



## **Precision Workholding Technology**

DYNOGRIP™ DYNOLOCK™ DYNOMOUNT™  
QUICK CHANGE, ZERO POINT 52/96 SYSTEM



Headquartered in Anoka, Minnesota, in a 300,000 sq. ft. (28,000m<sup>2</sup>) state-of-the-art facility.



## SEVEN DECADES OF EXCELLENCE

Founded in 1962, Mate is a world-class manufacturer of superior solutions for the metal cutting and metal forming industries. We manufacture workholding systems, CNC punch press tooling, and offer a complete line of press brake tooling and laser consumables. Mate products and services are available worldwide, fully supported by more than 80 dealers in every industrialized country.



## PERSONAL, RESPECTFUL RELATIONSHIPS

Mate does business with people, not companies. Our connection to you is personal. Mate's team of manufacturing and metalworking professionals knows what you go through. We know what it's like to compete for that next job, manage deadlines or even need a rescue. With Mate you have a partner that respects your knowledge and is dedicated to helping you succeed.

## YOUR GO-TO SOURCE

Serving our customers is at the core of who we are. In your plant or on the phone, we're up for whatever metalworking challenges you face. Your Mate representatives are experts who know from experience what happens on the shop floor and provide our legendary in-field support. They speak your language, fully capable of helping you improve processes and solve problems. Mate customer service is ready to assist with fast quotes, guiding your order on to our top-notch machinists and shipping pros.



## GET INSPIRED!

With our vast knowledge and broad product range we inspire innovative thinking. Our customer's projects can be seen around the world: from unique building façades thought to be impossible to make, to a new way to add strength to thin material. The possibilities are endless, so think big, bold and beyond.

## WE'VE GOT YOU COVERED

Dedicated to quality in every aspect of our business, Mate offers an extensive standard product line that can be delivered with same day or next day service. All Mate products are backed with our industry leading 100% customer satisfaction guarantee.



## MATE'S MISSION AND PROMISE TO YOU:

Mate's mission is to personally **Respect, Support** and **Inspire** metalworking professionals around the world with high-quality products and services for factory productivity.

**Precision Workholding Technology**

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**Welcome to Mate Workholding**

Increase your factory productivity with the all new, next generation 52/96 zero point workholding system from Mate Precision Technologies: Mate DynoGrip™ Vises, Mate DynoLock™ Bases and Mate DynoMount™ Mounts and Accessories.

Mate understands your challenges. We have decades of machining experience producing precision, high quality steel products for customers around the world. Using this knowledge, Mate designed and developed the ultimate workholding system. Mate Workholding is truly made for machinists by machinists.

The Mate 52/96 zero point workholding system maximizes holding power in a compact, quick change modular design that reduces setup time and process variability. It is ideal for 3-, 4- and 5-axis machining centers. Going beyond machining, it can be used in a variety of applications such as inspection, CMM, cleaning, washing, assembly and additive manufacturing.

A zero point system, Mate 52/96 workholding is compatible with similar systems, including 52mm and 96mm four post pull stud configurations from Lang, Jergens, 5th Axis, Gerardi and others. The vises also accept a single pull stud configuration for compatibility with Schunk, Big Daishowa and others. By using the appropriate adapter, Mate 52/96 zero point vises are easily modified to work with systems from SMW, Erowa, System 3R and others.

With an eye to factory automation, the Mate 52/96 zero point workholding system includes QuickSpecs™, a unique product identification system that provides real-time access to product information and potential integration into your business systems. Additionally, the product supports common robotic interfaces and palletizing systems.

Made in the USA. Made for people who respect well-made, quality products. Made for machinists by machinists.

*Catalog content subject to change without notice.*



## SELF-CENTERING VISE SYSTEM

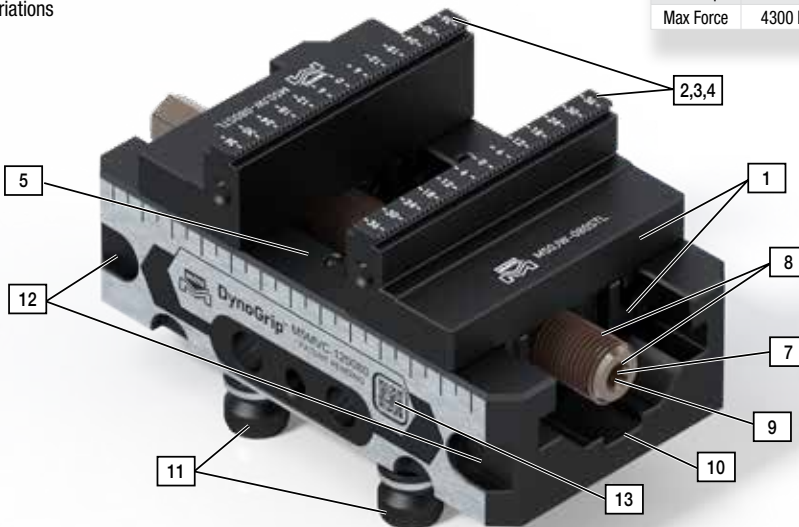
Not just any compact quick change vise system, Mate DynoGrip self-centering vises are engineered to shorten setup time and reduce process variability. A closer look at the following product highlights shows just how much thought went into designing and building the DynoGrip vise system.

### Product highlights:

- Maximum holding power in a compact form with minimal part lift
- Best-in-class accuracy of vise clamping on center to  $\pm 0.015\text{mm}$  ( $\pm 0.0006''$ )
- Best-in-class repeatability of vise return to center of 0.010mm (0.0004")
- Quick change jaws, reversible and interchangeable
- Jaws made from highly-alloyed, tool steel (core hardness 45-50 HRC, surface hardness up to 65HRC)
- Black Diamond™ surface treatment on vise body, pushers and jaws for maximum life
- Zero Point quality engagement with 52mm and 96mm four post pull stud pattern
- Compatible with other mounting systems or mount directly to the machine bed
- Available in 13 size variations
- Patents Pending
- Made in USA

Best-In-Class		
Accuracy:	$\pm 0.015\text{mm}$	$\pm 0.0006''$
Repeatability:	0.010mm	0.0004"

Torque and Force				
	52 with 60mm Jaw	52 with 80mm Jaw	96 with 80mm Jaw	96 with 125mm Jaw
Max Torque	60Nm	60Nm	130Nm	130Nm
Max Force	19kN	23kN	31kN	34kN
Max Torque	44 ft-lbs	44 ft-lbs	95 ft-lbs	95 ft-lbs
Max Force	4300 lbf	5200 lbf	7000 lbf	7650 lbf



1. Anti-Lift Design - the pusher and jaw exert downward force on the piece part
2. Quick change jaws, hardened, interchangeable and reversible, no tools required to attach or remove
3. Three-In-One multi-grip jaw design for maximum flexibility-parallel, 45° dovetail, and precision serrated tooth standard with every jaw
4. Serrated tooth geometry for superior bite and downward force, with a built-in dovetail design for the most demanding applications
5. Designed to accept an optional center jaw to hold two piece parts at one time
6. Optional machinable jaw adapter with integrated quick change feature and steel or aluminum jaw blanks (not shown)
7. Best in class precision lead screw manufactured from premium tool steel and NC controlled heat treatment, tempering and proprietary TiCN coating
8. Synchronized timed threads on both the lead screw and pushers - repeatable precision centering, interchangeable replacement components
9. Lead screw and center support assembly are easily micro adjustable, fine calibration
10. Angled channels and side ports for better swarf and coolant flow
11. Pull studs highly wear resistant with optimized geometry to ensure better location repeatability and lock down force when used with DynoLock bases
12. Toe Clamp engagement option for direct mount to machine table
13. Mate's QuickSpecs™ 2D bar code tag that is smartphone enabled and 3D graphic supported, with links to full product specs and CAD files
14. Compatible with competitor bases. Requires applicable pull studs and hardware
15. Compatible with Schunk Vero-S and other ZPS connection systems. Requires applicable pull studs and hardware
16. Black Diamond™ surface treatment on vise body, pushers and jaws for maximum life
17. Jaws are end stop ready

### 52 Family



### 96 Family





## BASE SYSTEM

Mate's DynoLock quick change base system is the foundation of your workholding and the key to superior productivity.

DynoLock bases mount to the machine bed, tombstone, pyramid, riser or dual right angle.

Offering best-in-class accuracy and repeatability, DynoLock maintains a superior holding force with the top tool.

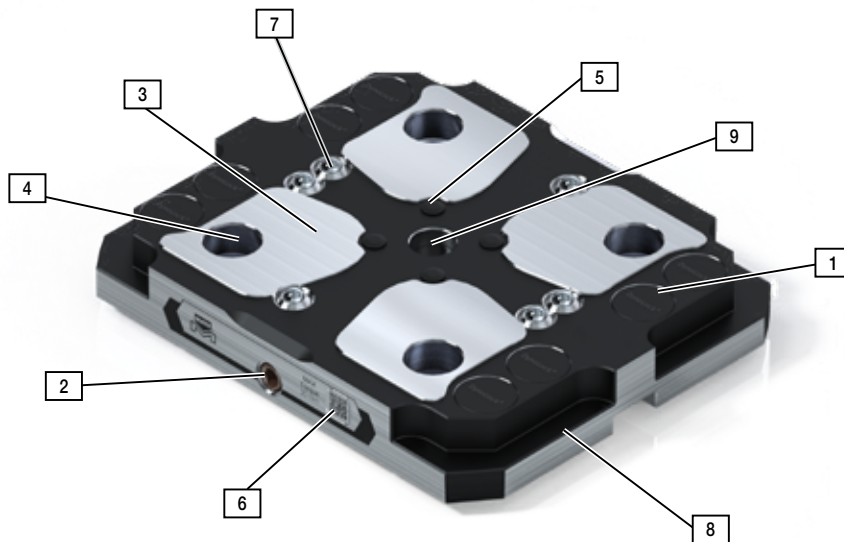
Whether you change the same vise repeatedly or exchange it for a different one, DynoLock has what it takes to securely hold your vise.

Mate DynoLock bases reduce your machine setup times and keeps you in the cut.

### Product highlights:

- Best-in-class accuracy - engaging top tool on center to  $\pm 0.013\text{mm}$  ( $\pm 0.0005''$ )
- Best-in-class repeatability - engagement of top tool to same location  $0.005\text{mm}$  ( $0.0002''$ )
- Best in-class holding force - secure hold of top tool. Force required to separate top tool  $0.013\text{mm}$  ( $0.0005''$ ) from 52 base is greater than  $22\text{kN}$  ( $5000\text{lb}$ ) and  $26\text{kN}$  ( $6000\text{lb}$ ) in 96 base
- Lowest input torque to output force
- Black Diamond™ surface treatment on vise body, pushers and jaws for maximum life
- Pull studs are firmly secured and held by a collar which has superior holding functionality
- Zero Point quality engagement as all four pull studs are drawn to the base center for superior accuracy
- Available in 11 size variations
- Patents Pending
- Made in USA

Best-In-Class		
Accuracy:	$\pm 0.013\text{mm}$	$\pm 0.0005''$
Repeatability:	$0.005\text{mm}$	$0.0002''$



1. Table mount options: mounting bore holes or toe clamp engagement
2. Manually actuated using standard 6mm hex
3. Raised contact pads ensures better flatness and improved machining debris removal
4. Collar style pull stud engagement design - centering distribution for superior holding force and repeatability
5. Poka-Yoke alignment feature
6. Mate's QuickSpecs™ 2D bar code tag that is smartphone enabled and 3D graphic supported, with links to full product specs and CAD files
7. Lifters (ball plungers) help to lift the vise off of the contact surfaces of the base to making vise removal easier
8. Toe Clamp engagement option for direct mounting to the machine table
9. Precision center probe hole for acquiring location indicator readings
10. Compatible with competitor vises if Mate pull studs are attached
11. Supports bottom centering plate and alignment keys for direct mount 5-axis machine tables

### 52 Family



### 96 Family



### Adapter





## TOMBSTONES

DynoMount three- and four-sided tombstones are designed for use with Mate DynoLock 52 family and 96 family bases. Using a chambered design for weight reduction, Mate DynoMount tombstones include a hoist ring lift connection for easy load and unload. Features Mate's QuickSpecs™ 2D bar code tag that is smartphone enabled and 3D graphic supported, with links to full product specs and CAD files. Compatible with some competitor bases when used with applicable bushings and hardware. Available as a tombstone only or assembled with DynoLock bases.

**52 Family - 3 Sided, 4 Sided****96 Family - 4 Sided**

## DUAL RIGHT ANGLES

DynoMount dual right angle mounts are for applications set perpendicular to the table. Designed for use with Mate DynoLock 52 family and 96 family bases, dual right angle mounts can be setup and used on one or both sides. Features Mate's QuickSpecs™ 2D bar code tag that is smartphone enabled and 3D graphic supported, with links to full product specs and CAD files. Designed to be pull stud mounted to a compatible base, the dual right angle is also direct-to-table mount ready. Compatible with some competitor bases when used with applicable bushings and hardware. Available as a dual right angle only or assembled with DynoLock bases.

**52 Family - 2 Sided****96 Family - 2 Sided**



## PYRAMIDS

DynoMount three-sided pyramids are designed for use with Mate DynoLock 52 family and 96 family bases. Using a chambered design for weight reduction, pyramids also include a hoist ring lift connection for easy load and unload. Features Mate's QuickSpecs™ 2D bar code tag that is smartphone enabled and 3D graphic supported, with links to full product specs and CAD files. Designed to be pull stud mounted to a compatible base, pyramids are also direct-to-table mount ready. Compatible with some competitor bases when used with applicable bushings and hardware. Available as a pyramid only or assembled with DynoLock bases.

52 Family - 3 Sided



96 Family - 3 Sided



## RISERS

Risers are designed for use with Mate DynoLock 52 family and 96 family bases. Available with a total 60mm (2.36") or 100mm (3.94") additional height. Features Mate's QuickSpecs™ 2D bar code tag that is smartphone enabled and 3D graphic supported, with links to full product specs and CAD files. Mate risers use a pull stud mounting to a compatible base. Compatible with some competitor bases when used with applicable bushings and hardware. Available as a riser only or assembled with DynoLock bases.

52 Family - 60mm, 100mm



96 Family - 60mm, 100mm



**DynoGrip Vises - 52 Family****52 Vise Assembly 95 60**

See Page 9	M5MVC-095060
Jaw Width	60mm
Max Opening	95mm
Torque (Nm)	60Nm

**52 Vise Assembly 120 60**

See Page 10	M5MVC-120060
Jaw Width	60mm
Max Opening	120mm
Torque (Nm)	60Nm

**52 Vise Assembly 95 80**

See Page 11	M5MVC-095080
Jaw Width	80mm
Max Opening	95mm
Torque (Nm)	60Nm

**52 Vise Assembly 120 80**

See Page 12	M5MVC-120080
Jaw Width	80mm
Max Opening	120mm
Torque (Nm)	60Nm

**52 Vise Assembly 160 80**

See Page 13	M5MVC-160080
Jaw Width	80mm
Max Opening	160mm
Torque (Nm)	60Nm

**52 Vise Assembly 200 80**

See Page 14	M5MVC-200080
Jaw Width	80mm
Max Opening	200mm
Torque (Nm)	60Nm

**DynoGrip Vises - 96 Family****96 Vise Assembly 155 80**

See Page 15	M9MVC-155080
Jaw Width	80mm
Max Opening	155mm
Torque (Nm)	130Nm

**96 Vise Assembly 205 80**

See Page 16	M9MVC-205080
Jaw Width	80mm
Max Opening	205mm
Torque (Nm)	130Nm

**96 Vise Assembly 155 125**

See Page 17	M9MVC-155125
Jaw Width	125mm
Max Opening	155mm
Torque (Nm)	130Nm

**96 Vise Assembly 205 125**

See Page 18	M9MVC-205125
Jaw Width	125mm
Max Opening	205mm
Torque (Nm)	130Nm

**96 Vise Assembly 255 125**

See Page 19	M9MVC-255125
Jaw Width	125mm
Max Opening	255mm
Torque (Nm)	130Nm

**96 Vise Assembly 305 125**

See Page 20	M9MVC-305125
Jaw Width	125mm
Max Opening	305mm
Torque (Nm)	130Nm

**96 Vise Assembly 355 125**

See Page 21	M9MVC-355125
Jaw Width	125mm
Max Opening	355mm
Torque (Nm)	130Nm

[Dimensions in mm(in)]. Images are proportionate but not to scale.





## M5MVC-095060

	Information	Metric	Imperial
Jaw Width		60mm	2.36"
Jaw Grip to Grip Maximum Opening		95mm	3.74"
Jaw Face to Face Maximum Opening		91mm	3.58"
Maximum Torque		60Nm	44 ft-lbs
Maximum Clamping Force		19kN	4300 lbf
Double Part Capable (requires Center Jaw)	See Page 49		
Machinable Jaw Compatible	See Page 50		
Lead Screw Diameter		16mm	0.63"
Lead Screw Hex Size External		12mm	
Lead Screw Hex Size Internal		6mm	
Vise Overall Length		117mm	4.61"
Vise Overall Width		80mm	3.15"
Vise Overall Height		65mm	2.56"
Vise Overall Weight		2.6kg	5.8lbs
Vise Rotational Clearance	See Page 56	146mm	5.75"

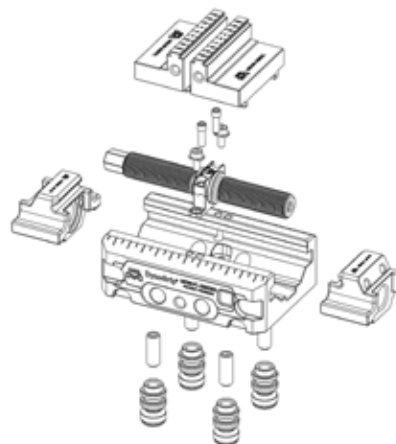
Accessories		Page
Standard Jaw (Pair)	M50JP-060STL	49
Pull Stud (Set of 4)	M5MAC-PS	54
Jaw Pusher (Kit of L and R)	M5MAC-JP	54
Lead Screw Assembly	M5MLS-095	54
Hardened Center Jaw	M50JC-060STL	49
Machinable Steel Jaw	M50JW-060ST2	50
Machinable Aluminum Jaw	M50JW-060AL2	50
Speed Wrench	M5MAC-SW12	54
40mm Indexing Pin	M00AC-PN-01	59
40mm Pin A Kit	M00AC-PN-02	59

Compatible Base Assemblies		Page
52 Base Assembly 116 Round	M5MBR-116-01	24
52 Base Assembly 157 Round	M5MBR-157-01	25
52 Base Assembly 104 Square	M5MBS-104-01	26
52 Base Assembly 116 150 Rectangle	M5MBX-116150-02	27
Adapter	M9MBA-126150	35

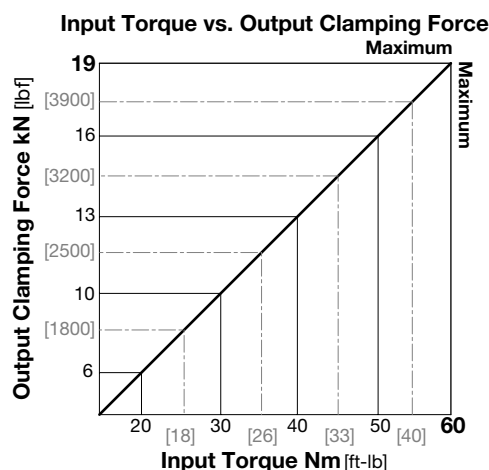
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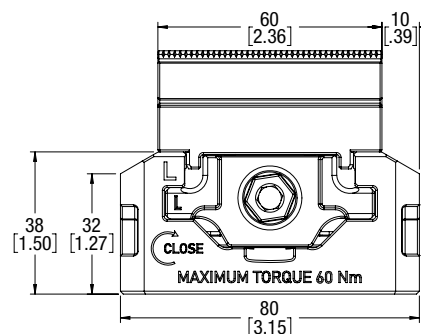
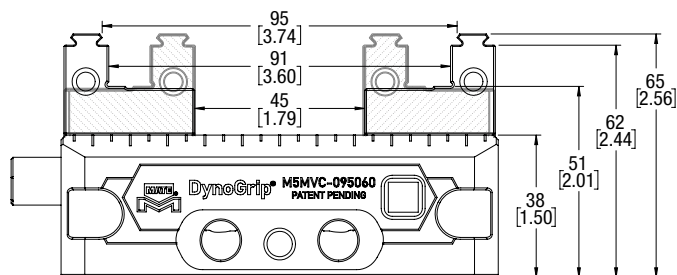
### Exploded View



### Torque and Clamp Force Chart



### Key Dimensions



[Dimensions in mm(in)]. Images are proportionate but not to scale.



## M5MVC-120060

	Information	Metric	Imperial
Jaw Width		60mm	2.36"
Jaw Grip to Grip Maximum Opening		120mm	4.72"
Jaw Face to Face Maximum Opening		116mm	4.57"
Maximum Torque		60Nm	44 ft-lbs
Maximum Clamping Force		19kN	4300 lbf
Double Part Capable (requires Center Jaw)	See Page 49		
Machinable Jaw Compatible	See Page 50		
Lead Screw Diameter		16mm	0.63"
Lead Screw Hex Size External		12mm	
Lead Screw Hex Size Internal		6mm	
Vise Overall Length		142mm	5.59"
Vise Overall Width		80mm	3.15"
Vise Overall Height		65mm	2.56"
Vise Overall Weight		3.0kg	6.7lbs
Vise Rotational Clearance	See Page 56	168mm	6.61"

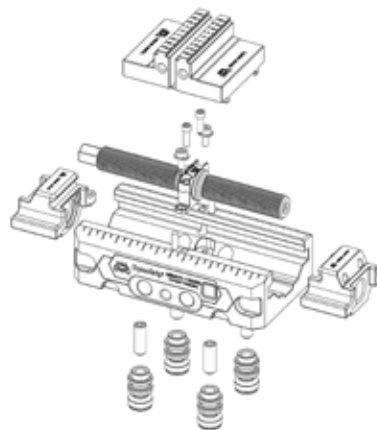
Accessories		Page
Standard Jaw (Pair)	M50JP-060STL	49
Pull Stud (Set of 4)	M5MAC-PS	54
Jaw Pusher (Kit of L and R)	M5MAC-JP	54
Lead Screw Assembly	M5MLS-120	54
Hardened Center Jaw	M50JC-060STL	49
Machinable Steel Jaw	M50JW-060ST2	50
Machinable Aluminum Jaw	M50JW-060AL2	50
Speed Wrench	M5MAC-SW12	54
40mm Indexing Pin	M00AC-PN-01	59
40mm Pin A Kit	M00AC-PN-02	59

Compatible Base Assemblies		Page
52 Base Assembly 116 Round	M5MBR-116-01	24
52 Base Assembly 157 Round	M5MBR-157-01	25
52 Base Assembly 104 Square	M5MBS-104-01	26
52 Base Assembly 116 150 Rectangle	M5MBX-116150-02	27
Adapter	M9MBA-126150	35

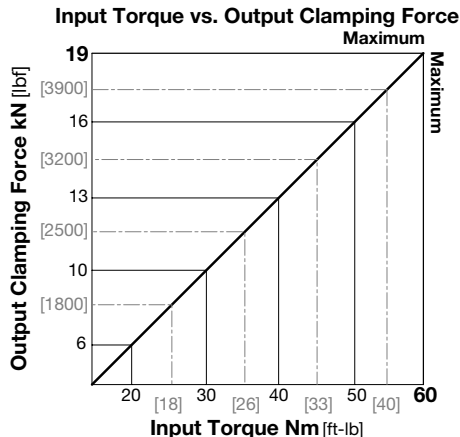
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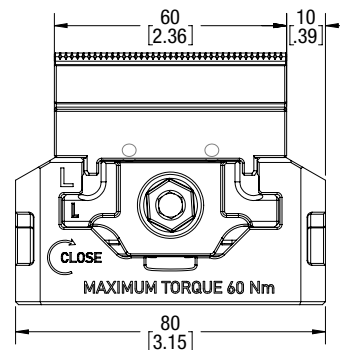
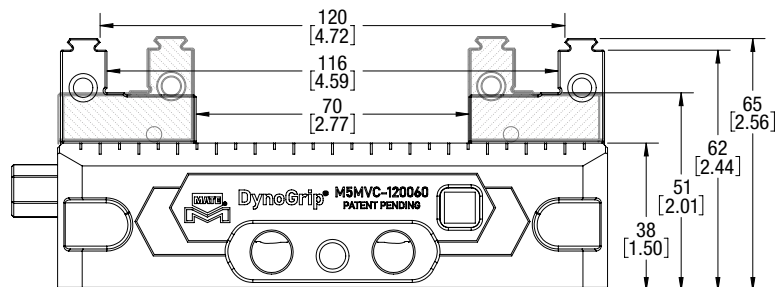
### Exploded View



### Torque and Clamp Force Chart



### Key Dimensions



[Dimensions in mm(in)]. Images are proportionate but not to scale.



