

# Status Flow Series



## Instruction, Operating & Maintenance Manual



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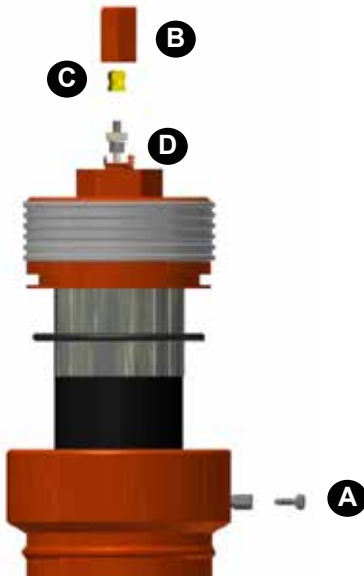
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This manual describes operating practices and maintenance procedures applicable to Status Flow Series Pulsation Dampeners and Suction Stabilizers manufactured by Performance Pulsation Control, Inc. The information contained herein reflects recommendations based on industry best practices and recognized safety protocols. Use of the information and procedures contained in this manual is voluntary and is to be implemented at the sole discretion of the user. The user is at all times responsible for operating and maintaining pulsation dampeners in a manner that is safe, conforms to the owner's established business practices, and is in conformance with applicable regulations.

**NOTE:** Please read all instructions carefully before proceeding with the installation, operation, and charging of this equipment. Contact Performance Pulsation Control for assistance or questions concerning the information in this manual.

**MATERIALS NEEDED:**

- General Hand Tools



**! WARNING**

**CHARGE ONLY WITH NITROGEN.**

- The recommended pre-charge pressure is between 70% of the discharge operating pressure and the maximum charge pressure of the cartridge – whichever is less.
- Maximum charge pressure levels are found on the case label or on the pressure tag located at the top of the cartridge.
- Proper charging requires the use of a nitrogen bottle with a regulator set at the maximum charge pressure.

**CHARGING INSTRUCTIONS:**

1. Shut down pump and relieve line pressure using appropriate safety and fluid management procedures.
2. Open discharge bleeder valve (A).

**! NOTICE**

There may be fluid discharge from valve. Take appropriate steps to capture fluid if necessary.

3. Remove loading valve protection cap (B).

4. Remove dust cap from stabilizer loading valve port (C) and attach charging hose.
5. Loosen the 5/8" safety nut (D) with 3 full turns.
6. Using NITROGEN ONLY, charge the cartridge through loading valve (C) to the recommended charge pressure.

**! WARNING**

**DO NOT EXCEED MAXIMUM CHARGING PRESSURE OF THE CARTRIDGE.**

Failure to use a regulator to limit the nitrogen charge to the maximum allowable charge pressure could result in bursting or other damage to the cartridge and early failure.

7. Re-tighten safety nut (D).

**! CAUTION**

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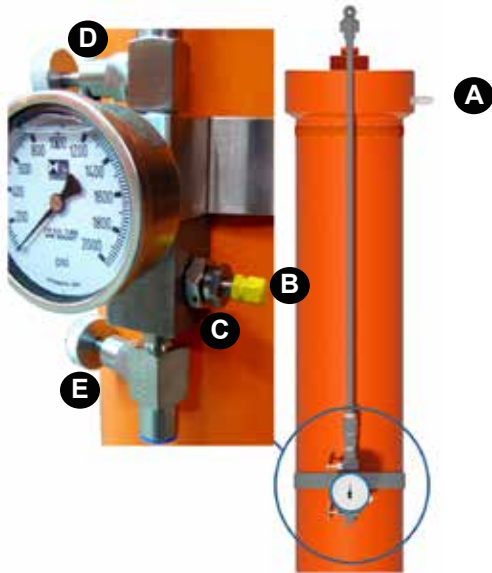
8. Remove charging hose and replace dust cap on charging port (C).
9. Replace the loading valve protection cap (B).
10. Use bleeder valve (A) as appropriate for system to fully evacuate air from vessel. Once purged, close bleeder valve (A).

