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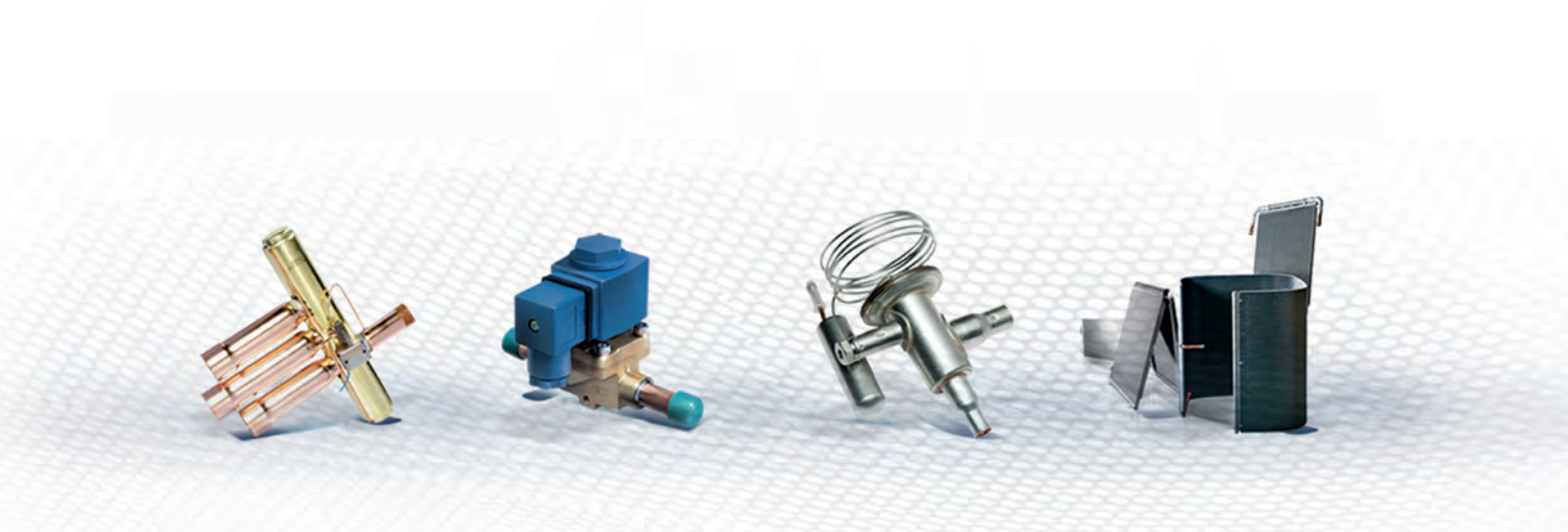

General Product Catalogue

AIR CONDITIONING

COMMERCIAL REFRIGERATION

HEAT PUMP

SANHUA

SANHUA

*"Strive for perfection, **Pursuit of excellence"***

Sanhua is a leading HVAC&R manufacturer of controls and components with a global footprint and 30 years of experience. Our co-operation with the largest companies in the Automotive, Appliance and HVAC&R industry makes Sanhua a leading worldwide OEM supplier providing the highest quality components at the most competitive price.

Furthermore, strategic acquisitions by Sanhua of leading HVAC brands such as Ranco and Aweco and joint venture projects with Danfoss transformed Sanhua into one of the largest manufacturers of Expansion, Solenoid and Reversing Valves with annual valve sales exceeding 100 Million pieces.

SANHUA IS LISTED IN TOP 100 STRONGEST CHINESE INDUSTRIAL BRANDS.

After sustainable growth over the last 3 decades, Sanhua have made significant progress to introduce a comprehensive range of controls and line components for the Commercial Air conditioning and Refrigeration Industries and to increase its service level coverage in the most important European markets.

SUMMARY

4 WAY REVERSING VALVE SHF SERIES 10

ELECTRONIC EXPANSION VALVE DPF-T/S SERIES 20
ELECTRONIC EXPANSION VALVE VPF SERIES 24
ELECTRONIC EXPANSION VALVE O SERIES 32
ELECTRONIC EXPANSION VALVE R SERIES 36
PRESSURE SENSOR YCQ SERIES 38

THERMOSTATIC EXPANSION VALVE RFKA SERIES 46
THERMOSTATIC EXPANSION VALVE RFKH SERIES 52
THERMOSTATIC EXPANSION VALVE RFGB SERIES 58
THERMOSTATIC EXPANSION VALVE RFGD SERIES 64

CONTROLLER FOR EEV 72
RESIDENTIAL INVERTER CONTROLLER 74
INVERTER CONTROLLER FOR LARGE SYSTEM 75
INVERTER CONTROLLER FOR HP WATER HEATER 76
STANDAR INVERTER COMPRESSOR CONTROLLER 77

SOLENOID VALVE MDF SERIES 80
SOLENOID VALVE FDF N/C SERIES 84
SOLENOID VALVE FDF N/O SERIES 86
SOLENOID VALVE HDF SERIES 90
SOLENOID VALVE MDF FLANGE SERIES 94
SOLENOID VALVE FDF FLANGE SERIES 96

BALL VALVE SBV SERIES 97
BALL VALVE CBV SERIES 101
CHECK VALVE PISTON TYPE YCV SERIES 105
CHECK VALVE FLOAT TYPE SERIES 108
SIGHT GLASS SYJ SERIES 110
BRASS SERVICE VALVE SSV SERIES 114
ANGLE VALVE GZF SERIES 116
RECEIVER VALVE ZJF SERIES 119
CHARGE VALVE TCJ SERIES 120
BAR-STOCK SERVICE VALVE SMV SERIES 122

UNI-FLOW FILTER DRIER DTG/L SERIES 128
BI-FLOW FILTER DRIER STG/L SERIES 138
FILTER DRIERS WITH REPLACEABLE CORE HTG SERIES 146
BI-STABLE SOLENOID VALVE BDF/KMV SERIES 156
STEP VALVE DDF SERIES 157
DRAIN PUMP A SERIES 158
DRAIN PUMP B SERIES 160
FLOAT LEVEL SWITCH YKG (A) SERIES 162
ACCUMULATOR P SERIES 163
ACCUMULATOR S SERIES 165
LIQUID RECEIVER V SERIES 167
SUCTION LINE ACCUMULATOR (COMPRESSOR) KCY SERIES 168
COMPENSATOR JYQ SERIES 170
MUFFLER TXY/XYQ SERIES 172
PESSURE VESSEL Y SERIES 174
ASSEMBLY GZJ SERIES 175

Note: Sanhua accepts no responsibility for any errors that may occur in this catalogue. Sanhua accepts no responsibility for any product selection made from this material, it is the customers sole responsibility to ensure the correct selection of any components.

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Technical information

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SANHUA INTERNATIONAL
info@sanhuaeurope.com

Certificate of registration
ISO 14001:2004

Certificate of registration
ISO 9001:2008

REACH

NR. 1907/2006
CONFORMITY DECLARATION

BEST SUPPLIER AWARDS

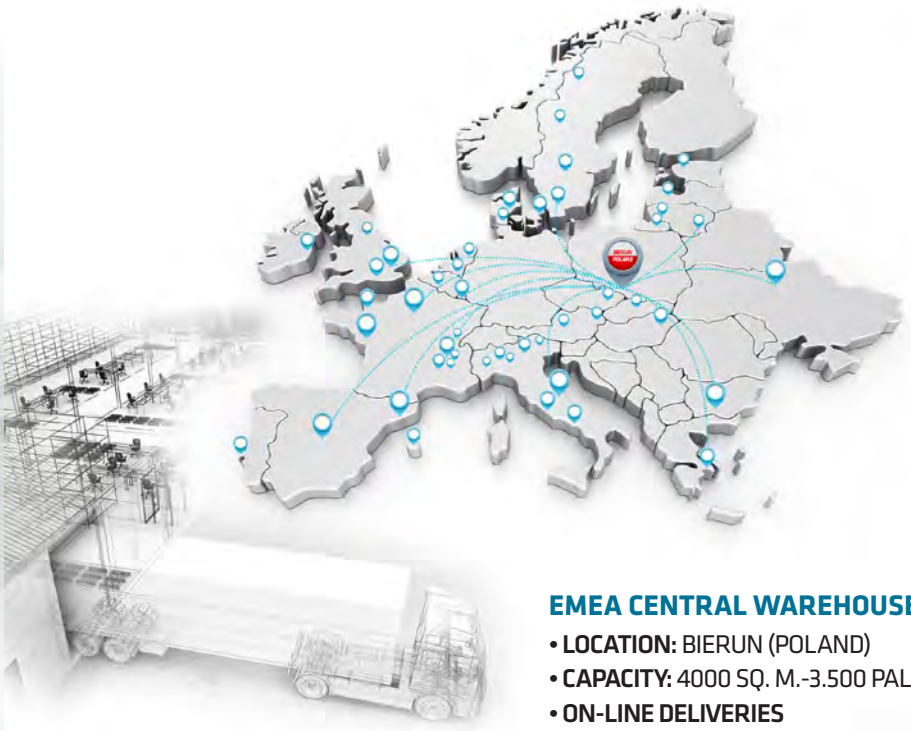
B/S/H/

Carrier

TRANE

Note: Conditions could change without previous notice due to components updating or typing mistakes.
Sanhua declines any responsibility for a wrong product choice based on this table. Please make sure all your requirements are covered in our suggestion.

GLOBAL FOOTPRINT & LOCAL SUPPORT



- **Technical Service Hotline in 4 languages (English, Italian, German and Spanish)**
- **On site engineering support on request.**
- **Online Data Sheets and product catalogues.**
- **B2B Customer Platform, on line 24x7 order & stock management.**

EMEA CENTRAL WAREHOUSE

- **LOCATION:** BIERUN (POLAND)
- **CAPACITY:** 4000 SQ. M.-3.500 PALLETS
- **ON-LINE DELIVERIES TRACKING SYSTEM**
- **OPENING HOURS FLEXIBILITY**
- **URGENCIES MANAGEMENT**

QUALITY AND R&D

The company has a sufficient number of modern manufacturing equipment, advanced production engineering and effective control tools.

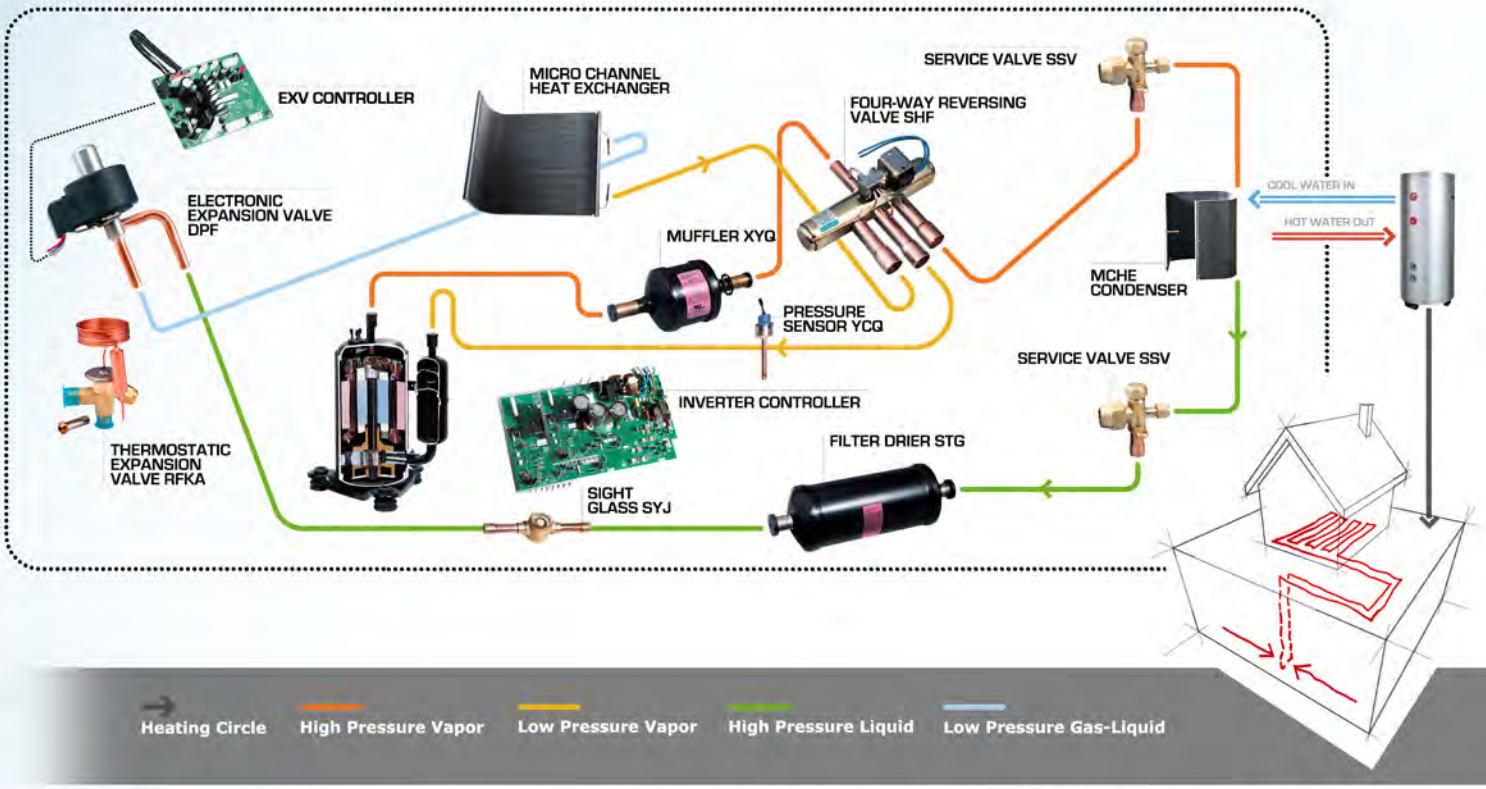
Products of Sanhua have passed many international and domestic safety certificates such as CQC, CE, TüV, UL, VDE, and have gained trust and satisfaction from customers with reliable and continuous-improving quality.

ISO9001 Quality Management System
ISO14001 Environment Manag.System
QC080000 Hazardous Substance
ISO10012 Measurement Manag System**

eco GREEN

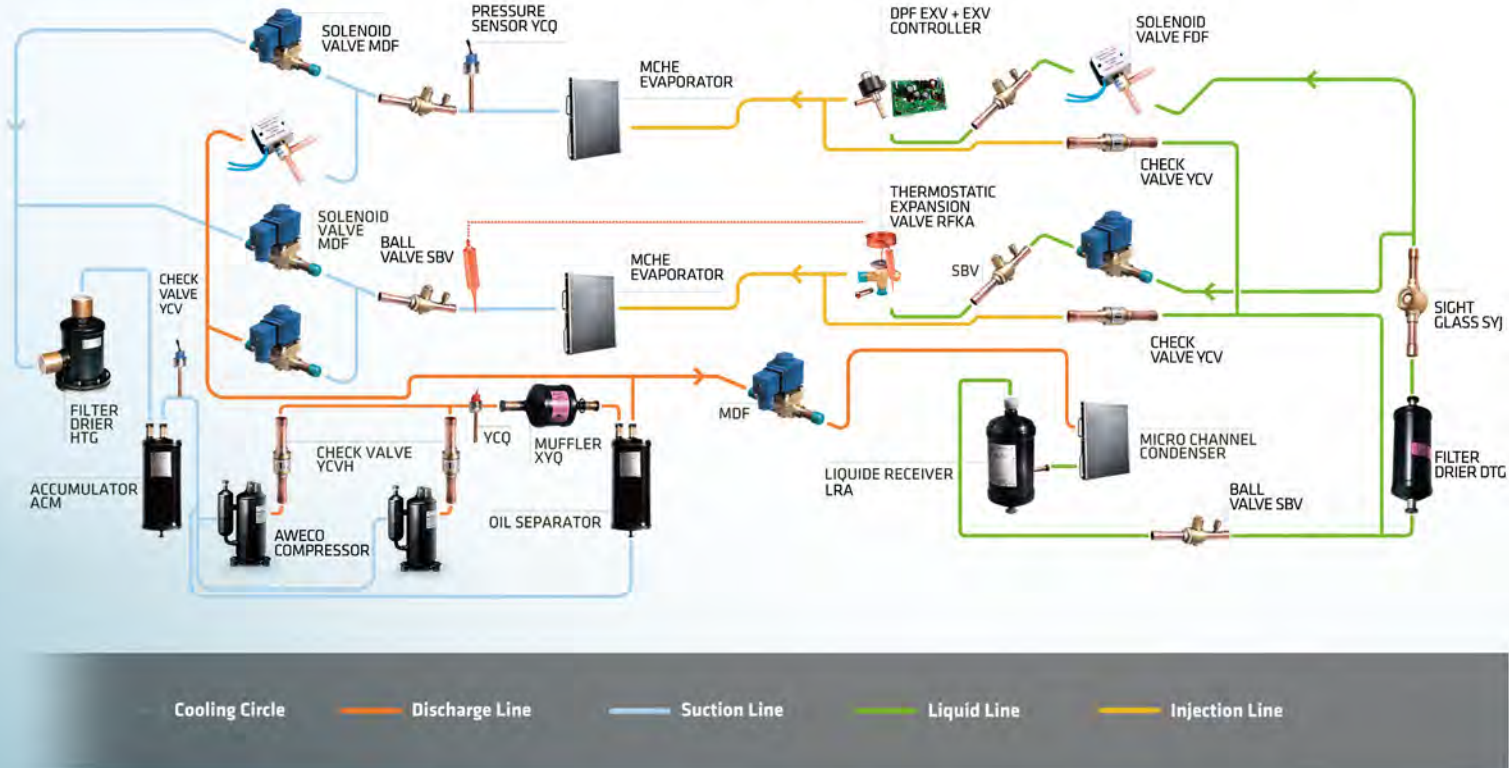
SANHUA

Air to Water Heat Pump *Application Solutions*

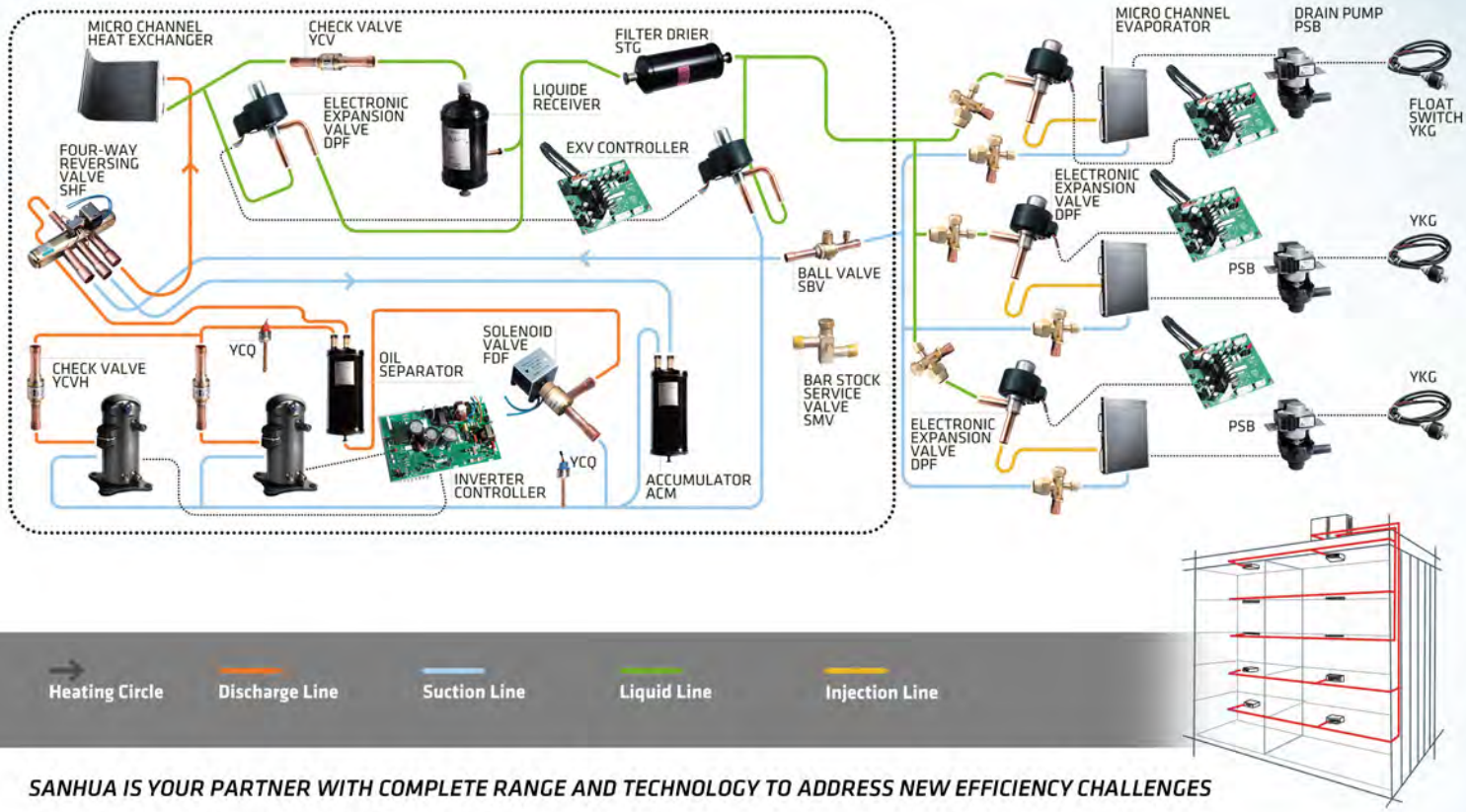


SANHUA IS YOUR PARTNER WITH COMPLETE RANGE AND TECHNOLOGY TO ADDRESS NEW EFFICIENCY CHALLENGES

Commercial Refrigeration *Application Solutions*



COMMERCIAL AIR CONDITIONING
VRF SYSTEM



SANHUA IS YOUR PARTNER WITH COMPLETE RANGE AND TECHNOLOGY TO ADDRESS NEW EFFICIENCY CHALLENGES

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SANHUA *YOUR ROAD MAP TO THE ECO-DESIGN DIRECTIVE**

*KEEPS YOU ONE STEP AHEAD OF THE COMING **EFFICIENCY** AND **ENVIRONMENTAL** EUROPEAN **CHALLENGES***

EEV Technology + Electronic Controls

- *Improves HVAC&R system efficiency up to **20%***
- *DPF&VPF series from 2kW to 1400kW*
  **75kW and 1400kW available in Quarter 4*
- *Advanced MSS (Minimum Stable Superheat) control logic*

2 kW

1400kW

4 Way Reversing Valve

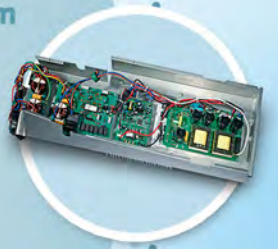
- *Improves efficiency by **5%***
- *SHF series 1kW to 420 kW*
- *Widest range in the market with Single Body Design*

1 kW

420kW

Inverter Controller for Large System

- *Improves system efficiency up to **30%***
- ***Active Frequency** Conversion Technology*
- *Wide Range of voltage application*



MCHE

- *Improves efficiency by **30%***
- *Refrigerant Charge Reduction by **30%** Environmental Friendly*
- *MCHE is lighter in weight, smaller in volume Compact Design*

**DIRECTIVE 2012/27/EU*

ADERAL ES

ADVANCED
Technology & Solutions

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2 out of 3 AC units are equipped with a **SANHUA** *reversing valve*

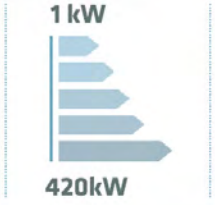
YEARLY SANHUA SUPPLIES OVER 50 MILLION FOUR WAY REVERSING VALVES TO THE COMMERCIAL AND RESIDENTIAL HVAC INDUSTRY WORLDWIDE

DISCOVER WHY

www.sanhuaclimate.com

ADVANCED
Technology & Solutions

- ✓ *Improves efficiency by* **5%**
- ✓ *SHF series 1kW to 420 kW*
- ✓ *Widest range in the market with Single Body Design*



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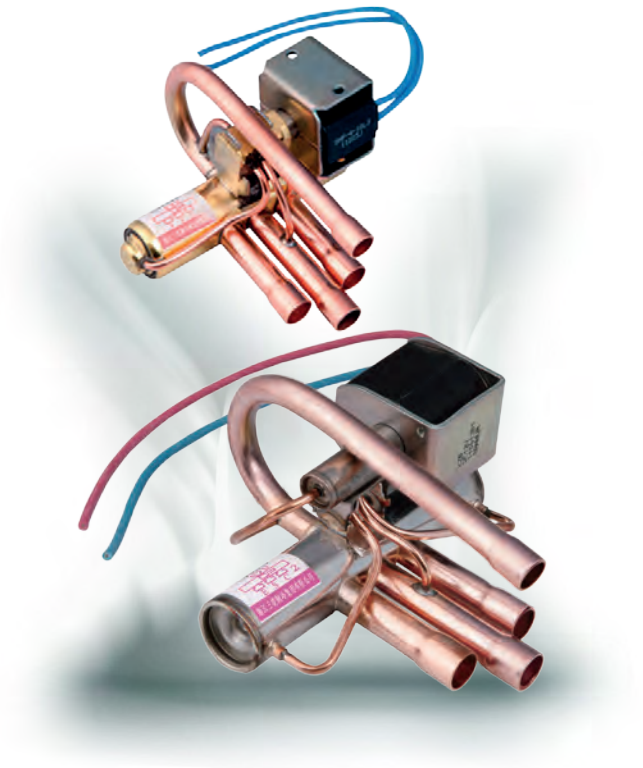
ADERAL.ES

SHF SERIES

4 Way Reversing Valve

SHF series four-way reversing valves are applicable for heat pump systems such as central, unitary and room air conditioners to realize switching between cooling mode and heating mode by changing the flow path of refrigerant.



FEATURES

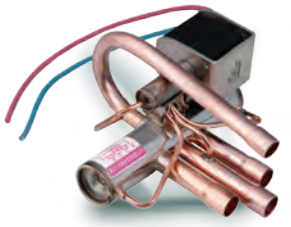
- WIDE APPLICATION RANGE
- SUITABLE FOR COOLING CAPACITIES FROM 3.6 TO 420KW (R410A, CONDITION 2)
- SEVERAL DESIGNS AVAILABLE

GENERAL SPECIFICATION

- Applicable for all common HCFC and HFC refrigerants such as: R22, R134a, R404A, R407C, R410A, R507
- Medium temperature TS min./max.: -30°C / +135°C *
- Ambient temperature min./max.: -30°C / +50 or +70°C (Depending on used coil)
- Relative humidity: 0 to 95% RH
- Max. operating pressure PS: 4.5 MPa (45 bar)
- Installation position:
  - Coil upwards or with body axis in horizontal alignment
  - Flow direction according to installation instruction
- Certifications: UL/CSA** and declaration according to LVD or PED

* SHF-50-911-D2: TS min./max. : -30°C / +120°C
** SHF(L)-4H to SHF-50 valves, coil selection on request

SHF SERIES
4 Way Reversing Valve

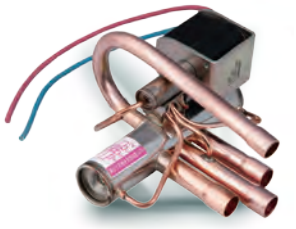


GENERAL CHARACTERISTICS

General Characteristics									
Valve Model	Unique code for multi package*	Ø Port	Kv	Connections ODF		MOP	OPD		PED Category
				ØD	ØE/S/C		Max.	Min.	
		[mm]	[m³/h]	[inch]	[inch]	[MPa]	[MPa]	[MPa]	
SHF(L)-3H-12U-51	10180944702	7,4	1,5	1/4	5/16	4,5	4	0,25	3.3
SHF(L)-4H-23U-51	10180944902	8	1,6	5/16	3/8	4,5	4	0,25	3.3
SHF(G)-7C-34U	10325040102	11,1	2,9	3/8	1/2	4,5	4	0,25	3.3
SHF(G)-7C-34	10325040302	11,1	2,9	3/8	1/2	4,5	4	0,25	3.3
SHF(L)-7H-35-51	10180945002	11,1	2,9	3/8	5/8	4,5	4	0,25	3.3
SHF(G)-11C-34U	10325040202	11,5	3,9	3/8	1/2	4,5	4	0,25	3.3
SHF(L)-11H-35U-51	10180942902	11,5	4,5	3/8	5/8	4,5	4	0,3	3.3
SHF(L)-11H-45D1-51	10180943002	11,5	4,5	1/2	5/8	4,5	4	0,3	3.3
SHF(L)-11H-46D1-51	10180944602	11,5	4,5	1/2	3/4	4,5	4	0,3	3.3
SHF-14A-46	10325030102	13,5	6,6	1/2	3/4	4,5	4	0,3	3.3
SHF-20D-46-02	10325020102	17,2	9,5	1/2	3/4	4,5	4	0,3	3.3
SHF-20D-47-02	10325030302	17,2	9,9	1/2	7/8	4,5	4	0,3	3.3
SHF-20D-57-02	10325032902	17,2	9,9	5/8	7/8	4,5	4	0,3	3.3
SHF-20D-67-02	10325039802	17,2	9,9	3/4	7/8	4,5	4	0,3	3.3
SHF-35B-47-04	10325033602	20	14,7	1/2	7/8	4,5	4	0,3	3.3
SHF-35B-57-04	10325035702	20	14,7	5/8	7/8	4,5	4	0,3	3.3
SHF-35B-59-04	10325039902	20	14,7	5/8	1 1/8	4,5	4	0,3	3.3
SHF-35B-67-04	10325031002	20	14,7	3/4	7/8	4,5	4	0,3	3.3
SHF-35B-69-04	10325035802	20,9	14,7	3/4	1 1/8	4,5	4	0,3	3.3
SHF-35B-79-04	10325033002	20,9	14,7	7/8	1 1/8	4,5	4	0,3	3.3
SHF-50A-79	10325030002	22,8	18,3	7/8	1 1/8	4,5	4	0,3	3.3
SHF-50-911D2	10325011602	25,6	18,5	1 1/8	1 3/8	4,5	3,1	0,3	I
SHF(L)-70-810	10325030202	28,6	28,5	1	1 1/4	4,5	4	0,3	3.3
SHF(L)-70-810-01	10325033102	28,6	28,5	1	1 1/4	4,5	4	0,3	3.3
SHF(L)-70-911	10325038402	28,6	28,5	1 1/8	1 3/8	4,5	4	0,3	I
SHF(L)-70-911-01	10325038302	28,6	28,5	1 1/8	1 3/8	4,5	4	0,3	I
SHF(L)-70-913-05	10325039502	28,6	28,5	1 1/8	1 5/8	4,5	4	0,3	I
SHF(L)-70-913-03	10325039702	28,6	28,5	1 1/8	1 5/8	4,5	4	0,3	I
SHF(L)-100-911	10325037902	34,8	40,5	1 1/8	1 3/8	4,5	4	0,3	I
SHF(L)-100-911-01	10325038002	34,8	40,5	1 1/8	1 3/8	4,5	4	0,3	I
SHF(L)-100-913	10325033702	34,8	40,5	1 1/8	1 5/8	4,5	4	0,3	I
SHF(L)-100-913-01	10325034702	34,8	40,5	1 1/8	1 5/8	4,5	4	0,3	I
SHF(L)-100-1012	10325027102	34,8	40,5	1 1/4	1 1/2	4,5	4	0,3	I
SHF(L)-100-1012-01	10325033202	34,8	40,5	1 1/4	1 1/2	4,5	4	0,3	I
SHF(L)-100-1013	10325035502	34,8	40,5	1 1/4	1 5/8	4,5	4	0,3	I
SHF(L)-100-1013-01	10325038902	34,8	40,5	1 1/4	1 5/8	4,5	4	0,3	I

* Available also as industrial package. Contact Sanhua for more details.

SHF SERIES
4 Way Reversing Valve



GENERAL CHARACTERISTICS

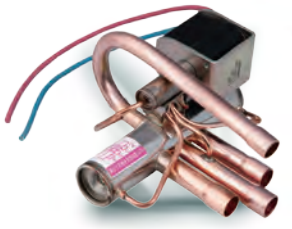
General Characteristics									
Valve Model	Unique code for multi package*	Ø Port	Kv	Connections ODF		MOP	OPD		PED Category
				ØD	ØE/S/C		Max.	Min.	
		[mm]	[m³/h]	[inch]	[inch]	[MPa]	[MPa]	[MPa]	
SHF(L)-140-1113	10325038102	41	58,4	1 3/8	1 5/8	4,5	4	0,3	I
SHF(L)-140-1213	10325038602	41	58,4	1 1/2	1 5/8	4,5	4	0,3	I
SHF(L)-140-1214	10180940402	41	58,4	1 1/2	1 3/4	4,5	4	0,3	I
SHF(L)-140-1313	10325034102	41	58,4	1 5/8	1 5/8	4,5	4	0,3	I
SHF(L)-175-1217	10325030402	46,4	70,5	1 1/2	2 1/8	4,5	4	0,3	I
SHF(L)-175-1317	10325034002	46,4	70,5	1 5/8	2 1/8	4,5	4	0,3	I
SHF(L)-210-1321	10325030502	50	84,4	1 5/8	2 5/8	4,5	4	0,3	I
SHF(L)-350-1721	71325000702	59	138,4	2 1/8	2 5/8	4,5	4	0,3	I
SHF(L)-420-2125	71325000502	69	177	2 5/8	3 1/8	4,5	4	0,3	I

* Available also as industrial package. Contact Sanhua for more details.

Nominal Operating Conditions	Condition 1	Condition 2
Condensing Temperature t_c	38°C	54,4°C
Evaporating Temperature t_o	5°C	7,2°C
Superheat Δt_{sc}	5K	5K
Subcooling Δt_{sr}	0K	5K

Notes for Capacity Selection Tables:
1) Pressure drop is valid for flow from ØC to ØS or from ØE to ØS
2) R407C data based on dew point conditions

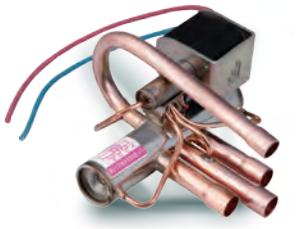
SHF SERIES
4 Way Reversing Valve



Capacity Selection Table									
Valve Model	Unique code for multi package*	Nominal Cooling Capacity (condition 1)							
		R407C[2)]		R410A		R134a		R404A / R507	
		ΔP: 0,1 bar	ΔP: 0,2 bar	ΔP: 0,1 bar	ΔP: 0,2 bar	ΔP: 0,1 bar	ΔP: 0,2 bar	ΔP: 0,1 bar	ΔP: 0,2 bar
		[kW]	[kW]	[kW]	[kW]	[kW]	[kW]	[kW]	[kW]
SHF(L)-3H-12U-51	10180944702	3,3	4,7	4,0	5,7	2,6	3,7	2,9	4,0
SHF(L)-4H-23U-51	10180944902	3,6	5,0	4,3	6,1	2,8	4,0	3,1	4,3
SHF(G)-7C-34U	10325040102	6,5	9,1	7,8	11,0	5,1	7,2	5,5	7,8
SHF(G)-7C-34	10325040302	6,5	9,1	7,8	11,0	5,1	7,2	5,5	7,8
SHF(L)-7H-35-51	10180945002	6,5	9,1	7,8	11,0	5,1	7,2	5,5	7,8
SHF(G)-11C-34U	10325040202	8,7	12,3	10,5	14,8	6,8	9,6	7,4	10,5
SHF(L)-11H-35U-51	10180942902	10,0	14,2	12,1	17,1	7,9	11,1	8,6	12,1
SHF(L)-11H-45D1-51	10180943002	10,0	14,2	12,1	17,1	7,9	11,1	8,6	12,1
SHF(L)-11H-46D1-51	10180944602	10,0	14,2	12,1	17,1	7,9	11,1	8,6	12,1
SHF-14A-46	10325030102	14,7	20,8	17,7	25,1	11,5	16,3	12,6	17,8
SHF-20D-46-02	10325020102	21,2	29,9	25,5	36,1	16,6	23,5	18,1	25,6
SHF-20D-47-02	10325030302	22,1	31,2	26,6	37,7	17,3	24,5	18,9	26,7
SHF-20D-57-02	10325032902	22,1	31,2	26,6	37,7	17,3	24,5	18,9	26,7
SHF-20D-67-02	10325039802	22,1	31,2	26,6	37,7	17,3	24,5	18,9	26,7
SHF-35B-47-04	10325033602	32,7	46,3	39,5	55,9	25,7	36,3	28,1	39,7
SHF-35B-57-04	10325035702	32,7	46,3	39,5	55,9	25,7	36,3	28,1	39,7
SHF-35B-59-04	10325039902	32,7	46,3	39,5	55,9	25,7	36,3	28,1	39,7
SHF-35B-67-04	10325031002	32,7	46,3	39,5	55,9	25,7	36,3	28,1	39,7
SHF-35B-69-04	10325035802	32,7	46,3	39,5	55,9	25,7	36,3	28,1	39,7
SHF-35B-79-04	10325033002	32,7	46,3	39,5	55,9	25,7	36,3	28,1	39,7
SHF-50A-79	10325030002	40,8	57,7	49,2	69,6	32,0	45,2	34,9	49,4
SHF-50-911D2	10325011602	41,2	58,3	49,8	70,4	32,3	45,7	35,3	49,9
SHF(L)-70-810	10325030202	63,5	89,8	76,6	108,4	49,8	70,4	54,4	76,9
SHF(L)-70-810-01	10325033102	63,5	89,8	76,6	108,4	49,8	70,4	54,4	76,9
SHF(L)-70-911	10325038402	63,5	89,8	76,6	108,4	49,8	70,4	54,4	76,9
SHF(L)-70-911-01	10325038302	63,5	89,8	76,6	108,4	49,8	70,4	54,4	76,9
SHF(L)-70-913-05	10325039502	63,5	89,8	76,6	108,4	49,8	70,4	54,4	76,9
SHF(L)-70-913-03	10325039702	63,5	89,8	76,6	108,4	49,8	70,4	54,4	76,9
SHF(L)-100-911	10325037902	90,2	127,6	108,9	154,0	70,8	100,1	77,3	109,3
SHF(L)-100-911-01	10325038002	90,2	127,6	108,9	154,0	70,8	100,1	77,3	109,3
SHF(L)-100-913	10325033702	90,2	127,6	108,9	154,0	70,8	100,1	77,3	109,3
SHF(L)-100-913-01	10325034702	90,2	127,6	108,9	154,0	70,8	100,1	77,3	109,3
SHF(L)-100-1012	10325027102	90,2	127,6	108,9	154,0	70,8	100,1	77,3	109,3
SHF(L)-100-1012-01	10325033202	90,2	127,6	108,9	154,0	70,8	100,1	77,3	109,3
SHF(L)-100-1013	10325035502	90,2	127,6	108,9	154,0	70,8	100,1	77,3	109,3
SHF(L)-100-1013-01	10325038902	90,2	127,6	108,9	154,0	70,8	100,1	77,3	109,3
SHF(L)-140-1113	10325038102	130,1	184,0	157,1	222,1	102,0	144,3	111,5	157,6
SHF(L)-140-1213	10325038602	130,1	184,0	157,1	222,1	102,0	144,3	111,5	157,6
SHF(L)-140-1214	10180940402	130,1	184,0	157,1	222,1	102,0	144,3	111,5	157,6
SHF(L)-140-1313	10325034102	130,1	184,0	157,1	222,1	102,0	144,3	111,5	157,6
SHF(L)-175-1217	10325030402	157,0	222,1	189,6	268,1	123,2	174,2	134,6	190,3
SHF(L)-175-1317	10325034002	157,0	222,1	189,6	268,1	123,2	174,2	134,6	190,3
SHF(L)-210-1321	10325030502	188,0	265,9	227,0	321,0	147,5	208,6	161,1	227,8
SHF(L)-350-1721	71325000702	308,3	436,0	372,2	526,4	241,8	342,0	264,2	373,6
SHF(L)-420-2125	71325000502	394,3	557,6	476,0	673,2	309,3	437,4	337,8	477,8

* Available also as industrial package. Contact Sanhua for more details.

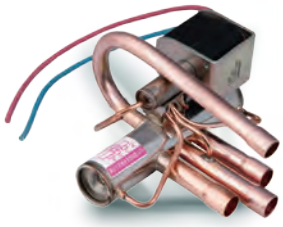
SHF SERIES
4 Way Reversing Valve



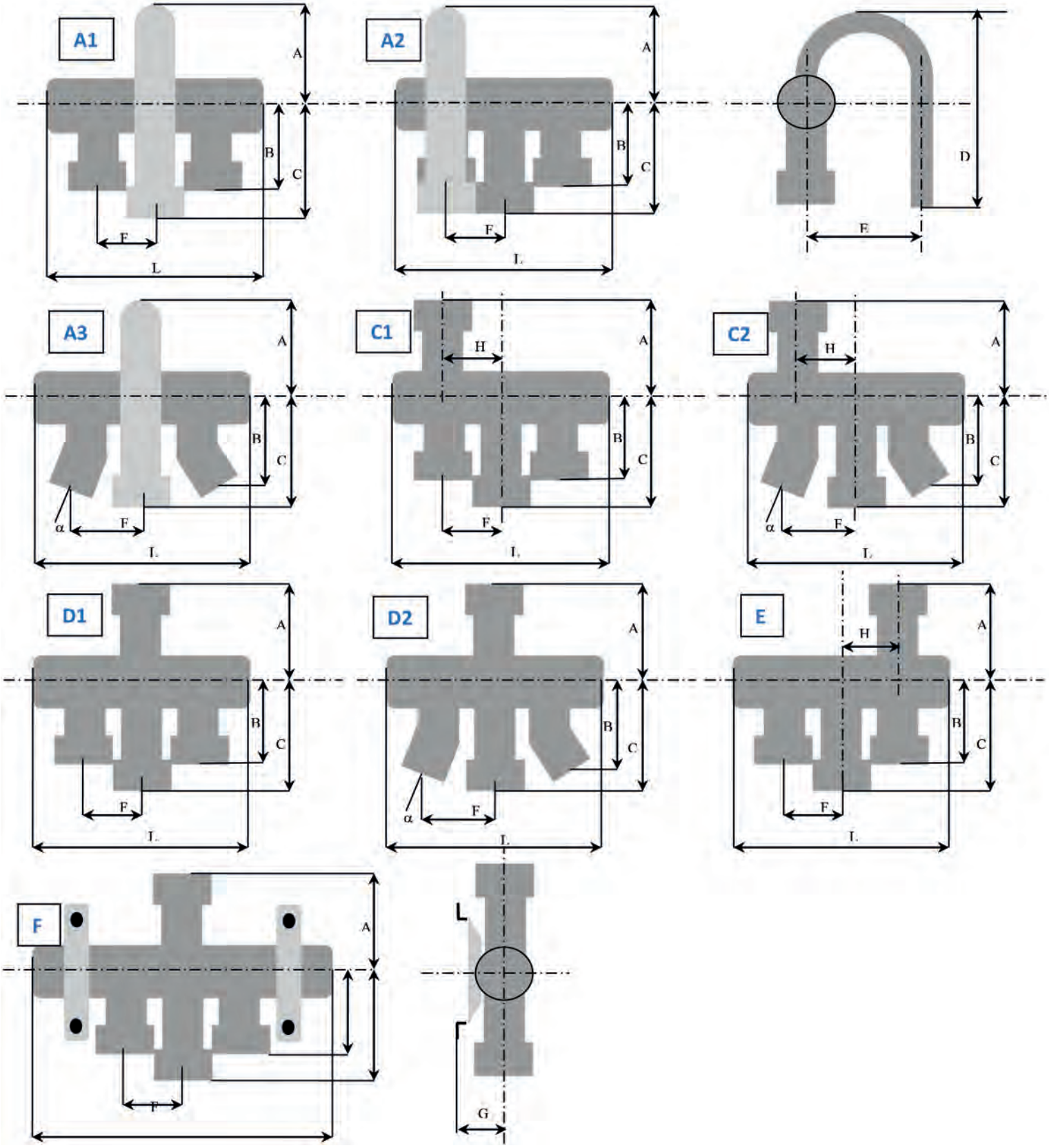
Capacity Selection Table									
Valve Model	Unique code for multi package*	Nominal Cooling Capacity (condition 2)							
		R407C[2)]		R410A		R134a		R404A / R507	
		ΔP: 0,1 bar	ΔP: 0,2 bar	ΔP: 0,1 bar	ΔP: 0,2 bar	ΔP: 0,1 bar	ΔP: 0,2 bar	ΔP: 0,1 bar	ΔP: 0,2 bar
		[kW]	[kW]	[kW]	[kW]	[kW]	[kW]	[kW]	[kW]
SHF(L)-3H-12U-51	10180944702	3,0	4,3	3,6	5,0	2,4	3,4	2,4	3,4
SHF(L)-4H-23U-51	10180944902	3,2	4,6	3,8	5,4	2,6	3,7	2,6	3,7
SHF(G)-7C-34U	10325040102	5,9	8,3	6,9	9,7	4,7	6,6	4,7	6,6
SHF(G)-7C-34	10325040302	5,9	8,3	6,9	9,7	4,7	6,6	4,7	6,6
SHF(L)-7H-35-51	10180945002	5,9	8,3	6,9	9,7	4,7	6,6	4,7	6,6
SHF(G)-11C-34U	10325040202	7,9	11,2	9,3	13,1	6,3	8,9	6,3	8,9
SHF(L)-11H-35U-51	10180942902	9,1	12,9	10,7	15,1	7,3	10,3	7,3	10,3
SHF(L)-11H-45D1-51	10180943002	9,1	12,9	10,7	15,1	7,3	10,3	7,3	10,3
SHF(L)-11H-46D1-51	10180944602	9,1	12,9	10,7	15,1	7,3	10,3	7,3	10,3
SHF-14A-46	10325030102	13,4	18,9	15,7	22,2	10,7	15,1	10,7	15,1
SHF-20D-46-02	10325020102	19,3	27,3	22,5	31,9	15,4	21,7	15,4	21,7
SHF-20D-47-02	10325030302	20,1	28,4	23,5	33,2	16,0	22,7	16,0	22,6
SHF-20D-57-02	10325032902	20,1	28,4	23,5	33,2	16,0	22,7	16,0	22,6
SHF-20D-67-02	10325039802	20,1	28,4	23,5	33,2	16,0	22,7	16,0	22,6
SHF-35B-47-04	10325033602	29,8	42,2	34,9	49,3	23,8	33,7	23,8	33,6
SHF-35B-57-04	10325035702	29,8	42,2	34,9	49,3	23,8	33,7	23,8	33,6
SHF-35B-59-04	10325039902	29,8	42,2	34,9	49,3	23,8	33,7	23,8	33,6
SHF-35B-67-04	10325031002	29,8	42,2	34,9	49,3	23,8	33,7	23,8	33,6
SHF-35B-69-04	10325035802	29,8	42,2	34,9	49,3	23,8	33,7	23,8	33,6
SHF-35B-79-04	10325033002	29,8	42,2	34,9	49,3	23,8	33,7	23,8	33,6
SHF-50A-79	10325030002	37,1	52,5	43,4	61,4	29,6	41,9	29,6	41,8
SHF-50-911D2	10325011602	37,5	53,1	43,9	62,1	29,9	42,4	29,9	42,3
SHF(L)-70-810	10325030202	57,8	81,8	67,6	95,7	46,1	65,2	46,1	65,2
SHF(L)-70-810-01	10325033102	57,8	81,8	67,6	95,7	46,1	65,2	46,1	65,2
SHF(L)-70-911	10325038402	57,8	81,8	67,6	95,7	46,1	65,2	46,1	65,2
SHF(L)-70-911-01	10325038302	57,8	81,8	67,6	95,7	46,1	65,2	46,1	65,2
SHF(L)-70-913-05	10325039502	57,8	81,8	67,6	95,7	46,1	65,2	46,1	65,2
SHF(L)-70-913-03	10325039702	57,8	81,8	67,6	95,7	46,1	65,2	46,1	65,2
SHF(L)-100-911	10325037902	82,2	116,2	96,1	136,0	65,6	92,7	65,5	92,6
SHF(L)-100-911-01	10325038002	82,2	116,2	96,1	136,0	65,6	92,7	65,5	92,6
SHF(L)-100-913	10325033702	82,2	116,2	96,1	136,0	65,6	92,7	65,5	92,6
SHF(L)-100-913-01	10325034702	82,2	116,2	96,1	136,0	65,6	92,7	65,5	92,6
SHF(L)-100-1012	10325027102	82,2	116,2	96,1	136,0	65,6	92,7	65,5	92,6
SHF(L)-100-1012-01	10325033202	82,2	116,2	96,1	136,0	65,6	92,7	65,5	92,6
SHF(L)-100-1013	10325035502	82,2	116,2	96,1	136,0	65,6	92,7	65,5	92,6
SHF(L)-100-1013-01	10325038902	82,2	116,2	96,1	136,0	65,6	92,7	65,5	92,6
SHF(L)-140-1113	10325038102	118,5	167,5	138,6	196,0	94,5	133,7	94,4	133,5
SHF(L)-140-1213	10325038602	118,5	167,5	138,6	196,0	94,5	133,7	94,4	133,5
SHF(L)-140-1214	10180940402	118,5	167,5	138,6	196,0	94,5	133,7	94,4	133,5
SHF(L)-140-1313	10325034102	118,5	167,5	138,6	196,0	94,5	133,7	94,4	133,5
SHF(L)-175-1217	10325030402	143,0	202,2	167,3	236,7	114,1	161,4	114,0	161,2
SHF(L)-175-1317	10325034002	143,0	202,2	167,3	236,7	114,1	161,4	114,0	161,2
SHF(L)-210-1321	10325030502	171,2	242,1	200,3	283,3	136,6	193,2	136,5	193,0
SHF(L)-350-1721	71325000702	280,7	397,0	328,5	464,6	224,1	316,9	223,8	316,4
SHF(L)-420-2125	71325000502	359,0	507,8	420,1	594,2	286,5	405,2	286,2	404,7

* Available also as industrial package. Contact Sanhua for more details.

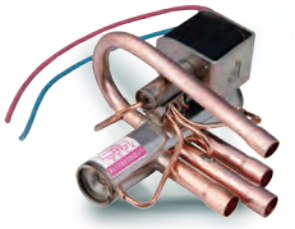
SHF SERIES
4 Way Reversing Valve



DIMENSIONS - VALVES



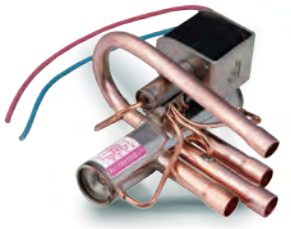
SHF SERIES
4 Way Reversing Valve



Dimensions - Valves													
Valve Model	Unique code for multi package*	Valve Style	L	A	B	C	D	E	F	G	H	Angle α	Weight
			[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[°]	[kg]
SHF(L)-3H-12U-51	10180944702	A1	88,2	38,5	38	50	88,5	43	11	-	-	0	0,2
SHF(L)-4H-23U-51	10180944902	A1	94,4	43	50	62	105	43	12	-	-	0	0,2
SHF(G)-7C-34U	10325040102	A2	113,6	48	59	71	119	52	16	-	-	0	0,28
SHF(G)-7C-34	10325040302	C1	113,6	51	59	71	-	-	16	-	-	0	0,28
SHF(L)-7H-35-51	10180945002	D2	113	52	57	72	-	-	23,5	-	16	0	0,3
SHF(G)-11C-34U	10325040202	A2	113,6	51	59	71	119	52	16	-	-	0	0,3
SHF(L)-11H-35U-51	10180942902	A3	115,5	51	57	71	119	52	23,5	-	-	15	0,3
SHF(L)-11H-45D1-51	10180943002	C2	117	52	62	87	-	-	25	-	16	15	0,32
SHF(L)-11H-46D1-51	10180944602	C2	117	52	82	87	-	-	32,5	-	16	20	0,35
SHF-14A-46	10325030102	D1	163	67	83	95	-	-	23,8	-	-	0	0,72
SHF-20D-46-02	10325020102	D1	183,6	67	83	95	-	-	28,6	-	-	0	0,75
SHF-20D-47-02	10325030302	D1	183,6	67	83	95	-	-	28,6	-	-	0	0,75
SHF-20D-57-02	10325032902	D1	183,6	67	83	95	-	-	28,6	-	-	0	0,75
SHF-20D-67-02	10325039802	D1	183,6	67	83	95	-	-	28,6	-	-	0	0,75
SHF-35B-47-04	10325033602	D1	212,2	82	87	100	-	-	33	-	-	0	1,3
SHF-35B-57-04	10325035702	D1	212,2	82	87	100	-	-	33	-	-	0	1,3
SHF-35B-59-04	10325039902	D1	212,2	82	87	100	-	-	33	-	-	0	1,3
SHF-35B-67-04	10325031002	D1	212,2	82	87	100	-	-	33	-	-	0	1,3
SHF-35B-69-04	10325035802	D1	212,2	82	87	100	-	-	33	-	-	0	1,3
SHF-35B-79-04	10325033002	D1	212,2	82	87	100	-	-	33	-	-	0	1,3
SHF-50A-79	10325030002	D1	217	91	96	128	-	-	33	-	-	0	2,1
SHF-50-911D2	10325011602	E	269	97	149	174	-	-	41,3	-	41,3	0	2,1
SHF(L)-70-810	10325030202	D1	303	111	117	131	-	-	46	-	-	0	3
SHF(L)-70-810-01	10325033102	F	303	111	117	154	-	-	46	58	-	0	3
SHF(L)-70-911	10325038402	D1	303	111	117	154	-	-	46	-	-	0	3
SHF(L)-70-911-01	10325038302	F	321	111	117	131	-	-	49	58	-	0	3,5
SHF(L)-70-913-05	10325039502	D1	321	111	117	131	-	-	49	-	-	0	3,5
SHF(L)-70-913-03	10325039702	F	321	111	117	131	-	-	49	58	-	0	3,5
SHF(L)-100-911	10325037902	D1	321	111	117	131	-	-	49	-	-	0	3,5
SHF(L)-100-911-01	10325038002	F	303	111	117	131	-	-	46	58	-	0	3
SHF(L)-100-913	10325033702	D1	303	111	117	154	-	-	46	-	-	0	3
SHF(L)-100-913-01	10325034702	F	303	111	117	154	-	-	46	58	-	0	3
SHF(L)-100-1012	10325027102	D1	321	111	117	131	-	-	49	-	-	0	3,5
SHF(L)-100-1012-01	10325033202	F	321	111	117	131	-	-	49	58	-	0	3,5
SHF(L)-100-1013	10325035502	D1	321	111	117	131	-	-	49	-	-	0	3,5
SHF(L)-100-1013-01	10325038902	F	321	111	117	131	-	-	49	58	-	0	3,5
SHF(L)-140-1113	10325038102	F	390	135,6	148,7	168,7	-	-	58	63	-	0	7,2
SHF(L)-140-1213	10325038602	F	390	135,6	148,7	168,7	-	-	58	63	-	0	7,2
SHF(L)-140-1214	10180940402	F	390	135,6	148,7	168,7	-	-	58	63	-	0	7,2
SHF(L)-140-1313	10325034102	F	390	135,6	148,7	168,7	-	-	58	63	-	0	7,2
SHF(L)-175-1217	10325030402	F	390	135,6	148,7	198	-	-	58	63	-	0	7,6
SHF(L)-175-1317	10325034002	F	390	135,6	148,7	198	-	-	58	63	-	0	7,6
SHF(L)-210-1321	10325030502	F	452	135,6	148,7	198	-	-	71,5	63	-	0	8,7
SHF(L)-350-1721	71325000702	F	531	176,5	184	240	-	-	75	82,5	-	0	22
SHF(L)-420-2125	71325000502	F	611,7	176,5	184	240	-	-	93	82,5	-	0	26

* Available also as industrial package. Contact Sanhua for more details.

