

FASTFLO®
PUMP SYSTEMS

Providing Pumping Solutions



PRODUCT CATALOGUE

FREEPHONE 0800 327 835

www.fastflo.co.nz



WELCOME/INTRODUCTION

Welcome to Fastflo Pump Systems latest Product Selection Catalogue (third edition) designed with a very easy-to-read format to assist you in selecting the right pump for the right job.

The Company

Fastflo Pump Systems (the wholesale division of Pump & Valve Specialties Ltd) is a NZ owned and operated company. We now have 4 offices (Auckland, Wanganui, Wellington and Christchurch) over 20 staff, and have 30 years combined experience in the pumping industry.



The Products

Fastflo Pump Systems is fully committed to supplying a large range of reliable, quality pumping and associated products at competitive prices. We specialise in supplying quality pumping systems for water, sewage, and stormwater systems. This catalogue includes an extended product range, along with new product lines to meet all your pumping and related requirements.



The Service

Service is a very important component in our business. The Fastflo Pump Systems team is dedicated to providing integrity, value, quality, service and satisfaction to all its customers, including a fast turn around on all products, and after sales support.



The Care

The Fastflo Pump Systems team CARE about the ENVIRONMENT. We understand that we are dealing with your most precious resource - WATER! Therefore we offer environmental and eco-friendly products to assist you in dealing with your water requirements the best way possible.














Mission Statement

"To Provide Effective & Innovative Solutions for all Fluid Movement Applications"

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GENERAL/PRODUCT INFORMATION

Product Range

The Fastflo Products shown in this catalogue are a selection of both local and imported quality products from reputable well established companies and manufacturers.

We would like to emphasise that our product range is not limited to what's in the catalogue, therefore if you can't find what you're looking for please give us a call.

Specifications

Fastflo Product Specifications may change at any time without notice, due to design and product enhancement.

Technical Support

The Fastflo Pump Systems Sales Team is available to discuss any technical queries to assist in selection of products, or submit a quotation to meet a specific requirement. This includes working with individual clients including Plumbers, Drainlayers, Architects, Designers and Developers to establish their exact requirements and then liaising with their chosen Plumbing Merchant.

Purchasing

Fastflo Products can be purchased through all the mainstream plumbing merchants nationwide, as well as some pump companies and farm supply companies for certain products. If you are not sure of your nearest merchant, please give us a call on our Freephone: 0800-327-835

Pricing

For all product pricing please call us on our freephone, or contact your local plumbing merchant.

Freight

Orders over \$500 plus GST are freight free. Orders under this amount will incur freight charges. The following products exclude freight charges:

- Underground Vertical Pump Chambers.

Availability

Please give us a call to check on Fastflo Product availability. This can vary from day to day depending on demand or other factors that are beyond our control.

Warranty

All Fastflo Product Warranties are shown on the respective product sheets. The warranty period is from date of invoice against faulty parts and workmanship.

Disclaimer

The Fastflo Products listed in this catalogue are described in general terms, and all technical information and applications are given as a guideline only. Final product selection and suitability is the customer's responsibility - refer to Terms and Conditions at the back of this catalogue.



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SECTION I

PACKAGED PUMP STATIONS



"Packaged Pump Stations are fully integrated packaged systems designed for the pumping of greywater, stormwater, sewage and wastewater when gravity discharge is not feasible."

PACKAGED PUMPING STATIONS - OVERVIEW

"Your answer to gravity discharge problems"

DESCRIPTION

FASTFLO™ Packaged Pump Stations are fully integrated pumping stations designed to ease sewage, wastewater, and stormwater problems for domestic commercial, industrial, & civil applications in situations where gravity discharge is not available.

THE BENEFITS

- Easy & lightweight to handle
- Polyethylene tanks designed to be buried underground
- Don't rust or corrode, and no water ingress
- Supplied as a complete package, ready to install
- Large range of tank & pump options to suit all applications
- Quality components to reliably work for you, day after day.

If you're below the sewer line...

Get Online

THE ADVANTAGES

- Over 2600 FASTFLO Packaged Pumping Stations installed in NZ - that means experience next to none other.
- Holding tanks that are manufactured in NZ to meet NZ conditions
- Installed in most areas of NZ and are recognized by local councils to be a superior product
- Well recognised in the Plumbing & Drainlaying industry to be a superior product.
- Are manufactured using only top quality materials & components
- Are manufactured in accordance and comply with AS/NZS 1546-1:2008 and NSF/ANSI 46-2007
- Are covered by the following warranty:-

Submersible Pump – 24 months

Polyethylene Tank – 20 years

FRP Tank – 20 years



WASTEWATER/GREYWATER PUMP STATIONS

CUBE

DESCRIPTION

- Smaller sized self contained above-ground wastewater pump out unit, for situations where gravity is not feasible
- Units are usually installed below sink or basin unit to accept gravity waste pipe inlets

NB: Separate carbon vent available if required, otherwise units require venting. Hunter valves are not suitable

CONSTRUCTION/FEATURES

- Polyethylene Sealed Tank c/w bolted PE Sealed lid
- Non-corrosive and long lasting tank
- Semi-Compact - more suited for domestic and light commercial applications where less space is available
- Simple installation - all internal plumbing done
- 3 standard pump options - Custom units available with larger pumps
- 2 year pump warranty



Tank size: 410mm L x 300mm W x 400mm H
Tank capacity: 43 Litres

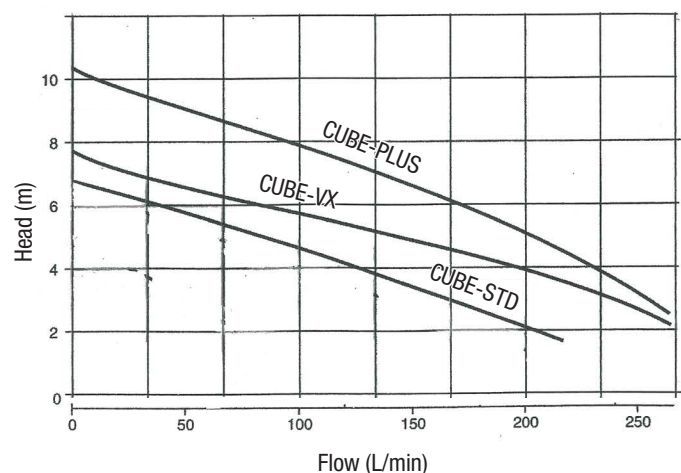
APPLICATIONS

- Kitchen Sinks/Kitchenettes/Bakeries
- Laundry Tubs/Washing Machines
- Cleaners Sinks/Wash Rooms
- Restaurants/Cafes/Lunch Bars
- Doctors/Dentists/Clinics
- Surgeries/Hospitals/Medical Centres
- Office Blocks/High rise buildings
- General domestic and light commercial

Model	Motor size	Voltage	Solids Passage	Outlet size
CUBE - STD (Standard)	0.22kW	230 V	10mm	32mm
CUBE - PLUS (Medium)	0.55kW	230 V	10mm	32mm
CUBE - VX (Vortex)	0.55kW	230 V	25mm	32mm

High Level Alarm available if required. Refer page 88
Solenoid valves available if required. Refer page 78-79

HYDRAULIC DATA



WASTEWATER/GREYWATER PUMP STATIONS
**UNDERSINK (LARGE)
US SERIES**
DESCRIPTION

- Medium sized self contained above-ground wastewater pump out unit, for situations where gravity is not feasible
- Units are usually installed below sink or basin unit to accept gravity waste pipe inlets

NB: Separate carbon vent available if required, otherwise units require venting. Hunter valves are not suitable

CONSTRUCTION/FEATURES

- Polyethylene Sealed Tank c/w bolted PE Sealed lid
- Non-corrosive and long lasting tank
- Semi-Compact - more suited for domestic/light commercial applications where more space is available
- Simple installation - all internal plumbing done
- 3 standard pump options - Custom units available with larger pumps
- Stainless steel tanks available for hygiene sensitive applications if required eg. Hospitals
- 2 year pump warranty



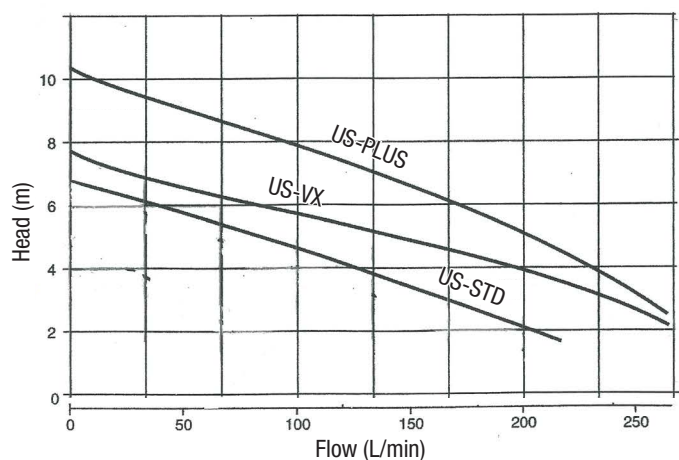
Tank size: 510mm L x 410mm W x 475mm H
Tank capacity: 90 Litres

APPLICATIONS

- Restaurants/Cafes/Lunch Bars
- Kitchens
- Bakeries
- Laboratories/Laundry
- Doctors/Dentists
- Surgeries/Hospitals
- Office blocks/High rise Buildings
- Temporary Building and Construction Sites
- Portable Building Facilities

Model	Motor size	Voltage	Solids Passage	Outlet size
US - STD (Standard)	0.22kW	230 V	10mm	32mm
US - PLUS (Medium)	0.55kW	230 V	10mm	32mm
US - VX (Vortex)	0.55kW	230 V	25mm	32mm

High Level Alarm available if required. Refer page 88
Solenoid valves available if required. Refer page 78-79

HYDRAULIC DATA


SANI PUMP OUT UNITS - GREYWATER

SOLOLIFT 2 C3 & D2

DESCRIPTION

- Compact self-contained sanitary pump-out units for pumping of greywater only (not toilets) in domestic situations only
- Units are installed beside or under sanitary fixtures depending on site conditions in the same room

CONSTRUCTION/FEATURES

- Unique welded pressure tight PVC tank
- Powerful robust motor c/w Stainless Steel parts
- Vortex impellor with 20mm free passage
- Alarm device optional/easy retrofit
- Hot water resistant - up to 90°C for 30 minutes
- 2 year warranty

APPLICATIONS

- Washing machines/showers/sink/wash hand basins
- Ensuites/basement bathrooms/garages

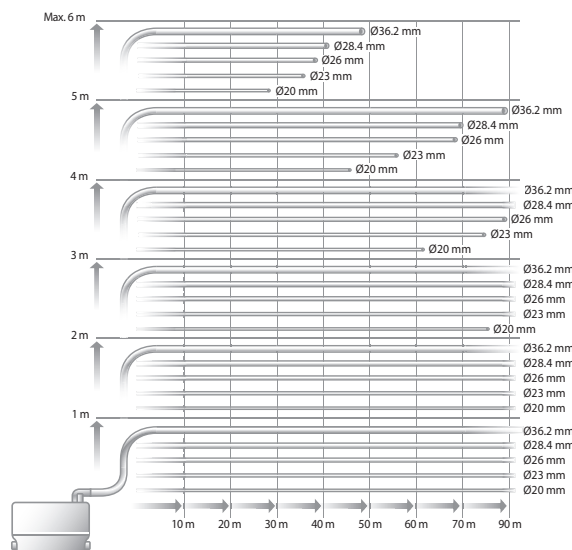
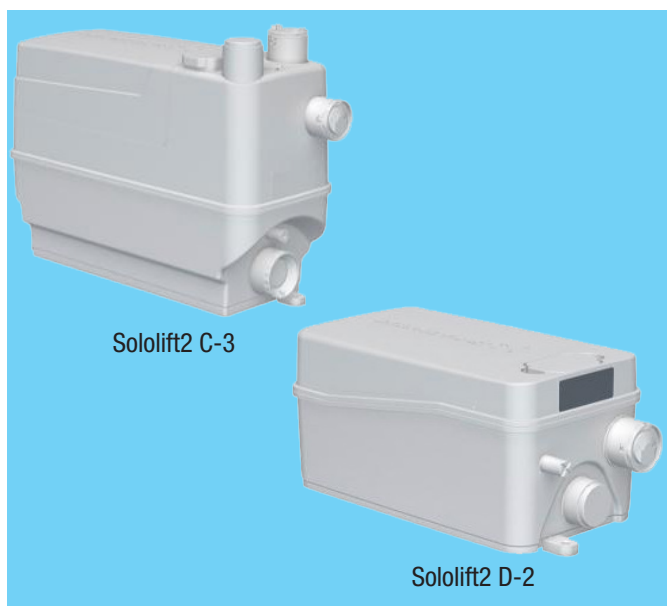
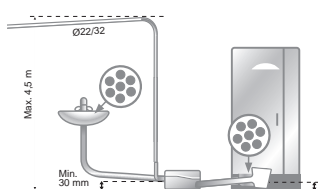
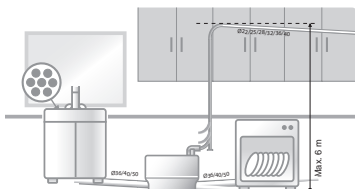
NB: These units are not suitable for commercial applications, and we do not guarantee they will handle sanitary products

Model	Motor size	Voltage	Outlet size
SOLOLIFT2 C3	640W	230V	25/32/40
SOLOLIFT2 D2	280W	230V	25/32/40

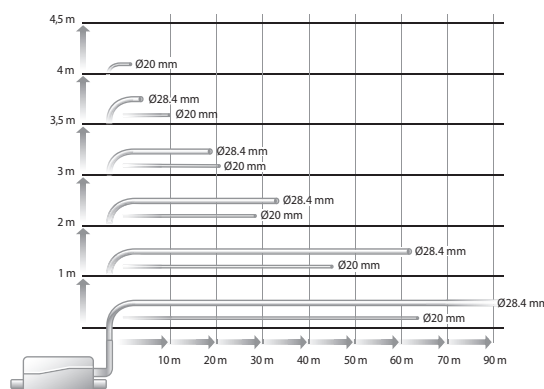
HL/Solenoid valve available if required - Refer pages 78-79

Sololift2 C-3 for washing machine and sink

Sololift2 D-2 for shower and sink



Sololift2 C-3



Sololift2 D-2

SANI PUMP OUT UNITS - SEWAGE/GREYWATER

SOLOLIFT 2 WC SERIES

DESCRIPTION

- Compact self-contained sanitary pump-out units for pumping of either raw sewage/greywater in domestic situations only
- Units are installed directly behind WC units - in the same room as the fixture
- Especially designed for tight spaces where holding tanks are not feasible

CONSTRUCTION/FEATURES

- Unique welded pressure tight PVC tank
- Powerful robust motor c/w Stainless Steel parts
- Grinder/cutter impellor for sewage water
- Self cleaning function & hardened Stainless Steel parts
- Alarm device optional/easy retrofit - simply insert a small PCB with buzzer
- Hot water resistant - up to 50°C
- 2 year warranty

APPLICATIONS

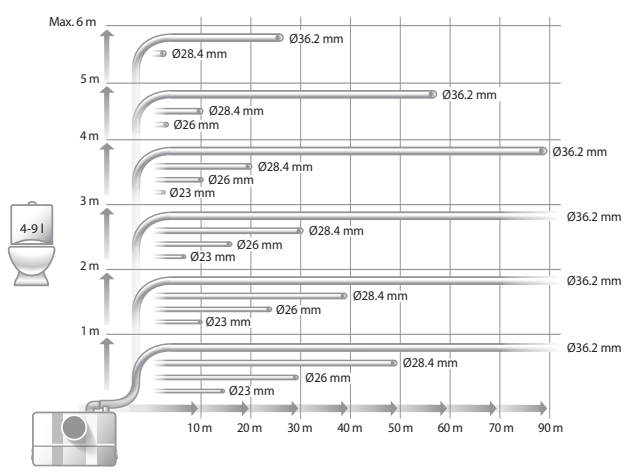
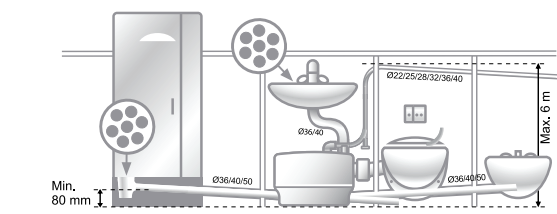
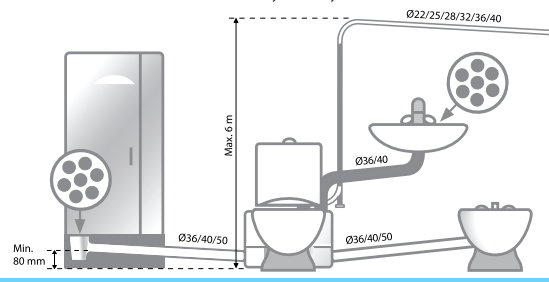
- Bathroom/Basement Ensuites/Facilities
- Granny Flats/Beach Houses/Baches
- Toilets/Showers/Wash Hand Basins/Vanity Units
- Laundry Fixtures/Kitchen Fixtures

NB: These units are not suitable in commercial applications, and we do not guarantee they will handle sanitary products

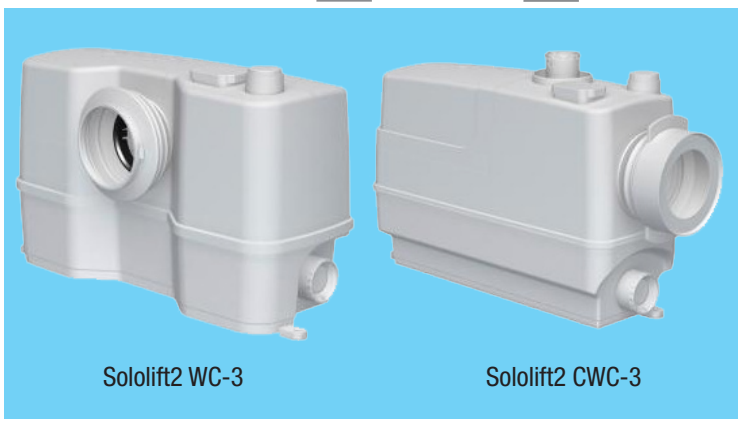
Model	Motor size	Voltage	Outlet size
SOLOLIFT 2 WC-1	620W	230V	25/32/40
SOLOLIFT 2 WC-3	620W	230V	25/32/40
SOLOLIFT 2 CWC-3	620W	230V	25/32/40

HL/Solenoid valve available if required - Refer pages 78-79

Sololift2 WC-3 for WC, WHB, bidet and shower



Sololift2 WC-1 Sololift2 WC-3 Sololift2 CWC-3



Sololift2 WC-3

Sololift2 CWC-3

SEWAGE & WASTEWATER LIFTING STATIONS

SANI CUBIC

DESCRIPTION

- Compact above-ground fully automatic single or dual pump stations designed for pumping sewage & wastewater, in sanitary applications where gravity discharge is not feasible

Codes:

- SC1 - Sani Cubic Classic 1 - (Single Pump)
- SC2P - Sani Cubic Plus 2 Pro - (Dual Pump)

CONSTRUCTION/FEATURES

- PVC Pump Housing
- L557 x W491 x H408mm
- Multiple inlets with various diameter
- Single or Dual 1.5kW 230V motors
- Includes option of unit alarm only or unit alarm plus remote alarm and solenoid valve if required (Refer to pages 88, 78-79)
- 2 Year pump warranty



SANICUBIC 2 PRO

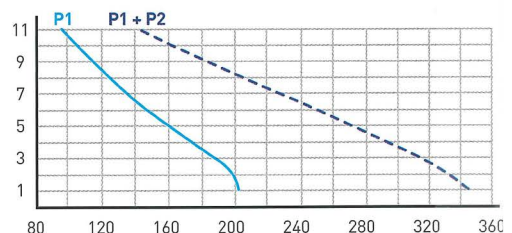
APPLICATIONS

- Basement Ensuites/Bathrooms
- Granny Flats/Beach Houses/Baches
- Toilets/Shower/Wash Hand Basins/Vanity Units
- Laundry Fixtures - Tubs & Washing Machines
- Kitchen Fixtures
- Bars/Restaurants
- Multiple WCS & urinals

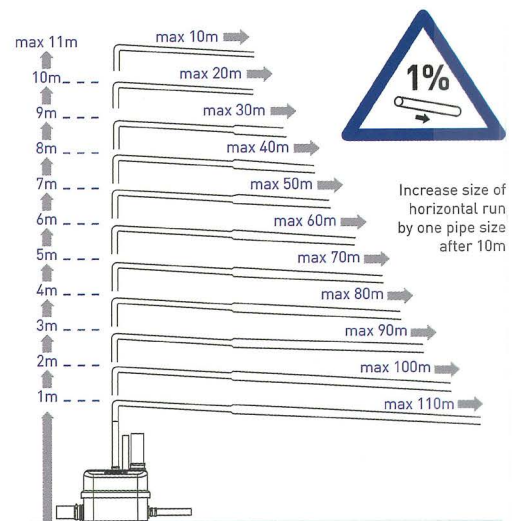
NB: All fixtures need to be 275mm above the base of the pump.

Model	Motor size	Description
SANI CUBIC 1 (SC1)	1 x 1.5kW	Single Pump - Includes unit alarm only
SANI CUBIC 2 PRO (SC2P)	2 x 1.5kW	Dual Pump - Remote & unit alarms

HEIGHT (m)



OUTPUT (litres/min)



SEWAGE & WASTEWATER LIFTING STATIONS

ABS - SANIMAT

DESCRIPTION

- Above-ground compact self-contained sanitary pump-out units for pumping of either raw sewage/greywater
- Units are either installed in recess/cavity or basement below the level of the fixtures
- Especially designed for tight spaces where holding tanks are not feasible
- Single or Dual pump options available in both single and three phase
- ABS, Grundfos, Sanimaster brands available

CONSTRUCTION/FEATURES

- Robust, compact, polyethylene tanks
- Easily transported and fitted up on site
- Powerful Grinder or Vortex Pump options
- Multiple inlet port options available
- Cast iron motor housings and impeller
- Integrated ball type NRV included
- Large range of flows and heads available
- 2 year warranty



ABS SANIMAT 2002

APPLICATIONS

- Domestic/Commercial/Industrial
- Bathroom/Basement Ensuities
- Toilets/Shower/Wash Hand Basins/Vanity Units
- Laundry Fixtures - Tubs & Washing Machines
- Kitchen Fixtures/Bars/Restaurants/Cafes

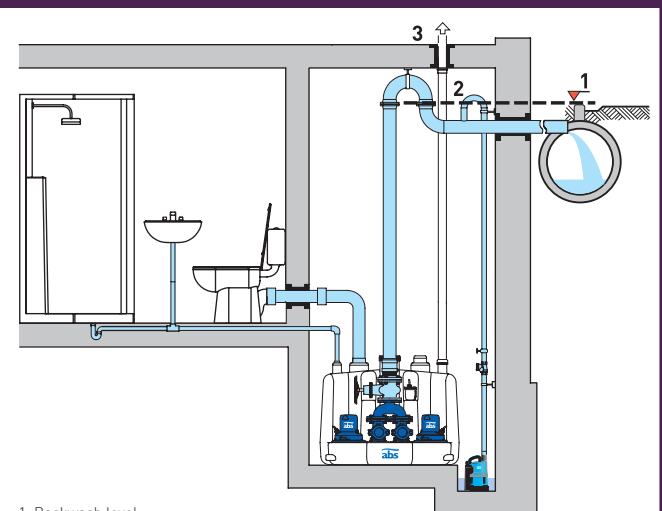
Model	Motor size	Voltage	Outlet size
1000 W (Single vortex)	1.3 kW	230V	80/100mm
1000 D (Single vortex)	1.4 kW	400V	
1000 D/HD (Single vortex)	2.2 kW		
1002 D (Dual vortex)	1.7 kW	400V	80/100mm
1002 D/HD (Dual vortex)	2.2 kW		
2002 D/HD (Dual vortex)	2.2 kW	400V	80/100mm
2002 D/XD (Dual vortex)	3 kW		
701 W (Single grinder)	1.7 kW	230V	32mm
701 D (Single grinder)	1.7 kW	400V	
1002 D (Dual grinder)	1.7 kW		

Code

701 Series Tank = 70 Litre Capacity
 1000 Series Tank = 70 Litre Capacity
 1002 Series Tank = 140 Litre Capacity
 2002 Series Tank = 320 Litre Capacity

*Solenoid valves available if required - Refer pages 78-79.

TYPICAL INSTALLATION



1. Backwash level
2. Backwash loop with base below the backwash level
3. External ventilation pipe

SEWAGE & WASTEWATER PUMP STATIONS

DRAIN BOX SERIES

DESCRIPTION

- Compact above-ground fully automatic single pump stations designed for pumping sewage and wastewater for smaller sanitary applications in situations where gravity discharge is not feasible
- There are 4 different pump types available to suit different site conditions & applications
- Dual pump options also available

CONSTRUCTION/FEATURES

- Tough PE Holding tank - 250 Litre c/w sealed bolted PE lid (trafficable rated lid option available if required)
- Robust, Heavy duty sewage pumps - either Vortex (VX), Cutter (CR), or Grinder (GR) options available
- Lightweight - easily handled & installed by 1 man
- Space Saving - all below-ground installation
- Sealed Unit - No ground water infiltration or leakage
- Labour Saving - on site costs are minimal as all components are supplied including pipework, valves, control box, and HL Alarm
- 2 year pump warranty



FASTFLO DRAIN BOX
650 x 650 x 750H (250LTRS Max)

APPLICATIONS

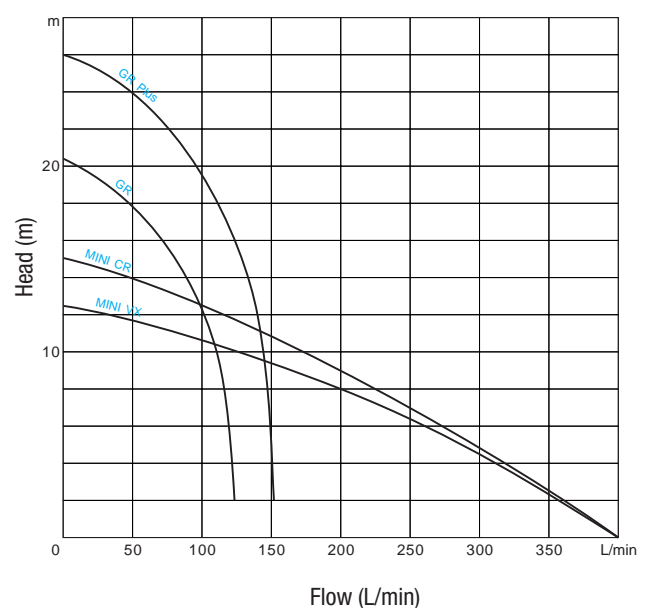
- Basement Ensuites/Bathrooms
- Granny Flats/Beach Houses/Baches
- Bathrooms/Laundries/Kitchen
- Lift Pits/Carparks
- Restaurants/Lunch Bars
- Commercial Kitchens
- Toilets, Showers, Washhand Basins, Vanity Units

NB: These units are not designed for whole house situations. We do not guarantee that these pumps will handle sanitary products

Refer to Technical Overview on pump types - page 50

Model	Motor size	Voltage	Solids Passage	Outlet size
D Box VX	0.75kW	230 V	35mm	50mm
D Box CR	0.75kW	230 V	40mm	50mm
D Box GR	1.0kW	230 V	N/A	32mm
D BoxGR Plus	1.5kW	230 V	N/A	32mm

HYDRAULIC DATA



SEWAGE & WASTEWATER PUMP STATIONS

MAXI SERIES

DESCRIPTION

- Compact above-ground fully automatic dual pump stations designed for pumping sewage and wastewater for smaller sanitary applications in situations where gravity discharge is not feasible
- There are 4 different pump types available to suit different site conditions & applications

CONSTRUCTION/FEATURES

- Tough PE Holding tank - 500 Litre c/w dual sealed bolted PE lids (trafficable rated lid option available if required)
- Robust, Heavy duty sewage pumps - either Vortex (VX), Cutter (CR), or Grinder (GR) options available
- Lightweight - easily handled & installed by 1 man
- Space Saving - all below-ground installation
- Sealed Unit - No ground water infiltration or leakage
- Labour Saving - on site costs are minimal as all components are supplied including pipework, valves, control box, and HL Alarm
- 2 year pump warranty

APPLICATIONS

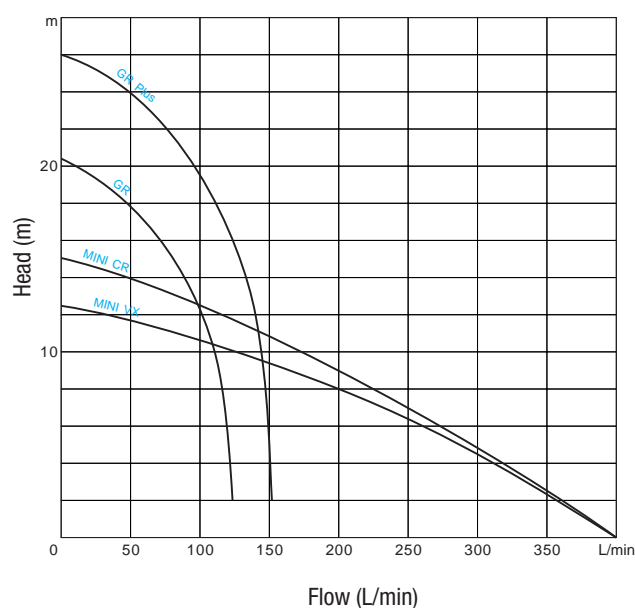
- Basement Ensuites/Bathrooms
- Granny Flats/Beach Houses/Baches
- Bathrooms/Laundries/Kitchen
- Lift Pits/Carparks
- Restaurants/Lunch Bars
- Commercial Kitchens
- Toilets, Showers, Washhand Basins, Vanity Units

