***RFGD** SERIES*

THERMOSTATIC EXPANSION VALVE

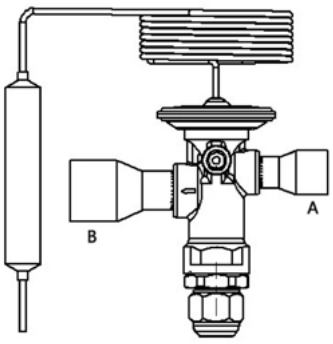
RFGD series thermostatic expansion valves are used to adjust mass flow of refrigerant into the evaporator while controlling the refrigerant´s superheat at the outlet of the evaporator. They can be used for various refrigerants under all working conditions. Typical applications are refrigeration systems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

FEATURES

- COMPACT DESIGN WITH BUILD-IN ORIFICE
- DOUBLE DIAPHRAGM DESIGN
- 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
- WIDE CAPACITIES RANGE SPLIT IN 9 ORIFICES SIZES:
  - RFGD10: (ORIFICES 1 TO 6)
  - RFGD20: (ORIFICES 7 TO 9)

GENERAL SPECIFICATION

- Applicable for all common HCFC and HFC refrigerants such as: R22, R134a, R404A, R507A, R407C, R410A; R448A/R449A, R452A, R513A, R407A with an appropriate SH adjustment
- Ambient temperature min./max.: -35/+55°C
- Medium temperature TS min./max.: -40°C / +70°C
- Max. operating pressure PS: 4.8 Mpa[1)]
- Installation position:
  - Preferably valve head upwards
  - Main flow direction from inlet A to outlet B
- Certifications: UL/CSA and PED declaration



THERMOSTATIC EXPANSION VALVE

TECHNICAL PARAMETERS

- RFGD valves are available in straight shape with adjustable superheat on site
- RFGD valves are available with the different solder and flare connections (see more details in following tables)
- RFGD valves are available with 2 different temperature ranges:
  - from -40°C to +10°C
  - from -25°C to +10°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 -25°C to +10°C: MOP: +15°C

MODEL DESIGNATION LEGEND

Position Number	Model Designation Legend	
1	**Product Code**	**Product Series**
	RFGD	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	**Capacity**	**Description**
	X.X	Nominal valve capacity in tons
5	**Miscellaneous**	**Description**
	xxx	Digits for additional information

THERMOSTATIC EXPANSION VALVE

MODEL DESIGNATION EXAMPLE

Position Number					According to Model Designation Legend
1	2	3	4	5	
RFGD	04	E	1.5	xxx	Thermostatic expansion valve with build-in orifice
RFGD	**04**	E	1.5	xxx	Refrigerant: R134a
RFGD	04	**E**	1.5	xxx	With connection for external pressure equalization
RFGD	04	E	**1.5**	xxx	Capacity: Valve and orifice size **3**
RFGD	04	E	1.5	**xxx**	Digits for additional information

MODELS DESIGNATION (VALVE HEAD)

Code	Description
GD04E-1.5-1601	Model
-40/10°C	Evaporating temperature (°C)
-40/+50°F	Evaporating temperature (°F)
R134a	Refrigerant
MWP 4.8 Mpa	Max. Working Pressure (MPa)
MWP 695 psig	Max. Working Pressure (Psig)

