

Frese STBV FODRV

DN15-DN300

Description

The Frese STBV FODRV is a Fixed Orifice Double Regulating Valve for flow balancing and verification.

Application

The Frese STBV FODRV is ideally suited for use in heating and cooling applications for the balancing and accurate verification of flow in various sections of the system.

The FODRV balancing valve ensures simple and reliable verification of the system and can be installed in both variable flow systems and constant flow systems.

Operation

The double regulating valve feature allows the valve to be set to the required position and locked thus limiting the opening of the valve. If required, the valve can then be isolated by turning the hand wheel to set point 0.0 and reopened to the previous set point.

The integral fixed orifice, which has a fixed dimension and geometry, induces a difference in pressure for flow measurement.

Benefits

- Kvs value printed clearly on the hand wheel for identification during commissioning
- Simple to install and adjust
- Clear, 2 digit pre-setting scale
- Isolation feature
- Provides an alternative to commissioning sets (only one valve to install instead of a separate DRV and metering station)
- Delivers accurate control of the flow at all settings



Features

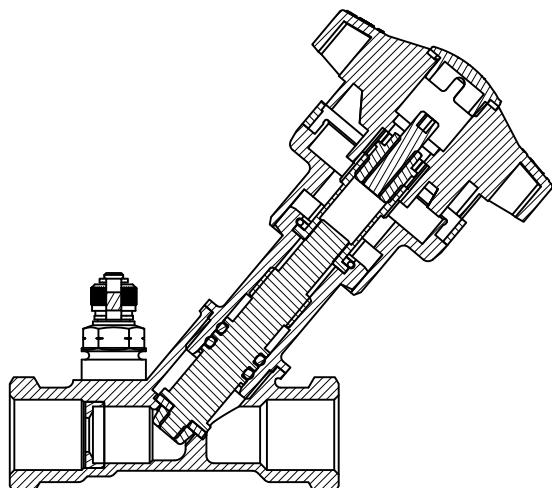
- Available in sizes DN15 to DN300
- Double regulating feature enables the valve opening to be set at the desired set point using a 3mm allen key
- Built in PT ports for flow measurement
- Can be installed with the PV Compact differential pressure control valve for efficient pressure and flow control

Frese STBV FODRV

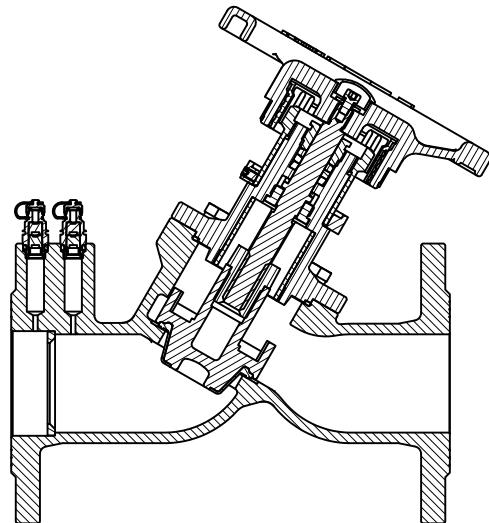
DN15-DN300

Design

The Frese STBV FODRV consists of a throttling globe valve to set the flow and a fixed orifice plate for flow verification. The accuracy of the flow measurement is +/- 5% at all settings.



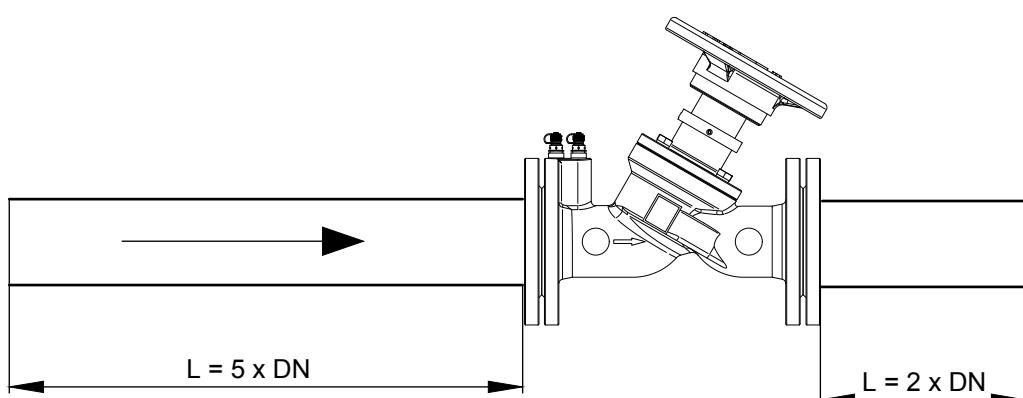
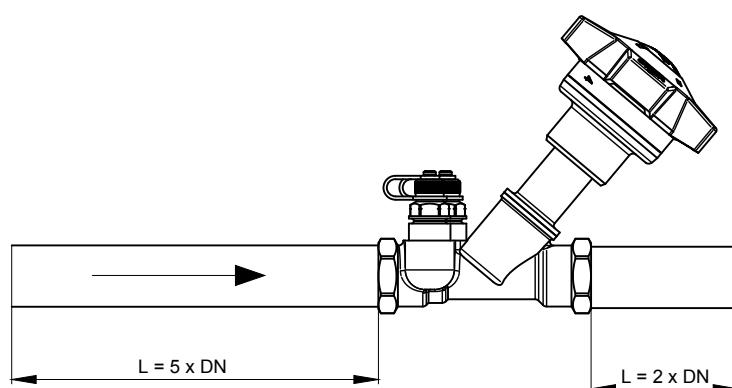
DN15-DN50 section drawing



DN65-DN300 section drawing

Installation

The Frese STBV FODRV must be installed according to the requirements below to obtain the measured flow accuracy.

