

# EXPANSION VALVES

## Type QCX & RCX

SAGInoMIYA

### GENERAL DESCRIPTION

- Application: Commercial refrigerator, freezer, air conditioner, cold chain box, etc.
- Suitable for refrigeration systems with hot gas defrosting.
- Type QCX ... Internal equalizer type  
Type RCX ... External equalizer type
- The same products can be used for R22 and R407C.
- With superheat external adjust device.

### SPECIFICATIONS

- Max. working pressure: 3.0 MPa {30kgf/cm<sup>2</sup>}
- Adjustable range of static superheat:  
1 to 7°C at R22, R134a, R404A  
1 to 5°C at R407C, R410A
- $\bigcirc$  Increase about 0.045MPa / rotation
- Superheat change: 4 to 5°C (C, SL-charge)  
3 to 4°C (SA-charge)



Type QCX-B



Type QCX-D



Type RCX-B



Type RCX-D

Charge		A Zone	R Zone	F Zone	MOP (°C)	Temp. Condition	
		Evaporating Temp. (°C)				Power Element Temp.: Ts, Sensing Bulb Temp.: Tb	
SA	R22	-40 to 10	-	-	18	Ts ≥ Tb	
C		-	-40 to 0	-	-	Ts ≧ Tb	
SL		-	-	-60 to -25	-20	Ts ≧ Tb	
C	R134a	-30 to 10		-	-	Ts ≧ Tb	
SA	R404A	-40 to 10	-	-	18	Ts ≥ Tb	
C		-	-40 to 0	-	-	Ts ≧ Tb	
SL		-	-	-60 to -25	-20	Ts ≧ Tb	
SA	R407C	-40 to 10	-	-	18	Ts ≥ Tb	
C		-	-40 to 0	-	-	Ts ≧ Tb	
SA	R410A	-45 to 10	-	-	18	Ts ≥ Tb	
C		-	-40 to -10	-	-	Ts ≧ Tb	

### VALVE NOMENCLATURE

Catalog No. is decided according to the specifications.

Example: QCX - 0234 B U SA  
 I            II        III IV V

I : Type..... QCX-Internal equalizer type, RCX-External equalizer type

II : Model..... The first and the second digits indicate nominal capacity.

The last two digits indicate inlet and outlet pipe size respectively.

