



Used on surface, cylindrical, and tool and cutter grinders, Norton precision, form-holding vitrified toolroom wheels maximize your productivity. Available in latest-generation ceramic alumina, aluminum oxide, and silicon carbide – for every ferrous and nonferrous MRO, small job shop, and production operation.

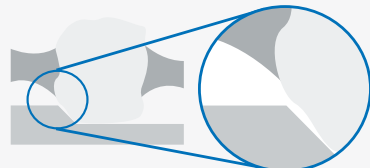
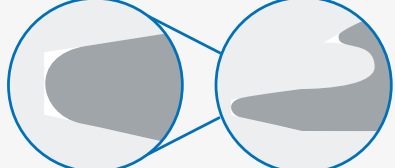
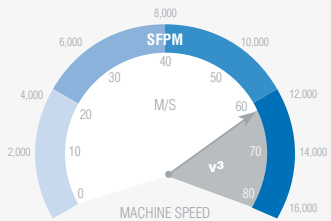
Applications:	Surface grinding, tool and cutter grinding, and reshaping
Shapes:	Type 01 Straight, Type 02 Cylinder, Type 05 and 07 Recessed 1 and 2 Sides, Type 06 and 11 Straight and Flaring Cups, Type 12 Dish, Type 20 Concaved 1 Side, and Type 35 Plate Mounted Disc
Size Range:	3/4" – 18" diameter
Grit Range:	46 – 220
Abrasive Grain:	Ceramic Alumina, Aluminum Oxide, Silicon Carbide

MATERIAL-TO-PRODUCT RECOMMENDATION GUIDE

APPLICATION / MATERIAL	PERFORMANCE/PRODUCTIVITY								
	Narrow Contact Area			Medium Contact Area			Wide Contact Area		
	BEST	BETTER	GOOD	BEST	BETTER	GOOD	BEST	BETTER	GOOD
Tool Reshaping									
• Heavy Stock Removal (> .004)									
HSS & Tool Steel RC 50-68	5SG46-KVS	32A46-KVBE	38A46-KVBE	5SG46-JVS	32A46-JVBE	38A46-JVBE	5SG46-GVSP 3SGR46-GVP2	32A46-GVBEP 48A46-GVP2	38A46-GVBEP 38A46-GVP2
• Moderate Stock Removal (.002-.004)									
HSS & Tool Steel RC 50-68	5SG60-KVS	32A60-KVBE	38A60-KVBE	5SG60-JVS	32A60-JVBE	38A60-JVBE	5SG60-GVSP 3SGR60-GVP2	32A60-GVBEP 48A60-GVP2	38A60-GVBEP
Carbide			39C60-JVK			39C60-JVK			
Surface Grinding									
• Heavy Stock Removal (> .004)									
HSS & Tool Steel RC 50-68	5NQ46-JVS	32A46-JVBE	38A46-JVBE	5SG46-IVS	32A46-IVBE	38A46-IVBE	5SG46-GVSP 3SGR46-GVP2	32A46-GVBEP 48A46-GVP2	38A46-GVBEP 38A46-GVP2
400 Series Stainless									
Soft Steels RC 30-45	5SG46-KVS	32A46-KVBE	38A46-KVBE	5SG46-JVS	32A46-JVBE	38A46-JVBE	5SG46-HVSP 3SGR46-HVP2	32A46-HVBEP 48A46-HVP2	38A46-HVBEP 38A46-HVP2
300 Series Stainless									
Cast Iron: Ductile & Gray	5SG46-KVS	32A46-KVBE	38A46-KVBE	5SG46-JVS	32A46-JVBE	38A46-JVBE	5SG46-HVSP 3SGR46-GVP2	32A46-HVBEP 48A46-HVP2	38A46-HVBEP 38A46-HVP2
Nonferrous Alloys			39C46-JVK			39C46-IVK			
• Moderate Stock Removal (.002-.004)									
HSS & Tool Steel RC 50-68	5NQ60-JVS	32A60-JVBE	38A60-JVBE	5SG60-IVS	32A60-IVBE	38A60-IVBE	5SG60-GVSP 3SGR60-GVP2	32A60-GVBEP 48A60-GVP2	38A60-GVBEP
400 Series Stainless									
Soft Steels RC 30-45	5SG60-KVS	32A60-KVBE	38A60-KVBE	5SG60-JVS	32A60-JVBE	38A60-JVBE	5SG60-HVSP 3SGR60-HVP2	32A60-HVBEP 48A60-HVP2	38A60-HVBEP 38A60-HVP2
300 Series Stainless									
Cast Iron: Ductile & Gray	5SG60-KVS	32A60-KVBE	38A60-KVBE	5SG60-JVS	32A60-JVBE	38A60-JVBE	5SG60-HVSP 3SGR60-HVP2	32A60-HVBEP 48A60-HVP2	38A60-HVBEP 38A60-HVP2
Nonferrous Alloys			39C60-JVK			39C60-IVK			
• Light Stock Removal and Finishing (<.001)									
HSS & Tool Steel RC 50-68		32A80-JVBE	38A80-JVBE		32A80-IVBE	38A80-IVBE		32A80-HVBE	38A80-HVBE
400 Series Stainless									
Soft Steels RC 30-45		32A80-KVBE	38A80-KVBE		32A80-JVBE	38A80-JVBE		32A80-IVBE	38A80-IVBE
300 Series Stainless									
Cast Iron: Ductile & Gray		32A80-KVBE	38A80-KVBE		32A80-JVBE	38A80-JVBE		32A80-IVBE	38A80-IVBE
Nonferrous Alloys			39C80-JVK			39C80-IVK			39C80-HVK

