

Die springs are specially for use where high load is required in a confined space, eg. Die sets.

The high demands placed upon these springs are a result of the high frequencies with which dies are charged.

The use of high quality chrome alloy steel combines maximum load with long life.

The SPEC range of die springs is composed of 8 groups by diameter. In this way it is possible to select springs of different load characteristics for the same tooling already adapted for pressed parts, resulting in a longer operating lifetime for your dies and die sets.

Each group of spring is divided into a rising load range and can be identified by a colour coding system thus:

Middle – Blue  
Middle Heavy – Red  
Heavy – Copper  
Extra Heavy – Green

The length in column L<sub>1</sub> can be used with a frequency of 1000 compressions per hour maximum.

In case of higher frequencies the efficient operating range will be:

Blue – 25-30% of the free length  
Red – 20-25% of the free length  
Copper – 15-20% of the free length  
Green – 15% of the free length

To determine the load at any working length, use rate x proposed deflection (Lo-L<sub>1</sub>)

### Free Length Tolerances

Length mm	Tol. mm
0 - 60	+2.5
61 - 105	+3.5
106 - 200	+5
201 - 250	+6.5
251 - 305	+10

Les Ressorts de compression extra raide sont spécialement étudiés pour une utilisation demandant des efforts très élevés dans un encombrement réduit, l'outillage de presse par exemple.

Les exigences importantes imposées sur ces ressorts résultent de la fréquence de fonctionnement très élevée des outils de presse.

L'utilisation de l'acier au chrome alloy de haute qualité permet de combiner un maximum d'effort et de longévité.

La gamme de ressorts de compression extra raide SPEC est composée de 8 groupes par diamètre. De cette façon il est possible de sélectionner des ressorts à caractéristiques de forces différentes pour le même outillage adapté préalablement pour des pièces embouties, le résultat étant une longévité d'outillage augmentée.

Chaque groupe de ressorts est divisé en plages croissantes de charge et peut être identifié par un système de code couleurs soit:

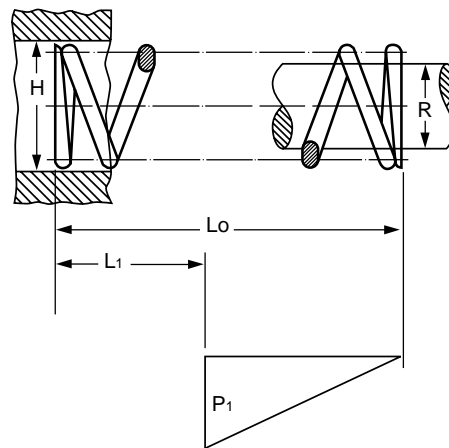
Moyen = Bleu  
Moyen raide = Rouge  
Raide = Cuivre  
Extra raide = Vert

La longueur en colonne L<sub>1</sub> peut être utilisée avec une fréquence maximum de 1000 compressions par heure. Dans le cas de fréquences plus importantes, la plage d'utilisation efficace sera:

Bleu = 25-30% de la longueur libre  
Rouge = 20-25% de la longueur libre  
Cuivre = 15-20% de la longueur libre  
Vert = 15% de la longueur libre

Pour déterminer la charge à une longueur d'utilisation donnée utilisez la formule: taux x déflexion proposée (Lo - L<sub>1</sub>)

Longueur mm	Tolérance mm
0 - 60	+2.5
61 - 105	+3.5
106 - 200	+5
201 - 250	+6.5
251 - 305	+10



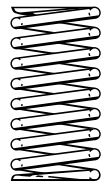
Lo = Free length  
L<sub>1</sub> = Working Length (Recommended)  
P<sub>1</sub> = Load at L<sub>1</sub> Newtons  
P/f = Rate N/mm  
H = Hole Diameter  
R = Rod Diameter

Lo = Longueur libre  
L<sub>1</sub> = Longueur d'utilisation  
P<sub>1</sub> = Charge à L<sub>1</sub>, Newton  
P/f = Raideur N/mm  
H = Diamètre de logement  
R = Diamètre d' Axe



