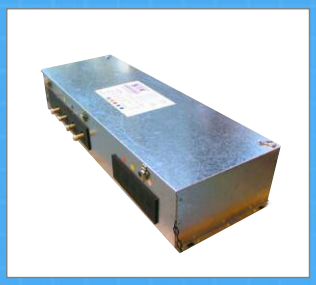
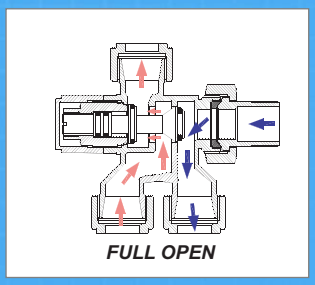

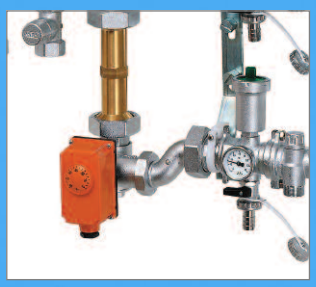

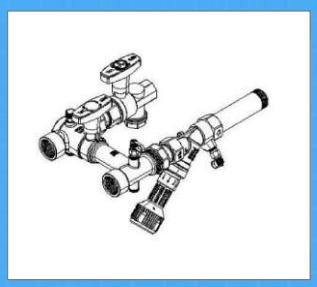

HVAC DISTRIBUTION MANIFOLDS

SAV Systems

Product Brochure

www.sav-systems.com

Rev: 1.0 11/2010

HVAC DISTRIBUTION MANIFOLDS

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SAV Systems

SAV Systems is a leading provider of innovative building services solutions designed to boost energy efficiency and cut carbon emissions.

Products vary from sophisticated mini-CHP systems to simple water meters, but all are purpose-developed to serve a better internal environment and a greener world.

Used as individual products, or integrated into custom-designed systems, the SAV range makes a perfect partner for low energy technologies from renewables to central plant and even district heating systems.

It's a full family of choice sourced from some of the world's leading specialist companies - our Partners in Technology. Product groups cover the full spectrum of modern building services.

SAV has been operating in the UK since 1988.

Hard won skills and experience have been used to create a Development and Distribution Centre for the world's finest fluid control valves and systems.

Working in liaison with our Partners in Technology we have access to comprehensive ranges of components backed by the latest in research, development and manufacturing techniques.

Our Partners are all leading figures in their specialist sectors. SAV's development team provides the catalyst that binds superb individual products into cost-efficient solutions, tailored to meet the special needs of the British construction industry.

Quality is the common thread that runs through all SAV activity. We insist on quality in both human and technical resources. It is quality that ensures efficiency and reliability and thus customer satisfaction.

And we believe that satisfied customers are our best guarantee of a long and prosperous future.

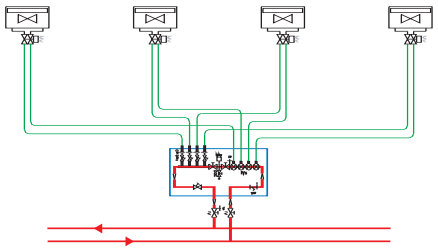
FloCon™ COMMISSIONING MODULES

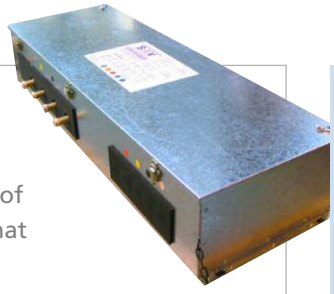
Fan coil and chilled beam headers

Overview

Modules are purpose designed to act as the distribution "hub" for groups of terminal units and can be configured for fan coils, chilled beams etc. Each compact unit has all components for balancing, commissioning and control - including multi-port manifold, automatic air vent and isolation valves - housed in a pre-insulated galvanised steel casing.

Differential Pressure Control Valves (DPCV's), energy meters etc can also be accommodated, as the project requires.





System Benefits

- Faster, cheaper installation with centralisation of commissioning valves and terminal branches that flush, vent and back-flush centrally.
- Great flexibility in Building Design with fewer access points, minimal space requirement around terminals, simplified pipe sizing and easier routing
- Optimum flow control. Flow balance holds when changes occur elsewhere and there is no need for upstream balancing valves.
- Simpler, less frequent maintenance. Each FloCon™ Commissioning Module incorporates a large strainer with ball valve isolation, which protects the entire system from scale and debris in the pipe work so dirt cannot enter (and block) the terminal branches Commissioning valves are grouped and a single person can balance flows. Easy to remove units for repair or add new terminals to the system

Partners in Technology

Since its foundation in 1957 the Cimberio Group has produced hundreds of millions of valve products, which have been distributed throughout the world.

www.cimberio.it

FAR Rubinetterie S.p.A. has a proud 30 year history in the design and manufacture of components for heating, plumbing and sanitary systems.

www.far.eu

Literature

FloCon Brochure

FloCon Design Guide

The above documents are available for download by visiting our website at:

www.sav-systems.com

alternatively a printed copy can be obtained by calling 020 8979 4153.

HEATING

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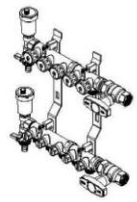
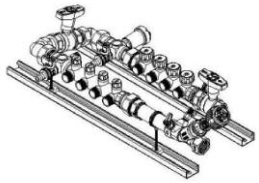
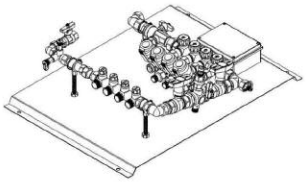
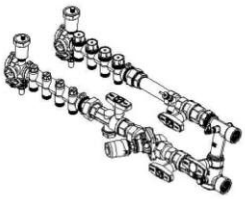
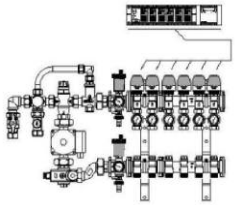
	876	Heating - Radiant Panels	11
	840	Heating - Radiators	12
	864	Trench Heaters	13
	911	UFH with By-pass	14
	501	UFH with Pump Kit	15

