

ELECTRONIC EXPANSION VALVES

High Volume OEM Item (Type UKV, VKV, AKV)

Type UKV, VKV, PKV & AKV

SAGINOMIYA

GENERAL DESCRIPTION

- Application: Wide range of air conditioning and refrigeration equipment
- Refrigerant: R22, R134a, R404A, R407C, R410A
- High cool down capability.
- Quick response.
- Less energy consumption.
- Bi-Flow capability. (Type UKV, VKV, AKV)



Type UKV



Type PKV



Type AKV

SPECIFICATIONS

Max. working pressure: 4.2 MPa {42kgf/cm²}

Valve operating pulse range: 0 to 480 pulse, 1–2 phase excitation.

TYPE NUMBER SELECTION

Type UKV – High volume OEM item

Catalog No.	Port Size (φ mm)	Capacity (U.S.R.T.) {kW}					Connection (Solder) (mm)		Operating Pressure Differential B to A flow direction (MPa) {kgf/cm ² }	Valve shut press on, A to B flow direction (MPa) {kgf/cm ² }	Wt. (kg)
		R22	R134a	R404A	R407C	R410A	B side	A side			
UKV-18D	1.8	2.9 {10.3}	2.3 {8.1}	2.1 {7.3}	3.0 {10.6}	3.4 {12.1}	φ 6.35 OD	φ 6.35 OD	0 to 3.5 {0 to 35}	2.8 {28} or less	0.05
UKV-25D	2.5	5.6 {19.6}	4.4 {15.3}	3.9 {13.8}	5.7 {20.1}	6.5 {23.0}	φ 7.94 OD	φ 7.94 OD		2.2 {22} or less	
UKV-30D	3.0	7.6 {26.8}	6.0 {20.9}	5.4 {18.9}	7.8 {27.5}	9.0 {31.5}			0 to 2.8 {0 to 28}	1.5 {15} or less	
UKV-32D	3.2	8.2 {28.8}	6.4 {22.5}	5.8 {20.3}	8.4 {29.6}	9.6 {33.9}				1.2 {12} or less	
UKV-40D	4.0	11.1 {39.1}	8.7 {30.6}	7.9 {27.6}	11.4 {40.2}	13.1 {46.0}			0 to 2.1 {0 to 21}	0.7 {7} or less	

• Capacity: Based on CT = 38°C, ET = 5°C, SC = 0°C and SH = 0°C

• Please contact us if other capacity or connection are required.

Type VKV – Middle volume OEM item

Catalog No.	Port Size (φ mm)	Capacity (U.S.R.T.) {kW}					Connection (Solder) (mm)		Operating Pressure Differential B to A flow direction (MPa) {kgf/cm ² }	Valve shut press on, A to B flow direction (MPa) {kgf/cm ² }	Wt. (kg)
		R22	R134a	R404A	R407C	R410A	B side	A side			
VKV-14D	1.4	1.5 {5.2}	1.1 {4.0}	1.0 {3.6}	1.5 {5.3}	1.7 {6.1}	φ 7.94 OD	φ 7.94 OD	0 to 3.5 {0 to 35}	2.8 {28} or less	0.11
VKV-18D	1.8	2.9 {10.3}	2.3 {8.1}	2.1 {7.3}	3.0 {10.6}	3.4 {12.1}				2.4 {24} or less	
VKV-20D	2.0	3.5 {12.4}	2.7 {9.7}	2.5 {8.7}	3.6 {12.7}	4.1 {14.5}			0 to 2.5 {0 to 25}	2.4 {24} or less	0.13
VKV-25D	2.5	5.3 {18.5}	4.1 {14.5}	3.7 {13.1}	5.4 {19.0}	6.2 {21.8}				2.2 {22} or less	
VKV-30D	3.0	7.0 {24.7}	5.5 {19.3}	4.9 {17.4}	7.2 {25.4}	8.3 {29.1}				1.5 {15} or less	0.15
VKV-32D	3.2	8.2 {28.8}	6.4 {22.5}	5.8 {20.3}	8.4 {29.6}	9.6 {33.9}	φ 9.52 OD	φ 12.7 OD		1.0 {10} or less	

• Capacity: Based on CT = 38°C, ET = 5°C, SC = 0°C and SH = 0°C

• Please contact us if valves for application of hot gas bypass are required.

Type PKV – Flare connection model type

Catalog No.	Port Size (φ mm)	Capacity (U.S.R.T.) {kW}					Connection (Flare)		Operating Pressure Differential (MPa) {kgf/cm ² }	Wt. (kg)
		R22	R134a	R404A	R407C	R410A	Inlet	Outlet		
PKV-14BS	1.4	1.5 {5.2}	1.1 {4.0}	1.0 {3.6}	1.5 {5.3}	1.7 {6.1}	3/8"	3/8"	0 to 2.3 {0 to 23}	0.5
PKV-18BS	1.8	2.9 {10.3}	2.3 {8.1}	2.1 {7.3}	3.0 {10.6}	3.4 {12.1}		3/8"		
PKV-24BS	2.4	5.0 {17.5}	3.9 {13.7}	3.5 {12.3}	5.1 {18.0}	5.9 {20.6}		1/2"	0 to 2.2 {0 to 22}	0.7
PKV-30BS	3.0	7.9 {27.8}	6.2 {21.7}	5.6 {19.6}	8.1 {28.5}	9.3 {32.7}				

