ALIGNMENT LOCKS
PERFORMANCE TESTING

Progressive Components regularly tests products through independent testing facilities nationwide.

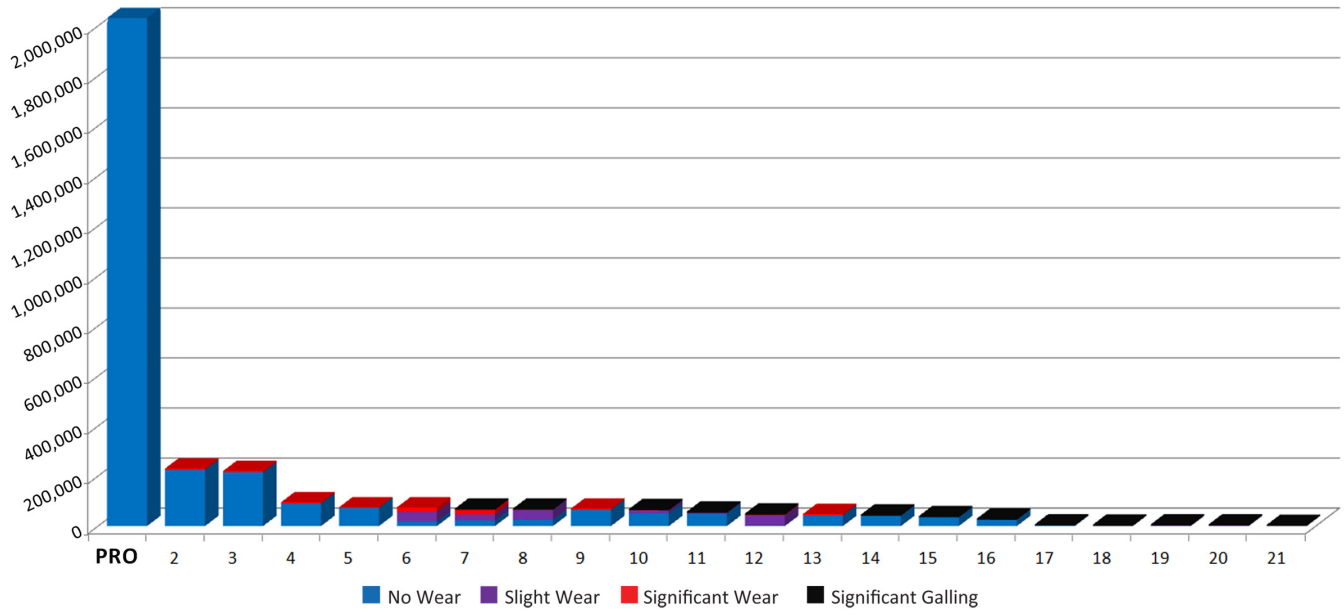
Before launching of the Z-Series™ Alignment Locks, Progressive contracted Element Materials Technology to provide a thorough mold lock Performance Evaluation:

"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."

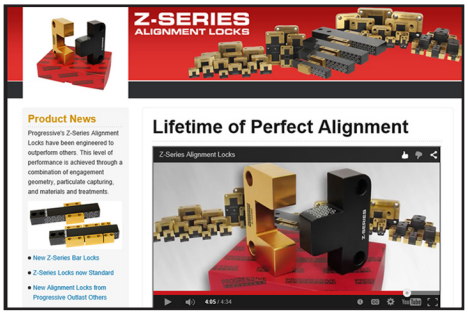
It was determined that the Progressive Components' Z-Series Alignment Locks exceeded the 2-million cycle mark, and still displayed no measurable signs of wear of any type.

"During the past year, 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."

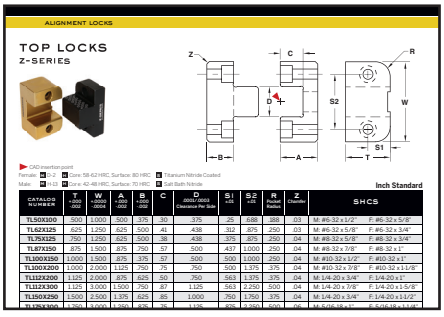
With the industry's widest selection of sizes in stock and competitively priced, specifying alignment locks from Progressive Components means your molds will have unmatched protection from damage and downtime.



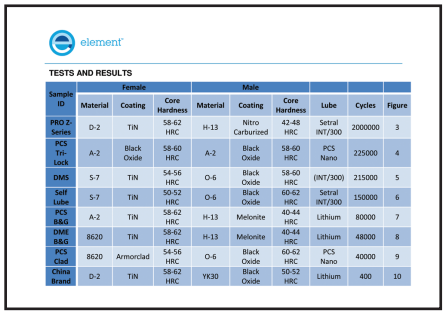
ONLINE DATA



Learn more at www.procomps.com/z-series



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



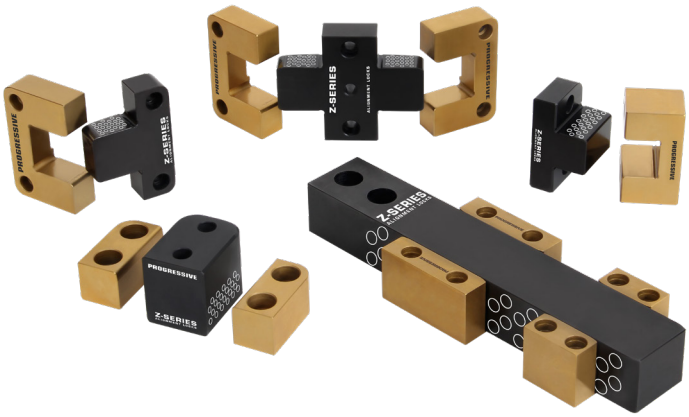
View the entire independent testing report online.

US Patent No. 8,821,144 and others pending.

PROGRESSIVE COMPONENTS

ALIGNMENT LOCKS

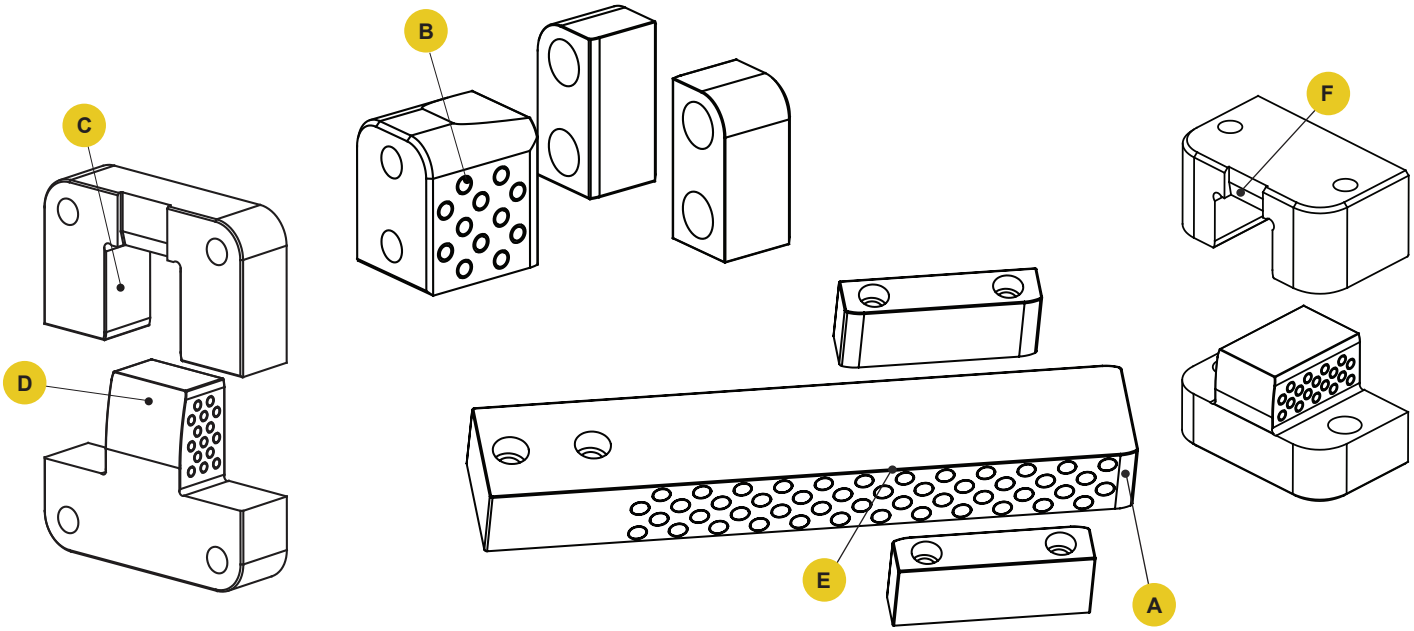
Z-SERIES™



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.

