

## TAYLOR LIQUID DIE SPRINGS

Specifically designed for use in:

Blanking Dies, Plastic Molds, Stripping Dies, Piercing Dies, Punching Dies, Fixtures

### Operating Principles of Taylor Liquid Die Springs

The Taylor Liquid Die Spring operates by mechanically compressing a liquid, Tayco Piezoil, in a sealed chamber. A piston moves into a cylinder filled with this liquid to compress it 9.4% at 20,000 PSI. The effect is roughly comparable to forcing 10 gallons of liquid into a 9-gallon container.

Preload is the resistant force within the unit that must be overcome to initiate piston travel. Endload is the maximum force capacity of a unit at the end of its given stroke or travel.

Never exceed the given stroke of any unit. Overstroking causes seal damage and loss in both preload and endload.

The Liquid Die Spring is designed with a standard threaded end fitting so that the unit can be installed in any position. In the vertical position, however, the unit may simply be set in a bored hole with the unit resting on a flat bottom or on its shoulder. Insertion may be done by hand.

Heat is generated within the unit as it is cycled. This heat must be dissipated in order for the unit to operate satisfactorily. Therefore, to prevent overheating, the maximum allowable stroke of a given unit is reduced as the cyclic rate is increased. For complete design information on using Taylor Liquid Die Springs, ask for Taylor Data Book 7.

### Taylor Liquid Die Spring Specifications

Model Number	208.5	3101	3101.5	4142	4143	5164	5172.5	6186	6232
Max. Endload (lbs.)	500	1000	1500	2000	3000	4000	2500	6000	2000
Preload (lbs.)	50	100	150	200	300	400	250	600	200
Max Stroke (in.)	.360	.510	.340	.680	.430	.590	1.000	.600	2.000
Body Length (in.)	2.00	2.50	2.50	3.50	3.50	4.00	4.50	4.50	5.75
Piston Length (in.)	.390	.54	.54	.71	.71	.62	1.12	.76	2.01
Thread Length (in.)	.375	.50	.50	.75	.75	.75	.75	1.00	1.00
Cylinder Diameter (in.)	1/2	3/4	3/4	1	1	1-1/4	1-1/4	1-1/2	1-1/2
Piston Diameter (in.)	3/16	1/4	5/16	3/8	7/16	1/2	7/16	5/8	3/8
Thread	3/8-24	1/2-20	1/2-20	3/4-16	3/4-16	3/4-16	3/4-16	1-14	1-14
Unit Weight (lbs.)	.05	.19	.23	.42	.51	.85	.85	1.34	1.34

