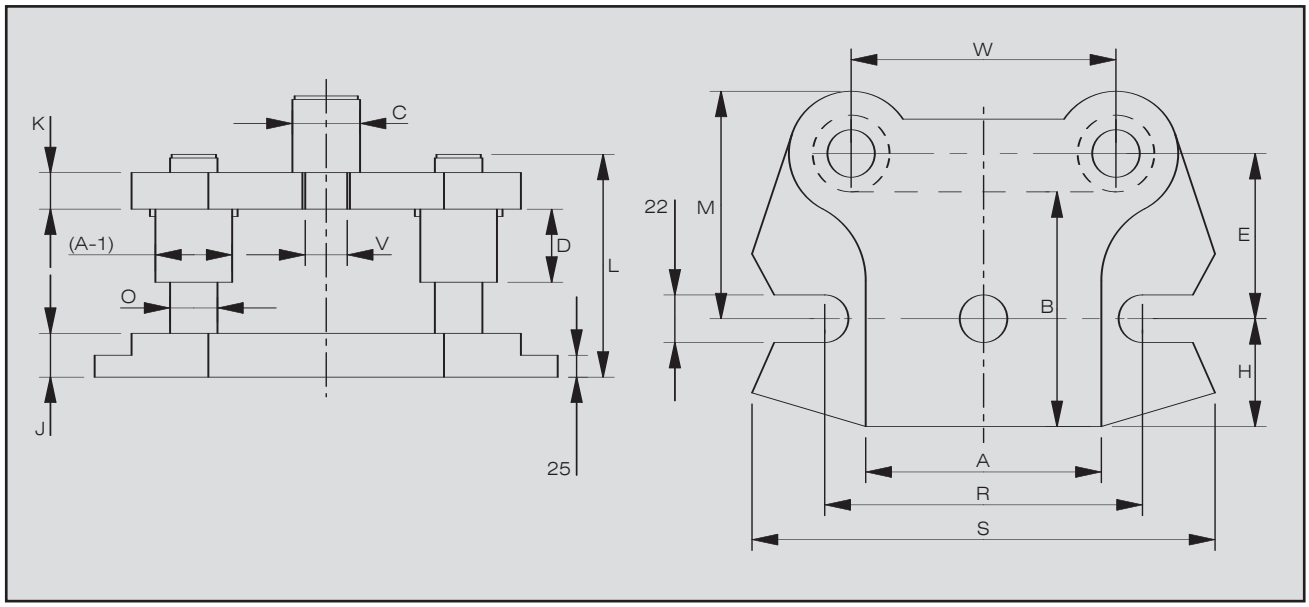
hales

Tooling Component & Industrial Supplies

press tooling components

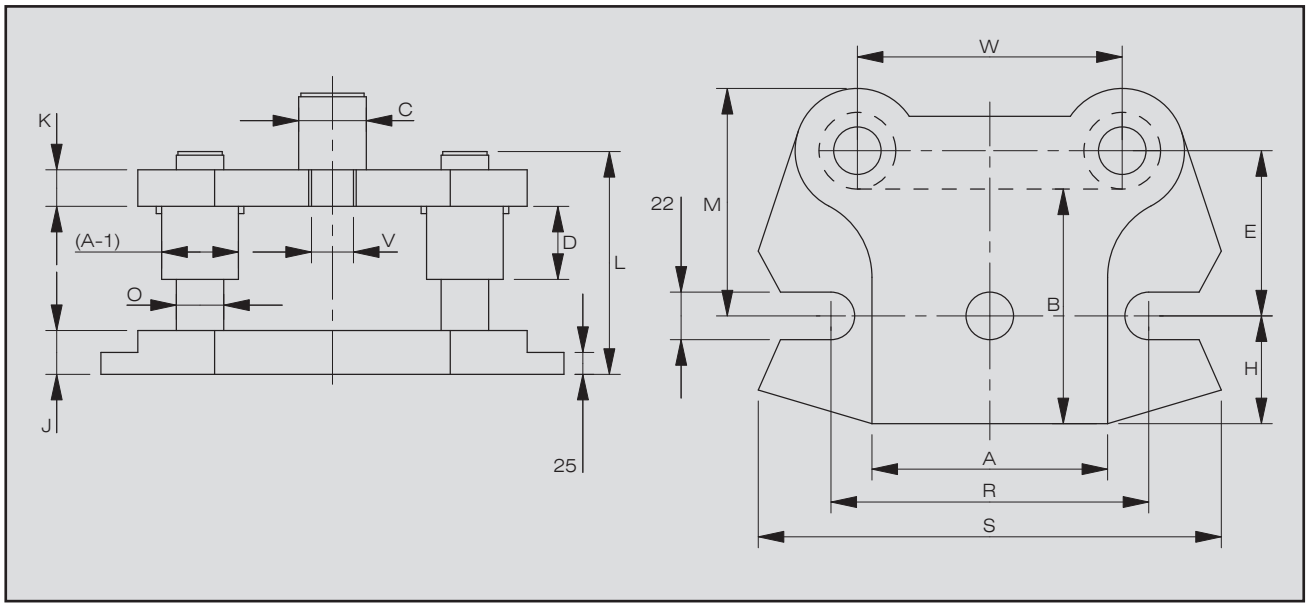
Contents

Rear Pillar Steel Dieset



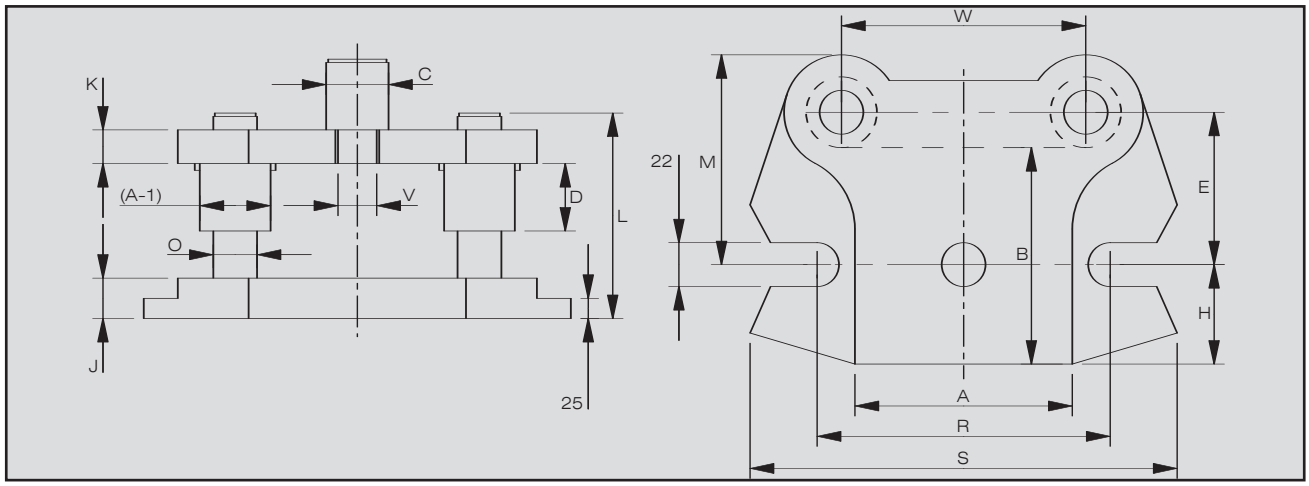
HALES CODE	DIE AREA		SHANK DIAMETER	PIN LENGTH	GENERAL DIMENSIONS											BSF
	A	B	C	L	W	E	H	J	K	M	O	A-1	R	S	D	V
HRPS-33A	3 (76.2)	3 (76.2)	1 1 1/4	4 1/2	76.2	55.5	38.1	22.2	22.2	84.1	.7355	28.63	152.4	203	44.47	3/4
HRPS-44A	4 (101.6)	4 (1016)	1 1/4 1 1/2	4 1/2	101.6	68.2	50.8	35	30.5	96.8	.7355	28.63	171.4	222.2	44.47	1
HRPS-55A	5 (131)	5 (126.6)	1 1/2 2	4 1/2 5 3/4	127.0	84.1	63.5	38.5	30.5	119.0	.9855	44.45	196.8	247.6	31.75 57.15	1 1/4
HRPS-64A	6 (156.4)	4 (101.2)	1 1/2 2	4 1/2 5 3/4	152.4	71.4	50.8	38.5	30.5	106.3	.9855	44.45	222.2	273.0	31.75 57.15	1 1/4
HRPS-66A	6 (156.4)	6 (152)	1 1/2 2	4 1/2 5 3/4	152.4	96.8	76.2	38.5	30.5	131.7	.9855	44.45	222.2	273.0	31.75 57.15	1 1/4
HRPS-75A HRPS-75B	7 (181.8)	5 (126.6)	1 1/2 2 1 1/2 2	4 1/2 5 3/4 5 1/4 6 1/2	177.8	84.1	63.5	38.5 48.5	30.5	119.0	.9855	44.45	247.6	298.4	31.75 57.15 57.15	1 1/4
HRPS-86A HRPS-86B	8 (207.2)	6 (152)	1 1/2 2 1 1/2 2	4 1/2 5 3/4 5 1/4 6 1/2	203.2	96.8	76.2	38.5 48.5	30.5	131.7	.9855	44.45	273.0	323.8	31.75 57.15 57.15	1 1/4
HRPS-88A	8 (207.2)	8 (202.8)	1 1/2 2	4 1/2 5 3/4	203.2	122.2	101.6	38.5	30.5	157.1	.9855	44.45	273.0	323.8	31.75 57.15	1 1/4
HRPS-95A HRPS-95B	9 (232.6)	5 (126.6)	1 1/2 2 1 1/2 2	4 1/2 5 3/4 5 1/4 6 1/2	228.6	84.1	63.5	38.5 48.5	30.5	119.0	.9855	44.45	297.2	349.2	31.75 57.15 57.15	1 1/4
HRPS-97A HRPS-97B	9 (232.6)	7 (177.4)	1 1/2 2 1 1/2 2	4 1/2 5 3/4 5 1/4 6 1/2	228.6	109.5	88.9	38.5 48.5	30.5	144.4	.9855	44.45	297.2	349.2	31.75 57.15 57.15	1 1/4
HRPS-106A HRPS-106B	10 (258.0)	6 (152.0)	1 1/2 2 1 1/2 2	4 1/2 5 3/4 5 1/4 6 1/2	254.0	96.8	76.2	38.5 48.5	30.5	131.7	.9855	44.45	323.8	374.6	31.75 57.17 57.17	1 1/4

Rear Pillar Steel Dieset



HALES CODE	DIE AREA		SHANK DIAMETER	PIN LENGTH	GENERAL DIMENSIONS											BSF
	A	B	C	L	W	E	H	J	K	M	O	A-1	R	S	D	V
HRPS-118A	11	8	1 1/2 2	4 1/2 5 3/4	279.4	125.4	101.6	38.5	30.5	166.7	1.2355	53.97	349.2	400.0	38.10 60.33	1 1/4
HRPS-118B	(283.4)	(201.2)	1 1/2 2	5 1/4 6 1/2				48.5							60.33	
HRPS-126A HRPS-126B	12 (308.8)	6 (150.4)	2	5 3/4 6 1/2	304.8	100.0	76.2	38.5 48.5	30.5	141.3	1.2355	53.97	374.6	425.4	60.33	1 1/4
HRPS-128A HRPS-128B	12 (308.8)	8 (201.2)	2	5 3/4 6 1/2	304.8	125.4	101.6	38.5 48.5	30.5	166.7	1.2355	53.97	374.6	425.4	60.33	1 1/4
HRPS-1210A HRPS-1210B	12 (308.8)	10 (255.2)	2	5 3/4 6 1/2	304.8	154.0	127.0	38.5 48.5	30.5	195.3	1.2355	53.97	374.6	425.4	60.33	1 1/4
HRPS-146A HRPS-146B	14 (359.6)	6 (150.4)	2	5 3/4 6 1/2	355.6	100.0	76.2	38.5 48.5	30.5	141.3	1.2355	53.97	425.4	476.2	60.33	1 1/4
HRPS-148A HRPS-148B	14 (359.6)	8 (201.2)	2	5 3/4 6 1/2	355.6	125.4	101.6	38.5 48.5	30.5	166.7	1.2355	53.97	425.4	476.2	60.33	1 1/4
HRPS-1410A HRPS-1410B	14 (359.6)	10 (253.9)	2	5 3/4 6 1/2	355.6	157.1	127.0	38.5 48.5	38.5	206.3	1.4855	60.00	431.8	482.6	69.85	1 1/4
HRPS-1414A HRPS-1414B	14 (359.6)	14 (355.2)	2	5 3/4 6 1/2	355.6	207.6	177.8	38.5 48.5	30.5 38.5	258.4	1.4855	60.00	389.2	457.2	69.85	1 1/4
HRPS-166A HRPS-166B	16 (410.4)	6 (150.4)	2	5 3/4 6 1/2	406.4	100.0	76.2	38.5 48.5	38.5	141.3	1.4855	53.97	479.2	527.0	60.33	1 1/4
HRPS-1612A HRPS-1612B	16 (410.4)	12 (304.8)	2	8 1/2 10	406.4	182.6	152.4	38.5 48.5	38.5 48.5	233.4	1.4855	60.0	440.0	508.0	69.85	1 1/4
HRPS-187A HRPS-187B	18 (461.2)	7 (177.8)	2	8 1/2 10	457.2	119.1	88.9	38.5 48.5	38.5 48.5	169.9	1.4855	60.0	490.8	558.8	69.85	1 1/4
HRPS-189A HRPS-189B	18 (461.2)	9 (228.6)	2	8 1/2 10	457.2	144.5	144.3	38.5 48.5	38.5 48.5	195.3	1.4855	60.0	490.8	558.8	69.85	1 1/4
HRPS-1814A HRPS-1814B	18 (461.2)	14 (352.4)	2	8 1/2 10	457.2	208.0	177.8	38.5 48.5	38.5 48.5	265.1	1.4855 1.7355	60.0 66.68	502.9	571.5	69.85 76.18	1 1/4
HRPS-1818A HRPS-1818B	18 (461.2)	18 (458.8)	2	8 1/2 10	457.2	263.5	228.6	38.5 48.5	38.5 48.5	320.7	1.7355	66.68	503.5	571.5	69.85 76.18	1 1/4

Rear Pillar Steel Dieset

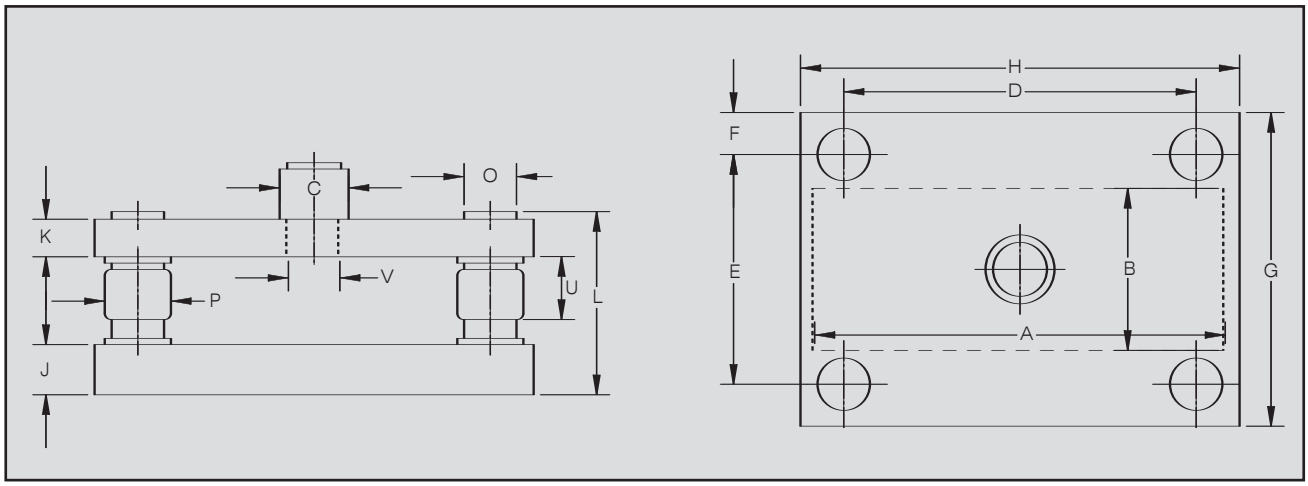


HALES CODE	DIE AREA		SHANK DIAMETER	PIN LENGTH	GENERAL DIMENSIONS											BSF
	A	B	C	L	W	E	H	J	K	M	O	A-1	R	S	D	V
HRPS-206A	20	6	2	8 1/2	508.0	106.4	76.2	38.5	38.5	157.2	1.4855	60.0	541.6	609.6	76.18	1 1/4
HRPS-206B	(512)	(152.4)		10				48.5	48.5			66.68				
HRPS-2010A	20	10	2	8 1/2	508.0	161.9	127.0	38.5	38.5	219.1	1.4855	60.0	554.3	622.3	69.85	1 1/4
HRPS-2010B	(512)	(255.6)		10				48.5	48.5		1.7355	66.68			76.18	
HRPS-227A	22	7	2	8 1/2	558.8	123.8	89.9	38.5	38.5	181.0	1.4855	60.0	605.1	673.1	69.85	1 1/4
HRPS-227B	(562.8)	(179.4)		10				48.5	48.5		1.7355	66.68			76.18	
HRPS-2214A	22	14	2	8 1/2	558.8	212.7	177.8	38.5	38.5	269.9	1.7355	66.68	604.5	673.1	69.85	1 1/4
HRPS-2214B	(562.8)	(357.2)		10				48.5	48.5						76.18	
HRPS-246A	24	6	2	8 1/2	609.8	111.1	76.2	38.5	38.5	168.3	1.4855	60.0	655.9	723.9	69.85	1 1/4
HRPS-246B	(613.6)	(154.0)		10				48.5	48.5		1.7355	66.68			76.18	
HRPS-249A	24	9	2	8 1/2	609.8	149.2	114.3	38.5	38.5	206.4	1.4855	60.0	655.9	723.9	69.85	1 1/4
HRPS-249B	(613.6)	(230.2)		10				48.5	48.5		1.7355	66.68			76.18	
HRPS-2412A	24	12	2	8 1/2	187.3	152.4	244.5	38.5	38.5	609.6	1.7355	66.68	655.3	723.9	69.85	1 1/4
HRPS-2412B	(613.6)	(306.4)		10				48.5	48.5						76.18	
HRPS-306A	30	6	2	8 1/2	762.0	111.1	76.2	38.5	38.5	168.3	1.4855	60.0	808.3	876.3	69.85	1 1/4
HRPS-306B	(766.0)	(154.0)		10				48.5	48.5		1.7355	66.68			76.18	
HRPS-309A	30	9	2	8 1/2	762.0	149.2	114.3	38.5	38.5	206.4	1.4855	60.0	808.3	876.3	69.85	1 1/4
HRPS-309B	(766.0)	(230.2)		10				48.5	48.5		1.7355	66.68			76.18	
HRPS-366A	36	6	2	8 1/2	914.4	111.1	76.2	38.5	38.5	168.3	1.4855	60.0	960.7	1028.7	69.85	1 1/4
HRPS-366B	(918.4)	(154.0)		10				48.5	48.5		1.7355	66.68			76.18	
HRPS-369A	36	9	2	8 1/2	914.4	149.2	114.3	38.5	38.5	206.4	1.4855	60.0	960.7	1028.7	69.85	1 1/4
HRPS-369B	(918.4)	(230.2)		10				48.5	48.5		1.7355	66.68			76.18	

REVERSE REAR PILLAR STEEL

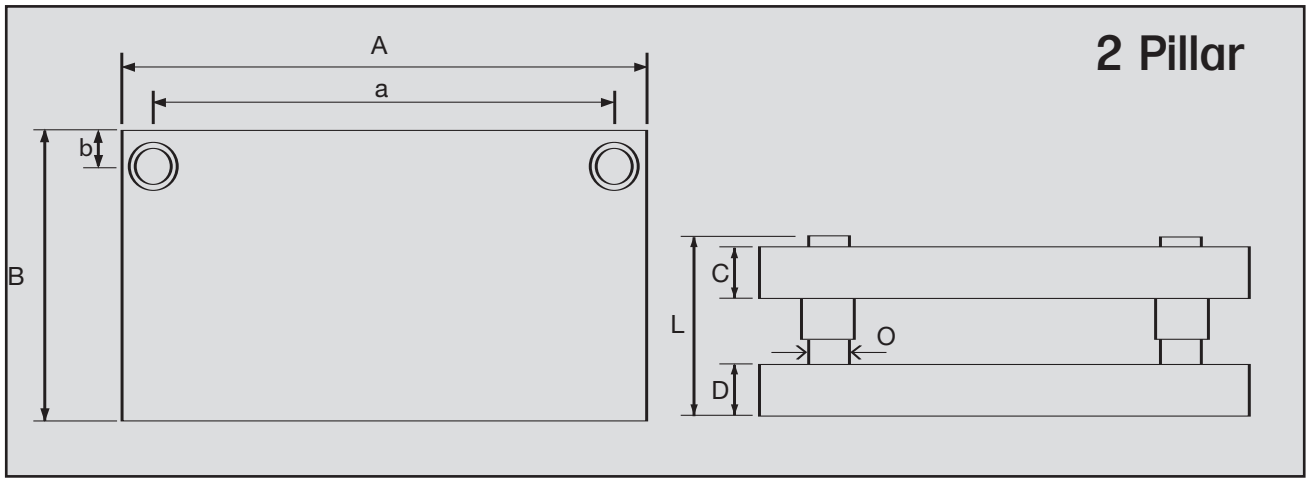
HALES CODE	DIE AREA		SHANK DIAMETER	PIN LENGTH	GENERAL DIMENSIONS											BSF
	A	B	C	L	W	E	H	J	K	M	O	A-1	R	S	D	V
HRPS-58A	5	8	2	5 3/4	142.9	122.2	101.6	38.5	30.5	157.1	.9855	44.45	212.7	263.5	57.17	1 1/4
HRPS-58B	(127.0)	(211.1)		6 1/2				48.5							57.17	
HRPS-710A	7	10	2	5 3/4	225.4	134.9	127.0	38.5	30.5	176.2	1.2355	53.97	247.6	298.4	60.33	1 1/4
HRPS-710B	(177.8)	(254)		6 1/2				48.5								
HRPS-1010A	10	10	2	5 3/4	254.0	157.2	127.0	38.5	30.5	198.3	1.2355	53.97	324.0	375.3	60.33	1 1/4
HRPS-1010B	(258.0)	(258.4)		6 1/2				48.5								
HRPS-1014A	10	14	2	5 3/4	254.0	209.5	177.8	38.5	30.5	250.7	1.2355	53.97	324.0	375.3	60.33	1 1/4
HRPS-1014B	(258.0)	(361.6)		6 1/2				48.5								

Four Pillar Steel Dieset

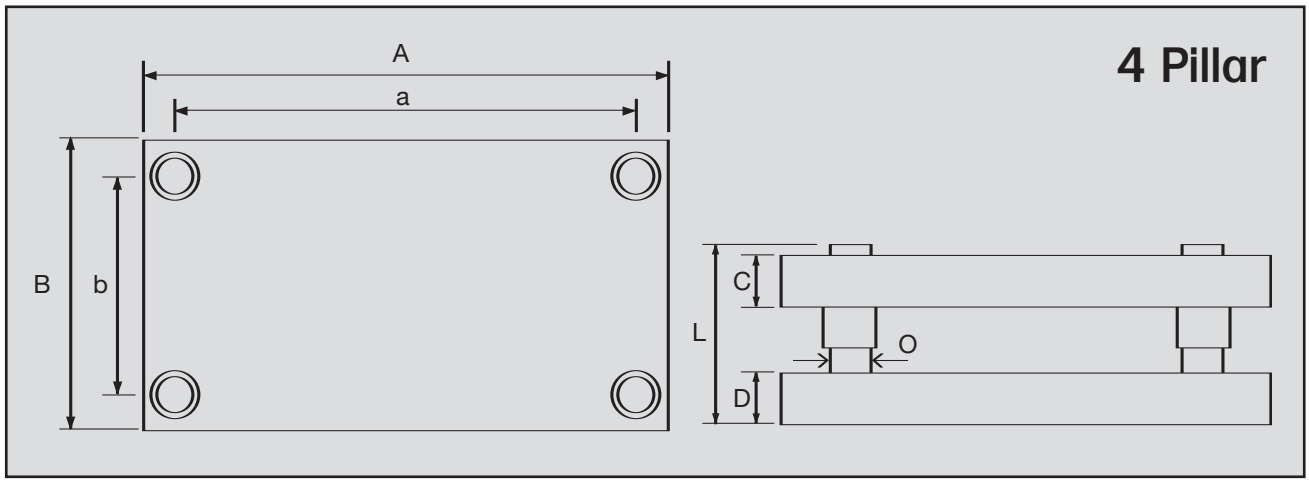


HALES CODE	DIE AREA		SHANK DIAMETER	GENERAL DIMENSIONS								PIN DIA.	BUSH	BSF
	A	B	C	L	D	E	G	H	J	K	P	O	U	V
H4PS-1062	10 (254)	5 1/2 (139.7)	2	5 3/4	235.0	187.3	276.0	323.9	40.0	40.0	44.45	.9855	57.17	1 1/4
H4PS-1262	12 (304.8)	5 1/2 (139.7)	2	5 3/4	279.4	193.7	289.0	374.7	40.0	40.0	53.97	1.2355	60.33	1 1/4
H4PS-1282	12 (304.8)	7 1/2 (190.5)	2	5 3/4	279.4	244.5	340.0	374.7	40.0	40.0	53.97	1.2355	60.33	1 1/4
H4PS-1462	14 (355.6)	5 1/2 (139.7)	2	5 3/4	330.2	193.7	289.0	425.5	40.0	40.0	53.97	1.2355	60.33	1 1/4
H4PS-1482	14 (355.6)	7 1/2 (190.5)	2	5 3/4	330.2	244.5	340.0	425.5	40.0	40.0	53.97	1.2355	60.33	1 1/4
H4PS-14102	14 (355.6)	9 1/2 (241.3)	2	5 3/4	330.2	295.3	390.0	425.5	40.0	40.0	53.97	1.2355	60.33	1 1/4
H4PS-1662	16 (406.4)	5 1/2 (139.7)	2	5 3/4	381.0	193.7	289.0	222.3	40.0	40.0	53.97	1.2355	60.33	1 1/4
H4PS-1682	16 (406.4)	7 1/2 (190.5)	2	5 3/4	381.0	257.2	340.0	476.3	40.0	40.0	53.97	1.2355	60.33	1 1/4
H4PS-1862	18 (457.2)	5 1/2 (139.7)	2	5 3/4	431.8	193.7	276.0	527.1	40.0	40.0	53.97	1.2355	60.33	1 1/4

Special Die Set



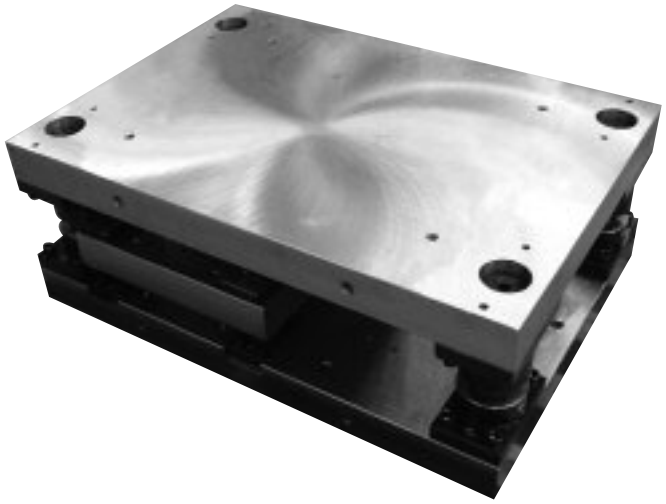
A	B	C	D	a	b	L	O



A	B	C	D	a	b	L	O

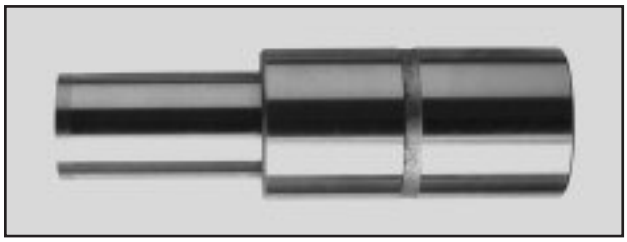
The following options are avaialable on request;

- Ball Bearing Bushings
- Drilling & Tapping (detailed drawing required)
- Pocketing (detailed drawing required)



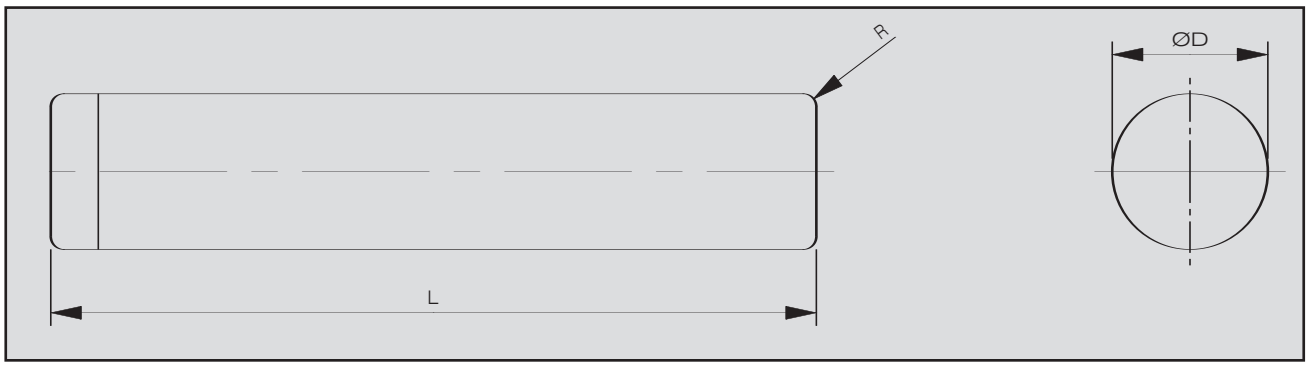
Oil-less Standard Die-set Press Fit Pin and Bush

Hales self-lubricating die components offer industry self-lubricating, maintenance-free performance resulting in overall cost savings and operational safety.



HALES STANDARD DIE SET GUIDE PINS

MATERIAL: HIGH CARBON CHROME BEARING STEEL

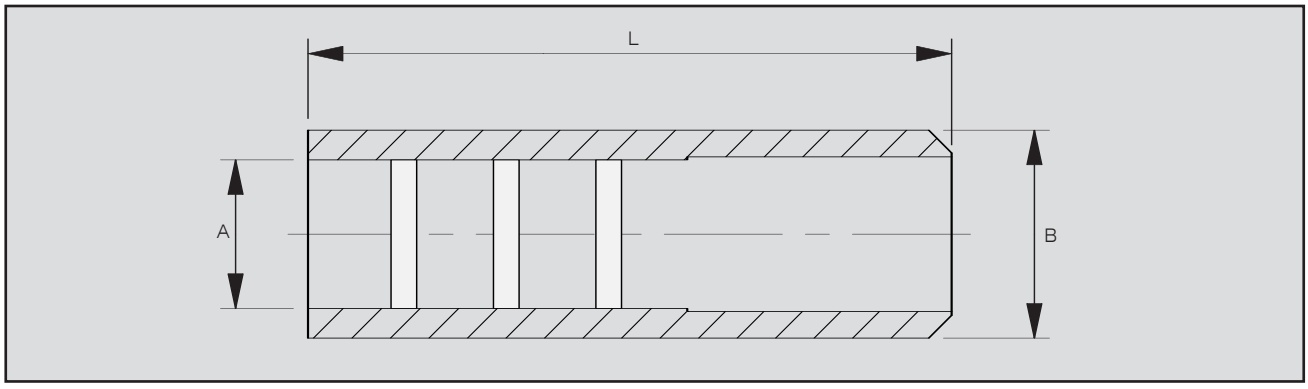


TOLERANCE	
D=	+0
	-0.0002"

HALES CODE	D	L										
HP .75 x L	0.7355	4.5	5.5	7	8							
HP 1 x L	0.9855	4.5	5.25	5.75	6.5	7	7.5	8	9	9 1/2	10	
HP 1.25 x L	1.2355	5.25	5.75	6.5	7	7.5	8	8.5	9.5	10	11	12
HP 1.5 x L	1.4855	5.75	6	6.5	7	7.5	8	8.5	9.5	10	11	12
HP 1.75 x L	1.7355	10	12									

HALES STANDARD DIE SET GUIDE BUSH

MATERIAL: HIGH CARBON CHROME BEARING STEEL WITH SOLID LUBRICANT



TOLERANCE	
A=	+0.0003
	-0
B=	+0.0003
	-0

HALES CODE	A	B	L		
HB .75 x L	0.7356	1.1271	2.125	2.625	
HB 1 x L	0.9856	1.5021	3	3.5	
HB 1.25 x L	1.2356	1.7521	3	3.5	4.378
HB 1.5 x L	1.4856	2.0021	3.5	4.375	5.25
HB 1.75 x L	1.7356	2.5021	4.5	5.25	

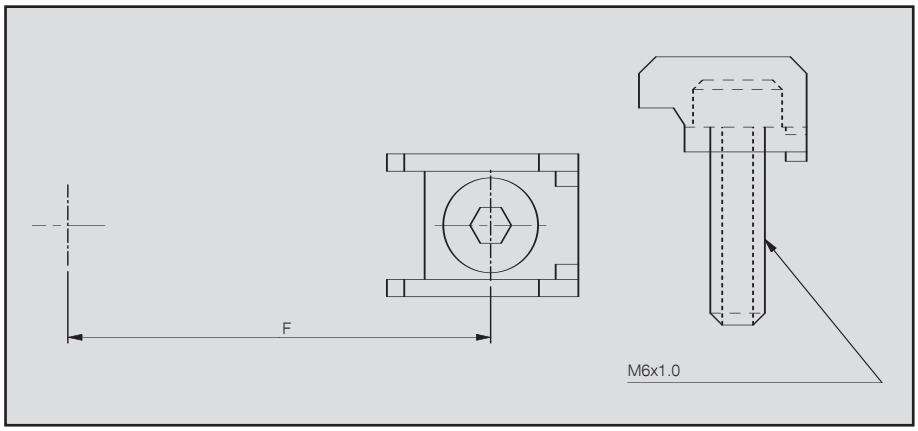
Standard Die Set Oil-less Demountable Guide Bushes

These bushes are a standard component in all Hales die-sets.

MATERIAL: DEEP CORE STRENGTH CASE HARDENED MATERIAL WITH SOLID LUBRICANT

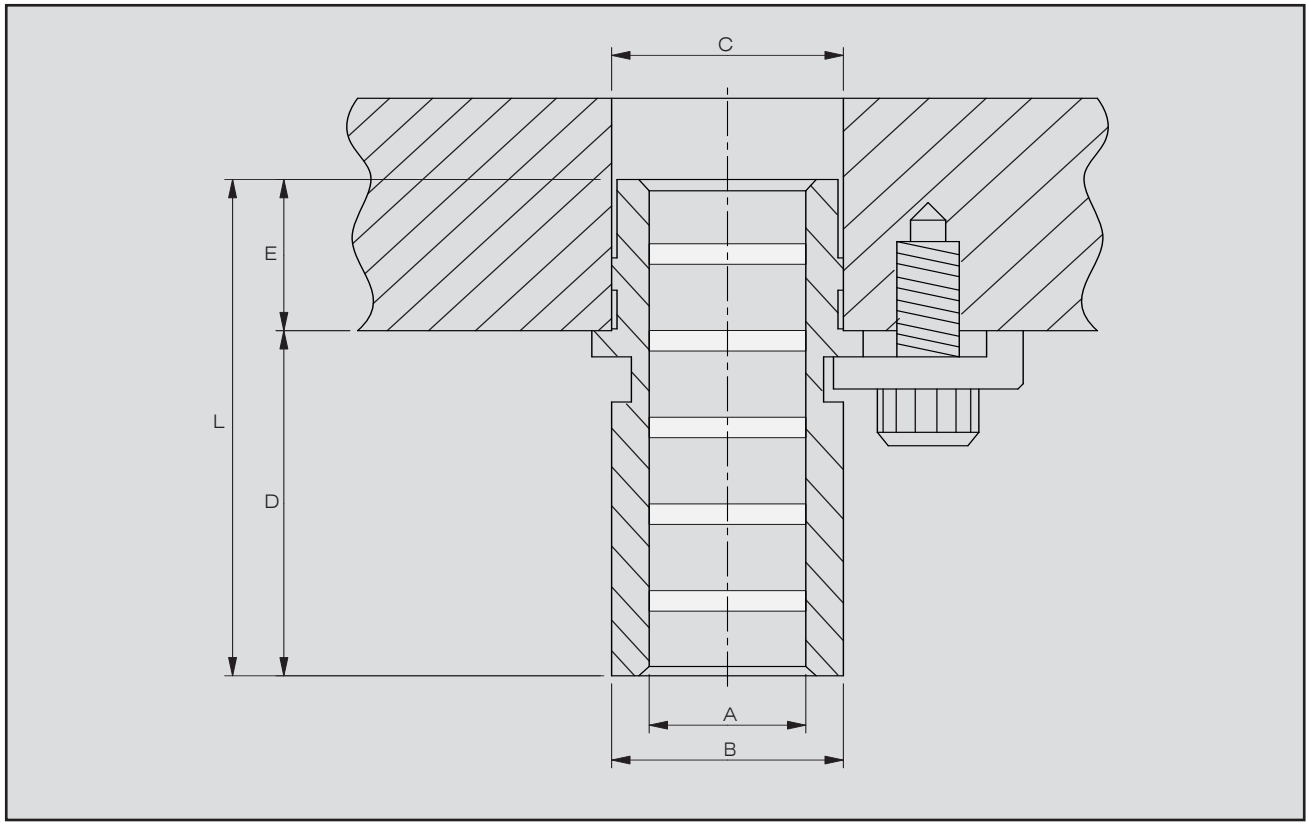
TOE CLAMP

HALES PART NO. HRBTC



HALES CODE	A	B	C	D	E	L	F
HRB 2532	25.037	44.45	38.10	31.75	22.25	54.00	27.40
HRB 2560	25.037	44.45	38.10	57.15	22.25	79.40	27.40
HRB 3238	31.387	53.97	44.45	38.10	28.58	66.70	32.10
HRB 3261	31.387	53.97	44.45	60.33	28.58	88.90	32.10
HRB 3838	37.737	60.00	50.80	38.10	34.93	73.00	35.30
HRB 3870	37.737	60.00	50.80	69.85	34.93	104.80	35.30
HRB 3890	37.737	60.00	50.80	88.90	34.93	123.80	35.30
HRB 4576	44.087	66.68	57.15	76.18	41.30	117.50	38.50

TOLERANCE MM			
A=	+0.008	C=	+0.000
	-0		-0.013

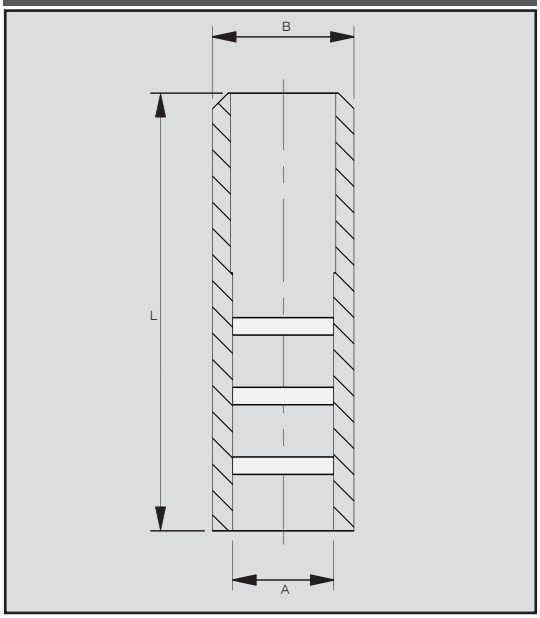


Oil-less Line-ream Pin and Bush Sets

No step boring.
No jig boring.
Just drill and ream.
Use radial drill.
Every size listed ex-stock.
Oil-less graphite lubrication.

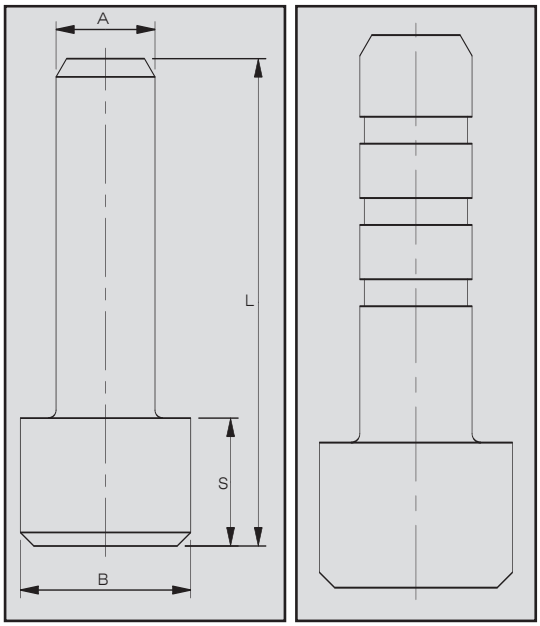
HALES CODE	A	B	C	L
EB-20:54	18.68	28.63	28	54
EB-20:70	"	"	35	70
EB-25:75	25.03	38.15	38	75
EB-25:90	"	"	48	90
EB-32:75	31.38	44.50	38	75
EB-32:90	"	"	48	90
EB-32:110	"	"	58	110
EB-38:90	37.73	50.85	48	90
EB-38:110	"	"	58	110
EB-38:135	"	"	76	135
EB-45:115	44.09	63.55	58	115
EB-45:135	"	"	76	135

HALES LINE-REAM BUSH



HALES CODE	A	B	S	L
EPH-20:80	18.68	28.63	25	82
EPH-20:100	"	"	"	100
EPH-20:125	"	"	"	125
EPH-20:175	"	"	"	175
EPH-25:100	25.03	38.15	38	100
EPH-25:125	"	"	"	125
EPH-25:150	"	"	"	150
EPH-25:175	"	"	"	175
EPH-25:200	"	"	"	200
EPH-32:100	31.38	44.50	45	100
EPH-32:125	"	"	"	125
EPH-32:150	"	"	"	150
EPH-32:175	"	"	"	175
EPH-32:200	"	"	"	200
EPH-32:215	"	"	"	215
EPH-32:225	"	"	"	225
EPH-38:175	37.73	50.85	50	175
EPH-38:200	"	"	"	200
EPH-38:225	"	"	"	225
EPH-38:250	"	"	"	255
EPH-45:225	44.09	63.55	63	225
EPH-45:250	"	"	"	250
EPH-45:280	"	"	"	280
EPH-45:305	"	"	"	305

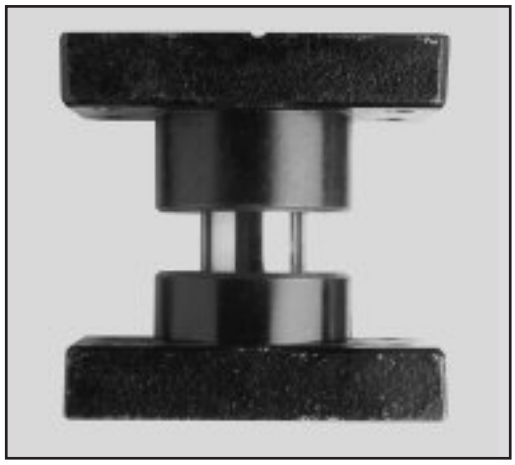
HALES LINE-REAM PIN



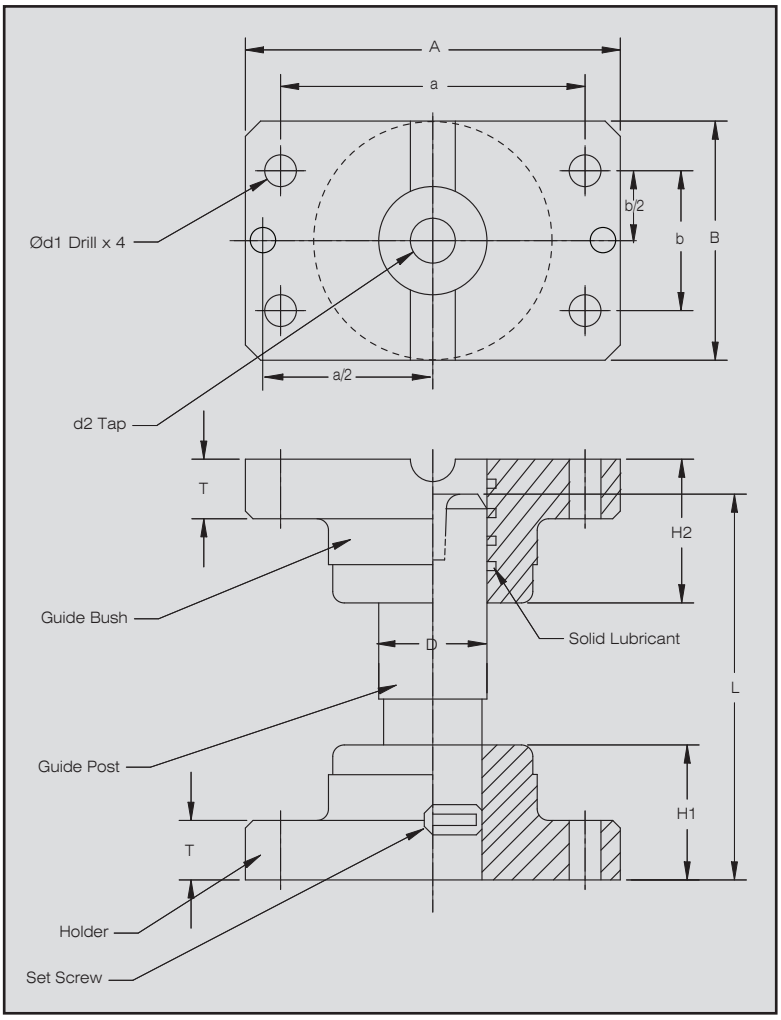
This style from EPH-38:175 to larger sizes.

hales
Tooling Component & Industrial Supplies

Oil-less Bolt-on Pin and Bush Assemblies



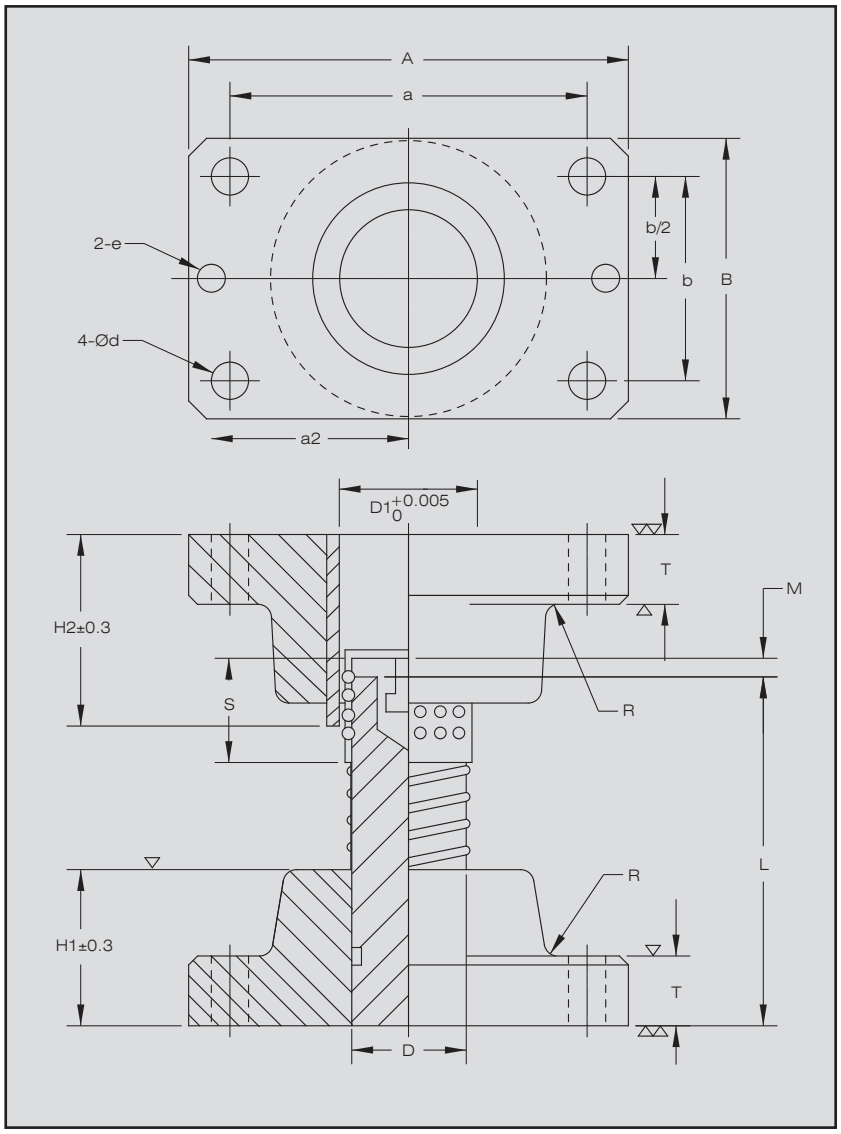
MATERIALS
Guide post: deep core strength, case hardened material.
Holder: automotive high alloyed iron.
Guide Bush: automotive high alloyed iron with solid lubricant.



STD. NO.		ØD	L	A	B	H_1	H_2	a	b	T	$Ød_1$	eH7	SCREW 8pcs	DOWEL 4pcs
P-SGR-25X	80 100 120	25	80 100 120	84	48	30	45	66	30	20	9	+0.015 8.0	M8x35	8x30
P-SGR-32X	100 120 140	32	100 120 140	100	58	40	50	76	36	20	11	+0.015 8.0	M10x40	8x30
P-SGR-38X	120 140 160 180	38	120 140 160 180	130	75	50	60	100	44	25	11	+0.015 10.0	M10x45	10x40
P-SGR-50X	160 200 250	50	160 200 250	155	90	65	85	125	60	25	14	+0.015 10.0	M12x50	10x40
P-SGR-60X	200 250 300	60	200 250 300	190	120	75	100	150	80	30	18	+0.018 13.0	M16x60	13x50
P-SGR-80X	250 300 350	80	250 300 350	230	150	100	130	180	110	35	22	+0.018 16.0	M20x75	16x60

When assembling, two dowel pins are to be fitted in guide bush and holder.
Please Note: dowels and screws are included in assembly.

Bolt-on Ball Bearing Pin and Bush Assemblies



Light smooth action.

Helical design of cage and plunger design allows cage to freely rotate over the entire peripheral surface.

Lubrication problems are almost entriely emlinated.

Perfect precision alignment.

D	D_1	A	B	a	b	d	H_1	H_2	T	S	M	eH7		S.H. SCREW (8 OFF)	DOWELL (4 OFF)
25	31	84	48	66	30	9	30	50	20	50	0 - 20	8		8Ø-35	8Ø-30
32	40	100	58	76	36	11	40	60	20	60	0 - 25	8	+0.015 0	10Ø-40	8Ø-30
38	48	130	75	100	44	11	50	70	25	70	0 - 29	10		10Ø-45	10Ø-40
50	60	155	90	125	60	14	65	90	25	90	0 - 42	10		12Ø-50	10Ø-40
60	70	190	120	150	80	18	75	100	30	100	0 - 59	13	+0.018 0	16Ø-60	13Ø-50

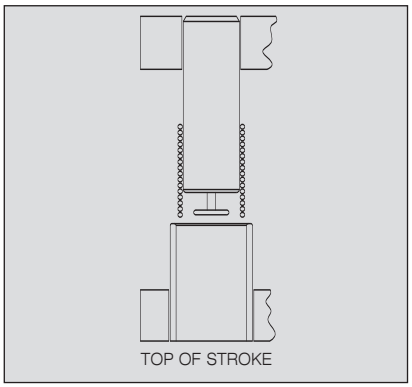
M: movable range of stopper.
Please Note: 60 Dia has fixed stopper.

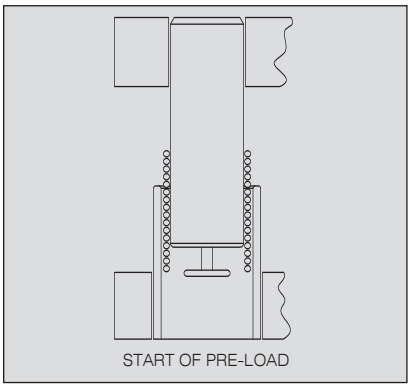
PSR-BB	D	L										
PSR-BB	25	100	120		140	160	180					
PSR-BB	32		120		140	160	180	200				
PSR-BB	38				140	160	180	200	240			
PSR-BB	50						180	200	240	260	300	
PSR-BB	60							200	240	260	300	350

When assembling, two dowel pins are to be fitted in the guide bush and holder.
Please note: dowels and screws are included in assembly.

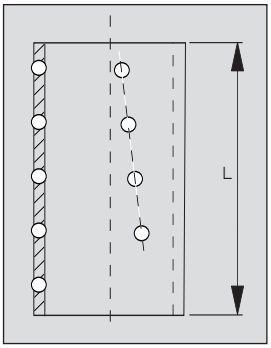
HBB Series

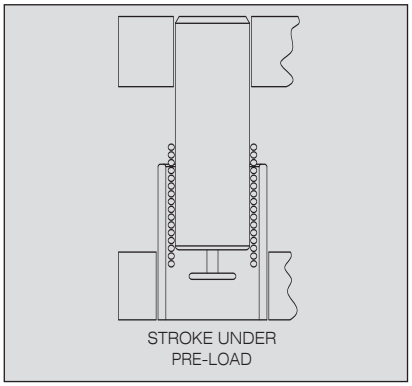
BALL BEARING PINS AND BUSHES OFFER DISTINCT ADVANTAGES

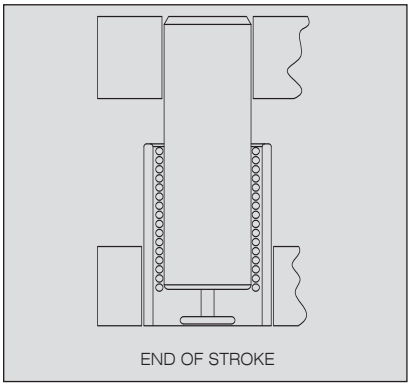




HBB HELICAL CAGE







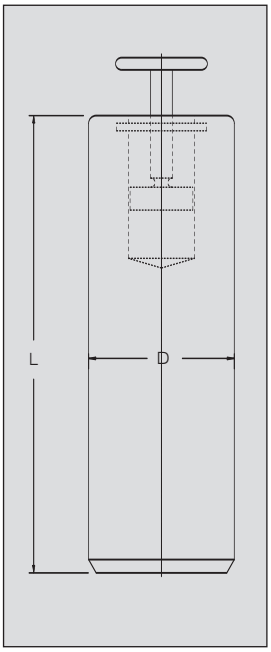
NOM. PIN. DIA.	LENGTHS
25	60, 75
32	75, 90
38	75, 90
45	90, 110
50	90, 110
60	90, 110

Difficulties of assembly and disassembly of diesets are eliminated.

Lubrication problems are almost entirely eliminated.

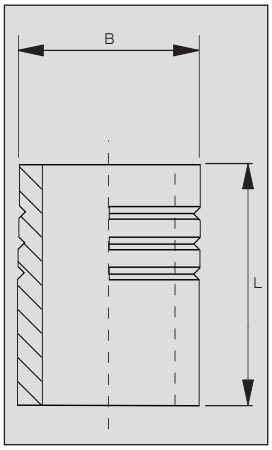
Perfect alignment increases die life.

HBB GUIDE PIN



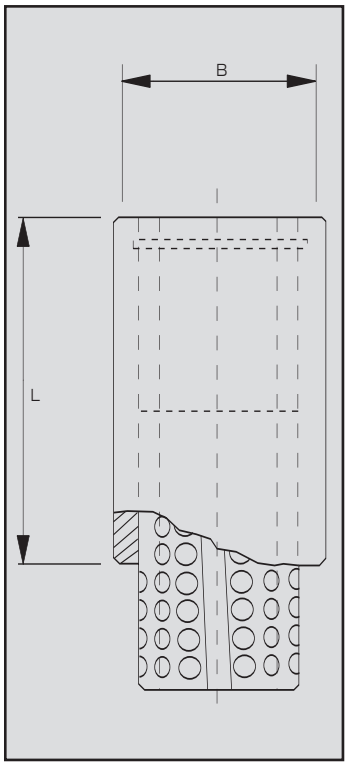
POST. DIA. D	LENGTHS
25mm	
+0.020	130, 150
+0.015	180, 200
32mm	150, 170
+0.025	190, 200
+0.020	220, 240
38mm	150, 180
+0.030	200, 240
+0.025	260, 280
45mm	180, 200
+0.030	220, 240
+0.025	260, 280
50mm	200, 220
+0.035	240, 260
+0.030	280, 300
60mm	200, 220
+0.035	240, 260
+0.030	280, 300

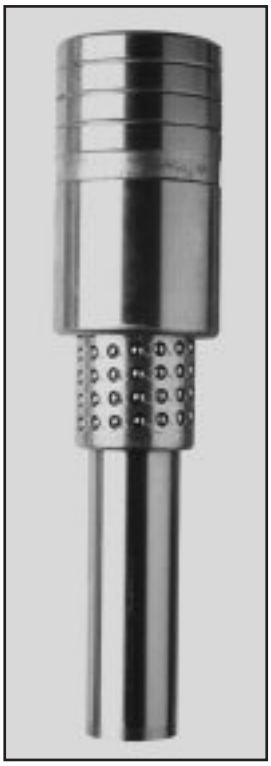
HBB BUSGING



POST DIA. A	O.D. B	LENGTH
25	45 0 -0.007	60 80
32	55 0 -0.008	80 100
38	64 0 -0.008	80 100
45	74 0 -0.008	100 120
50	83 0 -0.010	100 120
60	95 0 -0.010	100 120

The EBB bush and cage is designed to be fitted inside the top bolster as the ball cage is captive inside the bush. The advantage of this design is to eliminate any foreign bodies entering the sensative ball cage area causing damage. Due to its very simple design, the EBB series has an appreciable price advantage.



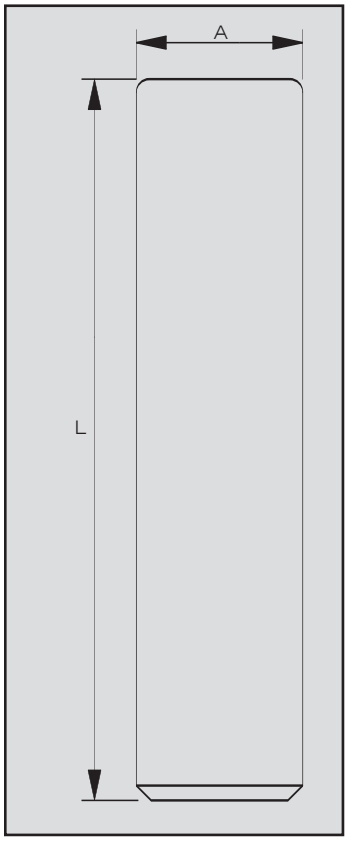


EBB

HALES CODE	B	L	
EBB 1 x L	1.9855	3.43	4.43
EBB 1.25 x L	2.235	3.93	4.93
EBB 1.5 x L	2.485	4.18	5.18
EBB 1.75 x L	2.985	4.43	5.43
EBB 2 x L	3.235	5.00	6.00

EBP

HALES CODE	A	L
EBP 1 x L	.9855	4.5, 5.25, 5.75, 6.5, 7, 7.5, 8, 8.5, 9, 10
EBP 1.25 x L	1.2355	5.25, 5.75, 6.5, 7, 7.5, 8, 8.5, 10
EBP 1.5 x L	1.4855	6, 6.75, 7.5, 8.5, 10, 11, 12
EBP 1.75 x L	1.7355	7.5, 8.5, 9.5, 10, 11, 12
EBP 2 x L	1.9855	7.5, 8.5, 9.5, 10, 11, 12



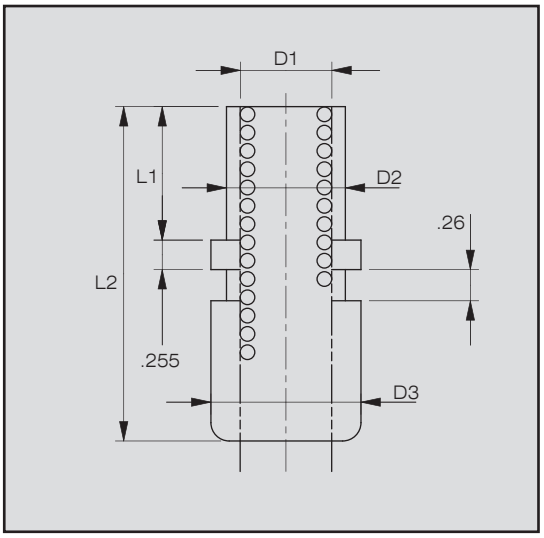
A1 Series

Designed to leave the guide pin, which eliminates the use of longer pins and bushes, which can be costly.

Ball cage is designed to circulate around pin and bush, giving even wear and longer life.

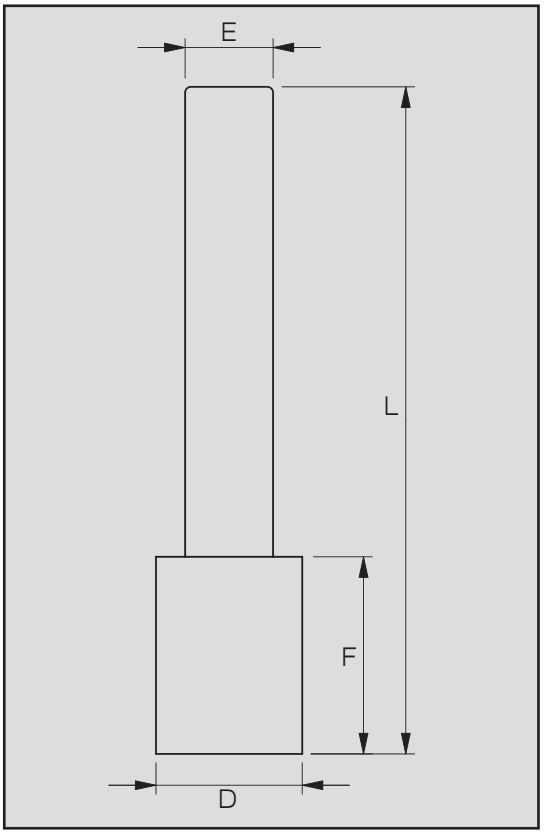
A1 Series are completely interchangeable with all popular mass produced pin and bush assemblies.

A1 Series can be fitted into Hales standard die set without any modification.

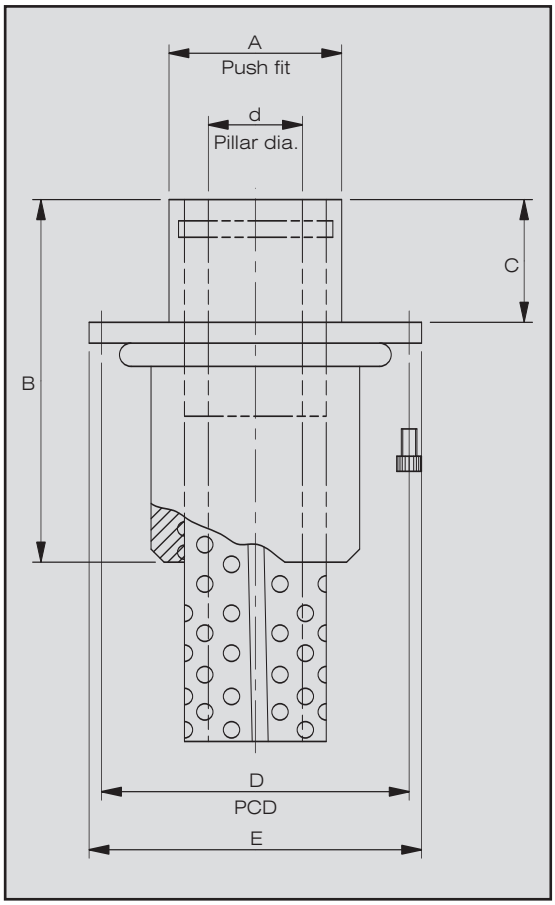


A1 SERIES PIN BUSH AND CAGE ASSEMBLY

HALES BUSH NO.	D1	D2 HOLE +0 +.0010	D2 BUSH +.0002 +0	D3	D4	L1	L2
A1-1"	1.274	1.500		1.875	2.275	1.218	3.437
A1-1.25"	1.524	1.750		2.125	2.525	1.218	3.937
A1-1.5"	1.774	2.000		2.375	2.775	1.437	4.187



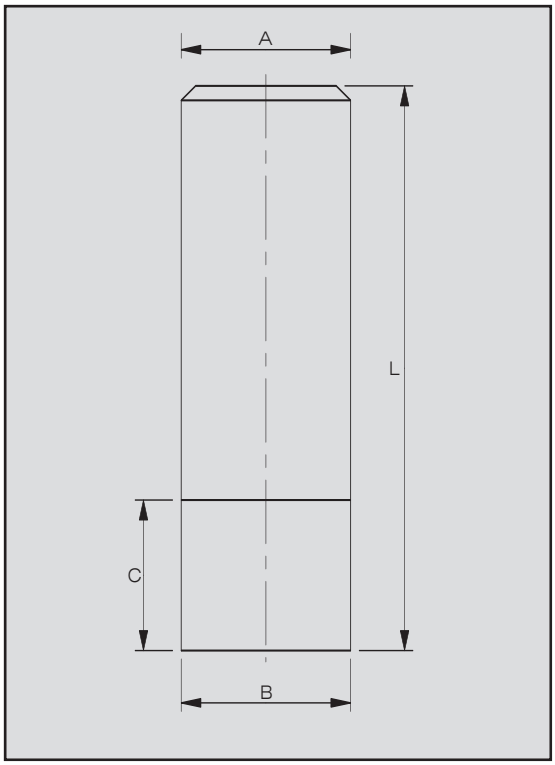
NOM PIN DIA	D +.0000 -.0002	E +.0000 -.0002	F +.020	L +.030 -.000
1"	.9855	.900	1.250	4.5, 5.75, 6.5, 7, 7.5, 8
1.25"	1.2355	1.150	1.500	5.75, 6.5, 7, 7.5, 8, 8.5
1.5"	1.4855	1.400	1.500	6, 6.5, 7, 7.5, 8, 8.5, 9.5



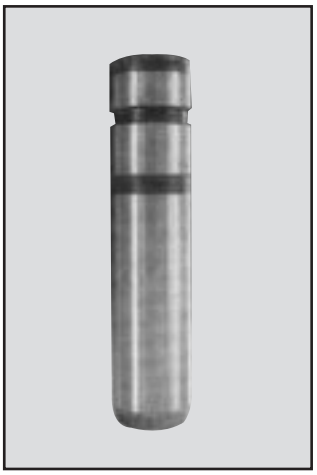
- Preloaded for high precision applications.
- Captive ball cage.
- Recommended for high-speed operations.
- Flanged mounting.
- Spiro-helical ball pattern for extended life.

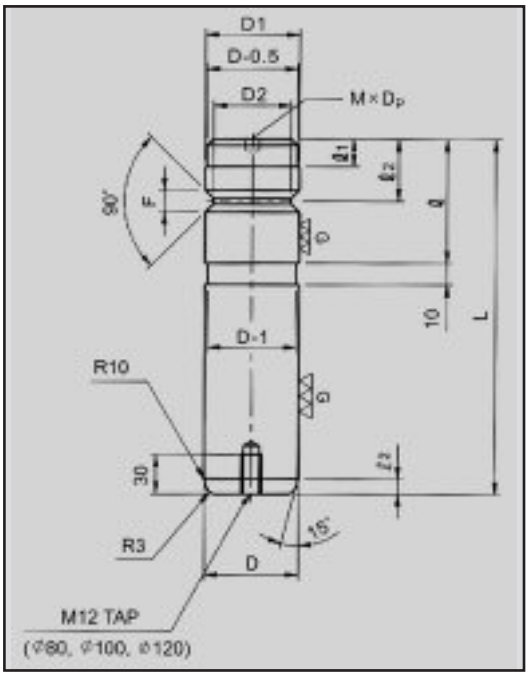
HALES CODE	d	A	B	C	D	E
EXBB 0.750	0.750	1.125	2.937	0.937	2.000	2.375
EXBB 1.00	1.000	1.5000	3.437	1.218	2.312	2.687
EXBB 1.250 S	1.2500	1.7500	3.937	1.218	2.656	3.000
EXBB 1.250	1.2500	1.7500	3.937	1.687	2.656	3.000
EXBB 1.500	1.5000	2.000	4.187	1.875	2.968	3.437

HALES CODE	A	B	C	L
EXP0.750 X L	0.750	.7355	1.250	5.5
EXP1 X L	1.000	.9855	1.500	6, 6.5, 7.5
EXP1.25 X L	1.250	1.2355	2.000	6, 6.5, 7.5, 8.5
EXP1.50 X L	1.500	1.4855	2.000	7.5, 8.5, 9.5



LPG





Material: SM45C

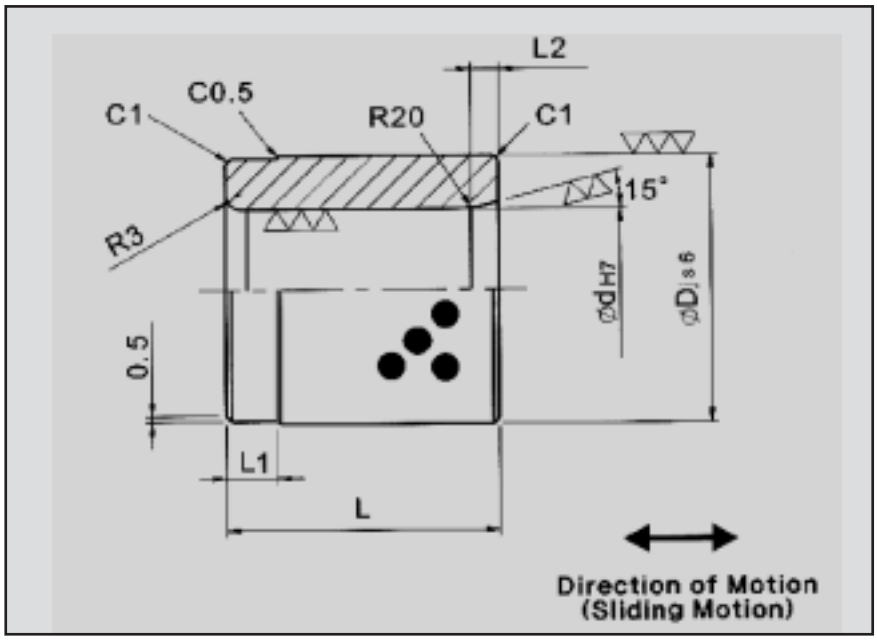
Hardness: HRC50-

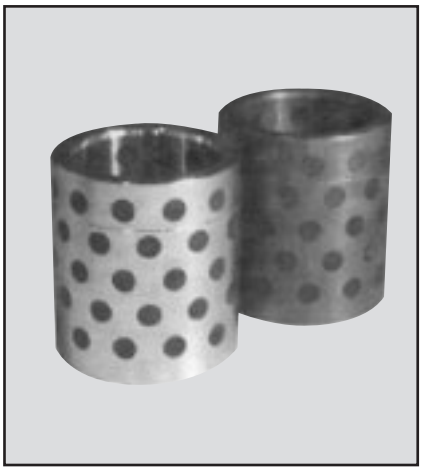
Product Code	D		D1	p6	D2	l	l1	l2	F	L	MxDp
LPG	25	-0.005 -0.015	25	+0.035 +0.022	21	30	5	5	8	80 100 120	M8×25
	30	-0.005 -0.015	30	+0.035 +0.022	26	40	5	5	8	100 120 140	
	40	-0.005 -0.015	40	+0.042 +0.026	36	50	5	5	8	120 140 160	M10×25
	50	-0.005 -0.015	50	+0.042 +0.026	45	70	10	10	10	160 200 250	
	60	-0.005 -0.015	60	+0.051 +0.032	55	90	10	10	12	200 250 300	M12×25
	65	-0.010 -0.025	65	+0.051 +0.032	60	100	10	10	12	250 300 350	
	80	-0.010 -0.025	80	+0.051 +0.032	75	120	10	10	12	250 300 350	M16×30
	100	-0.010 -0.025	100	+0.059 +0.037	95	150	10	10	12	300 350 400	
	120	-0.010 -0.025	120	+0.059 +0.037	114	180	10	10	16	350 400 450	

How to Order:

Product Code - D x L

Example: LPG - 50 x 200





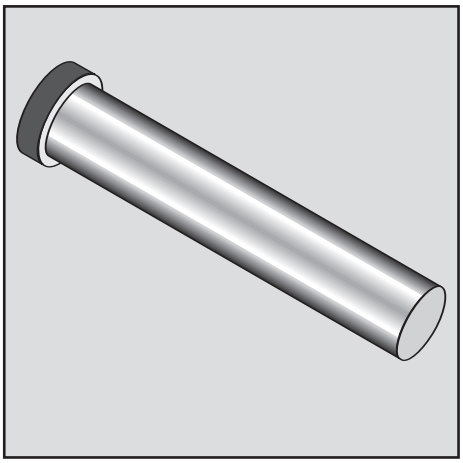
Material:
SP: #500SP(CAC304+Graphite)
F: #500F(GC250+Graphite)

Product Code	I.D	O.D	Length		
	d	D	L	L1	L2
LGB	30 $^{+0.021}_{0}$	50 ±0.008	50	10	5
	35 $^{+0.025}_{0}$	60 ±0.0095	55	15	
	38 "				
	40 "		60	10	
	50 "	70 ±0.0095	75	15	10
		75 ±0.0095			
	60 $^{+0.030}_{0}$	80 ±0.011	60, 90	20	
		85 ±0.011	90		
	80 "	100 ±0.011	80, 120	25	
		110 ±0.011	120		
	100 $^{+0.035}_{0}$	120 ±0.0125	100, 150		
		130 ±0.0125	150		
	120 "	140 ±0.0125	180		
		150 ±0.0125			

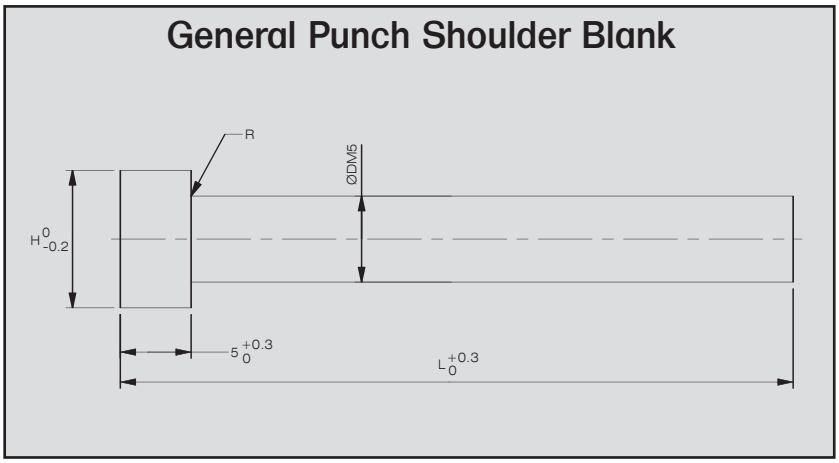
How to Order:

Product Code - d x D x L - Material
Example: LPG - 60 x 80 x 600 - SP

Blank Punches



General Punch Shoulder Blank



MATERIAL
A2, R/c 59-61 double tempered (Toolsteel) M2, R/c 61-63 triple tempered (HSS) Heads drawn to Rc 40-55.

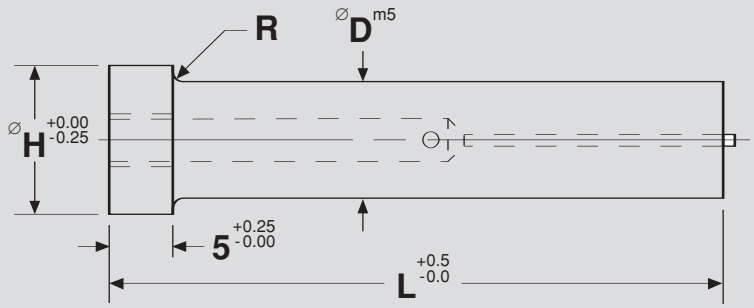
MATERIAL	D	H	OVERALL LENGTH							
			56	63	72	80	90	100	110	120
GPSB	3	6						100		
GPSB	4	7				80		100		
GPSB	5	8	56	63	72	80		100		
GPSB	6	9	56	63	72	80	90	100		120
GPSB	8	11	56	63	72	80	90	100	110	120
GPSB	10	13	56	63	72	80	90	100	110	120
GPSB	12	15	56	63	72	80	90	100	110	120
GPSB	13	16	56	63	72	80	90	100	110	120
GPSB	16	19	56	63	72	80	90	100	110	120
GPSB	20	23	56	63	72	80	90	100	110	120
GPSB	25	28				80		100		

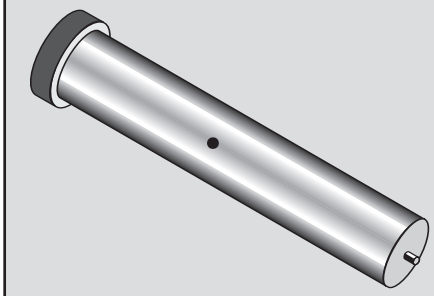
Ordering Example:

Qty 10 - GPSB 10-80 M2

Shedder Punch - Blank

General Ejector Shoulder Blank





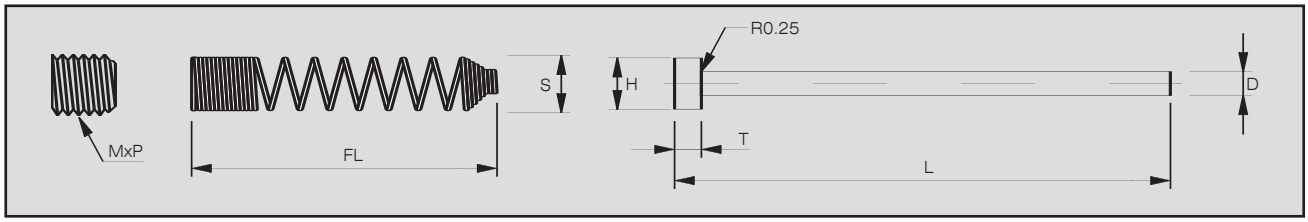
MATERIAL
A2, R/c 59-61 double tempered (Toolsteel) M2, R/c 61-63 triple tempered (HSS) Heads drawn to Rc 40-55.