SHF SERIES
4 Way Reversing Valve



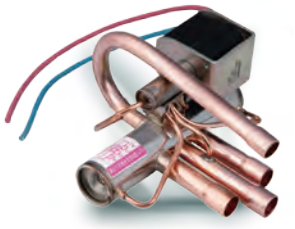
Coil Characteristics												
Coil Model [1]	Winding Code	Unique code for multi package*	Electrical Function/ Connection Type				Power Consumption					
							AC 50Hz	AC 60Hz	DC			
				[mm]	[-]	[V]	[W]	[W]	[W]	[-]	[-]	[°C]
SQ-A25 22G-00 0001	SHF-4-10L3	10805029102	Lead Wires	500	AC	220-240	4,5	3,5	-			
SQ-A25 200-00 0001	SHF-4-10L2	10805027002	Lead Wires	500	AC	200	4,5	3,5	-			
SQ-A25 100-00 0001	SHF-4-10L1	10805023602	Lead Wires	500	AC	100	4,5	3,5	-			
SQ-A25 11A-00 0001	SHF-4-10L4	10805150302	Lead Wires	500	AC	110-120	4,5	3,5	-			
SQ-A25 024-00 0001	SHF-4-10L5	10805227602	Lead Wires	500	AC	24	4,5	3,5	-	IP54	B[2]	130
SQ-A25 26H-00 0001	SHF-4-10L6	10805231902	Lead Wires	500	AC	265-277	4,5	3,5	-			
SQ-A25 22G-00 0870	SHF-4-10L3	10805240702	Lead Wires	1500	AC	220-240	4,5	3,5	-			
SQ-A25 11A-00 0840	SHF-4-10L4	10805240802	Lead Wires	1500	AC	110-120	4,5	3,5	-			
SQ-A25 024-00 0161	SHF-4-10L5	10805023002	Lead Wires	1500	AC	24	4,5	3,5	-			
SQ-A47 22G-00 0001	SHF-4-10FA5	10805065402	Spade (Faston)[3]	-	AC	220-240	6	5	-			
SQ-A44 220-00 0001	SHF-4-10FA1	10805244102	Spade (Faston)[3]	-	AC	220	6	5	-			
SQ-A47 11B-00 0001	SHF-4-10FA2	10805239302	Spade (Faston)[3]	-	AC	120	6	5	-			
SQ-A47 10A-00 0001	SHF-4-10FA3	10805244002	Spade (Faston)[3]	-	AC	100-110	6	5	-			
SQ-A47 024-00 0001	SHF-4-10FA4	10805064902	Spade (Faston)[3]	-	AC	24	6	5	-	IP00	F[2]	155
SQ-A47 26H-00 0001	SHF-4-10FA6	10805243802	Spade (Faston)[3]	-	AC	265-277	6	5	-			
SQ-D44 012-00 0001	SHF-4-10FA8	10805231802	Spade (Faston)[3]	-	DC	12	-	-	10			
SQ-D44 024-00 0001	SHF-4-10FA9	10805070102	Spade (Faston)[3]	-	DC	24	-	-	11			
SQ-A27 100-00 0001	-	10805063202	Bi-stable/Lead W.	500	AC	100	18	18	-			
SQ-A27 200-00 0001	-	10805063802	Bi-stable/Lead W.	500	AC	200	18	18	-	IP54	B[2]	130
SQ-A27 20K-00 0001	-	10805222902	Bi-stable/Lead W.	500	AC	220-240	18	18	-			
SQ-D27 012-00 0001	-	10805069302	Bi-stable/Lead W.	500	DC	12	-	-	20			

Note: * Available also as industrial package. Contact Sanhua for more details.
1) Every coil is applicable to all above specified valve models
2) Max ambient temperature up to + 50°C
3) Wire Harness for coil with Faston connector available as accessory

ACCESSORY

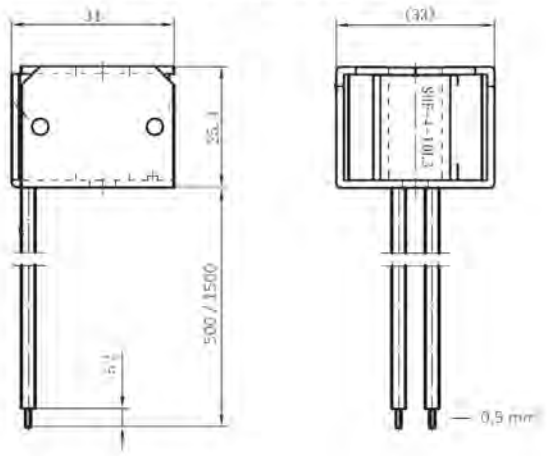
Wire Harness		
Model	Unique code for multi package	Cable Length [mm]
SQ-000000-090028	20805136302	1200
SQ-000000-090029	20805149202	2000

SHF SERIES
4 Way Reversing Valve

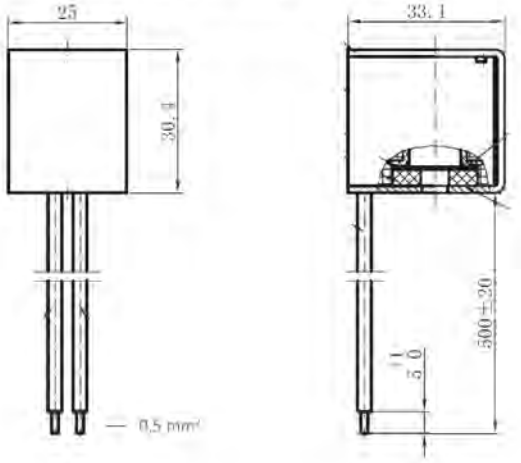


DIMENSIONS - COILS

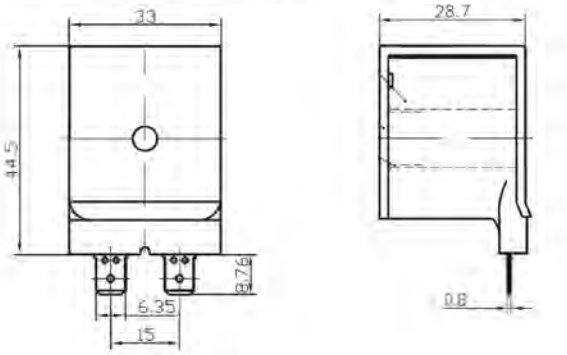
Coils with Lead Wires (SQ-A25 Series)



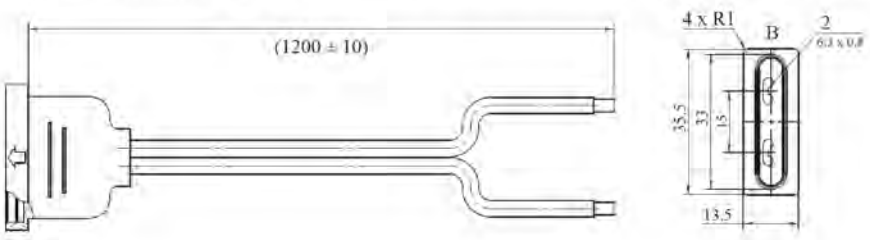
Bistable Coils (SQ-A/D27 Series)



Coils with Spade Connections (SQ-A/D44 Series)



Wire Harness (SQ-000000-0900xx)



SANHUA

Technical information

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Certificate of registration
ISO 14001:2004

Certificate of registration
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REACH

NR. 1907/2006
CONFORMITY DECLARATION

BEST SUPPLIER AWARDS

B/S/H/

Carrier

TRANE

Note: Conditions could change without previous notice due to components updating or typing mistakes.
Sanhua declines any responsibility for a wrong product choice based on this table. Please make sure all your requirements are covered in our suggestion.

Electronic Expansion Valve

T/S series electronic expansion valves are designed for use in air conditioning and refrigeration systems or in heat pumps. The valve controls the automatic adjustment of refrigerant flow rate and makes the system work under optimized conditions for the purpose of fast cooling or heating, precise temperature control and energy saving. The valve can also be used e.g. for suction line pressure controls. These valves provide bidirectional operation to control the refrigerant flow rate in heating or cooling mode.

FEATURES

- APPLICABLE FOR OIL-FREE SYSTEM (T SERIES)
- SMALLER INSTALLATION SPACE: LOW HEIGHT, SMALL VOLUME, LIGHT WEIGHT
- OPTIMIZED FLOW PATH DESIGN FOR NOISE REDUCTION
- FAST OPERATION, ENERGY SAVING
- APPLICABLE FOR REVERSIBLE SYSTEMS LIKE HEAT PUMPS: BIDIRECTIONAL FLOW

GENERAL SPECIFICATIONS

- Applicable for all common HCFC and HFC refrigerants such as: R22, R134a, R404A, R407C, R410A, R507A ...
- Cooling capacity: 3,5 to 105 kW (R22 nominal capacity)
- 500 steps (full stroke); 32 ± 20 opening steps
- Medium temperature TS min./max.: -30°C /+70°C (duty cycle rate below 50%)
- Ambient temperature min./max.: -30°C / +60°C (duty cycle rate below 50%)
- Relative humidity: : 0 to 95% RH
- Installation position: :
  - Coil installed in the upwards position, valve rotor central axis within ±15° versus vertical axis
  - Inlet connection preferably sidewise, outlet preferably downwards
- Certifications: UL/CSA and declaration according to LVD or PED

DPF-T/S SERIES
Electronic Expansion Valve

ELECTRICAL PARAMETERS

- Rated voltage: 12V DC(± 10%), rectangular wave
- Actuating mode: 4-phase 8-step permanent magnet stepping motor of direct-acting type
- Excitation mode: 1 ~ 2 phase excitation, monopole actuation
- Excitation rate:
  - Seat Ø 1,3 to 3,2 mm: 30 to 90pps
  - Seat Ø 4,0 to 6,5 mm: 30 to 40pps
- Activation of self-holding mechanism: Maintain excitation in stop position min. 0,1~1,0 sec.
- Min. motion time from completely open to completely closed:
  - Seat Ø 1,3 to 3,2 mm: 6s @ 90pps
  - Seat Ø 4,0 to 6,5 mm: 13s @ 40pps
- Coil current:
  - Seat Ø 1,3 to 3,2 mm: 260mA/phase (20°C)
  - Seat Ø 4,0 to 6,5 mm: 375mA/phase (20°C)
- Coil resistance:
  - Seat Ø 1,3 to 3,2 mm: 46 ± 3.7 Ω/phase (20°C)
  - Seat Ø 4,0 to 6,5 mm: 32 ± 3.2 Ω/phase (20°C)
- Insulation class of coil: E
- Protection class: IP 67

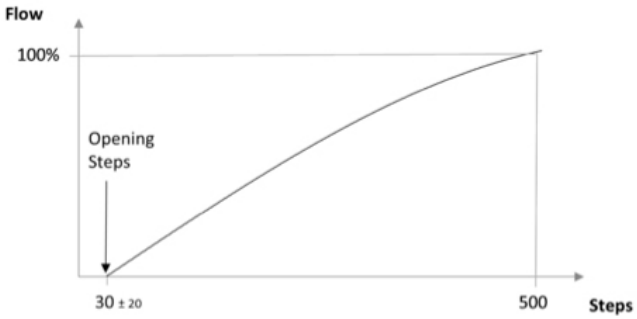
GENERAL CHARACTERISTICS

Valve Model	Unique code for multi package* [1]	Seat Φ (mm)	Kv (m^3/h)	Nominal Cooling Capacity [2] [kW]					MOP Max. Oper. Press. [MPa]	MOPD Direct [MPa]	MOPD Rev. (MPa)
				R22	R134a	R407C[3]	R404A R507A	R410A			
DPF(T01)1.3C-07	71130011902	1,3	0,05	4,7	3,6	4,8	3,3	5,5	4,5	3,5	≥2.1
DPF(T01)1.65C-05	10130316802	1,65	0,08	7,8	6,0	8,0	5,5	9,1			
DPF(T01)1.8C-08	71130009902	1,8	0,1	9,4	7,2	9,7	6,6	11			
DPF(T01)2.0C-03	71130011502	2	0,16	11,5	8,9	11,8	8,1	13,5			
DPF(T01)2.2C-01	10130320702	2,2	0,2	15	11,6	15,5	10,5	17,6			
DPF(T01)2.4C-01	71130004602	2,4	0,23	20,7	15,9	21,3	14,5	24,2			
DPF(TS1)3.0C-01	71130012102	3	0,39	30,8	23,7	31,7	21,6	36			≥1.5
DPF(TS1)3.2C-01	71130012002	3,2	0,43	36,3	28	37,4	25,4	42,5			
DPF(S03)4.0C-01	71130003702	4	0,5	42	32,3	42	29,4	50,4			≥0.7
DPF(S03)4.5C-01	10130035502	4,5	0,7	53	40,4	52,5	36,8	63			
DPF(S03)5.5C-01	71130006702	5,5	0,9	70	53,9	70	49,0	84			
DPF(S03)6.5C-02	71130006802	6,5	1,1	105	80,9	105	73,5	126		3,0	

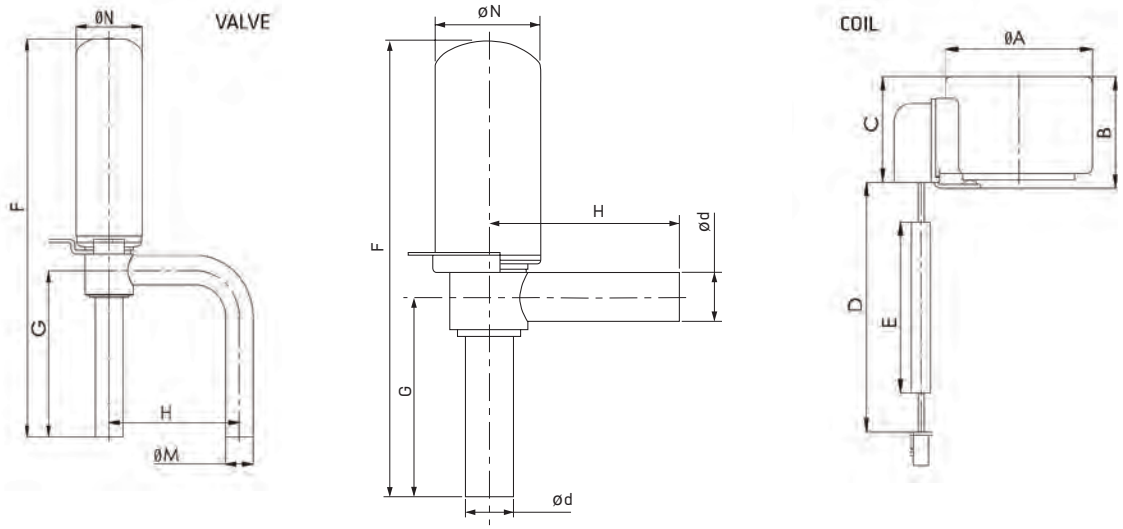
Note: * Available also as industrial package. Contact Sanhua for more details.
1) Extent of delivery without coil
2) Nominal working conditions: Condensing Temperature 38°C; Evaporating Temperature 5°C; Sub-cooling 0K; Superheat 0K
3) Nominal capacity is got at 480 fully open pulses of linear flow curve.

DPF-T/S SERIES
Electronic Expansion Valve

FLOW CHARACTERISTIC



DIMENSIONS



Valve Model	Coil Series	Valve Dimensions [mm]				
		F	G	H	Ød	ØN
DPF(T01)1.3C-07 to DPF(T01)2.4C-01	PQ-M10	78	36	30	6,35	17,35
DPF(TS1)3.0C-01 to DPF(TS1)3.2C-01		82	40	30	7,94	17,35
DPF(S03)4.0C-01 to DPF(S03)6.5C-02	PQ-M03	148	64,7	63,4	15,88	35,3

Valve Model	Coil Model	Unique code for multi package	Coil Dimensions [mm]					Coil Product Number
			ØA	B	C	D	E	
DPF(T01)1.3C-07 to DPF(TS1)3.2C-01	PQ-M10 012-000277	71810005902	38,5	26,4	25,6	700	600	DPF-58013
DPF(S03)4.0C-01 to DPF(S03)6.5C-02	PQ-M03 012-000001	71810003702	67,5	42,4	33	700	600	DPF-58002

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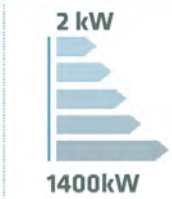

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Electronic Expansion Valve

VPF series electronic expansion valves are designed for commercial and industrial applications. Typical VPF applications are air conditioning and refrigeration systems or heat pumps. The valve controls the automatic adjustment of refrigerant flow rate and makes the system work under optimized conditions for the purpose of fast cooling or heating, precise temperature control and energy saving. The valve can also be used e.g. for suction line pressure controls. These valves provide bidirectional operation to control the refrigerant flow rate in heating or cooling mode.

FEATURES

- ENERGY SAVING THANKS TO VERY PRECISE CAPACITY CONTROL: UP TO 3800 STEPS
- INTERNAL TIGHTNESS LIKE A SOLENOID VALVE
- OPTIMIZED FLOW PATH DESIGN FOR NOISE REDUCTION
- APPLICABLE FOR REVERSIBLE SYSTEMS LIKE HEAT PUMPS: BIDIRECTIONAL FLOW
- CORROSION RESISTANT DESIGN, LONG LIFETIME, HIGH RELIABILITY
- COMPACT DESIGN
- MODELS WITH INTEGRATED SIGHT GLASS ARE AVAILABLE

GENERAL SPECIFICATION

- Applicable for all common HCFC and HFC refrigerants such as: R22, R134a, R404A, R407A, R407C, R407F, R410A, R507A ...
- Cooling capacity: 112 to 892 kW (R134a nominal capacity)
- Up to 3800 steps (full stroke); Valve starts opening with 110 steps (VPF25) and 165 steps (VPF50...250)
- Medium temperature TS min./max.: -40°C / +70°C (duty cycle rate below 50%)
- Ambient temperature min./max.: -40°C / +60°C (duty cycle rate below 50%)
- Relative humidity: : 0 to 100% RH
- Installation position:
  - Major flow direction corresponds to the arrow
  - Installation in horizontal and vertical pipes possible
  - Installation position in horizontal lines with stepper motor preferably upwards
- Certifications: Declaration according to PED and EAC

VPF SERIES
Electronic Expansion Valve

ELECTRICAL PARAMETERS

- Rated voltage: 12V DC, rectangular wave
- Actuating mode: 2-phase 4-step permanent magnet stepping motor
- Excitation mode: 2 phase excitation, bi-pole actuation
- Excitation rate: 300 pps (current drive)
- Motion time from completely open to completely closed (current drive):
  - VPF25, VPF50: 8,7s
  - VPF100: 11,7s
  - VPF150, VPF250: 12,7s
- Nominal motor current: 100mA RMS per phase in control operation
- Peak motor current: 140mA per phase in reference run
- Coil resistance: 52 ± 5,2Ω/coil (20°C)
- Insulation class of coil: E
- Protection class: IP 67

MODEL DESIGNATIONS

Position Number	Model Designation Legend	
1	**Product Code**	**Product Series**
	VPF	Electronic expansion valve with bi-pole stepper motor
2	**Capacity Size**	**Description**
	25	
	50	
	100	
	150	
	250	
3	**Connections Type**	**Description**
	H	Solder
4	**Valve Body**	**Description**
	0...4	With sight glass
	5...9	Without sight glass
5	**Pipe Connection**	**Description**
	1...9	Digit for pipe connection diameter

MODEL DESIGNATION EXAMPLE

Position Number					According to Model Designation Legend
1	**2**	**3**	**4**	**5**	
VPF	100	H	0	3	Electronic expansion valve
VPF	**100**	H	0	3	Digits for capacity size
VPF	100	**H**	0	3	Connection: Solder
VPF	100	H	**0**	3	Valve body: With sight glass
VPF	100	H	0	**3**	Digit for pipe connection diameter

VPF SERIES
Electronic Expansion Valve

TECHNICAL PARAMETER

Model	Multi package[1]	Valve Shape	Sight Glass	Connections ød ODF Inlet A x Outlet B		Seat[2] ø	Kv[3]	MWP PS	MOPD Direct A->B	MOPD Rev. B->A
				[inch]	[mm]	[mm]	m³/h	[MPa]	[MPa]	[MPa]
VPF 25-H52		straight	-	5/8 x 5/8	16 × 16	7,5	1,3	5,0	3,9	3,9
VPF 25-H53				7/8 x 7/8	22 × 22					
VPF 25-H58		L-shape	-	5/8 x 5/8	16 × 16					
VPF 25-H59				7/8 x 7/8	22 × 22					
VPF 50-H51	10130337702	straight	-	7/8 x 7/8	22 x 22	14,4	2,4			
VPF 50-H52	10130347002			7/8 x 1 1/8	-					
VPF 50-H53	10130347002			1 1/8 x 1 1/8	-					
VPF 50-H54	10130342302			1 1/8 x 1 3/8	-					
VPF 50-H56	10130347102			-	22 x 28					
VPF 50-H57	10130347202			-	28 x 28					
VPF 50-H58	10130342402			-	28 x 35					
VPF 50-H01	10130341102	straight	with sight glass	7/8 x 7/8	22 x 22					
VPF 50-H02	10130346702			7/8 x 1 1/8	-					
VPF 50-H03	10130344802			1 1/8 x 1 1/8	-					
VPF 50-H04	10130342802			1 1/8 x 1 3/8	-					
VPF 50-H06	10130346802			-	22 x 28					
VPF 50-H07	10130346902			-	28 x 28					
VPF 50-H08	10130342502			-	28 x 35					
VPF100-H51	10130347502	straight	-	1 1/8 x 1 1/8	-	14,4	4,0			
VPF100-H52	10130347602			1 1/8 x 1 3/8	-					
VPF100-H53	10130342602			1 3/8 x 1 3/8	35 x 35					
VPF100-H54	10130347702			-	28 x 28					
VPF100-H55	10130347802			-	28 x 35					
VPF100-H01	71130023702	straight	with sight glass	1 1/8 x 1 1/8	-					
VPF100-H02	10130347302			1 1/8 x 1 3/8	-					
VPF100-H03	71130023102			1 3/8 x 1 3/8	35 x 35					
VPF100-H05	10130347402			-	28 x 35					
VPF100-H06	10130343102			-	28 x 28					
VPF150-H51		L-shape	-	1 1/8 x 1 3/8	-	14,8	7,7			
VPF150-H52				1 5/8 x 1 5/8	-					
VPF150-H01		L-shape	with sight glass	1 1/8 x 1 3/8	-					
VPF150-H02				1 5/8 x 1 5/8	-					
VPF250-H01	10130348002	straight	with sight glass	1 1/8 x 1 1/8	-	23,9	12,0	4,5	3,5	3,5
VPF250-H02	10130342902			1 3/8 x 1 3/8	35 x 35					
VPF250-H03	71130022902			1 5/8 x 1 5/8	-					
VPF250-H04	10130348102			-	28 x 28					
VPF250-H05	10130341202			-	42 x 42					

Note:

1) Extent of delivery: valve body (reference number for connection cable see in the following pages)

2) Specified diameters are hydraulic diameters. The seat cross-section isn't circularly.

3) Kv values valid for the flow direction inlet to outlet

VPF SERIES
Electronic Expansion Valve

COOLING CAPACITIES

Model	Steps Completely Open	Nominal Cooling Capacity[1] [kW]						
		R22	R134a	R407A[2]	R407C[2]	R407F[2]	R404A R507A	R410A
VPF 25	2600	143	112	144	153	163	105	171
VPF 50	2600	287	226	289	307	328	210	343
VPF 100	3500	406	319	409	435	463	298	485
VPF 150	3800	730	574	736	782	833	535	872
VPF 250	3800	1133	892	1143	1215	1294	832	1354

Model	Steps Completely Open	Nominal Cooling Capacity[1] [USRT]						
		R22	R134a	R407A[2]	R407C[2]	R407F[2]	R404A R507A	R410A
VPF 25	2600	41	32	41	44	46	30	49
VPF 50	2600	82	64	82	87	93	60	97
VPF 100	3500	115	91	116	124	132	85	138
VPF 150	3800	207	163	209	222	237	152	248
VPF 250	3800	322	254	325	345	368	236	385

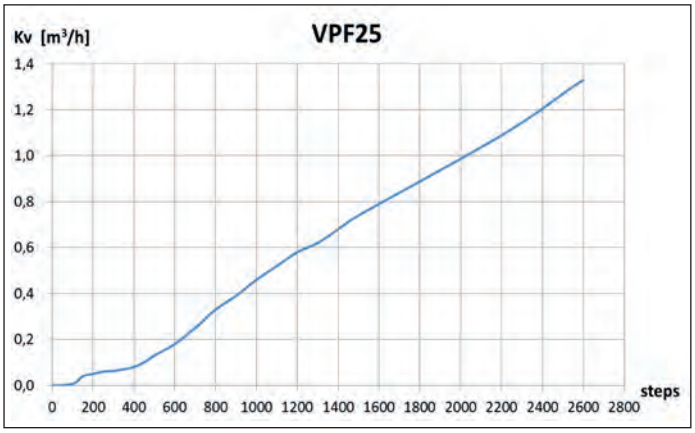
Note:

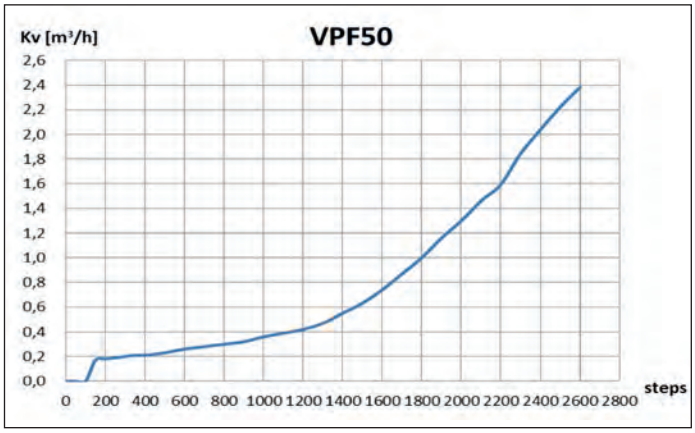
1) Nominal working conditions: Condensing temperature 38°C; evaporating temperature +4,4°C; liquid temperature 37°C

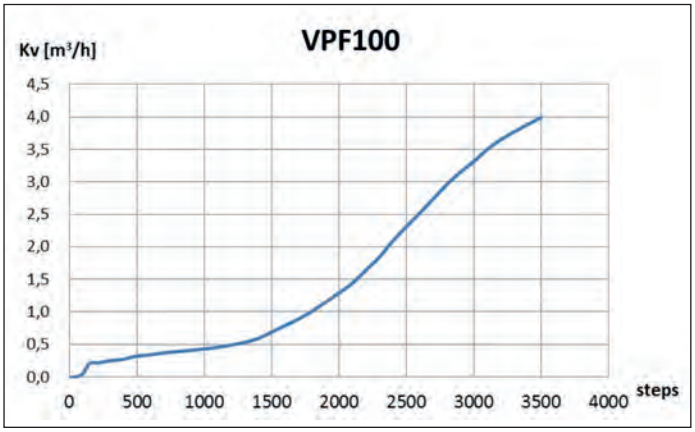
2) Data based on dew point conditions

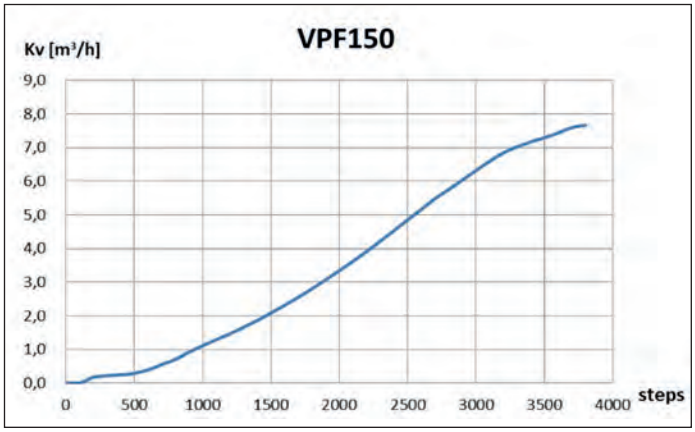
VPF SERIES
Electronic Expansion Valve

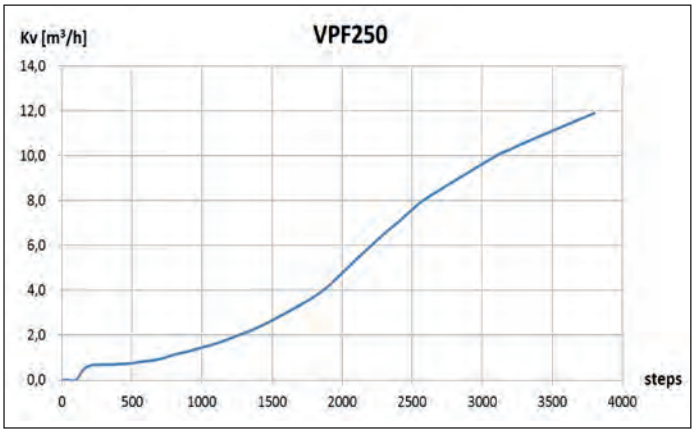
FLOW CHARACTERISTIC





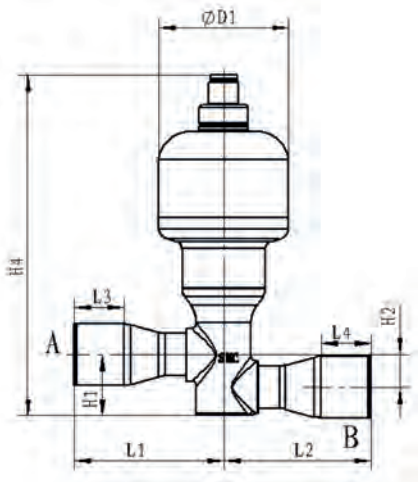




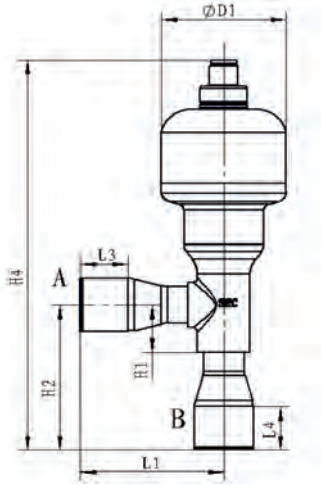


VPF SERIES
Electronic Expansion Valve

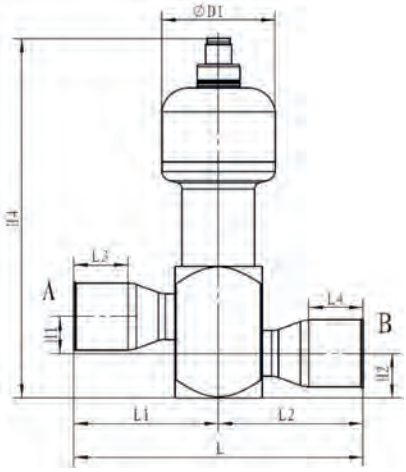
DIMENSIONS



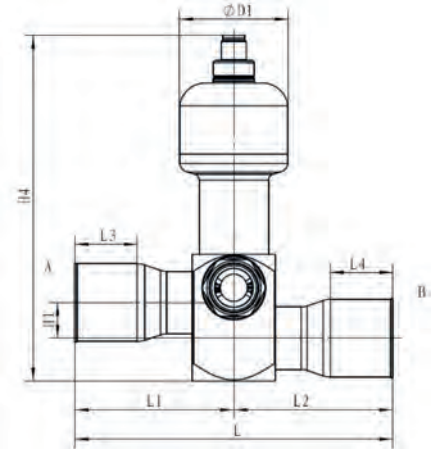
Valve Body - Straight: VPF25



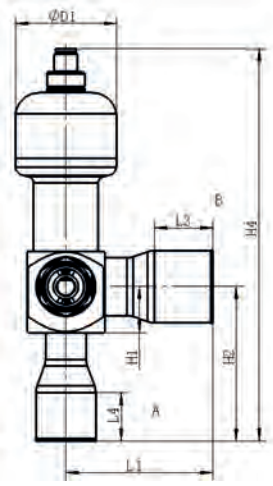
Valve Body - L-Shape: VPF25



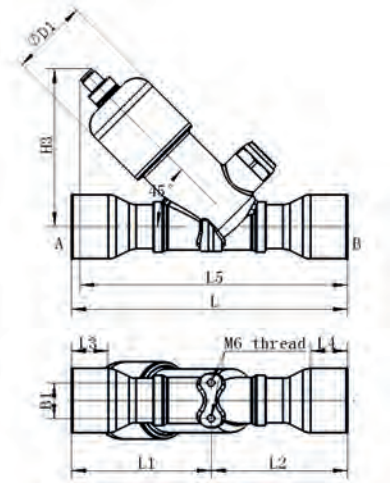
Valve Body - Without sight glass: VPF50, VPF100



Valve Body - With sight glass: VPF50, VPF100



Valve Body - With sight glass: VPF150



Valve Body - With sight glass: VPF250

VPF SERIES
Electronic Expansion Valve

Model	Multi package*	Dimensions [mm]											
		L	L1	L2	L3	L4	L5	H1	H2	H3	H4	B1	øD1
VPF 25-H52		120	60	60	13	13	-	25,6	13	-	136	-	52
VPF 25-H53		120	60	60	20	20		25,6	13		136		52
VPF 25-H58		-	60	-	13	13	-	22,5	66,5	-	178	-	52
VPF 25-H59			60		20	20		22,5	66,5		178		52
VPF 50-H51	10130337702	112	56	56	20	20		17	21		166		52
VPF 50-H52	10130347002	122	56	66	20	25		17	21		166		52
VPF 50-H53	71130023002	132	66	66	25	25		17	21		166		52
VPF 50-H54	10130342302	142	66	76	25	30	-	17	21	-	166	-	52
VPF 50-H56	10130347102	122	56	66	20	25		17	21		166		52
VPF 50-H57	10130347202	132	66	66	25	25		17	21		166		52
VPF 50-H58	10130342402	142	66	76	25	30		17	21		166		52
VPF 50-H01	10130341102	112	56	56	20	20		17	21		166		52
VPF 50-H02	10130346702	122	56	66	20	25		17	21		166		52
VPF 50-H03	10130344802	132	66	66	25	25		17	21		166		52
VPF 50-H04	10130342802	142	66	76	25	30	-	17	21	-	166	-	52
VPF 50-H06	10130346802	122	56	66	20	25		17	21		166		52
VPF 50-H07	10130346902	132	66	66	25	25		17	21		166		52
VPF 50-H08	10130342502	142	66	76	25	30		17	21		166		52
VPF100-H51	10130347502	132	66	66	25	25		17	21		166		52
VPF100-H52	10130347602	142	66	76	25	30		17	21		166		52
VPF100-H53	10130342602	152	76	76	30	30	-	17	21	-	166	-	52
VPF100-H54	10130347702	132	66	66	25	25		17	21		166		52
VPF100-H55	10130347802	142	66	76	25	30		17	21		166		52
VPF100-H01	71130023702	132	66	66	25	25		17	21		166		52
VPF100-H02	10130347302	142	66	76	25	30		17	21		166		52
VPF100-H03	71130023102	152	76	76	30	30	-	17	21	-	166	-	52
VPF100-H05	10130347402	142	66	76	25	30		17	21		166		52
VPF100-H06	10130343102	132	66	66	25	25		17	21		166		52
VPF150-H01		-	76	-	30	25	-	24	70	-	195	-	52
VPF150-H02			76		25	25		34	89		212		52
VPF250-H01	10130348002	166	84	82	25	25	170			107		24	52
VPF250-H02	10130342902	186	94	92	25	25	180			107		24	52
VPF250-H03	71130022902	186	94	92	25	25	180	-	-	107	-	24	52
VPF250-H04	10130348102	166	84	82	25	25	170			107		24	52
VPF250-H05	10130341202	186	94	92	25	25	180			107		24	52

* Available also as industrial package. Contact Sanhua for more details.

VPF SERIES
Electronic Expansion Valve

ACCESSORIES
Connection Cable

Model	Multi package* [1)]	Cable Length [m]
VPF100-006 005	72130045902	2
VPF100-006 006	20130661202	8

Note: * Available also as industrial package. Contact Sanhua for more details.
1) Extent of delivery: cable, connecting valve plug and cable sleeves for each single wire
2) Cable-VPF valve connection in IP67

O SERIES

Electronic Expansion Valve

O series electronic expansion valve are mainly used in air conditioning systems variable refrigerant flow to realize automatic adjustment of refrigerant flow rate and make the air conditioning system work under the best working condition for the purpose of fast cooling, precise temperature control and power saving. These valves can also be used for other controls. These valves are reversible which can automatically control the flow of refrigerant in either heating or cooling mode.

FEATURES

- HIGH PRECISION: FULL OPEN PULSE 2000
- LONG LIFE
- LOW NOISE
- ENERGY SAVING

GENERAL SPECIFICATIONS

- Applicable refrigerant: R22, R134A, R404A, R407C, R410A etc.
- Capacity: 1USRT~13.3USRT (R22 Nominal Capacity)
- Applicable medium temperature: -30°C ~ +70°C (electrified rate below 50%)
- Applicable ambient temperature: -30°C ~ +60°C (electrified rate below 50%)
- Relative humidity: below 95% RH
- Installation mode: Coil upwards, central axis of valve rotor within ±15°vertical to horizontal surface

ELECTRICAL PARAMETERS

- Rated voltage: DC12V (±10%), rectangular wave;
- Actuating mode: 4-phase 4-step permanent magnet stepping motor of speed reduction type;
- Excitation mode: 2-2 phase excitation, monopole actuation;
- Excitation rate: 100PPS~250PPS (opening excitation speed ≤ closing excitation speed, the ending excitation mode maintains more than 0.1S);
- Current of coil:80mA/phase(20°C)
- Resistance of coil:150±15Ω/phase(20°C)
- Insulation grade of coil: E

O SERIES
Electronic Expansion Valve

TECHNICAL PARAMETERS

Model	Port mm	R22 Nominal Capacity		Max. Operation Pressure Difference MPa			Internal Leakage ml/min	Reverse Open Valve Pressure Difference MPa		
		kW	US.R.T	R22	R407C	R410A		R22	R407C	R410A
DPF(O)1.3	1.3	5.28	1.5	2.26	2.48	3.43	≤600	3.0	3.3	4.2
DPF(O)2.0	2.0	8.8	2.5							
DPF(O)2.4	2.4	10.56	3.0							
DPF(O)3.2	3.2	14.1	4.0				≤1000			
DPF(O)3.2	3.2	17.6	5.0							
DPF(O)4.0	4.0	21.2	6.0							
DPF(O)5.2	5.2	28.1	8.0							
DPF(O)6.4	6.4	35.2	10.0							
DPF(O)8.0	8.0	47.6	13.3							

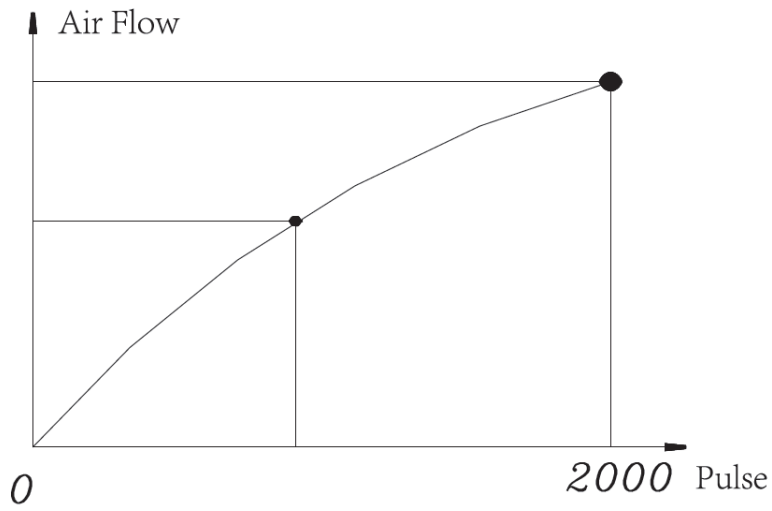
Note:

1) Nominal working conditions: Condensing temperature: 38°C, vaporing temperature 5°C,Supercooling temperature 0°C,superheat temperature 0°C

2) When using other refrigerants, it is need to use a factor to adjust nominal capacity of R22.(R134A --0.75, R407C--1, R410A--1.2)

STANDARD FLOW CURVE

Standard Flow Curve



O SERIES
Electronic Expansion Valve

DIMENSIONS

FIG. 1

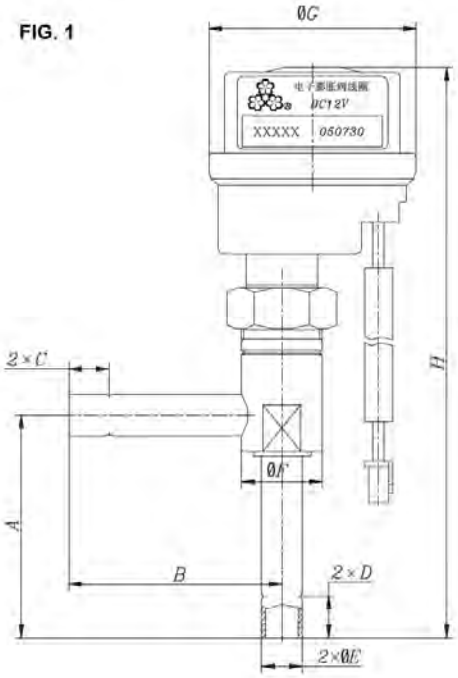
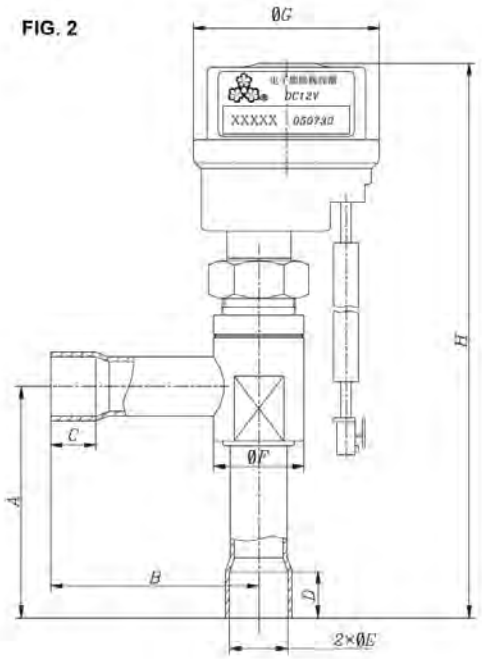


FIG. 2



Model	Dimensions (mm)								Note
	A	B	C	D	E	F	G	H	
DPF(O)1.3	43	42.5	8	8	7.94	16	41.2	110	Fig.1
DPF(O)2.0	43	42.5	8	8	7.94	16	41.2	110	
DPF(O)2.4	43	42.5	8	8	7.94	16	41.2	110	
DPF(O)3.2	43	42.5	8	8	7.94	16	41.2	110	
DPF(O)3.2	50	46	10	10	12.8	20	41.2	119	Fig.2
DPF(O)4.0	50	46	10	10	12.8	20	41.2	119	
DPF(O)5.2	50	46	10	10	12.8	20	41.2	119	
DPF(O)6.4	50	46	10	10	12.8	20	41.2	119	
DPF(O)8.0	50	46	10	10	12.8	20	41.2	119	

SANHUA *YOUR ROAD MAP TO THE ECO-DESIGN DIRECTIVE**

*KEEPS YOU ONE STEP AHEAD OF THE COMING **EFFICIENCY** AND **ENVIRONMENTAL** EUROPEAN **CHALLENGES***

EEV Technology + Electronic Controls

- *Improves HVAC&R system efficiency up to **20%***
- *DPF&VPF series from 2kW to 1400kW*
  **75kW and 1400kW available in Quarter 4*
- *Advanced MSS (Minimum Stable Superheat) control logic*

2 kW

1400kW

4 Way Reversing Valve

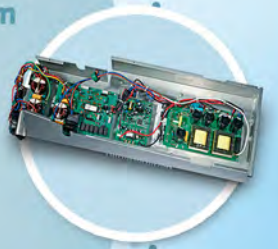
- *Improves efficiency by **5%***
- *SHF series 1kW to 420 kW*
- *Widest range in the market with Single Body Design*

1 kW

420kW

Inverter Controller for Large System

- *Improves system efficiency up to **30%***
- ***Active Frequency** Conversion Technology*
- *Wide Range of voltage application*



MCHE

- *Improves efficiency by **30%***
- *Refrigerant Charge Reduction by **30%** Environmental Friendly*
- *MCHE is lighter in weight, smaller in volume Compact Design*

**DIRECTIVE 2012/27/EU*

ADERAL ES

ADVANCED
Technology & Solutions

SANHUA

CHILLING *ideas worldwide*

SANHUA INTERNATIONAL
info@sanhuaeurope.com

R SERIES

Electronic Expansion Valve

R series electronic expansion valve are mainly used in air conditioning systems with variable refrigerant flow to realize automatic adjustment of refrigerant flow rate and make the air conditioning system work under the best working condition for the purpose of fast cooling, precise temperature control and power saving. These valves can also be used for other controls. These valves are reversible which can automatically control the flow of refrigerant in either heating or cooling mode.

FEATURES

- APPLICABLE FOR OIL-FREE COOLING SYSTEM
- SMALLER INSTALLATION SPACE: LOW HEIGHT, SMALL VOLUME AND LIGHT WEIGHT
- WIDER APPLICABILITY FOR ELIMINATING SYSTEM REFRIGERANT NOISE: WITH OPTIMIZED FLOW PATH DESIGN
- OUTER ENCAPSULATION COIL STRUCTURE: BETTER CORROSION RESISTANCE

GENERAL SPECIFICATIONS

- Applicable refrigerant: R744(CO2)
- Applicable medium temperature: -30°C ~ 80°C (electrified rate below 40%)
- Applicable ambient temperature: -30°C ~ 60°C (electrified rate below 40%)
- Relative humidity: below 95% RH
- Installation mode: Coil upwards, central axis of valve rotor within ±15°vertical to horizontal surface.
- Direction of Medium: one direction from horizontal tube to Vertical tube

ELECTRICAL PARAMETERS

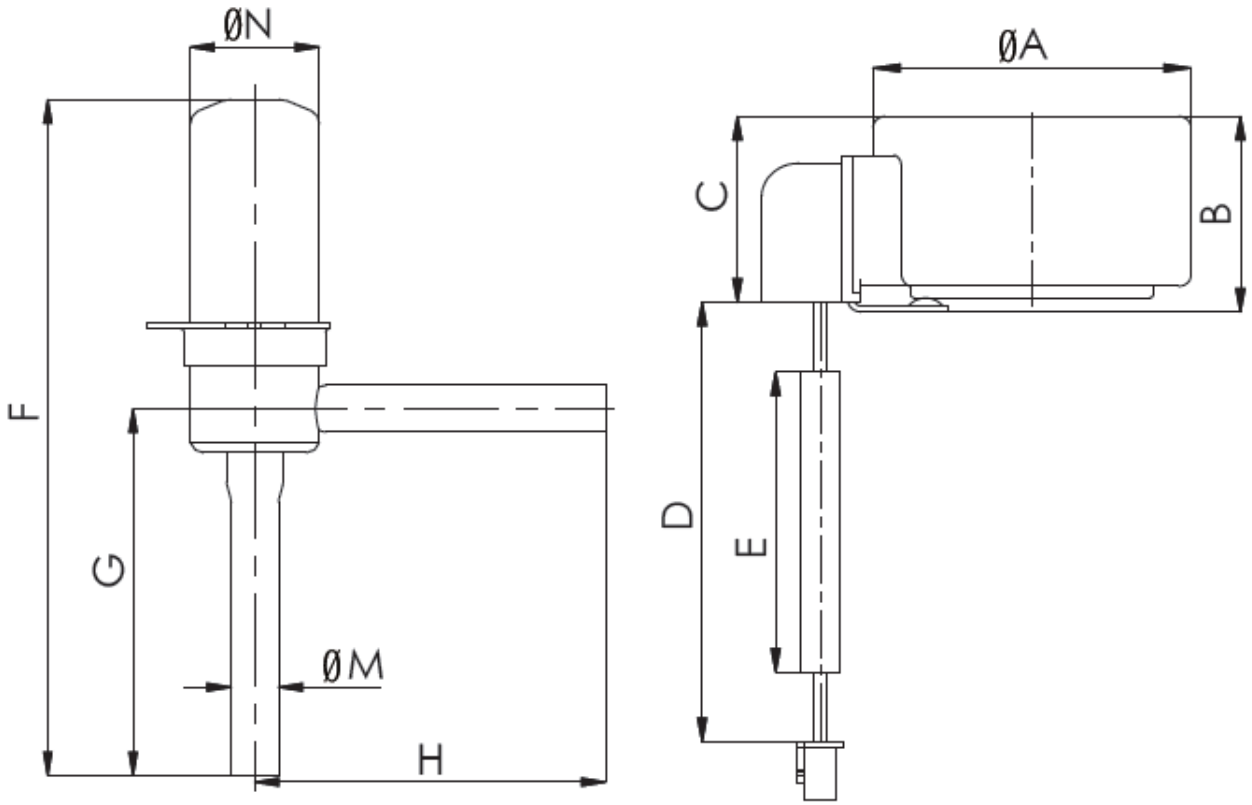
- Rated voltage: DC12V (±10%), rectangular wave
- Actuating mode: 4-phase 8-step permanent magnet stepping motor of direct-operated type
- Excitation mode: 1-2 phase excitation, monopole actuation
- Excitation rate: 31,3PPS (the ending excitation mode maintains 0.1~1.0s)
- Current of coil:260mA/phase(20°C)
- Resistance of coil:46±3.7Ω/phase(20°C)
- Insulation grade of coil: E

R SERIES
Electronic Expansion Valve

TECHNICAL PARAMETERS

Model	Port mm	R744 Nominal Capacity		Full Open Pulse	Opening Pulse	Max. Operation Pressure Difference MPa	Internal Leakage ml/min	Max. Working Pressure MPa
		kW	US.R.T					
DPF(R04)1.5D	1.5	10,5	3	500	32 ± 20	10	≤600	14

DIMENSIONS



Port mm	Code of the Coil Series	Dimensions (mm)									
		A	B	C	D	E	F	G	H	M	N
1.5	M10	38.5	26.4	25.6	700	600	93,5	50	47	6.35	17.3

Pressure Sensor

Pressure sensors are widely used in Air Conditioning, Refrigeration and Heat Pump system. Using a 5 V excitation input these sensors provide a 0.5-3.5 V or 0.5-4.5 V signal output proportional to the pressure of the medium. This device requires no end user amplification. Pressure sensors permit to control and guarantee the system working under safe and stability condition.

FEATURES

- OVERALL FEATURES: APPLIED HIGH PERFORMANCE DIGITAL CIRCUIT WHICH HAS GOOD LINEAR, SMALL TEMPERATURE EXCURSION AND HIGH LEVEL OF ACCURACY OVER WIDE OPERATING RANGE
- SMALL SIZE AND SIMPLE INSTALLATION; MODELS WITH LEAD WIRE DIRECT CONNECTOR;
- STABILITY: APPLIED SUPERIOR PRESSURE CORE, GOOD STABILITY UNDER STRICT PROCESS CONTROL;
- DIVERSIFICATION: 2 DIFFERENT PRESSURE RANGE; 2 DIFFERENT LEVEL OF ACCURACY.

GENERAL SPECIFICATION

- Applicable for all common HCFC and HFC refrigerants such as: R22, R134a, R404A, R407C, R410A, R507A ...
- Medium temperature TS min./max.: -30°C / +120°C (models with 2% accuracy)
- Medium temperature TS min./max.: -40°C / +120°C* (models with 0,8% accuracy)
- Ambient temperature min./max.: -30°C / +80°C
- Relative humidity: 0 to 95% RH
- Installation position: preferably with vertical axis and sensor upwards
- Certifications: UL/CSA and declaration according to LVD or PED

***Note:** 0.8% FS accuracy is guaranteed only in the temperature range -40°C /+40°C

YCQ SERIES
Pressure Sensor

GENERAL CHARACTERISTICS

Models with 2% Accuracy					
Model		YCQB02H01	YCQB05H01	YCQB02L01	YCQB05L01
Part Number		YCQ-21001	YCQ-21002	YCQ-21003	YCQ-21004
Connection Type		Solder	Solder	Thread	Thread
Connection Pipe Size	[inch]	1/4"	1/4"	SAE - 1/4"	SAE - 1/4"
Thread Size	[inch]	-	-	7/16-20 UNF	7/16-20 UNF
Supply Voltage	[V]	5 ± 0,25 DC	5 ± 0,25 DC	5 ± 0,25 DC	5 ± 0,25 DC
Pressure Range (0 to pr)	[MPa]	0 to 2	0 to 5	0 to 2	0 to 4,6
Output (VA0 to VApr)	[V]	0,5 to 3,5 DC	0,5 to 3,5 DC	0,5 to 4,5 DC	0,5 to 4,5 DC
Signal Span (VFS) [1]	[V]	3,0	3,0	3,0	3,0
Accuracy [2]	[%]	± 2,0 % F.S.	± 2,0 % F.S.	± 2,0 % F.S.	± 2,0 % F.S.
Response Time [3]	[ms]	10	10	10	10
Current Consumption	[mA]	Max. 10	Max. 10	Max. 10	Max. 10
Load Resistance	[kΩ]	Min. 10	Min. 10	Min. 10	Min. 10
Insulation Resistance [4]	[MΩ]	Min. 100	Min. 100	Min. 100	Min. 100
Maximum Operating Pressure (MOP)	[MPa]	3,50	5,00	3,50	4,60
Test Pressure	[MPa]	5,25	7,50	5,25	7,50
Burst Pressure	[MPa]	17,50	25,00	17,50	25,00
Protection Class	[-]	IP 67	IP 67	IP 67	IP 67

YCQ SERIES
Pressure Sensor

GENERAL CHARACTERISTICS

Models with 0.8% Accuracy			
Model		YCQB02H01-1	YCQB02L01-1
Part Number		YCQ-21005	YCQ-21006
Connection Type		Solder	Thread
Connection Pipe Size	[inch]	1/4"	SAE - 1/4"
Thread Size	[inch]	-	7/16-20 UNF
Supply Voltage	[V]	5 ± 0,25 DC	5 ± 0,25 DC
Pressure Range (0 to pr)	[MPa]	0 to 2	0 to 2
Output (VA0 to VApr)	[V]	0,5 to 3,5 DC	0,5 to 4,5 DC
Signal Span (VFS) [1]	[V]	3,0	3,0
Accuracy [2]	[%]	± 0,8 % F.S.	± 0,8 % F.S
Response Time [3]	[ms]	10	10
Current Consumption	[mA]	Max. 10	Max. 10
Load Resistance	[kΩ]	Min. 10	Min. 10
Insulation Resistance [4]	[MΩ]	Min. 100	Min. 100
Maximum Operating Pressure (MOP)	[MPa]	3,50	3,50
Test Pressure	[MPa]	5,25	5,25
Burst Pressure	[MPa]	17,50	17,50
Protection Class	[-]	IP 67	IP 67

Note: 1) Signal span: V_{FS}=FS (Full Scale) = $V_A(p_r)$ - V_{A0}

2) Accuracy measured within the temperature ranges:
- YCQB02xxx: from -30°C to +85°C
- YCQB05xxx: from -30°C to +120°C
- YCQB02xxx-1: from -40°C to +40°C

Included Nonlinearity (L) and pressure hysteresis. The Nonlinearity is the deviation of the real sensor characteristic $V_A = f(p)$ from the ideal straight line. It can be approximated by a polynomial of second order, with the maximum at $p_x = p_r / 2$.

