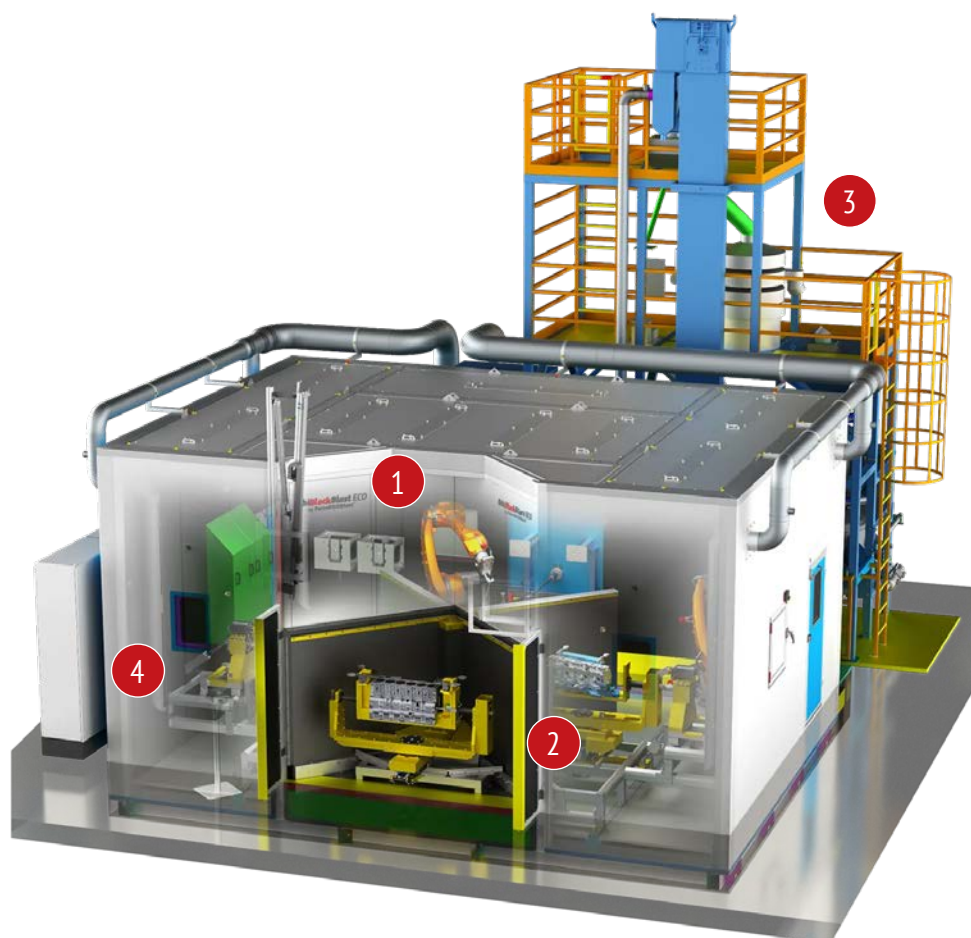


ORBIBLOCKBLAST BLASTING SYSTEM

Automatic internal sandblasting systems for engine blocks and cylinder heads

The OrbiBlockBlast is a modular, fully automatic internal sandblasting system engineered for the precise cleaning of complex internal geometries in engine blocks, cylinder heads, and similar castings. It is **custom-built** for automotive and heavy-industry applications where reliability, flexibility, and process consistency are essential.

With multiple stations, robotic manipulators, and programmable blasting recipes, removing casting sand, rust, scale, and other impurities from water jackets, air channels, and combustion pockets.



Robotic nozzle manipulation

Up to 4 manipulators, programmable on X, Y, Z axes.



Rotary Satellite Table

Indexing system supports 4–8 fixtures, up to 2500 kg capacity.



Automatic Media Recover

Closed-loop system with cyclone separator and classifiers.



FerroSmartPanel Interface

Easy programming of blast cycles and media flow.

How it works

1. Loading

A part is loaded manually with a crane or automatically via robot. The part is mounted onto a rotary satellite with custom clamping fixtures that ensure consistent positioning and orientation.

2. Program Selection

Operators select a blasting recipe through the FerroSmartPanel. Each recipe includes parameters for nozzle movement, media flow, pressure, and cycle time. Access levels control who can change what.

3. Blasting Process

The satellite indexes into the blasting chamber. Robotic manipulators, equipped with adjustable tungsten or boron carbide nozzles, clean the internal surfaces using high-velocity abrasive streams. Depending on the geometry, internal rotary lances are also used to access narrow or curved cavities. Manipulators can move vertically and horizontally in programmable steps.

4. Cleaning and Finishing

After blasting, internal and external blow-off stations remove all residual media using compressed air. Collected abrasive is recycled and is automatically returned to the blasting generator.

5. Unloading

Once finished, the part rotates to the unloading station and a new part can enter with each rotation initiating a new tact in the process.

Specification ORBIBLOCKBLAST

* **Please note:** This is a sample specification. Each machine is **custom-made**, so the data may vary based on specific requirements and purposes.

	ORBIBLOCKBLAST 4/2 ECO	ORBIBLOCKBLAST 8 ECO	ORBI-BLOCKBLAST
Blast Chamber Dimensions (L x W x H mm)	2000 x 2000 x 2400	6000 x 6000 x 3500	6000 x 6000 x 3500
Workpiece Types	4 engine blocks	4- 6 cylinder heads	blocks and heads
Turntable Configuration	4 (2 blast, 2 load)	8 (6 blast, 2 load)	4 (2 blast, 1 load, 1 blow-off)
No. of Manipulators	2	4	2
Nozzles per Manipulator	2	2 dual, 2 single	1 dual, 1 single
Internal Rotary Lance	o	•	•
Cycle Time (min)	4	3-6	4
Satellite Payload (kg)	500	500	500
Blasting Generator	TZP 100/60 x2	TZP 500/200	TZP 500/6
Abrasive Type	Steel shot S170–S230	Steel shot S170–S230	Steel shot S170–S230
Media Recovery System	Conveyor + elevator	Seperator + elevator	Cyclone + elevator
Filter Unit	CENTRO 4/4-500	CENTRO 4/6-500	CENTRO 4/6-500
Air Consumption (Nm³/min @ bar)	22 @ 6.0	12-16 @ 6.5	16 @ 6.0
Power Supply (kW)	11.5	10	35
Tool Changer for Lance	o	•	•

• - standard | o - optional | x - not available