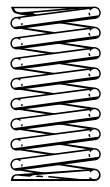
Lo Free Length mm	L1 Working Length mm	P1 Load at L1 N	P/f Rate N/mm	Part No.	Price Group
<b>Hole Dia. min. 9.53mm</b>		<b>Rod Dia. max. 4.75mm</b>			
25.40	19.05	62.27	9.8	S150300	BA
	19.05	100.08	15.8	S150310	BA
	21.59	82.73	21.7	S150320	BB
	21.59	146.78	38.5	S150330	BB
31.75	23.83	66.72	8.4	S150340	BA
	23.83	101.46	12.8	S150350	BA
	27.00	81.75	17.2	S150360	BB
	27.00	141.80	29.8	S150370	BC
38.10	28.58	63.38	6.7	S150380	BB
	28.58	111.78	11.7	S150390	BB
	32.39	96.08	16.8	S150400	BC
	32.39	145.14	25.4	S150410	BC
44.45	33.35	66.19	6.0	S150420	BB
	33.35	112.89	10.2	S150430	BB
	37.80	98.08	14.7	S150440	BC
	37.80	134.29	20.1	S150450	BD
50.80	38.10	62.27	4.9	S150460	BC
	38.10	112.20	8.8	S150470	BC
	43.18	96.08	12.6	S150480	BD
	43.18	133.44	17.5	S150490	BD
63.50	47.63	66.72	4.2	S150500	BC
	47.63	116.76	7.4	S150510	BD
	53.98	100.08	10.5	S150520	BE
	53.98	133.44	14.0	S150530	BE
76.20	57.15	60.06	3.2	S150540	BD
	57.15	100.08	5.3	S150550	BE
	64.77	84.07	7.4	S150560	BE
	64.77	130.10	11.4	S150570	BE
304.80	228.60	80.06	1.0	S150580	BT
	228.60	120.10	1.6	S150590	BT
	259.08	96.08	2.1	S150600	BV
	259.08	120.10	2.6	S150610	BW
<b>Hole Dia. min. 12.7mm</b>		<b>Rod Dia. max. 7.14mm</b>			
25.40	19.05	111.20	17.5	S150620	BB
	19.05	186.82	29.4	S150630	BB
	21.59	157.46	41.3	S150640	BC
	21.59	213.50	56.0	S150650	BD
31.75	23.83	127.66	16.1	S150660	BB
	23.83	193.22	24.3	S150670	BC
	26.97	155.15	32.6	S150680	BC
	26.97	200.16	42.0	S150690	BD
38.10	28.58	126.77	13.3	S150700	BC
	28.58	200.16	21.0	S150710	BC
	32.39	164.13	28.7	S150720	BD
	32.39	200.16	35.0	S150730	BE
44.45	33.35	132.33	11.9	S150740	BC
	33.35	202.38	18.2	S150750	BC
	37.77	161.15	24.2	S150760	BD
	37.77	198.51	29.8	S150770	BE
50.80	38.10	142.34	11.2	S150780	BD
	38.10	193.49	15.2	S150790	BD
	43.18	146.89	19.3	S150800	BE
	43.18	186.82	24.5	S150810	BF
63.50	47.63	144.56	9.1	S150820	BD
	47.63	189.04	11.9	S150830	BE
	53.98	140.11	14.7	S150840	BF
	53.98	191.84	20.1	S150850	BF
76.20	57.15	133.44	7.0	S150860	BE
	57.16	190.15	10.0	S150870	BE
	64.77	148.12	13.6	S150880	BF
	64.77	180.14	15.8	S150890	BG
88.90	66.68	116.76	5.3	S150900	BF
	66.68	182.95	8.2	S150910	BF
	75.57	149.45	11.2	S150920	BG
	75.57	186.82	14.0	S150930	BH
304.80	228.60	106.75	1.4	S150940	BV
	228.60	160.13	2.1	S150950	BV
	259.08	128.10	2.8	S150960	BW
	259.08	200.16	4.4	S150970	BW
114.30	85.73	125.12	4.4	S150901	BJ
139.70	104.78	128.46	3.7	S150902	BK
165.10	123.83	115.66	2.8	S150903	BL
190.50	142.88	91.76	1.9	S150904	BL
<b>Hole Dia. min. 15.88mm</b>		<b>Rod Dia. max. 8.71mm</b>			
25.40	19.05	145.67	22.9	S150980	BC
	19.05	308.02	48.5	S150990	BD
	21.59	282.89	74.2	S151000	BD
	21.59	420.34	110.3	S151010	BE
31.75	23.80	177.92	22.4	S151020	BD
	23.80	289.12	36.4	S151030	BD
	26.97	246.86	51.8	S151040	BE
	26.97	392.00	82.3	S151050	BE
38.10	28.58	180.14	18.9	S151060	BD
	28.58	316.92	33.3	S151070	BE
	32.39	272.22	47.6	S151080	BE
	32.39	380.30	66.6	S151090	BF
44.45	33.32	186.82	16.8	S151100	BE

