



Braukmann
V5001S Kombi-S

Shut-off Valve

APPLICATION

The V5001S Kombi-S shut-off valve is used to shut-off pipelines in residential or commercial hydronic heating and cooling systems. It can be installed in either supply or return pipeline.

When installed in supply it can also be used to connect impulse tube of a V5001P Kombi-Auto differential pressure control valve.

SPECIAL FEATURES

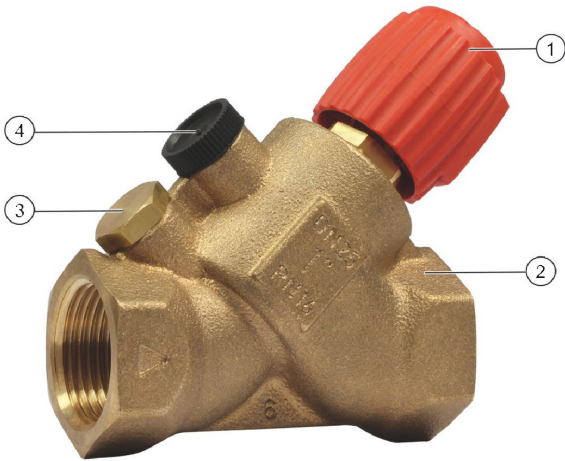
- Rugged, robust design
- High flowrates
- Insulation shells included
- Supports flow measurement with Resideo SafeCon™ quick connections
- Two measuring ranges, one for standard flow, one for low flow conditions



TECHNICAL DATA

Media	
Medium:	Water or water-glycol mixture, quality to VDI 2035
pH-value:	8...9.5
Pressure values	
Operating pressure:	max. 16 bar (232 psi)
Operating temperatures	
Water	-20...130 °C (68...266 °F)
Water-glycol mixtures:	-20...110 °C (68...230 °F)
Leakage rate	
Leakage rate:	According to Class IV IEC 60534-2-3

CONSTRUCTION

Overview	Components	Materials
	1 Handwheel	Plastic
	2 Valve housing	Red bronze, lead content <3%
	3 Lower blind stop	Brass
	4 Upper blind stop	Plastic
	Not depicted components	
Valve insert		Brass
Seat sealing		Rubber

METHOD OF OPERATION

The V5001S Kombi-S shutoff valve is installed in supply or return pipeline as pipeline shutoff valve.

Installation

The Kombi-S was designed as partner valve for a Kombi-AutoDP control valve. It provides impulse tube connection for supply pressure signal and pressure test connection for differential pressure measuring devices if desired. Impulse tube and all fittings required to connect to a Kombi-S are supplied with the Kombi-Auto. The Kombi-Auto itself has to be ordered separately.

All valves must be installed in the right flow direction indicated by an arrow on each side of valve inlet.

Flow and pressure measurement

The Kombi-S can optionally be equipped with a SafeCon™ quick connect pressure test valve on the back of the valve housing to allow measurements with a differential pressure measuring computer, for example Resideo VM242 BasicMes-2.

The following measurements are possible:

- Flow** Requires additional PT valves VS600C001
- High pressure: connected to Kombi-Auto
 - Low pressure: connected to Kombi-S

- Δ loop** Requires additional PT valves VS600C001
- High pressure: connected to Kombi-S
 - Low pressure: connected to Kombi-Auto

SafeCon™ quick connect pressure test valves are available as accessory – see chapter ‘Accessories’ below. Depending on type of measurement desired they have to be fitted to the Kombi-Auto and/or Kombi-S supply valve (if used). If no Kombi-S is used other means for pressure testing and impulse tube connection must be provided.

The BasicMes-2 can directly connect to SafeCon pressure test valves for leakage free and quick measuring operations.

Measuring points

The Kombi-S has two measuring points. Measuring point A is at fully open valve. Measuring point B is at approx. 25% stroke. To reach measuring point B reliably adapter VA5001A001/VA5001A002 is inserted between handwheel and valve housing and then the valve is closed as far as possible.

Measuring point B is used in low flow conditions when no stable signal can be picked up at measuring point A.