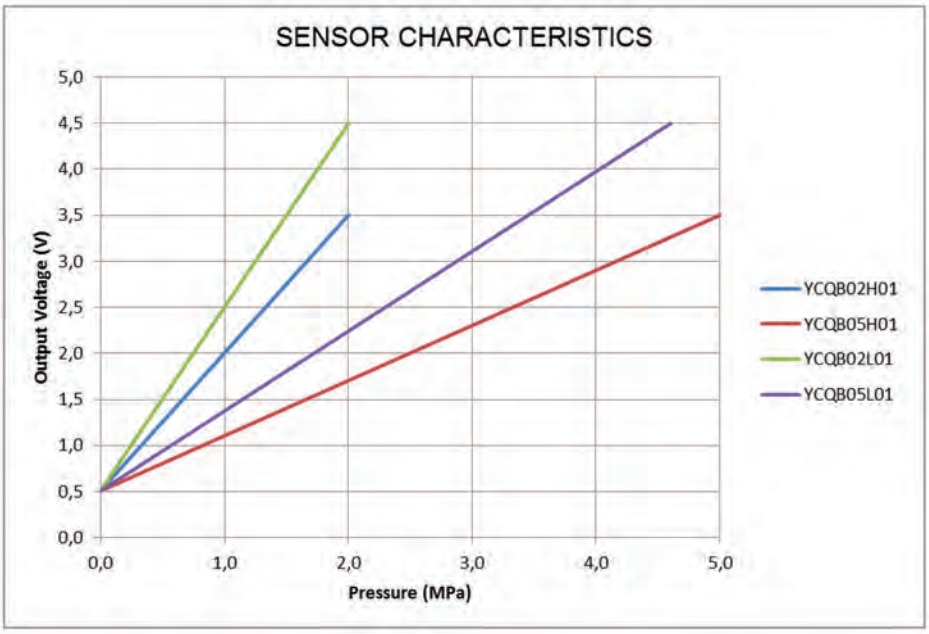
The equation to calculate the nonlinearity is: $L = (V_A(p_x) - V_{A0}) / (V_A(p_r) - VA0) - p_x / p_r$

3) Response Time: delay between a pressure change (10 to 90% p_r) and the corresponding signal output change (10 to 90% FS)

4) Insulation Resistance measured with rated voltage: 500 V DC

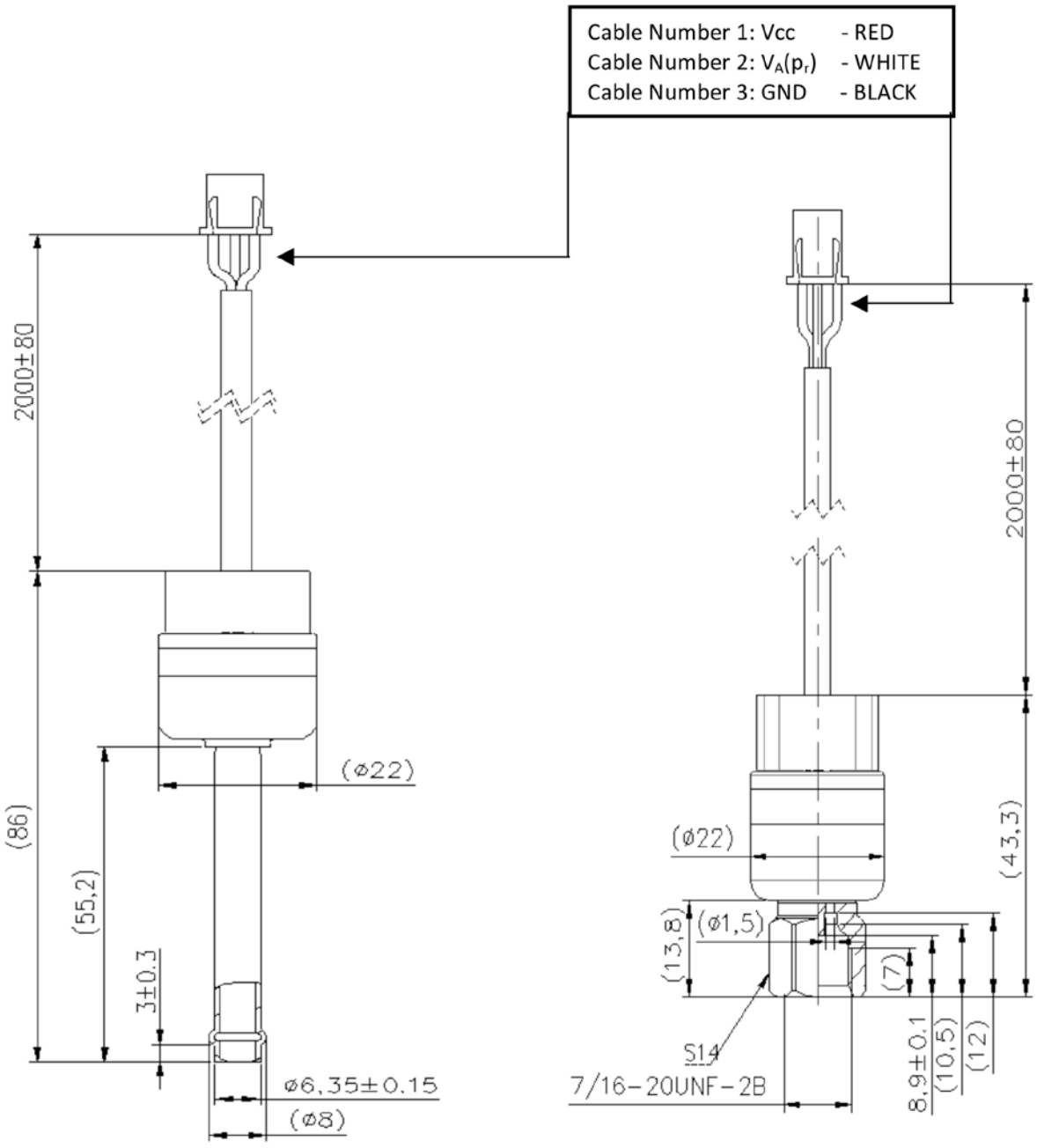
YCQ SERIES
Pressure Sensor

PRESSURE / OUTPUT VOLTAGE CHARACTERISTICS [1]



Note: 1) The YCQB02H01 characteristic is also valid for the model YCQB02H01-1
2) The YCQB02L01 characteristic is also valid for the model YCQB02L01-1

DIMENSIONS



YCQB02H01
YCQB05H01
YCQB02H01-1

YCQB02L01
YCQB05L01
YCQB02L01-1

EVERY SECOND HOME REFRIGERATOR IN EUROPE IS EQUIPPED WITH A **SANHUA** SOLENOID VALVE

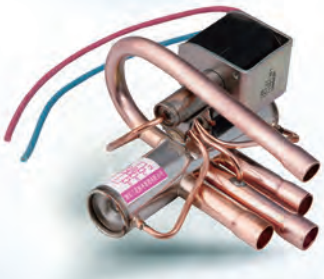
EVERY 4th CAR IS EQUIPPED WITH A **SANHUA** EXPANSION VALVE

Solenoid Valve

Check Valve Piston Type

Thermostatic Expansion Valve

Uni-Flow Filter Driers



4 Way Reversing Valve

Ball Valve

Electronic Expansion Valve

Filter Driers with Replaceable Core

Sight Glass

2 OUT OF 3 AC UNITS ARE EQUIPPED WITH A **SANHUA** REVERSING VALVE

Technical information
sanhuaclimate.com

- *Extended product range for Heat pumps, Air Conditioning and Commercial refrigeration.*
- *Online Data Sheets and product catalogues.*

SANHUA

CHILLING
ideas worldwide

SANHUA

Micro-Channel Heat Exchangers MCHE

BENEFITS

No galvanic corrosion (100% aluminum)
Refrigerant charge reduction – up to 70%
Long life alloy for very aggressive environments
Helps manufacturers to meet high SEER (Seasonal Efficiency Ratio) and HSPF (Heating Seasonal Performance Factor) requirements.
MCHE is more than 30% higher HT efficiency
Up to 30% lower airside dP
MCHE is lighter in weight, smaller in volume: up to 50%
100% Aluminum, easy to cycle
Minimum performances decrease with lifetime (100% brazed)
Special tube bending structure for A-coil
Special desing for good refrigerant distribution
Special fin desing for good water drainage.

SANHUA MCHE

Evaporator

Over 100,000 coils on the market since 2011

The Sanhua MCHE Evaporator

- Performs in both heating, cooling and as a dehumidifier.
- Operates in both condensing and evaporating mode.

Applications

- Commercial cooling and heating.
- Residential air conditioning and heating.
- Commercial retail refrigeration.

SANHUA MCHE

Heat Pump Coil

The Sanhua MCHE Heat Pump Coil

- Designed to perform in both cooling and heating functions.

Applications

- Commercial heating and cooling applications (Rooftop and chiller units).
- Residential air conditioning units.
- Heating Heat pump units.

SANHUA MCHE

Condenser

Over 1,3 million coils on the market since 2008

The Sanhua MCHE Condenser

- Developed with a superior design and performance in cooling mode.

Applications

- Commercial cooling application for chillers units .
- Residential air conditioning for outdoor units.
- Refrigeration application (transport and retail refrigeration).

SANHUA

COMMERCIAL AC
Key benefits

- Raise product efficiency or reduce footprint
- Save money on raw material, transport, storage
- Improve environmental performance and meet regulations
- Attract customers with lean, MCHE-based products

TRANSPORT REFRIGERATION
Key benefits

- Create high-capacity products for transport
- Attract customers with reduced fuel costs and more cargo space
- Improve environmental performance and meet regulations

PRECISION COOLING
Key benefits

- Precise temperature control to safeguard sensitive equipment
- Compact, space-saving units
- Low energy consumption
- Meet environmental regulations

COLD ROOMS
Key benefits

- Hygiene – very easy to clean
- Build compact space saving units
- Reliable temperature control
- Meet environmental regulations
- Low energy consumption

RESIDENTIAL AC and Heating Heat Pump
Key benefits

- Higher system efficiency
- Better environmental performance
- Lower noise levels

APPLICABILITY

Refrigerant:
R410A, R134a, R22, R407C, R404A

Design pressure:
4.5MPa

Ambient air temperature:
-30°C to 72°C (-22°F to 161.6°F)

Expected refrigerant temperature:
-30°C to 121°C (-22°F to 250°F)

Storage temperature:
-30°C to 121°C (-22°F to 250°F)

ASSEMBLY

SHIPPING PALLET

FIN PROCESS

FIN MACHINE

HELIUM DETECTOR

FURNACES

Manufacturing *capabilities*

SANHUA

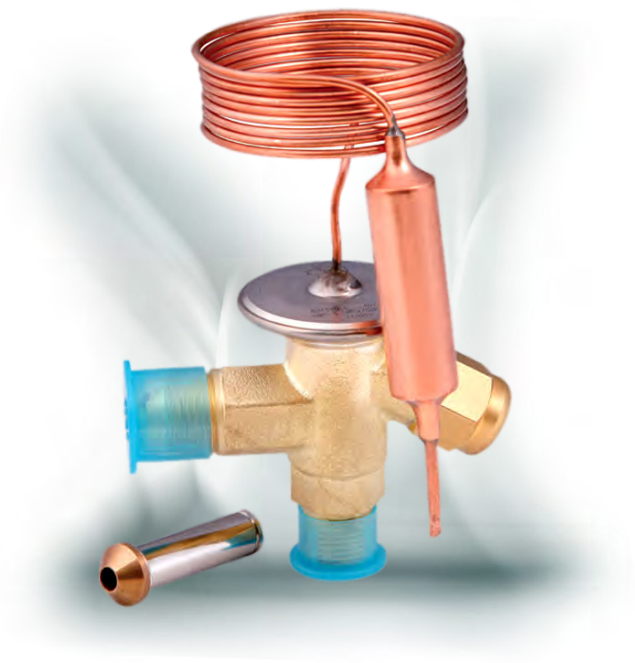
FOR DETAILED INFORMATION PLEASE CONTACT:

EMEA MCHE MANAGER

Nicolas Gignoux
nicolas@sanhuaeurope.com
Phone: +33 478 083 457
Mobile: +33 620 586 838

Thermostatic Expansion Valve

RFKA series thermostatic expansion valves are used to adjust mass flow of refrigerant into the evaporator while controlling the refrigerant´s superheat at the outlet of the evaporator. They can be used for various refrigerants under all working conditions. Typical applications are refrigeration systems like freezers, ice makers, dehumidifiers as well as air conditioners and heat pumps at various evaporation temperature ranges.



FEATURES

- EXCHANGEABLE VALVE ORIFICE, EASY TO STOCK HOLDING, CONVENIENT FOR CAPACITY MATCH AND REPAIR
- THERMAL BULB UTILIZES CROSS CHARGE TECHNOLOGY, PROVIDING CONSISTENT SUPERHEAT DEGREE OVER THE WHOLE EVAPORATION TEMPERATURE RANGE
- VALVES WITH MOP FUNCTION CAN BE PROVIDED TO ASSURE RELIABLE COMPRESSOR OPERATION
- APPLICABLE IN A WIDE EVAPORATION TEMPERATURE RANGE
- RELIABLE AND CONSISTENT PERFORMANCE OF SUPERHEAT CONTROL

GENERAL SPECIFICATIONS

- Applicable for all common HCFC and HFC refrigerants such as: R22, R134a, R404A, R407C, R507A ...
- Medium temperature TS min./max.: -40°C/+70°C
- Max. operating pressure PS: 2,1 ... 3,5 MPa (21 ... 35 bar)
- Installation position:
  - Preferably valve head upwards
  - Flow direction from inlet A to outlet B
- Certifications: UL/CSA and PED declaration

TECHNICAL PARAMETERS

- RFKA series angle shape valve
- Inlet 3/8" flare connection
- Capillary tube length 1,5m
- Equalization port:
  - RFKA flare/flare type with ¼" flare connection;
  - RFKA flare/solder type with 6mm solder connection

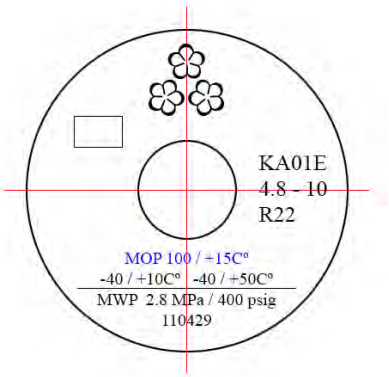
RFKA SERIES
Thermostatic Expansion Valve

MODEL DESIGNATION LEGEND

Position Number	Model Designation Legend	
1	**Product Code**	**Product Series**
	RFKH	Thermostatic expansion valve
2	**Refrigerant**	**Description**
	01	R22
	02	R407C
	03	R404A / R507A
	04	R134a
3	**Pressure Equalization**	**Description**
	E	External pressure equalization
	(Omitted)	Internal pressure equalization
4	**Miscellaneous**	**Description**
	xxxx	Digits for additional information

MODEL DESIGNATION EXAMPLE

Position Number				According to Model Designation Legend
1	2	3	4	
RFKA	01	E	xxxx	Thermostatic expansion valve
RFKA	**01**	E	xxxx	Refrigerant R22
RFKA	01	**E**	xxxx	Connection for external pressure equalization
RFKA	01	E	**xxxx**	Digits for additional information



RFKA SERIES
Thermostatic Expansion Valve

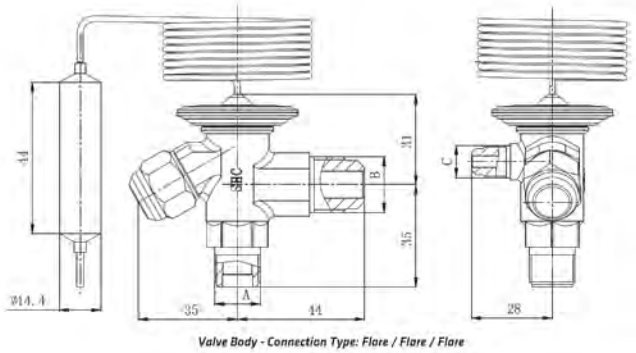
TECHNICAL PARAMETERS

Ref. PS [MPa]	Model Valve Body	Multi package*[1]	Connection type	Temp. Range[2]	MOP[3]	Inlet ØA	Outlet[4] ØB			Ext. ØC	
			In / Out / Ext. Pressure Equal.	[°C]	[°C]	Flare	Flare	Solder		Flare	Solder
						[inch]	[inch]	[mm]	[inch]	[inch]	
R22 2,8	RFKA01-4.8-22	71200003402	flare / flare	+10 to -40	-	3/8	1/2	-	-	-	-
	RFKA01E-4.8-13	71200000502	flare / flare / flare				1/2	-	-	1/4	-
	RFKA01-4.8-26	10201000202	flare / solder				-	12	-	-	-
	RFKA01E-4.8-06	71200000202	flare / solder / solder				-	12	-	-	6
	RFKA01-4.8-07	71200000302	flare / solder				-	-	1/2	-	-
	RFKA01E-4.8-08	71200000402	flare / solder / solder				-	-	1/2	-	1/4
R407C 2,8	RFKA02-5.2-24	71205004302	flare / flare	+10 to -40	-	3/8	1/2	-	-	-	-
	RFKA02E-5.2-20	71200003202	flare / flare / flare				1/2	-	-	1/4	-
	RFKA02-5.2-27	10201000302	flare / solder				-	12	-	-	-
	RFKA02E-5.2-28	71201000302	flare / solder / solder				-	12	-	-	6
	RFKA02-5.2-32	71201000402	flare / solder				-	-	1/2	-	-
	RFKA02E-5.2-18	71200003302	flare / solder / solder				-	-	1/2	-	1/4
R404A / R507A 3,5	RFKA03-3.4-21	71200003502	flare / flare	+10 to -40	-	3/8	1/2	-	-	-	-
	RFKA03E-3.4-15	71200001302	flare / flare / flare				1/2	-	-	1/4	-
	RFKA03-3.4-03	71200000902	flare / solder				-	12	-	-	-
	RFKA03E-3.4-02	71200000802	flare / solder / solder				-	12	-	-	6
	RFKA03-3.4--09	71200001102	flare / solder				-	-	1/2	-	-
	RFKA03E-3.4-10	71200001202	flare / solder / solder				-	-	1/2	-	1/4
R134a 2,1	RFKA04-4.0-23	71205004402	flare / flare	+10 to -40	-	3/8	1/2	-	-	-	-
	RFKA04E-4.0-19	71200003102	flare / flare / flare				1/2	-	-	1/4	-
	RFKA04-4.0-29	10201000102	flare / solder				-	12	-	-	-
	RFKA04E-4.0-17	10202000102	flare / solder / solder				-	12	-	-	6
	RFKA04-4.0-30	71201000102	flare / solder				-	-	1/2	-	-
	RFKA04E-4.0-31	71201000202	flare / solder / solder				-	-	1/2	-	1/4

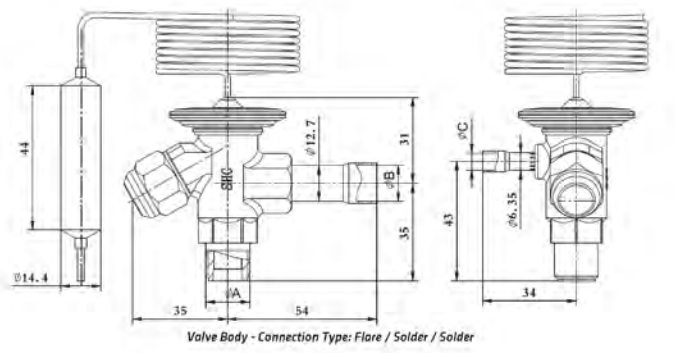
Note: * Available also as industrial package. Contact Sanhua for more details.
1) Extent of delivery: valve body and bulb strap
2) Different evaporation temperature range on request
3) MOP function on request

RFKA SERIES
Thermostatic Expansion Valve

DIMENSIONS

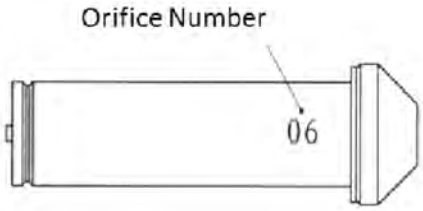


Valve Body - Connection Type: Flare / Flare / Flare



Valve Body - Connection Type: Flare / Solder / Solder

ACCESSORIES



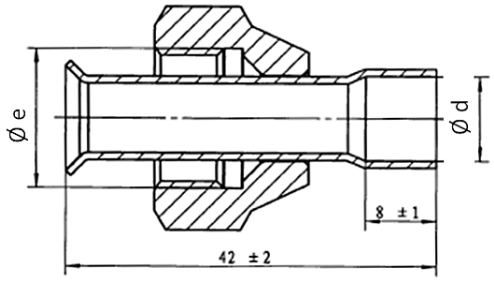
ORIFICE

Valve Orifice Model	Multi package*	Orifice Number	Nominal Capacity[1] [kW]			
			R22	R407C[2]	R404A / R507A	R134a
RFKA-023-0X	71200001502	0X	1,04	1,09	0,76	0,62
RFKA-023-00	71200001602	0	1,66	1,7	1,34	1,1
RFKA-023-01	71200001702	1	3,5	3,62	3,06	2,18
RFKA-023-02	71200001802	2	4,87	5	4,15	2,77
RFKA-023-03	71200001902	3	6,82	7,02	6,01	4,07
RFKA-023-04	71200002002	4	9,49	9,92	8,73	5,56
RFKA-023-05	71200002102	5	14,9	14,8	12,5	8,35
RFKA-023-06	71200002202	6	19,9	20,2	15,8	12,0

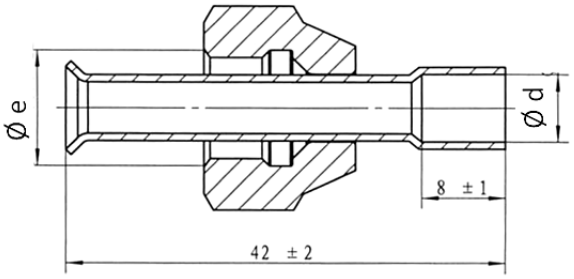
Note: * Available also as industrial package. Contact Sanhua for more details.
1) Nominal working conditions: Condensing temperature 38°C; evaporating temperature +4,4°C; liquid temperature 37°C
2) R407C data based on dew point conditions

RFKA SERIES
Thermostatic Expansion Valve

INLET A



EXTERNAL PRESSURE EQUALIZATION C



SOLDER ADAPTERS FOR RFKA INLET A

Model	Multi package*	SAE Flare Ø e	Solder Connection Ø d
RFKA-038-01	71200002302	3/8″	3/8"
RFKA-038-02	71200002402		10mm
RFKA-038-05	20200000202		1/4"
RFKA-038-06	20200000302		6mm

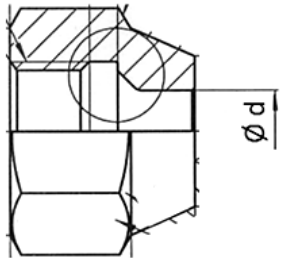
* Available also as industrial package. Contact Sanhua for more details.

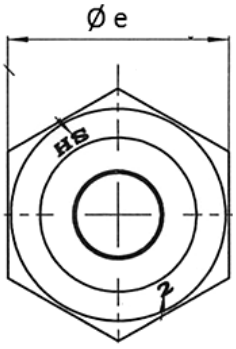
SOLDER ADAPTERS FOR RFKA EXTERNAL PRESSURE EQUALIZATION C

Model	Multi package*	SAE Flare Ø e	Solder Connection Ø d
RFKA-038-03	71200002502	1/4″	6mm
RFKA-038-04	71200002602		1/4"

* Available also as industrial package. Contact Sanhua for more details.

FLARE NUTS FOR RFKA





Model	Multi package*	SAE Flare	Pipe Diameter Ø d		Wrench Size Ø e
		[inch]	[mm]	[inch]	[mm]
ZZ4-0107721	20165119202	1/4	6	1/4	17
ZZ4-0107723	20165119302	3/8	-	3/8	22
ZZ4-0107724	20165119402	1/2	12	1/2	24

* Available also as industrial package. Contact Sanhua for more details.

SANHUA

Technical information

sanhuaclimate.com

CHILLING
ideas worldwide

SANHUA INTERNATIONAL
info@sanhuaeurope.com

Certificate of registration
ISO 14001:2004

Certificate of registration
ISO 9001:2008

REACH

NR. 1907/2006
CONFORMITY DECLARATION

BEST SUPPLIER AWARDS

B/S/H/

Carrier

TRANE

Note: Conditions could change without previous notice due to components updating or typing mistakes.
Sanhua declines any responsibility for a wrong product choice based on this table. Please make sure all your requirements are covered in our suggestion.

Thermostatic Expansion Valve

RFKH series thermostatic expansion valves are used to adjust mass flow of refrigerant into the evaporator while controlling the refrigerant´s superheat at the outlet of the evaporator. They can be used for various refrigerants under all working conditions. Typical applications are refrigeration systems like freezers, ice makers, dehumidifiers as well as air conditioners and heat pumps at various evaporation temperature ranges.

FEATURES

- STAINLESS STEEL CAPILLARY AND SENSING BULB
- EXCHANGEABLE VALVE ORIFICE, EASY TO STOCK HOLDING, CONVENIENT FOR CAPACITY MATCH AND REPAIR
- THERMAL BULB UTILIZES CROSS CHARGE TECHNOLOGY, PROVIDING CONSISTENT SUPERHEAT DEGREE OVER THE WHOLE EVAPORATION TEMPERATURE RANGE
- VALVES WITH MOP FUNCTION CAN BE PROVIDED TO ASSURE RELIABLE COMPRESSOR OPERATION
- APPLICABLE IN A WIDE EVAPORATION TEMPERATURE RANGE
- RELIABLE AND CONSISTENT PERFORMANCE OF SUPERHEAT CONTROL

GENERAL SPECIFICATIONS

- Applicable for all common HCFC and HFC refrigerants such as: R22, R407C, R404A, R507, R134a, R404A, R410A, R407A, R407F ...
- Ambient temperature min./max.: -35°C / +55°C
- Medium temperature TS min./max.: -40°C / +70°C
- Max. operating pressure PS: 4.6 MPa (46 bar)
- Installation position:
  - Preferably valve head upwards
  - Flow direction from inlet A to outlet B
- Certifications: UL/CSA and PED declaration

TECHNICAL PARAMETERS

- RFKH series angle shape valve
- Inlet 3/8" flare connection
- Capillary tube length 1,5m
- Equalization port:
  - RFKH flare/flare type with ¼" flare connection;
  - RFKH flare/solder type with 6mm solder connection

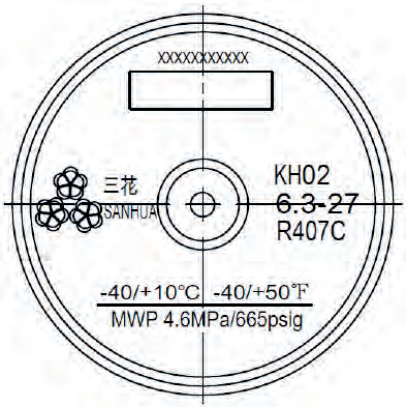
RFKH SERIES
Thermostatic Expansion Valve

MODEL DESIGNATION LEGEND

Position Number	Model Designation Legend	
1	**Product Code**	**Product Series**
	RFKH	Thermostatic expansion valve
2	**Refrigerant**	**Description**
	01	R22
	02	R407C
	03	R404A / R507A
	04	R134a
	05	R410A
	07	R407A / R407F
	04	R134a
3	**Pressure Equalization**	**Description**
	E	External pressure equalization
	(Omitted)	Internal pressure equalization
4	**Miscellaneous**	**Description**
	xxxx	Digits for additional information

MODEL DESIGNATION EXAMPLE

Position Number				According to Model Designation Legend
1	2	3	4	
RFKA	01	E	xxxx	Thermostatic expansion valve
RFKA	**01**	E	xxxx	Refrigerant R22
RFKA	01	**E**	xxxx	Connection for external pressure equalization
RFKA	01	E	**xxxx**	Digits for additional information



RFKH SERIES
Thermostatic Expansion Valve

TECHNICAL PARAMETERS

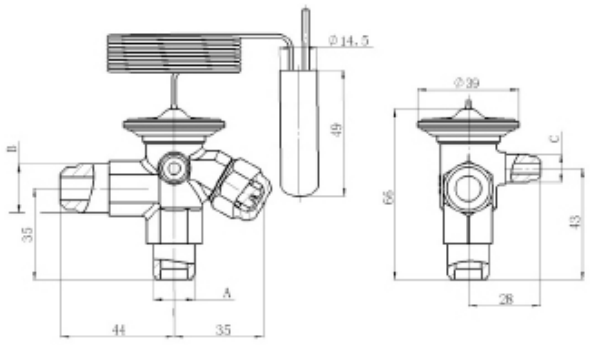
Tab. A : Models with Field N : Temperature Range from -40°C to +10°C

Ref. PS [Mpa]	Valve Orifice Model	Unique code of multi package[1)]	Connection type	Inlet ØA	Outlet ØB			Ext. ØC	
			In / Out / Ext. Pressure Equal.	Flare	Flare	Solder		Flare	Solder
				[inch]	[inch]	[mm]	[inch]	[inch]	[mm]
R22 4,6	RFKH 01-6.0-22	10201002502	flare / flare	3/8	1/2	-	-	-	-
	RFKH01E-6.0-13	10201002402	flare / flare / flare		1/2	-	-	1/4	-
	RFKH01-6.0-26	10201002602	flare / solder		-	12	-	-	-
	RFKH01E-6.0-06	10201002102	flare / solder / solder		-	12	-	-	6
	RFKH01-6.0-07	10201002202	flare / solder		-	-	1/2	-	-
	RFKH01E-6.0-08	10201002302	flare / solder / solder		-	-	1/2	-	1/4
R407C 4,6	RFKH02-6.3-24	10201002902	flare / flare	3/8	1/2	-	-	-	-
	RFKH02E-6.3-20	10201002802	flare / flare / flare		1/2	-	-	1/4	-
	RFKH02-6.3-27	10201003002	flare / solder		-	12	-	-	-
	RFKH02E-6.3-28	10201003102	flare / solder / solder		-	12	-	-	6
	RFKH02-6.3-32	10201003202	flare / solder		-	-	1/2	-	-
	RFKH02E-6.3-18	10201002702	flare / solder / solder		-	-	1/2	-	1/4
R404A / R507A 4,6	RFKH03-4.8-21	10201003702	flare / flare	3/8	1/2	-	-	-	-
	RFKH03E-4.8-15	10201003802	flare / flare / flare		1/2	-	-	1/4	-
	RFKH03-4.8-03	10201003402	flare / solder		-	12	-	-	-
	RFKH03E-4.8-02	10201003302	flare / solder / solder		-	12	-	-	6
	RFKH03-4.8-09	10201003502	flare / solder		-	-	1/2	-	-
	RFKH03E-4.8-10	10201003602	flare / solder / solder		-	-	1/2	-	1/4
R134a 4,6	RFKH04-2.9-23	10201004102	flare / flare	3/8	1/2	-	-	-	-
	RFKH04E-2.9-19	10201004002	flare / flare / flare		1/2	-	-	1/4	-
	RFKH04-2.9-29	10201004202	flare / solder		-	12	-	-	-
	RFKH04E-2.9-17	10201003902	flare / solder / solder		-	12	-	-	6
	RFKH04-2.9-30	10201004302	flare / solder		-	-	1/2	-	-
	RFKH04E-2.9-31	10201004402	flare / solder / solder		-	-	1/2	-	1/4
R410A 4,6	RFKH05-6.8-66	10201005702	flare / flare	3/8	1/2	-	-	-	-
	RFKH05E-6.8-33	10201005202	flare / flare / flare		1/2	-	-	1/4	-
	RFKH05-6.8-37	10201005602	flare / solder		-	12	-	-	-
	RFKH05E-6.8-36	10201005502	flare / solder / solder		-	12	-	-	6
	RFKH05-6.8-35	10201005402	flare / solder		-	-	1/2	-	-
	RFKH05E-6.8-34	10201005302	flare / solder / solder		-	-	1/2	-	1/4
R407A / R407F 4,6	RFKH07-6.0-43	10201004802	flare / flare	3/8	1/2	-	-	-	-
	RFKH07E-6.0-42	10201004702	flare / flare / flare		1/2	-	-	1/4	-
	RFKH07-6.0-44	10201004902	flare / solder		-	12	-	-	-
	RFKH07E-6.0-41	10201004602	flare / solder / solder		-	12	-	-	6
	RFKH07-6.0-45	10201005002	flare / solder		-	-	1/2	-	-
	RFKH07E-6.0-46	10201005102	flare / solder / solder		-	-	1/2	-	1/4

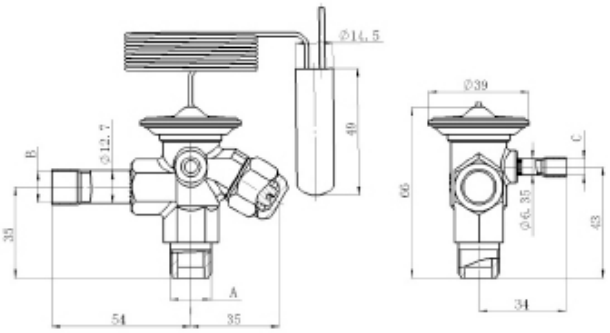
Note: 1) Extent of delivery: valve body and bulb strap
2) Different evaporation temperature range on request
3) MOP function on request

RFKH SERIES
Thermostatic Expansion Valve

DIMENSIONS

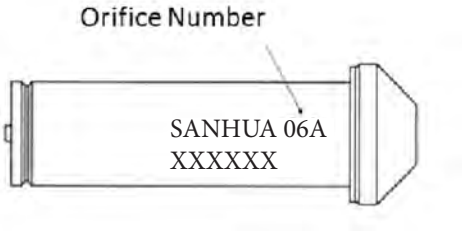


Valve Body - Connection Type: flare/flare/flare



Valve Body - Connection Type: flare/solder/solder

ACCESSORIES



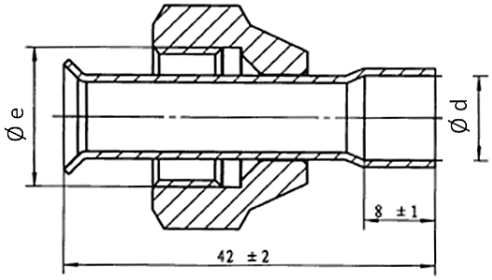
ORIFICE

Valve Orifice Model	Unique code of multi package	Orifice Number	Nominal Capacity[1] [kW]					
			R22	R407C	R404A R507A	R134a	R410A	R407A R407F
RFKH-023-0X	10202001702	0X	1.0	1.0	0.7	0.69	1.1	1.0
RFKH-023-00	10202001002	0	1.9	2.1	1.4	1.2	2.2	1.8
RFKH-023-01	10202001102	1	3.8	4.0	2.8	2.1	4.5	3.7
RFKH-023-02	10202001202	2	5.1	5.4	4.0	2.7	5.6	5.1
RFKH-023-03	10202001302	3	8.6	9.2	6.8	4.4	10.0	8.6
RFKH-023-04	10202001402	4	13.2	13.9	10.8	6.5	15.2	13.4
RFKH-023-05	10202001502	5	18.1	18.5	14.1	8.6	19.1	17.6
RFKH-023-06	10202001602	6	21.3	22.1	16.8	10.3	24.0	21.2

Note: 1) Nominal working conditions: Condensing temperature 38°C; evaporating temperature +4,4°C; liquid temperature 37°C

2) R407C data based on dew point conditions

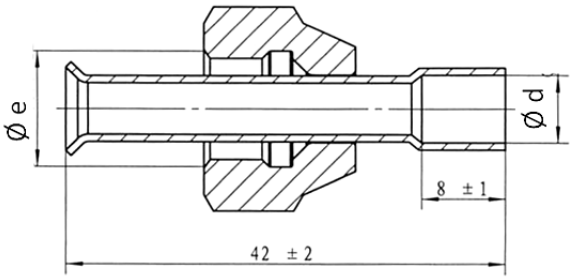
RFKH SERIES
Thermostatic Expansion Valve



SOLDER ADAPTERS FOR RFKH INLET A

Model	Part Number[1)]	SAE Flare Ø e	Solder Connection Ø d
RFKA-038-01	RFK-24044	3/8″	3/8"
RFKA-038-02	RFK-24045		10mm
RFKA-038-05	RFK-24048		1/4"
RFKA-038-06	RFK-24049		6mm

Note: 1) Copper pipe and flare nut are in the extent of delivery



SOLDER ADAPTERS FOR RFKH EXTERNAL PRESSURE EQUALIZATION C

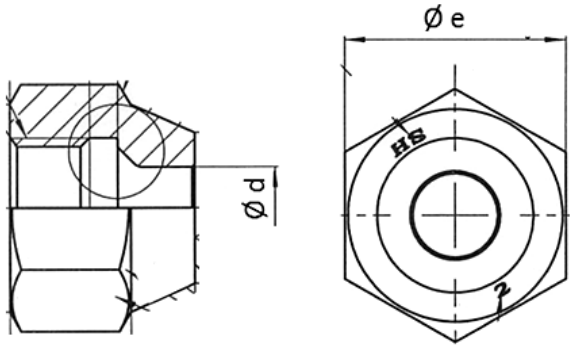
Model	Part Number[1)]	SAE Flare Ø e	Solder Connection Ø d
RFKA-038-03	RFK-24046	1/4″	6mm
RFKA-038-04	RFK-24047		1/4"

Note: 1) Copper pipe and flare nut are in the extent of delivery

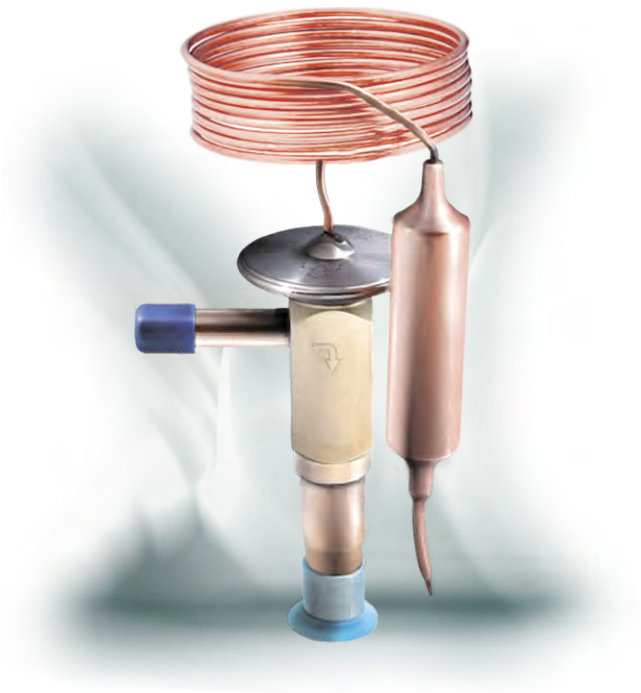
RFKH SERIES
Thermostatic Expansion Valve

FLARE NUTS FOR RFKH

Model	Part Number	SAE Flare	Pipe Diameter Ø d		Wrench Size Ø e
		[inch]	[mm]	[inch]	[mm]
JZF-000-011072	RFK-24050	1/4	6	1/4	17
JZF-000-011073	RFK-24051	3/8	-	3/8	22
JZF-000-011074	RFK-24052	1/2	12	1/2	24



Thermostatic Expansion Valve



RFGB series thermostatic expansion valves are used to adjust mass flow of refrigerant into the evaporator while controlling the refrigerant´s superheat at the outlet of the evaporator. They can be used for various refrigerants under all working conditions. Typical applications are refrigeration systems like commercial refrigerators and freezers, icemakers, dehumidifiers as well as air conditioners at various evaporation temperature.

FEATURES

- COMPACT DESIGN WITH BUILD-IN ORIFICE
- WARM THERMO HEAD CONSTRUCTION
- ALL CONNECTIONS PIPES ARE COMPLETELY IN COPPER
- VALVES WITH MOP FUNCTION CAN BE PROVIDED TO ASSURE RELIABLE COMPRESSOR OPERATION
- APPLICABLE IN A WIDE EVAPORATION TEMPERATURE RANGE
- RELIABLE AND CONSISTENT PERFORMANCE OF SUPERHEAT CONTROL

GENERAL SPECIFICATION

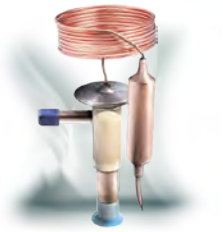
- Applicable for all common HCFC and HFC refrigerants such as: R22, R134a, R404A, R407C, R507A ...
- Ambient temperature min./max.: -35/+55°C
- Medium temperature TS min./max.: -40°C / +70°C
- Max. operating pressure PS: 2,1 ... 3,5 MPa (21 ... 35 bar) [1)]
- Installation position: - Preferably valve head upwards
  - Flow direction from inlet A to outlet B
- Certifications: UL/CSA and PED declaration

1) Max. operating pressure is related to the used refrigerant

TECHNICAL PARAMETERS

- RFGB valve available in straight shape with adjustable superheat on site
- RFGB valve available in angle shape with fixed factory super heat settings
- Both versions are available with the following solder connections
  - Metric: Inlet 6mm ODF/ Outlet 10mm ODF or Inlet 10mm ODF/ Outlet 12mm ODF
  - Imperial: Inlet 1/4" ODF/ Outlet 3/8" ODF or Inlet 3/8" ODF/ Outlet 1/2" ODF
- Equalization port available as option:
  - Metric: 6mm ODF (available for models with metric solder connections)
  - Imperial: 1/4" ODF (available for models with imperial solder connections)
- Capillary tube length 800mm

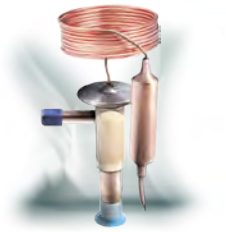
RFGB SERIES
Thermostatic Expansion Valve



MODEL DESIGNATION LEGEND

Position Number	Model Designation Legend	
1	**Product Code**	**Product Series**
	RFGB	Thermostatic expansion valve with build-in orifice
2	**Refrigerant**	**Description**
	1	R22
	2	R407C
	3	R404A / R507A
	4	R134a
3	**Pressure Equalization**	**Description**
	E	External pressure equalization
	(Omitted)	Internal pressure equalization
4	**Valve Size**	**Internal Orifice Size**
	From 1 to 5	Valve size: proportional to the orifice size and to the nominal capacity
5	**Valve Shape**	**Description**
	S	Straight Version
	A	Angle Version
6	**Connections Type**	**Description**
	M6	Metric: inlet 6mm / outlet 10mm
	M10	Metric: inlet 10mm / outlet 12mm
	2	Imperial: inlet 1/4" / outlet 3/8"
	3	Imperial: inlet 3/8" / outlet 1/2"
7	**Miscellaneous**	**Description**
	xxx	Digits for additional information e.g. static superheat, MOP, Bleed...

RFGB SERIES
Thermostatic Expansion Valve



MODEL DESIGNATION EXAMPLE

Position Number							According to Model Designation Legend
1	2	3	4	5	6	7	
RFGB	04	E	3	S	M6	xxxx	Thermostatic expansion valve with build-in orifice
RFGB	**04**	E	3	S	M6	xxxx	Refrigerant: R134a
RFGB	04	**E**	3	S	M6	xxxx	With connection for external pressure equalization
RFGB	04	E	**3**	S	M6	xxxx	Capacity: Valve and orifice size 3
RFGB	04	E	3	**S**	M6	xxxx	Valve Shape: straight
RFGB	04	E	3	S	**M6**	xxxx	Valve pipe connections: metric inlet 6mm/outlet 10mm
RFGB	04	E	3	S	M6	**xxxx**	Digits for additional information

TECHNICAL DATA

R22		R407C[3]		R404A / R507A		R134a	
PS: 2,8 MPa		PS: 2,8 MPa		PS: 3,5 MPa		PS: 2,1 MPa	
Model Name[4]	Capacity	Model Name[4]	Capacity	Model Name[4]	Capacity	Model Name[4]	Capacity
	[USRT] [kW]		[USRT] [kW]		[USRT] [kW]		[USRT] [kW]
RFGB 01 -1	0,48 1,7	RFGB 02 -1	0,48 1,7	RFGB 03 -1	0,34 1,2	RFGB 04 -1	0,31 1,1
RFGB 01E-1		RFGB 02E-1		RFGB 03E-1		RFGB 04E-1	
RFGB 01 -2	0,82 2,9	RFGB 02 -2	0,85 3,0	RFGB 03 -2	0,65 2,3	RFGB 04 -2	0,43 1,5
RFGB 01E-2		RFGB 02E-2		RFGB 03E-2		RFGB 04E-2	
RFGB 01 -3	1,4 4,8	RFGB 02 -3	1,4 5,0	RFGB 03 -3	1,2 4,3	RFGB 04 -3	0,77 2,7
RFGB 01E-3		RFGB 02E-3		RFGB 03E-3		RFGB 04E-3	
RFGB 01 -4	2,0 6,9	RFGB 02 -4	2,0 7,2	RFGB 03 -4	1,8 6,4	RFGB 04 -4	1,1 4,0
RFGB 01E-4		RFGB 02E-4		RFGB 03E-4		RFGB 04E-4	
RFGB 01 -5	2,3 8,1	RFGB 02 -5	2,4 8,4	RFGB 03 -5	2,1 7,5	RFGB 04 -5	1,3 4,6
RFGB 01E-5		RFGB 02E-5		RFGB 03E-5		RFGB 04E-5	

Note:

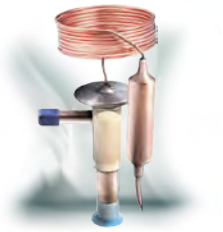
1) Nominal capacity valid for: - Version "S" in straight shape and version "A" in angle shape
- Versions with metrical and imperial connections

2) Nominal working conditions: Condensing temperature: 38°C; evaporating temperature +4,4°C; Liquid temperature 37°C

3) R407C data based on dew point conditions

4) Model Name in this table is referred to the first 4 positions of the model designation

RFGB SERIES
Thermostatic Expansion Valve



MODEL LIST

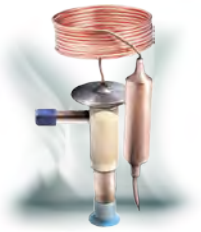
Evaporation Temp. Range to = +10...-40°C [1)]

Model Name [2) 3) 4) 5)]				Connections Size (Solder ODF)					
Valve Body All Refrigerants	**Capacity Size** All Sizes	**Valve Shape**[6)] Straight / Angle	**Pipe connections** Metric / Imperial	**Inlet**		**Outlet**		**Pressure Equal.**	
				[mm]	**[inch]**	**[mm]**	**[inch]**	**[mm]**	**[inch]**
RFGB 01 - RFGB 02 - RFGB 03 - RFGB 04 -	1 - 2 - 3 - 4 - 5 -	S -	M6	6	-	10	-	-	-
			M10	10	-	12	-	-	-
			2	-	1/4	-	3/8	-	-
			3	-	3/8	-	1/2	-	-
		A -	M6	6	-	10	-	-	-
			M10	10	-	12	-	-	-
			2	-	1/4	-	3/8	-	-
			3	-	3/8	-	1/2	-	-
RFGB 01E - RFGB 02E - RFGB 03E - RFGB 04E -	1 - 2 - 3 - 4 - 5 -	S -	M6	6	-	10	-	6	-
			M10	10	-	12	-	6	-
			2	-	1/4	-	3/8	-	1/4
			3	-	3/8	-	1/2	-	1/4
		A -	M6	6	-	10	-	6	-
			M10	10	-	12	-	6	-
			2	-	1/4	-	3/8	-	1/4
			3		3/8	-	1/2	-	1/4

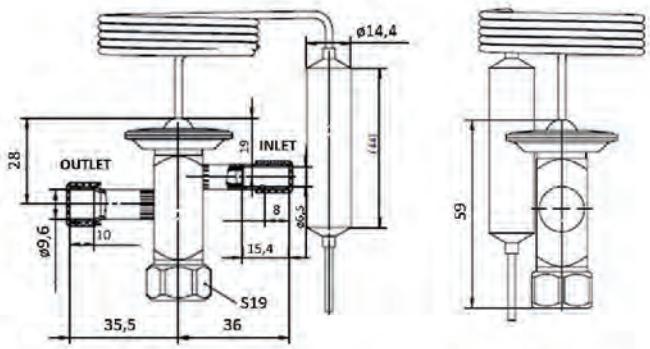
Note:

1) Different evaporation temperature range on request
2) Extent of delivery: valve body and bulb strap
3) MOP function on request
4) Delivery time on request
5) Model Name in this table is referred to the first 6 positions of the model designation
6) Superheat : - Straight version "S" with adjustable settings
- Angle version "A" with fixed factory settings

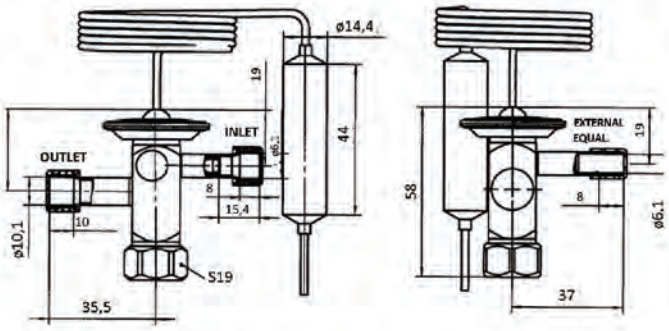
RFGB SERIES
Thermostatic Expansion Valve



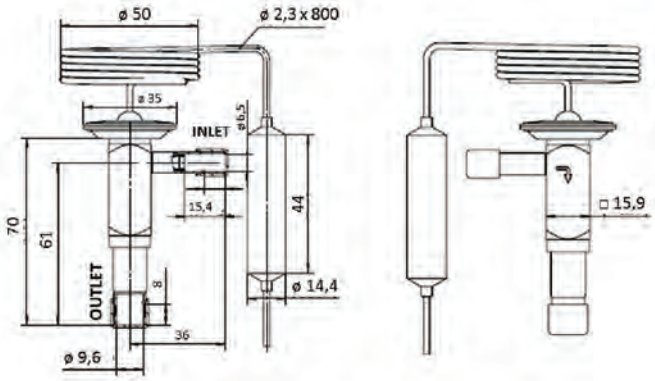
DIMENSIONS



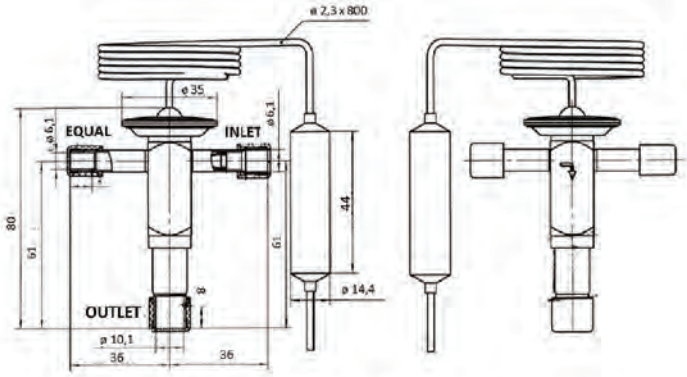
Straight Shape with Internal Pressure Equalization



Straight Shape with External Pressure Equalization



Angle Shape with Internal Pressure Equalization



Angle Shape with External Pressure Equalization

Did you know?

SANHUA

Every second fridge
is equipped with Sanhua
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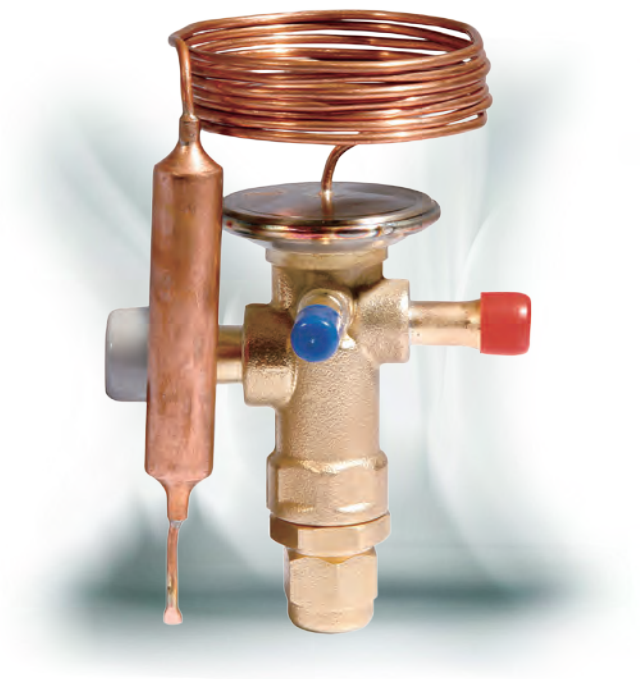
Thermostatic Expansion Valve



RFGD series thermostatic expansion valves are used to adjust mass flow of refrigerant into the evaporator while controlling the refrigerant´s superheat at the outlet of the evaporator. They can be used for various refrigerants under all working conditions. Typical applications are refrigeration systems like commercial refrigerators and freezers, icemakers, dehumidifiers as well as air conditioners at various evaporation temperatures.

FEATURES

- COMPACT DESIGN WITH BUILD-IN ORIFICE
- WARM THERMO HEAD CONSTRUCTION
- ALL CONNECTIONS PIPES ARE COMPLETELY IN COPPER
- VALVES WITH MOP FUNCTION CAN BE PROVIDED TO ASSURE RELIABLE COMPRESSOR OPERATION
- APPLICABLE IN A WIDE EVAPORATION TEMPERATURE RANGE
- RELIABLE AND CONSISTENT PERFORMANCE OF SUPERHEAT CONTROL
- BALANCED PORT – SUITABLE FOR REVERSIBLE CYCLES
- THERMAL BULB UTILIZES CROSS CHARGE TECHNOLOGY, PROVIDING CONSISTENT SUPERHEAT DEGREE OVER THE WHOLE EVAPORATION TEMPERATURE RANGE

GENERAL SPECIFICATION

- Applicable for all common HCFC and HFC refrigerants such as: R22, R134a, R404A, R407C, R410A, R507
- Ambient temperature min./max.: -35/+55°C
- Medium temperature TS min./max.: -40°C / +70°C
  -60°C / +70°C
- Max. operating pressure PS: 2,1 ... 4,5 MPa (21 ... 45 bar) [1)]
- Installation position: - Preferably valve head upwards
  - Main flow direction from inlet A to outlet B
- Certifications: UL/CSA and PED declaration

1) Max. operating pressure is related to the used refrigerant

RFGD SERIES
Thermostatic Expansion Valve

TECHNICAL PARAMETERS

- RFGD valves are available in straight shape with adjustable superheat on site
- RFGD valves are available with the following solder connections
  - Metric: Inlet 10mm ODF/ Outlet 16mm ODF or
    Inlet 12mm ODF/ Outlet 22mm ODF or
    Inlet 16mm ODF/ Outlet 22mm ODF
  - Imperial: Inlet 3/8" ODF/ Outlet 5/8" ODF or
    Inlet 1/2" ODF/ Outlet 7/8" ODF or
    Inlet 5/8" ODF/ Outlet 7/8" ODF
- RFGD valves are available with 3 different temperature ranges:
  - from -40°C to +10°C
  - from -40°C to -5°C
  - from -60°C to -25°C
- Equalization port available as option:
  - Metric: 6mm ODF (available for models with metric solder connections)
  - Imperial: 1/4" ODF (available for models with imperial solder connections)
- Capillary tube length 1500mm as standard. Different length customizable on request.
- Standard MOP values:
  - T. range -40°C to +10°C: MOP: +15°C or MOP not present
  - T. range -40°C to -5°C: MOP: 0°C
  - T. range -60°C to -25°C: MOP: -20°C

MODEL DESIGNATION LEGEND

Position Number	Model Designation Legend	
1	**Product Code**	**Product Series**
	RFGB	Thermostatic expansion valve with build-in orifice
2	**Refrigerant**	**Description**
	1	R22
	2	R407C
	3	R404A / R507
	4	R134a
	5	R410A
3	**Pressure Equalization**	**Description**
	E	External pressure equalization
	(Omitted)	Internal pressure equalization
4	**Valve Size**	**Internal Orifice Size**
	From 1 to 6	Valve size: proportional to the orifice size and to the nominal capacity
5	**Connections Type**	**Description**
	M10	Metric: inlet 10mm / outlet 16mm
	M12	Metric: inlet 12mm / outlet 22mm
	M16	Metric: inlet 16mm / outlet 22mm
	3	Imperial: inlet 3/8" / outlet 5/8"
	4	Imperial: inlet 1/2" / outlet 7/8"
	5	Imperial: inlet 5/8" / outlet 7/8"
6	**Miscellaneous**	**Description**
	xxx	Digits for additional information e.g. static superheat, MOP, Bleed...

