

THE FULLY APPROVED SUPER SAVING SPARTAN

What Is The Spartan?

It is the first truly effective technical bridge between the primary and secondary systems. It allows the secondary (hot water) system to feed, fill and vent the primary (central heating) system.

IT IS NOT A PRIMATIC CYLINDER as it maintains the two systems independently, without any contamination of the secondary water under operational conditions.

How Does It Work?

Imagine the system filling through one of the horizontal pipes (see Cutaway Picture) which is fed from the hot water cylinder and which in turn is fed by the cold supply tank. The Purg-o-Mat automatic float air vent opens, releasing air thereby allowing the water level to rise above the top of the stand pipe in the upper chamber of the Spartan, to flow down through the lower chamber to fill the primary system.

Once the primary system is full the water level rises in the lower chamber which raises the Purg-o-Mat's float to shut off the air vent. Air pressure then stops the water flowing down the stand pipe. This acts as a positive seal to maintain the two systems independence. If in operation, the primary water level drops for any reason, then the filling process is automatically repeated to top the system up.

What Benefits Does It Give?

It eliminates the need for feed and expansion tanks, loft space working and the attendant pipework, to save on installation costs.

It is not always realised that, when using normal expansion tanks, the feed water contains over 2% air in solution. This 2 parts in 100 is a major cause of internal corrosion of the primary system. The Spartan constantly de-aerates the primary system to render it virtually inert and in tests conducted by British Gas at their Watson House Laboratories it was found that there was less than 1 part to 2 million reoxygenation of the primary water. This effectively reduces corrosion on the internal surfaces of radiators and metal components.

It will operate under a low 'static head' and effectively eliminates the problems associated with a high velocity pump pushing up the vent pipe and causing the primary water to be pulled down the feed pipe with a resulting ingress of air occurring from the expansion tank.

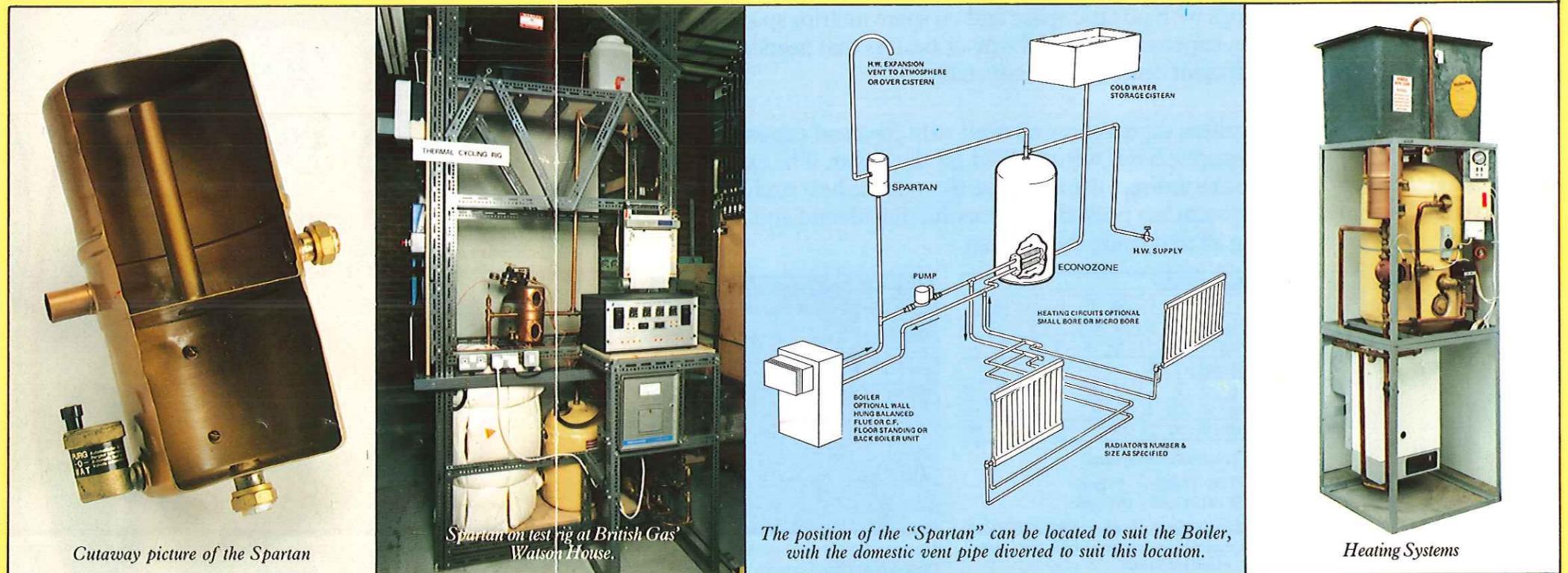
There will be less call backs to vent the system provided the installation is to standard code of practice for central heating and the radiators are properly vented on filling.

