

# FALFLEX

## WALL MOUNTED INVERTER CONTROLLED TWIN PUMP COLD WATER BOOSTER SETS



- Space Saving Wall Mounted
- Flow Rates up to 3 l/s Per Pump
- Pressures up to 5 bar
- Built in Dry Run Protection
- Integrated Variable Speed Drives
- Digital Display on All Units
- Optional Weatherproof Enclosure

## FalFlex™ Cold Water Booster Sets

The FalFlex™ range of twin pump cold water booster sets utilise quality stainless steel multistage pumps with a factory mounted frequency inverter for each pump. The speed of each pump is varied by means of the frequency inverter, enabling the pumps to operate in a cascade system. The control of each pump is via a pressure transducer installed in the discharge flow manifold. This relays a 4-20 mA signal to the inverter to vary the motor speed.

FalFlex booster sets are available in either single phase with a low water VF contact or, three phase incorporating both low water and common fault VF alarm contacts. All units incorporate high/low pressure alarm, dry run protection, auto change-over, fault history, protection against high/low voltage, over current, current surge, inverter overheat, communication error.

For ease of use and set up the FalFlex™ frequency inverters have a digital interface. The display shows the output frequency, actual pressure, pressure setting, output current, transducer error, high/low pressure, low water, drive error.

### Booster Set Selection

Once the required pressure and flow rates are known then the decision as to the operation of the set and, therefore, the sizing of the pumps has to be made. The FalFlex booster set is a twin pump booster set and, as such, it would seem the most cost effective option to select the pumps in duty/assist arrangement to each supply 50% of the required flow. However, the importance of ensuring a water supply must be considered. For example, a hotel or hospital will almost certainly require a standby pump capable of supplying the full duty if one of the pumps were to fail, this arrangement would be 'duty/standby'. Option limiting factors may be the size of the pumps available with the FalFlex and also the electrical supply, therefore two pumps sized to operate duty/assist may be the only option. A real benefit of the FalFlex is that the unit will operate duty/assist regardless of whether the pumps are sized for duty/assist or duty/standby.

For larger duties it may be necessary to refer to our ExeFlex range of floor mounted booster sets which, though having a bigger 'foot print', do have features that are not available in the FalFlex range.

### Equipment Details

#### Pumps

Vertical stainless steel multistage pumps. Three phase water cooled 2900 rpm motors.

#### Mechanical seals

Twin mechanical seals with an oil filled chamber (FDA approved oil). Pump side seal, Alumina Oxide/Silicon Carbide. Motor seal, Graphite/Alumina Oxide.

#### Pump Control Vessel

Suitable for 10 bar working pressure with E.P.D.M rubber diaphragm.

#### Manifolds

Grade 304 stainless steel, 316 grade available to order.

#### Power supply

Single phase or three phase up to 2.2 kW.

#### Features of the FalFlex™

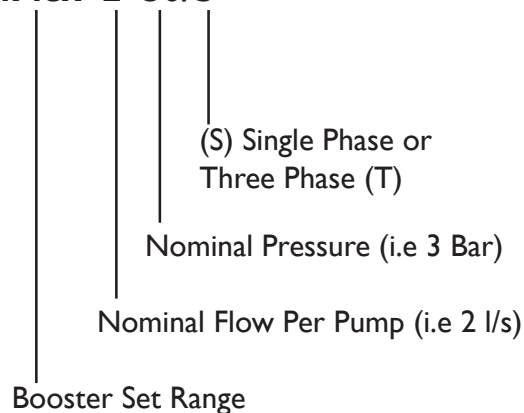
- Frequency inverters with digital display
- Built in dry run protection
- IP55 control panel complete with MCB's
- All booster sets are complete with isolating and non return valves
- Pump control vessel fitted as standard

