

Controlled by traditional analogue pressure switches, the Quantum Contract cabinetised fill-sets are very cost effective. The inclusion as a standard feature of the BMS-compatible high and low system pressure alarms ensures these units are totally adequate for almost every situation



Technical Features

- System pressure indication
- Compact design
- High quality bronze pump(s)
- Sturdy powder coated steel case
- BMS compatible high and low pressure alarms
- Boiler/Chiller interlock

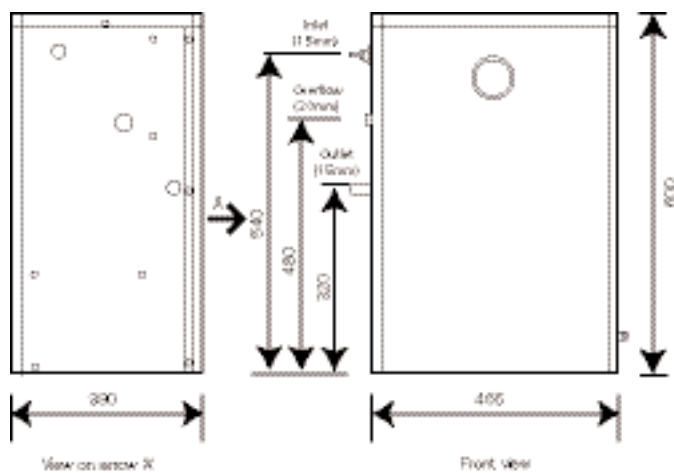
Specification	
Max C.F.P	3.0 Bar/6.0 Bar (HP)
Air gap type	AA
Break tank capacity	25 litres
Float valve type	Class 1
Supply voltage	250/1/50
Full load current	2.5 Amps
VFC rating	250v @ 5.0 Amps
Boiler/Chiller relay rating	250v @ 5.0 Amps

Quantum Contract:	Single pump, 3.0 Bar CFP
Quantum Contract Plus:	Twin pump, 3.0 Bar CFP

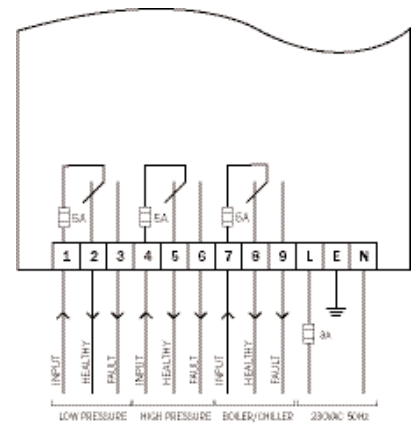
Quantum Contract Range

Unit Only
With 60ltr expansion vessel
With 80ltr expansion vessel
With 100ltr expansion vessel
With 150ltr expansion vessel
With 200ltr expansion vessel
With 300ltr expansion vessel
With 500ltr expansion vessel

