

# BRISTLE BLASTING POWERTOOLS

PREPARATION  
FROM  
SCRATCH



II 2G c IIA T4 X



# ABSOLUTELY GRÜNDLICH

QUALITY MADE IN GERMANY SINCE 1987

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# BLASTING WITHOUT GRIT

Discover the power of our specialized powertools. Innovative surface preparation solutions to achieve blasting quality without grit. Whether onshore or offshore, whether removing, cleaning or profiling, MontiPower's innovative blasting technology ensures the best possible bond. The world's best coatings and sealants deserve the best surface preparation.

**Absolutely Gründlich stands for a thorough and sustainable long-term protection of your assets. MontiPower®-preparation from scratch!**



Bristle blaster® on an offshore platform

**VS.**



Conventional grit blasting

## MONTIPOWER INNOVATION

The patented Bristle Blaster® is the first hand-held brush belt system in the world that produces a quality of surface roughness comparable to that achieved by 'grit blasting'. The Bristle Blasting process is an innovation that both removes corrosion and generates an anchor profile by using a specially designed rotary bristle belts. This belt consists of wire bristle tips that are bent forward and dynamically tuned to a hand-held powertool which operates at approximately 2,500 rpm.

## GROUND BREAKING AND CUTTING-EDGE

Bristle Blaster® is the world's only hand-held powertool that can achieve sandblasting results. The patented technology removes corrosion and coatings quickly and thoroughly. At the same time, it creates surface preparation grades comparable with Sa2½ (SSPC-SP 10/ NACE No. 2) to Sa3 (SSPC-SP 5/NACE No. 1) with roughness levels of up to 120 µm (4.72 mil) Rz.



- › Bristle Blasting is a surface preparation process that uses a specially designed rotary bristle belt for achieving both corrosion removal and an anchor profile.
- › The rotating bristles are DYNAMICALLY TUNED to the powertool which results in impact and immediate retraction of the bristle tips from the corroded surface.
- › The bristle tips strike the corroded surface with kinetic energy that is equivalent to grit blast media generating a texture and visual cleanliness that mimics the grit blasting process.
- › Bristle Blasting simplifies the surface preparation operation and reduces costs through the elimination of expensive equipment, media and extensive environmental and safety measures.

From industrial to marine, from automotive to infrastructure, MontiPower® has solutions for all kinds of surfaces across many different sectors. Partnering with MontiPower® lets you solve complex challenges, every day.

- › **WIND / RENEWABLE ENERGY**
- › **INDUSTRIAL**
- › **AUTOMOTIVE**
- › **MARINE**

- › **BRIDGES, RAIL, PORT & HIGHWAYS**
- › **STAINLESS STEEL**
- › **WELDING**



## MECHANICAL PRINCIPLES

Bristle tips are designed to strike the corroded surface with kinetic energy that is equivalent to conventional blasting processes that use grit blast media. Immediately after the bristle tips strike the corroded steel surface, they retract (i.e., “rebound”) from the surface, which results in both corrosion removal and a 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 conventional grit blasting processes. The different powertools of MontiPower® are a phenomenal breakthrough when it comes to ‘blasting without grit’. The Bristle Blasting process provides the foundation for new surface preparation product ranges.

## COMMON APPLICATIONS

Although the Bristle Blasting process is ideally suited for spot repair applications, it can also be readily applied to larger surface areas where the use of other metal cleaning processes may be prohibitive. The process provides an efficient means for the removal of corrosion, mill scale, defunct protective coatings, and for post-weld cleaning operations. These applications frequently arise in a wide range of fabricating and infrastructure-support operations, such as onshore/offshore well drilling installations, bridge refurbishment, the fabrication and repair of naval/marine vessels and industrial maintenance applications.



