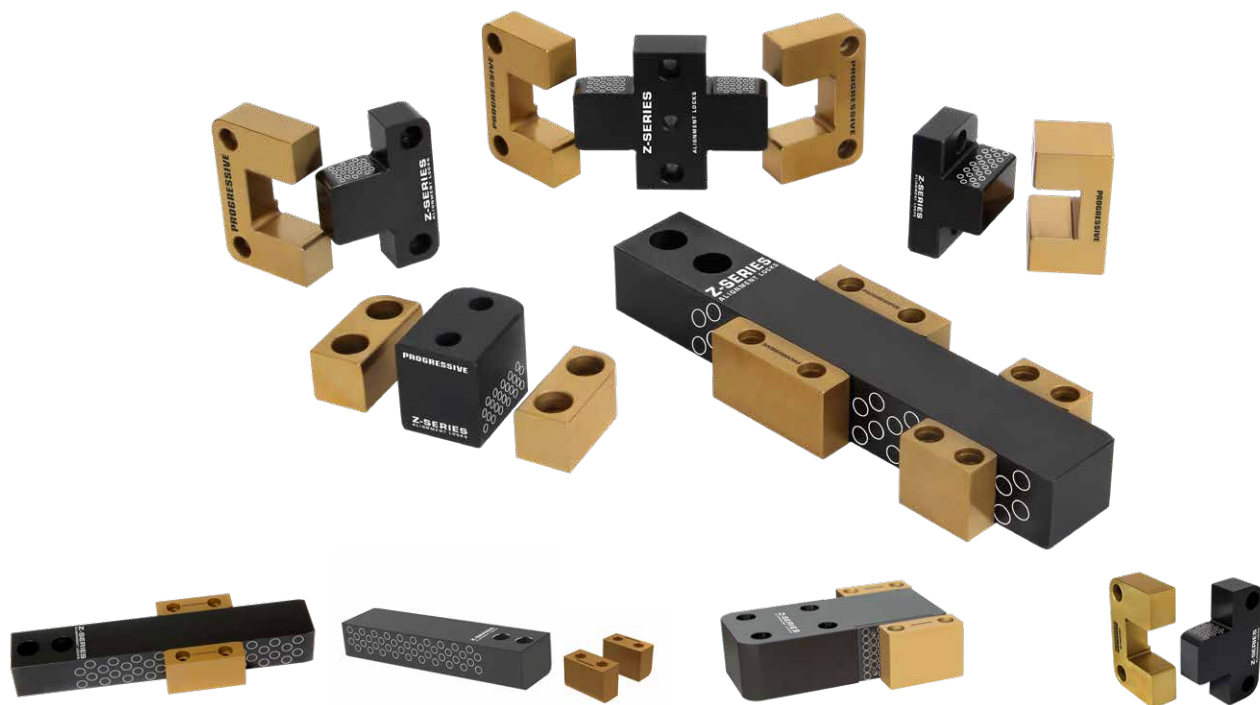


ALIGNMENT LOCKS

SECTION C



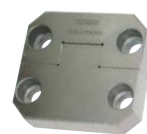
Bar Locks	Bar Locks: Top Machining/X	Bar Locks: Inserted	Side Locks
Prefix: BLB, BLG	Prefix: BLBT, BLGT, BLBX	Prefix: BLN, BLS	Prefix: SL, SLC, SLM
Page: C-4 & C-5	Page: C-6 & C-7	Page: C-9	Page: C-10



X-Style Side Locks	Top Locks: Internal	Top Locks	Guide Locks
Prefix: SLX	Prefix: TL, TLM	Prefix: TL, TLM	Prefix: GL, GLM
Page: C-11	Page: C-12	Page: C-3	Page: C-14



Rectangular Taper Bar Locks	Cavity Interlocks (Flat/Round)	Taper Locks: Counterbored	Taper Locks & Plates
Prefix: MTBL, FTBL	Prefix: CF, CFM, CRS, CRSM	Prefix: TLC	Prefix: MTL, FTL, TLP
Page: C-15	Page: C-16 & C-17	Page: C-18	Page: C-19



Needle Bearing Locks	Black Nitride Side Lock	Side Locks: Graphite Plugged	Side Locks: Steel
Prefix: SLR, SLRM, TLR	Prefix: SL	Prefix: SLPM	Prefix: SLS, SLMS
Page: C-20 & C-21	Page: C-22	Page: C-23	Page: C-24



ALIGNMENT LOCKS PERFORMANCE TESTING

Progressive Components regularly tests products through independent testing facilities nationwide.

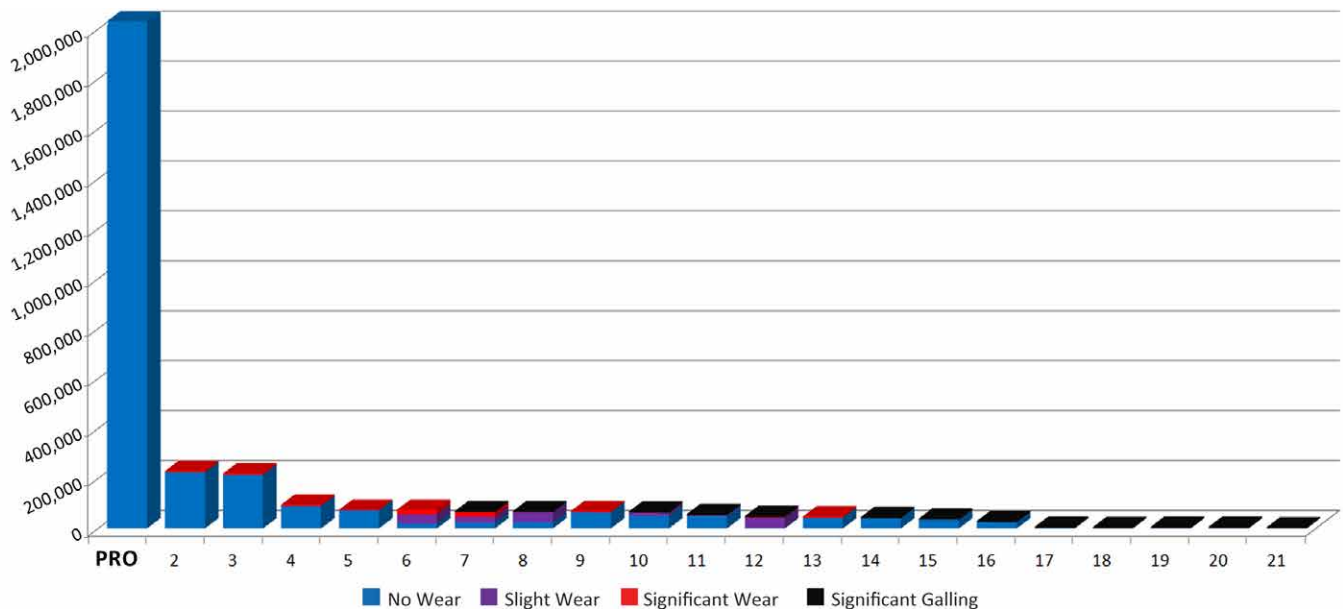
Before launching of the Z-Series™ Alignment Locks, Progressive contracted Element Materials Technology to provide a thorough mold lock Performance Evaluation:

“Element Materials Technology has conducted independent life cycle testing of mold interlocks since 1999. The processes with fixtures and cycling were established to simulate use in the molding environment, but more severe loads were used to accelerate the failures at 4400 lbs of pressure. The locks tested have been from Progressive as well as other standard lock distributors in the US and Asia, plus several additional material and treatment combinations were tested for comparison.”

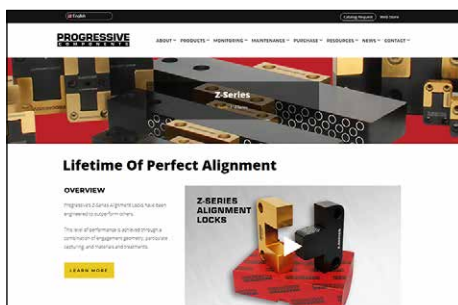
It was determined that the Progressive Components Z-Series Alignment Locks exceeded the 2-million cycle mark, and still displayed no measurable signs of wear of any type.

“During the past few years, over 21 different tests were performed with the purpose of cycling until failure occurred. At no time during our tests over the years have we seen cycle performance at the level of this new design, represented as PRO in the chart below.”

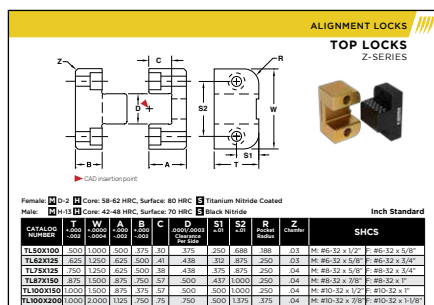
With the industry's widest selection of sizes in stock and competitively priced, specifying alignment locks from Progressive Components means your molds will have unmatched protection from damage and downtime.



ONLINE DATA



Learn more at
procomps.com/z-series.



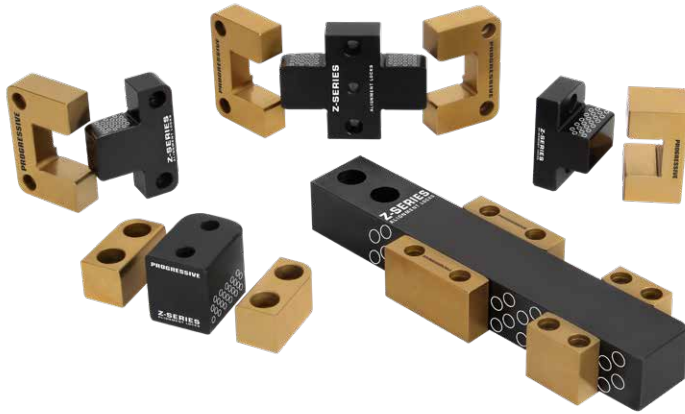
All catalog pages are online for
forwarding to suppliers, customers, etc.

TESTS AND RESULTS									
Sample ID	Material	Coating	Core Hardness	Material	Coating	Core Hardness	Lube	Cycles	Figure
PRO 3-Series	D-2	TIN	58-62 HRC	H 13	Nitro Carbide	42-48 HRC	Serol INT/300	2000000	3
PCS Tor-Lock	A-2	Black Oxide	58-60 HRC	A-2	Black Oxide	58-60 HRC	PCS Nano	225000	4
DMS	S-7	TIN	58-56 HRC	O-6	Black Oxide	58-60 HRC	(INT/300)	215000	5
Serol	S-7	TIN	50-52 HRC	O-6	Black Oxide	60-62 HRC	Serol INT/300	150000	6
PCS B&G	A-2	TIN	58-62 HRC	H 13	Machinist	40-44 HRC	Lithium	80000	7
DMS B&G	B&G	TIN	58-62 HRC	H 13	Machinist	40-44 HRC	Lithium	48000	8
PCS Clad	B&G	Armorclad	54-56 HRC	O-6	Black Oxide	60-62 HRC	PCS Nano	80000	9
China Brand	D-2	TIN	58-62 HRC	YC30	Black Oxide	50-52 HRC	Lithium	400	10

View the entire independent
testing report online.