MATERIAL	D	H	OVERALL LENGTH						EJECTOR TYPE
			56	63	71	80	90	100	
GESB	5	8	56	63	71	80	90	100	E2AM
GESB	6	9	56	63	71	80	90	100	E3M
GESB	8	11	56	63	71	80	90	100	E4M
GESB	10	13	56	63	71	80	90	100	E6M
GESB	12	15	56	63	71	80	90	100	E6M
GESB	13	16	56	63	71	80	90	100	E6M
GESB	16	19	56	63	71	80	90	100	E9M
GESB	20	24	56	63	71	80	90	100	E9M

Ordering Example:

Qty 10 - GESB 10-80 M2

Ejector Kit

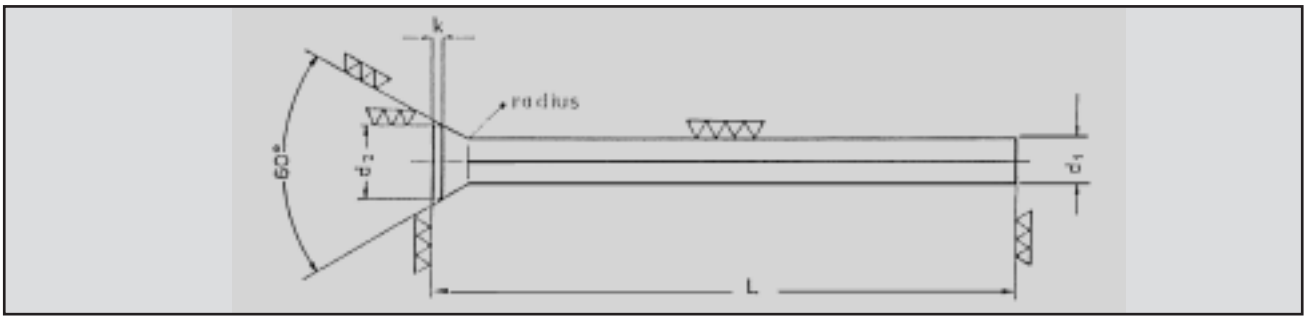


CODE	MXP	D	L	H	T	S	FL
E2AM	M2.5xP0.45	0.51	28.2	1.2	0.79	1.95	63.5
E3M	M3xP0.5	0.69	35.0	2.0	1.19	2.54	63.5
E4M	M4xP0.7	1.04	49.3	2.4	1.58	3.35	76.2
E6M	M5xP0.8	1.47	49.3	3.2	1.58	4.14	101.6
E9M	M6xP1.0	2.26	56.4	3.9	2.38	5.03	101.6
E12M	M8xP1.0	3.00	56.4	4.7	2.38	6.60	101.6

Form D - Precision Punches with Conical Head

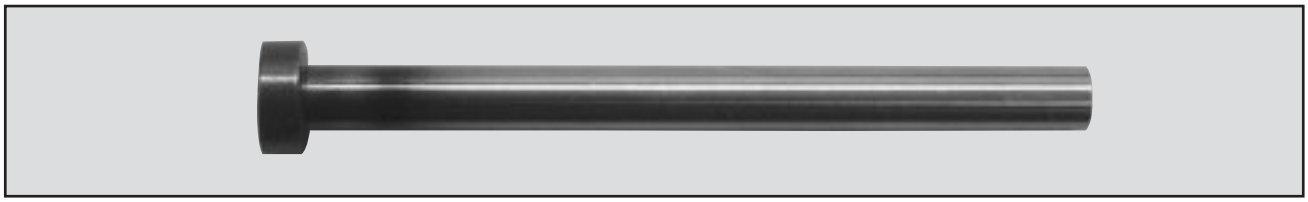
Materials: (HSS) M2HSS Tungsten High Speed Steel
Shank Hardness: 64 +/- 2 Hrc Head Hardness: 50 +/- 5 Hrc

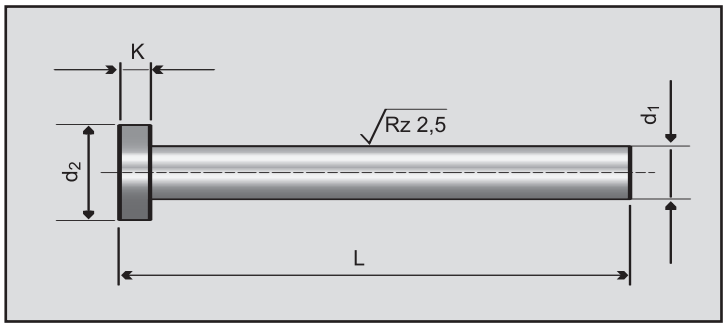
(Toolsteel) D-2 Chromium (12%) Steel
Shank Hardness: 62 +/- 2 Hrc Head Hardness: 45 +/- 5 Hrc



d1 h6	d2 +/-0.1	k +0.2 R-3	Increments			L + 0.5			
			70 Long		Other	70	80	90	100
			R3	U-12					
0.50	0.9	0.2	0.05	0.05		◆			
0.55	1.0	0.2	0.05	0.05		◆			
0.60	1.1	0.2	0.05	0.05		◆			
0.65	1.2	0.2	0.05	0.05		◆			
0.70 – 0.75	1.3	0.2	0.05	0.05		◆			
0.80 – 0.85	1.4	0.4	0.05	0.05		◆			
0.90 – 0.95	1.6	0.4	0.05	0.05		◆			
1.00 – 1.10	1.8	0.5	0.05	0.05	0.10	◆	◆	◆	◆
1.15 – 1.30	2.0	0.5	0.05	0.05	0.10	◆	◆	◆	◆
1.35 – 1.50	2.2	0.5	0.05	0.05	0.10	◆	◆	◆	◆
1.55– 1.70	2.5	0.5	0.05	0.05	0.10	◆	◆	◆	◆
1.75 – 1.90	2.8	0.5	0.05	0.05	0.10	◆	◆	◆	◆
1.95 – 2.00	3.0	0.5	0.05	0.05	0.10	◆	◆	◆	◆
2.05 – 2.20	3.2	0.5	0.05	0.05	0.10	◆	◆	◆	◆
2.25 – 2.50	3.5	0.5	0.05	0.05	+	◆	◆	◆	◆
2.55 – 2.95	4.0	0.5	0.05	0.05	0.25	◆	◆	◆	◆
3.00 – 3.45	4.5	0.5	0.05	0.10	+	◆	◆	◆	◆
3.50 – 3.95	5.0	0.5	0.05	0.10	0.75	◆	◆	◆	◆
4.00 – 4.45	5.5	0.5	0.05	0.10	0.75	◆	◆	◆	◆
4.50 – 4.95	6.0	0.5	0.05	0.10	0.75	◆	◆	◆	◆
5.00 – 5.45	6.5	0.5	0.05	+	0.75	◆	◆	◆	◆
5.50 – 5.95	7.0	0.5	0.05	0.25	0.75	◆	◆	◆	◆
6.0 – 6.4	8.0	0.5	0.10	+	0.75	◆	◆	◆	◆
6.5 – 7.4	9.0	1.0	0.75	0.75		◆	◆	◆	◆
7.5 – 8.4	10.0	1.0	+	0.75	0.75	◆	◆	◆	◆
8.5 – 9.4	11.0	1.0	0.25	0.75	0.75	◆	◆	◆	◆
9.5 – 10.4	12.0	1.0	+	0.75	0.75	◆	◆	◆	◆
10.5 – 11.4	13.0	1.0	0.75	0.50	0.50	◆	◆	◆	◆
11.5 – 12.4	14.0	1.0	0.75	0.50	0.50	◆	◆	◆	◆
12.5 – 13.0	15.0	1.0	0.50	0.50	0.50	◆	◆	◆	◆
13.5 – 14.0	16.0	1.0	0.50	0.50	0.50	◆	◆	◆	◆
14.5 – 15.0	17.0	1.0	0.50	0.50	0.50	◆	◆	◆	◆
15.5 – 16.0	18.0	1.0	0.50	0.50	1.0	◆	◆	◆	◆
16.5 – 17.0	19.0	1.0	0.50	0.50	1.0	◆	◆	◆	◆
17.5 – 18.0	20.0	1.0	0.50	0.50	1.0	◆	◆	◆	◆
18.5 – 19.0	21.0	1.0	0.50	0.50	1.0	◆	◆	◆	◆
19.5 – 20.0	22.0	1.0	0.50	0.50	1.0	◆	◆	◆	◆
21.0	23.0	1.0	1.0	1.0	1.0	◆	◆	◆	◆
22.0	24.0	1.0	1.0	1.0	1.0	◆	◆	◆	◆
23.0	25.0	1.0	1.0	1.0	1.0	◆	◆	◆	◆
24.0	26.0	1.0	1.0	1.0	1.0	◆	◆	◆	◆
25.0	27.0	1.0	1.0	1.0	1.0	◆	◆	◆	◆

Through Hardened Ejector Pins - DIN



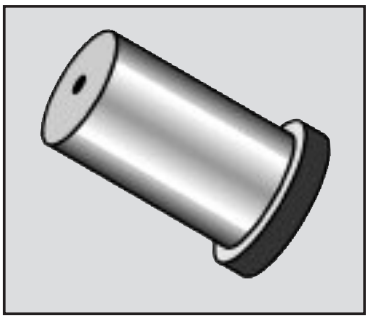


Type: E03

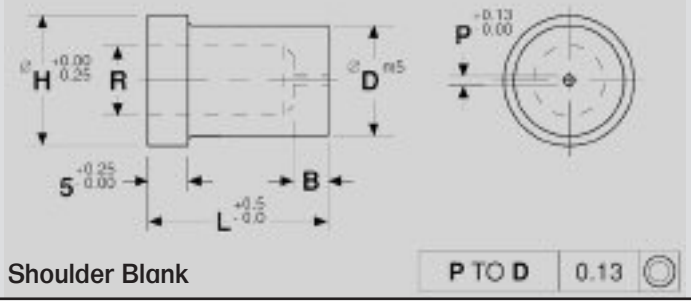
Standard: **DIN1530-AH** / ISO6751
Material: *1.2067 Hardened Steel*
Hardness:
Head = HRC45+/-5
Shaft = HRC60+/-2 Through Hardened

Part Number	d_1 g6	d_2 0/-0.2	k 0/-0.05	L+2										
				100	125	160	200	250	315	400	500	630	800	1000
HED15	1.5	3	1.5	•	•	•	•	•						
HED2	2.0	4	2	•	•	•	•	•	•					
HED22	2.2	4	2	•	•	•	•	•	•					
HED25	2.5	5	2	•	•	•	•	•	•					
HED27	2.7	5	2	•	•	•	•	•	•					
HED3	3.0	6	3	•	•	•	•	•	•	•				
HED32	3.2	6	3	•	•	•	•	•	•	•				
HED35	3.5	7	3	•	•	•	•	•	•	•				
HED37	3.7	7	3	•	•	•	•	•	•	•				
HED4	4.0	8	3	•	•	•	•	•	•	•	•			
HED42	4.2	8	3	•	•	•	•	•	•	•	•			
HED45	4.5	8	3	•	•	•	•	•	•	•	•			
HED5	5.0	10	3	•	•	•	•	•	•	•	•			
HED52	5.2	10	3	•	•	•	•	•	•	•	•			
HED55	5.5	10	3	•	•	•	•	•	•	•	•			
HED6	6.0	12	5	•	•	•	•	•	•	•	•	•		
HED62	6.2	12	5	•	•	•	•	•	•	•	•	•		
HED65	6.5	12	5	•	•	•	•	•	•	•	•	•		
HED7	7.0	12	5	•	•	•	•	•	•	•	•	•		
HED75	7.5	12	5	•	•	•	•	•	•	•	•	•		
HED8	8.0	14	5	•	•	•	•	•	•	•	•	•		
HED82	8.2	14	5	•	•	•	•	•	•	•	•	•		
HED85	8.5	14	5	•	•	•	•	•	•	•	•	•		
HED9	9.0	14	5	•	•	•	•	•	•	•	•	•		
HED10	10.0	16	5	•	•	•	•	•	•	•	•	•		
HED102	10.2	16	5	•	•	•	•	•	•	•	•	•		
HED105	10.5	16	5	•	•	•	•	•	•	•	•	•		
HED11	11.0	16	5	•	•	•	•	•	•	•	•	•		
HED12	12.0	20	7	•	•	•	•	•	•	•	•	•		
HED122	12.2	20	7	•	•	•	•	•	•	•	•	•		
HED125	12.5	20	7	•	•	•	•	•	•	•	•	•		
HED14	14.0	22	7	•	•	•	•	•	•	•	•	•		
HED16	16.0	22	7	•	•	•	•	•	•	•	•	•		
HED18	18.0	24	7	•	•	•	•	•	•	•	•	•		
HED20	20.0	26	8	•	•	•	•	•	•	•	•	•		
HED25	25.0	32	10			•	•	•	•	•	•	•		
HED32	32.0	40	10			•	•	•	•	•	•	•		

GBSB Die Blank - Lane ISO Type



A2, R/c 60-63
double tempered

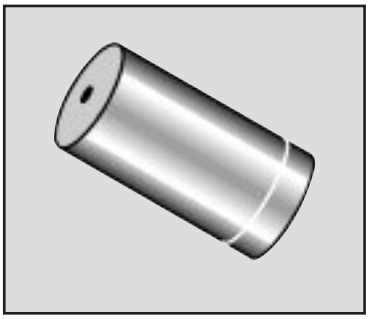


General Button Shoulder Blank

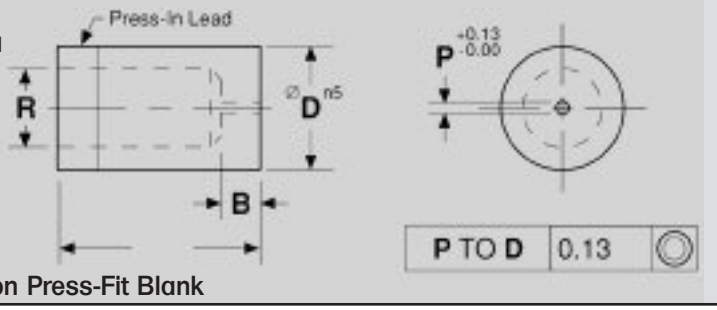
TYPE	"D"	LAND "B"	Overall Length "L" 20	22	25	28	30	32	35	DRILL "P"	MAX. "R"	HEAD DIA. "H"
GBSB	10	4	20	22	25	28	30	32	35	0.8	5.8	13
GBSB	13	5	20	22	25	28	30	32	35	0.8	8.0	16
GBSB	16	5	20	22	25	28	30	32	35	1.5	9.5	19
GBSB	20	5	20	22	25	28	30	32	35	2.4	11.9	24
GBSB	22	6	20	22	25	28	30	32	35	3.0	14.7	26
GBSB	25	6	20	22	25	28	30	32	35	3.0	17.4	29
GBSB	32	6	20	22	25	28	30	32	35	3.0	20.6	36
GBSB	38	8	20	22	25	28	30	32	35	3.0	27.0	42

Ordering Example: Qty 15-GBSB 16-22 A2

GBPB Die Blank - Lane ISO Type



A2, R/c 60-63
double tempered



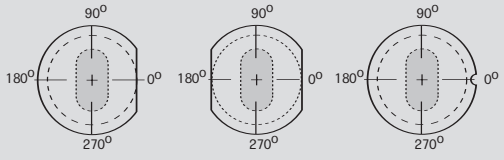
General Button Press-Fit Blank

TYPE	"D"	LAND "B"			Overall Length "L" 20	22	25	28	30	32	35	40	DRILL "P"	MAX. "R"
GBPB	8	4	8		20	22	25	28	30	32	35		0.8	4.0
GBPB	10	4	8		20	22	25	28	30	32	35		0.8	5.8
GBPB	13	5	8		20	22	25	28	30	32	35		0.8	8.0
GBPB	16	5	8		20	22	25	28	30	32	35		1.5	9.5
GBPB	20	5	12		20	22	25	28	30	32	35		2.4	11.9
GBPB	22	6	12		20	22	25	28	30	32	35		3.0	14.7
GBPB	25	6	12		20	22	25	28	30	32	35		3.0	17.4
GBPB	32	6	12		20	22	25	28	30	32	35		3.0	20.6
GBPB	38	8	12		20	22	25	28	30	32	35		3.0	27.0
GBPB	40	8	12	20			25	28	30	32	35		3.0	27.0
GBPB	45	8	12	20			25	28	30	32	35	40	3.0	36.0
GBPB	50	8	12	20			25	28	30	32	35	40	3.0	41.0
GBPB	56	8	12	20			25	28	30	32	35	40	3.0	46.0
GBPB	63	8	12	20			25	28	30	32	35	40	3.0	51.0
GBPB	71	8	12	20			25	28	30	32	35	40	3.0	57.0
GBPB	76	8	12	20			25	28	30	32	35	40	3.0	61.0
GBPB	85	8	12	20			25	28	30	32	35	40	3.0	67.0
GBPB	90	8	12	20			25	28	30	32	35	40	3.0	71.0
GBPR	100	8	12	20			25	28	30	32	35	40	3.0	79.0

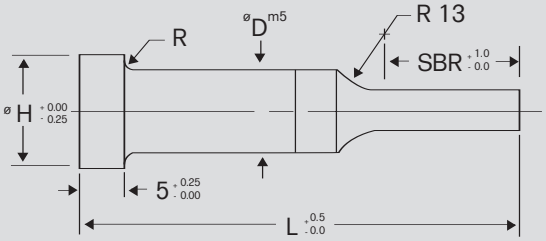
General Punch Shoulder

R = ○ O = ⬭ S = □▭ H = ⬭

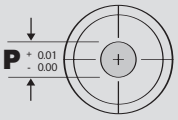
Key-Flats in Die Position



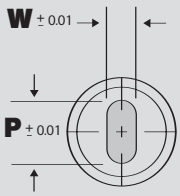
K2 Single Flat | K3 Double Flats | K4 ø 3.0 Pin Slot



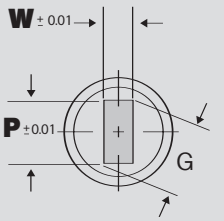
GPSR
Round



GPSO
Oblong

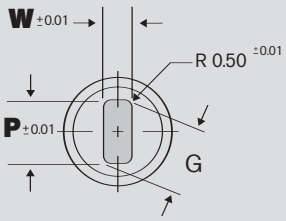


GPSS
Square/rect



Diagonal "G"= $\sqrt{P^2 + W^2}$

GPSH
High production



G $\left(\sqrt{(P-1.0)^2 + (W-1.0)^2}\right)+1.0$

Ordering Example

GPSR 13-13-71-M2 P10.1

GPSO 20-19-80 M2 P18.2 W9.5 K2

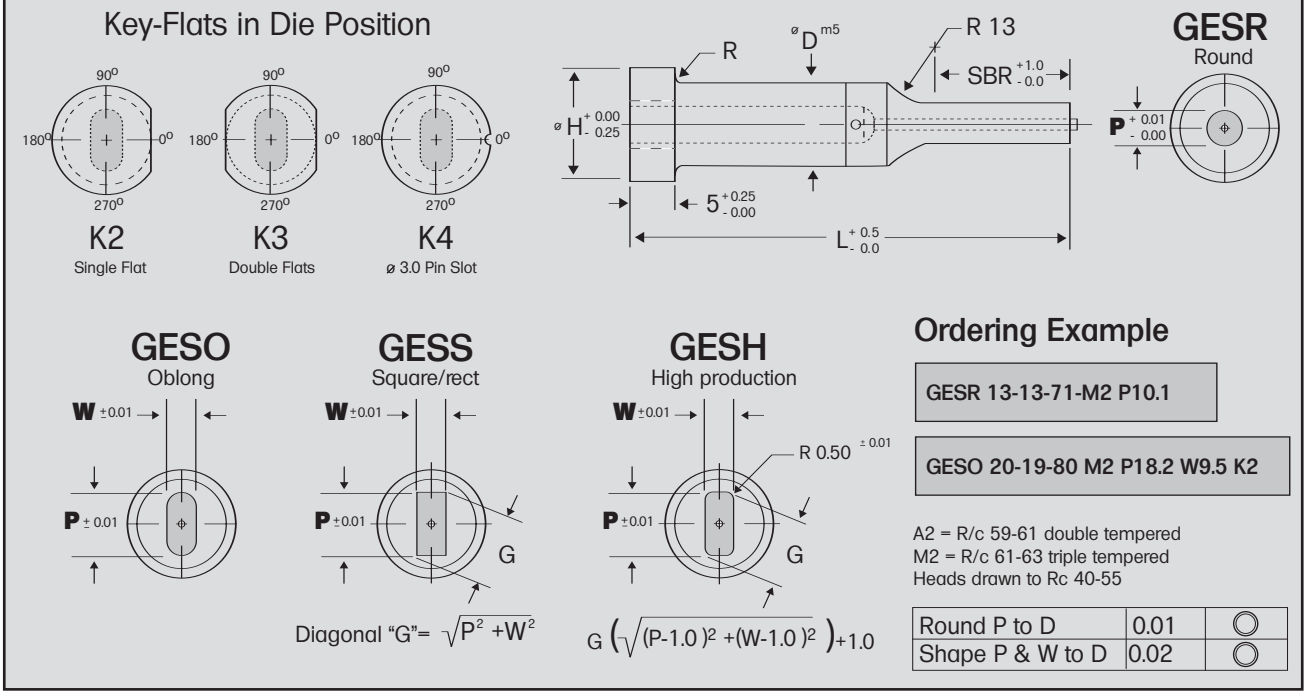
A2 = R/c 59-61 double tempered
M2 = R/c 61-63 triple tempered
Heads drawn to Rc 40-55

Round P to D	0.01	◎
Shape P & W to D	0.02	◎

Type	D	Point Length SBR						Overall Length L							Round P min.	Shape W min.	Head Dia. H
		8	10	13	19	25	32	50	56	63	71	80	90	100			
GPS_	4	8	10					50	56	63					0.8	0.8	7
GPS_	5	8	10	13				50	56	63	71				1.3	1.3	8
GPS_	6	8	10	13				50	56	63	71	80			1.4	1.4	9
GPS_	8	8	10	13				50	56	63	71	80			1.5	1.5	11
GPS_	10		10	13	19			50	56	63	71	80	90	100	1.9	1.9	13
GPS_	13		10	13	19			50	56	63	71	80	90	100	3.1	3.1	16
GPS_	16			13	19	25		50	56	63	71	80	90	100	5.7	5.7	19
GPS_	20			13	19	25			56	63	71	80	90	100	5.7	5.7	24
GPS_	25			13	19	25			56	63	71	80	90	100	5.7	5.7	29
GPS_	32				19	25					71	80	90	100	9.9	9.9	36
GPS_	40				19	25	32				71	80	90	100	12.0	12.0	45
GPS_	45					25	32					80	90	100	14.0	14.0	50
GPS_	50					25	32					80	90	100	16.0	16.0	55
GPS_	56					25	32					80	90	100	18.0	18.0	61
GPS_	63					25	32					80	90	100	20.0	20.0	68

General Ejector Shoulder

R = ○ O = ⬭ S = □▭ H = ⬭



Ordering Example

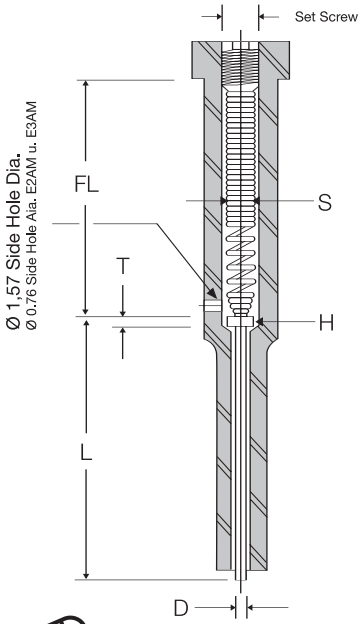
GESR 13-13-71-M2 P10.1

GESO 20-19-80 M2 P18.2 W9.5 K2

A2 = R/c 59-61 double tempered
M2 = R/c 61-63 triple tempered
Heads drawn to Rc 40-55

Round P to D	0.01	◯
Shape P & W to D	0.02	◯

Type	D	Point Length SBR						Overall Length L							Round P min.	Shape W min.	Head Dia H	Ejector Type
		8	10	13	19	25	32	50	56	63	71	80	90	100				
GES_	5	8	10	13				50	56	63	71				1.9	1.9	8	E2AM
GES_	6	8	10	13				50	56	63	71	80			2.0	2.0	9	E3M
GES_	8	8	10	13				50	56	63	71	80			2.9	2.9	11	E4M
GES_	10		10	13	19			50	56	63	71	80	90	100	4.0	4.0	13	E6M
GES_	13		10	13	19			50	56	63	71	80	90	100	4.0	4.0	16	E6M
GES_	16			13	19	25		50	56	63	71	80	90	100	5.7	5.7	19	E9M
GES_	20			13	19	25			56	63	71	80	90	100	5.7	5.7	24	E9M
GES_	25			13	19	25			56	63	71	80	90	100	5.7	5.7	29	E9M
GES_	32				19	25	32				71	80	90	100	9.9	9.9	36	E12M
GES_	40				19	25	32					80	90	100	12.0	12.0	45	E12M
GES_	45					25	32					80	90	100	14.0	14.0	50	E12M
GES_	50					25	32					80	90	100	16.0	16.0	55	E12M
GES_	56					25	32					80	90	100	18.0	18.0	61	E12M
GES_	63					25	32					80	90	100	20.0	20.0	68	E12M



Ejector Components for GES

Ejector Catalogue Number	Pin Diameter D	Pin Overall Length L	Pin Head Thickness H	Spring Diameter S	Spring Free Length FL	Set Screw Size	Ball-Lock Punch Shank Diameter	Shoulder Punch Shank Diameter
E2AM	0.51	28.2	1.2	1.95	63.50	M2.5 x .45	6	5
E3M	0.69	35.0	2.0	2.54	63.50	M3 x .5	-	6
E4M	1.04	49.3	2.4	3.35	76.20	M4 x .7	10	8
E6M	1.47	49.3	3.2	4.14	101.60	M5 x .8	13	10 - 13
E9M	2.26	56.4	3.9	5.03	101.60	M6 x 1	16 - 25	16 - 25
E12M	3.00	56.4	4.7	6.60	101.60	M8 x 1.25	32 and up	32 and up

Pin Extensions = 0.8mm, E3M
1.5mm, E4M, E6M, E9M E12M

Ordering Example:
(25) E6M Ejector Kits

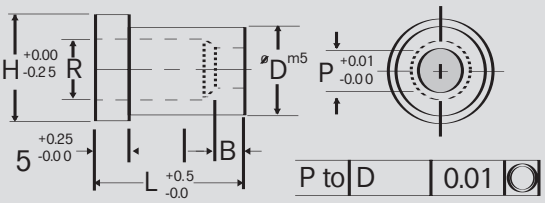
Set includes one each:
Pin, Spring, & Set Screw.

hales
Tooling Component & Industrial Supplies

General Button Shoulder

R = ○ O = ⬭ S = □▭ H = ⬭

GBSR
Round



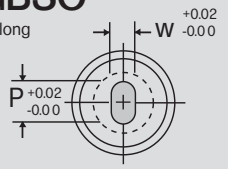
Ordering Example

GBSR 13-28 A2 P4.5

A2 = R/c 59-61 double tempered

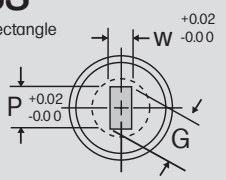
Type	D	Land B	Overall Length L							Point Range P			Max. R	Head Dia. H
			20	22	25	28	30	32	35					
GBSR	10	4	20	22	25	28	30	32	35	1.5	-	5.0	5.8	13
GBSR	13	5	20	22	25	28	30	32	35	3.0	-	7.2	8.0	16
GBSR	16	5	20	22	25	28	30	32	35	5.0	-	8.8	9.5	19
GBSR	20	5	20	22	25	28	30	32	35	7.0	-	11.0	11.9	24
GBSR	22	6	20	22	25	28	30	32	35	9.0	-	13.8	14.7	26
GBSR	25	6	20	22	25	28	30	32	35	11.0	-	16.5	17.4	29
GBSR	32	6	20	22	25	28	30	32	35	13.0	-	19.8	20.6	36
GBSR	38	8	20	22	25	28	30	32	35	16.0	-	26.0	27.0	42

GBSO
Oblong



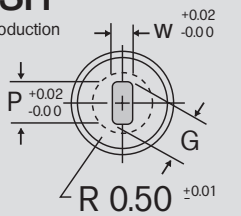
P & W to D 0.02

GBSS
Square/Rectangle



Diagonal "G"= $\sqrt{P^2 + W^2}$

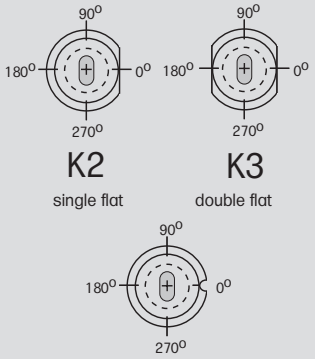
GBSH
High production



$G = \left(\sqrt{(P-1.0)^2 + (W-1.0)^2}\right) + 1.0$

GBSO 16-20 A2 P6.9 W4.3 K2

Key-Flats in Die Position



K2
single flat

K3
double flat

K4
3.0 diameter pin slot

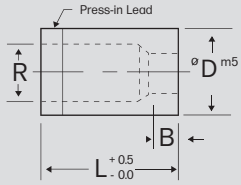
Type	D	Land B	Overall Length L							Min. W	Min. P /G	Max. R	Head Dia. H
			20	22	25	28	30	32	35				
GBS_	10	4	20	22	25	28	30	32	35	1.2	5.0	5.8	13
GBS_	13	5	20	22	25	28	30	32	35	2.0	7.2	8.0	16
GBS_	16	5	20	22	25	28	30	32	35	2.4	8.8	9.5	19
GBS_	20	5	20	22	25	28	30	32	35	3.2	11.0	11.9	24
GBS_	22	6	20	22	25	28	30	32	35	4.0	13.8	14.7	26
GBS_	25	6	20	22	25	28	30	32	35	4.8	16.5	17.4	29
GBS_	32	6	20	22	25	28	30	32	35	5.5	19.8	20.6	36
GBS_	38	8	20	22	25	28	30	32	35	6.4	26.0	27.0	42

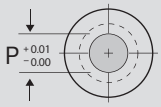
Die Buttons - Lane ISO Type

General Button Press Fit

R = ○ O = ⬭ S = □▭ H = ⬭

GBPR
Round





P to D 0.01 ◎

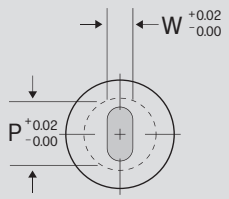
Ordering Example

GBPR 13-28 A2 P4.5

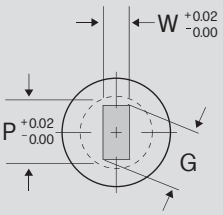
A2 = R/c 59-61 double tempered

Type	D	Land B			Overall Length L								Point Range P	Max. R
					20	22	25	28	30	32	35	40		
GBPR	8	4	8		20	22	25	28	30	32	35		1.5 - 3.2	4.0
GBPR	10	4	8		20	22	25	28	30	32	35		1.5 - 5.0	5.8
GBPR	13	5	8		20	22	25	28	30	32	35		3.0 - 7.2	8.0
GBPR	16	5	8		20	22	25	28	30	32	35		5.0 - 8.8	9.5
GBPR	20	6	12		20	22	25	28	30	32	35		7.0 - 11.0	11.9
GBPR	22	6	12		20	22	25	28	30	32	35		9.0 - 13.8	14.7
GBPR	25	6	12		20	22	25	28	30	32	35		11.0 - 16.5	17.4
GBPR	32	8	12		20	22	25	28	30	32	35		13.0 - 19.8	20.6
GBPR	38	8	12		20	22	25	28	30	32	35		16.0 - 26.0	27.0
GBPR	40	8	12	20			25	28	30	32	35		16.0 - 26.0	27.0
GBPR	45	8	12	20			25	28	30	32	35	40	19.0 - 35.0	36.0
GBPR	50	8	12	20			25	28	30	32	35	40	22.0 - 40.0	41.0
GBPR	56	8	12	20			25	28	30	32	35	40	25.0 - 45.0	46.0
GBPR	63	8	12	20			25	28	30	32	35	40	28.0 - 51.0	51.0
GBPR	71	8	12	20			25	28	30	32	35	40	31.0 - 57.0	57.0
GBPR	76	8	12	20			25	28	30	32	35	40	39.0 - 61.0	61.0
GBPR	85	8	12	20			25	28	30	32	35	40	43.0 - 67.0	67.0
GBPR	90	8	12	20			25	28	30	32	35	40	45.0 - 71.0	71.0
GBPR	100	8	12	20			25	28	30	32	35	40	50.0 - 79.0	79.0

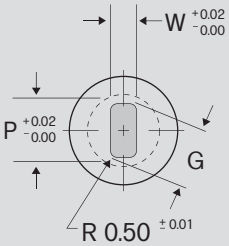
GBPO
Oblong



GBPS
Square/Rectangle



GBPH
High Production

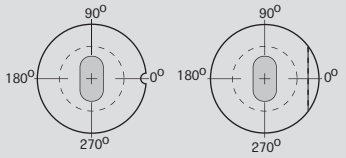


P & W to D 0.02 ◎

Diagonal "G"= $\sqrt{P^2 + W^2}$

$G = \left(\sqrt{(P - 1.0)^2 + (W - 1.0)^2}\right) + 1.0$

Key-Flats in Die Position



K0
ø 3.0 Pin Slot

K2
Single Flat

Type	D	Land B			Overall Length L								Min. W	Max P/G	Max. R
					20	22	25	28	30	32	35	40			
GBP_	10	4	8		20	22	25	28	30	32	35		1.2	5.0	5.8
GBP_	13	5	8		20	22	25	28	30	32	35		2.0	7.2	8.0
GBP_	16	5	8		20	22	25	28	30	32	35		2.4	8.8	9.5
GBP_	20	6	12		20	22	25	28	30	32	35		3.2	11.0	11.9
GBP_	22	6	12		20	22	25	28	30	32	35		4.0	13.8	14.7
GBP_	25	6	12		20	22	25	28	30	32	35		4.8	16.5	17.4
GBP_	32	8	12		20	22	25	28	30	32	35		5.5	19.8	20.6
GBP_	38	8	12		20	22	25	28	30	32	35		6.4	26.0	27.0
GBP_	40	8	12	20			25	28	30	32	35		6.4	26.0	27.0
GBP_	45	8	12	20			25	28	30	32	35	40	8.0	35.0	36.0
GBP_	50	8	12	20			25	28	30	32	35	40	9.0	40.0	41.0
GBP_	56	8	12	20			25	28	30	32	35	40	10.0	45.0	46.0
GBP_	63	8	12	20			25	28	30	32	35	40	11.0	50.0	51.0
GBP_	71	8	12	20			25	28	30	32	35	40	12.0	56.0	57.0
GBP_	76	8	12	20			25	28	30	32	35	40	15.0	60.0	61.0
GBP_	85	8	12	20			25	28	30	32	35	40	21.0	66.0	67.0
GBP_	90	8	12	20			25	28	30	32	35	40	25.0	70.0	71.0
GBP_	100	8	12	20			25	28	30	32	35	40	33.0	78.0	79.0

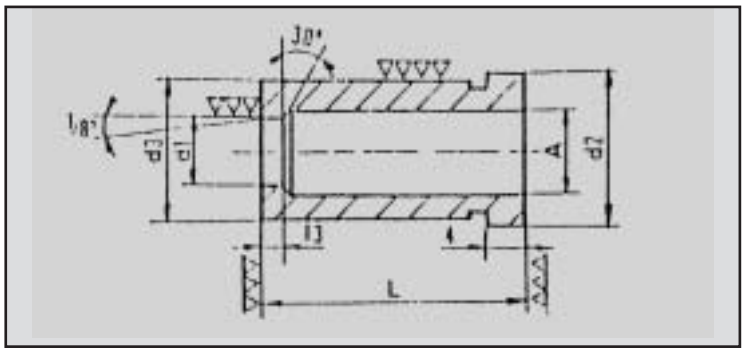
GBPO 16-20 A2 P6.9 W4.3 K2

Die Buttons - FIT DIN Standard

FORM B Precision Die Inserts (Headed)

Materials: R-3 Tungsten & Cobalt (5%) High Speed Steel
Hardnes: 64 +/- 2 Hrc

WS Tool Steel Alloy
Hardness: 60 +/- 2 Hrc



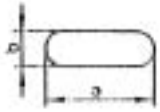
d1 H8	d3 k6	d2	A	l3	Increments	L 20	L 28
1.0 – 2.0	8	6.0	2.5	2	0.10	◆	
2.1 – 2.6	9	7.0	3.5	3	0.10	◆	◆
2.7 – 3.3	9	7.0	3.5	3	0.10	◆	◆
3.1 – 4.0	10	8.0	4.5	4	0.10	◆	◆
4.1 – 5.0	12	10.0	5.5	4	0.10	◆	◆
5.1 – 6.0	14	12.0	6.5	4	0.10	◆	◆
6.1 – 7.0	17	15.0	7.5	4	0.10	◆	◆
7.1 – 8.0	17	15.0	8.5	4	0.10	◆	◆
8.1 – 9.0	20	18.0	9.5	4	0.10	◆	◆
9.1 – 10.0	20	18.0	10.5	4	0.10	◆	◆
10.1 – 11.0	24	22.0	12.0	4	0.10	◆	◆
11.1 – 12	24	22.0	13.0	4	0.10	◆	◆
12.1 – 13.0	28	26.0	14.0	4	0.10	◆	◆
13.1 – 14.0	28	26.0	15.0	4	0.10	◆	◆
14.1 – 15.0	28	26.0	16.0	4	0.10	◆	◆
15.1 – 18.0	32	30.0	19.0	4	0.5		◆
18.1 – 20.0	37	35.0	23.0	4	0.5		◆
20.1 – 22.0	37	35.0	23.0	4	1.0		◆
22.1– 26.0	42.0	44	27.0	4	1.0		◆
Special Die Inserts: 30mm Long in WS Material							
3.0 – 5.5	12.0	16	6.0	8	0.1		
3.0 – 10.0	20.0	2.4	to suit	8	0.1		
4.0 – 16.0	24.0	30	to suit	8	0.1		
5.0 – 20.0	32.0	36	to suit	8			
6.0 min	38.0	44	28.0	10			
11.0 min	44.0	50	33.0	10			

How to order
Die Insert d1 x d3 x L x d2 Form B Material
Eg: Die Insert 8.0 x 15 x 28 x 17 Form B WS
Die Insert 1.9 x 7x 20 x 9 Form B R-3
Note: The WS alloy is currently being phased out and may not be available in all sizes

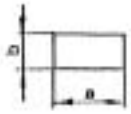
Form shapes available include:

Type EKDF

Type EKDO



Type EKDR



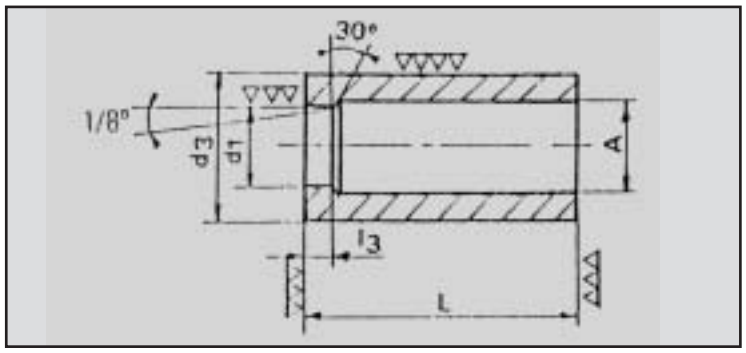
Type EKDS

Die Buttons - FIT DIN Standard

FORM A **Precision Die Inserts(Headless)**

Materials : R -3 Tungsten & Cobalt (5%) High Speed Steel
Hardness :64+/- 2 Hrc

WS Tool Steel Alloy
Hardness : 60 +/- 2 Hrc



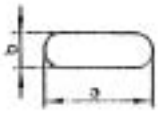
d1 H8	d3 n6	A	l3	Increments	L 20	L 28
1.0 – 2.0	6.0	2.5	2	0.10	◆	
2.1 – 2.6	7.0	3.5	3	0.10	◆	◆
2.7 – 3.3	7.0	3.5	3	0.10	◆	◆
3.1 – 4.0	8.0	4.5	4	0.10	◆	◆
4.1 – 5.0	10.0	5.5	4	0.10	◆	◆
5.1 – 6.0	12.0	6.5	4	0.10	◆	◆
6.1 – 7.0	15.0	7.5	4	0.10	◆	◆
7.1 – 8.0	15.0	8.5	4	0.10	◆	◆
8.1 – 9.0	18.0	9.5	4	0.10	◆	◆
9.1 – 10.0	18.0	10.5	4	0.10	◆	◆
10.1 – 11.0	22.0	12.0	4	0.10	◆	◆
11.1 – 12	22.0	13.0	4	0.10	◆	◆
12.1 – 13.0	26.0	14.0	4	0.10	◆	◆
13.1 – 14.0	26.0	15.0	4	0.10	◆	◆
14.1 – 15.0	26.0	16.0	4	0.10	◆	◆
15.1 – 18.0	30.0	19.0	4	0.5		◆
18.1 – 20.0	35.0	23.0	4	0.5		◆
20.1 – 22.0	35.0	23.0	4	1.0		◆
22.1 – 26.0	42.0	27.0	4	1.0		◆
Special Die Inserts for Pullmax Machines in WS Material						
3.0 – 11.0	18.0	to suit	4	0.1		

How to Order
Die Insert d1 x d3 xL Form A Material
Eg: Die Insert 5.2 x 12 x 28 Form A WS
Die Insert 2.8 x 7 x 20 Form A R-S
Note: The WS alloy is currently being phased out and may not be available in all sizes

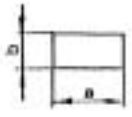
Form shapes available include:

Type EDF

Type EDO



Type EDR

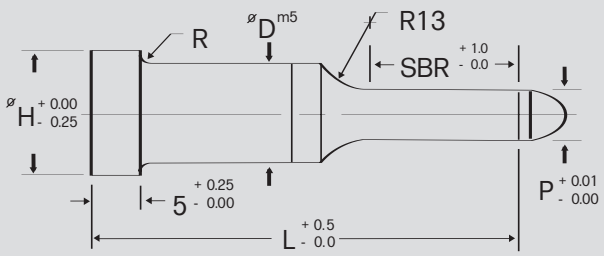


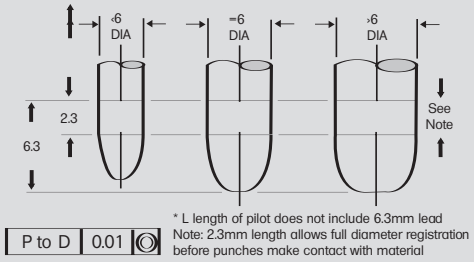
Type EDS

hales
Tooling Component & Industrial Supplies

General Punch Shoulder Parabolic Pilot

GPSP





* L length of pilot does not include 6.3mm lead
Note: 2.3mm length allows full diameter registration before punches make contact with material

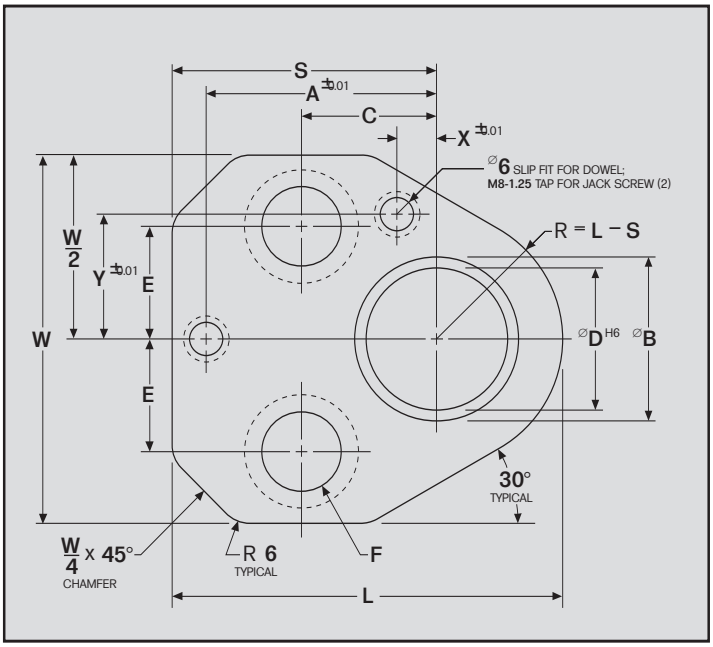
Type	D	Point Length SBR						Length L							Min. p	Head Dia. H
		8	10	13	19	25	32	50	56	63	71	80	90	100		
GPSP	5	8	10	13				50	56	63	71				1.2	8
GPSP	6	8	10	13				50	56	63	71	80			1.3	9
GPSP	8	8	10	13				50	56	63	71	80			1.4	11
GPSP	10		10	13	19			50	56	63	71	80	90	100	1.8	13
GPSP	13		10	13	19			50	56	63	71	80	90	100	3.0	16
GPSP	16			13	19	25		50	56	63	71	80	90	100	5.6	19
GPSP	20			13	19	25			56	63	71	80	90	100	5.6	24
GPSP	25			13	19	25			56	63	71	80	90	100	5.6	29
GPSP	32				19	25	32				71	80	90	100	9.8	36
GPSP	40				19	25	32					80	90	100	11.9	45

Ordering Example

GPSP 20-13-63 M2 P18.3

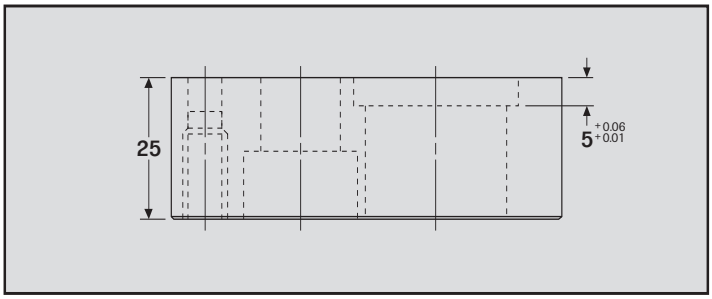
A2 = R/c 59-61 double tempered
M2 = R/c 61-63 triple tempered
Heads Drawn to Rc 40-55

Peerless Retainer Shoulder



A Speedy Solution for
Round Punches and Pilots.

Dowels are finished, and retainer ready for CNC mounting. Counterbore is sized to accept shoulder/headed punches. Also, the dowel holes are tapped for easy removal in confined spaces.

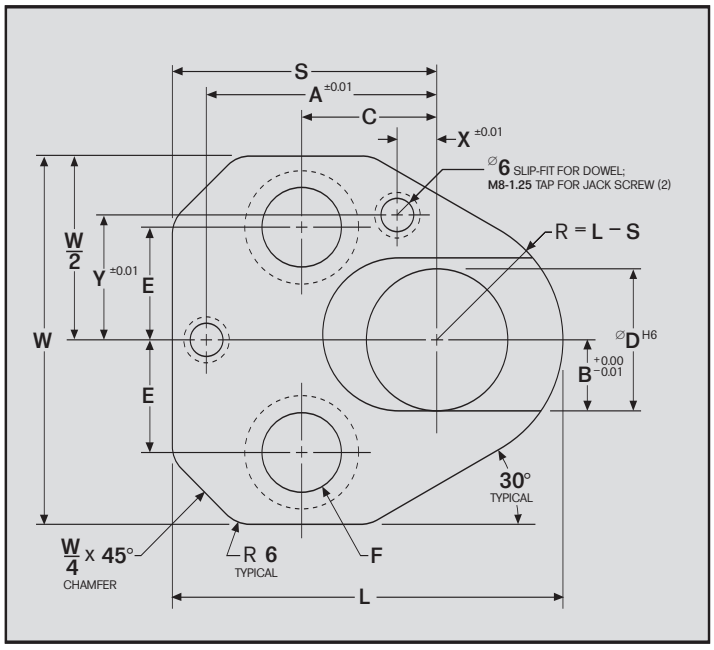


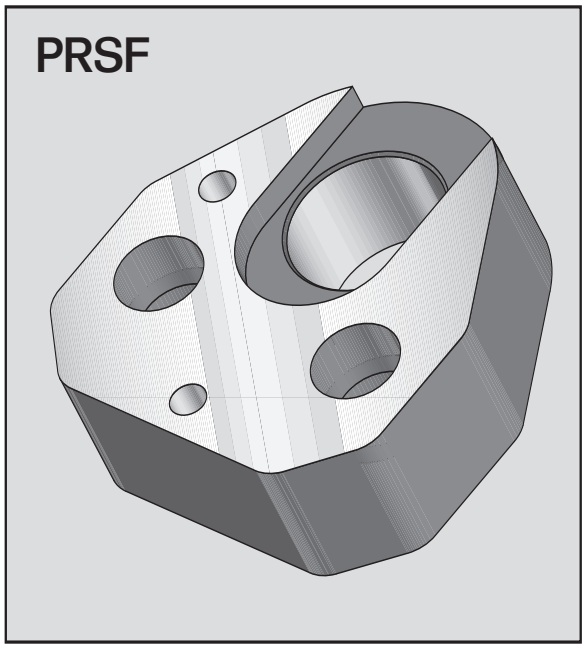
TYPE	"D"	"W"	"L"	"B"	"S"	"A"	"C"	"E"	"X"	"Y"	"F"
PRSR	10	41.0	43.5	14.0	34.0	26.924	19.05	11.12	7.5	9.0	M8
PRSR	13	48.5	49.6	17.0	37.0	29.972	19.05	14.27	6.5	12.0	M8
PRSR	16	51.7	52.7	20.0	38.6	31.750	19.05	15.87	6.0	13.5	M8
PRSR	20	56.8	59.3	24.0	41.9	33.528	19.05	17.47	5.0	16.5	M10
PRSR	25	64.5	68.9	29.0	46.7	40.640	23.82	19.84	7.0	22.0	M12
PRSR	32	64.5	68.9	36.0	46.7	40.640	23.82	19.84	7.0	22.0	M12

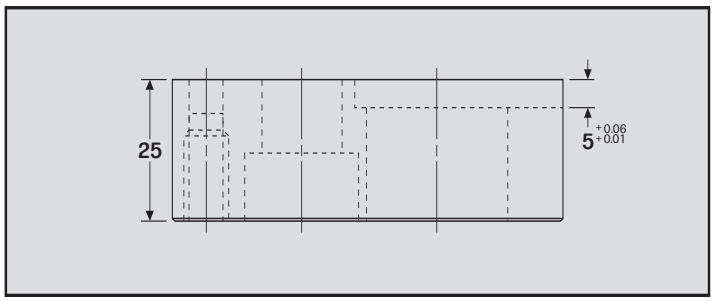
Ordering Example:
(3) PRSR 25

Retainer set includes:
2 Socket head cap screws.
2 Vented and tapped dowels.

Peerless Retainer Shoulder Form







The Fastest, Least Expensive Way to Mount Shaped and Form-Pointed Punches.

A standard K2 key flat orients the shape inside the retainer. Just place two round dowel holes in your die shoe, and you re ready to locate complex shaped punches.

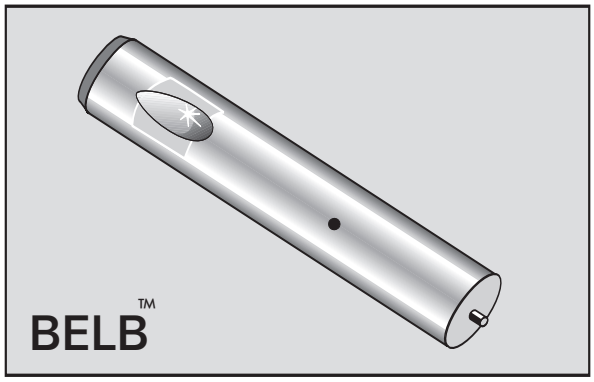
Dowels are finished, and dowel holes are slip-fit sized. Retainer is ready for CNC mounting.

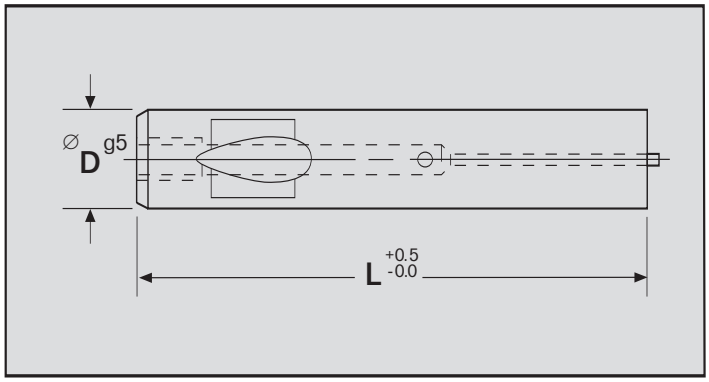
TYPE	"D"	"W"	"L"	"B"	"S"	"A"	"C"	"E"	"X"	"Y"	"F"
PRSF	10	41.0	43.5	5.0	34.0	26.924	19.05	11.12	7.5	9.0	M8
PRSF	13	48.5	49.6	6.5	37.0	29.972	19.05	14.27	6.5	12.0	M8
PRSF	16	51.7	52.7	8.0	38.6	31.750	19.05	15.87	6.0	13.5	M8
PRSF	20	56.8	59.3	10.0	41.9	33.528	19.05	17.47	5.0	16.5	M10
PRSF	25	64.5	68.9	12.5	46.7	40.640	23.82	19.84	7.0	22.0	M12
PRSF	32	64.5	68.9	16.0	46.7	40.640	23.82	19.84	7.0	22.0	M12

Ordering Example:
(2) PRSF 25

Retainer set includes:
2 Socket head cap screws.
2 Vented and tapped dowels.

Ball-Lock Ejector Light Duty Blank

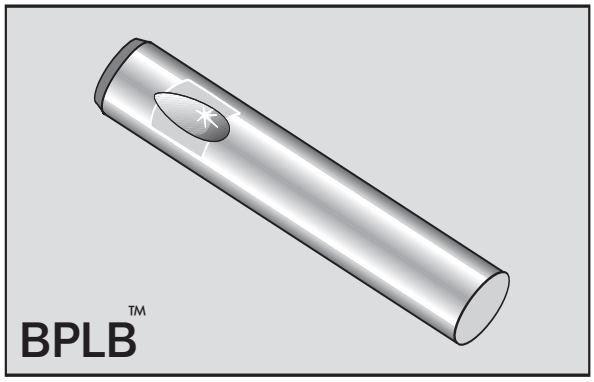


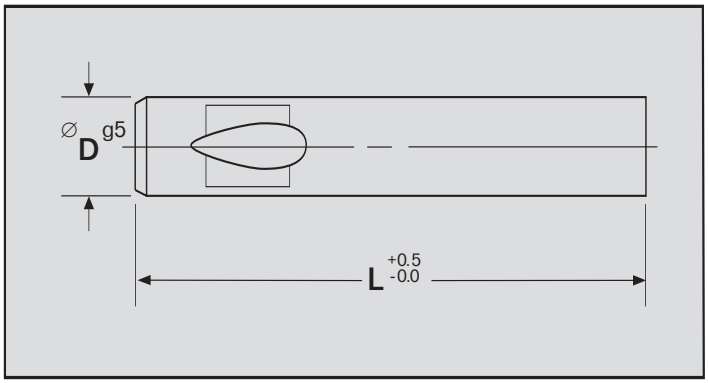


Type	"D"	Overall Length "L"							Ejector Type
		50	56	63	71	80	90	100	
BELB	6	50	56	63	71	80			E2AM
BELB	10	50	56	63	71	80	90	100	E4M
BELB	13	50	56	63	71	80	90	100	E6M
BELB	16		56	63	71	80	90	100	E9M
BELB	20		56	63	71	80	90	100	E9M
BELB	25		56	63	71	80	90	100	E9M
BELB	32				71	80	90	100	E12M
BELB	38					80	90	100	E12M

Ordering Example: **(15) BELB 32-90 M2**
A2, R/c 60-63 double tempered
M2, R/c 60-63 triple tempered

Ball-Lock Punch Light Duty Blank

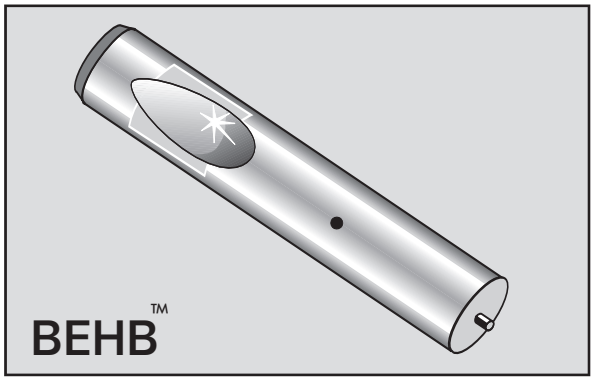


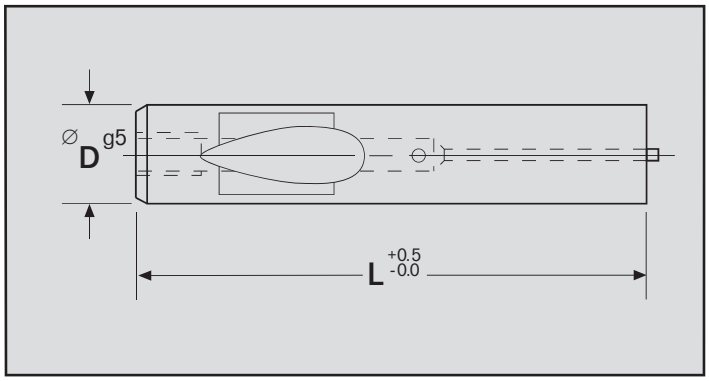


Type	"D"	Overall Length "L"												
		50	56	63	71	80	90	100	110	125	140	150	175	200
BPLB	6	50	56	63	71	80	90	100						
BPLB	10	50	56	63	71	80	90	100	110	125	140			
BPLB	13	50	56	63	71	80	90	100	110	125	140	150	175	
BPLB	16		56	63	71	80	90	100	110	125	140	150	175	
BPLB	20		56	63	71	80	90	100	110	125	140	150	175	
BPLB	25		56	63	71	80	90	100	110	125	140	150	175	
BPLB	32				71	80	90	100	110	125	140	150	175	200
BPLB	38					80	90	100	110	125	140	150	175	200

Ordering Example: **(12) BPLB 32-125 M2**
A2, R/c 60-63 double tempered
M2, R/c 60-63 triple tempered

Ball-Lock Ejector Heavy Duty Blank

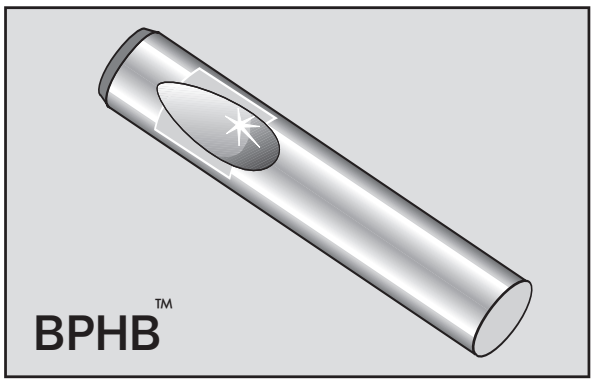


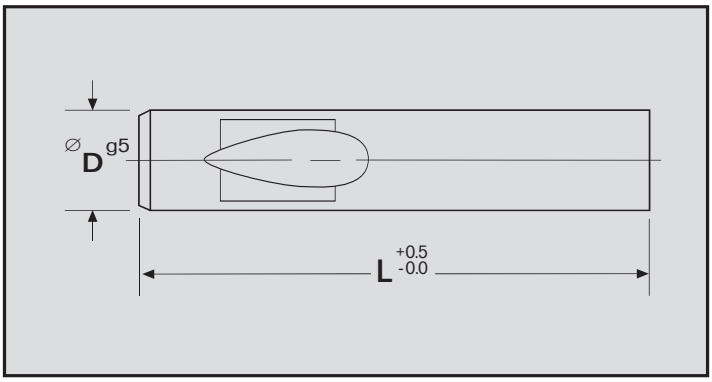


Type	"D"	Overall Length "L"							Ejector Type
		63	71	80	90	100	110	125	
BEHB	10	63	71	80	90	100			E4M
BEHB	13	63	71	80	90	100	110	125	E6M
BEHB	16	63	71	80	90	100	110	125	E9M
BEHB	20	63	71	80	90	100	110	125	E9M
BEHB	25		71	80	90	100	110	125	E9M
BEHB	32		71	80	90	100	110	125	E12M
BEHB	40			80	90	100	110	125	E12M

Ordering Example: **(15) BEHB 32-90 M2**
M2, R/c 60-63 triple tempered

Ball-Lock Punch Heavy Duty Blank

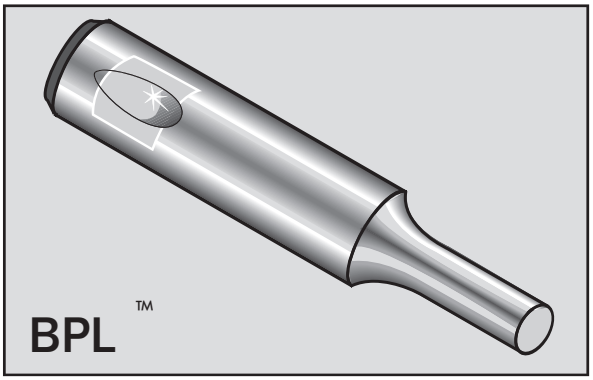




Type	"D"	Overall Length "L"										
		63	71	80	90	100	110	125	140	150	175	200
BPHB	10	63	71	80	90	100	110	125				
BPHB	13	63	71	80	90	100	110	125	140	150	175	
BPHB	16	63	71	80	90	100	110	125	140	150	175	
BPHB	20	63	71	80	90	100	110	125	140	150	175	
BPHB	25		71	80	90	100	110	125	140	150	175	200
BPHB	32		71	80	90	100	110	125	140	150	175	200
BPHB	40			80	90	100	110	125	140	150	175	200

Ordering Example: **(12) BPHB 32-125 M2**
M2, R/c 60-63 triple tempered

Ball-Lock Punch Light Duty



BPL™

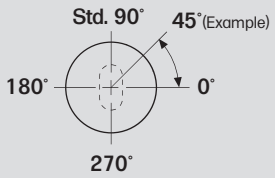
Ordering Example:
(12) BPLR 6-13-63 M2 P4.2

Ordering Example:
(15) BPLO 25-19-80 M2 P21.6 W12.2 BS-90

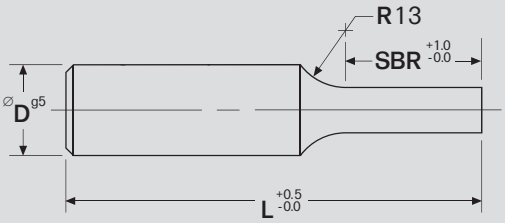
A2, R/c 60-63 double tempered
M2, R/c 60-63 triple tempered

Round P to D	0.01
Shape P &W to D	0.02

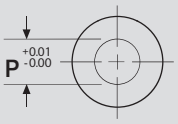
Ball Seat Location shown in Die Position



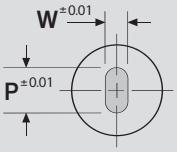
Angle from 0° must be specified.
90° IS FURNISHED IF NOT SPECIFIED.



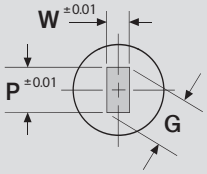
BPLR
Round



BPLO
Oblong

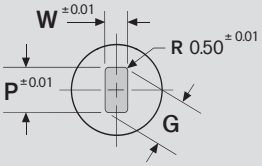


BPLS
Square/rect.



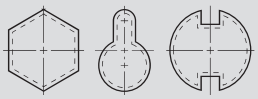
DIAGONAL "G" = $\sqrt{P^2 + W^2}$

BPLH
High productio n



$G = \left(\sqrt{(P - 1.0)^2 + (W - 1.0)^2}\right) + 1.0$

BPLC
Classified shape



(See pages 53-55)

Type	"D"	Point Length "SBR"				Overall Length "L"							Round "P" min.	Shape "W" min.
		8	13	19	25	50	56	63	71	80	90	100		
BPL_	6	8	13			50	56	63	71	80			1.4	1.4
BPL_	10		13	19		50	56	63	71	80	90	100	1.4	1.4
BPL_	13		13	19		50	56	63	71	80	90	100	4.0	4.0
BPL_	16		13	19	25		56	63	71	80	90	100	6.0	6.0
BPL_	20		13	19	25		56	63	71	80	90	100	6.0	6.0
BPL_	25		13	19	25		56	63	71	80	90	100	8.0	8.0
BPL_	32		13	19	25				71	80	90	100	10.0	10.0
BPL_	38			19	25					80	90	100	12.0	12.0

L = 50, max. SBR = 13
L = 56, max. SBR = 19

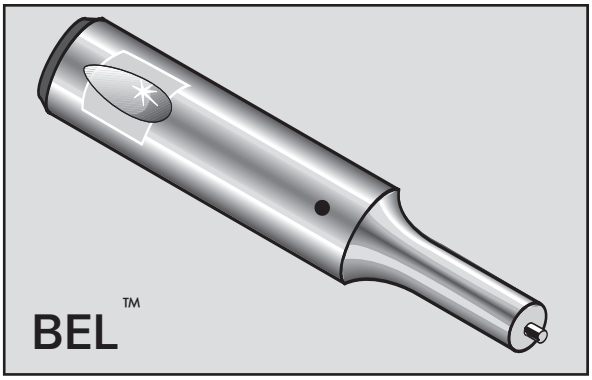
Ball-Lock Ejector Light Duty

Ordering Example:
(12) BELR 13-13-71 M2 P10.1

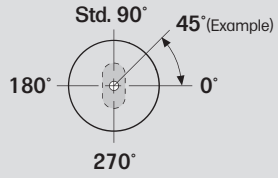
Ordering Example:
(12) BELO 20-19-80 M2 P18.2 W9.5 BS-90˚

A2, R/c 60-63 double tempered
M2, R/c 60-63 triple tempered

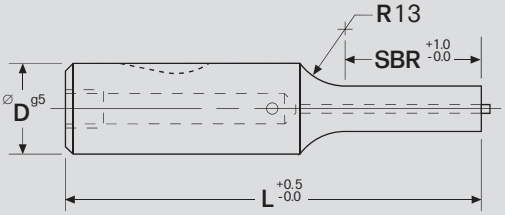
Round P to **D**	0.01
Shape P &W to **D**	0.02



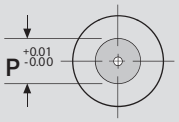
Ball Seat Location shown in Die Position



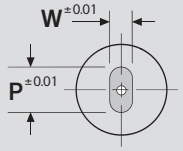
Angle from 0˚ must be specified.
90˚ IS FURNISHED IF NOT SPECIFIED.



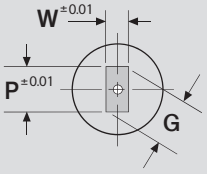
BELR
Round



BELO
Oblong

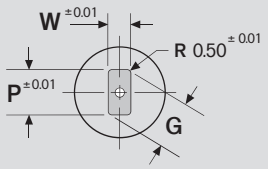


BELS
Square/rect.



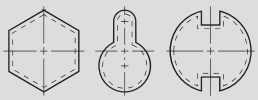
DIAGONAL "G" = $\sqrt{P^2 + W^2}$

BELH
High production



$G = \left(\sqrt{(P - 1.0)^2 + (W - 1.0)^2}\right) + 1.0$

BELC
Classified shape

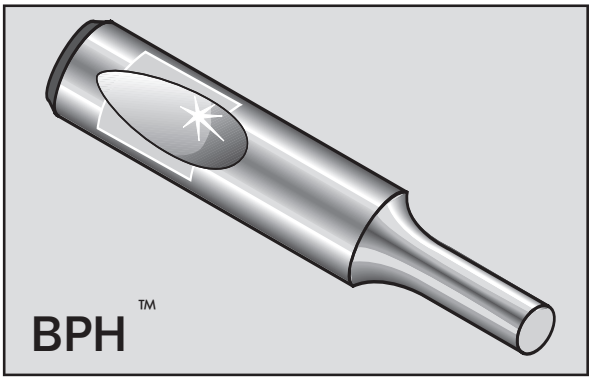


(See pages 53-55)

Type	"D"	Point Length "SBR"				Overall Length "L"							Round "P" min.	Shape "W" min.	Ejector Type
		8	13	19	25	50	56	63	71	80	90	100			
BEL_	6	8	13			50	56	63	71	80			1.9	1.9	E2AM
BEL_	10		13	19		50	56	63	71	80	90	100	2.9	2.9	E4M
BEL_	13		13	19		50	56	63	71	80	90	100	4.0	4.0	E6M
BEL_	16		13	19	25		56	63	71	80	90	100	6.0	6.0	E9M
BEL_	20		13	19	25		56	63	71	80	90	100	6.0	6.0	E9M
BEL_	25		13	19	25		56	63	71	80	90	100	8.0	8.0	E9M
BEL_	32		13	19	25				71	80	90	100	10.0	10.0	E12M
BEL_	38			19	25					80	90	100	12.0	12.0	E12M

L = 50, max. SBR = 13
L = 56, max. SBR = 19

Ball-Lock Punch Heavy Duty



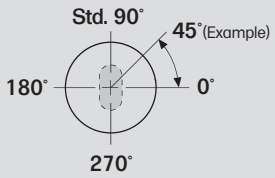
Ordering Example:
(12) BPHR 13-13-71 M2 P10.1

Ordering Example:
(15) BPHO 20-19-80 M2 P18.2 W9.5 BS-90°

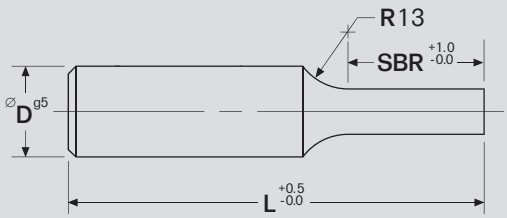
M2, R/c 60-63 triple tempered

Round P to D	0.01
Shape P&W to D	0.02

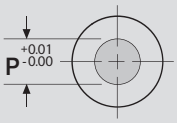
Ball Seat Location shown in Die Position



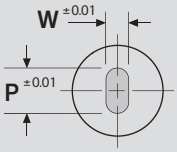
Angle from 0° must be specified.
90° IS FURNISHED IF NOT SPECIFIED.



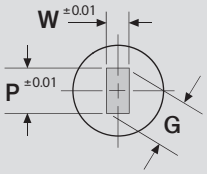
BPHR
Round



BPHO
Oblong

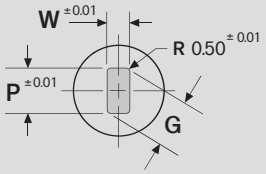


BPHS
Square/rect.



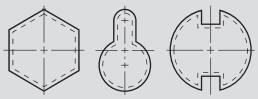
DIAGONAL "G" = $\sqrt{P^2 + W^2}$

BPHH
High productio n



$G = \left(\sqrt{(P - 1.0)^2 + (W - 1.0)^2}\right) + 1.0$

BPHC
Classified shape



(See pages 53-55)

Type	"D"	Point Length "SBR"					Overall Length "L"							Round Min. "P"	Shape Min. "W"
		10	13	19	25	32	63	71	80	90	100	110	125		
BPH_	10	10	13	19			63	71	80	90	100			1.4	1.4
BPH_	13		13	19			63	71	80	90	100	110	125	2.1	2.1
BPH_	16		13	19	25		63	71	80	90	100	110	125	5.0	5.0
BPH_	20		13	19	25		63	71	80	90	100	110	125	6.0	6.0
BPH_	25		13	19	25			71	80	90	100	110	125	8.0	8.0
BPH_	32		13	19	25			71	80	90	100	110	125	10.0	10.0
BPH_	40			19	25	32			80	90	100	110	125	12.0	12.0

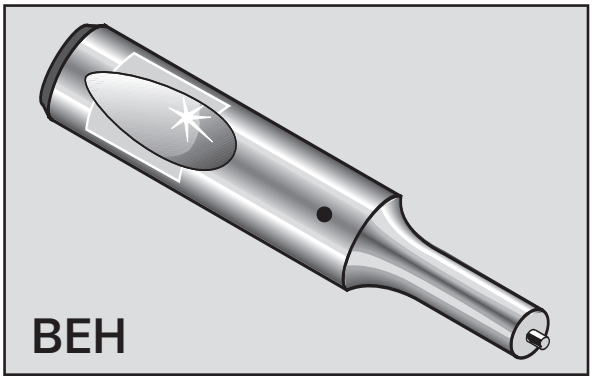
Ball-Lock Ejector Heavy Duty

Ordering Example:
(12) BEHR 13-13-71 M2 P10.1

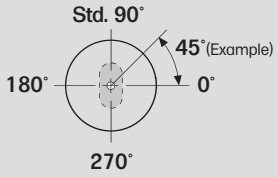
Ordering Example:
(12) BEHO 20-19-80 M2 P18.2 W9.5 BS-90°

M2 R/c 60-63 triple tempered

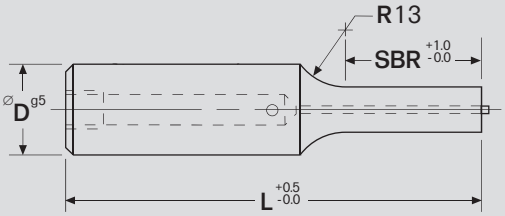
Round P to D	0.01	◎
Shape P&W to D	0.02	◎



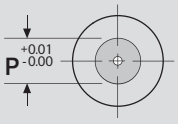
Ball Seat Location shown in Die Position



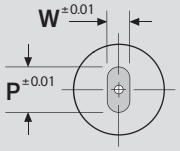
Angle from 0° must be specified.
90° IS FURNISHED IF NOT SPECIFIED.



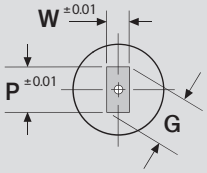
BEHR
Round



BEHO
Oblong

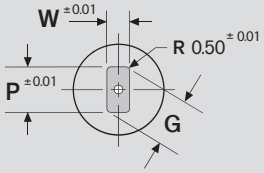


BEHS
Square/rect



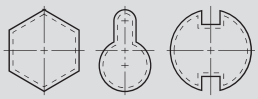
DIAGONAL "G" = $\sqrt{P^2 + W^2}$

BEHH
High productio n



G = $\left(\sqrt{(P - 1.0)^2 + (W - 1.0)^2}\right) + 1.0$

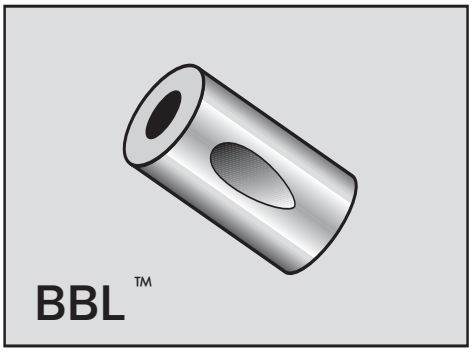
BEHC
Classified Shape



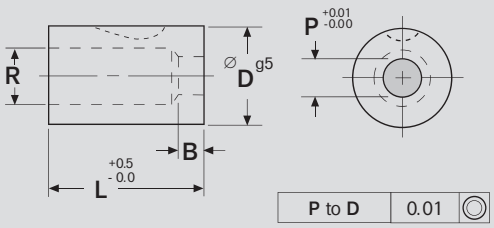
(See pages 53-55)

Type	"D"	Point Length "SBR"					Overall Length "L"							Round Min. "P"	Shape Min. "W"	Ejector Type
		10	13	19	25	32	63	71	80	90	100	110	125			
BEH_	10	10	13	19			63	71	80	90	100	110		2.9	2.9	E4M
BEH_	13		13	19			63	71	80	90	100	110	125	4.0	4.0	E6M
BEH_	16		13	19	25		63	71	80	90	100	110	125	6.0	6.0	E9M
BEH_	20		13	19	25		63	71	80	90	100	110	125	6.0	6.0	E9M
BEH_	25		13	19	25			71	80	90	100	110	125	8.0	8.0	E9M
BEH_	32		13	19	25			71	80	90	100	110	125	10.0	10.0	E12M
BEH_	40			19	25	32			80	90	100	110	125	12.0	12.0	E12M

Ball-Lock Button Light Duty



BBLR
Round



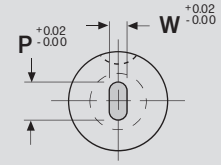
Type	"D"	Land "B"	Lengt h "L"	Min. "P"	Max. "P"	Max. "R"
BBLR	13	4.0	32	1.5	5.0	5.8
BBLR	16	5.0	32	3.2	7.2	8.0
BBLR	20	5.0	32	4.0	11.0	11.9
BBLR	25	6.0	32	8.0	15.0	16.0
BBLR	32	6.0	32	11.0	19.0	20.0
BBLR	38	8.0	32	16.5	26.0	27.0

Ordering Example:
(10) BBLR 20-32 A2 P9,8

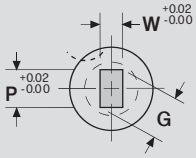
Ordering Example:
(10) BBLO 13-32 A2 P4.4 W1.3 BS-90°

A2, R/c 60-63 double tempered

BBLO
Oblong

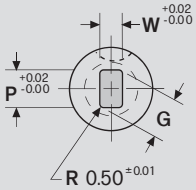


BBLS
Square/Rectangular



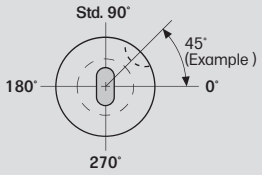
DIAGONAL "G" = $\sqrt{P^2 + W^2}$

BBLH
High Production



$G = \left(\sqrt{(P - 1.0)^2 + (W - 1.0)^2}\right) + 1.0$

Ball Seat Location shown in Die Position

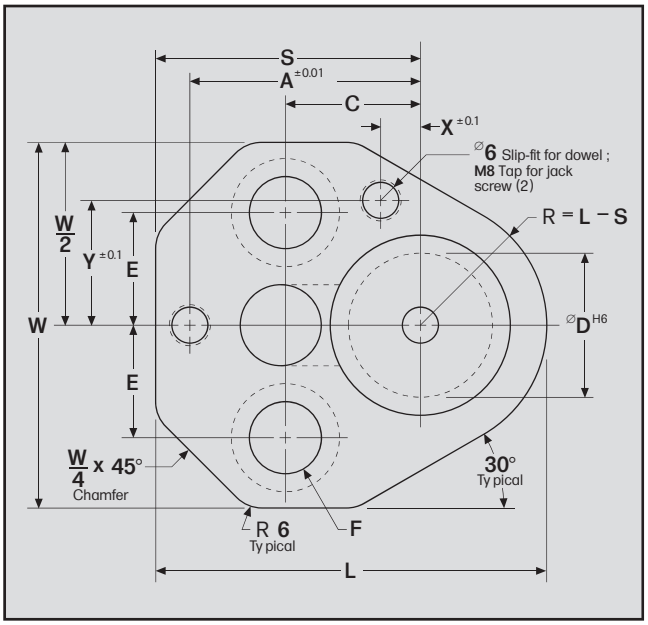


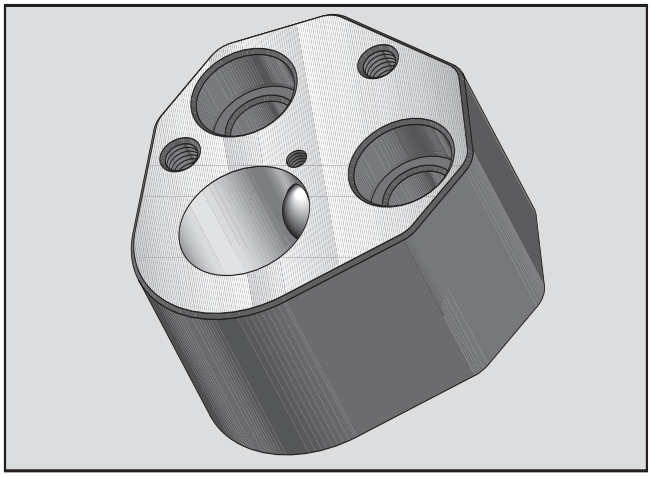
Angle from 0° must be specified.
90° IS FURNISHED IF NOT SPECIFIED.

