



QUARRYING | MDS M515 PROCESSING RIP-RAP

A Basalt quarry in Germany wanted to produce 10-60kg armour rocks for a customer completing a water defense project.

Challenge

Basalt is an exceptionally durable rock, ideal for sea and water defense projects, but it is also highly abrasive. Its large size and the significant wear and tear it causes result in high processing costs, making efficient handling in a scalping screen challenging.

Job Requirements

- Produce a 10-60kg armour rock for the customer
- Machine must be sufficiently wear resistant for continuous long-term feeding of abrasive material
- Reduce the need to prep the in-feed material before screening



M515 Heavy Duty Trommel Solution

Given the density of basalt and using a rock-size calculator, it was determined that rocks weighing 10-60kg would fall within the size range of 150-300mm. The M515's adjustable screen drum frame allowed for the installation of screens tailored to the application. For this purpose, heavy-duty 150mm and 300mm screens made of Hardox, wear-resistant steel, were used.

Additionally, a tipping grid with 450mm openings enabled direct feeding of material into the M515 without the need to preprocess the pile, any rocks that were too large were rejected by the grid and deflected away from the machine.



The MDS M515 Heavy Duty Trommel can handle large feed loads of up to 20T in its massive 12.6m³ (16.5yd³) hopper, taking up to 800mm (32") size rocks in the feed. This unit offers a different screening mechanism to regular screens, allowing it to effectively clean rocks and screen materials. It has a rotating drum that tumbles and agitates the material inside, allowing it to break impurities from the rocks.



Location: GERMANY

Machine: MDS M515

Application: PROCESSING RIP-RAP

Throughput: 450-500 TPH, Fuel Efficiency, 15 L/hr

Machine Specs:

- CAT 3.6 Tier 4 Stage 5 Diesel
- Fines, 150mm Heavy Duty Changeable screens
- Mid, 300mm Heavy Duty Changeable Screens
- Tipping grid, 450mm openings





Key Benefits:

1.Tipping Grid: The 450mm tipping grid rejects any material too large for the trommel negating the need for pre-processing of the pile and reducing the risk of blockages in the machine

2.HD Screens: Heavy Duty screens made from Hardox wear resistant steel have a long life even in the most abrasive of applications. The bolt-in, bolt-out design allows for flexibility in material sizing from one job to the next

3.Large Mid-product: The M515 can accommodate material up to 450mm on the mid-product conveyor. This is a lot larger than most scalping screens can take, making it ideal for Armour Rock and Rip-Rap

4.Product Classification: The M515 was able to produce 4 different products in one pass:

- 0 – 150mm Fines Product
- 150 – 300mm Mid-Product
- 300 – 450mm Oversize Product
- 450mm + from the tipping grid

Conclusion:

The MDS M515 allowed the customer to fulfil their order for Armour Rock quickly and efficiently. Careful planning prior to the job meant that the appropriate screens were fitted, resulting in a product that met the required specification and saving the trommel from unnecessary wear and tear in abrasive material.