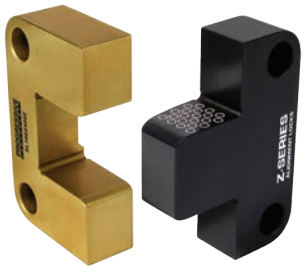


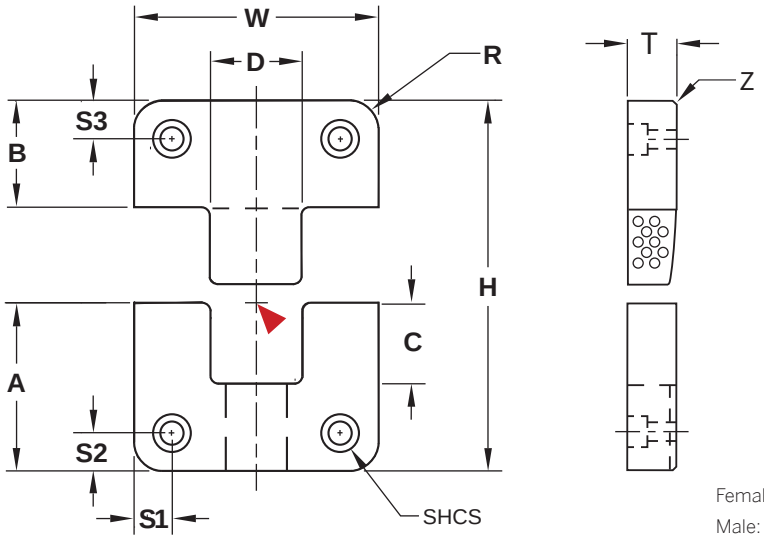
A	**Engagement Ramp:** A fine finish radial lead-in for smooth lifting upon engagement of the mold halves.
B	**Particle Rings:** Particle rings on the width of the male locks trap material and debris to avoid "picking up" or galling of the alignment surface.
C	**Longer Engagement:** Using the maximum 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.
G	**Premium Materials:** Males: H-13, 42-48 HRC, Surface: 70 HRC; Females: D-2, 58-62 HRC, Surface: 80 HRC.

PROGRESSIVE COMPONENTS

US Patent No. 8,821,144 and others pending.

SIDE LOCKS
Z-SERIES





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 Salt Bath Nitride

CAD insertion point

Inch Standard

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/S2/S3 ±.01	Z Chamfer	SHCS
SL37X100	.375	1.000	1.125	.875	.62	.500	2.000	.187	.250	.015	#10-32 x 1/2"
SL50X125	.490	1.250	1.125	.875	.68	.500	2.000	.187	.250	.03	#8-32 x 5/8"
SL50X150	.500	1.500	.875	.875	.56	.563	1.750	.187	.250	.03	#8-32 x 5/8"
SL50X200	.500	2.000	1.375	.875	.86	.750	2.250	.187	.312	.03	#10-32 x 5/8"
SL75X300	.750	3.000	1.875	.875	1.18	1.250	2.750	.250	.375	.03	1/4-20 x 3/4"
SL100X400	1.000	4.000	2.375	1.375	1.43	1.500	3.750	.500	.500	.03	3/8-16 x 1"
SL125X500	1.250	5.000	2.875	1.375	1.75	2.000	4.250	.500	.625	.03	1/2-13 x 1-1/4"
SL150X600	1.500	6.000	2.875	1.375	1.87	2.500	4.250	.500	.625	.03	1/2-13 x 1-1/2"

Screws included.

Inch Standard-Compatible

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 Chamfer	SHCS
SLC62X150	.620	1.500	.870	.870	.41	.500	1.74	.187	.281	.281	.437	.03	1/4-20 x 3/4"
SLC62X200	.620	2.000	.870	.870	.41	.680	1.74	.187	.375	.375	.437	.03	1/4-20 x 3/4"
SLC75X300	.745	3.000	1.370	1.360	.68	1.000	2.73	.187	.375	.688	.688	.03	3/8-16 x 1"

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 Chamfer	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.

For custom Locks, refer to the templates in section X.

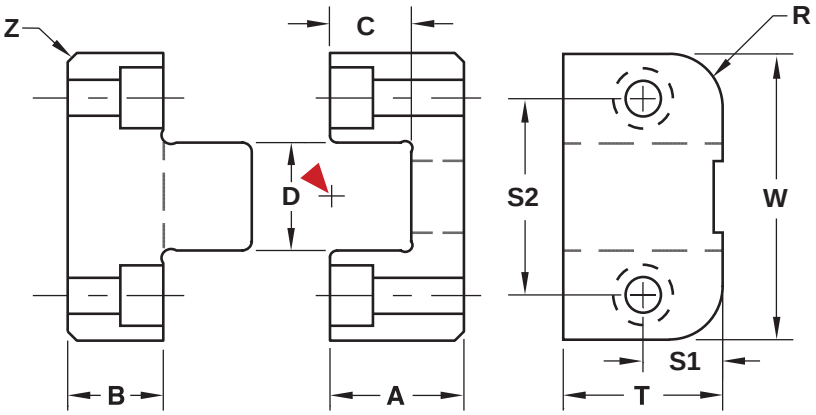
Note: 500°F max operating temperature.

Lubrication:

- 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 Side Locks only; maintain the grease on the mating surfaces and within the rings.

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 Salt Bath 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 Chamfer	SHCS	
TL50X100	.500	1.000	.500	.375	.30	.375	.25	.688	.188	.03	M: #6-32 x 1/2"	F: #6-32 x 5/8"
TL62X125	.625	1.250	.625	.500	.41	.438	.312	.875	.250	.03	M: #6-32 x 5/8"	F: #6-32 x 3/4"
TL75X125	.750	1.250	.625	.500	.38	.438	.375	.875	.250	.04	M: #8-32 x 5/8"	F: #8-32 x 3/4"
TL87X150	.875	1.500	.875	.750	.57	.500	.437	1.000	.250	.04	M: #8-32 x 7/8"	F: #8-32 x 1"
TL100X150	1.000	1.500	.875	.375	.57	.500	.500	1.000	.250	.04	M: #10-32 x 1/2"	F: #10-32 x 1"
TL100X200	1.000	2.000	1.125	.750	.75	.750	.500	1.375	.375	.04	M: #10-32 x 7/8"	F: #10-32 x 1-1/8"
TL112X200	1.125	2.000	.875	.625	.50	.750	.563	1.375	.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	.563	2.250	.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	.750	1.750	.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	.875	2.250	.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	1.000	2.500	.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 Chamfer	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.

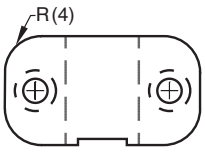
Note: 500°F max operating temperature.

Note: For 20mm square size, refer to page C-11.

For custom Locks, refer to the templates in section X.

Additional Option:

Top Locks are also available with dual radii for mounting internally. To order, specify the catalog number followed by "-R". Ex. TL112X200-R.



