

Centerless Grinding, Cylindrical Grinding & Flat Finishing  
with 3M™ Trizact™ Belts 363FC, 463FC & 953FA



# Consistency

from Start  
to  
Finish

Long-lasting abrasive technology helps you achieve desired dimensions and finishes – right from the start!

- Little or no break-in period
- Extended belt life
- Fewer rejects, less rework  
– higher productivity

**3M**

# More consistent results – lower cost of operation

For over 15 years, 3M™ Trizact Abrasive Belts have set the industry standard for metal preparation and finishing of carbon steel and stainless steel.

Now 3M's newest belts for centerless grinding, cylindrical grinding and flat finishing offer you unprecedented performance on a wide range of metals including titanium, zirconium and other alloys—for outstanding quality, throughput and cost savings.

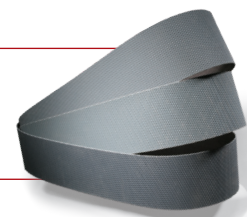
## The best of the best

**Trizact Belts** are engineered to deliver consistent finishes on a broad range of materials, including titanium, zirconium, carbon steel and stainless steel. Ideal for both centerless and flat finishing and polishing applications that use coolant, these durable belts feature abrasive grain in a macroreplicated pattern, bonded to a durable cloth backing. This unique, long-lasting construction provides a controlled, predictable wear rate, for fewer belt changes and less machine downtime. It also means you can achieve desired results from the very first part—with little or no break in, and without the “wild scratches” often encountered with other abrasives.

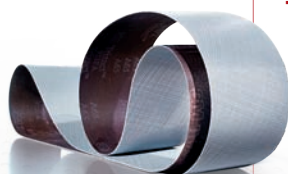


**NEW Trizact Belts 363FC** utilize an aluminum oxide mineral abrasive, and are consistent “go-to first” products for a wide range of applications, from heavy deburring and defect removal to intermediate finishing.

**NEW Trizact Belts 463FC** are offered in a finer grade range, for those materials that require silicon carbide minerals, or for finer finishes on all metals.

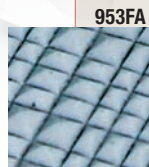
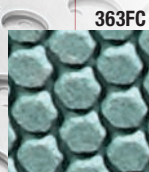
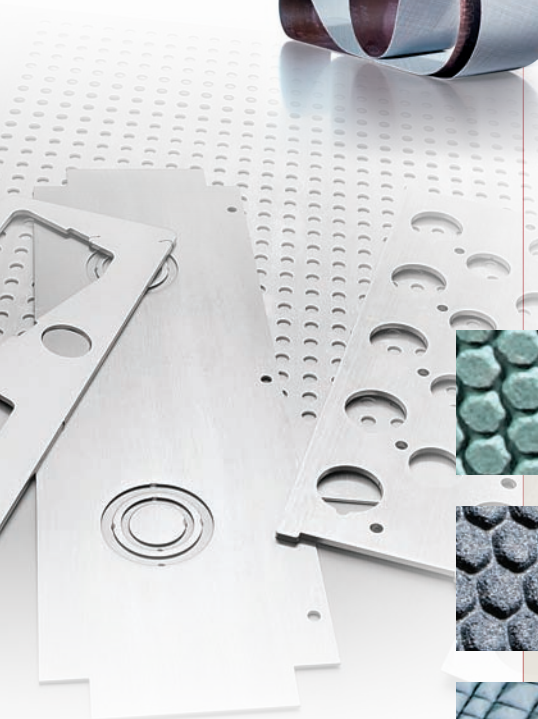


**Trizact Belts 953FA** combine the consistency of Trizact abrasive products with the durability of 3M™ Cubitron™ Abrasive Grain. These belts are ideal for applications where more aggressive cutting action is desired.



## Grinding/Finishing Capabilities

	Stock Removal	Dimension and Finish	Final Finish and Polish
A300		Trizact 953FA	A6
	A300	<b>Trizact 363FC</b>	A35
			A45 <b>Trizact 463FC</b> A6




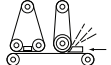

Trizact belts feature an engineered surface of three-dimensional structures. As these structures wear, fresh mineral is delivered constantly and evenly to the work surface, so cut and finish remain stable throughout the life of the abrasive. This unique technology delivers a number of significant performance advantages, including:

- **Consistent, predictable results**—Helps you achieve the part size and finish you need, every time!
- **Process flexibility**—Fast cutting allows high throughput and/or fewer belts on multiple-head machines, for lower total cost of operation
- **Up to 5X longer life than conventional belts**—Fewer belt changes means less downtime and lower consumables consumption

**Plus** you get the benefit of 3M's 100+ years of abrasive experience, broad product range and global applications support, to help you maximize the return on your abrasives investment.

