



Providing Pumping Solutions

OPERATION & MAINTENANCE MANUAL
Fastflo Packaged Pumping Station



Fastflo Pump Systems

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WASTEWATER/GREYWATER PUMP STATIONS | **NOVABOX / CUBE**

DESCRIPTION

- Ultra-Compact self contained above-ground wastewater pump out units designed for wastewater and greywater situations where gravity discharge is not feasible
- Units are usually located below sink or basin unit to accept gravity waste pipe inlets

CONSTRUCTION/FEATURES

- PVC Sealed tank c/w clip on sealed PVC lid
- Non-corrosive and long lasting tank
- Compact - easily fits under most sink cabinets
- Simple installation - all internal plumbing done
- 2 year pump warranty

APPLICATIONS

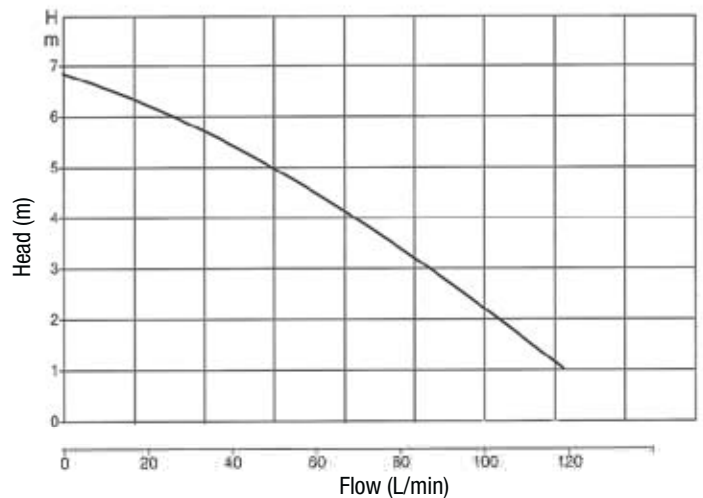
- Kitchen Sinks/Kitchenettes
- Laundry/Tubs/Washing Machines
- Cleaners Sinks/Wash Rooms
- Restaurants/Cafes/Lunch Bars
- Doctors/Dentists
- Surgeries/Hospitals
- Office Blocks/High rise buildings
- General domestic and light commercial



Model	Motor size	Voltage	Solids Passage	Outlet size
NOVABOX	0.35kW	230 V	10mm	32mm
CUBE	0.35kW	230 V	10mm	32mm

High Level Alarm and Solenoid Valves available on Cube only if required - Refer pages 106 & 120.

HYDRAULIC DATA



OPERATION & MAINTENANCE MANUAL

FASTFLO UNDERSINK SULLAGE CHAMBER

Warranty Registration Form

Section 1

GS1	General Specification
FFP20	Sketch showing Typical Pump Station Arrangement
PS-PE1	Producer Statement

Section 2

Pump Technical Data & Operating Instructions

Section 3

Maintenance Schedule

Section 4

US1 – US2	Plumbing Instructions & Installation Procedure
US3 / VN1	Ventilation Requirements

Section 5

EL.4A	Electrical Wiring Instructions
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Optional Extras (where applicable/required)

US-HL/CONT	High Level Alarm Instructions
US-SOL	Liquid Level Alarm & Valve Shut-off Instructions

24 MONTH WARRANTY REGISTRATION FORM

JOB NO: F

Thank you for purchasing a FASTFLO unit from Fastflo Pump Systems.
Please fill in the warranty form and send back to us, by post, fax or email.
The manual copy is to fill in and keep for your own records.
The warranty is not valid unless the Warranty Registration is returned to Fastflo Pump Systems.

Please Print Clearly:

PUMP STATION MODEL:

PUMP STATION TANK NO:

SUBMERSIBLE PUMP MODEL:

SUBMERSIBLE PUMP SERIAL NO:

DATE OF PURCHASE:.....

DEALER PURCHASED FROM:.....

DEALER'S ADDRESS:.....

OWNER'S NAME:.....

OWNER'S ADDRESS:.....

DATE OF INSTALLATION:.....

INSTALLERS – PLUMBER:.....

PHONE NO:.....

INSTALLERS – ELECTRICIAN:.....

PHONE NO:.....

 **PURCHASER'S SIGNATURE:**.....

WARRANTY AND LIMITATION OF WARRANTY

FASTFLO Products when installed and operated correctly in accordance with our installation instructions and relevant plumbing and electrical regulations, will give you a trouble free service. If you are unsure of the installation, servicing and operational requirements, we recommend that you contact Fastflo Pump Systems. We also recommend precautions are taken against overflow or leakage of any cause.

Fastflo Pump Systems warrants your unit for goods sold and used in NZ in accordance with and subject to the conditions herein contained against any original defects from faulty workmanship or materials for a period of normal use in 24 months from the date of supply for new equipment unless otherwise stated in writing. Where the unit is not installed immediately, this warranty is valid only if the unit has been stored correctly and proof of installation date is provided.

Fastflo Pump Systems will not be liable for costs involved with the removal and reinstallation of the equipment that has failed under the warranty period.

In the event of a breakdown within the warranty period, please contact Fastflo Pump Systems. If the fault is deemed by Fastflo Pump Systems not to be covered by our warranty then all replacement parts, labour, travelling and other charges will be your responsibility.

This warranty does not extend to cover your unit or any part of it which in the reasonable opinion of Fastflo Pump Systems has not been installed, operated or maintained correctly, has been worn by normal wear & tear, operated in an abnormal condition or outside the parameters specified to Fastflo Pump Systems or has been damaged or rendered by accident, wilful act, negligence, misuse, alteration, adjustment or repair other than by Fastflo Pump Systems, usage of incorrect or fluctuating voltage, electrical fusion, or damaged by force majeure.

Any goods or parts supplied or work done by Fastflo Pump Systems shall not extend Fastflo Pump Systems liability beyond the stipulated warranty period.

