

## STG SERIES | *Bidirectional Filter Driers*



The series STG bidirectional filter-driers specifically designed for use in heat pump systems, and they are used to protect these systems from moisture and contamination.

### FEATURES

- HIGHLY EFFICIENT IN MOISTURE AND CONTAMINATION REMOVAL
- BIDIRECTIONAL FLOW
- AVAILABLE IN 4 STYLES:
  - MOLDED POROUS CORE – 100% 3Å DESICCANT
  - MOLDED POROUS CORE – 80% 3Å DESICCANT, 20% ACTIVATED ALUMINA
  - COMPACTED BEAD – 100% 3Å DESICCANT
  - COMPACTED BEAD – 80% 3Å DESICCANT, 20% ACTIVATED ALUMINA
- 20 MICRON FILTRATION RATING
- 500 HOUR GB/T 10125 SALT SPRAY CORROSION RESISTANCE
- CONNECTION TYPES: SAE FLARE OR ODF SOLDER

### GENERAL SPECIFICATION

- Applicable for all common HCFC and HFC refrigerants such as: R-22, R-134a, R-404A, R-407C, R-410A, R-507
- Applicable ambient temperatures: -22°F to +130°F
- Fluid temperature range: -22°F to +250°F
- Maximum operating pressure: 700 psig
- Certifications: UL/CSA listed

## STG SERIES | Bidirectional Filter Driers

### MODEL DESIGNATION LEGEND

Position Number	Model Designation Legend	
1	Product Code	Filter Drier Series
	STG	Model number - Bidirectional filter drier
2	Filter Core	Type and Material
	A	Compacted bead - 100%3Å desiccant
	B	Molded porous core - 100%3Å desiccant
	E	Compacted bead - 80% 3Å desiccant and 20% active alumina
	F	Molded porous core - 80% 3Å desiccant and 20% activated alumina
3	Internal Volume	Internal Volume (in <sup>3</sup> )
	05	5
	08	8
	16	16
	30	30
4	Connection Size	Connection Size (in)
	02	1/4
	25	5/16
	03	3/8
	04	1/2
	05	5/8
	06	3/4
	07	7/8
	1-1/8	
5	Connection Type	Connection Type
	0	ODF solder connections
	4	SAE flare connections
6	Version Number	Description
	901	901 = Standard product, xxx = Special product

### MODEL DESIGNATION EXAMPLE

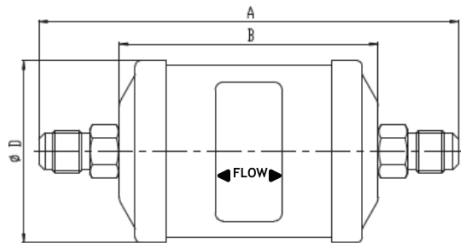
Position Number						According to Model Designation Legend
1	2	3	4	5	6	
<b>STG</b>	B	08	03	0	901	→ Bidirectional filter drier
STG	<b>B</b>	08	03	0	901	→ Molded porous core - 100% 3Å desiccant
STG	B	<b>08</b>	03	0	901	→ 8 in <sup>3</sup> internal volume
STG	B	08	<b>03</b>	0	901	→ 3/8" connection size
STG	B	08	03	<b>0</b>	901	→ ODF solder connections
STG	B	08	03	0	<b>901</b>	→ Standard product

