GPS-T3, FP4, pump series and FRK motors

Bore pumps, and motors
Diameter - 72mm / 3" to 100mm / 4"

50Hz

GLOBAL PUMP SOLUTIONS

Contents

GPS Bore Pumps series

GLOBAL PUMP SOLUTIONS

For bore pumps 5″ and larger
please contact GPS for quotation and technical data

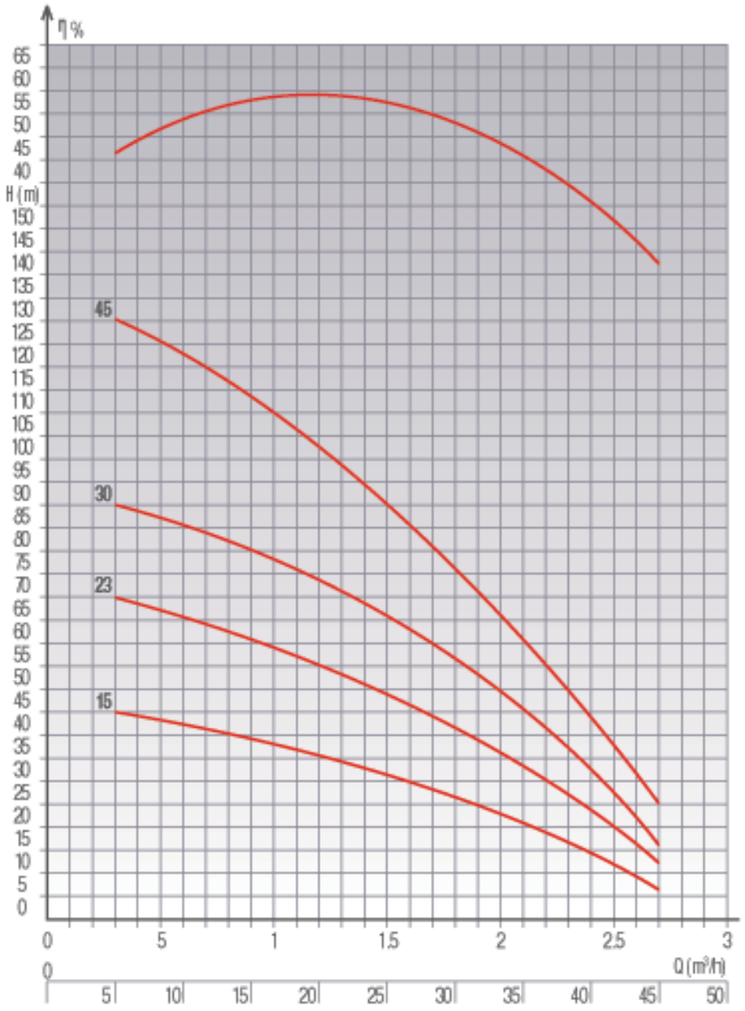
Hydraulic Information

GPS-T3 3 inch bore pump series

GLOBAL PUMP SOLUTIONS

Hydraulic Information

GPS-T3 3 inch bore pump series



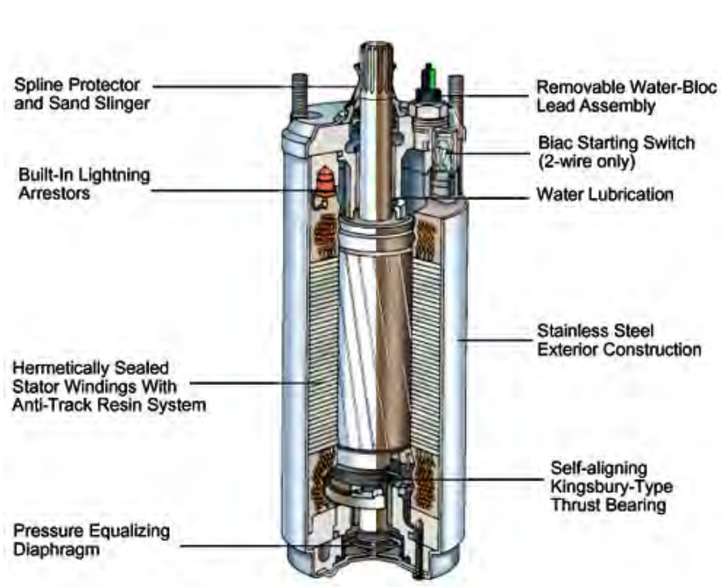
Tipo Type Type	Motore Motor Moteur		Q m³/h	Portata - Capacity - Debit							Dimensioni e Pesi Dimension and Weight Dimension et Masses	
	kw	HP	L/min.	5	10	15	20	30	40	45	H/mm	kg
T3-15	0.33	0.50	PREVALENZA m TOTAL HEAD m HAUTEUR D'ELEVATION m	46	42	39	36	28	15	7	580	3.3
T3-23	0.55	0.75		70	66	61	55	43	24	13	780	4.4
T3-30	0.75	1		92	86	80	73	57	33	17	1000	5.6
T3-45	1.1	1.5		128	119	112	103	75	47	28	1380	7.6

PSC Motor Information

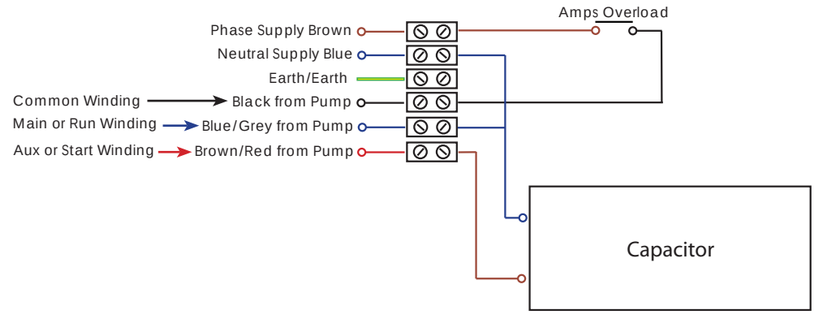
GPS-FRK 4 inch motors

GPS bore pumps 4" diameter and up use franklin motors unless specifically mentioned

All single phase motors are of PSC permanently split capacitor (PSC) design, over the years this has been the most reliable choice in motor design, requiring an external capacitor.



