

SA SUPERABRASIVES

SUPERSAVER AND SUPERPERFORMANCE

DIAMOND AND CBN RESIN BOND

STOCK GRINDING WHEELS

FOR CUTTING TOOL FABRICATION – NEW & REGRINDS

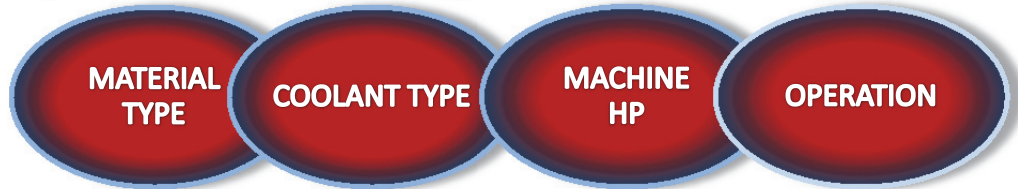
BROACH & HOB MANUFACTURING – NEW & RESHARPENING

SAW BLADE PRODUCTION – NEW & RESHARPENING



At SuperAbrasives, we've been manufacturing and developing resin bond grinding wheels for the cutting tool industry since we opened our doors in 1977 and today we continue this tradition by expanding our product line to include a cost effective bond system – our SuperSaver line of diamond and CBN wheels. These wheels are available in an assortment of sizes and combination of mesh & bond choices to cover a wide variety of applications. Read on for more details on these wheels as well as to learn about our SuperPerformance wheels - our premium bonds designed to produce superior results.

When choosing the right wheel for your application it's important to know the following...



Once you know what your capabilities and expectations are then you can choose the best wheel for each operation. Remember, it's always better to choose a wheel per operation and not expect one wheel to do the job for all operations. Ask us how to make this decision.

SO HOW DO YOU KNOW WHAT'S THE RIGHT BOND CHOICE FOR YOU?

There are so many variables that influence your grinding operation that it can be confusing when making a choice on a grinding wheel. So, we've put together an easy to follow chart that lets you identify each variable that applies to your application and then see the coordinating Application ID. All you have to do is give us that ID number and we know exactly what you're grinding- and how. From there we can assist you in choosing the best wheel for your individual needs. Every bond system we manufacture is engineered and both internally and field tested for performance and reliability so that our customers can be confident that the wheel they're using has proven results to provide the end results they need.

APPLICATION						MACHINE HP			MATERIAL		COOLANT			YOUR APP/OP
Flute	Gash	Relief	OD	End Work	Cut-Off	High > 20HP	Medium 10-20HP	Low < 10HP	Carbide	Steel	Oil	Synthetic	Dry	ID No.
✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓		SSO-001
✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓		SSO-002
✓	✓	✓	✓		✓	✓	✓	✓	✓		✓		✓	SSP-001
✓	✓	✓		✓	✓	✓	✓		✓	✓		✓	✓	SSS-001
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	SSS-002
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		SSP-002
			✓		✓	✓	✓	✓	✓		✓	✓	✓	SPO-003
✓	✓		✓			✓	✓		✓		✓		✓	SPO-004

Some of the questions we're asked most often center around Feed Rates and Operating Speeds. We've worked with both our customers and machine builders over the years to gain knowledge and understanding of each operation and how different speeds and feeds influence the wheel performance and tool condition. The charts shown below are general guidelines for you to use to get started – if you need more detailed guidance we can work with you individually to refine these numbers to meet your specific requirements. Call us at 800-341-4426 or email us at sales@superabrasives.com

Hardened Steel

New Tools & Regrinds

Straight Oil, Water Soluble & Synthetic

Operation	Wheel Type	Wheel Diameter	M/S	Depth of Cut	Feed Rate (IPM)
Fluting	IAI IVI	3" to 6"	20-45	0.100"	1.5" to 10"
Gashing	IVI (30° - 60°)	4" to 6"	20-45	0.100"	1.5" to 10"
Relief	11V9, 6A2, 12V9	3-3/4" to 5"	20-45	0.010"	5" to 15"
O.D.	11V9, 6A2, 12V9	3-3/4" to 5"	20-45	0.010"	5" to 15"