Lo Free Length mm	L1 Working Length mm	P1 Load at L1 N	P/f Rate N/mm	Part No.	Price Group
<b>Hole Dia. min. 15.88mm</b>		<b>Rod Dia. max. 8.71mm</b>			
44.45	33.32	326.83	29.4	S151110	BE
	37.77	280.22	42.0	S151120	BF
	37.77	373.63	56.0	S151130	BF
50.80	38.10	195.71	15.4	S151140	BE
	38.10	329.15	25.9	S151150	BF
	43.18	277.56	36.4	S151160	BF
	43.18	386.98	50.8	S151170	BG
63.50	47.63	166.80	10.5	S151180	BF
	47.63	319.72	20.1	S151190	BF
	53.98	283.56	29.8	S151200	BG
	53.98	366.96	38.5	S151210	BH
76.20	57.15	186.82	9.8	S151220	BF
	57.15	333.60	17.5	S151230	BG
	64.77	288.23	25.2	S151240	BH
	64.77	360.29	31.5	S151250	BH
88.90	66.68	186.82	8.4	S151260	BG
	66.68	330.84	14.9	S151270	BH
	75.57	284.89	21.4	S151280	BH
	75.57	373.63	28.0	S151290	BH
101.60	76.20	195.71	7.7	S151300	BH
	76.20	338.05	13.3	S151310	BH
	86.38	288.23	18.9	S151320	BH
	86.38	360.29	23.6	S151330	BJ
304.80	228.60	186.82	2.5	S151340	BW
	228.60	360.29	4.7	S151350	BW
	259.08	320.26	7.0	S151360	BW
	259.08	360.29	7.9	S151370	BX
<b>Hole Dia. min. 19.05mm</b>		<b>Rod Dia. max. 9.53mm</b>			
25.40	19.05	346.94	54.6	S151380	BH
	19.05	640.51	100.9	S151390	BH
	21.59	720.58	189.1	S151400	BH
	21.59	934.09	245.1	S151410	BJ
31.75	23.80	355.84	44.8	S151420	BH
	23.80	611.60	77.0	S151430	BH
	26.97	735.88	154.0	S151440	BH
	26.97	917.40	192.6	S151450	BJ
38.10	28.58	333.60	35.0	S151460	BH
	28.58	533.76	56.0	S151470	BH
	32.39	656.52	114.9	S151480	BJ
	32.39	890.71	155.8	S151490	BJ
44.45	33.32	342.50	30.8	S151500	BH
	33.32	560.46	50.4	S151510	BJ
	37.77	700.56	105.1	S151520	BJ
	37.77	875.72	131.3	S151530	BK
50.80	38.10	320.26	25.2	S151540	BJ
	38.10	551.55	43.4	S151550	BJ
	43.18	661.86	86.8	S151560	BJ
	43.18	847.34	111.2	S151570	BK
63.50	47.63	333.60	21.0	S151580	BJ
	47.63	533.76	33.6	S151590	BJ
	53.98	627.17	65.8	S151600	BK
	53.98	834.00	87.6	S151610	BK
76.20	57.15	320.26	16.8	S151620	BJ
	57.15	480.38	25.2	S151630	BK
	64.77	624.50	54.6	S151640	BK
	64.77	810.65	70.9	S151650	BK
88.90	66.68	311.36	14.0	S151660	BK
	66.68	498.18	22.4	S151670	BK
	75.57	616.49	46.2	S151680	BL
	75.57	805.67	60.4	S151690	BM
101.60	76.20	320.26	12.6	S151700	BK
	76.20	533.76	21.0	S151710	BL
	86.36	619.16	40.6	S151720	BM
	86.36	800.64	52.5	S151730	BN
114.30	85.73	320.26	11.2	S151740	BL
	85.73	560.45	19.6	S151750	BL
	97.16	600.48	35.0	S151760	BN
	97.16	795.66	46.4	S151770	BO
127.00	95.25	311.36	9.8	S151780	BL
	95.25	578.24	18.2	S151790	BM
	107.95	587.14	30.8	S151800	BO
	107.95	783.96	41.1	S151810	BP
139.70	104.78	293.57	8.4	S151820	BM
	104.78	587.14	16.8	S151830	BN
	118.75	587.14	28.0	S151840	BP
	118.75	788.99	37.6	S151850	BR
152.40	114.30	266.88	7.0	S151860	BM
	114.30	533.76	14.0	S151870	BN
	129.54	576.46	25.2	S151880	BQ
	129.54	780.62	34.1	S151890	BS
304.80	228.60	320.26	4.2	S151900	BW
	228.60	480.38	6.3	S151910	BX
	259.08	576.46	12.6	S151920	BY
	259.08	760.61	16.6	S151930	BY
165.10	123.83	281.91	6.8	S151861	BN
190.50	142.88	275.24	5.8	S151862	BP



