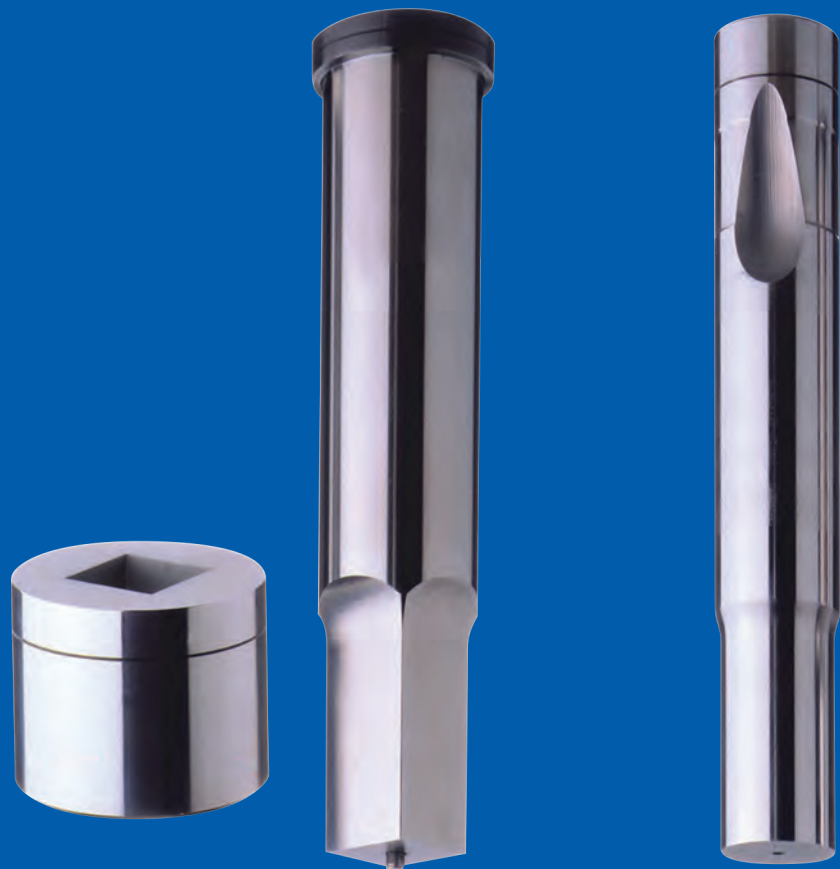


WILSON TOOL INTERNATIONAL



EXACTA TOOLING HEADED AND BALL LOCK

INCH AND METRIC

2026

WILSON TOOL INTERNATIONAL TOOLING DIVISIONS

BENDING

Wilson Tool's Bending division delivers the most complete line of tooling and clamping solutions available anywhere.

Whether you use American, European, WT, Bystronic or LVD-style precision or conventional tooling, Wilson Tool has a solution for you. Our clamping options cover these styles as well. With hydraulic push button, quick release mechanical or standard manual clamps, we have a clamping solution for any style of machine or budget. And our custom tooling manufacturing capabilities are the envy of the industry with innovative solutions for complex bending challenges. With manufacturing facilities located in the USA and Canada, our delivery times to North American fabricators are the fastest in the industry.



STAMPING



Wilson Tool's Stamping division, Impax Tooling Solutions®, offers high quality punch and die components, accessories and retainers for the stamping industry.

Innovative products such as our HP Accu-Lock® Retainer Inserts and extensive coating options, combined with our world-class customer service, have enabled us to quickly grow into a world-class provider. With a direct sales force throughout North America, we deliver products straight from the factory to you, enabling the fastest deliveries in the industry. Our custom tooling expertise is second to none with many customers coming to us for their most difficult stamping challenges.

PUNCHING

Wilson Tool's Punching division continues to drive the industry with new levels of quality, delivery, service and innovation.

From the early days of Series 80 to the Wilson Wheel® Family to EXP® technology, our punching division has been the industry-leading innovation driver. Combined with the most experienced customer support professionals in the industry, Wilson Tool continues to raise the bar. Thick turret, TRUMPF-style, Salvagnini-style, or any other style of punch press you may be using, Wilson Tool offers the most complete line of tooling solutions available today.



TRUMPF is a trademark of TRUMPF GmbH + Co. KG.

ACCESSORIES



Whether you need storage systems, grinders, urethane rolls, hand tools or related supplies, we offer a wide range of solutions to help you be more productive, organized and efficient.



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CUSTOMIZED PRODUCT OFFERS FOR GREATER PRODUCTIVITY

Exacta Tooling Solutions™ is a stamping product line designed and manufactured in our Canadian facility to provide stampers high quality punch and die components. The Exacta line is ideal for configurable, affordable tooling from a reliable source.

PRODUCT SUMMARY

	EXACTA TOOLING SOLUTIONS™
PRODUCT OFFERING	Headed tooling, ball lock tooling, special tooling
PRODUCT GOAL	Quality tooling at an affordable price
SERVICE GOAL	Tooling technicians will process your order quickly and professionally, offering custom assistance when necessary
LEAD TIMES	Fastest for those living in Canada
PUNCH SURFACE FINISH	8 - 16 Ra
MACHINE TOOL CAPABILITY	Numerous CNC machine tools
STOCKED TOOL STEEL	M2, A2, D2, PM - M4 (other steels also available)
STANDARD TOOL STEEL	M2
FINISHING OF PUNCHES	CNC grinding, CNC turning, CNC milling
CERTIFICATION	ISO 9001-2015
DEDICATED TOOLING TECHNICIANS	Experts available over the phone to help you determine the right tooling for your individual needs
TRAVELING EXPERTS READY TO COME MEET WITH YOU	Over 50 sales engineers in North America available to meet with you in-person to understand your fabrication needs
COATINGS	Large variety of coatings available
SURFACE FINISH ENHANCEMENTS	Polish

EASY ORDERING

From design and development to manufacturing, our tooling technicians will work with you to customize your product and determine the right production process. Together, we can turn your vision into reality.

Ready to Order?

We are here to help and to partner with you through the ordering process. Placing a tooling order is easy; simply follow one of the options listed below. Need us to come to you? Ask your local sales engineer to stop in to consult.



Option 1: Email — Attach your print and completed ordering guide and email to punching@wilsontoolcanada.com.



Option 2: Fax — Scan your print and completed ordering guide and fax to 800-668-9314.

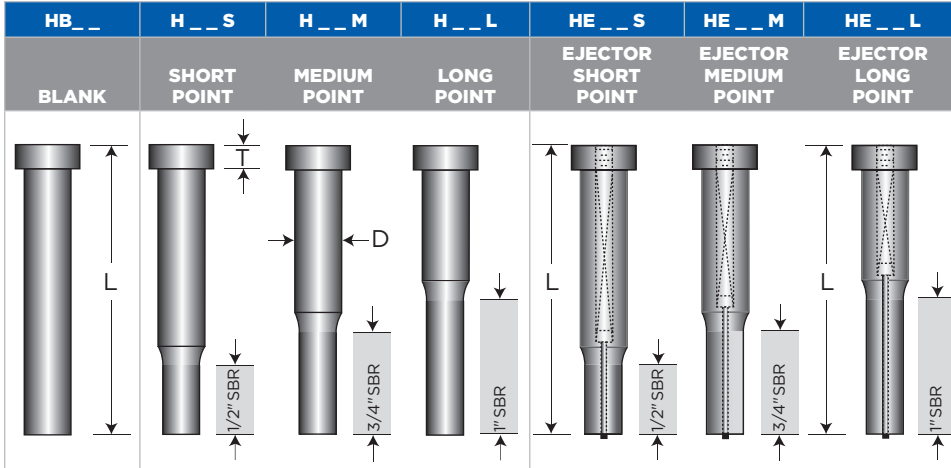


Option 3: Phone — Give us a call at 800-268-5573 and we'll take your order over the phone based on the information on your print and ordering guide.



Option 4: Mail — 4-5590 Finch Ave. E
Toronto ON
M1B 1T1

PRESS FIT – HEADED PUNCHES



Specify Shape and Body Code in place of __

Standard Material: M2, HRC 60 – 63. Alternate materials are available upon request.

* **'M' SBR** supplied on .093 or greater unless otherwise specified.

** **'S' SBR** supplied on .062 – .092 unless otherwise specified.

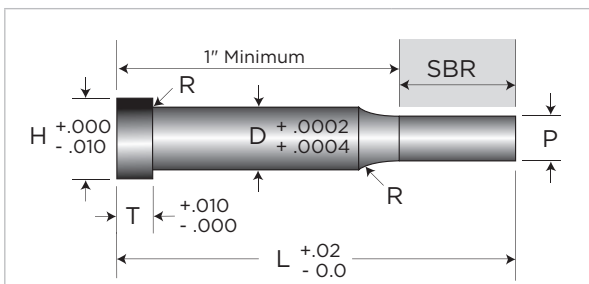
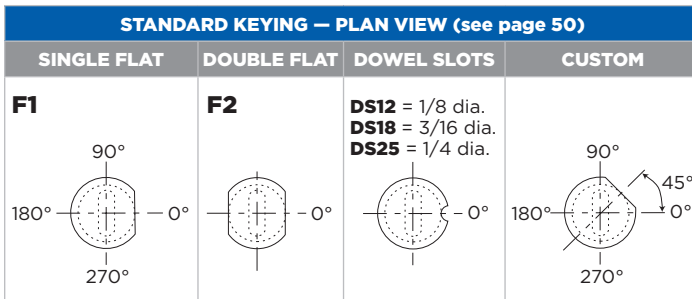
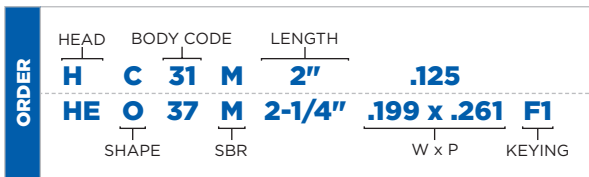
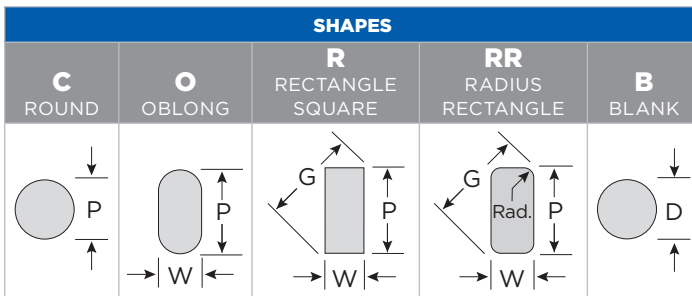
P or G cannot exceed body diameter.

Ejector Pin lock hole supplied on request.

Surface Coatings Available (see page 51)

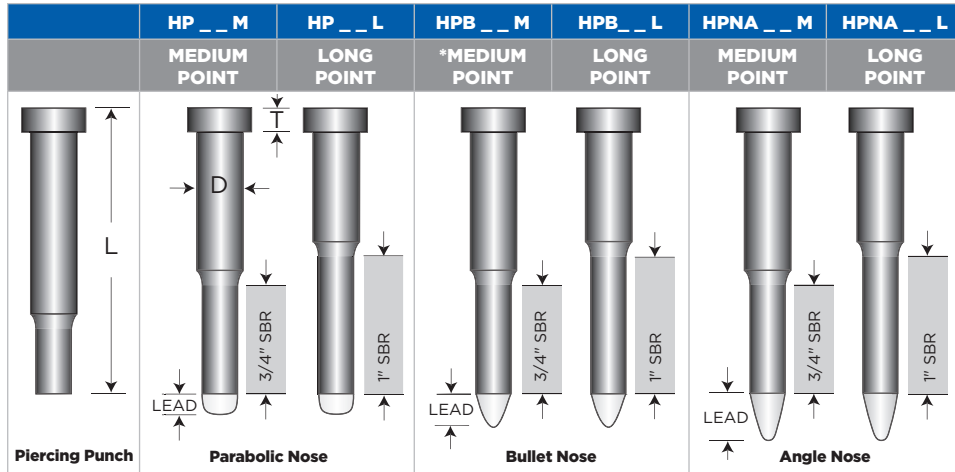
HEAD	BODY	BODY CODE		LENGTHS IN 1/4" INCREMENTS		MIN. P/W HEAD	MIN. P/W EJECTOR	EJECTOR KIT				STANDARD DIMENSIONS								
		M2	SBR	STANDARD	EXTENDED			KIT	PIN	SPRING	SET SCREW	D	H	T						
H Headed	1/8	12	S 1/2" SBR **(STD.) (.062 – .092) Point Diameter	1-1/2 – 2-1/2	2-3/4 – 4	.062	N/A	N/A	N/A	N/A	N/A	1/8	3/16	1/8						
	3/16	18		1-1/2 – 2-3/4	3 – 6							.062	.073	EK29	.029	.090	5 – 40	3/16	5/16	1/8
HE Headed Ejector	1/4	25		1-1/2 – 3-1/2	3-3/4 – 6	.093	.103	EK41	.041	.125	8 – 32	1/4	3/8	1/8						
	5/16	31		1-3/4 – 4	.125							.146	EK58	.058	.150	10 – 32	5/16	7/16	1/8	
	3/8	37		2 – 4													4-1/4 – 6	3/8	1/2	3/16
HT Headed I = 3/16	7/16	43		M 3/4" SBR **(STD.) (.093 >) Point Diameter	2 – 4	4-1/4 – 6	.146	.146	EK89	.089	.187	1/4 – 28	7/16	9/16	3/16					
	1/2	50	2-1/4 – 4		4-1/4 – 6	.222							.222	EK89	.089	.187	1/4 – 28	1/2	5/8	3/16
HTE Headed I = 3/16 Ejector	5/8	62	2-1/4 – 4		4-1/4 – 6		.300	.300	EK12	.120	.270	5/16 – 24						5/8	3/4	1/4
	3/4	75	2-1/4 – 4		4-1/4 – 6	.300							.300	EK12	.120	.270	5/16 – 24	3/4	7/8	1/4
	7/8	87	2-1/4 – 4		4-1/4 – 6													.300	.300	EK12
1	100	2-1/4 – 4	4-1/4 – 6		.300	.300	EK12	.120	.270	5/16 – 24	1	1-1/8	1/4							
1-1/4	125	2-1/4 – 4	4-1/4 – 6	.300							.300	EK12	.120	.270	5/16 – 24	1-1/4	1-3/8	1/4		
1-1/2	150	2-1/4 – 4	4-1/4 – 6		.300	.300	EK12	.120	.270	5/16 – 24						1-1/2	1-5/8	1/4		

HEADED PUNCHES



TOLERANCE		
ROUNDS P	+0.005 -0.000	TIR .0005
SHAPES P/W	±0.005	TIR .001

PRESS FIT — HEADED PILOT PUNCHES



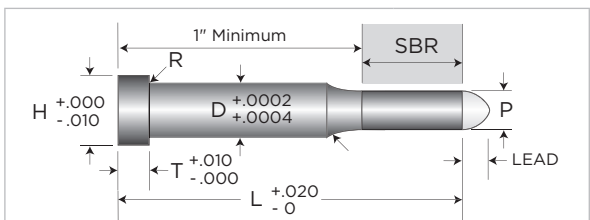
Specify Shape and Body Code in place of __

Standard Material: M2, HRC 60-63. Alternate materials are available upon request.

Stubby Pilot available upon request.

PILOT CODE	PILOT NOSE STYLE	P RANGE	**MAX. LEAD LENGTH	BODY	BODY CODE		LENGTHS IN 1/4" INCREMENTS		MIN. P DIM.		
					M2	SBR	STANDARD	EXTENDED			
HPP Headed Pilot Parabolic Nose HTPP Headed Pilot I = 3/16 Parabolic Nose		.125 - 1.250	.250	1/8	12	*M 3/4" SBR Standard	2-1/2 - 2-1/2	2-3/4 - 4	.061		
				3/16	18						
				1/4	25						
				5/16	31						
				3/8	37						
HPB Headed Pilot Bullet Nose HTPB Headed Pilot I = 3/16 Bullet Nose		.125 - .249 .250 - .624 .625 - 1.250	.250 .500 .750	7/16	43	L 1" SBR	2 - 4	4-1/4 - 6	.145		
				1/2	50						
				5/8	62						
				3/4	75						
				7/8	87						
HPNA Headed Pilot New Angle Nose HPTNA Headed Pilot I = 3/16 New Angle Nose		.125 - .250 .251 - .313 .314 - .375 .376 - .438 .439 - .500 .501 - .625 .626 - .750 .751 - .875 .876 - 1.000 1.001 - 1.250	.25 .31 .37 .43 .50 .62 .75 .87 1.00 1.25	1	100	2-1/4 - 4	4-1/4 - 6	.221			
				1-1/4	125						
				1-1/2	150						
									2-1/4 - 4	4-1/4 - 6	.299

Longer SBR available.
 *M-SBR is shipped unless otherwise specified.
 **Lead length is automatically added to the "L" dimension ordered



SHAPES				
C	O	R	RR	B
ROUND	OBLONG	RECTANGLE SQUARE	RADIUS RECTANGLE	BLANK

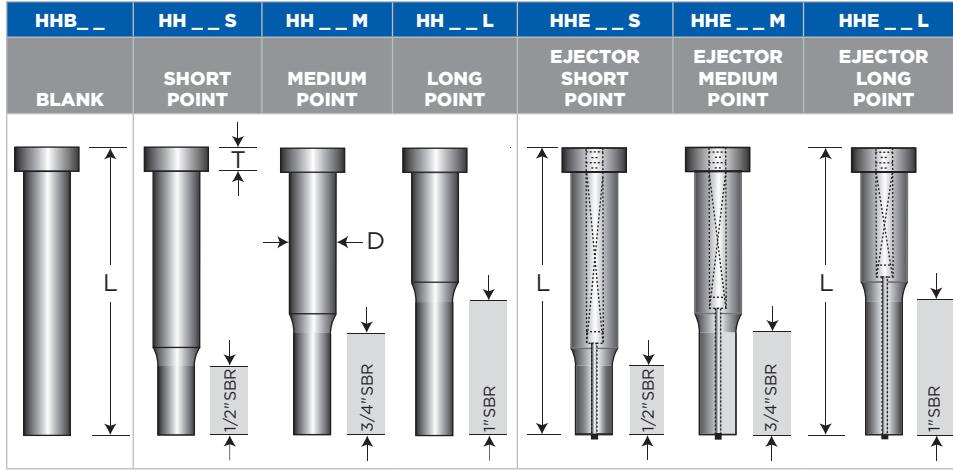
TOLERANCE		
ROUNDS P	+ .0005 - .0000	TIR .0005
SHAPES P/W	± .0005	TIR .001

ORDER

PILOT CODE: **HPB**
 BODY CODE: **C 62 M**
 LENGTH: **3" .500**

SHAPE: C SBR: M P: .500

HEAVY DUTY PRESS FIT – HEADED PUNCHES



Specify Shape and Body Code in place of __

Standard Material: PM-M4, HRC 62-64. Alternate materials are available upon request.

* **'M' SBR** supplied on .093 or greater unless otherwise specified.

** **'S' SBR** supplied on .062-.092 unless otherwise specified.

P or G cannot exceed body diameter.

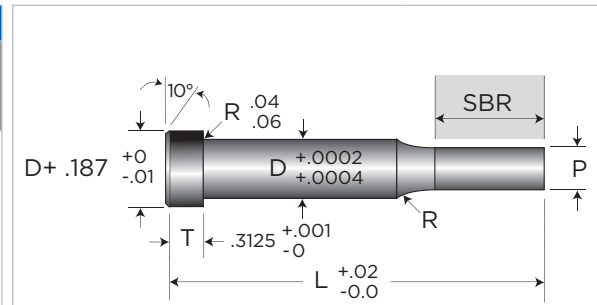
Ejector Pin lock hole supplied on request.

Surface Coatings Available (see page 51)

HEAD	BODY	BODY CODE	SBR	LENGTHS IN 1/4" INCREMENTS			EJECTOR KIT			
				STANDARD	MIN. P/W	MIN. P/W EJECTOR	KIT	PIN	SPRING	SET SCREW
HH Headed Heavy Duty	3/8	37	S 1/2" SBR	2-5	.158	.158	EK58	.058	.150	10-32
	7/16	43								
	1/2	50								
HHE Headed Heavy Duty Ejector	5/8	62	*M 3/4" SBR (Standard)	2-3/4-4	.250	.250	EK89	.089	.187	1/4-28
	3/4	75	L 1" SBR (not available in 2" long)							
	7/8	87								
	1	100								

HEADED PUNCHES

SHAPES				
C ROUND	O OBLONG	R RECTANGLE SQUARE	RR RADIUS RECTANGLE	B BLANK



STANDARD KEYING — PLAN VIEW (see page 50)			
SINGLE FLAT	DOUBLE FLAT	DOWEL SLOTS	CUSTOM
F1 	F2 	DS12 = 1/8 dia. DS18 = 3/16 dia. DS25 = 1/4 dia. 	

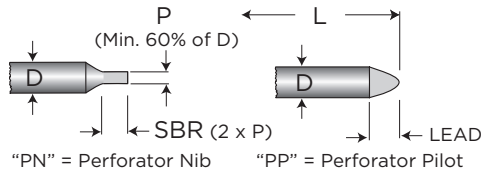
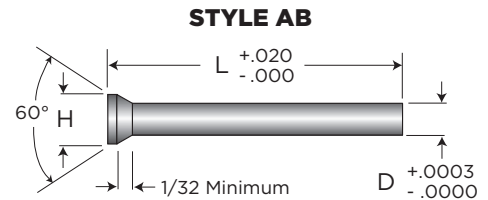
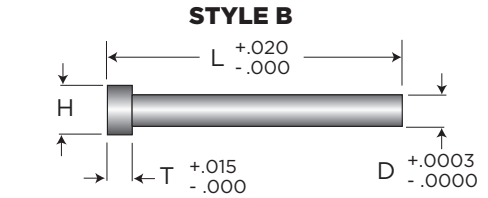
TOLERANCE		
ROUNDS P	+0.0005 -0.0000	TIR .0005
SHAPES P/W	±0.0005	TIR .001

ORDER	HEAD	BODY CODE	LENGTH			KEYING
	HH	C	37 M	2"	.187	
HHE	O	37 M	2-1/4"	.199 x .261	F1	
	SHAPE	SBR		W x P		

PERFORATOR PUNCHES

"P" SERIES — H.S.S.										
CAT. NO.	SIZE RANGE D .001 INCREMENTS NO.	T	H	MAX. STANDARD STOCK LENGTHS						
				2	2-1/4	2-1/2	2-3/4	3	3-1/2	
P-1	.037-.046	1/16	5/64	●						
P-2	.047-.055	3/32	3/32		●					
P-3	.056-.064		7/64			●				
P-4	.065-.078		1/8			●				
P-5	.079-.087		9/64				●			
P-6	.088-.099		5/32				●			
P-7	.100-.120		11/64				●			
P-8	.121-.131	1/8	3/16				●			
P-9	.132-.147		13/64				●			
P-10	.148-.163		7/32					●		
P-11	.164-.179		15/64					●		
P-12	.180-.194		1/4					●		
P-13	.195-.210		17/64					●		
P-14	.211-.225		9/32					●		
P-15	.226-.241		19/64					●		
P-16	.242-.257		3/16	5/16					●	
P-17	.258-.272			21/64						●
P-18	.273-.288	11/32							●	
P-19	.289-.304	23/64							●	
P-20	.305-.320	3/8							●	

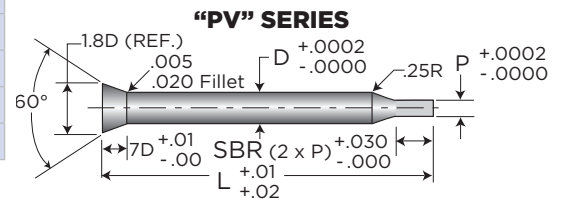
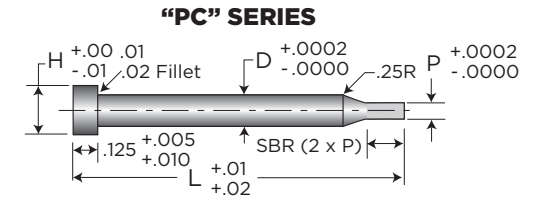
Standard Material: M2, HRC 60-63.
Alternate materials are available upon request.