ALIGNMENT LOCKS

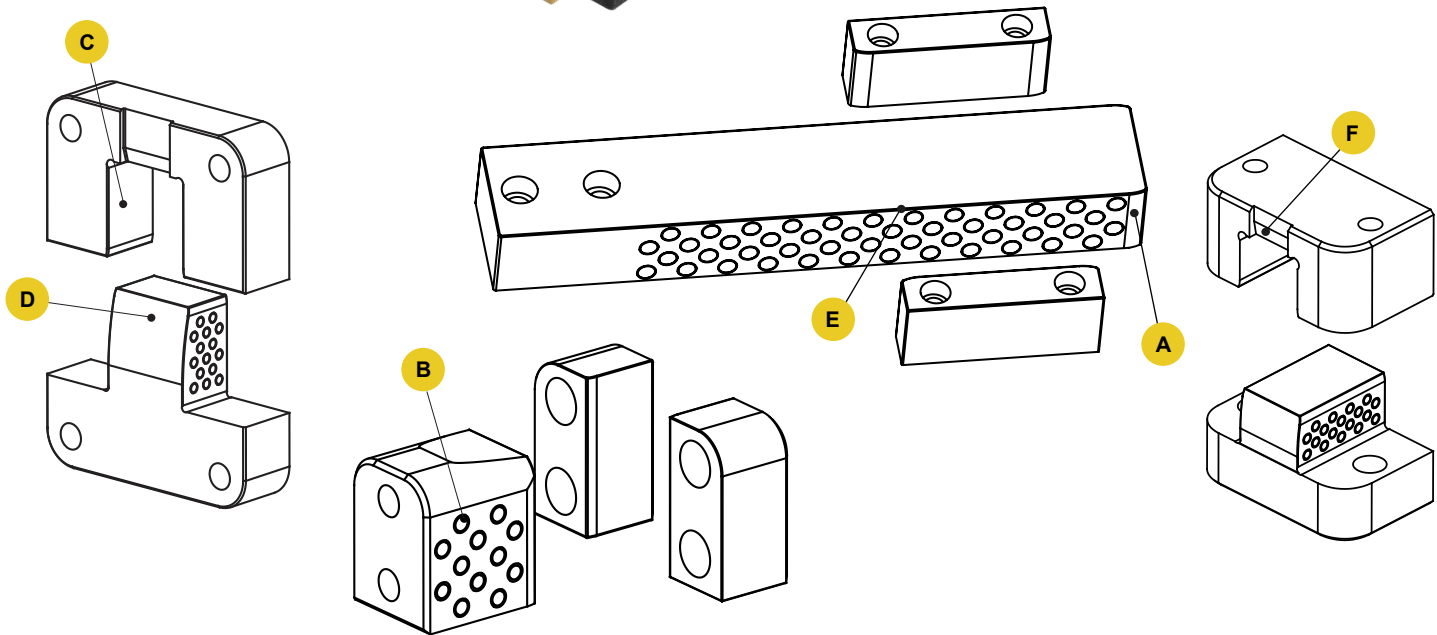
Z-SERIES™



Progressive's Alignment Locks have been advanced to outperform other styles. This is achieved through a combination of engagement geometry, particulate capturing rings, materials and treatments, and lubrication.

Benefits of the Z-Series Alignment Locks include:

- Longevity that far surpasses others, confirmed by extensive independent lab testing as well as monitoring performance in harsh, 'real world' conditions.
- Exclusive features maintain clean and consistent lubrication.
- Bar Lock, Guide Lock, Side Lock, X-Style Side Lock and Top Lock styles available with the features below, and Cavity Locks (Round and Flat), Tapered Bar Locks, and C'Bored Taper Locks are also available with the Z-Series treatments.



A Engagement Ramp: A fine finish radial lead-in for smooth lifting upon engagement of the mold halves.

B Particle Rings: Particle rings on the width of the male locks trap material and debris to avoid "picking up" or galling of the alignment surface.

C Longer Engagement: Using the maximum allowable engagement area on all locks surpasses previously-established industry standards.

D Arced Relief: Reduces the possibility of parts sticking to the lock at the bottom of the mold.

E Rounded Edges: A larger radius for all protruding surfaces to eliminate operator "reach in" injury.

F Pry Slot Lead-In: Expanded the entry of pry slots to ease removal.

Premium Materials: Males: H-13, 42-48 HRC, Surface: 70 HRC; Females: D-2, 58-62 HRC, Surface: 80 HRC.

Note: 500°F (260°C) max operating temperature.

Lubrication & Maintenance:

- Non-drying, non-hardening food grade grease is applied to all areas, including the particle rings.
- For production, install the locks and wipe down the outside of the locks only; maintain the grease on the mating surfaces and within the rings as provided.



SIDE/TOP/GUIDE LOCK SELECTION GUIDE

Refer to the chart below to match the correct alignment lock for the corresponding mold size and weight of the B-Side and press platen, using four locks per mold. Clean and lubricate lock every 100,000 cycles, and prevent corrosion during mold storage.

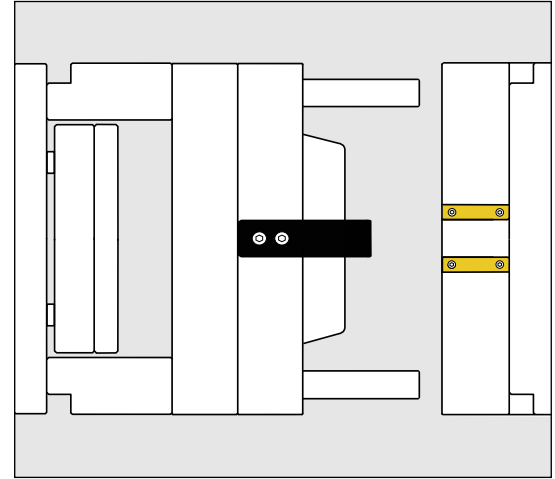
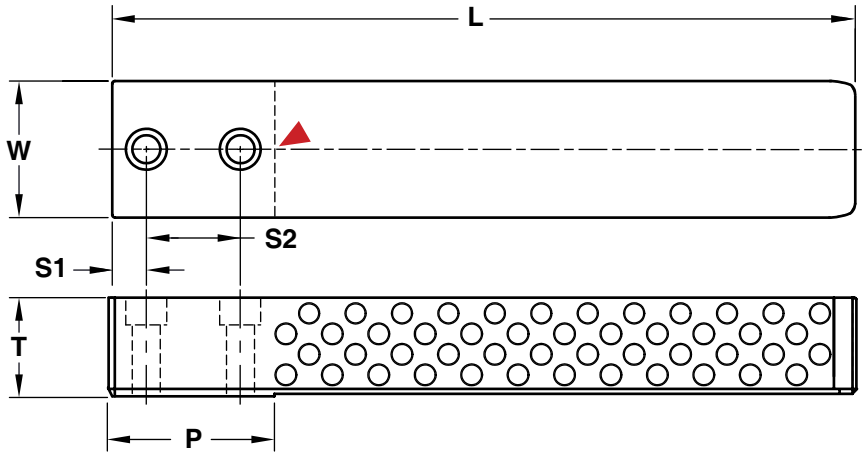
RECOMMEND-ED MAX MOLD SIZE (LXWXH)	SIDE LOCKS	METRIC SIDE LOCKS	GUIDE LOCKS	TOP LOCKS	TOTAL MAX WEIGHT B SIDE + PRESS PLATEN (LBS/KG)
RTI AND MOLDS 8 X 8 X 8 AND SMALLER	SL37X100, SL50X125 SL50X150, SL50X200 SLS62X150, SLS62X200 SLR50X125, SLR50X150	SLM16X50, SLPM16X20 SLPM16X40, SLPM20X25 SLPM20X50, SLMS13X38 SLMS16X50	GL100X150 GLM25X45	TL75X75, TLM20X20 TL50X100, TL62X125 TL75X125, TLM26X35 TLR87X150	2,000 / 900
11 X 16 X 10	SL50X125, SL50X150 SL50X200, SLS62X150 SLS62X200, SLS75X300 SLS75X400, SLR50X150 SLR50X200	SLM16X50, SLMS19X75 SLPM25X32, SLPM25X63 SLPM32X40, SLPM32X80 SLPM40X50, SLPM40X100 SLMS19X100	GL100X150 GL150X250 GLM25X45	TL62X125, TL75X125 TL100X100, TLM25X25 TLM26X35 TLR87X150, TLR112X200	5,000 / 2,300
16 X 24 X 16	SL50X150, SL50X200 SL75X300, SLS112X500 SLS75X300, SLS75X400 SLR75X300, SLR100X400	SLM19X75, SLM19X100 SLMS25X125 SLPM50X56, SLPM50X112 SLRM32X63 SLRM40X100	GL150X250 GLM40X65	TL75X125, TLR87X150 TL137X137, TLM32X32 TLM26X35, TLM30X45 TLR112X200 TLR150X250	7,000 / 3,200
28 X 34 X 24	SL75X300, SLS112X500	SLM19X75, SLM19X100	GL200X350 GL150X250 GLM40X65	TL100X150, TL100X200 TL112X200, TL112X300 TLM26X35, TLM30X45	10,000 / 4,500
32 X 40 X 28	SL100X400	SLM25X125	GL200X350 GLM40X65	TL112X200, TL112X300 TLM36X55, TLM36X75	15,000 / 6,800
42 X 48 X 34	SL125X500		GL250X450 GLM50X90	TL150X250, TL175X300 TLM36X55, TLM36X75	20,000 / 9,000
48 X 52 X 38	SL150X600		GL250X450	TL175X300, TL200X350 TLM45X100	26,000 / 11,800

BAR LOCK SELECTION GUIDE

MALE BAR CATALOG NUMBER	GUIDE CATALOG NUMBER	BAR LOCK ENGAGEMENT	TOTAL MAX WEIGHT SUPPORTED (LBS/KG)
BLB100L4	BLG100L1.3, BLG100L1.8 BLG100L2.3, BLG100L2.8	2.50	10,000 / 4,500
BLBX137L5	BLGT137L1.3, BLGT137L1.8	3.00	
BLB100L6	BLG100L1.3, BLG100L1.8 BLG100L2.3, BLG100L2.8	4.50	
BLBT137L6	BLGT137L1.3, BLGT137L1.8		
BLBM25L125	BLGM25L27, BLGM25L36	89mm	
BLB125L5	BLG125L1.3, BLG125L1.8 BLG125L2.3, BLG125L2.8	3.00	15,000 / 6,800
BLBX162L6	BLGT162L1.3, BLGT162L2.3	3.50	
BLB125L9	BLG125L1.3, BLG125L1.8 BLG125L2.3, BLG125L2.8	7.00	
BLBT162L9	BLGT162L1.3, BLGT162L2.3		
BLBM32L160	BLGM32L36, BLGM32L46	114mm	
BLB137L6	BLG137L1.8, BLG137L2.3 BLG137L2.8, BLG137L3.3, BLG137L3.8	3.50	20,000 / 9,000
BLBX200L7	BLGT200L1.8 & BLGT200L2.8	4.50	
BLB137L11	BLG137L1.8, BLG137L2.3 BLG137L2.8, BLG137L3.3, BLG137L3.8	8.50	
BLBT200L11	BLGT200L1.8 & BLGT200L2.8		
BLBM38L250	BLGM38L46, BLGM38L76	194 mm	26,000 / 11,800
BLB150L8	BLG150L1.8, BLG150L2.3 BLG150L2.8, BLG150L3.3, BLG150L3.8	4.50	
BLB150L16		12.50	
BLN150L8	BLG150L1.8, BLG150L2.3 BLG150L2.8, BLG150L3.3, BLG150L3.8	3.75	
BLN250L10	BLG250L4.3	5.00	
BLN350L13	BLG350L4.8	6.00	75,000 / 34,000

BAR LOCKS

BAR-SIDE MACHINE STYLE



Inch Standard

M H-13 **H** Core: 42-48 HRC, Surface 70 HRC **S** Black Nitride

 CAD insertion point

CATALOG NUMBER	L	T +.000 - .005	W +.0000 - .0005	P MINIMUM POCKET LENGTH	S1 ±.01	S2 ±.01	SHCS
BLB100L4	3.88	1.000	1.000	1.38	.38	.69	5/16-18 x 1-1/4
BLB100L6	6.00						
BLB125L5	4.88	1.250	1.500	1.88	.50	1.00	3/8 - 16 x 1-1/2
BLB125L9	8.88						
BLB137L6	5.88	1.375	2.000	2.38	.50	1.38	3/8 - 16 x 1-1/2
BLB137L11	10.88						
BLB150L8	7.88	1.500	3.000	3.38	.63	2.00	1/2 - 13 x 1-3/4
BLB150L16	15.88						

Bars are sold individually and include 2 screws.

