# WATERPROOF PIPE SLEEVE

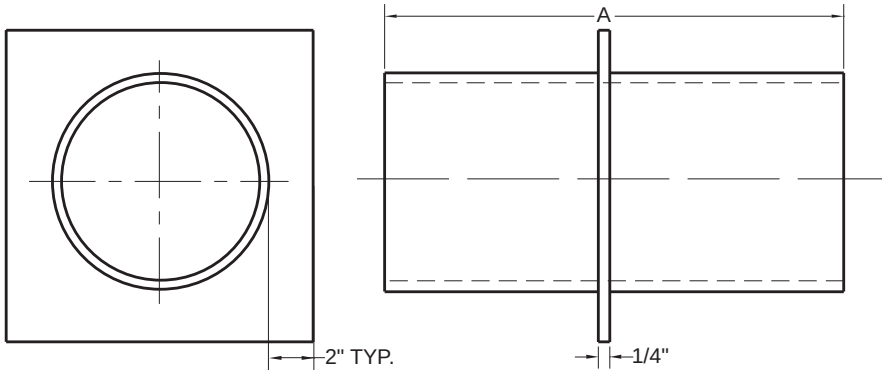
## Figure 453

The Figure 453 is designed for floor and ceiling penetrations through concrete. Pipes, and conduits can be placed within the sleeve for easy through access. Sleeves are normally furnished as schedule 40 pipe up to 12" NPS, standard wall up to 20" NPS, and rolled plate for larger sizes.

**Material:** Steel.

**Finish:** Plain, Painted, Hot-Dip Galvanized.

**Ordering:** Specify sleeve diameter, dimension A, figure number, and finish. For Metric applications specify Figure M453.




# CUSHION SPRING ASSEMBLY

## Figure 478

Designed to provide an economical method to support piping with both vertical and axial movement as well as absorbing vibration normally found in piping systems.

Comprised of two spring coils and four steel caps the Cushion Spring Assembly is used in conjunction with our Figure 142 Two Rod Roll Hanger and drop rods, both must be ordered separately. The Figure 478 can also be used for insulated piping provided the correct saddle has been ordered from this catalog.

In selecting the correct spring size consideration should be given to weight of pipe to be supported and its contents, concentrated loads, as well as the anticipated deflection.

**Material:** Carbon Steel.

**Finish:** Plain, Painted.

**Orde**ring: Specify drop rod diameter, spring number, figure number, and finish. For Metric applications specify Figure M478.

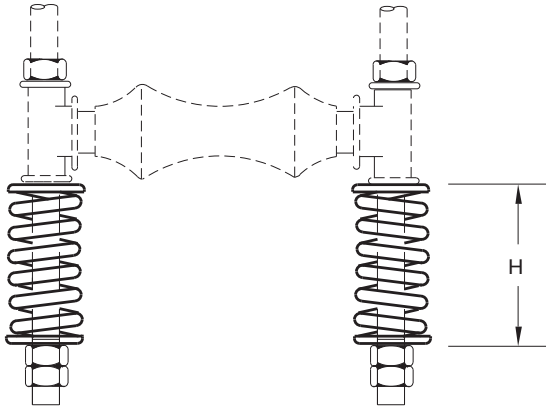



**FIGURE 478 – CUSHION SPRING ASSEMBLY**

| SPRING NUMBER | MAXIMUM LOAD | MAXIMUM DEFLECTION | SPRING DEFLECTION | ROD SIZE | MAXIMUM ROD SIZE | H | WEIGHT EACH |
|---|---|---|---|---|---|---|---|
| 1 | 535 | 1¼ | 428 lbs./in. | ⅜ | ¾ | 6¼ | 4.5 |
| 1 | 2380 | 32 | 74 N/mm | M10 | M20 | 159 | 2.0 |
| 2 | 1500 | 1¼ | 1200 lbs./in. | ½ | ¾ | 5⅝ | 14.0 |
| 2 | 6673 | 32 | 208 N/mm | M12 | M20 | 143 | 6.4 |
| 3 | 3750 | 1¼ | 3000 lbs./in. | ⅞ | 1½ | 8⅞ | 22.0 |
| 3 | 13345 | 32 | 417 N/mm | M22 | M36 | 225 | 10.0 |

| DIMENSIONS | TEMPERATURE | LOADS | WEIGHT |
|---|---|---|---|
| INCHES | FAHRENHEIT | POUNDS | POUNDS |
| MILLIMETERS | CELSIUS | NEWTONS | KILOGRAMS |