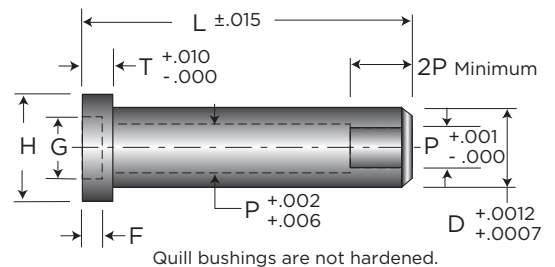
NOTE: Perforator Pilot lead is included in overall length ordered, and not added to length ordered, like standard head type and ball lock pilots.

The perforators can be shortened, nib pointed or pilot nosed at an additional charge.

CLOSE CENTRE PUNCHES									
BODY CODE	SHANK D	HEAD DIE H	POINT LENGTH SBR	RANGE P	OVERALL LENGTH L				
					1-1/2	1-3/4	2	2-1/4	2-1/2
06	.0625	.125	2 x P	.0310-.0624	●	●	●	●	●
09	.0938	.160		.0626-.0937	●	●	●	●	●
12	.1250	.190		.0939-.1249	●	●	●	●	●
15	.1562	.220		.1251-.1561	●	●	●	●	●
18	.1875	.250		.1563-.1874	●	●	●	●	●
21	.2188	.282		.1876-.2187	●	●	●	●	●
25	.2500	.313		.2189-.2499	●	●	●	●	●



QUILL BUSHINGS — "Q" SERIES												
CAT. NO.	P	D	H	T	G	F	OVERALL LENGTH L					
							3/4	1	1-1/4	1-1/2	1-3/4	2
Q18	.040-.060	3/16	1/4	3/32	1/8	3/32	●	●	●			
Q25	.060-.126	1/4	3/8	1/8	3/16	3/32	●	●	●	●	●	●
Q31	.080-.160	5/16	7/16	1/8	7/32	3/32	●	●	●	●	●	●
Q37	.161-.218	3/8	1/2	1/8	1/4	1/8	●	●	●	●	●	●
Q43	.200-.250	7/16	9/16	1/8	9/32	1/8	●	●	●	●	●	●
Q50	.218-.312	1/2	5/8	3/16	3/8	1/8	●	●	●	●	●	●



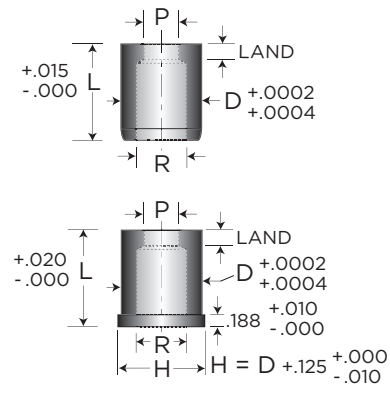
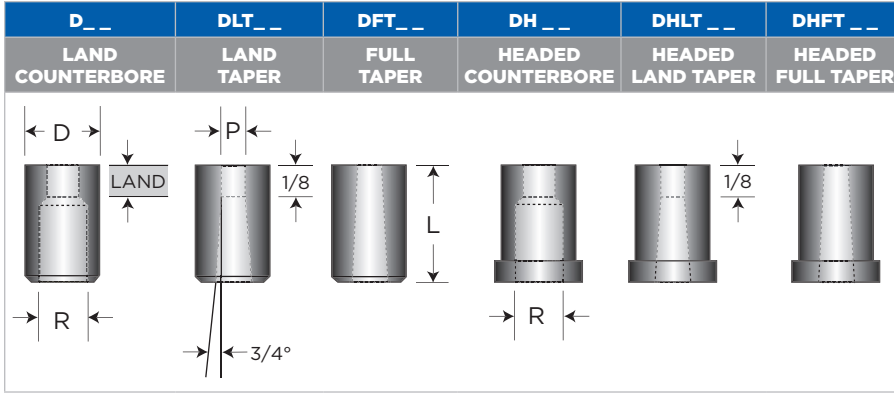
PERFORATOR PUNCHES

Specify Shape and Body Code in place of __

PRESS FIT DIES

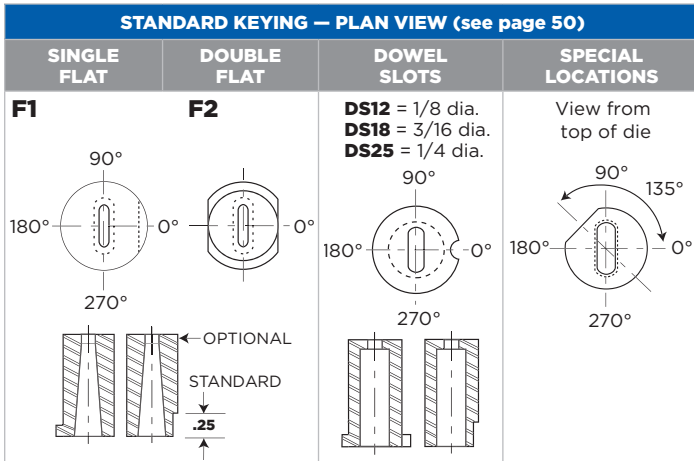
Standard Material: M2, HRC 60-63.

Alternate materials are available upon request.



PRESS FIT DIES

SHAPES	DIE CODE	BODY	M2	C-BORE MIN. LAND	LENGTHS IN 1/8" INCREMENTS		COUNTERBORE STYLE			TAPERED STYLE			
					STANDARD	EXTENDED	MIN. P ROUND	MIN. P/W	MAX. P/G SHAPE	R MAX. C-BORE	MIN. P/W	MAX. P/G	
C ROUND	D Die Counterbore DLT Die Land Taper DFT Die Full Taper DH Die Headed (Counterbore) DHLT Die Headed Land Taper DHFT Die Headed Full Taper	1/4	25	5/32	3/4 - 1-1/4	1-3/8 - 1-1/2	.064	.062	.135	.156	.062	.170	
O OBLONG		5/16	31						.175	.187		.212	
R RECTANGLE SQUARE		3/8	37						.195	.228		.255	
		7/16	43	.245					.265	.297			
		1/2	50	.285					.312	.344			
RR RADIUS RECTANGLE		5/8	62	.365					.375	.425			
		3/4	75	.435	.468	.510							
		7/8	87	.545	.578	.595							
WB WIRE BLANK		1	100	1/4	3/4 - 1-1/4	1-3/4 - 2	.075	.350	.675	.687	.075	.680	
		1-1/4	125	5/16					.500	.800		.812	.850
		1-1/2	150	.600					1.050	1.062		1.050	
		1-3/4	175	.750					1.400	1.430		1.400	
	2	200	.875	1.600					1.630	1.600			
	2-1/4	225	3/8	1.000					.075	1.800		1.830	.075
2-1/2	250	2.000	2.030	2.000									
2-3/4	275	2.200	2.230	2.200									
3	300	2.300	2.330	2.400									



Straight Through Dies (No Taper) Available

DST: Die Straight Taper

DHST: Die Headed Straight Taper

TOLERANCE		
ROUNDS P	+.0005 -.0000	TIR .0005
SHAPES P/W	±.0005	TIR .001

ORDER

SHAPE: **D C 62** LENGTH: **1-1/4"** **.300**

DH O 100 **1-1/4"** **.256 x .650** **DS12**

DIE CODE BODY CODE W x P KEYING

CUSTOM TOOLING SOLUTIONS

Serving a wide variety of industries, we have the ability to design and create an immense range of custom tooling. Here is a sample of our breadth and capabilities:



We can help solve your special tooling needs. Our design and sales engineers are available to discuss your unique application and provide a cost-effective solution to meet your needs.

SPECIAL TOOLING

Mold & Die Cast Components

- Custom Core Pins
- Custom Ejector Pins
- Trim Die Components
- Custom Wire Work

Special Machine Components

- Locator Pins
- Inspection Pins
- Custom Components

Jig & Fixture Components

- Locating Pins/Bushings
- Custom Clamping Components

Die Industry

- Die Blocks
- Punch Pads
- Pedestal Punches
- Custom Retainers
- Cams

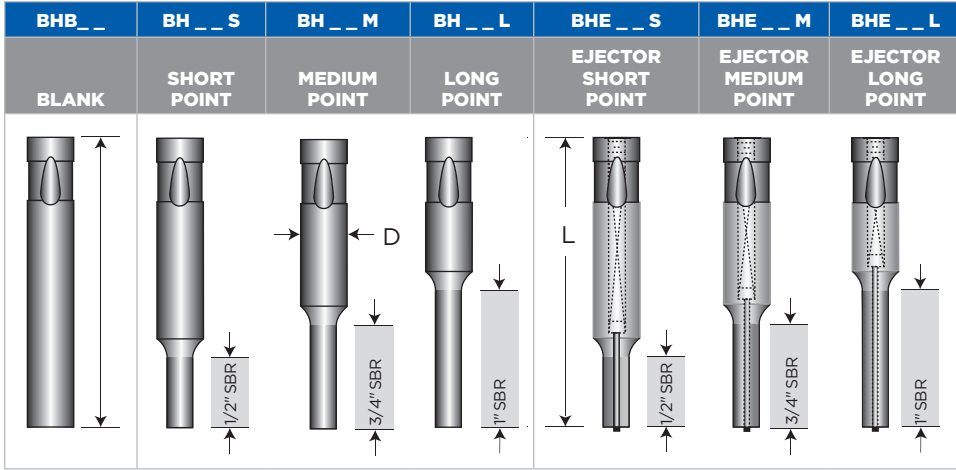
PROCESSES

- Tube Expansion
- Fine Blanking
- * Cold Forging/Heading
- Plastic Injection
- Fastener Heading
- Molding
- Broaching
- Bending
- Extruding
- Stamping
- Drawing

INDUSTRIES SERVED

- Electronics
- Ammunitions
- Food and Beverage
- HVAC
- Medical
- General Manufacturing
- Automotive
- Motor Vehicles
- Window and Door

HEAVY DUTY — BALL LOCK PUNCHES



Specify Shape and Body Code in place of __

Standard Material: M2, HRC 60-63. Alternate materials are available upon request.

BALL LOCK CODE	BODY	BODY CODE		LENGTHS IN 1/4" INCREMENTS		MIN. P/W	MIN. P/W EJECTOR	EJECTOR KIT			
		M2	SBR	STANDARD	EXTENDED			KIT	PIN D	SPRING D	SET SCREW D
BH Ball Lock Heavy Duty	3/8	37	S 1/2" SBR **(STD) (.062-.092)	2-1/2-5	5-1/4-6	.102	.102	EK41	.041	.125	8-32
	1/2	50				.146	.146	EK58	.058	.150	10-32
	5/8	62	*M 3/4" SBR **(STD) (.093>)			.222	.222	EK89	.089	.187	1/4-28
BHE Ball Lock Heavy Duty Ejector	3/4	75		3-5	.300	.300	EI12	.120	.270	5/16-24	
7/8	87	1-1/4			125	1" SBR					

BALL LOCK PUNCHES

ORDER

BALL LOCK CODE: **BH** BODY CODE: **C 50** LENGTH: **3"** **.375**

BHE **O 62** **M 3"** **.250 x .560**

SHAPE SBR W x P

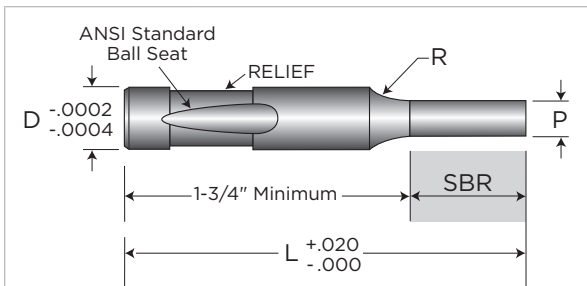
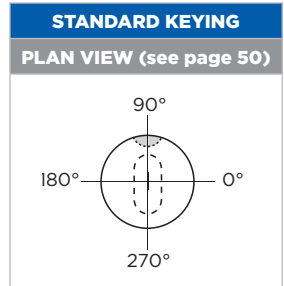
* **'M' SBR** supplied on .093 or greater unless otherwise specified.

** **'S' SBR** supplied on .062-.092 unless otherwise specified.

P or G cannot exceed body diameter.

Ejector Pin lock hole supplied on request N/C.

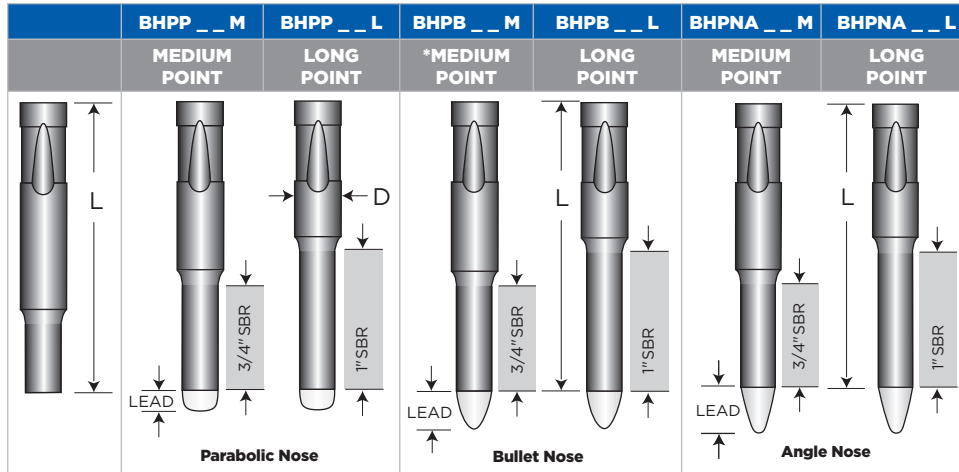
Surface Coatings Available (see page 51).



TOLERANCE		
ROUNDS P	+0.005 -0.000	TIR .0005
SHAPES P/W	±.0005	TIR .001

SHAPES				
C ROUND	O OBLONG	R RECTANGLE SQUARE	RR RADIUS RECTANGLE	B BLANK

HEAVY DUTY — BALL LOCK PILOT PUNCHES



Specify Shape and Body Code in place of _ _

Standard Material: M2, HRC 60-63. Alternate materials are available upon request.

Stubby Pilot available upon request.

* 'M' SBR is shipped unless otherwise specified.

P or G dimension cannot exceed body diameter.

Surface Coatings Available (see page 51)

PILOT CODE	PILOT NOSE STYLE	P RANGE	**MAX. LEAD LENGTH	BODY	BODY CODE	LENGTHS IN 1/4" INCREMENTS		MIN. P DIM.
						SBR	STANDARD	
BHPP Ball Lock Heavy Duty Pilot Parabolic Nose		.125 - 1.250	.250	3/8	37	*M 3/4" SBR Standard	2-1/2 - 5	.101
				1/2	50			
				5/8	62			
				3/4	75			
BHPB Ball Lock Heavy Duty Pilot Bullet Nose		.125 - .249 .250 - .624 .625 - 1.250	.250 .500 .750	7/8	87	L 1" SBR	5-1/2	.221
				1	100			
				1-1/4	125			
BHPNA Ball Lock Heavy Duty Pilot New Angle Nose		.125 - .250	.25	D -0.0002 -0.0004	ANSI Standard Ball Seat	RELIEF	R	P
		.251 - .313	.31					
		.314 - .375	.37					
		.376 - .438	.43					
		.439 - .500	.50					
		.501 - .625	.62					
		.626 - .750	.75					
		.751 - .875	.87					
		.876 - 1.000	1.00					
		1.001 - 1.250	1.25					

*Longer SBR available.
**Lead length is automatically added to the "L" dimension ordered

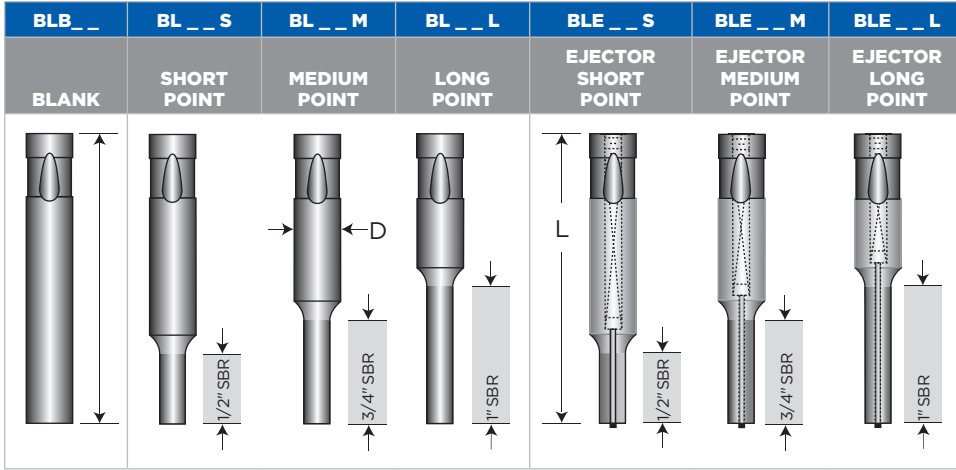
SHAPES			
C ROUND	O OBLONG	R RECTANGLE SQUARE	RR RADIUS RECTANGLE

TOLERANCE		
ROUNDS P	+0.0005 -0.0000	TIR .0005
SHAPES P/W	±.0005	TIR .001

ORDER	PILOT CODE	BODY CODE	LENGTH
	BHPB	C	62
	SHAPE	SBR	P
			.500

BALL LOCK PILOT PUNCHES

LIGHT DUTY — BALL LOCK PUNCHES



Specify Shape and Body Code in place of __

Standard Material: M2, HRC 60-63. Alternate materials are available upon request.

BALL LOCK CODE	BODY	BODY CODE		LENGTHS IN 1/4" INCREMENTS		MIN. P/W	MIN. P/W EJECTOR	EJECTOR KIT			
		M2	SBR	STANDARD	EXTENDED			KIT	PIN D	SPRING D	SET SCREW D
BL Ball Lock Light Duty	1/4	25	S 1/2" SBR **(Standard) (.062-.092)	2-3-1/2	3-3/4-6	.058	.058	EK23	.023	.075	4-40
	3/8	37		2-4	4-1/4-6	.102	.102	EK41	.041	.125	8-32
	1/2	50	.146			.146	EK58	.058	.150	10-32	
BLE Ball Lock Light Duty Ejector	5/8	62	M 3/4" SBR **(Standard) (.093>)	2-1/4-4							
	3/4	75									
	7/8	87	L 1" SBR			.222	.222	EK89	.089	.187	1/4-28
1	100										

BALL LOCK PUNCHES

ORDER

BALL LOCK CODE: **BL**
 BODY CODE: **C 37 M**
 LENGTH: **2-1/4"**
 .250

BLE R 50 M
 .187 x .375

SHAPE: **R** SBR: **M** W x P: **.187 x .375**

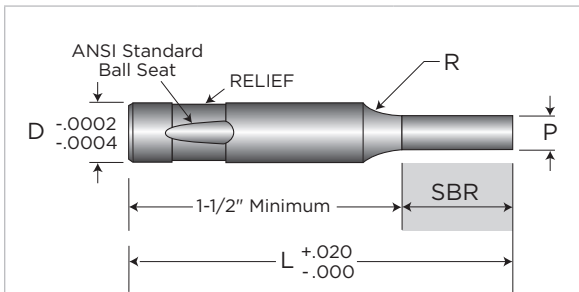
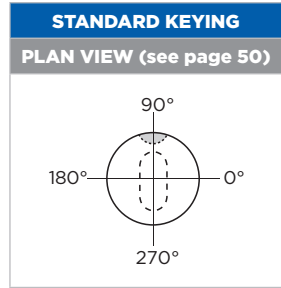
* **'M'** SBR supplied on .093 or greater unless otherwise specified.

** **'S'** SBR supplied on .062-.093 unless otherwise specified

P or **G** dimension cannot exceed body diameter.

Ejector Pin lock hole supplied on request N/C.

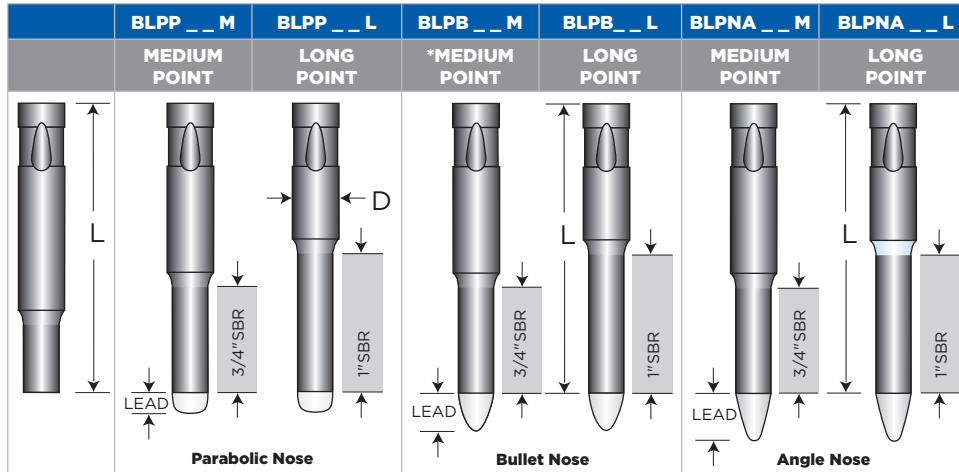
Surface Coatings Available (see page 51)



TOLERANCE		
ROUNDS P	+0.005 -0.000	TIR .0005
SHAPES P/W	±.0005	TIR .001

SHAPES				
C ROUND	O OBLONG	R RECTANGLE SQUARE	RR RADIUS RECTANGLE	B BLANK

LIGHT DUTY – BALL LOCK PILOT PUNCHES



Specify Shape and Body Code in place of __

Standard Material: M2, HRC 60-63. Alternate materials are available upon request.

Stubby Pilot available upon request.

* 'M' SBR is shipped unless otherwise specified.

P or G dimension cannot exceed body diameter.

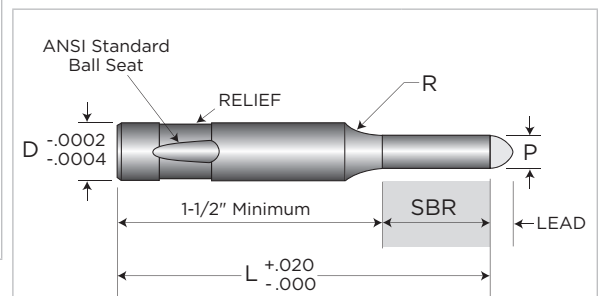
Surface Coatings Available (see page 51)

PILOT CODE	PILOT NOSE STYLE	P RANGE	**MAX. LEAD LENGTH
BLPP Ball Lock Light Duty Pilot Parabolic Nose		.125-.1250	.250
BLPB Ball Lock Light Duty Pilot Bullet Nose		.125-.249 .250-.624 .625-1.250	.250 .500 .750
BLPNA Ball Lock Light Duty Pilot New Angle Nose		.125-.250 .251-.313 .314-.375 .376-.438 .439-.500 .501-.625 .626-.750 .751-.875 .876-1.000 1.001-1.250	.25 .31 .37 .43 .50 .62 .75 .87 1.00 1.25

BODY	BODY CODE	SBR	LENGTHS IN 1/4" INCREMENTS		MIN. P DIM.
			STANDARD	EXTENDED	
3/8	37	*M 3/4" SBR Standard	2-1/2-5	5-1/2	.061
1/2	50				
5/8	62				
3/4	75	L 1" SBR	2-3/4-5		.092
7/8	87				
1	100	3-5		.145	
1-1/4	125				

*Longer SBR available.

