



- the complete package

A UNIQUE CONCEPT • A UNIQUE CONCEPT • A UNIQUE CONCEPT • A U





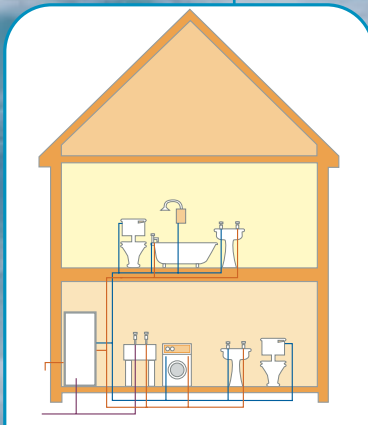
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- ▶ The Oso Dualstream system utilises all the benefits of traditional unvented cylinders taking performance to another level, transforming both new and existing plumbing systems, delivering a truly outstanding performance.

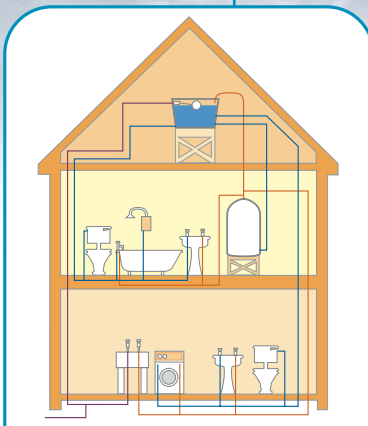
The Oso Dualstream will provide a substantial increase in water volume to both hot and cold outlets within the building. Designed to work at very low flow rates (5LPM) and can be adjusted to operate even if the mains water pressure is reduced.

### Why install Oso Dualstream over conventional unvented systems?

For many years domestic plumbing practices in the United Kingdom have relied on cold storage tanks in the loft and hot water cylinder.



▲ Home with a Oso Dualstream system installed



▲ Traditional home without an Oso Dualstream system installed

▲ See the difference

Unvented hot water cylinders have been approved and installed since the late 1980s and have many benefits to the end user, specifiers, developers and installers.

- High performance mains pressure showering - no shower pump required
- The Oso Dualstream is supplied with an adjustable pressure reduction valve. This means pressure to all mains water outlets can be adjusted between 0.5 bar to 5 bar
- No cold water storage tanks required removes risk of water stagnation and Legionella
- Dry roof space removing the threat of frozen pipes and tanks - no noisy ball valves or tank filling noise
- Simple plumbing design uses less pipework, saving time and money
- Wholesome water to all cold taps
- Balanced mains pressure hot and cold water supply to multiple outlets
- Oso Dualstream is BBA approved and WRAS listed
- Will work at very low flow rates (5LPM)
- Oso Dualstream utilises Green Technology
- Two or more models can be installed in parallel for greater volume demand, applications such as health clubs, hotels, sports and social clubs
- Our systems once installed, are supported by a 25 year cylinder guarantee † the accumulator and all other parts have a 2 year guarantee - scale excepted

The Oso Dualstream system has many applications and can be used for three or four storey town houses and flats with poor volume problems, exaggerated by the building height.

A normal solution would be to use break tanks and booster sets to ensure adequate volume and pressure, this can be expensive and of course chlorination is an ongoing expense, and pump noise and running costs have to be considered.

† Inner pressure vessel scale excepted

# The Complete Package and How it Works

The OSO DUALSTREAM utilises all the benefits of a traditional unvented cylinder with standard controls; temperature / pressure relief valve and pressure reducing valve set at 3.5 bar.

