

PRESSURE REGULATING VALVES

Type HPR

SAGINOMIYA

GENERAL DESCRIPTION

- Type HPR can control the condensing pressure corresponding to the change in the outside temperature, and prevents the condensation pressure decrease in the control in winter, also steady throughout the year control is possible.
- This product properly maintains the inlet pressure of the expansion valve and prevents the decrease in the refrigeration capacity.
- Suitable for refrigeration systems with hot gas defrosting.



SPECIFICATIONS

Max. Working Pressure: 2.9MPa {29kgf/cm²} (R22, R134a, R404A, R407C)
 4.17MPa {41.7kgf/cm²} (R410A)
 Airtight Test Pressure: 3.5MPa {35kgf/cm²} (R22, R134a, R404A, R407C)
 4.17MPa {41.7kgf/cm²} (R410A)
 Fluid Temperature: to 125°C

TYPE NUMBER SELECTION

Catalog No.			Port size (mm)	Connection		Factory Setting (MPa)	Wt. (kg)
Type	Model	Refrigerant		Copper Tube (O.D.)	Style		
HPR-	1304D [B]	H (R22) M (R134a) U (R404A) P (R407C) V (R410A)	13	1/2"	Copper Tube O.D. [Flare]	1.32 (H,U,P) 0.686 (M) 2.15 (V)	0.76
	1305D [B]			5/8"			
	2207D		22	7/8"			1.65

- Flare type is produced only 5/8 and 1/2.
- R410A type is produced only 5/8 and 1/2.

CAPACITY TABLE

Nominal capacity is based on condensing temp. 38°C, evaporating temp. 5°C, and Supercooling temp. 0°C.

R22

Catalog No.		Port size (mm)	Capacity (U.S.R.T.) {kW}							
Type	Model		R22							
			Pressure drop across the valve (MPa) {kgf/cm ² }							
			0.005 {0.05}	0.01 {0.1}	0.015 {0.15}	0.02 {0.2}	0.025 {0.25}	0.03 {0.3}	0.035 {0.35}	0.04 {0.4}
HPR-	1304D [B] H	13	5.97 {21.0}	8.50 {29.9}	10.4 {36.5}	12.0 {42.2}	13.4 {47.1}	15.2 {53.5}	16.1 {56.6}	17.0 {59.8}
	1305D [B] H									
	2207DH	22	14.7 {51.7}	20.8 {73.1}	25.6 {90.0}	29.6 {104}	33.0 {116}	36.1 {127}	39.0 {137}	41.8 {147}

R134a

Catalog No.		Port size (mm)	Capacity (U.S.R.T.) {kW}							
Type	Model		R134a							
			Pressure drop across the valve (MPa) {kgf/cm ² }							
			0.005 {0.05}	0.01 {0.1}	0.015 {0.15}	0.02 {0.2}	0.025 {0.25}	0.03 {0.3}	0.035 {0.35}	0.04 {0.4}
HPR-	1304D [B] M	13	5.94 {20.9}	8.47 {29.8}	10.4 {36.4}	12.0 {42.2}	13.3 {46.9}	15.1 {53.1}	16.0 {56.1}	16.9 {59.4}
	1305D [B] M									
	2207DM	22	14.6 {51.5}	20.7 {72.8}	25.5 {89.5}	29.3 {103}	33.0 {116}	35.8 {126}	39.0 {137}	41.8 {147}

R404A

Catalog No.		Port size (mm)	Capacity (U.S.R.T.) {kW}							
Type	Model		R404A							
			Pressure drop across the valve (MPa) {kgf/cm ² }							
			0.005 {0.05}	0.01 {0.1}	0.015 {0.15}	0.02 {0.2}	0.025 {0.25}	0.03 {0.3}	0.035 {0.35}	0.04 {0.4}
HPR-	1304D [B] U	13	3.90 {13.7}	5.23 {18.4}	6.74 {23.7}	7.88 {27.7}	8.73 {30.7}	9.87 {34.7}	10.5 {36.8}	11.0 {38.7}
	1305D [B] U									
	2207DU	22	9.58 {33.7}	13.6 {47.7}	16.7 {58.7}	19.3 {67.8}	21.6 {75.8}	23.6 {82.9}	25.5 {89.6}	27.3 {95.9}

R407C

Catalog No.		Port size (mm)	Capacity (U.S.R.T.) {kW}							
Type	Model		R407C							
			Pressure drop across the valve (MPa) {kgf/cm ² }							
		0.005 {0.05}	0.01 {0.1}	0.015 {0.15}	0.02 {0.2}	0.025 {0.25}	0.03 {0.3}	0.035 {0.35}	0.04 {0.4}	
HPR-	1304D [B] P	13	6.14 {21.6}	8.76 {30.8}	10.7 {37.6}	12.4 {43.5}	13.8 {48.5}	15.7 {55.1}	16.6 {58.3}	17.5 {61.6}
	1305D [B] P									
	2207DP	22	15.1 {53.1}	21.4 {75.1}	26.3 {92.4}	30.4 {107}	33.8 {119}	37.0 {130}	40.1 {141}	42.9 {151}

R410A

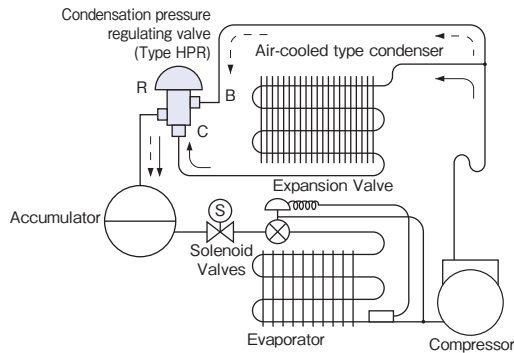
Catalog No.		Port size (mm)	Capacity (U.S.R.T.) {kW}							
Type	Model		R410A							
			Pressure drop across the valve (MPa) {kgf/cm ² }							
		0.005 {0.05}	0.01 {0.1}	0.015 {0.15}	0.02 {0.2}	0.025 {0.25}	0.03 {0.3}	0.035 {0.35}	0.04 {0.4}	
HPR-	1304D [B] V	13	6.57 {23.1}	9.36 {32.9}	11.4 {40.2}	13.2 {46.4}	14.7 {51.8}	16.8 {58.9}	17.7 {62.3}	18.7 {65.8}
	1305D [B] V									

APPLICATION EXAMPLE

This product can control the condensing pressure corresponding to the change in the outside temperature, and prevents the condensing pressure decrease in the control in the winter, also steady throughout the year control is possible.

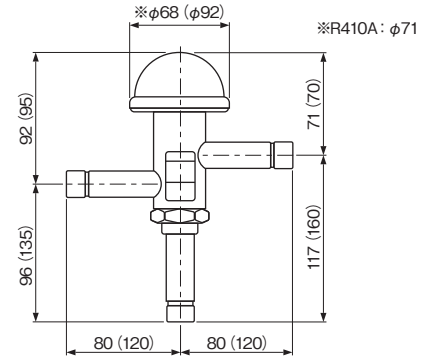
This product properly maintains the inlet pressure of the expansion valve and prevents the decrease in the refrigeration capacity.

Suitable for use in refrigeration systems with hot gas defrosting and in extremely cold region.



- ↪ Condensing Pressure higher than the set value (summer) C→R
- ↪ Condensing Pressure lower than the set value (winter) B→R

DIMENSIONS



Type HPR-1304 to 1305D
(Type HPR-2207D)

Unit: mm