Carbide

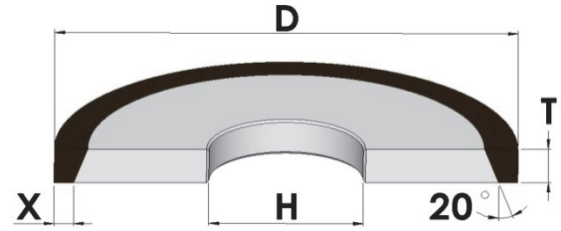
New Tools & Regrinds

Straight Oil, Water Soluble & Synthetic

Operation	Wheel Type	Wheel Diameter	M/S	Depth of Cut	Feed Rate (IPM)
Fluting	IAI IVI	3" to 6"	10-15	0.100"	2" to 6"
Gashing	IVI (30° - 60°)	4" to 6"	14-18	0.100"	4" to 8"
Relief	11V9, 6A2, 12V9	3-3/4" to 5"	15-33	0.010"	5" to 15"
O.D.	11V9, 6A2, 12V9	3-3/4" to 5"	15-33	0.010"	5" to 15"

1A1 FLUTING WHEELS

Diameter (D)	Thickness (T)	Abrasive	Mesh	Bond	Part#
4"	1/4"	Diamond	220	BHP B103 B8L	SS-A001
					SS-A002
					SS-A003
	3/8"	Diamond	220	BHP B103 B8L	SS-A004
					SS-A005
					SS-A006
	1/2"	Diamond	220	BHP B103 B8L	SS-A007
					SS-A008
					SS-A009
		CBN	180	BHP B103 B8L	SS-A010
					SS-A011
					SS-A012
5"	1/4"	Diamond	220	BHP B103 B8L	SS-A013
					SS-A014
					SS-A015
	3/8"	Diamond	220	BHP B103 B8L	SS-A016
					SS-A017
					SS-A018
	1/2"	Diamond	220	BHP B103 B8L	SS-A019
					SS-A020
					SS-A021
		CBN	180	BHP B103 B8L	SS-A022
					SS-A023
					SS-A024
	3/4"	Diamond	220	BHP B103 B8L	SS-A025
					SS-A026
					SS-A027
6"	1/4"	Diamond	220	BHP B103 B8L	SS-A028
					SS-A029
					SS-A030
	3/8"	Diamond	220	BHP B103 B8L	SS-A031
					SS-A032
					SS-A033
	1/2"	Diamond	220	BHP B103 B8L	SS-A034
					SS-A035
					SS-A036
		CBN	180	BHP B103 B8L	SS-A037
					SS-A038
					SS-A039



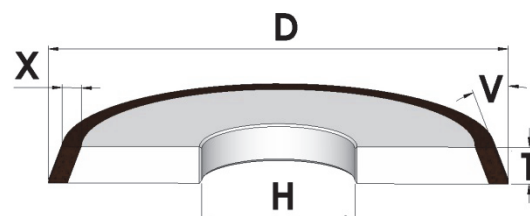
All Fluting wheels come designed with a 20° angle on the core only – the OD of the wheel remains straight. This special design allows us to modify the wheel per your exact requirement and get up to a 20° angle on the OD while keeping the usable depth at a full 1/4".

TRUE VERSATILITY!