Wiring Diagram for European PSC Motor



Hydraulic Information

General 4 inch borehole information

The GPS 4" bore pump is made of solid construction with cast 304 stainless steel discharge housing and the pump to motor coupling.

This unique impeller/diffuser design has been patented and uses floating impellers that have an extremely low axial thrust onto the submersible motor. The addition of controlled clearances within the pump means the GPS-FP4 series pumps are suitable to handle a higher percentage of sand than other bore pumps.

The new technical polymers employed in manufacturing also allow the pump to run completely dry for a period of time. In fact the GPS-FP4 series pumps can run-dry for up to 6 hours with minimal performance loss.

Note - although the pump end has run dry capability the motors require water flow over them for cooling.

Applications

- Domestic and industrial water supply.
- Farm water
- Fire-fighting systems.
- Pressurizing water system.
- Shower and running irrigation

Materials

- AISI 304 stainless steel for top and bottom.
- AISI 304 stainless steel for shaft.
- AISI 316L/304 stainless steel for coupling.
- AISI 304 stainless steel for external jacket, diffuser casing, screen and cable guard.
- Impellers, diffusers and bushes are in PA66 fiberglass reinforced.

Operating data

- capacity up to 21 m3/h
- head up to 360 m
- power up to 7,5 kW
- max. water temperature 35°C
- max. sand content: 185 g/m3
- max. starts per hour: 15
- min. recommended head of water above pump suction: 1 m

Hydraulic Information

GPS-FP4 series performance table

50 Hz 2 poles	Q (mc/h)	0	0,3	0,6	1,2	1,8	2,1	2,4	3,0	3,6	4,2	4,8	5,4	6	7,8	9	12	13,5	15	18	21
TYPE	HP	Q (l/min)	0	5	10	20	30	35	40	50	60	70	80	90	100	130	150	200	225	250	300	350
FP4A005	0,5		64	63	60	49	30	16														
FP4A007	0,7		99	97	93	76	46	25														
FP4A010	1		128	125	121	98	59	32														
FP4A015	1,5		185	182	175	143	86	47														
FP4A020	2		249	244	236	192	116	63														
FP4A030	3		359	352	340	277	168	90														
FP4B005	0,5		45	44	43	40	35	31	27	15												
FP4B007	0,7		71	70	68	62	55	49	42	23												
FP4B010	1		96	95	92	85	75	66	57	32												
FP4B015	1,5		141	139	135	125	110	97	84	47												
FP4B020	2		186	184	178	164	145	128	111	61												
FP4B030	3		270	266	258	238	210	186	160	89												
FP4B040	4		360	355	344	318	280	248	214	119												
FP4D005	0,5		33			32	31	31	30	27	23	18										
FP4D007	0,7		46			45	44	43	41	37	32	25										
FP4D010	1		66			64	63	61	59	54	46	35										
FP4D015	1,5		100			97	94	92	89	80	69	53										
FP4D020	2		133			129	125	122	118	107	92	70										
FP4D030	3		192			187	181	177	171	155	133	102										
FP4D040	4		265			258	250	244	236	214	184	140										
FP4D055	5,5		345			335	325	317	307	278	239	182										
FP4E005	0,5		28				26	25	25	23	21	18	15	12								
FP4E007	0,7		41				39	38	37	35	31	27	23	17								
FP4E010	1		55				52	51	49	46	41	36	31	23								
FP4E015	1,5		83				78	76	74	69	62	54	46	35								
FP4E020	2	H	110				104	102	99	92	83	72	61	47								
FP4E030	3	(m)	165				156	153	148	138	124	109	92	70								
FP4E040	4		220				208	204	198	184	166	145	122	93								
FP4E055	5,5		303				286	280	272	253	228	199	168	128								
FP4F010	1		34						31	30	29	28	26	25	24	18	13					
FP4F015	1,5		54						50	48	46	44	42	40	38	29	20					
FP4F020	2		74						68	66	63	61	58	55	52	40	28					
FP4F030	3		107						99	96	92	88	84	80	75	58	40					
FP4F040	4		147						137	132	127	121	116	110	103	79	55					
FP4F055	5,5		201						186	180	173	165	158	150	141	108	75					
FP4F075	7,5		268						248	241	230	220	210	200	188	144	100					
FP4F100	10		335						310	301	288	275	263	250	235	180	125					
FP4H015	1,5		36									34	33	32	31	29	27	16				
FP4H020	2		50									47	46	45	44	40	37	22				
FP4H030	3		71									68	66	65	63	58	51	32				
FP4H040	4		100									95	93	90	88	80	72	44				
FP4H055	5,5		136									129	126	123	120	110	98	60				
FP4H075	7,5		193									183	179	174	170	156	140	85				
FP4H100	10		257									244	238	233	227	206	186	113				
FP4L020	2		34														24	21	19	17	12	7
FP4L030	3		54														39	33	30	27	20	12
FP4L040	4		74														53	46	42	37	27	16
FP4L055	5,5		101														73	62	57	51	37	22
FP4L075	7,5		134														97	83	76	67	49	30
FP4L100	10		181														131	112	103	91	67	40

