



V2464ED, V2474ED, V2473ED

Therafix Universal

Universal thermostatic valve with 2-point radiator connection

APPLICATION

The Therafix Universal is used for thermostatic regulation of flow through radiators with 2-point bottom connection with 50 mm centre to centre distance, such as towel radiators.

The V2464ED version is designed for 1-pipe systems. The V2473ED and V2474ED valves are designed for 2-pipe heating systems.

The Therafix Universal is compatible with all Honeywell Home radiator thermostats with M30 x 1.5 connection.

SPECIAL FEATURES

- Universal valve for all radiator connection interfaces: 1/2" internal thread; 3/4" external thread with Euroconus per EN 16313; 3/4" external thread with flat seal
- Universal valve for pipes coming off the wall (angled) and pipes coming off the floor (straight). Delivered in angled setup which can be quickly rebuilt to straight setup by simply swapping the blinding caps
- Universal valve for the supply on the left and on the right. The thermostatic inserts are designed for flow in both directions, so it does not matter to which side of the valve the supply pipe is connected
- 2-pipe versions have the VS presettable insert
- 1-pipe versions have the high flow UBGB insert and a screw for adjustment of the by-pass flow proportion
- Functions: thermostatic control, presetting, shut-off, flow-share adjustment (1-pipe)
- Supplied with white or chromed cover

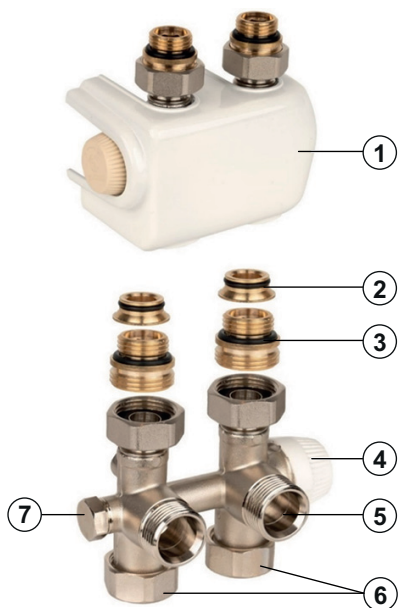


TECHNICAL DATA

Media	
Medium:	Heating water
pH-value:	8...9.5
Pressure values	
Max. operating pressure:	PN10, 10 bar (1000 kPa)
Max. differential pressure:	0.6 bar (60 kPa), 0.2 bar (20 kPa) recommended for quiet operation
Operating temperatures	
Max. operating temperature medium:	130°C with cover 90°C

Specifications	
k _{vs} -value:	2-pipe: 0.75 m ³ /h 1-pipe: 2.0 m ³ /h with fully open by-pass, 1.7 m ³ /h with closed by-pass
Nominal flow (EN 215):	130 kg/h (2-pipe) 190 kg/h (1-pipe)
Thermostat thread:	M30 x 1.5
Closing dimension:	11.5 mm
Stroke:	2.5 mm
Radiator connection:	1/2" and 3/4" with Euroconus (EN 16313) or flat seat
Pipe connection:	3/4" Euroconus (EN 16313)

CONSTRUCTION

Overview		
	1	Decorative cover
	2	Flat seal to Euroconus interface piece
	3	1/2" nipple
	4	Protection cap
	5	Valve housing
	6	Blinding caps
	7	Nut
	Not depicted components:	
		Ball valve
		Insert
	Bypass setting screw	
	O-rings and flat seals	

Materials
ABS: white RAL 9016 UV stabilized, or chrome plated
Brass, EPDM O-rings
Brass, EPDM O-rings
PP
Brass
Brass, EPDM seals
Brass
Brass, PTFE seals
Brass, stainless steel, PPS
Brass
EPDM

METHOD OF OPERATION

The Therafix Universal is used to connect radiators with 50 mm bottom connection (e.g. centre-connection towel rails) to the heating circuit.

The 2-pipe versions V2474ED and V2473ED have a bi-directional thermostatic insert of VS type with presetting facility on the left side of the valve to enable hydraulic balancing of the radiator. The right side of the valve is equipped with a ball valve.

The 1-pipe version V2464ED has a bi-directional, high-flow thermostatic insert on its left side and a ball valve on the right side. In addition, the right side of the valve is equipped with a flow-share regulation screw, which is used to adjust the proportion of water flowing through the radiator and through the by-pass to the next radiator in the 1-pipe circuit. Thus, 1-pipe systems can be accurately regulated. The by-pass function can also be used to provide supply of heating water to an underfloor heating loop connected after the radiator including in the shut-off condition of the thermostatic valve.