*Abrasive depth is 1/4" for all wheels.
All wheels listed in this chart are our standard for this operation and are in stock. If you require something different contact your sales representative or us directly for assistance at 800-341-4426 or sales@superabrasives.com

1V1 FLUTING & GASHING WHEELS

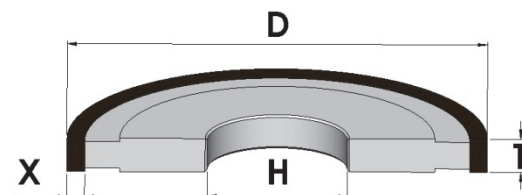
Diameter (D)	Thickness (T)	Abrasive	Mesh	Angle (V)	Bond	Part#		
4"	1/4"	Diamond	220	30°	BHP	SS-D001		
				30°	B103	SS-D002		
				30°	B8L	SS-D003		
				45°	BHP	SS-D004		
				45°	B103	SS-D005		
				45°	B8L	SS-D006		
	3/8"	Diamond	220	30°	BHP	SS-D007		
				30°	B103	SS-D008		
				30°	B8L	SS-D009		
				45°	BHP	SS-D010		
				45°	B103	SS-D011		
				45°	B8L	SS-D012		
5"	3/8"	Diamond	220	30°	B8L	SS-D013		
				30°	B103	SS-D014		
				30°	B8L	SS-D015		
				45°	BHP	SS-D016		
				45°	B103	SS-D017		
				45°	B8L	SS-D018		
	1/2"	Diamond	220	30°	BHP	SS-D019		
				30°	B103	SS-D020		
				30°	B8L	SS-D021		
				CBN	180	45°	BHP	SS-D022
						45°	B103	SS-D023
						45°	B8L	SS-D024



*Abrasive depth is 1/4" for all wheels.
 All wheels listed in this chart are our standard for this operation and are in stock. If you require something different contact your sales representative or us directly for assistance at 800-341-4426 or sales@superabrasives.com

1A1R CUT-OFF WHEELS

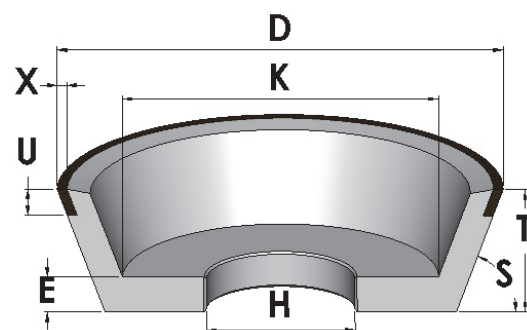
Diameter (D)	Thickness (T)	Abrasive	Mesh	Bond	Part#
6"	0.35	Diamond	120	B8D	SS-A099
		CBN	120	B8D	SS-A100



*Abrasive depth is 1/4" for all wheels.
 All wheels listed in this chart are our standard for this operation and are in stock. If you require something different contact your sales representative or us directly for assistance at 800-341-4426 or sales@superabrasives.com

11V9 RELIEF WHEELS

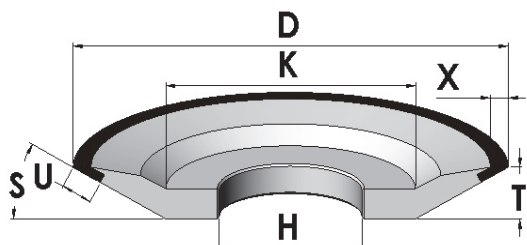
Diameter (D)	Thickness (T)	Abrasive	Mesh	U	Bond	Part#	
3-3/4"	1-1/2"	Diamond	220	3/8"	B103 B8D	SS-I001	
						SS-I002	
			320		B103 B8D	SS-I003	
						SS-I004	
		CBN	180	3/8"	B103 B8D	SS-I005	
						SS-I006	
5"	1-3/4"	Diamond	220	7/16"	B103 B8D	SS-I007	
						SS-I008	
					320	B103 B8D	SS-I009
							SS-I010
			320		7/16"	B103 B8D	SS-I011
							SS-I012
		CBN	220	7/16"	B103 B8D	SS-I013	
						SS-I014	
					B103 B8D	SS-I015	
						SS-I016	