Metric Standard

M H-13 **H** Core: 42-48 HRC, Surface 70 HRC **S** Black Nitride

CATALOG NUMBER	L	T +.0 - .1	W +.00 - .01	P MINIMUM POCKET LENGTH	S1 ±.25	S2 ±.25	SHCS
BLBM25L125	125	25	25	36	10	18	M8-1.25 x 30
BLBM32L160	160	32	38	46	12.5	25	M10-1.5 x 35
BLBM38L250	250	38	50	56	15	30	M12-1.75 x 45

Bars are sold individually and include 2 screws.

ALTERNATIVE CONFIGURATIONS AVAILABLE

- Guides are sold separately on page C-5.
- Bars can be cut to length and/or have radii machined. Refer to page C-7 for details.
- Made-to-order Bar Locks can be quoted using the templates at procomps.com.



BAR LOCKS

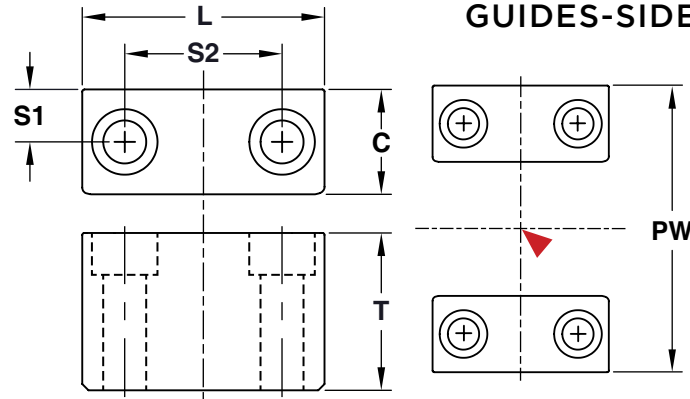
GUIDES-SIDE MACHINE STYLE

PW Tolerances:

Standard Bars:
+.0003/+.0006
(+.007/+.015mm)

Inserted Bars:
+.0010/+.0015
(+.025/+.038mm)

▶ CAD insertion point



M D-2 **H** Core: 58-62 HRC, Surface 80 HRC **S** Titanium Nitride Coated

Inch Standard

CATALOG NUMBER	T +.000 -.005	L +.000 -.005	C +.0000 -.0003	S1 ±.01	S2 ±.01	PW	SHCS	USE WITH
BLG100L1.3	1.000	1.310	.500	.25	.75	2.000	#10-32 x 1-1/4	BLB100L4 & BLB100L6
BLG100L1.8		1.810			1.12			
BLG100L2.3		2.310			1.25			
BLG100L2.8		2.810			1.625			
BLG125L1.3	1.250	1.310	.625	.31	.75	2.750	1/4-20 x 1-1/2	BLB125L5 & BLB125L9
BLG125L1.8		1.810			1.12			
BLG125L2.3		2.310			1.25			
BLG125L2.8		2.810			1.62			
BLG137L1.8	1.375	1.810	.750	.37	1.12	3.500	5/16-18 x 1-1/2	BLB137L6 & BLB137L11
BLG137L2.3		2.310			1.25			
BLG137L2.8		2.810			1.62			
BLG137L3.3		3.310			2.25			
BLG137L3.8	1.500	3.810	1.000	.50	2.50	5.000 (6.000 for BLN150)	3/8-16 x 1-3/4	BLN150L8, BLB150L8, & BLB150L16
BLG150L1.8		1.810			1.00			
BLG150L2.3		2.310			1.50			
BLG150L2.8		2.810			1.62			
BLG150L3.3		3.310			2.25			
BLG150L3.8		3.810			2.50			
BLG250L4.3	2.500	4.310	1.250	.62	3.00	7.500	1/2-13 x 2-3/4	BLN250L10
BLG350L4.8	3.500	4.810	1.750	.87	3.25	9.500	5/8-11 x 3-3/4	BLN350L13

M D-2 **H** Core: 58-62 HRC, Surface 80 HRC **S** Titanium Nitride Coated

Metric Standard

CATALOG NUMBER	T +.0 -.1	L +.0 -.1	C +.000 -.007	S1 ±.25	S2 ±.25	PW	SHCS	USE WITH
BLGM25L27	25	27	12	6	14	49	M4-0.7 x 25	BLBM25L125
BLGM25L36		36			20			
BLGM32L36	32	36	16	8	20	70	M6-1.0 x 35	BLBM32L160
BLGM32L46		46			30			
BLGM38L46	38	46	22	11	24	94	M10-1.5 x 40	BLBM38L250
BLGM38L76		76			54			

ALTERNATIVE CONFIGURATIONS AVAILABLE

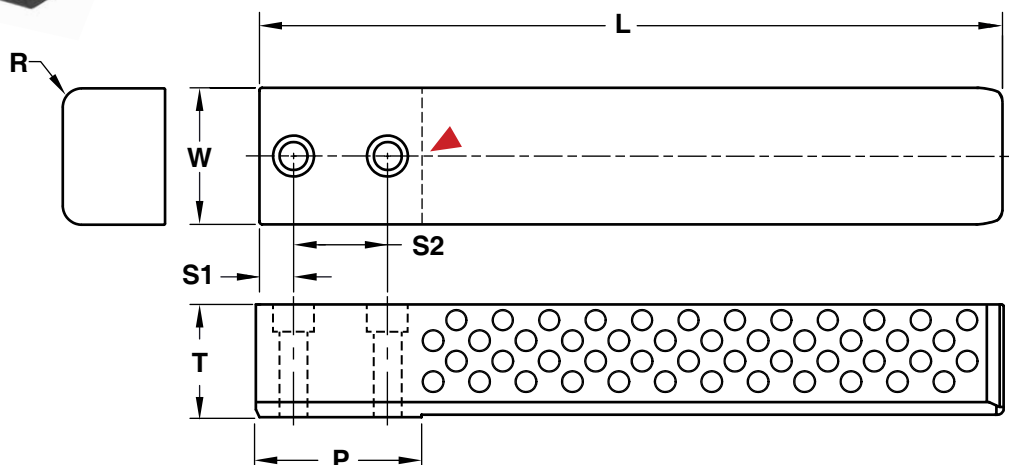
- Side Machine Bars are sold separately on page C-4. Inserted Bar Locks are sold on page C-9.
- Guides can have 2 or 4 radii machined. Refer to page C-7 for details.
- Made-to-order Guides can be quoted using the templates at procomps.com.

APPLICATION GUIDELINES

- Guides are sold in pairs. Each set includes 2 Guides and 4 Screws.
- Refer to page C-8 for application guidelines.

BAR LOCKS

BAR-TOP MACHINE STYLE



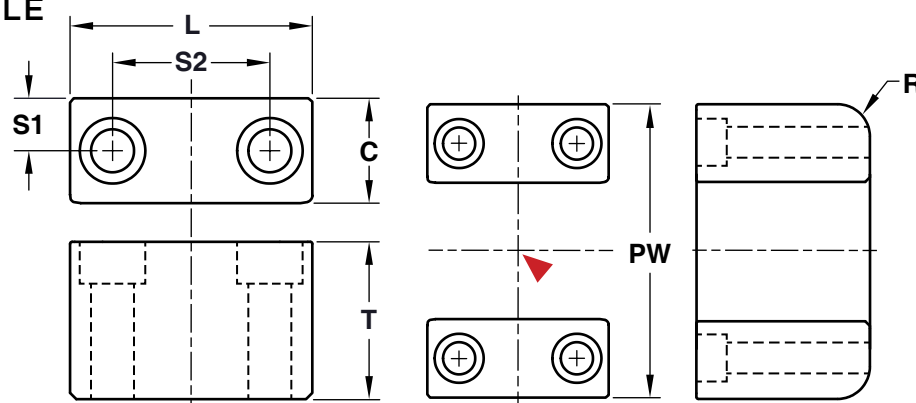
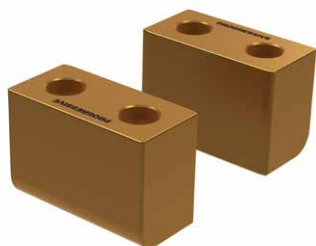
M H-13 **H** Core: 42-48 HRC, Surface 70 HRC **S** Black Nitride

▶ CAD insertion point

CATALOG NUMBER	L	T +.000 -.005	W +.0000 -.0005	P MINIMUM POCKET LENGTH	R POCKET RADIUS	S1 ±.01	S2 ±.01	SHCS
BLBT137L6	6.00	1.375	1.625	1.375	.250	.38	.69	5/16-18 x 1-1/2
BLBT162L9	8.88	1.625	2.250	1.875	.312	.50	1.00	3/8-16 x 1-3/4
BLBT200L11	10.88	2.000	3.000	2.375	.375	.63	1.25	1/2-13 x 2-1/4

Bars are sold individually and include 2 screws.

