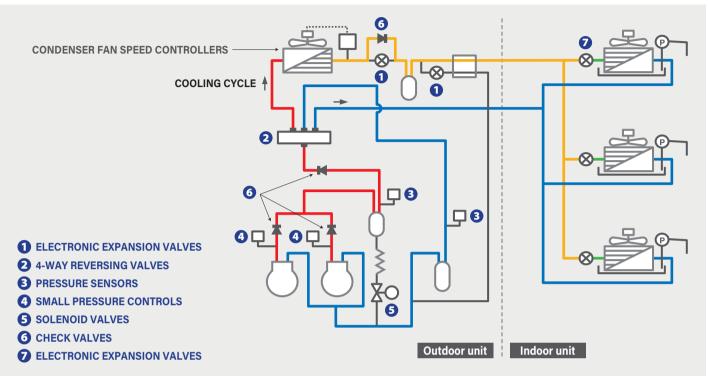
# **AUTOMATIC CONTROLS**

**Product Digest Catalog** 



# AIR CONDITONING FIELD

## Commercial Air Conditioning



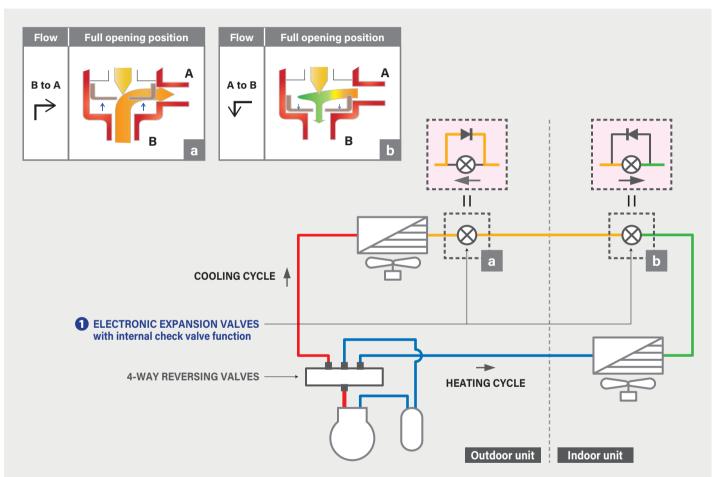


# AIR CONDITIONING FIELD



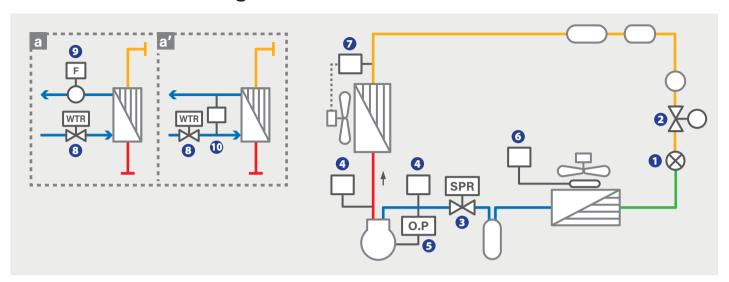
\*Please contact us for other refrigerants.

# Residential Air Conditioning





# Commercial Refrigeration Unit 1



#### R448A, R449A, R454C, R1234yf, R290

1 EXPANSION VALVE UL OEM



#### Type ARX

[Max. Working Press.] 406psi [Capacity] 0.34 to 1.71USRT (R404A)\* [Connections] 5/16" × 3/8" Solder



#### R448A, R449A, R454C, R1234yf, R600a, R290

## EXPANSION VALVES UL

Type QCX/RCX

[Max. Working Press.] 435psi [Capacity] 0.20 to 2.96USRT (R404A)\* [Equalizer] Internal/External [Connections] 3/8" × 1/2" Flare, Solder



#### R448A, R449A, R454C, R1234yf, R600a, R290

#### EXPANSION VALVES UL

## Type SCX

[Max. Working Press.] 435psi [Capacity] 3.64 to 9.07USRT (R404A)\* [Equalizer] External [Connections]

1/2" × 5/8" Flare, Solder 5/8" × 7/8" Solder, 7/8" × 1-1/8" Solder



## **1** EXPANSION VALVES

#### Type ATX

[Max. Working Press.] 406psi [Max. Working Temp.(Body)] 176°F [Capacity] 0.7 to 56.9USRT (R404A)\* [Equalizer] External (1/4" Flare) [Connections] 3/8" to 1" Solder 3/8" × 1/2" Flare