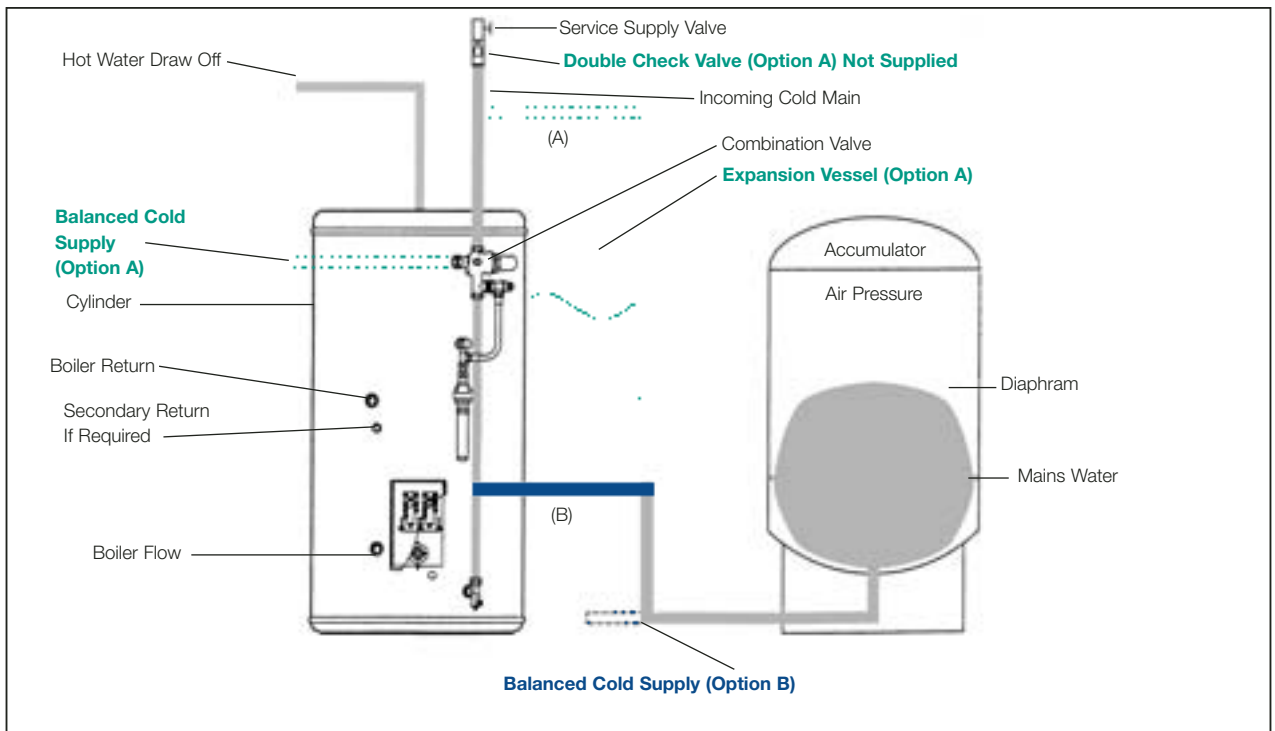
The system also uses an accumulator vessel, this stores mains water at the main pressure in a special butyl diaphragm, and is the driving force to the hot and cold supplies. The Oso Dualstream as shown below can be installed in two ways. Option A or B.

**Option A requires an accessory pack containing pressure reducing valve, expansion vessel and bracket at additional cost and should be ordered with the system. Option A is used when the accumulator is remote from the cylinder.**

**Option B. Standard installation does not require an expansion vessel as expansion is accommodated within the accumulator.**

Note:

The water pressure is balanced by air pressure between the accumulator wall and diaphragm. When any tap or shower is turned on, the stored water from the accumulator will supplement water from the incoming main.



Each Oso Dualstream system is supplied with a comprehensive illustrated manual, which takes you through the installation process.

To speed up installation time the Oso Dualstream system is supplied as a pre-fabricated assembly which includes: Combination valve comprising non-return valve, line strainer, adjustable pressure reduction valve (prv) with pressure gauge (prv preset at 3.5 bar adjustable on site between 0.5 bar and 5.0 bar) 8 bar expansion relief valve linked to the tundish. Systems supplied with cylinders of 250 litres and above will be supplied with 1" combination valve which includes a blanked off expansion vessel connection. All cylinders supplied with a factory fitted pressure and temperature relief valve, the discharge outlet being connected to the tundish. Indirect cylinders are supplied with a factory fitted low entry 3KW immersion heater and surface

mounted thermostat incorporating an energy cut out. Hard wiring between the element and the thermostat is factory fitted. All direct cylinders except the 120 litre version have 2 x 3KW immersion heaters, with thermostat and factory fitted hard wiring all as indirect models. A two port motorised valve is supplied with all indirect units. This valve must be installed on the flow to the OSO cylinder. Indirect OSO Dualstream cylinders can be installed using an S plan or Y plan system.

In addition Oso Dualstream systems with cylinder capacities from 120 litres to 200 litres are supplied with three 22mm full-bore isolation valves and a double check valve. Capacities from 250 litres to 380 litres will be supplied with three 28mm full-bore isolation valves and a double check valve.

## Choosing your Oso Dualstream system

To obtain the very best performance from your Oso Dualstream system the accumulator must be sized correctly, as it is the driving force supplying simultaneous hot and cold water demand to the building.

The accumulator will hold 50% - 70% of its volume dependant upon the set operating pressure. Ideally the accumulator should recover its contents in less than 15 minutes following water usage. Recovery however is dependant upon flow rate from the main supply, which can vary.

When choosing your Oso Dualstream, consider the following:

- Mains flow rate and dynamic pressure
- House type and number of occupants
- Typical daily water usage
- Number of Bathrooms/en-suite/showers
- Other water usage hot or cold

The indirect version of the OSO Dualstream can be supplied with 2 coils, this option is available on capacities of 250 litres and above.



