



## Hydromet Marine Shafting

### Overview

Hydromet 680 is a superior quality Duplex Stainless Steel specifically selected for high performance shafting applications. Manufactured from billet to DIN 1.4462/UNS31803 specification, Hydromet 680 is an ideal choice for fast naval patrol vessels and luxury yacht applications.

The high strength and corrosion resistance characteristics of Hydromet 680 provide long term reliability, even in the harshest of environments.

Hydromet 680 is available in metric or imperial dimensions in lengths up to 9 metres. Machined to suit keyed or hydraulically fitted couplings and propellers. Each individual shaft is precision ground and straightened to ensure smooth, vibration-free operation.

### Mechanical Properties

UTS	680 N/mm <sup>2</sup> to 880 N/mm <sup>2</sup>
0.2% YS	450 N/mm <sup>2</sup>
Shear Strength	430 N/mm <sup>2</sup> (63,000 psi)
0.2% Proof Stress	Tensile - 450 N/mm <sup>2</sup>
0.2% Proof Stress	Torsion - 350 N/mm <sup>2</sup>
Elongation	25% over 2" G.L.
Hardness	(H.B.) 200 - 277
Impact	Charpy V. Notch 140 (j) (R.T.) 200 A.V.
Endurance limit	10 Degrees Cycles 325 (R.T.)
Critical pitting temperature in sea water 60°	(316 - 20°)
Corrosion fatigue in Sea Water (stress to bring about rupture after 2 x 10 <sup>7</sup> cycles at 6000 RPM)	430/mm <sup>2</sup> (316 - 260 N/mm <sup>2</sup> )