**Lead length is automatically added to the "L" dimension ordered.

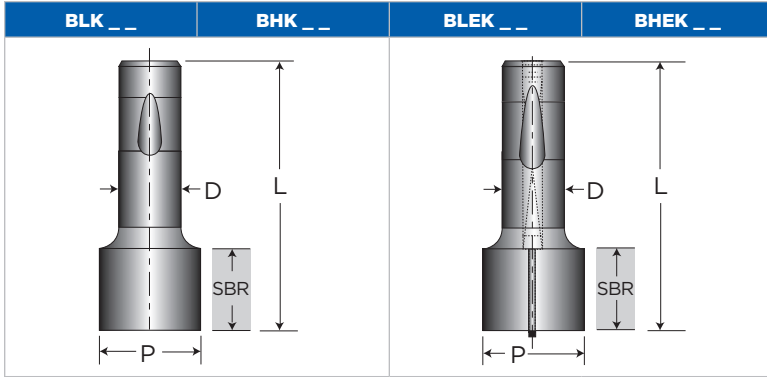


ORDER	STYLE	BODY CODE	LENGTH
	BLPB	C	62
	SHAPE		SBR
			3"
			.500
			P

TOLERANCE		
ROUNDS P	+0.005 -0.000	TIR .0005
SHAPES P/W	±.0005	TIR .001

BALL LOCK PILOT PUNCHES

KNOB LIGHT/HEAVY DUTY — BALL LOCK PUNCHES



Specify Shape and Body Code in place of __

Standard Material: M2, HRC 60-63. Alternate materials are available upon request.

* **Standard SBR** supplied unless otherwise specified.

Ejector Pin lock hole supplied on request N/C.

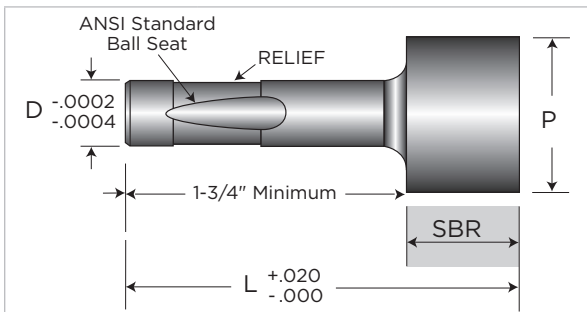
Special lengths supplied upon request.

Special SBR supplied upon request.

Surface Coatings Available (see page 51)

BALL LOCK CODE	BODY	BODY CODE		STANDARD LENGTHS	RANGE CODE	MAX. P/G	MIN. W	EJECTOR KIT			
		M2	SBR					KIT	PIN D	SPRING D	SET SCREW D
BLK Ball Lock Light Duty Knob	1/2	50	L 1" SBR	3-3-1/2-4	-3	.750	.146	EK58	.058	.150	10-32
	5/8	62			-4	1.000					
BLEK Ball Lock Light Duty Ejector Knob	3/4	75			-5	1.250	.222	EK89	.089	.187	1/4-28
					-4	1.000					
					-5	1.250					
BHK Ball Lock Heavy Duty Knob	7/8	87			-6	1.500	.222	EK89	.089	.187	1/4-28
					-4	1.000					
					-5	1.250					
BHLEK Ball Lock Heavy Duty Ejector Knob	1-1/4	125			-6	1.500	.300	EK12	.120	.270	5/16-24
					-5	1.250					
					-7	1.750					

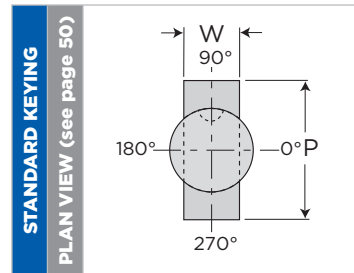
BALL LOCK PUNCHES



SHAPES				
C ROUND	O OBLONG	R RECTANGLE SQUARE	RR RADIUS RECTANGLE	B BLANK

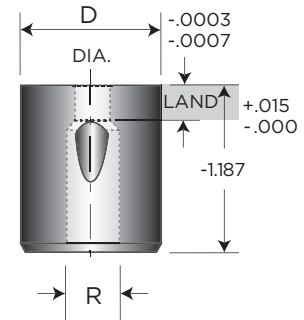
TOLERANCE		
ROUNDS P	+0.0005 -0.0000	TIR .0005
SHAPES P/W	±0.0005	TIR .001

ORDER	BALL LOCK CODE	BODY CODE	RANGE CODE	W x P
	BHK	C	100	L -6 3"
BHEK	R	100	L -6 3"	.560 x 1.375
	SHAPE	SBR	LENGTH	

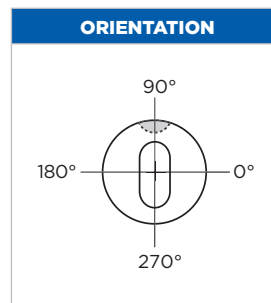


LIGHT DUTY – BALL LOCK DIES

BALL LOCK CODE	BODY	BODY CODE	MIN. LAND	MIN. P ROUND	MIN. W SHAPE	MAX. P/G SHAPE	R MAX. C-BORE
		M2					
DBL Die Ball Lock Light Duty	1/2	50	5/32	.062	.062	.195	.228
	5/8	62	3/16	.093	.093	.285	.312
	3/4	75		.118	.118	.345	.375
	7/8	87	1/4	.125	.125	.435	.468
	1	100		.156	.156	.545	.578
	1-1/4	125	5/16	.187	.187	.655	.687
	1-1/2	150	3/8	.250	.250	.780	.812
	1-3/4	175				1.35	1.062



SHAPES				
C ROUND	O OBLONG	R RECTANGLE SQUARE	RR RADIUS RECTANGLE	W WIRE BLANK



TOLERANCE	
ROUNDS P	+ .0005 - .0000
SHAPES P/W	± .0005

The **Standard Ball Seat** location is at 90°. Alternate locations of 0° or 180° or 270° can be specified.

Custom Ball Seat locations can be specified at any degree counterclockwise from 0°.

Standard Keying – Plan View (see page 50)

ELIMINATE COSTLY SLUG PULLING

Slug pulling can cause expensive press downtime. At Wilson Tool International, our desire to provide innovative tooling solutions for our customers has lead us to develop the Slug Hugger® die design which helps eliminate the very costly problem of slug pulling.

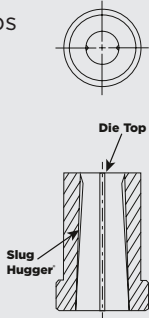
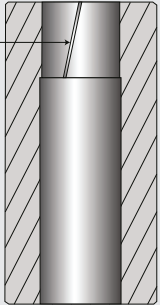
The Slug Pulling Solution

Slug Hugger dies help eliminate scrapped parts, costly downtime, and possible press and tooling damage due to slug pulling.

This unique design helps eliminate unnecessary back-pressure on small punch tips by preventing packed slugs. The Slug Hugger 2 design works on most material types and thicknesses including aluminum and stainless steel while Slug Hugger 4L is specifically designed for thinner materials. They are an available option on all die configurations: taper relief, counterbore relief, headed or headless.



SLUG HUGGER®

SLUG HUGGER® 2	SLUG HUGGER® 4L
<p>The Slug Hugger 2 design grabs the slug just below the cutting surface of the die and retains it during the stripping process. Precision “nips” hold slugs in the die and when capacity is reached, one slug per hit is released through the relief.</p> 	<p>The Slug Hugger 4L retains slugs with the assistance of cavities on the inside of the die. These cavities hold the slug in place after the hit occurs. While the 4L can be used with any material thickness, it is ideal for stamping thinner materials and is recommended for clearances of less than .004”.</p> 

Ordering Slug Hugger Dies

- Use the clearance you want and the die type you like.
- The minimum P/W dimension for the Slug Hugger 4L is 0.050” [1.27mm].
- The minimum total clearance for Slug Hugger 4L shape is 0.001” [.025mm], a round is 0.0005” [.012mm]
- The minimum total P/W dimension for the Slug Hugger 2 is 0.035” [.89mm].
- Minimum clearance for a Slug Hugger 2 shape or round is 0.004” [.10mm] total.

Simply specify that you’d like Slug Hugger 2 or 4L when you place your tooling order. Indicate the type and thickness of material you are stamping as well as your desired clearance. See the example below:

QTY.	CAT. NO.		SHAPE	P	W	TOLERANCE	TYPE	MATERIAL TYPE	MATERIAL THICKNESS	DIE CLEARANCE
2	DLTC 100 1-1/4” Die Land Taper Round	INCH	RD	.5000”	—	1	Slug Hugger® 2	Cold Rolled	.060”	.010” Per Side
1	DHLTO 100 1-1/4” Die Headed Land Taper Oblong		OB	.6500”	.4000”	1	Slug Hugger® 4L	Cold Rolled	.020”	.002” Per Side
1	MDHLTR 16 - 25 Metric Die Headed Land Taper Square	METRIC	SQ	6.5	—	1	Slug Hugger® 2	Aluminum	1.5mm	.105mm Per Side

RETAINERS AND RETAINER INSERTS

Wilson Tool International provides a range of retainers for your stamping application including headed, ball lock, square, end and custom retainers. For those looking to manufacture custom retainers in-house with ease and speed, time-saving HP Accu-Lock® Retainer Inserts will allow you to get back to production quickly without waiting for a custom retainer to arrive.

Retainers and retainer inserts are available from both the Canadian and USA manufacturing plants. Additional options are available upon request.



Tru Advantage Retainer

Wilson Tool International's ball lock or Tru Advantage retainers are fully compatible with all ball lock punches, including HP ball lock punches.



Custom Hole Retainer

Custom retainers are manufactured to meet your design specifications. Size and design are limited to your imagination and are manufactured to meet ANSI standards.



End Retainer

Wilson Tool International's end retainers hold punches securely and accurately. They are fully compatible with all ball lock punches, including HP ball lock punches.



Square Retainer

Wilson Tool International's square retainers hold punches securely and accurately. They are fully compatible with all ball lock punches, including HP Ball Lock punches.



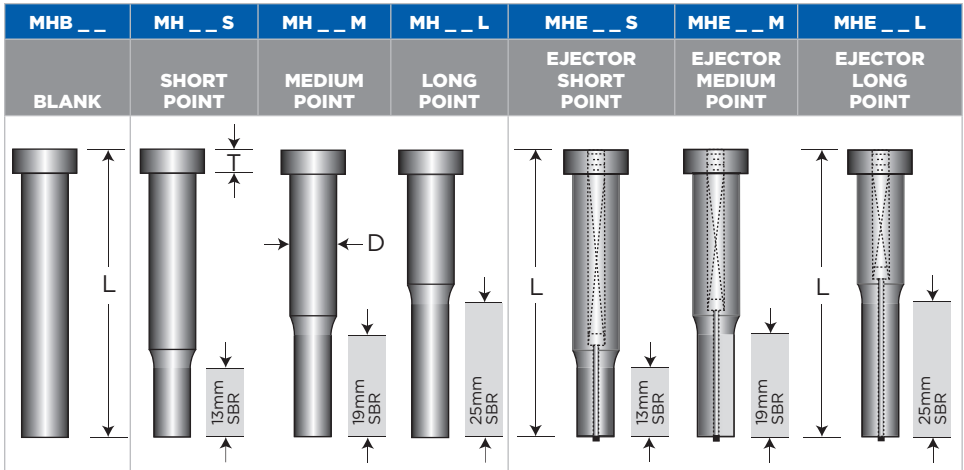
HP Accu-Lock® Special Retainer Inserts

Why stop and wait for a new retainer when you can keep production moving? HP Accu-Lock Special Retainer Inserts give you the simple tools to make and modify existing retainers in-house so you get more runtime.

Why depend on another production schedule when you can have full control over your own? HP Accu-Lock is the DIY solution that reduces downtime and eliminates waiting around for a custom retainer to arrive. Why outsource when you can do it yourself faster and cheaper?

HP Accu-Lock couldn't be simpler. You can make and modify retainers with a simple straight-line machining process. Wilson Tool provides the step-by-step instructions to put you in the driver's seat. Within hours, you can create your own custom retainer that securely and accurately holds all types of Ball Lock punches.

PRESS FIT – HEADED PUNCHES



Specify Shape and Body Code in place of __

Standard Material: M2, HRC 60-63. Alternate materials are available upon request.

***'M' SBR** supplied unless otherwise specified.

P or G cannot exceed body diameter.

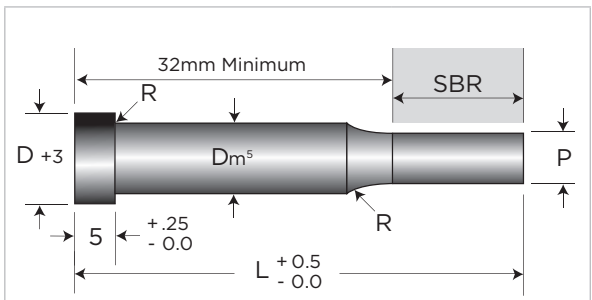
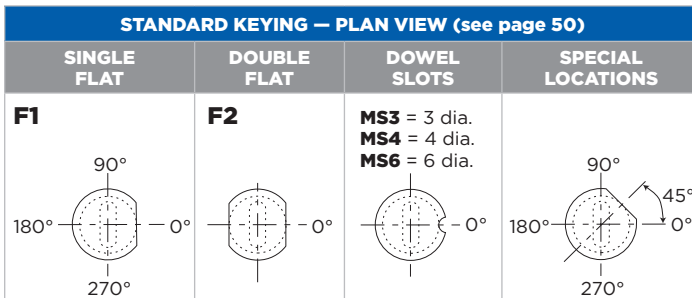
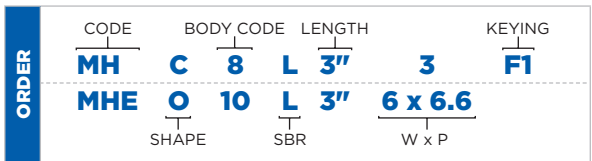
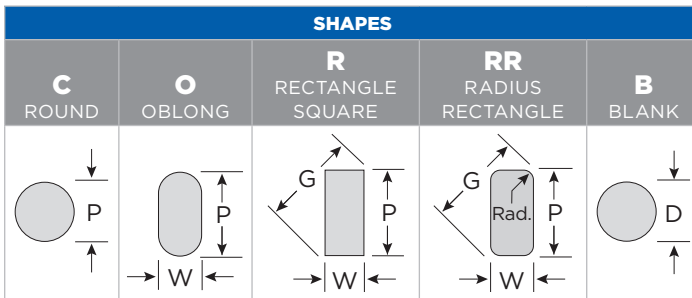
Ejector Pin lock hole supplied on request N/C.

Surface Coatings Available (see page 51)

HEADED PUNCHES

CODE	BODY CODE	SBR	STANDARD LENGTHS [†]										MIN. P/W	MIN. P/W EJECTOR	EJECTOR KIT				
			40	50	56	60	63	70	71	80	90	100			KIT	PIN D	SPRING D	SET SCREW D	
MH Metric Headed	5	S 13mm SBR	●	●	●	●	●	●	●	●	●	●	●	1.45	1.45	MEK2	.58	1.9	M2.6
	6		●	●	●	●	●	●	●	●	●	●	●	1.75	1.75	MEK3	.70	2.2	M3
	8		●	●	●	●	●	●	●	●	●	●	●	2.5	2.5	MEK4	1.0	3.1	M4
	10		●	●	●	●	●	●	●	●	●	●	●	3.75	3.75	MEK5	1.0	3.1	M5
	13	●	●	●	●	●	●	●	●	●	●	●	5.75	5.75	MEK6	1.5	4.0		
MHE Metric Headed Ejector	16	*M 19mm SBR	●	●	●	●	●	●	●	●	●	●	●	5.75	5.75	MEK6	2.3	5.0	M6
	20		●	●	●	●	●	●	●	●	●	●	●	7.5	7.5				
	25	L 25mm SBR	Expanded Body Diameter			●	●	●	●	●	●	●	●	7.5	7.5	MEK7	3.0	5.0	M6
	32		●	●	●	●	●	●	●	●	●	●	●						
	40		●	●	●	●	●	●	●	●	●	●	●	●					
	45		●	●	●	●	●	●	●	●	●	●	●	●					
	50		●	●	●	●	●	●	●	●	●	●	●	●					
56	●	●	●	●	●	●	●	●	●	●	●	●							
63	●	●	●	●	●	●	●	●	●	●	●	●							

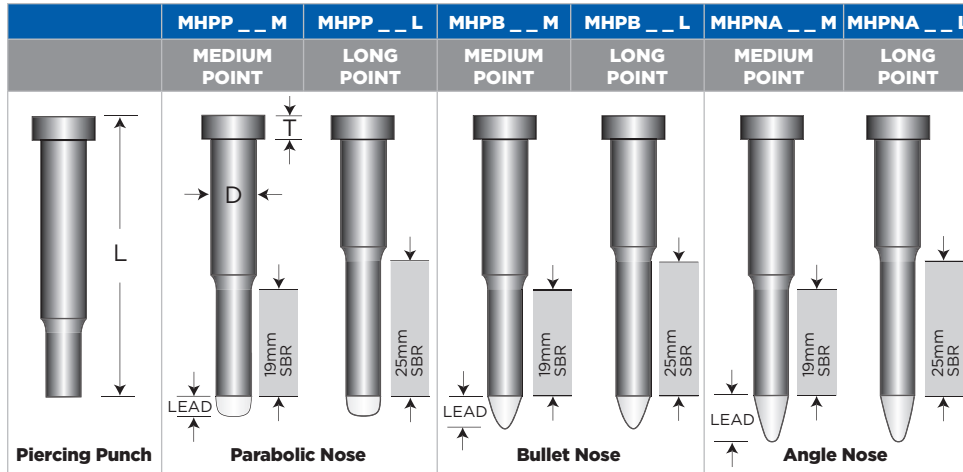
[†]Extended lengths available 110 – 25 – 140 – 150



TOLERANCE

ROUNDS P		TIR .01
	+ .01 - .00	
SHAPES P/W	± .01	TIR .02

PRESS FIT — HEADED PILOT PUNCHES



Specify Shape and Body Code in place of _ _

Standard Material: M2, HRC 60-63. Alternate materials are available upon request.

Stubby Pilot available upon request.

Longer SBR available.

* **M-SBR** is shipped unless otherwise specified.

** **Lead length** is automatically added to the "L" dimension ordered.

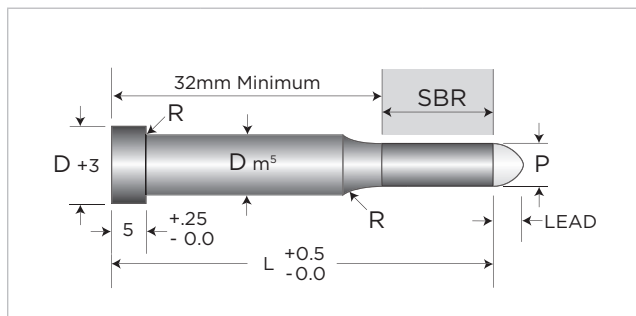
PILOT CODE	PILOT NOSE STYLE	P RANGE	**LEAD LENGTH
MHPP Metric Headed Pilot Parabolic Nose		.3 - 32mm	6mm
MHPB Metric Headed Pilot Bullet Nose		3. - 10 10.1 - 15 15.1 - 32	10 15 20
MHPNA Metric Headed Pilot New Angle Nose		4.85 - 6 6.1 - 8 8.1 - 10 10.1 - 12 12.1 - 16 16.1 - 20 20.1 - 23 23.1 - 25 25.1 - 30 32.1 - 40	6 8 10 12 15 20 23 25 30 40

BODY CODE	SBR	STANDARD LENGTHS [†]							MIN. P
		60	63	70	71	80	90	100	
5	*M 19mm SBR Standard	●	●	●	●				1.42
6		●	●	●	●	●			1.72
8		●	●	●	●	●			2.47
10		●	●	●	●	●	●	●	3.72
13		●	●	●	●	●	●	●	5.72
16		●	●	●	●	●	●	●	7.47
20		●	●	●	●	●	●	●	
25		●	●	●	●	●	●	●	
32		●	●	●	●	●	●	●	
40		L 25mm SBR		●	●	●	●	●	●
45			●	●	●	●	●	●	
50			●	●	●	●	●	●	
56			●	●	●	●	●	●	
63			●	●	●	●	●	●	

[†]Extended lengths available 110 - 25 - 140 - 150

SHAPES	C ROUND	O OBLONG	R RECTANGLE SQUARE	RR RADIUS RECTANGLE

ORDER	PILOT CODE	BODY CODE	LENGTH
	MHPB	C	16
		SHAPE	SBR
		M	90
			12.7
			P

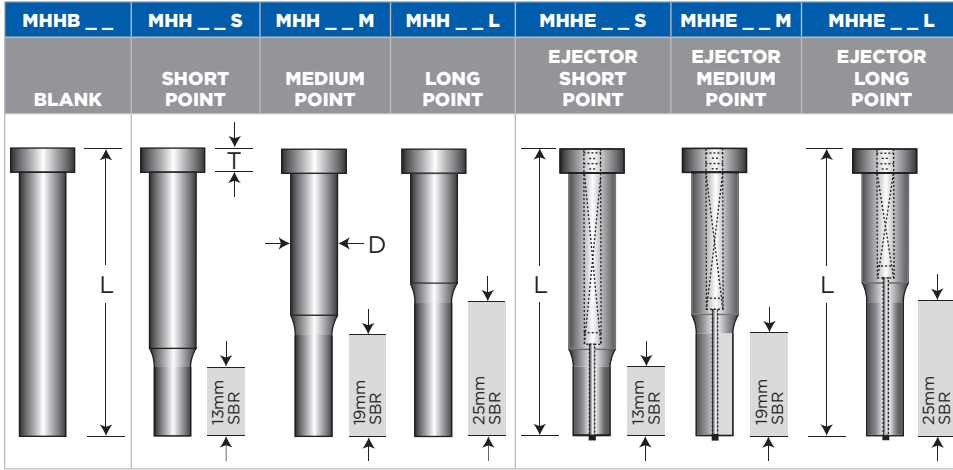


TOLERANCE		
ROUNDS P	+0.01 -0.00	TIR .01
SHAPES P/W	±0.01	TIR .02

D	m ⁵	D	m ⁵	D	m ⁵	D	m ⁵
5.0	+0.004	13.0	+0.007	32.0	+0.009 +0.020	56.0	+0.011
6.0	+0.009	16.0	+0.015	40.0		63.0	+0.024
8.0	+0.006	20.0	+0.008	45.0			
10.0	+0.012	25.0	+0.017	50.0			

HEADED PILOT PUNCHES

HEAVY DUTY PRESS FIT – HEADED PUNCHES



Specify Shape and Body Code in place of __

Standard Material: PM-M4, HRC 62-64. Alternate materials are available upon request.

* **Standard SBR** supplied unless otherwise specified.

P or G cannot exceed body diameter.

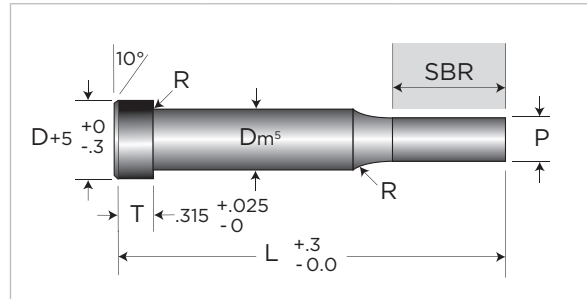
Ejector Pin lock hole supplied on request NC.