## M5MVC-095080

	Information	Metric	Imperial
Jaw Width		80mm	3.15"
Jaw Grip to Grip Maximum Opening		95mm	3.74"
Jaw Face to Face Maximum Opening		91mm	3.58"
Maximum Torque		60Nm	44 ft-lbs
Maximum Clamping Force		23kN	5200 lbf
Double Part Capable (requires Center Jaw)	See Page 49		
Machinable Jaw Compatible	See Page 51		
Lead Screw Diameter		16mm	0.63"
Lead Screw Hex Size External		12mm	
Lead Screw Hex Size Internal		6mm	
Vise Overall Length		117mm	4.61"
Vise Overall Width		80mm	3.15"
Vise Overall Height		65mm	2.56"
Vise Overall Weight		2.9kg	6.3lbs
Vise Rotational Clearance	See Page 56	146mm	5.75"

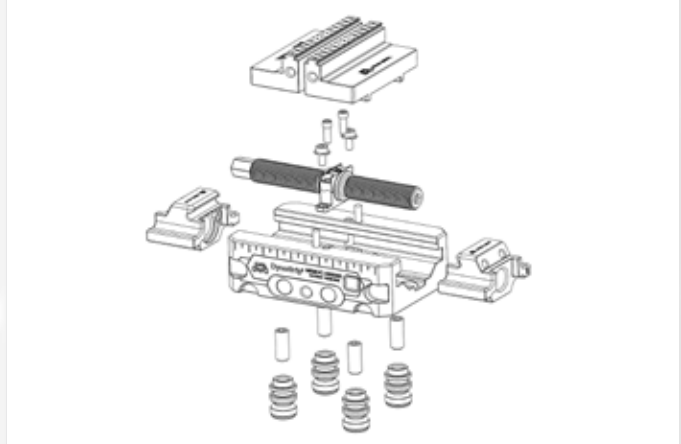
Accessories		Page
Standard Jaw (Pair)	M50JP-080STL	49
Pull Stud (Set of 4)	M5MAC-PS	54
Jaw Pusher (Kit of L and R)	M5MAC-JP	54
Lead Screw Assembly	M5MLS-095	54
Hardened Center Jaw	M50JC-080STL	49
Machinable Steel Jaw	M50JW-080ST2	51
Machinable Aluminum Jaw	M50JW-080AL2	51
Speed Wrench	M5MAC-SW12	54
40mm Indexing Pin	M00AC-PN-01	59
40mm Pin A Kit	M00AC-PN-02	59

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52 Base Assembly 116 150 Rectangle	M5MBX-116150-02	27
Adapter	M9MBA-126150	35

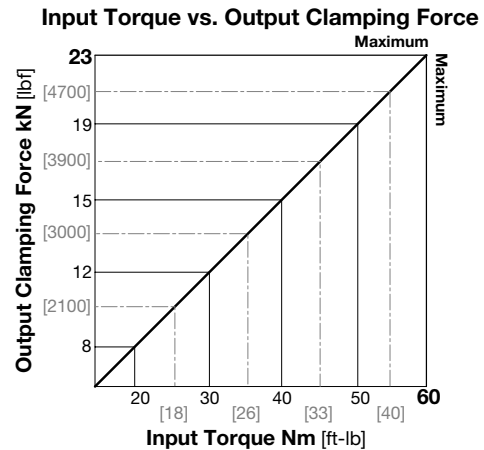
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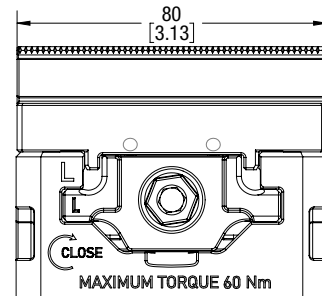
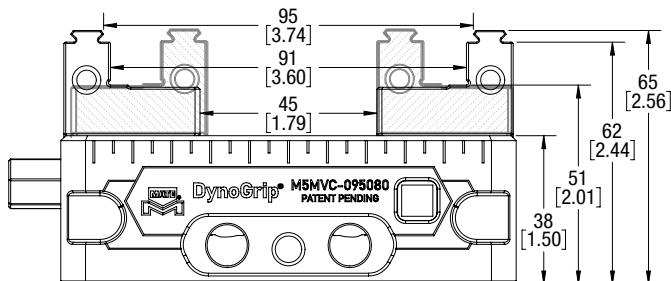
### Exploded View



### Torque and Clamp Force Chart



### Key Dimensions



[Dimensions in mm(in)]. Images are proportionate but not to scale.



## M5MVC-120080

	Information	Metric	Imperial
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Jaw Grip to Grip Maximum Opening		120mm	4.72"
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Machinable Jaw Compatible	See Page 51		
Lead Screw Diameter		16mm	0.63"
Lead Screw Hex Size External		12mm	
Lead Screw Hex Size Internal		6mm	
Vise Overall Length		142mm	5.59"
Vise Overall Width		80mm	3.15"
Vise Overall Height		65mm	2.56"
Vise Overall Weight		3.3kg	7.2lbs
Vise Rotational Clearance	See Page 56	168mm	6.61"

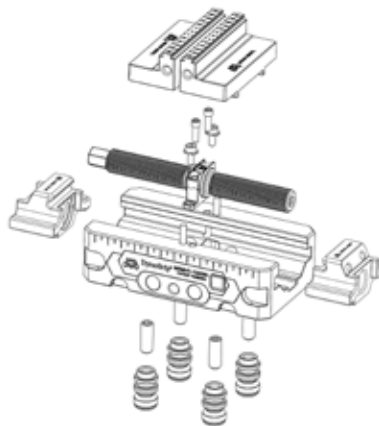
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Lead Screw Assembly	M5MLS-120	54
Hardened Center Jaw	M50JC-080STL	49
Machinable Steel Jaw	M50JW-080ST2	51
Machinable Aluminum Jaw	M50JW-080AL2	51
Speed Wrench	M5MAC-SW12	54
40mm Indexing Pin	M00AC-PN-01	59
40mm Pin A Kit	M00AC-PN-02	59

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52 Base Assembly 116 150 Rectangle	M5MBX-116150-02	27
Adapter	M9MBA-126150	35

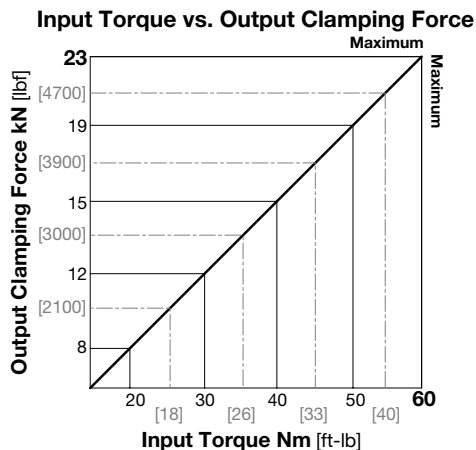
### Assembly - M5MVC-120080



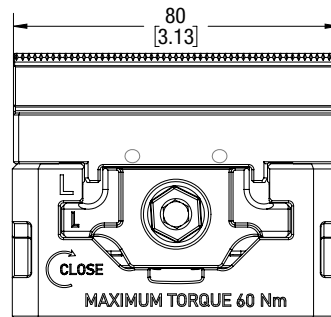
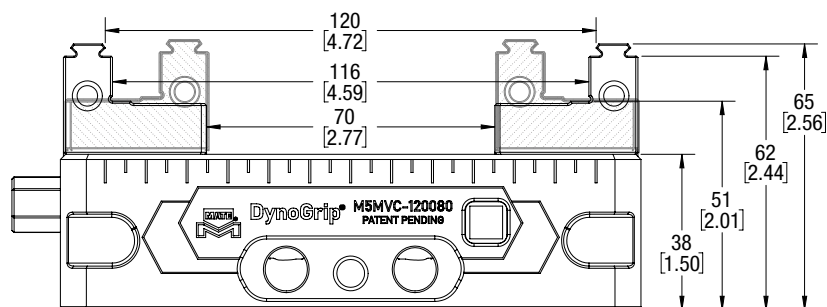
### Exploded View



### Torque and Clamp Force Chart



### Key Dimensions



[Dimensions in mm(in)]. Images are proportionate but not to scale.



## M5MVC-160080

	Information	Metric	Imperial
Jaw Width		80mm	3.15"
Jaw Grip to Grip Maximum Opening		160mm	6.30"
Jaw Face to Face Maximum Opening		156mm	6.14"
Maximum Torque		60Nm	44 ft-lbs
Maximum Clamping Force		23kN	5200 lbf
Double Part Capable (requires Center Jaw)	See Page 49		
Machinable Jaw Compatible	See Page 51		
Lead Screw Diameter		16mm	0.63"
Lead Screw Hex Size External		12mm	
Lead Screw Hex Size Internal		6mm	
Vise Overall Length		182mm	7.17"
Vise Overall Width		80mm	3.15"
Vise Overall Height		65mm	2.56"
Vise Overall Weight		3.9kg	8.6lbs
Vise Rotational Clearance	See Page 56	208mm	8.19"

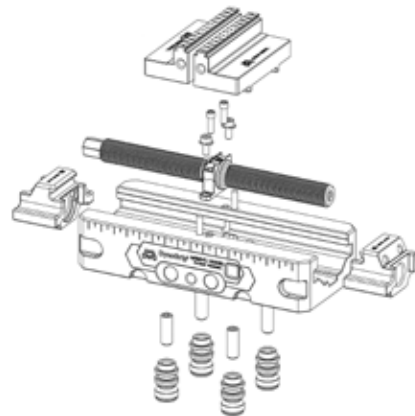
Accessories		Page
Standard Jaw (Pair)	M50JP-080STL	49
Pull Stud (Set of 4)	M5MAC-PS	54
Jaw Pusher (Kit of L and R)	M5MAC-JP	54
Lead Screw Assembly	M5MLS-160	54
Hardened Center Jaw	M50JC-080STL	49
Machinable Steel Jaw	M50JW-080ST2	51
Machinable Aluminum Jaw	M50JW-080AL2	51
Speed Wrench	M5MAC-SW12	54
40mm Indexing Pin	M00AC-PN-01	59
40mm Pin A Kit	M00AC-PN-02	59

Compatible Base Assemblies		Page
52 Base Assembly 116 Round	M5MBR-116-01	24
52 Base Assembly 157 Round	M5MBR-157-01	25
52 Base Assembly 104 Square	M5MBS-104-01	26
52 Base Assembly 116 150 Rectangle	M5MBX-116150-02	27
Adapter	M9MBA-126150	35

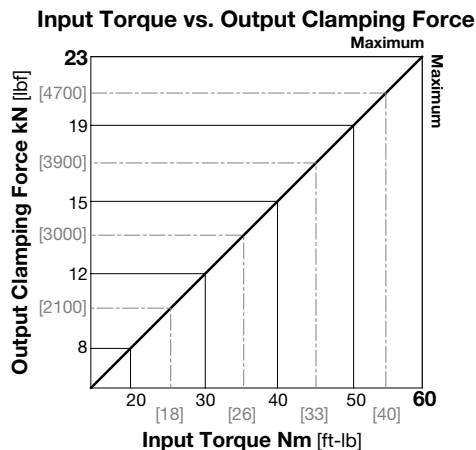
### Assembly - M5MVC-160080



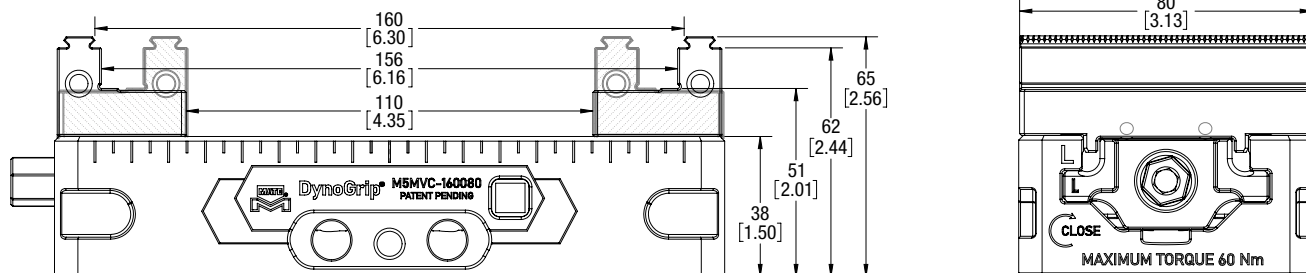
### Exploded View



### Torque and Clamp Force Chart



### Key Dimensions



[Dimensions in mm(in)]. Images are proportionate but not to scale.





## M5MVC-200080

	Information	Metric	Imperial
Jaw Width		80mm	3.15"
Jaw Grip to Grip Maximum Opening		200mm	7.87"
Jaw Face to Face Maximum Opening		196mm	7.72"
Maximum Torque		60Nm	44 ft-lbs
Maximum Clamping Force		23kN	5200 lbf
Double Part Capable (requires Center Jaw)	See Page 49		
Machinable Jaw Compatible	See Page 51		
Lead Screw Diameter		16mm	0.63"
Lead Screw Hex Size External		12mm	
Lead Screw Hex Size Internal		6mm	
Vise Overall Length		222mm	8.74"
Vise Overall Width		80mm	3.15"
Vise Overall Height		65mm	2.56"
Vise Overall Weight		4.5kg	10.0lbs
Vise Rotational Clearance	See Page 56	251mm	9.88"

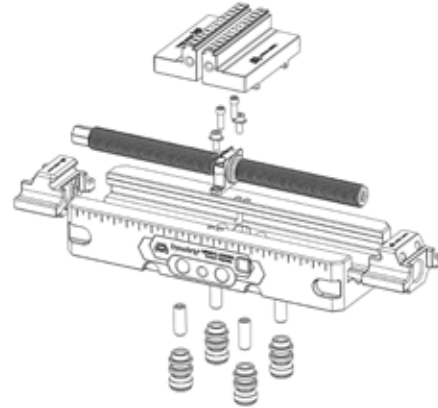
Accessories		Page
Standard Jaw (Pair)	M50JP-080STL	49
Pull Stud (Set of 4)	M5MAC-PS	54
Jaw Pusher (Kit of L and R)	M5MAC-JP	54
Lead Screw Assembly	M5MLS-200	54
Hardened Center Jaw	M50JC-080STL	49
Machinable Steel Jaw	M50JW-080ST2	51
Machinable Aluminum Jaw	M50JW-080AL2	51
Speed Wrench	M5MAC-SW12	54
40mm Indexing Pin	M00AC-PN-01	59
40mm Pin A Kit	M00AC-PN-02	59

Compatible Base Assemblies		Page
52 Base Assembly 116 Round	M5MBR-116-01	24
52 Base Assembly 157 Round	M5MBR-157-01	25
52 Base Assembly 104 Square	M5MBS-104-01	26
52 Base Assembly 116 150 Rectangle	M5MBX-116150-02	27
Adapter	M9MBA-126150	35

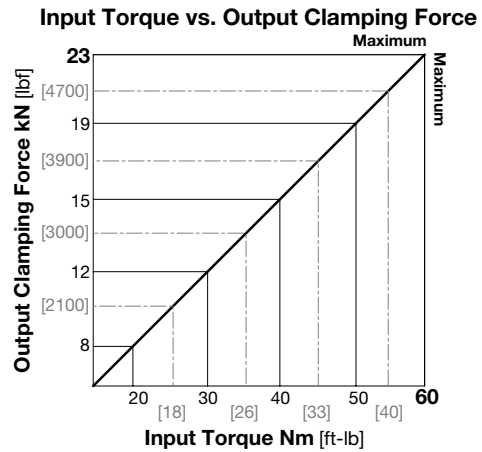
### Assembly - M5MVC-200080



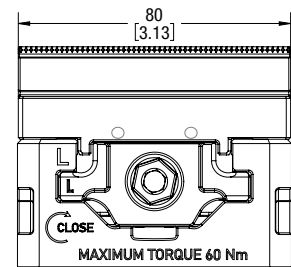
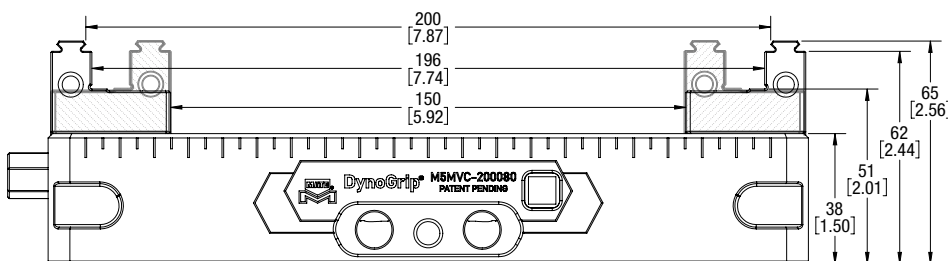
### Exploded View



### Torque and Clamp Force Chart



### Key Dimensions



[Dimensions in mm(in)]. Images are proportionate but not to scale.





## M9MVC-155080

	Information	Metric	Imperial
Jaw Width		80mm	3.15"
Jaw Grip to Grip Maximum Opening		155mm	6.10"
Jaw Face to Face Maximum Opening		149mm	5.87"
Maximum Torque		130Nm	95 ft-lbs
Maximum Clamping Force		31kN	7000 lbf
Double Part Capable (requires Center Jaw)	See Page 49		
Machinable Jaw Compatible	See Page 52		
Lead Screw Diameter		22mm	0.87"
Lead Screw Hex Size External		16mm	
Lead Screw Hex Size Internal		6mm	
Vise Overall Length		181mm	7.13"
Vise Overall Width		125mm	4.92"
Vise Overall Height		89mm	3.50"
Vise Overall Weight		8.5kg	18.8lbs
Vise Rotational Clearance	See Page 56	214mm	8.43"

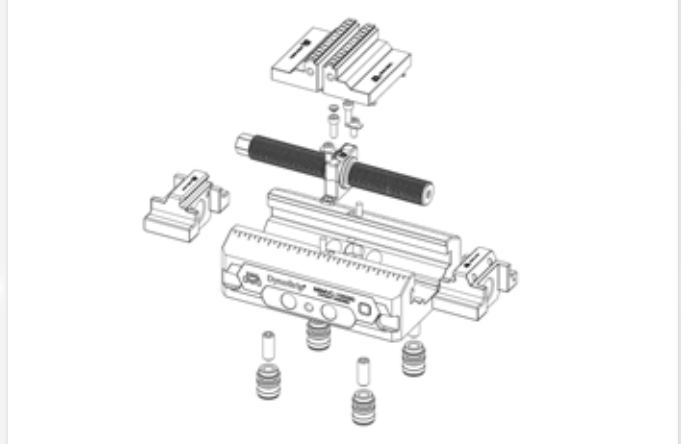
Accessories		Page
Standard Jaw (Pair)	M90JP-080STL	49
Pull Stud (Set of 4)	M9MAC-PS	54
Jaw Pusher (Kit of L and R)	M9MAC-JP	54
Lead Screw Assembly	M9MLS-155	54
Hardened Center Jaw	M90JC-080STL	49
Machinable Steel Jaw	M90JW-080ST2	52
Machinable Aluminum Jaw	M90JW-080AL2	52
Speed Wrench	M9MAC-SW16	54
40mm Indexing Pin	M00AC-PN-01	59
40mm Pin A Kit	M00AC-PN-02	59

Compatible Base Assemblies		Page
96 Base Assembly 192 Square	M9MBS-192-01	31
96 Base Assembly 192 Square	M9MBS-192-02	32
96 Base Assembly 156 192 Rectangle	M9MBX-156192-02	33
96 Base Assembly 246 192 Rectangle	M9MBX-192246-01	34
96 Base Assembly 176 Round	M9MBR-176-01	28
96 Base Assembly 246	M9MBR-246-01	29
96 Base Assembly 246 Round	M9MBR-246-02	30

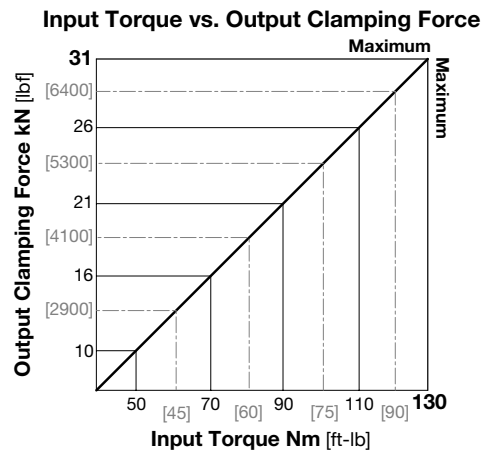
### Assembly - M9MVC-155080



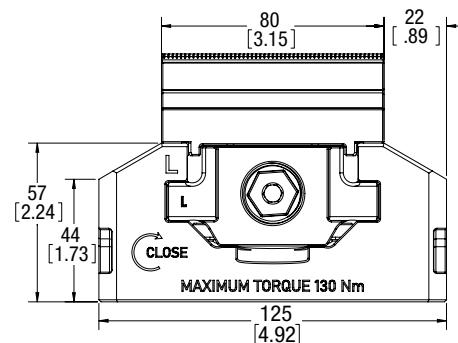
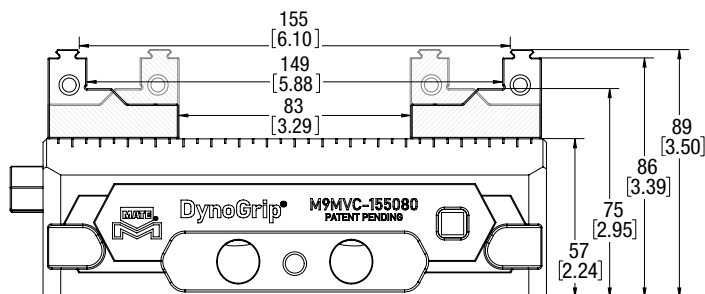
### Exploded View



### Torque and Clamp Force Chart



### Key Dimensions



[Dimensions in mm(in)]. Images are proportionate but not to scale.