By closing the protection cap on the thermostatic side and shutting the ball valve, both sides of the valve can be shut and the radiator removed (e.g. for painting) while the whole heating circuit is still in operation.

When an M30x1,5 TRV head is mounted onto the left side of the valve, it regulates the flow through the radiator in proportion to the room temperature. The radiator is supplied with just the amount of water that is required to maintain the room temperature set on the radiator thermostat.

The thermostatic insert can be replaced under system pressure using the insert exchange tool.

TRANSPORTATION AND STORAGE

Keep parts in their original packaging and unpack them shortly before use.

The following parameters apply during transportation and storage:

Parameter	Value
Environment:	clean, dry and dust free
Min. ambient temperature:	-15 °C
Max. ambient temperature:	50 °C
Max. ambient relative humidity:	75 % *

*non condensing

INSTALLATION GUIDELINES

Because the thermostatic inserts can operate in both directions, supply and return can be connected to either side of the valve.

The valve is supplied with the blinding caps mounted on the bottom of the valve, which is an arrangement for pipes coming off the wall. When the pipes are coming off the floor, the blinding caps with their seals simply need to be switched to the rear pipe connection ports.

The valves can be connected to all common radiator interfaces that exist in the market. For radiators with $\frac{1}{2}$ " internal thread, use the $G^{\frac{3}{4}}$ " to $G^{\frac{1}{2}}$ " adapter nipple. In case of radiators with $G^{\frac{3}{4}}$ " external thread and EN 16313 Euroconus sealing interface, the V2473ED models can be connected directly by the coupling nut.

For the V2474ED and V2464ED models, it is recommended to insert the flat seal to Euroconus adapter between the valve and the radiator with Euroconus interface.

Radiators with $G^{\frac{3}{4}}$ " external thread and flat sealing interface can be connected by the V2474ED and V2464ED models directly by the coupling nut.

The white or chromed cover, supplied with the product, snaps easily onto all types of the Therafix Universal valves and will not interfere with any part of the radiator, so a universal fit is provided.

