



## FIG. 510AD & 511AD

## HYDRAULIC SHOCK & SWAY SUPPRESSOR

ENGINEERED SPRING SUPPORTS

[www.pipingtech.com/fig510ad](http://www.pipingtech.com/fig510ad)

**APPLICATION:** For use on piping systems or equipment when unrestrained thermal movement must be allowed, but which must be restrained during impulsive or cyclic disturbance. The unit is not effective against low amplitude, high frequency movement. The preferred usage with standard settings is to prevent destructive results due to earthquakes, flow transients, or wind load. Special settings are available to absorb the continuous thrust resulting from safety valve blow-off or pipe rupture.

**SIZE RANGE:** PT&P offers seven sizes with cylinder bores of 1 1/2" to 8". These units have a normal load range of 3,000 lb. to 130,000 lb, and are available in 6", 12" and 18" strokes. Standard configuration includes an integral, spring energized reservoir and is also available with a remote reservoir.

**ORDERING:** Specify figure number, description, cylinder size, stroke, load, thermal movement, overall length, and piston end option. If a pipe clamp is required, please specify nominal pipe size or special O.D., pipe temperature, and any additional option features (i.e. integral relief valve or remote reservoir mounting) or special settings required.

FIG. 510 AD SHORT STRUT HYDRAULIC SNUBBER

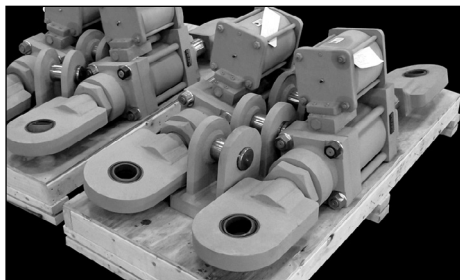
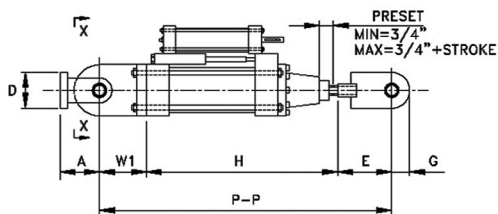
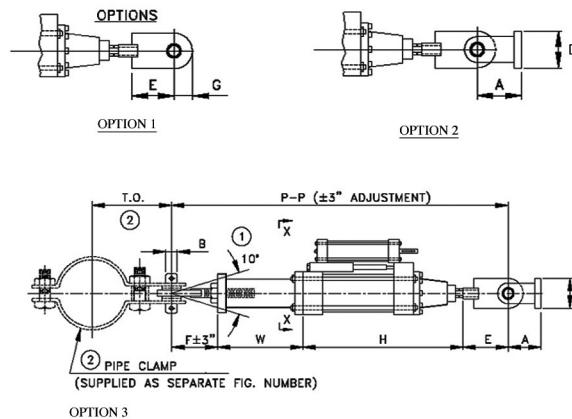


FIG. 511AD ADJUSTABLE STRUT HYDRAULIC SNUBBER



**NOTES:** ① LOAD MUST BE APPLIED INSIDE OF A 10° CONE LINE OF ACTION. ② CONTACT PT&P FOR PIPE CLAMP DESIGN.

### DIMENSIONS

CYLINDER SIZE	A	FIG. 510AD P-P RETRACTED*	FIG. 511AD P-P RETRACTED*
1 1/2	2	21	32 3/4
2 1/2	2 1/2	23 1/4	36 1/4
3 1/4	4	27 1/8	41 5/8
4	4	28 1/2	44 1/8
5	5 1/2	31 3/4	49 1/2
6	6	33 3/4	53 3/8
8	8 1/2	41 7/16	62 11/16

\* Add cold piston setting for install length.

These values reflect cylinders having 6" of stroke.

Additional dimensional information is available at [fronekgrp.com](http://fronekgrp.com).

CYLINDER SIZE	MAX. RECOM. NORMAL LOAD* (lb.)
1 1/2	3,000
2 1/2	10,000
3 1/4	20,000
4	30,000
5	50,000
6	70,000
8	130,000

\*Load must not be applied outside a 10° included angle cone of action to the pipe clamp axis w/o special authorization. VLDEVICES.XLS-01/12/10