NB: We do not guarantee that these pumps will handle sanitary products

Refer to Technical Overview on pump types - page 50

Model	Motor size	Voltage	Solids Passage	Outlet size
MAXI VX	0.75kW	230 V	35mm	50mm
MAXI CR	0.75kW	230 V	40mm	50mm
MAXI GR	1.0kW	230 V	N/A	32mm
MAXI GR PLUS	1.5kW	230 V	N/A	32mm

HYDRAULIC DATA



MAXI (DUAL)
720 x 1270 x 770 H (500Ltrs max)

SEWAGE & WASTEWATER PUMP STATIONS

MINI SERIES

DESCRIPTION

- Compact in-ground fully automatic single pump stations designed for pumping sewage and wastewater for smaller sanitary applications in situations where gravity discharge is not feasible
- There are 4 different pump types available to suit different site conditions & applications
- Dual pump options also available

CONSTRUCTION/FEATURES

- Tough PE Holding tank - 330 Litre c/w sealed bolted PE lid (trafficable rated lid option available if required)
- Robust, Heavy duty sewage pumps - either Vortex (VX), Cutter (CR), or Grinder (GR) options available
- Lightweight - easily handled & installed by 1 man
- Space Saving - all below-ground installation
- Sealed Unit - No ground water infiltration or leakage
- Labour Saving - on site costs are minimal as all components are supplied including pipework, valves, control box, and HL Alarm
- 2 year pump warranty

APPLICATIONS

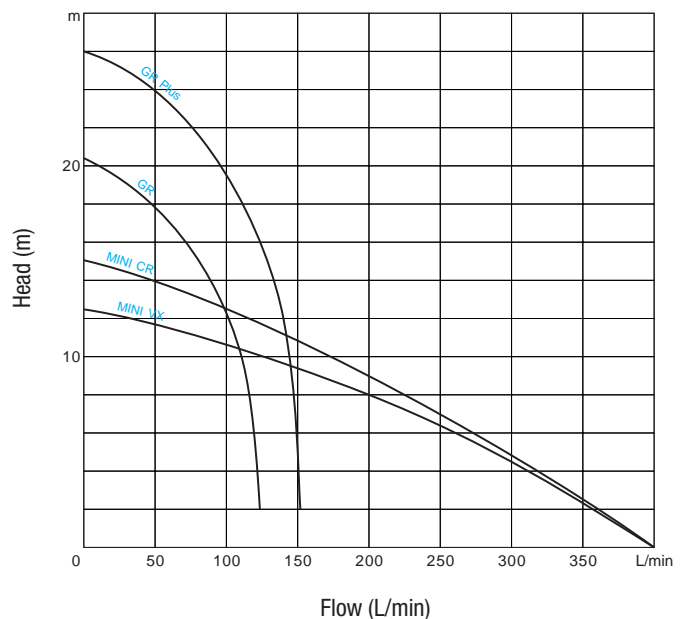
- Basement Ensuites/Bathrooms
- Granny Flats/Beach Houses/Baches
- Bathrooms/Laundries/Kitchen
- Lift Pits/Carparks
- Restaurants/Lunch Bars
- Commercial Kitchens/ Bakeries
- Toilets, Showers, Washhand Basins, Vanity Units

NB: The Mini Series units are not designed for whole house situations. We do not guarantee that these pumps will handle sanitary products

Refer to Technical Overview on pump types page 50

Model	Motor size	Voltage	Solids Passage	Outlet size
Mini VX	0.75kW	230 V	35mm	50mm
Mini CR	0.75kW	230 V	40mm	50mm
Mini GR	1.0kW	230 V	N/A	32mm
Mini GR Plus	1.5kW	230 V	N/A	32mm

HYDRAULIC DATA



FASTFLO MINI
800mmØ x 850mm high (330 Ltrs max)

SEWAGE & WASTEWATER PUMP STATIONS

1000/1500/2000
SERIES

DESCRIPTION

- Compact in-ground fully automatic single pump stations designed for pumping sewage & wastewater in whole house situations where gravity discharge is not feasible
- Dual pump stations also available

CONSTRUCTION/FEATURES

- Tough PE Holding Tank - 1000Ltr/1500Ltr/2000Ltr options c/w Sealed Bolted PE Lid (trafficable rated lid option available if required)
- Robust, Heavy duty sewage pumps - either Vortex (VX), Cutter (CR), or Grinder (GR) options available as standard (refer to attached graph)
- Extra heavy duty all cast iron vortex pump options also available for more demanding commercial/ industrial applications and larger solids handling.
- Lightweight - easily handled & installed by 2 men
- Space Saving - all below ground installation
- Sealed Unit - No ground water infiltration
- Labour Saving - on site costs are minimal as all components are supplied, including pipework, valves, control box, and HL alarm
- 2 year pump warranty/20 year tank warranty

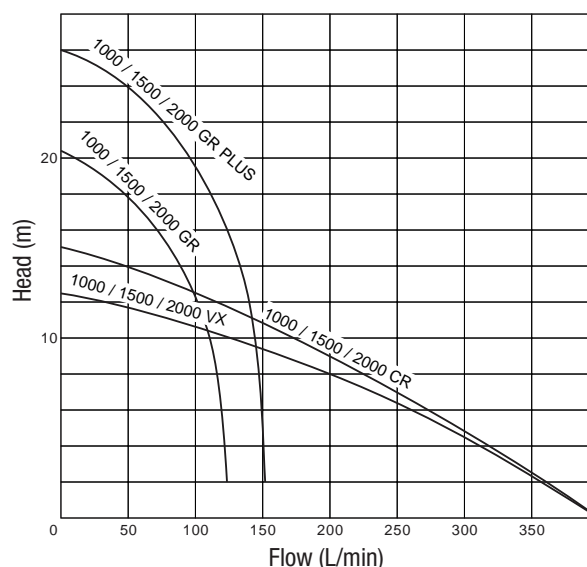
APPLICATIONS

- Individual dwellings/houses
- Kindergartens/Schools/Colleges
- Hotels/Motels/Tourist Complexes
- Caravan Parks/Picnic Areas
- Sports Clubs/Golf Clubs/Boat Shed Facilities
- Medical Centres/Hospitals
- Industrial Complexes

NB: We do not guarantee these pumps will handle sanitary products
Refer to Technical Overview on pump types on page 50

Model	Motor size	Voltage	Solids Passage	Outlet size
1000 VX	0.75kW	230 V	35mm	50mm
1500 VX				
2000 VX				
1000 CR	0.75kW	230 V	40mm	50mm
1500 CR				
2000 CR				
1000 GR	1.0kW	230 V	N/A	32mm
1500 GR				
2000 GR				
1000 GR PLUS	1.5kW	230V	N/A	32mm
1500 GR PLUS				
2000 GR PLUS				

HYDRAULIC DATA



1000 SERIES
1.1mØ x 1.7m High

1500 SERIES
1.1mØ x 2.1m High

2000 SERIES
1.1mØ x 2.6m High

SEWAGE & WASTEWATER PUMP STATIONS

HYDROPRO PRESSURE SEWER SERIES

DESCRIPTION

- Compact in-ground fully automatic single pump stations designed for pumping sewage & wastewater from either single homes or entire communities via a pressure main to a centralized treatment plant or municipal wastewater collection network.
- Especially designed for hilly or low lying areas where gravity sewers would be expensive to install or for replacing aged septic tank systems, without major disruption to established areas
- Dual pump options also available

CONSTRUCTION/FEATURES

- Tough PE holding Tank – 330/1000/1500 Litre options
- Robust, heavy duty High Head Grinder Pump
- Environmental friendly as remove sewage & wastewater off the property
- Use small bore discharge pipelines
- Sealed Unit – no ground water infiltration
- Reliable & proven design
- Cost Effective/Low running costs
- Labour saving/Easy to install
- 2 year pump warranty

APPLICATIONS

- Individual Dwellings/Houses
- Kindergartens/Schools/Colleges
- Hotels/Motels/Tourist Complexes
- Caravan Parks/Picnic Areas
- Sports Clubs/Golf Clubs
- Medical Centres/Hospitals
- Boat Shed Facilities
- Residential Subdivisions/Communities
- Industrial Complexes

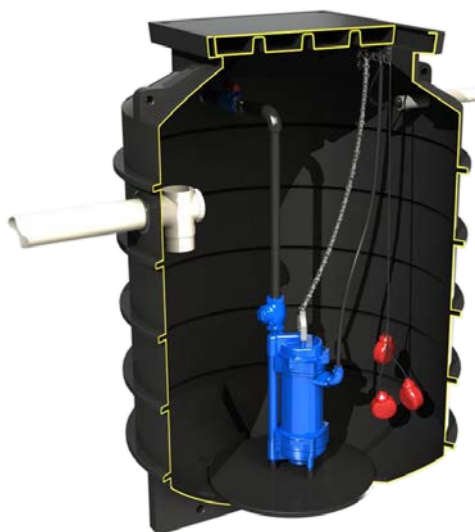
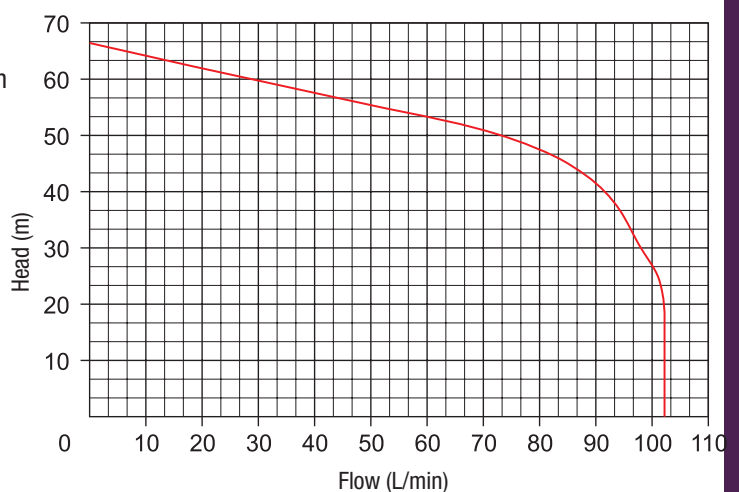
NB: We do not guarantee these pumps will handle sanitary products

- Refer to Technical Overview on grinder pumps page 50
- Includes CB - Deluxe Single Pump Controller/HL Alarm - Refer page 89

Model	Motor Size	Voltage	Solids Passage	Outlet Size
MINI HP	1.5kW	230V	N/A	32mm
1000 HP	1.5kW	230V	N/A	32mm
1500 HP	1.5kW	230V	N/A	32mm
2000 HP	1.5kW	230V	N/A	32mm

Boundary Boxes available if required. Refer to page 27

HYDRAULIC DATA



HYDROPRO 1000 (shown)

HYDROPRO MINI
800mmØ x 850mm high
(330Ltrs)

HYDROPRO 1000
1.1mØ x 1.7m high
(1200Ltrs max)

HYDROPRO 1500
1.1mØ x 2.1m high
(1600Ltrs max)

HYDROPRO 2000
1.1mØ x 2.6m high
(2000Ltrs max)

SEWAGE & WASTEWATER PUMP STATIONS

3000/4000 SERIES

DESCRIPTION

- Compact in-ground fully automatic pump stations designed for pumping sewage and wastewater in commercial, industrial and residential situations where gravity discharge is not feasible - Designed for dual pump applications, where larger flows are required

CONSTRUCTION/FEATURES

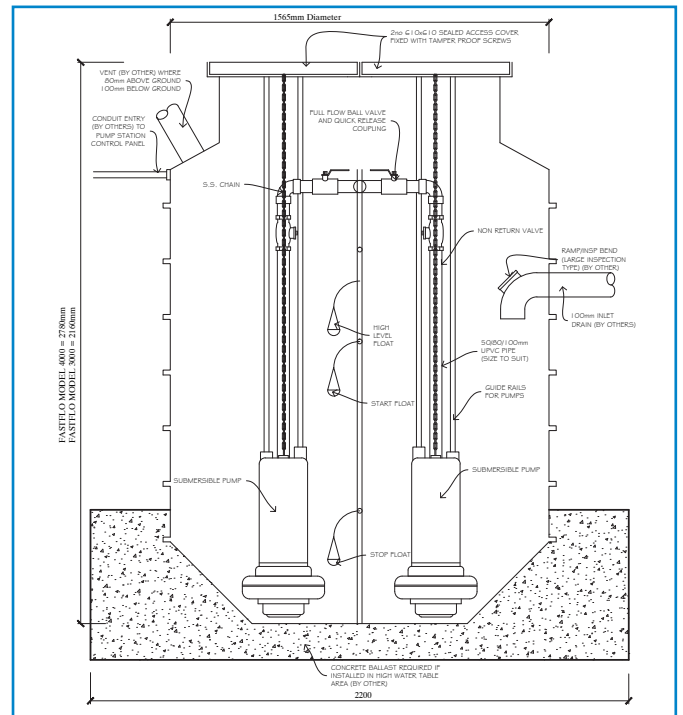
- Tough PE Holding Tanks - 3000 litre, 4000 litre options c/w Sealed Bolted PE Lids (trafficable rated lid option available if required)
- Robust, Heavy duty sewage pumps - either Vortex (VX), Cutter (CR), or Grinder (GR) options available
- Lightweight - Can be lifted by standard excavators
- Space Saving - All below ground installation
- Sealed Unit - No ground water infiltration
- Labour Saving - on site costs are minimal as all components are supplied, including pipework, valves, control box, and HL alarm.
- 2 year pump warranty/20 year tank warranty

APPLICATIONS

- Small - Medium Residential Complexes
- Kindergartens/Schools/Colleges
- Hotels/Motels/Tourist Complexes
- Caravan Parks/Picnic Areas
- Sports Clubs/Golf Clubs
- Medical Centres/Hospitals
- Boat Shed Facilities
- Industrial Complexes

Refer to Technical Overview on pump types on page 50

Model	Pipe Size	Pump Type	Voltage	Valve Box (Extra)
3000-50	50mm	Vortex/Grinder	1 PH/3 PH	✓
3000-80	80mm	Vortex/Grinder	1 PH/3 PH	✓
4000-50	50mm	Vortex/Grinder	1 PH/3 PH	✓
4000-80	80mm	Vortex/Grinder	1 PH/3 PH	✓



ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

EFFLUENT PUMP STATIONS

EFF SERIES

DESCRIPTION

- Compact in-ground fully automatic single pump stations designed for pumping effluent & greywater for whole house situations in conjunction with septic tank systems E.g. Post Septic Tank - pumping to remote distribution/effluent fields
- Dual pump options also available

CONSTRUCTION/FEATURES

- Tough PE Holding Tank - 1000/1500/2000LTR options c/w sealed lid (trafficable rated lid option available if required)
- Robust, Heavy duty drainage pumps - either low, medium head or high head pump options
- Lightweight - easily handled & installed by 2 men
- Space Saving - all below ground installation
- Sealed Unit - No ground water infiltration
- Labour Saving - on site costs are reduced to a minimal as all components are supplied including pipework, valves, control box, and HL alarm
- 2 year pump warranty/20 year tank warranty



EFFLUENT 1000 (shown)

EFFLUENT MINI
800Ø x 850 H

EFFLUENT 1000
1.1mØ x 1.7m high
(1200Ltrs max)

EFFLUENT 1500
1.1mØ x 2.1m high
(1600Ltrs max)

EFFLUENT 2000
1.1mØ x 2.6m high
(2000Ltrs max)

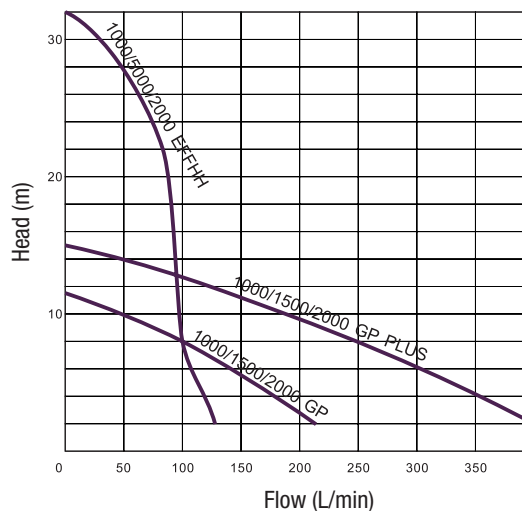
APPLICATIONS

- Individual dwellings/houses - Post Septic Tank
- Kindergartens/Schools/Colleges
- Hotels/Motels/Tourist Complexes
- Caravan Parks/Picnic Areas
- Sports Clubs/Golf Clubs/Boat sheds
- Medical Centres/Hospitals
- Industrial Complexes

NB: These pumps are not suitable for pumping raw sewage or sanitary products.

Model	Motor size	Voltage	Solids Passage	Outlet size
MINI EFF GP	0.4kW	230 V	8mm	50mm
1000 EFF GP				
1500 EFF GP				
2000 EFF GP				
MINI EFF GP PLUS	0.75kW	230 V	10mm	50mm
1000 EFF GP PLUS				
1500 EFF GP PLUS				
2000 EFF GP PLUS				
MINI EFF HH	0.6kW	230 V	1-3mm	50mm
1000 EFF HH				
1500 EFF HH				
2000 EFF HH				

HYDRAULIC DATA



STORMWATER PUMP STATIONS

SW SUMP SERIES

DESCRIPTION

- Compact in-ground fully automatic pump/sump stations designed for pumping stormwater and ground water in domestic situations with small surface areas
- There are 2 different pump types to suit different site conditions and applications General Purpose (GP) or Vortex (VX) pumps

CONSTRUCTION/FEATURES

- Tough 100Ltr P.E holding tank c/w galvanised grate lid
- Reinforced inert plastic pump body – non-corrosive for long life
- Built-in rigid float activated automatic switch, factory set for reliable operation – eliminates cable failure
- 2 year pump warranty



SW SUMP GP
450mm x 450mm x 625mm
(100 Ltrs)

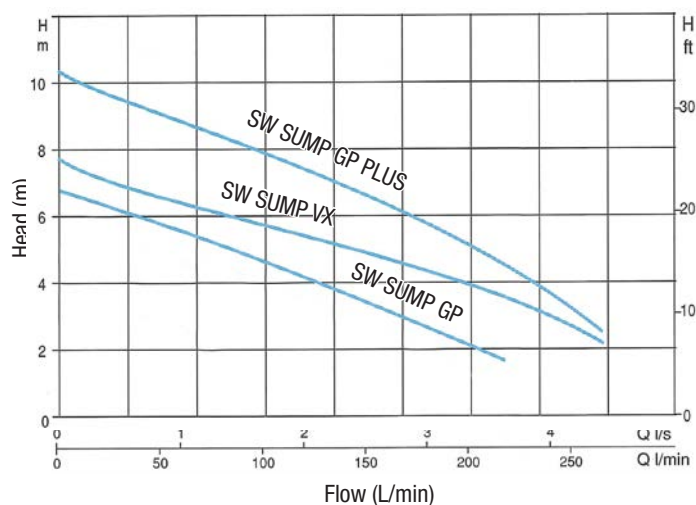
APPLICATIONS

- Domestic/Residential/Commercial Applications
- Basements/Garages/Rumpus Rooms
- Driveway/Yard Run-Off
- Seepage Water/Below Ground
- General Stormwater/Roof Run-Off
- Surface Water
- Vortex Pump Options For Solids Handling
Eg Leaves & Debris

High Level Alarm available as extra - Refer page 92

Model	Motor Size	Voltage	Solids Passage	Outlet Size
SW Sump GP	0.22kW	230V	10mm	32mm
SW Sump GP Plus	0.55kW	230V	10mm	32mm
SW Sump VX	0.55kW	230V	25mm	32mm

HYDRAULIC DATA



STORMWATER PUMP STATIONS

SW STANDARD SERIES

DESCRIPTION

- Compact in-ground fully automatic single pump stations designed for pumping stormwater & groundwater in low lying areas where gravity discharge is not feasible
- There are 4 pump options, and 3 tank options available
- Dual pump options also available

CONSTRUCTION/FEATURES

- Tough PE holding Tanks c/w either PE or galv. grate lid options (Trafficable rated lid option available if required)
- Robust, heavy duty cast iron & S/S drainage General Purpose (GP) or Vortex (VX) Pump options
- Lightweight units – can easily be handled by two men
- Space saving – all below ground installation
- Sealed unit – no ground water infiltration
- Labour saving – on site costs reduced to a minimum, as all prefabricated unit c/w pipework & valves
- Larger tanks & custom units available on requested (including dual pumps options)
- 2 year pump warranty

APPLICATIONS

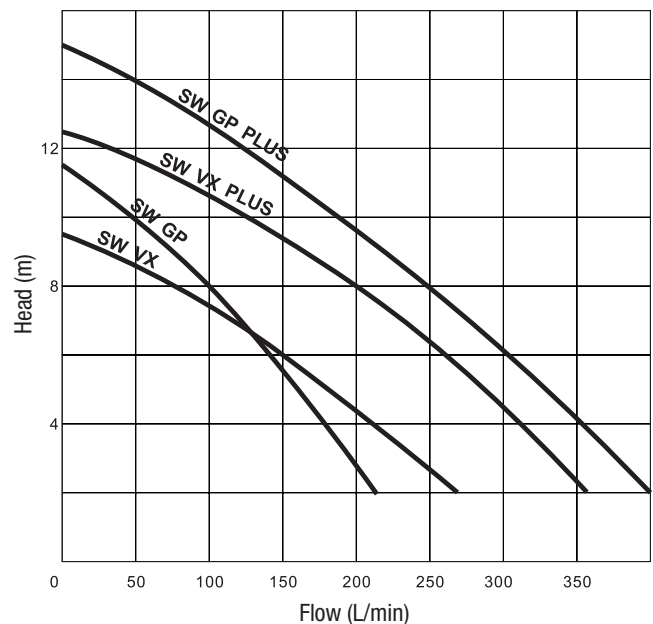
- Domestic/Roof Gutter Collection
- Drainage/Ground Water/Driveway Runoff
- Commercial Car-park collection
- General Seepage Water/Surface water

Model	Tank Size	Tank Volume
MINI	800mm dia x 850mm high	330 Litre
1000	1100mm dia x 1700mm high	1200 Litre
1500	1100mm dia x 2100mm high	1600 Litre
2000	1100mm dia x 2600mm high	2000 Litre

Model	Motor Size	Voltage	Solids Passage	Outlet Size
GP	0.4kW	230V	8mm	50mm
GP PLUS	0.75kW	230V	10mm	50mm
VX	0.4kW	230V	35mm	50mm
VX PLUS	0.75kW	230V	35mm	50mm

High level alarm available as extra. Refer page 92

HYDRAULIC DATA



NB: Larger sized stormwater pump stations also horizontal stormwater detention and retention tanks available if required.

SECTION 2

IN-GROUND VERTICAL PUMP CHAMBERS



"In-Ground Vertical Pump Chambers are designed for sewage and stormwater applications in either retrofit/replacement or new tank installations."

(These exclude pumps, pipework, valves & controls)

UNDERGROUND VERTICAL PUMP CHAMBERS

T SERIES

DESCRIPTION

- In-Ground Vertical Pump Chambers are designed for sewage and stormwater applications in either retrofit, replacement or new tank installations

NB: These tanks include flat base for pumps, but exclude the pumps, pipework and valves.

CONSTRUCTION/FEATURES

- Tough PE rotationally moulded chambers c/w PE Sealed Lids (Trafficable rated lids available if required)
- Lightweight - easily transported handled, and lifted as required
- Longevity - PE is inert to most chemicals and will not rust or rot
- Space Saving - all below ground installation
- Sealed unit - No ground water infiltration
- 20 year warranty on tanks

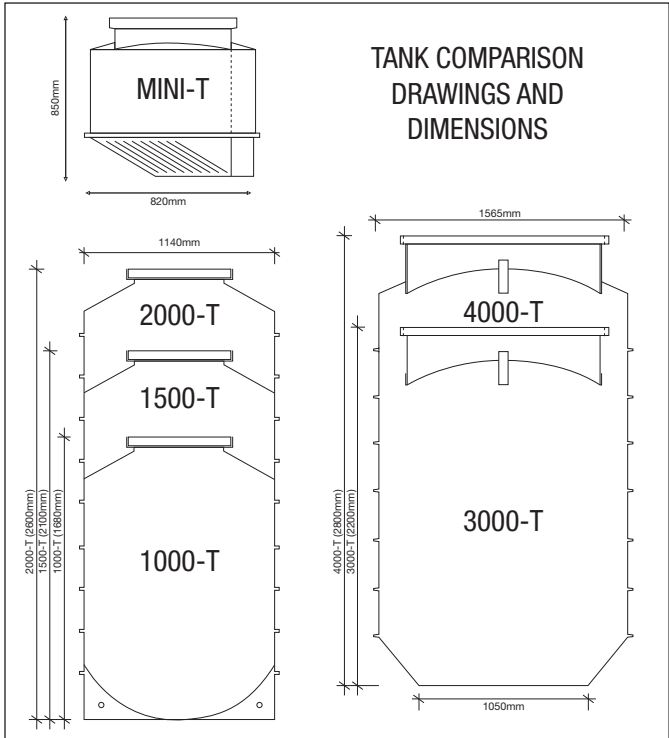
APPLICATIONS

- Stormwater/Rainwater Harvesting/Garden
- Wastewater/Greywater
- Sewage/Sludge
- Farm Effluent
- Industrial Waste
- Landfills/Leachate
- Wineries/Breweries

Model	Litres	Tank Size
MINI-T	330	800Ø x 850H
1000-T	1200	1.1Ø x 1.680H
1500-T	1600	1.1Ø x 2.1H
2000-T	2000	1.1Ø x 2.6H
3000-T	3500	1.5Ø x 2.2H
4000-T	4400	1.5Ø x 2.8H



NB: Tank photos are not to scale



SECTION 3

PUMP STATION/TANK

ACCESSORIES



"A range of pump station accessories designed to supplement your existing or new pump station installation, as required. Product range includes: Extension Risers, Valve Chambers, Grease & Scum Digestors."