R448A, R449A

R448A, R449A

#### R448A, R449A

#### SOLENOID VALVES

#### Type SEV

[Max. Working Press.] 609psi [Fluid Temp.] -40 to 257°F [M.O.P.D.] 355psi (AC), 284psi (DC) [Cv Value] 0.25 to 5.3

[Connections] 1/4" to 3/4" Male Flare 1/4" to 7/8" Solder



## SOLENOID VALVES

#### Type REV

[Max. Working Press.] 609psi [Fluid Temp.] -40 to 257°F [M.O.P.D] 355psi [Cv Value] 1.0 to 19.4 [Connections] 3/8" to 5/8" Male Flare Rc3/8" to 3/4"

3/8" to 1-5/8" Solder



#### R448A, R449A

## PRESSURE REGULATING VALVES

#### Type EPR/SPR

[Max. Working Press.] 363psi [Capacity] EPR: 1.9 to 4.0USRT (R404A)\*

SPR: 1.1 to 4.5USRT (R404A)\* [Adjusting Range] 0 to 87psi [Connections] Flare, Solder



## R448A, R449A, R454C, R1234yf, R600a, R290

#### **CHECK VALVES**

#### Type **BCV**

[Max. Working Press.] 602psi [Fluid Temp.] -22 to 248°F [Cv Value] 0.33 to 8 [Connections] 1/4" to 1" Solder



#### R448A, R449A

## 4 SMALL PRESSURE CONTROLS UL

#### Type LTB/ETB

[Range] LTB: 0 to 56.9psi ETB: 14.2 to 35.6psi [Max. Working Press.] 213psi [Fluid Temp.] -4 to 248°F [Contact Functions] LTB: SPST. ETB: Manual Reset



## SMALL PRESSURE CONTROLS UL

## Type HTB/FTB

[Range] 113 to 426psi [Max. Working Press.] 469psi [Fluid Temp.] -4 to 248°F [Contact Functions] HTB: SPST FTB: Manual Reset





R448A, R449A

OEM

#### R448A, R449A

#### SINGLE FUNCTION PRESSURE CONTROLS

#### Type SNS

[Range] Min. -9 to 145psi Max. 14.5 to 507psi [Max. Working Press.] 43.5 to 551psi [Contact Functios] SPDT [Contact Capacity]

Small Current: 120V, 240V.AC 0.075A Medium Current: 120V.AC 10A, 240V.AC 8 to 10A Large Current: 120V.AC 16 to 20A, 240V.AC 8 to 17A

[Connections] 1/4" Male Flare

**6** OIL PROTECTION CONTROLS

[Contact Capacity] 250V.AC 3A ( $\cos \phi = 0.75$ )

[Press. Diffrential] 7.3psi(Approx.)

[Max. Working Press.] 218psi [Fluid Temp.] -4 to 248°F

Capillary and 1/4" Female Flare with Schrader







## O DUAL PRESSURE CONTROLS

## Type DNS

[Low Side Range] Min. -9 to 116psi Max. 58 to 87 psi [High Side Range] Min. 116psi Max. 435psi

[Max. Working Press.] Low Side: 218psi High Side: 479psi

[Contact Functios] SPST, SPDT

[Contact Capacity] Small Current: 120V, 240V.AC 0.075A

Medium Current: 120V.AC 10A, 240V.AC 8 to 10A Large Current: 120V.AC 16 to 20A, 240V.AC 8 to 17A

[Connections] 1/4" Male Flare

Capillary and 1/4" Female Flare with Schrader

#### R448A, R449A



Type LWS [Range] -31 to 464°F

[Contact Functions] SPDT [Contant Capacity] 125V.AC 0.05 to 8.5A, 0.5 to 16A 250V.AC 0.05 to 4.5A, 0.5 to 8A

**6** TEMPERATURE CONTROLS **UL** 



#### R448A, R449A, R454C, R1234yf, R600a, R290

#### CONDENSER FAN SPEED CONTROLLERS UL

# Type XGE

Type ONS

[Range] 7.3 to 50.8psi

[Max. Working Press.] 681psi [Contorol Method] Phase Control [Range] 116 to 566psi [Rated Amp.] 0.2 to 3A [Connections] 1/4" Female Flare with Schrader



#### CONDENSER FAN SPEED CONTROLLERS

#### Type RGE

[Max. Working Press.] 681psi [Contorol Method] Phase Control [Range] 116 to 566psi [Rated Amp.] 0.2 to 8A [Connections] 1/4" Female Flare with Schrader



#### R448A, R449A, R454C, R1234yf, R600a, R290

## PRESSURE ACTUATED WATER REGULATING VALVES



\*Excl. AWR

Type AWR/VWR

[Range] AWR: 87 to 261psi, VWR: 145 to 421psi [Max. Working Press.] AWR: 290psi, VWR: 522psi [Max. Water Temp.] 140°F [Max. Water Press.] 145psi

