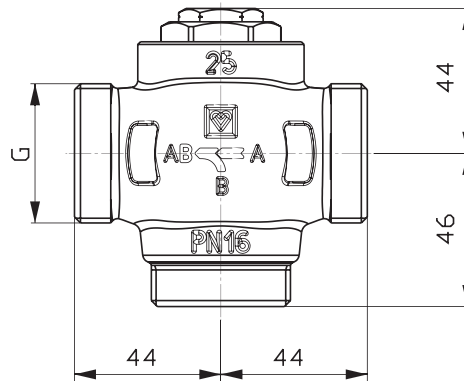


## HERZ Teplomix

### Thermostatic three-way control valve for boiler return bypass

Datasheet for 1 7766 XX, Issue 0519

#### ☑ Dimensions in mm



Order number	Dimension	G	$\Delta p_{\max}$	kvs (m <sup>3</sup> /h) Normal Flow	kvs (m <sup>3</sup> /h) Bypass
1 7766 03	DN 25	G 5/4 B	0,5	11	17
1 7766 04	DN 32	G 6/4 B	0,5	14	19
1 7766 13	DN 25	G 5/4 B	0,5	11	16
1 7766 14	DN 32	G 6/4 B	0,5	14	16

Order number	T <sub>max</sub> Mixer Temperature.	p <sub>max</sub> (bar)	T <sub>min</sub> Water	T <sub>min</sub> Frost protection
1 7766 03	110 °C	16	+2 °C	-20 °C
1 7766 04	110 °C	16	+2 °C	-20 °C
1 7766 13	110 °C	16	+2 °C	-20 °C
1 7766 14	110 °C	16	+2 °C	-20 °C

#### ☑ Design / application

Three-way mixer valve with continuously controllable thermostatic input, factory pre-set. The bypass is operated automatically from the thermostat with no electrical link to the boiler. External thread according to ISO 228/1, class B flat-sealing. Pipe connections must be ordered separately. Casing made of standard brass for use in heating equipment

- 1 7766 03 The models 1 7766 03 and 1 7766 04 incorporate a fixed bypass, control temperature for path A --- AB: approx 61 °C
- 1 7766 04 Installation of a regulating valve in the bypass between the boiler flow and return is recommended (see diagram)
- 1 7766 13 The models 1 7766 13 and 1 7766 14 are designed with a closing function on the bypass At a mixing temperature of approx 63 °C the bypass is closed (B-AB branch) and opens again at a temperature of approx 55 °C.
- 1 7766 14 The installation of a regulating valve in the bypass is not necessary.

#### ☑ Water quality

The ammonia contained in hemp damages brass valve casings and EPDM seals may be macerated by mineral oils or lubricants containing mineral oils and may cause damage to the seals. Frost and corrosion protection products made using ethylene and propylene glycol are permitted in the ratio of 25 – 50% vol. Water quality according to ÖNORM H 5195 and VDI 2035.

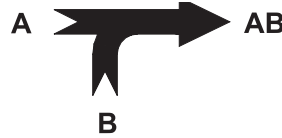
**Installation**

The valves are installed using HERZ connections with flat seals in the pipe system according to the designated use. The ingress of dirt into the valves should be avoided.

**Notes on installation**



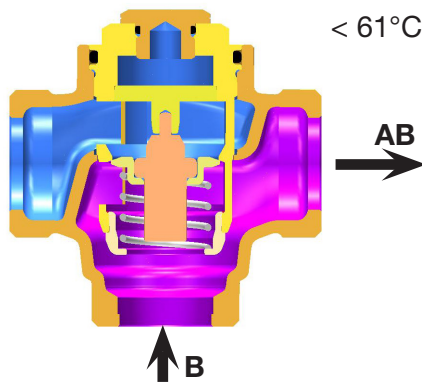
The flow direction should be noted at installation. This is marked on the casing by an arrow.



Filling / emptying and dirt removal of the heating unit can be carried out by removing the R3/8 plug at the top of the valve and installing a drain valve.

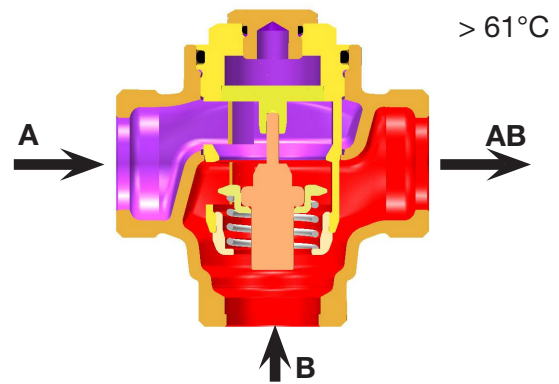
**Functioning 1 7766 03 - 1 7766 04**

Leakage: For A-AB approx. 3% from kvs- value



**Valve closed  
(Starting position)**

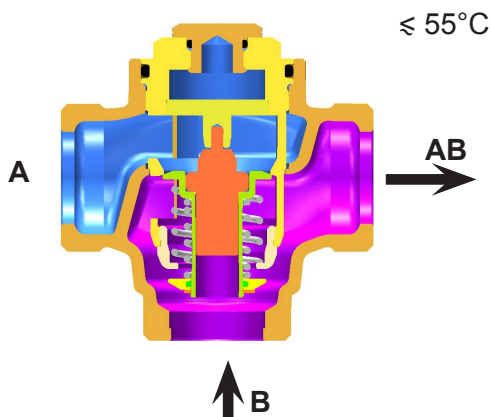
The system return (A) is closed. The water from the bypass (B) is taken directly in unmixed condition to the boiler.



