

**NORTON**

## **NEW NORTON GEMINI SEGMENTS AND CYLINDRICAL, CENTERLESS, AND SURFACE GRINDING WHEELS**

► **Consistent Performance at  
an Economical Price**

► **For Small- to Medium-Size  
Manufacturers That Need Versatile  
Abrasive Products for Many  
Different Grinding Jobs**



[www.nortonabrasives.com](http://www.nortonabrasives.com)



# New Expanded Line of Versatile Performing and Economically-Priced Gemini Cylindrical, Centerless and Surface Wheels and Segments

The Norton bonded Gemini wheel line has been expanded. The Gemini line now includes segments, cylindrical wheels, centerless wheels and surface wheels. These bonded abrasives are ideal for light production and maintenance applications for small- to medium-size manufacturers that need one abrasive product for many different jobs.

Like the current line of Norton Gemini snagging and bench and pedestal wheels, the new Gemini offering provides consistent performance and versatility at economic price levels.



# Gemini

**Value and  
Performance**

## Contents

Guidelines for Safe Use	3
Surface Grinding Segments	5
Bench and Pedestal Wheels	6
Snagging Wheels	7
Centerless Grinding Wheels	8
Cylindrical Grinding Wheels	9
Surface Grinding Wheels	10

# Guidelines for Safe Use

## Safe Operating Practices

Safe operating practices must be part of every grinding wheel user's operation. The greatest efficiency and lowest overall abrasive cost can be realized only if proven care and use techniques become standard practice.

- Be sure to read any safety material/guidelines provided with the abrasive product.
- Always check the wheel for cracks or damage before use.
- Before mounting the wheel, use a tachometer to measure the spindle speed.
- Ensure the mounting flanges, backplate or adapter supplied by the machine manufacturer are used and kept in good condition. ANSI Safety Requirements B7.1 provides wheel mounting requirements. Check mounting flanges for equal and correct diameter and use blotters when supplied.
- Always mount, true and dress the wheel in conformance with the guidelines published in the ANSI Safety Requirements B7.1.
- Ensure the correct wheel guard is in place before starting the wheel. Allow the wheel to come up to full operating speed before starting to grind for a minimum of one minute, and stand out of the plane of rotation.
- NEVER use a high-speed air sander as a portable grinder.
- NEVER exceed the maximum operating speed marked on the wheel being used. The following formula may be used to calculate wheel speed:  
$$SFPM = \text{Spindle Speed in RPM} \times \text{Wheel Dia. in inches} \times .262$$
- Avoid dropping or bumping the wheel.
- When not using the wheel, store the wheel in its original packing materials. This protects the wheel from chips and cracking, as well as provides easy identification of the wheel.

For more information on product safety, ask your Norton Distributor for these publications:

- "Primer on Grinding Wheel Safety" (form 474)
- Portable Grinding Safety (form 1406)
- ANSI B7.1 "Safety Requirements for the Use, Care and Protection of Abrasive Wheels"
- ANSI B7.7 "Safety Requirements for Abrading Materials with Coated Abrasive Systems"
- Federal Hazard Communication Standard 29 CFR 1910.95, 1910.132, 1910.133, 1910.134, 1910.138 and 1910.1200
- Material safety data sheets
- Norton safety videos
- Other applicable regulations

## Safety Tips

### Snagging, Depressed Center and Cut-off Wheels

#### Do's

- Check all wheels for cracks or damage before use.
- Check machine speed against established safe operating speed marked on the wheel.
- Always use the proper wheel guard for the application.
- Run wheel in a protected area for one minute before grinding.

#### Don'ts

- Don't use wheels that have been dropped or otherwise damaged.
- Don't use heavy side pressure on any thin Type O1 straight cut-off wheel or Type 27 thin depressed center wheel.
- Never use a grinding wheel with a rated speed less than that of the grinder.

### Bench and Pedestal Wheels

#### Do's

- Check all wheels for cracks or damage before use.
- Always use a safety guard and ensure work rest is properly adjusted.
- Always handle and store wheels in a careful manner.
- Check mounting flanges for equal and correct diameter and use blotters when supplied.
- Check machine speed against established safe operating speed marked on wheel.