RFGD SERIES
Thermostatic Expansion Valve

MODEL DESIGNATION EXAMPLE

Position Number						According to Model Designation Legend
1	2	3	4	5	6	
RFGD	04	E	3	M16	xxxx	Thermostatic expansion valve with build-in orifice
RFGD	**04**	E	3	M16	xxxx	Refrigerant: R134a
RFGD	04	**E**	3	M16	xxxx	With connection for external pressure equalization
RFGD	04	E	**3**	M16	xxxx	Capacity: Valve and orifice size 3
RFGD	04	E	3	**M16**	xxxx	Valve pipe connections: metric inlet 16mm/outlet 22mm
RFGD	04	E	3	M16	**xxxx**	Digits for additional information

TECHNICAL DATA

Nominal Capacities[1]

R22			R407C[2]			R404A / R507A			R134a			R410A		
PS: 2,8 MPa			PS: 2,8 MPa			PS: 3,5 MPa			PS: 2,1 MPa			PS: 4,5 MPa		
Model Name[3]	Capacity		Model Name[3]	Capacity		Model Name[3]	Capacity		Model Name[3]	Capacity		Model Name[3]	Capacity	
	[USRT]	[kW]		[USRT]	[kW]		[USRT]	[kW]		[USRT]	[kW]		[USRT]	[kW]
RFGD 01-1	3,0	10,6	RFGD 02-1	3,1	10,9	RFGD 03-1	2,0	7,0	RFGD 04-1	1,8	6,3	RFGD 05-1	3,5	12,3
RFGD 01E-1			RFGD 02E-1			RFGD 03E-1			RFGD 04E-1			RFGD 05E-1		
RFGD 01-2	4,0	14,1	RFGD 02-2	4,2	14,8	RFGD 03-2	2,8	9,8	RFGD 04-2	2,5	8,8	RFGD 05-2	4,5	15,8
RFGD 01E-2			RFGD 02E-2			RFGD 03E-2			RFGD 04E-2			RFGD 05E-2		
RFGD 01-3	6,0	21,1	RFGD 02-3	6,3	22,2	RFGD 03-3	4,2	14,8	RFGD 04-3	3,6	12,7	RFGD 05-3	7,0	24,6
RFGD 01E-3			RFGD 02E-3			RFGD 03E-3			RFGD 04E-3			RFGD 05E-3		
RFGD 01-4	7,5	26,4	RFGD 02-4	8,1	28,5	RFGD 03-4	5,4	19,0	RFGD 04-4	4,6	16,2	RFGD 05-4	8,6	30,2
RFGD 01E-4			RFGD 02E-4			RFGD 03E-4			RFGD 04E-4			RFGD 05E-4		
RFGD 01-5	9,0	31,7	RFGD 02-5	9,4	33,1	RFGD 03-5	6,4	22,5	RFGD 04-5	5,5	19,3	RFGD 05-5	10,6	37,3
RFGD 01E-5			RFGD 02E-5			RFGD 03E-5			RFGD 04E-5			RFGD 05E-5		
RFGD 01-6	11,0	38,7	RFGD 02-6	11,7	41,1	RFGD 03-6	7,8	27,4	RFGD 04-6	6,8	23,9	RFGD 05-6	12,8	45,0
RFGD 01E-6			RFGD 02E-6			RFGD 03E-6			RFGD 04E-6			RFGD 05E-6		

Note:

1) Nominal capacities referred at the following working conditions:
Condensing temperature: 38°C; evaporating temperature +4,4°C; Liquid temperature 37°C
Static Super Heating: 3,5K
2) R407C data based on dew point conditions
3) Model Name in this table is referred to the first 4 positions of the model designation

RFGD SERIES
Thermostatic Expansion Valve

MODEL LIST (WITHOUT INTERNAL EQUALIZATION)

Model Name										Temperature Range			
Ref.	Valve Body	Capacity Size All Sizes	Pipe connections Metric / Imperial	Inlet		Outlet		Pressure Equal.		-40°C to +10°C		-40°C to -5°C	-60°C to -20°C
				[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	No MOP	MOP: +15°C	MOP: 0°C	MOP: -20°C
R22	RFGD 01	1	M10	10	-	16	-	-	-	O.R.	O.R.	O.R.	O.R.
		2	M12	12	-	22	-	-	-	O.R.	O.R.	O.R.	O.R.
		3	M16	16		22		-	-	O.R.	O.R.	O.R.	O.R.
		4	3	-	3/8	-	5/8	-	-	O.R.	O.R.	O.R.	O.R.
		5	4	-	1/2	-	7/8	-	-	O.R.	O.R.	O.R.	O.R.
		6	5		5/8		7/8	-	-	O.R.	O.R.	O.R.	O.R.
R407C	RFGD 02	1	M10	10	-	16	-	-	-	O.R.	O.R.	O.R.	O.R.
		2	M12	12	-	22	-	-	-	O.R.	O.R.	O.R.	O.R.
		3	M16	16		22		-	-	O.R.	O.R.	O.R.	O.R.
		4	3	-	3/8	-	5/8	-	-	O.R.	O.R.	O.R.	O.R.
		5	4	-	1/2	-	7/8	-	-	O.R.	O.R.	O.R.	O.R.
		6	5		5/8		7/8	-	-	O.R.	O.R.	O.R.	O.R.
R404A / R507	RFGD 03	1	M10	10	-	16	-	-	-	O.R.	O.R.	O.R.	O.R.
		2	M12	12	-	22	-	-	-	O.R.	O.R.	O.R.	O.R.
		3	M16	16		22		-	-	O.R.	O.R.	O.R.	O.R.
		4	3	-	3/8	-	5/8	-	-	O.R.	O.R.	O.R.	O.R.
		5	4	-	1/2	-	7/8	-	-	O.R.	O.R.	O.R.	O.R.
		6	5		5/8		7/8	-	-	O.R.	O.R.	O.R.	O.R.
R134a	RFGD 04	1	M10	10	-	16	-	-	-	O.R.	O.R.	O.R.	O.R.
		2	M12	12	-	22	-	-	-	O.R.	O.R.	O.R.	N.A.
		3	M16	16		22		-	-	O.R.	O.R.	O.R.	N.A.
		4	3	-	3/8	-	5/8	-	-	O.R.	O.R.	O.R.	N.A.
		5	4	-	1/2	-	7/8	-	-	O.R.	O.R.	O.R.	N.A.
		6	5		5/8		7/8	-	-	O.R.	O.R.	O.R.	N.A.
R410A	RFGD 05	1	M10	10	-	16	-	-	-	O.R.	O.R.	O.R.	N.A.
		2	M12	12	-	22	-	-	-	O.R.	O.R.	O.R.	N.A.
		3	M16	16		22		-	-	O.R.	O.R.	O.R.	N.A.
		4	3	-	3/8	-	5/8	-	-	O.R.	O.R.	O.R.	N.A.
		5	4	-	1/2	-	7/8	-	-	O.R.	O.R.	O.R.	N.A.
		6	5		5/8		7/8	-	-	O.R.	O.R.	O.R.	N.A.

Note: 1) Extent of delivery: valve body and bulb strap
2) O.R. : On Request
3) N.A.: Not Available

RFGD SERIES
Thermostatic Expansion Valve

MODEL LIST (WITH EXTERNAL EQUALIZATION)

Model Name										Temperature Range			
Ref.	Valve Body	Capacity Size All Sizes	Pipe connections Metric / Imperial	Inlet		Outlet		Pressure Equal.		-40°C to +10°C		-40°C to -5°C	-60°C to -20°C
				[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	No MOP	MOP: +15°C	MOP: 0°C	MOP: -20°C
R22	RFGD 01E	1	M10	10	-	16	-	-	-	O.R.	O.R.	O.R.	O.R.
		2	M12	12	-	22	-	-	-	O.R.	O.R.	O.R.	O.R.
		3	M16	16		22		-	-	O.R.	O.R.	O.R.	O.R.
		4	3	-	3/8	-	5/8	-	-	O.R.	O.R.	O.R.	O.R.
		5	4	-	1/2	-	7/8	-	-	O.R.	O.R.	O.R.	O.R.
		6	5		5/8		7/8	-	-	O.R.	O.R.	O.R.	O.R.
R407C	RFGD 02E	1	M10	10	-	16	-	-	-	STD	O.R.	O.R.	O.R.
		2	M12	12	-	22	-	-	-	STD	O.R.	O.R.	O.R.
		3	M16	16		22		-	-	STD	O.R.	O.R.	O.R.
		4	3	-	3/8	-	5/8	-	-	STD	O.R.	O.R.	O.R.
		5	4	-	1/2	-	7/8	-	-	STD	O.R.	O.R.	O.R.
		6	5		5/8		7/8	-	-	STD	O.R.	O.R.	O.R.
R404A / R507	RFGD 03E	1	M10	10	-	16	-	-	-	STD	O.R.	O.R.	O.R.
		2	M12	12	-	22	-	-	-	STD	O.R.	O.R.	O.R.
		3	M16	16		22		-	-	STD	O.R.	O.R.	O.R.
		4	3	-	3/8	-	5/8	-	-	STD	O.R.	O.R.	O.R.
		5	4	-	1/2	-	7/8	-	-	STD	O.R.	O.R.	O.R.
		6	5		5/8		7/8	-	-	STD	O.R.	O.R.	O.R.
R134a	RFGD 04E	1	M10	10	-	16	-	-	-	STD	O.R.	O.R.	O.R.
		2	M12	12	-	22	-	-	-	STD	O.R.	O.R.	N.A.
		3	M16	16		22		-	-	STD	O.R.	O.R.	N.A.
		4	3	-	3/8	-	5/8	-	-	STD	O.R.	O.R.	N.A.
		5	4	-	1/2	-	7/8	-	-	STD	O.R.	O.R.	N.A.
		6	5		5/8		7/8	-	-	STD	O.R.	O.R.	N.A.
R410A	RFGD 05E	1	M10	10	-	16	-	-	-	STD	O.R.	O.R.	N.A.
		2	M12	12	-	22	-	-	-	STD	O.R.	O.R.	N.A.
		3	M16	16		22		-	-	STD	O.R.	O.R.	N.A.
		4	3	-	3/8	-	5/8	-	-	STD	O.R.	O.R.	N.A.
		5	4	-	1/2	-	7/8	-	-	STD	O.R.	O.R.	N.A.
		6	5		5/8		7/8	-	-	STD	O.R.	O.R.	N.A.

Note: 1) Extent of delivery: valve body and bulb strap
2) O.R. : On Request
3) N.A.: Not Available
4) STD: Standard Models available on stock (see Standard Model Table for further details)

RFGD SERIES
Thermostatic Expansion Valve

RFGD STANDARD RANGE

A) Models with Metric Connections

Model Name								
Ref.	MWP [MPa]	Valve Body	Capacity Size All Sizes	Connections IN x OUT		Pressure Equal.	Internal Code	Multi package*
				Metric	[mm]	[mm]		
R407C	2,8	RFGD 02E	1 -	M10	10 x 16	6	RFGD 02E-3.1-57	10205009002
			2 -	M12	12 x 22	6	RFGD 02E-4.2-58	10205009102
			3 -	M12	12 x 22	6	RFGD 02E-6.3-59	10205009202
			4 -	M12	12 x 22	6	RFGD 02E-8.1-60	10205009302
			5 -	M16	16 x 22	6	RFGD 02E-9.4-61	10205009402
			6 -	M16	16 x 22	6	RFGD 02E-11.7-62	10205009502
R404A / R507	3,5	RFGD 03E	1 -	M10	10 x 16	6	RFGD 03E-2.0-63	10205009602
			2 -	M12	12 x 22	6	RFGD 03E-2.8-64	10205009702
			3 -	M12	12 x 22	6	RFGD 03E-4.2-65	10205009802
			4 -	M12	12 x 22	6	RFGD 03E-5.4-66	10205009902
			5 -	M16	16 x 22	6	RFGD 03E-6.4-67	10205010002
			6 -	M16	16 x 22	6	RFGD 03E-7.8-68	10205010102
R134a	2,1	RFGD 04E	1 -	M10	10 x 16	6	RFGD 04E-1.8-69	10205010202
			2 -	M12	12 x 22	6	RFGD 04E-2.5-70	10205010302
			3 -	M12	12 x 22	6	RFGD 04E-3.6-71	10205010402
			4 -	M12	12 x 22	6	RFGD 04E-4.6-72	10205010502
			5 -	M16	16 x 22	6	RFGD 04E-5.5-73	10205010602
			6 -	M16	16 x 22	6	RFGD 04E-6.8-74	10205010702
R410A	4,5	RFGD 05E	1 -	M10	10 x 16	6	RFGD 05E-3.5-75	10205010802
			2 -	M12	12 x 22	6	RFGD 05E-4.5-76	10205010902
			3 -	M12	12 x 22	6	RFGD 05E-7.0-77	10205011002
			4 -	M12	12 x 22	6	RFGD 05E-8.6-78	10205011102
			5 -	M16	16 x 22	6	RFGD 05E-10.6-79	10205011202
			6 -	M16	16 x 22	6	RFGD 05E-12.8-80	10205011302

* Available also as industrial package. Contact Sanhua for more details.

RFGD SERIES
Thermostatic Expansion Valve

RFGD STANDARD RANGE

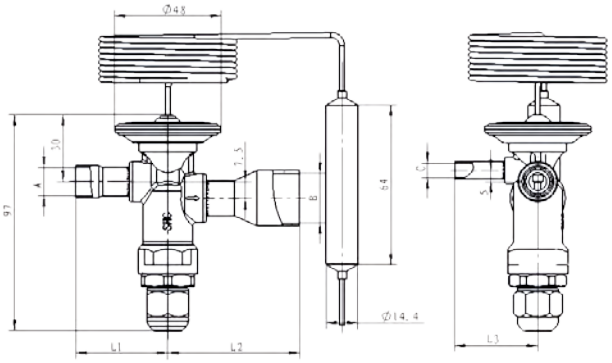
B) Models with Imperial Connections

Model Name								
Ref.	MWP [MPa]	Valve Body	Capacity Size All Sizes	Connections IN x OUT		Pressure Equal.	Product Number	Multi package*
				Imperial	[inch]	[inch]		
R407C	2,8	RFGD 02E	1 -	3	3/8 x 5/8	1/4	RFGD 02E-3.1-33	10205008402
			2 -	4	1/2 x 7/8	1/4	RFGD 02E-4.2-34	10205007002
			3 -	4	1/2 x 7/8	1/4	RFGD 02E-6.3-35	10205008502
			4 -	4	1/2 x 7/8	1/4	RFGD 02E-8.1-36	10205007802
			5 -	5	5/8 x 7/8	1/4	RFGD 02E-9.4-37	10205007902
			6 -	5	5/8 x 7/8	1/4	RFGD 02E-11.7-38	10205008002
R404A / R507	3,5	RFGD 03E	1 -	3	3/8 x 5/8	1/4	RFGD 03E-2.0-39	10205008102
			2 -	4	1/2 x 7/8	1/4	RFGD 03E-2.8-40	10205008202
			3 -	4	1/2 x 7/8	1/4	RFGD 03E-4.2-41	10205008302
			4 -	4	1/2 x 7/8	1/4	RFGD 03E-5.4-42	10205008602
			5 -	5	5/8 x 7/8	1/4	RFGD 03E-6.4-43	10205008702
			6 -	5	5/8 x 7/8	1/4	RFGD 03E-7.8-44	10205008802
R134a	2,1	RFGD 04E	1 -	3	3/8 x 5/8	1/4	RFGD 04E-1.8-01	71205002802
			2 -	4	1/2 x 7/8	1/4	RFGD 04E-2.5-02	71205002902
			3 -	4	1/2 x 7/8	1/4	RFGD 04E-3.6-03	71205003002
			4 -	4	1/2 x 7/8	1/4	RFGD 04E-4.6-04	71205003102
			5 -	5	5/8 x 7/8	1/4	RFGD 04E-5.5-49	10205008902
			6 -	5	5/8 x 7/8	1/4	RFGD 04E-6.8-32	10205004402
R410A	4,5	RFGD 05E	1 -	3	3/8 x 5/8	1/4	RFGD 05E-3.5-22	10205002502
			2 -	4	1/2 x 7/8	1/4	RFGD 05E-4.5-23	10205002702
			3 -	4	1/2 x 7/8	1/4	RFGD 05E-7.0-24	10205002802
			4 -	4	1/2 x 7/8	1/4	RFGD 05E-8.6-25	10205002902
			5 -	5	5/8 x 7/8	1/4	RFGD 05E-10.6-27	10205003102
			6 -	5	5/8 x 7/8	1/4	RFGD 05E-12.8-26	10205003002

* Available also as industrial package. Contact Sanhua for more details.

RFGD SERIES
Thermostatic Expansion Valve

DIMENSIONS



Note: The drawing represents a model with External Pressure Equalization

Overall Dimensions			
Orifice Size	**L1 (mm)**	**L2 (mm)**	**L3 (mm)**
1	41.5	59.5	37.5
2	41.5	59.5	37.5
3	41.5	59.5	37.5
4	41.5	59.5	37.5
5	41.5	59.5	37.5
6	41.5	59.5	37.5

Controller for EEV

Electronic expansion valve controller is applicable for cooling systems such as room air conditioners, commercial air conditioners and freezers which is the core component for refrigerant flow control.

FEATURES

- HIGH SHARING DESIGN

  ADOPTING SHARING PCB DESIGN (4 MODELS), APPLICABLE FOR DETECTIONS OF THREE TEMPERATURE SENSORS OR ONE TEMPERATURE AND ONE PRESSURE SENSOR

  APPLICABLE FOR SPLIT OR PACKAGED UNIT,EITHER COOLING OR BOTH COOLING AND HEATING WITH VARIOUS VOLTAGE

  APPLICABLE FOR ALL SANHUA ELECTRONIC EXPANSION VALVES ALLOWING TROUBLE-FREE SECLECTION AND COMPATIBILITY FOR CUSTOMERS

  THE CONTROLLER IS EQUIPPED WITH A WHOLE SET OF ADVANCED SYSTEM CONTROL SOLUTIONS FOR WHICH PARAMETERS COULD BE ADJUSTED ACCORDING TO USERS' REQUIREMENTS

- HIGH QUALITY DESIGN

  ADOPTING OVERHEAT FEEDBACK CONTROL, PID CORE ALGORITHM ADJUSTMENT AND CONTROL AS WELL AS FUNCTIONS SUCH AS ABNORMAL PROTECTION CONTROL, DEFROSTING CONTROL AND SENSOR ABNORMAL ALARM

  USING IMPORTED HIGH QUALITY ELEMENTS FOR IMPORTANT COMPONENTS TO ENSURE CONTROL ACCURACY OF THE CONTROLLER

  THE BOTTOM IS PAINTED WITH SILICA GEL TO IMPROVE DUST-FREE, MOISTUREPROOF AND CORROSION RESISTANCE PERFORMANCE

TECHNICAL PARAMETERS

Project / Shared Model	Cooling Only, Cooling & Heating
Voltage	DC12V±10%, AC24V±10%, AC100V~AC240V
Frequency	50Hz/60Hz
Construction mode	One-unit, duel-panel FR-4 design
Ambient temperature and humidity	-20ºC ~ +70ºC, 10% ~ 95%
Storage environment temperature and humidity	-30ºC ~ +85ºC, 10% ~ 95%
Rated Electric Input Power	20VA
Max. Electric Input Power	30VA
Applicable Expansion Valve Type	Q series, O series, S series , R series , T series
Applicable Expansion Valve Port Size	1.3mm ~ 6.5mm

Controller of EEV

TECHNICAL PARAMETERS

Project / Shared Model	Cooling & Heating Type
Applicable Expansion Valve Full Open Pulse	500Pulse, 2000Pulse
Applicable Expansion Valve Excitation Mode	1~2 phase excitation, 2~2 phase excitation
Size	90x70mm, 100x80mm, 110x90mm, available for customization as per customers' needs
Certification	3C/CE/ETL/TUV/UL(including EMC)

Residential Inverter Controller

Residential inverter controller is applicable for controlling room air conditioners including heat pump air conditioning systems, which is the core component of inverter air conditioners.

FEATURES

- HIGH INTEGRATION DESIGN

IN ADDITION TO RESEARCHING AND DEVELOPING ELECTRIC CONTROL PRODUCTS, WE ALSO PROVIDE WHOLE SET OF ADVANCED COOLING CONTROL SOLUTIONS AND STRUCTURE DESIGN, INCLUDING CONTROL OF COMPRESSORS, ELECTRONIC EXPANSION VALVES, DEFROSTING, OUTSIDE TEMPERATURE, DISCHARGE TEMPERATURE, OVERHEAT PROTECTION AND ROTATING SPEED OF OUTDOOR BLOWERS APPLICABLE FOR SPLIT OR PACKAGED UNIT,EITHER COOLING OR BOTH COOLING AND HEATING WITH VARIOUS VOLTAGE

WE HAVE LABORATORIES FOR 10HP MUTILPLE INDOOR SYSTEM INLCUDING ENTHALPY DIFFERENCE LABORATORY, ENVIRONMENT & NOISE COMBINED LABORATORY, ENDURANCE LABORATORY, EMC LABORATORY, ELECTRIC ASSEMBLY LABORATORY, THERMAL SHOCK TESTER AND A LARGE BATCH OF HIGH PRECISION IMPORTED TESTING DEVICES TO ENSURE A GOOD DEVELOPING QUALITY

- HIGH QUALITY DESIGN

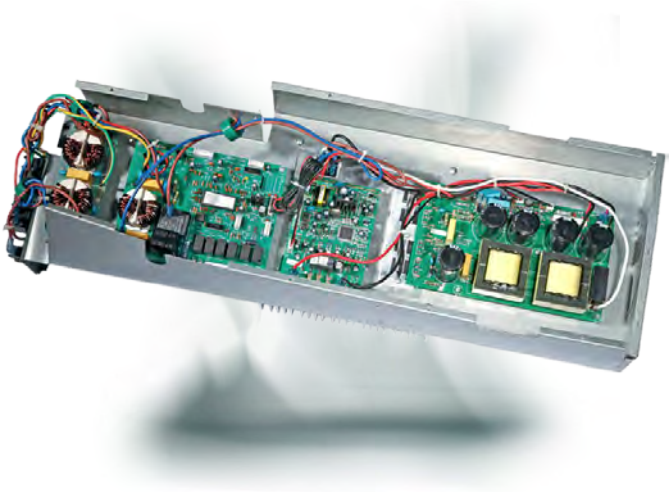
MASTERING CORE FREQUENCY CONVERSION TECHNOLOGIES TO REALIZE TORQUE COMPENSATION CONTROL AND FIELD WEAKENING, REDUCE COMPRESSOR VIBRATION, NOISE AND IMPROVE THE OPERATION FREQUENCY OF THE COMPRESSOR UTILIZING IMPORTED HIGH QUALITY ELEMENTS FOR IMPORTANT COMPONENTS (MITSUBISHI IPM, FAIRCHILD IPM, NEC CHIPS AND TOSHIBA CHIPS ETC.)

CONTROL TECHNIQUES WITH MULTIPLE SOLUTIONS TO MEEET VARIOUS NEEDS OF THE CUSTOMERS

TECHNICAL PARAMETERS

Project / Nominal Refrigerating Capacity	1HP	1.5HP	2HP	3HP
Voltage	220V±25%			
Frequency	50Hz/60Hz			
Frequency conversion range	Passive PFC 15-85Hz/Active PFC 15-120Hz			
Power factor	Passive PFC:0.85~0.90 Part PFC:0.95~0.98 Whole range PFC:0.97~0.997			
Construction	One-unit design/Split design			Split design
Allowed ambient temperature	-15ºC ~ +55ºC			-15ºC ~ +55ºC
Compressor actuating method	150° wide-angle actuating/Sine wave actuating			Sine wave actuating
Outdoor fan	DC motor/AC motor			
Throttle mode	Electronic expansion valve/capillary tubes			
Actuating compressor	GMCC, Panasonic, Hitachi, Sanyo, MITSUBISHI etc.			
Certification	3C\CE\ETL\TUV(including EMC)			

Inverter Controller for Large System



Inverter controller for large System is mainly used to control whole electric control systems such in outdoor unit as commercial or multiple inverter air conditioners. They not only realize frequency conversion control over DC converter compressor, but also control all kinds of electric parts such as outdoor blowers, electronic expansion valves and solenoid valves, greatly improving the efficiency of the whole system.

FEATURES

- UTILIZING ACTIVE FREQUENCY CONVERSION TECHNOLOGY FOR THE WHOLE PROCESS WITH A POWER FACTOR ABOVE 98.5%, APPLICABLE FOR A WIDER RANGE OF VOLTAGE
- USING DC FREQUENCY CONVERSION 180° SINE WAVE ACTUATING TECHNOLOGY, INCREASING TORQUE COMPENSATION, MORE INTELLIGENT CONTROL
- AVAILABLE WITH CIRCUIT CONTROLLED BY ELECTRONIC EXPANSION VALVE TO BETTER BRING WHOLE EFFICIENCY OF THE SYSTEM INTO FULL PLAY
- DC FREQUENCY CONVERSION BLOWER CAN BE EQUIPPED TO IMPROVE THE SYSTEM EFFICIENCY
- PASSING EMC TESTS WITH THE WHOLE FREQUENCY MEETING NATIONAL AND RELEVANT EXPORT STANDARDS

GENERAL SPECIFICATIONS

- Applicable voltage: single phase AC 220V - 230V ± 20%, 3 phase AC380V - 400V ± 15%
- Nominal Refrigerating capacity: 3HP~12HP
- Frequency conversion range: 15~120Hz
- Temperature control accuracy: ±1°
- Compatible indoor units: wall mounted air conditioners, cabinet air conditioners, ceiling air conditioners and duct type air conditioners

Inverter Controller for HP Water Heater

Inverter Controller for HP Water Heater is used to realize overall control of the outdoor unit of heat pump and water heating system. Energy efficiency of whole water heating system can be greatly improved by actuating frequency conversion control over DC converter compressor and electrical parts such as outdoor blower, electronic expansion valve and solenoid valves. Normally, the efficiency can be up to 3.2 with incomparable energy saving advantages over other water heating methods.

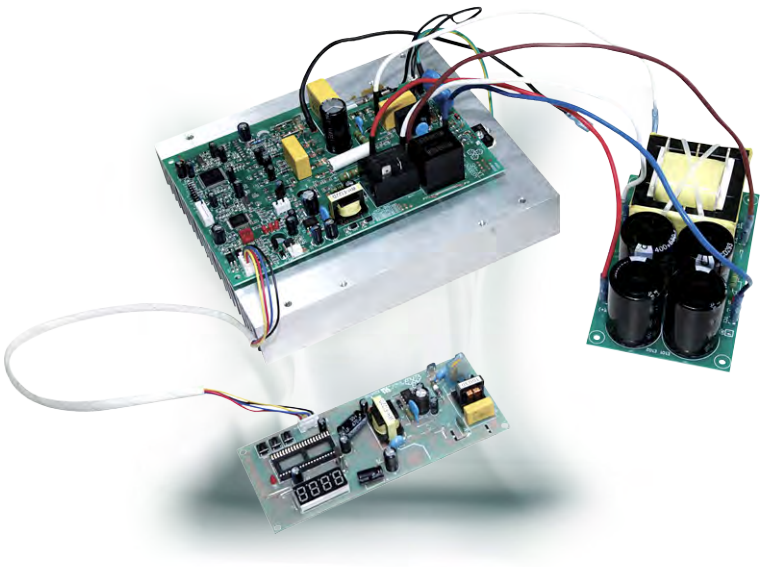
FEATURES

- INTELLIGENT ANTI-FREEZE PROTECTION UNDER LOW TEMPERATURE, SUITABLE FOR OUTDOOR USE IN LOW TEMPERATURE
- UTILIZING ACTIVE FREQUENCY CONVERSION TECHNOLOGY FOR THE WHOLE PROCESS WITH A POWER FACTOR ABOVE 98.5%, APPLICABLE FOR A WIDER RANGE OF VOLTAGE
- USING DC FREQUENCY CONVERSION 180° SINE WAVE ACTUATING TECHNOLOGY, INCREASING TORQUE COMPENSATION AND MORE INTELLIGENT CONTROL
- MULTIPLE STAGE TIMING SWITCH TO MEET THE CUSTOMERS' REQUIREMENTS IN DIFFERENT TIME INTERVALS
- SUB-CONTROLLER CAN NOT ONLY CONTROL TEMPERATURE OF THE WATER TANK BUT ALSO REALIZE INQUIRY OF REAL-TIME TEMPERATURE AND FAULTS ETC.
- AVAILABLE WITH CIRCUIT CONTROLLED BY ELECTRONIC EXPANSION VALVE TO BETTER BRING THE EFFICIENCY OF THE SYSTEM INTO FULL PLAY
- DC FREQUENCY CONVERSION BLOWER CAN BE EQUIPPED TO IMPROVE THE SYSTEM EFFICIENCY
- PASSING EMC TESTS WITH THE WHOLE FREQUENCY MEETING NATIONAL AND RELEVANT EXPORT STANDARDS

GENERAL SPECIFICATIONS

- Applicable voltage: single phase AC220V-230V±20%, 3 phase AC380V-400V±15%
- Frequency conversion range: 15~150Hz
- Water heating temperature: 0~+55°
- Water temperature control accuracy: ±0.5°
- Specifications of controllers: inverter 3HP, inverter 5HP; inverter 3HP+fixed frequency 3HP, inverter 5HP + fixed frequency 5HP

Standard inverter compressor controller



FEATURES

- APPLICABLE FOR UNITS OF 1HP TO 5HP AND FOR MITSUBISHI, SANYO, TCC,GMCC, HITACHI, HIGHLY, PANASONIC,ETC.
- PCB ASSEMBLY WITHOUT C-BOX, OPTIONAL FOR HEATSINK PROVIDED OR HEATSINK OUTSOURCED BY CUSTOMERS THEMSELVES.
- OPTIONAL FOR EXTERNAL HIGH FREQUENCY REACTOR AND BIG ELECTROLYTIC CAPACITOR PROVIDED OR OUTSOURCED BY CUSTOMERS THEMSELVES.
- OPTIONAL DC12V FAN, WHICH CAN AUTOMATICALLY CONTROL TEMPERATURE ACCORDING TO TEMPERATURE OF HEATSINK.
- USE FAIRCHILD 20A,30A IPM AND MITSUBISHI 50 AIPM
- USE ISOLATED OPTICAL COUPLING ASYNCHRONOUS COMMUNICATION
- HAVE A COMMUNICATING DEBUGGING BOARD.
- USE ISOLATED OPTICAL COUPLING ASYNCHRONOUS COMMUNICATION
- PHASE CURRENT PROTECTION, AC BUSBAR VOLTAGE PROTECTION,HEATSINK OVERHEAT PROTECTION, ETC.

TECHNICAL PARAMETERS

Storage Temperature	-30C° ~ +85C°
Humidity	30 ~ 95%RH
ambient temperature for operating	-20C° ~ +60C°
Power supply	AC187V ~ AC276V,50/60Hz;
PFC	0.97-0.998
Load electric power	max.5000W for inverter
Frequency	15 ~ 110Hz
Temperature control and measurement accuracy	±1C°
current measurement accuracy	0.1A
voltage measurement accuracy	2V

SANHUA *YOUR ROAD MAP TO THE ECO-DESIGN DIRECTIVE**

*KEEPS YOU ONE STEP AHEAD OF THE COMING **EFFICIENCY** AND **ENVIRONMENTAL** EUROPEAN **CHALLENGES***

EEV Technology + Electronic Controls

- *Improves HVAC&R system efficiency up to **20%***
- *DPF&VPF series from 2kW to 1400kW*
  **75kW and 1400kW available in Quarter 4*
- *Advanced MSS (Minimum Stable Superheat) control logic*

2 kW

1400kW

4 Way Reversing Valve

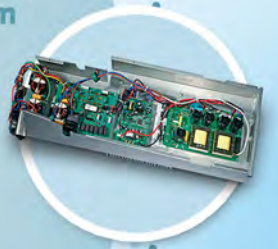
- *Improves efficiency by **5%***
- *SHF series 1kW to 420 kW*
- *Widest range in the market with Single Body Design*

1 kW

420kW

Inverter Controller for Large System

- *Improves system efficiency up to **30%***
- ***Active Frequency** Conversion Technology*
- *Wide Range of voltage application*



MCHE

- *Improves efficiency by **30%***
- *Refrigerant Charge Reduction by **30%** Environmental Friendly*
- *MCHE is lighter in weight, smaller in volume Compact Design*

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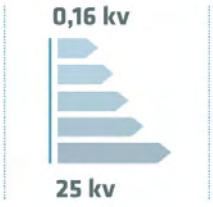

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Solenoid Valve

MDF series solenoid valves are direct operated or pilot operated solenoid valves, mainly used in refrigerant control of various devices such as refrigerating and freezing systems, air conditioners and heat pumps.

FEATURES

- COILS: LOW ENERGY CONSUMPTION, RELIABLE
- GREAT VALVE OPENING PERFORMANCE, HIGH MOPD
- COILS ARE DOUBLE SEALED, WATER TIGHT AND SAFE

GENERAL SPECIFICATIONS

- Applicable for all common HCFC and HFC refrigerants such as: R22, R134a, R407C, R404A, R410A, R507A
- Medium temperature TS min./max.:
  - MDF 2H...22H and MDF 2L...15L: -30°C/105°C
  - MDF 25H...40H: -40°C/140°C
- Ambient temperature min./max.: -30°C / +55°C
- Relative humidity: 0 to 95% RH
- Installation position:
  - Liquid, suction and discharge line
  - Preferably coil upwards and flow direction corresponds to the arrow
- Declaration according to LVD or PED

TECNHICAL PARAMETERS

Technical parameters of Coil

Model Coil[1)]	Multi package*[2)]	Rated Voltage [V]	Supply	Power [W]	Frequ. [Hz]	Voltage Tolerance	Insulation Class	Protection Class (w/plug)	Wiring type
MQ-A03024-000001	71820000802	24	AC	10,5W (50Hz) 8,5W (60Hz)	50/60	-15% +10%	F	IP65	DIN Plug
MQ-A0311A-000001	71820001102	110 to 120		12W (50Hz) 10W (60Hz)					
MQ-A0322G-000001	71820001002	220 to 240		12W (50Hz) 10W (60Hz)					
MQ-D03024-000002	10820001002	24	DC	12W (50Hz) 10W (60Hz)	-	±10%			

Note: 1) Applicable to MDF-A03 and MDF-B03 valve bodies
* Available also as industrial package. Contact Sanhua for more details.
2) Extent of delivery: coil body, fastening screw for the coil body, DIN plug for electrical connection incl. gaskets

MDF SERIES
Solenoid Valve

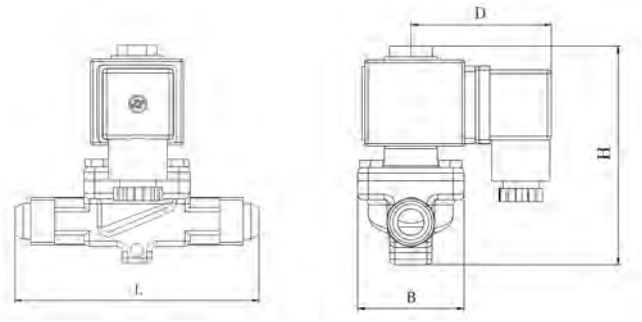
Technical Parameters of Valve Body

Solder	Flare	Normal position	Actuation	Kv [m³/h]	MOP [Mpa]	Max. OPD [Mpa]	Min. OPD[3] [Mpa]
MDF-A03-2H	MDF-A03-2L	NC	Direct	0,16	4,5	3,1	0,00
MDF-A03-3H	MDF-A03-3L			0,23			
MDF-A03-6H	MDF-A03-6L		Pilot[1]	0,8			0,01
MDF-A03-10H	MDF-A03-10L			1,9			
MDF-A03-15H	MDF-A03-15L			2,3			
MDF-A03-20H	--			5,0			
MDF-A03-22H	--			5,9			
MDF-B03-25H	--		Pilot (P)[2]	10,0			0,02
MDF-B03-32H	--			15,0			
MDF-B03-40H	--			25,0			

Note: 1) Membrane operated
2) Piston operated
3) Min. OPD: values referred to 60% of nominal flow

DIMENSIONS

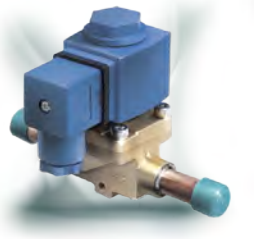
Valve Body
Thread Connection



Model Valve Body	SAE Flare Connection [inch]	Kv [m³/h]	Multi package* [1]	PED Category Group 2	Dimensions [mm]			
					L	B	D	H
MDF-A03-2L 001	1/4	0,16	10125000102	3.3	59	30	53	82
MDF-A03-3L 001	1/4	0,23	71125005202	3.3	59	30	53	82
MDF-A03-3L 003	3/8	0,23	71125010702	3.3	59	30	53	82
MDF-A03-6L 001	3/8	0,8	71125005302	3.3	69	36	53	88
MDF-A03-6L 003	1/2	0,8	71125010802	3.3	69	36	53	88
MDF-A03-10L 003	1/2	1,9	71125010602	3.3	92	42	53	96
MDF-A03-10L 001	5/8	1,9	71125005402	3.3	92	42	53	96
MDF-A03-15L 001	5/8	2,3	71125005502	3.3	104	52	53	100
MDF-A03-15L 003	7/8	2,3	71125011102	3.3	104	52	53	100

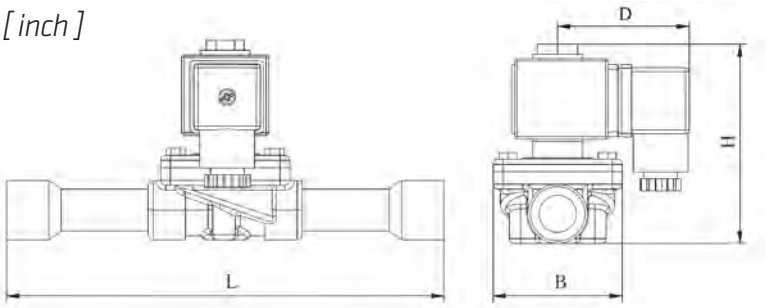
Note: * Available also as industrial package. Contact Sanhua for more details.
1) Extent of delivery: valve body without coil

MDF SERIES
Solenoid Valve



DIMENSIONS

Valve Body Solder Connection [inch]

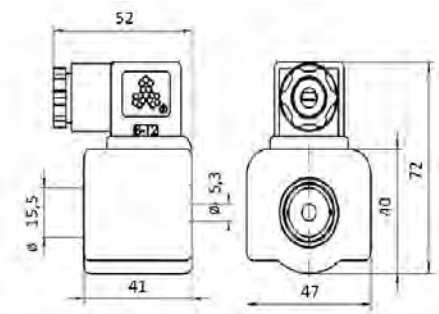


Model Valve Body	Solder Connection [inch]	Multi package*1)	PED Category	Dimensions [mm]			
				L	B	D	H
MDF-A03-2H 001	1/4	71125002402	3.3	102	30	53	82
MDF-A03-3H 001	1/4	71125002502	3.3	102	30	53	82
MDF-A03-3H 003	3/8	71125008502	3.3	102	30	53	82
MDF-A03-6H 001	3/8	71125002602	3.3	111	36	53	88
MDF-A03-6H 003	1/2	71125007402	3.3	111	36	53	88
MDF-A03-10H 001	1/2	71125002702	3.3	127	42	53	95
MDF-A03-10H 003	5/8	71125008902	3.3	127	42	53	95
MDF-A03-15H 005	5/8	71125008602	3.3	176	52	53	100
MDF-A03-15H 003	7/8	71125010102	3.3	176	52	53	100
MDF-A03-20H 001	7/8	71125002902	3.3	191	52	53	117
MDF-A03-22H 001	7/8	71125003002	3.3	191	60	53	117
MDF-A03-20H 003	1-1/8	71125009402	3.3	191	52	53	117
MDF-A03-22H 009	1-1/8	71125010002	3.3	191	60	53	117
MDF-B03-25H 003	1-1/8	71125011302	3.3	280	76	53	144
MDF-A03-22H 003	1-3/8	71125010202	I	191	60	53	117
MDF-B03-25H 004	1-3/8	71125011202	I	280	76	53	144
MDF-B03-32H 001	1-3/8	71125006502	I	281	76	53	144
MDF-B03-32H 002	1-5/8	71125011902	I	281	76	53	144
MDF-B03-40H 002	1-5/8	71125008702	I	281	84	53	152
MDF-B03-40H 004	2-1/8	71125011802	I	281	84	53	152

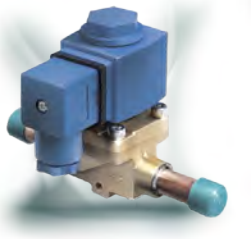
Note: * Available also as industrial package. Contact Sanhua for more details.
1) Extent of delivery: valve body without coil

DIMENSIONS - COILS

Coils with DIN Plug
(MQ-A03 and MQ-D03 Series)

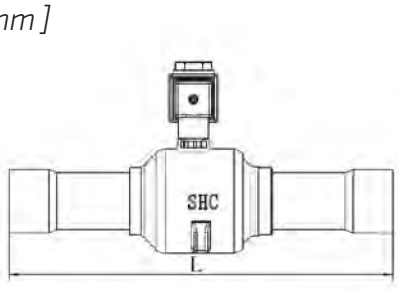


MDF SERIES
Solenoid Valve



DIMENSIONS

Valve Body Solder Connection [mm]

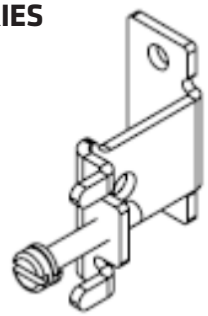


Model Valve Body	Solder Connection [mm]	Multi package*[1)]	PED Category	Dimensions [mm]			
				L	B	D	H
MDF-A03-2H 003	6	71125009102	3.3	102	30	53	82
MDF-A03-3H 005	6	71125007602	3.3	102	30	53	82
MDF-A03-3H 007	10	71125008102	3.3	102	30	53	82
MDF-A03-6H 005	10	71125007902	3.3	111	36	53	88
MDF-A03-6H 007	12	71125008802	3.3	111	36	53	88
MDF-A03-10H 005	12	71125008402	3.3	127	42	53	95
MDF-A03-10H 003	16	71125008902	3.3	127	42	53	95
MDF-A03-15H 005	16	71125008602	3.3	176	52	53	100
MDF-A03-15H 003	22	71125010102	3.3	176	52	53	100
MDF-A03-20H 001	22	71125002902	3.3	191	52	53	117
MDF-A03-22H 001	22	71125003002	3.3	191	60	53	117
MDF-A03-20H 007	28	71125009502	3.3	191	52	53	117
MDF-A03-22H 011	28	10125000302	3.3	191	60	53	117
MDF-B03-25H 005	28	71125011402	3.3	280	76	53	144
MDF-A03-22H 003	35	71125010202	I	191	60	53	117
MDF-B03-25H 004	35	71125011202	I	280	76	53	144
MDF-B03-32H 001	35	71125006502	I	281	76	53	144
MDF-B03-32H 003	42	71125011502	I	281	76	53	144
MDF-B03-40H 003	42	71125011702	I	281	84	53	152
MDF-B03-40H 004	54	71125011802	I	281	84	53	152

Note: * Available also as industrial package. Contact Sanhua for more details.
1) Extent of delivery: valve body without coil

ACCESSORIES

Bracket



Model[1)]	Multi package	Applicable Valve Models	
		Solder	Flare
MDF-A03-033001	20125000902	MDF-A03-2H	MDF-A03-2L
		MDF-A03-3H	MDF-A03-3L
		MDF-A03-6H	MDF-A03-6L
		MDF-A03-10H	MDF-A03-10L
		MDF-A03-15H	MDF-A03-15L

Note: 1) Extent of delivery: bracket and screw

Solenoid Valve

FDF series solenoid valves are direct operated or pilot operated solenoid valves, mainly used in refrigerant control of various devices such as refrigerating and freezing systems, air conditioners and heat pumps.

FEATURES

- COILS: LOW ENERGY CONSUMPTION, RELIABLE
- GREAT VALVE OPENING PERFORMANCE, HIGH MOPD

GENERAL SPECIFICATIONS

- Applicable for all common HCFC and HFC refrigerants such as: R22, R134a, R404A, R407C, R410A, R507A ...
- Medium temperature TS min./max.: -30°C / 120°C
- Ambient temperature min./max.: -30°C / +50°C
- Relative humidity: 0 to 95% RH
- Installation position: - Liquid, suction and discharge line
  - Coil upwards, coil axis ± 15° tolerance versus vertical axis
  - Flow direction corresponds to the arrow
- Certifications: UL/CSA* and declaration according to LVD or PED

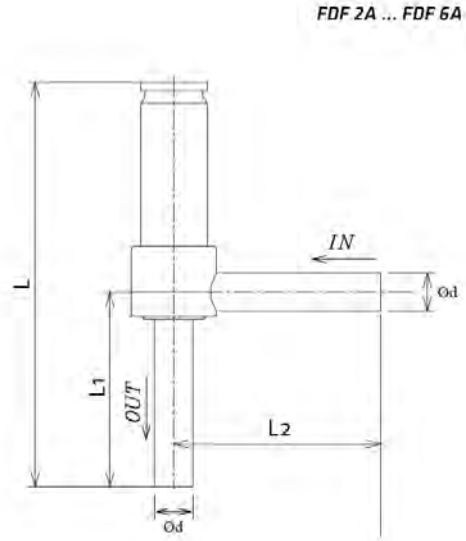
TECNHICAL PARAMETERS OF VALVE BODY

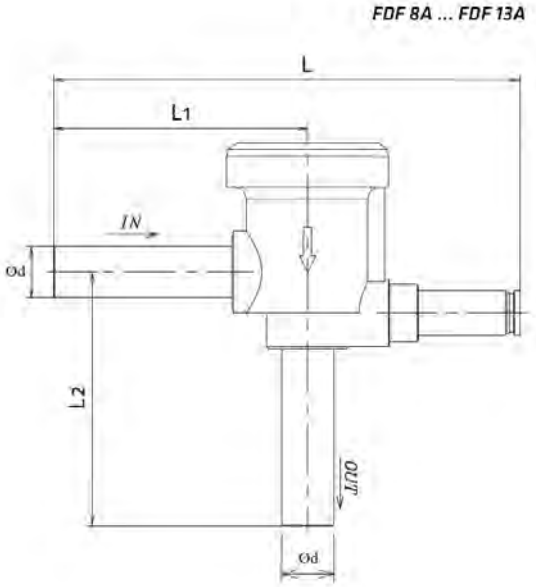
Model Valve Body	Multi package*	Normal Position	Actuation	Ø Seat	Kv	MOP	Max. OPD	Min. OPD	Ød OD	Ød OD	Measurement [mm]		
				[mm]	[m³/h]	[MPa]	[MPa]	[MPa]	[mm]	[inch]	L	L1	L2
FDF 2A 94	10120019802	NC	Direct	1,9	0,08	4,5	3,4	0	6,35	1/4	66,5	32	34
FDF 2.5A 08	10120021102		Pilot	2,5	0,21		2,1	0,01	6,35	1/4	85	37,5	38
FDF 3A 08	10120019302			2,7	0,26		3,4		7,94	5/16	81	34,5	36
FDF 4A 10	10120006502			4,0	0,30		3,4		6,35	1/4	81	35	38
FDF 6A 58	10120018702			5,8	0,56		3,0		7,94	5/16	81	35,5	35,5
FDF 8A 21	10120020902			8,0	1,29		2,8	0,02	12,7	1/2	114	62	62
FDF 11A 16	10120020302			11	2,40				12,7	1/2	114	61	61
FDF 13A 12	10120020502			13	3,44				15,88	5/8	114	62	62

* Available also as industrial package. Contact Sanhua for more details.

FDF (NC) SERIES
Solenoid Valve

DIMENSIONS - VALVE BODY



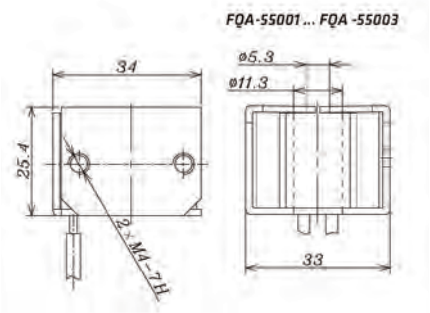


TECNHICAL PARAMETERS OF COIL

Model Coil	Multi package*	Rated Voltage [V]	Supply	Power [1] [W]	Freq. [Hz]	Voltage Tolerance	Insulation Class	Wiring type
FQ-A05 024-000709	10800072302	24	AC	5 (50Hz) 4,5 (60Hz)	50/60	-15% +10%	B	flying leads
FQ-A05 120-001098	10800062002	110 to 120		5 (50Hz) 4,5 (60Hz)				
FQ-A05 22G-001044	10800058002	220 to 240		5 (50Hz) 4,5 (60Hz)				

Note: * Available also as industrial package. Contact Sanhua for more details.
1) Power consumption based on 220V

DIMENSIONS - COIL



FDF2AK (NO) SERIES

Solenoid Valve

FDF2AK series solenoid valves are direct operated, normally open solenoid valves, mainly used in refrigerant control of various devices such as refrigerating and freezing systems, air conditioners and heat pumps.

FEATURES

- COMPACT DESIGN
- LOW ENERGY CONSUMPTION
- EXCELLENT OPERATION PERFORMANCE

GENERAL SPECIFICATIONS

- Applicable for all common HCFC and HFC refrigerants such as: R22, R134a, R404A, R407C, R410A, R507A ...
- Medium temperature TS min./max.: -30°C / 120°C
- Ambient temperature: -30°C / +50°C
- Relative humidity: 0 to 95% RH
- Installation position:
  - Liquid, suction and discharge line
  - Coil upwards, coil axis ±15° tolerance versus vertical axis
  - Flow direction corresponds to the arrow
- Declaration according to LVD or PED

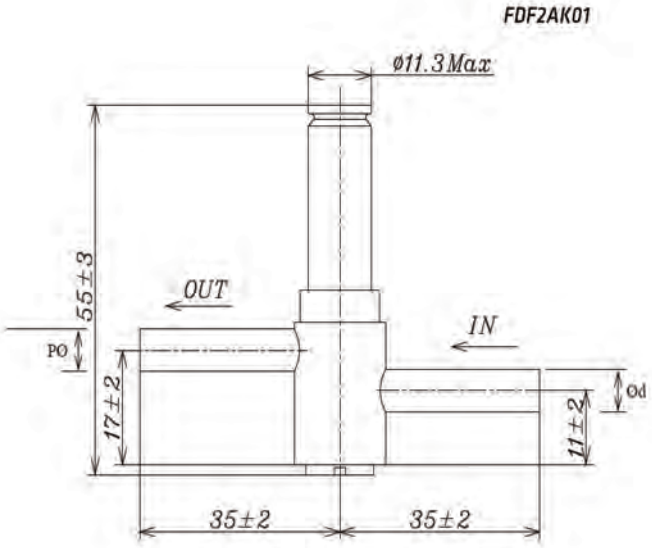
TECHNICAL PARAMETERS OF VALVE BODY

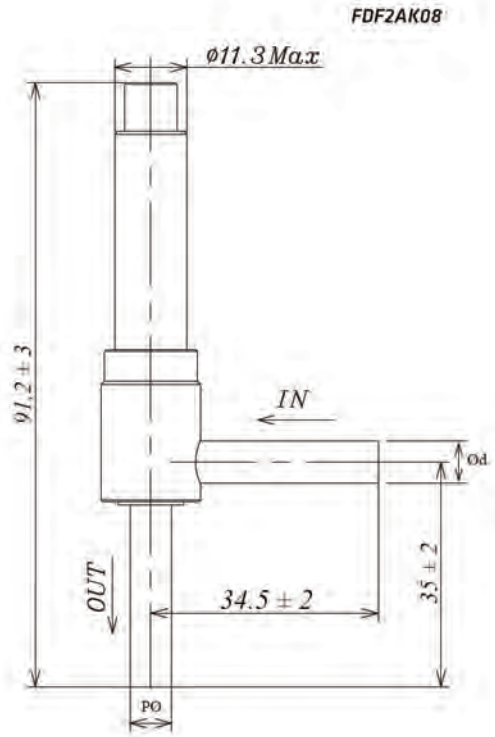
Valve Body Model	Multi package*	Normal Position	Actuation	Ø Seat [mm]	Kv [m³/h]	MOP [MPa]	Max. OPD [MPa]	Min. OPD [MPa]	Connection OD Ød	
									[mm]	[inch]
FDF 2AK 01	10120006702	NO	Direct	1,8	0,05	4,5	1,5	0	6,35 ±0,1	1/4
FDF 2AK 08	10120009702			1,9	0,08					

* Available also as industrial package. Contact Sanhua for more details.

FDF2AK (NO) SERIES
Solenoid Valve

DIMENSIONS - VALVE BODY





TECNHICAL PARAMETERS OF COIL

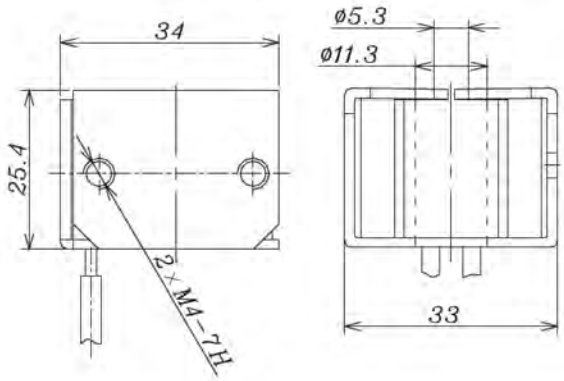
Coil Model	Multi package*	Rated Voltage [V]	Supply	Power[3] [W]	Used for	Freq. [Hz]	Voltage Tolerance	Insulation Class	Wiring type
FQ-A05024 -000709	10800072302	24	AC	5 (50Hz) 4,5 (60Hz)	FDF 2AK 01[1]	50/60	-15% +10%	B	flying leads
FQ-A05120 -001098	10800062002	110 to 120		5 (50Hz) 4,5 (60Hz)					
FQ-A0522G -001022	10800057302	220 to 240		5 (50Hz) 4,5 (60Hz)					
FQ-A0522G -001066	10800060102	220 to 240		6,5 (50Hz) 5 (60Hz)	FDF 2AK 08[2]				

Note: * Available also as industrial package. Contact Sanhua for more details.
1) Dimensions: drawing 1
2) Dimensions: drawing 2
3) Power consumption based on 220V

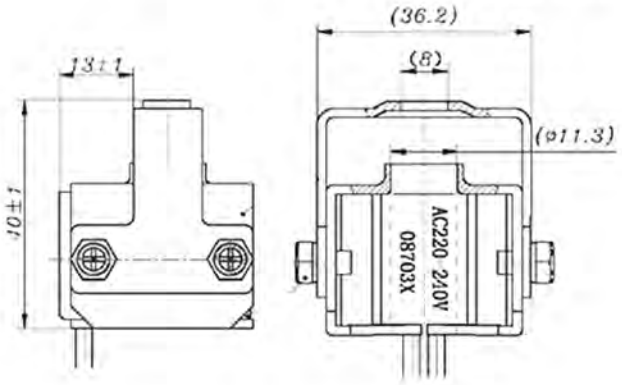
FDF2AK (NO) SERIES
Solenoid Valve

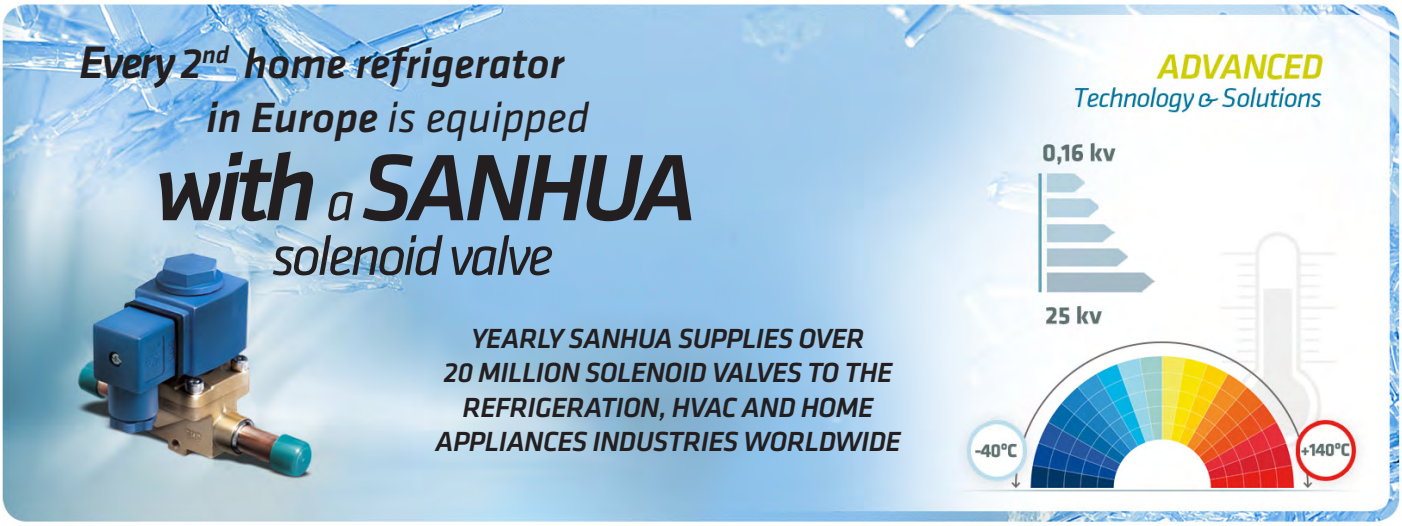
DIMENSIONS - COIL

Drawing 1: *FQA-55001, -55002, -55003*



Drawing 2: *FQA-55007*





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NR. 1907/2006
CONFORMITY DECLARATION

BEST SUPPLIER AWARDS

B/S/H/

Carrier

TRANE

Note: Conditions could change without previous notice due to components updating or typing mistakes.
Sanhua declines any responsibility for a wrong product choice based on this table. Please make sure all your requirements are covered in our suggestion.

Solenoid Valve

HDF series solenoid valves are piston type pilot operated solenoid valves, mainly used in refrigerant control of various devices such as refrigerating and freezing systems, air conditioners and heat pumps. The maximum admitted refrigerant temperature (equal to +140°C) permits to install HDF valves in gas injection or hot gas bypass lines such as in the compressor discharge line.

