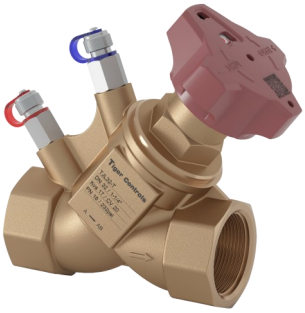
Perfect Observe and Control Device

Build Smart Cities

TigerIoT

Static Balancing Valve
Technical Data

Rev.1.0.1



DN15-DN50

DN50-DN500

Product Fearures

- **Opening Lock Function**

The valve can be locked at random position to set the max. opening which will not affect the valve opening and close. After the valve locked, it could still regulate between 0 to the set max. opening.

- **Digital Handwheel**

Accurate scale on digital handwheel which could accurate to 0.1 cycle The humanized design for numerical reading is convenient for operator to regulate flow value accurately and fast.

- **Complete Close-off Design**

Balanced valve core makes it easy to close the valve by rotating handwheel regardless of the medium pressure. Leakage of the valve is approximately "0" when shut off the valve.

- **Self-sealing Test Plug**

There are two test plugs on the both ports of the valve. Use a “Hydraulic Balancing Debugging Instrument" to measure the differential pressure value. Then you can easily regulate the flow by handwheel.

- **High-quality Materials**

The valve body ranging from DN50 to DN500 is made of high-quality ductile iron material(EN-GJS-450-10), and the surface adopts electrostatic spraying craft, the body has better intensity and corrosion resistance.

Type Overview

Static balancing valve	Type PN16	Type PN25	Caliber [in.]	DN [mm]	Connection	Kvs [m^3/h]
	TJL15-T	TJL15-T-PN25	1/2"	15	Female threaded	5.8
	TJL20-T	TJL20-T-PN25	3/4"	20	Female threaded	8.0
	TJL25-T	TJL25-T-PN25	1"	25	Female threaded	11
	TJL32-T	TJL32-T-PN25	1-1/4"	32	Female threaded	17
	TJL40-T	TJL40-T-PN25	1-1/2"	40	Female threaded	25
	TJL50-T	TJL50-T-PN25	2"	50	Female threaded	34
	TJF50-T	TJF50-T-PN25	2"	50	Flanged	55
	TJF65-T	TJF65-T-PN25	2-1/2"	65	Flanged	107
	TJF80-T	TJF80-T-PN25	3"	80	Flanged	145
	TJF100-T	TJF100-T-PN25	4"	100	Flanged	290
	TJF125-T	TJF125-T-PN25	5"	125	Flanged	430
	TJF150-T	TJF150-T-PN25	6"	150	Flanged	647
	TJF200-T	TJF200-T-PN25	8"	200	Flanged	1085
	TJF250-T	TJF250-T-PN25	10"	250	Flanged	1630
	TJF300-T	TJF300-T-PN25	12"	300	Flanged	2495
	TJF350-T	TJF350-T-PN25	14"	350	Flanged	3229
	TJF400-T	TJF400-T-PN25	16"	400	Flanged	4850
	TJF450-T	TJF450-T-PN25	18"	450	Flanged	6305
	TJF500-T	TJF500-T-PN25	20"	500	Flanged	8200

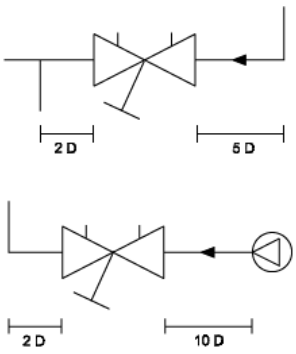
Relationship between Differential Pressure and Flow

$$Kvs = \frac{V}{\sqrt{\frac{\triangle P}{100}}}$$

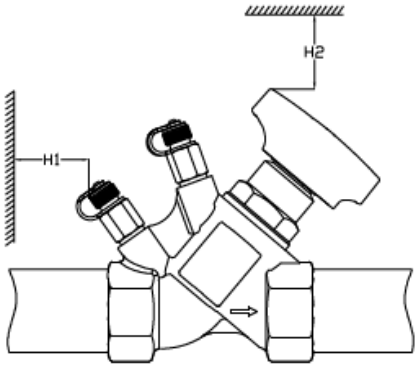
△P: Differential pressure when valve is full open (Unit: KPa)
V: Rating flow at the □P (Unit: m^3/h)
Kvs: Nominal flow coefficient，which refers to the flow when medium (Density= $1g/cm^3$) goes through the full open control valve，whose □P is 100KvPa.