Type	"D"	Land "B"	Overall Length "L"	Min. "W"	Max. "P"/"G"	Max. "R"
BBL_	13	4.0	32	1.2	5.0	5.8
BBL_	16	5.0	32	2.0	7.2	8.0
BBL_	20	5.0	32	2.4	11.0	11.9
BBL_	25	6.0	32	4.0	15.0	16.0
BBL_	32	6.0	32	4.8	19.0	20.0
BBL_	38	8.0	32	6.4	26.0	27.0

Ball-Lock Retainer Heavy Duty Tru-Lock

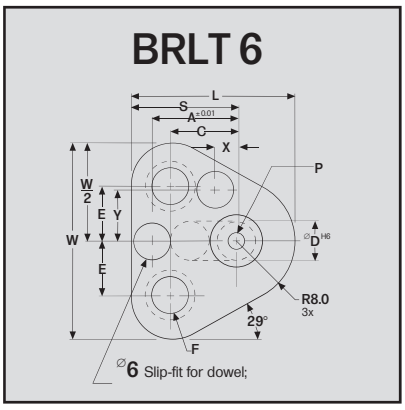
Ball-Lock Retainer Light Duty Tru-Lock

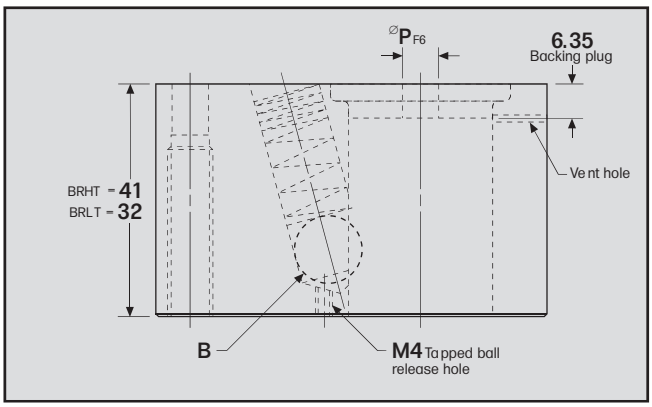




Ordering Example: **(36) BRHT 25**

Retainer set includes:
2 Socket head cap screws
2 Vented and tapped dowels
1 Ball release set screw





Heavy-Duty

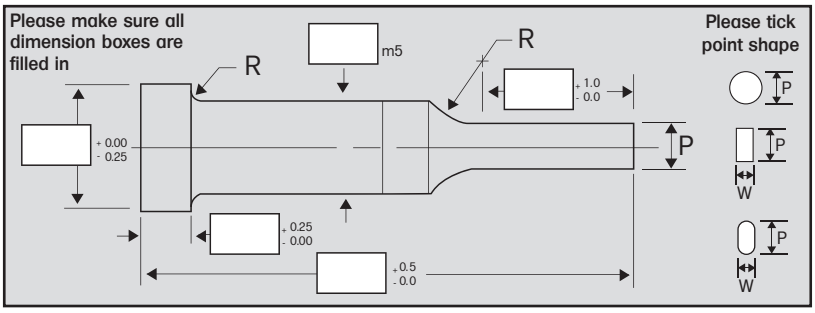
Type	"D"	"W"	"L"	"S"	"A"	"C"	"E"	"X"	"Y"	"B"	"F"
BRHT	10	41.0	43.5	34.0	26.924	19.05	11.12	7.5	9.0	10.0	M8
BRHT	13	48.5	49.6	37.0	29.972	19.05	14.27	6.5	12.0	12.0	M8
BRHT	16	51.7	52.7	38.6	31.750	19.05	15.87	6.0	13.5	12.0	M8
BRHT	20	56.8	59.3	41.9	33.528	19.05	17.47	5.0	16.5	12.0	M10
BRHT	25	64.5	68.9	46.7	40.640	23.82	19.84	7.0	22.0	12.0	M12
BRHT	32	64.5	68.9	46.7	40.640	23.82	19.84	7.0	22.0	12.0	M12
BRHT	40	72.9	76.4	50.5	43.993	27.00	24.00	10.0	26.0	12.0	M12

Light-Duty

Type	"D"	"W"	"L"	"S"	"A"	"C"	"E"	"X"	"Y"	"B"	"P"	"F"
BRLT	6	37.5	35.0	27.0	23.000	19.00	11.10	9.0	8.0	6.0	3.0	M6
BRLT	10	41.0	43.5	34.0	26.924	19.05	11.12	7.5	9.0	8.0	6.0	M8
BRLT	13	48.5	49.6	37.0	29.972	19.05	14.27	6.5	12.0	8.0	6.0	M8
BRLT	16	51.7	52.7	38.6	31.750	19.05	15.87	6.0	13.5	8.0	6.0	M8
BRLT	20	56.8	59.3	41.9	33.528	19.05	17.47	5.0	16.5	8.0	6.0	M10
BRLT	25	64.5	68.9	46.7	40.640	23.82	19.84	7.0	22.0	8.0	6.0	M12
BRLT	32	64.5	68.9	46.7	40.640	23.82	19.84	7.0	22.0	8.0	6.0	M12
BRLT	38	72.9	76.4	50.5	43.993	27.00	24.00	10.0	26.0	8.0	6.0	M12

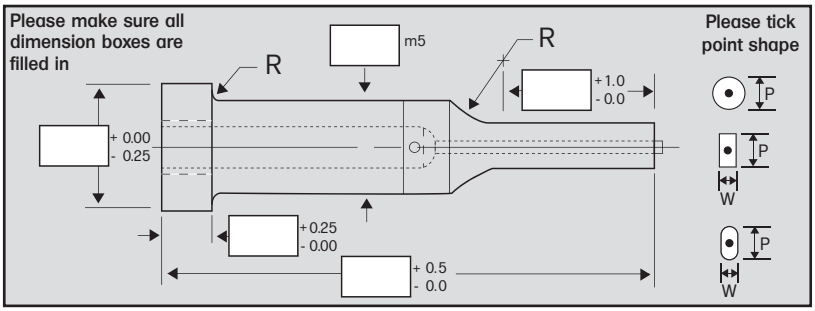
Special Punches & Dies Made to Order

Solid Punch



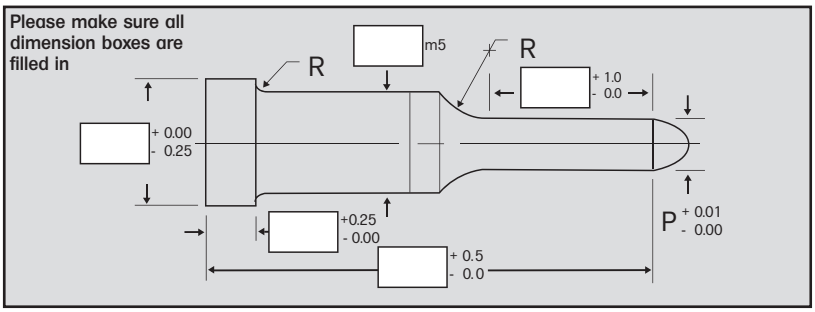
P=	W=	QTY=
P=	W=	QTY=
P=	W=	QTY=
Please tick material required below		
MAT TYPE	HSS	TOOLSTEEL

Ejector Punch



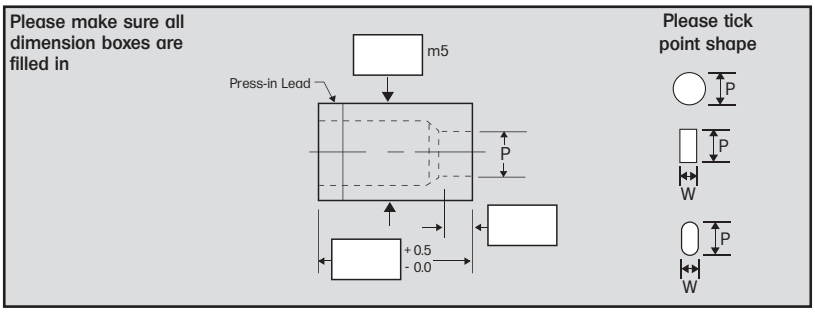
P=	W=	QTY=
P=	W=	QTY=
P=	W=	QTY=
Please tick material required below		
MAT TYPE	HSS	TOOLSTEEL

Parabolic Pilot



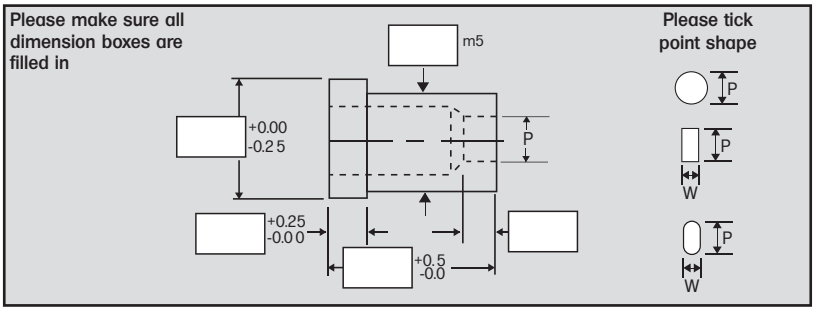
P=	QTY=	
P=	QTY=	
P=	QTY=	
Please tick material required below		
MAT TYPE	HSS	TOOLSTEEL

Die Button Press Fit



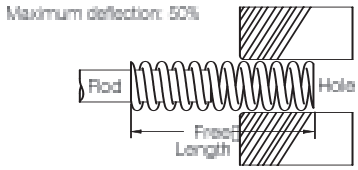
P=	W=	QTY=
P=	W=	QTY=
P=	W=	QTY=
Please tick material required below		
MAT TYPE	HSS	TOOLSTEEL

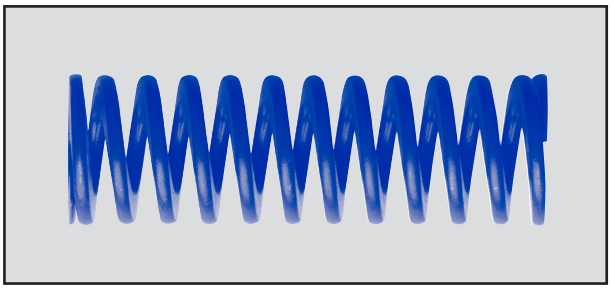
Die Button Shoulder



P=	W=	QTY=
P=	W=	QTY=
P=	W=	QTY=
Please tick material required below		
MAT TYPE	HSS	TOOLSTEEL

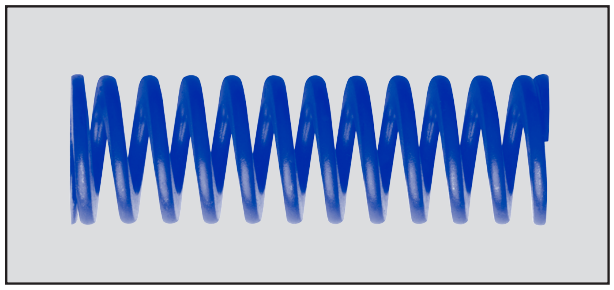
Silicone Chrome Die Springs
Raymond



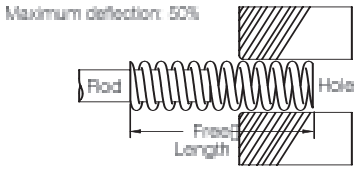


HOLE DIA.	ROD DIA.	FREE LENGTH		lb at 1/10" DEFL.	MAXIMUM DEFLECTION 50% OF FREE LENGTH		DEFLECTION FOR AVERAGE LIFE 40% OF FREE LENGTH		DEFLECTION FOR LONG LIFE 25% OF FREE LENGTH		TOTAL TRAVEL TO SOLID		NO. PER BOX
		in.	mm		PRESSURE POUNDS	LENGTH OF DEFL.	PRESSURE POUNDS	LENGTH OF DEFL.	PRESSURE POUNDS	LENGTH OF DEFL.	PRESSURE POUNDS	LENGTH OF DEFL.	
3/8 10mm	3/16 4.5mm	1.00	25	5.6	28	.500	23	.400	14	.250	31	.545	200
		1.25	32	4.8	30	.625	24	.500	15	.312	35	.735	200
		1.50	38	3.8	29	.750	23	.600	14	.375	34	.906	100
		1.75	44	3.4	30	.875	24	.700	15	.437	36	1.053	100
		2.0	51	2.8	28	1.000	22	.800	14	.500	35	1.248	100
WIRE .089x.070		2.50	64	2.4	30	1.250	24	1.000	15	.625	38	1.581	100
		3.0	76	1.8	27	1.500	22	1.200	14	.750	35	1.931	100
		12.00	305	0.6	36	6.000	29	4.800	18	3.000	48	7.961	50
1/2 13mm	9/32 7mm	1	25	10.0	50	.500	40	.400	25	.250	58	.578	100
		1.25	32	9.2	58	.625	46	.500	29	.312	66	.722	100
		1.50	38	7.6	57	.750	46	.600	29	.375	68	.893	100
		1.75	44	6.8	60	.875	48	.700	30	.437	71	1.048	100
		2.00	51	6.4	64	1.000	51	.800	32	.500	79	1.234	100
		2.50	64	5.2	65	1.250	52	1.000	33	.625	81	1.550	50
		3.00	76	4.0	60	1.500	48	1.200	30	.750	76	1.891	50
		3.50	89	3.0	53	1.750	42	1.400	26	.875	67	2.233	50
		4.50	115	2.5	53	2.125	45	1.80	28	1.125	71	2.850	50
WIRE .052x.093		5.50	140	2.1	57	2.750	46	2.2	28.6	1.375	71	3.420	50
		6.50	165	1.6	52	3.250	42	2.6	26	1.625	60	3.860	50
		7.50	191	1.1	41	3.750	33	3.000	20.6	1.875	45	4.140	50
		12.00	305	0.8	48	6.000	38	4.800	24	3.000	56	6.931	50
5/8 16mm	11/32 8.5mm	1.00	25	13.0			52	.400	33	.250	55	.420	100
		1.25	32	12.8			64	.500	40	.312	79	.617	100
		1.50	38	10.8	81	.750	65	.600	41	.375	88	.815	50
		1.75	44	9.6	84	.875	67	.700	42	.437	93	.969	50
		2.00	51	8.8	88	1.000	70	.800	44	.500	102	1.157	50
		2.50	64	6.0	75	1.250	60	1.000	38	.625	87	1.445	50
		3.00	76	5.6	84	1.500	67	1.200	42	.750	103	1.840	50
WIRE .069x.109		3.50	89	4.8	84	1.750	67	1.400	42	.875	104	2.159	50
		4.00	102	4.4	88	2.000	70	1.600	44	1.000	113	2.576	50
		12.00	305	1.4	84	6.000	67	1.800	42	3.000	109	7.782	50
3/4 19mm	3/8 9.5mm	1.00	25	31.2	156	.500	125	.400	78	.250	170	.544	50
		1.25	32	25.6	160	.625	128	.500	80	.312	179	.699	50
		1.50	38	20.0	150	.750	120	.600	75	.375	171	.854	50
		1.75	44	17.6	154	.875	123	.700	77	.437	176	1.000	50
		2.00	51	14.4	144	1.000	115	.800	72	.500	167	1.162	50
		2.50	64	12.0	150	1.250	120	1.000	75	.625	177	1.474	50
		3.00	76	9.6	144	1.500	115	1.200	72	.750	171	1.784	50
		3.50	89	8.0	140	1.750	112	1.400	70	.875	168	2.094	50

Medium Duty - Blue continued

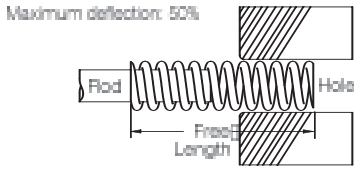


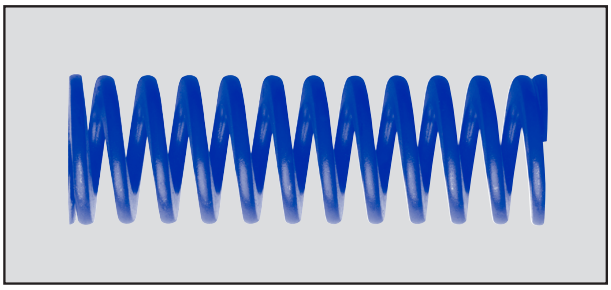
Silicone Chrome Die Springs
Raymond



HOLE DIA.	ROD DIA.	FREE LENGTH		lb at 1/10" DEFL.	MAXIMUM DEFLECTION 50% OF FREE LENGTH		DEFLECTION FOR AVERAGE LIFE 40% OF FREE LENGTH		DEFLECTION FOR LONG LIFE 25% OF FREE LENGTH		TOTAL TRAVEL TO SOLID		NO. PER BOX
		in.	mm		PRESSURE POUNDS	LENGTH OF DEFL.	PRESSURE POUNDS	LENGTH OF DEFL.	PRESSURE POUNDS	LENGTH OF DEFL.	PRESSURE POUNDS	LENGTH OF DEFL.	
WIRE .075x.165		4.00	102	7.2	144	2.000	115	1.600	72	1.000	173	2.404	50
		4.50	115	6.4	144	2.250	115	1.800	72	1.125	174	2.714	50
		5.00	127	5.6	140	2.500	112	2.000	70	1.250	169	3.024	50
		5.50	139	4.8	132	2.750	106	2.200	66	1.375	160	3.334	50
		6.00	152	4.0	120	3.000	96	2.400	60	1.500	146	3.644	50
		6.50	165	3.9	126	3.250	101	2.600	41	1.625	144	3.690	50
		7.50	191	3.3	123	3.750	99	3.000	62	1.875	142	4.300	50
		12.00	305	2.4	144	6.000	115	4.800	72	3.000	177	7.364	50
1 26mm	1/2 12.5mm	1.00	25	53.6			214	.400	134	.250	264	.493	50
		1.25	32	43.6			218	.500	136	.312	272	.624	50
		1.50	38	33.6	252	.750	202	.600	126	.375	274	.816	50
		1.75	44	28.8	248	.875	202	.700	126	.437	272	.944	50
		2.00	51	23.2	232	1.000	186	.800	116	.500	258	1.114	50
		2.50	64	20.0	250	1.250	200	1.000	125	.625	282	1.411	50
		3.00	76	15.2	228	1.500	182	1.200	114	.750	260	1.708	25
		3.50	89	12.8	224	1.750	80	1.400	112	.875	266	2.082	25
WIRE .100x.215		4.00	102	12.0	240	2.000	192	1.600	120	1.000	276	2.303	25
		4.50	115	10.4	234	2.250	187	1.800	117	1.125	271	2.601	25
		5.00	127	9.6	240	2.500	192	2.000	120	1.250	278	2.898	25
		5.50	139	8.8	242	2.750	194	2.200	121	1.375	281	3.195	25
		6.00	152	8.0	240	3.000	192	2.400	120	1.500	279	3.493	25
		7.00	178	7.2	252	3.500	202	2.800	126	1.750	294	4.086	25
		8.00	203	5.6	224	4.000	180	3.200	112	2.000	262	4.682	25
		12.00	305	4.0	240	6.000	192	4.800	120	3.000	282	7.062	25
1 1/4 32mm	5/8 15.5mm	1.50	38	49.6	372	.750	298	.600	186	.375	399	.804	50
		1.75	44	42.4	371	.875	296	.700	185	.437	402	.947	50
		2.00	51	35.2	352	1.000	282	.800	176	.500	398	1.130	50
		2.50	64	28.8	360	1.250	288	1.000	180	.625	419	1.456	25
		3.00	76	24.0	360	1.500	288	1.200	180	.750	428	1.782	25
		3.50	89	20.0	350	1.750	280	1.400	175	.875	422	2.108	25
		4.00	102	17.6	352	2.000	282	1.600	176	1.000	428	2.434	25
		4.50	115	16.0	360	2.500	288	1.800	180	1.125	442	2.760	25
		5.00	127	13.6	340	2.500	272	2.000	170	1.250	420	3.086	25
		5.50	139	12.8	352	2.750	282	2.200	176	1.375	437	3.412	25
		6.00	152	12.0	360	3.000	288	2.400	180	1.500	449	3.738	25
WIRE .115x.285		7.00	178	10.4	364	3.500	291	2.800	182	1.750	457	4.390	25
		8.00	203	8.8	352	4.000	282	3.200	176	2.000	444	5.042	25
		10.00	254	7.2	360	5.000	288	4.000	180	2.500	457	6.346	25
		12.00	305	5.6	336	6.000	269	4.800	168	3.000	428	7.650	25

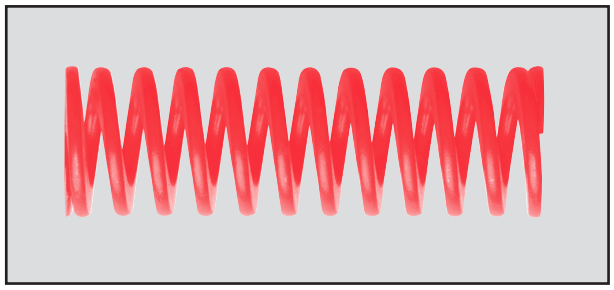
Silicone Chrome Die Springs
Raymond



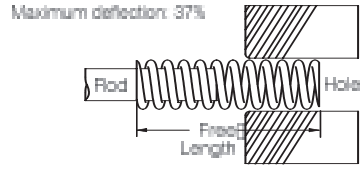


HOLE DIA.	ROD DIA.	FREE LENGTH		lb at 1/10" DEFL.	MAXIMUM DEFLECTION 50% OF FREE LENGTH		DEFLECTION FOR AVERAGE LIFE 40% OF FREE LENGTH		DEFLECTION FOR LONG LIFE 25% OF FREE LENGTH		TOTAL TRAVEL TO SOLID		NO. PER BOX
		in.	mm		PRESSURE POUNDS	LENGTH OF DEFL.	PRESSURE POUNDS	LENGTH OF DEFL.	PRESSURE POUNDS	LENGTH OF DEFL.	PRESSURE POUNDS	LENGTH OF DEFL.	
1 1/2 38mm	3/4 19mm	2.00	51	44.8	448	1.000	358	.800	224	.500	500	1.116	25
		2.50	64	36.8	460	1.250	368	1.000	230	.625	532	1.446	25
		3.00	76	33.6	504	1.500	403	1.200	252	.750	597	1.776	25
		3.50	89	26.4	462	1.750	370	1.400	231	.875	547	2.072	25
		4.00	102	21.6	432	2.000	346	1.600	216	1.000	526	2.436	25
		4.50	115	20.8	468	2.250	374	1.800	234	1.125	575	2.766	25
		5.00	127	20.0	500	2.500	400	2.000	250	1.250	619	3.096	25
		5.50	139	16.8	462	2.750	370	2.200	231	1.375	576	3.426	25
		6.00	152	14.4	432	3.000	346	2.400	216	1.500	540	3.756	25
WIRE .135x.345		7.00	178	13.6	476	3.500	381	2.800	238	1.750	601	4.416	25
		8.00	203	12.8	512	4.000	410	3.200	256	2.000	650	5.076	25
		10.00	254	8.8	440	5.000	352	4.000	220	2.500	563	6.396	25
		12.00	305	8.0	480	6.000	384	4.800	240	3.000	606	7.580	25
2 51mm	1 25mm	2.50	64	89.6	1120	1.250	896	1.000	560	.625	1179	1.316	25
		3.00	76	76.8	1152	1.500	922	1.200	576	.750	1243	1.619	25
		3.50	89	64.8	1134	1.750	907	1.400	567	.875	1245	1.922	25
		4.00	102	55.2	1104	2.000	883	1.600	552	1.000	1228	2.224	25
		4.50	115	47.2	1062	2.250	850	1.800	531	1.125	1193	2.527	25
		5.00	127	41.6	1040	2.500	832	2.000	520	1.250	1177	2.830	25
		5.50	139	39.2	1078	2.750	862	2.200	539	1.375	1228	3.132	25
		6.00	152	35.2	1056	3.000	845	2.400	528	1.500	1209	3.435	25
WIRE .195x.468		7.00	178	31.2	1092	3.500	874	2.800	546	1.750	1260	4.040	25
		8.00	203	25.6	1024	4.000	819	3.200	512	2.000	1189	4.645	10
		10.00	254	20.8	1040	5.000	832	4.000	520	2.500	1218	5.857	10
		12.00	305	16.8	1008	6.000	806	4.800	504	3.000	1187	7.067	10

Medium Heavy-Duty - Red

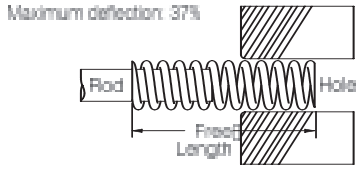


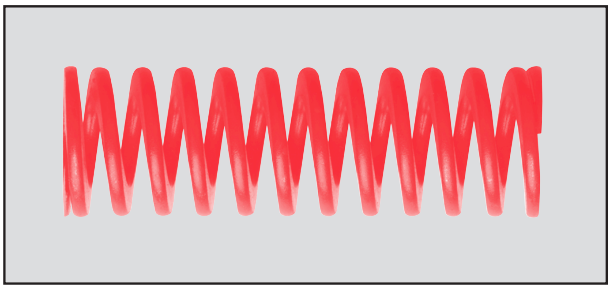
Silicone Chrome Die Springs
Raymond



HOLE DIA.	ROD DIA.	FREE LENGTH		lb at 1/10" DEFL.	MAXIMUM DEFLECTION 37% OF FREE LENGTH		DEFLECTION FOR AVERAGE LIFE 25% OF FREE LENGTH		DEFLECTION FOR LONG LIFE 20% OF FREE LENGTH		TOTAL TRAVEL TO SOLID		NO. PER BOX
		in.	mm		PRESSURE POUNDS	LENGTH OF DEFL.	PRESSURE POUNDS	LENGTH OF DEFL.	PRESSURE POUNDS	LENGTH OF DEFL.	PRESSURE POUNDS	LENGTH OF DEFL.	
3/8 10mm	3/16 4.5mm	1.00	25	9.0	33	.370	23	.250	17	.200	41	.456	200
		1.25	32	74.3	34	.462	23	.312	18	.250	45	.611	200
		1.50	38	6.7	37	.555	25	.375	20	.300	54	.802	100
		1.75	44	5.8	35	.647	25	.437	20	.250	52	.922	100
		2.00	51	5.0	37	.740	25	.500	20	.400	53	1.054	100
WIRE .046x.067		2.50	64	4.2	39	.925	26	.625	21	.500	56	1.341	100
		3.00	76	3.0	33	1.110	23	.750	18	.600	48	1.605	100
		12.00	305	0.9	40	4.440	27	3.000	22	2.400	62	7.081	50
1/2 13mm	9/32 7mm	1.00	25	16.8	62	.370	42	.250	34	.200	84	.499	100
		1.25	32	13.9	64	.462	43	.312	35	.250	90	.647	100
		1.50	38	12.0	67	.555	45	.375	36	.300	97	.811	100
		1.75	44	10.4	67	.647	45	.437	36	.350	100	.962	100
		2.00	51	8.7	64	.740	44	.500	35	.400	96	1.108	100
		2.50	64	6.8	63	.925	43	.625	34	.500	95	1.404	50
WIRE .061x.093		3.00	76	2.7	63	1.110	43	.750	34	.600	98	1.717	50
		3.50	89	4.7	61	1.295	41	.875	33	.700	94	1.998	50
		12.00	3.5	1.2	53	4.440	36	3.000	29	2.400	79	6.616	50
5/8 16mm	11/32 8.5mm	1.00	25	27.7	102	.370	69	.250	55	.200	106	.383	100
		1.25	32	20.8	96	.462	65	.312	52	.250	104	.498	100
		1.50	38	19.0	105	.555	71	.375	57	.300	126	.664	50
		1.75	44	16.8	109	.647	73	.437	59	.350	141	.837	50
		2.00	51	14.8	110	.740	74	.500	59	.400	148	.997	50
		2.50	64	11.5	106	.925	72	.625	58	.500	143	1.246	50
WIRE .081x.117		3.00	76	10.0	111	1.110	75	.750	60	.600	156	1.558	50
		3.50	89	8.5	110	1.295	74	.875	60	.700	155	1.828	50
		4.00	102	7.6	112	1.482	76	1.000	61	.800	166	2.182	50
		12.00	305	2.7	120	4.440	81	3.000	65	2.400	184	6.817	50
3/4 19mm	3/8 9.5mm	1.00	25	57.6	213	.370	144	.250	115	.200	259	.450	50
		1.25	32	44.8	207	.462	140	.3612	112	.250	265	.592	50
		1.50	38	32.0	178	.555	120	.375	96	.300	235	.735	50
		1.75	44	28.8	186	.647	126	.437	101	.350	252	.874	50
		2.00	51	24.8	184	.740	124	.500	99	.400	253	1.020	50
		2.50	64	19.2	178	.925	120	.625	96	.500	251	1.305	50
		3.00	76	14.4	160	1.110	108	.750	86	.600	229	1.590	50
		3.50	89	12.8	166	1.295	112	.875	90	.700	240	1.875	50
		4.00	102	12.0	178	1.480	120	1.000	96	.800	259	2.160	50
		4.50	115	11.2	186	1.665	136	1.125	101	.900	274	2.445	50
WIRE .093x.156		5.00	127	10.4	192	1.850	130	1.250	104	1.000	286	2.753	50
		5.50	139	9.6	195	2.035	132	1.375	106	1.100	289	3.014	50
		6.00	152	8.0	178	2.220	120	1.500	96	1.200	264	3.300	50
		12.00	305	3.6	160	4.440	108	3.000	86	2.400	232	6.455	50

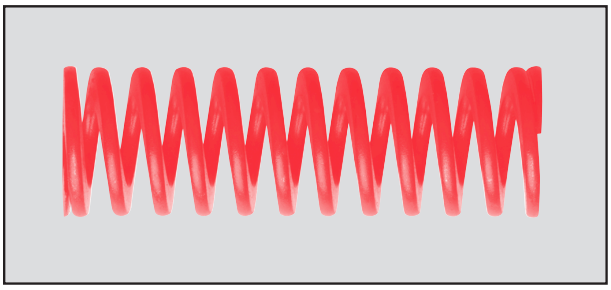
Silicone Chrome Die Springs
Raymond



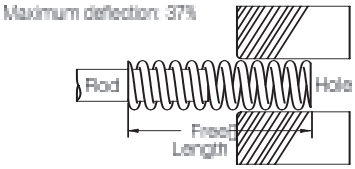


HOLE DIA.	ROD DIA.	FREE LENGTH		lb at 1/10" DEFL.	MAXIMUM DEFLECTION 37% OF FREE LENGTH		DEFLECTION FOR AVERAGE LIFE 25% OF FREE LENGTH		DEFLECTION FOR LONG LIFE 20% OF FREE LENGTH		TOTAL TRAVEL TO SOLID		NO. PER BOX
		in.	mm		PRESSURE POUNDS	LENGTH OF DEFL.	PRESSURE POUNDS	LENGTH OF DEFL.	PRESSURE POUNDS	LENGTH OF DEFL.	PRESSURE POUNDS	LENGTH OF DEFL.	
1 26mm	1/2 12.5mm	1.00	25	72.0	266	.370	180	.250	144	.200	297	.412	50
		1.25	32	62.4	288	.462	195	.312	156	.250	300	.481	50
		1.50	38	49.6	275	.555	186	.375	149	.300	350	.706	50
		1.75	44	44.0	285	.647	192	.437	154	.350	364	.828	50
		2.00	51	36.8	272	.740	184	.500	147	.400	368	1.000	50
		2.50	64	28.8	266	.925	180	.625	144	.500	373	1.295	50
		3.00	76	23.2	258	1.110	174	.750	139	.600	369	1.589	25
		3.50	89	21.6	280	1.295	189	.875	151	.700	407	1.883	25
		4.00	102	18.4	272	1.480	184	1.000	147	.800	401	2.179	25
		4.50	115	15.2	253	1.665	171	1.125	137	.900	376	2.471	25
		5.00	127	14.4	266	1.850	180	1.250	144	1.000	398	2.766	25
		5.50	139	12.8	260	2.035	176	1.375	141	1.100	377	2.942	25
WIRE .115x.218		6.00	152	11.2	249	2.220	168	1.500	134	1.200	362	3.236	25
		7.00	178	9.6	249	2.590	168	1.750	134	1.400	367	3.825	25
		8.00	203	8.8	260	2.960	176	2.000	141	1.600	388	4.413	25
		12.00	305	5.6	249	4.440	168	3.000	134	2.400	379	6.767	25
1 1/4 32mm	5/8 15.5mm	1.50	38	114.4	635	.555	429	.375	343	.300	752	.657	50
		1.75	44	100.8	652	.647	440	.437	353	.350	790	.784	50
		2.00	51	86.4	639	.740	432	.500	346	.400	792	.917	50
		2.50	64	62.4	577	.925	390	.625	312	.500	734	1.176	25
		3.00	76	51.2	568	1.110	384	.750	307	.600	735	1.435	52
		3.50	89	44.0	570	1.295	385	.875	308	.700	745	1.694	25
		4.00	102	36.8	545	1.480	368	1.000	294	.800	719	1.954	25
		4.50	115	32.0	533	1.665	360	1.125	288	.900	708	2.213	25
		5.00	127	27.2	503	1.850	340	1.250	272	1.000	672	2.472	25
		5.50	139	26.4	537	2.035	363	1.375	290	1.100	720	2.731	25
		6.00	152	23.2	515	2.220	348	1.500	278	1.200	712	3.071	25
WIRE .156x.281		7.00	178	20.0	518	2.590	350	1.750	280	1.400	702	3.509	25
		8.00	203	18.4	545	2.960	368	2.000	294	1.600	741	4.028	25
		10.00	254	12.8	474	3.700	320	2.500	256	2.000	648	5.065	25
		12.00	305	11.2	497	4.440	336	3.000	269	2.400	683	6.102	25
1 1/2 38mm	3/4 19mm	2.00	51	108.0	799	.740	540	.500	432	.400	966	.894	25
		2.50	64	85.6	792	.925	535	.625	428	.500	988	1.154	25
		3.00	76	62.4	693	1.100	468	.750	374	.600	882	1.414	25
		3.50	89	52.8	684	1.295	462	.875	370	.700	883	1.673	25
		4.00	102	48.0	710	1.480	480	1.000	384	.800	928	1.933	25
		4.50	115	43.2	719	1.665	486	1.125	389	.900	947	2.192	25
		5.00	127	36.8	681	1.850	460	1.250	368	1.000	902	2.452	25

Medium Heavy-Duty - Red continued

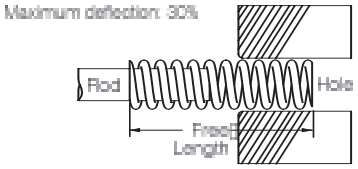


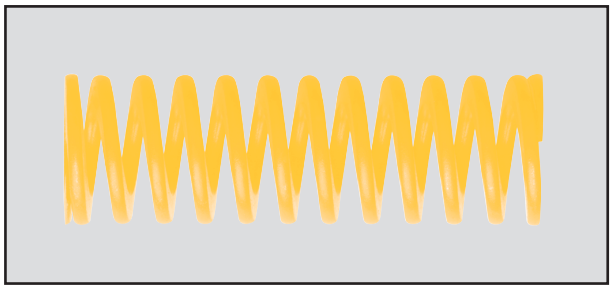
Silicone Chrome Die Springs
Raymond



HOLE DIA.	ROD DIA.	FREE LENGTH		lb at 1/10" DEFL.	MAXIMUM DEFLECTION 37% OF FREE LENGTH		DEFLECTION FOR AVERAGE LIFE 25% OF FREE LENGTH		DEFLECTION FOR LONG LIFE 20% OF FREE LENGTH		TOTAL TRAVEL TO SOLID		NO. PER BOX
		in.	mm		PRESSURE POUNDS	LENGTH OF DEFL.	PRESSURE POUNDS	LENGTH OF DEFL.	PRESSURE POUNDS	LENGTH OF DEFL.	PRESSURE POUNDS	LENGTH OF DEFL.	
WIRE .187x.312		5.50	139	34.4	700	2.035	473	1.375	378	1.100	933	2.712	25
		6.00	152	30.4	675	2.220	456	1.500	365	1.200	903	2.971	25
		7.00	178	26.4	684	2.590	462	1.750	370	1.400	934	3.359	25
		8.00	203	20.8	616	2.960	416	2.00	333	1.600	844	4.058	25
		10.00	254	17.6	651	3.700	440	2.500	352	2.000	907	5.154	25
		12.00	305	14.4	639	4.440	432	3.000	346	2.400	883	6.135	25
2 51mm	1 25mm	2.50	64	118.4	1095	.925	740	.625	592	.500	1326	1.120	25
		3.00	76	96.0	1066	1.110	720	.750	576	.600	1334	1.390	25
		3.50	89	80.0	1036	1.295	700	.875	560	.700	1328	1.660	25
		4.00	102	66.4	983	1.480	664	1.000	531	.800	1282	1.930	25
		4.50	115	60.0	999	1.665	675	1.125	540	.900	1320	2.200	25
		5.00	127	56.0	1036	1.850	700	1.250	560	1.000	1383	2.470	25
		5.50	139	50.4	1026	2.035	693	1.375	554	1.100	1381	2.740	25
		6.00	152	47.2	1048	2.220	708	1.500	566	1.220	1421	3.010	25
WIRE .225x.437		7.00	178	40.0	1036	2.590	700	1.750	560	1.400	1420	3.550	25
		8.00	203	35.2	1042	2.960	704	2.000	563	1.600	1440	4.090	10
		10.00	254	24.0	888	3.700	600	2.500	480	2.000	1241	5.170	10
		12.00	305	22.4	995	4.440	672	3.000	538	2.400	1400	6.250	10

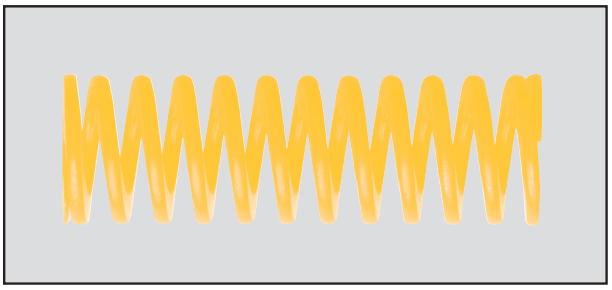
Silicone Chrome Die Springs
Raymond



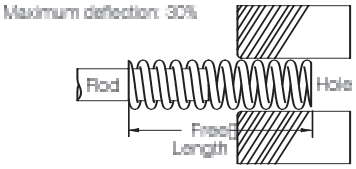


HOLE DIA.	ROD DIA.	FREE LENGTH		lb at 1/10" DEFL.	MAXIMUM DEFLECTION 30% OF FREE LENGTH		DEFLECTION FOR AVERAGE LIFE 20% OF FREE LENGTH		DEFLECTION FOR LONG LIFE 15% OF FREE LENGTH		TOTAL TRAVEL TO SOLID		NO. PER BOX
		in.	mm		PRESSURE POUNDS	LENGTH OF DEFL.	PRESSURE POUNDS	LENGTH OF DEFL.	PRESSURE POUNDS	LENGTH OF DEFL.	PRESSURE POUNDS	LENGTH OF DEFL.	
3/8 10mm	3/16 4.5mm	1.00	25	12.4	37	.300	25	.200	18	.150	44	.354	200
		1.25	32	9.8	37	.375	25	.250	18	.187	45	.463	200
		1.50	38	9.6	43	.450	29	.300	22	.225	55	.573	100
		1.75	44	8.4	44	.525	29	.350	22	.262	58	.686	100
		2.00	51	7.2	43	.600	29	.400	22	.300	57	.792	100
WIRE .054x.072		2.50	64	6.0	45	.750	30	.500	23	.375	66	1.011	100
		3.00	76	4.2	38	.900	25	.600	19	.450	51	1.216	100
		12.00	305	1.2	43	3.600	29	2.400	22	1.800	70	5.818	50
1/2 13mm	9/32 7mm	1.00	25	23.6	71	.300	47	.200	35	.150	107	.455	100
		1.25	32	18.6	70	.375	47	.250	35	.187	109	.587	100
		1.50	38	16.4	74	.450	49	.300	37	.225	121	.737	100
		1.75	44	13.8	72	.525	48	.350	36	.262	116	.844	100
		2.00	51	11.0	66	.600	44	.400	33	.300	110	1.000	100
		2.50	64	8.4	63	.750	42	.500	32	.375	106	1.264	50
WIRE .070x.093		3.00	76	7.4	67	.900	44	.600	33	.450	113	1.528	50
		3.50	89	6.4	67	1.050	45	.700	34	.525	116	1.810	50
		12.00	305	1.6	58	3.600	38	2.400	29	1.800	100	6.266	50
5/8 16mm	11/32 8.5mm	1.00	25	42.4	127	.300	85	.200	64	.150	151	.357	100
		1.25	32	29.6	111	.375	74	.250	55	.187	140	.474	100
		1.50	38	27.2	122	.450	82	.300	61	.225	165	.606	50
		1.75	44	24.0	126	.525	84	.350	63	.262	175	.730	50
		2.00	51	20.8	125	.600	83	.400	62	.300	179	.860	50
		2.50	64	17.0	128	.750	85	.500	64	.375	190	1.118	50
WIRE .093x.125		3.00	76	14.4	130	.900	86	.600	65	.450	198	1.375	50
		3.50	89	12.2	128	1.050	85	.700	64	.525	199	1.633	50
		4.00	102	10.8	130	1.200	86	.800	65	.600	204	1.890	50
		12.00	305	4.0	144	3.600	96	2.400	72	1.800	201	5.016	50
3/4 19mm	3/8 9.5mm	1.00	25	108.0	324	.300	216	.200	162	.150	324	.300	50
		1.25	32	86.8	326	.375	217	.250	162	.187	353	.407	50
		1.50	38	65.6	295	.450	197	.300	148	.225	337	.514	50
		1.75	44	60.0	315	.525	210	.350	157	.262	361	.601	50
		2.00	51	49.6	298	.600	198	.400	149	.300	361	.728	50
		2.50	64	37.6	282	.750	188	.500	141	.375	354	.924	50
		3.00	76	31.2	281	.900	187	.600	140	.450	361	1.156	50
		3.50	89	26.4	277	1.050	185	.700	139	.525	361	1.369	50
		4.00	102	23.2	278	1.200	186	.800	139	.600	367	1.583	50
		4.50	115	20.0	270	1.350	180	.900	135	.675	359	1.797	50
WIRE .125x.165		5.00	127	17.6	264	1.500	176	1.000	132	.750	354	2.011	50
		5.50	139	16.0	264	1.650	176	1.100	132	.825	356	2.225	50
		6.00	152	14.4	259	1.800	173	1.200	130	.900	351	2.438	50
		12.00	305	7.2	259	360.00	173	2.400	130	1.800	382	5.300	50

Heavy-Duty - Gold continued

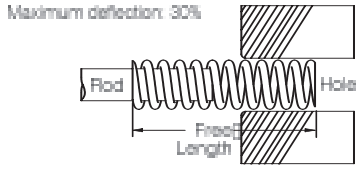


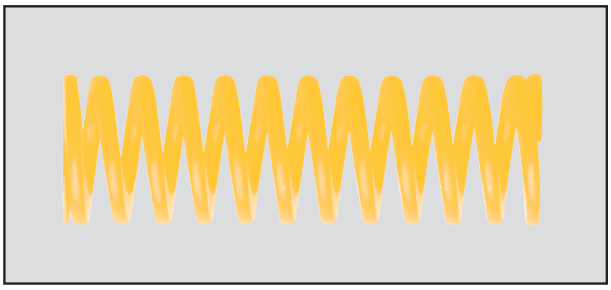
Silicone Chrome Die Springs
Raymond



HOLE DIA.	ROD DIA.	FREE LENGTH		lb at 1/10" DEFL.	MAXIMUM DEFLECTION 30% OF FREE LENGTH		DEFLECTION FOR AVERAGE LIFE 20% OF FREE LENGTH		DEFLECTION FOR LONG LIFE 15% OF FREE LENGTH		TOTAL TRAVEL TO SOLID		NO. PER BOX
		in.	mm		PRESSURE POUNDS	LENGTH OF DEFL.	PRESSURE POUNDS	LENGTH OF DEFL.	PRESSURE POUNDS	LENGTH OF DEFL.	PRESSURE POUNDS	LENGTH OF DEFL.	
1 26mm	1/2 12.5mm	1.00	25	208.0			416	.200	312	.150	614	.295	50
		1.25	32	171.2			428	.250	320	.187	540	.315	50
		1.50	38	118.4	533	.450	355	.300	266	.225	598	.505	50
		1.75	44	104.0	546	.525	364	.350	272	.262	655	.630	50
		2.00	51	84.0	504	.600	336	.400	252	.300	600	.714	50
		2.50	64	68.0	510	.750	340	.500	255	.375	628	.924	50
		3.00	76	54.4	490	.900	326	.600	245	.450	617	1.134	25
		3.50	89	45.6	479	1.050	319	.700	239	.525	612	1.343	25
		4.00	102	40.0	480	1.200	320	.800	240	.600	621	1.553	25
		4.50	115	35.2	475	1.350	317	.900	238	.675	621	1.763	25
		5.00	127	31.2	468	1.500	312	1.000	234	.750	615	1.972	25
WIRE .158x.225		5.50	139	28.8	475	1.650	317	1.100	238	.825	628	2.182	25
		6.00	152	25.6	461	1.800	307	1.200	230	.900	612	2.392	25
		7.00	178	22.4	470	2.100	314	1.400	235	1.050	630	2.811	25
		8.00	203	19.2	461	2.400	307	1.600	230	1.200	620	3.230	25
		12.00	305	12.0	432	3.600	288	2.400	216	1.800	589	4.908	25
1 1/4 32mm	5/8 15.5mm	1.50	38	212.0	954	.450	636	.300	477	.225	954	.450	50
		1.75	44	181.6	953	.525	636	.350	476	.262	1017	.560	50
		2.00	51	149.6	898	.600	598	.400	449	.300	950	.635	50
		2.50	64	117.6	882	.750	588	.500	441	.375	964	.820	25
		3.00	76	95.2	857	.900	571	.600	428	.450	957	1.005	25
		3.50	89	75.2	790	1.050	526	.700	395	.525	895	1.190	25
		4.00	102	66.4	797	1.200	531	.800	398	.600	913	1.375	25
		4.50	115	58.4	788	1.350	526	.900	394	.675	911	1.560	25
		5.00	127	49.6	744	1.500	496	1.000	372	.750	866	1.745	25
		5.50	139	47.2	779	1.650	519	1.100	389	.828	911	1.930	25
		6.00	152	42.4	763	1.800	509	1.200	382	.900	897	2.115	25
WIRE .200x.295		7.00	178	36.8	773	2.100	515	1.400	386	1.050	914	2.485	25
		8.00	203	32.8	787	2.400	525	1.600	394	1.200	936	2.855	25
		10.00	254	25.6	768	3.000	512	2.000	384	1.500	920	3.595	25
		12.00	305	20.8	749	3.600	499	2.400	374	1.800	902	4.335	52
1 1/2 38mm	3/4 19mm	2.00	51	190.4	1142	.600	762	.400	571	.300	1346	.707	25
		2.50	64	148.8	1116	.750	744	.500	558	.375	1446	.972	25
		3.00	76	122.4	1102	.900	734	.600	551	.450	1443	1.179	25
		3.50	89	106.4	1117	1.050	745	.700	559	.525	1535	1.443	25
		4.00	102	91.2	1094	1.200	730	.800	547	.600	1505	1.650	25
		4.50	115	78.4	1058	1.350	706	.900	529	.675	1478	1.885	25
		5.00	127	71.2	1068	1.500	712	1.000	534	.750	1509	2.120	25

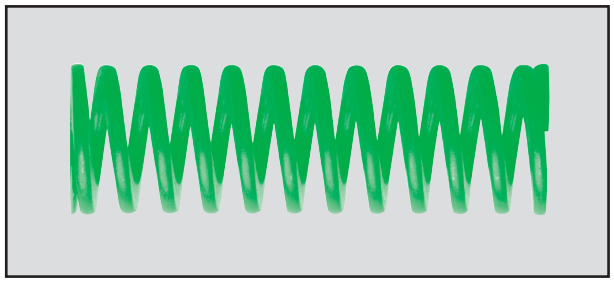
Silicone Chrome Die Springs
Raymond



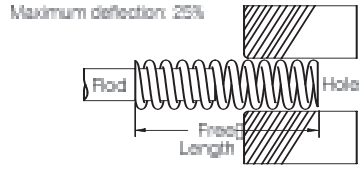


HOLE DIA.	ROD DIA.	FREE LENGTH		lb at 1/10" DEFL.	MAXIMUM DEFLECTION 30% OF FREE LENGTH		DEFLECTION FOR AVERAGE LIFE 20% OF FREE LENGTH		DEFLECTION FOR LONG LIFE 15% OF FREE LENGTH		TOTAL TRAVEL TO SOLID		NO. PER BOX
		in.	mm		PRESSURE POUNDS	LENGTH OF DEFL.	PRESSURE POUNDS	LENGTH OF DEFL.	PRESSURE POUNDS	LENGTH OF DEFL.	PRESSURE POUNDS	LENGTH OF DEFL.	
WIRE .225x.350		5.50	139	64.0	1056	1.650	704	1.100	528	.825	1508	2.357	25
		6.00	152	58.4	1051	1.800	701	1.200	526	.900	1514	2.592	25
		7.00	178	49.6	1042	2.100	694	1.400	521	1.050	1520	3.064	25
		8.00	203	43.2	1037	2.400	691	1.600	518	1.200	1527	3.535	25
		10.00	254	34.4	1032	3.000	688	2.000	516	1.500	1540	4.477	25
		12.00	305	28.8	1037	3.600	691	2.400	518	1.800	1561	5.420	25
2 51mm	1 25mm	2.50	64	220.0	1650	.750	1100	.500	825	.375	1982	.901	25
		3.00	76	185.6	1670	.900	1114	.600	835	.450	2189	1.147	25
		3.50	89	160.0	1680	1.050	1220	.700	840	.525	2227	1.392	25
		4.00	102	133.6	1603	1.200	1069	.800	802	.600	2188	1.638	25
		4.50	115	117.6	1588	1.350	1058	.900	794	.675	2216	1.884	25
		5.00	127	104.0	1560	1.500	1040	1.000	780	.750	2214	2.129	25
WIRE .280x.470		5.50	139	92.8	1531	1.650	1021	1.100	766	.825	2204	2.375	25
		6.00	152	83.2	1498	1.800	998	1.200	749	.900	2181	2.621	25
		7.00	178	73.6	1546	2.100	1030	1.400	773	1.050	2290	3.112	25
		8.00	203	64.0	1536	2.400	1024	1.600	768	1.200	2306	3.603	10
		10.00	254	48.8	1464	3.000	976	2.000	732	1.500	2238	4.586	10
		12.00	305	40.0	1440	3.600	960	2.400	720	1.800	2227	5.568	10

Extra Heavy-Duty - Green

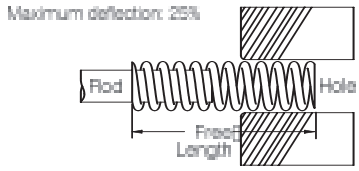


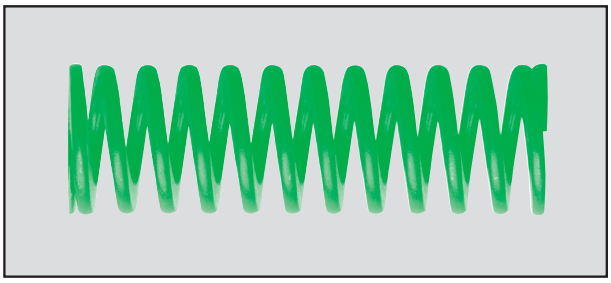
Silicone Chrome Die Springs
Raymond



HOLE DIA.	ROD DIA.	FREE LENGTH		lb at 1/10" DEFL.	MAXIMUM DEFLECTION 25% OF FREE LENGTH		DEFLECTION FOR AVERAGE LIFE 20% OF FREE LENGTH		DEFLECTION FOR LONG LIFE 15% OF FREE LENGTH		TOTAL TRAVEL TO SOLID		NO. PER BOX
		in.	mm		PRESSURE POUNDS	LENGTH OF DEFL.	PRESSURE POUNDS	LENGTH OF DEFL.	PRESSURE POUNDS	LENGTH OF DEFL.	PRESSURE POUNDS	LENGTH OF DEFL.	
3/8 10mm	3/16 4.5mm	1.00	25	22.0	55.0	.250	44	.200	33	.150	56	.275	200
		1.25	32	17.0	53.2	.312	43	.250	32	.187	54	.350	200
		1.50	38	14.5	54.4	.375	43	.300	32	.225	57	.440	100
		1.75	44	11.5	50.4	.437	39	.350	29	.262	55	.480	100
		2.00	51	10.0	50.0	.500	40	.400	30	.300	54	.600	100
WIRE .059x.097		2.50	64	8.0	50.0	.625	40	.500	30	.375	55	.770	100
		3.00	76	6.5	48.8	.750	39	.600	29	.450	55	.920	100
		12.00	305	1.5	45.0	3.00	36	2.400	27	1.800	58	3.850	50
1/2 13mm	9/32 7mm	1.00	25	32.0	80.0	.250	64	.200	48	.150	103	.295	100
		1.25	32	24.0	75.1	.312	60	.250	45	.187	97	.360	100
		1.50	38	20.0	75.0	.375	60	.300	45	.225	103	.470	100
		1.75	44	17.0	74.5	.437	60	.350	45	.262	99	.530	100
		2.00	51	14.0	70.0	.500	56	.400	42	.300	126	.680	100
		2.50	64	11.5	71.9	.625	56	.500	42	.375	102	.800	50
WIRE .084x.097		3.00	76	9.0	67.5	.750	54	.600	41	.450	102	.980	50
		3.50	89	8.0	70.0	.875	56	.700	42	.525	94	1.180	50
		12.00	305	2.5	75.0	3.00	60	2.400	45	1.800	104	4.150	50
5/8 16mm	11/32 8.5mm	1.00	25	63.0	157.5	.250	126	.200	95	.150	208	.280	100
		1.25	32	47.0	147.1	.312	117	.250	88	.187	187	.340	100
		1.50	38	38.0	142.5	.375	114	.300	86	.225	184	.420	50
		1.75	44	32.0	140.2	.437	112	.350	84	.262	181	.490	50
		2.00	51	29.0	145.0	.500	116	.400	87	.300	180	.560	50
		2.50	64	22.0	137.5	.625	110	.500	83	.375	1.95	.780	50
WIRE .110x.126		3.00	76	18.0	135.0	.750	108	.600	81	.450	200	.980	50
		3.50	89	16.0	140.0	.875	112	.700	84	.525	192	1.100	50
		4.00	102	13.5	135.0	1.00	108	.800	81	.600	204	1.360	50
		12.00	305	4.5	135.0	3.00	108	2.400	81	1.800	197	4.100	50
3/4 19mm	3/8 9.5mm	1.00	25	140.0	350.0	.250	280	.200	210	.150	335	.215	50
		1.25	32	110.0	344.3	.312	275	.250	206	.187	340	.300	50
		1.50	38	89	333.8	.375	268	.300	200	.225	420	.460	50
		1.75	44	75.0	328.5	.437	264	.350	198	.262	350	.460	50
		2.00	51	63.5	317.5	.500	254	.400	190	.300	330	.510	50
		2.50	64	50.0	312.5	.625	250	.500	188	.375	355	.710	50
		3.00	76	40.5	303.7	.750	243	.600	182	.450	345	.840	50
		3.50	89	34.5	301.9	.875	242	.700	181	.525	360	1.040	50
		4.00	102	30.0	300.0	1.00	240	.800	180	.600	360	1.200	50
		4.50	115	26.5	298.1	1.125	238	.900	178	.675	385	1.460	50
WIRE .135x.165		5.00	127	23.5	293.7	1.250	235	1.000	177	.750	352	1.500	50
		5.50	139	21.5	295.6	1.375	234	1.100	176	.825	362	1.700	50
		6.00	152	19.5	292.5	1.500	234	1.200	176	.900	380	1.850	50
		12.00	305	9.5	285.0	3.00	228	2.400	171	1.800	375	4.150	50

Silicone Chrome Die Springs
Raymond





HOLE DIA.	ROD DIA.	FREE LENGTH		lb at 1/10" DEFL.	MAXIMUM DEFLECTION 25% OF FREE LENGTH		DEFLECTION FOR AVERAGE LIFE 20% OF FREE LENGTH		DEFLECTION FOR LONG LIFE 15% OF FREE LENGTH		TOTAL TRAVEL TO SOLID		NO. PER BOX
		in.	mm		PRESSURE POUNDS	LENGTH OF DEFL.	PRESSURE POUNDS	LENGTH OF DEFL.	PRESSURE POUNDS	LENGTH OF DEFL.	PRESSURE POUNDS	LENGTH OF DEFL.	
1 26mm	1/2 12.5mm	1.50	38	184.8	693	.375	555	.300	416	.225	632	.342	50
		2.00	51	116.0	580	.500	464	.400	348	.300	567	.489	50
		2.50	64	89.6	560	.625	448	.500	336	.375	571	.637	50
		3.00	76	73.6	552	.750	442	.600	331	.450	615	.835	25
		3.50	89	62.4	546	.875	437	.700	328	.525	613	.982	25
		4.00	102	55.2	552	1.000	442	.800	331	.600	651	1.180	25
		4.50	115	48.8	549	1.125	439	.900	329	.675	672	1.378	25
WIRE .188x.225		5.00	127	43.2	540	1.375	432	1.000	324	.750	659	1.526	25
		6.00	152	36.0	540	1.500	432	1.200	324	.900	674	1.871	25
		12.00	305	17.6	528	3.000	423	2.400	317	1.800	694	3.944	25
1 1/4 32mm	5/8 15.5mm	2.00	51	192.0	960	.500	768	.400	577	.300	1002	.522	50
		2.50	64	144.0	900	.625	720	.500	540	.375	1045	.726	25
		3.00	76	118.4	888	.750	710	.600	533	.450	1102	.931	25
		3.50	89	100.8	882	.875	706	.700	530	.525	1144	1.135	25
		4.00	102	84.0	840	1.000	673	.800	505	.600	1075	1.280	25
		4.50	115	78.4	882	1.125	706	.900	529	.675	1164	1.485	25
		5.00	127	68.0	850	1.375	680	1.000	510	.750	1149	1.689	25
WIRE .225x.295		6.00	152	56.0	840	1.500	672	1.200	504	.900	1142	2.039	25
		8.00	203	41.6	832	2.000	666	1.600	499	1.200	1164	2.797	25
		10.00	254	33.6	840	2.500	672	2.000	504	1.500	1194	3.555	25
		12.00	305	26.4	792	3.000	636	2.400	475	1.800	1076	4.077	25
1 1/2 38mm	3/4 19mm	2.00	51	376.0	1880	.500	1505	.400	1128	.300	1950	.495	25
		2.50	64	294.4	1840	.625	1472	.500	1104	.375	1840	.625	25
		3.00	76	231.2	1734	.750	1387	.600	1040	.450	1896	.820	25
		3.50	89	196.0	1715	.875	1372	.700	1029	.525	1911	.975	25
		4.00	102	171.2	1712	1.000	1370	.800	1027	.600	2001	1.169	25
		4.50	115	148.0	1665	1.125	1332	.900	999	.675	2017	1.363	25
		5.00	127	136.0	1700	1.375	1360	1.000	1020	.750	2118	1.557	25
WIRE .300x.350		6.00	152	110.4	1656	1.500	1325	1.200	994	.900	2147	1.945	25
		8.00	203	80.8	1616	2.00	1293	1.600	970	1.200	2199	2.721	25
		10.00	254	67.2	1680	2.500	1344	2.000	1008	1.500	2350	3.497	25
		12.00	305	54.4	1632	3.000	1304	2.400	980	1.800	2325	4.273	25
2 51mm	1 25mm	2.50	64	381.6	2385	.625	1908	.500	1431	.375	2851	.747	25
		3.00	76	312.0	2340	.750	1872	.600	1404	.450	2702	.866	25
		3.50	89	254.4	2226	.875	1781	.700	1336	.525	2310	.908	25
		4.00	102	220.0	2200	1.000	1760	.800	1320	.600	2691	1.223	25
		4.50	115	188.8	2124	1.125	1700	.900	1274	.675	2622	1.389	25
		5.00	127	172.8	2164	1.250	1728	1.000	1296	.750	2428	1.405	25
		6.00	152	141.6	2124	1.500	1700	1.200	1275	.900	2280	1.610	25
WIRE .365x.460		8.00	203	100.0	2000	2.000	1600	1.600	1200	1.200	2234	2.234	10
		10.00	254	84.0	2100	2.500	1680	2.000	1260	1.500	2448	2.914	10
		12.00	305	71.2	2136	3.000	1710	2.4100	1282	1.800	3184	4.472	10

Compression Springs B

SPEC compression springs provide design engineers, draughtsmen, production and maintenance departments with precision-engineered springs in an economical and time saving way.

The SPEC service saves time and therefore money as design work and calculations are no longer required.

· Music wire exstock

·Stainless available upon request

Part Number	Outside Dia		Wire Dia		Free Length L_0 Approx.		Load P at L_1		Length L_1		Solid Height Approx.		Spring Rate, R	
	mm	in	mm	in	mm	in	N	lb	mm	in	mm	in	N/m	lb/in
C00570060120M	1.45	0.057	0.15	0.006	3.05	0.12	1.023	0.23	1.55	0.061	1.12	0.044	0.665	3.8
C00570060190M	1.45	0.057	0.15	0.006	4.83	0.19	1.023	0.23	2.29	0.09	1.52	0.06	0.385	2.2
C00570060250M	1.45	0.057	0.15	0.006	6.35	0.25	1.023	0.23	2.9	0.114	1.91	0.075	0.28	1.6
C00570060310M	1.45	0.057	0.15	0.006	7.87	0.31	1.023	0.23	3.51	0.138	2.24	0.088	0.228	1.3
C00570060380M	1.45	0.057	0.15	0.006	9.65	0.38	1.023	0.23	4.24	0.167	2.54	0.1	0.193	1.1
C00570060440M	1.45	0.057	0.15	0.006	11.18	0.44	1.023	0.23	4.9	0.193	3	0.118	0.158	0.9
C00570060500M	1.45	0.057	0.15	0.006	12.7	0.5	1.023	0.23	5.54	0.218	3.3	0.13	0.14	0.8
C00570060560M	1.45	0.057	0.15	0.006	14.22	0.56	1.023	0.23	6.58	0.259	3.28	0.129	0.14	0.8
C00570060620M	1.45	0.057	0.15	0.006	15.75	0.62	1.023	0.23	7.26	0.286	3.61	0.142	0.123	0.7
C00570070120M	1.45	0.057	0.18	0.007	3.05	0.12	1.69	0.38	1.7	0.067	1.35	0.053	1.226	7
C00570070190M	1.45	0.057	0.18	0.007	4.83	0.19	1.69	0.38	2.46	0.097	1.88	0.074	0.7	4
C00570070250M	1.45	0.057	0.18	0.007	6.35	0.25	1.69	0.38	3.18	0.125	2.26	0.089	0.543	3.1
C00570070310M	1.45	0.057	0.18	0.007	7.87	0.31	1.69	0.38	3.91	0.154	2.74	0.108	0.42	2.4
C00570070380M	1.45	0.057	0.18	0.007	9.65	0.38	1.69	0.38	4.75	0.187	3.3	0.13	0.333	1.9
C00570070440M	1.45	0.057	0.18	0.007	11.18	0.44	1.69	0.38	5.38	0.212	3.63	0.143	0.298	1.7
C00570070500M	1.45	0.057	0.18	0.007	12.7	0.5	1.69	0.38	6.1	0.24	4.01	0.158	0.263	1.5
C00570070560M	1.45	0.057	0.18	0.007	14.22	0.56	1.69	0.38	6.76	0.266	4.55	0.179	0.228	1.3
C00570070620M	1.45	0.057	0.18	0.007	15.75	0.62	1.69	0.38	8.05	0.317	4.78	0.188	0.21	1.2
C00570080120M	1.45	0.057	0.2	0.008	3.05	0.12	2.67	0.6	1.83	0.072	1.55	0.061	2.19	12.5
C00570080190M	1.45	0.057	0.2	0.008	4.83	0.19	2.67	0.6	2.72	0.107	2.18	0.086	1.261	7.2
C00570080250M	1.45	0.057	0.2	0.008	6.35	0.25	2.67	0.6	3.51	0.138	2.69	0.106	0.928	5.3
C00570080310M	1.45	0.057	0.2	0.008	7.87	0.31	2.67	0.6	4.24	0.167	3.23	0.127	0.735	4.2
C00570080380M	1.45	0.057	0.2	0.008	9.65	0.38	2.67	0.6	5.16	0.203	3.81	0.15	0.595	3.4
C00570080440M	1.45	0.057	0.2	0.008	11.18	0.44	2.67	0.6	5.84	0.23	4.37	0.172	0.508	2.9
C00570080500M	1.45	0.057	0.2	0.008	12.7	0.5	2.67	0.6	6.68	0.263	4.95	0.195	0.438	2.5
C00570080560M	1.45	0.057	0.2	0.008	14.22	0.56	2.67	0.6	7.44	0.293	5.51	0.217	0.385	2.2
C00570080620M	1.45	0.057	0.2	0.008	15.75	0.62	2.67	0.6	8.13	0.32	5.69	0.224	0.35	2
C00880080120M	2.24	0.088	0.2	0.008	3.05	0.12	1.69	0.38	1.5	0.059	1.09	0.043	1.103	6.3
C00880080190M	2.24	0.088	0.2	0.008	4.83	0.19	1.69	0.38	2.16	0.085	1.4	0.055	0.613	3.5
C00880080250M	2.24	0.088	0.2	0.008	6.35	0.25	1.69	0.38	2.74	0.108	1.63	0.064	0.455	2.6
C00880080310M	2.24	0.088	0.2	0.008	7.87	0.31	1.69	0.38	3.28	0.129	1.85	0.073	0.368	2.1
C00880080380M	2.24	0.088	0.2	0.008	9.65	0.38	1.69	0.38	3.81	0.15	2.13	0.084	0.298	1.7
C00880080440M	2.24	0.088	0.2	0.008	11.18	0.44	1.69	0.38	4.47	0.176	2.34	0.092	0.263	1.5
C00880080500M	2.24	0.088	0.2	0.008	12.7	0.5	1.69	0.38	4.95	0.195	2.57	0.101	0.228	1.3
C00880080560M	2.24	0.088	0.2	0.008	14.22	0.56	1.69	0.38	5.61	0.221	2.92	0.115	0.193	1.1
C00880080620M	2.24	0.088	0.2	0.008	15.75	0.62	1.69	0.38	6.1	0.24	3.02	0.119	0.175	1
C00880100120M	2.24	0.088	0.25	0.01	3.05	0.12	2.67	0.6	1.73	0.068	1.52	0.06	2.15	12.3
C00880100190M	2.24	0.088	0.25	0.01	4.83	0.19	2.67	0.6	2.64	0.104	2.06	0.081	1.191	6.8
C00880100250M	2.24	0.088	0.25	0.01	6.35	0.25	2.67	0.6	3.3	0.13	2.49	0.098	0.876	5
C00880100310M	2.24	0.088	0.25	0.01	7.87	0.31	2.67	0.6	4.06	0.16	3	0.118	0.665	3.8
C00880100380M	2.24	0.088	0.25	0.01	9.65	0.38	2.67	0.6	4.78	0.188	3.3	0.13	0.578	3.3
C00880100440M	2.24	0.088	0.25	0.01	11.18	0.44	2.67	0.6	5.46	0.215	3.73	0.147	0.49	2.8
C00880100500M	2.24	0.088	0.25	0.01	12.7	0.5	2.67	0.6	6.22	0.245	4.37	0.172	0.403	2.3
C00880100560M	2.24	0.088	0.25	0.01	14.22	0.56	2.67	0.6	6.88	0.271	4.7	0.185	0.368	2.1
C00880100620M	2.24	0.088	0.25	0.01	15.75	0.62	2.67	0.6	7.52	0.296	5.11	0.201	0.333	1.9
C00880100690M	2.24	0.088	0.25	0.01	17.53	0.69	2.67	0.6	8.69	0.342	5.41	0.213	0.298	1.7
C00880100750M	2.24	0.088	0.25	0.01	19.05	0.75	2.67	0.6	9.4	0.37	5.79	0.228	0.28	1.6
C00880120120M	2.24	0.088	0.3	0.012	3.05	0.12	4.76	1.07	1.96	0.077	1.91	0.075	4.31	24.6
C00880120190M	2.24	0.088	0.3	0.012	4.83	0.19	4.76	1.07	2.97	0.117	2.54	0.1	2.54	14.5
C00880120250M	2.24	0.088	0.3	0.012	6.35	0.25	4.76	1.07	3.76	0.148	3.12	0.123	1.839	10.5
C00880120310M	2.24	0.088	0.3	0.012	7.87	0.31	4.76	1.07	4.6	0.181	3.76	0.148	1.401	8
C00880120380M	2.24	0.088	0.3	0.012	9.65	0.38	4.76	1.07	5.49	0.216	4.37	0.172	1.138	6.5
C00880120440M	2.24	0.088	0.3	0.012	11.18	0.44	4.76	1.07	6.22	0.245	4.85	0.191	0.998	5.7
C00880120500M	2.24	0.088	0.3	0.012	12.7	0.5	4.76	1.07	7.06	0.278	5.46	0.215	0.858	4.9
C00880120560M	2.24	0.088	0.3	0.012	14.22	0.56	4.76	1.07	7.92	0.312	5.97	0.235	0.77	4.4
C00880120620M	2.24	0.088	0.3	0.012	15.75	0.62	4.76	1.07	8.76	0.345	6.73	0.265	0.665	3.8

Part Number	Outside Dia		Wire Dia		Free Length L_0 Approx.		Load P at L_1		Length L_1		Solid Height Approx.		Spring Rate, R	
	mm	in	mm	in	mm	in	N	lb	mm	in	mm	in	N/m	lb/in
C00880120690M	2.24	0.088	0.3	0.012	17.53	0.69	4.76	1.07	9.88	0.389	6.76	0.266	0.613	3.5
C00880120750M	2.24	0.088	0.3	0.012	19.05	0.75	4.76	1.07	10.72	0.422	7.44	0.293	0.56	3.2
C01200100250M	3.05	0.12	0.25	0.01	6.35	0.25	2.14	0.48	2.57	0.101	1.63	0.064	0.56	3.2
C01200100310M	3.05	0.12	0.25	0.01	7.87	0.31	2.14	0.48	3.1	0.122	1.85	0.073	0.438	2.5
C01200100380M	3.05	0.12	0.25	0.01	9.65	0.38	2.14	0.48	3.73	0.147	2.11	0.083	0.35	2
C01200100440M	3.05	0.12	0.25	0.01	11.18	0.44	2.14	0.48	4.27	0.168	2.34	0.092	0.298	1.7
C01200100500M	3.05	0.12	0.25	0.01	12.7	0.5	2.14	0.48	4.8	0.189	2.57	0.101	0.263	1.5
C01200100560M	3.05	0.12	0.25	0.01	14.22	0.56	2.14	0.48	5.33	0.21	2.77	0.109	0.245	1.4
C01200100620M	3.05	0.12	0.25	0.01	15.75	0.62	2.14	0.48	5.87	0.231	3	0.118	0.21	1.2
C01200100690M	3.05	0.12	0.25	0.01	17.53	0.69	2.14	0.48	6.5	0.256	3.28	0.129	0.193	1.1
C01200100750M	3.05	0.12	0.25	0.01	19.05	0.75	2.14	0.48	7.04	0.277	3.48	0.137	0.175	1
C01200100810M	3.05	0.12	0.25	0.01	20.57	0.81	2.14	0.48	7.57	0.298	3.71	0.146	0.158	0.9
C01200100880M	3.05	0.12	0.25	0.01	22.35	0.88	2.14	0.48	8.18	0.322	3.96	0.156	0.158	0.9
C01200100940M	3.05	0.12	0.25	0.01	23.88	0.94	2.14	0.48	8.71	0.343	4.19	0.165	0.14	0.8
C01200101000M	3.05	0.12	0.25	0.01	25.4	1	2.14	0.48	9.27	0.365	4.42	0.174	0.123	0.7
C01200101120M	3.05	0.12	0.25	0.01	28.45	1.12	2.14	0.48	10.34	0.407	4.88	0.192	0.123	0.7
C01200101250M	3.05	0.12	0.25	0.01	31.75	1.25	2.14	0.48	11.48	0.452	5.36	0.211	0.105	0.6
C01200101500M	3.05	0.12	0.25	0.01	38.1	1.5	2.14	0.48	13.72	0.54	6.3	0.248	0.088	0.5
C01200120250M	3.05	0.12	0.3	0.012	6.35	0.25	3.51	0.79	3.15	0.124	2.06	0.081	1.103	6.3
C01200120310M	3.05	0.12	0.3	0.012	7.87	0.31	3.51	0.79	3.81	0.15	2.36	0.093	0.876	5
C01200120380M	3.05	0.12	0.3	0.012	9.65	0.38	3.51	0.79	4.6	0.181	2.72	0.107	0.7	4
C01200120440M	3.05	0.12	0.3	0.012	11.18	0.44	3.51	0.79	5.26	0.207	3.02	0.119	0.595	3.4
C01200120500M	3.05	0.12	0.3	0.012	12.7	0.5	3.51	0.79	5.94	0.234	3.33	0.131	0.525	3
C01200120560M	3.05	0.12	0.3	0.012	14.22	0.56	3.51	0.79	6.6	0.26	3.63	0.143	0.455	2.6
C01200120620M	3.05	0.12	0.3	0.012	15.75	0.62	3.51	0.79	7.26	0.286	3.94	0.155	0.42	2.4
C01200120690M	3.05	0.12	0.3	0.012	17.53	0.69	3.51	0.79	8.05	0.317	4.29	0.169	0.368	2.1
C01200120750M	3.05	0.12	0.3	0.012	19.05	0.75	3.51	0.79	8.74	0.344	4.6	0.181	0.35	2
C01200120810M	3.05	0.12	0.3	0.012	20.57	0.81	3.51	0.79	9.4	0.37	4.9	0.193	0.315	1.8
C01200120880M	3.05	0.12	0.3	0.012	22.35	0.88	3.51	0.79	10.19	0.401	5.26	0.207	0.298	1.7
C01200120940M	3.05	0.12	0.3	0.012	23.88	0.94	3.51	0.79	10.85	0.427	5.56	0.219	0.263	1.5
C01200121000M	3.05	0.12	0.3	0.012	25.4	1	3.51	0.79	11.53	0.454	5.87	0.231	0.263	1.5
C01200121120M	3.05	0.12	0.3	0.012	28.45	1.12	3.51	0.79	12.88	0.507	6.48	0.255	0.228	1.3
C01200121250M	3.05	0.12	0.3	0.012	31.75	1.25	3.51	0.79	14.33	0.564	7.14	0.281	0.21	1.2
C01200121500M	3.05	0.12	0.3	0.012	38.1	1.5	3.51	0.79	17.12	0.674	8.41	0.331	0.175	1
C01200140250M	3.05	0.12	0.36	0.014	6.35	0.25	5.47	1.23	3.51	0.138	2.57	0.101	1.926	11
C01200140310M	3.05	0.12	0.36	0.014	7.87	0.31	5.47	1.23	4.24	0.167	2.97	0.117	1.506	8.6
C01200140380M	3.05	0.12	0.36	0.014	9.65	0.38	5.47	1.23	5.13	0.202	3.45	0.136	1.208	6.9
C01200140440M	3.05	0.12	0.36	0.014	11.18	0.44	5.47	1.23	5.89	0.232	3.86	0.152	1.033	5.9
C01200140500M	3.05	0.12	0.36	0.014	12.7	0.5	5.47	1.23	6.63	0.261	4.27	0.168	0.911	5.2
C01200140560M	3.05	0.12	0.36	0.014	14.22	0.56	5.47	1.23	7.39	0.291	4.67	0.184	0.805	4.6
C01200140620M	3.05	0.12	0.36	0.014	15.75	0.62	5.47	1.23	8.13	0.32	5.08	0.2	0.718	4.1
C01200140690M	3.05	0.12	0.36	0.014	17.53	0.69	5.47	1.23	9.02	0.355	5.56	0.219	0.648	3.7
C01200140750M	3.05	0.12	0.36	0.014	19.05	0.75	5.47	1.23	9.78	0.385	5.97	0.235	0.595	3.4
C01200140810M	3.05	0.12	0.36	0.014	20.57	0.81	5.47	1.23	10.52	0.414	6.38	0.251	0.543	3.1
C01200140880M	3.05	0.12	0.36	0.014	22.35	0.88	5.47	1.23	11.4	0.449	6.83	0.269	0.508	2.9
C01200140940M	3.05	0.12	0.36	0.014	23.88	0.94	5.47	1.23	12.17	0.479	7.24	0.285	0.473	2.7
C01200141000M	3.05	0.12	0.36	0.014	25.4	1	5.47	1.23	12.9	0.508	7.65	0.301	0.438	2.5
C01200141120M	3.05	0.12	0.36	0.014	28.45	1.12	5.47	1.23	14.4	0.567	8.46	0.333	0.385	2.2
C01200141250M	3.05	0.12	0.36	0.014	31.75	1.25	5.47	1.23	16.05	0.632	9.35	0.368	0.35	2
C01200141500M	3.05	0.12	0.36	0.014	38.1	1.5	5.47	1.23	19.18	0.755	11.02	0.434	0.298	1.7
C01200160190M	3.05	0.12	0.41	0.016	4.83	0.19	8.18	1.84	3	0.118	2.57	0.101	4.48	25.6
C01200160250M	3.05	0.12	0.41	0.016	6.35	0.25	8.18	1.84	3.68	0.145	3.02	0.119	3.06	17.5
C01200160310M	3.05	0.12	0.41	0.016	7.87	0.31	8.18	1.84	4.55	0.179	3.53	0.139	2.45	14
C01200160380M	3.05	0.12	0.41	0.016	9.65	0.38	8.18	1.84	5.51	0.217	4.14	0.163	1.979	11.3
C01200160440M	3.05	0.12	0.41	0.016	11.18	0.44	8.18	1.84	6.25	0.246	4.75	0.187	1.663	9.5
C01200160500M	3.05	0.12	0.41	0.016	12.7	0.5	8.18	1.84	7.11	0.28	5.28	0.208	1.453	8.3
C01200160560M	3.05	0.12	0.41	0.016	14.22	0.56	8.18	1.84	7.82	0.308	5.87	0.231	1.278	7.3
C01200160620M	3.05	0.12	0.41	0.016	15.75	0.62	8.18	1.84	8.69	0.342	6.38	0.251	1.156	6.6
C01200160690M	3.05	0.12	0.41	0.016	17.53	0.69	8.18	1.84	9.53	0.375	7.14	0.281	1.016	5.8
C01200160750M	3.05	0.12	0.41	0.016	19.05	0.75	8.18	1.84	10.26	0.404	7.7	0.303	0.928	5.3
C01200161000M	3.05	0.12	0.41	0.016	25.4	1	8.18	1.84	14.22	0.56	9.6	0.378	0.718	4.1
C01200161120M	3.05	0.12	0.41	0.016	28.45	1.12	8.18	1.84	15.88	0.625	10.64	0.419	0.63	3.6
C01200161250M	3.05	0.12	0.41	0.016	31.75	1.25	8.18	1.84	17.68	0.696	11.76	0.463	0.56	3.2
C01200161500M	3.05	0.12	0.41	0.016	38.1	1.5	8.18	1.84	21.13	0.832	13.82	0.544	0.49	2.8
C01200180190M	3.05	0.12	0.46	0.018	4.38	0.19	11.39	2.56	3.25	0.128	2.97	0.117	7.23	41.3
C01200180250M	3.05	0.12	0.46	0.018	6.35	0.25	11.39	2.56	4.04	0.159	3.53	0.139	4.94	28.2

Compression Springs B

Part Number	Outside Dia		Wire Dia		Free Length L, Approx.		Load P at L_1		Length L_1		Solid Height Approx.		Spring Rate, R	
	mm	in	mm	in	mm	in	N	lb	mm	in	mm	in	N/m	lb/in
C01200180310M	3.05	0.12	0.46	0.018	7.87	0.31	11.39	2.56	4.9	0.193	4.22	0.166	3.84	21.9
C01200180380M	3.05	0.12	0.46	0.018	9.65	0.38	11.39	2.56	6.02	0.237	4.93	0.194	3.13	17.9
C01200180440M	3.05	0.12	0.46	0.018	11.18	0.44	11.39	2.56	6.88	0.271	5.59	0.22	2.66	15.2
C01200180500M	3.05	0.12	0.46	0.018	12.7	0.5	11.39	2.56	7.75	0.305	6.3	0.248	2.29	13.1
C01200180560M	3.05	0.12	0.46	0.018	14.22	0.56	11.39	2.56	8.53	0.336	7.09	0.279	1.996	11.4
C01200180620M	3.05	0.12	0.46	0.018	15.75	0.62	11.39	2.56	9.6	0.378	7.54	0.297	1.856	10.6
C01200180690M	3.05	0.12	0.46	0.018	17.53	0.69	11.39	2.56	10.52	0.414	8.43	0.332	1.628	9.3
C01200180750M	3.05	0.12	0.46	0.018	19.05	0.75	11.39	2.56	11.38	0.448	9.12	0.359	1.488	8.5
C01200181000M	3.05	0.12	0.46	0.018	25.4	1	11.39	2.56	15.52	0.611	11.56	0.455	1.121	6.4
C01200181120M	3.05	0.12	0.46	0.018	28.45	1.12	11.39	2.56	17.35	0.683	12.83	0.505	0.998	5.7
C01200181250M	3.05	0.12	0.46	0.018	31.75	1.25	11.39	2.56	19.33	0.761	14.2	0.559	0.893	5.1
C01200181500M	3.05	0.12	0.46	0.018	38.1	1.5	11.39	2.56	23.11	0.91	16.84	0.663	0.735	4.2
C01200200250M	3.05	0.12	0.51	0.02	6.35	0.25	14.72	3.31	4.47	0.176	4.14	0.163	7.84	44.8
C01200200310M	3.05	0.12	0.51	0.02	7.87	0.31	14.72	3.31	5.46	0.215	4.88	0.192	6.09	34.8
C01200200380M	3.05	0.12	0.51	0.02	9.65	0.38	14.72	3.31	6.6	0.26	5.74	0.226	4.85	27.7
C01200200440M	3.05	0.12	0.51	0.02	11.18	0.44	14.72	3.31	7.59	0.299	6.5	0.256	4.12	23.5
C01200200500M	3.05	0.12	0.51	0.02	12.7	0.5	14.72	3.31	8.59	0.338	7.24	0.285	3.57	20.4
C01200200560M	3.05	0.12	0.51	0.02	14.22	0.56	14.72	3.31	9.58	0.377	7.98	0.314	3.17	18.1
C01200200620M	3.05	0.12	0.51	0.02	15.75	0.62	14.72	3.31	10.57	0.416	8.74	0.344	2.84	16.2
C01200200690M	3.05	0.12	0.51	0.02	17.53	0.69	14.72	3.31	11.71	0.461	9.6	0.378	2.54	14.5
C01200200750M	3.05	0.12	0.51	0.02	19.05	0.75	14.72	3.31	12.7	0.5	10.34	0.407	2.31	13.2
C01200200810M	3.05	0.12	0.51	0.02	20.57	0.81	14.72	3.31	13.69	0.539	11.1	0.437	2.14	12.2
C01200200880M	3.05	0.12	0.51	0.02	22.35	0.88	14.72	3.31	14.83	0.584	11.96	0.471	1.961	11.2
C01200200940M	3.05	0.12	0.51	0.02	23.88	0.94	14.72	3.31	15.82	0.623	12.7	0.5	1.821	10.4
C01200201000M	3.05	0.12	0.51	0.02	25.4	1	14.72	3.31	16.81	0.662	13.46	0.53	1.716	9.8
C01200201120M	3.05	0.12	0.51	0.02	28.45	1.12	14.72	3.31	18.77	0.739	14.94	0.588	1.523	8.7
C01200201250M	3.05	0.12	0.51	0.02	31.75	1.25	14.72	3.31	20.93	0.824	16.56	0.652	1.366	7.8
C01200201500M	3.05	0.12	0.51	0.02	38.1	1.5	14.72	3.31	25.02	0.985	19.66	0.774	1.121	6.4
C01200220250M	3.05	0.12	0.56	0.022	6.35	0.25	19.93	4.48	4.75	0.187	4.34	0.171	12.36	70.6
C01200220310M	3.05	0.12	0.56	0.022	7.87	0.31	19.93	4.48	5.74	0.226	5.31	0.209	9.33	53.3
C01200220380M	3.05	0.12	0.56	0.022	9.65	0.38	19.93	4.48	6.91	0.272	6.4	0.252	7.27	41.5
C01200220440M	3.05	0.12	0.56	0.022	11.18	0.44	19.93	4.48	8.05	0.317	7.11	0.28	6.37	36.4
C01200220500M	3.05	0.12	0.56	0.022	12.7	0.5	19.93	4.48	9.04	0.356	8.1	0.319	5.45	31.1
C01200220560M	3.05	0.12	0.56	0.022	14.22	0.56	19.93	4.48	10.19	0.401	8.79	0.346	4.94	28.2
C01200220620M	3.05	0.12	0.56	0.022	15.75	0.62	19.93	4.48	11.18	0.44	9.75	0.384	4.36	24.9
C01200220690M	3.05	0.12	0.56	0.022	17.53	0.69	19.93	4.48	12.34	0.486	11.23	0.442	3.71	21.2
C01200220750M	3.05	0.12	0.56	0.022	19.05	0.75	19.93	4.48	13.41	0.528	11.71	0.461	3.54	20.2
C01200220810M	3.05	0.12	0.56	0.022	20.57	0.81	19.93	4.48	14.48	0.57	12.55	0.494	3.27	18.7
C01200220940M	3.05	0.12	0.56	0.022	23.88	0.94	19.93	4.48	16.94	0.667	14.38	0.566	2.75	15.7
C01200221000M	3.05	0.12	0.56	0.022	25.4	1	19.93	4.48	18.01	0.709	15.24	0.6	2.57	14.7
C01200221120M	3.05	0.12	0.56	0.022	28.45	1.12	19.93	4.48	20.12	0.792	16.94	0.667	2.4	13.7
C01200221250M	3.05	0.12	0.56	0.022	31.75	1.25	19.93	4.48	22.4	0.882	18.77	0.739	2.05	11.7
C01200221500M	3.05	0.12	0.56	0.022	38.1	1.5	19.93	4.48	26.82	1.056	22.33	0.879	1.698	9.7
C01200240310M	3.05	0.12	0.61	0.024	7.87	0.31	25.04	5.63	6.15	0.242	5.82	0.229	14.41	82.3
C01200240380M	3.05	0.12	0.61	0.024	9.65	0.38	25.04	5.63	7.44	0.293	6.88	0.271	11.36	64.9
C01200240440M	3.05	0.12	0.61	0.024	11.18	0.44	25.04	5.63	8.59	0.338	7.8	0.307	9.63	55
C01200240500M	3.05	0.12	0.61	0.024	12.7	0.5	25.04	5.63	9.7	0.382	8.71	0.343	8.35	47.7
C01200240560M	3.05	0.12	0.61	0.024	14.22	0.56	25.04	5.63	10.82	0.426	9.63	0.379	7.37	42.1
C01200240620M	3.05	0.12	0.61	0.024	15.75	0.62	25.04	5.63	11.96	0.471	10.54	0.415	6.6	37.7
C01200240690M	3.05	0.12	0.61	0.024	17.53	0.69	25.04	5.63	13.26	0.522	11.61	0.457	5.88	33.6
C01200240750M	3.05	0.12	0.61	0.024	19.05	0.75	25.04	5.63	14.4	0.567	12.52	0.493	5.38	30.7
C01200240810M	3.05	0.12	0.61	0.024	20.57	0.81	25.04	5.63	15.52	0.611	13.44	0.529	4.96	28.3
C01200240880M	3.05	0.12	0.61	0.024	22.35	0.88	25.04	5.63	16.84	0.663	14.5	0.571	4.54	25.9
C01200240940M	3.05	0.12	0.61	0.024	23.88	0.94	25.04	5.63	17.96	0.707	15.42	0.607	4.24	24.2
C01200241000M	3.05	0.12	0.61	0.024	25.4	1	25.04	5.63	19.08	0.751	16.33	0.643	3.96	22.6
C01200241120M	3.05	0.12	0.61	0.024	28.45	1.12	25.04	5.63	21.34	0.84	18.16	0.715	3.52	20.1
C01200241250M	3.05	0.12	0.61	0.024	31.75	1.25	25.04	5.63	23.77	0.936	20.14	0.793	3.13	17.9
C01200241500M	3.05	0.12	0.61	0.024	38.1	1.5	25.04	5.63	28.47	1.121	23.95	0.943	2.61	14.9
C01480210250M	3.76	0.148	0.53	0.021	6.35	0.25	14.01	3.15	4.11	0.162	3.63	0.143	6.25	35.7
C01480210310M	3.76	0.148	0.53	0.021	7.87	0.31	14.01	3.15	4.98	0.196	4.22	0.166	4.85	27.7
C01480210380M	3.76	0.148	0.53	0.021	9.65	0.38	14.01	3.15	6.02	0.237	4.9	0.193	3.85	22
C01480210440M	3.76	0.148	0.53	0.021	11.18	0.44	14.01	3.15	6.88	0.271	5.51	0.217	3.27	18.7
C01480210500M	3.76	0.148	0.53	0.021	12.7	0.5	14.01	3.15	7.77	0.306	6.1	0.24	2.84	16.2
C01480210560M	3.76	0.148	0.53	0.021	14.22	0.56	14.01	3.15	8.66	0.341	6.68	0.263	2.5	14.3
C01480210620M	3.76	0.148	0.53	0.021	15.75	0.62	14.01	3.15	9.53	0.375	7.26	0.286	2.24	12.8
C01480210690M	3.76	0.148	0.53	0.021	17.53	0.69	14.01	3.15	10.54	0.415	7.95	0.313	2.01	11.5

