

ferroli

Pressurisation units & expansion vessels



Pressurisation units



The new generation of microprocessor controlled pressurisation units

Standard Unit/Advanced Unit

These microprocessor controlled pressurisation units are suitable for use in a wide range of residential, commercial and industrial applications, where pressurisation of a heating or chilled water system is required.

The new units incorporate CH2-30 and CH2-50 multi-stage centrifugal

compact horizontal pumps that provide cold fill pressure up to 2.5 bar and 4.3 bar respectively. These low noise, efficient pumps are specifically developed for applications such as pressurisation.

Available in single and twin pump configurations and in single phase as standard, both offer a comprehensive range of features.

Features	Standard	Advanced
Microprocessor Control	●	●
Digital 2 Line Liquid Crystal Display	●	●
Display Backlight	●	●
Dual Colour Status LED	●	●
Audible Alarm	●	●
Alarm Mute	●	●
3-button User Interface	●	●
Customer Assigned Password Protection	●	●
Single or Twin Pump Versions	●	●
Manual Pump Run Control	●	●
Low Tank Water Level	●	●
Multiple Programmable Alarms	●	●
Service Due Feature	●	●
Programmable Volt Free Contact(s)	1	2*
History Event Log	●	●
Automatic Pump-Test		●
Pump Run Hours Counter		●
Real Time Clock with Battery Back-Up		●
Additional Thermal and Circuit Protection		●
240v AC 50Hz Single Phase Operation	●	●
RS-232 Port		●

*In addition to the above, Advanced offers eight (8) additional volt free contacts specifically for BMS (Building Management System)

These can be used for: Pressure Low, Pressure High, Water Low, System Leak Pump A Fault, Pump B Fault, Service Due, System Fault

Product Specification & Pump Data

Pump Electrical Data

Type	Pump Type	Phase Power	Input (P1)W	FLC (A)	Start (A)
Standard	CH2-30	1ph	480	2.3	10.5
Advanced	CH2-50	1ph	680	2.9	10.5

Voltage: 220-240V/1ph/50Hz

Capacitor size: 10uF/400V

Enclosure class: IP54

Insulation class: F

Pump Material Specification

Suction Chamber: Cast Iron BS 1452 Grade 180

Intermediate Chamber: Stainless Steel BS 1449 304 S15

Impellers: Stainless Steel BS 1449 304 S15

Pump Shaft: Stainless Steel BS 970 431 S29

Shaft Seal Face: Silicon carbide

Shaft Seal Seat: Silicon carbide

Shaft Seal 'O' Rings: FKM elastomer

Product Specification

Microprocessor controlled

7 bar pressure transducer

240v/1ph/50Hz

Digital pressure display with 0.1 bar resolution

CE marked

Dimensions

Standard

750(H) x 450(W) x 330(D)mm

Advanced

750(H) x 450(W) x 485(D)mm

Pump Mechanical Data

Liquid temperature: 0-90°C

Max ambient temperature: 55°C

Pump speed: 2900 rpm

Connections

Mains supply cable length: 4m

Cold water supply connection: 1/2" BSP Male

Overflow connection: 3/4" BSP Male

System water connection: 15mm compression

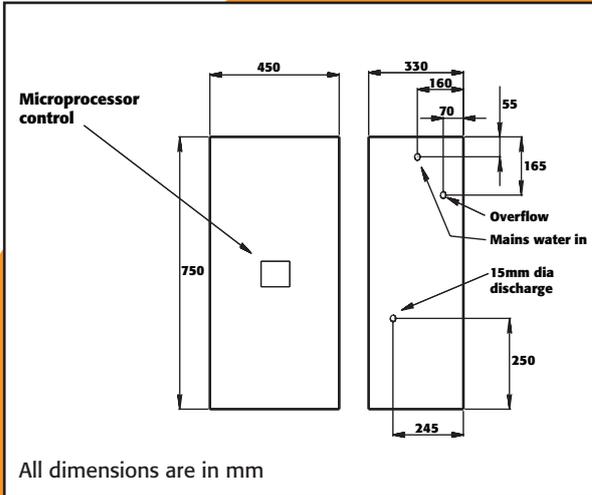
Weights

	Standard	Advanced
1 x CH2-30:	25 kg	29 kg
1 x CH2-50:	28 kg	32 kg
2 x CH2-30:	35 kg	42 kg
2 x CH2-50:	40 kg	47 kg