GUIDES-TOP MACHINE STYLE



M D-2 **H** Core: 58-62 HRC, Surface 80 HRC **S** Titanium Nitride Coated

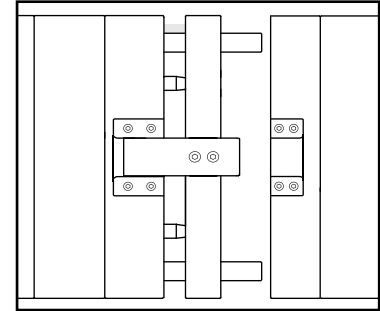
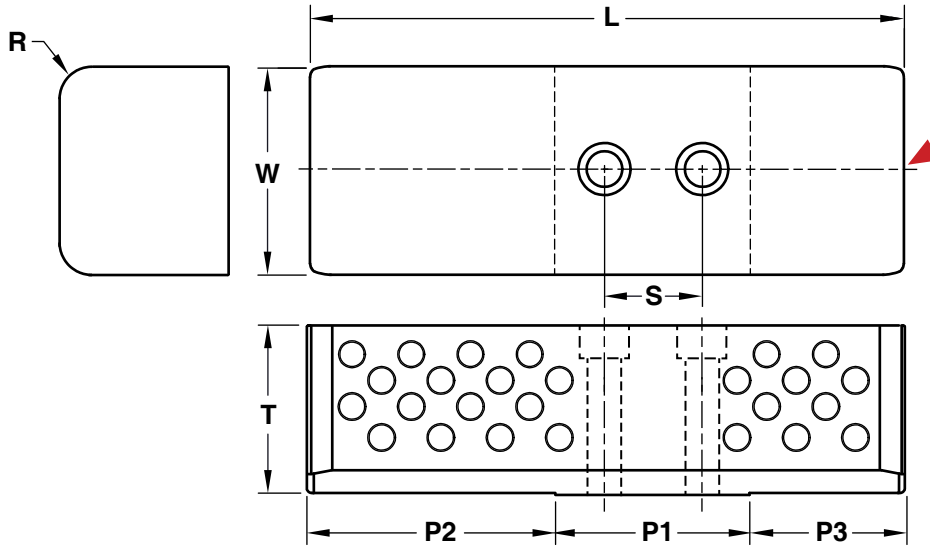
▶ CAD insertion point

CATALOG NUMBER	T +.000 -.005	L +.000 -.005	C +.0000 -.0003	R POCKET RADIUS	S1 ±.01	S2 ±.01	PW +.0003 +.0006	SHCS	USE WITH
BLGT137L1.3	1.375	1.310	1.000	.250	.50	.75	3.625	#10-32 x 1-1/2	BLBT137L6
BLGT137L1.8		1.810				1.12			
BLGT162L1.3	1.625	1.310	1.125	.312	.56	.75	4.500	1/4-20 x 1-3/4	BLBT162L9
BLGT162L2.3		2.310				1.25			
BLGT200L1.8	2.000	1.810	1.375	.375	.69	1.12	5.750	5/16-18 x 2-1/4	BLBT200L11
BLGT200L2.8		2.810				1.62			

Guides are sold in pairs. Each set includes 2 Guides and 4 Screws.



BAR LOCKS X-STYLE



M H-13 **H** Core: 42-48 HRC, Surface 70 HRC **S** Black Nitride

▶ CAD insertion point

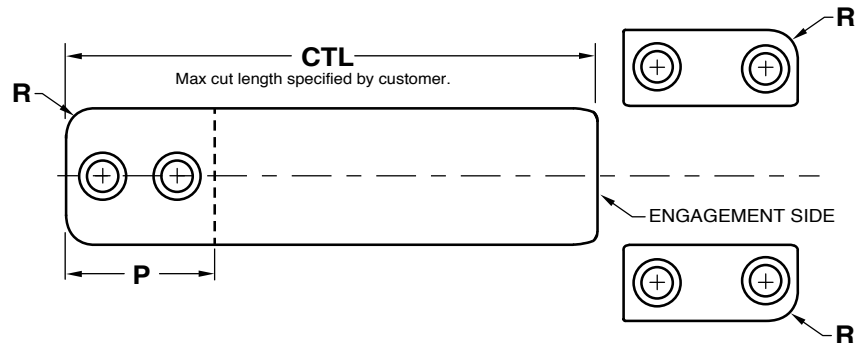
CATALOG NUMBER	L	T +.000 -.005	W +.0000 -.0005	P1 MINIMUM POCKET LENGTH	P2 MIN. PLATE THICKNESS	P3 MIN. PLATE THICKNESS	R POCKET RADIUS	S ±.01	SHCS
BLBX137L5	4.63	1.375	1.625	1.375	1.88	1.38	.250	.69	5/16-18 x 1-1/2
BLBX162L6	5.63	1.625	2.250	1.875	2.38	1.38	.312	1.00	3/8-16 x 1-3/4
BLBX200L7	7.13	2.000	3.000	2.375	2.88	1.88	.375	1.25	1/2-13 x 2-1/4

Bars are sold individually and include 2 screws. Top machine style Guides are sold on page C-6.

MOLD-READY SPECIALS

To Order:

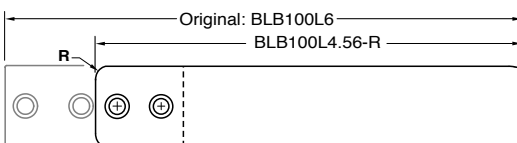
- For cut-to-length Side Machine Bars (pg C-4) or Top Machine Bars (pg C-6), specify the prefix of the Bar and the finished length. Ex. BLB100L4.56. (See max CTL length in the chart below.)
- For Side Machine Bars cut to length with pocket radii with sizes shown in the chart, specify the size, length and add "-R" suffix. Ex. BLB100L4.56-R.
- For Side Machine Bars with pocket radii in standard lengths, add "-R" to the end of the catalog number. Ex. BLB100L6-R.
- For Side Machine Guides with corner radii on both parts, add "-R" to the end of the catalog number. Ex. BLG150L2.8-R.



Note: Mold-Ready Specials must have a minimum quantity of (2) Bars or (2) sets of Guides per order.

APPLICATION GUIDELINES

- For Guides, the pocket radii are machined on opposing sides as shown above.
- Bar lengths are modified from standards and radii (for Side Machine Bars) are machined on the pocket side to maintain the integrity of the material and treatment on the engagement side.

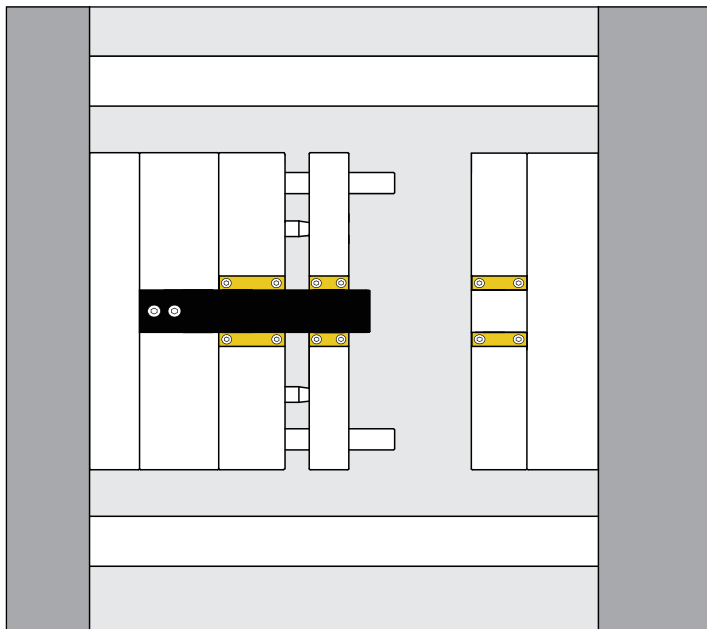


BAR CATALOG PREFIX	CTL MAX	R POCKET RADIUS
BLB100	4.62	.25
BLB125	7.00	.31
BLB137	8.50	.37
BLBT137	4.62	N/A
BLB150	12.50	.50
BLBT162	7.00	N/A
BLBT200	8.50	N/A
BLBM25	89mm	6 mm
BLBM32	114mm	8 mm
BLBM38	194mm	10 mm

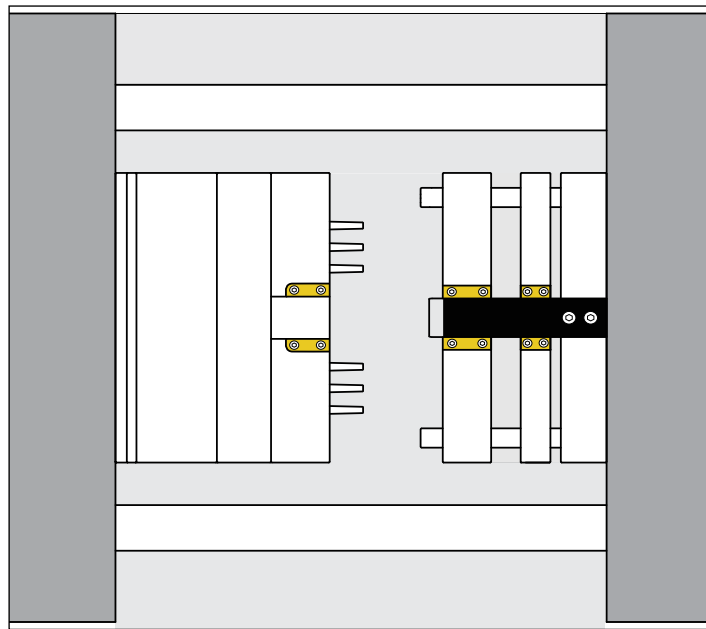
GUIDE CATALOG PREFIX	R POCKET RADIUS
BLG100	.18
BLG125	.25
BLG137	.31
BLG150	.37
BLG250	.37
BLG350	.50
BLGM25	5mm
BLGM32	6mm
BLGM38	7mm

