



# Cubitron™ 3

Performance Abrasives

# Produce more. With less.

## 3M™ Cubitron™ 3 Fibre Discs and Roloc™

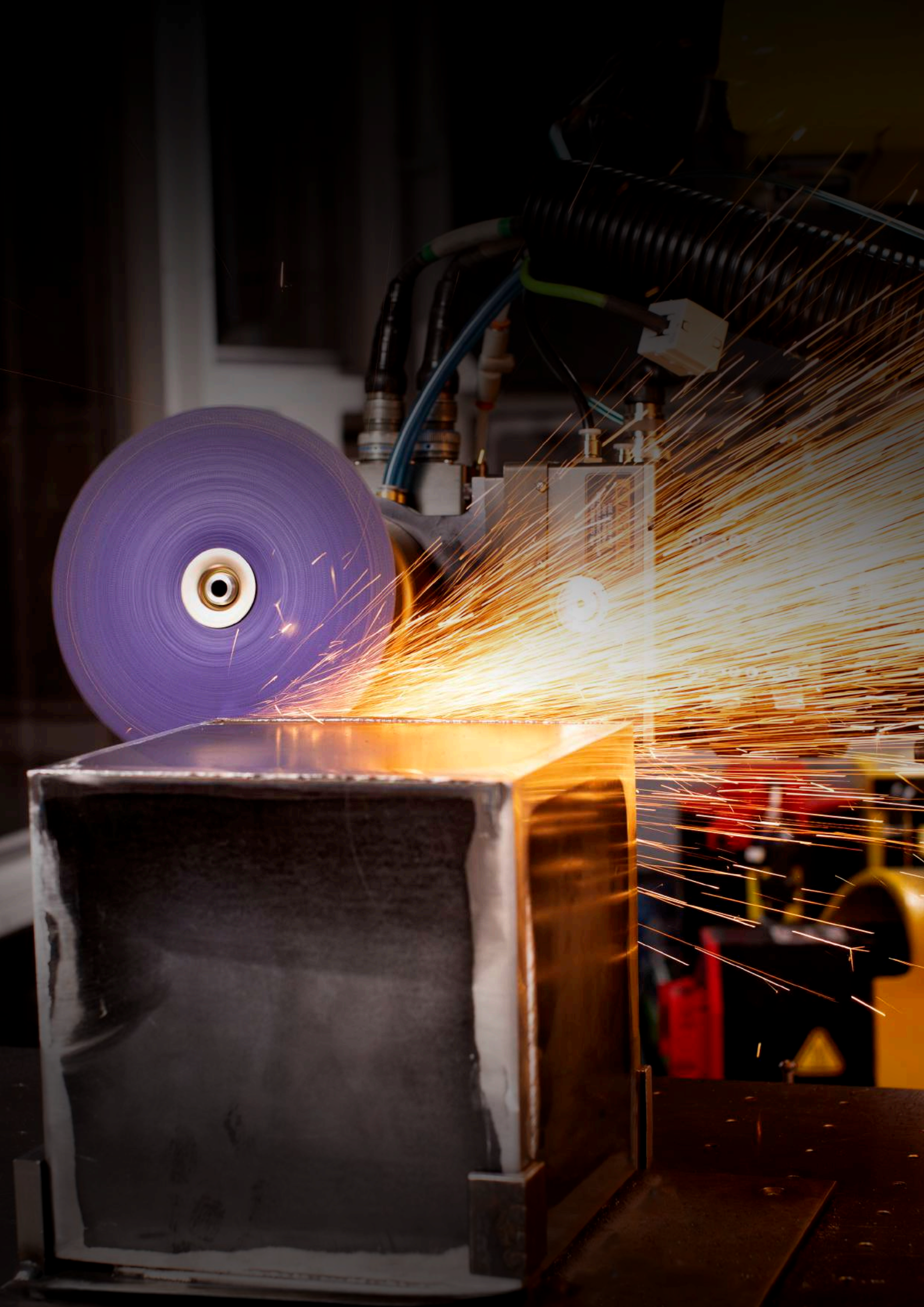
Breakthroughs in technology that redefine the limits of cut rate and total stock removal, with a focus on prioritising productivity, safety, sustainability and optimising automation.



Now 36+, 60+ and 80+  
grades available!

