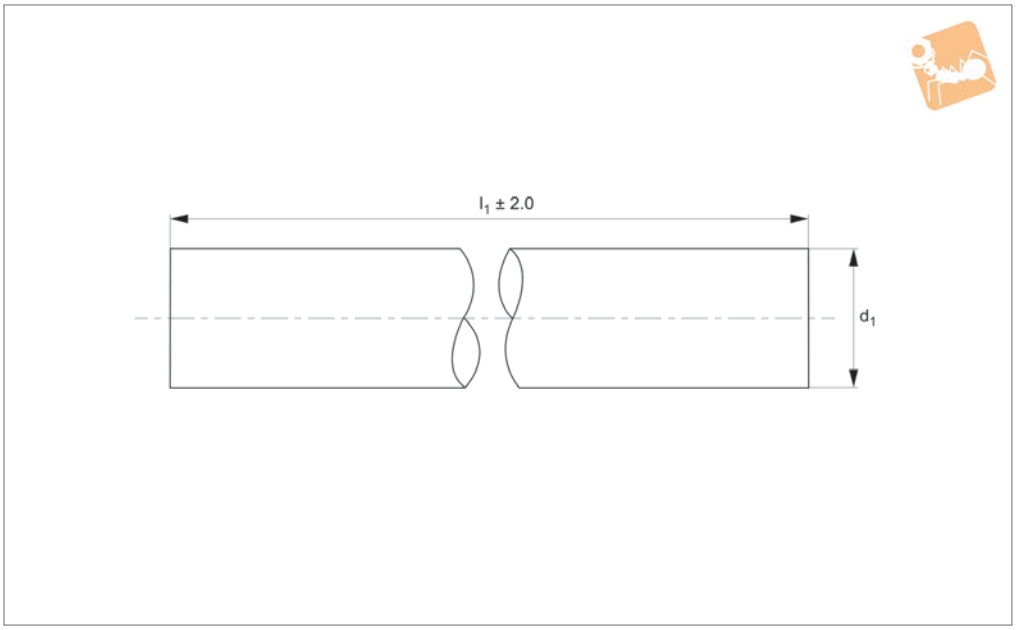

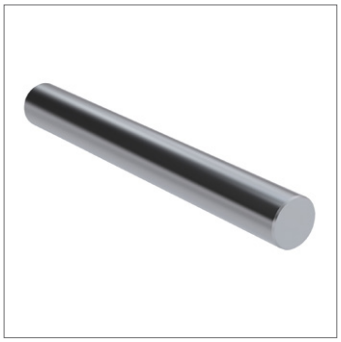

L1770.25

Material
Carbon steel (070M55,Cf53 - DIN 1.1213), Surface hardness 60-66 HRC. Surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.
Yield stress: >325 N/mm^2, tensile strength: >630 N/mm^2.

Technical Notes
Tolerance, h6 standard, special tolerances upon request.
Suitable for use with linear bearings.
Straightness 0,1mm/m.

Tips
Modifications, drilled and tapped holes, retainer grooves, special coatings etc. are available.
Shaft lengths are cut to typically ± 2mm, ends are not hardened.

Order No.	d_1	l_1	Depth of hardness min.	Weight kg
L1770.25-0100	25	100	0.9	0.385
L1770.25-0150	25	150	0.9	0.578
L1770.25-0200	25	200	0.9	0.770
L1770.25-0250	25	250	0.9	0.963
L1770.25-0300	25	300	0.9	1.155
L1770.25-0350	25	350	0.9	1.348
L1770.25-0400	25	400	0.9	1.540
L1770.25-0450	25	450	0.9	1.733
L1770.25-0500	25	500	0.9	1.925
L1770.25-0550	25	550	0.9	2.118
L1770.25-0600	25	600	0.9	2.310
L1770.25-0650	25	650	0.9	2.503
L1770.25-0700	25	700	0.9	2.695
L1770.25-0750	25	750	0.9	2.888
L1770.25-0800	25	800	0.9	3.080
L1770.25-0850	25	850	0.9	3.273
L1770.25-0900	25	900	0.9	3.465
L1770.25-0950	25	950	0.9	3.658
L1770.25-1000	25	1000	0.9	3.850
L1770.25-1050	25	1050	0.9	4.043
L1770.25-1100	25	1100	0.9	4.235
L1770.25-1150	25	1150	0.9	4.428
L1770.25-1200	25	1200	0.9	4.620
L1770.25-1250	25	1250	0.9	4.813
L1770.25-1300	25	1300	0.9	5.005
L1770.25-1350	25	1350	0.9	5.198
L1770.25-1400	25	1400	0.9	5.390
L1770.25-1450	25	1450	0.9	5.583
L1770.25-1500	25	1500	0.9	5.775
L1770.25-1550	25	1550	0.9	5.968
L1770.25-1600	25	1600	0.9	6.160