Surface Coatings Available (see page 51)

CODE	BODY CODE	SBR	LENGTHS IN 10 INCREMENTS	MIN. P/W	MIN. P/W EJECTOR	EJECTOR KIT			
						KIT	PIN D	SPRING D	SET SCREW D
MHH Metric Headed Heavy Duty	8	S 13mm SBR	50-100	3.0	3.0	MEK4	1.0	3.1	M4
	10			3.0	3.0		MEK5	1.0	
	13	*M 19mm SBR (Standard)		4.5	4.5	1.5		4.0	M5
16	6.0			6.0	MEK6	2.3	5.0	M6	
20	8.0			8.0					
MHHE Metric Headed Heavy Duty Ejector	25	L 25mm SBR (Not available in 50 long)		9.0	9.0	2.3	5.0	M6	

HEADED PUNCHES

SHAPES				
C ROUND	O OBLONG	R RECTANGLE SQUARE	RR RADIUS RECTANGLE	B BLANK



STANDARD KEYING – PLAN VIEW (see page 50)			
SINGLE FLAT	DOUBLE FLAT	DOWEL SLOTS	CUSTOM
F1 	F2 	MS3 = 3mm Ø MS4 = 4mm Ø MS6 = 6mm Ø 	F1

TOLERANCE		
ROUNDS P	+01 -00	TIR .01
SHAPES P/W	±.01	TIR .02

ORDER	CODE	BODY CODE	LENGTH		
	MHH	C 10 M	60	.125	
	MHHE	O 16 M	90	5.0 x 12.7	F1
	SHAPE	SBR	W x P	KEYING	

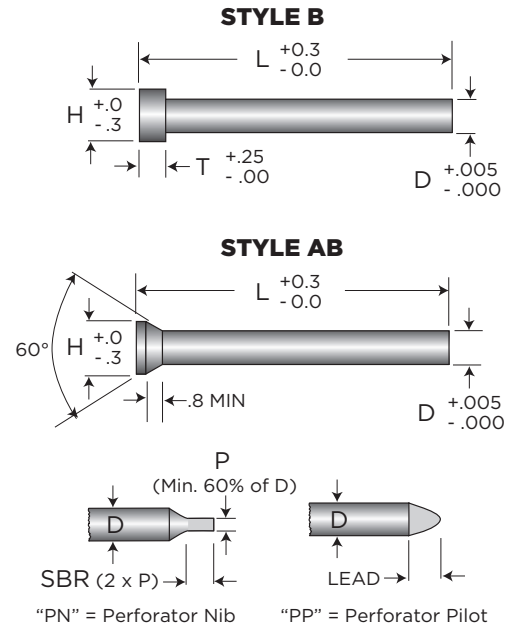
PERFORATOR PUNCHES

"MP" SERIES — H.S.S.					
CAT. NO.	SIZE RANGE D .01 INCREMENTS NO.	T	H	STOCK LENGTHS	
				40	100
MP-3	0.8-1.6	5	3	●	
MP-4	1.61-2.0		4	●	
MP-5	2.01-3.0		5		●
MP-6	3.01-4.0		6		●
MP-7	4.01-5.0		7		●
MP-8	5.01-6.0		8		●
MP-9	6.01-7.0		9		●
MP-11	7.01-8.0		11		●
MP-13	8.01-10.0		13		●

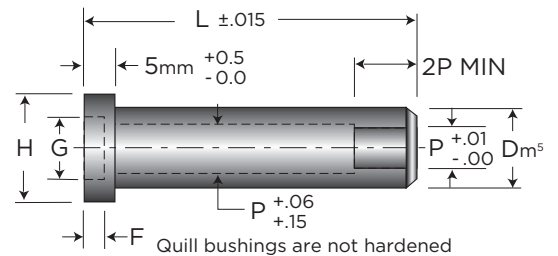
ORDER

CAT. NO.	SIZE	STYLE
MP7	70	B
LENGTH		
	4.5	

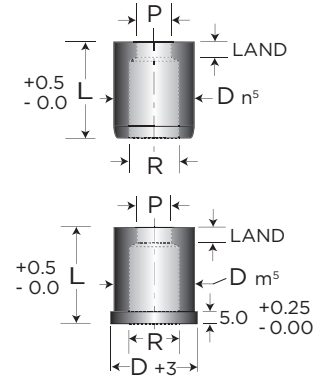
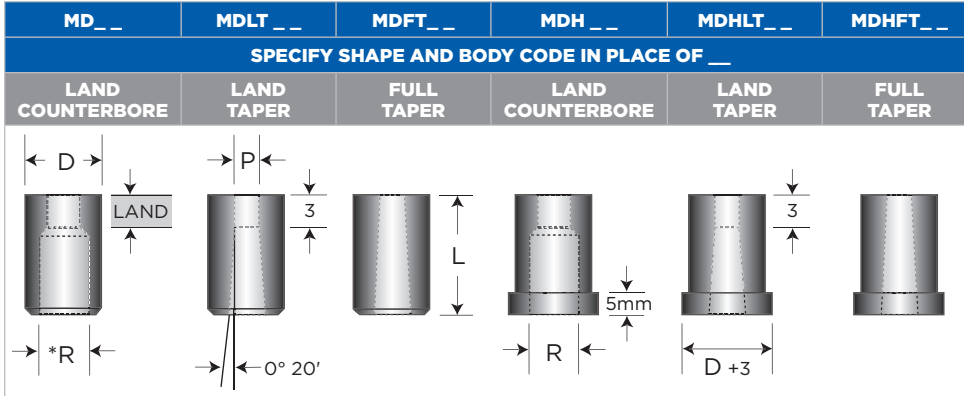
Standard Material: M2, HRC 60-63.
Alternate materials are available upon request.



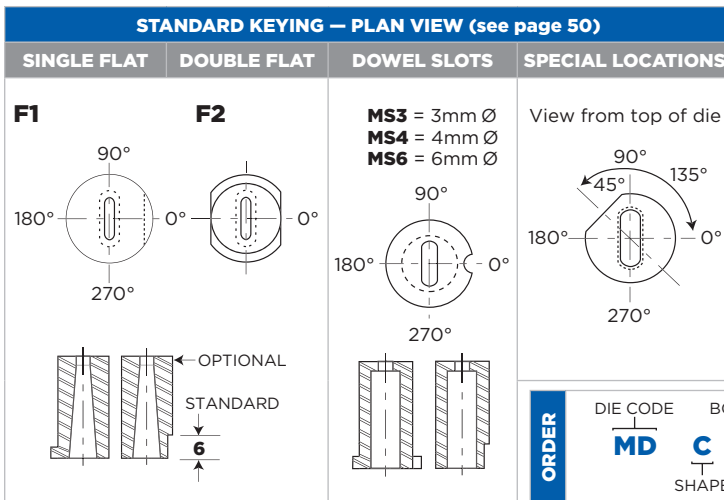
METRIC QUILL BUSHINGS — "MQ" SERIES										
CAT. NO.	P	D	H	T	G	F	LENGTHS			
							25	30	40	50
MQ5	0.8-1.6	5	8	5	3	5	●	●	●	●
MQ6	1.7-2.0	6	9		4		●	●	●	●
MQ7	2.1-3.0	7	10		5		●	●	●	●
MQ8	3.1-4.0	8	11		6		●	●	●	●
MQ9	4.1-5.0	9	12		7		●	●	●	●
MQ10	5.1-6.0	10	13		8		●	●	●	●
MQ13	6.1-7.0	13	16		9		●	●	●	●



PRESS FIT DIES



SHAPES	DIE CODE	BODY CODE	MIN. LAND	STANDARD LENGTHS							COUNTERBORE STYLE			TAPERED				
				20	22	25	28	30	32	35	MIN. P ROUND	MIN. W SHAPE	MAX. P/G SHAPE	*R MAX. C-BORE	MIN. P/W	MAX. P/G		
C ROUND 	MD Metric Die (Counterbore)	8	4	●	●	●	●	●	●	●	1.5	1.5	3.25	4.0	1.5	5.4		
		10		●	●	●	●	●	●	●			5.25	6.0		6.8		
O OBLONG 	MDLT Metric Die Land Taper	13	5	●	●	●	●	●	●	●	3.0	2.0	7.25	8.0	1.5	8.8		
		16		●	●	●	●	●	●	●			5.0	2.4		8.75	9.5	10.8
R RECTANGLE SQUARE 	MDFT Metric Die Full Taper	20	6	●	●	●	●	●	●	●	7.0	3.2	11.25	12.0	1.9	13.6		
		22		●	●	●	●	●	●	●			9.0	4.0		14.0	15.0	
RR RADIUS RECTANGLE 	MDH Metric Die Headed	25	8	●	●	●	●	●	●	●	11.0	4.5	16.5	17.5	1.9	17.0		
		32		●	●	●	●	●	●	●			13.0	5.5		20.0	21.0	22.0
WB WIRE BLANK 	MDHLT Metric Die Headed Land Taper	38	8	●	●	●	●	●	●	●	16.0	6.4	26.0	27.0	1.9	27.0		
		40		●	●	●	●	●	●	●			19.0	8.0		35.0	36.5	35.0
WB WIRE BLANK 	MDHFT Metric Die Headed Full Taper	45	8	●	●	●	●	●	●	●	19.0	8.0	35.0	36.5	1.9	35.0		
		50		●	●	●	●	●	●	●			22.0	9.0		40.0	41.5	40.0
		56		●	●	●	●	●	●	●			25.0	10.0		45.0	46.5	45.0
		63		●	●	●	●	●	●	●	28.0	11.0	50.0	51.5	50.0			



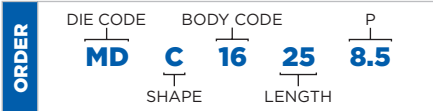
Straight Through Dies (No Taper) Available

MDST: Metric Die Straight Taper

MDHST: Metric Die Headed Straight Taper

TOLERANCE
ROUNDS P
+0.13
-0.00
TIR .01
SHAPES P/W
+0.13
TIR .02

D	M5	N5
4.0	+0.009	+0.013
5.0	+0.004	+0.008
6.0		
8.0	+0.012	+0.016
10.0	+0.006	+0.010
13.0	+0.015	+0.020
16.0	+0.007	+0.012
20.0	+0.017	+0.024
25.0	+0.008	+0.015
32.0		
40.0	+0.020	+0.028
45.0	+0.009	+0.017
50.0		
56.0	+0.024	+0.033
63.0	+0.011	+0.020



TOOL STORAGE CABINET

Cabinets create a safe and organized way to store and locate tooling. This style of cabinet can accommodate storage of punch and die components — be sure to talk to your Wilson Tool Sales Engineer regarding the cabinet that fits your tooling style best.

8 Drawer Arrangement and Capacity

3 drawers for 'A' station tooling:

- 18 punch and guide assemblies (per drawer)
- 36 dies and 18 additional punches (per drawer)

3 drawers for 'B' station tooling:

- 12 punch and guide assemblies (per drawer)
- 24 dies and 12 additional punches (per drawer)

1 drawer for 'C' & 'D' station tooling:

- 12 punches, stripper plates and dies ('C' or 'D' station)

1 drawer (9 compartments)

- 'E' or 'F' large station guide assemblies

Includes lock with two keys and forklift base.



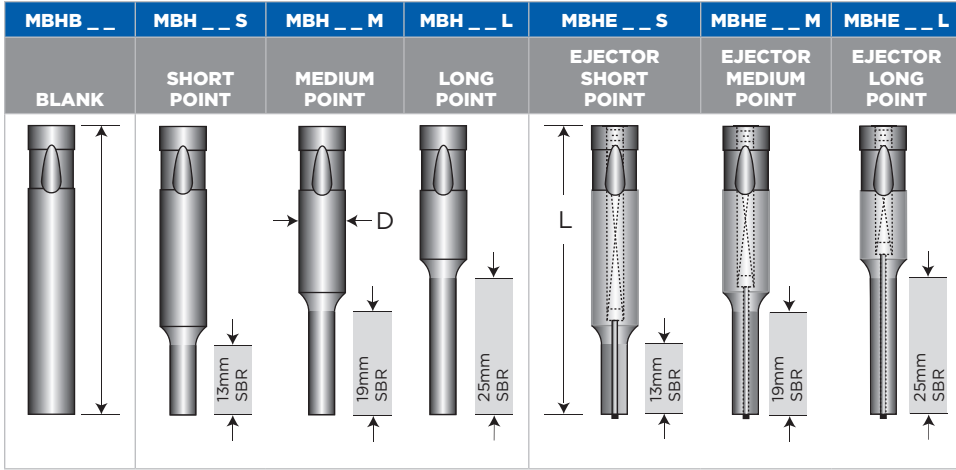
Overall Dimensions:

42" high x 28" wide x 29" deep

107cm high x 71cm wide x 74cm deep

DESCRIPTION	CAT. NO.
Cabinet: Three (3) 2" usable height drawers Three (3) 3" usable height drawers One (1) 5" usable height drawer One (1) 7" usable height drawer	90001
OPTIONS	
Plastic Drawer Liners	90002
Mobile Base	90003
Maple Top	90004
Cart Handle (1)	90005
Ribbed Rubber Mat	90006

HEAVY DUTY — BALL LOCK PUNCHES

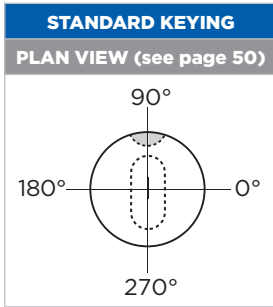


Specify Shape and Body Code in place of __
Standard Material: M2, HRC 60-63. Alternate materials are available upon request.

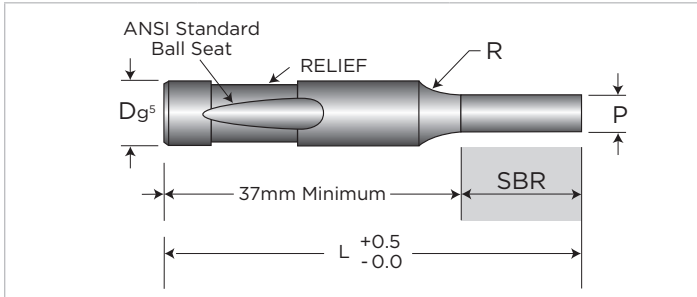
BALL LOCK CODE	BODY CODE	SBR	STANDARD LENGTHS					EXTENDED LENGTHS				MIN. P/W	MIN. P/W EJECTOR	EJECTOR KIT	COMPONENTS			
			63	70	71	80	90	100	110	125	140				150	PIN D	SPRING D	SET SCREW D
MBH Metric Ball Lock Heavy Duty	10	S 13mm	●	●	●	●	●	●	●	●	●	●	2.50	2.50	MEK4	1.0	3.1	M4
	13		●	●	●	●	●	●	●	●	●	●	3.75	3.75	MEK5	1.5	3.8	M5
	16	●	●	●	●	●	●	●	●	●	●	5.75	5.75	MEK6	2.3	4.2	M6	
MBHE Metric Ball Lock Heavy Duty Ejector	20	*M 19mm (STD.)	●	●	●	●	●	●	●	●	●	●	7.50	7.50	MEK7	3.0	4.2	M6
	25		●	●	●	●	●	●	●	●	●	●	7.50	7.50	MEK7	3.0	4.2	M6
	32	L 25mm	●	●	●	●	●	●	●	●	●	●	7.50	7.50	MEK7	3.0	4.2	M6
	40		●	●	●	●	●	●	●	●	●	7.50	7.50	MEK7	3.0	4.2	M6	

BALL LOCK PUNCHES

SHAPES				
C ROUND	O OBLONG	R RECTANGLE SQUARE	RR RADIUS RECTANGLE	B BLANK



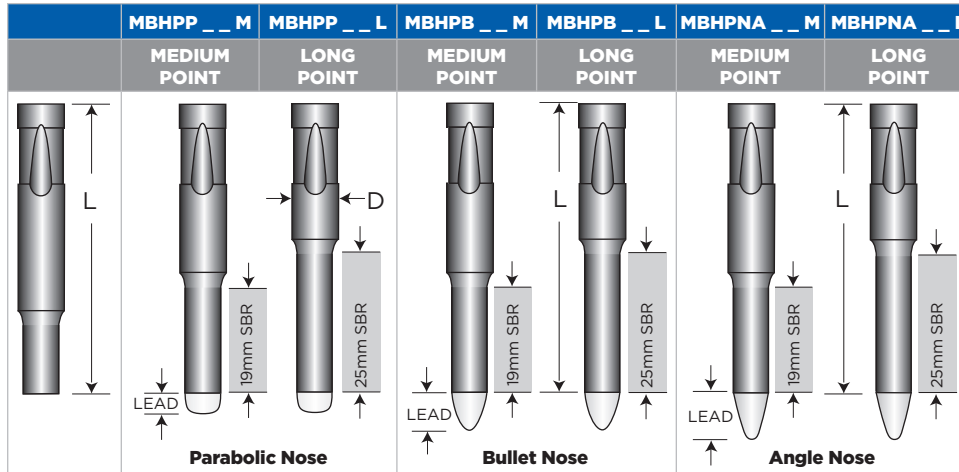
* Standard SBR supplied unless otherwise specified.
P or G diameter cannot exceed body diameter.
Ejector Pin lock hole supplied on request NC.
Surface Coatings Available (see page 51)



TOLERANCE		
ROUNDS P	+01 -00	TIR .01
SHAPES P/W	±.01	TIR .01

ORDER	BALL LOCK CODE	SHAPE	BODY CODE	SBR	LENGTH	W x P
		MBH	C	20	M	80
	MBHE	O	25	M	80	13 x 23

HEAVY DUTY — BALL LOCK PILOT PUNCHES



Specify Shape and Body Code in place of _ _

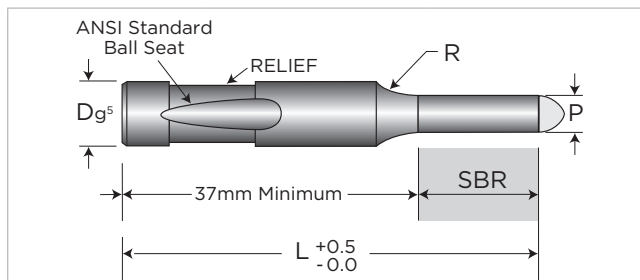
Standard Material: M2, HRC 60-63. Alternate materials are available upon request.

NOTE: Pilot nose lead length is automatically added to the "L" dimension ordered.

PILOT CODE	PILOT NOSE STYLE	P RANGE	**MAX. LEAD LENGTH
MBHPP Metric Ball Lock Heavy Duty Pilot Parabolic Nose		3 - 32mm	
MBHPB Ball Lock Heavy Duty Pilot Bullet Nose		3 - 10 10.1 - 15 15.1 - 32	10 15 20
MBHPNA Ball Lock Heavy Duty Pilot New Angle Nose		4.85 - 6.0 6.10 - 8.0 8.10 - 10.0 10.1 - 12.0 12.1 - 16.0 16.1 - 20.0 20.1 - 23.0 23.1 - 25.0 25.1 - 32.0 32.1 - 40.0	6 8 10 12 15 20 23 25 30 40

BODY CODE	SBR	STANDARD LENGTHS					EXTENDED LENGTHS					MIN. P DIM.
		63	70	71	80	90	100	110	125	140	150	
10	*M 19mm (STD.)	●	●	●	●	●	●	●	●	●	●	2.47
13		●	●	●	●	●	●	●	●	●	●	4.97
16		●	●	●	●	●	●	●	●	●	●	7.97
20	L 25mm	●	●	●	●	●	●	●	●	●	●	11.97
25		●	●	●	●	●	●	●	●	●	●	15.97
32		●	●	●	●	●	●	●	●	●	●	23.97
40		●	●	●	●	●	●	●	●	●	●	29.97

SHAPES	C	O	R	RR
	ROUND	OBLONG	RECTANGLE SQUARE	RADIUS RECTANGLE



TOLERANCE		
ROUNDS P	+0.01 -0.00	TIR .01
SHAPES P/W	±0.01	TIR .01

ORDER	PILOT CODE	BODY CODE	LENGTH
	MHPB	C	16
		SHAPE	SBR
			90
			14.0
			P

* Standard SBR supplied unless otherwise specified.

Longer SBR available.

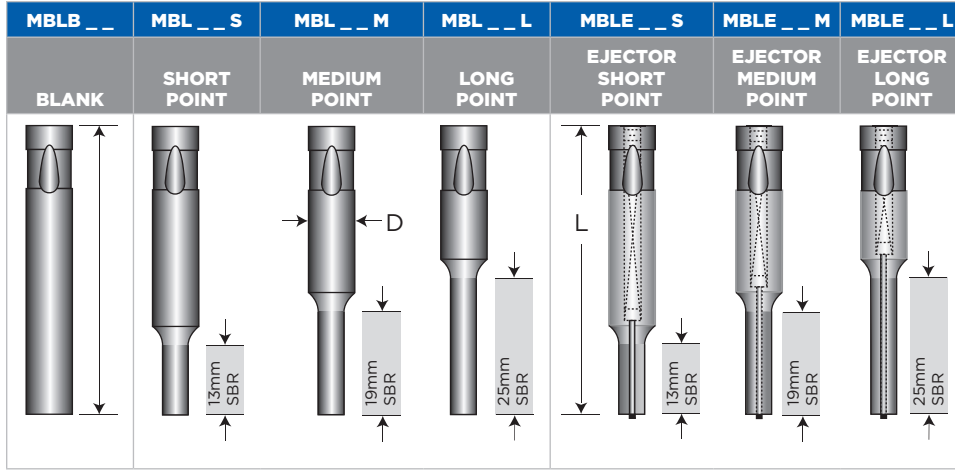
** LEAD length is automatically added to the "L" dimension ordered.

P or G diameter cannot exceed body diameter.

Surface Coatings Available (see page 51)

BALL LOCK PILOT PUNCHES

LIGHT DUTY — BALL LOCK PUNCHES



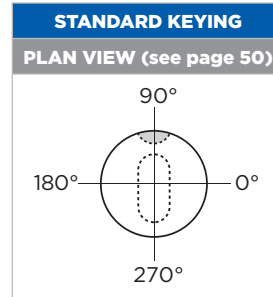
Specify Shape and Body Code in place of __

Standard Material: M2, HRC 60-63. Alternate materials are available upon request.

BALL LOCK CODE	BODY CODE	SBR	STANDARD LENGTHS					EXTENDED LENGTHS				MIN. P/W	MIN. P/W EJECTOR	EJECTOR KIT	COMPONENTS			
			63	70	71	80	90	100	110	125	140				150	PIN D	SPRING D	SET SCREW D
MBL Metric Ball Lock Light Duty	6	S 13mm	●	●	●	●	●	●	●	●	●	1.75	1.75	MEK3	.75	2.2	M3	
	10		●	●	●	●	●	●	●	●	●	2.5	2.5	MEK4	1.0	3.1	M4	
	13		●	●	●	●	●	●	●	●	●	3.75	3.75	MEK5	1.5	3.8	M5	
MBLE Metric Ball Lock Light Duty Ejector	16	*M 19mm (STD)		●	●	●	●	●	●	●	●							
	20			●	●	●	●	●	●	●	●							
	25			●	●	●	●	●	●	●	●							
	32			●	●	●	●	●	●	●	●							
	38	L 25mm			●	●	●	●	●	●	●	5.75	5.75	MEK6	2.3	4.2	M6	
						●	●	●	●	●	●							

BALL LOCK PUNCHES

SHAPES				
C ROUND	O OBLONG	R RECTANGLE SQUARE	RR RADIUS RECTANGLE	B BLANK

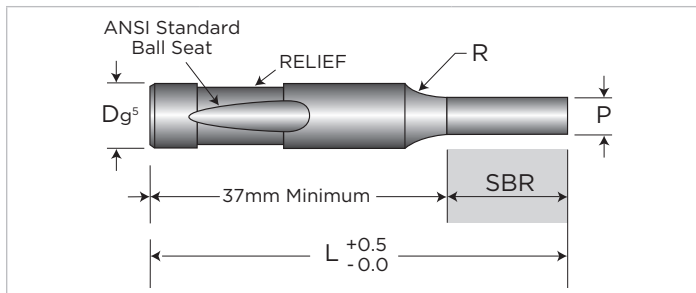


* Standard SBR supplied unless otherwise specified.