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

IV : Refrigerant..... M = R134a, H = R22, R407C, U = R404A, V = R410A

V : Charge type..... SL = SL-charge, C = C-charge, SA = SA-charge

# TYPE NUMBER SELECTION (1)

Application	Catalog No.	Refrigerant	Capacity (U.S.R.T.) {kW}		Connection		Capil. Tube Length (mm)	Wt. (kg)								
			A,R Zone	F Zone	Inlet	Outlet										
			C.T. 38°C	C.T. 38°C												
			E.T. -5°C	E.T. -30°C												
F Zone	Freezing -60 to -25°C (SL: R22, R404A)	QCX- RCX-	R22	-	0334B[D]HSL	0.22 {0.79}	3/8" Flare [B]  [ 3/8" Solder [D] ]	1/2" Flare [B]  [ 1/2" Solder [D] ]	φ 2.4 × 1500	0.28 (QCX-***34B) 0.24 (QCX-***34D) 0.29 (RCX-***34B) 0.24 (RCX-***34D)						
					0534B[D]HSL	0.33 {1.16}										
					0834B[D]HSL	0.54 {1.91}										
					1234B[D]HSL	0.87 {3.07}										
					1634B[D]HSL	1.10 {3.87}										
					2434B[D]HSL	1.68 {5.91}										
					3134B[D]HSL	2.27 {7.97}										
					4734B[D]HSL	3.10 {10.9}										
					0234B[D]USL	0.13 {0.46}										
		0334B[D]USL	0.19 {0.68}													
		0534B[D]USL	0.32 {1.11}													
		0834B[D]USL	0.51 {1.79}													
		1034B[D]USL	0.64 {2.25}													
		1534B[D]USL	0.98 {3.44}													
		2034B[D]USL	1.32 {4.63}													
		3034B[D]USL	1.80 {6.34}													
		R Zone	Refrigeration -40 to 0°C (C: R22, R404A, R407C)	QCX- RCX-	R22	-					0334B[D]HC	0.31 {1.10}	3/8" Flare [B]  [ 3/8" Solder [D] ]	1/2" Flare [B]  [ 1/2" Solder [D] ]	φ 2.4 × 1500	0.28 (QCX-***34B) 0.24 (QCX-***34D) 0.29 (RCX-***34B) 0.24 (RCX-***34D)
											0534B[D]HC	0.47 {1.65}				
0834B[D]HC	0.78 {2.75}															
1234B[D]HC	1.25 {4.41}															
1634B[D]HC	1.57 {5.51}															
2434B[D]HC	2.35 {8.26}															
3134B[D]HC	3.13 {11.0}															
4734B[D]HC	4.69 {16.5}															
0234B[D]UC	0.20 {0.70}															
0334B[D]UC	0.30 {1.05}															
0534B[D]UC	0.49 {1.74}															
0834B[D]UC	0.78 {2.76}															
1034B[D]UC	0.99 {3.48}															
1534B[D]UC	1.48 {5.22}															
2034B[D]UC	1.98 {6.95}															
3034B[D]UC	2.96 {10.4}															
0334B[D]HC	0.32 {1.13}															
0534B[D]HC	0.48 {1.70}															
0834B[D]HC	0.81 {2.84}															
1234B[D]HC	1.29 {4.54}															
1634B[D]HC	1.61 {5.67}															
2434B[D]HC	2.42 {8.51}															
3134B[D]HC	3.21 {11.3}															
4734B[D]HC	4.83 {17.0}															
Refrigeration -30 to 10°C (C: R134a)	QCX- RCX-		R134a	-	0234B[D]MC	0.24 {0.85}	3/8" Flare [B]  [ 3/8" Solder [D] ]	1/2" Flare [B]  [ 1/2" Solder [D] ]	φ 2.4 × 1500	0.28 (QCX-***34B) 0.24 (QCX-***34D) 0.29 (RCX-***34B) 0.24 (RCX-***34D)						
					0434B[D]MC	0.36 {1.28}										
					0634B[D]MC	0.61 {2.13}										
					1034B[D]MC	0.96 {3.38}										
					1234B[D]MC	1.21 {4.27}										
					1834B[D]MC	1.82 {6.40}										
					2434B[D]MC	2.43 {8.54}										
					3634B[D]MC	3.64 {12.8}										
					Refrigeration -40 to -10°C (C: R410A)	QCX- RCX-					R410A	-	0334B[D]VC	0.35 {1.22}	3/8" Flare [B]  [ 3/8" Solder [D] ]	1/2" Flare [B]  [ 1/2" Solder [D] ]
	0534B[D]VC		0.52 {1.83}													
	0934B[D]VC		0.86 {3.04}													
	1434B[D]VC		1.37 {4.82}													
	1734B[D]VC	1.73 {6.08}														
	2634B[D]VC	2.59 {9.12}														
	3534B[D]VC	3.44 {12.1}														
	5234B[D]VC	5.18 {18.2}														

• External equalizer for RCX: 1/4" flare (for all flare outlet bodies) , 1/4" solder[D] (for all solder outlet bodies)

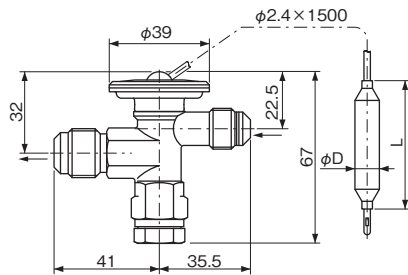
# TYPE NUMBER SELECTION (2)