Lo Free Length mm	L1 Working Length mm	P1 Load at L1 N	P/f Rate N/mm	Part No.	Price Group
<b>Hole Dia. min. 25.4mm</b>		<b>Rod Dia. max. 12.7mm</b>			
25.40	19.05	596.03	93.8	S151940	BJ
	19.05	800.64	126.1	S151950	BK
	21.59	1387.78	364.2	S151960	BK
31.75	23.80	606.04	76.3	S151970	BK
	23.80	867.36	109.3	S151980	BK
	26.97	1427.81	299.8	S151990	BL
38.10	28.58	560.46	58.8	S152000	BK
	28.58	827.33	86.8	S152010	BK
	32.39	1184.95	207.3	S152020	BL
	32.39	1849.48	323.6	S152030	BN
44.45	33.32	560.45	50.4	S152040	BK
	33.32	856.24	77.0	S152050	BL
	37.77	1214.30	182.1	S152060	BL
50.80	38.10	515.97	40.6	S152070	BK
	38.10	818.43	64.4	S152080	BL
	43.18	1120.90	147.1	S152090	BM
	43.18	1547.90	203.1	S152100	BO
63.50	47.63	556.00	35.0	S152110	BL
	47.63	800.64	50.4	S152120	BL
	53.98	1134.24	119.1	S152130	BM
	53.98	1494.53	156.9	S152140	BO
76.20	57.15	507.07	26.6	S152150	BL
	57.16	773.95	40.6	S152160	BM
	64.77	1088.87	95.3	S152170	BN
	64.77	1473.18	128.9	S152180	BP
88.90	66.68	498.18	22.4	S152190	BM
	66.68	840.87	37.8	S152200	BN
	75.57	1064.85	79.8	S152210	BO
	75.57	1457.16	109.3	S152220	BO
101.60	76.20	533.76	21.0	S152230	BM
	76.20	818.43	32.2	S152240	BN
	86.36	1067.62	70.0	S152250	BO
	86.36	1473.18	96.7	S152260	BR
114.30	86.73	520.42	18.2	S152270	BM
	85.73	760.61	26.6	S152280	BO
	97.14	1056.84	61.6	S152290	BP
	97.16	1465.17	85.4	S152300	BS
127.00	95.25	533.76	16.8	S152310	BN
	95.25	800.64	25.2	S152320	BP
	107.95	1040.83	54.6	S152330	BQ
	107.95	1441.16	75.6	S152340	BT
139.70	104.78	538.21	15.4	S152350	BO
	104.78	782.85	22.4	S152360	BQ
	118.75	1056.84	50.4	S152370	BR
152.40	114.30	533.76	14.0	S152380	BP
	114.30	747.28	19.6	S152390	BR
	129.54	1024.82	44.8	S152400	BS
	129.54	1441.15	63.0	S152410	BV
177.80	133.35	560.45	12.6	S152420	BQ
	133.35	747.26	16.8	S152430	BT
	151.13	1046.17	39.2	S152440	BU
203.20	152.40	498.18	9.8	S152450	BS
	152.40	782.85	15.4	S152460	BV
	172.72	1024.82	33.6	S152470	BW
304.80	228.60	533.76	7.0	S152480	BX
	228.60	747.26	9.8	S152490	BX
	259.08	960.77	21.0	S152500	BY
	259.08	1409.13	30.8	S152510	BZ
<b>Hole Dia. min. 31.75mm</b>		<b>Rod Dia. max. 15.88mm</b>			
38.10	28.58	827.33	86.8	S152520	BM
	28.58	1908.19	200.3	S152530	BN
	32.39	2121.70	371.2	S152540	BN
44.45	33.32	825.10	74.2	S152550	BN
	33.32	1961.57	176.5	S152560	BN
	37.77	2120.36	318.0	S152570	BN
50.80	38.10	782.85	61.6	S152580	BN
	38.10	1921.54	151.3	S152590	BN
	43.18	1996.26	261.9	S152600	BO
	43.18	2562.05	336.2	S152610	BQ
63.50	47.63	800.64	50.4	S152620	BO
	47.63	1734.72	109.3	S152630	BO
	53.98	1961.57	205.9	S152640	BP
	53.98	2401.92	252.1	S152650	BS
76.20	57.15	800.64	42.0	S152660	BO
	57.15	1708.03	89.7	S152670	BP
	64.77	1905.52	166.7	S152680	BQ
88.90	64.77	2369.89	207.3	S152690	BT
	66.68	778.40	35.0	S152700	BP
	66.68	1712.48	77.0	S152710	BP
	75.57	1756.07	131.7	S152720	BR
101.60	75.57	2353.88	176.5	S152730	BV
	76.20	782.85	30.8	S152740	BQ
	76.20	1636.86	64.4	S152750	BQ
	86.36	1772.08	116.3	S152760	BS
114.30	86.36	2241.79	147.1	S152770	BW
	85.73	800.64	28.0	S152780	BR
	85.73	1601.28	56.0	S152790	BS
	97.16	1753.40	102.3	S152800	BT