Is It Approved?

Yes. The Spartan has been tested and approved by the National Water Council and granted certification number 810317. It has also been tested by British Gas Watson House Laboratories and found satisfactory for use in gas fired installations, (although it works just as efficiently whatever the fuel used) receiving their certification number AEI/84/36.

How Is It Fitted?

It is simply suspended, without the need for brackets, in the hot water draw off and vent pipe (see diagram) with the primary connection at the base of the unit. Use either compression or capillary fittings. The Spartan can operate with a minimum head of two inches, although filling is slower and a greater head is recommended.



Cutaway picture of the Spartan

Spartan on test rig at British Gas Watson House.

The position of the "Spartan" can be located to suit the Boiler, with the domestic vent pipe diverted to suit this location.

Heating Systems

Heating Systems

The Spartan works well on a gravity system as well as allowing a high velocity pumped system to operate under a low head enabling the introduction of a range of packaged heating systems (see photograph) that occupy a minimum of space, are quick to install and require only radiators and pipe runs to complete. They offer designers and contractors a single source of responsibility for everything except the boiler (optional) circuits and radiators. Ask for your Hydro Pac catalogue which includes further details.

SUPER SAVING SPARTAN

Case Histories

NATIONAL BUILDING COMPANY - FLATS IN BOURNEMOUTH

Problem: Overboiling and ingress of air

Although designed 'to the book' the installed system utilised a low water content boiler operating under a minimal static head. With a fast, pumped water flow through the boiler air was sucked into the system. When the water flow was slowed down to compensate, the thermostat was not able to switch off quickly enough and the temperature would reach boiling point.

Solution:

With a Spartan fitted the water flow was able to be speeded up without drawing air into the system. These systems are now operating satisfactorily to gas authority requirements.

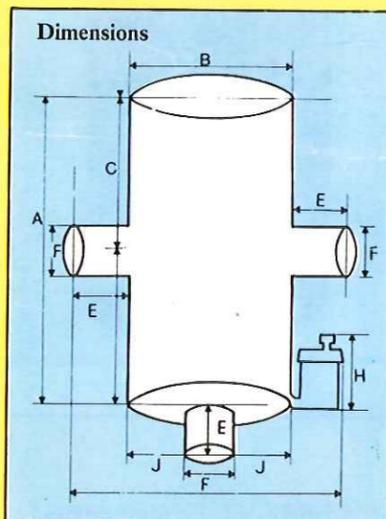
A SOUTH WEST DISTRICT COUNCIL

Problem: Lack of Space for Modernising Obsolete Gas Warm Air Heating

Hundreds of flat roofed dwellings with no attic space and no spare interior space. Built in the sixties with now obsolete, expensive to run, warm air heaters that needed replacing by an effective and efficient central heating system.

Solution:

With a Spartan fitted into the system there is now no need to fit feed and expansion tanks. The existing flues and concrete bases were utilised for the boiler. The existing combination tank was converted to indirect use using the Econozone heat exchanger (See separate brochure). This system has proved so successful that second and third stage conversions are now being altered using the Spartan.



Model ET50									
A	B	C	D	E	F	G	H	J	
ins	12	6	6	6	1 1/2	-	9	2 3/4	3
mm	305	152	152	152	38	22	229	70	76

Model ET100									
A	B	C	D	E	F	G	H	J	
ins	15	7 1/2	8	1 1/2	1 1/2	-	10 1/2	2 3/4	3 3/4
mm	381	191	178	203	38	22	267	70	96

For open vented systems

ET50 12 galls - 55 litres

ET100 24 galls - 110 litres

Manufactured of copper to BSS: 2870 C101

Pressure tested similar to BSS: 699 Grade 1, which is 53lb/in²

Weight empty: ET50 4 3/4 lbs.
ET100 5 3/4 lbs.

Patent GB 2001 740 B



Incorporated with the Spartan is the Purg-o-Mat High Capacity Automatic Float Air Vent for automatic purging of all open hot water systems. Vertical or lateral connection.

Ask for separate leaflets.

Stockists.



HYDRO SPARTAN LTD.

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THE AUTOMATIC RECOVERY TANK THAT SAVES ON INSTALLATION COSTS, TIME, CALL-BACKS AND CORROSION IN CENTRAL HEATING SYSTEMS



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