

Self-operated Temperature Control Valve



豆包AI生成

Catalog

- 1. Product Introduction**
- 2. Technical Data**
- 3. Structure**
- 4. Spare Parts' material**
- 5. Flow Capacity Chart**
- 6. Dimension and Weight**

Self-operated temperature control valve (SWT Model)

1. Product Introduction

Self-operated temperature control valves are mainly used to regulate the discharge temperature of thermal energy in industrial heating systems. When the fluid temperature drops, the flow rate in the channel increases; the fluid only flows when its temperature is lower than the shutdown temperature (set temperature); this maintains sufficient fluid flow rate, constant pressure and temperature, and reduces heat loss, thereby improving the utilization of thermal energy.

The shutdown temperature is set by the factory and can be adjusted within a variable temperature range at the usage site.

When the fluid temperature drops, the flow holes open, allowing more fluid to pass through. When the fluid temperature rises, the regulator will close the flow holes more, thereby reducing the flow of fluid passing through.

SWT Self-operated temperature control valve:

- ◆ Self-powered structure, capable of achieving temperature regulation without external energy supply
- ◆ Compact structure, saving space
- ◆ Bimetallic sheet structure, with long service life
- ◆ Can be installed at any position on the return pipeline (preferably with the cover facing downwards)
- ◆ Simple components, convenient and quick for on-site maintenance
- ◆ External temperature regulation device, facilitating online temperature adjustment
- ◆ Capable of achieving long-term maintenance-free online operation

2. Technical Data

Nominal Diameter: DN15(NPS1/2)~DN40 (NPS1 1/2)

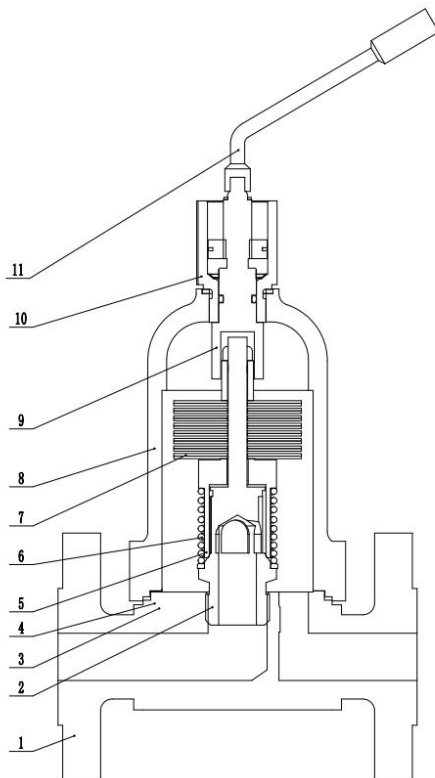
Pressure Class: PN16~PN40、Class150~Class300

Connection: Flange、Thread G、Thread NPT、BW、SW

Max.Differential Pressure: 0.6MPa

Adjustable shutdown temperature range (°C)			
Model	DN15(NPS1/2)	DN20(NPS3/4) DN25(NPS1)	DN40
SWT-1	30-140	30-120	40-130
SWT-2	145-160	125-160	135-160

3. Structure



NO.	Name
1	Body
2	seat
3	Gasket
4	Bolt
5	core
6	Spring
7	Bimetallic regulator disks
8	Cover
9	Forked adjusting piece
10	Temperature scale
11	adjusting handle

4. Spare Part' Material

Body	Cover	seat	Spring	core	Bolt
A105	WCB	304	304	304	A193 B7
F304	CF8				A193 B8
LF2	LCB				A320 L7

