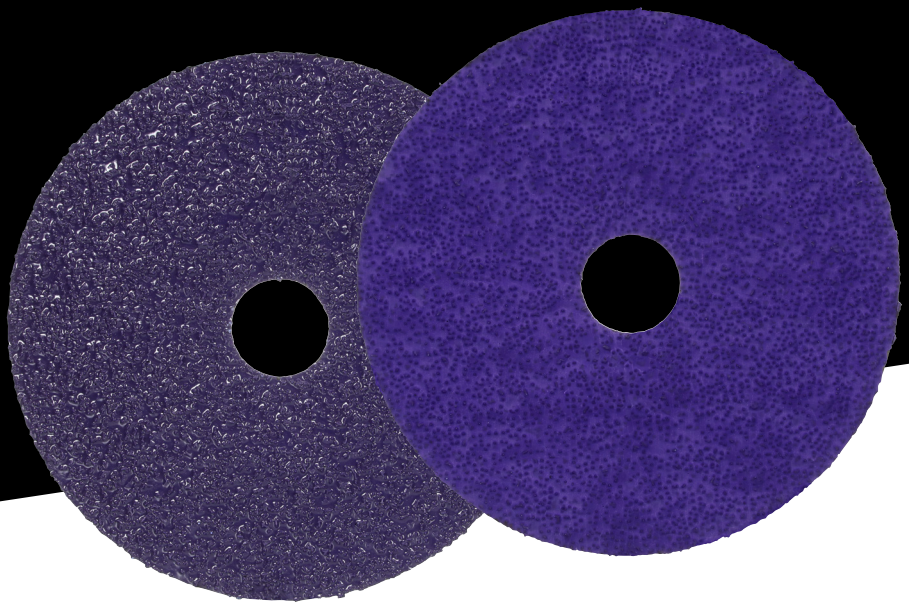
3M | Cubitron™ 3
Performance Abrasives

Produce more. With less.

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 and 1187C

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+

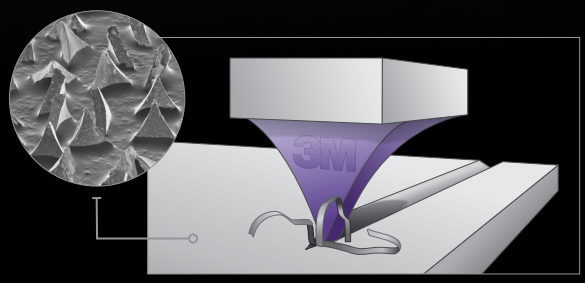
Up to

60%

→ Faster sustained cut rate
→ More total material removed

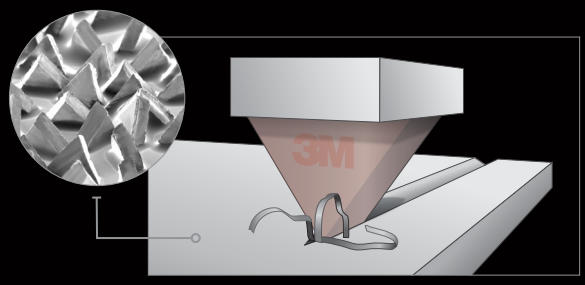
vs. 3M™ Cubitron™ II Fibre Disc 982C, 36+

Enhanced mineral orientation



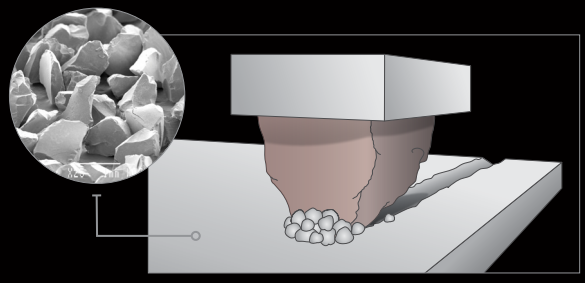
Our latest 3M Precision-Shaped Grain

Re-engineered precision-shaped ceramic grain using a proprietary breakthrough in grain shape with curved sides. 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.

Re-shaping the way work gets done.

3M | Cubitron™ 3
Performance Abrasives

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.