Upgrade to Vitrium³ to improve your process and productivity in 3 ways

Vitrium³ bond (VS3) wheels for enhanced performance are available with these abrasives: NQ, SG, 32A, and 48A

1. COOL CUTTING	2. PRECISE PROFILE	3. HIGH SPEED
VITRIUM³ BOND BOND-PART INTERACTION  Improved holding power (using less bond-to-abrasive ratio) exposes a larger grain surface area, improving freer cut rate.	Vitrium³ wheel After 5 grinding cycles  Superior grain-holding properties significantly improve wheel form and corner holding vs. other bond systems – reducing dressing time and dresser wear.	 High Speed – Norton Vitrium³ bond provides the ultimate wheel strength. This allows for high speed operation on equipment designed and rated for high speed.

Vitrified Wheels For Steel Applications (continued)



TIER: **BEST**
 BRAND: Norton
 TRADENAME: **QUANTUM / NORTON SG**
 ABRASIVE: Ceramic Alumina



TIER: **BETTER**
 BRAND: Norton
 TRADENAME: **32A / 48A**
 ABRASIVE: Aluminum Oxide



TIER: **GOOD**
 BRAND: Norton
 TRADENAME: **38A / 25A / GEMINI**
 ABRASIVE: Aluminum Oxide

SIZE (D x T x H)	MAX. RPM	MIN./STD. PKG.	SPEC.	PART #	SPEC.	PART #	MIN./STD. PKG.	SPEC.	PART #
Type O1 Straight 									
7 x 1/4 x 1-1/4	3,600	1/10			32A120-KVBE	66252939682	1/10	38A220-MV	66252939530
	3,600	1/10			32A220-LVBE	66252939689	10/10	Gemini 60-I	66253246722
	3,600	1/10					10/10	Gemini 60-J	66253246788
	3,600	1/10					10/10	Gemini 60-K	66253246789
	3,600	1/10					10/10	Gemini 80-K	66253246792
7 x 3/8 x 1-1/4	3,600	1/10			32A60-KVBE	66252940276	1/10	38A60-KVBE	66252940294
	3,600	1/10			32A80-KVBE	66252940284	1/10	38A80-IVBE	66252940297
7 x 1/2 x 1-1/4	3,600	1/10	5NQ46-HVS3	66253375053	32A46-FVBEP	66252941203	1/10	25A46-HVP2	66252916219
	3,600	1/10	5NQ46-IVS	69083159103	32A46-GVBE	66252940862	1/10	25A60-HVP2	66252916221
	3,600	1/10	5NQ46-IVS3	66253375052	32A46-GVBEP	66252941204 B	1/10	38A46-GVBE	66252941022
	3,600	1/10	5NQ46-JVS	69083159104	32A46-HVBE	66252940863 B	1/10	38A46-GVBEP	66252941323
	3,600	1/10	5NQ60-GVSP	69083159105	32A46-HVBE	66253288775 S	1/10	38A46-HVBE	66252941023
	3,600	1/10	5NQ60-IVS3	66253375047	32A46-HVBEP	66252941205 B	1	38A46-HVBE	66253288770 S
	3,600	1/10	5NQ60-JVS	69083159106	32A46-HVS3	66243494107	1/10	38A46-HVBEP	66252941324
	3,600	1/10	5NQ60-JVS3	66253375046	32A46-IVBE	66252940864 B	1/10	38A46-HVP2	662529416223
	3,600	1/10	3SGP46-GVSP	66252911717	32A46-IVBE	66253288776 S	1/10	38A46-IVBE	66252941024
	3,600	1/10	3SGR46-HVP2	66252916211	32A46-IVBEP	66252941206	1/10	38A46-JVBE	66252941026
	3,600	1/10	3SGR60-HVP2	66252916213	32A46-IVS3	66243495357	1	38A46-JVBE	66253288767 S
	3,600	1/10	5SG46-GVSP	66252940522	32A46-JVBE	66252940865 B	1/10	38A46-KVBE	66252941028
	3,600	1/10	5SG46-HVS3	66253375050	32A46-JVBE	66253288777 S	1/10	38A60-HVBE	66252941035
	3,600	1/10	5SG46-HVSP	66252941130	32A46-JVS3	66243495264	1/10	38A60-HVBEP	66252941330
	3,600	1/10	5SG46-IVS	66252940193 B	32A46-KVBE	66252940867 B	1/10	38A60-IVBE	66252941036