**! NOTICE**

There may be fluid discharge from valve. Take appropriate steps to capture fluid if necessary.

**MATERIALS NEEDED:**

- General Hand Tools



4. Ensure that isolation valve (D) is open.
5. Remove dust cap from stabilizer loading valve port (B) and attach charging hose.
6. Loosen the 5/8" safety nut (D) with 3 full turns.
7. Using NITROGEN ONLY, charge the cartridge through loading valve (B) to the recommended charge pressure.

**⚠ WARNING**

**DO NOT EXCEED MAXIMUM CHARGING PRESSURE OF THE CARTRIDGE.**

Failure to use a regulator to limit the nitrogen charge to the maximum allowable charge pressure could result in bursting or other damage to the cartridge and early failure.

8. Re-tighten safety nut (C).

**⚠ CAUTION**

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Failure to use a regulator to limit the nitrogen charge to the maximum allowable charge pressure could result in bursting or other damage to the cartridge and early failure.

9. Remove charging hose and replace dust cap on charging port (B).
10. Replace the loading valve protection cap (B).
11. Use bleeder valve (A) as appropriate for system to fully evacuate air from vessel. Once purged, close bleeder valve (A).

**⚠ NOTICE**

There may be fluid discharge from valve. Take appropriate steps to capture fluid if necessary.

**⚠ WARNING**

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**CHARGING INSTRUCTIONS:**

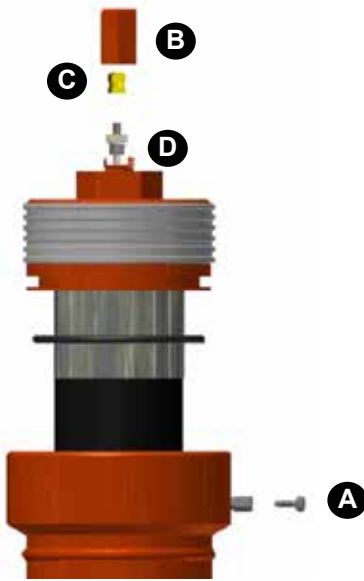
1. Close bleeder valve (E). Valve should remain closed during charging and operation.
2. Shut down pump and relieve line pressure from discharge side of pump using appropriate safety and fluid management procedures.
3. Open discharge bleeder valve (A).

**⚠ NOTICE**

There may be fluid discharge from valve. Take appropriate steps to capture fluid if necessary.

**MATERIALS NEEDED:**

- General Hand Tools



4. Remove loading valve protection cap (B).
5. Remove dust cap from stabilizer loading valve port (C) and attach charging hose.
6. Loosen the 5/8" safety nut (D) with 3 full turns.
7. Using NITROGEN ONLY, charge the cartridge through loading valve (C) to the recommended charge pressure.

**! WARNING**

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8. Re-tighten safety nut (D).

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Failure to use a regulator to limit the nitrogen charge to the maximum allowable charge pressure could result in bursting or other damage to the cartridge and early failure.

9. Remove charging hose and replace dust cap on charging port (C).
10. Replace the loading valve protection cap (B).
11. Use bleeder valve (A) as appropriate for system to fully evacuate air from vessel. Once purged, close bleeder valve (A).

**! NOTICE**

There may be fluid discharge from valve. Take appropriate steps to capture fluid if necessary.