Compression Springs B

Part Number	Outside Dia		Wire Dia		Free Length L_0 Approx.		Load P at L_1		Length L_1		Solid Height Approx.		Spring Rate, R	
	mm	in	mm	in	mm	in	N	lb	mm	in	mm	in	N/m	lb/in
C01480210750M	3.76	0.148	0.53	0.021	19.05	0.75	14.01	3.15	11.43	0.45	8.53	0.336	1.839	10.5
C01480210810M	3.76	0.148	0.53	0.021	20.57	0.81	14.01	3.15	12.32	0.485	9.12	0.359	1.698	9.7
C01480210880M	3.76	0.148	0.53	0.021	22.35	0.88	14.01	3.15	13.33	0.525	9.8	0.386	1.558	8.9
C01480210940M	3.76	0.148	0.53	0.021	23.88	0.94	14.01	3.15	14.22	0.56	10.41	0.41	1.453	8.3
C01480211000M	3.76	0.148	0.53	0.021	25.4	1	14.01	3.15	15.09	0.594	11	0.433	1.366	7.8
C01480211250M	3.76	0.148	0.53	0.021	31.75	1.25	14.01	3.15	18.75	0.738	13.44	0.529	1.068	6.1
C01480211500M	3.76	0.148	0.53	0.021	38.1	1.5	14.01	3.15	22.4	0.882	15.9	0.626	0.893	5.1
C01480230250M	3.76	0.148	0.58	0.023	6.35	0.25	17.97	4.04	4.37	0.172	4.06	0.16	9.11	52
C01480230310M	3.76	0.148	0.58	0.023	7.87	0.31	17.97	4.04	5.31	0.209	4.75	0.187	7.02	40.1
C01480230380M	3.76	0.148	0.58	0.023	9.65	0.38	17.97	4.04	6.43	0.253	5.54	0.218	5.55	31.7
C01480230440M	3.76	0.148	0.58	0.023	11.18	0.44	17.97	4.04	7.37	0.29	6.22	0.245	4.71	26.9
C01480230500M	3.76	0.148	0.58	0.023	12.7	0.5	17.97	4.04	8.31	0.327	6.91	0.272	4.08	23.3
C01480230560M	3.76	0.148	0.58	0.023	14.22	0.56	17.97	4.04	9.25	0.364	7.59	0.299	3.61	20.6
C01480230620M	3.76	0.148	0.58	0.023	15.75	0.62	17.97	4.04	10.19	0.401	8.28	0.326	3.24	18.5
C01480230690M	3.76	0.148	0.58	0.023	17.53	0.69	17.97	4.04	11.28	0.444	9.07	0.357	2.89	16.5
C01480230750M	3.76	0.148	0.58	0.023	19.05	0.75	17.97	4.04	12.22	0.481	9.75	0.384	2.64	15.1
C01480230810M	3.76	0.148	0.58	0.023	20.57	0.81	17.97	4.04	13.16	0.518	10.41	0.41	2.43	13.9
C01480230880M	3.76	0.148	0.58	0.023	22.35	0.88	17.97	4.04	14.27	0.562	11.23	0.442	2.22	12.7
C01480230940M	3.76	0.148	0.58	0.023	23.88	0.94	17.97	4.04	15.21	0.599	11.91	0.469	2.08	11.9
C01480231000M	3.76	0.148	0.58	0.023	25.4	1	17.97	4.04	16.15	0.636	12.57	0.495	1.944	11.1
C01480231250M	3.76	0.148	0.58	0.023	31.75	1.25	17.97	4.04	20.09	0.791	15.42	0.607	1.541	8.8
C01480231500M	3.76	0.148	0.58	0.023	38.1	1.5	17.97	4.04	24	0.945	18.26	0.719	1.278	7.3
C01800120250M	4.57	0.18	0.3	0.012	6.35	0.25	2.4	0.54	2.57	0.101	1.45	0.057	0.63	3.6
C01800120310M	4.57	0.18	0.3	0.012	7.87	0.31	2.4	0.54	3.07	0.121	1.57	0.062	0.508	2.9
C01800120380M	4.57	0.18	0.3	0.012	9.65	0.38	2.4	0.54	3.68	0.145	1.75	0.069	0.403	2.3
C01800120440M	4.57	0.18	0.3	0.012	11.18	0.44	2.4	0.54	4.22	0.166	1.88	0.074	0.35	2
C01800120500M	4.57	0.18	0.3	0.012	12.7	0.5	2.4	0.54	4.72	0.186	2.03	0.08	0.298	1.7
C01800120560M	4.57	0.18	0.3	0.012	14.22	0.56	2.4	0.54	5.26	0.207	2.16	0.085	0.263	1.5
C01800120620M	4.57	0.18	0.3	0.012	15.75	0.62	2.4	0.54	5.77	0.227	2.31	0.091	0.245	1.4
C01800120690M	4.57	0.18	0.3	0.012	17.53	0.69	2.4	0.54	6.38	0.251	2.46	0.097	0.21	1.2
C01800120750M	4.57	0.18	0.3	0.012	19.05	0.75	2.4	0.54	6.88	0.271	2.62	0.103	0.193	1.1
C01800120810M	4.57	0.18	0.3	0.012	20.57	0.81	2.4	0.54	7.42	0.292	2.77	0.109	0.175	1
C01800120880M	4.57	0.18	0.3	0.012	22.35	0.88	2.4	0.54	8.03	0.316	2.92	0.115	0.175	1
C01800120940M	4.57	0.18	0.3	0.012	23.88	0.94	2.4	0.54	8.53	0.336	3.07	0.121	0.158	0.9
C01800121000M	4.57	0.18	0.3	0.012	25.4	1	2.4	0.54	9.04	0.356	3.2	0.126	0.14	0.8
C01800121250M	4.57	0.18	0.3	0.012	31.75	1.25	2.4	0.54	11.23	0.442	3.78	0.149	0.123	0.7
C01800121500M	4.57	0.18	0.3	0.012	38.1	1.5	2.4	0.54	13.39	0.527	4.37	0.172	0.105	0.6
C01800140250M	4.57	0.18	0.36	0.014	6.35	0.25	3.74	0.84	2.95	0.116	1.75	0.069	1.086	6.2
C01800140310M	4.57	0.18	0.36	0.014	7.87	0.31	3.74	0.84	3.53	0.139	1.93	0.076	0.858	4.9
C01800140380M	4.57	0.18	0.36	0.014	9.65	0.38	3.74	0.84	4.24	0.167	2.16	0.085	0.683	3.9
C01800140440M	4.57	0.18	0.36	0.014	11.18	0.44	3.74	0.84	4.83	0.19	2.34	0.092	0.595	3.4
C01800140500M	4.57	0.18	0.36	0.014	12.7	0.5	3.74	0.84	5.44	0.214	2.54	0.1	0.508	2.9
C01800140560M	4.57	0.18	0.36	0.014	14.22	0.56	3.74	0.84	6.05	0.238	2.72	0.107	0.455	2.6
C01800140620M	4.57	0.18	0.36	0.014	15.75	0.62	3.74	0.84	6.63	0.261	2.9	0.114	0.403	2.3
C01800140690M	4.57	0.18	0.36	0.014	17.53	0.69	3.74	0.84	7.34	0.289	3.12	0.123	0.368	2.1
C01800140750M	4.57	0.18	0.36	0.014	19.05	0.75	3.74	0.84	7.95	0.313	3.3	0.13	0.333	1.9
C01800140880M	4.57	0.18	0.36	0.014	22.35	0.88	3.74	0.84	9.25	0.364	3.71	0.146	0.28	1.6
C01800141000M	4.57	0.18	0.36	0.014	25.4	1	3.74	0.84	10.44	0.411	4.09	0.161	0.245	1.4
C01800141250M	4.57	0.18	0.36	0.014	31.75	1.25	3.74	0.84	12.95	0.51	4.85	0.191	0.193	1.1
C01800141380M	4.57	0.18	0.36	0.014	35.05	1.38	3.74	0.84	14.25	0.561	5.26	0.207	0.175	1
C01800141500M	4.57	0.18	0.36	0.014	38.1	1.5	3.74	0.84	15.44	0.608	5.64	0.222	0.158	0.9
C01800160250M	4.57	0.18	0.41	0.016	6.35	0.25	5.56	1.25	2.77	0.109	2.03	0.08	1.558	8.9
C01800160310M	4.57	0.18	0.41	0.016	7.87	0.31	5.56	1.25	3.63	0.143	2.21	0.087	1.313	7.5
C01800160380M	4.57	0.18	0.41	0.016	9.65	0.38	5.56	1.25	4.29	0.169	2.54	0.1	1.033	5.9
C01800160440M	4.57	0.18	0.41	0.016	11.18	0.44	5.56	1.25	4.75	0.187	2.84	0.112	0.858	4.9
C01800160500M	4.57	0.18	0.41	0.016	12.7	0.5	5.56	1.25	5.21	0.205	3.15	0.124	0.735	4.2
C01800160560M	4.57	0.18	0.41	0.016	14.22	0.56	5.56	1.25	5.66	0.223	3.45	0.136	0.648	3.7
C01800160620M	4.57	0.18	0.41	0.016	15.75	0.62	5.56	1.25	6.45	0.254	3.66	0.144	0.595	3.4
C01800160690M	4.57	0.18	0.41	0.016	17.53	0.69	5.56	1.25	7.19	0.283	3.94	0.155	0.543	3.1
C01800160750M	4.57	0.18	0.41	0.016	19.05	0.75	5.56	1.25	7.62	0.3	4.24	0.167	0.49	2.8
C01800160880M	4.57	0.18	0.41	0.016	22.35	0.88	5.56	1.25	9.88	0.389	4.7	0.185	0.438	2.5
C01800161000M	4.57	0.18	0.41	0.016	25.4	1	5.56	1.25	11.18	0.44	5.18	0.204	0.385	2.2
C01800161250M	4.57	0.18	0.41	0.016	31.75	1.25	5.56	1.25	13.84	0.545	6.22	0.245	0.298	1.7
C01800161380M	4.57	0.18	0.41	0.016	35.05	1.38	5.56	1.25	15.24	0.6	6.76	0.266	0.28	1.6
C01800161500M	4.57	0.18	0.41	0.016	38.1	1.5	5.56	1.25	16.54	0.651	7.24	0.285	0.245	1.4
C01800161750M	4.57	0.18	0.41	0.016	44.45	1.75	5.56	1.25	19.2	0.756	8.28	0.326	0.21	1.2

Compression Springs B

Part Number	Outside Dia		Wire Dia		Free Length L, Approx.		Load P at L_1		Length L_1		Solid Height Approx.		Spring Rate, R	
	mm	in	mm	in	mm	in	N	lb	mm	in	mm	in	N/m	lb/in
C01800180250M	4.57	0.18	0.46	0.018	6.35	0.25	7.83	1.76	3.05	0.12	2.39	0.094	2.36	13.5
C01800180310M	4.57	0.18	0.46	0.018	7.87	0.31	7.83	1.76	3.96	0.156	2.62	0.103	1.996	11.4
C01800180380M	4.57	0.18	0.46	0.018	9.65	0.38	7.83	1.76	4.83	0.19	2.95	0.116	1.628	9.3
C01800180440M	4.57	0.18	0.46	0.018	11.18	0.44	7.83	1.76	5.46	0.215	3.3	0.13	1.366	7.8
C01800180500M	4.57	0.18	0.46	0.018	12.7	0.5	7.83	1.76	6.07	0.239	3.66	0.144	1.173	6.7
C01800180560M	4.57	0.18	0.46	0.018	14.22	0.56	7.83	1.76	6.4	0.252	4.11	0.162	0.998	5.7
C01800180620M	4.57	0.18	0.46	0.018	15.75	0.62	7.83	1.76	7.01	0.276	4.45	0.175	0.893	5.1
C01800180690M	4.57	0.18	0.46	0.018	17.53	0.69	7.83	1.76	7.87	0.31	4.8	0.189	0.805	4.6
C01800180750M	4.57	0.18	0.46	0.018	19.05	0.75	7.83	1.76	8.2	0.323	5.26	0.207	0.718	4.1
C01800180880M	4.57	0.18	0.46	0.018	22.35	0.88	7.83	1.76	10.59	0.417	5.77	0.227	0.648	3.7
C01800181000M	4.57	0.18	0.46	0.018	25.4	1	7.83	1.76	11.96	0.471	6.4	0.252	0.56	3.2
C01800181250M	4.57	0.18	0.46	0.018	31.75	1.25	7.83	1.76	14.83	0.584	7.7	0.303	0.455	2.6
C01800181380M	4.57	0.18	0.46	0.018	35.05	1.38	7.83	1.76	16.33	0.643	8.38	0.33	0.403	2.3
C01800181500M	4.57	0.18	0.46	0.018	38.1	1.5	7.83	1.76	17.7	0.697	9.02	0.355	0.368	2.1
C01800181750M	4.57	0.18	0.46	0.018	44.45	1.75	7.83	1.76	20.57	0.81	10.31	0.406	0.315	1.8
C01800200250M	4.57	0.18	0.51	0.02	6.35	0.25	10.19	2.29	3.61	0.142	2.87	0.113	3.71	21.2
C01800200310M	4.57	0.18	0.51	0.02	7.87	0.31	10.19	2.29	4.34	0.171	3.25	0.128	2.89	16.5
C01800200380M	4.57	0.18	0.51	0.02	9.65	0.38	10.19	2.29	5.21	0.205	3.71	0.146	2.29	13.1
C01800200440M	4.57	0.18	0.51	0.02	11.18	0.44	10.19	2.29	5.94	0.234	4.09	0.161	1.944	11.1
C01800200500M	4.57	0.18	0.51	0.02	12.7	0.5	10.19	2.29	6.68	0.263	4.47	0.176	1.698	9.7
C01800200560M	4.57	0.18	0.51	0.02	14.22	0.56	10.19	2.29	7.42	0.292	4.85	0.191	1.506	8.6
C01800200620M	4.57	0.18	0.51	0.02	15.75	0.62	10.19	2.29	8.15	0.321	5.26	0.207	1.348	7.7
C01800200690M	4.57	0.18	0.51	0.02	17.53	0.69	10.19	2.29	9.02	0.355	5.69	0.224	1.191	6.8
C01800200750M	4.57	0.18	0.51	0.02	19.05	0.75	10.19	2.29	9.75	0.384	6.07	0.239	1.103	6.3
C01800200880M	4.57	0.18	0.51	0.02	22.35	0.88	10.19	2.29	11.35	0.447	6.91	0.272	0.928	5.3
C01800201000M	4.57	0.18	0.51	0.02	25.4	1	10.19	2.29	12.83	0.505	7.67	0.302	0.805	4.6
C01800201250M	4.57	0.18	0.51	0.02	31.75	1.25	10.19	2.29	15.9	0.626	9.3	0.366	0.648	3.7
C01800201380M	4.57	0.18	0.51	0.02	35.05	1.38	10.19	2.29	17.5	0.689	10.11	0.398	0.578	3.3
C01800201500M	4.57	0.18	0.51	0.02	38.1	1.5	10.19	2.29	18.97	0.747	10.9	0.429	0.525	3
C01800201750M	4.57	0.18	0.51	0.02	44.45	1.75	10.19	2.29	22.05	0.868	12.5	0.492	0.455	2.6
C01800220250M	4.57	0.18	0.56	0.022	6.35	0.25	13.92	3.13	3.66	0.144	3.07	0.121	5.18	29.6
C01800220310M	4.57	0.18	0.56	0.022	7.87	0.31	13.92	3.13	4.52	0.178	3.48	0.137	4.15	23.7
C01800220380M	4.57	0.18	0.56	0.022	9.65	0.38	13.92	3.13	5.64	0.222	3.91	0.154	3.47	19.8
C01800220440M	4.57	0.18	0.56	0.022	11.18	0.44	13.92	3.13	6.48	0.255	4.32	0.17	2.96	16.9
C01800220500M	4.57	0.18	0.56	0.022	12.7	0.5	13.92	3.13	7.11	0.28	4.88	0.192	2.49	14.2
C01800220560M	4.57	0.18	0.56	0.022	14.22	0.56	13.92	3.13	7.52	0.296	5.56	0.219	2.08	11.9
C01800220620M	4.57	0.18	0.56	0.022	15.75	0.62	13.92	3.13	8.28	0.326	6.12	0.241	1.839	10.5
C01800220690M	4.57	0.18	0.56	0.022	17.53	0.69	13.92	3.13	9.27	0.365	6.58	0.259	1.681	9.6
C01800220750M	4.57	0.18	0.56	0.022	19.05	0.75	13.92	3.13	9.88	0.389	7.11	0.28	1.523	8.7
C01800220810M	4.57	0.18	0.56	0.022	20.57	0.81	13.92	3.13	10.29	0.405	7.85	0.309	1.348	7.7
C01800220940M	4.57	0.18	0.56	0.022	23.88	0.94	13.92	3.13	12.93	0.509	8.56	0.337	1.208	6.9
C01800221000M	4.57	0.18	0.56	0.022	25.4	1	13.92	3.13	13.72	0.54	9.02	0.355	1.138	6.5
C01800221120M	4.57	0.18	0.56	0.022	28.45	1.12	13.92	3.13	15.29	0.602	9.93	0.391	1.016	5.8
C01800221250M	4.57	0.18	0.56	0.022	31.75	1.25	13.92	3.13	16.99	0.669	10.92	0.43	0.911	5.2
C01800221500M	4.57	0.18	0.56	0.022	38.1	1.5	13.92	3.13	20.29	0.799	12.85	0.506	0.753	4.3
C01800221750M	4.57	0.18	0.56	0.022	44.45	1.75	13.92	3.13	23.6	0.929	13.97	0.55	0.665	3.8
C01800240250M	4.57	0.18	0.61	0.024	6.35	0.25	16.95	3.81	4.06	0.16	3.63	0.143	7.41	42.3
C01800240310M	4.57	0.18	0.61	0.024	7.87	0.31	16.95	3.81	4.9	0.193	4.17	0.164	5.71	32.6
C01800240380M	4.57	0.18	0.61	0.024	9.65	0.38	16.95	3.81	5.89	0.232	4.8	0.189	4.5	25.7
C01800240440M	4.57	0.18	0.61	0.024	11.18	0.44	16.95	3.81	6.73	0.265	5.33	0.21	3.82	21.8
C01800240500M	4.57	0.18	0.61	0.024	12.7	0.5	16.95	3.81	7.57	0.298	5.89	0.232	3.31	18.9
C01800240560M	4.57	0.18	0.61	0.024	14.22	0.56	16.95	3.81	8.41	0.331	6.43	0.253	2.92	16.7
C01800240620M	4.57	0.18	0.61	0.024	15.75	0.62	16.95	3.81	9.27	0.365	6.96	0.274	2.61	14.9
C01800240750M	4.57	0.18	0.61	0.024	19.05	0.75	16.95	3.81	11.1	0.437	8.13	0.32	2.14	12.2
C01800240880M	4.57	0.18	0.61	0.024	22.35	0.88	16.95	3.81	12.93	0.509	9.3	0.366	1.804	10.3
C01800241000M	4.57	0.18	0.61	0.024	25.4	1	16.95	3.81	14.61	0.575	10.36	0.408	1.576	9
C01800241120M	4.57	0.18	0.61	0.024	28.45	1.12	16.95	3.81	16.28	0.641	11.43	0.45	1.401	8
C01800241250M	4.57	0.18	0.61	0.024	31.75	1.25	16.95	3.81	18.11	0.713	12.6	0.496	1.243	7.1
C01800241500M	4.57	0.18	0.61	0.024	38.1	1.5	16.95	3.81	21.64	0.852	14.86	0.585	1.033	5.9
C01800241750M	4.57	0.18	0.61	0.024	44.45	1.75	16.95	3.81	25.15	0.99	17.09	0.673	0.876	5
C01800242000M	4.57	0.18	0.61	0.024	50.8	2	16.95	3.81	28.68	1.129	19.33	0.761	0.77	4.4
C01800260250M	4.57	0.18	0.66	0.026	6.35	0.25	22.38	5.03	4.14	0.163	3.78	0.149	10.12	57.8
C01800260310M	4.57	0.18	0.66	0.026	7.87	0.31	22.38	5.03	5.16	0.203	4.27	0.168	8.23	47
C01800260380M	4.57	0.18	0.66	0.026	9.65	0.38	22.38	5.03	6.25	0.246	4.95	0.195	6.57	37.5
C01800260440M	4.57	0.18	0.66	0.026	11.18	0.44	22.38	5.03	7.09	0.279	5.61	0.221	5.46	31.2
C01800260500M	4.57	0.18	0.66	0.026	12.7	0.5	22.38	5.03	7.92	0.312	6.27	0.247	4.69	26.8

Compression Springs B

Part Number	Outside Dia		Wire Dia		Free Length L_0 Approx.		Load P at L_1		Length L_1		Solid Height Approx.		Spring Rate, R	
	mm	in	mm	in	mm	in	N	lb	mm	in	mm	in	N/m	lb/in
C01800260560M	4.57	0.18	0.66	0.026	14.22	0.56	22.38	5.03	8.79	0.346	6.91	0.272	4.12	23.5
C01800260620M	4.57	0.18	0.66	0.026	15.75	0.62	22.38	5.03	9.63	0.379	7.57	0.298	3.66	20.9
C01800260690M	4.57	0.18	0.66	0.026	17.53	0.69	22.38	5.03	10.72	0.422	8.23	0.324	3.29	18.8
C01800260750M	4.57	0.18	0.66	0.026	19.05	0.75	22.38	5.03	11.56	0.455	8.94	0.352	2.98	17
C01800260810M	4.57	0.18	0.66	0.026	20.57	0.81	22.38	5.03	12.4	0.488	9.58	0.377	2.73	15.6
C01800260880M	4.57	0.18	0.66	0.026	22.35	0.88	22.38	5.03	13.51	0.532	10.24	0.403	2.52	14.4
C01800261000M	4.57	0.18	0.66	0.026	25.4	1	22.38	5.03	15.49	0.61	11.71	0.461	2.14	12.2
C01800261120M	4.57	0.18	0.66	0.026	28.45	1.12	22.38	5.03	17.3	0.681	12.93	0.509	1.891	10.8
C01800261250M	4.57	0.18	0.66	0.026	31.75	1.25	22.38	5.03	19.23	0.757	14.27	0.562	1.698	9.7
C01800261500M	4.57	0.18	0.66	0.026	38.1	1.5	22.38	5.03	22.99	0.905	16.84	0.663	1.401	8
C01800261750M	4.57	0.18	0.66	0.026	44.45	1.75	22.38	5.03	26.72	1.052	19.41	0.764	1.191	6.8
C01800262000M	4.57	0.18	0.66	0.026	50.8	2	22.38	5.03	30.45	1.199	21.97	0.865	1.033	5.9
C01800290250M	4.57	0.18	0.74	0.029	6.35	0.25	28.6	6.43	4.6	0.181	4.37	0.172	16.3	93.1
C01800290310M	4.57	0.18	0.74	0.029	7.87	0.31	28.6	6.43	5.56	0.219	5.28	0.208	12.43	71
C01800290380M	4.57	0.18	0.74	0.029	9.65	0.38	28.6	6.43	6.71	0.264	6.12	0.241	9.72	55.5
C01800290440M	4.57	0.18	0.74	0.029	11.18	0.44	28.6	6.43	7.7	0.303	6.86	0.27	8.2	46.8
C01800290500M	4.57	0.18	0.74	0.029	12.7	0.5	28.6	6.43	8.66	0.341	7.59	0.299	7.09	40.5
C01800290560M	4.57	0.18	0.74	0.029	14.22	0.56	28.6	6.43	9.65	0.38	8.31	0.327	6.23	35.6
C01800290620M	4.57	0.18	0.74	0.029	15.75	0.62	28.6	6.43	10.62	0.418	9.04	0.356	5.57	31.8
C01800290690M	4.57	0.18	0.74	0.029	17.53	0.69	28.6	6.43	11.76	0.463	9.91	0.39	4.96	28.3
C01800290750M	4.57	0.18	0.74	0.029	19.05	0.75	28.6	6.43	12.73	0.501	10.62	0.418	4.52	25.8
C01800290810M	4.57	0.18	0.74	0.029	20.57	0.81	28.6	6.43	13.72	0.54	11.35	0.447	4.17	23.8
C01800290880M	4.57	0.18	0.74	0.029	22.35	0.88	28.6	6.43	14.83	0.584	12.22	0.481	3.82	21.8
C01800290940M	4.57	0.18	0.74	0.029	23.88	0.94	28.6	6.43	15.82	0.623	12.93	0.509	3.56	20.3
C01800291000M	4.57	0.18	0.74	0.029	25.4	1	28.6	6.43	16.79	0.661	13.67	0.538	3.33	19
C01800291120M	4.57	0.18	0.74	0.029	28.45	1.12	28.6	6.43	18.75	0.738	15.14	0.596	2.94	16.8
C01800291250M	4.57	0.18	0.74	0.029	31.75	1.25	28.6	6.43	20.85	0.821	16.71	0.658	2.63	15
C01800291380M	4.57	0.18	0.74	0.029	35.05	1.38	28.6	6.43	22.99	0.905	18.29	0.72	2.36	13.5
C01800291500M	4.57	0.18	0.74	0.029	38.1	1.5	28.6	6.43	24.94	0.982	19.76	0.778	2.17	12.4
C01800291750M	4.57	0.18	0.74	0.029	44.45	1.75	28.6	6.43	29.01	1.142	22.78	0.897	1.856	10.6
C01800292000M	4.57	0.18	0.74	0.029	50.8	2	28.6	6.43	33.07	1.302	25.83	1.017	1.611	9.2
C01800320310M	4.57	0.18	0.81	0.032	7.87	0.31	39.28	8.83	6.05	0.238	5.23	0.206	21.49	122.7
C01800320380M	4.57	0.18	0.81	0.032	9.65	0.38	39.28	8.83	7.34	0.289	6.1	0.24	16.99	97
C01800320440M	4.57	0.18	0.81	0.032	11.18	0.44	39.28	8.83	8.28	0.326	7.11	0.28	13.57	77.5
C01800320500M	4.57	0.18	0.81	0.032	12.7	0.5	39.28	8.83	9.25	0.364	8.1	0.319	11.36	64.9
C01800320560M	4.57	0.18	0.81	0.032	14.22	0.56	39.28	8.83	10.41	0.41	8.71	0.343	10.31	58.9
C01800320620M	4.57	0.18	0.81	0.032	15.75	0.62	39.28	8.83	11.38	0.448	9.7	0.382	8.98	51.3
C01800320690M	4.57	0.18	0.81	0.032	17.53	0.69	39.28	8.83	12.8	0.504	10.31	0.406	8.32	47.5
C01800320750M	4.57	0.18	0.81	0.032	19.05	0.75	39.28	8.83	13.61	0.536	11.58	0.456	7.23	41.3
C01800320810M	4.57	0.18	0.81	0.032	20.57	0.81	39.28	8.83	14.55	0.573	12.6	0.496	6.53	37.3
C01800320880M	4.57	0.18	0.81	0.032	22.35	0.88	39.28	8.83	15.65	0.616	13.79	0.543	5.87	33.5
C01800320940M	4.57	0.18	0.81	0.032	23.88	0.94	39.28	8.83	16.71	0.658	14.63	0.576	5.48	31.3
C01800321000M	4.57	0.18	0.81	0.032	25.4	1	39.28	8.83	17.78	0.7	15.44	0.608	5.15	29.4
C01800321120M	4.57	0.18	0.81	0.032	28.45	1.12	39.28	8.83	20.12	0.792	17.2	0.677	4.48	25.6
C01800321250M	4.57	0.18	0.81	0.032	31.75	1.25	39.28	8.83	22.4	0.882	19	0.748	3.99	22.8
C01800321380M	4.57	0.18	0.81	0.032	35.05	1.38	39.28	8.83	24.66	0.971	20.8	0.819	3.61	20.6
C01800321500M	4.57	0.18	0.81	0.032	38.1	1.5	39.28	8.83	26.77	1.054	22.48	0.885	3.29	18.8
C01800321750M	4.57	0.18	0.81	0.032	44.45	1.75	39.28	8.83	31.14	1.226	25.98	1.023	2.82	16.1
C01800322000M	4.57	0.18	0.81	0.032	50.8	2	39.28	8.83	35.53	1.399	29.46	1.16	2.45	14
C01800350380M	4.57	0.18	0.89	0.035	9.65	0.38	47.77	10.74	7.67	0.302	7.26	0.286	23.99	137
C01800350440M	4.57	0.18	0.89	0.035	11.18	0.44	47.77	10.74	8.79	0.346	8.15	0.321	20.08	114.7
C01800350500M	4.57	0.18	0.89	0.035	12.7	0.5	47.77	10.74	9.93	0.391	9.04	0.356	17.28	98.7
C01800350560M	4.57	0.18	0.89	0.035	14.22	0.56	47.77	10.74	11.07	0.436	9.93	0.391	15.16	86.6
C01800350620M	4.57	0.18	0.89	0.035	15.75	0.62	47.77	10.74	12.22	0.481	10.82	0.426	13.52	77.2
C01800350690M	4.57	0.18	0.89	0.035	17.53	0.69	47.77	10.74	13.54	0.533	11.86	0.467	11.99	68.5
C01800350750M	4.57	0.18	0.89	0.035	19.05	0.75	47.77	10.74	14.68	0.578	12.75	0.502	10.93	62.4
C01800350810M	4.57	0.18	0.89	0.035	20.57	0.81	47.77	10.74	15.82	0.623	13.64	0.537	10.05	57.4
C01800350880M	4.57	0.18	0.89	0.035	22.35	0.88	47.77	10.74	17.15	0.675	14.68	0.578	9.18	52.4
C01800350940M	4.57	0.18	0.89	0.035	23.88	0.94	47.77	10.74	18.29	0.72	15.57	0.613	8.55	48.8
C01800351000M	4.57	0.18	0.89	0.035	25.4	1	47.77	10.74	19.43	0.765	16.46	0.648	8	45.7
C01800351120M	4.57	0.18	0.89	0.035	28.45	1.12	47.77	10.74	21.69	0.854	18.24	0.718	7.07	40.4
C01800351250M	4.57	0.18	0.89	0.035	31.75	1.25	47.77	10.74	24.16	0.951	20.14	0.793	6.3	36
C01800351500M	4.57	0.18	0.89	0.035	38.1	1.5	47.77	10.74	28.91	1.138	23.85	0.939	5.2	29.7
C01800351750M	4.57	0.18	0.89	0.035	44.45	1.75	47.77	10.74	33.66	1.325	27.56	1.085	4.43	25.3
C01800352000M	4.57	0.18	0.89	0.035	50.8	2	47.77	10.74	38.4	1.512	31.27	1.231	3.85	22
C02100180250M	5.33	0.21	0.46	0.018	6.35	0.25	6.67	1.5	2.9	0.114	2.26	0.089	1.926	11

Compression Springs B

Part Number	Outside Dia		Wire Dia		Free Length L, Approx.		Load P at L_1		Length L_1		Solid Height Approx.		Spring Rate, R	
	mm	in	mm	in	mm	in	N	lb	mm	in	mm	in	N/m	lb/in
C02100180310M	5.33	0.21	0.46	0.018	7.87	0.31	6.67	1.5	3.43	0.135	2.51	0.099	1.506	8.6
C02100180380M	5.33	0.21	0.46	0.018	9.65	0.38	6.67	1.5	4.09	0.161	2.79	0.11	1.191	6.8
C02100180440M	5.33	0.21	0.46	0.018	11.18	0.44	6.67	1.5	4.62	0.182	3.05	0.12	1.016	5.8
C02100180500M	5.33	0.21	0.46	0.018	12.7	0.5	6.67	1.5	5.18	0.204	3.3	0.13	0.893	5.1
C01800350750M	4.57	0.18	0.89	0.035	19.05	0.75	47.77	10.74	14.68	0.578	12.75	0.502	10.93	62.4
C01800350810M	4.57	0.18	0.89	0.035	20.57	0.81	47.77	10.74	15.82	0.623	13.64	0.537	10.05	57.4
C01800350880M	4.57	0.18	0.89	0.035	22.35	0.88	47.77	10.74	17.15	0.675	14.68	0.578	9.18	52.4
C01800350940M	4.57	0.18	0.89	0.035	23.88	0.94	47.77	10.74	18.29	0.72	15.57	0.613	8.55	48.8
C01800351000M	4.57	0.18	0.89	0.035	25.4	1	47.77	10.74	19.43	0.765	16.46	0.648	8	45.7
C01800351120M	4.57	0.18	0.89	0.035	28.45	1.12	47.77	10.74	21.69	0.854	18.24	0.718	7.07	40.4
C01800351250M	4.57	0.18	0.89	0.035	31.75	1.25	47.77	10.74	24.16	0.951	20.14	0.793	6.3	36
C01800351500M	4.57	0.18	0.89	0.035	38.1	1.5	47.77	10.74	28.91	1.138	23.85	0.939	5.2	29.7
C01800351750M	4.57	0.18	0.89	0.035	44.45	1.75	47.77	10.74	33.66	1.325	27.56	1.085	4.43	25.3
C01800352000M	4.57	0.18	0.89	0.035	50.8	2	47.77	10.74	38.4	1.512	31.27	1.231	3.85	22
C02100180250M	5.33	0.21	0.46	0.018	6.35	0.25	6.67	1.5	2.9	0.114	2.26	0.089	1.926	11
C02100180310M	5.33	0.21	0.46	0.018	7.87	0.31	6.67	1.5	3.43	0.135	2.51	0.099	1.506	8.6
C02100180380M	5.33	0.21	0.46	0.018	9.65	0.38	6.67	1.5	4.09	0.161	2.79	0.11	1.191	6.8
C02100180440M	5.33	0.21	0.46	0.018	11.18	0.44	6.67	1.5	4.62	0.182	3.05	0.12	1.016	5.8
C02100180500M	5.33	0.21	0.46	0.018	12.7	0.5	6.67	1.5	5.18	0.204	3.3	0.13	0.893	5.1
C02100180560M	5.33	0.21	0.46	0.018	14.22	0.56	6.67	1.5	5.74	0.226	3.56	0.14	0.788	4.5
C02100180620M	5.33	0.21	0.46	0.018	15.75	0.62	6.67	1.5	6.3	0.248	3.81	0.15	0.7	4
C02100180690M	5.33	0.21	0.46	0.018	17.53	0.69	6.67	1.5	6.93	0.273	4.09	0.161	0.63	3.6
C02100180750M	5.33	0.21	0.46	0.018	19.05	0.75	6.67	1.5	7.49	0.295	4.34	0.171	0.578	3.3
C02100180810M	5.33	0.21	0.46	0.018	20.57	0.81	6.67	1.5	8.03	0.316	4.6	0.181	0.525	3
C02100180880M	5.33	0.21	0.46	0.018	22.35	0.88	6.67	1.5	8.69	0.342	4.88	0.192	0.49	2.8
C02100181000M	5.33	0.21	0.46	0.018	25.4	1	6.67	1.5	9.78	0.385	5.38	0.212	0.42	2.4
C02100181250M	5.33	0.21	0.46	0.018	31.75	1.25	6.67	1.5	12.09	0.476	6.43	0.253	0.333	1.9
C02100181500M	5.33	0.21	0.46	0.018	38.1	1.5	6.67	1.5	14.38	0.566	7.47	0.294	0.28	1.6
C02100181750M	5.33	0.21	0.46	0.018	44.45	1.75	6.67	1.5	16.69	0.657	8.48	0.334	0.245	1.4
C02100182000M	5.33	0.21	0.46	0.018	50.8	2	6.67	1.5	19	0.748	9.53	0.375	0.21	1.2
C02100220250M	5.33	0.21	0.56	0.022	6.35	0.25	11.52	2.59	3.56	0.14	2.87	0.113	4.13	23.6
C02100220310M	5.33	0.21	0.56	0.022	7.87	0.31	11.52	2.59	4.27	0.168	3.23	0.127	3.2	18.3
C02100220380M	5.33	0.21	0.56	0.022	9.65	0.38	11.52	2.59	5.11	0.201	3.63	0.143	2.54	14.5
C02100220440M	5.33	0.21	0.56	0.022	11.18	0.44	11.52	2.59	5.82	0.229	3.99	0.157	2.15	12.3
C02100220500M	5.33	0.21	0.56	0.022	12.7	0.5	11.52	2.59	6.53	0.257	4.32	0.17	1.874	10.7
C02100220560M	5.33	0.21	0.56	0.022	14.22	0.56	11.52	2.59	7.24	0.285	4.67	0.184	1.646	9.4
C02100220620M	5.33	0.21	0.56	0.022	15.75	0.62	11.52	2.59	7.98	0.314	5.03	0.198	1.488	8.5
C02100220690M	5.33	0.21	0.56	0.022	17.53	0.69	11.52	2.59	8.79	0.346	5.44	0.214	1.313	7.5
C02100220750M	5.33	0.21	0.56	0.022	19.05	0.75	11.52	2.59	9.5	0.374	5.79	0.228	1.208	6.9
C02100220810M	5.33	0.21	0.56	0.022	20.57	0.81	11.52	2.59	10.21	0.402	6.12	0.241	1.121	6.4
C02100220880M	5.33	0.21	0.56	0.022	22.35	0.88	11.52	2.59	11.05	0.435	6.53	0.257	1.016	5.8
C02100221000M	5.33	0.21	0.56	0.022	25.4	1	11.52	2.59	12.47	0.491	7.24	0.285	0.893	5.1
C02100221250M	5.33	0.21	0.56	0.022	31.75	1.25	11.52	2.59	15.44	0.608	8.69	0.342	0.7	4
C02100221500M	5.33	0.21	0.56	0.022	38.1	1.5	11.52	2.59	18.42	0.725	10.13	0.399	0.578	3.3
C02100221750M	5.33	0.21	0.56	0.022	44.45	1.75	11.52	2.59	21.39	0.842	11.58	0.456	0.508	2.9
C02100222000M	5.33	0.21	0.56	0.022	50.8	2	11.52	2.59	24.36	0.959	13.06	0.514	0.438	2.5
C02100260250M	5.33	0.21	0.66	0.026	6.35	0.25	18.42	4.14	3.96	0.156	3.56	0.14	7.72	44.1
C02100260310M	5.33	0.21	0.66	0.026	7.87	0.31	18.42	4.14	4.78	0.188	4.04	0.159	5.94	33.9
C02100260380M	5.33	0.21	0.66	0.026	9.65	0.38	18.42	4.14	5.72	0.225	4.6	0.181	4.66	26.6
C02100260440M	5.33	0.21	0.66	0.026	11.18	0.44	18.42	4.14	6.5	0.256	5.08	0.2	3.94	22.5
C02100260500M	5.33	0.21	0.66	0.026	12.7	0.5	18.42	4.14	7.32	0.288	5.56	0.219	3.41	19.5
C02100260560M	5.33	0.21	0.66	0.026	14.22	0.56	18.42	4.14	8.13	0.32	6.02	0.237	3.01	17.2
C02100260620M	5.33	0.21	0.66	0.026	15.75	0.62	18.42	4.14	8.92	0.351	6.5	0.256	2.7	15.4
C02100260690M	5.33	0.21	0.66	0.026	17.53	0.69	18.42	4.14	9.86	0.388	7.06	0.278	2.4	13.7
C02100260750M	5.33	0.21	0.66	0.026	19.05	0.75	18.42	4.14	10.67	0.42	7.54	0.297	2.19	12.5
C02100260810M	5.33	0.21	0.66	0.026	20.57	0.81	18.42	4.14	11.46	0.451	8.03	0.316	2.01	11.5
C02100260880M	5.33	0.21	0.66	0.026	22.35	0.88	18.42	4.14	12.4	0.488	8.59	0.338	1.839	10.5
C02100261000M	5.33	0.21	0.66	0.026	25.4	1	18.42	4.14	14	0.551	9.55	0.376	1.611	9.2
C02100261250M	5.33	0.21	0.66	0.026	31.75	1.25	18.42	4.14	17.35	0.683	11.53	0.454	1.278	7.3
C02100261500M	5.33	0.21	0.66	0.026	38.1	1.5	18.42	4.14	20.68	0.814	13.54	0.533	1.051	6
C02100261750M	5.33	0.21	0.66	0.026	44.45	1.75	18.42	4.14	24.03	0.946	15.52	0.611	0.893	5.1
C02100262000M	5.33	0.21	0.66	0.026	50.8	2	18.42	4.14	27.38	1.078	17.5	0.689	0.788	4.5
C02400160250M	6.1	0.24	0.41	0.016	6.35	0.25	4.09	0.92	2.54	0.1	1.78	0.07	1.086	6.2
C02400160310M	6.1	0.24	0.41	0.016	7.87	0.31	4.09	0.92	3.02	0.119	1.93	0.076	0.84	4.8
C02400160380M	6.1	0.24	0.41	0.016	9.65	0.38	4.09	0.92	3.58	0.141	2.11	0.083	0.683	3.9
C02400160440M	6.1	0.24	0.41	0.016	11.18	0.44	4.09	0.92	4.06	0.16	2.26	0.089	0.578	3.3

Compression Springs B

Part Number	Outside Dia		Wire Dia		Free Length L, Approx.		Load P at L_1		Length L_1		Solid Height Approx.		Spring Rate, R	
	mm	in	mm	in	mm	in	N	lb	mm	in	mm	in	N/m	lb/in
C02400160500M	6.1	0.24	0.41	0.016	12.7	0.5	4.09	0.92	4.55	0.179	2.41	0.095	0.508	2.9
C02400160560M	6.1	0.24	0.41	0.016	14.22	0.56	4.09	0.92	5.03	0.198	2.57	0.101	0.438	2.5
C02400160620M	6.1	0.24	0.41	0.016	15.75	0.62	4.09	0.92	5.51	0.217	2.72	0.107	0.403	2.3
C02400160690M	6.1	0.24	0.41	0.016	17.53	0.69	4.09	0.92	6.07	0.239	2.9	0.114	0.35	2
C02400160750M	6.1	0.24	0.41	0.016	19.05	0.75	4.09	0.92	6.55	0.258	3.05	0.12	0.333	1.9
C02400160810M	6.1	0.24	0.41	0.016	20.57	0.81	4.09	0.92	7.01	0.276	3.2	0.126	0.298	1.7
C02400160880M	6.1	0.24	0.41	0.016	22.35	0.88	4.09	0.92	7.57	0.298	3.38	0.133	0.28	1.6
C02400161000M	6.1	0.24	0.41	0.016	25.4	1	4.09	0.92	8.53	0.336	3.68	0.145	0.245	1.4
C02400161250M	6.1	0.24	0.41	0.016	31.75	1.25	4.09	0.92	10.54	0.415	4.32	0.17	0.193	1.1
C02400161500M	6.1	0.24	0.41	0.016	38.1	1.5	4.09	0.92	12.52	0.493	4.95	0.195	0.158	0.9
C02400161750M	6.1	0.24	0.41	0.016	44.45	1.75	4.09	0.92	14.53	0.572	5.59	0.22	0.14	0.8
C02400162000M	6.1	0.24	0.41	0.016	50.8	2	4.09	0.92	16.51	0.65	6.22	0.245	0.123	0.7
C02400180250M	6.1	0.24	0.46	0.018	6.35	0.25	5.69	1.28	2.92	0.115	2.03	0.08	1.663	9.5
C02400180310M	6.1	0.24	0.46	0.018	7.87	0.31	5.69	1.28	3.48	0.137	2.24	0.088	1.296	7.4
C02400180380M	6.1	0.24	0.46	0.018	9.65	0.38	5.69	1.28	4.11	0.162	2.44	0.096	1.033	5.9
C02400180440M	6.1	0.24	0.46	0.018	11.18	0.44	5.69	1.28	4.67	0.184	2.62	0.103	0.876	5
C02400180500M	6.1	0.24	0.46	0.018	12.7	0.5	5.69	1.28	5.23	0.206	2.82	0.111	0.77	4.4
C02400180560M	6.1	0.24	0.46	0.018	14.22	0.56	5.69	1.28	5.79	0.228	3	0.118	0.683	3.9
C02400180620M	6.1	0.24	0.46	0.018	15.75	0.62	5.69	1.28	6.38	0.251	3.2	0.126	0.613	3.5
C02400180690M	6.1	0.24	0.46	0.018	17.53	0.69	5.69	1.28	7.01	0.276	3.4	0.134	0.543	3.1
C02400180750M	6.1	0.24	0.46	0.018	19.05	0.75	5.69	1.28	7.57	0.298	3.58	0.141	0.49	2.8
C02400180810M	6.1	0.24	0.46	0.018	20.57	0.81	5.69	1.28	8.13	0.32	3.78	0.149	0.455	2.6
C02400180880M	6.1	0.24	0.46	0.018	22.35	0.88	5.69	1.28	8.79	0.346	3.99	0.157	0.42	2.4
C02400181000M	6.1	0.24	0.46	0.018	25.4	1	5.69	1.28	9.91	0.39	4.37	0.172	0.368	2.1
C02400181250M	6.1	0.24	0.46	0.018	31.75	1.25	5.69	1.28	12.24	0.482	5.16	0.203	0.298	1.7
C02400181500M	6.1	0.24	0.46	0.018	38.1	1.5	5.69	1.28	14.58	0.574	5.92	0.233	0.245	1.4
C02400181750M	6.1	0.24	0.46	0.018	44.45	1.75	5.69	1.28	16.92	0.666	6.71	0.264	0.21	1.2
C02400182000M	6.1	0.24	0.46	0.018	50.8	2	5.69	1.28	19.23	0.757	7.47	0.294	0.175	1
C02400200250M	6.1	0.24	0.51	0.02	6.35	0.25	7.78	1.75	3.2	0.126	2.31	0.091	2.47	14.1
C02400200310M	6.1	0.24	0.51	0.02	7.87	0.31	7.78	1.75	3.84	0.151	2.51	0.099	1.926	11
C02400200380M	6.1	0.24	0.51	0.02	9.65	0.38	7.78	1.75	4.57	0.18	2.79	0.11	1.523	8.7
C02400200440M	6.1	0.24	0.51	0.02	11.18	0.44	7.78	1.75	5.18	0.204	3	0.118	1.296	7.4
C02400200500M	6.1	0.24	0.51	0.02	12.7	0.5	7.78	1.75	5.82	0.229	3.23	0.127	1.121	6.4
C02400200560M	6.1	0.24	0.51	0.02	14.22	0.56	7.78	1.75	6.45	0.254	3.45	0.136	0.998	5.7
C02400200620M	6.1	0.24	0.51	0.02	15.75	0.62	7.78	1.75	7.06	0.278	3.68	0.145	0.893	5.1
C02400200690M	6.1	0.24	0.51	0.02	17.53	0.69	7.78	1.75	7.8	0.307	3.94	0.155	0.805	4.6
C02400200750M	6.1	0.24	0.51	0.02	19.05	0.75	7.78	1.75	8.43	0.332	4.17	0.164	0.735	4.2
C02400200810M	6.1	0.24	0.51	0.02	20.57	0.81	7.78	1.75	9.04	0.356	4.37	0.172	0.665	3.8
C02400200880M	6.1	0.24	0.51	0.02	22.35	0.88	7.78	1.75	9.78	0.385	4.62	0.182	0.613	3.5
C02400201000M	6.1	0.24	0.51	0.02	25.4	1	7.78	1.75	11.02	0.434	5.08	0.2	0.543	3.1
C02400201250M	6.1	0.24	0.51	0.02	31.75	1.25	7.78	1.75	13.64	0.537	5.99	0.236	0.42	2.4
C02400201500M	6.1	0.24	0.51	0.02	38.1	1.5	7.78	1.75	16.26	0.64	6.93	0.273	0.35	2
C02400201750M	6.1	0.24	0.51	0.02	44.45	1.75	7.78	1.75	18.85	0.742	7.85	0.309	0.298	1.7
C02400202000M	6.1	0.24	0.51	0.02	50.8	2	7.78	1.75	21.46	0.845	8.79	0.346	0.263	1.5
C02400220250M	6.1	0.24	0.56	0.022	6.35	0.25	10.63	2.39	3.23	0.127	2.62	0.103	3.41	19.5
C02400220310M	6.1	0.24	0.56	0.022	7.87	0.31	10.63	2.39	3.86	0.152	2.87	0.113	2.64	15.1
C02400220380M	6.1	0.24	0.56	0.022	9.65	0.38	10.63	2.39	4.72	0.186	2.92	0.115	2.15	12.3
C02400220440M	6.1	0.24	0.56	0.022	11.18	0.44	10.63	2.39	4.9	0.193	3.33	0.131	1.698	9.7
C02400220500M	6.1	0.24	0.56	0.022	12.7	0.5	10.63	2.39	5.54	0.218	3.61	0.142	1.488	8.5
C02400220560M	6.1	0.24	0.56	0.022	14.22	0.56	10.63	2.39	6.15	0.242	3.91	0.154	1.313	7.5
C02400220620M	6.1	0.24	0.56	0.022	15.75	0.62	10.63	2.39	6.78	0.267	4.17	0.164	1.191	6.8
C02400220690M	6.1	0.24	0.56	0.022	17.53	0.69	10.63	2.39	7.67	0.302	4.45	0.175	1.086	6.2
C02400220750M	6.1	0.24	0.56	0.022	19.05	0.75	10.63	2.39	8.31	0.327	4.78	0.188	0.981	5.6
C02400220810M	6.1	0.24	0.56	0.022	20.57	0.81	10.63	2.39	8.94	0.352	5.03	0.198	0.911	5.2
C02400221000M	6.1	0.24	0.56	0.022	25.4	1	10.63	2.39	11.63	0.458	5.99	0.236	0.735	4.2
C02400221250M	6.1	0.24	0.56	0.022	31.75	1.25	10.63	2.39	14.38	0.566	7.11	0.28	0.578	3.3
C02400221500M	6.1	0.24	0.56	0.022	38.1	1.5	10.63	2.39	17.12	0.674	8.26	0.325	0.49	2.8
C02400221750M	6.1	0.24	0.56	0.022	44.45	1.75	10.63	2.39	19.86	0.782	9.37	0.369	0.42	2.4
C02400222000M	6.1	0.24	0.56	0.022	50.8	2	10.63	2.39	22.61	0.89	10.49	0.413	0.368	2.1
C02400240380M	6.1	0.24	0.61	0.024	9.65	0.38	12.99	2.92	5.05	0.199	3.61	0.142	2.84	16.2
C02400240440M	6.1	0.24	0.61	0.024	11.18	0.44	12.99	2.92	5.77	0.227	3.94	0.155	2.4	13.7
C02400240500M	6.1	0.24	0.61	0.024	12.7	0.5	12.99	2.92	6.45	0.254	4.27	0.168	2.08	11.9
C02400240560M	6.1	0.24	0.61	0.024	14.22	0.56	12.99	2.92	7.16	0.282	4.57	0.18	1.839	10.5
C02400240620M	6.1	0.24	0.61	0.024	15.75	0.62	12.99	2.92	7.85	0.309	4.9	0.193	1.646	9.4
C02400240690M	6.1	0.24	0.61	0.024	17.53	0.69	12.99	2.92	8.66	0.341	5.28	0.208	1.471	8.4
C02400240750M	6.1	0.24	0.61	0.024	19.05	0.75	12.99	2.92	9.35	0.368	5.61	0.221	1.331	7.6

Compression Springs B

Part Number	Outside Dia		Wire Dia		Free Length L, Approx.		Load P at L_1		Length L_1		Solid Height Approx.		Spring Rate, R	
	mm	in	mm	in	mm	in	N	lb	mm	in	mm	in	N/m	lb/in
C02400240810M	6.1	0.24	0.61	0.024	20.57	0.81	12.99	2.92	10.06	0.396	5.92	0.233	1.226	7
C02400240880M	6.1	0.24	0.61	0.024	22.35	0.88	12.99	2.92	10.85	0.427	6.3	0.248	1.121	6.4
C02400241000M	6.1	0.24	0.61	0.024	25.4	1	12.99	2.92	12.24	0.482	6.96	0.274	0.981	5.6
C02400241250M	6.1	0.24	0.61	0.024	31.75	1.25	12.99	2.92	15.14	0.596	8.31	0.327	0.788	4.5
C02400241500M	6.1	0.24	0.61	0.024	38.1	1.5	12.99	2.92	18.03	0.71	9.63	0.379	0.648	3.7
C02400241750M	6.1	0.24	0.61	0.024	44.45	1.75	12.99	2.92	20.93	0.824	10.97	0.432	0.56	3.2
C02400242000M	6.1	0.24	0.61	0.024	50.8	2	12.99	2.92	23.83	0.938	12.32	0.485	0.473	2.7
C02400260310M	6.1	0.24	0.66	0.026	7.87	0.31	17.13	3.85	4.47	0.176	3.51	0.138	5.03	28.7
C02400260380M	6.1	0.24	0.66	0.026	9.65	0.38	17.13	3.85	5.46	0.215	3.63	0.143	4.08	23.3
C02400260440M	6.1	0.24	0.66	0.026	11.18	0.44	17.13	3.85	6.27	0.247	3.96	0.156	3.48	19.9
C02400260500M	6.1	0.24	0.66	0.026	12.7	0.5	17.13	3.85	7.09	0.279	4.29	0.169	3.05	17.4
C02400260560M	6.1	0.24	0.66	0.026	14.22	0.56	17.13	3.85	7.57	0.298	4.78	0.188	2.57	14.7
C02400260620M	6.1	0.24	0.66	0.026	15.75	0.62	17.13	3.85	8.05	0.317	5.28	0.208	2.22	12.7
C02400260690M	6.1	0.24	0.66	0.026	17.53	0.69	17.13	3.85	8.76	0.345	5.79	0.228	1.944	11.1
C02400260750M	6.1	0.24	0.66	0.026	19.05	0.75	17.13	3.85	9.25	0.364	6.25	0.246	1.751	10
C02400260810M	6.1	0.24	0.66	0.026	20.57	0.81	17.13	3.85	10.06	0.396	6.6	0.26	1.628	9.3
C02400260880M	6.1	0.24	0.66	0.026	22.35	0.88	17.13	3.85	10.8	0.425	7.14	0.281	1.471	8.4
C02400261000M	6.1	0.24	0.66	0.026	25.4	1	17.13	3.85	12.9	0.508	7.95	0.313	1.296	7.4
C02400261250M	6.1	0.24	0.66	0.026	31.75	1.25	17.13	3.85	15.95	0.628	9.53	0.375	1.033	5.9
C02400261500M	6.1	0.24	0.66	0.026	38.1	1.5	17.13	3.85	19	0.748	11.1	0.437	0.858	4.9
C02400261750M	6.1	0.24	0.66	0.026	44.45	1.75	17.13	3.85	22.07	0.869	12.67	0.499	0.718	4.1
C02400262000M	6.1	0.24	0.66	0.026	50.8	2	17.13	3.85	25.12	0.989	14.25	0.561	0.63	3.6
C02400290380M	6.1	0.24	0.74	0.029	9.65	0.38	22.02	4.95	5.72	0.225	4.7	0.185	5.6	32
C02400290440M	6.1	0.24	0.74	0.029	11.18	0.44	22.02	4.95	6.53	0.257	5.16	0.203	4.73	27
C02400290500M	6.1	0.24	0.74	0.029	12.7	0.5	22.02	4.95	7.32	0.288	5.61	0.221	4.08	23.3
C02400290560M	6.1	0.24	0.74	0.029	14.22	0.56	22.02	4.95	8.1	0.319	6.1	0.24	3.61	20.6
C02400290620M	6.1	0.24	0.74	0.029	15.75	0.62	22.02	4.95	8.89	0.35	6.55	0.258	3.22	18.4
C02400290690M	6.1	0.24	0.74	0.029	17.53	0.69	22.02	4.95	9.83	0.387	7.09	0.279	2.85	16.3
C02400290750M	6.1	0.24	0.74	0.029	19.05	0.75	22.02	4.95	10.62	0.418	7.57	0.298	2.61	14.9
C02400290810M	6.1	0.24	0.74	0.029	20.57	0.81	22.02	4.95	11.4	0.449	8.03	0.316	2.4	13.7
C02400290880M	6.1	0.24	0.74	0.029	22.35	0.88	22.02	4.95	12.32	0.485	8.56	0.337	2.21	12.6
C02400290940M	6.1	0.24	0.74	0.029	23.88	0.94	22.02	4.95	13.13	0.517	9.02	0.355	2.05	11.7
C02400291000M	6.1	0.24	0.74	0.029	25.4	1	22.02	4.95	13.92	0.548	9.5	0.374	1.926	11
C02400291120M	6.1	0.24	0.74	0.029	28.45	1.12	22.02	4.95	15.49	0.61	10.41	0.41	1.698	9.7
C02400291250M	6.1	0.24	0.74	0.029	31.75	1.25	22.02	4.95	17.22	0.678	11.43	0.45	1.523	8.7
C02400291380M	6.1	0.24	0.74	0.029	35.05	1.38	22.02	4.95	18.92	0.745	12.42	0.489	1.366	7.8
C02400291500M	6.1	0.24	0.74	0.029	38.1	1.5	22.02	4.95	20.52	0.808	13.36	0.526	1.261	7.2
C02400291750M	6.1	0.24	0.74	0.029	44.45	1.75	22.02	4.95	23.83	0.938	15.29	0.602	1.068	6.1
C02400292000M	6.1	0.24	0.74	0.029	50.8	2	22.02	4.95	27.13	1.068	17.22	0.678	0.928	5.3
C02400320310M	6.1	0.24	0.81	0.032	7.87	0.31	30.65	6.89	5.13	0.202	4.24	0.167	11.17	63.8
C02400320380M	6.1	0.24	0.81	0.032	9.65	0.38	30.65	6.89	6.4	0.252	4.67	0.184	9.42	53.8
C02400320440M	6.1	0.24	0.81	0.032	11.18	0.44	30.65	6.89	7.16	0.282	5.31	0.209	7.56	43.2
C02400320500M	6.1	0.24	0.81	0.032	12.7	0.5	30.65	6.89	7.95	0.313	5.89	0.232	6.44	36.8
C02400320560M	6.1	0.24	0.81	0.032	14.22	0.56	30.65	6.89	8.74	0.344	6.48	0.255	5.59	31.9
C02400320620M	6.1	0.24	0.81	0.032	15.75	0.62	30.65	6.89	9.5	0.374	7.09	0.279	4.9	28
C02400320690M	6.1	0.24	0.81	0.032	17.53	0.69	30.65	6.89	10.52	0.414	7.7	0.303	4.38	25
C02400320750M	6.1	0.24	0.81	0.032	19.05	0.75	30.65	6.89	11.05	0.435	8.51	0.335	3.84	21.9
C02400320810M	6.1	0.24	0.81	0.032	20.57	0.81	30.65	6.89	11.84	0.466	9.12	0.359	3.5	20
C02400320880M	6.1	0.24	0.81	0.032	22.35	0.88	30.65	6.89	12.85	0.506	9.75	0.384	3.22	18.4
C02400320940M	6.1	0.24	0.81	0.032	23.88	0.94	30.65	6.89	13.64	0.537	10.34	0.407	2.99	17.1
C02400321000M	6.1	0.24	0.81	0.032	25.4	1	30.65	6.89	14.4	0.567	10.95	0.431	2.78	15.9
C02400321250M	6.1	0.24	0.81	0.032	31.75	1.25	30.65	6.89	18.49	0.728	13.36	0.526	2.19	12.5
C02400321380M	6.1	0.24	0.81	0.032	35.05	1.38	30.65	6.89	20.35	0.801	14.55	0.573	1.961	11.2
C02400321500M	6.1	0.24	0.81	0.032	38.1	1.5	30.65	6.89	22.05	0.868	15.65	0.616	1.804	10.3
C02400321750M	6.1	0.24	0.81	0.032	44.45	1.75	30.65	6.89	25.6	1.008	17.96	0.707	1.541	8.8
C02400322000M	6.1	0.24	0.81	0.032	50.8	2	30.65	6.89	29.16	1.148	20.24	0.797	1.331	7.6
C02400350310M	6.1	0.24	0.89	0.035	7.87	0.31	37.1	8.34	5.44	0.214	5.23	0.206	15.22	86.9
C02400350380M	6.1	0.24	0.89	0.035	9.65	0.38	37.1	8.34	6.5	0.256	5.97	0.235	11.78	67.3
C02400350440M	6.1	0.24	0.89	0.035	11.18	0.44	37.1	8.34	7.42	0.292	6.6	0.26	9.88	56.4
C02400350500M	6.1	0.24	0.89	0.035	12.7	0.5	37.1	8.34	8.33	0.328	7.26	0.286	8.49	48.5
C02400350560M	6.1	0.24	0.89	0.035	14.22	0.56	37.1	8.34	9.25	0.364	7.9	0.311	7.46	42.6
C02400350620M	6.1	0.24	0.89	0.035	15.75	0.62	37.1	8.34	10.16	0.4	8.53	0.336	6.64	37.9
C02400350690M	6.1	0.24	0.89	0.035	17.53	0.69	37.1	8.34	11.23	0.442	9.3	0.366	5.88	33.6
C02400350750M	6.1	0.24	0.89	0.035	19.05	0.75	37.1	8.34	12.14	0.478	9.93	0.391	5.38	30.7
C02400350810M	6.1	0.24	0.89	0.035	20.57	0.81	37.1	8.34	13.05	0.514	10.57	0.416	4.94	28.2
C02400350880M	6.1	0.24	0.89	0.035	22.35	0.88	37.1	8.34	14.12	0.556	11.3	0.445	4.5	25.7

Compression Springs B

Part Number	Outside Dia		Wire Dia		Free Length L, Approx.		Load P at L_1		Length L_1		Solid Height Approx.		Spring Rate, R	
	mm	in	mm	in	mm	in	N	lb	mm	in	mm	in	N/m	lb/in
C02400350940M	6.1	0.24	0.89	0.035	23.88	0.94	37.1	8.34	15.04	0.592	11.96	0.471	4.2	24
C02400351000M	6.1	0.24	0.89	0.035	25.4	1	37.1	8.34	15.95	0.628	12.6	0.496	3.92	22.4
C02400351250M	6.1	0.24	0.89	0.035	31.75	1.25	37.1	8.34	19.76	0.778	15.27	0.601	3.1	17.7
C02400351380M	6.1	0.24	0.89	0.035	35.05	1.38	37.1	8.34	21.74	0.856	16.66	0.656	2.78	15.9
C02400351500M	6.1	0.24	0.89	0.035	38.1	1.5	37.1	8.34	23.57	0.928	17.93	0.706	2.56	14.6
C02400351750M	6.1	0.24	0.89	0.035	44.45	1.75	37.1	8.34	27.38	1.078	20.6	0.811	2.17	12.4
C02400352000M	6.1	0.24	0.89	0.035	50.8	2	37.1	8.34	31.19	1.228	23.27	0.916	1.891	10.8
C02400352250M	6.1	0.24	0.89	0.035	57.15	2.25	37.1	8.34	35	1.378	25.93	1.021	1.681	9.6
C02400352500M	6.1	0.24	0.89	0.035	63.5	2.5	37.1	8.34	38.81	1.528	28.6	1.126	1.506	8.6
C02400380310M	6.1	0.24	0.97	0.038	7.87	0.31	49.2	11.06	5.66	0.223	5.28	0.208	22.26	127.1
C02400380380M	6.1	0.24	0.97	0.038	9.65	0.38	49.2	11.06	6.88	0.271	6.02	0.237	17.77	101.5
C02400380440M	6.1	0.24	0.97	0.038	11.18	0.44	49.2	11.06	7.85	0.309	6.73	0.265	14.78	84.4
C02400380500M	6.1	0.24	0.97	0.038	12.7	0.5	49.2	11.06	8.81	0.347	7.47	0.294	12.66	72.3
C02400380560M	6.1	0.24	0.97	0.038	14.22	0.56	49.2	11.06	9.78	0.385	8.2	0.323	11.07	63.2
C02400380620M	6.1	0.24	0.97	0.038	15.75	0.62	49.2	11.06	10.77	0.424	8.89	0.35	9.88	56.4
C02400380690M	6.1	0.24	0.97	0.038	17.53	0.69	49.2	11.06	11.99	0.472	9.63	0.379	8.88	50.7
C02400380750M	6.1	0.24	0.97	0.038	19.05	0.75	49.2	11.06	12.95	0.51	10.34	0.407	8.07	46.1
C02400380810M	6.1	0.24	0.97	0.038	20.57	0.81	49.2	11.06	13.92	0.548	11.07	0.436	7.39	42.2
C02400380880M	6.1	0.24	0.97	0.038	22.35	0.88	49.2	11.06	14.96	0.589	12.04	0.474	6.65	38
C02400380940M	6.1	0.24	0.97	0.038	23.88	0.94	49.2	11.06	15.75	0.62	12.98	0.511	6.06	34.6
C02400381000M	6.1	0.24	0.97	0.038	25.4	1	49.2	11.06	16.71	0.658	13.74	0.541	5.66	32.3
C02400381120M	6.1	0.24	0.97	0.038	28.45	1.12	49.2	11.06	18.67	0.735	15.16	0.597	5.03	28.7
C02400381250M	6.1	0.24	0.97	0.038	31.75	1.25	49.2	11.06	20.85	0.821	16.59	0.653	4.52	25.8
C02400381380M	6.1	0.24	0.97	0.038	35.05	1.38	49.2	11.06	23.04	0.907	18.06	0.711	4.1	23.4
C02400381500M	6.1	0.24	0.97	0.038	38.1	1.5	49.2	11.06	24.99	0.984	19.51	0.768	3.75	21.4
C02400381750M	6.1	0.24	0.97	0.038	44.45	1.75	49.2	11.06	29.11	1.146	23.16	0.912	3.03	17.3
C02400382000M	6.1	0.24	0.97	0.038	50.8	2	49.2	11.06	33.17	1.306	26.21	1.032	2.64	15.1
C02400382250M	6.1	0.24	0.97	0.038	57.15	2.25	49.2	11.06	37.21	1.465	29.24	1.151	2.33	13.3
C02400382500M	6.1	0.24	0.97	0.038	63.5	2.5	49.2	11.06	41.28	1.625	32.26	1.27	2.1	12
C02400400310M	6.1	0.24	1.02	0.04	7.87	0.31	53.51	12.03	5.92	0.233	5.59	0.22	27.28	155.8
C02400400380M	6.1	0.24	1.02	0.04	9.65	0.38	53.51	12.03	7.09	0.279	6.96	0.274	20.91	119.4
C02400400440M	6.1	0.24	1.02	0.04	11.18	0.44	53.51	12.03	8.1	0.319	7.75	0.305	17.42	99.5
C02400400500M	6.1	0.24	1.02	0.04	12.7	0.5	53.51	12.03	9.12	0.359	8.53	0.336	14.94	85.3
C02400400560M	6.1	0.24	1.02	0.04	14.22	0.56	53.51	12.03	10.13	0.399	9.3	0.366	13.08	74.7
C02400400620M	6.1	0.24	1.02	0.04	15.75	0.62	53.51	12.03	11.15	0.439	10.08	0.397	11.63	66.4
C02400400690M	6.1	0.24	1.02	0.04	17.53	0.69	53.51	12.03	12.32	0.485	11	0.433	10.28	58.7
C02400400750M	6.1	0.24	1.02	0.04	19.05	0.75	53.51	12.03	13.34	0.525	11.79	0.464	9.37	53.5
C02400400810M	6.1	0.24	1.02	0.04	20.57	0.81	53.51	12.03	14.35	0.565	12.57	0.495	8.6	49.1
C02400400880M	6.1	0.24	1.02	0.04	22.35	0.88	53.51	12.03	15.52	0.611	13.49	0.531	7.84	44.8
C02400400940M	6.1	0.24	1.02	0.04	23.88	0.94	53.51	12.03	16.54	0.651	14.27	0.562	7.3	41.7
C02400401000M	6.1	0.24	1.02	0.04	25.4	1	53.51	12.03	17.55	0.691	15.04	0.592	6.83	39
C02400401120M	6.1	0.24	1.02	0.04	28.45	1.12	53.51	12.03	19.58	0.771	16.61	0.654	6.04	34.5
C02400401250M	6.1	0.24	1.02	0.04	31.75	1.25	53.51	12.03	21.77	0.857	18.31	0.721	5.36	30.6
C02400401380M	6.1	0.24	1.02	0.04	35.05	1.38	53.51	12.03	23.98	0.944	20.02	0.788	4.83	27.6
C02400401500M	6.1	0.24	1.02	0.04	38.1	1.5	53.51	12.03	25.98	1.023	21.56	0.849	4.41	25.2
C02400401750M	6.1	0.24	1.02	0.04	44.45	1.75	53.51	12.03	30.2	1.189	24.82	0.977	3.77	21.5
C02400402000M	6.1	0.24	1.02	0.04	50.8	2	53.51	12.03	34.42	1.355	28.09	1.106	3.27	18.7
C02400402250M	6.1	0.24	1.02	0.04	57.15	2.25	53.51	12.03	38.66	1.522	35.99	1.417	2.89	16.5
C02400402500M	6.1	0.24	1.02	0.04	63.5	2.5	53.51	12.03	42.88	1.688	34.62	1.363	2.59	14.8
C02400420380M	6.1	0.24	1.07	0.042	9.65	0.38	64.01	14.39	7.26	0.286	6.91	0.272	26.44	151
C02400420440M	6.1	0.24	1.07	0.042	11.18	0.44	64.01	14.39	8.2	0.323	7.87	0.31	21.54	123
C02400420500M	6.1	0.24	1.07	0.042	12.7	0.5	64.01	14.39	9.27	0.365	8.71	0.343	18.56	106
C02400420560M	6.1	0.24	1.07	0.042	14.22	0.56	64.01	14.39	10.39	0.409	9.47	0.373	16.46	94
C02400420620M	6.1	0.24	1.07	0.042	15.75	0.62	64.01	14.39	11.4	0.449	10.19	0.401	14.88	85
C02400420690M	6.1	0.24	1.07	0.042	17.53	0.69	64.01	14.39	12.73	0.501	11.2	0.441	13.13	75
C02400420750M	6.1	0.24	1.07	0.042	19.05	0.75	64.01	14.39	13.39	0.527	12.67	0.499	11.21	64
C02400420810M	6.1	0.24	1.07	0.042	20.57	0.81	64.01	14.39	14.45	0.569	13.34	0.525	10.51	60
C02400420880M	6.1	0.24	1.07	0.042	22.35	0.88	64.01	14.39	15.77	0.621	14.12	0.556	9.81	56
C02400420940M	6.1	0.24	1.07	0.042	23.88	0.94	64.01	14.39	16.69	0.657	15.24	0.6	8.93	51
C02400421000M	6.1	0.24	1.07	0.042	25.4	1	64.01	14.39	17.75	0.699	16.03	0.631	8.41	48
C02400421120M	6.1	0.24	1.07	0.042	28.45	1.12	64.01	14.39	19.89	0.783	17.75	0.699	7.44	42.5
C02400421250M	6.1	0.24	1.07	0.042	31.75	1.25	64.01	14.39	22.05	0.868	19.76	0.778	6.57	37.5
C02400421380M	6.1	0.24	1.07	0.042	35.05	1.38	64.01	14.39	24.33	0.958	21.51	0.847	5.95	34
C02400421500M	6.1	0.24	1.07	0.042	38.1	1.5	64.01	14.39	25.86	1.018	23.7	0.933	5.34	30.5
C02400421750M	6.1	0.24	1.07	0.042	44.45	1.75	64.01	14.39	31.27	1.231	26.42	1.04	4.64	26.5
C02400422000M	6.1	0.24	1.07	0.042	50.8	2	64.01	14.39	35.64	1.403	29.9	1.177	4.03	23

Compression Springs B

Part Number	Outside Dia		Wire Dia		Free Length L, Approx.		Load P at L_1		Length L_1		Solid Height Approx.		Spring Rate, R	
	mm	in	mm	in	mm	in	N	lb	mm	in	mm	in	N/m	lb/in
C02400422250M	6.1	0.24	1.07	0.042	57.15	2.25	64.01	14.39	40.01	1.575	33.38	1.314	3.57	20.4
C02400422500M	6.1	0.24	1.07	0.042	63.5	2.5	64.01	14.39	44.4	1.748	36.88	1.452	3.2	18.3
C02400450440M	6.1	0.24	1.14	0.045	11.18	0.44	71.92	16.17	8.84	0.348	8.28	0.326	30.63	174.9
C02400450500M	6.1	0.24	1.14	0.045	12.7	0.5	71.92	16.17	9.96	0.392	9.17	0.361	26.14	149.3
C02400450560M	6.1	0.24	1.14	0.045	14.22	0.56	71.92	16.17	11.07	0.436	10.06	0.396	22.8	130.2
C02400450620M	6.1	0.24	1.14	0.045	15.75	0.62	71.92	16.17	12.19	0.48	11.07	0.436	20.22	115.5
C02400450690M	6.1	0.24	1.14	0.045	17.53	0.69	71.92	16.17	13.51	0.532	12.12	0.477	17.86	102
C02400450750M	6.1	0.24	1.14	0.045	19.05	0.75	71.92	16.17	14.63	0.576	13.11	0.516	16.23	92.7
C02400450810M	6.1	0.24	1.14	0.045	20.57	0.81	71.92	16.17	15.75	0.62	14	0.551	14.88	85
C02400450880M	6.1	0.24	1.14	0.045	22.35	0.88	71.92	16.17	17.04	0.671	15.09	0.594	13.57	77.5
C02400451000M	6.1	0.24	1.14	0.045	25.4	1	71.92	16.17	19.3	0.76	16.94	0.667	11.78	67.3
C02400451250M	6.1	0.24	1.14	0.045	31.75	1.25	71.92	16.17	23.98	0.944	20.65	0.813	9.25	52.8
C02400451500M	6.1	0.24	1.14	0.045	38.1	1.5	71.92	16.17	28.65	1.128	24.36	0.959	7.6	43.4
C02400451750M	6.1	0.24	1.14	0.045	44.45	1.75	71.92	16.17	33.3	1.311	28.07	1.105	6.46	36.9
C02400452000M	6.1	0.24	1.14	0.045	50.8	2	71.92	16.17	37.97	1.495	31.78	1.251	5.6	32
C02400452250M	6.1	0.24	1.14	0.045	57.15	2.25	71.92	16.17	42.65	1.679	35.48	1.397	4.96	28.3
C02400452500M	6.1	0.24	1.14	0.045	63.5	2.5	71.92	16.17	47.32	1.863	39.19	1.543	4.45	25.4
C03000220380M	7.62	0.3	0.56	0.022	9.65	0.38	8.59	1.93	4.19	0.165	2.54	0.1	1.576	9
C03000220440M	7.62	0.3	0.56	0.022	11.18	0.44	8.59	1.93	4.72	0.186	2.69	0.106	1.331	7.6
C03000220500M	7.62	0.3	0.56	0.022	12.7	0.5	8.59	1.93	5.21	0.205	2.77	0.109	1.156	6.6
C03000220560M	7.62	0.3	0.56	0.022	14.22	0.56	8.59	1.93	5.97	0.235	2.92	0.115	1.033	5.9
C03000220620M	7.62	0.3	0.56	0.022	15.75	0.62	8.59	1.93	6.02	0.237	3.2	0.126	0.876	5
C03000220690M	7.62	0.3	0.56	0.022	17.53	0.69	8.59	1.93	7.04	0.277	3.33	0.131	0.823	4.7
C03000220750M	7.62	0.3	0.56	0.022	19.05	0.75	8.59	1.93	7.06	0.278	3.61	0.142	0.718	4.1
C03000220810M	7.62	0.3	0.56	0.022	20.57	0.81	8.59	1.93	7.85	0.309	3.78	0.149	0.665	3.8
C03000220880M	7.62	0.3	0.56	0.022	22.35	0.88	8.59	1.93	8.86	0.349	3.91	0.154	0.63	3.6
C03000221000M	7.62	0.3	0.56	0.022	25.4	1	8.59	1.93	10.57	0.416	4.45	0.175	0.56	3.2
C03000221250M	7.62	0.3	0.56	0.022	31.75	1.25	8.59	1.93	13.03	0.513	5.18	0.204	0.438	2.5
C03000221500M	7.62	0.3	0.56	0.022	38.1	1.5	8.59	1.93	15.49	0.61	5.89	0.232	0.368	2.1
C03000221750M	7.62	0.3	0.56	0.022	44.45	1.75	8.59	1.93	17.96	0.707	6.63	0.261	0.316	1.8
C03000222000M	7.62	0.3	0.56	0.022	50.8	2	8.59	1.93	20.45	0.805	7.34	0.289	0.263	1.5
C03000222250M	7.62	0.3	0.56	0.022	57.15	2.25	8.59	1.93	22.91	0.902	7.82	0.308	0.245	1.4
C03000222500M	7.62	0.3	0.56	0.022	63.5	2.5	8.59	1.93	25.37	0.999	8.48	0.334	0.228	1.3
C03000260440M	7.62	0.3	0.66	0.026	11.18	0.44	13.88	3.12	5.23	0.206	3.3	0.13	2.33	13.3
C03000260500M	7.62	0.3	0.66	0.026	12.7	0.5	13.88	3.12	5.56	0.219	3.63	0.143	1.944	11.1
C03000260560M	7.62	0.3	0.66	0.026	14.22	0.56	13.88	3.12	6.5	0.256	3.76	0.148	1.804	10.3
C03000260620M	7.62	0.3	0.66	0.026	15.75	0.62	13.88	3.12	6.83	0.269	4.11	0.162	1.558	8.9
C03000260690M	7.62	0.3	0.66	0.026	17.53	0.69	13.88	3.12	7.42	0.292	4.47	0.176	1.366	7.8
C03000260750M	7.62	0.3	0.66	0.026	19.05	0.75	13.88	3.12	8.33	0.328	4.62	0.182	1.296	7.4
C03000260810M	7.62	0.3	0.66	0.026	20.57	0.81	13.88	3.12	8.69	0.342	4.93	0.194	1.173	6.7
C03000260880M	7.62	0.3	0.66	0.026	22.35	0.88	13.88	3.12	9.27	0.365	5.23	0.206	1.068	6.1
C03000260940M	7.62	0.3	0.66	0.026	23.88	0.94	13.88	3.12	9.6	0.378	5.64	0.222	0.963	5.5
C03000261000M	7.62	0.3	0.66	0.026	25.4	1	13.88	3.12	9.93	0.391	5.94	0.234	0.893	5.1
C03000261250M	7.62	0.3	0.66	0.026	31.75	1.25	13.88	3.12	14.17	0.558	6.91	0.272	0.753	4.3
C03000261500M	7.62	0.3	0.66	0.026	38.1	1.5	13.88	3.12	16.84	0.663	7.95	0.313	0.613	3.5
C03000261750M	7.62	0.3	0.66	0.026	44.45	1.75	13.88	3.12	19.53	0.769	8.99	0.354	0.525	3
C03000262000M	7.62	0.3	0.66	0.026	50.8	2	13.88	3.12	22.2	0.874	10.01	0.394	0.455	2.6
C03000262250M	7.62	0.3	0.66	0.026	57.15	2.25	13.88	3.12	24.89	0.98	10.57	0.416	0.438	2.5
C03000262500M	7.62	0.3	0.66	0.026	63.5	2.5	13.88	3.12	27.56	1.085	11.56	0.455	0.385	2.2
C03000300440M	7.62	0.3	0.76	0.03	11.18	0.44	19.66	4.42	5.97	0.235	4.37	0.172	3.77	21.5
C03000300500M	7.62	0.3	0.76	0.03	12.7	0.5	19.66	4.42	6.65	0.262	4.7	0.185	3.26	18.6
C03000300560M	7.62	0.3	0.76	0.03	14.22	0.56	19.66	4.42	7.37	0.29	5.03	0.198	2.87	16.4
C03000300620M	7.62	0.3	0.76	0.03	15.75	0.62	19.66	4.42	8.05	0.317	5.38	0.212	2.56	14.6
C03000300690M	7.62	0.3	0.76	0.03	17.53	0.69	19.66	4.42	8.89	0.35	5.77	0.227	2.28	13
C03000300750M	7.62	0.3	0.76	0.03	19.05	0.75	19.66	4.42	9.58	0.377	6.1	0.24	2.08	11.9
C03000300810M	7.62	0.3	0.76	0.03	20.57	0.81	19.66	4.42	10.29	0.405	6.43	0.253	1.909	10.9
C03000300880M	7.62	0.3	0.76	0.03	22.35	0.88	19.66	4.42	11.1	0.437	6.81	0.268	1.751	10
C03000300940M	7.62	0.3	0.76	0.03	23.88	0.94	19.66	4.42	11.81	0.465	7.14	0.281	1.628	9.3
C03000301000M	7.62	0.3	0.76	0.03	25.4	1	19.66	4.42	12.5	0.492	7.47	0.294	1.523	8.7
C03000301250M	7.62	0.3	0.76	0.03	31.75	1.25	19.66	4.42	15.42	0.607	8.84	0.348	1.208	6.9
C03000301500M	7.62	0.3	0.76	0.03	38.1	1.5	19.66	4.42	18.34	0.722	10.21	0.402	0.998	5.7
C03000301750M	7.62	0.3	0.76	0.03	44.45	1.75	19.66	4.42	21.26	0.837	11.61	0.457	0.84	4.8
C03000302000M	7.62	0.3	0.76	0.03	50.8	2	19.66	4.42	24.18	0.952	12.98	0.511	0.735	4.2
C03000302250M	7.62	0.3	0.76	0.03	57.15	2.25	19.66	4.42	27.1	1.067	14.35	0.565	0.648	3.7
C03000302500M	7.62	0.3	0.76	0.03	63.5	2.5	19.66	4.42	30.02	1.182	15.72	0.619	0.595	3.4
C03000320440M	7.62	0.3	0.81	0.032	11.18	0.44	24.87	5.59	5.97	0.235	4.45	0.175	4.78	27.3