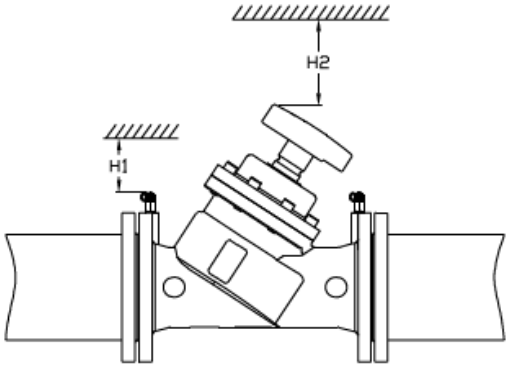
Installation Instruction

1. Ensure that there are no impurities in the system and remove the plug first.
2. The valve installation direction can be arbitrary, and only when the medium is clean can the handwheel be installed downwards.
3. Pay attention to the flow of the medium: keep the same with direction mark on the valve body.
4. Flanges should be sealed when connecting with pipeline.
5. In order to insure the valve works properly, there shall be a straight pipe which length is not less than 5 times of pipe diameter at the water inlet, and 2 times at the water outlet.



6. Please reserve debugging space during installation as per below requirements:
   DN15-DN50: H1>200mm, H2>170mm
   DN50-DN150: H1>200mm, H2>230mm
   DN200-DN500: H1>200mm, H2>400mm





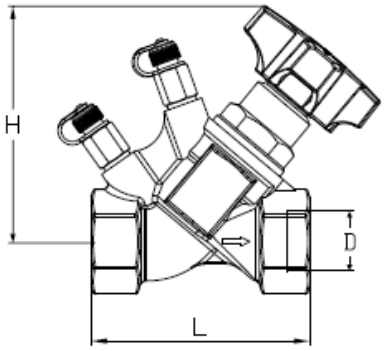
Operating Instructions

1. Opening regulating function:
The valve opening can be adjusted by rotating the handwheel, as shown in the figure below. The current number of turns of the valve is 1.6, and 0 turns is the closed state of the valve.

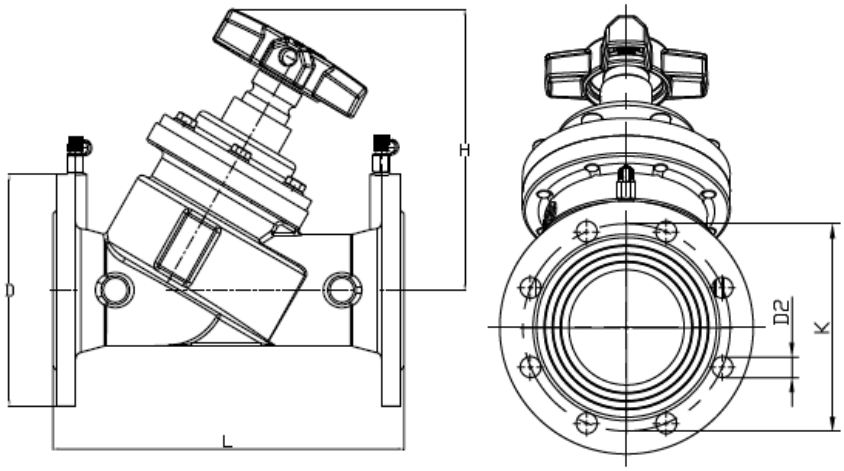
2. Opening lock function:
After setting the maximum opening of the valve, use an Allen wrench to insert it into the center hole of the handwheel, rotate it clockwise and tighten it to lock the opening.