Application	Catalog No.	Refrigerant	Capacity (U.S.R.T.) {kW}		Connection		Capil. Tube Length (mm)	Wt. (kg)						
			A,R Zone	F Zone	Inlet	Outlet								
			C.T. 38°C	C.T. 38°C										
		E.T. -5°C		E.T. -30°C										
A Zone	Air Conditioning -40 to 10°C (SA: R22, R404A, R407C)	R22	0334B[D]HSA	0.31 {1.10}	-	3/8" Flare [B]	1/2" Flare [B]	φ 2.4 × 1500	0.28 (QCX-***34B)					
			0534B[D]HSA	0.47 {1.65}										
			0834B[D]HSA	0.78 {2.75}										
			1234B[D]HSA	1.25 {4.41}										
			1634B[D]HSA	1.57 {5.51}										
			2434B[D]HSA	2.35 {8.26}										
			3134B[D]HSA	3.13 {11.0}										
			4734B[D]HSA	4.69 {16.5}										
			0234B[D]USA	0.20 {0.70}										
		0334B[D]USA	0.30 {1.05}											
		0534B[D]USA	0.49 {1.74}											
		0834B[D]USA	0.78 {2.76}											
		1034B[D]USA	0.99 {3.48}											
		1534B[D]USA	1.48 {5.22}											
		2034B[D]USA	1.98 {6.95}											
		3034B[D]USA	2.96 {10.4}											
		Air Conditioning -45 to 10°C (SA:R410A)	R407C	0334B[D]HSA	0.32 {1.13}					-	3/8" Solder [D]	1/2" Solder [D]	φ 2.4 × 1500	0.29 (RCX-***34B)
				0534B[D]HSA	0.48 {1.70}									
	0834B[D]HSA			0.81 {2.84}										
	1234B[D]HSA			1.29 {4.54}										
	1634B[D]HSA			1.61 {5.67}										
	2434B[D]HSA			2.42 {8.51}										
	3134B[D]HSA			3.21 {11.3}										
	4734B[D]HSA			4.83 {17.0}										
	0334B[D]VSA			0.35 {1.22}										
	0534B[D]VSA		0.52 {1.83}											
	0934B[D]VSA		0.86 {3.04}											
	1434B[D]VSA		1.37 {4.82}											
	1734B[D]VSA		1.73 {6.08}											
	2634B[D]VSA		2.59 {9.12}											
	3534B[D]VSA		3.44 {12.1}											
	5234B[D]VSA	5.18 {18.2}												

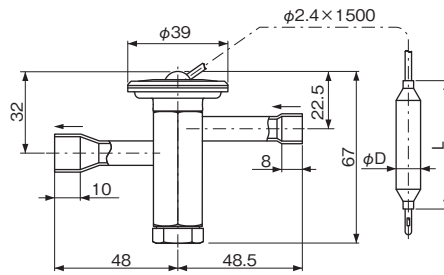
• External equalizer for RCX: 1/4" flare (for all flare outlet bodies) , 1/4" solder (for all solder outlet bodies)

## DIMENSIONS

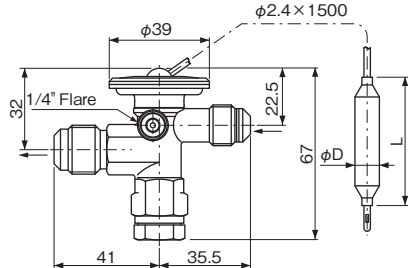
Type QCX-B



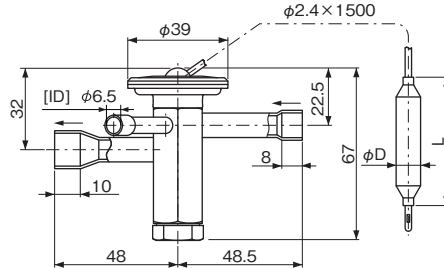
Type QCX-D



Type RCX-B

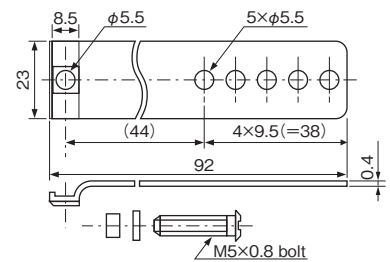


Type RCX-D



## ACCESSORY

• Sensing Bulb Mounting Band



	D	L
SA	12.7	80
C	9.5	50
SL	12.7	80

Unit: mm