Lo Free Length mm	L1 Working Length mm	P1 Load at L1 N	P/f Rate N/mm	Part No.	Price Group	
<b>Hole Dia. min. 31.75mm</b>		<b>Rod Dia. max. 15.88mm</b>				
127.00	97.16	2353.88	137.3	S152810	BW	
	95.25	756.10	23.8	S152820	BS	
	95.25	1512.32	47.6	S152830	BT	
	107.95	1654.66	86.8	S152840	BV	
	107.95	2268.48	119.1	S152850	BX	
139.70	104.78	782.85	22.4	S152860	BT	
	104.78	1614.62	46.2	S152870	BV	
	118.75	1732.05	82.6	S152880	BW	
152.40	114.30	800.64	21.0	S152890	BV	
	114.30	1547.90	40.6	S152900	BW	
	129.54	1697.36	74.2	S152910	BW	
	129.54	2241.79	98.1	S152920	BY	
177.80	133.35	809.54	18.2	S152930	BW	
	133.35	1556.80	35.0	S152940	BW	
	151.13	1718.71	64.4	S152950	BX	
	152.40	782.85	15.4	S152960	BW	
203.20	152.40	1636.86	32.2	S152970	BX	
	172.72	1750.73	57.4	S152980	BY	
	172.72	2220.44	72.8	S152990	CA	
	190.50	800.64	12.6	S153000	BX	
254.00	190.50	1423.36	22.4	S153010	BY	
	215.90	1708.08	44.8	S153020	BZ	
	215.90	2241.79	58.8	S153030	CC	
	228.60	747.26	9.8	S153040	BZ	
304.80	228.60	1494.53	19.6	S153050	CA	
	259.08	1665.33	36.4	S153060	CB	
	259.08	2113.69	46.2	S153070	CE	
<b>Hole Dia. min. 38.1mm</b>		<b>Rod Dia. max. 19.05mm</b>				
50.80	38.10	996.35	78.4	S153080	BO	
	38.10	2401.92	189.1	S153090	BR	
	43.18	2540.70	333.4	S153100	BS	
	43.18	5017.34	658.4	S153110	BW	
63.50	47.63	1023.04	64.4	S153120	BP	
	47.63	2379.68	149.9	S153130	BS	
	53.98	2481.98	260.5	S153140	BU	
	53.98	4910.59	515.5	S153150	BW	
76.20	57.15	1120.90	58.8	S153160	BQ	
	57.15	2081.66	109.3	S153170	BU	
	64.77	2449.96	214.3	S153180	BW	
	64.77	4627.70	404.8	S153190	BX	
88.90	66.68	1027.49	46.2	S153200	BR	
	66.68	2054.98	92.5	S153210	BW	
	75.57	2484.65	186.3	S153220	BW	
	75.57	4576.99	343.2	S153230	BX	
101.60	76.20	960.77	37.8	S153240	BT	
	76.20	2135.04	84.0	S153250	BW	
	86.36	2433.95	159.7	S153260	BW	
	86.36	4568.99	299.8	S153270	BY	
114.30	85.73	1040.83	36.4	S153280	BU	
	85.73	2161.73	75.6	S153290	BW	
	97.16	2353.88	137.3	S153300	BX	
	97.16	4443.55	259.1	S153310	BY	
127.00	95.25	1112.00	35.0	S153320	BW	
	95.25	2046.08	64.4	S153330	BX	
	107.95	2375.23	124.7	S153340	BX	
	107.95	4536.96	238.1	S153350	BZ	
139.70	104.78	1027.49	29.4	S153360	BW	
	104.78	2103.90	60.2	S153370	BX	
	118.75	2348.54	112.1	S153380	BY	
	114.30	960.77	25.2	S153390	BW	
152.40	114.30	2028.29	53.2	S153400	BX	
	129.54	2337.87	102.3	S153410	BY	
	129.54	4419.53	193.3	S153420	CA	
	133.35	1058.62	23.8	S153430	BX	
177.80	133.35	2054.98	46.2	S153440	BY	
	151.13	2316.62	86.8	S153450	BZ	
	152.40	1138.69	22.4	S153460	BY	
	152.40	1850.37	36.4	S153470	BZ	
203.20	172.72	2305.84	75.6	S153480	CA	
	172.72	4312.78	141.5	S153490	CD	
	190.50	978.56	15.4	S153500	BZ	
	190.50	1957.12	30.8	S153510	CB	
254.00	215.90	2295.17	60.2	S153520	CC	
	215.90	4483.58	117.7	S153530	CG	
	228.60	1067.52	14.0	S153540	CB	
	228.60	1921.54	25.2	S153550	CD	
304.80	259.08	2305.84	50.4	S153560	CE	
	259.08	4355.48	95.3	S153570	CJ	
	<b>Hole Dia. min. 50.8mm</b>		<b>Rod Dia. max. 25.4mm</b>			
	63.50	47.63	2490.88	156.9	S153580	BW
47.63		3291.52	207.3	S153590	BX	
53.98		3669.60	385.2	S153600	BX	
53.98		6365.09	668.2	S153610	BZ	
76.20	57.15	2562.05	134.5	S153620	BX	
	57.15	3202.56	168.1	S153630	BX	
	64.77	3714.97	325.0	S153640	BY	
	64.77	6244.99	546.3	S153650	BZ	