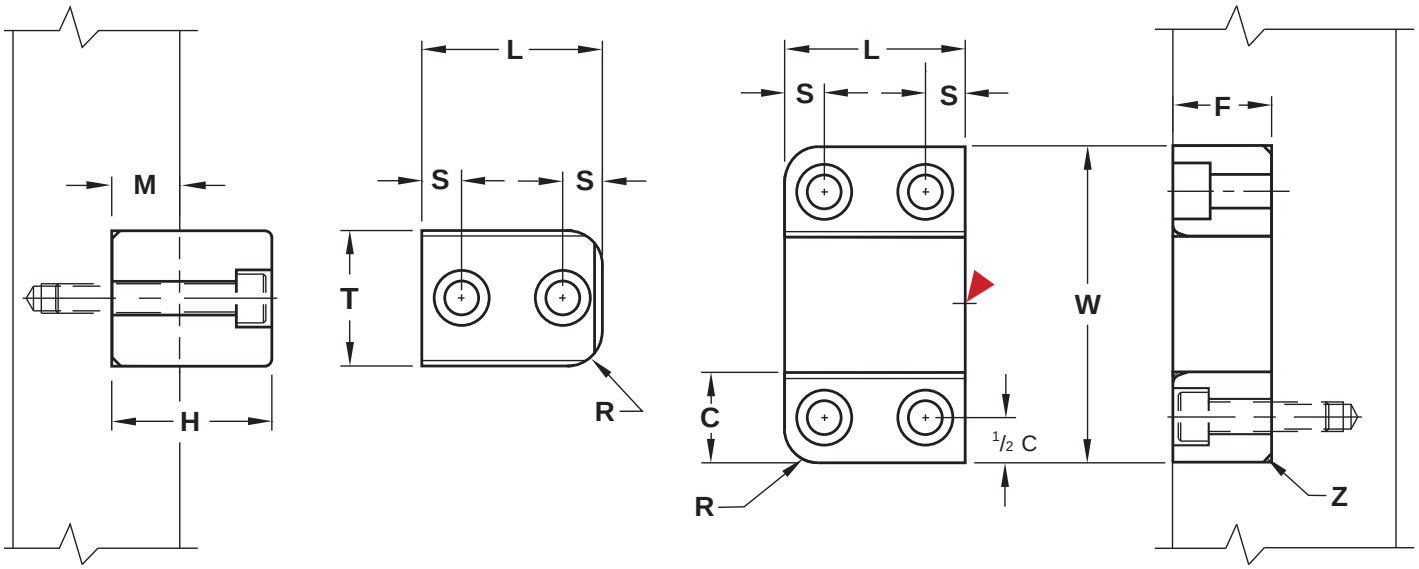
Lubrication:

- 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 Top Locks only; maintain the grease on the mating surfaces and within the rings.

PROGRESSIVE COMPONENTS

US Patent No. 8,821,144 and others pending.

GUIDE 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 Salt Bath Nitride

Inch Standard

CAD insertion point

CATALOG NUMBER	L +.000 -.010	W +.0003 +.0006	C +.0000 -.0003	F +.000 -.005	T +.0000 -.0003	M	H +.00 -.01	S ±.01	R Pocket Radius	Z Chamfer	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.

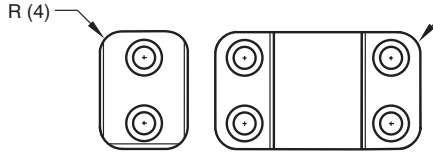
Metric Standard

CATALOG NUMBER	L +.00 -.25	W +.008 +.015	C +.00 -.01	F +.00 -.12	T +.00 -.01	M	H +.0 -.2	S ±.2	R Pocket Radius	Z Chamfer	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

Note: 500°F max operating temperature.

For custom Locks, refer to the templates in section X.

Additional Option:



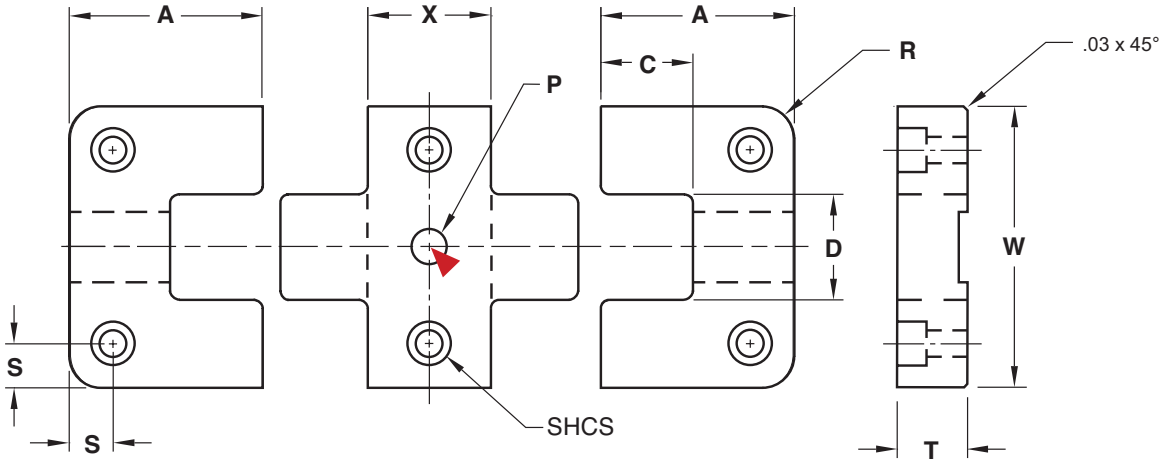
Guide Locks are also available with dual radii for mounting internally as shown at left. To order, specify the catalog number followed by "-R". Ex. GL200X350-R.

Lubrication:

- 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 Guide Locks only; maintain the grease on the mating surfaces and within the rings.

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 Salt Bath Nitride

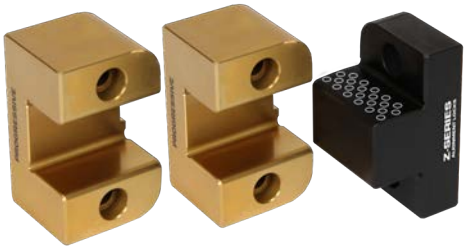
CAD insertion point

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	.312	.250	#10-32 x 5/8"
SLX75X137	.750	3.000	1.375	1.875	1.18	1.250	.250	.375	.313	1/4-20 x 3/4"
SLX75X187	.750	3.000	1.875	1.875	1.18	1.250	.250	.375	.313	1/4-20 x 3/4"
SLX100X137	1.000	4.000	1.375	2.375	1.43	1.500	.500	.500	.375	3/8-16 x 1"

For custom Locks, refer to the templates in section X.

Screws included.
Note: 500°F max operating temperature.

SHUTTLE MOLD SETS



Examples of Shuttle Mold configurations:

2 Female Inserts : 1 Male Insert
To order, specify "-SF" after the catalog number of the lock.
Example: SL50X200-SF GL100X150-SF TL75X125-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

Contact Customer Service for Pricing at CustomerService@procomps.com

PROGRESSIVE COMPONENTS

US Patent No. 8,821,144 and others pending.

INSERTED BAR LOCKS
Z-SERIES

Progressive's Inserted Bar Locks are engineered for long term alignment of very large molds:

- Longevity that far surpasses others, confirmed by extensive independent lab testing as well as monitored performance in harsh, 'real world' conditions.
- Designed to align large injection molds up to 75,000 pounds (B-Side and platen).
- Inserts are also sold individually for new tooling or to retrofit onto existing molds.

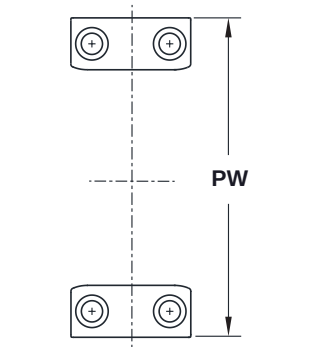
BAR LOCK ASSEMBLIES

Bar: M 4140 H Core: 36-40 HRC S Black Oxide Inserts: M H-13 H Core: 42-48 HRC, Surface 70 HRC S Salt Bath Nitride ▶ CAD insertion point