Use this guide to assist in choosing your OSO Dualstream system

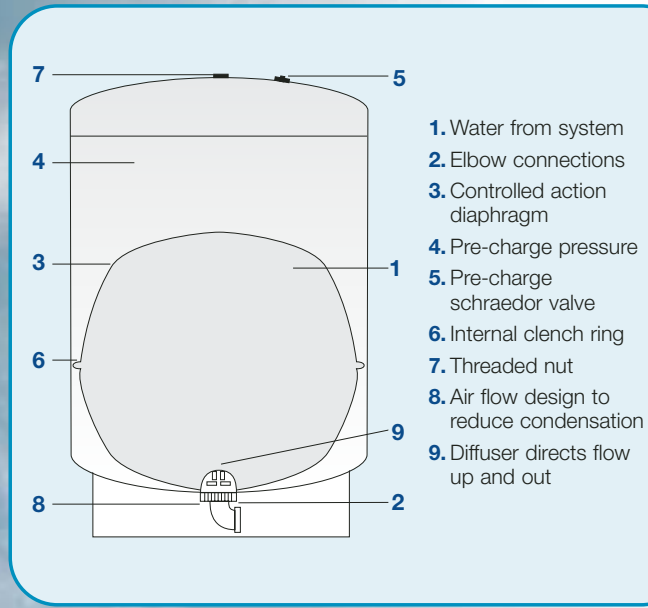
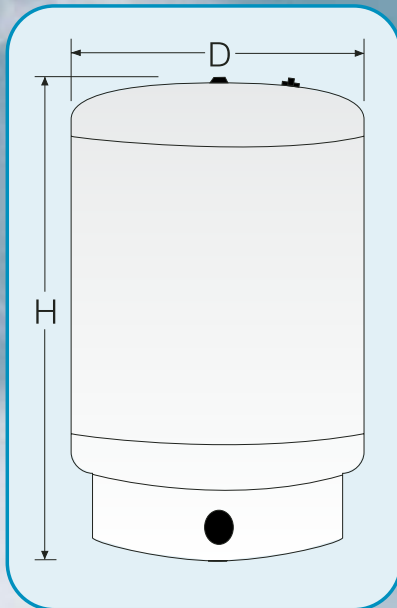
Direct model Order Code

Indirect model Order Code

Bedsit	ODD 120/80	ODI 120/80
1 bed, 2 people, bath + shower, kitchen	ODD 150/200 or 200/200	ODI 150/200
2 bed, 3 people, bath + shower, kitchen	ODD 200/240 or 250/240	ODI 150/200 or 200/200
3 bed, 4 people, bath + shower, kitchen	ODD 250/240 or 300/300	ODI 200/200 or 250/240
4 bed, 5 people, 2 baths + shower, kitchen	ODD 300/300 or 380/300	ODI 250/240 or 300/240
Larger homes requiring higher storage capacities	ODD 380/500 or 2 x 380/500	ODI 380/500 or 2 x 380/500
	Other combinations are available. Please contact OSO Hotwater (UK) Ltd.	
Small commercial	Capacities from 500 litres upward are available. Please consult OSO Hotwater (UK) Ltd	

The installation of any OSO Dualstream unvented hot water system must comply with the current building regulations and approved document G3. The system must also be installed in accordance with the water regulations and with due care and attention to the design requirements of BS: 6700:1987.

## Oso Dualstream Technical Specification - Accumulator



This unique range of accumulators feature a patented controlled action diaphragm with special diffuser to prevent stratification.

- Maximum working pressure 10 bar (shell)
- Maximum operating temperature 70°C
- The Oso Dualstream accumulator is supplied with a pre-charge of 2bar to give 1.5bar differential between the accumulator pressure and the 3.5bar pressure reducing valve (PRV) setting. If a higher or lower PRV setting is required, the accumulator pressure must be raised or lowered to maintain the 1.5bar differential. However do not reduce the accumulator pressure below 0.5bar (7PSI).