**! WARNING**

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**CHARGING INSTRUCTIONS:**

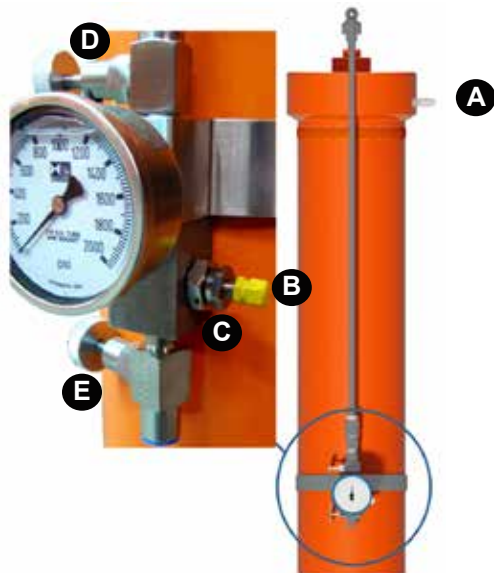
1. Shut down pump and relieve line pressure using appropriate safety and fluid management procedures.
2. Once pump discharge line pressure is relieved, close suction line valve and drain suction line.
3. Open stabilizer bleeder valve (A).

**! NOTICE**

There may be fluid discharge from valve. Take appropriate steps to capture fluid if necessary.

**MATERIALS NEEDED:**

- General Hand Tools



4. Ensure that isolation valve (D) is open.
5. Remove dust cap from stabilizer loading valve port (B) and attach charging hose.
6. Loosen the 5/8" safety nut (D) with 3 full turns.
7. Using NITROGEN ONLY, charge the cartridge through loading valve (B) to the recommended charge pressure.

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**CHARGING INSTRUCTIONS:**

1. Close bleeder valve (E). Valve should remain closed during charging and operation.
2. Shut down pump and relieve line pressure from discharge side of pump using appropriate safety and fluid management procedures.
3. Open tabilizer bleeder valve (A).

8. Re-tighten safety nut (C).
9. Remove charging hose and replace dust cap on charging port (B).
10. Replace the loading valve protection cap (B).
11. Use bleeder valve (A) as appropriate for system to fully evacuate air from vessel. Once purged, close bleeder valve (A).

**⚠ NOTICE**

There may be fluid discharge from valve. Take appropriate steps to capture fluid if necessary.

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There may be fluid discharge from valve. Take appropriate steps to capture fluid if necessary.

**MATERIALS NEEDED:**

- General Hand Tools

**CARTRIDGE REPLACEMENT**

1. Shut down pump and bleed line pressure with bleeder valve on stabilizer.



2. Bleed pressure from bladder if it still has pressure.
3. Use a hammer to loosen wing nut.
4. Remove wing nut and expose cartridge top.



5. Lift cartridge from stabilizer case.



6. Take the new cartridge out of the box and check. Clean grooves if needed.



7. Ensure O-rings are installed in grooves on new cartridge. Place O-ring in grooves before installation.
8. Grease the O-ring and threads with a copperkote thread compound (Jet Lub or BestOLife)
9. Install the new cartridge. Be sure not to drop in unit as this can damage seals (O-rings).
10. Thread wing nut onto case until fully engaged into threaded area and secure cartridge down.



11. Use hammer to tighten wing nut onto case.
12. Recharge stabilizer to desired pressure rating and follow charging instructions.
13. Close the bleeder valve and begin pump startup process.



