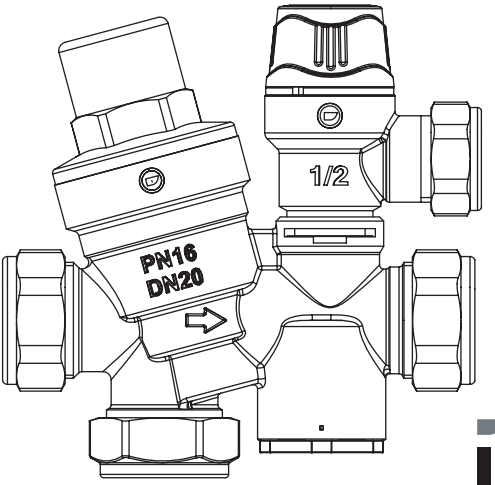
Unvented Group Set

Installation and Maintenance Instructions



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Introduction

The Inta unvented group sets are a combination fitting combining a non return valve, pre-set pressure reducing valve, a strainer and a safety relief valve.

Pressure reducing valves (PRV) are installed in domestic water systems to reduce and stabilise the inlet pressure from the mains supply, which is generally too high and variable for domestic appliances to function correctly.

For installers on a competent persons scheme, they need only notify their scheme provider who will in turn notify the local Building Control office.

These instructions cover the installation, operation and maintenance. Please read the enclosed instructions before commencing the installation of this product, please note;

We recommend that the installation of any Inta product is carried out by an approved installer.

It is recommended, especially in hard water areas, that a water softener such as the ActivFlo or ActivFlo lite be fitted to reduce the risk of calcium deposits forming.

Products

The pressure relief valve is available pre-set to 3, 4.5 bar, 6 bar and 8 bar maximum inlet pressures which must be specified when ordering.

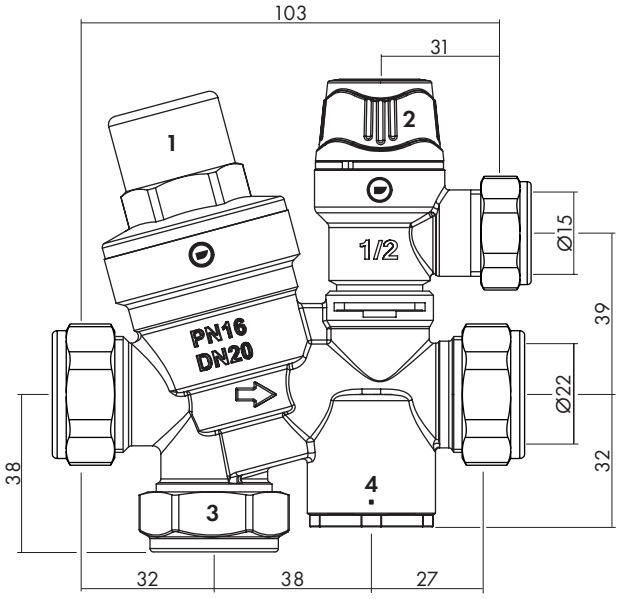
Technical Specification

Max. working pressure:	16 bar
Max. temperature:	85˚C
Medium:	Water
Downstream pressure setting range:	1 to 4 bar
Compression connection:	BS EN 1254 -2
WRAS approved product:	

Advantages of Fitting an Unvented Group Set

- Ease of installation with just 4 compression connections.
- Cost saving - the installation takes less time than a traditional system and the equipment is maintenance free, apart from occasional operational checks.
- No feed / expansion tank helps avoid over pumping and the risk of freezing.
- Combines a PRV, SRV, check valve and filter into one fitting.
- Controls inlet pressure to unvented hot water systems.
- Longer life - corrosion issues are virtually eliminated.

Dimensions



Components

1 Pressure reducing valve
2 Safety relief valve
3 22mm balanced take-off
4 Connection for expansion vessel

Material

Body	Brass	BS EN CW602N
Strainer	Stainless steel	AISI 302 - 300 µ mesh
Cover	Polymer	PA66
PRV internal components	Brass	BS EN 614N
SRV cartridge	Polymer	POM

Installation

Carefully follow these instructions and ensure that the installation conforms to the Water Regulations.

It is recommended that isolating valves are installed upstream and downstream to facilitate any future maintenance.

It is recommended that a pressure gauge is installed downstream of the unvented group set to establish and check the pressure from the pressure reducing valve.

Ensure that sufficient water pressure and flow rate are available.

Flush the system thoroughly and expel any air remaining in the pipes.