Dimension

- **PN16**



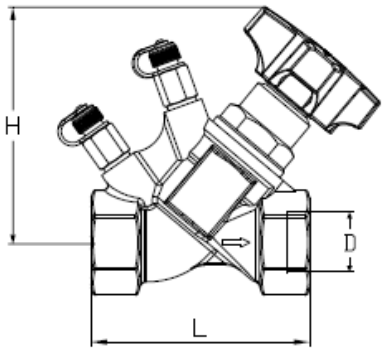
DN15-DN50



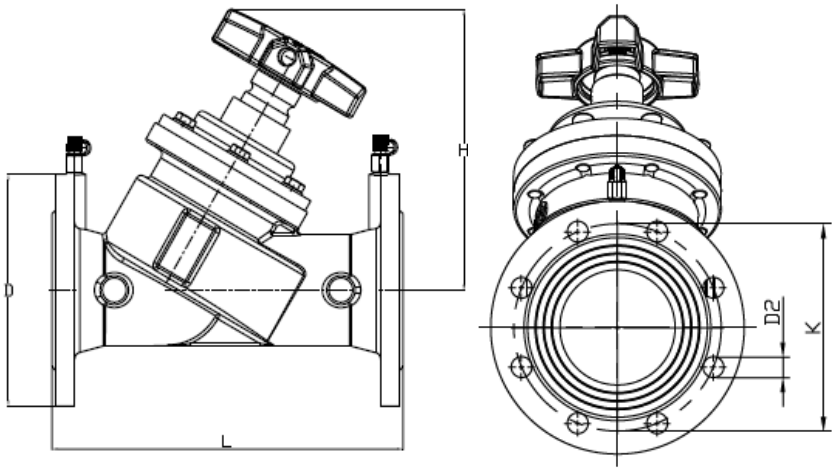
DN50-DN500

DN	D (mm)	D2 (mm)	K (mm)	L (mm)	H (mm)	Weight kg
DN15	1/2"	/	/	80	102	0.8
DN20	3/4"	/	/	85	104	0.9
DN25	1"	/	/	98	105	1.2
DN32	1-1/4"	/	/	110	115	1.6
DN40	1-1/2"	/	/	120	122	2.0
DN50	2"	/	/	150	135	3.7
DN50	165	4-19	125	230	214	11
DN65	185	4-19	145	290	222	15
DN80	200	8-19	160	310	257	21
DN100	220	8-19	180	350	275	30
DN125	250	8-19	210	400	332	45
DN150	285	8-23	240	480	396	65
DN200	340	12-23	295	600	498	123
DN250	405	12-28	355	730	555	195
DN300	460	12-28	410	850	630	320
DN350	520	16-28	470	980	733	440
DN400	580	16-31	525	1100	800	630
DN450	640	20-31	585	1200	810	885
DN500	715	20-34	650	1250	900	1125

- **PN25**



DN15-DN50



DN50-DN500

DN	D (mm)	D2 (mm)	K (mm)	L (mm)	H (mm)	Weight kg
DN15	1/2"	/	/	80	102	0.8
DN20	3/4"	/	/	85	104	0.9
DN25	1"	/	/	98	105	1.2
DN32	1-1/4"	/	/	110	115	1.6
DN40	1-1/2"	/	/	120	122	2.0
DN50	2"	/	/	150	135	3.7
DN50	165	4-19	125	230	214	11
DN65	185	8-19	145	290	222	15
DN80	200	8-19	160	310	257	21
DN100	235	8-23	190	350	275	30
DN125	270	8-28	220	400	332	45
DN150	300	8-28	250	480	396	65
DN200	360	12-28	310	600	498	123
DN250	425	12-31	370	730	555	195
DN300	485	16-31	430	850	630	320
DN350	555	16-34	490	980	733	440
DN400	620	16-37	550	1100	800	630
DN450	670	20-37	600	1200	810	885
DN500	730	20-37	660	1250	900	1125

Technical Parameters

• Functional data	
Nominal size	DN15-DN500
Nominal pressure	PN16 / PN25
Leakage rate	DN15~DN150 zero leakage DN200~DN500≤0.02% kvs
Medium temperature	DN15~DN50: -10~+120°C DN50~DN500: -10~+150°C
Connection standard	DN15~DN50: female threaded ISO7-1 DN50~DN500: flanged ISO7005-2

• Spare parts materials	
Valve body	DN15~DN50 brass Hpb59-1 DN50~DN500: ductile iron EN-GJS-450-10
Valve stem	DN15~DN50: brass DN50~DN500: stainless steel
Valve core	DN15~DN50: brass DN50~DN500: stainless steel, ductile iron
Hand wheel	DN15~DN50: PA DN50~DN500: die-casting aluminum

• Certificates	
CE certification	
PED directive	2014/68/EU
System certification	
AMS	GB/T19001-2016 / ISO9001:2015
EMS	GB/T24001-2016 / ISO14001:2015
OHSMS	GB/T45001-2020 / ISO45001:2018

TigerIoT

WeChat Official Account

Channels

Website: www.tigeriot.com Welcome to follow the "Tige IoT" related platform for more information

Information contained in this document, such as product design, specifications, or appearance, is subject to change without notice. This information is for reference only, please prevail in kind when buying.