

## 3 way ball valve S4 hand operated



Symbolfoto

### General:

- Material: PVC-U / PP / PVDF
- Sealing material: EPDM / FPM
- Ball seating joint: PTFE
- Ball: T- oder L-Bohrung
- Dimensions:
  - DN10 (DN15 / d16 / d3/8")
  - DN15 d20 d1/2"
  - DN20 (DN25 / d25 / d3/4")
  - DN25 d32 d1"
  - DN32 (DN40 / d40 / d1 1/4")
  - DN40 d50 d1 1/2"
  - DN50 d63 d2"

### Connector types:

- Solvent socket DIN / ASTM / JIS  
PVC
- Solvent spigot DIN  
PVC
- Threaded socket BSP / NPT  
PVC / PP
- Fusion socket DIN  
PP / PVDF
- Fusion spigot DIN  
PP / PVDF / PE
- Backing flange DIN  
PVC

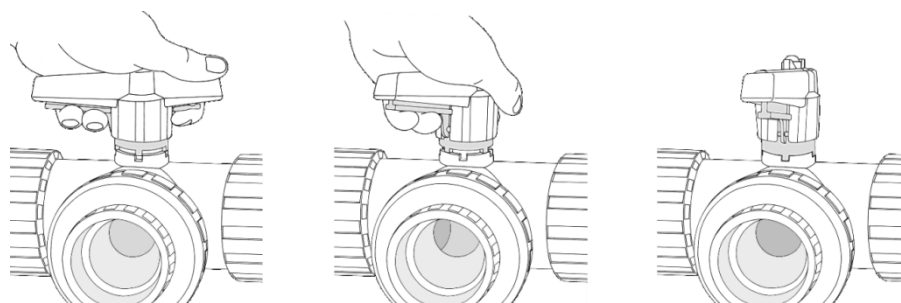
### Operating pressure:

- PVC / PVDF PN16
- PP PN10

### Technical features:

- Safety locking handle system
- Radial installation and removal
- Double sided blocked ball
- Machined ball
- Full section area of flow (nominal bore)
- Floating ball