## STG SERIES | Bidirectional Filter Driers

### GENERAL CHARACTERISTICS OF STG-B FILTER - FLARE CONNECTION

Model <sup>1)</sup>	Part Number	Nominal Volume	Connection	Dimensions & Weight			
			SAE Flare	ØD	B	A	Weight
		(in <sup>3</sup> )	(in)	(in)	(in)	(in)	(lb)
STG-B05 024-901	STG-30001	3	1/4	2.72	2.99	4.48	.099
STG-B05 034-901	STG-30002		3/8			5.39	
STG-B05 044-901	STG-30003		1/2			5.71	
STG-B08 024-901	STG-30004	8	1/4	2.72	3.86	5.71	1.28
STG-B08 034-901	STG-30005		3/8			6.26	
STG-B08 044-901	STG-30006		1/2			6.57	
STG-B16 034-901	STG-30007	16	3/8	3.19	4.65	7.05	1.98
STG-B16 044-901	STG-30008		1/2			7.36	
STG-B16 054-901	STG-30009		5/8			7.72	
STG-B30 034-901	STG-30010	30	3/8	3.19	7.60	10.0	3.75
STG-B30 044-901	STG-30011		1/2			10.3	
STG-B30 054-901	STG-30012		5/8			10.7	
STG-B30 064-901	STG-30013		3/4			10.7	

**Note:** 1) Delivery time on request

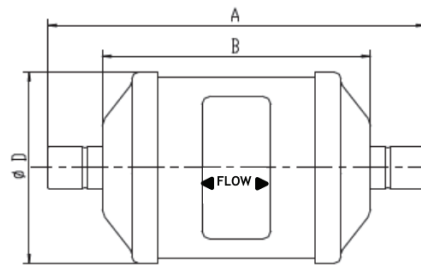


Flare Connection

## STG SERIES | Bidirectional Filter Driers

### GENERAL CHARACTERISTICS OF STG-B FILTER - SOLDER CONNECTION

Model	Part Number	Nominal Volume	Connection	Dimensions & Weight			
			ODF Solder	ØD	B	A	Weight
		(in <sup>3</sup> )	(in)	(in)	(in)	(in)	(lb)
STG-B05 020-901	STG-30024	5	1/4	2.72	2.99	4.49	0.99
STG-B05 030-901	STG-30026		3/8				
STG-B05 040-901	STG-30027		1/2			4.88	
STG-B08 020-901	STG-30029	8	1/4	2.72	3.86	5.35	1.28
STG-B08 250-901	STG-30030		5/16				
STG-B08 030-901	STG-30031		3/8				
STG-B08 040-901	STG-30032		1/2			5.75	
STG-B16 030-901	STG-30036	16	3/8	3.19	4.65	6.14	1.98
STG-B08 040-901	STG-30033		1/2			6.54	
STG-B08 050-901	STG-30033		5/8			7.01	
STG-B08 070-901	STG-30033		7/8				
STG-B30 030-901	STG-30041	30	3/8	3.19	7.60	9.09	3.75
STG-B30 040-901	STG-30042		1/2			9.49	
STG-B30 050-901	STG-30043		5/8			9.96	
STG-B30 060-901	STG-30044		3/4			10.4	
STG-B30 070-901	STG-30045		7/8				
STG-B30 090-901	STG-30046		1-1/8				



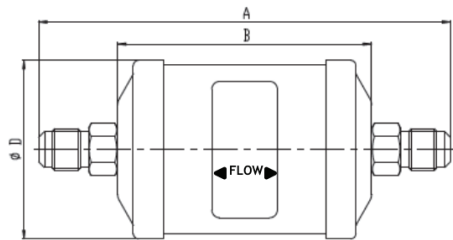
Solder Connection

## STG SERIES | Bidirectional Filter Driers

### GENERAL CHARACTERISTICS OF STG-F FILTER - FLARE CONNECTION

Model <sup>1)</sup>	Part Number	Nominal Volume	Connection	Dimensions & Weight			
			SAE Flare	ØD	B	A	Weight
			(in <sup>3</sup> )	(in)	(in)	(in)	(in)
STG-F05 024-901	STG-31044	3	1/4	2.72	2.99	4.84	0.99
STG-F05 034-901	STG-31045		3/8			5.39	
STG-F05 044-901	STG-31046		1/2			5.71	
STG-F08 024-901	STG-31047	8	1/4	2.72	3.86	5.71	1.28
STG-F08 034-901	STG-31048		3/8			6.26	
STG-F08 044-901	STG-31049		1/2			6.57	
STG-F16 034-901	STG-31050	16	3/8	3.19	4.65	7.05	1.98
STG-F16 044-901	STG-31051		1/2			7.36	
STG-F16 054-901	STG-31052		5/8			7.72	
STG-F30 034-901	STG-31053	30	3/8	3.19	7.60	10.0	3.75
STG-F30 044-901	STG-31054		1/2			10.3	
STG-F30 054-901	STG-31055		5/8			10.7	
STG-F30 064-901	STG-31056		3/4				