[Connections] AWR: 1/2" Flare Rc3/8" to 1-1/4" 1-1/2" to 2-1/2" Flange VWR: NPT3/8" to 3/4" Rc3/8" to 3/4"



## R448A, R449A

#### FLOW SWITCHES UL



## Type FQS

[Range] 18 to 2268L/min [Max. Working Press.] 145psi [Fluid Temp.] 41 to 636°F



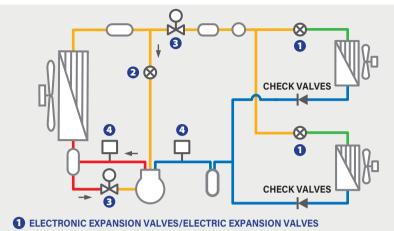
## n DIFFERENTIAL PRESSURE CONTROLS UL

## Type WNS

[Range] 4.4 to 50.8psi [Press. Diffrential] 4.4 to 36.3psi [Max. Working Press.] 72.5 to 218psi [Fluid Temp.] -4 to 248°F [Electrical Rating] 250V.AC 4.5A  $(\cos \phi = 0.75)$ 



## Commercial Refrigeration Unit 2



R448A, R449A, R454C, R1234yf, R600a, R290

ELECTRONIC EXPANSION VALVES





#### Type AKV

[Supply Voltage] 12V.DC [Max. Working Press.] 609psi [Capacity] 16.7 to 19.8USRT (R404A)\* [Fluid Temp.] -22 to 248°F



R448A, R449A, R454C, R1234yf, R600a, R290

ELECTRONIC EXPANSION VALVES







[Supply Voltage] 12V.DC [Max. Working Press.] 623psi [Capacity] 0.3 to 7.9USRT (R404A)\* [Fluid Temp.] -58 to 140°F [Actuator] Stepper Motor



R448A, R449A

2 ELECTRONIC EXPANSION VALVES (Hot gas)

**11** ELECTRONIC EXPANSION VALVES

SOLENOID VALVES

Type GKV

Type VKV

40D: -22 to 140°F

Type ACB

A SMALL PRESSURE CONTROLS

[Supply Voltage] 12V.DC, 24V.DC

[Capacity] 2.1 to 11.2USRT (R404A)\*

[Max. Working Press.] 609psi

[Supply Voltage] 12V, 24V.DC

[Max. Working Press.] 609psi [Capacity] 1.0 to 9.3USRT (R404A)\* [Fluid Temp.] -22 to 248°F

[Fluid Temp.] -94 to 140°F

#### R448A, R449A



ELECTRIC EXPANSION VALVES

R448A, R449A, R454C, R1234yf, R600a, R290

R448A, R449A, R454C, R1234yf, R600a, R290

[Supply Voltage] 100V.AC, 200V.AC, 220V.AC [Max. Working Press.] 609psi [Capacity] 0.4 to 2.6USRT (R404A)\* [Fluid Temp.] -22 to 158°F [Connections] 3/8" Solder



#### R448A, R449A, R454C, R1234yf, R290

#### **ELECTRONIC EXPANSION VALVES UL OEM**





3 SOLENOID VALVES UL OEM

Type EPV

## Type VPV/TEV-S

[Max. Working Press.] 623psi [Fluid Temp.] -22 to 248°F [Connections] 1/4" to 1/2" Solder [Cv Value] VPV: 0.06 to 3.0

PRESSURE SENSORS

TEV-S: 0.037 to 0.09



R448A, R449A, R454C, R1234yf, R600a, R290

#### SMALL PRESSURE CONTROLS







[Range] 15 to 653psi (setting) ACB: 101 to 653psi LCB: 15 to 101psi [Contact Functions] SPST, SPDT [Contact Capacity] 250V.AC 1 to 4A [Connections] 1/4" Flare, Solder Please contact us about high durability type



Type NSK

[Press. Range] 0 to 725psi, etc. [Output] 0.5 to 4.5V.DC, etc. / 4 to 20mA [Supply Voltage] 5V.DC, etc. / 7 to 35V.DC [Connections] NPT, 1/4" Flare, Solder, R1/8"



R448A, R449A

#### **A** PRESSURE SENSORS

#### Type XSK

[Press. Range] 0 to 725psi, etc. [Output] 4 to 20mA [Supply Voltage] 10.5 to 28V.DC [Connections] 1/4" Flare, R1/8", R1/4", R3/8"



