

The Legacy of Bates Technologies

Bates Technologies LLC, a division of Lapmaster International, is built upon an 80+ year legacy of innovative honing and bore sizing technology and technical expertise. Included in this legacy are the world class manufacturing expertise of the Micromatic and Barnes companies which continue to produce state of the art honing machines, precision stroke and single-pass bore sizing tools, abrasives and air gage systems. Bates products are the preferred choice for forward-thinking companies — from specialized machine shops to the largest manufacturers in the precision metalworking industry, including automotive, aircraft, energy, compressor, and petroleum industries.

Products

Our honing products represent a complete line of bore finishing solutions for all industries.

- Precision hone tooling engineered to fit and function on all styles of hone machines
- Advanced hone machinery from the Barnes Bore Honing and Finishing Systems group
- Agile and Flexible Honing and Air Gage Systems for use on CNC Machining Centers
- Single Pass Bore Size tooling using electro-plated or sintered diamond abrasives
- PAG's Precision Air Gaging and Size Control Systems
- Honing stones: CBN and diamond (metal-bond) – SiC/AIO x (vitrified and resin bond)
- Microsize® and Micro-Mold® metal-bonded and jacketed abrasives

Products are created for all honing machines:

- | | | |
|--------------|------------|--------------|
| ■ Micromatic | ■ Engis | ■ Kadia |
| ■ Gehring | ■ Toyo | ■ Accu-Cut |
| ■ Sunnen | ■ Delepena | ■ Fuji |
| ■ Barnes | ■ Nagle | ■ And Others |

Services

- Hone-Tech Center
- Machine and Tooling Upgrades
- Hone Process Analysis
- Service Department

Facilities

- Fishers, IN
- Mount Prospect, IL



A Quality and Competitive Honing Abrasive Selection for users of the Sunnen style honing machines

A world leader in honing technology, Bates Technologies engineers quality and competitively priced honing stones for virtually every honing machine on the market. A high quality line of metal bonded honing stones produced to fit and function in tooling used on Sunnen horizontal style honing machines such as ML, EC, and MBB. Bates has positioned its products as the quality and cost efficient alternative to the standard OEM offering. Bates has a proven record of operational success in many of the thousands of small machine shops as well as the large metalworking facilities worldwide that use these style stones. Highly regarded for their ease of use and long-term durability, the Bates stones have become a superior alternative to the traditional Sunnen OEM honing stones. The Bates stones are produced using state of the art CNC sintering equipment assuring our customers of consistent quality over time. These stones are created from metal bonded diamond or cubic boron nitrate (CBN) to achieve sound results on a variety of materials, including cast iron, carbide, steel, chrome, ceramic and alloys.

Bates Technologies' part numbering system distinguishes its products from those of its competitors. This system assures customers they are gaining the Bates edge in quality and performance in every stone purchased.

The matrix shown on this page reflects the interpretation of the Sunnen stone code along with the same stone interpreted in the Bates code.

These conversion charts were developed to assist you in understanding the part numbering system. Should you have any questions, please contact us. We will give you our immediate assistance.

STONE SIZES		
Bore Size	Sunnen	Bates
B-Series Stone		
.100-.120	K3	B3
.120-.150	K4	B4
.150-.185	K5	B5
.185-.245	K6	B6
.245-.308	K8	B8
.308-.370	K10	B10
.370-.485	K12	B12
.496-.619	K16	B16
.619-.744	K20	B20
BP-Series Stone		
.619-1.00	P20	BP20
1.0-3.625	P28	BP28
1.0-3.625	R28	BR28
BL-Series Stone		
.100-.120	L3	BL3
.120-.150	L4	BL4
.150-.185	L5	BL5
.185-.245	L6	BL6
.245-.308	L8	BL8
.308-.370	L10	BL10
.370-.485	L12	BL12
.496-.619	L16	BL16
.619-.744	L20	BL20

Sunnen Stone Code: K20-DM35			
Bates Stone Code: B20-D181-2			
Stone Size	Abrasive Code	Grit Size	Hardness
K20	DM	3	5
B20	D	181	2

ABRASIVE CODE		
Type	Sunnen	Bates
Diamond	DM	D
CBN	NM	C
MATERIALS HONED WITH:		
Diamond	Cast Iron	Carbide
	Chrome	Ceramic
	Glass	
CBN	Hard/Soft Steel	
	Inconel	
	Stellite	
	Stainless Steel	

