

Series W-DP15-25T (DN15-DN40)

Dynamic Flow Balancing Valve

◆ Application

The Series W-DP15 Dynamic Flow Balancing Valve is designed for air-conditioning or heating system to keep the flow less than or equal to design value. It is generally used in constant flow systems.

◆ Features

- Dynamic Balancing: constant flow is achieved through the valve cartridge's auto-adjustment of the opening rate when ΔP of the system fluctuates
- Precision calibrated valve plug keeps the flow deviation no greater than $\pm 5\%$
- The flow rate is factory preset multiple ΔP ranges available for each size
- No on-site commissioning is needed, saving time and labor costs
- No need of re-balancing after system changes

◆ Operating Principles

- Acting as a simple orifice plate, the valve plug will fully open when ΔP across the valve is below its control range. This allows the flow rate increases with the growth of ΔP (Figure 1).
- If ΔP is in the control range, the valve plug will adjust its opening in terms of the system's ΔP change. This ensures a constant flow rate with a deviation no greater than $\pm 5\%$ (Figure 2).
- If ΔP exceeds the control range, the valve plug will work as an orifice plate again to achieve the smallest opening rate. And the flow rate increases with the growth of ΔP (Figure 3).
- ΔP -Flow Curve shows that in the in the working ΔP range, the flow rate stay the same (Figure 4).

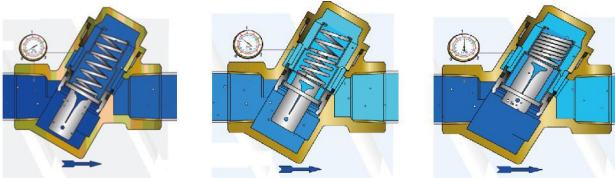


Figure 1

Figure 2

Figure 3

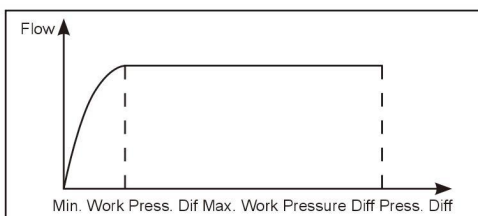


Figure 4

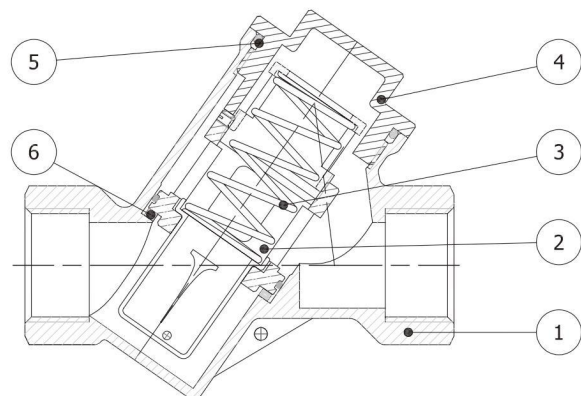


◆ Technical Specification

Dimensions:	DN15-DN40
Working Temperature:	0~110°C
Working Pressure:	PN25
Fluid Medium:	Water / Ethylene Glycol
Connection:	Threaded Connection
Connection Standard:	GB/T 7306.1-2000
Test Standard:	GB/T13927-2008

Materials:

① Valve Body:	Brass CuZn40Pb2
② Valve Core:	Brass CuZn40Pb2
③ Spring:	Stainless Steel 304
④ Valve Bonnet:	Brass CuZn40Pb2
⑤ O ring:	EPDM
⑥ Rubber Gasket:	EPDM



◆ Technical Parameters

Product Type:

Type	Size	Δ P Code	Δ P Range (KPa)	Flow Range (m ³ /h)
W-DP15015_-25T W-DP15020_-25T W-DP15025_-25T	DN15 DN20 DN25	A	15-150	0.432-1.51
		B	20-200	0.54-1.98
		C	30-300	0.68-2.77
		D	80-800	1.00-4.18
		E	10-100	0.216-0.54
W-DP15032_-25T W-DP15040_-25T	DN32 DN40	A	15-150	0.54-3.13
		B	20-200	0.68-3.67
		C	30-300	0.79-4.82
		D	80-800	1.44-7.52

*According to design requirements, select a valve with suitable ΔP range.
Design flow should be in the valve's flow range.

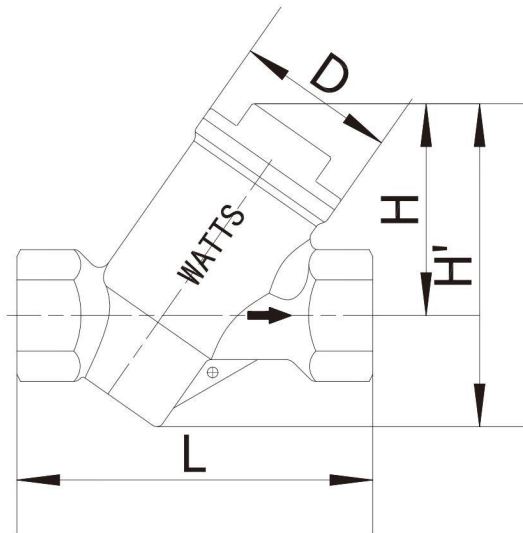
Coding Rules:

W	DP	15	015	A-	25	T
W	DP	15	015	A-	25	T
W	WATTS					T
DP	Dynamic Flow Balancing Valve					T
15	Series Code					T
Size						
015-DN15	020-DN20					T
025-DN25	032-DN32					T
040-DN40						T
Δ P Range (KPa)						
A=15-150	B=20-200					T
C=30-300	D=80-800					T
E=10-100						T
Pressure Class PN25						
Body Material Brass						

◆ Installation

- The valve can be installed horizontally or vertically.
- The direction of the arrow head on the valve body must accord with the direction of the flow. Wrong installation will lead to clog in the system.
- Same-sized valves might have different calibration values. The rated parameters of other equipment should be checked to ensure that the valves' rated parameters satisfy the application requirements.

Installation Dimensions:



Size	L(mm)	H(mm)	H'(mm)	D(mm)	Weight (Kg)
DN15	100	60	90	45	0.73
DN20	100	60	90	45	0.69
DN25	110	65	95	45	0.80
DN32	140	80	110	55	1.25
DN40	145	84	115	55	1.65