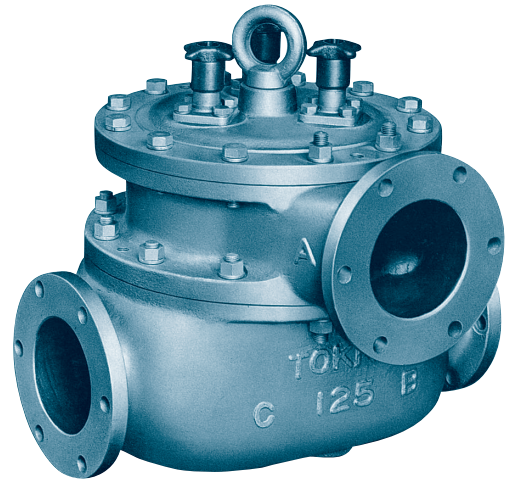


S(M)FH

# Type SFH · Type SMFH Wax Type Temperature Regulating Valves

- Three way temperature regulating valve acting by wax type thermostat ("element").
- Operating power like a electricity, hydraulic pressure and air pressure is not necessary.
- Operating characteristics are free from ambient temperature
- It is recommended, although position is free, to install upright due to maintenance.
- Disassembling and maintenance work for S(M)FH4, S(M)FH5A and S(M)FH6 can be done without separating from piping.



5

Temperature Regulating Valves

## Specifications

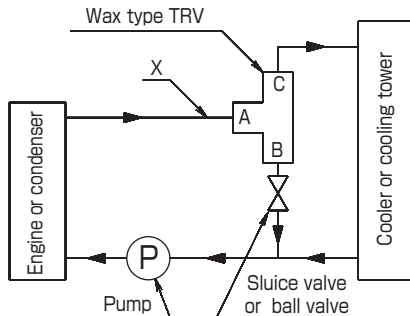
Fluid	Water, lubricant, fuel oil	
Allowable max. pressure	1.0MPa	
Permissible differential pressure	0.15MPa	
Connection	Flanged JIS10K	
Material	Body	Cast iron (Cast steel is available)
	Main parts	Bronze, stainless steel
Direction of ASSEMBLY (¹)	STANDARD ASSEMBLY, REVERSE ASSEMBLY	

Note (¹) : For SFH3A and SMFH3A, only STANDARD ASSEMBLY is available.

## Control system

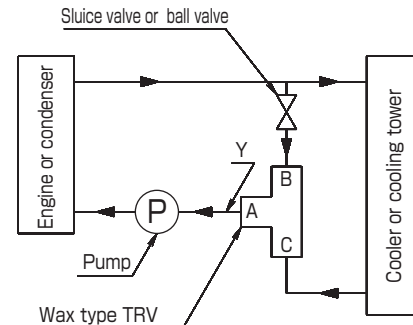
### ○ Diverting type

To make constant the temperature of point X.  
The flow rate into cooler/cooling tower is controlled by the fluid temperature of A.



### ○ Mixing type

To make constant the temperature of point Y.  
The flow rate into cooler/cooling tower is controlled by the fluid temperature of A.



Name of connection  
A : Engine or condenser  
B : Bypass line  
C : Cooler or cooling tower

Remark : Control system shall be specified when ordering.

## Model, control system and size

Diverting type	Mixing type	Size
SFH3A	SMFH3A	25—80
SFH4	SMFH4	100—50
SFH5A	SMFH5A	25 · 40—80
SFH6	SMFH6	200 · 250

## Indication of Type

Example : SMFH5AR

Direction of ASSEMBLY (S : STANDARD, R : REVERSE)  
Type

## Standard set temperature

(°C)

Standard set temperature (²)	25	30	35	40	45	50	55	60	65	70	75	80	85	87
Operating temperature range	20/30	25/35	30/40	35/45	40/50	45/55	50/60	55/65	60/70	65/75	70/80	75/85	80/90	82/92

Note (²) : Max. allowable temperature is standard set temperature + 20°C.

