

THINK ELECTRICAL

PUMP & LEVEL CONTROL SOLUTIONS

SHORTFORM CATALOGUE '18

ACDCTM
DYNAMICS
www.acdc.co.za

PREVIEW OF THE NEW '18|19 MAIN CATALOGUE



NATIONAL CONTACT CENTRE

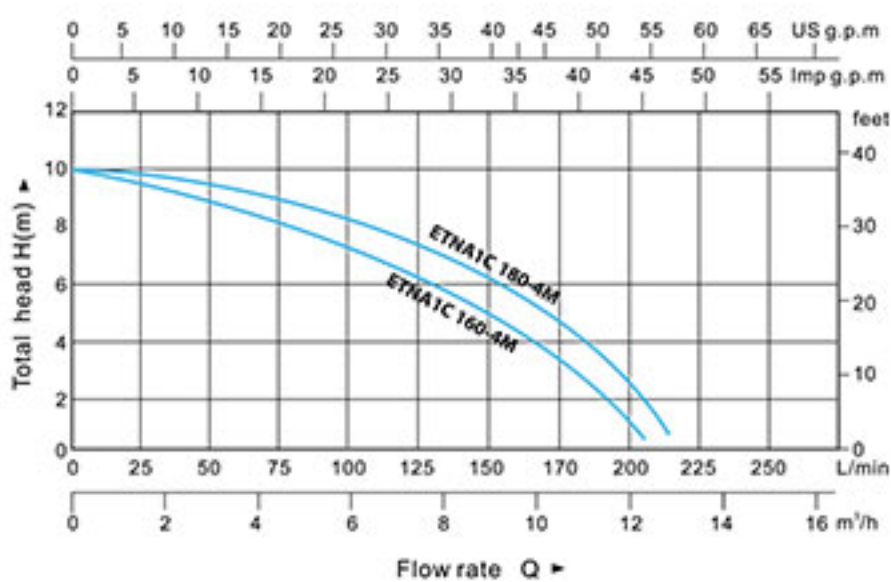
Sales Centre 010 202 3400
Technical 010 202 3500

BRANCH CONTACT DETAILS

Johannesburg 010 202 3300
Germiston 011 418 9600
Cape Town 021 510 0710
Pinetown 031 700 4215
Riverhorse 031 492 4800

Offering practical solutions both
in economical & reliable water
pumps & pressure controllers

NEW **SWIMMING POOL & SPA PUMPS IP55**

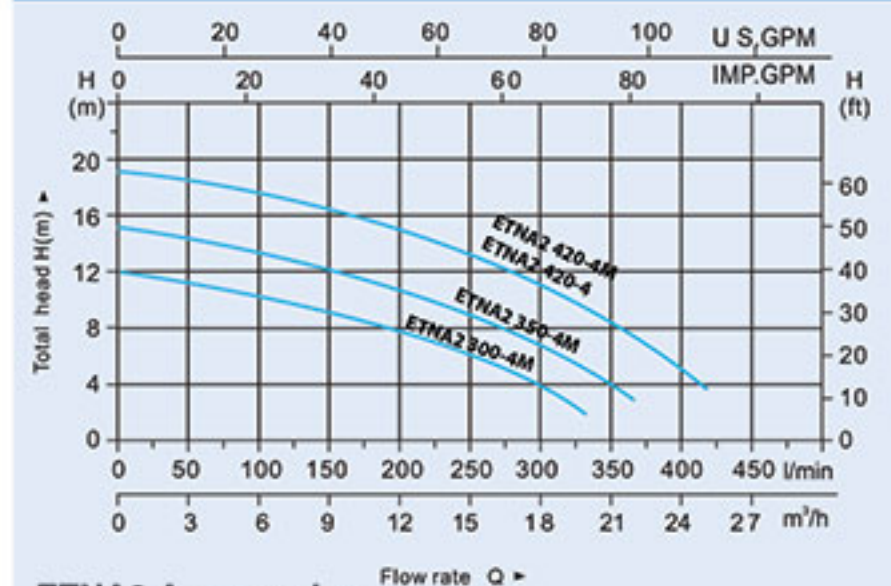


Small to Medium Pools

Application:
Recycling & filtering
of water for small to
medium swimming
pools

- Impeller Noryl/glass fibre
- Max working pressure 3 bar
- Built-in Thermal Protection
- Class F Insulation
- Polypropylene Pump Body/Diffuser
- Stainless Steel Shaft
- Ceramic/graphite mechanical seal

Code	Voltage	Power		Amps	Max Head (m)	Max Flow (l/min)	In / Out (Inch)
		KW	HP				
ETNA1C 160-4M	230VAC	0,25	0,33	1,9	10	200	1½ x 1½
ETNA1C 180-4M	230VAC	0,37	0,5	3,2	10	230	1½ x 1½



Medium to Large Pools

Application:
Recycling & filtering
of water for
medium to large
swimming pools

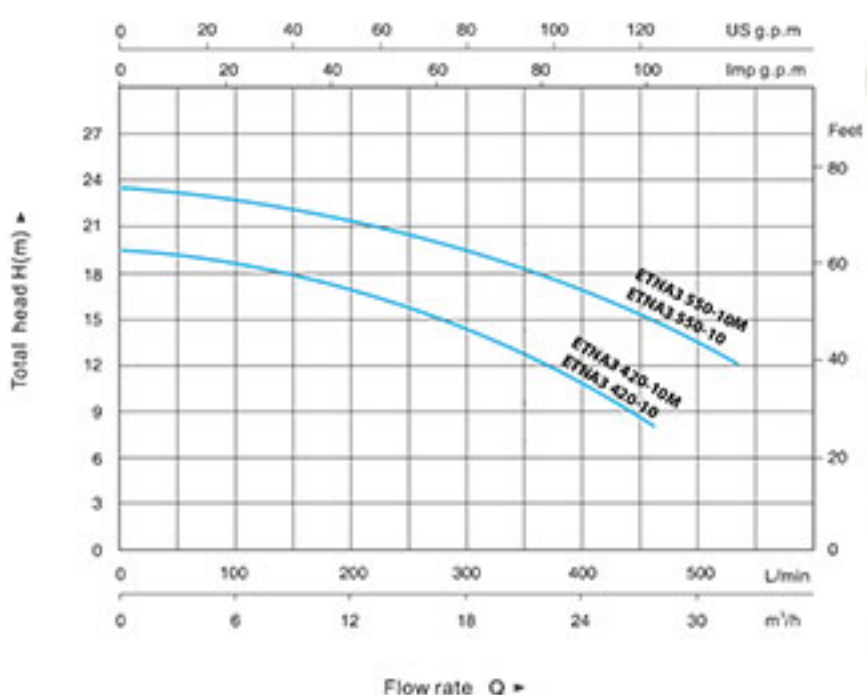
- Self priming up to 2.5m
- Class F Insulation
- Built-in Thermal Protection (230V versions)
- Max working pressure 3 bar
- Polypropylene Pump Body/Diffuser
- Noryl/glass fibre Impeller
- Stainless Steel Shaft
- Ceramic/graphite mechanical seal

Code	Voltage	Power		Amps	Max Head (m)	Max Flow (l/min)	In / Out (Inch)
		KW	HP				
ETNA2 300-4M	230VAC	0,55	0,75	0,75	12,5	330	2¼ x 2
ETNA2 350-4M	230VAC	0,75	1	1	15	360	2¼ x 2
ETNA2 420-4M	230VAC	1,1	1,5	1,5	17	400	2¼ x 2
ETNA2 420-4	400VAC	1,1	1,5	1,5	17	400	2¼ x 2

ETNA2 Accessories



PERFORMANCE CHART AT n=2900 r/min



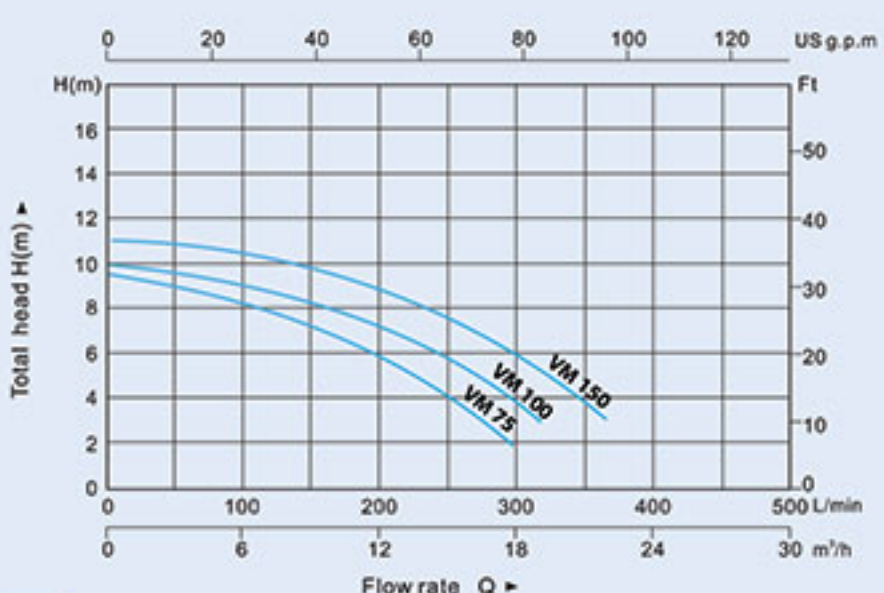
Large Pools

Application:
Recycling & filtering
of water for large
swimming pools

- Self priming up to 1.5m
- Class F Insulation
- Built-in Thermal Protection (230V versions)
- Max working pressure 2.5 bar
- Polypropylene Pump Body/Diffuser
- Noryl/glass fibre Impeller
- Stainless Steel Shaft
- Ceramic/graphite mechanical seal

Code	Voltage	Power		Amps	Max Head (m)	Max Flow (l/min)	In / Out (Inch)
		KW	HP				
ETNA3 420-10M	230VAC	1,5	2	4,8	19,5	465	2 x 2½
ETNA3 420-10	230VAC	1,5	2	2,8	19,5	465	2 x 2½
ETNA3 550-10M	230VAC	2,2	3	7,1	23	540	2 x 2½
ETNA3 550-10	400VAC	2,2	3	4,1	23	540	2 x 2½

PERFORMANCE CHART AT n=2900 r/min



Spa Pumps

Application:
Circulation of
Spa Bath Water

- Class F Insulation
- Built-in Thermal Protection
- Max working pressure 2.5bar
- Polypropylene Pump Body/Diffuser
- Noryl/glass fibre Impeller
- Stainless Steel Shaft
- Ceramic/graphite mechanical seal

Code	Voltage	Power		Amps	Max Head (m)	Max Flow (l/min)	In / Out (Inch)
		KW	HP				
VM75	230VAC	0,5	0,7	2,7	9	300	1½ x 1½
VM100	230VAC	0,7	1	3,7	10	320	1½ x 1½
VM120	230VAC	0,9	1,2	5,6	11	360	1½ x 1½

POOL LIGHTS

Recessed Mounting					Surface Mount
Supply Voltage: 12VAC					
Code	PL100-10	PL300-10	PLP300-10	PS100-10	
Power	100W	300W	300W	100W	
Lamp Type	PAR36 (incl.)	PAR56 (incl.)	PAR56 (incl.)	2 X JC (G6.35) (incl.)	
Size (mm)	Ø165 x 110	Ø270 x 125	Ø270 x 125	Ø280 x 50	
Spare Lamp	Lamp not replaceable	ACL81	ACL81	JC-12-50	

c/w Standard 10m cable. For swimming pool transformers, see page 79

Supply Voltage: 12VAC	PAR56 - Recessed Mounting	LED - Surface Mounting	LED S/Steel - c/w internal controller	RGB - with Remote Control Surface Mount
Code	LH-PAR56	PAR56-270-CW PAR56-270-BL	CM-P007-M	PAR56-272-RGB
Power	120W/300W (max.)	15W	15W	15W
Lamp Type	PAR56 (not incl.)	White LEDs	Blue LEDs	LEDs
Size (mm)	Ø280 x 160	Ø290 x 60	Ø290 x 60	Ø290 x 60
Spare Lamp	ACL81 or HG-PAR56 (LED)			



Lumen (MCD):
 R & Y=1500-2500
 G=7000-9000
 B=2000-2500
 W=6000-8000
 RGB=2000-3500
 Supply Volts=12VAC

LED PAR 56 & PAR46 Lamp (Suitable for Swimming Pools)

Code	No of LED's	Power
HG-PAR56-*	252	18W
HGPAR56AUTO	252	18W Auto changing
HG-PAR46-*	180	10W

*Add colour to code: ● R, ● B, ● G, ● Y, ○ W, ●●● M (RGB), ●●● Auto (Auto colour changing).

Remote supplied with M (Multicolour) only



NEW

LED AQUA POOL LIGHTS IP68



Surface Mount

Code	Wattage	Voltage	Lumen	Beam Angle	Size (mm)
P120-*	20W (1700mA)	12-24VAC/DC	1500lm	120°	Ø250 x 50

*Add colour to code: ○ W (White), ● B (Blue), ●●● RGB (Colour Changing)

Niche Mount - Retrofit to a Standard Wet Niche

PN10W*	10W	12-24VAC/DC	900lm	60-90°	Ø300 x 60
--------	-----	-------------	-------	--------	-----------

*Add colour to code: ○ W (White), ● B (Blue)

PAR56 Retrofit Lamp

Code	Wattage	Voltage	Lumen	Beam Angle	Size (mm)
PAR120-*	20W (1700mA)	12-24VAC/DC	1500lm	120°	Ø180 x 77

*Add colour to code: ○ W (White), ● B (Blue), ●●● RGB (Colour Changing)

Spa and Jacuzzi LED

Code	Wattage	Voltage	Lumen	Beam Angle	Size (mm)
P50SPA-B	4W	12VAC/DC	400lm	60 - 90°	Ø110 x 63

Accessories



Code	Description
PLA05	Output 12V, 150VA, Outdoor Transformer, 1-6 pieces
PLA06	10A Underwater Connector
PLA07	PAR56 Pool Light Plastic Case Housing
PLA09	External R.F Remote System, Control device power on/off, Select programme, Synchrony programme

NEW
SMART
POOL
BOX

POOL BOXES

SMART Models:

Timers are replaced with Smart WIFI Controllers. Change schedules and monitor status via the Smart phone app. Switch your pool pumps on/off from anywhere in the world.



Mobile phone not included
App: Silux



SBX-4A/5A - cover removed



SBX-2



SBX-1/3/7/8

Swimming Pool Control Boxes - Wired, comprising DIN isolator, circuit breakers & timer plus double wound lighting transformer & socket outlet if selected. Suitable for incandescent and LED underwater lights.

Enclosure Rating	16A socket outlet	Timer	No Light	NEW Underwater Lighting		
			Vinyl Pools	50VA Trf 3 x 15W LED	120VA Trf 1 x 100W Inc 6 x 15W LED	300VA Trf 2 x 100W Inc 6 x 15W LED
Indoor IP42	No	BND	SBX-8 BND	SBX-1L BND	SBX-1 BND	-
		SD	SBX-8 SD	SBX-1L SD	SBX-1 SD	-
		SUL	SBX-8 SUL	SBX-1L SUL	SBX-1 SUL	-
		TH	SBX-8 TH	SBX-1L TH	SBX-1 TH	-
		WIFI	SBX-8 SMART	SBX-1L SMART	SBX-1 SMART	-
	Yes	BND	-	SBX-2L BND	SBX-2 BND	-
		SD	-	SBX-2L SD	SBX-2 SD	-
		SUL	-	SBX-2L SUL	SBX-2 SUL	-
		TH	-	SBX-2L TH	SBX-2 TH	-
		WIFI	-	SBX-2L SMART	SBX-2 SMART	-
Outdoor Weatherproof IP55	No	BND	-	SBX-4L BND	SBX-4 BND	SBX-5 BND
		SD	-	SBX-4L SD	SBX-4 SD	SBX-5 SD
		SUL	-	SBX-4L SUL	SBX-4 SUL	SBX-5 SUL
		TH	-	SBX-4L TH	SBX-4 TH	SBX-5 TH
		WIFI	-	SBX-4L SMART	SBX-4 SMART	SBX-5 SMART
	Yes	BND	-	SBX-4AL BND	SBX-4A BND	SBX-5A BND
		SD	-	SBX-4AL SD	SBX-4A SD	SBX-5A SD
		SUL	-	SBX-4AL SUL	SBX-4A SUL	SBX-5A SUL
		TH	-	SBX-4AL TH	SBX-4A TH	SBX-5A TH
		WIFI	-	SBX-4AL SMART	SBX-4A SMART	SBX-5A SMART

Note: IP42 Enclosure - ABS with hinged transparent cover over the breakers and timers

IP55 Enclosure - DMC with sliding lift off front cover

Spa/Jacuzzi Boards IP42

Code	Description
SBX-3	SPA D/B Board no wiring: c/w DIN isolator, 2x20A CB's, 1x4kW contactor & 24 hour timer
SBX-7	For Jacuzzis with no light: c/w isolator, pump CB & timer, plus 20A CB & relay for heating

POOL FILTERS

Pool Filter

Code - Top Valve	Filter Area	Max Flow Rate	Sand
PL-650	0.31m ²	15.3m ³ /h	145kg / 4 bags
PL-700	0.39m ²	19.2m ³ /h	210kg / 5 bags

Accessories

Code	Description
HT-815	Top mount valve 1½"/ 50mm unions

Suitable for residential pools and fish ponds. Maximum working pressure: 200kPa. Easy to use multi-port valve allows easy selection of valve / filter operations. Valve / filter operations: filter, backwash, rinse, waste, closed, recirculate. Valve connections: 1½" / 50mm



HT-815

PL-650

NEW

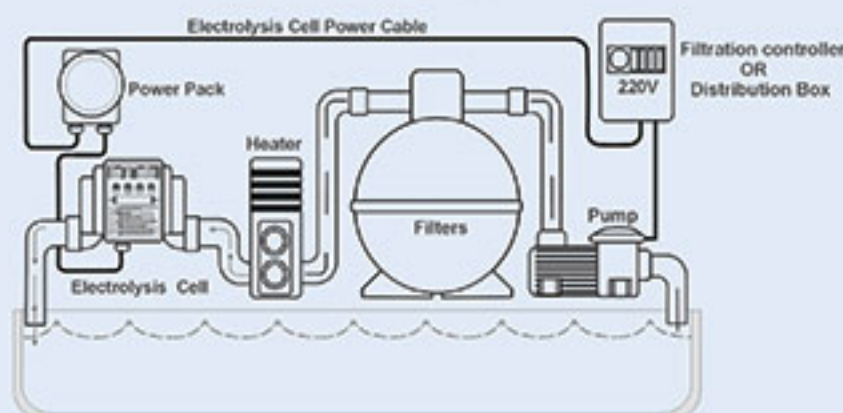
SALTCELL SWIMMING POOL SALT CHLORINATOR

Designed to operate in pools ranging from 15000 to 55000L, to produce chlorine. Keep pool water silky smooth and bacteria free. **20G-CHLORINATOR** Consist of: 1 x Control Panel, 1 x PSU, 1 x Electrolysis Cell



20G-CHLORINATOR

Control Panel



Applications

- Produces Ph friendly chlorine for swimming pools
- Disinfection of drinking water
- Odor control of cooling-water towers
- Disinfect circulating and service water systems
- Control marine organisms and slime growth in seawater fed systems
- Disinfect sewage and industrial effluent and water cooling systems
- Helps control cyanides in industrial process waters.

Benefits

- Reduces dangers from transport/storage of chlorines
- Very effective against bacteria, fungi and viruses
- No harsh chlorine fumes, red eyes or itchy skin

Code	20G-CHLORINATOR
Supply	220 - 240VAC
Power Consumption	60W
Indication	Backlit LCD
Salt Level Indicator	Yes
Salt level warning	Yes
Overload protection	Yes
Max production	20g/h
Min flow rate	150L/hr
Inlet / Outlet size	50mm
Control panel + Electrolysis cell (mm)	260Lx165Hx123D
Power pack size	150Lx120Hx82D
Recommended Salt Level	3 - 6g/l (3000 - 6000ppm)

Accessories	Description
20G-CELL	Spare Electrolysis Cell
20G-PSU	Spare Power Supply

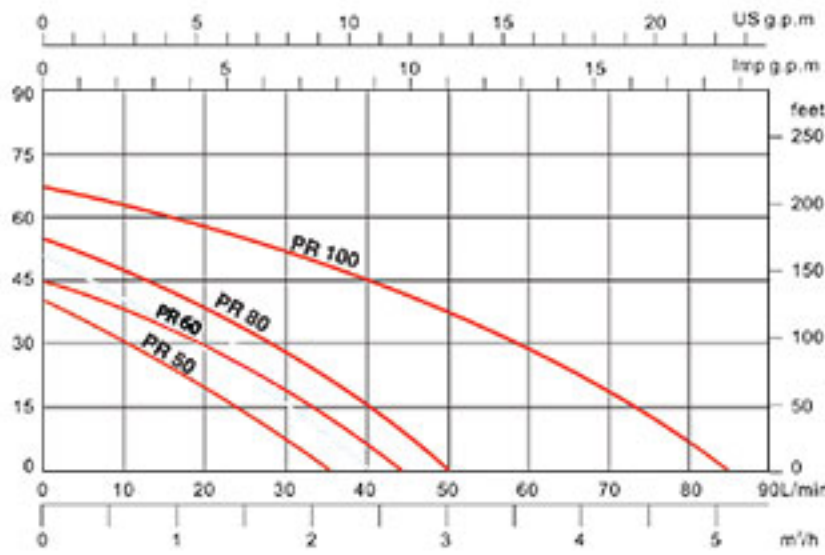
NEW

CAST IRON SURFACE PUMPS

Peripheral Pump

Application: Clean water and liquids without particulate matter and aggressive chemicals

- IP44 Protection
- Class B Insulation
- Max Liquid Temp 60°C
- Stainless Steel Shaft AISI 420
- Cast Iron Pump Body
- Ceramic/graphite mechanical seal
- Brass Impeller



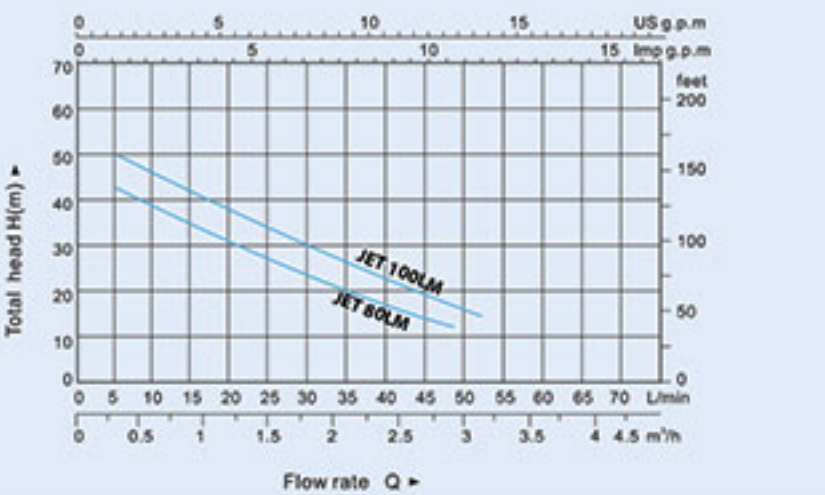
Code	Voltage	Power		Amps	Max Head (m)	Max Flow (l/min)	In / Out (Inch)
		KW	HP				
PR 50M	230VAC	0,37	0,5	2,4	35	35	1 x 1
PR 60M	230VAC	0,55	0,75	4,9	50	40	1 x 1
PR 80M	230VAC	0,75	1	6,2	58	50	1 x 1
PR 100M	230VAC	1,1	1,5	7,6	68	85	1 x 1

PERFORMANCE CHART AT n=2900 r/min

Self Priming Jet Pump

Application: Clean water and liquids without particulate matter and aggressive chemicals

- IP44 Protection
- Class B Insulation
- Max Liquid Temp 60°C
- Stainless Steel Shaft AISI 420
- Cast Iron Pump Body
- Ceramic/graphite mechanical seal
- Brass Impeller



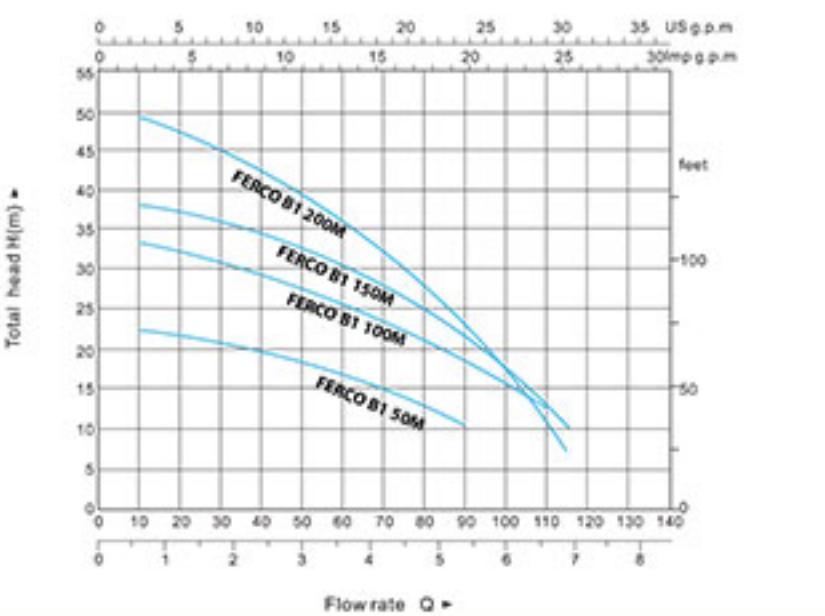
Code	Voltage	Power		Amps	Max Head (m)	Max Flow (l/min)	In / Out (Inch)
		KW	HP				
JET-L C80M	230VAC	0,55	0,75	4,2	43	48	1 x 1
JET-L C100M	230VAC	0,75	1	5	50	52	1 x 1

PERFORMANCE CHART AT n=2900 r/min

Centrifugal Pump

Application: Clean water and liquids without particulate matter and aggressive chemicals

- IP44 Protection
- Cast Iron Pump Body
- Cast Iron Motor Bracket
- Stainless Steel Shaft AISI 420
- Continuous Duty Rated
- Ceramic/graphite mechanical seal
- Max Suction Head 8m
- Brass Impeller



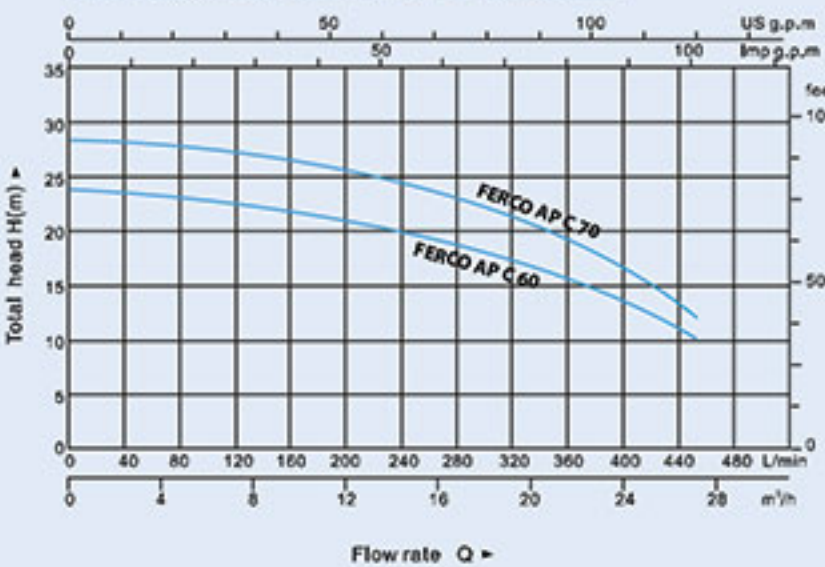
Code	Voltage	Power		Amps	Max Head (m)	Max Flow (l/min)	In / Out (Inch)
		KW	HP				
FERCO B150M	230VAC	0,37	0,5	2,2	22	90	1 x 1
FERCO B1100M	230VAC	0,75	1	5,48	32	110	1 x 1
FERCO B1150M	230VAC	1,1	1,5	7,5	37	115	1 x 1
FERCO B1200M	230VAC	1,5	2	10,5	47	115	1 x 1

PERFORMANCE CHART AT n=2900 r/min

Hi-Flow Centrifugal Pump

Application: Recommended for civil, agricultural and industrial use. High flow rate and continuous rated

- IP44 Protection
- Class B Insulation
- Max Liquid Temp 60°C
- Stainless Steel Shaft AISI 420
- Cast Iron Pump Body
- Ceramic/graphite mechanical seal
- Brass Impeller

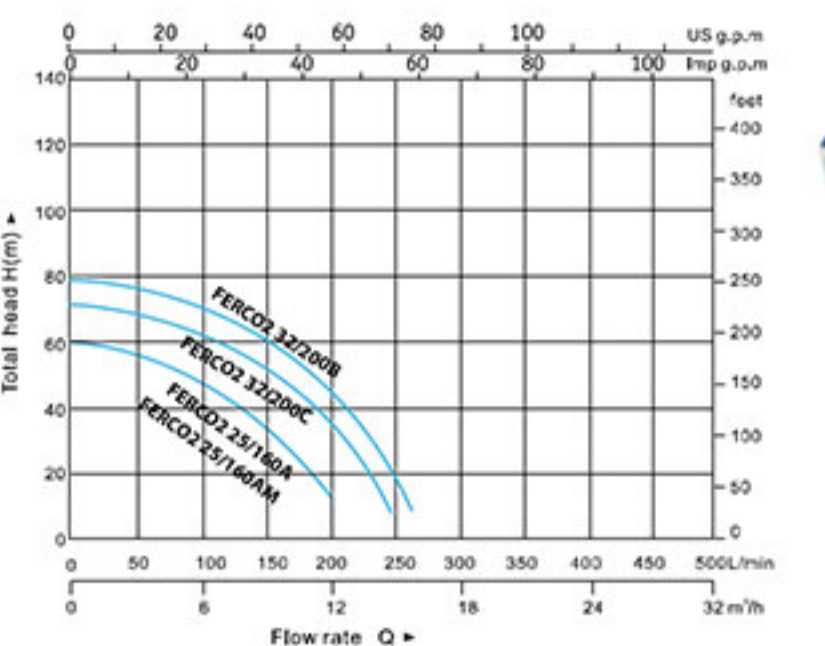


Code	Voltage	Power		Amps	Max Head (m)	Max Flow (l/min)	In / Out (Inch)
		KW	HP				
FERCO APC-60M	230VAC	1,1	1,5	5,2	24	450	2 x 2
FERCO APC-60	400VAC	1,1	1,5	3	24	450	2 x 2
FERCO APC-70M	230VAC	1,5	2	6,7	28	450	2 x 2
FERCO APC-70	400VAC	1,5	2	3,9	28	450	2 x 2

Twin Stage Centrifugal Pump

Application: Clean water and liquids without particulate matter and aggressive chemicals

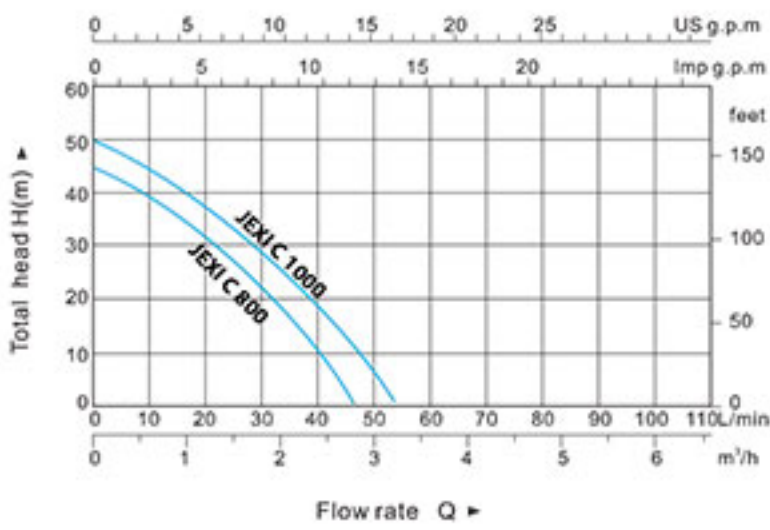
- IP44 Protection
- Class B Insulation
- Continuous Duty Rated
- Max Liquid Temp 60°C
- Stainless Steel Shaft AISI 420
- Cast Iron Pump Body
- Ceramic/graphite mechanical seal
- Brass Impeller



Code	Voltage	Power		Amps	Max Head (m)	Max Flow (l/min)	In / Out (Inch)
		KW	HP				
FERCO2 25/160AM	230VAC	2,2	3	8,1	60	200	1 1/4 x 1
FERCO2 25/160A	400VAC	2,2	3	4,7	60	200	1 1/4 x 1
FERCO2 32/200C	400VAC	3	4	6,1	70	250	1 1/2 x 1 1/4
FERCO2 32/200B	400VAC	4	5	9,7	80	275	2 x 1 1/4

STAINLESS STEEL BOOSTER PUMPS

PERFORMANCE CHART AT n=2900 r/min



Self Priming Jet Pump

Application:
Clean water and liquids without particulate matter and aggressive chemicals