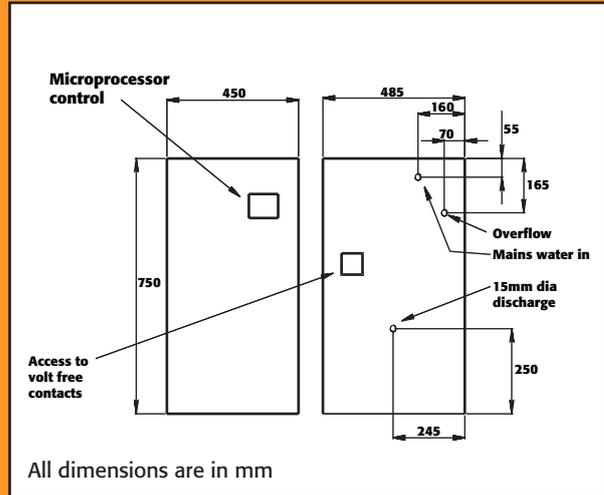
Product Codes

Standard 1 Pump	Standard 1 Pump	Standard 2 Pump	Standard 2 Pump
CH2-30	CH2-50	CH2-30	CH2-50
MIMS 2301	MIMS 2501	DIMS 2301	DIMS 2501
Advanced 1 Pump	Advanced 1 Pump	Advanced 2 Pump	Advanced 2 Pump
CH2-30	CH2-50	CH2-30	CH2-50
MIMA 2301	MIMA 2501	DIMA 2301	DIMA 2501

Standard unit



Advanced unit



Operation of volt free contact(s), audible alarm and LED indicator (when being used as a stand alone unit).

The new range of standard and advanced microprocessor controlled pressurisation units has the option of configuring the operation of the volt free contacts, the audible alarm and the dual colour LED indicator. Each of the above three functions can be assigned to operate with one or more of the following configurable parameters:

- Low Pressure, High Pressure, Low Water Level, System Leak, Pump Fault, Service Due, Controller Fault, Stop Relay Failsafe Operation.
- The standard unit is provided with one programmable volt free contact. The standard unit would be specified where only system interlock or a fault indication is required.
- The advanced unit is provided with two programmable volt free contacts. The above parameters can be assigned to the operation of one or either volt free contact