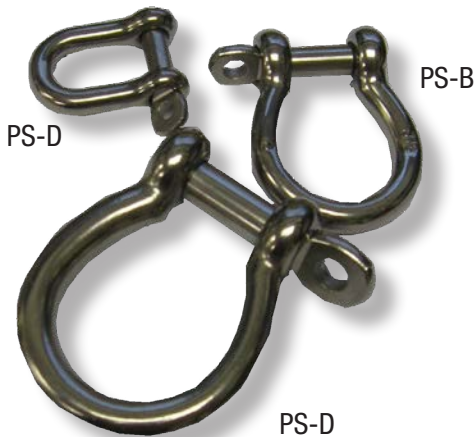
CHAINS/SHACKLES/UNISEALS



PCSS



PCGV



PS-D

PS-B

PS-D



USL

PUMP CHAIN

PCSS/PCGV

- Stainless steel (PCSS) and Galvanized Pump Chain (PCGV)
- Standard Galvanized Chain sizes 6mm and 8mm
- Standard Stainless steel Chain sizes 4mm, 5mm, 6mm and 8mm
- Designed for coupling of submersible pumps in wet well situations
- Suitable for general purpose use as well

PUMP SHACKLES

PS-D/PS-B

- Stainless steel Pump Shackles
- Standard types either 'D' shackle (PS-D) or 'Bow' Shackle (PS-D)
- Designed to couple submersible pumps onto lifting chains in wet well situations
- Standard sizes 5mm and 6mm
- Large range of sizes available on request

UNISEALS

USL

- Rubber compression seals, especially designed for fitting of pipework into polyethylene tanks and chambers Eg Pumping stations
- Unique lip ensures a high integrity seal
- Easy to Install – you only require the right size holesaw and drill
- Accommodates tank wall thickness up to 15mm
- Provides a flexible, water tight seal in tanks
- Standard sizes to suit pipe from 10mm up to 160mm

PE EXTENSION RISER/VALVE BOX

EXR/VBX SERIES

DESCRIPTION

- PE Extension Riser (EXR) / Valve Box (VBX) designed for above or below ground applications
- The single riser fits the Mini, 1000, 1500 or 2000 Litre Pump Stations.
- The dual riser fits the 3000 and 4000 Litre pump stations
- Designed if extra depth required, or as a separate valve chamber

CONSTRUCTION/FEATURES

- Tough PE riser available with or without PE Lid
- Trafficable rated lids available if required
- Extends tank by 300mm or 700mm (nominal)
- Available in either single or dual chamber sizes
- (250 Litre or 500 Litre size)

APPLICATIONS

- Sewage or Stormwater Pump Stations
- In-ground valve pits/chambers
- Irrigation Boxes
- Electrical junction boxes/Tele-communications pits

Model	Size	Other
EXR-1 (Ext Riser)	650 x 650 x 770H	No Lid
EXR-2	720 x 1270 x 770H	No Lid
VBX-1 (Valve Box)	650 x 650 x 770H	Single Lid, 250 Litre
VBX-2	720 x 1270 x 770H	Dual Lid, 500 Litre



EXR-1 / VBX-1



EXR-2 / VBX-2

PUMP STATION LIDS



POLYETHYLENE - STD		PEI
Model	Size	Description
PE 1	610mm x 610mm	Standard Pedestrian Rated PE Lid
SSFX	N/A	S/S Fixing Set c/w Sealed Washer (For PE1 Lid)

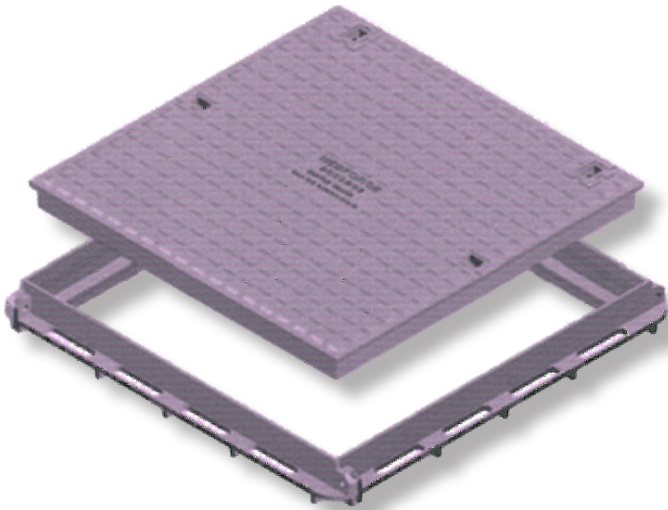


ALUMINIUM SAFETY GRILLE		ASG
Model	Size	Description
ASG	540mm x 540mm	Aluminium Safety Grille which fits inside pump station opening

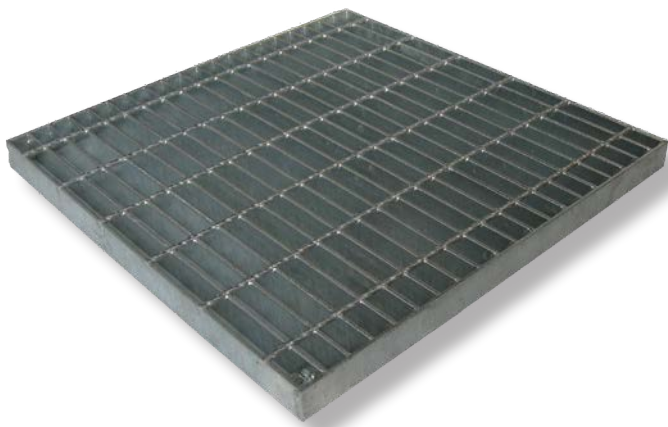


GALVANISED LID/FRAME		GLF
Model	Size	Description
GLF	610mm x 610mm	5 tonne Loading Light Traffic Rated

PUMP STATION LIDS



CAST IRON – LID/FRAME		DRC
Model	Size	Description
DRC66AB	615mm x 615mm	AB Rated – 53kN Light Duty Traffic Rated
DRC66CD	615mm x 615mm	CD Rated – 140kN Heavy Duty Traffic Rated



GALVANISED WEB GRATING		GWG
Model	Size	Description
GWG-A	610mm x 610mm	Pedestrian Rated (Class A)
GWG-B	610mm x 610mm	Pedestrian Rated (Class B) - Includes Frame
GWG-C	610mm x 610mm	Heavy Duty Rated (Class C) - Includes Frame



ALUMINIUM HINGED/LOCKABLE		ALH
Model	Size	Description
ALH-SL	610mm x 610mm	Hinged Lockable Aluminium Lid (Single)
ALH-DL	1210mm x 610mm	Hinged Lockable Aluminium Lid (Double)

VENT ODOUR FILTERS

VF SERIES

DESCRIPTION

- Vent Odour Filters are designed to remove foul odours, noxious and corrosive gases from vent pipes (including hydrogen sulfide)
- They are designed to fit sewer vent pipes (see table below)

CONSTRUCTION/FEATURES

- U.V and chemical resistant PVC construction to last many years exposed to elements
- The filter media consists of various grades of an absorbent natural mineral combined with a very small quantity of oxidising chemical.
- Safe to handle and easily installed
- Replacement media cartridges available if required
- Extractor fans available to make more effective if required

APPLICATIONS

- Sewage or Stormwater Pump Stations
- Septic Tanks
- Sewage Treatment Systems
- Residential/Commercial/Industrial
- Municipal/Council/Utilities



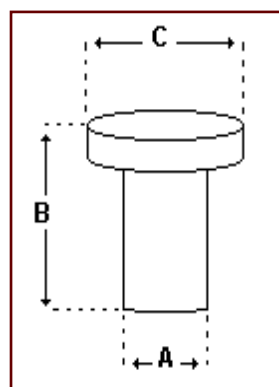
50mm

100mm



150mm

Model	Size (mm)			Weight
	A	B	C	
VF 50	55	130	90	230gms
VF 100	110	120	165	820gms
VF 150	160	190	250	2355gms
VF 300	300	430	400	12Kg



TREATMENT PRODUCTS: WASTEWATER

G-MINT/BIO-CH
SLB

- Natural
- Sustainable
- Pure Strain
- Earth Derived
- Non-Toxic
- Non-Pathogenic



- Increases Biological Activity
- Reduces Foul Odours
- Non-Toxic
- Biological nutrients and activators to help achieve maximum digestion



- Long Lasting High Activity Rate
- Biological Control
- Cost Effective
- Non-toxic
- Eliminates Bad Odours
- Reduces Algae
- Fish Friendly
- Simple & Safe to use
- Digests Green Waste & Fertilizer run-off



GREASE MINT

G-MINT

- Designed to continually release powerful fat and scum digesting bacteria in pump stations, WWTPs, Septic Tanks, Grease-traps & Sewer Drains
- Breaks down fat accumulations
- Makes pump maintenance easier
- Reduces odours in the collection system
- Reduces grease trap pump out time frequency
- Cost effective solution to your effluent discharge permits and maintenance problems

BIO-CHARGE

BIO-CH

- Designed for treating septic tank problems
- Specially prepared live bacterial culture
- Softens hardened fat build up
- Excellent for fast recovery of overloaded systems that have received sudden heavy toxic shocks
- Safe non-toxic live culture that enhances digestion of household and kitchen waste
- Useful for getting microbial activity started in new septic tanks

SLUDGE BOMB

SLB

- Pond Sediment Treatment
- Slow release live culture bacteria suitable for bio-degrading excess nutrients & pond sediment.
- Breaks down grass clippings, leaves, and fertilizer run off
- Helps to create a balanced aqua-system that is suitable for fish, animals and birdlife.
- Works in conjunction with Aquaboost product to complete digestion cycle and bring beautiful clarity to the water

SECTION 4

SUBMERSIBLE PUMPS



"Submersible Pumps are designed for the pumping of liquids from tanks, sumps & pits to higher levels. Typical liquid types include water, wastewater, effluent, greywater, stormwater and sewage."

GENERAL PURPOSE/DRAINAGE PUMPS

ECO SERIES

DESCRIPTION

- A general purpose submersible drainage pump for clean & dirty water applications
- Either manual or automatic models available
- Available in Single Phase only.

APPLICATIONS

- Light/Medium Domestic Duties
 - Pond & Swimming Pool Filling/Emptying
 - Garden/Rainwater Tank Filling/Emptying
- NB:** These are not designed for pond or continuous operation

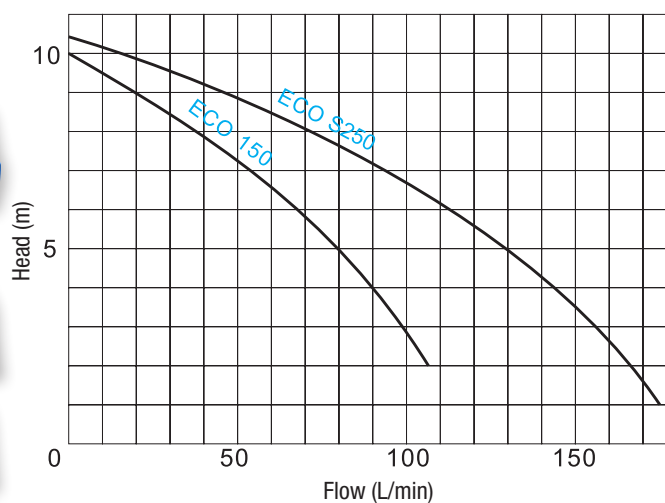
CONSTRUCTION/FEATURES

- Plastic Casing & Impeller
- Aluminium motor housing design (For ECO 150 Series)
- Stainless steel motor housing design (For ECO S 250 Series)
- Mechanical seal, oil seal, epoxy resin sealed cable
- Automatic option available with standard float switch (F) or compact Vertical Type Float (FV)
- 2 year warranty

Model	Motor Size	Voltage	Solids Passage	Outlet Size
ECO 150M (Manual)	0.15kW	230V	4mm	25mm
ECO 150F (Auto)	0.15kW	230V	4mm	25mm
ECO 150FV (Manual/Auto)	0.15kW	230V	4mm	25mm
ECO S 250 (Manual)	0.25kW	230V	4mm	32mm
ECO S 250 (Auto)	0.25kW	230V	4mm	32mm
ECO S 250 (Manual/Auto)	0.25kW	230V	4mm	32mm

Hose & Fittings available if required

HYDRAULIC DATA



ECO M SERIES

ECO FV SERIES

GENERAL PURPOSE/DRAINAGE PUMPS

NOVA/FEKA SERIES

DESCRIPTION

- Compact, lightweight & reliable submersible pumps designed for general purpose drainage and wastewater applications
- Include compact fixed arm float switches for tight spaces.
- Available in Single Phase only.

CONSTRUCTION/FEATURES

- Reinforced inert plastic body: non-corrosive for long life
- Built-in rigid automatic float switch, factory set for reliable operation, eliminates float cable failure
- Stainless steel shaft & screws: corrosion resistant for longer life
- Ball bearings for longer life and quiet operation
- Ground rotor shaft, triple lip seals in oil chamber: longer seal and pump life
- 2 year warranty

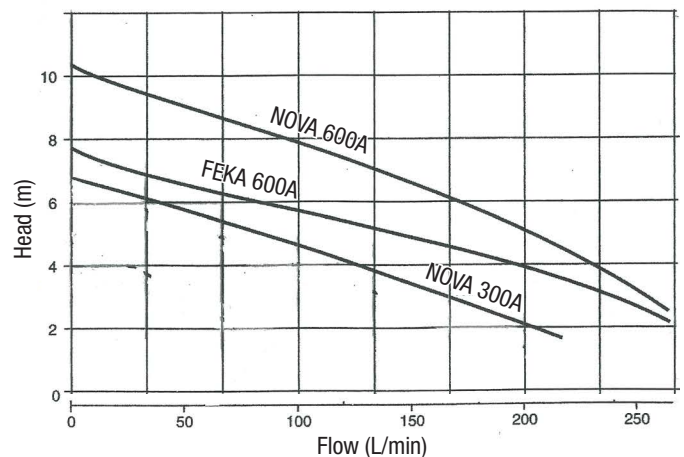
APPLICATIONS

- Domestic/Residential Ground Water & Seepage Applications
- Basements/Garages/Rumpus Rooms
- Sumps/Lift Pits/Mechanics Inspection Pits
- Stormwater/Surface Water/Roof Water
- Commercial/Industrial Complexes
- Vortex Pumps for Solids Handling/Wastewater Applications Eg Leaves & Debris (Feka Series)

Model	Motor size	Voltage	Solids Passage	Outlet size
NOVA 300A	0.22kW	230V	10mm	32mm
NOVA 600A	0.55kW	230V	10mm	32mm
FEKA 600A	0.55kW	230V	25mm	32mm

Hose & Fittings available if required

HYDRAULIC DATA



NOVA 300A

FEKA 600A

GENERAL PURPOSE/DRAINAGE PUMPS

A SERIES

DESCRIPTION
<ul style="list-style-type: none"> Robust, heavy duty submersible pumps for clean or dirty water applications Either manual or automatic models available (See specs) Single & Three phase options available (See specs)
CONSTRUCTION/FEATURES
<ul style="list-style-type: none"> Quality cast iron & stainless steel construction designed for more serious pumping applications Cast Iron multi-vane impellers Corrosion resistant base & motor casing 304 stainless steel strainer Double mechanical seal & oil chamber plus lip seal Built in thermal/motor overload Auto Reset Free standing or guide rail mounted options available Pump Controllers also available 10m long oil neoprene resistant lead & 3 pin plug 2 year warranty

APPLICATIONS
<ul style="list-style-type: none"> Dewatering/Groundwater/Stormwater Construction/Building Sites Flood Control/Civil Works Basements & Cellars Septic Tanks/Effluent <p>Hose & Fittings available if required.</p>



A21(F)



A32

GENERAL PURPOSE/DRAINAGE PUMPS

A SERIES

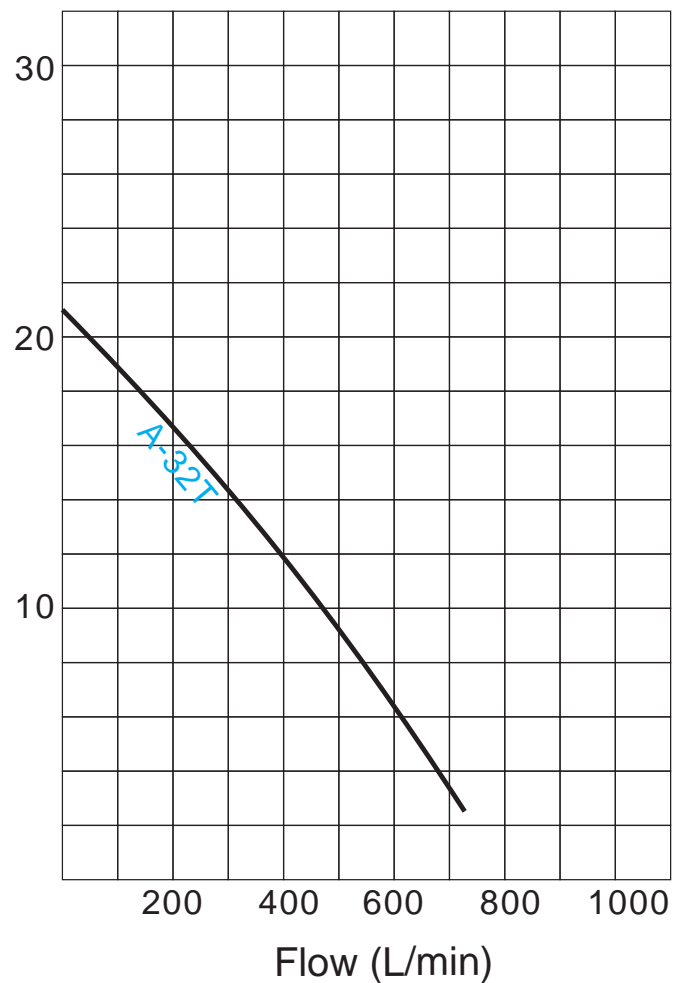
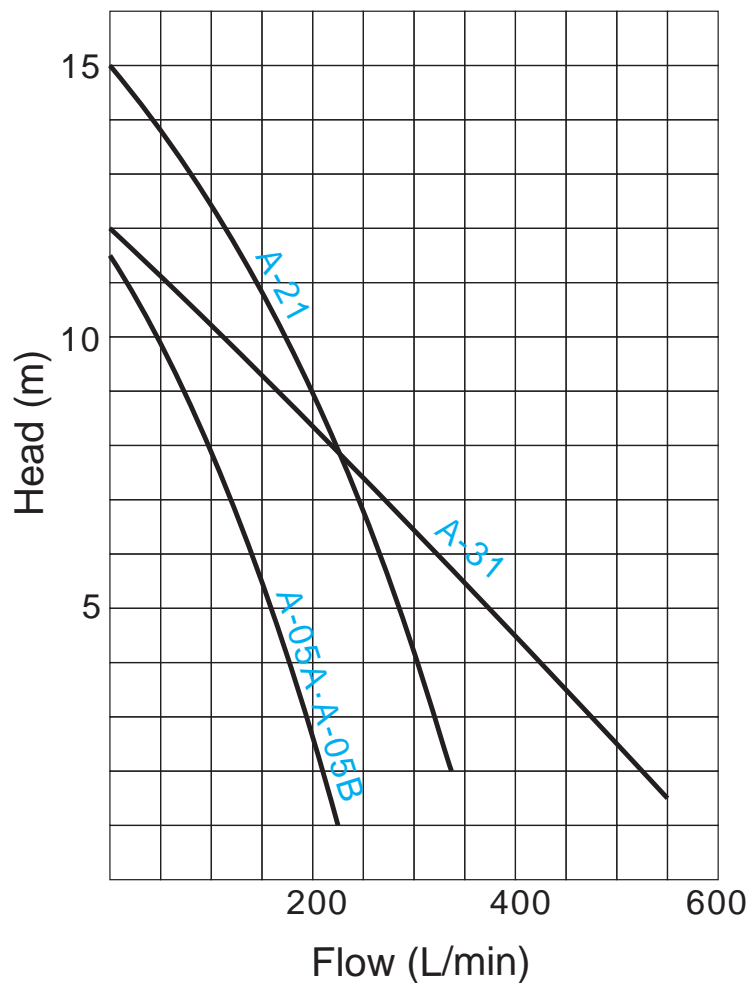
PERFORMANCE SPECIFICATION

Model	Power HP(kW)	Discharge Inch(mm)	Phase Ø	Start Method	Head m	Capacity		Weight kg 1Ø/3Ø	Solid Passage mm	Dimension (mm)		
						L/min	m³/h			Length	Width	Height
A-05B	1/2(0.4)	2"(50)	1	Capacitor	8	100	6	14	8	227	161	372
A-05B (F)												
A-21												
A-21 (F)												
3/A-21	1(0.75)	2"(50)	3	Direct	10	180	10.8	17	10	245	173	430
3/A-21(F)												
A-31 (F)	1(0.75)	3"(80)	1	Capacitor	6.5	300	18	19	10	278	173	457
A-32T (F)	2(1.5)	3"(80)	1	Capacitor	12	400	24	42	11	385	216	575
3/A-32T			3	Direct				37				495

The above hydraulic data figures are at a given duty point. They are not the maximum pump performances.

- 3/ Denotes 3 phase pumps
- (F) Denotes pump has a float switch (automatic)

HYDRAULIC DATA



CONTRACTOR PUMPS

AS SERIES

DESCRIPTION

- Robust, heavy duty submersible contractor pumps for clean or dirty water applications
- Top discharge to suit construction sites
- Either manual or automatic models available (See specs)
- Single & Three Phase options available (See specs)

CONSTRUCTION/FEATURES

- Quality cast iron casing with stainless steel outer cover
- Compact strong & easy handling
- Cast Iron multi-vane open type impeller
- Double silicone carbide mechanical seals in oil chamber plus lip seal
- 10 metre long neoprene oil resistant lead & 3 pin plug
- High chrome alloy (HCR) steel hardened impeller 55 - 60 Rockwell, designed to stand high abrasive applications
- Motor is cooled as water flows past it
- Pump Controllers available
- 2 year warranty

APPLICATIONS

- Building Site/De-Watering/Flood Control
- Civil Engineering, Tunnel De-Watering, Ground Works
- Contractors, General Drainage Applications
- NB: The contractor type pump is also available in an agitator configuration if required. This creates a powerful stirring action for pumping of slurries. Please contact us if you wish to discuss this option.
- Hose & Fittings available if required
- DOL starters available if required - Refer page 85



AS-215



80ASN23.7 (AS35)



150ASL25.5

CONTRACTOR PUMPS

AS SERIES

PERFORMANCE SPECIFICATION

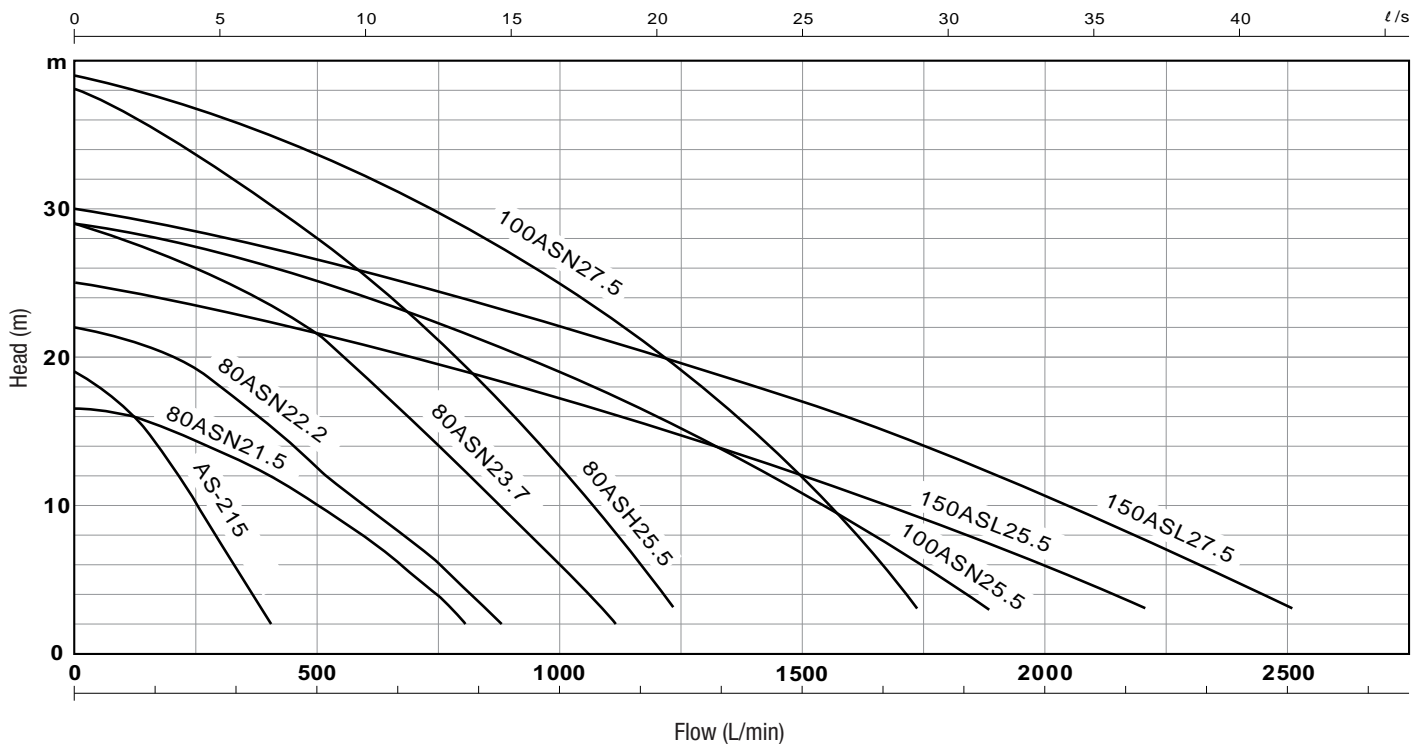
Model	Power HP(kW)	Discharge Inch(mm)	Phase Ø	Start Method	Head m	Capacity		Weight kg 1Ø/3Ø	Solid Passage mm	Dimension (mm)		
						L/min	m³/h			Length	Width	Height
AS-215	1.5(1.1)	2"(50)	1	Capacitor	13.5	200	12	28	8	-	210	496
AS-215 (F)				Capacitor								
80AS-21.5	2(1.5)	3"(80)	1	Capacitor	10	400	24	43	11	252	235	616
3/80ASN21.5				Direct				37				536
3/80ASN22.2	3(2.2)	3"(80)	3	Direct	14	400	24	40	11	252	235	536
3/80ASN23.7	5(3.7)	3"(80)	3	Direct	20	500	30	44	11	252	235	561
3/80ASH25.5	7.5(5.5)	3"(80)	3	Direct	28	500	30	72	10	-	286	661
3/100ASN25.5	7.5(5.5)	4"(100)	3	Direct	19	1000	60	75	10	-	286	661
3/100ASN27.5	10(7.5)	4"(100)	3	Direct	25	1000	60	75	10	-	286	661
3/150ASL25.5	7.5(5.5)	6"(150)	3	Direct	12	1500	90	78	10	-	286	723
3/150ASL27.5	10(7.5)	6"(150)	3	Direct	17	1500	90	81	10	-	286	723

The above hydraulic data figures are at a given duty point. They are not the maximum pump performances.

- 3/ Denotes 3 phase pumps

- (F) Denotes pump has a float switch (automatic)

HYDRAULIC DATA



VORTEX/SOLIDS HANDLING PUMPS

DHS SERIES

DESCRIPTION

- Compact, lightweight submersible pumps designed for solids handling applications, in tight spaces
- 2 pump options available
- Available in single phase only

CONSTRUCTION/FEATURES

- Technopolymer or 304 S/S Casing options
- Technopolymer Impellers
- Mechanical Seal c/w Triple Lip Seals
- Solids Handling Vortex to handle light slurries and soft solids
- 12 Month Warranty

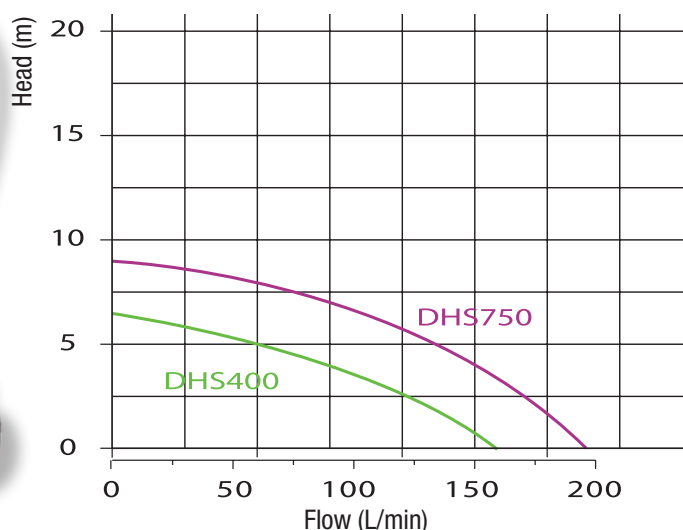
APPLICATIONS

- Grey Water Pumping
- Sump Emptying
- Stormwater/Rainwater Pumping
- Septic and Effluent Disposal Systems
- Water Transfer from Ponds & Tanks
- Light Slurries, Wastewater, Recycled Water

Model	Motor size	Voltage	Solids Passage	Outlet Size
DHS400	0.4kW	230V	30mm	25/32mm
DHS750	0.75kW	230V	30mm	25/32/40mm

Hose & Fittings available if required

HYDRAULIC DATA



DHS400

DHS750

VORTEX/SOLIDS HANDLING PUMPS

HV SERIES

DESCRIPTION

- Medium Duty submersible pumps designed for solids handling applications, in tight spaces
- Available in Single Phase only

CONSTRUCTION/FEATURES

- Cast Iron & S/S Pump Body
- Cast Iron Impeller
- Double Mechanical Seal in Oil Bath plus lip seal
- Corrosion Resistant S/S Shaft, Motor Shell and Fasteners
- Solids Handling Vortex to handle light slurries and soft solids
- 12 Month Warranty

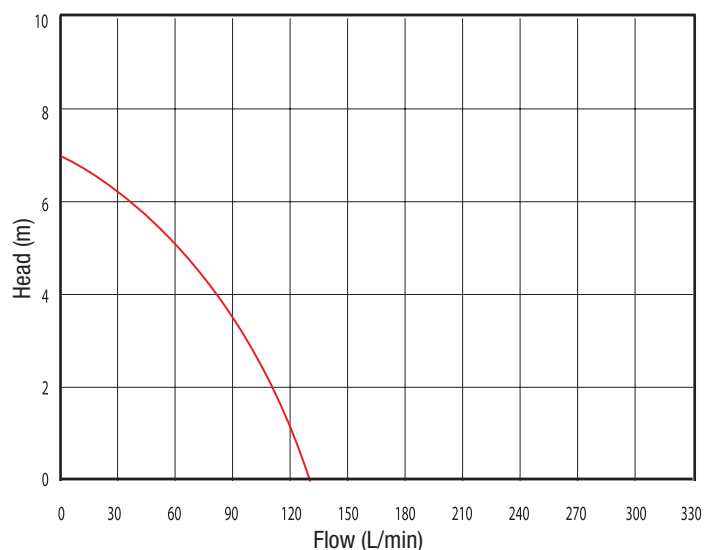
APPLICATIONS

- Grey Water Pumping
- Sump Emptying
- Stormwater Pumping
- Septic & Effluent Disposal Systems
- Water Transfer from ponds & tanks
- Light Slurries and Factory Waste



Model	Motor size	Voltage	Solids Passage	Outlet Size
HV180	0.18kW	230V	15mm	25/32/40mm
Hose & Fittings available if required				

HYDRAULIC DATA



VORTEX/SOLIDS HANDLING PUMPS

F SERIES

DESCRIPTION
<ul style="list-style-type: none"> Robust, heavy duty submersible vortex and cutter pumps for solids handling applications Manual or automatic models available (See specs) Single Phase available only
CONSTRUCTION/FEATURES
<ul style="list-style-type: none"> Quality cast iron/stainless steel construction designed for more serious pumping applications Cast iron vortex non-clogging impellers Tungsten carbide cutting tip on cutter pump Double mechanical seal in oil chamber plus lip seal 10m long neoprene oil resistant lead & 3 pin plug Free standing or guide rail mounted option available Thermal motor overload - Auto Reset 2 year warranty

APPLICATIONS
<ul style="list-style-type: none"> Domestic, Commercial, Industrial sewage & wastewater applications Public facilities, shopping malls, hotels & restaurants Septic tanks/Pump Stations/Lift Pits Stormwater pumping/Runoff <p>NB: We do not guarantee that these pumps will handle sanitary products</p> <ul style="list-style-type: none"> Refer to page 50 for more details on Vortex/Cutter pump mechanisms. Hose & Fittings available if required Refer to page 56 for more details on Guide Rail Systems



F-05U (F)
F-21U (F)
(VORTEX)



F-21P (F)
(CUTTER)



F-31U
(VORTEX)