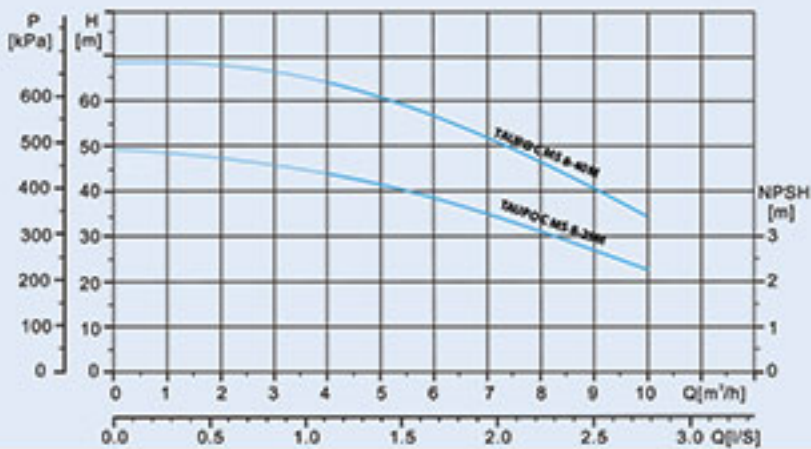
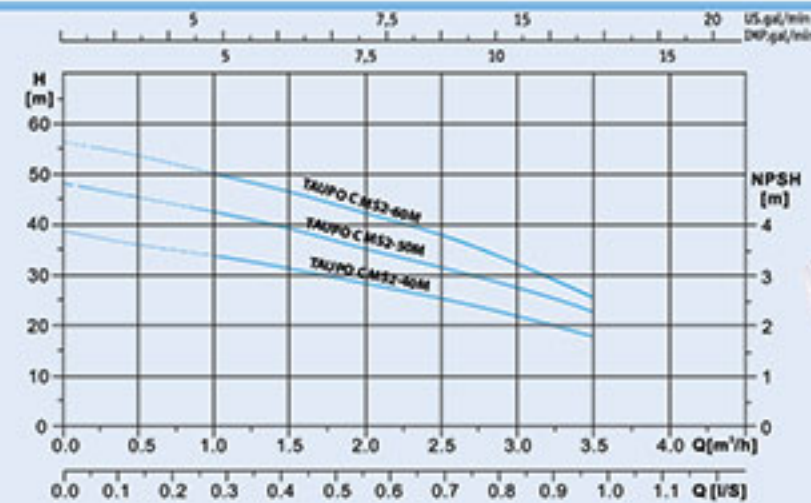
- IP44 Protection
- Class B Insulation
- 2 Pole Induction Motor
- Max Suction Head 8m
- Stainless Steel Shaft AISI 420
- Stainless Steel Pump Body
- Ceramic/graphite mechanical seal
- Stainless Steel Impeller

Code	Voltage	Power		Amps	Max Head (m)	Max Flow (l/min)	In / Out (Inch)
		KW	HP				
JEXI C800M	230VAC	0,6	0,8	4,2	45	46	1 x 1
JEXI C1000M	230VAC	0,75	1	5,1	50	52	1 x 1

Horizontal Multi-Stage Stainless Steel Pump

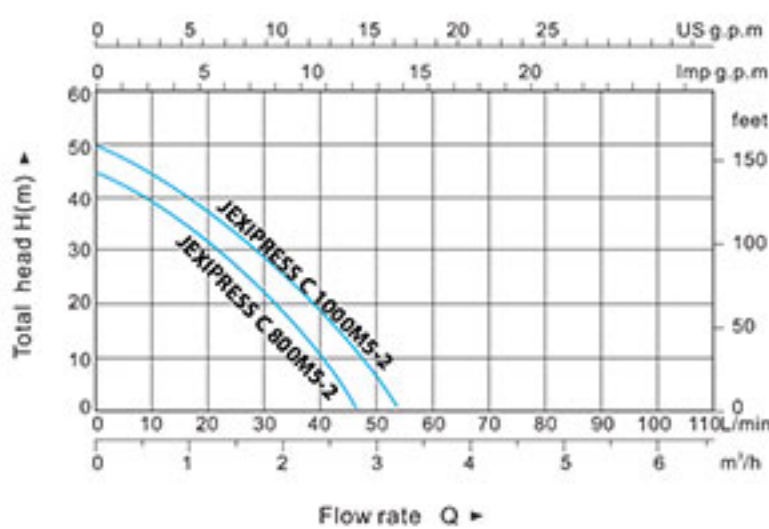
Application:
Pumping of water and light chemicals for domestic and light industrial uses

- IP55 Protection
- 2 Pole Induction Motor
- Continuous Rated
- Stainless Steel Shaft
- Stainless Steel Pump Body
- Ceramic/graphite mechanical seal
- Stainless Steel Impeller/Diffuser



Code	Voltage	Power		Amps	Max Head (m)	Max Flow (l/min)	In / Out (Inch)
		KW	HP				
TAUPO CMS2-40	380VAC	0,55	0,75	4	28	58	1 x 1
TAUPO CMS2-50	380VAC	0,55	0,75	4,2	35	58	1 x 1
TAUPO CMS2-60	380VAC	0,75	1	5,2	45	58	1½ x 1½
TAUPO CMS8-25	380VAC	1,5	2	7,2	27	166	1½ x 1½
TAUPO CMS8-40	380VAC	2,2	3	8,4	48	166	1½ x 1½

PERFORMANCE CHART AT n=2900 r/min



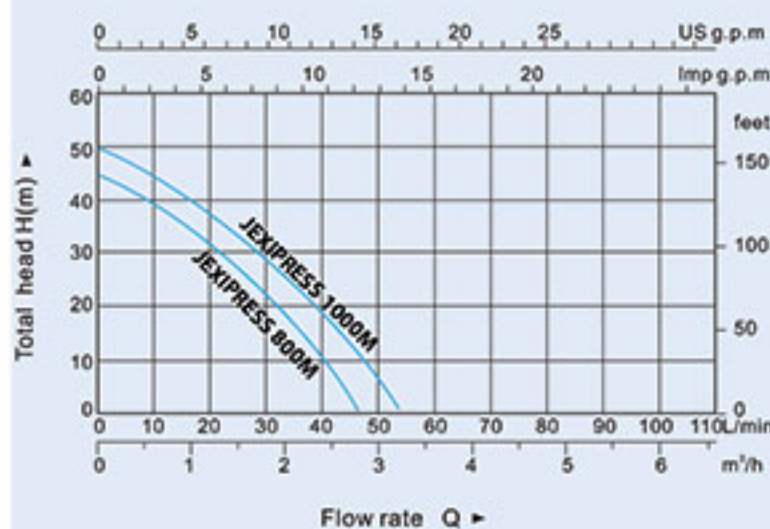
Auto Pressure Systems

Booster pump c/w pressure vessel for domestic applications.

- IP44 Protection
- 19L Tank
- Stainless Steel Shaft AISI 420
- Stainless Steel Pump Body
- Stainless Steel flexible Hose
- Ceramic/graphite mechanical seal
- Stainless Steel Impeller
- Pressure Range: 1.2 - 4.5 Bar

Code	Voltage	Power		Amps	Max Head (m)	Max Flow (l/min)	In / Out (Inch)
		KW	HP				
JEXIPRES C800S1M	230VAC	0,6	0,8	4,2	45	46	1 x 1
JEXIPRES C1000S1M	230VAC	0,75	1	5,1	50	52	1 x 1

PERFORMANCE CHART AT n=2900 r/min



Self Priming Jet Pump with Pressure Controller

Booster pump c/w pressure control for domestic applications.

- IP44 Protection
- Class F Insulation
- 2 Pole Induction Motor
- Max Liquid Temp 60°C
- Stainless Steel Shaft AISI 420
- Stainless Steel Pump Body
- Ceramic/graphite mechanical seal
- Stainless Steel Impeller
- Pressure Range: 1.2 - 4.5 Bar

Code	Voltage	Power		Amps	Max Head (m)	Max Flow (l/min)	In / Out (Inch)
		KW	HP				
JEXIPRES C800RM	230VAC	0,6	0,8	4,2	45	46	1 x 1
JEXIPRES C1000RM	230VAC	0,75	1	5,1	50	52	1 x 1

MULTI STAGE BOOSTER PUMPS

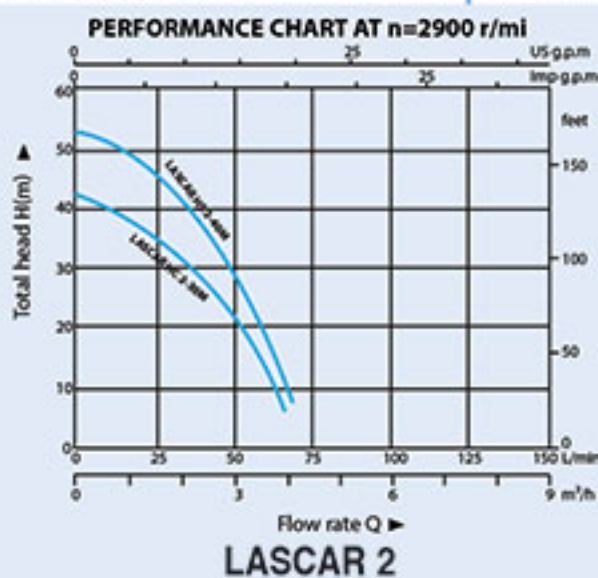


Self Priming Multi-Stage Centrifugal Pump - IP55

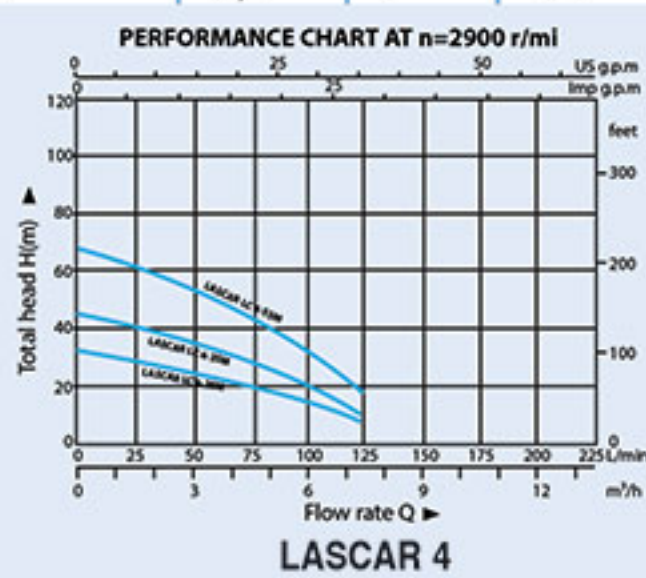
Application:
Clean water and liquids without particulate matter and aggressive chemicals

- Class F Insulation
- 2 Pole Induction Motor
- Self Priming up to 8m
- Stainless Steel Shaft
- Cast Iron Suction / Discharge
- Ceramic/graphite mechanical seal
- Stainless Steel Impeller

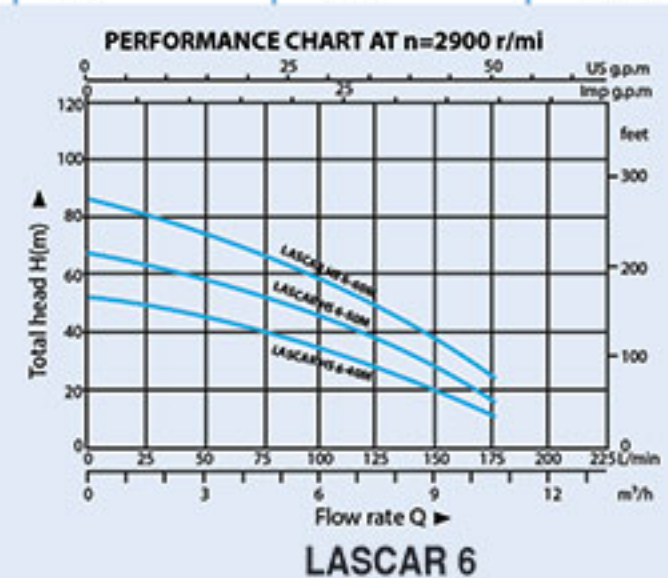
Code	Voltage	No of Impellers	Power		Amps	Max Head (m)	Max Flow (l/min)	In / Out (Inch)
			KW	HP				
LASCAR HS2-30M	230VAC	4	0,5	0,75	3.8	35	65	1 x 1
LASCAR HS2-40M	230VAC	5	0,75	1	4.8	45	65	1 x 1
LASCAR HS4-25M	230VAC	3	0,75	1	4.9	33	125	1 x 1
LASCAR HS4-35M	230VAC	4	0,9	1,2	6.1	43	125	1 x 1
LASCAR HS4-55M	230VAC	6	1,5	2	10.4	65	125	1 x 1
LASCAR HS6-40M	230VAC	4	0,9	1,2	6.1	52	175	1 x 1
LASCAR HS6-50M	230VAC	5	1,5	2	11.9	65	175	1 x 1
LASCAR HS6-60	400VAC	6	2,2	3	5.6	80	175	1 x 1



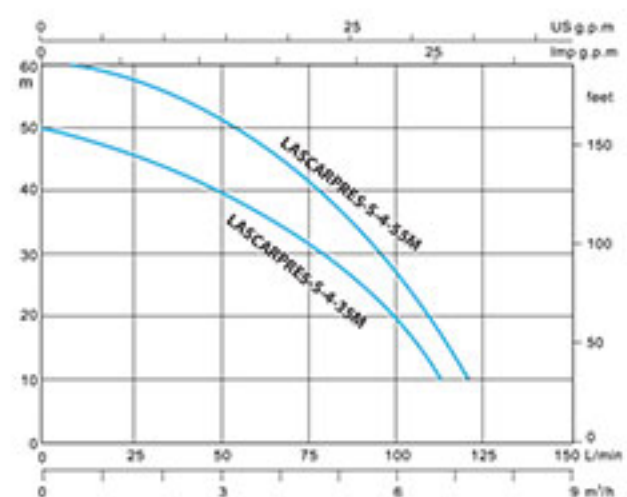
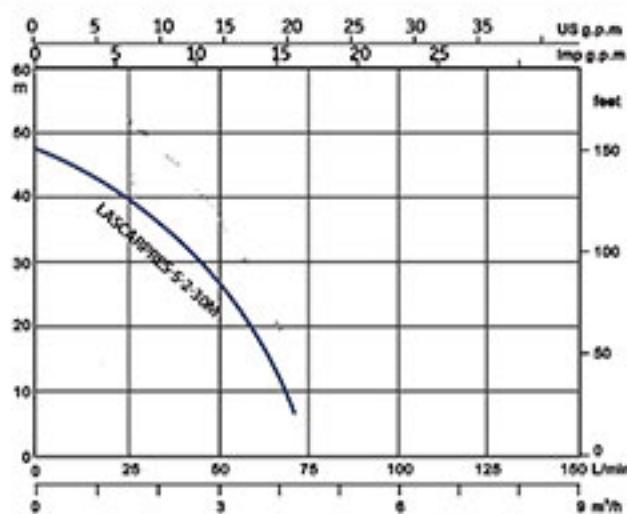
LASCAR 2



LASCAR 4



LASCAR 6



Booster Sets with Pressure Controller

Application:
Electronic booster set for household use in homes, apartment buildings

- IP55 Protection
- 2 Pole Asynchronous Motor
- Stainless Steel Shaft
- Max Suction Head 8m
- Cast Iron Suction / Discharge
- Stainless Steel Pump Body
- Ceramic/graphite mechanical seal
- Stainless Steel Impeller
- Built-in non return valve

Code	Voltage	Amps	No of Impellers	Power		Max Head(m)	Max Flow (l/min)	In / Out (Inch)
				KW	HP			
LASCARPRES-S2-30M	230VAC	3,8	3	0,55	0,75	48	70	1 x 1
LASCARPRES-S4-35M	230VAC	6,2	4	0,75	1,2	50	110	1 x 1
LASCARPRES-S4-55M	230VAC	9,6	5	1,5	2	62	120	1 x 1

Systems Available on Request

VSD Control
Variable speed multi pump pressure booster sets for applications where constant pressure is required

Applications
Multi-storey buildings, Hotels, Hostels and Apartment blocks

BFS Booster Sets
Cost effective mechanical booster sets. Pressure switch controlled

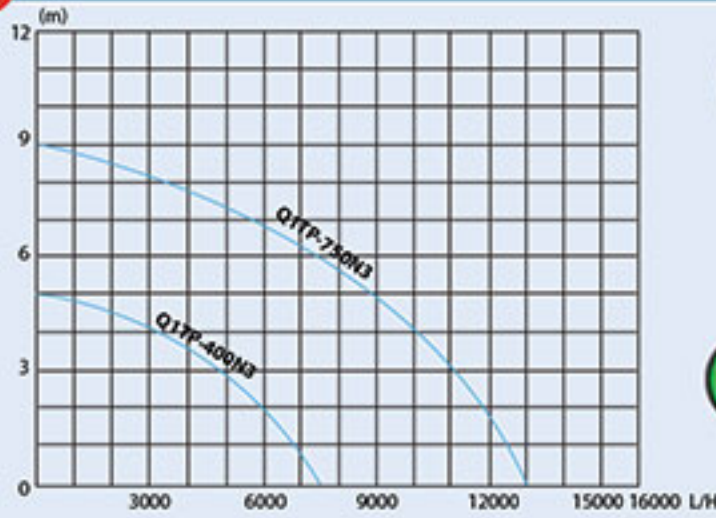
Applications
Large domestic installations, Guest houses

VSD Control
Variable speed multi pump pressure booster sets for applications where constant pressure is required

Applications
Industrial water supply
Irrigation systems
Mining water supply

SUBMERSIBLE DRAINAGE PUMPS

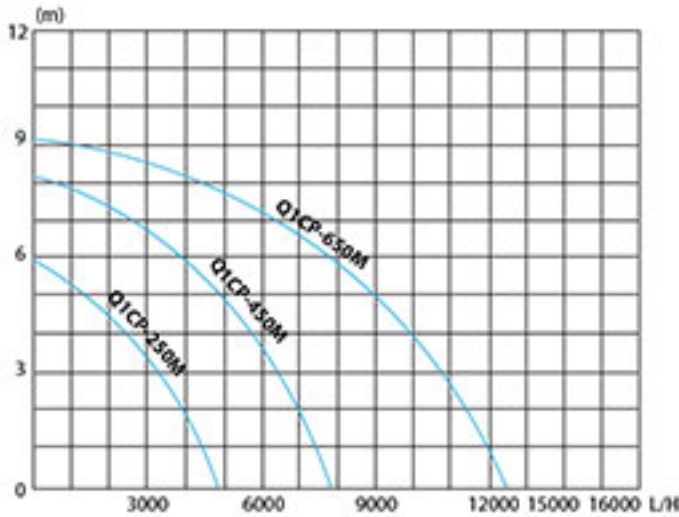
NEW



Domestic Utility Drainage Pump

- Max particulate size 1 - 35mm adjustable
- Corrosion resistant materials
- Complete with Float Switch
- Stainless Steel Shaft
- Not Continuous Rated
- Mechanical Seals
- **IPX8**

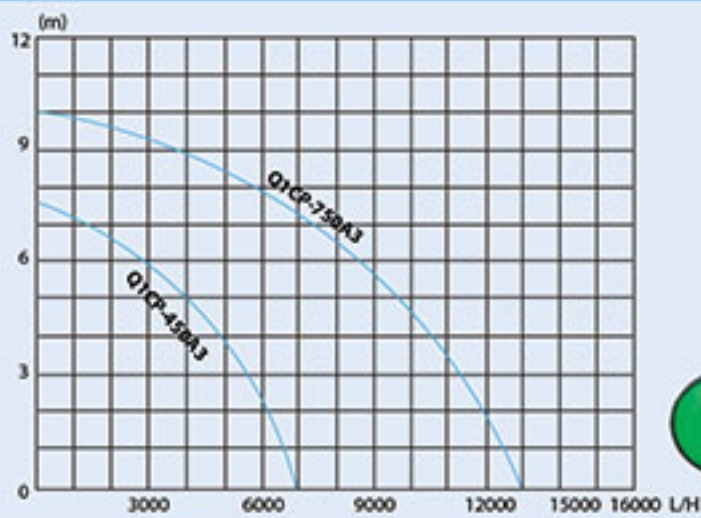
Code	Voltage	Power		Amps	Max Head(m)	Max Flow (l/min)	Outlet (mm)
		KW	HP				
Q1TP-400N3	230VAC	0.4	0.5	1.4	6	125	1"/1¼/1½
Q1TP-750N3	230VAC	0.75	1.0	2.9	9	217	1"/1¼/1½



Domestic Clean Water Drainage Pump

- Max particulate size 5mm
- Corrosion resistant materials
- Complete with Float Switch
- Stainless Steel Shaft
- Not Continuous Rated
- Mechanical Seals (Lip Seal for 0,25kW)
- **IPX8**

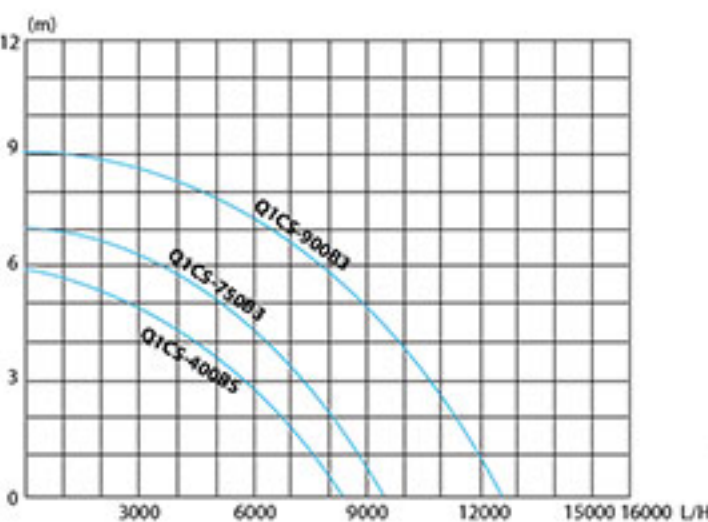
Code	Voltage	Power		Amps	Max Head(m)	Max Flow (l/min)	Outlet (mm)
		KW	HP				
Q1CP-250M	230VAC	0.25	0.33	1.1	6	83	1"/1¼/1½
Q1CP-450M	230VAC	0.45	0.6	1.6	8	133	1"/1¼/1½
Q1CP-650M	230VAC	0.65	0.87	2.5	9	208	1"/1¼/1½



Domestic Clean Water Drainage Pumps

- Max particulate size 5mm
- Corrosion resistant materials
- Complete with Float Switch
- Stainless Steel Shaft
- Not Continuous Rated
- Mechanical Seals (Lip Seal for 0,25kW)
- **IPX8**

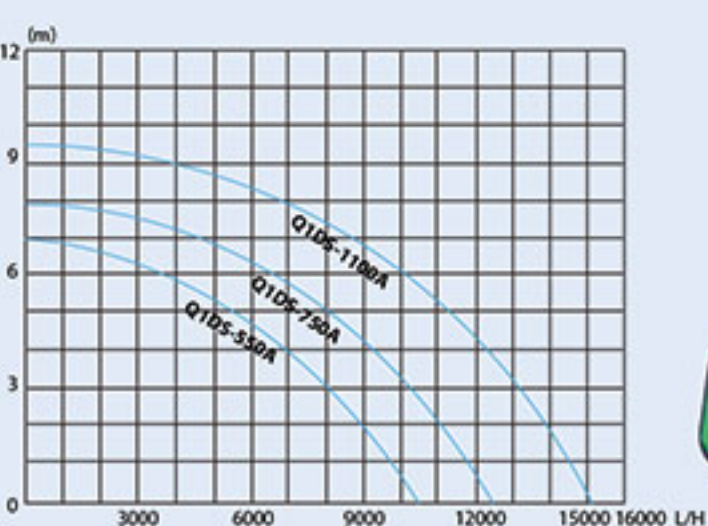
Code	Voltage	Power		Amps	Max Head(m)	Max Flow (l/min)	Outlet (mm)
		KW	HP				
Q1CP-450A3	230VAC	0.45	0.6	1.6	8	133	1"/1¼/1½
Q1CP-750A3	230VAC	0.75	0.87	2.7	10	208	1"/1¼/1½



Domestic Clean Water Drainage Pumps

- Max particulate size 5mm
- Corrosion resistant materials
- Complete with Float Switch
- Stainless Steel Pump Body
- Stainless Steel Shaft
- Not Continuous Rated
- Mechanical Seals
- **IPX8**

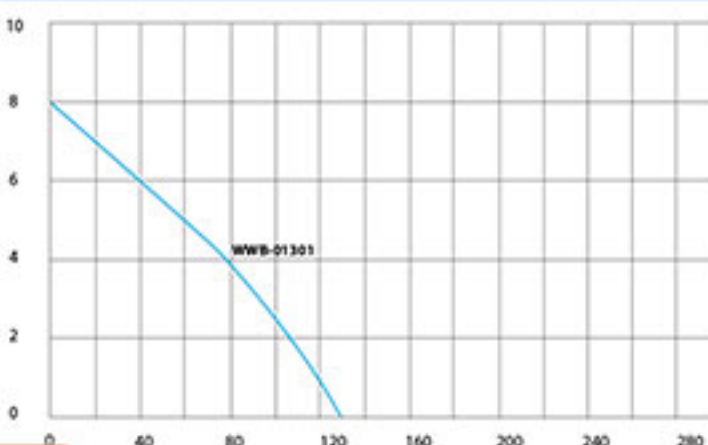
Code	Voltage	Power		Amps	Max Head(m)	Max Flow (l/min)	Outlet (mm)
		KW	HP				
Q1CS-400B3	230VAC	0.4	0.53	1.5	7	133	1"/1¼/1½
Q1CS-750B3	230VAC	0.75	0.75	2.7	8.5	175	1"/1¼/1½
Q1CS-900B3	230VAC	0.9	0.9	3.6	9	216	1"/1¼/1½



Domestic Dirty Water Drainage Pumps

- Max particulate size 35mm
- Corrosion resistant materials
- Complete with Float Switch
- Stainless Steel Pump Body
- Stainless Steel Shaft
- Not Continuous Rated
- Mechanical Seals
- **IPX8**

Code	Voltage	Power		Amps	Max Head(m)	Max Flow (l/min)	Outlet (mm)
		KW	HP				
Q1DS-550A	230VAC	0.55	0.74	2.5	7	175	1"/1¼/1½
Q1DS-750A	230VAC	0.75	1.0	2.9	8	216	1"/1¼/1½
Q1DS-1100A	230VAC	1.1	1.5	3.8	9.5	258	1"/1¼/1½



Bilge Pump

- Max Particulate size 25mm
- Corrosion resistant materials
- Tough plastic body with integral strainer
- Quick release inlet strainer for rapid cleaning

Code	Voltage	Power		Amps	Max Head(m)	Max Flow (l/min)	Outlet (mm)
		KW	HP				
WWB-01301	12VDC	0.14	0.18	12	8.5	126	25

AQUARIUM / FOUNTAIN PUMPS

Multi-function Submersible Pump

- 230VAC
- Energy Efficient & long service life
- For use in aquariums or for pond water circulation



Fountain/Pond Pumps with filter & LED colour Lights IP68

- Max. flow 2400 L/H.
- 45 Watts
- Max. head 2.3 meters

Colour	Code Small Filter	Code Large Filter
● ●	FKD-3200R/R	GPD-3200R/R
● ●	FKD-3200R/Y	GPD-3200R/Y
● ●	FKD-3200R/B	GPD-3200R/B
● ●	FKD-3200R/G	GPD-3200R/G
● ●	FKD-3200Y/B	GPD-3200Y/B
● ●	FKD-3200Y/G	GPD-3200Y/G
● ●	FKD-3200Y/Y	GPD-3200Y/Y
● ●	FKD-3200B/B	-
Spare Filter	-	GPD-FILTER



Code	Head Max	Flow Max	Power
FONT 08C5-2	1.0m	450L/h	8W
FONT 10C5-2	1.2m	600L/h	10W
FONT 17C5-2	1.6m	800L/h	17W
FONT 22C5-2	2.0m	1200L/h	22W
FONT 55C5-2	3.0m	2300L/h	55W
FONT 95C5-2	3.8m	3800L/h	95W

Pond / Fountain Pumps

Ideal for water display in gardens, ponds and water features

Code	Head Max	Flow Max	Power
FONT 18-09M	1.4m	15L/min	18W
FONT 20-12M	1.6m	15L/min	28W
FONT 21-28M	2.6m	35L/min	50W
FONT 30-34M	3.5m	50L/min	85W
FONT 36-40M	4.1m	60L/min	120W

Note: Pump & Fountain Head supplied separately c/w strainer sponge filter and power cord

Fountain Heads

Choose the fountain head to suit your application. Please check compatibility.

Compatibility: FONT 18/20-F,G / FONT 21-A,B,C,D / FONT 30/36-A,C,E

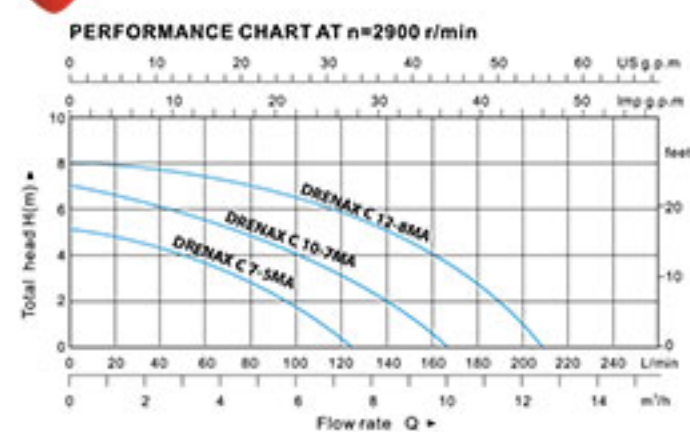
Code	FONT FH-*
* Add to Code	



Circulation Water Pumps with filter

Code	Flow Max	Head Max	Power
FK-120SC	4200L/h	6.2	1/6HP
FK-180SC	6600L/h	7.5	1/5HP

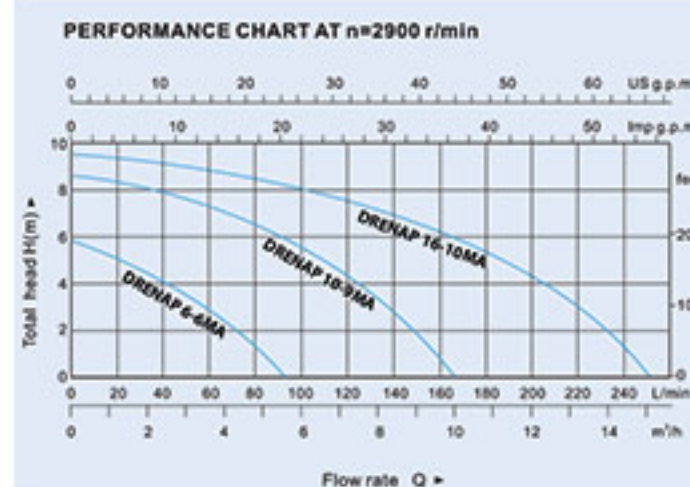
NEW DOMESTIC SUBMERSIBLE DRAINAGE PUMPS



Domestic Dirty Water Drainage Pump - 230VAC

- Max particle size 35mm
- Class B Insulation
- Max Immersion Depth - 5m
- Not Continuous Rated

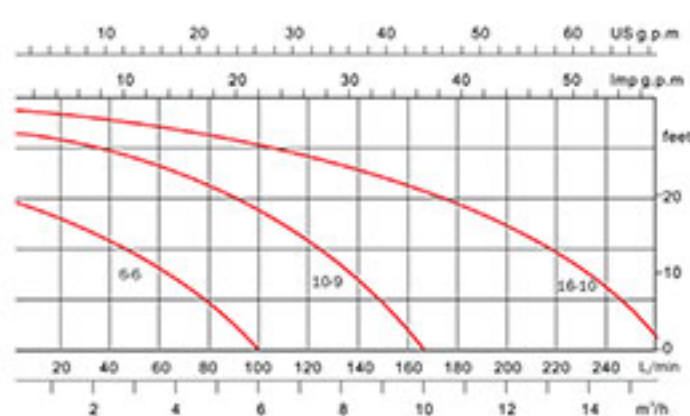
Code	Power		Amps	Max Head (m)	Max Flow (l/min)	Outlet (Inch)
	KW	HP				
DRENAX C7-5MA	0.4	0.5	1.8	4.7	133	1"1/4/1 1/2
DRENAX C10-7MA	0.55	0.73	2.4	7	160	1"1/4/1 1/2
DRENAX C12-8MA	0.75	1	2.7	8	205	1"1/4/1 1/2



Domestic Clean Water Drainage Pump - 230VAC

- Max particle size 5mm
- Class B Insulation
- Max Immersion Depth - 5m
- Not Continuous Rated

Code	Power		Amps	Max Head (m)	Max Flow (l/min)	Outlet (Inch)
	KW	HP				
DRENAP 6-6MA	0.15	0.2	1.4	5.7	94	1"1/4/1 1/2
DRENAP 10-9MA	0.37	0.5	1.7	8.5	168	1"1/4/1 1/2
DRENAP 16-10MA	0.5	1.67	3	9.5	250	1"1/4/1 1/2



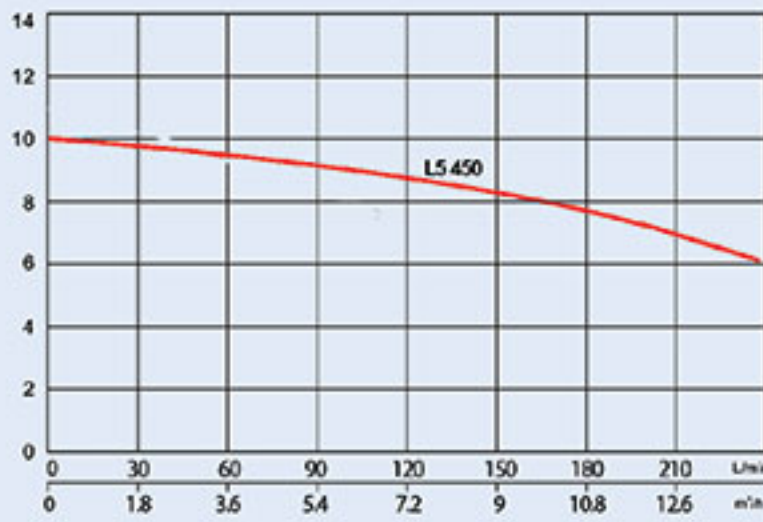
Sealless, Water Cooled, Continuous Rated, Fountain Pump - 230VAC

- C/w Float Switch
- Max solid diameter: 5mm
- Max Immersion depth: 7m
- Continuous Rated • Water Cooled Motor

These pumps can be used to pump clean water from garages or basements, to empty swimming pools or tanks or to supply garden fountains.