Dimensions

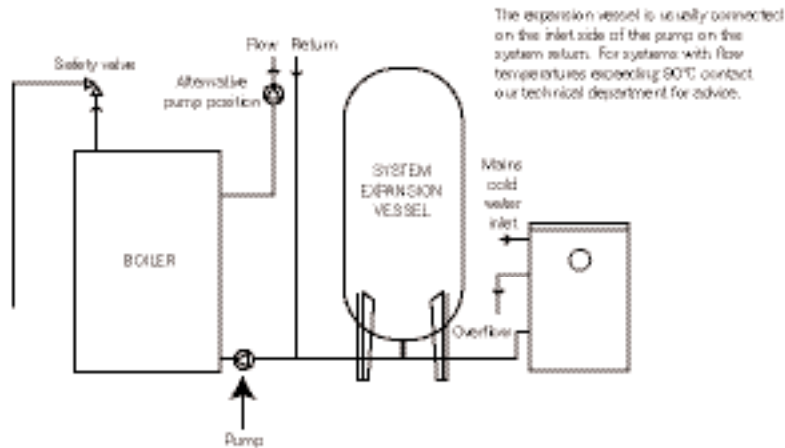


Wiring Diagram



* Boiler/chiller relay will activate in either high or low alarm conditions

Typical Installation Diagram

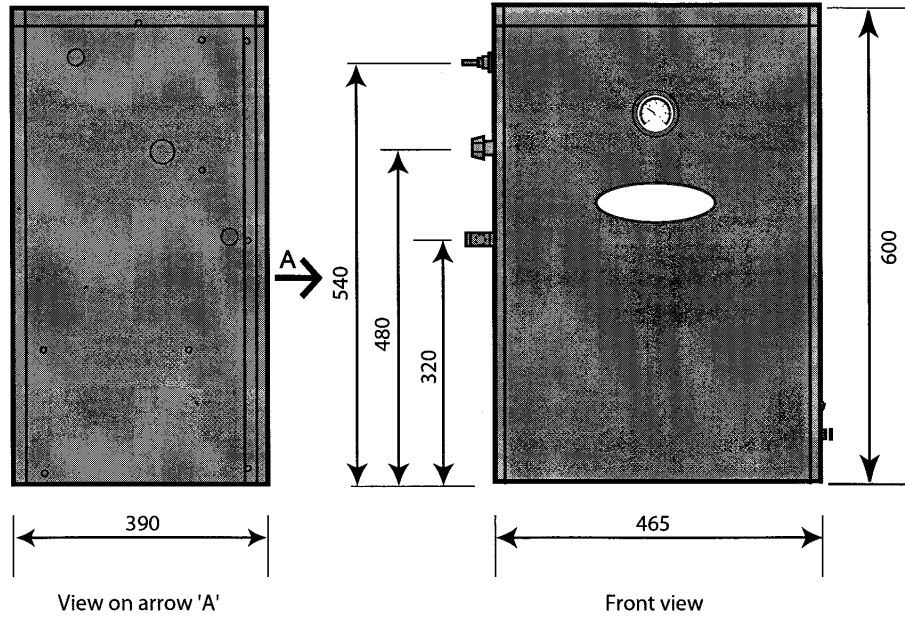


OPERATING & MAINTENANCE INSTRUCTIONS

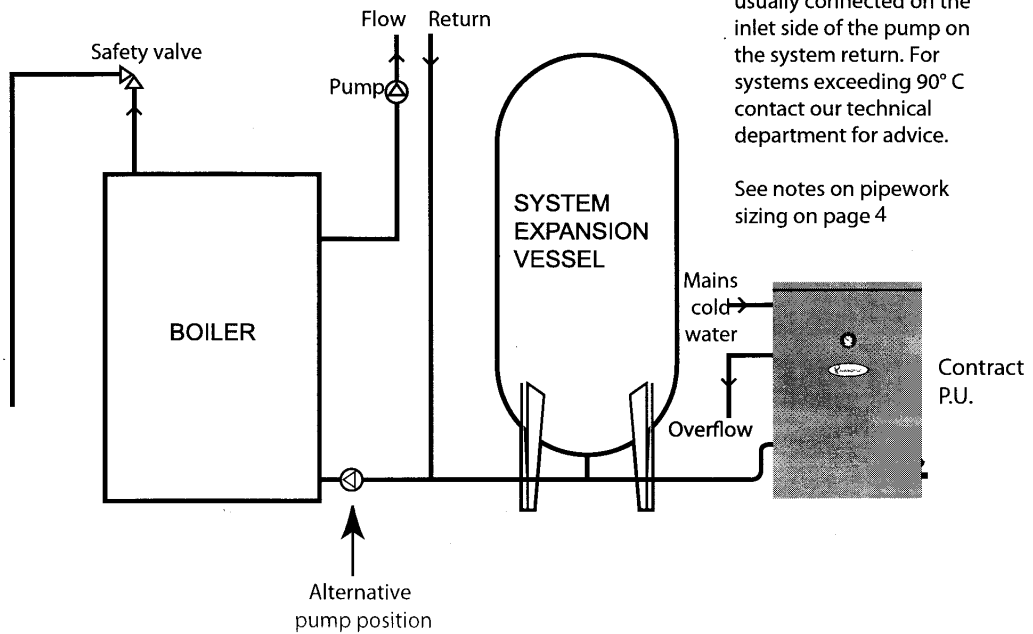
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Dimensions



Typical installation diagram



The expansion vessel is usually connected on the inlet side of the pump on the system return. For systems exceeding 90° C contact our technical department for advice.

See notes on pipework sizing on page 4

Contract & Contract Plus pressurisation units

The *Dutypoint* Contract range is a fully automatic heating / chiller system pressurisation device and is suitable for the water management in all domestic and commercial heating and cooling systems. It is supplied as a fully commissioned unit and requires no "on site" commissioning.

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1 Installation

All *Dutypoint* products should be installed by a competent person with regard to the relevant requirements of the Health and Safety regulations, Building Regulations, IEE Regulations, Water Supply (water fittings) Regulations, Water Bye-laws(Scotland) and any other Local Bye-laws or planning requirements.

The *Dutypoint* Contract is intended for floor mounting: the unit should be situated in such a position as to enable access to the internal components for maintenance purposes.

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1.1 Mains/boosted cold water supply

The *Dutypoint* Contract is designed to be connected directly to the mains cold water supply, or a boosted cold water supply, the unit is supplied complete with all necessary isolating valves, but an inlet water isolating valve is recommended. The water inlet is 15mm compression and should be connected to the mains cold water supply by 15mm copper tube or equivalent approved plastic pipework. If the contract is sited some distance away from the mains cold water supply it may be advisable to install a single check valve adjacent to the mains cold water supply.

