



**BATES**  
TECHNOLOGIES, INC.  
HONING SPECIALISTS

# HONING STONES

## for use in Sunnen machines

### The Legacy of Bates Technologies

Bates Technologies and its honing products are built on a long legacy of innovative technology and technical expertise. Today's Bates includes the Micromatic line of tooling and abrasive products, including the Microhone® and Microsize® tooling and processes, size controls, and machine parts. At work in manufacturing processes worldwide, Bates products are the leading choice for forward-thinking companies—from specialized machine shops to the largest manufacturers in precision metalworking, including aircraft, automotive, transportation, packaging, and petroleum industries.

### Products

The Bates family of products represents a complete line of bore finishing solutions for all industries. Products include:

- Conventional Microabrasives (Vitrified- and Resin-Bonded)
- Superabrasives (CBN and Diamond in Vitrified-, Resin-, and Metal-Bonds)
- Microhone®, Microsize®, Micro-Mold® Bonded and Electro-Plated Mandrels and Tooling
- CBN and Diamond Electro-Plated Products
- Micro-Precision Gaging and Size Control Systems
- Microhone®, CNC Tooling and Abrasive Systems

### Products are created for all honing machines:

- |              |                     |
|--------------|---------------------|
| ■ Micromatic | ■ Delapena          |
| ■ Sunnen     | ■ Engis             |
| ■ Barnes     | ■ Jones and Shipman |
| ■ Gehring    | ■ Accu-Cut          |
| ■ Nagel      | ■ Fuji              |
| ■ Toyo       | ■ Others            |
| ■ Kadia      |                     |

### Services

- Applications Technology Center (ATC)
- Test Drive Trial Program
- Electronic Ordering of Stock (EDI)
- Process Application Analysis
- Service Department

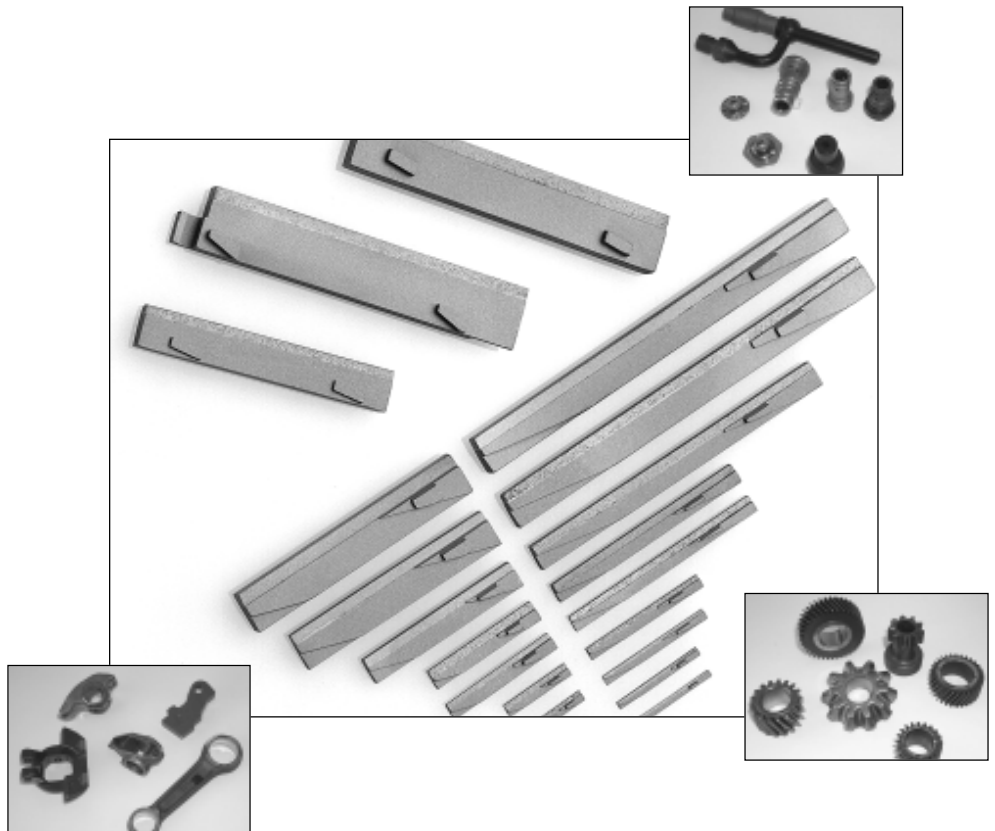
### Facilities

- Indianapolis, IN
- Angola, IN

### A Quality and Competitive Honing Alternative

A world leader in honing technology, Bates Technologies engineers quality and competitively priced honing stones for virtually every honing machine on the market.

Bates features the Bates Technologies® line of honing stones for use in Sunnen machines, which have a proven record of operational success in small shops and large plants worldwide. Highly regarded for their ease of use and long-term durability, the Bates stones have become a superior alternative to traditional honing stones. The stones are created of 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**  
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HONING SPECIALISTS



**Micromatic**  
Honing Tools & Abrasives



\*The trademark "Micromatic" is owned by and used under license from Micromatic Inc.

9059 Technology Lane  
Fishers, Indiana 46038-4546  
Phone: 317.841.2400  
Fax: 317.841.1200

Visit our Website: [www.batestech.com](http://www.batestech.com)



# STONE CODE CHART

## for converting Sunnen stones

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

The example at the right shows 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>B-Series Stone</b>		
.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
<b>BP-Series Stone</b>		
.619-1.00	P20	BP20
1.0-3.625	P28	BP28
1.0-3.625	R28	BR28
<b>BL-Series Stone</b>		
.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

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

ABRASIVE CODE		
Type	Sunnen	Bates
Diamond	DM	D
CBN	NM	C
<b>MATERIALS HONED WITH:</b>		
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		BOND CODE		BOND CODE		BOND CODE	
	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
60/80	DM13	D252-1	DM15	D252-2	DM17	D252-3	DM19	D252-4
80/100	DM33	D181-1	DM35	D181-2	DM37	D181-3	DM39	D181-4
120/140	DM43	D126-1	DM45	D126-2	DM47	D126-3	DM49	D126-4
200/230	DM53	D76-1	DM55	D76-2	DM57	D76-3	DM59	D76-4
230/270	DM63	D64-1	DM65	D64-2	DM67	D64-3	DM69	D64-4
325/400	DM83	D46-1	DM85	D46-2	DM87	D46-3	DM89	D46-4
450	DM93	D45-1	DM95	D45-2	DM97	D45-3	DM99	D45-4
600	DM03	D30-1	DM05	D30-2	DM07	D30-3	DM09	D30-4
800	DM903	D25-1	DM905	D25-2	DM907	D25-3	DM909	D25-4
1200	DM003	D15-1	DM005	D15-2	DM007	D15-3	DM009	D15-4

### CBN

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

MM0001-7/07

Contact our representative:

