

# HTA BRISBANE LINE CARD

Process	Process Details	Components / Examples	Furnace Capability
Aluminium	Solution Treatment, Annealing & Age Treatments for sheet, wrought, forged or cast aluminium alloys.	Climbing Fixtures, Fire Hydrant Components, Marine Fittings	Maximum Size 872 x 815 x 436 mm
Annealing	Annealing prior to Hardening of alloy steels that are welded, as cast, forged or previously heat treated - this process sets a formal microstructure within a material preparing it for further treatment or use.	Alloy Steels that are welded, as cast, forged or previously heat treated.	Furnace Sizes: 575 x 570 x 875 mm 600 x 900 x 600 mm 500 Dia x 600 mm
Bistruff Nitriding	A low temperature process allowing engineering steels to be processed without changing the core strength from which they were supplied and due to very low distortion, machined parts can be virtually finished with only minor polishing required post treatment.	Crankshafts, Roll Form, Pins, Camshafts, Bushes	Maximum Size 1070 Dia x 2100 mm
Continuous / Conveyor Harden and Temper	Through Hardening & Tempering of smaller components in large quantities.	Gutter clips, Mower Blades, Roofing Clips.	Please contact HTA to discuss
Cryogenics (Sub Zero)	Subzero transformation used after quenching some specialised stainless steels. Subzero treatment for parts so you don't have to sharpen cutting tools, or invest in new engine parts as often.	Cutting Tools, Knives, Engine Parts	Maximum Size 1000 x 560 x 560 mm
Heat Track Solutions	HTA Trademarked Customer Information Portal and Client interface. Secured Client services, accounting, job tracking, email notifications or work progression and more.	HTA's Portal for processing, accounting and live status of workflow	Access at <a href="http://hta-global.com">hta-global.com</a>
Low Pressure Carburizing in Vac	Seco Warwick fine carb system used for precision carburising of low alloy steels. Used in conjunction with the 25 Bar Nitrogen quench system	Various types of Gears, Racks and Pinions	Maximum Size 575 x 570 x 875 mm
Normalising	Normalising prior to Hardening of alloy steels that are welded, as cast, forged or previously heat treated, this process sets a formal microstructure within a material preparing it for further treatment or use.	A process used to set the microstructure in a metal prior to hardening and tempering	Furnace Sizes: 750 x 580 x 1080 mm 750 x 450 x 1080 mm
Plasma Nitriding (available September 2023)	Plasma nitriding is a modern thermochemical treatment which is carried out in a mixture of nitrogen & hydrogen gases. This is a low pressure process allowing stainless steel and other low alloy steels to be processed which is used to increase the reliability, wear resistance and enhance corrosion protection.	Crankshafts, Roll Form, Pins, Camshafts, Bushes	Maximum Size 1500 Dia x 2100 mm
Process Verification Testing	ASTM E18 Standard for Rockwell Testing, ASTM E10 for Brinell Testing, ASTM E384 Standard for micro hardness of Knoop & Vickers Testing, Case depth checking by etching or ECD. ARP 1820 Standard for IGO and IGA Testing, ASTM E1004 Standard for Eddy Current Testing.	Verification Capabilities for all Processes Performed.	



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Sealed Quench Processing	Through Hardening of parts that can be oil or water quenched. Normalising of components. Case hardening of parts from 0.25mm up to 3mm deep.	Extrusion Dies, Pins, Gears,	Furnace Sizes: 750 x 580 x 1080 mm 750 x 450 x 1080 mm
Stainless Steels	Annealing of stainless steel (300 series) Harden and tempering of stainless steels (400 series) Plasma nitriding of stainless steel (All series) - available September 2023 Solution and ageing of stainless steel (600 series)	Blades, Knives; Medical & Food Industry Components	Please contact HTA to discuss
Stress Relieving	Stress relieving of fabrications after welding or parts after machining to reduce stress induced from manufacture.	Vessels, Fabrications; Large Components prior to Heat Treatment	Maximum Size 2100 x 2100 mm
Tempering	Multiple furnaces ranging in sizes for tempering of parts after hardening or for tempering only of components. Also used for de-embrittlement of plated parts.	Chrome Plated Car Parts, Zinc Plated Gutter Clips.	Maximum Size 800 x 1300 x 800 mm
Vacuum Aluminium Brazing	Aluminium Vacuum Brazing (AVB) process is utilised to manufacture electronic housings and chassis', the method metallurgical bonds machined aluminium components via a brazing medium. These chassis are typically used to dissipate heat in electronic assemblies and to provide solutions to weight and dimensional constraint solutions.	Electronic Cooling Chassis, Cold Wall Plate Heat Exchangers, Microwave Components.	Maximum Size 900 x 1200 x 700 mm 600 x 600 x 995 mm
Vacuum Nickel & Copper brazing	Typically used where high temperature or highly stressed applications demand good cross-sectional toughness and strength for applications like hydraulic spools and actuators or high pressure fluid type manifold systems.	Hydraulics; Actuators; Fluid Transfer	Furnace Sizes: 575 x 570 x 875 mm 600 x 900 x 600 mm 500 Dia x 600 mm
Vacuum Processing with 5, 15 or 25 Bar Gas Quench	3 Distinct Quench Capabilities for processing steel to customer requirements. Gas quenching, used instead of oil quenching, provides much lower distortion levels during heat treatment, able to be applied to alloy steels which are traditionally oil quenched. Two atmospheres available, Nitrogen & Argon.	Moulds, Punches, Knives, Axles, Form Rollers, Cutters	Furnace Sizes: 575 x 570 x 875 mm 600 x 900 x 600 mm 500 Dia x 600 mm

