

MicroStep®

DRM series

Heavy-duty CNC machine for special requirements

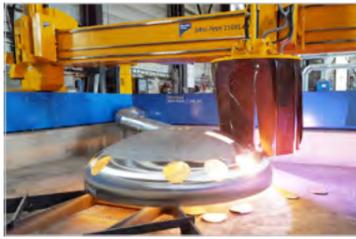


The **DRM** is a heavy-duty cutting and drilling machine designed for a wide range of **dome, sheet** and **tube** processing applications.

Its robust gantry enables vibration-free operation of heavy equipment such as several automatic oxyfuel triple torches, a **3D rotator** with tilting up to 120° and **Z-axis stroke 1,500 mm** or other custom equipment.

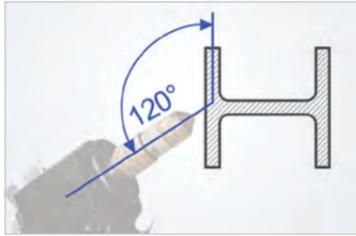
Along with the full range of sheet and pipe cutting options, DRM offers special applications on domes like trimming, separation cuts, cutting of diverse openings and weld edge preparation across the whole surface of domes or dome petals. An advanced 3D scanning process with MicroStep's **mScan technology** allows the machine to achieve excellent spatial precision in **3D cutting**.

A special version of the machine with a **drilling** table and a selection of powerful drilling tool stations **up to 55 kW** allows for heavy-duty drilling of construction sheets, tube sheets for heat exchangers and other demanding drilling jobs as well as a selected range of milling operations.



Flexible means of production for nearly any cutting task

- Broad range of processing possibilities – cutting of plates, pipes, profiles, beams and domes as well as several drilling and marking options
- Extremely robust and heavy gantry for toughest requirements
- Long-term reliability in single- and multi-shift operations



Fast and precise bevel cutting with plasma and oxyfuel

- Fully automatic and highly precise weld edge preparation with rotator and 3D rotator bevel tool stations with auto-calibration feature (ACTG®)
- Bevel cutting on sheets, pipes, profiles, beams and domes
- 3D rotator with a tilt up to 120° for cutting of 3D objects with both plasma and oxyfuel technologies
- Additional Beveling Process (ABP) – simple and reliable subsequent weld edge preparation via a laser scanning process



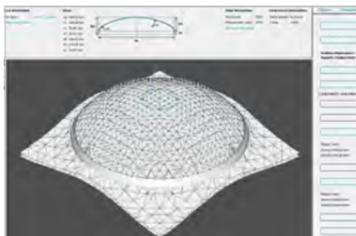
Fully automatic drilling, tapping and milling

DRM machines can be delivered in a special version with a drilling table and a selection of powerful drilling heads with powers up to 55 kW that allow drilling up to Ø 60 mm and tapping up to M30. Optionally, its functionality can be extended to marking and a selected range of milling operations. The solution can also include a motorized brush and a sideways waste channel for removal of drilling chips. For a smooth and fast tool change, the machine can be equipped with a linear or a rotary tool magazine for up to 16 tools.



Dome processing up to dome height 1,500 mm

- Automatic processing of large tank ends with height up to 1,500 mm
- Trimming of domes, separation cuts, cutting of diverse openings and intersections
- Weld edge preparation across the whole dome surface
- Advanced dome scanning process
- Convenient creation of cutting programs from solid models in MicroStep's 3D CAM software mCAM



Precise dome processing with mScan

MicroStep's mScan technology for precise cutting of domes sets new standards in dome processing. A 3D laser scanning process and a point cloud processing software are used to map the true shape of a particular dome. Advanced algorithms then allow the control system to adjust the movement of tool accordingly and compensate for possible deviations of the real dome from its ideal shape. Thus, contours and openings can be cut with an outstanding precision.