*Abrasive depth is 1/8" for all wheels.
 All wheels listed in this chart are our standard for this operation and are in stock. If you require something different contact your sales representative or us directly for assistance at 800-341-4426 or sales@superabrasives.com

12V9 RELIEF WHEELS

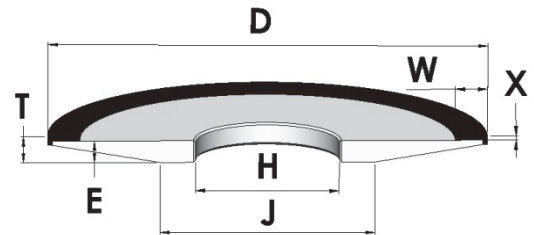
Diameter (D)	Thickness (T)	Abrasive	Mesh	Angle (S)	Bond	Part#
4"	3/4"	Diamond	320	30°	B103 B8D	SS-K001
						SS-K002
		CBN	280		B103 B8D	SS-K003
						SS-K004
		Diamond	320	45°	B103 B8D	SS-K005
						SS-K006
		CBN	220		B103 B8D	SS-K007
						SS-K008
5"	3/4"	Diamond	320	30°	B103 B8D	SS-K009
						SS-K010
		CBN	220		B103 B8D	SS-K011
						SS-K012
		Diamond	320	45°	B103 B8D	SS-K013
						SS-K014
		CBN	220		B103 B8D	SS-K015
						SS-K016



*Abrasive depth is 1/8" for all wheels.
 All wheels listed in this chart are our standard for this operation and are in stock. If you require something different contact your sales representative or us directly for assistance at 800-341-4426 or sales@superabrasives.com

4A2P SAW BLADE WHEELS

Diameter (D)	Thickness (T)	Abrasive	Mesh	Face Width (W)	Bond	Part#
6"	3/8"	Diamond	220	3/8"	BHP B103 B8L	SS-1001
						SS-1002
						SS-1003
		CBN	180	3/8"	BHP B103 B8L	SS-1004
						SS-1005
						SS-1006
6"	1/4"	Diamond	220	3/8"	BHP B103 B8L	SS-1007
						SS-1008
						SS-1009
		CBN	180	3/8"	BHP B103 B8L	SS-1010
						SS-1011
						SS-1012



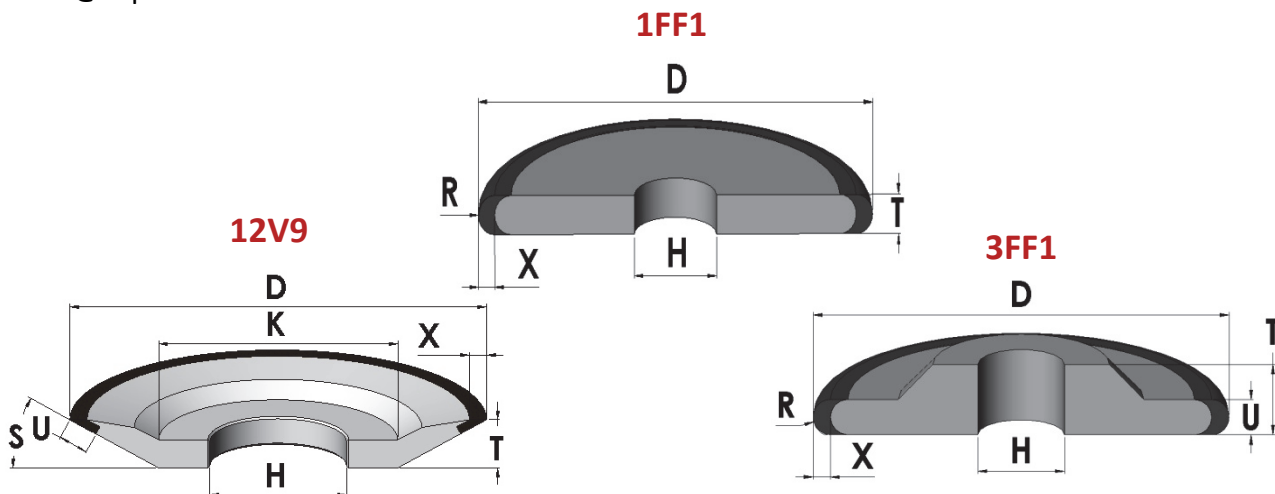
*Abrasive depth is 1/8" for all wheels.
 All wheels listed in this chart are our standard for this operation and are in stock. If you require something different contact your sales representative or us directly for assistance at 800-341-4426 or sales@superabrasives.com

