



**Cubitron™ 3**

Performance Abrasives

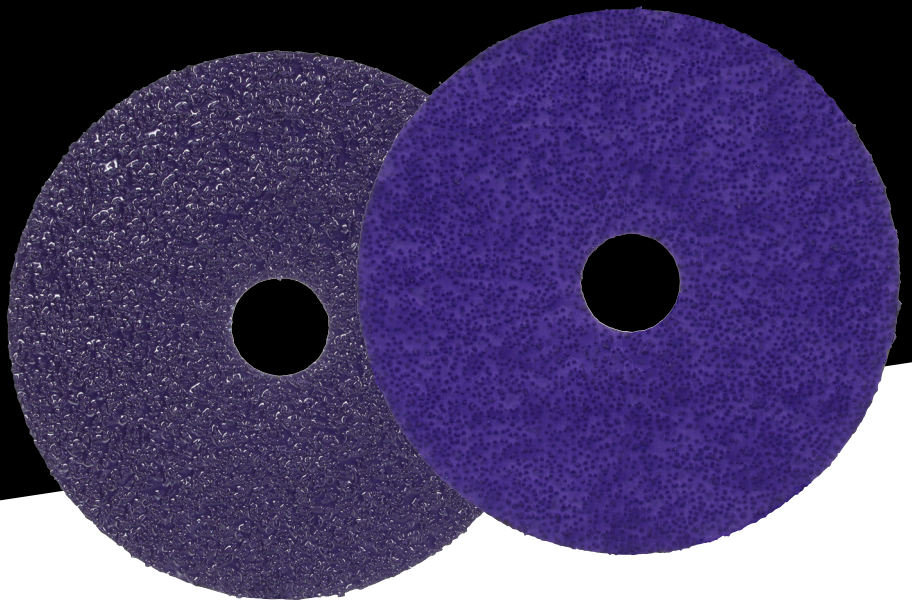


**Produce more.  
With less.**

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## **3M™ Cubitron™ 3 Fibre Discs**

Breakthroughs in technology that are redefining the limits of cut rate and total stock removal, with a focus on prioritizing productivity, safety, sustainability, and optimizing automation.



**3M™ Cubitron™ 3 Fibre Discs 1182C, 36+ and 1187C, 36+**

# A new era of abrasive performance is here.

Introducing 3M re-engineered Precision-Shaped Grain, boosting the speed and life of 3M™ Cubitron™ Performance Abrasives to new heights. This advancement prioritizes operator safety, maximizes sustainability, and amplifies time and labor efficiency.

3M™ Cubitron™ 3 Fibre Disc 1182C, 36+

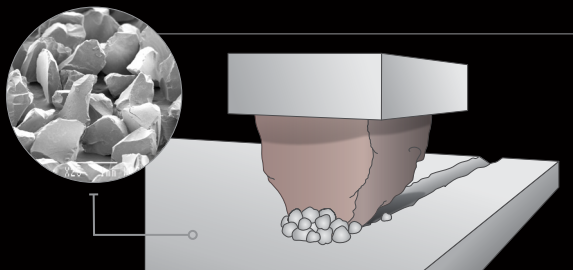
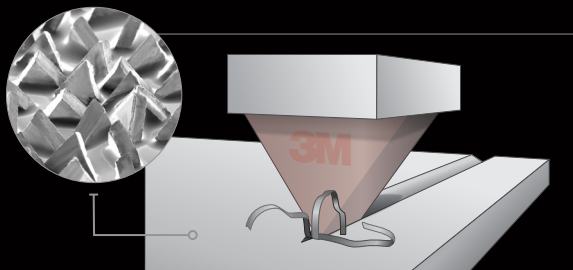
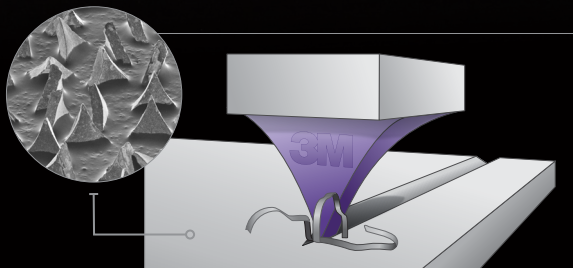
Up to

# 60%

- **Faster sustained cut rate**
- **More total material removed**

vs. 3M™ Cubitron™ II Fibre Disc 982C, 36+

## Enhanced mineral orientation



## Re-shaping the way work gets done.

**Cubitron™ 3**  
Performance Abrasives

### Our latest 3M Precision-Shaped Grain

Re-engineered precision-shaped ceramic triangular grain using a proprietary breakthrough in grain shape. This helps increase productivity and lower overall grinding costs.