Notwithstanding the warrant and undertaking above, Fastflo Pump Systems shall not be liable for any consequential loss or damage of any kind whatsoever (including financial loss, injury, or death of any persons, animals or loss or damage to property) whether suffered or incurred by you or by some third party where such loss or damage arises in relation to or as a result of the unit or any part of it thereof and whether arising wholly or partially as a result of the negligence of Fastflo Pump Systems to you or its agents or otherwise. In no circumstances shall the combined liability of Fastflo Pump Systems to you and to any third party exceed the total purchase price of the unit or the replacement part thereof in question.

Where the goods are sold are consumer goods not acquired for business purposes as defined by the Consumer Guarantees Act 1993, the Warranty exclusions shall apply only to the extent permissible under the Act.



Section 1

GENERAL SPECIFICATION

PUMP STATION DETAILS & DRAWINGS

**FASTFLO UNDERSINK SULLAGE CHAMBER WASTEWATER / GREYWATER
CUBE (SMALL) & US (LARGE) SERIES
GENERAL SPECIFICATION**

Each pump station is supplied as a fully integrated packaged system, including:-

HOLDING TANK

1 only Polyethylene rotationally-moulded holding tank complete with sealed polyethylene lid. The tank is fitted up complete with pump, valves and pipework as specified below.

Tank Size (Cube):	410mm long x 300mm wide x 400mm high
Tank Size (US Series):	510mm long x 410mm wide x 475mm high
Total Tank Capacity:	43 Litres (Cube) 90 Litres (US Series)

U/S STAINLESS Models:

All as above, except tank is in 304 stainless steel for special applications.

Approx. tank dimensions: 500mm long x 400mm wide x 460mm high

PUMP

1 only DAB single-phase submersible pump, complete with control float switch.

Pump Models:

CUBE/ US- STD	DAB Nova 300 Drainage	0.35kW	1.6 Amps
CUBE/US- PLUS	DAB Nova 600 Drainage	0.8kW	3.4 Amps
CUBE/US-VX	DAB Feka 600 Vortex	1.0 KW	4.3 Amps
U/S Stainless	Any of the above options		

PIPEWORK & VALVES

CUBE/ US-STD and PLUS Models:

Pre-fabricated pump pipework and fittings are in 32mm PVC pressure pipe. 1 only 32mm brass non-return valve and 1 only quick-release coupling are supplied with the pipework.

Outlet is 32mm female BSP. 1 x 40mm Uniseal is supplied for the inlet and 1 x 32mm Uniseal for venting.

CUBE/US-VX Model:

Pre-fabricated pump pipework and fittings are in 32mm PVC pressure pipe. 1 only 32mm PVC full-flow ball non-return valve and 1 only quick-release coupling are supplied with the pipework. Outlet is 32mm female BSP. 1 x 40mm Uniseal is supplied for the inlet and 1 x 32mm Uniseal for venting.

ELECTRICAL CONTROLS

The Undersink pump station includes power lead with 3-pin plug for connection to power.

US-HL/CONT High Level Alarm Option (where required) includes:

1 x wall-mounting polycarbonate control box c/w 1m flex and 3-pin plug. Indicator lights on the control box are green for "Power ON" indication and red for "High Level Alarm" indication, and also a mute switch on the front overlay. Buzzer built into unit. Has connections for remote 24VDC alarm (light/buzzer) up to 500mA and mute switch. Has voltage free contacts for remote alarm, BMS or solenoid valve panel option as below.

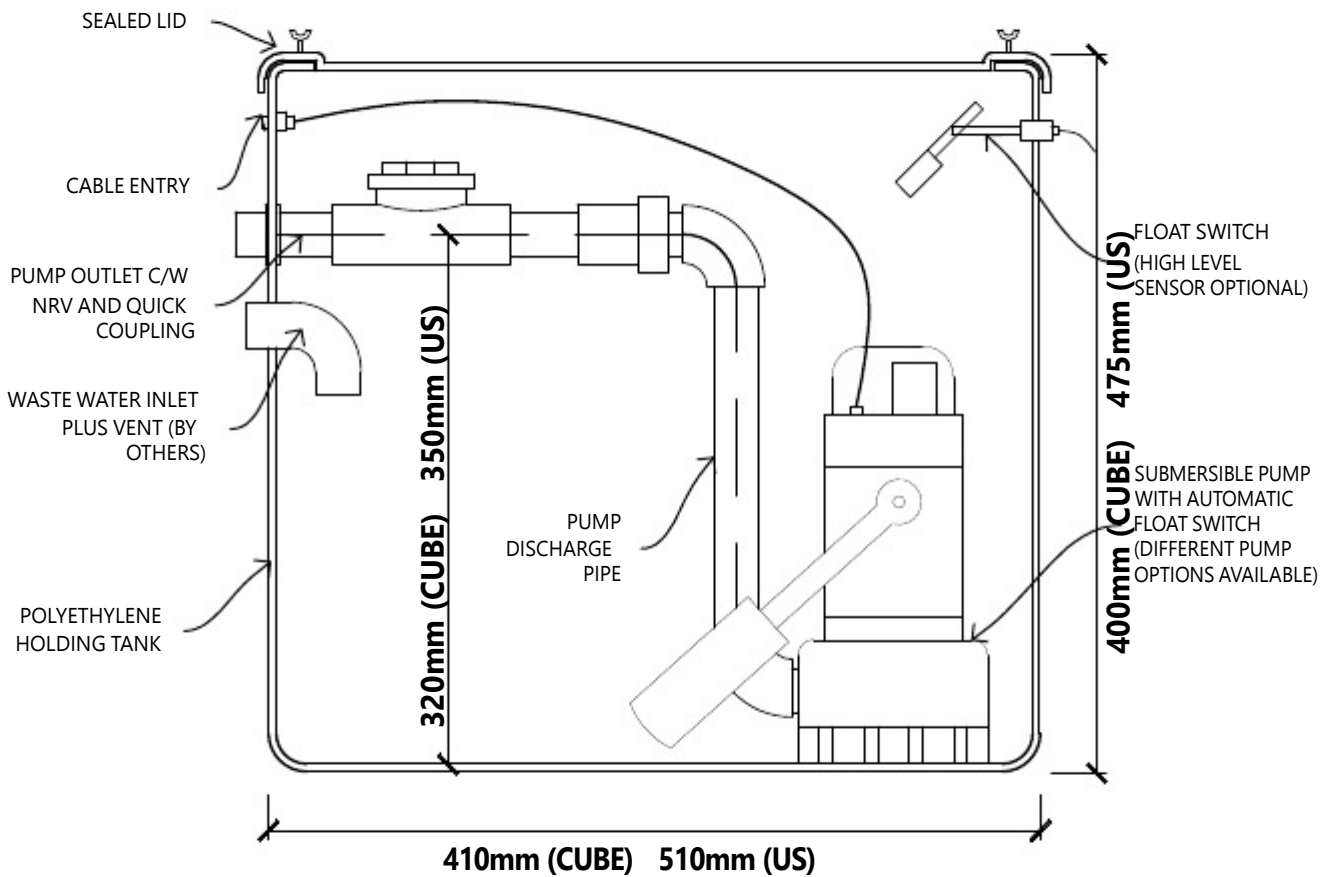
US-SOL Solenoid Valve Option (where required) includes:

Connections for solenoid valve are applicable only when this option is required.

Includes 1 x wall-mounted polycarbonate solenoid valve control box c/w plug & play lead that connects to the high level alarm box above.

NOTE:

1. NON RETURN VALVE IS EITHER IN BRASS OR PVC, DEPENDING ON THE PUMP MODEL
2. FLOAT SWITCH IS ACTUALLY MOUNTED ON THE SAME TANK WALL AS OUTLET PIPE ETC, BUT IS SHOWN ON OPPOSITE SIDE FOR CLARITY



UNDERSINK CUBE – 43 LTR CAPACITY
UNDERSINK US – 90LTR CAPACITY

FASTFLO PUMP SYSTEMS

41 Raiha St, Elsdon, Porirua
 P O Box 56-008, Wellington 5249
 Tel 04 239 6006 Fax 04 237 8174

FASTFLO PACKAGED PUMP STATION
 MODEL: "UNDERSINK SULLAGE CHAMBER"

TYPICAL ARRANGEMENT

Scale 1:5

Drg No FFP 20

Date APRIL 2012

PRODUCER STATEMENT

FASTFLO PACKAGED PUMP STATION POLYETHYLENE MODELS

1. WET WELLS

Polyethylene wetwells are rotationally moulded in virgin material circumferentially reinforced, and with wall thickness designed to take internal and external hydraulic pressures as applicable to buried tanks.

Design Life: 25 years

2. PUMPS

Pumps as manufactured by leading ISO 9001 certified pump companies, to meet consultant's specification. Manufacturer's standard 24 months warranty applies.

3. COMPONENTRY, PIPEWORK & VALVES

All in-tank components to consultant's requirements, in new materials, including isolation and non-return valves, all conforming to applicable AS/NZS Standards.

All in-tank work by registered and experienced tradesmen.

4. ELECTRICAL / CONTROLS

All electrical controls and control panels comply with appropriate AS/NZS Standards, manufactured and tested by registered electricians.

5. MANUFACTURE

All fabrication and assembly of components, electrical wiring and control panels are executed in our premises by our own qualified staff.

6. INSTRUCTIONS

Each pump station is provided with a comprehensive manual with full installation instructions, wiring diagrams and commissioning details.

7. WARRANTIES

All components, controls, pipework and fittings are warranted for 24 months against defective equipment and workmanship.