	3,600	1/10	5SG46-IVS	66253288788 S	32A46-KVS3	66243495362	1/10	38A60-JVBE	66252941038
	3,600	1/10	5SG46-IVS3	66253375049	32A54-IVBE	66252940873	1	38A60-JVBE	66253288766 S
	3,600	1/10	5SG46-IVSP	66252940523	32A60-GVBEP	66252941313	1/10	38A60-KVBE	66252941041
	3,600	1/10	5SG46-JVS	66252940194 B	32A60-HVBE	66252940879 B	1	38A60-KVBE	66253288769 S
	3,600	1/10	5SG46-JVS	66253288789 S	32A60-HVBEP	66252941314	1/10	38A60-LVBE	66252911677
	3,600	1/10	5SG46-JVS3	66243495263	32A60-IVBE	66252940880 B	1/10	38A80-HVBE	66252941047
	3,600	1/10	5SG46-KVS	66252940195	32A60-IVBE	66253288779 S	1/10	38A80-IVBE	66252941048
	3,600	1/10	5SG60-GVSP	66252940524	32A60-IVS3	66243495363	1/10	38A80-JVBE	66252941049
	3,600	1/10	5SG60-IVS	66252940196 B	32A60-JVBE	66252940882 B	1/10	38A80-KVBE	66252941054
	3,600	1/10	5SG60-IVS	66253288791 S	32A60-JVBEP	66252941316	1	38A80-KVBE	66253350641 S
	3,600	1/10	5SG60-IVS3	66253375045	32A60-JVS3	66243495364	1/10	38A80-LVBE	66252941056
	3,600	1/10	5SG60-IVSP	66252940525	32A60-KVBE	66252940885 B	1/10	38A100-IVBE	66252941163
	3,600	1/10	5SG60-JVS	66252940197 B	32A60-KVBE	66253288782 S	1/10	38A100-JVBE	66252941165
	3,600	1/10	5SG60-JVS	66253288792 S	32A60-LVBE	66252940888	1/10	38A100-KVBE	66252941168
	3,600	1/10	5SG60-JVS3	66253375043	32A80-HVBE	66252940894	1/10	38A120-JVBE	66252941174
	3,600	1/10	5SG60-KVS	66252940198	32A80-IVBE	66252940895 B	1/10	38A120-KVBE	66252941175
	3,600	1/10	5SG60-LVS	66252940199	32A80-IVBE	66253288783 S	1/10	38A150-JVBE	66252941179
	3,600	1/10	5SG80-IVS	66252940200	32A80-JVBE	66252940897 B	1/10	38A150-MV	66252940595
	3,600	1/10	5SG80-IVSP	66252940527	32A80-KVBE	66252940899 B	1/10	38A220-QV	66252940605
	3,600	1/10	5SG80-JVS	66252940201 B	32A80-KVBE	66253288784 S	10/10	Gemini 46-H	66253246795
	3,600	1/10	5SG80-JVS	66253288793 S	32A80-LVBE	66252940900	10/10	Gemini 46-I	66253246800
	3,600	1/10	5SG80-KVS	66252940202	32A100-IVBE	66252940907	10/10	Gemini 46-J	66253246802
	3,600	1/10	5SG80-LVS	66252940203	32A100-JVBE	66252941008	10/10	Gemini 46-K	66253246812
	3,600	1/10	5SG100-JVS	66252940204	32A120-LVBE	66252941018 B	10/10	Gemini 60-I	66253246818
	3,600	1/10	5SG100-KVS	66252940205	32A120-LVBE	66253288786 S	10/10	Gemini 60-J	66253246820
	3,600	1/10			48A46-HVP2	66252916215 B	10/10	Gemini 60-K	66253246821
	3,600	1/10			48A60-HVP2	66252916217 B	10/10	Gemini 80-K	66253246832
	3,600	1/10					10/10	Gemini 100-K	66253246838
7 x 5/8 x 1-1/4	3,600	1/10			32A60-IVBE	66252941762			
7 x 3/4 x 1-1/4	3,600	1/10	5SG46-IVS	66252942304	32A46-GVBEP	66252942070	1/10	38A46-HVBE	66252941950
	3,600	1/10	5SG46-KVS	66252942305	32A46-HVBE	66252941930	1/10	38A46-KVBE	66252941954
	3,600	1/10	5SG60-JVS	66252942307	32A46-IVBE	66252941931	1/10	38A60-IVBE	66252942207
	3,600	1/10	5SG60-KVS	66252942308	32A46-KVBE	66252941935	1/10	38A60-KVBE	66252942060
	3,600	1/10			32A60-IVBE	66252941938			
	3,600	1/10			32A60-KVBE	66252941943			
	3,600	1/10			32A80-IVBE	66252941946			

B = Best Seller; performs well in a variety of applications for many satisfied customers
 S = Single Pack