PIC DESIGN®

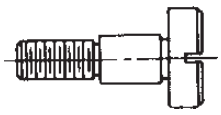
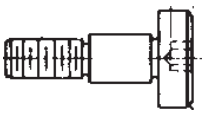
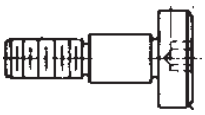
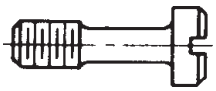
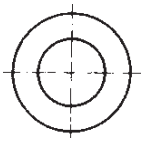
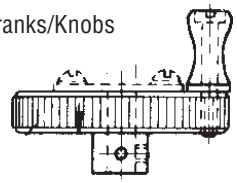
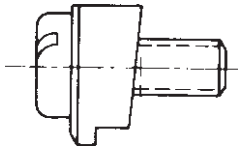
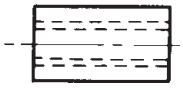
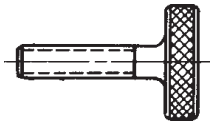
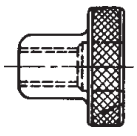
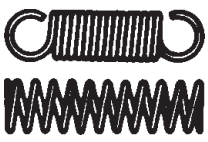
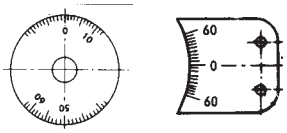
PRECISION INDUSTRIAL COMPONENTS

PRECISION HARDWARE

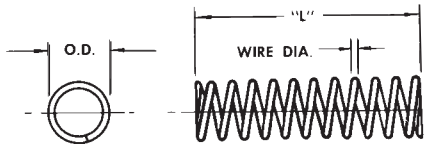
PIC Design offers an extensive line of precision Hardware which contains various items for fastening and/or locating of precision industrial components. The hardware is manufactured from Stainless Steel to the PIC high quality standards, in either inch or metric styles of thread, diameter and length.

The following pages have been included as a technical guide to aid the designer or engineer in selecting the appropriate screw type and size. The drill and tap data in inch for both the UNF and the UNC pieces, selects the correct drill to be used for the appropiate tap. For the metric ISO thread, the correct drill is recommended for the thread size and pitch.

The screw head detail data for both inch and metric heads enables the designer to select the appropriate type of head required and to allow for the clearance of the heads.

Slotted head shoulder screws. 	Socket head shoulder screws. 	Philips head shoulder screws. 	Captive Screws 
No-Mar set screws	Silver-Grip set screws	Cup point set screws	Brass tip set screws
Precision washers 	Belleville spring washers	Curved washers	Cranks/Knobs 
Retaining rings	Motor mount cleats 	Spacers	Standoffs 
Dowel pins	Woodruff keys	Knurled thumb screws 	Knurled thumb nuts 
Swivel studs, nuts and washers	Handles	Springs 	Dials and verniers 

COMPRESSION TYPE



Ground ends except small sizes marked*

Material: 302 Stainless Stell (Spring Temper)

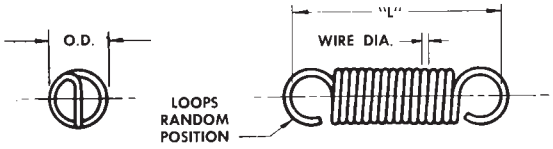
K = Average spring rate-LB./IN.

O.D.	Wire Dia.	Free Length "L"	K	Aprox. of Coils	Part Number
1/16	.008	1/4	4.3	20	*AY-20
	.008	1/2	2	23	*AY-22
3/32	.010	1/4	4.1	8	*AY-24
	.010	1/2	1.9	16	*AY-26
	.010	3/8	5.4	13	*AY-28
	.010	3/4	2.7	24	*AY-30
1/8	.016	1/4	14.6	7	AY-32
	.016	1/2	6.9	12	AY-34
	.018	3/8	15	10	AY-36
	.018	3/4	7.1	19	AY-38
	.020	3/8	23.1	11	AY-40
	.020	3/4	11	20	AY-42
	.022	1/2	25.8	14	AY-44
	.022	1	12.2	27	AY-46
3/16	.018	1/2	5.6	7	AY-48
	.018	1	2.7	13	AY-50
	.020	1/2	8.1	8	AY-52
	.020	1	3.7	15	AY-54

