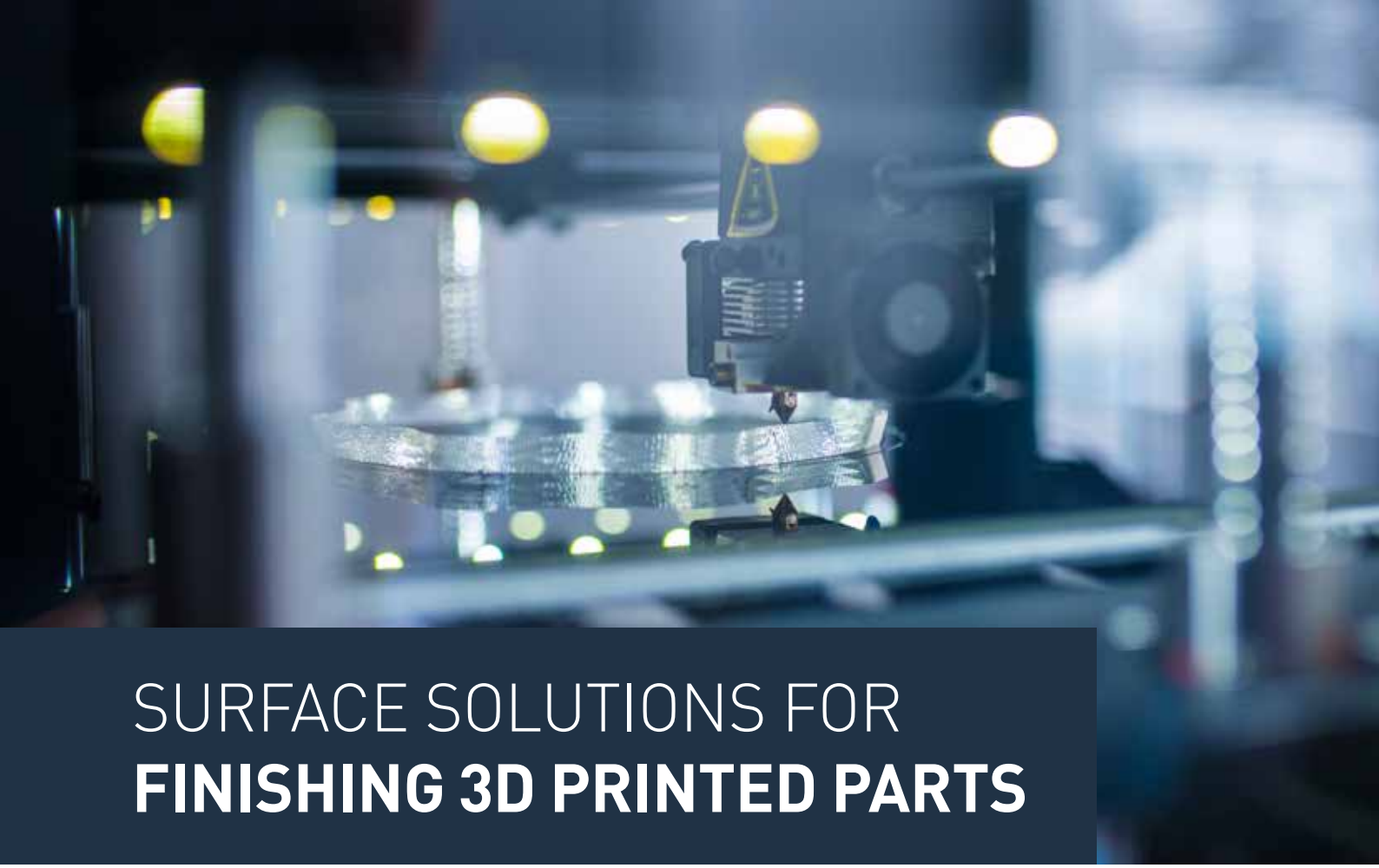
NORTON®
SAINT-GOBAIN

Transforming surfaces ...and beyond

SURFACE SOLUTIONS

FINISHING 3D PRINTED PARTS

SAINT-GOBAIN



SURFACE SOLUTIONS FOR **FINISHING 3D PRINTED PARTS**

3D printing (3DP) or additive manufacturing (AM), which started as an emerging technology, has grown to commercial production for many industries, such as aerospace, medical, tooling, automotive and energy.

With the exponential adoption of 3D printing, particularly with metal materials, finishing has been a key challenge. Many 3D printed parts require additional finishing steps to improve dimensional tolerance and surface quality

The thermal-mechanical properties of materials, such as hardness and ductility, play a significant role in the selection of material types for metal 3D printing applications.

Material properties are also an important factor for choosing the correct finishing processes and abrasive products.

Among typical 3D printed metals, superalloys and steels are generally finished with ceramic or cBN abrasives, while titanium and aluminium are finished with silicon carbide or diamond abrasives.

Post-processing of 3D-printed polymer parts presents additional challenges and requires specially designed automated solutions.

In addition to material properties, part geometry, initial surface condition, requirements for dimensional tolerance and surface finish are other factors to consider. 3D printed parts often consist of various complex features, and therefore may require different types of abrasive tools to achieve desired surface finish and optimal operational efficiency.

In partnership with AMT, a leading manufacturer of automated post-processing technology, Norton offers a comprehensive range of solutions ideal for all 3D printed parts finishing applications. Whether cutting, grinding metal or depowdering and shot blasting of polymer parts we have a perfect surface solution for every job.