Part Number	Outside Dia		Wire Dia		Free Length L, Approx.		Load P at L_1		Length L_1		Solid Height Approx.		Spring Rate, R	
	mm	in	mm	in	mm	in	N	lb	mm	in	mm	in	N/m	lb/in
C03000320500M	7.62	0.3	0.81	0.032	12.7	0.5	24.87	5.59	6.68	0.263	4.83	0.19	4.13	23.6
C03000320560M	7.62	0.3	0.81	0.032	14.22	0.56	24.87	5.59	7.26	0.286	5.28	0.208	3.57	20.4
C03000320620M	7.62	0.3	0.81	0.032	15.75	0.62	24.87	5.59	7.92	0.312	5.66	0.223	3.19	18.2
C03000320690M	7.62	0.3	0.81	0.032	17.53	0.69	24.87	5.59	8.84	0.348	6.1	0.24	2.85	16.3
C03000320750M	7.62	0.3	0.81	0.032	19.05	0.75	24.87	5.59	9.5	0.374	6.48	0.255	2.61	14.9
C03000320810M	7.62	0.3	0.81	0.032	20.57	0.81	24.87	5.59	10.16	0.4	6.91	0.272	2.38	13.6
C03000320880M	7.62	0.3	0.81	0.032	22.35	0.88	24.87	5.59	11.05	0.435	7.29	0.287	2.21	12.6
C03000320940M	7.62	0.3	0.81	0.032	23.88	0.94	24.87	5.59	11.28	0.444	7.9	0.311	1.979	11.3
C03000321000M	7.62	0.3	0.81	0.032	25.4	1	24.87	5.59	11.94	0.47	8.28	0.326	1.856	10.6
C03000321250M	7.62	0.3	0.81	0.032	31.75	1.25	24.87	5.59	16.08	0.633	9.86	0.388	1.506	8.6
C03000321500M	7.62	0.3	0.81	0.032	38.1	1.5	24.87	5.59	19.13	0.753	11.43	0.45	1.243	7.1
C03000321750M	7.62	0.3	0.81	0.032	44.45	1.75	24.87	5.59	22.17	0.873	12.98	0.511	1.051	6
C03000322000M	7.62	0.3	0.81	0.032	50.8	2	24.87	5.59	25.22	0.993	14.55	0.573	0.928	5.3
C03000322250M	7.62	0.3	0.81	0.032	57.15	2.25	24.87	5.59	28.27	1.113	15.44	0.608	0.858	4.9
C03000322500M	7.62	0.3	0.81	0.032	63.5	2.5	24.87	5.59	31.32	1.233	16.66	0.656	0.77	4.4
C03000350380M	7.62	0.3	0.89	0.035	9.65	0.38	31.85	7.16	5.69	0.224	4.9	0.193	8.06	46
C03000350440M	7.62	0.3	0.89	0.035	11.18	0.44	31.85	7.16	6.45	0.254	5.33	0.21	6.74	38.5
C03000350500M	7.62	0.3	0.89	0.035	12.7	0.5	31.85	7.16	7.21	0.284	5.77	0.227	5.81	33.2
C03000350560M	7.62	0.3	0.89	0.035	14.22	0.56	31.85	7.16	7.98	0.314	6.2	0.244	5.1	29.1
C03000350620M	7.62	0.3	0.89	0.035	15.75	0.62	31.85	7.16	8.74	0.344	6.65	0.262	4.54	25.9
C03000350690M	7.62	0.3	0.89	0.035	17.53	0.69	31.85	7.16	9.63	0.379	7.14	0.281	4.03	23
C03000350750M	7.62	0.3	0.89	0.035	19.05	0.75	31.85	7.16	10.36	0.408	7.57	0.298	3.68	21
C03000350810M	7.62	0.3	0.89	0.035	20.57	0.81	31.85	7.16	11.13	0.438	8.03	0.316	3.38	19.3
C03000350880M	7.62	0.3	0.89	0.035	22.35	0.88	31.85	7.16	12.01	0.473	8.51	0.335	3.08	17.6
C03000350940M	7.62	0.3	0.89	0.035	23.88	0.94	31.85	7.16	12.78	0.503	8.97	0.353	2.87	16.4
C03000351000M	7.62	0.3	0.89	0.035	25.4	1	31.85	7.16	13.54	0.533	9.4	0.37	2.68	15.3
C03000351120M	7.62	0.3	0.89	0.035	28.45	1.12	31.85	7.16	15.06	0.593	10.26	0.404	2.38	13.6
C03000351250M	7.62	0.3	0.89	0.035	31.75	1.25	31.85	7.16	16.69	0.657	11.2	0.441	2.12	12.1
C03000351380M	7.62	0.3	0.89	0.035	35.05	1.38	31.85	7.16	18.34	0.722	12.14	0.478	1.909	10.9
C03000351500M	7.62	0.3	0.89	0.035	38.1	1.5	31.85	7.16	19.86	0.782	13	0.512	1.751	10
C03000351750M	7.62	0.3	0.89	0.035	44.45	1.75	31.85	7.16	23.01	0.906	14.81	0.583	1.488	8.5
C03000352000M	7.62	0.3	0.89	0.035	50.8	2	31.85	7.16	26.16	1.03	16.61	0.654	1.296	7.4
C03000352250M	7.62	0.3	0.89	0.035	57.15	2.25	31.85	7.16	29.34	1.155	18.42	0.725	1.138	6.5
C03000352500M	7.62	0.3	0.89	0.035	63.5	2.5	31.85	7.16	32.49	1.279	20.22	0.796	1.033	5.9
C03000380380M	7.62	0.3	0.97	0.038	9.65	0.38	40.21	9.04	6.1	0.24	5	0.197	11.29	64.5
C03000380440M	7.62	0.3	0.97	0.038	11.18	0.44	40.21	9.04	6.88	0.271	5.54	0.218	9.37	53.5
C03000380500M	7.62	0.3	0.97	0.038	12.7	0.5	40.21	9.04	7.75	0.305	6.02	0.237	8.13	46.4
C03000380560M	7.62	0.3	0.97	0.038	14.22	0.56	40.21	9.04	8.31	0.327	6.73	0.265	6.79	38.8
C03000380620M	7.62	0.3	0.97	0.038	15.75	0.62	40.21	9.04	9.17	0.361	7.21	0.284	6.11	34.9
C03000380690M	7.62	0.3	0.97	0.038	17.53	0.69	40.21	9.04	9.96	0.392	7.95	0.313	5.31	30.3
C03000380750M	7.62	0.3	0.97	0.038	19.05	0.75	40.21	9.04	10.82	0.426	8.41	0.331	4.89	27.9
C03000380810M	7.62	0.3	0.97	0.038	20.57	0.81	40.21	9.04	11.68	0.46	8.92	0.351	4.52	25.8
C03000380880M	7.62	0.3	0.97	0.038	22.35	0.88	40.21	9.04	12.47	0.491	9.63	0.379	4.06	23.2
C03000380940M	7.62	0.3	0.97	0.038	23.88	0.94	40.21	9.04	13.34	0.525	10.11	0.398	3.82	21.8
C03000381000M	7.62	0.3	0.97	0.038	25.4	1	40.21	9.04	14.2	0.559	10.59	0.417	3.59	20.5
C03000381120M	7.62	0.3	0.97	0.038	28.45	1.12	40.21	9.04	15.93	0.627	11.58	0.456	3.2	18.3
C03000381250M	7.62	0.3	0.97	0.038	31.75	1.25	40.21	9.04	17.91	0.705	12.52	0.493	2.91	16.6
C03000381380M	7.62	0.3	0.97	0.038	35.05	1.38	40.21	9.04	19.89	0.783	13.51	0.532	2.64	15.1
C03000381500M	7.62	0.3	0.97	0.038	38.1	1.5	40.21	9.04	21.64	0.852	14.48	0.57	2.43	13.9
C03000381750M	7.62	0.3	0.97	0.038	44.45	1.75	40.21	9.04	25.04	0.986	17.27	0.68	1.961	11.2
C03000382000M	7.62	0.3	0.97	0.038	50.8	2	40.21	9.04	28.5	1.122	19.43	0.765	1.698	9.7
C03000382250M	7.62	0.3	0.97	0.038	57.15	2.25	40.21	9.04	31.93	1.257	20.47	0.806	1.576	9
C03000382500M	7.62	0.3	0.97	0.038	63.5	2.5	40.21	9.04	35.38	1.393	22.2	0.874	1.436	8.2
C03000400380M	7.62	0.3	1.02	0.04	9.65	0.38	43.81	9.85	6.35	0.25	5.87	0.231	13.22	75.5
C03000400440M	7.62	0.3	1.02	0.04	11.18	0.44	43.81	9.85	7.19	0.283	6.43	0.253	11.01	62.9
C03000400500M	7.62	0.3	1.02	0.04	12.7	0.5	43.81	9.85	8.05	0.317	6.99	0.275	9.44	53.9
C03000400560M	7.62	0.3	1.02	0.04	14.22	0.56	43.81	9.85	8.92	0.351	7.54	0.297	8.27	47.2
C03000400620M	7.62	0.3	1.02	0.04	15.75	0.62	43.81	9.85	9.78	0.385	8.13	0.32	7.34	41.9
C03000400690M	7.62	0.3	1.02	0.04	17.53	0.69	43.81	9.85	10.8	0.425	8.79	0.346	6.5	37.1
C03000400750M	7.62	0.3	1.02	0.04	19.05	0.75	43.81	9.85	11.66	0.459	9.35	0.368	5.92	33.8
C03000400810M	7.62	0.3	1.02	0.04	20.57	0.81	43.81	9.85	12.52	0.493	9.91	0.39	5.43	31
C03000400880M	7.62	0.3	1.02	0.04	22.35	0.88	43.81	9.85	13.51	0.532	10.57	0.416	4.96	28.3
C03000400940M	7.62	0.3	1.02	0.04	23.88	0.94	43.81	9.85	14.38	0.566	11.13	0.438	4.61	26.3
C03000401000M	7.62	0.3	1.02	0.04	25.4	1	43.81	9.85	15.24	0.6	11.68	0.46	4.31	24.6
C03000401120M	7.62	0.3	1.02	0.04	28.45	1.12	43.81	9.85	16.97	0.668	12.83	0.505	3.82	21.8
C03000401250M	7.62	0.3	1.02	0.04	31.75	1.25	43.81	9.85	18.82	0.741	14.05	0.553	3.4	19.4

Compression Springs B

Part Number	Outside Dia		Wire Dia		Free Length L, Approx.		Load P at L_1		Length L_1		Solid Height Approx.		Spring Rate, R	
	mm	in	mm	in	mm	in	N	lb	mm	in	mm	in	N/m	lb/in
C03000401380M	7.62	0.3	1.02	0.04	35.05	1.38	43.81	9.85	20.7	0.815	15.27	0.601	3.05	17.4
C03000401500M	7.62	0.3	1.02	0.04	38.1	1.5	43.81	9.85	22.4	0.882	16.38	0.645	2.8	16
C03000401750M	7.62	0.3	1.02	0.04	44.45	1.75	43.81	9.85	26.01	1.024	18.72	0.737	2.38	13.6
C03000402000M	7.62	0.3	1.02	0.04	50.8	2	43.81	9.85	29.59	1.165	21.08	0.83	2.07	11.8
C03000402250M	7.62	0.3	1.02	0.04	57.15	2.25	43.81	9.85	33.17	1.306	23.42	0.922	1.821	10.4
C03000402500M	7.62	0.3	1.02	0.04	63.5	2.5	43.81	9.85	36.78	1.448	25.78	1.015	1.646	9.4
C03000420380M	7.62	0.3	1.07	0.042	9.65	0.38	52.53	11.81	6.88	0.271	5.33	0.21	18.96	108.3
C03000420440M	7.62	0.3	1.07	0.042	11.18	0.44	52.53	11.81	7.87	0.31	5.84	0.23	15.9	90.8
C03000420500M	7.62	0.3	1.07	0.042	12.7	0.5	52.53	11.81	8.46	0.333	6.76	0.266	12.38	70.7
C03000420560M	7.62	0.3	1.07	0.042	14.22	0.56	52.53	11.81	9.25	0.364	7.47	0.294	10.54	60.2
C03000420620M	7.62	0.3	1.07	0.042	15.75	0.62	52.53	11.81	9.93	0.391	8.26	0.325	9.04	51.6
C03000420690M	7.62	0.3	1.07	0.042	17.53	0.69	52.53	11.81	10.87	0.428	9.07	0.357	7.9	45.1
C03000420750M	7.62	0.3	1.07	0.042	19.05	0.75	52.53	11.81	11.86	0.467	9.6	0.378	7.3	41.7
C03000420810M	7.62	0.3	1.07	0.042	20.57	0.81	52.53	11.81	12.55	0.494	10.39	0.409	6.55	37.4
C03000420880M	7.62	0.3	1.07	0.042	22.35	0.88	52.53	11.81	13.49	0.531	11.23	0.442	5.92	33.8
C03000420940M	7.62	0.3	1.07	0.042	23.88	0.94	52.53	11.81	14.48	0.57	11.73	0.462	5.59	31.9
C03000421000M	7.62	0.3	1.07	0.042	25.4	1	52.53	11.81	15.44	0.608	12.29	0.484	5.27	30.1
C03000421120M	7.62	0.3	1.07	0.042	28.45	1.12	52.53	11.81	17.37	0.684	13.36	0.526	4.75	27.1
C03000421250M	7.62	0.3	1.07	0.042	31.75	1.25	52.53	11.81	19.3	0.76	14.68	0.578	4.22	24.1
C03000421380M	7.62	0.3	1.07	0.042	35.05	1.38	52.53	11.81	21.21	0.835	16	0.63	3.8	21.7
C03000421500M	7.62	0.3	1.07	0.042	38.1	1.5	52.53	11.81	22.89	0.901	17.37	0.684	3.45	19.7
C03000421750M	7.62	0.3	1.07	0.042	44.45	1.75	52.53	11.81	26.95	1.061	20.17	0.794	2.87	16.4
C03000422000M	7.62	0.3	1.07	0.042	50.8	2	52.53	11.81	30.68	1.208	22.71	0.894	2.49	14.2
C03000422250M	7.62	0.3	1.07	0.042	57.15	2.25	52.53	11.81	34.42	1.355	25.27	0.995	2.21	12.6
C03000422500M	7.62	0.3	1.07	0.042	63.5	2.5	52.53	11.81	38.15	1.502	26.67	1.05	2.07	11.8
C03000450380M	7.62	0.3	1.14	0.045	9.65	0.38	63.43	14.26	6.71	0.264	6.27	0.247	21.63	123.5
C03000450440M	7.62	0.3	1.14	0.045	11.18	0.44	63.43	14.26	7.75	0.305	6.83	0.269	18.58	106.1
C03000450500M	7.62	0.3	1.14	0.045	12.7	0.5	63.43	14.26	8.79	0.346	7.42	0.292	16.21	92.6
C03000450560M	7.62	0.3	1.14	0.045	14.22	0.56	63.43	14.26	9.6	0.378	8.26	0.325	13.71	78.3
C03000450620M	7.62	0.3	1.14	0.045	15.75	0.62	63.43	14.26	10.39	0.409	9.12	0.359	11.84	67.6
C03000450690M	7.62	0.3	1.14	0.045	17.53	0.69	63.43	14.26	11.68	0.46	9.68	0.381	10.86	62
C03000450750M	7.62	0.3	1.14	0.045	19.05	0.75	63.43	14.26	12.47	0.491	10.54	0.415	9.63	55
C03000450810M	7.62	0.3	1.14	0.045	20.57	0.81	63.43	14.26	13.51	0.532	11.1	0.437	8.98	51.3
C03000450880M	7.62	0.3	1.14	0.045	22.35	0.88	63.43	14.26	14.55	0.573	11.99	0.472	8.13	46.4
C03000450940M	7.62	0.3	1.14	0.045	23.88	0.94	63.43	14.26	15.34	0.604	12.85	0.506	7.42	42.4
C03000451000M	7.62	0.3	1.14	0.045	25.4	1	63.43	14.26	16.38	0.645	13.39	0.527	7.04	40.2
C03000451120M	7.62	0.3	1.14	0.045	28.45	1.12	63.43	14.26	18.44	0.726	14.55	0.573	6.34	36.2
C03000451250M	7.62	0.3	1.14	0.045	31.75	1.25	63.43	14.26	20.55	0.809	15.98	0.629	5.66	32.3
C03000451380M	7.62	0.3	1.14	0.045	35.05	1.38	63.43	14.26	22.61	0.89	17.42	0.686	5.1	29.1
C03000451500M	7.62	0.3	1.14	0.045	38.1	1.5	63.43	14.26	24.43	0.962	18.85	0.742	4.64	26.5
C03000451750M	7.62	0.3	1.14	0.045	44.45	1.75	63.43	14.26	28.37	1.117	22.3	0.878	3.77	21.5
C03000452000M	7.62	0.3	1.14	0.045	50.8	2	63.43	14.26	32.31	1.272	25.15	0.99	3.27	18.7
C03000452250M	7.62	0.3	1.14	0.045	57.15	2.25	63.43	14.26	36.25	1.427	27.99	1.102	2.91	16.6
C03000452500M	7.62	0.3	1.14	0.045	63.5	2.5	63.43	14.26	40.16	1.581	29.72	1.17	2.73	15.6
C03000470380M	7.62	0.3	1.19	0.047	9.65	0.38	71.61	16.1	7.09	0.279	6.35	0.25	27.84	159
C03000470440M	7.62	0.3	1.19	0.047	11.18	0.44	71.61	16.1	8.05	0.317	7.09	0.279	23.01	131.4
C03000470500M	7.62	0.3	1.19	0.047	12.7	0.5	71.61	16.1	9.04	0.356	7.9	0.311	19.61	112
C03000470560M	7.62	0.3	1.19	0.047	14.22	0.56	71.61	16.1	10.03	0.395	8.71	0.343	17.09	97.6
C03000470620M	7.62	0.3	1.19	0.047	15.75	0.62	71.61	16.1	11.02	0.434	9.5	0.374	15.15	86.5
C03000470690M	7.62	0.3	1.19	0.047	17.53	0.69	71.61	16.1	12.17	0.479	10.36	0.408	13.36	76.3
C03000470750M	7.62	0.3	1.19	0.047	19.05	0.75	71.61	16.1	13.16	0.518	11.05	0.435	12.13	69.3
C03000470810M	7.62	0.3	1.19	0.047	20.57	0.81	71.61	16.1	14.12	0.556	11.71	0.461	11.12	63.5
C03000470880M	7.62	0.3	1.19	0.047	22.35	0.88	71.61	16.1	15.29	0.602	12.52	0.493	10.14	57.9
C03000470940M	7.62	0.3	1.19	0.047	23.88	0.94	71.61	16.1	16.26	0.64	13.21	0.52	9.42	53.8
C03000471000M	7.62	0.3	1.19	0.047	25.4	1	71.61	16.1	17.25	0.679	13.89	0.547	8.79	50.2
C03000471120M	7.62	0.3	1.19	0.047	28.45	1.12	71.61	16.1	19.23	0.757	15.24	0.6	7.76	44.3
C03000471250M	7.62	0.3	1.19	0.047	31.75	1.25	71.61	16.1	21.36	0.841	16.71	0.658	6.88	39.3
C03000471380M	7.62	0.3	1.19	0.047	35.05	1.38	71.61	16.1	23.5	0.925	18.21	0.717	6.2	35.4
C03000471500M	7.62	0.3	1.19	0.047	38.1	1.5	71.61	16.1	25.45	1.002	19.56	0.77	5.66	32.3
C03000471750M	7.62	0.3	1.19	0.047	44.45	1.75	71.61	16.1	29.57	1.164	22.4	0.882	4.82	27.5
C03000472000M	7.62	0.3	1.19	0.047	50.8	2	71.61	16.1	33.66	1.325	25.25	0.994	4.19	23.9
C03000472250M	7.62	0.3	1.19	0.047	57.15	2.25	71.61	16.1	37.77	1.487	28.09	1.106	3.7	21.1
C03000472500M	7.62	0.3	1.19	0.047	63.5	2.5	71.61	16.1	41.86	1.648	30.94	1.218	3.31	18.9
C03000472750M	7.62	0.3	1.19	0.047	69.85	2.75	71.61	16.1	45.97	1.81	33.78	1.33	2.99	17.1
C03000473000M	7.62	0.3	1.19	0.047	76.2	3	71.61	16.1	50.06	1.971	36.63	1.442	2.75	15.7
C03000490380M	7.62	0.3	1.24	0.049	9.65	0.38	79.98	17.98	7.24	0.285	6.68	0.263	33.18	189.5

Compression Springs B

Part Number	Outside Dia		Wire Dia		Free Length L, Approx.		Load P at L_1		Length L_1		Solid Height Approx.		Spring Rate, R	
	mm	in	mm	in	mm	in	N	lb	mm	in	mm	in	N/m	lb/in
C03000490440M	7.62	0.3	1.24	0.049	11.18	0.44	79.98	17.98	8.26	0.325	7.47	0.294	27.37	156.3
C03000490500M	7.62	0.3	1.24	0.049	12.7	0.5	79.98	17.98	9.27	0.365	8.33	0.328	23.29	133
C03000490560M	7.62	0.3	1.24	0.049	14.22	0.56	79.98	17.98	10.29	0.405	9.19	0.362	20.26	115.7
C03000490620M	7.62	0.3	1.24	0.049	15.75	0.62	79.98	17.98	11.28	0.444	10.03	0.395	17.93	102.4
C03000490690M	7.62	0.3	1.24	0.049	17.53	0.69	79.98	17.98	12.47	0.491	10.95	0.431	15.81	90.3
C03000490750M	7.62	0.3	1.24	0.049	19.05	0.75	79.98	17.98	13.49	0.531	11.68	0.46	14.36	82
C03000490810M	7.62	0.3	1.24	0.049	20.57	0.81	79.98	17.98	14.48	0.57	12.42	0.489	13.15	75.1
C03000490880M	7.62	0.3	1.24	0.049	22.35	0.88	79.98	17.98	15.67	0.617	13.28	0.523	11.98	68.4
C03000490940M	7.62	0.3	1.24	0.049	23.88	0.94	79.98	17.98	16.69	0.657	14	0.551	11.12	63.5
C03000491000M	7.62	0.3	1.24	0.049	25.4	1	79.98	17.98	17.7	0.697	14.73	0.58	10.38	59.3
C03000491120M	7.62	0.3	1.24	0.049	28.45	1.12	79.98	17.98	19.71	0.776	16.21	0.638	9.16	52.3
C03000491250M	7.62	0.3	1.24	0.049	31.75	1.25	79.98	17.98	21.89	0.862	17.78	0.7	8.13	46.4
C03000491380M	7.62	0.3	1.24	0.049	35.05	1.38	79.98	17.98	24.1	0.949	19.38	0.763	7.3	41.7
C03000491500M	7.62	0.3	1.24	0.049	38.1	1.5	79.98	17.98	26.11	1.028	20.85	0.821	6.67	38.1
C03000491750M	7.62	0.3	1.24	0.049	44.45	1.75	79.98	17.98	30.33	1.194	23.9	0.941	5.67	32.4
C03000492000M	7.62	0.3	1.24	0.049	50.8	2	79.98	17.98	34.54	1.36	26.95	1.061	4.92	28.1
C03000492250M	7.62	0.3	1.24	0.049	57.15	2.25	79.98	17.98	38.76	1.526	30	1.181	4.34	24.8
C03000492500M	7.62	0.3	1.24	0.049	63.5	2.5	79.98	17.98	42.98	1.692	33.05	1.301	3.91	22.3
C03000492750M	7.62	0.3	1.24	0.049	69.85	2.75	79.98	17.98	47.19	1.858	36.09	1.421	3.54	20.2
C03000493000M	7.62	0.3	1.24	0.049	76.2	3	79.98	17.98	51.41	2.024	39.14	1.541	3.22	18.4
C03000510380M	7.62	0.3	1.3	0.051	9.65	0.38	89.72	20.17	7.39	0.291	6.96	0.274	39.68	226.6
C03000510440M	7.62	0.3	1.3	0.051	11.18	0.44	89.72	20.17	8.43	0.332	7.82	0.308	32.64	186.4
C03000510500M	7.62	0.3	1.3	0.051	12.7	0.5	89.72	20.17	9.47	0.373	8.71	0.343	27.72	158.3
C03000510560M	7.62	0.3	1.3	0.051	14.22	0.56	89.72	20.17	10.49	0.413	9.63	0.379	24.08	137.5
C03000510620M	7.62	0.3	1.3	0.051	15.75	0.62	89.72	20.17	11.53	0.454	10.54	0.415	21.29	121.6
C03000510690M	7.62	0.3	1.3	0.051	17.53	0.69	89.72	20.17	12.75	0.502	11.51	0.453	18.75	107.1
C03000510750M	7.62	0.3	1.3	0.051	19.05	0.75	89.72	20.17	13.77	0.542	12.27	0.483	17.02	97.2
C03000510810M	7.62	0.3	1.3	0.051	20.57	0.81	89.72	20.17	14.81	0.583	13.06	0.514	15.58	89
C03000510880M	7.62	0.3	1.3	0.051	22.35	0.88	89.72	20.17	16.03	0.631	13.97	0.55	14.18	81
C03000510940M	7.62	0.3	1.3	0.051	23.88	0.94	89.72	20.17	17.07	0.672	14.73	0.58	13.17	75.2
C03000511000M	7.62	0.3	1.3	0.051	25.4	1	89.72	20.17	18.08	0.712	15.52	0.611	12.28	70.1
C03000511120M	7.62	0.3	1.3	0.051	28.45	1.12	89.72	20.17	20.17	0.794	17.07	0.672	10.84	61.9
C03000511250M	7.62	0.3	1.3	0.051	31.75	1.25	89.72	20.17	22.4	0.882	18.75	0.738	9.61	54.9
C03000511380M	7.62	0.3	1.3	0.051	35.05	1.38	89.72	20.17	24.66	0.971	20.45	0.805	8.63	49.3
C03000511500M	7.62	0.3	1.3	0.051	38.1	1.5	89.72	20.17	26.72	1.052	22	0.866	7.9	45.1
C03000511750M	7.62	0.3	1.3	0.051	44.45	1.75	89.72	20.17	31.04	1.222	25.22	0.993	6.69	38.2
C03000512000M	7.62	0.3	1.3	0.051	50.8	2	89.72	20.17	35.36	1.392	28.47	1.121	5.81	33.2
C03000512250M	7.62	0.3	1.3	0.051	57.15	2.25	89.72	20.17	39.67	1.562	31.7	1.248	5.13	29.3
C03000512500M	7.62	0.3	1.3	0.051	63.5	2.5	89.72	20.17	43.99	1.732	34.95	1.376	4.61	26.3
C03000512750M	7.62	0.3	1.3	0.051	69.85	2.75	89.72	20.17	48.31	1.902	38.18	1.503	4.17	23.8
C03000513000M	7.62	0.3	1.3	0.051	76.2	3	89.72	20.17	52.63	2.072	41.43	1.631	3.8	21.7
C03600260500M	9.14	0.36	0.66	0.026	12.7	0.5	11.65	2.62	5.46	0.215	2.97	0.117	1.611	9.2
C03600260560M	9.14	0.36	0.66	0.026	14.22	0.56	11.65	2.62	6.07	0.239	3.12	0.123	1.436	8.2
C03600260620M	9.14	0.36	0.66	0.026	15.75	0.62	11.65	2.62	6.71	0.264	3.28	0.129	1.296	7.4
C03600260690M	9.14	0.36	0.66	0.026	17.53	0.69	11.65	2.62	7.57	0.298	3.45	0.136	1.173	6.7
C03600260750M	9.14	0.36	0.66	0.026	19.05	0.75	11.65	2.62	8.2	0.323	3.63	0.143	1.068	6.1
C03600260810M	9.14	0.36	0.66	0.026	20.57	0.81	11.65	2.62	8.81	0.347	3.76	0.148	0.998	5.7
C03600260880M	9.14	0.36	0.66	0.026	22.35	0.88	11.65	2.62	8.79	0.346	4.11	0.162	0.858	4.9
C03600260940M	9.14	0.36	0.66	0.026	23.88	0.94	11.65	2.62	9.91	0.39	4.29	0.169	0.805	4.6
C03600261000M	9.14	0.36	0.66	0.026	25.4	1	11.65	2.62	9.12	0.359	4.6	0.181	0.718	4.1
C03600261120M	9.14	0.36	0.66	0.026	28.45	1.12	11.65	2.62	11.25	0.443	4.75	0.187	0.683	3.9
C03600261250M	9.14	0.36	0.66	0.026	31.75	1.25	11.65	2.62	13.13	0.517	5.41	0.213	0.595	3.4
C03600261500M	9.14	0.36	0.66	0.026	38.1	1.5	11.65	2.62	15.6	0.614	6.15	0.242	0.49	2.8
C03600261750M	9.14	0.36	0.66	0.026	44.45	1.75	11.65	2.62	16.56	0.652	6.86	0.27	0.42	2.4
C03600262000M	9.14	0.36	0.66	0.026	50.8	2	11.65	2.62	18.8	0.74	7.57	0.298	0.368	2.1
C03600290500M	9.14	0.36	0.74	0.029	12.7	0.5	15.03	3.38	6.06	0.238	3.81	0.15	2.26	12.9
C03600290560M	9.14	0.36	0.74	0.029	14.22	0.56	15.03	3.38	6.68	0.263	4.04	0.159	1.996	11.4
C03600290620M	9.14	0.36	0.74	0.029	15.75	0.62	15.03	3.38	7.29	0.287	4.24	0.167	1.786	10.2
C03600290690M	9.14	0.36	0.74	0.029	17.53	0.69	15.03	3.38	8.03	0.316	4.5	0.177	1.576	9
C03600290750M	9.14	0.36	0.74	0.029	19.05	0.75	15.03	3.38	8.66	0.341	4.72	0.186	1.436	8.2
C03600290810M	9.14	0.36	0.74	0.029	20.57	0.81	15.03	3.38	9.27	0.365	4.93	0.194	1.331	7.6
C03600290880M	9.14	0.36	0.74	0.029	22.35	0.88	15.03	3.38	10	0.394	5.18	0.204	1.208	6.9
C03600290940M	9.14	0.36	0.74	0.029	23.88	0.94	15.03	3.38	10.62	0.418	5.41	0.213	1.138	6.5
C03600291000M	9.14	0.36	0.74	0.029	25.4	1	15.03	3.38	11.25	0.443	5.61	0.221	1.068	6.1
C03600291120M	9.14	0.36	0.74	0.029	28.45	1.12	15.03	3.38	12.5	0.492	6.05	0.238	0.946	5.4
C03600291250M	9.14	0.36	0.74	0.029	31.75	1.25	15.03	3.38	13.84	0.545	6.53	0.257	0.84	4.8

Compression Springs B

Part Number	Outside Dia		Wire Dia		Free Length L, Approx.		Load P at L_1		Length L_1		Solid Height Approx.		Spring Rate, R	
	mm	in	mm	in	mm	in	N	lb	mm	in	mm	in	N/m	lb/in
C03600291380M	9.14	0.36	0.74	0.029	35.05	1.38	15.03	3.38	15.19	0.598	6.99	0.275	0.753	4.3
C03600291500M	9.14	0.36	0.74	0.029	38.1	1.5	15.03	3.38	16.43	0.647	7.42	0.292	0.7	4
C03600291750M	9.14	0.36	0.74	0.029	44.45	1.75	15.03	3.38	19.02	0.749	8.33	0.328	0.595	3.4
C03600292000M	9.14	0.36	0.74	0.029	50.8	2	15.03	3.38	21.62	0.851	9.25	0.364	0.508	2.9
C03600320380M	9.14	0.36	0.81	0.032	9.65	0.38	21	4.72	4.83	0.19	3.84	0.151	4.34	24.8
C03600320440M	9.14	0.36	0.81	0.032	11.18	0.44	21	4.72	5.44	0.214	4.11	0.162	3.64	20.8
C03600320500M	9.14	0.36	0.81	0.032	12.7	0.5	21	4.72	6.02	0.237	4.04	0.159	3.13	17.9
C03600320560M	9.14	0.36	0.81	0.032	14.22	0.56	21	4.72	6.86	0.27	4.24	0.167	2.85	16.3
C03600320620M	9.14	0.36	0.81	0.032	15.75	0.62	21	4.72	7.72	0.304	4.45	0.175	2.61	14.9
C03600320690M	9.14	0.36	0.81	0.032	17.53	0.69	21	4.72	8.15	0.321	4.85	0.191	2.24	12.8
C03600320750M	9.14	0.36	0.81	0.032	19.05	0.75	21	4.72	9.02	0.355	5.05	0.199	2.08	11.9
C03600320810M	9.14	0.36	0.81	0.032	20.57	0.81	21	4.72	9.86	0.388	5.26	0.207	1.961	11.2
C03600320880M	9.14	0.36	0.81	0.032	22.35	0.88	21	4.72	10.31	0.406	5.69	0.224	1.733	9.9
C03600320940M	9.14	0.36	0.81	0.032	23.88	0.94	21	4.72	11.15	0.439	5.87	0.231	1.646	9.4
C03600321000M	9.14	0.36	0.81	0.032	25.4	1	21	4.72	11.35	0.447	6.27	0.247	1.488	8.5
C03600321120M	9.14	0.36	0.81	0.032	28.45	1.12	21	4.72	12.4	0.488	6.86	0.27	1.313	7.5
C03600321250M	9.14	0.36	0.81	0.032	31.75	1.25	21	4.72	14.61	0.575	7.7	0.303	1.156	6.6
C03600321380M	9.14	0.36	0.81	0.032	35.05	1.38	21	4.72	14.99	0.59	8.05	0.317	1.051	6
C03600321500M	9.14	0.36	0.81	0.032	38.1	1.5	21	4.72	16.03	0.631	8.74	0.344	0.946	5.4
C03600321750M	9.14	0.36	0.81	0.032	44.45	1.75	21	4.72	20.06	0.79	9.93	0.391	0.805	4.6
C03600322000M	9.14	0.36	0.81	0.032	50.8	2	21	4.72	22.81	0.898	11.02	0.434	0.7	4
C03600322250M	9.14	0.36	0.81	0.032	57.15	2.25	21	4.72	25.53	1.005	11.79	0.464	0.665	3.8
C03600322500M	9.14	0.36	0.81	0.032	63.5	2.5	21	4.72	28.27	1.113	12.65	0.498	0.595	3.4
C03600350440M	9.14	0.36	0.89	0.035	11.18	0.44	25.49	5.73	6.05	0.238	4.62	0.182	4.97	28.4
C03600350500M	9.14	0.36	0.89	0.035	12.7	0.5	25.49	5.73	6.73	0.265	4.95	0.195	4.27	24.4
C03600350560M	9.14	0.36	0.89	0.035	14.22	0.56	25.49	5.73	7.44	0.293	5.28	0.208	3.75	21.4
C03600350620M	9.14	0.36	0.89	0.035	15.75	0.62	25.49	5.73	8.13	0.32	5.59	0.22	3.34	19.1
C03600350690M	9.14	0.36	0.89	0.035	17.53	0.69	25.49	5.73	8.94	0.352	5.97	0.235	2.96	16.9
C03600350750M	9.14	0.36	0.89	0.035	19.05	0.75	25.49	5.73	9.63	0.379	6.27	0.247	2.7	15.4
C03600350810M	9.14	0.36	0.89	0.035	20.57	0.81	25.49	5.73	10.31	0.406	6.6	0.26	2.49	14.2
C03600350880M	9.14	0.36	0.89	0.035	22.35	0.88	25.49	5.73	11.13	0.438	6.99	0.275	2.28	13
C03600350940M	9.14	0.36	0.89	0.035	23.88	0.94	25.49	5.73	11.81	0.465	7.29	0.287	2.12	12.1
C03600351000M	9.14	0.36	0.89	0.035	25.4	1	25.49	5.73	12.52	0.493	7.62	0.3	1.979	11.3
C03600351120M	9.14	0.36	0.89	0.035	28.45	1.12	25.49	5.73	13.89	0.547	8.26	0.325	1.751	10
C03600351250M	9.14	0.36	0.89	0.035	31.75	1.25	25.49	5.73	15.39	0.606	8.94	0.352	1.558	8.9
C03600351380M	9.14	0.36	0.89	0.035	35.05	1.38	25.49	5.73	16.89	0.665	9.63	0.379	1.401	8
C03600351500M	9.14	0.36	0.89	0.035	38.1	1.5	25.49	5.73	18.29	0.72	10.26	0.404	1.278	7.3
C03600351750M	9.14	0.36	0.89	0.035	44.45	1.75	25.49	5.73	21.18	0.834	11.61	0.457	1.103	6.3
C03600352000M	9.14	0.36	0.89	0.035	50.8	2	25.49	5.73	24.05	0.947	12.93	0.509	0.946	5.4
C03600352250M	9.14	0.36	0.89	0.035	57.15	2.25	25.49	5.73	26.95	1.061	14.27	0.562	0.84	4.8
C03600352500M	9.14	0.36	0.89	0.035	63.5	2.5	25.49	5.73	29.82	1.174	15.6	0.614	0.753	4.3
C03600380440M	9.14	0.36	0.97	0.038	11.18	0.44	33.94	7.63	5.99	0.236	4.83	0.19	6.55	37.4
C03600380500M	9.14	0.36	0.97	0.038	12.7	0.5	33.94	7.63	7.01	0.276	5.05	0.199	5.97	34.1
C03600380560M	9.14	0.36	0.97	0.038	14.22	0.56	33.94	7.63	7.49	0.295	5.54	0.218	5.04	28.8
C03600380620M	9.14	0.36	0.97	0.038	15.75	0.62	33.94	7.63	7.98	0.314	6.02	0.237	4.36	24.9
C03600380690M	9.14	0.36	0.97	0.038	17.53	0.69	33.94	7.63	8.74	0.344	6.5	0.256	3.87	22.1
C03600380750M	9.14	0.36	0.97	0.038	19.05	0.75	33.94	7.63	9.73	0.383	6.76	0.266	3.64	20.8
C03600380810M	9.14	0.36	0.97	0.038	20.57	0.81	33.94	7.63	10.24	0.403	7.24	0.285	3.27	18.7
C03600380880M	9.14	0.36	0.97	0.038	22.35	0.88	33.94	7.63	10.97	0.432	7.72	0.304	2.98	17
C03600380940M	9.14	0.36	0.97	0.038	23.88	0.94	33.94	7.63	11.46	0.451	8.2	0.323	2.73	15.6
C03600381000M	9.14	0.36	0.97	0.038	25.4	1	33.94	7.63	12.47	0.491	8.43	0.332	2.63	15
C03600381120M	9.14	0.36	0.97	0.038	28.45	1.12	33.94	7.63	13.44	0.529	9.4	0.37	2.26	12.9
C03600381250M	9.14	0.36	0.97	0.038	31.75	1.25	33.94	7.63	15.19	0.598	10.13	0.399	2.05	11.7
C03600381380M	9.14	0.36	0.97	0.038	35.05	1.38	33.94	7.63	16.43	0.647	11.1	0.437	1.821	10.4
C03600381500M	9.14	0.36	0.97	0.038	38.1	1.5	33.94	7.63	19.43	0.765	11.81	0.465	1.681	9.6
C03600381750M	9.14	0.36	0.97	0.038	44.45	1.75	33.94	7.63	22.33	0.879	13.36	0.526	1.453	8.3
C03600382000M	9.14	0.36	0.97	0.038	50.8	2	33.94	7.63	25.37	0.999	14.91	0.587	1.261	7.2
C03600382250M	9.14	0.36	0.97	0.038	57.15	2.25	33.94	7.63	28.42	1.119	16.48	0.649	1.121	6.4
C03600382500M	9.14	0.36	0.97	0.038	63.5	2.5	33.94	7.63	31.47	1.239	18.06	0.711	0.998	5.7
C03600400440M	9.14	0.36	1.02	0.04	11.18	0.44	37.01	8.32	6.58	0.259	5.54	0.218	8.06	46
C03600400500M	9.14	0.36	1.02	0.04	12.7	0.5	37.01	8.32	7.34	0.289	5.94	0.234	6.9	39.4
C03600400560M	9.14	0.36	1.02	0.04	14.22	0.56	37.01	8.32	8.1	0.319	6.35	0.25	6.04	34.5
C03600400620M	9.14	0.36	1.02	0.04	15.75	0.62	37.01	8.32	8.86	0.349	6.78	0.267	5.38	30.7
C03600400690M	9.14	0.36	1.02	0.04	17.53	0.69	37.01	8.32	9.73	0.383	7.26	0.286	4.75	27.1
C03600400750M	9.14	0.36	1.02	0.04	19.05	0.75	37.01	8.32	10.49	0.413	7.67	0.302	4.33	24.7
C03600400810M	9.14	0.36	1.02	0.04	20.57	0.81	37.01	8.32	11.25	0.443	8.08	0.318	3.98	22.7

Part Number	Outside Dia		Wire Dia		Free Length L, Approx.		Load P at L_1		Length L_1		Solid Height Approx.		Spring Rate, R	
	mm	in	mm	in	mm	in	N	lb	mm	in	mm	in	N/m	lb/in
C03600400880M	9.14	0.36	1.02	0.04	22.35	0.88	37.01	8.32	12.14	0.478	8.56	0.337	3.63	20.7
C03600400940M	9.14	0.36	1.02	0.04	23.88	0.94	37.01	8.32	12.9	0.508	8.97	0.353	3.36	19.2
C03600401000M	9.14	0.36	1.02	0.04	25.4	1	37.01	8.32	13.64	0.537	9.4	0.37	3.15	18
C03600401120M	9.14	0.36	1.02	0.04	28.45	1.12	37.01	8.32	15.16	0.597	10.21	0.402	2.78	15.9
C03600401250M	9.14	0.36	1.02	0.04	31.75	1.25	37.01	8.32	16.81	0.662	11.13	0.438	2.47	14.1
C03600401380M	9.14	0.36	1.02	0.04	35.05	1.38	37.01	8.32	18.44	0.726	12.01	0.473	2.22	12.7
C03600401500M	9.14	0.36	1.02	0.04	38.1	1.5	37.01	8.32	19.96	0.786	12.83	0.505	2.05	11.7
C03600401750M	9.14	0.36	1.02	0.04	44.45	1.75	37.01	8.32	23.11	0.91	14.55	0.573	1.733	9.9
C03600402000M	9.14	0.36	1.02	0.04	50.8	2	37.01	8.32	26.29	1.035	16.28	0.641	1.506	8.6
C03600402250M	9.14	0.36	1.02	0.04	57.15	2.25	37.01	8.32	29.44	1.159	18.01	0.709	1.331	7.6
C03600402500M	9.14	0.36	1.02	0.04	63.5	2.5	37.01	8.32	32.59	1.283	19.74	0.777	1.191	6.8
C03600420440M	9.14	0.36	1.07	0.042	11.18	0.44	44.48	10	6.81	0.268	5.31	0.209	10.17	58.1
C03600420500M	9.14	0.36	1.07	0.042	12.7	0.5	44.48	10	7.44	0.293	5.87	0.231	8.46	48.3
C03600420560M	9.14	0.36	1.07	0.042	14.22	0.56	44.48	10	8.08	0.318	6.4	0.252	7.23	41.3
C03600420620M	9.14	0.36	1.07	0.042	15.75	0.62	44.48	10	9.17	0.361	6.65	0.262	6.76	38.6
C03600420690M	9.14	0.36	1.07	0.042	17.53	0.69	44.48	10	10.06	0.396	7.21	0.284	5.95	34
C03600420750M	9.14	0.36	1.07	0.042	19.05	0.75	44.48	10	10.72	0.422	7.65	0.301	5.41	30.9
C03600420810M	9.14	0.36	1.07	0.042	20.57	0.81	44.48	10	11.35	0.447	8.28	0.326	4.82	27.5
C03600420880M	9.14	0.36	1.07	0.042	22.35	0.88	44.48	10	12.27	0.483	8.79	0.346	4.42	25.2
C03600420940M	9.14	0.36	1.07	0.042	23.88	0.94	44.48	10	12.9	0.508	9.35	0.368	4.04	23.1
C03600421000M	9.14	0.36	1.07	0.042	25.4	1	44.48	10	13.56	0.534	9.86	0.388	3.77	21.5
C03600421120M	9.14	0.36	1.07	0.042	28.45	1.12	44.48	10	14.86	0.585	10.92	0.43	3.27	18.7
C03600421250M	9.14	0.36	1.07	0.042	31.75	1.25	44.48	10	16.84	0.663	11.76	0.463	2.98	17
C03600421380M	9.14	0.36	1.07	0.042	35.05	1.38	44.48	10	18.82	0.741	12.57	0.495	2.73	15.6
C03600421500M	9.14	0.36	1.07	0.042	38.1	1.5	44.48	10	20.55	0.809	13.34	0.525	2.54	14.5
C03600421750M	9.14	0.36	1.07	0.042	44.45	1.75	44.48	10	23.93	0.942	15.77	0.621	2.07	11.8
C03600422000M	9.14	0.36	1.07	0.042	50.8	2	44.48	10	27.2	1.071	17.65	0.695	1.804	10.3
C03600422250M	9.14	0.36	1.07	0.042	57.15	2.25	44.48	10	30.48	1.2	19.56	0.77	1.593	9.1
C03600422500M	9.14	0.36	1.07	0.042	63.5	2.5	44.48	10	33.73	1.328	21.44	0.844	1.418	8.1
C03600450440M	9.14	0.36	1.14	0.045	11.18	0.44	53.78	12.09	7.29	0.287	5.69	0.224	13.83	79
C03600450500M	9.14	0.36	1.14	0.045	12.7	0.5	53.78	12.09	8.03	0.316	6.27	0.247	11.5	65.7
C03600450560M	9.14	0.36	1.14	0.045	14.22	0.56	53.78	12.09	8.76	0.345	6.86	0.27	9.84	56.2
C03600450620M	9.14	0.36	1.14	0.045	15.75	0.62	53.78	12.09	9.5	0.374	7.42	0.292	8.6	49.1
C03600450690M	9.14	0.36	1.14	0.045	17.53	0.69	53.78	12.09	10.52	0.414	7.98	0.314	7.67	43.8
C03600450750M	9.14	0.36	1.14	0.045	19.05	0.75	53.78	12.09	11.25	0.443	8.56	0.337	6.9	39.4
C03600450810M	9.14	0.36	1.14	0.045	20.57	0.81	53.78	12.09	11.99	0.472	9.12	0.359	6.27	35.8
C03600450880M	9.14	0.36	1.14	0.045	22.35	0.88	53.78	12.09	13	0.512	9.7	0.382	5.74	32.8
C03600450940M	9.14	0.36	1.14	0.045	23.88	0.94	53.78	12.09	13.74	0.541	10.26	0.404	5.31	30.3
C03600451000M	9.14	0.36	1.14	0.045	25.4	1	53.78	12.09	14.48	0.57	10.85	0.427	4.92	28.1
C03600451120M	9.14	0.36	1.14	0.045	28.45	1.12	53.78	12.09	15.98	0.629	11.99	0.472	4.31	24.6
C03600451250M	9.14	0.36	1.14	0.045	31.75	1.25	53.78	12.09	17.73	0.698	13.11	0.516	3.84	21.9
C03600451380M	9.14	0.36	1.14	0.045	35.05	1.38	53.78	12.09	19.46	0.766	14.27	0.562	3.45	19.7
C03600451500M	9.14	0.36	1.14	0.045	38.1	1.5	53.78	12.09	20.96	0.825	15.42	0.607	3.13	17.9
C03600451750M	9.14	0.36	1.14	0.045	44.45	1.75	53.78	12.09	25.15	0.99	17.63	0.694	2.66	15.2
C03600452000M	9.14	0.36	1.14	0.045	50.8	2	53.78	12.09	28.6	1.126	19.76	0.778	2.31	13.2
C03600452250M	9.14	0.36	1.14	0.045	57.15	2.25	53.78	12.09	32.03	1.261	21.89	0.862	2.05	11.7
C03600452500M	9.14	0.36	1.14	0.045	63.5	2.5	53.78	12.09	35.48	1.397	24.03	0.946	1.839	10.5
C03600452750M	9.14	0.36	1.14	0.045	69.85	2.75	53.78	12.09	38.91	1.532	25.15	0.99	1.733	9.9
C03600470440M	9.14	0.36	1.19	0.047	11.18	0.44	57.87	13.01	7.59	0.299	6.53	0.257	16.21	92.6
C03600470500M	9.14	0.36	1.19	0.047	12.7	0.5	57.87	13.01	8.51	0.335	7.04	0.277	13.82	78.9
C03600470560M	9.14	0.36	1.19	0.047	14.22	0.56	57.87	13.01	9.42	0.371	7.54	0.297	12.03	68.7
C03600470620M	9.14	0.36	1.19	0.047	15.75	0.62	57.87	13.01	10.31	0.406	8.08	0.318	10.66	60.9
C03600470690M	9.14	0.36	1.19	0.047	17.53	0.69	57.87	13.01	11.38	0.448	8.66	0.341	9.4	53.7
C03600470750M	9.14	0.36	1.19	0.047	19.05	0.75	57.87	13.01	12.29	0.484	9.17	0.361	8.55	48.8
C03600470810M	9.14	0.36	1.19	0.047	20.57	0.81	57.87	13.01	13.18	0.519	9.68	0.381	7.83	44.7
C03600470880M	9.14	0.36	1.19	0.047	22.35	0.88	57.87	13.01	14.25	0.561	10.29	0.405	7.13	40.7
C03600470940M	9.14	0.36	1.19	0.047	23.88	0.94	57.87	13.01	15.14	0.596	10.8	0.425	6.64	37.9
C03600471000M	9.14	0.36	1.19	0.047	25.4	1	57.87	13.01	16.05	0.632	11.3	0.445	6.18	35.3
C03600471120M	9.14	0.36	1.19	0.047	28.45	1.12	57.87	13.01	17.86	0.703	12.32	0.485	5.46	31.2
C03600471250M	9.14	0.36	1.19	0.047	31.75	1.25	57.87	13.01	19.81	0.78	13.44	0.529	4.85	27.7
C03600471380M	9.14	0.36	1.19	0.047	35.05	1.38	57.87	13.01	21.79	0.858	14.55	0.573	4.36	24.9
C03600471500M	9.14	0.36	1.19	0.047	38.1	1.5	57.87	13.01	23.6	0.929	15.57	0.613	3.99	22.8
C03600471750M	9.14	0.36	1.19	0.047	44.45	1.75	57.87	13.01	27.36	1.077	17.7	0.697	3.38	19.3
C03600472000M	9.14	0.36	1.19	0.047	50.8	2	57.87	13.01	31.14	1.226	19.84	0.781	2.94	16.8
C03600472250M	9.14	0.36	1.19	0.047	57.15	2.25	57.87	13.01	34.9	1.374	21.97	0.865	2.61	14.9
C03600472500M	9.14	0.36	1.19	0.047	63.5	2.5	57.87	13.01	38.68	1.523	24.1	0.949	2.33	13.3

Compression Springs B

Part Number	Outside Dia		Wire Dia		Free Length L, Approx.		Load P at L_1		Length L_1		Solid Height Approx.		Spring Rate, R	
	mm	in	mm	in	mm	in	N	lb	mm	in	mm	in	N/m	lb/in
C03600472750M	9.14	0.36	1.19	0.047	69.85	2.75	57.87	13.01	42.44	1.671	26.24	1.033	2.12	12.1
C03600473000M	9.14	0.36	1.19	0.047	76.2	3	57.87	13.01	46.2	1.819	28.37	1.117	1.926	11
C03600473250M	9.14	0.36	1.19	0.047	82.55	3.25	57.87	13.01	49.99	1.968	30.51	1.201	1.769	10.1
C03600473500M	9.14	0.36	1.19	0.047	88.9	3.5	57.87	13.01	53.75	2.116	32.61	1.284	1.646	9.4
C03600490440M	9.14	0.36	1.24	0.049	11.18	0.44	64.72	14.55	7.77	0.306	6.88	0.271	19.03	108.7
C03600490500M	9.14	0.36	1.24	0.049	12.7	0.5	64.72	14.55	8.71	0.343	7.44	0.293	16.2	92.5
C03600490560M	9.14	0.36	1.24	0.049	14.22	0.56	64.72	14.55	9.63	0.379	8	0.315	14.1	80.5
C03600490620M	9.14	0.36	1.24	0.049	15.75	0.62	64.72	14.55	10.57	0.416	8.53	0.336	12.47	71.2
C03600490690M	9.14	0.36	1.24	0.049	17.53	0.69	64.72	14.55	11.63	0.458	9.19	0.362	11	62.8
C03600490750M	9.14	0.36	1.24	0.049	19.05	0.75	64.72	14.55	12.57	0.495	9.75	0.384	9.98	57
C03600490810M	9.14	0.36	1.24	0.049	20.57	0.81	64.72	14.55	13.51	0.532	10.29	0.405	9.14	52.2
C03600490880M	9.14	0.36	1.24	0.049	22.35	0.88	64.72	14.55	14.58	0.574	10.95	0.431	8.34	47.6
C03600490940M	9.14	0.36	1.24	0.049	23.88	0.94	64.72	14.55	15.52	0.611	11.51	0.453	7.74	44.2
C03600491000M	9.14	0.36	1.24	0.049	25.4	1	64.72	14.55	16.43	0.647	12.04	0.474	7.21	41.2
C03600491120M	9.14	0.36	1.24	0.049	28.45	1.12	64.72	14.55	18.29	0.72	13.16	0.518	6.37	36.4
C03600491250M	9.14	0.36	1.24	0.049	31.75	1.25	64.72	14.55	20.29	0.799	14.35	0.565	5.66	32.3
C03600491380M	9.14	0.36	1.24	0.049	35.05	1.38	64.72	14.55	22.33	0.879	15.54	0.612	5.08	29
C03600491500M	9.14	0.36	1.24	0.049	38.1	1.5	64.72	14.55	24.18	0.952	16.66	0.656	4.64	26.5
C03600491750M	9.14	0.36	1.24	0.049	44.45	1.75	64.72	14.55	28.04	1.104	18.97	0.747	3.94	22.5
C03600492000M	9.14	0.36	1.24	0.049	50.8	2	64.72	14.55	31.9	1.256	21.26	0.837	3.43	19.6
C03600492250M	9.14	0.36	1.24	0.049	57.15	2.25	64.72	14.55	35.76	1.408	23.57	0.928	3.03	17.3
C03600492500M	9.14	0.36	1.24	0.049	63.5	2.5	64.72	14.55	39.65	1.561	25.88	1.019	2.71	15.5
C03600492750M	9.14	0.36	1.24	0.049	69.85	2.75	64.72	14.55	43.51	1.713	28.19	1.11	2.45	14
C03600493000M	9.14	0.36	1.24	0.049	76.2	3	64.72	14.55	47.37	1.865	30.48	1.2	2.24	12.8
C03600493250M	9.14	0.36	1.24	0.049	82.55	3.25	64.72	14.55	51.23	2.017	32.79	1.291	2.07	11.8
C03600493500M	9.14	0.36	1.24	0.049	88.9	3.5	64.72	14.55	55.09	2.169	35.1	1.382	1.909	10.9
C03600510440M	9.14	0.36	1.3	0.051	11.18	0.44	72.68	16.34	7.9	0.311	7.26	0.286	22.2	126.8
C03600510500M	9.14	0.36	1.3	0.051	12.7	0.5	72.68	16.34	8.84	0.348	7.85	0.309	18.86	107.7
C03600510560M	9.14	0.36	1.3	0.051	14.22	0.56	72.68	16.34	9.78	0.385	8.46	0.333	16.39	93.6
C03600510620M	9.14	0.36	1.3	0.051	15.75	0.62	72.68	16.34	10.72	0.422	9.04	0.356	14.48	82.7
C03600510690M	9.14	0.36	1.3	0.051	17.53	0.69	72.68	16.34	11.84	0.466	9.75	0.384	12.77	72.9
C03600510750M	9.14	0.36	1.3	0.051	19.05	0.75	72.68	16.34	12.78	0.503	10.34	0.407	11.57	66.1
C03600510810M	9.14	0.36	1.3	0.051	20.57	0.81	72.68	16.34	13.72	0.54	10.95	0.431	10.59	60.5
C03600510880M	9.14	0.36	1.3	0.051	22.35	0.88	72.68	16.34	14.81	0.583	11.63	0.458	9.65	55.1
C03600510940M	9.14	0.36	1.3	0.051	23.88	0.94	72.68	16.34	15.75	0.62	12.24	0.482	8.95	51.1
C03600511000M	9.14	0.36	1.3	0.051	25.4	1	72.68	16.34	16.71	0.658	12.83	0.505	8.35	47.7
C03600511120M	9.14	0.36	1.3	0.051	28.45	1.12	72.68	16.34	18.59	0.732	14.02	0.552	7.37	42.1
C03600511250M	9.14	0.36	1.3	0.051	31.75	1.25	72.68	16.34	20.62	0.812	15.32	0.603	6.53	37.3
C03600511380M	9.14	0.36	1.3	0.051	35.05	1.38	72.68	16.34	22.68	0.893	16.61	0.654	5.87	33.5
C03600511500M	9.14	0.36	1.3	0.051	38.1	1.5	72.68	16.34	24.56	0.967	17.81	0.701	5.38	30.7
C03600511750M	9.14	0.36	1.3	0.051	44.45	1.75	72.68	16.34	28.5	1.122	20.32	0.8	4.55	26
C03600512000M	9.14	0.36	1.3	0.051	50.8	2	72.68	16.34	32.41	1.276	22.81	0.898	3.96	22.6
C03600512250M	9.14	0.36	1.3	0.051	57.15	2.25	72.68	16.34	36.35	1.431	25.3	0.996	3.48	19.9
C03600512500M	9.14	0.36	1.3	0.051	63.5	2.5	72.68	16.34	40.28	1.586	27.79	1.094	3.13	17.9
C03600512750M	9.14	0.36	1.3	0.051	69.85	2.75	72.68	16.34	44.2	1.74	30.28	1.192	2.84	16.2
C03600513000M	9.14	0.36	1.3	0.051	76.2	3	72.68	16.34	48.13	1.895	32.77	1.29	2.59	14.8
C03600513250M	9.14	0.36	1.3	0.051	82.55	3.25	72.68	16.34	52.07	2.05	35.26	1.388	2.38	13.6
C03600513500M	9.14	0.36	1.3	0.051	88.9	3.5	72.68	16.34	55.98	2.204	37.74	1.486	2.21	12.6
C03600550440M	9.14	0.36	1.4	0.055	11.18	0.44	89.58	20.14	8.26	0.325	7.87	0.31	30.75	175.6
C03600550500M	9.14	0.36	1.4	0.055	12.7	0.5	89.58	20.14	9.25	0.364	8.56	0.337	26.02	148.6
C03600550560M	9.14	0.36	1.4	0.055	14.22	0.56	89.58	20.14	10.26	0.404	9.22	0.363	22.55	128.8
C03600550620M	9.14	0.36	1.4	0.055	15.75	0.62	89.58	20.14	11.25	0.443	9.88	0.389	19.89	113.6
C03600550690M	9.14	0.36	1.4	0.055	17.53	0.69	89.58	20.14	12.4	0.488	10.67	0.42	17.49	99.9
C03600550750M	9.14	0.36	1.4	0.055	19.05	0.75	89.58	20.14	13.41	0.528	11.35	0.447	15.86	90.6
C03600550810M	9.14	0.36	1.4	0.055	20.57	0.81	89.58	20.14	14.4	0.567	12.01	0.473	14.5	82.8
C03600550880M	9.14	0.36	1.4	0.055	22.35	0.88	89.58	20.14	15.54	0.612	12.8	0.504	13.19	75.3
C03600550940M	9.14	0.36	1.4	0.055	23.88	0.94	89.58	20.14	16.56	0.652	13.46	0.53	12.22	69.8
C03600551000M	9.14	0.36	1.4	0.055	25.4	1	89.58	20.14	17.55	0.691	14.15	0.557	11.4	65.1
C03600551120M	9.14	0.36	1.4	0.055	28.45	1.12	89.58	20.14	19.53	0.769	15.47	0.609	10.05	57.4
C03600551250M	9.14	0.36	1.4	0.055	31.75	1.25	89.58	20.14	21.69	0.854	16.94	0.667	8.9	50.8
C03600551380M	9.14	0.36	1.4	0.055	35.05	1.38	89.58	20.14	23.85	0.939	18.39	0.724	7.99	45.6
C03600551500M	9.14	0.36	1.4	0.055	38.1	1.5	89.58	20.14	25.83	1.017	19.74	0.777	7.3	41.7
C03600551750M	9.14	0.36	1.4	0.055	44.45	1.75	89.58	20.14	29.97	1.18	22.53	0.887	6.18	35.3
C03600552000M	9.14	0.36	1.4	0.055	50.8	2	89.58	20.14	34.11	1.343	25.32	0.997	5.38	30.7
C03600552250M	9.14	0.36	1.4	0.055	57.15	2.25	89.58	20.14	38.25	1.506	28.12	1.107	4.75	27.1
C03600552500M	9.14	0.36	1.4	0.055	63.5	2.5	89.58	20.14	42.42	1.67	30.91	1.217	4.24	24.2

Compression Springs B

Part Number	Outside Dia		Wire Dia		Free Length L_0 Approx.		Load P at L_1		Length L_1		Solid Height Approx.		Spring Rate, R	
	mm	in	mm	in	mm	in	N	lb	mm	in	mm	in	N/m	lb/in
C03600552750M	9.14	0.36	1.4	0.055	69.85	2.75	89.58	20.14	46.56	1.833	33.71	1.327	3.85	22
C03600553000M	9.14	0.36	1.4	0.055	76.2	3	89.58	20.14	50.7	1.996	36.5	1.437	3.52	20.1
C03600553250M	9.14	0.36	1.4	0.055	82.55	3.25	89.58	20.14	54.84	2.159	39.29	1.547	3.24	18.5
C03600553500M	9.14	0.36	1.4	0.055	88.9	3.5	89.58	20.14	58.98	2.322	42.09	1.657	2.99	17.1
C03600590440M	9.14	0.36	1.5	0.059	11.18	0.44	108.22	24.33	8.59	0.338	8.15	0.321	41.67	238
C03600590500M	9.14	0.36	1.5	0.059	12.7	0.5	108.22	24.33	9.63	0.379	9.04	0.356	35.13	200.6
C03600590560M	9.14	0.36	1.5	0.059	14.22	0.56	108.22	24.33	10.67	0.42	9.86	0.388	30.36	173.4
C03600590620M	9.14	0.36	1.5	0.059	15.75	0.62	108.22	24.33	11.71	0.461	10.69	0.421	26.74	152.7
C03600590690M	9.14	0.36	1.5	0.059	17.53	0.69	108.22	24.33	12.9	0.508	11.63	0.458	23.46	134
C03600590750M	9.14	0.36	1.5	0.059	19.05	0.75	108.22	24.33	13.94	0.549	12.4	0.488	21.24	121.3
C03600590810M	9.14	0.36	1.5	0.059	20.57	0.81	108.22	24.33	14.99	0.59	13.13	0.517	19.4	110.8
C03600590880M	9.14	0.36	1.5	0.059	22.35	0.88	108.22	24.33	16.21	0.638	14.02	0.552	17.62	100.6
C03600590940M	9.14	0.36	1.5	0.059	23.88	0.94	108.22	24.33	17.25	0.679	14.76	0.581	16.32	93.2
C03600591000M	9.14	0.36	1.5	0.059	25.4	1	108.22	24.33	18.29	0.72	15.52	0.611	15.22	86.9
C03600591120M	9.14	0.36	1.5	0.059	28.45	1.12	108.22	24.33	20.37	0.802	17.02	0.67	13.4	76.5
C03600591250M	9.14	0.36	1.5	0.059	31.75	1.25	108.22	24.33	22.63	0.891	18.64	0.734	11.85	67.7
C03600591380M	9.14	0.36	1.5	0.059	35.05	1.38	108.22	24.33	24.87	0.979	20.24	0.797	10.63	60.7
C03600591500M	9.14	0.36	1.5	0.059	38.1	1.5	108.22	24.33	26.95	1.061	21.74	0.856	9.72	55.5
C03600591750M	9.14	0.36	1.5	0.059	44.45	1.75	108.22	24.33	31.29	1.232	24.87	0.979	8.23	47
C03600592000M	9.14	0.36	1.5	0.059	50.8	2	108.22	24.33	35.64	1.403	27.99	1.102	7.13	40.7
C03600592250M	9.14	0.36	1.5	0.059	57.15	2.25	108.22	24.33	39.95	1.573	31.12	1.225	6.3	36
C03600592500M	9.14	0.36	1.5	0.059	63.5	2.5	108.22	24.33	44.3	1.744	34.24	1.348	5.64	32.2
C03600592750M	9.14	0.36	1.5	0.059	69.85	2.75	108.22	24.33	48.64	1.915	37.36	1.471	5.1	29.1
C03600593000M	9.14	0.36	1.5	0.059	76.2	3	108.22	24.33	52.96	2.085	40.49	1.594	4.66	26.6
C03600593250M	9.14	0.36	1.5	0.059	82.55	3.25	108.22	24.33	57.3	2.256	43.61	1.717	4.29	24.5
C03600593500M	9.14	0.36	1.5	0.059	88.9	3.5	108.22	24.33	61.65	2.427	46.74	1.84	3.98	22.7
C03900430500M	9.91	0.39	1.09	0.043	12.7	0.5	42.04	9.45	7.39	0.291	6.12	0.241	7.93	45.3
C03900430560M	9.91	0.39	1.09	0.043	14.22	0.56	42.04	9.45	8.15	0.321	6.53	0.257	6.93	39.6
C03900430620M	9.91	0.39	1.09	0.043	15.75	0.62	42.04	9.45	8.92	0.351	6.93	0.273	6.15	35.1
C03900430690M	9.91	0.39	1.09	0.043	17.53	0.69	42.04	9.45	9.8	0.386	7.42	0.292	5.43	31
C03900430750M	9.91	0.39	1.09	0.043	19.05	0.75	42.04	9.45	10.54	0.415	7.82	0.308	4.94	28.2
C03900430810M	9.91	0.39	1.09	0.043	20.57	0.81	42.04	9.45	11.3	0.445	8.23	0.324	4.54	25.9
C03900430880M	9.91	0.39	1.09	0.043	22.35	0.88	42.04	9.45	12.19	0.48	8.71	0.343	4.13	23.6
C03900430940M	9.91	0.39	1.09	0.043	23.88	0.94	42.04	9.45	13.03	0.513	9.12	0.359	3.87	22.1
C03900431000M	9.91	0.39	1.09	0.043	25.4	1	42.04	9.45	13.69	0.539	9.55	0.376	3.59	20.5
C03900431120M	9.91	0.39	1.09	0.043	28.45	1.12	42.04	9.45	15.21	0.599	10.36	0.408	3.17	18.1
C03900431250M	9.91	0.39	1.09	0.043	31.75	1.25	42.04	9.45	16.87	0.664	11.25	0.443	2.82	16.1
C03900431380M	9.91	0.39	1.09	0.043	35.05	1.38	42.04	9.45	18.49	0.728	12.14	0.478	2.54	14.5
C03900431500M	9.91	0.39	1.09	0.043	38.1	1.5	42.04	9.45	20.02	0.788	12.95	0.51	2.33	13.3
C03900431750M	9.91	0.39	1.09	0.043	44.45	1.75	42.04	9.45	23.16	0.912	14.68	0.578	1.979	11.3
C03900432000M	9.91	0.39	1.09	0.043	50.8	2	42.04	9.45	26.31	1.036	16.38	0.645	1.716	9.8
C03900470500M	9.91	0.39	1.19	0.047	12.7	0.5	53.82	12.1	7.85	0.309	6.86	0.27	11.08	63.3
C03900470560M	9.91	0.39	1.19	0.047	14.22	0.56	53.82	12.1	8.66	0.341	7.34	0.289	9.67	55.2
C03900470620M	9.91	0.39	1.19	0.047	15.75	0.62	53.82	12.1	9.45	0.372	7.82	0.308	8.56	48.9
C03900470690M	9.91	0.39	1.19	0.047	17.53	0.69	53.82	12.1	10.39	0.409	8.38	0.33	7.55	43.1
C03900470750M	9.91	0.39	1.19	0.047	19.05	0.75	53.82	12.1	11.2	0.441	8.89	0.35	6.86	39.2
C03900470810M	9.91	0.39	1.19	0.047	20.57	0.81	53.82	12.1	12.01	0.473	9.37	0.369	6.29	35.9
C03900470880M	9.91	0.39	1.19	0.047	22.53	0.88	53.82	12.1	12.95	0.51	9.93	0.391	5.73	32.7
C03900470940M	9.91	0.39	1.19	0.047	23.88	0.94	53.82	12.1	13.77	0.542	10.41	0.41	5.32	30.4
C03900471000M	9.91	0.39	1.19	0.047	25.4	1	53.82	12.1	14.58	0.574	10.9	0.429	4.97	28.4
C03900471120M	9.91	0.39	1.19	0.047	28.45	1.12	53.82	12.1	16.18	0.637	11.86	0.467	4.4	25.1
C03900471250M	9.91	0.39	1.19	0.047	31.75	1.25	53.82	12.1	17.93	0.706	12.9	0.508	3.89	22.2
C03900471380M	9.91	0.39	1.19	0.047	35.05	1.38	53.82	12.1	19.69	0.775	13.97	0.55	3.5	20
C03900471500M	9.91	0.39	1.19	0.047	38.1	1.5	53.82	12.1	21.29	0.838	14.94	0.588	3.2	18.3
C03900471750M	9.91	0.39	1.19	0.047	44.45	1.75	53.82	12.1	24.66	0.971	16.94	0.667	2.71	15.5
C03900472000M	9.91	0.39	1.19	0.047	50.8	2	53.82	12.1	28.02	1.103	18.97	0.747	2.36	13.5
C04200350500M	10.67	0.42	0.89	0.035	12.7	0.5	22.02	4.95	6.35	0.25	4.37	0.172	3.45	19.7
C04200350620M	10.67	0.42	0.89	0.035	15.75	0.62	22.02	4.95	7.62	0.3	4.85	0.191	2.7	15.4
C04200350750M	10.67	0.42	0.89	0.035	19.05	0.75	22.02	4.95	8.99	0.354	5.36	0.211	2.19	12.5
C04200350880M	10.67	0.42	0.89	0.035	22.35	0.88	22.02	4.95	10.36	0.408	5.87	0.231	1.839	10.5
C04200351000M	10.67	0.42	0.89	0.035	25.4	1	22.02	4.95	11.63	0.458	6.35	0.25	1.593	9.1
C04200351250M	10.67	0.42	0.89	0.035	31.75	1.25	22.02	4.95	14.3	0.563	7.34	0.289	1.261	7.2
C04200351500M	10.67	0.42	0.89	0.035	38.1	1.5	22.02	4.95	16.94	0.667	8.33	0.328	1.033	5.9
C04200351750M	10.67	0.42	0.89	0.035	44.45	1.75	22.02	4.95	19.58	0.771	9.32	0.367	0.893	5.1
C04200380500M	10.67	0.42	0.97	0.038	12.7	0.5	29.36	6.6	5.08	0.2	4.37	0.172	3.85	22
C04200380560M	10.67	0.42	0.97	0.038	14.22	0.56	29.36	6.6	5.59	0.22	4.72	0.186	3.5	20

Compression Springs B

Part Number	Outside Dia		Wire Dia		Free Length L, Approx.		Load P at L_1		Length L_1		Solid Height Approx.		Spring Rate, R	
	mm	in	mm	in	mm	in	N	lb	mm	in	mm	in	N/m	lb/in
C04200380625M	10.67	0.42	0.97	0.038	15.75	0.62	29.36	6.6	6.6	0.26	4.93	0.194	3.15	18
C04200380750M	10.67	0.42	0.97	0.038	19.05	0.75	29.36	6.6	7.62	0.3	5.66	0.223	2.54	14.5
C04200380880M	10.67	0.42	0.97	0.038	22.35	0.88	29.36	6.6	8.76	0.345	6.25	0.246	2.19	12.5
C04200381000M	10.67	0.42	0.97	0.038	25.4	1	29.36	6.6	10.16	0.4	6.83	0.269	1.926	11
C04200381250M	10.67	0.42	0.97	0.038	31.75	1.25	29.36	6.6	12.07	0.475	8.28	0.326	1.488	8.5
C04200381500M	10.67	0.42	0.97	0.038	38.1	1.5	29.36	6.6	14.73	0.58	9.45	0.372	1.261	7.2
C04200381750M	10.67	0.42	0.97	0.038	44.45	1.75	29.36	6.6	20.52	0.808	10.74	0.423	1.156	6.6
C04200382000M	10.67	0.42	0.97	0.038	50.8	2	29.36	6.6	23.29	0.917	11.58	0.456	1.068	6.1
C04200382250M	10.67	0.42	0.97	0.038	57.15	2.25	29.36	6.6	26.09	1.027	12.55	0.494	0.946	5.4
C04200382500M	10.67	0.42	0.97	0.038	63.5	2.5	29.36	6.6	28.85	1.136	13.51	0.532	0.84	4.8
C04200420500M	10.67	0.42	1.07	0.042	12.7	0.5	39.59	8.9	6.05	0.238	4.83	0.19	5.95	34
C04200420560M	10.67	0.42	1.07	0.042	14.22	0.56	39.59	8.9	6.91	0.272	5.11	0.201	5.43	31
C04200420625M	10.67	0.42	1.07	0.042	15.75	0.62	39.59	8.9	7.8	0.307	5.41	0.213	4.9	28
C04200420750M	10.67	0.42	1.07	0.042	19.05	0.75	39.59	8.9	8.76	0.345	6.3	0.248	3.85	22
C04200420880M	10.67	0.42	1.07	0.042	22.35	0.88	39.59	8.9	10.03	0.395	7.11	0.28	3.24	18.5
C04200421000M	10.67	0.42	1.07	0.042	25.4	1	39.59	8.9	11.3	0.445	7.87	0.31	2.8	16
C04200421250M	10.67	0.42	1.07	0.042	31.75	1.25	39.59	8.9	14.35	0.565	9.22	0.363	2.28	13
C04200421500M	10.67	0.42	1.07	0.042	38.1	1.5	39.59	8.9	16.51	0.65	10.9	0.429	1.839	10.5
C04200421750M	10.67	0.42	1.07	0.042	44.45	1.75	39.59	8.9	21.84	0.86	12.73	0.501	1.628	9.3
C04200422000M	10.67	0.42	1.07	0.042	50.8	2	39.59	8.9	24.79	0.976	14.17	0.558	1.418	8.1
C04200422250M	10.67	0.42	1.07	0.042	57.15	2.25	39.59	8.9	27.74	1.092	15.04	0.592	1.348	7.7
C04200422500M	10.67	0.42	1.07	0.042	63.5	2.5	39.59	8.9	30.71	1.209	16	0.63	1.208	6.9
C04200450500M	10.67	0.42	1.14	0.045	12.7	0.5	46.71	10.5	6.5	0.256	5.44	0.214	7.35	42
C04200450625M	10.67	0.42	1.14	0.045	15.75	0.62	46.71	10.5	8	0.315	6.2	0.244	5.95	34
C04200450750M	10.67	0.42	1.14	0.045	19.05	0.75	46.71	10.5	9.14	0.36	7.21	0.284	4.73	27
C04200450880M	10.67	0.42	1.14	0.045	22.35	0.88	46.71	10.5	10.67	0.42	8.08	0.318	4.03	23
C04200451000M	10.67	0.42	1.14	0.045	25.4	1	46.71	10.5	12.07	0.475	8.94	0.352	3.5	20
C04200451250M	10.67	0.42	1.14	0.045	31.75	1.25	46.71	10.5	15.11	0.595	10.62	0.418	2.8	16
C04200451500M	10.67	0.42	1.14	0.045	38.1	1.5	46.71	10.5	17.53	0.69	12.52	0.493	2.28	13
C04200451750M	10.67	0.42	1.14	0.045	44.45	1.75	46.71	10.5	22.86	0.9	14.3	0.563	2.07	11.8
C04200452000M	10.67	0.42	1.14	0.045	50.8	2	46.71	10.5	25.96	1.022	15.93	0.627	1.786	10.2
C04200452250M	10.67	0.42	1.14	0.045	57.15	2.25	46.71	10.5	29.06	1.144	17.55	0.691	1.576	9
C04200452500M	10.67	0.42	1.14	0.045	63.5	2.5	46.71	10.5	32.13	1.265	19.2	0.756	1.418	8.1
C04200480500M	10.67	0.42	1.22	0.048	12.7	0.5	53.25	11.97	7.67	0.302	6.63	0.261	10.61	60.6
C04200480750M	10.67	0.42	1.22	0.048	19.05	0.75	53.25	11.97	10.92	0.43	8.48	0.334	6.55	37.4
C04200481000M	10.67	0.42	1.22	0.048	25.4	1	53.25	11.97	14.17	0.558	10.34	0.407	4.75	27.1
C04200481250M	10.67	0.42	1.22	0.048	31.75	1.25	53.25	11.97	17.4	0.685	12.19	0.48	3.71	21.2
C04200481500M	10.67	0.42	1.22	0.048	38.1	1.5	53.25	11.97	20.65	0.813	14.02	0.552	3.05	17.4
C04200481750M	10.67	0.42	1.22	0.048	44.45	1.75	53.25	11.97	23.9	0.941	15.88	0.625	2.59	14.8
C04200482000M	10.67	0.42	1.22	0.048	50.8	2	53.25	11.97	27.13	1.068	17.73	0.698	2.26	12.9
C04200510500M	10.67	0.42	1.3	0.051	12.7	0.5	63.03	14.17	8	0.315	7.16	0.282	13.38	76.4
C04200510620M	10.67	0.42	1.3	0.051	15.75	0.62	63.03	14.17	9.63	0.379	8.15	0.321	10.28	58.7
C04200510750M	10.67	0.42	1.3	0.051	19.05	0.75	63.03	14.17	11.38	0.448	9.22	0.363	8.21	46.9
C04200510880M	10.67	0.42	1.3	0.051	22.35	0.88	63.03	14.17	13.13	0.517	10.31	0.406	6.85	39.1
C04200511000M	10.67	0.42	1.3	0.051	25.4	1	63.03	14.17	14.78	0.582	11.3	0.445	5.94	33.9
C04200511250M	10.67	0.42	1.3	0.051	31.75	1.25	63.03	14.17	18.16	0.715	13.36	0.526	4.64	26.5
C04200511500M	10.67	0.42	1.3	0.051	38.1	1.5	63.03	14.17	21.56	0.849	15.42	0.607	3.8	21.7
C04200511750M	10.67	0.42	1.3	0.051	44.45	1.75	63.03	14.17	24.94	0.982	17.48	0.688	3.22	18.4
C04200512000M	10.67	0.42	1.3	0.051	50.8	2	63.03	14.17	28.35	1.116	19.53	0.769	2.8	16
C04200512250M	10.67	0.42	1.3	0.051	57.15	2.25	63.03	14.17	31.72	1.249	21.59	0.85	2.49	14.2
C04200512500M	10.67	0.42	1.3	0.051	63.5	2.5	63.03	14.17	35.13	1.383	23.67	0.932	2.22	12.7
C04200550500M	10.67	0.42	1.4	0.055	12.7	0.5	80.07	18	7.87	0.31	6.93	0.273	16.64	95
C04200550625M	10.67	0.42	1.4	0.055	15.75	0.62	80.07	18	9.78	0.385	8.03	0.316	13.13	75
C04200550750M	10.67	0.42	1.4	0.055	19.05	0.75	80.07	18	11.68	0.46	9.14	0.36	10.86	62
C04200550880M	10.67	0.42	1.4	0.055	22.35	0.88	80.07	18	13.41	0.528	10.36	0.408	9.11	52
C04200551000M	10.67	0.42	1.4	0.055	25.4	1	80.07	18	15.24	0.6	11.53	0.454	7.88	45
C04200551250M	10.67	0.42	1.4	0.055	31.75	1.25	80.07	18	18.67	0.735	14.05	0.553	6.13	35
C04200551500M	10.67	0.42	1.4	0.055	38.1	1.5	80.07	18	22.35	0.88	16.38	0.645	5.08	29
C04200551750M	10.67	0.42	1.4	0.055	44.45	1.75	80.07	18	26.34	1.037	19.61	0.772	4.29	24.5
C04200552000M	10.67	0.42	1.4	0.055	50.8	2	80.07	18	29.95	1.179	21.97	0.865	3.73	21.3
C04200552250M	10.67	0.42	1.4	0.055	57.15	2.25	80.07	18	32.77	1.29	24.31	0.957	3.29	18.8
C04200552500M	10.67	0.42	1.4	0.055	63.5	2.5	80.07	18	36.32	1.43	26.67	1.05	2.94	16.8
C04200590500M	10.67	0.42	1.5	0.059	12.7	0.5	94.3	21.2	8.76	0.345	8.18	0.322	23.94	136.7
C04200590625M	10.67	0.42	1.5	0.059	15.75	0.62	94.3	21.2	10.64	0.419	9.65	0.38	18.04	103
C04200590750M	10.67	0.42	1.5	0.059	19.05	0.75	94.3	21.2	12.52	0.493	11.15	0.439	14.46	82.6
C04200590880M	10.67	0.42	1.5	0.059	22.35	0.88	94.3	21.2	14.5	0.571	12.6	0.496	11.99	68.5

