



Cubitron™ 3

Performance Abrasives

Portable Grinding and Cut-Off Wheels



Produce more. With less.

3M™ Cubitron™ 3 Portable Grinding and Cutting Wheels feature 3M Precision-Shaped Ceramic Grain, which cuts faster and lasts longer than conventional grain. Designed for everyday high performance, helping you to reduce your manufacturing costs without compromising on performance.



Lasts longer



Cuts faster



Cuts cooler

A new era of heavy grinding and cutting:
3M™ Cubitron™ 3
Performance Abrasives.



Our portable grinding and cutting wheels have evolved.



Launched in 2012, this was the first range of cutting and grinding products using 3M's precision-shaped triangular grain abrasives. This range has now been replaced by our latest and best offering.



Significantly raising the benchmark for cut rate and product life in heavy grinding and cutting applications.

Up to
3X
Longer
lasting

Responding to industry requirements for better product productivity, worker safety and sustainability, 3M has developed abrasive wheel technologies that make portable grinding and cutting wheels work even faster and last even longer than our current best performing range. Performance is so good compared to existing 3M™ Cubitron™ II Performance Abrasives that we've established a new generation of products called 3M™ Cubitron™ 3 Performance Abrasives.

**Elevated
experience**

To maximise simplicity and value to our customers, the current 3M™ Cubitron™ II Portable Grinding and Cutting Wheel range will be discontinued and replaced by 3M™ Cubitron™ 3 Performance Abrasives. Customers will benefit from a wider product choice, better performance and optimised sustainability with no change in list price.

Re-shaping the way work gets done.



Our latest 3M Precision-Shaped Grain

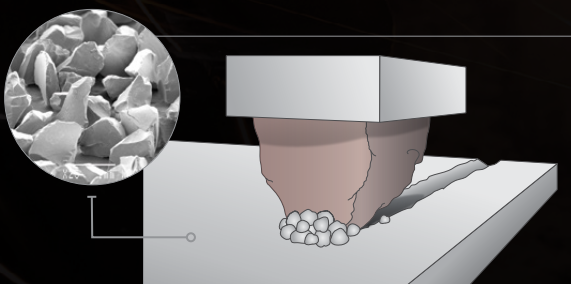
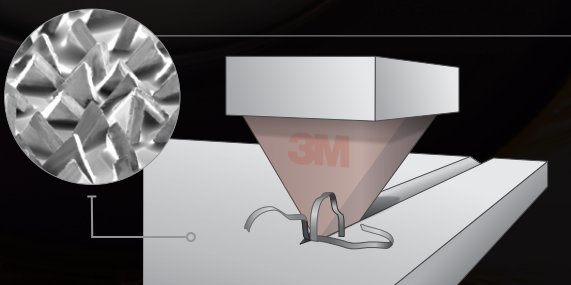
We've re-engineered precision-shaped ceramic triangular grain using proprietary breakthroughs in **molecular bonding technology**.

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.

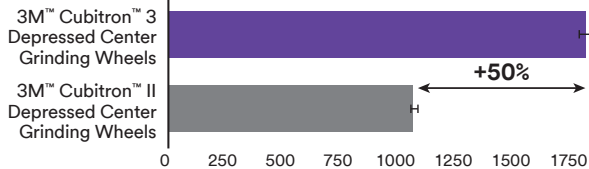


3M™ Cubitron™ 3 Depressed Center Grinding Wheels

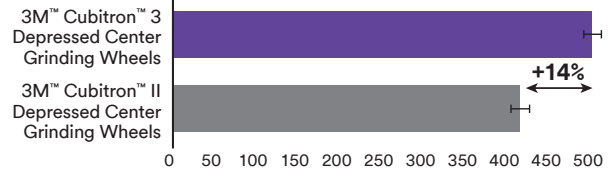


Fast cutting, long lasting wheels that require less pressure for heavy grinding and weld removal.

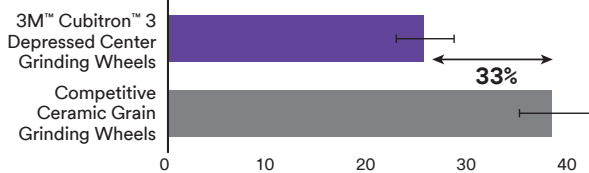
50% Longer life¹



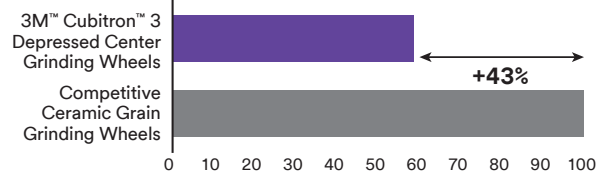
14% Faster cut¹



33% Less hand-arm vibration¹



43% Less noise^{1,2}

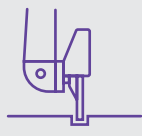


1. Results are based on an automated beveling of 1018 carbon steel bars. Grinding wheel geometry is 115mm outer diameter mounted on a servo motor with an applied force of 12 lbs. Cut speed is defined by metal removed after 10 minutes of testing. The total material removal is estimated based on the amount of wheel used for 10 minutes of testing life. End of life is assumed to be 50% of the initial wheel mass.

2. Noise level operator exposure testing in a typical weld preparation process; 3M™ Cubitron™ 3 Depressed Center Grinding Wheels average compared to the average result of the high-quality ceramic bonded wheels tested, according to independent testing by Fraunhofer Institute, August 2023. Noise is measured in dB(A) and is a logarithmic number, a reduction of 3dB(A) is a halving of the noise intensity. Above 80dB(A) hearing protection should be provided. 105 decibels for high-quality grinding wheels, 102 decibels for 3M™ Cubitron™ 3 Depressed Center Grinding Wheels.

Range Expansion

Specific product lines have been introduced where wheel construction and grain type are optimised for applications such as gouging and back grinding where the wheel is used on its edge.



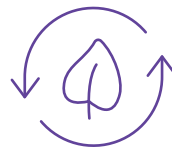
3M™ Cubitron™ 3 Depressed Center Grinding Wheels

Part Number	3M ID	Type	Diameter (mm)	Thickness (mm)	Center Hole (mm)	
99396	7100303984	T27	100	6.0	16.00	
99306	7100303983	T27	115	7.0	22.23	
98647	7100303982	T27	125	7.0	22.23	
98452	7100303981	T27	150	7.0	22.23	
98418	7100303980	T27	180	7.0	22.23	
98291	7100303979	T27	230	7.0	22.23	
Gouge Special Wheels						
New!	43616	7100312955	T27	125	7.0	22.23
New!	74433	7100303963	T27	150	7.0	22.23
New!	97818	7100305453	T27	180	7.0	22.23

3M™ Cubitron™ 3 Cut-Off Wheels

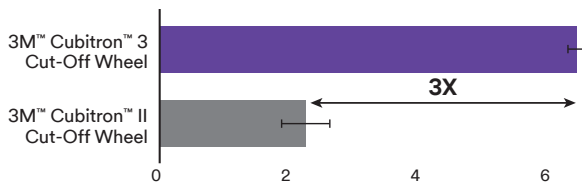


Designed to provide high cut rates and long life to help reduce cost.



Performance enhancing packaging
When cut-off wheels are properly protected from atmospheric moisture, product life can be extended. All 3M™ Cubitron™ 3 Cut-Off Wheels will come in re-sealable, moisture resistant bags made with recycled material.

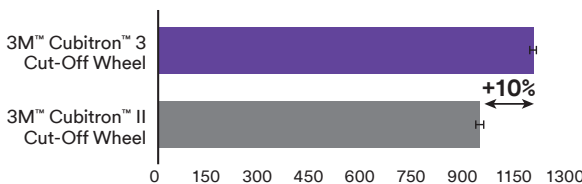
3X Longer life³



33% Less hand-arm vibration³



10% Faster cut³



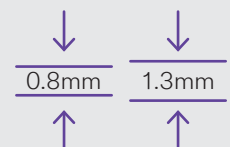
3. Results are based on an automated cutting of a 3mm thick 304 stainless steel sheet. Cut-off wheel geometry is 125mm x 1.6mm x 22mm mounted on a 1.5 hp angle grinder with an applied force of 9 lbs. Cut speed is defined by time needed to cut 1 meter of stainless steel. The number of cuts is estimated by the amount of wheel that was used after cutting a distance of 1 meter. End of life is assumed to be 50% of initial wheel mass.