VENTILATION & AIR CONDITIONING

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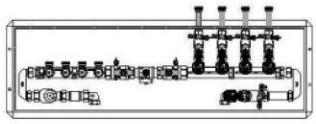
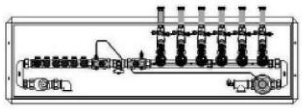
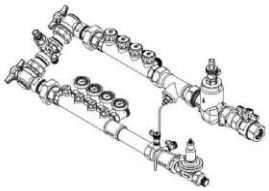
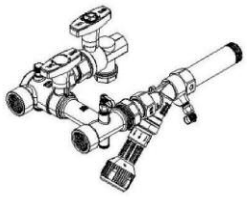
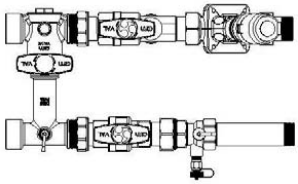
	843	Commissioning Module - Constant Flow	16
	835	Commissioning Module - Variable Flow	17
	957	Chilled Beam Assembly	18
	818 (DN 15) 820 (DN 20) 824 (DN 25) 637 DN (32)	Monolink Constant Flow	19
	811 (DN 15) 813 (DN 20) 806 (DN 25) 636 DN (32)	Monolink Variable Flow	20

HVAC DISTRIBUTION SOLUTIONS

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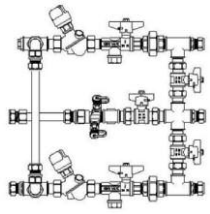
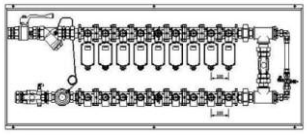
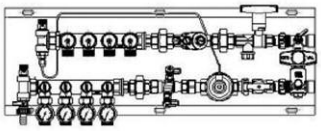
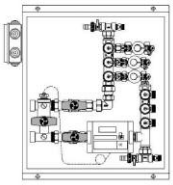
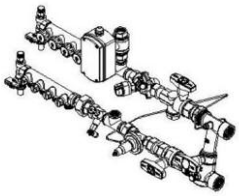
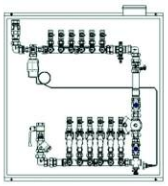
	512	LPHW and chilled water manifold assembly with a common return	Full Datasheet Coming Soon
	288	Radiant manifold assembly with 2-Port valves & bleed by-pass	Full Datasheet Coming Soon
	890	Radiator manifold assembly with differential pressure controller, metering station and Temperature gauges on the return	Full Datasheet Coming Soon
	640	Manifold assembly in insulated enclosure with energy meter & 2-Port valve with actuator	Full Datasheet Coming Soon
	907	Radiator manifold assembly with cylinder feed	Full Datasheet Coming Soon
	672	Chilled Beam with Temperature control	Full Datasheet Coming Soon

HVAC DISTRIBUTION MANIFOLD ACCESSORIES

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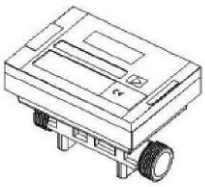
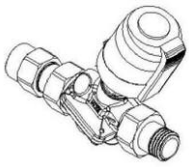
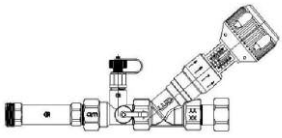
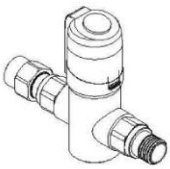
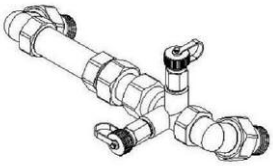
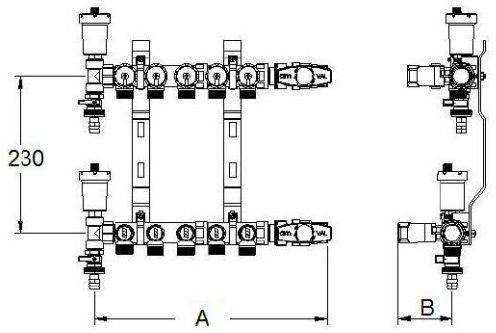
	1000	Energy Meter with temperature sensor	Full Datasheet Coming Soon
	3434	Temperature gauge	Full Datasheet Coming Soon
	3428	Flow gauge	Full Datasheet Coming Soon
	972	Automatic balancing valve	Full Datasheet Coming Soon
	192, 195, 196, 197, 198, 199	Commissioning set with flow straightener	Full Datasheet Coming Soon
	973	2-Port valve with actuator	Full Datasheet Coming Soon
	974	Commissioning module By-pass-assy	Full Datasheet Coming Soon

876 - Heating / Radiant panel Manifold assemblies



Dimension table

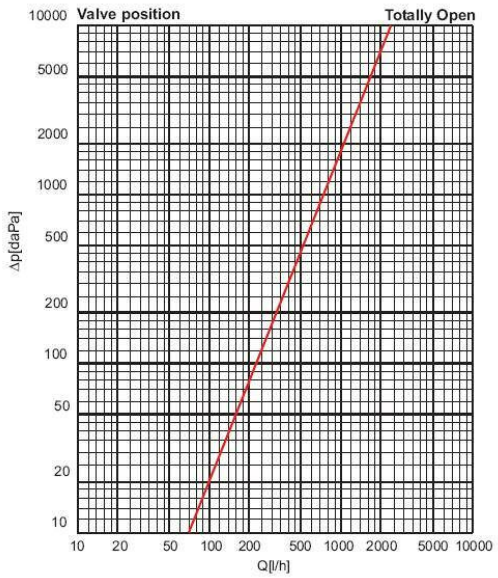
Ports	Manifold 20-mm		Manifold 25-mm	
	A	*B*	*A*	*B*
2	*230*	*70*	*252*	*80*
3	*275*		*297*	
4	*320*		*342*	
5	*365*		*387*	
6	*410*		*432*	

Note: Manifold assemblies are available with larger port allocations on request

Technical Data

Manifold Size	20-mm	25-mm
Manifold Port flow	See graph below	
Manifold Material	Brass	
Manifold	Flow -MultiFar Return - LockShield	
Centre between ports	45-mm	45-mm
Maximum operating pressure	10 bar	10 bar
Maximum operating temperature	95 °C	95 °C

