

Lock-Up Devices

Lock-Up Devices:

A damper with extremely restrictive orifices used to limit relative motion between masses during a transient event, while providing free motion in the normal mode. These products were developed during the 1960s for the protection of large steam pipes in nuclear power plants.

In the 1990s, Taylor Devices began using these devices to limit the relative motion of highway bridge sections under various types of transient motion, usually seismic in origin. When used on civil engineering structures, the product is usually called a Lock-Up Device or Shock Transmission Unit (STU). Most applications have been in regions of low or moderate seismic risk, typically including seismic zones 1-3 in the United States. On bridges in these zones, the Lock-Up Devices allow essentially unrestricted motion when the bridge structure slowly expands and contracts thermally, yet locks the structural masses together under seismic or wind storm conditions.

Taylor Devices' Lock-Up Devices have the same basic dimensions as our Fluid Viscous Dampers. Available in force ranges of 10 kip to 2000 kip, with thermal stroke capability of up to 120 inches.



500 kip Lock-Up Devices for the Sidney Lanier Bridge (Georgia)



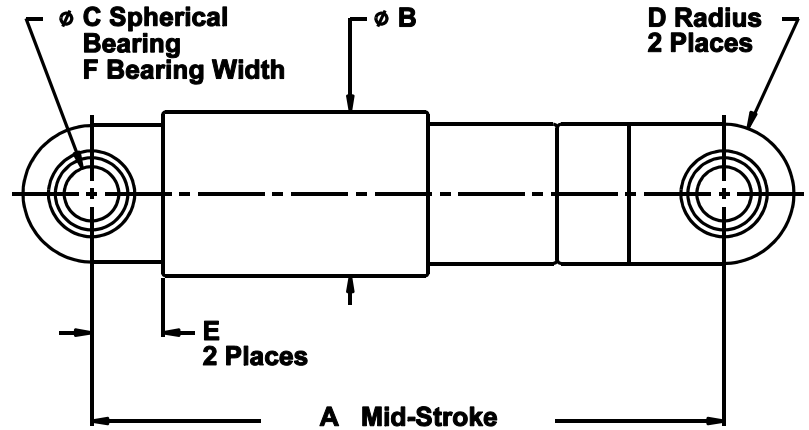
taylor devices inc.

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please call, fax, or visit our web site for additional information

High Capacity Lock-Up Devices

10 kip to 2000 kip Output



Dimensional Data

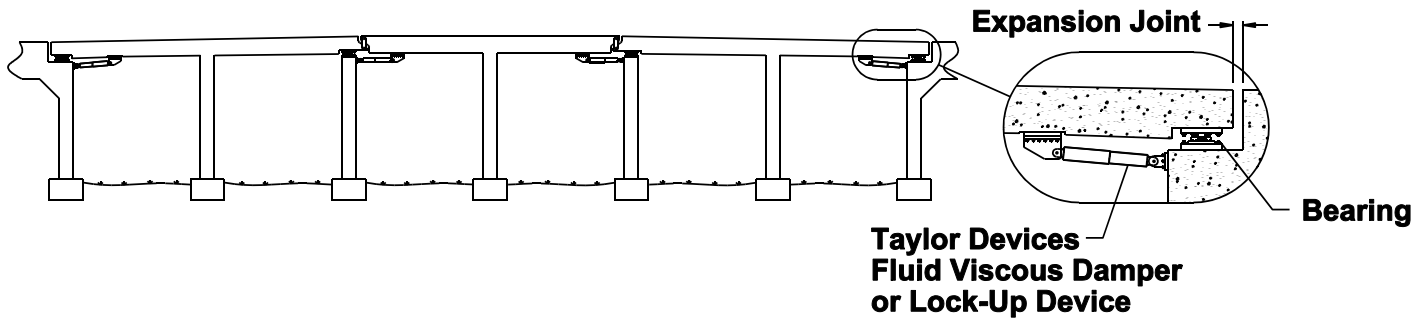
Model	Stroke	A Inches	B Inches	C Inches	D Inches	E Inches	F Inches
10 kip	12" (±6")	48	5.0	1.25	1.4	1.25	1.1
50 kip	12" (±6")	53	7.0	1.5	1.9	2.0	1.3
100 kip	12" (±6")	53	7.5	2.5	3.2	4.75	2.2
200 kip	12" (±6")	54	9.0	2.75	3.9	5.0	2.4
300 kip	12" (±6")	60	11.5	3.0	4.25	5.25	2.7
600 kip	12" (±6")	77	16.0	6.0	7.5	10.0	4.8
1000 kip	12" (±6")	88	23.0	6.0	9.0	14.25	4.8
2000 kip	12" (±6")	102	26.0	8.0	11.0	17.0	6.0

NOTE:

Various strokes available, from 2 inches to 120 inches. Any stroke change from the 12 inch stroke version depicted changes extended length by two and one half inches per inch of total stroke change.

EXAMPLE:

200 kip x 8 inch stroke, mid-stroke length is $54 - 2.5(12 - 8) = 44$ inches.



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Certified ISO 9001 : 2000 by