3M™ Cubitron™ 3 Fibre Discs 1182C and 1187C  
3M™ Cubitron™ 3 Roloc™ 1184F, 1182C and 1187C







# Produce more. With less.

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## 3M™ Cubitron™ 3 Fibre Discs and Roloc™

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# 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 prioritises operator safety, maximises sustainability and amplifies time and labour 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

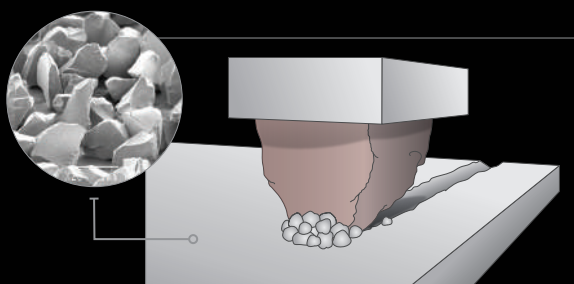
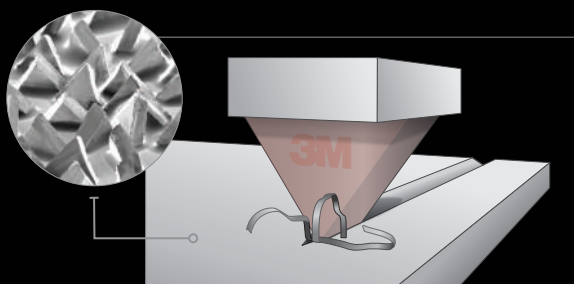
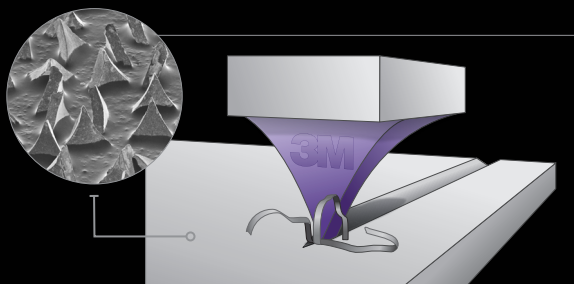
Re-engineered precision-shaped ceramic triangular grain using a proprietary breakthrough in grain shape. This helps increase productivity and lower overall grinding costs.

### 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 plough 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 minimise abrasive changeover to save money over time. A stiff fibre 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 minimise rework.



**Industries: ▶ Metal fabrication ▶ Machinery manufacturing ▶ Shipyards**



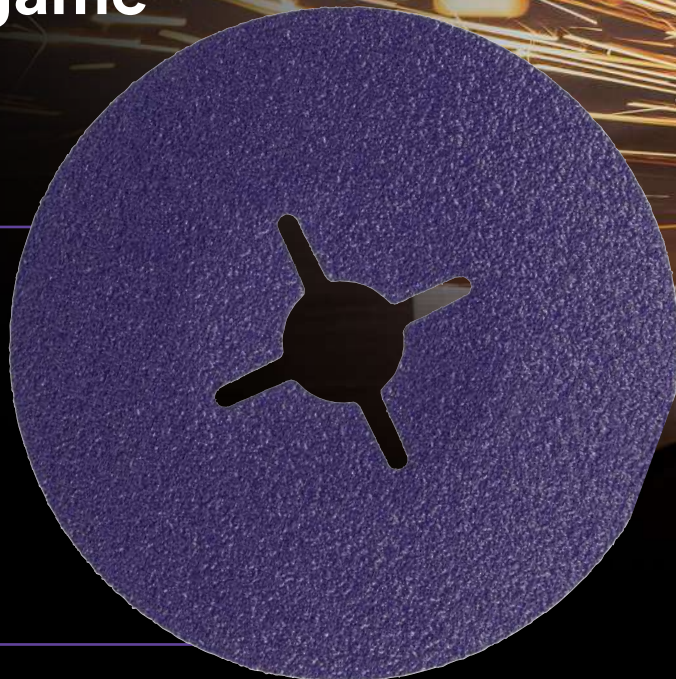


# Proven to change the game for your process.

## 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

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



### Cool cutting

Helps to reduce  
metal discolouration  
and stress cracks  
— ultimately  
minimising re-work