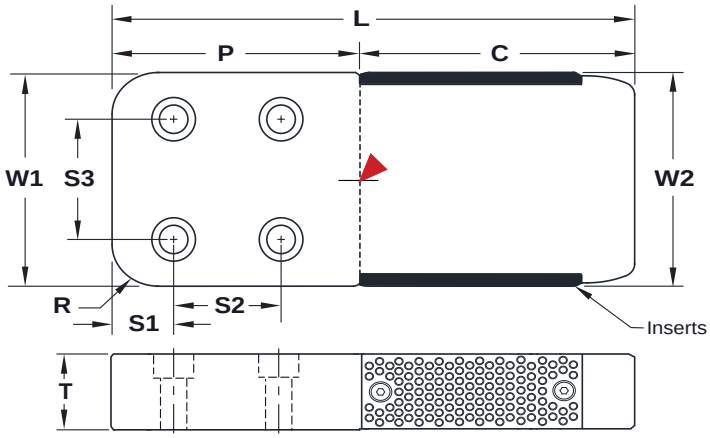
CATALOG NUMBER	T +.000 -.005	W1 +.0000 -.0005	W2	L REF	C REF	S1 ±.01	S2 ±.01	S3 ±.01	R Pocket Radius	P Minimum Pocket Length	SHCS	TOTAL MAX LBS. SUPPORTED
BLN150L8	1.500	4.000	4.000 +.000/-.002	7.75	3.75	1.00	2.00	2.25	.75	4.00	1/2-13 x 1.75	25,000
BLN250L10	2.500	5.000	5.000 +.000/-.002	10.38	5.00	1.25	3.25	3.25	1.00	5.38	5/8-11 x 2.75	50,000
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 3.75	75,000

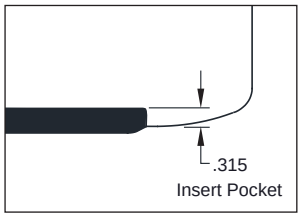
Note: Each catalog number includes (1) Bar and (2) Inserts with screws. Guides are sold separately.

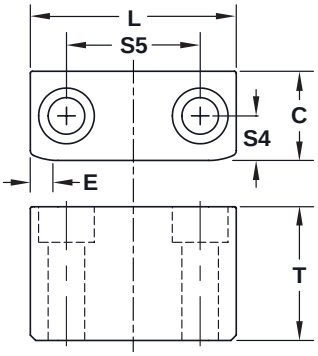
GUIDES



BAR





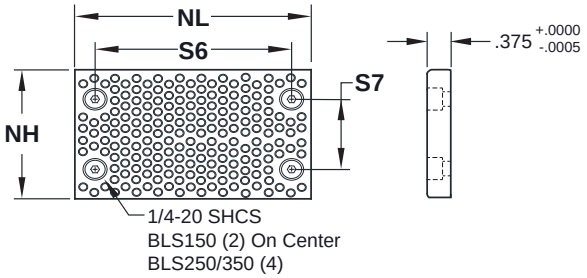


GUIDES

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

CATALOG NUMBER	T +.000 -.005	L +.000 -.005	PW +.0010 +.0015	C +.0000 -.0003	E REF	S4 ±.01	S5 ±.01	SHCS	USE WITH
BLG150L2.3	1.500	2.310	6.000	1.000	.31	.50	1.50	3/8-16 x 1.75	BLN150L8
BLG150L3.8	1.500	3.810	6.000	1.000	.31	.50	2.50	3/8-16 x 1.75	BLN150L8
BLG250L4.3	2.500	4.310	7.500	1.250	.31	.625	3.00	1/2-13 x 2.75	BLN250L10
BLG350L4.8	3.500	4.810	9.500	1.750	.31	.875	3.25	5/8-11 x 3.75	BLN350L13

Notes: Guides are sold in pairs. Each catalog number includes (2) Guides and (4) screws. 500°F max operating temperature.



INSERTS

M H-13 H Core: 42-48 HRC, Surface 70 HRC S Salt Bath Nitride

CATALOG NUMBER	NH +.000 -.005	NL +.000 -.002	S6 ±.01	S7 ±.01
BLS150	1.440	2.999	1.750	---
BLS250	2.440	3.999	2.250	1.500
BLS350	3.375	4.999	3.000	2.500

Note: Inserts sold individually and include screws.

US Patent No. 8,821,144 and others pending.

BAR LOCKS

Z-SERIES-INCH STANDARD

Progressive's Bar Locks enable mold designers to select off-the-shelf components for alignment of large molds and molds with multiple moving plates.

Long-term precision alignment of plates is achieved through Progressive's Z-Series proprietary treatments, engagement ramp geometry and particle rings on the guiding surfaces.

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 Bar Locks only; maintain the grease on the mating surfaces and within the rings.

BAR

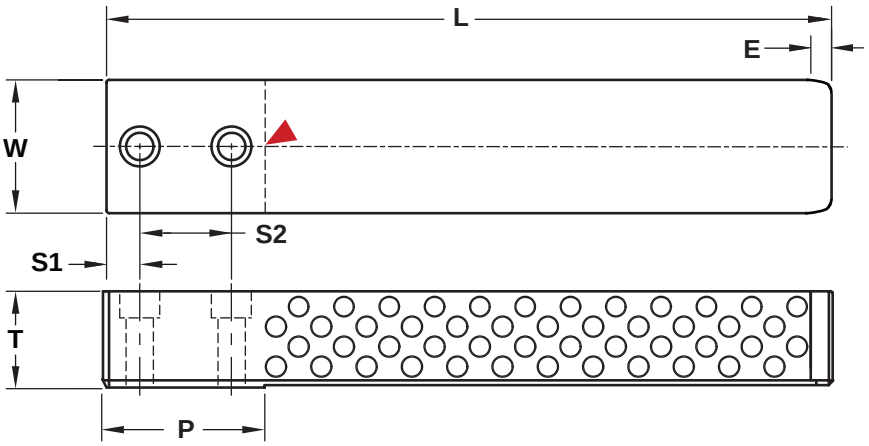
M H-13 H Core: 42-48 HRC, Surface: 70 HRC S Salt Bath Nitride

CATALOG NUMBER	T +.000 -.005	L ±.005	W +.0000 -.0005	E REF	P	S1 ±.005	S2 ±.005	SHCS
BLB100L6	1.000	6.00	1.000	.22	1.38	.38	.69	5/16-18 x 1.25
BLB125L9	1.250	8.88	1.500	.28	1.88	.50	1.00	3/8 - 16 x 1.50
BLB137L11	1.375	10.88	2.000	.31	2.38	.50	1.38	3/8 - 16 x 1.50
BLB150L16	1.500	15.88	3.000	.31	3.38	.63	2.00	1/2 - 13 x 1.75

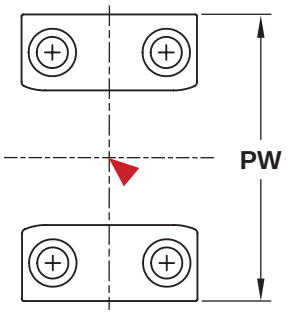
Note: Sold individually. Each catalog number includes (1) Bar Lock and (2) Screws. ▶ CAD insertion point

For custom Bar Locks, refer to the templates in section X.

BAR



GUIDES



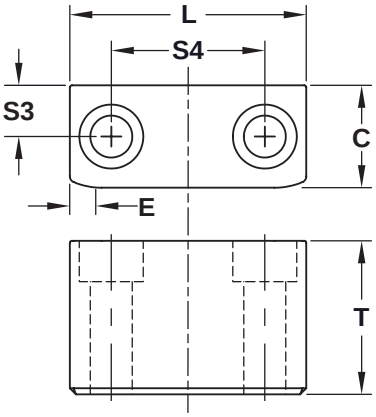
GUIDES

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

CATALOG NUMBER	T +.000 -.005	L +.000 -.005	C +.0000 -.0003	PW +.0003 +.0006	E REF	S3 ±.005	S4 ±.005	SHCS	USE WITH
BLG100L1.3	1.000	1.310	.500	2.000	.22	.250	.750	#10-32 x 1.25	BLB100L6
BLG100L1.8		1.810					1.125		
BLG125L1.3	1.250	1.310	.625	2.750	.28	.310	.750	1/4-20 x 1.50	BLB125L9
BLG125L2.3		2.310					1.25		
BLG137L1.8	1.375	1.810	.750	3.500	.31	.375	1.125	5/16-18 x 1.50	BLB137L11
BLG137L3.3		3.310					2.250		
BLG150L2.3	1.500	2.310	1.000	5.000	.31	.500	1.500	3/8-16 x 1.75	BLB150L16
BLG150L3.8		3.810					2.500		

Guides are sold in pairs. Each catalog number includes (2) guides and (4) screws. ▶ CAD insertion point
Note: 500°F max operating temperature.

For custom Guides, refer to the templates in section X.

