

### L1778.30

LINEAR SHAFT BARS

#### Material

Aluminium EN AW 6061/6060  
Surface: Hard anodized  
Hardness: 450-550 HV

#### Technical Notes

Designed to be used with self-lubricating ceramic bushings (part no.s L1764 to

L1769).

Temp. range -130°C to +200°C.  
Non-magnetic, contaminants do not stick to surface, coating is FDA compliant, light-weight.

#### Tips

Shaft ends are not coated as standard,

however coated ends are available on request.

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

Shafts lengths are cut to typically ± 2mm.

Order No.	d <sub>1</sub> tol. h6	l <sub>1</sub>	Tolerance μ tol. h6
L1778.30-0100	30	100	+0,-9
L1778.30-0150	30	150	+0,-9
L1778.30-0200	30	200	+0,-9
L1778.30-0250	30	250	+0,-9
L1778.30-0300	30	300	+0,-9
L1778.30-0350	30	350	+0,-9
L1778.30-0400	30	400	+0,-9
L1778.30-0450	30	450	+0,-9
L1778.30-0500	30	500	+0,-9
L1778.30-0550	30	550	+0,-9
L1778.30-0600	30	600	+0,-9
L1778.30-0650	30	650	+0,-9
L1778.30-0700	30	700	+0,-9
L1778.30-0750	30	750	+0,-9
L1778.30-0800	30	800	+0,-9
L1778.30-0850	30	850	+0,-9
L1778.30-0900	30	900	+0,-9
L1778.30-1000	30	1000	+0,-9
L1778.30-1050	30	1050	+0,-9
L1778.30-1100	30	1100	+0,-9
L1778.30-1150	30	1150	+0,-9
L1778.30-1200	30	1200	+0,-9
L1778.30-1250	30	1250	+0,-9
L1778.30-1300	30	1300	+0,-9
L1778.30-1350	30	1350	+0,-9
L1778.30-1400	30	1400	+0,-9
L1778.30-1450	30	1450	+0,-9
L1778.30-1500	30	1500	+0,-9
L1778.30-1550	30	1550	+0,-9
L1778.30-1600	30	1600	+0,-9



Order No.	d <sub>1</sub> tol. h6	l <sub>1</sub>	Tolerance μ tol. h6
L1778.30-1650	30	1650	+0,-9
L1778.30-1700	30	1700	+0,-9
L1778.30-1750	30	1750	+0,-9
L1778.30-1800	30	1800	+0,-9
L1778.30-1850	30	1850	+0,-9
L1778.30-1900	30	1900	+0,-9
L1778.30-1950	30	1950	+0,-9
L1778.30-2000	30	2000	+0,-9



### 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 Automation 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>