VORTEX/SOLIDS HANDLING PUMPS

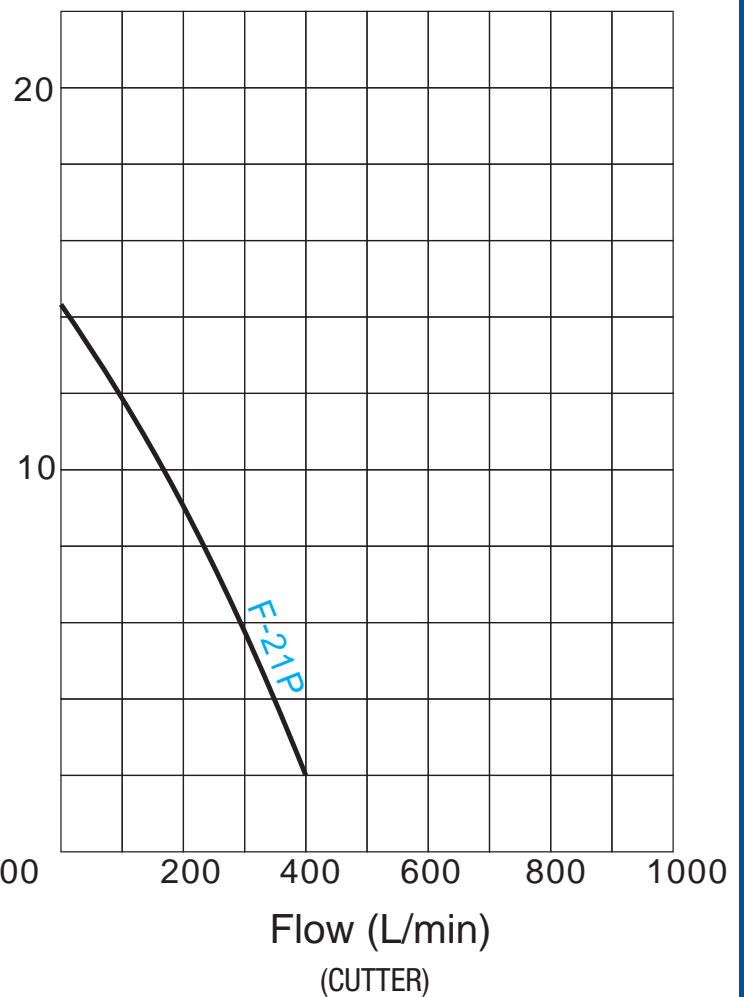
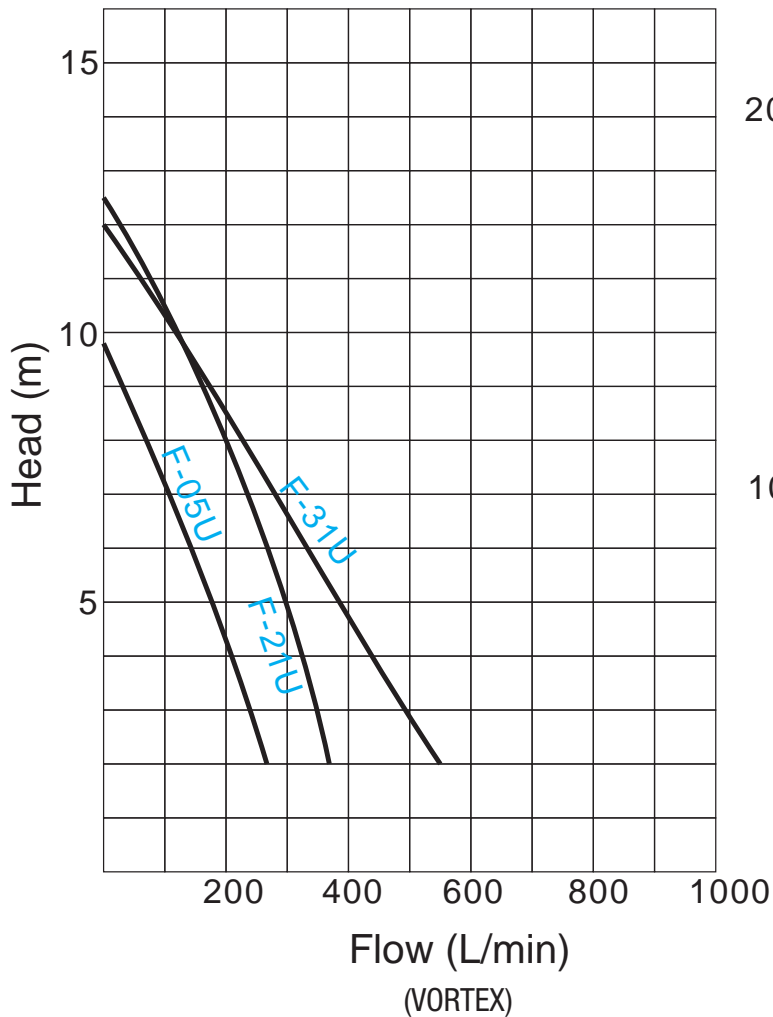
F SERIES

PERFORMANCE SPECIFICATION

Model	Power HP(kW)	Discharge Inch(mm)	Phase Ø	Start Method	Head m	Capacity		Weight kg 1Ø/3Ø	Solid Passage mm	Dimension (mm)		
						L/min	m³/h			Length	Width	Height
F-05U	1/2(0.4)	2"(50)	1	Capacitor	6	150	9	16	35	237	154	427
F-21U	1(0.75)	2"(50)	1	Capacitor	8	200	12	18	35	237	154	427
F-31U	1(0.75)	3"(80)	1	Capacitor	6.5	300	18	19	30	278	173	457
F-21P	1(0.75)	2"(50)	1	Capacitor	9	200	12	18	22	274	235	440

The above hydraulic data figures are at a given duty point. They are not the maximum pump performances.
 - (F) Denotes pump has a float switch (automatic)

HYDRAULIC DATA



VORTEX/SOLIDS HANDLING PUMPS	AF SERIES
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DESCRIPTION

- Robust, heavy duty submersible vortex pumps for solids handling applications
- Either manual or automatic models available (See specs)
- Single & Three Phase options available (See specs)

CONSTRUCTION/FEATURES

- Quality cast iron construction designed for more serious pumping applications
- Cast Iron vortex non-clogging impellers
- Double mechanical seal in oil chamber plus lip seal
- 10m long neoprene oil resistant lead
- Free standing or guide rail mounted option available
- Pump controllers available
- 2 year warranty

APPLICATIONS

- Domestic, Commercial, Industrial Sewage
- Wastewater Applications
- Public Facilities, Shopping Malls, Hotels & Restaurants
- Septic Tanks/Pump Stations/Lift Pits
- Stormwater Pumping/Runoff

NB: We do not guarantee that these pumps will handle sanitary products

- Refer to page 50 for more details on Vortex/Cutter pump mechanisms
- Refer to page 56 for more details on Guide Rail Systems



50AFU2.8



80AFP21.5

VORTEX/SOLIDS HANDLING PUMPS

AF SERIES

PERFORMANCE SPECIFICATION

Pole	Model	Power HP(kW)	Discharge Inch(mm)	Phase Ø	Start Method	Head m	Capacity		Head feet	Capacity GPM	Weight kg 1Ø/3Ø	Solid Passage mm	Dimension (mm)		
							L/min	(m³/hr)					Length	Width	Height
2P	50AFU2.8L	1(0.75)	2"(50)	1	Direct	6.5	250	15	-	-	22	50	307	164	447
	80AFP21.5L	2(1.5)	3"(80)	3	Direct	4.5	0.5	30	-	-	40	76	443	255	622
	80AFU22.2L	3(2.2)	3"(80)	3	Direct	7	0.5	30	-	-	40	76	538	289	695

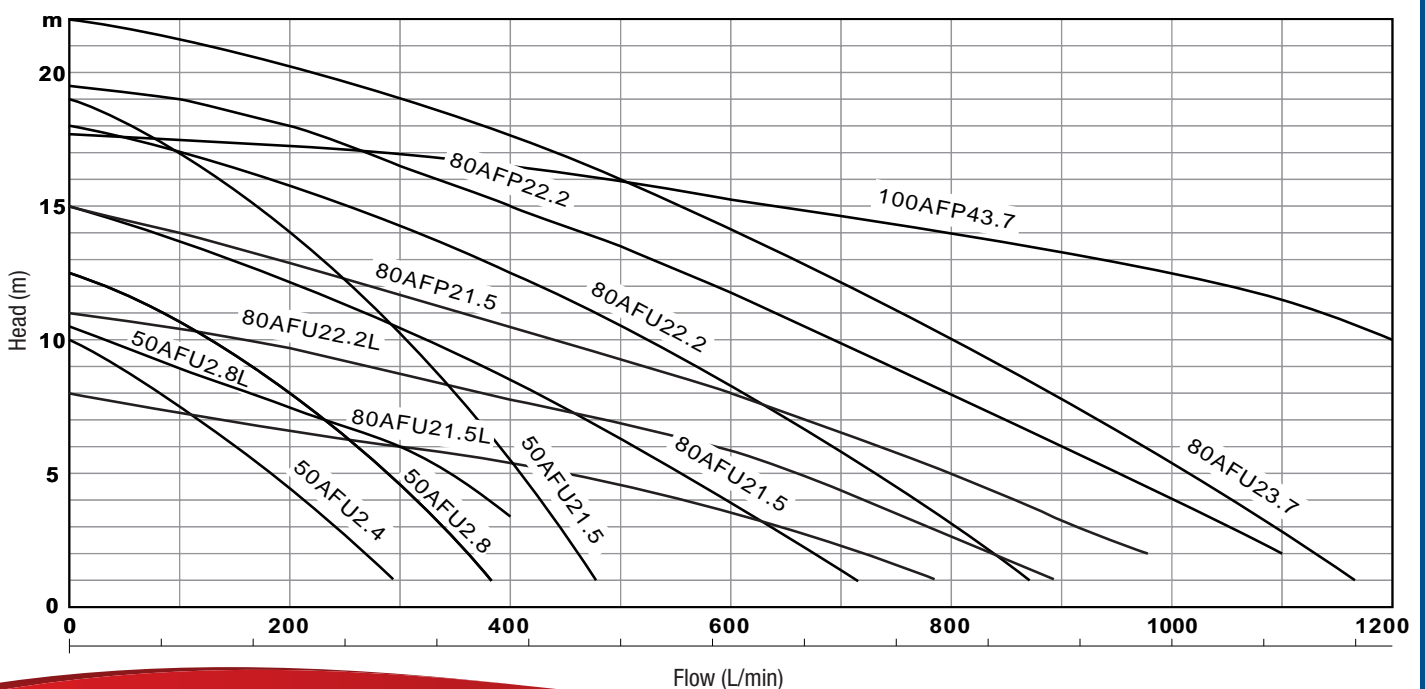
Pole	Model	Power HP(kW)	Discharge Inch(mm)	Phase Ø	Start Method	Head m	Capacity		Weight kg 1Ø/3Ø	Solid Passage mm	Dimension (mm)		
							L/min	m³/h			Length	Width	Height
2P	50AFU2.8	1(0.75)	2"(50)	1	Capacitor	8	200	12	20	35	236	152	418
				3	Direct				19				
	50AFU21.5	2(1.5)	2"(50)	1	Capacitor	14	200	12	64	35	288	202	532
				3	Direct				-				477
	80AFU21.5 80AFU21.5 (F) 3/80AFU21.5	2(1.5)	3"(80)	1	Capacitor	8.5	400	24	40	50	379	202	575
				3	Direct				36				524
	80AFU22.2	3(2.2)	3"(80)	3	Direct	12.5	400	24	38	50	379	202	524
	80AFP21.5 80AFP21.5 (F) 3/80AFP21.5	2(1.5)	3"(80)	1	Capacitor	8	600	36	42	35	413	260	576
				3	Direct				38				525
	80AFP22.2	3(2.2)	3"(80)	3	Direct	12	600	36	40	35	413	260	525
	80AFU23.7	5(3.7)	3"(80)	3	Direct	16	500	-	-	56	478	220	588
	4P	100AFP43.7	5(3.7)	4"(100)	3	Direct	11.5	1000	-	-	50	571	313

The above hydraulic data figures are at a given duty point. They are not the maximum pump performances.

- 3/ Denotes 3 phase pumps

- (F) Denotes pump has a float switch (automatic)

HYDRAULIC DATA



CONTRACTOR PUMPS

GD/GDR SERIES

DESCRIPTION

- Robust, heavy duty submersible contractor pumps for clean or dirty water applications
- Top discharge to suit construction sites
- Either manual or automatic models available (GD Series only)
- GDR-400 pump available in manual only

CONSTRUCTION/FEATURES

- Coated aluminium outer case for low weight and effective cooling
- Polyurethane impeller for abrasion resistance
- Double silicone carbide mechanical seals in oil chamber plus lip seal
- Thermal protection on motor winding
- Standard with 10m power cable
- GDR-400 pumps sucks down to 1mm
- 2 Year Warranty

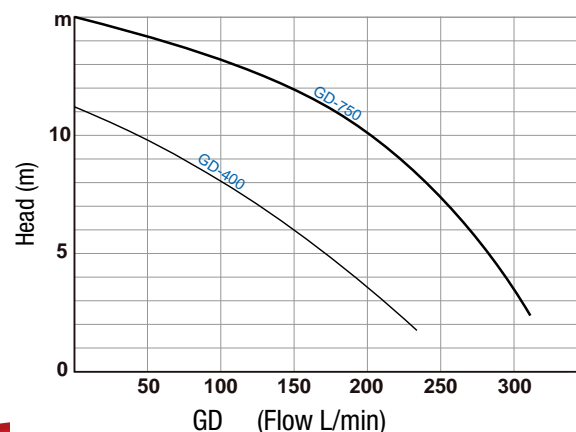
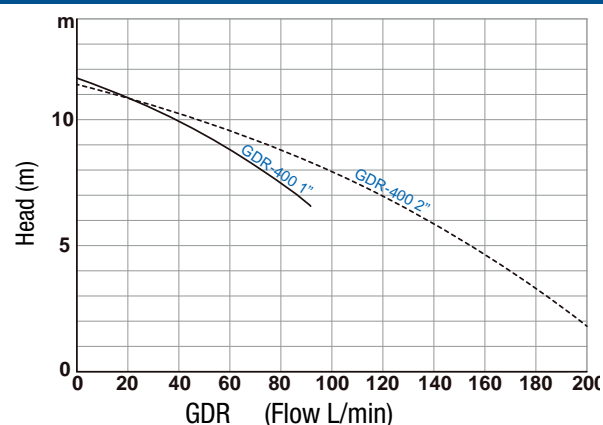
APPLICATIONS

- Building Sites, Construction, Concrete Contractors
- Civil Engineering, Tunnel De-Watering, Ground Works
- Contractors, General Drainage Applications
- Rental & Hire Companies
- Cellars, Foundations, Basements

Model	Motor size	Voltage	Solids Passage	Outlet size
GDR400	0.4Kw	230V	N/A	25/50mm
GD400	0.4Kw	230V	7mm	50mm
GD750	0.75Kw	230V	7mm	50mm

Hose & Fittings available if required

HYDRAULIC DATA



GDR-400



GD-400/750

GRINDER PUMPS - HIGH HEAD

SABRE HGP2 SERIES

DESCRIPTION

- Robust, heavy duty Twin Impellor High Head Grinder Pumps
- Designed for pumping sewage & wastewater through small bore pipelines

CONSTRUCTION/FEATURES

- Dual impellor - centrifugal design
- Cast iron motor housing & ductile iron impellers designed for more serious pumping applications
- Oil filled motor to give better cooling
- Cutters hardened to 44055T
- Heads up to 60 metres (approx)
- Flow Rates up to 100 L/m (approx)
- 2 year warranty

APPLICATIONS

- Domestic/Residential/Subdivisional sewage and wastewater applications
- Pressure Sewer Projects & domestic housing developments
- Commercial/Industrial Situations
- Especially for very high head or extra long length rising mains

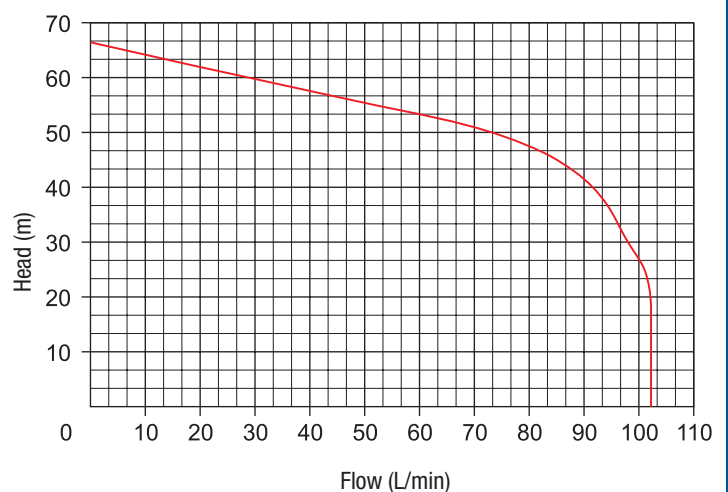
NB: We do not guarantee that these pumps will handle sanitary products

Refer to page 50 for more details on grinder pump mechanisms



Model	Motor size	Voltage	Outlet size
HGP2-2021-50	1.5kW	230V	32mm
HGP2-2043-50	1.5kW	400V	32mm

HYDRAULIC DATA



GRINDER PUMPS

GF SERIES

DESCRIPTION
<ul style="list-style-type: none"> • Robust, heavy duty submersible grinder pumps • Super grinding ability for grinding troublesome/foreign objects • Either manual or automatic models available (See specs) • Single & Three Phase options available (See specs)
CONSTRUCTION/FEATURES
<ul style="list-style-type: none"> • Durable heavy duty cast iron construction designed for more serious pumping applications • Grinder unit with radial cutter & cutting ring hardened to 55 - 60 Rockwell • Double mechanical seal in oil chamber plus lip seal • 10m neoprene oil resistant lead • Free standing or guide rail mounted options available • Pump Controllers available • 2 year warranty

APPLICATIONS
<ul style="list-style-type: none"> • Domestic, Commercial, Industrial Sewage • Wastewater Applications • Public Toilets, Schools, & Sports Facilities <p>NB: We do not guarantee that these pumps will handle sanitary products</p> <ul style="list-style-type: none"> • Refer to page 50 for more details on Grinder Pump mechanisms • Refer to page 56 for more details on Guide Rail Systems



32GF21.5



50GF23.7

GRINDER PUMPS

GF SERIES

PERFORMANCE SPECIFICATION

Model	Power HP(kW)	Discharge Inch(mm)	Phase Ø	Start Method	Head m	Capacity		Weight kg 1Ø/3Ø	Dimension (mm)		
						L/min	m³/h		Length	Width	Height
32GF21.0 (F)	1.3(1.0)	1¼"(32)	1	Capacitor	17	60	3.6	28	249	177	555
32GF21.5 (F)	2(1.5)	1¼"(932)	1	Capacitor	23	60	3.6	36	285	203	597
3/32GF21.5			3	Direct				33			546
3/32GF21.5 (F)			1	Capacitor	26	60					
*32GF21-5H			3	Direct							
*32GF21.5H (F)											
32GF22.2	3(2.2)	1¼"(32)	3	Direct	29	60	3.6	38 35	285	203	546
50GF22.2	3(2.2)	2"(50)	3	Direct	19	200	12	51	393	226	616
50GF23.7	5(3.7)	2"(50)	3	Direct	26	200	12	53	393	226	616

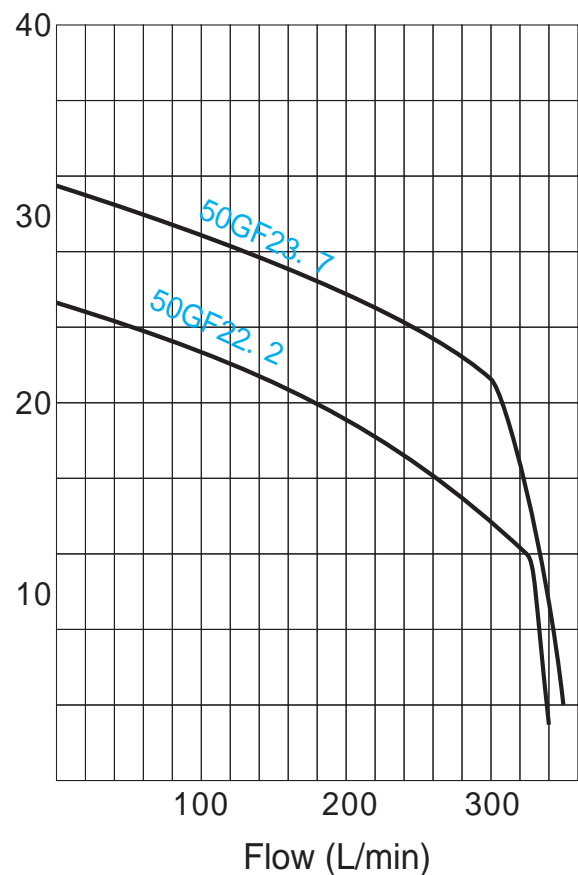
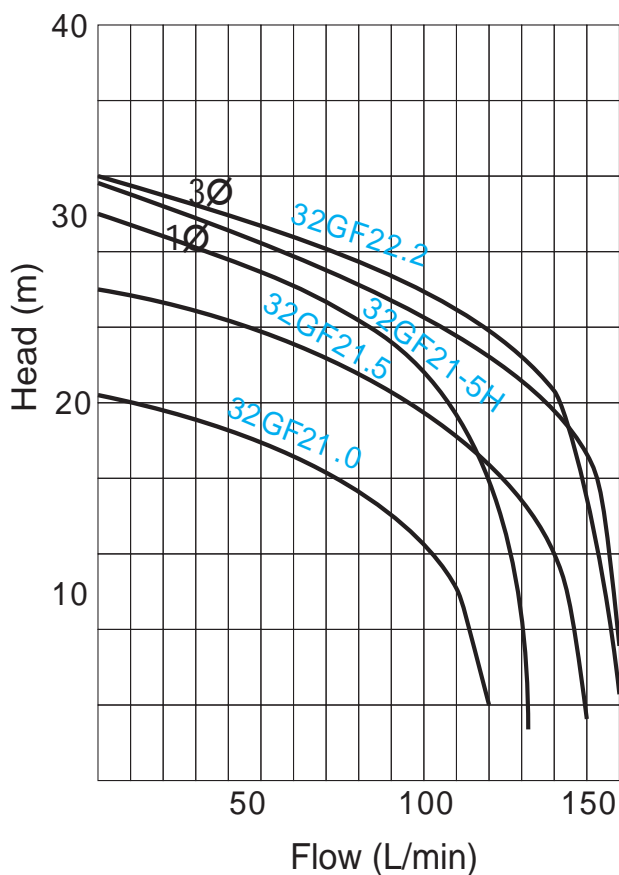
The above hydraulic data figures are at a given duty point. They are not the maximum pump performances.

- 3/ Denotes 3 phase pumps

- (F) Denotes pump has a float switch (automatic)

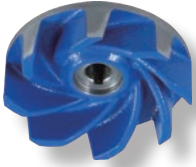
*New model

HYDRAULIC DATA



TECHNICAL OVERVIEW

VORTEX SUBMERSIBLE PUMPS



- The Vortex (semi-open) Impeller produces a vortex (whirlpool effect) allowing long fibrous materials and other solid waste to pass through without contact with the impeller
- Designed for sewage & wastewater applications in domestic and commercial applications

NB: We do not guarantee that these pumps will pump sanitary products

CUTTER SUBMERSIBLE PUMPS



- The cutter (semi-open) impeller enables cutting of delicate materials to prevent clogging
- The impeller is imbedded with a tungsten blade/tip to assist in cutting product
- Designed for sewage & wastewater applications domestic and commercial applications

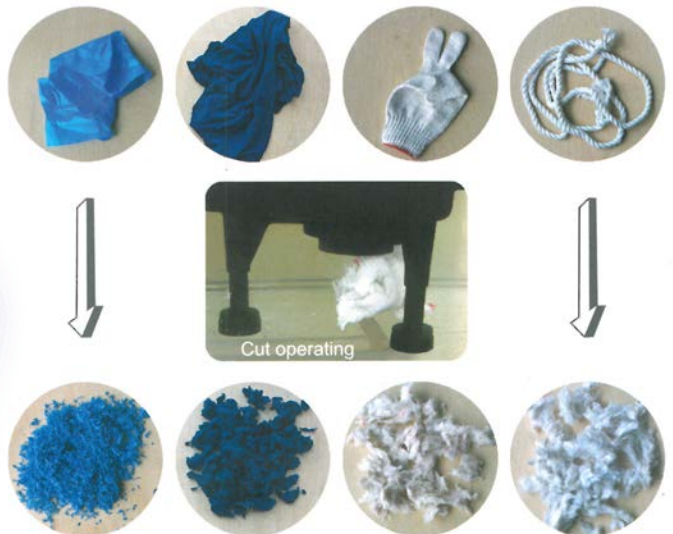
NB: We do not guarantee that these pumps will pump sanitary products

GRINDER SUBMERSIBLE PUMPS



- The Grinder Pumps utilise grinder mechanism to grind foreign objects prior to entering pump.
- Incorporate hardened radial cutter and cutter ring for maximum grinding action
- Designed for Sewage and Wastewater in domestic, commercial, industrial applications

NB: We do not guarantee that these pumps will pump sanitary products.



POND & WATERFALL PUMPS

DP SERIES

DESCRIPTION

- Submersible Pond/Waterfall pumps designed for domestic & commercial fountains and waterfalls. These pumps are continuous rated for 24/7 submerged operation.
- Available in Single Phase only.

CONSTRUCTION/FEATURES

- Vertical or horizontal installation
- Open impeller allowing the passage of small solids
- Adjustable inlet strainer holes (5mm or 10mm) to control water flow through the pump.
- Oil free motor, so they are safe for fishponds
- Maximum submergence of up to 3 metres.
- 32mm BSP female outlet & elbow for hose connection.
- 2 year warranty



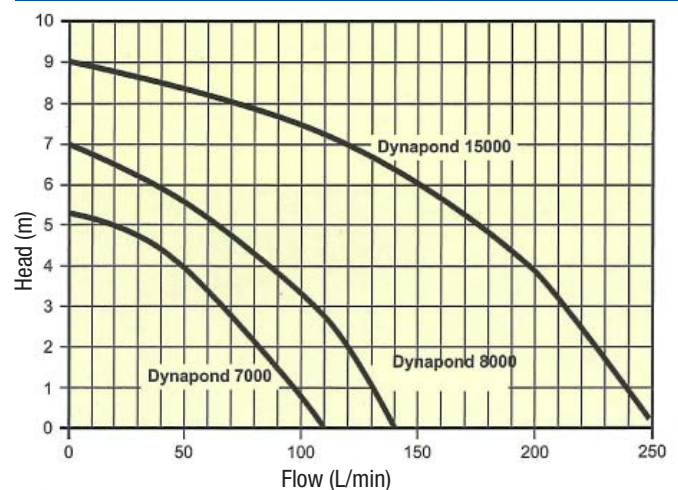
APPLICATIONS

- Domestic/Commercial applications
- Ponds/Garden Pools
- Fountains/Waterfalls
- Koi/Fish Ponds
- Fresh Water Aqua Culture
- Salt Water Aqua Culture (Dynapond 8000)

Model	Motor size	Voltage	Outlet size
DP7000	0.2kW	230V	32mm
DP8000	0.28kW	230V	32mm
DP15000	0.75kW	230V	32mm

4 Nozzle types are available.

HYDRAULIC DATA



Flow required per metre width of waterfall

Depth of water at top of waterfall	FLOW	
	(lpm)	(l/hr)
5mm	45	0.45
10mm	100	0.78
15mm	200	0.58
20mm	300	0.80

MULTISTAGE PRESSURE PUMPS

DHS SERIES

DESCRIPTION

- 6" Multistage submersible pressure pump with Float Switch for situations where high pressure is required
- Available in Single Phase only

CONSTRUCTION/FEATURES

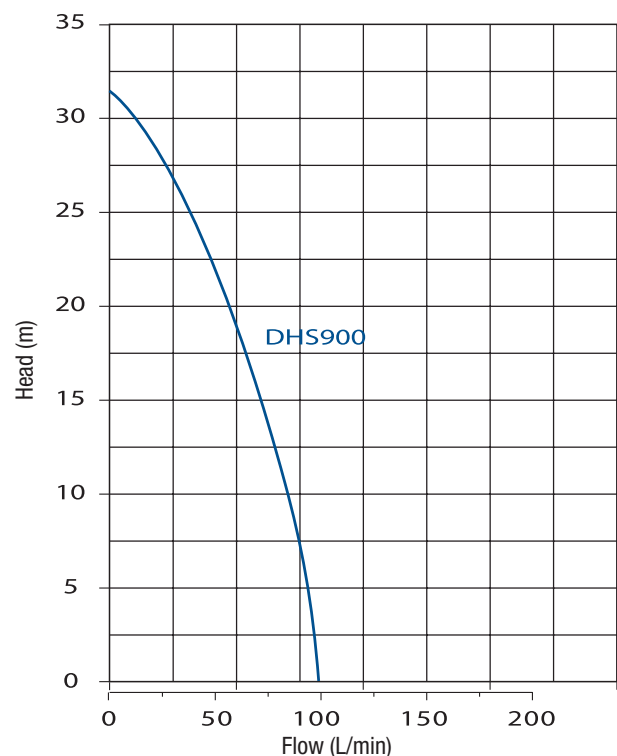
- Techno polymer & 304 s/s pump body
- Technopolymer impellor
- Heads up to 32 metres (320kPA)
- Flows up to 100 Litres/minute
- 12 month warranty

APPLICATIONS

- Rainwater Systems
- Sprinklers
- Irrigation Systems
- Pumping water from tanks, ponds & wells that require high pressure
- Effluent applications
- Grey water applications

Model	Motor size	Voltage	Solids Passage	Outlet Size
DHS900	0.9kW	230V	1mm	25mm
Hose & Fittings available if required				

HYDRAULIC DATA



MULTISTAGE PRESSURE PUMPS

D42 / D53 SERIES

DESCRIPTION

- Multistage submersible drainage pumps c/w 2 or 3 impeller designs for higher head pressures
- Either manual or automatic models available