Compression Springs B

Part Number	Outside Dia		Wire Dia		Free Length L_0 Approx.		Load P at L_1		Length L_1		Solid Height Approx.		Spring Rate, R	
	mm	in	mm	in	mm	in	N	lb	mm	in	mm	in	N/m	lb/in
C04200591000M	10.67	0.42	1.5	0.059	25.4	1	94.3	21.2	16.31	0.642	13.87	0.546	10.37	59.2
C04200591250M	10.67	0.42	1.5	0.059	31.75	1.25	94.3	21.2	20.07	0.79	16.54	0.651	8.07	46.1
C04200591500M	10.67	0.42	1.5	0.059	38.1	1.5	94.3	21.2	23.85	0.939	19.18	0.755	6.62	37.8
C04200591750M	10.67	0.42	1.5	0.059	44.45	1.75	94.3	21.2	27.61	1.087	21.84	0.86	5.6	32
C04200592000M	10.67	0.42	1.5	0.059	50.8	2	94.3	21.2	31.39	1.236	24.51	0.965	4.85	27.7
C04200592250M	10.67	0.42	1.5	0.059	57.15	2.25	94.3	21.2	35.15	1.384	27.15	1.069	4.29	24.5
C04200592500M	10.67	0.42	1.5	0.059	63.5	2.5	94.3	21.2	38.94	1.533	29.82	1.174	3.84	21.9
C04200630500M	10.67	0.42	1.6	0.063	12.7	0.5	112.85	25.37	9.17	0.361	8.76	0.345	31.89	182.1
C04200630620M	10.67	0.42	1.6	0.063	15.75	0.62	112.85	25.37	11.07	0.436	10.57	0.416	24.15	137.9
C04200630750M	10.67	0.42	1.6	0.063	19.05	0.75	112.85	25.37	13.16	0.518	12.09	0.476	19.12	109.2
C04200630880M	10.67	0.42	1.6	0.063	22.35	0.88	112.85	25.37	15.21	0.599	13.61	0.536	15.81	90.3
C04200631000M	10.67	0.42	1.6	0.063	25.4	1	112.85	25.37	17.15	0.675	15.01	0.591	13.64	77.9
C04200631250M	10.67	0.42	1.6	0.063	31.75	1.25	112.85	25.37	21.11	0.831	17.93	0.706	10.61	60.6
C04200631500M	10.67	0.42	1.6	0.063	38.1	1.5	112.85	25.37	25.1	0.988	20.85	0.821	8.69	49.6
C04200631750M	10.67	0.42	1.6	0.063	44.45	1.75	112.85	25.37	29.08	1.145	23.8	0.937	7.34	41.9
C04200632000M	10.67	0.42	1.6	0.063	50.8	2	112.85	25.37	33.07	1.302	26.72	1.052	6.36	36.3
C04200632250M	10.67	0.42	1.6	0.063	57.15	2.25	112.85	25.37	37.06	1.459	29.64	1.167	5.62	32.1
C04200632500M	10.67	0.42	1.6	0.063	63.5	2.5	112.85	25.37	41.05	1.616	32.56	1.282	5.03	28.7
C04200670750M	10.67	0.42	1.7	0.067	19.05	0.75	133.53	30.02	13.77	0.542	12.88	0.507	25.27	144.3
C04200671000M	10.67	0.42	1.7	0.067	25.4	1	133.53	30.02	17.98	0.708	16.03	0.631	17.98	102.7
C04200671250M	10.67	0.42	1.7	0.067	31.75	1.25	133.53	30.02	22.17	0.873	19.18	0.755	13.96	79.7
C04200671500M	10.67	0.42	1.7	0.067	38.1	1.5	133.53	30.02	26.39	1.039	22.33	0.879	11.4	65.1
C04200671750M	10.67	0.42	1.7	0.067	44.45	1.75	133.53	30.02	30.58	1.204	25.48	1.003	9.63	55
C04200672000M	10.67	0.42	1.7	0.067	50.8	2	133.53	30.02	34.8	1.37	28.63	1.127	8.34	47.6
C04200672250M	10.67	0.42	1.7	0.067	57.15	2.25	133.53	30.02	39.01	1.536	31.78	1.251	7.35	42
C04200672500M	10.67	0.42	1.7	0.067	63.5	2.5	133.53	30.02	43.21	1.701	34.93	1.375	6.58	37.6
C04200721000M	10.67	0.42	1.83	0.072	25.4	1	162.49	36.53	18.75	0.738	17.53	0.69	24.37	139.2
C04200721250M	10.67	0.42	1.83	0.072	31.75	1.25	162.49	36.53	23.14	0.911	21.06	0.829	18.86	107.7
C04200721500M	10.67	0.42	1.83	0.072	38.1	1.5	162.49	36.53	27.53	1.084	24.56	0.967	15.39	87.9
C04200721750M	10.67	0.42	1.83	0.072	44.45	1.75	162.49	36.53	31.95	1.258	28.07	1.105	12.99	74.2
C04200722000M	10.67	0.42	1.83	0.072	50.8	2	162.49	36.53	36.35	1.431	31.6	1.244	11.24	64.2
C04200722250M	10.67	0.42	1.83	0.072	57.15	2.25	162.49	36.53	40.74	1.604	35.1	1.382	9.91	56.6
C04200722500M	10.67	0.42	1.83	0.072	63.5	2.5	162.49	36.53	45.16	1.778	38.63	1.521	8.86	50.6
C04550390500M	11.56	0.455	0.99	0.039	12.7	0.5	27.62	6.21	6.53	0.257	4.75	0.187	4.48	25.6
C04550390620M	11.56	0.455	0.99	0.039	15.75	0.62	27.62	6.21	7.82	0.308	5.26	0.207	3.48	19.9
C04550390750M	11.56	0.455	0.99	0.039	19.05	0.75	27.62	6.21	9.25	0.364	5.82	0.229	2.82	16.1
C04550390880M	11.56	0.455	0.99	0.039	22.35	0.88	27.62	6.21	10.64	0.419	6.38	0.251	2.36	13.5
C04550391000M	11.56	0.455	0.99	0.039	25.4	1	27.62	6.21	11.94	0.47	6.88	0.271	2.05	11.7
C04550391250M	11.56	0.455	0.99	0.039	31.75	1.25	27.62	6.21	14.63	0.576	7.92	0.312	1.611	9.2
C04550391500M	11.56	0.455	0.99	0.039	38.1	1.5	27.62	6.21	17.32	0.682	8.99	0.354	1.331	7.6
C04550391750M	11.56	0.455	0.99	0.039	44.45	1.75	27.62	6.21	20.04	0.789	10.06	0.396	1.138	6.5
C04550460500M	11.56	0.455	1.17	0.046	12.7	0.5	43.86	9.86	7.21	0.284	5.92	0.233	7.99	45.6
C04550460620M	11.56	0.455	1.17	0.046	15.75	0.62	43.86	9.86	8.64	0.34	6.63	0.261	6.18	35.3
C04550460750M	11.56	0.455	1.17	0.046	19.05	0.75	43.86	9.86	10.19	0.401	7.39	0.291	4.96	28.3
C04550460880M	11.56	0.455	1.17	0.046	22.35	0.88	43.86	9.86	11.76	0.463	8.15	0.321	4.13	23.6
C04550461000M	11.56	0.455	1.17	0.046	25.4	1	43.86	9.86	13.18	0.519	8.86	0.349	3.59	20.5
C04550461250M	11.56	0.455	1.17	0.046	31.75	1.25	43.86	9.86	16.18	0.637	10.34	0.407	2.82	16.1
C04550461500M	11.56	0.455	1.17	0.046	38.1	1.5	43.86	9.86	19.15	0.754	11.81	0.465	2.31	13.2
C04550461750M	11.56	0.455	1.17	0.046	44.45	1.75	43.86	9.86	22.15	0.872	13.28	0.523	1.961	11.2
C04800350500M	12.19	0.48	0.89	0.035	12.7	0.5	20.86	4.69	5.08	0.2	4.06	0.16	2.75	15.7
C04800350620M	12.19	0.48	0.89	0.035	15.75	0.62	20.86	4.69	6.02	0.237	4.45	0.175	2.14	12.2
C04800350750M	12.19	0.48	0.89	0.035	19.05	0.75	20.86	4.69	7.01	0.276	4.88	0.192	1.733	9.9
C04800350880M	12.19	0.48	0.89	0.035	22.35	0.88	20.86	4.69	8	0.315	5.28	0.208	1.453	8.3
C04800351000M	12.19	0.48	0.89	0.035	25.4	1	20.86	4.69	8.94	0.352	5.66	0.223	1.261	7.2
C04800351250M	12.19	0.48	0.89	0.035	31.75	1.25	20.86	4.69	10.85	0.427	6.48	0.255	0.998	5.7
C04800351750M	12.19	0.48	0.89	0.035	44.45	1.75	20.86	4.69	14.71	0.579	8.1	0.319	0.7	4
C04800352000M	12.19	0.48	0.89	0.035	50.8	2	20.86	4.69	16.64	0.655	8.92	0.351	0.613	3.5
C04800352500M	12.19	0.48	0.89	0.035	63.5	2.5	20.86	4.69	20.47	0.806	10.52	0.414	0.49	2.8
C04800353000M	12.19	0.48	0.89	0.035	76.2	3	20.86	4.69	24.33	0.958	12.14	0.478	0.403	2.3
C04800380500M	12.19	0.48	0.97	0.038	12.7	0.5	26.69	6	5.08	0.2	3.66	0.144	3.5	20
C04800380625M	12.19	0.48	0.97	0.038	15.75	0.62	26.69	6	5.97	0.235	4.24	0.167	2.63	15
C04800380750M	12.19	0.48	0.97	0.038	19.05	0.75	26.69	6	6.86	0.27	4.7	0.185	2.19	12.5
C04800380880M	12.19	0.48	0.97	0.038	22.35	0.88	26.69	6	7.75	0.305	5.26	0.207	1.839	10.5
C04800381000M	12.19	0.48	0.97	0.038	25.4	1	26.69	6	9.4	0.37	5.59	0.22	1.663	9.5
C04800381250M	12.19	0.48	0.97	0.038	31.75	1.25	26.69	6	11.43	0.45	6.58	0.259	1.313	7.5
C04800381500M	12.19	0.48	0.97	0.038	38.1	1.5	26.69	6	12.7	0.5	7.75	0.305	1.051	6

Compression Springs B

Part Number	Outside Dia		Wire Dia		Free Length L, Approx.		Load P at L_1		Length L_1		Solid Height Approx.		Spring Rate, R	
	mm	in	mm	in	mm	in	N	lb	mm	in	mm	in	N/m	lb/in
C04800381750M	12.19	0.48	0.97	0.038	44.45	1.75	26.69	6	16.76	0.66	8.94	0.352	0.963	5.5
C04800382000M	12.19	0.48	0.97	0.038	50.8	2	26.69	6	19.2	0.756	9.86	0.388	0.84	4.8
C04800382250M	12.19	0.48	0.97	0.038	57.15	2.25	26.69	6	24.46	0.963	10.08	0.397	0.823	4.7
C04800382500M	12.19	0.48	0.97	0.038	63.5	2.5	26.69	6	27.05	1.065	10.9	0.429	0.735	4.2
C04800382750M	12.19	0.48	0.97	0.038	69.85	2.75	26.69	6	29.67	1.168	11.73	0.462	0.665	3.8
C04800383000M	12.19	0.48	0.97	0.038	76.2	3	26.69	6	32.26	1.27	12.55	0.494	0.613	3.5
C04800420500M	12.19	0.48	1.07	0.042	12.7	0.5	34.7	7.8	5.59	0.22	4.24	0.167	4.9	28
C04800420625M	12.19	0.48	1.07	0.042	15.75	0.62	34.7	7.8	6.48	0.255	4.93	0.194	3.68	21
C04800420750M	12.19	0.48	1.07	0.042	19.05	0.75	34.7	7.8	8	0.315	5.41	0.213	3.15	18
C04800420880M	12.19	0.48	1.07	0.042	22.35	0.88	34.7	7.8	9.02	0.355	6.07	0.239	2.63	15
C04800421000M	12.19	0.48	1.07	0.042	25.4	1	34.7	7.8	10.16	0.4	6.68	0.263	2.28	13
C04800421250M	12.19	0.48	1.07	0.042	31.75	1.25	34.7	7.8	11.94	0.47	8.05	0.317	1.751	10
C04800421500M	12.19	0.48	1.07	0.042	38.1	1.5	34.7	7.8	14.73	0.58	9.09	0.358	1.488	8.5
C04800421750M	12.19	0.48	1.07	0.042	44.45	1.75	34.7	7.8	20.37	0.802	10.62	0.418	1.348	7.7
C04800422000M	12.19	0.48	1.07	0.042	50.8	2	34.7	7.8	23.09	0.909	11.73	0.462	1.173	6.7
C04800422250M	12.19	0.48	1.07	0.042	57.15	2.25	34.7	7.8	23.57	0.928	12.83	0.505	1.033	5.9
C04800422500M	12.19	0.48	1.07	0.042	63.5	2.5	34.7	7.8	28.58	1.125	13.21	0.52	0.998	5.7
C04800422750M	12.19	0.48	1.07	0.042	69.85	2.75	34.7	7.8	31.32	1.233	14.25	0.561	0.893	5.1
C04800423000M	12.19	0.48	1.07	0.042	76.2	3	34.7	7.8	34.04	1.34	15.29	0.602	0.823	4.7
C04800450500M	12.19	0.48	1.14	0.045	12.7	0.5	40.92	9.2	6.02	0.237	4.7	0.185	6.13	35
C04800450625M	12.19	0.48	1.14	0.045	15.75	0.62	40.92	9.2	7.49	0.295	5.31	0.209	4.9	28
C04800450750M	12.19	0.48	1.14	0.045	19.05	0.75	40.92	9.2	8.38	0.33	6.15	0.242	3.85	22
C04800450880M	12.19	0.48	1.14	0.045	22.35	0.88	40.92	9.2	9.91	0.39	6.76	0.266	3.33	19
C04800451000M	12.19	0.48	1.14	0.045	25.4	1	40.92	9.2	11.68	0.46	7.29	0.287	2.98	17
C04800451250M	12.19	0.48	1.14	0.045	31.75	1.25	40.92	9.2	13.84	0.545	8.84	0.348	2.28	13
C04800451500M	12.19	0.48	1.14	0.045	38.1	1.5	40.92	9.2	16.89	0.665	10.03	0.395	1.926	11
C04800451750M	12.19	0.48	1.14	0.045	44.45	1.75	40.92	9.2	21.21	0.835	11.91	0.469	1.681	9.6
C04800452000M	12.19	0.48	1.14	0.045	50.8	2	40.92	9.2	24.08	0.948	13.21	0.52	1.471	8.4
C04800452250M	12.19	0.48	1.14	0.045	57.15	2.25	40.92	9.2	26.92	1.06	14.48	0.57	1.296	7.4
C04800452500M	12.19	0.48	1.14	0.045	63.5	2.5	40.92	9.2	28.32	1.115	15.75	0.62	1.156	6.6
C04800452750M	12.19	0.48	1.14	0.045	69.85	2.75	40.92	9.2	31.04	1.222	17.04	0.671	1.051	6
C04800453000M	12.19	0.48	1.14	0.045	76.2	3	40.92	9.2	33.71	1.327	18.31	0.721	0.963	5.5
C04800510500M	12.19	0.48	1.3	0.051	12.7	0.5	55.65	12.51	7.52	0.296	6.48	0.255	10.73	61.3
C04800510620M	12.19	0.48	1.3	0.051	15.75	0.62	55.65	12.51	9.02	0.355	7.26	0.286	8.25	47.1
C04800510750M	12.19	0.48	1.3	0.051	19.05	0.75	55.65	12.51	10.62	0.418	8.13	0.32	6.6	37.7
C04800510880M	12.19	0.48	1.3	0.051	22.35	0.88	55.65	12.51	12.22	0.481	8.97	0.353	5.5	31.4
C04800511000M	12.19	0.48	1.3	0.051	25.4	1	55.65	12.51	13.72	0.54	9.75	0.384	4.76	27.2
C04800511250M	12.19	0.48	1.3	0.051	31.75	1.25	55.65	12.51	16.81	0.662	11.38	0.448	3.73	21.3
C04800511500M	12.19	0.48	1.3	0.051	38.1	1.5	55.65	12.51	19.91	0.784	13.03	0.513	3.06	17.5
C04800511750M	12.19	0.48	1.3	0.051	44.45	1.75	55.65	12.51	23.01	0.906	14.66	0.577	2.59	14.8
C04800512000M	12.19	0.48	1.3	0.051	50.8	2	55.65	12.51	26.09	1.027	16.28	0.641	2.26	12.9
C04800512250M	12.19	0.48	1.3	0.051	57.15	2.25	55.65	12.51	29.18	1.149	17.93	0.706	1.996	11.4
C04800512500M	12.19	0.48	1.3	0.051	63.5	2.5	55.65	12.51	32.28	1.271	19.56	0.77	1.786	10.2
C04800512750M	12.19	0.48	1.3	0.051	69.85	2.75	55.65	12.51	35.38	1.393	21.18	0.834	1.611	9.2
C04800513000M	12.19	0.48	1.3	0.051	76.2	3	55.65	12.51	38.48	1.515	22.83	0.899	1.471	8.4
C04800550500M	12.19	0.48	1.4	0.055	12.7	0.5	72.06	16.2	6.99	0.275	6.25	0.246	12.61	72
C04800550625M	12.19	0.48	1.4	0.055	15.75	0.62	72.06	16.2	8.51	0.335	7.24	0.285	9.81	56
C04800550750M	12.19	0.48	1.4	0.055	19.05	0.75	72.06	16.2	10.26	0.404	8.1	0.319	8.23	47
C04800550880M	12.19	0.48	1.4	0.055	22.35	0.88	72.06	16.2	11.43	0.45	9.35	0.368	6.65	38
C04800551000M	12.19	0.48	1.4	0.055	25.4	1	72.06	16.2	13.59	0.535	9.93	0.391	6.13	35
C04800551250M	12.19	0.48	1.4	0.055	31.75	1.25	72.06	16.2	16.51	0.65	12.04	0.474	4.73	27
C04800551500M	12.19	0.48	1.4	0.055	38.1	1.5	72.06	16.2	19.43	0.765	14.15	0.557	3.85	22
C04800551750M	12.19	0.48	1.4	0.055	44.45	1.75	72.06	16.2	24.23	0.954	16.54	0.651	3.4	19.4
C04800552000M	12.19	0.48	1.4	0.055	50.8	2	72.06	16.2	27.51	1.083	18.42	0.725	2.94	16.8
C04800552250M	12.19	0.48	1.4	0.055	57.15	2.25	72.06	16.2	30.76	1.211	20.29	0.799	2.61	14.9
C04800552500M	12.19	0.48	1.4	0.055	63.5	2.5	72.06	16.2	34.04	1.34	22.2	0.874	2.33	13.3
C04800552750M	12.19	0.48	1.4	0.055	69.85	2.75	72.06	16.2	37.29	1.468	23.14	0.911	2.21	12.6
C04800553000M	12.19	0.48	1.4	0.055	76.2	3	72.06	16.2	40.56	1.597	24.92	0.981	2.01	11.5
C04800590500M	12.19	0.48	1.5	0.059	12.7	0.5	83.4	18.75	8.26	0.325	7.75	0.305	18.77	107.2
C04800590620M	12.19	0.48	1.5	0.059	15.75	0.62	83.4	18.75	9.91	0.39	8.79	0.346	14.29	81.6
C04800590750M	12.19	0.48	1.5	0.059	19.05	0.75	83.4	18.75	11.71	0.461	9.91	0.39	11.35	64.8
C04800591000M	12.19	0.48	1.5	0.059	25.4	1	83.4	18.75	15.14	0.596	12.04	0.474	8.13	46.4
C04800591250M	12.19	0.48	1.5	0.059	31.75	1.25	83.4	18.75	18.59	0.732	14.17	0.558	6.34	36.2
C04800591500M	12.19	0.48	1.5	0.059	38.1	1.5	83.4	18.75	22.02	0.867	16.31	0.642	5.18	29.6
C04800591750M	12.19	0.48	1.5	0.059	44.45	1.75	83.4	18.75	25.48	1.003	18.44	0.726	4.4	25.1
C04800592000M	12.19	0.48	1.5	0.059	50.8	2	83.4	18.75	28.91	1.138	20.57	0.81	3.82	21.8

Compression Springs B

Part Number	Outside Dia		Wire Dia		Free Length L, Approx.		Load P at L_1		Length L_1		Solid Height Approx.		Spring Rate, R	
	mm	in	mm	in	mm	in	N	lb	mm	in	mm	in	N/m	lb/in
C04800592250M	12.19	0.48	1.5	0.059	57.15	2.25	83.4	18.75	32.36	1.274	22.71	0.894	3.36	19.2
C04800592500M	12.19	0.48	1.5	0.059	63.5	2.5	83.4	18.75	35.79	1.409	24.84	0.978	3.01	17.2
C04800592750M	12.19	0.48	1.5	0.059	69.85	2.75	83.4	18.75	39.24	1.545	26.97	1.062	2.73	15.6
C04800593000M	12.19	0.48	1.5	0.059	76.2	3	83.4	18.75	42.67	1.68	29.11	1.146	2.49	14.2
C04800630500M	12.19	0.48	1.6	0.063	12.7	0.5	102.31	23	7.82	0.308	7.52	0.296	21.01	120
C04800630625M	12.19	0.48	1.6	0.063	15.75	0.62	102.31	23	9.73	0.383	8.69	0.342	16.64	95
C04800630750M	12.19	0.48	1.6	0.063	19.05	0.75	102.31	23	11.56	0.455	9.86	0.388	13.66	78
C04800630880M	12.19	0.48	1.6	0.063	22.35	0.88	102.31	23	13.34	0.525	11.07	0.436	11.56	66
C04800631000M	12.19	0.48	1.6	0.063	25.4	1	102.31	23	15.11	0.595	12.32	0.485	9.98	57
C04800631250M	12.19	0.48	1.6	0.063	31.75	1.25	102.31	23	18.8	0.74	14.78	0.582	7.88	45
C04800631380M	12.19	0.48	1.6	0.063	35.05	1.38	102.31	23	21.36	0.841	16.64	0.655	7.48	42.7
C04800631500M	12.19	0.48	1.6	0.063	38.1	1.5	102.31	23	22.73	0.895	16.89	0.665	6.65	38
C04800631750M	12.19	0.48	1.6	0.063	44.45	1.75	102.31	23	26.7	1.051	20.35	0.801	5.64	32.2
C04800632000M	12.19	0.48	1.6	0.063	50.8	2	102.31	23	30.33	1.194	22.73	0.895	4.89	27.9
C04800632250M	12.19	0.48	1.6	0.063	57.15	2.25	102.31	23	33.93	1.336	25.12	0.989	4.31	24.6
C04800632500M	12.19	0.48	1.6	0.063	63.5	2.5	102.31	23	37.57	1.479	27.51	1.083	3.85	22
C04800632750M	12.19	0.48	1.6	0.063	69.85	2.75	102.31	23	40.56	1.597	29.9	1.177	3.48	19.9
C04800633000M	12.19	0.48	1.6	0.063	76.2	3	102.31	23	44.12	1.737	32.28	1.271	3.19	18.2
C04800670500M	12.19	0.48	1.7	0.067	12.7	0.5	118.46	26.63	8.97	0.353	8.53	0.336	31.64	180.7
C04800670620M	12.19	0.48	1.7	0.067	15.75	0.62	118.46	26.63	10.77	0.424	10.24	0.403	23.83	136.1
C04800670750M	12.19	0.48	1.7	0.067	19.05	0.75	118.46	26.63	12.75	0.502	11.63	0.458	18.81	107.4
C04800670880M	12.19	0.48	1.7	0.067	22.35	0.88	118.46	26.63	14.73	0.58	13	0.512	15.53	88.7
C04800671000M	12.19	0.48	1.7	0.067	25.4	1	118.46	26.63	16.54	0.651	14.27	0.562	13.38	76.4
C04800671250M	12.19	0.48	1.7	0.067	31.75	1.25	118.46	26.63	20.35	0.801	16.92	0.666	10.38	59.3
C04800671500M	12.19	0.48	1.7	0.067	38.1	1.5	118.46	26.63	24.13	0.95	19.56	0.77	8.48	48.4
C04800671750M	12.19	0.48	1.7	0.067	44.45	1.75	118.46	26.63	27.91	1.099	22.2	0.874	7.16	40.9
C04800672000M	12.19	0.48	1.7	0.067	50.8	2	118.46	26.63	31.72	1.249	24.84	0.978	6.2	35.4
C04800672250M	12.19	0.48	1.7	0.067	57.15	2.25	118.46	26.63	35.51	1.398	27.48	1.082	5.48	31.3
C04800672500M	12.19	0.48	1.7	0.067	63.5	2.5	118.46	26.63	39.29	1.547	30.15	1.187	4.9	28
C04800672750M	12.19	0.48	1.7	0.067	69.85	2.75	118.46	26.63	43.1	1.697	32.79	1.291	4.43	25.3
C04800673000M	12.19	0.48	1.7	0.067	76.2	3	118.46	26.63	46.89	1.846	35.43	1.395	4.05	23.1
C04800720500M	12.19	0.48	1.83	0.072	12.7	0.5	144.47	32.48	9.47	0.373	9.09	0.358	44.76	255.6
C04800720620M	12.19	0.48	1.83	0.072	15.75	0.62	144.47	32.48	11.43	0.45	10.64	0.419	33.48	191.2
C04800720750M	12.19	0.48	1.83	0.072	19.05	0.75	144.47	32.48	13.56	0.534	12.32	0.485	26.3	150.2
C04800720880M	12.19	0.48	1.83	0.072	22.35	0.88	144.47	32.48	15.67	0.617	13.89	0.547	21.66	123.7
C04800721000M	12.19	0.48	1.83	0.072	25.4	1	144.47	32.48	17.65	0.695	15.27	0.601	18.61	106.3
C04800721250M	12.19	0.48	1.83	0.072	31.75	1.25	144.47	32.48	21.72	0.855	18.14	0.714	14.41	82.3
C04800721500M	12.19	0.48	1.83	0.072	38.1	1.5	144.47	32.48	25.81	1.016	20.98	0.826	11.75	67.1
C04800721750M	12.19	0.48	1.83	0.072	44.45	1.75	144.47	32.48	29.9	1.177	23.85	0.939	9.93	56.7
C04800722000M	12.19	0.48	1.83	0.072	50.8	2	144.47	32.48	33.99	1.338	26.7	1.051	8.58	49
C04800722250M	12.19	0.48	1.83	0.072	57.15	2.25	144.47	32.48	38.05	1.498	29.57	1.164	7.56	43.2
C04800722500M	12.19	0.48	1.83	0.072	63.5	2.5	144.47	32.48	42.14	1.659	32.41	1.276	6.76	38.6
C04800722750M	12.19	0.48	1.83	0.072	69.85	2.75	144.47	32.48	46.23	1.82	35.28	1.389	6.11	34.9
C04800723000M	12.19	0.48	1.83	0.072	76.2	3	144.47	32.48	50.32	1.981	38.13	1.501	5.59	31.9
C04800723250M	12.19	0.48	1.83	0.072	82.55	3.25	144.47	32.48	54.41	2.142	41	1.614	5.13	29.3
C04800723500M	12.19	0.48	1.83	0.072	88.9	3.5	144.47	32.48	58.47	2.302	43.84	1.726	4.75	27.1
C04800740500M	12.19	0.48	1.88	0.074	12.7	0.5	154.75	34.79	9.65	0.38	8.89	0.35	50.62	289.1
C04800740620M	12.19	0.48	1.88	0.074	15.75	0.62	154.75	34.79	11.66	0.459	10.69	0.421	37.75	215.6
C04800740750M	12.19	0.48	1.88	0.074	19.05	0.75	154.75	34.79	13.82	0.544	12.24	0.482	29.61	169.1
C04800740880M	12.19	0.48	1.88	0.074	22.35	0.88	154.75	34.79	16	0.63	13.87	0.546	24.34	139
C04800741000M	12.19	0.48	1.88	0.074	25.4	1	154.75	34.79	18.01	0.709	15.49	0.61	20.91	119.4
C04800741250M	12.19	0.48	1.88	0.074	31.75	1.25	154.75	34.79	22.17	0.873	18.64	0.734	16.16	92.3
C04800741500M	12.19	0.48	1.88	0.074	38.1	1.5	154.75	34.79	26.37	1.038	21.72	0.855	13.19	75.3
C04800741750M	12.19	0.48	1.88	0.074	44.45	1.75	154.75	34.79	30.53	1.202	24.69	0.972	11.12	63.5
C04800742000M	12.19	0.48	1.88	0.074	50.8	2	154.75	34.79	34.72	1.367	27.66	1.089	9.63	55
C04800742250M	12.19	0.48	1.88	0.074	57.15	2.25	154.75	34.79	38.89	1.531	30.63	1.206	8.48	48.4
C04800742500M	12.19	0.48	1.88	0.074	63.5	2.5	154.75	34.79	43.08	1.696	33.63	1.324	7.58	43.3
C04800742750M	12.19	0.48	1.88	0.074	69.85	2.75	154.75	34.79	47.27	1.861	36.6	1.441	6.85	39.1
C04800743000M	12.19	0.48	1.88	0.074	76.2	3	154.75	34.79	51.44	2.025	39.57	1.558	6.25	35.7
C04800743250M	12.19	0.48	1.88	0.074	82.55	3.25	154.75	34.79	55.63	2.19	42.55	1.675	5.74	32.8
C04800743500M	12.19	0.48	1.88	0.074	88.9	3.5	154.75	34.79	59.79	2.354	45.52	1.792	5.32	30.4
C04800810500M	12.19	0.48	2.06	0.081	12.7	0.5	197.22	44.34	10.19	0.401	9.63	0.379	78.22	446.7
C04800810620M	12.19	0.48	2.06	0.081	15.75	0.62	197.22	44.34	12.34	0.486	11.63	0.458	57.73	329.7
C04800810750M	12.19	0.48	2.06	0.081	19.05	0.75	197.22	44.34	14.66	0.577	13.36	0.526	44.97	256.8
C04800810880M	12.19	0.48	2.06	0.081	22.35	0.88	197.22	44.34	16.99	0.669	15.19	0.598	36.82	210.3
C04800811000M	12.19	0.48	2.06	0.081	25.4	1	197.22	44.34	19.15	0.754	16.99	0.669	31.55	180.2

Compression Springs B

Part Number	Outside Dia		Wire Dia		Free Length L, Approx.		Load P at L_1		Length L_1		Solid Height Approx.		Spring Rate, R	
	mm	in	mm	in	mm	in	N	lb	mm	in	mm	in	N/m	lb/in
C04800811250M	12.19	0.48	2.06	0.081	31.75	1.25	197.22	44.34	23.65	0.931	20.52	0.808	24.3	138.8
C04800811500M	12.19	0.48	2.06	0.081	38.1	1.5	197.22	44.34	28.12	1.107	23.93	0.942	19.77	112.9
C04800811750M	12.19	0.48	2.06	0.081	44.45	1.75	197.22	44.34	32.61	1.284	27.25	1.073	16.65	95.1
C04800812000M	12.19	0.48	2.06	0.081	50.8	2	197.22	44.34	37.08	1.46	30.58	1.204	14.39	82.2
C04800812250M	12.19	0.48	2.06	0.081	57.15	2.25	197.22	44.34	41.58	1.637	33.88	1.334	12.66	72.3
C04800812500M	12.19	0.48	2.06	0.081	63.5	2.5	197.22	44.34	46.05	1.813	37.21	1.465	11.31	64.6
C04800812750M	12.19	0.48	2.06	0.081	69.85	2.75	197.22	44.34	50.55	1.99	40.51	1.595	10.21	58.3
C04800813000M	12.19	0.48	2.06	0.081	76.2	3	197.22	44.34	55.04	2.167	43.84	1.726	9.32	53.2
C04800813250M	12.19	0.48	2.06	0.081	82.55	3.25	197.22	44.34	59.51	2.343	47.17	1.857	8.56	48.9
C04800813500M	12.19	0.48	2.06	0.081	88.9	3.5	197.22	44.34	64.01	2.52	50.47	1.987	7.92	45.2
C06000450500M	15.24	0.6	1.14	0.045	12.7	0.5	26.69	6	6.53	0.257	3.89	0.153	4.33	24.7
C06000450625M	15.24	0.6	1.14	0.045	15.75	0.62	26.69	6	7.42	0.292	4.55	0.179	3.15	18
C06000450750M	15.24	0.6	1.14	0.045	19.05	0.75	26.69	6	8.38	0.33	5.21	0.205	2.45	14
C06000450880M	15.24	0.6	1.14	0.045	22.35	0.88	26.69	6	9.53	0.375	5.69	0.224	2.1	12
C06000451000M	15.24	0.6	1.14	0.045	25.4	1	26.69	6	10.16	0.4	6.38	0.251	1.751	10
C06000451250M	15.24	0.6	1.14	0.045	31.75	1.25	26.69	6	12.7	0.5	7.42	0.292	1.401	8
C06000451380M	15.24	0.6	1.14	0.045	35.05	1.38	26.69	6	13.72	0.54	7.77	0.306	1.243	7.1
C06000451500M	15.24	0.6	1.14	0.045	38.1	1.5	26.69	6	14.61	0.575	8.59	0.338	1.138	6.5
C06000451750M	15.24	0.6	1.14	0.045	44.45	1.75	26.69	6	19.41	0.764	9.3	0.366	1.173	6.7
C06000452000M	15.24	0.6	1.14	0.045	50.8	2	26.69	6	22	0.866	10.19	0.401	1.016	5.8
C06000452250M	15.24	0.6	1.14	0.045	57.15	2.25	26.69	6	24.56	0.967	11.07	0.436	0.911	5.2
C06000452500M	15.24	0.6	1.14	0.045	63.5	2.5	26.69	6	27.15	1.069	11.96	0.471	0.805	4.6
C06000452750M	15.24	0.6	1.14	0.045	69.85	2.75	26.69	6	29.72	1.17	13.72	0.54	0.665	3.8
C06000453000M	15.24	0.6	1.14	0.045	76.2	3	26.69	6	32.31	1.272	14.86	0.585	0.613	3.5
C06000453500M	15.24	0.6	1.14	0.045	88.9	3.5	26.69	6	37.47	1.475	16.74	0.659	0.525	3
C06000490620M	15.24	0.6	1.24	0.049	15.75	0.62	37.37	8.4	8.13	0.32	5.94	0.234	4.9	28
C06000490750M	15.24	0.6	1.24	0.049	19.05	0.75	37.37	8.4	9.53	0.375	6.48	0.255	3.92	22.4
C06000491000M	15.24	0.6	1.24	0.049	25.4	1	37.37	8.4	12.22	0.481	7.54	0.297	2.84	16.2
C06000491250M	15.24	0.6	1.24	0.049	31.75	1.25	37.37	8.4	14.91	0.587	8.59	0.338	2.22	12.7
C06000491500M	15.24	0.6	1.24	0.049	38.1	1.5	37.37	8.4	17.6	0.693	9.65	0.38	1.821	10.4
C06000491750M	15.24	0.6	1.24	0.049	44.45	1.75	37.37	8.4	20.32	0.8	10.72	0.422	1.541	8.8
C06000492000M	15.24	0.6	1.24	0.049	50.8	2	37.37	8.4	23.01	0.906	11.76	0.463	1.348	7.7
C06000492250M	15.24	0.6	1.24	0.049	57.15	2.25	37.37	8.4	25.7	1.012	12.83	0.505	1.191	6.8
C06000492500M	15.24	0.6	1.24	0.049	63.5	2.5	37.37	8.4	28.4	1.118	13.87	0.546	1.068	6.1
C06000492750M	15.24	0.6	1.24	0.049	69.85	2.75	37.37	8.4	31.09	1.224	14.94	0.588	0.963	5.5
C06000493000M	15.24	0.6	1.24	0.049	76.2	3	37.37	8.4	33.78	1.33	15.98	0.629	0.876	5
C06000550625M	15.24	0.6	1.4	0.055	15.75	0.62	53.38	12	8.26	0.325	5.74	0.226	7	40
C06000550750M	15.24	0.6	1.4	0.055	19.05	0.75	53.38	12	9.78	0.385	6.38	0.251	5.78	33
C06000550880M	15.24	0.6	1.4	0.055	22.35	0.88	53.38	12	11.43	0.45	7.01	0.276	4.9	28
C06000551000M	15.24	0.6	1.4	0.055	25.4	1	53.38	12	12.7	0.5	7.72	0.304	4.2	24
C06000551250M	15.24	0.6	1.4	0.055	31.75	1.25	53.38	12	14.73	0.58	9.37	0.369	3.15	18
C06000551500M	15.24	0.6	1.4	0.055	38.1	1.5	53.38	12	17.78	0.7	10.67	0.42	2.63	15
C06000551750M	15.24	0.6	1.4	0.055	44.45	1.75	53.38	12	21.74	0.856	12.93	0.509	2.28	13
C06000552000M	15.24	0.6	1.4	0.055	50.8	2	53.38	12	24.64	0.97	14.27	0.562	1.979	11.3
C06000552250M	15.24	0.6	1.4	0.055	57.15	2.25	53.38	12	27.51	1.083	15.6	0.614	1.751	10
C06000552500M	15.24	0.6	1.4	0.055	63.5	2.5	53.38	12	30.4	1.197	16.94	0.667	1.558	8.9
C06000552750M	15.24	0.6	1.4	0.055	69.85	2.75	53.38	12	33.3	1.311	17.81	0.701	1.453	8.3
C06000553000M	15.24	0.6	1.4	0.055	76.2	3	53.38	12	36.17	1.424	19.1	0.752	1.331	7.6
C06000590620M	15.24	0.6	1.5	0.059	15.75	0.62	62.85	14.13	9.07	0.357	7.57	0.298	9.4	53.7
C06000590750M	15.24	0.6	1.5	0.059	19.05	0.75	62.85	14.13	10.64	0.419	8.36	0.329	7.48	42.7
C06000590880M	15.24	0.6	1.5	0.059	22.35	0.88	62.85	14.13	12.22	0.481	9.14	0.36	6.2	35.4
C06000591000M	15.24	0.6	1.5	0.059	25.4	1	62.85	14.13	13.67	0.538	9.88	0.389	5.36	30.6
C06000591250M	15.24	0.6	1.5	0.059	31.75	1.25	62.85	14.13	16.69	0.657	11.4	0.449	4.17	23.8
C06000591500M	15.24	0.6	1.5	0.059	38.1	1.5	62.85	14.13	19.71	0.776	12.95	0.51	3.41	19.5
C06000591750M	15.24	0.6	1.5	0.059	44.45	1.75	62.85	14.13	22.73	0.895	14.48	0.57	2.89	16.5
C06000592000M	15.24	0.6	1.5	0.059	50.8	2	62.85	14.13	25.76	1.014	16	0.63	2.5	14.3
C06000592250M	15.24	0.6	1.5	0.059	57.15	2.25	62.85	14.13	28.78	1.133	17.53	0.69	2.21	12.6
C06000592500M	15.24	0.6	1.5	0.059	63.5	2.5	62.85	14.13	31.8	1.252	19.05	0.75	1.979	11.3
C06000592750M	15.24	0.6	1.5	0.059	69.85	2.75	62.85	14.13	34.82	1.371	20.6	0.811	1.786	10.2
C06000593000M	15.24	0.6	1.5	0.059	76.2	3	62.85	14.13	37.85	1.49	22.12	0.871	1.646	9.4
C06000630625M	15.24	0.6	1.6	0.063	15.75	0.62	80.07	18	8.51	0.335	7.11	0.28	10.86	62
C06000630750M	15.24	0.6	1.6	0.063	19.05	0.75	80.07	18	10.16	0.4	7.98	0.314	8.93	51
C06000630880M	15.24	0.6	1.6	0.063	22.35	0.88	80.07	18	11.81	0.465	8.71	0.343	7.7	44
C06000631000M	15.24	0.6	1.6	0.063	25.4	1	80.07	18	13.34	0.525	9.6	0.378	6.65	38
C06000631250M	15.24	0.6	1.6	0.063	31.75	1.25	80.07	18	17.02	0.67	11.05	0.435	5.43	31
C06000631500M	15.24	0.6	1.6	0.063	38.1	1.5	80.07	18	19.05	0.75	13.36	0.526	4.2	24

Compression Springs B

Part Number	Outside Dia		Wire Dia		Free Length L_0 Approx.		Load P at L_1		Length L_1		Solid Height Approx.		Spring Rate, R	
	mm	in	mm	in	mm	in	N	lb	mm	in	mm	in	N/m	lb/in
C06000631750M	15.24	0.6	1.6	0.063	44.45	1.75	80.07	18	23.75	0.935	16.05	0.632	3.64	20.8
C06000632000M	15.24	0.6	1.6	0.063	50.8	2	80.07	18	26.9	1.059	17.78	0.7	3.15	18
C06000632250M	15.24	0.6	1.6	0.063	57.15	2.25	80.07	18	30.07	1.184	19.51	0.768	2.78	15.9
C06000632500M	15.24	0.6	1.6	0.063	63.5	2.5	80.07	18	33.22	1.308	21.23	0.836	2.49	14.2
C06000632750M	15.24	0.6	1.6	0.063	69.85	2.75	80.07	18	36.4	1.433	21.92	0.863	2.4	13.7
C06000633000M	15.24	0.6	1.6	0.063	76.2	3	80.07	18	39.57	1.558	23.55	0.927	2.19	12.5
C06000633500M	15.24	0.6	1.6	0.063	88.9	3.5	80.07	18	45.9	1.807	26.8	1.055	1.856	10.6
C06000670625M	15.24	0.6	1.7	0.067	15.75	0.62	93.41	21	9.14	0.36	7.62	0.3	14.01	80
C06000670750M	15.24	0.6	1.7	0.067	19.05	0.75	93.41	21	10.92	0.43	8.53	0.336	11.56	66
C06000670880M	15.24	0.6	1.7	0.067	22.35	0.88	93.41	21	11.56	0.455	10.19	0.401	8.76	50
C06000671000M	15.24	0.6	1.7	0.067	25.4	1	93.41	21	13.46	0.53	10.92	0.43	7.88	45
C06000671250M	15.24	0.6	1.7	0.067	31.75	1.25	93.41	21	16.89	0.665	12.83	0.505	6.3	36
C06000671500M	15.24	0.6	1.7	0.067	38.1	1.5	93.41	21	19.81	0.78	15.09	0.594	5.08	29
C06000671750M	15.24	0.6	1.7	0.067	44.45	1.75	93.41	21	21.08	0.83	18.16	0.715	4.03	23
C06000672000M	15.24	0.6	1.7	0.067	50.8	2	93.41	21	28.09	1.106	19.58	0.771	3.94	22.5
C06000672250M	15.24	0.6	1.7	0.067	57.15	2.25	93.41	21	31.39	1.236	21.51	0.847	3.47	19.8
C06000672500M	15.24	0.6	1.7	0.067	63.5	2.5	93.41	21	34.7	1.366	23.44	0.923	3.1	17.7
C06000672750M	15.24	0.6	1.7	0.067	69.85	2.75	93.41	21	38	1.496	24.54	0.966	2.92	16.7
C06000673000M	15.24	0.6	1.7	0.067	76.2	3	93.41	21	41.3	1.626	26.42	1.04	2.68	15.3
C06000720620M	15.24	0.6	1.83	0.072	15.75	0.62	106.76	24	10.29	0.405	9.68	0.381	20.05	114.5
C06000720750M	15.24	0.6	1.83	0.072	19.05	0.75	106.76	24	11.3	0.445	10.06	0.396	13.66	78
C06000720880M	15.24	0.6	1.83	0.072	22.35	0.88	106.76	24	13.21	0.52	11	0.433	11.91	68
C06000721000M	15.24	0.6	1.83	0.072	25.4	1	106.76	24	14.35	0.565	12.75	0.502	9.63	55
C06000721250M	15.24	0.6	1.83	0.072	31.75	1.25	106.76	24	18.03	0.71	14.76	0.581	7.88	45
C06000721500M	15.24	0.6	1.83	0.072	38.1	1.5	106.76	24	21.08	0.83	17.55	0.691	6.3	36
C06000721750M	15.24	0.6	1.83	0.072	44.45	1.75	106.76	24	24.13	0.95	20.35	0.801	5.25	30
C06000722000M	15.24	0.6	1.83	0.072	50.8	2	106.76	24	28.96	1.14	21.54	0.848	4.9	28
C06000722250M	15.24	0.6	1.83	0.072	57.15	2.25	106.76	24	33.05	1.301	24.03	0.946	4.54	25.9
C06000722500M	15.24	0.6	1.83	0.072	63.5	2.5	106.76	24	36.53	1.438	26.24	1.033	4.05	23.1
C06000722750M	15.24	0.6	1.83	0.072	69.85	2.75	106.76	24	40.67	1.601	28.42	1.119	3.66	20.9
C06000723000M	15.24	0.6	1.83	0.072	76.2	3	106.76	24	44.25	1.742	30.63	1.206	3.34	19.1
C06000810620M	15.24	0.6	2.06	0.081	15.75	0.62	145.41	32.69	11.84	0.466	10.46	0.412	37.23	212.6
C06000810750M	15.24	0.6	2.06	0.081	19.05	0.75	145.41	32.69	14.05	0.553	11.66	0.459	29	165.6
C06000810880M	15.24	0.6	2.06	0.081	22.35	0.88	145.41	32.69	16.23	0.639	12.88	0.507	23.74	135.6
C06000811000M	15.24	0.6	2.06	0.081	25.4	1	145.41	32.69	18.26	0.719	14.02	0.552	20.35	116.2
C06000811250M	15.24	0.6	2.06	0.081	31.75	1.25	145.41	32.69	22.48	0.885	16.36	0.644	15.67	89.5
C06000811500M	15.24	0.6	2.06	0.081	38.1	1.5	145.41	32.69	26.7	1.051	18.69	0.736	12.75	72.8
C06000811750M	15.24	0.6	2.06	0.081	44.45	1.75	145.41	32.69	30.91	1.217	21.03	0.828	10.73	61.3
C06000812000M	15.24	0.6	2.06	0.081	50.8	2	145.41	32.69	35.13	1.383	23.37	0.92	9.28	53
C06000812250M	15.24	0.6	2.06	0.081	57.15	2.25	145.41	32.69	39.34	1.549	25.7	1.012	8.16	46.6
C06000812500M	15.24	0.6	2.06	0.081	63.5	2.5	145.41	32.69	43.56	1.715	28.04	1.104	7.3	41.7
C06000812750M	15.24	0.6	2.06	0.081	69.85	2.75	145.41	32.69	47.78	1.881	30.38	1.196	6.58	37.6
C06000813000M	15.24	0.6	2.06	0.081	76.2	3	145.41	32.69	51.99	2.047	32.72	1.288	6.01	34.3
C06000813250M	15.24	0.6	2.06	0.081	82.55	3.25	145.41	32.69	56.21	2.213	35.05	1.38	5.52	31.5
C06000813500M	15.24	0.6	2.06	0.081	88.9	3.5	145.41	32.69	60.43	2.379	37.39	1.472	5.11	29.2
C06000813750M	15.24	0.6	2.06	0.081	95.25	3.75	145.41	32.69	64.64	2.545	39.73	1.564	4.75	27.1
C06000814000M	15.24	0.6	2.06	0.081	101.6	4	145.41	32.69	68.86	2.711	42.06	1.656	4.45	25.4
C06000850620M	15.24	0.6	2.16	0.085	15.75	0.62	167.33	37.62	12.12	0.477	11	0.433	45.96	262.5
C06000850750M	15.24	0.6	2.16	0.085	19.05	0.75	167.33	37.62	14.35	0.565	12.29	0.484	35.65	203.6
C06000850880M	15.24	0.6	2.16	0.085	22.35	0.88	167.33	37.62	16.61	0.654	13.61	0.536	29.14	166.4
C06000851000M	15.24	0.6	2.16	0.085	25.4	1	167.33	37.62	18.69	0.736	14.81	0.583	24.92	142.3
C06000851250M	15.24	0.6	2.16	0.085	31.75	1.25	167.33	37.62	23.01	0.906	17.32	0.682	19.16	109.4
C06000851500M	15.24	0.6	2.16	0.085	38.1	1.5	167.33	37.62	27.33	1.076	19.84	0.781	15.55	88.8
C06000851750M	15.24	0.6	2.16	0.085	44.45	1.75	167.33	37.62	31.67	1.247	22.35	0.88	13.1	74.8
C06000852000M	15.24	0.6	2.16	0.085	50.8	2	167.33	37.62	35.99	1.417	24.84	0.978	11.29	64.5
C06000852250M	15.24	0.6	2.16	0.085	57.15	2.25	167.33	37.62	40.34	1.588	27.36	1.077	9.95	56.8
C06000852500M	15.24	0.6	2.16	0.085	63.5	2.5	167.33	37.62	44.65	1.758	29.87	1.176	8.88	50.7
C06000852750M	15.24	0.6	2.16	0.085	69.85	2.75	167.33	37.62	48.97	1.928	32.39	1.275	8.02	45.8
C06000853000M	15.24	0.6	2.16	0.085	76.2	3	167.33	37.62	53.31	2.099	34.9	1.374	7.3	41.7
C06000853250M	15.24	0.6	2.16	0.085	82.55	3.25	167.33	37.62	57.63	2.269	37.41	1.473	6.71	38.3
C06000853500M	15.24	0.6	2.16	0.085	88.9	3.5	167.33	37.62	61.95	2.439	39.93	1.572	6.22	35.5
C06000853750M	15.24	0.6	2.16	0.085	95.25	3.75	167.33	37.62	66.29	2.61	42.42	1.67	5.78	33
C06000854000M	15.24	0.6	2.16	0.085	101.6	4	167.33	37.62	70.61	2.78	44.93	1.769	5.39	30.8
C06000920750M	15.24	0.6	2.34	0.092	19.05	0.75	206.65	46.46	15.01	0.591	13.31	0.524	51.04	291.5
C06000920880M	15.24	0.6	2.34	0.092	22.35	0.88	206.65	46.46	17.37	0.684	14.76	0.581	41.5	237
C06000921000M	15.24	0.6	2.34	0.092	25.4	1	206.65	46.46	19.56	0.77	16.08	0.633	35.41	202.2

Compression Springs B

Part Number	Outside Dia		Wire Dia		Free Length L, Approx.		Load P at L_1		Length L_1		Solid Height Approx.		Spring Rate, R	
	mm	in	mm	in	mm	in	N	lb	mm	in	mm	in	N/m	lb/in
C06000921250M	15.24	0.6	2.34	0.092	31.75	1.25	206.65	46.46	24.13	0.95	18.87	0.743	27.09	154.7
C06000921500M	15.24	0.6	2.34	0.092	38.1	1.5	206.65	46.46	28.68	1.129	21.67	0.853	21.96	125.4
C06000921750M	15.24	0.6	2.34	0.092	44.45	1.75	206.65	46.46	33.25	1.309	24.43	0.962	18.44	105.3
C06000922000M	15.24	0.6	2.34	0.092	50.8	2	206.65	46.46	37.8	1.488	27.23	1.072	15.9	90.8
C06000922250M	15.24	0.6	2.34	0.092	57.15	2.25	206.65	46.46	42.37	1.668	30	1.181	13.97	79.8
C06000922500M	15.24	0.6	2.34	0.092	63.5	2.5	206.65	46.46	46.94	1.848	32.79	1.291	12.47	71.2
C06000922750M	15.24	0.6	2.34	0.092	69.85	2.75	206.65	46.46	51.49	2.027	35.56	1.4	11.26	64.3
C06000923000M	15.24	0.6	2.34	0.092	76.2	3	206.65	46.46	56.06	2.207	38.35	1.51	10.26	58.6
C06000923250M	15.24	0.6	2.34	0.092	82.55	3.25	206.65	46.46	60.6	2.386	41.12	1.619	9.42	53.8
C06000923500M	15.24	0.6	2.34	0.092	88.9	3.5	206.65	46.46	65.18	2.566	43.92	1.729	8.7	49.7
C06000923750M	15.24	0.6	2.34	0.092	95.25	3.75	206.65	46.46	69.75	2.746	46.69	1.838	8.11	46.3
C06000924000M	15.24	0.6	2.34	0.092	101.6	4	206.65	46.46	74.3	2.925	49.48	1.948	7.56	43.2
C06000980750M	15.24	0.6	2.49	0.098	19.05	0.75	245.26	55.14	15.44	0.608	14.2	0.559	67.9	387.8
C06000980880M	15.24	0.6	2.49	0.098	22.35	0.88	245.26	55.14	17.88	0.704	15.77	0.621	55	314.1
C06000981000M	15.24	0.6	2.49	0.098	25.4	1	245.26	55.14	20.17	0.794	17.22	0.678	46.79	267.2
C06000981250M	15.24	0.6	2.49	0.098	31.75	1.25	245.26	55.14	24.89	0.98	20.27	0.798	35.7	203.9
C06000981500M	15.24	0.6	2.49	0.098	38.1	1.5	245.26	55.14	29.59	1.165	23.29	0.917	28.86	164.8
C06000981750M	15.24	0.6	2.49	0.098	44.45	1.75	245.26	55.14	34.32	1.351	26.34	1.037	24.22	138.3
C06000982000M	15.24	0.6	2.49	0.098	50.8	2	245.26	55.14	39.04	1.537	29.36	1.156	20.85	119.1
C06000982250M	15.24	0.6	2.49	0.098	57.15	2.25	245.26	55.14	43.76	1.723	32.41	1.276	18.32	104.6
C06000982500M	15.24	0.6	2.49	0.098	63.15	2.5	245.26	55.14	48.49	1.909	35.43	1.395	16.34	93.3
C06000982750M	15.24	0.6	2.49	0.098	69.85	2.75	245.26	55.14	53.21	2.095	38.48	1.515	14.73	84.1
C06000983000M	15.24	0.6	2.49	0.098	76.2	3	245.26	55.14	57.91	2.28	41.5	1.634	13.41	76.6
C06000983250M	15.24	0.6	2.49	0.098	82.55	3.25	245.26	55.14	62.64	2.466	44.55	1.754	12.33	70.4
C06000983500M	15.24	0.6	2.49	0.098	88.9	3.5	245.26	55.14	67.36	2.652	47.57	1.873	11.38	65
C06000983750M	15.24	0.6	2.49	0.098	95.25	3.75	245.26	55.14	72.09	2.838	50.62	1.993	10.59	60.5
C06000984000M	15.24	0.6	2.49	0.098	101.6	4	245.26	55.14	76.81	3.024	53.64	2.112	9.89	56.5
C07200550620M	18.29	0.72	1.4	0.055	15.75	0.62	43.37	9.75	8.13	0.32	6.12	0.241	5.69	32.5
C07200550750M	18.29	0.72	1.4	0.055	19.05	0.75	43.37	9.75	8	0.315	5.61	0.221	4.03	23
C07200550880M	18.29	0.72	1.4	0.055	22.35	0.88	43.37	9.75	9.53	0.375	6.05	0.238	3.5	20
C07200551000M	18.29	0.72	1.4	0.055	25.4	1	43.37	9.75	11.68	0.46	6.3	0.248	3.24	18.5
C07200551250M	18.29	0.72	1.4	0.055	31.75	1.25	43.37	9.75	14.73	0.58	7.14	0.281	2.63	15
C07200551500M	18.29	0.72	1.4	0.055	38.1	1.5	43.37	9.75	16	0.63	8.46	0.333	2.01	11.5
C07200551750M	18.29	0.72	1.4	0.055	44.45	1.75	43.37	9.75	17.02	0.67	9.86	0.388	1.611	9.2
C07200552000M	18.29	0.72	1.4	0.055	50.8	2	43.37	9.75	20.83	0.82	10.44	0.411	1.488	8.5
C07200552250M	18.29	0.72	1.4	0.055	57.15	2.25	43.37	9.75	25.2	0.992	12.24	0.482	1.366	7.8
C07200552500M	18.29	0.72	1.4	0.055	63.5	2.5	43.37	9.75	27.81	1.095	13.18	0.519	1.208	6.9
C07200552750M	18.29	0.72	1.4	0.055	69.85	2.75	43.37	9.75	30.43	1.198	14.12	0.556	1.103	6.3
C07200553000M	18.29	0.72	1.4	0.055	76.2	3	43.37	9.75	33.07	1.302	15.06	0.593	0.998	5.7
C07200590750M	18.29	0.72	1.5	0.059	19.05	0.75	52.84	11.88	9.88	0.389	7.24	0.285	5.76	32.9
C07200590880M	18.29	0.72	1.5	0.059	22.35	0.88	52.84	11.88	11.28	0.444	7.82	0.308	4.78	27.3
C07200591000M	18.29	0.72	1.5	0.059	25.4	1	52.84	11.88	12.6	0.496	8.33	0.328	4.12	23.5
C07200591250M	18.29	0.72	1.5	0.059	31.75	1.25	52.84	11.88	15.32	0.603	9.42	0.371	3.2	18.3
C07200591500M	18.29	0.72	1.5	0.059	38.1	1.5	52.84	11.88	18.03	0.71	10.52	0.414	2.63	15
C07200591750M	18.29	0.72	1.5	0.059	44.45	1.75	52.84	11.88	20.75	0.817	11.61	0.457	2.22	12.7
C07200592000M	18.29	0.72	1.5	0.059	50.8	2	52.84	11.88	23.47	0.924	12.67	0.499	1.926	11
C07200592250M	18.29	0.72	1.5	0.059	57.15	2.25	52.84	11.88	26.19	1.031	13.77	0.542	1.698	9.7
C07200592500M	18.29	0.72	1.5	0.059	63.5	2.5	52.84	11.88	28.91	1.138	14.86	0.585	1.523	8.7
C07200630620M	18.29	0.72	1.6	0.063	15.75	0.62	62.28	14	8.79	0.346	7.26	0.286	9.11	52
C07200630750M	18.29	0.72	1.6	0.063	19.05	0.75	62.28	14	8.26	0.325	7.21	0.284	5.78	33
C07200630880M	18.29	0.72	1.6	0.063	22.35	0.88	62.28	14	9.53	0.375	7.95	0.313	4.9	28
C07200631000M	18.29	0.72	1.6	0.063	25.4	1	62.28	14	10.67	0.42	8.74	0.344	4.2	24
C07200631250M	18.29	0.72	1.6	0.063	31.75	1.25	62.28	14	12.45	0.49	10.39	0.409	3.24	18.5
C07200631500M	18.29	0.72	1.6	0.063	38.1	1.5	62.28	14	14.48	0.57	12.07	0.475	2.63	15
C07200631750M	18.29	0.72	1.6	0.063	44.45	1.75	62.28	14	17.27	0.68	13.44	0.529	2.28	13
C07200632000M	18.29	0.72	1.6	0.063	50.8	2	62.28	14	18.54	0.73	15.29	0.602	1.926	11
C07200632250M	18.29	0.72	1.6	0.063	57.15	2.25	62.28	14	27.2	1.071	15.37	0.605	2.12	12.1
C07200632500M	18.29	0.72	1.6	0.063	63.5	2.5	62.28	14	30.02	1.182	16.61	0.654	1.891	10.8
C07200632750M	18.29	0.72	1.6	0.063	69.85	2.75	62.28	14	32.87	1.294	17.83	0.702	1.716	9.8
C07200633000M	18.29	0.72	1.6	0.063	76.2	3	62.28	14	35.69	1.405	19.08	0.751	1.558	8.9
C07200650750M	18.29	0.72	1.65	0.065	19.05	0.75	69.26	15.57	10.44	0.411	8.23	0.324	8.06	46
C07200650880M	18.29	0.72	1.65	0.065	22.35	0.88	69.26	15.57	11.94	0.47	8.92	0.351	6.65	38
C07200651000M	18.29	0.72	1.65	0.065	25.4	1	69.26	15.57	13.34	0.525	9.55	0.376	5.74	32.8
C07200651250M	18.29	0.72	1.65	0.065	31.75	1.25	69.26	15.57	16.21	0.638	10.87	0.428	4.45	25.4
C07200651500M	18.29	0.72	1.65	0.065	38.1	1.5	69.26	15.57	19.1	0.752	12.19	0.48	3.64	20.8
C07200651750M	18.29	0.72	1.65	0.065	44.45	1.75	69.26	15.57	21.97	0.865	13.51	0.532	3.08	17.6

Part Number	Outside Dia		Wire Dia		Free Length L, Approx.		Load P at L_1		Length L_1		Solid Height Approx.		Spring Rate, R	
	mm	in	mm	in	mm	in	N	lb	mm	in	mm	in	N/m	lb/in
C07200652000M	18.29	0.72	1.65	0.065	50.8	2	69.26	15.57	24.84	0.978	14.83	0.584	2.66	15.2
C07200652250M	18.29	0.72	1.65	0.065	57.15	2.25	69.26	15.57	27.74	1.092	16.15	0.636	2.35	13.4
C07200652500M	18.29	0.72	1.65	0.065	63.5	2.5	69.26	15.57	30.61	1.205	17.5	0.689	2.1	12
C07200652750M	18.29	0.72	1.65	0.065	69.85	2.5	69.26	15.57	33.5	1.319	18.14	0.714	1.909	10.9
C07200653000M	18.29	0.72	1.65	0.065	76.2	3	69.26	15.57	36.37	1.432	20.14	0.793	1.733	9.9
C07200670750M	18.29	0.72	1.7	0.067	19.05	0.75	80.07	18	9.91	0.39	7.09	0.279	8.76	50
C07200670880M	18.29	0.72	1.7	0.067	22.35	0.88	80.07	18	10.8	0.425	8	0.315	7	40
C07200671000M	18.29	0.72	1.7	0.067	25.4	1	80.07	18	11.43	0.45	8.99	0.354	5.78	33
C07200671250M	18.29	0.72	1.7	0.067	31.75	1.25	80.07	18	14.73	0.58	10.24	0.403	4.73	27
C07200671500M	18.29	0.72	1.7	0.067	38.1	1.5	80.07	18	17.27	0.68	11.79	0.464	3.85	22
C07200671750M	18.29	0.72	1.7	0.067	44.45	1.75	80.07	18	19.05	0.75	13.67	0.538	3.15	18
C07200672000M	18.29	0.72	1.7	0.067	50.8	2	80.07	18	21.59	0.85	15.32	0.603	2.71	15.5
C07200672250M	18.29	0.72	1.7	0.067	57.15	2.25	80.07	18	28.27	1.113	16.99	0.669	2.61	14.9
C07200672500M	18.29	0.72	1.7	0.067	65.5	2.25	80.07	18	31.19	1.228	18.39	0.724	2.33	13.3
C07200673000M	18.29	0.72	1.7	0.067	76.2	3	80.07	18	37.08	1.46	21.21	0.835	1.926	11
C07200673250M	18.29	0.72	1.7	0.067	82.55	3.25	80.07	18	40.01	1.575	21.59	0.85	1.874	10.7
C07200673500M	18.29	0.72	1.7	0.067	88.9	3.5	80.07	18	42.95	1.691	22.91	0.902	1.751	10
C07200720750M	18.29	0.72	1.83	0.072	19.05	0.75	93.41	21	11.13	0.438	9.35	0.368	11.78	67.3
C07200720880M	18.29	0.72	1.83	0.072	22.35	0.88	93.41	21	11.05	0.435	9.27	0.365	8.41	48
C07200721000M	18.29	0.72	1.83	0.072	25.4	1	93.41	21	12.7	0.5	10.08	0.397	7.35	42
C07200721250M	18.29	0.72	1.83	0.072	31.75	1.25	93.41	21	16.51	0.65	11.38	0.448	6.13	35
C07200721500M	18.29	0.72	1.83	0.072	38.1	1.5	93.41	21	17.78	0.7	14.07	0.554	4.55	26
C07200721750M	18.29	0.72	1.83	0.072	44.45	1.75	93.41	21	20.57	0.81	15.95	0.628	3.85	22
C07200722000M	18.29	0.72	1.83	0.072	50.8	2	93.41	21	24.13	0.95	17.2	0.677	3.5	20
C07200722250M	18.29	0.72	1.83	0.072	57.15	2.25	93.41	21	29.62	1.166	19.08	0.751	3.34	19.1
C07200722500M	18.29	0.72	1.83	0.072	63.5	2.5	93.41	21	32.69	1.287	20.7	0.815	2.99	17.1
C07200722750M	18.29	0.72	1.83	0.072	69.85	2.75	93.41	21	35.79	1.409	22.3	0.878	2.7	15.4
C07200723000M	18.29	0.72	1.83	0.072	76.2	3	93.41	21	38.86	1.53	23.93	0.942	2.47	14.1
C07200723250M	18.29	0.72	1.83	0.072	82.55	3.25	93.41	21	41.38	1.629	25.53	1.005	2.28	13
C07200723500M	18.29	0.72	1.83	0.072	88.9	3.5	93.41	21	44.42	1.749	27.15	1.069	2.1	12
C07200724000M	18.29	0.72	1.83	0.072	101.6	4	93.41	21	51.18	2.015	30.02	1.182	1.856	10.6
C07200810750M	18.29	0.72	2.06	0.081	19.05	0.75	127.75	28.72	11.99	0.472	10.9	0.429	18.12	103.5
C07200810880M	18.29	0.72	2.06	0.081	22.35	0.88	127.75	28.72	13.74	0.541	11.94	0.47	14.83	84.7
C07200811000M	18.29	0.72	2.06	0.081	25.4	1	127.75	28.72	15.34	0.604	12.9	0.508	12.71	72.6
C07200811250M	18.29	0.72	2.06	0.081	31.75	1.25	127.75	28.72	18.69	0.736	14.91	0.587	9.79	55.9
C07200811500M	18.29	0.72	2.06	0.081	38.1	1.5	127.75	28.72	22.05	0.868	16.89	0.665	7.97	45.5
C07200811750M	18.29	0.72	2.06	0.081	44.45	1.75	127.75	28.72	25.4	1	18.9	0.744	6.71	38.3
C07200812000M	18.29	0.72	2.06	0.081	50.8	2	127.75	28.72	28.75	1.132	20.9	0.823	5.8	33.1
C07200812250M	18.29	0.72	2.06	0.081	57.15	2.25	127.75	28.72	32.11	1.264	22.91	0.902	5.1	29.1
C07200812500M	18.29	0.72	2.06	0.081	63.5	2.5	127.75	28.72	35.46	1.396	24.92	0.981	4.55	26
C07200812750M	18.29	0.72	2.06	0.081	69.85	2.75	127.75	28.72	38.81	1.528	26.92	1.06	4.12	23.5
C07200813000M	18.29	0.72	2.06	0.081	76.2	3	127.75	28.72	42.16	1.66	28.93	1.139	3.75	21.4
C07200813500M	18.29	0.72	2.06	0.081	88.9	3.5	127.75	28.72	48.87	1.924	32.94	1.297	3.19	18.2
C07200814000M	18.29	0.72	2.06	0.081	101.6	4	127.75	28.72	55.52	2.186	36.96	1.455	2.78	15.9
C07200850750M	18.29	0.72	2.16	0.085	19.05	0.75	149.41	33.59	12.9	0.508	11.02	0.434	24.34	139
C07200850880M	18.29	0.72	2.16	0.085	22.35	0.88	149.41	33.59	14.83	0.584	12.04	0.474	19.87	113.5
C07200851000M	18.29	0.72	2.16	0.085	25.4	1	149.41	33.59	16.61	0.654	13	0.512	17	97.1
C07200851250M	18.29	0.72	2.16	0.085	31.75	1.25	149.41	33.59	20.32	0.8	14.96	0.589	13.06	74.6
C07200851500M	18.29	0.72	2.16	0.085	38.1	1.5	149.41	33.59	24.03	0.946	16.92	0.666	10.61	60.6
C07200851750M	18.29	0.72	2.16	0.085	44.45	1.75	149.41	33.59	27.74	1.092	18.87	0.743	8.93	51
C07200852000M	18.29	0.72	2.16	0.085	50.8	2	149.41	33.59	31.42	1.237	20.85	0.821	7.7	44
C07200852250M	18.29	0.72	2.16	0.085	57.15	2.25	149.41	33.59	35.13	1.383	22.81	0.898	6.78	38.7
C07200852500M	18.29	0.72	2.16	0.085	63.5	2.5	149.41	33.59	38.84	1.529	24.77	0.975	6.06	34.6
C07200852750M	18.29	0.72	2.16	0.085	69.85	2.75	149.41	33.59	42.55	1.675	26.72	1.052	5.46	31.2
C07200853000M	18.29	0.72	2.16	0.085	76.2	3	149.41	33.59	46.25	1.821	28.7	1.13	4.99	28.5
C07200853500M	18.29	0.72	2.16	0.085	88.9	3.5	149.41	33.59	53.64	2.112	32.61	1.284	4.24	24.2
C07200854000M	18.29	0.72	2.16	0.085	101.6	4	149.41	33.59	61.06	2.404	36.55	1.439	3.68	21
C07200960750M	18.29	0.72	2.44	0.096	19.05	0.75	201.63	45.33	14.22	0.56	12.45	0.49	41.78	238.6
C07200960880M	18.29	0.72	2.44	0.096	22.35	0.88	201.63	45.33	16.41	0.646	13.64	0.537	33.9	193.6
C07200961000M	18.29	0.72	2.44	0.096	25.4	1	201.63	45.33	18.42	0.725	14.76	0.581	28.86	164.8
C07200961250M	18.29	0.72	2.44	0.096	31.75	1.25	201.63	45.33	22.61	0.89	17.04	0.671	22.05	125.9
C07200961500M	18.29	0.72	2.44	0.096	38.1	1.5	201.63	45.33	26.8	1.055	19.35	0.762	17.83	101.8
C07200961750M	18.29	0.72	2.44	0.096	44.45	1.75	201.63	45.33	30.99	1.22	21.64	0.852	14.97	85.5
C07200962000M	18.29	0.72	2.44	0.096	50.8	2	201.63	45.33	35.18	1.385	23.95	0.943	12.91	73.7
C07200962250M	18.29	0.72	2.44	0.096	57.15	2.25	201.63	45.33	39.34	1.549	26.26	1.034	11.33	64.7
C07200962500M	18.29	0.72	2.44	0.096	63.5	2.5	201.63	45.33	43.54	1.714	28.55	1.124	10.1	57.7

Compression Springs B

Part Number	Outside Dia		Wire Dia		Free Length L, Approx.		Load P at L_1		Length L_1		Solid Height Approx.		Spring Rate, R	
	mm	in	mm	in	mm	in	N	lb	mm	in	mm	in	N/m	lb/in
C07200962750M	18.29	0.72	2.44	0.096	69.85	2.75	201.63	45.33	47.73	1.879	30.86	1.215	9.12	52.1
C07200963000M	18.29	0.72	2.44	0.096	76.2	3	201.63	45.33	51.92	2.044	33.15	1.305	8.3	47.4
C07200963500M	18.29	0.72	2.44	0.096	88.9	3.5	201.63	45.33	60.3	2.374	37.74	1.486	7.06	40.3
C07200964000M	18.29	0.72	2.44	0.096	101.6	4	201.63	45.33	68.68	2.704	42.37	1.668	6.13	35
C07201050750M	18.29	0.72	2.67	0.105	19.05	0.75	260.65	58.6	14.86	0.585	13.64	0.537	62.11	354.7
C07201050880M	18.29	0.72	2.67	0.105	22.35	0.88	260.65	58.6	17.15	0.675	15.01	0.591	50.06	285.9
C07201051000M	18.29	0.72	2.67	0.105	25.4	1	260.65	58.6	19.25	0.758	16.26	0.64	42.46	242.5
C07201051250M	18.29	0.72	2.67	0.105	31.75	1.25	260.65	58.6	23.67	0.932	18.87	0.743	32.25	184.2
C07201051500M	18.29	0.72	2.67	0.105	38.1	1.5	260.65	58.6	28.07	1.105	21.49	0.846	26	148.5
C07201051750M	18.29	0.72	2.67	0.105	44.45	1.75	260.65	58.6	32.49	1.279	24.1	0.949	21.78	124.4
C07201052000M	18.29	0.72	2.67	0.105	50.8	2	260.65	58.6	36.88	1.452	26.72	1.052	18.74	107
C07201052250M	18.29	0.72	2.67	0.105	57.15	2.25	260.65	58.6	41.3	1.626	29.34	1.155	16.44	93.9
C07201052500M	18.29	0.72	2.67	0.105	63.5	2.5	260.65	58.6	45.69	1.799	31.95	1.258	14.64	83.6
C07201052750M	18.29	0.72	2.67	0.105	69.85	2.75	260.65	58.6	50.11	1.973	34.57	1.361	13.2	75.4
C07201053000M	18.29	0.72	2.67	0.105	76.2	3	260.65	58.6	54.51	2.146	37.19	1.464	12.03	68.7
C07201053500M	18.29	0.72	2.67	0.105	88.9	3.5	260.65	58.6	63.32	2.493	42.42	1.67	10.19	58.2
C07201054000M	18.29	0.72	2.67	0.105	101.6	4	260.65	58.6	72.14	2.84	47.65	1.876	8.84	50.5
C07201120750M	18.29	0.72	2.84	0.112	19.05	0.75	309.54	69.59	15.29	0.602	14.63	0.576	82.09	468.8
C07201120880M	18.29	0.72	2.84	0.112	22.35	0.88	309.54	69.59	17.65	0.695	16.15	0.636	65.82	375.9
C07201121000M	18.29	0.72	2.84	0.112	25.4	1	309.54	69.59	19.84	0.781	17.55	0.691	55.63	317.7
C07201121250M	18.29	0.72	2.84	0.112	31.75	1.25	309.54	69.59	24.38	0.96	20.45	0.805	42.08	240.3
C07201121500M	18.29	0.72	2.84	0.112	38.1	1.5	309.54	69.59	28.96	1.14	23.34	0.919	33.83	193.2
C07201121750M	18.29	0.72	2.84	0.112	44.45	1.75	309.54	69.59	33.5	1.319	26.26	1.034	28.3	161.6
C07201122000M	18.29	0.72	2.84	0.112	50.8	2	309.54	69.59	38.07	1.499	29.16	1.148	24.3	138.8
C07201122250M	18.29	0.72	2.84	0.112	57.15	2.25	309.54	69.59	42.62	1.678	32.05	1.262	21.31	121.7
C07201122500M	18.29	0.72	2.84	0.112	63.5	2.5	309.54	69.59	47.19	1.858	34.95	1.376	18.96	108.3
C07201122750M	18.29	0.72	2.84	0.112	69.85	2.75	309.54	69.59	51.74	2.037	37.87	1.491	17.09	97.6
C07201123000M	18.29	0.72	2.84	0.112	76.2	3	309.54	69.59	56.29	2.216	40.77	1.605	15.55	88.8
C07201123500M	18.29	0.72	2.84	0.112	88.9	3.5	309.54	69.59	65.41	2.575	46.58	1.834	13.19	75.3
C07201124000M	18.29	0.72	2.84	0.112	101.6	4	309.54	69.59	74.52	2.934	52.37	2.062	11.43	65.3
C08500680750M	21.59	0.85	1.73	0.068	19.05	0.75	48.66	10.94	11.3	0.445	7.42	0.292	6.29	35.9
C08500680875M	21.59	0.85	1.73	0.068	22.35	0.88	48.66	10.94	12.9	0.508	8.05	0.317	5.22	29.8
C08500681000M	21.59	0.85	1.73	0.068	25.4	1	48.66	10.94	14.5	0.571	8.69	0.342	4.47	25.5
C08500681250M	21.59	0.85	1.73	0.068	31.75	1.25	48.66	10.94	17.68	0.696	9.93	0.391	3.47	19.8
C08500681500M	21.59	0.85	1.73	0.068	38.1	1.5	48.66	10.94	20.88	0.822	11.2	0.441	2.82	16.1
C08500681750M	21.59	0.85	1.73	0.068	44.45	1.75	48.66	10.94	24.08	0.948	12.45	0.49	2.38	13.6
C08500682000M	21.59	0.85	1.73	0.068	50.8	2	48.66	10.94	27.28	1.074	13.72	0.54	2.07	11.8
C08500682250M	21.59	0.85	1.73	0.068	57.15	2.25	48.66	10.94	30.48	1.2	14.99	0.59	1.821	10.4
C08500682500M	21.59	0.85	1.73	0.068	63.5	2.5	48.66	10.94	33.66	1.325	16.23	0.639	1.628	9.3
C08500683000M	21.59	0.85	1.73	0.068	76.2	3	48.66	10.94	40.06	1.577	18.77	0.739	1.348	7.7
C08500683500M	21.59	0.85	1.73	0.068	88.9	3.5	48.66	10.94	46.43	1.828	21.29	0.838	1.138	6.5
C08500684000M	21.59	0.85	1.73	0.068	101.6	4	48.66	10.94	52.83	2.08	23.8	0.937	0.998	5.7
C08500740875M	21.59	0.85	1.88	0.074	22.35	0.88	61.65	13.86	13.46	0.53	9.02	0.355	7.02	40.1
C08500741000M	21.59	0.85	1.88	0.074	25.4	1	61.65	13.86	15.11	0.595	9.75	0.384	5.99	34.2
C08500741250M	21.59	0.85	1.88	0.074	31.75	1.25	61.65	13.86	18.47	0.727	11.25	0.443	4.64	26.5
C08500741500M	21.59	0.85	1.88	0.074	38.1	1.5	61.65	13.86	21.79	0.858	12.73	0.501	3.78	21.6
C08500742000M	21.59	0.85	1.88	0.074	50.8	2	61.65	13.86	28.45	1.12	15.7	0.618	2.77	15.8
C08500742500M	21.59	0.85	1.88	0.074	63.5	2.5	61.65	13.86	35.13	1.383	18.67	0.735	2.17	12.4
C08500743000M	21.59	0.85	1.88	0.074	76.2	3	61.65	13.86	41.78	1.645	21.64	0.852	1.786	10.2
C08500743500M	21.59	0.85	1.88	0.074	88.9	3.5	61.65	13.86	48.46	1.908	24.61	0.969	1.523	8.7
C08500810750M	21.59	0.85	2.06	0.081	19.05	0.75	79.31	17.83	12.34	0.486	9.27	0.365	11.85	67.7
C08500810875M	21.59	0.85	2.06	0.081	22.35	0.88	79.31	17.83	14.1	0.555	10.16	0.4	9.77	55.8
C08500811000M	21.59	0.85	2.06	0.081	25.4	1	79.31	17.83	15.85	0.624	11.05	0.435	8.32	47.5
C08500811250M	21.59	0.85	2.06	0.081	31.75	1.25	79.31	17.83	19.35	0.762	12.8	0.504	6.41	36.6
C08500811500M	21.59	0.85	2.06	0.081	38.1	1.5	79.31	17.83	22.86	0.9	14.55	0.573	5.2	29.7
C08500811750M	21.59	0.85	2.06	0.081	44.45	1.75	79.31	17.83	26.37	1.038	16.31	0.642	4.4	25.1
C08500812000M	21.59	0.85	2.06	0.081	50.8	2	79.31	17.83	29.87	1.176	18.08	0.712	3.78	21.6
C08500812250M	21.59	0.85	2.06	0.081	57.15	2.25	79.31	17.83	33.38	1.314	19.84	0.781	3.34	19.1
C08500812500M	21.59	0.85	2.06	0.081	63.5	2.5	79.31	17.83	36.88	1.452	21.59	0.85	2.98	17
C08500812750M	21.59	0.85	2.06	0.081	69.85	2.75	79.31	17.83	40.39	1.59	23.37	0.92	2.7	15.4
C08500813000M	21.59	0.85	2.06	0.081	76.2	3	79.31	17.83	43.89	1.728	25.12	0.989	2.45	14
C08500813500M	21.59	0.85	2.06	0.081	88.9	3.5	79.31	17.83	50.9	2.004	28.63	1.127	2.08	11.9
C08500850750M	21.59	0.85	2.16	0.085	19.05	0.75	90.7	20.39	12.67	0.499	9.86	0.388	14.24	81.3
C08500850875M	21.59	0.85	2.16	0.085	22.35	0.88	90.7	20.39	14.48	0.57	10.82	0.426	11.71	66.9
C08500851000M	21.59	0.85	2.16	0.085	25.4	1	90.7	20.39	16.28	0.641	11.76	0.463	9.95	56.8
C08500851250M	21.59	0.85	2.16	0.085	31.75	1.25	90.7	20.39	19.89	0.783	13.69	0.539	7.63	43.6

Compression Springs B

Part Number	Outside Dia		Wire Dia		Free Length L_0 Approx.		Load P at L_1		Length L_1		Solid Height Approx.		Spring Rate, R	
	mm	in	mm	in	mm	in	N	lb	mm	in	mm	in	N/m	lb/in
C08500851500M	21.59	0.85	2.16	0.085	38.1	1.5	90.7	20.39	23.5	0.925	15.62	0.615	6.2	35.4
C08500851750M	21.59	0.85	2.16	0.085	44.45	1.75	90.7	20.39	27.1	1.067	17.53	0.69	5.22	29.8
C08500852000M	21.59	0.85	2.16	0.085	50.8	2	90.7	20.39	30.68	1.208	19.46	0.766	4.52	25.8
C08500852250M	21.59	0.85	2.16	0.085	57.15	2.25	90.7	20.39	34.29	1.35	21.36	0.841	3.98	22.7
C08500852500M	21.59	0.85	2.16	0.085	63.5	2.5	90.7	20.39	37.9	1.492	23.29	0.917	3.54	20.2
C08500852750M	21.59	0.85	2.16	0.085	69.85	2.75	90.7	20.39	41.5	1.634	25.2	0.992	3.2	18.3
C08500853000M	21.59	0.85	2.16	0.085	76.2	3	90.7	20.39	45.11	1.776	27.13	1.068	2.92	16.7
C08500853250M	21.59	0.85	2.16	0.085	82.55	3.25	90.7	20.39	48.72	1.918	29.06	1.144	2.68	15.3
C08500853500M	21.59	0.85	2.16	0.085	88.9	3.5	90.7	20.39	52.3	2.059	30.96	1.219	2.49	14.2
C08500854000M	21.59	0.85	2.16	0.085	101.6	4	90.7	20.39	59.51	2.343	34.8	1.37	2.15	12.3
C08500920880M	21.59	0.85	2.34	0.092	22.35	0.88	112.94	25.39	15.19	0.598	11.96	0.471	15.78	90.1
C08500921000M	21.59	0.85	2.34	0.092	25.4	1	112.94	25.39	17.02	0.67	13.03	0.513	13.47	76.9
C08500921250M	21.59	0.85	2.34	0.092	31.75	1.25	112.94	25.39	20.78	0.818	15.24	0.6	10.3	58.8
C08500921500M	21.59	0.85	2.34	0.092	38.1	1.5	112.94	25.39	24.56	0.967	17.42	0.686	8.35	47.7
C08500921750M	21.59	0.85	2.34	0.092	44.45	1.75	112.94	25.39	28.35	1.116	19.63	0.773	7	40
C08500922000M	21.59	0.85	2.34	0.092	50.8	2	112.94	25.39	32.13	1.265	21.84	0.86	6.04	34.5
C08500922250M	21.59	0.85	2.34	0.092	57.15	2.25	112.94	25.39	35.89	1.413	24.05	0.947	5.32	30.4
C08500922500M	21.59	0.85	2.34	0.092	63.5	2.5	112.94	25.39	39.67	1.562	26.24	1.033	4.75	27.1
C08500922750M	21.59	0.85	2.34	0.092	69.85	2.75	112.94	25.39	43.46	1.711	28.45	1.12	4.27	24.4
C08500923000M	21.59	0.85	2.34	0.092	76.2	3	112.94	25.39	47.24	1.86	30.66	1.207	3.91	22.3
C08500923500M	21.59	0.85	2.34	0.092	88.9	3.5	112.94	25.39	54.79	2.157	35.05	1.38	3.31	18.9
C08500981000M	21.59	0.85	2.49	0.098	25.4	1	134.51	30.24	17.63	0.694	14.1	0.555	17.28	98.7
C08500981250M	21.59	0.85	2.49	0.098	31.75	1.25	134.51	30.24	21.54	0.848	16.54	0.651	13.19	75.3
C08500981500M	21.59	0.85	2.49	0.098	38.1	1.5	134.51	30.24	25.48	1.003	18.97	0.747	10.65	60.8
C08500981750M	21.59	0.85	2.49	0.098	44.45	1.75	134.51	30.24	29.41	1.158	21.41	0.843	8.95	51.1
C08500982000M	21.59	0.85	2.49	0.098	50.8	2	134.51	30.24	33.32	1.312	23.88	0.94	7.7	44
C08500982250M	21.59	0.85	2.49	0.098	57.15	2.25	134.51	30.24	37.26	1.467	26.31	1.036	6.76	38.6
C08500982500M	21.59	0.85	2.49	0.098	63.5	2.5	134.51	30.24	41.2	1.622	28.75	1.132	6.02	34.4
C08500921500M	21.59	0.85	2.34	0.092	38.1	1.5	112.94	25.39	24.56	0.967	17.42	0.686	8.35	47.7
C08500921750M	21.59	0.85	2.34	0.092	44.45	1.75	112.94	25.39	28.35	1.116	19.63	0.773	7	40
C08500922000M	21.59	0.85	2.34	0.092	50.8	2	112.94	25.39	32.13	1.265	21.84	0.86	6.04	34.5
C08500922250M	21.59	0.85	2.34	0.092	57.15	2.25	112.94	25.39	35.89	1.413	24.05	0.947	5.32	30.4
C08500922500M	21.59	0.85	2.34	0.092	63.5	2.5	112.94	25.39	39.67	1.562	26.24	1.033	4.75	27.1
C08500922750M	21.59	0.85	2.34	0.092	69.85	2.75	112.94	25.39	43.46	1.711	28.45	1.12	4.27	24.4
C08500923000M	21.59	0.85	2.34	0.092	76.2	3	112.94	25.39	47.24	1.86	30.66	1.207	3.91	22.3
C08500923500M	21.59	0.85	2.34	0.092	88.9	3.5	112.94	25.39	54.79	2.157	35.05	1.38	3.31	18.9
C08500981000M	21.59	0.85	2.49	0.098	25.4	1	134.51	30.24	17.63	0.694	14.1	0.555	17.28	98.7
C08500981250M	21.59	0.85	2.49	0.098	31.75	1.25	134.51	30.24	21.54	0.848	16.54	0.651	13.19	75.3
C08500981500M	21.59	0.85	2.49	0.098	38.1	1.5	134.51	30.24	25.48	1.003	18.97	0.747	10.65	60.8
C08500981750M	21.59	0.85	2.49	0.098	44.45	1.75	134.51	30.24	29.41	1.158	21.41	0.843	8.95	51.1
C08500982000M	21.59	0.85	2.49	0.098	50.8	2	134.51	30.24	33.32	1.312	23.88	0.94	7.7	44
C08500982250M	21.59	0.85	2.49	0.098	57.15	2.25	134.51	30.24	37.26	1.467	26.31	1.036	6.76	38.6
C08500982500M	21.59	0.85	2.49	0.098	63.5	2.5	134.51	30.24	41.2	1.622	28.75	1.132	6.02	34.4
C08500982750M	21.59	0.85	2.49	0.098	69.85	2.75	134.51	30.24	45.11	1.776	31.22	1.229	5.45	31.1
C08500983000M	21.59	0.85	2.49	0.098	76.2	3	134.51	30.24	49.05	1.931	33.66	1.325	4.96	28.3
C08500983500M	21.59	0.85	2.49	0.098	88.9	3.5	134.51	30.24	56.9	2.24	38.53	1.517	4.2	24
C09750740750M	24.77	0.975	1.88	0.074	19.05	0.75	54.05	12.15	11.3	0.445	7.49	0.295	6.97	39.8
C09750740875M	24.77	0.975	1.88	0.074	22.35	0.88	54.05	12.15	12.85	0.506	8.05	0.317	5.78	33
C09750741000M	24.77	0.975	1.88	0.074	25.4	1	54.05	12.15	14.43	0.568	8.64	0.34	4.92	28.1
C09750741250M	24.77	0.975	1.88	0.074	31.75	1.25	54.05	12.15	17.55	0.691	9.8	0.386	3.8	21.7
C09750741500M	24.77	0.975	1.88	0.074	38.1	1.5	54.05	12.15	20.68	0.814	10.95	0.431	3.1	17.7
C09750742000M	24.77	0.975	1.88	0.074	50.8	2	54.05	12.15	26.95	1.061	13.26	0.522	2.26	12.9
C09750742500M	24.77	0.975	1.88	0.074	63.5	2.5	54.05	12.15	33.2	1.307	15.57	0.613	1.786	10.2
C09750743000M	24.77	0.975	1.88	0.074	76.2	3	54.05	12.15	39.47	1.554	17.88	0.704	1.471	8.4
C09750743500M	24.77	0.975	1.88	0.074	88.9	3.5	54.05	12.15	45.72	1.8	20.19	0.795	1.243	7.1
C09750744000M	24.77	0.975	1.88	0.074	101.6	4	54.05	12.15	51.99	2.047	22.5	0.886	1.086	6.2
C09750850875M	24.77	0.975	2.16	0.085	22.35	0.88	79.62	17.9	13.77	0.542	9.68	0.381	9.42	53.8
C09750851000M	24.77	0.975	2.16	0.085	25.4	1	79.62	17.9	15.44	0.608	10.44	0.411	8	45.7
C09750851250M	24.77	0.975	2.16	0.085	31.75	1.25	79.62	17.9	18.8	0.74	11.94	0.47	6.15	35.1
C09750851500M	24.77	0.975	2.16	0.085	38.1	1.5	79.62	17.9	22.15	0.872	13.46	0.53	4.99	28.5
C09750852000M	24.77	0.975	2.16	0.085	50.8	2	79.62	17.9	28.85	1.136	16.48	0.649	3.63	20.7
C09750852500M	24.77	0.975	2.16	0.085	63.5	2.5	79.62	17.9	35.56	1.4	19.53	0.769	2.85	16.3
C09750853000M	24.77	0.975	2.16	0.085	76.2	3	79.62	17.9	42.27	1.664	22.56	0.888	2.35	13.4
C09750853500M	24.77	0.975	2.16	0.085	88.9	3.5	79.62	17.9	48.97	1.928	25.58	1.007	1.996	11.4
C09750920875M	24.77	0.975	2.34	0.092	22.35	0.88	99.24	22.31	14.35	0.565	10.69	0.421	12.61	72
C09750921000M	24.77	0.975	2.34	0.092	25.4	1	99.24	22.31	16.1	0.634	11.58	0.456	10.68	61

