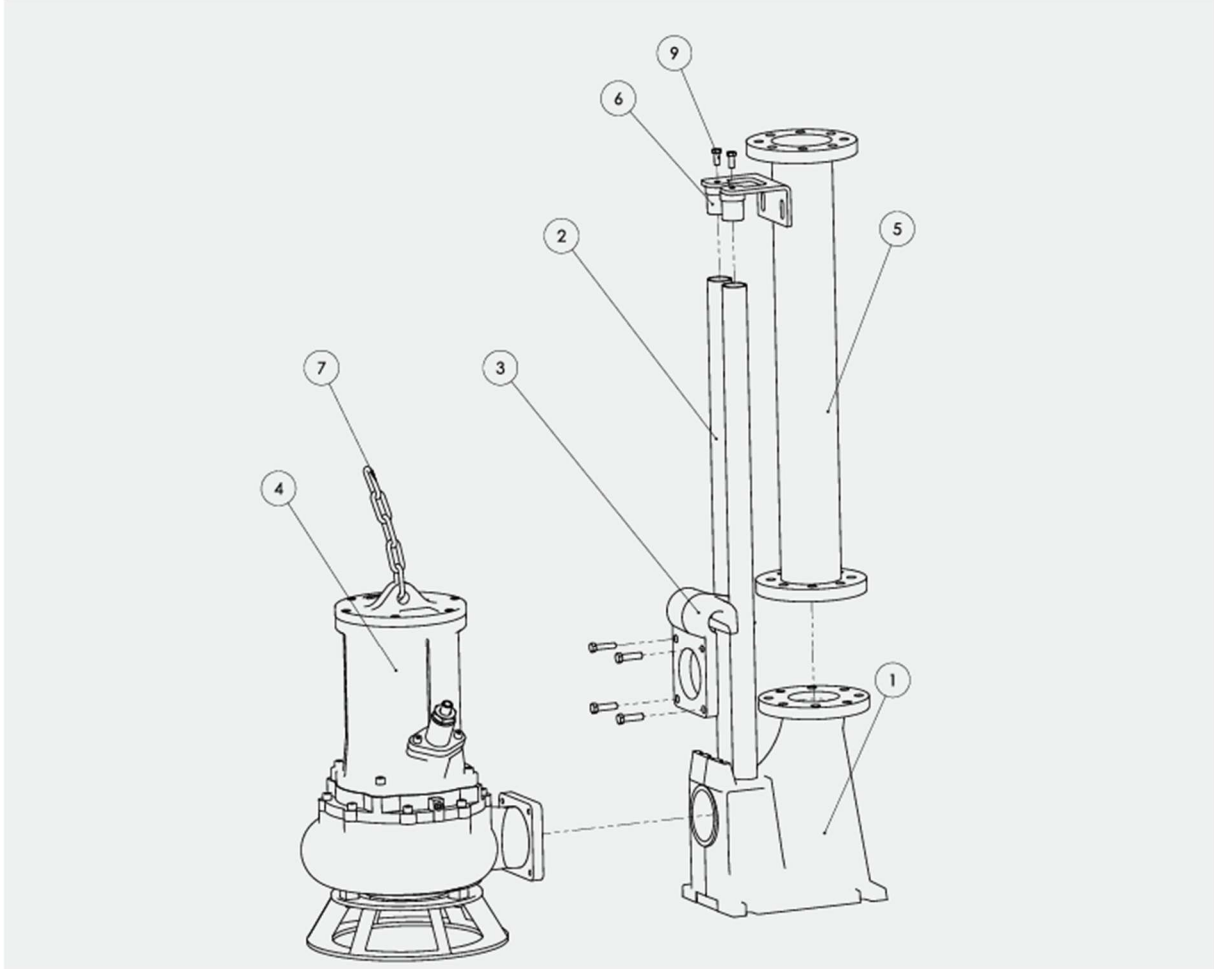
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AUTO COUPLINGS DETAILS



It's economic and practical installation for stationary systems. Automatic coupling system consists of duck foot bend fixed on sump floor, guide rail (consists of 2 galvanized or 2 SS304 pipes connected in parallel) and fixing flange which is fitted to the pump. Automatic coupling set components and discharge piping have to be installed before sump get filled with medium. Fixing flange which is fitted to the pump slides through the guide rails and pump lowered to the sump by means of chain. To take pump out of the sump by pulling pump by chain is enough, no dismantling or bolt removal required. Sealing is done by special gasket.