### 3M Precision-Shaped Grain

3M pioneered the first precision-shaped grain using 3M microreplication technology to form consistent sharp peaks that easily “slice” through metal—cutting cooler, faster, and lasting longer than conventional abrasive grain.

### Conventional ceramic abrasive

Conventional ceramic abrasive grain tends to “plow” through metal, causing heat to build up in the workpiece and abrasive, resulting in a slower cut and shorter abrasive life compared to our latest precision-shaped grain.

# Ideal for heavy grinding applications.

By using long-lasting, fast-cutting 3M™ Cubitron™ 3 Performance Abrasives, you can minimize abrasive changeover to save money over time. Stiff fiber backing and a strong resin bond provide durability and tear-resistance for heavy grinding applications from beveling, weld grinding, surface grinding to deburring, and flame cut smoothing. In each application the product grinds more freely and at lower temperatures, helping to reduce job times, operator fatigue and minimize rework.



Industries: ▶ Metal fabrication ▶ Machinery manufacturing ▶ Shipyards



# 3M™ Cubitron™ 3 Fibre Disc 1182C, 36+

## Faster cut rate

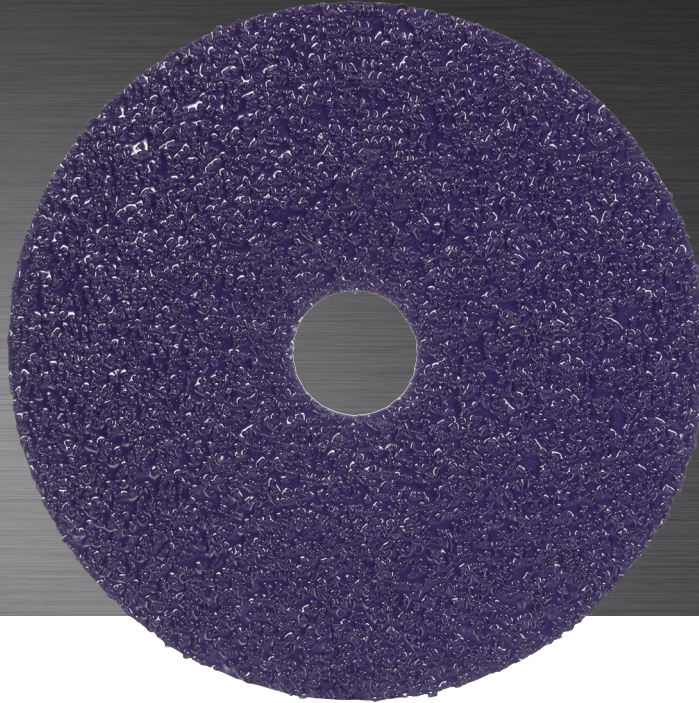
Long lasting and faster cutting fibre discs help increase productivity and your bottom line

## Total material removed

Fewer changeouts needed and less downtime

## Less operator fatigue

Designed to cut with less pressure



More parts per disc



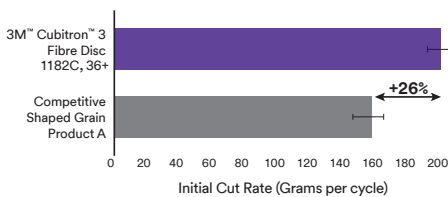
Faster throughput



Cool cutting

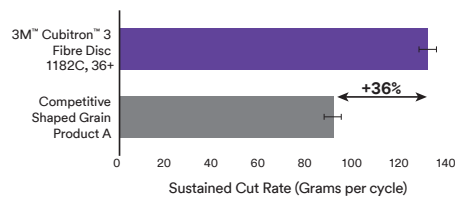
## Carbon steel grinding

Up to  
**26%**  
Faster initial  
cut rate\*



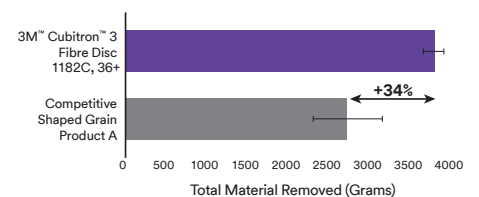
Carbon Steel: the 'initial cut rate' claim is determined from averaging the cut/cycle from cycles 1–2 (first two minutes of grinding). Each cycle on the test method is 1 minute of grinding time. Error bars represent the results with a 95% confidence level.

