

## BALANCING VALVES



### BALANCING VALVE

*The STAV balancing valve delivers accurate hydronic performance in an impressive range of applications. Ideally suited for use on the secondary side in heating, cooling, and tap water systems.*



**SELF-SEALING MEASURING POINTS**  
*For simple, accurate balancing.*



**HANDWHEEL**  
*Equipped with a digital read-out, the handwheel ensures accurate and straightforward balancing.*



**VENTURI ORIFICE**  
*For more accurate flow readings than traditional orifice plates and low permanent pressure loss.*

## TECHNICAL DESCRIPTION

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### Applications:

Heating and cooling systems.  
Tap water systems.

### Functions:

Balancing  
Pre-setting  
Measuring  
Shut-off

### Dimensions:

DN 15-50

### Pressure class:

PN 20

### Temperature:

Max. working temperature: 120°C  
Min. working temperature: -20°C

### Material:

The valves are made of AMETAL®  
Venturi nozzle insert: AMETAL®  
Sealings: EPDM O-rings  
Handwheel: Polyamide  
*Smooth ends:*  
Nipple: AMETAL®  
O-ring (DN 25-50): EPDM

AMETAL® is the dezincification resistant alloy of TA.

### Marking:

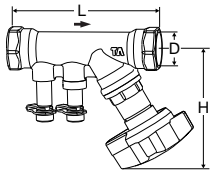
Body: TA, PN 20, DN and inch size.  
Handwheel: Valve type and DN.  
Marking ring on measuring point:  
MD 71 Standard flow: Black, 120°C,  $Kv_{signal}$   
MD 72 Low flow: White, 120°C,  $Kv_{signal}$   
MD 73 Ultra low flow: Blue, 120°C,  $Kv_{signal}$

### Approval:

WRAS Certificate No. 0512120.

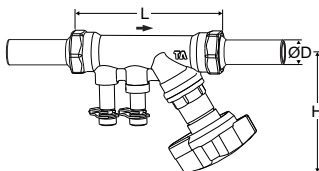


### With female threads



TA No	DN	D**	L	H	Kv <sub>max</sub>	Kv <sub>signal</sub>	l/h***	l/s***	Kg
<b>MD 71 Standard flow</b>									
52 572-015	15*	G1/2	113	100	1.75	1.25	216-520	0.060-0.144	0.58
52 572-020	20*	G3/4	122	100	3.98	2.70	468-980	0.130-0.272	0.69
52 572-025	25	G1	137	105	6.46	5.00	865-1980	0.240-0.550	0.92
52 572-032	32	G1 1/4	156	110	11.4	10.4	1800-3820	0.500-1.06	1.3
52 572-040	40	G1 1/2	168	120	15.8	15.6	2700-5730	0.750-1.59	1.8
52 572-050	50	G2	206	120	29.3	29.7	5150-10900	1.43-3.03	2.9
<b>MD 72 Low flow</b>									
52 572-115	15*	G1/2	113	100	0.821	0.540	94-240	0.026-0.067	0.58
<b>MD 73 Ultra low flow</b>									
52 572-215	15*	G1/2	113	100	0.319	0.208	36-105	0.010-0.029	0.58

### With smooth ends



TA No	DN	D	L	H	Kv <sub>max</sub>	Kv <sub>signal</sub>	l/h***	l/s***	Kg
<b>MD 71 Standard flow</b>									
52 472-015	15*	15	171	100	1.75	1.25	216-520	0.060-0.144	0.68
52 472-020	20*	22	186	100	3.98	2.70	468-980	0.130-0.272	0.85
52 472-025	25	28	219	105	6.46	5.00	865-1980	0.240-0.550	1.2
52 472-032	32	35	254	110	11.4	10.4	1800-3820	0.500-1.06	1.7
52 472-040	40	42	277	120	15.8	15.6	2700-5730	0.750-1.59	2.3
52 472-050	50	54	336	120	29.3	29.7	5150-10900	1.43-3.03	3.7
<b>MD 72 Low flow</b>									
52 472-115	15*	15	171	100	0.821	0.540	94-240	0.026-0.067	0.68
<b>MD 73 Ultra low flow</b>									
52 472-215	15*	15	171	100	0.319	0.208	36-105	0.010-0.029	0.68

→ = Flow direction

\*) Can be connected to smooth pipes by KOMBI compression coupling. If using pipes smaller than valve size – contact TA. For further information of KOMBI – see catalogue leaflet KOMBI.