This application guide is designed to provide recommendations for the best surface solutions for each application.

The full range of product availability can be found at **www.nortonabrasives.com** and **www.amtechnologies.com**.

Please contact your Norton representative with any questions or for additional products, sizes and configurations.

METAL PARTS

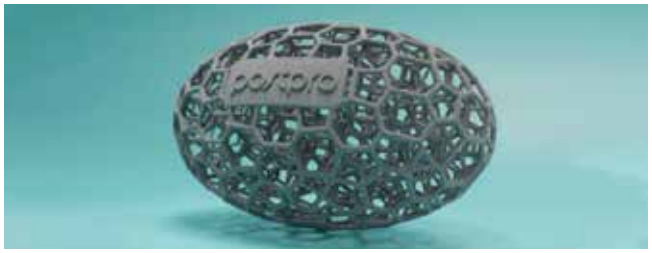
PART SEPARATION
Manual or automated cutting wheels to cut part from build plate.

BUILD PLATE RE-GRIND
Grind build plate to restore surface finish and flatness.

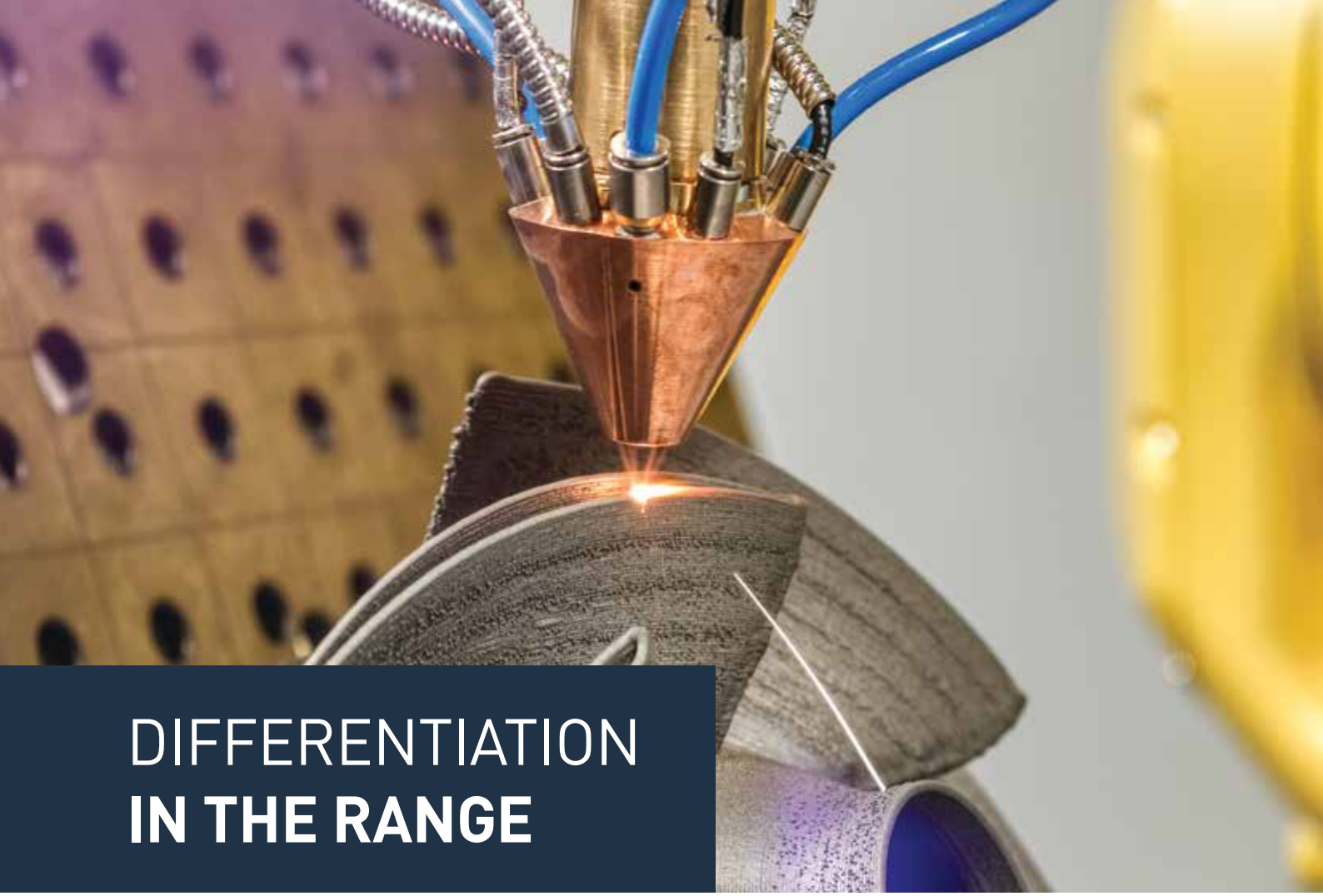
FREE-FORM FINISHING
Manual or robotic finishing with coated, non-woven and mounted point tools.

CNC GRINDING
CNC grinding with bonded and superabrasive wheels and mounted points.

POLYMER PARTS



AUTOMATED POST-PROCESSING SOLUTIONS
FOR POLYMERS



DIFFERENTIATION **IN THE RANGE**

We have one of the widest selections of abrasive products to meet every customer requirement. The range is classified into four quality-tiers (good/better/best/innovation) to help you choose the right product for your specific application.

