

Radiator Valves and Thermostats V2440

High-flow Lockshield Valves

Application

V2440 Veramax lockshields are used at the supply or return of heat exchangers in hydronic cooling and heating systems requiring high flow rates. They have the following functions:

- Shut-off: by closing the valve the flow through the heat exchanger is shut-off
- Presetting: the flow through the heat exchanger can be throttled to meet system requirements

V2440 Veramax lockshields are suitable for hot water or low pressure steam heating systems and cold water cooling systems.

Special Features

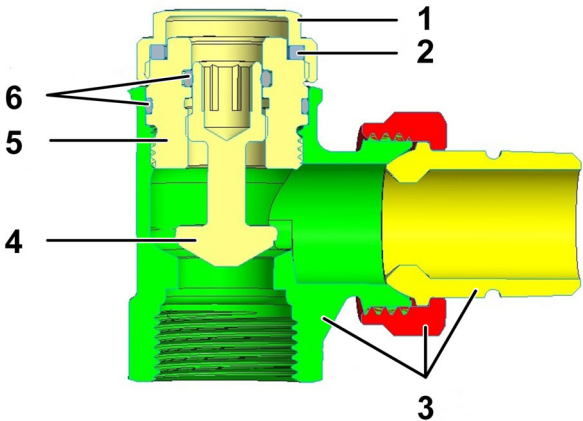
- For heating and cooling systems with high water flow rates
- Presetting and shut-off with one valve
- Optional flow direction. Performance values apply for both directions
- Quiet operation with low-noise design of the regulating plunger
- Standard dimensions DN15 and DN20 per EN215 D-series, plus DN25 straight version
- DN15 and DN20 straight versions with external threads
- Nickel plated valve bodies
- Nickel plated protection cap
- Nominal pressure rating PN16
- 5-year warranty



Technical Data

Media	
Medium:	Water with max. 50 % glycol according to VDI 2035
pH-value:	8 - 9.5
Connections/Sizes	
Radiator connection tailpiece and internal thread:	3/4" and 1" angled; 3/4", 1" and 1 1/4" straight
Flat sealing and external thread:	G3/4" and G1"
Operating temperatures	
Max. operating temperature medium:	130 °C
Min. operating temperature medium:	-10 °C non-freezing
Pressure values	
Max. operating pressure:	PN 16, 16 bar (1600 kPa)
Max. differential pressure:	1.0 bar (100 kPa)
Flow capacity	
kvs [m ³ /h at 1.0 bar Δp]:	3.4 to 8.2 according to body type

Construction

Overview		Components	Materials
	1	Protection cap	Brass
	2	Secondary, fail-safe seal	PTFE
	3	Valve body, tailpiece, nut	Brass
	4	Regulation plunger with anti-noise knurling	
	5	Insert cartridge	
	6	O-Rings	EPDM 70

Method of Operation

The V2440 Veramax lockshields are valves with presettable kv-value. Using an 8 mm Allen key, the threaded plunger can be rotated by a given number of turns from closed position to the required opening with specific kv-value. Using the same Allen key, the valve can be completely shut-off.

The V2440 Veramax can be installed as the principle throttling valve at large heat exchanges, or at the return of a radiator or other heat exchanger, in order to statically balance the heating or cooling system.

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:	0 °C
Max. ambient temperature:	50 °C
Max. ambient relative humidity:	75 % *

*non condensing

Installation Example

The V2440 Veramax lockshields can be installed at supply or return of heat exchangers, and the medium can flow in either direction.

