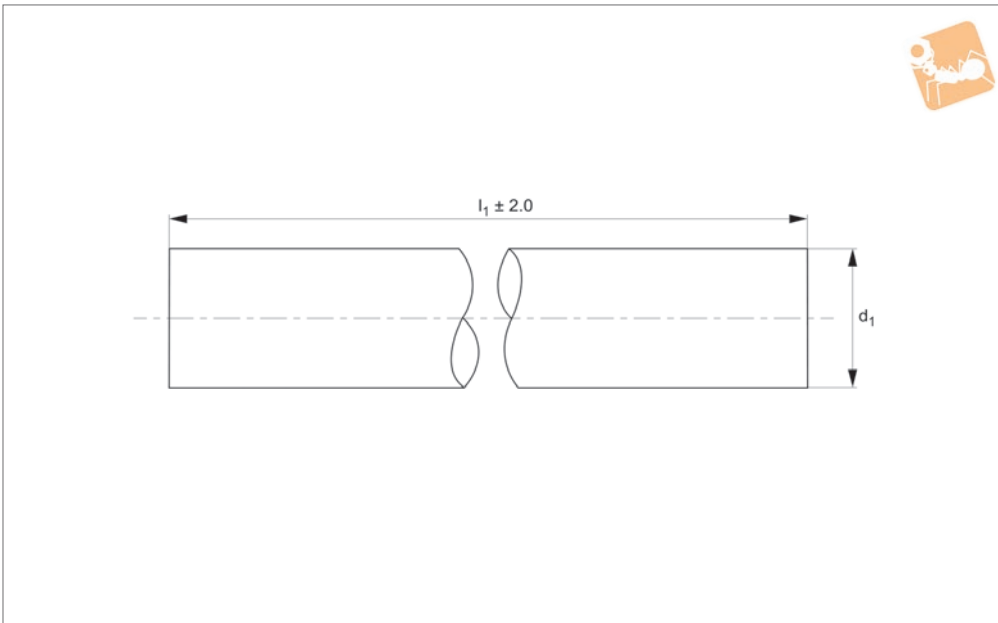




# 50Ø Stainless AISI 316 Shafts

soft

## Linear Shaft Bars



**L1774.50**

LINEAR SHAFT BARS

### Material

Stainless steel (AISI 316, A4). Surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.

Yield stress: >205 N/mm<sup>2</sup>, tensile strength: >515 N/mm<sup>2</sup>.

### Technical Notes

Tolerance, h6 standard, other tolerances

on request.

Straightness 0,1mm/m.

### Tips

Modifications, drilled and tapped holes, circlip grooves, special coatings etc. available.

Shafts lengths are cut to typically  $\pm 2$ mm. To be used with ceramic or other bearings

not containing hardened ball bearings.

Order No.	$d_1$ tol. h6	$l_1$	Tolerance µ tol. h6	Depth of hardness
L1774.50-0100	50	100	+0,-16	3.5
L1774.50-0150	50	150	+0,-16	3.5
L1774.50-0200	50	200	+0,-16	3.5
L1774.50-0250	50	250	+0,-16	3.5
L1774.50-0300	50	300	+0,-16	3.5
L1774.50-0350	50	350	+0,-16	3.5
L1774.50-0400	50	400	+0,-16	3.5
L1774.50-0450	50	450	+0,-16	3.5
L1774.50-0500	50	500	+0,-16	3.5
L1774.50-0550	50	550	+0,-16	3.5
L1774.50-0600	50	600	+0,-16	3.5
L1774.50-0650	50	650	+0,-16	3.5
L1774.50-0700	50	700	+0,-16	3.5
L1774.50-0750	50	750	+0,-16	3.5
L1774.50-0800	50	800	+0,-16	3.5
L1774.50-0850	50	850	+0,-16	3.5
L1774.50-0900	50	900	+0,-16	3.5
L1774.50-1000	50	1000	+0,-16	3.5
L1774.50-1050	50	1050	+0,-16	3.5
L1774.50-1100	50	1100	+0,-16	3.5
L1774.50-1150	50	1150	+0,-16	3.5
L1774.50-1200	50	1200	+0,-16	3.5
L1774.50-1250	50	1250	+0,-16	3.5
L1774.50-1300	50	1300	+0,-16	3.5
L1774.50-1350	50	1350	+0,-16	3.5
L1774.50-1400	50	1400	+0,-16	3.5
L1774.50-1450	50	1450	+0,-16	3.5
L1774.50-1500	50	1500	+0,-16	3.5
L1774.50-1550	50	1550	+0,-16	3.5



