

SURFACE GRINDING WHEELS

Surface grinding wheels are generally used to grind flat stock or flat surfaces within a workpiece. These wheels are typically used on horizontal spindle machines. Applications can vary from heavy, rapid stock removal to precision tolerance operations.

Typical Wheel Applications

- Producing flat stock
- Grinding large molds and dies
- Sharpening knives, blades and cutlery
- Manufacturing broaches



GOOD Gemini Non-stock Wheels – Economical, versatile, general purpose wheels

FEATURES	BENEFITS
• Specially blended aluminum oxide abrasive for many surface grinding applications	• Consistent performance at an economical price • Faster grinding rates remove stock; lower rates produce finer finishes
• Porous bond	• Cool cutting on medium to wide contact areas; high chip clearance and stock removal
• Versatile	• Ideal when a broad range of tool steel parts are ground on one machine



Popular Gemini Surface Grinding Wheels

The following UPC numbers for popular sizes and specifications have been created for ease of ordering. Two are stock; the remainder are non-stock. See the availability chart for many more made-to-order sizes and specifications.

SIZE D X T X H	MAX. RPM	MIN./STD. PKG.	GOOD GEMINI SPEC	UPC NO.
TYPE 01 STRAIGHT				
16 x 2 x 5	1,430	2/-	Gemini 36-I	66253058310*
18 x 2 x 8	1,275	1/-	Gemini 36-I	66253058311*
20 x 2 x 8	1,625	1/-	Gemini 36-I	66253058312*
TYPE 07 RECESSED TWO SIDES				
18 x 2 x 8 Recess 2/S 11-1/2 x 1/2	1,275	1/-	Gemini 46-I	66253058313*
20 x 3 x 8 Recess 2/S 11-1/2 x 1/2	1,625	1/-	Gemini 46-I	66253058314*
20 x 3 x 10 Recess 2/S 12-1/4 x 3/4	1,625	1/-	Gemini 46-I	66253058315
20 x 4 x 8 Recess 2/S 11-1/2 x 1/2	1,625	1/-	Gemini 46-I	66253058317*
20 x 4 x 10 Recess 2/S 12-1/4 x 1	1,625	1/-	Gemini 46-I	66253058318*
20 x 6 x 10 Recess 2/S 12-1/4 x 1	1,625	1/-	Gemini 46-I	66253058320

* NON-STOCK; AVAILABLE IN STANDARD NON-STOCK LEAD-TIMES

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Gemini Surface Grinding Wheel Availability

ALL GEMINI SURFACE GRINDING WHEELS ARE NON-STOCK, MADE-TO-ORDER, WITH STANDARD LEAD-TIMES (EXCEPT THE TWO STOCK WHEELS SHOWN IN THE UPC CHART).

Wheel Types :	Type 01 Straight, Type 05 Recessed One Side, and Type 07 Recessed Two Sides
Abrasive:	Surface grinding aluminum oxide blend
Diameter:	16" - 24"
Maximum Thickness:	6"
Grit sizes:	24 - 120
Grades:	D - I
Bond:	Vitrified porous bond

Surface Grinding Wheel Competitive Cross Reference

NORTON	CAMEL	CINCINNATI	MILACRON	RADIAC
Gemini	91A	29A, 97A		WAA, 97A, 45A

See 55A-VH Blank Stock on page 170 for additional (FastTrack) Surface Grinding specifications.
Ask your distributor about our revolutionary new Norton Quantum ceramic made-to-order surface grinding wheels – a quantum leap in technology.

SURFACE GRINDING SEGMENTS

Surface grinding segments are generally used to grind flat stock or flat surfaces within a workpiece. The segment moves over the workpiece in a flat plane or vice versa. Applications can vary from heavy, rapid stock removal to precision tolerance operations.

Typical Segment Applications

- Vertical spindle surface grinding
- Grinding large molds, dies and large plates
- Producing flat stock
- Sharpening knives, blades, cutlery



BEST SG Ceramic Aluminum Oxide Segments	
FEATURES	BENEFITS
• High performance seeded gel ceramic abrasive	• Fast stock removal, maximum productivity; lowest total grinding cost
• Self-sharpening abrasive	• Cool cutting, minimal dressing needed
• High performance bond	• Long segment life
5SG	
• Highest ceramic content	• Best for grinding hard materials
• Sharpest blend	• Fastest stock removal
3SGP	
• Aggressive, ceramic blend	• Very durable and sharp
	• Best for grinding mild steels



BETTER 86A Segments	
FEATURES	BENEFITS
• Sharp aluminum oxide abrasive	• Versatile, consistent performance



GOOD Gemini Segments	
FEATURES	BENEFITS
• Quality aluminum oxide abrasive blend	• Ideal when a large variety of parts are ground on one machine
	• Excellent value for general purpose use, and for the account where initial price is a main purchasing consideration



TECHtips

- Choose 24 and 30 grit for soft and mild steels.
- Choose 36 and 46 grit for hard steels.
- Choose as coarse a grit size as possible in order to remove stock as quickly as possible (in big chips).
- To maximize production, choose the hardest grade possible that will not overload the machine.