#### Optional Additional Items

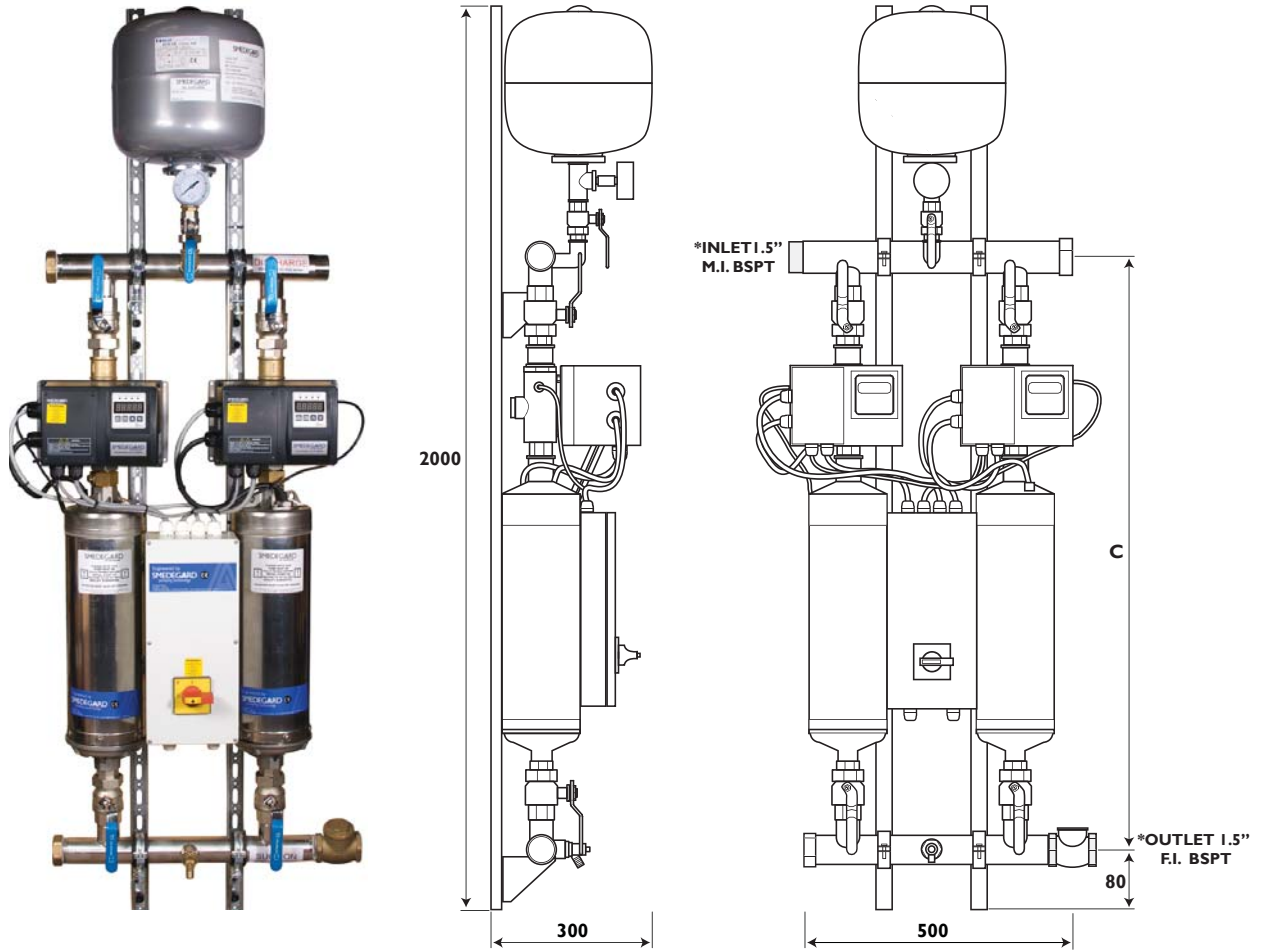
- Cat 5 compliant cold water break tanks
- Flexible pipe connectors available
- Float type dry run protection

