

STG SERIES

BI-FLOW FILTER DRIERS



(GreenTech range: for fluids GROUP 1 according to Directive 2014/68/EU or GROUP A3/A2L according to ANSI-ASHRAE 34-2016)



FEATURES

- HIGHLY 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: SOLDER

GENERAL SPECIFICATION

- Applicable for HC, HFC, HFO refrigerants such as: R290, R1234ze(E), R1234yf, R447A, R452B, R454B, R454C
- Ambient temperature min./max.: -30°C / +55°
- 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 (all products have been covered by Art.4.3 PED Directive 2014/68/EU)

TECHNICAL PARAMETERS *Desiccant Selection Table*

	Medium Type	80% 3Å desiccant and 20% active alumina	100% 3Å desiccant
Refrigerant	HC	Applicable	Applicable
	HFC	Applicable	Applicable
	HFO	Applicable	Applicable
Oil ¹⁾	Mineral oil or AB	Applicable	Applicable
	Pure POE or PAG	Applicable	Applicable
	POE or PAG with additive	Not applicable	Applicable

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

STG 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	
	B	Solid core, 100% 3Å desiccant	
F	Solid core, 80% 3Å desiccant and 20% active alumina		
3	Internal Volume	Expressed in [inch ³]	Expressed in [cm ³]
	03	3	49
	05	5	82
	08	8	131
	16	16	262
	30	30	492
4	Connection Size	Pos. 5 shows "0": Solder [inch]	
	02	1/4	
	25	5/16	
	03	3/8	
	04	1/2	
	05	5/8	
	06	3/4	
	07	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) *	(5/8" version can be used e.g. STG-B16 050)	
	(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	
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, 16 and 22 mm

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	3 inch ³ 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

STG SERIES

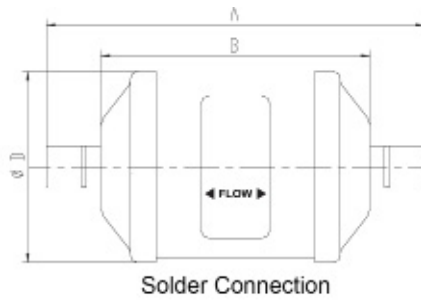
BI-FLOW FILTER DRIERS



GENERAL CHARACTERISTICS OF STG-B FILTER - SOLDER CONNECTION

Filter	Model [inch]	Part Number (multi package) ¹⁾ [inch]	Model [mm]	Part Number (multi package) ¹⁾ [mm]	Nominal Volumen		Connection		Dimensions & Weight ²⁾				PED Category ³⁾ (Fluid Group 1)
							Solder		ØD	B	A	Weight	
					[inch ³]	[cm ³]	[inch]	[mm]	[mm]	[mm]	[mm]	[g]	
STGB052s	STG-B05 020-901	10235005902	STG-B05 061-901	10235007602	5	82	1/4	6	69	76	114	450	Art. 4.3
STGB053s	STG-B05 030-901	10235006002	STG-B05 101-901	10235007802	5	82	3/8	10	69	76	114	450	Art. 4.3
STGB054s	STG-B05 040-901	10235006102	STG-B05 121-901	10235007902	5	82	1/2	12	69	76	124	450	Art. 4.3
STGB082s	STG-B08 020-901	10235006202	STG-B08 061-901	10235007702	8	131	1/4	6	69	98	136	580	Art. 4.3
STGB0825s	STG-B08 250-901	10235007402	STG-B08 250-901	10235007402	8	131	5/16	8	69	98	136	580	Art. 4.3
STGB083s	STG-B08 030-901	10235006302	STG-B08 101-901	10235008002	8	131	3/8	10	69	98	136	580	Art. 4.3
STGB084s	STG-B08 040-901	10235006402	STG-B08 121-901	10235008102	8	131	1/2	12	69	98	146	580	Art. 4.3
STGB163s	STG-B16 030-901	10235006602	STG-B16 101-901	10235008202	16	262	3/8	10	81	118	156	900	Art. 4.3
STGB164s	STG-B16 040-901	10235006502	STG-B16 121-901	10235008402	16	262	1/2	12	81	118	166	900	Art. 4.3
STGB165s	STG-B16 050-901	10235006702	STG-B16 050-901	10235006702	16	262	5/8	16	81	118	166	900	Art. 4.3
STGB167s	STG-B16 070-901	10235006802	STG-B16 070-901	10235006802	16	262	7/8	22	81	118	178	900	Art. 4.3
STGB303s	STG-B30 030-901	10235006902	STG-B30 101-901	10235008302	30	492	3/8	10	81	193	231	1700	Art. 4.3
STGB304s	STG-B30 040-901	10235007002	STG-B30 121-901	10235008502	30	492	1/2	12	81	193	241	1700	Art. 4.3
STGB305s	STG-B30 050-901	10235007102	STG-B30 050-901	10235007102	30	492	5/8	16	81	193	241	1700	Art. 4.3
STGB306s	STG-B30 060-901	10235007202	-	-	30	492	3/4	-	81	193	253	1700	Art. 4.3
STGB307s	STG-B30 070-901	10235007302	STG-B30 070-901	10235007302	30	492	7/8	22	81	193	253	1700	Art. 4.3
STGB309s	STG-B30 090-901	10235007502	STG-B30 281-901	10235010202	30	492	1 1/8	28	81	193	263	1700	Art. 4.3