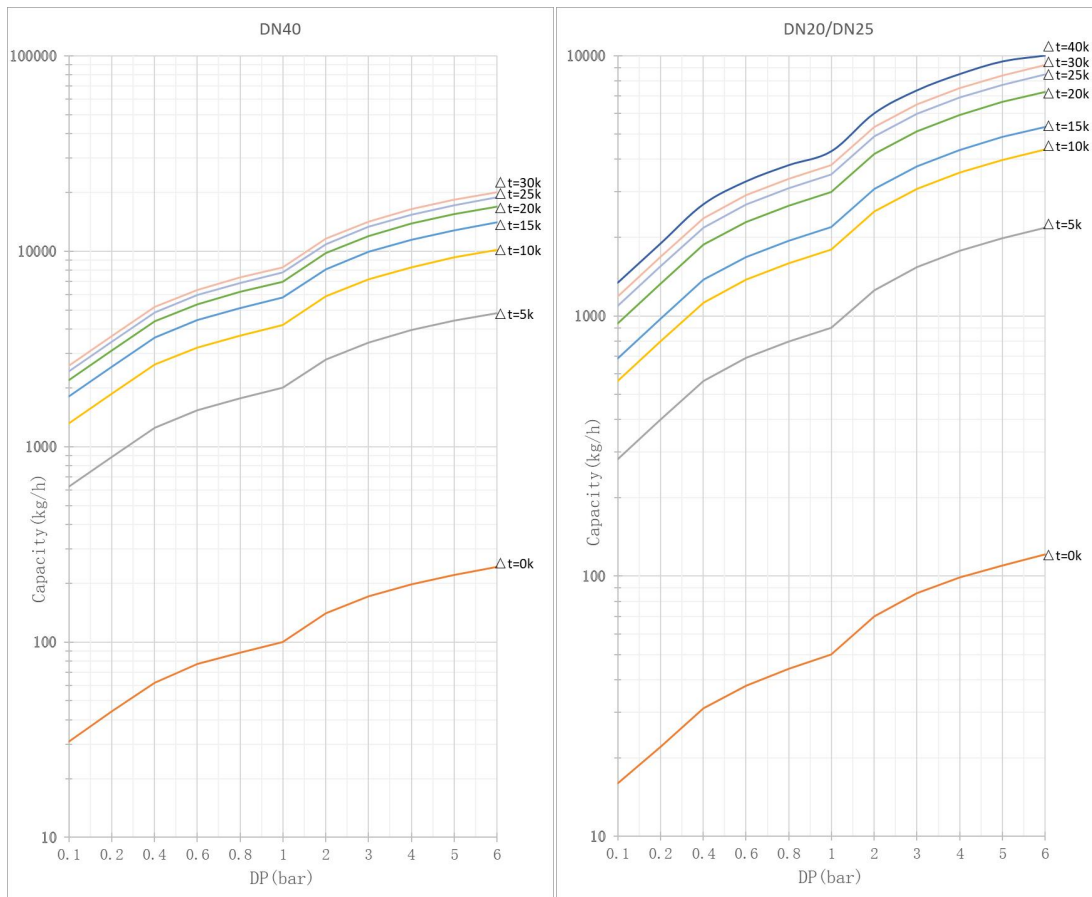
The operating temperature range of the valve body material corresponding to the pressure range (MPa)

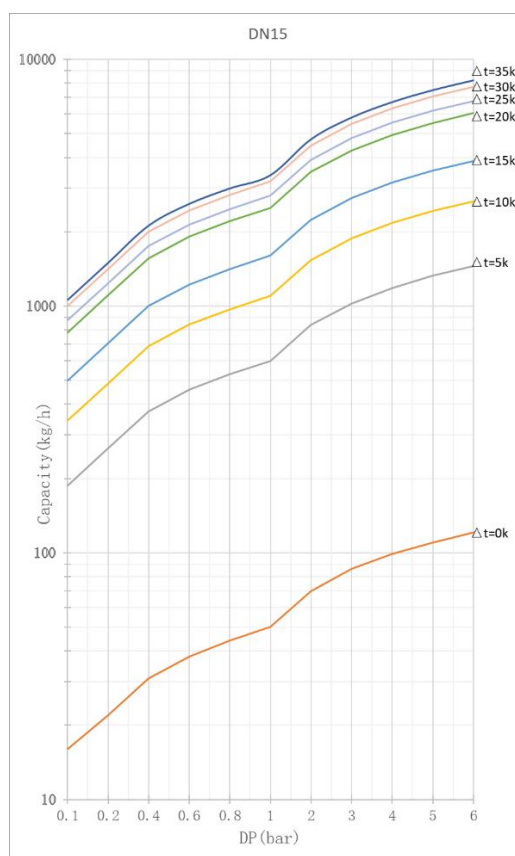
Temp ℃	Class150					Class300				
	A105 (WCB)	LF2 (LCB)	F11 (WC6)	F304 (CF8)	F316L (CF3M)	A105 (WCB)	LF2 (LCB)	F11 (WC6)	F304 (CF8)	F316L (CF3M)
-196 ~ -47	-	-	-	1.90	1.90	-		-	4.96	4.96
-46 ~ -30	-	1.96	-	1.90	1.90	-	5.11	-	4.96	4.96
-29 ~ 38	1.96	1.96	1.98	1.90	1.90	5.11	5.11	5.17	4.96	4.96
50	1.92	1.92	1.95	1.83	1.84	5.01	5.01	5.17	4.78	4.81
100	1.77	1.77	1.77	1.57	1.62	4.66	4.66	5.15	4.09	4.22
150	1.58	1.58	1.58	1.42	1.48	4.51	4.51	4.97	3.7	3.85
200	1.38	1.38	1.38	1.32	1.37	4.38	4.38	4.80	3.45	3.57
250	1.21	1.21	1.21	1.21	1.21	4.19	4.19	4.63	3.25	3.34
300	1.02	1.02	1.02	1.02	1.02	3.98	3.98	4.29	3.09	3.16
325	0.93	0.93	0.93	0.93	0.93	3.87	3.87	4.14	3.02	3.09
350 (343)	0.84	0.84	0.84	0.84	0.84	3.76	3.76	4.03	2.96	3.03
375	0.74	-	0.74	0.74	0.74	3.64	-	3.89	2.9	2.99
400	0.65	-	0.65	0.65	0.65	3.47	-	3.65	2.84	2.94