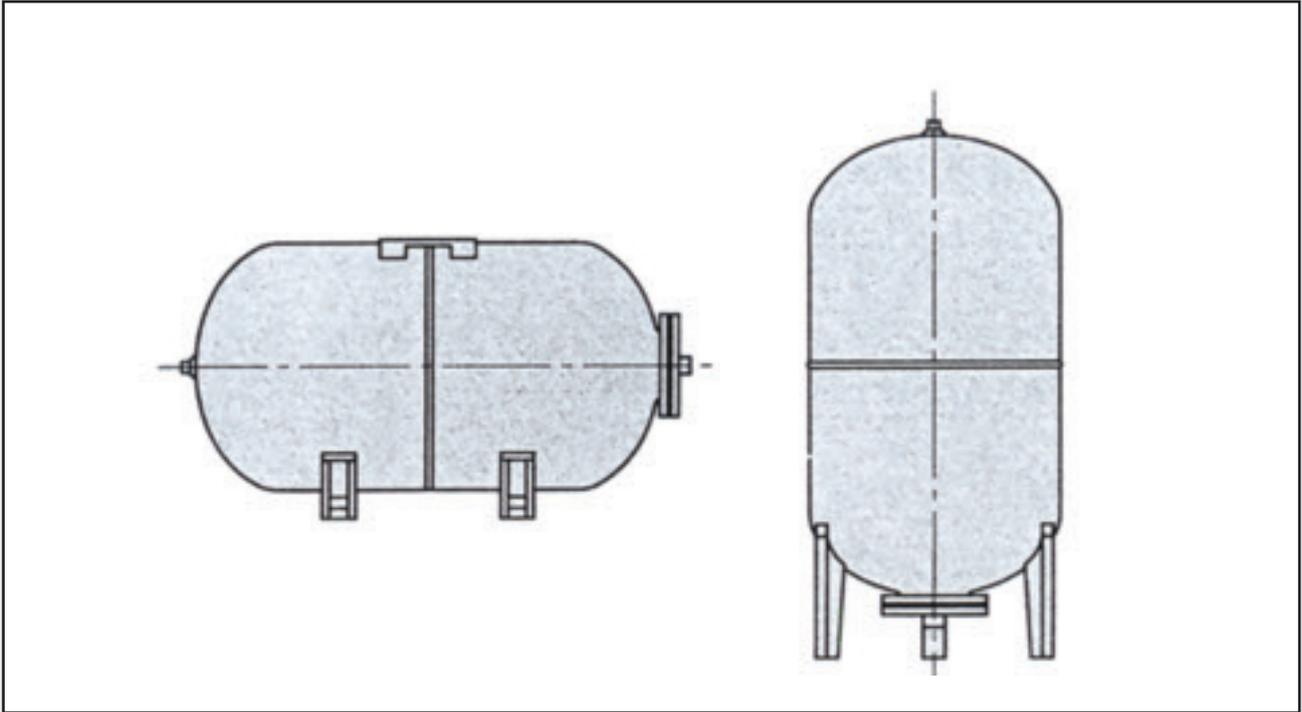
as required. The advanced unit would be specified where both a system interlock and a fault indication is required. There are also an additional eight dedicated volt free contacts specifically to communicate with building management systems.

Optional features

In addition to both of the units, provisions have been made for customised features such as:

- Network communications
- Connection to remote control display panel for adjustment and monitoring
- Stainless steel CHN units or other pump alternatives for high pressure systems

These options can be discussed with our Sales Team on 08707 272 755



Expansion vessels

Systems with pressurisation sets require the installation of an expansion vessel of adequate capacity. This table gives guide figures for the number and size of expansion vessels required.

Please contact us for details of our complete product range and dimensions.

Installed boiler power (kW)		System volume (litres)		Vessel volume (litres)	No. and size of vessel(s)
min	max	min	max		
28	70	280	700	60	1 x 60
71	93	701	930	80	1 x 80
94	115	931	1150	100	1 x 100
116	230	1151	2300	200	1 x 200
231	345	2301	3450	300	1 x 300
346	465	3451	4650	400	2 x 200
466	580	4651	5800	500	1 x 500
581	700	5801	7000	600	2 x 300
701	810	7001	8100	700	1 x 700
810	1160	8100	11600	1000	1 x 1000
1161	1620	11601	16200	1400	1 x 700
1620	2330	16200	23300	2000	1 x 1000

Mini pressurisation units



The Mini Pressurisation Unit is a compact wall mounted unit housing either one or two small pressurisation pumps and associated control equipment for connecting to small heating or cooling installations within large domestic dwellings or small industrial/commercial installations.

All the equipment is mounted in a white powder coated casing with a flush mounted gauge on the front of the unit to indicate the system pressure. Within the cabinet is housed a small make-up tank complete with a system filling valve

assembly complying with the Water Regulations Guide, a small hydraulic pump capable of producing a pressure of between 0.7 to 2.4bar, pressure control switch, control circuit fuse, terminals, and all necessary wiring to achieve the correct operation.

Suitable connections are provided to allow system make-up, tank overflow, and connection to the system pipework as well as electrical terminals for connecting the single phase, live, neutral and earth supply.

Installation

The mechanical and electrical installation of the unit should be carried out in accordance with the relevant Water Authority Regulation and current edition of the Electrical Regulations.