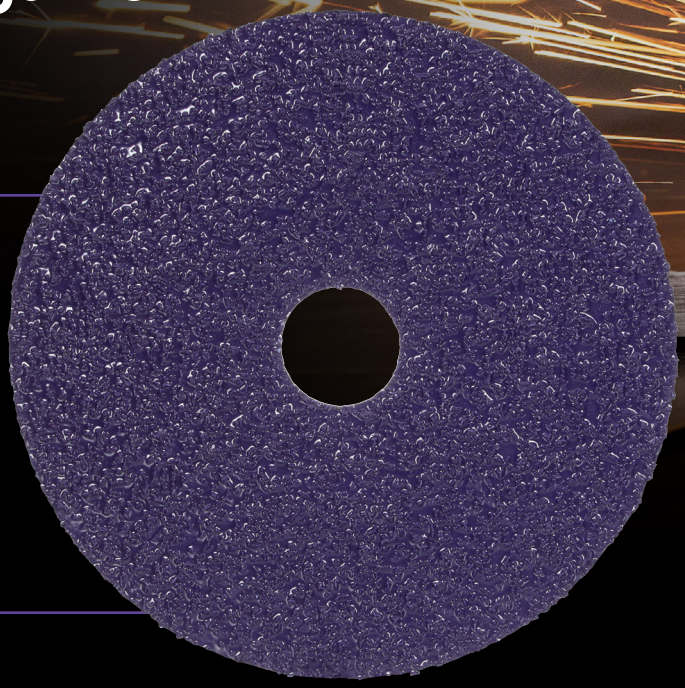
Industries: ▸ Metal fabrication ▸ Machinery manufacturing ▸ Shipyards

Proven to change the game for your process.

3M™ Cubitron™ 3 Fibre Disc 1182C

Carbon steel grinding

Grade 36+



More total material removed

Longer lasting abrasives with fewer changeouts needed and less downtime

Less operator fatigue

Prioritize workplace wellbeing and motivation with less pressure required on the tool

Cool cutting

Helps to reduce metal discoloration and stress cracks — ultimately minimizing re-work

Faster cut rate

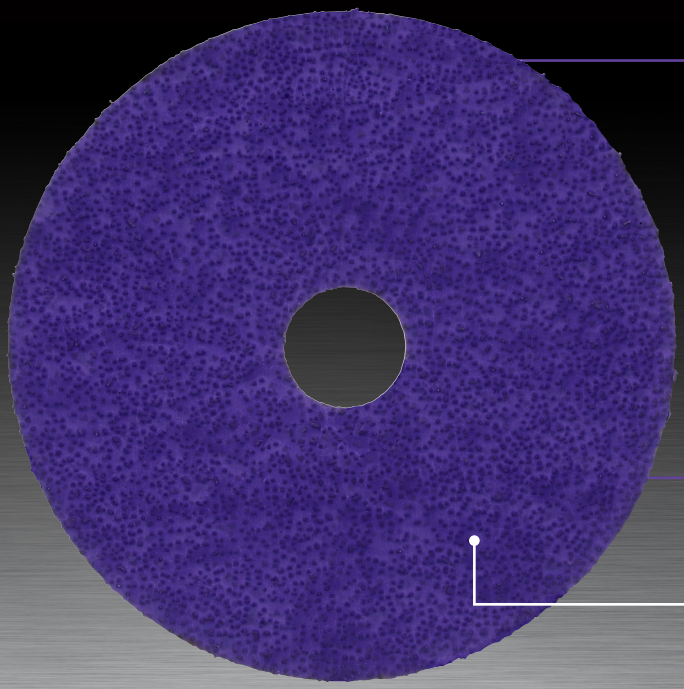
Incredibly fast cut rate helps to increase throughput, maximize productivity and boost your bottom line

Less vibration exposure

Helps improve workplace safety without compromising productivity

Sustainability at the core

Longer-lasting abrasives and eco-friendly packaging helps reduce carbon footprints and waste