SPECIALTY WHEELS FOR HOB AND BROACH GRINDING

Hob and broach grinding – both new and resharpening – use some of the same standard wheels as used for round tool fabrication but due to the sensitive nature of these cutting tools certain wheel characteristics are crucial. Whether your tool is made from standard material like M5, M32 or M45 your concerns are the same – Part Finish and Surface Integrity.

Our resin and vitrified bond CBN wheels designed specifically for these applications are field tested to provide these exact requirements while producing faster cycle times and a free cutting experience.

For more detailed information contact your sales representative or us directly at 800-341-4426 or sales@superabrasives.com.



All wheels listed in this catalog, as well as other shapes and sizes, are also available in our SuperPerformance premium bond systems. These bond systems are designed to maximize and optimize your operation and provide the combination of superior performance and cost effectiveness. Like our SuperSaver bond systems, our SuperPerformance bond systems are designed to give you a hassle free experience while at the same time giving you a top performing wheel that will provide that extra amount of power and performance needed in today's tough competitive market.

BENEFITS



- ~ IMPROVED CORNER RETENTION
- ~ LONGER TOOL LIFE
- ~ HIGHER DEPTH OF CUT
- ~ REDUCTION OF CYCLE TIMES

For carbide grinding applications, we've developed true Hybrid bond system by combining some of our top performing resin and metal bonds to create unique structures that outperform the norm. Whether your application is fluting, gashing, relief, endwork, or all of them, we have numerous options for you to choose from.

And if you're looking for ways to improve your HSS applications ask about our options to use **Vitrified CBN** – we have those, too. These bond systems are optimized for high production environments and produce desired advantages like

- ~ TRUING & DRESSING ON LINE
- ~ IMPROVED CYCLE TIMES
- ~ HIGHER DEPTH OF CUT



Don't see exactly what you're looking for here in this catalog – give us a call – we have many other wheel types and bond systems available to work with many other standard and precision applications. Check out the Products And Services page for information on our product engineering and design, technical support and other special services we offer. And if you want more detailed information, call your sales representative or contact us directly at 800-341-4426 or sales@superabrasives.com.

At SA we manufacture diamond and CBN grinding wheels and honing stones used in a vast variety of operations. All of our products are engineered around application specific requirements and designed for optimal performance. Our products range from small diameter mounted wheels used for ID grinding to large diameter form wheels used in automotive production applications like camshaft and crankshaft grinding. Whether your need is big or small, we have the knowledge and desire to work with you and get you the best product for your job.