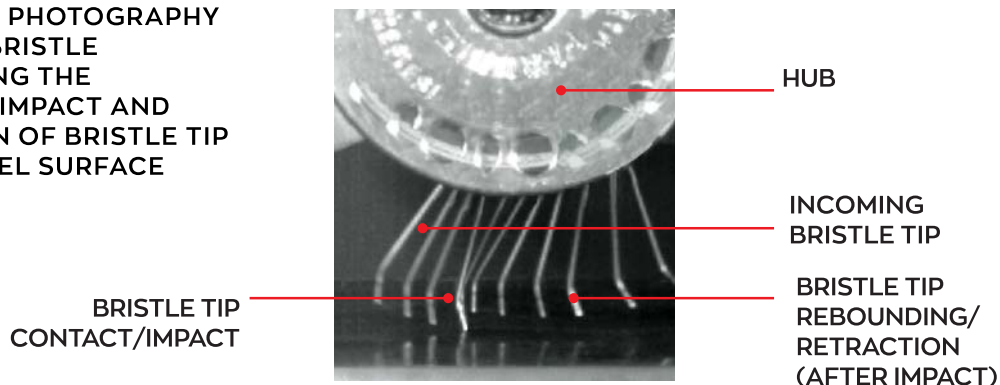
## PROCESS ADVANTAGES/BENEFITS

The primary advantages of the Bristle Blasting process lie in its simplicity and in its economic benefits. The tool itself is driven by a light-weight motor that can utilize either a standard electric power source or compressed air. Safety precautions taken by the operator are the same as those which apply to ordinary hand-held powertools namely: wearing work gloves, suitable work-clothing and appropriate face/eye protection. The tool has excellent portability and eliminates the need for complex equipment, work-suits, breathing apparatus and grit-recovery systems that are commonly required for ordinary abrasive blasting processes. In addition, the Bristle Blasting process is eco-friendly in that it does not use or generate hazardous waste, thereby 'greening' industry's approach to corrosion removal and surface preparation of steel components.

## TOOL PERFORMANCE AND LIFE

Independent third party laboratory testing has indicated that the Bristle Blaster® can perform on a par with traditional grit blasting processes. Corroded and pitted steel surfaces can be restored to a near-white or white metal appearance after treatment. In addition, an anchor profile that ranges from 2.6 to 3.3 mil (65 - 85  $\mu\text{m}$  Rz) is routinely obtained on standard API 5L steel, which is commonly used for petroleum piping applications. Testing has also shown that corroded surfaces can be thoroughly treated at a rate of 1.1  $\text{m}^2/\text{hr}$  per operator per single belt, which is well within the life of a single Bristle Blaster belt. Finally, the Bristle Blasting process simultaneously generates a compressive residual stress along the treated surface which, in turn, can increase the ability of steel to resist cracking, fatigue and stress corrosion.

### HIGH-SPEED PHOTOGRAPHY OF SINGLE BRISTLE ILLUSTRATING THE APPROACH, IMPACT AND RETRACTION OF BRISTLE TIP FROM A STEEL SURFACE



BRISTLE BLASTER®  
PNEUMATIC



DEMONSTRATED PERFORMANCE IN CORROSION REMOVAL



API 5L Piping



- Bristle Blaster®
- Near- white/White metal
- 1.1 m<sup>2</sup>/hr



- 83 µm Rz (3.3 mil)





Noise Reduction

Dust Exhaust System



BRISTLE BLASTER®  
ELECTRIC



BRISTLE BLASTER®  
CORDLESS



BRISTLE BLASTER®  
DOUBLE



BRISTLE BLASTER®  
AXIAL

## THE BRISTLE BLASTER® **ADVANTAGE**

THE BRISTLE BLASTER® OFFERS DISTINCT ADVANTAGES OVER CONVENTIONAL SURFACE PREPARATION METHODS AND WILL YIELD SUPERIOR RESULTS - WITH FAR LESS TIME AND EFFORT.

- Removes corrosion, coatings, mill scale and other contaminants
  - without removing healthy material
  - without grinding or polishing
- Generates anchor profiles ranging from 2.5 to 3.3mil (65 - 85  $\mu\text{m}$  Rz) including on weld seams, edges, around bolts and on surface irregularities
- Restores corroded and pitted surfaces to near-white metal or white metal appearance
- Improves integrity of treated surface - generates compressive residual stress
  - for crack growth resistance, improved fatigue life and improved corrosion resistance
- Cleans and profiles quickly and economically using safe and durable Bristle Blaster® belts - eliminating the need for costly abrasive blast equipment
- Suitable for spot repairs as well as larger areas where other processes are prohibitive - does not use/produce hazardous material

# BRISTLE BLASTER® ELECTRIC

**AVAILABLE IN**  
230V / 50HZ &  
120V / 60HZ



Bristle Blasting technology simultaneously removes corrosion and generates anchor profile.

The Bristle Blaster® Electric is available in 230V / 50Hz and 120V / 60Hz with steel and stainless steel belts for non-ferrous substrates.

## Details

Length	400 mm
Height (incl. handle)	180 mm
Width	100 mm
Weight	2.2 kg   4.9 lbs
Output	700 W
Free Speed (± 5%)	3,200 rpm
Vibration	2.8 m/sec <sup>2</sup>
Sound pressure level	83 dB(A)



# BRISTLE BLASTER® PNEUMATIC



**SUITED  
FOR USE**  
WITH 23MM OR  
11MM BELTS

The Bristle Blaster® Pneumatic is ATEX-approved and includes Dustcontrol.



