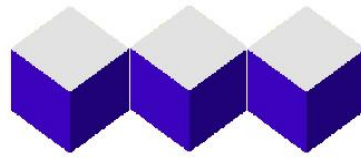


AQUA ENERGY



“WATERJET SOLUTIONS”

Wet-Abrasive Track Mounted Cutting Systems

1379 – 3000 bar (20,000 – 43,500 psi) Pressure Ranges

Power, Versatility and True Flexibility in a “Cold-Cutting” System Tailored for Your Plant

Aqua Energy offers a growing line of quality high-end water jetting accessories. These versatile accessories work well with the Aqua Energy line of pumps.

The Aqua Energy line of Wet Abrasive Cutting Systems solve a variety of commonly encountered industrial tank and pipe cutting issues. It can be very expensive to completely shut down and evacuate all personnel and potentially flammable substances from a given plant in order to clean or rehab pipes or tanks, so conventional torch cutting becomes not only expensive but very dangerous. The Aqua Energy Wet Abrasive Cutting Systems is a lot cooler and safer because it generates a minimal amount of sparks and heat. We do recommend a consultation with an Aqua Energy engineer to assure that the correct cutting system is matched to the application.

From the productivity perspective, this system easily out-performs many other systems on the market. The Wet Abrasive Cutting System makes a clean cut through metal up to five inches thick. This system is designed to be fully portable and easily set-up by a two man team. The three function control panel of the Suction Track Wet Abrasive Cutting System are easily mastered with minimal training and offer the ability of the operator to operate at a safe distance from the cutting area.

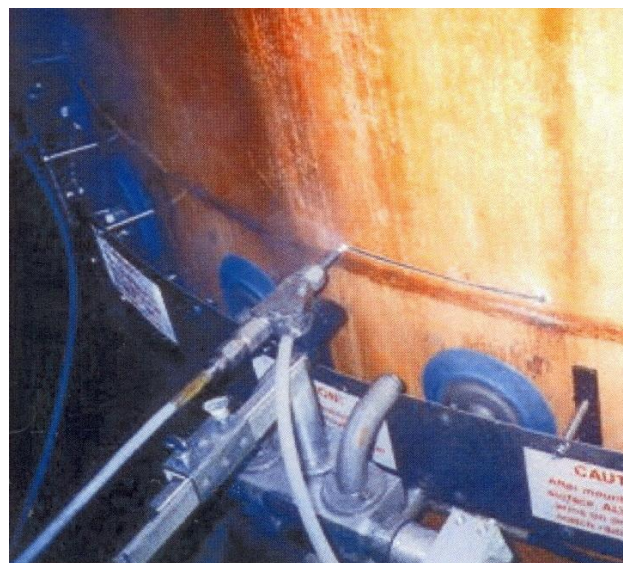
A variety of track mounting options assures that the system can be tailored to handle the job efficiently. A suction cup style flexible stainless steel track and the standard rigid track usually perform perfectly in most situations, but for those unique applications where either a little extra flexibility is required, or the surface is too corroded for the suction cups, a magnetic flex-track is available.

The system includes a dolly-mounted abrasive hopper with an air-operated metering assembly, control console

mounted on a portable stand, parallel and perpendicular nozzle mounting brackets, a carbide slurry nozzle, a universal power head that works with both the pipe line cutter and the flex track, and of course, the track-mounting option of choice.

Also available is an Aqua Energy Water-jet Radius Cutter, which can also be mounted to the flex track systems, and adjusted to cut from 13cm to 23cm (5” to 9”) radii in either flat or curved surfaces. This is ideal for cutting doors and other passages into sheet metal.

The Aqua Energy wet-abrasive cutting system can mount to any size steel wall or pipe using either suction cups or magnets. The Suction Track is pictured below. This system can neatly punch and cut up to 13cm (5”) thick steel.



Cutting Systems

Versatile Application-Based Water-Jetting Systems

Built-In Quality

All Wet Abrasive Cutting Systems by Aqua Energy are quality constructed and designed to be rugged and dependable.

Features Common To These Systems Include:

Power Head Assembly

- Universal power head assembly - #66ABC00060.
- Air motor drive reversible for cutting in either direction.
- Adapts to pipe cutting bands, both straight-line or flex-track.
- Support bushing permits elevation adjustment of cutting nozzles.

Parallel Mounting

- Parallel mounting bracket with parallel support bushing.
- Designed for mounting "ACNM" series cutting nozzle in a position parallel to the band or track.
- Affords adjustable standoff distance between the nozzle and cutting surface.
- Permits angular nozzle adjustment from 0° to 45° (in 15° increments).

Air-Operated Abrasive Metering Assembly

- Air operated valve permits remote on/off control of abrasive flow.
- Adjustment screw - permits control of abrasive flow.
- Vent Valve - permits evacuation of material from abrasive feed line to preclude plugging.
- Adjustable vibrator speed assures smoother material flow with varying materials.
- Sight glass - permits operator to see abrasive flow.
- 5cm (2") NPT connection - fits a wide variety of flow hoppers.