P or G diameter cannot exceed body diameter.

Ejector Pin lock hole supplied on request.

Surface Coatings Available (see page 51)

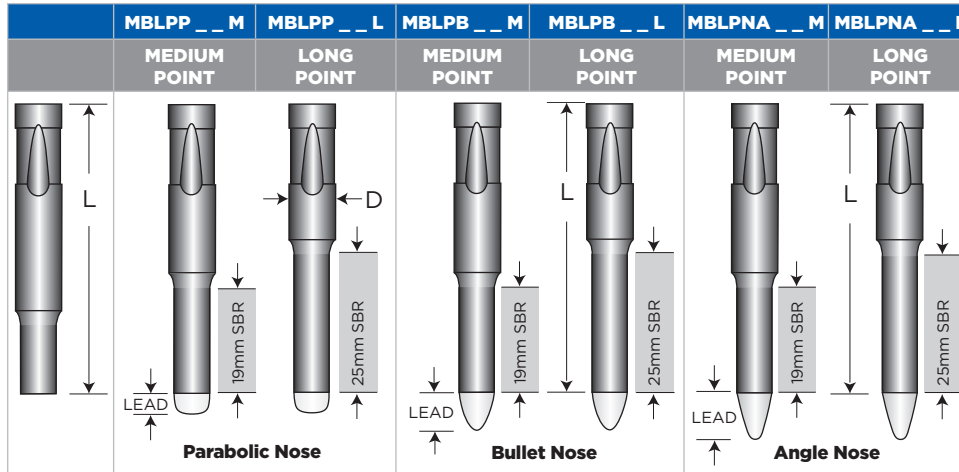


TOLERANCE		
ROUNDS P	+0.01 -0.00	TIR .01
SHAPES P/W	±0.01	TIR .01

ORDER

BALL LOCK CODE	SHAPE	BODY CODE	SBR	LENGTH	W x P
MBL	C	20	M	80	13
MBLE	O	25	M	80	13 x 23

LIGHT DUTY – BALL LOCK PILOT PUNCHES



Specify Shape and Body Code in place of __

Standard Material: M2, HRC 60-63. Alternate materials are available upon request.

PILOT CODE	PILOT NOSE STYLE	P RANGE	**MAX. LEAD LENGTH
MBLPP Metric Ball Lock Light Duty Pilot Parabolic Nose		3-32	6mm
MBLPB Metric Ball Lock Light Duty Pilot Bullet Nose		3-10 10.1-15 15.1-32	10 15 20
MBLPNA Metric Ball Lock Light Duty Pilot New Angle Nose		4.85-6.0 6.10-8.0 8.10-10.0 10.1-12.0 12.1-16.0 16.1-20.0 20.1-23.0 23.1-25.0 25.1-32.0 32.1-40.0	6 8 10 12 15 20 23 25 30 40

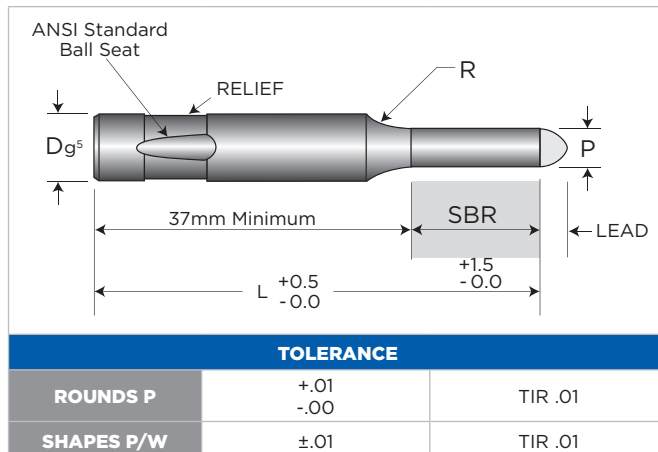
BODY CODE	SBR	STANDARD LENGTHS					EXTENDED LENGTHS					MIN. P	
		63	70	71	80	90	100	110	125	140	150		
6	*M 19mm (STD)	●	●	●	●	●	●	●	●	●	●	●	1.6
10		●	●	●	●	●	●	●	●	●	●	●	3.0
13		●	●	●	●	●	●	●	●	●	●	●	5.0
16		●	●	●	●	●	●	●	●	●	●	●	8.0
20	L 25mm	●	●	●	●	●	●	●	●	●	●	●	12.0
25		●	●	●	●	●	●	●	●	●	●	●	16.0
32		●	●	●	●	●	●	●	●	●	●	●	24.0
38		●	●	●	●	●	●	●	●	●	●	●	31.0

* **Standard SBR** supplied unless otherwise specified. Longer SBR available.

** **LEAD** length is automatically added to the "L" dimension ordered.

P or G diameter cannot exceed body diameter.

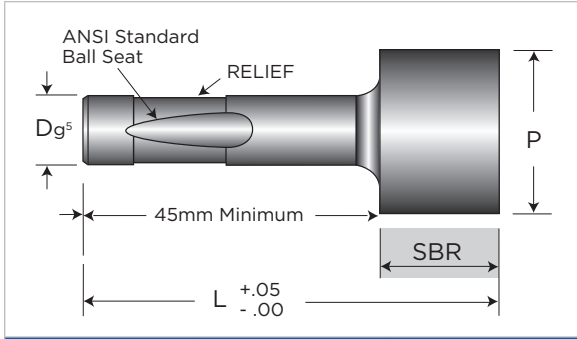
Surface Coatings Available (see page 51)



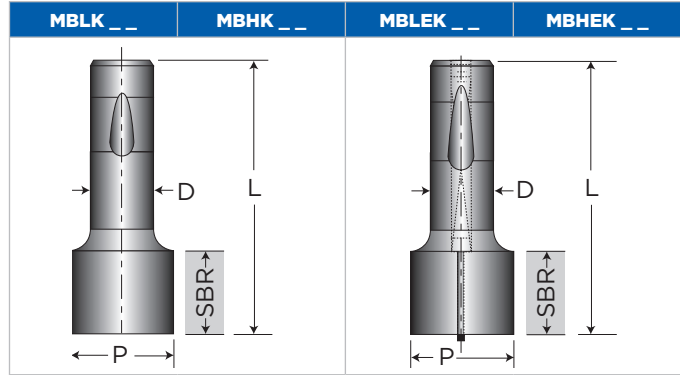
ORDER	PILOT CODE	BODY CODE	LENGTH
		MBLPB	C 16
	SHAPE	SBR	P

BALL LOCK PILOT PUNCHES

KNOB LIGHT/HEAVY DUTY – BALL LOCK PUNCHES



TOLERANCE		
ROUNDS P	+01 -00	TIR .01
SHAPES P/W	±01	TIR .01



Specify Shape and Body Code in place of __

Standard Material: M2, HRC 60-63. Alternate materials are available upon request.

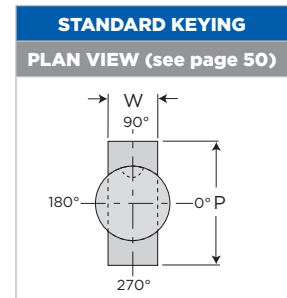
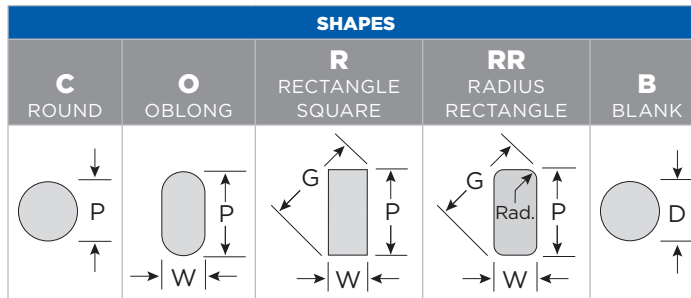
BALL LOCK PUNCHES

BALL LOCK CODE	BODY CODE	SBR	STANDARD LENGTHS	RANGE CODE	MAX. P/G	MIN. W SHAPE	EJECTOR KIT							
							KIT	PIN D	SPRING D	SET SCREW D				
MBLK Metric Ball Lock Light Duty Knob	13	*L 25mm SBR	80 90 100	-3	20	4.5	MEK5	1.5	3.6	M5				
	16			-4	25									
				-5	32									
MBLEK Metric Ball Lock Light Duty Ejector Knob	20			-4	25	8.0								
	25			-5	32									
				-6	38									
MBHK Metric Ball Lock Heavy Duty Knob	32			-5	32	10.0					MEK6	2.3	4.2	M6
				-6	38									
				-7	44									
MBLEK Metric Ball Lock Heavy Duty Ejector Knob	40			-6	38	13.0					MEK7	3.0	4.2	M6
				-7	44									
				-8	50									
		-9	57											
		-10	63											
		-11	70											
		-12	76											

* Standard SBR supplied unless otherwise specified.

Ejector Pin lock hole supplied on request N/C.

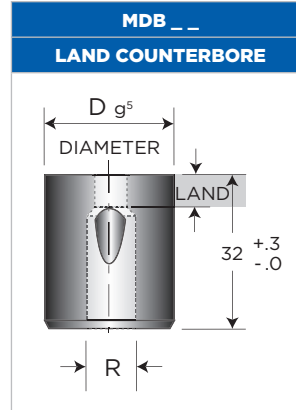
Surface Coatings Available (see page 51)



ORDER	BALL LOCK CODE	BODY CODE	RANGE CODE	W x P	
	MBHK	C	16	L	-5
	MBHEK	O	32	L	-7
					100
					22 x 40
		SHAPE	SBR	LENGTH	

LIGHT DUTY — BALL LOCK DIES

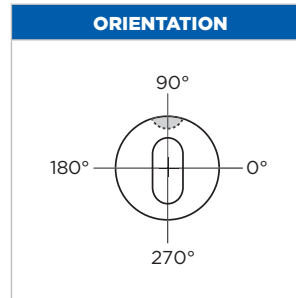
DIE CODE	BODY CODE	MIN. LAND	COUNTERBORE STYLE			R MAX. C-BORE
			MIN. P ROUND	MIN. W SHAPE	MAX. P/G SHAPE	
MDBL Metric Die Ball Lock Light Duty	13	4	1.5	1.2	5.0	6.0
	16	5	3.2	2.0	7.2	8.0
	20	5	4.0	2.4	11.0	12.0
	25	6	8.0	4.0	15.0	16.0
	32	6	11.0	4.8	19.0	20.0
	38	8	16.5	6.4	26.0	27.0



Specify Shape and Body Code in place of __

Standard Material: M2, HRC 60-63. Alternate materials are available upon request.

SHAPES				
C ROUND	O OBLONG	R RECTANGLE SQUARE	RR RADIUS RECTANGLE	W WIRE BLANK



TOLERANCE	
ROUNDS P	+01 -00
SHAPES P/W	±01
	TIR .01

The **Standard Ball Seat** location is at 90°. Alternate locations of 0° or 180° or 270° can be specified.

Custom Ball Seat locations can be specified at any degree counterclockwise from 0°.

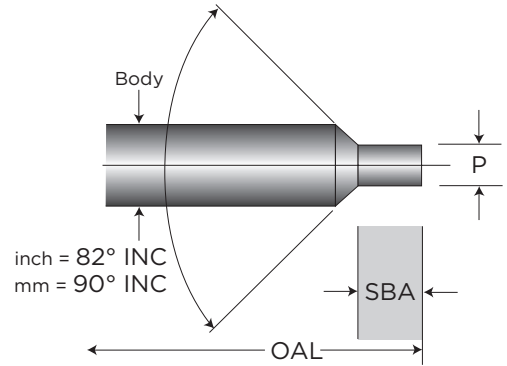
Standard Keying — Plan View (see page 50)

FORMING PUNCHES

Countersink Punches — CK Series

Available in both Headed and Ball Lock styles (specify)

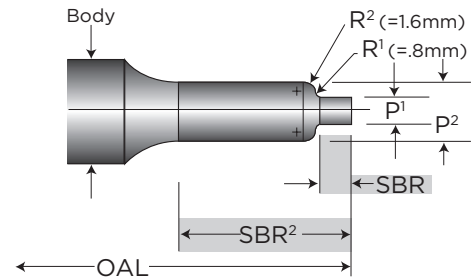
ORDER	STYLE CODE	BODY CODE	LENGTH		KEYING
	BHCK	C	50	.187	3
MBHCK	C	13	—	70	3
	SHAPE	SBA	P		



Extrusion Punches — X Series

Available in both Headed and Ball Lock styles (specify)

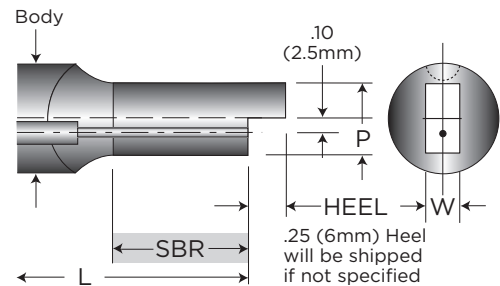
ORDER	STYLE CODE	BODY CODE	LENGTH		P ²	SBR ²	R ²
	BLX	C	62	M	3	.100	.250
MBLX	C	16	M	80	2.5	.6	3.2
	SHAPE	SBR	P ¹		SBR ¹	R ¹	



Offset Ejector with Heel

Available in both Headed and Ball Lock styles (specify)

ORDER	STYLE CODE	BODY DIAMETER	LENGTH	KEYING
	BH	OEHR	62	M
MH	OEHR	16	M	80
	SHAPE	SBR	W x P	HEEL

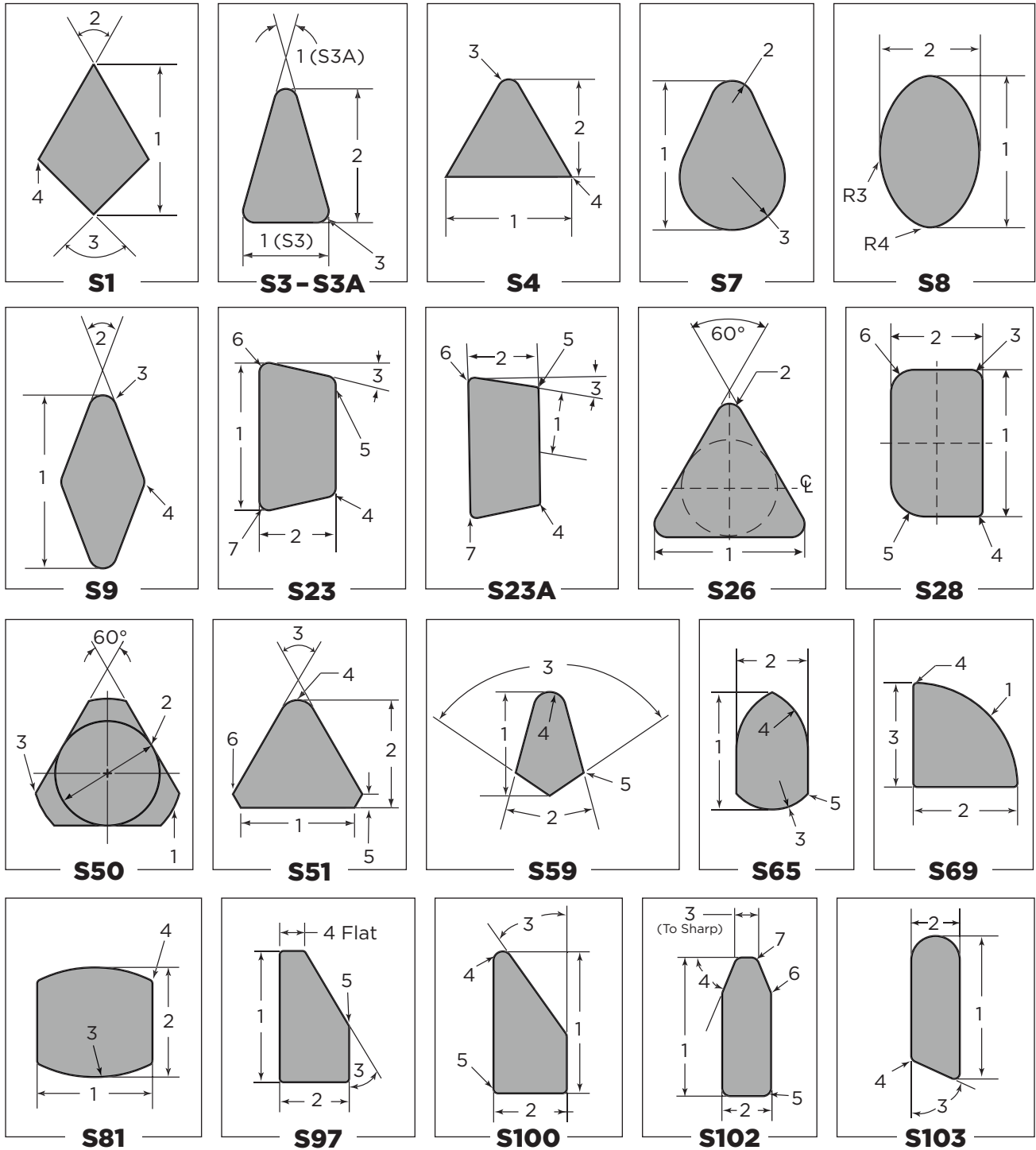


Additional forms are available upon request.

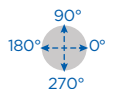
SPECIAL SHAPES — GROUP 'A'

Die View

☒ = Centerline T.S. = Theoretical Sharp T.I. = Theoretical Intersection



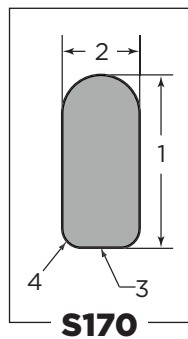
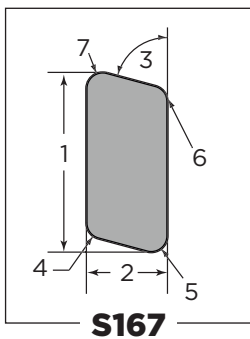
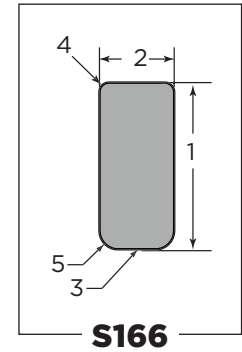
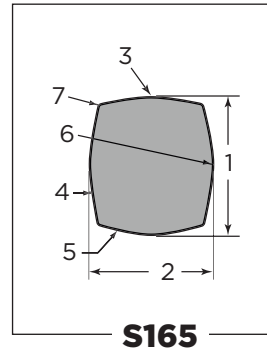
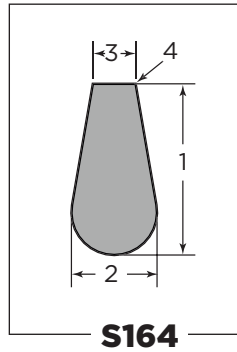
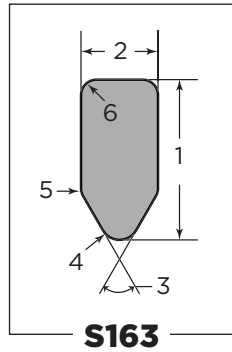
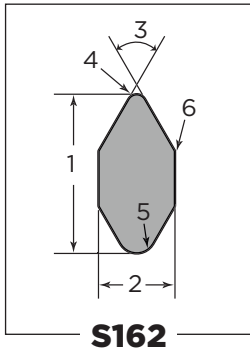
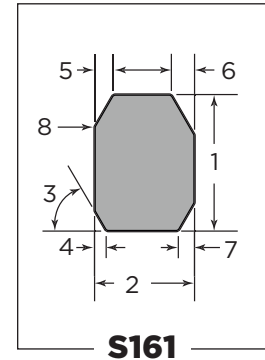
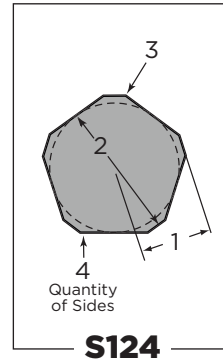
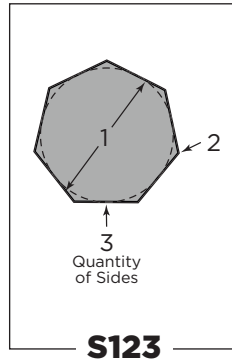
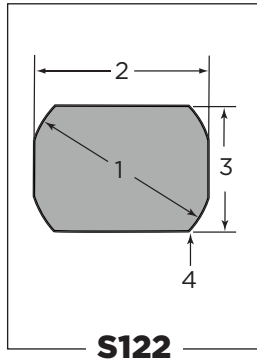
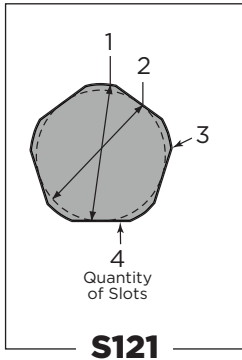
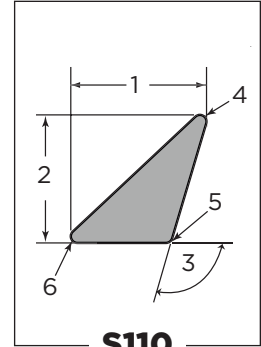
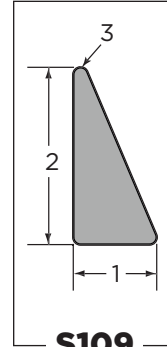
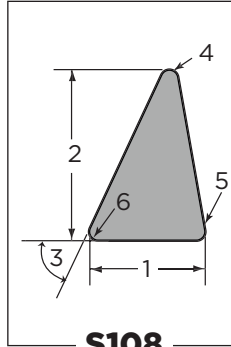
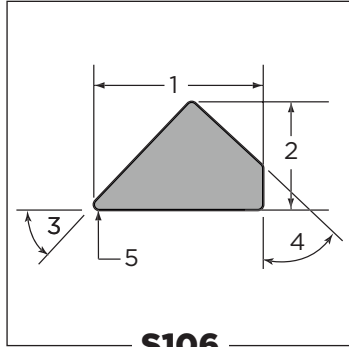
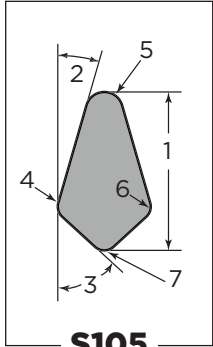
NOTE: Punches: External radii will be .005 unless otherwise noted. **Dies/Guides:** Internal radii will be .007 unless noted. All shapes can be mirrored. Use die view when ordering tooling. **All shapes are centered on shank unless otherwise noted.**



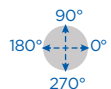
SPECIAL SHAPES — GROUP 'A'