3M™ Cubitron™ 3 Cut-Off Wheels

Part Number	3M ID	Type	Diameter (mm)	Thickness (mm)	Center Hole (mm)
90230	7100303861	T41	75	1.0	6.35
91045	7100304124	T41	75	1.0	8.00
90230	7100304121	T41	75	1.0	9.53
91045	7100304123	T41	75	1.0	10.00
86997	7100303830	T41	100	2.0	15.88
86581	7100304305	T41	115	0.8	22.23
86616	7100304120	T41	115	1.0	22.23
89573	7100304003	T41	115	1.6	22.23
88383	7100303996	T42	115	2.5	22.23
86580	7100304127	T41	125	0.8	22.23
47420	7100304303	T41	125	1.0	15.88
86647	7100304306	T41	125	1.0	22.23
86647	7100304306	T41	125	1.0	22.23
86457	7100304304	T41	125	1.3	22.23
86412	7100303829	T41	125	1.6	22.23
88775	7100304000	T41	125	2.0	22.23
87963	7100303995	T42	125	2.5	22.23
87338	7100303831	T42	125	3.0	22.23
90247	7100305353	T41	150	1.6	22.23
86542	7100304056	T41	150	2.0	22.23
88912	7100305230	T41	180	1.6	22.23
88768	7100303999	T41	180	2.0	22.23
87396	7100303994	T42	180	2.5	22.23
88732	7100303998	T41	230	2.0	22.23
88404	7100303997	T41	230	2.5	22.23
87378	7100303993	T42	230	2.5	22.23
87671	7100303832	T41	230	0.8	22.23

Range Expansion

A 0.8mm thickness option has been added that offers better speed on thin substrates. A 1.3mm thickness option is a compromise between the speed of a 1.0mm and the life of a 1.6mm thick wheel.



3M™ Cubitron™ 3 Cut & Grind Wheels



Versatile wheels are designed to be used as both a depressed center grinding wheel and as a cut-off wheel — making them ideal for cutting, grinding, gouging and more!

We've reformulated our Cut & Grind Wheel composition to offer:



Smooth action

vs. 3M™ Cubitron™ II



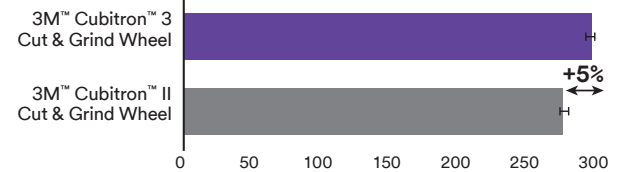
Best in class performance



Better balance

vs. 3M™ Cubitron™ II

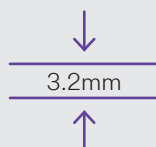
5% Faster cut⁴



4. Results are based on an automated beveling of 1018 carbon steel bars. Cutting & grinding wheel geometry was 115mm outer diameter mounted on a servo motor with an applied force of 12 lbs. Cut speed is defined by metal removed after 10 minutes of testing. The total material removal is estimated based on the amount of wheel used for 10 minutes of testing life. End of life is assumed to be 50% of the initial wheel mass.

Range Expansion

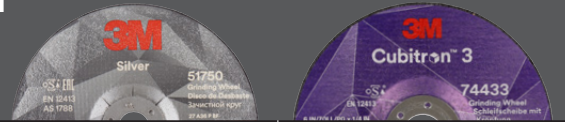
We've added a 3.2mm option for applications requiring a thinner cutting profile. A thinner wheel makes it cut faster too!



3M™ Cubitron™ 3 Cut & Grind Wheels

Part Number	3M ID	Type	Diameter (mm)	Thickness (mm)	Center Hole (mm)	
New!	93314	7100305445	T27	100	3.2	22.23
New!	94159	7100305449	T27	115	3.2	22.23
New!	93498	7100305448	T27	125	3.2	22.23
New!	47563	7100305148	T27	150	3.2	22.23
New!	93473	7100305447	T27	180	3.2	22.23
New!	93395	7100305446	T27	230	3.2	22.23
	95508	7100305450	T27	100	4.2	22.23
	95344	7100303975	T27	115	4.2	22.23
	94946	7100303974	T27	125	4.2	22.23
	94888	7100303973	T27	150	4.2	22.23
	94542	7100303972	T27	180	4.2	22.23
	94343	7100303971	T27	230	4.2	22.23

3M™ Portable Grinding and Cut-Off Wheel product performance comparisons



Attributes	Aluminum oxide	Alumina zirconia	3M™ Silver	3M™ Cubitron™ 3
Durability / life	★★	★★★	★★★★★	★★★★★
Speed of cut	★	★★	★★★	★★★★★
Feel: smooth	★★	★★★	★★★★★	★★★★★
Contaminant-free* (for stainless/inox)	varies	varies	yes	yes
Mineral	aluminum oxide	alumina zirconia	blend of precision-shaped ceramic grain	precision-shaped ceramic grain
Abrasive cost per job	\$\$\$	\$\$	\$	\$\$
Total cost of job (abrasive, labor, processes)	\$\$\$\$	\$\$\$	\$\$	\$

*Contains less than 0.1% Fe, S and Cl.