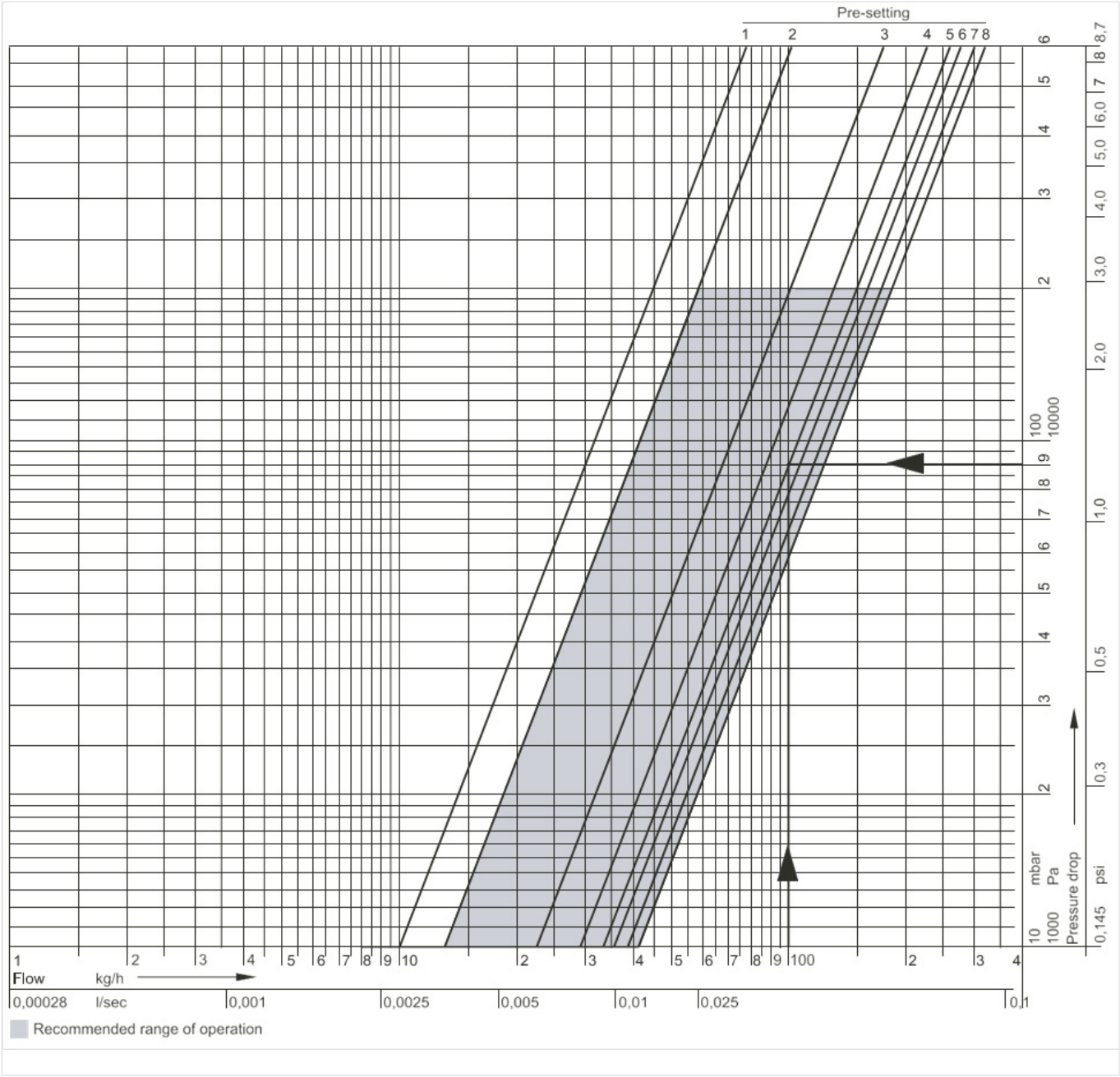
Setup requirements

- To avoid stone deposit and corrosion the composition of the medium should conform with VDI-Guideline 2035
- All additives and lubricants used for heating medium treatment have to be suitable for EPDM seals to avoid their disintegration. Use of mineral oils should be avoided
- Heavy polluted existing heating systems must be flushed thoroughly before replacing thermostatic valves
- The heating system must be fully deaerated



TECHNICAL CHARACTERISTICS

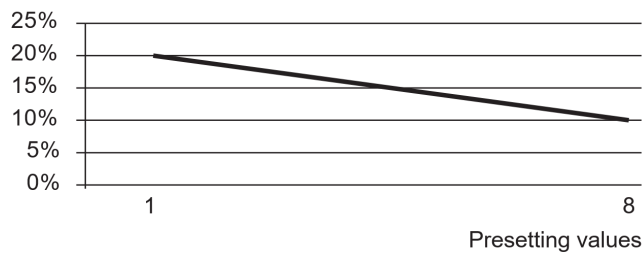
Flow diagram for V2473ED and V2474ED - 2-pipe models based on 2K