Hydraulic Information

GPS-FP4A Bore Pumps series

GPS
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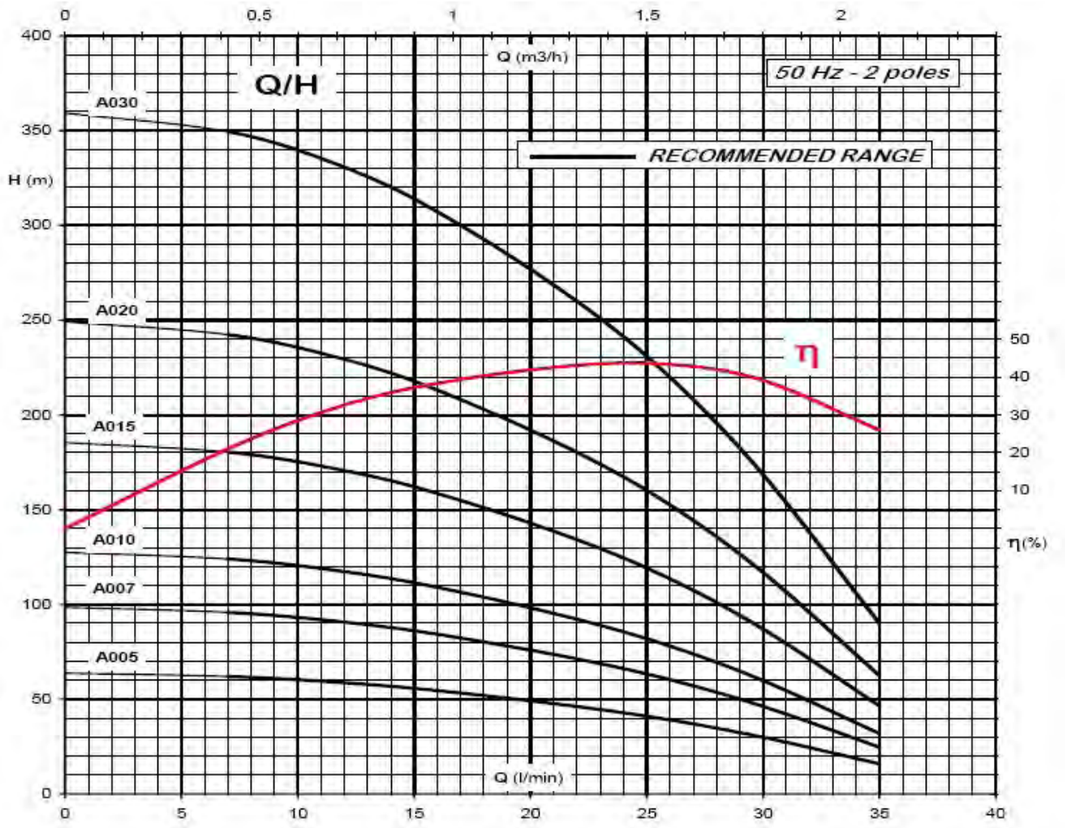
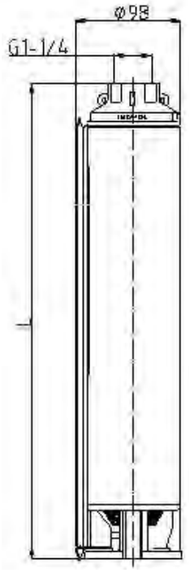




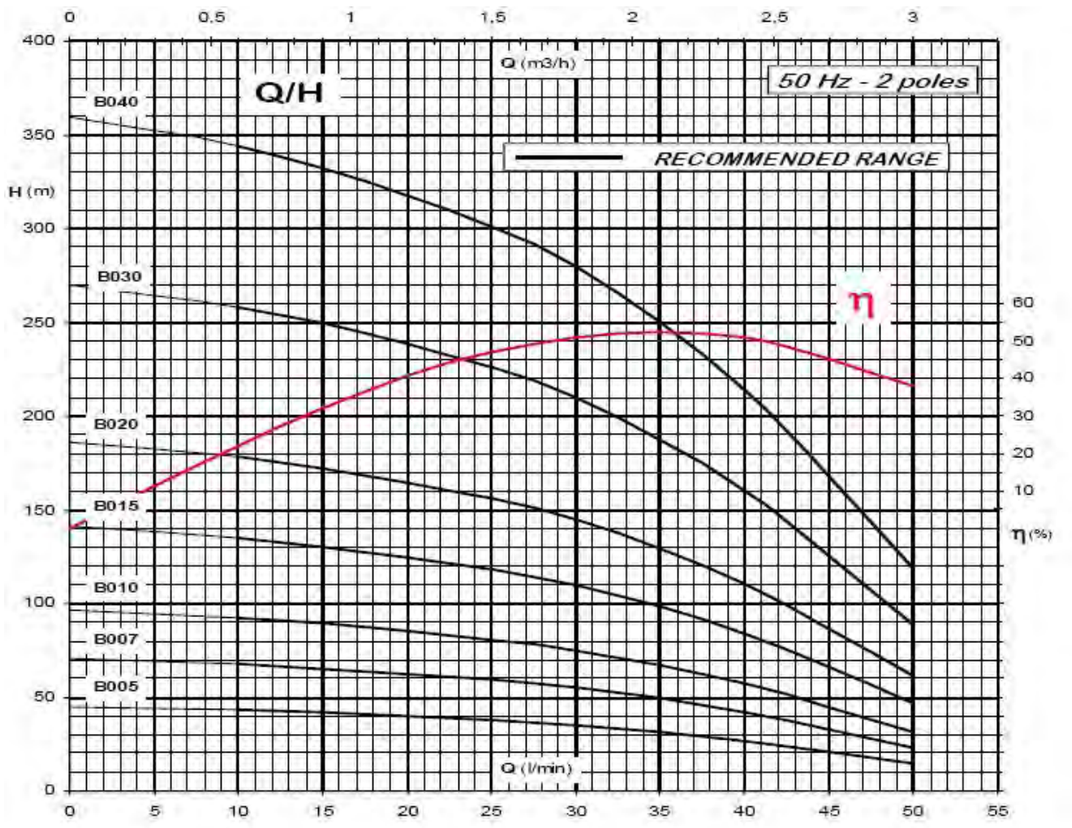
DIMENSIONS AND WEIGHTS					
TYPE	motor type	HP	kW	L mm	W Kg
FP4A005	4" *	0,5	0,37	308	3,3
FP4A007	4" *	0,75	0,55	410	4,4
FP4A010	4" *	1	0,75	495	5,4
FP4A015	4" *	1,5	1,1	665	7,2
FP4A020	4" *	2	1,5	851	9,2
FP4A030	4" *	3	2,2	1174	12,7

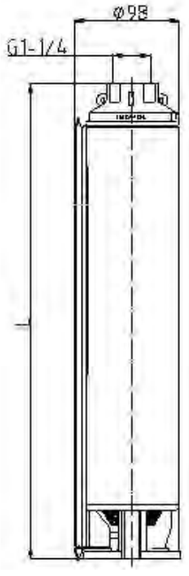
* = NEMA COUPLING

Hydraulic Information

GPS-FP4B Bore Pumps series

GPS
GLOBAL PUMP SOLUTIONS





DIMENSIONS AND WEIGHTS					
TYPE	motor type	HP	kW	L mm	W Kg
FP4B005	4" *	0,5	0,37	261	2,7
FP4B007	4" *	0,75	0,55	341	3,5
FP4B010	4" *	1	0,75	421	4,3
FP4B015	4" *	1,5	1,1	561	5,6
FP4B020	4" *	2	1,5	701	7,0
FP4B030	4" *	3	2,2	960	9,6
FP4B040	4" *	4	3	1240	12,3