Order No.	d <sub>1</sub> tol. h6	l <sub>1</sub>	Tolerance μ tol. h6	Depth of hardness
L1774.50-1600	50	1600	+0,-16	3.5
L1774.50-1650	50	1650	+0,-16	3.5
L1774.50-1700	50	1700	+0,-16	3.5
L1774.50-1750	50	1750	+0,-16	3.5
L1774.50-1800	50	1800	+0,-16	3.5
L1774.50-1850	50	1850	+0,-16	3.5
L1774.50-1900	50	1900	+0,-16	3.5
L1774.50-1950	50	1950	+0,-16	3.5
L1774.50-2000	50	2000	+0,-16	3.5
L1774.50-2050	50	2050	+0,-16	3.5
L1774.50-2100	50	2100	+0,-16	3.5
L1774.50-2150	50	2150	+0,-16	3.5
L1774.50-2200	50	2200	+0,-16	3.5
L1774.50-2250	50	2250	+0,-16	3.5
L1774.50-2300	50	2300	+0,-16	3.5
L1774.50-2350	50	2350	+0,-16	3.5
L1774.50-2400	50	2400	+0,-16	3.5
L1774.50-2450	50	2450	+0,-16	3.5
L1774.50-2500	50	2500	+0,-16	3.5
L1774.50-2550	50	2550	+0,-16	3.5
L1774.50-2600	50	2600	+0,-16	3.5
L1774.50-2650	50	2650	+0,-16	3.5
L1774.50-2700	50	2700	+0,-16	3.5
L1774.50-2750	50	2750	+0,-16	3.5
L1774.50-2800	50	2800	+0,-16	3.5
L1774.50-2850	50	2850	+0,-16	3.5
L1774.50-2900	50	2900	+0,-16	3.5
L1774.50-2950	50	2950	+0,-16	3.5
L1774.50-3000	50	3000	+0,-16	3.5
L1774.50-3050	50	3050	+0,-16	3.5
L1774.50-3100	50	3100	+0,-16	3.5
L1774.50-3150	50	3150	+0,-16	3.5
L1774.50-3200	50	3200	+0,-16	3.5
L1774.50-3250	50	3250	+0,-16	3.5
L1774.50-3300	50	3300	+0,-16	3.5
L1774.50-3350	50	3350	+0,-16	3.5
L1774.50-3400	50	3400	+0,-16	3.5
L1774.50-3450	50	3450	+0,-16	3.5
L1774.50-3500	50	3500	+0,-16	3.5
L1774.50-3550	50	3550	+0,-16	3.5
L1774.50-3600	50	3600	+0,-16	3.5
L1774.50-3650	50	3650	+0,-16	3.5
L1774.50-3700	50	3700	+0,-16	3.5
L1774.50-3750	50	3750	+0,-16	3.5
L1774.50-3800	50	3800	+0,-16	3.5
L1774.50-3850	50	3850	+0,-16	3.5
L1774.50-3900	50	3900	+0,-16	3.5
L1774.50-3950	50	3950	+0,-16	3.5
L1774.50-4000	50	4000	+0,-16	3.5
L1774.50-4050	50	4050	+0,-16	3.5
L1774.50-4100	50	4100	+0,-16	3.5
L1774.50-4150	50	4150	+0,-16	3.5
L1774.50-4200	50	4200	+0,-16	3.5
L1774.50-4250	50	4250	+0,-16	3.5
L1774.50-4300	50	4300	+0,-16	3.5
L1774.50-4350	50	4350	+0,-16	3.5
L1774.50-4400	50	4400	+0,-16	3.5
L1774.50-4450	50	4450	+0,-16	3.5
L1774.50-4500	50	4500	+0,-16	3.5
L1774.50-4550	50	4550	+0,-16	3.5
L1774.50-4600	50	4600	+0,-16	3.5
L1774.50-4650	50	4650	+0,-16	3.5
L1774.50-4700	50	4700	+0,-16	3.5
L1774.50-4750	50	4750	+0,-16	3.5
L1774.50-4800	50	4800	+0,-16	3.5
L1774.50-4850	50	4850	+0,-16	3.5
L1774.50-4900	50	4900	+0,-16	3.5
L1774.50-4950	50	4950	+0,-16	3.5



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## Linear Shaft Bars



Order No.	$d_1$ tol. h6	$l_1$	Tolerance $\mu$ tol. h6	Depth of hardness
L1774.50-5000	50	5000	+0,-16	3.5
L1774.50-5050	50	5050	+0,-16	3.5
L1774.50-5100	50	5100	+0,-16	3.5
L1774.50-5150	50	5150	+0,-16	3.5
L1774.50-5200	50	5200	+0,-16	3.5
L1774.50-5250	50	5250	+0,-16	3.5
L1774.50-5300	50	5300	+0,-16	3.5
L1774.50-5350	50	5350	+0,-16	3.5
L1774.50-5400	50	5400	+0,-16	3.5
L1774.50-5450	50	5450	+0,-16	3.5
L1774.50-5500	50	5500	+0,-16	3.5
L1774.50-5550	50	5550	+0,-16	3.5
L1774.50-5600	50	5600	+0,-16	3.5
L1774.50-5650	50	5650	+0,-16	3.5
L1774.50-5700	50	5700	+0,-16	3.5
L1774.50-5750	50	5750	+0,-16	3.5
L1774.50-5800	50	5800	+0,-16	3.5
L1774.50-5850	50	5850	+0,-16	3.5
L1774.50-5900	50	5900	+0,-16	3.5
L1774.50-5950	50	5950	+0,-16	3.5
L1774.50-6000	50	6000	+0,-16	3.5

LINEAR SHAFT BARS



#### 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 its 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<sub>C</sub>. 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, dyeing 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

<p><b>L1770 - Hardened steel shafts</b></p>  <p>For use with linear bearings. Ø6 to Ø60</p>	<p><b>L1771 - Hardened hollow shafts</b></p>  <p>For use with linear bearings. Hollowed for lighter weight. Ø12 to Ø50</p>
<p><b>L1772 - Hardened Stainless shafts</b></p>  <p>For use with linear bearings Anti-corrosion. Ø6 to Ø60</p>	<p><b>L1773 - Stainless 303 shafts</b></p>  <p>Soft stainless, high anti-corrosion. Not for use with ball bush linear bearings. Ø6 to Ø60</p>
<p><b>L1774 - Stainless 316 shafts</b></p>  <p>Soft stainless, very high anti-corrosion. Not for use with ball bushing linear bearings. Ø6 to Ø60</p>	<p><b>L1778 - Aluminium shafts</b></p>  <p>Light weight, non-magnetic. Ø10 to Ø50</p>