

DATA SHEET

PULSATION DAMPENERS



Carbon Steel/Stainless Steel Models: 6026, 6029, 6030

Stainless Steel Model: 6031



Model 6026

Model 6029

FEATURES

- Pressurized bladder absorbs pressure spikes for smoother, more consistent flow.
- Precharged with nitrogen to reduce moisture contamination and help extend bladder life.
- Protects downstream system components, including regulators, unloaders and relief valves.
- Improves system performance at lower pump speeds.
- Reduces system water hammer.
- Reduces operator fatigue in hand-operated systems.

SHIPMENT REGULATIONS

- Pre-charged pulsation dampeners are defined as hazardous articles. These articles use the proper shipping name, "Articles, Pressurized, Hydraulic," and the identification number, "UN3164."
- Uncharged pulsation dampeners require no special handling and can be shipped via standard shipping methods.
- All domestic shipments of hazardous articles must follow Department of Transportation (DOT) regulations CFR 49, Parts 100–185.
- International shipments of hazardous articles must follow either International Air Transport Association (IATA) regulations or International Maritime Dangerous Goods (IMDG) Codes.

ORDERING INFORMATION

Use the base part number for sealed model 6026 or rechargeable models 6029, 6030 or 6031 when a factory pre-charge of 450 psi is desired.

Add ".800" to the base part number for rechargeable models (e.g., 6029.800) for:

1. No precharge (0 psi, removes factory pressure)
2. A precharge different from the factory setting (indicate desired precharge when ordering)

For optimal pulsation dampening at ambient temperature, the precharge should be set to approximately 50–60% of system operating pressure.

Note: A handling charge will apply.

SPECIFICATIONS

U.S.

Metric

MODEL 6026 – Sealed

Maximum Flow	15 gpm	57 lpm
Working Pressure Range	300–600 psi*	20–41 bar
Precharge	250 psi	17 bar
Operating Temperature Range	+5 to 180° F	-15 to 82° C
Volume	10 cu in	0.16 l
Safety Factor	4:1	4:1
Bladder Material	NBR	NBR
Lower Body (Wetted Parts)	Coated Carbon Steel	
Upper Body	Carbon Steel	
Port Size	½" NPT(M)	½" NPT(M)
Diameter	2.93"	74.5 mm
Length	4.67"	118.7 mm
Weight	1.81 lb	0.84 kg

*Optimal pulsation dampening occurs within the stated pressure range. Performance remains acceptable up to a system pressure of 3000 psi, where full pulsation dampening is not required.

MODELS 6029 and 6030 – Rechargeable

Maximum Flow	15 gpm	57 lpm
Working Pressure Range	100–3000 psi	6.9–207 bar
Precharge (Rechargeable)	450 psi	31 bar
Operating Temp. Range (6029)	+5 to 180° F	-15 to 82° C
Operating Temp. Range (6030)	+5 to 300° F	-15 to 149° C
Volume	10 cu in	0.16 l
Safety Factor	4:1	4:1
Bladder Material (6029)	NBR	NBR
Bladder Material (6030)	FPM	FPM
Lower Body (Wetted Parts)	SS	SS
Upper Body	Carbon Steel	Carbon Steel
Port Material	SS	SS
Port Size	½" NPT(M)	½" NPT(M)
Diameter	2.93"	74.5 mm
Length	5.51"	140 mm
Weight	2.18 lbs	1.02 kg

MODEL 6031 – Rechargeable (All Stainless Steel)

Maximum Flow	15 gpm	57 lpm
Working Pressure Range	100–2400 psi	6.9–165 bar
Precharge (Rechargeable)	450 psi	31 bar
Operating Temperature Range	+5 to 180° F	-15 to 82° C
Volume	10 cu in	0.16 l
Safety Factor	4:1	4:1
Bladder Material	NBR	NBR
Body and Port Material	SS	SS
Port Size	½" NPT(M)	½" NPT(M)
Diameter	2.93"	74.5 mm
Length	5.51"	140 mm
Weight	2.18 lbs	1.02 kg

INSTALLATION INSTRUCTIONS

⚠ WARNING

Do not charge pulsation dampeners with oxygen. Oxygen may cause an explosion causing personal injury, death or property damage.

- 1. Use nitrogen only when charging pulsation dampeners, DO NOT USE OXYGEN.
- 2. Use proper charging tools to charge pulsation dampeners.
- 3. Charge pulsation dampener within specifications stated on data sheet to ensure proper pulsation dampening and prevent failure of bladder.

SELECTION: The pulsation dampener should be selected to match the system's flow and pressure requirements and ensure liquid compatibility.

INSTALLATION: The pulsation dampener should be mounted directly to the pump discharge manifold for optimal pulsation dampening and to help prevent system vibration damage.

