



V135

Linear 3 way Diverting and Mixing Valve

APPLICATION

The V135 is a three-way mixing or diverting valve for hot water heating systems. It is typically used with a T100R or T100RS thermostat for hot water control applications, e.g. temperature control of underfloor heating systems.

SPECIAL FEATURES

- Balanced valve insert for high differential pressure resistance
- Small stroke with high kv-value
- Robust red bronze valve housing
- Handwheel cap supplied with valve
- Upper spindle sealing can be replaced under system pressure

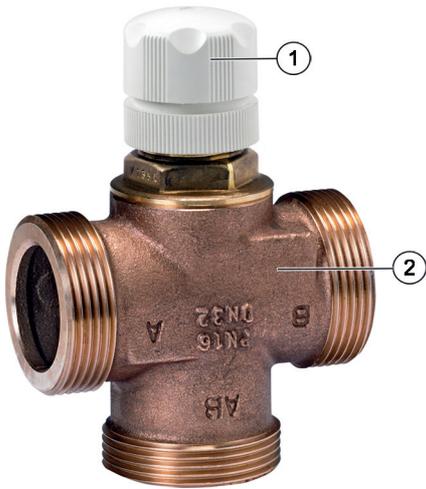
TECHNICAL DATA

Media	
Medium:	Water or water-glycol mixture, quality to VDI 2035 (up to 50 % Glycol)
pH-value:	8 - 9.5
Pressure values	
Max. operating pressure:	16 bar (232 psi)
Max. differential pressure with T100R thermostat:	10 bar (145 psi)
Operating temperatures	
Water:	-10...120 °C (14 - 248 °F)
Water-glycol mixtures:	-10...110°C (14 - 230°F)
Specifications	
Flow:	AB A or B A or B AB
Starting position:	AB - A (B closed)
Stroke:	2 mm
Closing dimension:	11.5 mm
Actuator connection:	M30 x 1.5
Suitable Actuators:	T100R/RS thermostat for water and air Smart-T thermal actuator



- Note: To avoid stone deposit and corrosion the composition of the medium should conform with VDI-Guideline 2035
- Note: Additives have to be suitable for EPDM sealings
- Note: System has to be flushed thoroughly before initial operation with all valves fully open
- Note: Any complaints or costs resulting from non-compliance with above rules will not be accepted
- Note: Please contact us if you should have any special requirements or needs

CONSTRUCTION

Overview	Components	Materials
	1 Handwheel cap	White plastic
	2 Valve housing PN16 with internal or external threads	Red bronze
	Not depicted components:	
	Valve insert	Brass and plastic with EPDM O-rings and soft seals
	Union-nuts, threaded tailpieces and sealings (C type only)	Brass

METHOD OF OPERATION

As mixing valve on primary side (in connection with T100R/RS thermostat):

The thermostat sensor is attached to the supply pipeline of the secondary loop. The combination of V135 and T100R/RS acts as mixing valve and controls the amount of primary supply (port A) and return water (port B) to achieve the desired hot water temperature in the secondary supply loop.

As mixing valve on secondary side (in connection with T100R/RS thermostat):

The thermostat sensor is attached to the supply pipeline of the secondary loop. The combination of V135 and T100R/RS acts as mixing valve and controls the amount of secondary supply water (port A) mixed to the return water (port B) to achieve the desired hot water temperature in the secondary supply loop (port AB).

As diverting valve on primary side (in connection with T100R/RS thermostat):

The thermostat sensor is attached to the supply pipeline of the secondary loop. The combination of V135 and T100R/RS acts as diverting valve and diverts the primary supply (port AB) into the heat exchanger (port A) when the secondary supply temperature is below the set temperature of the T100R/RS thermostat. When the temperature is above the set temperature the primary supply is diverted through the bypass into the return (port B).