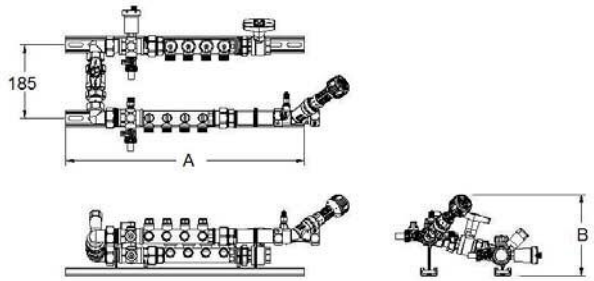
Manifold Flow Characteristics



FAR MultiFar manifold

FAR LockShied manifold

840 – Radiator Heating Manifold



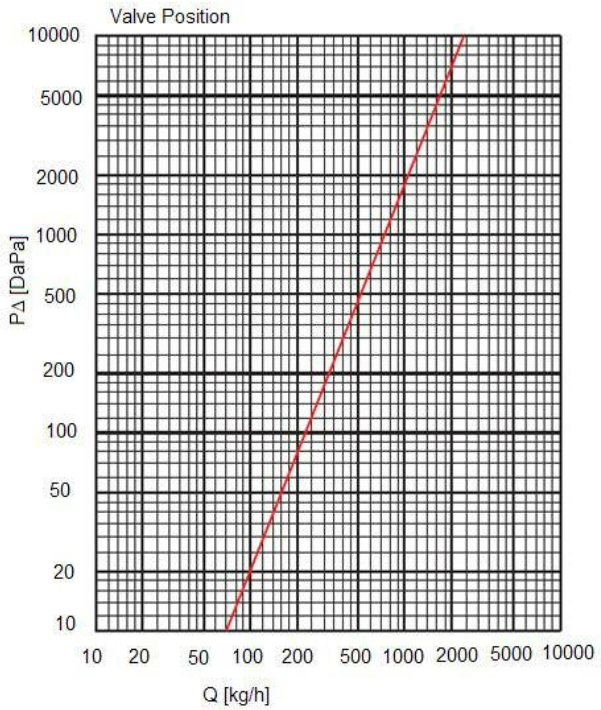
Dimension table				
Ports	Manifold 25-mm		Manifold 32-mm	
	A	B	A	B
2 to 4	600	210	600	250
5 to 8	800		800	

Note: Manifold assemblies are available with larger port allocations on request.

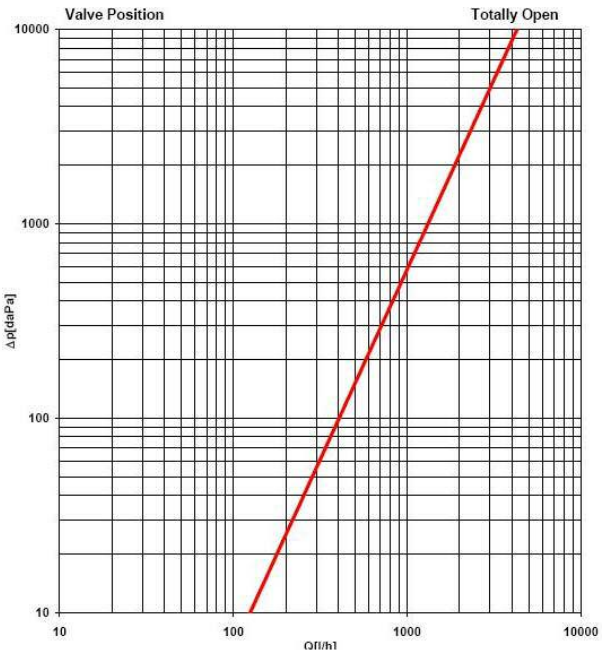
Technical Data		
	Manifold 25 -mm	Manifold 32-mm
Features	Standard manifold assemblies are fitted with an IV on the flow and a Commissioning set with flow strainer on the return. A by-pass valve, DOC & AAV on the Flow and MAV & drain on the return is provided for flushing and venting. Different combinations to suit system requirements are available on request.	
Manifold Port flow	See Flow charts below	
Max manifold flow	0.54 l/sec	1.12 l/sec
Manifold suitability	Heating	
Centres between ports	45 - mm	70 - mm
Maximum operating pressure	10 bar	10 bar
Maximum operating temperature	95 °C	95 °C

Manifold Flow Characteristics

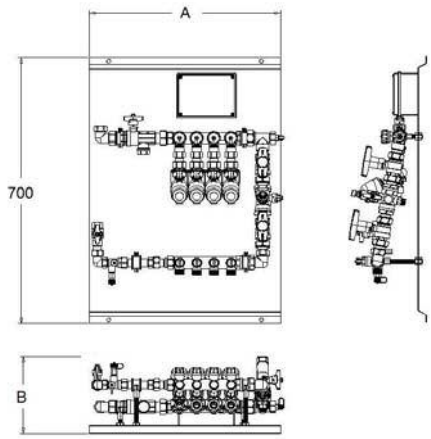
25 –mm Manifold



32-mm Manifold



864 – Trench Heating Manifold



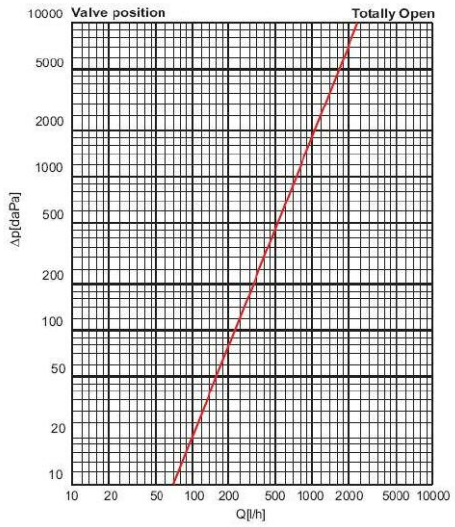
Dimension table				
Ports	Manifold 20-mm		Manifold 25-mm	
	A	B	A	B
2 to 4	500	200	500	250
5 to 8	700		700	

Note: Manifold assemblies are available with larger port allocations on request.