#### Don'ts

- Don't use a cracked wheel or one that has been dropped or damaged.
- Don't exceed recommended operating speeds.
- Don't tighten the mounting nut excessively.
- Don't jam work into the wheel.
- Do not sand wood, plastic or any other non-metallic material on bench and pedestal grinders.

### A Deadly Equation

#### Pistol Grip Air Sander + Grinding Wheel = Certain Injury!

- Never use a high-speed air sander as a portable grinder.
- Use only sanding discs specifically designed for sanders.
- Because the speed of these sanders far exceeds the maximum rated speeds for grinding wheels, a potentially lethal wheel breakage may occur.



PISTOL GRIP AIR SANDER



**It is the user's responsibility to refer to and comply with ANSI B7.1 and B7.7**

For additional information on safety, visit our website at [www.nortonabrasives.com](http://www.nortonabrasives.com)



# Guidelines for Safe Use

## Abrasive Cup Wheel Safety and You!

### What Are the Safety Requirements for Abrasive Cup Wheels?

Following OSHA and ANSI safety requirements when using abrasive cup wheels may require a little extra time and increase your cost (in the short run), but if you consider the time lost and medical cost due to an accident, it is really MUCH cheaper to “do it right.” Knowing the rules and following those rules does not only make good business sense, but it is the smart thing to do! Following is a check list of the important rules to follow.

#### Matching the Abrasive Wheel to the Machine:

- Mismatching the grinding wheel and the machine can be a real “recipe for disaster.” Select only grinders with the correct speed, mounting system and guard for the abrasive wheel that you are going to use. Select the proper abrasive cup wheel and machine for the job.
- Cup Wheel Speed versus Machine Speed: Use only abrasive wheels with speeds rated at or higher than the speed marked on the grinder.
- Use abrasive cup wheels on portable grinders with cup guards only.
- Use abrasive cup wheels on grinders with a proper back flange. A 2" flat or non-relieved back flange will provide abrasive cup wheels 6" in diameter and smaller with the required back support. ANSI requires back flange sizes to be as follows:

CUP DIAMETER	MINIMUM BACK FLANGE DIAMETER
6"	2"
5"	1-3/4"
4"	1-3/8"



## For Your Protection



#### Safety Guides and Wheel Warning Messages

Norton provides information pertaining to the safe use of all products. Please take the time to read it carefully.



#### Face Protection

Always wear face protection when using abrasive products.



#### Safety Gloves

Grinding applications are conducted in harsh environments. The use of safety gloves is recommended.



#### Hearing Protection

Use of these products may create elevated sound levels. Hearing protection must be worn where required.



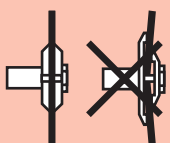
#### Speeds

Check machine speed against safe maximum operating speed marked on the grinding wheel. Do not overspeed the wheel.



#### Wheel Guard

Always use the wheel guard as supplied by the machine manufacturer.



#### Flanges

When mounting grinding wheels, use only flanges of equal diameter. For exceptions see ANSI B7.1.



#### Respiratory Protection

Always use dust controls and protective measures appropriate to the material being ground.



## WARNING

This warning icon appears on our products and packaging. It is intended to draw your attention to the specific safety warning practices outlined after it.

# Gemini Segments

The full Gemini Segment availability is listed below. All available Gemini segments are stocked products.

## 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)

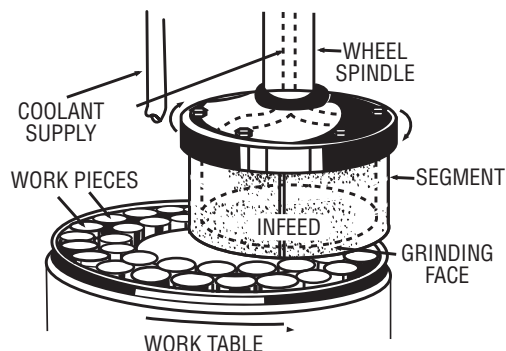


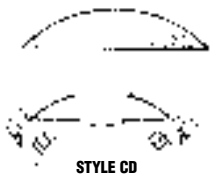
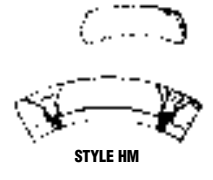
## Cortland Shapes