FEATURES

- VALVE BODY WITH A COMPACT DESIGN, EASY TO MANAGE AND INSTALL
- VALVE BODY WITH HERMETIC DESIGN TO ELIMINATE THE RISK OF EXTERNAL LEAKAGE
- SOLENOID VALVES PILOTED BY PISTON ACTUATION. WIDE MEDIUM TEMPERATURE RANGE ALLOWED
- GREAT VALVE OPENING PERFORMANCE, HIGH MAX. OPD
- COILS: LOW ENERGY CONSUMPTION, RELIABLE
- COILS ARE DOUBLE SEALED, WATER TIGHT AND SAFE
- COILS CAN BE SELECTED WITH DIN CONNECTOR OR WITH LEAD WIRES

GENERAL SPECIFICATIONS

- Applicable for all common HCFC and HFC refrigerants such as: R22, R134a, R407C, R404A, R410A, R507C
- Medium temperature TS min./max.: -40°C/+140°C
- Ambient temperature min./max.: -30°C /+55°C
- Relative humidity: 0 to 95% RH
- Installation position:
  - Liquid, suction and discharge line
  - Preferably coil upwards and flow direction corresponds to the arrow
- Certifications: Declaration according to LVD and PED

TECHNICAL PARAMETERS OF VALVE BODY

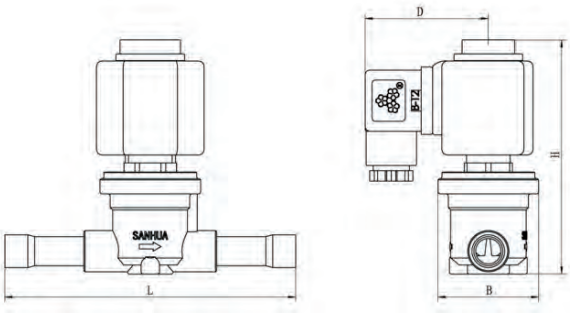
Valve body (solder connections)	Normal Position	Actuation	Kv [m³/h]	MOP [MPa]	Max. OPD [MPa]		Min. OPD [MPa]
					AC coil	DC coil	
HDF 3	NC	Pilot (piston operated)	0,3	4,5	3,8	2,8	0.007
HDF 6			0,8	4,5	3,8	2,8	0.007
HDF 10			1,9	4,5	3,8	2,8	0.007
HDF 15			2,6	4,5	3,8	2,8	0.007
HDF 20			4,0	4,5	3,8	2,8	0.007
HDF 22			5,7	4,5	3,8	2,8	0.007

HDF SERIES
Solenoid Valve

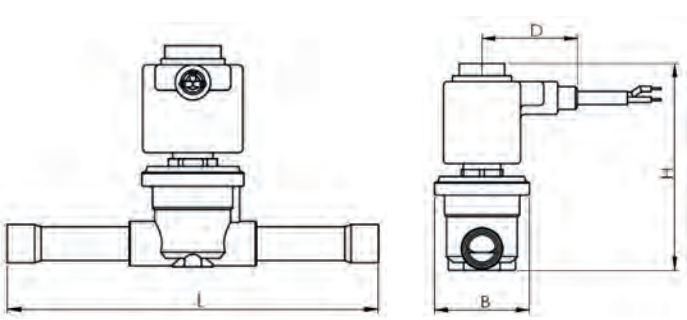
DIMENSIONS

Model Valve body	Solder Connection (ODF)		Kv [m³/h]	Part Number[1)]	PED Category Group 2	Dimensions [mm]			
	[inch]	[inch]				L	B	D	H
HDF3H01	1/4"	-	0,3	HDF-71001	3.3	118	33	54	95
HDF3H03	-	6	0,3	HDF-71002	3.3	118	33	54	95
HDF3H02	3/8"	-	0,3	HDF-71003	3.3	118	33	54	95
HDF3H05	-	10	0,3	HDF-71004	3.3	118	33	54	95
HDF6H02	3/8"	-	0,8	HDF-71005	3.3	118	33	54	95
HDF6H04	-	10	0,8	HDF-71006	3.3	118	33	54	95
HDF6H03	1/2"	-	0,8	HDF-71007	3.3	127	33	54	95
HDF6H07	-	12	0,8	HDF-71008	3.3	127	33	54	95
HDF10H01	1/2"	-	1,9	HDF-71009	3.3	127	44	54	102
HDF10H03	-	12	1,9	HDF-71010	3.3	127	44	54	102
HDF10H02	5/8"	16	1,9	HDF-71011	3.3	166	44	54	102
HDF15H01	5/8"	16	2,6	HDF-71012	3.3	175	48	54	105
HDF15H02	7/8"	22	2,6	HDF-71013	3.3	175	48	54	105
HDF20H01	7/8"	22	4,0	HDF-71014	3.3	181	57	54	114
HDF20H02	1 1/8"	-	4,0	HDF-71015	3.3	214	57	54	114
HDF20H03	-	28	4,0	HDF-71016	3.3	214	57	54	114
HDF22H01	7/8"	22	5,7	HDF-71017	3.3	190	58	54	114
HDF22H03	1 1/8"	-	5,7	HDF-71018	3.3	214	58	54	114
HDF22H04	-	28	5,7	HDF-71019	3.3	214	58	54	114
HDF22H02	1 3/8"	35	5,7	HDF-71020	I	281	58	54	114

Note: 1) Extent of delivery: valve body without coil



Valve Body Solder Connection– with standard coils (DIN connector)



Valve Body Solder Connection– with a Lead wires coil

HDF SERIES
Solenoid Valve

TECHNICAL PARAMETERS OF COIL

Standard coils with DIN connector (MQ-A03 and MQ-D03 Series)

Model Coil[1)]	Part Number[2)]	Rated Voltage [V]	Supply	Power [W]	Frequency [Hz]	Voltage Tolerance	Insulation Class	Protection Class (w/plug)	Wiring type
MQ-A03 024-001001	MDF-60015	24	AC	8,5 (50Hz) 7,5 (60Hz)	50/60	-15% to +10%	F	IP65	DIN Plug
MQ-A03 11A-001001	MDF-60016	110 to 120		8,5 (50Hz) 7,5 (60Hz)					
MQ-A03 22G-001001	MDF-60017	220 to 240		8,5 (50Hz) 7,5 (60Hz)					
MQ-D03 012-001001	MDF-60020	12	DC	12,0	-	±10%			
MQ-D03 024-001001	MDF-60021	24		12,0					

Note: Extent of delivery: coil body, fastening screw for the coil body, DIN plug for electrical connection incl. gaskets

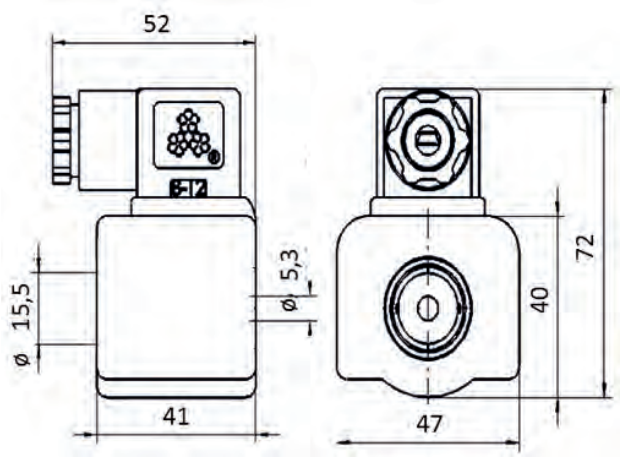
Coils with Lead wires (MQ-A07 and MQ-D07 Series)

Model Coil[1)]	Part Number[2)]	Rated Voltage [V]	Supply	Power [W]	Frequency [Hz]	Voltage Tolerance	Insulation Class	Protection Class (w/plug)	Wiring type
MQ-A07024-000 001	HDF-60001	24	AC	7,5 (50Hz) 6,5 (60Hz)	50/60	-15% to +10%	B	IP67	Lead Wires
MQ-A07100-000 001	HDF-60002	100		8,5 (50Hz) 7,5 (60Hz)					
MQ-A0711A-000 001	HDF-60003	110 to 120		8,5 (50Hz) 7,5 (60Hz)					
MQ-A07200-000 001	HDF-60004	200		8,0 (50Hz) 7,0 (60Hz)					
MQ-A0722G-000 001	HDF-60005	220 to 240		7,0 (50Hz) 6,0 (60Hz)					
MQ -D07012-000001	HDF-60006	12	DC	9,0	-	±10%			
MQ -D07024-000 001	HDF-60007	24		9,0					

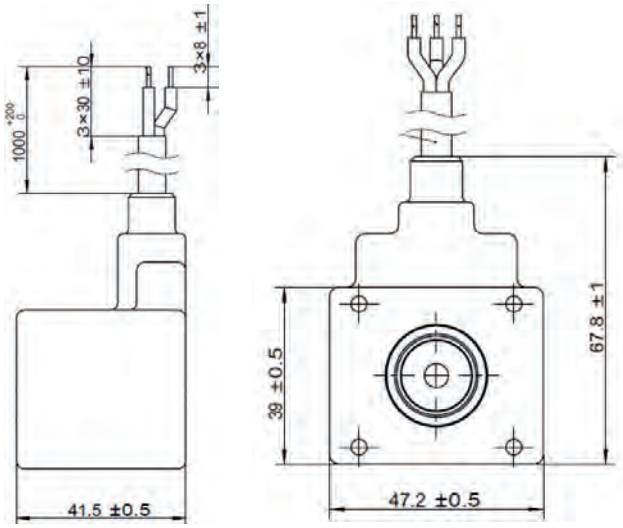
HDF SERIES
Solenoid Valve

DIMENSIONS OF THE COILS

Standard coils with DIN connector (MQ-A03 and MQ-D03 Series)



Coils with DIN Plug (MQ-A03 and MQ-D03 Series)



Coils with Lead wires (MQ-A07 and MQ-D07 Series)

MDF FLANGE SERIES

Solenoid Valve

MDF flange solenoid valve are used in the oil return line of compressors, applicable for various POE refrigeration oil and general refrigerants such as R22. But applicable maximum differential pressure is different in pure oil and in non-pure oil environments for the oil temperature and viscosity.

FEATURES

- APPLICABLE FOR STOP-AND-GO CONTROL OF OIL RETURN LINE IN REFRIGERATING COMPRESSORS
- DIRECT OPERATED, NORMALLY CLOSE VALVE WITH ZERO MIN. VALVE OPENING PRESSURE DIFFERENCE
- APPLICABLE FOR POE REFRIGERATION OIL AND VARIOUS FLUORIDE REFRIGERANTS
- MAXIMUM VALVE OPENING PRESSURE DIFFERENCE FOR GASSY OIL AND 90°C PURE OIL IS 2.2MPA
- UTILIZING NO CONNECTION TUBE STRUCTURE, BUT FLANGE CONNECTION IS COMPACT, LIGHT, EASY TO INSTALL AND HAVE GOOD PERFORMANCE OF ANTI-VIBRATION
- THE VALVE BODY IS ALL WELDED FOR TIGHTNESS WITH LITTLE LEAKAGE RIS

GENERAL SPECIFICATIONS

- Applicable refrigerant: POE refrigeration oil, R22, R134a, R407C, R404A etc.
- Applicable medium temperature: 0°C ~90°C
- Applicable ambient temperature: -30C ~+55°C
- Maximum working pressure: 4.5MPa(655Psig)

TECHNICAL PARAMETERS *Technical Parameters of Valve Body*

Model	Operation Type	Cv Value	Operation Pressure Difference MPa		
			Max		Min
			Gas and 90°C pure oil	0°C pure oil	
FDF2A905	Directoperated	0.14	2.2	0.8	0

Electrical Parameters of Coil

Series	Insulation Grade	Voltage Change	Frequency Hz	Wiring Type	IP Grade
Matching Coil MQ-A01220	F	AC220V	50	DIN junction box	IP65

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SANHUA INTERNATIONAL
info@sanhuaeurope.com

Certificate of registration
ISO 14001:2004

Certificate of registration
ISO 9001:2008

REACH

NR. 1907/2006
CONFORMITY DECLARATION

BEST SUPPLIER AWARDS

B/S/H/

Carrier

TRANE

Note: Conditions could change without previous notice due to components updating or typing mistakes.
Sanhua declines any responsibility for a wrong product choice based on this table. Please make sure all your requirements are covered in our suggestion.

FDF FLANGE SERIES

Solenoid Valve

FDF series Solenoid Valve are used in the new compressor system developed by Copeland, which uses a flange to connect the compressor. It is available in high ambient temperature and medium temperature with long service life.

FEATURES

- LOW TEMPERATURE RISE OF THE COIL, LOW ENERGY CONSUMPTION AND RELIABLE;
- LONG SERVICE LIFE, UP TO 35,000,000 TIMES;

GENERAL SPECIFICATIONS

- Applicable refrigerant: R22, R134a, R404A, R407A, R407C and R507 etc.;
- Applicable medium temperature: +10°C ~ +146°C (non-persistent);
- Applicable ambient temperature: -30°C ~+60°C;
- Relative humidity: below 95% RH

TECHNICAL PARAMETERS *Technical Parameters Of Valve Body*

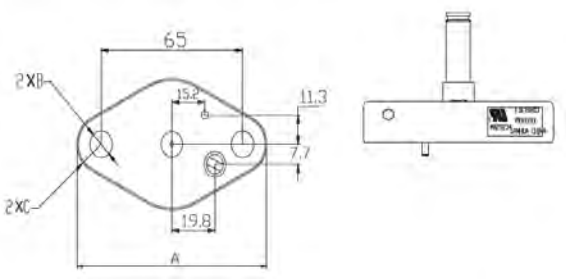
Model	Flow L/min (ΔP=0.345MPa)	Operation Pressure Difference MPa		Max. Working Pressure MPa
		Max	Min	
FDF2A903-01	42.5	2.8	0	3.5
FDF2A903-02				

Electrical Parameters of Coil

Model	Insulation Grade	Rated Voltage V	Voltage Change	Frequency Hz
SHF-4-10FA5	F	AC220V~240V	85%~110%	50/60
SHF-4-10FA2		AC120V		
SHF-4-10FA4		AC24V		

DIMENSIONS

Model	A	B	C
FDF2A903-01	(87)	10.30	R11.1
FDF2A903-02	(90)	13.47	R12.7



Ball Valve

The ball valve of series SBV is applicable for commercial air conditioner, freezing or deep-freezing equipment or other refrigeration circuits in order to open and to shut off inner flow path by operating the valve stem. It can also be used as service valve for vacuum pumping and refrigerant injection etc.

FEATURES

- STRAIGHTWAY TYPE, FULL PORT, LOW PRESSURE DROP , COST-EFFECTIVE
- OPTIONAL WITH REINFORCED SPRING
- VALVE BODY AND VALVE SEAT WITH WELDED STRUCTURE, WITH HIGH PRODUCT RELIABILITY
- ROTATE 1/4 CIRCLES FROM FULL-OPEN TO FULL-CLOSE, EASY TO OPERATE
- BIDIRECTIONAL FLOW
- ROTATION STOP ON REQUEST FOR FULL-OPEN AND FULL-CLOSE OF THE VALVE
- SPECIAL SEALING MATERIALS TO PREVENT INTERNAL LEAKAGE

GENERAL SPECIFICATIONS

- Applicable for all common HCFC and HFC refrigerants such as: R22, R134a, R404A, R407C, R410A, R507A ...
- Medium temperature TS min./max.: -40°C / +120°C
- Max. operating pressure PS: 4,5 MPa (45 bar)
- Installation position: liquid, suction and discharge line in all directions
- Certifications: UL/CSA and PED declaration

SBV SERIES
Ball Valve

GENERAL CHARACTERISTICS

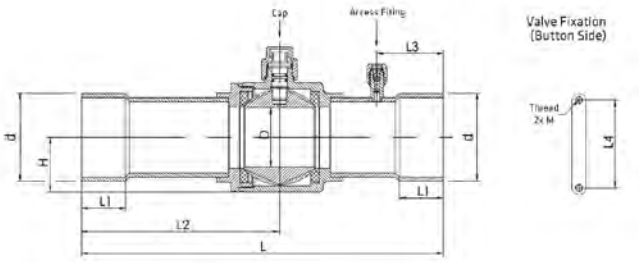
Without Access Fitting		Connections Ø d ODF		Kv	Wrench Size Cap	PED category	With Access Fitting	
Model	Multi package*	[inch]	[mm]	[m³/h]	[mm]		Model	Multi package*
SBV(M)-A2YHSY-2-S	10150053902	-	6	1,9	14	3.3	SBV(M)-JA2YHSY-2-S	10150056702
SBV(M)-A2YHSY-1-S	10150058302	1/4	-	1,9	14	3.3	SBV(M)-JA2YHSY-1-S	10150058402
SBV(M)-A3YHSY-2-S	10150053702	3/8	-	5,5	14	3.3	SBV(M)-JA3YHSY-2-S	10150053802
SBV(M)-A3YHSY-1-S	10150057302	-	10	5,5	14	3.3	SBV(M)-JA3YHSY-1-S	10150056802
SBV(M)-A4YHSY-2-S	10150057402	-	12	10,2	14	3.3	SBV(M)-JA4YHSY-2-S	10150057502
SBV(M)-A4YHSY-1-S	10150054102	1/2	-	10,2	14	3.3	SBV(M)-JA4YHSY-1-S	10150054002
SBV(M)-A5YHSY-2-S	10150057602	-	15	13,2	14	3.3	SBV(M)-JA5YHSY-2-S	10150057702
SBV(M)-A5YHSY-1-S	10150053302	5/8	16	13,8	14	3.3	SBV(M)-JA5YHSY-1-S	10150053402
SBV(M)-A6YHSY-2-S	10150054602	-	18	19,5	17	3.3	SBV(M)-JA6YHSY-2-S	10150054502
SBV(M)-A6YHSY-1-S	10150054302	3/4	-	19,5	17	3.3	SBV(M)-JA6YHSY-1-S	10150054202
SBV(M)-A7YHSY-1-S	10150053502	7/8	22	28,0	17	3.3	SBV(M)-JA7YHSY-1-S	10150053602
SBV(M)-A9YHSY-2-S	10150055102	-	28	51,5	17	3.3	SBV(M)-JA9YHSY-2-S	10150055202
SBV(M)-A9YHSY-1-S	10150054702	1 1/8	-	51,5	17	3.3	SBV(M)-JA9YHSY-1-S	10150054802
SBV(M)-A11YHSY-1-S	10150055002	1 3/8	35	80,0	17	I	SBV(M)-JA11YHSY-1-S	10150054902
SBV(M)-A13YHSY-2-S	10150055502	1 5/8	-	119,8	17	I	SBV(M)-JA13YHSY-2-S	10150055402
SBV(M)-A13YHSY-1-S	10150055302	-	42	119,8	17	I	SBV(M)-JA13YHSY-1-S	10150057802
SBV(M)-A17YHSY-1-S	10150055702	2 1/8	54	225	19	I	SBV(M)-JA17YHSY-1-S	10150055802
SBV(M)-A19YHSY-1-S	10150055902	-	64	225	19	I	SBV(M)-JA19YHSY-1-S	10150056002
SBV(M)-A21YHSY-2-S	10150056302	2 5/8	-	305	19	I	SBV(M)-JA21YHSY-2-S	10150056402
SBV(M)-A25YHSY-2-S	10150056502	3 1/8	80	635	24	I	SBV(M)-JA25YHSY-2-S	10150056602
SBV(M)-A29YHSY-1-S	10150057002	3 5/8	92	805	26	I	SBV(M)-JA29YHSY-1-S	10150056902
SBV(M)-A33YHSY-2-S	10150056102	4 1/8	105	950	32	I	SBV(M)-JA33YHSY-2-S	10150056202
SBV(M)-A34YHSY-1-S	10150057102	4 1/4	108	950	32	I	SBV(M)-JA34YHSY-1-S	10150057202

Note: SBV model with connection size 3-1/2" (89mm) available on request

* Available also as industrial package. Contact Sanhua for more details.

SBV SERIES
Ball Valve

DIMENSIONS & WEIGHT

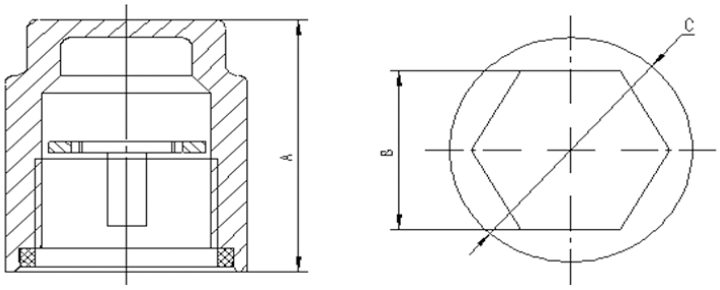


Part Number		L	L1	L2	L3[1)]	L4	D	H	M	Weight
Without access fitting	With Access Fitting	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg]
SBV-13001	SBV-13019	132	8	68	31	22	14	16	M4 x 0,7	0,28
SBV-13002	SBV-13020	132	8	68	31	22	14	16	M4 x 0,7	0,28
SBV-13037	SBV-13039	132	8	68	31	22	14	16	M4 x 0,7	0,29
SBV-13003	SBV-13021	132	8	68	31	22	14	16	M4 x 0,7	0,29
SBV-13004	SBV-13022	160	10	85	31	22	14	16	M4 x 0,7	0,30
SBV-13005	SBV-13023	160	10	85	31	22	14	16	M4 x 0,7	0,30
SBV-13006	SBV-13024	160	12	85	31	22	14	16	M4 x 0,7	0,30
SBV-13007	SBV-13025	160	12	85	31	22	14	16	M4 x 0,7	0,30
SBV-13008	SBV-13026	185	14	99	37	30	19	20	M4 x 0,7	0,51
SBV-13009	SBV-13027	185	14	99	37	30	19	20	M4 x 0,7	0,51
SBV-13010	SBV-13028	185	17	99	37	30	19	20	M4 x 0,7	0,52
SBV-13011	SBV-13029	208	20	112	44	38	25	25	M4 x 0,7	0,73
SBV-13012	SBV-13030	208	20	112	44	38	25	25	M4 x 0,7	0,73
SBV-13013	SBV-13031	251	25	136	44	48	32	31	M6 x 1,0	1,42
SBV-13038	SBV-13040	281	29	151	56	55	38	35	M6 x 1,0	1,90
SBV-13014	SBV-13032	281	29	151	56	55	38	35	M6 x 1,0	1,90
SBV-13015	SBV-13033	305	34	167	56	74	50	46	M6 x 1,0	3,74
SBV-13016	SBV-13034	305	34	167	70	74	50	46	M6 x 1,0	3,79
SBV-13017	SBV-13035	305	37	167	56	74	60	56	M6 x 1,0	6,08
SBV-13018	SBV-13036	378	42	186,2	80	90	70	63	M6 x 1,0	8,81
SBV-13041	SBV-13043	422,7	42	207,5	75	108	80	75	M6 x 1,0	11,32
SBV-13046	SBV-13045	423	42	210,0	75	148	95	91	M6 x 1,0	19,94
SBV-13042	SBV-13044	423	42	210,0	75	148	95	91	M6 x 1,0	19,94

Note: 1) Applicable to versions with access fitting - SBV(M)-JA series

SBV SERIES
Ball Valve

ACCESSORIES



Anti-Rotation Device

Model	Multi package*	Applicable for SBV models with:		Cap Nut	Dimensions mm		
		Inch connections:	Metric connections:		A	B	C
SK01	10150061902	1" 1/8 - 1" 3/8	28mm - 35mm	M18X1-6H	27,0	H17	Ø 24
SK02	10150062002	1" 5/8	42mm	M22X1-6H	27,5	H17	Ø 26
SK03	10150062102	2" 1/8 - 2" 5/8	54mm - 64mm	M22X1-6H	27,5	H19	Ø 28
SK04	10150062202	3" 1/8 - 3" 5/8	80mm - 92mm	M26X1-6H	29,5	H24	Ø 32
SK05	10150062302	4" 1/8 - 4" 1/4	105mm - 108mm	M32X1-6H	32,0	H29	Ø 38

* Available also as industrial package. Contact Sanhua for more details.

Ball Valve

CBV valves are typically used in commercial CO_2 refrigeration applications in order to open and to shut off inner flow path by operating the valve stem. The ball valve of series CBV is applicable for subcritical CO_2 refrigeration systems and is a perfect choice for all similar CO_2 systems.

FEATURES

- STRAIGHTWAY TYPE, FULL PORT, LOW PRESSURE DROP, COST-EFFECTIVE
- VALVE BODY AND VALVE SEAT WITH WELDED STRUCTURE, WITH HIGH PRODUCT RELIABILITY
- ROTATE ¼ CIRCLES FROM FULL-OPEN TO FULL-CLOSE, EASY TO OPERATE
- BIDIRECTIONAL FLOW [1)]
- ROTATION STOP FOR FULL-OPEN AND FULL-CLOSE OF THE VALVE AVAILABLE
- SPECIAL SEALING MATERIALS TO PREVENT INTERNAL LEAKAGE

Note: 1) CBV valves fulfill internal tightness requirements of the standard EN12284, paragraph 9.6.3 in both flow directions. Installations with shut off function to the atmosphere (just temporarily for service purpose): Please install the solder connection "B" at the airside. Please see solder connection "A" and "B" at the dimensional drawing page 3.
Remark: Welding body junction is always at solder connection "A"

GENERAL SPECIFICATION

- Applicable for R744 (CO_2)
- Medium temperature TS min./max.: -40°C/+150°C
- Max. operating pressure PS: 4,5 MPa (45 bar)
- Installation position: liquid, suction and discharge line in all directions
- Certification: PED declaration.

CBV SERIES
Ball Valve

GENERAL CHARACTERISTICS

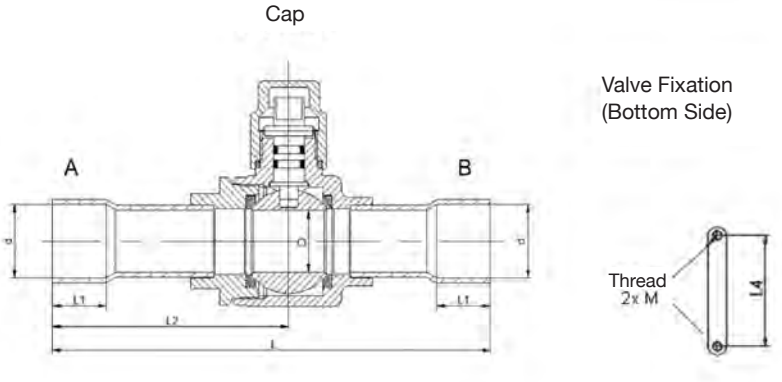
Model	Multi package*[1)]	Connection Ø d ODF		Kv	Wrench Size Cap	PED Category
		[inch]	[mm]	[m³/h]	[mm]	
CBV02-002	10150074202	-	6	1,9	H14	3.3
CBV02-001	10150074102	1/4	-	1,9	H14	3.3
CBV03-001	10150074302	3/8	-	5,5	H14	3.3
CBV03-002	10150074402	-	10	5,5	H14	3.3
CBV04-002	10150074602	-	12	10,2	H14	3.3
CBV04-001	10150074502	1/2	-	10,2	H14	3.3
CBV05-001	10150074702	5/8	16	13,8	H14	3.3
CBV06-002	10150074902	-	18	19,5	H17	3.3
CBV06-001	10150074802	3/4	-	19,5	H17	3.3
CBV07-001	10150063002	7/8	22	28,0	H17	3.3
CBV09-002	10150075002	-	28	51,5	H17	3.3
CBV09-001	10150062902	1 1/8	-	51,5	H17	3.3
CBV11-001	10150075102	1 3/8	35	80,0	H17	I
CBV13-002	10150062802	1 5/8	-	119,8	H17	I
CBV13-003	10150075202	-	42	119,8	H17	I
CBV17-001	10150075302	2 1/8	54	225,0	H19	I

Note: * Available also as industrial package. Contact Sanhua for more details.

1) Extent of delivery: valve body and standard cap

CBV SERIES
Ball Valve

DIMENSIONS & WEIGHT

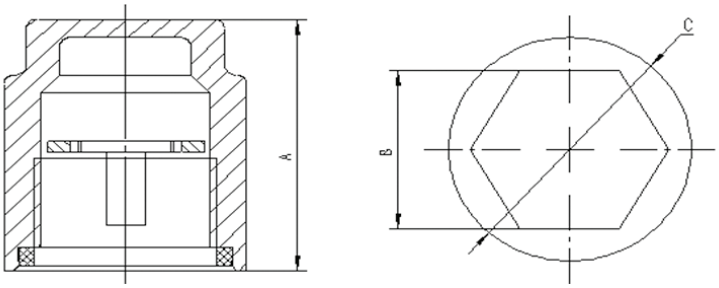


Model	Multi package	L	L1	L2	L4	D	H	M	Weight
CBV02-002	10150074202	132	8	68	22	14	16	M4 x 0,7	0,28
CBV02-001	10150074102	132	8	68	22	14	16	M4 x 0,7	0,28
CBV03-001	10150074302	132	8	68	22	14	16	M4 x 0,7	0,29
CBV03-002	10150074402	132	8	68	22	14	16	M4 x 0,7	0,29
CBV04-002	10150074602	160	10	85	22	14	16	M4 x 0,7	0,30
CBV04-001	10150074502	160	10	85	22	14	16	M4 x 0,7	0,30
CBV05-001	10150074702	160	12	85	22	14	16	M4 x 0,7	0,30
CBV06-002	10150074902	185	14	99	30	19	20	M4 x 0,7	0,51
CBV06-001	10150074802	185	14	99	30	19	20	M4 x 0,7	0,51
CBV07-001	10150063002	185	17	99	30	19	20	M4 x 0,7	0,52
CBV09-002	10150075002	208	20	112	38	25	25	M4 x 0,7	0,73
CBV09-001	10150062902	208	20	112	38	25	25	M4 x 0,7	0,73
CBV11-001	10150075102	251	25	136	48	32	31	M6 x 1,0	1,42
CBV13-002	10150062802	281	29	151	55	38	35	M6 x 1,0	1,90
CBV13-003	10150075202	281	29	151	55	38	35	M6 x 1,0	1,90
CBV17-001	10150075302	305	34	167	74	50	46	M6 x 1,0	3,74

* Available also as industrial package. Contact Sanhua for more details.

CBV SERIES
Ball Valve

ACCESSORIES



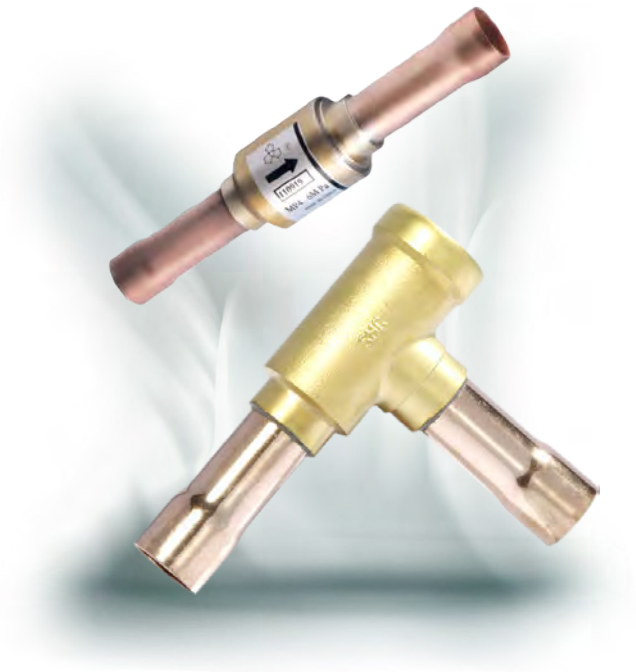
Anti-Rotation Device

Model	Multi package* [1]	Applicable for CBV models with:		Cap Nut	Dimensions mm		
		Inch connections	Metric connections		A	B	C
SK01	10150061902	1" 1/8 - 1" 3/8	28mm - 35mm	M18X1-6H	27,0	H17	Ø 24
SK02	10150062002	1" 5/8	42mm	M22X1-6H	27,5	H17	Ø 26
SK03	10150062102	2" 1/8 - 2" 5/8	54mm - 64mm	M22X1-6H	27,5	H19	Ø 28

Note: * Available also as industrial package. Contact Sanhua for more details.
1) Extent of delivery: cap with anti-rotation device

Check Valve Piston Type

Piston type check valves are designed for installation in commercial refrigerating systems and in residential or industrial air conditioning plants. They are used to control the unidirectional flow of refrigerant so as to prevent backflow.



FEATURES

- THIS VALVE CAN ENSURE THE ONLY CORRECT FLOW DIRECTION
- EQUIPPED WITH DAMPING SPRING TO FREELY INSTALL THE VALVE AT POSITIONS WITH PRESSURE PULSE
- AVAILABLE IN TWO TYPES OF MODEL: STRAIGHTWAY VALVE AND L-SHAPE VALVE, EASY TO CONNECT
- SPECIAL VERSION OF CHECK VALVE EQUIPPED WITH REINFORCED SPRING AVAILABLE, APPLICABLE TO COMPRESSOR DISCHARGE PIPES IN SINGLE OR MULTI COMPRESSOR SYSTEMS (YCVSH SERIES)
- LOW PRESSURE DROP DURING OPERATION

GENERAL SPECIFICATIONS

- Applicable for all common HCFC and HFC refrigerants such as: R22, R134a, R404A, R407C, R410A, R507A ...
- Medium temperature TS min./max.: -50°C / +140°C
- Max. operating pressure PS: 4,6 MPa (46 bar)
- Installation position:
  - Flow direction corresponds to the arrow
  - Straight-way type: preferably installed with vertical axis and flow upwards, sloping axis up to horizontal is tolerable
  - L-shape type: flow direction from bottom to top
- Declaration according to PED

YCV SERIES
Check Valve Piston Type

GENERAL CHARACTERISTICS

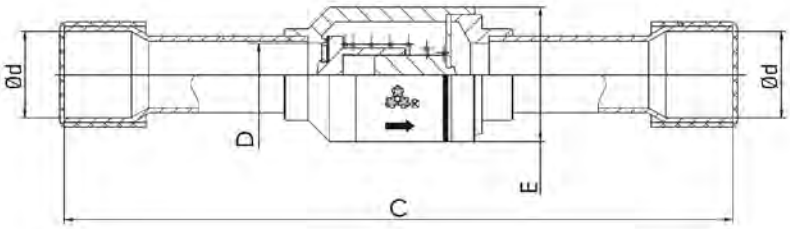
Model	Multi package*	Type	Connections ODF		Kv	Min. OPD	Dimensions			PED category
			Ø d				ØD	C	E	
			[inch]	[mm]	[m³/h]	[kPa]	[mm]	[mm]	[mm]	
YCVS 5-11GSHC-1	10160030202	straight-way	-	6	0,56	5	5	90	18	3,3
YCVS 5-22GSHC-1	10160024502	straight-way	1/4	-	0,56	5	5	90	18	3,3
YCVS 8-33GSHC-1	10160024602	straight-way	3/8	-	1,43	5	8	110	18	3,3
YCVSH 8-33GSHC-1	10160030502	straight-way	3/8	-	1,43	15	8	110	18	3,3
YCVS 8-33GSHC-2	10160031302	straight-way	-	10	1,43	5	8	110	18	3,3
YCVSH 8-33GSHC-2	10160033202	straight-way	-	10	1,43	15	8	110	18	3,3
YCVS 10-33GSHC-1	10160023802	straight-way	-	12	2,1	5	10	130	22	3,3
YCVSH 10-33GSHC-1	10160029102	straight-way	-	12	2,1	15	10	130	22	3,3
YCVS 10-44GSHC-1	10160023902	straight-way	1/2	-	2,1	5	10	130	22	3,3
YCVSH10-44GSHC-1	10160024802	straight-way	1/2	-	2,1	15	10	130	22	3,3
YCVS 13-55GSHC-1	10160024002	straight-way	5/8	16	3,9	5	13	140	28	3,3
YCVSH 13-55GSHC-1	10160024902	straight-way	5/8	16	3,9	15	13	140	28	3,3
YCVS 17-55GSHC-1	10160024202	straight-way	-	18	5,52	5	17	165	34	3,3
YCVSH 17-55GSHC-1	10160036902	straight-way	-	18	5,52	15	17	165	34	3,3
YCVS 17-66GSHC-1	10160024102	straight-way	3/4	-	5,52	5	17	165	34	3,3
YCVSH 17-66GSHC-1	10160028202	straight-way	3/4	-	5,52	15	17	165	34	3,3
YCVS 17-77GSHC-1	10160025002	straight-way	7/8	22	5,52	5	17	165	34	3,3
YCVSH 17-77GSHC-1	10160037502	straight-way	7/8	22	5,52	15	17	165	34	3,3
YCVS 20-77GSHC-1	10160030002	L-shape	7/8	22	13,2	10	20	132	87	3,3
YCVSH 20-77GSHC-1	10160034602	L-shape	7/8	22	13,2	30	20	132	87	3,3
YCVS 26-88GSHC-1	10160037202	L-shape	-	28	19,02	10	26	196	123	3,3
YCVSH 26-88GSHC-1	10160023702	L-shape	-	28	19,02	30	26	196	123	3,3
YCVS 26-99GSHC-1	10160030102	L-shape	1 1/8	-	19,02	10	26	196	123	3,3
YCVSH 26-99GSHC-1	10160034702	L-shape	1 1/8	-	19,02	30	26	196	123	3,3
YCVS 31-BBGSHC-1	10160024402	L-shape	1 3/8	35	29,1	10	31	196	123	I
YCVSH 31-BBGSHC-1	10160037402	L-shape	1 3/8	35	29,1	30	31	196	123	I
YCVS 31-DDGSHC-1	10160037002	L-shape	1 5/8	-	29,1	10	31	196	123	I
YCVSH 31-DDGSHC-1	10160037102	L-shape	1 5/8	-	29,1	30	31	196	123	I
YCVS 31-DDGSHC-2	10160032402	L-shape	-	42	29,1	10	31	196	123	I
YCVSH 31-DDGSHC-2	10160042302	L-shape	-	42	29,1	30	31	196	123	I

* Available also as industrial package. Contact Sanhua for more details.

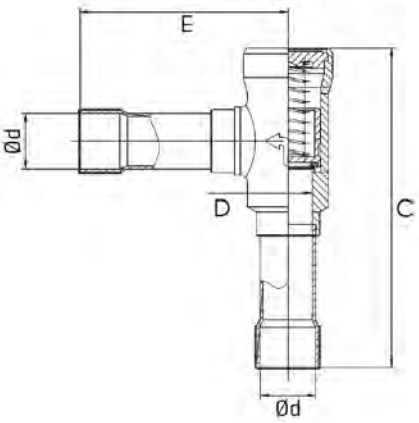
YCV SERIES
Check Valve Piston Type

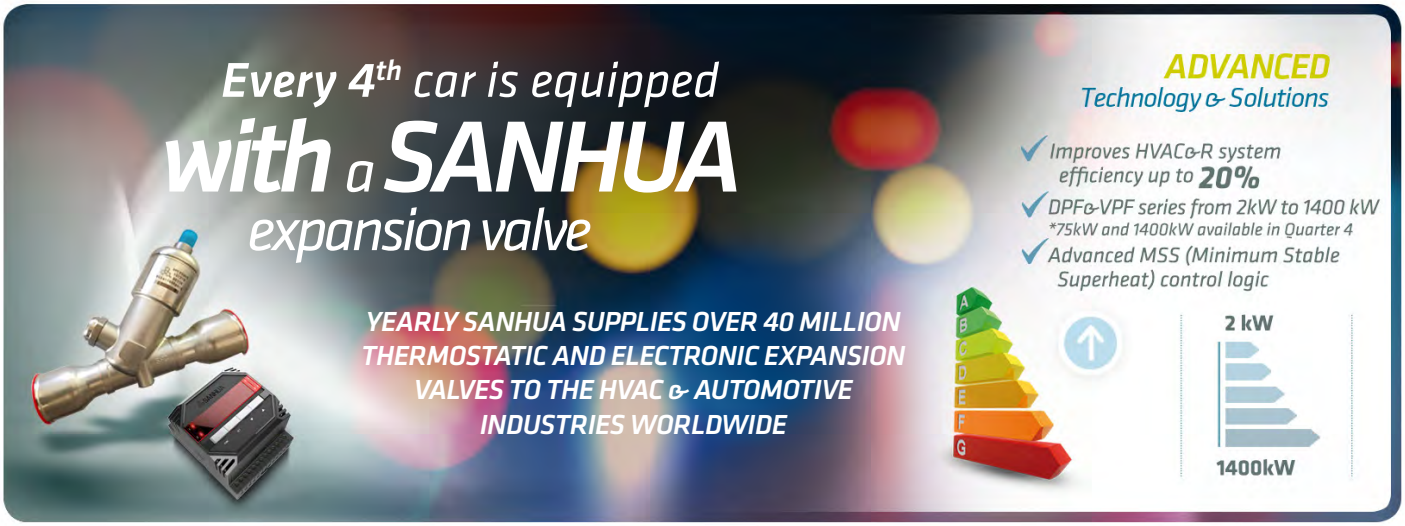
GENERAL CHARACTERISTICS

Straight-way



L-shape





Float Type SERIES

Check Valve

Float type check valve are used in air conditioning system in shunt connection with capillary tubes to control the forward and reverse flow of refrigerant and make refrigerant flow in a specified direction.

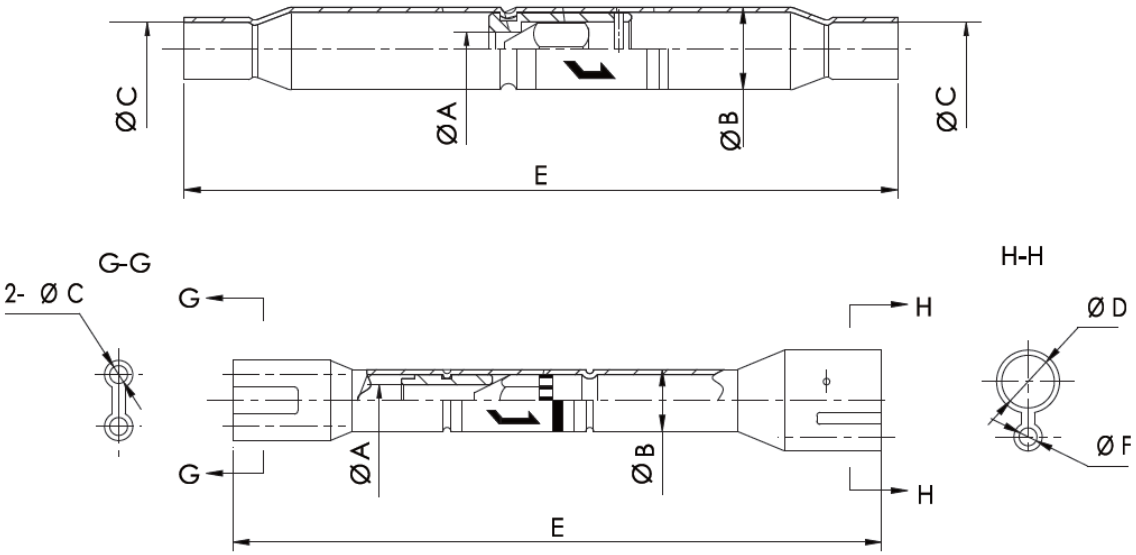
FEATURES

- GOOD SEALING PERFORMANCE, STABLE STRUCTURE: USING HIGH QUALITY ENGINEERING PLASTIC VALVE CORE
- SMALL FLOW RESISTANCE, BIG FLOW RATE

GENERAL SPECIFICATIONS

- Applicable refrigerant: R22, R407C, R410A etc.
- Applicable medium temperature: -30°C~+120°C
- Maximum working pressure: 4.2MPa

DIMENSIONS



Float Type SERIES
Check Valve

DIMENSIONS

Model	Dimensions mm				
	A	B	C	D/F	E
YCV3	3	9.52	3.18	3.18	100
			6.35	6.35	
YCV5	5	12.7	9.52	9.52	110
			12.7	12.7	
YCV8	8	19.05	12.7	12.7	150
			15.88	15.88	
YCV11	11	22.2	15.88	15.88	160
			19.05	19.05	
YCV14	14	28	19.05	19.05	
			22.2	22.2	
CV/CAV	4.8	9.52	2.7	6.0/3.1	100
			2.9	6.5/2.7	
			3.1	6.5/2.9	
			3.3	8.1/2.7	
			3.5	8.1/3.3	

Sight Glass

Sight glasses are installed after the filter drier in liquid line of refrigerating systems, in order to observe property changes of the refrigerant (liquid/vapor) and to indicate the moisture level by colors.

FEATURES

- HIGH PRECISION COLOR INDICATOR
- INDICATOR PASTED CLOSELY TO THE GLASS TO PREVENT SURFACE CONTAMINATION
- SOLID AND CORROSION RESISTANT BRASS MATERIAL
- GOOD READABILITY DUE TO HIGH CLEAR SIGHT GLASS OF WIDE ANGLE
- SEALING OF LOW CREEP PTFE TO ENSURE LEAKAGE FREE PERFORMANCE
- NEW ANNULAR HUMIDITY COLOR INDICATOR. FULL PORT PASSAGE WITH LOW PRESSURE DROP

GENERAL SPECIFICATION

- Applicable for all common HCFC, HFC, HC, HFO[1)] refrigerants such as: R22, R134a, R404A, R407C, R410A, R507A, R744, R407A/F, R1234ze, R290
- Ambient temperature min./max.: -50°C / +80°C
- Medium temperature TS min./max.: -50°C / +80°C
- Max. operating pressure PS: 4,6 MPa (46 bar)
- Installation position:
  - Liquid and suction line
  - Preferably in vertical lines, recommended position for horizontal lines is upwards without inclination in any direction
- Declaration according to PED (all products have been covered by Art.4.3 PED Directive 2014/68/EU)

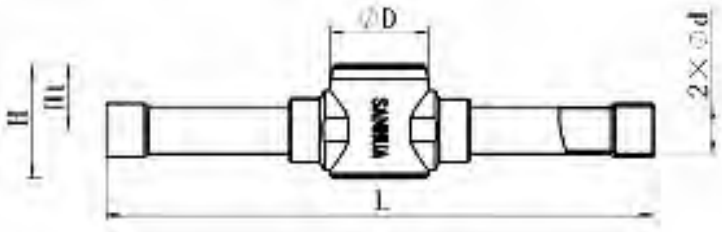
Note: 1) please contact Sanhua representative regarding applications with HFO

SYJ SERIES
Sight Glass

Version with Solder Connections

General Characteristics												
Model Series	Model Name	Multi package*	Connection Type [inch]	Connecting dimensions		Dimensions & Weight						
						L	H	H1	ØD	B	Weight	drawing
				[inch]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[g]	
SYJ6	SYJ06H12	10285007102	solder ODF x ODF	-	6	101	23	14	26	/	100	A
SYJ6	SYJ06H11	10285007002	solder ODF x ODF	1/4	-	101	23	14	26	/	100	
SYJ10	SYJ10H11	10285007202	solder ODF x ODF	3/8	-	119	23	14	26	/	100	
SYJ10	SYJ10H12	10285007302	solder ODF x ODF	-	10	119	23	14	26	/	100	
SYJ12	SYJ12H11	10285006902	solder ODF x ODF	1/2	-	146	30	17	26	/	200	
SYJ12	SYJ12H12	10285007402	solder ODF x ODF	-	12	146	30	17	26	/	200	
SYJ16	SYJ16H11	10285007502	solder ODF x ODF	5/8	16	146	30	17	26	/	200	
SYJ19	SYJ19H11	10285007602	solder ODF x ODF	3/4	-	173	36	21	27	/	300	
SYJ22	SYJ22H11	10285007702	solder ODF x ODF	7/8	22	173	36	21	27	/	300	

* Available also as industrial package. Contact Sanhua for more details.

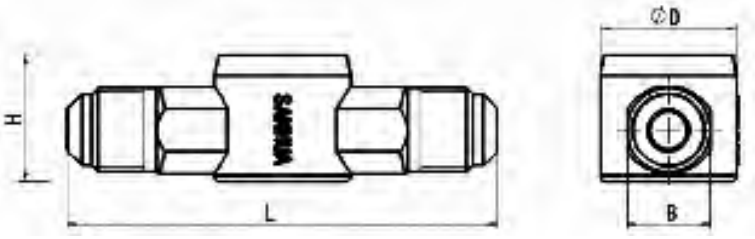


"Drawing A"

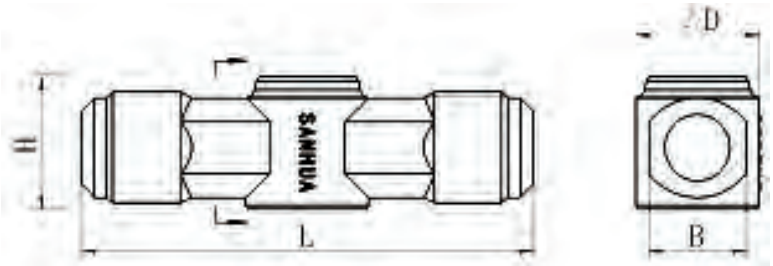
Version with male/male Flare Connections

General Characteristics												
Model Series	Model Name	Multi package*	Connection Type [inch]	Connecting dimensions		Dimensions & Weight						
						L	H	H1	ØD	B	Weight	drawing
				[inch]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[g]	
SYJ6	SYJ06L11	10285007902	flare M x M	1/4	-	67	24		27	14	110	
SYJ10	SYJ10L11	10285008102	flare M x M	3/8	-	82	24		32	22	240	B
SYJ12	SYJ12L11	10285008302	flare M x M	1/2	-	88	30		32	22	240	
SYJ16	SYJ16L11	10285008502	flare M x M	5/8	-	104	30		30	24	320	
SYJ19	SYJ19L01	10285008702	flare M x M	3/4	-	110	32		30	24	340	C

* Available also as industrial package. Contact Sanhua for more details.



"Drawing B"



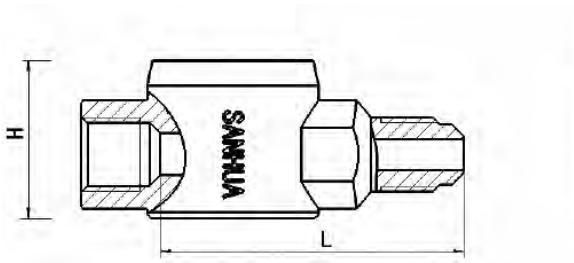
"Drawing C"

SYJ SERIES
Sight Glass

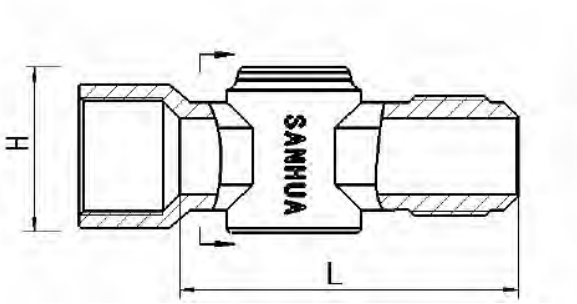
Version with male/female Flare connections

General Characteristics												
Model Series	Model Name	Multi package*	Connection Type [inch]	Connecting dimensions		Dimensions & Weight						
						L	H	H1	ØD	B	Weight	drawing
				[inch]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[g]	
SYJ6	SYJ06L41	10285008002	flare F x M	1/4	-	46	30		32	22	200	d
SYJ10	SYJ10L41	10285008202	flare F x M	3/8	-	57	30		32	22	240	
SYJ12	SYJ12L41	10285008402	flare F x M	1/2	-	59	32		30	24	250	
SYJ16	SYJ16L41	10285008602	flare F x M	5/8	-	71	37		30	24	320	e
SYJ19	SYJ19L41	10285008802	flare F x M	3/4	-	75	37		30	24	330	

* Available also as industrial package. Contact Sanhua for more details.

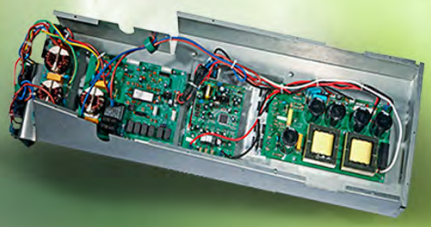


"Drawing D"



"Drawing E"

Every second A/C system
in the world is equipped with
Inverter Technology



SANHUA IS PROVIDING INVERTER CONTROLLER SOLUTIONS TO ITS COSTUMERS HELPING THEM TO IMPROVE SYSTEM EFFICIENCY BY 30%

ADVANCED
Technology & Solutions

- *Improves system efficiency up to* ***30%***
- ***Active Frequency*** *Conversion Technology*
- *Wide Rage of voltage application*

SYJ SERIES
Sight Glass

Moisture Indication Limits

Refrigerant	Moisture Content 25°C: PPM		
	Green/Dry	Middle Color	Yellow/Wet
R22	<100	100~200	>200
R134a	<90	90~180	>180
R404A	<40	40~100	>100
R410A	<90	90~300	>300
R507	<15	15~90	>90
R407C	<120	120~280	>280

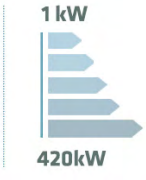
Refrigerant	Moisture Content 40°C: PPM		
	Green/Dry	Middle Color	Yellow/Wet
R22	<140	140~350	>350
R134a	<120	120~330	>335
R404A	<80	80~160	>160
R410A	<200	200~580	>580

2 out of 3 AC units are equipped
with a SANHUA
reversing valve

ADVANCED
Technology & Solutions

- Improves efficiency by 5%
- SHF series 1kW to 420 kW
- Widest range in the market with Single Body Design

YEARLY SANHUA SUPPLIES OVER 50 MILLION FOUR WAY REVERSING VALVES TO THE COMMERCIAL AND RESIDENTIAL HVAC INDUSTRY WORLDWIDE



Brass Service Valve

Brass service valves of series SSV are applicable for split air conditioners to connect indoor unit and outdoor unit. It can also be used in other cooling or refrigeration systems. The inner path of the valve can be closed by operating the valve stem. The 3way version (with charge port) can be used as service valve for vacuum pumping and refrigerant injection.

FEATURES

- AVAILABLE WITHOUT AND WITH CHARGE PORT
- COST EFFICIENT SOLUTION
- RELIABLE AND ROBUST DESIGN

GENERAL SPECIFICATIONS

- Applicable for all common HCFC and HFC refrigerants such as: R134a, R404A, R407C, R410A, R507A...
- Ambient temperature min./max.: -30°C / +55°C
- Medium temperature TS min./max.: -30 °C / +120°C
- Max. operating pressure PS: 4,5 MPa (45 bar)
- Installation position: Preferably liquid and suction line
- Certifications: UL/CSA and PED declaration

GENERAL CHARACTERISTICS

Model	Multi package*[1)]	Connections					Cooling capacity	PED Category
		ØA Flare	Ød ODF		ØI Pipe	Charge Port Flare		
		[inch]	[inch]	[mm]	[mm]	[inch]	[kW]	
SSV-A2GSHC-23	10165068702	7/16-20UNF	1/4	6,35	4,8	-	0,7 - 1,5	3,3
SSV-JA3GSHC-20	10165068602	5/8-18UNF	3/8	9,52	7,0	1/4	0,7 - 3,7	3,3
SSV-JA4GSHC-19	10165070602	3/4-16UNF	1/2	12,7	10	1/4	1,1 - 7,5	3,3
SSV-JA5GSHC-15	10165068802	7/8-14UNF	5/8	15,9	12,5	1/4	1,5 - 8,8	3,3
SSV-JA6GSHC-13	10165070302	1 1/16-14UNS	3/4	19,1	16	1/4	3,7 - 5,9	3,3

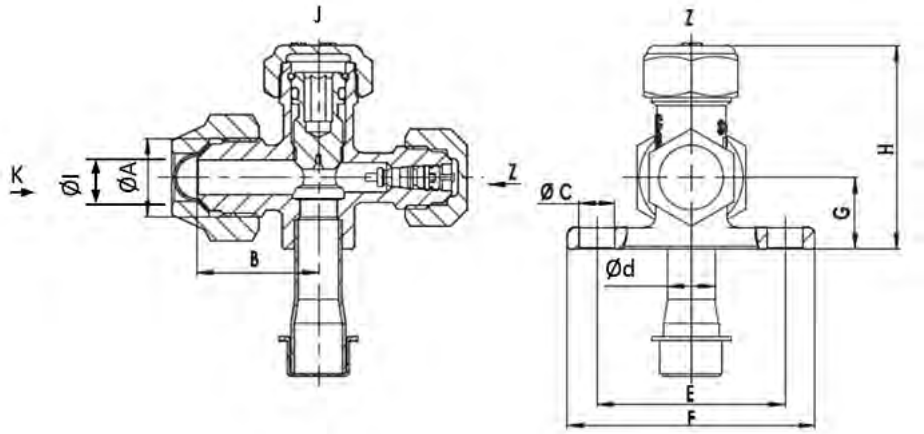
Note: * Available also as industrial package. Contact Sanhua for more details.

1) Extent of delivery:

- SSV-JA valve body with schrader valve, cap charge port, cap shut-off valve, nut pipe connection
- SSV-A valve body, cap shut-off valve, nut pipe connection, without charge port

SSV SERIES
Brass Service Valve

DIMENSIONS



Model	Multi package	Dimensions [mm]						Wrench Size [mm]			
		B	ØC	E	F	G	H	Nut Pipe Connection K	Cap Shut-off Valve J	Valve[1] Steam J	Cap Charge Port Z
SSV-A2GSHC-23	10165068702	23	7,2	38	50	14	36	19	17	5	-
SSV-JA3GSHC-20	10165068602	24,5	7,2	38	50	14,5	41	22	19	5	17
SSV-JA4GSHC-19	10165070602	28	7,2	38	50	16	44	24	22	5	17
SSV-JA5GSHC-15	10165068802	34	7,2	38	50	17	47	27	26	5	17
SSV-JA6-GSHC-13	10165070302	40	7,2	44	56	23	61	32	30	5	17

Note: 1) Allen screw

GZF SERIES

Angle Valve

Applicable for compressors, reservoirs of commercial air conditioner, freezing or deep-freezing equipment or for pipe connection; it can close inner passage of the valve by operating the valve stem.