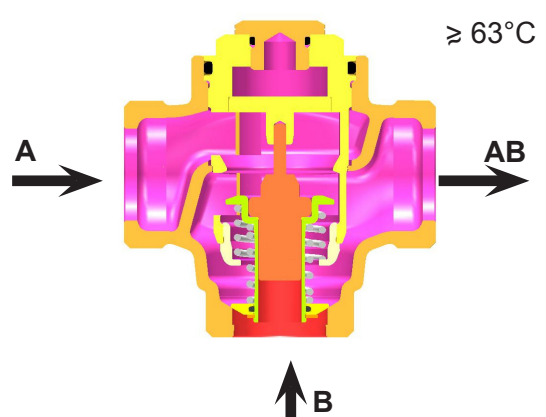
**Valve open  
(Operational setting)**

Cold return water from the heating system and hot water from the bypass are mixed and fed to the boiler.

**Functioning 1 7766 13 - 1 7766 14**



The direction A-AB is in the closed state at a mixing temperature of  $\leq 55^{\circ}\text{C}$ . Leakage: 3-5% of the kvs values.



The direction B-AB closes at a mixing temperature of  $\geq 63^{\circ}\text{C}$ . Leakage: 0.03% of the kvs values.

### ☑ Accessories

Connections, consisting of seal, nut and nipple for each valve – 3 sets required.

#### for Teplomix DN 25

- 1 6220 63 Iron pipe connection, AG R1
- 1 6236 63 Soldered connection for 28mm copper pipe
- 1 6240 63 Welded connection for 33.7mm pipe
- P 70xx 43 Junction press fitting, flat seal for 25 x 3.5 mm and 40 x 3.5 mm aluminium connection pipes

