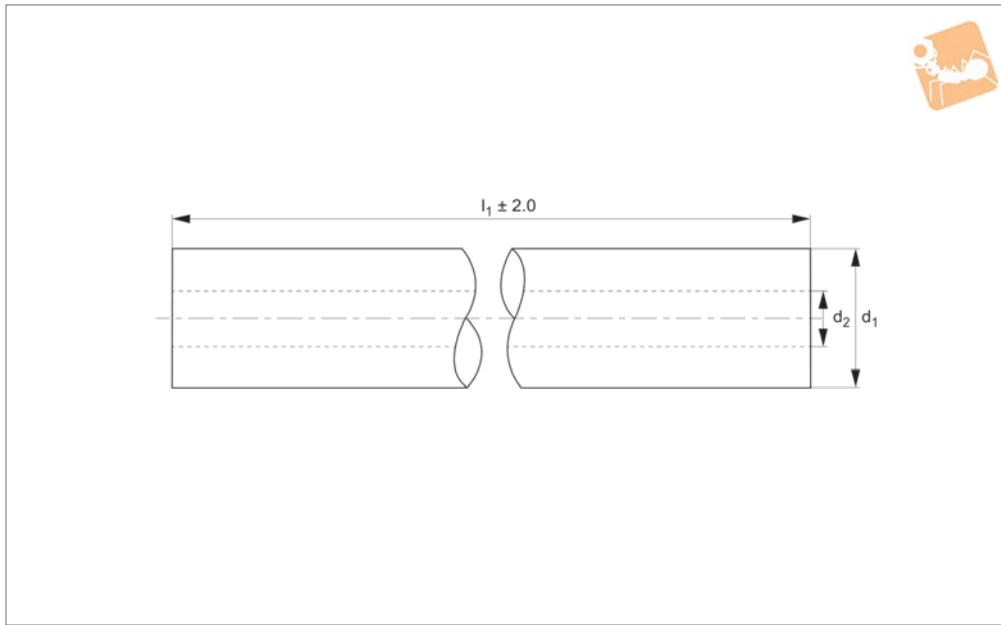




20Ø Hardened Hollow Shafts for linear bearings

Linear Shaft Bars



L1771.20

LINEAR SHAFT BARS

Material

Carbon steel (C60), surface hardness 60-65 HRC. Surface finish 0.3-0.6µ Ra, ground and polished to 8-12 cla.

Technical Notes

Used in linear bearing and guideway

systems where weight reduction is important.

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 tol. h6	l ₁	d ₂ tol. h6	Depth of hardness min.
L1771.20-0100	20	100	14	0.4
L1771.20-0150	20	150	14	0.4
L1771.20-0200	20	200	14	0.4
L1771.20-0250	20	250	14	0.4
L1771.20-0300	20	300	14	0.4
L1771.20-0350	20	350	14	0.4
L1771.20-0400	20	400	14	0.4
L1771.20-0450	20	450	14	0.4
L1771.20-0500	20	500	14	0.4
L1771.20-0550	20	550	14	0.4
L1771.20-0600	20	600	14	0.4
L1771.20-0650	20	650	14	0.4
L1771.20-0700	20	700	14	0.4
L1771.20-0750	20	750	14	0.4
L1771.20-0800	20	800	14	0.4
L1771.20-0850	20	850	14	0.4
L1771.20-0900	20	900	14	0.4
L1771.20-0950	20	950	14	0.4
L1771.20-1000	20	1000	14	0.4
L1771.20-1050	20	1050	14	0.4
L1771.20-1100	20	1100	14	0.4
L1771.20-1150	20	1150	14	0.4
L1771.20-1200	20	1200	14	0.4
L1771.20-1250	20	1250	14	0.4
L1771.20-1300	20	1300	14	0.4
L1771.20-1350	20	1350	14	0.4
L1771.20-1400	20	1400	14	0.4
L1771.20-1450	20	1450	14	0.4
L1771.20-1500	20	1500	14	0.4
L1771.20-1550	20	1550	14	0.4
L1771.20-1600	20	1600	14	0.4