### Faster cut rate

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



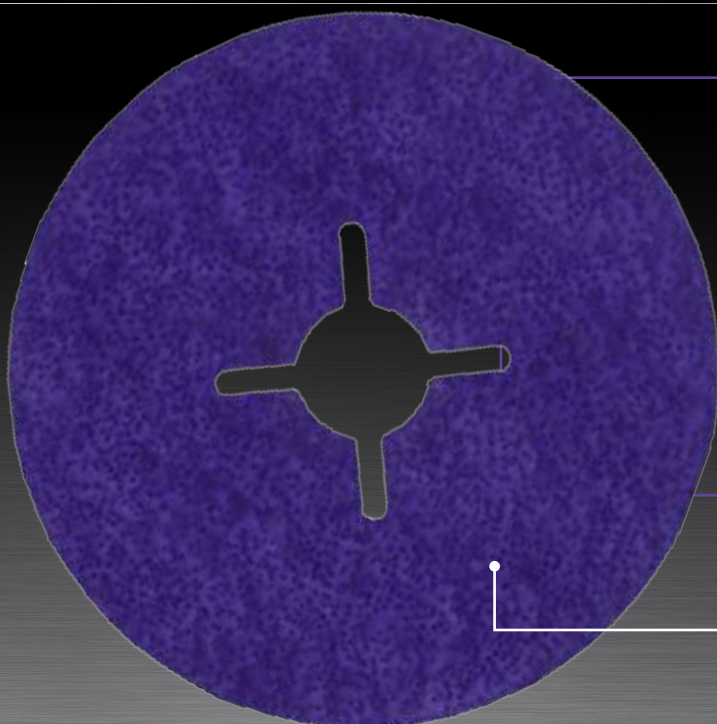
### Less vibration exposure

Helps improve  
workplace safety  
without compromising  
productivity



### Sustainability at the core

Longer-lasting  
abrasives and recycled  
shipper packaging  
helps reduce carbon  
footprints and waste



## 3M™ Cubitron™ 3 Fibre Disc 1187C

Stainless steel grinding

Grade 36+

### Coated with a grinding aid

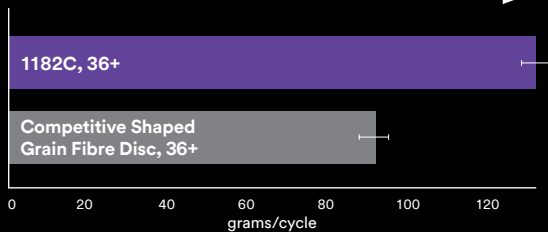
Reduces the risk of discoloration  
from thermal damage in heat  
sensitive metals

Grade 36+

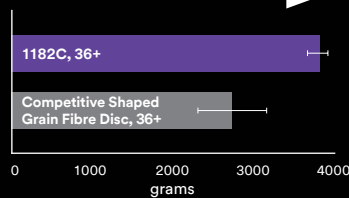
We tested 3M™ Cubitron™ 3 Fibre Disc 1182C, 36+ and here are the results:

Productivity  
Delivered

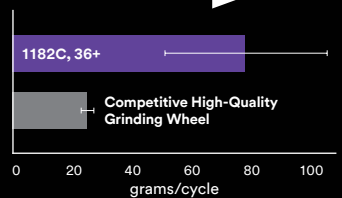
Up to  
**36%** Faster  
sustained  
cut rate<sup>1</sup>



Up to  
**34%** More total  
material  
removed<sup>1</sup>



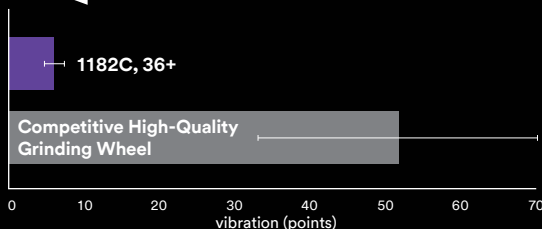
Up to  
**3x** Faster  
initial  
cut rate<sup>2</sup>



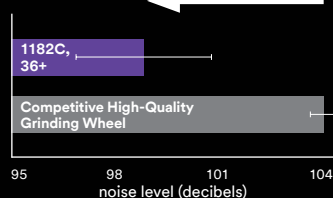
Helps improve workplace safety without  
compromising productivity.

Safety  
Built In

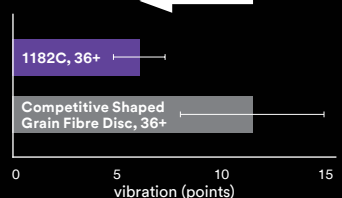
Up to  
**88%** Less  
vibration  
exposure<sup>2</sup>



Up to  
**70%** Less noise  
energy  
generated<sup>3</sup>



Up to  
**47%** Less  
vibration  
exposure<sup>4</sup>



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

<sup>1</sup> 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.