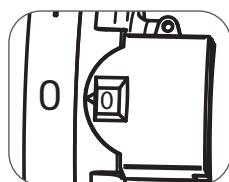


Frese STBV FODRV

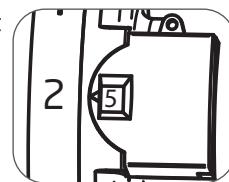
DN15-DN300

Setting the valve DN15-DN50

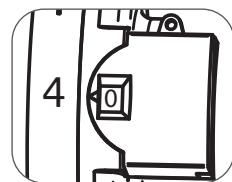
Valve closed



Valve set at 2.5



Valve fully open



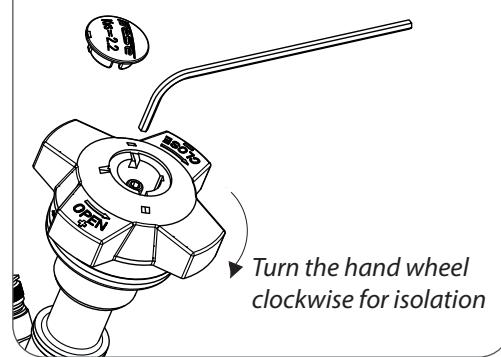
The Frese STBV FODRV is set using the pre-setting scale located below the hand wheel. The set point of the valve can be determined by using the flow tables from page 8.

Pre-setting max position.

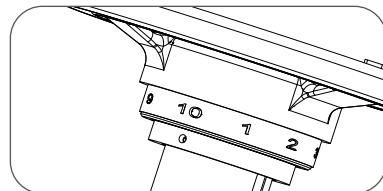
- Set the valve handle to the desired value
- Remove cap marked Frese, and tighten (turn clockwise) with 3mm hexagonal key
- The valve can then be reopened to the pre-set value after the valve has been used for isolation

To set the valve to another flow position, loosen the valve pre-setting with the 3 mm hexagonal key (turn anti clockwise) and set the hand wheel to the new position and tighten.

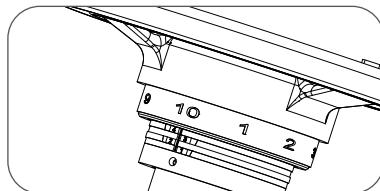
Turn clockwise with 3mm hexagonal key to set the valve to max setting position



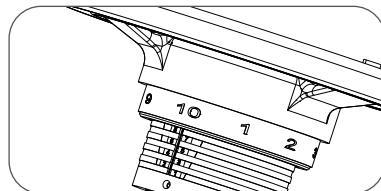
Setting the valve DN65-DN500



Valve closed

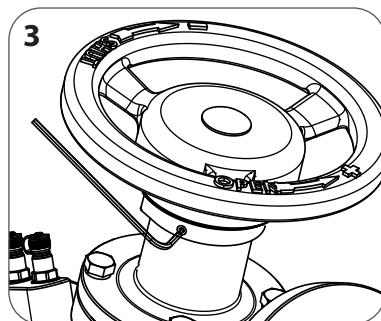
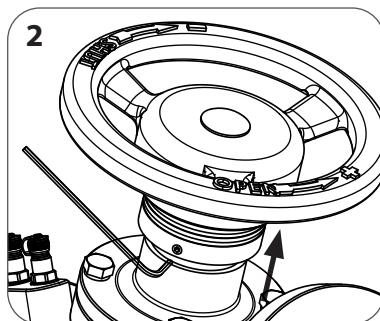
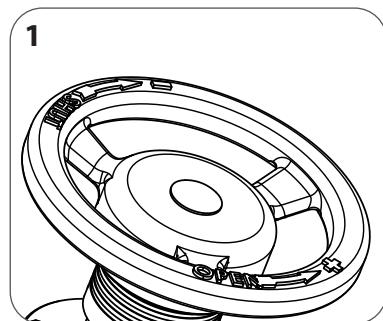


Valve set at 4.0



Valve set at 8.0

The Frese STBV FODRV is set using the pre-setting scale located below the hand wheel. The set point of the valve can be determined by using the flow tables from page 8.



Pre-setting max position:

1. Set the hand wheel to the desired value
2. Loosen the 2 screws with a 2.5mm hexagonal key in the ring below the hand wheel and lift it up
3. Tighten the 2 screws again with the 2.5mm hexagonal key.

The valve can then be reopened to the pre-set value after the valve has been used for isolation

To set the valve to another flow position, loosen the screws again, set the hand wheel to the new position, lift up the ring again and tighten.

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Verification of the flow

In general, the flow rate in a system can be verified in two ways:

1. Direct flow rate verification in a circuit
2. Measurement of the differential pressure across the balancing valve or metering station.

1. Direct flow rate verification

For example, this can be carried out by ultrasonic equipment. On the basis of the measured velocity of the flow and the pipe dimension, the software will compute the flow rate. The use of ultrasonic verification requires free access to the pipes as the sensors are fitted directly to the pipe.

2. Measurement of the differential pressure

In the case of balancing valves, such as the Frese STBV FODRV, the differential pressure across the balancing valve or metering station is measured to verify the flow.

Use the data tables from page 8 to determine the Kv of the valve at the specific pre-setting. The formula on the right hand side of this page can be used to determine the flow from the measured ΔP .

