



TEMPER

SINCE 1993

BALL
VALVES

BALANCING BALL VALVES



Distributor:

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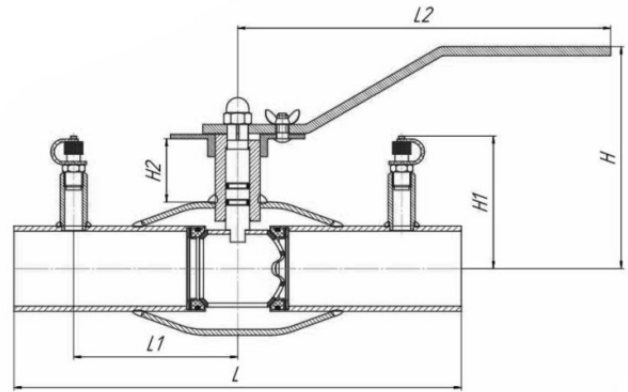


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BALANCING BALL VALVE

682/692

WELDED CONNECTION*

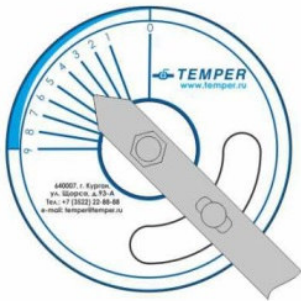


Temper balancing ball valves are designed for regulation (balancing) of the working fluid flow in heating, cold supply and ventilation systems. The ball has a special orifice and the valve is equipped with a scale of values. Regulation is carried out by turning the handle with the pointer. The selected position of the handle is fixed with a bolt and a nut-butterfly.

Two types of regulating ball valves:

- 1) With measuring nipples (see the picture and the drawing on the page). All the measurements could be measured by a flow meter.
- 2) Without measuring nipples. Flow adjustment is made only by a handle with index.

BALANCING BALL VALVE DIMENSIONS



DN	PN	PRODUCT NUMBER	L	L1	L2	H	H1	H2
20	40	68220020	230	65	175	135	74	45
25	40	68220025	230	65	175	138	76	45
32	40	68220032	260	80	175	140	79	45
40	40	68220040	260	90	250	148	84	43
50	40	68220050	300	110	250	148	88	40
65	25	68220065	360	120	250	152	98	36
80	25	68220080	370	135	300	186	138	49
100	25	68220100	390	135	300	194	148	43
125**	25	68220125	330	115	-	-	158	51
150**	25	68220150	360	125	-	-	168	58

RATE VALUES OF TEMPER BALANCING BALL VALVE, KV, M³/H

The value of the valve scale	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100	DN 125	DN 150
1	-	-	-	0,42	0,57	1,30	2,45	3,38	6,55	8,75	14,30
2	0,16	0,16	0,50	0,79	1,50	2,76	4,82	7,45	12,62	18,50	26,14
3	0,40	0,40	1,20	1,50	2,65	4,45	8,10	12,95	20,20	31,10	45,14
4	0,82	0,82	1,90	2,23	4,10	6,80	11,80	19,20	28,76	45,80	66,47
5	1,19	1,19	2,80	3,50	5,85	9,78	16,25	27,62	42,92	65,84	98,30
6	1,90	1,90	4,60	5,20	8,50	14,20	26,10	39,10	61,20	98,60	145,20
7	3,10	3,10	6,50	7,12	12,41	20,10	33,72	54,20	91,10	143,20	243,00
8	4,30	4,30	9,10	9,88	17,20	26,70	46,15	76,12	134,20	206,10	341,10
9	5,72	5,72	12,20	13,20	22,30	34,40	61,40	106,70	214,25	289,80	458,20

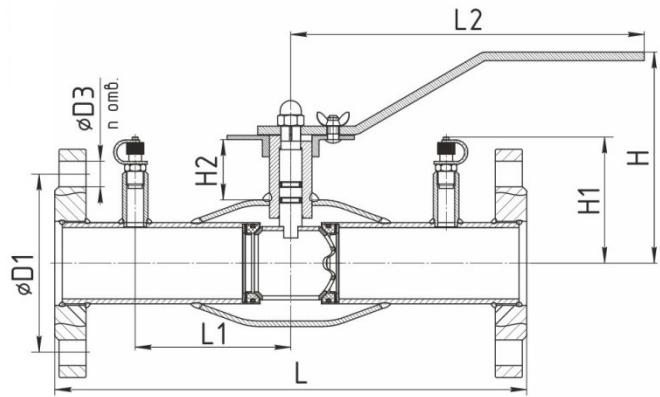
* It is also possible to manufacture Temper regulating ball valves of the following connection types: FEMALE THREADS / WELDED - 281 type, FLANGED - 683/693 and 684/694 types, or combined - 681/691, 688/698 and 689/699 types.