25Ø Hardened Steel Shafts

Order No.	d_1	l_1	Depth of hardness min.	Weight kg
L1770.25-1650	25	1650	0.9	6.353
L1770.25-1700	25	1700	0.9	6.545
L1770.25-1750	25	1750	0.9	6.738
L1770.25-1800	25	1800	0.9	6.930
L1770.25-1850	25	1850	0.9	7.123
L1770.25-1900	25	1900	0.9	7.315
L1770.25-1950	25	1950	0.9	7.508
L1770.25-2000	25	2000	0.9	7.700
L1770.25-2050	25	2050	0.9	7.893
L1770.25-2100	25	2100	0.9	8.085
L1770.25-2150	25	2150	0.9	8.278
L1770.25-2200	25	2200	0.9	8.470
L1770.25-2250	25	2250	0.9	8.663
L1770.25-2300	25	2300	0.9	8.855
L1770.25-2350	25	2350	0.9	9.048
L1770.25-2400	25	2400	0.9	9.240
L1770.25-2450	25	2450	0.9	9.433
L1770.25-2500	25	2500	0.9	9.625
L1770.25-2550	25	2550	0.9	9.818
L1770.25-2600	25	2600	0.9	10.010
L1770.25-2650	25	2650	0.9	10.203
L1770.25-2700	25	2700	0.9	10.395
L1770.25-2750	25	2750	0.9	10.588
L1770.25-2800	25	2800	0.9	10.780
L1770.25-2850	25	2850	0.9	10.973
L1770.25-2900	25	2900	0.9	11.165
L1770.25-2950	25	2950	0.9	11.358
L1770.25-3000	25	3000	0.9	11.550
L1770.25-3050	25	3050	0.9	11.743
L1770.25-3100	25	3100	0.9	11.935
L1770.25-3150	25	3150	0.9	12.128
L1770.25-3200	25	3200	0.9	12.320
L1770.25-3250	25	3250	0.9	12.513
L1770.25-3300	25	3300	0.9	12.705
L1770.25-3350	25	3350	0.9	12.898
L1770.25-3400	25	3400	0.9	13.090
L1770.25-3450	25	3450	0.9	13.283
L1770.25-3500	25	3500	0.9	13.475
L1770.25-3550	25	3550	0.9	13.668
L1770.25-3600	25	3600	0.9	13.860
L1770.25-3650	25	3650	0.9	14.053
L1770.25-3700	25	3700	0.9	14.245
L1770.25-3750	25	3750	0.9	14.438
L1770.25-3800	25	3800	0.9	14.630
L1770.25-3850	25	3850	0.9	14.823
L1770.25-3900	25	3900	0.9	15.015
L1770.25-3950	25	3950	0.9	15.208
L1770.25-4000	25	4000	0.9	15.400
L1770.25-4050	25	4050	0.9	15.593
L1770.25-4100	25	4100	0.9	15.785
L1770.25-4150	25	4150	0.9	15.978
L1770.25-4200	25	4200	0.9	16.170
L1770.25-4250	25	4250	0.9	16.363
L1770.25-4300	25	4300	0.9	16.555
L1770.25-4350	25	4350	0.9	16.748
L1770.25-4400	25	4400	0.9	16.940
L1770.25-4450	25	4450	0.9	17.133
L1770.25-4500	25	4500	0.9	17.325
L1770.25-4550	25	4550	0.9	17.518
L1770.25-4600	25	4600	0.9	17.710
L1770.25-4650	25	4650	0.9	17.903
L1770.25-4700	25	4700	0.9	18.095
L1770.25-4750	25	4750	0.9	18.288
L1770.25-4800	25	4800	0.9	18.480
L1770.25-4850	25	4850	0.9	18.673
L1770.25-4900	25	4900	0.9	18.865
L1770.25-4950	25	4950	0.9	19.058
L1770.25-5000	25	5000	0.9	19.250

Order No.	d_1	l_1	Depth of hardness min.	Weight kg
L1770.25-5050	25	5050	0.9	19.443
L1770.25-5100	25	5100	0.9	19.635
L1770.25-5150	25	5150	0.9	19.828
L1770.25-5200	25	5200	0.9	20.020
L1770.25-5250	25	5250	0.9	20.213
L1770.25-5300	25	5300	0.9	20.405
L1770.25-5350	25	5350	0.9	20.598
L1770.25-5400	25	5400	0.9	20.790
L1770.25-5450	25	5450	0.9	20.983
L1770.25-5500	25	5500	0.9	21.175
L1770.25-5550	25	5550	0.9	21.368
L1770.25-5600	25	5600	0.9	21.560
L1770.25-5650	25	5650	0.9	21.753
L1770.25-5700	25	5700	0.9	21.945
L1770.25-5750	25	5750	0.9	22.138
L1770.25-5800	25	5800	0.9	22.330
L1770.25-5850	25	5850	0.9	22.523
L1770.25-5900	25	5900	0.9	22.715
L1770.25-5950	25	5950	0.9	22.908
L1770.25-6000	25	6000	0.9	23.100