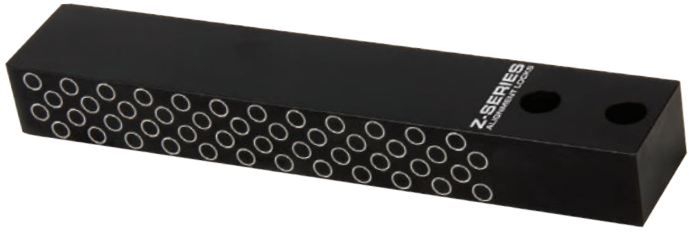


GUIDES

PROGRESSIVE COMPONENTS

US Patent No. 8,821,144 and others pending.

BAR LOCKS
Z-SERIES-METRIC STANDARD



BAR

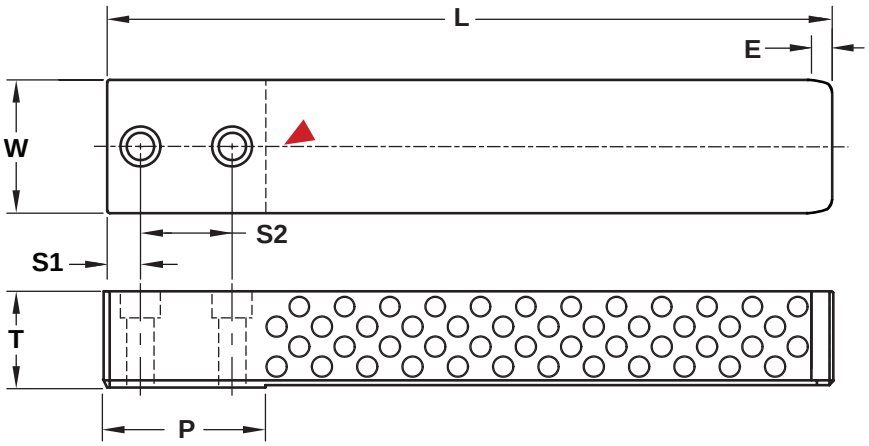
M H-13 H Core: 42-48 HRC, Surface: 70 HRC S Salt Bath Nitride

CATALOG NUMBER	T +.0 -.1	L ±.1	W +.00 -.01	E REF	P MIN	S1 ±.1	S2 ±.1	SHCS
BLBM25L125	25	125	25	6	36	10	18	M8-1.25 x 30
BLBM32L160	32	160	38	6	46	12.5	25	M10-1.5 x 35
BLBM38L250	38	250	50	8	56	15	30	M12-1.75 x 45

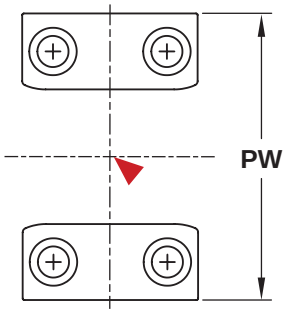
Note: Sold individually. Each catalog number includes (1) Bar Lock and (2) Screws.

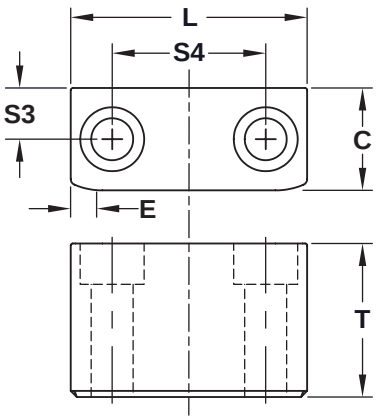
▶ CAD insertion point

BAR



GUIDES





GUIDES

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

CATALOG NUMBER	T +.0 -.1	L +.0 -.1	C +.000 -.005	PW +.007 +.015	E REF	S3 ±.1	S4 ±.1	SHCS	USE WITH
BLGM25L27	25	27	12	49	6	6	14	M4-0.7 x 25	BLBM25L125
BLGM25L36		36					20		
BLGM32L36	32	36	16	70		8	20	M6-1.0 x 35	BLBM32L160
BLGM32L46		46					30		
BLGM38L46	38	46	22	94		11	24	M10-1.5 x 40	BLBM38L250
BLGM38L76		76					54		

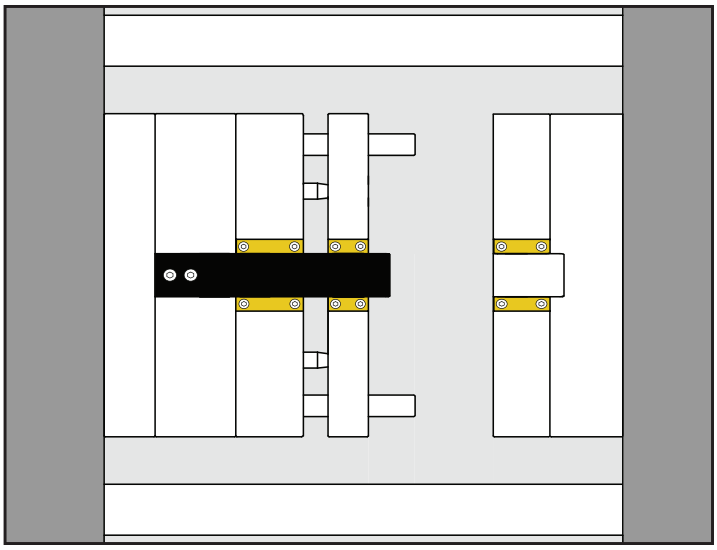
Guides are sold in pairs. Each catalog number includes (2) guides and (4) screws.
Note: 500°F max operating temperature.

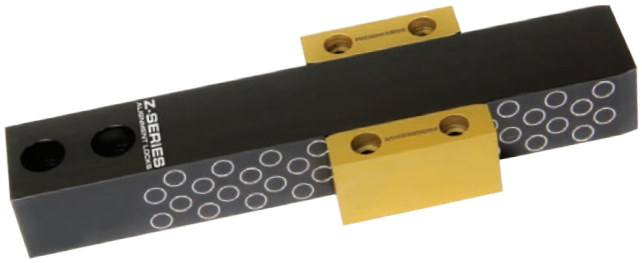
For custom Guides, refer to the templates in section X.

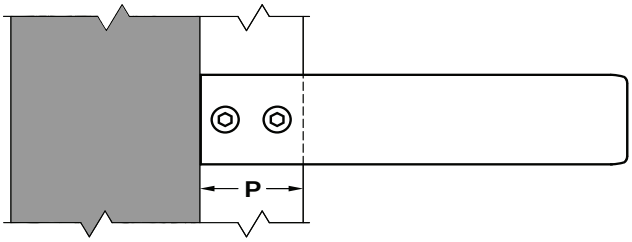
US Patent No. 8,821,144 and others pending.