BAR LOCKS APPLICATIONS

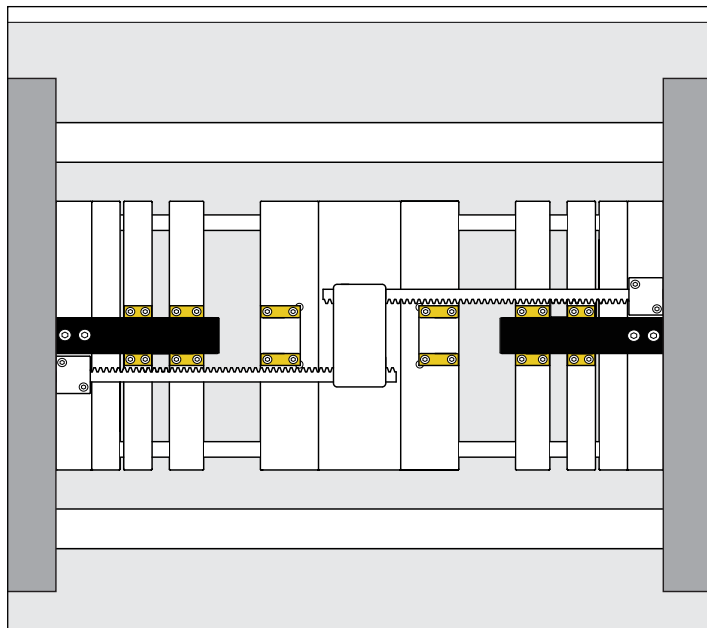
Stripper Plate Application



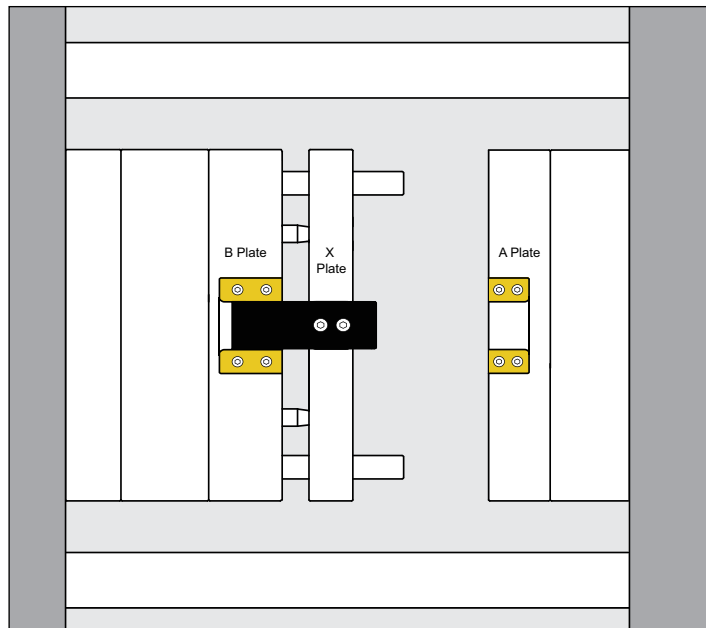
Three Plate Application



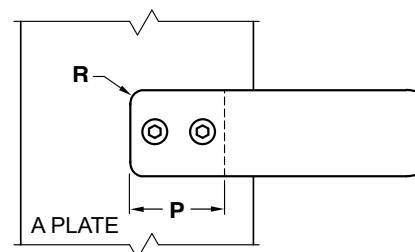
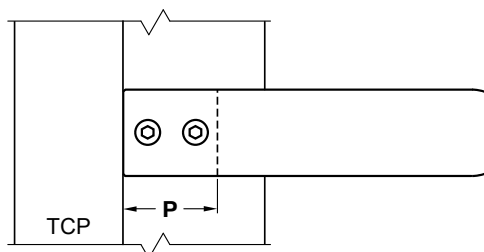
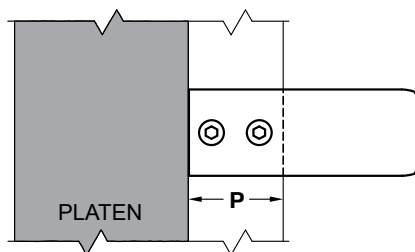
Stack Mold Application



Floating Plate Application

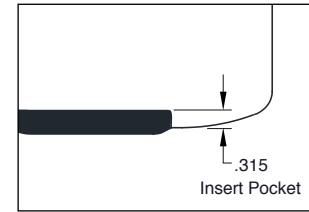
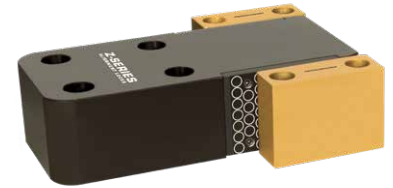
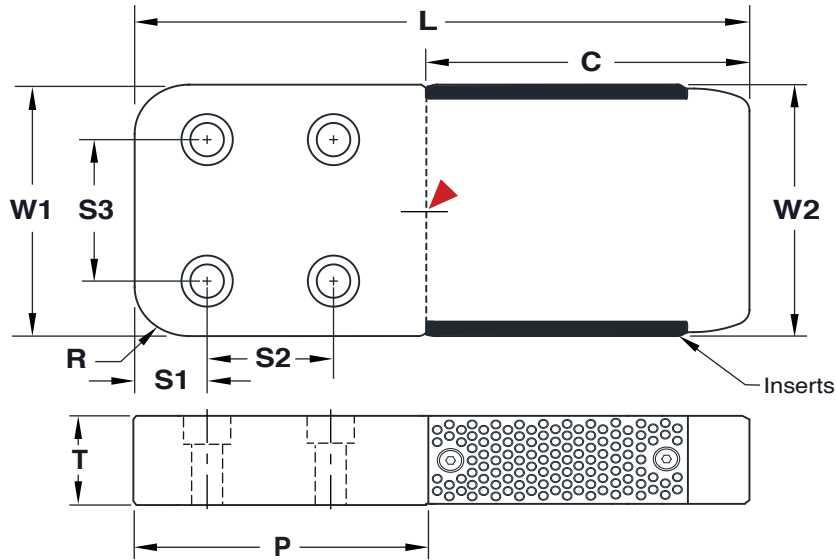


The minimum pocket length (P) is shown below in different applications.





BAR LOCKS INSERTED



MALE BAR LOCK ASSEMBLIES

Bar: **M** 4140 **H** Core: 36-40 HRC, Surface 70 HRC **S** Black Oxide

Inserts: **M** H-13 **H** Core: 42-48 HRC, Surface 70 HRC **S** Black Nitride

CAD insertion point

CATALOG NUMBER	T +.000 -.005	W1 +.0000 -.0005	W2	L	C REF	S1 ±.01	S2 ±.01	S3 ±.01	R POCKET RADIUS	P MINIMUM POCKET LENGTH	SHCS
BLN150L8	1.500	4.000	4.000 +.000 -.002	7.75	3.75	1.00	2.00	2.25	.75	4.00	1/2-13 x 1-3/4
BLN250L10	2.500	5.000	5.000 +.000 -.002	10.38	5.00	1.25	3.25	3.25	1.00	5.38	5/8-11 x 2-3/4
BLN350L13	3.500	6.000	6.000 +.000 -.003	12.88	6.00	1.50	4.00	3.50	1.00	6.88	3/4-10 x 3-3/4

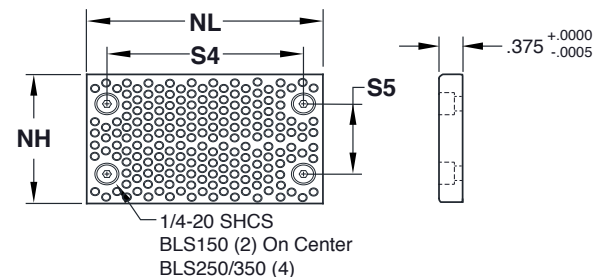
Each catalog number includes (1) Bar and (2) Inserts with screws. Guides are sold separately on page C-5.

INSERTS

M H-13 **H** Core: 42-48 HRC, Surface 70 HRC **S** Black Nitride

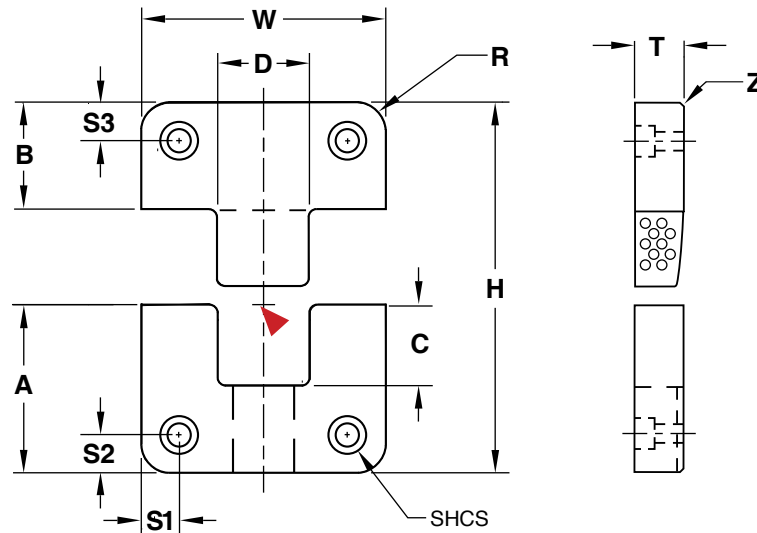
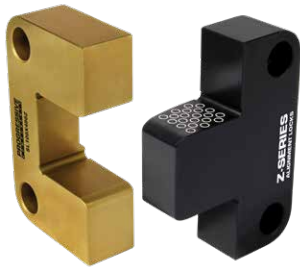
CATALOG NUMBER	NH +.000 -.005	NL +.000 -.002	S4 ±.01	S5 ±.01
BLS150	1.440	2.999	1.75	---
BLS250	2.440	3.999	2.25	1.50
BLS350	3.375	4.999	3.00	2.50

Inserts sold individually and include screws.



SIDE LOCKS

Z-SERIES



Inch Standard

Female: **M** D-2 **H** Core: 58-62 HRC, Surface: 80 HRC **S** Titanium Nitride Coated

Male: **M** H-13 **H** Core: 42-48 HRC, Surface: 70 HRC **S** Black Nitride

CAD insertion point

CATALOG NUMBER	T +.000 -.002	W +.0000 -.0004	A +.000 -.002	B +.000 -.002	C	D .0001/.0003 CLEARANCE PER SIDE	H +.000 -.004	R POCKET RADIUS	S1 ±.01	S2 ±.01	S3 ±.01	Z	SHCS
SL37X100	.375	1.000	1.125	.875	.62	.500	2.000	.187	.25	.25	.25	.015	#10-32 x 1/2
SL50X125	.490	1.250	1.125	.875	.68	.500	2.000	.187	.25	.25	.25	.03	#8-32 x 5/8
SL50X150	.500	1.500	.875	.875	.56	.563	1.750	.187	.25	.25	.25	.03	#8-32 x 5/8
SL50X200	.500	2.000	1.375	.875	.86	.750	2.250	.187	.31	.31	.31	.03	#10-32 x 5/8
SLC62X150	.620	1.500	.870	.870	.41	.500	1.74	.187	.28	.28	.43	.03	1/4-20 x 3/4
SLC62X200	.620	2.000	.870	.870	.41	.680	1.74	.187	.37	.37	.43	.03	1/4-20 x 3/4
SL75X300	.750	3.000	1.875	.875	1.18	1.250	2.750	.250	.37	.37	.37	.03	1/4-20 x 3/4
SLC75X300	.745	3.000	1.370	1.360	.68	1.000	2.73	.187	.37	.68	.68	.03	3/8-16 x 1
SL100X400	1.000	4.000	2.375	1.375	1.43	1.500	3.750	.500	.50	.50	.50	.03	3/8-16 x 1
SL125X500	1.250	5.000	2.875	1.375	1.75	2.000	4.250	.500	.62	.62	.62	.03	1/2-13 x 1-1/4
SL150X600	1.500	6.000	2.875	1.375	1.87	2.500	4.250	.500	.62	.62	.62	.03	1/2-13 x 1-1/2

Screws included.