Order No.	d ₁ tol. h6	l ₁	d ₂ tol. h6	Depth of hardness min.
L1771.20-1650	20	1650	14	0.4
L1771.20-1700	20	1700	14	0.4
L1771.20-1750	20	1750	14	0.4
L1771.20-1800	20	1800	14	0.4
L1771.20-1850	20	1850	14	0.4
L1771.20-1900	20	1900	14	0.4
L1771.20-1950	20	1950	14	0.4
L1771.20-2000	20	2000	14	0.4
L1771.20-2050	20	2050	14	0.4
L1771.20-2100	20	2100	14	0.4
L1771.20-2150	20	2150	14	0.4
L1771.20-2200	20	2200	14	0.4
L1771.20-2250	20	2250	14	0.4
L1771.20-2300	20	2300	14	0.4
L1771.20-2350	20	2350	14	0.4
L1771.20-2400	20	2400	14	0.4
L1771.20-2450	20	2450	14	0.4
L1771.20-2500	20	2500	14	0.4
L1771.20-2550	20	2550	14	0.4
L1771.20-2600	20	2600	14	0.4
L1771.20-2650	20	2650	14	0.4
L1771.20-2700	20	2700	14	0.4
L1771.20-2750	20	2750	14	0.4
L1771.20-2800	20	2800	14	0.4
L1771.20-2850	20	2850	14	0.4
L1771.20-2900	20	2900	14	0.4
L1771.20-2950	20	2950	14	0.4
L1771.20-3000	20	3000	14	0.4
L1771.20-3050	20	3050	14	0.4
L1771.20-3100	20	3100	14	0.4
L1771.20-3150	20	3150	14	0.4
L1771.20-3200	20	3200	14	0.4
L1771.20-3250	20	3250	14	0.4
L1771.20-3300	20	3300	14	0.4
L1771.20-3350	20	3350	14	0.4
L1771.20-3400	20	3400	14	0.4
L1771.20-3450	20	3450	14	0.4
L1771.20-3500	20	3500	14	0.4
L1771.20-3550	20	3550	14	0.4
L1771.20-3600	20	3600	14	0.4
L1771.20-3650	20	3650	14	0.4
L1771.20-3700	20	3700	14	0.4
L1771.20-3750	20	3750	14	0.4
L1771.20-3800	20	3800	14	0.4
L1771.20-3850	20	3850	14	0.4
L1771.20-3900	20	3900	14	0.4
L1771.20-3950	20	3950	14	0.4
L1771.20-4000	20	4000	14	0.4
L1771.20-4050	20	4050	14	0.4
L1771.20-4100	20	4100	14	0.4
L1771.20-4150	20	4150	14	0.4
L1771.20-4200	20	4200	14	0.4
L1771.20-4250	20	4250	14	0.4
L1771.20-4300	20	4300	14	0.4
L1771.20-4350	20	4350	14	0.4
L1771.20-4400	20	4400	14	0.4
L1771.20-4450	20	4450	14	0.4
L1771.20-4500	20	4500	14	0.4
L1771.20-4550	20	4550	14	0.4
L1771.20-4600	20	4600	14	0.4
L1771.20-4650	20	4650	14	0.4
L1771.20-4700	20	4700	14	0.4
L1771.20-4750	20	4750	14	0.4
L1771.20-4800	20	4800	14	0.4
L1771.20-4850	20	4850	14	0.4
L1771.20-4900	20	4900	14	0.4
L1771.20-4950	20	4950	14	0.4
L1771.20-5000	20	5000	14	0.4



20Ø Hardened Hollow Shafts for linear bearings

Linear Shaft
Bars

Order No.	d ₁ tol. h6	l ₁	d ₂ tol. h6	Depth of hardness min.
L1771.20-5050	20	5050	14	0.4
L1771.20-5100	20	5100	14	0.4
L1771.20-5150	20	5150	14	0.4
L1771.20-5200	20	5200	14	0.4
L1771.20-5250	20	5250	14	0.4
L1771.20-5300	20	5300	14	0.4
L1771.20-5350	20	5350	14	0.4
L1771.20-5400	20	5400	14	0.4
L1771.20-5450	20	5450	14	0.4
L1771.20-5500	20	5500	14	0.4
L1771.20-5550	20	5550	14	0.4
L1771.20-5600	20	5600	14	0.4
L1771.20-5650	20	5650	14	0.4
L1771.20-5700	20	5700	14	0.4
L1771.20-5750	20	5750	14	0.4
L1771.20-5800	20	5800	14	0.4
L1771.20-5850	20	5850	14	0.4
L1771.20-5900	20	5900	14	0.4
L1771.20-5950	20	5950	14	0.4
L1771.20-6000	20	6000	14	0.4

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_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, 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.