* = NEMA COUPLING

Hydraulic Information

GPS-FP4D Bore Pumps series

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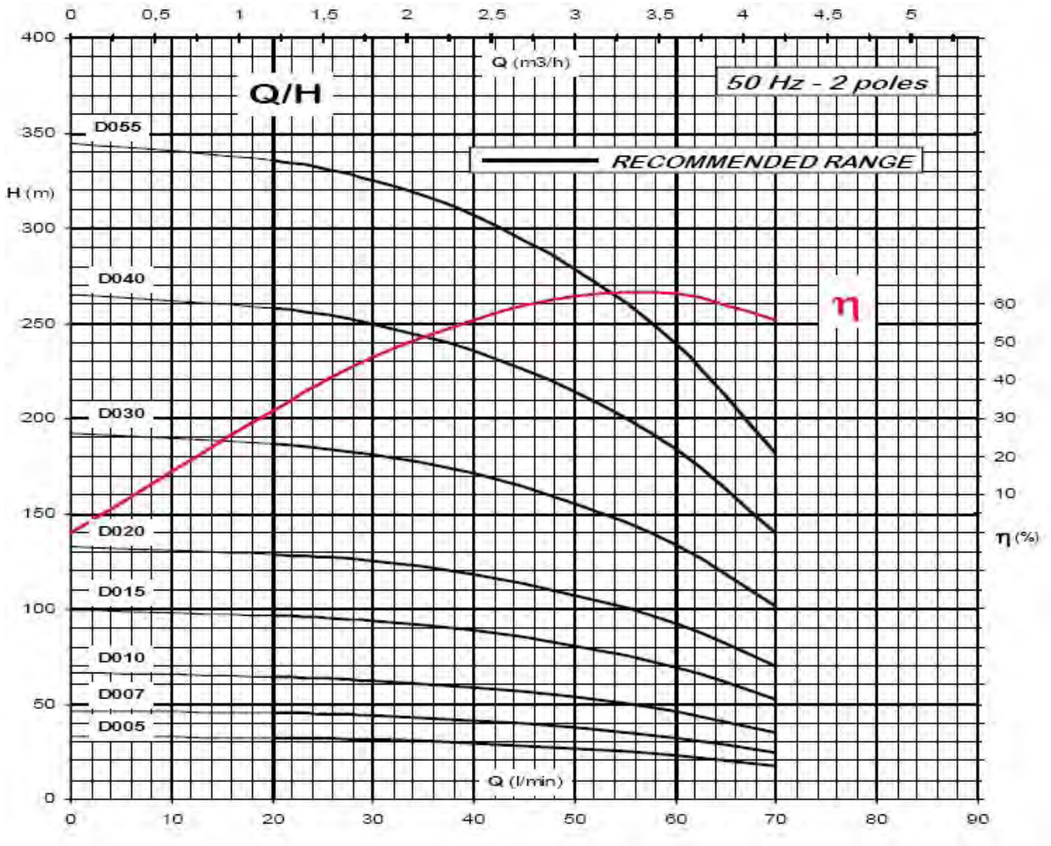

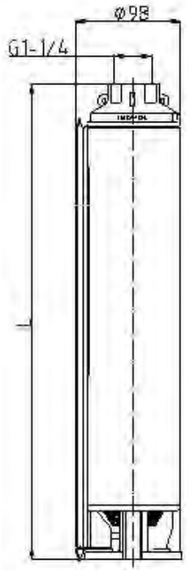

DIMENSIONS AND WEIGHTS					
TYPE	motor type	HP	kW	L mm	W Kg
FP4D005	4" *	0,5	0,37	230	2,3
FP4D007	4" *	0,75	0,55	270	2,7
FP4D010	4" *	1	0,75	330	3,3
FP4D015	4" *	1,5	1,1	430	4,2
FP4D020	4" *	2	1,5	530	5,2
FP4D030	4" *	3	2,2	710	7,0
FP4D040	4" *	4	3	929	9,1
FP4D055	4" *	5,5	4	1169	11,4

* = NEMA COUPLING

Hydraulic Information

GPS-FP4E Bore Pumps series

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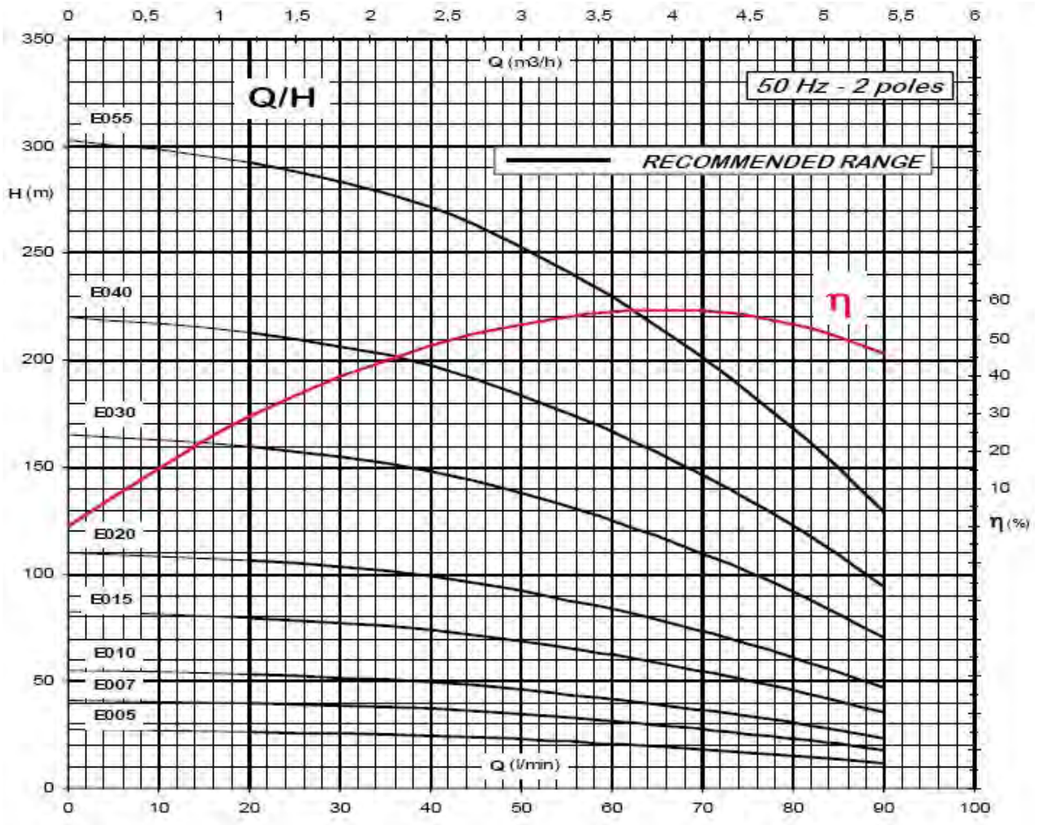