• Capacity: Based on CT = 38°C, ET = 5°C, SC = 0°C and SH = 0°C

Type AKV – Large capacity type

Catalog No.	Port Size (φ mm)	Capacity (U.S.R.T.) {kW}					Connection (Solder) (mm)		Operating Pressure Differential B to A flow direction (MPa) {kgf/cm ² }	Valve shut press on, A to B flow direction (MPa) {kgf/cm ² }	Wt. (kg)
		R22	R134a	R404A	R407C	R410A	B side	A side			
AKV-55D	5.5	23.7 {83.4}	18.5 {65.2}	16.7 {58.8}	24.4 {85.6}	27.9 {98.1}	φ 15.88 OD	φ 15.88 OD	0 to 2.5 {0 to 25}	0.7 {7} or less	0.4
AKV-65D	6.5	28.4 {99.9}	22.2 {78.1}	19.8 {70.4}	29.2 {102.5}	33.4 {117.4}					0.42

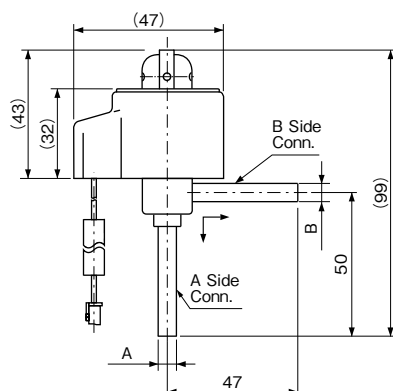
• Capacity: Based on CT = 38°C, ET = 5°C, SC = 0°C and SH = 0°C

Coil

Valve Type	Rated Voltage & Current	Wt.(kg)
Type UKV	12V DC...260mA/Phase	0.13
Type VKV, PKV		0.15
Type AKV	12V DC...375mA/Phase	0.4

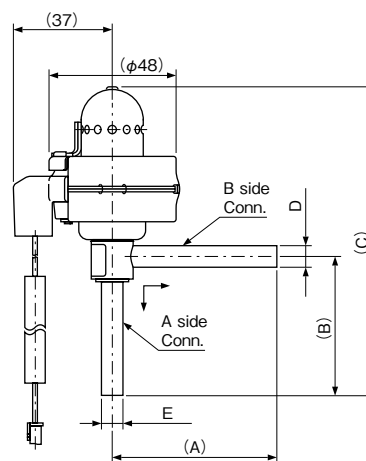
DIMENSIONS

Type UKV



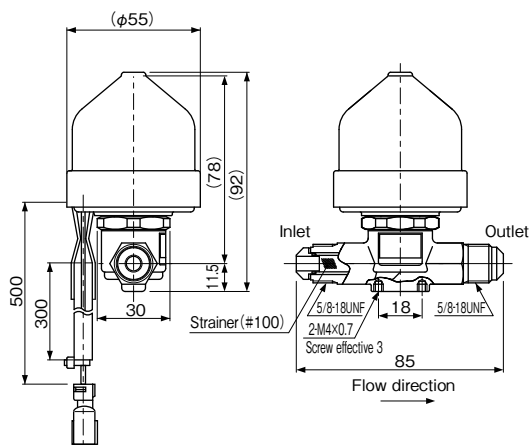
Catalog No.	A	B
UKV-18D	$\phi 6.35$	
UKV-25D	$\phi 7.94$	
UKV-30D		
UKV-32D		
UKV-40D		

Type VKV

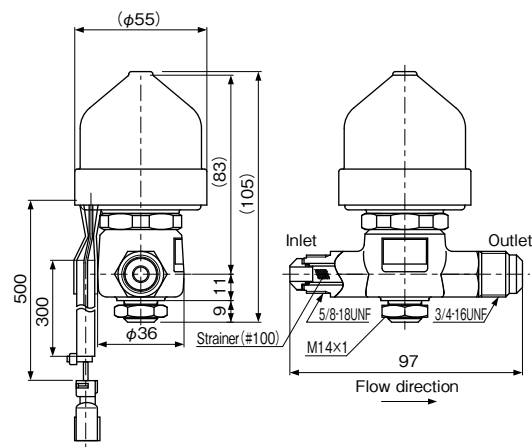


Catalog No.	A	B	C	D	E
VKV-14D	64	49	112	$\phi 7.94$	
VKV-18D					
VKV-20D					
VKV-25D					
VKV-30D					
VKV-32D	66	64	130	$\phi 9.52$	$\phi 12.7$

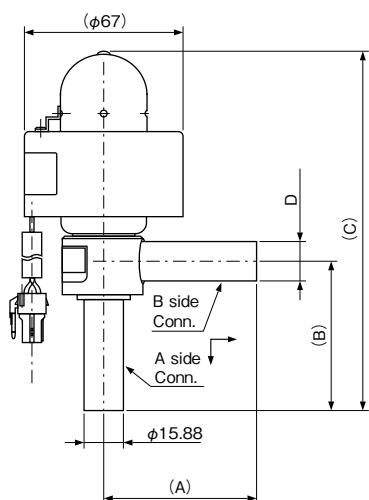
Type PKV-14BS to 24BS



Type PKV-30BS



Type AKV



Unit: mm

Catalog No.	A	B	C	D	E
AKV-55D	64.5	65.5	150	$\phi 15.88$	
AKV-65D					