<sup>2</sup> Performance testing in a typical weld preparation process; 3M™ Cubitron™ 3 Fibre disc average compared to the average result of 10 globally available high-quality competitive shape type-27 Grinding wheels including ceramic grain products, according to independent testing by Fraunhofer Institute. January 2024.\*\*

<sup>3</sup> Noise energy operator exposure testing in a typical weld preparation process; Cubitron™ 3 Fibre disc average compared to the average result of 10 globally available high-quality competitive shape type-27 Grinding wheels including ceramic grain products, according to independent testing by Fraunhofer Institute. January 2024.

<sup>4</sup> Performance testing in a typical weld preparation process; 3M™ Cubitron™ 3 Fibre disc average compared to the average result of 5 globally available high-quality competitive Fibre discs including ceramic shaped grain products, according to independent testing by Fraunhofer Institute. January 2024.

<sup>5</sup> Average result from 10 high-quality globally represented competitive Grinding wheels including ceramic grain products. Error bars shows a range of likely values for the mean with a confidence level of 95%.

Independent hazards testing performed by:

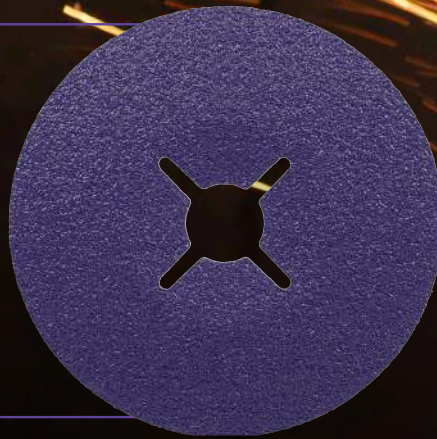
 **Fraunhofer**



# 3M™ Cubitron™ 3 Fibre Disc 1182C

Carbon steel grinding

Grades **60+ & 80+**



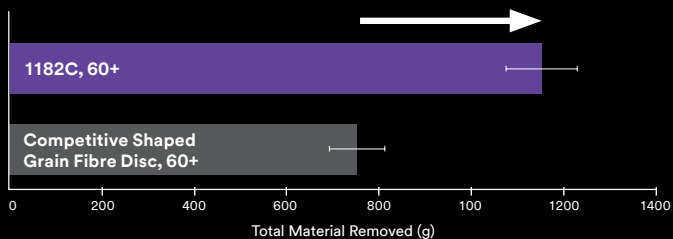
**NEW!**

We tested 3M™ Cubitron™ 3  
Fibre Disc 1182C 60+ and 80+,  
and here are the results:

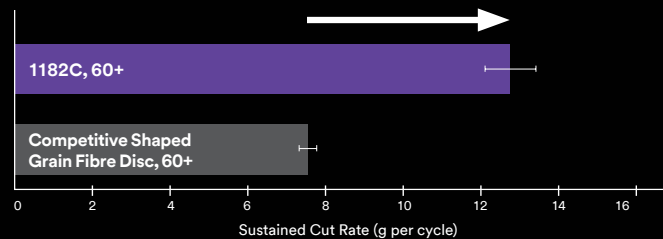
**Productivity  
Delivered**

## Grade 60+

Up to  
**53%** More total  
material  
removed<sup>1</sup>

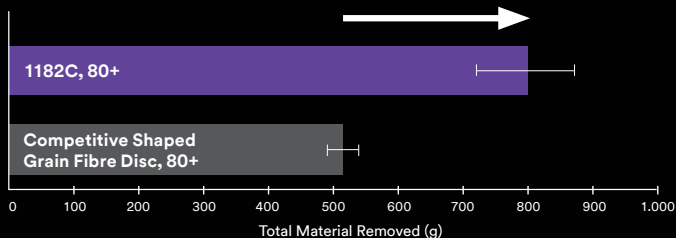


Up to  
**69%** Faster  
sustained  
cut rate<sup>2</sup>

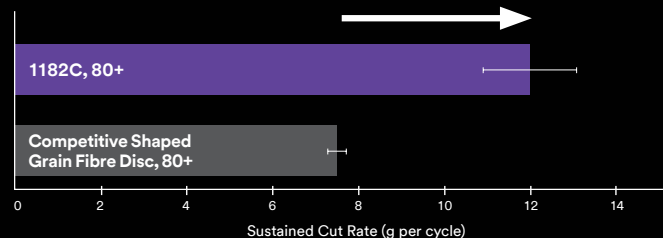


## Grade 80+

Up to  
**55%** More total  
material  
removed<sup>1</sup>



Up to  
**60%** Faster  
sustained  
cut rate<sup>2</sup>



### Total material removed:

60+ Carbon Steel: The 'total material removed' claim is determined by averaging the amount of metal ground over 100 cycles, approximately 42 minutes of grinding.