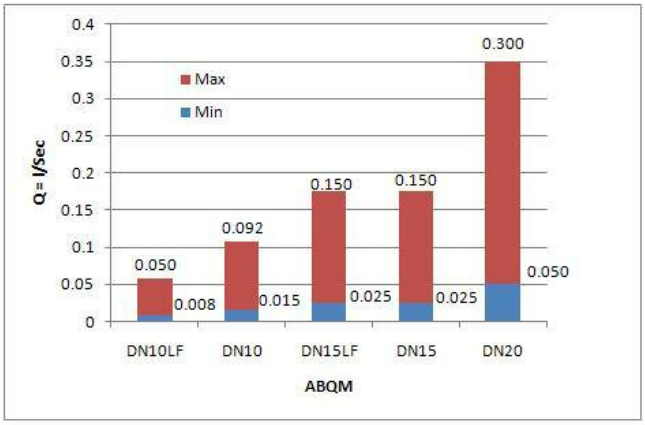
Technical Data		
	Manifold 20 -mm	Manifold 25-mm
Features	Standard Trench heater manifold assemblies are fitted with an IV + strainer on the flow and an IV with metering station & flow straightener on the return. A by-pass valve with MAV & DOC is provided for flushing and venting. Automatic balancing valves (ABQM) with thermal actuators wired to a common terminal box are provided for control purposes. Different combinations to suit system requirements are available on request.	
Manifold Port flow	See Flow charts below	
Max manifold flow	0.29 l/sec	0.54 l/sec
Manifold suitability	Heating	
Centres between ports	45 - mm	45 - mm
Max operating pressure	10 bar	10 bar
Max operating temperature	95 °C	95 °C

Manifold Flow Characteristics

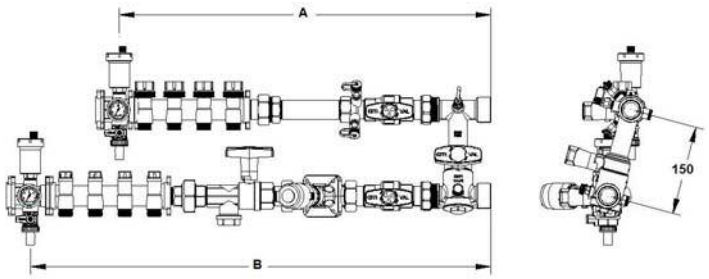
20/25 –mm Manifold



ABQM



911 – UFH with By-Pass



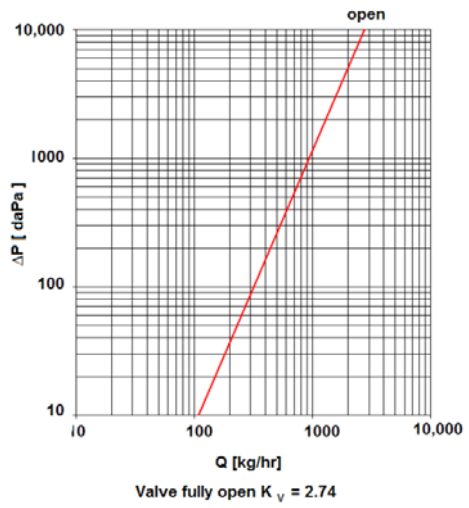
Dimension table		
Ports	Manifold 25-mm	
	A	B
2	530	680
3	580	730
4	630	780
5	680	830
6	730	880

Note: Manifold assemblies are available with larger port allocations

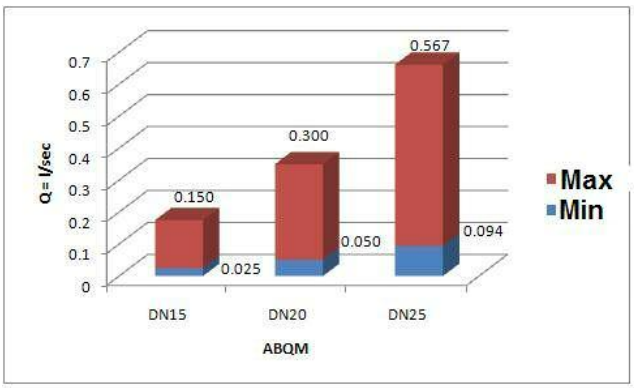
Technical Data		
	Manifold 20 -mm	Manifold 25-mm
Features	**The UFH manifold** assembly is fitted with a by-pass having isolation to flow & return. **The Flow** manifold is equipped with ABQM and IV with strainer, AAV, DOC, LockShield adjustable valves on each port and if required, can be provided with Temperature and or flow gauge. **The Return** manifold is fitted with a metering station with flow straightener, adjustable valve on each port, AAV and DOC. If required the port valves can be fitted with thermal adjusting heads for connection to a central control station.	
Manifold Port flow	See Flow charts below	
Max manifold flow	0.54 l/sec	
Manifold suitability	Under Floor Heating	
Centres between ports	50 - mm	
Maximum operating pressure	10 bar	
Maximum operating temperature	95 °C	

Manifold Flow Characteristics

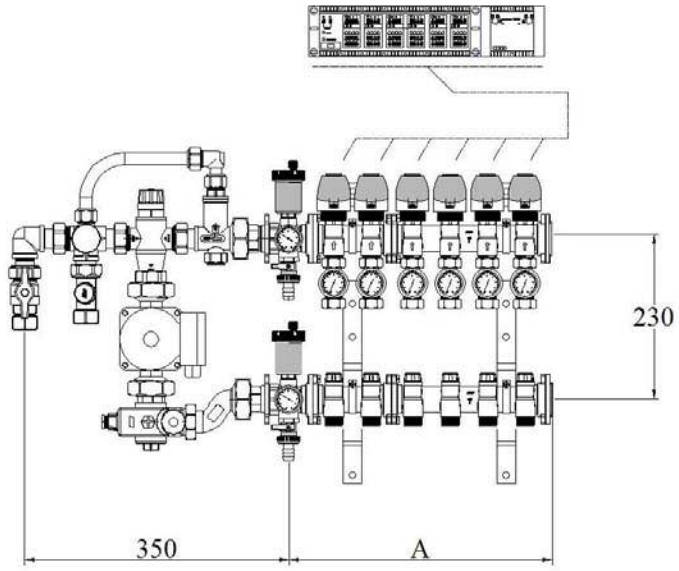
25 –mm Manifold



ABQM



501 – UFH Heating Manifold



The UFH system is designed for connection to a primary flow & return. A secondary circulator to effectively distribute a set water temperature can be provided if required. The system temperature is controlled by a thermostatic mixer to blend water from the return circuit with hot water from the boiler. A security thermostat on the flow ensures that excessively high temperature water cannot enter the system should the mixer valve fail. To enhance control an electronic Controller for thermostatic control of the port outlets and boiler control can be provided.