THERMOSTATIC EXPANSION VALVE

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(E)-1	3,0	10,6	RFGD 02(E)-1	2,5	8,8	RFGD 03(E)-1	2,0	7,0	RFGD 04(E)-1	1,5	5,3	RFGD 05(E)-1	3,5	12,3
RFGD 01(E)-2	4,0	14,1	RFGD 02(E)-2	3,5	12,3	RFGD 03(E)-2	2,5	8,8	RFGD 04(E)-2	2,5	8,8	RFGD 05(E)-2	4,5	15,8
RFGD 01(E)-3	6,0	12,1	RFGD 02(E)-3	5,0	17,6	RFGD 03(E)-3	4,0	14,1	RFGD 04(E)-3	3,5	12,3	RFGD 05(E)-3	6,5	22,9
RFGD 01(E)-4	7,5	26,4	RFGD 02(E)-4	7,0	24,6	RFGD 03(E)-4	5,0	17,6	RFGD 04(E)-4	4,5	15,8	RFGD 05(E)-4	9,0	31,7
RFGD 01(E)-5	9,0	31,7	RFGD 02(E)-5	8,5	29,9	RFGD 03(E)-5	6,0	21,1	RFGD 04(E)-5	5,5	19,3	RFGD 05(E)-5	11,0	38,7
RFGD 01(E)-6	11,0	38,7	RFGD 02(E)-6	10,0	35,2	RFGD 03(E)-6	7,5	26,4	RFGD 04(E)-6	7,0	24,6	RFGD 05(E)-6	13,0	45,7
RFGD 01(E)-7	12,0	42,2	RFGD 02(E)-7	12,0	42,2	RFGD 03(E)-7	9,0	31,7	RFGD 04(E)-7	8,0	28,1	RFGD 05(E)-7	15,0	52,8
RFGD 01(E)-8	15,0	52,8	RFGD 02(E)-8	15,0	52,8	RFGD 03(E)-8	11,0	38,7	RFGD 04(E)-8	10,0	35,2	RFGD 05(E)-8	19,0	66,8
RFGD 01(E)-9	18,0	63,3	RFGD 02(E)-9	18,0	63,3	RFGD 03(E)-9	13,0	45,7	RFGD 04(E)-9	12,0	42,2	RFGD 05(E)-9	23,0	80,9

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: 4 K
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

THERMOSTATIC EXPANSION VALVE

RFGD MODELS

RFGD range allow high level of customization on request considering parameters indicated in table below. Contact Sanhua to request specific model not included on standard range.

Model Name										Temperature Range	
Refrigerant	Valve Body	Capacity Size	Inlet		Outlet		Pressure Equal.			-40°C to +10°C	-25°C to +10°C
			[mm]	[inch]	[mm]	[inch]	w/equal	[mm]	[inch]		
R22 R407C R404A/R507 R134a R410A	RFGD01 RFGD02 RFGD03 RFGD04 RFGD05	1- 2- 3- 4- 5- 6-	10	-	16	-	-	6	-	No MOP	MOP: +15°C
			12	-	22	-		6	-		
			16		22			6	-		
			-	3/8	-	5/8		-	1/4		
			-	1/2	-	7/8		-	1/4		
				5/8		7/8		-	1/4		
		7- 8- 9-	16		22		-	6			
			16		28			6			
			16		28			6			
			22		28			6			
			22		28			6			
			22		35			6			
				5/8		7/8			1/4		
				5/8		1-1/8			1/4		
				5/8		1-1/8			1/4		
				7/8		1-1/8			1/4		
				7/8		1-1/8			1/4		
				7/8		1-3/8			1/4		

THERMOSTATIC EXPANSION VALVE

RFGD STANDARD RANGE

A) Models with Metric Connections

RFGD10 (orifice 1-6) -40°C to +10°C (Models without MOP)