# Appendix

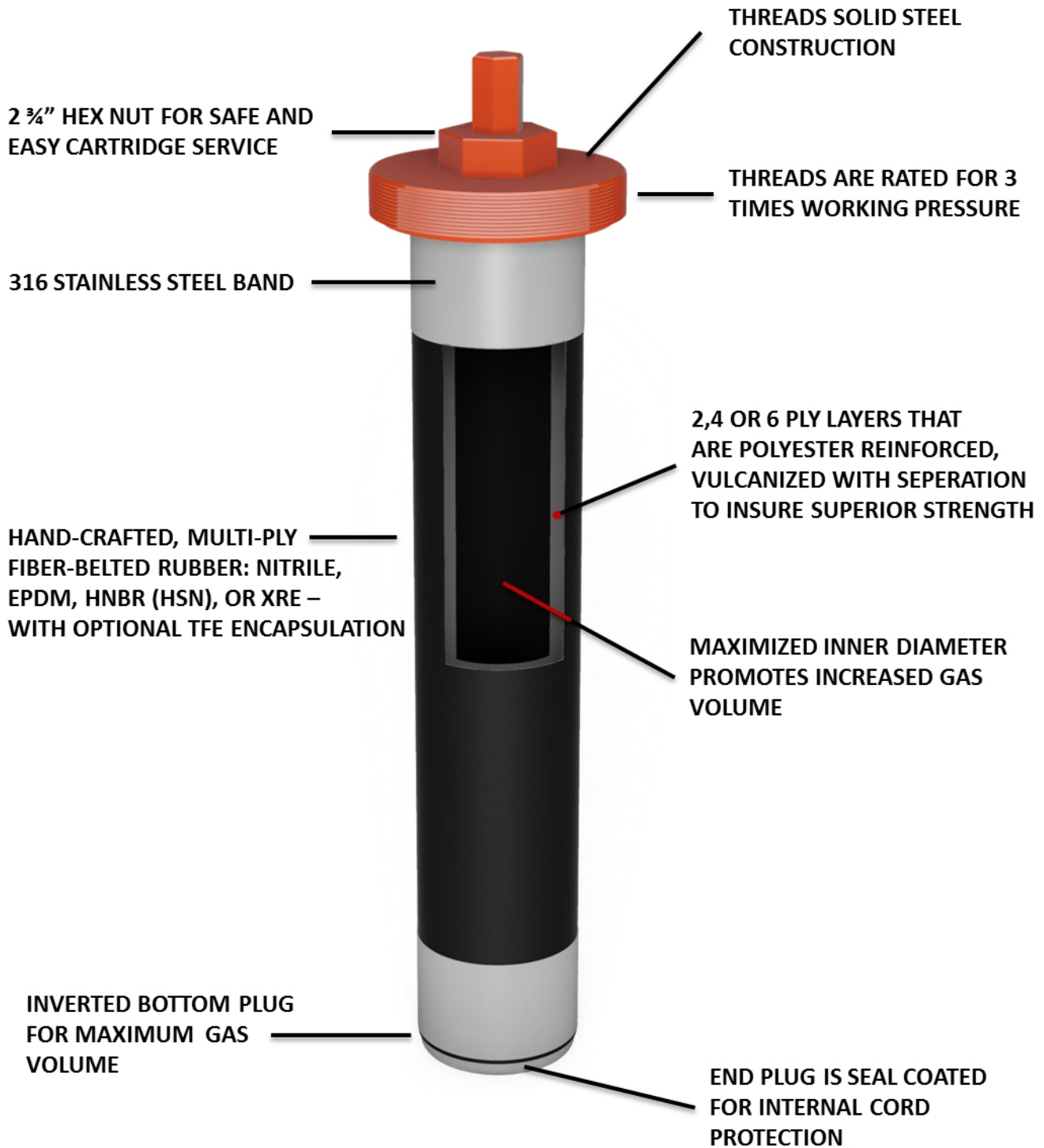




### EXAMPLE: SFT-SERIES



★ OPTIONAL CERTIFICATIONS AVAILABLE:   CRN



EXAMPLE: **SFT-14403-F-300**



**SFT** CARTRIDGE CONNECTION TYPE:

- (SFT) THREADED
- (SFAT) ACME THREADED
- (SFU) UNION
- (SFV) GROOVED 4" & 6"
- (SFVM) MAGNUM GROOVED 8"
- (SFM) MAGNUM THREADED
- (SFG) GROOVED 16"

**1440** RATED OPERATING PRESSURE:

- 150
- 450
- 700
- 1440
- 2100
- 3000
- 3600
- 5000

**3** OPENING SIZE: \*DEPENDS ON THE SERIES\*

- 1"
- 1.5"
- 2"
- 2.5"
- 3"
- 4"
- 6"
- 8"
- 10"
- 12"
- 14"