\*\*) Thread length according to ISO 7/1.

\*\*\*) Recommended flow rate. Min. flow rate is based upon a measured pressure drop of 3 kPa.

**Kv<sub>max</sub>** is the Kv value for the total valve.

**Kv<sub>signal</sub>** is the Kv value used for flow measuring.

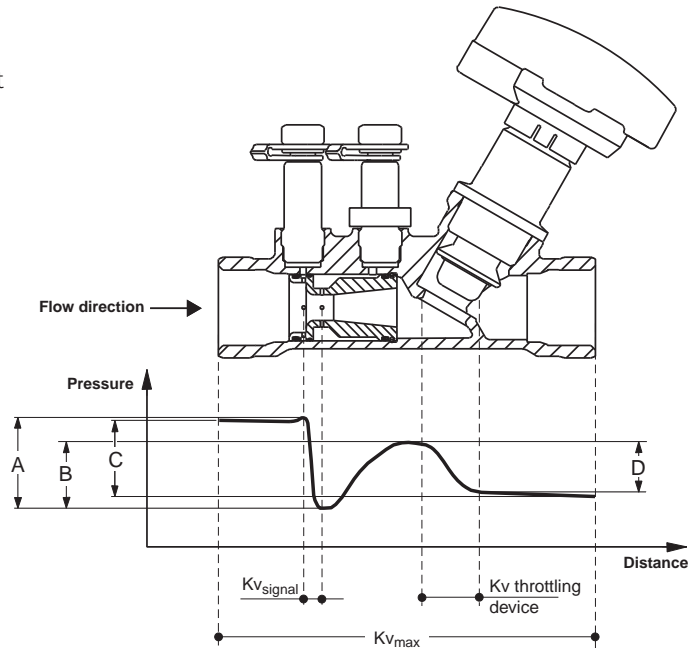
# STAV

BALANCING

## OPERATING FUNCTION

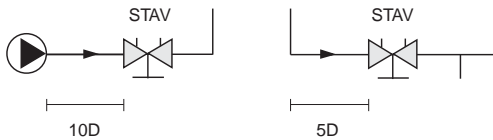
The pressure drop over the valve may be lower than the pressure drop between the two measuring points, since most of that pressure drop will be recovered in the outlet part of the venturi nozzle, see figure.

- A** Pressure drop between measuring points
- B** Recovered pressure
- C** Pressure drop over the valve
- D** Pressure drop over the throttling device



## MEASURING ACCURACY

Flow deviation less than  $\pm 5\%$ .



## KV VALUES

$Kv_{max}$  at different settings

No of turns	MD 71 Standard low flow						MD 72 Low flow	MD 73 Ultra low flow
	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 15	DN 15
0.5	0.127	0.511	0.600	1.14	1.75	2.56	-	-
1	0.212	0.757	1.03	1.90	3.30	4.20	0.090	0.090
1.5	0.314	1.19	2.10	3.10	4.60	7.20	0.134	0.126
2	0.571	1.80	3.61	4.66	6.10	11.6	0.280	0.217
2.5	0.862	2.46	4.68	6.72	8.43	16.1	0.465	0.277
3	1.22	3.24	5.34	8.62	11.7	20.7	0.657	0.304
3.5	1.55	3.74	5.92	9.96	13.9	24.5	0.795	0.316
4	1.75	3.98	6.46	11.43	15.8	29.3	0.821	0.319

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