Ref.	Valve Body	Capacity Size All Sizes	Connections IN x OUT		Pressure Equal.	Model Name	Product Number U11 Code Multi-Pack
			Metric	[mm]	[mm]		
R407C	RFGD 02E	1 -	M10/16	10 x 16	6	RFGD02E-2.5-1202	10205200202
		2 -	M12/22	12 x 22	6	RFGD02E-3.5-1206	10205200402
		3 -	M12/22	12 x 22	6	RFGD02E-5.0-1212	10205200602
		4 -	M16/22	12 x 22	6	RFGD02E-7.0-1219	10205200802
		5 -	M16/22	16 x 22	6	RFGD02E-8.5-1221	10205201002
		6 -	M16/22	16 x 22	6	RFGD02E-10.0-1224	10205234502
R404A / R507	RFGD 03E	1 -	M10/16	10 x 16	6	RFGD03E-2.0-1402	10205240402
		2 -	M12/22	12 x 22	6	RFGD03E-2.5-1404	10205235202
		3 -	M12/22	12 x 22	6	RFGD03E-4.0-1408	10205235402
		4 -	M16/22	12 x 22	6	RFGD03E-5.0-1411	10205235602
		5 -	M16/22	16 x 22	6	RFGD03E-6.0-1414	10205235802
		6 -	M16/22	16 x 22	6	RFGD03E-7.5-1417	10205235902
R134a	RFGD 04E	1 -	M10/16	10 x 16	6	RFGD04E-1.5-1601	10205240602
		2 -	M12/22	12 x 22	6	RFGD04E-2.5-1604	10205236102
		3 -	M12/22	12 x 22	6	RFGD04E-3.5-1609	10205236202
		4 -	M16/22	12 x 22	6	RFGD04E-4.5-1613	10205236302
		5 -	M16/22	16 x 22	6	RFGD04E-5.5-1616	10205236402
		6 -	M16/22	16 x 22	6	RFGD04E-7.0-1618	10205236502
R410A	RFGD 05E	1 -	M10/16	10 x 16	6	RFGD05E-3.5-1802	10205231402
		2 -	M12/22	12 x 22	6	RFGD05E-4.5-1806	10205236602
		3 -	M12/22	12 x 22	6	RFGD05E-6.5-1812	10205236802
		4 -	M16/22	16 x 22	6	RFGD05E-9.0-1816	10205236902
		5 -	M16/22	16 x 22	6	RFGD05E-11.0-1819	10205220202
		6 -	M16/22	16 x 22	6	RFGD05E-13.0-1824	10205220302

THERMOSTATIC EXPANSION VALVE

RFGD STANDARD RANGE

B) Models with Metric Connections

RFGD20 (orifice 7-9) -40°C to +10°C (Models without MOP)

Ref.	Valve Body	Capacity Size All Sizes	Connections IN x OUT		Pressure Equal.	Model Name	Product Number U11 Code Multi-Pack
			Metric	[mm]	[mm]		
R407C	RFGD 02E -	7 -	M16/22	16 x 22	6	RFGD02E-12.0-565A	RFGD0011402
		7 -	M16/28	16 x 28	6	RFGD02E-12.0-544A	RFGD0004602
		8 -	M16/28	16 x 28	6	RFGD02E-15.0-546A	RFGD0004702
		8 -	M22/28	22 x 28	6	RFGD02E-15.0-548A	RFGD0004802
		9 -	M22/28	22 x 28	6	RFGD02E-18.0-550A	RFGD0011502
		9 -	M22/35	22 x 35	6	RFGD02E-18.0-566A	RFGD0014702
R404A / R507	RFGD 03E -	7 -	M16/22	16 x 22	6	RFGD03E-9.0-563A	RFGD0015702
		8 -	M16/28	16 x 28	6	RFGD03E-11.0-536A	RFGD0015002
		8 -	M22/28	22 x 28	6	RFGD03E-11.0-538A	RFGD0016502
		9 -	M22/28	22 x 28	6	RFGD03E-13.0-540A	RFGD0015302
		9 -	M22/35	22 x 35	6	RFGD03E-13.0-564A	RFGD0004902
R134a	RFGD 04E -	7 -	M16/22	16 x 22	6	RFGD04E-8.0-559A	RFGD0004202
		7 -	M16/28	16 x 28	6	RFGD04E-8.0-503A	RFGD0017102
		8 -	M16/28	16 x 28	6	RFGD04E-10.0-515A	RFGD0017102
		8 -	M22/28	22 x 28	6	RFGD04E-10.0-521A	RFGD0016202
		9 -	M22/28	22 x 28	6	RFGD04E-12.0-523A	RFGD0008302
R410A	RFGD 05E -	7 -	M16/22	16 x 22	6	RFGD05E-15.0-567A	RFGD0017602
		7 -	M16/28	16 x 28	6	RFGD05E-15.0-552A	RFGD0017502
		8 -	M16/28	16 x 28	6	RFGD05E-19.0-553A	RFGD0006502
		9 -	M22/28	22 x 28	6	RFGD05E-23.0-556A	RFGD0018102
		9 -	M22/35	22 x 35	6	RFGD05E-23.0-568A	RFGD0005002