Flow measurement in the loop

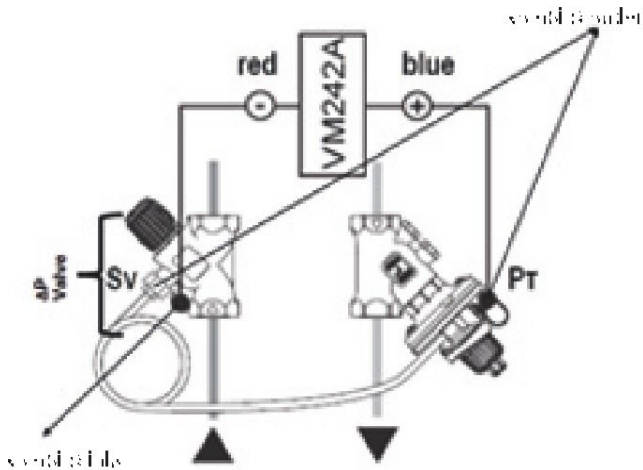
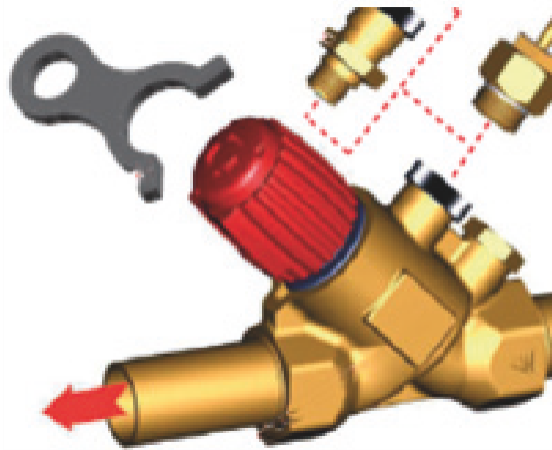


Fig. 1 Flow measured using the Kombi S kv and the ΔP across it when it is fully open at position A or partially closed at set position B.

Adapters for flow measurement



DN size:	Normal kvs-value:	Valve Part-No:	Adapter:	Reduced kvs with adapter:
15	4,7	V5001SY2015	VA5001A001	1,9
20	8,1	V5001SY2020		2,7
25	10,7	V5001SY2025		4,1
32	23,3	V5001SY2032	VA5001A002	8,1
40	35,3	V5001SY2040		8,4
50	48,8	V5001SY2050		9,1

TRANSPORTATION AND STORAGE

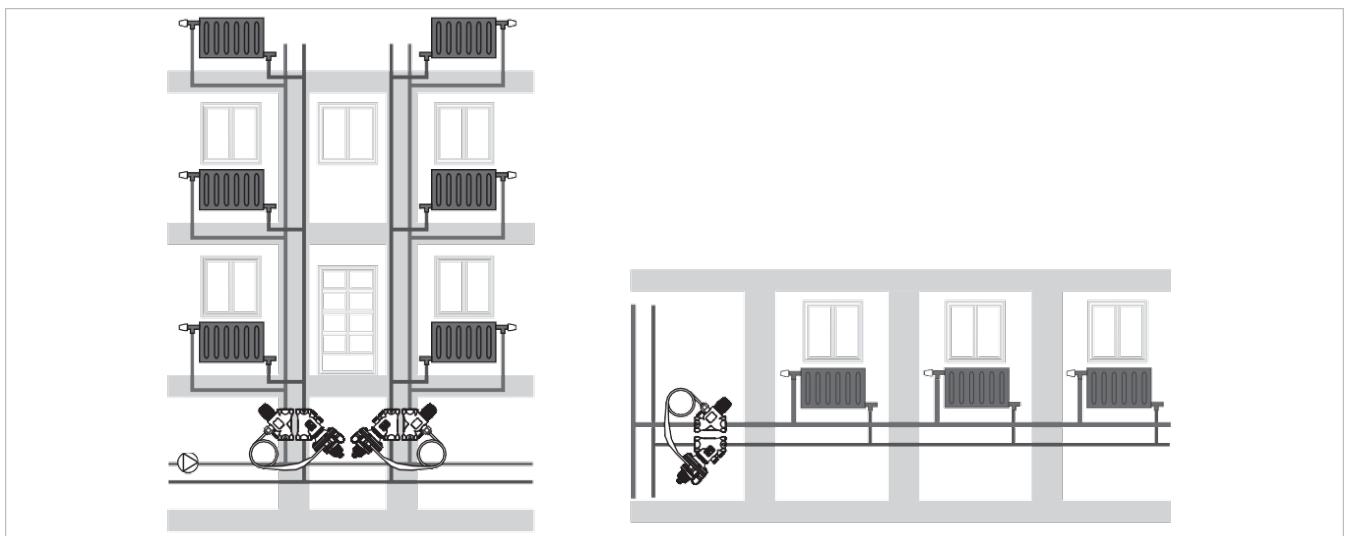
Keep parts in their original packaging and unpack them shortly before use.