Install the unvented group set with the integral arrow on the body pointing in the direction of flow.

The compression joints should be tightened with a torque of 35 Nm.

Connection (3) on the body may be used as a balanced cold water supply.

Connection (4) on the manifold is a plugged connection which may be used for direct mounting to an expansion vessel if required. This plug is plastic and has an 'O' ring seal therefore excessive force should not be used for it's removal or replacement.

Safety Relief Valve

The safety (pressure) relief valve is free to rotate to the required position.

The safety relief valve **MUST NOT** be fitted with the cap pointing downwards and the discharge pointing in an upward gradient. .

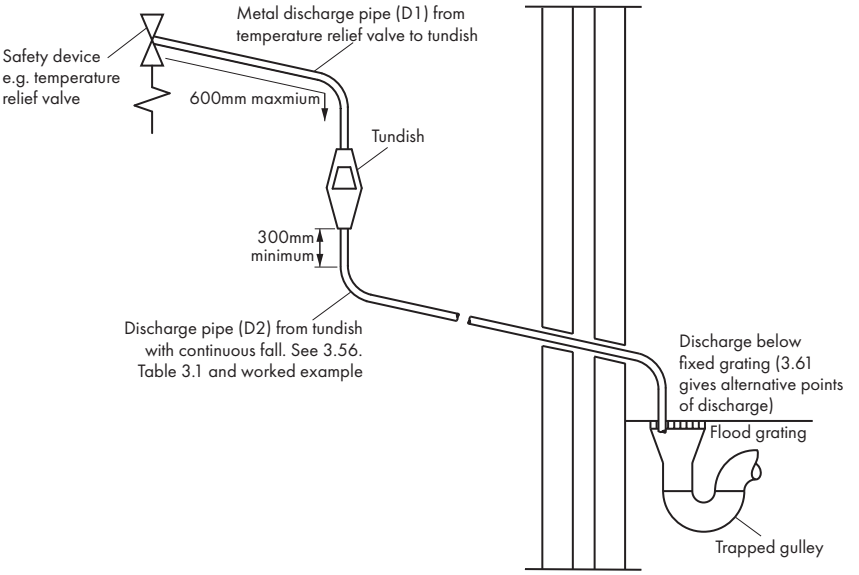
Should be sited in the locations prescribed or separate of the kit in accordance with local Bylaws and best practice.

There must be no restriction or obstruction between the system and the unvented group set.

The discharge pipework must be sited in accordance with water bylaws, paying particular attention to siting of tundish and sizing and routing of discharge pipework. **NEVER** block the discharge port of the relief valve

Valve Outlet Size	Min Size of Discharge Pipework (D1)	Min size of Discharge Pipework from Tundish (D2)	Max Resistance allowed expressed as a length of pipe(i.e. no elbows and bends)	Resistance created by each elbow or bend
G½	15mm	22mm	Up to 9m	0.8
		28mm	Up to 18m	1.0
		25mm	Up to 27m	1.4
G¾	22mm	28mm	Up to 9m	1.0
		25mm	Up to 18m	1.4
		42mm	Up to 27m	1.7
G1	28mm	35mm	Up to 9m	1.4
		41mm	Up to 18m	1.7
		54mm	Up to 27m	2.3

Safety Relief Valve Continued



Problem Solving

By reading these installation notes and adhering to their guidance, system faults should be minimal.

However, the following faults (while not an exhaustive list) are among the most common.

Fault: SRV discharges when system is cold

- Pressure reducing valve failure
- Blocked seat of safety relief valve

Fault: SRV discharges when system is hot

- Expansion vessel sized incorrectly.
- Expansion vessel pre-charge set to incorrect value.
- Expansion vessel diaphragm ruptured.
- Safety relief valve incorrectly sized.
- System pressure too high.

Fault: Poor flow at hot water outlets

- In line strainer blocked
- Non return valve blocked
- Incorrectly sized hot feed pipework to outlets
- Incorrectly sized cold feed pipework to cylinder
- Poor mains pressure in the initial instance

Fault: Vessel discharges liquid when air pressure is checked

- Membrane is ruptured and requires replacement.

Maintenance

Check the pressure gauge when the system is cold to identify any pressure loss below the set point.

A loss of pressure either indicates air venting or a system leak. Re-pressurise as needed and continue to observe.

An inspection of the Schrader valve should be made at least every 12 months to ensure the compressed air cushion is still intact.

Notes:

Please leave this Manual for the User

To activate your product warranty please visit

www.intatec.co.uk

and click on Product Registration

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