SPECIFICATION	2-1/4 X 11-1/4 X 6" (ME30777)
Gemini 30-E	69936699706
Gemini 30-F	69936699709
Gemini 30-G	69936699710
Gemini 30-H	66243447588
Gemini 30-I	66243447589
SPECIFICATION	2-1/4 X 11-1/4 X 8" (ME30777)
Gemini 30-E	69936699712
Gemini 30-F	69936699716
Gemini 30-G	69936699717
Gemini 30-H	66243447591
Gemini 30-I	66243447592
SPECIFICATION	3 X 11-1/4 X 8 - BONUS (ME100703B)
Gemini 30-E	69936699725
Gemini 30-F	69936699727
Gemini 30-G	69936699728
Gemini 30-H	66243447594
Gemini 30-I	66243447595

## Hanchett Shape

SPECIFICATION	5 X 1-1/2 X 6 (ME 20579)
Gemini 30-E	66253050295
Gemini 30-F	66253050297
Gemini 30-G	66253050299




SEGMENTS FOR CORTLAND CHUCKS	SET NO.	CHUCK DIAMETER	PER SET	NORTON NUMBER	WIDTH	THICKNESS	HEIGHT
	CD 18L	18	4	ME 30777	11-1/4	2-1/4	6
	CD22	22	5	ME 30777	11-1/4	2-1/4	6
	CD22L	22	5	ME 30777	11-1/4	2-1/4	6
	CD32A	32	7	ME 30777	11-1/4	2-1/4	6, 8
	CD42	42	10	ME 30777	11-1/4	2-1/4	6, 8
	CD44	44	10	ME 30777	11-1/4	2-1/4	6, 8
	CD48	48	11	ME 30777	11-1/4	2-1/4	6, 8
	CD54	54	13	ME 30777	11-1/4	2-1/4	6
	CD60	60	14	ME 30777	11-1/4	2-1/4	8
	Bonus Grind	-	-	ME100703B	11-1/4	3	8
FOR HANCHETT, NORTON, MATTISON CHUCKS							
	HM 18	18	8	ME20579	5	1-1/2	6
	NO14	14	6	ME20579	5	1-1/2	6
	NO18	18	8	ME20579	5	1-1/2	6
	NO20	20	9	ME20579	5	1-1/2	6
	NO22	22	10	ME20579	5	1-1/2	6
	NO26	26	12	ME20579	5	1-1/2	6
	NO28	28	14	ME20579	5	1-1/2	6
	NO32	32	14	ME20579	5	1-1/2	6
	NO36	36	16	ME20579	5	1-1/2	6

# Gemini Bench and Pedestal Wheels

The full Gemini Bench and Pedestal wheel line availability is listed below. All are stock products.

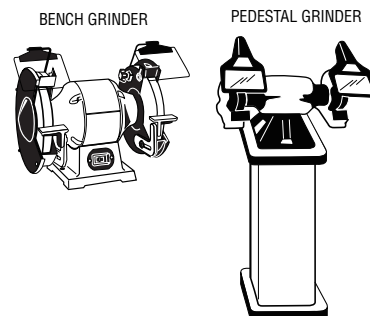
## Grit Selection Guide

SPEC (FINISH)	A/O (STEEL)	S/C (NON-STEEL)	STOCK REMOVAL
Very Coarse	24 Grit	24 Grit	Heavy
Coarse	36/46 Grit	—	
Medium	60/80 Grit	60 Grit	
Fine	100/120 Grit	80 Grit	
Very Fine	150 Grit	—	
Extra Fine		120 Grit	Light