Nominal Accumulator size (litres)	Diameter	Height	Gross weight (kg)	Connection size
80 ltr	400mm	890mm	86	1"
200 ltr	535mm	995mm	150	1"
240 ltr	540mm	1220mm	205	1"
300 ltr	540mm	1560mm	255	1"
500 ltr	665mm	1550mm	385	1"



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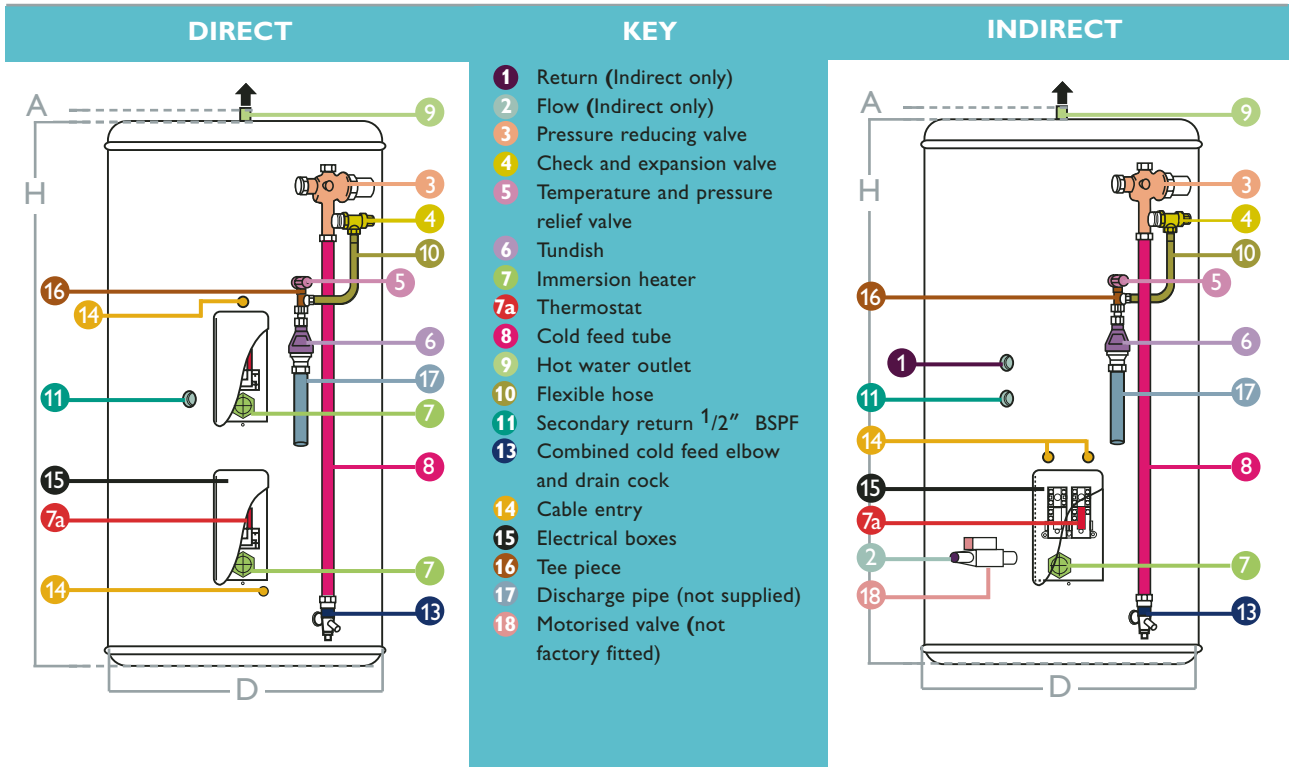
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Oso Cylinder Fully Flooded Capacity	Dimensions mm			Approx weight full kg	3kw Elements factory fitted	Floor standing	Wall fixing bracket††	Connection dimensions from base unit in mm			Standing heat loss/kWh/24h
	H	D	A					1	2	11	
Direct											
120	720	580	25	127	1	Yes	Yes††	-	-	345	1.32
150	900	580	25	159	2	Yes	Yes††	-	-	435	1.55
200	1150	580	25	209	2	Yes	Yes††	-	-	560	1.77
250	1400	580	25	255	2	Yes	No	-	-	755	1.95
300	1600	580	25	297	2	Yes	No	-	-	995	2.19
380	2090	580	25	391	2	Yes	No	-	-	1470	2.55
Indirect											
120	720	580	25	132	1	Yes	Yes††	480	225	345	1.32
150	900	580	25	163	1	Yes	Yes††	480	225	435	1.55
200	1150	580	25	215	1	Yes	Yes††	720	225	560	1.77
250	1400	580	25	261	1	Yes	No	720	225	755	1.95
300	1600	580	25	303	1	Yes	No	720	225	995	2.19
380	2090	580	25	397	1	Yes	No	720	225	1470	2.55

†† Wall Fixing bracket available as an extra

In known hard water regions where lime scale deposits occur, it is advisable to take precautions to prevent it's formation in your OSO water cylinder.

Oso Dualstream Cylinders with fully flooded capacities of 120 - 200 Litres will be supplied with 3/4" Hot & Cold water connections. Cylinders with fully flooded capacities of 250 - 380 Litres will have 1" Hot & Cold connections.