CONSTRUCTION/FEATURES

- Corrosion resistant thermo-plastic pump casings & stainless steel motor caps for longer life
- Double mechanical seal (one in oil bath) for reliability & longer service life
- Corrosion resistant hard wearing polycarbonate impellers for longer service life
- Multistage impeller design for higher pressures & heads

APPLICATIONS

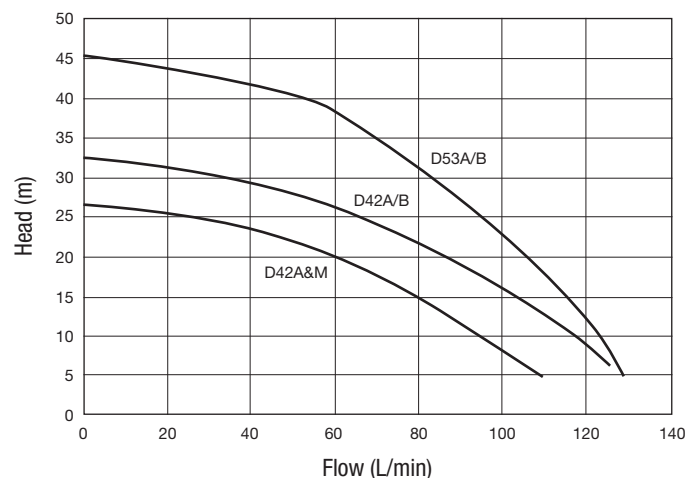
- Lawn & garden irrigation
- Sump emptying to higher heads
- Treated effluent disposal
- Water transfer from wells
- A/B models specially designed for non potable rainwater applications



D42 AB / D53AB

Model	Motor size	Voltage	Speed	Centre Distance	Union Size
D42A	0.6kW	230V	110 L/m	26m	25mm
D42M	0.6kW	230V	110 L/m	26m	25mm
D42A/B	0.6kW	230V	125 L/m	33m	25mm
D42A/B - 20	0.6kW	230V	125 L/m	33m	25mm
D53A/B	0.84kW	230V	130 L/m	45m	25mm
D53A/B - 20	0.84kW	230V	130 L/m	45m	25mm

HYDRAULIC DATA



CAST STAINLESS STEEL PUMPS	SS/SF SERIES
-----------------------------------	---------------------

DESCRIPTION	APPLICATIONS
<ul style="list-style-type: none"> Robust, heavy duty submersible pumps for corrosive/ aggressive liquid applications Either manual or automatic models available (See specs) Single & Three Phase options available (See specs) 	<ul style="list-style-type: none"> Vineyards/Wineries With Acidic Waters Abattoirs/Industrial Process Plants/Factories Seawater/Saltwater Chemical, Pharmaceutical, And Metal Processing Industry Sanitary Sewer Hose & Fittings available if required Guide Rail Systems available if required - Refer to page 56
CONSTRUCTION/FEATURES	
<ul style="list-style-type: none"> Cast 316 stainless steel casings designed for specialised pumping applications Cast stainless steel impeller Double silicone carbide mechanical seal in oil chamber plus lip seal and viton O rings 10 metre long neoprene oil resistant lead Pump options: Drainage Pumps (SS) or Vortex Pumps (SF) Pump Controllers available 2 year warranty 	



SS-21



SF-21U



80SFU21.5

CAST STAINLESS STEEL PUMPS

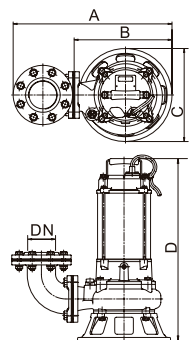
SS/SF SERIES

PERFORMANCE SPECIFICATION

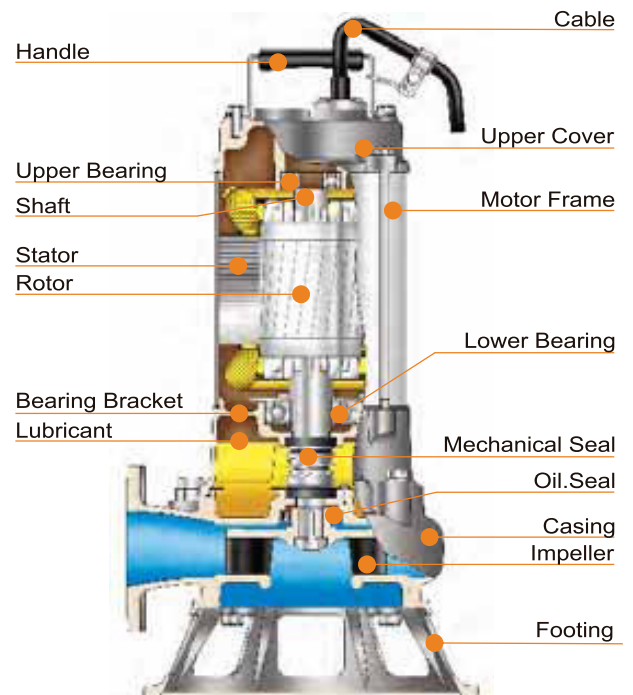
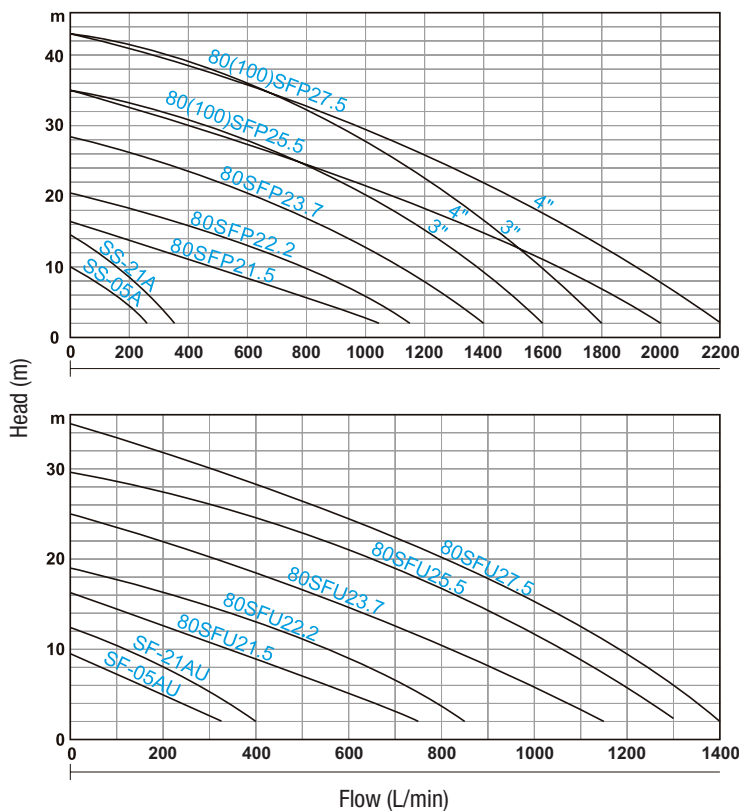
Model	Output HP (kW)	Size DN Inch (mm)	Phase Ø	Start Method	Head (m)	Capacity		Solid Passage (mm)	Weight (kg)		Dimension (mm)				
						L/min	m³/h		1Ø	3Ø	A	B	C	D 1Ø 3Ø	
SS-05A	½ (0.4)	2" (50)	1 3	Capacitor Direct	7	120	7.2	10	14	14	245	-	174	439	439
SS-21A	1 (0.75)	2" (50)	1 3	Capacitor Direct	10	170	10.5	10	16	15	245	-	174	439	439
SF-05AU	½ (0.4)	2" (50)	1 3	Capacitor Direct	6	150	9	35	15	14	237	-	154	427	427
SF-21AU	1 (0.75)	2" (50)	1 3	Capacitor Direct	8	200	12	35	16	15	237	-	154	427	427
80SFU21.5	2 (1.5)	3" (80)	3	Direct	8.5	400	24	50	-	26.5	402	260	202	-	517
80SFU22.2	3 (2.2)	3" (80)	3	Direct	13	400	24	50	-	29	402	260	202	-	517
80SFU23.7	5 (3.7)	3" (80)	3	Direct	17.5	500	30	50	-	40	476	286	223	-	561
80SFU25.5	7½ (5.5)	3" (80)	3	Direct	21	600	36	50	-	61	499	309	258	-	657
80SFU27.5	10 (7.5)	3" (80)	3	Direct	26.5	600	36	50	-	67	499	309	258	-	657
80SFP21.5	2 (1.5)	3" (80)	3	Direct	8.5	600	36	35	-	28.5	417	275	260	-	521
80SFP22.2	3 (2.2)	3" (80)	3	Direct	13	600	36	35	-	31.5	417	275	260	-	521
80SFP23.7	5 (3.7)	3" (80)	3	Direct	20.5	600	36	32	-	43	495	305	290	-	568
80(100)SFP25.5	7½ (5.5)	3" (80)	3	Direct	28	600	36	30	-	67	563	373	345	-	684
		4" (100)			21.5	1000	60				591				
80(100)SFP27.5	10 (7.5)	3" (80)	3	Direct	36	600	36	30	-	73	563	373	345	-	684
		4" (100)			29.5	1000	60				591				

NOTES:

- For 3 Phase Pumps - Add 3/ to start of pump code
- For Auto (Float Switch) Add (F) to end of pump code



HYDRAULIC DATA



GUIDE RAIL SYSTEMS

TOS SERIES

DESCRIPTION

- Guide Rail Systems (GRS) are designed to provide easy and accurate pump alignment, for submersible pumps in pumping stations/wet wells

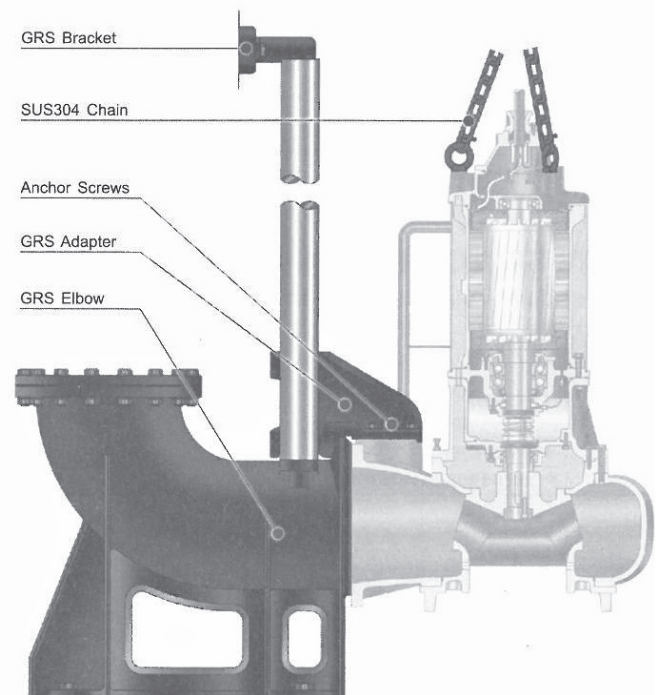
CONSTRUCTION/FEATURES

- Cast Iron Construction designed for more serious pumping applications
- Cast Stainless Steel guide rail couplers available also (refer to pricelist)
- Auto-coupling of pumps to provide water tight seal
- Large range of sizes available from 50mm to 400mm discharge size
- 2 year warranty

APPLICATIONS

- Commercial/Residential/Industrial Sewage & Stormwater Systems
- Septic Tanks/Pumping Stations/Lift Pits
- Situations where pumping stations must be regularly maintained and serviced.
- Public facilities/Shopping Malls, Hotels & Restaurants

Model	Discharge Size	Pump Type Use
TOS 50A	50mm	Vortex & Cutter
TOS 50C	50mm	Grinder (32mm)
TOS 50D	50mm	Grinder (50mm)
TOS 80C	80mm	Vortex & Cutter
TOS 100C	100mm	Vortex & Cutter



SECTION 5

HOUSEHOLD AND IRRIGATION PUMPS



"Home Pressure Systems are designed to boost/pressurize household water supply to simulate mains pressure on demand."

TURBINE WATER BOOSTER PUMP
DHT SERIES
DESCRIPTION

- Compact turbine pump designed for pressurizing of fixtures (Small flow situations)
- Designed where economy rated pump is high priority

CONSTRUCTION/FEATURES

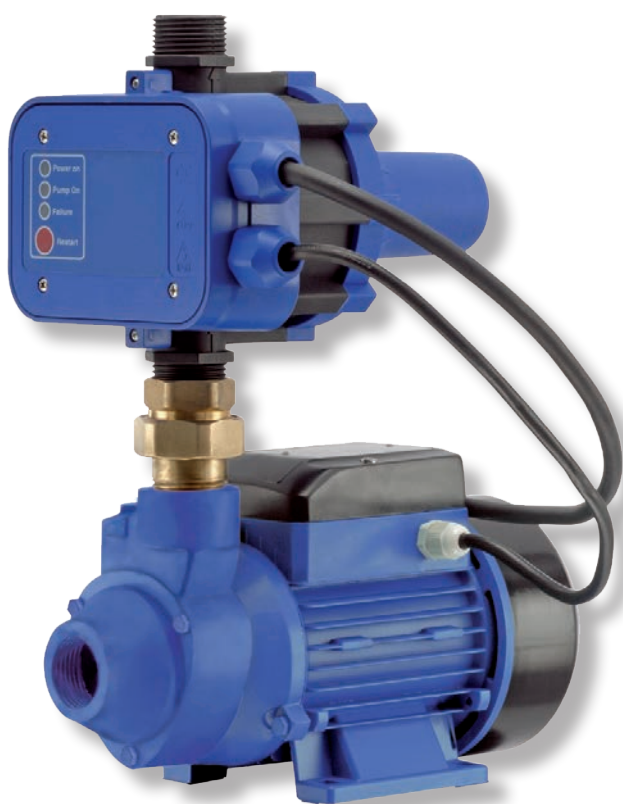
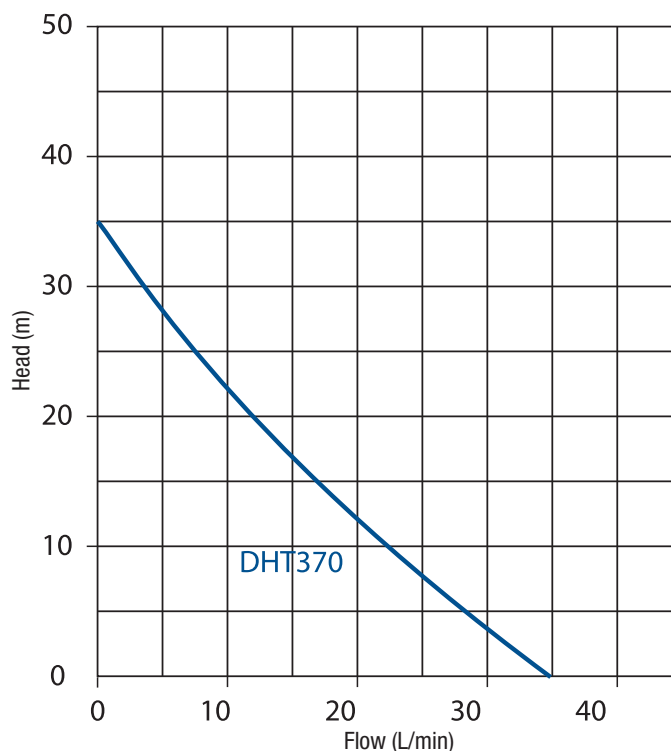
- Cast iron pump body
- Brass impellor
- Carbon ceramic mechanical seal c/w lip seal
- Automatic electronic pump controller (P.C) c/w run dry protection & constant pressure at low flows
- 2 year warranty

APPLICATIONS

- Home/Domestic Water Supply
- Small House/Bach/Beach house water boosting applications
- Irrigation Systems
- Garden Watering
- Rainwater Harvesting Systems

Model	Motor Size	Voltage	Max Flow	Max Pressure (KPA)	Inlet/Outlet size
DHT370	0.37kW	230V	35L/M	350	25/25mm Turbine

We recommend adding either an 8Litre or 18Litre pressure tank to these pumps. PE pump covers are available if required - Refer to Pump Accessories section 6


HYDRAULIC DATA


JET ASSISTED WATER BOOSTER PUMPS

HSJ SERIES

DESCRIPTION

- Standard jet assisted centrifugal pump range designed for pressurising household water supply.
- 4 pump sizes available to suit different requirements
- Available as dual pump sets also - see page 63
- Available as a booster/filter package also - see page xx

CONSTRUCTION/FEATURES

- Pump body, Impellers and shaft in Stainless Steel
- Automatic Press Controller for constant flow with inbuilt run-dry protection
- Mechanical Seal: Ceramic/Graphite/NBR
- IP55 Motor/Insulation Class F
- Heavy Duty Brass Coupling
- Plug & play Press Control Connection
- Suction lift up to 8 metres including friction loss
- 2 year warranty



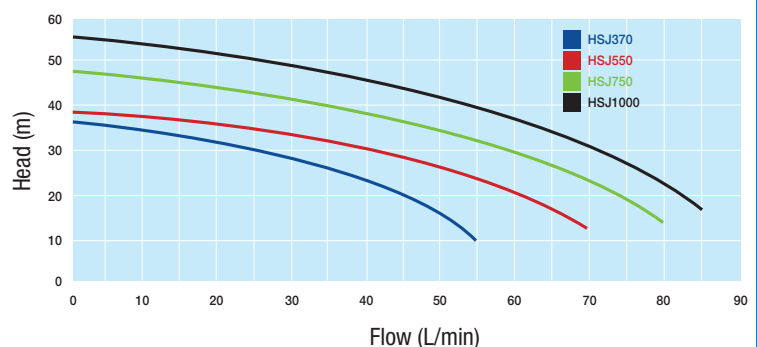
APPLICATIONS

- Household Water Supply/Pressure Boosting
- Irrigation Systems/Garden Watering
- Rainwater Harvesting Systems
- Water Transfer/Tank Filling
- Pumping from underground tanks
- Rural/Farm applications
- Granny Flats/Beach Houses
- Residential/Commercial

Model	Motor Size	Voltage	Max Flow	Max Pressure (KPA)	Inlet/Outlet Size
HSJ370	0.37kW	230V	55L/m	360	25/25mm
HSJ550	0.55kW	230V	70L/m	380	25/25mm
HSJ750	0.75kW	230V	80L/m	450	25/25mm
HSJ1000	1.00kW	230V	85L/m	520	25/25mm

We recommend adding either an 8 Litre or 18 Litre pressure tank to these pumps. PE Pump covers are available if required - Refer to Pump Accessories section 6

HYDRAULIC DATA



MULTISTAGE WATER BOOSTER PUMPS
HCM SERIES
DESCRIPTION

- Horizontal multistage centrifugal pumps designed for pressurising household water supply – where higher pressures are required.
- Available in 3 sizes makes choosing the right pump for a reliable water supply easy
- Available as dual pump sets also - see page 63
- Available as a booster/filter package also - see page xx

CONSTRUCTION/FEATURES

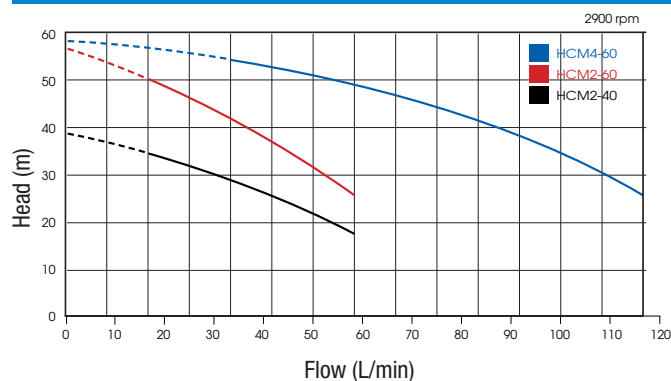
- Stainless Steel Impellers, Chambers and Shaft
- Automatic Press Controller for constant flow with inbuilt run-dry protection
- NBR Carbon / Ceramic mechanical seal
- IP55 Motor / Insulation Class F
- Heavy Duty Brass Coupling
- Quiet Operation
- 2 Year Warranty


HCM4-60
APPLICATIONS

- Household Water Supply
- Irrigation Systems
- Garden Watering
- Rainwatering Harvesting Systems
- Water Transfer
- Tank Filling
- Washing Systems/Individual Cleaning
- Pressure Boosting
- Air Conditioning
- Cooling Systems

Model	Motor Size	Voltage	Max Flow	Max Pressure	Inlet/Outlet size
HCM2-40	0.55kW	230V	58 L/M	380kPA	25/25mm
HCM2-60	0.75kW	230V	58 L/M	580kPA	25/25mm
HCM4-60	1.1kW	230V	116 L/M	590kPA	32/25mm

We recommend adding either an 8 Litre or 18 Litre pressure tank to these pumps. PE Pump covers are available if required - refer to Pump Accessories section 6

HYDRAULIC DATA


MULTISTAGE BOOSTER PUMPS: VARIABLE SPEED

SCALA 2

DESCRIPTION

- Horizontal multi-stage self-priming centrifugal pump, designed for boosting household water supply
- Fully automatic operation

CONSTRUCTION/FEATURES

- Variable Speed Electronic Controller
- Self-priming - for both above and below ground water supplies
- Energy efficient - Permanent magnet motor
- User Friendly
- Quiet Operation
- 2 + 2 (4 Year) warranty

APPLICATIONS

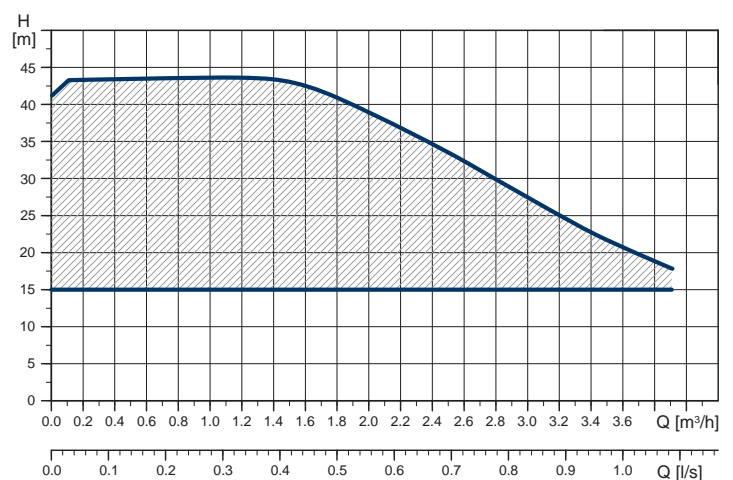
- Household Water Supply
- Irrigation Systems
- Garden Watering
- Water Transfer
- Tank Filling
- Washing Systems/Industrial Cleaning
- Pressure Boosting/Mains Boosting
- Air Conditioning/Cooling Systems
- Rainwater Harvesting Systems

Model	Motor Size	Voltage	Max Flow	Max Pressure	Outlet size
SCALA 2	0.75kW	230V	65 L/M	430kPA	25mm
PE Pump covers are available if required Refer Pump Accessories section 6					



SCALA 2

HYDRAULIC DATA



MULTISTAGE PRESSURE PUMPS
DT/HSM SERIES
DESCRIPTION

- 4" and 6" Multistage submersible pressure pumps with built-in integrated electronics, designed to automatically start and stop the pump.
- Available in Single Phase only
- Grundfos and Davey brands also available

CONSTRUCTION/FEATURES

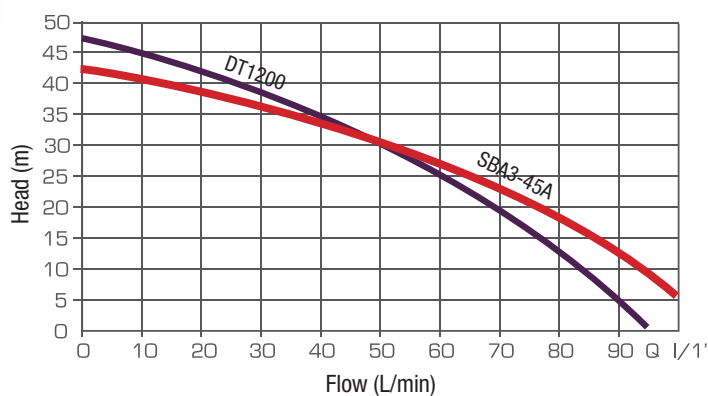
- Techno polymer/stainless steel construction
- Stainless shaft/Double Mechanical Seal (HSM Pump)
- Built-in electronic pressure switch and flow sensor
- Equipped with dry run protection and built-in NRV
- HSM Slimline option (125mm at base/100mm at top)
- DT option available with screen filter (DT1200) or stainless steel ring for use with suction kit (DT1200X)
- Automatic Reset
- Quiet Operation
- 12 month warranty

APPLICATIONS

- Household Water Supply
- Clean Water Plumbing Systems
- Rainwater Systems/Irrigation
- Potable Water/Water Transfer
- Pressure Boosting/Domestic Supply
- Bathrooms/Ensuites
- Kitchen/Laundrys
- Industrial Wash Down
- Tank Filling

Model	Motor Size	Voltage	Solids Passage	Outlet Size
DIVERTRON DT1200	1.1kW	230V	1mm	25mm
DIVERTRON DT1200X	1.1kW	230V	1mm	25mm
SBA3-45A	1.05kW	230V	1mm	25mm

Hose, Pipe & Fittings available if required.
We recommend adding either an 8 Litre or 18 Litre pressure tank to these pumps. (Refer to Pump Accessories Section 6)

HYDRAULIC DATA


DT1200

DT1200X

SBA3-45A

DUAL PUMP - BOOSTER PUMP SETS

DPBS - STD/VSD

DESCRIPTION

- Dual Pump Packaged Water Booster Pump Sets designed for more demanding applications
- Fully automatic operation

CONSTRUCTION/FEATURES

- Twin fixed speed or VSD operated pumps
- Prefabricated suction and discharge pipework/valves and pressure tanks (optional)
- Dual Pump Control panel c/w auto alternating controls
- Fixed speed pumps have press controls (see pumps pages xx and xx)
- VSD pumps have integrated VSD controls (see pumps on page 63)
- All mounted on galvanised steel base plates

APPLICATIONS

- Household Water Supply
- Irrigation Systems/Garden Watering
- Commercial/Industrial Water Supply
- Multi-Dwelling Water Supply System
- Water Supply, Boosting & Transfer
- Washing Systems/Industrial Cleaning
- Air Conditioning/Cooling Systems
- Agriculture/Stock Watering

Pump Options

STANDARD SYSTEM (DPBS-STD)

- Each pump with own Press Control and runs independently
- Normally one pump on house and one pump on garden, but can be switched over in event of one pump going down

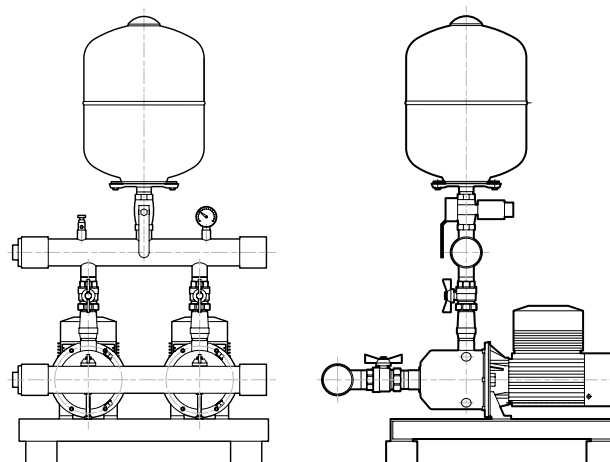
VSD SYSTEM (DPBS-VSD)

- Pumps are inter-linked
- If first pump cannot maintain pressure/flow, second pump will cut in
- Pumps are auto alternating (ie duty/standby)
- Includes Run Dry Protection

- Pump performance curves available on request
- Custom units available if required



TYPICAL DUAL WATER BOOSTER PUMP SET



TYPICAL ARRANGEMENT

BORE HOLE PUMPS

4HS

DESCRIPTION

- 4" (100mm) variable speed multistage submersible borehole pumps c/w controllers and built in invertors
- Large range of pump sizes to suit all applications
- Optional solar-powered controllers available if required

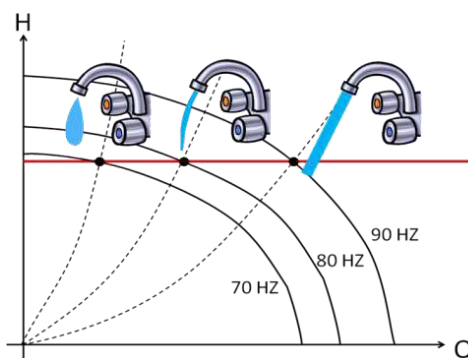
CONSTRUCTION/FEATURES

- 3-phase water-filled asynchronous motor c/w encapsulated resin starter
- Housing and inner components fully constructed of A151 304 stainless steel
- Built in integrated inverter controlled by CM control module
- Energy saving and quick, simple, reliable operation
- Also available with a multi controller which allows connection to renewable energy sources eg. solar panels, batteries, wind turbines, diesel generators etc.
- Adjusts performance to suit each source
- Will accept voltages from 90-265V AC or 90-340V DC
- 2 Year pump and controller warranty

APPLICATIONS

- Well and Bore Water applications
- Clean Water Plumbing Systems
- Rainwater Systems/Rain Harvesting
- Potable Water/Water Transfer
- Pressure Boosting/Domestic Supply
- Stock Water/Troughs
- Irrigation/Sprinkler Systems
- Tank/Reservoir Filling

Constant pressure control

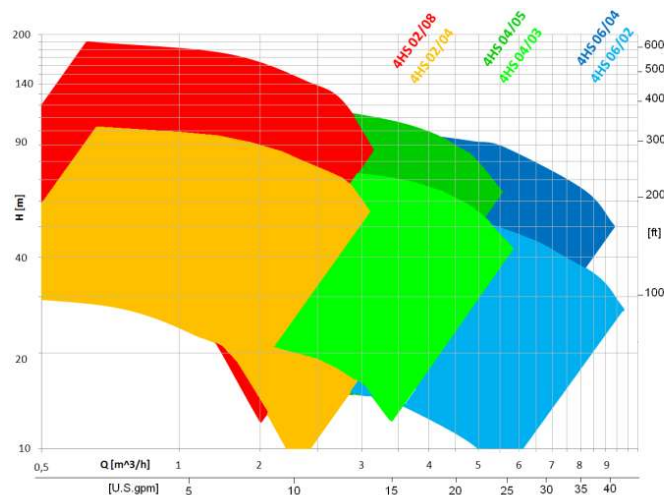


The control module receives the pressure signal from the pressure transducers and varies pump speed to maintain a constant set pressure regardless of water demand. In addition to the constant pressure control, CM can also the following control modes:

- fixed frequency
- constant flow
- constant temperature

HYDRAULIC DATA

Variable speed allows 4HS to cover a wide range of water flow and heads with only few models; selecting the proper pump model for an application will help maximize the performance and overall efficiency of the application. Use the diagram below to select the most suitable 4HS pump model for your application.