Metric Standard

CATALOG NUMBER	T +.00 -.05	W +.00 -.01	A +.00 -.05	B +.00 -.05	C	D .002/.008 CLEARANCE PER SIDE	H + 0.0 - 0.1	R POCKET RADIUS	S1 ±.25	S2/S3 ±.25	Z	SHCS
SLM16X50	16	50	21.5	21.5	13	17	43	5	8	11	.8	M6-1.0 x 18
SLM19X75	19	75	36	36	22.5	25	72	5	12.5	18	.8	M10-1.5 x 20
SLM19X100	19	100	45	45	30	35	90	5	15	22	.8	M10-1.5 x 20
SLM25X125	25	125	45	45	28.7	35	90	5	20.5	22	.8	M10-1.5 x 25

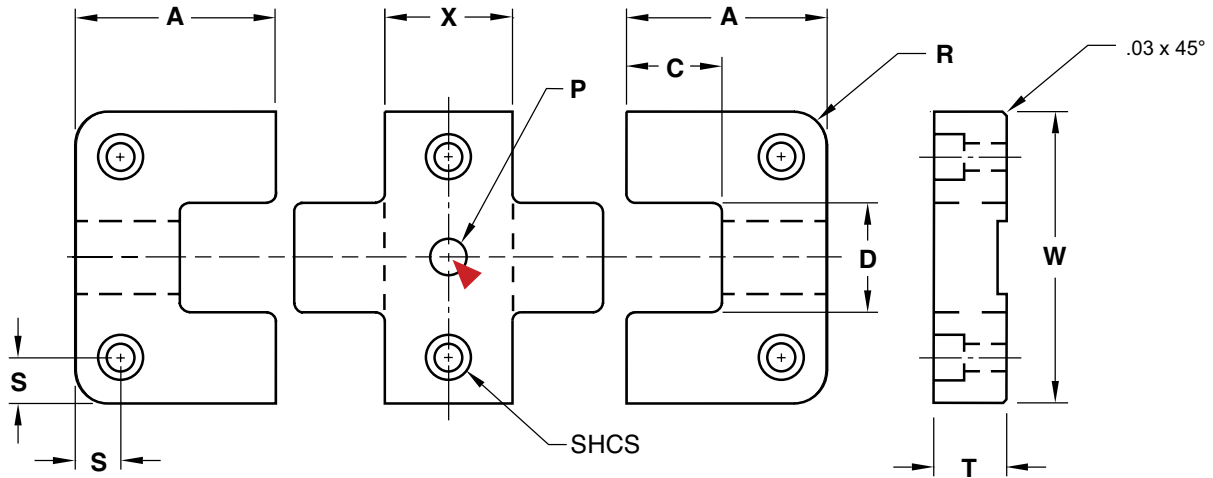
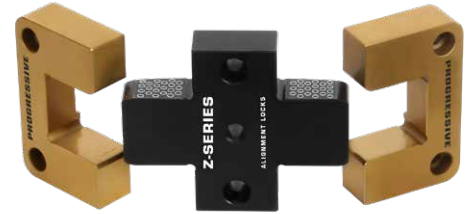
Screws included.

ALTERNATIVE CONFIGURATIONS AVAILABLE

- To order Shuttle Mold sets or special male/female configurations, refer to page C-11.
- Made-to-order Side Locks can be quoted using the templates at procomps.com.



X-STYLE SIDE LOCKS Z-SERIES



Females (2): **M** D-2 **H** Core: 58-62 HRC, Surface: 80 HRC **S** Titanium Nitride Coated

Male: **M** H-13 **H** Core: 42-48 HRC, Surface: 70 HRC **S** Black Nitride

CAD insertion point

CATALOG NUMBER	T +.000 -.002	W +.0000 -.0004	X +.000 -.002	A +.000 -.002	C ±.01	D .0001/.0003 CLEARANCE PER SIDE	R POCKET RADIUS	S ±.01	P +.001 -.000	SHCS
SLX50X87	.500	2.000	.875	1.375	.87	.750	.187	.31	.250	#10-32 x 5/8
SLX75X137	.750	3.000	1.375	1.875	1.18	1.250	.250	.37	.313	1/4-20 x 3/4
SLX75X187	.750	3.000	1.875	1.875	1.18	1.250	.250	.37	.313	1/4-20 x 3/4
SLX100X137	1.000	4.000	1.375	2.375	1.43	1.500	.500	.50	.375	3/8-16 x 1

Screws included.

ALTERNATIVE CONFIGURATIONS AVAILABLE

- Made-to-order Side Locks can be quoted using the templates at procomps.com.

Examples of Shuttle Mold configurations:

2 Female Inserts : 1 Male Insert

To order, specify "-SF" after the catalog number of the lock.

Examples: SL50X200-SF GL100X150-SF TL75X125-SF
TL50X100-R-SF CF31X62-SF CRSM08-SF

2 Male Inserts : 1 Female Insert

To order, specify "-SM" after the catalog number of the lock.

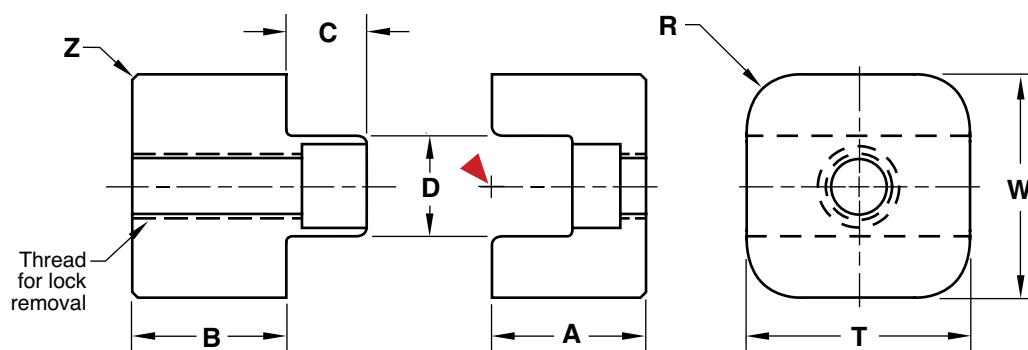
Example: SL75X300-SM GL250X450-SM TL112X200-SM
TL150X250-R-SM CF31X62-SM CRSM08-SM

Individual males and females and special configurations (Ex. 4M:1F) are available. Contact Customer Service for pricing and availability.



INTERNAL TOP LOCKS

Z-SERIES



Inch Standard

Female: **M** D-2 **H** Core: 58-62 HRC, Surface: 80 HRC **S** Titanium Nitride Coated

Male: **M** H-13 **H** Core: 42-48 HRC, Surface: 70 HRC **S** Black Nitride

► CAD insertion point

CATALOG NUMBER	T +.000 -.002	W +.0000 -.0004	A +.000 -.002	B +.000 -.002	C	D .0001/.0003 CLEARANCE PER SIDE	R POCKET RADIUS	Z	SHCS	
TL75X75	.750	.750	.625	.375	.275	.350	.188	.04	M: #6-32 x 3/4	F: #6-32 x 3/8
TL100X100	1.000	1.000	.875	.500	.450	.500	.250	.04	M: #10-32 x 1	F: #10-32 x 1/2
TL137X137	1.375	1.375	1.125	.625	.550	.750	.375	.04	M: 5/16-18 x 1-3/8	F: 5/16-18 x 3/4

Screws included.

Metric Standard

CATALOG NUMBER	T +.00 -.05	W +.00 -.01	A +.00 -.05	B +.00 -.05	C	D .002/.008 CLEARANCE PER SIDE	R POCKET RADIUS	Z	SHCS	
TLM20X20	20	20	14	14	7	9	5	1	M: M4 x 25	F: M4 x 10
TLM25X25	25	25	16	16	8	12	6	1	M: M5 x 25	F: M5 x 10
TLM32X32	32	32	20	20	10	16	7	1	M: M6 x 35	F: M6 x 12

Screws included.

APPLICATION GUIDELINES

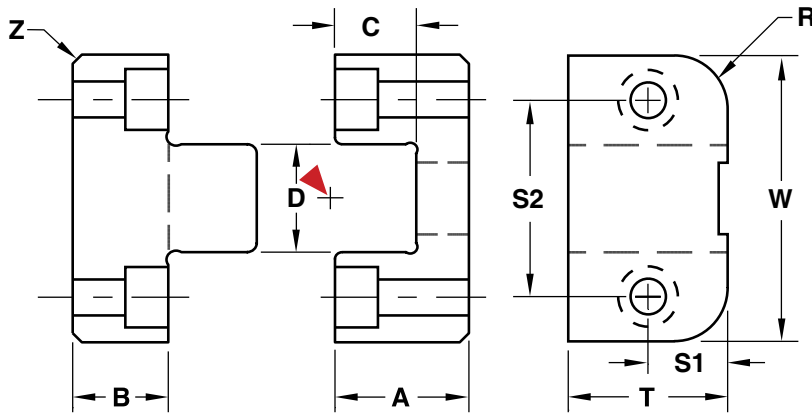
- Internal Top Locks are designed to be installed into inserts or small/medium mold bases.

ALTERNATIVE CONFIGURATIONS AVAILABLE

- To order Shuttle Mold sets or special male/female configurations, refer to page C-11.
- Made-to-order Top Locks can be quoted using the templates at procomps.com.



TOP LOCKS Z-SERIES



► CAD insertion point



Female: **M** D-2 **H** Core: 58-62 HRC, Surface: 80 HRC **S** Titanium Nitride Coated

Male: **M** H-13 **H** Core: 42-48 HRC, Surface: 70 HRC **S** Black Nitride

Inch Standard

CATALOG NUMBER	T +.000 -.002	W +.0000 -.0004	A +.000 -.002	B +.000 -.002	C	D .0001/.0003 CLEARANCE PER SIDE	S1 ±.01	S2 ±.01	R POCKET RADIUS	Z	SHCS	
TL50X100	.500	1.000	.500	.375	.30	.375	.25	.68	.188	.03	M: #6-32 x 1/2	F: #6-32 x 5/8
TL62X125	.625	1.250	.625	.500	.41	.438	.31	.87	.250	.03	M: #6-32 x 5/8	F: #6-32 x 3/4
TL75X125	.750	1.250	.625	.500	.38	.438	.37	.87	.250	.04	M: #8-32 x 5/8	F: #8-32 x 3/4
TL87X150	.875	1.500	.875	.750	.57	.500	.43	1.00	.250	.04	M: #8-32 x 7/8	F: #8-32 x 1
TL100X150	1.000	1.500	.875	.375	.57	.500	.50	1.00	.250	.04	M: #10-32 x 1/2	F: #10-32 x 1
TL100X200	1.000	2.000	1.125	.750	.75	.750	.50	1.37	.375	.04	M: #10-32 x 7/8	F: #10-32 x 1-1/8
TL112X200	1.125	2.000	.875	.625	.50	.750	.56	1.37	.375	.04	M: 1/4-20 x 3/4	F: 1/4-20 x 1
TL112X300	1.125	3.000	1.500	.750	.87	1.125	.56	2.25	.500	.04	M: 1/4-20 x 7/8	F: 1/4-20 x 1-5/8
TL150X250	1.500	2.500	1.375	.625	.85	1.000	.75	1.75	.375	.04	M: 1/4-20 x 3/4	F: 1/4-20 x 1-1/2
TL175X300	1.750	3.000	1.250	.875	.75	1.125	.87	2.25	.500	.06	M: 5/16-18 x 1	F: 5/16-18 x 1-1/4
TL200X350	2.000	3.500	1.750	.750	1.07	1.500	1.00	2.50	.500	.06	M: 3/8-16 x 7/8	F: 3/8-16 x 2"

Screws included.

