

# EXPANSION VALVES

## Type ATX

SAGINOMIYA

### GENERAL DESCRIPTION

- Capacity can be changed by replacing the body sheet assembly.
- Application: General refrigeration and air conditioning system.
- In the case of  $-20^{\circ}\text{C}$  less, S-charge type is best suited for heat-pump air conditioners and unloading system attached device evaporation temperature.



Type ATX-B



Type ATX-D

### SPECIFICATIONS

- Max. working pressure:
  - 2.8 MPa {28kgf/cm<sup>2</sup>}..... (S, SL, CY-charge)
  - 3.3 MPa {33kgf/cm<sup>2</sup>}..... (S-charge for R407C)
  - 1.4 MPa {14kgf/cm<sup>2</sup>}..... (G, L, C, CL-charge)
- Adjustable range of static superheat:
  - 3 to 13°C..... (G, L, CL-charge)
  - 0 to 13°C..... (CY-charge)
  - 0 to 8°C..... (S-charge)
  - 1 to 7°C..... (S, SL-charge for R404A)
- $\odot$  Increase about 0.007MPa / rotation

### VALVE NOMENCLATURE

Catalog No. is decided according to the specifications.

Example:  $\frac{\text{ATX}}{\text{I}} - \frac{34006}{\text{II}} \frac{\text{B}}{\text{III}} \frac{\text{H}}{\text{IV}} \frac{\text{L}}{\text{V}}$

I : Type..... ATX-Thermostatic expansion valve for general use.

II : Model..... The first and second digits indicate inlet and outlet pipe size respectively. The last three digits indicate nominal capacity.

III : Connection..... B-Flare Nut Connection, D-Solder Connection

IV : Refrigerant..... M = R134a, H = R22, U = R404A, P = R407C

V : Charge type..... G = G-charge, L = L-charge, C = C-charge, CL = CL-charge, CY = CY-charge, S = S-charge, SL = SL-charge

### TYPE NUMBER SELECTION

Catalog No.					Capacity (U.S.R.T.) (kW)					Connection			Capil. Tube Length (mm)	Wt. (kg)
Type	Model	Connection	Refrigerant	Charge	R22	R134a	R404A	R407C	R404A(SL)	Inlet	Outlet	Equalizer		
ATX-	34006	B (Flare)	M (R134a)	S (R134a)	1.0 {3.51}	0.7 {2.46}	0.7 {2.46}	1.0 {3.51}	0.3 {1.16}	3/8"	1/2"	1/4" Flare	$\phi 3 \times 1500$	1.2
	34013				R22	2.1 {7.39}	1.6 {5.63}	1.5 {5.27}	2.2 {7.74}					
	34023		H (R22)	SL (R404A)	3.6 {12.7}	2.8 {9.85}	2.7 {9.49}	3.7 {13.0}	1.4 {4.78}					
	34035		U (R404A)		5.5 {19.3}	4.2 {14.8}	4.0 {14.1}	5.7 {20.0}	2.0 {7.19}					
	34045		P (R407C)		G L C (R22)	7.0 {24.8}	5.4 {19.0}	5.1 {17.9}	7.2 {25.3}					

\* Capillary tube length: 2000mm for S-charge valve as standard.

• Capacity: Based on condensing temp. 38°C and evaporating temp. 5°C. ( $-30^{\circ}\text{C}$  for SL-charge).

# TYPE NUMBER SELECTION

Catalog No.					Capacity (U.S.R.T.) [kW]					Connection			Capil. Tube Length (mm)	Wt. (kg)
Type	Model	Connection	Refrigerant	Charge	R22	R134a	R404A	R407C	R404A(SL)	Inlet	Outlet	Equalizer		
ATX-	34006	D (Solder)	M (R134a)  H (R22)  U (R404A)  P (R407C)	S (R134a R22 R404A R407C)	1.0 {3.51}	0.7 {2.46}	0.7 {2.46}	1.0 {3.51}	0.3 {1.16}	3/8" OD	1/2" OD	1/4" Flare	φ3 × 1500	1.1
	34013				2.1 {7.39}	1.6 {5.63}	1.5 {5.27}	2.2 {7.74}	0.8 {2.90}					
	34023				3.6 {12.7}	2.8 {9.85}	2.7 {9.49}	3.7 {13.0}	1.4 {4.78}					
	34035				5.5 {19.3}	4.2 {14.8}	4.0 {14.1}	5.7 {20.0}	2.0 {7.19}					
	34045				7.0 {24.8}	5.4 {19.0}	5.1 {17.9}	7.2 {25.3}	2.6 {9.23}					
	57060			SL (R404A)	9.7 {34.1}	7.2 {25.4}	6.8 {23.9}	10.0 {35.1}	3.7 {12.9}	5/8" OD or 7/8" ID	7/8" OD or 1-1/8" ID	1/4" Flare	φ3 × 2000	1.3
	57080				13.0 {45.7}	9.6 {33.7}	9.1 {32.0}	13.4 {47.1}	4.9 {17.3}					
	71110				17.8 {62.6}	13.2 {46.4}	12.5 {44.0}	18.3 {64.3}	6.9 {24.4}					
	71140				22.6 {79.4}	16.8 {59.1}	16.0 {56.3}	23.3 {81.9}	8.7 {30.7}					
	71160				26.0 {91.6}	19.2 {67.5}	18.2 {64.0}	26.8 {94.2}	10.0 {35.0}					
	12220			G L C CL (R22)	35.8 {126}	26.4 {92.8}	25.1 {88.3}	36.9 {130}	13.7 {48.2}	1" OD or 1-1/4" ID	1" OD or 1-1/4" ID	1/4" Flare	φ3 × 3000	1.5
	12270				43.5 {154}	32.4 {114}	30.8 {108}	44.8 {158}	16.9 {59.3}					
	12330				53.4 {187}	39.6 {140}	37.6 {132}	55.0 {193}	20.6 {72.4}					
	12420				67.6 {237}	50.4 {177}	47.9 {168}	69.6 {245}	27.6 {97.1}					
	12500				81.0 {285}	60.0 {211}	57.0 {200}	83.4 {293}	33.0 {116}					