Code	Power		Amps	Max Head (m)	Max Flow (l/min)	Outlet (Inch)
	KW	HP				
DRENAPS 6-6MA	0.18	0.24	1	5.8	100	3/4 / 1

SUBMERSIBLE DRAINAGE PUMPS



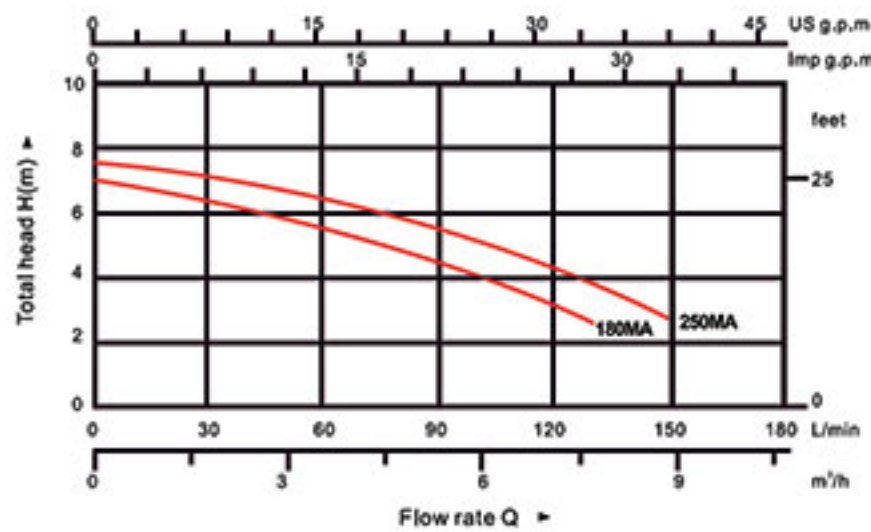
Clean Water Drainage Pump - 230VAC

- Max particle size 2mm
- Pump Body NBR Plastic
- Shaft Stainless Steel
- 2 Pole Induction motor
- Complete with float switch
- Impeller Rubber
- Double mechanical seal in oil bath
- Thermal Protected



The outlet can be rotated 90°

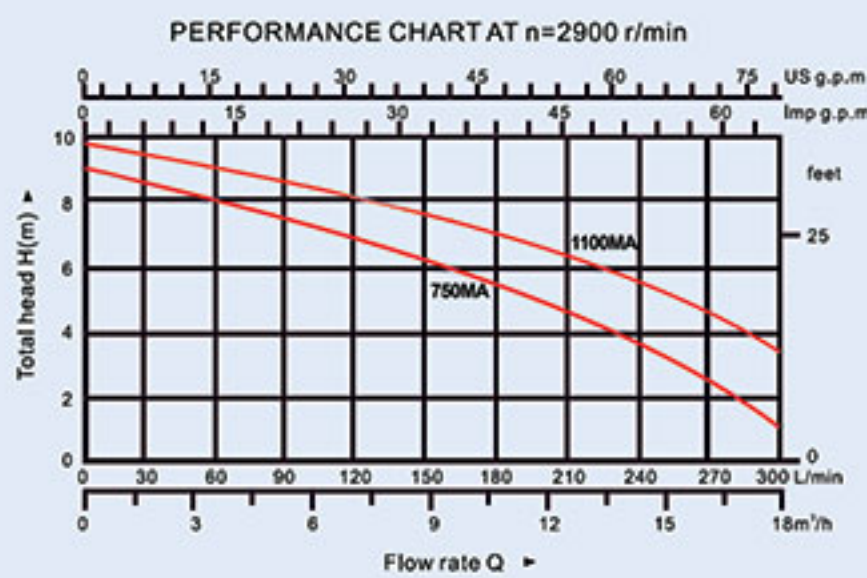
Code	KW	HP	Amp	Head Max	Outlet
DRENAP L5-450	0.45	0.6	1.95	10m	25mm



Sewage Pump with Plastic Pump Body - 230VAC

- c/w Float Switch • Maximum operating depth 5m below water level
- Dual seal and oil bath • Stainless steel motor housing
- Stainless steel mechanical seal (graphite to ceramic)
- Stainless steel shaft • Max Solids size Ø20mm
- c/w Thermal overload protection
- Reinforced polypropylene impeller
- Reinforced polypropylene pump casing and base plate

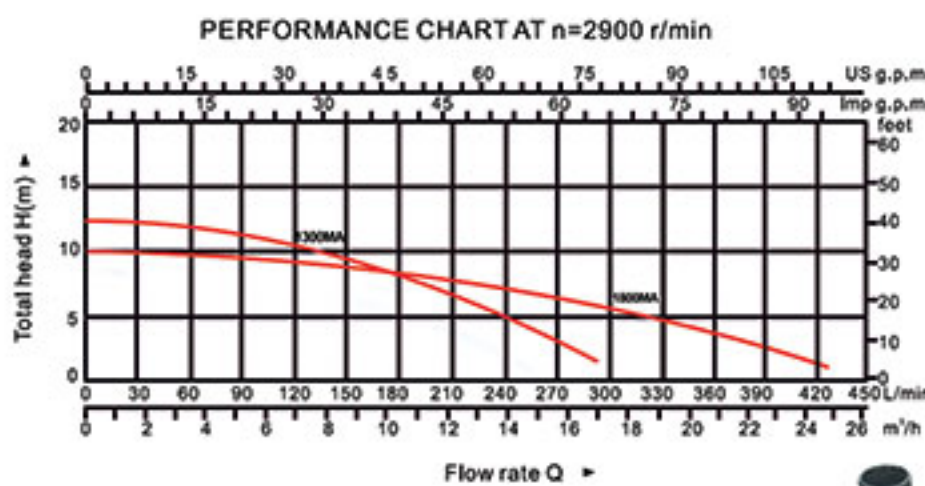
Code	KW	HP	Amp	Head Max	Outlet
DRAFEXP 180MA	0.18	0.20	1.5	7.0m	40mm
DRAFEXP 250MA	0.25	0.35	1.8	7.5m	40mm



Sewage Pump with Cast Iron Pump Body - 230 VAC

- Cast Iron pump body • Stainless steel shaft
- Stainless steel mechanical seal (ceramic to graphite)
- Cast iron impeller • Max Solids size Ø30mm
- c/w Thermal overload protection • Dual seal and oil bath

Code	KW	HP	Amp	Head Max	Outlet
With Float Switch					
DRAFEX 750MA	0.75	1	4.2	10m	50mm
DRAFEX 1100MA	1.1	1.5	4.6	9m	50mm
Without Float Switch					
DRAFEX 750M	0.75	1	4.2	10m	50mm
DRAFEX 1100M	1.1	1.5	4.6	9m	50mm

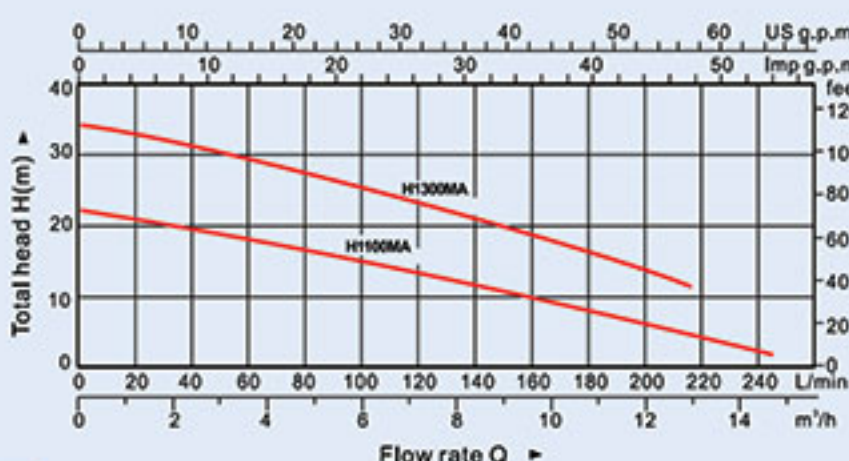


Sewage Pump with Cutting System - 230VAC

- c/w Float Switch
- Maximum operating depth 5m below water level
- Maximum fluid temperature: 40°C
- Maximum passage for suspended solids Ø30mm
- PH value in water : 4 - 10
- Dual seal and oil bath
- Stainless steel mechanical seal
- Cast Iron pump body
- Stainless steel shaft • Cast iron impeller with cutter

Code	KW	HP	Amp	Head Max	Outlet
DRAFEX 1300MA	1.3	1.75	14.3	12m	50mm
DRAFEX 1800MA	1.8	2.4	4.9	10m	50mm

Designed to lift dirty water with long fibers or firm sundries. These are cut up by the cutter to avoid the impeller becoming blocked or entangled. Suitable for use in kitchen, sanitation, factory, mine and domestic applications.



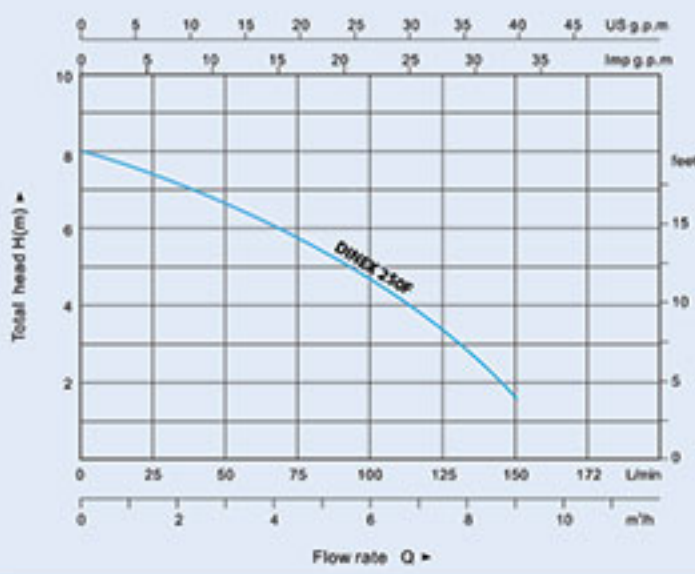
High Head Two Stage Submersible Pumps - 230VAC

- Float switch for auto cut in cut out • Compact size
- Thermal overload protection • Dual seal and oil bath
- Light weight and easy to use
- Maximum operating depth 5 meter below water level
- Maximum passage for suspended solids 2mm

Code	KW	HP	Amp	Head Max	Outlet
DRAFEX H1100MA	1.1	1.5	5.6	20m	50mm
DRAFEX H1300MA	1.3	1.75	4.3	34m	50mm

STAINLESS STEEL SUBMERSIBLE PUMPS

PERFORMANCE CHART AT n=2900 r/min



NEW

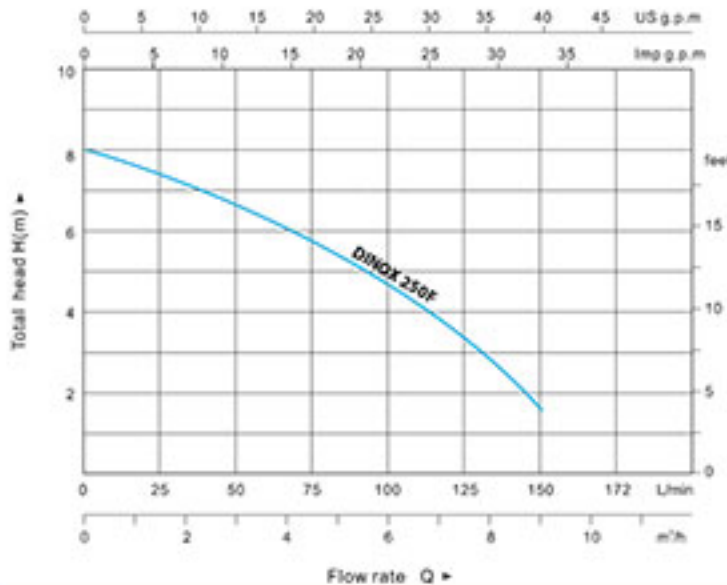
Clean Water Sump Pump - 230VAC

- C/w Float Switch
- Max depth 5m
- Max solids size 10mm
- Stainless Steel Pump and Motor Body
- Thermal Protection
- Stainless Steel Impeller

- Stainless Steel Shaft
- Seal Silicon Carbide in oil chamber
- 2 Pole Induction Motor

Code	Power		Amps	Max Head (m)	Max Flow (l/min)	Outlet (Inch)
	KW	HP				
DINOX 250F	0.25	0.33	2	8	133	1¼

PERFORMANCE CHART AT n=2900 r/min



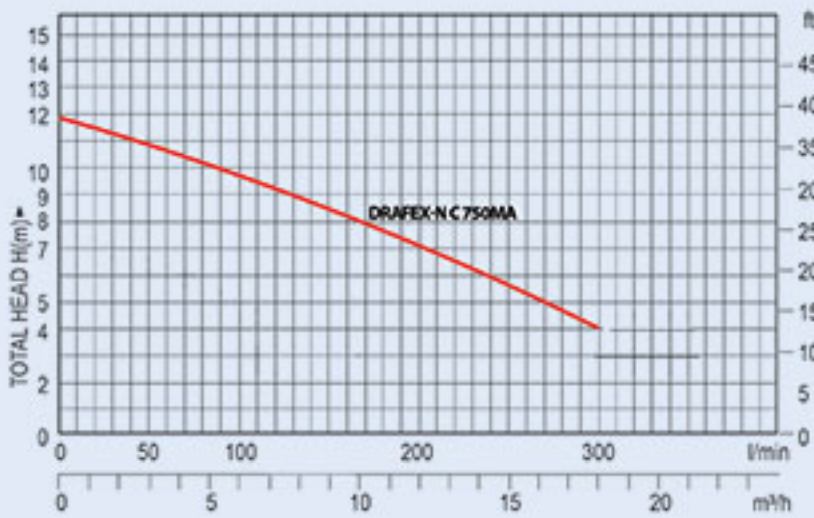
NEW

Dirty Water Sump Pump - 230VAC

- C/w Float Switch
- Max depth 5m
- Max solids size 20mm
- Stainless Steel Pump and Motor Body
- Thermal Protection
- Stainless Steel Impeller

- Stainless Steel Shaft
- Seal Silicon Carbide in oil chamber
- 2 Pole Induction Motor

Code	Power		Amps	Max Head (m)	Max Flow (l/min)	Outlet (Inch)
	KW	HP				
DINOX 250F	0.25	0.33	2.2	8	133	1"/1¼/1½



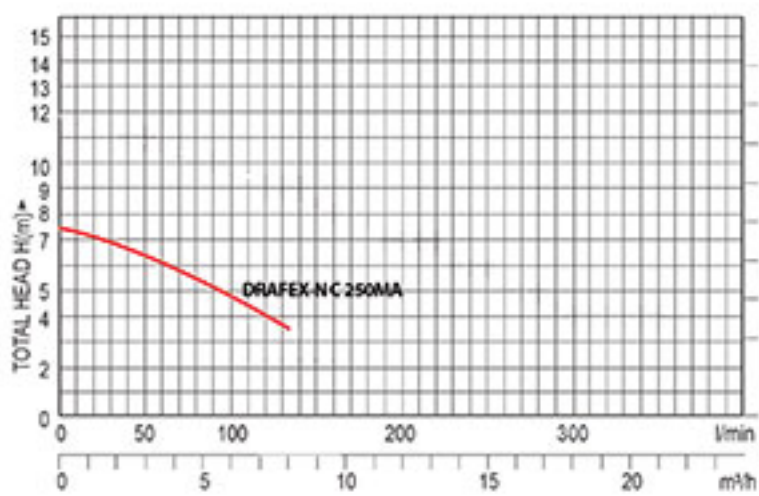
NEW

Dirty Water/Sewage Submersible Pump - 230VAC

- C/w Float Switch
- Max depth 5m
- Max solid size 25mm
- Pump body Stainless Steel
- Impeller Stainless Steel
- Shaft Stainless Steel

- Thermal protection
- Seal Ceramic / Graphite
- Suitable for use with sea water

Code	Power		Amps	Max Head (m)	Max Flow (l/min)	Outlet (Inch)
	KW	HP				
DRAFEX-N C750MA	0.75	1	3.3	12	300	50



NEW

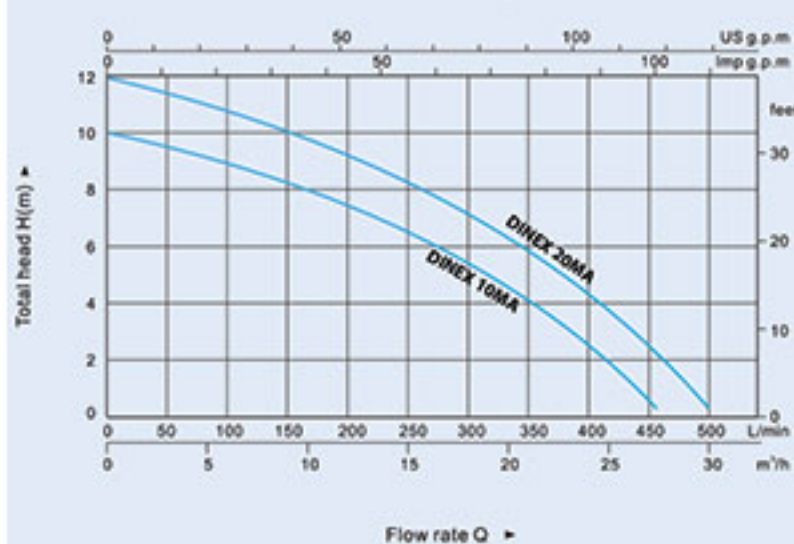
Dirty Water/Sewage Submersible Pump - 230VAC

- C/w Float Switch
- Max depth 5m
- Max solid size 25mm
- Pump body Stainless Steel
- Impeller Stainless Steel
- Shaft Stainless Steel

- Thermal protection
- Seal Ceramic / Graphite
- Suitable for use with sea water

Code	Power		Amps	Max Head (m)	Max Flow (l/min)	Outlet (Inch)
	KW	HP				
DRAFEX-N C250MA	0.25	0.33	2.1	7.5	150	1¼

PERFORMANCE CHART AT n=2900 rpm



Dirty Water/Sewage Submersible Pump - 230VAC

- C/w Float Switch
- Max depth 5m
- Max solid size 40mm
- Continuous Rated
- Stainless Steel Pump Body

- Stainless Steel Motor Sleeve
- Stainless Steel Impeller
- Stainless Steel Shaft
- Ceramic / Graphite Seal
- 2 Pole Induction Motor

Code	Power		Amps	Max Head (m)	Max Flow (l/min)	Outlet (Inch)
	KW	HP				
DINOX 10MA	0.75	1	7.8	10	450	2
DINOX 20MA	1.5	2	10	12	500	2

NEW

STAINLESS STEEL SUBMERSIBLE PUMPS

Stainless Steel Cased Submersible Pump - 230VAC

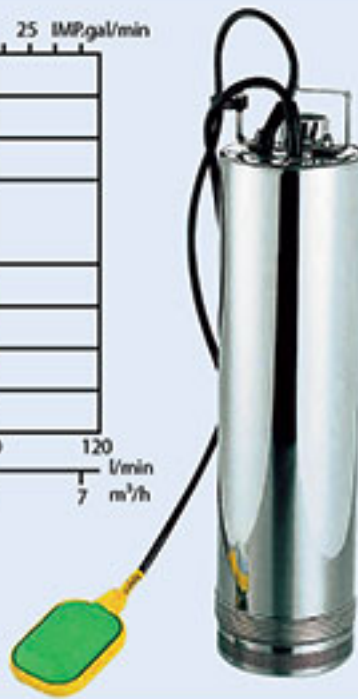
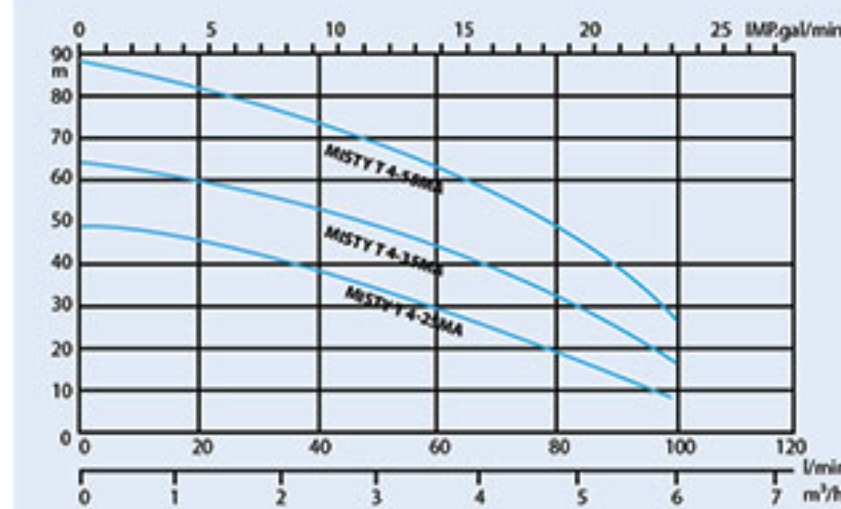
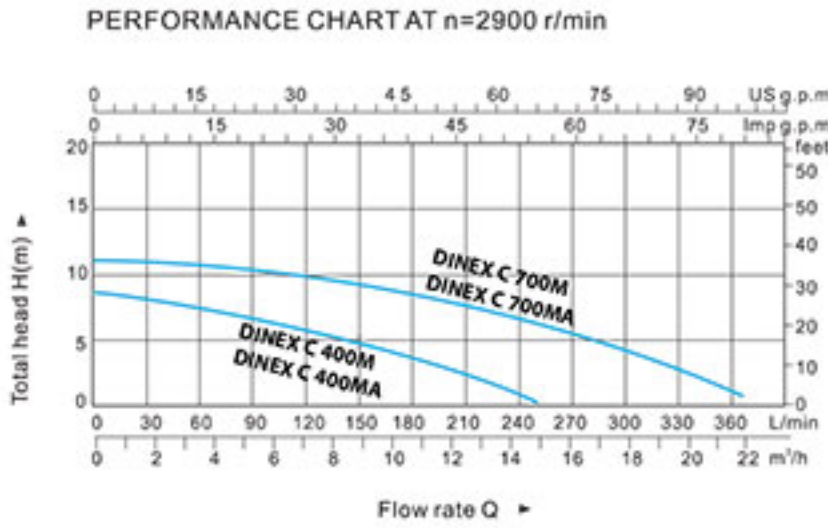
- Max depth 5m
- Thermal Protection
- Stainless Steel Shaft
- Stainless Steel Outer Case
- Cast Iron Pump Body
- Ceramic / Graphite Seal
- Continuous Rate
- Cast Iron Impeller
- 2 Pole Induction Motor

Code	Power		Amps	Max Head (m)	Max Flow (l/min)	Outlet (Inch)
	KW	HP				
DINEX C400M	0.4	0.53	3.3	9	150	2
DINEX C400MA	0.4	0.53	3.3	9	183	2
DINEX C700M	0.7	0.93	3.8	11	183	2
DINEX C700MA	0.7	0.93	3.8	11	183	2

Multi-Stage Stainless Steel Submersible Pump - 230VAC

- Outer casing stainless steel
- Impellers Plastic (PC)
- Motor shaft in stainless steel
- Diffusers in Noryl, and glass loaded polymer
- Double mechanical seal in graphite and alumina
- Asynchronous, two poles
- Water cooled motor
- Continuous operation
- Built-in thermal protection

Code	Power		Amps	Max Head (m)	Max Flow (l/min)	Outlet (Inch)
	KW	HP				
MISTI T4-25MA	0.75	1	3.4	50	100	1¼
MISTI T4-35MA	0.8	1.25	6.5	65	100	1¼
MISTI T4-55MA	1.3	1.75	7.4	85	100	1¼



Submersible multi-stage pumps for open wells with a minimum diameter of 140mm

STAINLESS STEEL BOREHOLE MOTORS

NEW

Single Phase 4"(100mm) Borehole Pump Motors (Motor and lead out cable only)

Code 230V	Full Load Current	Code 400V	Full Load Current	kW	HP	Length (mm)
NFS4-37P	3.9A	-	-	0.37	0.5	343
NFS4-56P	5.0A	-	-	0.55	0.75	363
NFS4-75P	6.0A	-	-	0.75	1	383
NFS4-110P	8.8A	-	-	1.1	1.5	428
NFS4-150P	11.8A	-	-	1.5	2	473
NFS4-220P	17.0A	-	-	2.2	3	580

Three Phase 4"(100mm) borehole pump motors (Motor and lead out cable only)

Code 230V	Full Load Current	Code 400V	Full Load Current	kW	HP	Length (mm)
NFS4-37P-3P	3.6A	-	-	0.37	0.5	343
NFS4-56P-3P	4.8A	NFS4-56V	1.7A	0.55	0.75	363
NFS4-75P-3P	6.3A	NFS4-75V	2.2A	0.75	1	383
NFS4-110P-3P	8.6A	NFS4-110V	3.0A	1.1	1.5	428
NFS4-150P-3P	10.6A	NFS4-150V	3.9A	1.5	2	473
NFS4-220P-3P	15.6A	NFS4-220V	5.9A	2.2	3	580/565
-	-	NFS4-300V	7.2A	3	4	580
-	-	NFS4-400V	9.3A	4	5.5	645
-	-	NFS4-550V	13A	5.5	7.5	755
-	-	NFS4-750V	17A	7.5	10	955

Standard Single Phase 230V Control Box

Code	kW	Code	kW
NF0.37	0.37	NF1.1	1.1
NF0.56	0.56	NF1.5	1.5
NF0.75	0.75	NF2.2	2.2



For full range of 400V Control Panels see page 173 -174

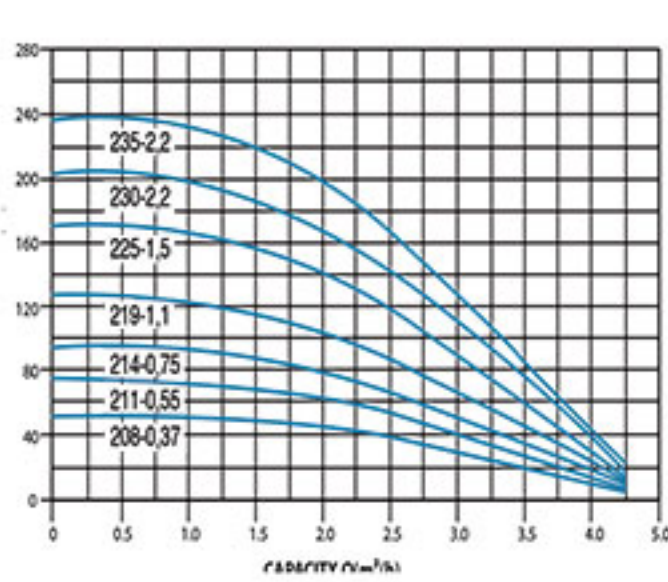


NEW

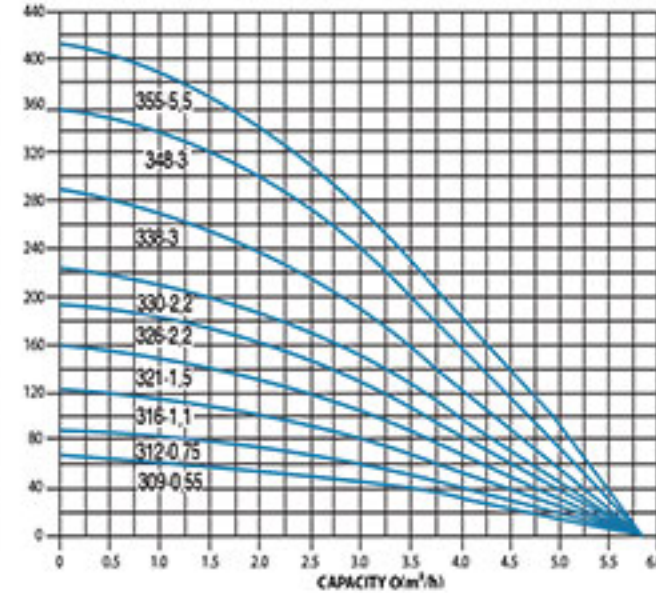
STAINLESS STEEL/PLASTIC 4" BOREHOLE PUMPS

Impellers & Difusers in Poly-Phenylene Oxide

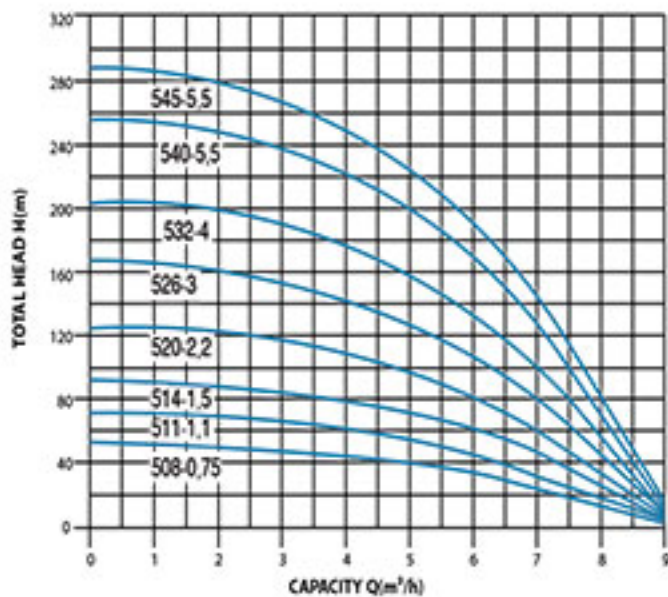
Pump Only	230V Pump & Motor	400V Pump & Motor	kW	HP
4SR208	4SRM208	—	0.37	0.5
4SR211	4SRM211	4SRV211	0.55	0.75
4SR214	4SRM214	4SRV214	0.75	1.1
4SR219	4SRM219	4SRV219	1.1	1.5
4SR225	4SRM225	4SRV225	1.5	2.0
4SR230	4SRM230	4SRV230	2.2	3.0
4SR309	4SRM309	4SRV309	0.55	0.75
4SR312	4SRM312	4SRV312	0.75	1.1
4SR316	4SRM316	4SRV316	1.1	1.5
4SR321	4SRM321	4SRV321	1.5	2.0
4SR326	4SRM326	4SRV326	2.2	3.0
4SR330	4SRM330	4SRV330	2.2	3.0
4SR338	—	4SRV338	3.0	4.0
4SR348	—	4SRV348	4.0	5.5
4SR355	—	4SRV355	5.5	7.5
4SR508	4SRM508	4SRV508	0.75	1.1
4SR511	4SRM511	4SRV511	1.1	1.5
4SR514	4SRM514	4SRV514	1.5	2.0
4SR520	4SRM520	4SRV520	2.2	3.0
4SR526	—	4SRV526	3.0	4.0
4SR532	—	4SRV532	4.0	5.5
4SR540	—	4SRV540	5.5	7.5
4SR545	—	4SRV545	5.5	7.5
4SR807	4SRM807	4SRV807	0.75	1.1
4SR809	4SRM809	4SRV809	1.1	1.5
4SR811	4SRM811	4SRV811	1.5	2.0
4SR814	4SRM814	4SRV814	2.2	3.0
4SR816	4SRM816	4SRV816	2.2	3.0
4SR820	—	4SRV820	3.0	4.0
4SR824	—	4SRV824	4.0	5.5
4SR828	—	4SRV828	5.5	7.5
4SR832	—	4SRV832	5.5	7.5
4SR1004	4SRM1004	—	0,55	0,75
4SR1006	4SRM1006	—	0,75	1,1
4SR1008	4SRM1008	4SRV1008	1,1	1,5
4SR1010	4SRM1010	4SRV1010	1,5	2,0
4SR1014	4SRM1014	4SRV1014	2,2	3,0
4SR1017	—	4SRV1017	3,0	4,0
4SR1021	—	4SRV1021	4,0	5,5
4SR1028	—	4SRV1028	5,5	7,5
4SR1036	—	4SRV1036	7,5	10,0
4SR1604	4SRM1604	4SRV1604	1,1	1,5
4SR1606	4SRM1606	4SRV1606	1,5	2,0
4SR1609	4SRM1609	4SRV1609	2,2	3,0
4SR1612	—	4SRV1612	3,0	4,0
4SR1616	—	4SRV1616	4,0	5,5
4SR1620	—	4SRV1620	5,5	7,5
4SR1625	—	4SRV1625	7,5	10,0