Die View

☒ = Centerline **T.S.** = Theoretical Sharp **T.I.** = Theoretical Intersection



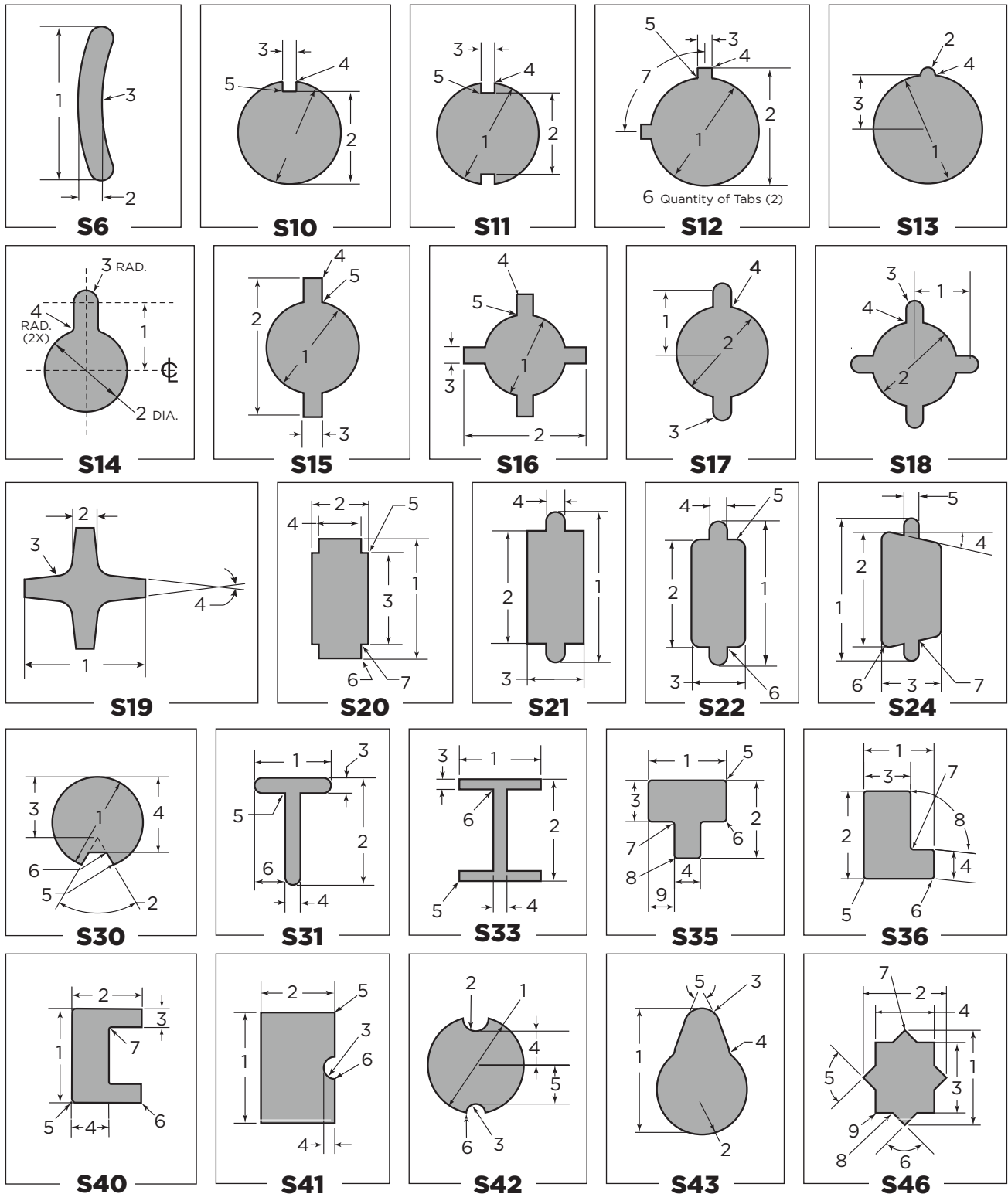
NOTE: Punches: External radii will be .005 unless otherwise noted. **Dies/Guides:** Internal radii will be .007 unless noted. All shapes can be mirrored. Use die view when ordering tooling. **All shapes are centered on shank unless otherwise noted.**



SPECIAL SHAPES — GROUP 'B'

Die View

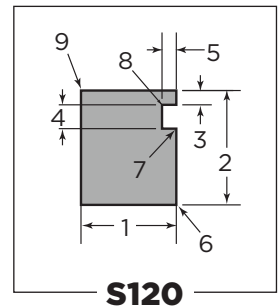
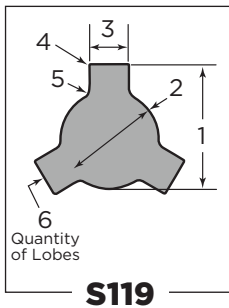
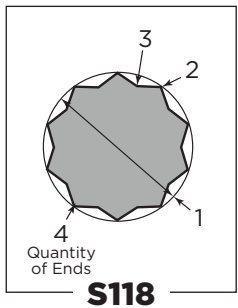
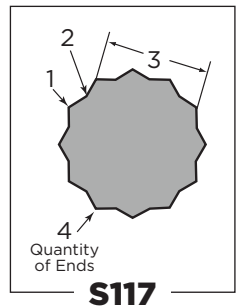
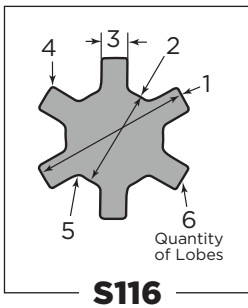
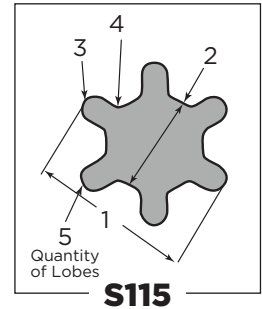
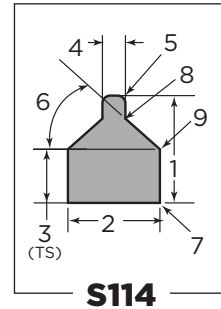
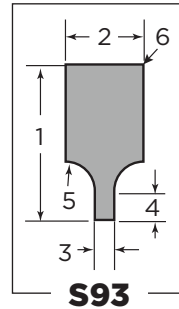
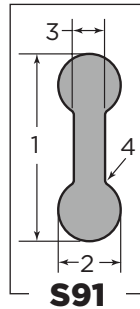
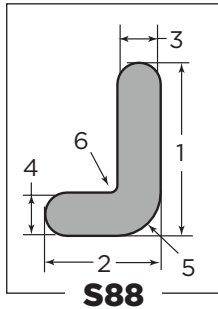
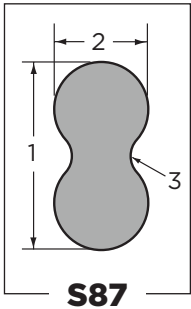
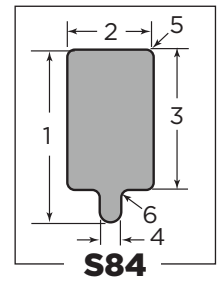
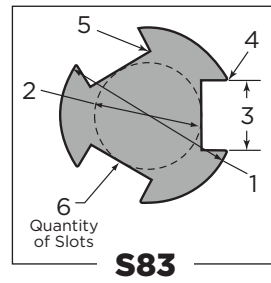
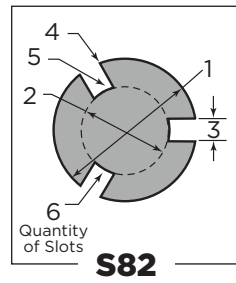
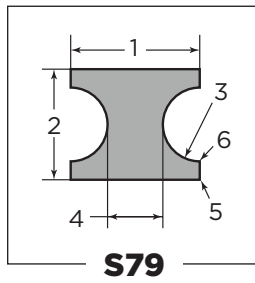
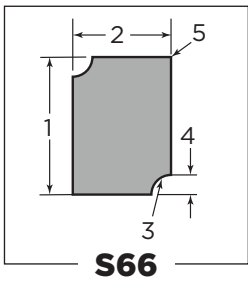
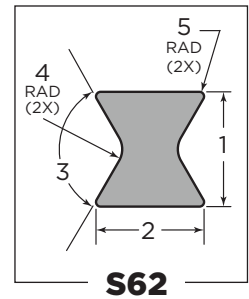
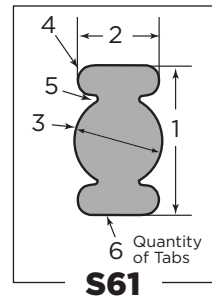
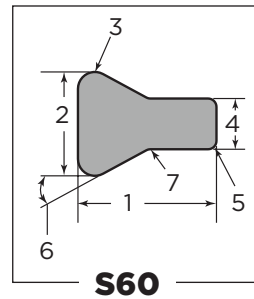
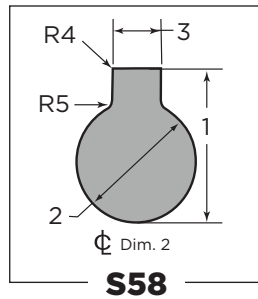
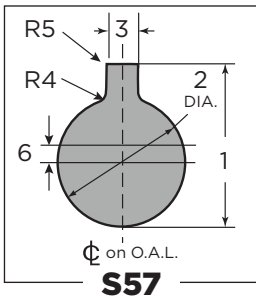
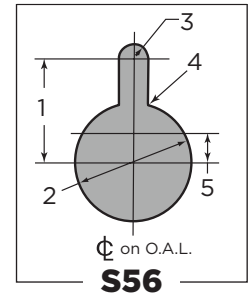
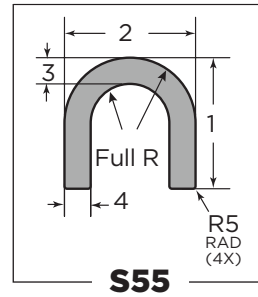
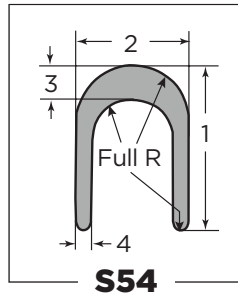
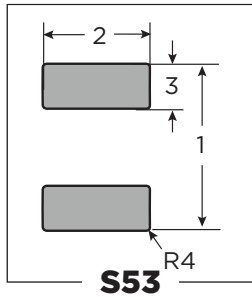
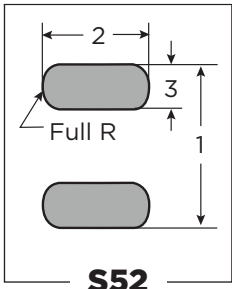
☒ = Centerline **T.S.** = Theoretical Sharp **T.I.** = Theoretical Intersection



SPECIAL SHAPES — GROUP 'B'

Die View

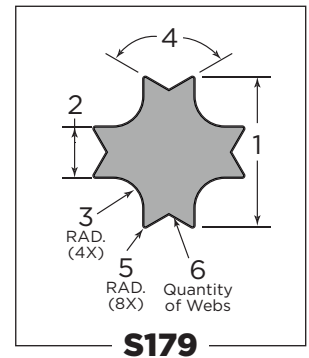
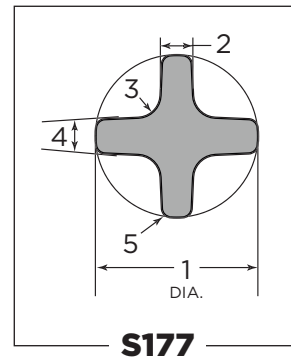
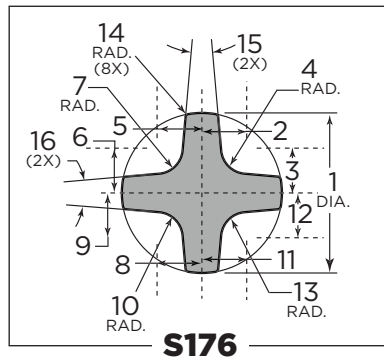
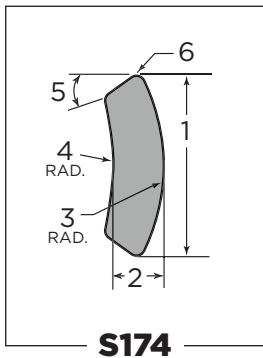
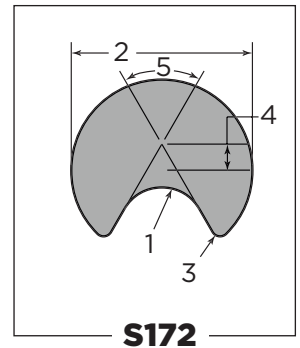
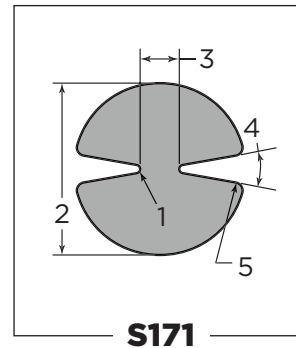
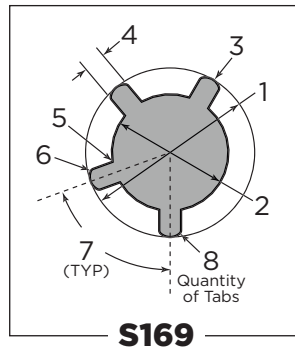
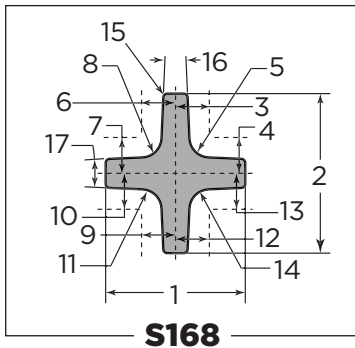
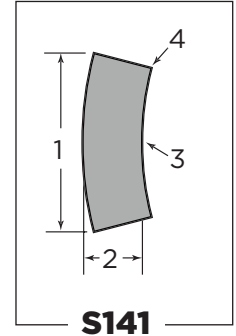
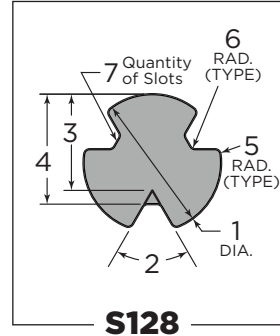
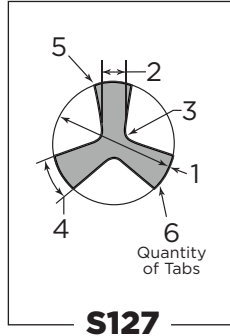
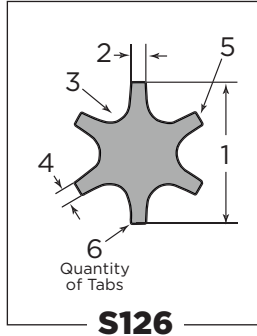
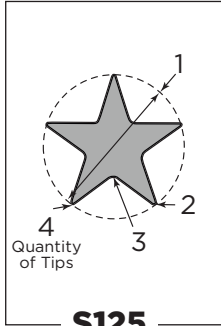
☒ = Centerline **T.S.** = Theoretical Sharp **T.I.** = Theoretical Intersection



SPECIAL SHAPES – GROUP ‘B’

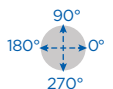
Die View

☒ = Centerline **T.S.** = Theoretical Sharp **T.I.** = Theoretical Intersection

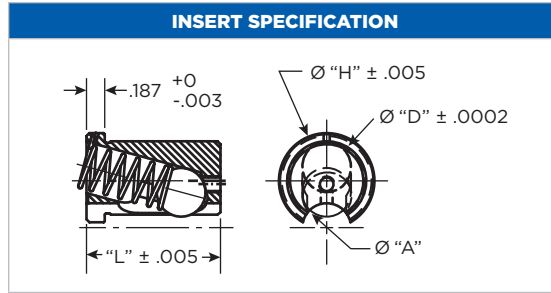
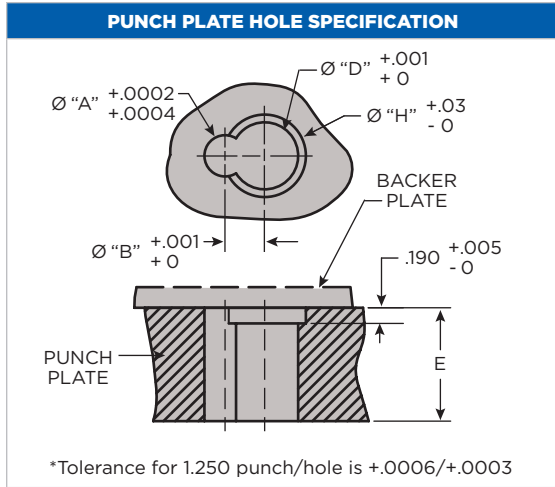


SPECIAL SHAPES

NOTE: Punches: External radii will be .005 unless otherwise noted. **Dies/Guides:** Internal radii will be .007 unless noted. All shapes can be mirrored. Use die view when ordering tooling. **All shapes are centered on shank unless otherwise noted.**



HP ACCU-LOCK® SPECIAL RETAINER INSERTS

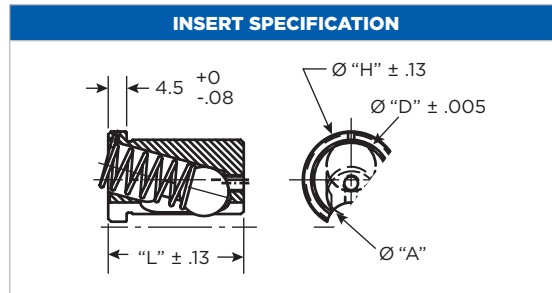
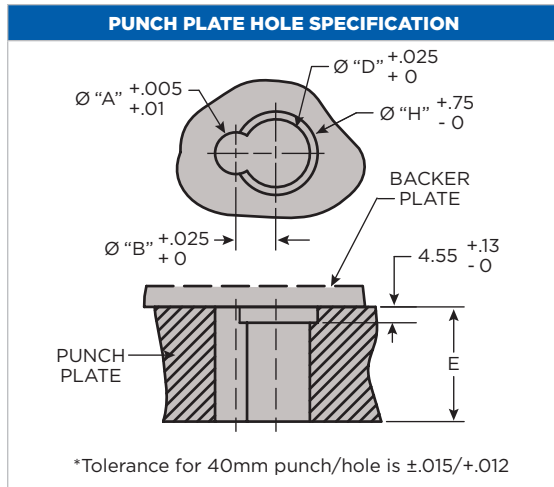


ORDER	STYLE	
	HEAVY DUTY	050
LIGHT DUTY	ILIS	050
		SHANK

HEAVY DUTY	INSERT SPECIFICATION					PUNCH PLATE SPECIFICATION						
	STYLE CODE	SHANK CODE	SHANK DIA.	INSERT DIA. [D]	HEAD DIA. [H]	LENGTH [L]	PUNCH DIA. HOLE [A]	CENTER TO CENTER [B]	INSERT HOLE DIA. [D]	HEAD C-BORE DIA. [H]	PLATE THICKNESS [E]	INNER BOOSTER SPRING
IHIS	037	.375	.625	.735	.8125	1.38	.375	.375	.6255	.75	1.38	972100
	050	.5					.5	.48				
	062	.625					.625	.543				
	075	.75					.75	.605				
	087	.875					.875	.668				
	100	1.00					1.00	.73				
	125*	1.25					1.25	.855				

LIGHT DUTY	INSERT SPECIFICATION					PUNCH PLATE SPECIFICATION						
	STYLE CODE	SHANK CODE	SHANK DIA.	INSERT DIA. [D]	HEAD DIA. [H]	LENGTH [L]	PUNCH DIA. HOLE [A]	CENTER TO CENTER [B]	INSERT HOLE DIA. [D]	HEAD C-BORE DIA. [H]	PLATE THICKNESS [E]	INNER BOOSTER SPRING
ILIS	025	.25	.5	.615	.625	1	.25	.28	.5005	.625	1.00	972100
	037	.375					.375	.325				
	050	.5					.5	.406				
	062	.625					.625	.469				
	075	.75					.75	.563				
	087	.875					.875	.625				
	100	1.00					1.00	.688				

HP ACCU-LOCK® SPECIAL RETAINER INSERTS



ORDER	HEAVY DUTY	STYLE	
	LIGHT DUTY	SHANK	
		MHIS	020
		MILIS	013

	INSERT SPECIFICATION					PUNCH PLATE SPECIFICATION						
	STYLE CODE	SHANK CODE	SHANK DIA.	INSERT DIA. [D]	HEAD DIA. [H]	LENGTH [L]	PUNCH DIA. HOLE [A]	CENTER TO CENTER [B]	INSERT HOLE DIA. [D]	HEAD C-BORE DIA. [H]	PLATE THICKNESS [E]	INNER BOOSTER SPRING
HEAVY DUTY	MHIS	010	10	16	19.6	34.7	10	10	16.013	20	34.7	972100
		013	13				13	11.5				
		016	16				16	13				
		020	20	20	24.6		20	15	20.013	25		972101
		025	25				25	17.5				
		032	32				32	21				
		040*	40				40	25				

	INSERT SPECIFICATION					PUNCH PLATE SPECIFICATION						
	STYLE CODE	SHANK CODE	SHANK DIA.	INSERT DIA. [D]	HEAD DIA. [H]	LENGTH [L]	PUNCH DIA. HOLE [A]	CENTER TO CENTER [B]	INSERT HOLE DIA. [D]	HEAD C-BORE DIA. [H]	PLATE THICKNESS [E]	INNER BOOSTER SPRING
LIGHT DUTY	MILIS	006	6	12	14.6	25.7	6	6.5	12.013	15	25.7	972100
		010	10				10	9				
		013	13	14	16.6		13	10.5	14.013	17		
		016	16				16	12				
		020	20				20	14				16.013
		025	25	25	16.5							
		032	32	16	18.6		32	20	16.013	19		
		038	38				38	23				

HP ACCU-LOCK®

TRU ADVANTAGE RETAINERS

Order Information

Retainer includes backing plugs and:

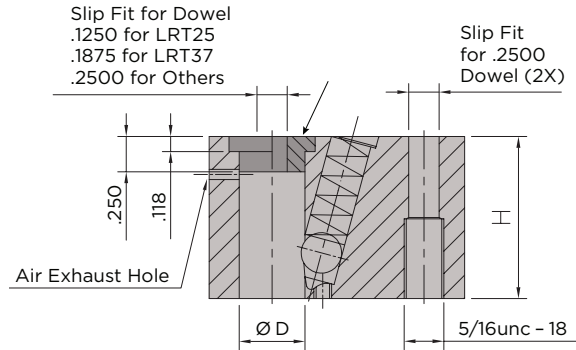
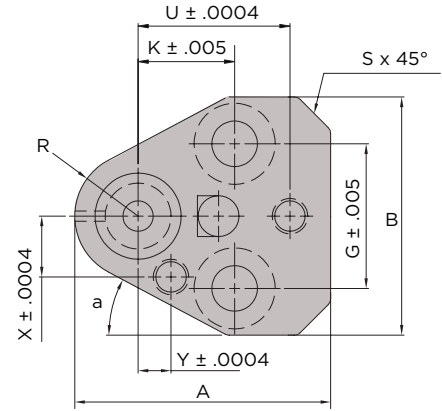
- 1 Ball & Spring
- 2 Screws
- 2 Round Air Vented Dowel Pins
- Note:** All 1/4 dowels are tapped for easy removal
- 1 Ball Release Set Screw
- 1 Jam Screw for Access Hole

Specify: Quantity and Catalogue Number

Example: 6 pieces, HRT 50
6 pieces, HRT 50 Grind Third Dowel



ORDER	HEAVY DUTY	STYLE	
	LIGHT DUTY		
		MRH	20
		MRL	13
			SHANK



STYLE CODE	SHANK CODE	SHANK DIA. [D]	A	B	G	H	K	R	S	U	X	Y	a°	SCREW SIZE
HEAVY DUTY TRIANGLE														
HRT	37	.375	1.744	1.614	0.876	1.614	0.750	0.37	0.197	1.060	0.354	0.295	30°	5/16 - 18
	50	.500	1.984	1.850	1.124			0.49	0.265	1.180	0.472	0.256	28°	
	62	.625	2.106	1.969	1.250			0.55	0.335	1.250	0.532			
	75	.750	2.366	2.165	1.376			0.69	0.394	1.320	0.650	0.197		
	87	.875	2.492	2.291	1.376			0.75	0.433	1.400	0.728			
	100	1.00	2.744	2.480	1.562			0.938	0.87	0.472	1.600	0.866	0.276	1/2 - 13
	125	1.25												