INNOVATION

Norton's innovative abrasive solutions offer outstanding productivity and versatility.

GOOD

+++

Our **good** tier products promise great value with great performance you'd expect from Norton, at a competitive price.

BETTER

++++

Our **better** tier products are the right fit when you can't easily measure the value of a best tier product, but still have higher expectations for performance.

BEST

+++++

Our **best** tier products are top-of-the-range solutions with an impressive, measurable impact on reduced process cost.

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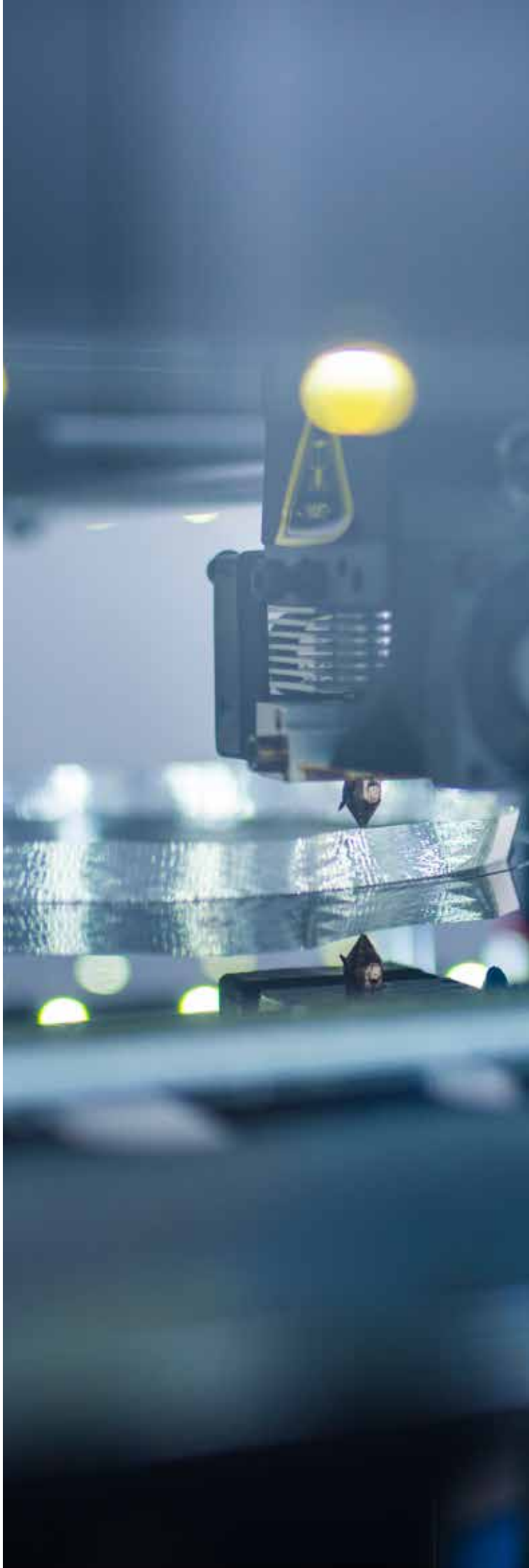
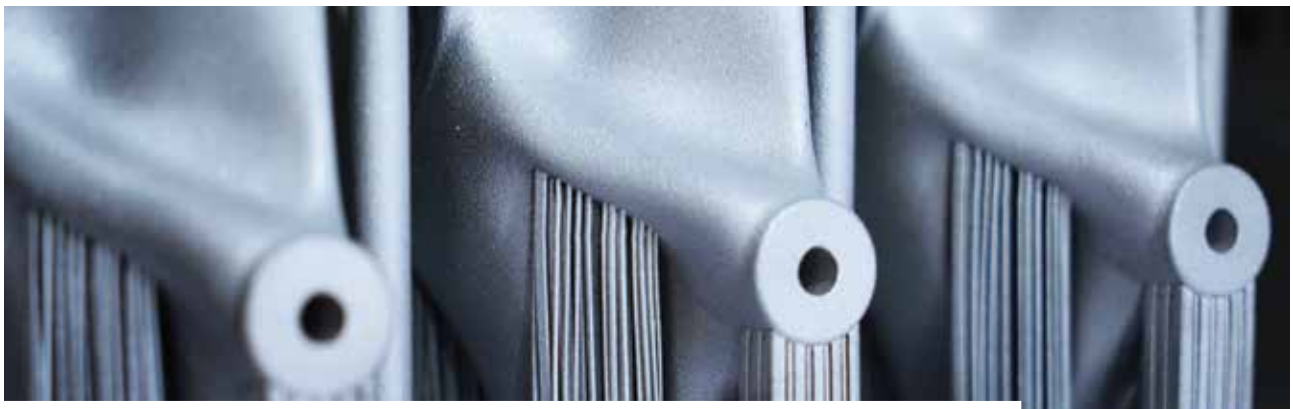




PART SEPARATION
FIRST STEPS

One of the first steps in the process of finishing additively manufactured parts is removing the printed part from the build plate and/or removing the support structures. There are several Norton products which can be used to complete this task including products for both manual and CNC operations. For manual cutting, Norton's free-cutting and user-friendly thin wheels can be paired with a right angle grinder. For automated and high precision applications we offer superabrasive diamond or cBN cutting wheels.