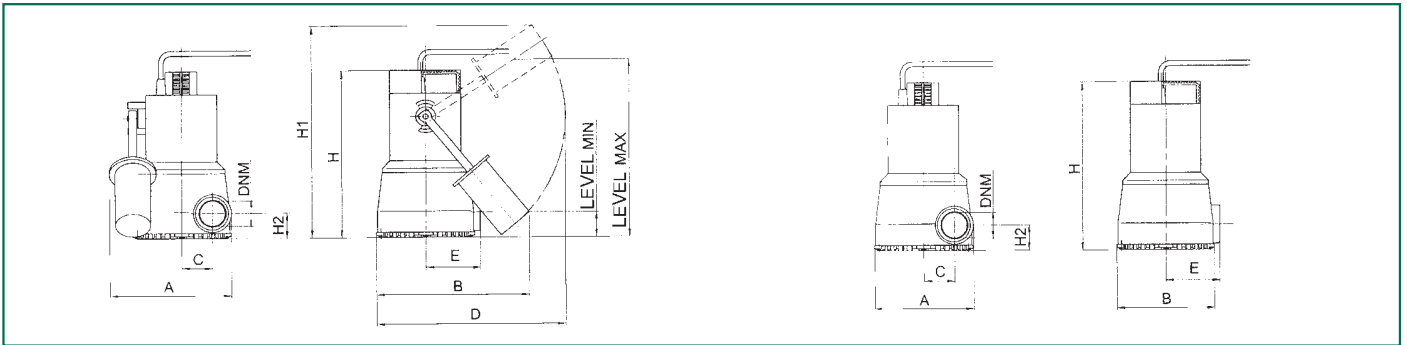
Section 2

PUMP DATA

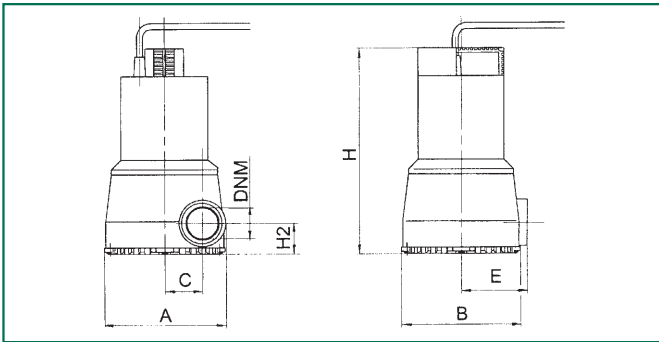
PUMP OPERATING & MAINTENANCE MANUAL

DIMENSIONS AND WEIGHTS

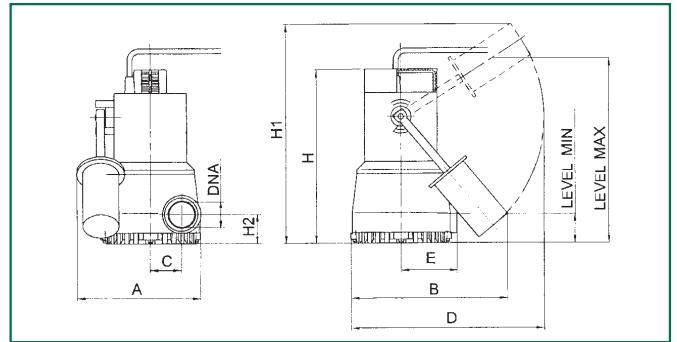
NOVA 180



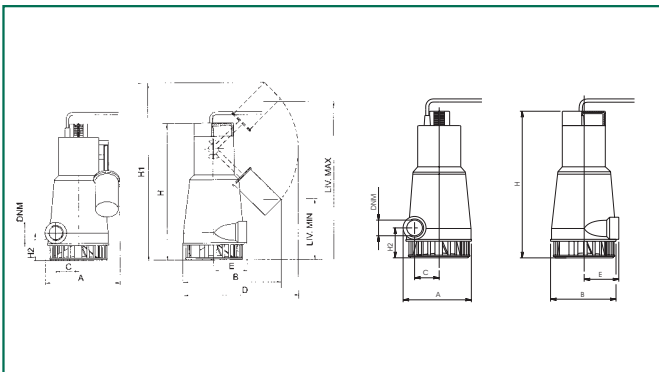
NOVA 200



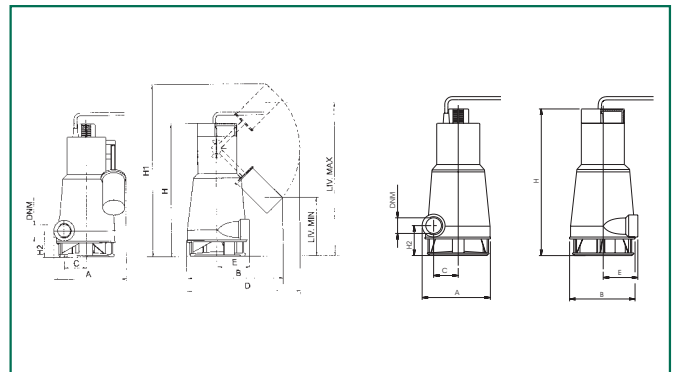
NOVA 300



NOVA 600



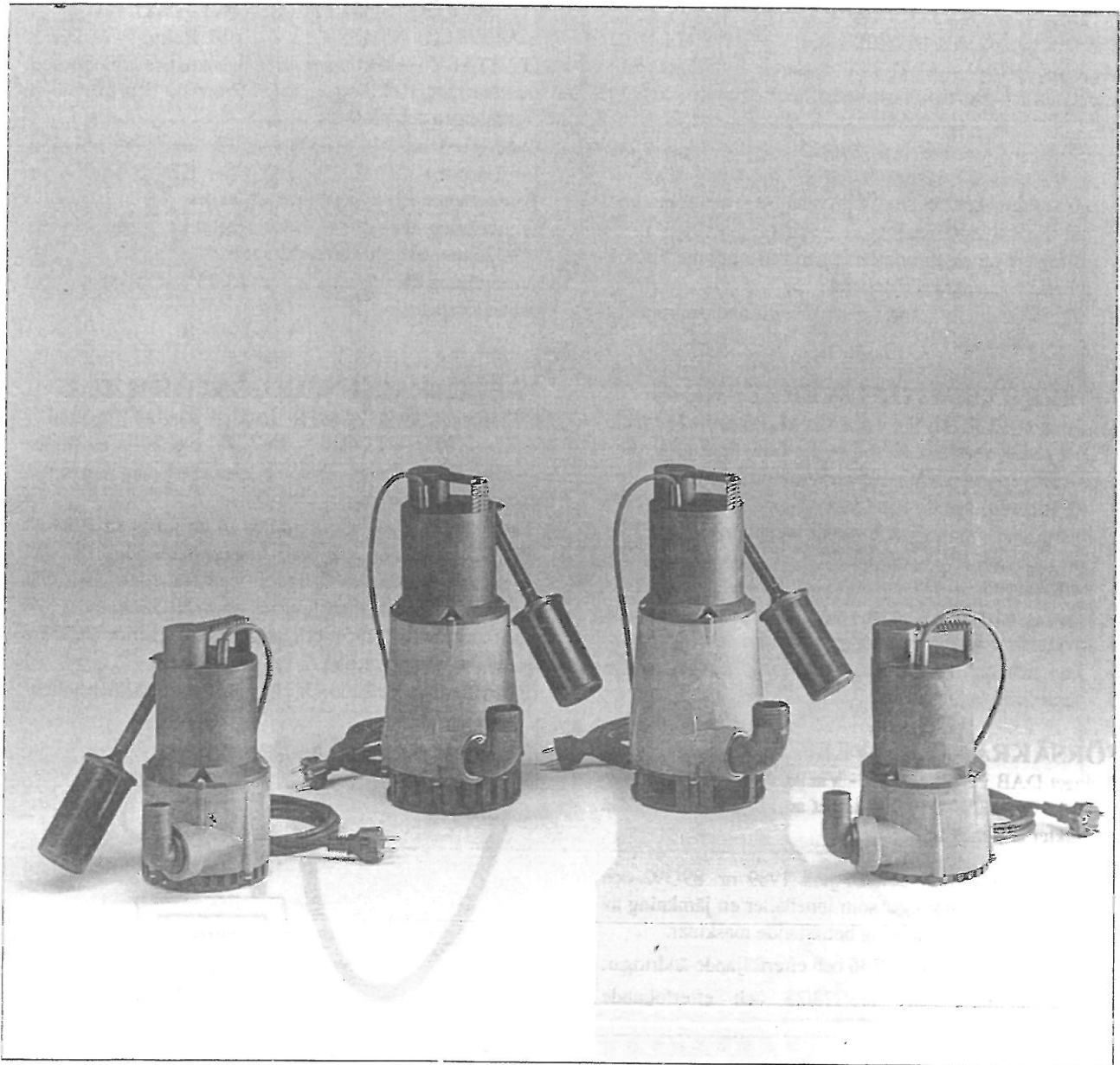
FEKA 600



MODEL	A	B	C	D	E	H	H1	H2	LEVEL MIN.	LEVEL MAX.	DNM	PACKAGING DIMENSIONS			VOLUME m ³	WEIGHT Kg
												L/A	L/B	H		
NOVA 180 M-A	181	235	46	296	82	253	345	38	77	277	1/4"G	287	202	320	0,019	4,6
NOVA 180 M-NA	148	148	46	-	82	253	-	38	-	-	1/4"G	287	202	320	0,019	4,5
NOVA 180 M-A SV *	181	235	46	296	82	253	345	38	77	277	1/4"G	287	202	320	0,019	4,6
NOVA 180 M-NA SV *	148	148	46	-	82	253	-	38	-	-	1/4"G	287	202	320	0,019	4,5
NOVA 200 M-NA	148	148	46	-	82	253	-	38	-	-	1/4"G	287	202	320	0,019	4,5
NOVA 200 M-NA SV *	148	148	46	-	82	253	-	38	-	-	1/4"G	287	202	320	0,019	4,5
NOVA 300 M-A	181	235	46	296	82	262	354	47	85	285	1/4"G	287	202	320	0,019	4,6
NOVA 300 M-A SV *	181	235	46	296	82	262	354	47	85	285	1/4"G	287	202	320	0,019	4,6
NOVA 600 M-A	193	235	56	296	90	368	443	73	190	390	1/4"G	287	202	431	0,025	7
NOVA 600 (M-T)-NA	162	160	56	-	90	368	-	73	-	-	1/4"G	287	202	431	0,025	6,7
NOVA 600 M-A SV *	193	235	56	296	90	368	443	73	190	390	1/4"G	287	202	431	0,025	7
NOVA 600 (M-T)-NA SV *	162	160	56	-	90	368	-	73	-	-	1/4"G	287	202	431	0,025	6,7
FEKA 600 M-A	193	235	56	296	90	368	443	73	190	390	1/4"G	287	202	431	0,025	7
FEKA 600 (M-T)-NA	162	160	56	-	90	368	-	73	-	-	1/4"G	287	202	431	0,025	6,7
FEKA 600 M-A SV *	193	235	56	296	90	368	443	73	190	390	1/4"G	287	202	431	0,025	7
FEKA 600 (M-T)-NA SV *	162	160	56	-	90	368	-	73	-	-	1/4"G	287	202	431	0,025	6,7

* With special stainless steel motor shaft.

ISTRUZIONI PER L'INSTALLAZIONE E LA MANUTENZIONE
INSTRUCTIONS DE MISE EN SERVICE ET D'ENTRETIEN
INSTRUCTIONS FOR INSTALLATION AND MAINTENANCE
INSTALLATIONSANWEISUNG UND WARTUNG
INSTRUCTIES VOOR INGEBRUIKNAME EN ONDERHOUD
INSTRUCCIONES PARA LA INSTALACION Y EL MANTENIMIENTO
INSTALLATIONS - OCH UNDERHÅLLSANVISNING



DAB
PUMP PERFORMANCE

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1. GENERAL



Read this documentation carefully before installation. Installation and functioning must comply with the safety regulations in force in the country in which the product is installed. The entire operation must be carried out in a workmanlike manner.

Failure to comply with the safety regulations not only causes risk to personal safety and damage to the equipment, but invalidates every right to assistance under guarantee.