THERMOSTATIC EXPANSION VALVE

RFGD STANDARD RANGE

C) Models with Metric Connections

RFGD20 (orifice 7-9) -25°C to +10°C with MOP +15°C

Ref.	Valve Body	Capacity Size All Sizes	Connections IN x OUT		Pressure Equal.	Model Name	Product Number U11 Code Multi-Pack
			Metric	[mm]	[mm]		
R407C	RFGD 02E -	7 -	M16/22	16 x 22	6	RFGD02E-12.0-663A	RFGD0012902
		7 -	M16/28	16 x 28	6	RFGD02E-12.0-639A	RFGD0014402
		8 -	M16/28	16 x 28	6	RFGD02E-15.0-641A	RFGD0014502
		8 -	M22/28	22 x 28	6	RFGD02E-15.0-643A	RFGD0014602
		9 -	M22/28	22 x 28	6	RFGD02E-18.0-645A	RFGD0014802
		9 -	M22/35	22 x 35	6	RFGD02E-18.0-664A	RFGD0014902
R404A / R507	RFGD 03E -	7 -	M16/22	16 x 22	6	RFGD03E-9.0-661A	RFGD0016002
		7 -	M16/28	16 x 28	6	RFGD03E-9.0-629A	RFGD0015902
		8 -	M16/28	16 x 28	6	RFGD03E-11.0-631A	RFGD0015102
		8 -	M22/28	22 x 28	6	RFGD03E-11.0-633A	RFGD0015202
		9 -	M22/28	22 x 28	6	RFGD03E-13.0-635A	RFGD0015502
		9 -	M22/35	22 x 35	6	RFGD03E-13.0-662A	RFGD0015602
R134a	RFGD 04E -	7 -	M16/22	16 x 22	6	RFGD04E-8.0-657A	RFGD0001502
		7 -	M16/28	16 x 28	6	RFGD04E-8.0-603A	RFGD0001602
		8 -	M16/28	16 x 28	6	RFGD04E-10.0-605A	RFGD0016302
		8 -	M22/28	22 x 28	6	RFGD04E-10.0-607A	RFGD0011602
		9 -	M22/28	22 x 28	6	RFGD04E-12.0-609A	RFGD0016702
		9 -	M22/35	22 x 35	6	RFGD04E-12.0-658A	RFGD0017002
R410A	RFGD 05E -	7 -	M16/22	16 x 22	6	RFGD05E-15.0-665A	RFGD0017802
		7 -	M16/28	16 x 28	6	RFGD05E-15.0-649A	RFGD0017702
		8 -	M16/28	16 x 28	6	RFGD05E-19.0-651A	RFGD0017902
		8 -	M22/28	22 x 28	6	RFGD05E-19.0-653A	RFGD0018002
		9 -	M22/28	22 x 28	6	RFGD05E-23.0-655A	RFGD0018202
		9 -	M22/35	22 x 35	6	RFGD05E-23.0-666A	RFGD0018302

THERMOSTATIC EXPANSION VALVE

RFGD STANDARD RANGE

D) Models with Imperial Connections

RFGD10 (orifice 1-6) -40°C to +10°C (Models without MOP)