MANUAL CUTTING

Machine: Portable Cutting Tool
Small Diameter Cutting Disc <100 mm Diameter

NORTON BLUE FIRE +++++

- For hard to cut materials and applications

Machine: Right Angle Grinder
Cutting Discs >100 mm Diameter

NORTON QUANTUM3 CERAMIC ALUMINA INNOVATION

- For thicker parts and harder to grind materials

NORTON X-TREME +++++

- All purpose

NORTON ALU

- For use on Aluminium or soft metals

AUTOMATED OR CNC CUTTING

Material: **Ferrous**
cBN cutting wheels for automated cutting of ferrous materials

Material: **Non-Ferrous**
Diamond cutting wheels for automated cutting of non-ferrous materials

For specifications and sizes contact your Norton representative.

BUILD PLATE RE-GRIND

NEXT STEPS

After the part has been cut and removed from the build plate, the plate must be prepared for reuse. Rotary or reciprocating surface grinding can be used to re-establish the required roughness, flatness, and parallelism of metal build plates. Norton surface grinding wheels using ceramic alumina abrasive grain are recommended to achieve a consistent surface finish with lower cycle time and longer wheel life.

TOOLROOM/SURFACE GRINDING WHEELS

Machine: Surface Grinding Machine

Product	Specification
NORTON QUANTUM™ PRIME +++++	3NQN60F12VQNP
NORTON VV1 ++++	38A60F12VV1P

SURFACE GRINDING SEGMENTS

Machine: Blanchard Style Rotary Surface Grinding Machine

Product	Specification
NORTON QUANTUM™ PRIME +++++	3NQN46HVQN
NORTON VITRIUM$^{3®}$ ++++	38A46HVS3

For additional specifications and sizes contact your Norton representative.

FREE FORM FINISHING
USING OFF-HAND TOOLS

Free form finishing using off-hand tools can provide an excellent finish for metal 3D printed parts. A wide range of abrasive products are available including discs, belts and mounted points which can be used for off-hand or robotic grinding. Ceramic abrasives are recommended for use on stainless steel and superalloys while Silicon Carbide or Zirconia abrasives are best for finishing titanium and aluminium.

The abrasive products shown in this section can be used with portable power tools, including mini right angle sanders, die grinders or file belt grinders. The lightweight, small size and good flexibility of these portable tools allow for many possibilities in the finishing process, such as bringing tools to stationary parts, bringing parts to tools, and simultaneously manipulating both tools and parts. Multiple abrasive tools can be set up on a workstation to finish a variety of complex features with the most effective tools.

SMALL FLAT SURFACE

TOOL	GRINDING Material removal	BLENDING Defect removal	FINISHING Final finish
MINI ANGLE GRINDER 	COATED QUICK-CHANGE DISCS Coarse or medium grit	NON-WOVEN QUICK-CHANGE DISCS Coarse grade	NON-WOVEN QUICK-CHANGE DISCS Medium or fine grade

MINI ANGLE GRINDER RECOMMENDATIONS

GRINDING – MATERIAL REMOVAL

Coated Quick-Change discs

NORTON BLAZE® R980P CERAMIC ALUMINA +++++

- For use on Inconel, Stainless Steels, Titanium and Superalloys

BLENDING – DEFECT REMOVAL

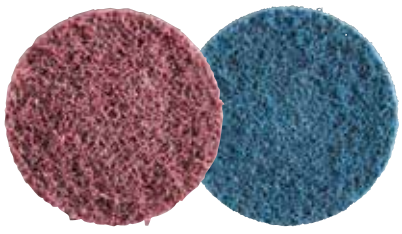
Non-Woven Quick-Change discs - Coarse grade

NORTON RAPID PREP ALUMINIUM OXIDE +++

- Reinforced with a special nylon fibre net backing (scrim) to increase the resistance to tearing. They provide a unique combination of aggressive performance, long life and improved finish.

FINISHING – FINAL FINISHING

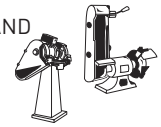
Non-Woven Quick-Change discs - Medium or fine grade



NORTON RAPID PREP ALUMINIUM OXIDE +++

- Reinforced with a special nylon fibre net backing (scrim) to increase the resistance to tearing. They provide a unique combination of aggressive performance, long life and improved finish.

LARGE FLAT SURFACE

TOOL	GRINDING Material removal	BLENDING Defect removal	FINISHING Final finish
ORBITAL SANDER 	-	LIGHTWEIGHT PAPER DISCS	-
IN-LINE DRUM SANDER 	COATED PORTABLE BELTS Extra coarse to fine grit	NON-WOVEN PORTABLE BELTS Coarse grade	NON-WOVEN PORTABLE BELTS Medium or fine grade
OFF-HAND BENCHSTAND AND BACKSTAND 	COATED BENCHSTAND AND BACKSTAND BELTS	NON-WOVEN BENCHSTAND AND BACKSTAND BELTS Coarse grade	NON-WOVEN BENCHSTAND AND BACKSTAND BELTS Medium or fine grade
	ENGINEERED ABRASIVE BELTS	ENGINEERED ABRASIVE BELTS	ENGINEERED ABRASIVE BELTS