The following parameters apply during transportation and storage:

Parameter	Value
Environment:	clean, dry and dust free
Min. ambient temperature:	-20 °C
Max. ambient temperature:	65 °C

INSTALLATION GUIDELINES

Installation Example



For more information on Resideo Balancing and Pipeline Valves see homecomfort.resideo.com.

TECHNICAL CHARACTERISTICS

Pressure drop characteristics

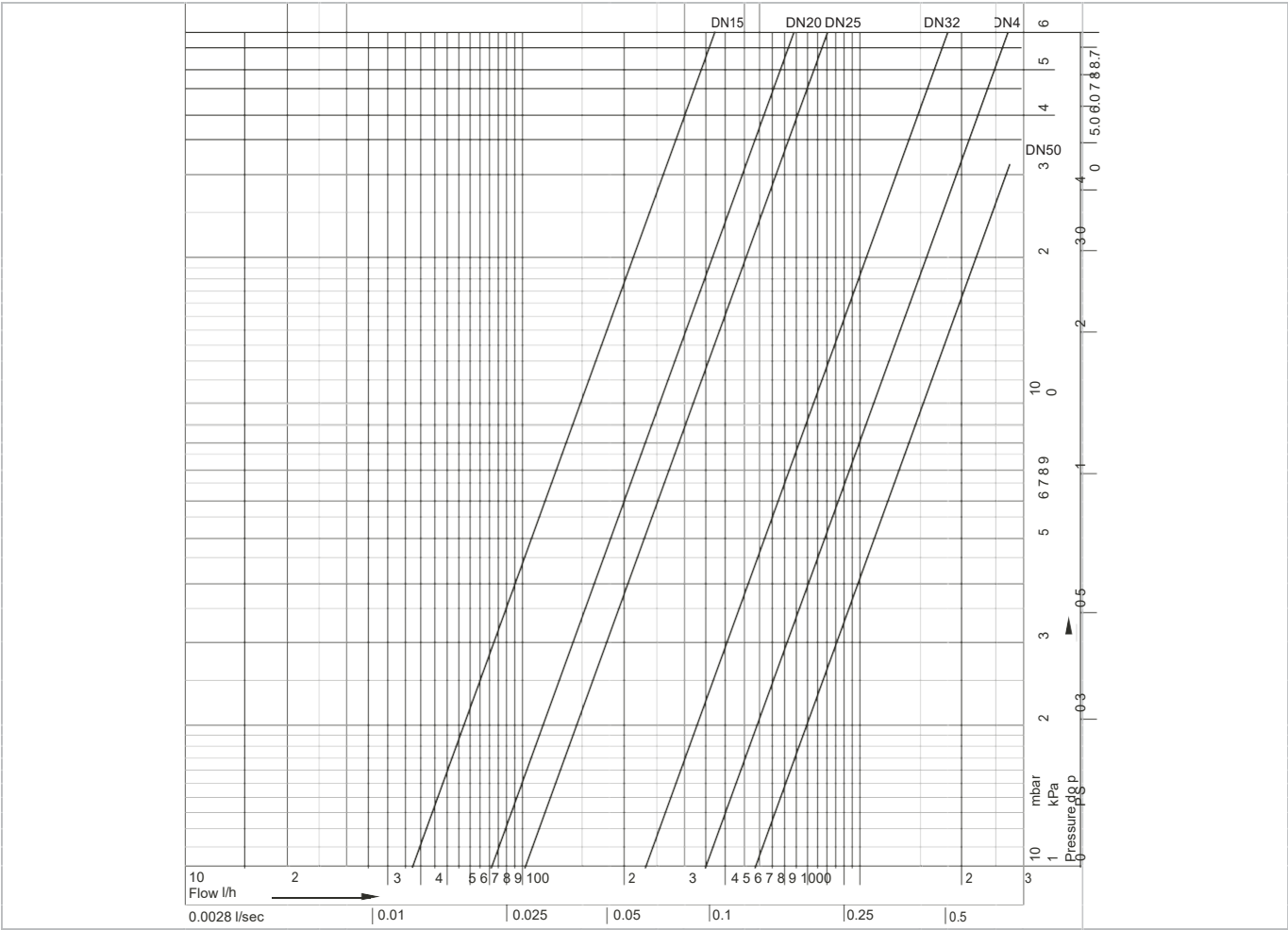
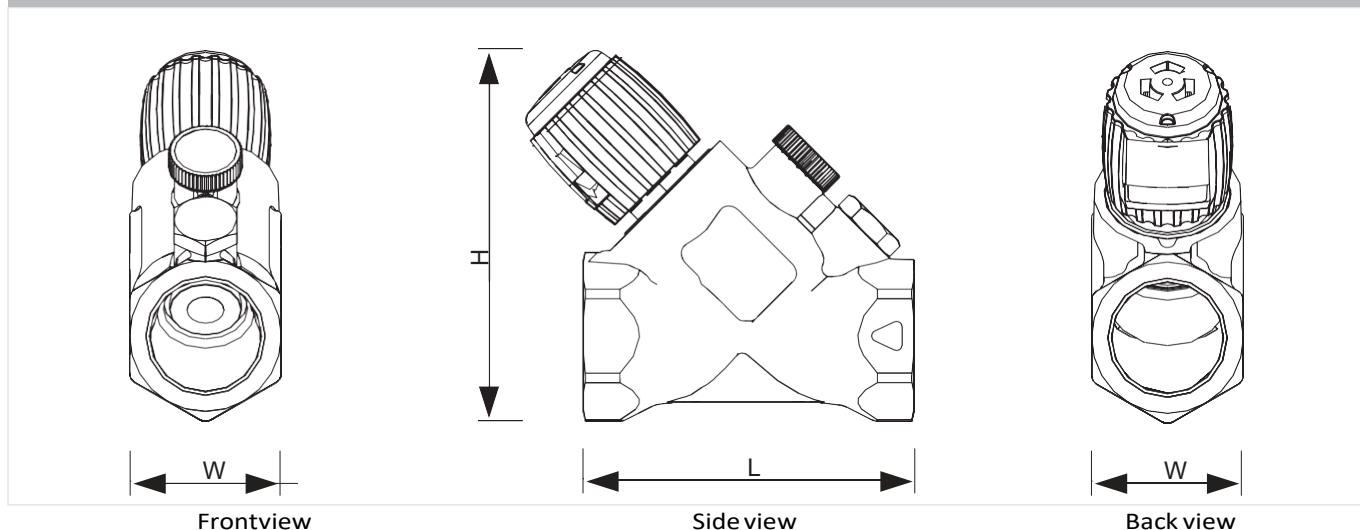