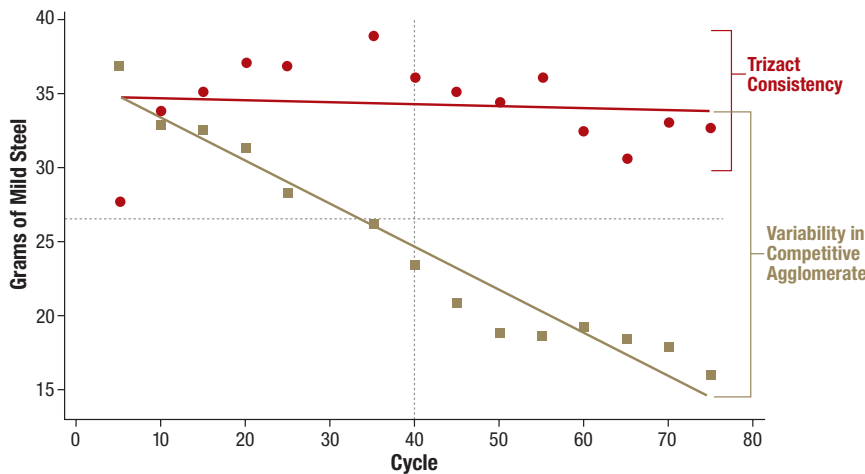


## Typical Applications

Process	Industry	Metal(s)	Applications
<b>Centerless grinding and finishing</b> 	Food/pharmaceutical/chemical	• Stainless steel	• Finished tube and pipe
	Architectural	• Stainless steel	• Finished tube and pipe
	Nuclear power	• Zirconium	• Fuel rod tubing
	Oil & gas drilling, mining	• Carbon steel	• Drilling & mining components
	Aircraft/aerospace	• Titanium • Nickel alloys • Other alloys	• Hydraulic tubing • Finishing hydraulic rods before chrome plating
	Automotive	• Carbon steel	• Shock absorbers, engine valves, piston pins, etc.
	Heavy industrial equipment (agriculture, construction, etc.)	• Carbon steel	• Hydraulic rod finishing (machinery, elevator shafts, etc.) • Sized and finished rods, tubes and pipes
	Home appliances	• Carbon steel	• Sized, finished rods and shafts
	Sporting goods	• Titanium • Stainless steel	• Exercise equipment, Bicycle frames • Golf club shafts
<b>Flat finishing</b> 	Automotive	• Stainless steel • Carbon steel	• Clutch plates, brake components and other stamped parts, Pre-chrome or pre-buff finish
	Aircraft/aerospace	• Titanium • Nickel alloys • Other alloys	• Stamped and blanked parts • Tubing
	Medical	• Stainless steel	• Surgical components
	Various	• Stainless steel • Other alloys	• Metal sheets, plates or square tubing
<b>Cylindrical grinding</b> 	Industrial rolls, Hydraulic cylinders	• Steel • Chrome • Stainless steel • Aluminum	• Roll grinding and finishing
	Oil & gas drilling, mining	• Carbon steel	• Drilling & mining components
	Paper mills	• Carbon steel • Stainless steel	• Calendar rolls • Suction drums
	Various	• Stainless steel • Other alloys	• Rod, tube & pipe • Hydraulic cylinders

## With 3M™ Trizact™ Abrasive technology, you get consistent results – from start to finish

### 3M Trizact Belts vs. Competitive Agglomerate Belt – Change in Stock Removal Rate



## Case Histories\*

### Application – Centerless Grinding

Mild steel hydraulic bars

### Product Sequence

363FC – A100, A45, A35, 463FC – A20

### Customer Results

50% improvement of life over 963FA, more consistent finish

### Application – Centerless Grinding

Zirconium tubing for the nuclear industry

### Product Sequence

463FC – A45 (3 heads), A20 (2 heads), A6

### Customer Results

2X+ life of competitor agglomerate product, more consistent finish

\*Individual results may vary depending on equipment, operating parameters, parts and materials.

## Case Histories\*

### Application – Flat Finishing

General de-burring of stamped parts

#### Product Sequence

363FC – A300, A65

#### Customer Results

2X life of competitor agglomerate product, more consistent finish, cleaner burr removal

### Application – Flat Finishing

De-burr and finish of automotive clutch rings

#### Product Sequence

363FC – A100, A45 (2 heads)

#### Customer Results

2.5X life of competitor agglomerate product, less belt break-in, more consistent finish

### Application – Flat Finishing

Heavy burr-removal of stamped parts

#### Product Sequence

363FC – A300, A160

#### Customer Results

3X life of competitor AZ mineral product

### Application – Flat Finishing

Automotive carbon steel clutch rings

#### Product Sequence

953FA – A80, A65, A45, A30, A16

#### Customer Results

Double productivity of competitor agglomerate product, reduce rework from 10% to 3%.  
250K annual savings

\*Individual results may vary depending on equipment, operating parameters, parts and materials.