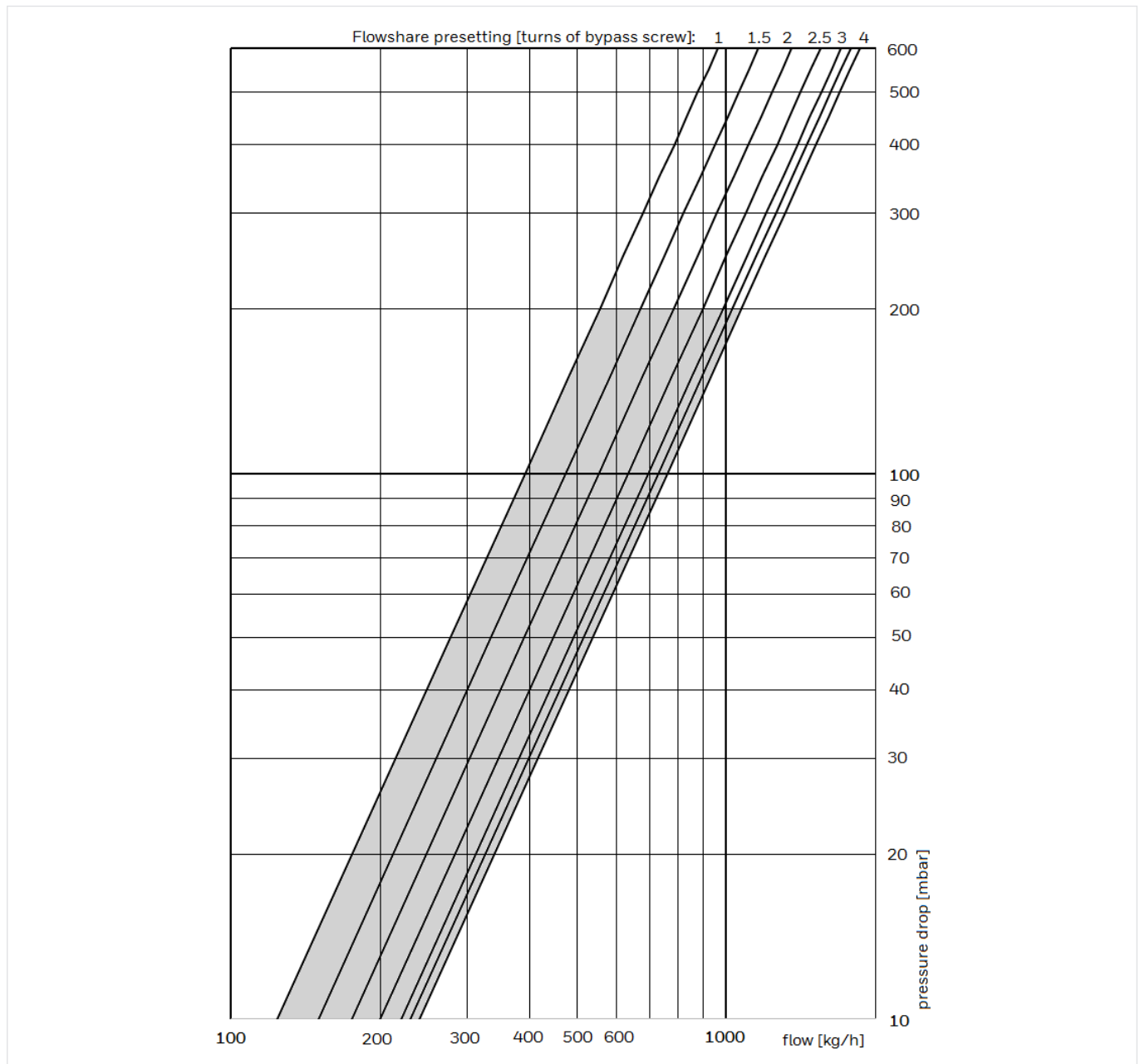


Presetting	1	2	3	4	5	6	7	8
xP = 1K (m³/h)	0.10	0.12	0.15	0.17	0.19	0.20	0.20	0.20
xP = 2K (m³/h)	0.10	0.13	0.22	0.29	0.33	0.36	0.38	0.41
k _v -value	0.10	0.15	0.25	0.35	0.45	0.57	0.65	0.75
cv-value	0.12	0.17	0.29	0.41	0.52	0.66	0.75	0.87