** These valves are supplied with gearboxes.

BALANCING BALL VALVE

683/693

FLANGED CONNECTION*

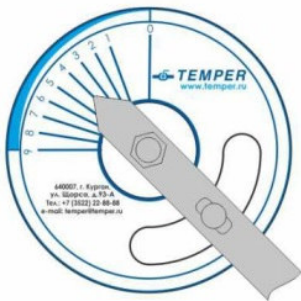


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Two types of regulating ball valves:

- 1) With measuring nipples (see the picture and the drawing on the page). All the measurements could be measured by a flow meter.
- 2) Without measuring nipples. Flow adjustment is made only by a handle with index.

BALANCING BALL VALVE DIMENSIONS



DN	PN	PRODUCT NUMBER	L	L1	L2	H	H1	H2	D1	D3	n of holes
20	40	68320020	150	50	175	135	74	45	65	14	4
25	40	68320025	160	50	175	138	76	45	75	14	4
32	40	68320032	180	55	175	140	79	45	85	14	4
40	40	68320040	200	65	250	148	84	43	100	18	4
50	40	68320050	230	70	250	148	88	40	110	18	4
65	25	68320065	270	85	250	152	98	36	125	18	4
80	25	68320080	280	95	300	186	138	49	145	18	8
100	25	68320100	300	105	300	194	148	43	160	18	8
125**	25	68320125	350	115	-	-	158	51	210	18	8
150**	25	68320150	380	125	-	-	168	58	240	22	8