It is the user's responsibility to refer to and comply with ANSI B7.1

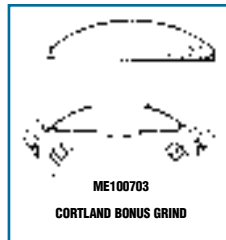
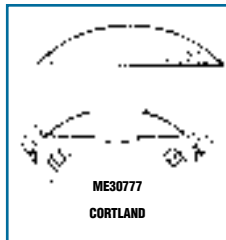
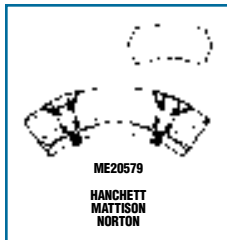
SURFACE GRINDING SEGMENTS

Segments

WIDTH	THICK.	HEIGHT	BLUEPRINT NO.	STD. PKG.	BEST SG		BETTER 86A		GOOD GEMINI	
					SPEC	UPC NO.	SPEC	UPC NO.	SPEC	UPC NO.
5	1-1/2	6	ME20579	8	3SGP30-G12VSP 5SG30-G12VSP	61463604490 B 61463650413	86A30-F12VBEP 86A30-G12VBEP	61463650273 61463650275	Gemini 30-E Gemini 30-F Gemini 30-G	66253050295 66253050297 66253050299
11-1/4	2-1/4	6	ME30777	5	3SGP30-E12VSP 3SGP30-F12VSP 3SGP30-G12VSP 5SG30-E12VSP 5SG30-F12VSP 5SG30-G12VSP 5SG36-G12VSP	61463604646 61463604039 B 61463604522 B 61463650424 B 61463650417 B 61463650419 61463650421	86A24-E12VBEP 86A24-G12VBEP 86A30-E12VBEP 86A30-F12VBEP 86A30-G12VBEP 86A36-E12VBEP 86A46-D12VBEP	61463650279 61463650282 61463650285 61463650287 61463650289 61463650291 61463650442	Gemini 30-E Gemini 30-F Gemini 30-G Gemini 30-H Gemini 30-I	69936699706 69936699709 69936699710 66243447588 66243447589
11-1/4	2-1/4	8	ME30777	5			86A24-G12VBEP	61463650293	Gemini 30-E Gemini 30-F Gemini 30-G Gemini 30-H Gemini 30-I	69936699712 69936699716 69936699717 66243447591 66243447592
11-1/4	3	8	ME100703B	4	3SGP30-F12VSP 3SGP30-G12VSP	61463604720 B 61463615471 B	86A30-E12VBEP	61463650301	Gemini 30-E Gemini 30-F Gemini 30-G Gemini 30-H Gemini 30-I	69936699725 69936699727 69936699728 66243447594 66243447595
	1-5/8			10	Vitrified Burr Remover	61463650268*				

B = BEST SELLER; PERFORMS WELL IN A VARIETY OF APPLICATIONS FOR MANY SATISFIED CUSTOMERS

*MINIMUM QUANTITY = 2



Ask your distributor about our revolutionary new Norton Quantum ceramic made-to-order segments – a quantum leap in technology.

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Troubleshooting Guide

PROBLEM	CORRECTION
Segment acting too hard	Increase rate of downfeed Increase table rotation speed (watch amp-meter) Dress more frequently Consider reducing area of table load
Segment acting too soft	Decrease rate of downfeed Decrease table rotation speed Check for abnormal machine vibration
Glazing and/or burning	Choose a softer grade Increase table speed (watch amp-meter)

Surface Grinding Starting Recommendations by Material

MATERIAL	WHEELS	SEGMENTS – HEAVY-DUTY	SEGMENTS – GENERAL-DUTY
Aluminum	Gemini 46-H	86A30-E12VBEP	Gemini 30-E
Bronze (hard)	Gemini 46-I	Pacesetter 30-G	Gemini 30-G
Cast Iron	Gemini 46-G	5SG30-G12VSP	Gemini 30-G
Hastalloy	Gemini 46-G	86A30-G12VBEP	Gemini 30-E
Inconel	Gemini 60-F	5SG30-E12VSP	Gemini 30-E
Hardened Steel	Gemini 60-F	5SG30-G12VSP	Gemini 30-E
High Speed Steel	Gemini 60-G	5SG30-G12VSP	Gemini 30-E
Soft Steel	Gemini 60-H	Charger 30-G	Gemini 30 G
Stainless Steel 300	Gemini 60-F	86A30-E12VBEP	Gemini 30-E
Stainless Steel 400	Gemini 60-H	86A30-E12VBEP	Gemini 30-F