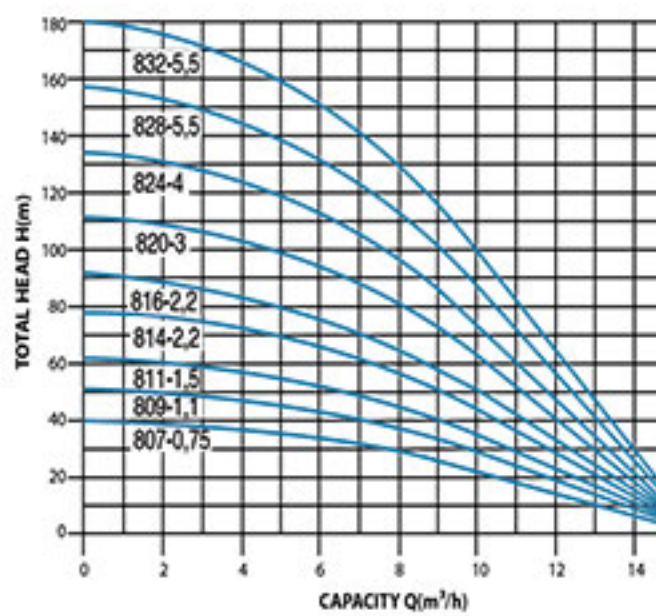
4SR2



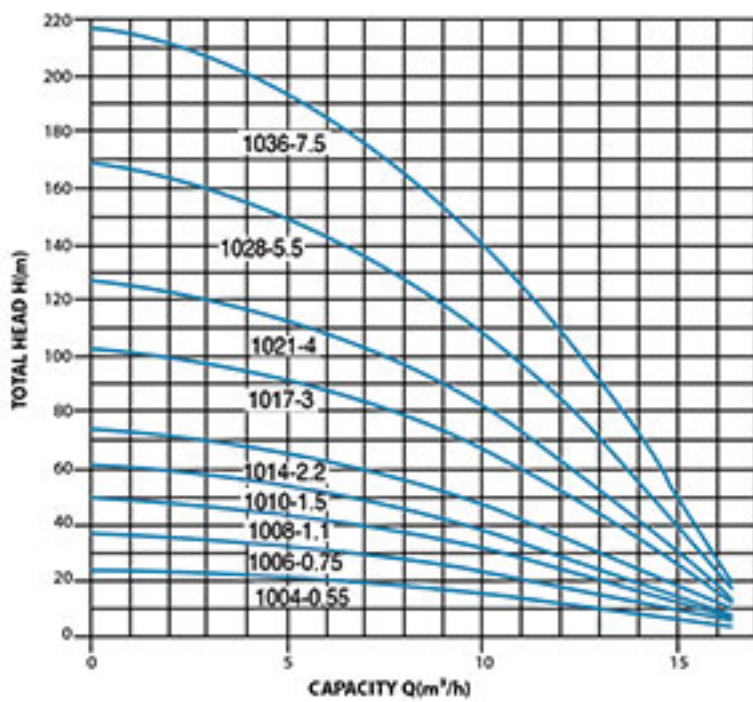
4SR3



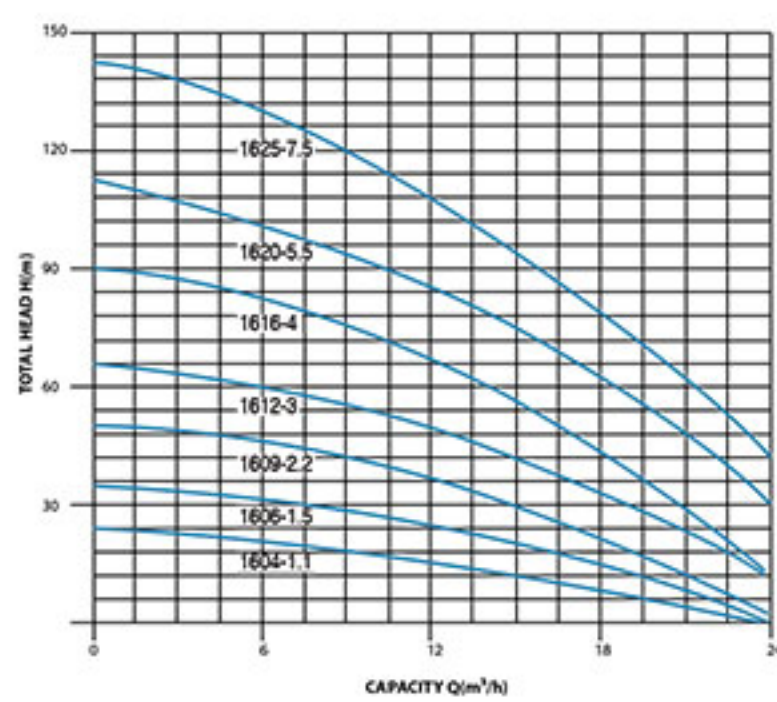
4SR5



4SR8



4SR10



4SR16

Standard 1PH Control Box

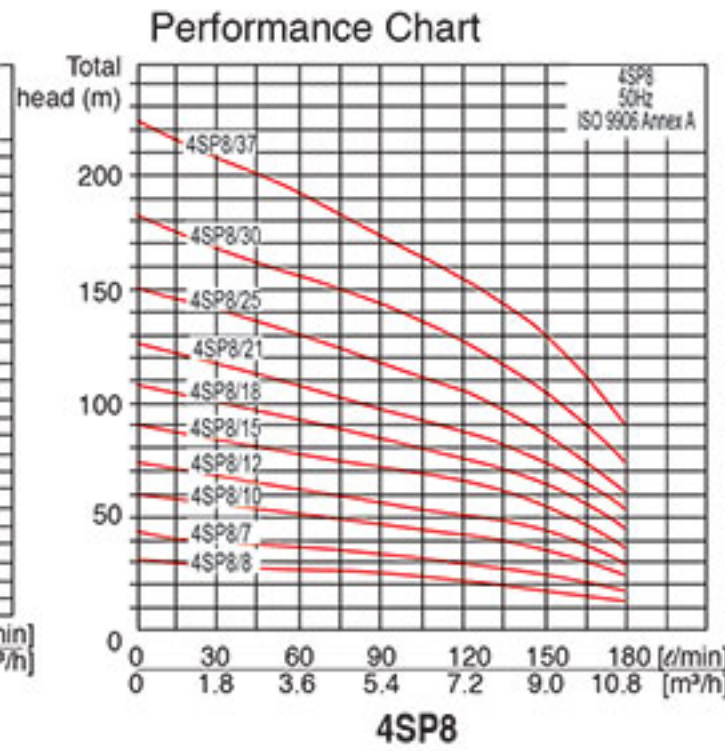
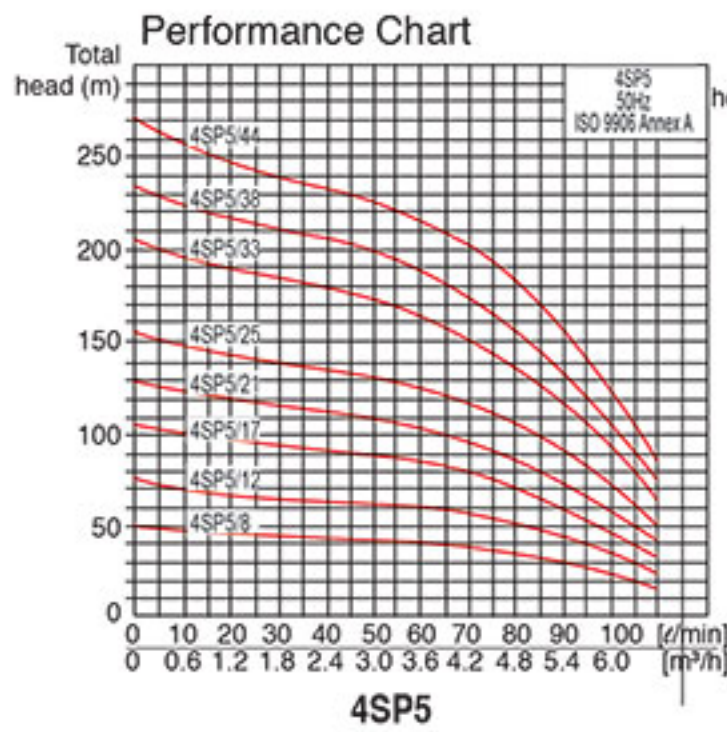
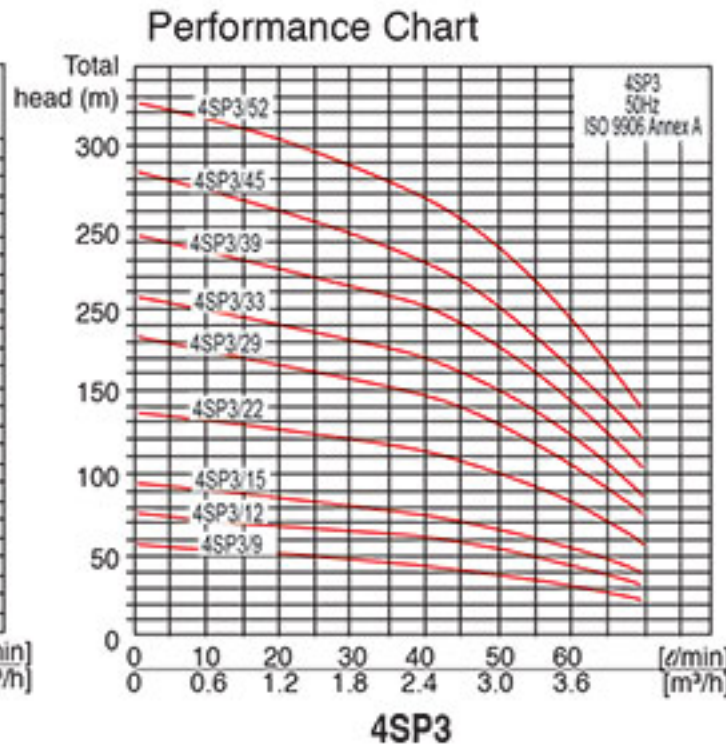
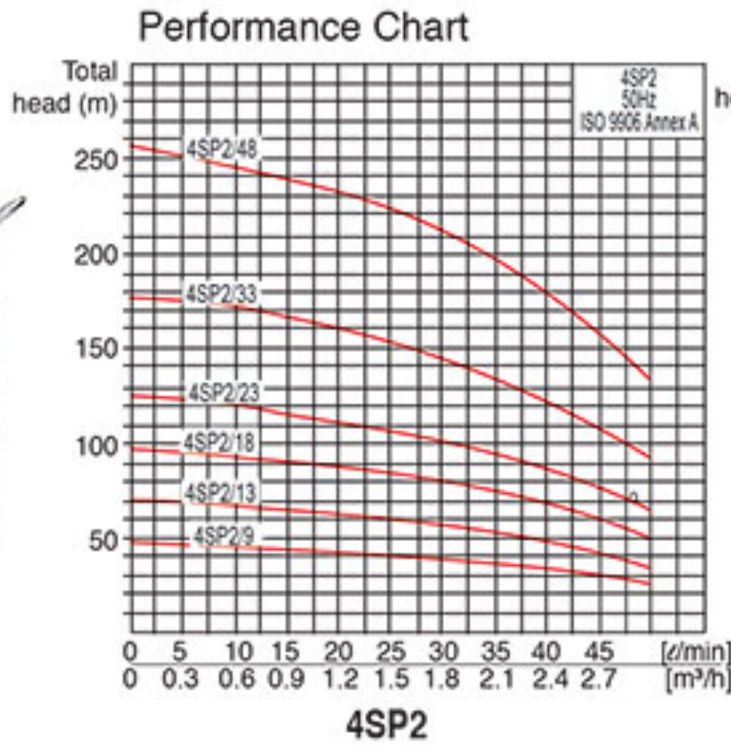


- 230V 1PH Pump complete with Motor, Lead Out Cable, 1PH Standard Control Box
- 400V Pump complete with Motor, Lead Out Cable
- Non-Return valve incorporated in pump body

Pump Series	Outlet Size	Pump Series	Outlet Size
4SR2	1¼"	4SR8	2"
4SR3	1.½"	4SR10	2"
4SR5	2"	4SR16	2"

FULL STAINLESS STEEL 4" BOREHOLE PUMPS

Complete Stainless Steel Construction, Impeller and Strainer



- 230V 1PH Pump complete with Motor, Lead Out Cable, Standard 1PH Control Box
- 400V Pump complete with Motor, Lead Out Cable
- Non-Return valve incorporated in pump body

Pump Series	Outlet Size	Pump Series	Outlet Size
4SP2	1"	4SP5	1.5"
4SP3	1"	4SP8	2"



Standard 1PH Control Box

Pump Only	230V Pump & Motor	400V Pump & Motor	kW	HP
4SP2/9	4SP2/9P	—	0.37	0.50
4SP2/13	4SP2/13P	4SP2/13V	0.55	0.75
4SP2/18	4SP2/18P	4SP2/18V	0.75	1.0
4SP2/23	4SP2/23P	4SP2/23V	1.1	1.5
4SP2/33	4SP2/33P	4SP2/33V	1.5	2.0
4SP2/48	4SP2/48P	4SP2/48V	2.2	3.0
4SP3/9	4SP3/9P	4SP3/9V	0.55	0.75
4SP3/12	4SP3/12P	4SP3/12V	0.75	1.0
4SP3/15	4SP3/15P	4SP3/15V	1.1	1.5
4SP3/22	4SP3/22P	4SP3/22V	1.5	2.0
4SP3/29	4SP3/29P	4SP3/29V	2.2	3.0
4SP3/33	4SP3/33P	4SP3/33V	2.2	3.0
4SP3/39	—	4SP3/39V	3.0	4.0
4SP3/45	—	4SP3/45V	3.0	4.0
4SP3/52	—	4SP3/52V	4.0	5.5
4SP5/8	4SP5/8P	4SP5/8V	0.75	1.0
4SP5/12	4SP5/12P	4SP5/12V	1.1	1.5
4SP5/17	4SP5/17P	4SP5/17V	1.5	2.0
4SP5/21	4SP5/21P	4SP5/21V	2.2	3.0
4SP5/25	4SP5/25P	4SP5/25V	2.2	3.0
4SP5/33	—	4SP5/33V	3.0	4.0
4SP5/38	—	4SP5/38V	4.0	5.5
4SP5/44	—	4SP5/44V	4.0	5.5
4SP8/5	4SP8/5P	4SP8/5V	0.75	1.0
4SP8/7	4SP8/7P	4SP8/7V	1.1	1.5
4SP8/10	4SP8/10P	4SP8/10V	1.5	2.0
4SP8/12	4SP8/12P	4SP8/12V	2.2	3.0
4SP8/15	4SP8/15P	4SP8/15V	2.2	3.0
4SP8/18	—	4SP8/18V	3.0	4.0
4SP8/21	—	4SP8/21V	4.0	5.5
4SP8/25	—	4SP8/25V	4.0	5.5
4SP8/30	—	4SP8/30V	5.5	7.5
4SP8/37	—	4SP8/37V	5.5	7.5

BOREHOLE ACCESSORIES

Base Plates		Safety Rope		4-Core Submersible Cable			Gate Valves	Non-Return Valve with Filter	Non-Return Valve	Full Way Ballcock Valve	PVC Valves
Code	Description	Code (per m)	Size	Code (per m)	Size	Size	Gate Valves	Non-Return Valve with Filter	Non-Return Valve	Full Way Ballcock Valve	PVC Valves
P115-B	32mm Pressed Metal	SR-7	7mm ²	A430	2-5mm ²	15mm	GV001	NRV01F	NRV01	FB001	HV001
P116	40mm Pressed Metal	SR-10	10mm ²	A431	4mm ²	20mm	GV002	NRV02F	NRV02	FB002	HV002
P117	50mm Pressed Metal	SR-12	12mm ²	A432	6mm ²	25mm	GV003	NRV03F	NRV03	FB003	HV003
				A433	10mm ²	32mm	GV004	NRV04F	NRV04	FB004	HV004
				A434	16mm ²	40mm	GV005	NRV05F	NRV05	FB005	HV005
						50mm	GV006	NRV06F	NRV06	FB006	HV006

PUMP ACCESSORIES

To be used with PS-02A 2.8 pressure switch



Hydrospheres - Max.Working Pressure: 8 Bar | Bursting Pressure: 25 Bar

Code	Description	Spare Bladders
TNK24	24ℓ Vertical Pump Mounting	BLA24
TNK24H	24ℓ Horizontal Free Standing	BLA24H
TNK24H-SS	24ℓ Stainless Steel Horizontal Free Standing	BLA24H
TNK50	50ℓ Vertical Free Standing	BLA50
TNK50H	50ℓ Horizontal Free Standing	BLA50H
TNK100	100ℓ Vertical Free Standing	BLA100
TNK200	200ℓ Vertical Free Standing	BLA200
TNK300	300ℓ Vertical Free Standing	BLA300
TNK500	500ℓ Vertical Free Standing	BLA500



Brass Connectors

Code	Description
3WAY	3-way Brass Connector
5WAY	5-way Brass Connector

Float Switches



Also see pg 51 & 56 for more options

- Code UKV70-AB**
- Temp: -30°C - 80°C
 - Contacts: 4A@250VAC
 - N/O Mercury Switch



Code	Description
FLO-1	3m 8A Float Switch 1C/O
FLO-2	3m 8A Float Switch 1C/O

• c/w weight
• Internal Micro Switch
See pg 51 for more options



Flexible Hose

Code	Description
FH60	1" BSP x 60cm long flexible hose (s/s)



Pressure Gauge

Code	Description
GGE6R	40mmØ 6Bar Pressure Gauge, rear
GGE6B	40mmØ 6Bar Pressure Gauge, bottom
GGE10R	40mmØ 10Bar Pressure Gauge, rear
GGE10B	40mmØ 10Bar Pressure Gauge, bottom

Pressure Switches



Code	Pressure (Bar)		Contact Rating	Thread
	Min.	Max.		
PS-02A 2.8	1.4	2.8	2P 20A N/C	1/4" NPT
PS-02A 3.5	2.1	3.5	2P 20A N/C	1/4" NPT
PS-02A 4.3	2.8	4.3	2P 20A N/C	1/4" NPT
PS-02B 5.6	3.5	5.6	2P 20A N/C	1/4" NPT
PS-02B 7.2	4.9	7.2	2P 20A N/C	1/4" NPT

Strain relief for Float Switches

CA-8135	CA-8136
Cable Guard	Flange

CON



SWITCHMATIC 2



SWITCHMATIC 1T

Electronic Pressure Switches IP65

With integrated digital pressure gauge. (Bar & psi). Start and stop single phase electric pumps. Cut-In and Cut-Out pressure easily and accurately set via control panel.

Code	SWITCHMATIC 2	SWITCHMATIC 1T
Power Supply	110 - 230VAC, 50/60Hz	
Max Power	2.2kW (3HP)	
Start Pressure	0.5 TO 7 bar	
Stop Pressure	1 to 8 bar	
Max Differential	7.5 bar	
Min Differential	0.5 to 1.5 bar	
Max water Temp	50°C	
Inlet Thread	G 1/4" F	G 1"
Outlet Thread	—	G 1"
Tank Thread	—	G 1"

SWITCHMATIC 2

- Dry run protection (current)
- Overload alarm
- Differential, Inverse or synchronized (2 pumps) control

SWITCHMATIC 1T

- Incorporated 3 way fitting
- Built-in non return valve
- Dry run protection (pressure)

Common Features

- ART (Automatic Reset Test feature)
- Sleep mode for low power consump.
- Built-in pressure transmitter
- Rapid cycle alarms
- Manual start function



Pressurestat IP65

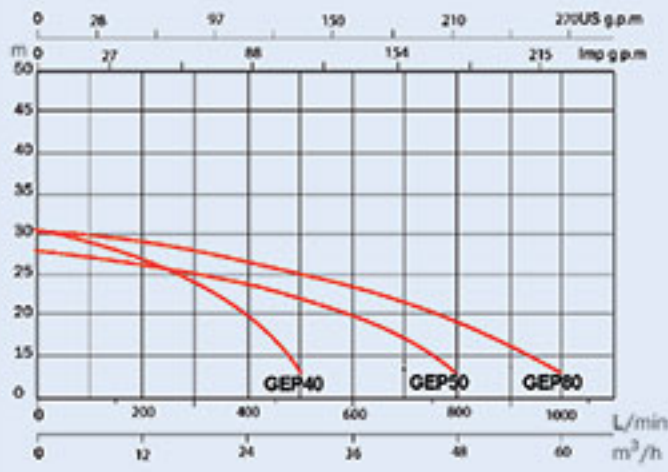
Assembled to a pump it supplies constant pressure. Electronic controls prevent starting in the absence of water, and reduce water hammer. Does not require any maintenance or air pre-charge.

Applications:

- Suitable for operation with water containing a small quantity of sand.
- Replaces the use of costly hydrospheres and pressure switches in many systems.

Code	DSK-1	DSK-1.1	DSK-2	DSK-2.1
Voltage	240V	240V	230V	230V
Rated Current	10A	10A	10A	10A
Max. Pressure	10 bar	10 bar	10 Bar	10 Bar
Starting Pressure	1.5 bar	1 - 2.2 bar (Adj)	1.5 Bar	1.5 - 2.5 Bar (Adj)
Stopping Pressure	The Max given by the pump			
Differential Pressure	≥ 0.7 Bar	≥ 0.7 Bar	≥ 0.7 Bar	≥ 0.5 Bar
Max. Flow	12m³/h	12m³/h	12 m³/h	12 m³/h
Max. Building Height	15m	15m	15m	15m
In/Outlet Thread Ø	1" male	1" male	1" male	1" male

PETROL ENGINE WATERPUMPS



Portable Engine Driven Pumps

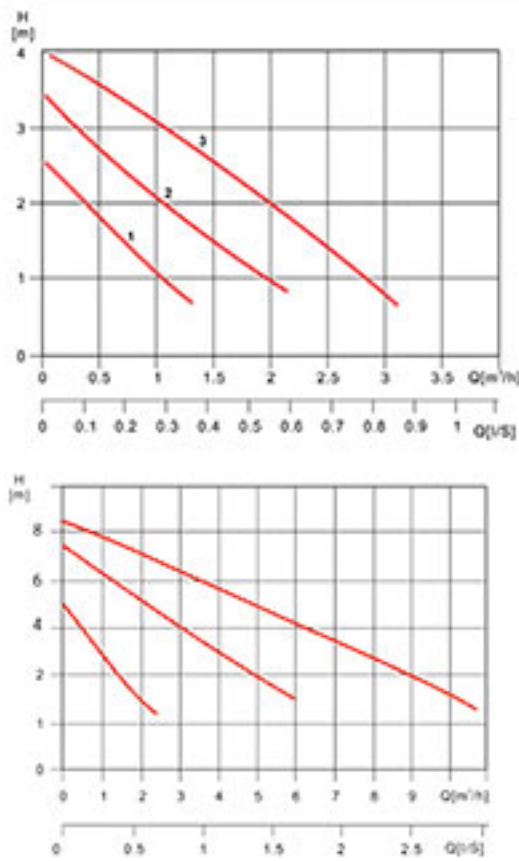
- Maximum working pressure 4 bar
- Suction lift 8m
- Fluid Temperature up to 40°C
- Continuous Duty



GEP centrifugal hand-carry motor pumps are particularly suitable to supply and distribute clean water for agricultural and gardening purposes when electrical connection is not possible

Code	Power	Inlet/Outlet	Head Max.	Flow Rate Max.
GEP40	5.5 HP	2" x 2"	28m	600ℓ/min
GEP50	6.5 HP	3" x 3"	28m	1000ℓ/min
GEP80	8 HP	4" x 4"	28m	1800ℓ/min

CIRCULATING PUMPS



Circulating Pumps - 230VAC

- 2 Pole induction motor
- Three adjustable speeds
- Fluid temperature: -10°C to 110°C
- Ambient Temperature +40°C
- Maximum working pressure: 10Bar
- Cast-iron Pump Body
- Plastic Impeller
- Ceramic Shaft & Bearing



Code	Inlet/Outlet	Head Max.	Flow Rate Max.
CPD20-40-130	G1"	4m	35ℓ/min
CPD25-40-130	G1½"	4m	40ℓ/min
CPD40-80F	DN40 Flange	4m	150ℓ/min

VANE OIL PUMPS



Vane Oil Pump - 230VAC

Code	Power	Head Max.	Flow Rate Max.
MVP-370	370W	26m	2.6m³/h

Low Voltage Vane Oil Pumps - 12/24VDC

Code	Power	Head Max.	Flow Rate Max.
MVO-400A	400W	3m	2.4m³/h

Accessories - 12/24VDC

Code	Inlet	Outlet	Description
AN15A	1"	1"	Nozzle
MN12A	1"	13/16"	Nozzle
LC1	1"	1"	Litre counter (accuracy ± 2%)
UR-750	1"	1"	Hose for use with pumps (length: 5m)
UR-100	1"	1"	1" Coupling
UR-257	1"	1"	3/4" Coupling
UR-375	1"	1"	Foot Valve
UR-400	-	-	Hose Clamp

DIESEL OIL PUMPS & ACCESSORIES

Diesel Transfer Pump - 230VAC



PS SERIES



GT KIT

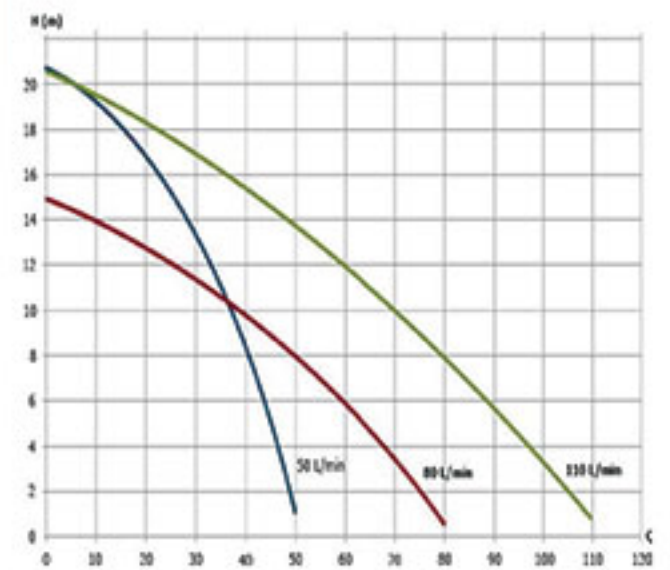


VF KIT



SMT KIT

Type	Code		
Pump Only	PS30	PS48N	PS70
With GT KIT	GT30	GT48N	GT70
With VF KIT	VF30	VF48N	VF70
With SMT KIT	SMT3000	SMT4800N	SMT7000
Flow Rate at pump	50ℓ/min	80ℓ/min	110ℓ/min
Flow Rate at nozzle (6m hose)	46ℓ/min	70ℓ/min	92ℓ/min
Horse Power	0.5hp	0.5hp	0.75hp
Watts	0.37kW	0.37kW	0.56kW
Amps	2.2A	2.5A	3A
Volts	230VAC	230VAC	230VAC
RPM	2800	2800	2800



Kit Type	Kit Includes
Pump Only	• Self priming volumetric vane pump with built in by-pass • Cast iron body
GT KIT	• Steel pump cover and rotor • POM plastic impeller and by-pass valves • Aluminium motor case Basic Pump plus: • 4m anti static discharge hose with 1"-1" crimped brass connections • Aluminium manual nozzle
VF KIT	Basic Pump plus: • 1.1m telescopic suction tube with 2" connection for barrel or drum • Aluminium manual nozzle • 4m antistatic discharge hose with 1"-1" crimped brass connections
SMT KIT	Basic Pump plus: • Wall mounting bracket • 3 digit mechanical flowmeter • Aluminium manual nozzle • 6m anti static discharge hose with 1"-1" crimped brass connections

Diesel Transfer Pumps - 12VDC (Maximum Continuous Pumping Allowed: 20 minutes)



PS12V SERIES



KITBAT12V KIT

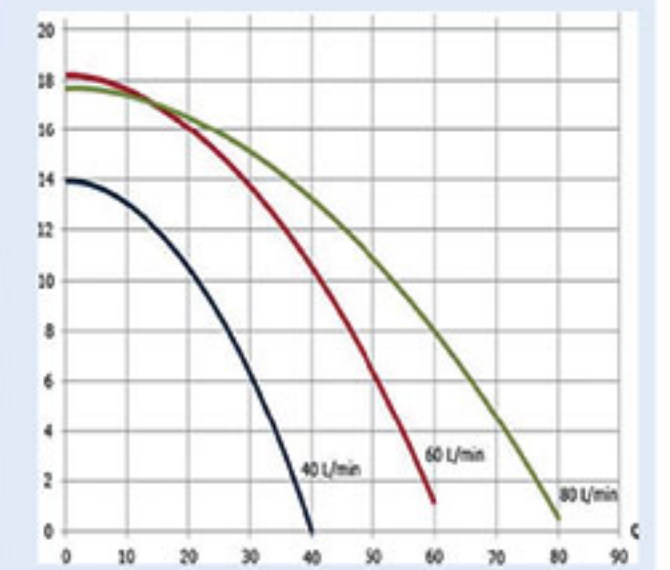


VF12V KIT



SMT KIT

Type	Code		
Pump Only	PS12V40L	PS12V60L	PS12V80L
With GT KIT	KITBAT12V40L	KITBAT12V60L	KITBAT12V80L
With VF KIT	VF12V40L	VF12V60L	VF12V80L
With SMT KIT	SMT12V40L	SMT12V60L	SMT12V80L
Flow Rate at pump	40ℓ/min	60ℓ/min	80ℓ/min
Flow Rate at Nozzle (6m hose)	34ℓ/min	48ℓ/min	72ℓ/min
Horse Power	0.2hp	0.33hp	0.55hp
Watts	140W	240W	400W
Amps	16A	30A	40A
Volts	12VDC	12VDC	12VDC
RPM	4200	4200	3000



Kit Type	Kit Includes
Pump Only	• Portable self priming diesel oil transfer vane pumps with by-pass • Cast iron pump body
GT KIT	• Steel pump cover plate • POM plastic impeller blades and by-pass valves • Galvanised steel motor case Basic Pump plus: • 4m anti static discharge hose with 1"-1" crimped brass connections • Aluminium manual nozzle
VF KIT	Basic Pump plus: • 1.1m telescopic suction tube with 2" connection for barrel or drum • Aluminium manual nozzle • 4m antistatic discharge hose with 1"-1" crimped brass connections
SMT KIT	Basic Pump plus: • Wall mounting bracket • 3 digit mechanical flowmeter • Aluminium manual nozzle • 6m anti static discharge hose with 1"-1" crimped brass connections

Accessories



UR6000



TL80



UR-139787



UR300/UR400



UR-140907



UR-995-257



UR-001



UR-995-375

Code	Description
TL80	Automatic nozzle with F1" swivel connection and trigger lock up to 80ℓ/m
UR6000	Aluminium manual nozzle with F1" swivel connection and trigger lock up to 80ℓ/m
UR-995-257	Swivel connections for automatic nozzles (1"Male x 1" Female)
UR-995-375	Drum coupling swivel
UR-001	Drum coupling rigid
UR-139787	4 Metre Ø20mm, 1" crimped discharge hose
UR-971520	6 Metre Ø20mm, 1" crimped discharge hose
UR-140907	BRASS-Threaded connection (Male)1" (26/34mm) Ribbed Ø20mm
UR300FM	3 Digit resettable flowmeter with oscillant disc for precise measurement of fuel. 6 Digit non resettable total counter. Max 3 bar.
UR400FM	4 Digit resettable flowmeter with oscillant disc for precise measurement of fuel. 6 Digit non resettable total counter. Max 3 bar.

BOREHOLE PUMP CONTROLS



DOL Borehole Pump Control Panels with TE03 Pump Protection Relay

Protection Features: Dry run, locked rotor, overload, phase failure/reverse/imbalance, over/under voltage, LED Status indication through window. Auto calibration for ease of commissioning.

General Features: Supplied with an Isolator, Contactor or Soft Starter, CT (where required), Lightning Arrestors, TE03 protection relay, "Power On" and "Pump Run" LED indication lights.

Control Options: Standard: Hand / Off / Auto Selector Switch / Float Switch
 LL: Hand / Off / Auto Selector Switch / Liquid Level Relay
 U: Hand / Off / Auto Selector / 24-hour Timer

For optional extras, see below.



Pump kW	Polycarbonate Enclosure IP56			Metal Enclosure IP65		
	Float Switch*	With Liquid Level*	With Time Switch	Float Switch*	With Liquid Level*	With Time Switch

Single Phase 230VAC DOL

0.75kW	B00S/IS/P U	B00S/IS/LL/P U	B00S/IS/U/P U	B00S/IS/S U	B00S/IS/LL/S U	B00S/IS/U/S U
1.1kW	B09S/IS/P U	B09S/IS/LL/P U	B09S/IS/U/P U	B09S/IS/S U	B09S/IS/LL/S U	B09S/IS/U/S U
1.5kW	B12S/IS/P U	B12S/IS/LL/P U	B12S/IS/U/P U	B12S/IS/S U	B12S/IS/LL/S U	B12S/IS/U/S U
2.2kW	B18S/IS/P U	B18S/IS/LL/P U	B18S/IS/U/P U	B18S/IS/S U	B18S/IS/LL/S U	B18S/IS/U/S U

Three Phase 400VAC DOL

4kW	B09T/IS/P N	B09T/IS/LL/P N	B09T/IS/U/P N	B09T/IS/S N	B09T/IS/LL/S N	B09T/IS/U/S N
5.5kW	B12T/IS/P N	B12T/IS/LL/P N	B12T/IS/U/P N	B12T/IS/S N	B12T/IS/LL/S N	B12T/IS/U/S N
7.5kW	B18T/IS/P N	B18T/IS/LL/P N	B18T/IS/U/P N	B18T/IS/S N	B18T/IS/LL/S N	B18T/IS/U/S N
11kW	B25T/IS/P N	B25T/IS/LL/P N	B25T/IS/U/P N	B25T/IS/S N	B25T/IS/LL/S N	B25T/IS/U/S N
15kW	B32T/IS/P N	B32T/IS/LL/P N	B32T/IS/U/P N	B32T/IS/S N	B32T/IS/LL/S N	B32T/IS/U/S N
18.5kW	B40T/IS/P N	B40T/IS/LL/P N	B40T/IS/U/P N	B40T/IS/S N	B40T/IS/LL/S N	B40T/IS/U/S N
22kW	B50T/IS/P N	B50T/IS/LL/P N	B50T/IS/U/P N	B50T/IS/S N	B50T/IS/LL/S N	B50T/IS/U/S N
30kW	B65T/IS/P N	B65T/IS/LL/P N	B65T/IS/U/P N	B65T/IS/S N	B65T/IS/LL/S N	B65T/IS/U/S N

Three Phase 400VAC Soft Start

5.5kW	BS05T/IS/P N	BS05T/IS/LL/P N	BS05T/IS/U/P N	BS05T/IS/S N	BS05T/IS/LL/S N	BS05T/IS/U/S N
7.5kW	BS07T/IS/P N	BS07T/IS/LL/P N	BS07T/IS/U/P N	BS07T/IS/S N	BS07T/IS/LL/S N	BS07T/IS/U/S N
11kW	BS11T/IS/P N	BS11T/IS/LL/P N	BS11T/IS/U/P N	BS11T/IS/S N	BS11T/IS/LL/S N	BS11T/IS/U/S N
15kW	BS15T/IS/P N	BS15T/IS/LL/P N	BS15T/IS/U/P N	BS15T/IS/S N	BS15T/IS/LL/S N	BS15T/IS/U/S N
18.5kW	BS18T/IS/P N	BS18T/IS/LL/P N	BS18T/IS/U/P N	BS18T/IS/S N	BS18T/IS/LL/S N	BS18T/IS/U/S N
22kW	BS22T/IS/P N	BS22T/IS/LL/P N	BS22T/IS/U/P N	BS22T/IS/S N	BS22T/IS/LL/S N	BS22T/IS/U/S N
30kW	BS30T/IS/P N	BS30T/IS/LL/P N	BS30T/IS/U/P N	BS30T/IS/S N	BS30T/IS/LL/S N	BS30T/IS/U/S N

Optional Extras for Borehole Pump Controls

Code	Description
EFS01	Ammeter Selector Switch up to 18.5kW
EFS02	Ammeter Selector Switch 22kW+
EFS03	Voltmeter 72 x 72, c/w Fuses - IP42
EFS04	Voltmeter Selector Switch
EFS05	Running Hour Meter 48 x 48
EFS19	Ammeter 72 x 72 - IP42 up to 18,5kW
EFS20	Ammeter 72 x 72 - IP42 22kW+

*Order float switch or probes separately. See page 51 & 52.