**F** MOUNTING TYPE:

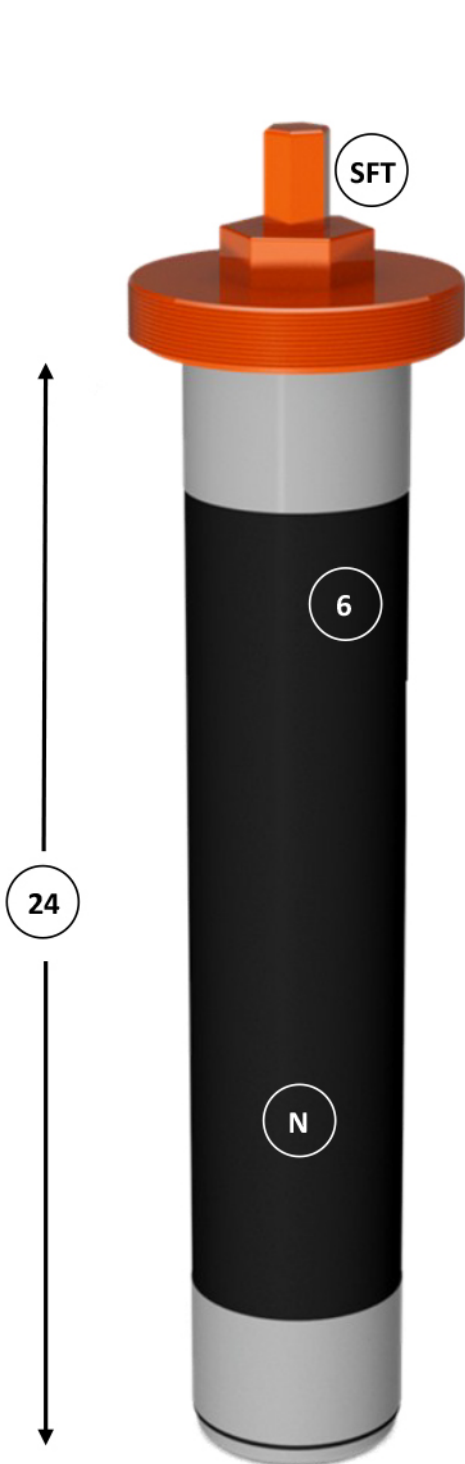
- (F) FLANGED RF
- (T) NPT THREADED
- (FFS) FLANGED FLOW THROUGH –TOP (STD)
- (FFT) FLANGED FLOW THROUGH –BOTTOM
- (FJ) FLANGED RTJ

**300** CUBIC INCH GAS VOLUME OF STABILIZER INTERNAL CARTRIDGE:

- 50
- 100
- 300
- 600
- 900
- 1200
- 2400
- 4800

*\*For additional requirements, multiple non-displayed options are available.\**

EXAMPLE: SFT-246-N



**SFT** CARTRIDGE CONNECTION TYPE:

- (SFT) THREADED
- (SFAT) ACME THREADED
- (SFU) UNION
- (SFV) GROOVED 4" & 6"
- (SFVM) MAGNUM GROOVED 8"
- (SFM) MAGNUM THREADED
- (SFG) GROOVED 16"

**24** CARTRIDGE LENGTH:

- 9"
- 18"
- 24"
- 36"
- 48"

**6** NUMBER OF PLYS:

- 2-PLY
- 4-PLY
- 6-PLY

**N** TYPE OF MATERIAL:

- (N) NITRILE
- (NT) NITRILE / TFE ENCAPSULATED
- (NN) NITRILE / NICKEL PLATED
- (NTN) NITRILE / NICKEL PLATED / TFE ENCAPSULATED
- (E) EPDM
- (ET) EPDM / TFE ENCAPSULATED
- (EN) EPDM / NICKEL PLATED
- (ETN) EPDM / NICKEL PLATED / TFE ENCAPSULATED
- (X) XRE
- (XT) XRE / TFE ENCAPSULATED
- (XN) XRE / NICKEL PLATED
- (XTN) XRE / NICKEL PLATED / TFE ENCAPSULATED
- (H) HNBR (HSN)
- (HT) HNBR / TFE ENCAPSULATED
- (HN) HNBR / NICKEL PLATED
- (HTN) HNBR / NICKEL PLATED / TFE ENCAPSULATED