CONTROLLER
BORE HOLE PUMP

GRUNDFOS PUMPS

HOME & GARDEN

We offer the following Grundfos pump range at very competitive prices.

<p>SELF-PRIMING</p> <p>Ideal for one or multiple tap outlets to your garden, toilet and laundry, the Grundfos JPRain range offers a reliable solution to help you utilise your collected rainwater in the best possible way.</p>	 <p>JP/JPC JPRAIN MQ</p>
<p>PRESSURE SYSTEM</p> <p>This range of Grundfos pumps and tanks are designed for any pumping application involving clean and non-aggressive water in household, small scale irrigation and booster applications.</p>	 <p>PM RAIN CME CM</p>
<p>SUBMERSIBLE</p> <p>Grundfos submersible pumps are easy to handle and suitable for a variety of applications such as domestic water supply, irrigation and pressure boosting.</p>	 <p>SB SPO SQN/SQEN</p>
<p>WASTEWATER AND DRAINAGE</p> <p>Grundfos wastewater and drainage pumps are designed to make pumping from household applications as simple and efficient as possible.</p>	 <p>UNILIFT CC UNILIFT KP/AP12 UNILIFT AP35/AP50 SOLOLIFT 2</p>
<p>HOT WATER AND HEATING</p> <p>The Grundfos range of circulators for heating and hot water re-circulation are available in a variety of materials and finishes to cover even the most exceptional tasks.</p>	 <p>UPA-BOOSTER COMFORT UPN/UPS ALPHA 2</p>
<p>HOUSEHOLD B-LINE</p> <p>A range of quality pumps for home and garden.</p>	 <p>JPRAIN NSB KPB</p>

SECTION 6

PUMP ACCESSORIES



"Pump Accessories are designed to supplement your existing or new pump system as required"

PRESSURE TANKS & ASSOCIATED PRODUCTS



PT(V) Vertical



PRESSURE TANKS

PTV/PTM

- S/S Water Connection – Corrosion Resistant
- Controlled Action Diaphragm - longer life
- Brass air stem c/w sealing cap – longer life
- No regular air checks required
- Food Grade FDA Approved high grade Butyl Membrane
- Suitable for drinking water
- Max. working pressure 150 PSI/10 Bar
- Max. working temperature 90°C
- Horizontal (PTH) or Vertical (PTV) options
- Pressure Switches available also. Refer to Electrical Section 10

PUMP COVERS

PC/PCL

- Polyethylene vented pump cover
- Stainless steel screws provided
- Universal – fits most pump types
- Versatile – easy to install
- Provides shelter & protection for pump
- Available in range of different colours
- 2 sizes available:-
 - Standard = 700L x 450W x 550H
 - Large = 770L x 550W x 750H

FLOATING SUCTION STRAINERS

FSS

- Designed to float just below the water level to ensure you are drawing the cleanest water in your tank
- Includes PVC Ball float, flexible hose, suction strainer, and hose tail
- Standard sizes are 25mm and 32mm

SECTION 7

HOT WATER PUMPS



"Hot Water pumps are designed for use in domestic & commercial hot water applications

Hot Water Boosting Systems, Central Heating Circulation Systems, Solar Power Systems"

IN-LINE CIRCULATOR PUMPS

UPS SERIES

DESCRIPTION

- In-line hot water circulator pumps designed for the following applications:-
 - Hot Water Systems – Domestic/Commercial
 - Central home heating systems
 - Solar power systems and swimming pool systems
- Grundfos, DAB, Wilo pump brands available

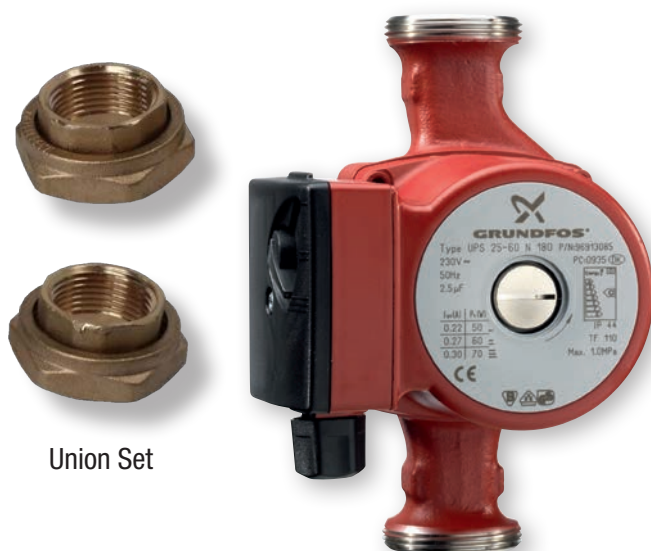
CONSTRUCTION/FEATURES

- Pump bodies are cast in either:-
 - Bronze - for hot water systems
 - Cast Iron - for central heating and cooling systems
- All models designed to withstand temperatures of up to 110°C
- Wet rotor circulators for quiet running and long working life
- Impellers are technopolymer construction
- Pump body with electrophoresis coating to ensure optimal corrosion resistance
- Motor case in aluminium
- Motor Shaft, Stator and rotor in stainless steel
- 12 month warranty

APPLICATIONS

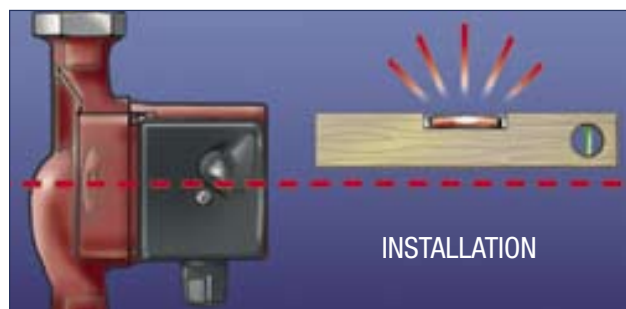
- Domestic/Commercial Hot Water Systems (Bronze)
- Central Home Heating Systems (Cast Iron)
- Radiators/Under floor heating applications
- Solar Power Systems/Swimming Pool Systems
- Closed & Pressurized or open tank heating systems

Model	Motor Size	Voltage	Speed	Centre Distance	Union Size
Bronze Circulators (Hot Water/Solar)					
UP20-30N	0.09kW	230V	1	150mm	20mm
UP20-45N	0.12kW	230V	1	150mm	20mm
UPS20-60N	0.09kW	230V	3	150mm	20mm
UPS25-60N	0.06kW	230V	3	180mm	25mm
UPS25-80N	0.16kW	230V	3	180mm	25mm
UPS32-80N	0.22kW	230V	3	180mm	32mm
UPS32-100N	0.34kW	230V	3	180mm	32mm
Cast Iron Circulators (Heating & Cooling)					
UPS25-60	0.09kW	230V	3	130mm	25mm
UPS25-60	0.12kW	230V	3	180mm	25mm
UPS25-80	0.19kW	230V	3	180mm	25mm
UPS25-100	0.06kW	230V	3	180mm	25mm
UPS32-80	0.22kW	230V	3	180mm	32mm
UPS32-100	0.34kW	230V	3	180mm	32mm
Union Sets Extra - 20mm/25mm/32mm					



Union Set

GRUNDFOS UPS25



INSTALLATION

HOT WATER BOOSTER PUMPS

UPA - HOME BOOSTER

DESCRIPTION

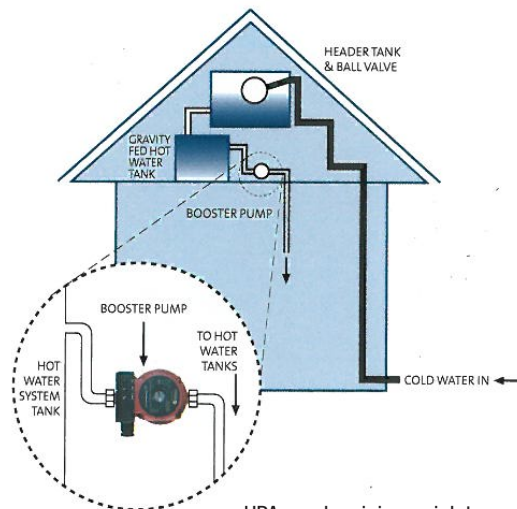
- In-line hot water booster pumps designed to increase/boost the pressure at showers and taps in domestic situations
- The pump is used in open systems and can be connected directly to the water main
- Grundfos, DAB, Wilo pump brands available

CONSTRUCTION/FEATURES

- Pump body is in Stainless Steel components
- Built in flow switch
- Water cooled system
- Leakage free - Energy saving
- Space intelligent - Easy Installation
- Maximum temperature 90°C
- 24 month warranty

APPLICATIONS

- Boosting showers and bathroom taps
- Ensuites/Bathrooms/Laundry
- Domestic household applications



UPA needs minimum inlet pressure of 0.5 m

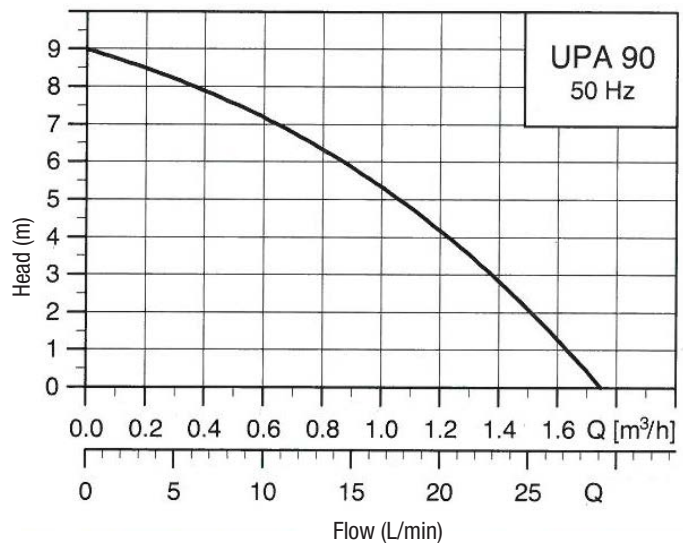
Selector in position		The pump ...
I	Off	is switched off
II	Auto	starts and stops automatically
III	Manual*	runs continuously (also if tapping points are turned off)

*pin must be removed for access to this setting



Model	Motor Size	Voltage	Speed	Centre Distance	Union Size
UPA15-90N	0.12kW	230V	1	160mm	20mm

HYDRAULIC DATA



SECTION 8

PORTABLE PUMPS



"Portable Pumps are designed for transferring water when required especially where no power supply is available."

PORTABLE PUMPS

FF WP SERIES

DESCRIPTION

- Portable Water Pumps designed for clean/dirty water transfer applications
- Other pump types also available (refer to next page)
- Petrol or Diesel pump options available

CONSTRUCTION/FEATURES

- Aluminium Pump Housings
- Cast Iron Impellers and Volutes
- Honda Petrol Engines and Anderson Diesel Engines
- Self Priming to 8m
- Standard sizes are:- 25mm/50mm/80mm/100mm
- Electric Start Options on some models if required
- 12 month warranty

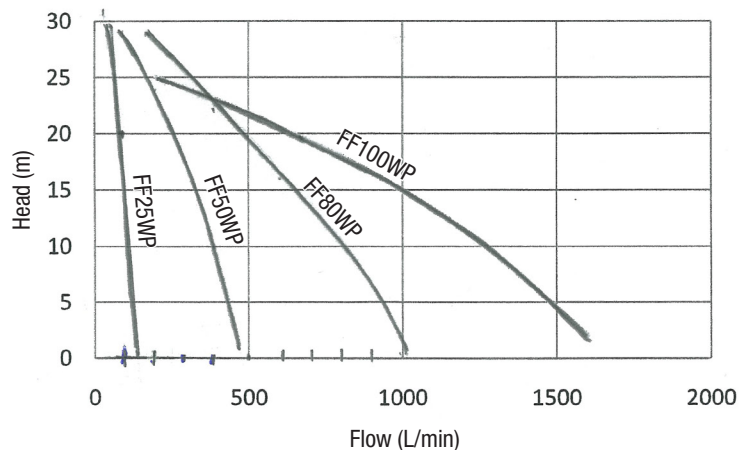
APPLICATIONS

- De-watering/Drainage Applications
- Civil Engineering/Building Sites
- Farms/Agricultural Applications
- Emptying Tanks, Troughs, Swimming Pools
- Irrigation/Sprinkler Systems
- Washdown
- General Water transfer
- Firefighting

Model	Engine	HP	Inlet/Outlet Size
FF25WP	Honda	4-Stroke	25mm/25mm
FF50WP	Honda	4 HP	50mm/50mm
FF50WPE	Honda Electric Start	4 HP	50mm/50mm
FF80WP	Honda	5.5HP	80mm/80mm
FF80WPE	Honda Electric Start	5.5HP	80mm/80mm
FF100WP	Honda	8HP	100mm/100mm

Hose & Fittings available if required

HYDRAULIC DATA



FF80WP HONDA PUMP

HONDA PORTABLE PUMPS

GENERAL

We can also offer other portable pump types at competitive prices

HIGH PRESSURE PUMPS

For irrigation, fire fighting, washdown and uphill to tanks diaphragm type for gorse & crop spraying, and pumping water to high head



SEMI TRASH/TRASH PUMPS

- Semi trash for pumping water with solids up to 20mm
- Full trash for pumping water with solids and trash up to 31mm



FLEXI DRIVE PUMPS

Ideal for drainage and dewatering applications
Available in either 50mm or 80mm



DIAPHRAGM SLUDGE PUMPS

Ideal pumps for pumping muddy water containing sand and sludge etc



POLY PUMPS

For pumping corrosive liquids such as liquid fertiliser, salt water, and chemicals



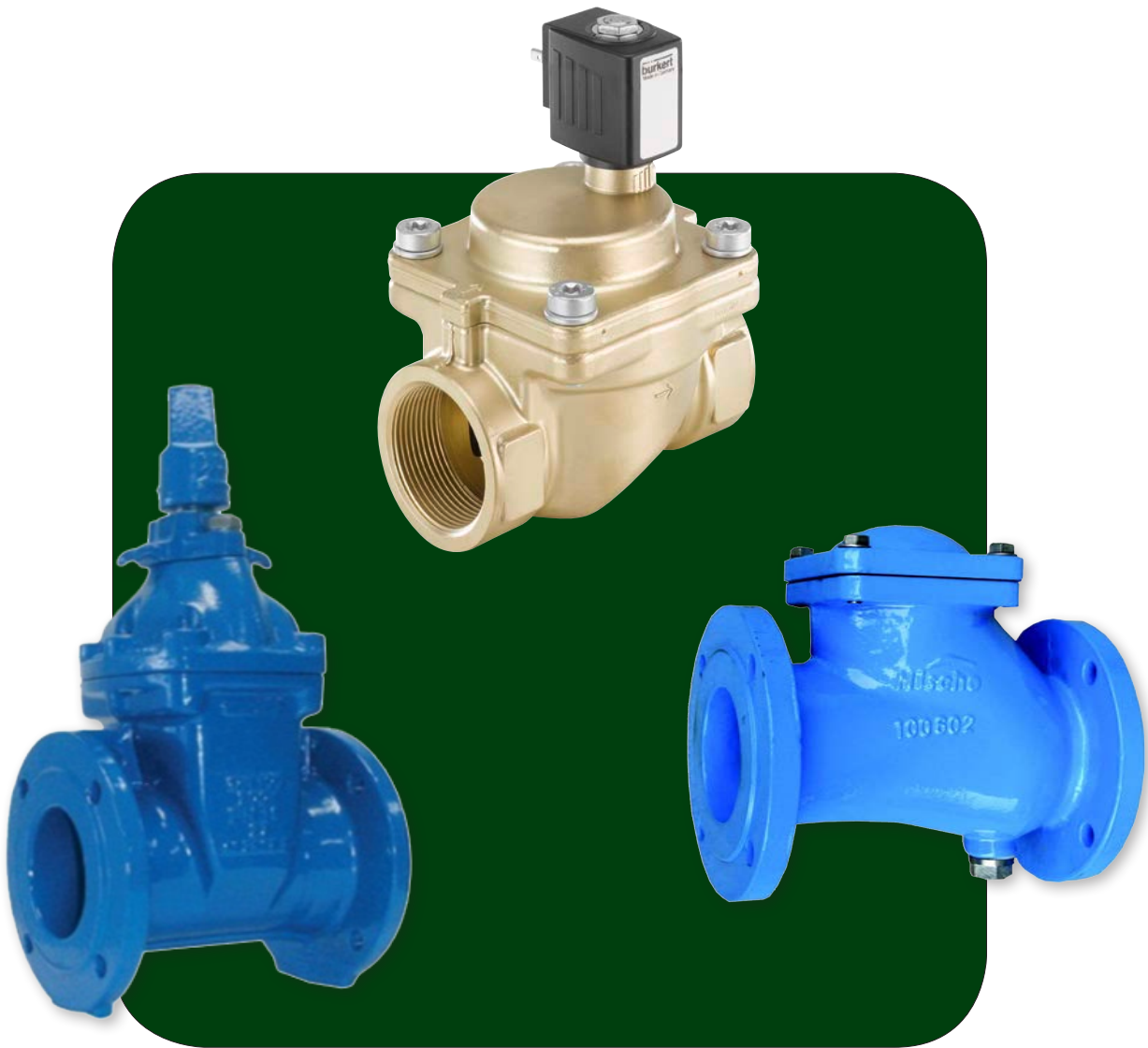
FIREFIGHTING PUMPS

Single and twin impellor High Head pumps for firefighting, pumping up hills, and irrigation etc



SECTION 9

VALVES



"These valves are designed for water, wastewater, and sewage applications. Valve types include Gate Valves, Isolating Valves, Non-Return Valves with others available on request."

SOLENOID VALVES
SV SERIES
DESCRIPTION

- Economical, general purpose industrial solenoid valves c/w encapsulated coil
- Designed to isolate water supply in the event of power failure or product malfunction etc.

CONSTRUCTION/FEATURES

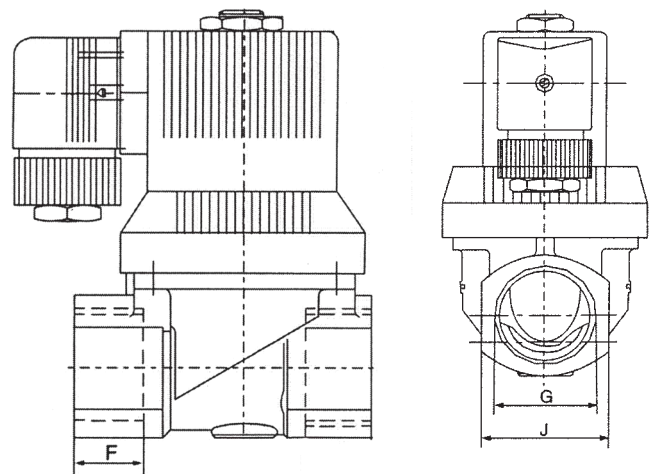
- Brass or Stainless steel Bodies
- NBR, EPDM, FKM Diaphragms
- Fluid Temp - 10°C to 80°C
- Ambient Temp - Max 55°C
- Available in normally closed or normally open configuration
- Standard sizes from 10mm to 40mm
- 15mm-25mm Rated 0.3 - 10 Bar
- Available in 12VAC, 24VAC, 240VAC, 12VDC, 24VDC
- IP65 Protection

APPLICATIONS

- Sewage & Wastewater Pump Stations
- Sani/Grey-Water Pump Systems
- Mechanical Services
- Fluid Control/Irrigation
- Air/Inert Gases/Light Oils



Model	Size	Normally Closed	Normally Open
SV3515	15mm	✓	
SV3520	20mm	✓	
SV3525	25mm	✓	
SV3532	32mm	✓	
SV3540	40mm	✓	
SV3550	50mm	✓	
SV3615	15mm		✓
SV3620	20mm		✓
SV3625	25mm		✓
SV3632	32mm		✓
SV3640	40mm		✓
SV3650	50mm		✓



SOLENOID VALVES: PULSE LATCHING

D80 SERIES

DESCRIPTION

- 12VDC Pulse Latching Solenoid in 20mm & 25mm

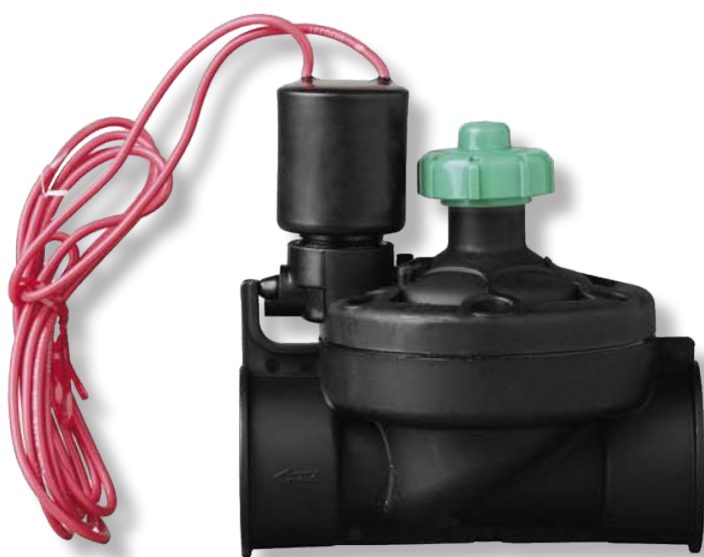
CONSTRUCTION/FEATURES

- Durable, corrosion free materials
- Simple, reliable and economical
- Unique clog-free labyrinth inlet of the activation water
- Operation at wide range of flow rates, from near zero to the maximal flow
- Internal bleed manual override opening
- Larger sizes available on request
- 0.5 - 12 Bar pressure rated
- Suitable for use on our Fastflo Pump Solenoid option Control Boxes (US-SOL/GRF-SOL)
- Unique operation:
 - 1 pulse to open
 - 1 pulse to close
 - Non powered

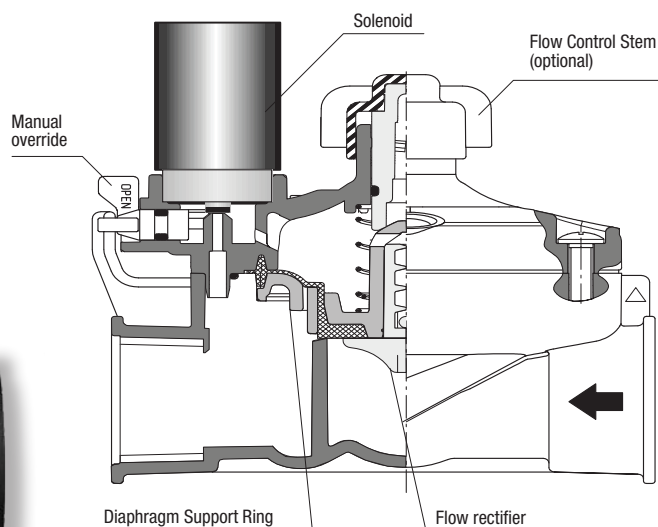
APPLICATIONS

- General Plumbing Applications
- Clean Water Up To 60°C
- Gardens, Parks, Golf Courses
- Irrigation/Sprinkler Systems
- Agricultural/Green Houses
- Filtration Systems
- Under Sink Sullage Chambers

Model	Size	24V Normally Closed
COM-30092	20mm	Brass
COM-30093	20mm	Plastic
COM-30094	25mm	Plastic



COM-30093 (shown)



CAST IRON NON RETURN VALVES: BALL CHECK
FF BCV SERIES
DESCRIPTION

- Full-flow ball check non-return valves designed for handling sewage & wastewater products
- Larger bore/full flow to eliminate blockages
- Available in BSP or Flanged configurations
- Swing Flex Valves also available

CONSTRUCTION/FEATURES

- Cast Iron Construction/Epoxy coated housing
- Nitrile coated ball/Stainless Steel fixings
- Max working pressure PN16
- Temp range 10-80°C
- Maximum back pressure for seating 0.3-0.5 bar
- Face to face dimension for flanged type EN-558-1 series 48 (DIN3202 F6)
- Flanged to AS4087 (Table D)
- 12 month warranty

APPLICATIONS

- Water, Sewage, Wastewater products
- Pumping Stations
- Lift Pits/Effluent Pits
- Domestic/Residential Applications
- Commercial/Municipal/Civil Applications
- Industrial Products/Abattoirs
- Hot Water/Sticky Fluids
- Stormwater/Flood water

Model	BSP	Flanged - Table D	Solids Size	Outlet size
FF BCV32	✓		22mm	32mm
FF BCV50	✓	✓	40mm	50mm
FF BCV80		✓	70mm	80mm
FF BCV100		✓	90mm	100mm
FF BCV150		✓	140mm	150mm

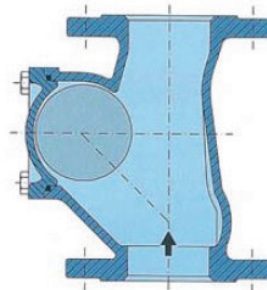
Larger sizes available on request (up to 300mm)
 Table Gaskets available for all valve sizes



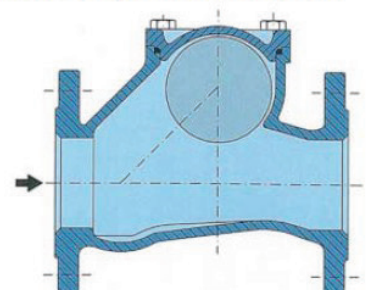
BSP



FLANGED

INSTALLATION OPTIONS


VERTICAL FITTING



HORIZONTAL FITTING

CAST IRON GATE VALVES: RESILIENT SEATED

FF RSG-V SERIES

DESCRIPTION

- Cast Iron Resilient Seated Gate Valves designed for water, wastewater and sewage applications.
- Large bore/full-flow to eliminate blockages

CONSTRUCTION/FEATURES

- Cast Iron Construction/Epoxy coated housing
- Nitrile (NBR) Coated wedges/gates
- Max working pressure PN16
- Standards – BS5163 AS/NZS2368
- Flanged to AS4087 (Table D)
- 431 or 316 S/S spindle options
- Counter clockwise to close
- Hand wheel available as option
- 12 month warranty



APPLICATIONS

- Water, Sewage, Wastewater products
- Pumping Stations
- Lift/Effluent Pits
- Domestic/Residential Applications
- Commercial/Municipal/Civil Applications
- Industrial Products/Abattoirs
- Municipal

Model	BSP	Flanged - Table D	Solids Size	Outlet size
FF RSGV50	×	✓	40mm	50mm
FF RSGV80	×	✓	70mm	80mm
FF RSGV100	×	✓	90mm	100mm
FF RSGV150	×	✓	140mm	150mm

Larger Sizes available on request (up to 600mm)
Table Gaskets available for all valve sizes

Large Range of Cast Iron Valves available including:

- Butterfly Valves
- Knife Gate Valves
- Diaphragm Valves
- Air Release Valves

SECTION 10

ELECTRICAL/CONTROL SYSTEMS



"Electrical / Control Systems are designed to provide fully automatic operation of pumping systems as required."

BASIC PUMP CONTROLLERS



PRESSURE SWITCH - STANDARD

FSG-2

- Designed for pumping applications
- Standard Pressure Range 20 – 65 PSI
- Higher Pressure Options up to 350 PSI
- Fluid Temperatures 0 - 70°C
- ¼" BSP Female Fluid Connection
- 6 Bar & 12 Bar Options
- Single & 3 Phase Options

PRESSURE SWITCH - LOSS OF PRIME

FSG-2 LOP

- Designed for pumping applications
- Standard Pressure Range up to 85 PSI
- Operates as normal but also turns off if pressure falls below 15 PSI
- Designed to protect pumps from running dry

PRESS CONTROL (ELECTRONIC)

PC

- Designed for pumping applications
- Automatically starts & stops pump when tap opens and closes
- Provides constant flow & run dry protection
- 1.5 Bar (PC10) 2.5 Bar Starting Pressure options (PC12)
- Min. Pump Pressure: 35 PSI (2.5 Bar)
- Max. Pump Pressure: 145 PSI (10 Bar)
- Max. Water Temp: 65°C/IP65 Protection
- 25mm Inlet / Outlet Connection

PUMP/MOTOR STARTERS & CABLE



DOL STARTER - STANDARD

LE1

- Hard Wearing Plastic Housing/Enclosure
- Includes contactor, overload, start & stop push button
- Ideal Starter box for all pump types
(eg. Contractor Submersible Pumps - Refer page 38)
- Available in Single & Three Phase options

DOL STARTER - DELUXE

159

- Robust powdercoated metal Housing/Enclosure
- Auto/off/manual switching
- Low voltage circuitry for input switches
- Contactor & thermal overload motor protection
- Available in Single & Three Phase options

POWER CABLE & PLUGS

CAB/PDL

CABLE

- Heavy duty submersible cable (neoprene)
- 3 core & 4 core types available from 1.5mm²

PLUGS

- Single & Three Phase IP67 plugs
- Suitable for all pump types where applicable

PUMP/MOTOR PROTECTION CONTROLLER

PILOT

DESCRIPTION

- Electronic Motor and Pump Protection Controllers
- Available for either 1 or 3 phase applications
- Aviator Boards for CAP Start Cap Run Motors/Pumps

CONSTRUCTION/FEATURES

- Body constructed entirely of aluminium for strength and superior cooling
- Visual and audible
- IPSS Protection
- Provides protection against overcurrent, phase loss, excessive number of starts, dry running
- Optional inputs and outputs available
- Aviator Boards fit into a Pilot 118 only.