- Note:**
- 1) Available also as industrial package. Contact Sanhua for more details.
 - 2) Dimensions are rounded up to integral mm
 - 3) PED Directive 2014/68/EU. Category evaluated considering product as a “vessel”



STG SERIES

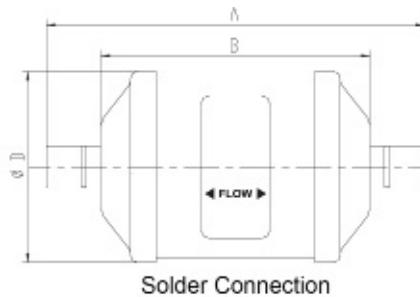
BI-FLOW FILTER DRIERS



GENERAL CHARACTERISTICS OF STG-F FILTER - SOLDER CONNECTION

Filter	Model ¹⁾ [inch]	Part Number (multi package) ²⁾ [inch]	Model ¹⁾ [mm]	Part Number (multi package) ²⁾ [mm]	Nominal Volumen		Connection		Dimensions & Weight ³⁾				PED Category ⁴⁾ (Fluid Group 1)
							Solder		ØD	B	A	Weight	
					[inch ³]	[cm ³]	[inch]	[mm]	[mm]	[mm]	[mm]	[g]	
STGF052s	STG-F05 020-901	10235010302	STG-F05 061-901	10235010602	5	82	1/4	6	69	76	114	450	Art. 4.3
STGF053s	STG-F05 030-901	10235010402	STG-F05 101-901	10235010702	5	82	3/8	10	69	76	114	450	Art. 4.3
STGF054s	STG-F05 040-901	10235010502	STG-F05 121-901	10235010802	5	82	1/2	12	69	76	124	450	Art. 4.3
STGF082s	STG-F08 020-901	10235011202	STG-F08 061-901	10235011602	8	131	1/4	6	69	98	136	580	Art. 4.3
STGF0825s	STG-F08 250-901	10235011302	STG-F08 250-901	10235011302	8	131	5/16	8	69	98	136	580	Art. 4.3
STGF083s	STG-F08 030-901	10235011402	STG-F08 101-901	10235011702	8	131	3/8	10	69	98	136	580	Art. 4.3
STGF084s	STG-F08 040-901	10235011502	STG-F08 121-901	10235011802	8	131	1/2	12	69	98	146	580	Art. 4.3
STGF163s	STG-F16 030-901	10235012202	STG-F16 101-901	10235012602	16	262	3/8	10	81	118	156	900	Art. 4.3
STGF164s	STG-F16 040-901	10235012302	STG-F16 121-901	10235012702	16	262	1/2	12	81	118	166	900	Art. 4.3
STGF165s	STG-F16 050-901	10235012402	STG-F16 050-901	10235012402	16	262	5/8	16	81	118	166	900	Art. 4.3
STGF167s	STG-F16 070-901	10235012502	STG-F16 070-901	10235012502	16	262	7/8	22	81	118	178	900	Art. 4.3
STGF303s	STG-F30 030-901	10235013902	STG-F30 101-901	10235013102	30	492	3/8	10	81	193	231	1700	Art. 4.3
STGF304s	STG-F30 040-901	10235014002	STG-F30 121-901	10235013202	30	492	1/2	12	81	193	241	1700	Art. 4.3
STGF305s	STG-F30 050-901	10235014102	STG-F30 050-901	10235014102	30	492	5/8	16	81	193	241	1700	Art. 4.3
STGF306s	STG-F30 060-901	10235014202	-	-	30	492	3/4	-	81	193	253	1700	Art. 4.3
STGF307s	STG-F30 070-901	10235012902	STG-F30 070-901	10235012902	30	492	7/8	22	81	193	253	1700	Art. 4.3
STGF309s	STG-F30 090-901	10235013002	STG-F30 281-901	10235013402	30	492	1 1/8	28	81	193	263	1700	Art. 4.3