DIMENSION	SPECIFICATION	UPC
5 x 1/2 x 1	Alundum Medium 60/80	66252830649
6 x 1/2 x 1	Alundum Coarse 36/46	66252836132
	Alundum Medium 60/80	66252836131
	Alundum Fine 100/120	66252836133
	Crystolon Medium 60	66252836571
	Crystolon Fine 80	66252836572
	Crystolon Extra Fine 120	66252836573
6 x 3/4 x 1	Alundum Coarse 36/46	66252837103
	Alundum Medium 60/80	66252837102
	Alundum Fine 100/120	66252837101
	Crystolon Medium 60	66252837190
	Crystolon Fine 80	66252837191
	Crystolon Extra Fine 120	66252837192
6 x 1 x 1	Alundum Coarse 36/46	66252837958
	Alundum Medium 60/80	66252837957
	Alundum Fine 100/120	66252837100
	Crystolon Medium 60	66252837187
	Crystolon Fine 80	66252837193
	Crystolon Extra Fine 120	66252837194
7 x 1 x 1	Alundum Coarse 36/46	66252942292
	Alundum Medium 60/80	66252942294
	Alundum Fine 100/120	66252942295
	Crystolon Medium 60	66252942300
	Crystolon Fine 80	66252942301
	Crystolon Extra Fine 120	66252942302
8 x 3/4 x 1	Alundum Coarse 36/46	66253042315
	Alundum Medium 60/80	66253042316
	Alundum Fine 100/120	66253042317
8 x 1 x 1	Alundum Very Coarse 24	66253044454
	Alundum Coarse 36/46	66253044449
	Alundum Medium 60/80	66253044448
	Alundum Fine 100/120	66253044447
	Crystolon Medium 60	66253044087
	Crystolon Fine 80	66253044534
	Crystolon Extra Fine 120	66253044535

DIMENSION	SPECIFICATION	UPC
10 x 1 x 1-1/4	Alundum Very Coarse 24	66253160788
	Alundum Coarse 36/46	66253160787
	Alundum Medium 60/80	66253160789
	Alundum Fine 100/120	66253160350
	Crystolon Medium 60	66253144536
	Crystolon Fine 80	66253160366
10 x 1-1/4 x 1-1/4	Alundum Coarse 36/46	66253161250
	Alundum Medium 60/80	66253161251
10 x 1-1/2 x 1-1/4	Alundum Coarse 36/46	66253161393
	Alundum Medium 60/80	66253161395
12 x 1-1/2 x 1-1/2	Alundum Coarse 36/46	66253263052
	Alundum Medium 60/80	66253263053
12 x 2 x 1-1/4	Crystolon Medium 60	66253263359
	Crystolon Fine 80	66253263360
12 x 2 x 1-1/2	Alundum Very Coarse 24	66253263054
	Alundum Coarse 36/46	66253263055
	Alundum Medium 60/80	66253263056





# Gemini Snagging Wheels

The Gemini Snagging wheel stock offering is listed below. All UPCs listed are stock products.

## Portable Straight and Cup Wheel Starting Recommendations by Material

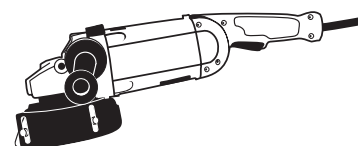
CASTING TYPE		SPECIFICATION
Iron	Gray	57A16-Q Gemini
	Ductile/malleable	57A16-Q Gemini
	Dirty/scale-covered	57AC16-Q Gemini
Steel	Carbon and low alloy	57A16-Q Gemini
	Stainless and high alloy	57A16-Q Gemini
Aluminum Alloy		57AC16-Q, 37C16-P