### Safety locking handle system

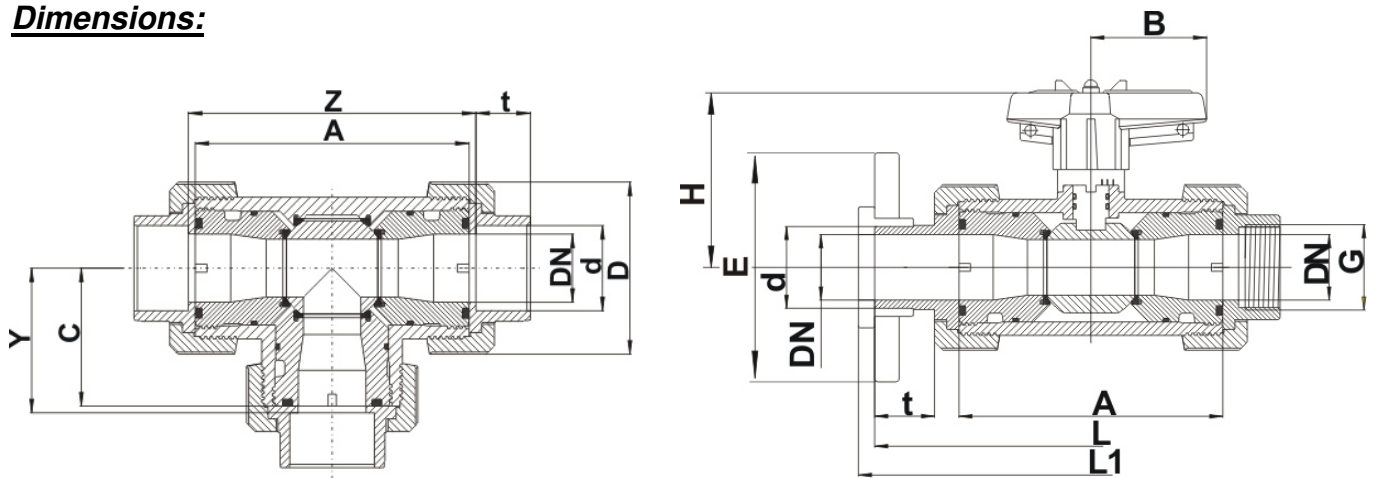


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**Dimensions:**



**PVC-U**

**Connector types**

PVC solvent socket / solvent spigot / threaded socket / backing flange

PE fusion socket

DN	10	15	20	25	32	40	50
d	16	20	25	32	40	50	63
<b>G</b> TSO <sup>1</sup>	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
<b>A</b>	100	100	120	120	162	162	181
<b>B</b>	40	40	51,5	51,5	73	73	85
<b>C</b>	50	50	60	60	81	81	90,5
<b>D</b>	53	53	70	70	101	101	124,5
<b>H</b>	72	72	81,5	81,5	107,5	107,5	116,5
<b>t</b> SSO <sup>2</sup> /SSP <sup>3</sup>	16,5	16,5	20	22,5	27,5	31,5	38,5
<b>t</b> FSP PE <sup>4</sup>	13	14,5	-	18,5	-	29	31
<b>E</b> BF <sup>5</sup>	90	95	-	115	-	150	165
<b>L</b> SSO <sup>2</sup> /TSO <sup>1</sup>	138	138	166	172	224	234	269
<b>L</b> SSP <sup>3</sup>	153	163	-	200	-	261	295
<b>L</b> PE FSP <sup>4</sup>	150	160	-	198	-	246	269
<b>L1</b> BF <sup>5</sup>	159	169	-	206	-	267	301
<b>Y</b>	53	53	63	63	84,5	85,5	96
<b>Z</b>	106	106	126	126	169	171	192
<b>PN</b>	16	16	16	16	16	16	16
<b>PN</b> BF <sup>5</sup> PE <sup>4</sup>	10	10	10	10	10	10	10

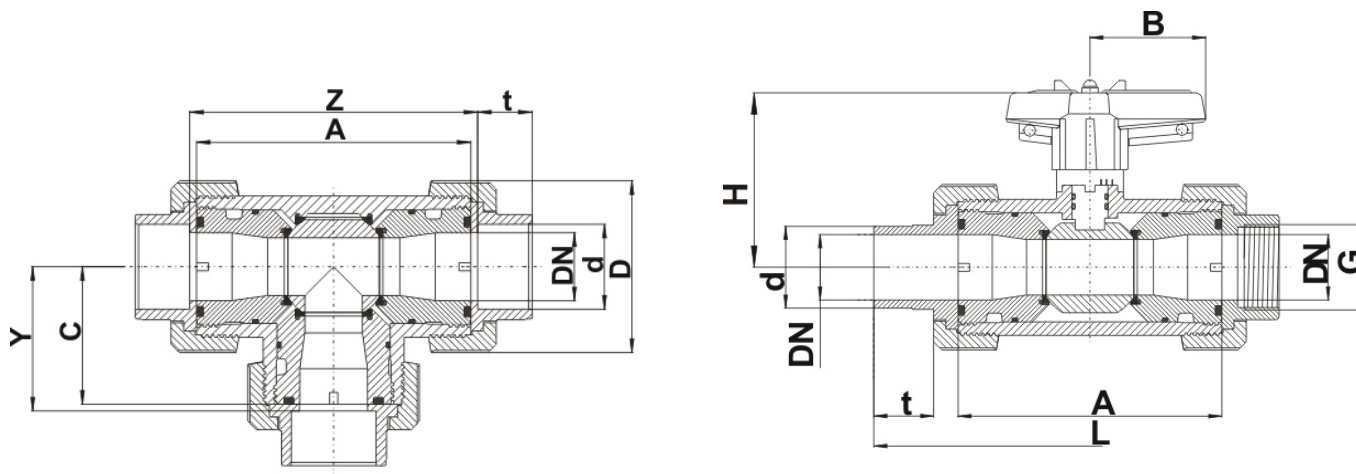
dimensions in mm

<sup>1</sup> TSO = threaded socket  
<sup>2</sup> SSO = Klebemuffe  
<sup>3</sup> SSP = Klebestutzen  
<sup>4</sup> FSP = fusion socket PE