# Type SFH · Type SMFH Wax Type Temperature Regulating Valves

## Construction and Cv values

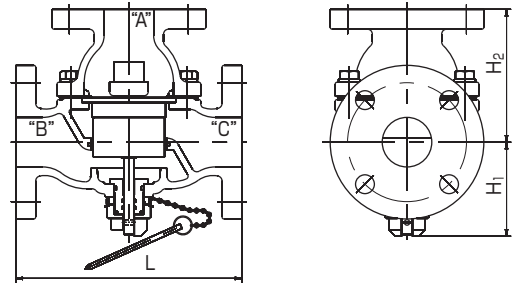
### ○ SFH3A, SMFH3A

(mm, kg)

Class \ Size	25	32	40	50	65	80
H <sub>1</sub>	88	93	93	96	103	115
H <sub>2</sub>	117	134	134	134	167	177
L	188	228	228	228	298	318
Q'ty of element	1	1	1	1	2	2
Weight	10.5	14	15	18	33	42.5
Cv values	6.5	22	31.2	45.8	114	152

### SFH3A · SMFH3A

Size : 25—80



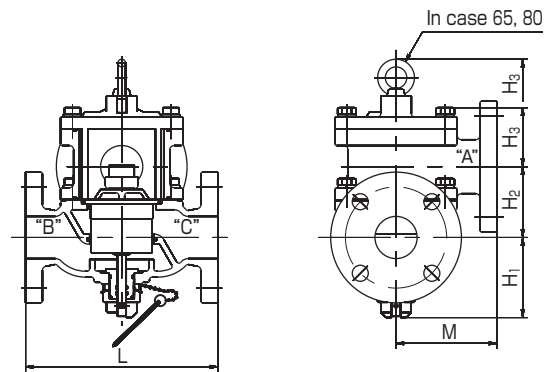
### ○ SFH5A, SMFH5A

(mm, kg)

Class \ Size	25	40	50	65	80
H <sub>1</sub>	88	93	96	103	115
H <sub>2</sub>	68	84	84	146.5	157.5
H <sub>3</sub>	53.3	70	70	160	167.5
L	188	228	228	298	318
M	94	119.5	119.5	187	204
Q'ty of element	1	1	1	2	2
Weight	13	21	24	43	54
Cv values	6.5	31.2	45.8	114	152

### SFH5A · SMFH5A

Size : 25 · 40—80



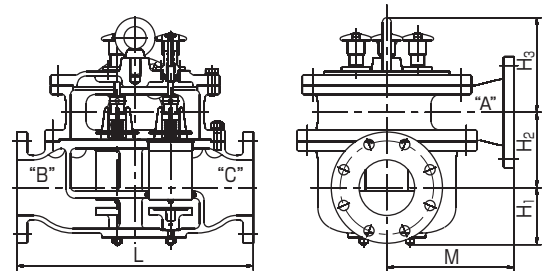
### ○ SFH4, SMFH4

(mm, kg)

Class \ Size	100	125	150
H <sub>1</sub>	128	128	128
H <sub>2</sub>	160	170	180
H <sub>3</sub>	162	213	221
L	388	532	608
M	264	286	344
Q'ty of element	2	3	4
Weight	83	160	215
Cv values	230	330	433

### SFH4 · SMFH4

Size : 100—150



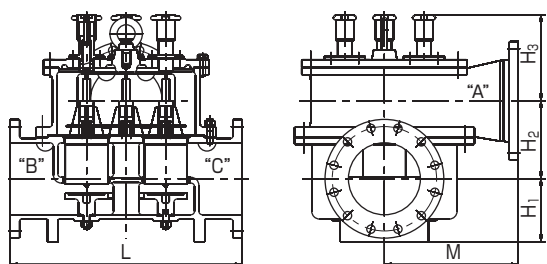
### ○ SFH6, SMFH6

(mm, kg)

Class \ Size	200	250
H <sub>1</sub>	175	215
H <sub>2</sub>	216	246.5
H <sub>3</sub>	238	241
L	644	728
M	372	414
Q'ty of element	4	6
Weight	245	355
Cv values	768	1200