STYLE CODE	SHANK CODE	SHANK DIA. [D]	A	B	G	H	K	R	S	U	X	Y	a°	SCREW SIZE
LIGHT DUTY TRIANGLE														
LRT	25	.250	1.744	1.614	0.876	1.260	0.750	0.37	0.197	1.060	0.354	0.295	30°	5/16 - 18
	37	.375												
	50	.500	1.984	1.850	1.124			0.49	0.295	1.180	0.472	0.256	28°	3/8 - 16
	62	.625	2.106	1.969	1.250			0.55	0.335	1.250	0.532	0.236		
	75	.75	2.366	2.165	1.376			0.69	0.394	1.320	0.650	0.197		
	87	.875	2.492	2.291	1.376			0.75	0.433	1.400	0.728	0.197		
	100	1.00	2.744	2.480	1.562			0.938	0.87	0.472	1.600	0.866	0.276	1/2 - 13

TRU ADVANTAGE RETAINERS

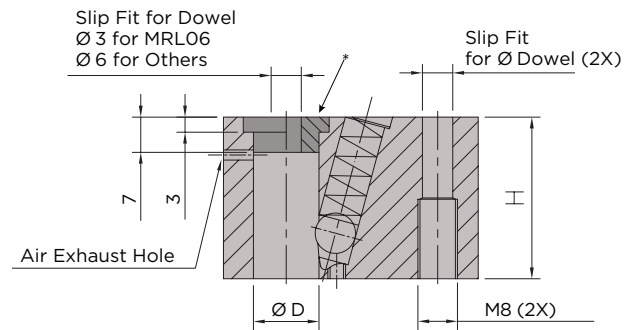
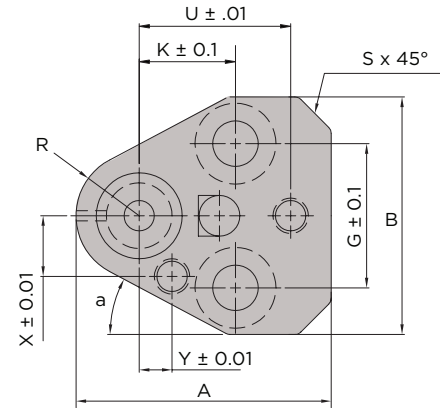
Order Information

Retainer includes backing plugs and:

- 1 Ball & Spring
- 2 Screws
- 2 Round Air Vented Dowel Pins
 - Note:** All 6mm dowels are tapped for easy removal
- 1 Ball Release Set Screw
- 1 Jam Screw for Access Hole

Specify: Quantity and Catalogue Number

Example: 6 pieces, MRL20



ORDER	HEAVY DUTY	STYLE	
		MRH	20
	LIGHT DUTY	MRL	13
			SHANK

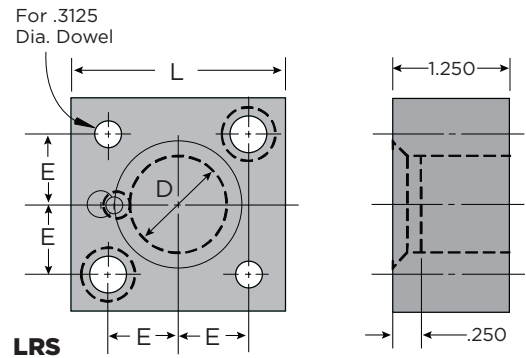
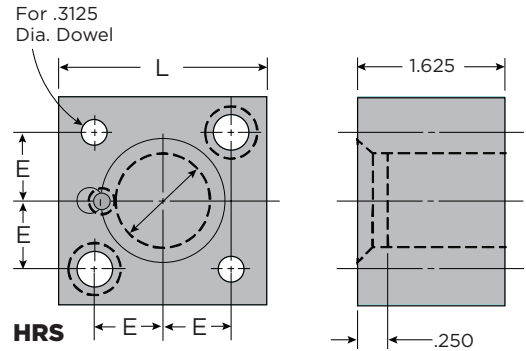
STYLE CODE	SHANK CODE	SHANK DIA. [D]	A	B	G	H	K	R	S	U	X	Y	a°	SCREW SIZE	
HEAVY DUTY TRIANGLE															
MRH	10	10	44.3	41	22.24	41	19.95	9.5	5	26.925	9	7.5	30°	M8	
	13	13	50.4	47	28.54			12.5	7.5	29.97	12	6.5			
	16	16	53.5	50	31.74			14	8.5	31.75	13.5	6			
	20	20	60.1	55	34.94			17.5	10	33.53	16.5	5			
	25	25	69.7	63	39.68		23.82	22	12	40.64	22	7	28°	M10	
	32	32	76.4	73	48			27	26	15	43.993	26			10
	40	40													

STYLE CODE	SHANK CODE	SHANK DIA. [D]	A	B	G	H	K	R	S	U	X	Y	a°	SCREW SIZE	
LIGHT DUTY TRIANGLE															
MRL	06	6	35	37.5	22.2	32	19	8	5	23	8	9	30°	M6	
	10	10	44.3	41	22.24			19.95	9.5	5	26.925	9			7.5
	13	13	50.4	47	28.54				12.5	7.5	29.97	12			6.5
	16	16	53.5	50	31.74				14	8.5	31.75	13.5			6
	20	20	60.1	55	34.94		23.82	17.5	10	33.53	16.5	5	28°	M10	
	25	25	69.7	63	39.68			22	12	40.64	22	7			
	32	32													

BALL LOCK RETAINERS

SQUARE STYLE RETAINERS

Furnished with backing plugs instead of backing plate.



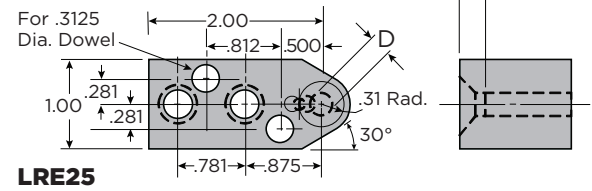
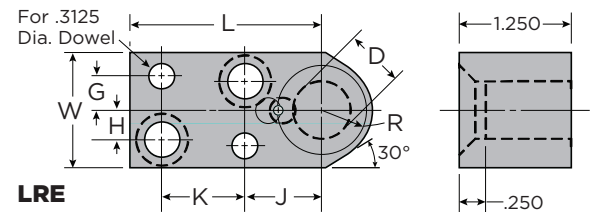
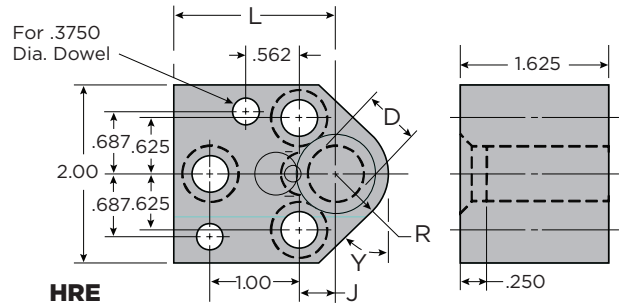
ORDER	HEAVY DUTY	STYLE	
		HRS	62
	LIGHT DUTY	LRS	62
			SHANK

STYLE CODE	SHANK CODE [D]	SHANK DIAMETER	L	E	SCREW SIZE
HEAVY DUTY					
HRS	50	.500	1.88	.562	3/8-16
	62	.625	2	.625	
	75	.750	2.12	.688	
	87	.875	2.38	.750	1/2-13
	100	1.00			
	125	1.25	2.62	.812	

STYLE CODE	SHANK CODE [D]	SHANK DIAMETER	L	E	SCREW SIZE
LIGHT DUTY					
LRS	25	.250	1.25	.312	1/4-20
	37	.375	1.38	.375	5/16-18
	50	.500	1.50	.438	
	62	.625	1.62	.500	
	75	.750	1.88	.562	3/8-16
	87	.875	2.00	.625	
	100	1.00	2.25	.750	
	125	1.25			
	150	1.50	2.75	1.00	
	175	1.75			

END STYLE RETAINERS

Furnished with backing plugs instead of backing plate.



ORDER	HEAVY DUTY	STYLE	
		HRE	50
LIGHT DUTY		LRE	62
			SHANK

STYLE CODE	SHANK CODE [D]	SHANK DIAMETER	L	J	R	Y	SCREW SIZE
HEAVY DUTY							
HRE	50	.500	1.75	.375	.50	40°	3/8-16
	62	.625	1.81	.438	.56	45°	
	75	.750	1.88	.500	.69	60°	
	87	.875	1.94	.562	.75		
	100	1.00	2.00	.625	.81		
	125	1.25	2.12	.750	1	—	

STYLE CODE	SHANK CODE [D]	SHANK DIAMETER	G	H	J	K	L	R	W	SCREW SIZE	
LIGHT DUTY											
LRE	25	.250	See diagram above for 25 specifications.							1.25	1/4 - 20
	37	.375	.375	.281	.906	.969	2.25	.38	1.25	3/8 - 16	
	50	.500						.50			
	62	.625	.438	.344	1.125	1.000	2.50	.56	1.38		
	75	.750						.69	1.50		
	87	.875	.560	.560	.875	1.125	2.37	1.00	.75		1.62
	100	1.00							.81		1.87
	125	1.25									

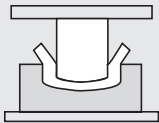
BALL LOCK RETAINERS

URETHANE — SHEETS, RODS, BARS, TUBES

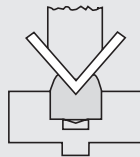
Cataloged standard sizes in 90 Shore Durometer are available from stock for most needs. Urethane has extreme load-bearing capacity and is abrasion resistant. Urethane has excellent resilience and memory qualities and returns to its original shape with minimal deterioration. It is unaffected by oil, grease and most chemicals and solvents.

Urethane offers more than three times the wear life characteristics of natural rubber. Will not mar, scratch, dent or gouge most painted, galvanized or soft metal surfaces. Ideal for pressure pads, forming blocks, stripping pads, draw dies, embossing dies, bulging punches, strippers, springs or shedders.

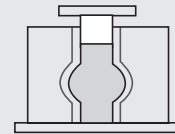
Urethane forms any angle, adapts to practically any shape and is easy to install for a wide range of metalworking and stamping operations.



Urethane helps to eliminate wrinkles caused by drawing in the air.



Urethane produces better definition and sharper bends.



Mar-free tubular and even convolute forms can be bulged with long-lasting urethane.

Urethane is available in a full range of hardnesses for special jobs.

DUROMETER SHORE HARDNESS	COLOUR CODE	MAXIMUM DEFLECTION
60A	YELLOW	40%
80A	BLUE	30%
STD 90A	GREEN	25%
95A	RED	20%
75D	BLACK	5%

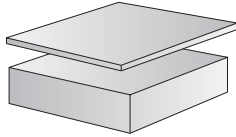
Stocked Hardness 90 Durometer. Other hardness and sizes available upon request.

Solid bars may be used in press brake tooling, as pressure pads or as a replacement for long rows of steel springs.

Solid rods of urethane are incomparable in bulging operations, roll forming and as individual springs.

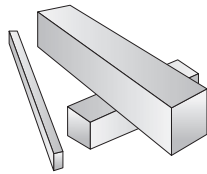
URETHANE – SHEETS, RODS, BARS, TUBES

INCH



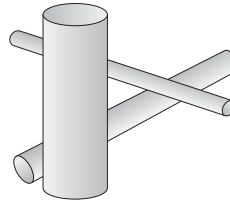
Urethane Sheets
Standard 12" Square

CAT. NO.	THICKNESS
US12	1/8
US25	1/4
US37	3/8
US50	1/2
US62	5/8
US75	3/4
US200	1
US125	1-1/4
US150	1-1/2
US200	2



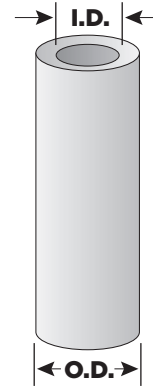
Urethane Bars
Standard 12" Length

CAT. NO.	THICKNESS
UB1x1	1 x 1
UB1x2	1 x 2
UB1x3	1 x 3
UB1x4	1 x 4
UB2x2	2 x 2
UB2x4	2 x 4
UB3x3	3 x 3
UB3x4	3 x 4
UB4x4	4 x 4



Urethane Rods
Standard 12" Length

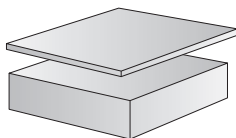
CAT. NO.	THICKNESS
UR12	1/8
UR25	1/4
UR37	3/8
UR50	1/2
UR62	5/8
UR75	3/4
UR87	7/8
UR100	1
UR112	1-1/8
UR125	1-1/4
UR150	1-1/2
UR200	2
UR250	2-1/2
UR300	3
UR400	4
UR600	6



Urethane Tubes
Standard 12" Length

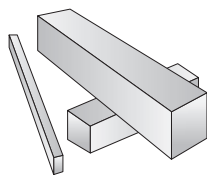
CAT. NO.	I.D.	O.D.
LIGHT DUTY		
UTL18	3/16	11/16
UTL25	1/4	3/4
UTL31	5/16	13/16
UTL37	3/8	7/8
UTL50	1/2	1
UTL62	5/8	1-1/8
UTL75	3/4	1-3/8
UTL87	7/8	1-5/8
UTL100	1	1-3/4
HEAVY DUTY		
UTH50	1/2	1-1/8
UTH62	5/8	1-1/4
UTH75	3/4	1-1/2
UTH87	7/8	1-3/4
UTH100	1	2
EXTRA HEAVY DUTY		
UTEH50	1/2	1-1/4
UTEH62	5/8	1-1/2
UTEH75	3/4	1-3/4
UTEH87	7/8	2
UTEH100	1	2-1/4
UTEH125	1-1/4	2-1/2
UTEH150	1-1/2	2-3/4

METRIC



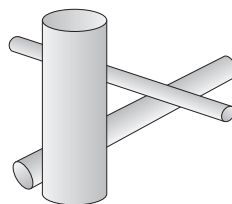
Urethane Sheets
Standard 305mm Square

CAT. NO.	THICKNESS
MUS3	3
MUS6	6
MUS10	10
MUS13	13
MUS16	16
MUS19	19
MUS25	25
MUS32	32
MUS38	38
MUS50	50



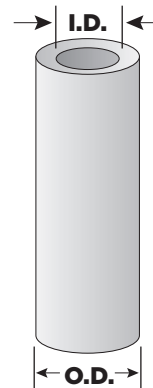
Urethane Bars
Standard 305mm Length

CAT. NO.	THICKNESS
MUB25x25	25 x 25
MUB25x50	25 x 50
MUB25x75	25 x 75
MUB25x100	25 x 100
MUB50x50	50 x 50
MUB50x75	50 x 75
MUB50x100	50 x 100
MUB75x75	75 x 75
MUB75x100	75 x 100
MUB100x100	100 x 100



Urethane Rods
Standard 305mm Length

CAT. NO.	THICKNESS
MUR3	3
MUR6	6
MUR10	10
MUR13	13
MUR16	16
MUR19	19
MUR22	22
MUR25	25
MUR30	30
MUR32	32
MUR38	38
MUR50	50
MUR65	65
MUR75	75
MUR100	100
MUR150	150



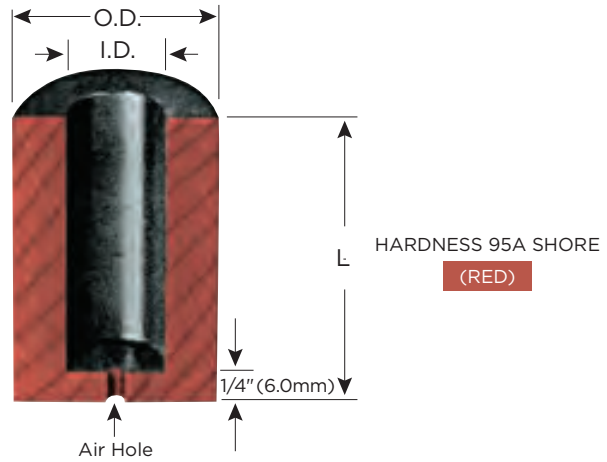
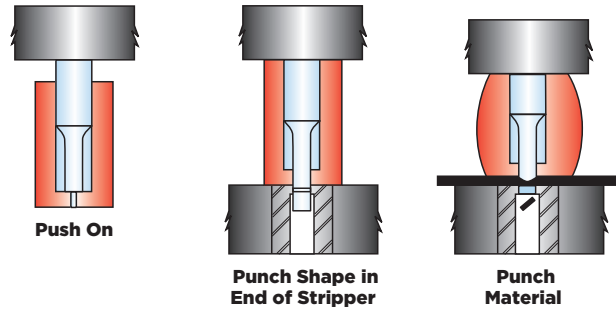
Urethane Tubes
Standard 305mm Length

CAT. NO.	I.D.	O.D.
LIGHT DUTY		
MUTL6	6	19
MUTL8	8	21
MUTL10	10	23
MUTL13	13	26
MUTL16	16	30
MUTL20	20	38
MUTL25	25	44
MUTL32	32	60
HEAVY DUTY		
MUTH13	13	30
MUTH16	16	32
MUTH20	20	38
MUTH25	25	50

URETHANE – CLOSED END STRIPPERS

A hard, tough urethane with extreme load bearing capacity and abrasion resistance. Also offers the desired resilience for extensive deformation with minimum deterioration.

Urethane Strippers assure positive stripping and, at the same time, dampen punch vibration by gripping around the punch point. The closed-end feature holds thin stock flat during the stripping cycle, eliminating the potential for rejected parts.



INCH ORDER EXAMPLE

QTY.	CAT. NO.	LENGTH
6	UCS25	1-3/4"

CAT. NO.	FITS PUNCH SHANK [A]	O.D.	LENGTH [L]	APPROX. STRIPPING PRESSURE AVAILABLE AT DEFLECTION INDICATED		
				1/8	1/4	3/8
UCS25	1/4	3/4	1-1/4	1280	460	620
			1-1/2	260	455	610
			1-3/4	255	445	580
			2	245	430	540
			2	245	430	540
UCS31	5/16	13/16	1-1/4	320	515	640
			1-1/2	310	495	600
			1-3/4	280	475	580
			2	275	455	550
			2	275	455	550
UCS37	3/8	7/8	1-1/4	420	640	950
			1-1/2	400	620	825
			1-3/4	390	600	775
			2	380	520	660
			2	380	520	660
UCS50	1/2	1	1-1/4	510	780	1010
			1-1/2	490	710	990
			1-3/4	475	670	870
			2	330	500	660
			2-1/4	300	435	615
UCS62	5/8	1-1/8	1-1/4	555	900	1220
			1-1/2	470	820	1100
			1-3/4	460	800	990
			2	450	730	975
			2-1/4	440	700	950
UCS75	3/4	1-3/8	1-1/2	450	720	1050
			1-3/4	360	645	970
			2	340	610	885
			2-1/4	320	575	810
			2-1/2	275	525	735
UCS87	7/8	1-5/8	2-3/4	240	475	670
			3	210	410	600
			1-1/2	1100	1635	2260
			1-3/4	940	1400	2040
			2	850	1250	1900
UCS10	1	1-3/4	2-1/4	765	1155	1715
			2-1/2	650	970	1420
			2-3/4	635	940	1375
			3	600	900	1200
			1-1/2	1800	2800	3100
UCS10	1	1-3/4	1-3/4	1200	2600	3000
			2	1000	2200	2740
			2-1/4	900	1860	2600
			2-1/2	850	1600	2300
			2-3/4	800	1400	2100
3	780	1250	1900			

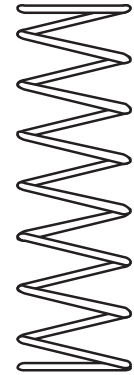
METRIC ORDER EXAMPLE

QTY.	CAT. NO.	LENGTH
6	MUCS50	71mm

CAT. NO.	FITS PUNCH SHANK [A]	O.D.	LENGTH [L]	APPROX. STRIPPING PRESSURE AVAILABLE AT DEFLECTION INDICATED		
				3.0mm	6.5mm	9.5mm
MUCS6	6	19	45	135	230	—
			53	110	190	240
			71	70	110	180
MUCS8	8	21	45	150	225	—
			53	135	200	300
			71	100	165	270
MUCS10	10	23	45	175	285	—
			53	145	250	325
			56	145	250	325
			71	115	205	275
MUCS13	13	26	45	215	340	—
			53	150	240	350
			56	150	240	300
			71	130	200	250
MUCS16	16	30	45	240	390	—
			53	220	360	460
			56	220	360	460
			71	185	300	390
MUCS20	20	38	45	250	400	—
			53	220	370	570
			71	165	300	475
MUCS25	25	50	45	950	1460	—
			53	750	1180	1630
			71	500	850	1375

BALL LOCK ACCESSORIES

INCH	BALL DIAMETER	DESCRIPTION	FITS RETAINER STYLE
	1/4"	Retainer Spring	1/4" and 3/8" Light Duty
		Retainer Ball	
	5/16"	Retainer Spring	1/2" and 5/8" Light Duty
		Retainer Ball	
	3/8"	Retainer Spring	3/4" to 1-3/4" Light Duty 3/8" Heavy Duty
Retainer Ball			
1/2"	Retainer Spring	1/2" to 1-1/4" Heavy Duty	
	Retainer Ball		
3/4"	Retainer Spring	Extra Heavy Duty	
	Retainer Ball		

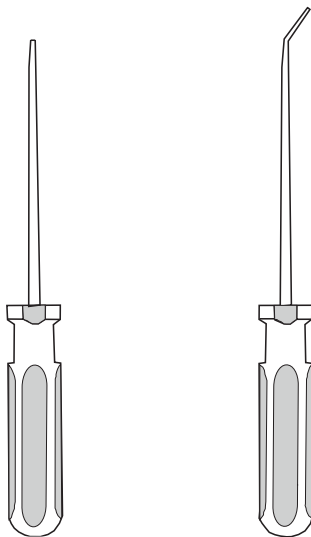


Retainer Spring

METRIC	BALL DIAMETER	DESCRIPTION	FITS RETAINER STYLE
	6mm	Retainer Spring	6mm Light Duty
		Retainer Ball	
	8mm	Retainer Spring	10mm to 38mm Light Duty
		Retainer Ball	
	10mm	Retainer Spring	10mm Heavy Duty
Retainer Ball			
12mm	Retainer Spring	13mm to 40mm Heavy Duty	
	Retainer Ball		



Retainer Ball



Release Tool Straight
(#971451)

Release Tool Angular
(#971449)



Die Springs



Punch Puller

XSHARP™ GRINDER

Benefits of Accurate Regrinding

- Burr-free, quality parts straight off the punch press
- Longer tool life for reduced tooling costs
- No scrapped or wasted sheets due to tooling malfunction
- Reduced wear on your punch press

Fully Automated Grinding Process

- Simple to operate; no previous grinding experience required
- Touchscreen controller with user-friendly multi-language interface for easy operation (language can be selected during machine setup)
- Automated height detection feature locates the top of any tool mounted in the chuck before the grinding cycle begins
- Automatic compensation makes up for any grinding wheel wear

Suitable for Most Tooling Styles: Flexible range of chucks and adapters allows for sharpening most punch press tooling styles

Precision: AC-servo motor drives a precision gear and ball screw with dual linear guides and four carriers to provide highly stable bearing properties

Shear Grinding Chuck: For sharpening punches with shears (included)

Closed Coolant System: Ensures the tool is constantly flooded with coolant during the grinding process

Interlocking Safety Guard: Automatically opens and closes

Frame: Heavy-duty cast-iron frame for durability, stability and long life

Small Footprint: Machine can easily be placed next to the punch press



XSHARP™ ACCESSORIES	
Description	Cat. No.
Grinding Wheel	55109
Coolant	55367
Dressing Stone	55117

TECHNICAL SPECIFICATIONS*	
Machine Height 77.2" (1962mm)	Max. Tool Diameter 6.3" (160mm)
Machine Width 31.5" (800mm)	Max. Tool Height 9" (230mm)
Machine Depth 30.7" (779mm)	Air Pressure Supply 6 bar
Machine Weight 992 lbs./450kg	Grinding Motor Power 3HP/2.2 kW
Power Supply 230/460V, 60Hz	Wheel Rotation Speed 2800 rpm
Table Motor Power .24HP/.18 kW	Coolant Pump Power .21HP/0.16 kW
Table Rotation Speed 40 RPM	Coolant Pump Water Flow Max. 11.5GPM/40 l/min

Note: Adapters may be required for some ranges of TRUMPF-style tooling.
*Wilson Tool International reserves the right to change machine specifications without prior notice.