Ref.	MWP [MPa]	Valve Body	Capacity Size All Sizes	Connections IN x OUT		Pressure Equal.	Model Name	Product Number U11 Code Multi-Pack
				Imperial	[inch]	[inch]		
R407C	2,8	RFGD 02E	1 -	3/5	3/8 x 5/8	1/4	RFGD02E-2.5-1200	10205200102
			2 -	4/7	1/2 x 7/8	1/4	RFGD02E-3.5-1205	10205200302
			3 -	4/7	1/2 x 7/8	1/4	RFGD02E-5.0-1209	10205200502
			4 -	5/7	5/8 x 7/8	1/4	RFGD02E-7.0-1217	10205200702
			5 -	5/7	5/8 x 7/8	1/4	RFGD02E-8.5-1220	10205200902
			6 -	5/7	5/8 x 7/8	1/4	RFGD02E-10.0-1222	10205215102
R404A / R507	3,5	RFGD 03E	1 -	3/5	3/8 x 5/8	1/4	RFGD03E-2.0-1401	10205240302
			2 -	4/7	1/2 x 7/8	1/4	RFGD03E-2.5-1403	10205235102
			3 -	4/7	1/2 x 7/8	1/4	RFGD03E-4.0-1407	10205235302
			4 -	5/7	5/8 x 7/8	1/4	RFGD03E-5.0-1410	10205235502
			5 -	5/7	5/8 x 7/8	1/4	RFGD03E-6.0-1413	10205235702
			6 -	5/7	5/8 x 7/8	1/4	RFGD03E-7.5-1416	10205215002
R134a	2,1	RFGD 04E	1 -	3/5	3/8 x 5/8	1/4	RFGD04E-1.5-1600	10205240502
			2 -	4/7	1/2 x 7/8	1/4	RFGD04E-2.5-1603	10205236002
			3 -	4/7	1/2 x 7/8	1/4	RFGD04E-3.5-1607	10205220902
			4 -	5/7	5/8 x 7/8	1/4	RFGD04E-4.5-1612	10205221002
			5 -	5/7	5/8 x 7/8	1/4	RFGD04E-5.5-1615	10205221102
			6 -	5/7	5/8 x 7/8	1/4	RFGD04E-7.0-1617	10205221202
R410A	4,5	RFGD 05E	1 -	3/5	3/8 x 5/8	1/4	RFGD05E-3.5-1800	10205231302
			2 -	4/7	1/2 x 7/8	1/4	RFGD05E-4.5-1805	10205233502
			3 -	4/7	1/2 x 7/8	1/4	RFGD05E-6.5-1809	10205236702
			4 -	5/7	5/8 x 7/8	1/4	RFGD05E-9.0-1815	10205217402
			5 -	5/7	5/8 x 7/8	1/4	RFGD05E-11.0-1818	10205215302
			6 -	5/7	5/8 x 7/8	1/4	RFGD05E-13.0-1822	10205215402

THERMOSTATIC EXPANSION VALVE

RFGD STANDARD RANGE

E) Models with Imperial Connections

RFGD20 (orifice 7-9) -40°C to +10°C (Models without MOP)

Ref.	Valve Body	Capacity Size All Sizes	Connections IN x OUT		Pressure Equal.	Model Name	Product Number U11 Code Multi-Pack
			Imperial	[inch]	[inch]		
R407C	RFGD 02E -	7 -	5/7	5/8 x 7/8	1/4	RFGD02E-12.0-542A	RFGD0005102
		7 -	5/9	5/8 x 1-1/8	1/4	RFGD02E-12.0-543A	RFGD0018802
		8 -	5/9	5/8 x 1-1/8	1/4	RFGD02E-15.0-545A	RFGD0002402
		8 -	7/9	7/8 x 1-1/8	1/4	RFGD02E-15.0-547A	RFGD0005202
		9 -	7/9	7/8 x 1-1/8	1/4	RFGD02E-18.0-549A	RFGD0005302
		9 -	7/11	7/8 x 1-3/8	1/4	RFGD02E-18.0-551A	RFGD0018902
R404A / R507	RFGD 03E -	7 -	5/7	5/8 x 7/8	1/4	RFGD03E-9.0-532A	RFGD0003902
		7 -	5/9	5/8 x 1-1/8	1/4	RFGD03E-9.0-533A	RFGD0002802
		8 -	7/9	7/8 x 1-1/8	1/4	RFGD03E-11.0-537A	RFGD0002902
		9 -	7/9	7/8 x 1-1/8	1/4	RFGD03E-13.0-539A	RFGD0004102
		9 -	7/11	7/8 x 1-3/8	1/4	RFGD03E-13.0-541A	RFGD0003002
R134a	RFGD 04E -	7 -	5/7	5/8 x 7/8	1/4	RFGD04E-8.0-501A	RFGD0005402
		7 -	5/9	5/8 x 1-1/8	1/4	RFGD04E-8.0-502A	RFGD0003302
		8 -	5/9	5/8 x 1-1/8	1/4	RFGD04E-10.0-504A	RFGD0001002
		8 -	7/9	7/8 x 1-1/8	1/4	RFGD04E-10.0-520A	RFGD0003102
		9 -	7/9	7/8 x 1-1/8	1/4	RFGD04E-12.0-522A	RFGD0003402
		9 -	7/11	7/8 x 1-3/8	1/4	RFGD04E-12.0-524A	RFGD0003202
R410A	RFGD 05E -	7 -	5/7	5/8 x 7/8	1/4	RFGD05E-15.0-510A	RFGD0002502
		7 -	5/9	5/8 x 1-1/8	1/4	RFGD05E-15.0-511A	RFGD0005502
		8 -	5/9	5/8 x 1-1/8	1/4	RFGD05E-19.0-512A	RFGD0002602
		8 -	7/9	7/8 x 1-1/8	1/4	RFGD05E-19.0-517A	RFGD0005602
		9 -	7/9	7/8 x 1-1/8	1/4	RFGD05E-23.0-555A	RFGD0002702
		9 -	7/11	7/8 x 1-3/8	1/4	RFGD05E-23.0-557A	RFGD0005702

