



## Abrasive Cutting Head Assembly

ACTIVE AUTOLINE™ II

Easy Solution for  
Top Level Performance



# AUTOLINE™ II

## High Speed, Self-aligning Cutting Nozzle

With the introduction of the ACTIVE AUTOLINE™ II, KMT WATERJET SYSTEMS – the market leader in the waterjet cutting technology for over four decades – has developed an abrasive cutting head assembly that provides the best efficiency by utilizing long life components.

### Further development of tried and tested cutting head

The new AUTOLINE™ II abrasive cutting head, combines the reliability of the original model with a number of innovations that make waterjet cutting even more efficient and user-friendly. Old cutting heads can be replaced quickly and easily. ACTIVE AUTOLINE™ II systems can be integrated into all waterjet units, be it 2D units, multi-axle machines or robot systems.

### Optimised abrasive feed

The abrasive material is fed through a wear-proof cemented hard metal tube at an angle of 30° to the mixing chamber. This reduces the need for space and prolongs the service life of the nozzle body and insert. The mixing chamber has been repositioned to allow for better access for the cleaning and replacement of the nozzle insert. A pin ensures proper alignment of the mixing chamber and the abrasive inlet at the nozzle body, so that flow loss, caused by incorrect installation is effectively prevented. The orifice is mounted directly on the mixing chamber.

### Design ensures correct alignment of jet

There is no need to adjust the water jet alignment at the nozzle. The construction design ensures that the water-abrasive mixture is ejected at the centre of the nozzle and at maximum speed. The centred and powerful waterjet is one of the key features of all AUTOLINE cutting heads.

### Ergonomic handling of focussing nozzle

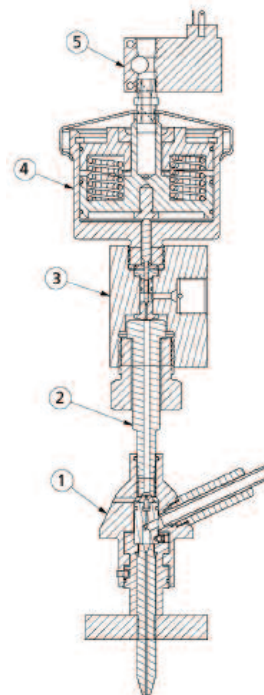
The installation and removal of the focussing nozzle has been made even more user-friendly. Thanks to the wing screws, it can be properly mounted without the need for tools.

### Instant indication of preventable faults

The cutting head is now equipped with a leakage bore near the water nozzle. It indicates whether the nozzle is installed correctly and the cutting head is properly secured. Damage to the sealing surfaces of diamond or sapphire nozzles or to the nozzle pipe can thus be easily detected and eliminated.

### Technical Data

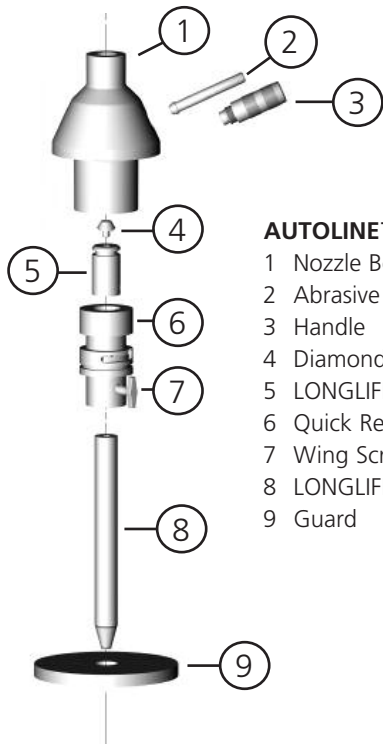
Length	50 mm
Width	50 mm
Height (with 6" Nozzle Tube)	490 mm
Weight	2,3 kg
HP Connection	3/8" UNF
Mounting Screws (2x)	1/4" x 7/8"



- 1 AUTOLINE™ II
- 2 Nozzle Tube  
(Std = 6" / 152,4 mm)
- 3 Nozzle Valve
- 4 Pneumatic Actuator N/C
- 5 Solenoid Valve

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#### AUTOLINE™ II – Components

- 1 Nozzle Body
- 2 Abrasive Feed Liner
- 3 Handle
- 4 Diamond Orifice
- 5 LONGLIFE Mixing Chamber
- 6 Quick Removable Cartridge
- 7 Wing Screw Focusing Tube
- 8 LONGLIFE Focussing Tube
- 9 Guard

Material	Thickness	Cutting Speed
Stainless Steel	10	135
	40	32
Titanium	10	150
	40	30
Aluminium	10	385
	40	78
Marble	10	800
	40	160
Granite	10	685
	40	135
Glass	10	635
	40	130
Untis	mm	mm/min

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

#### Standard Nozzle Configurations

Orifice	Focusing
0,17 (0,007)	0,54 (0,021)
0,23 (0,009)	0,76 (0,030)
0,25 (0,010)	0,76 (0,030)
0,30 (0,012)	0,90 (0,035)
0,33 (0,013)	1,10 (0,043)
0,35 (0,014)	1,10 (0,043)

Units: mm (inch)

#### AUTOLINE™ II

This proven cutting head, which can also be adapted onto conventional cutting systems, provides accurate and automatic alignment of the diamond or sapphire water orifice and ceramic focussing tube. The consistently sharp jet of water and abrasive gives a high degree of repeatability as well as a remarkable cutting speed. The AUTOLINE™ II abrasive cutting head is particularly efficient, as tools are not required for replacing worn parts.



#### The advantages of AUTOLINE™ II at a glance

- Pre-aligned orifice and focusing tube reduce operator setup time by maintaining an accurate Tool Center Point (TCP), and ensuring an effective cutting stream.
- The patented tool-free attachment allows for the quick exchange of the water and focussing nozzles without the need to dismantle the abrasive feed hose.
- The unique non-metallically welded nozzle base caters for high precision and repetition accuracy.
- The AUTOLINE™ II cutting head includes only three wear parts, namely the orifice, the mixing chamber and the focussing tube, which are made from extremely wear-resistant materials.
- The nozzle body consists of an exchangeable insert. If worn, simply replace the mixing chamber.
- Pure-water cuts can be made with the same orifice, so that retooling takes only a few seconds.



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