2. APPLICATIONS

The pumps in the **NOVA** series are of submersible type, designed and built to pump cloudy fibre-free water, prevalently for domestic uses in fixed applications, with manual or automatic operation, for draining cellars and garages prone to flooding, for pumping drains, rainwater traps or infiltrations from gutters, etc.

Thanks to their compact shape and easy manoeuvrability, they are also suitable for particular applications as portable pumps for emergency uses, such as for drawing water from tanks or rivers, draining swimming pools or fountains, excavations or underpasses. Also suitable for gardening and hobby uses in general.

The pumps in the **FEKA** series, also of submersible type, have been designed and built for lifting dirty water from septic tanks and are able to deal with suspended solid bodies with dimensions of up to 25 mm diameter. The level switch allows fixed installation and guarantees automatic pumping operation.



These pumps cannot be used in swimming pools, ponds or tanks in which people or present, or for pumping hydrocarbons (petrol, diesel fuel, fuel oils, solvents, etc.) in accordance with the accident-prevention regulations in force.

3. PUMPED FLUIDS

	NOVA	FEKA
Groundwater	♦	♦
Rainwater	♦	♦
Clear waste water	♦	♦
Sewage		♦
Untreated dirty water containing solid bodies and long fibres		♦
Fountain water	♦	
River or lake water	♦	♦

4. TECHNICAL DATA AND RANGE OF USE

- Supply voltage see electric data plate

- Delayed line fuses indicative values (Ampere):

Model	Line fuses 1x220-240V 50Hz	Line fuses 1x110V 50Hz	Line fuses 1x230V 60Hz	Line fuses 1x115V 60Hz	Line fuses 3x400V 50/60Hz
NOVA 180; NOVA 200; NOVA 300;	2	4	2	4	--
NOVA 600; FEKA 600;	4	8	4	8	2

- Flow rate: from 0.5 to 16 m³/h (see electric data plate)
- Head: up to 11 mt. (see electric data plate)
- Degree of motor protection: IP68
- Protection class: F
- Absorbed power: see electric data plate
- Storage temperature: -10°C to +40°C
- Liquid temperature range: from 0° to +35°C for domestic uses according to Safety standards EN 60335-2-41
- Maximum immersion: 7 metres
- Granulometry for passing through the intake grid:

NOVA 180	5 mm
NOVA 200	5 mm
NOVA 300	10 mm
NOVA 600	10 mm
FEKA 600	25 mm

- Minimum draught:

NOVA 180	77 mm (AUT) 8 mm
NOVA 200	8 mm
NOVA 300	85 mm
NOVA 600	175 mm (AUT) 38 mm
FEKA 600	175 mm (AUT) 38 mm

5. MANAGEMENT

5.1. Storage

All the pumps must be stored indoors, in a dry, vibration-free and dust-free environment, possibly with constant air humidity.