Up to  
**36%**  
Faster sustained  
cut rate\*



Carbon Steel: the 'sustained cut rate' claim is determined from averaging the cut/cycle from cycles 7–20 (which is 14 minutes of grinding). Error bars represent the results with a 95% confidence level.

Up to  
**34%**  
More total material  
removed\*



Carbon Steel: the 'total material removed' claim is determined by averaging the amount of metal ground over the entire test method (30 cycles or 30 minutes of grinding). Error bars represent the results with a 95% confidence level.

\*Compared to Competitive Shaped Grain Product A. Results are based on an automated, 30-minute, high pressure test on 1018 steel using 180mm 36+ grit fibre discs and 3M™ Disc Pad Face Plate Ribbed 80514 on a servo motor.

# 3M™ Cubitron™ 3 Fibre Disc 1187C, 36+

## Faster cut rate

Long lasting and faster cutting fibre discs help increase productivity and your bottom line

## Total material removed

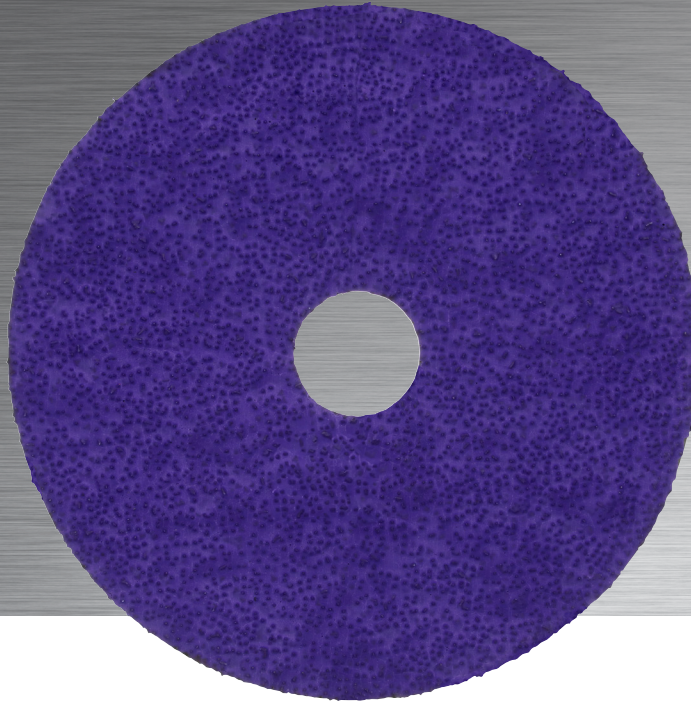
Fewer changeouts needed and less downtime

## Less operator fatigue

Designed to cut with less pressure

## Grinding aid

Reduces the risk of discoloration from thermal damage in heat sensitive metals



More parts per disc



Faster throughput



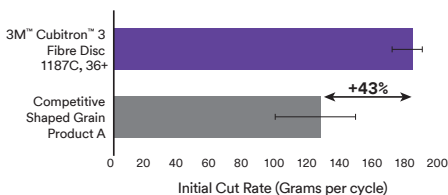
Cool cutting

## Stainless steel grinding

Up to

# 43%

Faster initial cut rate\*

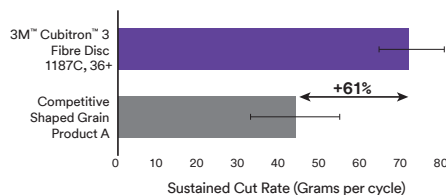


Stainless Steel: the 'initial cut rate' claim is determined from averaging the cut/cycle from cycles 1–2 (first two minutes of grinding). Each cycle on the test method is 1 minute of grinding time. Error bars represent the results with a 95% confidence level.

Up to

# 61%

Faster sustained cut rate\*

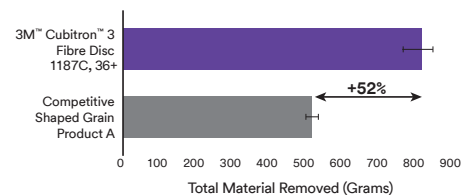


Stainless Steel: the 'sustained cut rate' claim is determined from averaging the cut/cycle from cycles 3–6 (which is 4 minutes of grinding). Error bars represent the results with a 95% confidence level.

Up to

# 52%

More total material removed\*



Stainless Steel: the 'total material removed' claim is determined by averaging the amount of metal ground over the entire test method (10 cycles or 10 minutes of grinding). Error bars represent the results with a 95% confidence level.