***\*NITRILE IS THE STANDARD ELASTOMER ON ALL CARTRIDGES UNLESS SPECIFIED. FOR COMPATIBILITY OF ELASTOMERS, REFER TO PAGE 13, OR CONTACT THE FACTORY.\****



SFU SERIES	
1	SFU GASKET
2	SFU WING NUT
3	DUST CAP
4	LOADING VALVE
5	BLEEDER VALVE
6	CARTRIDGE
7	CASE



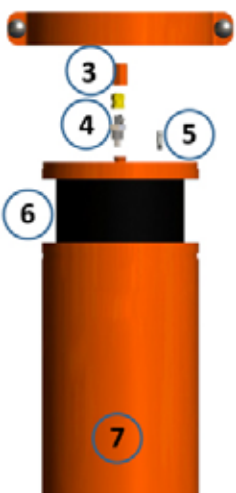
MINI, SFV & SFVM SERIES	
1	4", 6", OR 8" SUCTION GASKET
2	4", 6", OR 8" GROOVED COUPLING
3	DUST CAP
4	LOADING VALVE
5	BLEEDER VALVE
6	CARTRIDGE
7	CASE



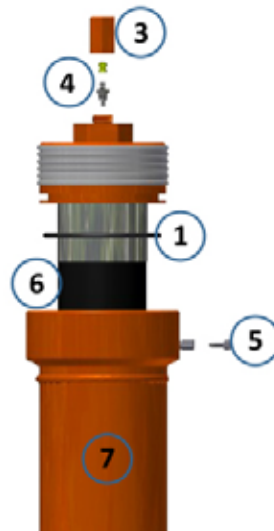
SFT SERIES	
1	HPG-1 GASKET (NITRILE, HNBR, XRE OR EPDM)
3	DUST CAP
4	LOADING VALVE
5	BLEEDER VALVE
6	CARTRIDGE
7	CASE



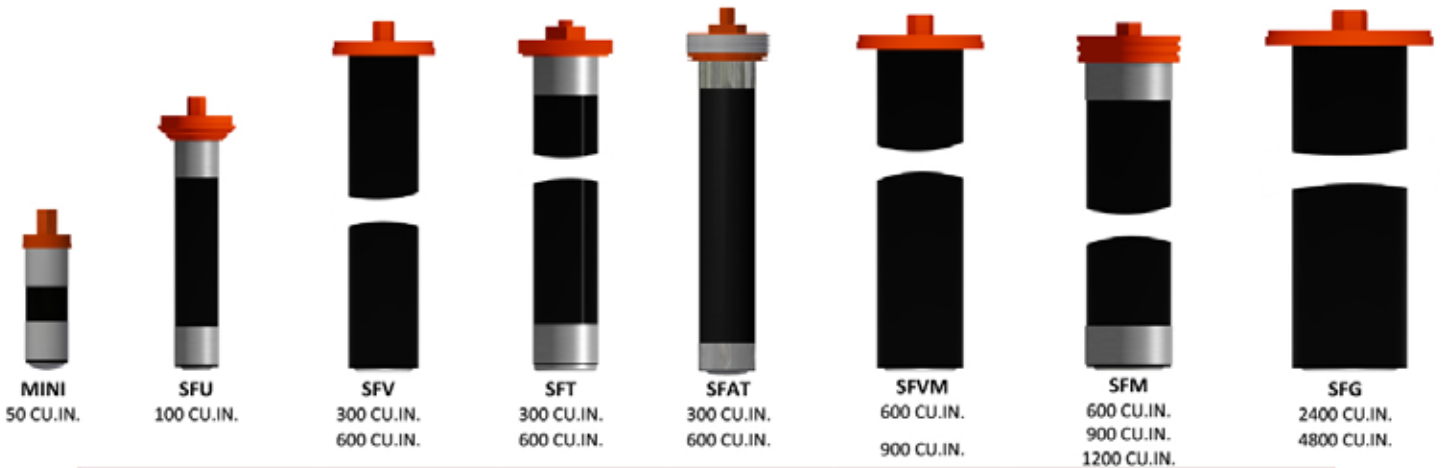
SFM SERIES	
1	SFM GASKET (2 REQUIRED)
2	SFM WING NUT
3	DUST CAP
4	LOADING VALVE
5	BLEEDER VALVE
6	CARTRIDGE
7	CASE
8	SFM WINGNUT SCREW