BAR LOCKS
APPLICATIONS

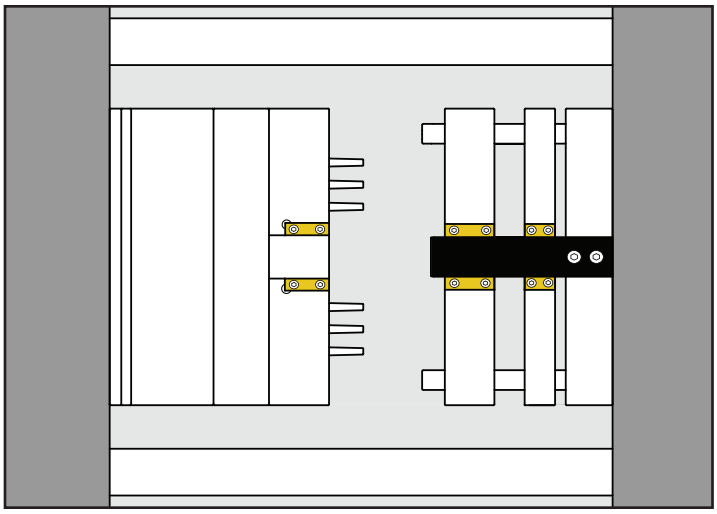
Stripper Plate Application

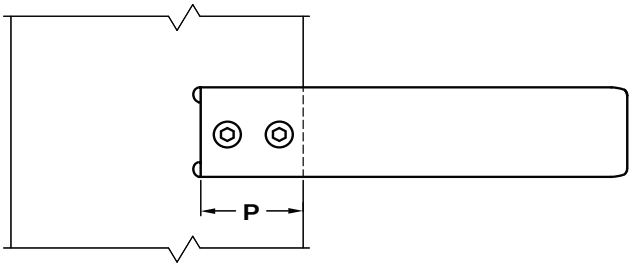






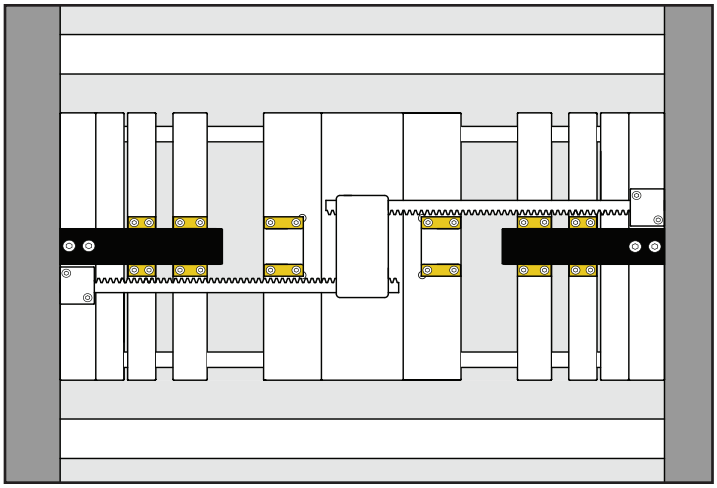
Three Plate Application



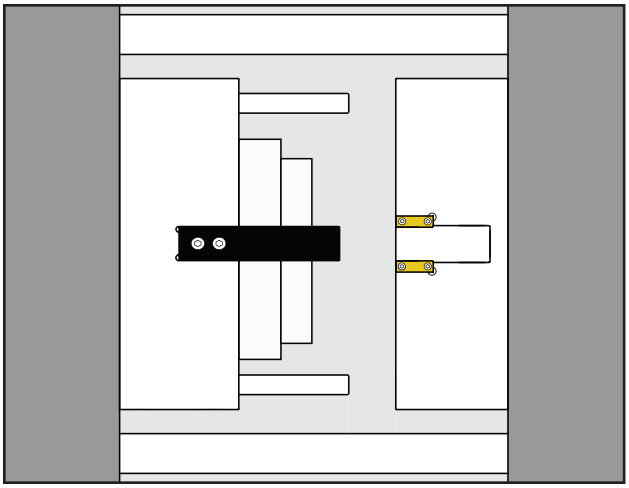


MINIMUM POCKET LENGTH = **P**

Stack Mold Application



Large Mold Application



PROGRESSIVE COMPONENTS

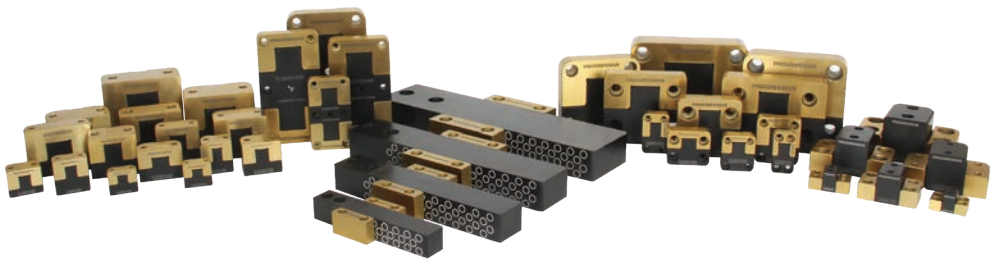
SIDE/TOP/GUIDE LOCK SELECTION GUIDE

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

RECOMMENDED 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	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 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	GL150X250 GLM40X65	TL75X125, TL87X150 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

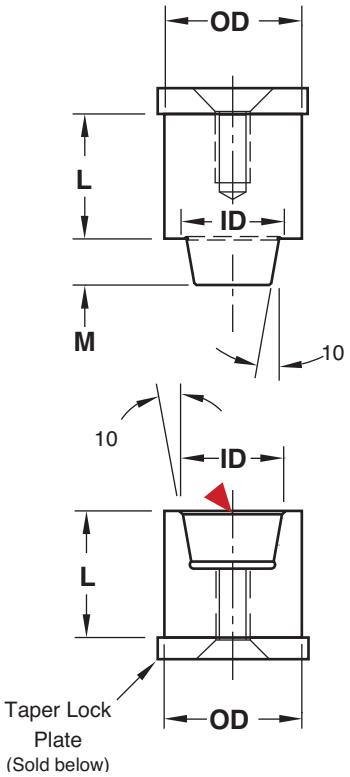
BAR CATALOG NUMBER	GUIDE CATALOG NUMBER	BAR LOCK ENGAGEMENT	TOTAL MAX WEIGHT SUPPORTED (LBS/KG)
BLB100L6	BLG100L1.3, BLG100L1.8	4.50	**15,000 / 6,800**
BLBM25L125	BLGM25L27, BLGM25L36	89	**15,000 / 6,800**
BLB125L9	BLG125L1.3, BLG125L2.3	7.00	**20,000 / 9,000**
BLBM32L160	BLGM32L36, BLGM32L46	114	**20,000 / 9,000**
BLB137L11	BLG137L1.8, BLG137L3.3	8.50	**23,000 / 10,400**
BLBM38L250	BLGM38L46, BLGM38L76	194	**26,000 / 11,500**
BLB150L16	BLG150L2.3, BLG150L3.8	12.50	**26,000 / 11,800**
BLN150L8	BLG150L2.3, BLG150L3.8	3.75	**25,000 / 11,250**
BLN250L10	BLG250L4.3	5.00	**50,000 / 22,500**
BLN350L13	BLG350L4.8	6.00	**75,000 / 34,000**



US Patent No. 8,821,144 and others pending.

PROGRESSIVE COMPONENTS

TAPER LOCKS

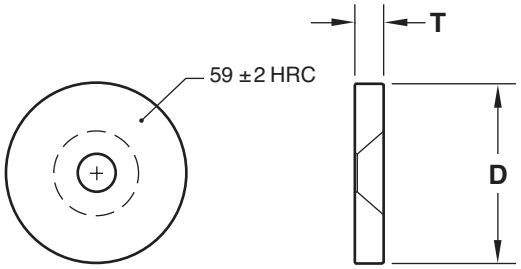


M H-13 H 48-52 HRC

CAD insertion point

O.D. +.0000 -.0003	I.D.	M	Thread Size	L +.004 +.008	MALE CATALOG NUMBER	FEMALE CATALOG NUMBER
1/2	.312	.250	#10-24	11/16	MTL50L.68	FTL50L.68
				7/8	MTL50L.87	FTL50L.87
				1-3/16	MTL50L1.18	FTL50L1.18
				1-3/8	MTL50L1.37	FTL50L1.37
3/4	.500	.281	1/4-20	11/16	MTL75L.68	FTL75L.68
				7/8	MTL75L.87	FTL75L.87
				1-3/16	MTL75L1.18	FTL75L1.18
				1-3/8	MTL75L1.37	FTL75L1.37
1	.625	.343	1/4-20	11/16	MTL100L.68	FTL100L.68
				7/8	MTL100L.87	FTL100L.87
				1-3/16	MTL100L1.18	FTL100L1.18
				1-3/8	MTL100L1.37	FTL100L1.37
1-1/2	1.000	.500	5/16-18	1-1/8	MTL150L1.12	FTL150L1.12
				1-3/8	MTL150L1.37	FTL150L1.37
				1-5/8	MTL150L1.62	FTL150L1.62
2	1.500	.500	5/16-18	1-1/8	MTL200L1.12	FTL200L1.12
				1-3/8	MTL200L1.37	FTL200L1.37
				1-5/8	MTL200L1.62	FTL200L1.62

TAPER LOCK PLATES



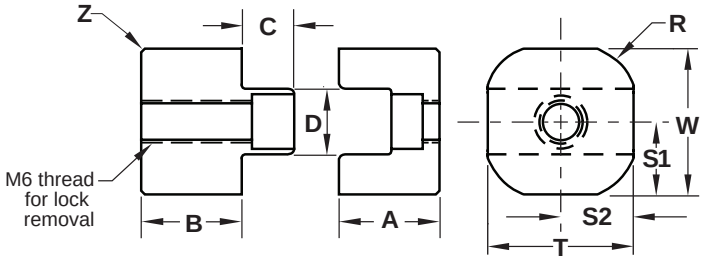
M AISI 52100 H 57-61 HRC S Black Oxide

CATALOG NUMBER	Taper Lock OD	D +.000 -.015	T +.000 -.002	Flat Head Counterbore
TLP50	1/2	.687	.187	#10-24
TLP75	3/4	1.000	.187	1/4-20
TLP100	1	1.187	.187	1/4-20
TLP150	1-1/2	1.687	.250	5/16-18
TLP200	2	2.187	.250	5/16-18

1/2" long FHCS included.