OPERATION: The pulsation dampener should be precharged only with dry nitrogen.

The standard pulsation dampener is precharged to 450 psi; however, it may be adjusted to provide more precise pulsation control in critical applications such as reverse osmosis.

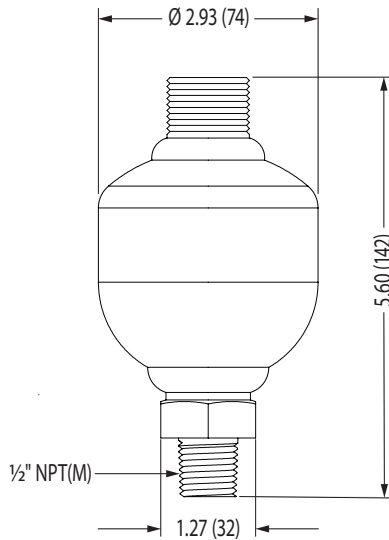
When pumping ambient-temperature fluid at 70°F, optimal accumulator performance is achieved with a precharge calibrated to 50% of the system operating pressure.

Note: When operating at lower temperatures, the precharge should be increased to approximately 65% of system pressure. When operating at higher temperatures, precharge should be reduced to approximately 35% of system pressure.

Precharge should be checked every 12 months under normal operating conditions and more frequently in continuous-duty applications.

Note: Up to 50 psi of pre-charge pressure may be lost during pre-charge pressure checks.

DIMENSIONAL



⚠ CAUTIONS AND WARNINGS

All high-pressure systems require a primary pressure regulating device (e.g. regulator, unloader) and a secondary pressure relief device (e.g. pop-off valve, relief valve). Failure to install such relief devices could result in personal injury or damage to pump or property. Cat Pumps does not assume any liability or responsibility for the operation of a customer's high-pressure system. Read all CAUTIONS and WARNINGS before commencing service or operation of any high-pressure system. The CAUTIONS and WARNINGS are included in each Service Manual and with each Accessory Data sheet. CAUTIONS and WARNINGS can also be viewed online at www.catpumps.com/dynamic-literature/cautions-and-warnings or can be requested directly from Cat Pumps.

WARRANTY

View the Limited Warranty online at www.catpumps.com/literature/cat-pumps-limited-warranty

FILLING AND GAUGING INSTRUCTIONS

The following steps describe how to check the precharge of the pulsation dampener and recharge it if there is a loss of pressure or adjustment is required.

Note: A gas regulator must be installed between the nitrogen tank and the hose connection from the filling and gauging assembly to regulate pre-charge pressure and prevent excessive pressure from being transmitted directly to the pulsation dampener. Over-pressurization will void the warranty.

- 1. Turn the pumping system off before checking pre-charge pressure. Confirm system pressure is at zero.
- 2. Slightly loosen the sealed valve at the top of the pulsation dampener by turning it counter-clockwise using a 6 mm long-handled hex wrench. Thread the filling and gauging assembly on hand-tight.
- 3. Ensure the side bleed valve on the gauging assembly is fully closed (clockwise).
- 4. Slowly open the large "T" valve at the top of the gauging assembly by turning it counter-clockwise until fully open. The gauge on the assembly will display pulsation dampener pre-charge pressure.
- 5. Completely back off the gas regulator adjustment knob by turning it counter-clockwise. Slightly open the nitrogen tank valve and read the nitrogen tank pressure on the first gauge.
- 6. If the gauge assembly reading is 50% of system pressure, close the top "T" valve (clockwise) and proceed to Step 9.
- 7. If the pre-charge pressure is too high, keep the top "T" valve open and slowly open the small "T" valve on the side of the gauging assembly (counter-clockwise) to bleed off pressure.
- 8. If the pressure is less than 50% of system pressure, slowly increase regulator setting by turning the gas regulator adjustment knob clockwise until the desired pre-charge pressure is reached on the second gauge.
- 9. When the gauge reads the required pre-charge pressure, close the top "T" valve (clockwise) on the gauging assembly to lock the pre-charge pressure in the pulsation dampener.
- 10. Completely back off the gas regulator adjustment knob by turning it counter-clockwise.
- 11. Slowly open the small side "T" valve on the gauging assembly (counter-clockwise) to relieve (bleed off) pressure in the assembly and on the second gauge of the gas regulator.
- 12. Close the side "T" valve on the gauging assembly (clockwise) and remove the assembly from the pulsation dampener.
- 13. Tighten the pulsation dampener sealed valve by turning it clockwise and resume operation.

OPTIONAL TOOLS AND SPARE PARTS

P/N	DESCRIPTION
30940	Complete Filling and Gauging Assembly (Optional)
30941	Hex Wrench (Included with Assembly)
6099	Pressure Gauge (Included with Assembly)
76501	Charging Screw with Seal Washer

