



Waterjet Cutting And More

Site Overview

Experts in waterjet cutting technology

Achieving real cost savings through nesting

As well as stockholding, thyssenkrupp Materials UK Darton has access to some of the most advanced flat product cutting facilities in the industry. Our customer base is predominantly from the aerospace industry, which means we have world class in-house engineering expertise and accreditations to support all major OEMs and Tier suppliers.

We specialise in waterjet cutting services but we also have 3-axis milling, routing, deburring, guillotining, polycoating and welding capabilities to support all customer needs.



Benefits of Waterjet Cutting

Waterjet cutting specialises in cutting hard materials like titanium, composites/carbon fibre, thicker aluminium, hard steel and nickel alloys. The machines, used for these applications, use high-pressure jets of water. Our scale and variation of waterjet cutting machines at thyssenkrupp Materials UK - Darton makes us the supplier of choice to leading aerospace manufacturing companies. We are able to cope with large volumes and a quick turnaround.

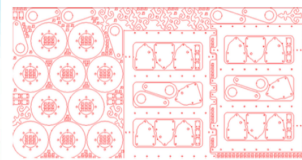
There are many benefits from using waterjet cutting to manufacture parts and components. The use of water prevents any change in the material's intrinsic properties due to heat generation, making waterjet cutting perfect for the most intricate material cuts.

- Waterjet cutting is one of the fastest growing major machine tool processes in the world.
- There are NO heat generated structural changes, as it's a cold cutting process.
- Virtually burr-free cut edges, leading to reduced manual finishing operations.
- There are NO material discolouration.
- There are NO toxic or fume discharge.
- Waterjet cutting offers HIGH yield of material through closer nesting of parts.
- Multi-head operation allows competitive cutting.

At thyssenkrupp Materials UK - Darton, we have access to 9 state-of-the-art waterjet cutting machines, which enables us to also offer machining of special features, cut up to 12m long, microjet and 5-axis capabilities.

Multi-part nesting

Benefit: Increased material utilisation



Saving 44% material cost per part

Multi-head nesting

Benefit: Decreased cutting time



60% reduction on cutting cost per part

thyssenkrupp Materials UK Ltd is part of thyssenkrupp AG, which is present in over 80 countries and has built a reputation of credibility, integrity, expertise, and consistency.



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Waterjet Cutters

Machine	Hole Location (mm)	Thickness (mm)	Width (mm)	Length (mm)	Cutting Heads
Bystronic Byjet L12030	+/- 0.15mm	0-100	3000	12000	2
Warricut HWE-P 2040	+/- 0.15mm	tbc	2000	4000	2 + Microjet
Bystronic Byjet L6030	+/- 0.15mm	0-100	3000	6000	2 + 1 Drill Head
Bystronic Byjet 4022	+/- 0.15mm	0-100	2200	4000	2
Bystronic Byjet Flex	+/- 0.15mm	tbc	3000	4000	2
Warricut HWP-6050/2-3D/2D/DH	+/- 0.15mm	tbc	5000	6000	2 (2D & 5-Axis)
Flow WMC2 DWJ 4020 Dynamic	+/- 0.15mm	15-200	2000	4000	2
Flow MACH3 Dynamic	+/- 0.15mm	15-200	2000	3000	1
Flow MACH3 Dynamic	+/- 0.15mm	15-200	2000	4000	1 - Dynamic

Approvals



Waterjet Nesting

Waterjet cutting is best described as an accelerated erosion process that we are controlling. For this reason, waterjet can cut or erode through virtually any material known, making it one of the most versatile machines available. Unlike laser, plasma or oxy-fuel cutting, waterjet lends itself to common line cutting. thyssenkrupp Materials UK - Darton offers optional state-of-the-art nesting service, allowing to nest multiple shapes together and cut them with multiple heads. We can track sheet remnants and nest your parts onto any odd shapes to help save valuable material.



Other Capabilities

At thyssenkrupp Materials UK - Darton, we offer rigorous design and 3-axis milling processes, with available machine bed sizes 3000x1500cm and 600x400cm to allow material preparation to exact customer specification. To ensure the best quality materials are delivered to our customers, we also provide metal and surface finishing services with FLADDER brush deburr and Grind Master automated deburr. Being a one stop shop for all materials needs, thyssenkrupp Materials UK - Darton has also the ability to offer polycoating and laser coating capabilities.

Our on-site routing capabilities have been solving the toughest manufacturing challenges for years. Our Technos single head (6200x1600cm) and twin head (4000x2500cm) routers are designed to route, carve, drill and engrave material. Our goal is to help businesses create more parts by spending less money.