3M™ Cubitron™ 3 Fibre Disc 1187C

Stainless steel grinding

Grade 36+

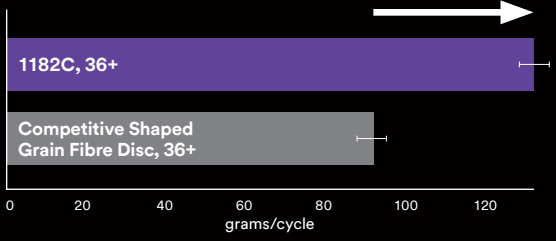
Coated with a grinding aid

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

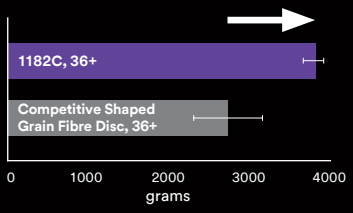
We tested 3M™ Cubitron™ 3 Fibre Disc 1182C, 36+ and here are the results:

Productivity Delivered

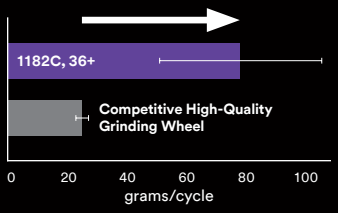
Up to **36%** Faster sustained cut rate[1]



Up to **34%** More total material removed[1]



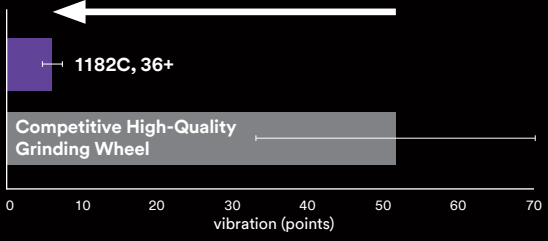
Up to **3X** Faster initial cut rate[2]



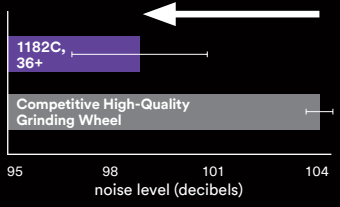
Helps improve workplace safety without compromising productivity.

Safety Built In

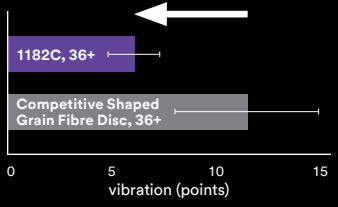
Up to **88%** Less vibration exposure[2]



Up to **70%** Less noise energy generated[3]



Up to **47%** Less vibration exposure[4]



Error bars represent the results with a 95% confidence level.

[1] Compared to Competitive Shaped Grain Fibre Disc. Results are based on an automated, 30-minute, high pressure test on 1018 steel using 7 inch, 36+ grit fibre discs and 3M™ Disc Pad Face Plate Ribbed 80514 on a servo motor.

[2] Performance testing in a typical weld preparation process; 3M™ Cubitron™ 3 Fibre Disc 1182C, 36+ average compared to the average result of 10 globally selected high-quality competitive type 27 grinding wheels including ceramic grain products, according to independent testing by Fraunhofer Institute. January 2024.

[3] Noise energy operator exposure testing in a typical weld preparation process; 3M™ Cubitron™ 3 Fibre Disc 1182C, 36+ average compared to the average result of 10 globally selected high-quality competitive type 27 grinding wheels including ceramic grain products, according to independent testing by Fraunhofer Institute. January 2024.

[4] Performance testing in a typical weld preparation process; 3M™ Cubitron™ 3 Fibre Disc 1182C, 36+ average compared to the average result of 5 globally selected high-quality competitive fibre discs including ceramic shaped grain products, according to independent testing by Fraunhofer Institute. January 2024.

Independent hazards testing performed by:

Fraunhofer

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.