Lo Free Length mm	L1 Working Length mm	P1 Load at L1 N	P/f Rate N/mm	Part No.	Price Group
<b>Hole Dia. min. 50.8mm</b>		<b>Rod Dia. max. 25.4mm</b>			
88.90	66.68	2522.02	113.5	<b>S153660</b>	<b>BX</b>
	66.68	3113.60	140.1	<b>S153670</b>	<b>BX</b>
	75.57	3736.32	280.2	<b>S153680</b>	<b>BY</b>
	75.57	5940.75	445.5	<b>S153690</b>	<b>CA</b>
101.60	76.20	2455.30	96.7	<b>S153700</b>	<b>BX</b>
	76.20	2953.47	116.3	<b>S153710</b>	<b>BY</b>
	86.36	3565.52	233.9	<b>S153720</b>	<b>BY</b>
	86.36	5871.36	385.2	<b>S153730</b>	<b>CB</b>
114.30	85.73	2361.89	82.6	<b>S153740</b>	<b>BY</b>
	85.73	3002.40	105.1	<b>S153750</b>	<b>BY</b>
	97.16	3530.82	205.9	<b>S153760</b>	<b>BZ</b>
	97.16	5668.53	330.6	<b>S153770</b>	<b>CB</b>
127.00	95.25	2312.96	72.8	<b>S153780</b>	<b>BY</b>
	95.25	3113.60	98.1	<b>S153790</b>	<b>BZ</b>
	107.95	3469.44	182.1	<b>S153800</b>	<b>BZ</b>
	107.95	5764.61	302.6	<b>S153810</b>	<b>CC</b>
139.70	104.78	2397.47	68.6	<b>S153820</b>	<b>BZ</b>
	104.78	3082.47	88.3	<b>S153830</b>	<b>CA</b>
	118.75	3405.39	162.5	<b>S153840</b>	<b>CA</b>