**NOTE: GRADE, GRIT AND ABRASIVE TUNING MAY BE NECESSARY TO OBTAIN OPTIMUM PERFORMANCE**



DIMENSION	ADDITIONAL PRODUCT INFORMATION	SPECIFICATION	UPC
<b>Portable Snagging Wheels</b>			
<b>TYPE 11 FLARING CUP</b>			
6 / 4-3/4 x 2 x 5/8-11 Rim 1 Back 3/4	ME22100 E98728 NCRH Steel Bushing	Gemini 57A16-Q	66252825201
6 / 4-3/4 x 2 x 5/8-11 Rim 1-1/2 Back 3/4	ME24180 E98728 NCRH Steel Bushing	Gemini 37C16-P	66252809609
6 / 4-3/4 x 2 x 5/8-11 Rim 1-1/2 Back 3/4	ME24180 E98728 NCRH Steel Bushing	Gemini 57A16-Q	66252809618
6 / 4-3/4 x 2 x 5/8-11 Rim 1-1/2 Back 3/4	ME24180 E98728 NCRH Steel Bushing	Gemini 57AC16-Q	66252809608
6 / 4-13/16 x 2 x 5/8-11 Rim 1-1/2 Back 3/4	ME71438 D121920 NCRH Steel Cup Bushing	Gemini 57A16-Q	66252809599
6 / 4-13/16 x 2 x 5/8-11 Rim 1-1/2 Back 3/4	ME71438 D121920 NCRH Steel Cup Bushing	Gemini 57AC16-Q	66252809600
<b>TYPE 01 STRAIGHT</b>			
6 X 1 X 5/8	S Webs Reinforced	Gemini 57A16-Q	66252809563
8 x 1 x 5/8	S Webs Reinforced	Gemini 57A16-PS	66253006883
<b>Cones and Plugs</b>			
<b>TYPE 16 CONES</b>			
1 x 3 x 3/8 - 24	ME107019 E113445 NFRH Steel Bushing	Gemini 57A24-R	61463622342
1-1/2 x 2-1/2 x 3/8 - 24	ME44436 E113443 NFRH Steel Bushing	Gemini 57A24-R	61463622349
1-1/2 x 3 x 5/8 - 11	ME70535 E57608 NCRH Steel Bushing	Gemini 57A24-R	61463622190
1-3/4 x 3 x 3/8 - 24	ME49226 E113445 NFRH Steel Bushing	Gemini 57A24-R	61463614503
1-3/4 x 3 x 5/8-11	ME33432 E78877 NCRH Steel Bushing	Gemini 57A24-R	61463622195
2 x 3 x 5/8-11	ME28229 E57608 NCRH Steel Bushing	Gemini 57A24-R	61463622218
2-3/4 x 3-1/2 x 5/8-11	ME18265 E57608 NCRH Steel Bushing	Gemini 57A24-R	61463622387
<b>TYPE 17 CONES – SQUARE TIP</b>			
1-1/2/ 1/2 x 3 x 3/8-24	E113445 NFRH Steel Bushing	Gemini 57A24-R	61463622194
2/ 1/2 x 3 x 5/8 -11	E57608 NCRH Steel Bushing	Gemini 57A24-R	61463615722
<b>TYPE 18 PLUGS – SQUARE TIP</b>			
1-1/2 x 2-1/2 x 3/8 - 24	E113443 NFRH Steel Bushing	Gemini 57A24-R	61463622217
1-1/2 x 2-1/2 x 5/8 - 11	E57608 NCRH Steel Bushing	Gemini 57A24-R	61463622351
1-1/2 x 3 x 5/8 - 11	E57608 NCRH Steel Bushing	Gemini 57A24-R	61463622191
2 x 3 x 5/8-11	E57608 NCRH Steel Bushing	Gemini 57A24-R	61463622219
2 x 4 x 5/8-11	E57608 NCRH Steel Bushing	Gemini 57A24-R	61463622366
<b>TYPE 18R PLUGS – ROUND TIP</b>			
1 x 3 x 3/8 - 24	E113445 NFRH Steel Bushing	Gemini 57A24-R	61463622192
2 x 3 x 5/8-11	E57608 NCRH Steel Bushing	Gemini 57A24-R	61463622220
<b>Floorstand and Swingframe Snagging Wheels</b>			
<b>TYPE 01 STRAIGHT</b>			
24 x 3 x 12	Steel Rings with Fine Centers S Webs	Gemini All Purpose	69083167173
30 x 2 x 12	Steel Rings with Fine Centers S Webs	Gemini All Purpose	69210417463

RIGHT ANGLE PORTABLE CUP GRINDER



# Gemini Centerless Wheels

All Gemini Centerless wheels are non-stock (made-to-order).

## Gemini Centerless Wheel Availability

Wheel types: 01, 05, 07

Abrasive: 52A

Grit Sizes: 36-180

Grades: I-R

Bond: VS

Dimensions:

DIAMETER	GRIT SIZE	MAX THICKNESS
>18 - 24"	36 - 100	10"
	120 - 180	4-1/2"

Additional Information: Layers and special tolerances not allowed

External Marking: Gemini (grit)-(grade)

## Ordering

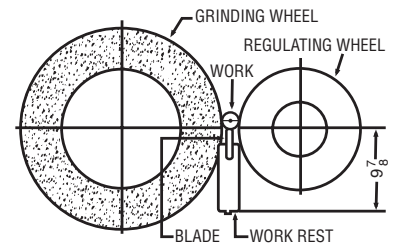
Gemini centerless wheels should be ordered by the internal specification. An example of an internal specification would be a 52A60-IVS; the external specification in this example would read "Gemini 60-I."