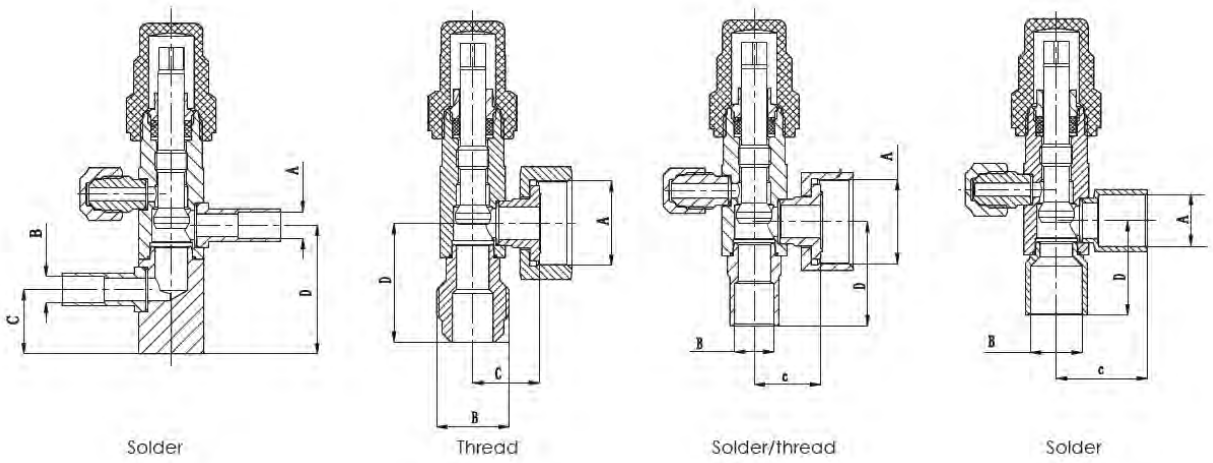
FEATURES

- BIDIRECTIONAL FLOW
- PRODUCTS ARE 100% H/HE INSPECTED
- HIGH PRECISION AND RELIABILITY: PROCESSED BY DEDICATED EQUIPMENT
- GOOD CONSISTENCY: MULTI-SPOT WELDED BY TUNNEL FURNACE
- EXCELLENT TEMPERATURE RESISTANCE: UTILIZING SPECIAL SEALING MATERIALS

GENERAL SPECIFICATIONS

- Applicable refrigerant: R22, R134a, R407C and R410A etc.
- Applicable medium temperature: -40°C ~ +150°C
- Maximum working pressure: 4.83MPa
- Certification: UL

DIMENSIONS



GZF SERIES
Angle Valve

GENERAL CHARACTERISTICS

Model	Dimensions							Connection Type
	Diagonal Size of Valve Body mm	A		B		Structure Size mm		
		Thread	Solder in	Thread	Solder in	C	D	
GZF(20)-ZB022	20	/	1/4	/	1/4	28	29	Solder
GZF(20)-ZB033		/	3/8	/	3/8	28	29	
GZF(20)-ZB044		/	1/2	/	1/2	28	29	
GZF(20)-ZB055		/	5/8	/	5/8	28	29	
GZF(20)-ZA042		3/4-16UNF	/	7/16-20UNF	/	19,8	30	Thread
GZF(20)-ZA043			/	5/8-18UNF	/	19,8	30	
GZF(20)-ZA044			/	3/4-16UNF	/	19,8	30	
GZF(20)-ZA045			/	7/8-14UNF	/	19,8	30	
GZF(20)-ZC042			/	/	1/4	19	27	Solder / thread
GZF(20)-ZC043			/	/	3/8	16,5	39,5	
GZF(20)-ZC044			/	/	1/2	19	27	
GZF(20)-ZC045			/	/	5/8	19	27	
GZF(20)-ZC083		1-14UNS	/	/	3/8	20,5	32	
GZF(20)-ZC084			/	/	1/2	20,5	32	
GZF(20)-ZC085			/	/	5/8	20,5	37	
GZF(20)-ZA082			/	7/16-20UNF	/	20,5	33,5	Thread
GZF(20)-ZA083			/	5/8-18UNF	/	20,5	33,5	
GZF(20)-ZA084			/	3/4-16UNF	/	20,5	33,5	
GZF(20)-ZA085			/	7/8-14UNF	/	30,5	36,5	
GZF(22)-ZB055	22	/	5/8	/	5/8	33,5	40	Solder
GZF(22)-ZB085		1-14UNS	/	7/8-14UNF	/	36	39,5	Thread
GZF(30)-ZB066	30	/	3/4	/	3/4	17,5	50	Solder
GZF(30)-ZB077		/	7/8	/	7/8	40	42	
GZF(30)-ZB099		/	1 1/8	/	1 1/8	51	53	
GZF(30)-ZC0A7		1 1/4-12UNF	/	/	7/8	25	42	Solder / thread
GZF(30)-ZC0A9		1 1/4-12UNF	/	/	1 1/8	25	56,5	
GZF(30)-ZC0B7		1 3/4-12UN	/	/	7/8	25	56,5	
GZF(30)-ZC0B9		1 3/4-12UN	/	/	1 1/8	27,5	57	

GZF SERIES
Angle Valve

GENERAL CHARACTERISTICS

Model	Dimensions							Connection Type
	Diagonal Size of Valve Body mm	A		B		Structure Size mm		
		Thread	Solder in	Thread	Solder in	C	D	
GZF(35)-ZB099	35	/	1 1/8	/	1 1/8	52,5	58	Solder
GZF(35)-ZB0BB		/	1 3/8	/	1 3/8	52,5	58	
GZF(35)-ZB0DD		/	1 5/8	/	1 5/8	52,5	58	
GZF(35)-ZC0E9		1 3/4-12UN	/	/	1 1/8	31	56,5	Solder / thread
GZF(35)-ZC0EB		1 3/4-12UN	/	/	1 3/8	31	62,5	
GZF(35)-ZC0ED		1 3/4-12UN	/	/	1 5/8	31	62,5	
GZF(50)-ZB0DD	50	/	1 5/8	/	1 5/8	62,5	69	Solder
GZF(50)-ZB0HH		/	2 1/8	/	2 1/8	67,5	74	
GZF(50)-ZC0ED		1 3/4-12UN	/	/	1 5/8	62,5	69	Solder / thread
GZF(50)-ZC0IH		1 3/4-12UN	/	/	2 1/8	41,8	72,5	

ZJF SERIES

Receiver Valve

Receiver valve are used for tube connection or compressor and reservoirs of commercial air conditioner, freezing or deep-freezing equipment. Inner path of the valve can be closed or opened by operating the valve stem.

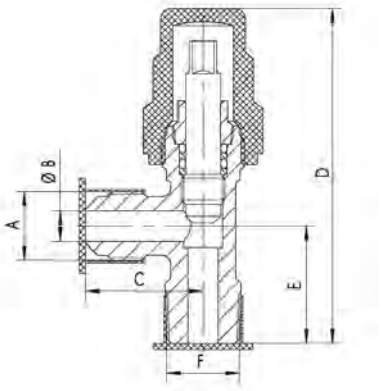
FEATURES

- COST EFFECTIVE: OPTIMAL DESIGN BASED ON PERFORMANCE
- GOOD APPEARANCE AND ENDURABLE: THE VALVE BODY TREATED WITH SHOT BLAST.
- WELL SEALING PERFORMANCE: WITH PARTICULAR SEALING STRUCTURE AND DESIGN

GENERAL SPECIFICATIONS

- Applicable refrigerant: R22, R124a, R407C, R410A, R404A, R507, R1234ze
- Applicable medium temperature: -40°C ~ +120°C
- Maximum working pressure: 4.83 MPa
- Certification: UL

DIMENSIONS



Model	A in	Dimensions mm				F in
		B	C	D	E	
ZJF-A22	7/16-20UNF	4.8	23.5	74	23.5	NPT 1/4
ZJF-A23	7/16-20UNF	4.8	27	77	27	NPT 3/8
ZJF-A33	5/8-18UNF	7	27	77	27	NPT 3/8
ZJF-A32	5/8-18UNF	7	27	77	27	NPT 1/4
ZJF-A34	5/8-18UNF	7	32	114	37	NPT 1/2
ZJF-A44	3/4-16UNF	10	36	114	37	NPT 1/2
ZJF-A43	3/4-16UNF	10	36	114	37	NPT 3/8
ZJF-A54	7/8-14UNF	12.5	36	114	37	NPT 1/2
ZJF-A66	1 1/16-14UNS	16	42	122	43	NPT 3/4
ZJF-A76	1 1/4-12UNF	20	48	122	43	NPT 3/4

Charge Valve

Charge valves are mainly installed in air conditioning and refrigeration systems. They are used as service valve for circuit evacuation to vacuum and for refrigerant injection.

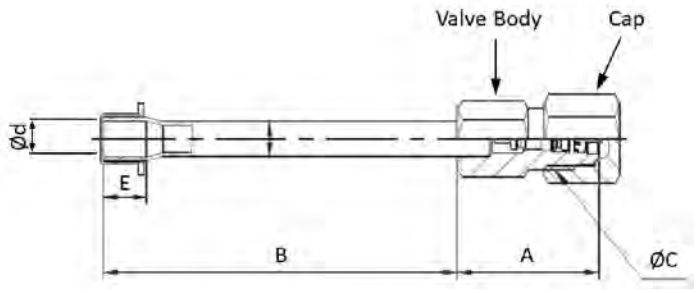
FEATURES

- SIMPLE STRUCTURE, CONVENIENT TO USE
- PREVENT REFRIGERANT LOSS THROUGH INTEGRATED SHRADER VALVE

GENERAL SPECIFICATION

- Applicable for all common HCFC and HFC refrigerants such as: R22, R134a, R404A, R407C, R410A, R507A ...
- Ambient temperature min./max.: -30/+55°C
- Medium temperature TS min./max.: -30°C / +80°C
- Max. operating pressure PS: 4,5 MPa (45 bar)
- Installation position: liquid or suction line
- Declaration according to PED

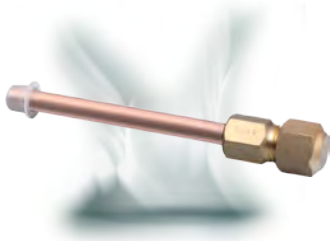
DIMENSIONS

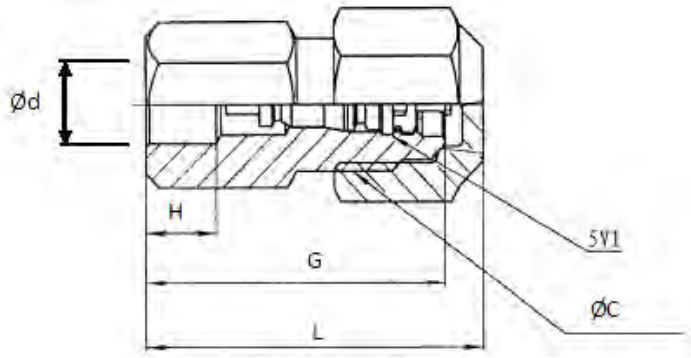


Model	Multi package* 1)	Connections			Dimensions			Wrench Size		Refrigerant
		Solder ODF Ød		Flare UNF ØC	A	B	E	Valve Body	Cap	
		[mm]	[inch]	[inch]	[mm]			[mm]		[mm]
TCJ-2HMSZ-1	10155004802	6,35	1/4	7/16-20	26	65	8	12	14	R22
TCJ-2GMS-1	10155001502	6,35	1/4	1/2-20	26	65	8	14	17	R134a/R404A/R407C R410A/R507

Note: * Available also as industrial package. Contact Sanhua for more details.
1) Extent of delivery: valve body, schrader valve and cap

TCJ SERIES
Charge Valve





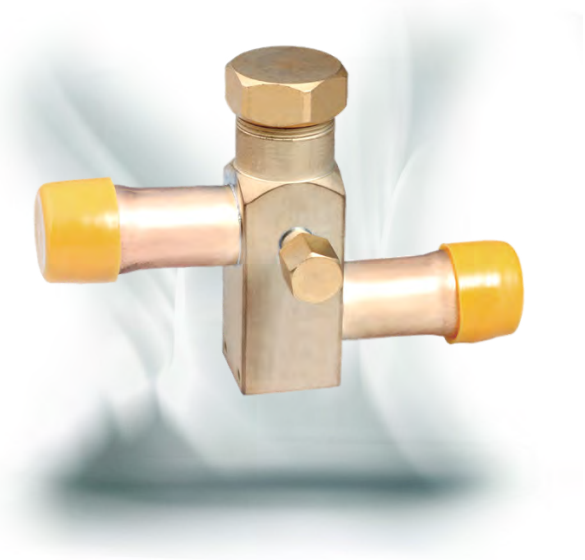
Model	Multi package* [1]	Connections			Dimensions			Wrench Size		Refrigerant
		Solder ODF Ød		Flare UNF ØC	L	G	H	Valve Body	Cap	
		[mm]	[inch]	[inch]	[mm]			[mm]		[mm]
TCJ-2HLEN-1	10155010302	6,35	1/4	7/16-20	29	26	6	12	14	R22
TCJ-2GLEN-2	10155009202	6,35	1/4	1/2-20	29	26	6	14	17	R134a/R404A/R407C R410A/R507

Note: * Available also as industrial package. Contact Sanhua for more details.
1) Extent of delivery: valve body, schrader valve and cap

SMV SERIES

Bar-Stock Service Valve

Bar-stock service valve can be used in split air conditioners to connect indoor unit and outdoor unit, which can close the inner passage of the valve by operating the valve stem; it can be used as service valve during maintenance for the purpose of vacuum pumping and refrigerant injection. It can also be used in other refrigerating systems.



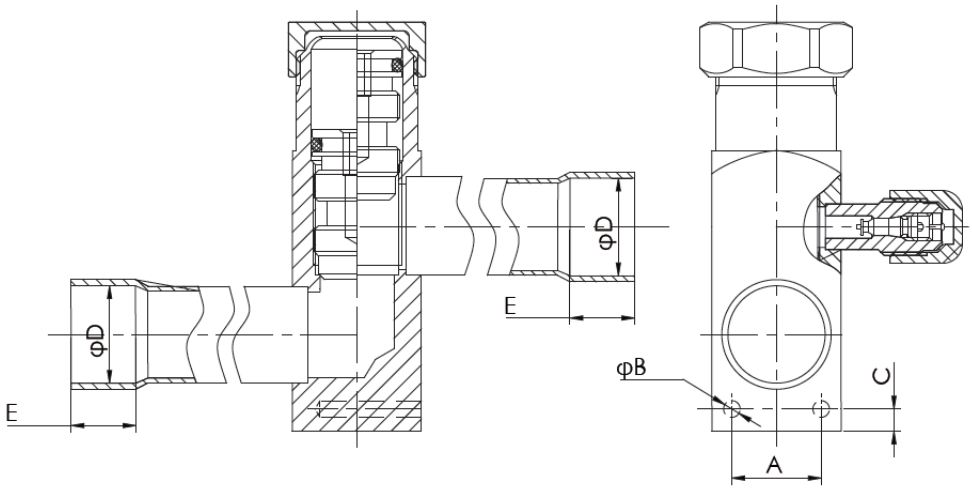
FEATURES

- COST-EFFECTIVE: UNIQUE METAL CAPTURE STRUCTURE, ENSURE HIGH QUALITY
- VARIOUS SQUARE SHAPES TO MEET SPECIAL INSTALLATION MODE AND FLOW REQUIREMENTS OF EQUIPMENT
- GOOD CONSISTENCY: SIMULTANEOUS WELDING OF MULTIPLE SPOTS BY TUNNEL FURNACE
- HIGH TESTING PRECISION: PRODUCTS ARE 100% H/HE INSPECTED

GENERAL SPECIFICATIONS

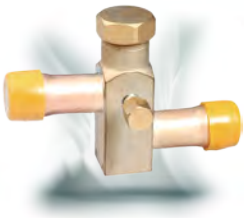
- Applicable refrigerant: R22, R134a, R407C, R410A etc.
- Applicable medium temperature: -30°C ~ +120°C
- Maximum working pressure: 4.2MPa, 4.83 MPa for special square body valve
- Certification: UL

TECHNICAL PARAMETERS

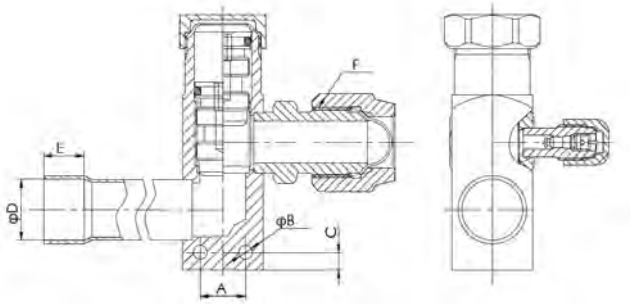


Solder Connection

SMV SERIES
Bar-Stock Service Valve



Type	Model	Copper tube Size in	Dimensions mm					Thread Size F
			A	B	C	D	E	
Solder Connection	SMV-JA3Y	3/8	10.6±0.5	3.6±0.10	3,6	9,6	8±1.0	/
	SMV-JA4Y	1/2	17.7±0.5	3.6±0.10	3,6	12,8	9.7±1.0	/
	SMV-JA5Y	5/8	17.7±0.5	3.6±0.10	3,6	15,95	14.2±1.0	/
	SMV-JA6Y	3/4	17.7±0.5	3.6±0.10	3,6	19,13	15.7±1.0	/
	SMV-JA7Y	7/8	17.7±0.5	3.6±0.10	3,6	22,33	19±1.0	/
	SMV-JA8Y	1	17.7±0.5	3.6±0.10	3,6	25,4	15±1.0	/
	SMV-JA9Y	9/8	17.7±0.5	3.6±0.10	3,6	28,8	15±1.0	/
	SMV-8JA3Y	3/8	10.6±0.5	3.6±0.10	3,6	9,6	8±1.0	/
	SMV-15JA4Y	1/2	17.7±0.5	3.6±0.10	3,6	12,8	9.7±1.0	/
	SMV-15JA5Y	5/8	17.7±0.5	3.6±0.10	3,6	15,95	14.2±1.0	/
	SMV-15JA6Y	3/4	17.7±0.5	3.6±0.10	3,6	19,13	15.7±1.0	/
	SMV-17JA7Y	7/8	17.7±0.5	3.6±0.10	3,6	22,33	19±1.0	/



Solder/Flare Nut

Type	Model	Copper tube Size in	Dimensions mm					Thread Size F
			A	B	C	D	E	
Solder / Flare Nut	SMV-JA3	3/8	10.6±0.5	3.6±0.10	3,6	9,6	8±1.0	5/8-18UNF
	SMV-JA4	1/2	17.7±0.5	3.6±0.10	3,6	12,8	9.7±1.0	3/4-16UNF
	SMV-JA5	5/8	17.7±0.5	3.6±0.10	3,6	15,95	14.2±1.0	7/8-14UNF
	SMV-JA6	3/4	17.7±0.5	3.6±0.10	3,6	19,13	15.7±1.0	1 1/16-14UNS
	SMV-JA7	7/8	17.7±0.5	3.6±0.10	3,6	22,33	19±1.0	1 1/16-14UNS
	SMV-8JA3	3/8	10.6±0.5	3.6±0.10	3,6	9,6	8±1.0	5/8-18UNF
	SMV-15JA4	1/2	17.7±0.5	3.6±0.10	3,6	12,8	9.7±1.0	3/4-16UNF
	SMV-15JA5	5/8	17.7±0.5	3.6±0.10	3,6	15,95	14.2±1.0	7/8-14UNF
	SMV-15JA6	3/4	17.7±0.5	3.6±0.10	3,6	19,13	15.7±1.0	1 1/16-14UNS
	SMV-17JA7	7/8	17.7±0.5	3.6±0.10	3,6	22,33	19±1.0	1 1/16-14UNS

SANHUA *YOUR ROAD MAP TO THE ECO-DESIGN DIRECTIVE**

*KEEPS YOU ONE STEP AHEAD OF THE COMING **EFFICIENCY** AND **ENVIRONMENTAL** EUROPEAN **CHALLENGES***

EEV Technology + Electronic Controls

- *Improves HVAC&R system efficiency up to **20%***
- *DPF&VPF series from 2kW to 1400kW*
  **75kW and 1400kW available in Quarter 4*
- *Advanced MSS (Minimum Stable Superheat) control logic*

2 kW

1400kW

4 Way Reversing Valve

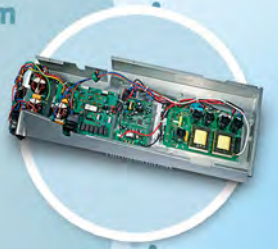
- *Improves efficiency by **5%***
- *SHF series 1kW to 420 kW*
- *Widest range in the market with Single Body Design*

1 kW

420kW

Inverter Controller for Large System

- *Improves system efficiency up to **30%***
- ***Active Frequency** Conversion Technology*
- *Wide Range of voltage application*



MCHE

- *Improves efficiency by **30%***
- *Refrigerant Charge Reduction by **30%** Environmental Friendly*
- *MCHE is lighter in weight, smaller in volume Compact Design*

**DIRECTIVE 2012/27/EU*

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SANHUA

CHILLING *ideas worldwide*

SANHUA INTERNATIONAL
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Every second A/C system in the world is equipped with **Inverter Technology**

SANHUA IS PROVIDING INVERTER CONTROLLER SOLUTIONS TO ITS CUSTOMERS HELPING THEM TO IMPROVE SYSTEM EFFICIENCY BY UP TO 30%

DISCOVER WHY

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- *Improves system efficiency up to* ***30%***
- ***Active Frequency*** *Conversion Technology*
- *Wide Range of voltage application*

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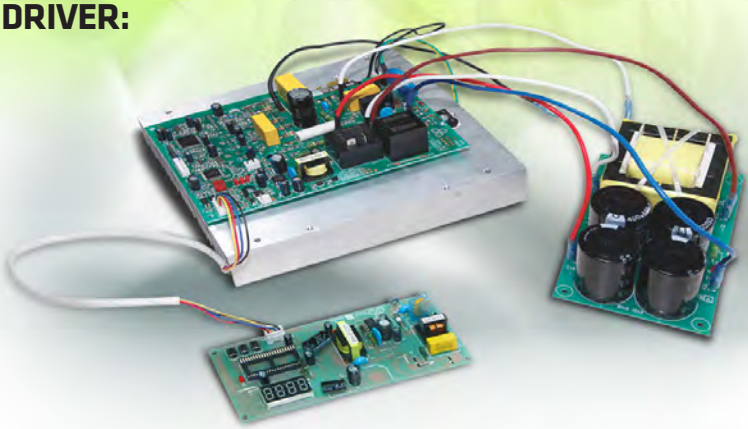
Electronic Controls

FEATURES OF STANDARD INVERTER DRIVER:



- Up to 30% high energy efficiency.
- Mutually optimized and qualified: More than 20 Years Experienced Japanese Experts in Compressor Inverter Driver.
- Famous Compressor Brand: Mitsubishi, Sanyo, Toshiba, Hitachi, Panasonic...
- Capacity from 1HP to 12HP, Single phase or Three phase Power.
- Wide compressor speed range from 10Hz to 120Hz.
- Excellent compressor noise and vibration reduce technology.
- Protects compressor with current and voltage monitoring.
- Active power factor correction (PF > 0.985).
- Total core algorithms developed by Sanhua inside the CPU.
- Multi board easy for combine, update, after sale service and good for qualified power management.
- Wide application: Industrial, Refrigeration, RAC, CAC, Heat pump water heater, HVAC, DC motors...

Controller for EEV

Inverter Controller for HP Water Heater

Inverter Controller for Large System

Residential Inverter Controller

SANHUA

Manufacturing *capabilities*

ANNUAL CAPACITY OF INVERTER CONTROLLER FOR 2012 IS 500,000 SETS, AND THE CAPACITY WILL BE EXPANDED TO 1 MILLION SETS IN 2013.
ALL EQUIPMENT IS IMPORTED, FOR EXAMPLE DEK ENGLAND PRINTING MACHINE, JUKI JAPAN SMT MACHINE, HELLER AMERICA REFLOW SOLDERING MACHINE, OMRON JAPAN AUTO OPTICAL INSPECTOR, AND PANASONIC JAPAN AUTO PLUG-IN MACHINE.

Production Line & Product Warehouse

IQC, Raw Material Ware House & SMT Workshop Equipments

The former Foxconn management team brings scientific manufacturing process and strict quality control. Along with all the advanced equipment, we achieve a modern production process from raw material input to product output.

> IQC, Raw Material Ware House & SMT Workshop Equipment:

> Transistor Curve Tracer ,Precision LCR Meter etc. (IQC Equipment)

> Electric Moisture-proof Cabinet, Vacuum Packaging Machine, Hygrothermograph, Check List (Raw material warehouse and Equipment)

> Silk screen printing machine (DEK UK)

> SMT machine (JUKI Japan)

> Re-flow Welding Machine (HELLER USA)

> Auto optics inspector (Omron Japan)

> Auto plug-in machine (Panasonic Japan)

SANHUA

Uni-Flow Filter Driers

The filter driers of series DTG are used in refrigeration system with unidirectional flow to absorb moisture and acid in the system and to filter out the impurities.

FEATURES

- HIGH EFFICIENT IN MOISTURE ABSORPTION, FILTERING IMPURITY, ACID, PAINT REMAINS AND MUD REMOVAL
- HYBRID DESICCANT
- DURABLE AND SOLID FILTER CORES
- FILTERING FINENESS: 20μm
- CORROSION RESISTANT PAINTING SURVIVES SALT SPRAY TEST OF 500 HOURS
- CONNECTION TYPE: FLARE OR SOLDER

GENERAL SPECIFICATIONS

- Applicable for all common HCFC, HFC, HC, HFO [1] refrigerants such as: R22, R134a, R404A, R407C, R410A, R507A R290 [2], R1234ez
- Ambient temperature min./max.: -30°C / +55°C
- Medium temperature TS min./max.: -30°C / +120°C
- Max. operating pressure PS max.: 4,83 MPa (48,3 bar) - 700 PSI
- Installation position:
  - Flow direction corresponds to the arrow
  - Preferably installed in liquid line
- Certifications: UL/CSA and PED declaration

TECNHICAL PARAMETERS *Desiccant Selection Table*

	Medium Type	80% 3Å desiccant and 20% active alumina	100% 3Å desiccant
Refrigerant	HFC	Applicable	Applicable
	HCFC	Applicable	Applicable
	HC	Applicable	Applicable
Oil [3]	Mineral oil or AB	Applicable	Applicable
	Pure POE or PAG	Applicable	Applicable
	POE or PAG with additive	Not Applicable	Applicable

Note: 1) please contact Sanhua representative regarding applications with HFO
2) for propane (R290) only solder versions with tube connections below 25 mm (1 inch) can be used
3) When the systems use oil with additive, it is not recommended to use a core with alumina.

DTG/L SERIES
Uni-Flow Filter Driers

Model Designation Legend

1	**Product Code**	**Filter Drier Series**	
	DTG	Indicates unidirectional filter drier	
2	**Filter Core**	**Structure and Material**	
	A	Loos core, 100%3Å desiccant	
	B	Solid core, 100%3Å desiccant	
	E	Loos core, 80% 3Å desiccant and 20% active alumina	
	F	Solid core, 80% 3Å desiccant and 20% active alumina	
3	**Internal Volume**	**Expressed in [inch³]**	**Expressed in [cm³]**
	03	3	49
	05	5	82
	08	8	131
	16	16	262
	30	30	492
	41	41	672
	75	75	1229
4	**Connection Size**	**Pos. 5 shows "0": Solder [inch]**	**Pos. 5 shows "4": SAE Flare [inch]**
	02	1/4	1/4
	25	5/16	-
	03	3/8	3/8
	04	1/2	1/2
	05	5/8	5/8
	06	3/4	3/4
	07	7/8	7/8
	09	1 1/8	-
	Connection Size	**Pos. 5 shows "1": Solder [mm]**	
	06	6	
	(08) *	(5/16” version can be used e.g. DTG-B03 **25**0)	
	10	10	
	12	12	
	16	16	
	(22) *	(7/8” version can be used e.g. DTG-B16 **07**0)	
	28	28	
5	**Pipe Connection**	**Type**	
	0	Solder with inch connections	
	1 *	Solder with metric connections	
	4	SAE flare connections	
6	**Version Number**	**Description**	
	901	Standard product	

Note: * Solder connections which fit to metric and inch are marked with inch product codes e.g. 8 and 22mm

DTG/L SERIES
Uni-Flow Filter Driers

MODEL DESIGNATION EXAMPLE

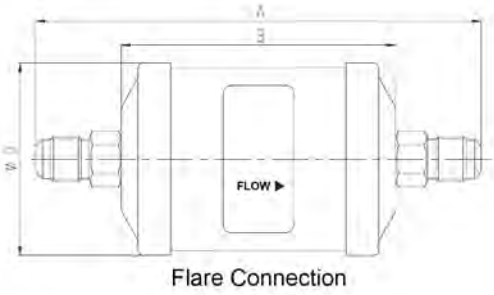
Position Number						According to Model Designation Legend
1	2	3	4	5	6	
DTG	B	03	06	1	901	Unidirectional filter drier
DTG	**B**	03	06	1	901	Solid filter core with 100% 3Å desiccant
DTG	B	**03**	06	1	901	3 inch³ internal volume
DTG	B	03	**06**	1	901	When Pos. 5 is "1": connection size 6mm
DTG	B	03	06	**1**	901	Solder connection metric
DTG	B	03	06	1	**901**	Standard product

GENERAL CHARACTERISTICS OF DTG-B FILTER - FLARE CONNECTION

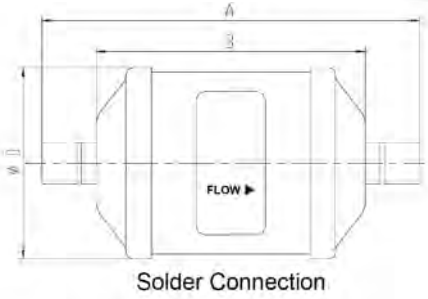
Model	Multi package*	Type of Connection	Nominal Volume		Connection	Dimensions & Weight [1]				PED Category [2]
					SAE Flare	ØD	B	A	Weight	
			[inch³]	[cm³]	[inch]	[mm]	[mm]	[mm]	[g]	
DTG-B03 024-901	10230009202	flare	3	49	1/4	45	65	112	160	Art. 4.3
DTG-B03 034-901	10230009102	flare	3	49	3/8	45	65	125	160	Art. 4.3
DTG-B03 044-901	10230009002	flare	3	49	1/2	45	65	133	160	Art. 4.3
DTG-B05 024-901	10230009802	flare	5	82	1/4	69	76	123	450	Art. 4.3
DTG-B05 034-901	10230009902	flare	5	82	3/8	69	76	136	450	Art. 4.3
DTG-B08 024-901	10230010002	flare	8	131	1/4	69	98	145	550	Art. 4.3
DTG-B08 034-901	10230010302	flare	8	131	3/8	69	98	158	550	Art. 4.3
DTG-B08 044-901	10230010102	flare	8	131	1/2	69	98	166	550	Art. 4.3
DTG-B16 024-901	10230011502	flare	16	262	1/4	69	118	165	660	Art. 4.3
DTG-B16 034-901	10230011702	flare	16	262	3/8	69	118	178	660	Art. 4.3
DTG-B16 044-901	10230011902	flare	16	262	1/2	69	118	186	660	Art. 4.3
DTG-B16 054-901	10230011802	flare	16	262	5/8	69	118	195	660	Art. 4.3
DTG-B16 064-901	10230013102	flare	16	262	3/4	69	118	195	660	Art. 4.3
DTG-B30 034-901	10230015402	flare	30	492	3/8	81	193	253	1550	Art. 4.3
DTG-B30 044-901	10230015502	flare	30	492	1/2	81	193	261	1550	Art. 4.3
DTG-B30 054-901	10230015702	flare	30	492	5/8	81	193	270	1550	Art. 4.3
DTG-B30 064-901	10230015802	flare	30	492	3/4	81	193	270	1550	Art. 4.3
DTG-B30 074-901	10230015602	flare	30	492	7/8	81	193	283	1550	Art. 4.3
DTG-B41 044-901	10230015302	flare	41	672	1/2	94	194	262	2050	Art. 4.3
DTG-B41 054-901	10230015202	flare	41	672	5/8	94	194	271	2050	Art. 4.3

Note: * Available also as industrial package. Contact Sanhua for more details.
1) Dimensions are rounded up to integral mm
2) PED Directive 2014/68/EU

DTG/L SERIES
Uni-Flow Filter Driers



Flare Connection



Solder Connection

GENERAL CHARACTERISTICS OF DTG-B FILTER - SOLDER CONNECTION

Model [inch]	Multi package* [inch]	Model [mm]	Multi package* [mm]	Type of connection	Nominal Volumen		Connection		Dimensions & Weight 1)				PED Category 2)
							Solder		ØD	B	A	Weight	
					[inch³]	[cm³]	[inch]	[mm]	[mm]	[mm]	[mm]	[g]	
DTG-B03 020-901	10230008302	DTG-B03 061-901	10230008702	solder	3	49	1/4	6	45	65	103	160	Art. 4.3
DTG-B03 250-901	10230008402	DTG-B03 250-901	10230008402	solder	3	49	5/16	8	45	65	103	160	Art. 4.3
DTG-B03 030-901	10230008502	DTG-B03 101-901	10230008802	solder	3	49	3/8	10	45	65	103	160	Art. 4.3
DTG-B03 040-901	10230008602	DTG-B03 121-901	10230008902	solder	3	49	1/2	12	45	65	113	160	Art. 4.3
DTG-B05 020-901	10230010202	DTG-B05 061-901	10230010802	solder	5	82	1/4	6	69	76	114	450	Art. 4.3
DTG-B05 250-901	10230010402	DTG-B05 250-901	10230010402	solder	5	82	5/16	8	69	76	114	450	Art. 4.3
DTG-B05 030-901	10230010502	DTG-B05 101-901	10230010902	solder	5	82	3/8	10	69	76	114	450	Art. 4.3
DTG-B05 040-901	10230010602	DTG-B05 121-901	10230011002	solder	5	82	1/2	12	69	76	124	450	Art. 4.3
DTG-B05 050-901	10230010702	DTG-B05 161-901	10230011102	solder	5	82	5/8	16	69	76	124	450	Art. 4.3
DTG-B08 020-901	10230009502	DTG-B08 061-901	10230011302	solder	8	131	1/4	6	69	98	136	550	Art. 4.3
DTG-B08 250-901	10230009402	DTG-B08 250-901	10230009402	solder	8	131	5/16	8	69	98	136	550	Art. 4.3
DTG-B08 030-901	10230009302	DTG-B08 101-901	10230011402	solder	8	131	3/8	10	69	98	136	550	Art. 4.3
DTG-B08 040-901	10230009602	DTG-B08 121-901	10230011602	solder	8	131	1/2	12	69	98	146	550	Art. 4.3
DTG-B08 050-901	10230009702	DTG-B08 161-901	10230011202	solder	8	131	5/8	16	69	98	146	550	Art. 4.3
DTG-B16 020-901	10230012002	DTG-B16 061-901	10230012702	solder	16	262	1/4	6	69	118	156	660	Art. 4.3
DTG-B16 250-901	10230012102	DTG-B16 250-901	10230012102	solder	16	262	5/16	8	69	118	156	660	Art. 4.3
DTG-B16 030-901	10230012202	DTG-B16 101-901	10230012802	solder	16	262	3/8	10	69	118	156	660	Art. 4.3
DTG-B16 040-901	10230012302	DTG-B16 121-901	10230015902	solder	16	262	1/2	12	69	118	166	660	Art. 4.3
DTG-B16 050-901	10230012402	DTG-B16 161-901	10230013002	solder	16	262	5/8	16	69	118	166	660	Art. 4.3
DTG-B16 060-901	10230012502	-	-	solder	16	262	3/4	-	69	118	178	660	Art. 4.3
DTG-B16 070-901	10230012602	DTG-B16 070-901	10230012602	solder	16	262	7/8	22	69	118	178	660	Art. 4.3
DTG-B30 030-901	10230013902	DTG-B30 101-901	10230014502	solder	30	492	3/8	10	81	193	231	1550	Art. 4.3
DTG-B30 040-901	10230014002	DTG-B30 121-901	10230014602	solder	30	492	1/2	12	81	193	241	1550	Art. 4.3
DTG-B30 050-901	10230014102	DTG-B30 161-901	10230014702	solder	30	492	5/8	16	81	193	241	1550	Art. 4.3
DTG-B30 060-901	10230014202	-	-	solder	30	492	3/4	-	81	193	253	1550	Art. 4.3

Note: * Available also as industrial package. Contact Sanhua for more details.
1) Dimensions are rounded up to integral mm
2) PED Directive 2014/68/EU

DTG/L SERIES
Uni-Flow Filter Driers

GENERAL CHARACTERISTICS OF DTG-B FILTER - SOLDER CONNECTION

Model [inch]	Multi package* [inch]	Model [mm]	Multi package* [mm]	Type of connection	Nominal Volumen		Connection		Dimensions & Weight [1]				PED Category [3]
							Solder		ØD	B	A	Weight	
					[inch³]	[cm³]	[inch]	[mm]	[mm]	[mm]	[mm]	[g]	
DTG-B30 070-901	10230014302	DTG-B30 070-901	10230014302	solder	30	492	7/8	22	81	193	253	1550	Art. 4.3
DTG-B30 090-901	10230014402	DTG-B30 281-901	10230014802	solder	30	492	1 1/8	28	81	193	263	1550	Art. 4.3
DTG-B41 040-901	10230013202	DTG-B41 121-901	10230013602	solder	41	672	1/2	12	94	194	242	2050	Art. 4.3
DTG-B41 050-901	10230013302	DTG-B41 161-901	10230013702	solder	41	672	5/8	16	94	194	242	2050	Art. 4.3
DTG-B41 070-901	10230013402	DTG-B41 070-901	10230013402	solder	41	672	7/8	22	94	194	254	2050	Art. 4.3
DTG-B41 090-901	10230013502	DTG-B41 281-901	10230013802	solder	41	672	1 1/8	28	94	194	264	2050	Art. 4.3
DTG-B75 070-901	10230014902	DTG-B75 070-901	10230014902	solder	75	1229	7/8	22	94	333	393	3400	Art. 4.3
DTG-B75 090-901	10230015002	DTG-B75 281-901	10230015102	solder	75	1229	1 1/8	28	94	333	403	3400	Art. 4.3

Note: * Available also as industrial package. Contact Sanhua for more details.
1) Dimensions are rounded up to integral mm
2) PED Directive 2014/68/EU

GENERAL CHARACTERISTICS OF DTG-F FILTER - FLARE CONNECTION

Model[1]	Multi package*	Type of Connection	Nominal Volume		Connection	Dimensions & Weight [2]				PED Category [3]
					SAE Flare	ØD	B	A	Weight	
			[inch³]	[cm³]	[inch]	[mm]	[mm]	[mm]	[g]	
DTG-F03 024-901	10230018002	flare	3	49	1/4	45	65	112,0	160	Art. 4.3
DTG-F03 034-901	10230017902	flare	3	49	3/8	45	65	125,2	160	Art. 4.3
DTG-F03 044-901	10230017802	flare	3	49	1/2	45	65	133,2	160	Art. 4.3
DTG-F05 024-901	10230016802	flare	5	82	1/4	69	76	123,0	450	Art. 4.3
DTG-F05 034-901	10230016702	flare	5	82	3/8	69	76	136,2	450	Art. 4.3
DTG-F08 024-901	10230019002	flare	8	131	1/4	69	98	145,0	550	Art. 4.3
DTG-F08 034-901	10230019102	flare	8	131	3/8	69	98	158,2	550	Art. 4.3
DTG-F08 044-901	10230019202	flare	8	131	1/2	69	98	166,2	550	Art. 4.3
DTG-F16 024-901	10230020402	flare	16	262	1/4	69	118	165,0	660	Art. 4.3
DTG-F16 034-901	10230020502	flare	16	262	3/8	69	118	178,2	660	Art. 4.3
DTG-F16 044-901	10230020602	flare	16	262	1/2	69	118	186,2	660	Art. 4.3
DTG-F16 054-901	10230020702	flare	16	262	5/8	69	118	195,4	660	Art. 4.3
DTG-F16 064-901	10230020802	flare	16	262	3/4	69	118	195,4	660	Art. 4.3
DTG-F30 034-901	10230021902	flare	30	492	3/8	81	193	253,2	1550	Art. 4.3
DTG-F30 044-901	10230022002	flare	30	492	1/2	81	193	261,2	1550	Art. 4.3
DTG-F30 054-901	10230022102	flare	30	492	5/8	81	193	270,4	1550	Art. 4.3
DTG-F30 064-901	10230022202	flare	30	492	3/4	81	193	270,4	1550	Art. 4.3
DTG-F30 074-901	10230022302	flare	30	492	7/8	81	193	283,0	1550	Art. 4.3
DTG-F41 044-901	10230031402	flare	41	672	1/2	94	194	262,2	2050	Art. 4.3
DTG-F41 054-901	10230031502	flare	41	672	5/8	94	194	271,4	2050	Art. 4.3

Note: * Available also as industrial package. Contact Sanhua for more details.
1) Delivery time on request
2) Dimensions are rounded up to integral mm
3) PED Directive 2014/68/EU

DTG/L SERIES
Uni-Flow Filter Driers

GENERAL CHARACTERISTICS OF DTG-F FILTER - SOLDER CONNECTION

Model[1] [inch]	Multi package*	Model[1] [mm]	Multi package*	Type of connection	Nominal Volumen		Connection		Dimensions & Weight [2]				PED Category [3]
							Solder		ØD	B	A	Weight	
					[inch³]	[cm³]	[inch]	[mm]	[mm]	[mm]	[mm]	[g]	
DTG-F03 020-901	10230016102	DTG-F03 061-901	10230016502	solder	3	49	1/4	6	45	65	103	160	Art. 4.3
DTG-F03 250-901	10230016202	DTG-F03 250-901	10230016202	solder	3	49	5/16	8	45	65	103	160	Art. 4.3
DTG-F03 030-901	10230016302	DTG-F03 101-901	10230016602	solder	3	49	3/8	10	45	65	103	160	Art. 4.3
DTG-F03 040-901	10230016402	DTG-F03 121-901	10230016002	solder	3	49	1/2	12	45	65	113	160	Art. 4.3
DTG-F05 020-901	10230017702	DTG-F05 061-901	10230017202	solder	5	82	1/4	6	69	76	114	450	Art. 4.3
DTG-F05 250-901	10230017602	DTG-F05 250-901	10230017602	solder	5	82	5/16	8	69	76	114	450	Art. 4.3
DTG-F05 030-901	10230017502	DTG-F05 101-901	10230017102	solder	5	82	3/8	10	69	76	114	450	Art. 4.3
DTG-F05 040-901	10230017402	DTG-F051 21-901	10230017002	solder	5	82	1/2	12	69	76	124	450	Art. 4.3
DTG-F05 050-901	10230017302	DTG-F051 61-901	10230016902	solder	5	82	5/8	16	69	76	124	450	Art. 4.3
DTG-F08 020-901	10230018102	DTG-F08 061-901	10230018602	solder	8	131	1/4	6	69	98	136	550	Art. 4.3
DTG-F08 250-901	10230018202	DTG-F08 250-901	10230018202	solder	8	131	5/16	8	69	98	136	550	Art. 4.3
DTG-F08 030-901	10230018302	DTG-F08 101-901	10230018702	solder	8	131	3/8	10	69	98	136	550	Art. 4.3
DTG-F08 040-901	10230018402	DTG-F08 121-901	10230018802	solder	8	131	1/2	12	69	98	146	550	Art. 4.3
DTG-F08 050-901	10230018502	DTG-F08 161-901	10230018902	solder	8	131	5/8	16	69	98	146	550	Art. 4.3
DTG-F16 020-901	10230019302	DTG-F16 061-901	10230020002	solder	16	262	1/4	6	69	118	156	660	Art. 4.3
DTG-F16 250-901	10230019402	DTG-F16 250-901	10230019402	solder	16	262	5/16	8	69	118	156	660	Art. 4.3
DTG-F16 030-901	10230019502	DTG-F16 101-901	10230020102	solder	16	262	3/8	10	69	118	156	660	Art. 4.3
DTG-F16 040-901	10230019602	DTG-F16 121-901	10230020202	solder	16	262	1/2	12	69	118	166	660	Art. 4.3
DTG-F16 050-901	10230019702	DTG-F16 161-901	10230020302	solder	16	262	5/8	16	69	118	166	660	Art. 4.3
DTG-F16 060-901	10230019802	-		solder	16	262	3/4	-	69	118	178	660	Art. 4.3
DTG-F16 070-901	10230019902	DTG-F16 070-901	10230019902	solder	16	262	7/8	22	69	118	178	660	Art. 4.3
DTG-F30 030-901	10230020902	DTG-F30 101-901	10230021502	solder	30	492	3/8	10	81	193	231	1550	Art. 4.3
DTG-F30 040-901	10230021002	DTG-F30 121-901	10230021602	solder	30	492	1/2	12	81	193	241	1550	Art. 4.3
DTG-F30 050-901	10230021102	DTG-F30 161-901	10230021702	solder	30	492	5/8	16	81	193	241	1550	Art. 4.3
DTG-F30 060-901	10230021202	-		solder	30	492	3/4	-	81	193	253	1550	Art. 4.3
DTG-F30 070-901	10230021302	DTG-F30 070-901	10230021302	solder	30	492	7/8	22	81	193	253	1550	Art. 4.3
DTG-F30 090-901	10230021402	DTG-F30 281-901	10230021802	solder	30	492	1 1/8	28	81	193	263	1550	Art. 4.3
DTG-F41 040-901	10230022402	DTG-F41 121-901	10230022802	solder	41	672	1/2	12	94	194	242	2050	Art. 4.3
DTG-F41 050-901	10230022502	DTG-F41 161-901	10230022902	solder	41	672	5/8	16	94	194	242	2050	Art. 4.3
DTG-F41 070-901	10230022602	DTG-F41 070-901	10230022602	solder	41	672	7/8	22	94	194	254	2050	Art. 4.3
DTG-F41 090-901	10230022702	DTG-F41 281-901	10230023002	solder	41	672	1 1/8	28	94	194	264	2050	Art. 4.3
DTG-F75 070-901	10230023102	DTG-F75 070-901	10230023102	solder	75	1229	7/8	22	94	333	393	3400	Art. 4.3
DTG-F75 090-901	10230031102	DTG-F75 281-901	10230023302	solder	75	1229	1 1/8	28	94	333	403	3400	Art. 4.3

Note: * Available also as industrial package. Contact Sanhua for more details.
1) Delivery time on request
2) Dimensions are rounded up to integral mm
3) PED Directive 2014/68/EU

DTG/L SERIES
Uni-Flow Filter Driers

SELECTION TABLE

Model	Capacity[1] [kW]					Moisture Absorption (gram H_2O)							
	R134a	R404A / R507A	R22	R407C[2]	R410A	R134a		R404A / R507A		R407C[2] / R410A		R22	
						75°F	125°F	75°F	125°F	75°F	125°F	75°F	125°F
						23,9°C	51,7°C	23,9°C	51,7°C	23,9°C	51,7°C	23,9°C	51,7°C
DTG-B03 020-901	7,7	6,7	8,1	8,1	8,1	4,2	3,8	5,7	3,4	3,4	3,1	3,7	3,4
DTG-B03 024-901	7,7	6,7	8,1	8,1	8,1	4,2	3,8	5,7	3,4	3,4	3,1	3,7	3,4
DTG-B03 250-901	9,5	6,7	9,5	9,5	9,8	4,2	3,8	5,7	3,4	3,4	3,1	3,7	3,4
DTG-B03 030-901	14,4	10,6	14,8	14,8	14,8	4,2	3,8	5,7	3,4	3,4	3,1	3,7	3,4
DTG-B03 034-901	14,4	10,6	14,8	14,8	14,8	4,2	3,8	5,7	3,4	3,4	3,1	3,7	3,4
DTG-B03 040-901	24,6	17,2	25,0	24,6	25,0	4,2	3,8	5,7	3,4	3,4	3,1	3,7	3,4
DTG-B03 044-901	24,6	17,2	25,0	24,6	25,0	4,2	3,8	5,7	3,4	3,4	3,1	3,7	3,4
DTG-B05 020-901	8,4	6,0	8,4	8,4	8,4	11,6	10,9	17,7	10,2	10,9	9,5	11,4	9,7
DTG-B05 024-901	8,4	6,0	8,4	8,4	8,4	11,6	10,9	17,7	10,2	10,9	9,5	11,4	9,7
DTG-B05 250-901	10,9	7,4	10,9	10,9	11,3	11,6	10,9	17,7	10,2	10,9	9,5	11,4	9,7
DTG-B05 030-901	23,9	16,9	24,3	23,9	24,6	11,6	10,9	17,7	10,2	10,9	9,5	11,4	9,7
DTG-B05 034-901	23,9	16,9	24,3	23,9	24,6	11,6	10,9	17,7	10,2	10,9	9,5	11,4	9,7
DTG-B05 040-901	25,3	17,9	25,7	25,7	26,0	11,6	10,9	17,7	10,2	10,9	9,5	11,4	9,7
DTG-B05 050-901	34,8	24,6	35,5	35,2	35,9	11,6	10,9	17,7	10,2	10,9	9,5	11,4	9,7
DTG-B08 020-901	8,4	6,0	8,4	8,4	8,4	14,8	14,2	23,7	19,8	14,8	13,0	15,5	13,1
DTG-B08 024-901	8,4	6,0	8,4	8,4	8,4	14,8	14,2	23,7	19,8	14,8	13,0	15,5	13,1
DTG-B08 250-901	11,6	8,1	12,0	11,6	12,0	14,8	14,2	23,7	19,8	14,8	13,0	15,5	13,1
DTG-B08 030-901	25,0	17,6	25,3	25,0	25,7	14,8	14,2	23,7	19,8	14,8	13,0	15,5	13,1
DTG-B08 034-901	25,0	17,6	25,3	25,0	25,7	14,8	14,2	23,7	19,8	14,8	13,0	15,5	13,1
DTG-B08 040-901	30,6	21,5	31,3	30,9	31,7	14,8	14,2	23,7	19,8	14,8	13,0	15,5	13,1
DTG-B08 044-901	30,6	21,5	31,3	30,9	31,7	14,8	14,2	23,7	19,8	14,8	13,0	15,5	13,1
DTG-B08 050-901	44,7	31,7	45,7	45,4	46,1	14,8	14,2	23,7	19,8	14,8	13,0	15,5	13,1
DTG-B16 020-901	10,9	7,7	11,3	10,9	11,3	20,6	19,5	33,2	18,3	20,6	17,6	20,9	17,7
DTG-B16 024-901	10,9	7,7	11,3	10,9	11,3	20,6	19,5	33,2	18,3	20,6	17,6	20,9	17,7
DTG-B16 250-901	11,6	8,1	12,0	11,6	12,0	20,6	19,5	33,2	18,3	20,6	17,6	20,9	17,7
DTG-B16 030-901	25,7	17,9	26,0	26,0	26,4	20,6	19,5	33,2	18,3	20,6	17,6	20,9	17,7
DTG-B16 034-901	25,7	17,9	26,0	26,0	26,4	20,6	19,5	33,2	18,3	20,6	17,6	20,9	17,7
DTG-B16 040-901	32,4	22,9	33,1	32,7	33,8	20,6	19,5	33,2	18,3	20,6	17,6	20,9	17,7

Note: 1) The above data is based on filter driers with inch connections and clean system at ideal conditions; with impurities accumulated in the filter, the capacity may decrease.

2) R407C data based on dew point conditions

DTG/L SERIES
Uni-Flow Filter Driers

SELECTION TABLE

Model	Capacity[1] [kW]					Moisture Absorption (gram H_2O)							
	R134a	R404A / R507A	R22	R407C[2]	R410A	R134a		R404A / R507A		R407C[2] / R410A		R22	
						75°F	125°F	75°F	125°F	75°F	125°F	75°F	125°F
						23,9°C	51,7°C	23,9°C	51,7°C	23,9°C	51,7°C	23,9°C	51,7°C
DTG-B16 044-901	32,4	22,9	33,1	32,7	33,8	20,6	19,5	33,2	18,3	20,6	17,6	20,9	17,7
DTG-B16 050-901	43,3	30,6	43,6	43,6	44,3	20,6	19,5	33,2	18,3	20,6	17,6	20,9	17,7
DTG-B16 054-901	43,3	30,6	43,6	43,6	44,3	20,6	19,5	33,2	18,3	20,6	17,6	20,9	17,7
DTG-B16 060-901	46,4	32,7	47,1	46,8	47,8	20,6	19,5	33,2	18,3	20,6	17,6	20,9	17,7
DTG-B16 064-901	46,4	32,7	47,1	46,8	47,8	20,6	19,5	33,2	18,3	20,6	17,6	20,9	17,7
DTG-B16 070-901	47,1	33,4	48,2	47,8	48,5	20,6	19,5	33,2	18,3	20,6	17,6	20,9	17,7
DTG-B30 030-901	25,7	17,9	26,0	26,0	26,4	51,4	48,7	83,4	51,4	51,3	43,7	52,1	44,1
DTG-B30 034-901	25,7	17,9	26,0	26,0	26,4	51,4	48,7	83,4	51,4	51,3	43,7	52,1	44,1
DTG-B30 040-901	33,1	23,2	33,8	33,4	34,1	51,4	48,7	83,4	51,4	51,3	43,7	52,1	44,1
DTG-B30 044-901	33,1	23,2	33,8	33,4	34,1	51,4	48,7	83,4	51,4	51,3	43,7	52,1	44,1
DTG-B30 050-901	45,7	32,0	46,4	46,1	46,8	51,4	48,7	83,4	51,4	51,3	43,7	52,1	44,1
DTG-B30 054-901	45,7	32,0	46,4	46,1	46,8	51,4	48,7	83,4	51,4	51,3	43,7	52,1	44,1
DTG-B30 060-901	62,6	44,0	63,7	63,3	64,4	51,4	48,7	83,4	51,4	51,3	43,7	52,1	44,1
DTG-B30 064-901	62,6	44,0	63,7	63,3	64,4	51,4	48,7	83,4	51,4	51,3	43,7	52,1	44,1
DTG-B30 070-901	63,0	44,3	64,0	63,7	64,7	51,4	48,7	83,4	51,4	51,3	43,7	52,1	44,1
DTG-B30 074-901	63,0	44,3	64,0	63,7	64,7	51,4	48,7	83,4	51,4	51,3	43,7	52,1	44,1
DTG-B30 090-901	70,7	52,1	75,3	74,6	76,0	51,4	48,7	83,4	51,4	51,3	43,7	52,1	44,1
DTG-B41 040-901	35,2	24,6	35,9	35,5	36,2	63,7	59,7	103,5	55,7	63,7	58,9	70,2	59,4
DTG-B41 044-901	35,2	24,6	35,9	35,5	36,2	63,7	59,7	103,5	55,7	63,7	58,9	70,2	59,4
DTG-B41 050-901	60,8	42,9	61,9	61,5	62,6	63,7	59,7	103,5	55,7	63,7	58,9	70,2	59,4
DTG-B41 054-901	60,8	42,9	61,9	61,5	62,6	63,7	59,7	103,5	55,7	63,7	58,9	70,2	59,4
DTG-B41 070-901	90,4	63,7	91,8	91,4	92,8	63,7	59,7	103,5	55,7	63,7	58,9	70,2	59,4
DTG-B41 090-901	92,1	64,7	93,6	92,8	94,6	63,7	59,7	103,5	55,7	63,7	58,9	70,2	59,4
DTG-B75 070-901	91,4	64,0	92,8	91,8	93,9	123,3	115,6	200,3	107,9	123,3	114,0	135,8	114,9
DTG-B75 090-901	95,3	67,2	97,1	96,4	98,1	123,3	115,6	200,3	107,9	123,3	114,0	135,8	114,9

Note: 1) The above data is based on filter driers with inch connections and clean system at ideal conditions; with impurities accumulated in the filter, the capacity may decrease.

2) R407C data based on dew point conditions

DTG/L SERIES
Uni-Flow Filter Driers

SELECTION FORMULAS

Filter Driers for liquid line are manufactured in compliance with ARI Standard 710. Maximum flow rate of liquid refrigerant at a differential pressure of 0,07bar (1psi) is indicated by kW (ton) which is based on the temperature of liquid refrigerant 30°C (86°F), the evaporating temperature of -15°C (5°F) and the following mass flow:

- 0,40 kg/min/kW (3.1 lb/min/ton) R134a
- 0,53 kg/min/kW (4.1 lb/min/ton) R404A, R507A
- 0,39 kg/min/kW (3.0 lb/min/ton) R22, R407C
- 0,36 kg/min/kW (2.8 lb/min/ton) R410A

Note: Data on water absorption is based on the following EPD (method: ASHRAE Standard 63.1):

- 60ppm R22
- 50ppm R134a
- 50ppm R404A
- 50ppm R407C
- 50ppm R410A
- 50ppm R507A

SANHUA is the world's largest producer of Micro-Channel Heat Exchangers

for Stationary HVAC&R application

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- Refrigerant Charge Reduction by **30%** Environmental Friendly
- MCHE is lighter in weight, smaller in volume Compact Design

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ADERALES

Bi-Flow Filter Driers

The filter driers of series STG are used in refrigeration system with bidirectional flow to absorb moisture and acid in the system and to filter out the impurities.