Note: When requesting a price or when ordering a starter with optional extra, please order optional extra as a separate line. Order example: 1) Borehole pump control 3 phase 5.5KW with isolator and liquid level control in a steel enclosure with running hour meter as optional extra.

Item 1: B12T/IS/LL/S N Item 2: EFS05

Wireless solutions available including GSM. Contact our Panel Workshop



TE05

Compact Borehole DOL Starter with TE03 Protection

With Contactor for motors up to 5.6kW @ 400V and 2.2kW @ 230V. Protection features: Dry run, locked rotor, overload, phase failure/reversal/imbalance, over/under voltage, auto calibration for easy commissioning and LED array for full status indication. Housed in compact IP56 polycarbonate enclosure with glands and on/off switch. Connection for float switch.

Code	Description	Size (H x W x D)
TE05M	Pump controller for 230V single phase motors up to 0.75kW	200 x 140 x 80mm
TE05M-1	Pump controller for 230V single phase motors 1.1 to 2.2kW	200 x 140 x 80mm
TE05Q	Pump controller for 400V three phase motors up to 4kW	200 x 140 x 80mm
TE05Q-1	Pump controller for 400V three phase motors 5.6kW	200 x 140 x 80mm
TE05N	Pump controller for 415V three phase motors up to 4kW	200 x 140 x 80mm
TE05N-1	Pump controller for 415V three phase motors up to 5,6kW	200 x 140 x 80mm



BOREHOLE PUMP CONTROLS



BETR3-055

Economy Borehole Control Panel IP43 - Size: 275 x 300 x 150mm

Weatherproof steel enclosed control panels with 3 conduit entries, On-off switch, Pump protection relay with provision for float switch, CT where required, Incoming isolator, Surge protection & contactor.

For features of the different protection relays, see pg 168 & 169

Motor 230V	FLC	UNO	TE03	TE03 + Ammeter
≤ 0.75kW	≤ 6A	BEUN1-015	BETE1-007	BETE1A-007
1.1kW	8.8A	BEUN1-015	BETE1-011	BETE1A-011
1.5kW	11.8A	BEUN1-015	BETE1-015	BETE1A-015
2.2kW	17A	BEUN1-022	BETE1-022	BETE1A-022

Motor 400V	FLC	TRIO	SUPRA	TE03	TE03 + Ammeter
≤ 4.0kW	9A	BETR3-055	-	BETE3-040	BETE3A-040
≤ 5.5kW	13.2A	BETR3-055	-	BETE3-055	BETE3A-055
7.5kW	17.8A	-	BESU3-075	BETE3-075	BETE3A-075



TRIO-SP5.6



TRIO-SP5.6/P



DOL Borehole Pump Control Panel with Motorscope Relay IP65

Fitted in IP65 steel or polycarbonate / ABS enclosure with Door-interlocked isolator, Surge protection, Contactor, Motorscope relay with protection fuses and CT. Door fitted with "POWER" on and "RUN" LED pilot-lights, Hand/Off/Auto selector switch and viewing window for Motorscope LED array. Provision for remote float switch.

Pump kW	Code		Enclosure Type	Size (H x W x D)
	400VAC	525VAC*		
0.37 - 5.6	TRIO-SP5.6/P	-	Plastic	400 x 300 x 180
0.37 - 5.6	TRIO-SP5.6*	SUPRA-5-SP11		400 x 300 x 200
7.5 - 11	SUPRA-SP11*	SUPRA-5-SP11	Steel	400 x 300 x 200
15	SUPRA-SP15*	SUPRA-5-SP15		400 x 300 x 200
22	SUPRA-SP22*	SUPRA-5-SP22		500 x 400 x 200
30	SUPRA-SP30*	SUPRA-5-SP30		500 x 400 x 200
37	SUPRA-SP37*	SUPRA-5-SP37		500 x 400 x 200
45	SUPRA-SP45*	SUPRA-5-SP45		600 x 400 x 260
55	SUPRA-SP55*	SUPRA-5-SP55		700 x 500 x 260
75	SUPRA-SP75*	SUPRA-5-SP75		700 x 500 x 260
90	-	SUPRA-5-SP90		700 x 500 x 260

Note: MOBI version available on special request at no extra charge for SUPRA versions

* Add -PSL to code for pressure switch lock-out facility. * 525VAC Versions - 110V Control



TRIO PANEL

Compact Borehole DOL Starter with Motorscope Protection

With Contactor for motors up to 5.6kW @ 400V. Protection features: Event memory, dry run, locked rotor, overload, phase failure/reversal/imbalance, over/under voltage, auto calibration for easy commissioning and LED array for full status indication. Housed in compact IP56 polycarbonate enclosure. Connection for float switch.

Code	Description	Size (H x W x D)
TRIO PANEL	Pump controller for 400V 3Ph Motors 0.37 - 5.6kW	300 x 220 x 180mm

COMPRESSOR STARTERS



AS15

Star-Delta starters with on-off selector switch and provision for pressure switch connection. 415V coils fitted. IP56

Code	Motor kW @ 400V	Size (H x W x D)
AS7.5	7.5kW	240 x 190 x 160mm
AS11	11kW	300 x 220 x 180mm
AS15	15kW	300 x 220 x 180mm

GSM / TELEMETRY KITS

NEW

GSM COMMANDER **MAKULU** READY TO MOUNT

The Makulu is a complete panel, ready to go. Designed with lazer-cut and electroplated brackets, it is set up with all the goodies you normally need in an installation. NO HOLES to be drilled by you! EVER!

Makulu - Direct 230V Power

Code	Description
RTM-M0321	GC0321 - LITE Version Ready to Mount Solution.
RTM-M0641	GC0641 - STANDARD Version Ready to Mount Solution.
RTM-M1281	GC1281 - PROFESSIONAL Version Ready to Mount Solution.

Makulu - Solar Powered (Use Max 1x20 Watt Panel)

Code	Description
SOL-M0321	GC0321 - LITE Version Solar Ready to Mount Solution.
SOL-M0641	GC0641 - STANDARD Version Solar Ready to Mount Solution.
SOL-M1281	GC1281 - PROFESSIONAL Version Solar Ready to Mount Solution.

Specifications

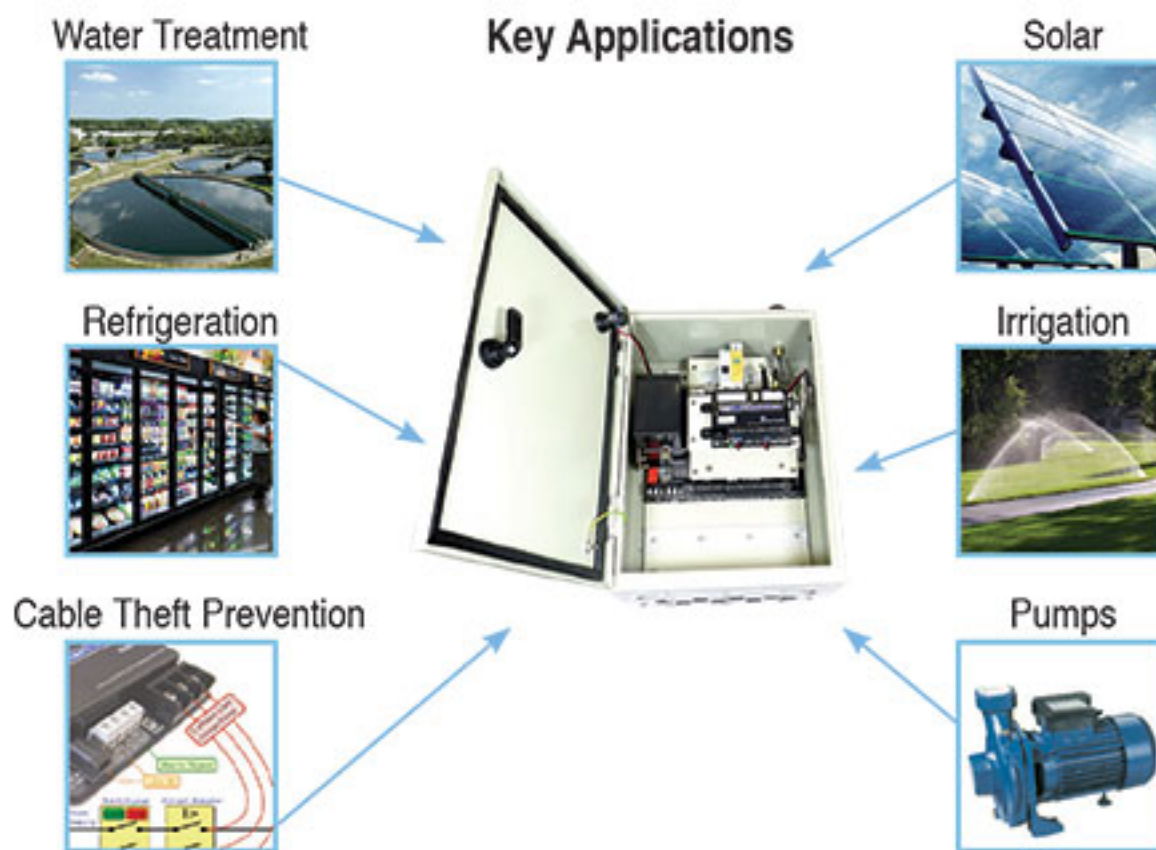
- 6 x 8A SPDT Relay outputs (expandable to 31*)
- 1 x 30Amp SPDT Relay outputs
- 7 x Optically Isolated inputs (expandable to 32*)
- 2 x Temperature Inputs (expandable to 10**)
- 1 x Analog input (expandable to 9**)
- 2 x Pulse Stretchers (on input 6 and 7)
- Dedicated Battery Charger***
- 25W Rugged Meanwell AC-DC Switching PSU***
- AC/DC Filter with Surge Protection***
- External 2 dBi Knobby Antenna
- Door Switch and Temperature Expansion
- User dedicated DIN-Rail Space

Note: Solar Panels & Regulator not included, use SLP020-12 & CML-05

- *Only space for 1 x I/O expansion unit inside Makulu. Additional expansions to be located separately
- ** EITHER the Analog OR the Temperature inputs can be expanded, not both at the same time
- *** Not included in Solar Makulu

Standard Kits include:

- 7 inputs / 7 outputs
- Optional expansion space for 1 temperature or 1 analogue or 1 cable theft monitor expansion
- Space for 1 I/O expansion
- 7 AH Battery with protector (Solar Makulu includes 1 extra 12V 7AH Battery)
- Built in temperature module (GT002)
- **Dimensions 300x400x250mm**



GSM COMMANDER **PICO** READY TO MOUNT

The Pico is a small, complete panel, ready to go. Designed with lazer-cut and electroplated brackets, it is set up with the goodies you need for a minimalistic installation. NO HOLES to be drilled by you! Ever!

Pico - Direct 230V Power

Code	Description
RTM-P0321	GC0321 - LITE Version Ready to Mount Solution.
RTM-P0641	GC0641 - STANDARD Version Ready to Mount Solution.
RTM-P1281	GC1281 - PROFESSIONAL Version Ready to Mount Solution.

Pico - Solar Powered (Use Max 1x10 Watt Panel)

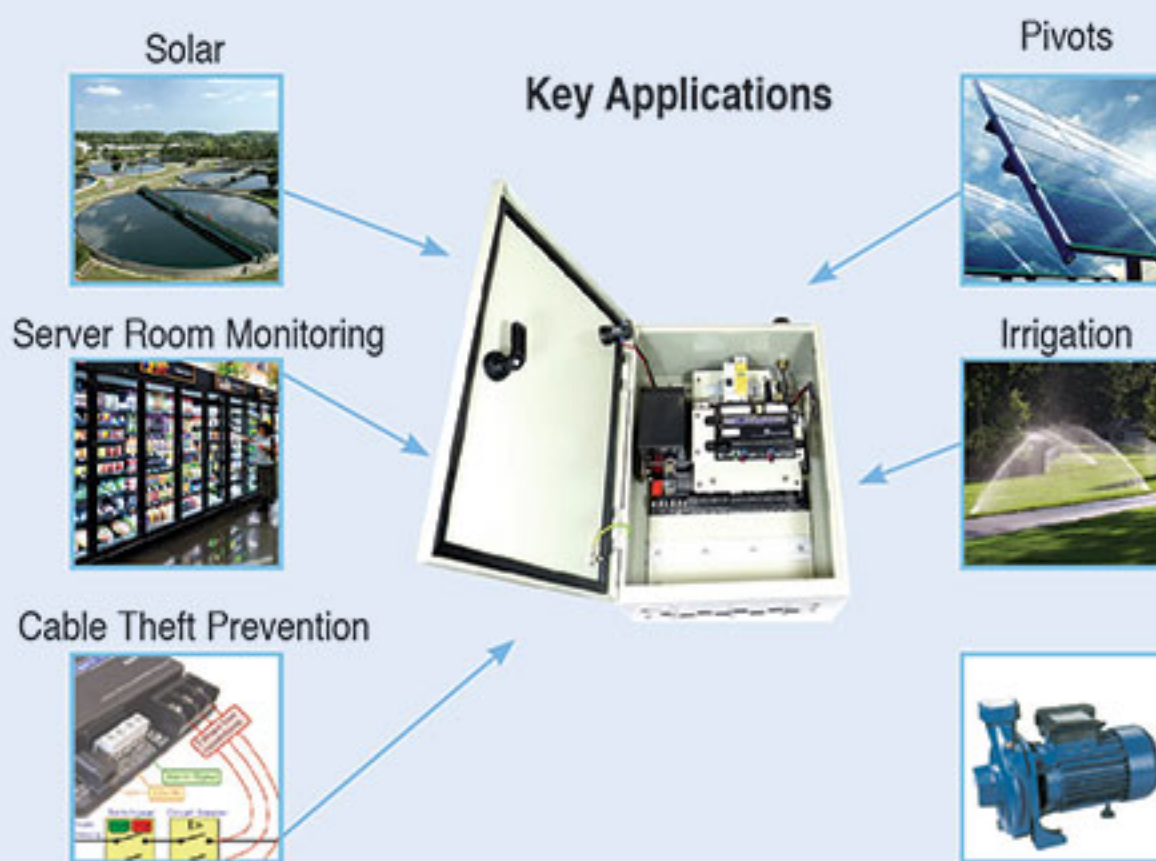
Code	Description
SOL-P0321	GC0321 - LITE Version Solar Ready to Mount Solution.
SOL-P0641	GC0641 - STANDARD Version Solar Ready to Mount Solution.
SOL-P1281	GC1281 - PROFESSIONAL Version Solar Ready to Mount Solution.

Specifications

- 2 x 8A SPDT Relay outputs (expandable to 32*)
- 2 x Optically Isolated inputs (expandable to 32*)
- 1 x Analog input (expandable to 9)
- 25W Rugged Meanwell AC-DC Switching PSU**
- Optional Built-in 400V-220V Transformer**
- External 2 dBi Knobby Antenna
- Door Switch

Standard Kits include:

- 2 inputs / 2 outputs
- 1.2AH Battery with protector (replaced with 12V 7AH Battery for Solar Makulu)
- **Dimensions 200x250x50mm**



- *No space inside the Pico for expanded I/O. Any expansion units must be located outside of the box in a separate enclosure.
- ** Not included in Solar Pico

INSTRUMENTS & TELEMETRY

GSM / TELEMETRY CONTROLLERS

GSM Commander - Base Unit

Supply Voltage 10-24VDC.

A product range used for PLC-Type Telemetry applications. Allows users to be notified of remote events and enables the user to control remote equipment - all from a cell phone. No PLC required, complete stand-alone unit. Easy to configure and install.



Code	NEW GC0101-*	GC0321-*	GC0641-*	GC1281-*
Type	Micro	LITE	STANDARD	PROFESSIONAL
Onboard Inputs	1	2	2	2
Onboard Outputs	1	2	2	2
Max. Extendable I/O	None	12/12	22/22	32/32
GPRS Functionality	Lite	Lite	Full	Full
No. of Statements	10	32	64	128
Setup Memory	2kB	2kB	4kB	8kB
Temp Probes Supported	0	2	2(10)	2(10)
Analogue Inputs	0	1	1(9)	1(9)
Battery/Power Monitors	Yes	Yes	Yes	Yes
USB Configuration	Yes	Yes	Yes	Yes
DTMF Decoder	No	No	Yes	Yes
SIM Card Slots	1	1	1	2 (Dual)*
Size (mm)	126 x 72 x 26	148 x 86 x 28	148 x 86 x 28	148 x 86 x 28

Specify if you would like to order a kit or only a base unit.

* Add to code: **OEM** (base unit only) or **BOX** (kit including basic antenna, power supply, USB cable and software CD).

Features

Digital Inputs	Opto-isolated. Can accept DC signals of any type. (Dry Contacts, Open Collector (PNP/NPN), DC Voltage (10-20V)).
Digital Outputs	SPDT 8A @ 10-48VDC or 4A @ 110-400VAC
Supply Voltage	10-24VDC (12VDC) Can accommodate a 12V 1.2Ah backup battery. Code for battery BATT1.2AH . c/w built-in charger.
Consumption	60mA Acquiescent
DTMF Decoder	If present the unit is able to detect and respond to key presses during a voice call.
No. of Statements	A measure of the complexity that can be programmed into the unit. Each statement is in the form IF <ABC Happens> THEN <do something>. e.g. IF Input 1 goes active THEN send "Generator tripped" to 083 123 1234
Programming	Unit can be programmed using the software supplied via USB or via SMS

Expansion Units

Code	Description
GX0505	5 x Input and 5 x relay Output Expansion Module Dimensions: 147 x 103 x 28mm
GX1000	Expansion unit with interface cable: 10 x Opto-isolated Inputs
GXS081A	8 x Input analogue expansion 4-20mA 10-30V (Serial Interface only for GC0641 & GC1281)
GXS082T	8 (4 groups of 2 each) Temperature Probe Expansion (only GC0641 & GC1281)
CTM001	Cable theft monitor for 3 phase & Single phase cable.

Accessories

Code	Description
GT002	Temperature interface to connect 2x temp. probes to units (Probes not included)
GT001-1	2 to 100°C Temperature Probe with 2m Cable. Type TR2 (Requires GT002)
GT001-2	2 to 100°C Temperature Probe with 4m Cable. Type TR2 (Requires GT002)
GT011-1	-15 to 35°C Temperature Probe with 2m Cable (Requires GT002)
GT011-2	-15 to 35°C Temperature Probe with 4m Cable (Requires GT002)
GT011-3	-15 to 35°C Temperature Probe with 8m Cable (Requires GT002)
GT003A	Primary Sensor for GXS082T -50 to 120°C 1m Cable
GT003B	Secondary Sensor for GXS082T -50 to 120°C 1m Cable
GA002	3dBi Magnetic base Antenna with 1m Cable
GA004	5dBi Outdoor Antenna - Screw Mount. 3.5m Cable (For low signal strength areas)
GS005	5m Low loss Extension Lead for Antenna
GA008	12dBi Outdoor Yagi Antenna for areas with extremely low signal strength
GA100	Battleship Antenna. Unbreakable outdoor Antenna with integrated intelligent vibration Sensor. 1.5m Cable
IVS002	Intelligent Vibration Sensor - Adjustable (normally closed)
DRA18-12	1.25A 12V Regulated DIN Mount Power Supply
PSU1417	1700mA 14V Metal Switching Power Supply
BATT1.2AH	12V 1.2AH Sealed Lead Acid Battery
BP001	Battery Protector – Protects batteries against under-voltage, over-current



ELECTRIC MOTOR / PUMP PROTECTION RELAYS



TE01



TE02/TE03

Pump and Motor Protection / Phase Angle Relays

Specifications

Supply Voltage	230VAC ±20% Single phase 400VAC or 525VAC ±20% 3phase
Power Consumption	2VA
Calibration	Manual or Automatic (Model dependant)
Dry Trip Level	10% of calibrated phase angle / current 2s delay
Dry Restart Delay	15 minutes to 24 hours adjustable
Output Relay	SPDT 250VAC/10A
Voltage Trip Level	10% of calibrated voltage, 2 sec delay (TE02/TE03)
Current Trip Level	20% of calibrated current, 1 sec delay (TE02/TE03)
Rapid Start Cycle	3 per 15 minutes maximum (TE03 only)

LED Status Indication TE02/TE03

Green	Amber	Red	Condition
ON	OFF	OFF	Normal Pumping
FLASH	OFF	OFF	Dry-timing or phase failure/reversal
OFF	ON	OFF	Supply Voltage Low/High
OFF	FLASH	OFF	Rapid Cycle
OFF	OFF	ON	Motor Overload or Phase Failure
ON	ON	ON	TE02/3 Uncalibrated
FLASH	FLASH	FLASH	TE02/3 Calibrating
OFF	OFF	OFF	Unable to Calibrate

Selection Guide

Code	TE01*	TE02*	TE03*
11 Pin Plug In	•	•	•
Running dry- Under load blocked in/outlet	•	•	•
Overcurrent		Auto	Auto
Phase Failure / Reversal		•	•
Over / Under voltage		•	•
Star/Delta or Soft Start	•**	•	•
Locked Rotor		•	•
Shunt Required	•		
Rapid pump start protection			
Cut-out over 12 starts/hour			•
LED Status Indication			•
Calibration	Manual	Auto	Auto
Tank Control (float switch)			•

*Add to Code: 230 = 230VAC, 400 = 400VAC, 525 = 525VAC

**TE01/S version only

Accessories

Code	Description
TE01 SHUNT R	Spare Red Shunt
TE01 SHUNT W	Spare White Shunt

M1

Current Transformer Selection Chart for TE Series

	230VAC				400VAC											
	TE01	PW155	PW205	PW255	TE02/03	PW155	PW205	PW305	PW405	PW405	DS-505	DS-755	DS-1005	DS-1005	DS-1055	
HP	0.36-1.1	1.5	2	3	0.5-1.5	2-7.5	10	15	20	25	30	40	50	60	75	
Kw	0.25-0.75	1.1	1.5	2.2	0.37-1.1	1.5-5.5	7.5	11	15	18.5	22	30	37	45	55	
Shunt	White				Red	White										

ELECTRONIC MOTOR & OVERLOAD PROTECTION RELAYS



Phase Angle Motor Protection Relays

Mainly used for borehole protection with liquid level control tank filling. DIN mount.

Code	Description	Max. Current Continuous
MP820/230VAC-SP	Single phase motor protection relay up to 1.1kW	* 15A
MP825/230VAC-SP	Single phase motor protection relay above 1.1kW	* 15A
MP830/230VAC-SP	Three phase motor protection relay up to 3.7kW	* 12A
MP830/400VAC-SP	Three phase motor protection relay up to 3.7kW	* 12A
MP830/525VAC-SP	Three phase motor protection relay up to 3.7kW	* 12A
MP835/230VAC-SP	Three phase motor protection relay up to 3.7kW	* 12A
MP835/400VAC-SP	Three phase motor protection relay up to 3.7kW	* 12A

* For higher load current use 5 Amp CT to achieve accurate calibration

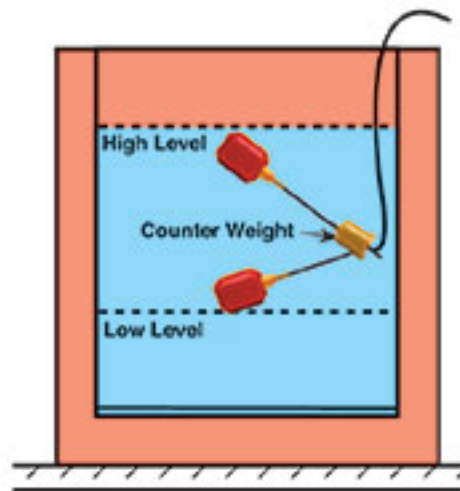
Single Phase Features

- MP820:**
- Direct in-line current sensing of motor, up to 1.1kW
 - Auto calibration of over/under current and voltage
 - Start up delay (3 seconds standard)
 - Adjustable reset time 15 mins to 24 hrs
 - Latching on overload conditions
 - Liquid Level Control (50kΩ)
 - Reset Lock out, Max 3 reset attempts in 15 minutes
- MP825:** As for MP820 plus
- Latching of over and under load conditions
 - Manual adjustment of under load sensitivity (after auto calibration)

Three Phase Features

- MP830:**
- Direct in-line current sensing of motor, up to 3.7kW
 - Auto calibration of over/under current and voltage
 - Start up delay (3 seconds standard)
 - Adjustable reset time 15 mins to 24 hrs
 - Latching of over load conditions
 - Liquid Level Control (50kΩ)
 - Reset Lock out, Max 3 reset attempts in 15 minutes
 - Phase sequence/phase failure detection
- MP835:** As for MP830 plus
- Latching of over and under load conditions
 - Manual adjustment of under load sensitivity (after auto calibration)

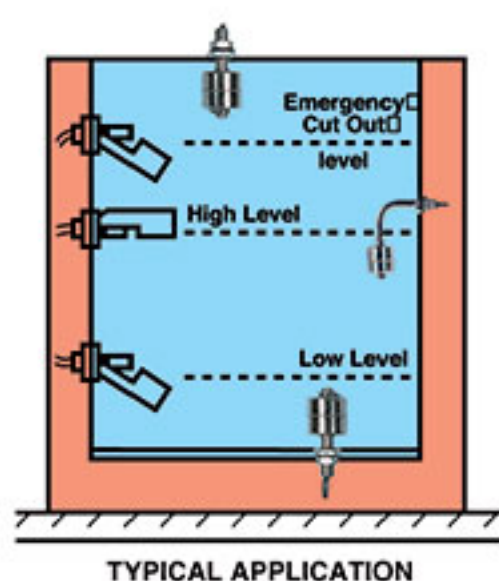
FLOAT SWITCHES



Typical Application showing use of 1 B-01 float switch to start and stop pump. One B-01 Float Switch can be used for both high and low levels.

	Micro Float Switch		Micro & Mercury Float Switches		Mercury Float Switches	Accessories
						 30mm Ø Ideal for autoclaves
						 Not for use with Mercury Float Switches
Code	B-01/5	B-01/10	MAG-*	MER-*	REMAX-P	MER30/5
Length of Cable	5metres	10metres	*Add 05, 10, 15, 20 metres		1m Float Cord No cable	5 metres
Weight Supplied	✓	✓	✓	N/A	✓	N/A
Switching Voltage Max.	240VAC/200VDC		250VAC		440VAC/200VDC	250V
Switching Current Max. (A)	4A		4A	0.5A	5A	5A
Carry Current Max. (A)	15A		6A	1A	10A	–
Switch Type	Micro C/O		Micro NO+NC	Mercury C/O	Mercury N.O.	Mercury N.O.
Operating Temperature	0°C to 60°C		-20°C to 50°C		-20°C to 70°C	-20°C to 60°C/8 bar
Material	Polypropylene/Cable P.V.C.		Moplen/Cable P.V.C		ABS	Moplen
Resistance to	Water & weak Acids		Water & weak Acids		Water & weak Acids	Water & weak Acids
						 MER30/GP 1 1/4" male gland plug for use with MER30/5

Plastic Reed Float Switches - Not suitable for use in Diesel or Petrol



			 Thread 1/8" ø 25mm 53mm	 M16	 177mm	 177mm
--	--	--	-----------------------------------	---------	-----------	-----------

Code	Internal LS-103-3	External LS-103-4	RF-0V2	RF-0V41	FF-80EFM	FF-81EFM
Mounting	Compression				Flange	M20
Thread Size	M16	1/2" NPT	1/8" PF	M16	2" x 5kg/cm ²	Connection Screw
Length Lead Wire	300mm		300mm		300mm	
Switching Voltage Max.	240VAC/200VDC		240VAC/200VDC		240VAC/200VDC	
Switching Current Max. (A)	0,5A		0,5A		0,5A	
Carry Current Max. (A)	1A		1A		1A	
Switch Type	Reed Switch N.O.		Reed Switch N.O.		Reed Switch N.O.	
Max. Pressure (kg/cm ²)	4		1	4	10	
Operating Temperature	-20°C to 80°C		-20°C to 80°C		-10°C to 80°C	
Material	Polypropylene (PP)		Polypropylene (PP)		Polypropylene (PP)	
Suitable Specific Gravity	0,7 g/cm ³		0,7 g/cm ³		0,6 g/cm ³	
Resistance to:	Water, Acids & Oils		Water, Acids & Oils		Corrosive liquids, i.e. Acids, Seawater etc	

STAINLESS STEEL FLOAT SWITCHES IP65



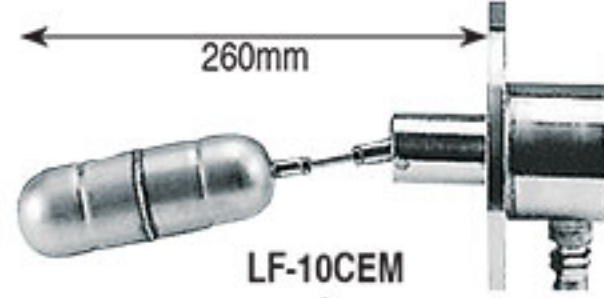
Side Mount - RF-3002D



Top or bottom mount - RF-3001



LF-10CEQ



LF-10CEM & FF-70SSS



FD-MH16A



FD-4022 (brass)

Code	Top/Bottom	Side Mount	LF-10CEM	LF-10CEQ	FF-70SSS	FD-MH16A	FD-4022
	RF-3001	RF-3002D					
Mounting							
Thread Size	1/8" PF	1/8" PF	Flange	1 1/2" PT	Explosion Proof Flange	1/2" PT Adaptor	1"
Length of Cable	300mm			-		300mm	-
Switching Voltage Max.	240VAC/200VDC			250VAC/200VDC		250VAC	250VAC
Switching Current Max.(A)	0,5A			2A		0.5A	5A
Carry Current Max.(A)	1A			5A		1A	16A
Switch Type	Reed Switch N.O. or N.C.			Reed Switch 1C/O		Reed Switch N.O.	Micro Switch C/O.
Max. Pressure	8.5 Bar			12.8 Bar		4.2 Bar	10 Bar
Operating Temperature	-20°C to 120°C			-25 to 100°C		-10 to 120°C	-10 to 120°C
Material	304 Stainless Steel		Housing: Aluminium IP65. Wetted parts 304 S/S			304 Stainless Steel	Brass
Suitable Specific Gravity	0.75 S.G.			0.65 S.G.		0,8 S.G.	0,8 S.G.
Resistance to:	Water & Liquids		Water, Acids & Oils			Seawater, Corrosive Liq.	Non-Aggressive Liq.