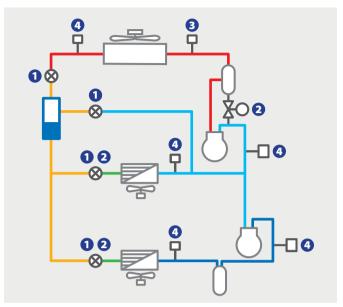
#### **DIAPHRAGM TYPE STOP VALVES**

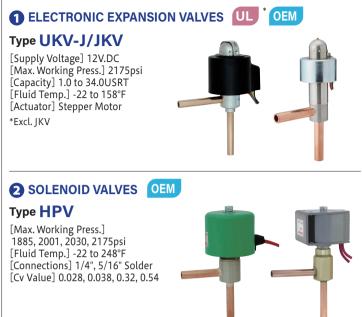
#### Type ADV

[Max. Working Press.] 507psi [Fluid Temp.] -40 to 248°F [Cv Value] 0.35 to 3.46 [Connections] 1/4" to 3/4" Flare, 1/4" to 7/8" Solder



# ■ Transcritical CO₂ system







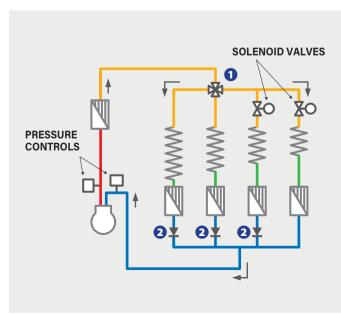


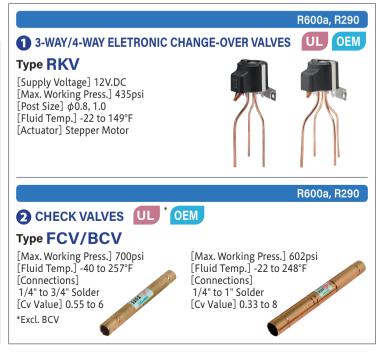


Type **HSK** [Press. Range] 0 to 2175psi [Output] 0.5 to 4.5V.DC / 4 to 20mA [Supply Voltage] 5V.DC / 7 to 35V.DC [Connections] Solder, NPT 1/4"



# Household Refrigerator





# **INDUSTRIAL FIELD**

## For Construction Machinery and Automobile Industries





#### SMALL PRESSURE CONTROLS

#### OEM

#### Type LCB

#### for Construction Machinery

[Range] 72.5 to 174.0psi [Supply Voltage] 12V, 24V.DC [Ambient Temp.] -40 to 302°F [Contacut Fucntions] SPST [Connections] R1/8"

#### for Automobile Engine

[Range]14.5 to 36.3psi [Supply Voltage] 12V, 24V.DC [Ambient Temp.] -40 to 302°F [Contacut Fucntions] SPST N.C [Connections] M10

#### for Automobile Transmission

[Range] 29.0 to 58.0psi [Supply Voltage] 12V, 24V.DC [Ambient Temp.] -40 to 302°F [Contacut Fucntions] SPST N.O [Connections] M10



#### PRESSURE SENSORS

#### OEM

#### Type KSK

#### for Construction Machinery

[Range] 0 to 725psi [Output Voltage] 0.5 to 4.5V.DC [Supply Voltage] 5V.DC [Ambient Temp.] -22 to 212°F [Connections] G1/4" with P11 O-Ring



#### **SMALL PRESSURE CONTROLS**

## Type HCB-K

## for Construction Machinery

[Range] 43.5 to 362.6psi [Supply Voltage] 12V, 24V.DC [Ambient Temp.] -22 to 212°F [Contacut Fucntions] SPST [Connections] R1/8", G1/4", G1/8"



# For Ships

#### **TEMPERATURE CONTROLS**

#### Type TNS-P/W

Drip Proof & Water Proof Model
[Range] Min. -49 to 239°F
Max. 32 to 302°F
[Limit Temp] 104 to 356°F
[Contact Functios] SPDT
[Contact Capacity] 125V.AC 8.5 to 10A
250V.AC 4.5 to 5A
[Connections] 1/4" Male Flare

[Conduit Gland]  $\phi$ 0.79in.,  $\phi$ 0.59in.





#### **PRESSURE CONTROLS**

#### Type SNS-P/W

Drip Proof & Water Proof Model
[Range] Min. -9 to 145psi
Max. 14.5 to 507psi
[Max. Working Press] 43.5 to 551psi
[Contact Functios] SPDT
[Contact Capacity] 125V.AC 8.5 to 10A
250V.AC 4.5 to 5A
[Connections] 1/4" Male Flare

[Conduit Gland]  $\phi$ 0.79in.,  $\phi$ 0.59in.