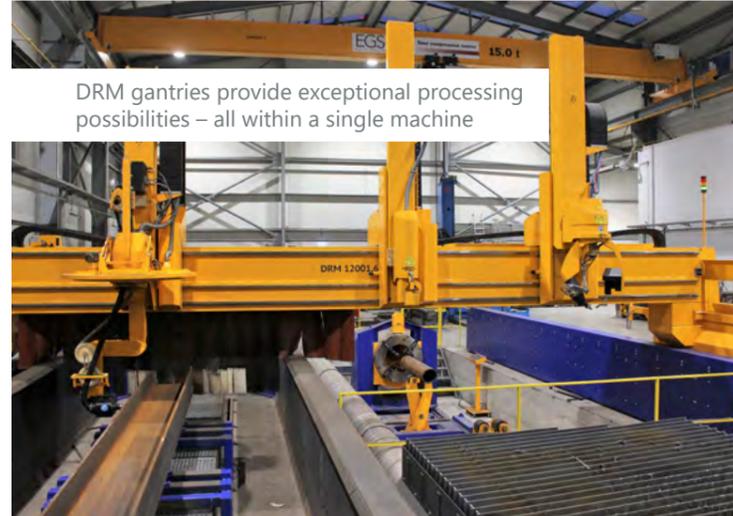
3D pipe & profile processing up to Ø 1,500 mm

- Enhance your production range by adding a pipe and profile cutting option for processing of a wide range of pipe diameters including heavy pipes up to 12 t
- Convenient cutting program creation with MicroStep's 2D and 3D CAM software
- High precision and dimensional accuracy reduce post-processing costs
- If required, the pipe cutting channel can be covered with additional grates and used as extension of the cutting table including sideways fume extraction

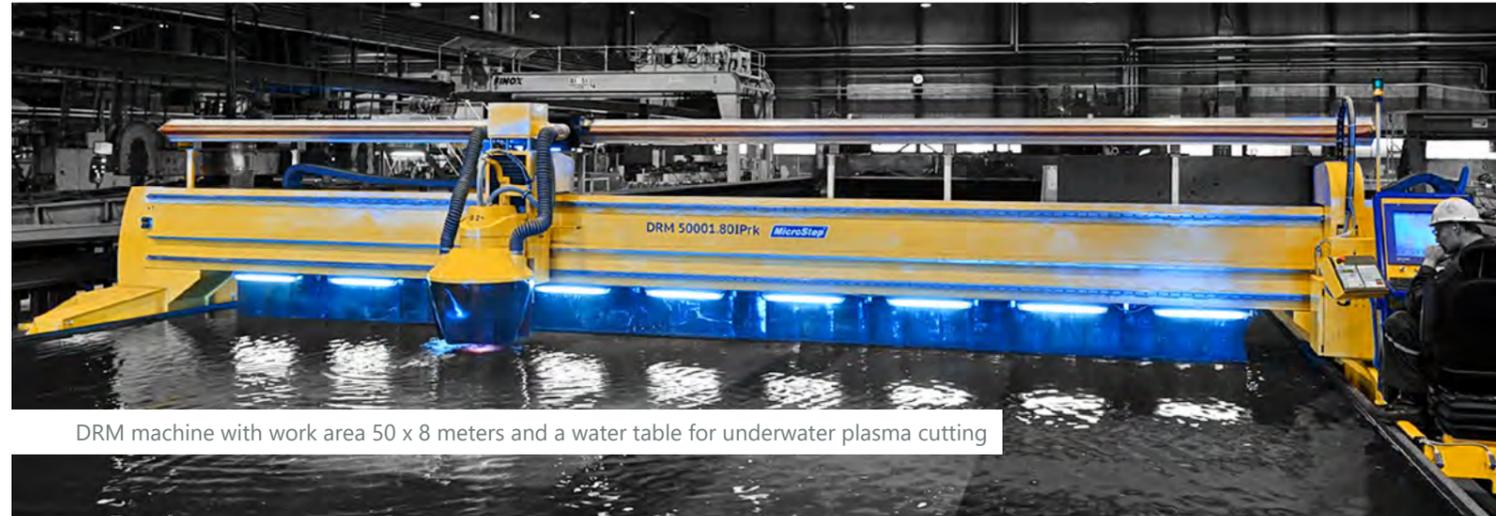
Real shape scanning of beams a profiles is crucial for accurate cutting



DRM gantries provide exceptional processing possibilities – all within a single machine



Cutting of pipes up to Ø 3,000 mm



DRM machine with work area 50 x 8 meters and a water table for underwater plasma cutting



Tank end processing on DRM, with a 3D rotator with tilt angle up to 120°



DRM's automatic drilling solution with 55 kW spindle with inner cooling and a dedicated drilling table