

Suction Filters WITH THE OPTIONAL RELIEF FEATURE

Design Benefits

- Protects the compressor from dirt
- A relief device opens if the filter plugs
- Suitable for use with all brazing alloys
- Maximum corrosion resistance
- Full flow design for low pressure drop
- Complete line of sizes



SF-287-T

Sporlan offers an exclusive concept in Suction Filter design – a filter with an optional relief feature. When flow is in **one direction**, the bypass relief feature is active. If the pressure drop across the element becomes excessive the bypass relief will open slightly to maintain sufficient gas flow and assure proper cooling of the hermetic motor.

When the Suction Filter is installed with flow in the **opposite direction**, the bypass relief feature is inactive and will never open, regardless of the increase in pressure drop.

The “-T” in the type number indicates that these models are equipped with an access valve to permit pressure drop readings. The access valve will be operational provided the Suction Filters are installed with the bypass feature inactive.

TYPE		CONNECTIONS Inches	FILTER AREA cm ²	DIMENSIONS - mm		
WITHOUT Access Valve	WITH Access Valve			OVERALL LENGTH	SOCKET DEPTH	SHELL DIAMETER
Types with bypass relief feature (Bi-directional Flow)						
SF-283F	—	3/8 SAE Flare	181	223	—	76
—	SF-285-T	5/8 ODF Solder		212	16	
—	SF-286-T	3/4 ODF Solder		223	18	
—	SF-287-T	7/8 ODF Solder		227	19	
—	SF-289-T	1-1/8 ODF Solder		242	23	
—	SF-489-T	1-1/8 ODF Solder	310	315	23	121
—	SF-4811-T	1-3/8 ODF Solder		333	25	
—	SF-4813-T	1-5/8 ODF Solder		341	28	
Types without bypass relief feature (Single Flow Direction)						
SF-114	—	1/2 ODF Solder	71	111	13	51
SF-114F	—	1/2 SAE Flare		133	—	
SF-115	—	5/8 ODF Solder		117	16	
SF-115F	—	5/8 SAE Flare		141	—	
—	SF-6417-T	2-1/8 ODF Solder	2503	278	31	121
—	SF-6421-T	2-5/8 ODF Solder		35	—	



Listed by Underwriters' Laboratories, Inc. – Guide SMGT – File No. SA-1756A & B.

Selection Recommendations

TYPE NUMBER		CONNECTIONS Inches	FLOW CAPACITY IN kW EVAPORATOR TEMPERATURE												NOMINAL SYSTEM HORSEPOWER		
WITHOUT Access Valve	WITH Access Valve		5°C		-5°C		-20°C		-30°C		-40°C		REFRIGERANT				
			PRESSURE DROP – bar														
			0.20	0.14	0.20	0.14	0.10	0.14	0.10	0.07	0.10	0.07		0.03			
			REFRIGERANT														
22	134a	407C	22	134a	404A, 507	22	134a	404A, 507	22	404A, 507	22	404A, 507	22, 407C	134a, 404A, 409A, 507			
SF-114	—	1/2 ODF	8.4	5.3	8.4	5.3	3.5	5.3	3.9	2.1	3.5	2.5	2.1	1.1	1.1	1	1/2
SF-114F	—	1/2 SAE	7.4	4.6	7.4	4.9	3.2	4.6	3.2	1.8	3.2	2.1	1.8	1.1	1.1	1	1/2
SF-115	—	5/8 ODF	14.4	9.1	14.4	9.5	6.0	9.1	6.3	3.9	6.0	4.2	3.9	2.1	2.1	2	1
SF-115-F	—	5/8 SAE	13.0	8.1	13.0	8.4	5.3	8.1	5.6	3.2	5.3	3.5	3.2	1.8	1.8	2	1
SF-283F	—	3/8 SAE	7.4	4.2	7.0	4.6	2.8	4.2	3.2	1.8	2.8	1.4	1.8	1.1	1.1	1	1/2
—	SF-285-T	5/8 ODF	22.5	14.1	21.8	14.1	9.5	13.7	10.2	6.0	9.5	6.3	6.0	3.5	3.2	4	1-1/2
—	SF-286-T	3/4 ODF	30.2	17.9	28.5	17.6	12.0	17.9	12.7	7.4	12.0	7.7	7.4	4.2	3.9	5	1-1/2
—	SF-287-T	7/8 ODF	39.0	24.6	39.7	25.3	16.2	24.6	17.9	9.8	16.2	10.9	10.2	5.3	5.3	7-1/2	3
—	SF-289-T	1-1/8 ODF	52.1	32.4	51.3	33.1	21.1	32.4	23.2	13.0	21.5	14.1	13.4	7.4	7.0	7-1/2	5
—	SF-489-T	1-1/8 ODF	56.3	34.8	55.2	35.2	22.9	34.5	24.6	13.7	22.9	15.1	14.4	7.7	7.4	10	5
—	SF-4811-T	1-3/8 ODF	64.7	39.4	63.3	40.1	25.7	39.4	27.8	15.5	26.0	16.9	16.2	8.8	8.4	12	5
—	SF-4813-T	1-5/8 ODF	76.0	46.8	74.9	47.5	30.6	46.8	33.1	18.3	30.6	19.7	19.0	10.2	9.8	15	7
—	SF-6417-T	2-1/8 ODF	320	179	313	200	109	185	125	57.7	112	71.4	62.6	32.7	27.8	55	20
—	SF-6421-T	2-5/8 ODF	419	221	383	247	136	227	155	72.5	139	90.0	78.4	41.5	35.2	60	30