<sup>5</sup> BF = backing flange  
 - = currently not realised



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**PP**

**Connector types**

PP fusion socket / fusion spigot / threaded socket

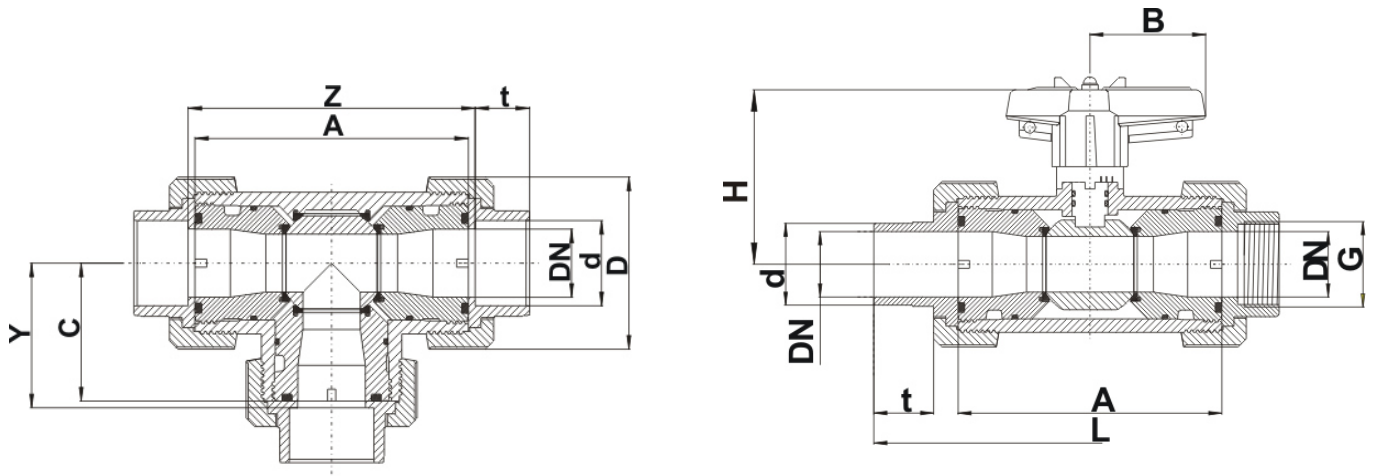
DN	10	15	20	25	32	40	50
<b>d</b>	16	20	25	32	40	50	63
<b>G</b> <sup>GM1</sup>	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
<b>A</b>	98	98	118	118	159	159	177
<b>B</b>	40	40	51,5	51,5	73	73	85
<b>C</b>	49	49	59	59	79,5	79,5	88,5
<b>D</b>	53	53	71	71	100	100	120,5
<b>H</b>	72	72	81,5	81,5	107,5	107,5	116,5
<b>t</b> <sup>minFSO<sup>2</sup>/FSP<sup>3</sup></sup>	13	14,5	16,5	18	20,5	23,5	27,5
<b>L</b> <sup>FSO<sup>2</sup></sup>	136	136	163	168	220	229	263
<b>L</b> <sup>FSP<sup>3</sup></sup>	150	160	190	196	247	256	289
<b>L</b> <sup>TSO<sup>1</sup></sup>	136	136	163	168	220	229	263
<b>Y</b>	55	53,5	65,5	66	89,5	91	104
<b>Z</b>	110	107	131	132	179	182	208
<b>PN</b>	10	10	10	10	10	10	10

dimensions in mm

- <sup>1</sup> TSO = threaded socket
- <sup>2</sup> FSO = fusion socket
- <sup>3</sup> FSP = fusion spigot
- = currently not realised