## Select UPCs

The following made-to-order UPC numbers for popular sizes and specifications have already been created for ease of ordering.



DIAMETER	THICKNESS	HOLE	ABRASIVE	GRIT	GRADE	BOND	UPC
20	6	12	52A	60	K	VS	66253056957
			52A	60	L	VS	66253056959
			52A	80	K	VS	66253056961
			52A	80	L	VS	66253056962
20	8	12	52A	60	K	VS	66253056963
			52A	60	L	VS	66253056964
			52A	80	K	VS	66253056965
			52A	80	L	VS	66253056967
24	6	12	52A	60	K	VS	66253056973
			52A	60	L	VS	66253056974
			52A	80	K	VS	66253056975
			52A	80	L	VS	66253056976
24	8	12	52A	60	K	VS	66253056977
			52A	60	L	VS	66253056978
			52A	80	K	VS	66253056979
			52A	80	L	VS	66253057199
24	10	12	52A	60	K	VS	66253057200
			52A	60	L	VS	66253057201
			52A	80	K	VS	66253056980
			52A	80	L	VS	66253057202
24	20	12	52A	60	K	VS	66253057203
			52A	60	L	VS	66253057204
			52A	80	K	VS	66253057205
			52A	80	L	VS	66253057206



## TECHtips

### To make a wheel act softer:

- Increase work speed/regulating wheel speed
- Increase throughput speed/regulating wheel speed
- Increase infeed
- Decrease wheel speed
- Dress at a faster traverse rate

### To make a wheel act harder:

- Decrease work speed/regulating wheel speed
- Decrease throughput speed/regulating wheel speed
- Decrease infeed
- Increase wheel speed (observe safe limits)



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



# Gemini Cylindrical Wheels

All Gemini Cylindrical wheels are non-stock (made-to-order).

## Gemini Cylindrical Wheel Availability

Wheel types: 01, 05, 07

Standard Faces Available

Abrasive: 52A

Grit Sizes: 36-180

Grades: I-R

Bond: VS

Dimensions:

DIAMETER	GRIT SIZE	MAX THICKNESS
16-18"	36 - 100	8"
	120 - 180	4-1/2"
>18 - 24"	36 - 100	10"
	120 - 180	4-1/2"
24 - 30"	36 - 100	6"
	120 - 180	3"

Additional Information: Layers and special tolerances not allowed

External Marking: Gemini (grit)-(grade)

## Ordering

Gemini cylindrical wheels should be ordered by the internal specification.

An example of an internal specification would be a 52A60-IVS; the external specification in this example would read "Gemini 60-I."

## Select UPCs

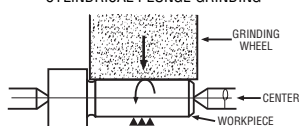
The following made-to-order UPC numbers for popular sizes and specifications have already been created for ease of ordering.