THERMOSTATIC EXPANSION VALVE

RFGD STANDARD RANGE

F) Models with Imperial Connections

RFGD20 (orifice 7-9) -25°C to +10°C with MOP +15°C

Ref.	Valve Body	Capacity Size All Sizes	Connections IN x OUT		Pressure Equal.	Model Name	Product Number U11 Code Multi-Pack
			Imperial	[inch]	[inch]		
R407C	RFGD 02E -	7 -	5/7	5/8 x 7/8	1/4	RFGD02E-12.0-637A	RFGD0003502
		7 -	5/9	5/8 x 1-1/8	1/4	RFGD02E-12.0-638A	RFGD0003602
		8 -	5/9	5/8 x 1-1/8	1/4	RFGD02E-15.0-640A	RFGD0018502
		8 -	7/9	7/8 x 1-1/8	1/4	RFGD02E-15.0-642A	RFGD0003702
		9 -	7/9	7/8 x 1-1/8	1/4	RFGD02E-18.0-644A	RFGD0005802
		9 -	7/11	7/8 x 1-3/8	1/4	RFGD02E-18.0-646A	RFGD0003802
R404A / R507	RFGD 03E -	7 -	5/7	5/8 x 7/8	1/4	RFGD03E-9.0-627A	RFGD0015802
		7 -	5/9	5/8 x 1-1/8	1/4	RFGD03E-9.0-628A	RFGD0012302
		8 -	5/9	5/8 x 1-1/8	1/4	RFGD03E-11.0-630A	RFGD0018602
		8 -	7/9	7/8 x 1-1/8	1/4	RFGD03E-11.0-632A	RFGD0012402
		9 -	7/9	7/8 x 1-1/8	1/4	RFGD03E-13.0-634A	RFGD0015402
		9 -	7/11	7/8 x 1-3/8	1/4	RFGD03E-13.0-636A	RFGD0011102
R134a	RFGD 04E -	7 -	5/7	5/8 x 7/8	1/4	RFGD04E-8.0-601A	RFGD0005902
		7 -	5/9	5/8 x 1-1/8	1/4	RFGD04E-8.0-602A	RFGD0017202
		8 -	5/9	5/8 x 1-1/8	1/4	RFGD04E-10.0-604A	RFGD0014202
		8 -	7/9	7/8 x 1-1/8	1/4	RFGD04E-10.0-606A	RFGD0006002
		9 -	7/9	7/8 x 1-1/8	1/4	RFGD04E-12.0-608A	RFGD0006102
		9 -	7/11	7/8 x 1-3/8	1/4	RFGD04E-12.0-610A	RFGD0006402
R410A	RFGD 05E -	7 -	5/7	5/8 x 7/8	1/4	RFGD05E-15.0-647A	RFGD0018402
		7 -	5/9	5/8 x 1-1/8	1/4	RFGD05E-15.0-648A	RFGD0004302
		8 -	5/9	5/8 x 1-1/8	1/4	RFGD05E-19.0-650A	RFGD0007202
		8 -	7/9	7/8 x 1-1/8	1/4	RFGD05E-19.0-652A	RFGD0004402
		9 -	7/9	7/8 x 1-1/8	1/4	RFGD05E-23.0-654A	RFGD0006302
		9 -	7/11	7/8 x 1-3/8	1/4	RFGD05E-23.0-656A	RFGD0004502