Linear Shafts from Automotion Components

Hardened steel linear shafting (L1770 – L1771)

Carbon steel to BS 070M55 hardened to 60-65 HRC. Carbon Steel B.S. 070M55 is a medium carbon steel which is used when greater strength and hardness is desired than in it's as rolled condition. Extreme size accuracy, straightness and concentricity are combined to minimise wear in high speed applications. Suitable for use with all types of linear bushings.

Corrosion resistant steel (L1772)

440C is a high carbon chromium martensitic stainless steel, generally supplied in the annealed condition with a maximum hardness of 50-55 HR_C. Characterised by good corrosion resistance in mild domestic and industrial environments, including fresh water, organic materials, mild acids, various petroleum products, coupled with extreme high strength, hardness and wear resistance when in the hardened and tempered condition. Used for parts requiring a combination of excellent wear resistance, plus reasonable corrosion resistance. Typical applications are: ball bearings and races, bushings, cutlery, chisels, knife blades, pump parts, surgical instruments, valve seats etc. Material magnetic in all conditions. Suitable for use with all types of linear bushings.

Stainless steel AISI 303 (L1773)

303 is a free machining chromium-nickel austenitic stainless steel with good strength and good corrosion resistance, as supplied in the annealed condition. Characterised by excellent machinability and non galling properties due to its higher sulphur content, which has the effect of slightly lowering its corrosion resistance. It is however, fairly resistant to general atmospheric corrosion, general foodstuffs, sterilizing solutions, dyestuffs, most organic chemicals, plus some inorganic chemicals. But has very limited resistance to acids. 303 cannot be hardened by thermal treatment, but strength and hardness can be increased substantially by cold working, with subsequent reduction in ductility. It is used primarily for production runs involving extensive machining, or complex parts requiring excellent machinability. Typical uses are: architectural components, food processing equipment, dairy equipment, dying industry, hardware and kitchenware manufacturing and allied industries. Commonly used to manufacture bolts and nuts, bushes, gears, shafts, valve bodies and fittings etc. Material is non magnetic in the annealed condition, but can become mildly magnetic following heavy cold working. Annealing is required to rectify if necessary.

Not suitable for use with linear ball bushings, please use ceramic bearings.

Stainless steel AISI 303 (L1774)

316 is a chromium-nickel-molybdenum austenitic stainless steel with good strength and excellent corrosion resistance, as supplied in the annealed condition. Characterised by high corrosion resistance in marine and industrial atmospheres, it exhibits excellent resistance to chloride attack and against complex sulphur compounds employed in the pulp and paper processing industries. The addition of 2% to 3% of molybdenum increases its resistance to pitting corrosion and improves its creep resistance at elevated temperatures. Also it displays good oxidation resistance at elevated temperatures and has excellent weldability. AISI 316 cannot be hardened by thermal treatment, but strength and hardness can be increased substantially by cold working, with subsequent reduction in ductility. It is used extensively by the marine, chemical, petrochemical, pulp and paper, textile, transport, manufacturing and allied industries. Typical uses are: architectural components, textile equipment, pulp and paper processing equipment, marine equipment and fittings, photographic equipment and x-ray equipment etc. Material non magnetic in the annealed condition, but can become mildly magnetic following heavy cold working. Annealing is required to rectify if necessary.

Note: Optimum corrosion resistance is achieved in the annealed condition. Not suitable for use with linear ball bushings; please use ceramic bearings.

Linear Shafts from Automotion Components

L1770 - Hardened steel shafts

For use with linear bearings.

Ø6 to Ø60

L1771 - Hardened hollow shafts

For use with linear bearings. Hollowed for lighter weight.

Ø12 to Ø50

L1772 - Hardened Stainless shafts

For use with linear bearings

Anti-corrosion.

Ø6 to Ø60

L1773 - Stainless 303 shafts

Soft stainless, high anti-corrosion.

Not for use with ball bush linear bearings.

Ø6 to Ø60

L1774 - Stainless 316 shafts

Soft stainless, very high anti-corrosion.

Not for use with ball bushing linear bearings.

Ø6 to Ø60

L1778 - Aluminium shafts

Light weight, non-magnetic.

Ø10 to Ø50