They are supplied in their original packaging and must remain there until the time of installation.

5.2. Transport

Avoid subjecting the products to needless jolts or collisions.

5.3. Weights

The adhesive label on the package indicates the total weight of the electropump.

6. WARNINGS

1. Use in cellars, basements, etc. is allowed only if the electric system is in possession of safety precautions in accordance with the regulations in force.
2. The pump is provided with a carrying handle which may also be used to lower it into wells or deep holes with a cable. (Fig. A).



The pumps must never be carried, lifted or made to operate hanging from their power cable.

3. If the power cable is damaged in any way it must be **replaced** and **not repaired**. This must be done by skilled personnel, in possession of the qualifications required by the regulations in force.
4. Qualified personnel must also be employed for all electrical repairs which, if badly carried out, could cause damage and accidents.
5. The pump must **never** be allowed to run dry.

The Manufacturer does not vouch for correct operation of the pump if it is tampered with or modified.

On the body of the NOVA 600 and of the FEKA 600 there is a breather hole to avoid cavitation phenomena when starting the pump. During pump operation it is therefore normal for a small amount of water to leak out through this hole.

The sealing device contains non-toxic oil which may however alter the characteristics of the water, if it is pure water, in the event of leakage of the pump.

6.1. Skilled technical personnel



It is advisable that installation be carried out by skilled personnel in possession of the technical qualifications required by the specific legislation in force.

The term **skilled personnel** means persons whose training, experience and instruction, as well as their knowledge of the respective standards and requirements for accident prevention and working conditions, have been approved by the person in charge of plant safety, authorizing them to perform all the necessary activities, during which they are able to recognize and avoid all dangers. (Definition for technical personnel IEC 364).

6.2. Safety

Use is allowed only if the electric system is in possession of safety precautions in accordance with the regulations in force in the country where the product is installed (for Italy, CEI 64/2).

6.3. Responsibility



The Manufacturer does not vouch for correct operation of the pumps if they are tampered with or modified, run outside the recommended work range or in contrast with the other instructions given in this manual.

The Manufacturer declines all responsibility for possible errors in this instructions manual, if due to misprints or errors in copying. The company reserves the right to make any modifications to products that it may consider necessary or useful, without affecting the essential characteristics.

7. INSTALLATION

7.1. If the bottom of the well or borehole in which the pump is to operate is particularly dirty, it is advisable to provide a support for the pump to sit on so as to avoid clogging of the intake grid.(Fig. B)

7.2. It is advisable to use pipes with an internal diameter of 30 mm to avoid falls in pump performance and the possibility of clogging.

7.3. The pump must be totally immersed in water.

7.4. On the version provided with a float switch, ensure that the control lever can move freely. Ensure that the **minimum dimensions** of the borehole are as in the following table :

TYPE OF PUMP	BASE DIMENSIONS (mm)	HEIGHT (mm)
NOVA 180	400 x 400	400
NOVA 200	400 x 400	400
NOVA 300	400 x 400	400
NOVA 600	400 x 400	600
FEKA 600	400 x 400	600

7.5. The dimensions of the borehole must also be calculated with relation to the quantity of water arriving and to the pump flow rate so as not to subject the motor to excessive starting operations.

7.6. **Attention: the pump must be installed in vertical!**

8. ELECTRICAL CONNECTION

Caution! always follow the safety regulations.

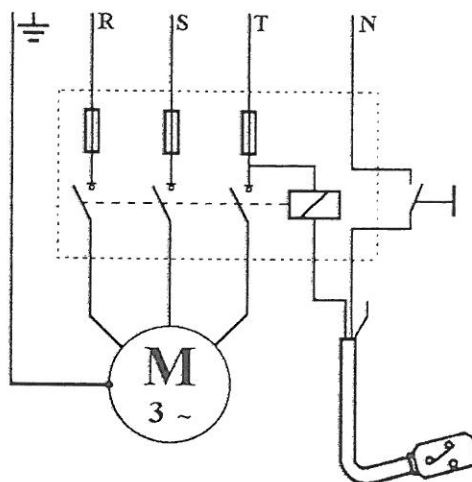


Ensure that the mains voltage is the same as the value shown on the motor plate and that there is the possibility of **MAKING A GOOD EARTH CONNECTION. FIG. C.**

8.1. **Fixed pumping stations must always be provided with an automatic switch with an intervention current of less than 30 mA.**

8.2. Single-phase motors are provided with built-in thermal overload protection and may be connected directly to the mains. **N.B. If the motor is overloaded it stops automatically. Once it has cooled down it starts again automatically without any need for manual intervention.**

8.3. Three-phase pumps must be protected with motor protectors suitably calibrated according to the values on the data plate of the pump to be installed. Those which are controlled by a float switch must be fed by the mains power supply by means of a power meter as shown in the following figure:



- 8.4. 5. Do not damage or cut the power cable. If this should occur accidentally, have it repaired or replaced by skilled and qualified personnel.
Depending on the applications it is necessary to use a main cable type H05 RN-F for internal uses and type H07 RN-F (≥ 10 mt) for external uses, complete with plug. For cable without plug, it is necessary a means for disconnecting from the supply, having a contact of at least 3 mm. in all poles.