80+ Carbon Steel: The 'total material removed' claim is determined by averaging the amount of metal ground over 70 cycles, approximately 30 minutes of grinding.

Units for carbon steel will be grams

Each cycle for the carbon steel test method = 25.3 seconds of grinding per cycle

### Sustained cut rate:

60+ and 80+ Carbon Steel: The 'sustained cut rate' claim is determined from averaging the cut/cycle from cycles 11 – 50 (40 cycles total, which is approximately 17 minutes of grinding)

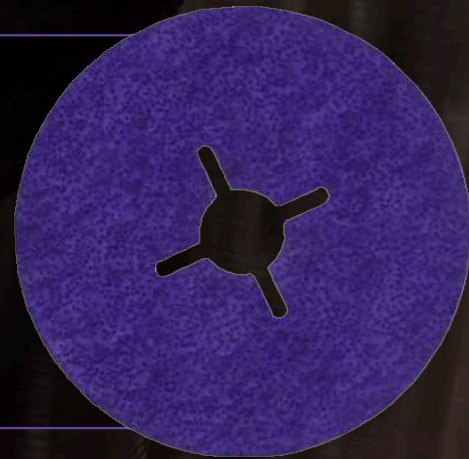


# 3M™ Cubitron™ 3 Fibre Disc 1187C

Stainless steel grinding

Grades 60+ and 80+

**NEW!**

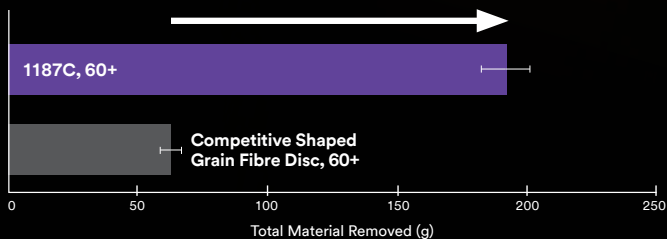


We tested 3M™ Cubitron™ 3  
Fibre Disc 1187C 60+ and 80+  
and here are the results:

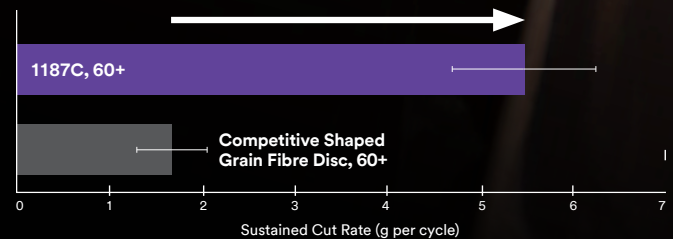
**Productivity  
Delivered**

## Grade 60+

Up to  
**207%** More total  
material  
removed<sup>1</sup>

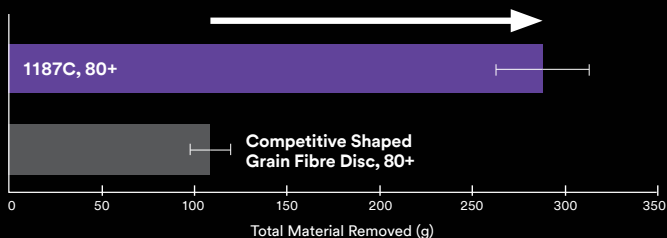


Up to  
**228%** Faster  
sustained  
cut rate<sup>2</sup>

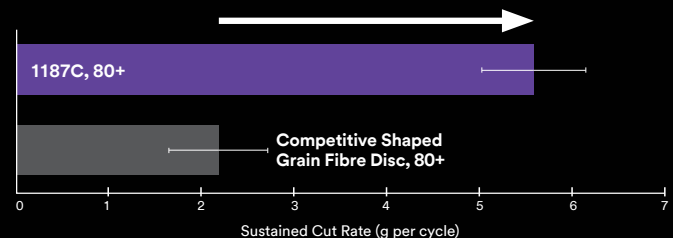


## Grade 80+

Up to  
**166%** More total  
material  
removed<sup>1</sup>



Up to  
**155%** Faster  
sustained  
cut rate<sup>2</sup>



### Total material removed:

60+ Stainless Steel: The 'total material removed' claim is determined by averaging the amount of metal ground over 40 cycles, approximately 8.5 minutes of grinding.  
80+ Stainless Steel: The 'total material removed' claim is determined by averaging the amount of metal ground over 72 cycles, approximately 15 minutes of grinding.