THERMOSTATIC EXPANSION VALVE

RFGD STANDARD RANGE

G) Models with Flare Connections

RFGD20 -40°C to +10°C without MOP

Ref.	Valve Body	Capacity Size All Sizes	Connections			Model Name	Product Number U11 Code Multi-Pack
			Flare	INxOUTxE	Flare Type		
R134a	RFGD 04E -	7 -	I5/6	5/8×3/4×1/4	MIOxMIOxMIO	RFGD04E-8.0-525A	RFGD0013802
		8 -	I5/6	5/8×3/4×1/4	MIOxMIOxMIO	RFGD04E-10.0-526A	RFGD0018702
		8 -	S5/6	5/8×3/4×1/4	SAExSAExSAE	RFGD04E-10.0-527A	RFGD0006202
		9 -	I5/6	5/8×3/4×1/4	MIOxMIOxMIO	RFGD04E-12.0-528A	RFGD0013902

Connections

1) MIO: Inlet = 7/8-14UNF-2A ; Outlet = 17/16-14UNS-2A ; Ext. Equalization port = 7/16-20UNF-2A
2) SAE: Inlet = 7/8-14UNF-2A ; Outlet = 17/16-14UNS-2A ; Ext. Equalization port = 7/16-20UNF-2A

H) Models with Flare Connections

RFGD20 -25°C to +10°C with MOP +15°C

Ref.	Valve Body	Capacity Size All Sizes	Connections			Model Name	Product Number U11 Code Multi-Pack
			Flare	INxOUTxE	Flare Type		
R134a	RFGD 04E -	7 -	I5/6	5/8×3/4×1/4	MIOxMIOxMIO	RFGD04E-8.0-611A	RFGD0017302
		7 -	S5/6	5/8×3/4×1/4	SAExSAExSAE	RFGD04E-8.0-612A	RFGD0017402
		8 -	I5/6	5/8×3/4×1/4	MIOxMIOxMIO	RFGD04E-10.0-613A	RFGD0014302
		8 -	S5/6	5/8×3/4×1/4	SAExSAExSAE	RFGD04E-10.0-614A	RFGD0016602
		9 -	S5/6	5/8×3/4×1/4	SAExSAExSAE	RFGD04E-12.0-615A	RFGD0016802
		9 -	O5/6	5/8×3/4×1/4	ORFSxORFSxSAE	RFGD04E-12.0-616A	RFGD0016902

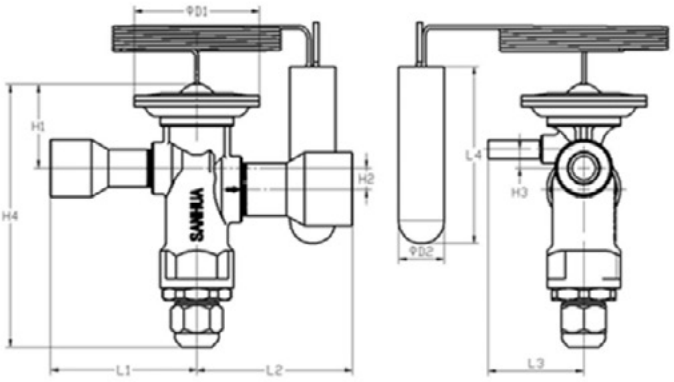
Connections

1) MIO: Inlet = 7/8-14UNF-2A ; Outlet = 17/16-14UNS-2A ; Ext. Equalization port = 7/16-20UNF-2A
2) SAE: Inlet = 7/8-14UNF-2A ; Outlet = 17/16-14UNS-2A ; Ext. Equalization port = 7/16-20UNF-2A
3) ORFS: Inlet = 1-14UNS-2A; Outlet = 1-3/16-12UN-2A; Ext. Equalization port = 7/16-20UNF-2A