\*Compared to Competitive Shaped Grain Product A. Results are based on an automated, 10-minute, high pressure test on 304 steel using 180mm 36+ grit fibre discs and 3M™ Disc Pad Face Plate Ribbed 80514 on a servo motor.

# Tools that take it to the next level.

The new 3M™ Pneumatic Angle Grinders and 3M™ Pneumatic Sanders are powerful tools that feature superior performance and world-class ergonomic designs. They're built with robust components for durability and reliability in the harshest industrial conditions.

- ▶ 1.5HP (1100 W power)
- ▶ Wheel autobalancer
- ▶ Spindle lock
- ▶ Vibration-reducing side handle with added padding—interchangeable for right or left hand usage
- ▶ Available accessories provide maximum functionality and flexibility
- ▶ Rear exhaust directs exhaust and swarf away from the workpiece
- ▶ Adjustable guard (3M™ Pneumatic Angle Grinder)



## Get the full system advantage.

**3M™ Pneumatic Angle Grinder or 3M™ Pneumatic Sander**



**3M™ Disc Back-up Pad, Ribbed, Extra Hard**



### TECH TIP:

*Combine with 3M™ Pneumatic Angle Grinder or Sander and 3M™ Disc Back-up Pad and set yourself up to a new level of productivity. Each component of this system has been engineered to optimize abrasive life, cut rate and consistency—helping to improve productivity and lower overall costs.*

# Get more value from your automation investment.

Automation Ready

There are many reasons to invest in automating your abrasive processes: improvement gains in productivity; increase in consistency, quality and safety; an answer to your labor shortage. And to ensure maximized ROI from your investment, the best path comes from automating correctly from the start. That's where 3M products and engineering expertise come in.

## The limitations of manual operation.

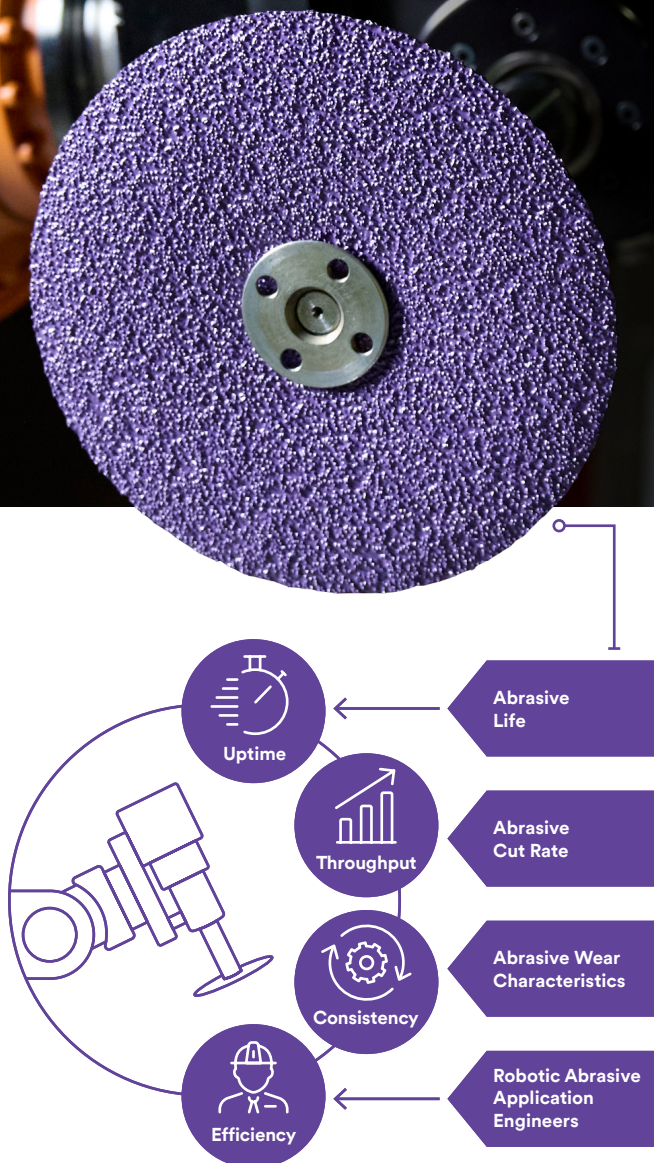
Manual operators are constrained by the amount of force they can apply and the angles they can hold a tool. Automation removes many of these constraints, working consistently and repeatedly at targeted angles and an optimized level of force and speed. A robot however, is still constrained by the abrasives it's running.