## M9MVC-205080

	Information	Metric	Imperial
Jaw Width		80mm	3.15"
Jaw Grip to Grip Maximum Opening		205mm	8.07"
Jaw Face to Face Maximum Opening		199mm	7.83"
Maximum Torque		130Nm	95 ft-lbs
Maximum Clamping Force		31kN	7000 lbf
Double Part Capable (requires Center Jaw)	See Page 49		
Machinable Jaw Compatible	See Page 52		
Lead Screw Diameter		22mm	0.87"
Lead Screw Hex Size External		16mm	
Lead Screw Hex Size Internal		6mm	
Vise Overall Length		231mm	9.09"
Vise Overall Width		125mm	4.92"
Vise Overall Height		89mm	3.50"
Vise Overall Weight		10.4kg	22.8lbs
Vise Rotational Clearance	See Page 56	259mm	10.20"

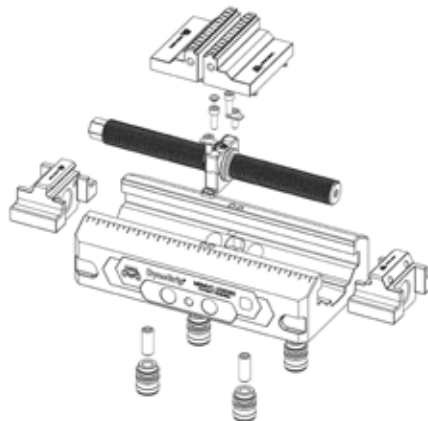
Accessories		Page
Standard Jaw (Pair)	M90JP-080STL	49
Pull Stud (Set of 4)	M9MAC-PS	54
Jaw Pusher (Kit of L and R)	M9MAC-JP	54
Lead Screw Assembly	M9MLS-205	54
Hardened Center Jaw	M90JC-080STL	49
Machinable Steel Jaw	M90JW-080ST2	52
Machinable Aluminum Jaw	M90JW-080AL2	52
Speed Wrench	M9MAC-SW16	54
40mm Indexing Pin	M00AC-PN-01	59
40mm Pin A Kit	M00AC-PN-02	59

Compatible Base Assemblies		Page
96 Base Assembly 192 Square	M9MBS-192-01	31
96 Base Assembly 192 Square	M9MBS-192-02	32
96 Base Assembly 156 192 Rectangle	M9MBX-156192-02	33
96 Base Assembly 246 192 Rectangle	M9MBX-192246-01	34
96 Base Assembly 176 Round	M9MBR-176-01	28
96 Base Assembly 246	M9MBR-246-01	29
96 Base Assembly 246 Round	M9MBR-246-02	30

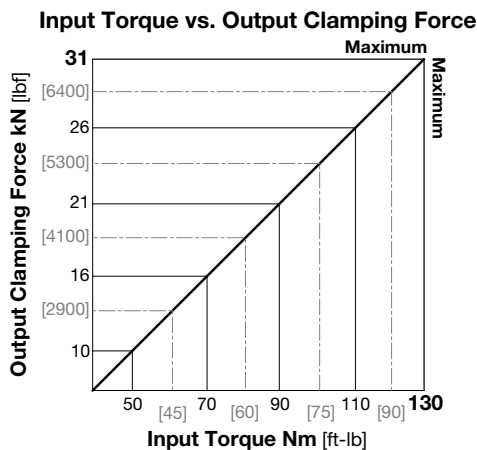
### Assembly - M9MVC-205080



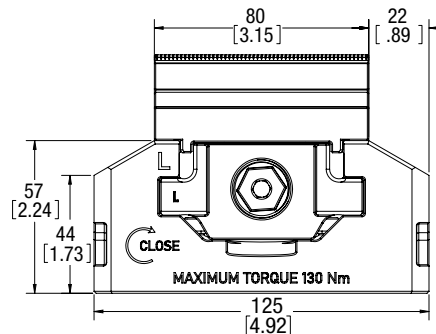
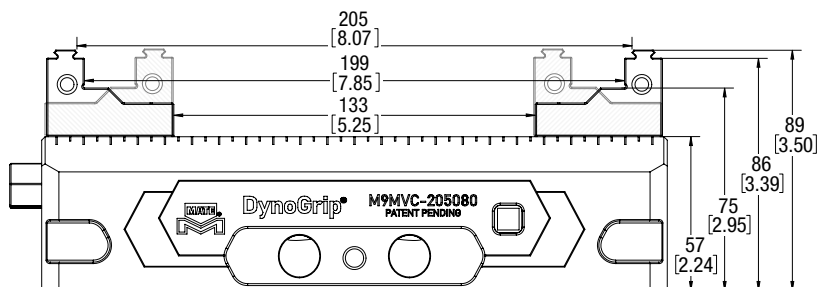
### Exploded View



### Torque and Clamp Force Chart



### Key Dimensions



[Dimensions in mm(in)]. Images are proportionate but not to scale.







# M9MVC-155125

	Information	Metric	Imperial
Jaw Width		125mm	4.92"
Jaw Grip to Grip Maximum Opening		155mm	6.10"
Jaw Face to Face Maximum Opening		149mm	5.87"
Maximum Torque		130Nm	95 ft-lbs
Maximum Clamping Force		34kN	7650 lbf
Double Part Capable (requires Center Jaw)	See Page 49		
Machinable Jaw Compatible	See Page 53		
Lead Screw Diameter		22mm	0.87"
Lead Screw Hex Size External		16mm	
Lead Screw Hex Size Internal		6mm	
Vise Overall Length		181mm	7.13"
Vise Overall Width		125mm	4.92"
Vise Overall Height		89mm	3.50"
Vise Overall Weight		9.5kg	21.0lbs
Vise Rotational Clearance	See Page 56	214mm	8.43"

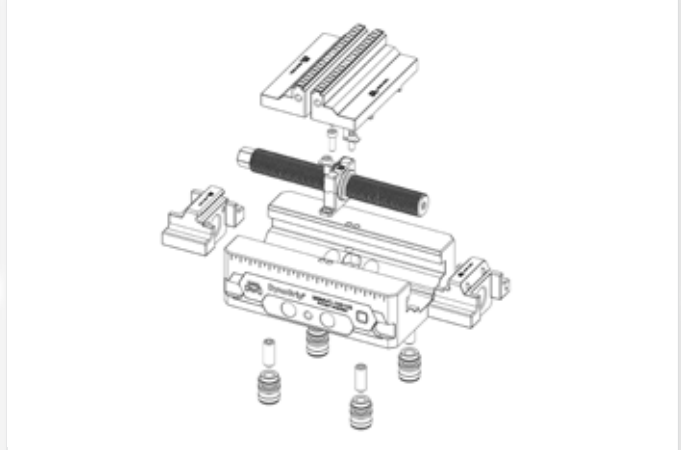
Accessories		Page
Standard Jaw (Pair)	M90JP-125STL	49
Pull Stud (Set of 4)	M9MAC-PS	54
Jaw Pusher (Kit of L and R)	M9MAC-JP	54
Lead Screw Assembly	M9MLS-155	54
Hardened Center Jaw	M90JC-125STL	49
Machinable Steel Jaw	M90JW-125ST2	53
Machinable Aluminum Jaw	M90JW-125AL2	53
Speed Wrench	M9MAC-SW16	54
40mm Indexing Pin	M00AC-PN-01	59
40mm Pin A Kit	M00AC-PN-02	59

Compatible Base Assemblies		Page
96 Base Assembly 192 Square	M9MBS-192-01	31
96 Base Assembly 192 Square	M9MBS-192-02	32
96 Base Assembly 156 192 Rectangle	M9MBX-156192-02	33
96 Base Assembly 246 192 Rectangle	M9MBX-192246-01	34
96 Base Assembly 176 Round	M9MBR-176-01	28
96 Base Assembly 246	M9MBR-246-01	29
96 Base Assembly 246 Round	M9MBR-246-02	30

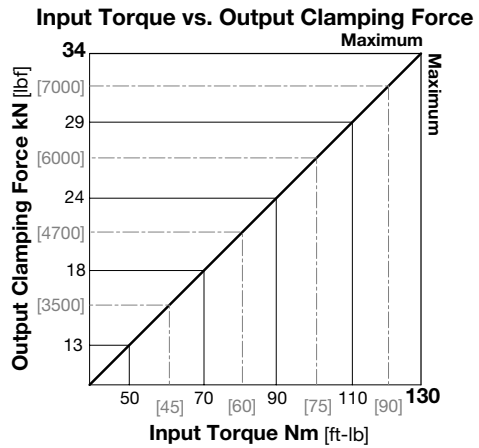
## Assembly - M9MVC-155125



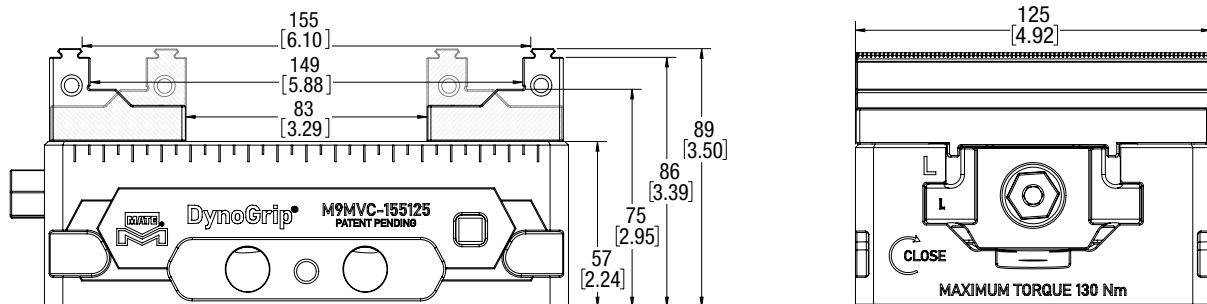
## Exploded View



## Torque and Clamp Force Chart



## Key Dimensions



[Dimensions in mm(in)]. Images are proportionate but not to scale.





## M9MVC-205125

	Information	Metric	Imperial
Jaw Width		125mm	4.92"
Jaw Grip to Grip Maximum Opening		205mm	8.07"
Jaw Face to Face Maximum Opening		200mm	7.87"
Maximum Torque		130Nm	95 ft-lbs
Maximum Clamping Force		34kN	7650 lbf
Double Part Capable (requires Center Jaw)	See Page 49		
Machinable Jaw Compatible	See Page 53		
Lead Screw Diameter		22mm	0.87"
Lead Screw Hex Size External		16mm	
Lead Screw Hex Size Internal		6mm	
Vise Overall Length		231mm	9.09"
Vise Overall Width		125mm	4.92"
Vise Overall Height		89mm	3.50"
Vise Overall Weight		11.5kg	25.3lbs
Vise Rotational Clearance	See Page 56	259mm	10.20"

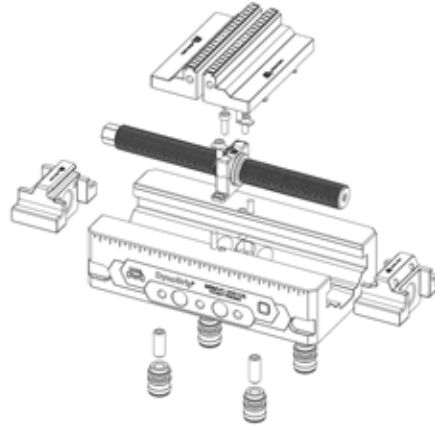
Accessories		Page
Standard Jaw (Pair)	M90JP-125STL	49
Pull Stud (Set of 4)	M9MAC-PS	54
Jaw Pusher (Kit of L and R)	M9MAC-JP	54
Lead Screw Assembly	M9MLS-205	54
Hardened Center Jaw	M90JC-125STL	49
Machinable Steel Jaw	M90JW-125ST2	53
Machinable Aluminum Jaw	M90JW-125AL2	53
Speed Wrench	M9MAC-SW16	54
40mm Indexing Pin	M00AC-PN-01	59
40mm Pin A Kit	M00AC-PN-02	59

Compatible Base Assemblies		Page
96 Base Assembly 192 Square	M9MBS-192-01	31
96 Base Assembly 192 Square	M9MBS-192-02	32
96 Base Assembly 156 192 Rectangle	M9MBX-156192-02	33
96 Base Assembly 246 192 Rectangle	M9MBX-192246-01	34
96 Base Assembly 176 Round	M9MBR-176-01	28
96 Base Assembly 246	M9MBR-246-01	29
96 Base Assembly 246 Round	M9MBR-246-02	30

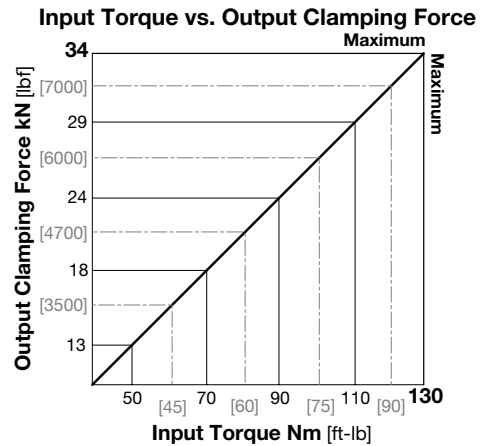
### Assembly - M9MVC-205125



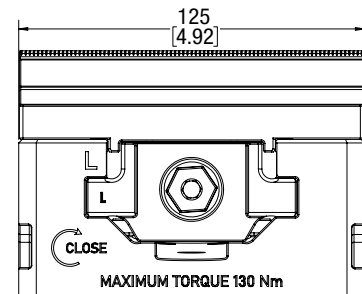
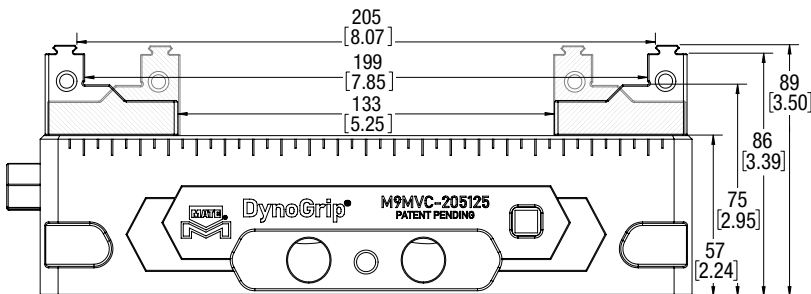
### Exploded View



### Torque and Clamp Force Chart



### Key Dimensions



[Dimensions in mm(in)]. Images are proportionate but not to scale.



## M9MVC-255125

	Information	Metric	Imperial
Jaw Width		125mm	4.92"
Jaw Grip to Grip Maximum Opening		255mm	10.04"
Jaw Face to Face Maximum Opening		249mm	9.80"
Maximum Torque		130Nm	95 ft-lbs
Maximum Clamping Force		34kN	7650 lbf
Double Part Capable (requires Center Jaw)	See Page 49		
Machinable Jaw Compatible	See Page 53		
Lead Screw Diameter		22mm	0.87"
Lead Screw Hex Size External		16mm	
Lead Screw Hex Size Internal		6mm	
Vise Overall Length		281mm	11.06"
Vise Overall Width		125mm	4.92"
Vise Overall Height		89mm	3.50"
Vise Overall Weight		13.5kg	29.6lbs
Vise Rotational Clearance	See Page 56	307mm	12.09"

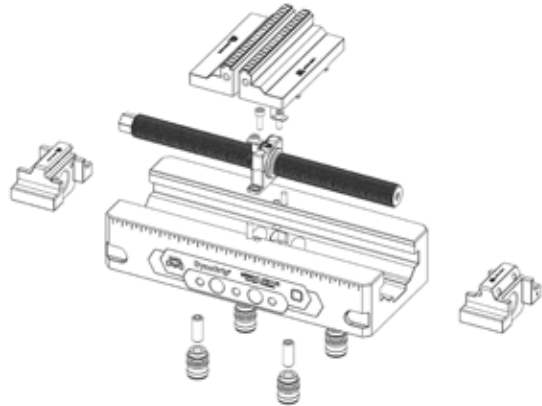
Accessories		Page
Standard Jaw (Pair)	M90JP-125STL	49
Pull Stud (Set of 4)	M9MAC-PS	54
Jaw Pusher (Kit of L and R)	M9MAC-JP	54
Lead Screw Assembly	M9MLS-255	54
Hardened Center Jaw	M90JC-125STL	49
Machinable Steel Jaw	M90JW-125ST2	53
Machinable Aluminum Jaw	M90JW-125AL2	53
Speed Wrench	M9MAC-SW16	54
40mm Indexing Pin	M00AC-PN-01	59
40mm Pin A Kit	M00AC-PN-02	59
40mm Pin B Kit	M00AC-PN-03	59

Compatible Base Assemblies		Page
96 Base Assembly 192 Square	M9MBS-192-01	31
96 Base Assembly 192 Square	M9MBS-192-02	32
96 Base Assembly 156 192 Rectangle	M9MBX-156192-02	33
96 Base Assembly 246 192 Rectangle	M9MBX-192246-01	34
96 Base Assembly 176 Round	M9MBR-176-01	28
96 Base Assembly 246	M9MBR-246-01	29
96 Base Assembly 246 Round	M9MBR-246-02	30

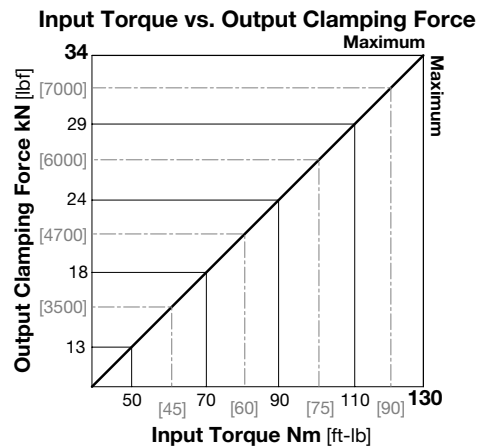
### Assembly - M9MVC-255125



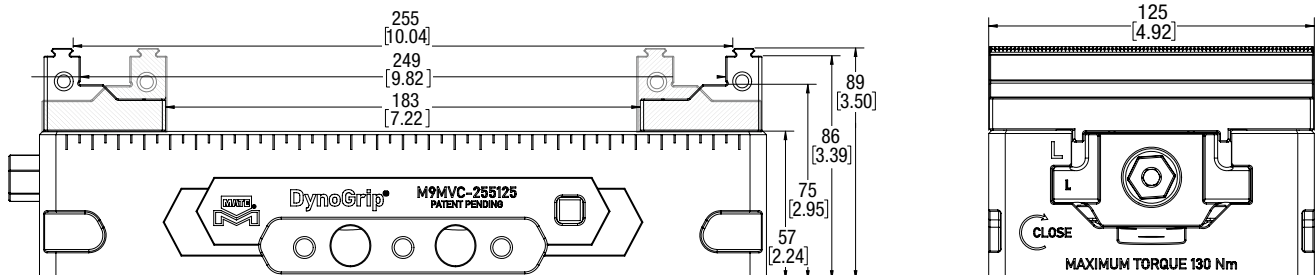
### Exploded View



### Torque and Clamp Force Chart



### Key Dimensions



[Dimensions in mm(in)]. Images are proportionate but not to scale.



## M9MVC-305125

	Information	Metric	Imperial
Jaw Width		125mm	4.92"
Jaw Grip to Grip Maximum Opening		305mm	12.01"
Jaw Face to Face Maximum Opening		299mm	11.77"
Maximum Torque		130Nm	95 ft-lbs
Maximum Clamping Force		34kN	7650 lbf
Double Part Capable (requires Center Jaw)	See Page 49		
Machinable Jaw Compatible	See Page 53		
Lead Screw Diameter		22mm	0.87"
Lead Screw Hex Size External		16mm	
Lead Screw Hex Size Internal		6mm	
Vise Overall Length		331mm	13.03"
Vise Overall Width		125mm	4.92"
Vise Overall Height		89mm	3.50"
Vise Overall Weight		15.4kg	33.9lbs
Vise Rotational Clearance	See Page 56	357mm	14.06"

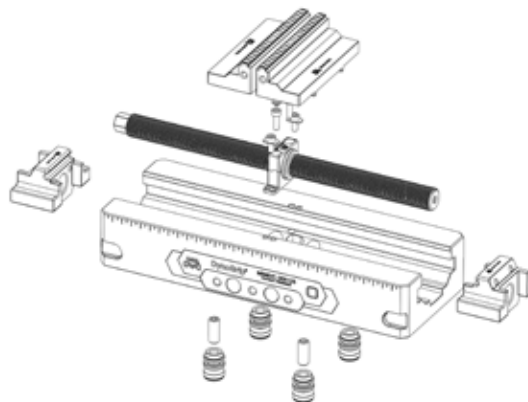
Accessories		Page
Standard Jaw (Pair)	M90JP-125STL	49
Pull Stud (Set of 4)	M9MAC-PS	54
Jaw Pusher (Kit of L and R)	M9MAC-JP	54
Lead Screw Assembly	M9MLS-305	54
Hardened Center Jaw	M90JC-125STL	49
Machinable Steel Jaw	M90JW-125ST2	53
Machinable Aluminum Jaw	M90JW-125AL2	53
Speed Wrench	M9MAC-SW16	54
40mm Indexing Pin	M00AC-PN-01	59
40mm Pin A Kit	M00AC-PN-02	59
40mm Pin B Kit	M00AC-PN-03	59

Compatible Base Assemblies		Page
96 Base Assembly 192 Square	M9MBS-192-01	31
96 Base Assembly 192 Square	M9MBS-192-02	32
96 Base Assembly 156 192 Rectangle	M9MBX-156192-02	33
96 Base Assembly 246 192 Rectangle	M9MBX-192246-01	34
96 Base Assembly 176 Round	M9MBR-176-01	28
96 Base Assembly 246	M9MBR-246-01	29
96 Base Assembly 246 Round	M9MBR-246-02	30

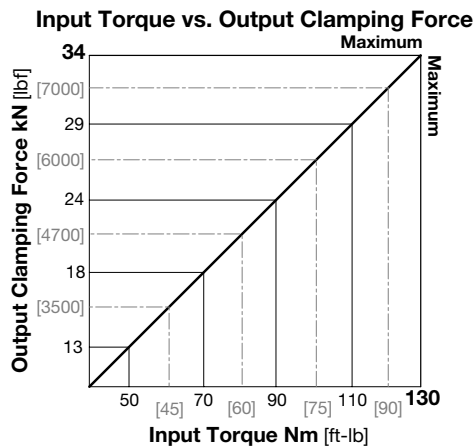
### Assembly - M9MVC-305125



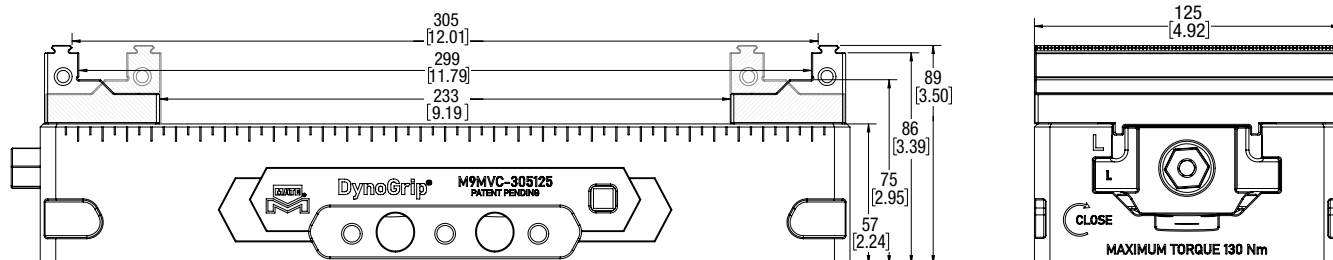
### Exploded View



### Torque and Clamp Force Chart



### Key Dimensions



[Dimensions in mm(in)]. Images are proportionate but not to scale.