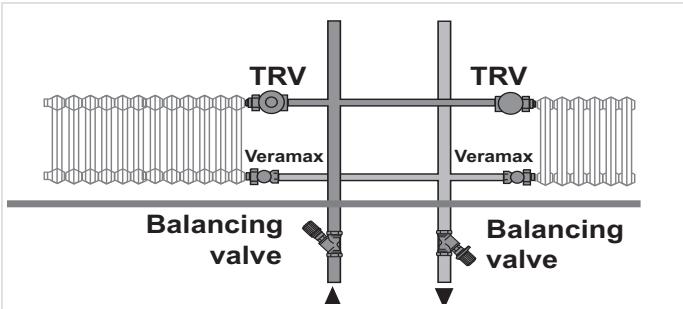


Fig. 1. Installation example heating system

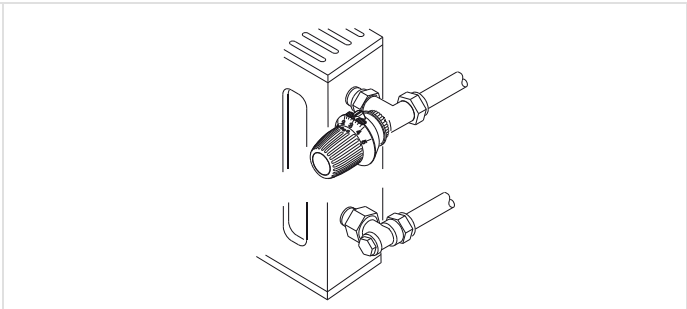


Fig. 2. Installation example radiator

Technical Characteristics

Kv-values [m³/h, Δp 1.0 bar]

Item No.	Turns of presetting screw from closed position									
	1/4	1/2	1	1 1/2	2	3	4	5	6	7
V2440D0015A	0.1	0.2	0.6	1.0	1.5	2.6	3.5	3.9	N	N
V2449D0015A	0.1	0.2	0.6	1.0	1.5	2.6	3.1	3.4	N	N
V2440E0015A	0.1	0.2	0.6	1.0	1.5	3.5	5.0	6.0	6.9	7.6
V2440D0020A	0.1	0.2	0.6	1.0	1.5	3.5	4.5	N	N	N
V2449D0020A	0.1	0.2	0.6	1.0	1.5	3.5	4.5	N	N	N
V2440E0020A	0.1	0.2	0.6	1.0	1.5	3.5	5.0	6.3	7.4	8.2
V2440D0025A	0.1	0.2	0.6	1.0	1.5	3.5	4.6	5.1	5.6	6.0

Note: N – setting not recommended with the given body type

Dimensions and Ordering Information

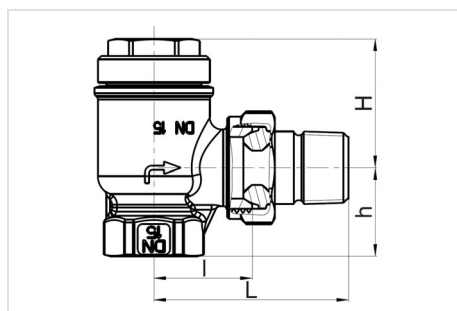


Fig. 1. Angled V2440E

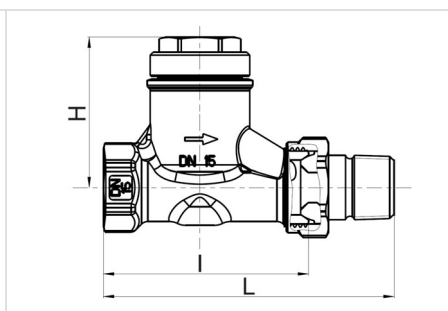


Fig. 2. Straight V2440D

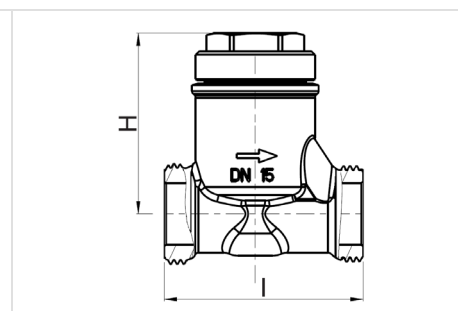
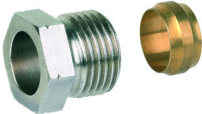
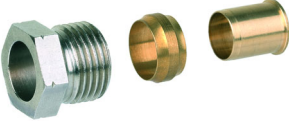