\* Capillary tube length: 2000mm for S-charge valve as standard.

• Capacity: Based on condensing temp. 38°C and evaporating temp. 5°C. (-30°C for SL-charge).

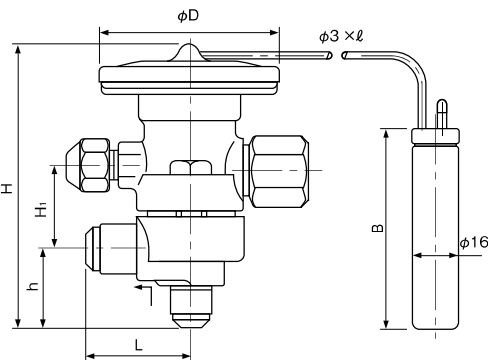
## Extreme Low Temperature Model ( - 70°C to - 40°C)

Catalog No.					Capacity (U.S.R.T.) [kW]		Connection			Capil. Tube Length (mm)	Wt. (kg)	
Type	Model	Connection	Refrigerant	Charge	R22	Inlet	Outlet	Equalizer				
ATX-	34006	B (Flare) or D (Solder)	H (R22)	CY (Extreme Low)	1.39 {4.88}	3/8" OD	1/2" OD	1/4" Flare	φ3 × 2000	1.2 (Flare) 1.1 (Solder)		
	34013				3.21 {11.3}							
	34023				5.40 {19.0}							
	34035				7.56 {26.6}							
	34045				9.74 {34.3}							
	57060	11.3 {39.8}			5/8" OD or 7/8" ID						7/8" OD or 1-1/8" ID	1.3
	57080	15.3 {53.7}										

• Capacity: Based on condensing temp. 40°C and evaporating temp. -60°C, sub-cooling 50°C.

## DIMENSIONS

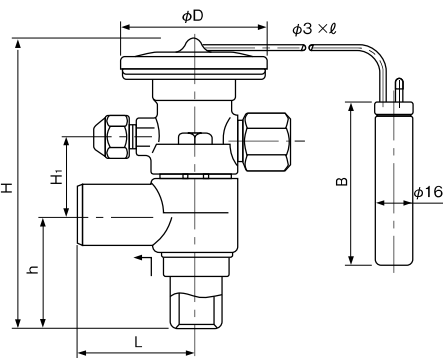
### Type ATX-B



Catalog No.			Unit: mm							
Type	Model	Connection	L	H	H <sub>1</sub>	h	φD	ℓ	B	
ATX-	34006	B (Flare) or D (Solder)	38	107	31	30	64	1500	76	
	34013									
	34023									
	34035									
	34045									
	57060	D (Solder)	51	132	34	52	2000	100		
	57080									
	71110									
	71140									
	71160									
	12220									
	12270									
12330										
12420										
12500										

• S,CY,SL-Charge C,CL-Charge for R410A : φD=68, ℓ=2000,B=100

### Type ATX-D

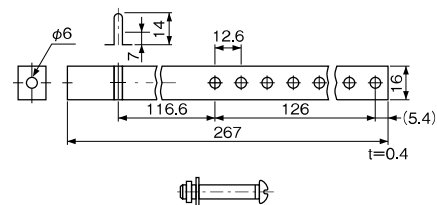


Unit: mm

## ACCESSORY

### • Sensing Bulb Mounting Band

For Type ATX-34006 to 71160



For Type ATX-12220 to 12500