The following applies to all flow control valves:

$$Q = Kv * \sqrt{\Delta p}$$

Q = Flow (m^3/h)

Kv = Orifice area

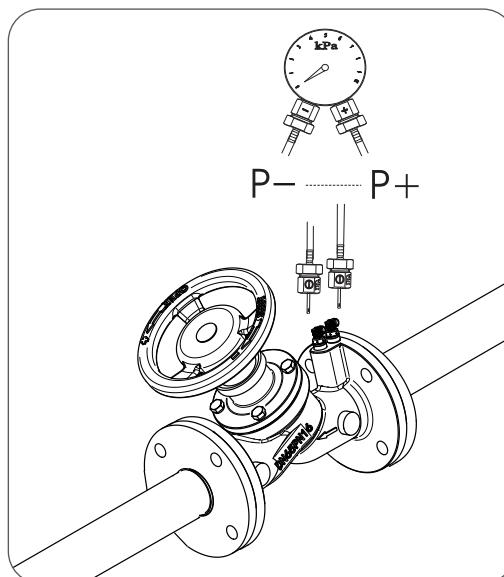
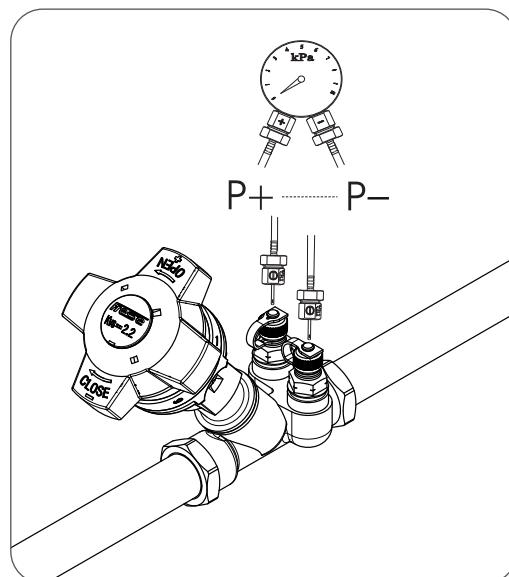
Δp = Differential pressure (Bar)

The Frese STBV FODRV verifies the flow by measuring the differential pressure across the variable orifice. The flow can be calculated using the formula above.

Flow calculation with other units

$Q = Kv \cdot 100 \cdot \sqrt{\Delta p}$	$Q = l/h$ $\Delta p = kPa$
$Q = \frac{Kv}{100} \cdot \sqrt{\Delta p}$ 36	$Q = l/s$ $\Delta p = kPa$

Measurement of the differential pressure across the variable orifice of the valve

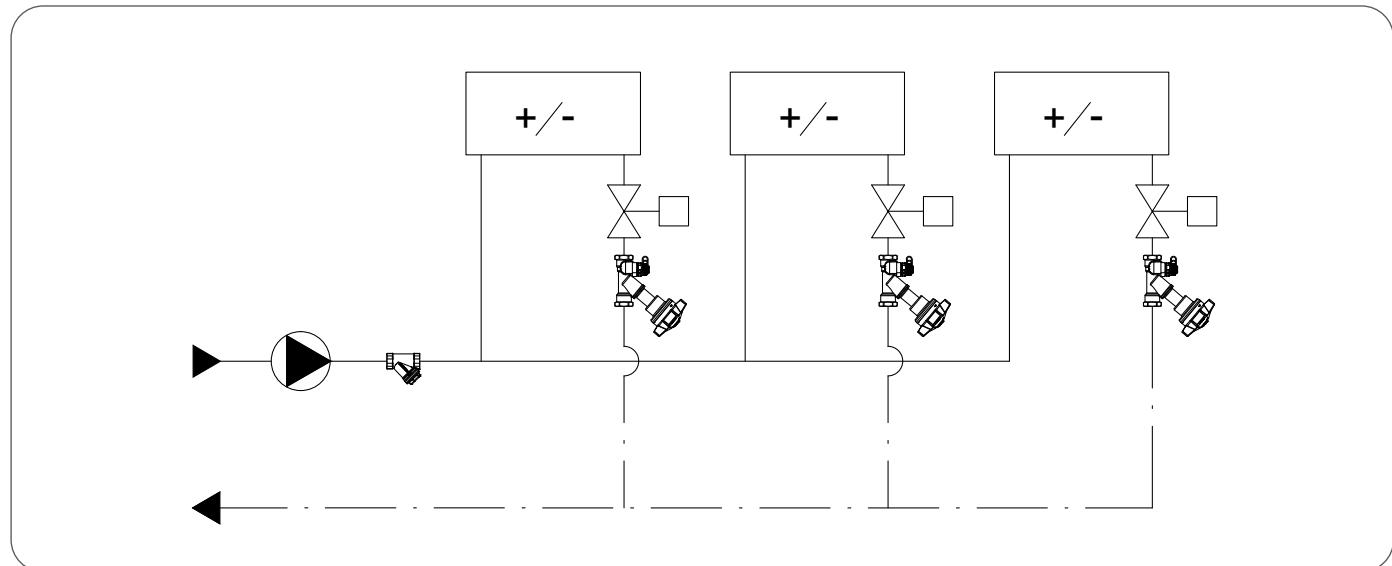


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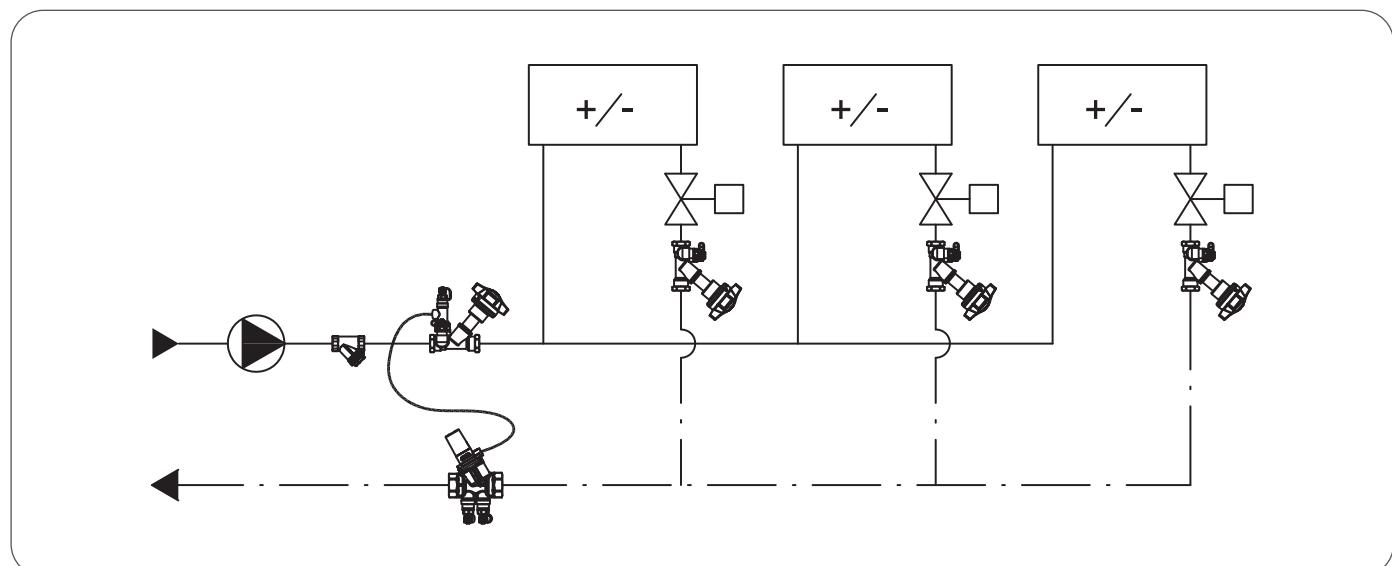
Application diagrams