GRIT SIZE CODE		
Size	Sunnen	Bates
30/40	N/A	602
60/80	1	252
80/100	3	181
120/140	4	126
200/230	5	76
230/270	6	64
325/400	8	46
450	9	45
600	0	30
800	90	25
1200	00	15

HARDNESS CODE		
Type	Sunnen	Bates
Soft	3	1
Standard	5	2
Hard	7	3
Hardest	9	4

DIAMOND

GRIT Size	BOND CODE Sunnen		BOND CODE Bates		BOND CODE Sunnen		BOND CODE Bates		BOND CODE Sunnen		BOND CODE Bates	
	Sunnen	Bates	Sunnen	Bates	Sunnen	Bates	Sunnen	Bates	Sunnen	Bates		
30/40	N/A	D602-1	N/A	D602-2	N/A	D602-3	N/A	D602-4	N/A	D602-4	N/A	D602-4
60/80	DM13	D252-1	DM15	D252-2	DM17	D252-3	DM19	D252-4	DM19	D252-4	DM19	D252-4
80/100	DM33	D181-1	DM35	D181-2	DM37	D181-3	DM39	D181-4	DM39	D181-4	DM39	D181-4
120/140	DM43	D126-1	DM45	D126-2	DM47	D126-3	DM49	D126-4	DM49	D126-4	DM49	D126-4
200/230	DM53	D76-1	DM55	D76-2	DM57	D76-3	DM59	D76-4	DM59	D76-4	DM59	D76-4
230/270	DM63	D64-1	DM65	D64-2	DM67	D64-3	DM69	D64-4	DM69	D64-4	DM69	D64-4
325/400	DM83	D46-1	DM85	D46-2	DM87	D46-3	DM89	D46-4	DM89	D46-4	DM89	D46-4
450	DM93	D45-1	DM95	D45-2	DM97	D45-3	DM99	D45-4	DM99	D45-4	DM99	D45-4
600	DM03	D30-1	DM05	D30-2	DM07	D30-3	DM09	D30-4	DM09	D30-4	DM09	D30-4
800	DM903	D25-1	DM905	D25-2	DM907	D25-3	DM909	D25-4	DM909	D25-4	DM909	D25-4
1200	DM003	D15-1	DM005	D15-2	DM007	D15-3	DM009	D15-4	DM009	D15-4	DM009	D15-4

CBN

GRIT Size	BOND CODE Sunnen		BOND CODE Bates		BOND CODE Sunnen		BOND CODE Bates		BOND CODE Sunnen		BOND CODE Bates	
	Sunnen	Bates	Sunnen	Bates	Sunnen	Bates	Sunnen	Bates	Sunnen	Bates		
30/40	N/A	C602-1	N/A	C602-2	N/A	C602-3	N/A	C602-4	N/A	C602-4	N/A	C602-4
60/80	NM13	C252-1	NM15	C252-2	NM17	C252-3	NM19	C252-4	NM19	C252-4	NM19	C252-4
80/100	NM33	C181-1	NM35	C181-2	NM37	C181-3	NM39	C181-4	NM39	C181-4	NM39	C181-4
120/140	NM43	C126-1	NM45	C126-2	NM47	C126-3	NM49	C126-4	NM49	C126-4	NM49	C126-4
200/230	NM53	C76-1	NM55	C76-2	NM57	C76-3	NM59	C76-4	NM59	C76-4	NM59	C76-4
230/270	NM63	C64-1	NM65	C64-2	NM67	C64-3	NM69	C64-4	NM69	C64-4	NM69	C64-4
325/400	NM83	C46-1	NM85	C46-2	NM87	C46-3	NM89	C46-4	NM89	C46-4	NM89	C46-4
450	NM93	C45-1	NM95	C45-2	NM97	C45-3	NM99	C45-4	NM99	C45-4	NM99	C45-4
600	NM03	C30-1	NM05	C30-2	NM07	C30-3	NM09	C30-4	NM09	C30-4	NM09	C30-4
800	NM903	C25-1	NM905	C25-2	NM907	C25-3	NM909	C25-4	NM909	C25-4	NM909	C25-4
1200	NM003	C15-1	NM005	C15-2	NM007	C15-3	NM009	C15-4	NM009	C15-4	NM009	C15-4