### 3 way ball valve S4 hand operated



#### PVDF

##### Connector types

PVDF fusion socket / fusion spigot / threaded socket

DN	10	15	20	25	32	40	50
d	16	20	25	32	40	50	63
G <sub>TSO</sub> <sup>1</sup>	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
A	98	98	117	117	158	158	176
B	40	40	51,5	51,5	73	73	85
C	49	49	59	59	79	79	88
D	52,5	52,5	70	70	98,5	98,5	118
H	72	72	81,5	81,5	107,5	107,5	116,5
t <sub>minFSP</sub> <sup>2/FSP</sup> <sup>3</sup>	13	14,5	16,5	18	20,5	23,5	27,5
L <sub>FSO</sub> <sup>2</sup>	136	136	162	167	219	228	262
L <sub>FSP</sub> <sup>3</sup>	150	160	190	196	247	256	289
L <sub>TSO</sub> <sup>1</sup>	136	136	-	168	-	228	262
Y	55	53,5	65,5	66	89	90,5	103,5
Z	110	107	130	131	178	181	207
PN	16	16	16	16	16	16	16

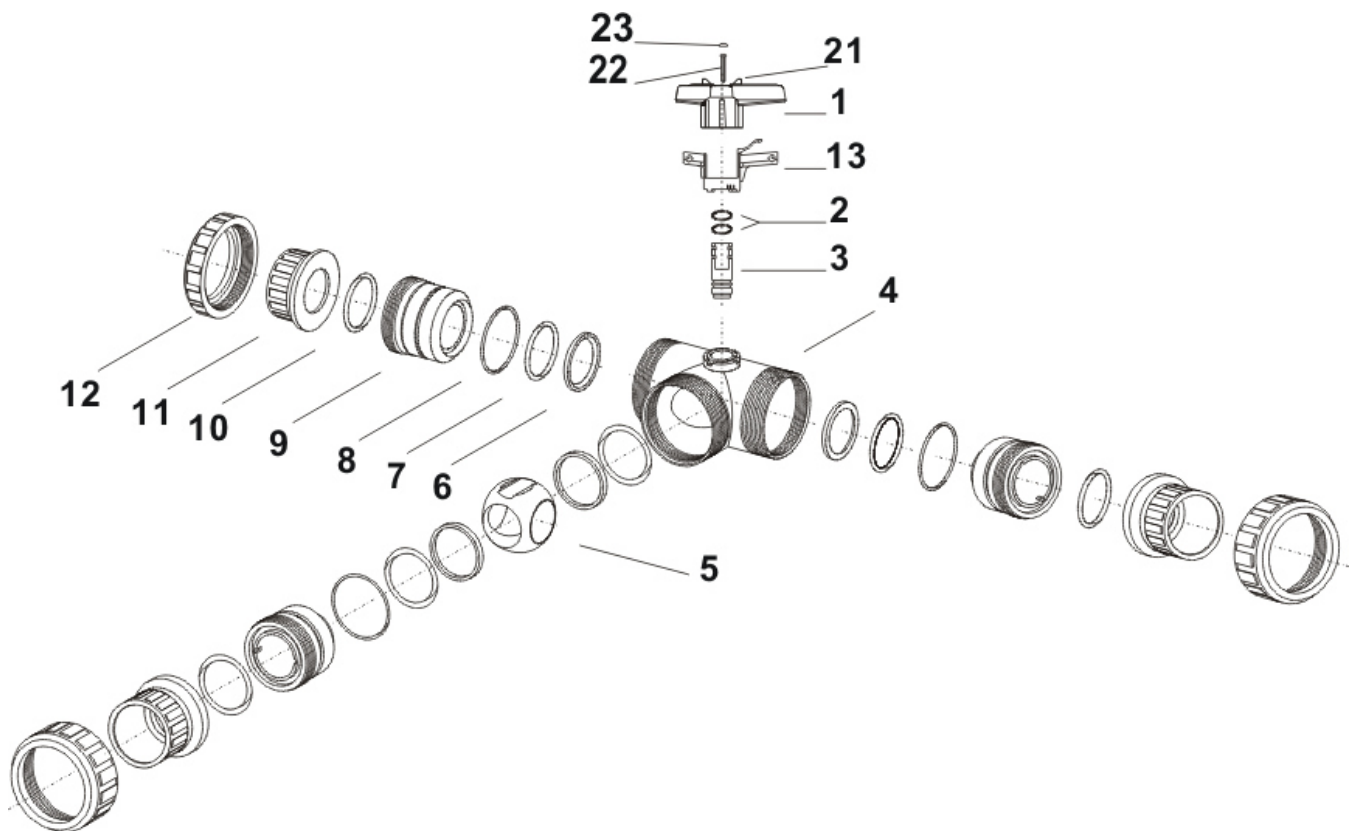
dimensions in mm

- <sup>1</sup> TSO = threaded socket
- <sup>2</sup> FSO = fusion socket
- <sup>3</sup> FSP = fusion spigot
- = currently not realised