ORBITAL SANDER RECOMMENDATIONS

BLENDING – DEFECT REMOVAL

Lightweight paper discs

NORTON PRO PLUS A975 NO-FIL® CERAMIC ALUMINA +++++

- For use on Inconel, Stainless Steel, Titanium and Superalloys

NORTON A275 NO-FIL® ALUMINIUM OXIDE ++++

- For use on Inconel, Stainless Steel, Titanium and Superalloys

PNEUMATIC IN-LINE DRUM SANDER RECOMMENDATIONS

GRINDING – MATERIAL REMOVAL

Portable belts

NORTON SG R929 CERAMIC ALUMINA +++++

- For use on Inconel, Stainless Steels, Titanium and Superalloys

NORTON NORZON R817 ZIRCONIA ++++

- For use on Aluminium

PNEUMATIC IN-LINE DRUM SANDER RECOMMENDATIONS

BLENDING – DEFECT REMOVAL
FINISHING – FINAL FINISHING

Non-woven portable belts

NORTON VORTEX® RAPID PREP ENGINEERED A/O ++++

- Coarse grit for scratch removal and medium or fine grit for final finishing
- Premium grain and proprietary Clean Bond™ for a smear-free finish on Aluminium, Inconel, Stainless Steel, Titanium and Superalloys

* Clean Bond Technology is a patented resin bond technology within non-woven products that eliminates smearing and reduces rework.

BACKSTAND MACHINES RECOMMENDATIONS

GRINDING – MATERIAL REMOVAL

Benchstand and backstand belts

NORTON VIKING R996 CERAMIC +++++

- Best choice for use on Inconel, Stainless Steel, Titanium and Superalloys

NORTON RED-X R976 CERAMIC +++++

- For use on Inconel, Stainless Steels, Titanium and Superalloys

NORTON BLUEFIRE R895 ZIRCONIA ++++

- For use on Carbon Steel and non-ferrous metals (Brass, Aluminium)

MATERIAL REMOVAL, BLENDING AND FINISHING

Engineered abrasive belts

NORTON NORaX® N889 J-WEIGHT +++++

- Available in X100 to X6 for all material types

NORTON NORaX® U464 XF-WEIGHT ++++

- Available in X110 to X70 for Titanium

NORTON NORaX® U936 Y-WEIGHT ++++

- Available in X200 to X16 for all material types

BLENDING – DEFECT REMOVAL
FINISHING – FINAL FINISHING

Non-woven benchstand and backstand belts

NORTON VORTEX® RAPID PREP ENGINEERED A/O ++++

- Coarse grit for scratch removal and medium or fine grit for final finishing
- Premium grain and proprietary CLEAN BOND for a smear-free finish on Aluminium, Inconel, Stainless Steel, Titanium and Superalloys

CONTOURED SURFACE WITH OPEN ACCESS

TOOL	GRINDING Material removal	BLENDING Defect removal	FINISHING Final finish
DIE GRINDER 	SPINDLE MOUNTED FLAP WHEELS Coarse grit	NON-WOVEN SPINDLE MOUNTED FLAP WHEELS Medium grade	NON-WOVEN SPINDLE MOUNTED FLAP WHEELS Medium grade
MINI ANGLE GRINDER 	NON-WOVEN QUICK-CHANGE DISCS Coarse grade	NON-WOVEN QUICK-CHANGE DISCS Medium grade	NON-WOVEN QUICK-CHANGE DISCS Medium or fine grade
PEDESTAL GRINDER 	FLANGE MOUNTED FLAP WHEELS Coarse grit	NON-WOVEN FLANGE MOUNTED INTERLEAVED FLAP WHEELS Coarse grade	NON-WOVEN FLANGE MOUNTED FLAP WHEELS Medium or fine grade

DIE GRINDER RECOMMENDATIONS

Use blending products directly on 3D printed parts if minimal shape change is desired on intricate features.

GRINDING – MATERIAL REMOVAL

Spindle mounted flap wheels - Coarse grit

NORTON QUANTUM™ R928 +++++

- Best choice for use on Inconel, Stainless Steel, Chromium Cobalt, Titanium, and extremely hard materials

NORTON R207 PLUS ALUMINIUM OXIDE +++

- Universal product for use on Stainless Steel, Carbon Steel, and non-ferrous metals (Brass, Aluminium)

BLENDING – DEFECT REMOVAL

Non-woven spindle mounted flap wheels - Medium grade

NORTON NON-WOVEN INTERLEAF FLAP WHEELS ALUMINIUM OXIDE +++

- Soft touch product with the flexibility to match the contours and awkward shapes of smaller ornate components

FINISHING – FINAL FINISH

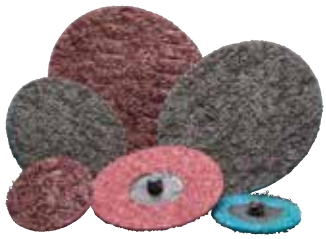
Non-woven spindle mounted flap wheels - Medium grade

NORTON NON-WOVEN FLAP WHEELS ALUMINIUM OXIDE +++

- Soft touch product with the flexibility to match the contours and awkward shapes of smaller ornate components

MINI ANGLE GRINDER RECOMMENDATIONS

Non-Woven Quick-Change discs made of tough and yet flexible synthetic fiber mesh for medium to light pressure grinding and finishing. Works well on all metals.