Units for stainless steel will be grams  
Each cycle for the stainless steel test method = 12.7 seconds of grinding per cycle

### Sustained cut rate:

60+ and 80+ Stainless Steel: The 'sustained cut rate' claim is determined from averaging the cut/cycle from cycles 5 – 24 (20 cycles total, which is approximately 4 minutes of grinding).  
Units for stainless steel will be (Grams/cycle)



# Tools that take it to the next level.

The new 3M™ Electric Grinder is available in 115mm, fixed speed. Designed with robust components, this grinder is built for durability in the harshest industrial conditions. A powerful and long-lasting tool you need to get more done.

- ▶ 1900 W power
- ▶ Available in fixed speed
- ▶ Excellent ergonomic design
- ▶ Restart protection
- ▶ Direct cooling for a long service life
- ▶ Overload protection
- ▶ Kickback control
- ▶ Adjustable guard
- ▶ Robust design and components provide durability in industrial conditions
- ▶ Accessories for maximum functionality and flexibility



## Get the full system advantage.

### 3M™ Electric Grinder



### 3M™ Disc Back-up Pads ideal use



Grade  
36+

Grades  
60+  
80+

### TECH TIP:

Combine with 3M™ Fibre Disc Back-up Pads and 3M™ Electric Grinder to optimise performance of 3M™ Cubitron™ 3 Fibre Discs 1182C and 1187C including abrasive life, cut rate and consistency.



# 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; and an answer to your labour shortage. To ensure maximised 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 optimised 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 realise the full ROI on your automation investment, you want to optimise your abrasive products and parameters for these four key elements:

- ▶ **Uptime:** Determined by abrasive life and full utilisation 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 utilises 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.



# 3M™ Cubitron™ 3 Roloc™ Fibre Discs

## The benefits of the Roloc™ attachment

3M™ Roloc™ Abrasive Discs are smaller discs that quickly attach onto a 3M™ Roloc™ disc pad so that you can conveniently and rapidly change discs as needed. Our system provides a secure attachment

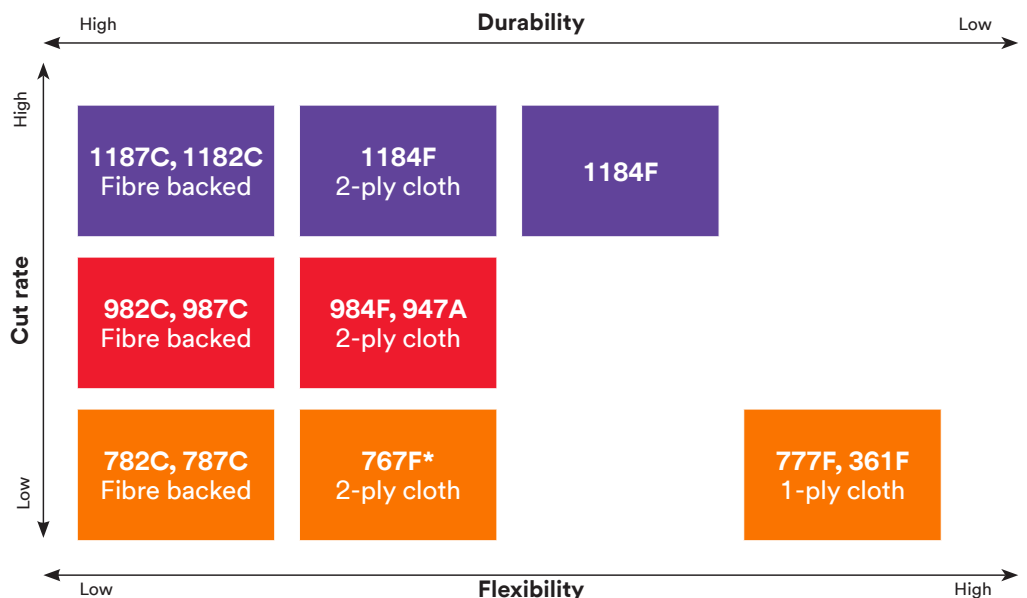
even for heavy-duty applications. Disc buttons are also colour-coded when needed to identify its grade, making it easy to select the grade required for different applications.