The Frese STBV FODRV in a system with 2-port Control Valves



The Frese STBV FODRV is placed on every coil to verify and balance the flow.

The Frese STBV FODRV in a system with the PV Compact Differential Pressure Control Valve



The Frese STBV FODRV is placed on every coil to verify and balance the flow.

The PV Compact is connected to the Frese STBV FODRV to ensure silent operation and effective modulating 2-port control of the sub-circuit by controlling and limiting the differential pressure in the system.

The pipe system must be properly ventilated to avoid risk of air pockets. Glycolic mixtures up to 50% are applicable (both ethylene and propylene).

Frese STBV FODRV

DN15-DN300

Technical data

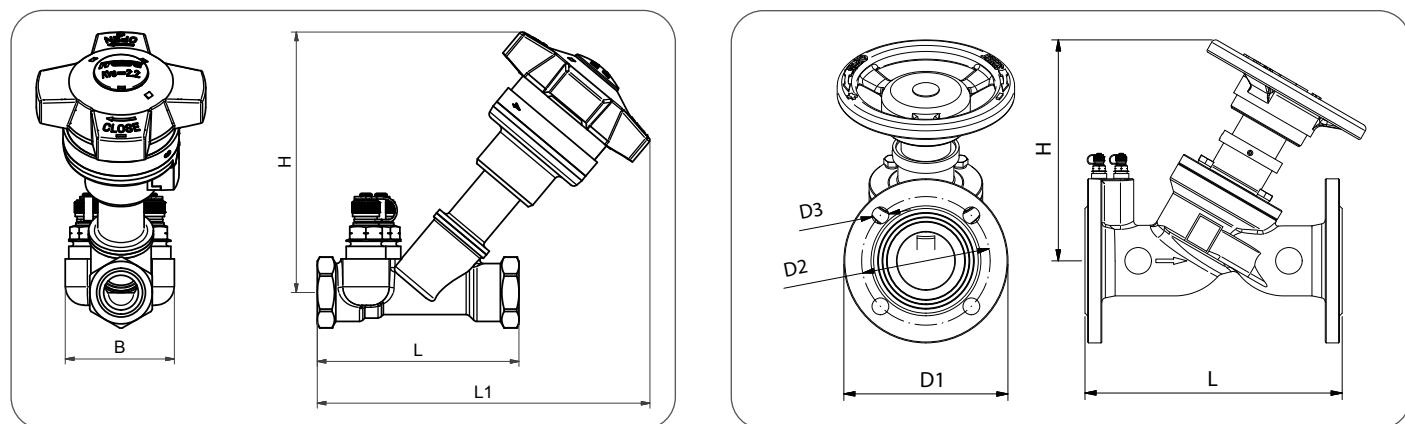
DN15 - DN50

Housing:	DZR Brass
Bonnet/Stem	DZR Brass
Handle/Scale:	PA6/ABS
O-rings:	EPDM
Pressure class:	PN25
Temperature range:	-10°C to + 120°C
Thread:	ISO 228

DN65 - DN300

Housing:	Ductile Iron
O-rings:	EPDM
Pressure class:	PN16
Temperature range:	-10°C to + 120°C (DN65 - DN200)
Flange connections:	-10°C to + 110°C (DN250 - DN300)
	EN 1092-2

Dimensions



DN15 - DN50

Size	DN15/LF/ULF	DN20	DN25	DN32	DN40	DN50
Dimension (mm)	L	87	96	100	114	124
	L1	143	142	153	163	177
	H	112	108	125	129	142
	B	47	53	57	63	76
Weight	kg	0.49	0.58	0.84	1.0	1.2
						1.9

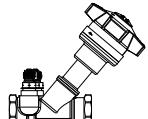
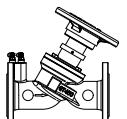
DN65 - DN300

Size	DN65	DN80	DN100	DN125	DN150	DN200	DN250	DN300
Dimension (mm)	L	290	310	350	400	480	600	730
	H	249	265	300	353	404	428	560
	D1	185	200	220	250	285	340	405
	D2	145	160	180	210	240	295	355
Weight	D3	4 x ø19	8 x ø19	8 x ø19	8 x ø19	8 x ø23	12 x ø23	12 x ø28
	Kg	17	20	26	37	53	97	146
								188

Frese STBV FODRV

DN15-DN300

Product programme

	DN15 ULF	DN15 LF	DN15	DN20	DN25	DN32	DN40	DN50
	53-2170	53-2171	53-2172	53-2173	53-2174	53-2175	53-2176	53-2177
K _v (For flow verification)	0.26	0.69	2.21	4.4	8.2	16.4	24.1	44.2
K _v (Total valve)	0.26	0.69	1.99	3.17	5.21	8.09	13.8	20.7
	DN65	DN80	DN100	DN125	DN150	DN200	DN250	DN300
	53-2178	53-2179	53-2180	53-2181	53-2182	53-2183	53-2184	53-2185
K _v (For flow verification)	88	116	205	324	449	865	1250	1620
K _v (Total valve)	64.1	85.4	119	203	263	504	912	1099

K_v = m³/h at a pressure drop of 1 bar across the fully open valve.