LEVEL PROBES & SENSORS

More Float Switches	Probe Assemblies	Probe Components	Conductive Probe Kits IP65																																						
<p>RF-0V61 1 x Reed</p> <p>RF-PV2 2 x Reed</p>	<p>APS - 3C APS - 5C</p>	<p>PS-5S APS-3 AF-12</p> <p>PF-101 PF-102 PF-103 PF-104</p> <p>PF-101P</p>	<p>RHOMBERG RHE</p> <p>CP1/C CP2/C CP3/C</p> <p>CP1 CP2 CP3</p> <p>• Material: Nylon • Thread: 1.5" BSP • Max Temp: 70°C</p> <p>DD3 EP1/C</p>																																						
<p>RF-0V61 RF-PV2</p> <ul style="list-style-type: none"> • Thread Size: 1/8" PF • Output Reed Switch @ 1A 250VAC • Switching 1x Reed Switch N.O. • Max Pressure: 4kg/cm² • Material: Polypropylene (PP) • Specific Gravity: 0.7 S.G. • -20 to 80°C 	<p>APS-3C 3-way APS-5C 5-way</p> <ul style="list-style-type: none"> • 3 or 5-way holder • Steel locking ring • 3 or 5 x 1m 204 S/S probes • Suitable for use with all liquid level relays e.g. TE101 – APS-3C, DLR – APS-5C • Max temperature: 100°C • Cut Probes to suit application 	<table border="1"> <thead> <tr> <th>Code</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>APS-3</td> <td>3 Probe holder only (6 mm thread)</td> </tr> <tr> <td>PS-5S</td> <td>5 Probe holder only</td> </tr> <tr> <td>AF-12</td> <td>Steel locking ring for holders - 115mmØ</td> </tr> <tr> <td>PF-101</td> <td>3 Probe Spacers (porcelain)</td> </tr> <tr> <td>PF-101P</td> <td>3 Probe Spacers (plastic)</td> </tr> <tr> <td>PF-105</td> <td>5 Probe Spacers (porcelain)</td> </tr> <tr> <td>PF-102</td> <td>Connecting nut (304 stainless steel)</td> </tr> <tr> <td>PF-104</td> <td>Tank probe</td> </tr> <tr> <td>PF-103</td> <td>1m 304 stainless steel rod 6mmØ</td> </tr> </tbody> </table>	Code	Description	APS-3	3 Probe holder only (6 mm thread)	PS-5S	5 Probe holder only	AF-12	Steel locking ring for holders - 115mmØ	PF-101	3 Probe Spacers (porcelain)	PF-101P	3 Probe Spacers (plastic)	PF-105	5 Probe Spacers (porcelain)	PF-102	Connecting nut (304 stainless steel)	PF-104	Tank probe	PF-103	1m 304 stainless steel rod 6mmØ	<table border="1"> <thead> <tr> <th>Code</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>CP1/CX</td> <td>1-Way Head only</td> </tr> <tr> <td>CP2/CX</td> <td>2-Way Head only</td> </tr> <tr> <td>CP3/CX</td> <td>3-Way Head only</td> </tr> <tr> <td>DD2</td> <td>2-Way Probe Spacer</td> </tr> <tr> <td>DD3</td> <td>3-Way Probe Spacer</td> </tr> <tr> <td>EP1/C</td> <td>Spare 1m s/s Rod coated</td> </tr> <tr> <td>EP1/U</td> <td>Spare uncoated s/s Rod 1m</td> </tr> <tr> <td>EP1/EXT</td> <td>M4 Connecting Nut Brass</td> </tr> </tbody> </table> <p>Coating of the rods improves resistance, prevents switching caused by frothing or condensation.</p>	Code	Description	CP1/CX	1-Way Head only	CP2/CX	2-Way Head only	CP3/CX	3-Way Head only	DD2	2-Way Probe Spacer	DD3	3-Way Probe Spacer	EP1/C	Spare 1m s/s Rod coated	EP1/U	Spare uncoated s/s Rod 1m	EP1/EXT	M4 Connecting Nut Brass
Code	Description																																								
APS-3	3 Probe holder only (6 mm thread)																																								
PS-5S	5 Probe holder only																																								
AF-12	Steel locking ring for holders - 115mmØ																																								
PF-101	3 Probe Spacers (porcelain)																																								
PF-101P	3 Probe Spacers (plastic)																																								
PF-105	5 Probe Spacers (porcelain)																																								
PF-102	Connecting nut (304 stainless steel)																																								
PF-104	Tank probe																																								
PF-103	1m 304 stainless steel rod 6mmØ																																								
Code	Description																																								
CP1/CX	1-Way Head only																																								
CP2/CX	2-Way Head only																																								
CP3/CX	3-Way Head only																																								
DD2	2-Way Probe Spacer																																								
DD3	3-Way Probe Spacer																																								
EP1/C	Spare 1m s/s Rod coated																																								
EP1/U	Spare uncoated s/s Rod 1m																																								
EP1/EXT	M4 Connecting Nut Brass																																								

PROBE & ROTARY LEVEL SWITCHES

Optical Level Sensor IP68		Capacitive Level Sensors for Solids		Vibration Probe Switch	Rotary Paddle Switch																					
<p style="font-size: small;">Optical sensor with infrared light for use in liquids such as oil, water, sewerage, beer, wine etc. (3/8" PT)</p>		<p style="font-size: small;">Capacitive level sensor for solid, fluid or granulated substances. 32mm Ø</p>			<p style="font-size: x-small;">For use in: Milk Powder, Cement, Fertilizer, Granulated products, etc.</p> <p style="font-size: x-small;">RP10C RP80C</p>																					
Code	SD10G-ARN1 (NPN NO) SD10G-ARP1 (PNP NO)	VP02-230TB Un-modulated	VR1A 8mm Sensing	VR1B 15mm Sensing	Code																					
Length of cable	2 meters		5 meters (PVC)		RP10C																					
Switching Voltage	10-28VDC (NPN, N.O.)	230VAC (N.O.)	20-30VDC (1kΩ)		RP80C																					
Operating Temperature	-20°C to 80°C		0°C to 70°C		Code																					
Material	Polysulphone		Polyester		RP10C																					
Switching Current Max (A)	DC: 100mA	AC: 100mA	10A @ 250VAC		RP80C																					
Max ambient light	5000 lux	100 lux	For use with amplifier Relay Type CLR2 pg 9		Code																					
DC Units for use with Relay Type CLR1 pg 9				SC1110	Code																					
<p style="font-size: x-small;">For 1 Level Control only Link 5 & 8 Probe 5, 6, 7</p>		<p style="font-size: x-small;">R=Relay 230VAC</p>		<p style="font-size: x-small;">For Filling Link 6 & 9</p>																						
SUPPLY VOLTAGE		SUPPLY VOLTAGE		Spare Paddle Code RP10-PADDLE RP80-PADDLE																						
				<ul style="list-style-type: none"> • Mounting Thread 1" • Probe Material S/S 304 • Housing Alu. IP65 • Output: 5A @ 250V 1C/O • Supply: 0-110-230VAC • Vibrating Frequency: 360-370Hz • Operating Temp.: -10 to 80°C • Material Density: 0.32g/cm² 																						
				<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="font-size: x-small;">Mounting Thread Size</td> <td style="font-size: x-small;">1"PF</td> <td style="font-size: x-small;">¾"PF</td> </tr> <tr> <td style="font-size: x-small;">Torque</td> <td style="font-size: x-small;">0.5 -1kg</td> <td style="font-size: x-small;">Adjustable</td> </tr> <tr> <td style="font-size: x-small;">Gravity</td> <td style="font-size: x-small;">>0.50 S.G</td> <td style="font-size: x-small;"><0.3 S.G</td> </tr> <tr> <td style="font-size: x-small;">Contact Type</td> <td colspan="2" style="font-size: x-small;">Micro Switch 1C/O</td> </tr> <tr> <td style="font-size: x-small;">Contact Rating</td> <td style="font-size: x-small;">5A</td> <td style="font-size: x-small;">5A</td> </tr> <tr> <td style="font-size: x-small;">Operating Temp</td> <td style="font-size: x-small;">-10 - 60°C</td> <td style="font-size: x-small;">-40 - 85°C</td> </tr> <tr> <td style="font-size: x-small;">Housing Material</td> <td colspan="2" style="font-size: x-small;">Aluminium IP65</td> </tr> </table>		Mounting Thread Size	1"PF	¾"PF	Torque	0.5 -1kg	Adjustable	Gravity	>0.50 S.G	<0.3 S.G	Contact Type	Micro Switch 1C/O		Contact Rating	5A	5A	Operating Temp	-10 - 60°C	-40 - 85°C	Housing Material	Aluminium IP65	
Mounting Thread Size	1"PF	¾"PF																								
Torque	0.5 -1kg	Adjustable																								
Gravity	>0.50 S.G	<0.3 S.G																								
Contact Type	Micro Switch 1C/O																									
Contact Rating	5A	5A																								
Operating Temp	-10 - 60°C	-40 - 85°C																								
Housing Material	Aluminium IP65																									

TUNING FORK LEVEL SWITCH IP65

Vibration Fork Level Switch

200mm

100mm

100mm

Code	SC1420-R	SC1400-R	SC2406-D
• Mounting Thread 1" PT			
• Probe Material 316			
• Housing Alu. IP65			
• Output: SPDT 5A 250VAC/28VDC			• Output: 2Wire 3mA
• Supply Voltage: 20-250VAC, 50/60Hz VAC/DC			• Supply Voltage: 20-250VAC, 50Hz
• Vibrating Frequency 350~370Hz			• 2 Wire electronic switch
• Operating Temp in Bin: -40~130C			• Fork Length: 100m
• Material Density: >0.07 g/cm ³			• Operating Temperature: -40~60°C
• Fail Safe Protection			

CAPACITIVE LEVEL SWITCH IP65

L

L

L

Wire Probe





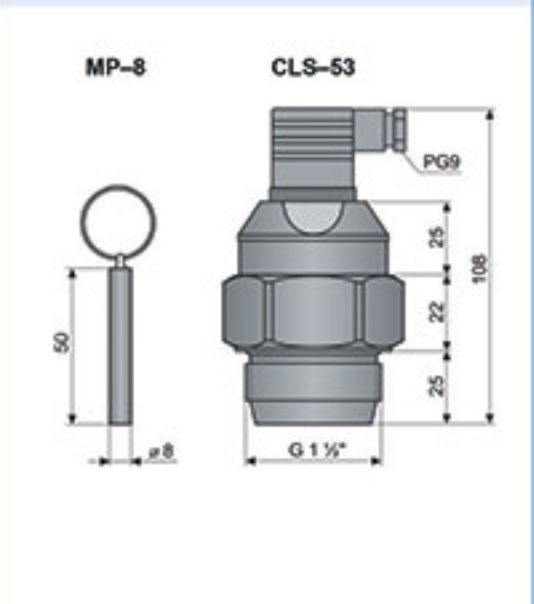
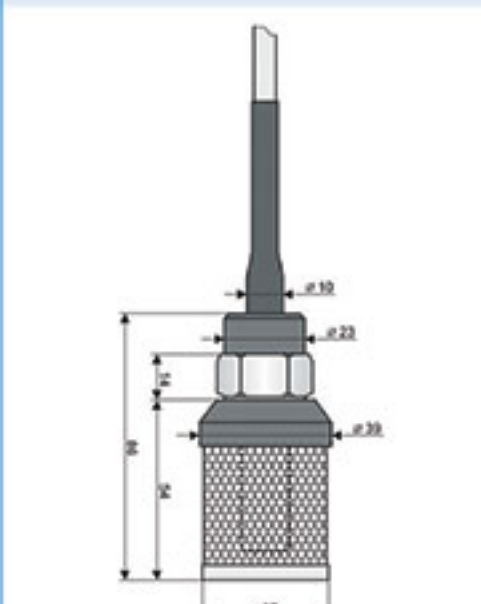
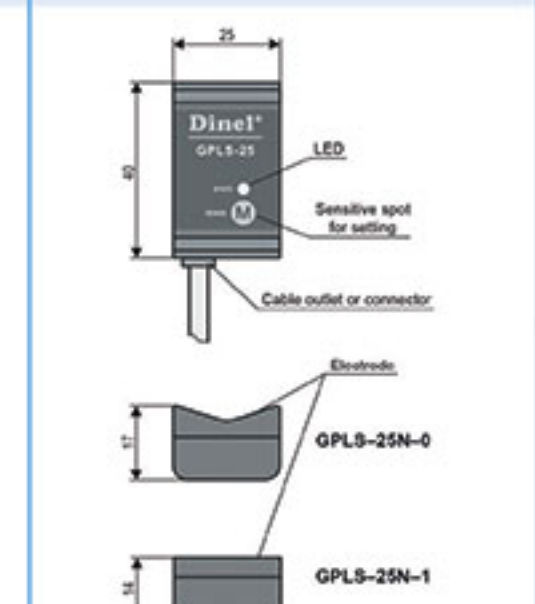
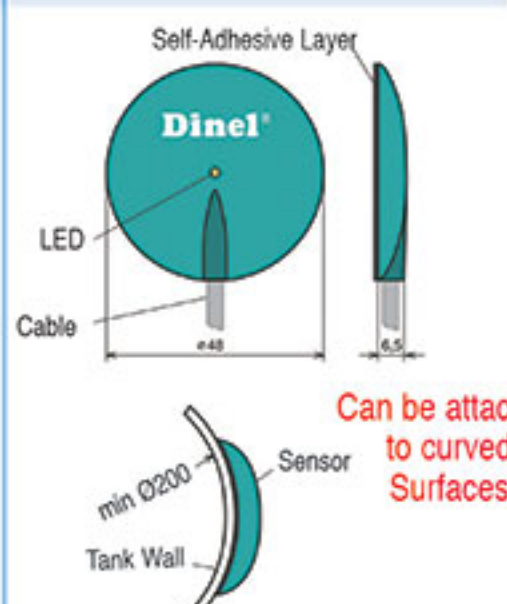
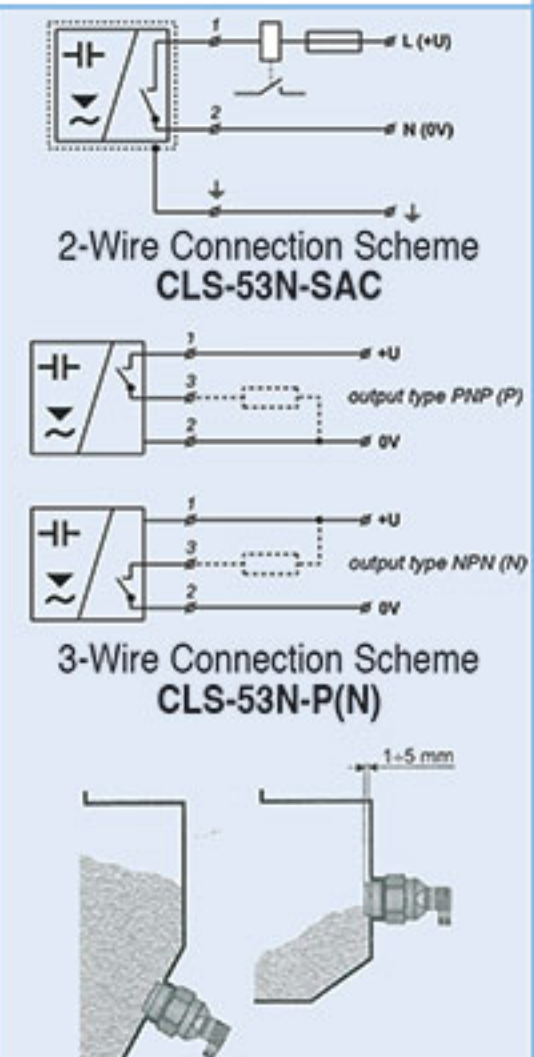
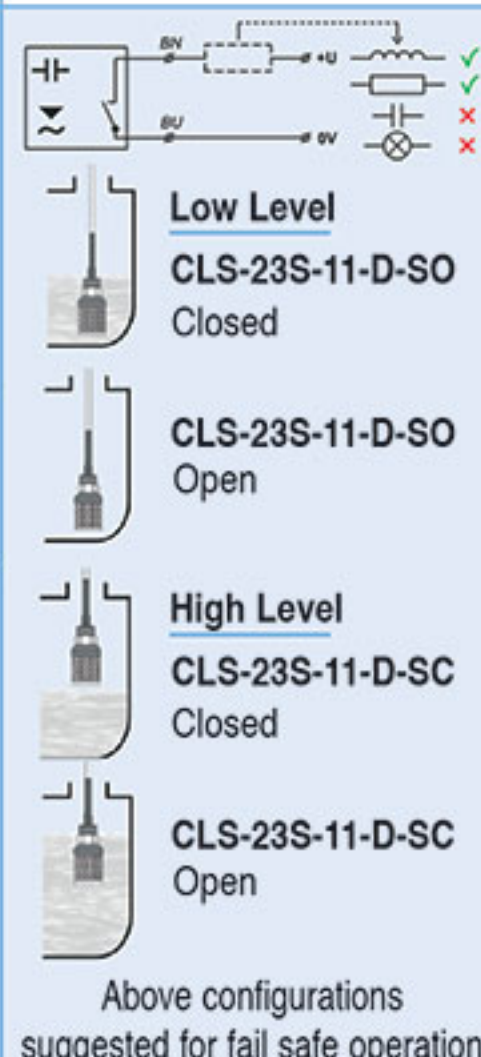
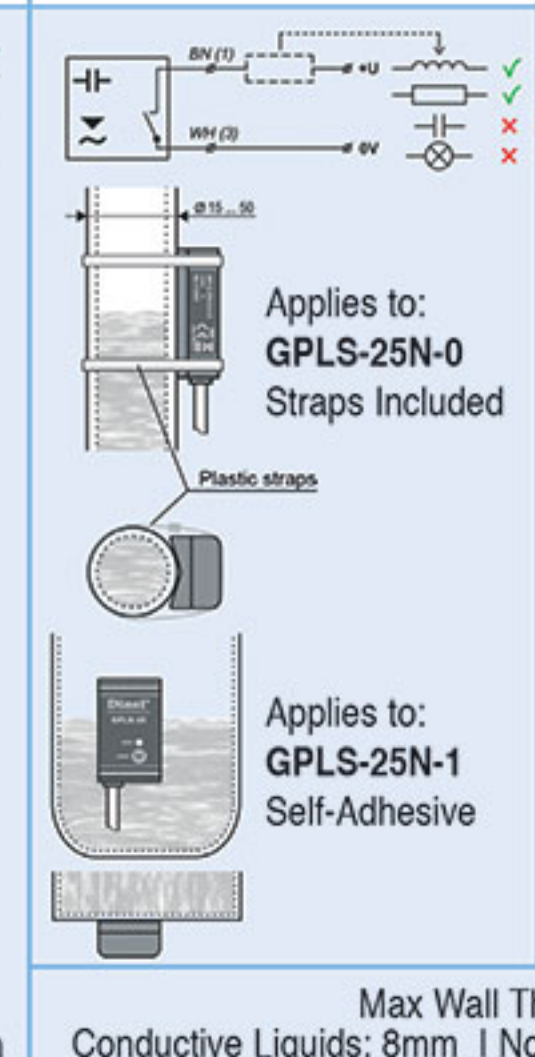

CAPACITIVE LEVEL SWITCH
SENSITIVITY ADJ
COARSE
FINE
NORMAL CLOSE
NORMAL OPEN
COMMON
POWER SOURCE

Application

- High temperature environment
- Corrosive environment
- Tank application

SA150A	SA111A-DQ-250	SA110A-DQ-150
L = 1m	L = 250mm	L = 150mm
<ul style="list-style-type: none"> • Mounting Thread 1"PT • Probe Material Stainless Steel 304 • Housing Alu. IP65 • Output: 5A @ 250V, Relay • Supply Voltage 110/230VAC 50/60Hz 		<ul style="list-style-type: none"> • Sensitivity Range 10pf, STD • Operating Temp in Bin: -20°C - 60°C • Operating Pressure: 20kg/cm³

LIMIT LEVEL SENSORS

	Capacitive Level Switch	Submersible Level Switch	Thru Wall Level Switch	Flexible Level Switch
	<p>For detection of bulk solid, fragmental and extruded materials</p> 	<p>For level detection of water in wells, boreholes, reservoirs and tanks</p> 	<p>For liquids limit level sensing on non-conductive (glass or plastic) gauge pipes, tubes and tank walls</p> 	<p>For limit level sensing of liquids in non-conductive plastic and glass vessels</p> 
Code	CLS-53N-*	CLS-23S-11-D-S*	GPLS-25N-[*]-A-S	FLD-48N
Mounting	G1½" Threaded	Suspended by Cable	[*] 0 - Tube Mounting Ø15-50mm [*] 1 - Flat Surface	Surface-Self Adhesive
Supply Voltage	20-230VAC/DC (SAC Version) 7-36VDC (P/N Version)	6-30VDC	6-30VDC	6-30VDC
Output Type	* Add Output Type to code: SAC : NO (2-Wire); P : PNP; N : NPN	* Add Output Type to code: O : NO (Low Level) C : NC (High Level)	NO or NC Programmable	NO or NC Programmable
Switching Current	0.3A (SAC) 0.2A (P/N)	40mA Max (To switch miniature relay only)	40mA Max (To switch miniature relay only)	40mA Max (To switch miniature relay only)
Settings	Simple sensitivity setting by means of magnetic pen (incl)	-	Simple sensitivity setting by means of magnetic pen (incl)	Configuration and adjustment by third programming wire (incl)
Ambient Temperature	-20° to 60°C	-20° to 70°C	-20° to 80°C	-10° to 60°C
Protection	IP65	IP68	IP67	IP67
Housing Material	Polypropylene	Plastic Polypropylene	Plastic Polypropylene	Polyurethane
Cable	Un-wired connector socket	PVC 2 x 0.75mm x 10m	PVC 2 x 0.34mm x 3m	PUR 3 x 0.14mm x 3m
Dimensions				 <p style="color: red; font-weight: bold;">Can be attached to curved Surfaces</p>
Wiring Diagrams & Application	 <p>2-Wire Connection Scheme CLS-53N-SAC</p> <p>3-Wire Connection Scheme CLS-53N-P(N)</p>	 <p>Low Level CLS-23S-11-D-SO Closed CLS-23S-11-D-SO Open</p> <p>High Level CLS-23S-11-D-SC Closed CLS-23S-11-D-SC Open</p> <p>Above configurations suggested for fail safe operation</p>	 <p>Applies to: GPLS-25N-0 Straps Included</p> <p>Applies to: GPLS-25N-1 Self-Adhesive</p> <p>Max Wall Thickness: Conductive Liquids: 8mm Non-Conductive Liquids: 3mm</p>	

LEVEL CONTROL & PUMPS

ANALOGUE ULTRASONIC LEVEL DETECTION

For continuous no-contact level measurement of various liquid and bulk solid materials in closed or open vessels, sumps, reservoirs etc.



Output Type	Sensing Distance			
	0,2 - 2m	0,25 - 6m	0,4 - 10m	0,5 - 20m

Factory Set Non-Adjustable Output Type **IP68** c/w 5m Cable

4 - 20mA (2-Wire)	ULM-53L-02-I	ULM-53L-06-I	ULM-53L-10-I	ULM-53L-20-I
0 - 10V (3-Wire)	ULM-53L-02-U	ULM-53L-06-U	ULM-53L-10-U	ULM-53L-20-U
Modbus RS-485 Output	ULM-53L-02-M	ULM-53L-06-M	ULM-53L-10-M	ULM-53L-20-M

Field Adjustable Output Type **IP67** c/w Connector Socket

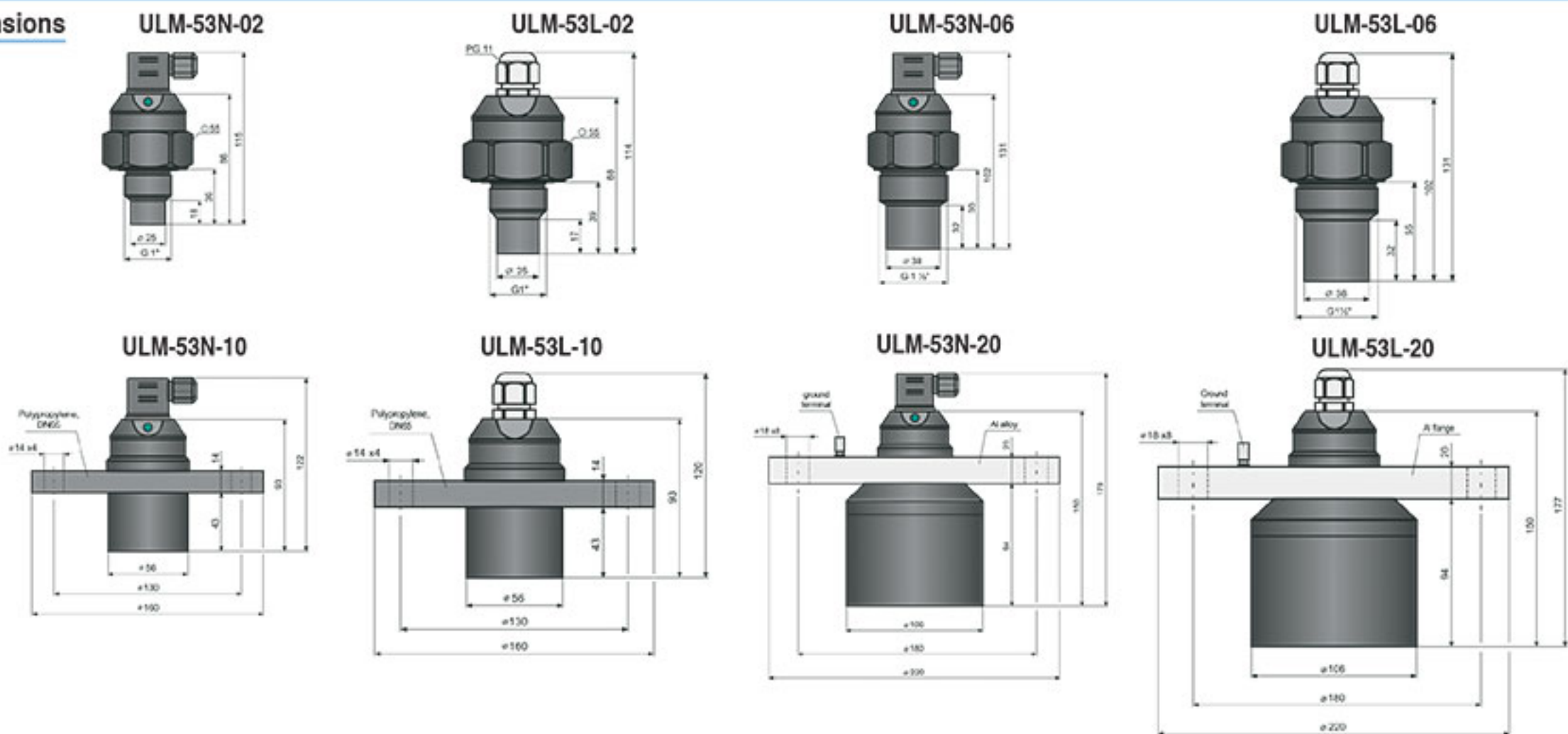
4 - 20mA (2-Wire)	ULM-53N-02-I	ULM-53N-06-I	ULM-53N-10-I	ULM-53N-20-I
0 - 10V (3-Wire)	ULM-53N-02-U	ULM-53N-06-U	ULM-53N-10-U	ULM-53N-20-U

Explosionproof Field Adjustable Type - Must be used with **IRU-420** (Below) c/w Connector Socket

4 - 20mA (2-Wire) EX Rating 	ULM-53XI-02-I Suitable for explosive areas (combustible gases or vapours) Ex II 1/2G Ex ia IIB T5 Ga/Gb with isolating repeater (IRU-420) the whole level meter - zone 1, front head part - zone 0	ULM-53XI-06-I Suitable for explosive areas (combustible gases or vapours) Ex II 1/2G Ex ia IIB T5 Ga/Gb with isolating repeater (IRU-420) the whole level meter - zone 1, front head part - zone 0	ULM-53XI-10-I Suitable for explosive areas (combustible gases or vapours) Ex II 1/2G Ex ia IIA T5 Ga/Gb with isolating repeater (IRU-420) the whole level meter - zone 1, front head part - zone 0	ULM-53XI-20-I Suitable for explosive areas (combustible gases or vapours) Ex II 2G Ex ia IIA T5 Gb with isolating repeater (IRU-420) the whole level meter - zone 1
------------------------------------	--	--	--	---

Mounting Type	G1"	G1½"	Polypropylene	Aluminium Alloy Flange
Supply Voltage	18 - 36VDC (18 - 30VDC For XI Versions)			
Accuracy	0.20%			
Ambient Temperature	-30° to 70°C		-30° to 60°C	

Dimensions



Isolating Repeater - for use with ULM-53XDI

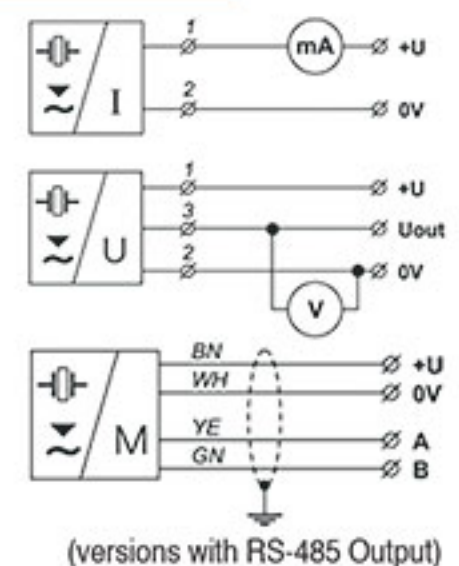
Code	IRU-420-I*	IRU-420-H*	IRU-420-U*
Input Signal	0/4 - 20mA	4 - 20mA	4 - 20mA
Output Signal	0/4 - 20mA	4 - 20mA	0 - 10V
Bi-directional Trans			
Communication signal	NO	YES	NO
HART™			

*Add Voltage to Code: 24V (18-30VAC/18-40VDC) 230V (60-230VAC/85-230VDC)

II(1)G[EEEx ia] IIB / IIC

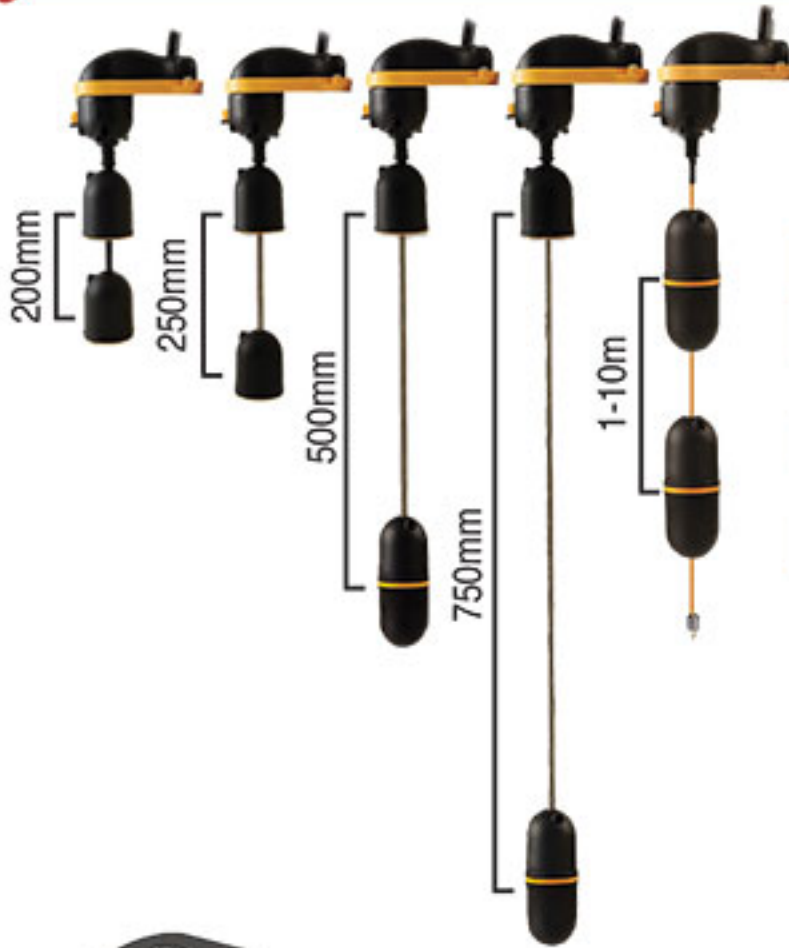
I(M1)G[EEEx ia] I

Wiring Diagrams



NEW

MOUSE LEVEL SWITCHES

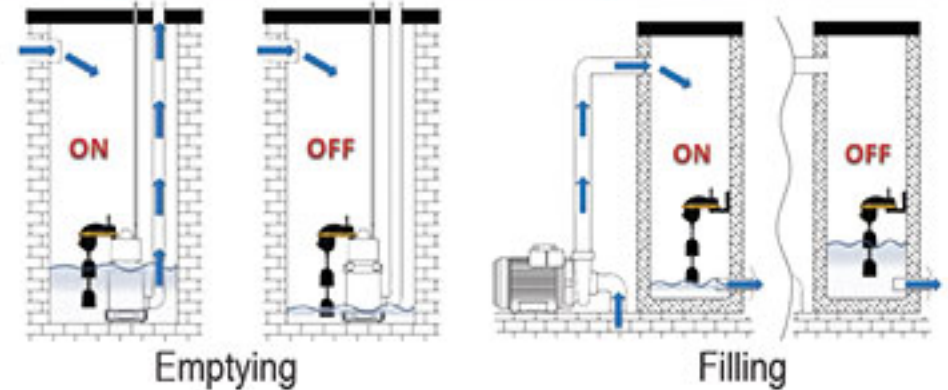


Vertical Level Switches - IP68

Vertical Level regulator for narrow spaces where conventional floatswitches do not have enough room to operate. High and low float levels are adjustable. Suitable for use in clean water, rain water, industrial water systems and systems with water containing chemical substances.

Code	Shaft Length	Min/Max Adj Range	Shaft Material
MOU00-DF-2M	200mm	50 - 110mm	PET
MOU25-DF-2M	250mm	50 - 170mm	AISI316
MOU50-DF-2M	500mm	50 - 420mm	AISI316
MOU75-DF-2M	750mm	60 - 650mm	AISI316
MOU100-DF-2M	10m*	1m - 10m	Polyester

- Manual / Auto operation
- Housing: Polypropylene
- Max Temp: 60°C (140°F)
- Contact rating: 1C/O 8A @ 230VAC
- Max depth: 15m
- Supplied with 2m cable
- * 10m Type: Only for use in Clean Water



TE-2047



TE-2046



TE-2048



TE-2049

Accessories

Code	Description
TE-2046	Wall/Tube mounting plastic bracket
TE-2047	AISI304 stainless steel mounting bracket
TE-2048	Flanged Support Bracket
TE-2049	Threaded support bracket (2" Gas)

BOREHOLE DEPTH TESTER



Borehole Depth Tester

The water level meter is portable, sturdy and extremely reliable. Used for measuring water levels in tube wells, boreholes, tanks, etc.