5 EASY STEPS TO A SHARPER EDGE



Step 1. Load tool into chuck.



Step 2. Set tool style.



Step 3. Set tool size.



Step 4. Set grind amount (in increments of 0.001" or 0.01mm)



Step 5. Touch start to sharpen the tool.

CONVERSION CHARTS

MILLIMETERS TO DECIMAL								INCHES	DECIMAL	mm	STANDARD GAGE FOR SHEET METAL	
mm	DECIMAL	mm	DECIMAL	mm	DECIMAL	mm	DECIMAL				STANDARD GAGE NO.	THICKNESS IN DECIMALS
0.01	.00039	0.51	.02008	1	.03937	51	2.00787	1/64	.01562	.03968		
0.02	.00079	0.52	.02047	2	.07874	52	2.04724	1/32	.03125	0.7937		
0.03	.00118	0.53	.02087	3	.11811	53	2.08661	3/64	.04687	1.1906		
0.04	.00157	0.54	.02126	4	.15748	54	2.12598	1/16	.0625	1.5875		
0.05	.00197	0.55	.02165	5	.19685	55	2.16535	5/64	.07812	1.9843		
0.06	.00236	0.56	.02205	6	.23622	56	2.20472	3/32	.09375	2.3812		
0.07	.00276	0.57	.02244	7	.27559	57	2.24409	7/64	.10937	2.7780		
0.08	.00315	0.58	.02283	8	.31496	58	2.28346	1/8	.1250	3.1749		
0.09	.00354	0.59	.02323	9	.35433	59	2.32283	9/64	.14062	3.5718		
0.10	.00394	0.60	.02362	10	.39370	60	2.36220	5/32	.15625	3.9686		
0.11	.00433	0.61	.02402	11	.43307	61	2.40157	11/64	.17187	4.3655		
0.12	.00472	0.62	.02441	12	.47244	62	2.44094	3/16	.1875	4.7624		
0.13	.00512	0.63	.02480	13	.51181	63	2.48031	13/64	.20312	5.1592		
0.14	.00551	0.64	.02520	14	.55118	64	2.51969	7/32	.21875	5.5561		
0.15	.00591	0.65	.02559	15	.59055	65	2.55906	15/64	.23437	5.9530		
0.16	.00630	0.66	.02598	16	.62992	66	2.59843	1/4	.2500	6.3498		
0.17	.00669	0.67	.02638	17	.66929	67	2.63780	17/64	.26562	6.7467		
0.18	.00709	0.68	.02677	18	.70866	68	2.67717	9/32	.28125	7.1436		
0.19	.00748	0.69	.02717	19	.74803	69	2.71654	19/64	.29687	7.5404		
0.20	.00787	0.70	.02756	20	.78740	70	2.75591	5/16	.3125	7.9373		
0.21	.00827	0.71	.02795	21	.82677	71	2.79528	21/64	.32812	8.3342		
0.22	.00866	0.72	.02835	22	.86614	72	2.83465	11/32	.34375	8.7310		
0.23	.00906	0.73	.02874	23	.90551	73	2.87402	23/64	.35937	9.1279		
0.24	.00945	0.74	.02913	24	.94488	74	2.91339	3/8	.3750	9.5248		
0.25	.00984	0.75	.02953	25	.98425	75	2.95276	25/64	.39062	9.9216		
0.26	.01024	0.76	.02992	26	1.02362	76	2.99213	13/32	.40625	10.3185		
0.27	.01063	0.77	.03032	27	1.06299	77	3.03150	27/64	.42187	10.7154		
0.28	.01102	0.78	.03071	28	1.10236	78	3.07087	7/16	.4375	11.1122		
0.29	.01142	0.79	.03110	29	1.14173	79	3.11024	29/64	.45312	11.5091		
0.30	.01181	0.80	.03150	30	1.18110	80	3.14961	15/32	.46875	11.9060		
0.31	.01220	0.81	.03189	31	1.22047	81	3.18898	31/64	.48437	12.3029		
0.32	.01260	0.82	.03228	32	1.25984	82	3.22835	1/2	.5000	12.6997		
0.33	.01299	0.83	.03268	33	1.29921	83	3.26772	33/64	.51562	13.0966		
0.34	.01339	0.84	.03307	34	1.33858	84	3.30709	17/32	.53125	13.4934		
0.35	.01378	0.85	.03346	35	1.37795	85	3.34646	35/64	.54687	13.8903		
0.36	.01417	0.86	.03386	36	1.41732	86	3.38583	9/16	.5625	14.2872		
0.37	.01457	0.87	.03425	37	1.45669	87	3.42520	37/64	.57812	14.6841		
0.38	.01496	0.88	.03465	38	1.49606	88	3.46457	19/32	.59375	15.0809		
0.39	.01535	0.89	.03504	39	1.53543	89	3.50394	39/64	.60937	15.4778		
0.40	.01575	0.90	.03543	40	1.57480	90	3.54331	5/8	.6250	15.8747		
0.41	.01614	0.91	.03583	41	1.61417	91	3.58268	41/64	.64062	16.2715		
0.42	.01654	0.92	.03622	42	1.65354	92	3.62205	21/32	.65625	16.6684		
0.43	.01693	0.93	.03661	43	1.69291	93	3.66142	43/64	.67187	17.0653		
0.44	.01732	0.94	.03701	44	1.73228	94	3.70079	11/16	.6875	17.4621		
0.45	.01772	0.95	.03740	45	1.77165	95	3.74016	45/64	.70312	17.8590		
0.46	.01811	0.96	.03780	46	1.81102	96	3.77953	23/32	.71875	18.2559		
0.47	.01850	0.97	.03819	47	1.85039	97	3.81890	47/64	.73437	18.6527		
0.48	.01890	0.98	.03858	48	1.88976	98	3.85827	3/4	.7500	19.0496		
0.49	.01929	0.99	.03898	49	1.92913	99	3.89764	49/64	.76562	19.4465		
0.50	.01969	1.00	.03937	50	1.96850	100	3.93701	25/32	.78125	19.8433		
								51/64	.79687	20.2402		
								13/16	.8125	20.6371		
								53/64	.82812	21.0339		
								27/32	.84375	21.4308		
								55/64	.85937	21.8277		
								7/8	.8750	22.2245		
								57/64	.89062	22.6214		
								29/32	.90625	23.0183		
								59/64	.92187	23.4151		
								15/16	.9375	23.8120		
								61/64	.95312	24.2089		
								31/32	.96875	24.6057		
								63/64	.98437	25.0026		
								1	1.0000	25.3995		
											3	0.2391
											4	.2242
											5	.2092
											6	.1943
											7	.1793
											8	.1644
											9	.1495
											10	.1345
											11	.1196
											12	.1046
											13	.0897
											14	.0747
											15	.0673
											16	.0598
											17	.0538
											18	.0478
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											37	.0064
											38	.0060

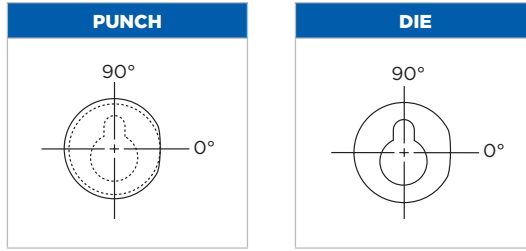
CONVERSION CHARTS

TECHNICAL INFORMATION

PLAN VIEW

- Point shape is shown with dotted lines from the head end of a **punch**
- Shape is shown with solid lines on a **die**

Head Type Tooling: Standard Locking Device orientation is at 0°

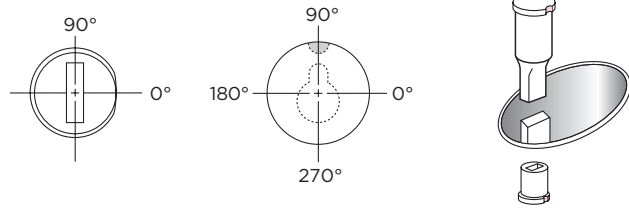


REFLECTED VIEW — PUNCHES

- The view as seen in a mirror when held below a punch or guide in its operating position.

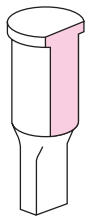
Note: Must identify as **REFLECTED VIEW** on punch drawing.

Ball Lock Tooling: Standard Locking Device orientation is at 90°

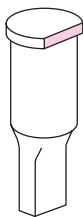


FLATS

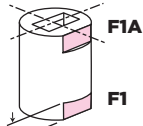
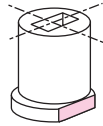
Headed Products **F** = .5D
Headless Products **F** = .5D - 1.5mm (.0625") (**FD**)



FF

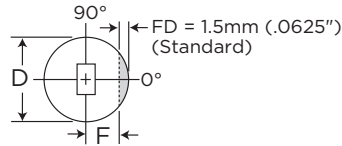


F1



F1A

F1



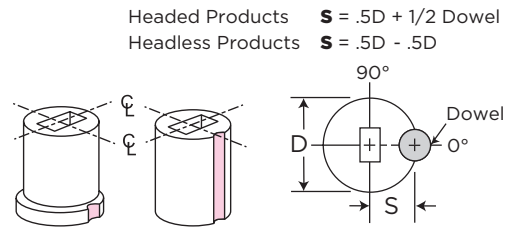
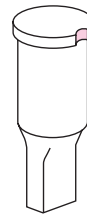
FL = 6.0mm (.250") (Standard)

F1 = Single Flat
F2 = Double Flat
FF = Full Length Flat (specify Flat Depth or F Dim.)

TECHNICAL INFORMATION

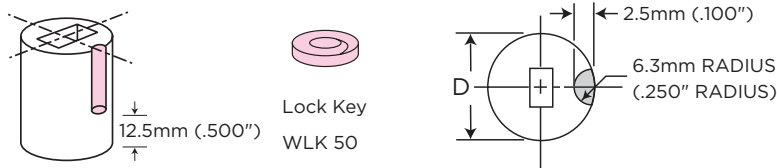
DOWEL SLOTS

"S" DIMENSION									
O.D.	8	10	13	16	20	22	25	32-63	
MS3	4.7	5.5	6.7						D÷2
MS4	5.2	6.0	7.2						D÷2
MS6	6.2	7.0	8.2	9.0	11.0	12.0	13.5		D÷2



"S" DIMENSION											
DIA.	25	31	37	43	50	62	75	87	100	125-275	
DS12	.1625	.1875	.2125	.2375	.2625						D÷2
DS18	.1938	.2188	.2438	.2688	.2938						D÷2
DS25	.225	.250	.275	.300	.325	.3438	.4063	.4688	.5313		D÷2

WINDSOR LOCK



SLUG HUGGER® 2 AND SLUG HUGGER® 4L

See page 18 for more information.

SURFACE COATINGS



PROTEC provides excellent wear resistance and longer tool life. Great for piercing, blanking and extrusions. AlCrN based coating provides excellent thermal shock stability and great all around coating.



FORTE® is our proprietary multi-layer nano coating that is a great alternative to a chemical vapor deposition (CVD) coating. A lower application temperature retains original dimensions. Good for high-pressure applications and punching and forming for high and low alloy steel in all thicknesses



TITANIUM CARBO-NITRIDE (TiCN) is a popular coating for piercing, blanking and trimming in a variety of applications. General service coating used to help improve wear resistance and reduce material adhesion.



SLIP-MAX® is a low friction, multi-layer coating that transitions from PVD to PACVD uniformly in the same batch, creating excellent adhesion amongst the layers and to the substrate material. Great for reducing material adhesion and improving lubricity. Often used in forming applications.

Additional surface treatment options are available. Our design and sales engineers can discuss your unique application and provide a cost-effective solution to meet your needs.

TONNAGE CALCULATION

MATERIAL THICKNESS

NON-FERROUS		GAUGE NO.	STEEL SHEETS	
GAUGE DECIMAL mm	GAUGE DECIMAL inches		GAUGE DECIMAL mm	GAUGE DECIMAL inches
5.827	.2294	3	.2391	6.073
5.189	.2043	4	.22242	5.695
4.62	.1819	5	.2092	5.314
4.115	.162	6	.1943	4.935
3.665	.1443	7	.1793	4.554
3.264	.1285	8	.1644	4.176
2.906	.1144	9	.1495	3.797
2.588	.1019	10	.1345	3.416
2.30	.0907	11	.1196	3.03
2.052	.0808	12	.1046	2.657
1.829	.072	13	.0897	2.278
1.628	.0641	14	.0747	1.897
1.45	.0571	15	.0673	1.709
1.29	.0508	16	.0598	1.519
1.151	.0453	17	.0538	1.367
1.024	.0403	18	.0478	1.214
0.912	.0359	19	.0418	1.062
0.813	.032	20	.0359	0.912
0.724	.0285	21	.0329	0.836
0.643	.0253	22	.0299	0.759
0.574	.0226	23	.0269	.0683
0.511	.0201	24	.0239	0.607
0.455	.0179	25	.0209	0.531
0.404	.0159	26	0.179	0.455
0.361	.0142	27	.0164	0.417
0.32	.0126	28	.0149	0.378
0.287	.0113	29	.0135	0.343
0.254	.01	30	.012	0.305
0.226	.0089	31	.0105	0.267
0.203	.008	32	.0097	0.246
.108	.0071	33	.009	0.229
0.16	.0063	34	.0082	0.208
0.142	.0056	35	.0075	0.191

MATERIAL MULTIPLICATION FACTOR

MATERIAL DESCRIPTION	MULTIPLIER (F)
Aluminum— Soft Sheet	.30
Aluminum— Half Hard	.38
Aluminum— Hard	.50
Brass — Soft Sheet	.60
Brass — Half Hard	.70
Copper — Rolled	.57
Steel — Mild	1.00
Steel — ASTM-A36	1.20
Steel — 50 Carbon	1.40
Steel — Cold Drawn	1.20
Steel — Stainless	1.40
Spring Steel — Tempered	4.00

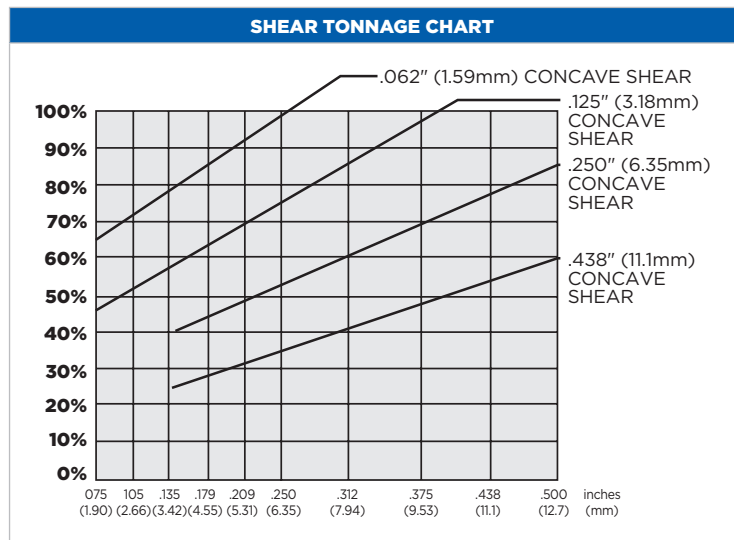
Based on Mild Steel Shear Strength of 50,000 P.S.I. (345 MPa)

TONNAGE [IMPERIAL]:
 Total Perimeter (P)
 x Material Thickness (T)
 x 25 x Material
 Multiplication Factor (F)
 x Shear Factor (S)

TONNAGE [METRIC]:
 Total Perimeter (P)
 x Material Thickness (T)
 x .0352 x Material
 Multiplication Factor (F)
 x Shear Factor (S)

SHEAR FACTOR

To find the actual tonnage required when using a given shear, multiply the calculated tonnage by the percentage shown below for a specified material thickness.



CLEARANCES

% x Material Thickness = Total Clearance

MATERIAL	MIN.	MAX.	EXAMPLE
Copper, 1/2 Hard	10	18	.250" (6.3mm) Mild Steel 20% or .050" (1.27mm)
Brass, 1/2 Hard	10	18	
Aluminum, Soft	10	18	
Mild Steel	14	20	For material greater than .135" (3.4mm) the "Maximum" column should be used.
High Carbon Steel	14	24	
Stainless Steel	14	24	

ABOUT WILSON TOOL INTERNATIONAL

From humble beginnings in a small manufacturing facility in St. Paul, Minnesota, Wilson Tool International has added manufacturing facilities and sales channels around the world to better serve our thousands of global customers. Throughout our expansion, our mission has never wavered — we continue to offer products and services that help you be more successful. Every product you buy, every employee with whom you communicate, and every training event you attend, are designed to help customers just like you be more successful.

At Wilson Tool, we continue to invest in your success through constant innovation. Our tooling and solutions represent decades of knowledge and experience in assisting manufacturers resolve their most challenging fabrication issues. We understand that no two jobs are the same. Change is the only constant in manufacturing. So, working with a tooling supplier who's flexible, nimble, and knowledgeable is important.

Our goal is to deliver exceptional
customer service
along with the most reliable and
innovative products and solutions
so that our **customers**
can be more successful.

When you have a challenge, reach out to us. At Wilson Tool we are more than tools... we are solutions. Your local Sales Engineer is available in person, by phone and through e-mail. Let us put our many decades of expertise to the test. We will work with you to find the best possible solution to whatever challenge you may be facing. And every order comes with our guarantee to outperform your current tooling.

From all of us at Wilson Tool, thank you for the trust you have placed in us to provide products and services that are critical to your business. We look forward to your continued success as we head into the future.



TERMS AND CONDITIONS



TERMS AND CONDITIONS

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LINEAR INCHES	PRESSURE IN TONS*											
	MFG. GAGE	30	27	24	22	20	18	16	14	12	11	10
THICKNESS	.0120	.0164	.0239	.0299	.0359	.0478	.0598	.0747	.1046	.1196	.125	.1345
1	1	1	1	1	1	2	2	3	3	4	4	4
2	1	1	2	2	2	3	4	5	6	7	7	8
3	1	2	2	3	3	4	5	7	9	10	11	12
4	2	2	3	4	4	6	7	9	12	14	14	15
5	2	3	4	5	5	7	9	11	15	17	18	19
6	2	3	4	5	6	8	10	13	18	20	21	23
7	3	4	5	6	7	10	12	15	21	24	25	26
8	3	4	6	7	8	11	14	17	24	27	28	30
9	3	5	6	8	9	12	15	19	26	30	31	34
10	4	5	7	9	10	14	17	21	29	33	35	37
12	4	6	8	10	12	1	20	25	35	40	42	45
14	5	7	10	12	14	19	24	29	41	47	49	52
16	6	8	11	14	16	22	27	33	47	53	55	60
18	6	9	12	15	18	24	30	37	52	60	62	67
20	7	10	14	17	20	27	33	41	58	66	69	74
25	9	12	17	21	25	33	42	52	72	83	86	93
30	10	14	20	25	30	40	50	62	87	99	104	111
35	12	16	23	29	35	46	58	72	101	116	121	130
12	14	19	27	33	40	53	66	83	116	132	138	148
14	15	21	30	37	45	60	74	93	130	148	155	167
16	17	23	33	42	50	66	83	103	144	165	172	185
18	20	28	40	50	60	79	99	124	173	198	207	223
20	24	32	46	58	70	93	116	144	202	231	241	259
25	27	37	53	66	79	106	132	165	231	264	275	296
30	30	41	60	74	89	119	148	185	259	297	310	333
35	33	46	66	83	99	132	165	206	288	329	344	370

*The figures shown are approximate tons required for punching mild sheet steel having a shear strength of 55,000 pounds per square inch.

CONNECT WITH WILSON TOOL

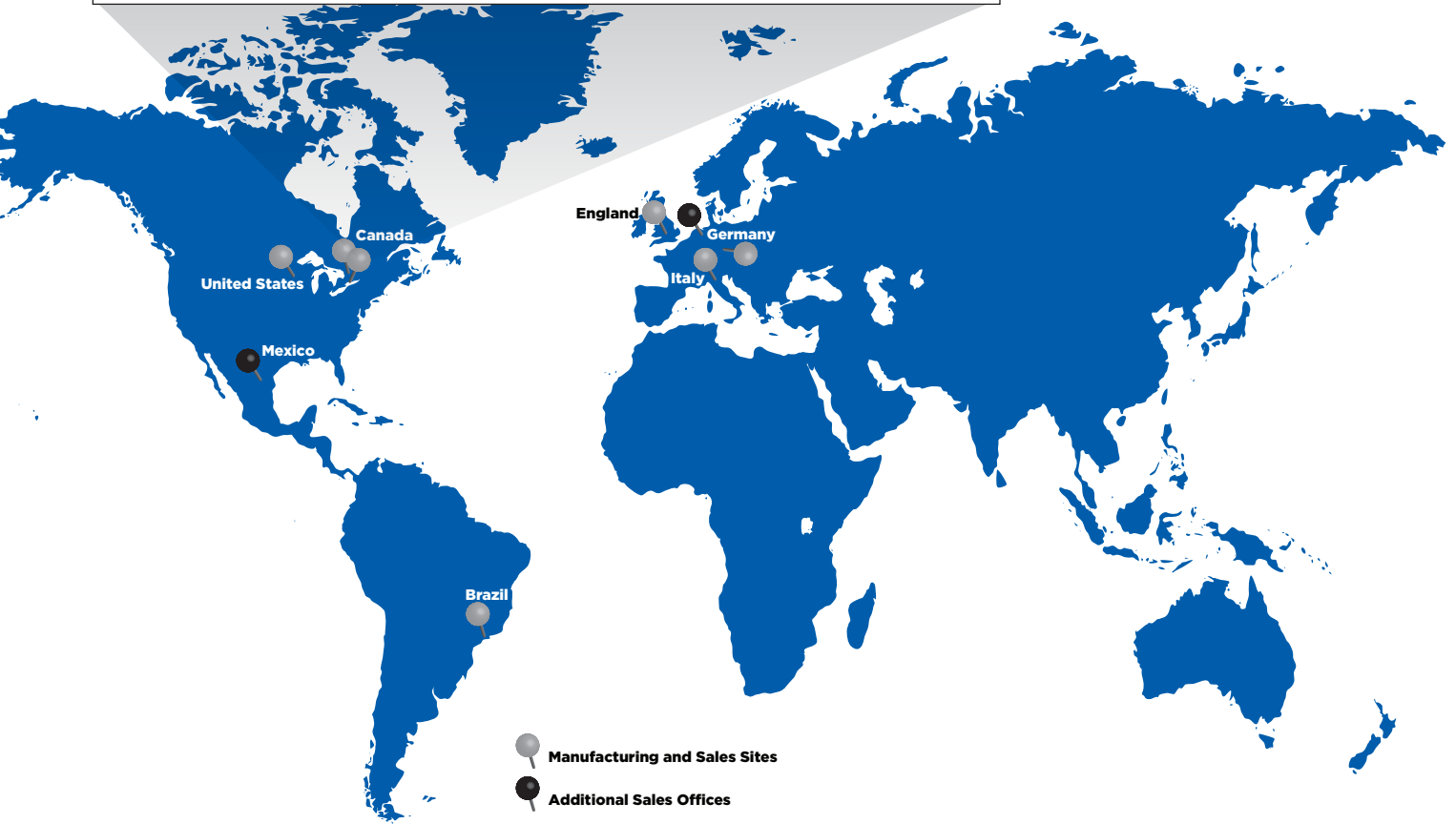
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*The products in this catalog are manufactured in a plant whose quality management system is certified or registered as conforming to the requirements defined in the ISO 9001 Standard.



E607C (3.2026)