- Note:**
- 1) Delivery time on request
 - 2) Available also as industrial package. Contact Sanhua for more details
 - 3) Dimensions are rounded up to integral mm
 - 4) PED Directive 2014/68/EU. Category evaluated considering product as a "vessel"



STG SERIES

BI-FLOW FILTER DRIERS



SELECTION TABLE

Model	Capacity ^{1) 2)} [kW]		
	R290	R1234yf	R1234ze(E)
STGB052s	9	5.45	6.6
STGB053s	20.1	12.1	14.7
STGB054s	30.4	18.4	22.3
STGB082s	10.7	6.45	7.85
STGB0825s	19.2	11.6	14.1
STGB083s	21	12.6	15.3
STGB084s	31.2	18.85	23
STGB163s	24	14.5	17.6
STGB164s	36.8	22.2	27
STGB165s	41.6	25	30.4
STGB167s	51.4	31	37.6
STGB303s	30.4	18.4	22.3
STGB304s	37.6	22.7	27.5
STGB305s	43.2	26	31.6
STGB306s	48.3	29	35.2
STGB307s	56.6	34	41.4
STGB309s	66	39.8	48.3

SELECTION TABLE

Model	Capacity ^{1) 2)} [kW]		
	R290	R1234yf	R1234ze(E)
STGF052s	9	5.45	6.6
STGF053s	20.1	12.1	14.7
STGF054s	30.4	18.4	22.3
STGF082s	10.7	6.45	7.85
STGF0825s	19.2	11.6	14.1
STGF083s	21	12.6	15.3
STGF084s	31.2	18.85	23
STGF163s	24	14.5	17.6
STGF164s	36.8	22.2	27
STGF165s	41.6	25	30.4
STGF167s	51.4	31	37.6
STGF303s	30.4	18.4	22.3
STGF304s	37.6	22.7	27.5
STGF305s	43.2	26	31.6
STGF306s	48.3	29	35.2
STGF307s	56.6	34	41.4
STGF309s	66	39.8	48.3

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

2) given capacity is for all available types of connection for the same model: solder [inch] and equivalent solder [mm]

SELECTION FORMULAS

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

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BI-FLOW FILTER DRIERS



(GreenTech range: for fluids GROUP 1 according to Directive 2014/68/EU or GROUP A3/A2L according to ANSI-ASHRAE 34-2016)



FEATURES

- HIGHLY EFFICIENT IN MOISTURE ABSORPTION, FILTERING IMPURITY, PAINT REMAINS AND MUD REMOVAL
- 100% 3Å DESICCANT
- DURABLE AND SOLID FILTER CORES
- FILTERING FINENESS: 20µm
- CORROSION RESISTANT PAINTING CAN SURVIVE SALT SPRAY TEST OF 500 HOURS
- CONNECTION TYPE: SOLDER

GENERAL SPECIFICATION

- Applicable for refrigerants such as R32
- Ambient temperature min./max.: -30°C / +55°
- Medium temperature TS min./max.: -30°C / +120°C
- Max. operating pressure PS: 4,9 MPa (49 bar) - 711 PSIG
- Installation position: preferably installed in liquid line
- Certifications: UL/CSA and PED declaration (all products have been covered by Art.4.3 PED Directive 2014/68/EU)

TECNHICAL PARAMETERS *Desiccant Selection Table*

	Medium Type	100% 3Å desiccant
Refrigerant	R32	Applicable
Oil	Mineral oil or AB	Applicable
	Pure POE or PAG	Applicable
	POE or PAG with additive	Applicable