Code (scale 1m)	Description
BDT-050	50m Tester
BDT-100	100m Tester
BDT-150	150m Tester
BDT-200	200m Tester
BDT-250	250m Tester

Specifications

- Probe Material: Stainless steel AISI 303
- Cable Reel Material: Steel
- Battery: 9V, Alkaline, Type 6LR61 or similar

Features

- Integrated electronics with both light and sound indication
- Low power consumption
- Long battery life
- Temperature insensitive
- Probe 10mm Ø

VALVE & CONTROLLER FOR DUST COLLECTOR SYSTEMS



Board Only



Complete with Box

Board Only

Code	Type	Size
MOD-320/S	2 - 10 Steps	195 x 130mm
MOD-420/S	2 - 40 Steps	195 x 130mm

Complete with Box

Code	Type	Size
MOD-320/B	2 - 10 Steps	250 x 200mm
MOD-420/B	2 - 40 Steps	320 x 250mm

Specifications

- Supply Voltage: 110V/220V ±10%, 50/60Hz
- Pulse Frequency Range of Adjustability: 2-60sec
- Fuse: 3A 250VAC
- Pulse Duration Range of Adjustability: 20-200ms
- Number of Sequenced Steps: 2-10
- Operating Temperature: 0-60°C



Solenoid Valve (for air only)

Code	Volts	Connection
RDA20SC2	230VAC	3/4" PT (20mm)
RDA20SC2	110VAC	3/4" PT (20mm)
RDA20SC2	230VAC	1" PT (25mm)
RDA20SC2	110VAC	1" PT (25mm)

Spare Coils

RDA-230VAC	230VAC
RDA-110VAC	110VAC

Specifications

- Medium pressure: 6kgs/cm²
- Medium Temperature: 90°C
- Material: Aluminium
- Supplied complete with coil

THERMAL DISPERSION FLOW SWITCHES

Type	Compact Model	High Temp Model	Economy Model
<ul style="list-style-type: none"> Measures the velocity of liquid inside a pipe or channel High sensitivity and accuracy Can be calibrated for liquids with different density and purity Pmax: 100 Bar 	<div style="display: flex; justify-content: center; align-items: center;"> <div style="margin-right: 10px;">40.5mm</div> <div style="margin-left: 10px;">31mm</div> </div>	<div style="display: flex; justify-content: center; align-items: center;"> <div style="margin-right: 10px;">72.5mm</div> <div style="margin-left: 10px;">31mm</div> </div>	<div style="display: flex; justify-content: center; align-items: center;"> <div style="margin-right: 10px;">69mm</div> <div style="margin-left: 10px;">31mm</div> </div>
Code	SP200-0-BU-* -2	SP202-L-BU-* -2	SP220-0-BU-* -2
Output Type: *Add to Code:	N: NPN Open Collector (400mA Max) P: PNP Open Collector (400mA Max) A: NO (1A@30VDC) B: NC (1A@30VDC)	N: NPN Open Collector (400mA Max) P: PNP Open Collector (400mA Max) A: NO (1A@30VDC) B: NC (1A@30VDC)	N: NPN Open Collector (400mA Max) P: PNP Open Collector (400mA Max) A: NO (1A@30VDC) B: NC (1A@30VDC)
Connection Thread	½" NPT	½" NPT	½" NPT
Measuring Range	Water: 1 - 150 cm/s / Oil: 3-300 cm/s	Water: 1 - 150 cm/s / Oil: 3-300 cm/s	Water: 1 - 150 cm/s / Oil: 3-300 cm/s
Operating Voltage	19-30VDC	19-30VDC	19-30VDC
Operating Temperature	-20° to 80°C	-20° to 120°C	-20° to 80°C
Protection Degree	IP67	IP67	IP65
Housing Material	SUS304	SUS316L	SUS304/Plastic
Connection Type	4-Pole M12 Connector (c/w 2m Cable)	4-Pole M12 Connector (c/w 2m Cable)	4-Pole M12 Connector (c/w 2m Cable)
LED Indication	<div style="display: flex; align-items: center;"> <div> <p>Wiring Diagrams</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>NPN output type wiring</p> </div> <div style="text-align: center;"> <p>PNP output type wiring</p> </div> </div> <p style="text-align: center;">3 Wire</p> </div> <div style="display: flex; justify-content: space-around; margin-top: 20px;"> <div style="text-align: center;"> <p>Relay output type wiring (NC)</p> </div> <div style="text-align: center;"> <p>Relay output type wiring (NO)</p> </div> </div> <p style="text-align: center;">4 Wire</p> </div>		

FLOW SWITCHES FOR WATER & AIR

Flow Switches for Water	Flow Switch for Air	Bargraph Panel Meter		
Paddle: 140 x 25mm 		Paddle: 175 x 80mm 	48 x 144 Bezel 	
FS-80	FS-2533	AS-2614	PM5022R3	PB-1471
<ul style="list-style-type: none"> Housing Material: Aluminium (IP65) Paddle Material: 304 S/S Switch: SPDT, 60W @ 230VAC Operating temperature: -30 to 150 °C Operating Max Pressure: 355 PSI Pressure drop allowance: 3 PSI Set point tolerance: ±25% Repeatability difference: ±5% Connecting: 1" PT screw Weight: 850g Spare Paddle: FS-80 PADDLE 	<ul style="list-style-type: none"> 3 Different Paddle lengths, 57, 88 & 167mm Housing material: ABS (IP64) Paddle material: 304 S/S Switch: SPDT, 16A@230VAC Connecting: 1" PT screw Brass Operating temperature: -20 to 120 °C Operating pressure Max: 10kg/cm² Set point tolerance: ±25% Repeatability difference: ±5% For piping 1" to 8" Adjustable setting Weight: 660g Spare Paddle: FS-2533 PADDLE 	<ul style="list-style-type: none"> Housing material: ABS (IP64) with steelbase Paddle material: Tinned S/S Brass Lever Switch: SPDT, 16A@230VAC Operating Temperature: -20 to 80 °C Min cut-in value 2m/sec Min cut-out value 1m/sec Weight: 400g Spare Paddle: AS-PADDLE 	Input 4 - 20mA Output 4 - 20mA <ul style="list-style-type: none"> 4 point alarm (HH, H, L, LL) relay outputs (5A/250VAC) Scaling function: (0 - 1099) Alarm Delay: On/Off 0 - 3sec adjustment Under/over range indication Accuracy 0.1% Built in 24VDC/50mA sensor supply See page 55 & for Level Sensors 	Input 0 - 10V <ul style="list-style-type: none"> Input: 4 - 20mA Display: 0 - 100% Accuracy: 1% Response Time: <500ms Size: 96 x 24mm Cutout: 92 x 23mm Complete with 230/24VDC power supply See page 55 & for Level Sensors

IRRIGATION

RAIN BIRD



ESP-4M



RSD-BEX



ESP-SM3

Irrigation Controllers

The ESP Modular Irrigation Controller is a 4 station timer with 3 independent programmes easily expanded up to 13 stations by adding "Plug In" 3 station expansion models.

Code	Description
ESP-4M	Outdoor Irrigation Controller
ESP-4MI	Indoor Irrigation Controller

Accessories

Code	Description
ESP-SM3	3 Station plug-in expansion module - order separately
RSD-BEX	Rain sensor c/w mounting bracket

- 3 programmes with 4 starts per program
- "Hot Swappable" plug-in modules
- MOV surge protectors fitted to inputs/outputs
- 230VAC input/ 25.5VAC @ 1A output
- Water budget feature accessible without re-programming



EV100

25VAW

25VAP

Solenoid Valves

Code	Description
EV100	24VAC Solenoid Valve - 25mm, 8 bar

Transformer for Solenoid Valves

Code	Description
25VAW 230/24	25VA 230/24VAC with Flying Leads
25VAW 400/24	25VA 400/24VAC with Flying Leads
25VAP-24-T	25VA 230/24VAC Plug Type



Inline Filters

Code	Description
WL-1L	1 Litre Water Filter - 25mm Inlet/Outlet
WL-1SF	Spare 1 Litre replacement cartridge (unwashable)

- Max Pressure: 5 Bar
- Max Temperature: 35°C



VB1419-13B



VB610

Valve Boxes

Code	Description
VB1419-13B	300 x 450mm Lockable rectangular Valve Box
VB610	150mmØ Non-Lockable round Valve Box
VB910-12	250mmØ Lockable round Valve Box

INLINE WATER TIMERS

120 min Mechanical Timer



Dial

7 Day Digital Timer



7 Day Analogue Timer

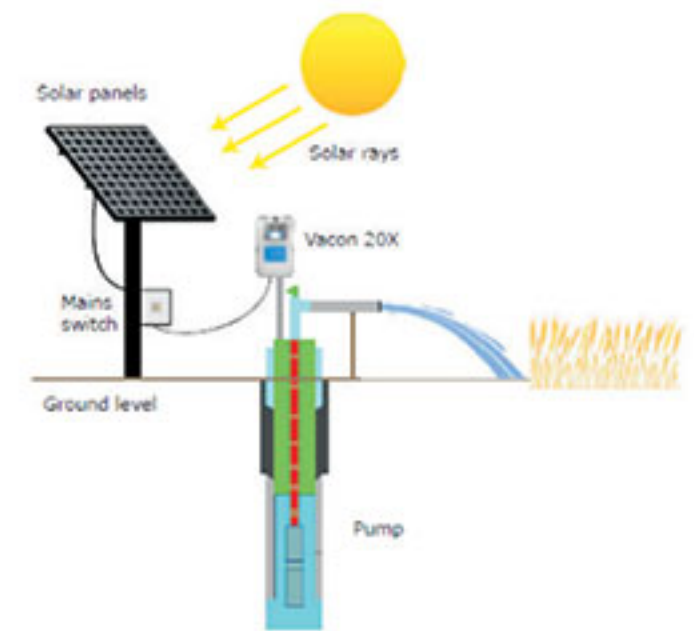


Code	WM-1000	AML-080C	AML-1037B
Power Supply	Mechanical	2 x AA 1.5V (Excl)	2 x AA 1.5V (Excl)
No. of Programs	-	6 Programs	1 Program
Features	Set watering time and open tap. Water cut-off when time elapses (3/4" couplings).	Quick, easy programmable. Seasonal budget. Adjusts program duration (0-200%)	Selectable time, duration and cycle (up to 7 days)

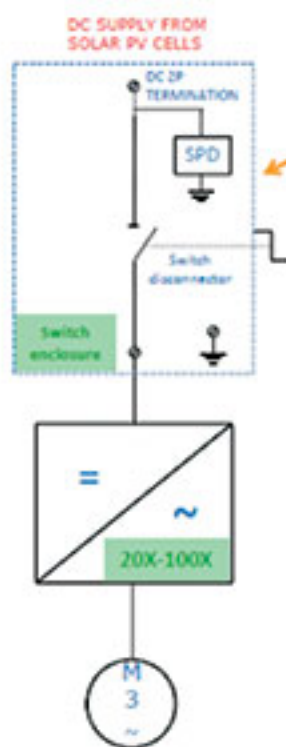
VACON SOLAR PUMP INVERTERS

Solar Pump Drives: The VACON IP66 Solution

- The VACON IP66 Solution is innovative from both the HW and the SW Control Strategy point of view.
- A small enclosure where to place the mains switch and the surge protection device replaces the usual large cabinet, as the Inverter is placed outside.
- The VACON IP66 Drive can be installed outdoors without any reliability risk. It doesn't require maintenance, as there are no filters to clean/replace.
- Condensation inside the drive is prevented by a GORE® vent which blocks the moisture without the need of any heater.
- Correct operation of the drive is visible from outside thanks to 4 LEDs showing the operating conditions: Power-ON, Run, Ready, Fault. An IP66 display panel can also be connected to get detailed information when needed, or kept permanently installed on the drive to show several variables (running speed, MWh counter, etc.)

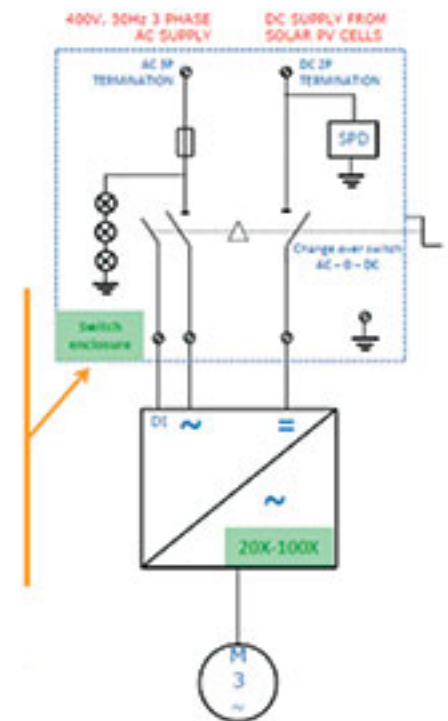


Solar Pump Drive: Examples of Supply Modes



- Solar panel connection mode:
- Stand-alone solution: inverter supplied by Solar Panels DC voltage.
 - Completely independent from the mains supply and selfsufficient installation.

- Solar panel or Grid connection mode:
- With an external changeover switch, inverter can be supplied either by mains or solar panels.
 - Useful during night or panel maintenance operations.
 - The Vacon 20X-100X can have a "hot commutation" from grid to PV and vice-versa, as they recognize the supply source (solar panels or grid) by a digital input, selecting the appropriate control SW.



Solar Pump: Key Benefits

- Reduced Carbon footprint
- Ideal for remote areas, where electricity is not available
- Clean energy and Eco-friendly solution
- Non dependent from conventional energy
- Uninterrupted supply for irrigation during the day time.
- Areas of use:
 - Irrigation (flood irrigation, drip irrigation)
 - Cattle watering system
 - Community water supply
 - Animal farming

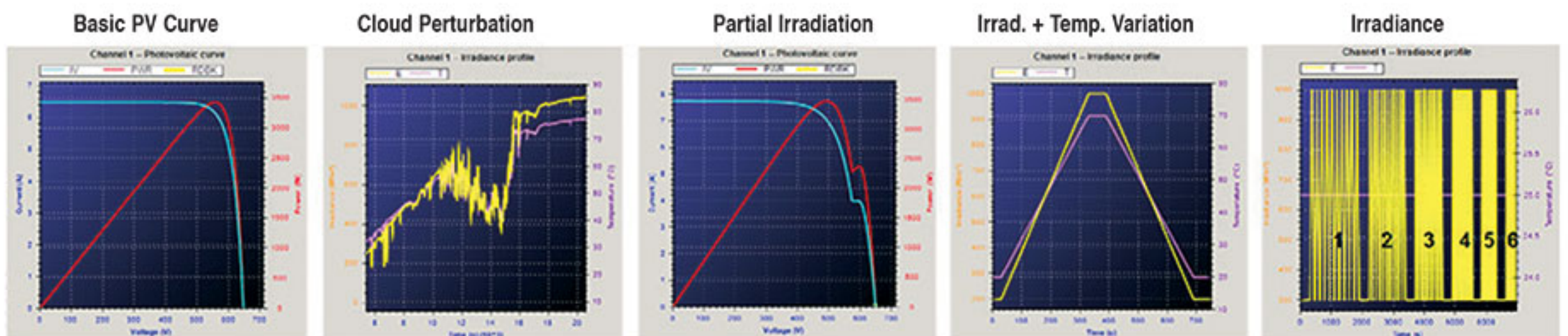
Solar Pump Drive: The VACON MPPT4 Control Strategy

A dedicated application SW was developed to drive a Solar Pump with an optimized multiple algorithm MPPT (Maximum Power Point Tracking) for 20X & 100X supplied by Solar Panels.

The unique controller VACON MPPT4 controller implements 4 concurrent algorithms:

- Feed-Forward controller (to follow the radiation variations)
- Correction controller (to compensate the temperature variations)
- Oscillation Damping regulator (to catch-back the panels entering in the "current source mode")
- Local Maxima Bypass logic (to skip the "false" maximum point in case of partial irradiation)

Analysis over other similar Solar Inverters showed that regulators called "MPPT" are often simple under-voltage regulators with corrections. Our simulations indicate that using a control based on under-voltage regulator the actual average power (and therefore liters of pumped water) generated by the solar panels can be 30% to 40% lower than the output power generated with Vacon MPPT 4!



NEW

VACON® 20 CP - COLD PLATE/SOLAR DRIVE



Technical highlights

- Cold plate cooling
- Unique low depth design
- Integrated brake resistor for MS2 frame size
- High ambient temp rating up to 70°C

Benefits

- Highest cooling flexibility
- Fast plugging of I/O wiring
- Custom-made software possible

VACON 20 CP - Single Phase Input **208-230V**, Three Phase Output **3 x 230V IP00**, DC input up to 400VDC

Code	High Overload Ratings			Frame Size	Dimensions (mm) W x H x D
	Motor Power (kW)	Continuous Current I _H (A)	150% Overload Current (A)		
VACON0020-1L-0004-2-CP	0,75	3,7	5,6	MS2	133 x 165 x 80
VACON0020-1L-0005-2-CP	1,1	4,8	7,2	MS2	133 x 165 x 80
VACON0020-1L-0007-2-CP	1,5	7	10,5	MS2	133 x 165 x 80

VACON 20 CP - Three Phase Input **380-480V**, Three Phase Output **3 x 380V IP00**, DC input up to 800VDC

Code	High Overload Ratings			Frame Size	Dimensions (mm) W x H x D
	Motor Power (kW)	Continuous Current I _H (A)	150% Overload Current (A)		
VACON0020-3L-0003-4-CP	0,75	2,4	3,6	MS2	133 x 165 x 80
VACON0020-3L-0004-4-CP	1,1	3,3	5,0	MS2	133 x 165 x 80
VACON0020-3L-0005-4-CP	1,5	4,3	6,5	MS2	133 x 165 x 80
VACON0020-3L-0006-4-CP	2,2	5,6	8,4	MS2	133 x 165 x 80
VACON0020-3L-0008-4-CP	3	7,6	11,4	MS2	133 x 165 x 80
VACON0020-3L-0009-4-CP	4	9,0	13,5	MS3	161 x 246 x 83
VACON0020-3L-0012-4-CP	5,5	12,0	18,0	MS3	161 x 246 x 83
VACON0020-3L-0016-4-CP	7,5	16,0	24,0	MS3	161 x 246 x 83

See Page 148 for Accessories. Keypads to be ordered separately.

NEW

VACON® 20 X - DECENTRALIZED DRIVE IP66



Technical highlights

- 2g resistance to vibrations (according to 3M6/IEC 60721-3-3)
- Large cooling ribs
- Option of integrated mains switch

Benefits

- Cost savings from decentral concept
- Can be used in almost any environment
- Can be cleaned with pressurized water
- Custom-made software solutions with built-in PLC functionality for OEMs

VACON 20 X - Single Phase Input **208-230V**, Three Phase Output **3 x 230V IP66/Type 4X**

Code	High Overload Ratings			Frame Size	Dimensions (mm) W x H x D
	Motor Power (kW)	Continuous Current I _H (A)	150% Overload Current (A)		
VACON0020-1L-0004-2-X	0,75	3,7	5,6	MU2	169 x 295 x 154
VACON0020-1L-0005-2-X	1,1	4,8	7,2	MU2	170 x 295 x 154
VACON0020-1L-0007-2-X	1,5	7	10,5	MU2	171 x 295 x 154

VACON 20 X - Three Phase Input **380-480V**, Three Phase Output **3 x 400V IP66/Type 4X**, (DC input up to 800VDC-MU3 Frame only)

Code	High Overload Ratings			Frame Size	Dimensions (mm) W x H x D
	Motor Power (kW)	Continuous Current I _H (A)	150% Overload Current (A)		
VACON0020-3L-0003-4-X	0,75	2,4	3,6	MU2	169 x 295 x 154
VACON0020-3L-0004-4-X	1,1	3,3	5	MU2	170 x 295 x 154
VACON0020-3L-0005-4-X	1,5	4,3	6,5	MU2	171 x 295 x 154
VACON0020-3L-0006-4-X	2,2	5,6	8,4	MU2	172 x 295 x 154
VACON0020-3L-0008-4-X	3	7,6	11,4	MU2	173 x 295 x 154
VACON0020-3L-0009-4-X	4	9	13,5	MU3	205 x 375 x 180
VACON0020-3L-0012-4-X	5,5	12	18	MU3	206 x 375 x 180
VACON0020-3L-0016-4-X	7,5	16	24	MU3	207 x 375 x 180

See Page 148 for accessories. Keypads to be ordered separately.

NEW

VACON® 100 X - DECENTRALIZED/SOLAR DRIVE IP66



Technical highlights

- 3g resistance to vibrations (according to 3M7/IEC 60721-3-3)
- Option of integrated mains switch
- Integrated with RS485 Modbus and EtherNET communication
- Integrated Brake Chopper

Benefits

- Able to withstand rough conditions such as heat, dirt and vibrations
- Programming enables top class integration for countless OEM applications
- Mountable in any position

VACON 100 X - Three Phase Input **380-480V**, Three Phase Output **3 x 400V IP66/Type 4X**, DC input up to 800VDC

Code	High Overload Ratings			Frame Size	Dimensions (mm) W x H x D
	Motor Power 400V (kW)	Continuous Current I _H (A)	150% Overload Current (A)		
VACON0100-3L-0003-4-X	1,1	3,4	5,1	MM4	191 x 315 x 196
VACON0100-3L-0004-4-X	1,5	4,8	7,2	MM4	191 x 315 x 196
VACON0100-3L-0005-4-X	2,2	5,6	8,4	MM4	191 x 315 x 196
VACON0100-3L-0008-4-X	3	8	12	MM4	191 x 315 x 196
VACON0100-3L-0009-4-X	4	9,6	14	MM4	191 x 315 x 196
VACON0100-3L-0012-4-X	5,5	12	18	MM4	191 x 315 x 196
VACON0100-3L-0016-4-X	7,5	16	24	MM5	233 x 367 x 214
VACON0100-3L-0023-4-X	11	23	34	MM5	233 x 367 x 214
VACON0100-3L-0031-4-X	15	31	46	MM5	233 x 367 x 214
VACON0100-3L-0038-4-X	18,5	38	57	MM6	350 x 500 x 235
VACON0100-3L-0046-4-X	22	46	69	MM6	350 x 500 x 235
VACON0100-3L-0061-4-X	30	61	91	MM6	350 x 500 x 235
VACON0100-3L-0072-4-X	37	72	80*	MM6	350 x 500 x 235

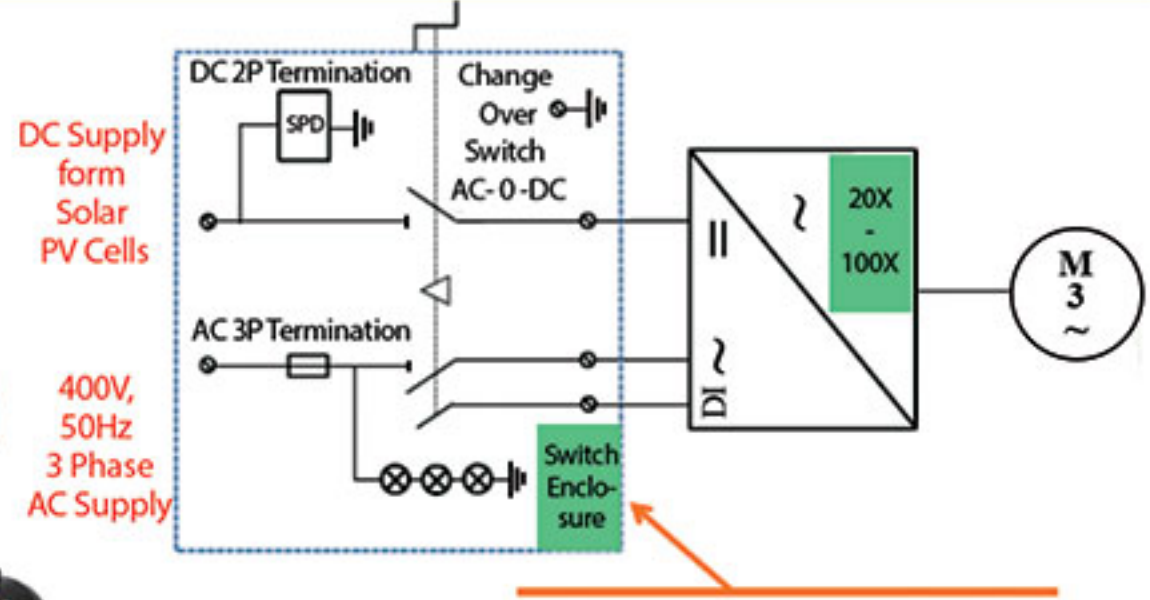
See Page 154 for accessories. Keypads to be ordered separately.

* 110% Overload

SOLAR SUPPLY KIT FOR 3PH 400VAC PUMP / MOTORS

Solar Pump Kits

Supplied to ensure correct sizing of PV array to user selected pump. The kits consist of PV panels, Solar cable, solar connectors and solar pump control box. The solar pump box contains a Vacon Solar drive controller, String box, Switchgear and protection.



Solar Pump Drive Kit Connection Example - Solar panel or Grid connection mode: With an external changeover switch, Inverter can be supplied either from mains or solar panels. This will enable night time pumping or panel maintenance operations. The Vacon 20X-100X series include "Hot Commutation" from the grid to PV and vice-versa.

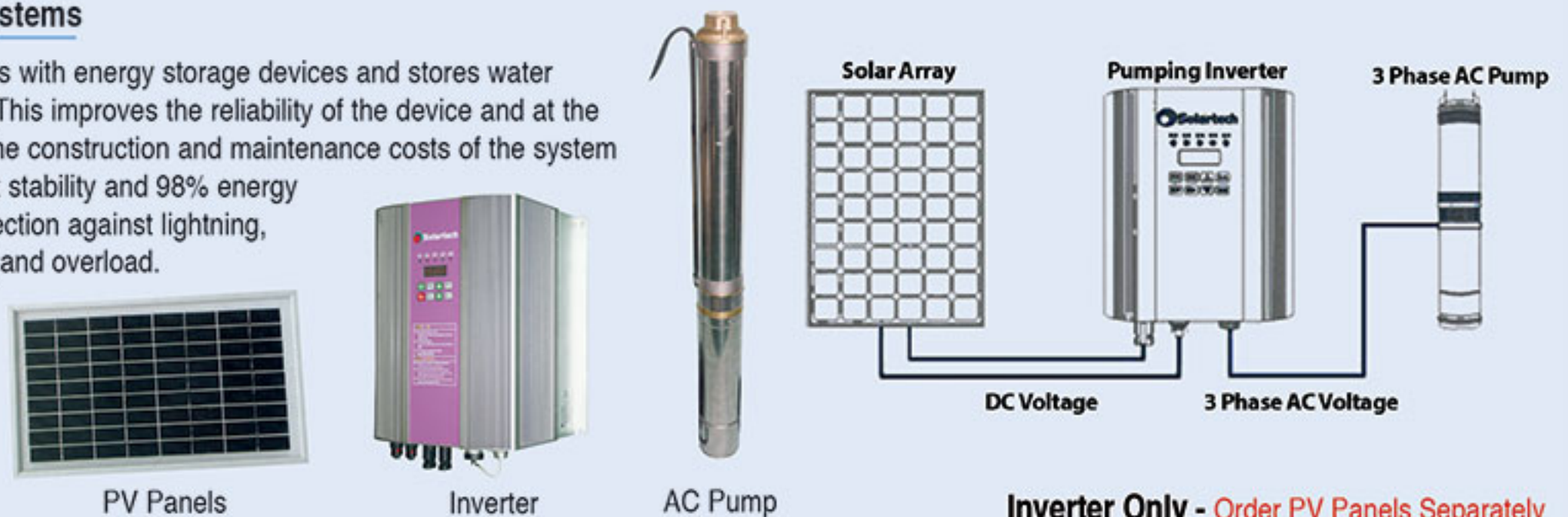
Kit Code	380VAC Motor kW	Motor Voltage	PV Array Power	PV Panels Required	Control Box	Solar Cables	Solar Connectors
SOL600W-0.37KW	0.37kW	230V 3PH	1040W	4 x RHV260	SPD-07		
SOL780W-0.55KW	0.55kW	230V 3PH	1040W	4 x RHV260	SPD-07		
SOL1040W-0.75KW	0.75kW	230V 3PH	1040W	4 x RHV260	SPD-07	1 x SW102/10m	1 x PV-ST101/F2
SOL1800W-1.1KW	1.1kW	400V 3PH	1800W	6 x RHV300	SPD-11	1 x SW104/10m	1 x PV-ST101/M2
SOL2100W-1.5KW	1.5kW	400V 3PH	2100W	7 x RHV300	SPD-15		
SOL3600W-2.2KW	2.2kW	400V 3PH	3600W	12 x RHV300	SPD-22		

SOLAR PUMPING SYSTEMS

Solar Pumping Systems

The system dispenses with energy storage devices and stores water instead of electricity. This improves the reliability of the device and at the same time it lowers the construction and maintenance costs of the system dramatically. Excellent stability and 98% energy conversion ratio. Protection against lightning, dry running, blocking and overload.

System include Inverter, Pump + 30 m Cable & Connections



Inverter Only - Order PV Panels Separately

Code	kW	Description	Head (m)	Flow Water (m ³ /day)	No. of PV Panels	Code	Code	Rated Output		MPP Voltage
								Current	KW	
PS370-1	0.37kW	Solar Pumping System	27 - 35m	10-7.5m ³ /day	4 x 260W HV	RVH-260	PB400L	3A	0.25-0.4	280-350V
PS550-1	0.55kW	Solar Pumping System	37 - 52m	10-7.5m ³ /day	4 x 260W HV	RVH-260	PB750L	5A	0.55-0.75	280-350V
PS750-1	0.75kW	Solar Pumping System	45 - 61m	10-7.5m ³ /day	4 x 260W HV	RHV-260	PB1500L	7A	1.1-1.5	280-350V
PS1100-2	1.10kW	Solar Pumping System	54 - 73m	10-7.5m ³ /day	8 x 260W HV	RVH-260	PB2200L	11A	2.2	280-350V
PS1500-2	1.50kW	Solar Pumping System	68 - 95m	10-7.5m ³ /day	10 x 260W HV	RHV-260	PB3700H	9A	3-3.7	500-600V
PS2200-1	2.20kW	Solar Pumping System	91 - 133m	10-7.5m ³ /day	12 x 300W HV	RHV-300	PB5500H	13A	4-4.5	500-600V
PS3000-1	3.7kW	Solar Pumping System	118 - 169m	15-10m ³ /day	18 x 260W HV	RHV-260				
PS4000-1	5.5kW	Solar Pumping System	155 - 207m	15-10m ³ /day	27 x 260W HV	RVH-260				

Features

- Solar pumping inverter converts DC voltage from the solar array into AC voltage to drive the pump.
- With the function of MPPT (maximum power point tracking), it regulates the output frequency according to irradiation in real time to achieve the maximum power.

Advantages

- To drive pumps equipped with 3-phase induction motors
- Optimized SPWM (Sinusoidal pulse width modulation)
- Various operation modes & MPPT algorithms are available
- Option of water-level detection and control is available
- Adjustable speed range of pump based on the actual situation (available solar power) of the system.
- Protection functions: lightning, over/low input voltage, over current and overload protection, etc.

Applications

- Desert control
- Sea water desalination
- Agricultural irrigation
- Daily water supply
- Forest irrigation
- Remote watering troughs for animals
- Waste water treatment

DC SOLAR PUMPS



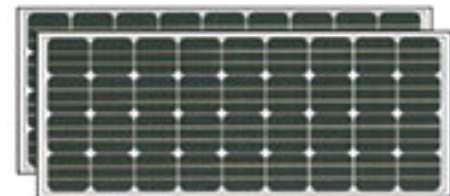
TSSP

NEW

NEW

Pool Pumps

Code	Voltage	Power	Max Flow Rate	Max Head	I/O Size	Required PV Panels
TSSP16-15-48/500	48VDC	500W	16m ³ /h	18m	1½" x 1½"	170W x 4
TSSP18-8-96/750	96VDC	750W	18m ³ /h	8m	3" x 3"	80W x 14
TSSP18-12-72/750	72VDC	750W	18m ³ /h	12m	2" x 2"	80W x 14
TSSP25-15-110/1000	110VDC	1000W	25m ³ /h	15m	2½" x 2½"	100W x 16
TSSP25-15-110/1200	110VDC	1200W	25m ³ /h	15m	2½" x 2½"	100W x 16
TSSP30-20-110/1500	110VDC	1500W	30m ³ /h	20m	3" x 3"	100W x 16



Order PV Panels Separately

NEW

Pool Pump With Built in Controller

Code	Voltage	Power	Max Flow Rate	Max Head	I/O Size	Required PV Panels
TSSP12-14-48/500	48VDC	500W	12m ³ /h	14m	2" x 2"	170W x 4

Fountain Pumps

Code	Voltage	Power	Max Flow Rate	Max Head	I/O Size	Required PV Panels
TSQB2.0-25-24/120	24VDC	120W	2.0m ³ /h	15m	1" x 1"	80W x 2
TSSGJ3.2-18-24/120	24VDC	120W	3.2m ³ /h	18m	1" x 1"	80W x 2
TSQB2.2-37-36/210	36VDC	210W	2.2m ³ /h	37m	1" x 1"	90W x 2



TSQB

Accessories

- Pump Controller
- Cable Connector
- Cable for Solar Panel
- Brass Impeller
- Water Level Sensor
- Solar Flash Light

DC SUBMERSIBLE PUMPS



Normal Plastic Impeller

Code	Voltage	Power	Max Flow Rate	Max Head	Pump Size	Required PV Panels	Outlet
3TSC-1.9-23-36/210	36VDC	210W	1.9m ³ /h	23m	3"	90W x 3	3/4"
3TSC-2-80-48/500	48VDC	500W	2.0m ³ /h	70m	3"	130W x 4	3/4"
3TSC-3.5-50-48/500	48VDC	500W	3.5m ³ /h	34m	3"	130W x 4	3/4"
4TSC-4-57-48/500	48VDC	500W	4.0m ³ /h	57m	4"	170W x 4	1¼"
4TSC-12.5-44-110/1000	110VDC	1000W	12.5m ³ /h	44m	4"	100W x 14	2"

NEW

Screw Type Impeller

Code	Voltage	Power	Max Flow Rate	Max Head	Pump Size	Required PV Panels	Outlet
3TSS-0.5-28-12/80	12VDC	80W	0.5m ³ /h	28m	3"	100W x 1	3/4"
3TSS-0.76-55-24/120	24VDC	120W	0.76m ³ /h	55m	3"	90W x 2	3/4"
3TSS-1.25-80-36/210	36VDC	210W	1.25m ³ /h	90m	3"	90W x 3	3/4"
4TSS-2.5-70-48/500	48VDC	500W	2.5m ³ /h	80m	4"	170W x 4	1"
4TSS-2.5-140-110/1000	110VDC	1000W	2.5m ³ /h	140m	4"	140W x 14	1"
5TSS-5-80-110/1200	110VDC	1200W	5m ³ /h	80m	5"	100W x 16	1½"

NEW

NEW



Applications

- Domestic & Municipal Water Supply
- Irrigation Systems
- Industrial & Mining Applications
- Ponds & Garden Water Supply

Features

- Floating impeller design prevents sand blockages
- Highly durable
- Can handle upthrust load

Accessories

- Liquid Level Sensor
- Torch light
- Water Level Sensor
- Order PV Panels Separately

DC PV PUMP SYSTEM CONTROLLER

Solar Pump System Controllers

Code	Description
TSPC-12-24V	12 - 24VDC Solar Pump System Controller
TSPC-36-48V	36 - 48VDC Solar Pump System Controller
TSPC-72-110V	72 - 110VDC Solar Pump System Controller

- MPPT and DSP control features provide a stable clean DC to the batteries extending battery life and system reliability
- For use with the above TAIFU Solar Pumping Systems
- Select controller to match system voltage



MULTI-STAGE BOOSTER PUMPS

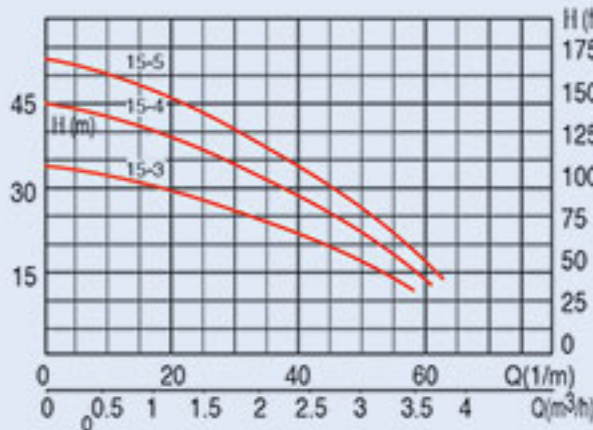
ASPRI 15

Inlet/Outlet: 1"
Max. Temp.: 35°C

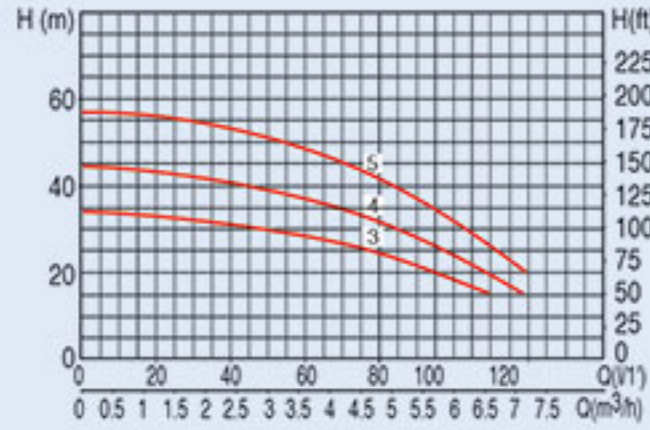
Quiet running multi-stage centrifugal pumps. Built-in self priming valve. Not very sensitive to impurities. Domestic clean water, irrigation and hydro-pneumatic applications. Continuous rated Pump body and impellers in stainless steel, inlet/outlet in cast iron, Diffusers in technopolymer.