CAUTION: the length of the power cable on the pump limits the maximum depth of immersion when using the pump.

9. STARTING UP

Models with a float switch start up automatically when the water level rises; models without a float are started by means of a switch located upstream from the socket (not supplied).

9.1. Checking the direction of rotation (for three-phase motors)

- 1) Start the pump and observe the water flow rate.
- 2) Stop the pump, switch off the power and invert two phases on the supply line (upstream from the control unit).
- 3) Restart the pump and check the water flow rate again.
- 4) Stop the pump.

The correct direction of rotation is the one that gives the higher flow rate.

It is not necessary to check the direction of rotation of single-phase motors.

10. PRECAUTIONS

- 10.1. The electropump should not be started more than 20 times in one hour so as not to subject the motor to excessive thermal shock.
- 10.2. **DANGER OF FROST :** When the pump remains inactive for a long time at temperatures of less than 0°C , it is necessary to ensure that there is no water residue which could freeze and cause cracking of the plastic parts.
- 10.3. If the pump has been used with substances which tend to form a deposit, rinse it after use with a powerful jet of water so as to avoid the formation of deposits or scale which would tend to reduce the yield of the pump.

11. MAINTENANCE AND CLEANING



In normal operation, the pump does not require any specific maintenance. **The electropump must not be dismantled unless by skilled personnel in possession of the qualifications required by the regulations in force.** In any case, all repairs and maintenance jobs must be carried out only after having disconnected the pump from the power mains.

When restarting the pump, ensure that the intake filter is always fitted so as not create any risk or possibility of accidental contact with the moving parts.

12. MODIFICATIONS AND SPARE PARTS



Any modification not authorized beforehand relieves the manufacturer of all responsibility. All the spare parts used in repairs must be original ones and the accessories must be approved by the manufacturer so as to be able to guarantee maximum safety of the machines and systems in which they may be fitted.



In the event of damage to the power cable of this appliance, it must be repaired by a skilled technician, as special tools are required.

13. TROUBLESHOOTING

FAULT	CHECK (possible cause)	REMEDY
1. The motor does not start and makes no noise	A. Check that the motor is live. B. Check the protection fuses. C. The switch is not activated by the float.	B. If they are burnt-out, change them. C. Ensure that the float moves freely. Increase the depth of the borehole.
2. The pump does not deliver.	A. The intake grid or the pipes are blocked. B. The impeller is worn or blocked. C. The required head is higher than the pump characteristics.	A. Remove the blockage. B. Change the impeller or remove the blockage.
3. The pump does not stop.	A. The switch is not disactivated by the float.	A. Ensure that the float moves freely.
4. The flow is insufficient.	A. Ensure that the intake grid is not partly blocked. B. Ensure that the impeller or the delivery pipe are not partly blocked or encrusted. C. Ensure that the check valve (if fitted) is not partly clogged. D. On three-phase motors, check that the direction of rotation is correct.	A. Remove any blockage. B. Remove any blockage. C. Carefully clean the check valve. D. If necessary, invert the connection of two supply wires.
5. The pump stops after running for a short time.	A. The thermal overload protection device is stopping the pump.	A. - Check that the liquid to be pumped is not too dense as this could cause overheating of the motor. - Check that the water temperature is not too high.



Section 3

MAINTENANCE SCHEDULE

MAINTENANCE SCHEDULE

Tank to be regularly cleaned by hand-held hose, and pump and alarm float operation checked.

In high grease applications, tank should be degreased on a regular basis by a waste removal contractor.

Pump to be removed for service on approximately a 12-monthly cycle, as per pump instructions.

If there are fat build-up problems, we recommend regularly using “Bio-Flush” Live Culture Grease & Fat Digester to break down any fat build-up.

For more information see next page, contact us or visit our website www.fastflo.co.nz

GREASE & SCUM DIGESTORS

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



FAT BAG SR

FBSR

- Designed to continually release powerful fat and scum digesting bacteria in pump stations, WWTPs, Septic Tanks, Grease-traps & Sewer Drains
- Reduces organic pollutants in the waste stream
- 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

- Biological Control
- Reduces Contaminants
- Controls Odours
- Keeps drains flowing
- Liquefies Fat & Grease
- Cost Effective



BIO-FLUSH

BIO-F

- Live Culture Grease & Fat Digester for under-bench restaurant Fat Collection Systems & Grease-traps - 1 LTR
- Excellent at keeping fat & grease liquified
- Softens hardened fat build up
- Helps to lower the levels of water born contaminants when used regularly
- Helps to keep drain lines open and free flowing
- Reduces bad odours from old fat and sediment
- Removes slime build-up in refrigeration condensate lines & drip tray

- Regular Concentrate
- Biological Control
- Consistent Results
- Cost Effective
- Non-toxic
- Eliminates Foul Odours
- Maximizes Waste Digestion
- Effluent System Efficiency Maintainer



BIO-TRAK ST

BIO-TST

- Septic Tank Maintainer - 5 LTR
- Live Bacterial Culture for regular treatment of Septic Tank Systems for houses & small commercial sites
- Assists the Septic Systems to digest many types of waste quickly & efficiently
- Gives System extra capacity to withstand sudden increased loadings & shock loadings
- Excellent for increasing and maintaining the efficiency and cleaning capability of septic tank systems

Call Free: 0800 FASTFLO or 0800 327 835

www.fastflo.co.nz



Section 4

PLUMBING INSTALLATION INSTRUCTIONS

FASTFLO Undersink Sullage Chamber PLUMBING INSTRUCTIONS & INSTALLATION PROCEDURE

IMPORTANT: Please read all instructions before commencing installation.

1. POSITION

Position unit in a clean, dry, flat, non-floodable position, i.e. under sink or fixture to be pumped. Decide which way around to install unit i.e. drain inlet and pump discharge on left or right hand side of chamber.