Temp℃	PN16					PN25				
	A105 (WCB)	LF2 (LCB)	F11 (WC6)	F304 (CF8)	F316L (CF3M)	A105 (WCB)	LF2 (LCB)	F11 (WC6)	F304 (CF8)	F316L (CF3M)
-196 ~ -47	-	-	-	1.57	1.57	-		-	2.45	2.45
-46 ~ -30	-	1.61	-	1.57	1.57	-	2.52	-	2.45	2.45
-29 ~ 38	1.61	1.61	1.63	1.57	1.57	2.52	2.52	2.55	2.45	2.45
50	1.58	1.58	1.63	1.51	1.52	2.47	2.47	2.55	2.36	2.37
100	1.46	1.46	1.63	1.29	1.33	2.29	2.29	2.54	2.02	2.08
150	1.43	1.43	1.57	1.17	1.22	2.23	2.23	2.45	1.83	1.9
200	1.38	1.38	1.51	1.09	1.13	2.16	2.16	2.37	1.70	1.76
250	1.32	1.32	1.46	1.03	1.05	2.06	2.06	2.28	1.60	1.65
300	1.22	1.22	1.35	0.97	1.00	1.91	1.91	2.11	1.51	1.56
350(343)	1.17	1.17	1.27	0.93	0.96	1.82	1.82	1.98	1.46	1.5
375	1.15	-	1.23	0.92	0.94	1.80	-	1.91	1.44	1.47
400	1.09	-	1.15	0.90	0.93	1.70	-	1.80	1.41	1.45

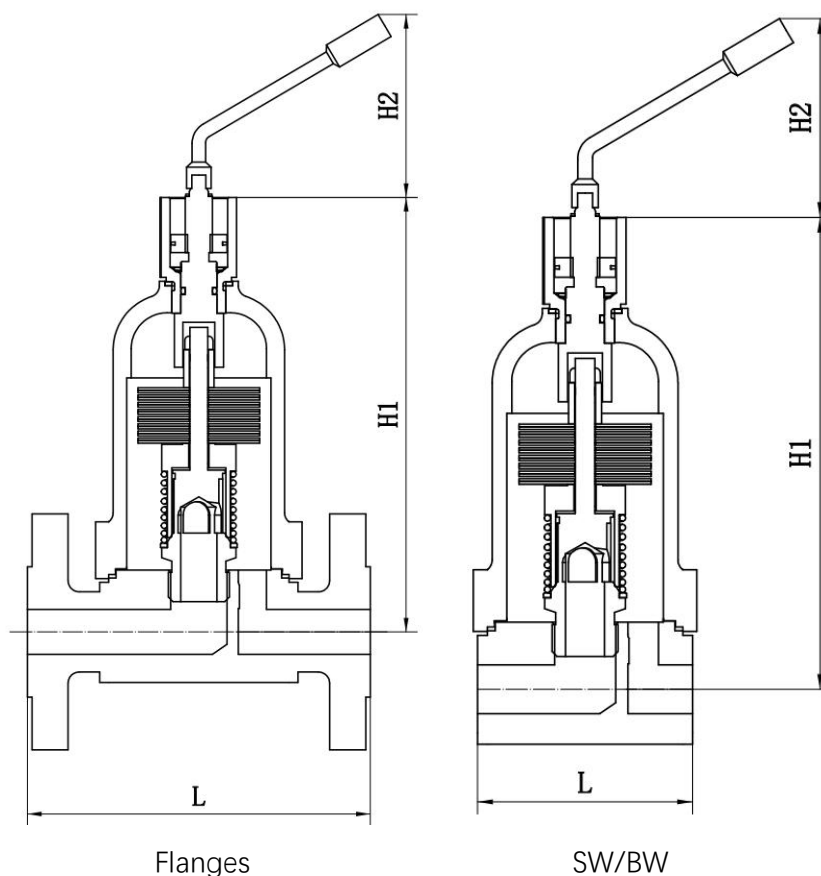
Temp°C	PN40				
	A105 (WCB)	LF2 (LCB)	F11 (WC6)	F304 (CF8)	F316L (CF3M)
-196 ~ -47	-	-	-	3.92	3.92
-46 ~ -30	-	4.03	-	3.92	3.92
-29 ~ 38	4.03	4.03	4.08	3.92	3.92
50	3.95	3.95	4.08	3.78	3.8
100	3.66	3.66	4.06	3.23	3.33
150	3.57	3.57	3.93	2.93	3.04
200	3.46	3.46	3.79	2.72	2.82
250	3.29	3.29	3.64	2.56	2.63
300	3.06	3.06	3.38	2.42	2.50
350(343)	2.92	2.92	3.18	2.33	2.40
375	2.88	-	3.06	2.30	2.36
400	2.72	-	2.89	2.26	2.32

5. Flow Capacity Chart





6. Dimension and Weight



VMV Zhejiang Newton Fluid Control Co., LTD.

Nominal Size	Code Name	DN15	DN20	DN25	DN40
Flanges(PN16-PN40)	L (mm)	150	150	160	200
Flanges(Class150)	L (mm)	150	150	160	216
Flanges(Class300)	L (mm)	150	150	160	230
SW	L (mm)	95	95	95	130
BW	L (mm)	200	200	200	250
Height	H1 (mm)	195	195	195	220
Height	H2 (mm)	70	70	70	70
Weight	(kg)	5.9	6.7	7.2	13.2