Lo Free Length mm	L1 Working Length mm	P1 Load at L1 N	P/f Rate N/mm	Part No.	Price Group
<b>Hole Dia. min. 50.8mm</b>		<b>Rod Dia. max. 25.4mm</b>			
152.40	114.30	2348.54	61.6	<b>S153850</b>	<b>BZ</b>
	114.30	3149.18	82.6	<b>S153860</b>	<b>CA</b>
	129.54	3330.66	145.7	<b>S153870</b>	<b>CB</b>
	129.54	5668.53	247.9	<b>S153880</b>	<b>CE</b>
177.80	133.35	2428.61	54.6	<b>S153890</b>	<b>CB</b>
	133.35	3113.60	70.0	<b>S153900</b>	<b>CB</b>
	151.13	3437.41	128.9	<b>S153910</b>	<b>CC</b>
203.20	152.40	2277.38	44.8	<b>S153920</b>	<b>CB</b>
	152.40	3131.39	61.6	<b>S153930</b>	<b>CC</b>
	172.72	3416.06	112.1	<b>S153940</b>	<b>CD</b>
	172.72	5337.60	175.1	<b>S153950</b>	<b>CH</b>
254.00	190.50	2312.96	36.4	<b>S153960</b>	<b>CE</b>
	190.50	2668.80	42.0	<b>S153970</b>	<b>CF</b>
	215.90	3255.94	85.5	<b>S153980</b>	<b>CG</b>
	215.90	5604.48	147.1	<b>S153990</b>	<b>CK</b>
304.80	228.60	2241.79	29.4	<b>S154000</b>	<b>CG</b>
	228.60	2989.06	39.2	<b>S154010</b>	<b>CH</b>
	259.08	3202.56	70.0	<b>S154020</b>	<b>CJ</b>
	259.08	5700.56	124.7	<b>S154030</b>	<b>CM</b>