Notes: Maximum rated pressure for SF-11, SF-28 and SF-48 is 27.5 bar. The SF-64 series is rated for 34.5 bar. All ratings are in accordance with ARI Standard 730.

REPLACEABLE *Suction Filters*

The Replaceable Suction Filter shell, used with RPE-48-BD pleated filter element, is designed to be installed in the suction line of new systems to remove circulating contaminants.

Design Benefits

- High flow capacity
- Corrosion resistant coating on shell
- Can be used with desiccant cores for clean-up after burnout
- Various fitting sizes up to 3-1/8" line size
- Access valve supplied for pressure drop measurement or charging

How It's Used

Sporlan Replaceable Suction Filters are installed in the suction line of refrigeration or air conditioning systems to remove contaminants that may be in the system at startup.

The Replaceable Suction Filter has large fittings permitting the use of a small shell on a system with large line sizes, resulting in considerable economy. The angle construction is suitable of flow in either direction, which results in easy installation even on compact racks.



RSF-4817-T

The Replaceable Suction Filters should be used with cores for cleaning up a system after a hermetic motor burnout. Select the RC-4864, RC-4864-HH or RCW-48 replaceable cores. After cleanup, install RPE-48-BD elements in the shells.

Selection

The table below gives information for choosing the proper model for a given system. The filter elements are supplied in hermetically sealed metal cans.

For flow capacity WITH CORES, see page 35.

TYPE	CONNECTIONS Inches OD SOLDER	FLOW CAPACITY IN kW																NUMBER OF FILTER ELEMENTS	FILTER AREA cm ²	OVERALL LENGTH mm				
		EVAPORATOR TEMPERATURE																						
		5°C				-5°C				-20°C				-30°C							-40°C			
		PRESSURE DROP – bar																						
		0.21	0.14	0.21	0.21	0.14	0.10	0.14	0.10	0.07	0.10	0.07	0.10	0.07	0.04	0.07	0.04				0.04			
		REFRIGERANT																						
		22	134a	407C	410A	22	134a	404A	22	134a	404A	22	134a	404A	22	404A								
RSF-487-T	7/8	42.2	24.6	38.7	48.5	24.6	17.6	24.6	17.6	10.6	14.1	10.6	3.52	10.6	3.52	3.52	One RPE-48-BD	2503	236					
RSF-489-T	1-1/8	73.9	38.7	63.3	77.4	45.7	24.6	38.7	31.7	14.1	24.6	17.6	7.03	14.1	10.6	7.03			238					
RSF-4811-T	1-3/8	95.0	56.3	91.4	113	59.8	35.2	56.3	38.7	21.1	35.2	24.6	10.6	21.1	10.6	10.6			244					
RSF-4813-T	1-5/8	116	70.3	116	144	73.9	45.7	70.3	49.2	28.1	45.7	28.1	14.1	28.1	14.1	14.1			244					
RSF-4817-T	2-1/8	155	95.0	155	193	98.5	59.8	95.0	63.3	35.2	59.8	38.7	21.1	38.7	17.6	17.6			238					
RSF-4821-T	2-5/8	204	123	204	253	127	80.9	123	84.4	45.7	80.9	49.2	24.6	49.2	24.6	24.6			248					
RSF-9611-T	1-3/8	106	63.3	102	127	70.3	49.2	63.3	49.7	28.1	42.2	31.7	10.6	28.1	17.6	14.1	Two RPE-48-BD	5006	385					
RSF-9613-T	1-5/8	141	77.4	134	165	95.0	63.3	84.4	66.8	38.7	56.3	42.2	17.6	35.2	24.6	21.1			385					
RSF-9617-T	2-1/8	169	102	165	207	106	66.8	102	70.3	38.7	63.3	45.7	21.1	38.7	24.6	24.6			380					
RSF-9621-T	2-5/8	229	141	229	285	144	91.4	141	95.0	52.8	91.4	56.3	28.1	56.3	28.1	28.1			392					
RSF-9625-T	3-1/8	317	193	313	390	200	123	193	130	70.3	123	87.9	42.2	77.4	38.7	35.2			384					

Listed by Underwriters' Laboratories, Inc. Guide SMGT File No. SA-1756A & B. RSF shells have a 34.5 bar M.R.P. rating.

Note: Use R-404A ratings for R-507.

Ratings are in accordance with ARI Standards 730. Flow capacity (kW) with cores is approximately 40% of the above values.