Innovative Solutions and Services

KMT WATERJET SYSTEMS designs, manufactures, distributes, services and provides solutions for ultra-high pressure waterjet cutting systems, LDPE polyethylene production and various other ultra-high pressure associated industries. Our customers appreciate us as their partner regarding any kind of system including 2-D, robotic 3-D, slitting, edge trimming and cleaning applications. We provide you with sample cutting in order to assist you in deciding for your cutting solution that fits your individual need.

Value-Added Solutions – Aftermarket Satisfaction

To guarantee optimum, aftermarket customer satisfaction we provide:

- 24-hour (or faster) shipment of stock items
- telephone hotline service for ordering parts and answering technical questions
- same-day emergency shipments, worldwide (7 days per week)
- immediate technical support by highly qualified service professionals
- immediate worldwide field service technician support
- modular training programs and seminars on maintenance, troubleshooting, equipment operation and safety
- test cuts to evaluate waterjet cutting performance on your specific material

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24 Hour Spare Parts Hotline:
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www.kmt-waterjet.com

KMT Waterjet Systems
KMT. Creating value through precision.

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Your Innovative Partner, for Your Waterjet Cutting Needs

Waterjet Cutting –
Your Way to make Profit - with KMT WATERJET SYSTEMS

Companies have been using waterjet systems with great effectiveness for more than 40 years. The flexibility and reliability of the process enables it to be used in both high volume production situations and in lower volume custom, creative applications. In fact, innovative companies are still finding new applications to improve their production and achieve a higher level of efficiency and profitability.

To date, the health, growth and survival of most industrial manufacturers, job and machine shops in the material separation, forming and fabricating business, are premised on waterjet machining. There are five critical elements that set waterjet cutting apart – namely:

- cost savings,
- versatility/flexibility,
- precision or near-net shape cutting,
- waterjet's ability to cut almost any material in a thickness range from very thin foils up to 150 mm / 6" and even more and
- waterjet's ability to complement other processes such as laser machining, plasma cutting and punch pressing

Marble (hard stone)
Abrasive Cutting

Cork
Pure Water Cutting

Metal
Abrasive Cutting

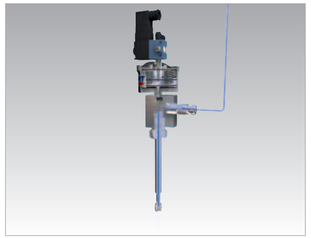
Synthetic Material
Pure Water Cutting

Main Benefits of Waterjet Cutting

- Extremely fast transition from drawing to cutting
- Faster setup – low tangential forces often eliminate the need for clamping
- High accuracy – eliminates secondary cutting
- Fast cutting speed
- Eliminates the need to sharpen tools
- Safer for operators and the environment – Avoids vapor, dust and smoke and does not require expensive coolants
- Cold cutting process – eliminates heat-affected zones, hardened material and material stresses
- Clean finished product eliminates secondary cleaning operations
- Burr-free finish – eliminates any need for secondary surface finishing for most applications
- Small kerfs
- Ideal for quick prototype, flexible production and proven for high volume production
- Optimum material utilization with CAD/CAM software
- Customized system solutions

Pure Water Cutting

This cutting method is primarily used for cutting soft materials such as rubber, foam, gasket, leather, textiles, foodstuffs and many other similar materials. Normal tap water is pressurized at ultra-high pressure levels and forced through a small precious stone orifice to form an intense cutting stream. The jet stream moves at a velocity of up to 2.5 times the speed of sound, creating the ability to cut at very high feed rates. The rates vary according to the material being cut – refer to the table below.

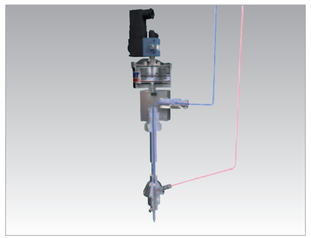


Material	Thickness	Cutting Speed
Rubber	2	27.000
	10	11.500
	20	2.200
Synthetic material	2	22.500
	5	8.900
	10	3.400
Foamed material	10	27.500
	100	5.500
Unit	mm	mm/min

at 4.136 bar; orifice sizes: 0,10 mm–0,25 mm; surface quality: medium – fine

Abrasive Cutting

For your hard materials that cannot be machined with water only, the water nozzle nut is replaced with the AUTOLINE™ I abrasive cutting head. The high velocity waterjet creates a vacuum which pulls the abrasive into a mixing chamber, producing a coherent, extremely energetic abrasive jet stream. This process is ideal for cutting intricate patterns in sheet metals, composites, decorative stone, synthetic ceramics, glass, etc.



Material	Thickness	Cutting Speed
Titanium	10	150
	40	30
	100	11
Marble	10	800
	40	160
	120	46
Glass	10	635
	40	130
	120	37
Unit	mm	mm/min

at 4.136 bar; 450 g/min abrasive flow; 0,25 – 0,76 mm orifice combination; surface quality: medium – fine