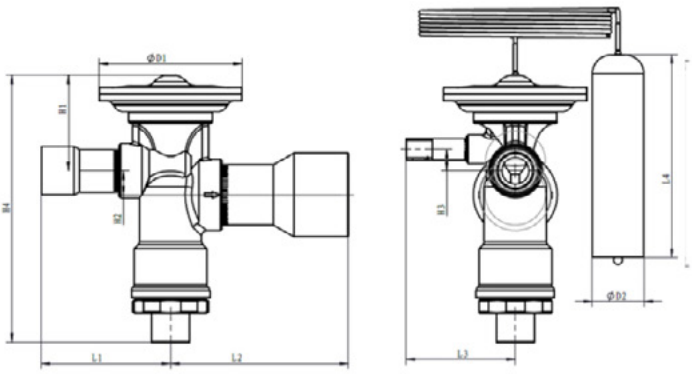
THERMOSTATIC EXPANSION VALVE

DIMENSIONS

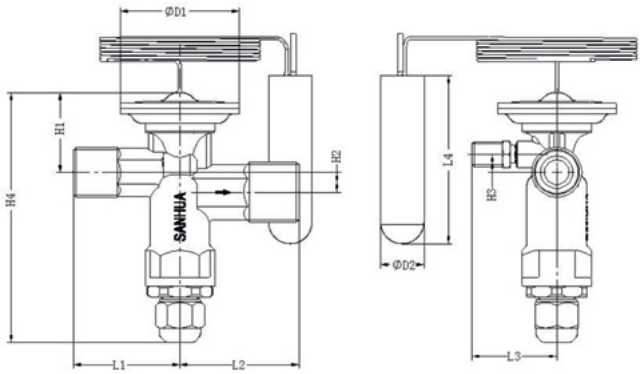
RFGD10



RFGD20



Model	Connections		Capillary	Dimensions [mm]									
	Imperial	Metric		H1	H2	H3	H4	L1	L2	L3	L4	ΦD1	ΦD2
	[inch]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
RFGD10	3/8×5/8	10×16	1.5	30	7.5	5	93	41.5	45.5	37.5	67	45	14.5
	1/2×7/8	12×22						41.5	59.5				
	5/8×7/8	16×22						45.5	59.5				
RFGD20	5/8×7/8	16×22	1.5	35.5	9	8	99.31	48	62	40.5	75	53	19.2
	5/8×1-1/8	16×28						48	66				
	7/8×1-1/8	22×28						62	66				
	7/8×1-3/8	22×35						62	66				



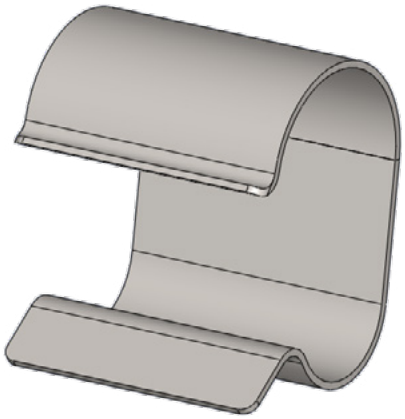
Model	Connections	Capillary	Dimensions [mm]									
	Flare		H1	H2	H3	H4	L1	L2	L3	L4	ΦD1	ΦD2
	Inlet x Out x Ext. E	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
RFGD20	5/8×3/4×1/4MIO	1.5	32	9	8	111	47.5	53	37.7	75	53	19,2
	5/8×3/4×1/4SAE											
	5/8×3/4 ORFS×1/4											

THERMOSTATIC EXPANSION VALVE

ACCESSORIES

All the RFGC06 models listed in this datasheet are equipped with copper stripe to fix the bulb suitable for a wide range of pipe diameters on suction line piping.

As an alternative Sanhua offers clips suitable for pipes with different diameters. It can be ordered as accessories: models and ordering codes are visible in the table below.

Picture	Type / Pipe	Model	Ordering Number (U11)	Quantity per Pack
	Stripe	RFK-000-019013	20201012702	160
	Clip [6 mm]	RFK-000-025024	20205202201	500
	Clip [8 mm]	RFK-000-025022	20205202001	
	Clip [10 mm]	RFK-000-025021	20205201901	
	Clip [12 mm]	RFK-000-025023	20205202101	
	Clip [1/4"]	RFK-000-025024	20205202201	
	Clip [5/16" mm]	RFK-000-025022	20205202001	
	Clip [3/8" mm]	RFK-000-025021	20205201901	
	Clip [1/2" mm]	RFK-000-025023	20205202101	