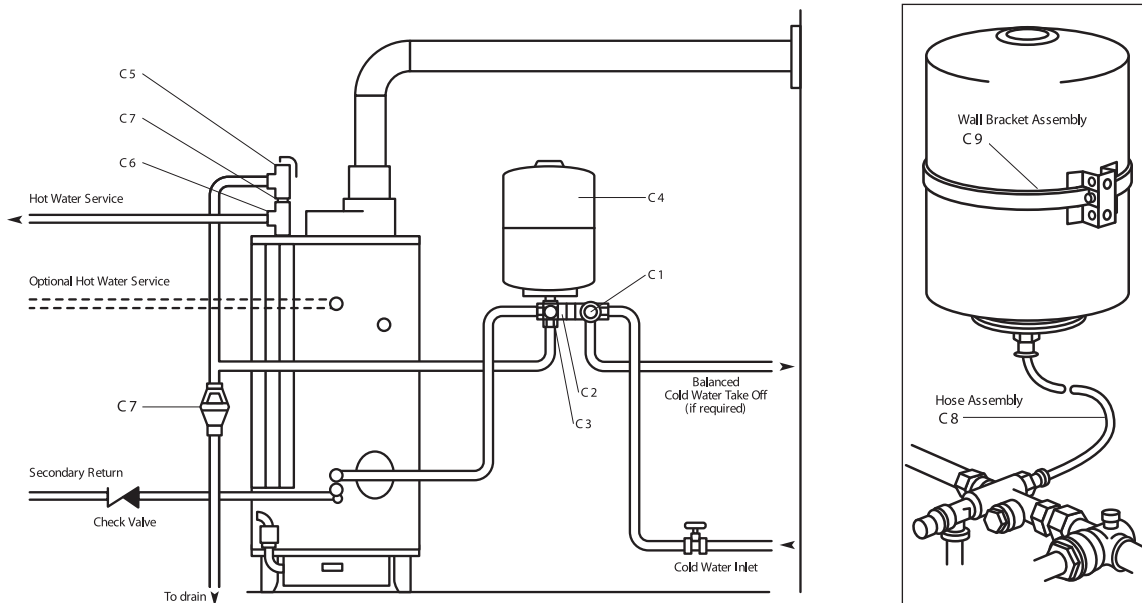


**T/D 045**

## GAS FIRED STORAGE WATER HEATERS

### Unvented Systems Kit Installation Details

### CSC39, 59, 78 & 93 Part No. B228



#### CSC39, 59, 78 & 93 COMPLETE UNVENTED SYSTEMS KIT PART No. B228 (COMPRISING C1-C7)

Components	Andrews Pt No.	RWC Pt No.
C1 Combined Reducing Valve/Strainer	C784	PRED 300-127
C2 Check Valve	C785	CORE 225-002
C3 Expansion Valve	C786	PREL 102-027
C4 Expansion Vessel (25 litre)	C782	XVES 603-041
C5 Temperature/Pressure Relief Valve 1 1/2"	E242	
C6 1 1/2" Square Equal Tee	C856	
C7 Tundish from Expansion Valve and T/P Valve	E326	

#### EXPANSION VESSEL WALL MOUNTING KIT PART No. B173 (OPTIONAL ANCILLARY COMPRISING C8-C9)

Components	Andrews Pt No.	RWC Pt No.
C8 Hose Assembly	C788	HOSE 202-106
C9 Wall Bracket Assembly	C787	BRKT 240-024

**NB. Unless specified Tees, elbows, stop valve and pipework not supplied.**

Andrews CSC Range Storage Water Heaters are listed under the United Kingdom Water Fittings Byelaws Scheme for use on unvented systems Certificate Number: 0207009

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These instructions are to be read in conjunction with the manufacturer's Technical Data and installation instructions. Installations of unvented hot water systems must comply with Part G3 of the Building Regulations 1992.

**Flush supply pipe to remove all flux and debris prior to fitting inlet controls.**

**Failure to do this may result in irreparable damage to the controls and will invalidate the warranty.**

**NB:** Items C1, C2 and C3 are not user adjustable.

The cold water supply pipework should be 28mm nominal size minimum.

**C1 Combination Pressure Reducing Valve/Line Strainer** – Set at 3.5bar, this controls the operating pressure and incorporates a wire gauze strainer. Care should be taken to ensure that the strainer is clear, particularly when commissioning and servicing. This component is supplied with one male union fitting.

**C2 Combination Check Valve/Expansion Valve** – The check valve function prevents back-flow and ingress of hot water into the cold supply.

In addition to the 1" female threaded 'in line' ports, the check valve housing incorporates 2x $\frac{3}{4}$ " ports and 1"x1" port. One of the  $\frac{3}{4}$ " ports accepts the Expansion Valve (C3) the other is for the connection of the Expansion Vessel. An optional Expansion Vessel – wall mounting kit is available if required.

Cold water for services may be drawn from 1" port. The water pressure at this port will be similar to that available at the hot water outlet of the water heater.

If higher flow rates are required for the cold water services a suitable 'tee' fitting should be incorporated upstream of C1.

Any unused ports should be sealed with the plugs supplied.

**C3 Expansion Valve** – The expansion valve is set to discharge at 6bar. This limits the maximum system pressure to 6bar, it also indicates a malfunction in the system: eg expansion vessel fault of 'crossflow'.

The PTFE sealing ring, on the male thread, will ensure a good joint and enable correct orientation. A small amount of jointing compound may be used as a lubricant. This valve should be fitted with the discharge directed downwards or horizontally – if fitted inverted, debris may be deposited on the seat of the valve and prevent proper closure. The blue 'easing knob' on the valve should be operated periodically to ensure that the valve is able to function.

**C4 Expansion Vessel (25 Litre)** – The vessel is designed to accommodate the expansion resulting from increased water temperature. The dry side of the diaphragm is charged to a pressure of 3.5bar. This pressure should be checked periodically, via the Schraeder type valve on the top of the unit and if necessary, restored to 3.5bar.

**NB:** Water pressure must be relieved whilst checking and adjusting pressure.

**C5 Combination Temperature/Pressure Relief Valve** – This opens at 90°C and/or 7bar. Its principal function is to prevent the water temperature from, at any time, exceeding 100°C, in compliance with the Requirement G3 of the Building Regulations 1992.

**C8 Tundish** – To comply with the requirement G3 of the Building Regulations 1992 this must be installed within a distance of 500mm from the Temperature/Pressure relief valve.

When assembling C1 and C2 care must be taken to ensure that flow arrows, marked on the components, are pointing in the direction of flow: ie towards the heater.

When connecting C1 and C2 together the PTFE sealing ring will ensure a good joint and enable correct orientation. A small amount of jointing compound may be used as a lubricant.

The black plastic plugs in C1 and C2 are pressure gauge connections to enable pressure monitoring if required.

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**If further information is required please contact Andrews Water Heaters.**



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Since it is our policy to strive for progressive design and performance all our equipment is subject to