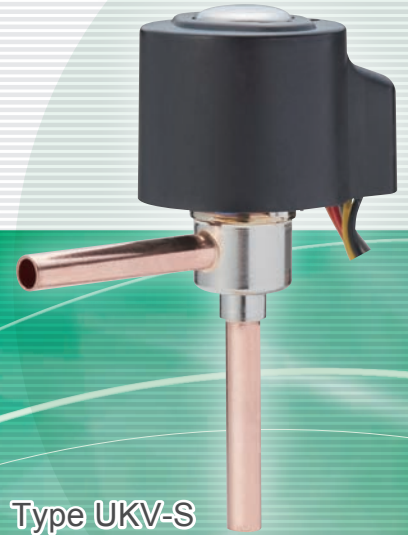


ELECTRONIC EXPANSION VALVE series

Products Digest Catalog

For Refrigeration and
Air conditioning...

SAGINOMIYA Electronic Expansion Valve series
for wide range of applications
and specifications



Type UKV-S



Type UKV
(for Refrigeration unit)



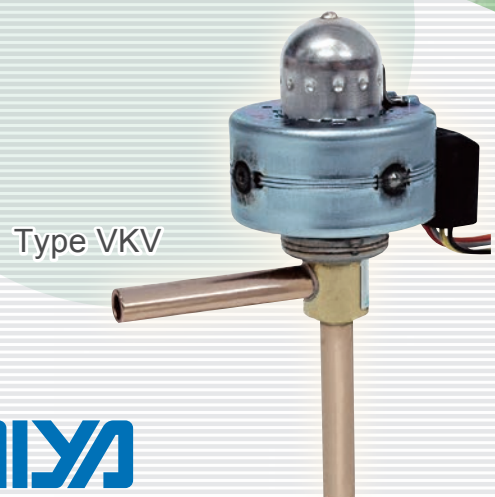
Type PKV



Type AKV



Type LKV-S



Type VKV

SAGInoMIYA

ELECTRONIC EXPANSION VALVE

• Used in various applications and controls

Application	Type	Feature	Refrigerant	Nominal Capacity (U.S.R.T.)
Air Conditioning • Room air conditioner • Ducted residential air conditioner • Packaged air conditioner • VRF	UKV-S	High pressure differential, compact size	R410A	~40
	VKV	Applicable for hot-gas line		~15
	UKV-F	With internal check valve function		~8
	LKV-S	Low valve leakage and Low flow noise type		~10
	AKV	Applicable for hot-gas line		~35
Refrigeration Unit • Freezer • Cold storage • Display case	UKV	Wide range of port size	R404A	~8
	PKV	Applicable for low temperature (-50°C)		~5
	GKV	Applicable for extreme low temperature (-70°C)	※1 R23	~18
• Chiller	AKV	Applicable for hot-gas line	R134a	~22
	MKV	Large capacity		~55
• Household refrigerator • Vending machine	RKV	2-way, 3-way, 4-way changeover	R600a	~1

Based on condensing temp. 38°C, evaporating temp. 5°C, sub-cooling 0°C and superheat 0°C
 For other refrigerants, please contact SAGINOMIYA.

※1: Based on condensing temp. -10°C, evaporating temp. -50°C, sub-cooling 0°C and superheat 0°C

Application	Type	Feature	Refrigerant	Nominal Capacity (U.S.R.T.)
CO ₂ Refrigerant • Display case • Freezer	UKV-J	Applicable for ultra-high pressure (15MPa)	※2 R744(CO ₂)	~2
	JKV			~32
• Heat pump water heater	UKV-J		※3 R744(CO ₂)	~2
	JKV			~42

※2: Based on condensing temp. -5°C, evaporating temp. -25°C, sub-cooling 0°C and superheat 0°C

※3: Based on gas cooler outlet temp. 22°C, gas cooler outlet pressure 9.5MPa, evaporating temp. 6°C and superheat 0°C

