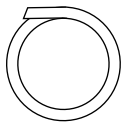
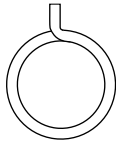


# SPRING ORDERING INFORMATION

## TORSION SPRING ENDS



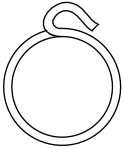
Standard Torsion Spring End



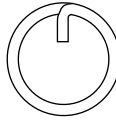
Overhead Ends Up 2" ID



Wagner End 2-1/2" ID



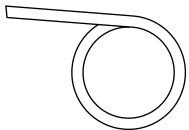
Mini Warehouse End Various ID's



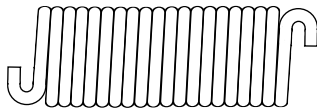
Ends In McKee & Various ID's



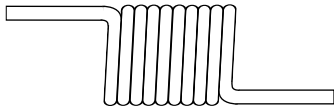
Crawford T-Spring End 3-25/32" ID



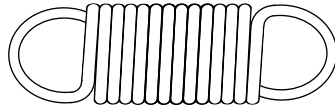
Crawford End 1-19/32" & 2-25/32" ID



Barcol End 1-13/16" ID

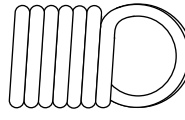


Rolling Steel Long End Various ID's

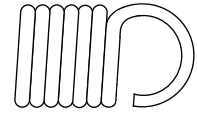


Rolling Steel Loops Various ID's

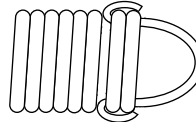
## EXTENSION SPRING ENDS



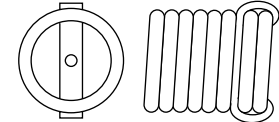
Double Loops



Single Open Loops



Clips Ends (Std. on .207 wire & larger)



Metal Strap With Hole for Bolt

## HELPFUL FORMULAS & RULES

Number of coils x wire size = spring length

*Example: 100 coils x .250 wire = 25"*

Subtract the wire size twice from the OD of a spring to determine the ID

*Example: 2-1/2" OD spring with .250 wire, 2-1/2" - .250 - .250 = 2" ID*

### **TORSION**

Number of turns x wire size = amount of spring growth

*Example: 10 turns x .250 wire = 2-1/2" of spring growth*

Inches divided by the number of coils = wire size

*Example: 2-1/2" per 10 coils, 2-1/2" divided by 10 = .250 wire*

Total IPPT of a door's springs divided by the cable drum multiplier = door weight

*Example: 1PR .250 x 2 x 32" installed on a 7' door with a 15" radius, 400-8 drums.*

*IPPT is 41.5 per spring, multiplier is .2866. Total IPPT of 83 divided by .2866 = 289 lbs door weight*

Door Weight x Hi Moment Arm divided by Number of Turns = Required IPPT

IPPT x Number of Turns divided Hi Moment Arm = Door Weight

High lift is the measured distance from the top of a closed door to the bottom of the horizontal track

When converting springs, always convert to a spring of equal or greater wire diameter

### **EXTENSION**

The stretch of an extension spring is 1/2 the door height

*Example: 7' high door, 84" divided by 2 = 42" of spring stretch*