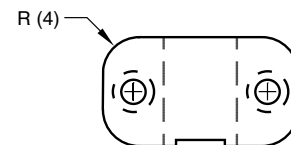
Metric Standard

CATALOG NUMBER	T +.00 -.05	W +.00 -.01	A +.00 -.05	B +.00 -.05	C	D .002/.008 CLEARANCE PER SIDE	S1 ±.25	S2 ±.25	R POCKET RADIUS	Z	SHCS	
TLM26X35	26	35	25	15	17	11	13	23	8	1	M: M5 x 16	F: M5 x 25
TLM30X45	30	45	25	15	17	15	15	30	8	1	M: M6 x 18	F: M6 x 25
TLM36X55	36	55	30	20	21.5	20	18	37.5	8	1	M: M8 x 22	F: M8 x 35
TLM36X75	36	75	35	20	26	30	18	52	8	1.5	M: M10 x 25	F: M10 x 35
TLM45X100	45	100	60	20	42	40	22.5	70	8	1.5	M: M10 x 25	F: M10 x 65

Screws included.

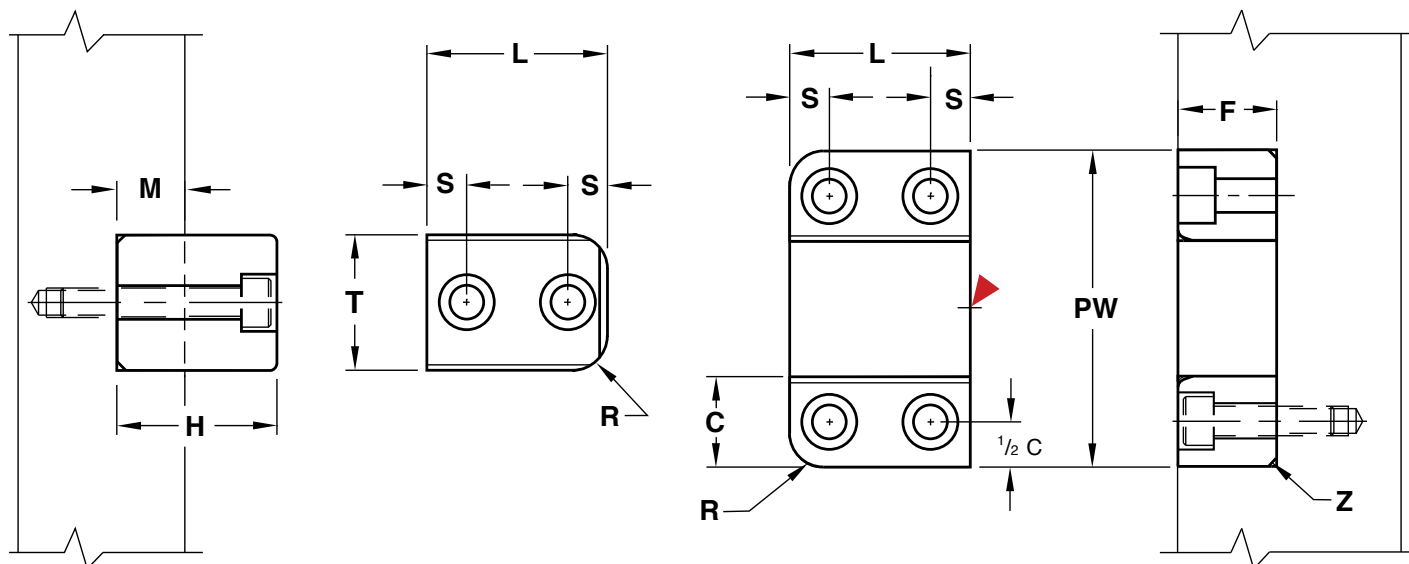
ALTERNATIVE CONFIGURATIONS AVAILABLE

- To order Top Locks with dual radii for mounting internally, specify the catalog number followed by "-R". Ex. TL112X300-R. As an option, refer to the standard Internal Locks shown on page C-12.
- To order Shuttle Mold sets or special male/female configurations, refer to page C-11.
- Made-to-order Top Locks can be quoted using the templates at procomps.com.



GUIDE LOCKS

Z-SERIES



Inch Standard

Females (2): **M** D-2 **H** Core: 58-62 HRC, Surface: 80 HRC **S** Titanium Nitride Coated

Male: **M** H-13 **H** Core: 42-48 HRC, Surface: 70 HRC **S** Black Nitride

CAD insertion point

CATALOG NUMBER	L +.000 -.010	PW +.0003 +.0006	C +.0000 -.0003	F +.000 -.005	T +.0000 -.0003	M	H +.00 -.01	S ±.01	R POCKET RADIUS	Z	SHCS	
GL100X150	1.000	1.500	.500	.500	.500	.375	.85	.25	.187	.03	M: #10-32 x 1	F: #10-32 x 5/8
GL150X250	1.500	2.500	.750	.750	1.000	.625	1.35	.31	.250	.06	M: 1/4-20 x 1-1/2	F: 1/4-20 x 7/8
GL200X350	2.000	3.500	1.000	1.000	1.500	.750	1.73	.44	.375	.06	M: 3/8-16 x 2	F: 3/8-16 x 1-1/4
GL250X450	2.500	4.500	1.250	1.250	2.000	.875	2.11	.56	.500	.09	M: 1/2-13 x 2-1/4	F: 1/2-13 x 1-1/2

Screws included.

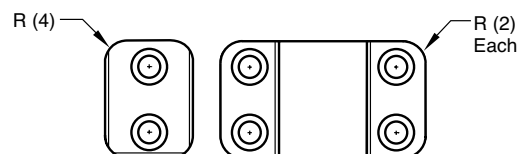
Metric Standard

CATALOG NUMBER	L +.00 -.25	PW +.008 +.015	C +.00 -.01	F +.00 -.12	T +.00 -.01	M	H +.0 -.2	S ±.25	R POCKET RADIUS	Z	SHCS	
GLM25X45	25	45	15	15	15	10	24	7	4	1	M: M4 x 25	F: M4 x 14
GLM40X65	40	65	20	20	25	15	34	10	9	1.5	M: M5 x 35	F: M5 x 22
GLM50X90	50	90	25	25	40	20	44	10	9	1.5	M: M6 x 45	F: M6 x 30

Screws included.

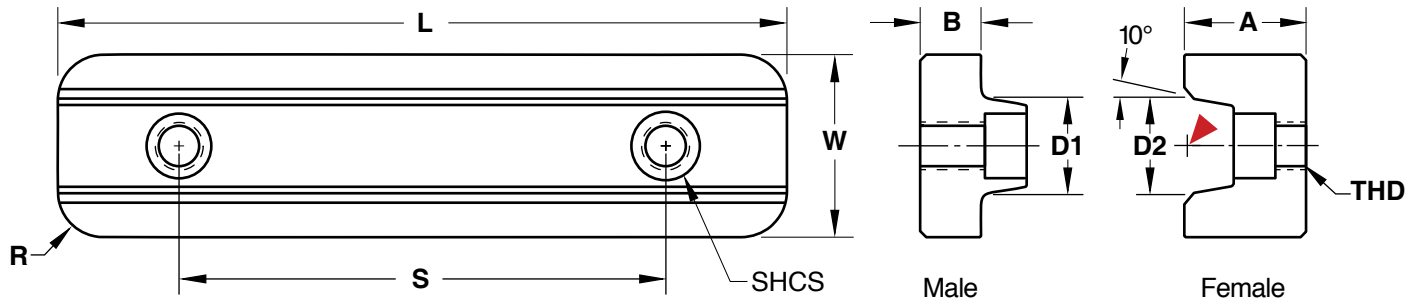
ALTERNATIVE CONFIGURATIONS AVAILABLE

- To order Guide Locks with dual radii for mounting internally, specify the catalog number followed by "-R". Ex. GL200X350-R.
- Made-to-order Guide Locks can be quoted using the templates at procomps.com.





RECTANGULAR TAPER BAR LOCKS



Female: **M** H-13 **H** Core: 42-48 HRC, Surface: 70 HRC **S** Black Nitride

Male: **M** D-2 **H** Core: 58-62 HRC, Surface: 80 HRC **S** Titanium Nitride Coated

CAD insertion point

MALE CATALOG NUMBER	FEMALE CATALOG NUMBER	L +.000 -.005	W +.0000 -.0004	A +.001 -.000	B +.001 -.000	D1 +.0005 -.0000	D2 +.0000 -.0005	R POCKET RADIUS	S ±.01	THD
MTBL100	FTBL100	1.99	.999	.690	.312	.5400	.5398	.250	Centered	1/4-20
MTBL125	FTBL125	3.99	1.249	.870	.375	.6700	.6698	.312	2.50	5/16-18
MTBL150	FTBL150	5.99	1.499	1.000	.500	.800	.7998	.375	4.00	3/8-16

MALE CATALOG NUMBER	SHCS	FEMALE CATALOG NUMBER	SHCS
MTBL100	#10-24 x 3/4 (1)	FTBL100	#10-24 x 1/2 (1)
MTBL125	1/4-20 x 7/8 (2)	FTBL125	1/4-20 x 5/8 (2)
MTBL150	5/16-18 x 1 (2)	FTBL150	5/16-18 x 3/4 (2)

Screws included.

APPLICATION GUIDELINES

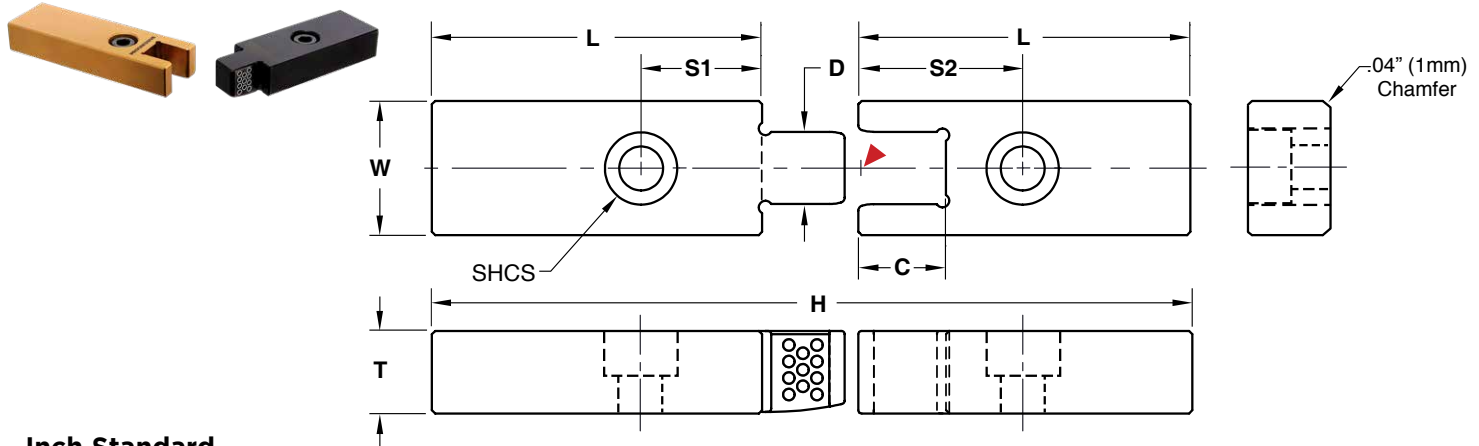
- Lock pockets should be perpendicular to insert side walls to compensate for unequal thermal expansion.
- Mounting pockets must be accurately aligned on the A-side and B-side of the mold.
- Taper Bar Locks should be fit and pre-loaded to assure metal to metal contact on taper geometry.
- The back of the Locks can be ground to adjust for pre-load.