Compression Springs B

Part Number	Outside Dia		Wire Dia		Free Length L, Approx.		Load P at L_1		Length L_1		Solid Height Approx.		Spring Rate, R	
	mm	in	mm	in	mm	in	N	lb	mm	in	mm	in	N/m	lb/in
C09750921250M	24.77	0.975	2.34	0.092	31.75	1.25	99.24	22.31	19.61	0.772	13.34	0.525	8.18	46.7
C09750921500M	24.77	0.975	2.34	0.092	38.1	1.5	99.24	22.31	23.11	0.91	15.09	0.594	6.62	37.8
C09750922000M	24.77	0.975	2.34	0.092	50.8	2	99.24	22.31	30.12	1.186	18.59	0.732	4.8	27.4
C09750922500M	24.77	0.975	2.34	0.092	63.5	2.5	99.24	22.31	37.11	1.461	22.12	0.871	3.77	21.5
C09750923000M	24.77	0.975	2.34	0.092	76.2	3	99.24	22.31	44.12	1.737	25.63	1.009	3.1	17.7
C09750923500M	24.77	0.975	2.34	0.092	88.9	3.5	99.24	22.31	51.13	2.013	29.13	1.147	2.63	15
C09750924000M	24.77	0.975	2.34	0.092	101.6	4	99.24	22.31	58.14	2.289	32.66	1.286	2.28	13
C09750960875M	24.77	0.975	2.44	0.096	22.35	0.88	111.69	25.11	14.68	0.578	11.28	0.444	14.81	84.6
C09750961000M	24.77	0.975	2.44	0.096	25.4	1	111.69	25.11	16.48	0.649	12.22	0.481	12.52	71.5
C09750961250M	24.77	0.975	2.44	0.096	31.75	1.25	111.69	25.11	20.07	0.79	14.12	0.556	9.56	54.6
C09750961500M	24.77	0.975	2.44	0.096	38.1	1.5	111.69	25.11	23.65	0.931	16.03	0.631	7.74	44.2
C09750962000M	24.77	0.975	2.44	0.096	50.8	2	111.69	25.11	30.84	1.214	19.81	0.78	5.59	31.9
C09750962500M	24.77	0.975	2.44	0.096	63.5	2.5	111.69	25.11	38.02	1.497	23.62	0.93	4.38	25
C09750963000M	24.77	0.975	2.44	0.096	76.2	3	111.69	25.11	45.19	1.779	27.41	1.079	3.61	20.6
C09750963500M	24.77	0.975	2.44	0.096	88.9	3.5	111.69	25.11	52.37	2.062	31.19	1.228	3.06	17.5
C09751050880M	24.77	0.975	2.67	0.105	22.35	0.88	143.19	32.19	15.49	0.61	12.6	0.496	20.85	119.1
C09751051000M	24.77	0.975	2.67	0.105	25.4	1	143.19	32.19	17.3	0.681	13.67	0.538	17.69	101
C09751051250M	24.77	0.975	2.67	0.105	31.75	1.25	143.19	32.19	21.08	0.83	15.9	0.626	13.43	76.7
C09751051500M	24.77	0.975	2.67	0.105	38.1	1.5	143.19	32.19	24.87	0.979	18.11	0.713	10.82	61.8
C09751051750M	24.77	0.975	2.67	0.105	44.45	1.75	143.19	32.19	28.68	1.129	20.32	0.8	9.07	51.8
C09751052000M	24.77	0.975	2.67	0.105	50.8	2	143.19	32.19	32.46	1.278	22.56	0.888	7.81	44.6
C09751052250M	24.77	0.975	2.67	0.105	57.15	2.25	143.19	32.19	36.25	1.427	24.77	0.975	6.85	39.1
C09751052500M	24.77	0.975	2.67	0.105	63.5	2.5	143.19	32.19	40.03	1.576	26.97	1.062	6.09	34.8
C09751052750M	24.77	0.975	2.67	0.105	69.85	2.75	143.19	32.19	43.82	1.725	29.18	1.149	5.5	31.4
C09751053000M	24.77	0.975	2.67	0.105	76.2	3	143.19	32.19	47.6	1.874	31.42	1.237	5.01	28.6
C09751053500M	24.77	0.975	2.67	0.105	88.9	3.5	143.19	32.19	55.19	2.173	35.84	1.411	4.26	24.3
C09751054000M	24.77	0.975	2.67	0.105	101.6	4	143.19	32.19	62.76	2.471	40.28	1.586	3.7	21.1
C09751120880M	24.77	0.975	2.84	0.112	22.35	0.88	171.17	38.48	16.03	0.631	13.59	0.535	27.09	154.7
C09751121000M	24.77	0.975	2.84	0.112	25.4	1	171.17	38.48	17.93	0.706	14.76	0.581	22.9	130.8
C09751121250M	24.77	0.975	2.84	0.112	31.75	1.25	171.17	38.48	21.87	0.861	17.25	0.679	17.32	98.9
C09751121500M	24.77	0.975	2.84	0.112	38.1	1.5	171.17	38.48	25.81	1.016	19.71	0.776	13.92	79.5
C09751122000M	24.77	0.975	2.84	0.112	50.8	2	171.17	38.48	33.71	1.327	24.64	0.97	10	57.1
C09751122500M	24.77	0.975	2.84	0.112	63.5	2.5	171.17	38.48	41.58	1.637	29.57	1.164	7.81	44.6
C09751123000M	24.77	0.975	2.84	0.112	76.2	3	171.17	38.48	49.45	1.947	34.49	1.358	6.41	36.6
C09751123500M	24.77	0.975	2.84	0.112	88.9	3.5	171.17	38.48	57.35	2.258	39.45	1.553	5.43	31
C09751250880M	24.77	0.975	3.18	0.125	22.35	0.88	231.49	52.04	16.99	0.669	15.29	0.602	43.18	246.6
C09751251000M	24.77	0.975	3.18	0.125	25.4	1	231.49	52.04	19.02	0.749	16.69	0.657	36.28	207.2
C09751251250M	24.77	0.975	3.18	0.125	31.75	1.25	231.49	52.04	23.24	0.915	19.61	0.772	27.21	155.4
C09751251500M	24.77	0.975	3.18	0.125	38.1	1.5	231.49	52.04	27.46	1.081	22.53	0.887	21.77	124.3
C09751251750M	24.77	0.975	3.18	0.125	44.45	1.75	231.49	52.04	31.7	1.248	25.45	1.002	18.14	103.6
C09751252000M	24.77	0.975	3.18	0.125	50.8	2	231.49	52.04	35.92	1.414	28.37	1.117	15.55	88.8
C09751252250M	24.77	0.975	3.18	0.125	57.15	2.25	231.49	52.04	40.13	1.58	31.29	1.232	13.61	77.7
C09751252500M	24.77	0.975	3.18	0.125	63.5	2.5	231.49	52.04	44.35	1.746	34.21	1.347	12.1	69.1
C09751252750M	24.77	0.975	3.18	0.125	69.85	2.75	231.49	52.04	48.59	1.913	37.13	1.462	10.89	62.2
C09751253000M	24.77	0.975	3.18	0.125	76.2	3	231.49	52.04	52.81	2.079	40.06	1.577	9.89	56.5
C09751253500M	24.77	0.975	3.18	0.125	88.9	3.5	231.49	52.04	61.24	2.411	45.9	1.807	8.37	47.8
C09751254000M	24.77	0.975	3.18	0.125	101.6	4	231.49	52.04	69.7	2.744	51.74	2.037	7.25	41.4
C09751350880M	24.77	0.975	3.43	0.135	22.35	0.88	286.72	64.46	17.75	0.699	16.33	0.643	62.44	356.6
C09751351000M	24.77	0.975	3.43	0.135	25.4	1	286.72	64.46	19.91	0.784	17.86	0.703	52.18	298
C09751351500M	24.77	0.975	3.43	0.135	38.1	1.5	286.72	64.46	28.83	1.135	24.21	0.953	30.96	176.8
C09751352000M	24.77	0.975	3.43	0.135	50.8	2	286.72	64.46	37.77	1.487	30.56	1.203	22.01	125.7
C09751352500M	24.77	0.975	3.43	0.135	63.5	2.5	286.72	64.46	46.71	1.839	36.91	1.453	17.07	97.5
C09751353000M	24.77	0.975	3.43	0.135	76.2	3	286.72	64.46	55.65	2.191	43.26	1.703	13.96	79.7
C09751353500M	24.77	0.975	3.43	0.135	88.9	3.5	286.72	64.46	64.59	2.543	49.61	1.953	11.78	67.3
C09751354000M	24.77	0.975	3.43	0.135	101.6	4	286.72	64.46	73.53	2.895	55.96	2.203	10.21	58.3
C09751481000M	24.77	0.975	3.76	0.148	25.4	1	367.09	82.53	20.83	0.82	19.38	0.763	80.37	459
C09751481500M	24.77	0.975	3.76	0.148	38.1	1.5	367.09	82.53	30.3	1.193	26.47	1.042	47	268.4
C09751482000M	24.77	0.975	3.76	0.148	50.8	2	367.09	82.53	39.75	1.565	33.58	1.322	33.2	189.6
C09751482500M	24.77	0.975	3.76	0.148	63.5	2.5	367.09	82.53	49.2	1.937	40.67	1.601	25.67	146.6
C09751483000M	24.77	0.975	3.76	0.148	76.2	3	367.09	82.53	58.65	2.309	47.75	1.88	20.92	119.5
C09751483500M	24.77	0.975	3.76	0.148	88.9	3.5	367.09	82.53	68.12	2.682	54.84	2.159	17.67	100.9
C09751484000M	24.77	0.975	3.76	0.148	101.6	4	367.09	82.53	77.57	3.054	61.95	2.439	15.27	87.2
C09751621500M	24.77	0.975	4.11	0.162	38.1	1.5	468.82	105.4	31.65	1.246	28.55	1.124	72.7	415.2
C09751622000M	24.77	0.975	4.11	0.162	50.8	2	468.82	105.4	41.61	1.638	36.32	1.43	51.01	291.3
C09751622500M	24.77	0.975	4.11	0.162	63.5	2.5	468.82	105.4	51.56	2.03	44.07	1.735	39.29	224.4
C09751623000M	24.77	0.975	4.11	0.162	76.2	3	468.82	105.4	61.52	2.422	51.84	2.041	31.96	182.5

Compression Springs B

Part Number	Outside Dia		Wire Dia		Free Length L_0 Approx.		Load P at L_1		Length L_1		Solid Height Approx.		Spring Rate, R	
	mm	in	mm	in	mm	in	N	lb	mm	in	mm	in	N/m	lb/in
C09751623500M	24.77	0.975	4.11	0.162	88.9	3.5	468.82	105.4	71.48	2.814	59.61	2.347	26.91	153.7
C09751624000M	24.77	0.975	4.11	0.162	101.6	4	468.82	105.4	81.43	3.206	67.36	2.652	23.25	132.8
C11000850875M	27.94	1.1	2.16	0.085	22.23	0.88	70.9	15.94	13.26	0.522	8.84	0.348	7.9	45.1
C11000851000M	27.94	1.1	2.16	0.085	25.4	1	70.9	15.94	14.83	0.584	9.45	0.372	6.71	38.3
C11000851250M	27.94	1.1	2.16	0.085	31.75	1.25	70.9	15.94	18.01	0.709	10.67	0.42	5.17	29.5
C11000851500M	27.94	1.1	2.16	0.085	38.1	1.5	70.9	15.94	21.16	0.833	11.86	0.467	4.19	23.9
C11000852000M	27.94	1.1	2.16	0.085	50.8	2	70.9	15.94	27.51	1.083	14.3	0.563	3.05	17.4
C11000852500M	27.94	1.1	2.16	0.085	63.5	2.5	70.9	15.94	33.83	1.332	16.74	0.659	2.4	13.7
C11000853000M	27.94	1.1	2.16	0.085	76.2	3	70.9	15.94	40.44	1.592	19.18	0.755	1.961	11.2
C11000853500M	27.94	1.1	2.16	0.085	88.9	3.5	70.9	15.94	46.51	1.831	21.62	0.851	1.681	9.6
C11000854000M	27.94	1.1	2.16	0.085	101.6	4	70.9	15.94	52.86	2.081	24.05	0.947	1.453	8.3
C11000854500M	27.94	1.1	2.16	0.085	114.3	4.5	70.9	15.94	59.18	2.33	26.49	1.043	1.278	7.3
C11000855000M	27.94	1.1	2.16	0.085	127	5	70.9	15.94	65.53	2.58	28.93	1.139	1.156	6.6
C11000960875M	27.94	1.1	2.44	0.096	22.35	0.88	99.6	22.39	14.07	0.554	10.31	0.406	12.22	69.8
C11000961000M	27.94	1.1	2.44	0.096	25.4	1	99.6	22.39	15.77	0.621	11.07	0.436	10.33	59
C11000961250M	27.94	1.1	2.44	0.096	31.75	1.25	99.6	22.39	19.13	0.753	12.62	0.497	7.9	45.1
C11000961500M	27.94	1.1	2.44	0.096	38.1	1.5	99.6	22.39	22.5	0.886	14.17	0.558	6.39	36.5
C11000962000M	27.94	1.1	2.44	0.096	50.8	2	99.6	22.39	29.24	1.151	17.25	0.679	4.62	26.4
C11000962500M	27.94	1.1	2.44	0.096	63.5	2.5	99.6	22.39	35.99	1.417	20.32	0.8	3.63	20.7
C11000963000M	27.94	1.1	2.44	0.096	76.2	3	99.6	22.39	42.72	1.682	23.42	0.922	2.98	17
C11000963500M	27.94	1.1	2.44	0.096	88.9	3.5	99.6	22.39	49.45	1.947	26.49	1.043	2.52	14.4
C11000964000M	27.94	1.1	2.44	0.096	101.6	4	99.6	22.39	56.18	2.212	29.59	1.165	2.19	12.5
C11000964500M	27.94	1.1	2.44	0.096	114.3	4.5	99.6	22.39	62.94	2.478	32.66	1.286	1.944	11.1
C11001050875M	27.94	1.1	2.67	0.105	22.35	0.88	127.8	28.73	14.76	0.581	11.51	0.453	17.11	97.7
C11001051000M	27.94	1.1	2.67	0.105	25.4	1	127.8	28.73	16.54	0.651	12.42	0.489	14.39	82.2
C11001051250M	27.94	1.1	2.67	0.105	31.75	1.25	127.8	28.73	20.07	0.79	14.25	0.561	10.94	62.5
C11001051500M	27.94	1.1	2.67	0.105	38.1	1.5	127.8	28.73	23.62	0.93	16.05	0.632	8.83	50.4
C11001052000M	27.94	1.1	2.67	0.105	50.8	2	127.8	28.73	30.68	1.208	19.71	0.776	6.36	36.3
C11001052500M	27.94	1.1	2.67	0.105	63.5	2.5	127.8	28.73	37.77	1.487	23.34	0.919	4.97	28.4
C11001053000M	27.94	1.1	2.67	0.105	76.2	3	127.8	28.73	44.86	1.766	26.97	1.062	4.08	23.3
C11001053500M	27.94	1.1	2.67	0.105	88.9	3.5	127.8	28.73	51.94	2.045	30.63	1.206	3.45	19.7
C11001120875M	27.94	1.1	2.84	0.112	22.35	0.88	152.84	34.36	15.27	0.601	12.42	0.489	21.98	125.5
C11001121000M	27.94	1.1	2.84	0.112	25.4	1	152.84	34.36	17.12	0.674	13.46	0.53	18.44	105.3
C11001121250M	27.94	1.1	2.84	0.112	31.75	1.25	152.84	34.36	20.78	0.818	15.49	0.61	13.94	79.6
C11001121500M	27.94	1.1	2.84	0.112	38.1	1.5	152.84	34.36	24.46	0.963	17.53	0.69	11.21	64
C11001121750M	27.94	1.1	2.84	0.112	44.45	1.75	152.84	34.36	28.14	1.108	19.58	0.771	9.37	53.5
C11001122000M	27.94	1.1	2.84	0.112	50.8	2	152.84	34.36	31.83	1.253	21.62	0.851	8.06	46
C11001122250M	27.94	1.1	2.84	0.112	57.15	2.25	152.84	34.36	35.51	1.398	23.67	0.932	7.06	40.3
C11001122500M	27.94	1.1	2.84	0.112	63.5	2.5	152.84	34.36	39.19	1.543	25.7	1.012	6.29	35.9
C11001123000M	27.94	1.1	2.84	0.112	76.2	3	152.84	34.36	46.53	1.832	29.79	1.173	5.15	29.4
C11001123500M	27.94	1.1	2.84	0.112	88.9	3.5	152.84	34.36	53.9	2.122	33.86	1.333	4.36	24.9
C11001124000M	27.94	1.1	2.84	0.112	101.6	4	152.84	34.36	61.26	2.412	37.95	1.494	3.78	21.6
C11001124500M	27.94	1.1	2.84	0.112	114.3	4.5	152.84	34.36	68.61	2.701	42.04	1.655	3.34	19.1
C11001250880M	27.94	1.1	3.18	0.125	22.35	0.88	207.02	46.54	16.26	0.64	14.12	0.556	34.02	194.3
C11001251000M	27.94	1.1	3.18	0.125	25.4	1	207.02	46.54	18.16	0.715	15.32	0.603	28.58	163.2
C11001251250M	27.94	1.1	3.18	0.125	31.75	1.25	207.02	46.54	22.1	0.87	17.75	0.699	21.43	122.4
C11001251500M	27.94	1.1	3.18	0.125	38.1	1.5	207.02	46.54	26.04	1.025	20.22	0.796	17.14	97.9
C11001251750M	27.94	1.1	3.18	0.125	44.45	1.75	207.02	46.54	29.97	1.18	22.68	0.893	14.29	81.6
C11001252000M	27.94	1.1	3.18	0.125	50.8	2	207.02	46.54	33.91	1.335	25.12	0.989	12.24	69.9
C11001252250M	27.94	1.1	3.18	0.125	57.15	2.25	207.02	46.54	37.85	1.49	27.58	1.086	10.72	61.2
C11001252500M	27.94	1.1	3.18	0.125	63.5	2.5	207.02	46.54	41.76	1.644	30.05	1.183	9.53	54.4
C11001253000M	27.94	1.1	3.18	0.125	76.2	3	207.02	46.54	49.63	1.954	34.95	1.376	7.79	44.5
C11001253500M	27.94	1.1	3.18	0.125	88.9	3.5	207.02	46.54	57.51	2.264	39.85	1.569	6.6	37.7
C11001254000M	27.94	1.1	3.18	0.125	101.6	4	207.02	46.54	65.38	2.574	44.78	1.763	5.71	32.6
C11001254500M	27.94	1.1	3.18	0.125	114.3	4.5	207.02	46.54	73.25	2.884	49.68	1.956	5.04	28.8
C11001351500M	27.94	1.1	3.43	0.135	38.1	1.5	255.82	57.51	27.18	1.07	22.2	0.874	23.41	133.7
C11001352000M	27.94	1.1	3.43	0.135	50.8	2	255.82	57.51	35.43	1.395	27.74	1.092	16.65	95.1
C11001352500M	27.94	1.1	3.43	0.135	63.5	2.5	255.82	57.51	43.69	1.72	33.27	1.31	12.92	73.8
C11001353000M	27.94	1.1	3.43	0.135	76.2	3	255.82	57.51	51.94	2.045	38.81	1.528	10.56	60.3
C11001353500M	27.94	1.1	3.43	0.135	88.9	3.5	255.82	57.51	60.22	2.371	44.35	1.746	8.91	50.9
C11001354000M	27.94	1.1	3.43	0.135	101.6	4	255.82	57.51	68.48	2.696	49.89	1.964	7.72	44.1
C11001354500M	27.94	1.1	3.43	0.135	114.3	4.5	255.82	57.51	76.73	3.021	55.42	2.182	6.81	38.9
C11001355000M	27.94	1.1	3.43	0.135	127	5	255.82	57.51	84.99	3.346	60.96	2.4	6.09	34.8
C12250850875M	31.12	1.225	2.16	0.085	22.35	0.88	64.05	14.4	12.24	0.482	8.38	0.33	6.41	36.6
C12250851000M	31.12	1.225	2.16	0.085	25.4	1	64.05	14.4	13.64	0.537	8.92	0.351	5.45	31.1
C12250851500M	31.12	1.225	2.16	0.085	38.1	1.5	64.05	14.4	19.28	0.759	11.02	0.434	3.4	19.4

Compression Springs B

Part Number	Outside Dia		Wire Dia		Free Length L, Approx.		Load P at L_1		Length L_1		Solid Height Approx.		Spring Rate, R	
	mm	in	mm	in	mm	in	N	lb	mm	in	mm	in	N/m	lb/in
C12250852000M	31.12	1.225	2.16	0.085	50.8	2	64.05	14.4	24.89	0.98	13.16	0.518	2.47	14.1
C12250852500M	31.12	1.225	2.16	0.085	63.5	2.5	64.05	14.4	30.51	1.201	15.27	0.601	1.944	11.1
C12250853000M	31.12	1.225	2.16	0.085	76.2	3	64.05	14.4	36.14	1.423	17.37	0.684	1.593	9.1
C12250853500M	31.12	1.225	2.16	0.085	88.9	3.5	64.05	14.4	41.76	1.644	19.51	0.768	1.366	7.8
C12250854000M	31.12	1.225	2.16	0.085	101.6	4	64.05	14.4	47.37	1.865	21.62	0.851	1.173	6.7
C12250854500M	31.12	1.225	2.16	0.085	114.3	4.5	64.05	14.4	53.01	2.087	23.72	0.934	1.051	6
C12250855000M	31.12	1.225	2.16	0.085	127	5	64.05	14.4	58.62	2.308	25.86	1.018	0.928	5.3
C12250960875M	31.12	1.225	2.44	0.096	22.35	0.88	89.85	20.2	13.61	0.536	9.58	0.377	10.44	59.6
C12250961000M	31.12	1.225	2.44	0.096	25.4	1	89.85	20.2	15.21	0.599	10.21	0.402	8.83	50.4
C12250961250M	31.12	1.225	2.44	0.096	31.75	1.25	89.85	20.2	18.42	0.725	11.48	0.452	6.74	38.5
C12250961500M	31.12	1.225	2.44	0.096	38.1	1.5	89.85	20.2	21.62	0.851	12.75	0.502	5.45	31.1
C12250961750M	31.12	1.225	2.44	0.096	44.45	1.75	89.85	20.2	24.82	0.977	14.02	0.552	4.57	26.1
C12250962000M	31.12	1.225	2.44	0.096	50.8	2	89.85	20.2	28.02	1.103	15.29	0.602	3.94	22.5
C12250962250M	31.12	1.225	2.44	0.096	57.15	2.25	89.85	20.2	31.22	1.229	16.56	0.652	3.47	19.8
C12250962500M	31.12	1.225	2.44	0.096	63.5	2.5	89.85	20.2	34.42	1.355	17.83	0.702	3.08	17.6
C12250962750M	31.12	1.225	2.44	0.096	69.85	2.75	89.85	20.2	37.62	1.481	19.1	0.752	2.78	15.9
C12250963000M	31.12	1.225	2.44	0.096	76.2	3	89.85	20.2	40.82	1.607	20.37	0.802	2.54	14.5
C12250963500M	31.12	1.225	2.44	0.096	88.9	3.5	89.85	20.2	47.22	1.859	22.91	0.902	2.15	12.3
C12250964000M	31.12	1.225	2.44	0.096	101.6	4	89.85	20.2	53.62	2.111	25.45	1.002	1.874	10.7
C12250964500M	31.12	1.225	2.44	0.096	114.3	4.5	89.85	20.2	60.02	2.363	27.99	1.102	1.663	9.5
C12250965000M	31.12	1.225	2.44	0.096	127	5	89.85	20.2	66.42	2.615	30.53	1.202	1.488	8.5
C12251050875M	31.12	1.225	2.67	0.105	22.35	0.88	115.34	25.93	14.25	0.561	10.69	0.421	14.45	82.5
C12251051000M	31.12	1.225	2.67	0.105	25.4	1	115.34	25.93	15.93	0.627	11.43	0.45	12.17	69.5
C12251051250M	31.12	1.225	2.67	0.105	31.75	1.25	115.34	25.93	19.28	0.759	12.95	0.51	9.25	52.8
C12251051500M	31.12	1.225	2.67	0.105	38.1	1.5	115.34	25.93	22.63	0.891	14.45	0.569	7.44	42.5
C12251052000M	31.12	1.225	2.67	0.105	50.8	2	115.34	25.93	29.31	1.154	17.48	0.688	5.38	30.7
C12251052500M	31.12	1.225	2.67	0.105	63.5	2.5	115.34	25.93	36.02	1.418	20.5	0.807	4.2	24
C12251053000M	31.12	1.225	2.67	0.105	76.2	3	115.34	25.93	42.72	1.682	23.52	0.926	3.45	19.7
C12251053500M	31.12	1.225	2.67	0.105	88.9	3.5	115.34	25.93	49.43	1.946	26.54	1.045	2.92	16.7
C12251054000M	31.12	1.225	2.67	0.105	101.6	4	115.34	25.93	56.11	2.209	29.57	1.164	2.54	14.5
C12251054500M	31.12	1.225	2.67	0.105	114.3	4.5	115.34	25.93	62.81	2.473	32.59	1.283	2.24	12.8
C12251055000M	31.12	1.225	2.67	0.105	127	5	115.34	25.93	69.52	2.737	35.61	1.402	2.01	11.5
C12251120875M	31.12	1.225	2.84	0.112	22.35	0.88	138.03	31.03	14.73	0.58	11.56	0.455	18.4	105.1
C12251121000M	31.12	1.225	2.84	0.112	25.4	1	138.03	31.03	16.46	0.648	12.4	0.488	15.44	88.2
C12251121250M	31.12	1.225	2.84	0.112	31.75	1.25	138.03	31.03	19.94	0.785	14.12	0.556	11.68	66.7
C12251121500M	31.12	1.225	2.84	0.112	38.1	1.5	138.03	31.03	23.39	0.921	15.82	0.623	9.39	53.6
C12251122000M	31.12	1.225	2.84	0.112	50.8	2	138.03	31.03	30.35	1.195	19.23	0.757	6.74	38.5
C12251122500M	31.12	1.225	2.84	0.112	63.5	2.5	138.03	31.03	37.29	1.468	22.63	0.891	5.27	30.1
C12251123000M	31.12	1.225	2.84	0.112	76.2	3	138.03	31.03	44.22	1.741	26.06	1.026	4.31	24.6
C12251123500M	31.12	1.225	2.84	0.112	88.9	3.5	138.03	31.03	51.16	2.014	29.46	1.16	3.66	20.9
C12251124000M	31.12	1.225	2.84	0.112	101.6	4	138.03	31.03	58.12	2.288	32.87	1.294	3.17	18.1
C12251250875M	31.12	1.225	3.18	0.125	22.35	0.88	187.14	42.07	15.6	0.614	13.13	0.517	28.24	161.3
C12251251000M	31.12	1.225	3.18	0.125	25.4	1	187.14	42.07	17.45	0.687	14.17	0.558	23.53	134.4
C12251251250M	31.12	1.225	3.18	0.125	31.75	1.25	187.14	42.07	21.16	0.833	16.23	0.639	17.65	100.8
C12251251500M	31.12	1.225	3.18	0.125	38.1	1.5	187.14	42.07	24.84	0.978	18.31	0.721	14.11	80.6
C12251251750M	31.12	1.225	3.18	0.125	44.45	1.75	187.14	42.07	28.54	1.124	20.4	0.803	11.77	67.2
C12251252000M	31.12	1.225	3.18	0.125	50.8	2	187.14	42.07	32.26	1.27	22.48	0.885	10.09	57.6
C12251252250M	31.12	1.225	3.18	0.125	57.15	2.25	187.14	42.07	35.96	1.415	24.54	0.966	8.83	50.4
C12251252500M	31.12	1.225	3.18	0.125	63.5	2.5	187.14	42.07	39.65	1.561	26.62	1.048	7.84	44.8
C12251252750M	31.12	1.225	3.18	0.125	69.85	2.75	187.14	42.07	43.34	1.707	28.7	1.13	7.06	40.3
C12251253000M	31.12	1.225	3.18	0.125	76.2	3	187.14	42.07	47.04	1.852	30.78	1.212	6.43	36.7
C12251253500M	31.12	1.225	3.18	0.125	88.9	3.5	187.14	42.07	54.46	2.144	34.93	1.375	5.43	31
C12251254000M	31.12	1.225	3.18	0.125	101.6	4	187.14	42.07	61.85	2.435	39.09	1.539	4.71	26.9
C12251254500M	31.12	1.225	3.18	0.125	114.3	4.5	187.14	42.07	69.26	2.726	43.23	1.702	4.15	23.7
C12251255000M	31.12	1.225	3.18	0.125	127	5	187.14	42.07	76.65	3.018	47.37	1.865	3.71	21.2
C12251350880M	31.12	1.225	3.43	0.135	22.35	0.88	231.44	52.03	16.33	0.643	14.35	0.565	38.38	219.2
C12251351000M	31.12	1.225	3.43	0.135	25.4	1	231.44	52.03	18.19	0.716	15.47	0.609	32.06	183.1
C12251351250M	31.12	1.225	3.43	0.135	31.75	1.25	231.44	52.03	22.07	0.869	17.83	0.702	23.88	136.4
C12251351500M	31.12	1.225	3.43	0.135	38.1	1.5	231.44	52.03	25.93	1.021	20.19	0.795	19.03	108.7
C12251352000M	31.12	1.225	3.43	0.135	50.8	2	231.44	52.03	33.71	1.327	24.94	0.982	13.54	77.3
C12251352500M	31.12	1.225	3.43	0.135	63.5	2.5	231.44	52.03	41.45	1.632	29.67	1.168	10.51	60
C12251353000M	31.12	1.225	3.43	0.135	76.2	3	231.44	52.03	49.23	1.938	34.39	1.354	8.58	49
C12251353500M	31.12	1.225	3.43	0.135	88.9	3.5	231.44	52.03	56.97	2.243	39.12	1.54	7.25	41.4
C12251480880M	31.12	1.225	3.76	0.148	22.35	0.88	298.03	67	17.12	0.674	15.77	0.621	56.91	325
C12251481000M	31.12	1.225	3.76	0.148	25.4	1	298.03	67	19.08	0.751	17.09	0.673	47.21	269.6
C12251481250M	31.12	1.225	3.76	0.148	31.75	1.25	298.03	67	23.19	0.913	19.84	0.781	34.83	198.9

Compression Springs B

Part Number	Outside Dia		Wire Dia		Free Length L_0 Approx.		Load P at L_1		Length L_1		Solid Height Approx.		Spring Rate, R	
	mm	in	mm	in	mm	in	N	lb	mm	in	mm	in	N/m	lb/in
C12251481500M	31.12	1.225	3.76	0.148	38.1	1.5	298.03	67	27.31	1.075	22.56	0.888	27.6	157.6
C12251482000M	31.12	1.225	3.76	0.148	50.8	2	298.03	67	35.51	1.398	28.04	1.104	19.51	111.4
C12251482500M	31.12	1.225	3.76	0.148	63.5	2.5	298.03	67	43.74	1.722	33.5	1.319	15.08	86.1
C12251483000M	31.12	1.225	3.76	0.148	76.2	3	298.03	67	51.94	2.045	38.96	1.534	12.29	70.2
C12251350880M	31.12	1.225	3.43	0.135	22.35	0.88	231.44	52.03	16.33	0.643	14.35	0.565	38.38	219.2
C12251351000M	31.12	1.225	3.43	0.135	25.4	1	231.44	52.03	18.19	0.716	15.47	0.609	32.06	183.1
C12251351250M	31.12	1.225	3.43	0.135	31.75	1.25	231.44	52.03	22.07	0.869	17.83	0.702	23.88	136.4
C12251351500M	31.12	1.225	3.43	0.135	38.1	1.5	231.44	52.03	25.93	1.021	20.19	0.795	19.03	108.7
C12251352000M	31.12	1.225	3.43	0.135	50.8	2	231.44	52.03	33.71	1.327	24.94	0.982	13.54	77.3
C12251352500M	31.12	1.225	3.43	0.135	63.5	2.5	231.44	52.03	41.45	1.632	29.67	1.168	10.51	60
C12251353000M	31.12	1.225	3.43	0.135	76.2	3	231.44	52.03	49.23	1.938	34.39	1.354	8.58	49
C12251353500M	31.12	1.225	3.43	0.135	88.9	3.5	231.44	52.03	56.97	2.243	39.12	1.54	7.25	41.4
C12251480880M	31.12	1.225	3.76	0.148	22.35	0.88	298.03	67	17.12	0.674	15.77	0.621	56.91	325
C12251481000M	31.12	1.225	3.76	0.148	25.4	1	298.03	67	19.08	0.751	17.09	0.673	47.21	269.6
C12251481250M	31.12	1.225	3.76	0.148	31.75	1.25	298.03	67	23.19	0.913	19.84	0.781	34.83	198.9
C12251481500M	31.12	1.225	3.76	0.148	38.1	1.5	298.03	67	27.31	1.075	22.56	0.888	27.6	157.6
C12251482000M	31.12	1.225	3.76	0.148	50.8	2	298.03	67	35.51	1.398	28.04	1.104	19.51	111.4
C12251482500M	31.12	1.225	3.76	0.148	63.5	2.5	298.03	67	43.74	1.722	33.5	1.319	15.08	86.1
C12251483000M	31.12	1.225	3.76	0.148	76.2	3	298.03	67	51.94	2.045	38.96	1.534	12.29	70.2
C12251772500M	31.12	1.225	4.5	0.177	63.5	2.5	486.43	109.36	48.77	1.92	40.49	1.594	33.01	188.5
C12251773000M	31.12	1.225	4.5	0.177	76.2	3	486.43	109.36	58.04	2.285	47.29	1.862	26.77	152.9
C12251773500M	31.12	1.225	4.5	0.177	88.9	3.5	486.43	109.36	67.31	2.65	54.1	2.13	22.52	128.6
C12251774000M	31.12	1.225	4.5	0.177	101.6	4	486.43	109.36	76.56	3.014	60.91	2.398	19.42	110.9
C12251774500M	31.12	1.225	4.5	0.177	114.3	4.5	486.43	109.36	85.83	3.379	67.72	2.666	17.09	97.6
C12251775000M	31.12	1.225	4.5	0.177	127	5	486.43	109.36	95.1	3.744	74.52	2.934	15.25	87.1
C12251921500M	31.12	1.225	4.88	0.192	38.1	1.5	605.51	136.13	31.39	1.236	28.93	1.139	90.37	516.1
C12251922000M	31.12	1.225	4.88	0.192	50.8	2	605.51	136.13	41.1	1.618	36.45	1.435	62.41	356.4
C12251922500M	31.12	1.225	4.88	0.192	63.5	2.5	605.51	136.13	50.8	2	43.94	1.73	47.66	272.2
C12251923000M	31.12	1.225	4.88	0.192	76.2	3	605.51	136.13	60.5	2.382	51.44	2.025	38.56	220.2
C12251923500M	31.12	1.225	4.88	0.192	88.9	3.5	605.51	136.13	70.21	2.764	58.95	2.321	32.36	184.8
C12251924000M	31.12	1.225	4.88	0.192	101.6	4	605.51	136.13	79.88	3.145	66.45	2.616	27.89	159.3
C12251924500M	31.12	1.225	4.88	0.192	114.3	4.5	605.51	136.13	89.59	3.527	73.96	2.912	24.5	139.9
C12251925000M	31.12	1.225	4.88	0.192	127	5	605.51	136.13	99.29	3.909	81.46	3.207	21.85	124.8
C12252072000M	31.12	1.225	5.26	0.207	50.8	2	742.5	166.93	42.39	1.669	39.19	1.543	88.39	504.8
C12252072500M	31.12	1.225	5.26	0.207	63.5	2.5	742.5	166.93	52.45	2.065	47.42	1.867	67.2	383.8
C12252073000M	31.12	1.225	5.26	0.207	76.2	3	742.5	166.93	62.51	2.461	55.63	2.19	54.21	309.6
C12252073500M	31.12	1.225	5.26	0.207	88.9	3.5	742.5	166.93	72.57	2.857	63.86	2.514	45.42	259.4
C12252074000M	31.12	1.225	5.26	0.207	101.6	4	742.5	166.93	82.6	3.252	72.06	2.837	39.08	223.2
C12252074500M	31.12	1.225	5.26	0.207	114.3	4.5	742.5	166.93	92.66	3.648	80.29	3.161	34.3	195.9
C12252075000M	31.12	1.225	5.26	0.207	127	5	742.5	166.93	102.72	4.044	88.49	3.484	30.57	174.6
C14601121500M	37.08	1.46	2.84	0.112	38.1	1.5	116.68	26.23	21.95	0.864	13.49	0.531	7.23	41.3
C14601122000M	37.08	1.46	2.84	0.112	50.8	2	116.68	26.23	28.32	1.115	15.98	0.629	5.18	29.6
C14601122500M	37.08	1.46	2.84	0.112	63.5	2.5	116.68	26.23	34.7	1.366	18.47	0.727	4.05	23.1
C14601123000M	37.08	1.46	2.84	0.112	76.2	3	116.68	26.23	41.07	1.617	20.96	0.825	3.33	19
C14601123500M	37.08	1.46	2.84	0.112	88.9	3.5	116.68	26.23	47.45	1.868	23.47	0.924	2.82	16.1
C14601124000M	37.08	1.46	2.84	0.112	101.6	4	116.68	26.23	53.82	2.119	25.96	1.022	2.43	13.9
C14601251500M	37.08	1.46	3.18	0.125	38.61	1.5	158.4	35.61	23.19	0.913	15.65	0.616	10.63	60.7
C14601252000M	37.08	1.46	3.18	0.125	50.8	2	158.4	35.61	29.95	1.179	18.75	0.738	7.6	43.4
C14601252500M	37.08	1.46	3.18	0.125	63.5	2.5	158.4	35.61	36.68	1.444	21.82	0.859	5.9	33.7
C14601253000M	37.08	1.46	3.18	0.125	76.2	3	158.4	35.61	43.41	1.709	24.92	0.981	4.83	27.6
C14601253500M	37.08	1.46	3.18	0.125	88.9	3.5	158.4	35.61	50.17	1.975	27.99	1.102	4.08	23.3
C14601254000M	37.08	1.46	3.18	0.125	101.6	4	158.4	35.61	56.9	2.24	31.09	1.224	3.54	20.2
C14601351500M	37.08	1.46	3.43	0.135	38.1	1.5	196.12	44.09	24.16	0.951	17.32	0.682	14.06	80.3
C14601352000M	37.08	1.46	3.43	0.135	50.8	2	196.12	44.09	31.19	1.228	20.9	0.823	10	57.1
C14601352500M	37.08	1.46	3.43	0.135	63.5	2.5	196.12	44.09	38.23	1.505	24.46	0.963	7.76	44.3
C14601353000M	37.08	1.46	3.43	0.135	76.2	3	196.12	44.09	45.26	1.782	28.02	1.103	6.34	36.2
C14601353500M	37.08	1.46	3.43	0.135	88.9	3.5	196.12	44.09	52.3	2.059	31.57	1.243	5.36	30.6
C14601354000M	37.08	1.46	3.43	0.135	101.6	4	196.12	44.09	59.33	2.336	35.38	1.393	4.64	26.5
C14601481500M	37.08	1.46	3.76	0.148	38.1	1.5	252.93	56.86	25.4	1	19.51	0.768	19.91	113.7
C14601482000M	37.08	1.46	3.76	0.148	50.8	2	252.93	56.86	32.82	1.292	23.7	0.933	14.06	80.3
C14601482500M	37.08	1.46	3.76	0.148	63.5	2.5	252.93	56.86	40.26	1.585	27.89	1.098	10.87	62.1
C14601483000M	37.08	1.46	3.76	0.148	76.2	3	252.93	56.86	47.68	1.877	32.08	1.263	8.86	50.6
C14601483500M	37.08	1.46	3.76	0.148	88.9	3.5	252.93	56.86	55.09	2.169	36.27	1.428	7.48	42.7
C14601484000M	37.08	1.46	3.76	0.148	101.6	4	252.93	56.86	62.53	2.462	40.46	1.593	6.48	37
C14601621500M	37.08	1.46	4.11	0.162	38.1	1.5	324.45	72.94	26.7	1.051	21.77	0.857	28.44	162.4
C14601622000M	37.08	1.46	4.11	0.162	50.8	2	324.45	72.94	34.54	1.36	26.64	1.049	19.96	114

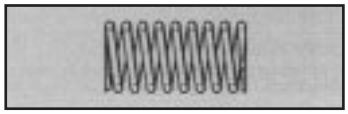
Compression Springs B

Part Number	Outside Dia		Wire Dia		Free Length L, Approx.		Load P at L_1		Length L_1		Solid Height Approx.		Spring Rate, R	
	mm	in	mm	in	mm	in	N	lb	mm	in	mm	in	N/m	lb/in
C14601622500M	37.08	1.46	4.11	0.162	63.5	2.5	324.45	72.94	42.39	1.669	31.52	1.241	15.37	87.8
C14601623000M	37.08	1.46	4.11	0.162	76.2	3	324.45	72.94	50.24	1.978	36.4	1.433	12.5	71.4
C14601623500M	37.08	1.46	4.11	0.162	88.9	3.5	324.45	72.94	58.09	2.287	41.28	1.625	10.52	60.1
C14601624000M	37.08	1.46	4.11	0.162	101.6	4	324.45	72.94	65.94	2.596	46.15	1.817	9.11	52
C14601624500M	37.08	1.46	4.11	0.162	114.3	4.5	324.45	72.94	73.79	2.905	51.03	2.009	8	45.7
C14601625000M	37.08	1.46	4.11	0.162	127	5	324.45	72.94	81.64	3.214	55.91	2.201	7.14	40.8
C16871351500M	42.85	1.687	3.43	0.135	38.1	1.5	170.81	38.4	22.94	0.903	15.37	0.605	11.28	64.4
C16871352000M	42.85	1.687	3.43	0.135	50.8	2	170.81	38.4	29.49	1.161	18.14	0.714	8.02	45.8
C16871352500M	42.85	1.687	3.43	0.135	63.5	2.5	170.81	38.4	36.02	1.418	20.9	0.823	6.22	35.5
C16871353000M	42.85	1.687	3.43	0.135	76.2	3	170.81	38.4	42.57	1.676	23.67	0.932	5.08	29
C16871353500M	42.85	1.687	3.43	0.135	88.9	3.5	170.81	38.4	49.1	1.933	26.44	1.041	4.29	24.5
C16871354000M	42.85	1.687	3.43	0.135	101.6	4	170.81	38.4	55.65	2.191	29.21	1.15	3.71	21.2
C16871354500M	42.85	1.687	3.43	0.135	114.3	4.5	170.81	38.4	62.2	2.449	31.98	1.259	3.27	18.7
C16871355000M	42.85	1.687	3.43	0.135	127	5	170.81	38.4	68.73	2.706	34.75	1.368	2.92	16.7
C16871481500M	42.85	1.687	3.76	0.148	38.1	1.5	220.5	49.57	24.05	0.947	17.32	0.682	15.71	89.7
C16871482000M	42.85	1.687	3.76	0.148	50.8	2	220.5	49.57	30.94	1.218	20.62	0.812	11.1	63.4
C16871482500M	42.85	1.687	3.76	0.148	63.5	2.5	220.5	49.57	37.8	1.488	23.93	0.942	8.58	49
C16871483000M	42.85	1.687	3.76	0.148	76.2	3	220.5	49.57	44.65	1.758	27.2	1.071	6.99	39.9
C16871483500M	42.85	1.687	3.76	0.148	88.9	3.5	220.5	49.57	51.54	2.029	30.51	1.201	5.9	33.7
C16871484000M	42.85	1.687	3.76	0.148	101.6	4	220.5	49.57	58.39	2.299	33.81	1.331	5.1	29.1
C16871484500M	42.85	1.687	3.76	0.148	114.3	4.5	220.5	49.57	65.28	2.57	37.11	1.461	4.5	25.7
C16871485000M	42.85	1.687	3.76	0.148	127	5	220.5	49.57	72.14	2.84	40.39	1.59	4.01	22.9
C16871621500M	42.85	1.687	4.11	0.162	38.1	1.5	283.13	63.65	25.25	0.994	19.43	0.765	22.03	125.8
C16871622000M	42.85	1.687	4.11	0.162	50.8	2	283.13	63.65	32.49	1.279	23.32	0.918	15.44	88.2
C16871622500M	42.85	1.687	4.11	0.162	63.5	2.5	283.13	63.65	39.7	1.563	27.18	1.07	11.91	68
C16871623000M	42.85	1.687	4.11	0.162	76.2	3	283.13	63.65	46.94	1.848	31.06	1.223	9.68	55.3
C16871623500M	42.85	1.687	4.11	0.162	88.9	3.5	283.13	63.65	54.18	2.133	34.95	1.376	8.16	46.6
C16871624000M	42.85	1.687	4.11	0.162	101.6	4	283.13	63.65	61.42	2.418	38.84	1.529	7.04	40.2
C16871624500M	42.85	1.687	4.11	0.162	114.3	4.5	283.13	63.65	68.66	2.703	42.72	1.682	6.2	35.4
C16871625000M	42.85	1.687	4.11	0.162	127	5	283.13	63.65	75.87	2.987	46.61	1.835	5.53	31.6
C16871771500M	42.85	1.687	4.5	0.177	38.1	1.5	361.46	81.26	26.49	1.043	21.62	0.851	31.12	177.7
C16871772000M	42.85	1.687	4.5	0.177	50.8	2	361.46	81.26	34.11	1.343	26.14	1.029	21.66	123.7
C16871772500M	42.85	1.687	4.5	0.177	63.5	2.5	361.46	81.26	41.76	1.644	30.66	1.207	16.62	94.9
C16871773000M	42.85	1.687	4.5	0.177	76.2	3	361.46	81.26	49.38	1.944	35.18	1.385	13.47	76.9
C16871773500M	42.85	1.687	4.5	0.177	88.9	3.5	361.46	81.26	57	2.244	39.7	1.563	11.33	64.7
C16871774000M	42.85	1.687	4.5	0.177	101.6	4	361.46	81.26	64.64	2.545	44.22	1.741	9.77	55.8
C16871774500M	42.85	1.687	4.5	0.177	114.3	4.5	361.46	81.26	72.26	2.845	48.77	1.92	8.6	49.1
C16871775000M	42.85	1.687	4.5	0.177	127	5	361.46	81.26	79.91	3.146	53.29	2.098	7.67	43.8
C16871921500M	42.85	1.687	4.88	0.192	38.1	1.5	451.94	101.6	27.66	1.089	23.72	0.934	43.32	247.4
C16871922000M	42.85	1.687	4.88	0.192	50.8	2	451.94	101.6	35.69	1.405	28.88	1.137	29.93	170.9
C16871922500M	42.85	1.687	4.88	0.192	63.5	2.5	451.94	101.6	43.71	1.721	34.04	1.34	22.85	130.5
C16871923000M	42.85	1.687	4.88	0.192	76.2	3	451.94	101.6	51.74	2.037	39.19	1.543	18.49	105.6
C16871923500M	42.85	1.687	4.88	0.192	88.9	3.5	451.94	101.6	59.77	2.353	44.37	1.747	15.51	88.6
C16871924000M	42.85	1.687	4.88	0.192	101.6	4	451.94	101.6	67.79	2.669	49.53	1.95	13.38	76.4
C16871924500M	42.85	1.687	4.88	0.192	114.3	4.5	451.94	101.6	75.82	2.985	54.69	2.153	11.75	67.1
C16871925000M	42.85	1.687	4.88	0.192	127	5	451.94	101.6	83.87	3.302	59.84	2.356	10.47	59.8
C19371482000M	49.2	1.937	3.76	0.148	50.8	2	193.14	43.42	29.41	1.158	18.19	0.716	9.04	51.6
C19371482500M	49.2	1.937	3.76	0.148	63.5	2.5	193.14	43.42	35.84	1.411	20.75	0.817	6.99	39.9
C19371483000M	49.2	1.937	3.76	0.148	76.2	3	193.14	43.42	42.27	1.664	23.34	0.919	5.69	32.5
C19371483500M	49.2	1.937	3.76	0.148	88.9	3.5	193.14	43.42	48.69	1.917	25.91	1.02	4.8	27.4
C19371484000M	49.2	1.937	3.76	0.148	101.6	4	193.14	43.42	55.12	2.17	28.5	1.122	4.15	23.7
C19371484500M	49.2	1.937	3.76	0.148	114.3	4.5	193.14	43.42	61.52	2.422	31.06	1.223	3.66	20.9
C19371485000M	49.2	1.937	3.76	0.148	127	5	193.14	43.42	67.95	2.675	33.63	1.324	3.27	18.7
C19371485500M	49.2	1.937	3.76	0.148	139.7	5.5	193.14	43.42	74.37	2.928	36.22	1.426	2.96	16.9
C19371622000M	49.2	1.937	4.11	0.162	50.8	2	248.21	55.8	30.78	1.212	20.57	0.81	12.4	70.8
C19371622500M	49.2	1.937	4.11	0.162	63.5	2.5	248.21	55.8	37.52	1.477	23.65	0.931	9.54	54.5
C19371623000M	49.2	1.937	4.11	0.162	76.2	3	248.21	55.8	44.25	1.742	26.72	1.052	7.76	44.3
C19371623500M	49.2	1.937	4.11	0.162	88.9	3.5	248.21	55.8	50.98	2.007	29.79	1.173	6.55	37.4
C19371624000M	49.2	1.937	4.11	0.162	101.6	4	248.21	55.8	57.71	2.272	32.84	1.293	5.66	32.3
C19371624500M	49.2	1.937	4.11	0.162	114.3	4.5	248.21	55.8	64.44	2.537	35.92	1.414	4.97	28.4
C19371625000M	49.2	1.937	4.11	0.162	127	5	248.21	55.8	71.15	2.801	38.99	1.535	4.45	25.4
C19371625500M	49.2	1.937	4.11	0.162	139.7	5.5	248.21	55.8	77.88	3.066	42.06	1.656	4.01	22.9
C19371772500M	49.2	1.937	4.5	0.177	63.5	2.5	317.11	71.29	39.34	1.549	26.77	1.054	13.12	74.9
C19371773000M	49.2	1.937	4.5	0.177	76.2	3	317.11	71.29	46.41	1.827	30.38	1.196	10.65	60.8
C19371773500M	49.2	1.937	4.5	0.177	88.9	3.5	317.11	71.29	53.47	2.105	34.01	1.339	8.95	51.1
C19371774000M	49.2	1.937	4.5	0.177	101.6	4	317.11	71.29	60.53	2.383	37.62	1.481	7.72	44.1

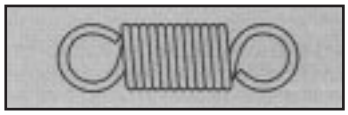
Compression Springs B

Part Number	Outside Dia		Wire Dia		Free Length L, Approx.		Load P at L_1		Length L_1		Solid Height Approx.		Spring Rate, R	
	mm	in	mm	in	mm	in	N	lb	mm	in	mm	in	N/m	lb/in
C19371774500M	49.2	1.937	4.5	0.177	114.3	4.5	317.11	71.29	67.61	2.662	41.25	1.624	6.79	38.8
C19371775000M	49.2	1.937	4.5	0.177	127	5	317.11	71.29	74.68	2.94	44.86	1.766	6.06	34.6
C19371775500M	49.2	1.937	4.5	0.177	139.7	5.5	317.11	71.29	81.74	3.218	48.46	1.908	5.46	31.2
C19371776000M	49.2	1.937	4.5	0.177	152.4	6	317.11	71.29	88.82	3.497	52.1	2.051	4.99	28.5
C19371922500M	49.2	1.937	4.88	0.192	63.5	2.5	396.91	89.23	41.15	1.62	29.87	1.176	17.76	101.4
C19371923000M	49.2	1.937	4.88	0.192	76.2	3	396.91	89.23	48.56	1.912	34.06	1.341	14.36	82
C19371923500M	49.2	1.937	4.88	0.192	88.9	3.5	396.91	89.23	55.98	2.204	38.23	1.505	12.05	68.8
C19371924000M	49.2	1.937	4.88	0.192	101.6	4	396.91	89.23	63.4	2.496	42.42	1.67	10.38	59.3
C19371924500M	49.2	1.937	4.88	0.192	114.3	4.5	396.91	89.23	70.82	2.788	46.58	1.834	9.12	52.1
C19371925000M	49.2	1.937	4.88	0.192	127	5	396.91	89.23	78.23	3.08	50.77	1.999	8.14	46.5
C19371925500M	49.2	1.937	4.88	0.192	139.7	5.5	396.91	89.23	85.65	3.372	54.97	2.164	7.34	41.9
C19371926000M	49.2	1.937	4.88	0.192	152.4	6	396.91	89.23	93.07	3.664	59.13	2.328	6.69	38.2
C19372072500M	49.2	1.937	5.26	0.207	63.5	2.5	488.1	109.73	42.93	1.69	32.94	1.297	23.71	135.4
C19372073000M	49.2	1.937	5.26	0.207	76.2	3	488.1	109.73	49.94	1.966	37.67	1.483	19.12	109.2
C19372073500M	49.2	1.937	5.26	0.207	88.9	3.5	488.1	109.73	58.45	2.301	42.42	1.67	16.02	91.5
C19372074000M	49.2	1.937	5.26	0.207	101.6	4	488.1	109.73	66.22	2.607	47.17	1.857	13.8	78.8
C19372074500M	49.2	1.937	5.26	0.207	114.3	4.5	488.1	109.73	73.99	2.913	51.92	2.044	12.1	69.1
C19372075000M	49.2	1.937	5.26	0.207	127	5	488.1	109.73	81.76	3.219	56.64	2.23	10.79	61.6
C19372075500M	49.2	1.937	5.26	0.207	139.7	5.5	488.1	109.73	89.51	3.524	61.39	2.417	9.72	55.5
C19372076000M	49.2	1.937	5.26	0.207	152.4	6	488.1	109.7	97.28	3.83	66.14	2.604	8.86	50.6

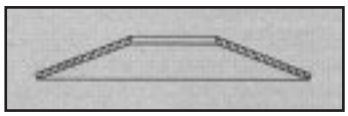
Hales Australia are the official distributor for the SPEC Spring Range:



· Compression Springs



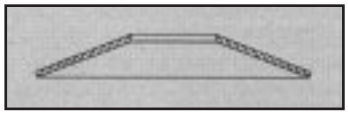
· Extension Springs



· Disc Springs

· Finger Spring Washers

· Wave Spring Washer



· Belleville Washer

· Curved Spring Washer

· Torsion Spring

· Constant Force Springs

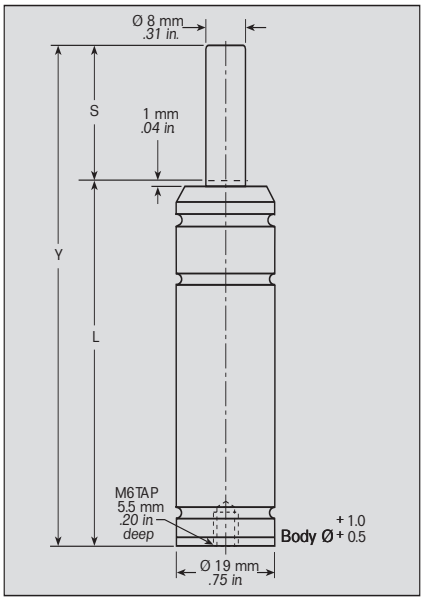
A complete spring catalogue is available upon request

Hyson® T2-90

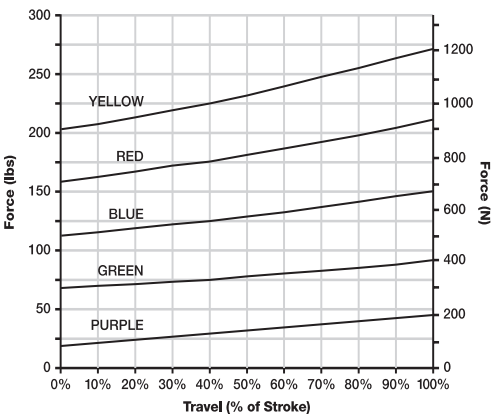
Product Specifications

Pressure Medium	Nitrogen Gas
Charging Pressure Range	Max.: 180 bar/2610 psi Min.: 18 bar/260 psi
Maximum Operating Temperature	80 C/176 F
Force Increase by Temperature	+/- 0.3% per degree C
Maximum Strokes/Minute	100-150 at 20 C
Maximum Piston Rod Velocity	96 m/min. 315 ft/min.
Maximum Utilized Stroke	100%
Repair Kit	Not repairable
Inlet Valve	4018112

Drop-In Mount



T2-90 Force Chart



T2-90 Dimensional Information

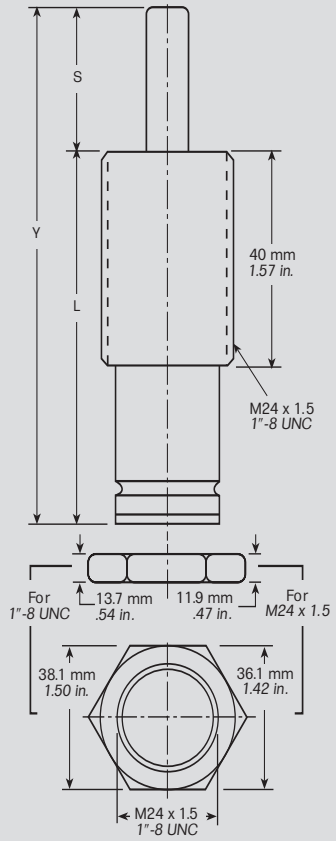
Part Number Model X Stroke	Stroke S		Y		L	
	mm	*in.*	mm	*in.*	mm	*in.*
T2-90X7	7	*0.28*	56	*2.20*	49	*1.93*
T2-90X10	10	*0.39*	62	*2.44*	52	*2.05*
T2-90X15	15	*0.59*	72	*2.83*	57	*2.24*
T2-90X25	25	*0.98*	92	*3.62*	67	*2.64*
T2-90X38	38.1	*1.50*	118.2	*4.65*	80.1	*3.15*
T2-90X50	50	*1.97*	142	*5.59*	92	*3.62*
T2-90X63	63.5	*2.50*	169	*6.65*	105.5	*4.15*
T2-90X80	80	*3.15*	205	*8.07*	125	*4.92*
T2-90X100	100	*3.94*	245	*9.65*	145	*5.71*
T2-90X125	125	*4.92*	295	*11.61*	170	*6.69*

T2-90 Contact Force

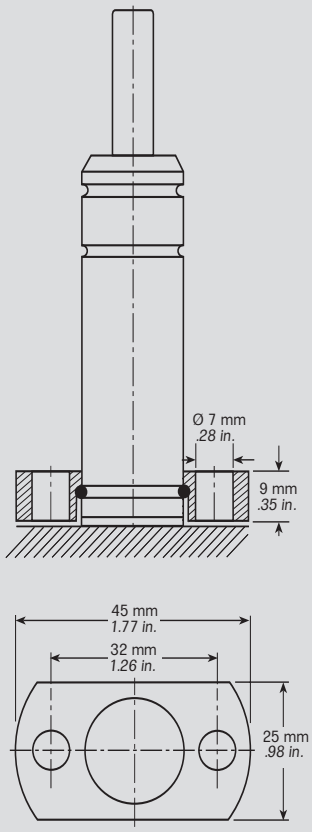
Color	Charge Pressure		Contact Force	
	Bar	*psi*	N	*lbs.*
Yellow	180	*2610*	905	*203*
Red	140	*2030*	704	*158*
Blue	100	*1450*	503	*113*
Green	60	*870*	302	*68*
Purple	18	*260*	89	*20*
Black*	18-180	*260-2610*	89-905	*20-203*

**Custom Pressure: Please specify charging pressure or contact force required.*

Threaded Body Mount – TE – TM

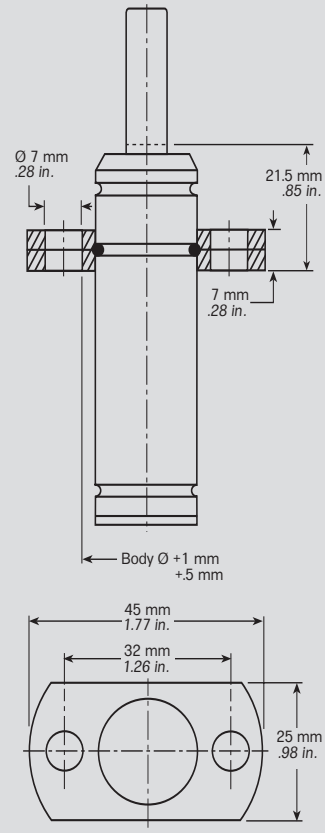


Flange Mount
T2-90-FM

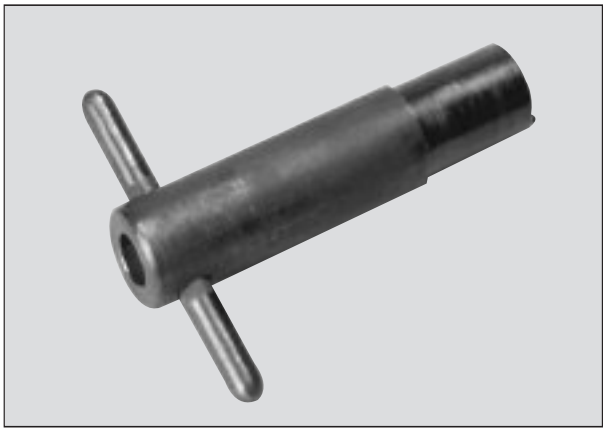


Flange sold separately.

Top Mount
T2-90-FCR



Flange sold separately.



Installation Tool for T2-90

Order No. 503497

T2-90 Ordering Options

T2-90X50	-	TE	-	Red
Model X Stroke		**Mount**		**Color**
See Dimensional Information Chart		TE TM		Yellow Red Blue Green Purple Black

All gas springs shipped at maximum charge pressure unless otherwise specified.

Note: Hyson Products recommends that T2 gas springs are backed up at all times. Stroke lengths of 25 mm/0.98 in. or greater should be base or flange mounted.

All dimensions are nominal. Data shown are typical. Actual data for any particular unit may vary.

Hyson® T2-180

Product Specifications

Pressure Medium.....Nitrogen Gas

Charging Pressure
Range.....Max.: 180 bar/2610 psi
Min.: 25 bar/360 psi

Maximum Operating
Temperature.....80° C/176° F

Force Increase by
Temperature.....+/- 0.3% per degree C

Maximum Strokes/Minute..... 80-100 at 20° C

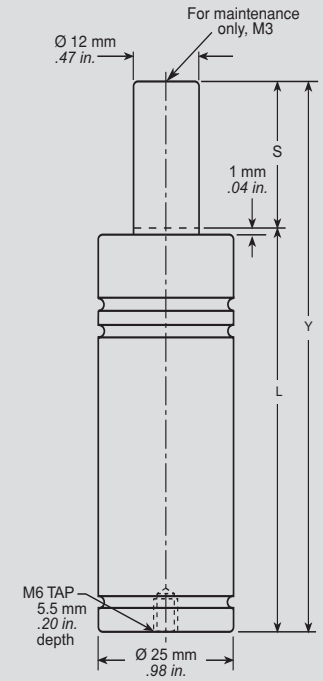
Maximum Piston Rod
Velocity .....96 m/min.
315 ft/min.

Maximum Utilized Stroke.....100%

Repair Kit T2SK2-180

Inlet Valve 4018112

Drop-In Mount

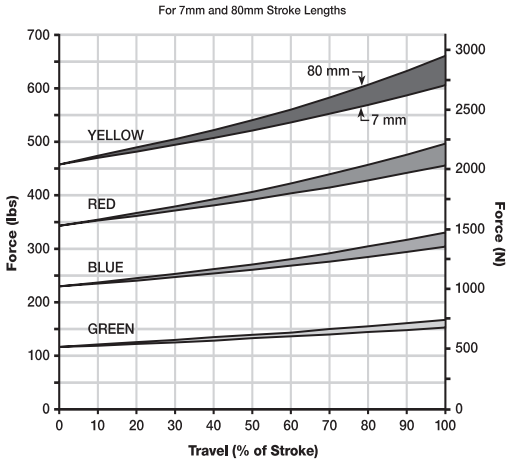


T2-180 Contact Force

Color	Charge Pressure		Contact Force	
	Bar	*psi*	N	*lbs.*
Yellow	180	*2610*	2036	*458*
Red	135	*1960*	1527	*343*
Blue	90	*1305*	1018	*229*
Green	45	*655*	509	*114*
Black*	25-180	*363-2610*	280-2036	*63-458*

**Custom Pressure: Please specify charging pressure or contact force required.*

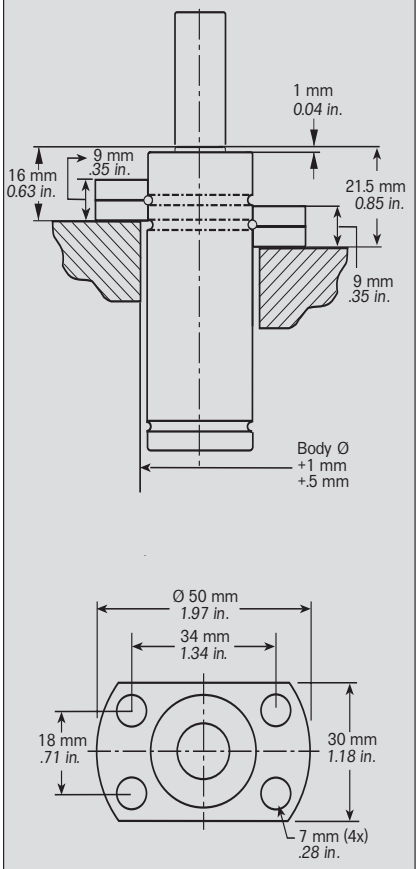
T2-180 Force Chart



T2-180 Dimensional Information

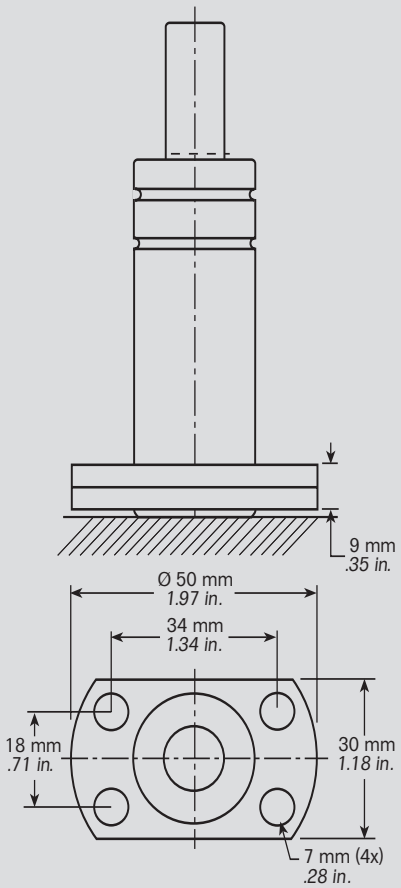
Part Number Model X Stroke	Stroke S		Y		L	
	mm	*in.*	mm	*in.*	mm	*in.*
T2-180X7	7	*0.28*	56	*2.20*	49	*1.93*
T2-180X10	10	*0.39*	62	*2.44*	52	*2.05*
T2-180X12.7	12.7	*0.50*	67.4	*2.65*	54.7	*2.15*
T2-180X15	15	*0.59*	72	*2.83*	57	*2.24*
T2-180X16	16	*0.63*	74	*2.91*	58	*2.28*
T2-180X25	25	*0.98*	92	*3.62*	67	*2.64*
T2-180X38	38.1	*1.50*	118.2	*4.65*	80.1	*3.15*
T2-180X50	50	*1.97*	142	*5.59*	92	*3.62*
T2-180X63	63.5	*2.50*	172	*6.77*	108.5	*4.27*
T2-180X75	75	*2.95*	195	*7.68*	120	*4.72*
T2-180X80	80	*3.15*	205	*8.07*	125	*4.92*
T2-180X100	100	*3.94*	245	*9.65*	145	*5.71*
T2-180X125	125	*4.92*	295	*11.61*	170	*6.69*

Top Mount
T2-180-FCR



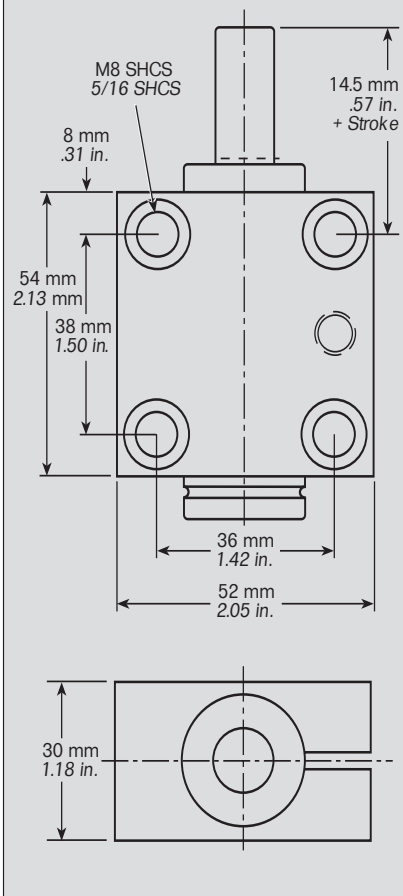
Flange sold separately.

Bottom Mount
T2-180-FCR



Flange sold separately.

Side Mount
T2-180-SM



Flange sold separately.

T2-180 Ordering Options

T2-180X100	-	Blue
Model X Stroke		**Color**
See Dimensional Information Chart		Yellow Red Blue Green Black

All gas springs shipped at maximum charge pressure unless otherwise speci×ed.

Note: Hyson Products recommends that T2 gas springs are backed up at all times. Stroke lengths of 25 mm/0.98 in. or greater should be base or flange mounted.

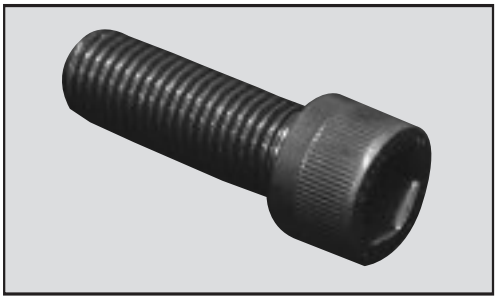
All dimensions are nominal. Data shown are typical. Actual data for any particular unit may vary.

Fasteners

Unbrako fasteners are the strongest off the shelf threaded fasteners you can buy. When purchasing Unbrako socket screws, you can be sure that they meet or exceed the strength levels of all current standards including ANSI, ISO and DIN to name a few.

Why Unbrako?
Reliability, high pressure, stresses and speeds in today's machines and equipment demands stronger more reliable fasteners, as the rising cost of down time is intolerable.,

Socket Head Cap Screws (Metric)



Suitable for all high tensile applications.
Use alloy for tensiles up to 1300Mpa

Sizes M18, M42 and zinc coated are also available

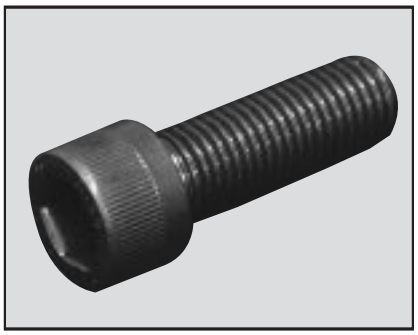
Length	M3	M4	M5	M6	M8	M10	M12	M14	M16	M20	M24	M27	M30	M36
5	◆	◆	◆											
6	◆	◆	◆											
8	◆	◆	◆	◆										
10	◆	◆	◆	◆	◆	◆								
12	◆	◆	◆	◆	◆	◆	◆							
16	◆	◆	◆	◆	◆	◆	◆							
20	◆	◆	◆	◆	◆	◆	◆		◆					
25	◆	◆	◆	◆	◆	◆	◆	◆	◆					
30	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆				
35	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆				
40	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆			
45	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆			
50	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆		◆	
55		◆	◆	◆	◆	◆	◆	◆	◆	◆	◆			
60	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	
65		◆	◆	◆	◆	◆	◆	◆	◆	◆	◆			
70	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
75		◆	◆	◆	◆	◆	◆	◆	◆	◆	◆			
80	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
90		◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
100		◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
110			◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
120		◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
130			◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
140			◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
150			◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
160			◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
170			◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
180			◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
190			◆	◆	◆	◆	◆	◆	◆	◆				◆
200			◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
220			◆	◆	◆	◆	◆		◆	◆	◆	◆	◆	◆
230						◆	◆				◆			

Socket Head Cap Screws (Metric) continued

Length	M3	M4	M5	M6	M8	M10	M12	M14	M16	M20	M24	M27	M30	M36
240						◆	◆		◆	◆	◆	◆	◆	◆
250					◆	◆	◆		◆	◆	◆		◆	◆
260							◆		◆	◆	◆	◆	◆	◆
280									◆	◆	◆	◆	◆	◆
300					◆	◆	◆		◆	◆	◆	◆	◆	◆
320									◆	◆	◆	◆	◆	◆
330											◆			
340									◆	◆	◆		◆	◆
350						◆			◆		◆			
360													◆	◆
380													◆	◆
400											◆		◆	◆
420													◆	
460														◆
480														◆
500														◆
520														◆
540										◆				
560														◆
580														◆

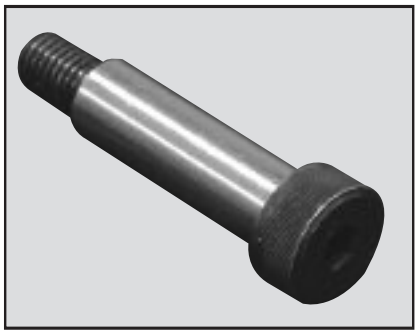
Socket Head Cap Screws (Imperial)

BSW cap screws stocked
Some sizes available in Threads: UNC, UNF, BSF
Sizes: 7/16, 7/8, 1 1/4, 1 1/2 also available



Length	1/8	3/16	1/4	5/16	3/8	1/2	5/8	3/4	1”
3/8	◆	◆	◆						
1/2	◆	◆	◆	◆	◆				
5/8		◆	◆	◆					
3/4	◆	◆	◆	◆	◆	◆			
7/8			◆	◆					
1	◆	◆	◆	◆	◆	◆	◆		
1 1/4		◆	◆	◆	◆	◆	◆	◆	
1 1/2		◆	◆	◆	◆	◆	◆	◆	
1 3/4		◆	◆	◆	◆	◆	◆	◆	
2		◆	◆	◆	◆	◆	◆	◆	◆
2 1/4				◆	◆	◆	◆	◆	◆
2 1/2			◆	◆	◆	◆	◆	◆	◆
2 3/4				◆	◆	◆	◆	◆	◆
3			◆	◆	◆	◆	◆	◆	◆
3 1/4						◆		◆	◆
3 1/2			◆	◆	◆	◆	◆	◆	◆
4			◆	◆	◆	◆	◆	◆	◆
4 1/2				◆	◆	◆	◆	◆	
5					◆	◆	◆	◆	◆
5 1/2						◆	◆		
6					◆	◆	◆	◆	◆
6 1/2						◆	◆		
7						◆	◆	◆	◆
8						◆	◆		
9									
10									

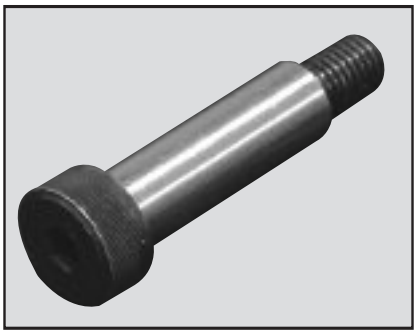
Socket Shoulder Screw (Metric)



Replaces costly special parts, shafts, pivots, pins and guides

Length	6mm M5	8mm M6	10mm M8	12mm M10	16mm M12	20mm M16	24mm M20	Shoulder Diameter Thread
10	◆	◆	◆					
12	◆	◆	◆	◆				
16	◆	◆	◆	◆				
20	◆	◆	◆	◆	◆			
25	◆	◆	◆	◆	◆			
30	◆	◆	◆	◆	◆			
40	◆	◆	◆	◆	◆	◆		
50	◆	◆	◆	◆	◆	◆	◆	
60	◆	◆	◆	◆	◆	◆	◆	
70	◆	◆	◆	◆	◆	◆	◆	
80	◆	◆	◆	◆	◆	◆	◆	
90		◆	◆	◆	◆	◆	◆	
100		◆	◆	◆	◆	◆	◆	
110			◆	◆	◆			
120				◆	◆	◆	◆	
130				◆	◆			
140				◆	◆			
150				◆	◆			

Socket Shoulder Screw (Imperial)



Replaces costly special parts, shafts, pivots, pins and guides

Length	1/4	5/16	3/8	1/2	5/8	3/4	Shoulder Diameter "Thread BSW,UNC"
3/8	◆	◆	◆				
1/2	◆	◆	◆	◆			
5/8	◆	◆	◆	◆			
3/4	◆	◆	◆	◆			
1	◆	◆	◆	◆			
1 1/4	◆	◆	◆	◆	◆		
1 1/2	◆	◆	◆	◆	◆	◆	
1 3/4		◆	◆	◆	◆	◆	
2	◆	◆	◆	◆	◆	◆	
2 1/4		◆	◆	◆	◆	◆	
2 1/2		◆	◆	◆	◆	◆	
2 3/4			◆	◆	◆	◆	
3			◆	◆	◆	◆	
3 1/2			◆	◆	◆	◆	
4			◆	◆	◆	◆	
4 1/2				◆	◆	◆	
5					◆	◆	

Socket Set Screw (Metric)

Knurled cup point

"dog, flat and cone point also available"

Length	M1.6	M2	M2.5	M3	M4	M5	M6	M8	M10	M12	M16	M20	M24	Thread
3	◆	◆	◆	◆	◆									
4	◆	◆	◆	◆	◆									
5	◆	◆	◆	◆	◆	◆								
6		◆	◆	◆	◆	◆	◆							
8		◆	◆	◆	◆	◆	◆	◆						
10			◆	◆	◆	◆	◆	◆	◆					
12				◆	◆	◆	◆	◆	◆	◆				
16				◆	◆	◆	◆	◆	◆	◆	◆			
20					◆	◆	◆	◆	◆	◆	◆	◆		
25						◆	◆	◆	◆	◆	◆	◆	◆	
30						◆	◆	◆	◆	◆	◆	◆	◆	
35							◆	◆	◆	◆	◆	◆	◆	
40							◆	◆	◆	◆	◆	◆	◆	
45							◆	◆	◆	◆	◆			
50							◆	◆	◆	◆	◆	◆	◆	
60										◆	◆	◆	◆	

Socket Set Screw (Imperial)

Knurled cup point

Length	1/8	3/16	1/4	5/16	3/8	1/2	5/8	3/4	1	BSW & UNC Thread
1/8	◆									
3/16	◆	◆								
1/4	◆	◆	◆	◆						
5/16		◆	◆	◆	◆					
3/8		◆	◆	◆	◆					
1/2	◆	◆	◆	◆	◆	◆				
5/8			◆	◆	◆	◆	◆	◆		
3/4		◆	◆	◆	◆	◆	◆	◆		
1		◆	◆	◆	◆	◆	◆	◆	◆	
1 1/4						◆	◆	◆		
1 1/2			◆	◆	◆	◆	◆	◆	◆	
2					◆	◆	◆	◆	◆	
2 1/2								◆	◆	
3								◆	◆	

Socket Head Countersunk Screws (Metric)

Controlled angle under head ensures maximum flushness and side wall contact, Non-slip hex socket provides positive drive without damage to material, also availabe in zinc coated

Length	M3	M4	M5	M6	M8	M10	M12	M16	M20	M24
6	◆									
8	◆	◆	◆	◆						
10	◆	◆	◆	◆	◆					
12	◆	◆	◆	◆	◆	◆				
16	◆	◆	◆	◆	◆	◆				
20	◆	◆	◆	◆	◆	◆	◆			
25	◆	◆	◆	◆	◆	◆	◆			
30	◆	◆	◆	◆	◆	◆	◆	◆		
35		◆	◆	◆	◆	◆	◆	◆	◆	
40		◆	◆	◆	◆	◆	◆	◆	◆	
45			◆	◆	◆	◆	◆	◆	◆	
50			◆	◆	◆	◆	◆	◆	◆	
55					◆	◆	◆	◆	◆	
60					◆	◆	◆	◆	◆	◆
70					◆	◆	◆	◆	◆	◆
80						◆	◆	◆	◆	◆
90						◆	◆	◆	◆	◆
100						◆	◆	◆	◆	◆
120								◆	◆	◆
140								◆	◆	◆
160								◆		◆
180										◆

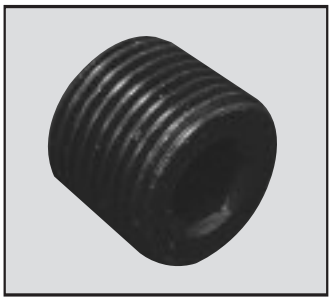
Socket Head Countersunk Screws (Imperial)

Length	3/16	1/4	5/16	3/8	1/2	5/8	3/4
3/8	◆	◆					
1/2	◆	◆	◆	◆			
5/8	◆	◆	◆	◆			
3/4	◆	◆	◆	◆	◆		
1	◆	◆	◆	◆	◆		
1 1/4	◆	◆	◆	◆	◆	◆	
1 1/2	◆	◆	◆	◆	◆	◆	◆
1 3/4		◆	◆	◆	◆	◆	◆
2		◆	◆	◆	◆	◆	◆
2 1/2		◆	◆	◆	◆	◆	◆
3				◆	◆	◆	◆
3 1/2						◆	◆
4						◆	◆

BSPT Pressure Plugs

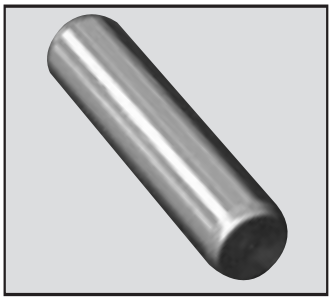
Also available in NPTF
Metric ISO

Thread Size
1/8
1/4
3/8
1/2
5/8
3/4
1
1 1/4
1 1/2



Standard Dowel Pins (Metric)

"Precision Ground and Hardened Dowel Pins, Standard for die work, also used as bearings, gauges and precision parts. Formed ends and controlled heat treatment prevent chipping. Close tolerances."