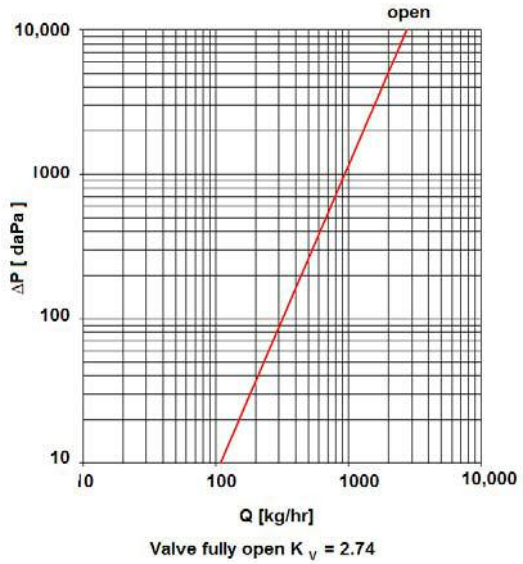
Dimensions					
Ports	2	3	4	5	6
Dimension A	150	200	250	300	350

Note: Manifold assemblies are available with larger port allocations on request

Technical Data	
	Manifold 25-mm
Manifold Port flow	See Flow charts below
Max manifold flow	0.54 l/sec
Manifold suitability	Under Floor Heating
Centres between ports	50 - mm
Maximum operating pressure	10 bar
Maximum operating temperature	95 °C

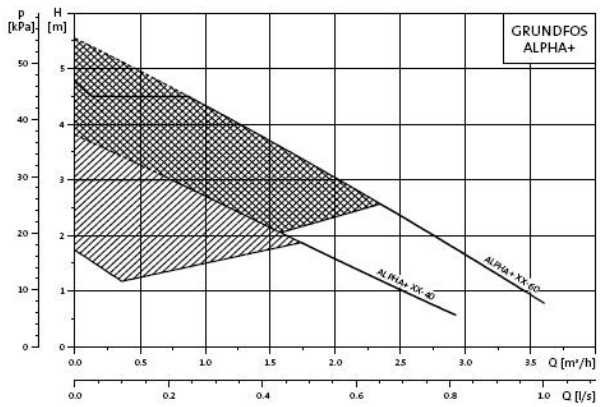
Manifold Flow Characteristics

25 –mm Manifold

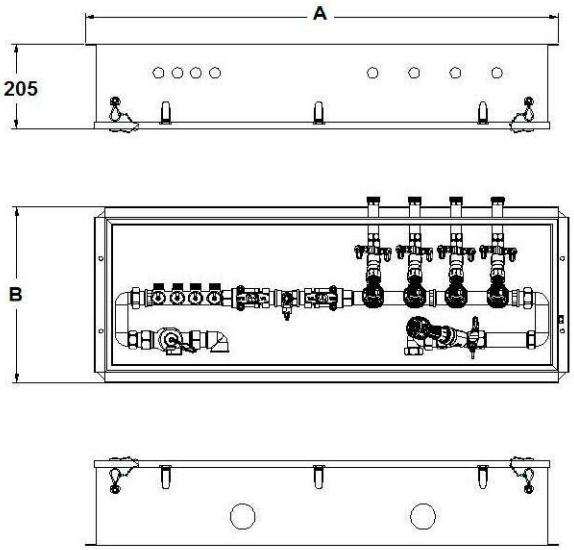


Valve fully open K_V = 2.74

Grundfos pump Alpha = 15 60



843 – Commissioning module constant flow

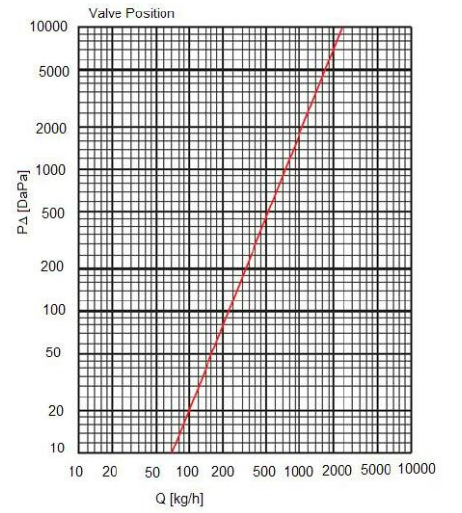


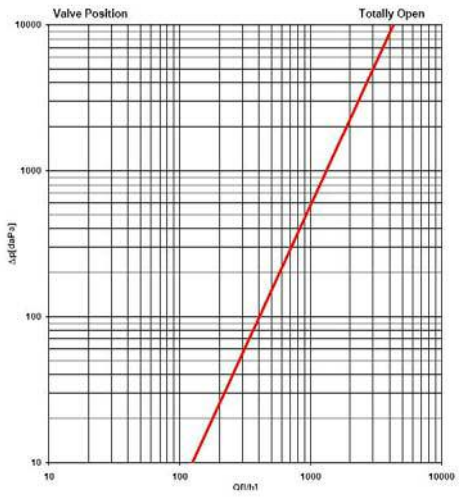
Dimensions					
25-mm Manifold CM module					
Ports	2	3	4	5	6
A	852	997	1142	1287	14.52
B	422				
32-mm Manifold CM module					
Ports	2	3	4	5	6
A	967	1137	1307	14.77	1647
B	452				
Note: 7-Port modules are available on request					

Technical Data		
	Manifold 25 -mm	**Manifold 32-mm**
Features	Please refer to the SAV FloCon commissioning modules data sheet for design and application notes. In general this product is designed for constant flow systems and sized and designed to meet the specific criteria for a project	
Manifold Port flow	See Flow charts below	
Max manifold flow	0.54 l/sec	1.12 l/sec
Manifold suitability	Heating and cooling systems	
Centres between ports	Flow 45 – mm Return 100-mm	
Maximum operating pressure	10 bar	10 bar
Maximum operating temperature	95 °C	95 °C