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PART LIST OF AUTO COUPLING

Duck Foot Bend	1
Guide Rail	2
Guide Flange	3
Pump	4
Discharge Pipe	5
Upper Support Bracket	6
Chain	7
Bolt	8

SOLID SIZE OF SWG TYPE PUMPS

Model	Free passage (mm)
SWG 50/160D (141.1)	25
SWG 50/160D (141.2)	25
SWG 50/160D (141.3)	25
SWG 50/160D (142.1)	25
SWG 50/160F (148.1)	5
SWG 50/160F (148.2)	5
SWG 50/160F (148.3)	5
SWG 50/160Vx (146.1)	35
SWG 50/160Vx (146.2)	35
SWG 50/160Vx (146.3)	35
SWG 50/160Vx (146.4)	35
SWG 50/200B (150.1)	25
SWG 50/200B (150.2)	25
SWG 50/200B (150.3)	25
SWG 50/200D (152.1)	25
SWG 50/200D (152.2)	25
SWG 50/200F (158.1)	5
SWG 50/200F (158.2)	5
SWG 50/200Vx (155.1)	40
SWG 50/200Vx (155.2)	40
SWG 50/200Vx (155.3)	40
SWG 50/200Vx (156.1)	35
SWG 50/200Vx (156.2)	35
SWG 50-270Vx	40
SWG 80/160B (160.1)	72
SWG 80/160Vx (165.1)	76



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SWG 80/200B (200.1)	55
SWG 80/200B (200.2)	55
SWG 80/200D (202.1)	35
SWG 80/200D (202.2)	35
SWG 80/200Vx (205.1)	60
SWG 80/200Vx (205.2)	60
SWG 80-270	18
SWG 100/240B (240.1)	55
SWG 100/240B (240.2)	55
SWG 100/240D (242.1)	38
SWG 100/240D (242.2)	38
SWG 100/240Vx (245.1)	60
SWG 100/240Vx (245.2)	60
SWG 100/270B	76
SWG 100/270B (270.1)	76
SWG 100/270B (270.2)	76
SWG 100/270Vx (275.1)	76
SWG 100/270Vx (275.2)	76
SWG 100-270	40
SWG 150-315	80
SWG 150-500	36
SWG 200-315	85
SWG 200-400	88
SWG 200-500	52



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CIRCUIT DIAGRAMS FOR MOTOR CONTROL PANEL

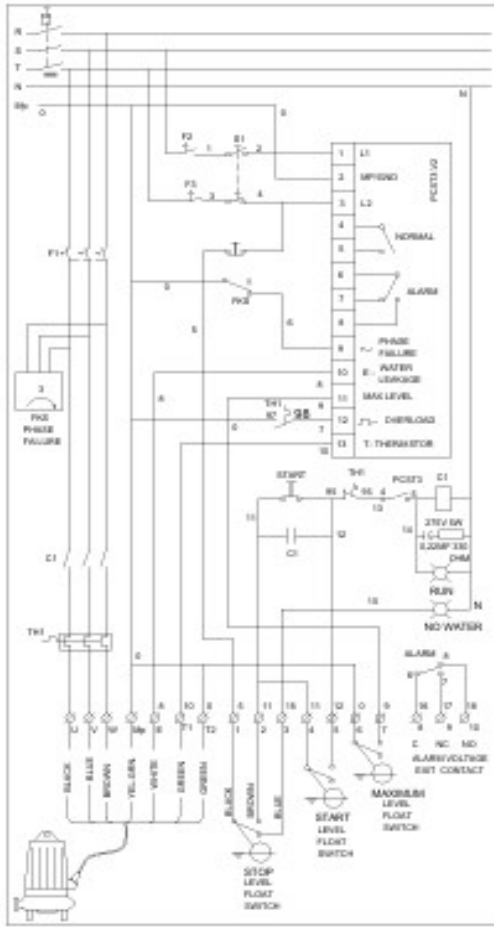


Figure 5a.

PUMPS WITH THREE-PHASE MOTORS

Cable sizes according to motor powers

Up to 0.75kW (4 x 1.5 + 3 x 1.5)

11kW (3 x 2.5 + 4 x 1.5)

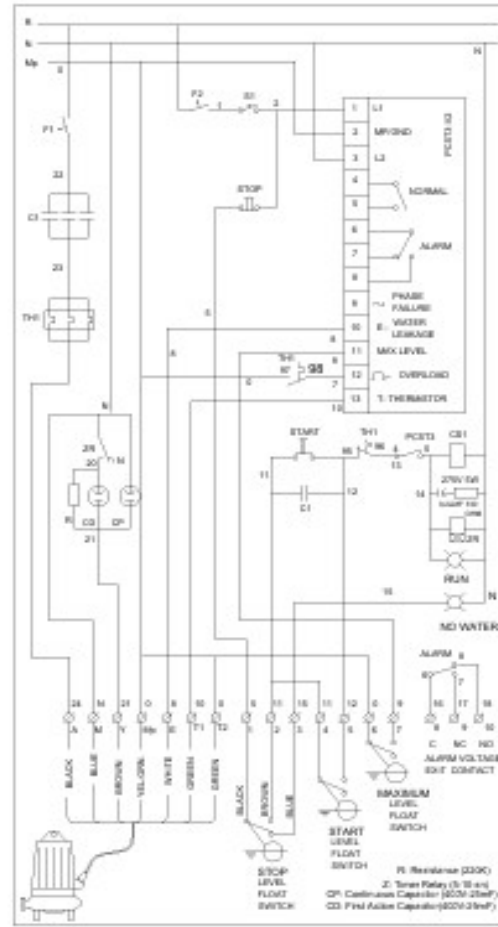


Figure 5b.

PUMPS WITH SINGLE-PHASE MOTORS

Cable sizes according to motor powers

For 1.1 and 1.5 kW (3 x 2.5 + 4 x 1.5)



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