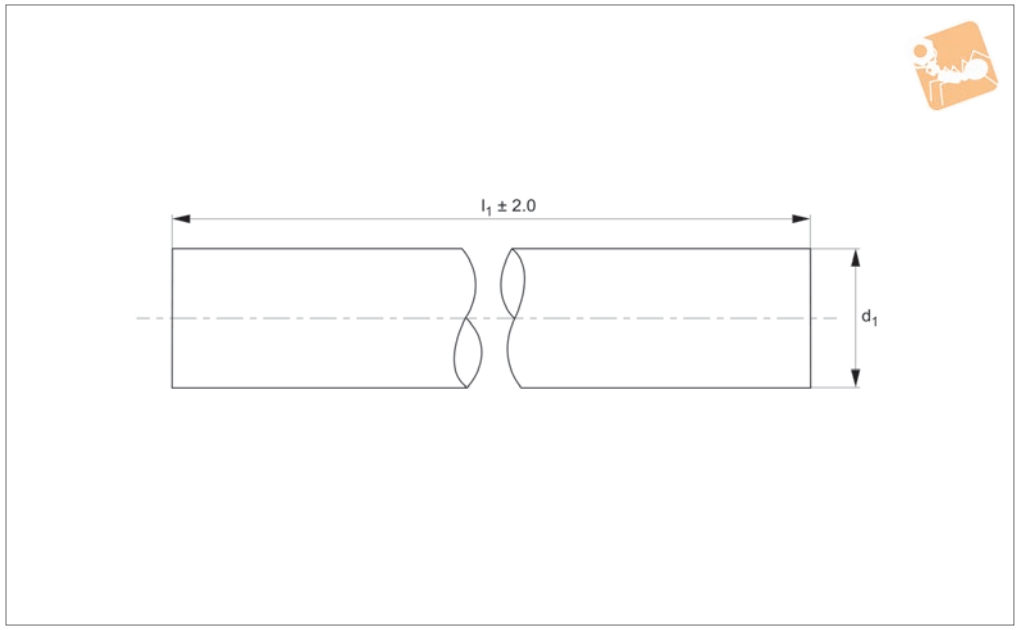

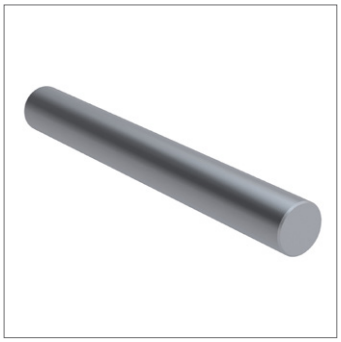

L1772.50

Material
Corrosion resistant stainless steel (440C, DIN 1.4112, X90 CrMo18) hardened.
Surface hardness 53-56 HRC, Rht 450Hv2.
Surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.
Yield stress: >420 N/mm^2.
Tensile strength: >785 N/mm^2.

Technical Notes
Suitable for use with linear bearings.
Tolerance, h6 standard, special tolerances on request.
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 tol. h6	l_1	Depth of hardness min.	Weight kg
L1772.50-0100	50	100	1.5	1.540
L1772.50-0150	50	150	1.5	2.310
L1772.50-0200	50	200	1.5	3.080
L1772.50-0250	50	250	1.5	3.850
L1772.50-0300	50	300	1.5	4.620
L1772.50-0350	50	350	1.5	5.390
L1772.50-0400	50	400	1.5	6.160
L1772.50-0450	50	450	1.5	6.930
L1772.50-0500	50	500	1.5	7.700
L1772.50-0550	50	550	1.5	8.470
L1772.50-0600	50	600	1.5	9.240
L1772.50-0650	50	650	1.5	10.010
L1772.50-0700	50	700	1.5	10.780
L1772.50-0750	50	750	1.5	11.550
L1772.50-0800	50	800	1.5	12.320
L1772.50-0850	50	850	1.5	13.090
L1772.50-0900	50	900	1.5	13.860
L1772.50-1000	50	1000	1.5	15.400
L1772.50-1050	50	1050	1.5	16.170
L1772.50-1100	50	1100	1.5	16.940
L1772.50-1150	50	1150	1.5	17.710
L1772.50-1200	50	1200	1.5	18.480
L1772.50-1250	50	1250	1.5	19.250
L1772.50-1300	50	1300	1.5	20.020
L1772.50-1350	50	1350	1.5	20.790
L1772.50-1400	50	1400	1.5	21.560
L1772.50-1450	50	1450	1.5	22.330
L1772.50-1500	50	1500	1.5	23.100
L1772.50-1550	50	1550	1.5	23.870
L1772.50-1600	50	1600	1.5	24.640
L1772.50-1650	50	1650	1.5	25.410