APPLICATIONS

- Sewage Pumps/Pumping Stations
- Stormwater Pumps/Pumping Stations
- Constant Pressure Systems/Water Booster Sets
- Hot Water Circulation Systems
- Transfer Pumping Systems



PILOT 118

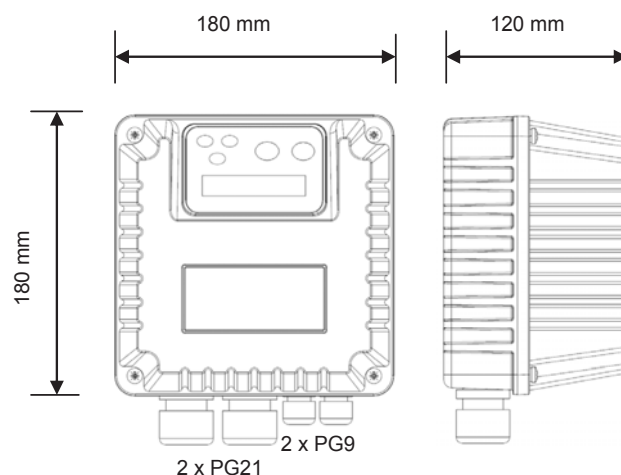
Model	Voltage [±10%] 50/60Hz	Maximum current	Weight [kg]
PILOT 112	1 x 230 VAC	12 A	2
PILOT 118	1 x 230 VAC	18 A	2
PILOT 312	3 x 400 VAC	12 A	2.2
PILOT 325	3 x 400 VAC	25 A	2.4
AVIATOR 1	0.31 – 0.55 kW	53-64 MFD	-
AVIATOR 2	0.75 – 1.1 kW	108-130 MFD	-
AVIATOR 3	1.5 – 2.2 kW	189-227 MFD	-

* Capacitor not included in the single phase models (available upon request)

Max. environment temperature: 40°C (104°F)

Max. altitude: 2000m

IP Protection: IP55 (NEMA 4)



UNDERSINK/SOLOLIFT CONTROLLERS/ALARMS

US/GRF SERIES

DESCRIPTION

- US Models - These are designed for Undersink Sullage Pump Stations that require High Level Alarm Indication and/or require shut off solenoid.
- GRF - models - These are designed for Grundfos Sololift Units as per the above requirements
- Unique Pulse latching Solenoid requires a pulse to open and a pulse to close. Normal state is non-powered.

CONSTRUCTION/FEATURES

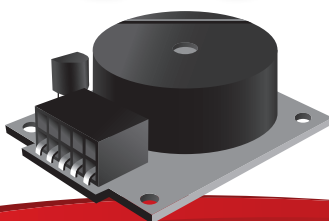
- Poly Enclosures
- Power on & Alarm LED
- Mute Button
- Low Voltage Controls (12VDC)
- Water Supply Shut Off Solenoid & Dishwasher Interlock options available



Model US-HL
(for Undersink Pump-out units)



Model US-SOL/GRF-SOL
(for Undersink Pump-out units with Solenoid Valve)

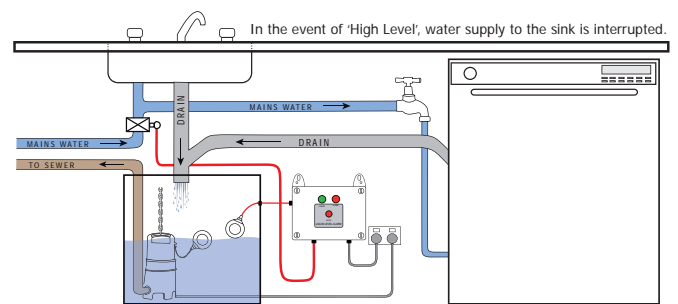


Model GRF-HL
(for Sololift Sani pump-out units)

APPLICATIONS

- Undersink Pump Stations/Sullage Chambers
- Sololift/Sani pump-out units
- Kitchens/Laundry Fixtures
- Domestic/Commercial
- Refer to Undersink Pump Stations on pages 7-8
- Refer to Sani Pump-out Units on pages 9-12

Model	Voltage	Description
US-HL/CONT	230VAC	High Level Alarm c/w Float Switch
US-SOL	230VAC	High Level Alarm c/w Float Switch & Solenoid Valve
US / DISH	230VAC	High Level Alarm c/w Float Switch & Dishwasher outlet
US-SOL / DISH	230VAC	High Level Alarm c/w Float Switch, Solenoid Valve & Dishwasher outlet
GRF-HL	230VAC	High Level Alarm only for Sololift
GRF-SOL	230VAC	High Level Alarm c/w Solenoid for Sololift



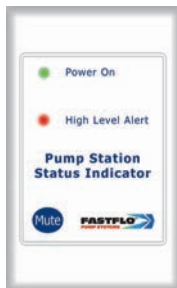
TYPICAL UNDERSINK INSTALLATION

STANDARD PUMP STATION CONTROLLERS/ALARMS
CB-SERIES
DESCRIPTION

- Pump Station Control Panel incorporating pump overload and High Level Alarm Indication suited to pump station installations
- Standard Controller used in domestic pump stations (eg Mini/1000/1500/2000 models)
- Two options available - either standard or deluxe

CONSTRUCTION/FEATURES

- Poly Enclosure
- Level Alarm Indication (Keypad)
- Connections for Pump & High Level Float
- Provision for Remote Alarm Plate
- Std or Deluxe Options (for Deluxe option, call us for more details eg Red strobe light)



ALARM PLATE
(ALP-STD)



STD CONTROLLER
(Model CB-STD)

APPLICATIONS

- Sewage Pumps/Pumping Stations
- Pressure Sewer Systems/Pumping Stations
- Stormwater Pumps/Pumping Stations
- Septic Tank Systems
- Refer to Sewage & Stormwater Pump Stations on pages 10-19, 20-21

Model	Voltage	Includes
CB-STD (Controller)	230 VAC (10A MAX)	Standard Control Box c/w HL Float
CB-DELUXE (Controller)	230VAC 400VAC	Deluxe Control Box c/w Control Float/HL Float (To be used with manual pumps over 10Amp)
ALP-STD	12VDC	Standard Alarm Plate
SW-HL	230VAC	HL Float/Alarm Plate



CB-DELUXE

SINGLE PUMP CONTROLLERS

FPC-1500 SERIES

DESCRIPTION

- The new FPC-1500-Advanced Single Pump Controller further enhances the "One controller does it all" concept, while at the same time, makes "simplicity of operation" even more user friendly. Although many unique features of the controller are common to all pumping applications, a number of "system specific" optional features, can be enabled or disabled at the flick of a switch.

CONSTRUCTION/FEATURES

- Circuit Breaker Protected Low voltage Control
- Lockable Main Isolater
- Visual and Audible Alarms c/w Mute Switch
- IP65 Weather Proof, Powder Coated Metal Enclosures
- LED Indicator Lights for System Status indication

APPLICATIONS

- Sewage Pumps/Pumping Stations
- Stormwater Pumps/Pumping Stations
- Constant Pressure Systems/Water Booster Sets
- Hot Water Circulation Systems
- Transfer Pumping Systems

Model	Voltage	Controls Mounting
FPC-15002	230V	External
FPC-15005	230V	Inner Door
FPC-15006	400V	External
FPC-15007	400V	Inner Door

Overload Sizes
AA=1.6-2.5A 0/L, A=2.5-4A, B=4-6A, C=7-10A, D=9-13A, E=12-18A
Order Code example: FPC-15002-B



FPC 15002 & FPC 15006
(External)



FPC 15005 & FPC 15007
(Inner Door)

DUAL PUMP CONTROLLERS

FPC-300 SERIES

DESCRIPTION

- The new FPC-300-Advanced Dual Pump Controller further enhances the "One controller does it all" concept, while at the same time, makes "simplicity of operation" even more user friendly. Although many unique features of the controller are common to all pumping applications, many "system specific" optional features, can be enabled or disabled at the flick of a switch

CONSTRUCTION/FEATURES

- Advanced Micro processor control module
- Key pad incorporating Auto/Off/Manual Operation of both pumps and status LEDs
- Thermal Overload Protection of Pump Motors
- IP65 Weather Proof, Powder Coated Metal Enclosure with removable gland plate
- Lockable Main Isolator
- Audio/Visual Alarms c/w Mute Switch

APPLICATIONS

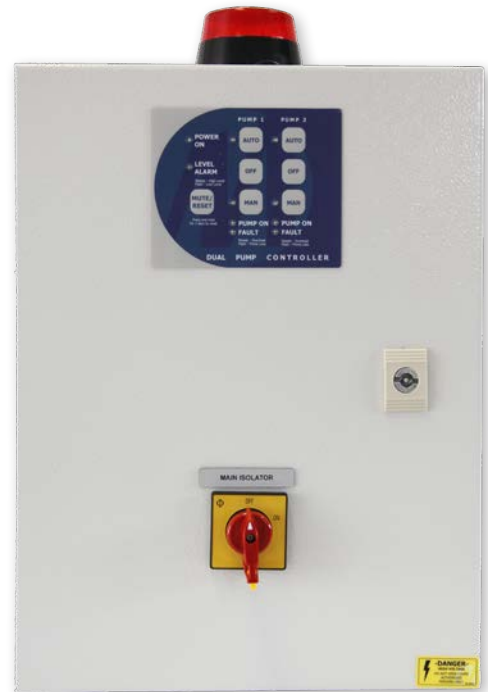
- Sewage Pumps/Pumping Stations (Refer page 42-49)
- Stormwater Pumps/Pumping Stations
- Constant Pressure Systems/Water Booster Sets
- Hot Water Circulation Systems
- Transfer Pumping Systems

Model	Voltage	Controls Mounting
FPC-30010	230V	External
FPC-30020	230V	Inner Door
FPC-30030	400V	External
FPC-30040	400V	Inner Door

Overload Sizes
 Note: AA=1.6-2.5A O/L, A=2.5-4A, B=4-6A, C=7-10A, D=9-13A, E=12-18A Order Code example: FPC-30010-A



FPC 30020 & 30040
(Inner Door)



FPC 30010 & 30030
(External)

PUMP STATION CONTROLLERS - AUXILLARY EQUIPMENT

BMS/RSI/SMS

DESCRIPTION

- External alarm equipment to provide remote alarms as required
- Options include BMS, RSI and SMS management systems

CONSTRUCTION/FEATURES

BMS - (Building Management System)

- Interface for SPC and DPC controllers
- 4 Output Relays - Pump 1, Pump 2, High Level Faults, Power Fail

RSI - (Remote Status Indicator)

- For SPC and DPC Controllers
- Indication of power on, high level and pump faults
- Mute button, built in buzzer

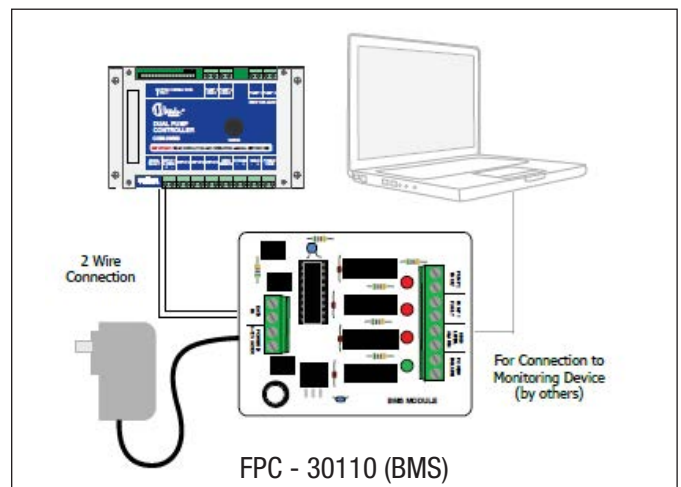
SMS - (Smart Message System) - Alarm Sender

- Send text messages when pump station fault,
- 4 output relays
- Up to 5 separate cell phone numbers to send descriptive messages to
- Dual and single pump controller compatable

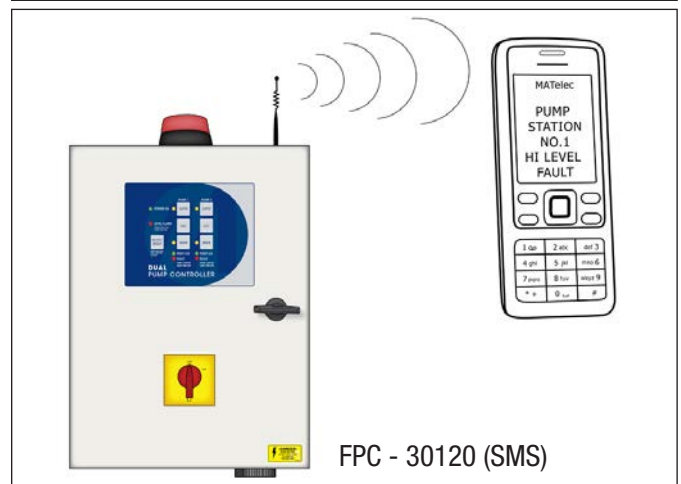
APPLICATIONS

- Sewage Pumps/Pumping Stations
- Stormwater Pumps/Pumping Stations
- Constant Pressure Pumps/Pumping Stations
- Hot Water Circulation Systems
- Transfer Pumping Systems

Model	Description
FPC-30110	BMS Module
FPC-15100	Remote Status - Single Pump
FPC-30100	Remote Status - Dual Pump
FPC-30120	SMS Alarm Sender



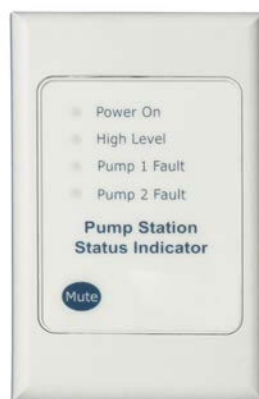
FPC - 30110 (BMS)



FPC - 30120 (SMS)



FPC - 15100



FPC - 30100

LIQUID LEVEL ALARM PACKAGES

FPC-126 SERIES

DESCRIPTION

- The Liquid Level Alarms are designed to provide warning indication when storage (Effluent, Grey Water, Rain Water etc) tank is either empty or full. Warning indication is determined by a float switch. Warnings are; Audio (buzzer), Visual (Flashing LED & Flashing Strobe on Deluxe Model) and clean contacts (for connection of an auxiliary alarm).
- Designed to stand alone HL alarm indication

CONSTRUCTION/FEATURES

- The Buzzer is muted via a button
- Pump output
- Electronics can be installed up to 50m from tank being monitored
- Low voltage controls float
- Includes 10m Float Switch

APPLICATIONS

- Effluent Systems
- Grey Water Systems
- Sewage Systems
- Rainwater/Harvesting Systems

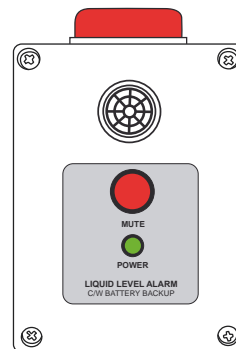
Model	Description	Voltage	Indication
FPC-12650 K	Standard	240VAC Power 12VDC Controls	LED/Buzzer - Power on - Alarm
FPC-12651 K	Deluxe	240VAC Power 12VDC Controls	Strobe/Buzzer LED - Power on - Alarm
FPC-12656 K	Flush Mount	240VAC Power 12VDC Controls	Power on Level Alert - Buzzer
FPC-12657 K	Battery Backup	240VAC Power 12VDC Controls	Power on Strobe/ Buzzer



FPC-12650
Liquid Level Alarm - Standard
Dimensions - 85mm (h) x 55mm (d) x 125mm (w)



FPC-12651
Liquid Level Alarm - Deluxe
Dimensions - 180mm (h) x 90mm (d) x 230mm (w)



FPC-12657
Dimensions - 119mm (h) x 73mm (d)
x 160mm (w)



FPC-12656
Standard Switch Plate size

RAIN/MAINS WATER CONTROLLER

FPC-127 SERIES

DESCRIPTION

- Designed to provide a continuous supply of water for a variety of uses, whilst prioritising and maximizing usage of rain water.
- Also available with the Booster Pump/Filter packages See page 58-61, 63.

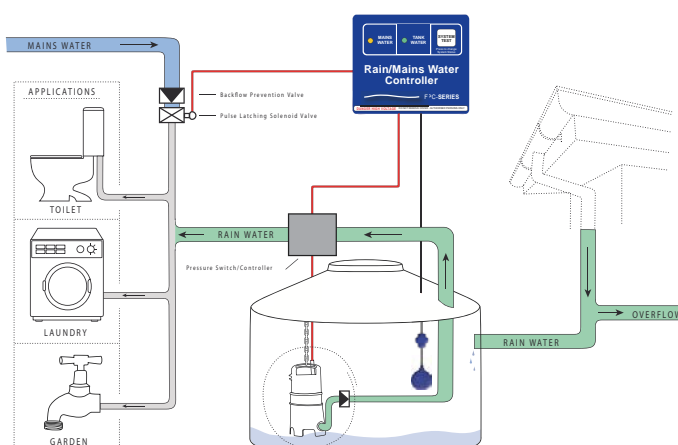
CONSTRUCTION/FEATURES

- Compatible with an entire range of high flow, low 'head loss' solenoid valves
- No continuously actuated solenoid valves
- Pump Protection Feature - If Rain Water is depleted, switching of pump output isolates power to pressure pump system
- Test Button - Provides change of system status, including pump and valve switching
- Includes pulse latching solenoid valve & 10m Float Switch
- LED's indicate 'mains water', 'rainwater'
- Available as a complete package including pump & housing

APPLICATIONS

- Domestic dwellings
- Commercial complexes
- Industrial complexes
- Irrigation systems
- Rainwater Harvesting

Code	Model	Voltage
FPC-12721	Controller 1 PH (Quick Plug System)	230V
FPC-12724	Controller 1 PH (Hard Wired Version)	230V
FPC-12725	Controller 3 PH (Hard Wired Version)	400V
Above & below-ground water tanks available. See page 24		



RAINS/MAINS WATER CONTROLLER
RM SERIES
DESCRIPTION

- Automatic Rain/Mains Control System c/w in-built pump all housed in custom PE Housing
- The unique electronic features make it the smartest unit available
- Booster/Filter Pump packages also available - refer to page 68

CONSTRUCTION/FEATURES

- P.E Pump Housing available in a range of colours to match your water tank
- Easy access of pump & control valves in case of maintenance
- Allows tank water to be used for water supply in preference to mains water – will automatically switch from one to the other as required
- 4 pump options available
- Allows for high water demand
- Saves water & reduces water expenses
- Seperate 20mm Solenoid plumbed with Valve & Tee available if required.
- Includes pulse latching solenoid & 10m float switch

APPLICATIONS

- Domestic Dwellings
- Commercial complexes
- Industrial complexes
- Irrigation systems
- Rainwater Harvesting

Model
Description

RM2000

Rain/Mains System with Pre-plumbed DHJ800 Automatic Pressure Pump

RM4000

Rain/Mains System with Pre-plumbed HCM2-40 Automatic Multistage Pressure Pump

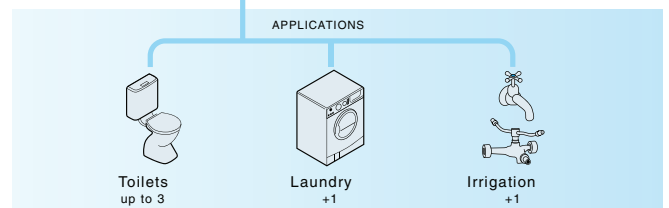
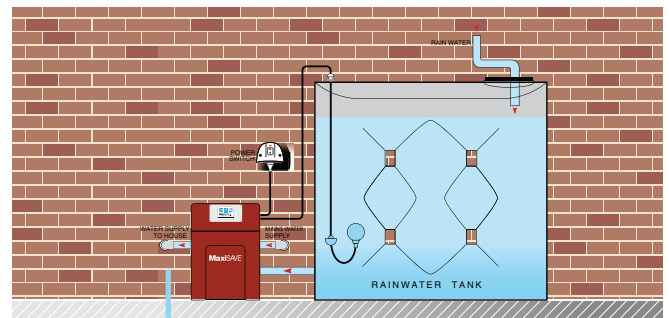
RM4260

Rain/Mains System with Pre-plumbed HCM2-60 Automatic Multistage Pressure Pump

RM4460

Rain/Mains System with Pre-plumbed HCM4-60 Automatic Multistage Pressure Pump

Refer to DHJ & HCM Series Pumps - Section 5



TYPICAL INSTALLATION

FLOAT SWITCHES

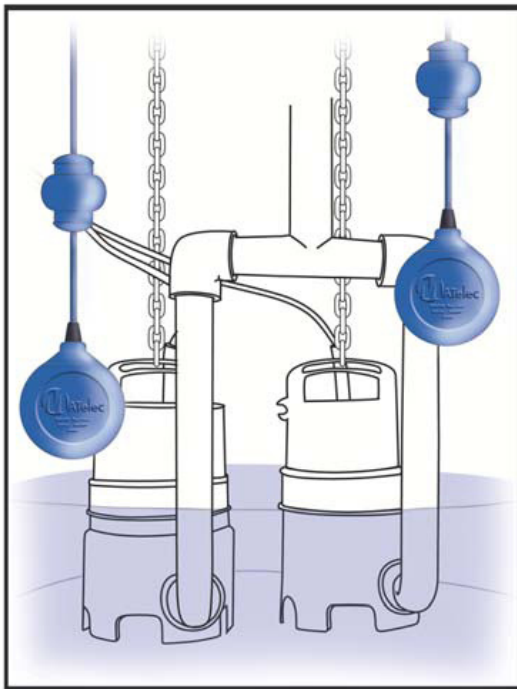
FSW-900 SERIES

DESCRIPTION

- The proven 900 Series MATElec Float Switch, which utilises an innovative, yet simple, fool proof switching concept, has greatly enhanced Float Switch reliability.
- The positive microswitching, eliminates the possibility of more than one circuit being in operation at any one time. The design innovation of the Switch is the 'sliding detent action' which obviates wave induced oscillation (common in mercury type switches) while maintaining consistency in switching level accuracy.
- The smooth robust ABS switch housing on the 9006, 9008 and the 9010 models prevents adhesion of foreign materials.

CONSTRUCTION/FEATURES

- Neoprene Rubber Cable
- ABS Housing Material
- Micro switch with NO/NC contacts
- Includes Cable weight
- Available in 2.5m, 10m and 20m lengths



APPLICATIONS

- Sewage & Stormwater pumps/Pumping Stations
- Rain Water/Water Saver Systems
- Waste Water Management
- Used To Control Pumps - When Liquid Level Changes

Model	Protection	Switching Capacity
FSW 9004	IP68 @ 20m	10A
FSW 9006	IP68 @ 20m	6A
FSW 9010	IP68 @ 20m	10A



WATER LEVEL SENSORS

FSW/FPC SERIES

DESCRIPTION

- Sensor for sensing water level
- Multi float tree, Hydrostatic Pressure Transducer

CONSTRUCTION/FEATURES

Multi Level Float Switch Tree

- No more tangled floats
- No more setting up with conduit ties
- No more trying to pull multiple float wires through undersized conduit
- Resin filled/potted connection - fully submersible

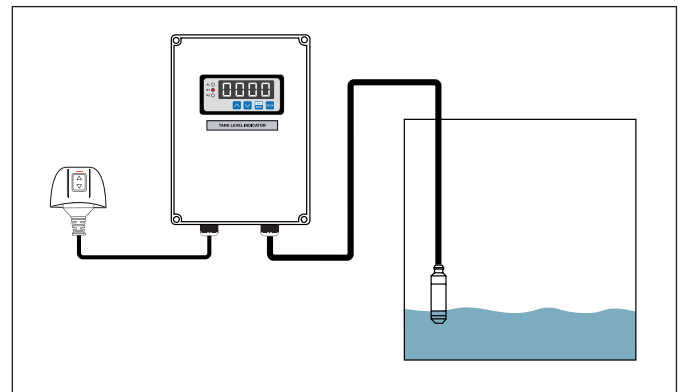
Hydrostatic Pressure Transducers

- Unit suited to 4-20 mA applications where precise level readings are required
- Pressure range 0-10m
- Small body diameter - 39mm
- Excellent Anti-Interference ability

APPLICATIONS

- Sewage Pump Stations
- Stormwater Pump Stations
- 3000/4000 Pump Stations (Refer page 18)
- Water Storage Tanks
- Wastewater Storage Tanks

Model	Description
FSW-12545	10m Float Switch Tree
FPC-12570	Waste Water Transducer
FPC-12571	Rainwater Transducer



FSW-12545
FLOAT TREE



FPC-12570
TRANSDUCER
(Wastewater)



FPC-12571
TRANSDUCER
(Rainwater)

ID68 WATERPROOF CONNECTORS/QUICK PLUG

FCN-162 SERIES

DESCRIPTION

- For safely connecting and carrying power through wet/damp environments or adverse weather conditions. The range available covers a multitude of domestic, commercial and industrial uses.
- Two versions available as follows
 - (i) In-line joiner/connector
 - (ii) In-line quick connect plug

CONSTRUCTION/FEATURES

- 32A 415V Rating (FCN-16245 & 16250)
- 16A Rating (FCN-16260 & 16262)
- 80°C Temp Rating
- IP68 Rated
- Conductor size 4mm² max
- Tube PA66 UL 94V²
- Glands AA66 UL 94 V²
- Screws - Zinc passivated steel

APPLICATIONS

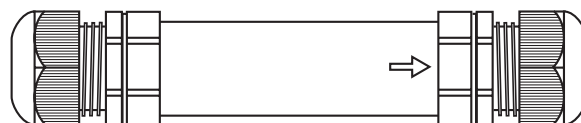
- Sewage Pumps/Stations
- Stormwater Pumps/Stations
- Water Booster Pumps/Packages
- Flexible Cable Joins
- Underwater Joins In Sumps
- Pump Repairs

Model	Poles	Quick Connect Plug
FCN-16245	3	No
FCN-16250	5	No
FCN-16260	3	Yes
FCN-16262	3	Yes

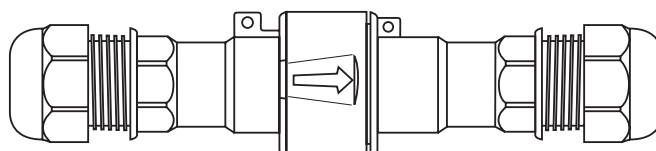
Model	MIN ODØ	MAX ODØ
FCN-16245	5mm	13mm
FCN-16250	8mm	17mm
FCN-16260	5mm	9mm
FCN-16262	8mm	13mm



IN-LINE JOINER
FCN-16250



QUICK CONNECT PLUG
FCN-16260 3P



SELECTING THE RIGHT PUMP FOR THE JOB

PLEASE FILL IN AND FAX OR EMAIL BACK TO US

1. State Your Pump Application:

- ☐ Household water pressure
- ☐ Garden watering/sprinklers
- ☐ Stock water supply
- ☐ Hosing down
- ☐ Tank filling
- ☐ Fire fighting
- ☐ Other (please specify) _____

2. State the Source of the Water Supply:

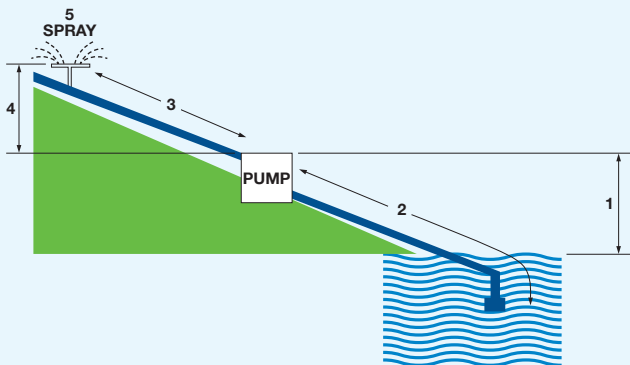
- ☐ River, creek, channel
- ☐ Dam
- ☐ Above ground tank, rainwater tank
- ☐ Underground tank or cistern
- ☐ Bore - attach Drillers Log and Water Analysis (if available)

3. If water is to be drawn from bore, state quantity of water bore will deliver _____ litre/min

3a. State the inside diameter of the bore casing _____ mm

4. State the Condition of Water Supply:
Clean / Muddy / Gritty / Dirty

5. How far down (vertically) from the pump to the water level itself (point 1 on diagram)? _____ m



6. How long is the suction pipe (point 2 on diagram)? _____ m

7. Diameter of the suction pipe is _____ mm

Type of pipe is _____

8. How far along does the pump have to push the water to the outlet (point 3 on diagram)? _____ m

9. How far up does the pump have to push the water to the outlet (point 3 on diagram)? _____ m

10. Diameter of the discharge pipe is _____ mm

Type of pipe is _____

11. Total flow required _____ litres/min

Or maximum number of taps that will run at any one time _____ (point 5 on diagram)