To reduce the pressure drop on very long routes then 22mm supply pipework is recommended.

1.2 Connection to the system

The *Dutypoint* contract is connected to the heating/chiller system by way of the 15mm outlet valve, the pipework from the unit should be made in 15mm copper tube or equivalent approved plastic pipework. A suitably sized expansion vessel should be incorporated into the system at this point. Please refer to a typical installation diagram on page 3. If you require any assistance regarding vessel sizing please contact our technical sales department. The final connection into the heating/ chiller system should be sized accordingly, recommendations are shown below:

Vessel size up to 100L	1/2" (15mm) expansion pipework
Vessel size up to 300L	3/4" (22mm) expansion pipework
Vessel size up to 1000L	1" (28mm) expansion pipework

For vessel sizes in excess of 1000L capacity please contact our technical sales department.

IMPOTANT NOTE

The expansion vessel nitrogen/air charge must be set at the same pressure as the cold fill pressure of the system.* All *Dutypoint* expansion vessels are factory commissioned to the correct pressure.

* When the installed height of the expansion vessel is different to that of the Contract then please contact our service department who will advise on the nitrogen/air charge.

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1.3 Overflow connection

The Contract is supplied with a 3/4" bsp plastic overflow (warning pipe) connection which should be led to a drain and be visible at point of discharge, *Dutypoint* Systems cannot accept responsibility for flood damage caused failure to connect the overflow.

Quantum CONTRACT
Pressure Switch-controlled
Pressurisation Units
Operating & Maintenance Manual
EPC © 2006

2 Electrical connections

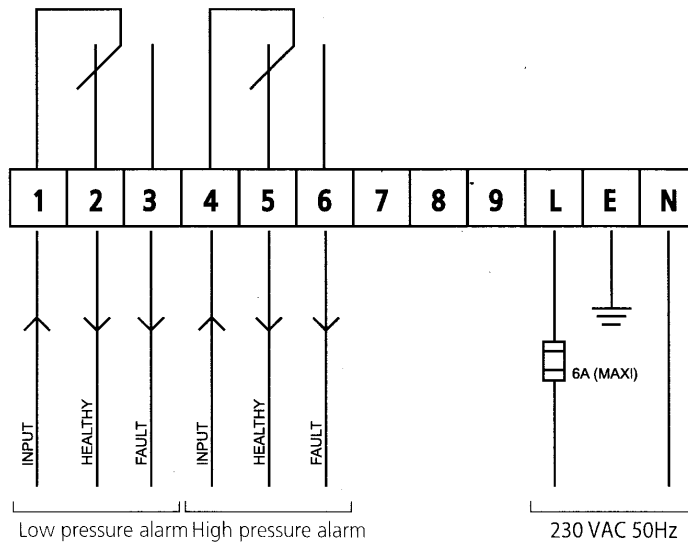
The *Dutypoint* Contract requires a permanent 230V 50Hz 1 phase supply rated at 6 amp. The unit is internally fused at 5 amp (see electrical diagram).

The Contract also incorporates two BMS pressure switches offering volt free contacts for remote indication of high or low pressure conditions within the heating/chiller system. Should either of the alarms operate then the unit will shut down the boiler or the chiller. The alarms are suitable for use on control voltages up to 250V.

Once the unit has been correctly connected the unit is ready for use. Ensure that the unit has an adequate water supply and the service valves are open. Check for water leaks. Although every unit is factory tested it is still advisable to vent the pump(s) before operation. This is achieved by slackening the brass plug (14mm A/F) situated on the pump housing, until all the air is eliminated. Switch on the electrical supply to the unit and the illuminated on/off switch to the lower right hand side of the unit and the unit will start to pressurise the system. When the system has achieved the set pressure, the unit will stop filling, and go to standby.

Important note, "pump type" pressurisation units are not designed to fill systems from empty, they are only capable of "top up" and pressurisation. The system should be filled by other means in compliance with the water regulations. The Contract is capable and approved to fill and pressurise heating/ chiller systems.

2.1 Electrical diagram



Electrical data

Supply: 230V 1ph 6 amp
 Full load current: 2.5 amp
 Start current: 4.5 amp
 Fuse rating: 6 amp
 BMS relays volt free contacts
 rated at 250VAC at 5 amp

7 Adjusting settings

Please note the Contract is a factory pre-commissioned product, but the setting can be altered as follows:

The unit is controlled by way of pressure switches, the switches are located on a panel inside the unit. to access the switches remove the front cover by slackening the six screws on the side of the unit.

The switches inside are clearly marked and can be adjusted via the slotted adjustment screws on the top of each switch.

8 Maintenance

The inlet filter(s) which is housed in the service valve on the pump(s) inlet pipework should be checked and cleaned annually.

EXPANSION VESSELS - Charge should be checked annually when the system is cold (the air charge pressure must be equal to the cold fill pressure of the Contract).