### SFH6 · SMFH6

Size : 200—250

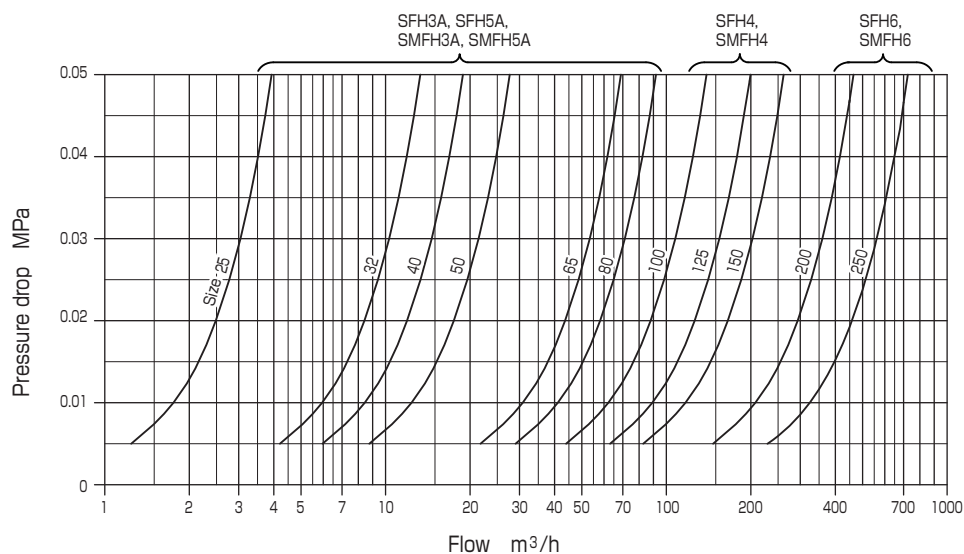


# Type SFH · Type SMFH Wax Type Temperature Regulating Valves

## Sizing

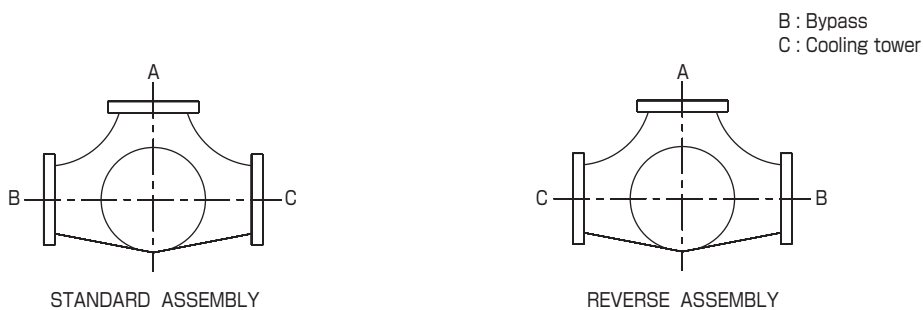
Use following chart to select the suitable valve size.

Flow – Pressure drop (Water)

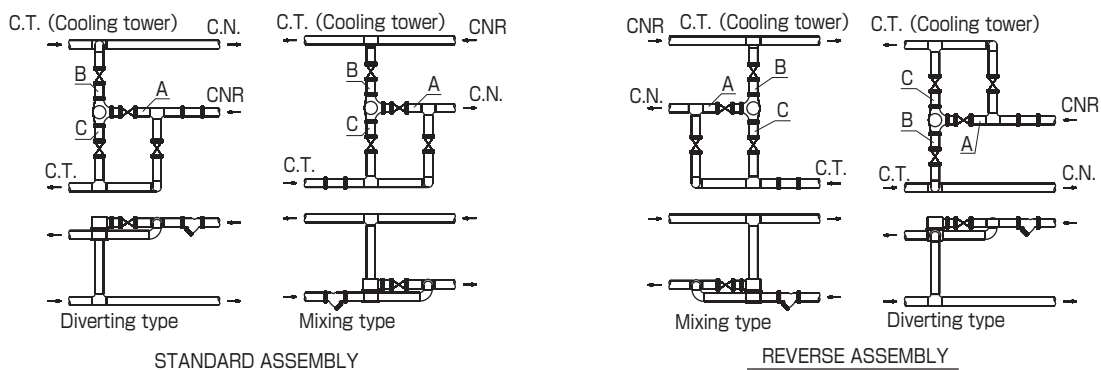


## Direction of ASSEMBLY (view from top)

Direction of port B · C for port A of S(M)FH5A, S(M)FH4 and S(M)FH6 shall be specified at order. STANDARD ASSEMBLY will be supplied in case of no specification.



## Installation example



# Type SFH · Type SMFH Wax Type Temperature Regulating Valves

## Element characteristics

The valve is operated by utilizing the phase change of wax that is, "solid to liquid" or "liquid to solid".  
The valve working as mixing type or diverting type controls the fluid operating temperature within approx. 10°C.

5 Temperature Regulating Valves