Accessories

	Frese no.	Description
	48-0015	Combi-drain
	09-2072	PT-plug and connection for capillary tube (for use with PV Compact DN15-DN50)
	48-0033	Connection for capillary tube (for use with PV Compact DN65-DN150)

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DN15-DN300

Setting and Kv - total valve (For pump dimensioning)

DN15 ULF	
Pre-set	Kv
0	0
0.1	0.03
0.2	0.06
0.3	0.09
0.4	0.12
0.5	0.15
0.6	0.15
0.7	0.16
0.8	0.17
0.9	0.17
1.0	0.18
1.1	0.18
1.2	0.19
1.3	0.19
1.4	0.20
1.5	0.20
1.6	0.21
1.7	0.21
1.8	0.21
1.9	0.22
2.0	0.22
2.1	0.22
2.2	0.23
2.3	0.23
2.4	0.23
2.5	0.24
2.6	0.24
2.7	0.24
2.8	0.24
2.9	0.25
3.0	0.25
3.1	0.25
3.2	0.25
3.3	0.25
3.4	0.25
3.5	0.25
3.6	0.26
3.7	0.26
3.8	0.26
3.9	0.26
4.0	0.26

DN15 LF	
Pre-set	Kv
0	0
0.1	0.08
0.2	0.16
0.3	0.23
0.4	0.31
0.5	0.39
0.6	0.43
0.7	0.46
0.8	0.50
0.9	0.53
1.0	0.57
1.1	0.58
1.2	0.60
1.3	0.61
1.4	0.62
1.5	0.63
1.6	0.64
1.7	0.64
1.8	0.65
1.9	0.65
2.0	0.66
2.1	0.66
2.2	0.67
2.3	0.67
2.4	0.67
2.5	0.68
2.6	0.68
2.7	0.68
2.8	0.68
2.9	0.68
3.0	0.69
3.1	0.69
3.2	0.69
3.3	0.69
3.4	0.69
3.5	0.69
3.6	0.69
3.7	0.69
3.8	0.69
3.9	0.69
4.0	0.69

DN15	
Pre-set	Kv
0	0
0.1	0.07
0.2	0.15
0.3	0.22
0.4	0.30
0.5	0.37
0.6	0.45
0.7	0.53
0.8	0.60
0.9	0.68
1.0	0.75
1.1	0.81
1.2	0.87
1.3	0.93
1.4	0.99
1.5	1.04
1.6	1.07
1.7	1.10
1.8	1.13
1.9	1.16
2.0	1.19
2.1	1.23
2.2	1.28
2.3	1.32
2.4	1.37
2.5	1.41
2.6	1.47
2.7	1.53
2.8	1.60
2.9	1.66
3.0	1.72
3.1	1.76
3.2	1.80
3.3	1.84
3.4	1.88
3.5	1.92
3.6	1.94
3.7	1.95
3.8	1.96
3.9	1.97
4.0	1.99

DN20	
Pre-set	Kv
0	0
0.1	0.04
0.2	0.08
0.3	0.12
0.4	0.16
0.5	0.20
0.6	0.28
0.7	0.36
0.8	0.43
0.9	0.51
1.0	0.59
1.1	0.66
1.2	0.74
1.3	0.82
1.4	0.89
1.5	0.97
1.6	1.03
1.7	1.08
1.8	1.14
1.9	1.19
2.0	1.25
2.1	1.30
2.2	1.36
2.3	1.42
2.4	1.48
2.5	1.54
2.6	1.65
2.7	1.76
2.8	1.87
2.9	1.97
3.0	2.08
3.1	2.21
3.2	2.34
3.3	2.46
3.4	2.59
3.5	2.72
3.6	2.81
3.7	2.90
3.8	2.99
3.9	3.08
4.0	3.17

Frese STBV FODRV

DN15-DN300

Setting and Kv - total valve (For pump dimensioning)

DN25	
Pre-set	Kv
0	0
0.1	0.24
0.2	0.48
0.3	0.72
0.4	0.96
0.5	1.20
0.6	1.38
0.7	1.56
0.8	1.73
0.9	1.91
1.0	2.09
1.1	2.21
1.2	2.32
1.3	2.44
1.4	2.56
1.5	2.67
1.6	2.75
1.7	2.82
1.8	2.90
1.9	2.98
2.0	3.05
2.1	3.18
2.2	3.31
2.3	3.45
2.4	3.58
2.5	3.71
2.6	3.84
2.7	3.98
2.8	4.11
2.9	4.25
3.0	4.38
3.1	4.49
3.2	4.61
3.3	4.72
3.4	4.83
3.5	4.94
3.6	5.00
3.7	5.05
3.8	5.10
3.9	5.16
4.0	5.21

DN32	
Pre-set	Kv
0	0
0.1	0.24
0.2	0.49
0.3	0.73
0.4	0.97
0.5	1.22
0.6	1.42
0.7	1.62
0.8	1.83
0.9	2.03
1.0	2.23
1.1	2.41
1.2	2.59
1.3	2.77
1.4	2.95
1.5	3.13
1.6	3.29
1.7	3.45
1.8	3.61
1.9	3.77
2.0	3.93
2.1	4.16
2.2	4.38
2.3	4.61
2.4	4.83
2.5	5.06
2.6	5.25
2.7	5.45
2.8	5.65
2.9	5.85
3.0	6.05
3.1	6.31
3.2	6.56
3.3	6.82
3.4	7.08
3.5	7.34
3.6	7.49
3.7	7.64
3.8	7.79
3.9	7.94
4.0	8.09