TOP LOCK-20MM SQUARE

Z-SERIES



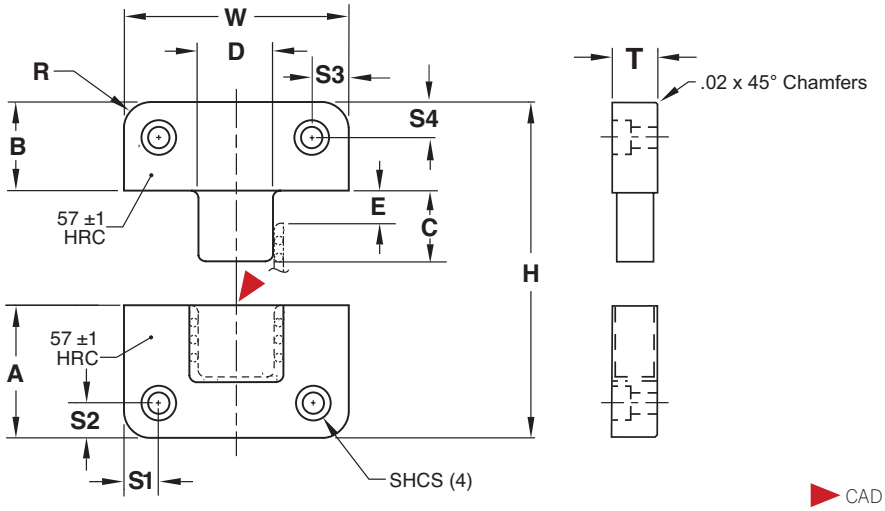
Female: M D-2 H Core: 58-62 HRC, Surface: 80 HRC S Titanium Nitride Coated

Male: M H-13 H Core: 42-48 HRC, Surface: 70 HRC S Salt Bath Nitride

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 Chamfer	SHCS
TLM20X20	20	20	14	14	7	9	Center	Center	5	1	M: M4 x 25 F: M4 x 10

SIDE LOCKS

NEEDLE BEARING · INCH STANDARD



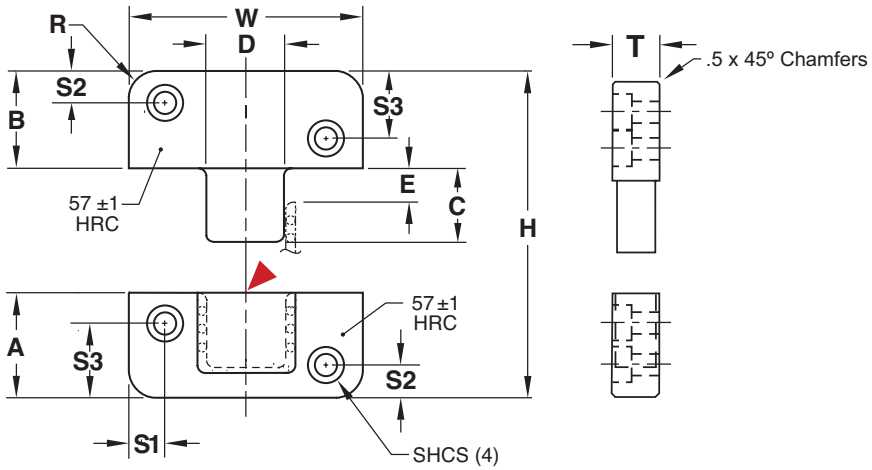
M O-2 H 56-58 HRC S Black Oxide

CAD insertion point

CATALOG NUMBER	T +.000 -.005	W ±.0002	W Pocket Width +.0005 -.0000	A +.000 -.005	B +.000 -.005	C	D	E	H +.000 -.004	R Pocket Radius	S1 ±.01	S2 ±.01	S3 ±.01	S4 ±.01	SHCS
SLR50X125	.500	1.2495	1.250	1.375	.875	.66	.412	.210	2.250	.187	.171	.250	.171	.437	#8-32 x 5/8"
SLR50X150	.500	1.4995	1.500	.875	.875	.40	.500	.210	1.750	.187	.250	.250	.250	.250	#8-32 x 5/8"
SLR50X150-L	.500	1.4995	1.500	1.375	.875	.66	.550	.250	2.250	.187	.182	.376	.182	.500	#8-32 x 5/8"
SLR50X200	.500	1.9995	2.000	1.375	.875	.66	.750	.325	2.250	.187	.312	.312	.312	.312	#10-32 x 5/8"
SLR75X300	.750	2.9995	3.000	1.875	.875	.95	1.188	.575	2.750	.250	.375	.375	.375	.375	1/4-20 x 3/4"
SLR100X400	1.000	3.9995	4.000	2.375	1.375	1.34	1.855	.450	3.750	.500	.500	.500	.500	.500	3/8-16 x 1-1/8"

For technical information, refer to page C-13. Note: Cages are manufactured from resin or aluminium, depending on size. Screws included.

NEEDLE BEARING · METRIC STANDARD



M O-2 H 56-58 HRC S Black Oxide

CATALOG NUMBER	T +.00 -.12	W ±.005	W Pocket Width + .012 - .000	A +.00 -.12	B +.00 -.12	C	D	E	H +0.0 -0.1	R Pocket Radius	S1 ±.25	S2 ±.25	S3 ±.25	SHCS
SLRM32X63	32	62.9	63	46	46	27	21	12.1	92	8	9	11	35	M8-1.25 x 35
SLRM40X100	40	99.9	100	66	66	36	33	19.5	132	10	13	18	48	M12-1.75 x 45

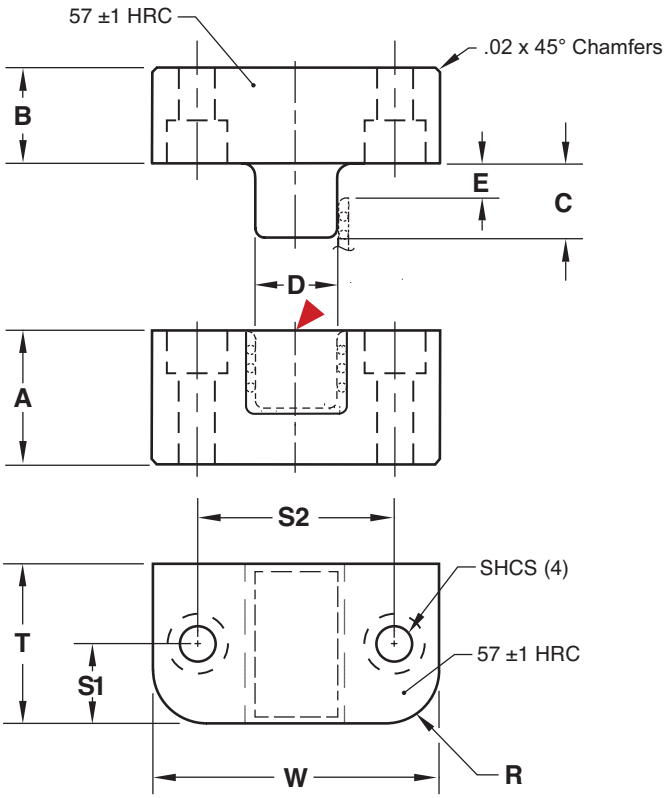
For technical information, refer to page C-13. Note: Cages are manufactured from resin or aluminium, depending on size. Screws included.