# UNIT OF VISCOSITY CONTROL Type VCU







Viscosity Controller (DUJ)

Viscosity Sensor (AVM)

Steam Control Motor Valve (WGK+NVK)

## **INDUSTRIAL FIELD**

# For Semiconductor and liquid crystal manufacturing equipment

#### **VORTEX FLOW METERS** UL



#### Type **SLK**

[Fluid contact Material] PFA [Range] 0.4 to 90L/min [Supply Voltage] 12 to 24V.DC [Output] (Current type) Current: 4 to 20mA (Pulse type) Pulse Rate: 0.1 to 10mL/pulse [Max. Working Press.] 72.5 to 145psi

[Fluid Temp.] 32 to 194°F [Ambient Temp.] 32 to 122°F



#### **VORTEX FLOW SENSORS**

#### Type JLK

[Fluid contact Material] Stainless Steel, PPS, EPDM or FKM [Range] 4 to 220L/min [Supply Voltage] 12 to 24V.DC [Output] 4 to 20mA [Max. Working Press.] 145psi [Fluid Temp.] 32 to 194°F [Ambient Temp.] 32 to 122°F



#### **VORTEX FLOW METERS**

#### Type RLK

[Range] 4 to 130L/min [Supply Voltage] 12 to 24V.DC [Output] Current: 4 to 20mA Pulse Rate: 2 to 100mL/pulse [Max. Working Press.] 145psi [Fluid Temp.] 32 to 122°F [Ambient Temp.] 32 to 122°F



## BELLOWS OEM

## Type HBL etc./WSL Hydraulically Forming Bellows

[Materials] Phosphor Bronze, etc. [Sizes] O.D : 0.3 to 11.3in. I.D: 0.2 to 10.5in. Welding Bellows [Materials] Stainless Steel [Sizes] O.D: 0.5 to 6.0in.

I.D: 0.3 to 5.4in.



#### **RESISTIVITY METERS**

#### Type RNE/ARK

[Range] 0.05 to 20MΩ·cm [Supply Voltage] 24V.DC [Output] 4 to 20mA [Max. Working Press.] 116psi [Fluid Temp.] 32 to 203°F [Ambient Temp.] 32 to 113°F [Fluid] Ultra Purified Water or Purified Water





## Others

#### PRESSURE REDUCING VALVES

#### Type ARV

[Decompress Range] 14.5 to 508psi [Fluid Temp.] -4 to 176°F [Max. Working Press.] 522psi [Connections] 3/8" to 3/4" Flare



#### **BELLOWS TYPE STOP VALVES**

#### Type **NBV**

[Max. Working Press.] 426, 511psi [Fluid Temp.] -22 to 248°F [Cv Value] 0.36 to 6.7 [Connections] 1/4" to 3/4" Flare 10A, 15A, 20A Flange Rc1/4" to 3/4"



#### **BELLOWS TYPE STOP VALVES**

#### Type SBV

[Max. Working Press.] 426, 511psi [Fluid Temp.] -22 to 248°F [Cv Value] 10 to 45 [Connections] 25A to 50A Flange Rc1" to 2"



#### **DIGITAL THERMOSTATS**

#### Type ALE

[Range] -58 to 86°F, 32 to 212°F [Supply Voltage] 85 to 264V.AC [Ambient Temp.] 14 to 122°F



#### **DIGITAL HUMIDISTATS**

#### Type **BLE**

[Range] 30 to 90%RH [Supply Voltage] 85 to 264V.AC [Ambient Temp.] 14 to 122°F





# **INDUSTRIAL FIELD**

# ■ Test Systems

■ Driving Simulator DiM (Driver in Motion)



■ Road Simulator (4Poster)



■ 6DOF Road Simulator



■ Spin Torsional Test System



**■** Elastomer Test System



■ Torsional Elastomer Test System



**■** Electric Servo Test System



# **GLOBAL NETWORKS**



SAGINOMIYA AMERICA, INC. (USA)
Sales



SAGINOMIYA AMERICA, INC. Dallas Office (USA)





**SAGINOMIYA EUROPE Sp. z o.o. (Poland)** Sales



Danfoss Saginomiya Sp. z o.o. (Poland) Manufacturing



FOSHAN HUALU AUTOMATIC CONTROLS LIMITED (China) Sales & Manufacturing



Saginomiya (Thailand) Co., Ltd. (Thailand) Sales & Manufacturing



SAGINOMIYA SEISAKUSHO, INC (Japan) Headquarters





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.



2024.12

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