2. WASTE

- (a) Using a holesaw, cut a hole on selected side of chamber wall near top of tank (allow clearance for lid rebate).
(Refer to Uniseal chart for correct hole saw size). Install uniseal on outside of tank.
- (b) Connect and run correct size wastepipe from the fixture(s) trap into the uniseal and through side of tank. Install PVC 90° bend to direct flow down.
- (c) We recommend that you install a rubber Plumbquik on the waste line on outside of unit to assist any future possibility of tank removal.
- (d) All fixture(s) running into the unit must be trapped to avoid any odours from entering into room.
- (e) Where a shower fixture is connected into the unit, a separate non-return flap valve must be installed inside of unit to prevent backflow.
- (f) The maximum height of any inlet fixture must be not more than 900mm. If higher than this, an overflow should be installed at 900mm to avoid over-pressurisation of the unit

3. DISCHARGE

- (a) Connect up and run the pump discharge pipework from the 32mm BSP female outlet connector on unit using a 32mm socket and run to the desired position (e.g. gully trap or wastewater valve stack). In some cases a larger diameter discharge pipe may be required.
- (b) A 32mm PVC pressure pipe or DWV pipeline is recommended for the pump discharge line.
- (c) It is recommended to install a 32mm double union type isolating valve on the pump discharge line on the outside of the tank, if pumping to a static head height above the height of the unit. This is to enable discharge line to be shut off in the case of removing unit or faulty pump.

4. VENT

- (a) Using a holesaw, cut a hole on selected side of chamber wall to suit, near top of tank (allow clearance for lid rebate).
(Refer to Uniseal chart for correct hole saw size). Install Uniseal on outside of tank.
- (b) Connect and run a 32mm DWV vent pipe from the Uniseal as above.
- (c) We recommend that you install a rubber Plumbquik on the vent line on outside of the unit to assist any future possibility of tank removal.
- (d) Run the vent to either an external position above roof or to internal position 150mm above highest fixture connected to the unit.
(Refer also to Page US3)

5. COMMISSIONING

- (a) Check that all plumbing connections are tight (incl rubber Plumbquik clamps, if used)
- (b) Check that pump and high level float are free of obstructions inside tank.
- (c) Place lid on unit and tighten all SS wing-nuts so that lid is fully sealed onto the unit. Sponge around lid seals tank.
- (d) Plug into 230 volt power supply and switch on.
- (e) We recommend that the optional high level alarm float and audio-visual alarm is installed. If this option is required, electrician to connect up.
- (f) Run cold water from waste fixture until pump cuts in, empties tank, and shuts off.

Your fully automatic Undersink Pump System installation should now be complete.

GENERAL INSTALLATION GUIDELINES

FASTFLO Undersink Pump Units are all pre-assembled and ready for installation and require no adjustments. We recommend that certain minimum guidelines are adhered to as follows:-

1. All units must be vented.
2. All plumbing must be carried out by a Registered Craftsman Plumber, and must comply with Plumbing Regulations and Codes of Practice.
3. All electrical permanent connections must be done by a Registered Electrician, and must comply with the Electricity Regulations and Codes of Practice.
4. All installation should be done in accordance with the Local Authority's guidelines and permit requirements.
5. No sewage, acids, solvents, corrosives, chemicals or inflammable liquids should be allowed into the unit, as it could cause serious problems.
6. The maximum water temperature permitted into the unit is 60°C constant.
*This unit is capable of 90°C for max. time of 3 minutes – at a time.

VENTILATION REQUIREMENTS

PAGE VN.1

PLEASE READ CAREFULLY

**ALL WORK MUST BE CARRIED OUT BY A REGISTERED PLUMBER / DRAINLAYER
AND MUST COMPLY WITH THE PLUMBING REGULATIONS
AND CODES OF PRACTICE.**

FASTFLO Undersink Sullage Chamber

Must be vented at all times to atmosphere. (An alternative to outside venting can be the use of an Air / Vacuum Valve with carbon filter – supplied by Fastflo Pump Systems).

FASTFLO MINI & 1000 & 1500 Models

Refer to Drg No's FFP.1 and FFP.2.

For Domestic Applications

No vent is required if the pump station is within 40 metres of the 80/100mm house drain TV (terminal vent), or the dwelling has less than 3 WC pans. If these parameters are exceeded, then a vent is required as described below.

For Industrial / Commercial Applications

Vent size required:	50mm / 80mm	Above ground level
	80mm / 100mm	From tank / below ground level

All vents should exit near top of pump chamber and terminate to the atmosphere to a minimum height of 1200mm above ground level, or 500mm above roof level, with a mushroom/vent cowl fitted at the top.

FASTFLO 3000, 4000, XL & FRP Models

Refer to Drg No's FFP.10 and FFP.11 (3000 & 4000)

Minimum vent size required:	80mm	Above ground level
	100mm	From tank / below ground level

All vents should exit near top of pump chamber and terminate to the atmosphere to a minimum height of 1200mm above ground level, or 500mm above roof level, with a mushroom/vent cowl fitted at the top.

IMPORTANT NOTE

AIR ADMITTANCE VALVES MUST NOT BE USED ON A FASTFLO PUMP STATION AT ANY TIME.

ALL VENTS MUST BE OPEN TO ATMOSPHERE.



Section 5

ELECTRICAL DATA & ELECTRICAL INSTALLATION INSTRUCTIONS

ELECTRICAL WIRING INSTRUCTIONS

UNDERSINK SULLAGE CHAMBER WITH SINGLE PHASE PUMP

- All Standard Pump only units plug in
- All units with alarms & solenoid valves will require work to be done by a registered electrician and must comply with the electricity regulations and codes of practice.

-
1. Plug in pump / control box to 10A socket or hardwire as required
 2. Run pump and float flexible cables directly into the control panel via GRP glands (if applicable)
 3. Check correct setting of overload relay to match the pump running current (if applicable)
 4. Check operation of the pump (starting & stopping)
 5. Check operation of the alarm by lifting up the alarm float / contacting probe (if applicable)
 6. Check solenoid valve operation in conjunction with Hi Level alarm (if applicable)