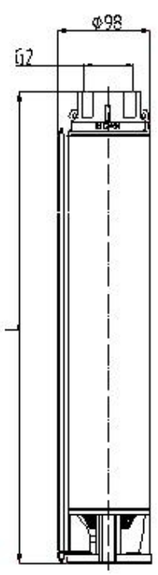

DIMENSIONS AND WEIGHTS					
TYPE	motor type	HP	kW	L mm	W Kg
FP4E005	4" *	0,5	0,37	210	2,0
FP4E007	4" *	0,75	0,55	250	2,3
FP4E010	4" *	1	0,75	290	2,7
FP4E015	4" *	1,5	1,1	370	3,5
FP4E020	4" *	2	1,5	450	4,3
FP4E030	4" *	3	2,2	610	5,8
FP4E040	4" *	4	3	750	7,4
FP4E055	4" *	5,5	4	1009	9,7

* = NEMA COUPLING

Hydraulic Information

GPS-FP4F Bore Pumps series

GPS
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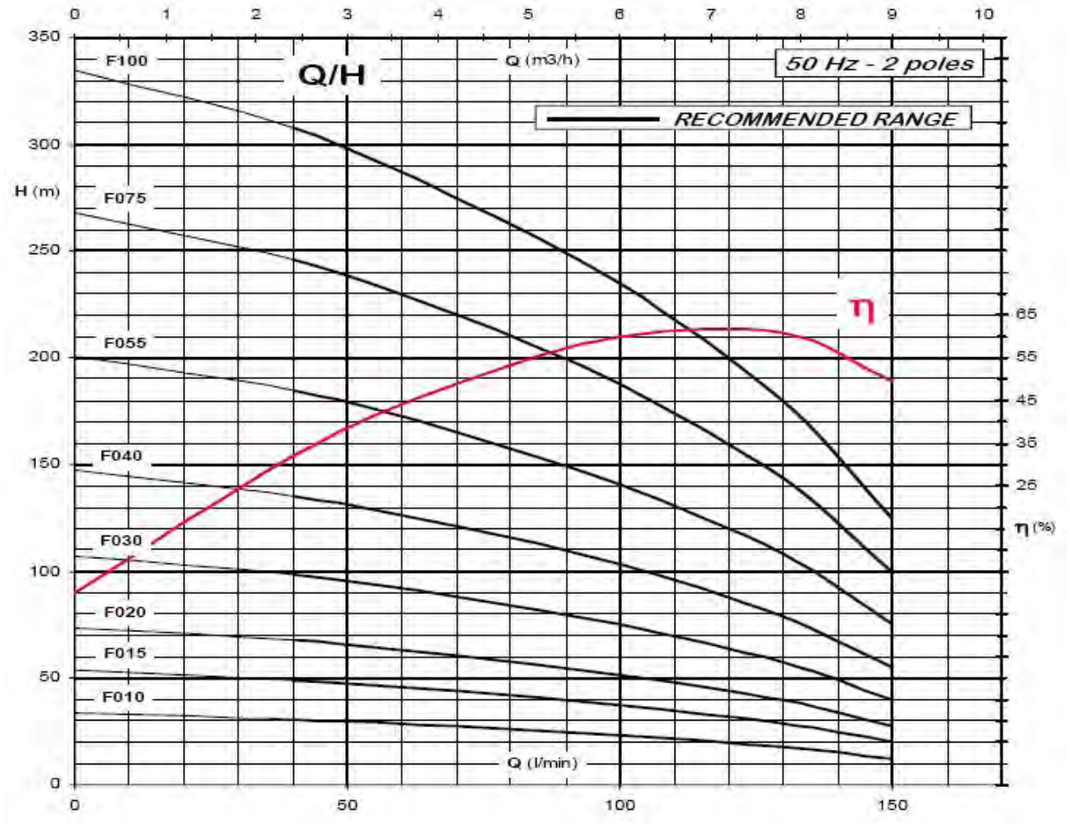

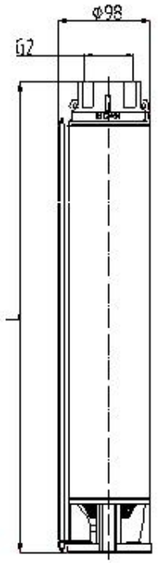

DIMENSIONS AND WEIGHTS					
TYPE	motor type	HP	kW	L mm	W Kg
FP4F010	4" *	1	0,75	323	3,2
FP4F015	4" *	1,5	1,1	438	4,2
FP4F020	4" *	2	1,5	554	5,2
FP4F030	4" *	3	2,2	746	6,8
FP4F040	4" *	4	3	976	8,8
FP4F055	4" *	5,5	4	1284	11,4
FP4F075	4" *	7,5	5,5	1669	14,7
FP4F100	4" *	10	7,5	2054	18,0