Fig. 2 Pressure drop diagram V5001S Kombi-S

DIMENSIONS

Overview



DN	Thread	Without insulation shell			With insulation shell			Weight
		Length	Width	Height	Length	Width	Height	
15	Rp 1/2"	102	35	89	133	84	122	0.5 kg
20	Rp 3/4"	101	40	95	130	93	125	0.7 kg
25	Rp 1"	105	41	101	140	104	136	0.8 kg
32	Rp 1 1/4"	140	56	135	171	113	167	1.6 kg
40	Rp 1 1/2"	146	66	140	176	126	174	1.9 kg
50	Rp 1"	158	78	154	200	147	190	2.8 kg

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.

Options

Description	Nominal size diameter: DN	Thread	kvs (cvs)-value	Ordering Number
V5001P Kombi-Auto with internal threads to DIN2999 (ISO7)	15	Rp 1/2"	4.7	V5001SY2015
	20	Rp 3/4"	8.1	V5001SY2020
	25	Rp 1"	10.7	V5001SY2025
	32	Rp 1 1/4"	23.3	V5001SY2032
	40	Rp 1 1/2"	35.3	V5001SY2040
	50	Rp 2"	48.8	V5001SY2050

Note: Available versions and OS-Nos (OS=Ordering Specification)

Accessories

	Description	Dimension	Part No.
	VM242A BasicMes-2 handheld measuring computer For all sizes. Computer is supplied with case and accessories		
			VM242A0101
	VS2600 Spare set of 2 pressure test cocks G¹/₄" For all sizes.		
			VS2600C001
	VS5501 Shut-off valve for impulse tube For all sizes.		
			VS5501A008

Spare Parts

Overview	Description	Dimension	Part No.
	1 Replacement inserts		
		DN15	V5001SZ2015
		DN20	V5001SZ2020
		DN25	V5001SZ2025
		DN32	V5001SZ2032
		DN40	V5001SZ2040
		DN50	V5001SZ2050
	2 Insulation shells		
		DN15	VA2510D015
		DN20	VA2510D020
		DN25	VA2510D025
		DN32	VA2510D032
		DN40	VA2510D040
		DN50	VA2510D050
	3 Measurement DN15-DN25		
		DN15	VA5001A001
		DN20	
		DN25	
	4 Measurement DN32-DN50		
		DN32	VA5001A002
		DN40	
		DN50	