## M9MVC-355125

	Information	Metric	Imperial
Jaw Width		125mm	4.92"
Jaw Grip to Grip Maximum Opening		355mm	13.98"
Jaw Face to Face Maximum Opening		349mm	13.74"
Maximum Torque		130Nm	95 ft-lbs
Maximum Clamping Force		34kN	7650 lbf
Double Part Capable (requires Center Jaw)	See Page 49		
Machinable Jaw Compatible	See Page 53		
Lead Screw Diameter		22mm	0.87"
Lead Screw Hex Size External		16mm	
Lead Screw Hex Size Internal		6mm	
Vise Overall Length		381mm	15.00"
Vise Overall Width		125mm	4.92"
Vise Overall Height		89mm	3.50"
Vise Overall Weight		17.4kg	38.2lbs
Vise Rotational Clearance	See Page 56	407mm	16.02"

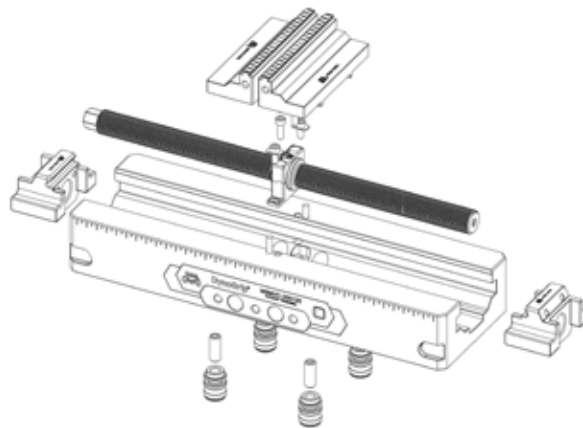
Accessories		Page
Standard Jaw (Pair)	M90JP-125STL	49
Pull Stud (Set of 4)	M9MAC-PS	54
Jaw Pusher (Kit of L and R)	M9MAC-JP	54
Lead Screw Assembly	M9MLS-355	54
Hardened Center Jaw	M90JC-125STL	49
Machinable Steel Jaw	M90JW-125ST2	53
Machinable Aluminum Jaw	M90JW-125AL2	53
Speed Wrench	M9MAC-SW16	54
40mm Indexing Pin	M00AC-PN-01	59
40mm Pin A Kit	M00AC-PN-02	59
40mm Pin B Kit	M00AC-PN-03	59

Compatible Base Assemblies		Page
96 Base Assembly 192 Square	M9MBS-192-01	31
96 Base Assembly 192 Square	M9MBS-192-02	32
96 Base Assembly 156 192 Rectangle	M9MBX-156192-02	33
96 Base Assembly 246 192 Rectangle	M9MBX-192246-01	34
96 Base Assembly 176 Round	M9MBR-176-01	28
96 Base Assembly 246	M9MBR-246-01	29
96 Base Assembly 246 Round	M9MBR-246-02	30

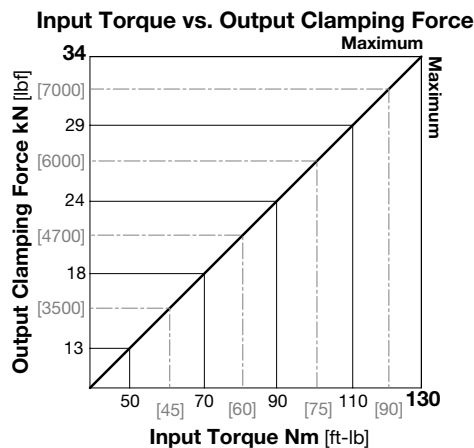
### Assembly - M9MVC-355125



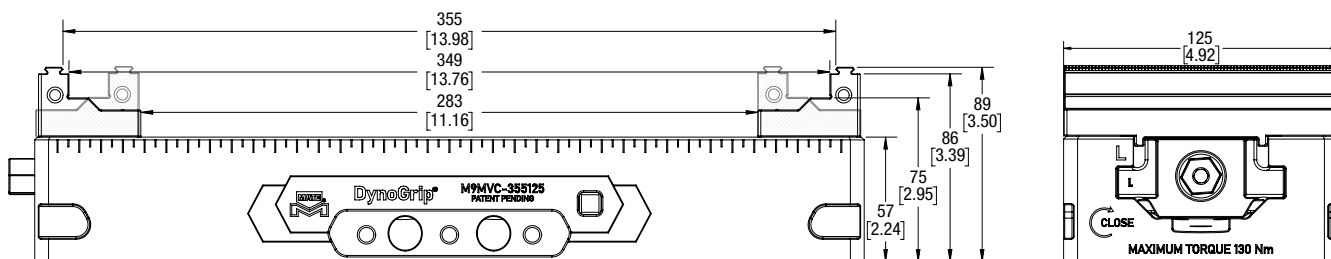
### Exploded View



### Torque and Clamp Force Chart



### Key Dimensions



[Dimensions in mm(in)]. Images are proportionate but not to scale.

## Table of Configurations for Vise Assemblies

Each variation is useful for specific user needs.

Variation VC is the most common configuration. Vise Complete. All standard components are included.

Variation VE is intended for use without (wo) pull studs. Vises are secured to the machine table using toe clamps.

Variation VF is intended for use without (wo) pull studs and choose to use the Mate machinable jaw options.

Variation VN is intended for applications using Mate machinable jaws.

Variation VB is the body only. Intended as a replaceable component.



Vise Options Defined		What is included?				
Variation	Description	Body	Standard Jaw (Pair)	Jaw Pusher (Kit of L and R)	Lead Screw Assembly	Pull Stud (Set of 4)
VC	Vise Assembly Complete	Included	Included	Included	Included	Included
VE	Vise Assembly wo Pull Studs	Included	Included	Included	Included	
VF	Vise Assembly wo Jaws wo Pull Studs	Included		Included	Included	
VN	Vise Assembly wo Jaws	Included		Included	Included	Included
VB	Vise Body Only	Included				

Page	52 Family / Size	Part Number	Variation	Page	96 Family / Size	Part Number	Variation
9	52 095 060 with Chamfer	M5MVC-095060	VC	15	96 155 080 with Chamfer	M9MVC-155080	VC
	52 095 060 with Chamfer	M5MVE-095060	VE		96 155 080 with Chamfer	M9MVE-155080	VE
	52 095 060 with Chamfer	M5MVF-095060	VF		96 155 080 with Chamfer	M9MVF-155080	VF
	52 095 060 with Chamfer	M5MVN-095060	VN		96 155 080 with Chamfer	M9MVN-155080	VN
	52 095 060 with Chamfer	M5MVB-095060	VB		96 155 080 with Chamfer	M9MVB-155080	VB
10	52 120 060 with Chamfer	M5MVC-120060	VC	16	96 205 080 with Chamfer	M9MVC-205080	VC
	52 120 060 with Chamfer	M5MVE-120060	VE		96 205 080 with Chamfer	M9MVE-205080	VE
	52 120 060 with Chamfer	M5MVF-120060	VF		96 205 080 with Chamfer	M9MVF-205080	VF
	52 120 060 with Chamfer	M5MVN-120060	VN		96 205 080 with Chamfer	M9MVN-205080	VN
	52 120 060 with Chamfer	M5MVB-120060	VB		96 205 080 with Chamfer	M9MVB-205080	VB
11	52 095 080	M5MVC-095080	VC	17	96 155 125	M9MVC-155125	VC
	52 095 080	M5MVE-095080	VE		96 155 125	M9MVE-155125	VE
	52 095 080	M5MVF-095080	VF		96 155 125	M9MVF-155125	VF
	52 095 080	M5MVN-095080	VN		96 155 125	M9MVN-155125	VN
	52 095 080	M5MVB-095080	VB		96 155 125	M9MVB-155125	VB
12	52 120 080	M5MVC-120080	VC	18	96 205 125	M9MVC-205125	VC
	52 120 080	M5MVE-120080	VE		96 205 125	M9MVE-205125	VE
	52 120 080	M5MVF-120080	VF		96 205 125	M9MVF-205125	VF
	52 120 080	M5MVN-120080	VN		96 205 125	M9MVN-205125	VN
	52 120 080	M5MVB-120080	VB		96 205 125	M9MVB-205125	VB
13	52 160 080	M5MVC-160080	VC	19	96 255 125	M9MVC-255125	VC
	52 160 080	M5MVE-160080	VE		96 255 125	M9MVE-255125	VE
	52 160 080	M5MVF-160080	VF		96 255 125	M9MVF-255125	VF
	52 160 080	M5MVN-160080	VN		96 255 125	M9MVN-255125	VN
	52 160 080	M5MVB-160080	VB		96 255 125	M9MVB-255125	VB
14	52 200 080	M5MVC-200080	VC	20	96 305 125	M9MVC-305125	VC
	52 200 080	M5MVE-200080	VE		96 305 125	M9MVE-305125	VE
	52 200 080	M5MVF-200080	VF		96 305 125	M9MVF-305125	VF
	52 200 080	M5MVN-200080	VN		96 305 125	M9MVN-305125	VN
	52 200 080	M5MVB-200080	VB		96 305 125	M9MVB-305125	VB
				21	96 355 125	M9MVC-355125	VC
					96 355 125	M9MVE-355125	VE
					96 355 125	M9MVF-355125	VF
					96 355 125	M9MVN-355125	VN
					96 355 125	M9MVB-355125	VB

[Dimensions in mm(in)]. Images are proportionate but not to scale.





## DynoLock Bases – 52 Family



**52 Base Assembly 116**

See Page 24	M5MBR-116-01
Body Height	27mm
Weight	1.7 kgs
Torque (Nm)	20Nm



**52 Base Assembly 157**

See Page 25	M5MBR-157-01
Body Height	27mm
Weight	3.4 kgs
Torque (Nm)	20Nm



**52 Base Assembly 104**

See Page 26	M5MBS-104-01
Body Height	27mm
Weight	1.7 kgs
Torque (Nm)	20Nm



**52 Base Assembly 116 150**

See Page 27	M5MBX-116150-02
Body Height	27mm
Weight	2.8 kgs
Torque (Nm)	20Nm

## DynoLock Bases – 96 Family



**96 Base Assembly 176**

See Page 28	M9MBR-176-01
Body Height	27mm
Weight	4.1 kgs
Torque (Nm)	20Nm



**96 Base Assembly 246**

See Page 29	M9MBR-246-01
Body Height	27mm
Weight	9.0 kgs
Torque (Nm)	20Nm



**96 Base Assembly 246**

See Page 30	M9MBR-246-02
Body Height	27mm
Weight	9.0 kgs
Torque (Nm)	20Nm



**96 Base Assembly 192**

See Page 31	M9MBS-192-01
Body Height	27mm
Weight	6.7 kgs
Torque (Nm)	20Nm



**96 Base Assembly 192**

See Page 32	M9MBS-192-02
Body Height	27mm
Weight	6.7 kgs
Torque (Nm)	20Nm



**96 Base Assembly 156 192**

See Page 33	M9MBX-156192-02
Body Height	27mm
Weight	4.8 kgs
Torque (Nm)	20Nm



**96 Base Assembly 246 192**

See Page 34	M9MBX-192246-01
Body Height	27mm
Weight	8.8 kgs
Torque (Nm)	20Nm



**Adapter**

See Page 35	M9MBA-126150
Body Height	27mm
Weight	3.4 kgs
Torque (Nm)	20Nm

[Dimensions in mm(in)]. Images are proportionate but not to scale.





## M5MBR-116-01

	Information	Metric	Imperial
Pull Stud Type	Mate 52		
Maximum Torque		20Nm	175 in-lbs
Mounting Bores Quantity	2		
Mounting Bores Spacing		96mm	3.78"
Mounting Bores - Inside Diameter		12mm	0.47"
Lead Screw Hex Size		6mm	
Base Overall Diameter		116mm	4.57"
Base Overall Height		27mm	1.06"
Base Overall Weight		1.7kg	3.8lbs
Use with Pyramid	Yes	See Page 43	
Centering Bottom Cover	Multiple Options	See Below	
Use with Competitor	Requires Pull Stud Kit	M5MAC-PS	
Tapped Hole (4) for Poka-Yoke	Screw Not Included	M5x6mm SHCS	

Accessories			Page
Mounting Bore Hole Cap, Plastic, Set of 4	52	M5MAC-BC	55
Pull Stud Plug, Steel, Set of 4 and MagGrabber	52	M5MAC-BPMET	55
52 DynoLock Base Service Kit	52	M5MAC-BS	55
Hex Wrench Adapter Socket	Use with M5MAC-BS	MATE02777	55
MagGrabber	See Page 55	MATE02803	55
Mount Hardware Kit, 4 Bushings and 4 Bolts	See Page 56	M00AC-BU	56
Pull Stud, Set of 4	52	M5MAC-PS	54
Centering Bottom Cover with 30mm Spud	52	M5MAC-CBC30	55
Centering Bottom Cover with 32mm Spud	52	M5MAC-CBC32	55
Centering Bottom Cover with 50mm Spud	52	M5MAC-CBC50	55
Table T-Slot Key 14mm	See Page 56	M00AC-TSK-01	56
Table T-Slot Key 18mm	See Page 56	M00AC-TSK-02	56
Centering Gage	52	M5MAC-CG	56
Poka-Yoke Screw - Not Included		M5x6 SHCS	

Compatible DynoGrip Vise Assemblies			Page
52 Vise Assembly 95 60	52	M5MVC-095060	9
52 Vise Assembly 120 60	52	M5MVC-120060	10
52 Vise Assembly 95 80	52	M5MVC-095080	11
52 Vise Assembly 120 80	52	M5MVC-120080	12
52 Vise Assembly 160 80	52	M5MVC-160080	13
52 Vise Assembly 200 80	52	M5MVC-200080	14
52 Pyramid w M5MBR-116-01	52	M50P3-108-01	43

## Assembly - M5MBR-116-01



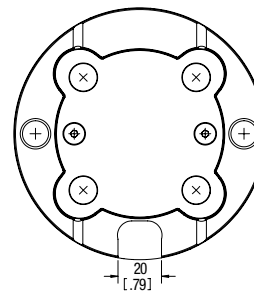
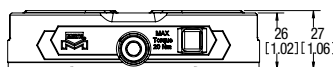
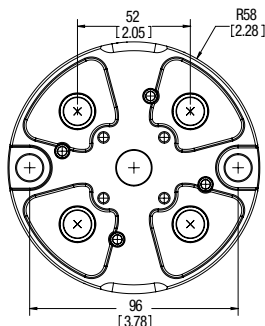
## Exploded View



## 52 DynoLock Base Service Kit

Components  
M5MAC-BSHex Wrench Adapter Socket  
MATE02777

## Key Dimensions



[Dimensions in mm(in)]. Images are proportionate but not to scale.





## M5MBR-157-01

	Information	Metric	Imperial
Pull Stud Type	Mate 52		
Maximum Torque		20Nm	175 in-lbs
Mounting Bores Quantity	6		
Mounting Bores Spacing		100mm	3.94"
Mounting Bores - Spacing Additional		96mm	3.78"
Mounting Bores - Inside Diameter		12mm	0.47"
Lead Screw Hex Size		6mm	
Base Overall Diameter		157mm	6.18"
Base Overall Height		27mm	1.06"
Base Overall Weight		3.4kg	7.5lbs
Centering Bottom Cover	Multiple Options	See Below	
Use with Competitor	Requires Pull Stud Kit	M5MAC-PS	
Tapped Hole (4) for Poka-Yoke	Screw Not Included	M5x6mm SHCS	

Accessories			Page
Mounting Bore Hole Cap, Plastic, Set of 4	52	M5MAC-BC	55
Pull Stud Plug, Steel, Set of 4 and MagGrabber	52	M5MAC-BPMET	55
52 DynoLock Base Service Kit	52	M5MAC-BS	55
Hex Wrench Adapter Socket	Use with M5MAC-BS	MATE02778	55
MagGrabber	See Page 55	MATE02803	55
Mount Hardware Kit, 4 Bushings and 4 Bolts	See Page 56	M00AC-BU	56
Pull Stud, Set of 4	52	M5MAC-PS	54
Centering Bottom Cover with 30mm Spud	52	M5MAC-CBC30	55
Centering Bottom Cover with 32mm Spud	52	M5MAC-CBC32	55
Centering Bottom Cover with 50mm Spud	52	M5MAC-CBC50	55
Table T-Slot Key 14mm	See Page 56	M00AC-TSK-01	56
Table T-Slot Key 18mm	See Page 56	M00AC-TSK-02	56
Centering Gage	52	M5MAC-CG	56
Poka-Yoke Screw - Not Included		M5x6 SHCS	

Compatible DynoGrip Vise Assemblies			Page
52 Vise Assembly 95 60	52	M5MVC-095060	9
52 Vise Assembly 120 60	52	M5MVC-120060	10
52 Vise Assembly 95 80	52	M5MVC-095080	11
52 Vise Assembly 120 80	52	M5MVC-120080	12
52 Vise Assembly 160 80	52	M5MVC-160080	13
52 Vise Assembly 200 80	52	M5MVC-200080	14

### Assembly - M5MBR-157-01



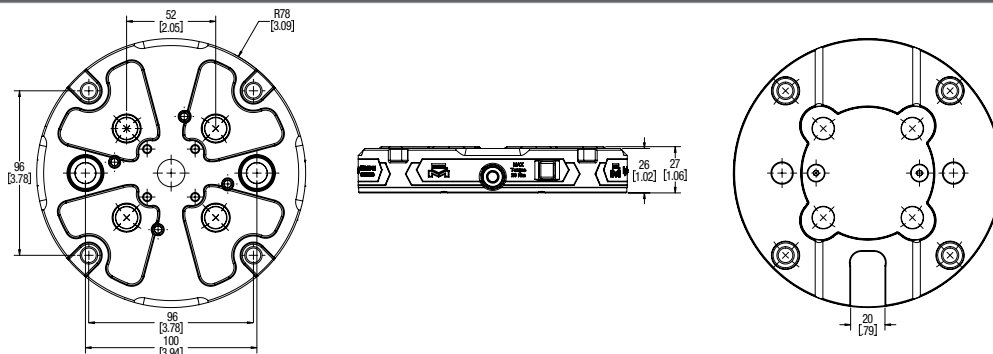
### Exploded View



### 52 DynoLock Base Service Kit



### Key Dimensions



[Dimensions in mm(in)]. Images are proportionate but not to scale.



# M5MBS-104-01

	Information	Metric	Imperial
Pull Stud Type	Mate 52		
Maximum Torque		20Nm	175 in-lbs
Mounting Bores Quantity	4		
Mounting Bores Spacing		82mm	3.23"
Mounting Bores - Inside Diameter		10mm	0.39"
Lead Screw Hex Size		6mm	
Base Overall Length		104mm	4.09"
Base Overall Width		104mm	4.09"
Base Overall Height		27mm	1.06"
Base Overall Weight		1.7kg	3.8lbs
Use with Tombstone	Yes	See Page 38	
Use with Dual Right Angle	Yes	See Page 41	
Centering Bottom Cover	Multiple Options	See Below	
Use with Competitor	Requires Pull Stud Kit	M5MAC-PS	
Tapped Hole (4) for Poka-Yoke	Screw Not Included	M5x6mm SHCS	

Accessories			Page
Mounting Bore Hole Cap, Plastic, Set of 4	52	M5MAC-BC	55
Pull Stud Plug, Steel, Set of 4 and MagGrabber	52	M5MAC-BPMET	55
52 DynoLock Base Service Kit	52	M5MAC-BS	55
Hex Wrench Adapter Socket	Use with M5MAC-BS	MATE02776	55
MagGrabber	See Page 55	MATE02803	55
Mount Hardware Kit, 4 Bushings and 4 Bolts	See Page 56	M00AC-BU	56
Pull Stud, Set of 4	52	M5MAC-PS	54
Centering Bottom Cover with 30mm Spud	52	M5MAC-CBC30	55
Centering Bottom Cover with 32mm Spud	52	M5MAC-CBC32	55
Centering Bottom Cover with 50mm Spud	52	M5MAC-CBC50	55
Table T-Slot Key 14mm	See Page 56	M00AC-TSK-01	56
Table T-Slot Key 18mm	See Page 56	M00AC-TSK-02	56
Centering Gage	52	M5MAC-CG	56
Poka-Yoke Screw - Not Included		M5x6 SHCS	

Compatible DynoGrip Vise Assemblies			Page
52 Vise Assembly 95 60	52	M5MVC-095060	9
52 Vise Assembly 120 60	52	M5MVC-120060	10
52 Vise Assembly 95 80	52	M5MVC-095080	11
52 Vise Assembly 120 80	52	M5MVC-120080	12
52 Vise Assembly 160 80	52	M5MVC-160080	13
52 Vise Assembly 200 80	52	M5MVC-200080	14
52 Tombstone 3-Sided w M5MBS-104-01	52	M50T3-260-01	38

## Assembly - M5MBS-104-01



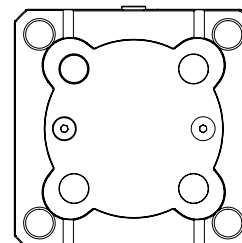
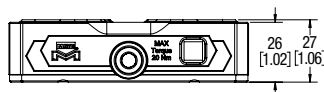
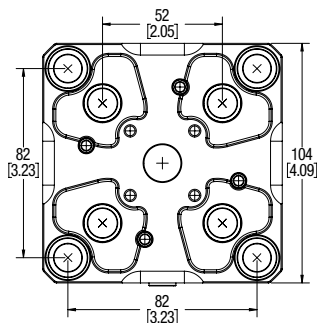
## Exploded View



## 52 DynoLock Base Service Kit



## Key Dimensions



[Dimensions in mm(in)]. Images are proportionate but not to scale.