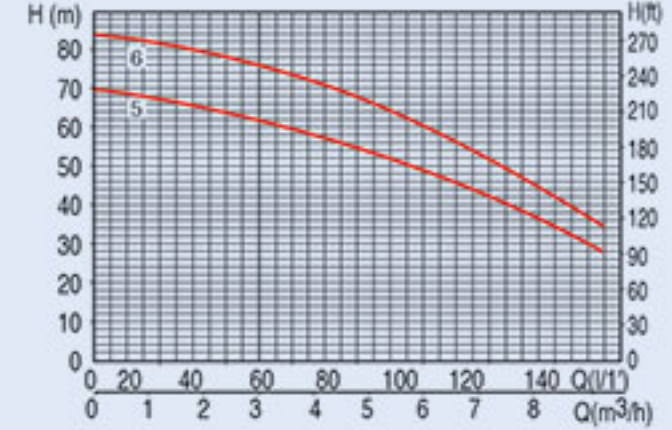
Code	Voltage	Amps	No. of Impellers	Power		Max Head (m)	Max Flow (l/min)	In / Out (inch)
				KW	HP			
ASPRI 15-4M	230VAC	3.5	4	0.55	0.75	44 - 21.5	5 - 50	1 x 1
ASPRI 15-5M	230VAC	4.1	5	0.75	1	53 - 17	5 - 60	1 x 1
ASPRI 15-5	400VAC	3.3	5	0.75	1	33 - 17	5 - 60	1 x 1
ASPRI 25-3M	230VAC	5.5	3	0.75	1	33 - 17	15 - 105	1 x 1
ASPRI 25-4M	230VAC	7	4	0.92	1.25	43 - 14.5	15 - 120	1 x 1
ASPRI 25-5	400VAC	5.2	5	1.12	1.5	56 - 20	15 - 120	1 x 1
ASPRI 35-5N	400VAC	6.9	5	1.5	2	68 - 30	20 - 120	1 1/4 x 1 1/4
ASPRI 35-6N	400VAC	8.3	5	2.2	3	81 - 37	20 - 120	1 1/4 x 1 1/4



ASPRI 15



ASPRI 25



ASPRI 35

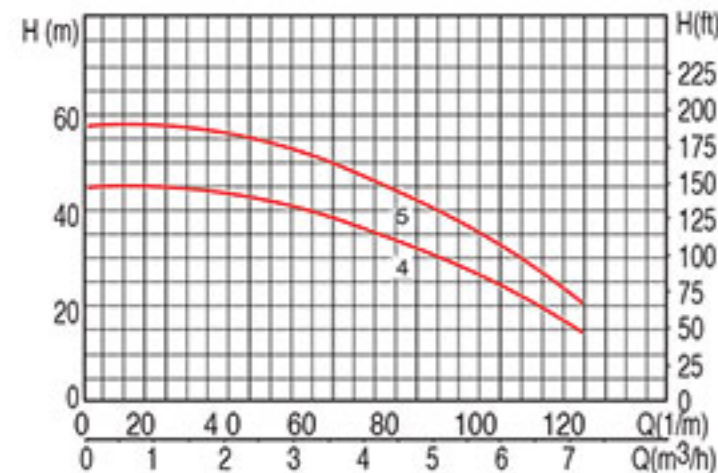
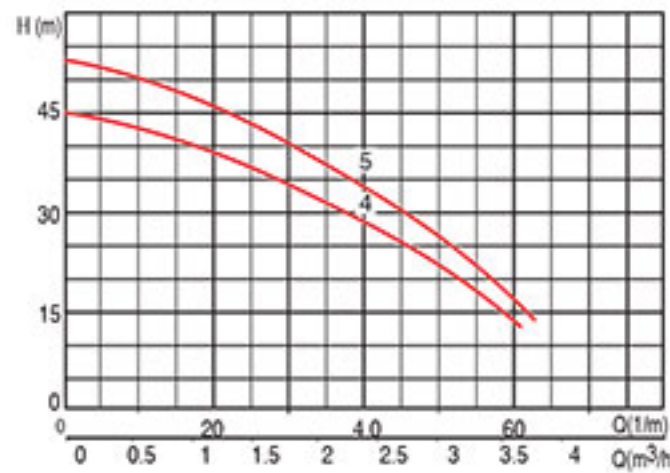
TECHNOSELF

Quiet running horizontal multi-stage centrifugal pumps for clean water with self-priming valve. Resistant to impurities. Continuous rated. Pump body and impellers in stainless steel, inlet/outlet in cast iron, Diffusers in technopolymer.



TECHNOSELF 15

Code	Voltage	Amps	No. of Impellers	Power		Max Head (m)	Max Flow (l/min)	In / Out (inch)
				KW	HP			
TECHNOSELF 15/4	400VAC	2.3	2.3	0.55	0.75	44 - 21.5	5 - 50	1 x 1
TECHNOSELF 25/3M	230VAC	5.5	5.5	0.75	1	33 - 17	15 - 105	1 x 1
TECHNOSELF 25/5	400VAC	5.2	5.2	1.12	1.5	56 - 20	15 - 120	1 x 1



TECHNOSELF 25

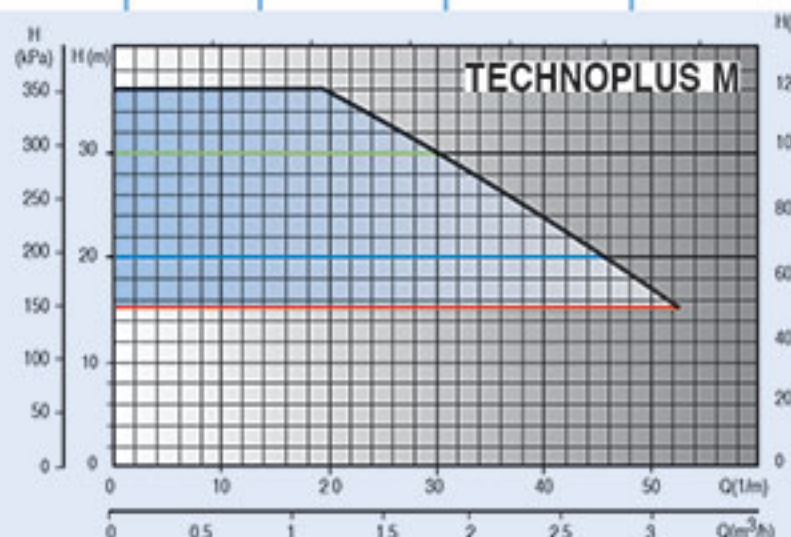
TECHNOPLUS

Horizontal multi-stage pumps with electronic regulation ESD (Espa Speed Driver) and speedcontrol with pressure sensor included. Built-in dry run protection. No water hammer in the installation Pump body and impellers in stainless steel, inlet/outlet in cast iron, Diffusers in technopolymer.



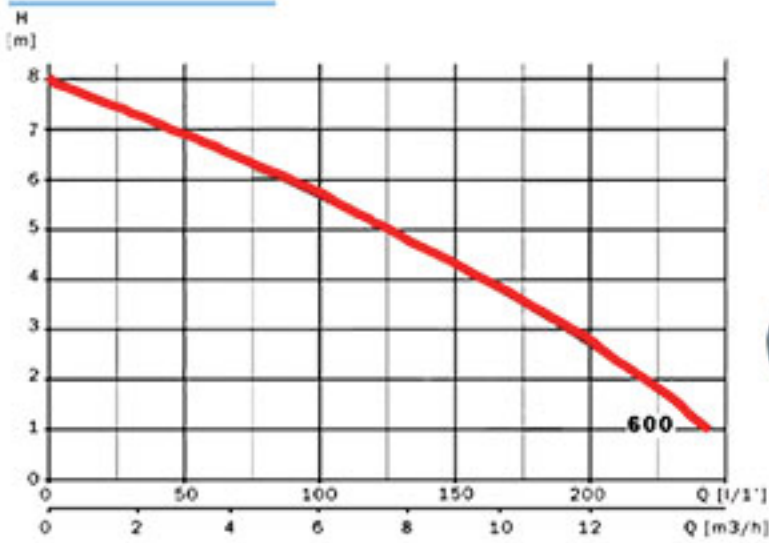
TECHNOPLUS M

Code	Voltage	Amps	No. of Impellers	Power		Max Head (m)	Max Flow (l/min)	In / Out (inch)
				KW	HP			
TECHNOPLUS M	230VAC	3	4	0.55	0.75	0.75	10 - 50	1 x 1



SUBMERSIBLE DRAINAGE / SEWAGE PUMPS

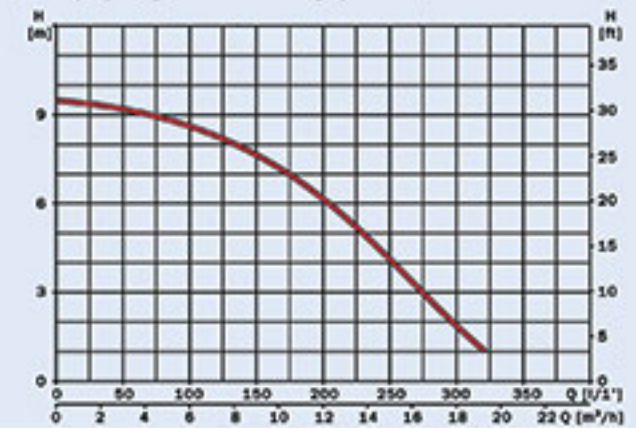
VIGIFLEX 600



Submersible pump with vortex system for dirty / grey water in domestic installations, operation in septic tanks and small purifying installations. Continuous rated.

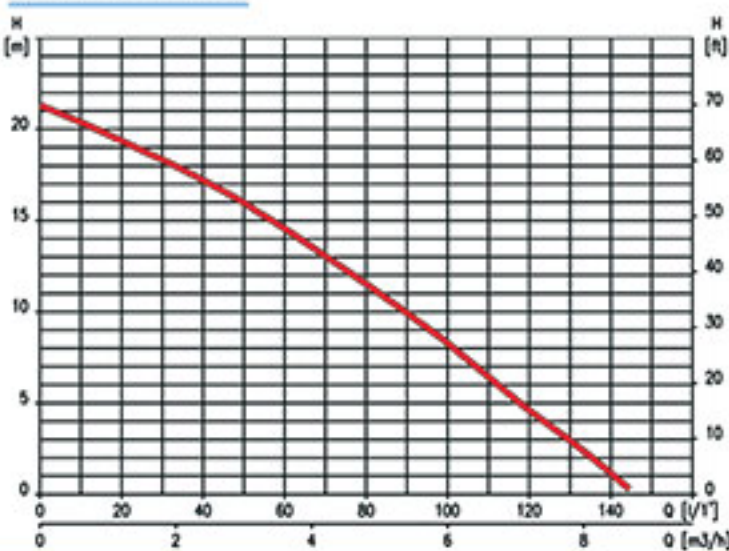
Code	Voltage	Power		Max Head (m)	Max Flow (l/min)	Out (mm)
		KW	HP			
VIGIFLEX 600 MA	230VAC	0.6	0.8	7.5 - 1	25 - 240	30

DRAIN 100 - Submersible pump for drainage of water without solid / particulate in suspension drainage of infiltration water, emptying swimming pools, decorative fountains and waterfalls.



Code	Voltage	Power		Max Head (m)	Max Flow (l/min)	Out (inch)
		KW	HP			
DRAIN 100M	230VAC	0.75	1	9.2 - 1	25 - 320	1¼
DRAIN 100MA	230VAC	0.75	1	9.2 - 1	25 - 320	1¼

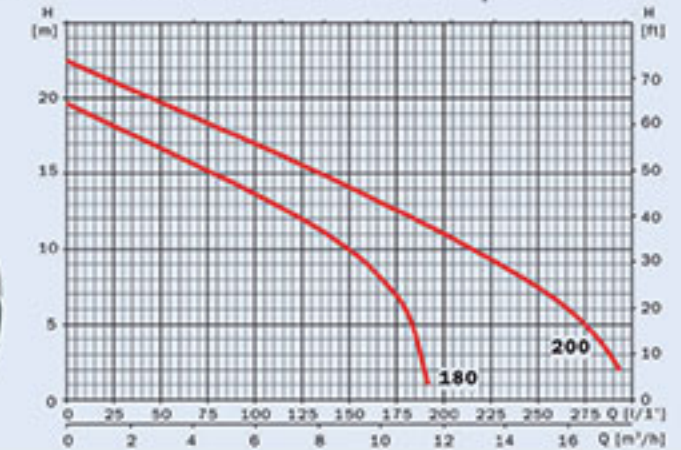
VIGICOR 150



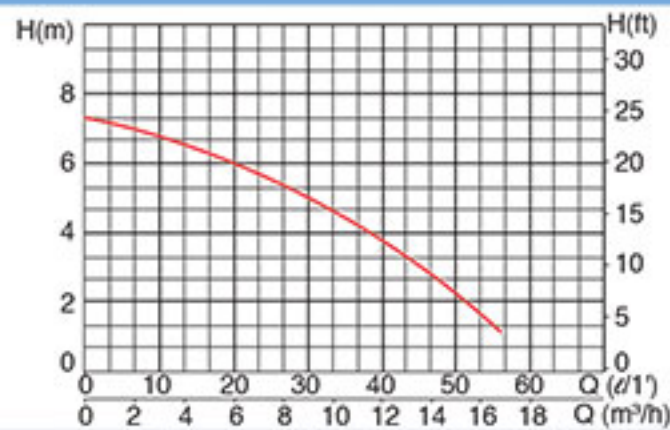
Submersible grinder pump for sewage water with filaments. Drainage of sewage or dirty water for operation in septic tanks and small purifying installations. Continuous rated

Code	Voltage	Power		Max Head (m)	Max Flow (l/min)	Out (inch)
		KW	HP			
VIGICOR 150MA	230VAC	0.9	1.2	20.2 - 1.2	10 - 140	1¼

DRAINCOR 180 /200 - Submersible grinder pump for sewage water with filaments. Drainage of sewage or dirty water for operation in septic tanks and small purifying installations Continuous rated. Single phase motor has built-in thermal protection



Code	Voltage	Power		Max Head (m)	Max Flow (l/min)	Out (mm)
		KW	HP			
DRAINCOR 180MA	230VAC	1.12	1.12	25 - 175	21 - 290	40
DRAINCOR 200	400VAC	1.25	1.25	18 - 7	21 - 2.5	40



DRAINEX 100

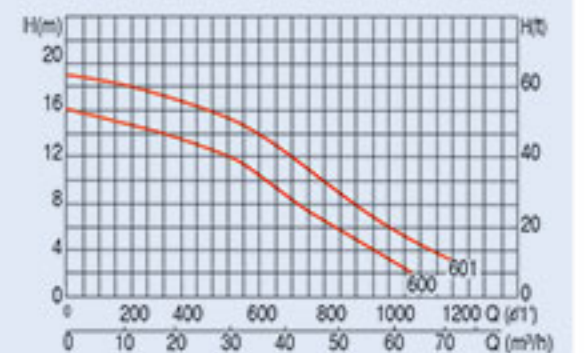
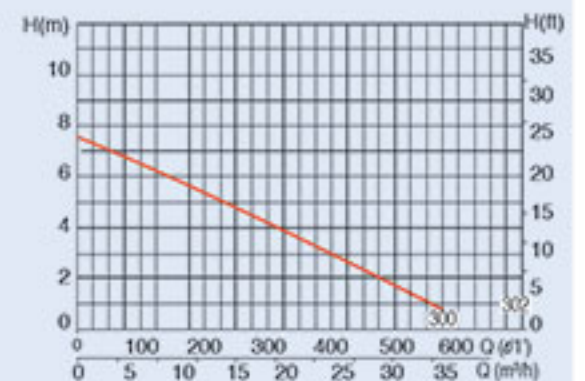
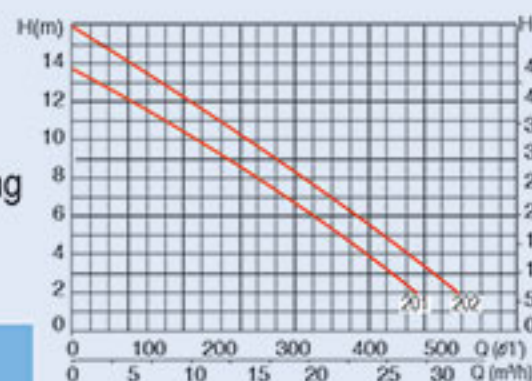
Submersible pump with vortex system for dirty / grey water in domestic installations, operation in septic tanks and small purifying installations. Continuous rated.

Code	Voltage	Power		Max Head (m)	Max Flow (l/min)	Out (mm)
		KW	HP			
DRAINEX 100M	230VAC	0.75	1	7	25-280	40
DRAINEX 100MA	400VAC	0.75	1	7	25-280	40

DRAINAGE 200 / 300 - Submersible pumps for draining dirty water with solid particulate in septic tanks, water treatment facilities and apartment blocks. Max particulate size 45mm

DRAINAGE 600 - Submersible mono block pumps with vortex impeller for draining dirty water with solid particulates in septic tanks, water treatment facilities and apartment blocks

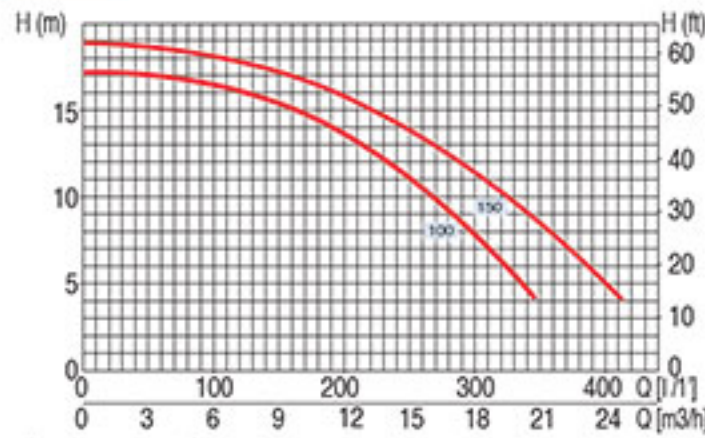
Code	Voltage	Power		Max Head (m)	Max Flow (l/min)	Out (inch)	Float Switch
		KW	HP				
DRAINEX 201M	230VAC	1.12	1.5	12.5 - 2	50 - 500	2	—
DRAINEX 201	400VAC	1.12	1.5	12.5 - 2	50 - 500	2	—
DRAINEX 202M	230VAC	1.12	1.5	14.5 - 2.5	50 - 500	2	—
DRAINEX 202MA	230VAC	1.12	1.5	14.5 - 2.5	50 - 500	2	✓
DRAINEX 300MA	230MA	1.12	1.5	7.1 - 1.8	50 - 500	2½	✓
DRAINEX 302M	230VAC	1.12	1.5	11 - 1.8	50 - 500	2½	—
DRAINEX 302MA	230VAC	1.12	1.5	11 - 1.8	50 - 500	2½	✓
DRAINEX 302	400VAC	1.12	1.5	11 - 1.8	50 - 500	2½	—
DRAINEX 600	400VAC	3.7	5	14.8 - 3.4	200 - 1000	2½	—



LEVEL CONTROL & PUMPS

SWIMMING POOL PUMPS

SILEN



- Pump Body, Foot, Diffuser, Impeller in Technopolymer
- Shaft in Stainlee Steel
- Ceramic / Grahite seral
- Motor Housing in Aluminium
- Complete with pre-filter and clear cover
- Continuous rated / Termal overload (230VAC motors only)

Code	Power		Voltage	In / Out (inch)
	KW	HP		
SILEN 150M	1.12	1.5	230VAC	2 x 2
SILEN 100	0.75	1	400VAC	2 x 2
SILEN 150	1.12	1.5	400VAC	2 x 2

Accessories



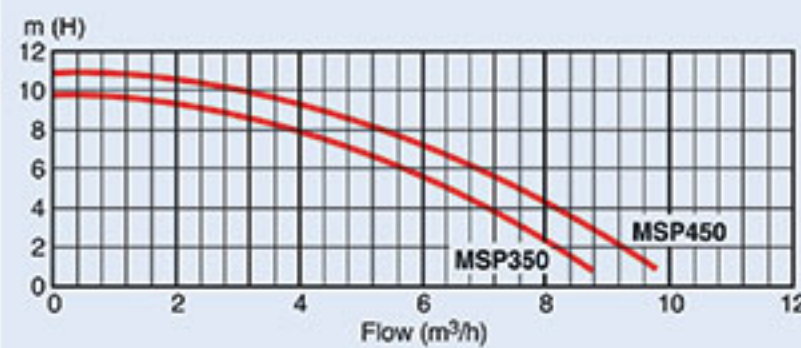
SILEN COVER

SILEN O-RING

SILEN COUPLING

SILEN BASKET

MSP350



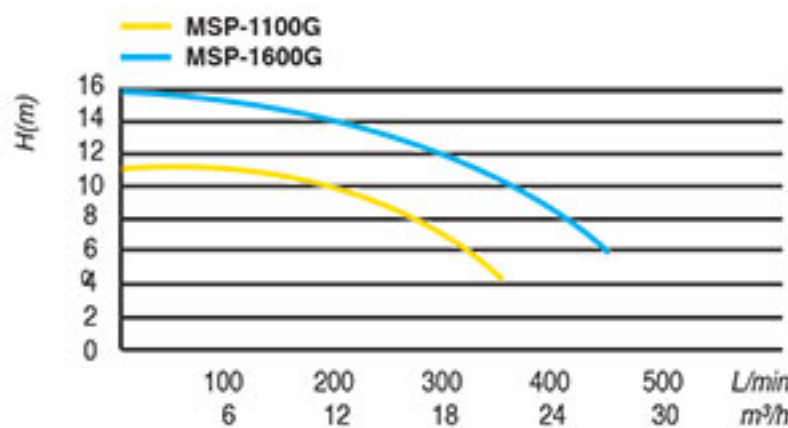
- Pump Body, Foot, in glass loaded polypropylene
- Impeller / diffuser in noryl
- Shaft in Carbon Steel
- Ceramic / Grahite seral
- Motor Housing in Aluminium
- Termal overload protection

Code	Power		Voltage	In / Out (inch)
	KW	HP		
MSP350	0.35	0.5	230VAC	1½ x 1½
MSP COUPLING	Spare 40mm Union Coupling			

MSP COUPLING



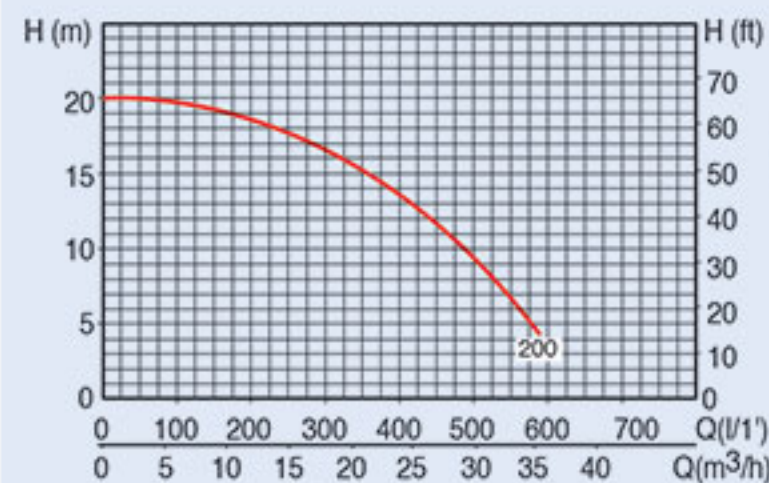
MSP-1100 / 1600



- Pump Body polypropylene
- Impeller / diffuser in PPO (poly-phenylene oxide)
- Shaft in stainless steel
- Ceramic / Grahite seral
- Suspended solids max Ø5mm
- Thermal overlaod protection

Code	Power		Voltage	In / Out (inch)
	KW	HP		
MSP-1100G	1.1	1.5	1.5	2½ x 2½
MSP-1600G	1.5	2	2	2½ x 2½

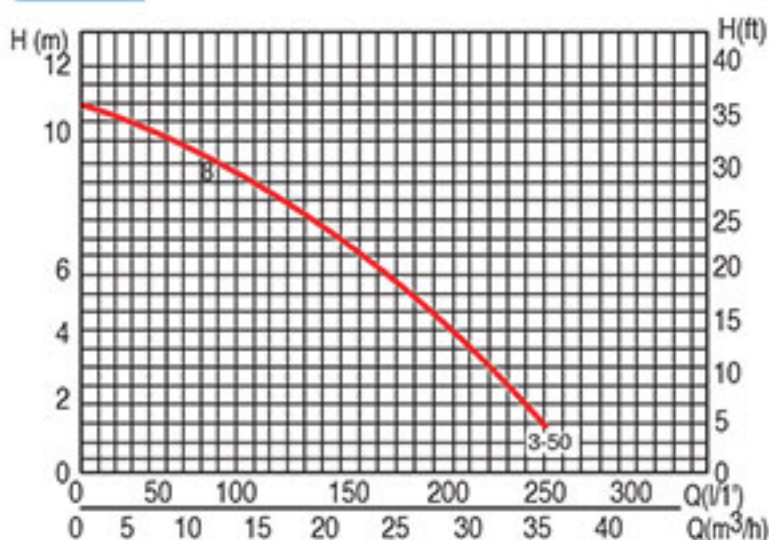
TIFON1



- Pump Body, Foot, Diffuser, Impeller in Technopolymer
- Shaft in Stainlee Steel
- Ceramic / Grahite seral
- Motor Housing in Aluminium
- Continuous rated
- Complete with pre-filter and clear cover

Code	Power		Voltage	In / Out (inch)
	KW	HP		
TIFON1 200M	1.5	2	230VAC	2½ x 2½

PISCIS



- Pump Body, Foot, in glass loaded polypropylene
- Impeller in glass loaded noryl
- Shaft in Stainlee Steel
- Ceramic / Grahite seral
- Flow rate 20 - 250l/min
- Motor Housing in Aluminium
- Continuous rated / Termal overload protection
- Designed for use with sea water / resistant to fish excrement

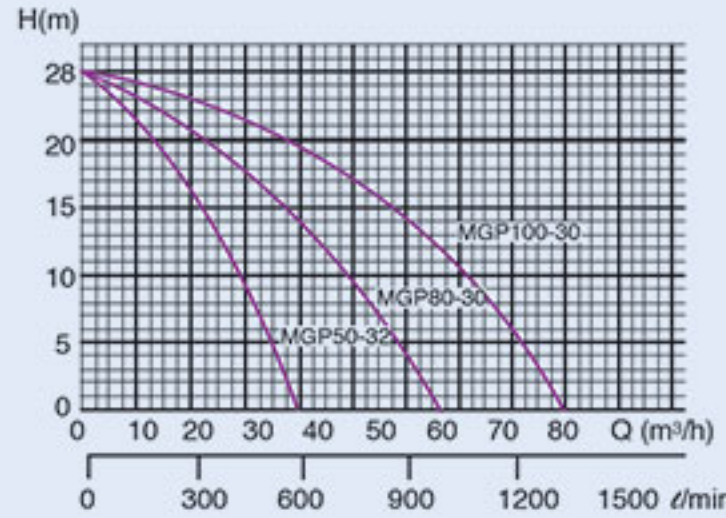
Code	Power		Voltage	In / Out (inch)
	KW	HP		
PISCIS 50M	0.37	0.5	230VAC	2 x 2

PETROL ENGINE WATERPUMPS



MGP50-32/MGP80-30

Code	Power	Inlet/Outlet	Head Max.	Flow Rate Max.
MGP50-32	5.5 HP	2" x 2"	28m	28m ³ /h
MGP80-30	5.5 HP	3" x 3"	28m	58m ³ /h
MGP100-30	5.5 HP	4" x 4"	28m	80m ³ /h



Operating Limits:

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

MGP centrifugal hand-carry motor pumps are particularly suitable to supply and distribute clean water for agricultural and gardening purposes when electrical connection is not possible

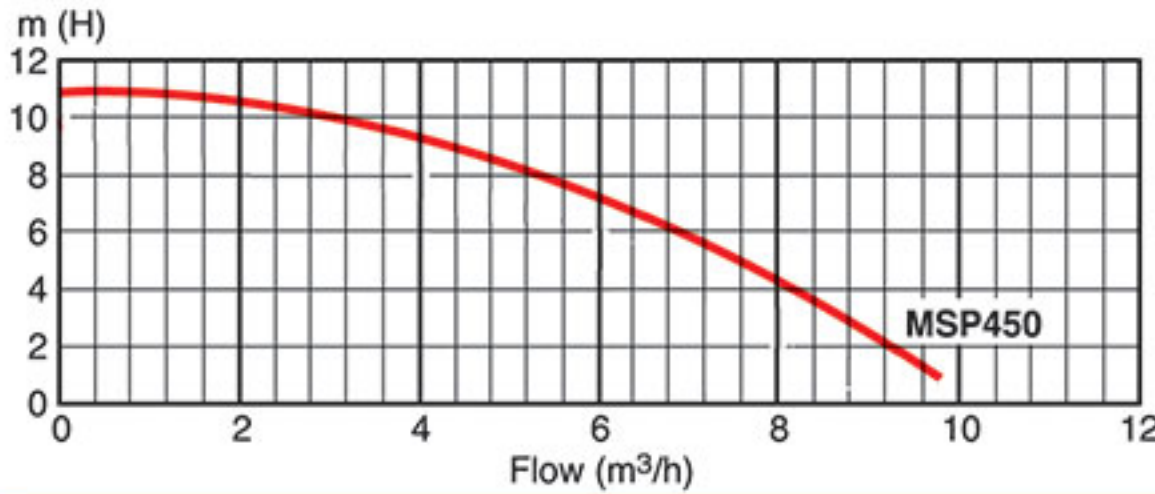
POOL & SPA PUMPS



MSP COUPLING

Pool/SPA Pumps - Supply Voltage 230VAC

Code	kW
MSP450	0.45kW
MSP COUPLING	Spare 40mm Union Coupling



Features:

Materials:

- Complete with pre-filter and clear cover.
- Mechanical seal.
- Suction and discharge Ø 1.5" (40mm).
- Pump body, filter and motor mounting in polypropylene, shaft in carbon steel, impeller and diffuser in Noryl.

Motor:

- Built-in thermal overload protection.

PUMPS

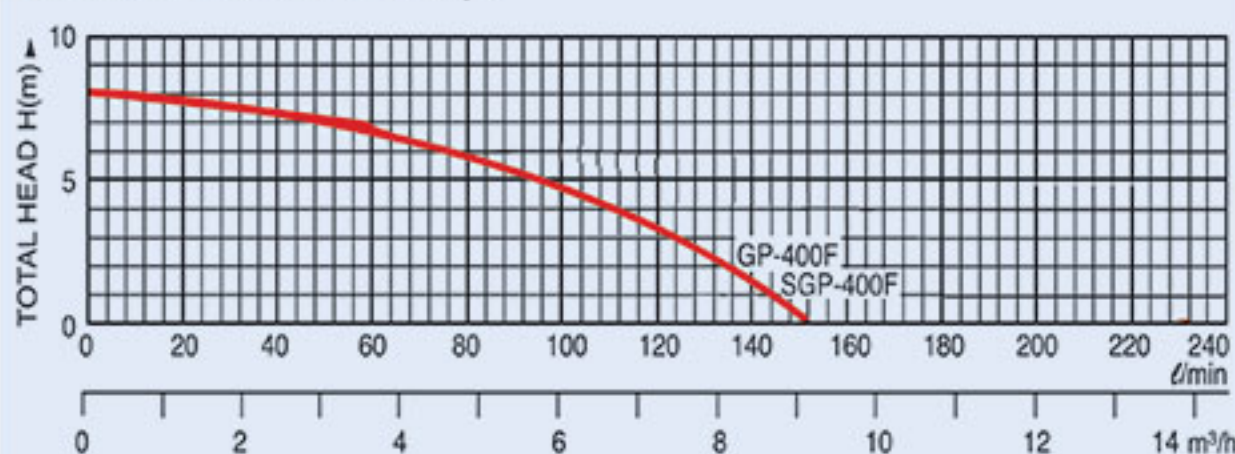
Submersible Garden Pumps

- Max. Liquid Temp: 35°C



230V With Float	230V No Float	Watts	Max Flow	Max Head
GP-400F	GP-400	400	9m ³ /H	7m

PERFORMANCE CHART AT n = 2900 rpm



Fountain and Multi-Purpose Pumps 230VAC



FB-650S



FK-2500

W/Small Filter	W/Fountain Kit and L/Filter	Max Flow (L/Hour)	Max Head (m)	Watts
FB-650S	-	520	520	520
-	FK-2500	1600	1600	1600

WITH MORE THAN
85,000
ELECTRICAL PRODUCTS

YOUR OPTIONS
ARE ENDLESS

ACDC
DYNAMICS

ACDC
DYNAMICS

ACDC
DYNAMICS

ACDC
DYNAMICS

ACDC
DYNAMICS

AC/DC SFC PUMPS



1st Edition September 2018

DISTRIBUTED BY:

Specifications are subject to change from time to time,
without notification in this publication

© ACDC Dynamics CC 2018

HEAD OFFICE - JOHANNESBURG

P.O. Box 3812, Edenvale,
1610, South Africa
26 Nguni Drive
Longmeadow Estate West
Edenvale, Gauteng
South Africa

info@acdc.co.za

Reception 010 202 3300

Sales 010 202 3400

Technical 010 202 3500

Fax 010 202 3365

www.acdc.co.za

BRANCH CONTACT DETAILS

Johannesburg	010 202 3300
Germiston	011 418 9600
Cape Town	021 510 0710
Pinetown	031 700 4215
Riverhorse	031 492 4800

www.acdc.co.za

Distributors & Franchises throughout Southern Africa

© ACDC Dynamics CC 2018

THINK ELECTRICAL