3M™ Portable Grinding and Cut-Off Wheels

3M™ Silver Depressed Center Grinding Wheel

3M ID	Type	Diameter (mm)	Thickness (mm)	Center Hole (mm)
7100141110	T27	100	6	9.53
7100141106	T27	100	6	15
7100141123	T27	100	7	16
7100141111	T27	115	6	22.23
7100141083	T27	115	7	22.23
7100141104	T27	125	6	22.23
7100141086	T27	125	7	22.23
7100141082	T27	150	6	22.23
7100141089	T27	150	7	22.23
7100141081	T27	180	6	22.23
7100141096	T27	180	7	22.23
7100141080	T27	230	6	22.23
7100141099	T27	230	7	22.23

3M™ Cut & Grind Wheels

3M ID	Type	Diameter (mm)	Thickness (mm)	Center Hole (mm)
7000105685	T27	100	3	16
7100213967	T27	100	4.2	16
7100214038	T27	115	4.2	22.23
7100214085	T27	125	4.2	22.23
7100214087	T27	150	4.2	22.23
7100214088	T27	180	4.2	22.23
7100214089	T27	230	4.2	22.23

3M™ Silver Cut-Off Wheels

3M ID	Type	Diameter (mm)	Thickness (mm)	Center Hole (mm)
7100139207	T41	75	0.9	6
7100139209	T41	75	0.9	10
7100139211	T41	75	1.6	10
7100139213	T41	100	0.9	6
7100139216	T41	100	1	10
7100139217	T41	100	1	16
7100172812	T41	100	1	16
7100139218	T41	100	1.3	16
7100172725	T41	100	2.5	16
7100139219	T41	105	1	10
7100225278	T41	105	1	16
7100139223	T41	105	1.3	9.53
7100139225	T41	105	2	16
7100139227	T41	115	1	22.23
7100172890	T41	115	1	22.23
7100139229	T41	115	1.6	22.23
7100171372	T41	115	2.5	22.23
7100139231	T41	125	1	16
7100139232	T41	125	1	22.23
7100172891	T41	125	1	22.23
7100139233	T41	125	1.3	16
7100140495	T41	125	1.3	22.23
7100139234	T41	125	1.6	22.23
7100172724	T41	125	1.6	22.23
7100139238	T41	125	2	22.23
7100171308	T41	125	2.5	22.23
7100177170	T41	127	1	22.23
7100139235	T41	150	1.6	22.23
7100139239	T41	180	1.6	22.23
7100139240	T41	180	2	22.23
7100172726	T41	180	2	22.23
7100171349	T41	180	2.5	22.23
7100141045	T41	180	3	22.23
7100141068	T41	230	2	22.23
7100171332	T41	230	2	22.23
7100171348	T41	230	2.5	22.23
7100141075	T41	230	3	22.23
7100141056	T42	115	2.5	22.23
7100141069	T42	125	2.5	22.23
7100141067	T42	180	2.5	22.23
7100141070	T42	230	2.5	22.23

3M has you covered when it comes to portable grinding and cutting. Offering a wide range of options tailored to your unique needs.

Tools that take it to the next level.

The new 3M™ Electric Grinder is available in 115mm and 125mm and fixed or variable speed. Designed with robust components, these grinders are built for durability in the harshest industrial conditions. They're the powerful and long-lasting tools you need to get more done.

- ▶ 1900W power
- ▶ Available in fixed or variable speeds
- ▶ World class 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



3M™ Electric Grinders 1900W, 220-240V, 11,500 Max RPM, M14

3M ID	Diameter (mm)	Part Number	Max RPM	Box/Case
7100249666	115	14253	Fixed	1/1
7100249667	115	14281	Variable	1/1
7100249665	125	14273	Fixed	1/1
7100249668	125	14291	Variable	1/1



TECH TIPS

Powering up for performance

- ▶ Portable bonded products perform better the faster they run, so having a tool able to maintain speed is crucial
- ▶ The higher the tool power, the easier it can maintain speed, resulting in faster cut time and longer wheel life
- ▶ When the tool speed decreases, wheel wear typically increases
- ▶ **Do not** exceed the maximum operating speed listed on the wheel!
- ▶ Always use a tool guard

Industries: Metal fabrication ▶ Machinery manufacturing ▶ Shipyards



Ideal for applications: Beveling ▶ Cutting ▶ Weld grinding



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.



Sustainable European Abrasive Manufacturers

Find out more at
www.seam.earth



Learn more at 3M.com/Cubitron3



3M Abrasive Systems
3M Center, Building 223-6N-02
St. Paul, MN 55144 USA

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

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