## The vital importance of the right abrasives and process parameters in automation.

To realize the full ROI on your automation investment, you want to optimize your abrasive products and parameters for these four key elements:

- ▶ **Uptime:** Determined by abrasive life and full utilization of abrasive, change-over frequency is a key factor here.
- ▶ **Throughput:** Determined by abrasive performance, faster processing leads to more part throughput.
- ▶ **Consistency:** Determined by performance through the life of the abrasive product, resulting in increased finished good quality and less change over.
- ▶ **Efficiency:** 3M Robotic Application Engineers can help design a process that utilizes the full width of the abrasive. Reducing abrasive waste and cost.

At 3M, we have a deep understanding of the factors that affect an automated abrasive process. Our 100+ years of abrasive experience and 35+ years of abrasive automation experience is accessible through our Technical Experts, our 17 Global Proof of Concept automation labs, and deployed into how we engineer our products.



## Products engineered with automation in mind.

3M™ Cubitron™ 3 Performance Abrasives elevate product life, cut rate, and wear consistency. This enhances processes that are already automated or increases the appeal of automating current manual ones.

## Start your journey with 3M.

We know abrasive automation. We start with your part requirements in mind and offer consultation on the entire cell system; including recommendations on hardware and software, connections to partners in our 3M System Integrator Network, and running proof of concept projects in our labs; to meet the needs of your process.

# Product Ordering Information



3M™ Cubitron™ 3 Fibre Disc 1182C, Grade 36+			
UPC	Diameter (in)	Max RPM	Box/Case
068060-66433-4	4 × 5/8	15,000	25/100
068060-66434-1	4 × 7/8	15,000	25/100
068060-66435-8	4-1/2 × 7/8	13,300	25/100
068060-66436-5	5 × 7/8	12,000	25/100
068060-66437-2	6 × 7/8	10,000	25/100
068060-66438-9	7 × 7/8	8,600	25/100
068060-66439-6	9-1/8 × 7/8	6,600	25/100
TN Quick Change			
068060-66440-2	4-1/2	13,300	25/100
068060-66441-9	5	12,000	25/100
068060-66442-6	7	8,600	25/100
GL Quick Change			
068060-66443-3	4-1/2	13,300	25/100
068060-66444-0	5	12,000	25/100
068060-66445-7	7	8,600	25/100

UPC	Diameter (in)	Max RPM	Box/Case
<b>3M™ Pneumatic Angle Grinder</b>			
638060-88566-6	5	12,000	1/1
<b>3M™ Pneumatic Sander</b>			
638060-88577-2	5	12,000	1/1

3M™ Cubitron™ 3 Fibre Disc 1187C, Grade 36+			
UPC	Diameter (in)	Max RPM	Box/Case
068060-66460-0	4 × 5/8	12,000	25/100
068060-66451-8	4-1/2 × 7/8	13,300	25/100
068060-66452-5	5 × 7/8	12,000	25/100
068060-66453-2	7 × 7/8	8,600	25/100
068060-66454-9	9-1/8 × 7/8	6,600	25/100
TN Quick Change			
068060-66455-6	4-1/2	13,300	25/100
068060-66456-3	5	12,000	25/100
068060-66457-0	7	8,600	25/100
GL Quick Change			
068060-66458-7	5	12,000	25/100
068060-66459-4	7	8,600	25/100

UPC	Diameter (in)	Max RPM	Box/Case
<b>3M™ Disc Back-up Pad, Ribbed, Extra Hard – One Piece</b>			
638060-88655-7	4-1/2	13,300	10/10
638060-88656-4	5	12,000	10/10
638060-88657-1	7	8,600	10/10
<b>3M™ Disc Back-up Pad Mounting Kit</b> (Not required for use with 3M™ Pneumatic Angle Grinder or Sander)			
638060-88968-8	3M™ Retainer Nut PN 02618, 3/16" PG Wheel Spacer and 1/8" Spacer		1/1

**TECH TIP:** Keep discs in the closed, resealable foil bag to help maintain disc shape and quality when not in use.

## Sustainability matters to 3M Abrasives.



When you buy from the SEAM value chain, you are helping to build a sustainable future for our industry, for people and for the planet. 3M is a founding member of the SEAM abrasives manufacturers program and aligns to the world's highest standards

of quality, safety and performance in a sustainable environment. We commit to transparency, accountability, innovation and progress. When buying from the SEAM value chain, customers are helping to build themselves a sustainable future.



Find out more at [www.seam.earth](http://www.seam.earth)

Get the discs that get more done at [3M.com/Cubitron3](http://3M.com/Cubitron3)



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