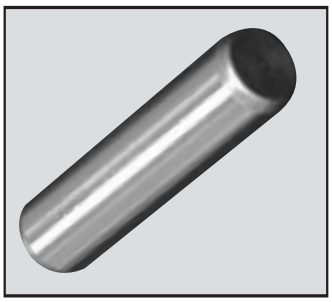


Additonal sizes available upon request.

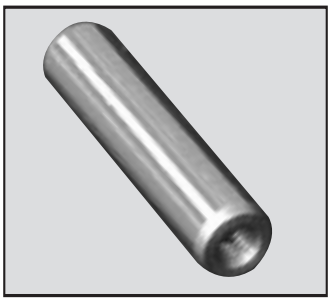
Length	M3	M4	M5	M6	M8	M10	M12	M13	M16	M20	M25	Dia
10	◆	◆										
12	◆	◆	◆									
16	◆	◆	◆	◆	◆							
18	◆	◆	◆	◆	◆							
20	◆	◆	◆	◆	◆	◆						
25	◆	◆	◆	◆	◆	◆	◆					
30	◆	◆	◆	◆	◆	◆	◆					
35		◆	◆	◆	◆		◆					
40		◆	◆	◆	◆	◆	◆		◆			
50		◆	◆	◆	◆	◆	◆	◆	◆	◆		
60				◆	◆	◆	◆		◆	◆	◆	
65					◆							
70					◆	◆	◆		◆			
80						◆	◆		◆	◆		
90									◆			
100						◆	◆		◆	◆		
120									◆	◆		

Standard Dowel Pins (Imperial)

Length	1/8	3/16	1/4	5/16	3/8	1/2	Dia
3/8	◆						
1/2	◆	◆	◆	◆	◆		
5/8	◆	◆					
3/4	◆	◆	◆	◆	◆	◆	
1	◆	◆	◆	◆	◆	◆	
1 1/4	◆	◆	◆	◆	◆	◆	
1 1/2	◆	◆	◆	◆	◆	◆	
1 3/4	◆		◆		◆	◆	
2	◆	◆	◆	◆	◆	◆	
2 1/4				◆	◆	◆	
2 1/2			◆	◆	◆	◆	
3				◆	◆	◆	
3 1/2						◆	
4						◆	



Tapped Dowel Pins (Metric)

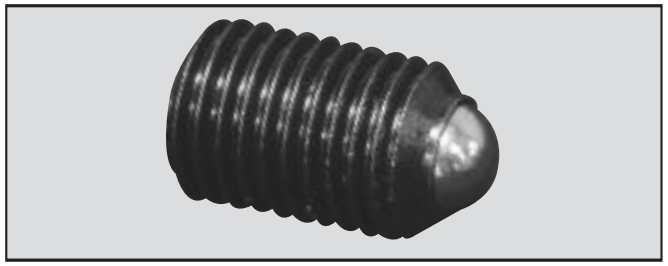


Length mm	6mm M4	8mm M5	10mm M5	12mm M6	13mm M8	16mm M8	20mm M10	Dia Internal Thread
20	◆	◆						
25	◆	◆	◆					
30	◆	◆	◆	◆				
35	◆	◆	◆	◆				
40	◆	◆	◆	◆	◆	◆		
50	◆	◆	◆	◆	◆	◆	◆	
60		◆	◆	◆	◆	◆	◆	
65								
70			◆	◆		◆		
80			◆	◆	◆	◆	◆	
90						◆		
100				◆	◆	◆	◆	
120						◆	◆	

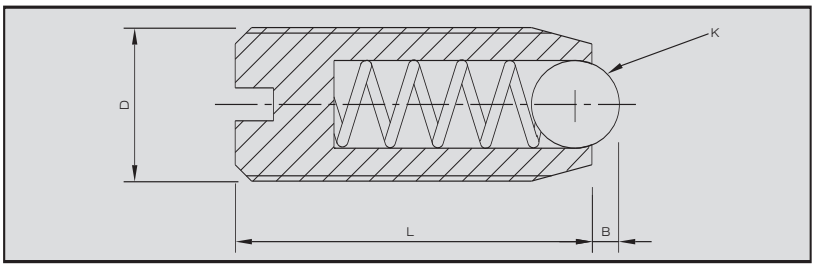
"25mm also available upon request"

Tapped Imperial dowel pins are available upon request

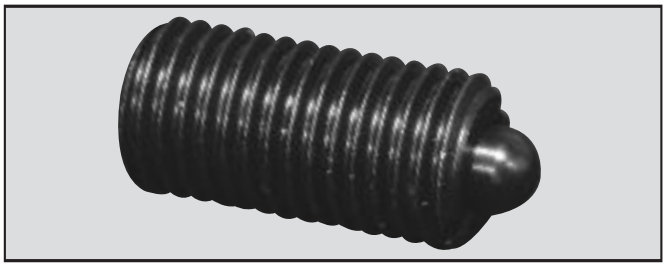
Ball Catches



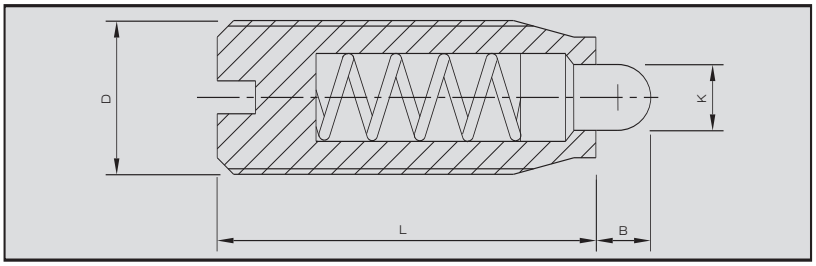
Part Number RAM			
D	K	L	B
M6	3.5	14	1.2
M8	5	16	1.8
M10	6	19	2.2
M12	8	22	2.8
M16	10	24	3.4



Pin Plungers

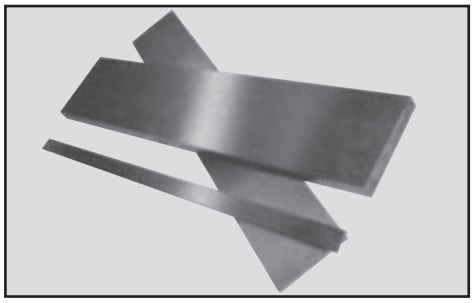


Part Number RBM			
D	K	L	B
M6	2.7	20	2.5
M8	3.5	22	2.5
M10	4	22	2.5
M12	6	28	3.5
M16	7.5	32	4.5



Surface Ground Mild Steel Bar

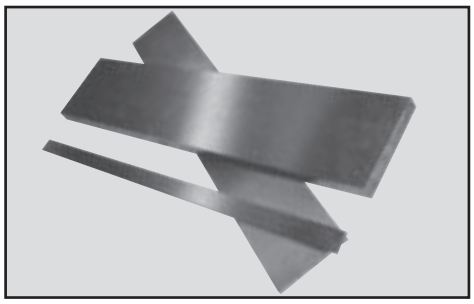
- 2 Standard lengths
- Second dimension is material thickness before grinding
- Immediate delivery
- 150cm available upon request only



Part Number	Description (Width x Thickness x Length)
HSB10010-050	100 x 10 STOCK BAR 50CM
HSB10010-100	100 X 10 STOCK BAR 100CM
HSB10010-150	100 X 10 STOCK BAR 150CM
HSB10012-050	100 x 12 STOCK BAR 50CM
HSB10012-100	100 X 12 STOCK BAR 100CM
HSB10012-150	100 X 12 STOCK BAR 150CM
HSB10016-050	100 X 16 STOCK BAR 50CM
HSB10016-100	100 X 16 STOCK BAR 100CM
HSB10016-150	100 X 16 STOCK BAR 150CM
HSB10020-050	100 x 20 STOCK BAR 50CM
HSB10020-100	100 X 20 STOCK BAR 100CM
HSB10020-150	100 X 20 STOCK BAR 150CM
HSB10025-050	100 X 25 STOCK BAR 50CM
HSB10025-100	100 X 25 STOCK BAR 100CM
HSB10025-150	100 X 25 STOCK BAR 150CM
HSB10032-050	100 X 32 STOCK BAR 5OCM
HSB10032-100	100 X 32 STOCK BAR 100CM
HSB10032-150	100 X 32 STOCK BAR 150CM
HSB10040-050	100 X 40 STOCK BAR 50CM
HSB10040-100	100 x 40 STOCK BAR 100CM
HSB10040-150	100 X 40 STOCK BAR 150CM
HSB10050-050	100 X 50 STOCK BAR 50CM
HSB10050-100	100 X 50 STOCK BAR 100CM
HSB10050-150	100 X 50 STOCK BAR 150CM
HSB1006-050	100 X 6 STOCK BAR 50CM
HSB1006-100	100 X 6 STOCK BAR 100CM
HSB1006-150	100 X 6 STOCK BAR 150CM
HSB13006-050	130 X 6 STOCK BAR 50CM
HSB13006-100	130 X 6 STOCK BAR 100CM
HSB13006-150	130 X 6 STOCK BAR 150CM

Part Number	Description (Width x Thickness x Length)
HSB13010-050	130 X 10 STOCK BAR 50CM
HSB13010-100	130 X 10 STOCK BAR 100CM
HSB13010-150	130 X 10 STOCK BAR 150CM
HSB13012-050	130 X 12 STOCK BAR 50CM
HSB13012-100	130 X 12 STOCK BAR 100CM
HSB13012-150	130 X 12 STOCK BAR 150CM
HSB13016-050	130 X 16 STOCK BAR 50CM
HSB13016-100	130 X 16 STOCK BAR 100CM
HSB13016-150	130 X 16 STOCK BAR 150CM
HSB13020-050	130 X 20 STOCK BAR 50CM
HSB13020-100	130 X 20 STOCK BAR 100CM
HSB13020-150	130 X 20 STOCK BAR 150CM
HSB13025-050	130 X 25 STOCK BAR 50CM
HSB13025-100	130 X 25 STOCK BAR 100CM
HSB13025-150	130 X 25 STOCK BAR 150CM
HSB13030-050	130 X 30 STOCK BAR 50CM
HSB13030-100	130 X 30 STOCK BAR 100CM
HSB13030-150	130 X 30 STOCK BAR 150CM
HSB13040-050	130 x 40 STOCK BAR 50CM
HSB13040-100	130 X 40 STOCK BAR 100CM
HSB13040-150	130 X 40 STOCK BAR 150CM
HSB13050-050	130 X 50 STOCK BAR 50CM
HSB13050-100	130 X 50 STOCK BAR 100CM
HSB13050-150	130 X 50 STOCK BAR 150CM
HSB15010-050	150 X 10 STOCK BAR 50CM
HSB15010-100	150 X 10 STOCK BAR 100CM
HSB15010-150	150 X 10 STOCK BAR 150CM
HSB15012-050	150 X 12 STOCK BAR 50CM
HSB15012-100	150 X 12 STOCK BAR 100CM
HSB15012-150	150 X 12 STOCK BAR 150CM

Surface Ground Mild Steel Bar



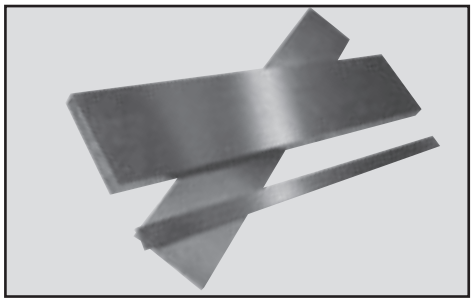
- 2 Standard lengths
- Second dimension is material thickness before grinding
- Immediate delivery
- 150cm available upon request only

Part Number	Description (Width x Thickness x Length)
HSB15016-050	150 X 16 STOCK BAR 50CM
HSB15016-100	150 X 16 STOCK BAR 100CM
HSB15016-150	150 X 16 STOCK BAR 150CM
HSB15020-050	150 X 20 STOCK BAR 50CM
HSB15020-100	150 X 20 STOCK BAR 100CM
HSB15020-150	150 X 20 STOCK BAR 150CM
HSB15025-050	150 X 25 STOCK BAR 50CM
HSB15025-100	150 X 25 STOCK BAR 100CM
HSB15025-150	150 X 25 STOCK BAR 150CM
HSB15032-050	150 X 32 STOCK BAR 50CM
HSB15032-100	150 X 35 STOCK BAR 100CM
HSB15032-150	150 X 32 STOCK BAR 150CM
HSB15040-050	150 X 40 STOCK BAR 50CM
HSB15040-100	150 X 40 STOCK BAR 100CM
HSB15040-150	150 X 40 STOCK BAR 150CM
HSB15050-050	150 X 50 STOCK BAR 50CM
HSB15050-100	150 X 50 STOCK BAR 100CM
HSB15050-150	150 X 50 STOCK BAR 150CM
HSB1506-050	150 X 6 STOCK BAR 50CM
HSB1506-100	150 X 6 STOCK BAR 100CM
HSB1506-150	150 X 6 STOCK BAR 150CM
HSB18012-050	180 X 12 STOCK BAR 50CM
HSB18012-100	180 X 12 STOCK BAR 100CM
HSB18012-150	180 X 12 STOCK BAR 150CM
HSB18020-050	180 X 20 STOCK BAR 50CM
HSB18020-100	180 X 20 STOCK BAR 100CM
HSB18020-150	180 X 20 STOCK BAR 150CM
HSB18025-050	180 X 25 STOCK BAR 50CM
HSB18025-100	180 X 25 STOCK BAR 100CM
HSB18025-150	180 X 25 STOCK BAR 150CM

Part Number	Description (Width x Thickness x Length)
HSB18030-050	180 X 30 STOCK BAR 50CM
HSB18030-100	180 X 30 STOCK BAR 100CM
HSB18030-150	180 X 30 STOCK BAR 150CM
HSB18040-050	180 X 40 STOCK BAR 50CM
HSB18040-100	180 X 40 STOCK BAR 100CM
HSB18040-150	180 X 40 STOCK BAR 150CM
HSB18050-050	180 X 50 STOCK BAR 50CM
HSB18050-100	180 X 50 STOCK BAR 100CM
HSB18050-150	180 X 50 STOCK BAR 150CM
HSB18060-050	180 X 60 STOCK BAR 50CM
HSB18060-100	180 X 60 STOCK BAR 100CM
HSB18060-150	180 X 60 STOCK BAR 150CM
HSB20012-050	200 X 12 STOCK BAR 50CM
HSB20012-100	200 X 12 STOCK BAR 100CM
HSB20012-150	200 X 12 STOCK BAR 150CM
HSB20016-050	200 X 16 STOCK BAR 50CM
HSB20016-100	200 X 16 STOCK BAR 100CM
HSB20016-150	200 X 16 STOCK BAR 150CM
HSB20020-050	200 X 20 STOCK BAR 50CM
HSB20020-100	200 X 20 STOCK BAR 100CM
HSB20020-150	200 X 20 STOCK BAR 150CM
HSB20025-050	200 X 25 STOCK BAR 50CM
HSB20025-100	200 X 25 STOCK BAR 100CM
HSB20025-150	200 X 25 STOCK BAR 150CM
HSB20030-050	200 X 30 STOCK BAR 50CM
HSB20030-100	200 X 30 STOCK BAR 100CM
HSB20030-150	200 X 30 STOCK BAR 150CM
HSB20040-050	200 X 40 STOCK BAR 50CM
HSB20040-100	200 X 40 STOCK BAR 100CM
HSB20040-150	200 X 40 STOCK BAR 150CM

Surface Ground Mild Steel Bar

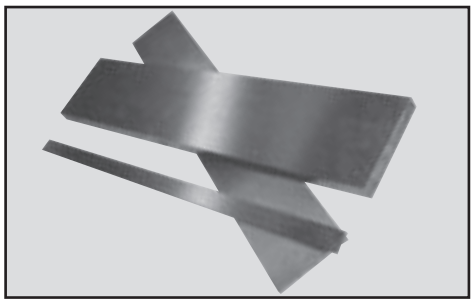
- 2 Standard lengths
- Second dimension is material thickness before grinding
- Immediate delivery
- 150cm available upon request only



Part Number	Description (Width x Thickness x Length)
HSB20050-050	200 X 50 STOCK BAR 50CM
HSB20050-100	200 X 50 STOCK BAR 100CM
HSB20050-150	200 X 50 STOCK BAR 150CM
HSB25010-050	250 X 10 STOCK BAR 50CM
HSB25010-100	250 X 10 STOCK BAR 100CM
HSB25010-150	250 X 10 STOCK BAR 150CM
HSB25012-050	250 X 12 STOCK BAR 50CM
HSB25012-100	250 X 12 STOCK BAR 100CM
HSB25012-150	250 X 12 STOCK BAR 150CM
HSB25016-050	250 X 16 STOCK BAR 50CM
HSB25016-100	250 X 16 STOCK BAR 100CM
HSB25016-150	250 X 16 STOCK BAR 150CM
HSB25020-050	250 X 20 STOCK BAR 50CM
HSB25020-100	250 X 20 STOCK BAR 100CM
HSB25020-150	250 X 20 STOCK BAR 150CM
HSB25025-050	250 X 25 STOCK BAR 50CM
HSB25025-100	250 X 25 STOCK BAR 100CM
HSB25025-150	250 X 25 STOCK BAR 150CM
HSB25030-050	250 X 30 STOCK BAR 50CM
HSB25030-100	250 X 30 STOCK BAR 100CM
HSB25030-150	250 X 30 STOCK BAR 150CM
HSB25040-050	250 X 40 STOCK BAR 50CM
HSB25040-100	250 X 40 STOCK BAR 100CM
HSB25040-150	250 X 40 STOCK BAR 150CM
HSB25050-050	250 X 50 STOCK BAR 50CM
HSB25050-100	250 X 50 STOCK BAR 100CM
HSB25050-150	250 X 50 STOCK BAR 150CM
HSB25060-050	250 X 60 STOCK BAR 50CM
HSB25060-100	250 X 60 STOCK BAR 100CM
HSB25060-150	250 X 60 STOCK BAR 150CM

Part Number	Description (Width x Thickness x Length)
HSB30012-050	300 X 12 STOCK BAR 50CM
HSB30012-100	300 X 12 STOCK BAR 100CM
HSB30012-150	300 X 12 STOCK BAR 150CM
HSB30016-050	300 X 16 STOCK BAR 50CM
HSB30016-100	300 X 16 STOCK BAR 100CM
HSB30016-150	300 X 16 STOCK BAR 150CM
HSB30020-050	300 X 20 STOCK BAR 50CM
HSB30020-100	300 X 20 STOCK BAR 100CM
HSB30020-150	300 X 20 STOCK BAR 150CM
HSB30025-050	300 X 25 STOCK BAR 50CM
HSB30025-100	300 X 25 STOCK BAR 100CM
HSB30025-150	300 X 25 STOCK BAR 150CM
HSB30030-050	300 X 30 STOCK BAR 50CM
HSB30030-100	300 X 30 STOCK BAR 100CM
HSB30030-150	300 X 30 STOCK BAR 150CM
HSB30040-050	300 X 40 STOCK BAR 50CM
HSB30040-100	300 X 40 STOCK BAR 100CM
HSB30040-150	300 X 40 STOCK BAR 150CM
HSB30050-050	300 X 50 STOCK BAR 50CM
HSB30050-100	300 X 50 STOCK BAR 100CM
HSB30050-150	300 X 50 STOCK BAR 150CM
HSB30060-050	300 X 60 STOCK BAR 50CM
HSB30060-100	300 X 60 STOCK BAR 100CM
HSB30060-150	300 X 60 STOCK BAR 150CM
HSB5010-050	50 X 10 STOCK BAR 50CM
HSB5010-100	50 X 10 STOCK BAR 100CM
HSB5010-150	50 X 10 STOCK BAR 150CM
HSB5012-050	50 X 12 STOCK BAR 50CM
HSB5012-100	50 X 12 STOCK BAR 100CM
HSB5012-150	50 X 12 STOCK BAR 150CM

Surface Ground Mild Steel Bar



- 2 Standard lengths
- Second dimension is material thickness before grinding
- Immediate delivery
- 150cm available upon request only

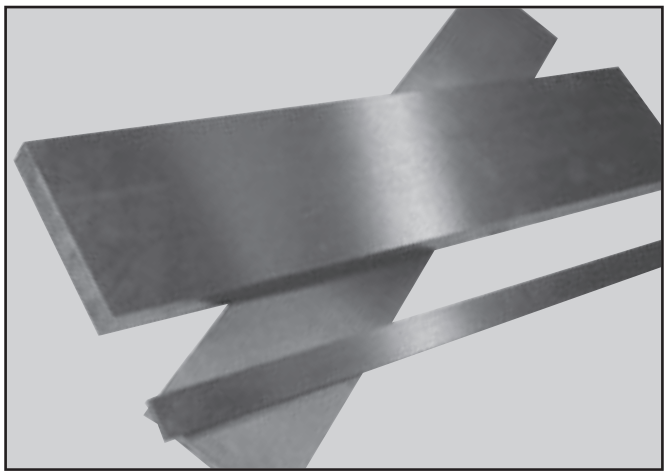
Part Number	Description (Width x Thickness x Length)
HSB5016-050	50 X 16 STOCK BAR 50CM
HSB5016-100	50 X 16 STOCK BAR 100CM
HSB5016-150	50 X 16 STOCK BAR 150CM
HSB5020-050	50 X 20 STOCK BAR 50CM
HSB5020-100	50 X 20 STOCK BAR 100CM
HSB5020-150	50 X 20 STOCK BAR 150CM
HSB5025-050	50 X 25 STOCK BAR 50CM
HSB5025-100	50 X 25 STOCK BAR 100CM
HSB5025-150	50 X 25 STOCK BAR 150CM
HSB5030-050	50 X 30 STOCK BAR 50CM
HSB5030-100	50 X 30 STOCK BAR 100CM
HSB5030-150	50 X 30 STOCK BAR 150CM
HSB5040-050	50 X 40 STOCK BAR 50CM
HSB5040-100	50 X 40 STOCK BAR 100CM
HSB5040-150	50 X 40 STOCK BAR 150CM
HSB5050-050	50 X 50 STOCK BAR 50CM
HSB5050-100	50 X 50 STOCK BAR 100CM
HSB5050-150	50 X 50 STOCK BAR 150CM
HSB506-050	50 X 6 STOCK BAR 50CM
HSB506-100	50 X 6 STOCK BAR 100CM
HSB506-150	50 X 6 STOCK BAR 150CM
HSB6512-050	65 X 12 STOCK BAR 50CM
HSB6512-100	65 X 12 STOCK BAR 100CM
HSB6512-150	65 X 12 STOCK BAR 150CM
HSB6520-050	65 X 20 STOCK BAR 50CM
HSB6520-100	65 X 20 STOCK BAR 100CM
HSB6520-150	65 X 20 STOCK BAR 150CM
HSB7506-050	75 X 6 STOCK BAR 50CM
HSB7506-100	75 X 6 STOCK BAR 100CM
HSB7506-150	75 X 6 STOCK BAR 150CM

Part Number	Description (Width x Thickness x Length)
HSB7510-050	75 X 10 STOCK BAR 50CM
HSB7510-100	75 X 10 STOCK BAR 100CM
HSB7510-150	75 X 10 STOCK BAR 150CM
HSB7512-050	75 X 12 STOCK BAR 50CM
HSB7512-100	75 X 12 STOCK BAR 100CM
HSB7512-150	75 X 12 STOCK BAR 150CM
HSB7516-050	75 X 16 STOCK BAR 50CM
HSB7516-100	75 X 16 STOCK BAR 100CM
HSB7516-150	75 X 16 STOCK BAR 150CM
HSB7520-050	75 X 20 STOCK BAR 50CM
HSB7520-100	75 X 20 STOCK BAR 100CM
HSB7520-150	75 X 20 STOCK BAR 150CM
HSB7525-050	75 X 25 STOCK BAR 50CM
HSB7525-100	75 X 25 STOCK BAR 100CM
HSB7525-150	75 X 25 STOCK BAR 150CM
HSB7530-050	75 X 30 STOCK BAR 50CM
HSB7530-100	75 X 30 STOCK BAR 100CM
HSB7530-150	75 X 30 STOCK BAR 150CM
HSB7540-050	75 X 40 STOCK BAR 50CM
HSB7540-100	75 X 40 STOCK BAR 100CM
HSB7540-150	75 X 40 STOCK BAR 150CM
HSB7550-050	75 X 50 STOCK BAR 50CM
HSB7550-100	75 X 50 STOCK BAR 100CM
HSB7550-150	75 X 50 STOCK BAR 150CM
HSB9012-050	90 X 12 STOCK BAR 50CM
HSB9012-100	90 X 12 STOCK BAR 100CM
HSB9012-150	90 X 12 STOCK BAR 150CM

Precision Ground Flat Stock (Gauge Plate)

Hales stock a comprehensive range of both metric and imperial Ground Flat Stock in 500mm lengths.

1 metre lengths also available.



O1 is a medium alloyed oil hardening steel with excellent cutting force and toughness, the excellent dimensional stability reduces distortion and the possibility of cracking during heat treatment.

Supplied in the annealed condition, the precision tolerances minimise additional costly tool room maching.

Ground Flat Stock provides toolmakers with a decarburization free surface, plus high wear resistance after heat treatment, making it ideal for a multitude of uses and applications: dies, press tools, punches, gauges, cams, jigs, maching knives and marking devices.

Hardness as supplied: 229 Brinall max Tensile Strength: 45 Tons / sq. in.

Gauge Plate (Metric)

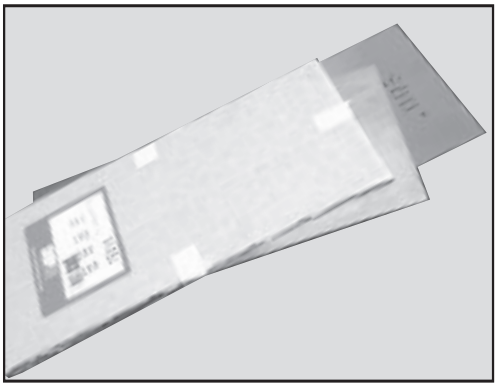
Width	1	1.5	2	3	4	5	6	8	10	12	15	20	25	30	40	50	Thickness
Square				◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	
10	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆							
15	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆						
20	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆					
25	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆				
30	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆			
40	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆		
50	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	
60	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	
70	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	
75	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	
80	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	
100	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	
125	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	
150	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	
200	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	
250	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	
300	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	

Gauge Plate (Imperial)

Width	1/32	1/16	3/32	1/8	5/32	3/16	1/4	5/16	3/8	1/2	5/8	3/4	1	1 1/4	1 1/2	2	Thickness
3/8	◆	◆	◆	◆	◆	◆	◆	◆									
1/2	◆	◆	◆	◆	◆	◆	◆	◆	◆								
5/8	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆							
3/4	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆						
1	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆					
1 1/4	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆				
1 1/2	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆			
2	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆		
2 1/2	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	
3	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	
4	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	
5	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	
6	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	
8	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	
10	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	
12	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	

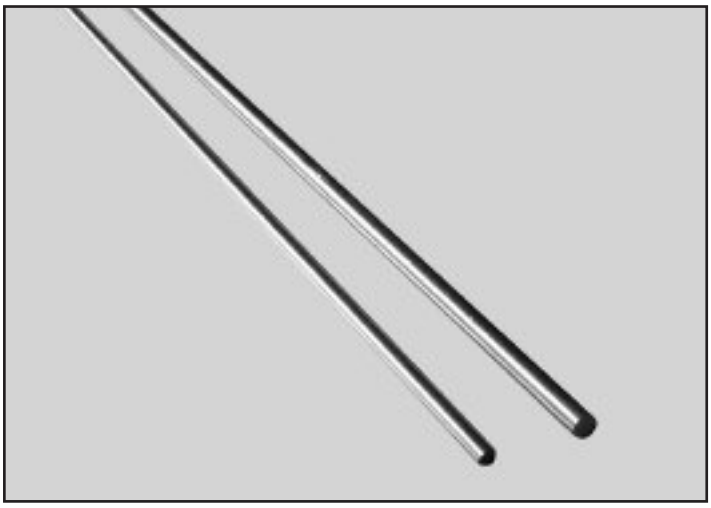
Steel Shim in a Can

Part Number	Description
SHS001	.001 SHIM STEEL
SHS002	.002 SHIM STEEL
SHS003	.003 SHIM STEEL
SHS004	.004 SHIM STEEL
SHS005	.005 SHIM STEEL
SHS006	.006 SHIM STEEL
SHS008	.008 SHIM STEEL
SHS010	.010 SHIM STEEL
SHS012	.012 SHIM STEEL
SHS015	.015 SHIM STEEL
SHS020	.020 SHIM STEEL
“full can 100”” lenghts or cut to size”	
SHSA	ASSORTED SHIM 12 PACK
	“6”” X 12”” X 12Pcs”
	“.001,.0015,.002,.003,”
	“.004,.005,.006,.007,.008,.010,.012.015”



Silver Steel

- 1 metre lengths
- Metric 2 - 50mm
- Imperial 1/16" - 2"



Urethane

DIAMETER
U060=6mm
U010=10mm
U012=12mm
U015=15mm
U020=20mm
U022=22mm
U025=25mm
U032=32mm
U035=35mm

DIAMETER
U040=40mm
U045=45mm
U050=50mm
U060=60mm
U070=70mm
U075=75mm
U082=82mm
U100=100mm
U150=150mm

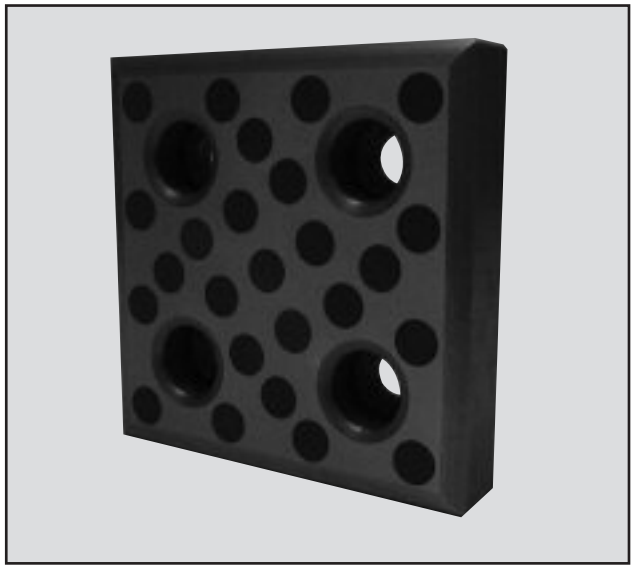
SHEETS
US010=10x305x305
US012=12x305x305
US015=15x305x305
US020=20x305x305
US025=25x305x305
US030=30x305x305
US035=35x305x305
US040=40x305x305
US045=45x305x305
US050=50x305x305

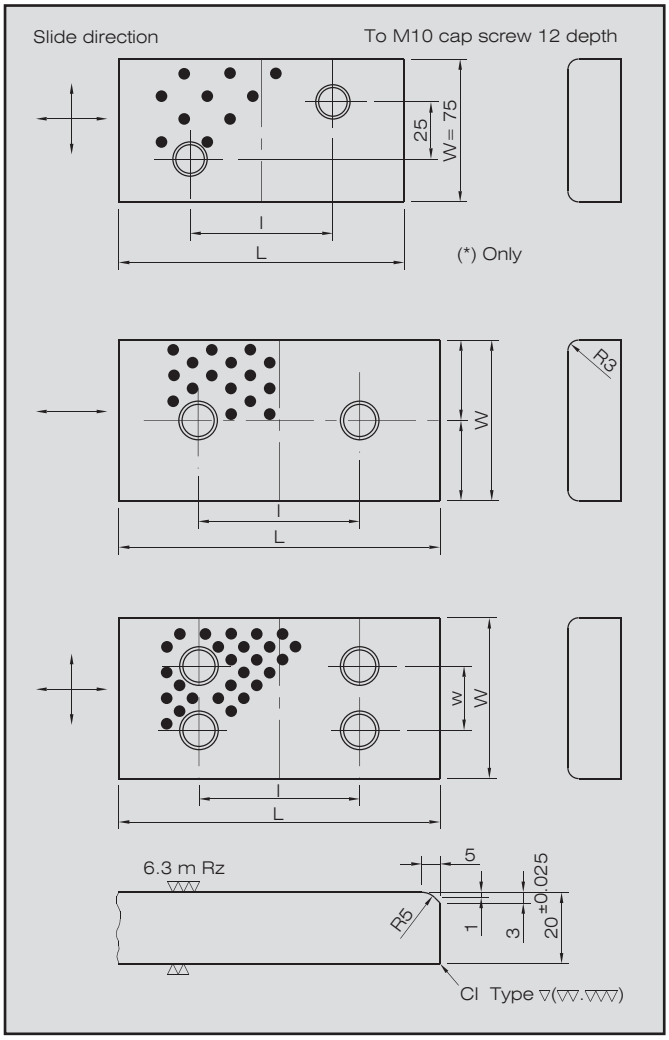
Stocked in P9A-90 Shore A-Red.

Harder. Softer and other sizes manufactured to order.

Black rubber sheets also ex-stock.

Wear Plates - Cast Iron





STD. NO.	W	LENGTH	PITCH		NO. OF SCREWS
			W	/	
HSES-201	48	75	-	45	2
HSES-202	48	100	-	50	2
HSES-203	48	125	-	75	2
HSES-204	48	150	-	100	2
HSES-205	75	75	25	25	2*
HSES-206	75	100	25	50	2*
HSES-207	75	125	-	75	2
HSES-208	75	150	-	100	2
HSES-209	75	200	-	150	2
HSES-210	100	100	50	50	4
HSES-211	100	125	50	75	4
HSES-212	100	150	50	100	4
HSES-213	100	200	50	150	4
HSES-214	100	250	50	200	4
HSES-215	125	150	50	100	4
HSES-216	125	200	50	150	4
HSES-217	125	250	50	200	4
HSES-218	150	150	100	100	4
HSES-219	150	200	100	150	4
HSES-220	150	250	100	200	4

RV - Pneumatic Vibrator

The Raymond Pneumatic Vibrator is an ideal solution for removing punchings, trimmings and scrap produced during press operations. The automatic and continuous removal keeps the press operator from interrupting production to clean away the punchings, trimmings and/or scraps by hand. The vibrator uses a pneumatic power source offering a cost effective alternative to electrically driven conveyor belts.

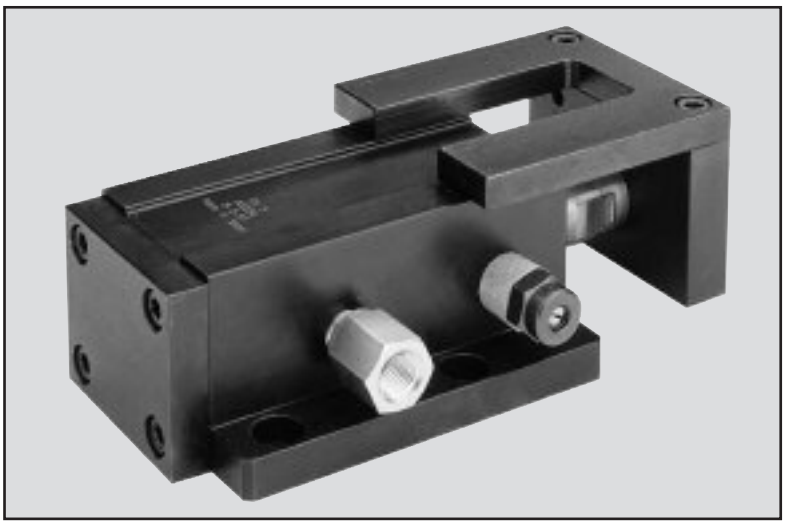
The pneumatic power source allows this unit to work in areas contaminated by lubricating fluids and oils. Unlike electrically driven systems with there inherent shock hazard, the Raymond Pneumatic Vibrator is safe to use as it consumes no electricity.

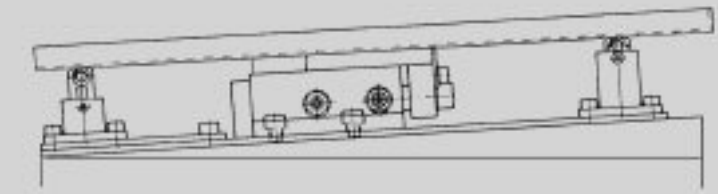
The compact design of the unit is made for working in the tight areas that are present on some presses. Easy to install, simply select the area for the unit, bolt in place and connect it to your air supply. The low air consumption and silent running Raymond Pneumatic Vibrator is the safe and economical solution for your scrap removal needs.

All Units feature a standard NTP connection for easy hookup to lubricated shop air and an adjustable exhaust muffler. By varying the input pressure and exhaust flow, the cycle rate and stroke of the unit can be custom adjusted by the user in each application. Note that if a lubricator is not used in conjunction with the shop air, the piston rod in the vibrator unit should be lubricated monthly.

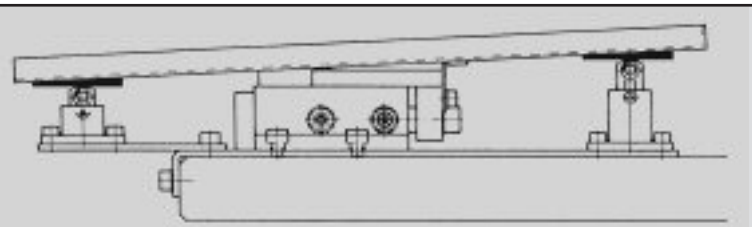
Standard transport trays are available. For balanced performance, all trays should use the RV12-S or RV50-S adjustable supports shown on page 40. For proper scrap removal, the tray should be sloped at an angle of 8 degrees or greater. The exact amount of inclination should be adjusted on-site based upon the scrap weight and the shape as well as the amount of oil and grease that is likely to be present.

Sloping of the tray can be accomplished by mounting the tray parallel to the vibrator unit and slpoing both the vibrator and the tray. Alternately, the tray can be mounted at an angle with respect to the unit. In both cases, care should be taken to assure that the tray supports are used and are in contact with the tray through the entire range of motion.



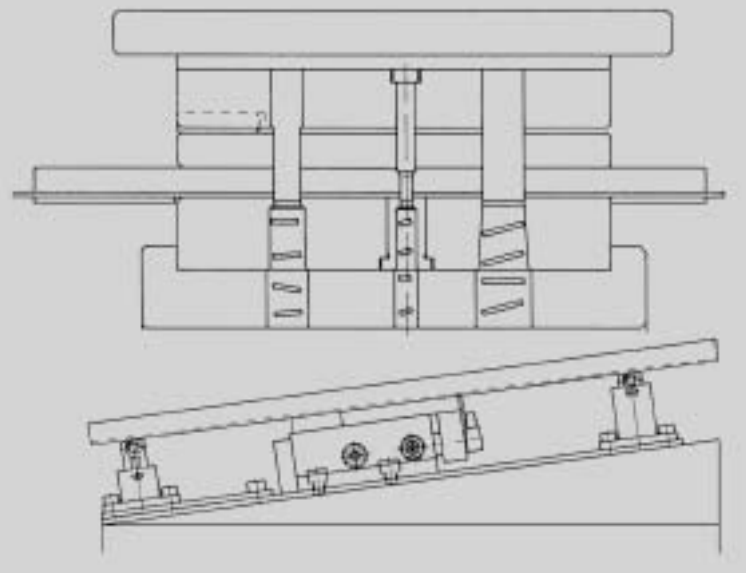


Mounting method with the tray parallel to the vibrator unit.



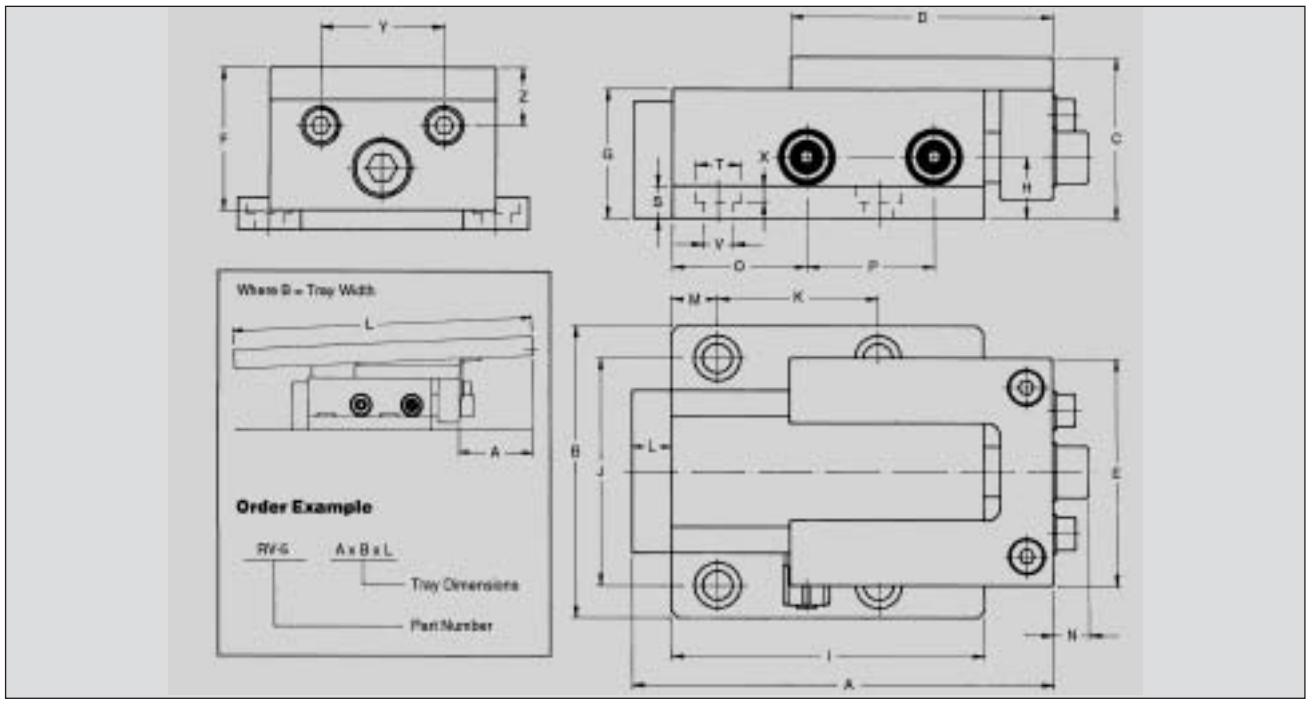
Mounting method with only the tray sloped. Note the use of flats on the base of the tray for proper contact with the supports.

Application Example



Accessories

RV - Pneumatic Vibrator



Ordering Information – RV 3 through RV 9

Order Number	A	B	C	D	E	F	G	H	I	J	K	L
RV3	128/5.04	90/3.54	48/1.89	80/3.15	70/2.76	44/1.73	38/1.50	19/.75	95/3.74	70/2.76	49/1.93	12/.47
RV5	155/6.10	100/3.94	65/2.56	90/3.54	80/3.15	60/2.36	55/2.17	27/1.06	118/4.65	82/3.23	60/2.36	12/.47
RV7	158/6.22	122/4.80	88/3.47	100/3.94	100/3.94	80/3.15	78/3.07	36/1.42	118/4.65	104/4.09	60/2.36	12/.47
RV9	179/7.05	150/5.91	108/4.25	120/4.72	125/4.92	98/3.86	95/3.74	48/1.89	130/5.12	130/5.12	65/2.56	14/.55

Order Number	M	N	O	P	S	T	V	X	Y	Z
RV3	14/.55	12.5/.49	41/1.61	39/1.54	10/.39	14/.55	9/.35	5/.20	38/1.50	16/.63
RV5	15/.59	19/.75	47/1.85	49/1.93	12/.47	14/.55	9/.35	8/.32	48/1.89	16/.63
RV7	15/.59	19/.75	47/1.85	49/1.93	14/.55	14/.55	9/.35	9/.35	64/2.52	16/.63
RV9	20/.79	24/.95	52/2.05	56/2.21	18/.71	17/.67	11/.43	11/.43	75/2.95	23/.91

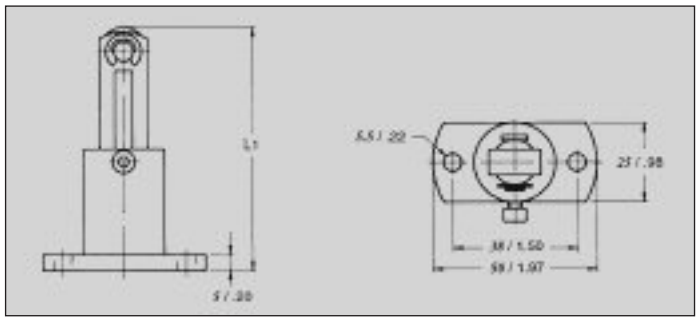
Technical Data

Order Number	Air Fitting Female NPT	Typical Air Pressure	Air Consumption (ft^3/min)	Typical Piston Stroke	Piston Speed (ft/min)	Typical Mounting Inclination	Maximum Load Inc. Tray	Noise Level (dB-A)	Working Temp. (^0F)
RV3	1/8	70	1.1	30/1.18	26-32	8^0	13.2	50	32-158
RV5	1/4	70	2.1	33/1.30	26-32	8^0	30.9	50	32-158
RV7	1/4	70	5.1	20/.79	26-32	8^0	79.4	50	32-158
RV9	3/8	70	7.6	28/1.10	26-32	8^0	123.5	53	32-158

Dimensions in millimeters/inches

RV Pneumatic Vibrator

Adjustable Supports for trays greater than 2ft. in length.



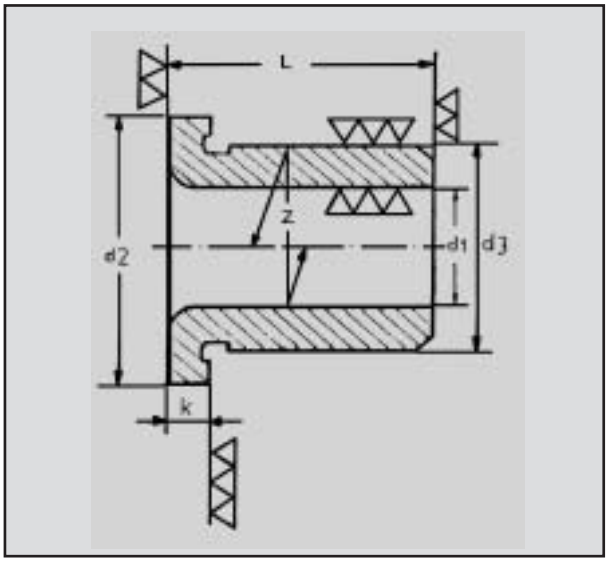
Ordering Information – RV 12-S through RV 50-S

Order Number	L1 Min.	L1 Max.
RV 12-S	38.5/1.52	51/2.01
RV 25-S	51/2.01	76/2.99
RV 50-S	76/2.99	126/4.96

Precision Drill Guides (Headed)

DIN 172 Precision Drill Guides (Headed)
Material: Case Hardened Steel
Hardness : 62 +/- 2 Hrc

d1 F7	d3 n6	d2	k	z	Increments	L Short	L Long
0.4 - 1.0	3.0	6	2	0.01	0.10	6	9
1.1 - 1.8	4.0	7	2	0.01	0.10	6	9
1.9 - 2.6	5.0	8	2	0.01	0.10	6	9
2.7 - 3.3	6.0	10	2S/3L	0.01	+	8	12
3.4 – 4.0	7.0	11	2S/3L	0.01	0.25	8	12
4.1 – 5.0	8.0	12	2S/3L	0.01	+	8	12
5.1 – 6.0	10.0	14	3	0.02	0.75	10	16
6.1 – 8.0	12.0	16	3	0.02	0.75	10	16
8.1 – 10.0	15.0	19	4	0.02	0.75	12	20
10.1 – 12.0	18.0	22	4	0.02	0.75	12	20
12.1 – 15.0	22.0	26	4	0.02	0.50	16	28
15.1 – 18.0	26.0	30	4	0.02	0.50	16	28
18.1 – 20.0	30.0	35	6	0.02	0.50	20	36
20.1 – 22.0	30.0	35	6	0.02	1.0	20	36
22.1 – 26.0	35.0	40	5	0.02	1.0	20	36
26.1 – 30.0	42.0	47	5	0.02	1.0	20	36
30.1 – 35.0	48.0	55	5	0.04	1.0	25	45
35.1 – 42.0	55.0	62	5	0.04	1.0	25	45
42.1 – 48.0	62.0	69	6	0.04	1.0	30	56
48.1 – 55.0	70.0	77	6	0.04	1.0	30	56
55.1 – 63.0	78.0	85	6	0.04	1.0	35	72

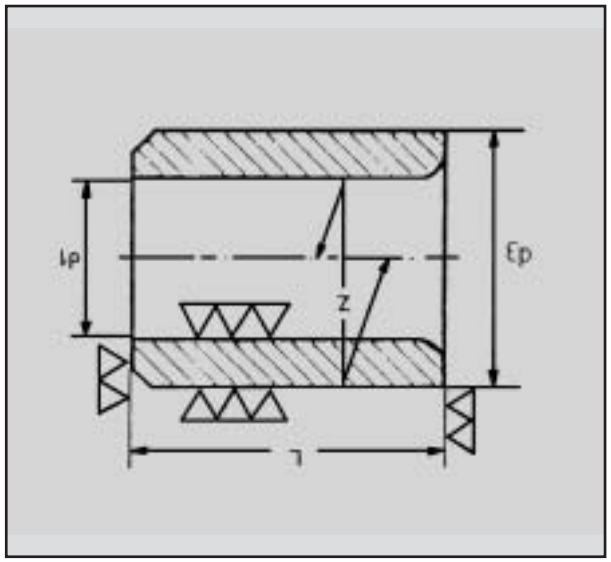


How to Order

Drill Guide d1 x L DIN 172 Short or Long
Eg: Drill Guide 2.6 x 9 DIN 172 Long
Drill Guide 15.0 x 16 DIN 172 Short

Precision Drill Guides (Headless)

DIN 179 Precision Drill Guides (Headless)
Material: Case Hardened Steel
Hardness : 62 +/- 2 Hrc



d1 F7	d3 n6	z	Increments	L Short	L Long
0.4 - 1.0	3.0	0.01	0.10	6	9
1.1 - 1.8	4.0	0.01	0.10	6	9
1.9 - 2.6	5.0	0.01	0.10	6	9
2.7 - 3.3	6.0	0.01	+	8	12
3.4 – 4.0	7.0	0.01	0.25	8	12
4.1 – 5.0	8.0	0.01	+	8	12
5.1 – 6.0	10.0	0.02	0.75	10	16
6.1 – 8.0	12.0	0.02	0.75	10	16
8.1 – 10.0	15.0	0.02	0.75	12	20
10.1 – 12.0	18.0	0.02	0.75	12	20
12.1 – 15.0	22.0	0.02	0.50	16	28
15.1 – 18.0	26.0	0.02	0.50	16	28
18.1 – 20.0	30.0	0.02	0.50	20	36
20.1 – 22.0	30.0	0.02	1.0	20	36
22.1 – 26.0	35.0	0.02	1.0	20	36
26.1 – 30.0	42.0	0.02	1.0	20	36
30.1 – 35.0	48.0	0.04	1.0	25	45
35.1 – 42.0	55.0	0.04	1.0	25	45
42.1 – 48.0	62.0	0.04	1.0	30	56
48.1 – 55.0	70.0	0.04	1.0	30	56
55.1 – 63.0	78.0	0.04	1.0	35	72

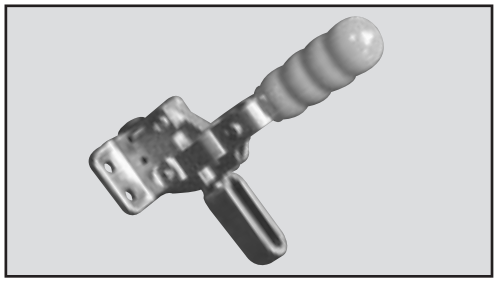
How to Order

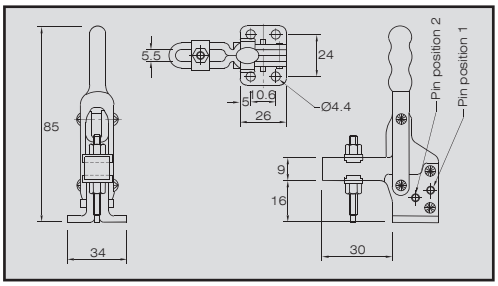
Drill Guide	d1 x L DIN 179 Short or Long
Eg: Drill Guide	2.6 x 9 DIN 179 Long
Drill Guide	15.0 x 16 DIN 179 Short

Part Number V75/2B

HOLDING FORCE	150kg
WEIGHT	70g
STANDARD SPINDLE MODEL NO.	M0535
ARM	
OPENING ANGLE	120˚
- PIN REMOVED	160˚
HANDLE	
OPENING ANGLE	85˚
- PIN REMOVED	105˚

Supplied with standard spindle, nuts and flanged washers.
For front mounting use bracket Model FM1.

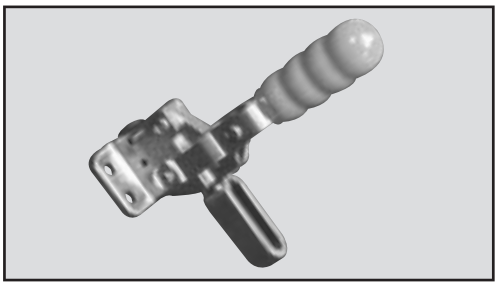


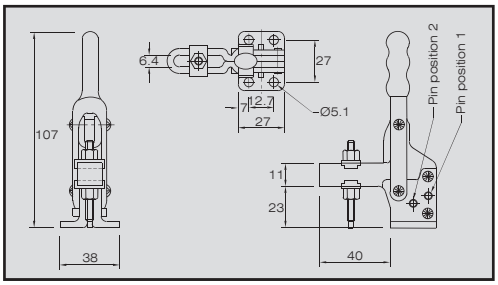


Part Number V150/2B

HOLDING FORCE	150kg
WEIGHT	170g
STANDARD SPINDLE MODEL NO.	M0650
ARM	
OPENING ANGLE	
- PIN POSITION 1	90˚
- PIN POSITION 2	120˚
- PIN REMOVED	160˚
HANDLE	
OPENING ANGLE	
- PIN POSITION 1	70˚
- PIN POSITION 2	85˚
- PIN REMOVED	105˚

Supplied with standard spindle, nuts and flanged washers.
For front mounting use bracket Model FM1.

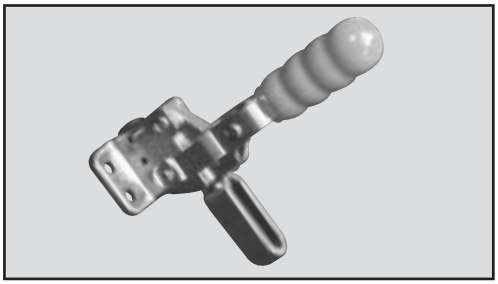


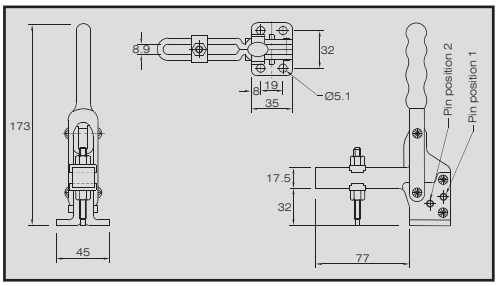


Part Number V250/2B

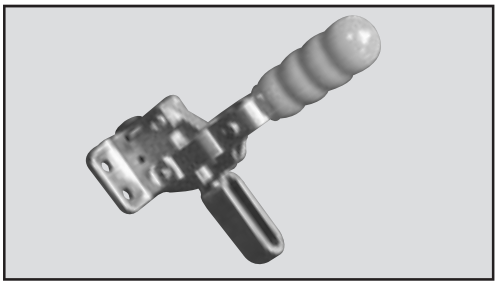
HOLDING FORCE	250kg
WEIGHT	380g
STANDARD SPINDLE MODEL NO.	M0865
ARM	
OPENING ANGLE	
- PIN POSITION 1	90˚
- PIN POSITION 2	120˚
- PIN REMOVED	160˚
HANDLE	
OPENING ANGLE	
- PIN POSITION 1	70˚
- PIN POSITION 2	85˚
- PIN REMOVED	105˚

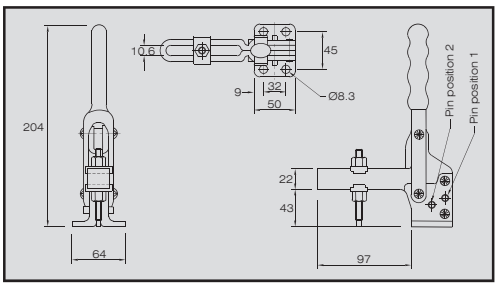
Supplied with standard spindle, nuts and flanged washers.
For front mounting use bracket Model FM2.





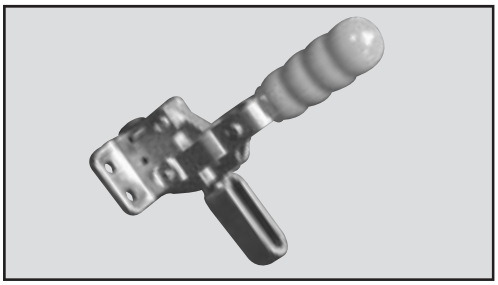
Vertical Toggle Clamps

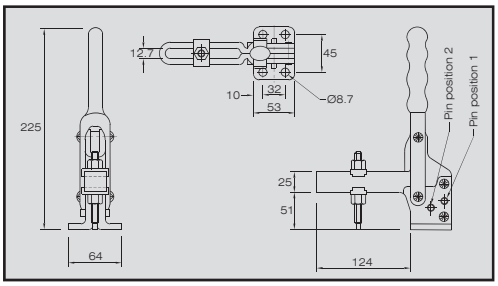




Part Number	V350/2B
HOLDING FORCE	350kg
WEIGHT	670g
STANDARD SPINDLE MODEL NO.	M1085
ARM	
OPENING ANGLE	
- PIN POSITION 1	90˚
- PIN POSITION 2	120˚
- PIN REMOVED	160˚
HANDLE	
OPENING ANGLE	
- PIN POSITION 1	70˚
- PIN POSITION 2	85˚
- PIN REMOVED	105˚

Supplied with standard spindle, nuts and flanged washers.
For front mounting use bracket Model FM3.

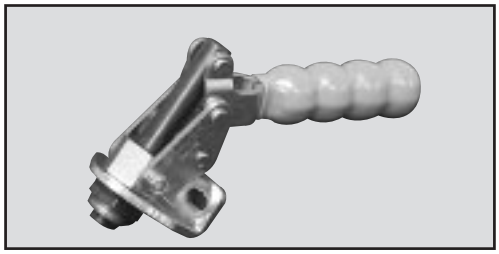




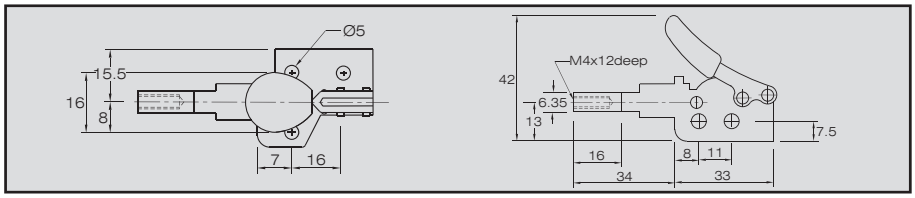
Part Number	V450/2B
HOLDING FORCE	450kg
WEIGHT	1.3kg
STANDARD SPINDLE MODEL NO.	M12100
ARM	
OPENING ANGLE	
- PIN POSITION 1	90˚
- PIN POSITION 2	120˚
- PIN REMOVED	160˚
HANDLE	
OPENING ANGLE	
- PIN POSITION 1	70˚
- PIN POSITION 2	85˚
- PIN REMOVED	105˚

Supplied with standard spindle, nuts and flanged washers.
For front mounting use bracket Model FM3.

Straight Line Clamps

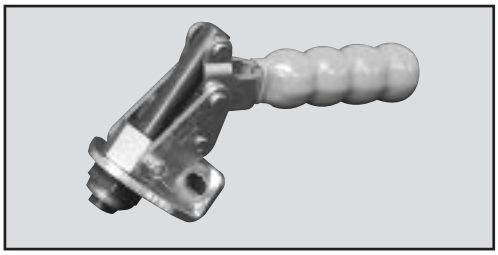


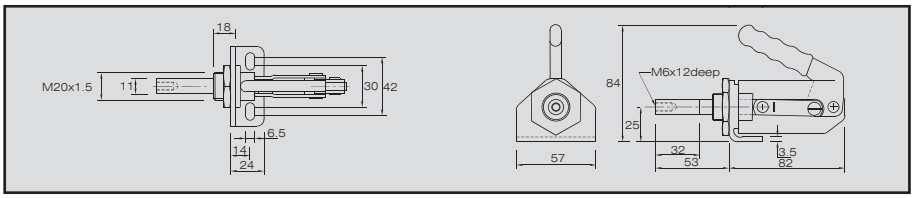
Part Number	P50
HOLDING FORCE	50kg
WEIGHT	45g
HANDLE	
OPENING ANGLE	180˚



Part Number P250

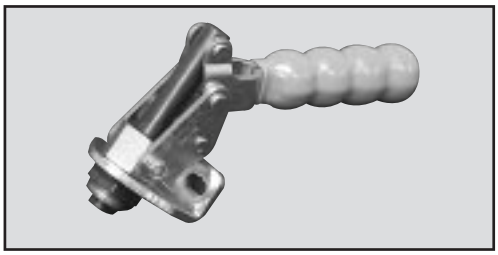
HOLDING FORCE	250kg
WEIGHT	350g
HANDLE	
OPENING ANGLE	180˚

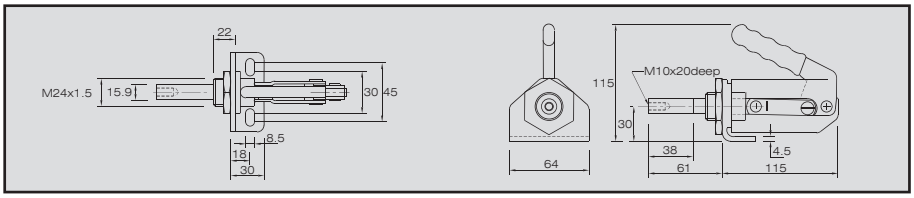




Part Number P450

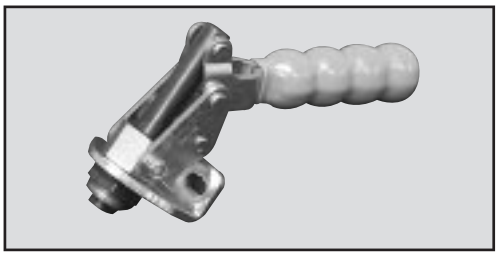
HOLDING FORCE	450kg
WEIGHT	755g
HANDLE	
OPENING ANGLE	180˚

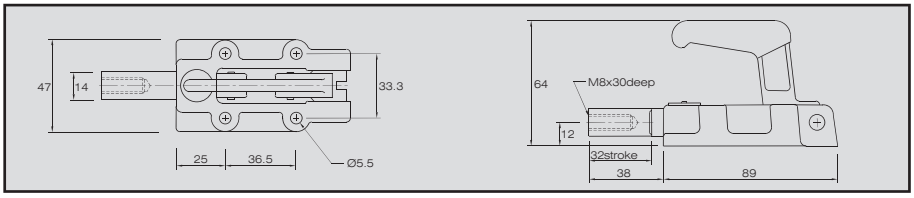




Part Number P600

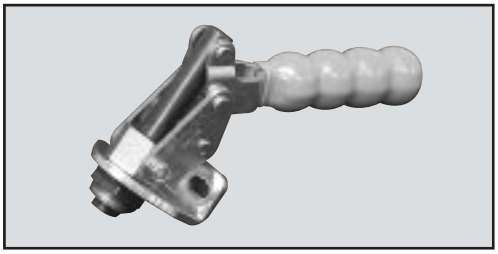
HOLDING FORCE	600kg
WEIGHT	480g
HANDLE	
OPENING ANGLE	180˚

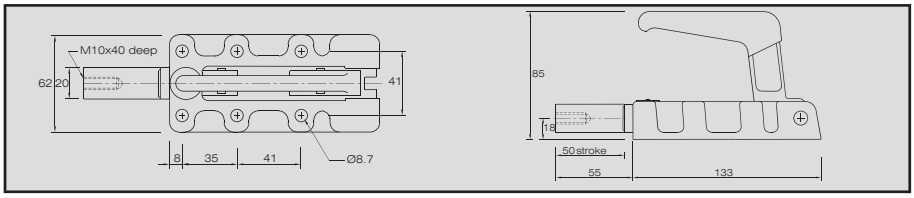




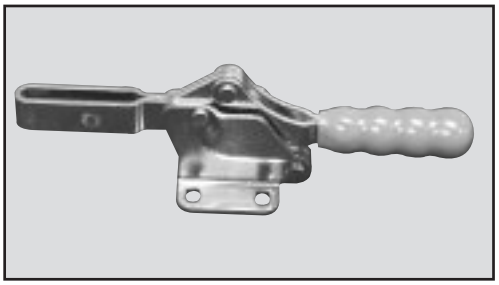
Part Number P1200

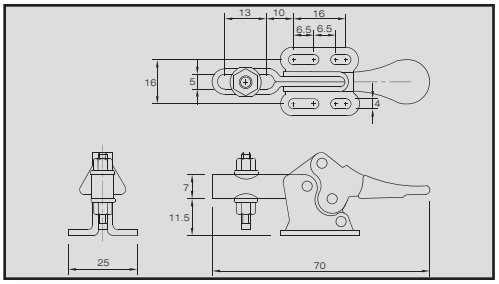
HOLDING FORCE	1200kg
WEIGHT	1.5kg
HANDLE	
OPENING ANGLE	180˚





Horizontal Toggle Clamps

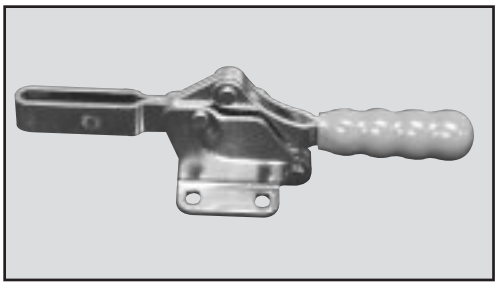


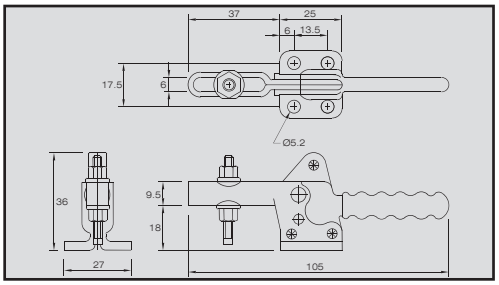


Part Number H50/2B

HOLDING FORCE	50kg
WEIGHT	31g
STANDARD SPINDLE MODEL NO.	MO525
ARM OPENING ANGLE	86°
HANDLE	
OPENING ANGLE	76°

Supplied with standard spindle, nuts and flanged washers.

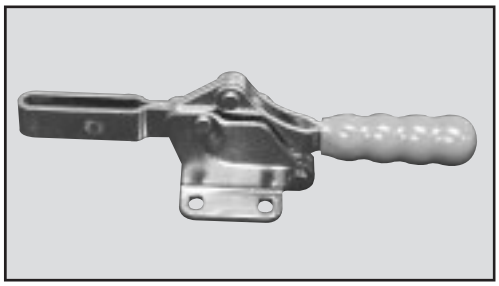


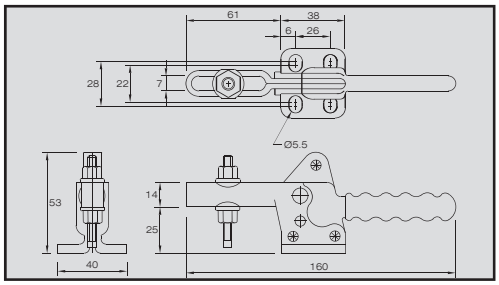


Part Number H75/2B

HOLDING FORCE	75kg
WEIGHT	60g
STANDARD SPINDLE MODEL NO.	MO535
ARM OPENING ANGLE	92°
HANDLE	
OPENING ANGLE	68°

Supplied with standard spindle, nuts and flanged washers.
For front mounting use bracket Model FM1.





Part Number H150/2B

HOLDING FORCE	150kg
WEIGHT	195g
STANDARD SPINDLE MODEL NO.	MO650
ARM OPENING ANGLE	94°
HANDLE	
OPENING ANGLE	74°

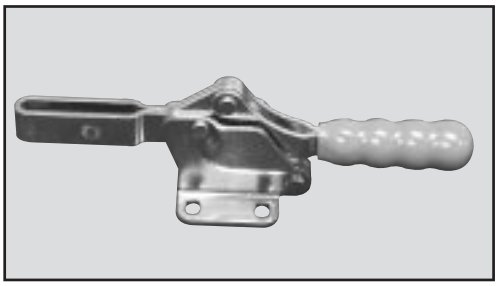
Supplied with standard spindle, nuts and flanged washers.
For front mounting use bracket Model FM2.

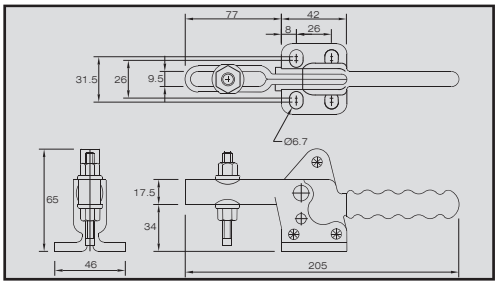
Horizontal Toggle Clamps

Part Number H250/2B

HOLDING FORCE	250kg
WEIGHT	375g
STANDARD SPINDLE MODEL NO.	MO865
ARM OPENING ANGLE	92˚
HANDLE	
OPENING ANGLE	70˚

Supplied with standard spindle, nuts and flanged washers.
For front mounting use bracket Model FM2.

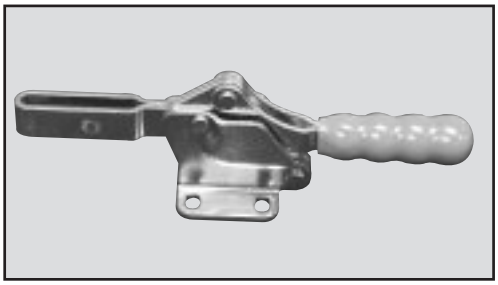


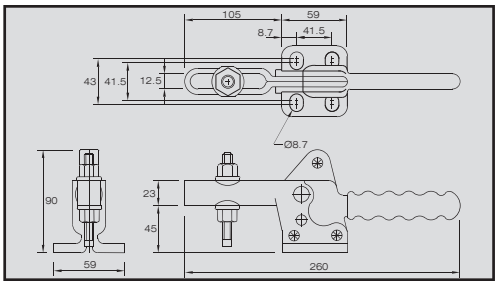


Part Number H350/2B

HOLDING FORCE	350kg
WEIGHT	900g
STANDARD SPINDLE MODEL NO.	M1085
ARM OPENING ANGLE	91˚
HANDLE	
OPENING ANGLE	68˚

Supplied with standard spindle, nuts and flanged washers.
For front mounting use bracket Model FM3.

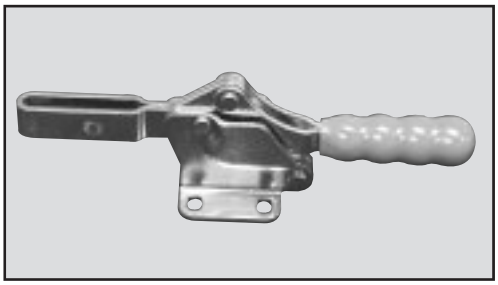


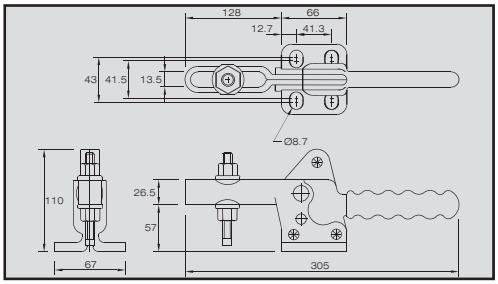


Part Number H450/2B

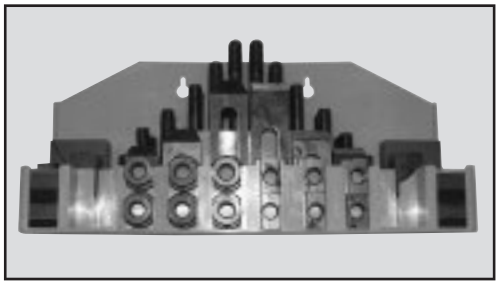
HOLDING FORCE	450kg
WEIGHT	1.5kg
STANDARD SPINDLE MODEL NO.	M121
ARM OPENING ANGLE	91˚
HANDLE	
OPENING ANGLE	68˚

Supplied with standard spindle, nuts and flanged washers.
For front mounting use bracket Model FM3.





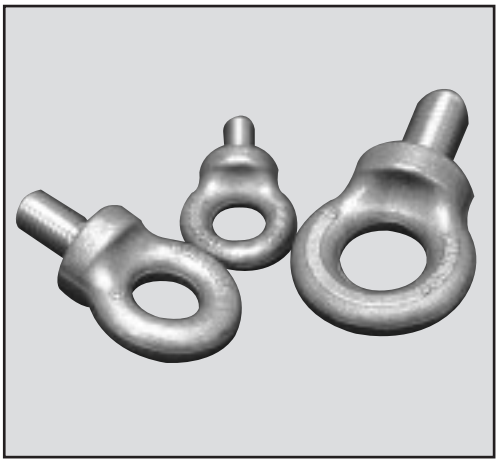
Clamping Kits



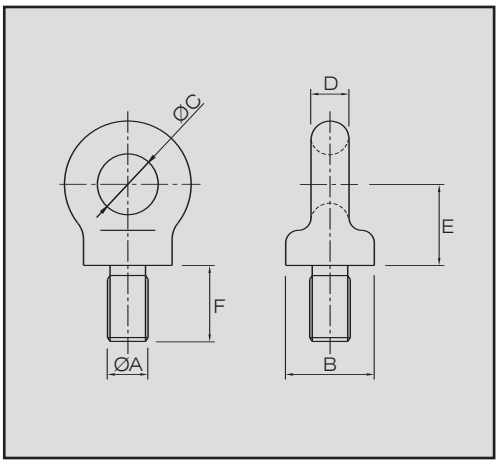
Part Number	Description
PK-104	1/2 Clamping Kit (52 pcs)
PK-105	5/8 Clamping Kit (52 pcs)
PKM12	12mm Clamping Kit (52 pcs)
PKM16	16mm Clamping Kit (52 pcs)

Collard Lifting Eyebolts

Metric & Imperial



Part No.	AØ	B	CØ	D	E	F
EYE10	M10	21	14	9	20	18
EYE12	M12	28	19	11	25	23
EYE16	M16	35	24	15	32	30
EYE20	M20	42	29	16	37	40
EYE22	M22	50	33	20	44	41
EYE24	M24	57	38	22	51	46
EYE30	M30	71	48	28	66	50
EYE33	M33	71	48	28	65	50
EYE38	M38	86	55	33	75	66
EYE39	M39	86	55	33	75	66
EYE42	M42	102	66	40	92	77
EYE48	M48	115	72	49	102	89
EYE56	M56	143	95	56	127	111
EYE64	M64	143	95	56	127	111
EYE76	M76	163	106	66	144	125



Part No.	AØ	B	CØ	D	E	F
EYE24	3/8”	21	14	9	20	18
EYE32	1/2”	28	19	11	25	23
EYE40	5/8”	35	24	15	32	30
EYE48	3/4”	42	29	16	37	40
EYE56	7/8”	50	33	20	44	41
EYE64	1”	57	38	22	51	46
EYE72	1 1/8”	71	48	28	66	50
EYE80	1 1/4”	71	48	28	65	50
EYE96	1 1/2”	86	55	33	75	66
EYE112	1 3/4”	86	55	33	75	66
EYE128	2”	102	66	40	92	77
EYE160	2 1/2”	115	72	49	102	89
EYE192	3”	143	95	56	127	111

Table of ISA Standard Tolerances in Microns

(1 micron = 0.001mm / 25.4 micron = 0.001 inches

Designation	Application	up to 3mm.	3 to 6mm.	6 to 10mm.	10 to 18mm.	18 to 30mm.	30 to 50mm.
d 9		-20 -45	-30 -60	-40 -76	-50 -93	-65 -117	-80 -142
f 7	Ground surfaces	-6 -16	-10 -22	-13 -28	-16 -34	-20 -41	-25 -50
F 7	Drill guides-I.D.	+16 +7	+22 +10	+28 +13	+34 +16	+41 +20	+50 +25
g 5		-2 -6	-4 -9	-5 -11	-6 -14	-7 -16	-9 -20
g 6	Ejector pins	-2 -8	-4 -12	-5 -14	-6 -17	-7 -20	-9 -25
h 4	Guide pins (die sets)	0 -3	0 -4	0 -4	0 -5	0 -6	0 -7
h 5		0 -4	0 -5	0 -6	0 -8	0 -9	0 -11
h 6	Punches D.C. F(pt)	0 -6	0 -8	0 -9	0 -11	0 -13	0 -16
h 7		0 -10	0 -12	0 -15	0 -18	0 -21	0 -25
h 9		0 -25	0 -30	0 -36	0 -43	0 -52	0 -62
h 11		0 -60	0 -75	0 -90	0 -110	0 -210	0 -250
H 5		+4 0	+5 0	+6 0	+8 0	+9 0	+11 0
H 7	Punch guides-I.D Reamers	+10 0	+12 0	+15 0	+18 0	+21 0	+25 0
H 8	Die inserts or buttons- I.D.(A&B)	+14 0	+18 0	+22 0	+27 0	+33 0	+39 0
j 5		+2 -2	+3 -2	+4 -2	+5 -3	+5 -4	+6 -5
j 6		+4 -2	+6 -2	+7 -2	+8 -3	+9 -4	+11 -5
j 7		+7 -2	+9 -3	+10 -5	+12 -6	+13 -8	+15 -10
k 6	Die inserts-O.D(B)	+10 +1	+12 +1	+15 +2	+18 +2		
m 5		+7 +2	+9 +4	+12 +6	+15 +7	+17 +8	+20 +9
m 6	Punches E,F(shk) Dowels	+9 +2	+12 +4	+15 +6	+18 +7	+21 +8	+25 +9
n 6	Die inserts-O.D.(A) Guide bushes-O.D.	+13 +6	+16 +8	+19 +10	+23 +12	+28 +15	+32 +17
p 6		+16 +9	+20 +12	+24 +15	+29 +18	+35 +22	+42 +26
r 6		+19 +12	+23 +15	+28 +19	+34 +23	+41 +28	+50 +34
s 5		+18 +14	+24 +19	+29 +23	+36 +28	+44 +35	+54 +43
s 6		+22 +15	+27 +19	+32 +23	+39 +28	+48 +35	+59 +43

Notes