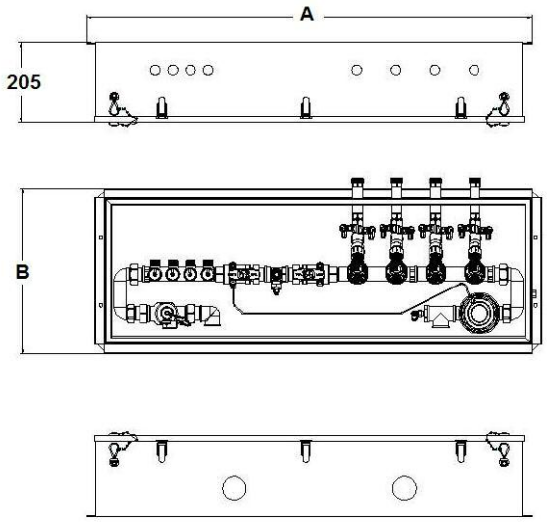
Manifold Flow Characteristics

20/25 –mm Manifold





835 – Commissioning module Variable flow

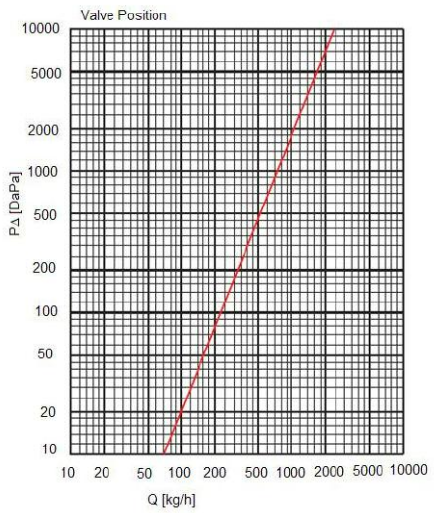


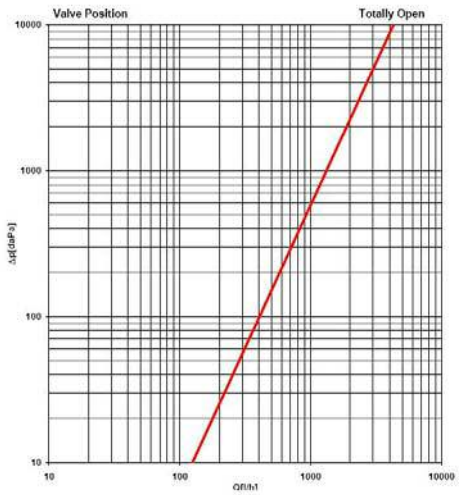
Dimensions					
25-mm Manifold CM module					
Ports	2	3	4	5	6
A	852	997	1142	1287	1452
B	422				
32-mm Manifold CM module					
Ports	2	3	4	5	6
A	967	1137	1307	14.77	1647
B	452				
Note: 7-Port modules are available on request					

Technical Data		
	Manifold 25 -mm	**Manifold 32-mm**
Features	Please refer to the SAV FloCon commissioning modules data sheet for design and application notes. In general this product is designed for Variable flow systems and sized to meet the specific criteria for a project. If required, a by-pass, Energy meter or similar variant can be incorporated in the module design.	
Manifold Port flow	See Flow charts below	
Max manifold flow	0.54 l/sec	1.12 l/sec
Manifold suitability	Heating and cooling systems	
Centres between ports	Flow 45 – mm Return 100-mm	
Maximum operating pressure	10 bar	10 bar
Maximum operating temperature	95 °C	95 °C

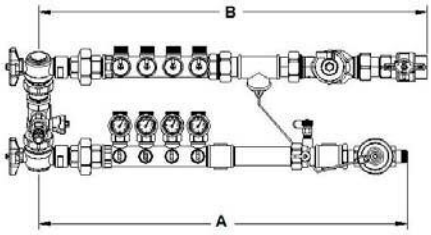
Manifold Flow Characteristics

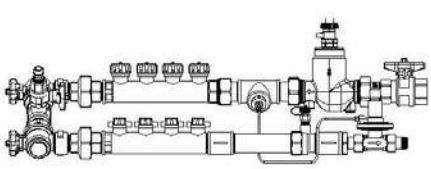
20/25 –mm Manifold

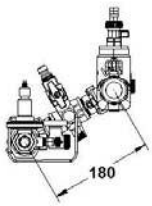




957 – Chilled Beam Assembly







Dimensions					
Ports	2	3	4	5	6
	Dimension A				
25-mm	550	595	640	685	730
32-mm	650	720	790	860	930
	Dimension B				
25-mm	530	600	670	740	810
32-mm	610	680	750	820	890

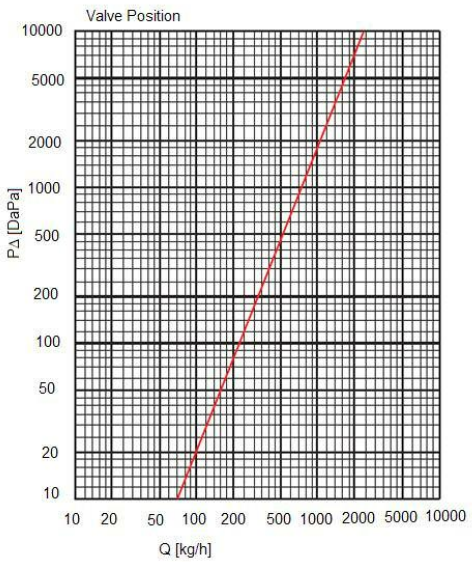
Note: Manifold assemblies are available with larger port allocations 0n request

Chilled beam assemblies are designed primarily for control of installations having a variable flow to chilled water cooling applications. The assembly can however also be used in other applications requiring similar control.
The assembly comprises of : **Flow:** IV , large bodied strainer, Flow manifold **Bypass:** IV, MAV and DOC **Return:** Differential pressure controller, Metering station, Flow manifold with temperature gauges on outlet ports

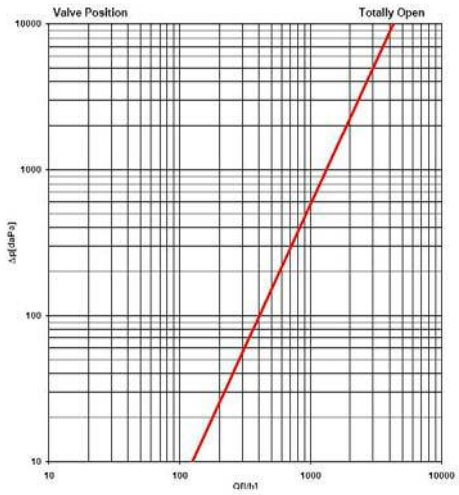
Technical Data		
	Manifold 25 -mm	**Manifold 32-mm**
Manifold Port flow	See Flow charts below	
Max manifold flow	0.54 l/sec	1.12 l/sec
Manifold suitability	Cooling / Heating	
Centres between ports	45 - mm	70 - mm
Maximum operating pressure	10 bar	10 bar
Maximum operating temperature	95 ^{o}C	95 ^{o}C

Manifold Flow Characteristics

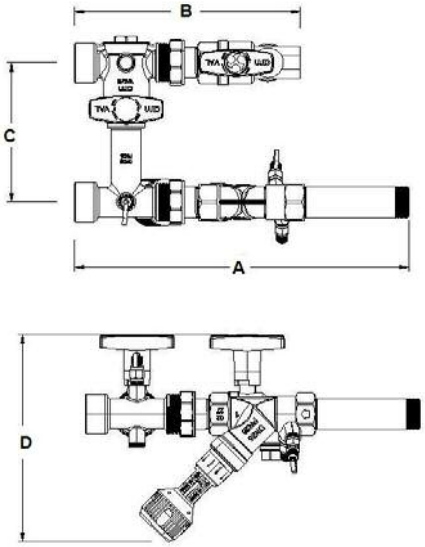
25 –mm Manifold



32 –mm Manifold



818, 820, 824 and 637 – Monolink, Constant Flow



This series of FloCon™ Monolinks is a compact design of IV and By pass valves for the control of constant water flow to Fan Coil units.

