

Dynamic Flow Balancing Valve (DN50–DN500)

Application:

The series SFV Dynamic Flow Balancing valve is solved by the out of balance in hydronic systems about pipe network for fluid supply. When the system pressure is within the scope of work pressure difference fluctuation, it can balance the change dynamically and maintain constant flow in pipe.

Features:

- Dynamic Balancing: constant flow is achieved through the valve plug's auto-adjustment of the opening rate when ΔP fluctuates in the system
- 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).

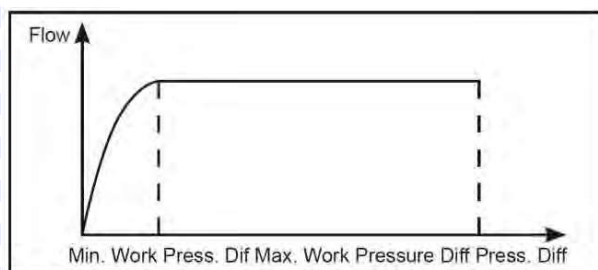
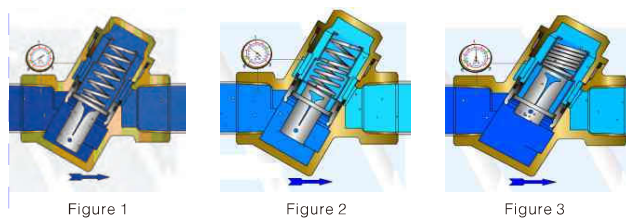


Figure 4



Technical Specification:

Diameter: DN50–DN500

Working Temperature: 0~110°C

Working Pressure: PN16/PN25

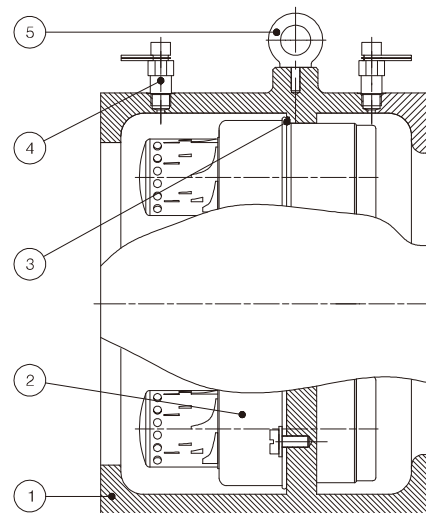
Fluid Medium: Water / Ethylene Glycol

Connection: Wafer Connection

Connection Standard: EN1092–1/2 GB/T 17241.6–2008

Materials:

- ① Body: Ductile Iron
- ② Valve Plug: Valve Core: Stainless Steel
Spring: Stainless Steel
- ③ O-Ring: EPDM
- ④ Test Plug: Brass
- ⑤ Ring Bolt: Stainless Steel 304



Dynamic Flow Balancing Valve (DN50-DN500)

Technical Parameter:

Product Type:

Type	DN	Δ P Code	Δ P Range (Kpa)	Flow Control (m³/h)
SFV050-0FP02_	DN50	A	15-150	3~15
		F	20-220	4~19
	DN65	G	33-330	5~23
		K	35-250	5~45
SFV065-0FP02_	DN80	H	90-900	8~38
		A	15-150	3~52
	DN100	F	22-220	4~66
		G	33-330	5~46
SFV100-0FP02_	DN100	K	35-250	5~90
		H	90-900	8~140
	DN125	A	15-150	3~78
		F	22-220	4~99
SFV125-0FP02_	DN125	G	33-330	5~69
		K	35-250	5~135
	DN150	H	90-900	8~210
		A	15-150	3~104
SFV150-0FP02_	DN150	F	22-220	4~132
		G	33-330	5~92
	DN200	K	35-250	5~180
		H	90-900	8~280
SFV200-0FP02_	DN200	A	15-150	3~182
		F	22-220	4~231
	DN250	G	33-330	5~161
		K	35-250	5~315
SFV250-0FP02_	DN250	H	90-900	8~490
		A	15-150	3~286
	DN300	F	22-220	4~363
		G	33-330	5~253
SFV300-0FP02_	DN300	K	35-250	5~495
		H	90-900	8~770
	DN350	A	15-150	3~390
		F	22-220	4~495
SFV350-0FP02_	DN350	G	33-330	5~345
		K	35-250	5~675
	DN400	H	90-900	8~1050
		A	15-150	3~520
SFV400-0FP02_	DN400	F	22-220	4~660
		G	33-330	5~460
	DN450	K	35-250	5~900
		H	90-900	8~1400
SFV450-0FP02_	DN450	A	15-150	3~650
		F	22-220	4~825
	DN500	G	33-330	5~575
		K	35-250	5~1125
SFV500-0FP02_	DN500	H	90-900	8~1750
		A	15-150	3~806
	DN500	F	22-220	4~1023
		G	33-330	5~713
SFV500-0FP02_	DN500	K	35-250	5~1395
		H	90-900	8~2170
	DN500	A	15-150	3~962
		F	22-220	4~1221
SFV500-0FP02_	DN500	G	33-330	5~851
		K	35-250	5~1665
	DN500	H	90-900	8~2590
		A	15-150	3~962

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

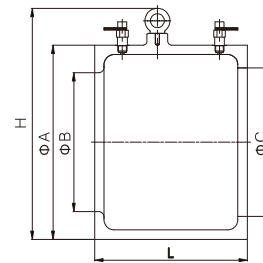
Coding Rules:

S	SUNFLU
FV	Dynamic Flow Balancing Valve
DN	
050-DN50	065-DN65
080-DN80	100-DN100
125-DN125	150-DN150
200-DN200	250-DN250
300-DN300	350-DN350
400-DN400	450-DN450
500-DN500	
0F	Two-way Threaded
PN	
P01	PN16
P02	PN25
Pressure Range(Kpa)	
A=15-150	F=22-220
G=33-330	K=35-350
H=90-900	

Installation:

Attention:

- According to valve type, select suitable valve and prevent error flow or different pressure.
- Attention to system pipe exhaust, system storage, it caused the media to jam, adjust the function failure, or too much noise.
- 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.
- Inlet of valve should install strainer or wash pipe to ensure the components of valve cannot be damaged by large particle



Dimension:

DN	L (mm)	H (mm)	A (mm)	B (mm)	C (mm)
DN50	180	106	106	50	83
DN65	180	120	120	65	83
DN80	180	132	132	80	83
DN100	220	177	177	100	133
DN125	220	193	193	125	140
DN150	220	273	220	150	162
DN200	220	333	280	200	214
DN250	220	394	341	250	280
DN300	223	469	400	300	328
DN350	223	517	448	350	382
DN400	242	579	510	400	440
DN450	242	629	560	450	487
DN500	242	687	618	500	545