- ▶ Remote applications
- ▶ Retain extra control
- ▶ Localised, refining, finishing
- ▶ Corner or curved surfaces
- ▶ Intricate, difficult to reach areas
- ▶ Remove weld splatter on small areas



**Productivity  
Delivered**

## Grinding and stock removal







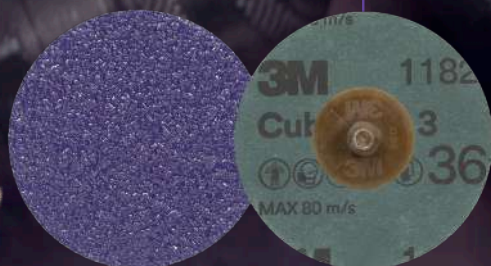
### 3M™ Cubitron™ 3 Roloc™ Durable Edge Disc 1184F

Stainless steel and other heat-sensitive alloys.

Designed for metalworking applications where flexibility is required and wear resistance in edge work is needed as well as weld grinding, beveling and deburring.

Grades 36+, 60+ and 80+

**NEW!**



### 3M™ Cubitron™ 3 Roloc™ Fibre Disc 1182C

Carbon steel grinding

Outstanding performance and productivity for medium to high pressure grinding applications on carbon steel when a smaller sized disc is needed.

Grades 36+, 60+ and 80+

**NEW!**



### 3M™ Cubitron™ 3 Roloc™ Fibre Disc 1187C

Stainless steel, cobalt chrome and nickel alloy applications.

Long-lasting disc offering a fast cut rate with high stock removal across a wide range of application pressures

Grades 36+, 60+ and 80+

**NEW!**

#### 3M™ Roloc™ Disc button colour/grade guide

CB3 Fibre Disc	Colour	Grade
1184F Durable edge	○ White	All*
1182C 1187C	● Brown	36+
	● Orange	60+
	● Yellow	80+

Optimum tool speed  
to maximise 3M™ Roloc™ Disc cut rates and life

Substrate				
Disc size	Carbon steel	Stainless steel	Titanium	Aluminium
25–38mm	30.000rpms	20.000rpms	9.000rpms	30.000rpms
50mm	20.000rpms	15.000rpms	7.000rpms	20.000rpms
75mm	15.000rpms	10.000rpms	4.500rpms	15.000rpms

#### 3M™ Roloc™ Attachment System

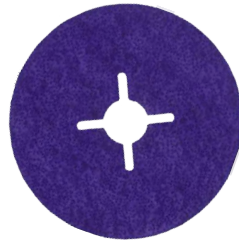
CB3 Fibre Disc	Size (mm)	TR
1184F	25–38	●
	50	●
	75	●
1182C	50	●
	75	●
1187C	50	●
	75	●

\*Ask for other dimensions availability.



**TR**  
plastic button

## Product Ordering Information



### 3M™ Cubitron™ 3 Fibre Disc 1182C

	Product ID	Grade	Diameter (mm)	Max RPM	Unit/case
	7100309905	36+	100 × 16	15,000	25/100
	7100308530	36+	115 × 22	13,300	25/100
	7100308531	36+	125 × 22	12,250	25/100
	7100309790	36+	150 × 22	10,200	25/100
	7100309794	36+	180 × 22	8,500	25/100
NEW	7100349563	60+	100 × 16	15,000	25/100
NEW	7100349583	60+	115 × 22	13,300	25/100
NEW	7100349498	60+	125 × 22	12,250	25/100
NEW	7100349676	60+	150 × 22	10,200	25/100
NEW	7100349667	60+	180 × 22	8,500	25/100
NEW	7100349570	80+	100 × 16	15,000	25/100
NEW	7100349564	80+	115 × 22	13,300	25/100
NEW	7100349571	80+	125 × 22	12,250	25/100
NEW	7100348572	80+	150 × 22	10,200	25/100
NEW	7100349585	80+	180 × 22	8,500	25/100

### 3M™ Cubitron™ 3 Fibre Disc 1187C

	Product ID	Grade	Diameter (mm)	Max RPM	Unit/case
	7100309798	36+	100 × 16	15,000	25/100
	7100309789	36+	115 × 22	13,300	25/100
	7100310794	36+	125 × 22	12,250	25/100
	7100309787	36+	150 × 22	10,200	25/100
	7100309795	36+	180 × 22	8,500	25/100
NEW	7100349572	60+	100 × 16	15,000	25/100
NEW	7100349586	60+	115 × 22	13,300	25/100
NEW	7100349581	60+	125 × 22	12,250	25/100
NEW	7100358917	60+	150 × 22	10,200	25/100
NEW	7100349679	60+	180 × 22	8,500	25/100
NEW	7100349573	80+	100 × 16	15,000	25/100
NEW	7100349587	80+	115 × 22	13,300	25/100
NEW	7100349590	80+	125 × 22	12,250	25/100
NEW	7100349672	80+	150 × 22	10,200	25/100
NEW	7100349663	80+	180 × 22	8,500	25/100