# M5MBX-116150-02

	Information	Metric	Imperial
Pull Stud Type	Mate 52		
Maximum Torque		20Nm	175 in-lbs
Mounting Bores Quantity	4		
Mounting Bores Spacing		100mm	3.94"
Mounting Bores - Spacing Additional		50mm	1.97"
Mounting Bores - Inside Diameter		12mm	0.47"
Lead Screw Hex Size		6mm	
Base Overall Length		116mm	4.57"
Base Overall Width		150mm	5.91"
Base Overall Height		27mm	1.06"
Base Overall Weight		2.8kg	6.2lbs
Use with Riser	Yes	See Page 45	
Centering Bottom Cover	Multiple Options	See Below	
Use with Competitor	Requires Pull Stud Kit	M5MAC-PS	
Tapped Hole (4) for Poka-Yoke	Screw Not Included	M5x6mm SHCS	

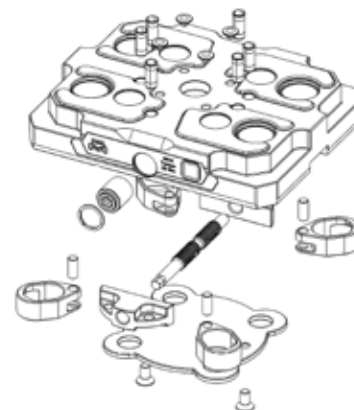
Accessories			Page
Mounting Bore Hole Cap, Plastic, Set of 4	52	M5MAC-BC	55
Pull Stud Plug, Steel, Set of 4 and MagGrabber	52	M5MAC-BPMET	55
52 DynoLock Base Service Kit	52	M5MAC-BS	55
Hex Wrench Adapter Socket	Use with M5MAC-BS	MATE02777	55
MagGrabber	See Page 55	MATE02803	55
Mount Hardware Kit, 4 Bushings and 4 Bolts	See Page 56	M00AC-BU	56
Pull Stud, Set of 4	52	M5MAC-PS	54
Centering Bottom Cover with 30mm Spud	52	M5MAC-CBC30	55
Centering Bottom Cover with 32mm Spud	52	M5MAC-CBC32	55
Centering Bottom Cover with 50mm Spud	52	M5MAC-CBC50	55
Table T-Slot Key 14mm	See Page 56	M00AC-TSK-01	56
Table T-Slot Key 18mm	See Page 56	M00AC-TSK-02	56
Centering Gage	52	M5MAC-CG	56
Poka-Yoke Screw - Not Included		M5x6 SHCS	

Compatible DynoGrip Vise Assemblies			Page
52 Vise Assembly 95 60	52	M5MVC-095060	9
52 Vise Assembly 120 60	52	M5MVC-120060	10
52 Vise Assembly 95 80	52	M5MVC-095080	11
52 Vise Assembly 120 80	52	M5MVC-120080	12
52 Vise Assembly 160 80	52	M5MVC-160080	13
52 Vise Assembly 200 80	52	M5MVC-200080	14
52 Riser 33mm w M5MBX-116150-02	52	M50RX-033-01	45

## Assembly - M5MBX-116150-02



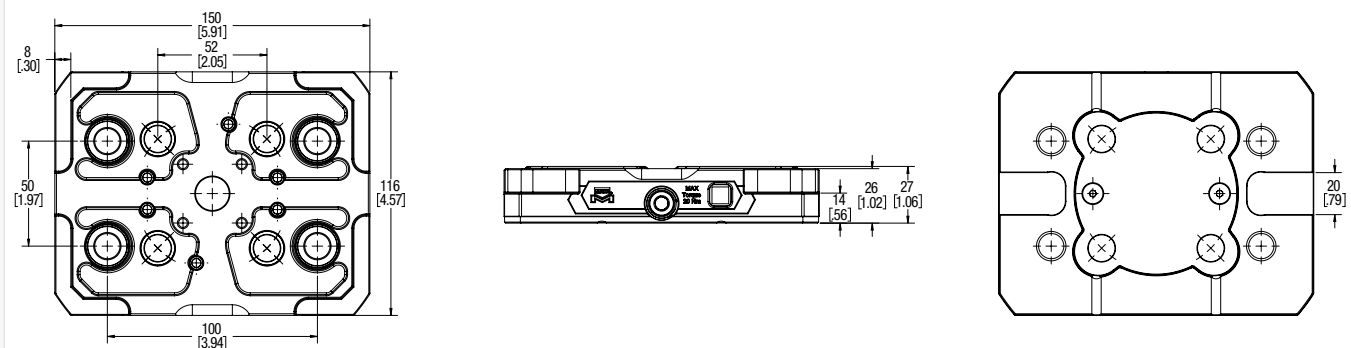
## Exploded View



## 52 DynoLock Base Service Kit



## Key Dimensions



[Dimensions in mm(in)]. Images are proportionate but not to scale.



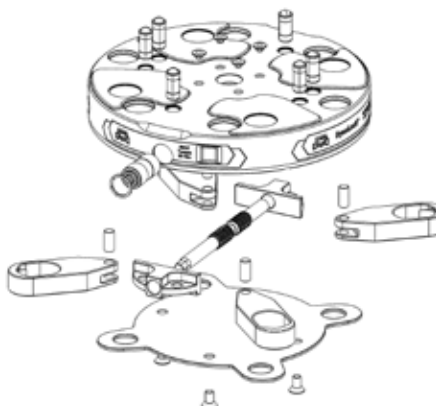


# M9MBR-176-01

## Assembly - M9MBR-176-01



## Exploded View



## 96 DynoLock Base Service Kit

Components  
M9MAC-BS

Hex Wrench Adapter Socket  
MATE02780

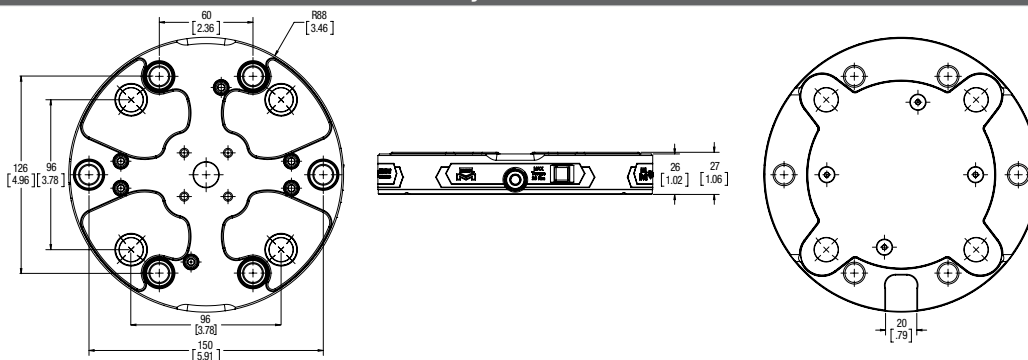


	Information	Metric	Imperial
Pull Stud Type	Mate 96		
Maximum Torque		20Nm	175 in-lbs
Mounting Bores Quantity	6		
Mounting Bores Spacing		150mm	5.91"
Mounting Bores - Spacing Additional		126mm	4.96"
Mounting Bores - Spacing Additional		60mm	2.36"
Mounting Bores - Inside Diameter		12mm	0.47"
Lead Screw Hex Size		6mm	
Base Overall Diameter		176mm	6.93"
Base Overall Height		27mm	1.06"
Base Overall Weight		4.1kg	9.0lbs
Use with Pyramid	Yes	See Page 44	
Centering Bottom Cover	Multiple Options	See Below	
Use with Competitor	Requires Pull Stud Kit	M9MAC-PS	
Tapped Hole (4) for Poka-Yoke	Screw Not Included	M5x6mm SHCS	

Accessories			Page
Mounting Bore Hole Cap, Plastic, Set of 4	96	M9MAC-BC	55
Pull Stud Plug, Steel, Set of 4 and MagGrabber	96	M9MAC-BPMET	55
96 DynoLock Base Service Kit	96	M9MAC-BS	55
Hex Wrench Adapter Socket	Use with M9MAC-BS	MATE02780	55
MagGrabber	See Page 55	MATE02803	55
Mount Hardware Kit, 4 Bushings and 4 Bolts	See Page 56	M00AC-BU	56
Pull Stud, Set of 4	96	M9MAC-PS	54
Centering Bottom Cover with 30mm Spud	96	M9MAC-CBC30	55
Centering Bottom Cover with 32mm Spud	96	M9MAC-CBC32	55
Centering Bottom Cover with 50mm Spud	96	M9MAC-CBC50	55
Table T-Slot Key 14mm	See Page 56	M00AC-TSK-01	56
Table T-Slot Key 18mm	See Page 56	M00AC-TSK-02	56
Centering Gage	96	M9MAC-CG	56
Poka-Yoke Screw - Not Included		M5x6 SHCS	

Compatible DynoGrip Vise Assemblies			Page
96 Vise Assembly 155 80	96	M9MVC-155080	15
96 Vise Assembly 205 80	96	M9MVC-205080	16
96 Vise Assembly 155 125	96	M9MVC-155125	17
96 Vise Assembly 205 125	96	M9MVC-205125	18
96 Vise Assembly 255 125	96	M9MVC-255125	19
96 Vise Assembly 305 125	96	M9MVC-305125	20
96 Vise Assembly 355 125	96	M9MVC-355125	21

## Key Dimensions



[Dimensions in mm(in)]. Images are proportionate but not to scale.





# M9MBR-246-01

	Information	Metric	Imperial
Pull Stud Type	Mate 96		
Maximum Torque		20Nm	175 in-lbs
Mounting Bores Quantity	4		
Mounting Bores Spacing		170mm	6.69"
Mounting Bores - Spacing Additional		126mm	4.96"
Mounting Bores - Inside Diameter		12mm	0.47"
Lead Screw Hex Size		6mm	
Base Overall Diameter		246mm	9.69"
Base Overall Height		27mm	1.06"
Base Overall Weight		9.0kg	19.7lbs
Centering Bottom Cover	Multiple Options	See Below	
Use with Competitor	Requires Pull Stud Kit	M9MAC-PS	
Tapped Hole (4) for Poka-Yoke	Screw Not Included	M5x6mm SHCS	

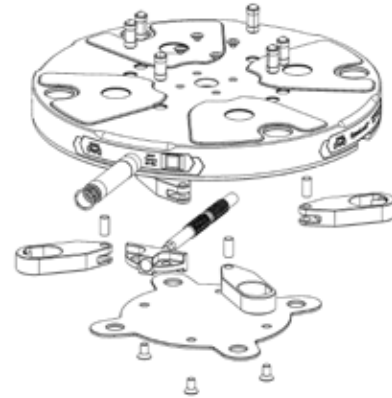
Accessories			Page
Mounting Bore Hole Cap, Plastic, Set of 4	96	M9MAC-BC	55
Pull Stud Plug, Steel, Set of 4 and MagGrabber	96	M9MAC-BPMET	55
96 DynoLock Base Service Kit	96	M9MAC-BS	55
Hex Wrench Adapter Socket	Use with M9MAC-BS	MATE02783	55
MagGrabber	See Page 55	MATE02803	55
Mount Hardware Kit, 4 Bushings and 4 Bolts	See Page 56	M00AC-BU	56
Pull Stud, Set of 4	96	M9MAC-PS	54
Centering Bottom Cover with 30mm Spud	96	M9MAC-CBC30	55
Centering Bottom Cover with 32mm Spud	96	M9MAC-CBC32	55
Centering Bottom Cover with 50mm Spud	96	M9MAC-CBC50	55
Table T-Slot Key 14mm	See Page 56	M00AC-TSK-01	56
Table T-Slot Key 18mm	See Page 56	M00AC-TSK-02	56
Centering Gage	96	M9MAC-CG	56
Poka-Yoke Screw - Not Included		M5x6 SHCS	

Compatible DynoGrip Vise Assemblies			Page
96 Vise Assembly 155 80	96	M9MVC-155080	15
96 Vise Assembly 205 80	96	M9MVC-205080	16
96 Vise Assembly 155 125	96	M9MVC-155125	17
96 Vise Assembly 205 125	96	M9MVC-205125	18
96 Vise Assembly 255 125	96	M9MVC-255125	19
96 Vise Assembly 305 125	96	M9MVC-305125	20
96 Vise Assembly 355 125	96	M9MVC-355125	21

## Assembly - M9MBR-246-01



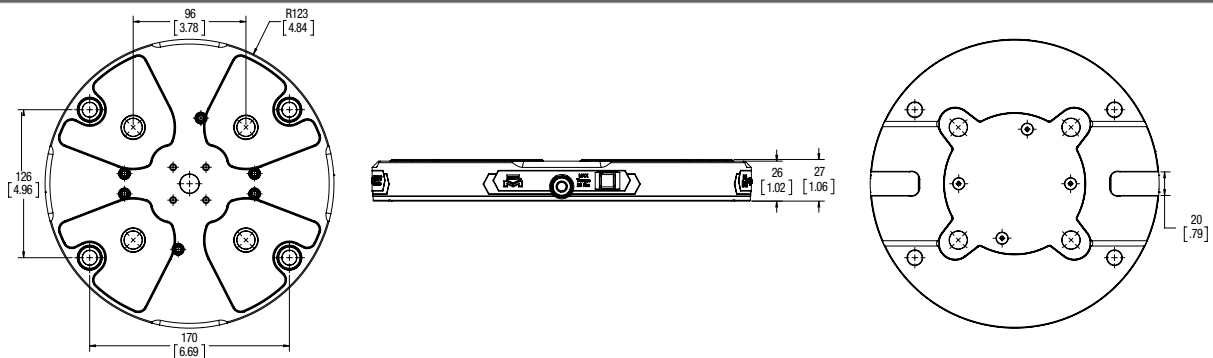
## Exploded View



## 96 DynoLock Base Service Kit



## Key Dimensions



[Dimensions in mm(in)]. Images are proportionate but not to scale.





# M9MBR-246-02

	Information	Metric	Imperial
Pull Stud Type	Mate 96		
Maximum Torque		20Nm	175 in-lbs
Mounting Bores Quantity	4		
Mounting Bores Spacing		156mm	6.14"
Mounting Bores - Inside Diameter		12mm	0.47"
Lead Screw Hex Size		6mm	
Base Overall Diameter		246mm	9.69"
Base Overall Height		27mm	1.06"
Base Overall Weight		9.0kg	19.7lbs
Centering Bottom Cover	Multiple Options	See Below	
Use with Competitor	Requires Pull Stud Kit	M9MAC-PS	
Tapped Hole (4) for Poka-Yoke	Screw Not Included	M5x6mm SHCS	

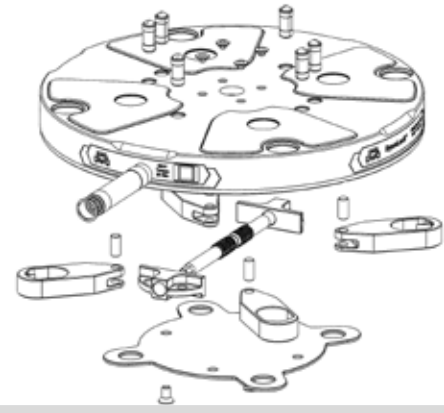
Accessories			Page
Mounting Bore Hole Cap, Plastic, Set of 4	96	M9MAC-BC	55
Pull Stud Plug, Steel, Set of 4 and MagGrabber	96	M9MAC-BPMET	55
96 DynoLock Base Service Kit	96	M9MAC-BS	55
Hex Wrench Adapter Socket	Use with M9MAC-BS	MATE02783	55
MagGrabber	See Page 55	MATE02803	55
Mount Hardware Kit, 4 Bushings and 4 Bolts	See Page 56	M00AC-BU	56
Pull Stud, Set of 4	96	M9MAC-PS	54
Centering Bottom Cover with 30mm Spud	96	M9MAC-CBC30	55
Centering Bottom Cover with 32mm Spud	96	M9MAC-CBC32	55
Centering Bottom Cover with 50mm Spud	96	M9MAC-CBC50	55
Base Orientation Key 14mm with bolt for M9MBR-246-02	See Page 30	M00AC-BKK-01	30
Base Orientation Key 18mm with bolt for M9MBR-246-02	See Page 30	M00AC-BKK-02	30
Centering Gage	96	M9MAC-CG	56
Poka-Yoke Screw - Not Included		M5x6 SHCS	

Compatible DynoGrip Vise Assemblies			Page
96 Vise Assembly 155 80	96	M9MVC-155080	15
96 Vise Assembly 205 80	96	M9MVC-205080	16
96 Vise Assembly 155 125	96	M9MVC-155125	17
96 Vise Assembly 205 125	96	M9MVC-205125	18
96 Vise Assembly 255 125	96	M9MVC-255125	19
96 Vise Assembly 305 125	96	M9MVC-305125	20
96 Vise Assembly 355 125	96	M9MVC-355125	21

## Assembly - M9MBR-246-02



## Exploded View

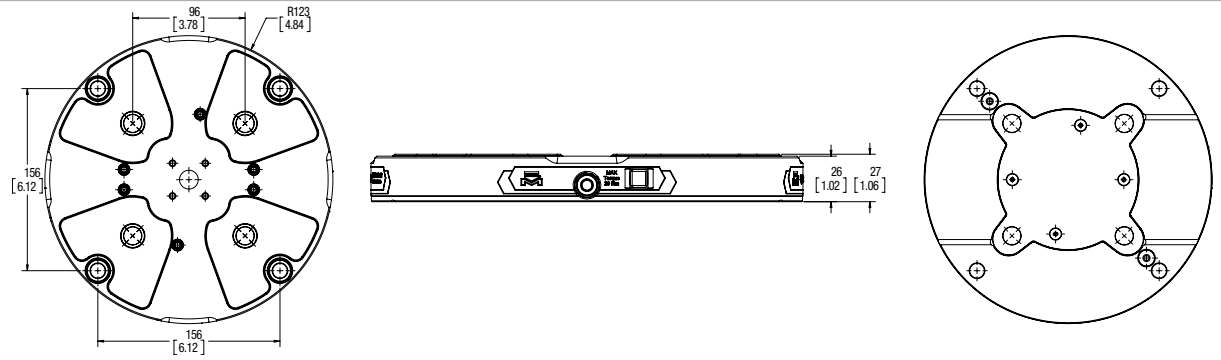


## 96 DynoLock Base Service Kit

Components M9MAC-BS	Hex Wrench Adapter Socket MATE02783
Base Orientation Key 14mm M00AC-BKK-01	Base Orientation Key 18mm M00AC-BKK-02

Attach using M5X1X14 DIN 912-12.9 Socket Head Cap Screw

## Key Dimensions



[Dimensions in mm(in)]. Images are proportionate but not to scale.





# M9MBS-192-01

	Information	Metric	Imperial
Pull Stud Type	Mate 96		
Maximum Torque		20Nm	175 in-lbs
Mounting Bores Quantity	4		
Mounting Bores Spacing		150mm	5.91"
Mounting Bores - Spacing Additional		120mm	4.72"
Mounting Bores - Inside Diameter		12mm	0.47"
Lead Screw Hex Size		6mm	
Base Overall Length		192mm	7.56"
Base Overall Width		192mm	7.56"
Base Overall Height		27mm	1.06"
Base Overall Weight		6.7kg	14.8lbs
Use with Tombstone	Yes	See Page 40	
Use with Dual Right Angle	Yes	See Page 42	
Centering Bottom Cover	Multiple Options	See Below	
Use with Competitor	Requires Pull Stud Kit	M9MAC-PS	
Tapped Hole (4) for Poka-Yoke	Screw Not Included	M5x6mm SHCS	

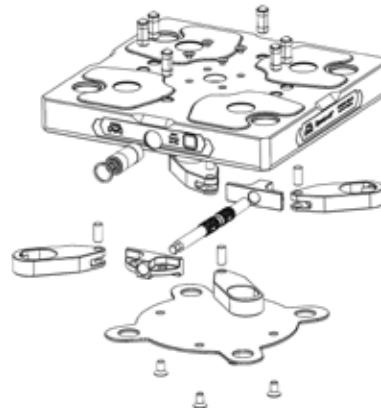
Accessories			Page
Mounting Bore Hole Cap, Plastic, Set of 4	96	M9MAC-BC	55
Pull Stud Plug, Steel, Set of 4 and MagGrabber	96	M9MAC-BPMET	55
96 DynoLock Base Service Kit	96	M9MAC-BS	55
Hex Wrench Adapter Socket	Use with M9MAC-BS	MATE02781	55
MagGrabber	See Page 55	MATE02803	55
Mount Hardware Kit, 4 Bushings and 4 Bolts	See Page 56	M00AC-BU	56
Pull Stud, Set of 4	96	M9MAC-PS	54
Centering Bottom Cover with 30mm Spud	96	M9MAC-CBC30	55
Centering Bottom Cover with 32mm Spud	96	M9MAC-CBC32	55
Centering Bottom Cover with 50mm Spud	96	M9MAC-CBC50	55
Centering Gage	96	M9MAC-CG	56
Poka-Yoke Screw - Not Included		M5x6 SHCS	

Compatible DynoGrip Vise Assemblies			Page
96 Vise Assembly 155 80	96	M9MVC-155080	15
96 Vise Assembly 205 80	96	M9MVC-205080	16
96 Vise Assembly 155 125	96	M9MVC-155125	17
96 Vise Assembly 205 125	96	M9MVC-205125	18
96 Vise Assembly 255 125	96	M9MVC-255125	19
96 Vise Assembly 305 125	96	M9MVC-305125	20
96 Vise Assembly 355 125	96	M9MVC-355125	21

## Assembly - M9MBS-192-01



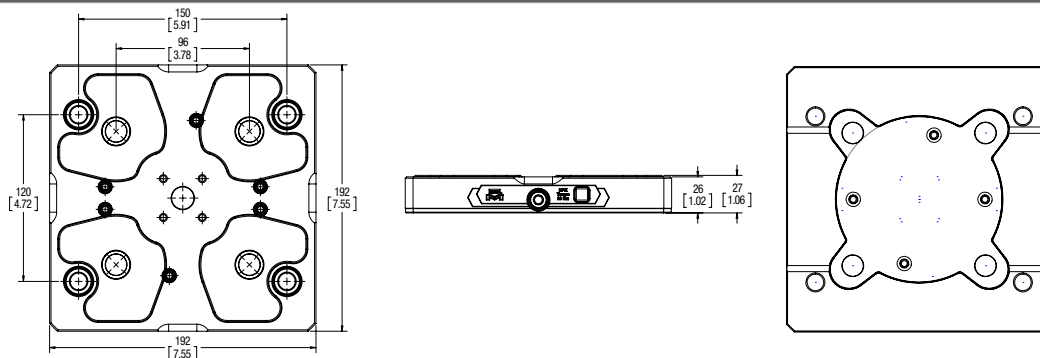
## Exploded View



## 96 DynoLock Base Service Kit

Components M9MAC-BS	Hex Wrench Adapter Socket MATE02781

## Key Dimensions



[Dimensions in mm(in)]. Images are proportionate but not to scale.