DN40	
Pre-set	Kv
0	0
0.1	0.39
0.2	0.79
0.3	1.18
0.4	1.58
0.5	1.97
0.6	2.29
0.7	2.62
0.8	2.94
0.9	3.27
1.0	3.59
1.1	3.85
1.2	4.10
1.3	4.36
1.4	4.62
1.5	4.87
1.6	5.19
1.7	5.50
1.8	5.82
1.9	6.13
2.0	6.45
2.1	6.82
2.2	7.19
2.3	7.56
2.4	7.93
2.5	8.30
2.6	8.80
2.7	9.30
2.8	9.80
2.9	10.3
3.0	10.8
3.1	11.1
3.2	11.5
3.3	11.8
3.4	12.1
3.5	12.5
3.6	12.7
3.7	13.0
3.8	13.3
3.9	13.5
4.0	13.8

DN50	
Pre-set	Kv
0	0
0.1	0.61
0.2	1.23
0.3	1.84
0.4	2.46
0.5	3.07
0.6	3.40
0.7	3.74
0.8	4.07
0.9	4.40
1.0	4.73
1.1	5.09
1.2	5.45
1.3	5.80
1.4	6.16
1.5	6.52
1.6	6.92
1.7	7.33
1.8	7.74
1.9	8.14
2.0	8.55
2.1	9.25
2.2	9.96
2.3	10.7
2.4	11.4
2.5	12.1
2.6	12.8
2.7	13.6
2.8	14.4
2.9	15.2
3.0	16.0
3.1	16.5
3.2	17.1
3.3	17.7
3.4	18.2
3.5	18.8
3.6	19.2
3.7	19.6
3.8	20.0
3.9	20.4
4.0	20.7

Frese STBV FODRV

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Setting and Kv - total valve (For pump dimensioning)

DN65	
Pre-set	Kv
0	0.00
0.1	1.68
0.2	3.36
0.3	5.04
0.4	6.73
0.5	8.41
0.6	10.1
0.7	11.8
0.8	13.5
0.9	15.1
1.0	16.8
1.1	17.7
1.2	18.5
1.3	19.3
1.4	20.2
1.5	21.0
1.6	21.8
1.7	22.7
1.8	23.5
1.9	24.4
2.0	25.2
2.1	26.0
2.2	26.8
2.3	27.6
2.4	28.3
2.5	29.1
2.6	29.9
2.7	30.7
2.8	31.5
2.9	32.3
3.0	33.1
3.1	33.5
3.2	34.0
3.3	34.4
3.4	34.8
3.5	35.3
3.6	35.7
3.7	36.1
3.8	36.6
3.9	37.0
4.0	37.4

DN65	
Pre-set	Kv
4.1	37.9
4.2	38.4
4.3	38.8
4.4	39.3
4.5	39.8
4.6	40.3
4.7	40.7
4.8	41.2
4.9	41.7
5.0	42.2
5.1	42.9
5.2	43.7
5.3	44.5
5.4	45.2
5.5	46.0
5.6	46.8
5.7	47.5
5.8	48.3
5.9	49.0
6.0	49.8
6.1	50.7
6.2	51.5
6.3	52.3
6.4	53.2
6.5	54.0
6.6	54.9
6.7	55.7
6.8	56.5
6.9	57.4
7.0	58.2
7.1	58.8
7.2	59.4
7.3	60.0
7.4	60.6
7.5	61.2
7.6	61.8
7.7	62.3
7.8	62.9
7.9	63.5
8.0	64.1

DN80	
Pre-set	Kv
0	0.00
0.1	1.68
0.2	3.37
0.3	5.05
0.4	6.73
0.5	8.41
0.6	10.1
0.7	11.8
0.8	13.5
0.9	15.1
1.0	16.8
1.1	18.3
1.2	19.8
1.3	21.3
1.4	22.8
1.5	24.3
1.6	25.8
1.7	27.3
1.8	28.8
1.9	30.3
2.0	31.8
2.1	32.7
2.2	33.6
2.3	34.4
2.4	35.3
2.5	36.2
2.6	37.1
2.7	37.9
2.8	38.8
2.9	39.7
3.0	40.6
3.1	41.3
3.2	42.0
3.3	42.8
3.4	43.5
3.5	44.2
3.6	45.0
3.7	45.7
3.8	46.4
3.9	47.2
4.0	47.9

DN80	
Pre-set	Kv
4.1	48.7
4.2	49.6
4.3	50.5
4.4	51.4
4.5	52.2
4.6	53.1
4.7	54.0
4.8	54.8
4.9	55.7
5.0	56.6
5.1	57.5
5.2	58.5
5.3	59.4
5.4	60.3
5.5	61.3
5.6	62.2
5.7	63.2
5.8	64.1
5.9	65.1
6.0	66.0
6.1	67.0
6.2	68.0
6.3	69.0
6.4	70.0
6.5	71.0
6.6	72.0
6.7	73.0
6.8	74.0
6.9	74.9
7.0	75.9
7.1	76.9
7.2	77.8
7.3	78.8
7.4	79.7
7.5	80.7
7.6	81.6
7.7	82.6
7.8	83.5
7.9	84.5
8.0	85.4

Frese STBV FODRV

DN15-DN300

Setting and Kv - total valve (For pump dimensioning)

