BRISTLE BLASTER®
Industrial
MONTI "GREEN" SURFACE PREPARATION SYSTEMS
THE KEY FEATURES OF BRISTLE BLASTING

What is the Bristle Blasting process?
Bristle Blasting is a new process that uses a specially designed rotary bristle tool for achieving both corrosion removal and an anchor profile.

How does the tool perform blasting operations?
The bristle tips are designed to strike the corroded surface with kinetic energy that is equivalent to standard processes that use grit blast media. Immediately after the bristle tips strike the surface, they retract (“rebound”) from the surface, which results in both corrosion removal and micro-indentation that exposes fresh surface.

Consequently, surfaces that have been treated by Bristle Blasting have a texture and visual cleanliness that mimics those obtained by traditional grit blasting processes.

Advantages:
• visual cleanliness as achieved by grit blasting (near white metal or SSPC-SP 10 or SA 2.5)
• roughness capability from 40-120 µm Rz (1.6-4.7 mils)
• hand held power tool, easy to operate and to transport (weight of Bristle Blaster® Pneumatic approx. 1.2 kg / 2.6 lbs)
• no complex equipment, machinery or work preparation required – only compressed air or electric power supply
• ATEX approved for the use in Zone 1 – potentially explosive atmospheres (for Bristle Blaster® Pneumatic)
• grit free process – no additional waste production
• no need for housing installations, no reprocessing or disposal of grit media needed
• ideal for spot-repair and touch-up jobs

Watch the high-speed video with your Smartphone (youtube)

Sequences from the high-speed-video, recorded with a frame rate of 30,000 frames/sec
Hub speed: 2,500 rpm
Impact duration: 0.0003 sec

Find the video here:
http://www.monti.de/flash/highspeedmovie.html

The bristles are obstructed (creating a tension), accelerated (released from the Accelerator Bar), impact the surface, and retract from the surface

Corroded surface before and after treatment by Bristle Blaster®

Scanning electron micrograph of bristle blast surface

20 x
Bristle Blasted Surface

100 x
Performance of The Bristle Blaster® Technology

Corrosion, Mill Scale, and Coating Removal
Restores surface to near white metal visual standard (or SA 2.5, NACE 2 or SSP-SP-10)

Surface Texture / Anchor Profile
Roughness capability from 40-120 µm Rz (1.6-4.7 mils) – depending on treated material. Also on weld seams

Eco-friendly
„Green“ surface treatment, does not use or produce hazardous materials

Improved Integrity of Treated Surfaces
Generates compressive residual stress along the treated surface for crack growth resistance, improved fatigue life, and improved corrosion resistance

Negligible Heat Generation
Surface free of thermal damage/heat marking

Simple/Economical
Eliminates the need for complex and costly abrasive blast equipment

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Bristle Blaster® Pneumatic was approved by ATEX for the use in Zone 1 – potentially explosive atmospheres

Bristle Blaster® Pneumatic
Technical data
Weight: 1.2 kg / 2.6 lbs
Air pressure connection thread: 1/4 " PT
Required hose diameter: 3/8 " ID (9.5 mm)
Rotational speed: 3500 RPM
Required flow pressure: 6.2 bar / 90 psi
Average air consumption: 17.5 CFM (500 l/min)
Vibration (EN ISO 8662-1; 8662-4): 2 m/sec²
Sound pressure level (DIN 45635-21; ISO 3744): 83 dB

Bristle Blaster® Electric
Technical data
Weight: 2.3 kg / 5.1 lbs
Output: 550 W
Voltage: Electric 230V 230 V (±10 %)
Electric 120V 120 V (±10 %)
Rotational speed: 3200 RPM
Vibration (EN ISO 8662-1; 8662-4): 2.8 m/sec²
Sound pressure level (DIN 45635-21; ISO 3744): 82 dB
Set Bristle Blaster® Industrial Pneumatic
consisting of:
• drive unit Bristle Blaster® Pneumatic
  with air cooling, noise reduction, dust exhaust, special gear reduction
• MBX® Adaptor Systems for 23mm- and 11mm-belts
• Accelerator Bars for 23mm- and 11mm-belts
• Air Pressure Regulators for 23mm- and 11mm-belts, with couplings and nipples
• 5 Bristle Blaster® Belts, 23 mm
• 5 Bristle Blaster® Belts, 11 mm
  • packed in a blow mould case
  As Set for stainless steel or aluminum surface preparation:
  incl. stainless steel Belts and stainless steel Accelerator Bars Art.No. SP-649-BMC

Set Bristle Blaster® Industrial Electric
consisting of:
• drive unit Bristle Blaster® 230V resp. 120V with special gear reduction
• MBX® Adaptor System 23mm
• Accelerator Bar for 23mm-belts
• 10 Bristle Blaster® Belts, 23mm
  • packed in a blow mould case
  230V 220V
  As Set for stainless steel or aluminum surface preparation:
  incl. stainless steel Belts and stainless steel Accelerator Bar
  230V 220V

Bristle Blaster® Belts, carbon spring steel
bristles: 0.7 mm carbon spring steel, angled, ground tips
ring color: red
23 mm width:
  Art.No. BB-033-10
11 mm width:
  Art.No. BB-034-10
(10 pack)

Bristle Blaster® Belts, stainless steel
bristles: 0.7 mm stainless steel, angled, ground tips
ring color: white
23 mm width:
  Art.No. BB-102-10
11 mm width:
  Art.No. BB-103-10
(10 pack)