** = NEMA COUPLING*

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Hydraulic Information

GPS-FP4H Bore Pumps series

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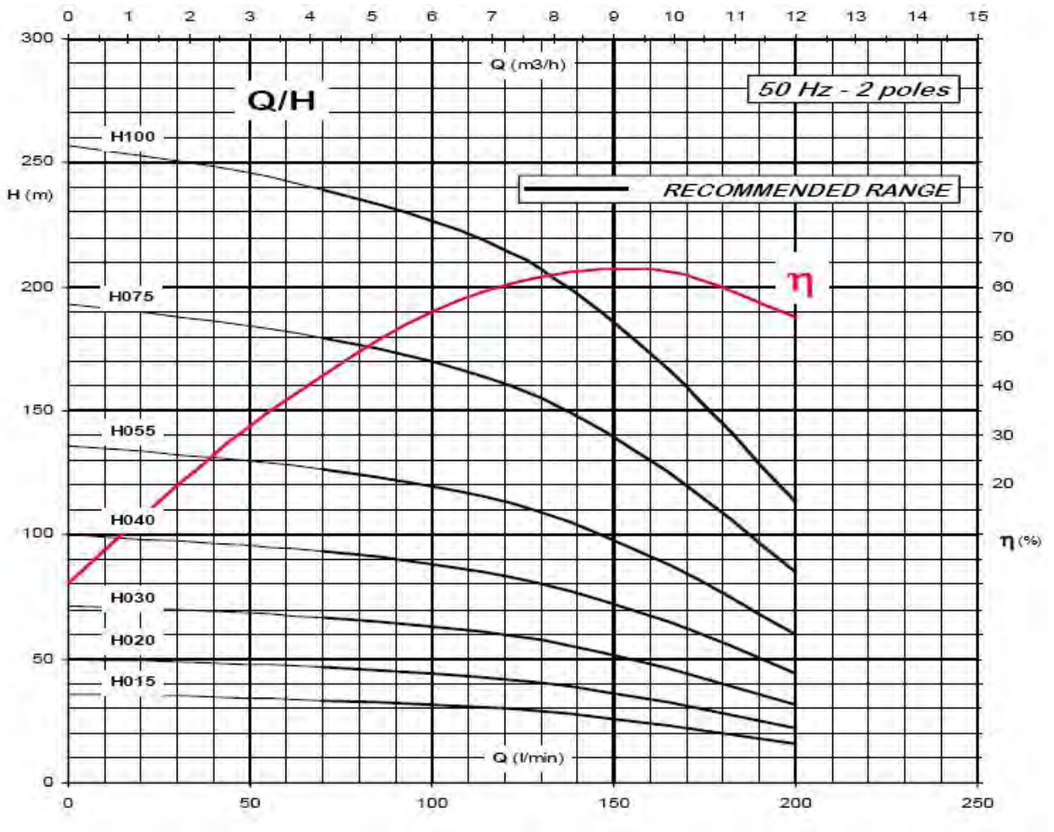

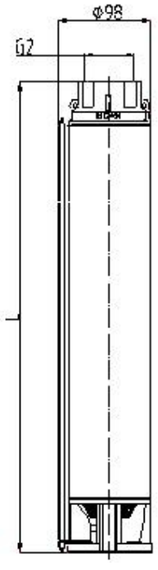

DIMENSIONS AND WEIGHTS					
TYPE	motor type	HP	kW	L mm	W Kg
FP4H015	4" *	1,5	1,1	341	3,2
FP4H020	4" *	2	1,5	418	3,8
FP4H030	4" *	3	2,2	533	4,8
FP4H040	4" *	4	3	688	6,1
FP4H055	4" *	5,5	4	879	7,7
FP4H075	4" *	7,5	5,5	1187	10,3
FP4H100	4" *	10	7,5	1533	13,2

** = NEMA COUPLING*

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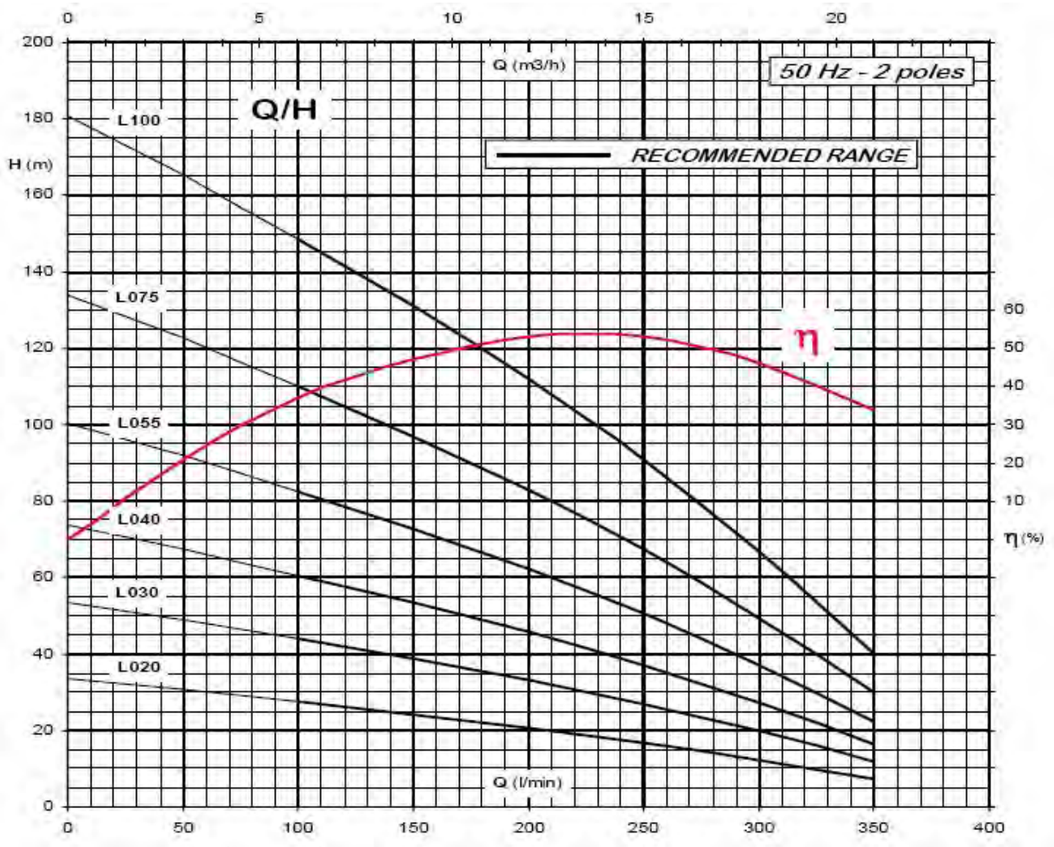
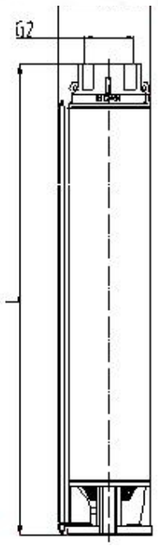
Hydraulic Information

GPS-FP4L Bore Pumps series





DIMENSIONS AND WEIGHTS					
TYPE	motor type	HP	kW	L	W
				mm	Kg
FP4L020	4" *	2	1,5	363	3,3
FP4L030	4" *	3	2,2	492	4,4
FP4L040	4" *	4	3	620	5,5
FP4L055	4" *	5,5	4	792	6,9
FP4L075	4" *	7,5	5,5	1005	8,7
FP4L100	4" *	10	7,5	1306	11,2

* = NEMA COUPLING

Hydraulic Information

GPS-Effluent series

GPS-Effluent050 and 070, have been developed in conjunction with Global Pumps specifically for effluent disposal from sewage treatment plants through raam drip line disposal fields.