Perpendicular Mounting

- Designed for mounting "ACNH" series cutting nozzle in a position perpendicular to the band or track.
- Affords adjustable standoff distance between the nozzle and cutting surface.
- Permits adjustment of nozzle height above or below track.
- Permits angular nozzle adjustment of "ACNH" series head from 0° to 45° (in 15° increments).

Hopper Assembly

- Mounted on heavy-duty dolly with pneumatic tires for portability.
- 150 pound capacity.
- Cone bottom poly-tank hopper.
- 5 cm (2") NPT outlet.
- Screw-down lid.
- Wire mesh sieve.
- Structural tubing tank stand.
- Pneumatic tires.

Nozzle Options

#77FACNHMP

- Carbide slurry nozzle rated for 1379 bar (20,000 psi) operation.
- Flows to 12 GPM.
- Sapphire orifices.
- Medium pressure or type "M" connection.

#77FACNHHP

- Carbide slurry nozzle rated for 3,000 bar (43,500 psi) operation.
- Flows to 6 GPM.
- Sapphire orifices.
- High pressure or type "M" connection.

Special Options

#66ABC0032R Radius Cutter

- Air-powered radius cutter.
- Mounts on any track.
- Cuts 15cm - 30cm (6" - 12") radius at end of horizontal cut without adjustment of magnetic track.

Suction Cup Track Cutting System

Control Panel

- 66CNTPL04 control panel for Suction Cup Track may be used for all other track options.
- Features vacuum generator with vacuum gauge.
- Control valve for vacuum generator.
- Three position valve controls power head assembly.
- Dial-air regulator controls travel speed.
- Ball valve controls on/off function of abrasive metering valve.
- Air filter.
- Pressure gauge.

Suction Cup Track

- 66ABC00051 flexible stainless steel track, 5 feet long with suction cup mounts.
- Each suction cup rated for approximately 8 bar (120 psi) of pull.
- May be coupled with another 5 foot track to form a single 10 foot long track assembly.

Radius Cutting System

Control Panel

- 66ABPANLJS control panel is used for rigid, magnetic or pipe cutting tracks.

Radius Cutting Track

- Air powered radius cutter, cuts 15cm to 30cm (6" to 12") radius at end of horizontal cut without adjustment of flex track.
- Radius cutter may be mounted to magnet or suction cup mounted tracks.
- Works on both flat and curved surfaces.
- Great for door openings in steel bulk-heads and tanks.

Rigid Track Cutting System

Control Panel

- 66ABPANLJS control panel is used for rigid, magnetic or pipe cutting tracks.
- Features vacuum generator.
- Pressure gauge.
- Air filter.
- Three position valve controls power head assembly.
- Dial-air regulator controls travel speed.
- Ball valve controls on/off function of abrasive metering valve.

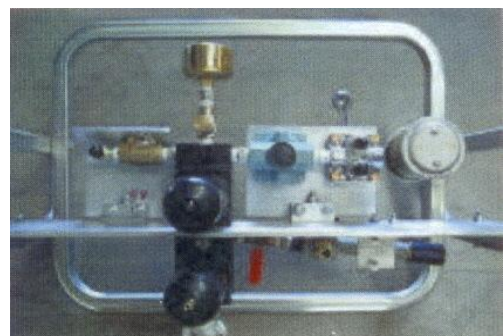
Rigid Track

- 66ABC0031A rigid stainless steel track, 5 feet long with adjustable mounts.
- May be coupled with another with another 5 foot track to form a single 10 foot long track assembly.



Above: The control console is easily manipulated and is fully portable to allow the operator to conveniently avoid potentially hazardous water-jet spray.

Below: Bottom view of the control console showing connections, slurry, water and air motor controls.



Magnetic Track Cutting System

Control Panel

- 66ABPANLJS control panel is used for rigid, magnetic or pipe cutting tracks.
- Features vacuum generator.
- Pressure gauge.
- Air filter.
- Three position valve controls power head assembly.
- Dial-air regulator controls travel speed.
- Ball valve controls on/off function of abrasive metering valve.

Magnetic Track

- 66ABC00035 flexible stainless steel track, 5 feet long with 15 magnets.
- Each magnet rated for approximately 8 bar (120 psi) of pull.
- Sections may be coupled together for longer cuts.



Above: Rugged dolly-mounted abrasive hopper.

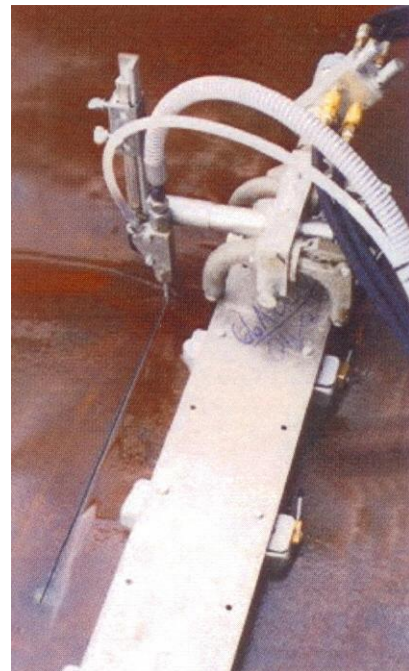
Pipe Cutting System

Control Panel

- 66ABPANLJS control panel is used for rigid, magnetic or pipe cutting tracks.
- Features vacuum generator.
- Pressure gauge.
- Air filter.
- Three position valve controls power head assembly.
- Dial-air regulator controls travel speed.
- Ball valve controls on/off function of abrasive metering valve.