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**Exploded drawing:**

- |                                   |  |
|-----------------------------------|--|
| 01. Handle                        | 12. Union nut                            |
| 02. O-Ring                        | 13. Spring loaded locking sleeve         |
| 03. Shaft                         | 21. Stub tenon for opening thrust collar |
| 04. Body                          | 22. Screw                                |
| 05. Ball „L“ or „T“               | 23. PLS-labeling insert                  |
| 06. Ball seating joint            |  |
| 07. O-Ring                        |  |
| 08. O-Ring                        |  |
| 09. Thrust collar                 |  |
| 10. O-Ring                        |  |
| 11. Connector types               |  |
| solvent socket / -spigot          |  |
| fusion socket /-spigot            |  |
| threaded socket                   |  |
| flange adapter and backing flange |  |

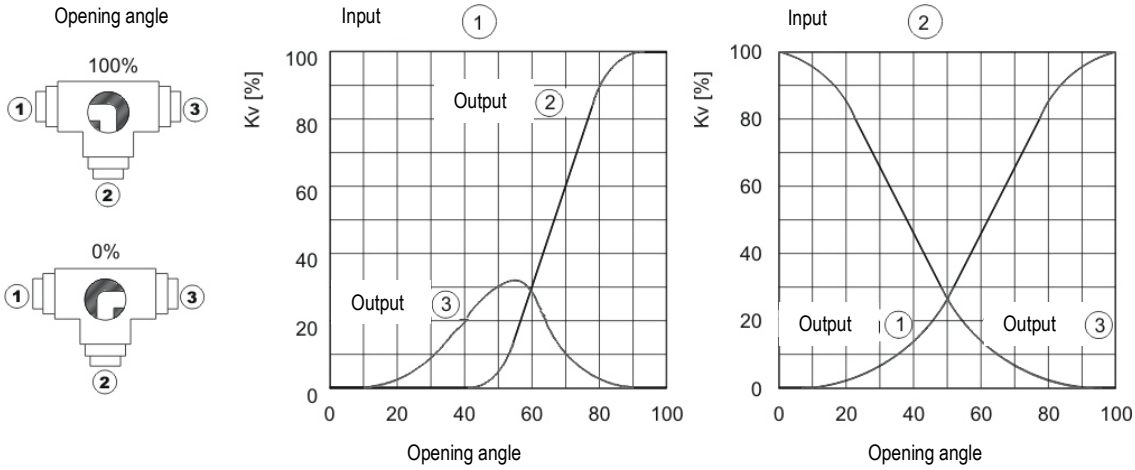


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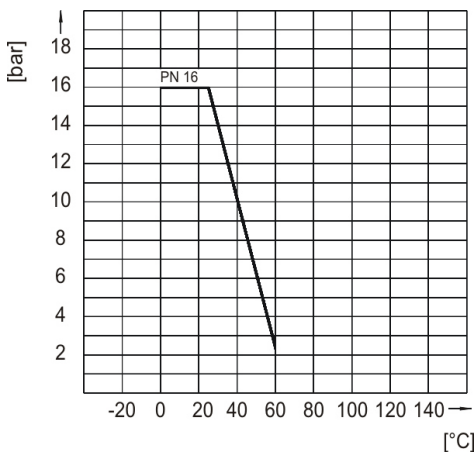