Note: Presetting 8 = flush position, set by factory

Tolerances for Presetting Values

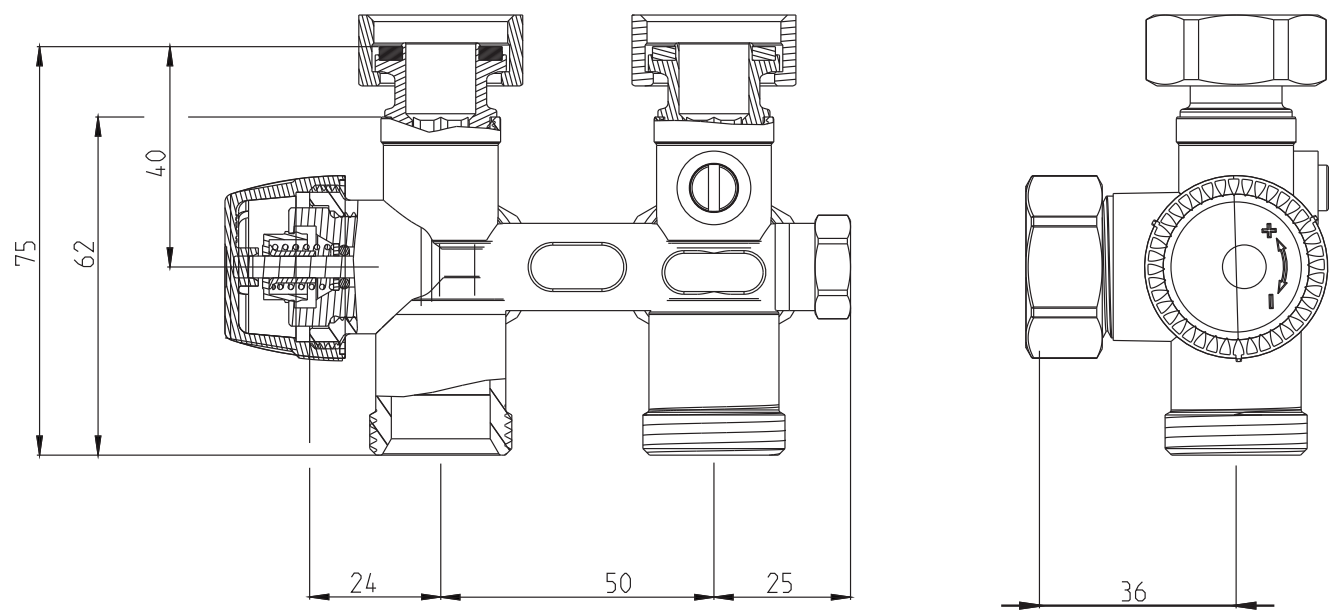


Flow diagram for radiator branch of V2464ED - 1-pipe models based on 2K

Flow values for Therafix Universal V2464ED in one-pipe systems

Flow share presetting (turns of bypass screw)	closed	1	1.5	2	2.5	3	3.5	4
k_v-value $xP = 1K$	0.3	0.75	1.0	1.25	1.5	1.7	1.8	1.9
Radiator share $xP = 1K$	100 %	40 %	30 %	25 %	20 %	18 %	16 %	15 %
k_v-value $xP = 2K$	0.6	1.05	1.3	1.55	1.8	2.0	2.1	2.2
Radiator share $xP = 2K$	100 %	60 %	45 %	40 %	35 %	30 %	27 %	25 %
k_v-value $xP = 3K$	0.8	1.25	1.5	1.75	2.0	2.2	2.3	2.4
Radiator share $xP = 3K$	100 %	65 %	53 %	45 %	40 %	35 %	33 %	30 %
Radiator + bypass k_v-value	1.9	2.0	2.1	2.2	2.25	2.3	2.35	2.4

Note: These values are for common towel radiators, k_v -values and the radiator share may differ depending on the radiator used

DIMENSIONS



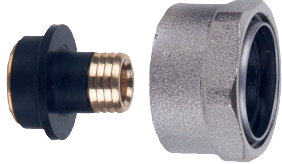
Note: All dimensions in mm unless stated otherwise.

ORDERING INFORMATION

The following tables contain all the information you need to make an order of an item of your choice. When ordering, please always state the type, the ordering or the part number.

Type	Valve body interface on radiator side	Adapters for 1/2" internal thread	Flat seal to Euroconus interface piece	Decorative cover	Insert	OS.-No.
For 2-pipe systems	3/4" ext. with flat seal	yes	yes	White	VS	V2474EDWSY015
	3/4" ext. with Euroconus	yes	no	White	VS	V2473EDWSY015
	3/4" ext. with flat seal	yes	yes	Chrome	VS	V2474EDCSY015
	3/4" ext. with Euroconus	yes	no	Chrome	VS	V2473EDCSY015
For 1-pipe systems	3/4" ext. with flat seal	yes	yes	White	UBGB	V2464EDWUY015

Accessories

	Description	Dimension	Part No.
	FEG3/4CS	Compressions fitting for copper and precision steel pipes	
		One-piece fitting with steel reinforced elastic ring	
	3/4"	10 mm	FEG3/4CS10
	3/4"	12 mm	FEG3/4CS12
	3/4"	14 mm	FEG3/4CS14
	3/4"	15 mm	FEG3/4CS15
	3/4"	16 mm	FEG3/4CS16
	3/4"	18 mm	FEG3/4CS18
	FEG3/4PM	Compression fitting for PEX and MULTILAYER pipe.	
		Consisting of a nut with pre-assembled anti-torsion compression ring and a reinforcing insert.	
	3/4"	14 x 2 mm	FEG3/4PM14X2
	3/4"	16 x 2 mm	FEG3/4PM16X2
	3/4"	16 x 2.2 mm	FEG3/4PM16X2.2
	3/4"	17 x 2 mm	FEG3/4PM17X2
	3/4"	18 x 2 mm	FEG3/4PM18X2
	3/4"	20 x 2 mm	FEG3/4PM20X2
	FEG3/4P	Compression fitting for PEX/PER pipe	
		Consisting of 2 union nuts, 2 compression rings and 2 support inserts	
	3/4"	12 x 1.1 mm	FEG3/4P12X1.1
	VS1200	Replacement valve insert	
	VS type	pre-settable, bi-directional, for 2-pipe version	VS1200VS01
	UBGB type	high-flow, bi-directional, for 1-pipe version	VS1200UB02

For more information

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