12. If known, what pressure is required at the outlet (point 5 on diagram) _____ kPa

13. State Pump Type Required:

- ☐ Automatic pressure system
- ☐ Electric pump
- ☐ Engine Driven pump
- ☐ Submersible Bore
- ☐ Belt drive without engine
- ☐ Sump Pump
- ☐ Other (please specify) _____

14. State Power Supply Available:

- ☐ Single phase 240 volt 50Hz
- ☐ Three phase 415 volt 50Hz
- ☐ Other (please specify) _____

COMMON AVERAGE WATER REQUIREMENTS

Shower	15lpm at 140kPa (20psi)
Lawn Sprinkler	15lpm at 140kPa (20psi)
1/2" Tap	12-15lpm at 140kPa (20psi)
3/4" Hose & 1/4" Nozzle	40lpm at 210kPa (30psi)
1" Hose & 3/8" Nozzle	75lpm at 210kPa (30psi)
Weekend Cottage	10-20L/min
Small House	20-30 L/min
Average Home	30-50 L/min
Large Home	50-90 L/min

Cattle	30-55 litres/day
Milking Cows	70 litres/day
Sheep	5-10 litres/day
Pigs	10 litres/day
Horses	55-60 litres/day
100 Chickens	25 litres/day

Flow Conversion

Litres Per Minute	Litres Per Second	Cubic Meters Per Hour	Gall Per Minute	Gall Per Hour
7.6	0.13	0.45	1.7	100
10	0.17	0.60	2.2	132
16.7	0.28	1	3.7	220
45.5	0.76	2.73	2.73	601
60.0	1	3.60	3.2	793
75.7	1.26	4.54	6.7	1000
83.3	1.39	5.00	8.3	1101

Pressure Conversion

Metres	kPa	Bar	Feet Head	PSI
1	9.81	0.10	3.28	1.42
10	98.1	0.98	32.8	14.2
10.2	100	1	33.4	14.5
15.2	149.5	1.5	50	21.6
30.5	299.0	3.0	100	43.3
35.2	354.4	3.5	115.5	50.0
70.4	690.8	6.9	231.0	100
101.9	999.6	10.0	334.2	144.7

Volume Conversion

Litres	Cubic Metres	Imp. Gals	US Gals	Cubic Feet
1	0.001	0.22	0.264	0.0353
1000	1	220	264	35.3
4.546	0.0045	1	1.2	0.1605
3.785	0.0038	0.833	1	0.1337
28.32	0.0283	6.23	7.48	1

Length Conversion

Inch	Foot	Yard	Meters
1	0.08	0.028	0.025
12	1	0.33	0.305
36	3.00	1	0.91
39.4	3.28	1.09	1

FRICITION LOSS TABLES

Friction Loss for Poly Pipe - 20mm to 63mm (m/100 metres of pipe)

Flow in		Medium Density Polythene Pipe																												
ltrs min	gals hr.	Rural Class B Pipe					PE80/PN8						PE80/PN10						PE80/PN12.5						PE80/PN16					
		¾"	1"	1¼"	1½"	2"	20	25	32	40	50	63	20	25	32	40	50	63	20	25	32	40	50	63	20	25	32	40	50	63
10	132	2.7	0.7	0.2	0.1	-	3.9	1.1	0.3	0.1	-	-	4.5	1.4	0.4	0.1	-	-	5.3	1.8	0.5	0.2	0.1	-	6.8	2.2	0.7	0.2	0.1	-
20	264	9.8	2.4	0.8	0.3	0.1	14.2	4.0	1.2	0.4	0.1	-	16.4	5.1	1.5	0.5	0.2	0.1	19.0	6.4	1.8	0.6	0.2	0.1	24.4	8.0	2.4	0.8	0.3	0.1
30	396	20.8	5.1	1.7	0.7	0.2		8.5	2.6	0.9	0.3	0.1		10.7	3.2	1.0	0.4	0.1		13.6	3.8	1.3	0.4	0.1		17.0	5.2	1.7	0.6	0.2
40	528		8.7	2.9	1.2	0.3			4.5	1.5	0.5	0.2			5.4	1.7	0.4	0.2			6.5	2.2	0.8	0.2			8.8	2.9	1.1	0.3
50	660		13.2	4.5	1.8	0.5			6.8	2.3	0.8	0.3			8.1	2.6	0.6	0.3			9.8	3.4	1.1	0.4			13.3	4.4	1.5	0.5
60	792		18.5	6.2	2.6	0.6			9.5	3.2	1.1	0.4			11.4	3.7	0.9	0.4			13.7	4.8	1.6	0.5			18.0	6.2	2.0	0.7
80	1056		30.1	10.6	4.4	1.1				5.5	1.8	0.6				6.3	1.3	0.7				8.1	2.7	0.9				10.5	3.5	1.2
100	1320			16.1	6.6	1.6				8.3	2.7	0.9				9.5	2.3	1.1				12.2	4.1	1.3				15.9	5.3	1.7
120	1584				9.3	2.3					3.8	1.3					3.4	1.5					5.8	1.9					7.4	2.4
140	1848				12.3	3.0					5.1	1.7					4.8	2.0					7.7	2.5					9.8	3.2
160	2112					3.9					6.5	2.2					6.4	2.6					9.8	3.2					12.6	4.2
180	2376					4.8						2.7					8.1	3.3						3.9						5.2
200	2639					5.9						3.3						4.0						4.8						6.3
220	2904					7.0						3.9						4.7						5.7						7.5
240	3168					8.2						4.6						5.6						6.7						8.8
250	3300					8.9						5.0						6.0						7.2						9.5

Friction Loss for Poly Pipe (m/100 metres of pipe)

Flow Rate			25mm O.D		32mm O.D		40mm O.D		50mm O.D		63mm O.D		75mm O.D		90mm O.D		110mm O.D	
lps	lpm	m³/hr	PN 6.3	PN 12.5	PN 6.3	PN 12.5	PN 6.3	PN 12.5	PN 6.3	PN 12.5	PN 6.3	PN 12.5	PN 6.3	PN 12.5	PN 6.3	PN 12.5	PN 6.3	PN 12.5
0.2	12	0.72	2.12	2.97	0.56	0.90	0.02	0.32	-	-	-	-	-	-	-	-	-	-
0.5	30	1.80	10.53	14.83	2.78	4.45	0.86	1.58	0.27	0.55	-	-	-	-	-	-	-	-
0.8	48	2.88	24.24	34.17	6.37	10.20	1.97	3.62	0.61	1.25	-	-	-	-	-	-	-	-
1.0	60	3.60	-	-	9.46	15.17	2.92	5.38	0.91	1.85	0.33	0.61	0.14	0.26	-	-	-	-
1.6	96	5.76	-	-	21.88	-	6.73	12.41	2.08	4.25	0.75	1.13	0.33	0.49	-	-	-	-
2.0	120	7.20	-	-	-	-	10.02	18.50	3.10	6.33	1.11	2.07	0.48	0.89	0.20	0.37	-	-
3.0	180	10.8	-	-	-	-	-	-	6.39	13.07	2.29	4.27	0.99	1.83	0.42	0.76	0.16	0.29
4.0	240	14.4	-	-	-	-	-	-	10.70	-	3.82	7.15	1.65	3.05	0.69	1.27	0.27	0.49
5.0	300	18.0	-	-	-	-	-	-	-	-	5.70	-	2.46	4.55	1.03	1.89	0.40	0.72
6.0	360	21.6	-	-	-	-	-	-	-	-	7.92	-	3.42	6.32	1.43	2.63	0.55	1.00
7.0	420	25.2	-	-	-	-	-	-	-	-	-	-	4.51	-	1.88	3.46	0.72	1.32
9.0	540	32.4	-	-	-	-	-	-	-	-	-	-	7.09	-	2.96	5.45	1.14	2.07
10.0	600	36.0	-	-	-	-	-	-	-	-	-	-	-	-	3.58	6.59	1.37	2.50
15.0	900	54.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.85	5.20
20.0	1200	72.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.80	-

Friction Loss for PVC Pipe (m/100 metres of pipe)

Flow Rate			25mm		32mm		40mm		50mm		80mm		100mm		150mm	
lps	lpm	m³/hr	PN 9	PN 12	PN 9	PN 12	PN 9	PN 12	PN 9	PN 12	PN 9	PN 12	PN 9	PN 12	PN 9	PN 12
0.2	12	0.72	0.43	0.49	0.14	0.16	0.08	0.42	-	-	-	-	-	-	-	-
0.5	30	1.80	2.15	2.40	0.70	0.80	0.37	0.97	0.13	0.14	-	-	-	-	-	-
0.8	48	2.88	4.91	5.50	1.61	1.82	0.84	1.43	0.29	0.33	-	-	-	-	-	-
1.0	60	3.60	7.29	8.16	2.38	2.70	1.24	3.30	0.42	0.48	0.07	0.08	-	-	-	-
1.6	96	5.76	16.85	18.87	5.49	6.23	2.86	4.90	0.97	1.11	0.15	0.18	-	-	-	-
2.0	120	7.20	-	-	8.17	9.27	4.25	10.12	1.42	1.65	0.23	0.26	0.07	0.05	-	-
3.0	180	10.8	-	-	-	-	8.77	16.98	2.97	3.40	0.46	0.53	1.14	0.08	-	-
4.0	240	14.4	-	-	-	-	-	-	4.98	5.68	0.77	0.89	1.23	0.16	-	-
5.0	300	18.0	-	-	-	-	-	-	7.43	8.49	1.15	1.32	0.34	0.26	-	-
6.0	360	21.6	-	-	-	-	-	-	-	-	1.60	1.83	0.48	0.39	0.09	0.11
7.0	420	25.2	-	-	-	-	-	-	-	-	2.11	2.42	0.63	0.55	0.12	0.14
8.0	480	28.8	-	-	-	-	-	-	-	-	2.68	3.07	0.80	0.72	0.16	0.18
9.0	540	32.4	-	-	-	-	-	-	-	-	3.31	3.80	0.98	0.91	0.19	0.22
10.0	600	36.0	-	-	-	-	-	-	-	-	4.00	4.59	1.19	1.13	0.23	0.27
15.0	900	54.0	-	-	-	-	-	-	-	-	-	-	2.47	1.36	0.48	0.55
20.0	1200	72.0	-	-	-	-	-	-	-	-	-	-	-	-	0.81	0.93

Friction Loss for Rubber Hose (m/100 metres of hose)

Flow Rate			Friction Loss (m/100 metres of hose)				
lps	lpm	m³/hr	20mm	25mm	32mm	40mm	50mm
0.2	12	0.72	4.29	1.14	0.37	0.15	-
0.5	30	1.80	22.81	5.88	1.90	0.77	0.2
1.0	60	3.60	-	21.11	6.71	2.67	0.7
2.0	120	7.20	-	-	24.37	9.56	2.47
3.0	180	10.8	-	-	-	20.43	5.21
4.0	240	14.4	-	-	-	35.22	8.9
4.5	270	16.2	-	-	-	-	11.1

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Contact Details

Name:		Are you:	General Public / Homeowner	
Company (if appl.)			Plumber / Drainlayer / Electrician	
Postal Address:			Plumbing Merchant Sales Person	
Suburb:			Pump Merchant Sales Person	
City:			Architect / Designer	
Postcode:			Consultant / Engineer	
Phone:			Other	
Fax:		Are you:	Building	
Email:			Renovating	
			Specifying	

Merchant Name:		Phone:	
Branch:		Fax:	
City:		Email:	
Contact at branch (if known)			

Product Code	Description	Qty Required	Price incl GST Each	Price incl GST Total
		Freight (if any)		
		Total Price		
		Incl GST		

Product Code:	
Description:	
Enquiry:	
Product Code:	
Description:	
Enquiry:	

Fax: ☐ Phone: ☐ Email: ☐

1. Definitions

- 1.1 "Seller" shall mean Pump & Valve Specialties Limited its successors and assigns or any person acting on behalf of and with the authority of Pump & Valve Specialties Limited.
- 1.2 "Buyer" shall mean the Buyer (or any person acting on behalf of and with the authority of the Buyer) as described on any quotation, work authorisation or other form as provided by the Seller to the Buyer.
- 1.3 "Guarantor" shall mean that person (or persons) who agrees to be liable for the debts of the Buyer on a principal debtor basis.
- 1.4 "Goods" shall mean all Goods supplied by the Seller to the Buyer (and where the context so permits shall include any supply of Services as hereinafter defined) and includes Goods described on any invoices, quotation, work authorisation or any other forms as provided by the Seller to the Buyer.
- 1.5 "Services" shall mean all services supplied by the Seller to the Buyer and includes any advice or recommendations (and where the context so permits shall include any supply of Goods as defined above).
- 1.6 "Price" shall mean the price payable for the Goods as agreed between the Seller and the Buyer in accordance with clause 4 of this contract.

2. Acceptance

- 2.1 Any instructions received by the Seller from the Buyer for the supply of Goods and/or the Buyer's acceptance of Goods supplied by the Seller shall constitute acceptance of the terms and conditions contained herein.
- 2.2 Where more than one Buyer has entered into this agreement, the Buyers shall be jointly and severally liable for all payments of the Price.
- 2.3 Upon acceptance of these terms and conditions by the Buyer the terms and conditions are binding and can only be amended with the written consent of the Seller.
- 2.4 The Buyer shall give the Seller not less than fourteen (14) days prior written notice of any proposed change of ownership of the Buyer or any change in the Buyer's name and/or any other change in the Buyer's details (including but not limited to, changes in the Buyer's address, facsimile number, or business practice). The Buyer shall be liable for any loss incurred by the Seller as a result of the Buyer's failure to comply with this clause.
- 2.5 Goods are supplied by the Seller only on the terms and conditions of trade herein to the exclusion of anything to the contrary in the terms of the Buyer's order notwithstanding that any such order is placed on terms that purport to override these terms and conditions of trade.
3. The parties agree that for the purposes of the Construction Contracts Act 2002 where the Seller is a commercial provider this contract is not a commercial construction contract or a construction contract whether for work on a commercial or residential property and liability under this contract shall be in no way limited by any contract that the Buyer may have entered into with a third party in relation to the supply of Goods and/or Services to that third party or the payment by the third party to the Buyer of any monies whether by progress payments or otherwise.

4. Price And Payment

- 4.1 At the Seller's sole discretion the Price shall be either:
 - (a) as indicated on invoices provided by the Seller to the Buyer in respect of Goods supplied; or
 - (b) the Seller's quoted Price (subject to clause 4.2) which shall be binding upon the Seller provided that the Buyer shall accept the Seller's quotation in writing within thirty (30) days.
- 4.2 The Seller reserves the right to change the Price in the event of a variation to the Seller's quotation. Any variation from the plan of scheduled works or specifications (including, but not limited to, any variation as a result of additional works required due to unforeseen circumstances such as poor weather conditions, limitations to accessing the site, availability of machinery, safety considerations, prerequisite work by any third party not being completed or as a result of any increase to the Seller in the cost of materials and labour or as a result of fluctuations in currency exchange rates) will be charged for on the basis of the Seller's quotation and will be shown as variations on the invoice. Payment for all variations must be made in full at their time of completion.
- 4.3 At the Seller's sole discretion a deposit may be required.
 - (a) At the Seller's sole discretion payment shall be due on delivery of the Goods; or
 - (b) payment for approved Buyers shall be due twenty (20) days following the end of the month in which a statement is posted to the Buyer's address or address for notices.
- 4.4 Time for payment for the Goods shall be of the essence and will be stated on the invoice or other forms. If no time is stated then payment shall be due seven (7) days following the date of the invoice.
- 4.5 Payment will be made by cash, or by cheque, or by bank cheque, or by direct credit, or by any other method as agreed to between the Buyer and the Seller. GST and other taxes and duties that may be applicable shall be added to the Price except when they are expressly included in the Price.

5. Delivery Of Goods

- 5.1 At the Seller's sole discretion delivery of the Goods shall take place when:
 - (a) the Buyer takes possession of the Goods at the Seller's address; or
 - (b) the Buyer takes possession of the Goods at the Buyer's nominated address (in the event that the Goods are delivered by the Seller or the Seller's nominated carrier); or
 - (c) the Buyer's nominated carrier takes possession of the Goods in which event the carrier shall be deemed to be the Buyer's agent.
- 5.2 At the Seller's sole discretion the costs of delivery are:
 - (a) included in the Price; or
 - (b) in addition to the Price; or
 - (c) for the Buyer's account.
- 5.3 The Buyer shall make all arrangements necessary to take delivery of the Goods whenever they are tendered for delivery. In the event that the Buyer is unable to take delivery of the Goods as arranged then the Seller shall be entitled to charge a reasonable fee for redelivery.
- 5.4 The failure of the Seller to deliver shall not entitle either party to treat this contract as repudiated.
- 5.5 The Seller shall not be liable for any loss or damage whatsoever due to failure by the Seller to deliver the Goods (or any of them) promptly or at all, where due to circumstances beyond the control of the Seller.

6. Risk

- 6.1 If the Seller retains ownership of the Goods nonetheless, all risk for the Goods passes to the Buyer on delivery.
- 6.2 If any of the Goods are damaged or destroyed following delivery but prior to ownership passing to the Buyer, the Seller is entitled to receive all insurance proceeds payable for the Goods. The production of these terms and conditions by the Seller is sufficient evidence of the Seller's rights to receive the insurance proceeds without the need for any person dealing with the Seller to make further enquiries.

7. Title

- 7.1 The Seller and Buyer agree that ownership of the Goods shall not pass until:
 - (a) the Buyer has paid the Seller all amounts owing for the particular Goods; and
 - (b) the Buyer has met all other obligations due by the Buyer to the Seller in respect of all contracts between the Seller and the Buyer.
- 7.2 Receipt by the Seller of any form of payment other than cash shall not be deemed to be payment until that form of payment has been honoured, cleared or recognised and until then the Seller's ownership or rights in respect of the Goods shall continue.
- 7.3 It is further agreed that:

- (a) where practicable the Goods shall be kept separate and identifiable until the Seller shall have received payment and all other obligations of the Buyer are met; and
- (b) until such time as ownership of the Goods shall pass from the Seller to the Buyer the Seller may give notice in writing to the Buyer to return the Goods or any of them to the Seller. Upon such notice being given the rights of the Buyer to obtain ownership or any other interest in the Goods shall cease; and
- (c) the Buyer is only a bailee of the Goods and until such time as the Seller has received payment in full for the Goods then the Buyer shall hold any proceeds from the sale or disposal of the Goods, up to and including the amount the Buyer owes to the Seller for the Goods, on trust for the Seller; and
- (d) until such time that ownership in the Goods passes to the Buyer, if the Goods are converted into other products, the parties agree that the Seller will be the owner of the end products; and
- (e) if the Buyer fails to return the Goods to the Seller then the Seller or the Seller's agent may (as the invitee of the Buyer) enter upon and into land and premises owned, occupied or used by the Buyer, or any premises where the Goods are situated and take possession of the Goods, and the Seller will not be liable for any reasonable loss or damage suffered as a result of any action by the Seller under this clause.

8. Personal Property Securities Act 1999 ("PPSA")

- 8.1 Upon assenting to these terms and conditions in writing the Buyer acknowledges and agrees that:
 - (a) these terms and conditions constitute a security agreement for the purposes of the PPSA; and
 - (b) a security interest is taken in all Goods previously supplied by the Seller to the Buyer (if any) and all Goods that will be supplied in the future by the Seller to the Buyer.
- 8.2 The Buyer undertakes to:
 - (a) sign any further documents and/or provide any further information (such information to be complete, accurate and up-to-date in all respects) which the Seller may reasonably require to register a financing statement or financing charge statement on the Personal Property Securities Register; and
 - (b) not register a financing statement or a charge demand without the prior written consent of the Seller; and
 - (c) immediately advise the Seller of any material change in its business practices of selling the Goods which would result in a change in the nature of proceeds derived from such sales.
- 8.3 The Seller and the Buyer agree that nothing in sections 114(1)(a), 133 and 134 of the PPSA shall apply to these terms and conditions.
- 8.4 The Buyer waives its rights as a debtor under sections 116, 120(2), 121, 125, 126, 127, 129, 131 and 132 of the PPSA.
- 8.5 Unless otherwise agreed to in writing by the Seller, the Buyer waives its right to receive a verification statement in accordance with section 148 of the PPSA.
- 8.6 The Buyer shall unconditionally ratify any actions taken by the Seller under clauses 8.1 to 8.5.

9. Security And Charge

- 9.1 Despite anything to the contrary contained herein or any other rights which the Seller may have howsoever:
 - (a) where the Buyer and/or the Guarantor (if any) is the owner of land, realty or any other asset capable of being charged, both the Buyer and/or the Guarantor agree to mortgage and/or charge all of their joint and/or several interest in the said land, realty or any other asset to the Seller or the Seller's nominee to secure all amounts and other monetary obligations payable under these terms and conditions. The Buyer and/or the Guarantor acknowledge and agree that the Seller (or the Seller's nominee) shall be entitled to lodge where appropriate a caveat, which caveat shall be withdrawn once all payments and other monetary obligations payable hereunder have been met.
 - (b) should the Seller elect to proceed in any manner in accordance with this clause and/or its sub-clauses, the Buyer and/or Guarantor shall indemnify the Seller from and against all the Seller's costs and disbursements including legal costs on a solicitor and own client basis.
 - (c) the Buyer and/or the Guarantor (if any) agree to irrevocably nominate constitute and appoint the Seller or the Seller's nominee as the Buyer's and/or Guarantor's true and lawful attorney to perform all necessary acts to give effect to the provisions of this clause 9.1.

10. Buyer's Disclaimer

- 10.1 The Buyer hereby disclaims any right to rescind, or cancel any contract with the Seller or to sue for damages or to claim restitution arising out of any inadvertent misrepresentation made to the Buyer by the Seller and the Buyer acknowledges that the Goods are bought relying solely upon the Buyer's skill and judgment.

11. Defects

- 11.1 The Buyer shall inspect the Goods on delivery and shall within seven (7) days of delivery (time being of the essence) notify the Seller of any alleged defect, shortage in quantity, damage or failure to comply with the description or quote. The Buyer shall afford the Seller an opportunity to inspect the Goods within a reasonable time following delivery if the Buyer believes the Goods are defective in any way. If the Buyer shall fail to comply with these provisions the Goods shall be presumed to be free from any defect or damage. For defective Goods, which the Seller has agreed in writing that the Buyer is entitled to reject, the Seller's liability is limited to either (at the Seller's discretion) replacing the Goods or repairing the Goods.
- 11.2 Goods will not be accepted for return other than in accordance with 11.1 above.

12. Warranty

- 12.1 For Goods not manufactured by the Seller, the warranty shall be the current warranty provided by the manufacturer of the Goods. The Seller shall not be bound by nor be responsible for any term, condition, representation or warranty other than that which is given by the manufacturer of the Goods.

13. Consumer Guarantees Act 1993

- 13.1 If the Buyer is acquiring Goods for the purposes of a trade or business, the Buyer acknowledges that the provisions of the Consumer Guarantees Act 1993 do not apply to the supply of Goods by the Seller to the Buyer.

14. Intellectual Property

- 14.1 Where the Seller has designed, drawn or written Goods for the Buyer, then the copyright in those designs and drawings and documents shall remain vested in the Seller, and shall only be used by the Buyer at the Seller's discretion.
- 14.2 The Buyer warrants that all designs or instructions to the Seller will not cause the Seller to infringe any patent, registered design or trademark in the execution of the Buyer's order and the Buyer agrees to indemnify the Seller against any action taken by a third party against the Seller in respect of any such infringement.
- 14.3 The Buyer agrees that the Seller may use any documents, designs, drawings or Goods created by the Seller for the purposes of advertising, marketing, or entry into any competition.

15. Default & Consequences Of Default

- 15.1 Interest on overdue invoices shall accrue daily from the date when payment becomes due, until the date of payment, at a rate of two and a half percent (2.5%) per calendar month (and at the Seller's sole discretion such interest shall compound monthly at such a rate) after as well as before any judgment.
- 15.2 In the event that the Buyer's payment is dishonoured for any reason the Buyer shall be liable for any dishonour fees incurred by the Seller.
- 15.3 If the Buyer defaults in payment of any invoice when due, the Buyer shall indemnify the Seller from and against all costs and disbursements incurred by the Seller in pursuing the debt including legal costs on a solicitor and own client basis and the Seller's collection agency costs.
- 15.4 Without prejudice to any other remedies the Seller may have, if at any time the Buyer is in breach of any obligation (including those relating to payment) the Seller may suspend or terminate the supply of Goods to the Buyer and any of its other obligations under the terms and conditions. The Seller will not be liable to the Buyer for any loss or damage the Buyer suffers because the Seller has exercised its rights under this clause.
- 15.5 If any account remains overdue after thirty (30) days then an amount of the greater of twenty dollars (\$20.00) or ten percent (10%) of the amount overdue (up to a maximum of two hundred dollars (\$200.00)) shall be levied for administration fees which sum shall become immediately due and payable.
- 15.6 Without prejudice to the Seller's other remedies at law the Seller shall be entitled to cancel all or any part of any order of the Buyer which remains unfulfilled and all amounts owing to the Seller shall, whether or not due for payment, become immediately payable in the event that:
 - (a) any money payable to the Seller becomes overdue, or in the Seller's opinion the Buyer will be unable to meet its payments as they fall due; or
 - (b) the Buyer becomes insolvent, convenes a meeting with its creditors or proposes or enters into an arrangement with creditors, or makes an assignment for the benefit of its creditors; or
 - (c) a receiver, manager, liquidator (provisional or otherwise) or similar person is appointed in respect of the Buyer or any asset of the Buyer.

16. Cancellation

- 16.1 The Seller may cancel any contract to which these terms and conditions apply or cancel delivery of Goods at any time before the Goods are delivered by giving written notice to the Buyer. On giving such notice the Seller shall repay to the Buyer any sums paid in respect of the Price. The Seller shall not be liable for any loss or damage whatsoever arising from such cancellation.
- 16.2 In the event that the Buyer cancels delivery of the Goods the Buyer shall be liable for any loss incurred by the Seller (including, but not limited to, any loss of profits) up to the time of cancellation.
- 16.3 Cancellation of orders for Goods made to the Buyer's specifications or non-stocklist items will definitely not be accepted, once production has commenced.

17. Privacy Act 1993

- 17.1 The Buyer and the Guarantor/s (if separate to the Buyer) authorises the Seller to:
 - (a) collect, retain and use any information about the Buyer and/or Guarantors, for the purpose of assessing the Buyer's and/or Guarantors creditworthiness or marketing products and services to the Buyer and/or Guarantors; and
 - (b) disclose information about the Buyer and/or Guarantors, whether collected by the Seller from the Buyer and/or Guarantors directly or obtained by the Seller from any other source, to any other credit provider or any credit reporting agency for the purposes of providing or obtaining a credit reference, debt collection or notifying a default by the Buyer and/or Guarantors.
- 17.2 Where the Buyer and/or Guarantors are an individual the authorities under clause 17.1 are authorities or consents for the purposes of the Privacy Act 1993.
- 17.3 The Buyer and/or Guarantors shall have the right to request the Seller for a copy of the information about the Buyer and/or Guarantors retained by the Seller and the right to request the Seller to correct any incorrect information about the Buyer and/or Guarantors held by the Seller.

18. Unpaid Seller's Rights

- 18.1 Where the Buyer has left any item with the Seller for repair, modification, exchange or for the Seller to perform any other service in relation to the item and Seller has not received or been tendered the whole of the Price, or the payment has been dishonoured, the Seller shall have:
 - (a) a lien on the item;
 - (b) the right to retain the item for the Price while the Seller is in possession of the item;
 - (c) a right to sell the item.
- 18.2 The lien of the Seller shall continue despite the commencement of proceedings, or judgement for the Price having been obtained.

19. Disputes

- 19.1 If a dispute arises between the parties to this contract then either party shall send to the other party a notice of dispute in writing adequately identifying and providing details of the dispute. Within fourteen (14) days after service of a notice of dispute, the parties shall confer at least once, to attempt to resolve the dispute. At any such conference each party shall be represented by a person having authority to agree to a resolution of the dispute. In the event that the dispute cannot be so resolved either party may by further notice in writing delivered by hand or sent by certified mail to the other party refer such dispute to arbitration. The arbitration should be under a single arbitrator agreed upon by both parties, or failing agreement, by two arbitrators (one to be appointed by each party) and their umpire (appointed by them prior to arbitration), such arbitration to be carried out in accordance with provisions of the Arbitration Act 1996.

20. General

- 20.1 If any provision of these terms and conditions shall be invalid, void, illegal or unenforceable the validity, existence, legality and enforceability of the remaining provisions shall not be affected, prejudiced or impaired.
- 20.2 These terms and conditions and any contract to which they apply shall be governed by the laws of New Zealand and are subject to the jurisdiction of the courts of New Zealand.
- 20.3 The Seller shall be under no liability whatsoever to the Buyer for any indirect and/or consequential loss and/or expense (including loss of profit) suffered by the Buyer arising out of a breach by the Seller of these terms and conditions.
- 20.4 In the event of any breach of this contract by the Seller the remedies of the Buyer shall be limited to damages which under no circumstances shall exceed the Price of the Goods.
- 20.5 The Buyer shall not be entitled to set off against, or deduct from the Price, any sums owed or claimed to be owed to the Buyer by the Seller nor to withhold payment of any invoice because part of that invoice is in dispute.
- 20.6 The Seller may license or sub-contract all or any part of its rights and obligations without the Buyer's consent.
- 20.7 The Seller reserves the right to review these terms and conditions at any time. If, following any such review, there is to be any change to these terms and conditions, then that change will take effect from the date on which the Seller notifies the Buyer of such change.
- 20.8 Neither party shall be liable for any default due to any act of God, war, terrorism, strike, lock-out, industrial action, fire, flood, drought, storm or other event beyond the reasonable control of either party.
- 20.9 The failure by the Seller to enforce any provision of these terms and conditions shall not be treated as a waiver of that provision, nor shall it affect the Seller's right to subsequently enforce that provision.



Providing Pumping Solutions

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