

Abrasive cutting with high pressure water



Applications

Cold cutting of:

- reinforced concrete
- stone
- metals
- laminates
- GRBP's
- Glass

and similar hard materials

Abrasive cutting device

- Abrasive entrainment and cutting nozzle
- Abrasive container with metering device
- Deployment unit for pipe and circular tank cutting
- Deployment rail for vertical / horizontal cutting



Ancillary equipment

Abrasive hopper

with pneumatic controller for the nozzle carrier



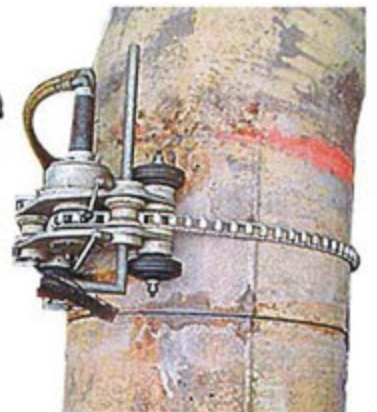
Nozzle carrier and chain tensioning for pipe cutting



Nozzle carrier

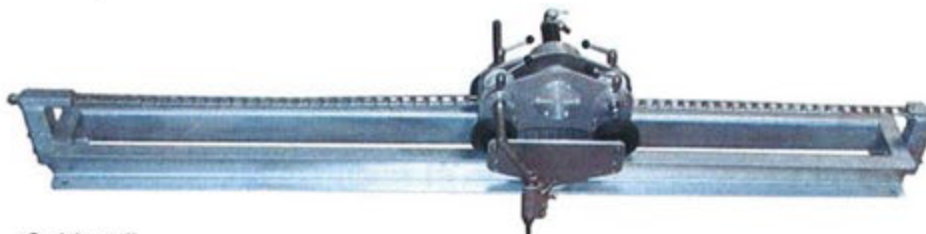


Chain tensioning unit

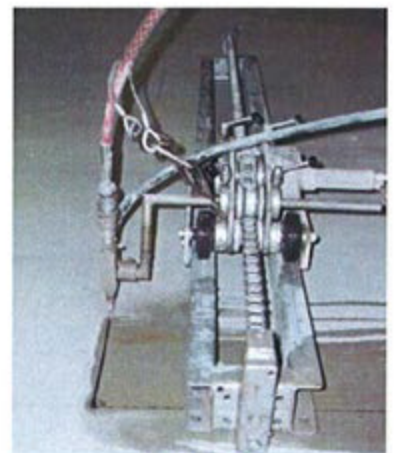


Chain

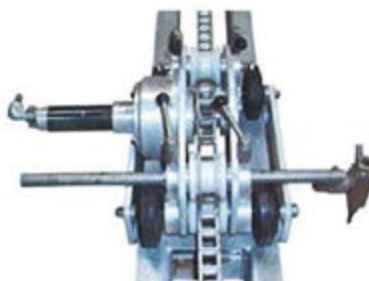
Nozzle carrier mounted on a rail for straight cuts at vertical and horizontal surfaces



Guide rail



Nozzle carrier mounted on rail



Abrasive material



Garnet

Type	Grain size [mm]	Application
HS 2	0,18 – 0,35	Steel
HS 5	0,50 – 1,00	Steel/ Concrete
HS 7	0,70 – 1,40	Concrete

Garnet

Type	Grain size [mm]	Application
HS 50	0,25 – 0,35	Steel
HS 80	0,20 – 0,25	Steel
HS 120	0,10 – 0,20	Steel
HP 220	0,075 – 0,10	Steel

Cutting nozzle assemblies

Materials that are difficult to cut require the use of a water jetting nozzle with an abrasive entrainment chamber.

A high pressure water nozzle inside the assembly creates a water jet. This pressurised water jet travels through the entrainment chamber at high speed to a focussing nozzle dragging the air in the chamber with it and creating a vacuum. Abrasive material is fed into the side of the chamber under air pressure. The abrasive particles are sucked into the air around the water jet and accelerated into the water stream to emit from the focussing nozzle.

Type B 1500



Operating pressure: 1500 bar

High pressure connection: Pressure ring / Pressure nut
M 26 x 1,5 for M 14 x 1,5 LH (Nipple)

Flow rate: 10 – 40 l/min

Designed to be mounted on a nozzle carrier.

Application examples:

- Concrete cutting
- Steelwork cutting

Type B 4000



Operating pressure: 4000 bar

High pressure connection: Pressure ring / Pressure nut
M 26 x 1,5 for M 14 x 1,5 LH (Nipple)

Flow rate: 10 – 25 l/min

Designed to be mounted on a nozzle carrier.

Application examples:

- Concrete cutting
- Steelwork cutting

Type S 4000 with collimation tube



Operating pressure: 4000 bar

High pressure connection: M 14 x 1,5 LH (Standard)
with adapter to M 26 x 1,5

Flow rate: max. 10 l/min

Application: especially for use with a cutting table, i.e. cutting shapes in metals, glass, plastics, ceramics etc.

The entrainment chamber can be removed without the need for tools for pure water jet cutting of softer materials.

Accessories for cutting nozzle assemblies

For
Type B 1500



Nozzle insert Type A

Operating pressure: 1500 bar
Efficiency factor: 0,95
Material: Steel
Orifice diameters: 0,4 – 4,9 mm

For types
B 4000
S 4000



Nozzle insert Type

Operating pressure: 4000 bar
Efficiency factor: 0,72
Material: Steel / Diamond
Orifice diameters: 0,15 – 1,2 mm

For types
B 1500
B 4000



Guide piece

Fits in front of the focussing nozzle. Suitable for all

Material: Tungsten carbide

For types
B 1500
B 4000
S 4000



Focussing nozzle

Material: Tungsten carbide
Focussing orifice: 0,5; 0,8; 1,0; 1,5; 2,0; 2,5; 3,0 mm
Outside dia.: 9,4 mm
Length: 75 mm

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