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

STG 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	
	B	Solid core, 100%3Å desiccant	
3	Internal Volume	Expressed in [inch³]	Expressed in [cm³]
	05	5	82
	08	8	131
	16	16	262
	30	30	492
4	Connection Size	Pos. 5 shows "0": Solder [inch]	
	02	1/4	
	03	3/8	
	04	1/2	
	05	5/8	
	07	7/8	
	09	1 1/8	
	Connection Size	Pos. 5 shows "1": Solder [mm]	
	06	6	
	10	10	
	12	12	
	(16) *	(5/8" version can be used e.g. STG-B16 050)	
	(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	
6	Version Number	Description	
	901	Standard product	

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

MODEL DESIGNATION EXAMPLE

Position Number						According to Model Designation Legend
1	2	3	4	5	6	
STG	B	05	06	1	932	Bidirectional filter drier
STG	B	05	06	1	932	Solid filter core with 100% 3Å desiccant
STG	B	05	06	1	932	5 inch ³ internal volume
STG	B	05	06	1	932	When Pos. 5 is "1": connection size 6 mm
STG	B	05	06	1	932	Solder connection metric
STG	B	05	06	1	932	Standard product for R32 (MOP 49 bar)

STG SERIES

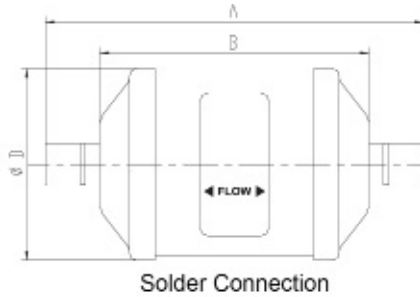
BI-FLOW FILTER DRIERS



GENERAL CHARACTERISTICS OF STG-B FILTER - SOLDER CONNECTION

Filter	Model [inch]	Part Number (multi package) ¹⁾ [inch]	Model [mm]	Part Number (multi package) ¹⁾ [mm]	Nominal Volumen		Connection		Dimensions & Weight ²⁾				PED Category ³⁾ (Fluid Group 1)
							Solder		ØD [mm]	B [mm]	A [mm]	Weight [g]	
					[inch]	[cm ³]	[inch]	[mm]					
STGB052s	STG-B05020-932	10235019502	STG-B05061-932	10235020602	5	82	1/4	6	69	76	114	450	Art. 4.3
STGB053s	STG-B05030-932	10235019602	STG-B05101-932	10235020702	5	82	3/8	10	69	76	114	450	Art. 4.3
STGB054s	STG-B05040-932	10235019702	STG-B05121-932	10235020802	5	82	1/2	12	69	76	124	450	Art. 4.3
STGB083s	STG-B08030-932	10235019802	STG-B08101-932	10235020902	8	131	3/8	10	69	98	136	580	Art. 4.3
STGB084s	STG-B08040-932	10235019902	STG-B08121-932	10235021002	8	131	1/2	12	69	98	146	580	Art. 4.3
STGB163s	STG-B16030-932	10235020002	STG-B16101-932	10235021102	16	262	3/8	10	81	118	156	900	Art. 4.3
STGB164s	STG-B16040-932	10235020102	STG-B16121-932	10235021202	16	262	1/2	12	81	118	166	900	Art. 4.3
STGB165s	STG-B16050-932	10235019302	STG-B16050-932	10235019302	16	262	5/8	16	81	118	166	900	Art. 4.3
STGB167s	STG-B16070-932	10235020202	STG-B16070-932	10235020202	16	262	7/8	22	81	118	178	900	Art. 4.3
STGB305s	STG-B30050-932	10235020302	STG-B30050-932	10235020302	30	492	5/8	16	81	193	241	1700	Art. 4.3
STGB307s	STG-B30070-932	10235020402	STG-B30070-932	10235020402	30	492	7/8	22	81	193	253	1700	Art. 4.3
STGB309s	STG-B30090-932	10235020502			30	492	1 1/8	28	81	193	263	1700	Art. 4.3

- Note:**
- 1) Available also as industrial package. Contact Sanhua for more details.
 - 2) Dimensions are rounded up to integral mm
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BI-FLOW FILTER DRIERS



SELECTION TABLE

Model	Capacity ^{1) 2)} [kW]
	R32
STGB052s	12.2
STGB053s	22.3
STGB054s	34.3
STGB083s	21.7
STGB084s	31.2
STGB163s	36.6
STGB164s	37.8
STGB165s	47.2
STGB167s	67.8
STGB305s	52.3
STGB307s	72.8
STGB309s	79.9

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

2) given capacity is for all available types of connection for the same model: solder [inch] and equivalent solder [mm]

SELECTION FORMULAS

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