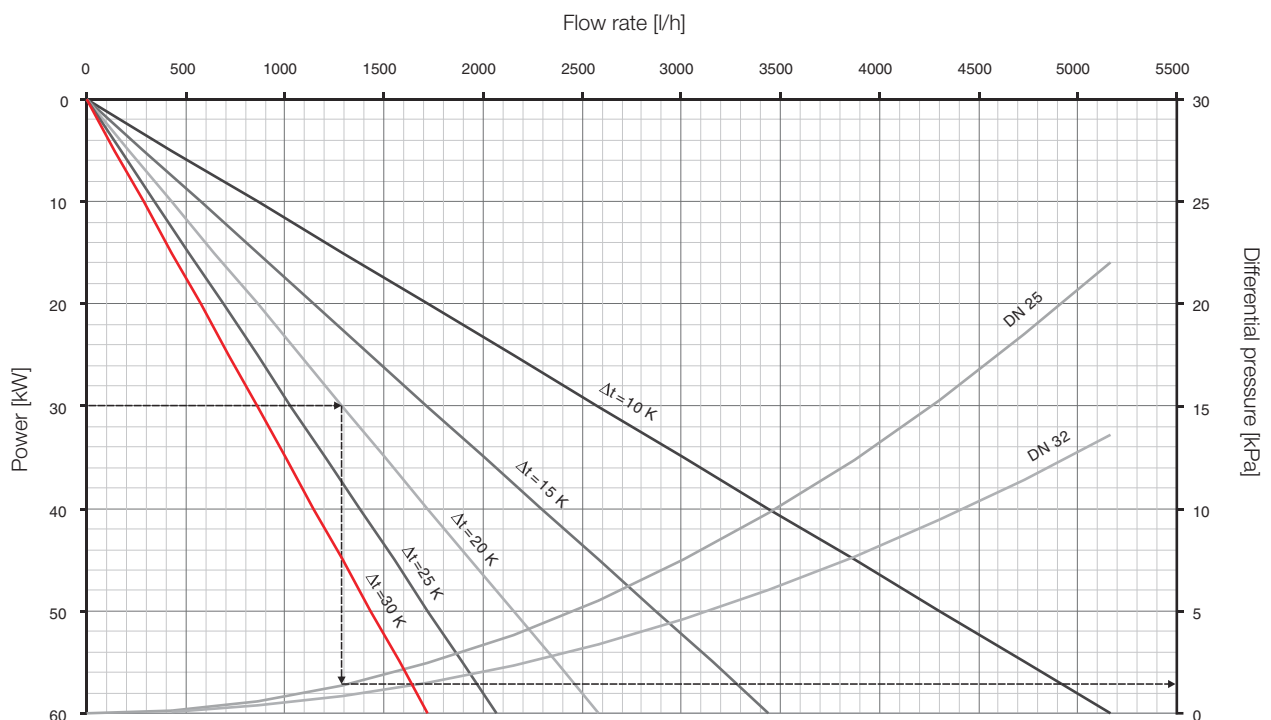
#### for Teplomix DN 32

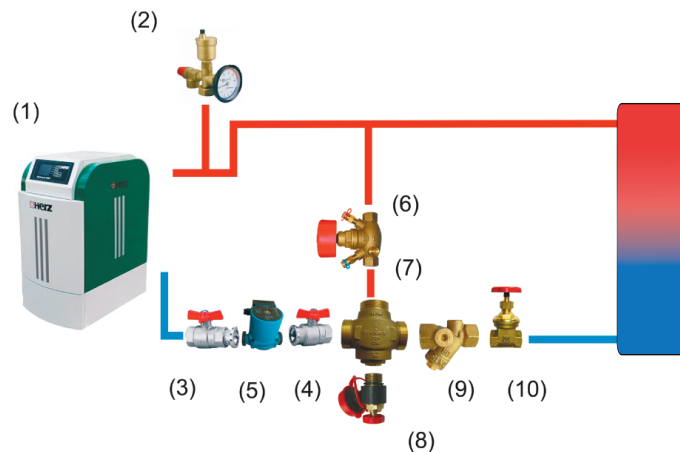
- 1 6220 64 Iron pipe connection R 1¼
- 1 6236 63 Soldered connection for 35mm copper pipe
- 1 6240 63 Welded connection for 42.4 mm pipe
- P 70xx 44 Junction press fitting, flat seal for 32 x 3 mm and 50 x 4 mm aluminium connection pipes
- 4111 Strainer, mesh 0.40 or 0.75 mm
- 4119 “Thermoflex” boiler fill and drain tap
- 1 0276 00 Drain valve with handle and pivotable hose connection, DN 10, O-ring seal
- 4112/ 4113 STRÖMAX shut-off and circuit regulating valve

### ☑ Other products

- 1 7761 xx Distributor valve, CALIS-RD, DN15 - DN32 for thermal actuation
- 1 7762 xx Three way mixer and distributor valve, DN10 - DN20 for thermal actuation
- 1 4037 xx Three way mixer and distributor valve, DN15 – DN50 suitable for motor actuation
- 2 7766 xx Thermostatic Mixer valve for use in drinking water systems
- 1 2137 xx Three-Port Mixing Valve

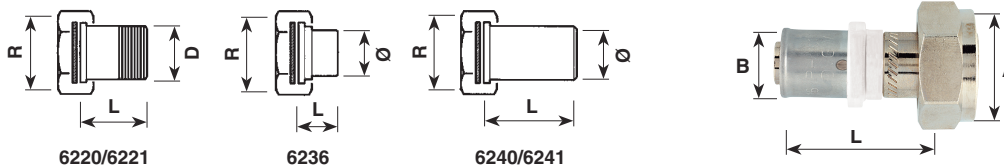
### ☑ Dimensioning



**Example of application:**

**Description of the products used**

- 1                   HERZ Boiler
- 2   1 **2104** 04   Boiler group, consisting of vent, safety valve, Manometric Thermometer and insulation jacket
- 3   1 **2268** 03   Ball valve for direct installation, with non-return valve
- 4   1 **2269** 03   Ball valve for direct installation
- 5                   HERZ Circulation Pump
- 6   1 **4217** xx   Circuit regulating valve, for limiting the volume of bypass water
- 7   1 **7766** xx   TEPLOMIX, thermostatic control valve
- 8   1 **0276** 00   Drain valve with handle and hose connection, DN 10, O-ring seal  
Alternative:
- 1 **4119** 00   "Thermoflex" boiler fill and drain tap without O-ring seal.
- 9   1 **4111** xx   Strainer
- 10  1 **4112** xx   Shut-off valve

\* The items used are examples. In case of any technical questions please contact closest HERZ Branch-office for support.



Dimension	Order #	R	D	ø	L
<b>DN 25</b>	1 <b>6220</b> 63	1¼	1	–	35
<b>DN 32</b>	1 <b>6220</b> 64	1½	1	–	40
<b>DN 25</b>	1 <b>6236</b> 63	1¼	–	28	24
<b>DN 32</b>	1 <b>6236</b> 64	1½	–	35	27
<b>DN 25</b>	1 <b>6240</b> 63	1¼	–	34	51
<b>DN 32</b>	1 <b>6240</b> 64	1½	–	42	54

Dimension	Order #	A	B	L
<b>DN 25</b>	P <b>7026</b> 43	G 1¼	26 x 3	50
<b>DN 25</b>	P <b>7032</b> 43	G 1¼	32 x 3	50
<b>DN 25</b>	P <b>7040</b> 43	G 1¼	40 x 3,5	70
<b>DN 32</b>	P <b>7032</b> 44	G 1½	32 x 3	50
<b>DN 32</b>	P <b>7040</b> 44	G 1½	40 x 3,5	70
<b>DN 32</b>	P <b>7050</b> 44	G 1½	50 x 4	70

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