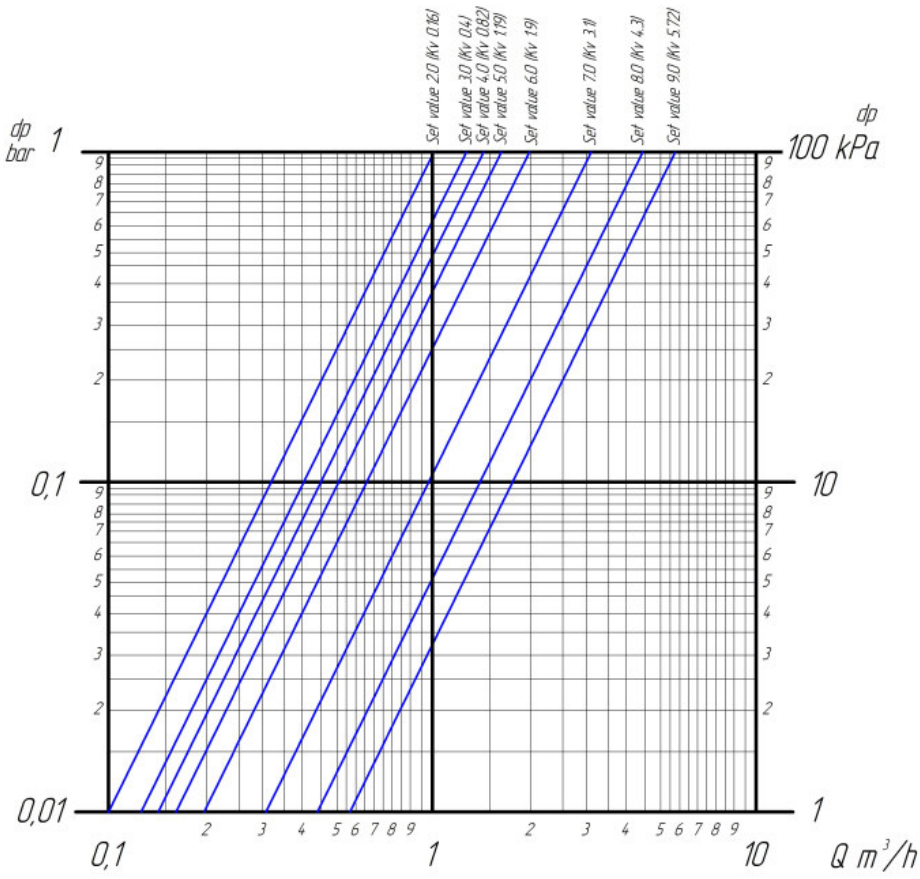
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2	0,16	0,16	0,50	0,79	1,50	2,76	4,82	7,45	12,62	18,50	26,14
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4	0,82	0,82	1,90	2,23	4,10	6,80	11,80	19,20	28,76	45,80	66,47
5	1,19	1,19	2,80	3,50	5,85	9,78	16,25	27,62	42,92	65,84	98,30
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8	4,30	4,30	9,10	9,88	17,20	26,70	46,15	76,12	134,20	206,10	341,10
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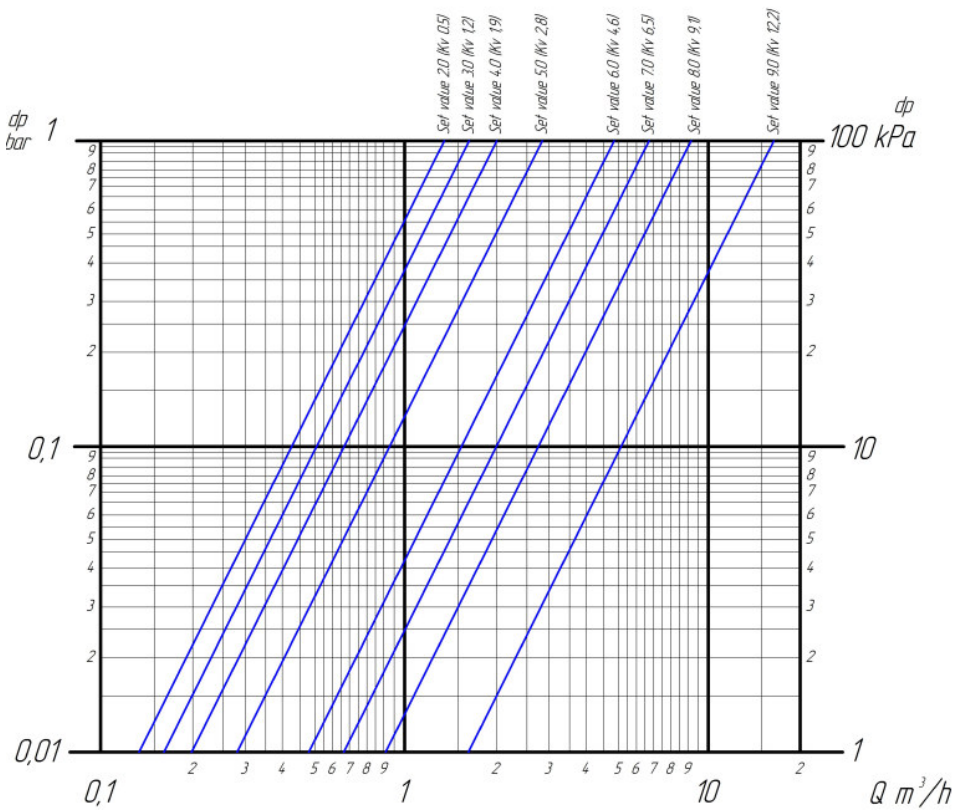
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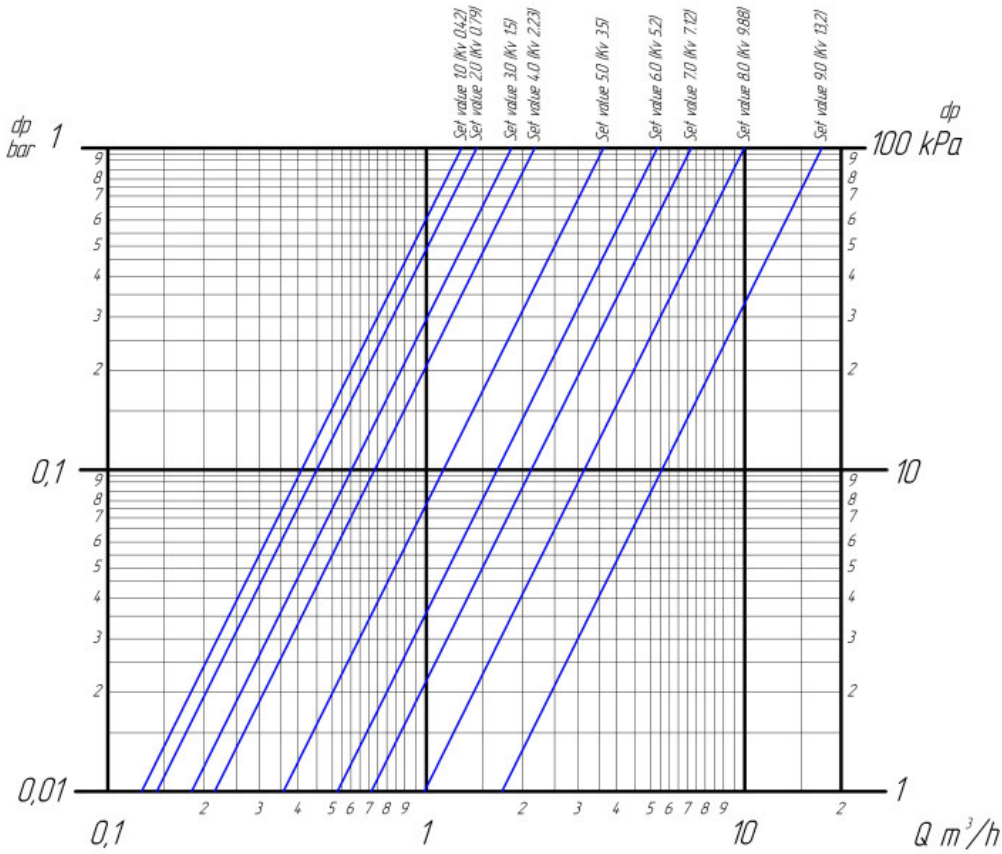
DN15-DN20



