

SYJ SERIES**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

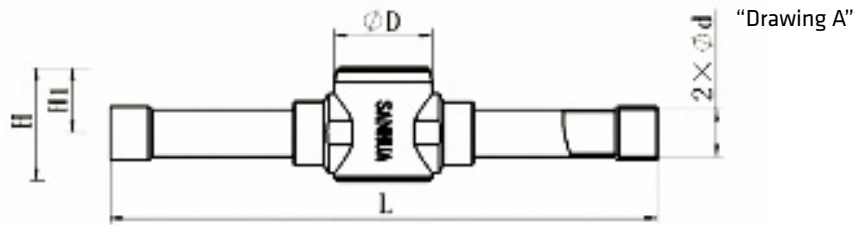
- Applicable for all common HCFC, HFC, HFO refrigerants such as: R22, R134a, R404A, R410A, R507, R407C, R407A/F, R448A/R449A, R452A, R450A/R513A
- Ambient temperature min./max.: -50°C / +80°C
- Medium temperature TS min./max.: -50°C / +80°C
- Max. operating pressure PS: 4,6 MPa (46 bar)
- Installation 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)



Version with Solder Connections

General Characteristics										
Model Series	Model Name	Part Number (multi package) ¹⁾	Connection Type	Connecting ODF		Dimensions & Weight				
				Ød		L	H	H1	Weight	Drawing
				[inch]	[mm]	[mm]	[mm]	[mm]	[g]	
SYJ6	SYJ06H12	10285007102	ODF x ODF solder	-	6	101	24	14	100	A
SYJ6	SYJ06H11	10285007002		1/4	-	101	24	14	100	
SYJ10	SYJ10H11	10285007202		3/8	-	119	24	14	100	
SYJ10	SYJ10H12	10285007302		-	10	119	24	14	100	
SYJ12	SYJ12H11	10285006902		1/2	-	146	30	17	200	
SYJ12	SYJ12H12	10285007402		-	12	146	30	17	200	
SYJ16	SYJ16H11	10285007502		5/8	16	146	30	17	200	
SYJ19	SYJ19H11	10285007602		3/4	-	173	37	21	300	
SYJ22	SYJ22H11	10285007702		7/8	22	173	37	21	300	

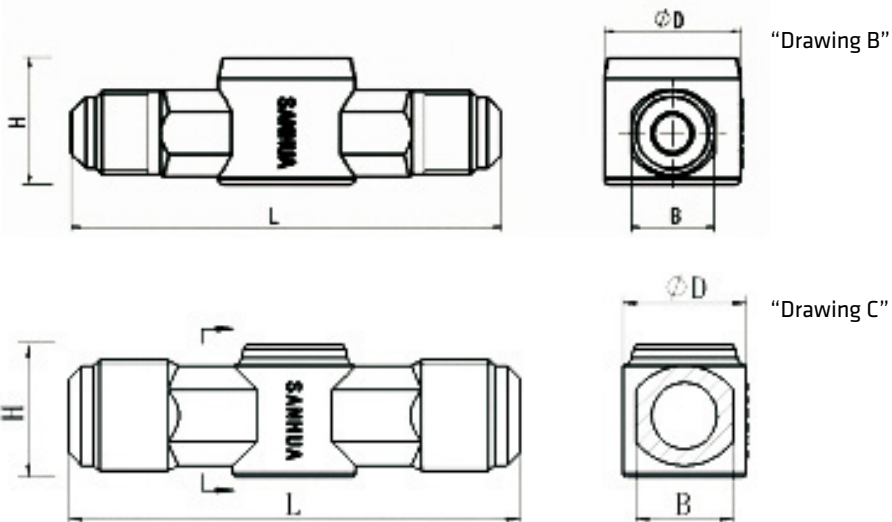
Note: 1) Available also as industrial package. Contact Sanhua for more details.



Version with male/male Flare Connections

General Characteristics										
Model Series	Model Name	Part Number (multi package) ¹⁾	Connection Type	SAE Flare	Dimensions & Weight					
				Ød	L	H	H1	Weight	Drawing	
				[inch]	[mm]	[mm]	[mm]	[g]		
SYJ6	SYJ06L11	10285007902	Flare M x M	1/4	67	24	14	110	B	
SYJ10	SYJ10L11	10285008102		3/8	82	24	14	240		
SYJ12	SYJ12L11	10285008302		1/2	88	30	17	250		
SYJ16	SYJ16L11	10285008502		5/8	104	32	17	320	C	
SYJ19	SYJ19L11	10285008702		3/4	110	32	15	340		

Note: 1) Available also as industrial package. Contact Sanhua for more details.