DN100		DN100		DN125		DN125	
Pre-set	Kv	Pre-set	Kv	Pre-set	Kv	Pre-set	Kv
0	0.00			0	0.00		
0.1	2.51	4.1	75.0	0.1	3.97	4.1	116
0.2	5.02	4.2	76.0	0.2	7.93	4.2	118
0.3	7.53	4.3	77.0	0.3	11.9	4.3	119
0.4	10.0	4.4	78.1	0.4	15.9	4.4	121
0.5	12.6	4.5	79.1	0.5	19.8	4.5	123
0.6	15.1	4.6	80.1	0.6	23.8	4.6	124
0.7	17.6	4.7	81.1	0.7	27.8	4.7	126
0.8	20.1	4.8	82.1	0.8	31.7	4.8	127
0.9	22.6	4.9	83.1	0.9	35.7	4.9	129
1.0	25.1	5.0	84.1	1.0	39.7	5.0	131
1.1	27.0	5.1	85.2	1.1	42.5	5.1	133
1.2	28.9	5.2	86.4	1.2	45.3	5.2	136
1.3	30.7	5.3	87.5	1.3	48.1	5.3	138
1.4	32.6	5.4	88.7	1.4	50.9	5.4	141
1.5	34.5	5.5	89.8	1.5	53.7	5.5	143
1.6	36.4	5.6	90.9	1.6	56.5	5.6	146
1.7	38.3	5.7	92.1	1.7	59.3	5.7	148
1.8	40.1	5.8	93.2	1.8	62.1	5.8	151
1.9	42.0	5.9	94.4	1.9	64.9	5.9	153
2.0	43.9	6.0	95.5	2.0	67.7	6.0	156
2.1	45.5	6.1	96.7	2.1	70.3	6.1	158
2.2	47.0	6.2	98.0	2.2	72.8	6.2	161
2.3	48.6	6.3	99.2	2.3	75.4	6.3	163
2.4	50.1	6.4	100	2.4	77.9	6.4	166
2.5	51.7	6.5	102	2.5	80.5	6.5	168
2.6	53.3	6.6	103	2.6	83.0	6.6	171
2.7	54.8	6.7	104	2.7	85.6	6.7	173
2.8	56.4	6.8	105	2.8	88.1	6.8	176
2.9	58.0	6.9	106	2.9	90.7	6.9	178
3.0	59.5	7.0	108	3.0	93.2	7.0	181
3.1	61.0	7.1	109	3.1	95.3	7.1	183
3.2	62.4	7.2	110	3.2	97.4	7.2	185
3.3	63.9	7.3	111	3.3	100	7.3	187
3.4	65.3	7.4	112	3.4	102	7.4	189
3.5	66.8	7.5	113	3.5	104	7.5	192
3.6	68.2	7.6	115	3.6	106	7.6	194
3.7	69.7	7.7	116	3.7	108	7.7	196
3.8	71.1	7.8	117	3.8	110	7.8	198
3.9	72.6	7.9	118	3.9	112	7.9	200
4.0	74.0	8.0	119	4.0	114	8.0	203

Frese STBV FODRV

DN15-DN300

Setting and Kv - total valve (For pump dimensioning)

DN150		DN150	
Pre-set	Kv	Pre-set	Kv
0	0.00		
0.1	7.72	4.1	181
0.2	15.4	4.2	183
0.3	23.2	4.3	186
0.4	30.9	4.4	189
0.5	38.6	4.5	191
0.6	46.3	4.6	194
0.7	54.0	4.7	197
0.8	61.8	4.8	199
0.9	69.5	4.9	202
1.0	77.2	5.0	205
1.1	81.1	5.1	207
1.2	85.0	5.2	209
1.3	88.9	5.3	212
1.4	92.9	5.4	214
1.5	96.8	5.5	217
1.6	101	5.6	219
1.7	105	5.7	221
1.8	109	5.8	224
1.9	112	5.9	226
2.0	116	6.0	229
2.1	119	6.1	231
2.2	123	6.2	233
2.3	126	6.3	235
2.4	129	6.4	237
2.5	132	6.5	239
2.6	135	6.6	241
2.7	138	6.7	243
2.8	141	6.8	245
2.9	144	6.9	247
3.0	147	7.0	249
3.1	150	7.1	250
3.2	153	7.2	252
3.3	156	7.3	253
3.4	160	7.4	255
3.5	163	7.5	256
3.6	166	7.6	257
3.7	169	7.7	259
3.8	172	7.8	260
3.9	175	7.9	262
4.0	178	8.0	263

Frese STBV FODRV

DN15-DN300

Setting and Kv - total valve (For pump dimensioning)

DN200		DN200		DN200	
Pre-set	Kv	Pre-set	Kv	Pre-set	Kv
0	0.00	4.1	243	8.1	369
0.1	13.4	4.2	245	8.2	373
0.2	26.8	4.3	247	8.3	377
0.3	40.2	4.4	249	8.4	381
0.4	53.6	4.5	251	8.5	385
0.5	67.0	4.6	253	8.6	389
0.6	80.4	4.7	255	8.7	393
0.7	93.8	4.8	256	8.8	397
0.8	107	4.9	258	8.9	401
0.9	121	5.0	260	9.0	405
1.0	134	5.1	263	9.1	409
1.1	139	5.2	266	9.2	414
1.2	144	5.3	270	9.3	418
1.3	148	5.4	273	9.4	423
1.4	153	5.5	276	9.5	427
1.5	158	5.6	279	9.6	432
1.6	162	5.7	282	9.7	436
1.7	167	5.8	285	9.8	441
1.8	172	5.9	288	9.9	445
1.9	177	6.0	291	10.0	450
2.0	181	6.1	294	10.1	453
2.1	185	6.2	298	10.2	457
2.2	189	6.3	301	10.3	461
2.3	193	6.4	304	10.4	464
2.4	197	6.5	308	10.5	468
2.5	200	6.6	311	10.6	472
2.6	204	6.7	315	10.7	475
2.7	208	6.8	318	10.8	479
2.8	212	6.9	322	10.9	483
2.9	215	7.0	325	11.0	486
3.0	219	7.1	329	11.1	488
3.1	221	7.2	333	11.2	490
3.2	224	7.3	337	11.3	492
3.3	226	7.4	341	11.4	493
3.4	228	7.5	345	11.5	495
3.5	230	7.6	349	11.6	497
3.6	232	7.7	353	11.7	499
3.7	234	7.8	357	11.8	501
3.8	236	7.9	361	11.9	503
3.9	239	8.0	365	12.0	504

Frese STBV FODRV

DN15-DN300

Setting and Kv - total valve (For pump dimensioning)