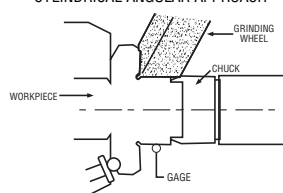
DIAMETER	THICKNESS	HOLE	ABRASIVE	GRIT	GRADE	BOND	UPC
16	1/2	5	52A	60	K	VS	66253057299
			52A	80	K	VS	66253057301
			52A	100	K	VS	66253057303
16	1	5	52A	60	K	VS	66253057305
			52A	80	K	VS	66253057307
			52A	100	K	VS	66253057309
16	2	5	52A	60	K	VS	66253057312
			52A	80	K	VS	66253057314
			52A	100	K	VS	66253057315
16	3	5	52A	60	K	VS	66253057317
			52A	80	K	VS	66253057319
			52A	100	K	VS	66253057320
18	1/2	5	52A	60	K	VS	66253057321
			52A	80	K	VS	66253057323
			52A	100	K	VS	66253057324
18	1	5	52A	60	K	VS	66253057327
			52A	80	K	VS	66253057328
			52A	100	K	VS	66253057334
18	2	5	52A	60	K	VS	66253057341
			52A	80	K	VS	66253057362
			52A	100	K	VS	66253057363
18	3	5	52A	60	K	VS	66253057364
			52A	80	K	VS	66253057365
			52A	100	K	VS	66253057366
18	1/2	8	52A	60	K	VS	66253057367
			52A	80	K	VS	66253057368
			52A	100	K	VS	66253057371
18	1	8	52A	60	K	VS	66253057374
			52A	80	K	VS	66253057373
			52A	100	K	VS	66253057375
18	2	8	52A	60	K	VS	66253057376
			52A	80	K	VS	66253057378
			52A	100	K	VS	66253057379
18	3	8	52A	60	K	VS	66253057380
			52A	80	K	VS	66253057381
			52A	100	K	VS	66253057383
20	1/2	8	52A	60	K	VS	66253057386
			52A	80	K	VS	66253057387
			52A	100	K	VS	66253057388

DIAMETER	THICKNESS	HOLE	ABRASIVE	GRIT	GRADE	BOND	UPC
20	1	8	52A	60	K	VS	66253057390
			52A	80	K	VS	66253057391
			52A	100	K	VS	66253057394
20	2	8	52A	60	K	VS	66253057396
			52A	80	K	VS	66253057399
			52A	100	K	VS	66253057401
20	3	8	52A	60	K	VS	66253057404
			52A	80	K	VS	66253057407
			52A	100	K	VS	66253057409
20	1/2	10	52A	60	K	VS	66253057412
			52A	80	K	VS	66253057413
			52A	100	K	VS	66253057415
20	1	10	52A	60	K	VS	66253057418
			52A	80	K	VS	66253057420
			52A	100	K	VS	66253057427
20	2	10	52A	60	K	VS	66253057429
			52A	80	K	VS	66253057432
			52A	100	K	VS	66253057434
20	3	10	52A	60	K	VS	66253057436
			52A	80	K	VS	66253057437
			52A	100	K	VS	66253057438
24	1/2	12	52A	60	K	VS	66253057393
			52A	80	K	VS	66253057395
			52A	100	K	VS	66253057397
24	1	12	52A	60	K	VS	66253057400
			52A	80	K	VS	66253057402
			52A	100	K	VS	66253057405
24	2	12	52A	60	K	VS	66253057408
			52A	80	K	VS	66253057410
			52A	100	K	VS	66253057411
24	3	12	52A	60	K	VS	66253057414
			52A	80	K	VS	66253057416
			52A	100	K	VS	66253057419
30	1	12	52A	60	K	VS	66253057421
			52A	80	K	VS	66253057422
			52A	100	K	VS	66253057423
30	2	12	52A	60	K	VS	66253057425
			52A	80	K	VS	66253057426
			52A	100	K	VS	66253057428

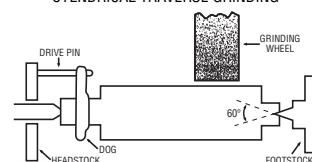
CYLINDRICAL PLUNGE GRINDING



CYLINDRICAL ANGULAR APPROACH



CYLINDRICAL TRAVERSE GRINDING



# Gemini Surface Grinding Wheels

All Gemini Surface Grinding wheels are non-stock (made-to-order).

## Gemini Surface Grinding Wheel Availability

Wheel types: 01, 05, 07

Abrasive: 59A

Grit Sizes: 24-120

Grades: D-L

Bond: VSP

Dimensions:

DIAMETER	MAX. THICKNESS
16" - 24"	6

Additional Information: Layers and special tolerances not allowed

External Marking: Gemini (grit)-(grade).

## Ordering

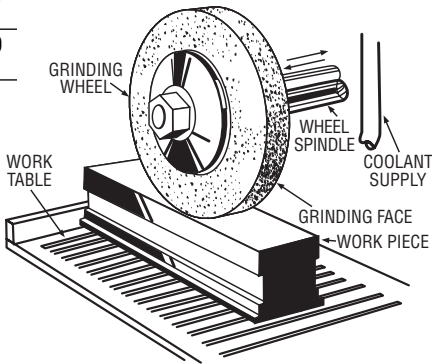
Gemini surface wheels should be ordered by the internal specification.