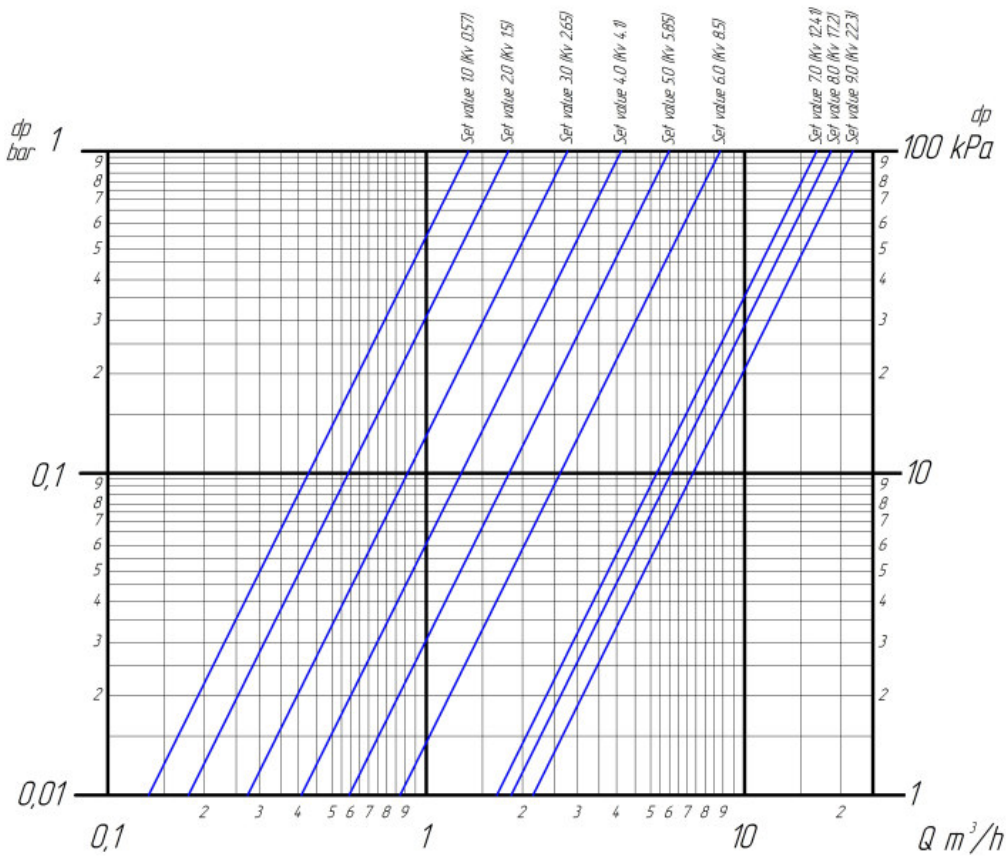
DN25



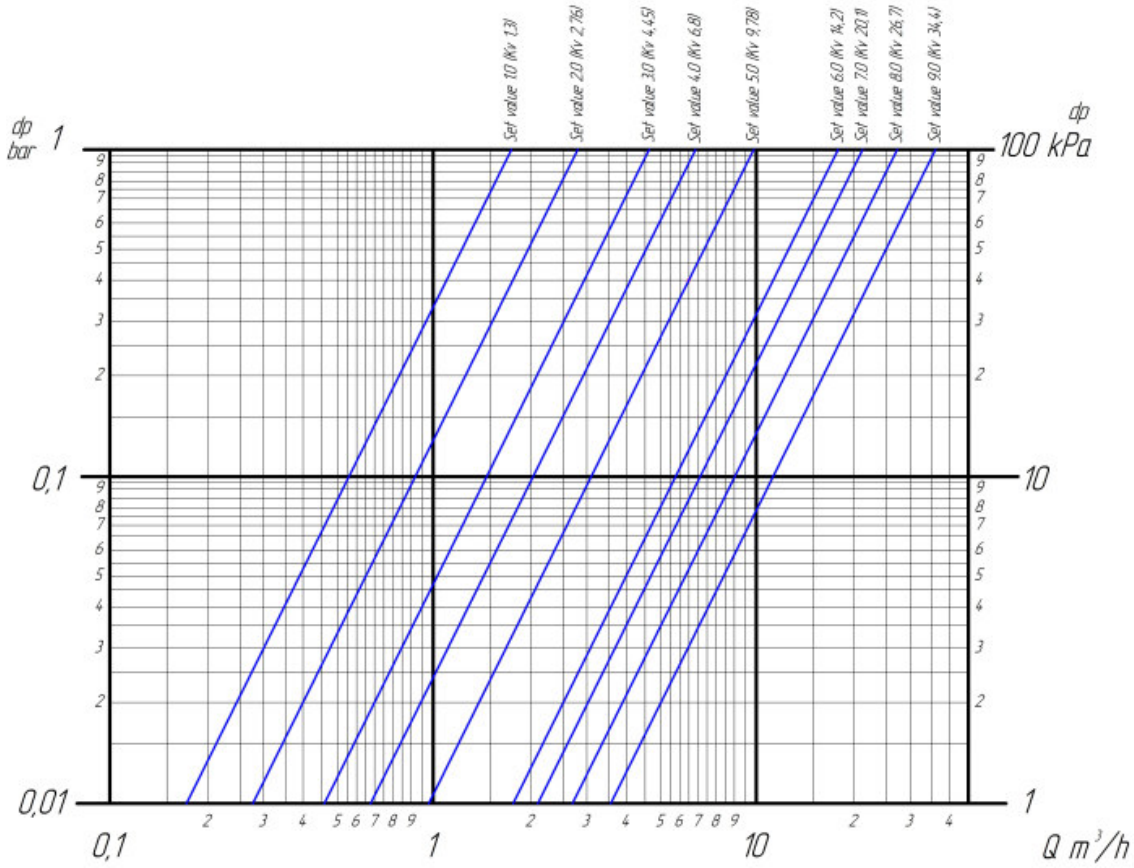
DN32



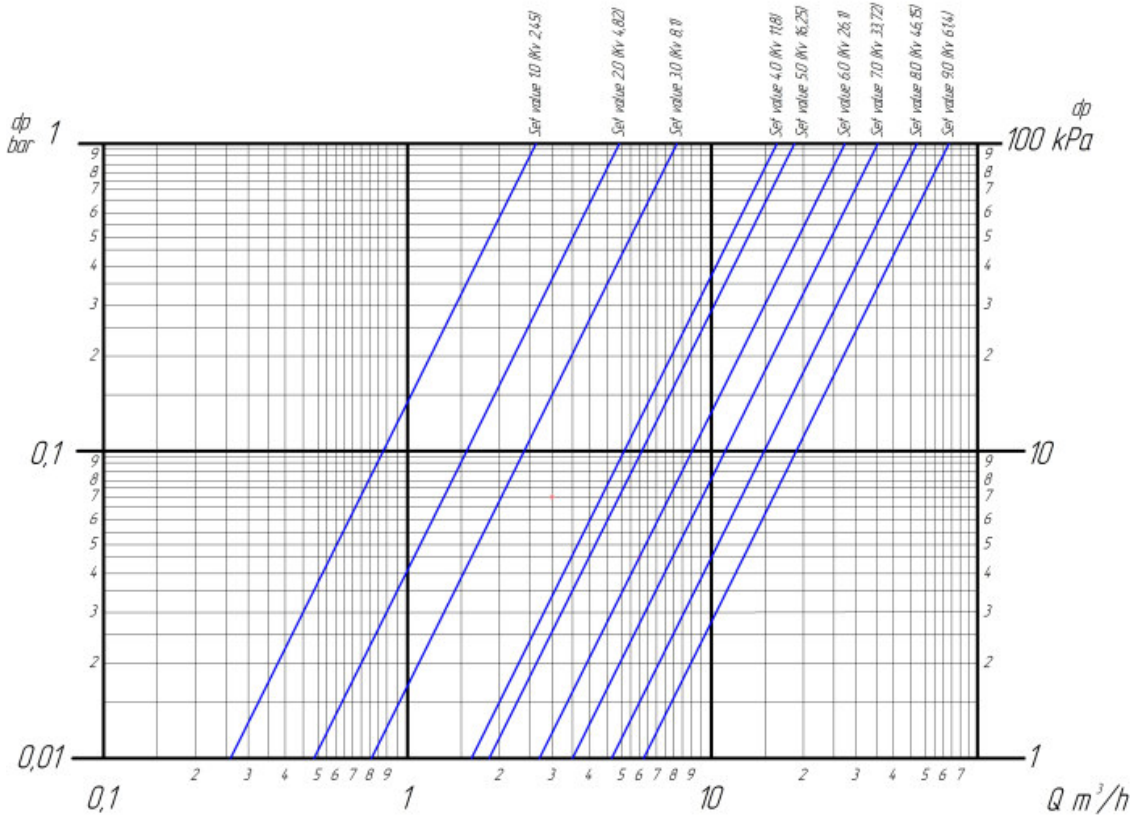
DN40



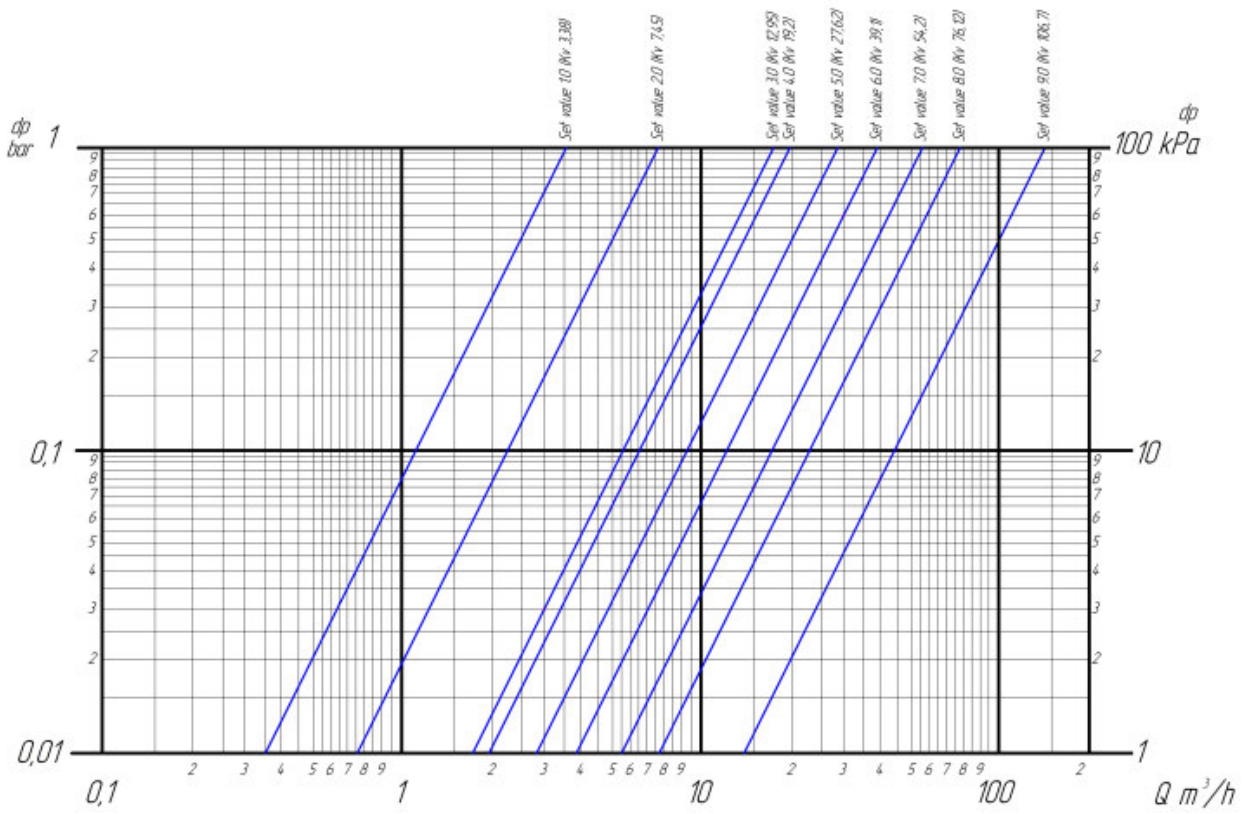
DN50



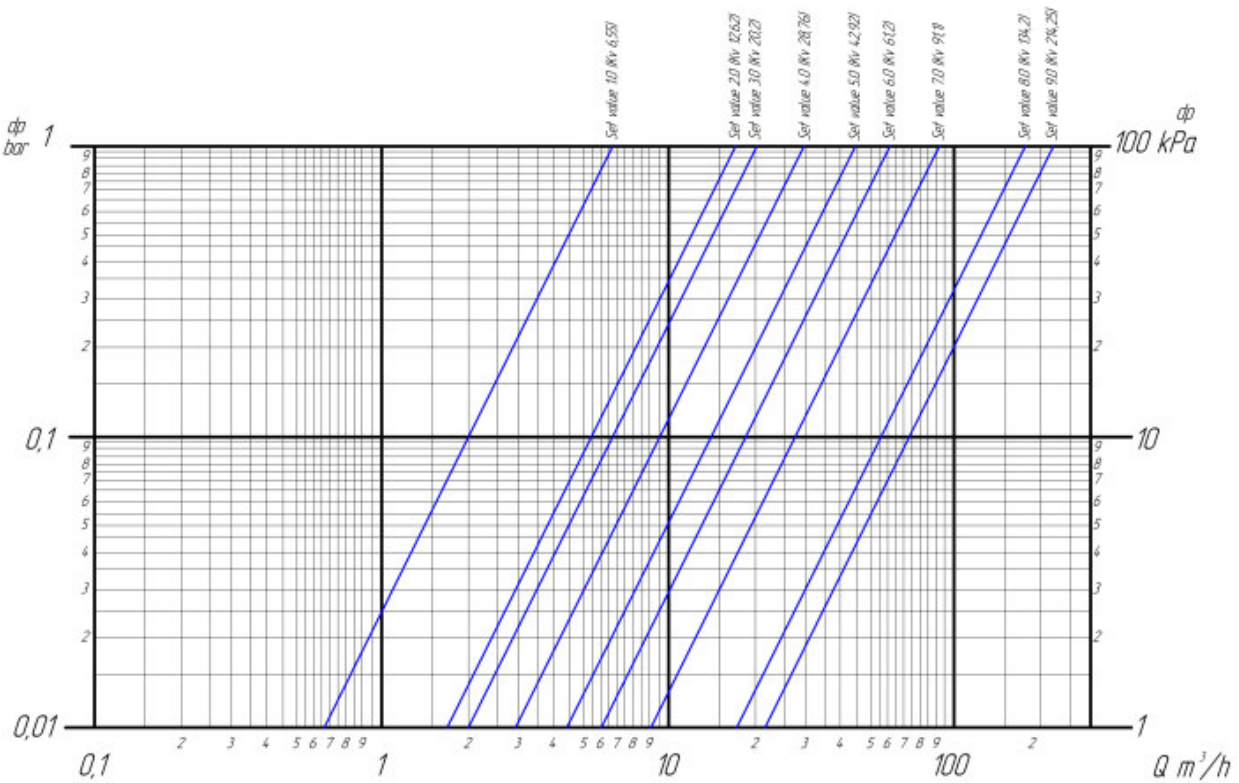
DN65



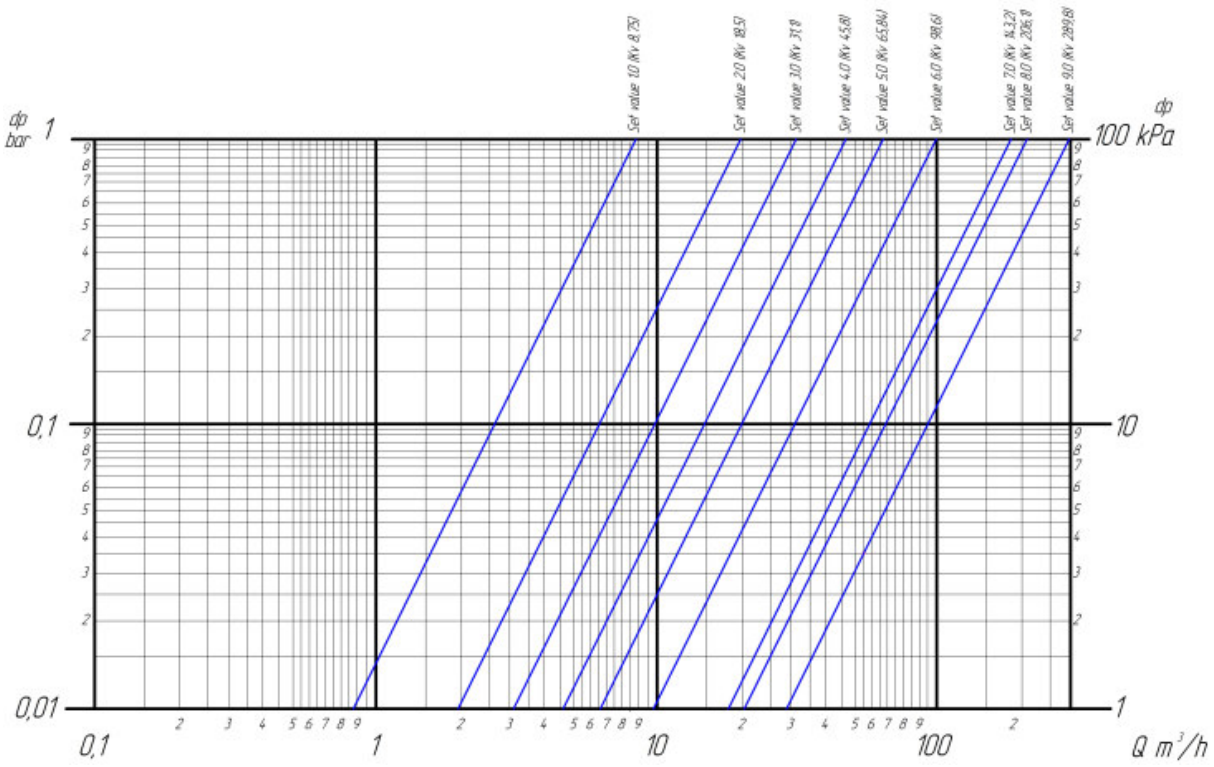
DN80



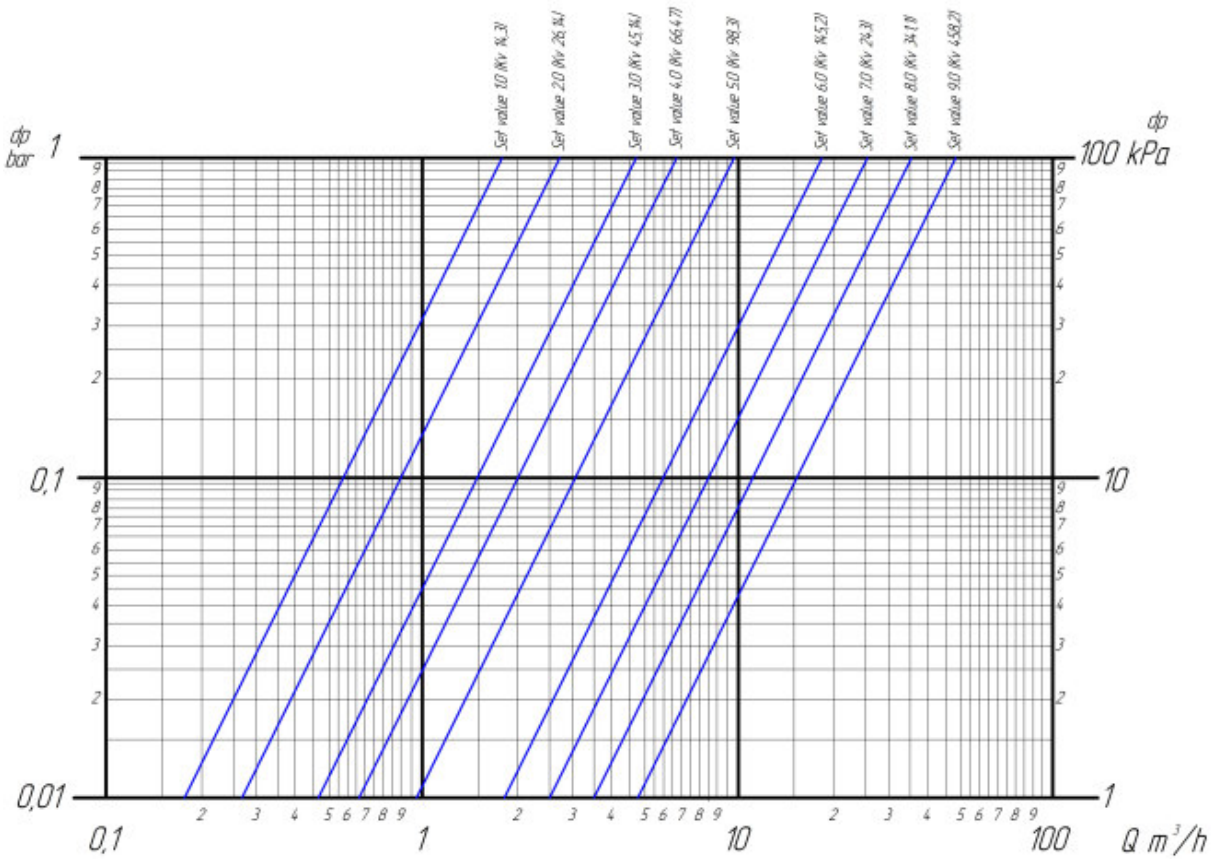
DN100



DN125



DN150



OPERATION MANUAL

1. TEMPER regulating ball valves are allowed to operate on the environment settings that do not exceed those specified in this data sheet.
2. It is prohibited the use TEMPER regulating ball valves for steam.
3. To avoid water hammer effect valve should be opened and closed smoothly, without hitching.
4. It is prohibited to dismantle valves, tighten flanges while working medium is present and pipeline is pressurized.
5. It is prohibited to operate valve with no technical passport available.
6. It is prohibited to operate valve using any extensions of valve handle.