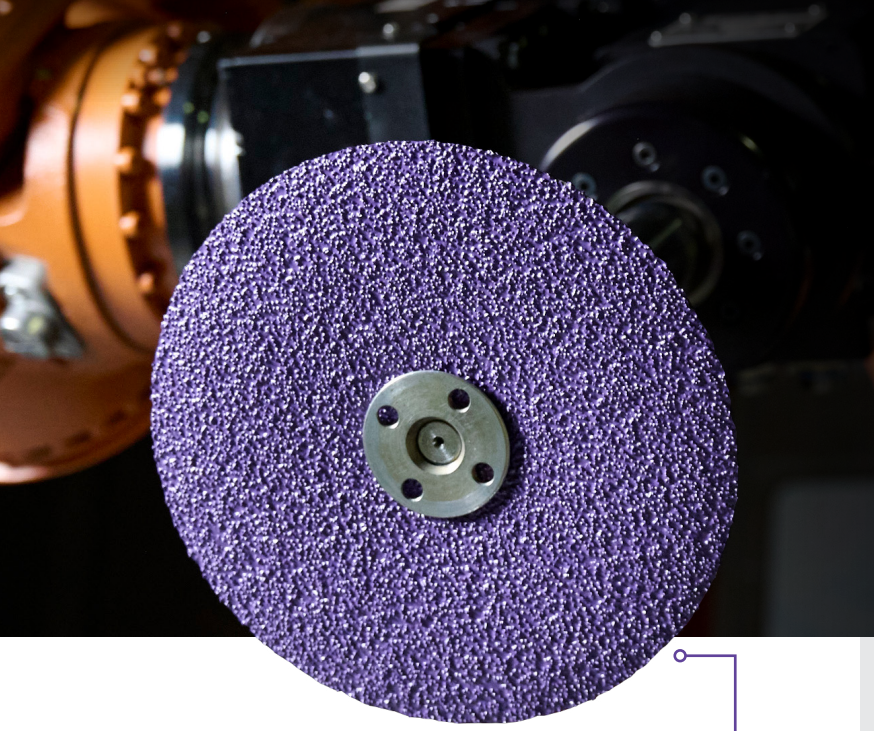
Get more value from your automation investment.

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.

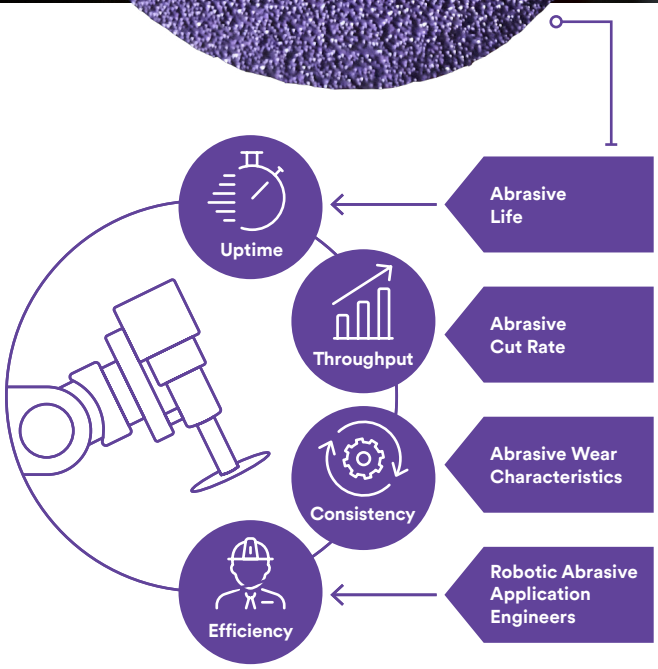


The vital importance of the right abrasives and process parameters in automation.

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

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

UPC	Diameter (in)	Max RPM	Box/Case
068060-66460-0	4 × 5/8	15,000	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
3M™ Pneumatic Angle Grinder			
638060-88566-6	5	12,000	1/1
3M™ Pneumatic Sander			
638060-88577-2	5	12,000	1/1

UPC	Diameter (in)	Max RPM	Box/Case
3M™ Disc Back-up Pad, Ribbed, Extra Hard – One Piece			
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
3M™ Disc Back-up Pad Mounting Kit (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.***

SEAM™
Sustainable European Abrasive Manufacturers

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

Get the discs that get more done at 3M.com/Cubitron3

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St. Paul, MN 55144 USA

Phone 1-866-279-1235
Web 3M.com/abrasives

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