Essential requirements

1. Locate units in a well ventilated environment.
2. Ensure supply voltage and overload protection is correct.
3. An isolating valve should be fitted to the incoming water supply.
4. Electrical installation should be carried out by a competent electrical engineer. Covers and

guards should not be removed during operation or without isolating the unit first.

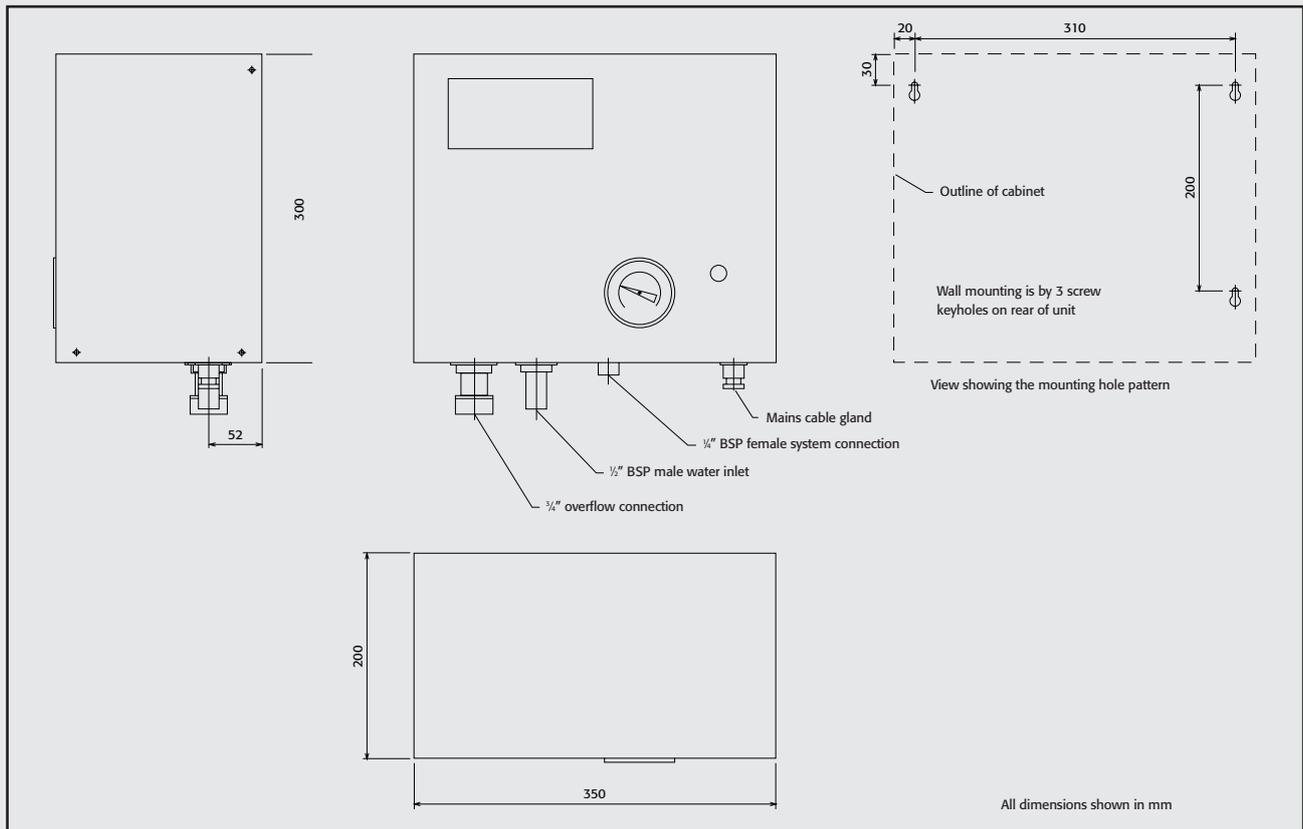
Note:

- An anti-gravity loop with a minimum height of 2m (or an intermediate vessel) must be installed to provide thermal protection to the unit.
- No pipework lagging is required between the system and the expansion vessel(s).
- The unit should be wall mounted, ensuring sufficient clearance is left to allow the cover to be removed.
- The pipework to the expansion vessels should be sized according

to the size and number of vessels and should be at least the same as the tank connection.