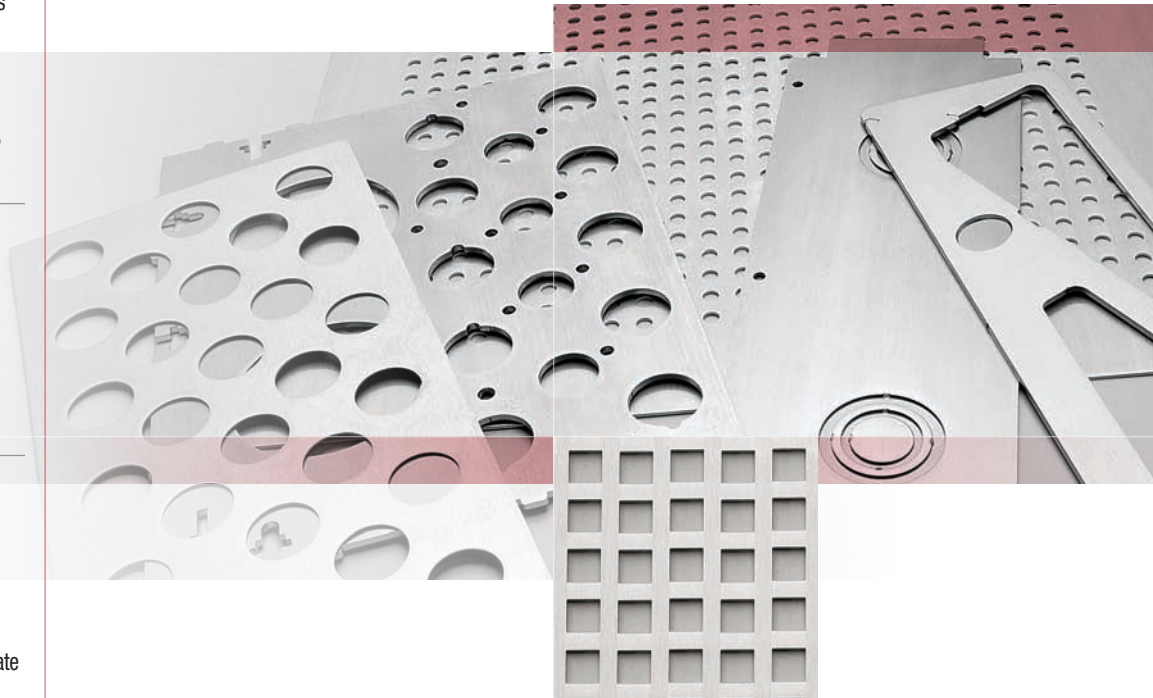
## Choose the belt that's right for your application

Belt widths up to 25" have a single splice. Belts over 25" wide have multiple splices.

Product	Mineral	Backing	Grades
3M™ Trizact™ Belt 363FC	Aluminum Oxide	YF	A300, A160, A100, A65, A45, A35
3M™ Trizact™ Belt 463FC	Silicon Carbide	YF	A45, A20, A10, A6
3M™ Trizact™ Belt 953FA	Cubitron™ Abrasive Grain	XF	A300**, A160, A100, A80, A65, A45, A30, A16, A10*, A6*

\* Grades A10 and A6 contain aluminum oxide.

\*\* A300 is on YF backing.



**Product Use:** All statements, technical information and recommendations contained in this document are based on tests or experience that 3M believes are reliable. However, many factors beyond 3M's control can affect the use and performance of a 3M product in a particular application, including conditions under which the product is used and the time and environmental conditions in which the product is expected to perform. Since these factors are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for the user's method of application.

**Warranty and Limited Remedy:** Unless stated otherwise in 3M's product literature, packaging inserts or product packaging for individual products, 3M warrants that each 3M product meets the applicable specifications at the time 3M ships the product. Individual products may have additional or different warranties as stated on product literature, package inserts or product packages. 3M MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY ARISING OUT OF A COURSE OF DEALING, CUSTOM OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's application. If the 3M product is defective within the warranty period, your exclusive remedy and 3M's and seller's sole obligation will be, at 3M's option, to replace the product or refund the purchase price.

**Limitation Of Liability:** Except where prohibited by law, 3M and seller will not be liable for any loss or damage arising from the 3M product, whether direct, indirect, special, incidental, or consequential regardless of the legal theory asserted, including warranty, contract, negligence or strict liability.