*Ground ends except small sizes marked

O.D.	Wire Dia.	Free Length "L"	K	Aprox. of Coils	Part Number
3/16	.022	1/2	11.8	8	AY-56
	.022	1	5.4	16	AY-58
	.024	1/2	158	9	AY-60
	.024	1	7.5	17	AY-62
	.026	1/2	22.2	9	AY-64
	.026	1	10.2	17	AY-66
	.029	3/4	21.5	14	AY-68
	.029	1-1/2	10.4	27	AY-70
	.032	3/4	34.3	14	AY-72
	.032	1-1/2	15.6	28	AY-74
1/4	.026	1/2	14.5	6	AY-76
	.026	1	6.2	11	AY-78
	.035	1/2	40.9	7	AY-80
	.035	1	22.50	13	AY-82

EXTENSION TYPE



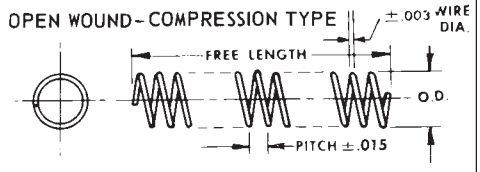
Material: 302 Stainless Steel (Spring Temper)

K = AVERAGE SPRING RATE-LB./IN.

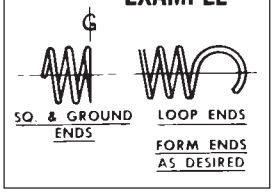
O.D.	Wire Dia.	Free Length "L"	K	Part No.
1/16	.008	1/2	.6	AZ-22
3/32	.010	3/4	.4	AZ-26
1/8	.016	3/4	1.7	AZ-28
	.016	1-1/4	1.0	AZ-30
	.020	3/4	6.2	AZ-32
3/16	.022	3/4	3.2	AZ-36
	.022	1-1/4	1.5	AZ-38
	.031	3/4	20.0	AZ-44

O.D.	Wire Dia.	Free Length "L"	K	Part No.
1/4	.026	1-1/4	1.6	AZ-50
	.029	1-1/4	2.8	AZ-54
	.031	3/4	10.0	AZ-56
	.031	1-1/4	4.1	AZ-58
	.034	3/4	14.8	AZ-60
	.034	1-1/4	6.6	AZ-62

EXPERIMENTAL SPRINGS



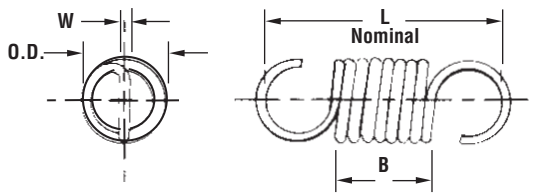
EXAMPLE



Material: 302 Stainless Steel-Spring Temper

O.D.	Fits Over Pin or Screw Dia.	Wire Dia.	Approx. No. of Coils	Pitch	Free Length	Part No.
3/32	—	.0159	32	.042	1-1/2	AY-1
1/8	—	.0179	37	.062	2	AY-2
3/16	—	.0226	37	.075	2-1/2	AY-3
1/4	—	.0253	29	.093	3	AY-4
5/16	—	.0320	29	.125	3-1/2	AY-5
9/64	3/32	.0159	17	.042	1	AY-7
11/64	1/8	.0179	19	.062	1-1/4	AY-8
1/4	3/16	.0226	22	.075	1-1/2	AY-9
21/64	1/4	.0253	19	.093	1-3/4	AY-10
25/64	5/16	.0320	16	.125	2	AY-11
15/32	3/8	.0403	12	.156	2-1/4	AY-12
39/64	1/2	.0465	15	.156	2-1/2	AY-13

ANTI-BACKLASH



Type Gear	Pitch	W Wire Dia.	L Nominal	O.D. ±.010	K	B Approx.	Part Number
Spur	48 to 120	.012	.350	.115	1.7	.170	BE-16
Worm	48 & 64	.015	.350	.115	5.7	.170	BE-66
Spur	24 & 32	.018	.350	.115	16	.170	BE-67
Mini Spur	Miniature	.012	.240	.093	0.6	.120	BE-16M

STAINLESS PRECISION SPRING KITS

Description of Contents	Number of Parts	Part No.
Compression Springs-Stainless Steel Assorted diameters from .057 to .240 and lengths from 1/4" to 2".	150	Y7K
Extension Springs-Stainless Steel Assorted diameters from 1/16 to 1/2 and lengths from 1/4" to 2".	150	Y8K