#### Model Identification

#### FalFlex 2 30/S



# FalFlex™ Booster Set



\* INLET/OUTLET can be left or right handed

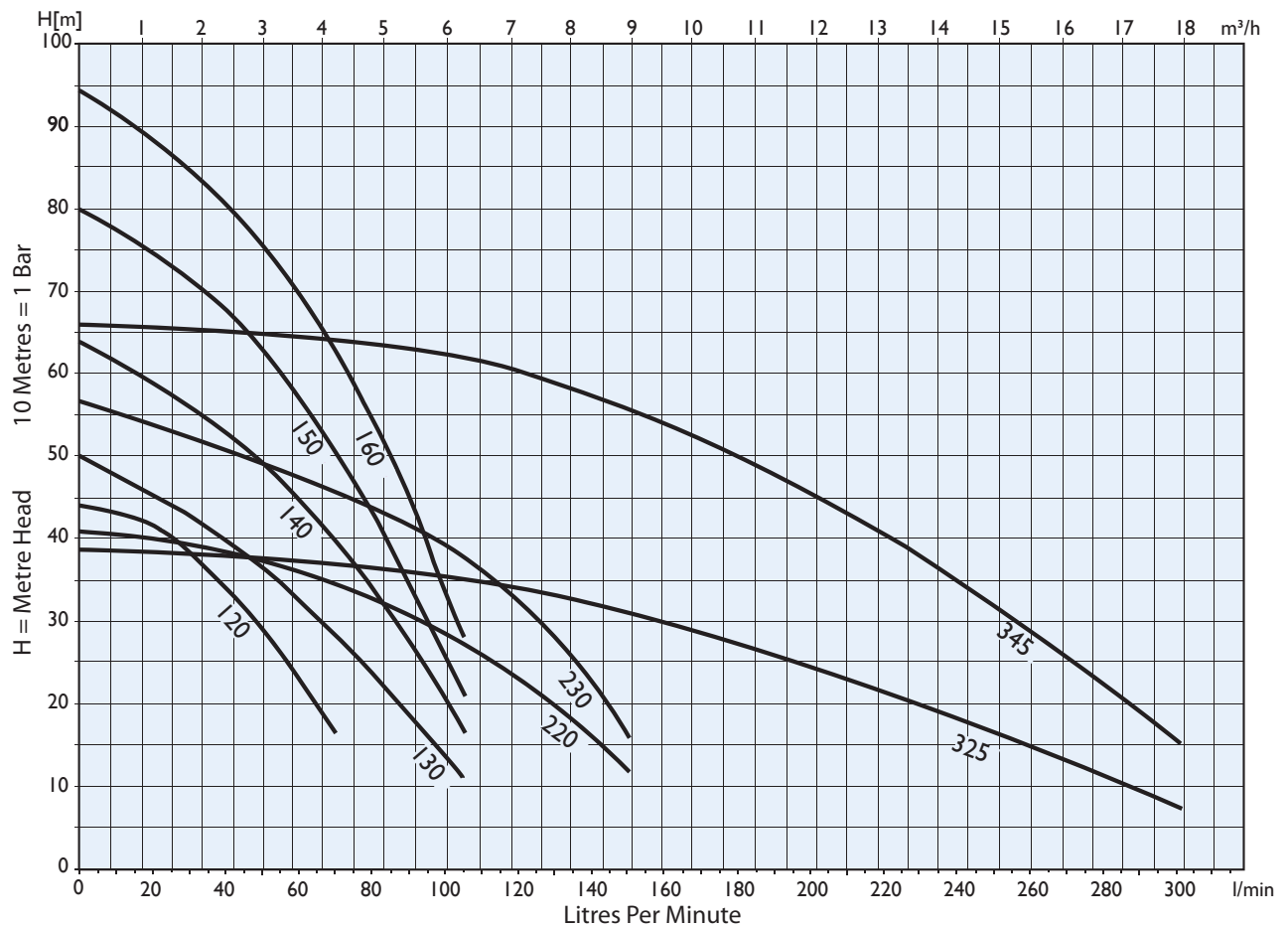
## Dimensions and Electrical Details

To select a FalFlex booster set, refer to the Pump Performance Curves on page 4

Model	C (Connection centres)*	Weight (kg)	kW (Per Pump)	FLC - Amps (Per Pump)	
				230V - 1ph	400V- 3ph
120	1080	69	0.55	5.3	1.8
130	1118	74	0.75	7.0	2.2
140	1155	76	0.9	7.8	2.5
150	1201	79	1.1	8.6	3.0
160	1248	82	1.5	9.2	3.6
220	1101	77	1.1	7.3	2.4
230	1148	80	1.2	9.1	3.0
325	1139	74	1.5	9.5	3.2
345	1231	87	2.2	14.4	5.3

\*All Dimensions in millimetres

## FalFlex™ Individual Pump Performance Curves



### Pump Selection

Once the required flow rate is known, the next step is to select the booster set using the pump curves above.

For example, we shall select a flow rate of 120 litres per minute @ 3 bar (30 Metres).

To achieve this flow rate from a duty/standby booster set requires that each pump must be capable of this duty.

From the pump curves it can be seen that the model 230 would be most suitable. The set reference being a FalFlex 230/S for single phase or a FalFlex 230/T for three phase electrical supply.

If the same duty is used to select a duty/assist booster set then the pump flow can be halved. Two pumps each capable of 60 litres per minute being needed to give the total duty of 120 litres per minute.

Again, from the pump curves above, the selection would now be a model FalFlex130/S for a single phase or a FalFlex 130/T for three phase electrical supply.