II 2G c IIA T4 X

## Details

Length	350 mm
Height (incl. handle)	160 mm
Width	70 mm
Weight	1.5 kg   3.3 lbs
Required flow pressure	6.2 bar   90 psi
Average air consumption	17.5 cfm   0.5 m <sup>3</sup> /min
Free Speed (± 5%)	3,500 rpm
Threaded air inlet	Rp 1/4"
Required hose diameter (interior)	9.5 mm   3/8"
Vibration	2 m/sec <sup>2</sup>
Sound pressure level	83 dB(A)

# BRISTLE BLASTER® CORDLESS



USE FOR  
**SPOT  
REPAIR**



The new cordless technology for the Bristle Blaster® includes a Safety Switch, an Anti-Vibration-Handle and a new robust fronthead.

Adjustable Accelerator Bar to fit difficult to reach objects. 2,200 rpm for single belt operation.

As part of the Cordless Alliance System, battery packs and chargers from different manufacturers can be used interchangeably.

We recommend using the 18V/8.0 Ah battery pack, which should last up to 0.5m<sup>2</sup> per fully charged battery.

## Details

Length (without battery)	420 mm
Height (incl. handle)	160 mm
Width	80 mm
Weight (without battery)	2.2 kg   4.9 lbs
Battery Voltage	18 V
Max. output	700 Watt
Free Speed (± 5%)	2,300 rpm
Vibration	4 m/sec <sup>2</sup>

# BRISTLE BLASTER® DOUBLE



USE FOR  
FLAT  
SURFACES

## DOUBLE THE POWER!

The Bristle Blaster® Double uses two 23mm belts.

Productivity rate of approx. 3m<sup>2</sup>/hr.

Includes an Anti-Vibration-Handle, Safety Switch and loop to attach a safety hook.

Additional internal thread for alternative handle position.

Details	
Length (without cable)	430 mm
Height (incl handle)	240 mm
Width (incl. protection cover)	100 mm
Weight	2.9 kg / 6.4 lbs
Max Output	910 Watt
Free Speed (± 5%)	2,300 rpm

# BRISTLE BLASTER® AXIAL

SPECIALIST FOR  
**ANGLES &  
FILLET  
WELDS**



The Bristle Blaster® Axial with its patented Accelerator Bar is specially designed to remove corrosion in areas that are difficult to reach. It is a perfect complement to the well-proven Bristle Blaster® systems.

The patented Accelerator Bar ensures a significantly higher and continuous performance of the Bristle Blaster® Axial belts.

Operates with 11mm belts only, but includes right and left-sided belts for hard to reach angles.

## Details

Length	300 mm
Width	125 mm
Weight	1.1 kg   2.4 lbs
Required flow pressure	6.2 bar   90 psi
Average air consumption	14.2 cfm   0.4 m <sup>3</sup> /min
Free Speed (± 5%)	2,700 rpm
Threaded air inlet	G 1/4"
Required hose diameter (interior)	9.5 mm   3/8"
Vibration	1.45 m/sec <sup>2</sup>
Sound pressure level	84 dB(A)



**ACCELERATOR BAR**

ITEM NO.	MATERIAL	WIDTH
ZU-060	Steel	23 mm belts
ZU-061	Steel	11 mm belts
ZU-062	Stainless steel	23 mm belts
ZU-063	Stainless steel	11 mm belts

**ACCELERATOR BAR - DOUBLE**

For use with Bristle Blaster® Electric Double

ITEM NO.	MATERIAL	APPLICATION
ZU-068	Steel	For two 23 mm belts

**ACCELERATOR BAR - AXIAL**

For use with Bristle Blaster® Axial

ITEM NO.	MATERIAL
ZU-064	Steel
ZU-065	Stainless steel



**BRISTLE BLASTER® BELT, STEEL,  
23 MM**

**ITEM NO. BB-033**



**BRISTLE BLASTER® BELT, STEEL,  
11 MM**

**ITEM NO. BB-034**



**BRISTLE BLASTER® BELT,  
STAINLESS STEEL, 23 MM**

**ITEM NO. BB-102**



**BRISTLE BLASTER® BELT,  
STAINLESS STEEL, 11 MM**

**ITEM NO. BB-103**



**BRISTLE BLASTER® AXIAL BELT,  
STEEL, 11 MM, RIGHT**

**ITEM NO. BB-098R Axial only**



**BRISTLE BLASTER® AXIAL BELT,  
STEEL, 11 MM, LEFT**

**ITEM NO. BB-099L Axial only**



**BRISTLE BLASTER® AXIAL BELT,  
STAINLESS STEEL, 11 MM, RIGHT**

**ITEM NO. BB-108R Axial only**



**BRISTLE BLASTER® AXIAL BELT,  
STAINLESS STEEL, 11 MM, LEFT**

**ITEM NO. BB-109L Axial only**