7. During the transportation, the body and handle of the valve must be protected from damage. It is prohibited to drop the product.
8. It is prohibited to mount the valve on working medium containing abrasive components.
9. Valves should not have loads of the pipeline, such as bending, compression, tension, torsion, distortions and the uneven tightening fasteners. If necessary, it shall be provided support or expansion joints, relieving the load on the valve from the pipeline.

INSTALLATION MANUAL

1. If installed on horizontal pipeline, the valve should be fully opened.
2. Prior to pipeline valve installation the valve should be cleaned from any dirt, sand, scale, etc.
3. It is prohibited fixing and / or seizure of the handles, steering wheels or gears of the electric and pneumatic actuators when lifting and / or transporting the ball valves with mechanical lifting devices.
4. TEMPER ball valves welded connection designed for installation on pipes using arc or gas welding. To ensure the quality of the weld is recommended to clean the pipe ends from dirt and rust.
5. When welding it is advised to avoid overheating of the valve body. The body is considered to be overheated if the surface temperature of the body in the seat of the valve exceeds 100 ° C. If necessary it is advised to cool the valve body, use a damp cloth. Is forbidden to open or close welded valve until it is cooled!
6. It is unacceptable to decrease the length of the ball valve, as this length is specifically designed to avoid overheating of the seal of the ball when it is installed on the pipeline.
7. It is necessary to inspect the surface of the thread valve and mating pipe when installing TEMPER regulating threaded ball valves.