GRINDING – MATERIAL REMOVAL

Non-Woven Quick-Change discs - Coarse grade

NORTON RAPID PREP XHD CERAMIC ALUMINA ++++

BLENDING – DEFECT REMOVAL

Non-Woven Quick-Change discs - Medium grade

NORTON VORTEX® RAPID BLEND ENGINEERED A/O ++++

- Patented grain provides an excellent combination of light cut and grinding power combined with a fantastic finish level – both actions in 1 step

FINISHING – FINAL FINISH

Non-Woven Quick-Change discs - Medium or fine grade

NORTON RAPID BLEND ALUMINIUM OXIDE +++

- Versatile compacted fibre web structure provides ideal finish and touch-up capability with long life without damage or changing the geometry of the component

PEDESTAL GRINDER RECOMMENDATIONS

Flap wheels are ideal for intricate shapes and contours thanks to good conformity of design.

GRINDING – MATERIAL REMOVAL

Flange mounted flap wheels - Coarse grit

NORTON R207 ALUMINIUM OXIDE +++

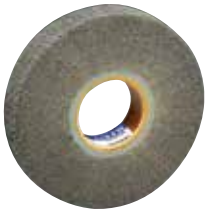
- Universal product for use on Stainless Steel, Carbon Steel, and non-ferrous metals (Brass, Aluminium)

BLENDING – DEFECT REMOVAL

Non-woven flange mounted interleaved flap wheels - Coarse grade

NORTON NON-WOVEN INTERLEAF FLAP WHEELS ALUMINIUM OXIDE ++++

FINISHING – FINAL FINISH



Non-woven flange mounted flap wheels - Medium or fine grade

NORTON NON-WOVEN FLAP WHEELS ALUMINIUM OXIDE ++++

CONTOURED SURFACE WITH WITH LIMITED ACCESS

TOOL	GRINDING Material removal	BLENDING Defect removal	FINISHING Final finish
FILE BELT MACHINE 	COATED FILE BELTS Coarse or medium grit	NON-WOVEN FILE BELTS Coarse grade	NON-WOVEN FILE BELTS Medium or fine grade

FILE BELT RECOMMENDATIONS

GRINDING – MATERIAL REMOVAL

File belts

NORTON VIKING R996 CERAMIC +++++

- For use on Inconel, Stainless Steel, Titanium and Superalloys

NORTON BLUEFIRE R895 ZIRCONIA OR R822 ++++

- For use on Carbon Steel and non-ferrous metals (Brass, Aluminium)

BLENDING – DEFECT REMOVAL

Non-woven file belts - Coarse grade

NORTON RAPID PREP ALUMINIUM OXIDE +++

- Reinforced with a special nylon fibre net backing (scrim) to increase the resistance to tearing. They provide a unique combination of aggressive performance, long life and improved finish

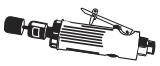
FINISHING – FINAL FINISH

Non-woven file belts - Medium or fine grade

NORTON RAPID PREP ALUMINIUM OXIDE +++

- Reinforced with a special nylon fibre net backing (scrim) to increase the resistance to tearing. They provide a unique combination of aggressive performance, long life and improved finish

INTRICATE SHAPES, INTERNAL DIAMETERS AND SMALL FEATURES

TOOL	GRINDING Material removal	BLENDING Defect removal	FINISHING Final finish
DIE GRINDER 	CARTRIDGE ROLL	NON-WOVEN CROSS BUFF	NON-WOVEN UNITISED WHEEL
	SLOTTED DISC	BORE POLISHER	NON-WOVEN STAR
	MOUNTED POINT Coarse grit	MOUNTED POINT Fine grit	COTTON FIBRE MOUNTED POINT

DIE GRINDER RECOMMENDATIONS

Use blending products directly on 3D printed parts if minimal shape change is desired on intricate features.