Product Development

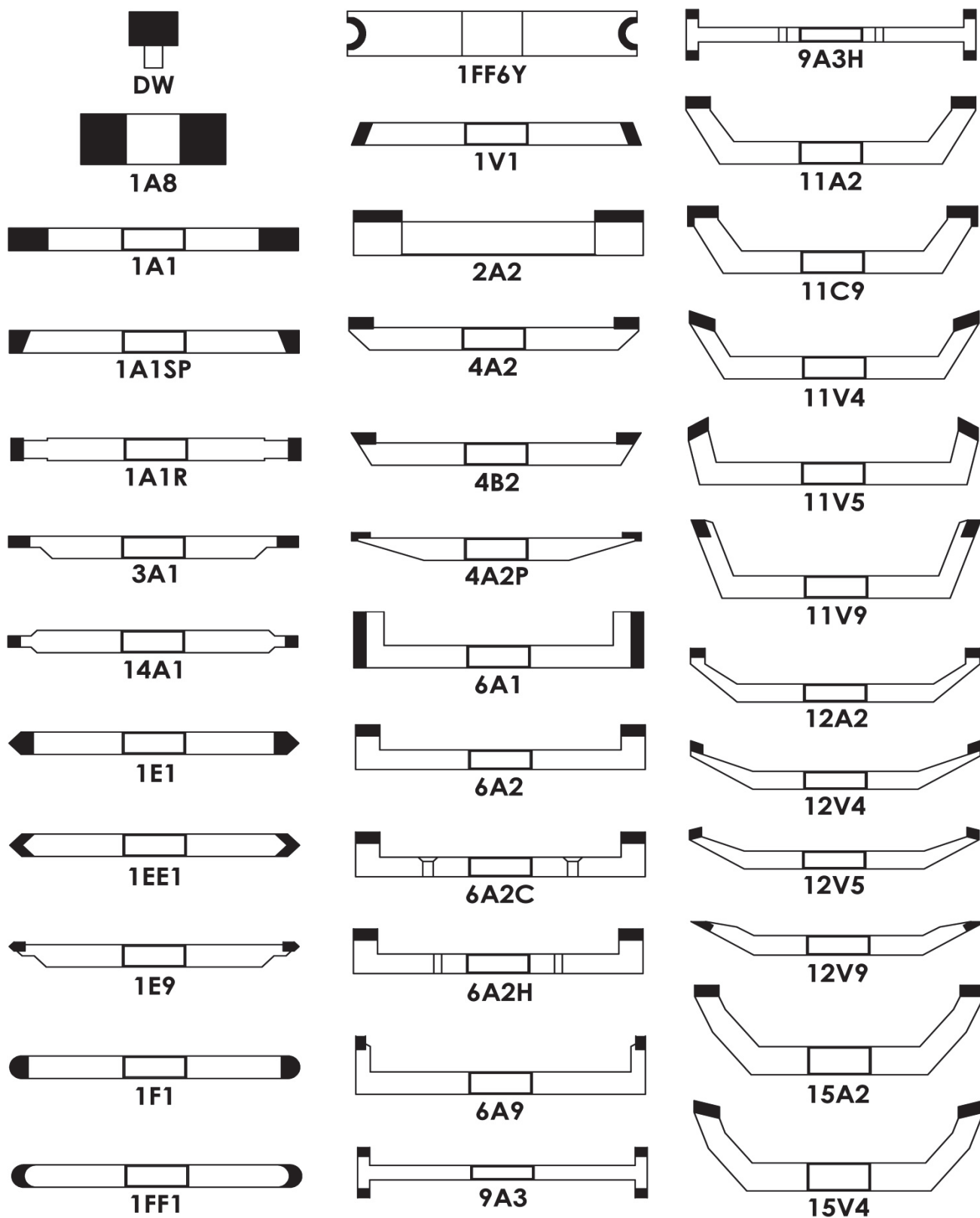
SA’s constant development and enhancement process for all our bond structures assures that our customers are getting the best products available. You see, at SA, we don’t try to make the application fit our wheel; we make our wheel fit your application. As a result, we work with our customers tirelessly to establish the best wheel for your need, for your application every time. We work hand in hand with our customers to achieve the goals set for each application and we continue this partnership throughout the entire life of the job. We take great pride with each success and always strive for improvement. Please speak to your sales representative or visit our website at www.superabrasives.com to learn of our success stories and to find out how our services can work for you.