On the thread should not be nicks, dents and burrs that prevent screwing the valve. When screwing the valve it is unacceptable to use a non-standard tools.
8. The sealing surfaces of the flanges must be inspected when mounting. They should not have dents, cavities, burrs, and other surface defects. Assembling flanges should be made by the calculated torque wrenches. Tightening the bolt flange connections should be made "crosswise" in three stages: 50%, 80% and 100% of torque of the key.
9. It is prohibited to remove distortions of pipe flanges by tightening of the flanges of the valve.
10. Tolerance of pipeline and valve sealing faces alignment is no more than 0.2 mm.
11. The valve body and the stem must be separated from the external environment in order to avoid corrosion of the outer wall surface of the valve when installing ball valves in wet areas, outside buildings or underground utilities.
12. It is prohibited to modify the structure of TEMPER regulating ball valves, without consulting the manufacturer.
13. The flow through the valve should go in the direction indicated by the arrow on the scale.
14. The required straight section in front of the crane must be at least 5 pipe diameters before, and at least 2 diameters after the valve.

SECURITY MEASURES

1. It is allowed to install TEMPER regulating ball valves on the pipeline and service them only by qualified working staff.
2. It is recommended to install the tube stubs when installing ball valves for venting.

MAINTENANCE

1. TEMPER regulating ball valves are not required of special maintenance.
2. Through the measuring nipples, it is possible to determine the pressure drop and the flow rate of the working medium by means of a flowmeter.
3. To prevent formation of deposits on ball surface (valve jamming) 2-3 open-close cycles should be performed several times a year.

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