The Effluent pump is designed to pump in the 10-40 litre per minute flow range to suit most drip line flow requirements, commonly pumps suited to much larger flows are used and have large horsepower requirements.

Features

This motor is fitted with a 1hp stator, and rotor but has only a 0.5hp pump end. The result is a pump that when all is well uses the power of 0.5hp pump but when a little extra torque is required the motor power is available. Also because the winding is larger than required for the pump it runs cooler and has resulting life expectancy increase.

The pump features a floating stack and as a result the pump puts almost no end thrust loading on to the bearings in the motor increasing bearing life expectancy.

Two independent rotating mechanical seals in an oil bath, this increases the life expectancy of the pump. Also as the impeller stack moves on the shaft there in not the problem of longitudinal shaft movement resulting in pressure variations on the seal faces which is an issue for pumps without floating impeller stacks.

Capacitor, one of the most common things to fail with single phase pumps is the capacitor, this is the usually the result of poor or variations in power supply. As a result we have used an external capacitor that can be changed easily if necessary without disturbing the pump sealing.

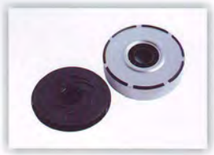
Cables, are of high grade HORNF7 neoprene, flexible with a long life expectancy.

Data	Effluent 050	Effluent 070
Maximum Pressure	45m	71m
Maximum flowrate	50 litres per minute or 3m³ per hour	
Target Pump Duty	10-40 litres per minute	
Power Available	P_1= 0.75kW	
Power Absorbed	P_2=0.37kW	P_2=0.55kW
Current FLC	3.9 amps	xxx amps

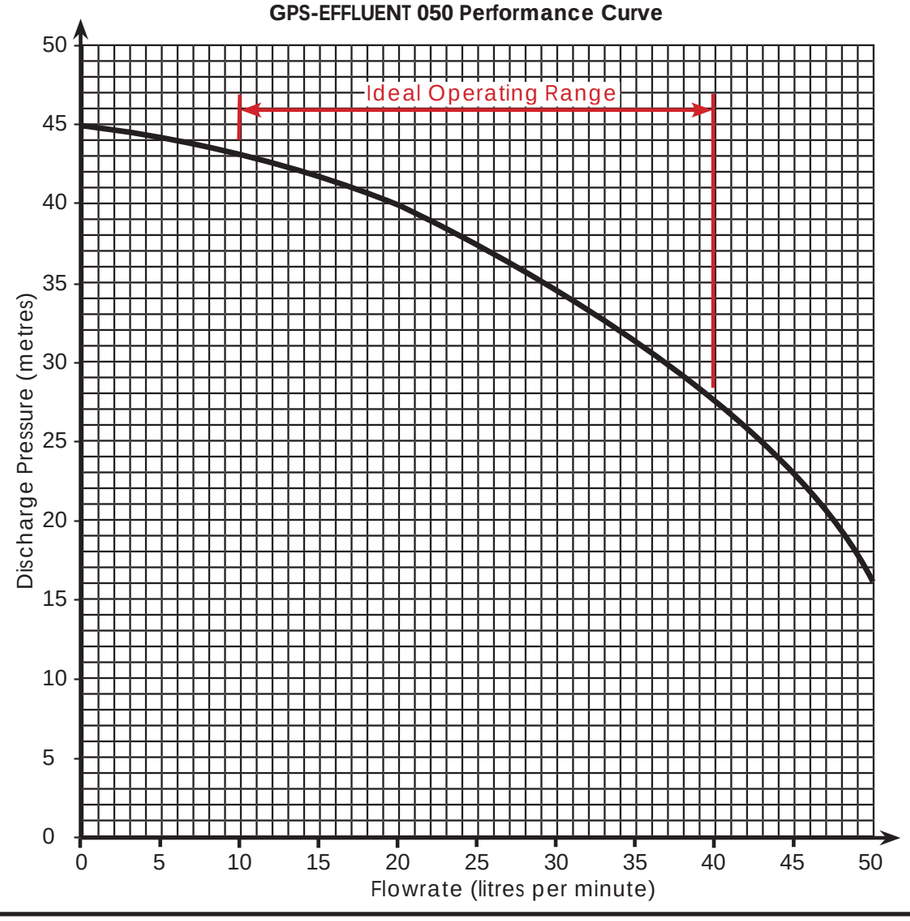
50Hz, 2 Poles, 230 volt		Q(m³/hr)	0	0.3	0.6	1.2	1.8	2.1	2.4	3.0
Model	P_2(Hp)	Q(lpm)	0	5	10	20	30	35	40	50
GPS-Effluent050	0.50	Head (m)	45	44	43	40	35	31	27	15
GPS-Effluent070	0.75	Head(m)	71	70	68	62	55	49	42	23

GPS-Effluent050 Construction features

- A double mechanical seal with oil chamber
- Forced motor cooling
- Patented impeller design that tansmits minimal axial thrust through to the motor
- Can pump down to 70mm water depth
- Rewindable motor
- Pump can be installed in hole 100mm diameter, large diameter well or tank