DN250		DN250		DN250		DN250	
Pre-set	Kv	Pre-set	Kv	Pre-set	Kv	Pre-set	Kv
0	0.00						
0.1	10.4	4.1	297	8.1	497	12.1	685
0.2	20.9	4.2	303	8.2	501	12.2	690
0.3	31.3	4.3	309	8.3	505	12.3	696
0.4	41.7	4.4	315	8.4	508	12.4	701
0.5	52.2	4.5	321	8.5	512	12.5	707
0.6	62.6	4.6	327	8.6	516	12.6	712
0.7	73.0	4.7	333	8.7	520	12.7	718
0.8	83.4	4.8	339	8.8	524	12.8	723
0.9	93.9	4.9	345	8.9	527	12.9	729
1.0	104	5.0	350	9.0	531	13.0	734
1.1	109	5.1	357	9.1	536	13.1	740
1.2	115	5.2	363	9.2	541	13.2	746
1.3	120	5.3	369	9.3	547	13.3	752
1.4	125	5.4	375	9.4	552	13.4	757
1.5	130	5.5	381	9.5	557	13.5	763
1.6	135	5.6	387	9.6	562	13.6	769
1.7	140	5.7	393	9.7	567	13.7	775
1.8	145	5.8	400	9.8	573	13.8	781
1.9	150	5.9	406	9.9	578	13.9	787
2.0	155	6.0	412	10.0	583	14.0	792
2.1	163	6.1	417	10.1	587	14.1	798
2.2	171	6.2	422	10.2	591	14.2	803
2.3	178	6.3	427	10.3	595	14.3	808
2.4	186	6.4	432	10.4	599	14.4	813
2.5	194	6.5	438	10.5	603	14.5	818
2.6	202	6.6	443	10.6	608	14.6	823
2.7	209	6.7	448	10.7	612	14.7	828
2.8	217	6.8	453	10.8	616	14.8	833
2.9	225	6.9	458	10.9	620	14.9	838
3.0	232	7.0	463	11.0	624	15.0	843
3.1	238	7.1	466	11.1	630	15.1	850
3.2	244	7.2	469	11.2	635	15.2	857
3.3	250	7.3	472	11.3	641	15.3	864
3.4	256	7.4	475	11.4	646	15.4	871
3.5	262	7.5	478	11.5	652	15.5	878
3.6	268	7.6	481	11.6	657	15.6	884
3.7	274	7.7	484	11.7	663	15.7	891
3.8	280	7.8	487	11.8	668	15.8	898
3.9	285	7.9	490	11.9	674	15.9	905
4.0	291	8.0	493	12.0	679	16.0	912

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DN15-DN300

Setting and Kv - total valve (For pump dimensioning)

DN300		DN300		DN300		DN300	
Pre-set	Kv	Pre-set	Kv	Pre-set	Kv	Pre-set	Kv
0	0.00						
0.1	13.0	4.1	375	8.1	647	12.1	818
0.2	25.9	4.2	381	8.2	653	12.2	826
0.3	38.9	4.3	388	8.3	660	12.3	834
0.4	51.8	4.4	394	8.4	666	12.4	842
0.5	64.8	4.5	400	8.5	673	12.5	850
0.6	77.8	4.6	406	8.6	679	12.6	857
0.7	90.7	4.7	412	8.7	686	12.7	865
0.8	104	4.8	418	8.8	693	12.8	873
0.9	117	4.9	424	8.9	699	12.9	881
1.0	130	5.0	430	9.0	706	13.0	889
1.1	138	5.1	437	9.1	710	13.1	897
1.2	147	5.2	443	9.2	714	13.2	906
1.3	156	5.3	450	9.3	719	13.3	914
1.4	165	5.4	456	9.4	723	13.4	923
1.5	173	5.5	463	9.5	728	13.5	931
1.6	182	5.6	470	9.6	732	13.6	940
1.7	191	5.7	476	9.7	736	13.7	948
1.8	199	5.8	483	9.8	741	13.8	957
1.9	208	5.9	489	9.9	745	13.9	965
2.0	217	6.0	496	10.0	749	14.0	974
2.1	225	6.1	503	10.1	751	14.1	981
2.2	233	6.2	511	10.2	753	14.2	988
2.3	241	6.3	519	10.3	754	14.3	995
2.4	248	6.4	526	10.4	756	14.4	1002
2.5	256	6.5	534	10.5	757	14.5	1009
2.6	264	6.6	541	10.6	759	14.6	1016
2.7	272	6.7	549	10.7	760	14.7	1023
2.8	280	6.8	557	10.8	762	14.8	1030
2.9	288	6.9	564	10.9	763	14.9	1037
3.0	296	7.0	572	11.0	765	15.0	1044
3.1	303	7.1	579	11.1	769	15.1	1050
3.2	310	7.2	586	11.2	774	15.2	1055
3.3	318	7.3	592	11.3	778	15.3	1061
3.4	325	7.4	599	11.4	783	15.4	1066
3.5	332	7.5	606	11.5	788	15.5	1072
3.6	340	7.6	613	11.6	792	15.6	1077
3.7	347	7.7	620	11.7	797	15.7	1082
3.8	354	7.8	626	11.8	801	15.8	1088
3.9	362	7.9	633	11.9	806	15.9	1093
4.0	369	8.0	640	12.0	810	16.0	1099

Frese STBV FODRV

DN15-DN300

Text for Technical Specifications

The valve housing, stem and bonnet shall be made of DZR brass (DN15-DN50) and Ductile Iron (DN65-DN300)

The valve shall be pressure class rated PN25 (DN15-DN50) and PN16 (DN65-DN300)

The valve shall be a static balancing valve with fixed orifice plate

The valve shall include P/T plugs for the verification of flow through measurement of the differential pressure across the orifice

The Kv-value for flow verification shall not be changed by the hand wheel setting

The valve shall have a flow accuracy measurement +/-5% at all hand wheel settings

The valve shall only be adjustable by a handle that can be set and locked to a maximum position.

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