PROGRESSIVE COMPONENTS

US Patent No. 6,953,331

TOP LOCKS

NEEDLE BEARING · INCH STANDARD



M O-2 H 56-58 HRC S Black Oxide

CAD insertion point

CATALOG NUMBER	T +.000 -.005	W +.0002 -.0000	W Pocket Width +.0005 -.0000	A +.000 -.005	B +.000 -.005	C	D	E	S1 ±.01	S2 ±.01	R Pocket Radius	SHCS	
TLR87X150	.875	1.4995	1.500	1.375	.750	.66	.550	.225	.438	1.143	.250	M: #8-32 x 7/8"	F: #8-32 x 1-1/2"
TLR112X200	1.125	1.9995	2.000	1.375	.625	.62	.660	.425	.563	1.375	.375	M: 1/4-20 x 3/4"	F: 1/4-20 x 1-1/2"
TLR150X250	1.500	2.4995	2.500	1.375	.625	.62	.900	.400	.750	1.750	.375	M: 1/4-20 x 3/4"	F: 1/4-20 x 1-1/2"
TLR150X250-L	1.500	2.4995	2.500	1.875	.875	1.02	1.015	.350	.750	1.875	.375	M: 1/4-20 x 1"	F: 1/4-20 x 2"

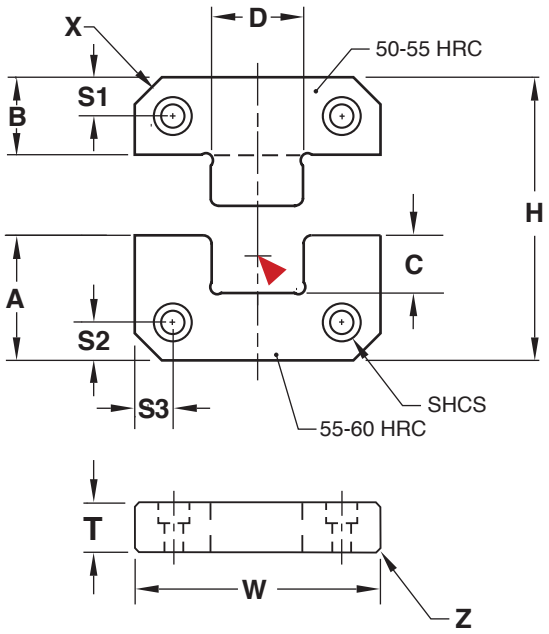
Note: Cages are manufactured from resin or aluminium, depending on size.

Screws included.

Technical Information:

- Zero clearance between male and female (D) dimensions.
- Bearings: 64 HRC
- Maximum Mold Temperature: 300° F (150° C)
- Engagement occurs at E dimension shown.
- Locks are to be mounted in the mold base and not in the core or cavity inserts.
- For optimal performance, pockets are to be machined to nominal "W" pocket width dimensions in each table. If replacing locks in existing pockets, ensure .0004" clearance, and the lock may be modified to suit.
- As with other mold mechanisms, clean and maintain locks at the mold's scheduled PMs.

SIDE LOCKS
INCH STANDARD



Female: M O-2 H 55-60 HRC
Male: M O-2 H 50-55 HRC

CAD insertion point

CATALOG NUMBER	T +.000 -.002	W +.0000 -.0004	A +.0000 -.0008	B +.0000 -.0008	C	D .0001/.0003 Clearance Per Side	H + .000 - .002	X Corner Chamfer	Z Chamfer	S1 ±.01	S2 ±.01	S3 ±.01	SHCS
SLS62X150	.620	1.500	.870	.870	.33	.500	1.74	.19	.02	.437	.281	.281	1/4-20 x 3/4"
SLS62X200	.620	2.000	.870	.870	.33	.680	1.74	.19	.04	.437	.375	.375	1/4-20 x 3/4"
SLS75X300	.745	3.000	1.370	1.360	.57	1.000	2.73	.38	.04	.688	.688	.375	3/8-16 x 1"
SLS75X400	.745	4.000	1.870	1.870	.79	1.375	3.74	.50	.04	.875	.875	.625	3/8-16 x 1"
SLS112X500	1.120	5.000	1.870	1.870	.79	1.750	3.74	.50	.04	.875	.875	.750	1/2-13 x 1-1/4"

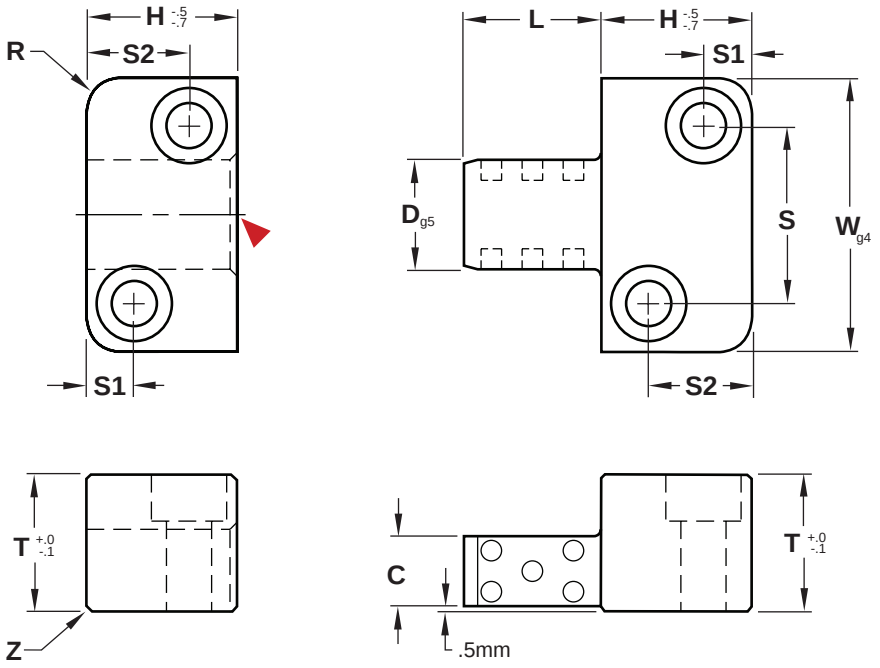
Screws included.

METRIC STANDARD

CATALOG NUMBER	T +.00 -.05	W +.00 -.01	A +.00 -.02	B +.00 -.02	C	D .002/.008 Clearance Per Side	H + .00 - .04	X Corner Chamfer	Z Chamfer	S1/S2 ±.2	S3 ±.2	SHCS
SLMS13X38	13	38	22	22	8.5	12	44	5	.5	7	8	M5-.8 x 15
SLMS16X50	16	50	21.5	21.5	9.5	17	43	5	1	11	8	M6-1.0 x 18
SLMS19X75	19	75	36	36	15	25	72	8	1	18	12.5	M10-1.5 x 20
SLMS19X100	19	100	45	45	21	35	90	10	1	22	15	M10-1.5 x 20
SLMS25X125	25	125	45	45	21	45	90	10	1	22	20.5	M10-1.5 x 25

Screws included.

SIDE LOCKS
GRAPHITE PLUGGED



M O-2 H 56-60 HRC

CAD insertion point

CATALOG NUMBER	L	D	T	W	C	H	S1	S2	S	R	Z	Screw Size
SLPM16X20	20	16	20	40	11	22	7	15	26	6	1	M6-1.0 x 25
SLPM16X40	40											
SLPM20X25	25	20	22	45	13	27	7	19	31	6	1	M6-1.0 x 25
SLPM20X50	50											
SLPM25X32	32	25	25	50	14	36	9	27	35	8	1	M6-1.0 x 30
SLPM25X63	63											
SLPM32X40	40	32	32	63	19	46	11	35	45	8	1	M8-1.25 x 35
SLPM32X80	80											
SLPM40X50	50	40	36	85	22	56	15	40	60	10	1.5	M10-1.5 x 40
SLPM40X100	100											
SLPM50X56	56	50	40	100	24	66	18	48	74	10	1.5	M12-1.75 x 45
SLPM50X112	112											

Screws included.

Using grease will inhibit the function of the graphite plugs. Instead, use a light 20 weight oil at startup to begin lubrication.