● Air Conditioning



Port Size ϕ 0.8 to 4.0



Port Size ϕ 4.0 to 6.1

Type UKV-S

OEM

High pressure differential, compact size

Refrigerant *	R410A, R32, R134a, R22
Port Size (mm)	0.8 to 6.1
Application	Packaged air conditioner, VRF (for Outdoor unit)
Nominal Capacity (100%open) (U.S.R.T.){kW}	R22 0.4 to 33.6 {1.5 to 118.4}
	R410A 0.5 to 39.5 {1.8 to 139.2}

※Based on condensing temp. 38°C, evaporating temp. 5°C, sub-cooling 0°C and superheat 0°C



Port Size ϕ 1.3 to 3.2

Type LKV-S

OEM

Low internal Leakage and flow noise type

Refrigerant *	R410A, R32, R134a, R22
Port Size (mm)	1.3 to 3.2
Application	Packaged air conditioner, VRF (for Indoor unit)
Nominal Capacity (100%open) (U.S.R.T.){kW}	R410A 2.0 to 10.1 {6.9 to 35.6}

※Based on condensing temp. 38°C, evaporating temp. 5°C, sub-cooling 0°C and superheat 0°C

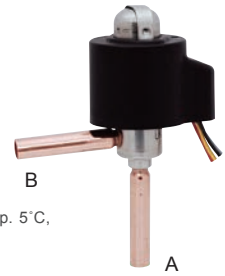
*For other refrigerant the above, please contact SAGINOMIYA.
 *Consent to "Important Notice for usage" is required when using with flammable refrigerants. Please contact us for details.

Type UKV-F

OEM

With internal check valve function

Refrigerant *	R410A, R32, R134a, R22
Port Size (mm)	1.9 to 3.2
Cv Value (A → B)	0.47
Application	Residential air conditioner
Nominal Capacity (100%open) (U.S.R.T.){kW}	R22 2.9 to 6.4 {10.3 to 22.5}
	R410A 3.4 to 7.5 {12.1 to 26.5}



※Based on condensing temp. 38°C, evaporating temp. 5°C,
sub-cooling 0°C and superheat 0°C
※B→A: Flow control
※A→B: Flow bypass

Refrigeration Unit

Type UKV

OEM

Wide range of port size

Refrigerant *	R448A, R449A, R407H, R134a, R404A, R407C, R463A-J, R410A, R1234yf, R290, R600a
Port Size (mm)	1.8 to 4.0
Application	Freezer, Cold storage, Display case
Nominal Capacity (100%open) (U.S.R.T.){kW}	R22 0.4 to 11.1 {1.5 to 39.1}
	R404A 1.1 to 27.6 {0.3 to 7.8}

※Based on condensing temp. 38°C, evaporating temp. 5°C, sub-cooling 0°C and superheat 0°C



Type VKV

OEM

Applicable for hot-gas line

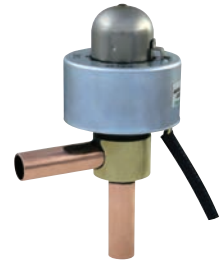


Refrigerant *	R448A, R449A, R407H, R134a, R404A, R407C, R463A-J, R410A, R1234yf, R290
Port Size (mm)	1.4 to 4.0
Application	Freezer, Cold storage, Display case
Nominal Capacity (100%open) (U.S.R.T.){kW}	R22 1.5 to 13.2 {5.2 to 46.4}
	R410A 1.7 to 15.5 {6.1 to 54.5}

※Based on condensing temp. 38°C, evaporating temp. 5°C, sub-cooling 0°C and superheat 0°C
Please contact us for hot gas bypass application.