GRINDING – MATERIAL REMOVAL

Cartridge rolls

NORTON BLAZE® R920 CERAMIC ALUMINA +++++

- For aggressive material removal

Overlap slotted discs

NORTON BLAZE® R920 CERAMIC ALUMINA +++++

Mounted points - Coarse grit

NORTON NORZON ZIRCONIA ALUMINA - RESIN BOND +++++

- For long tool life

NORTON QUANTUM™ CERAMIC GRAIN – VITRIFIED BOND +++++

- For high precision

BLENDING – DEFECT REMOVAL

Non-woven cross buffs

NORTON NON-WOVEN CROSS BUFF ALUMINIUM OXIDE ++++

Bore polishers

NORTON BORE POLISHER ALUMINIUM OXIDE ++++

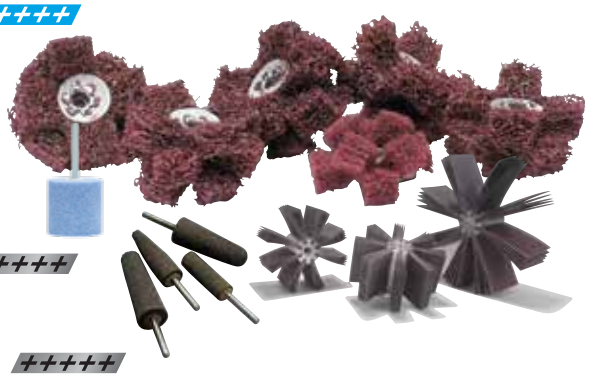
Mounted points - Fine grit

NORTON NORZON ZIRCONIA ALUMINA - RESIN BOND +++++

- For long tool life

NORTON QUANTUM™ CERAMIC GRAIN – VITRIFIED BOND +++++

- For high precision



FINISHING – FINAL FINISH

Non-woven unitised wheels

NORTON RAPID BLEND NEX UNITISED WHEEL ALUMINIUM OXIDE ++++

Non-woven stars

NORTON SURFACE PREPARATION STAR ALUMINIUM OXIDE ++++

Non-woven unitised mounted points

NORTON RAPID BLEND VORTEX® UNITISED POINT/WHEEL ALUMINIUM OXIDE ++++

EDGE GRINDING AND CHAMFERING

TOOL	GRINDING Material removal	BLENDING Defect removal	FINISHING Final finish
MINI ANGLE GRINDER 	COATED QUICK-CHANGE DISC	NON-WOVEN QUICK-CHANGE DISC Coarse grade	NON-WOVEN QUICK-CHANGE DISC Medium or fine grade
DIE GRINDER 	CARTRIDGE ROLL CARBIDE BURRR	NON-WOVEN CROSS BUFF MOUNTED POINT	NON-WOVEN UNITISED WHEEL COTTON FIBER MOUNTED POINT
PEDESTAL GRINDER 	-	NON-WOVEN CONVOLUTE WHEEL	ABRASIVE BUFFING WHEEL

MINI ANGLE SANDER RECOMMENDATIONS

Quick-Change discs are recommended for deburring and chamfer finishing of large external areas.

GRINDING – MATERIAL REMOVAL

Coated Quick-Change discs

NORTON BLAZE® F980 CERAMIC ALUMINA +++++

- For use on Inconel, Stainless Steel, Titanium and Superalloys

BLENDING – DEFECT REMOVAL

Non-woven Quick-Change discs - Medium grade

NORTON VORTEX® RAPID BLEND ENGINEERED A/O ++++

FINISHING – FINAL FINISH

Non-woven Quick-Change discs - Medium or fine grade

NORTON RAPID BLEND ALUMINIUM OXIDE +++

DIE GRINDER RECOMMENDATIONS

For intricate features and difficult to reach areas.

GRINDING – MATERIAL REMOVAL

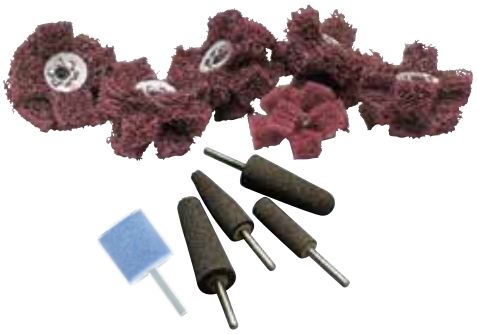
Cartridge rolls

NORTON BLAZE® R920 CERAMIC ALUMINA +++++

Carbide burrs

NORTON DOUBLE CUT CARBIDE BURRS

BLENDING – DEFECT REMOVAL



Cross buffs

NORTON NON-WOVEN CROSS BUFFS ALUMINIUM OXIDE

Mounted points

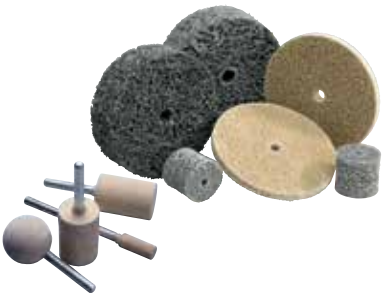
NORTON NORZON ZIRCONIA ALUMINA - RESIN BOND

- For long tool life

NORTON QUANTUM™ CERAMIC GRAIN – VITRIFIED BOND +++++

- For high precision

FINISHING – FINAL FINISH



Non-woven unitised wheels

NORTON RAPID BLEND NEX UNITISED WHEEL ALUMINIUM OXIDE +++

Cotton fibre mounted points

NORTON COTTON FIBER ALUMINIUM OXIDE - RESIN BOND +++

PEDESTAL GRINDER RECOMMENDATIONS

BLENDING – DEFECT REMOVAL

Convolute wheels

NORTON RAPID FINISH GENERAL PURPOSE A/O & S/C +++

FINISHING – FINAL FINISH

Buffing wheels

NORTON FAB (FIXED ABRASIVE BUFF) WHEEL

- Buffing wheel with abrasive grain on both sides of the cloth virtually eliminates the need for messy compound

CNC GRINDING

CNC grinding of 3D printed parts can be performed using conventional bonded or superabrasive mounted points as well as larger wheels. Norton offers a wide selection of products using a variety of shapes, grains, and bond technologies in both stock and made-to-order products. CNC grinding for large batch processes would typically be performed with larger wheels while CNC grinding with conventional bonded or superabrasive mounted points can be used for more flexibility on detailed parts.