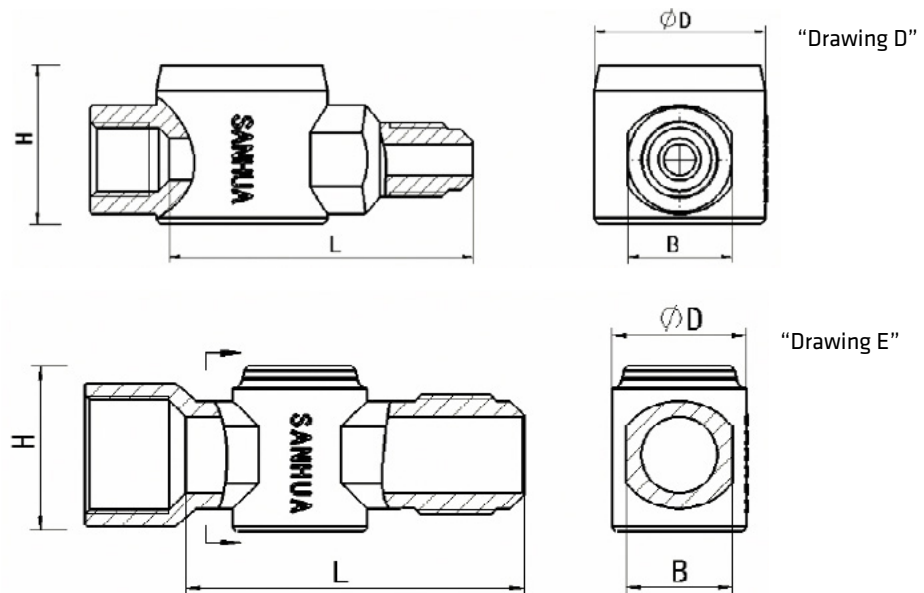




Version with male/female Flare connections

General Characteristics										
Model Series	Model Name	Part Number (multi package) ¹⁾	Connection Type	SAE Flare	Dimensions & Weight					Drawing
				Ød	H	φD	B	Weight		
				[inch]	[mm]	[mm]	[mm]	[g]		
SYJ6	SYJ06L41	10285008002	Flare F x M	1/4	30	32	22	200	D	
SYJ10	SYJ10L41	10285008202		3/8	30	32	22	240		
SYJ12	SYJ12L41	10285008402		1/2	32	30	24	250		
SYJ16	SYJ16L41	10285008602		5/8	37	30	24	320	E	
SYJ19	SYJ19L41	10285008802		3/4	37	30	24	330		

Note: 1) Available also as industrial package. Contact Sanhua for more details.





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
R507A	<15	15~90	>90
R407C	<120	120~280	>280
R407A	<180	180~340	>340
R448A	<220	220~440	>440
R449A	<180	180~380	>380
R452A ¹⁾	<50	50~120	>120
R450A ¹⁾	<45	45~260	>260
R513A	<180	180~280	>280

Note: 1) Calculated data based on refrigerant properties

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
R507A	<80	80~170	>170
R407C	<100	100~260	>260
R407A	<200	200~560	>560
R448A	<220	220~480	>480
R449A	<200	200~450	>450
R452A ^{1) □}	<90	90~170	>170
R450A ^{1) □}	<110	110~420	>420
R513A	<200	200~380	>380

Note: 1) Calculated data based on refrigerant properties

DSG SERIES**LIQUID LINE
FILTER DRIER WITH
SIGHT GLASS**

DSG Series liquid line filter drier/sight glass combination is a liquid line filter drier with a sight glass connected to the outlet side of the filter drier are used in refrigeration system with unidirectional flow to absorb moisture in the system and to filter out the impurities. Observe property changes of the refrigerant (liquid / vapor) and indicate the moisture level by the sight glass as well.

FEATURES

- HIGHLY EFFICIENT IN MOISTURE ABSORPTION, FILTERING IMPURITY, PAINT REMAINS AND MUD REMOVAL
- DURABLE AND SOLID FILTER CORES
- FILTERING FINENESS: 20 μ m
- CORROSION RESISTANT PAINTING SURVIVES SALT SPRAY TEST OF 500 HOURS
- SIGHT GLASS WITH NEW ANNULAR HUMIDITY COLOR INDICATOR TO REALIZE HIGH PRECISION AND FULL PORT PASSAGE WITH LOW PRESSURE DROP
- COMPACT UNIT: REDUCE CUSTOMER INSTALLATION TIME AND REDUCE POTENTIAL LEAKAGE RISK

GENERAL SPECIFICATION

- Applicable for all common HFC, HFO refrigerants such as: R134a, R404A, R407A/F, R407C, R410A, R448A, R449A, R450A, R452A, R513A, R507A
- Ambient temperature min./max.: -30°C / +55°C
- Medium temperature TS min./max.: -30°C / +80°C
- Max. operating pressure PS max.: 4,6 MPa
- Installation position:
 - Flow direction corresponds to the arrow
 - Preferably installed in liquid line
- Certifications: UL/CSA and PED declaration