INSTALLATION GUIDELINES

- 1) hot water
- 2) cold water

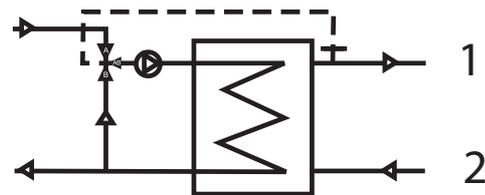


Fig. 1 Mixing valve on primary side

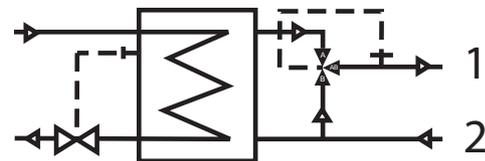


Fig. 2 Mixing valve on secondary side

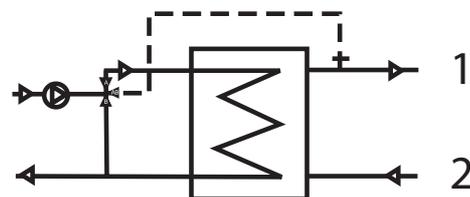


Fig. 3 Diverting valve on primary side

TECHNICAL CHARACTERISTICS

kvs-Values

Connection sizes:	15	20	25	32
k_{vs} (C_v)-values:	2.8	3.2	5.0	5.0

Pressure drop characteristics

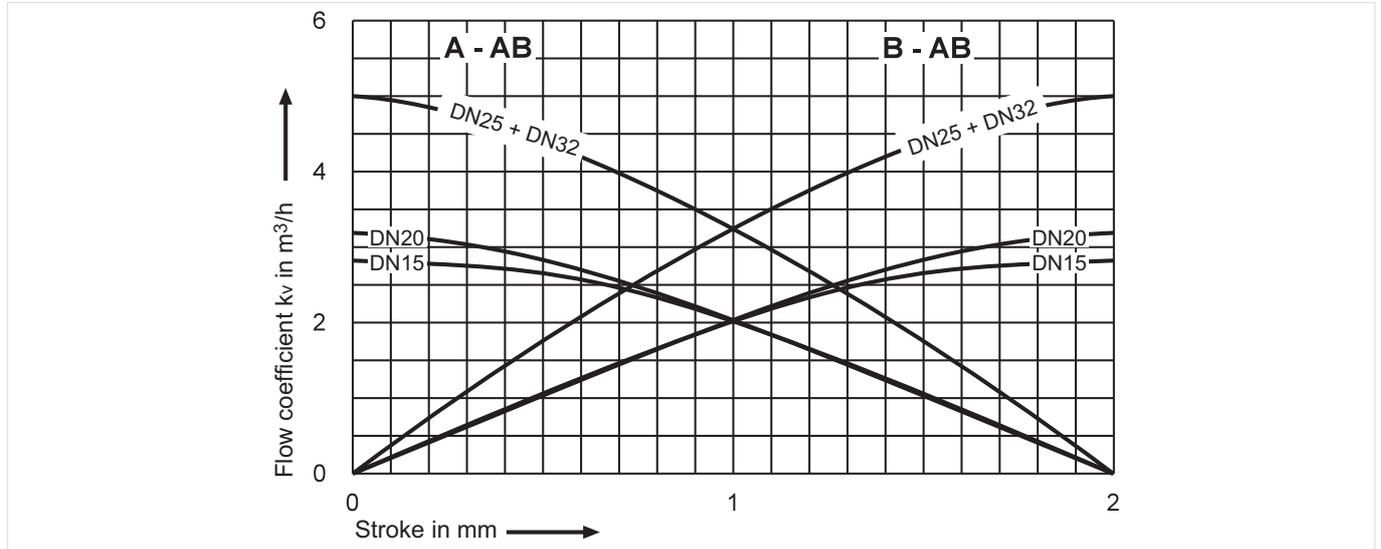
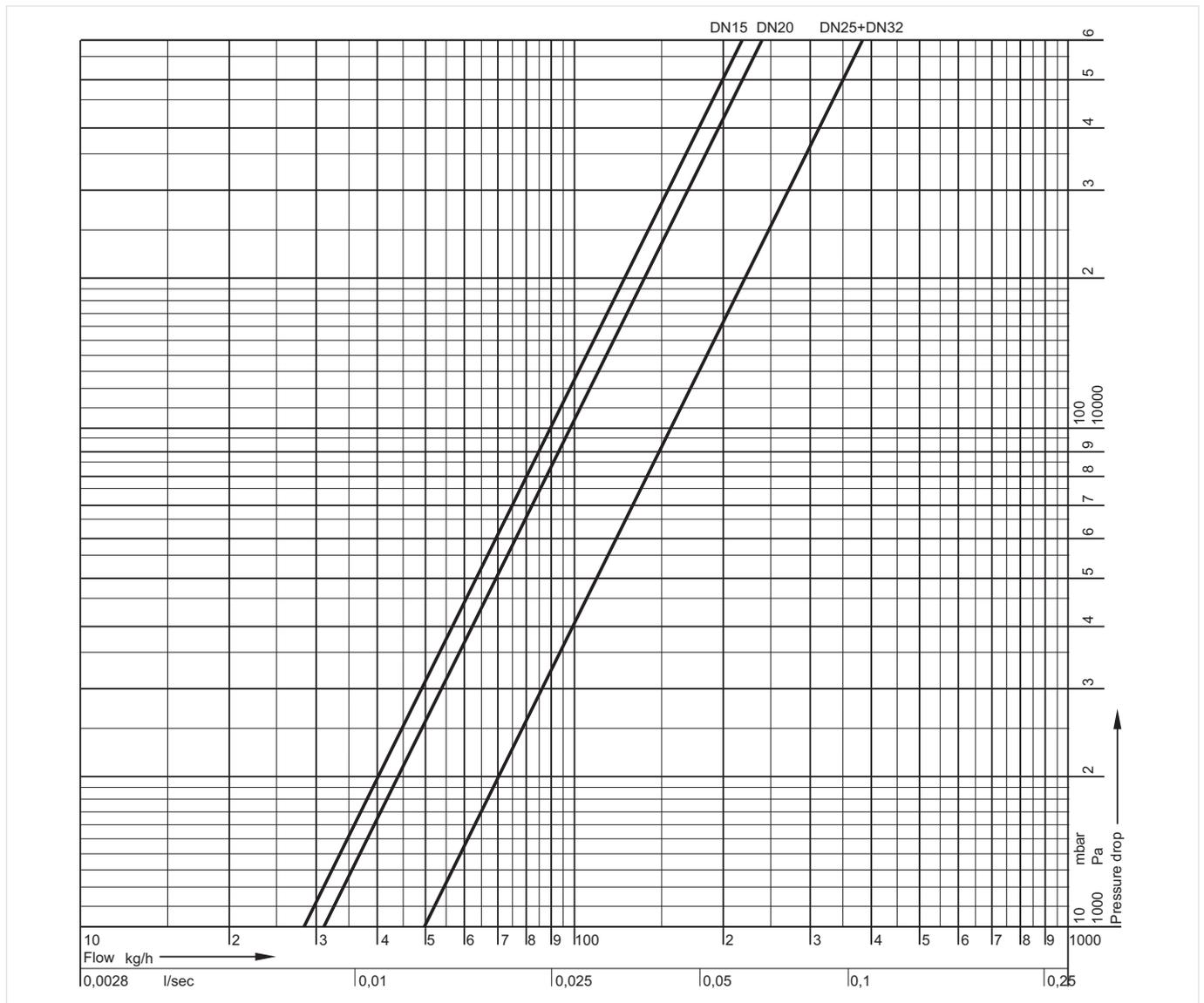


