



ANMIL®
INTERNATIONAL, INC.
(Formerly Grinnell)



Figure 3306N Hydraulic Snubber
The true replacement for PSA Snubbers

Hydraulic Snubber *FIGURE 3306N SIZES 1/4 - 35*

Anvil's Figure 3306N Hydraulic Snubbers are designed as direct replacements for Pacific Scientific PSA-1/4 through PSA-35 mechanical snubbers.

The Fig. 3306N incorporates the same reliable seals, materials, fluid, and valve design as our widely used Fig. 200N Hydraulic Snubbers. Therefore, they offer proven reliability.

The Fig. 3307N is the Fig. 3306N with an extension piece.



Applications

- Direct replacement of PSA snubbers: Exact load ratings, exact pin sizes, exact stroke lengths, and exact pin-to-pin dimensions make the Fig. 3306N an exact replacement for the PSA mechanical snubbers. Additionally, the cross sectional dimensions of the 3306N are based on those of the PSA to facilitate non-interference one-to-one replacement. Pins, clamps, pivot mounts, extension pieces, and rear brackets used with PSA snubbers are compatible with the Fig. 3306N and can be utilized at your discretion.
- New Installations: For new installations, including ASME Subsection NF, the 3306N is available with a complete line of pipe clamps and rear brackets.

Design Features

- Compact Design: Fits into existing envelopes.
- Interchangeable Parts: Existing PSA attachments may be used at your discretion.
- Functional and Dynamic Qualification: Qualification is to the proposed ASME QME/QDR standard for dynamic restraints.
- Drag Force: The drag force does not exceed 2% of rated load (17½ lbs. minimum).

Ethylene-Propylene Seals and SF-1154 Fluid

- All seals and fluid are radiation resistant to 3×10^7 Rads
- All seals and fluid have a 25 year Service Life at 157°F.

Temperature

- 200°F continuous.
- 300°F maximum LOCA.

Pressurized Reservoir

- Insures positive fluid pressure regardless of snubber orientation.
- Fluid level can be visually inspected.
- Exact fluid level can be measured.



Temperature Compensating Control Valves

- Temperature compensating locking velocity and bleed rates eliminate the need for a narrow range of functional test acceptance criteria.
- The bleed valve incorporates a multi-orifice design with proven resistance to clogging.
- The tamper-proof lock-up and bleed valves are precalibrated to any specified setting.

Finish

The finish is corrosion resistant, and non-reactive to Boron spray.

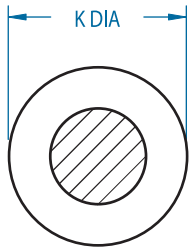
Advantages

- The only exact replacement for PSA snubbers, designed for non-interference installation.
- Qualification to anticipated new functional and dynamic requirements.
- Superior drag characteristics.
- Longer service life.
- Higher radiation and temperature resistance.
- Exact fluid level measurement when more than a visual examination is required.
- Temperature compensating valves.
- Reduced weight.

Benefits

- Ease of installation reduces costs and radiation exposure when replacing existing snubbers.
- Enhanced qualification program eliminates concerns over future changes to functional and dynamic requirements for snubbers.

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Bolt plate dia. K
Section x-x
Size 1/4 to 10

Fig. 3306N
Size 1/4 to 10

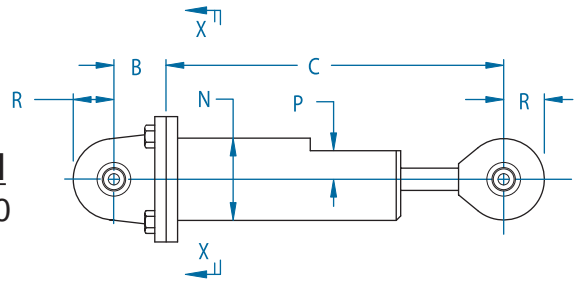


Fig. 3307N
Size 1/4 to 10

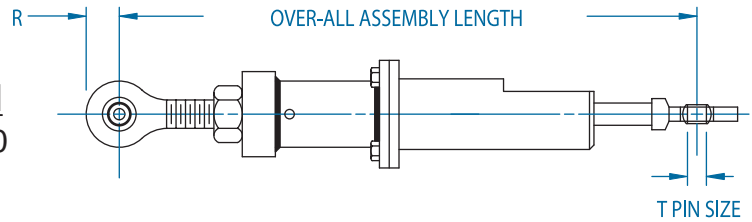


Fig. 3306N
Size 35

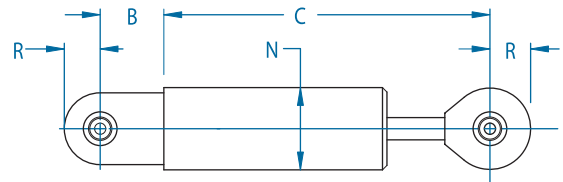
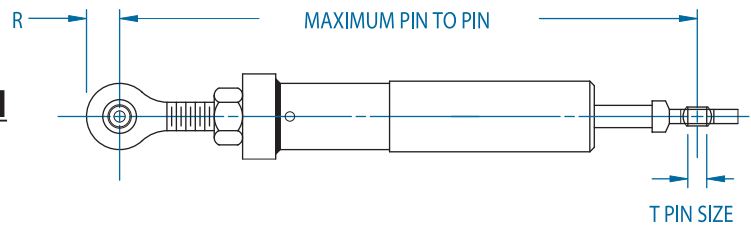


Fig. 3307N
Size 35



Units, Inches and Pounds

Snubber Size	Stroke	Design Load	B	C Min.	C Max.	K Dia.	P	N Dia.	R Max	T Dia. (Ref.)	Max. Pin-Pin
1/4	4.00	350	1.19	9.00	13.00	2.25	.62	2.25	.63	3/8	61.50
1/2	2.50	650		7.50	10.00						
1	4.00	1500	1.56	11.00	15.00	3.25	.69	2.38	1.00	1/2	61.50
		8.00		1487	15.50						
3	5.00	6000	2.12	14.50	19.50	4.62	1.44	4.62	1.38	3/4	61.50
		10.00		6000	20.50						
10	6.00	15000	3.06	17.10	23.10	5.75	1.62	5.75	1.62	1	72.75
		12.00		14400	24.10						
35	6.00	50000	3.00	24.00	30.00	-	-	6.00	3.00	1 1/2	117.50

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