**Note:** 1) Delivery time on request



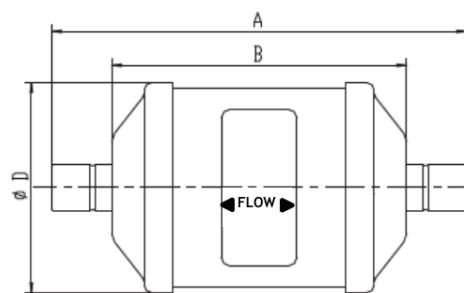
Flare Connection

## STG SERIES | Bidirectional Filter Driers

### GENERAL CHARACTERISTICS OF STG-F FILTER - SOLDER CONNECTION

Model	Part Number	Nominal Volume	Connection	Dimensions & Weight			
			ODF Solder	ØD	B	A	Weight
		(in <sup>3</sup> )	(in)	(in)	(in)	(in)	(lb)
STG-F05 020-901	STG-31057	5	1/4	2.72	2.99	4.49	0.99
STG-F05 030-901	STG-31058		3/8			4.88	
STG-F05 040-901	STG-31059		1/2				
STG-F08 020-901	STG-31060	8	1/4	2.72	3.86	5.35	1.28
STG-F08 250-901	STG-31061		5/16				
STG-F08 030-901	STG-31062		3/8				
STG-F08 040-901	STG-31063		1/2			5.75	
STG-F16 030-901	STG-31064	16	3/8	3.19	4.65	6.14	1.98
STG-F16 040-901	STG-31065		1/2			6.54	
STG-F16 050-901	STG-31066		5/8			7.01	
STG-F16 070-901	STG-31067		7/8				
STG-F30 030-901	STG-31068	30	3/8	3.19	7.60	9.09	3.75
STG-F30 040-901	STG-31069		1/2			9.49	
STG-F30 050-901	STG-31070		5/8				
STG-F30 060-901	STG-31071		3/4			9.96	
STG-F30 070-901	STG-31072		7/8				
STG-F30 090-901	STG-31073		1-1/8			10.4	

**Note:** 1) Delivery time on request



Solder Connection

## STG SERIES | Bidirectional Filter Driers

### SELECTION TABLE

Model	Capacity (tons)					Water Capacity (drops)							
	R-134a	R-404A	R-22	R-407C	R-410A	R-134a		R-404A		R-407C		R-22	
						75°F	125°F	75°F	125°F	75°F	125°F	75°F	125°F
STG-B05 020-901	2.10	1.51	2.19	2.19	2.19	86	80	82	76	74	68	82	74
STG-B05 024-901													
STG-B05 030-901	4.69	3.30	4.81	4.69	4.81								
STG-B05 034-901													
STG-B05 040-901	7.11	5.00	7.19	7.11	7.19								
STG-B05 044-901													
STG-B08 020-901	2.50	1.71	2.50	2.50	2.50	196	180	184	172	170	156	184	170
STG-B08 024-901													
STG-B08 250-901	4.49	3.10	4.61	4.49	4.61								
STG-B08 030-901													
STG-B08 034-901	4.89	3.41	5.00	4.89	5.00								
STG-B08 040-901													
STG-B08 044-901	7.31	5.09	7.51	7.39	7.51								
STG-B16 030-901	5.60	3.90	5.69	5.60	5.69	352	326	332	310	304	280	332	284
STG-B16 034-901													
STG-B16 040-901	8.59	6.11	8.79	8.70	8.79								
STG-B16 044-901													
STG-B16 050-901	9.70	6.80	9.90	9.81	10.0								
STG-B16 054-901													
STG-B16 070-901	12.0	8.50	12.2	12.1	12.3								
STG-B30 030-901	7.11	5.00	7.19	7.11	7.31	826	768	778	730	718	658	782	662
STG-B30 034-901													
STG-B30 040-901	8.79	6.20	9.01	9.01	9.10								
STG-B30 044-901													
STG-B30 050-901	10.1	7.11	10.3	10.2	10.4								
STG-B30 054-901													
STG-B30 060-901	11.3	7.99	11.4	11.3	11.5								
STG-B30 064-901													
STG-B30 070-901	13.2	9.21	11.4	13.3	13.5								
STG-B30 090-901	15.4	10.8	15.7	15.5	15.8								

