

MDS 5034

Mobile diamond wire saw



Cutting width < 5 m
Cutting depth < 3,4 m
Transport width/height < 3 m / 3,3 m



RECORD BREAKING ENGINEERING

Mobile diamond wire saw

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The mobile diamond wire saw (MDS for short) is a new development by Schwing, primarily designed for the natural stone industry for cutting raw blocks of any type of stone and cutting tranches directly in the quarrying area.



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Agility, quality and design



With its agility, cutting quality and compact design, the MDS revolutionises the processing of raw blocks in natural stone quarrying. The wire saw unit stands out with its considerable cutting capacity and compact transport dimensions without additional conversion effort. The machine is fully hydraulic; there are no electric actuators. To optimise the cutting capacity and cutting quality, particular attention was paid to the stability and the number of wire deflection pulleys.

The number of deflections and thus the bending cycles that the diamond wire has to undergo has a great influence on the wire tension and service life of the steel core in the diamond wire. After optimising the geometry, it was possible to design a very flexible machine with seven wire deflection pulleys. But the new design also made significant progress in terms of stability. By dispensing with sliding guides, the rigidity of the saw unit was increased many times over, maintenance work minimised and robustness increased. The required diamond wire has a fixed length, does not need to be lengthened or shortened and is part of the saw unit. The wire length is the same regardless of any situation (transport, setting and cutting operation).

The mobile diamond wire saw is ready for use at any time.

The technical solution concept allows the mobile diamond wire saw to be operated in the quarry by only one person.

Configuration

Radio remote control

The MDS can be operated either via the workstation in the cab (drive to the site, set up at the site, load the machine) or via a radio remote control (set up the saw unit for cutting, cutting operation). Both the telescopic loader and sawing unit can be operated simultaneously via the radio remote control.



Powerpack

Depending on the conditions on site, the operator can choose between operation with the telescopic loader's onboard hydraulics via the diesel engine or the additional permanently mounted electric Powerpack. For ecological as well as economic reasons, the machine was designed as a hybrid, which means that it can be operated completely self-sufficiently by the telescopic loader with diesel or, if available, with electricity in an energy-saving and emission-free manner via an attached powerpack.



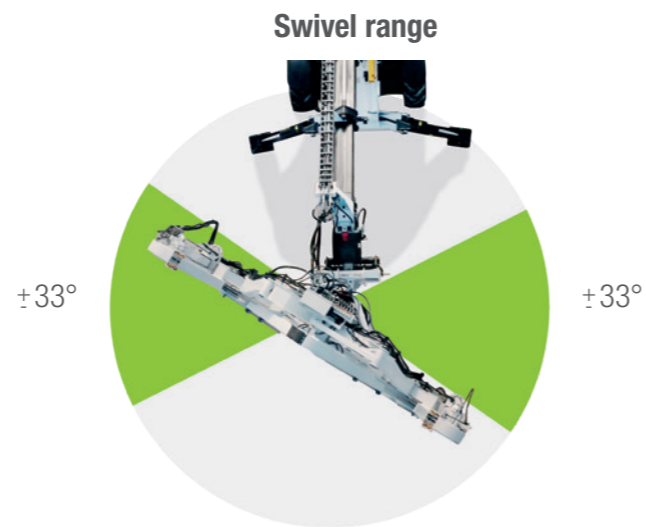
Directions of movement

The cut

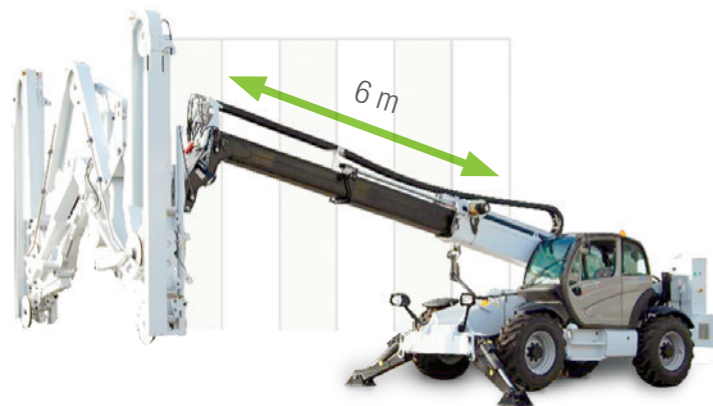
Cutting is possible with different degrees of freedom. Parallel cuts can also be made without changing location. All possibilities, whether parallel cutting, differently inclined cutting guides, variable cutting widths or cutting heights, produce a very good cutting result. For exact cutting alignment, even in rough terrain, the machine can be adjusted using five directions of movement: raise and lower, extend and retract, tilt out and in, swivel to the left and right, tilt to the left and right



Tilt range



Reach



Transport

Mobile and roadworthy

The MDS is a self-propelled working machine that moves itself to the worksite and reaches its working position without additional assistance. The machine is fully off-road capable with all-wheel drive, tilt adjustment and the 3 steering modes of front, all-wheel and crab steering. Road transport by a standard low-bed trailer is possible without special permits. Despite the enormous cutting capacity, the compact transport dimensions are achieved without conversion work. The saw can drive directly from the low-bed trailer to the place of use and start work immediately.



Technical specifications

Directions of movement

Tip range		126°
Tilt range		26°
Swivel range		66°
Telescope	m	6

Adjustment range

Cutting depth	m	3,4
Max. reach	m	5

Diamond wire

Nominal diameter of diamond wire	mm	8,8 - 9,2 (endless spliced, without crimping)
Speed of diamond wire	m/s	20-40

Power supply, hybrid

Diesel, electric

Carrier vehicle

Manitou MT 1440 HA

Steering

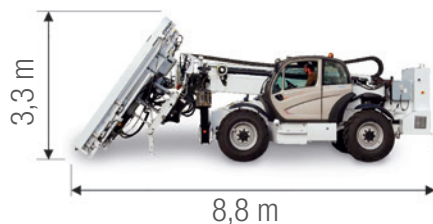
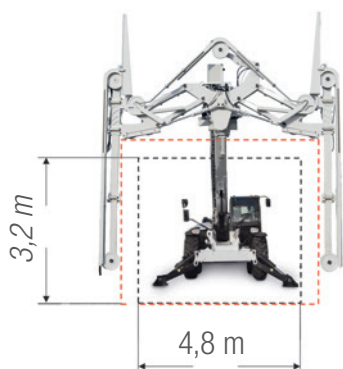
Front-wheel steering, all-wheel steering, crab steering

Other

Radio remote control, support of the saw unit on the block

Transport data

Transport height	m	3,3
Transport width	m	< 3
Transport length	m	8,8
Weight	t	14



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SCHWING GmbH
Friedrich-Wilhelm-Schwing-Straße 1 · A-9431 St. Stefan im Lavanttal
Tel.: +43 4352 2812 · Fax.: +43 4352 2953
www.schwing-auftragsfertigung.at · schwing-austria@schwing.at

Schwing - Stetter Baumaschinen Gesellschaft m.b.H.
Heizwerkstr. 6 · A-1232 Wien
Tel.: +43 1 6167313 · Fax.: +43 1 6167066
www.schwing.de · info@schwing-stetter.at