An example of an internal specification would be a 59A60-IVSP; the external specification in this example would read "Gemini 60-I."

## Select UPCs

The following made-to-order UPC numbers for popular sizes and specifications have already been created for ease of ordering.

DIAMETER	THICKNESS	HOLE	ABRASIVE	GRIT	GRADE	BOND	UPC
TYPE 01							
16	2	5	59A	36	I	VSP	66253058310
18	2	8	59A	36	I	VSP	66253058311
20	2	8	59A	46	I	VSP	66253058312
TYPE 07							
18	2	8	59A	46	I	VSP	66253058313
Recess 2 s 11 1/2 x 1/2							
20	3	8	59A	46	I	VSP	66253058314
Recess 2 s 11 1/2 x 1/2							
20	3	10	59A	46	I	VSP	66253058315
Recess 2 s 12 1/4 x 3/4							
20	4	8	59A	46	I	VSP	66253058317
Recess 2 s 11 1/2 x 1/2							
20	4	10	59A	46	I	VSP	66253058318
Recess 2 s 12 1/4 x 1							
20	6	10	59A	46	I	VSP	66253058320
Recess 2 s 12 1/4 x 1							



# Gemini Starting Specification

## by Material Ground



MATERIAL	CYLINDRICAL	CENTERLESS	SURFACE WHEELS	SURFACE SEGMENTS
Aluminum	52A60-KVS	52A54-LVS	59A46-HVSP	Gemini 30-E
Bronze (hard)	52A60-KVS	52A54-MVS	59A46-IVSP	Gemini 30-G
Cast Iron	52A60-KVS	52A60-MVS	59A46-GVSP	Gemini 30-G
Hastalloy	52A80-KVS	52A60-KVS	59A46-GVSP	Gemini 30-E
Inconel	86A80-KVS	52A60-KVS	59A60-FVSP	Gemini 30-E
Hardened Steel	52A60-KVS	52A60-KVS	59A60-FVSP	Gemini 30-E
Soft Steel	52A60-MVS	52A60-MVS	59A60-HVSP	Gemini 30 G
High-Speed Steel	52A60-KVS	52A60-KVS	59A60-GVSP	Gemini 30-E
Stainless Steel 300	52A60-KVS	52A60-KVS	59A60-FVSP	Gemini 30-E
Stainless Steel 400	52A60-LVS	52A60-LVS	59A60-HVSP	Gemini 30-F



**Value *and*  
Performance**





# Gemini

**Value and Performance**

**Good**

For most abrasive applications, Norton offers up to three product performance levels – GOOD, BETTER and BEST. Norton Gemini products are in the GOOD category and represent a value for the user who wants Norton quality products with consistent performance and a very competitive price.

To put Norton abrasives to work, contact your local Norton distributor. Call (800) 446-1119 or email us at [buynorton@nortonabrasives.com](mailto:buynorton@nortonabrasives.com) and we'll put you in contact with your local Norton industrial distributor. Or, visit our website at [www.nortonabrasives.com](http://www.nortonabrasives.com) to view our online catalog and learn about our latest products and applications, and find a local Norton distributor.

**NORTON**

**YOUR SOURCE FOR COST-SAVING ABRASIVE SOLUTIONS™**

**HEADQUARTERS:**

Saint-Gobain Abrasives, Inc.  
PO Box 15008, 1 New Bond Street  
Worcester, MA 01615-0008

**CUSTOMER SERVICE U.S.:**

Saint-Gobain Abrasives, Inc.  
2770 West Washington Street  
Stephenville, TX 76401-3799  
Phone: (254) 918-2313  
Fax: (254) 918-2314

**CUSTOMER SERVICE CANADA:**

Saint-Gobain Abrasives Canada Inc.  
PO Box 3008, 3 Beach Road  
Hamilton, ON L8L 7Y5  
Phone: (905) 547-2551  
Fax: (905) 547-8157

[www.nortonabrasives.com](http://www.nortonabrasives.com)

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**FORM #8018**

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