Fig. 4 A - AB and B - AB



Accessories

	Description	Dimension	Part No.
	T100R Thermostat with remote sensor (screw-in sensor) Note: For detailed information see T100R/RS data sheet.		
	With R ¹ / ₂ " immersion pocket, Setting range 10 - 50 °C (50 - 122 °F)		T100R-AA
	With R ¹ / ₂ " immersion pocket, Setting range 30 - 70 °C (86 - 158 °F)		T100R-AB
	With R ¹ / ₂ " screw in sensor, Setting range 10 - 50 °C (50 - 122 °F)		T100RS-DA
	With R ¹ / ₂ " screw in sensor, Setting range 30 - 70 °C (86 - 158 °F)		T100RS-DB
	MT4 Smart-T thermal actuator (on/off control only) 4.0 mm effective stroke	24 Vac/dc	MT4-024-NO MT4-024-NO-2.5M MT4-024S-NO MT4-024-NC MT4-024-NC-2.5M MT4-024S-NC
		230 Vac/dc	MT4-230-NO MT4-230-NO-2.5M MT4-230S-NO MT4-230-NC MT4-230-NC-2.5M MT4-230S-NC

Spare Parts

Overview	Description	Dimension	Part No.
	1 Valve insert		
		DN15, 1/2" DN20, 3/4"	V135A-1/2VE
		DN25, 1" DN32, 1 1/4"	V135A-1VE
		DN40, 1 1/2" DN50, 2"	V135A-11/2VE
	2 Handwheel (pack of 10)		H100-1/2VE

For more information

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Subject to change

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