GPS-EFFLUENT 050 Performance Curve



Hydraulic Information
GPS-Effluent series

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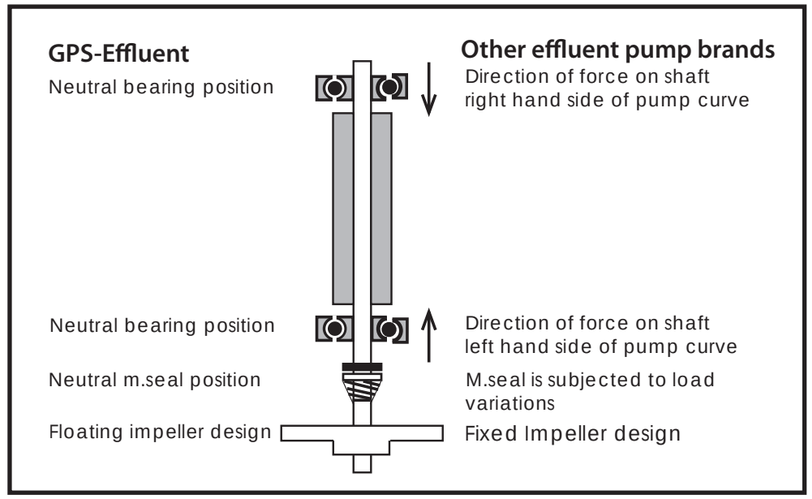
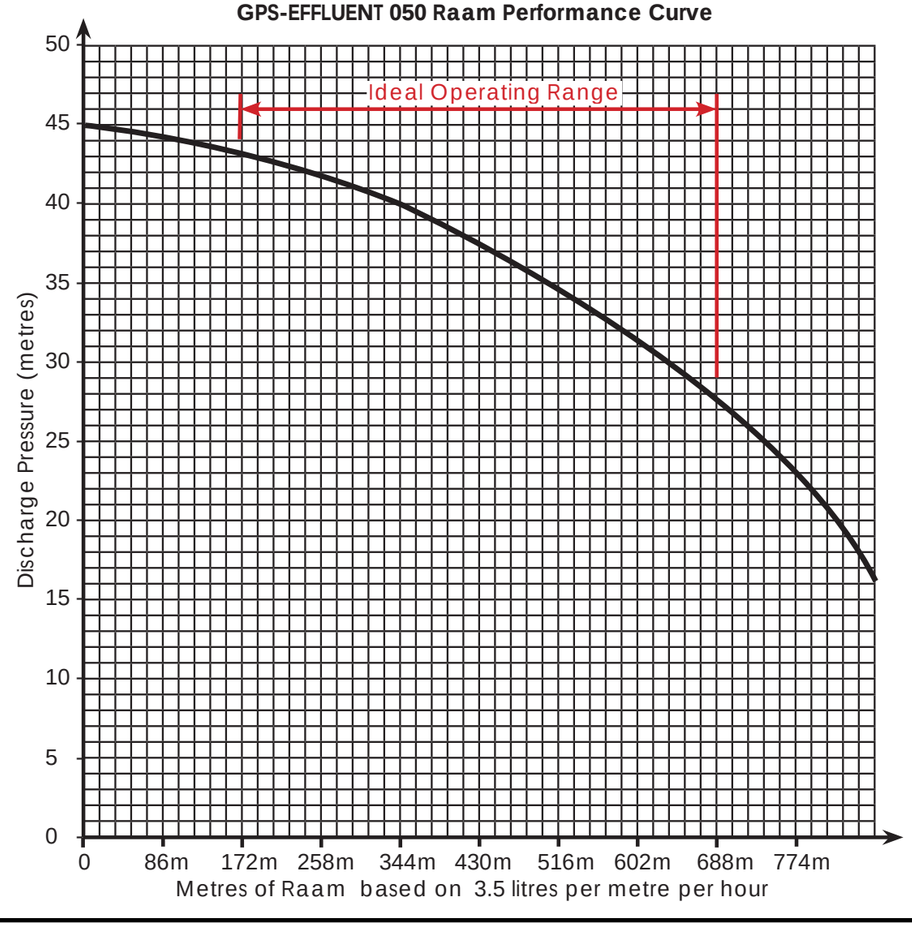
The GPS Effluent difference



GPS-EFFLUENT 050 Raam Performance Curve



The control panel for full protection

Sumodry is a control panel designed by Sumoto. Sumodry guarantee a full protection of submersible motor to prevent them from the dry running, without any use of water level probes.

Technical Features

Sumodry, are available in both single and three phase, control panels are fitted with a microprocessor, designed to assure full protection to all submersible motors

- Overload protection
- Dry running protection (water level probes are NOT required)
- Protection in case of lack of one or more phases (for 3-phase motors)
- Protection in case of voltage fluctuation
- Short circuit protection
- Overvoltage protection
- 4 alert leds are present;
    1. Power on (green)
    2. Dry running (red)
    3. Overload (red)
    4. Stand-by (yellow)
- Automatic reset of dry running protection, after pre-determined periods of time
- Remote control
- Digital set up of the nominal current and power factor via dip-switch
- Designed for 230V single-phase and 400V three-phase supply
- Manual reset
- Self learning feature, in order to facilitate the current and power factor setting

Range of Application

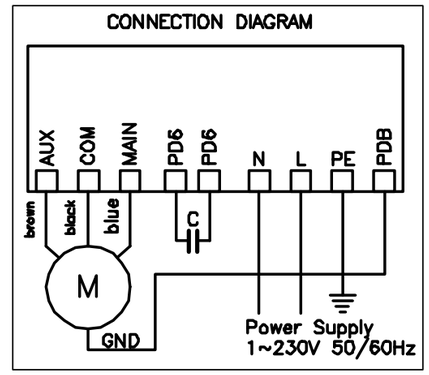
Sumo dry controllers are avilable for single phase Motors upto 15 amps and three phase motors upto 19 amps

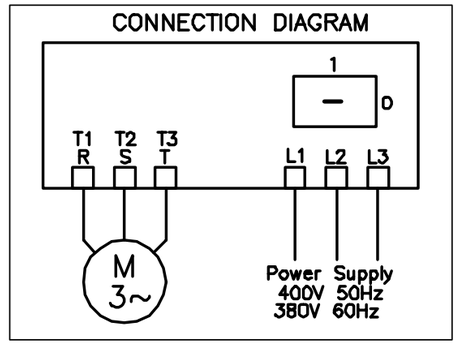
GPS-SumodryM	Single phase to 2.0hp
GPS-SumodryM1	Single phase to 3.0hp
GPS-SumodryT	Three phase to 7.5 hp

Fuses for the sumo dry controllers need to be specified at time of purchase based off the full load motor current

Controller Information
GPS-Sumodry

Wiring Connections for Sumodry Controllers





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