Fig. 3. Straight with external threads and flat sealing V2449D

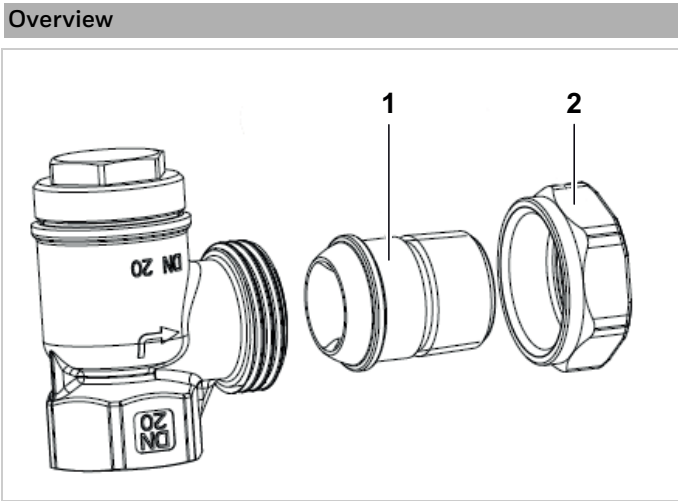
Body type	DN	Pipe connection	Radiator connection	Dimensions				Item No.
				L	I	H	h	
Angle (Fig. 1)	15	Rp 1/2"	G 3/4"	57	29	38	26	V2440E0015A
	20	Rp 3/4"	G 1"	65	34	39	29	V2440E0020A
Straight (Fig. 2)	15	Rp 1/2"	G 3/4"	96	68	50	-	V2440D0015A
	20	Rp 3/4"	G 1"	107	74	48	-	V2440D0020A
	25	Rp 1"	G 1 1/4"	109	76	48	-	V2440D0025A
Straight with flat sealing (Fig. 3)	15	G 3/4"	G 3/4"	-	55	50	-	V2449D0015A
	20	G 1"	G 1"	-	74	48	-	V2449D0020A

Note: All dimensions in mm unless stated otherwise.

Accessories

	Description	Dimension	Item No.
	FIG1/2CS Compression fitting for COPPER and STEEL pipe Consisting of compression nut and compression ring. For valves with internal thread. Note: Support inserts have to be used for copper or soft steel pipe with 1.0 mm wall thickness. Max. operating temperature 120 °C, max. operating pressure 10 bar.		
	1/2", DN 15	10 mm	FIG1/2CS10
	1/2", DN 15	12 mm	FIG1/2CS12
	1/2", DN 15	14 mm	FIG1/2CS14
	1/2", DN 15	15 mm	FIG1/2CS15
	1/2", DN 15 (10pcs.)	15 mm	FIG1/2CS15 - 10
	1/2", DN 15	16 mm	FIG1/2CS16
	3/4", DN 20	22 mm	FIG3/4CS22
	FIG1/2CSS Compression fitting for COPPER and STEEL pipe Consisting of compression nut and compression ring and support insert. For valves with internal thread. Note: Support inserts have to be used for copper or soft steel pipe with 1.0 mm wall thickness. Max. operating temperature 120 °C, max. operating pressure 10 bar.		
	1/2", DN 15	12 mm	FIG1/2CSS12
	1/2", DN 15	14 mm	FIG1/2CSS14
	1/2", DN 15	15 mm	FIG1/2CSS15
	1/2", DN 15	16 mm	FIG1/2CSS16
	FIG-M Compression fitting for MULTILAYER pipe. Consisting of compression nut, compression ring and support insert. For valves with internal thread. Note: Max. operating temperature 90°C, max. operating pressure 10 bar		
	1/2", DN 15	16 mm	FIG1/2M16X2
	VA6290 Reduction piece		
	1" pipe > 1/2" valve		VA6290A260
	1 1/4" pipe > 1/2" valve		VA6290A280
	1" pipe > 3/4" valve		VA6290A285
	1 1/4" pipe > 3/4" valve		VA6290A305
	VA5201A Tailpiece with thread up to collar for valves DN 15 (1/2")		VA5201A015
	VA5204Bxxx Extended radiator tailpiece, nickel-plated, to be shortened as required		
	1/2" x 76 mm (for DN 15) thread approx. 65 mm		VA5204B015
	3/4" x 70 mm (for DN 20) thread approx. 60 mm		VA5204B020
	VA5090 Sealing ring for pressure cap		
	for valves DN 15 (1/2")		VA5090A015
	for valves DN 20 (3/4")		VA5090A020
	VA2202A Pressure cap – for shutting off valves on radiator outlet		
	for valves DN15 (1/2")		VA2202A015

Spare Parts



	Description	Dimension	Item No.
1	Metal-to-metal sealing radiator tailpiece		
		1/2", DN 15	VA5200B015
		3/4", DN 20	VA5200B020
2	Coupling nut		
		DN 15, nut with G 3/4" internal thread	VA5000B015
		DN 20, nut with G 1" internal thread	VA5000B020