## Diagrams:

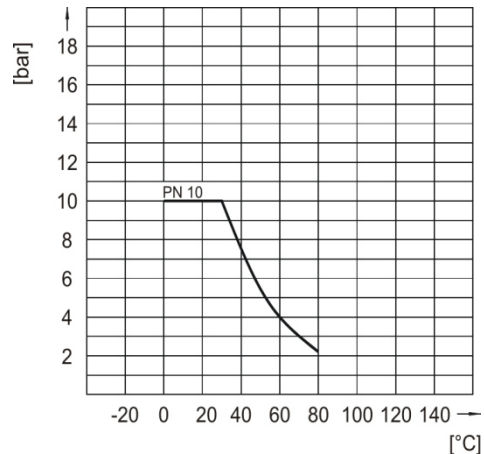
### Flow characteristics



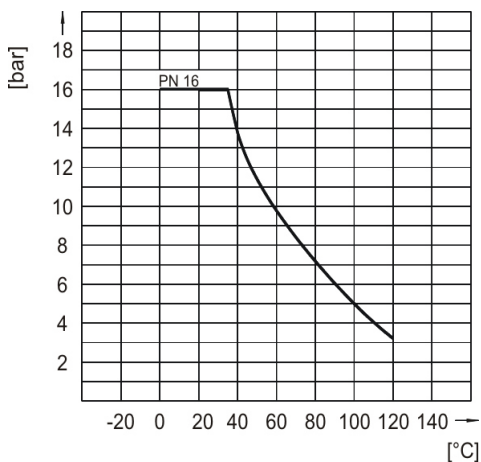
### Pressure – temperatur – PVC-U



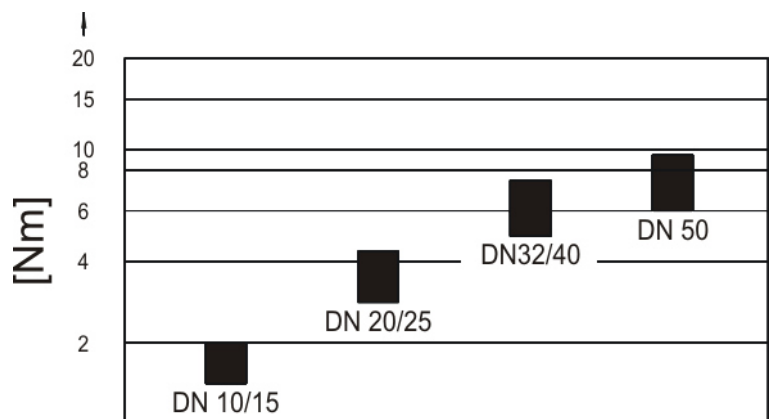
### Pressure – temperatur – PP



### Pressure – temperatur – PVDF



### Torque

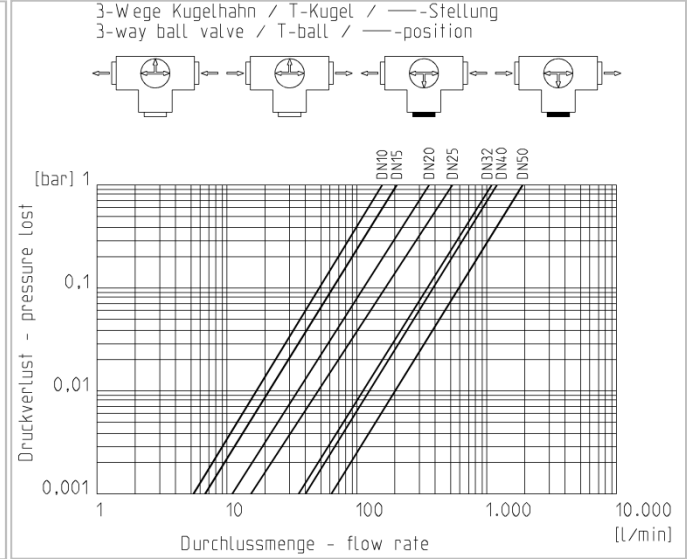
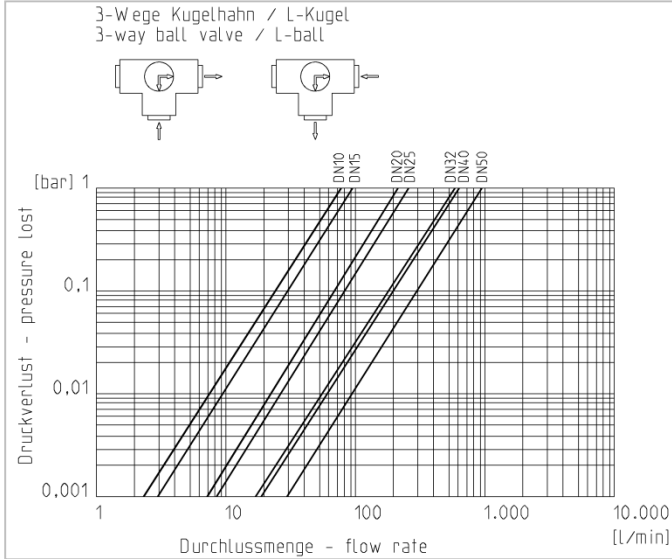