# M9MBS-192-02

	Information	Metric	Imperial
Pull Stud Type	Mate 96		
Maximum Torque		20Nm	175 in-lbs
Mounting Bores Quantity	4		
Mounting Bores Spacing		150mm	5.91"
Mounting Bores - Spacing Additional		126mm	4.96"
Mounting Bores - Inside Diameter		12mm	0.47"
Lead Screw Hex Size		6mm	
Base Overall Length		192mm	7.56"
Base Overall Width		192mm	7.56"
Base Overall Height		27mm	1.06"
Base Overall Weight		6.7kg	14.7lbs
Centering Bottom Cover	Multiple Options	See Below	
Use with Competitor	Requires Pull Stud Kit	M9MAC-PS	
Tapped Hole (4) for Poka-Yoke	Screw Not Included	M5x6mm SHCS	

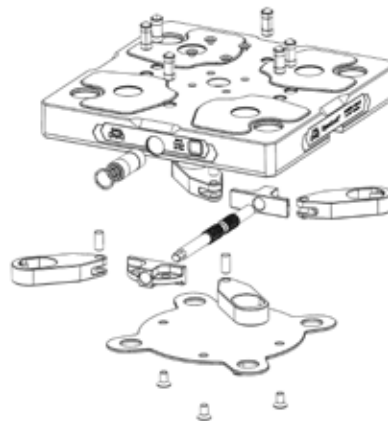
Accessories			Page
Mounting Bore Hole Cap, Plastic, Set of 4	96	M9MAC-BC	55
Pull Stud Plug, Steel, Set of 4 and MagGrabber	96	M9MAC-BPMET	55
96 DynoLock Base Service Kit	96	M9MAC-BS	55
Hex Wrench Adapter Socket	Use with M9MAC-BS	MATE02781	55
MagGrabber	See Page 55	MATE02803	55
Mount Hardware Kit, 4 Bushings and 4 Bolts	See Page 56	M00AC-BU	56
Pull Stud, Set of 4	96	M9MAC-PS	54
Centering Bottom Cover with 30mm Spud	96	M9MAC-CBC30	55
Centering Bottom Cover with 32mm Spud	96	M9MAC-CBC32	55
Centering Bottom Cover with 50mm Spud	96	M9MAC-CBC50	55
Table T-Slot Key 14mm	See Page 56	M00AC-TSK-01	56
Table T-Slot Key 18mm	See Page 56	M00AC-TSK-02	56
Centering Gage	96	M9MAC-CG	56
Poka-Yoke Screw - Not Included		M5x6 SHCS	

Compatible DynoGrip Vise Assemblies			Page
96 Vise Assembly 155 80	96	M9MVC-155080	15
96 Vise Assembly 205 80	96	M9MVC-205080	16
96 Vise Assembly 155 125	96	M9MVC-155125	17
96 Vise Assembly 205 125	96	M9MVC-205125	18
96 Vise Assembly 255 125	96	M9MVC-255125	19
96 Vise Assembly 305 125	96	M9MVC-305125	20
96 Vise Assembly 355 125	96	M9MVC-355125	21

## Assembly - M9MBS-192-02



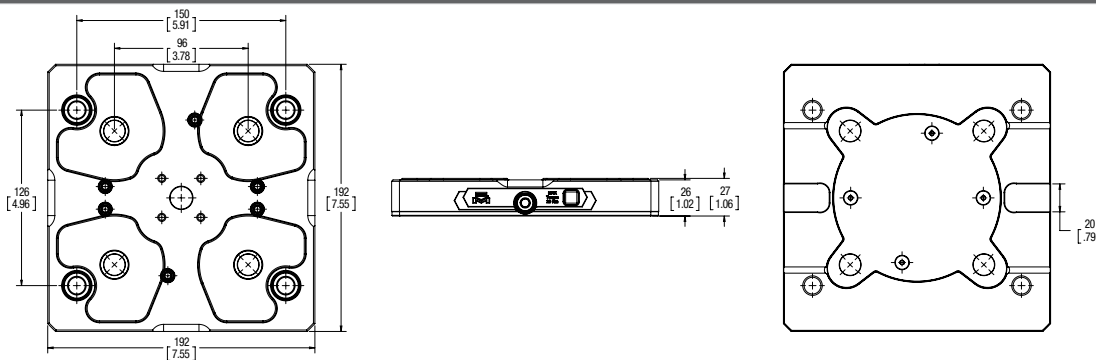
## Exploded View



## 96 DynoLock Base Service Kit



## Key Dimensions



[Dimensions in mm(in)]. Images are proportionate but not to scale.







# M9MBX-156192-02

	Information	Metric	Imperial
Pull Stud Type	Mate 96		
Maximum Torque		20Nm	175 in-lbs
Mounting Bores Quantity	8		
Mounting Bores Spacing		100mm	3.94"
Mounting Bores - Spacing Additional		50mm	1.97"
Mounting Bores - Inside Diameter		12mm	0.47"
Lead Screw Hex Size		6mm	
Base Overall Length		156mm	6.14"
Base Overall Width		192mm	7.56"
Base Overall Height		27mm	1.06"
Base Overall Weight		4.8kg	10.6lbs
Use with Riser	Yes	See Page 47	
Centering Bottom Cover	Multiple Options	See Below	
Use with Competitor	Requires Pull Stud Kit	M9MAC-PS	
Tapped Hole (4) for Poka-Yoke	Screw Not Included	M5x6mm SHCS	

Accessories			Page
Mounting Bore Hole Cap, Plastic, Set of 4	96	M9MAC-BC	55
Pull Stud Plug, Steel, Set of 4 and MagGrabber	96	M9MAC-BPMET	55
96 DynoLock Base Service Kit	96	M9MAC-BS	55
Hex Wrench Adapter Socket	Use with M9MAC-BS	MATE02777	55
MagGrabber	See Page 55	MATE02803	55
Mount Hardware Kit, 4 Bushings and 4 Bolts	See Page 56	M00AC-BU	56
Pull Stud, Set of 4	96	M9MAC-PS	54
Centering Bottom Cover with 30mm Spud	96	M9MAC-CBC30	55
Centering Bottom Cover with 32mm Spud	96	M9MAC-CBC32	55
Centering Bottom Cover with 50mm Spud	96	M9MAC-CBC50	55
Table T-Slot Key 14mm	See Page 56	M00AC-TSK-01	56
Table T-Slot Key 18mm	See Page 56	M00AC-TSK-02	56
Centering Gage	96	M9MAC-CG	56
Poka-Yoke Screw - Not Included		M5x6 SHCS	

Compatible DynoGrip Vise Assemblies			Page
96 Vise Assembly 155 80	96	M9MVC-155080	15
96 Vise Assembly 205 80	96	M9MVC-205080	16
96 Vise Assembly 155 125	96	M9MVC-155125	17
96 Vise Assembly 205 125	96	M9MVC-205125	18
96 Vise Assembly 255 125	96	M9MVC-255125	19
96 Vise Assembly 305 125	96	M9MVC-305125	20
96 Vise Assembly 355 125	96	M9MVC-355125	21

## Assembly - M9MBX-156192-02



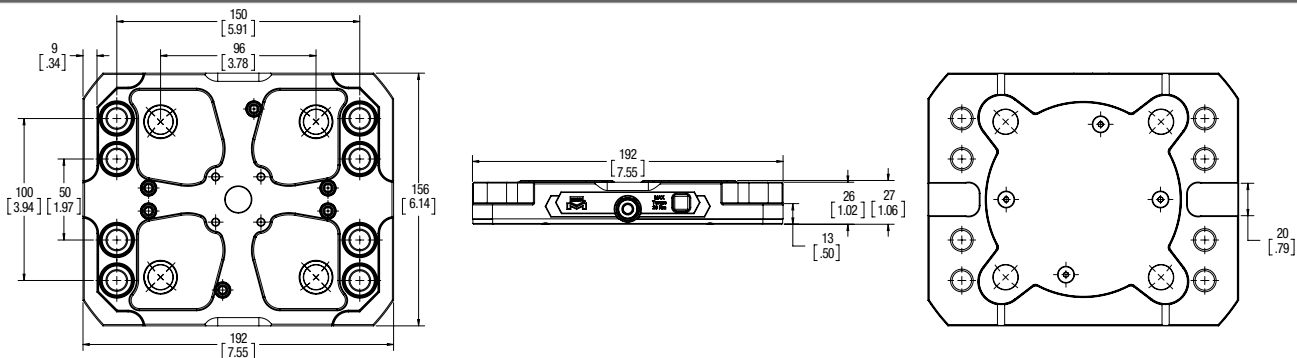
## Exploded View



## 96 DynoLock Base Service Kit



## Key Dimensions



[Dimensions in mm(in)]. Images are proportionate but not to scale.





# M9MBX-192246-01

	Information	Metric	Imperial
Pull Stud Type	Mate 96		
Maximum Torque		20Nm	175 in-lbs
Mounting Bores Quantity	4		
Mounting Bores Spacing		200mm	7.87"
Mounting Bores - Spacing Additional		150mm	5.91"
Mounting Bores - Inside Diameter		12mm	0.47"
Lead Screw Hex Size		6mm	
Base Overall Length		246mm	9.69"
Base Overall Width		192mm	7.56"
Base Overall Height		27mm	1.06"
Base Overall Weight		8.8kg	19.4lbs
Centering Bottom Cover	Multiple Options	See Below	
Use with Competitor	Requires Pull Stud Kit	M9MAC-PS	
Tapped Hole (4) for Poka-Yoke	Screw Not Included	M5x6mm SHCS	

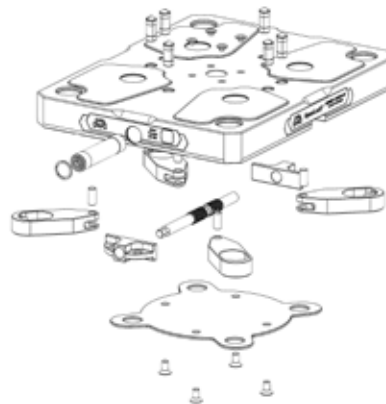
Accessories			Page
Mounting Bore Hole Cap, Plastic, Set of 4	96	M9MAC-BC	55
Pull Stud Plug, Steel, Set of 4 and MagGrabber	96	M9MAC-BPMET	55
96 DynoLock Base Service Kit	96	M9MAC-BS	55
Hex Wrench Adapter Socket	Use with M9MAC-BS	MATE02783	55
MagGrabber	See Page 55	MATE02803	55
Mount Hardware Kit, 4 Bushings and 4 Bolts	See Page 56	M00AC-BU	56
Pull Stud, Set of 4	96	M9MAC-PS	54
Centering Bottom Cover with 30mm Spud	96	M9MAC-CBC30	55
Centering Bottom Cover with 32mm Spud	96	M9MAC-CBC32	55
Centering Bottom Cover with 50mm Spud	96	M9MAC-CBC50	55
Table T-Slot Key 14mm	See Page 56	M00AC-TSK-01	56
Table T-Slot Key 18mm	See Page 56	M00AC-TSK-02	56
Centering Gage	96	M9MAC-CG	56
Poka-Yoke Screw - Not Included		M5x6 SHCS	

Compatible DynoGrip Vise Assemblies			Page
96 Vise Assembly 155 80	96	M9MVC-155080	15
96 Vise Assembly 205 80	96	M9MVC-205080	16
96 Vise Assembly 155 125	96	M9MVC-155125	17
96 Vise Assembly 205 125	96	M9MVC-205125	18
96 Vise Assembly 255 125	96	M9MVC-255125	19
96 Vise Assembly 305 125	96	M9MVC-305125	20
96 Vise Assembly 355 125	96	M9MVC-355125	21

## Assembly - M9MBX-192246-01



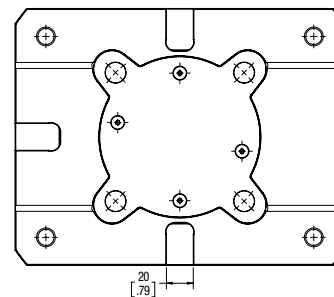
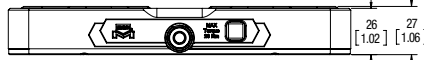
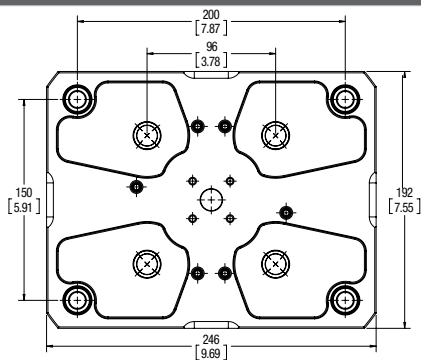
## Exploded View



## 96 DynoLock Base Service Kit



## Key Dimensions



[Dimensions in mm(in)]. Images are proportionate but not to scale.





## M9MBA-126150

	Information	Metric	Imperial
Part Number	M9MBA-126150		
Family	DynoLock		
Product	Adapter		
Product Version	96		
Product Shape	Adapter		
Pull Stud Type	Mate 96		
Maximum Torque		20Nm	175 in-lbs
Mounting Bores Quantity	4		
Mounting Bores Spacing		96mm	3.78"
Lead Screw Hex Size		6mm	
Base Overall Length		126mm	4.96"
Base Overall Width		150mm	5.91"
Base Overall Height		27mm	1.06"
Base Overall Weight		3.4kg	7.5lbs
Centering Bottom Cover	Multiple Options	See Below	
Use with Competitor	Requires Pull Stud Kit	M9MAC-PS	
Tapped Hole (4) for Poka-Yoke	Screw Not Included	M5x6mm SHCS	

Accessories			Page
Mounting Bore Hole Cap, Plastic, Set of 4	96	M9MAC-BC	55
Pull Stud Plug, Steel, Set of 4 and MagGrabber	52	M5MAC-BPMET	55
52 DynoLock Base Service Kit	52	M5MAC-BS	55
Hex Wrench Adapter Socket	Use with M5MAC-BS	MATE02786	55
MagGrabber	See Page 55	MATE02803	55
Mount Hardware Kit, 4 Bushings and 4 Bolts	See Page 56	M00AC-BU	56
Pull Stud, Set of 4	96	M9MAC-PS	54
Poka-Yoke Screw - Not Included		M5x6 SHCS	

Compatible DynoGrip Vise Assemblies			Page
52 Vise Assembly 95 60	52	M5MVC-095060	9
52 Vise Assembly 120 60	52	M5MVC-120060	10
52 Vise Assembly 95 80	52	M5MVC-095080	11
52 Vise Assembly 120 80	52	M5MVC-120080	12
52 Vise Assembly 160 80	52	M5MVC-160080	13
52 Vise Assembly 200 80	52	M5MVC-200080	14

### Assembly - M9MBA-126150



### Exploded View



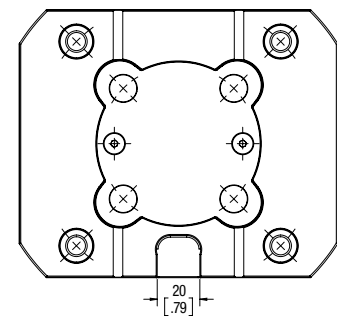
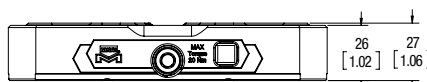
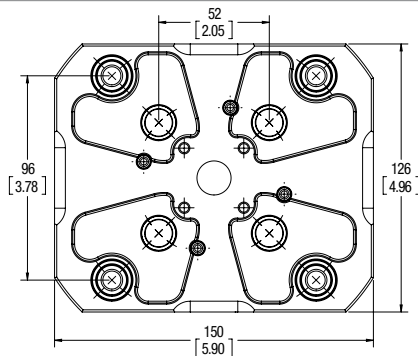
### 52 DynoLock Base Service Kit

Components  
M5MAC-BS

Hex Wrench Adapter Socket  
MATE02786



### Key Dimensions



[Dimensions in mm(in)]. Images are proportionate but not to scale.



## 52 Tombstones

**52 Tombstone Only  
3-Sided**

See Page 38	M50T3-260
Body Height	260mm
Weight	37.0 kgs

**52 Tombstone 3-Sided w  
M5MBS-104-01**

See Page 38	M50T3-260-01
Body Height	260mm
Weight	47.5 kgs

**52 Tombstone Only  
4-Sided**

See Page 39	M50T4-260
Body Height	260mm
Weight	28.5 kgs

**52 Tombstone 4-Sided w  
M5MBS-104-01**

See Page 39	M50T4-260-01
Body Height	260mm
Weight	42.5 kgs

## 52 Pyramids

**52 Pyramid Only**

See Page 43	M50P3-108
Body Height	108mm
Weight	7.0 kgs

**52 Pyramid w  
M5MBR-116-01**

See Page 43	M50P3-108-01
Body Height	108mm
Weight	12.2 kgs

## 52 Dual Right Angles

**52 Dual Right Angle Only**

See Page 41	M50B2-162
Body Height	162mm
Weight	7.3 kgs

**52 Dual Right Angle w  
M5MBS-104-01**

See Page 41	M50B2-162-01
Body Height	162mm
Weight	10.7 kgs

## 52 Risers

**52 Riser 33mm Only**

See Page 45	M50RX-033
Body Height	33mm
Weight	4.5 kgs

**52 Riser 33mm w  
M5MBX-116150-02**

See Page 45	M50RX-033-01
Body Height	33mm
Weight	7.3 kgs

**52 Riser 73mm Only**

See Page 46	M50RX-073
Body Height	73mm
Weight	9.9 kgs

**52 Riser 73mm  
w M5MBX-116150-02**

See Page 46	M50RX-073-01
Body Height	73mm
Weight	12.6 kgs



[Dimensions in mm(in)]. Images are proportionate but not to scale.



## 96 Tombstones

					
<b>96 Tombstone Only 4-Sided</b>		<b>96 Tombstone 4-Sided w M5MBS-104-01</b>		<b>96 Tombstone 4-Sided w M9MBS-192-01</b>	
See Page 40	M90T4-668	See Page 40	M90T4-668-01	See Page 40	M90T4-668-02
Body Height	668mm	Body Height	668mm	Body Height	668mm
Weight	194.7 kgs	Weight	229.4 kgs	Weight	275.1 kgs

## 96 Pyramids

			
<b>96 Pyramid Only</b>		<b>96 Pyramid w M9MBR-176-01</b>	
See Page 44	M90P3-150	See Page 44	M90P3-150-01
Body Height	150mm	Body Height	150mm
Weight	28.9 kgs	Weight	41.1 kgs

## 96 Dual Right Angles

					
<b>96 Dual Right Angle Only</b>		<b>96 Dual Right Angle w M5MBS-104-01</b>		<b>96 Dual Right Angle w M9MBS-192-01</b>	
See Page 42	M90B2-247	See Page 42	M90B2-247-01	See Page 42	M90B2-247-02
Body Height	254mm	Body Height	254mm	Body Height	254mm
Weight	29.0 kgs	Weight	32.5 kgs	Weight	42.4 kgs

## 96 Risers

							
<b>96 Riser 33mm Only</b>		<b>96 Riser 33mm w M9MBX-156192-02</b>		<b>96 Riser 73mm Only</b>		<b>96 Riser 73mm w M9MBX-156192-02</b>	
See Page 47	M90RX-033	See Page 47	M90RX-033-01	See Page 48	M90RX-073	See Page 48	M90RX-073-01
Body Height	33mm	Body Height	33mm	Body Height	73mm	Body Height	73mm
Weight	7.6 kgs	Weight	12.7 kgs	Weight	17.0 kgs	Weight	22.1 kgs

[Dimensions in mm(in)]. Images are proportionate but not to scale.





## M50T3-260

	Information	Ref Part Number	Metric	Imperial
Part Number		M50T3-260		
Family	DynoMount			
Product	Tombstone Only 3-Sided			
Product Version	52			
Product Type	Tombstone 3-Side, Square Base			
Overall Length			193mm	7.60"
Overall Width			193mm	7.60"
Overall Height			260mm	10.25"
Overall Weight			37.0kg	81.5lbs
Bolts for attaching DynoLock Base	Not Included See Accessories			
Precision Bushing (Required)	Not Included See Accessories			
Pull Studs Included, 4	20mm			
Mounting to Machine Table				
Mounting Bores - Quantity	8			
Mount to Table Option			100mm	3.94"
Custom Mounting Variations	Requires Technical Review			
Assembled Configuration				
	Description	Ref Part Number	Quantity	
	52 Tombstone 3-Sided w M5MBS-104-01	M50T3-260-01	1	
DynoLock Bases Included and Installed	Yes	M5MBS-104-01	6	

Accessories		Ref Part Number	Page
Compatible DynoMount Base	52	M5MBS-104-01	26
Base Mounting Bore Hole Cap, Set of 4	52	M5MAC-BC	55
Base Pull Stud Plug, Set of 4 and Removal Magnet	52	M5MAC-BPMET	55
MagGrabber		MATE02803	55
Mount Hardware Kit, 24 Bushings and 24 Bolts		M00AC-BU-01	56

Compatible DynoGrip Vise Assemblies		Ref Part Number	Page
52 Vise Assembly 95 60	52	M5MVC-095060	9
52 Vise Assembly 120 60	52	M5MVC-120060	10
52 Vise Assembly 95 80	52	M5MVC-095080	11
52 Vise Assembly 120 80	52	M5MVC-120080	12
52 Vise Assembly 160 80	52	M5MVC-160080	13
52 Vise Assembly 200 80	52	M5MVC-200080	14
52 Pull Stud, Set of 4	52	M5MAC-PS	54

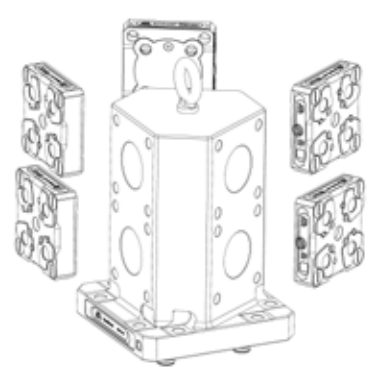
### Mount Base – M50T3-260



### Mount Assembly – M50T3-260-01



### Exploded View



### QuickSpecs™ (2D Bar Code Content)

Part Number:	M50T3-260
Serial Number:	Sample1234
Date Assembled:	yyyy/mm/dd
Product Type:	52 Tombstone 3-Side, Square Base
Overall Height:	260mm
Overall Weight:	37.0kg
Full Specs Link:	<a href="#">Click Here</a>
CAD File Link:	<a href="#">Click Here</a>
Instructions Link:	<a href="#">Click Here</a>
Register this Product:	<a href="#">Click Here</a>
	Made in USA

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M50T4-260				
	Information	Ref Part Number	Metric	Imperial
Part Number		M50T4-260		
Family	DynoMount			
Product	Tombstone Only 4-Sided			
Product Version	52			
Product Type	Tombstone 4-Side, Square Base			
Overall Length			193mm	7.60"
Overall Width			193mm	7.60"
Overall Height			260mm	10.25"
Overall Weight			28.5kg	62.8lbs
Bolts for attaching DynoLock Base	Not Included See Accessories			
Precision Bushing (Required)	Not Included See Accessories			
Pull Studs Included, 4	20mm			
Mounting to Machine Table				
Mounting Bores - Quantity	8			
Mount to Table Option			100mm	3.94"
Custom Mounting Variations	Requires Technical Review			
	Description	Ref Part Number	Quantity	
Assembled Configuration	52 Tombstone 4-Sided w M5MBS-104-01	M50T4-260-01	1	
DynoLock Bases Included and Installed	Yes	M5MBS-104-01	8	

Accessories		Ref Part Number	Page
Compatible DynoMount Base	52	M5MBS-104-01	26
Base Mounting Bore Hole Cap, Set of 4	52	M5MAC-BC	55
Base Pull Stud Plug, Set of 4 and Removal Magnet	52	M5MAC-BPMET	55
MagGrabber		MATE02803	55
Mount Hardware Kit, 32 Bushings and 32 Bolts		M00AC-BU-02	56

Compatible DynoGrip Vise Assemblies		Ref Part Number	Page
52 Vise Assembly 95 60	52	M5MVC-095060	9
52 Vise Assembly 120 60	52	M5MVC-120060	10
52 Vise Assembly 95 80	52	M5MVC-095080	11
52 Vise Assembly 120 80	52	M5MVC-120080	12
52 Vise Assembly 160 80	52	M5MVC-160080	13
52 Vise Assembly 200 80	52	M5MVC-200080	14
52 Pull Stud, Set of 4	52	M5MAC-PS	54

[Dimensions in mm(in)]. Images are proportionate but not to scale.