ALTERNATIVE CONFIGURATIONS AVAILABLE

- To order Shuttle Mold sets or special male/female configurations, order the quantity of males or female inserts to suit.

CAVITY INTERLOCKS

FLAT SERIES



Inch Standard

Male: **M** H-13 **H** Core: 42-48 HRC, Surface: 70 HRC **S** Black Nitride

Female: **M** DC53 **H** Core: 58-62 HRC, Surface: 80 HRC **S** Titanium Nitride Coated

▶ CAD insertion point

CATALOG NUMBER	T +.000 -.002	W +.0000 -.0002	L +.000 -.002	C	D .0001/.00025 CLEARANCE PER SIDE	H +.000 -.004	S1 ±.01	S2 ±.01	SHCS
CF31X62	.312	.625	1.875	.343	.312	3.750	.68	.68	#8-32 x 3/8"
CF50X87	.500	.875	2.875	.530	.438	5.750	1.00	1.00	1/4-20 x 5/8"

Screws included.

Metric Standard

Male: **M** H-13 **H** Core: 42-48 HRC, Surface: 70 HRC **S** Black Nitride

Female: **M** DC53 **H** Core: 58-62 HRC, Surface: 80 HRC **S** Titanium Nitride Coated

CATALOG NUMBER	T +.00 -.05	W +.000 -.005	L +.00 -.05	C	D .003/.006 CLEARANCE PER SIDE	H +.0 -.1	S1 ±.25	S2 ±.25	SHCS
CFM08X16	8	16	46	8.8	8	92	12.5	20	M4-0.7 X 10
CFM12X20	12	20	66	12.8	12	132	18.5	30	M6-1.0 X 14

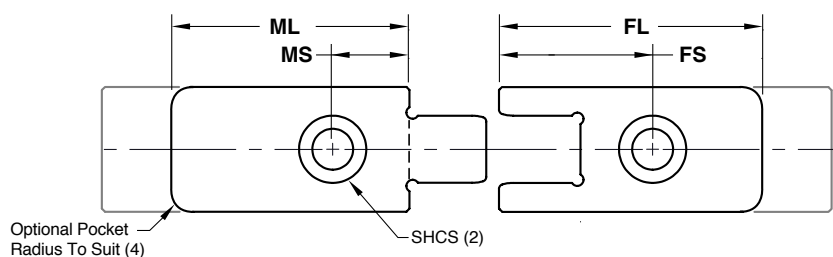
Screws included.

ALTERNATIVE CONFIGURATIONS AVAILABLE

- To order Shuttle Mold sets or special male/female configurations, refer to page C-11.
- Progressive can supply Mold-Ready Flat Cavity Interlocks complete with screw hole locations and lengths modified to suit your application. To order, specify the item code that will be modified from the charts above and provide the following to Customer Service. Note: Minimum order quantity is 2 sets of locks.
 - ML=Male Length (Must be less than "L" above.)
 - MS=Male Screw Location (Will be on center.)
 - FL=Female Length (Must be less than "L" above.)
 - FS=Female Screw Location (Will be on center.)
 - Pocket Radius: If required, add "-R" to the specification. (Radius is designed to suit Interlock size.)

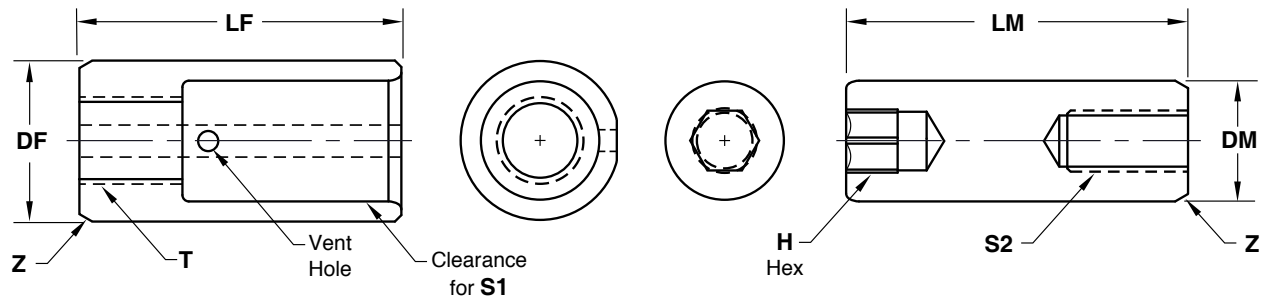
Note: Screw size will be the same as within the standards.

Any specifications outside of the modifications above can be quoted made-to-order by contacting tech@procomps.com.





CAVITY INTERLOCKS ROUND SERIES



Male: **M** H-13 **H** Core: 42-48 HRC, Surface: 70 HRC **S** Black Nitride

Female: **M** DC53 **H** Core: 58-62 HRC, Surface: 80 HRC **S** Titanium Nitride Coated

Inch Standard

CATALOG NUMBER	DM -.0001 -.0002	DF +.0000 -.0002	LF +.000 -.002	LM +.000 -.002	PM	E	Z	S1 SHCS SIZE	T	S2 SET SCREW SIZE	H
CRS250	.2500	.3750	.687	.812	.500	.23	.03	#6-32 x 3/8	#10-32	#6-32 x 1/2	1/8
CRS375	.3750	.5000	1.000	1.062	.625	.36	.04	#10-32 x 5/8	1/4-20	#10-32 x 5/8	3/16
CRS500	.5000	.6250	1.375	1.375	.750	.51	.04	1/4-20 x 7/8	5/16-18	1/4-20 x 3/4	3/16

Socket Head Cap Screw & Set Screw included.

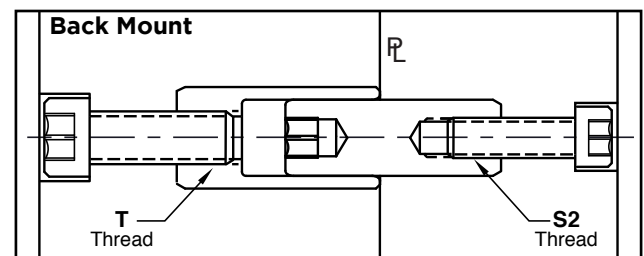
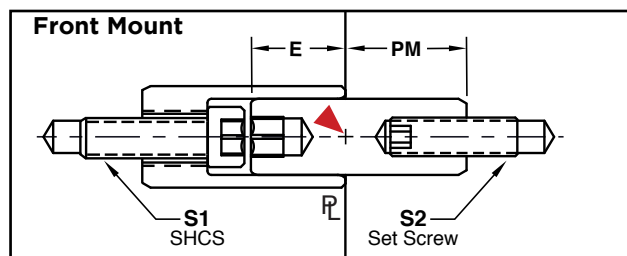
Male: **M** H-13 **H** Core: 42-48 HRC, Surface: 70 HRC **S** Black Nitride

Female: **M** DC53 **H** Core: 58-62 HRC, Surface: 80 HRC **S** Titanium Nitride Coated

Metric Standard

CATALOG NUMBER	DM -.002 -.006	DF +.000 -.005	LF +.0 -.1	LM +.0 -.1	PM	E	Z	S1 SHCS SIZE	T	S2 SET SCREW SIZE	H
CRSM06	6	8	16	18	10	6	.3	M3-0.5 x 8	M4-0.7	M4-0.7 x 12	3
CRSM08	8	12	20	24	14	8	.3	M4-0.7 x 10	M5-0.8	M5-0.8 x 16	4
CRSM10	10	14	22	26	14	10	.3	M4-0.7 x 10	M5-0.8	M6-1.0 x 16	5
CRSM12	12	16	30	32	17	13	.5	M6-1.0 x 16	M8-1.25	M6-1.0 x 16	5

Socket Head Cap Screw & Set Screw included.



APPLICATION GUIDELINES

- Interlocks Can be mounted from parting line or bolted from the back of the inserts.
- Vent hole and flat provided on female insert.
- Maximum clearance between female and male insert is .0006" / .015mm total.
- Diameter (DF & DM) Machining Tolerances: Inch: +.0002" / Metric: +.005mm
- Maximum chamfer size should be .02"/.5mm on counterbore.
- The fasteners provided are for parting line installation shown in the graphic above left. For bolting in back, select fasteners to accommodate insert thickness.
- When installing, limit torque specifications according to the chart at right.

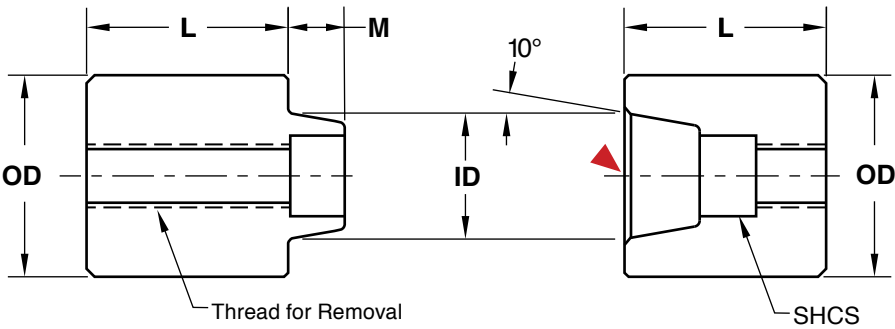
ALTERNATIVE CONFIGURATIONS AVAILABLE

- To order Shuttle Mold sets or special male/female configurations, refer to page C-11.

CATALOG NUMBER	TORQUE
CRS250	25 IN LB
CRSM06	25 IN LB
CRS375	75 IN LB
CRSM08	58 IN LB
CRS500	195 IN LB
CRSM10	140 IN LB
CRSM12	140 IN LB

► CAD insertion point

TAPER LOCKS
COUNTERBORED STYLE



Male: **M** DC53 **H** Core: 58-62 HRC, Surface: 80 HRC **S** Titanium Nitride Coated
Female: **M** H-13 **H** Core: 42-48 HRC, Surface: 70 HRC **S** Black Nitride ▶ CAD insertion point

CATALOG NUMBER	O.D. +.0000 -.0003	I.D.	M	THREAD SIZE	L +.004 +.008	SHCS	
TLC50	.5000	.375	.200	#10-32	.500	M: #6-32 x 3/4	F: #6-32 x 5/16
TLC75	.7500	.500	.250	1/4-20	.750	M: #10-32 x 1-1/8	F: #10-32 x 1/2
TLC100	1.0000	.625	.343	5/16-18	1.000	M: 1/4-20 x 1-1/2	F: 1/4-20 x 3/4
TLC150	1.5000	1.000	.500	3/8-16	1.250	M: 5/16-18x 2	F: 5/16-18x 7/8
TLC200	2.0000	1.500	.500	3/8-16	1.375	M: 5/16-18x 2	F: 5/16-18 x 1

Screws included.

APPLICATION GUIDELINES

- Designed to be mounted and easily removed from parting line utilizing the internal thread.
- Counterbored Style Taper Locks are sold in sets and the males/ females are designed to be used in assembly and cannot be utilized with the Taper Locks shown on page C-19.