Type AKV

Applicable for hot-gas line



Refrigerant *	R448A, R449A, R407H, R134a, R404A, R407C, R463A-J, R410A, R1234yf, R290, R600a
Port Size (mm)	5.5, 6.5
Application	Chiller, VRF, etc.
Nominal Capacity (100%open) (U.S.R.T.){kW}	R134a 18.5 / 22.0 {65.2 / 77.3}
	R410A 27.9 / 33.0 {98.1 / 116.2}

※Based on condensing temp. 38°C, evaporating temp. 5°C, sub-cooling 0°C and superheat 0°C
Please contact us for hot gas bypass application.

Type MKV

Large capacity



Refrigerant *	R134a, R404A, R407C, R22
Port Size (mm)	16.0
Application	Chiller, etc.
Nominal Capacity (100%open) (U.S.R.T.){kW}	R22 82.5 {290.5}
	R134a 64.5 {227.1}

※Based on condensing temp. 38°C, evaporating temp. 5°C, sub-cooling 0°C and superheat 0°C

Type PKV

Applicable for low temperature (-50°C)



Refrigerant *	R448A, R449A, R407H, R134a, R404A, R407C, R463A-J, R410A
Port Size (mm)	1.4 to 3.0
Application	Freezer, Cold storage, Display case
Nominal Capacity (100%open) (U.S.R.T.){kW}	R22 1.5 to 7.9 {5.2 to 27.8}
	R404A 1.0 to 5.6 {3.6 to 19.6}

※Based on condensing temp. 38°C, evaporating temp. 5°C, sub-cooling 0°C and superheat 0°C

Type GKV

Applicable for extreme low temperature (-70°C)



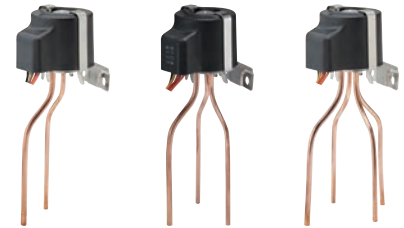
Refrigerant *	R23, R448A, R449A, R407H, R134a, R404A, R407C, R463A-J, R410A
Port Size (mm)	1.8 to 6.0
Application	Freezer, Cold storage, Display case
Nominal Capacity (100%open) (U.S.R.T.){kW}	※1 R23 3.5 to 18.9 {12.4 to 66.7}
	※2 R404A 2.1 to 11.1 {7.3 to 39.2}

※1: Based on condensing temp. -10°C, evaporating temp. -50°C, sub-cooling 0°C and superheat 0°C
 ※2: Based on condensing temp. 38°C, evaporating temp. 5°C, sub-cooling 0°C and superheat 0°C

Type RKV

OEM

2-way, 3-way, 4-way changeover



2-way change over valve 3-way change over valve 4-way change over valve

Refrigerant *	R600a, R290, R1234yf, R134a
Port Size (mm)	0.8, 1.0
Application	Refrigerator, Vending machine
Nominal Capacity (100%open) (U.S.R.T.){kW}	R600a 0.40 / 0.48 {1.4 / 1.7}
	R134a 0.45 / 0.54 {1.6 / 1.9}

※Based on condensing temp. 38°C, evaporating temp. 5°C, sub-cooling 0°C and superheat 0°C

CO₂ Refrigerant

Type UKV-J

OEM

Applicable for ultra-high pressure (15MPa)



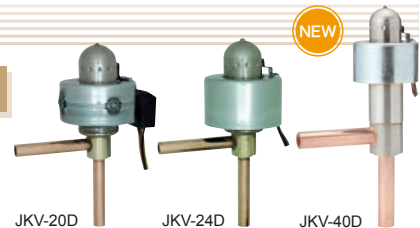
Refrigerant *	R744 (CO ₂)
Port Size (mm)	0.8 to 1.4
Application	Heat pump water heaters, Display case
Nominal Capacity (100%open) (U.S.R.T.){kW}	R744 0.8 to 2.9 {2.8 to 10.2} ※1
	1.1 to 3.9 {3.7 to 13.6} ※2