## STG SERIES | Bidirectional Filter Driers

### SELECTION TABLE

Model	Capacity (tons)					Water Capacity (drops)															
	R-134a	R-404A	R-22	R-407C	R-410A	R-134a		R-404A		R-407C		R-22									
						75°F	125°F	75°F	125°F	75°F	125°F	75°F	125°F								
STG-F05 020-901	2.10	1.51	2.19	2.19	2.19	73	68	70	65	63	58	70	63								
STG-F05 024-901																					
STG-F05 030-901	4.69	3.30	4.81	4.69	4.81																
STG-F05 034-901																					
STG-F05 040-901	7.11	5.00	7.19	7.11	7.19																
STG-F05 044-901																					
STG-F08 020-901	2.50	1.71	2.50	2.50	2.50	167	153	156	146	145	133	156	145								
STG-F08 024-901																					
STG-F08 250-901	4.49	3.10	4.61	4.49	4.61																
STG-F08 030-901	4.89	3.41	5.00	4.89	5.00																
STG-F08 034-901																					
STG-F08 040-901	7.31	5.09	7.51	7.39	7.51																
STG-F08 044-901																					
STG-F16 030-901	5.60	3.90	5.69	5.60	5.69									299	277	282	264	258	238	282	241
STG-F16 034-901																					
STG-F16 040-901	8.59	6.11	8.79	8.70	8.79																
STG-F16 044-901																					
STG-F16 050-901	9.70	6.80	9.90	9.81	10.0																
STG-F16 054-901																					
STG-F16 070-901	12.0	8.50	12.2	12.1	12.3																
STG-F30 030-901	7.11	5.00	7.19	7.11	7.31	702	653	661	621	610	559	665	563								
STG-F30 034-901																					
STG-F30 040-901	8.79	6.20	9.01	9.01	9.10																
STG-F30 044-901																					
STG-F30 050-901	10.1	7.11	10.3	10.2	10.4																
STG-F30 054-901																					
STG-F30 060-901	11.3	7.99	11.4	11.3	11.5																
STG-F30 064-901																					
STG-F30 070-901	13.2	9.21	11.4	13.3	13.5																
STG-F30 090-901	15.4	10.8	15.7	15.5	15.8																



## STG SERIES | *Bidirectional Filter Driers*

### SELECTION FORMULAS

Filter Driers for liquid line are rated in compliance with AHRI Standard 710. Maximum flow rate of liquid refrigerant at a differential pressure of 1 psi, liquid refrigerant temperature of 86°F, and an evaporating temperature 5°F. The follow may be used to convert capacity in tons to refrigerant mass flow:

- 3.1 lb/min-ton R-134a
- 4.1 lb/min-ton R-404A, R-507A
- 3.0 lb/min-ton R-22, R-407C
- 2.8 lb/min-ton R-410A

**Note:** Data on water capacity is based on the following equilibrium point dryness (EPD), ASHRAE Standard 63.1:

- 60ppm R-22
- 50ppm R-134a
- 50ppm R-404A
- 50ppm R-407C
- 50ppm R-410A
- 50ppm R-507