

Pilot operated

# Type PHP30 Pressure Reducing Valves for high pressure and high temperature steam

For steam

- For high pressure and high temperature steam
- To cope with large differential pressure and fluctuation of flow
- No damage even if inlet pressure is loaded to the outlet



1 Pressure Reducing Valves (For steam)

## Specifications

Fluid	Pressure (MPa)		Max. temp. (°C)	Material for main parts					Connection
	Inlet	Outlet set range		Body	Spring case	Valve disc	Piston	Diaphragm	
Steam	0.3-3.7	0.1-0.5 0.3-1.0	Sat.   300 (370) (1)	Cast iron (Stellited seating face)	Spheroidal graphite cast iron	Special stainless steel	Stainless steel	Stainless steel	Flanged JIS30KRF
	0.3-4.0	0.8-2.5							Flanged JIS40KRF

Note (1) : Available upon request. Material differs from 300°C type.

Remark ASME class 300RF and class 600RF flange are available.

## Performance

Applicable pressure range	Refer to illustration
Min. differential pressure	0.2MPa
Offset pressure	10% of inlet pressure (but min. 0.04MPa) or less
Min. controllable flow	5% of rated flow
Seat leakage	0.2% of rated flow or less

## Cv values

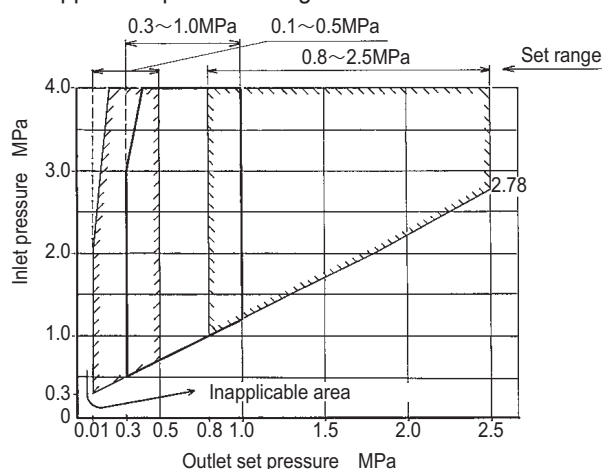
Size	25	40	50	65	80	100
Cv	5	12	19	28	44	76

## Cv calculation

Select the valve size by Cv calculation

In case of $(P_1 - P_2) \leq \frac{P_1}{2}$	In case of $(P_1 - P_2) \geq \frac{P_1}{2}$	Description
$Cv = \frac{WK}{198 \sqrt{(P_1 - P_2)P_2}}$	$Cv = \frac{WK}{99P_1}$	W : Flow kg/h P <sub>1</sub> : Inlet pressure MPa abs P <sub>2</sub> : Outlet set pressure MPa abs K : 1 + 0.0013 × (superheated steam temp. - saturated steam temp.) °C

Applicable pressure range

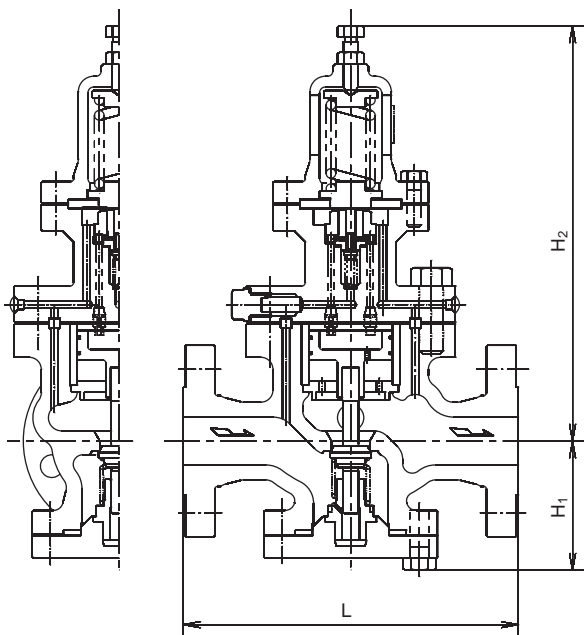


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## Construction



Dimensions and weights

(mm, kg)

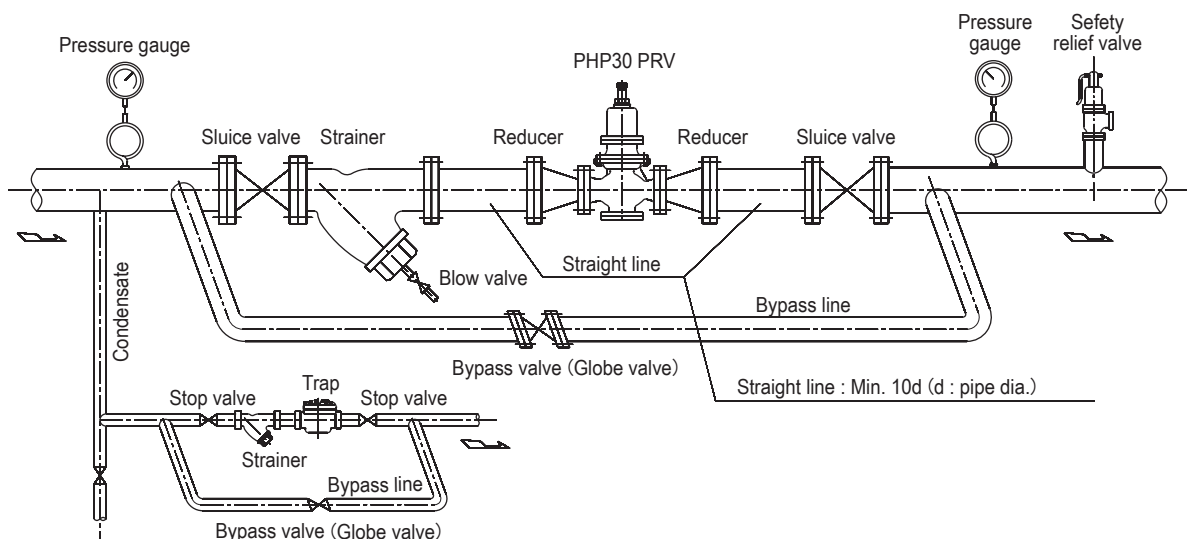
Size	25	40	50	65	80	100
L	JIS30K	260	280	320	360	370
	JIS40K					
H <sub>1</sub>	99	107	120	137	161	192
H <sub>2</sub>	340	348	370	384	417	430
Weight	30	38	46	73	130	150

## Space required for disassembling and maintenance

(mm)

Size	25	40	50	65	80	100
Above the center of pipe line.	430	450	470	490	520	530
Beneath the center of pipe line.	270	290	330	380	430	520

## Installation example



Note : Install upright in horizontal piping.