**FOR FURTHER ASSISTANCE AND SELECTIONS, PLEASE CONTACT SMEDEGAARD'S TECHNICAL TEAM.**

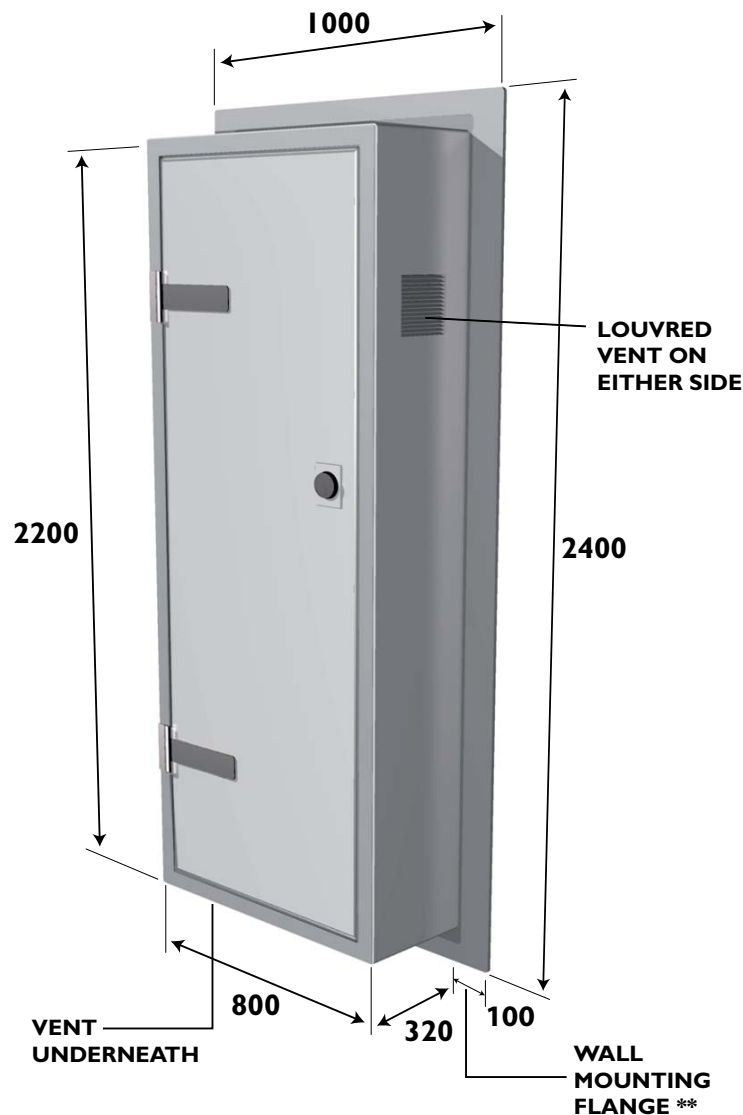
## Weatherproof Enclosure

In the event of a shortage of plant room space we are able to offer a purpose built GRP housing to enable the booster set to be fixed to an external wall. The housing is open backed, the booster set being secured to the wall prior to the housing being fixed and sealed in place. Ventilation is provided but, there is also the option for fitting anti frost protection. The door is fitted with stainless steel hinges and can be hinged from either side, left hand hinging is the standard.

A Yale type lock is normally fitted but, other options are available. The standard colour is a neutral grey but any colour from the RAL range can be provided to special order.

\*\* The mounting flange is 100mm wide and is not pre-drilled (see picture below). This is to enable the wall fixings to be fitted in the most suitable positions and thus avoid such problems as soft mortar.

- Simple fixing arrangement.
- Open backed with wide flange.
- Optional door handing and locking method.
- A wide choice of colours available.
- Ventilated as standard.
- Optional frost protection.
- Option for pre-drilled connection holes.



All Dimensions in millimetres

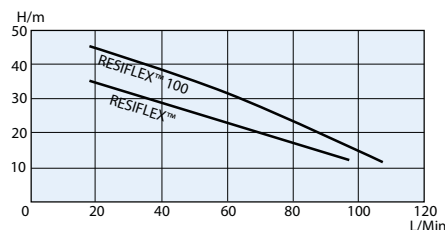
**Smedegaard's quality range of booster sets also include the following, details upon request**



**ResiFlex™**

- Compact design 595mm x 595mm footprint, 1950mm high
- Electronic variable speed pump control to ensure energy efficiency, soft starting and reduced noise
- Manual bypass with double check valve for emergency use
- Insulated break tank for potable water, actual 200 litre capacity
- All components accessible from front for ease of maintenance
- Sturdy welded steel frame with levelling feet

- Low water pump protection
- Sealed lid with screened vent
- Fully packaged



**ExeFlex™**

- Complete Range of Booster Sets
- Flow Rates up to 160 l/s
- Pressures up to 15 bar
- Single, Twin and Multiple Pump Sets
- Built in Dry Run Protection
- Pump Mounted Inverters
- Digital Interface on all units



**FlowFlex™**

- Space Saving Range of Booster Sets
- Flow Rates up to 3 l/s Per Pump
- Pressures up to 5 bar
- Single, Twin and Triple Pump Sets
- Built in Dry Run Protection
- Pump Mounted Inverters
- Digital Interface on All Units



**Chew™**

- Break tank packages
- Standard 20 litres - 5000 litres
- Packaged with variable speed or D.O.L booster sets
- WRAS category 5 compliant
- Insulated or uninsulated

*It is Smedegaard's policy to continually improve and develop its product range. We reserve the right to change specifications without prior notice. Whilst every care has been taken to ensure the data is correct, no responsibility can be taken for inaccuracies or misprints.*