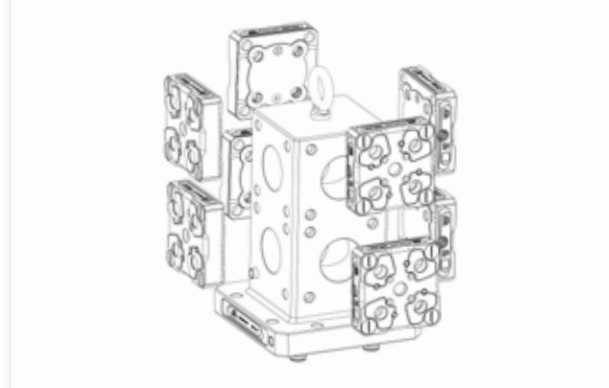
## Mount Base – M50T4-260



## Mount Assembly – M50T4-260-01



## Exploded View



## QuickSpecs™ (2D Bar Code Content)

Part Number:	M50T3-260
Serial Number:	Sample1234
Date Assembled:	yyyy/mm/dd
Product Type:	52 Tombstone 3-Side, Square Base
Overall Height:	260mm
Overall Weight:	37.0kg
Full Specs Link:	<a href="#">Click Here</a>
CAD File Link:	<a href="#">Click Here</a>
Instructions Link:	<a href="#">Click Here</a>
Register this Product:	<a href="#">Click Here</a>
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Scan code to launch product page



# DYNOMOUNT™ TOMBSTONES 96 FAMILY

## M90T4-668

	Information	Ref Part Number	Metric	Imperial
Part Number		M90T4-668		
Family	DynoMount			
Product	Tombstone Only 4-Sided			
Product Version	96			
Product Type	Tombstone 4-Side, Square Base			
Overall Length			400mm	15.75"
Overall Width			400mm	15.75"
Overall Height			668mm	26.30"
Overall Weight			194.7kg	428.3lbs
Bolts for attaching DynoLock Base	Not Included See Accessories			
Precision Bushing (Required)	Not Included See Accessories			
Pull Studs Included, 4	na			
Mounting to Machine Table				
Mounting Bores - Quantity	8			
Mount to Table Option			160mm	6.30"
Mount to Table Option 2			320mm	12.60"
Custom Mounting Variations	Requires Technical Review			
	Description	Ref Part Number	Quantity	
Assembled Configuration - with 52 Bases	96 Tombstone 4-Sided w M5MBS-104-01	M90T4-668-01	1	
DynoLock Bases Included and Installed	Yes	M5MBS-104-01	20	
	Description	Ref Part Number	Quantity	
Assembled Configuration - with 96 Bases	96 Tombstone 4-Sided w M9MBS-192-01	M90T4-668-02	1	
DynoLock Bases Included and Installed	Yes	M9MBS-192-01	12	

Accessories		Ref Part Number	Page
Compatible DynoMount Base	52	M5MBS-104-01	26
Compatible DynoMount Base	96	M9MBS-192-01	31
Base Mounting Bore Hole Cap, Set of 4	96	M9MAC-BC	55
Base Pull Stud Plug, Set of 4 and Removal Magnet	96	M9MAC-BPMET	55
MagGrabber		MATE02803	55
Mount Hardware Kit, 48 Bushings and 48 Bolts		M00AC-BU-03	56
Mount Hardware Kit, 80 Bushings and 80 Bolts		M00AC-BU-04	56

Compatible DynoGrip Vise Assemblies		Ref Part Number	Page
52 Vise Assembly 95 60	52	M5MVC-095060	9
52 Vise Assembly 120 60	52	M5MVC-120060	10
52 Vise Assembly 95 80	52	M5MVC-095080	11
52 Vise Assembly 120 80	52	M5MVC-120080	12
52 Vise Assembly 160 80	52	M5MVC-160080	13
52 Vise Assembly 200 80	52	M5MVC-200080	14
52 Pull Stud, Set of 4	52	M5MAC-PS	54
96 Vise Assembly 155 80	96	M9MVC-155080	15
96 Vise Assembly 205 80	96	M9MVC-205080	16
96 Vise Assembly 155 125	96	M9MVC-155125	17
96 Vise Assembly 205 125	96	M9MVC-205125	18
96 Vise Assembly 255 125	96	M9MVC-255125	19
96 Vise Assembly 305 125	96	M9MVC-305125	20
96 Vise Assembly 355 125	96	M9MVC-355125	21

### Mount Base – M90T4-668



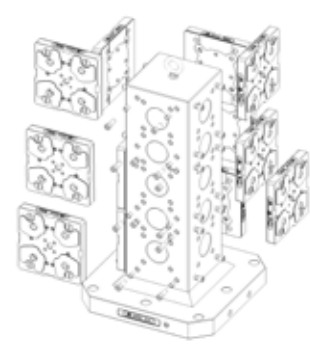
### Mount Assembly

With 52 Bases – M90T4-668-01

With 96 Bases – M90T4-668-02



### Exploded View



### QuickSpecs™ (2D Bar Code Content)

Part Number:	M50T3-260
Serial Number:	Sample1234
Date Assembled:	yyyy/mm/dd
Product Type:	52 Tombstone 3-Side, Square Base
Overall Height:	260mm
Overall Weight:	37.0kg
Full Specs Link:	<a href="#">Click Here</a>
CAD File Link:	<a href="#">Click Here</a>
Instructions Link:	<a href="#">Click Here</a>
Register this Product:	<a href="#">Click Here</a>
	Made in USA

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## M50B2-162

	Information	Ref Part Number	Metric	Imperial
Part Number		M50B2-162		
Family	DynoMount			
Product	Dual Right Angle Only			
Product Version	52			
Product Type	Dual Right Angle			
Overall Length			104mm	4.10"
Overall Width			104mm	4.10"
Overall Height			162mm	6.38"
Overall Weight			7.3kg	16.0lbs
Bolts for attaching DynoLock Base	Included	0		
Precision Bushing (Required)	Included	M00AC-BU		
Pull Studs Included, 4	16mm			
<b>Mounting to Machine Table</b>				
Mounting Bores - Quantity	2			
Mount to Table Option			67mm	2.64"
Custom Mounting Variations	Requires Technical Review			
<b>Assembled Configuration</b>				
	Description	Ref Part Number	Quantity	
Assembled Configuration	52 Dual Right Angle w M5MBS-104-01	M50B2-162-01	1	
DynoLock Bases Included and Installed	Yes	M5MBS-104-01	2	

Accessories			Page
Compatible DynoMount Base	52	M5MBS-104-01	26
Base Mounting Bore Hole Cap, Set of 4	52	M5MAC-BC	55
Base Pull Stud Plug, Set of 4 and Removal Magnet	52	M5MAC-BPMET	55
MagGrabber		MATE02803	55
Mount Hardware Kit, 4 Bushings and 4 Bolts		M00AC-BU	56

Compatible DynoGrip Vise Assemblies			Page
52 Vise Assembly 95 60	52	M5MVC-095060	9
52 Vise Assembly 120 60	52	M5MVC-120060	10
52 Vise Assembly 95 80	52	M5MVC-095080	11
52 Vise Assembly 120 80	52	M5MVC-120080	12
52 Vise Assembly 160 80	52	M5MVC-160080	13
52 Vise Assembly 200 80	52	M5MVC-200080	14
52 Pull Stud, Set of 4	52	M5MAC-PS	54

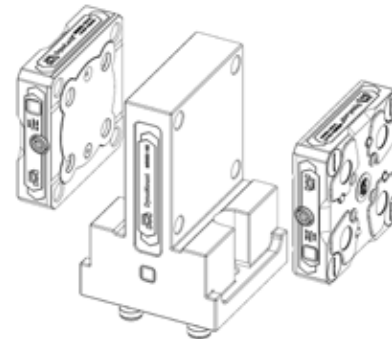
### Mount Base – M50B2-162



### Mount Assembly – M50B2-162-01



### Exploded View



### QuickSpecs™ (2D Bar Code Content)

Part Number:	M50B2-162
Serial Number:	Sample1234
Date Assembled:	yyyy/mm/dd
Product Type:	52 Dual Right Angle
Overall Height:	162mm
Overall Weight:	7.3kg
Full Specs Link:	<a href="#">Click Here</a>
CAD File Link:	<a href="#">Click Here</a>
Instructions Link:	<a href="#">Click Here</a>
Register this Product:	<a href="#">Click Here</a>
	Made in USA

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## M90B2-247

Part Number	Information	Ref Part Number	Metric	Imperial
Part Number		M90B2-247		
Family	DynoMount			
Product	Dual Right Angle Only			
Product Version	96			
Product Type	Dual Right Angle			
Overall Length			193mm	7.60"
Overall Width			140mm	5.50"
Overall Height			254mm	10.00"
Overall Weight			29.0kg	63.7lbs
Bolts for attaching DynoLock Base	Included	M10x1.5 X 30		
Precision Bushing (Required)	Included	M00AC-BU		
Pull Studs Included, 4	20mm			
Mounting to Machine Table				
Mounting Bores - Quantity	2			
Mount to Table Option			95mm	3.74"
Custom Mounting Variations	Requires Technical Review			
	Description	Ref Part Number	Quantity	
Assembled Configuration - with 52 Bases	96 Dual Right Angle w M5MBS-104-01	M90B2-247-01	1	
DynoLock Bases Included and Installed	Yes	M5MBS-104-01	2	
	Description	Ref Part Number	Quantity	
Assembled Configuration - with 96 Bases	96 Dual Right Angle w M9MBS-192-01	M90B2-247-02	1	
DynoLock Bases Included and Installed	Yes	M9MBS-192-01	2	

Accessories	Ref Part Number	Page
Compatible DynoMount 52 Base	52 M5MBS-104-01	26
Compatible DynoMount 96 Base	96 M9MBS-192-01	31
Mounting Bore Hole Cap, Plastic, Set of 4	96 M9MAC-BC	55
Pull Stud Plug, Steel, Set of 4 and MagGrabber	96 M9MAC-BPMET	55
MagGrabber	MATE02803	55
Mount Hardware Kit, 4 Bushings and 4 Bolts	M00AC-BU	56
Pull Stud, Set of 4	96 M9MAC-PS	54

Compatible DynoGrip Vise Assemblies	Ref Part Number	Page
52 Vise Assembly 95 60	52 M5MVC-095060	9
52 Vise Assembly 120 60	52 M5MVC-120060	10
52 Vise Assembly 95 80	52 M5MVC-095080	11
52 Vise Assembly 120 80	52 M5MVC-120080	12
52 Vise Assembly 160 80	52 M5MVC-160080	13
52 Vise Assembly 200 80	52 M5MVC-200080	14
52 Pull Stud, Set of 4	52 M5MAC-PS	54
96 Vise Assembly 155 80	96 M9MVC-155080	15
96 Vise Assembly 205 80	96 M9MVC-205080	16
96 Vise Assembly 155 125	96 M9MVC-155125	17
96 Vise Assembly 205 125	96 M9MVC-205125	18
96 Vise Assembly 255 125	96 M9MVC-255125	19
96 Vise Assembly 305 125	96 M9MVC-305125	20
96 Vise Assembly 355 125	96 M9MVC-355125	21
96 Pull Stud, Set of 4	96 M9MAC-PS	54

### Mount Base - M90B2-247



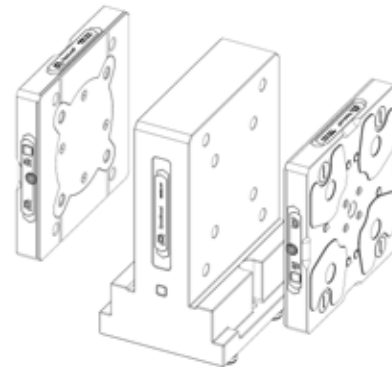
### Mount Assembly

With 52 Bases – M90B2-247-01

With 96 Bases – M90B2-247-02



### Exploded View



### QuickSpecs™ (2D Bar Code Content)

Part Number:	M90B2-247
Serial Number:	123456789
Date Assembled:	mm/dd/yyyy
Product Type:	Dual Right Angle Only 96
Overall Height:	254mm
Overall Weight:	29.0kg
Full Specs Link:	<a href="#">Click Here</a>
CAD File Link:	<a href="#">Click Here</a>
Instructions Link:	<a href="#">Click Here</a>
Register this Product:	<a href="#">Click Here</a>
	Made in USA

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## M50P3-108

	Information	Ref Part Number	Metric	Imperial
Part Number		M50P3-108		
Family	DynoMount			
Product	Pyramid Only 3-Sided			
Product Version	52			
Product Type	Pyramid 3-Side, Round Base			
Overall Diameter			246mm	9.70"
Overall Height			108mm	4.25"
Overall Weight			7.0kg	15.5lbs
Angle	40 Degrees			
Bolts for attaching DynoLock Base	Included	M10x1.5 X 30		
Precision Bushing (Required)	Included	M00AC-BU		
Pull Studs Included, 4	20mm			
Mounting to Machine Table				
Mounting Bores - Quantity	6			
Mount to Table Option 1			70mm	2.76"
Mount to Table Option 2			97mm	3.83"
Custom Mounting Variations	Requires Technical Review			
	Description	Ref Part Number	Quantity	
Assembled Configuration	52 Pyramid w M5MBR-116-01	M50P3-108-01	1	
DynoLock Bases Included and Installed	Yes	M5MBR-116-01	3	
Overall Weight			12.2kg	26.9lbs

Accessories			Page
Compatible DynoMount Base	52	M5MBR-116-01	24
Base Mounting Bore Hole Cap, Set of 4	52	M5MAC-BC	55
Base Pull Stud Plug, Set of 4 and Removal Magnet	52	M5MAC-BPMET	55
MagGrabber		MATE02803	55
Mount Hardware Kit, 4 Bushings and 4 Bolts		M00AC-BU	56

Compatible DynoGrip Vise Assemblies			Page
52 Vise Assembly 95 60	52	M5MVC-095060	9
52 Vise Assembly 120 60	52	M5MVC-120060	10
52 Vise Assembly 95 80	52	M5MVC-095080	11
52 Vise Assembly 120 80	52	M5MVC-120080	12
52 Vise Assembly 160 80	52	M5MVC-160080	13
52 Vise Assembly 200 80	52	M5MVC-200080	14
52 Pull Stud, Set of 4	52	M5MAC-PS	54

[Dimensions in mm(in)]. Images are proportionate but not to scale.

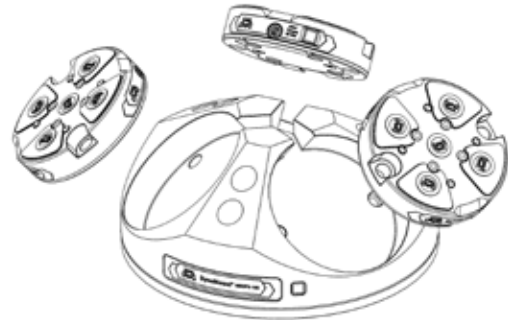
### Mount Base - M50P3-108



### Mount Assembly - M50P3-108-01



### Exploded View



### QuickSpecs™ (2D Bar Code Content)

Part Number:	M50P3-108
Serial Number:	Sample1234
Date Assembled:	yyyy/mm/dd
Product Type:	52 Pyramid 3-Side, Round Base
Overall Height:	108mm
Overall Weight:	7.0kg
Full Specs Link:	<a href="#">Click Here</a>
CAD File Link:	<a href="#">Click Here</a>
Instructions Link:	<a href="#">Click Here</a>
Register this Product:	<a href="#">Click Here</a>
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## M90P3-150

	Information	Ref Part Number	Metric	Imperial
Part Number		M90P3-150		
Family	DynoMount			
Product	Pyramid Only 3-Sided			
Product Version	96			
Product Type	Pyramid 3-Side, Round Base			
Overall Diameter			400mm	15.75"
Overall Height			150mm	5.90"
Overall Weight			28.9kg	63.5lbs
Angle	40 Degrees			
Bolts for attaching DynoLock Base	Included	M10x1.5 X 30		
Precision Bushing (Required)	Included	M00AC-BU		
Pull Studs Included, 4	20mm			
Mounting to Machine Table				
Mounting Bores - Quantity	6			
Mount to Table Option 1			92mm	3.63"
Mount to Table Option 2			146mm	5.73"
Custom Mounting Variations	Requires Technical Review			
	Description	Ref Part Number	Quantity	
Assembled Configuration	Pyramid w M9MBR-176-01	M90P3-150-01	1	
DynoLock Bases Included and Installed	Yes	M9MBR-176-01	3	
Overall Weight			41.1kg	90.5lbs

Accessories			Page
Compatible DynoMount Base	96	M9MBR-176-01	28
Base Mounting Bore Hole Cap, Set of 4	96	M9MAC-BC	55
Base Pull Stud Plug, Set of 4 and Removal Magnet	96	M9MAC-BPMET	55
MagGrabber		MATE02803	55
Mount Hardware Kit, 4 Bushings and 4 Bolts		M00AC-BU	56

Compatible DynoGrip Vise Assemblies			Page
96 Vise Assembly 155 80	96	M9MVC-155080	15
96 Vise Assembly 205 80	96	M9MVC-205080	16
96 Vise Assembly 155 125	96	M9MVC-155125	17
96 Vise Assembly 205 125	96	M9MVC-205125	18
96 Vise Assembly 255 125	96	M9MVC-255125	19
96 Vise Assembly 305 125	96	M9MVC-305125	20
96 Vise Assembly 355 125	96	M9MVC-355125	21
96 Pull Stud, Set of 4	96	M9MAC-PS	54

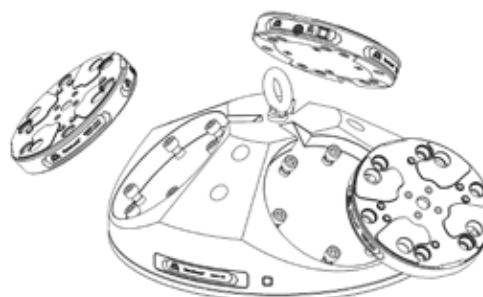
### Mount Base - M90P3-150



### Mount Assembly - M90P3-150-01



### Exploded View



### QuickSpecs™ (2D Bar Code Content)

Part Number:	M90P3-150
Serial Number:	Sample1234
Date Assembled:	yyyy/mm/dd
Product Type:	96 Pyramid 3-Side, Round Base
Overall Height:	150mm
Overall Weight:	28.9kg
Full Specs Link:	<a href="#">Click Here</a>
CAD File Link:	<a href="#">Click Here</a>
Instructions Link:	<a href="#">Click Here</a>
Register this Product:	<a href="#">Click Here</a>
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## M50RX-033

	Information	Ref Part Number	Metric	Imperial
Part Number		M50RX-033		
Family	DynoMount			
Product	Riser 33mm Only			
Product Version	52			
Product Type	Riser			
Overall Length			150mm	5.90"
Overall Width			116mm	4.57"
Overall Height			33mm	1.30"
Overall Weight			4.5kg	10.0lbs
Bolts for attaching DynoLock Base	Included	M10x1.5 X 30		
Precision Bushing (Required)	Included	M00AC-BU		
Pull Studs Included, 4	16mm			
Assembled Overall Height	Height Riser + Base		60mm	2.36"
	Description	Ref Part Number	Quantity	
Assembled Configuration	52 Riser 33mm w M5MBX-116150-02	M50RX-033-01	1	
DynoLock Bases Included and Installed	Yes	M5MBX-116150-02	1	

Accessories			Page
Compatible DynoMount Base	52	M5MBX-116150-02	27
Base Mounting Bore Hole Cap, Set of 4	52	M5MAC-BC	55
Base Pull Stud Plug, Set of 4 and Removal Magnet	52	M5MAC-BPMET	55
MagGrabber		MATE02803	55
Mount Hardware Kit, 4 Bushings and 4 Bolts		M00AC-BU	56

Compatible DynoGrip Vise Assemblies			Page
52 Vise Assembly 95 60	52	M5MVC-095060	9
52 Vise Assembly 120 60	52	M5MVC-120060	10
52 Vise Assembly 95 80	52	M5MVC-095080	11
52 Vise Assembly 120 80	52	M5MVC-120080	12
52 Vise Assembly 160 80	52	M5MVC-160080	13
52 Vise Assembly 200 80	52	M5MVC-200080	14
52 Pull Stud, Set of 4	52	M5MAC-PS	54

[Dimensions in mm(in)]. Images are proportionate but not to scale.