CNC GRINDING FOR LARGE BATCH PROCESS

- Grinding wheels can be prepared using a form roll dresser which matches part profile for creepfeed, surface or ID/OD plunge grinding.
- Part profile can also be produced by CNC grinding on multi-axis machines.
- Tight control of profile accuracy and surface finish is ensured with proper selection of wheel specification, grinding process and wheel dressing
- Grinding wheels and customized process solutions are available for Ni-based superalloys, titanium, tool steels, Co-Cr alloys, stainless steel, and composite materials

NORTON QUANTUM™ PRIME

- Precision grinding for reduced cycle time and improved part quality and surface finish

NORTON WINTER VITRON7™ VIT CBN SUPERABRASIVE WHEELS

- For high production volumes

NORTON WINTER PARADIGM DIAMOND SUPERABRASIVE WHEELS

- For difficult-to-grind materials

NORTON WINTER ELECTROPLATED DIAMOND OR CBN SUPERABRASIVE WHEELS

- For smaller lot sizes and added flexibility

CASE STUDY

PARTS:	3D printed Inconel 718 and Ti-64Al-4V with profile shown. All parts were treated by stress relief, hot isostatic press, anneal and age hardening before grinding
MACHINE:	Creepfeed grinder with 5-10% water soluble coolant
DRESSER:	Form plunge roller
NORTON PRODUCT:	Vitrium3 wheel with Norton Quantum ceramic abrasives for Inconel 718,
RESULT:	• Surface finish of ~0.7 um achieved for Inconel 718, at specific material removal rate of approximately 2 mm^3/min/mm • Desirable compressive residual stress on the ground surface
NORTON PRODUCT:	Paradigm wheel with diamond abrasives for Ti-64Al-4V
RESULT:	• Surface finish ~ 0.9 um for Ti-64Al-4V, at specific material removal rate of approximately 2 mm^3/min/mm • Desirable compressive residual stress on the ground surface

FLEXIBLE CNC GRINDING WITH MOUNTED POINTS

- Used on jig grinders, machining centres and CNC milling machines in a way similar to CNC machining with end mills
- Available in a wide variety of forms, sizes, abrasives and bond technologies
- Can be custom made to match part geometry

NORTON QUANTUM™ CERAMIC ALUMINA – VITRIFIED BOND

- Vitrified bonded mounted points for high precision

NORTON NZ OR A - RESIN BOND

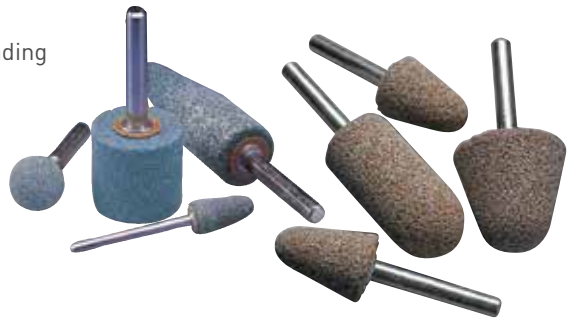
- Resin bonded mounted points for fast stock removal and dry grinding when coolant is not possible

NORTON WINTER CBN MOUNTED POINTS

- cBN grains for long wheel life on difficult-to-machine materials

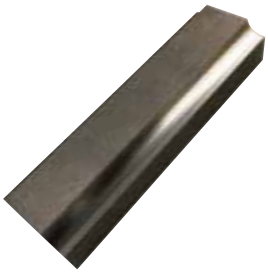
NORTON WINTER ELECTROPLATED MOUNTED POINTS

- Electroplated wheels for easy usage without dressing



CASE STUDY

PARTS:	3D printed Inconel 718 with curved chamfer and curved surface shown. All parts were treated by stress relief before grinding
MACHINE:	5-axis CNC machine with 5% water soluble coolant
NORTON PRODUCT:	Electroplated wheels with 100 grit cBN grains
RESULT:	• Surface finish of ~1.2 um and feed rate of 150 mm/min achieved • Expected wheel life > 50 meters of grinding length or over 300 minutes of grinding time



AUTOMATED POST-PROCESSING SOLUTIONS FOR POLYMERS

AMT is the world's first company focused on developing digital technology solutions for post-processing 3D printed parts. Developed at the intersection of material science, chemistry, hardware, engineering, robotics, and machine learning, the AMT post-processing technology enhances 3D printed parts to market-ready specifications, enabling every industry to mobilize the power of additive manufacturing.

CLEANING

1

UNPACKING

POSTPRO UP

2

DEPOWDERING

POSTPRO DP STUDIO
POSTPRO DP
POSTPRO DP PRO
POSTPRO DP MAX

3

SURFACE BLASTING

POSTPRO SB
POSTPRO SB PRO

AMT POSTPRO ENABLES ADDITIVE 2.0

- CE and UL Certified
- Certified solutions for all industries
- No geometrical limitations
- Reproducible results
- Material & technology agnostic
- Reduces cost per part
- Automated, scalable, customizable

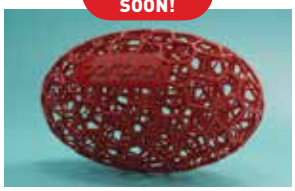
SURFACE FINISHING

4

CHEMICAL VAPOR SMOOTHING

POSTPRO SF50
POSTPRO SF100

5

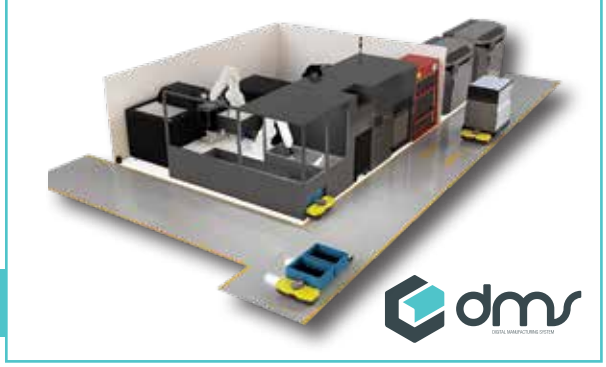


COLORING

POSTPRO COL

DIGITAL MANUFACTURING SYSTEM

6



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