### DISCS TECH TIP:

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



### 3M™ Fibre Disc Back-up Pad

	Product ID	Diameter (mm)	Part number	Max RPM	Box/case
Hard Red Grade 36+					
	7000032409	115	64860	13,300	10/10
	7000032410	125	64861	12,000	10/10
	7100242134	150	64829	10,200	15/15
	7000032411	180	64862	8,500	15/15
Semi-Flex Grade 60+ and 80+					
NEW	7000061711	115	64857	13,300	10/10
NEW	7000061712	125	64858	12,000	10/10
NEW	7000061713	180	64859	8,500	15/15

### 3M™ Electric Grinders

1900W, 220-240V, 11,500 Max RPM, M14

Product ID	Diameter (mm)	Part number	Max RPM	Box/case
Plug Type E				
7100249666	115	14253	Fixed	1/1
7100249667	115	14281	Variable	1/1
7100249665	125	14273	Fixed	1/1
7100249668	125	14291	Variable	1/1
Plug Type J				
7100281561	125	14112	Variable	1/1
Plug Type G				
7100281321	115	<b>14144</b>	Fixed	1/1

UK Plug Type G.

### PADS TECH TIP:

If higher performance (faster stock removal) is required when working on flat surfaces with grades: 60+ and 80+, use black ribbed or red ribbed.



## Product ordering information



3M™ Cubitron™ 3 Roloc™ Durable Edge Disc 1184F				
	Product ID	Diameter (mm)	Grade	Unit/case
NEW	7100331411	25–38	36+	50/200
NEW	7100332562	25–38	60+	50/200
NEW	7100331726	25–38	80+	50/200
NEW	7100331727	50	36+	50/200
NEW	7100331410	50	60+	50/200
NEW	7100332404	50	80+	50/200
NEW	7100331731	75	36+	50/200
NEW	7100331725	75	60+	50/200
NEW	7100332405	75	80+	50/200



3M™ Cubitron™ 3 Roloc™ Fibre Disc 1182C				
	Product ID	Diameter (mm)	Grade	Unit/case
NEW	7100332086	50	36+	50/200
NEW	7100332343	50	60+	50/200
NEW	7100332356	50	80+	50/200
NEW	7100332346	75	36+	50/200
NEW	7100332232	75	60+	50/200
NEW	7100332357	75	80+	50/200



3M™ Cubitron™ 3 Roloc™ Fibre Disc 1187C				
	Product ID	Diameter (mm)	Grade	Unit/case
NEW	7100332836	25–38	60+	50/500
NEW	7100331754	50	36+	50/200
NEW	7100331745	50	60+	50/200
NEW	7100331753	50	80+	50/200
NEW	7100331749	75	36+	50/200
NEW	7100332087	75	60+	50/200
NEW	7100332088	75	80+	50/200
NEW	7100332089	100	80+	25/100

Pads for Roloc™ discs				
Button TR	Size (mm)	Attachment thread	Grade	Hardness
7000045286	25–38	1/4-20INT	36+	Extra Hard or Hard*
7000045284	50	1/4-20INT		
7000045285	75	1/4-20INT		
7000045692	100	M14-2		
7000000441	50	1/4-20INT	60+	Hard
7100002305	75	1/4-20INT		
7000028376	100	M14-2		
7000045280	25–38	1/4-20INT	80+ and 120+	Medium or Hard*
7000045282	50	1/4-20INT		
7000000602	75	1/4-20INT		
7000045695	100	M14-2		

\*Ask for other dimensions availability.





## 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.

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**3M United Kingdom PLC**  
3M Centre  
Cain Road, Bracknell  
RG12 8HT  
Phone: +44 8705 360036  
Email: [abrasives.uk@mmm.com](mailto:abrasives.uk@mmm.com)  
Web: [3M.co.uk/abrasives](http://3M.co.uk/abrasives)

**3M Ireland Limited**  
The Iveagh Building  
Carrickmines Park  
Carrickmines  
Dublin 18  
Ireland  
Phone: +353 1800 303 437