※1: Based on condensing temp. -5°C, evaporating temp. -25°C, sub-cooling 0°C and superheat 0°C
 ※2: Based on gas cooler outlet temp. 22°C, gas cooler outlet pressure 9.5MPa, evaporating temp. 6°C and superheat 0°C

Type JKV

OEM

Applicable for ultra-high pressure (15MPa)



JKV-20D JKV-24D JKV-40D

Refrigerant *	R744 (CO ₂)
Port Size (mm)	2.0 to 4.0
Application	Heat pump water heaters, Display case
Nominal Capacity (100%open) (U.S.R.T.){kW}	R744 6.2 to 31.4 {21.9 to 110.4} ※1
	8.2 to 41.5 {29.0 to 146.3} ※2

※1: Based on condensing temp. -5°C, evaporating temp. -25°C, sub-cooling 0°C and superheat 0°C
 ※2: Based on gas cooler outlet temp. 22°C, gas cooler outlet pressure 9.5MPa, evaporating temp. 6°C and superheat 0°C

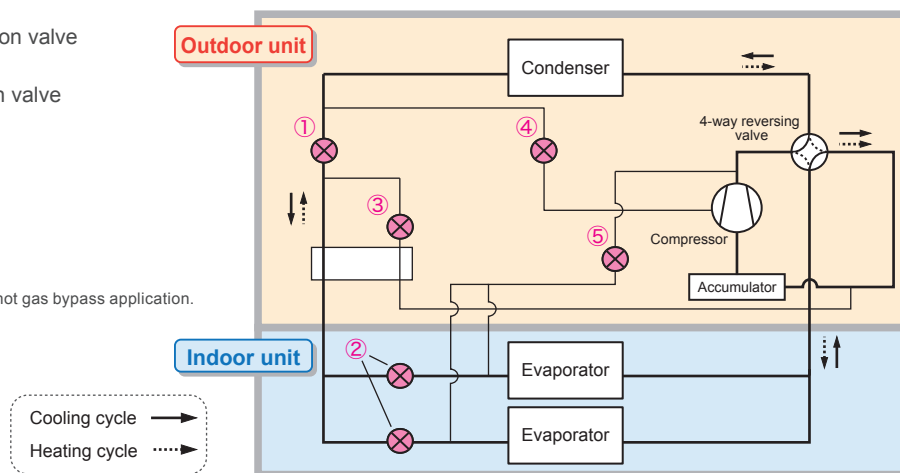
*For other refrigerant the above, please contact SAGINOMIYA.

*Consent to "Important Notice for usage" is required when using with flammable refrigerants. Please contact us for details.

SYSTEM EXAMPLE

- ① Outdoor expansion valve
- ② Indoor expansion valve
- ③ Sub-cooling
- ④ Injection
- ⑤ Hot gas bypass

※Please contact us for hot gas bypass application.



NOTES FOR SAFETY

Failure to read and follow all instruction carefully before installing or operating the product could cause personal injury and/or property damage.

Specifications are subject to change without notice.

SAGINOMIYA SEISAKUSHO, INC.

<Japan, Korea, Oceania>

E-mail : inter@saginomiya.co.jp

Tel : +81-3-6205-9120 Fax : +81-3-6205-9122

URL : <http://www.saginomiya-global.com/en/>

<Asia>

Saginomiya (Thailand) Co., Ltd. E-mail : info@saginomiya.co.th

Tel : +66-2260-8364 Fax : +66-2260-8366

<Europe, Middle East, Africa>

SAGINOMIYA EUROPE Sp. z o.o. E-mail : info@saginomiya.eu

Tel : +48-22-101-30-00 Fax : +48-22-101-30-01

<North America, Latin America>

SAGINOMIYA AMERICA, INC. E-mail : Sales@saginomiya-am.com

Tel : +1-614-766-7390 Fax : +1-614-766-7391

2022.1