LIQUID LINE FILTER DRIER WITH SIGHT GLASS



TECNHICAL PARAMETERS *Desiccant Selection Table*

	Medium Type	100% 3Å Desiccant
Refrigerant	HFC	Applicable
	HFO	Applicable
Oil ³	Mineral oil or AB	Applicable
	Pure POE or PAG	Applicable
	POE or PAG with additive	Applicable

Model Designation Legend

1	Product Code	Product Series	
	DSG	Indicates unidirectional filter drier with Sight glass	
2	Filter Core	Structure and Material	
	B	Solid core, 100%3Å desiccant	
3	Internal Volume ¹⁾	Expressed in [inch ³]	Expressed in [cm ³]
	05	5	82
	08	8	131
	16	16	262
4	Connection Size	Pos. 5 shows "4": SAE Flare [inch]	
	02	1/4	
	03	3/8	
	04	1/2	
5	Pipe Connection	Type	
	4	SAE flare connections	
6	Version Number	Description	
	002	Series number	

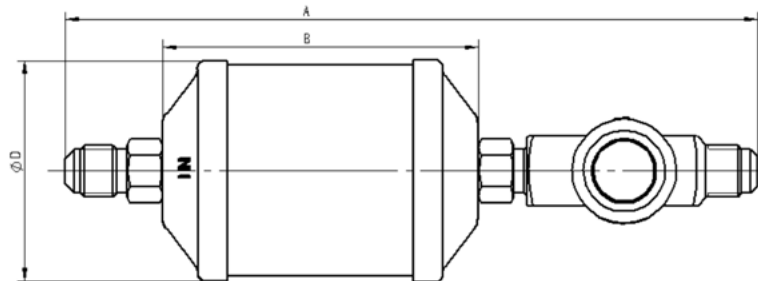
MODEL DESIGNATION EXAMPLE

Position Number						According to Model Designation Legend
1	2	3	4	5	6	
DSG	B	05	02	4	002	Unidirectional filter drier & sight glass assembly
DSG	B	05	02	4	002	Solid filter core with 100% 3Å desiccant
DSG	B	05	02	4	002	5 inch ³ internal volume
DSG	B	05	02	4	002	When Pos. 5 is "4": SAE flare connection size 1/4"
DSG	B	05	02	4	002	SAE flare connection
DSG	B	05	02	4	002	Series number

LIQUID LINE FILTER DRIER WITH SIGHT GLASS



VERSION WITH MALE/MALE FLARE CONNECTIONS



Series	Model	Part Number ¹⁾	Nominal Volume		Connection	Dimensions & Weight				PED Category ²⁾
			[inch ³]	[cm ³]	SAE Flare	ØD	A	B	Weight	
					[inch]	[mm]	[mm]	[mm]	[g]	
DSGB 052	DSG-B05 024-002	10221000102	5	82	1/4	69	168	76	620	Art. 4.3
DSGB 082	DSG-B08 024-002	10221000202	8	131	1/4	69	190	89	640	Art. 4.3
DSGB 083	DSG-B08 034-002	10221000302	8	131	3/8	69	214	89	640	Art. 4.3
DSGB 163	DSG-B16 034-002	10221000402	16	262	3/8	69	234	118	700	Art. 4.3
DSGB 164	DSG-B16 044-002	10221000502	16	262	1/2	69	245	118	700	Art. 4.3

Note: 1) Available also as industrial package. Contact Sanhua for more details.
2) PED Directive 2014/68/EU

SELECTION TABLE

Model	Capacity ¹⁾ [kW]					Moisture Absorption (gram H ₂ O)							
	R134a	R404A	R22	R407C ²⁾	R410A	R134a		R404A		R407C ²⁾		R22	
		R507A				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
DSGB 052	8,4	6,0	8,4	8,4	8,4	11,6	10,9	10,9	8,9	10,9	9,5	11,4	9,7
DSGB 082	8,4	6,0	8,4	8,4	8,4	14,8	14,2	16,3	13,4	14,8	13,0	15,5	13,1
DSGB 083	25,0	17,6	25,3	25,0	25,7	14,8	14,2	16,3	13,4	14,8	13,0	15,5	13,1
DSGB 163	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
DSGB 164	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 clean system at ideal conditions; with impurities accumulated in the filter, the capacity may decrease
2) R407C capacity is based on dew point conditions

LIQUID LINE FILTER DRIER WITH SIGHT GLASS



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

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
R507	<80	80~170	>170
R407C	<100	100~260	>260