Ø50 Hardened Stainless Shafts
for linear bearings

Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1772.50-1700	50	1700	1.5	26.180
L1772.50-1750	50	1750	1.5	26.950
L1772.50-1800	50	1800	1.5	27.720
L1772.50-1850	50	1850	1.5	28.490
L1772.50-1900	50	1900	1.5	29.260
L1772.50-1950	50	1950	1.5	30.030
L1772.50-2000	50	2000	1.5	30.800
L1772.50-2050	50	2050	1.5	31.570
L1772.50-2100	50	2100	1.5	32.340
L1772.50-2150	50	2150	1.5	33.110
L1772.50-2200	50	2200	1.5	33.880
L1772.50-2250	50	2250	1.5	34.650
L1772.50-2300	50	2300	1.5	35.420
L1772.50-2350	50	2350	1.5	36.190
L1772.50-2400	50	2400	1.5	36.960
L1772.50-2450	50	2450	1.5	37.730
L1772.50-2500	50	2500	1.5	38.500
L1772.50-2550	50	2550	1.5	39.270
L1772.50-2600	50	2600	1.5	40.040
L1772.50-2650	50	2650	1.5	40.810
L1772.50-2700	50	2700	1.5	41.580
L1772.50-2750	50	2750	1.5	42.350
L1772.50-2800	50	2800	1.5	43.120
L1772.50-2850	50	2850	1.5	43.890
L1772.50-2900	50	2900	1.5	44.660
L1772.50-2950	50	2950	1.5	45.430
L1772.50-3000	50	3000	1.5	46.200
L1772.50-3050	50	3050	1.5	46.970
L1772.50-3100	50	3100	1.5	47.740
L1772.50-3150	50	3150	1.5	48.510
L1772.50-3200	50	3200	1.5	49.280
L1772.50-3250	50	3250	1.5	50.050
L1772.50-3300	50	3300	1.5	50.820
L1772.50-3350	50	3350	1.5	51.590
L1772.50-3400	50	3400	1.5	52.360
L1772.50-3450	50	3450	1.5	53.130
L1772.50-3500	50	3500	1.5	53.900
L1772.50-3550	50	3550	1.5	54.670
L1772.50-3600	50	3600	1.5	55.440
L1772.50-3650	50	3650	1.5	56.210
L1772.50-3700	50	3700	1.5	56.980
L1772.50-3750	50	3750	1.5	57.750
L1772.50-3800	50	3800	1.5	58.520
L1772.50-3850	50	3850	1.5	59.290
L1772.50-3900	50	3900	1.5	60.060
L1772.50-3950	50	3950	1.5	60.830
L1772.50-4000	50	4000	1.5	61.600
L1772.50-4050	50	4050	1.5	62.370
L1772.50-4100	50	4100	1.5	63.140
L1772.50-4150	50	4150	1.5	63.910
L1772.50-4200	50	4200	1.5	64.680
L1772.50-4250	50	4250	1.5	65.450
L1772.50-4300	50	4300	1.5	66.220
L1772.50-4350	50	4350	1.5	66.990
L1772.50-4400	50	4400	1.5	67.760
L1772.50-4450	50	4450	1.5	68.530
L1772.50-4500	50	4500	1.5	69.300
L1772.50-4550	50	4550	1.5	70.070
L1772.50-4600	50	4600	1.5	70.840
L1772.50-4650	50	4650	1.5	71.610
L1772.50-4700	50	4700	1.5	72.380
L1772.50-4750	50	4750	1.5	73.150
L1772.50-4800	50	4800	1.5	73.920
L1772.50-4850	50	4850	1.5	74.690
L1772.50-4900	50	4900	1.5	75.460
L1772.50-4950	50	4950	1.5	76.230
L1772.50-5000	50	5000	1.5	77.000
L1772.50-5050	50	5050	1.5	77.770

Order No.	d_1 tol. h6	l_1	Depth of hardness min.	Weight kg
L1772.50-5100	50	5100	1.5	78.540
L1772.50-5150	50	5150	1.5	79.310
L1772.50-5200	50	5200	1.5	80.080
L1772.50-5250	50	5250	1.5	80.850
L1772.50-5300	50	5300	1.5	81.620
L1772.50-5350	50	5350	1.5	82.390
L1772.50-5400	50	5400	1.5	83.160
L1772.50-5450	50	5450	1.5	83.930
L1772.50-5500	50	5500	1.5	84.700
L1772.50-5550	50	5550	1.5	85.470
L1772.50-5600	50	5600	1.5	86.240
L1772.50-5650	50	5650	1.5	87.010
L1772.50-5700	50	5700	1.5	87.780
L1772.50-5750	50	5750	1.5	88.550
L1772.50-5800	50	5800	1.5	89.320
L1772.50-5850	50	5850	1.5	90.090
L1772.50-5900	50	5900	1.5	90.860
L1772.50-5950	50	5950	1.5	91.630
L1772.50-6000	50	6000	1.5	92.400

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