Technical Support

EVALUATE ANALYZE RECOMMEND SUPPORT

At SA we like to help our customers not only with providing them with a product, but also with providing them with insight on how to use our products. We’ll work with you to **EVALUATE** your application and operation; **ANALYZE** the findings; **RECOMMEND** wheel specifics and target operating parameters and **SUPPORT** the operation from the time of wheel installation and on.

We have compiled some useful information and tools to help you in different areas of wheel use; from truing and dressing, to feeds and speeds and more. And being a manufacturer ourselves we know problems can arise quickly and without warning, that’s why we’re available for assistance Monday through Friday to assist with all of your immediate needs. And if emergencies arise during non-business hours contact your sales representative or us directly via email at sales@superabrasives.com and someone will respond as quickly as possible.



All products shown in this section are available in diamond and CBN. And in most cases, all products are available in resin, metal, vitrified and electroplated bonds, but some limitations do apply. Please contact your sales representative for further details.

Just review the questions below and have your answers ready, then contact your sales representative or us directly and we'll help you decide on what's the best wheel option for your application.

Application / Operation						
<input type="radio"/> Fluting <input type="radio"/> Gashing <input type="radio"/> Relief <input type="radio"/> O.D. <input type="radio"/> Endwork <input type="radio"/> Cut-Off <input type="radio"/> Other Specify Other: _____						
Tool Type						
<input type="radio"/> New <input type="radio"/> Resharp		<input type="radio"/> Drill <input type="radio"/> Insert <input type="radio"/> Hob <input type="radio"/> Ceramic <input type="radio"/> Endmill <input type="radio"/> Tap <input type="radio"/> Broach <input type="radio"/> Other				
Material						
<input type="radio"/> Carbide <input type="radio"/> PCD / PCBN <input type="radio"/> Ceramic <input type="radio"/> Super Alloy <input type="radio"/> Other <input type="radio"/> Tool <input type="radio"/> Stainless <input type="radio"/> High Speed Steel _____						
Machine Type	Manufacturer	Model	HP	Condition	Dressing	
<input type="radio"/> CNC <input type="radio"/> Manual <input type="radio"/> NC <input type="radio"/> Off-Hand <input type="radio"/> Other	<input type="radio"/> Anca <input type="radio"/> Huffman <input type="radio"/> Rollomatic <input type="radio"/> Tru Tech <input type="radio"/> Unison <input type="radio"/> Walter <input type="radio"/> Other _____	_____ _____ _____ _____ _____ _____	<input type="radio"/> 10 <input type="radio"/> 15 <input type="radio"/> 20 <input type="radio"/> 30 <input type="radio"/> Other _____	<input type="radio"/> Rigid <input type="radio"/> Poor	<input type="radio"/> On Line <input type="radio"/> Off Line	
Coolant						
<input type="radio"/> Oil <input type="radio"/> Water Soluble <input type="radio"/> Synthetic <input type="radio"/> Dry <input type="radio"/> Other _____						
Wheel Information						
Style	Ext. Dim	Diameter	Thickness	Hole	Mesh	Desired Performance
<input type="radio"/> 1A1						<input type="radio"/> Wheel Life <input type="radio"/> Corner Retention <input type="radio"/> Depth of Cut <input type="radio"/> Reduced Cycle Times <input type="radio"/> Part Finish <input type="radio"/> Other _____
<input type="radio"/> 1V1	V=					
<input type="radio"/> 1A1R						
<input type="radio"/> 11V9						
<input type="radio"/> 12V9	S=					
<input type="radio"/> 1F1	R=					
<input type="radio"/> 4A2P	W=					
<input type="radio"/> 11A2	W=					
<input type="radio"/> 12A2	W=					
<input type="radio"/> Other						

SA SUPERABRASIVES

SuperAbrasives, Inc.

28047 Grand Oaks Ct.

Wixom, MI 48393

248.348.7670

800.341.4426

248.348-8037 Fax

sales@superabrasives.com

www.superabrasives.com