FEATURES

- HIGH EFFICIENT IN MOISTURE ABSORPTION, FILTERING IMPURITY, ACID, PAINT REMAINS AND MUD REMOVAL
- HYBRID DESICCANT
- DURABLE AND SOLID FILTER CORES
- FILTERING FINENESS: 20μm
- CORROSION RESISTANT PAINTING CAN SURVIVE SALT SPRAY TEST OF 500 HOURS
- CONNECTION TYPE: FLARE OR SOLDER

GENERAL SPECIFICATIONS

- Applicable for all common HCFC, HFC, HC, HFO [1)] refrigerants such as: R22, R134a, R404A, R407C, R410A, R507A R407A, R407F, R290[2)], R1234ez
- Ambient temperature min./max.: -30°C / +55°C
- Medium temperature TS min./max.: -30°C / +120°C
- Max. operating pressure PS: 4,83 MPa (48,3 bar)
- Installation position: preferably installed in liquid line
- Certifications: UL/CSA and PED declaration

TECNHICAL PARAMETERS *Desiccant Selection Table*

	Medium Type	80% 3Å Desiccant and 20% Active Alumina	100% 3Å Desiccant
Refrigerant	HFC	Applicable	Applicable
	HCFC	Applicable	Applicable
	HC	Applicable	Applicable
Oil[3]	Mineral oil or AB	Applicable	Applicable
	Pure POE or PAG	Applicable	Applicable
	POE or PAG with additive	Not Applicable	Applicable

Note: 1) please contact Sanhua representative regarding applications with HFO
2) for propane (R290) only solder versions with tube connections below 25 mm (1 inch) can be used
3) when the systems use oil with additive, it is not recommended to use a core with alumina

STG/L SERIES
Bi-Flow Filter Driers

Model Designation Legend

1	**Product Code**	**Filter Drier Series**	
	STG	Indicates bidirectional filter drier	
2	**Filter Core**	**Structure and Material**	
	A	Loos core, 100%3Å desiccant	
	B	Solid core, 100%3Å desiccant	
	E	Loos core, 80% 3Å desiccant and 20% active alumina	
	F	Solid core, 80% 3Å desiccant and 20% active alumina	
3	**Internal Volume**	**Expressed in [inch³]**	**Expressed in [cm³]**
	03	3	49
	05	5	82
	08	8	131
	16	16	262
	30	30	492
4	**Connection Size**	**Pos. 5 shows "0": Solder [inch]**	**Pos. 5 shows "4": SAE Flare [inch]**
	02	1/4	1/4
	25	5/16	-
	03	3/8	3/8
	04	1/2	1/2
	05	5/8	5/8
	06	3/4	3/4
	07	7/8	7/8
	09	1 1/8	-
	Connection Size	**Pos. 5 shows "1": Solder [mm]**	
	06	6	
	(08) *	(5/16” version can be used e.g. STG-B08 250)	
	10	10	
	12	12	
	16	16	
	(22) *	(7/8” version can be used e.g. STG-B16 070)	
	28	28	
5	**Pipe Connection**	**Type**	
	0	Solder with inch connections	
	1 *	Solder with metric connections	
	4	SAE flare connections	
6	**Version Number**	**Description**	
	901	Standard product	

Note: * Solder connections which fit to metric and inch are marked with inch product codes e.g. 8 and 22mm

STG/L SERIES
Bi-Flow Filter Driers

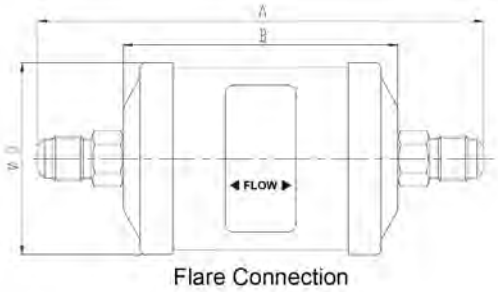
MODEL DESIGNATION EXAMPLE

Position Number						According to Model Designation Legend
1	2	3	4	5	6	
STG	B	05	06	1	901	Bidirectional filter drier
STG	**B**	05	06	1	901	Solid filter core with 100% 3Å desiccant
STG	B	**05**	06	1	901	5 inch³ internal volume
STG	B	05	**06**	1	901	When Pos. 5 is "1": connection size 6mm
STG	B	05	06	**1**	901	Solder connection metric
STG	B	05	06	1	**901**	Standard product

GENERAL CHARACTERISTICS OF STG-B FILTER - FLARE CONNECTION

Model	Multi package*	Type of Connection	Nominal Volume		Connection	Dimensions & Weight [1]				PED Category [2]
					SAE Flare	ØD	B	A	Weight	
			[inch³]	[cm³]	[inch]	[mm]	[mm]	[mm]	[g]	
STG-B05 024-901	10235009002	flare	5	82	1/4	69	76	123	450	Art. 4.3
STG-B05 034-901	10235009102	flare	5	82	3/8	69	76	137	450	Art. 4.3
STG-B05 044-901	10235009202	flare	5	82	1/2	69	76	145	450	Art. 4.3
STG-B08 024-901	10235008702	flare	8	131	1/4	69	98	145	580	Art. 4.3
STG-B08 034-901	10235008802	flare	8	131	3/8	69	98	159	580	Art. 4.3
STG-B08 044-901	10235008902	flare	8	131	1/2	69	98	167	580	Art. 4.3
STG-B16 034-901	10235009302	flare	16	262	3/8	81	118	179	900	Art. 4.3
STG-B16 044-901	10235009402	flare	16	262	1/2	81	118	187	900	Art. 4.3
STG-B16 054-901	10235008602	flare	16	262	5/8	81	118	196	900	Art. 4.3
STG-B30 034-901	10235009502	flare	30	492	3/8	81	193	254	1700	Art. 4.3
STG-B30 044-901	10235009602	flare	30	492	1/2	81	193	262	1700	Art. 4.3
STG-B30 054-901	10235009702	flare	30	492	5/8	81	193	271	1700	Art. 4.3
STG-B30 064-901	10235009802	flare	30	492	3/4	81	193	271	1700	Art. 4.3

Note: * Available also as industrial package. Contact Sanhua for more details.
1) Dimensions are rounded up to integral mm
2) PED Directive 2014/68/EU



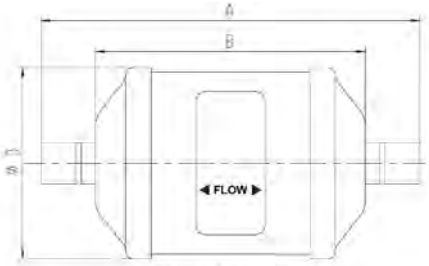
Flare Connection

STG/L SERIES
Bi-Flow Filter Driers

GENERAL CHARACTERISTICS OF STG-B FILTER - SOLDER CONNECTION

Model [inch]	Multi package* [inch]	Model [mm]	Multi package* [mm]	Type of connection	Nominal Volume		Connection		Dimensions & Weight[1]				PED Category [2]
							Solder		ØD	B	A	Weight	
					[inch³]	[cm³]	[inch]	[mm]	[mm]	[mm]	[mm]	[g]	
STG-B05 020-901	10235005902	STG-B05 061-901	10235007602	solder	5	82	1/4	6	69	76	114	450	Art. 4.3
STG-B05 030-901	10235006002	STG-B05 101-901	10235007802	solder	5	82	3/8	10	69	76	114	450	Art. 4.3
STG-B05 040-901	10235006102	STG-B05 121-901	10235007902	solder	5	82	1/2	12	69	76	124	450	Art. 4.3
STG-B08 020-901	10235006202	STG-B08 061-901	10235007702	solder	8	131	1/4	6	69	98	136	580	Art. 4.3
STG-B08 250-901	10235007402	STG-B08 250-901	10235007402	solder	8	131	5/16	8	69	98	136	580	Art. 4.3
STG-B08 030-901	10235006302	STG-B08 101-901	10235008002	solder	8	131	3/8	10	69	98	136	580	Art. 4.3
STG-B08 040-901	10235006402	STG-B08 121-901	10235008102	solder	8	131	1/2	12	69	98	146	580	Art. 4.3
STG-B16 030-901	10235006602	STG-B16 101-901	10235008202	solder	16	262	3/8	10	81	118	156	900	Art. 4.3
STG-B16 040-901	10235006502	STG-B16 121-901	10235008402	solder	16	262	1/2	12	81	118	166	900	Art. 4.3
STG-B16 050-901	10235006702	STG-B16 161-901	10235010002	solder	16	262	5/8	16	81	118	166	900	Art. 4.3
STG-B16 070-901	10235006802	STG-B16 070-901	10235006802	solder	16	262	7/8	22	81	118	178	900	Art. 4.3
STG-B30 030-901	10235006902	STG-B30 101-901	10235008302	solder	30	492	3/8	10	81	193	231	1700	Art. 4.3
STG-B30 040-901	10235007002	STG-B30 121-901	10235008502	solder	30	492	1/2	12	81	193	241	1700	Art. 4.3
STG-B30 050-901	10235007102	STG-B30 161-901	10235010102	solder	30	492	5/8	16	81	193	241	1700	Art. 4.3
STG-B30 060-901	10235007202	-	-	solder	30	492	3/4	-	81	193	253	1700	Art. 4.3
STG-B30 070-901	10235007302	STG-B30 070-901	10235007302	solder	30	492	7/8	22	81	193	253	1700	Art. 4.3
STG-B30 090-901	10235007502	STG-B30 281-901	10235010202	solder	30	492	1 1/8	28	81	193	263	1700	Art. 4.3

Note: * Available also as industrial package. Contact Sanhua for more details.
1) Dimensions are rounded up to integral mm
2) PED Directive 2014/68/EU



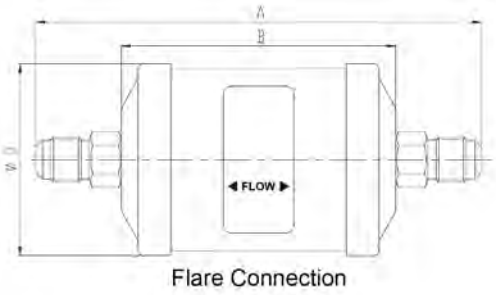
Solder Connection

STG/L SERIES
Bi-Flow Filter Driers

GENERAL CHARACTERISTICS OF STG-F FILTER - FLARE CONNECTION

Model[1]	Multi package*	Type of Connection	Nominal Volume		Connection	Dimensions & Weight [2]				PED Category [3]
					SAE Flare	ØD	B	A	Weight	
			[inch³]	[cm³]	[inch]	[mm]	[mm]	[mm]	[g]	
STG-F05 024-901	10235010902	flare	5	82	1/4	69	76	123	450	Art. 4.3
STG-F05 034-901	10235011002	flare	5	82	3/8	69	76	137	450	Art. 4.3
STG-F05 044-901	10235011102	flare	5	82	1/2	69	76	145	450	Art. 4.3
STG-F08 024-901	10235011902	flare	8	131	1/4	69	98	145	580	Art. 4.3
STG-F08 034-901	10235012002	flare	8	131	3/8	69	98	159	580	Art. 4.3
STG-F08 044-901	10235012102	flare	8	131	1/2	69	98	167	580	Art. 4.3
STG-F16 034-901	10235014902	flare	16	262	3/8	81	118	179	900	Art. 4.3
STG-F16 044-901	10235015002	flare	16	262	1/2	81	118	187	900	Art. 4.3
STG-F16 054-901	10235015102	flare	16	262	5/8	81	118	196	900	Art. 4.3
STG-F30 034-901	10235013802	flare	30	492	3/8	81	193	254	1700	Art. 4.3
STG-F30 044-901	10235013502	flare	30	492	1/2	81	193	262	1700	Art. 4.3
STG-F30 054-901	10235013602	flare	30	492	5/8	81	193	271	1700	Art. 4.3
STG-F30 064-901	10235013702	flare	30	492	3/4	81	193	271	1700	Art. 4.3

Note: * Available also as industrial package. Contact Sanhua for more details.
1) Delivery time on request
2) Dimensions are rounded up to integral mm
3) PED Directive 2014/68/EU



Flare Connection

STG/L SERIES
Bi-Flow Filter Driers

GENERAL CHARACTERISTICS OF STG-F FILTER - SOLDER CONNECTION

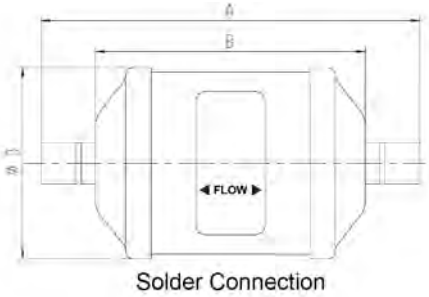
Model[1] [inch]	Multi package* [inch]	Model [mm]	Multi package* [mm]	Type of connection	Nominal Volumen		Connection		Dimensions & Weight[2]				PED Category [3]
							Solder		ØD	B	A	Weight	
					[inch³]	[cm³]	[inch]	[mm]	[mm]	[mm]	[mm]	[g]	
STG-F05 020-901	10235010302	STG-F05 061-901	10235010602	solder	5	82	1/4	6	69	76	114	450	Art. 4.3
STG-F05 030-901	10235010402	STG-F05 101-901	10235010702	solder	5	82	3/8	10	69	76	114	450	Art. 4.3
STG-F05 040-901	10235010502	STG-F05 121-901	10235010802	solder	5	82	1/2	12	69	76	124	450	Art. 4.3
STG-F08 020-901	10235011202	STG-F08 061-901	10235011602	solder	8	131	1/4	6	69	98	136	580	Art. 4.3
STG-F08 250-901	10235011302	STG-F08 250-901	10235011302	solder	8	131	5/16	8	69	98	136	580	Art. 4.3
STG-F08 030-901	10235011402	STG-F08 101-901	10235011702	solder	8	131	3/8	10	69	98	136	580	Art. 4.3
STG-F08 040-901	10235011502	STG-F08 121-901	10235011802	solder	8	131	1/2	12	69	98	146	580	Art. 4.3
STG-F16 030-901	10235012202	STG-F16 101-901	10235012602	solder	16	262	3/8	10	81	118	156	900	Art. 4.3
STG-F16 040-901	10235012302	STG-F16 121-901	10235012702	solder	16	262	1/2	12	81	118	166	900	Art. 4.3
STG-F16 050-901	10235012402	STG-F16 161-901	10235012802	solder	16	262	5/8	16	81	118	166	900	Art. 4.3
STG-F16 070-901	10235012502	STG-F16 070-901	10235012502	solder	16	262	7/8	22	81	118	178	900	Art. 4.3
STG-F30 030-901	10235013902	STG-F30 101-901	10235013102	solder	30	492	3/8	10	81	193	231	1700	Art. 4.3
STG-F30 040-901	10235014002	STG-F30 121-901	10235013202	solder	30	492	1/2	12	81	193	241	1700	Art. 4.3
STG-F30 050-901	10235014102	STG-F30 161-901	10235013302	solder	30	492	5/8	16	81	193	241	1700	Art. 4.3
STG-F30 060-901	10235014202	-	-	solder	30	492	3/4	-	81	193	253	1700	Art. 4.3
STG-F30 070-901	10235012902	STG-F30 070-901	10235012902	solder	30	492	7/8	22	81	193	253	1700	Art. 4.3
STG-F30 090-901	10235013002	STG-F30 281-901	10235013402	solder	30	492	1 1/8	28	81	193	263	1700	Art. 4.3

Note: * Available also as industrial package. Contact Sanhua for more details.

1) Delivery time on request

2) Dimensions are rounded up to integral mm

3) PED Directive 2014/68/EU



Solder Connection

STG/L SERIES
Bi-Flow Filter Driers

SELECTION TABLE

Model	Capacity [kW] [1]					Moisture Absorption (gram H_2O)							
	R134a	R404A / R507A	R22	R407C [2]	R410A	R134a		R404A / R507A		R407C [2] / R410A		R22	
						75°F / 23,9°C	125°F / 51,7°C	75°F / 23,9°C	125°F / 51,7°C	75°F / 23,9°C	125°F / 51,7°C	75°F / 23,9°C	125°F / 51,7°C
STG-B05 020-901	7,4	5,3	7,7	7,7	7,7	4,3	4,0	4,1	3,8	3,7	3,4	4,1	3,7
STG-B05 024-901	7,4	5,3	7,7	7,7	7,7	4,3	4,0	4,1	3,8	3,7	3,4	4,1	3,7
STG-B05 030-901	16,5	11,6	16,9	16,5	16,9	4,3	4,0	4,1	3,8	3,7	3,4	4,1	3,7
STG-B05 034-901	16,5	11,6	16,9	16,5	16,9	4,3	4,0	4,1	3,8	3,7	3,4	4,1	3,7
STG-B05 040-901	25,0	17,6	25,3	25,0	25,3	4,3	4,0	4,1	3,8	3,7	3,4	4,1	3,7
STG-B05 044-901	25,0	17,6	25,3	25,0	25,3	4,3	4,0	4,1	3,8	3,7	3,4	4,1	3,7
STG-B08 020-901	8,8	6,0	8,8	8,8	8,8	9,8	9,0	9,2	8,6	8,5	7,8	9,2	8,5
STG-B08 024-901	8,8	6,0	8,8	8,8	8,8	9,8	9,0	9,2	8,6	8,5	7,8	9,2	8,5
STG-B08 250-901	15,8	10,9	16,2	15,8	16,2	9,8	9,0	9,2	8,6	8,5	7,8	9,2	8,5
STG-B08 030-901	17,2	12,0	17,6	17,2	17,6	9,8	9,0	9,2	8,6	8,5	7,8	9,2	8,5
STG-B08 034-901	17,2	12,0	17,6	17,2	17,6	9,8	9,0	9,2	8,6	8,5	7,8	9,2	8,5
STG-B08 040-901	25,7	17,9	26,4	26,0	26,4	9,8	9,0	9,2	8,6	8,5	7,8	9,2	8,5
STG-B08 044-901	25,7	17,9	26,4	26,0	26,4	9,8	9,0	9,2	8,6	8,5	7,8	9,2	8,5
STG-B16 030-901	19,7	13,7	20,0	19,7	20,0	17,6	16,3	16,6	15,5	15,2	14,0	16,6	14,2
STG-B16 034-901	19,7	13,7	20,0	19,7	20,0	17,6	16,3	16,6	15,5	15,2	14,0	16,6	14,2
STG-B16 040-901	30,2	21,5	30,9	30,6	30,9	17,6	16,3	16,6	15,5	15,2	14,0	16,6	14,2
STG-B16 044-901	30,2	21,5	30,9	30,6	30,9	17,6	16,3	16,6	15,5	15,2	14,0	16,6	14,2
STG-B16 050-901	34,1	23,9	34,8	34,5	35,2	17,6	16,3	16,6	15,5	15,2	14,0	16,6	14,2
STG-B16 054-901	34,1	23,9	34,8	34,5	35,2	17,6	16,3	16,6	15,5	15,2	14,0	16,6	14,2
STG-B16 070-901	42,2	29,9	42,9	42,6	43,3	17,6	16,3	16,6	15,5	15,2	14,0	16,6	14,2
STG-B30 030-901	25,0	17,6	25,3	25,0	25,7	41,3	38,4	38,9	36,5	35,9	32,9	39,1	33,1
STG-B30 034-901	25,0	17,6	25,3	25,0	25,7	41,3	38,4	38,9	36,5	35,9	32,9	39,1	33,1
STG-B30 040-901	30,9	21,8	31,7	31,7	32,0	41,3	38,4	38,9	36,5	35,9	32,9	39,1	33,1
STG-B30 044-901	30,9	21,8	31,7	31,7	32,0	41,3	38,4	38,9	36,5	35,9	32,9	39,1	33,1
STG-B30 050-901	35,5	25,0	36,2	35,9	36,6	41,3	38,4	38,9	36,5	35,9	32,9	39,1	33,1
STG-B30 054-901	35,5	25,0	36,2	35,9	36,6	41,3	38,4	38,9	36,5	35,9	32,9	39,1	33,1
STG-B30 060-901	39,6	28,1	40,1	39,7	40,4	41,3	38,4	38,9	36,5	35,9	32,9	39,1	33,1
STG-B30 064-901	39,6	28,1	40,1	39,7	40,4	41,3	38,4	38,9	36,5	35,9	32,9	39,1	33,1
STG-B30 070-901	46,4	32,4	47,1	46,8	47,5	41,3	38,4	38,9	36,5	35,9	32,9	39,1	33,1
STG-B30 090-901	54,2	38,0	55,2	54,5	55,6	41,3	38,4	38,9	36,5	35,9	32,9	39,1	33,1

Note: 1) The above data is based on filter driers with inch connections and clean system at ideal conditions; with impurities accumulated in the filter, the capacity may decrease.

2) R407C data based on dew point conditions

STG/L SERIES
Bi-Flow Filter Driers

SELECTION FORMULAS

Filter driers for liquid line are manufactured in compliance with ARI Standard 710. Maximum flow rate of liquid refrigerant at a differential pressure of 0,07bar (1psi) is indicated by kW (ton) which is based on the temperature of liquid refrigerant 30°C (86°F), the evaporating temperature of -15°C (5°F) and the following mass flow:

- 0,40 kg/min/kW (3.1 lb/min/ton) R134a
- 0,53 kg/min/kW (4.1 lb/min/ton) R404A, R507A
- 0,39 kg/min/kW (3.0 lb/min/ton) R22, R407C
- 0,36 kg/min/kW (2.8 lb/min/ton) R410A

Note: Data on water absorption is based on the following EPD (method: ASHRAE Standard 63.1):

- 60ppm R22
- 50ppm R134a
- 50ppm R404A
- 50ppm R407C
- 50ppm R410A
- 50ppm R507A

Filter Driers with Replaceable Core

The filter driers with replaceable core (HTG series) are used in liquid line and suction line of refrigerating, freezing and air conditioning system. The filter housing allows to choose different kinds of cores. It's sealed by bottom cover for an easy removal and replacement of core from the bottom. The core holder requires minimum free space to remove the core for replacement.

FEATURES

- HIGH EFFICIENT IN MOISTURE ABSORPTION, FILTERING IMPURITY, ACID, PAINT REMAINS AND MUD REMOVAL
- DIFFERENT TYPES OF FILTER CORES
- DURABLE AND SOLID FILTER CORES
- FILTERING FINENESS: 20μm
- CORROSION RESISTANT PAINTING CAN SURVIVE SALT SPRAY TEST OF 500 HOURS
- CONNECTION TYPE: SOLDER

FEATURES OF FILTER ELEMENT

- **SH48-A80 FILTER ELEMENT:**

  80% 3A DESICCANT AND 20% ACTIVATED ALUMINA,
  It provides a good desiccation ability and an acid absorption capability in a wide temperature range. The core resistance is guaranteed with high level of vibration thanks to an anti-shock design. Suggested installation position on liquid line

- **SH48-A00 FILTER ELEMENT:**

  100% 3A DESICCANT
  It provides the maximum level of desiccation ability in a wide temperature range. The core resistance is guaranteed with high level of vibration thanks to an anti-shock design. Suggested installation position on liquid line

- **SH48-A30 FILTER ELEMENT:**

  30% 3A DESICCANT, 70% ACTIVATED ALUMINA
  This solid filter element provides an excellent acid absorption together with a standard desiccation ability in a wide temperature range. The suggested installation position is on the suction line; it is suitable after compressor burnout because it removes acid, impurities and other harmful substance avoiding the damage of the new compressor.

  SH48-A30 filter core is compatible with HCFC / HFC refrigerants and its design optimizes the flow passage generating low internal pressure drop. The core resistance is guaranteed with high level of vibration thanks to an anti-shock design.

- **SH48-B100 FILTER ELEMENT:**

  "Strainer core for filtering dirt particles. Compatible with HCFC, HFC, refrigerants. Suggested installation position on suction line."

HTG SERIES
Filter Driers with Replaceable Core

GENERAL SPECIFICATION

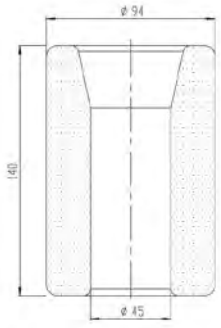
- Applicable for all common HCFC and HFC refrigerants such as: R22, R134a, R404A, R407C, R410A, R507A, R407A, R407F, R448A, R449A
- Ambient temperature min./max.: -30°C / +55°
- Medium temperature TS min./max.: -40°C / +70°C
- Max. operating pressure PS: from 4,5 MPa (45 bar) (see table 1)
- Installation position: HTG with SH48-A80 or SH48-A00 in liquid line, HTG with SH48-A30 or mechanical strainer SH48-B100 in suction line
- Certifications: UL/CSA and PED declaration

TECHNICAL PARAMETERS

Desiccant Selection Table

	Medium Type	30% 3A desiccant 70% active alumina	80% 3A desiccant 20% active alumina	100% 3A desiccant	Mechanical strainer
Core Model	-	SH48-A30	SH48-A80	SH48-A00	SH48-B00
Core Part Number	-	HTG-29101	HTG-29102	HTG-29103	HTG-29104
Suggested Installation position	-	Suction Line	Liquid Line	Liquid Line	Suction Line
Refrigerant	HFC	Applicable	Applicable	Suggested	Suggested
	HCFC	Suggested	Suggested	Applicable	Applicable
	HC	Applicable	Applicable	Applicable	-
Oil [1)]	Mineral oil or AB	Suggested	Suggested	Applicable	Applicable
	Pure POE or PAG	Applicable	Applicable	Suggested	Suggested
	POE or PAG with addictive	Not applicable	Not applicable	Applicable	Applicable

Note: 1) When the systems use oil with additive, it is not recommended to use a core with alumina.



Filter core dimensions

HTG SERIES
Filter Driers with Replaceable Core

MODEL DESIGNATION EXAMPLE

Position Number						According to Model Designation Legend
1	2	3	4	5	6	
HTG	A96	28	1	901		Replaceable core filter drier
HTG	**A96**	28	1	901		96 inch³ internal volume
HTG	A96	**28**	1	901		When Pos. 4 is "1": connection size 28mm
HTG	A96	28	**1**	901		Solder connection metric
HTG	A96	28	1	**901**		Standard product

Model Designation Legend

1	**Product Code**	**Filter Drier Series**	
	HTG	Indicates replaceable core filter drier	
2	**Internal volume**	**Expressed in inch³**	**Expressed in cm³**
	A48	48	787
	A96	96	1573
	B44	144	2360
	B92	192	3146
3	**Connection size**	**Pos. 4 shows "0": Solder [inch]**	
	05	5/8	
	07	7/8	
	09	1 1/8	
	11	1 3/8	
	13	1 5/8	
	17	2 1/8	
	21	2 5/8	
	Connection size	**Pos. 4 shows "1": Solder [mm]**	
	05	16 - (5/8" version can be used e.g. HTG-A48 050)	
	07	22 - (7/8" version can be used e.g. HTG-A48 070)	
	28	28	
	11	35 - (1 3/8" version can be used e.g. HTG-A48 110)	
	42	42	
	17	54 - (2 1/8" version can be used e.g. HTG-A48 170)	
4	**Pipe Connection**	**Type**	
	0	Solder with inch connections	
	1 *	Solder with metric connections	
5	**Version Number**	**Description**	
	901	Standard product	

Note: * Solder connections which fit to metric and inch are marked with inch product codes e.g. 16, 22, 35 and 54mm

HTG SERIES
Filter Driers with Replaceable Core

GENERAL CHARACTERISTICS OF FILTER *Table 1*

Series	Model	Multi package*	Solder Connections ODF		Number of cores	Dimensions & Weight					Design Pressure (MPa)	PED category
						A	B	L	G	Weight[1)]		
			[inch]	[mm]		[mm]	[mm]	[mm]	[mm]	[kg]		
HTG A48s	HTG-A48050-901	10225004502	5/8	16	1	250	164	170	116	5,1	4,5	Cat. I
	HTG-A48070-901	10225004402	7/8	22		249	163	170	116	5,1	4,5	
	HTG-A48090-901	10225004302	1 1/8	-		254	168	170	121	5,1	4,5	
	HTG-A48281-901	10225004202	-	28		254	168	170	121	5,1	4,5	
	HTG-A48110-901	10225004102	1 3/8	35		253	167	170	121	5,1	4,5	
	HTG-A48130-901	10225004002	1 5/8	-		272	186	170	141	5,1	4,5	
	HTG-A48421-901	10225003802	-	42		272	186	170	141	5,1	4,5	
	HTG-A48170-901	10225003902	2 1/8	54		275	182	170	145	5,1	4,5	
	HTG-A48210-901	10225003702	2 5/8	-		277	177	170	149	5,1	4,5	
HTG A96s	HTG-A96050-901	10225003602	5/8	16	2	391	305	310	116	6,2	4,5	
	HTG-A96070-901	10225003502	7/8	22		390	304	310	116	6,2	4,5	
	HTG-A96090-901	10225003302	1 1/8	-		395	309	310	121	6,2	4,5	
	HTG-A96281-901	10225003402	-	28		395	309	310	121	6,2	4,5	
	HTG-A96110-901	10225003202	1 3/8	35		394	308	310	121	6,2	4,5	
	HTG-A96130-901	10225003102	1 5/8	-		413	327	310	141	6,2	4,5	
	HTG-A96421-901	10225003002	-	42		413	327	310	141	6,2	4,5	
	HTG-A96170-901	10225002902	2 1/8	54		416	323	310	145	6,2	4,5	
	HTG-A96210-901	10225002802	2 5/8	-		418	318	310	149	6,2	4,5	
HTG B44s	HTG-B44050-901	10225002702	5/8	16	3	532	446	310	116	7,6	4,5	
	HTG-B44070-901	10225002602	7/8	22		531	445	310	116	7,6	4,5	
	HTG-B44090-901	10225002502	1 1/8	-		536	450	310	121	7,6	4,5	
	HTG-B44281-901	10225002402	-	28		536	450	310	121	7,6	4,5	
	HTG-B44110-901	10225002302	1 3/8	35		535	449	310	121	7,6	4,5	
	HTG-B44130-901	10225002202	1 5/8	-		554	468	310	141	7,6	4,5	
	HTG-B44421-901	10225002102	-	42		554	468	310	141	7,6	4,5	
	HTG-B44170-901	10225001902	2 1/8	54		557	464	310	145	7,6	4,5	
	HTG-B44210-901	10225001802	2 5/8	-		559	459	310	149	7,6	4,5	
HTG B92s	HTG-B92050-901	10225001702	5/8	16	4	677	591	310	116	9,1	4,5	
	HTG-B92070-901	10225001602	7/8	22		676	590	310	116	9,1	4,5	
	HTG-B92090-901	10225001502	1 1/8	-		681	595	310	121	9,1	4,5	
	HTG-B92281-901	10225004602	-	28		681	595	310	121	9,1	4,5	
	HTG-B92110-901	10225001402	1 3/8	35		680	594	310	121	9,1	4,5	
	HTG-B92130-901	10225002002	1 5/8	-		699	613	310	141	9,1	4,5	
	HTG-B92421-901	10225001302	-	42		699	613	310	141	9,1	4,5	
	HTG-B92170-901	10225001202	2 1/8	54		702	609	310	145	9,1	4,5	
	HTG-B92210-901	10225001102	2 5/8	-		704	604	310	149	9,1	4,5	

Note: * Available also as industrial package. Contact Sanhua for more details.
1) Weight of filter shell (must be added the filter core weight: 0.6 kg)

HTG SERIES
Filter Driers with Replaceable Core

SELECTION TABLE - WITH CORE SH48-A00 *Table 2*

Model	Acid Absorption capacity (g) [3]	Capacity [kW] [1]					Moisture Absorption [gram H_2O]							
		R134a	R404A / R507A	R22	R407C [2]	R410A	R134a		R404A / R507A		R407C [2] / R410A		R22	
							75°F / 23,9°C	125°F / 51,7°C	75°F / 23,9°C	125°F / 51,7°C	75°F / 23,9°C	125°F / 51,7°C	75°F / 23,9°C	125°F / 51,7°C
HTG-A48050-901		65,5	45,9	67,6	67,6	67,6	67,4	58,1	72,6	59,6	57,0	51,8	62,2	57,0
HTG-A48070-901		104,7	73,5	108,2	108,2	108,2	67,4	58,1	72,6	59,6	57,0	51,8	62,2	57,0
HTG-A48090-901		150,5	105,7	155,4	155,4	155,4	67,4	58,1	72,6	59,6	57,0	51,8	62,2	57,0
HTG-A48281-901		150,5	105,7	155,4	155,4	155,4	67,4	58,1	72,6	59,6	57,0	51,8	62,2	57,0
HTG-A48110-901	-	202,7	142,5	209,3	209,3	209,3	67,4	58,1	72,6	59,6	57,0	51,8	62,2	57,0
HTG-A48130-901		248,9	174,7	256,6	256,6	256,6	67,4	58,1	72,6	59,6	57,0	51,8	62,2	57,0
HTG-A48421-901		59,9	174,7	256,6	256,6	256,6	67,4	58,1	72,6	59,6	57,0	51,8	62,2	57,0
HTG-A48170-901		353,5	248,2	364,7	364,7	364,7	67,4	58,1	72,6	59,6	57,0	51,8	62,2	57,0
HTG-A48210-901		392,7	276,2	405,7	405,7	405,7	67,4	58,1	72,6	59,6	57,0	51,8	62,2	57,0
HTG-A96050-901		65,5	45,9	67,6	67,6	67,6	134,8	116,1	145,2	119,2	114,0	103,7	124,4	114,0
HTG-A96070-901		104,7	73,5	108,2	108,2	108,2	134,8	116,1	145,2	119,2	114,0	103,7	124,4	114,0
HTG-A96090-901		150,5	105,7	155,4	155,4	155,4	134,8	116,1	145,2	119,2	114,0	103,7	124,4	114,0
HTG-A96281-901		150,5	105,7	155,4	155,4	155,4	134,8	116,1	145,2	119,2	114,0	103,7	124,4	114,0
HTG-A96110-901	-	202,7	142,5	209,3	209,3	209,3	134,8	116,1	145,2	119,2	114,0	103,7	124,4	114,0
HTG-A96130-901		248,9	174,7	256,6	256,6	256,6	134,8	116,1	145,2	119,2	114,0	103,7	124,4	114,0
HTG-A96421-901		248,9	174,7	256,6	256,6	256,6	134,8	116,1	145,2	119,2	114,0	103,7	124,4	114,0
HTG-A96170-901		353,5	248,2	364,7	364,7	364,7	134,8	116,1	145,2	119,2	114,0	103,7	124,4	114,0
HTG-A96210-901		392,7	276,2	405,7	405,7	405,7	134,8	116,1	145,2	119,2	114,0	103,7	124,4	114,0
HTG-B44050-901		65,5	45,9	67,6	67,6	67,6	202,2	174,3	217,8	178,8	171,0	155,4	186,6	171,0
HTG-B44070-901		104,7	73,5	108,2	108,2	108,2	202,2	174,3	217,8	178,8	171,0	155,4	186,6	171,0
HTG-B44090-901		150,5	105,7	155,4	155,4	155,4	202,2	174,3	217,8	178,8	171,0	155,4	186,6	171,0
HTG-B44281-901		150,5	105,7	155,4	155,4	155,4	202,2	174,3	217,8	178,8	171,0	155,4	186,6	171,0
HTG-B44110-901	-	202,7	142,5	209,3	209,3	209,3	202,2	174,3	217,8	178,8	171,0	155,4	186,6	171,0
HTG-B44130-901		248,9	174,7	256,6	256,6	256,6	202,2	174,3	217,8	178,8	171,0	155,4	186,6	171,0
HTG-B44421-901		248,9	174,7	256,6	256,6	256,6	202,2	174,3	217,8	178,8	171,0	155,4	186,6	171,0
HTG-B44170-901		353,5	248,2	364,7	364,7	364,7	202,2	174,3	217,8	178,8	171,0	155,4	186,6	171,0
HTG-B44210-901		392,7	276,2	405,7	405,7	405,7	202,2	174,3	217,8	178,8	171,0	155,4	186,6	171,0
HTG-B92050-901		65,5	45,9	67,6	67,6	67,6	269,6	232,4	290,4	238,4	228,0	207,2	248,8	228,0
HTG-B92070-901		104,7	73,5	108,2	108,2	108,2	269,6	232,4	290,4	238,4	228,0	207,2	248,8	228,0
HTG-B92090-901		150,5	105,7	155,4	155,4	155,4	269,6	232,4	290,4	238,4	228,0	207,2	248,8	228,0
HTG-B92281-901		150,5	105,7	155,4	155,4	155,4	269,6	232,4	290,4	238,4	228,0	207,2	248,8	228,0
HTG-B92110-901	-	202,7	142,5	209,3	209,3	209,3	269,6	232,4	290,4	238,4	228,0	207,2	248,8	228,0
HTG-B92130-901		248,9	174,7	256,6	256,6	256,6	269,6	232,4	290,4	238,4	228,0	207,2	248,8	228,0
HTG-B92421-901		248,9	174,7	256,6	256,6	256,6	269,6	232,4	290,4	238,4	228,0	207,2	248,8	228,0
HTG-B92170-901		353,5	248,2	364,7	364,7	364,7	269,6	232,4	290,4	238,4	228,0	207,2	248,8	228,0
HTG-B92210-901		392,7	276,2	405,7	405,7	405,7	269,6	232,4	290,4	238,4	228,0	207,2	248,8	228,0

HTG SERIES
Filter Driers with Replaceable Core

SELECTION TABLE - WITH CORE SH48-A80 *Table 3*

Model	Acid Absorption capacity (g)	Capacity [kW] [1]					Moisture Absorption [gram H_2O]							
		R134a	R404A / R507A	R22	R407C[2]	R410A	R134a		R404A / R507A		R407C [2] / R410A		R22	
							75°F	125°F	75°F	125°F	75°F	125°F	75°F	125°F
							23,9°C	51,7°C	23,9°C	51,7°C	23,9°C	51,7°C	23,9°C	51,7°C
HTG-A48050-901	10	65,5	45,9	67,6	67,6	67,6	58,0	50,0	61,7	50,7	47,9	43,5	52,9	48,5
HTG-A48070-901		104,7	73,5	108,2	108,2	108,2	58,0	50,0	61,7	50,7	47,9	43,5	52,9	48,5
HTG-A48090-901		150,5	105,7	155,4	155,4	155,4	58,0	50,0	61,7	50,7	47,9	43,5	52,9	48,5
HTG-A48281-901		150,5	105,7	155,4	155,4	155,4	58,0	50,0	61,7	50,7	47,9	43,5	52,9	48,5
HTG-A48110-901		202,7	142,5	209,3	209,3	209,3	58,0	50,0	61,7	50,7	47,9	43,5	52,9	48,5
HTG-A48130-901		248,9	174,7	256,6	256,6	256,6	58,0	50,0	61,7	50,7	47,9	43,5	52,9	48,5
HTG-A48421-901		59,9	174,7	256,6	256,6	256,6	58,0	50,0	61,7	50,7	47,9	43,5	52,9	48,5
HTG-A48170-901		353,5	248,2	364,7	364,7	364,7	58,0	50,0	61,7	50,7	47,9	43,5	52,9	48,5
HTG-A48210-901		392,7	276,2	405,7	405,7	405,7	58,0	50,0	61,7	50,7	47,9	43,5	52,9	48,5
HTG-A96050-901	20	65,5	45,9	67,6	67,6	67,6	115,9	99,8	123,4	101,3	95,8	87,1	105,7	96,9
HTG-A96070-901		104,7	73,5	108,2	108,2	108,2	115,9	99,8	123,4	101,3	95,8	87,1	105,7	96,9
HTG-A96090-901		150,5	105,7	155,4	155,4	155,4	115,9	99,8	123,4	101,3	95,8	87,1	105,7	96,9
HTG-A96281-901		150,5	105,7	155,4	155,4	155,4	115,9	99,8	123,4	101,3	95,8	87,1	105,7	96,9
HTG-A96110-901		202,7	142,5	209,3	209,3	209,3	115,9	99,8	123,4	101,3	95,8	87,1	105,7	96,9
HTG-A96130-901		248,9	174,7	256,6	256,6	256,6	115,9	99,8	123,4	101,3	95,8	87,1	105,7	96,9
HTG-A96421-901		248,9	174,7	256,6	256,6	256,6	115,9	99,8	123,4	101,3	95,8	87,1	105,7	96,9
HTG-A96170-901		353,5	248,2	364,7	364,7	364,7	115,9	99,8	123,4	101,3	95,8	87,1	105,7	96,9
HTG-A96210-901		392,7	276,2	405,7	405,7	405,7	115,9	99,8	123,4	101,3	95,8	87,1	105,7	96,9
HTG-B44050-901	30	65,5	45,9	67,6	67,6	67,6	173,9	149,9	185,1	152,0	143,6	130,5	158,6	145,4
HTG-B44070-901		104,7	73,5	108,2	108,2	108,2	173,9	149,9	185,1	152,0	143,6	130,5	158,6	145,4
HTG-B44090-901		150,5	105,7	155,4	155,4	155,4	173,9	149,9	185,1	152,0	143,6	130,5	158,6	145,4
HTG-B44281-901		150,5	105,7	155,4	155,4	155,4	173,9	149,9	185,1	152,0	143,6	130,5	158,6	145,4
HTG-B44110-901		202,7	142,5	209,3	209,3	209,3	173,9	149,9	185,1	152,0	143,6	130,5	158,6	145,4
HTG-B44130-901		248,9	174,7	256,6	256,6	256,6	173,9	149,9	185,1	152,0	143,6	130,5	158,6	145,4
HTG-B44421-901		248,9	174,7	256,6	256,6	256,6	173,9	149,9	185,1	152,0	143,6	130,5	158,6	145,4
HTG-B44170-901		353,5	248,2	364,7	364,7	364,7	173,9	149,9	185,1	152,0	143,6	130,5	158,6	145,4
HTG-B44210-901		392,7	276,2	405,7	405,7	405,7	173,9	149,9	185,1	152,0	143,6	130,5	158,6	145,4
HTG-B92050-901	40	65,5	45,9	67,6	67,6	67,6	231,9	199,9	246,8	202,6	191,5	174,0	211,5	193,8
HTG-B92070-901		104,7	73,5	108,2	108,2	108,2	231,9	199,9	246,8	202,6	191,5	174,0	211,5	193,8
HTG-B92090-901		150,5	105,7	155,4	155,4	155,4	231,9	199,9	246,8	202,6	191,5	174,0	211,5	193,8
HTG-B92281-901		150,5	105,7	155,4	155,4	155,4	231,9	199,9	246,8	202,6	191,5	174,0	211,5	193,8
HTG-B92110-901		202,7	142,5	209,3	209,3	209,3	231,9	199,9	246,8	202,6	191,5	174,0	211,5	193,8
HTG-B92130-901		248,9	174,7	256,6	256,6	256,6	231,9	199,9	246,8	202,6	191,5	174,0	211,5	193,8
HTG-B92421-901		248,9	174,7	256,6	256,6	256,6	231,9	199,9	246,8	202,6	191,5	174,0	211,5	193,8
HTG-B92170-901		353,5	248,2	364,7	364,7	364,7	231,9	199,9	246,8	202,6	191,5	174,0	211,5	193,8
HTG-B92210-901		392,7	276,2	405,7	405,7	405,7	231,9	199,9	246,8	202,6	191,5	174,0	211,5	193,8

Note: 1. The data reported in the Table 2 and 3 is based on filter driers in a clean system at ideal conditions; with impurities accumulated in the filter, the capacity may decrease.

2. R407C data based on dew point conditions

3. Adsorption capacity of oleic acid at 0.05 TAN (Total Acid Number)

HTG SERIES
Filter Driers with Replaceable Core

SELECTION FORMULAS

Filter driers for liquid line are manufactured in compliance with ARI Standard 710. Maximum flow rate of liquid refrigerant at a differential pressure of 0,07bar (1psi) is indicated by kW (ton) which is based on the temperature of liquid refrigerant 30°C (86°F), the evaporating temperature of -15°C (5°F) and the following mass flow:

- 0,40 kg/min/kW (3.1 lb/min/ton) R134a
- 0,53 kg/min/kW (4.1 lb/min/ton) R404A, R507A
- 0,39 kg/min/kW (3.0 lb/min/ton) R22, R407C
- 0,36 kg/min/kW (2.8 lb/min/ton) R410A

Note: Data on water absorption is based on the following EPD (method: ASHRAE Standard 63.1):

- 60ppm R22
- 50ppm R134a
- 50ppm R404A
- 50ppm R407C
- 50ppm R410A
- 50ppm R507A

SUCTION LINE FILTER-DRIERS:

Any pressure loss in the suction line also reduces system capacity significantly. Obtaining a low pressure drop is particularly important for energy savings on all the air conditioning and refrigeration systems. Therefore, suction line filter-driers should be sized generously on these systems. Sanhua suggests that the pressure drop across it should not exceed the values given in the table below (table 4: DP limits in metric units; table 5: DP limits in imperial units)

Table 4

Suction Line Filter Drier Maximum Recommended Pressure Drop (bar)					
System	Evaporator Saturated Suction Temperature[4] (°C)	Permanent Installation		Temporary Installation	
		Refrigerant			
		R22; R404A; R407C; R410A, R507	R134a	R22; R404A; R407C; R410A, R507	R134a
Air conditioning	4	0,21	0,14	0,56	0,42
Commercial	-7	0,14	0,105	0,28	0,21
Low temperature	-29	0,07	0,035	0,14	0,07

Table 5

Suction Line Filter Drier Maximum Recommended Pressure Drop (psi)					
System	Evaporator Saturated Suction Temperature[5] (°F)	Permanent Installation		Temporary Installation	
		Refrigerant			
		R22; R404A; R407C; R410A, R507	R134a	R22; R404A; R407C; R410A, R507	R134a
Air conditioning	40	3	2	8	6
Commercial	20	2	1,5	4	3
Low temperature	-20	1	0,5	2	1

HTG SERIES
Filter Driers with Replaceable Core

SUCTION LINE FLOW CAPACITY WITH CORE SH48-A30 (KW)[1] *Table 6*

Model	Capacity (kW)											
	Evaporation temperature (°C)											
	-40	-20	4,4	-30	-20	4,4	-40	-20	4,4	-40	-20	4,4
	Pressure drop (bar)											
	0,04	0,10	0,21	0,04	0,07	0,14	0,04	0,10	0,21	0,04	0,10	0,21
	R22/R407C			R134a			R404A/R507			R410A		
HTG-A48050-901	3,0	8,5	20,0	2,9	5,1	12,4	2,3	6,7	16,6	3,0	8,5	20,0
HTG-A48070-901	5,5	15,5	36,0	5,3	9,4	22,2	4,3	12,3	29,6	5,5	15,3	36,0
HTG-A48090-901	7,4	20,5	48,5	7,1	12,6	30,0	5,7	16,3	40,0	7,4	20,5	48,5
HTG-A48281-901	7,4	20,5	48,5	7,1	12,6	30,0	5,7	16,3	40,0	7,4	20,5	48,5
HTG-A48110-901	9,5	26,0	61,0	9,1	16.0	37.5	7.3	20.7	50.0	9.5	26.0	61.0
HTG-A48130-901	9.5	26.0	61.0	9,1	16.0	37.5	7.3	20.7	50.0	9.5	26.0	61.0
HTG-A48421-901	9.5	26.0	61.0	9,1	16.0	37.5	7.3	20.7	50.0	9.5	26.0	61.0
HTG-A48170-901	9.5	26.0	61.0	9,1	16.0	37.5	7.3	20.7	50.0	9.5	26.0	61.0
HTG-A48210-901	9.5	26.0	61.0	9,1	16.0	37.5	7.3	20.7	50.0	9.5	26.0	61.0
HTG-A96050-901	3.1	8.6	20.3	3.0	5.4	12.7	2.4	7.0	17.1	3.1	8.7	20.5
HTG-A96070-901	5.5	15.4	36.2	5.3	9.4	22.4	4.3	12.3	29.8	5.5	15.4	36.2
HTG-A96090-901	8.3	23.4	55.4	8.0	14.3	34.1	6.5	18.7	46.0	8.3	23.4	56.0
HTG-A96281-901	8.3	23.4	55.4	8.0	14.3	34.1	6.5	18.7	46.0	8.3	23.4	56.0
HTG-A96110-901	11.3	32.0	76.0	10.8	19.4	46.5	8.8	25.5	63.0	11.3	32.0	76.0
HTG-A96130-901	13.5	38.0	91.0	13.0	23.1	55.6	10.5	30.4	75.0	13.4	38.0	91.0
HTG-A96421-901	13.5	38.0	91.0	13.0	23.1	55.6	10.5	30.4	75.0	13.4	38.0	91.0
HTG-A96170-901	13.5	38.0	91.0	13.0	23.1	55.6	10.5	30.4	75.0	13.4	38.0	91.0
HTG-A96210-901	13.5	38.0	91.0	13.0	23.1	55.6	10.5	30.4	75.0	13.4	38.0	91.0
HTG-B44050-901	3.3	9.5	21.7	3.2	5.7	13.3	2.6	7.3	16.5	3.3	9.5	21.7
HTG-B44070-901	6.3	18.0	41.0	6.0	10.6	25.1	4.8	13.8	34.0	6.3	18.0	41.0
HTG-B44090-901	8.4	24.0	55.0	8.0	14.3	34.0	6.5	18.5	46.0	8.4	24.0	55.0
HTG-B44281-901	8.4	24.0	55.0	8.0	14.3	34.0	6.5	18.5	46.0	8.4	24.0	55.0
HTG-B44110-901	12.5	36.5	89.0	12.1	22.0	54.0	9.8	29.2	73.0	12.5	36.5	89.0
HTG-B44130-901	12.5	36.5	89.0	12.1	22.0	54.0	9.8	29.2	73.0	12.5	36.5	89.0
HTG-B44421-901	12.5	36.5	89.0	12.1	22.0	54.0	9.8	29.2	73.0	12.5	36.5	89.0
HTG-B44170-901	12.5	36.5	89.0	12.1	22.0	54.0	9.8	29.2	73.0	12.5	36.5	89.0
HTG-B44210-901	12.5	36.5	89.0	12.1	22.0	54.0	9.8	29.2	73.0	12.5	36.5	89.0
HTG-B92050-901	4.0	10.9	25.9	3.8	6.7	16.0	3.0	8.7	21.6	4.0	10.9	25.9
HTG-B92070-901	7.5	20.5	48.8	7.2	12.7	30.0	5.8	16.5	40.6	7.5	20.5	48.8
HTG-B92090-901	10.1	27.5	66.0	9.7	17.1	40.0	7.8	22.1	54.3	10.1	27.5	66.0
HTG-B92281-901	10.1	27.5	66.0	9.7	17.1	40.0	7.8	22.1	54.3	10.1	27.5	66.0
HTG-B92110-901	14.1	39.7	95.0	13.6	24.2	58.1	11.0	31.9	78.1	14.1	39.7	95.0
HTG-B92130-901	17.1	49.0	118.0	16.5	30.0	72.0	13.4	39.0	97.0	17.1	49.0	118.0
HTG-B92421-901	17.1	49.0	118.0	16.5	30.0	72.0	13.4	39.0	97.0	17.1	49.0	118.0
HTG-B92170-901	17.1	49.0	118.0	16.5	30.0	72.0	13.4	39.0	97.0	17.1	49.0	118.0
HTG-B92210-901	17.1	49.0	118.0	16.5	30.0	72.0	13.4	39.0	97.0	17.1	49.0	118.0

HTG SERIES
Filter Driers with Replaceable Core

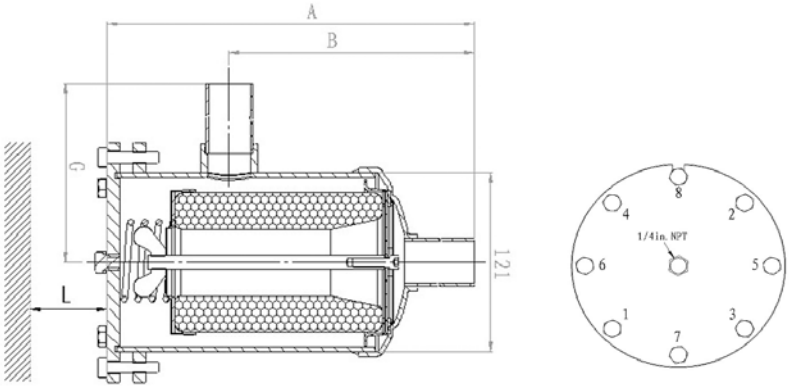
The capacities listed in the table 6 are rated at the maximum recommended pressure drop for permanent installation.
Suction line Filter-Driers guarantees an acid removal and a drying capacity described in table 7:

Table 7

Drying capacity: SH48-A30[1]					
Filter Type		**HTG-A48**	**HTG-A96**	**HTG-B44**	**HTG-B92**
Number of cores		**1**	**2**	**3**	**4**
Acid Adsorption capacity (g)[3]		**28,0**	**56,0**	**84,0**	**112,0**
Refrigerant	**Evaporating Temp. (°C)[4]**	**Moisture Absorption [gram H2O]**			
R22/ R407C[2]	-40,0	26,0	52,0	78,0	104,0
	-20,0	18,0	36,3	54,0	72,0
	4,4	11,0	22,0	32,0	43,0
R134a	-30,0	43,0	86,0	129,0	172,0
	-20,0	36,0	72,0	108,0	144,0
	4,4	25,0	50,0	75,0	100,0
R404A / R507	-40,0	45,0	90,0	135,0	180,0
	-20,0	28,0	56,0	84,0	112,0
	4,4	18,0	36,0	54,0	72,0
R410A	-40,0	40,0	80,0	120,0	160,0
	-20,0	33,0	66,0	99,0	132,0
	4,4	24,0	48,0	72,0	96,0

Drying capacity is expressed during drying in:
R22: EPD = 10 ppm W, corresponding dew point temperature is -50°C
R134a: EPD = 50 ppm W, corresponding dew point temperature is -37°C
R404A: EPD = 10 ppm W, corresponding dew point temperature is -40°C
R407C: EPD = 10 ppm W, corresponding dew point temperature is -40°C

Note:
1. The data reported in the Table 2, 3, 6 and 7 are based on filter driers in a clean system at ideal conditions; with impurities accumulated in the filter, the capacity may decrease.
2. R407C data based on dew point conditions
3. Adsorption capacity of oleic acid at 0.05 TAN (Total Acid Number)
4. Standard Evaporating Temperature defined by ANSI.AHRI Standard 731 (SI)-2013
5. Standard Evaporating Temperature defined by ANSI.AHRI Standard 730 (I-P)-2013



SANHUA

Technical information

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CHILLING
ideas worldwide

SANHUA INTERNATIONAL
info@sanhuaeurope.com

Certificate of registration
ISO 14001:2004

Certificate of registration
ISO 9001:2008

REACH

NR. 1907/2006
CONFORMITY DECLARATION

BEST SUPPLIER AWARDS

B/S/H/

Carrier

TRANE

Note: Conditions could change without previous notice due to components updating or typing mistakes.
Sanhua declines any responsibility for a wrong product choice based on this table. Please make sure all your requirements are covered in our suggestion.

BDF/KMV SERIES

Bi-stable Solenoid Valve

BDF/KMV bi-stable solenoid valve are used in duel temperature/double control household refrigerators, deep freezers, wine cabinet, water dispenser and other similar small scale cooling systems to switch the flow path of refrigerants.

FEATURES

- MAINTAINING WORKING CONDITIONS WITH PULSE ACTUATION AND MAGNET LATCHING MODE
- GOOD INNER LEAKAGE PERFORMANCE
- LOW NOISE

GENERAL SPEC.