SFG SERIES	
1	16" SUCTION GASKET
2	16" GROOVED COUPLING
3	DUST CAP
4	LOADING VALVE
5	BLEEDER VALVE
6	CARTRIDGE
7	CASE



SFAT SERIES	
1	SFAT GASKET
3	DUST CAP
4	LOADING VALVE
5	BLEEDER VALVE
6	CARTRIDGE
7	CASE



CARTRIDGE MODEL	PLY	GAS VOLUME	LENGTH	1200 CU. IN.	WEIGHT	MAX CHARGE
SFU-182	2	100 CU.IN.	18"	3"	20 LBS	100 PSI
SFU-186	6	100 CU.IN.	18"	3"	20 LBS	500 PSI
SFV-92	2	50 CU.IN.	9"	3"	17 LBS	100 PSI
SFV-96	6	50 CU.IN.	9"	3"	18 LBS	100 PSI
SFV-242	2	300 CU.IN.	24"	4"	25 LBS	100 PSI
SFV-244	4	300 CU.IN.	24"	4"	30 LBS	300 PSI
SFV-482	2	600 CU.IN.	48"	4"	25 LBS	100 PSI
SFV-484	4	600 CU.IN.	48"	4"	30 LBS	300 PSI
SFT-242	2	300 CU.IN.	24"	4"	25 LBS	100 PSI
SFT-244	4	300 CU.IN.	24"	4"	30 LBS	300 PSI
SFT-246	6	300 CU.IN.	24"	4"	35 LBS	500 PSI
SFAT-246	6	300 CU.IN.	24"	4"	45 LBS	500 PSI
SFT-246-5	6	300 CU.IN.	24"	4"	45 LBS	500 PSI
SFT-482	2	600 CU.IN.	48"	4"	25 LBS	100 PSI
SFT-484	4	600 CU.IN.	48"	4"	30 LBS	300 PSI
SFT-486	6	600 CU.IN.	48"	4"	50 LBS	500 PSI
SFAT-486	6	600 CU.IN.	48"	4"	60 LBS	500 PSI
SFT-486-5	6	600 CU.IN.	48"	4"	60 LBS	500 PSI
SFVM-244	4	600 CU.IN.	24"	6"	55 LBS	125 PSI
SFVM-364	4	900 CU.IN.	36"	6"	60 LBS	125 PSI
SFVM-484	4	1200 CU.IN.	48"	6"	60 LBS	125 PSI
SFM-244	4	600 CU.IN.	24"	6"	55 LBS	125 PSI
SFM-246	6	600 CU.IN.	24"	6"	55 LBS	300 PSI
SFM-364	4	900 CU.IN.	36"	6"	60 LBS	125 PSI
SFM-366	6	900 CU.IN.	36"	6"	65 LBS	300 PSI
SFM-484	4	1200 CU.IN.	48"	6"	60 LBS	125 PSI
SFM-486	6	1200 CU.IN.	48"	6"	70 LBS	300 PSI
SFG-246	6	2400 CU.IN.	24"	11.5"	170 LBS	100 PSI
SFG-486	6	4800 CU.IN.	48"	11.5"	210 LBS	100 PSI