Mounting Band Options

- Mounting band lengths are available for most pipes, in 5 cm (2") increments from 25cm – 61 cm (10" to 24").
- Adapter kit for 5cm to 20cm (2" to 8") pipe is standard and separate adapter kits are required for each size pipe.



Above: The JSA Magnetic Cutting Track cuts a clean slice through steel sheeting swiftly.

Carbide Cutting Nozzles

- This group of patented nozzles is designed primarily for abrasive water-jet cutting of a wide range of materials for various purposes.
- Rated for use at water pressures up to 2759 bar (40,000 psi) but their actual working pressure will be determined by the pressure capability of other components such as tubes, hoses and adapters.
- Suitable for use at less than 1.0 GPM to more than 10 GPM.
- Fitted with a replacement feed tube for connecting the nozzle body to the plastic supply tube for the additives so as to protect the nozzle body.

Available Models:

There are currently two standard models to choose from: #77FACNHMP and #77FACNHHP.

- #77FACNHMP with orifice cone rated for up to 1379 bar (20,000 psi).
- #77FACNHHP with orifice cone rated for up to 2759 bar (40,000 psi).

Tube-Nozzle Adapter Sizes:

This group of nozzles adapt to water supply tubes using three types of tube fittings:

- **NPTF** (National Pipe Threads Female) tube fitting of 1/2" diameter for applications at water pressures below 1034 bar (15,000 psi).
- **Medium Pressure** 1379 bar (20,000 psi) AE tube fitting of 9/16" O.D.
- **High Pressure** 4137 bar (60,000 psi) AF tube fitting of 9/16" O.D.
- Adapters for other tube fittings are available on special order.

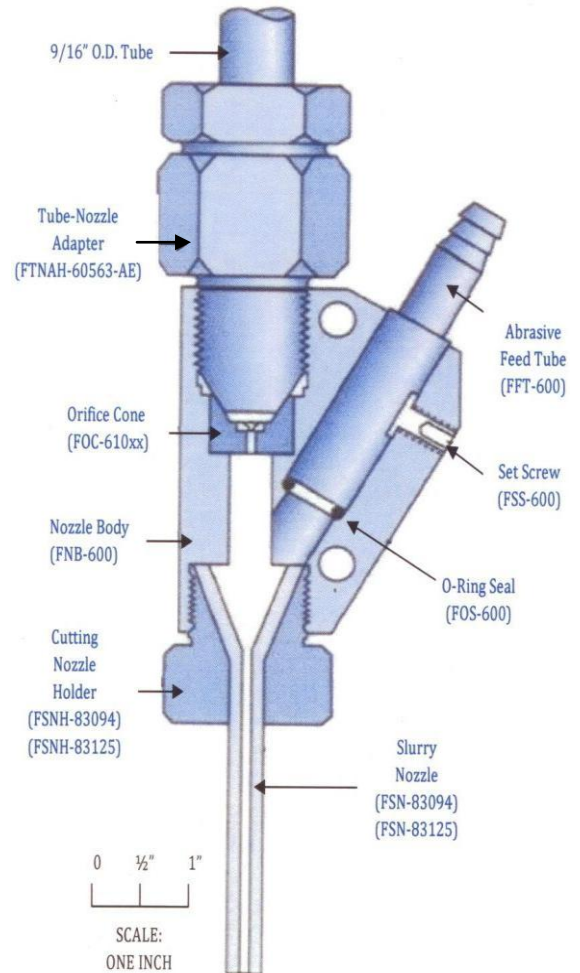
Note: When ordering, specify flow and pressure!

Recommended Units for Wet Abrasive Cutting Operation

UNIT	PRESSURE		FLOW		POWER		PLUNGER		PUMP
MODEL	PSI	BAR	GPM	LPM	HP	kW	In.	mm.	MODEL
DS-75	20,000	1379	6.5	24	75	56	.650	17	AL-100
DS-100	20,000	1379	7.7	29	100	75	.650	17	AL-100
DS-150	20,000	1379	10	65	200	149	0.945	25	DL-180-HP
DS-200	30,000	2068	9.0	34	170	127	0.79	20	DL-200-UH
DS-225	43,500	3000	7.3	26	170	127	0.71	18	DL-210-UH

Flow rates based on 100% volumetric efficiency; rates may vary according to pump speed.

#77FACNHMP
#77FACNHHP
1034 - 2759 bar (15,000 - 40,000 psi)
Cutting Nozzle



AQUA ENERGY INTERNATIONAL LTD
28 St James Business Centre, Linwood Road,
Paisley, PA3 3AY, Scotland, U.K.
Tel +(44) 141 849 6888
Fax +(44) 141 848 5777
sales@aquaenergy.com
www.aquaenergy.com