Dimensions

Size	15	20	25	32
A	250	310	360	360
B	170	200	245	450
C	100	100	150	230
D	185	210	220	220

Note: 40 & 50-mm assemblies are available on request

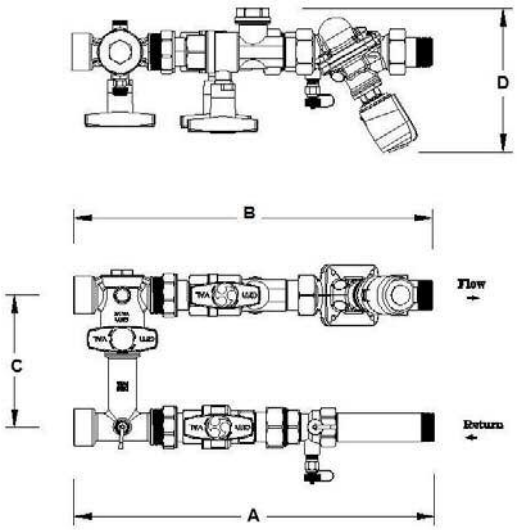
Technical Data

Size	Available in DN-15, DN-20, DN-25, DN-32, DN-40 and DN-50
Manifold Port flow	See Flow charts below
Manifold suitability	Heating / Cooling
Maximum operating pressure	10 bar
Maximum operating temperature	95 °C

Flow Characteristics

CS Size	Flow range l/sec	kvs
15 LL	0.014 – 0.028	0.473
15 ML	0.028 – 0.055	0.976
15 SL	0.055 – 0.095	1.799
15 SS	0.095 – 0.12	1.799
20	0.12 – 0.29	4.057
25	0.21 – 0.54	7.452
32	0.46 – 1.12	16.628
40	1.12 – 0.7	23
50	0.7 – 1.3	47.351

811, 813, 806 and 636 – Monolink, Variable Flow



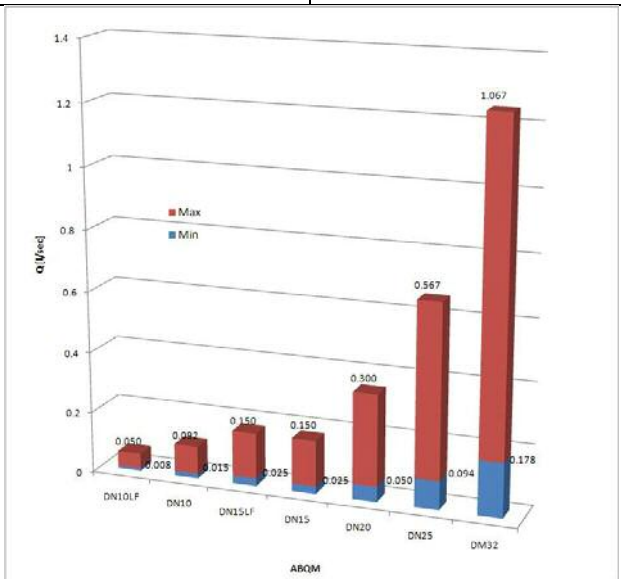
This series of FloCon™Monolinks is a compact design of IV, Automatic Balancing valves and By pass valve for the control of variable water flow to Fan Coil units.

Dimensions				
Size	*15*	*20*	*25*	*32*
A	*285*	*345*	*410*	*570*
B	*280*	*330*	*410*	*395*
C	*100*	*100*	*150*	*230*
D	*130*			*190*
Note: 40 & 50-mm assemblies are available on request				

Technical Data

Size	Available in DN-15, DN-20, DN-25, DN-32, DN-40 and DN-50
Manifold Port flow	See Flow charts below
Manifold suitability	Heating / Cooling
Maximum operating pressure	10 bar
Maximum operating temperature	95 ^{o}C

Flow Characteristics



Overview

Underfloor Heating requires only low temperature hot water and is ideal for use with modern condensing boilers. With Underfloor Heating, comfort levels are high and running costs are low.

Utilising today's modern multilayer pipes, control systems and high efficiency boilers, the underfloor heating systems of today are extremely comfortable and controllable. Radiators are no longer needed so giving more room space. The heat is more evenly distributed and dust is not circulated.

Underfloor heating has made it possible to reduce energy consumption by using low water temperatures.

System Benefits

- Space & Economics - Every square metre of your home can be fully utilised and the cost for our system is very similar to a radiator system.
- Hygiene - No dust and the underfloor heating will help to reduce house dust mites which is a benefit to asthma sufferers.
- Aesthetics & Labour Saving - You can design your home to suit your needs rather than that of your heating engineer. Cleaning of the floors is easier and wet floors dry very quickly.
- Silence & Comfort - Radiant heat will provide the highest comfort levels at an even temperature throughout. Compared to radiator systems, there is no noise.
- Cost effective - It has been proven that energy saving from 15-40% can be achieved with underfloor heating.
- Ease of control - Small temperature between the floor surface and the air above means the system is practically self regulating.

Installation

Partners in Technology

FAR Rubinetterie S.p.A. has a proud 30 year history in the design and manufacture of components for heating, plumbing and sanitary systems.

www.far.eu

FAR 3445

Automatic air vent, thermometer and drain cock.

CODE	Size	PRICE £
F3445-25	1″	See List

FAR 3446

Automatic air vent, thermometer, pressure gauge and drain cock.

CODE	Size	PRICE £
F3446-25	1″	See List

FAR 3929

"ZonaFAR" BSP flow & return manifold incl. brackets - Excl. adaptors and end plugs.

CODE	Size	PRICE £
F3929-3202	1 1/4″	See List
F3929-3203	1 1/4″	See List
F3929-3204	1 1/4″	See List
F3929-3205	1 1/4″	See List
F3929-3206	1 1/4″	See List
F3929-3207	1 1/4″	See List
F3929-3208	1 1/4″	See List
F3929-3209	1 1/4″	See List
F3929-3210	1 1/4″	See List
F3929-3211	1 1/4″	See List
F3929-3212	1 1/4″	See List

FAR 4100

"ZonaFAR" end plug

CODE	Size	PRICE £
F4100-32	1 1/4″	See List

FAR 4150

"ZonaFAR" end plug

CODE	Size	PRICE £
F4150-32	1 1/4″	See List

FAR 3445

Automatic air vent, thermometer and drain cock.