- Any expansion vessels should be fitted with individual drain cocks and isolating valves to facilitate initial set-up and future maintenance.

The system should be initially filled via a quick fill loop before operating the unit. The pump is not capable of filling any size of system.



Electrical connections

The unit should be connected to 240V single phase supply. The unit is internally fused with a 2A fuse.

Customer connections

Customer connections are accessed from the bottom of the unit. All connections are on 52mm centres from the rear face of the unit. See diagram above.

Adjustment of control pressure switch

The control pressure switch is factory set for 1 bar. In the unlikely event that this pressure is not acceptable and has to be adjusted within the operating range of the pump, ie maximum 2.4 bar, the following procedure should be adopted: isolate the unit and remove

cover screws and cover to access the pressure switch. The pressure setting can then be adjusted by turning the knurled knob on the pressure switch to the desired value, using the pressure gauge as a guide.

Technical data

Pump unit

- Self-priming piston pump, type 508LA, max. flow 80 litres/hour, generated pressure 2.4 Bar.
- Pump connection 1/8".
- Nominal power consumption 25W.

Make up tank

- 4.5 litre capacity.
- Complies with WRC byelaw 11 regulation.
- System connection 1/4" BSPF, water inlet connection 1/2" BSPM, overflow connection 3/4".

Pressure switch

Type 100SS, adjustment range 0.7 bar to 6.0 bar, 15amp @ 250v AC. Overpressure 10 bar (note that pump maximum pressure is 2.4 bar).

Pressure gauge

50mm diameter scaled 0.6 bar (dual scale).

Weights and dimensions

Weight 8.5kg empty.

Dimensions

350(H) x 300(W) x 200(D)mm.

Ferrolì



Ferrolì Limited

Ferrolì began producing heating appliances and equipment in Italy during the 1950s. Today, the company is still family-owned but now operates ten ultra-modern factories in Europe, employing over 2,500 people and producing a wide range of wall hung, cast iron and welded steel boilers, making Ferrolì one of the largest and most successful heating appliance manufacturers in the world.



Ferrolì Commercial and Industrial Boilers

The commercial and industrial boiler range covers steel and cast iron designs, atmospheric and pressure jet units, and oil, gas or biomass models. Outputs range from 50kW to 14,000kW. Other products include heat exchangers and pressurisation units. Ferrolì's UK warehouse, backed by its huge manufacturing facility in Italy, offers delivery ex-stock for most smaller boiler models and for all frequently used parts. It also assembles sectional boilers in the UK to suit particular requirements.



Ferrolì Domestic Boilers

Offering gas wall mounted units with outputs from 5kW to 50kW, Ferrolì's stylish, compact domestic boilers provide maximum comfort with minimal fuel usage. With a choice of conventional, condensing and combi technologies, there's a boiler to match the heating and hot water requirements of every home.



Ferrolì Service

Once the normal guarantee period on our boilers has expired, coverage can be extended cost-effectively with a choice of Ferrolì service contracts to suit your budget. All Ferrolì service engineers work to Benchmark standards and the Benchmark Code of Practice for the installation, commissioning and servicing of central heating systems, designed to improve the quality of work undertaken by plumbers and heating installers.



Ferrolì Spares

The rapidly growing popularity of Ferrolì as first choice for both domestic and commercial installations means that heating parts stockists offer readily available spares for Ferrolì boilers. For less frequently needed items, we maintain a fully-stocked warehouse located centrally in the UK, enabling same-day despatch of just about any part needed to keep your Ferrolì boiler running at optimum efficiency.



Ferrolì Training

Ferrolì understands that well-trained installers are the key to a safe and efficient heating system. That's why we run comprehensive training courses in our purpose-built facilities for everyone concerned in the installation and servicing of Ferrolì's range of boilers. These courses improve installers' knowledge and skills by providing both the theory and the hands-on practical experience essential to maintaining heating system performance and safety.



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