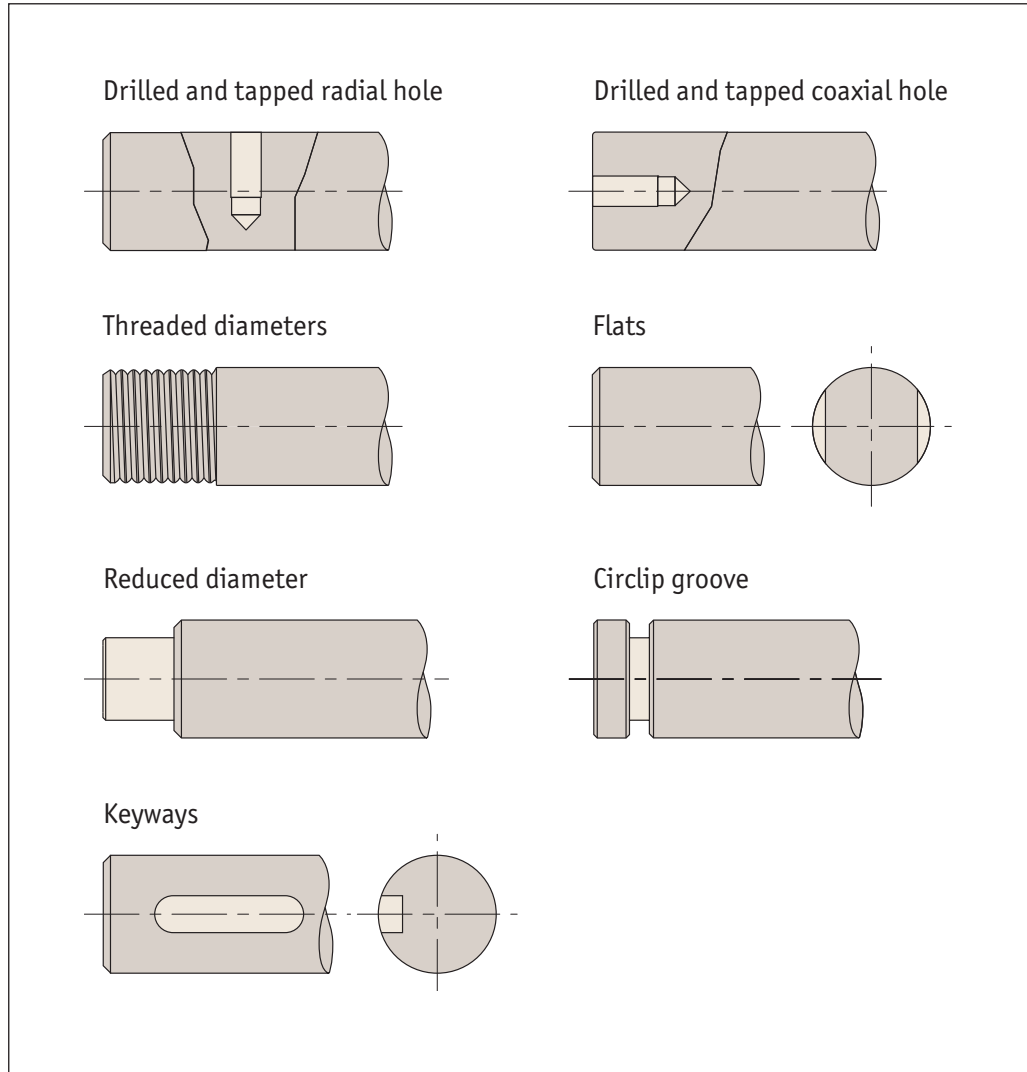
Linear Shafts from Automotion Components

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



As well as standard cut to length shafting, Automotion can offer many specials including imperial shafts, different tolerances and non-standard diameters.

We can also machine shafts to your requirements so if you have a specific requirement, please contact our Sales team. Below are examples of just some of the machining we can do to shafting on a quick turnaround.



Linear Shafts from Automotion Components

LINEAR SHAFT BARS