CODE	Size	PRICE £
F3445-25	1″	See List

FAR 3446

Automatic air vent, thermometer, pressure gauge and drain cock.

CODE	Size	PRICE £
F3446-25	1″	See List

FAR 3916

Pre-assembled "ZonaFAR" incl. brackets. Excl. adaptors and end plugs.

CODE	Size	PRICE £
F3916-2502	1″	See List
F3916-2503	1″	See List
F3916-2504	1″	See List
F3916-2505	1″	See List
F3916-2506	1″	See List
F3916-2507	1″	See List
F3916-2508	1″	See List
F3916-2509	1″	See List
F3916-2510	1″	See List
F3916-2511	1″	See List
F3916-2512	1″	See List

FAR 4310

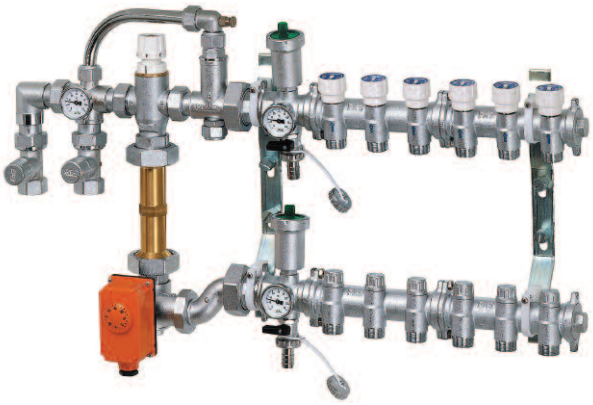
"ZonaFAR" end plug

CODE	Size	PRICE £
F4310-25	1″	See List

FAR 4150

"ZonaFAR" end plug

CODE	Size	PRICE £
F4150-25	1″	See List

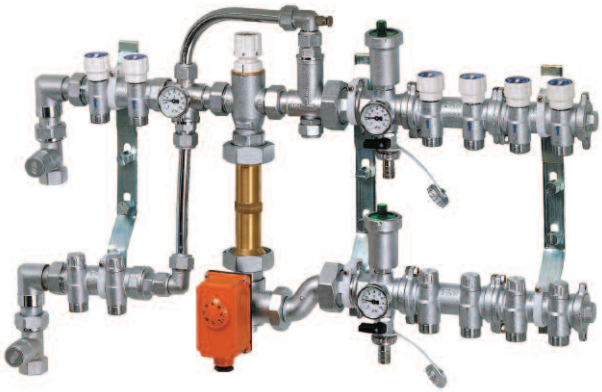


FAR 3481

30°C - 60°C

ZonaFar failsafe mixing arrangement, excluding pipe fittings and Grundfoss 15-60 Alpha Base pump.

CODE	Size	Ports	PRICE £
F3481-2503	1″	3	See List
F3481-2504	1″	4	See List
F3481-2505	1″	5	See List
F3481-2506	1″	6	See List
F3481-2507	1″	7	See List
F3481-2508	1″	8	See List
F3481-2509	1″	9	See List
F3481-2510	1″	10	See List
F3481-2511	1″	11	See List
F3481-2512	1″	12	See List



FAR 3483

30°C - 60°C

Integrated ZonaFar failsafe mixing for underfloor and radiator circuits, excluding pipe fittings and Grundfoss 15-60 Alpha Base pump.

CODE	Size	U/F	Rad	PRICE £
F3483-250302	1″	3	2	See List
F3483-250402	1″	4	2	See List
F3483-250502	1″	5	2	See List
F3483-250602	1″	6	2	See List
F3483-250702	1″	7	2	See List
F3483-250802	1″	8	2	See List
F3483-250902	1″	9	2	See List
F3483-251002	1″	10	2	See List
F3483-251102	1″	11	2	See List
F3483-250303	1″	3	3	See List
F3483-250403	1″	4	3	See List
F3483-250503	1″	5	3	See List
F3483-250603	1″	6	3	See List
F3483-250702	1″	7	3	See List
F3483-250803	1″	8	3	See List
F3483-250903	1″	9	3	See List
F3483-251003	1″	10	3	See List

FAR 3564

CODE	Size	Ports	PRICE £
F3564-102	1″	2	See List
F3564-103	1″	3	See List
F3564-104	1″	4	See List
F3564-105	1″	5	See List
F3564-106	1″	6	See List
F3564-107	1″	7	See List
F3564-108	1″	8	See List
F3564-109	1″	9	See List
F3564-110	1″	10	See List
F3564-111	1″	11	See List
F3564-112	1″	12	See List

FAR 3927

CODE	Size	Ports	PRICE £
F3297-11202	1 1/2″	2	See List
F3297-11203	1 1/2″	3	See List
F3483-11204	1 1/2″	4	See List
F3483-11205	1 1/2″	5	See List
F3483-11206	1 1/2″	6	See List
F3483-11207	1 1/2″	7	See List
F3483-11208	1 1/2″	8	See List
F3483-11209	1 1/2″	9	See List
F3483-11210	1 1/2″	10	See List
F3483-11211	1 1/2″	11	See List
F3483-11212	1 1/2″	12	See List

SAV Systems - greener by design

Established in 1988 SAV Systems is a leading provider of innovative building services solutions designed to boost energy efficiency and cut carbon emissions. Head office is in Surrey in the United Kingdom, but the company has partnership links with specialist manufacturers across Europe.

The SAV range makes a perfect partner for low energy technologies from renewables to central plant and even district heating systems.

Products vary from sophisticated mini-CHP systems to simple water meters, but all are purpose-developed to serve a better internal environment and a greener world.

SAV Systems' technical team can help specifiers to successfully integrate modules into their projects and specially prepared design guides are also available.

SAV Systems modules are delivered pre-packaged and pre-tested to integrate easily into modern, fast-track construction programmes.

- Ultra-compact SAV Flatstations
- FloCon™ fan coil and chilled beam commissioning modules
- LoadTracker modulating energy centres
- SAV metering and monitoring services
- SAV Warehouse

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Telephone: +44 (0) 20 8941 4153 EMAIL: info@sav-systems.com

GENERAL INFORMATION: Office Hours: 9.00am - 5.00pm Monday to Friday.