- Applicable refrigerant: R600a, R134a etc.
- Applicable medium temperature: -30°C ~ +65°C
- Ambient temperature: -20°C ~ +60°C
- Relative humidity: below 95% RH
- Maximum working pressure: 2.5MPa

TECHNICAL PARAMETERS

Model	Voltage V	Frequency Hz	Sealing Structure	Max. Opening Differential Pressure MPa	Air Flow L/h (Δ P=0.4MPa)	Inner Leakage ml/min (Δ P=0.4MPa)
BDF	AC110V~120V	50/60	Rubber	1.6	≥1000	≤10
KMV	AC220V~240V	50/60	Steel ball	1.6	≥1000	<83.3

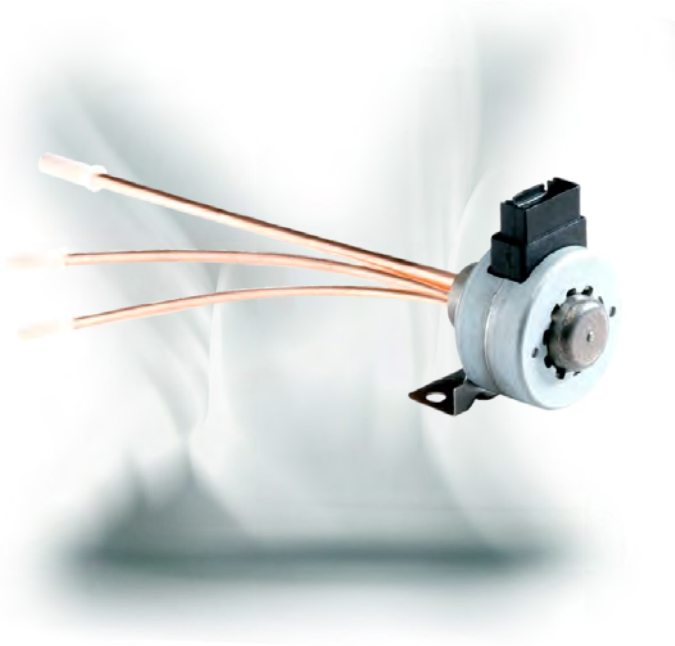
DIMENSIONS

- Product structure and interface dimensions can be customized according to customers' requirements.

DDF SERIES

Step Valve

DDF series step valve are mainly used in duel temperature/ double control household refrigerators with variable temperature areas (with 0°C preservation area or -7°C temperature area) and similar refrigeration systems for controlling and switching the flow direction of refrigerant.



FEATURES

- OPTIMIZED DESIGN OF REFRIGERATION SYSTEM, LOWER POWER CONSUMPTION
- LOW OPERATION NOISE: UTILIZING ROTARY ACTUATION

GENERAL SPEC.

- Applicable refrigerant: R600a and R134a
- Applicable medium temperature: -20°C ~ +65°C
- Applicable ambient temperature: -20°C ~ +60°C
- Relative humidity: below 95%RH
- Noise: Distance 15cm, starting noise ≤ 50dB (A), rotary noise ≤ 40dB (A)

TECHNICAL PARAMETERS

Technical Parameters of Valve Body				
Model	**Port mm**	**Air Flow L/h (Δ P=0.8MPa)**	**Inner Leakage mL/min (Δ P=0.8MPa)**	**Max. Working Pressure MPa**
DDF	0.8	≥1500	150	2.5
Electrical Parameters of Coil				
Resistance at 20°C Ω	**Rated Voltage V**	**Voltage Change**	**Rated Current When Unidirectional Winding is Powered mA**	**Max. Differential Pressure of Opening Valve MPa**
46±3	DC12V	90%~110%	260	1.8

DIMENSIONS

- Product structure and interface dimensions can be customized according to the customer's requirements.

A SERIES

Drain Pump

Drain pump are used in packaged air conditioners, indoor units of ceiling air conditioners to drain the condensing water generated by heat exchangers during cooling and dehumidification.

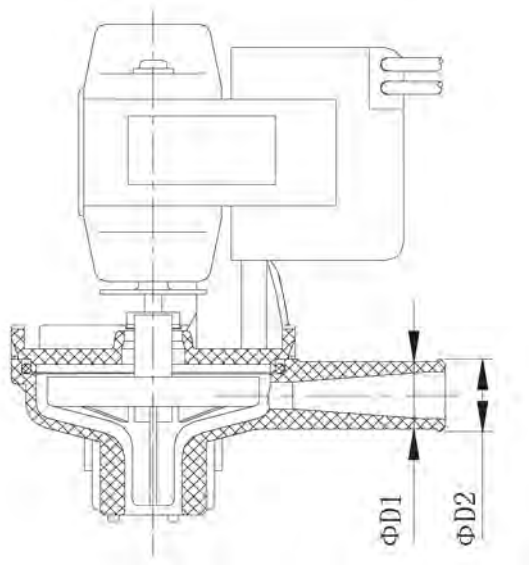
FEATURES

- LOW NOISE, LOW VIBRATION AND LIGHT WEIGHT
- SMALL SCALE WITH ENOUGH FLOW RATE, LONG LIFE
- COST-EFFECTIVE

GENERAL SPECIFICATIONS

- Applicable fluid temperature: 0°C ~ +40°C (but no fluid frozen)
- Applicable ambient temperature: -10°C ~ 45°C
- Relative humidity: below 95% RH
- Certification: UL, CQC and VDE

DIMENSIONS



Model	Dimensions mm			
	D1		D2	
PSB-7A	13	16	14	17
PSB-12A	13	16	14	17

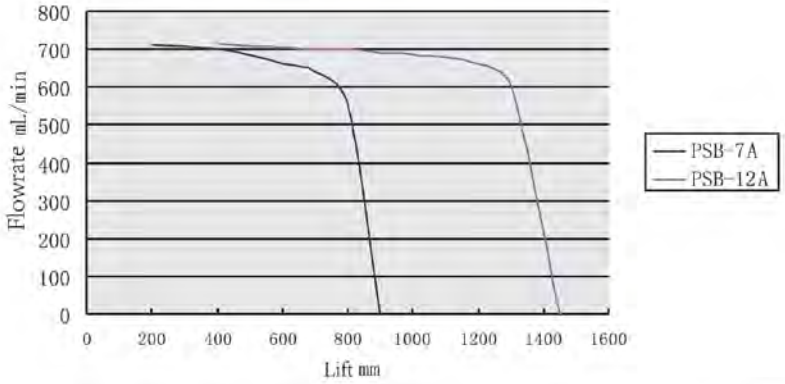
Note: 1) Type and length of leads, terminal insulation casing and support will be optional subject to the customers´needs.

2) In addition to the water outlet direction shown in the figure, there are another three optional outlet directions every 90°.

A SERIES
Drain Pump

TECHNICAL PARAMETERS

Model	Rated Lift mm	Rated Flow ml/min	Rated Voltage V	Rated Current mA	Input Power W
PSB-7A	700	≥450	AC220V~240V	<108/96	<10.8/96
		≥320	AC115V	<108/96	<10.8/96
PSB-12A	1200	≥400	AC220V~240V	120/108	12/10.8

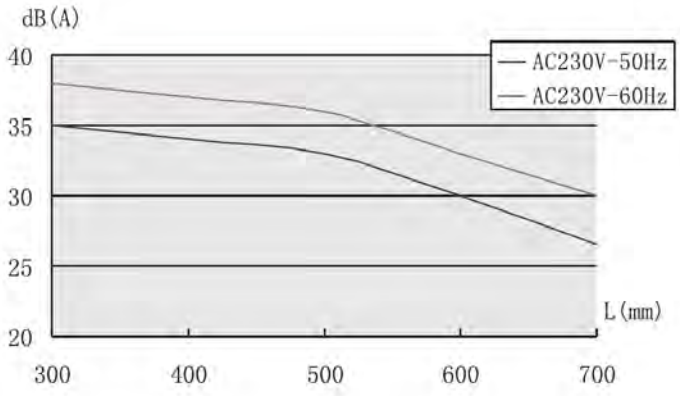


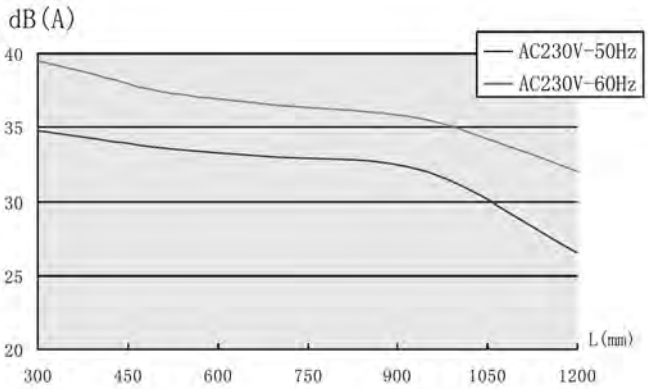
Lift and Flowrate Graph

- AC230V 50Hz/60Hz, at a water level of 10mm, testing draining noise in 1min under different lift (at the distance of 1m)

PSB-7A Model Lift - Noise Graph

- PSB-12A Model Lift - Noise Graph AC230V 50Hz/60Hz, at a water level of 10mm, testing draining noise in 1min under different lift (at the distance of 1m)





PSB-12A Model Lift - Noise Graph

- AC230V 50Hz/60Hz, at a water level of 10mm, testing draining noise in 1min under different lift (at the distance of 1m)

B SERIES

Drain Pump

PSB 12B series drain pump are used in packaged air conditioners and indoor unit of ceiling air conditioners to drain the condensate generated by the heat exchanger during cooling and dehumidification.

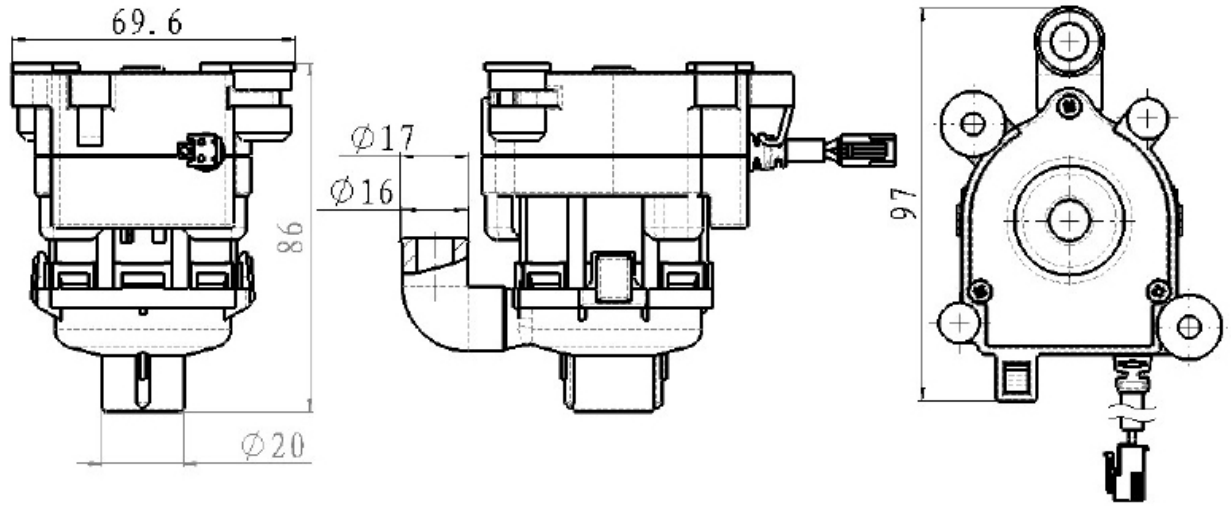
FEATURES

- LOW NOISE, LOW VIBRATION AND LIGHT WEIGHT
- SMALL VOLUME, BIG FLOW AND LONG SERVICE LIFE
- LOW ENERGY CONSUMPTION
- COST-EFFECTIVE

GENERAL SPECIFICATIONS

- Applicable fluid temperature: 0°C ~ +50°C (but no fluid frozen)
- Applicable ambient temperature: -10°C ~ 50 °C
- Relative humidity: below 95% RH

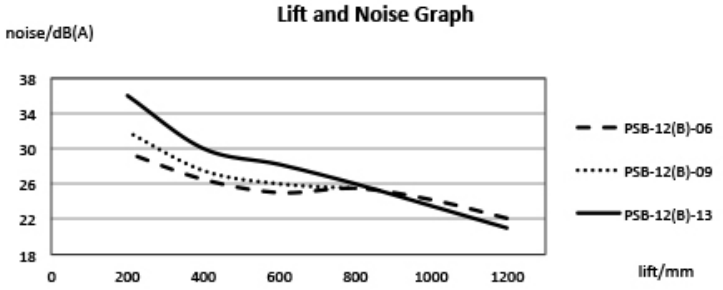
DIMENSIONS



B SERIES
Drain Pump

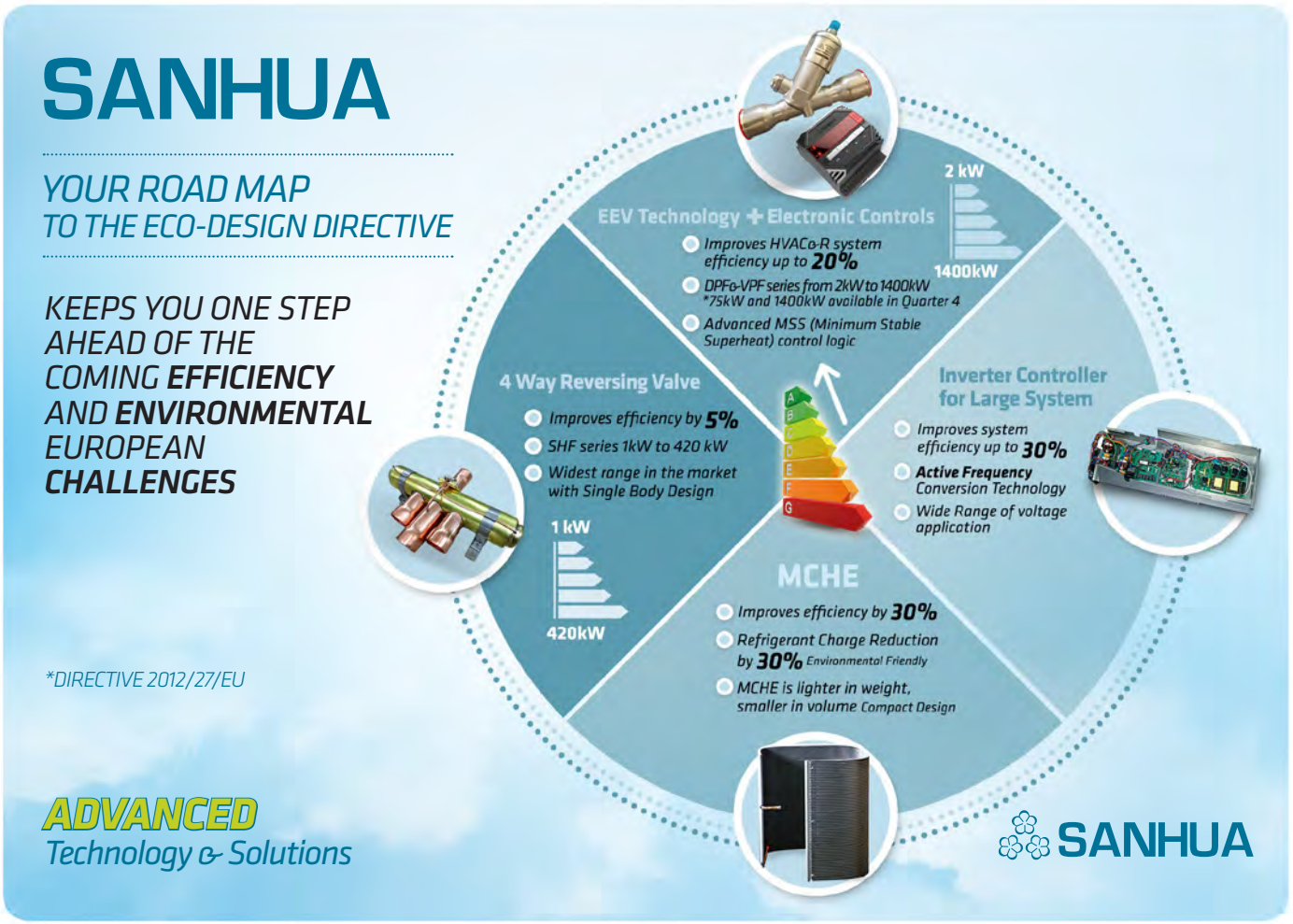
TECHNICAL PARAMETERS

Model	Nominal lift	Nominal flow	Rated voltage	Rated current	input power
	mm	ml/min	V	mA	W
PSB-12(B)-06	1200	≥400	DC13V	<323	<4.2
PSB-12(B)-09	850	≥450	DC12V	<300	<3.6
PSB-12(B)-13	1200	≥400	DC12V	<350	<4.2



Lift and Noise Graph

- AC230V 50Hz/60Hz, at a water level of 10mm, testing draining noise in 1min under different lift (at the distance of 1m)



YKG (A) SERIES

Float Level Switch

YKG (A) series level switches are applicable to many environments, usually connected to actuators such as drain pumps or electromagnetic valves to control the fluid level in the equipment for the purpose of level warning in the system.

FEATURES

- RELIABLE ACTION POINT, AND LONG LIFE
- COST EFFECTIVE

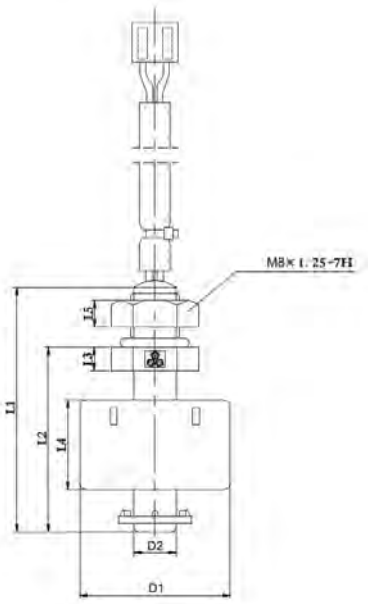
GENERAL SPECIFICATIONS

- Applicable fluid temperature: 0°C ~ +40°C (but no fluid frozen)
- Applicable ambient temperature: -10°C ~ +60°C
- Relative humidity: below 95% RH

TECHNICAL PARAMETERS

Model	Max. Contact Power W	Max. Switching Voltage V	Max. Switching Current A	Action Life 10 thousand times	Contact Resistance between Reed Contacts mΩ
YKG(A)-10	10	DC 100/AC 100	DC 0.5/AC 0.5	100	≤300
YKG(A)-50	50	DC 300/AC 300	DC 0.7/AC 0.5	100	≤300

DIMENSIONS



Model	Dimension	
L1	41±0.5	44±0.5
L2	31±0.5	34±0.5
D1	φ25	
D2	φ7	
L3	15	
L4	4	
L5	4.5	

Notes:
1) Type and length of leads, terminal insulation casing will be optional subject to the customers' needs.
2) See above figure for external dimensions of nuts. Recommended to tighten the nut to 0.25 N.m;

P SERIES

Accumulator

Accumulator is installed between the suction port of the refrigerating system compressors and evaporator to separate gas and fluid, store fluid, return oil and filter.

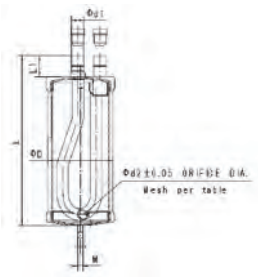
FEATURES

- INLET AND OUTLET ARE MADE OF COPPER TUBES
- AIR GUIDING PART DIRECT THE REFRIGERANT TOWARD THE WALL WHICH FROM A SLIPSTREAM TO MAKE THE REFRIGERANT EXPAND QUICKLY AND SLOW THE FLOW TO LET THE LIQUID DROP DOWN. THIS EFECTIVELY SEPARATES THE LIQUID AND GAS.
- THE U TUBE DESIGN GUARANTEE A MAX FLOW OF REFRIGERANT AND STOP LITTLE LUBRICATION OIL. THE INLET OF U TUBE IS BEHIND AIR GUIDING PART WHICH CAN PREVENT THE LIQUID FROM ENTERING COMPRESSOR. AT THE SAME TIME, IT CAN CHANGE THE DIRECTION OF REFRIGERANT TO COMPLETELY SEPARATE THE LIQUID AND GAS.
- THE BALANCING HOLE IN THE UPPER U TUBE CAN EFFECTIVELY ELIMINATE THE SIPHON CAUSED THE RESTART OF SYSTEM SO AS TO AVOID EXCESSIVE LIQUID ENTERING COMPRESSOR.
- THE OIL RETURN HOLE IS MATCHING THE SYSTEM CAPACITY TO OPTIMIZE THE FLOW OF LIQUID REFRIGERANT AND LUBRICATION OIL INTO COMPRESSOR
- CONNECTION TUBE, U TUBE AND VOLUME OF ACCUMULATOR IS DESIGNED BASED ON THE BASIC DEMAND OF HEAT PUMP SYSTEM ALLOWS A PROPER AND RELIABLE LIQUID REFRIGERANT AND LUBRICATION OIL BACK TO COMPRESSOR. THIS COMBINATION IS TO ACHIEVE AMINIMUM PRESSURE DROP AND LARGEST REFRIGERANT CAPACITY.
- POWER COATED SURFACE CAN SURVIVE 500 HOURS OF SALT SPRAY TEST.
- INCORPORATED FUSE OF 430°F

GENERAL SPECIFICATIONS

- Applicable refrigerant: CFC, HCFC, HFC and HFO
- Applicable medium temperature: -30°C ~+120°C (22°F~+240°F)
- Applicable ambient temperature: -35°C ~+55°C (22°F~+131°F)
- Maximum working pressure: 2.5MPa
- Certification: UL, CSA and PED

P SERIES
Accummulator



TECHNICAL PARAMETERS

Model	D mm	L mm	d1 mm	L1 mm	d2 mm	N meshes/in	Screw Size M	d2 mm	Volume L	Part Number
ACM-P21076-901	76	185,8	16,12	34,3	1,0	60	3/8-16UNC-2A	1,0	0,63	ACM-39001
ACM-P22076-901	76	268,8	16,12	34,3	1,0	60	3/8-16UNC-2A	1,0	0,98	ACM-39002
ACM-P23076-901	76	382,3	16,12	34,3	1,0	60	3/8-16UNC-2A	1,0	1,46	ACM-39003
ACM-P21101-901	101,6	251	16,12	34,3	1,0	60	3/8-16UNC-2A	1,0	1,59	ACM-39004
ACM-P22101-901	101,6	251	16,12	34,3	1,4	30	3/8-16UNC-2A	1,4	1,59	ACM-39005
ACM-P23101-901	101,6	251	19,17	34,3	1,0	60	3/8-16UNC-2A	1,0	1,59	ACM-39006
ACM-P24101-901	101,6	251	19,17	34,3	1,4	30	3/8-16UNC-2A	1,4	1,59	ACM-39007
ACM-P25101-901	101,6	282,3	16,12	34,3	1,0	60	3/8-16UNC-2A	1,0	1,83	ACM-39008
ACM-P26101-901	101,6	282,3	16,12	34,3	1,4	30	3/8-16UNC-2A	1,4	1,83	ACM-39009
ACM-P27101-901	101,6	282,3	19,17	34,3	1,0	60	3/8-16UNC-2A	1,0	1,83	ACM-39010
ACM-P28101-901	101,6	282,3	19,17	34,3	1,4	30	3/8-16UNC-2A	1,4	1,83	ACM-39011
ACM-P29101-901	101,6	320	16,12	34,3	1,0	60	3/8-16UNC-2A	1,0	2,11	ACM-39012
ACM-P30101-901	101,6	320	16,12	34,3	1,4	30	3/8-16UNC-2A	1,4	2,11	ACM-39013
ACM-P31101-901	101,6	320	19,17	34,3	1,0	60	3/8-16UNC-2A	1,0	2,11	ACM-39014
ACM-P32101-901	101,6	320	19,17	34,3	1,4	30	3/8-16UNC-2A	1,4	2,11	ACM-39015
ACM-P33101-901	101,6	357,1	16,12	34,3	1,0	60	3/8-16UNC-2A	1,0	2,39	ACM-39016
ACM-P34101-901	101,6	357,1	16,12	34,3	1,4	30	3/8-16UNC-2A	1,4	2,39	ACM-39017
ACM-P35101-901	101,6	357,1	19,17	34,3	1,0	60	3/8-16UNC-2A	1,0	2,39	ACM-39018
ACM-P36101-901	101,6	357,1	19,17	34,3	1,4	30	3/8-16UNC-2A	1,4	2,39	ACM-39019
ACM-P37101-901	101,6	432,1	16,12	34,3	1,0	60	3/8-16UNC-2A	1,0	2,96	ACM-39020
ACM-P38101-901	101,6	432,1	16,12	34,3	1,4	30	3/8-16UNC-2A	1,4	2,96	ACM-39021
ACM-P39101-901	101,6	432,1	19,17	34,3	1,0	60	3/8-16UNC-2A	1,0	2,96	ACM-39022
ACM-P40101-901	101,6	432,1	19,17	34,3	1,4	30	3/8-16UNC-2A	1,4	2,96	ACM-39023
ACM-P21127-901	127	250,4	22,35	40,4	1,4	30	3/8-16UNC-2A	1,4	2,49	ACM-39024
ACM-P22127-901	127	250,4	22,35	40,4	1,0	60	3/8-16UNC-2A	1,0	2,49	ACM-39025
ACM-P23127-901	127	244,3	19,17	34,3	1,4	30	3/8-16UNC-2A	1,4	2,49	ACM-39026
ACM-P24127-901	127	244,3	19,17	34,3	1,0	60	3/8-16UNC-2A	1,0	2,49	ACM-39027
ACM-P25127-901	127	293,9	22,35	40,4	1,4	30	3/8-16UNC-2A	1,4	3,01	ACM-39028
ACM-P26127-901	127	293,9	22,35	40,4	1,0	60	3/8-16UNC-2A	1,0	3,01	ACM-39029
ACM-P27127-901	127	287,8	19,17	34,3	1,4	30	3/8-16UNC-2A	1,4	3,01	ACM-39030
ACM-P28127-901	127	287,8	19,17	34,3	1,0	60	3/8-16UNC-2A	1,0	3,01	ACM-39031
ACM-P29127-901	127	327,2	22,35	40,4	1,4	30	3/8-16UNC-2A	1,4	3,41	ACM-39032
ACM-P30127-901	127	327,2	22,35	40,4	1,0	60	3/8-16UNC-2A	1,0	3,41	ACM-39033
ACM-P31127-901	127	321,1	19,17	34,3	1,4	30	3/8-16UNC-2A	1,4	3,41	ACM-39034
ACM-P32127-901	127	321,1	19,17	34,3	1,0	60	3/8-16UNC-2A	1,0	3,41	ACM-39035
ACM-P33127-901	127	389,6	22,35	40,4	1,4	30	3/8-16UNC-2A	1,4	4,14	ACM-39036
ACM-P34127-901	127	389,6	22,35	40,4	1,0	60	3/8-16UNC-2A	1,0	4,14	ACM-39037
ACM-P35127-901	127	383,5	19,17	34,3	1,4	30	3/8-16UNC-2A	1,4	4,14	ACM-39038
ACM-P36127-901	127	383,5	19,17	34,3	1,0	60	3/8-16UNC-2A	1,0	4,14	ACM-39039
ACM-P37127-901	127	438,2	22,35	40,4	1,4	30	3/8-16UNC-2A	1,4	4,72	ACM-39040
ACM-P38127-901	127	438,2	22,35	40,4	1,0	60	3/8-16UNC-2A	1,0	4,72	ACM-39041
ACM-P39127-901	127	432,1	19,17	34,3	1,4	30	3/8-16UNC-2A	1,4	4,72	ACM-39042
ACM-P40127-901	127	432,1	19,17	34,3	1,0	60	3/8-16UNC-2A	1,0	4,72	ACM-39043
ACM-P21153-901	152,4	366,3	28,63	48,3	2,03	30	1/2-13UNC-2A	2,03	5	ACM-39044
ACM-P22153-901	152,4	370,3	35,15	52,3	2,03	30	1/2-13UNC-2A	2,03	5	ACM-39045
ACM-P23153-901	152,4	408,3	28,63	48,3	2,03	30	1/2-13UNC-2A	2,03	5,7	ACM-39046
ACM-P24153-901	152,4	412,3	35,15	52,3	2,03	30	1/2-13UNC-2A	2,03	5,7	ACM-39047
ACM-P25153-901	152,4	475,5	28,63	48,3	2,03	30	1/2-13UNC-2A	2,03	6,8	ACM-39048
ACM-P26153-901	152,4	479,5	35,15	52,3	2,03	30	1/2-13UNC-2A	2,03	6,8	ACM-39049
ACM-P27153-901	152,4	530,1	28,63	48,3	2,03	30	1/2-13UNC-2A	2,03	7,8	ACM-39050
ACM-P28153-901	152,4	534,1	35,15	52,3	2,03	30	1/2-13UNC-2A	2,03	7,8	ACM-39051

S SERIES

Accumulator

S series accumulator is installed between the suction port of the refrigerating system compressors and evaporator to separate gas and fluid, store fluid, return oil and filter.

FEATURES

- INLET AND OUTLET ARE MADE OF COPPER TUBES
- AIR GUIDING PART DIRECT THE REFRIGERANT TOWARD THE WALL WHICH FORM A SLIPSTREAM TO MAKE THE REFRIGERANT EXPAND QUICKLY AND SLOW THE FLOW TO LET THE LIQUID DROP DOWN. THIS EFFECTIVELY SEPARATES THE LIQUID AND GAS.
- THE U TUBE DESIGN GUARANTEE A MAX FLOW OF REFRIGERANT AND STOP LITTLE LUBRICATION OIL. THE INLET OF U TUBE IS BEHIND AIR GUIDING PART WHICH CAN PREVENT THE LIQUID FROM ENTERING COMPRESSOR. AT THE SAME TIME, IT CAN CHANGE THE DIRECTION OF REFRIGERANT TO COMPLETELY SEPARATE THE LIQUID AND GAS.
- THE BALANCING HOLE IN THE UPPER U TUBE CAN EFFECTIVELY ELIMINATE THE SIPHON CAUSED THE RESTART OF SYSTEM SO AS TO AVOID EXCESSIVE LIQUID ENTERING COMPRESSOR
- THE OIL RETURN HOLE IS MATCHING THE SYSTEM CAPACITY TO OPTIMIZE THE FLOW OF LIQUID REFRIGERANT AND LUBRICATION OIL INTO COMPRESSOR.
- CONNECTION TUBE, U TUBE AND VOLUME OF ACCUMULATOR IS DESIGNED BASED ON THE BASIC DEMAND OF HEAT PUMP SYSTEM INCLUDING SAFETY STORE CAPACITY (VS. TOTAL CAPACITY) ; PROTECTIVE FLOW CONTROL BACK TO COMPRESSOR ALLOWS A PROPER AND RELIABLE LIQUID REFRIGERANT AND LUBRICATION OIL BACK TO COMPRESSOR. THIS COMBINATION IS TO ACHIEVE A MINIMUM PRESSURE DROP AND LARGEST REFRIGERANT CAPACITY.
- POWDER COATED SURFACE CAN SURVIVE 500HOURS OF SALT SPRAY TEST
- ADVANCED STRUCTURE DESIGN AND PROCESS, COST-EFFECTIVE

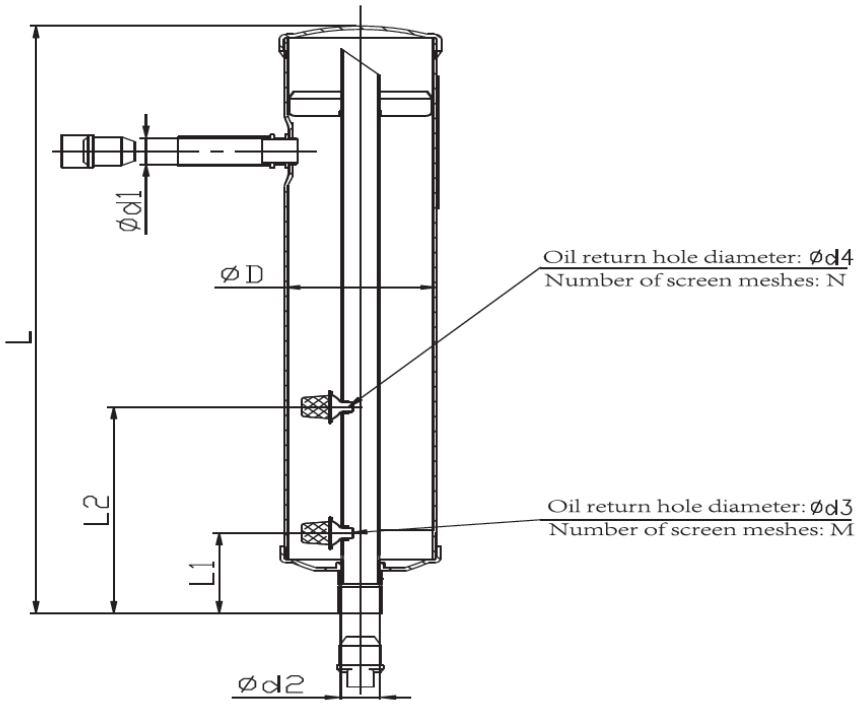
GENERAL SPECIFICATIONS

- Applicable refrigerant: CFC, HCFC, HFC and HFO
- Applicable medium temperature: -30°C~+120°C (-22°F~+240°F)
- Applicable ambient temperature: -35°C~+55°C (-22°F~+131°F)
- Maximum working pressure: 2.5MPa (362.5Psig)
- Certification: UL, CSA and PED

Note: 1) Please contact Sanhua representative for details regarding refrigerants.

S SERIES
Accumulator

TECHNICAL PARAMETERS



Model	L mm	D mm	d1 mm	d2 mm	L1 mm	L2 mm	d3 mm	d4 mm	M meshes/in	N meshes/in
ACM-S00063-004	355.6	63.5	16	16	51	127	1.52	0.74	60	60
ACM-S00063-005	355.6	63.5	16	16	51	127	3.2	0.74	60	60
ACM-S00063-006	355.6	63.5	16	16	51	127	0.74	0.74	60	60
ACM-S00063-012	431.8	63.5	19.2	19.2	51	127	1.14	0.74	60	60
ACM-S00076-007	279.4	76	19.2	19.2	64.3	140.5	1.52	1.52	30	30
ACM-S00076-008	330.2	76	22.4	22.4	70.6	146.8	1.52	1.52	30	30
ACM-S00101-023	333.3	101.6	19.2	19.2	50.8	127	1.52	0.74	30	60
ACM-S00101-033	333.3	101.6	22.4	22.4	50.8	127	1.52	0.74	60	60
ACM-S00101-017	371.4	101.6	19.2	19.2	50.8	127	1.52	0.74	60	60
ACM-S00101-012	371.4	101.6	22.4	22.4	50.8	127	1.52	0.74	60	60
ACM-S00101-022	438	101.6	22.4	22.4	50.8	127	1.52	0.74	30	60
ACM-S00101-021	485.7	101.6	22.4	22.4	50.8	127	1.52	0.74	60	60
ACM-S00101-016	523.7	101.6	22.4	22.4	50.8	127	1.52	0.74	60	60
ACM-S00101-025	558.8	101.6	19.2	19.2	50.8	127	0.74	0.74	60	60
ACM-S00101-024	612.7	101.6	22.4	22.4	50.8	152.4	1.52	0.74	60	60

V SERIES

Liquid Receiver

V series receiver are usually installed on high pressure liquid line of refrigeration systems to store excessive refrigerant when the load of the system changes.

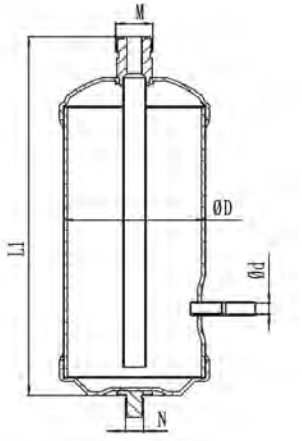
FEATURES

- THE INLET IS USE SOLDER CONNECTION AND OUTLET USES THREAD CONNECTION
- INTERNAL FLOW-OUT IS REALIZED BY SUCTION TUBE

GENERAL SPECIFICATIONS

- Applicable refrigerant: R22, R134a, R407C R404A, R507, R410A, R407A, R407F.
- Applicable medium temperature: -30°C~+120°C (-22°F~+240°F)
- Applicable ambient temperature: -35°C~ +60°C (-22°F~+131°F)
- Maximum working pressure: 3.5MPa
- Certification: UL, PED

TECHNICAL PARAMETERS



Model	M in	d		L	D		L		N
		in	mm		in	mm	in	mm	
LRA-V00076-017	3/4-16UNF-2A	0,256	6,5	0,75	3	76,2	8,27	210	screw 3/8-16UNC-2A
LRA-V00076-018	3/4-16UNF-2A	0,256	6,5	0,6	3	76,2	6,73	171	screw 3/8-16UNC-2A
LRA-V00127-016	3/4-16UNF-2A	0,256	6,5	2,1	5	127	009	221	screw 3/8-16UNC-2A
LRA-V00127-017	3/4-16UNF-2A	0,381	9,67	3,5	5	127	12,95	329	screw 3/8-16UNC-2A
LRA-V00153-004	3/4-16UNF-2A	0,381	9,67	5	6	152,4	12,95	329	screw 3/8-16UNC-2A
LRA-V00153-011	1-14UNS-2A	0,381	9,67	6	6	152,4	15,95	405	screw 3/8-16UNC-2A
LRA-V00153-012	1-14UNS-2A	0,506	12,85	8	6	152,4	19,96	507	screw 3/8-16UNC-2A

KCY SERIES

Suction line Accumulator (Compressor)

Applicable for household air conditioner compressor, the Accumulator is installed in front of the compressor to separate refrigerant and refrigeration oil and impurities not completely gasified by evaporators. It has functions of gas-liquid separation, liquid storage, oil return and noise reduction to ensure that the compressor would not be damaged by fluid impact.

FEATURES

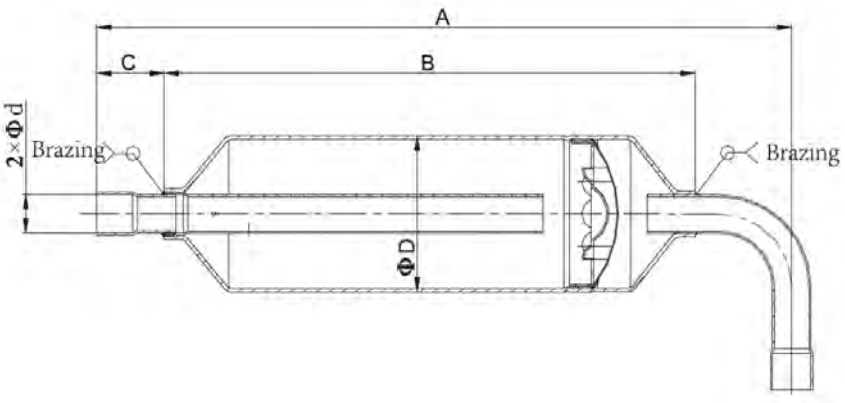
- CORROSION RESISTANCE: FINISHED WITH POWDER PAINTING SURVIVING 500 HOURS OF SALT SPRAY TEST
- LONG SERVICE LIFE: STEEL CASING, MORE ENDURABLE

GENERAL SPECIFICATIONS

- Applicable refrigerant: CFC,HCFC, HFC etc.
- Applicable medium temperature: -30°C~+120°C (-22°F~+240°F)
- Applicable ambient temperature: -30°C~ +65°C (-22°F~+131°F)
- Maximum working pressure: 4.8MPa
- Certification: UL and CSA

TECHNICAL PARAMETERS

Steel Receiver

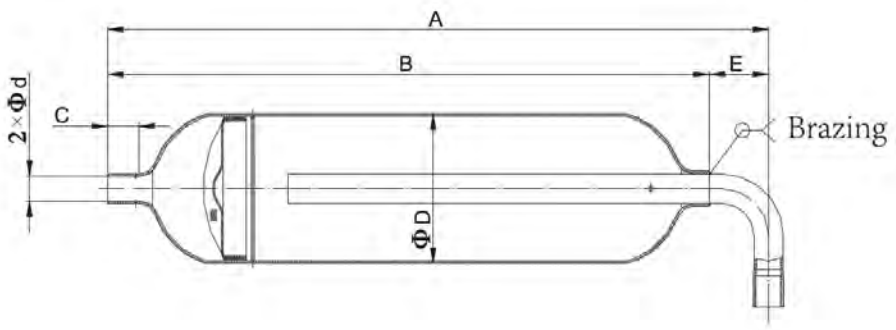


KCY SERIES
Suction line Accumulator (Compressor)

TECHNICAL PARAMETERS
Steel Receiver

Model	Dimensions					Connection Type
	D mm	B mm	A mm	C mm	d in	
KCY-FXX025	25,4	70~330	120~450	25~150	1/2, 1/4, 3/8	Solder Connection
KCY-FXX031	31,75	70~330	120~450	25~150	1/2, 1/4, 3/8	
KCY-FXX035	35	70~330	120~450	25~150	1/2, 1/4, 3/8	
KCY-FXX040	40	90~330	140~450	25~150	1/2, 1/4, 3/8	
KCY-FXX048	48	90~330	140~450	25~150	1/2, 1/4, 3/8	
KCY-FXX050	50,8	90~330	140~450	25~150	1/2, 1/4, 3/8	
KCY-FXX065	65	130~330	180~450	25~150	1/2, 1/4, 3/8	

DIMENSIONS
Copper Receiver



Model	Dimensions						Connection Type
	D mm	B mm	A mm	C mm	E mm	d in	
KCY-CXX025	25,4	70~330	120~450	5~15	25~150	1/2, 1/4, 3/8	Solder Connection
KCY-CXX030	30	70~330	120~450	5~15	25~150	1/2, 1/4, 3/8	
KCY-CXX031	31,75	70~330	120~450	5~15	25~150	1/2, 1/4, 3/8	
KCY-CXX035	35	90~330	140~450	5~15	25~150	1/2, 1/4, 3/8	
KCY-CXX041	41,3	90~330	140~450	5~15	25~150	1/2, 1/4, 3/8	
KCY-CXX048	48	90~330	140~450	5~15	25~150	1/2, 1/4, 3/8	
KCY-CXX050	50,8	130~330	180~450	5~15	25~150	1/2, 1/4, 3/8	
KCY-CXX057	57,2	130~330	180~450	5~15	25~150	1/2, 1/4, 3/8	

JYQ SERIES

Compensator

The Compensator is applicable for commercial air conditioner, freezing or deep-freezing equipment or other refrigeration circuits in order to open and to shut off inner flow path by operating the valve stem. It can also be used as service valve for vacuum pumping and refrigerant injection etc.

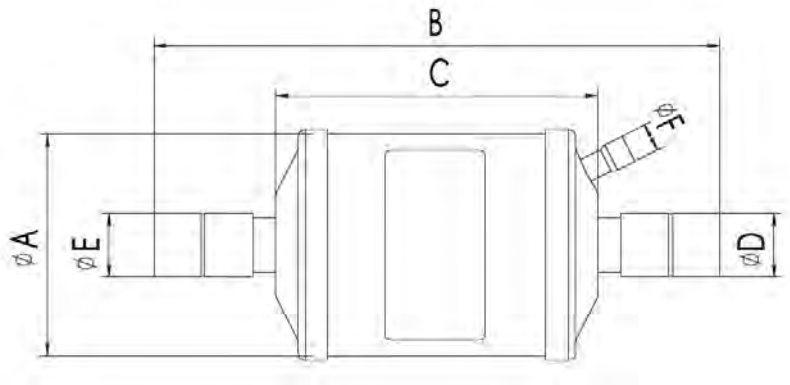
FEATURES

- SOLID COPPER SOLDER CONNECTION
- MINIMIZE PRESSURE DROP
- GUARANTEE THE MAXIMUM WORKING PRESSURE
- POWDER COATED SURFACE CAN SURVIVE 500 HOURS OF SALT SPRAY TEST
- EXCELLENT ANTI-SHOCK AND VIBRATION PERFORMANCE: USING STEEL CASING

GENERAL SPECIFICATIONS

- Applicable refrigerant: HFC, HCFC , HC and HFO
- Applicable medium temperature: -30°C~ +120°C (-22°F~+240°F)
- Applicable ambient temperature: -30°C~ +55°C (-22°F~+131°F)
- Maximum working pressure: 4.83MPa
- Certification: UL, CSA Declaración PED

DIMENSIONS TECHNICAL PARAMETERS



Note: 1) Please contact Sanhua representative for details regarding refrigerants.

JYQ SERIES
Compensator

TECHNICAL PARAMETERS

Model	Dimensions						Connection Type
	A mm	B mm	C mm	D in	E in	F in	
JYQ-A23060-901	89	182,6	84,6	6/8	6/8	3/8	Solder Connection
JYQ-A36060-901	89	226,5	128,5	6/8	6/8	3/8	
JYQ-A45060-901	89	258	160	6/8	6/8	3/8	
JYQ-A55060-901	89	280,4	182,7	6/8	6/8	3/8	
JYQ-A66060-901	89	306,3	208,3	6/8	6/8	3/8	
JYQ-A78060-901	89	358,4	260,4	6/8	6/8	3/8	
JYQ-A89060-901	89	402,8	304,8	6/8	6/8	3/8	
JYQ-B13060-901	89	463,8	365,8	6/8	6/8	3/8	
JYQ-A23070-901	89	182,6	84,6	7/8	7/8	3/8	
JYQ-A36070-901	89	226,5	128,5	7/8	7/8	3/8	
JYQ-A45070-901	89	258	160	7/8	7/8	3/8	
JYQ-A55070-901	89	280,4	182,7	7/8	7/8	3/8	
JYQ-A66070-901	89	306,3	208,3	7/8	7/8	3/8	
JYQ-A78070-901	89	358,4	260,4	7/8	7/8	3/8	
JYQ-A89070-901	89	402,8	304,8	7/8	7/8	3/8	
JYQ-B13070-901	89	463,8	365,8	7/8	7/8	3/8	

TXY/XYQ SERIES

Muffler

Muffler are used in refrigerating systems such as household air conditioners or commercial air conditioners. Muffler are installed in discharge line or other pipes with vibration and noise to eliminate and alleviate noises.

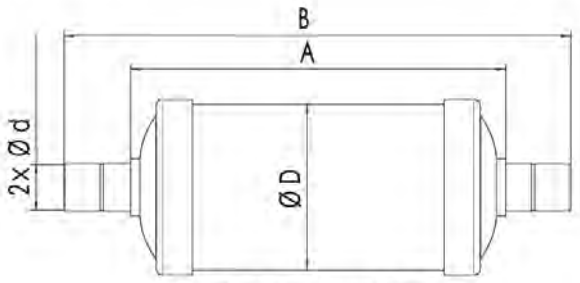
FEATURES

- CORROSION RESISTANT: FINISHED WITH EPOXY POWDER PAINTING
- EXCELLENT ANTI-SHOCK AND ANTI-VIBRATION PERFORMANCE WITH STEEL OR COPPER CASING

GENERAL SPECIFICATIONS

- Applicable refrigerant: HCFC,HFC and HC
- Applicable medium temperature: -30°C~+120°C (-22°F~+240°F)"
- Applicable ambient temperature: -30°C~ +55°C (-22°F~+131°F)"
- Maximum working pressure: 4.8MPa
- Certification: UL, CSA and PED declaration

TECHNICAL PARAMETERS

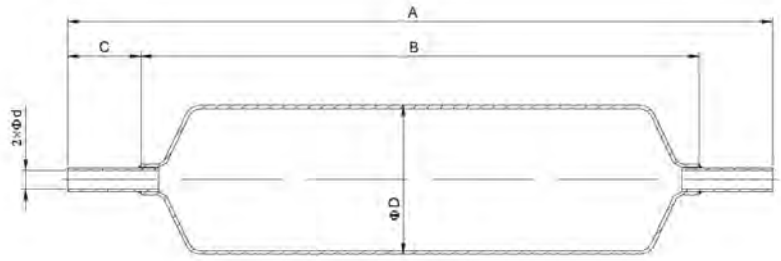


Regular Steel Muffler

Model	Dimensions					Connecction Type
	D mm	A mm	B mm	d in	d in	
TXY-A12040-002	65	76.2	154.4	1/2	1/2	Solder Connections
TXY-A29040-001	76	115.6	163.8	1/2	1/2	
TXY-A49040-001	76	190.5	238.7	1/2	1/2	
TXY-A30040-003	76	123.9	231.9	1/2	1/2	

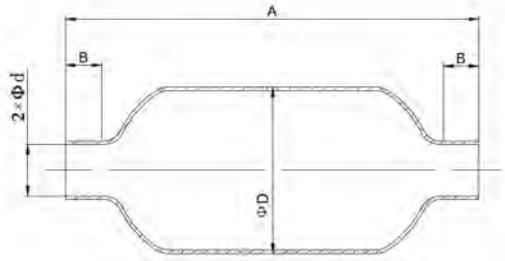
Note: 1) Please contact Sanhua representative for details regarding refrigerants.

TXY/XYQ SERIES
Muffler



Spun Steel Muffler

Model	Dimensions					Connecction Type
	D mm	A mm	B mm	C mm	d in	
XYQ-FXX025	25,4	70~330	120~450	25~150	1/2, 1/4, 3/8	Solder Connections
XYQ-FXX031	31,75	70~330	120~450	25~150	1/2, 1/4, 3/8	
XYQ-FXX035	35	70~330	120~450	25~150	1/2, 1/4, 3/8	
XYQ-FXX040	40	70~330	120~450	25~150	1/2, 1/4, 3/8	
XYQ-FXX048	48	90~330	120~450	25~150	1/2, 1/4, 3/8	
XYQ-FXX050	50,8	90~330	120~450	25~150	1/2, 1/4, 3/8	
XYQ-FXX065	65	130~330	120~450	25~150	1/2, 1/4, 3/8	



Spun Copper Muffler

Model	Dimensions				Connecction Type
	D mm	B mm	A mm	d in	
XYQ-CXX025	25,4	5~15	70~330	1/2, 1/4, 3/8	Solder Connections
XYQ-CXX030	30	5~15	70~330	1/2, 1/4, 3/8	
XYQ-CXX031	31,75	5~15	70~330	1/2, 1/4, 3/8	
XYQ-CXX035	35	5~15	70~330	1/2, 1/4, 3/8	
XYQ-CXX041	41,3	5~15	90~330	1/2, 1/4, 3/8	
XYQ-CXX048	48	5~15	90~330	1/2, 1/4, 3/8	
XYQ-CXX050	50,8	5~15	90~330	1/2, 1/4, 3/8	

Y SERIES

Pressure Vessel

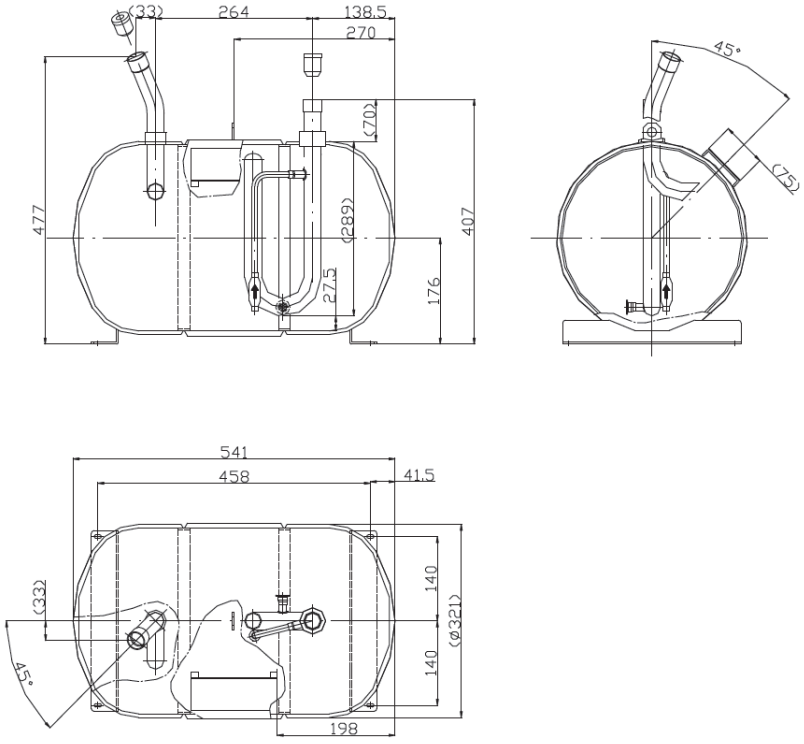
FEATURES

- THE DESIGN, MANUFACTURING AND INSPECTION IS BASED ON NB/T 47012 AND TSG R0004 STANDARD
- THE WELDING IS GOVERNED BY JB/T 4709
- THE INSPECTION OF WELDING LINE IS GOVERNED BY GRADE II IN JB/T 4730.2 WITH X-RAY.
- THE PRESSURE TEST IS FOLLOWING NB/T 47012

GENERAL SPECIFICATIONS

- Type of the vessel: D2
- Maximum operating pressure: 10 MPa
- Material of the main pressure parts: Carbon Steel and stainless steel
- Applicable refrigerant: as per customer
- Diameter range of body: Φ150 ~ Φ700 mm
- Maximum length of the product: 4000 mm

TECHNICAL PARAMETERS



GZJ SERIES

Assembly

GZJ series piping assembly is applicable for heat pump air conditioning systems such as room air conditioners to provide flow path for refrigerant.

FEATURES

- ALL HAVE BEEN TESTED AGAINST AIR TIGHTNESS TO ENSURE NO LEAKAGE UPON DELIVERY
- COMPLETE PERFORMANCE TEST ON VALVES SUCH AS 4-WAY VALVES AND ELECTRONIC EXPANSION VALVES TO ENSURE THE PRODUCT PERFORMANCE UPON DELIVERY

GENERAL SPECIFICATIONS

- Applicable refrigerant: HFC, HCFC and CFC etc.
- Applicable medium temperature: -30°C~+120°C
- Maximum working pressure: R22, R407C: 3MPa R410A: 4.15MPa

TECHNICAL PARAMETERS

Item	Refrigerant	Standard
Content of undissolved impurites	R22	≤5mg
	R407C	≤5mg
	R410A	≤5mg
Content of mineral oil	R22	≤20mg
	R407C	≤15mg
	R410A	≤15mg
Content of chloride ion	R22	/
	R407C	≤5PPM
	R410A	

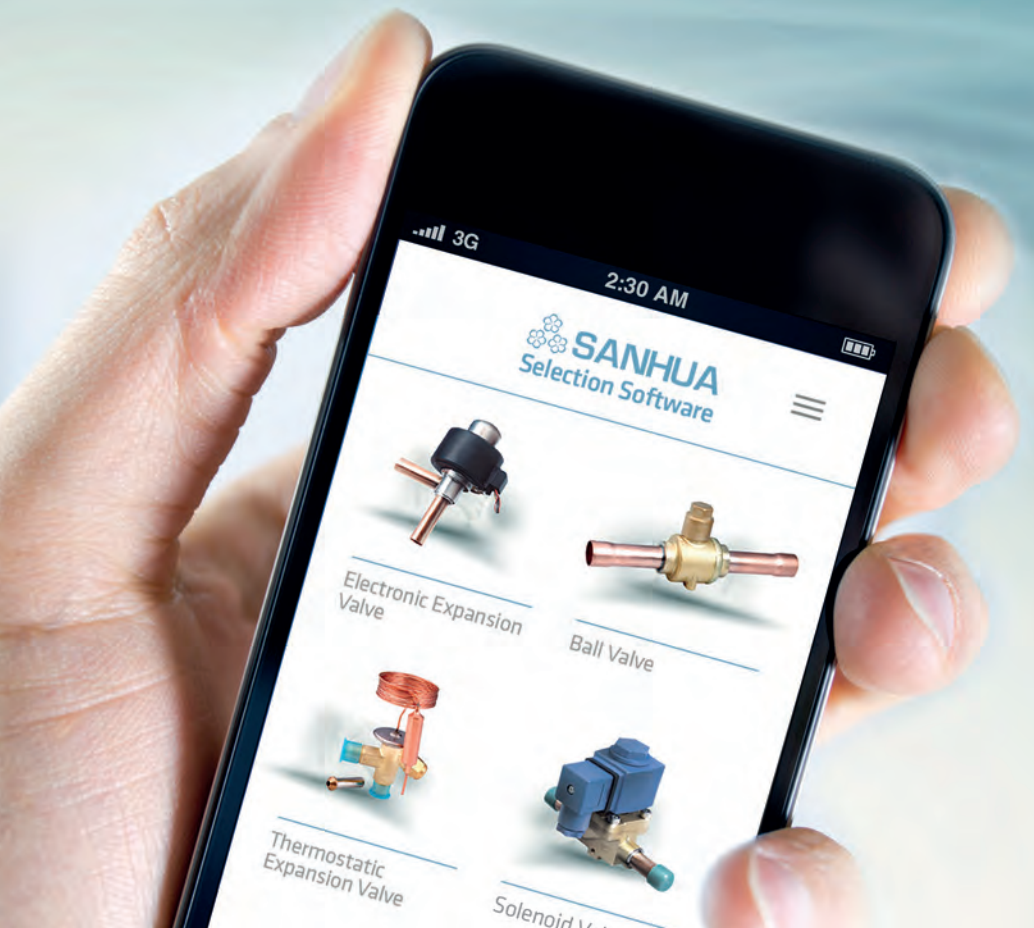
DIMENSIONS

Due to the particularity of pipe components, the installation position, product structure and connection size required by different customers differs, even those required by different model of products of one customer differs. Therefore, product structure and interface size are varied subject to the specific customer and product model.

WE ANNOUNCE SELECTION TOOL APP

SANHUA

This app offers you suggestions for the **selection of refrigeration** and air-conditioning components based on the user's requirements or on standard operating conditions in common refrigeration and A/C system.



Available also as internet Windows App
www.sanhuaclimate.com

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