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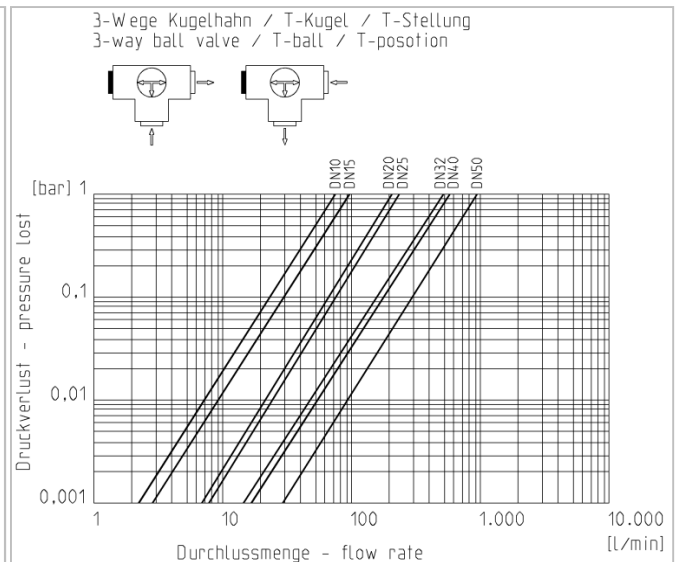
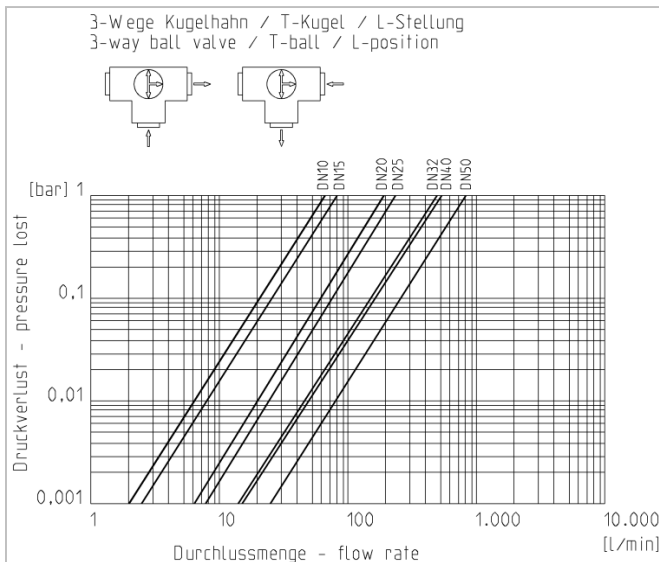


## Pressure loss diagramm



DN10	DN15	DN20	DN25	DN32	DN40	DN50	Pressure loss	DN10	DN15	DN20	DN25	DN32	DN40	DN50
2,4	2,9	6,9	8,3	17,8	19,3	29,4	<b>0,001 bar</b>	5,3	6,5	11,4	16,3	35,6	40	61,3
75	93	218	261	562	610	930	<b>1 bar</b>	166	207	360	515	1127	1265	1940

l/min



DN10	DN15	DN20	DN25	DN32	DN40	DN50	Pressure loss	DN10	DN15	DN20	DN25	DN32	DN40	DN50
2	2,5	6,2	7,6	15	16	25,5	<b>0,001 bar</b>	2,3	2,9	6,6	7,6	15,5	17,6	29,1
64	80	195	240	473	507	805	<b>1 bar</b>	72	90	210	240	490	555	920

l/min