### Mount Base - M50RX-033



### Mount Assembly - M50RX-033-01



### Exploded View

Assembled Height	60mm	2.36"
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### QuickSpecs™ (2D Bar Code Content)

Part Number:	M50RX-033
Serial Number:	Sample1234
Date Assembled:	yyyy/mm/dd
Product Type:	52 Riser
Overall Height:	33mm
Overall Weight:	4.5kg
Assembled Overall Height:	60mm
Full Specs Link:	<a href="#">Click Here</a>
CAD File Link:	<a href="#">Click Here</a>
Instructions Link:	<a href="#">Click Here</a>
Register this Product:	<a href="#">Click Here</a>
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## M50RX-073

	Information	Ref Part Number	Metric	Imperial
Part Number		M50RX-073		
Family	DynoMount			
Product	Riser 73mm Only			
Product Version	52			
Product Type	Riser			
Overall Length			150mm	5.90"
Overall Width			116mm	4.57"
Overall Height			73mm	2.87"
Overall Weight			9.9kg	21.8lbs
Bolts for attaching DynoLock Base	Included	M10x1.5 X 30		
Precision Bushing (Required)	Included	M00AC-BU		
Pull Studs Included, 4	16mm			
Assembled Overall Height	Height Riser + Base		100mm	3.94"
	Description	Ref Part Number	Quantity	
Assembled Configuration	52 Riser 73mm w M5MBX-116150-02	M50RX-073-01	1	
DynoLock Bases Included and Installed	Yes	M5MBX-116150-02	1	

Accessories			Page
Compatible DynoMount Base	52	M5MBX-116150-02	27
Base Mounting Bore Hole Cap, Set of 4	52	M5MAC-BC	55
Base Pull Stud Plug, Set of 4 and Removal Magnet	52	M5MAC-BPMET	55
MagGrabber		MATE02803	55
Mount Hardware Kit, 4 Bushings and 4 Bolts		M00AC-BU	56

Compatible DynoGrip Vise Assemblies			Page
52 Vise Assembly 95 60	52	M5MVC-095060	9
52 Vise Assembly 120 60	52	M5MVC-120060	10
52 Vise Assembly 95 80	52	M5MVC-095080	11
52 Vise Assembly 120 80	52	M5MVC-120080	12
52 Vise Assembly 160 80	52	M5MVC-160080	13
52 Vise Assembly 200 80	52	M5MVC-200080	14
52 Pull Stud, Set of 4	52	M5MAC-PS	54

### Mount Base - M50RX-073

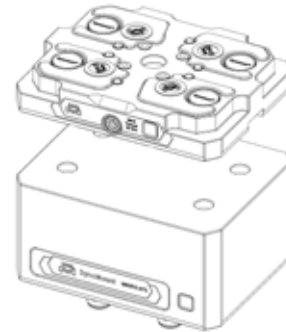


### Mount Assembly - M50RX-073-01



### Exploded View

Assembled Height	100mm	3.94"
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### QuickSpecs™ (2D Bar Code Content)

Part Number:	M50RX-073
Serial Number:	Sample1234
Date Assembled:	yyyy/mm/dd
Product Type:	52 Riser
Overall Height:	73mm
Overall Weight:	9.9kg
Assembled Overall Height:	100mm
Full Specs Link:	<a href="#">Click Here</a>
CAD File Link:	<a href="#">Click Here</a>
Instructions Link:	<a href="#">Click Here</a>
Register this Product:	<a href="#">Click Here</a>
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## M90RX-033

	Information	Ref Part Number	Metric	Imperial
Part Number		M90RX-033		
Family	DynoMount			
Product	Riser 33mm Only			
Product Version	96			
Product Type	Riser			
Overall Length			193mm	7.60"
Overall Width			156mm	6.15"
Overall Height			33mm	1.30"
Overall Weight			7.6kg	16.8lbs
Bolts for attaching DynoLock Base	Included	M10x1.5 X 30		
Precision Bushing (Required)	Included	M00AC-BU		
Pull Studs Included, 4	20mm			
Assembled Overall Height	Height Riser + Base		60mm	2.36"
	Description	Ref Part Number	Quantity	
Assembled Configuration	Riser 33mm w M9MBX-156192-02	M90RX-033-01	1	
DynoLock Bases Included and Installed	Yes	M9MBX-156192-02	1	

Accessories			Page
Compatible DynoMount Base	96	M9MBX-156192-02	33
Base Mounting Bore Hole Cap, Set of 4	96	M9MAC-BC	55
Base Pull Stud Plug, Set of 4 and Removal Magnet	96	M9MAC-BPMET	55
MagGrabber		MATE02803	55
Mount Hardware Kit, 4 Bushings and 4 Bolts		M00AC-BU	56

Compatible DynoGrip Vise Assemblies			Page
96 Vise Assembly 155 80	96	M9MVC-155080	15
96 Vise Assembly 205 80	96	M9MVC-205080	16
96 Vise Assembly 155 125	96	M9MVC-155125	17
96 Vise Assembly 205 125	96	M9MVC-205125	18
96 Vise Assembly 255 125	96	M9MVC-255125	19
96 Vise Assembly 305 125	96	M9MVC-305125	20
96 Vise Assembly 355 125	96	M9MVC-355125	21
96 Pull Stud, Set of 4	96	M9MAC-PS	54

[Dimensions in mm(in)]. Images are proportionate but not to scale.

### Mount Base - M90RX-033

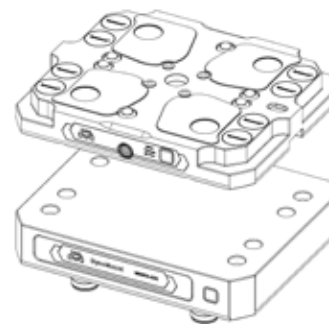


### Mount Assembly - M90RX-033-01



### Exploded View

Assembled Height	60mm	2.36"
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### QuickSpecs™ (2D Bar Code Content)

Part Number:	M90RX-033
Serial Number:	Sample1234
Date Assembled:	yyyy/mm/dd
Product Type:	96 Riser
Overall Height:	33mm
Overall Weight:	7.6kg
Assembled Overall Height:	60mm
Full Specs Link:	<a href="#">Click Here</a>
CAD File Link:	<a href="#">Click Here</a>
Instructions Link:	<a href="#">Click Here</a>
Register this Product:	<a href="#">Click Here</a>
	Made in USA



# M90RX-073

	Information	Ref Part Number	Metric	Imperial
Part Number		M90RX-073		
Family	DynoMount			
Product	Riser 73mm Only			
Product Version	96			
Product Type	Riser			
Overall Length			193mm	7.60"
Overall Width			156mm	6.15"
Overall Height			73mm	2.87"
Overall Weight			17.0kg	37.5lbs
Bolts for attaching DynoLock Base	Included	M10x1.5 X 30		
Precision Bushing (Required)	Included	M00AC-BU		
Pull Studs Included, 4	20mm			
Assembled Overall Height	Height Riser + Base		100mm	3.94"
	Description	Ref Part Number	Quantity	
Assembled Configuration - with 96 Bases	Riser 73mm w M9MBX-156192-02	M90RX-073-01	1	
DynoLock Bases Included and Installed	Yes	M9MBX-156192-02	1	

Accessories			Page
Compatible DynoMount Base	96	M9MBX-156192-02	33
Base Mounting Bore Hole Cap, Set of 4	96	M9MAC-BC	55
Base Pull Stud Plug, Set of 4 and Removal Magnet	96	M9MAC-BPMET	55
MagGrabber		MATE02803	55
Mount Hardware Kit, 4 Bushings and 4 Bolts		M00AC-BU	56

Compatible DynoGrip Vise Assemblies			Page
96 Vise Assembly 155 80	96	M9MVC-155080	15
96 Vise Assembly 205 80	96	M9MVC-205080	16
96 Vise Assembly 155 125	96	M9MVC-155125	17
96 Vise Assembly 205 125	96	M9MVC-205125	18
96 Vise Assembly 255 125	96	M9MVC-255125	19
96 Vise Assembly 305 125	96	M9MVC-305125	20
96 Vise Assembly 355 125	96	M9MVC-355125	21
96 Pull Stud, Set of 4	96	M9MAC-PS	54

## Mount Base - M90RX-073

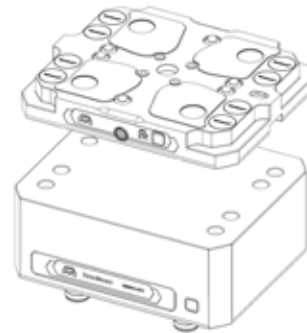


## Mount Assembly M90RX-073-01



## Exploded View

Assembled Height	100mm	3.94"



## QuickSpecs™ (2D Bar Code Content)

Part Number:	M90RX-073
Serial Number:	Sample1234
Date Assembled:	yyyy/mm/dd
Product Type:	96 Riser
Overall Height:	73mm
Overall Weight:	17.0kg
Assembled Overall Height:	100mm
Full Specs Link:	<a href="#">Click Here</a>
CAD File Link:	<a href="#">Click Here</a>
Instructions Link:	<a href="#">Click Here</a>
Register this Product:	<a href="#">Click Here</a>
	Made in USA

[Dimensions in mm(in)]. Images are proportionate but not to scale.





## Jaw Overview and Options

	Family	Jaw Width	Standard Hard Jaw Quantity 2	Center Hard Jaw Quantity 1	Machinable Jaw Aluminum Quantity 1 Requires Adapter	Machinable Jaw Steel (Soft) Quantity 1 Requires Adapter	Machinable Jaw Adapter Hardware Included Quantity 1	Machinable Center Jaw Adapter Hardware Included Quantity 1	Assembly of Adapter + Aluminum Jaw Quantity 2	Assembly of Adapter + Steel Jaw Quantity 2	Double Vise Set 1 Center Adapter + 2 Adapter with Aluminum Jaws	Double Vise Set 1 Center Adapter + 2 Adapter with Steel Jaws
Hard Steel	52	60mm	M50JP-060STL	M50JC-060STL								
Hard Steel	52	80mm	M50JP-080STL	M50JC-080STL								
Soft	52	60mm			M50JW-060AL2	M50JW-060ST2						
Soft	52	80mm			M50JW-080AL2	M50JW-080ST2						
Adapters	52	60mm					M50JA-060	not available				
Adapters	52	80mm					M50JA-080	M50JA-080-01				
Assembly	52	60mm							M50JP-060AL2	M50JP-060ST2	not available	not available
Assembly	52	80mm							M50JP-080AL2	M50JP-080ST2	M50JK-080AL2	M50JK-080ST2
Hard Steel	96	80mm	M90JP-080STL	M90JC-080STL								
Hard Steel	96	125mm	M90JP-125STL	M90JC-125STL								
Soft	96	80mm			M90JW-080AL2	M90JW-080ST2						
Soft	96	125mm			M90JW-125AL2	M90JW-125ST2						
Adapters	96	80mm					M90JA-080	M90JA-080-01				
Adapters	96	125mm					M90JA-125	M90JA-125-01				
Assembly	96	80mm							M90JP-080AL2	M90JP-080ST2	M90JK-080AL2	M90JK-080ST2
Assembly	96	125mm							M90JP-125AL2	M90JP-125ST2	M90JK-125AL2	M90JK-125ST2

## Standard Hardened Jaws

52	M50JP-060STL	Jaw (Pair) Hardened Steel	Kit of two jaws for 52 60 family vises
52	M50JP-080STL	Jaw (Pair) Hardened Steel	Kit of two jaws for 52 80 family vises
96	M90JP-080STL	Jaw (Pair) Hardened Steel	Kit of two jaws for 96 80 family vises
96	M90JP-125STL	Jaw (Pair) Hardened Steel	Kit of two jaws for 96 125 family vises



## Center Jaws

- Profile matches the standard jaw profile
- No adapter required
- Hardware included

### Center Jaws - Hardened Steel (one piece)

Family	52	52	96	96
Jaw Width	60mm	80mm	80mm	125mm
Part Number	M50JC-060STL	M50JC-080STL	M90JC-080STL	M90JC-125STL
Quantity	1	1	1	1



[Dimensions in mm(in)]. Images are proportionate but not to scale.



## 52 Family Machinable Jaws - Metric

60mm Machinable Jaw Blank and Adapter							
Jaw Material	Jaw (Single)	Assembly of Adapter + Aluminum Jaw Quantity 2					
Aluminum 6061	M50JW-060AL2	M50JP-060AL2					
Steel AISI 1018	M50JW-060ST2	M50JP-060ST2					
Description	Height	Length	Width	Offset	Hole Depth	Size	Torque
Useable Area	23mm	60mm	51mm				
Total Blank	37mm	60mm	51mm				
One-Way Pin Hole Offset				1mm			
Dowel Pin					8mm	8mm X 16mm	
Socket Head Cap Screw					8mm	M6x1x14	
Screw Torque Aluminum						5mm Hex	9Nm
Screw Torque Steel						5mm Hex	17Nm
Adapter	M50JA-060	Adapter includes four Cap Screws and two Dowel Pins					

## 52 Family Machinable Jaws - Inch

60mm Machinable Jaw Blank and Adapter							
Jaw Material	Jaw (Single)	Assembly of Adapter + Aluminum Jaw Quantity 2					
Aluminum 6061	M50JW-060AL2	M50JP-060AL2					
Steel AISI 1018	M50JW-060ST2	M50JP-060ST2					
Description	Height	Length	Width	Offset	Hole Depth	Size	Torque
Useable Area	0.91"	2.36"	2.00"				
Total Blank	1.47"	2.36"	2.00"				
One-Way Pin Hole Offset				0.04"			
Dowel Pin					0.33"	8mm X 16mm	
Socket Head Cap Screw					0.33"	M6x1x14	
Screw Torque Aluminum						5mm Hex	7 ft-lbs
Screw Torque Steel						5mm Hex	12 ft-lbs
Adapter	M50JA-060	Adapter includes four Cap Screws and two Dowel Pins					

### Assembly



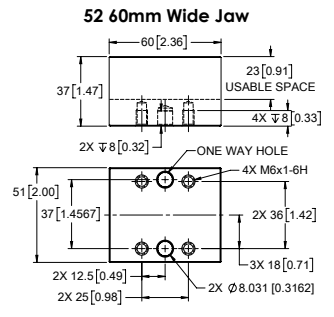
### Adapter



### Machinable Blank



### One-Way



[Dimensions in mm(in)]. Images are proportionate but not to scale.





## 52 Family Machinable Jaws - Metric

80mm Machinable Jaw Blank and Adapter							
Jaw Material	Jaw (Single)	Assembly of Adapter + Aluminum Jaw		Quantity 2			
Aluminum 6061	M50JW-080AL2	M50JP-080AL2					
Steel AISI 1018	M50JW-080ST2	M50JP-080ST2					
Description	Height	Length	Width	Offset	Hole Depth	Size	Torque
Useable Area	23mm	80mm	57mm				
Total Blank	37mm	80mm	57mm				
One-Way Pin Hole Offset				1mm			
Dowel Pin					8mm	8mm X 16mm	
Socket Head Cap Screw					8mm	M6x1x14	
Screw Torque Aluminum						5mm Hex	9Nm
Screw Torque Steel						5mm Hex	17Nm
Adapter	M50JA-080	Adapter includes four Cap Screws and two Dowel Pins					

## 52 Family Machinable Jaws - Inch

80mm Machinable Jaw Blank and Adapter							
Jaw Material	Jaw (Single)	Assembly of Adapter + Aluminum Jaw		Quantity 2			
Aluminum 6061	M50JW-080AL2	M50JP-080AL2					
Steel AISI 1018	M50JW-080ST2	M50JP-080ST2					
Description	Height	Length	Width	Offset	Hole Depth	Size	Torque
Useable Area	0.91"	3.13"	2.25"				
Total Blank	1.47"	3.13"	2.25"				
One-Way Pin Hole Offset				0.02"			
Dowel Pin					0.32"	8mm X 16mm	
Socket Head Cap Screw					0.32"	M6x1x14	
Screw Torque Aluminum						5mm Hex	7 ft-lbs
Screw Torque Steel						5mm Hex	12 ft-lbs
Adapter	M50JA-080	Adapter includes four Cap Screws and two Dowel Pins					

### Assembly



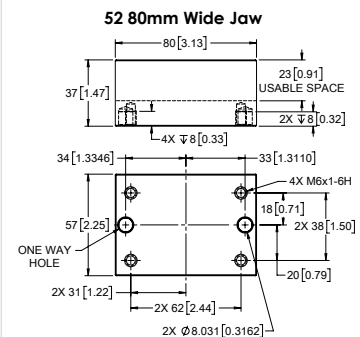
### Adapter



### Machinable Blank



### One-Way



[Dimensions in mm(in)]. Images are proportionate but not to scale.



## 96 Family Machinable Jaws - Metric

80mm Machinable Jaw Blank and Adapter							
Jaw Material	Jaw (Single)	Assembly of Adapter + Aluminum Jaw Quantity 2					
Aluminum 6061	M90JW-080AL2	M90JP-080AL2					
Steel AISI 1018	M90JW-080ST2	M90JP-080ST2					
Description	Height	Length	Width	Offset	Hole Depth	Size	Torque
Useable Area	35mm	80mm	57mm				
Total Blank	50mm	80mm	57mm				
One-Way Pin Hole Offset				2mm			
Dowel Pin					8mm	8mm X 16mm	
Socket Head Cap Screw					8mm	M8x1.25x12	
Screw Torque Aluminum						6mm Hex	28Nm
Screw Torque Steel						6mm Hex	40Nm
Adapter	M90JA-080	Adapter includes four Cap Screws and two Dowel Pins					

## 96 Family Machinable Jaws - Inch

80mm Machinable Jaw Blank and Adapter							
Jaw Material	Jaw (Single)	Assembly of Adapter + Aluminum Jaw Quantity 2					
Aluminum 6061	M90JW-080AL2	M90JP-080AL2					
Steel AISI 1018	M90JW-080ST2	M90JP-080ST2					
Description	Height	Length	Width	Offset	Hole Depth	Size	Torque
Useable Area	1.38"	3.15"	2.25"				
Total Blank	1.97"	3.15"	2.25"				
One-Way Pin Hole Offset				0.07"			
Dowel Pin					0.33"	8mm X 16mm	
Socket Head Cap Screw					0.33"	M8x1.25x12	
Screw Torque Aluminum						6mm Hex	21 ft-lbs
Screw Torque Steel						6mm Hex	29 ft-lbs
Adapter	M90JA-080	Adapter includes four Cap Screws and two Dowel Pins					

### Assembly



### Adapter

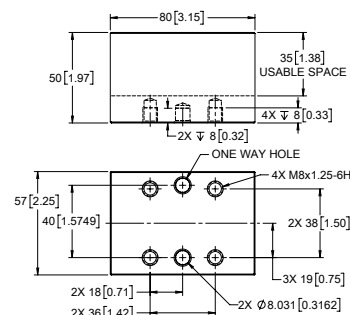


### Machinable Blank



### One-Way

#### 96 80mm Wide Jaw



[Dimensions in mm(in)]. Images are proportionate but not to scale.





## 96 Family Machinable Jaws - Metric

125mm Machinable Jaw Blank and Adapter							
Jaw Material	Jaw (Single)	Assembly of Adapter + Aluminum Jaw Quantity 2					
Aluminum	M90JW-125AL2	M90JP-125AL2					
Steel 1018	M90JW-125ST2	M90JP-125ST2					
Description	Height	Length	Width	Offset	Hole Depth	Size	Torque
Useable Area	35mm	125mm	57mm				
Total Blank	50mm	125mm	57mm				
One-Way Pin Hole Offset				2mm			
Dowel Pin					8mm	8mm X 16mm	
Socket Head Cap Screw					8mm	M8x1.25x12	
Screw Torque Aluminum						6mm Hex	28Nm
Screw Torque Steel						6mm Hex	40Nm
Adapter	M90JA-125	Adapter includes four Cap Screws and two Dowel Pins					

## 96 Family Machinable Jaws - Inch

125mm Machinable Jaw Blank and Adapter							
Jaw Material	Jaw (Single)	Assembly of Adapter + Aluminum Jaw Quantity 2					
Aluminum	M90JW-125AL2	M90JP-125AL2					
Steel 1018	M90JW-125ST2	M90JP-125ST2					
Description	Height	Length	Width	Offset	Hole Depth	Size	Torque
Useable Area	1.38"	4.90"	2.25"				
Total Blank	1.97"	4.90"	2.25"				
One-Way Pin Hole Offset				0.08"			
Dowel Pin					0.32"	8mm X 16mm	
Socket Head Cap Screw					0.32"	M8x1.25x12	
Screw Torque Aluminum						6mm Hex	21 ft-lbs
Screw Torque Steel						6mm Hex	29 ft-lbs
Adapter	M90JA-125	Adapter includes four Cap Screws and two Dowel Pins					

### Assembly



### Adapter

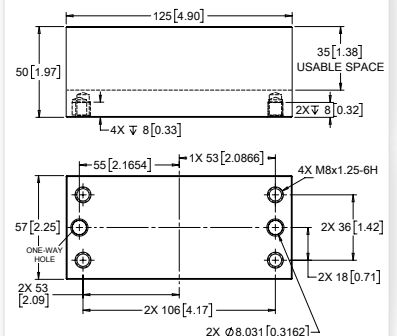


### Machinable Blank



### One-Way

#### 96 125mm Wide Jaw



[Dimensions in mm(in)]. Images are proportionate but not to scale.



## Vises

Family	Part Number	Description	Where Used
<b>Speed Wrench</b>			
52	M5MAC-SW12	Speed Wrench 12mm	DynoGrip Vise Lead Screw Hand Tool
96	M9MAC-SW16	Speed Wrench 16mm	DynoGrip Vise Lead Screw Hand Tool
<b>Pull Stud Kit</b>			
52	M5MAC-PS	Vise Pull Stud Kit, Steel, Set of 4, M8 Thread	
96	M9MAC-PS	Vise Pull Stud Kit, Steel, Set of 4, M10 Thread	
<b>Vise Lead Screw Assemblies</b>			
52	M5MLS-095	Lead Screw Assembly 9552	Includes Lead Screw and Center Support, Assembled
52	M5MLS-120	Lead Screw Assembly 12052	Includes Lead Screw and Center Support, Assembled
52	M5MLS-160	Lead Screw Assembly 16052	Includes Lead Screw and Center Support, Assembled
52	M5MLS-200	Lead Screw Assembly 20052	Includes Lead Screw and Center Support, Assembled
96	M9MLS-155	Lead Screw Assembly 15596	Includes Lead Screw and Center Support, Assembled
96	M9MLS-205	Lead Screw Assembly 20596	Includes Lead Screw and Center Support, Assembled
96	M9MLS-255	Lead Screw Assembly 25596	Includes Lead Screw and Center Support, Assembled
96	M9MLS-305	Lead Screw Assembly 30596	Includes Lead Screw and Center Support, Assembled
96	M9MLS-355	Lead Screw Assembly 35596	Includes Lead Screw and Center Support, Assembled



### Vise Pushers

52	M5MAC-JP	Jaw Pusher (Kit of L and R)	Kit of one left and one right pusher for 52 family vises
96	M9MAC-JP	Jaw Pusher (Kit of L and R)	Kit of one left and one right pusher for 96 family vises



### Standard Hardened Jaws

52	M50JP-060STL	Jaw (Pair) Hardened Steel	Kit of two jaws for 52 60 family vises
52	M50JP-080STL	Jaw (Pair) Hardened Steel	Kit of two jaws for 52 80 family vises
96	M90JP-080STL	Jaw (Pair) Hardened Steel	Kit of two jaws for 96 80 family vises
96	M90JP-125STL	Jaw (Pair) Hardened Steel	Kit of two jaws for 96 125 family vises



[Dimensions in mm(in)]. Images are proportionate but not to scale.



## Bases

Family	Part Number	Description	Where Used		
<b>Base Mounting Bore Cap Kit</b>					
52	M5MAC-BC	Mounting Bore Hole Cap, Plastic, Set of 4	Protect bore hole from chip and fluid when bolt is installed		
96	M9MAC-BC	Mounting Bore Hole Cap, Plastic, Set of 4	Protect bore hole from chip and fluid when bolt is installed		
<b>Base Mounting Bore Plug Kit</b>					
52	M5MAC-BBP	16mm Bore Plug, Plastic, Set of 4	Protect bore hole from chip and fluid when bolts are not installed		
96	M9MAC-BBP	20mm Bore Plug, Plastic, Set of 4	Protect bore hole from chip and fluid when bolts are not installed		
<b>Base Pull Stud Bore Plug Kit</b>					
52	M5MAC-BPMET	Pull Stud Plug, Steel, Set of 4 and MagGrabber	Kit of steel bore plugs and MagGrabber		
96	M9MAC-BPMET	Pull Stud Plug, Steel, Set of 4 and MagGrabber	Kit of steel bore plugs and MagGrabber		
<b>MagGrabber</b>					
52 96	MATE02803	MagGrabber Magnetic Pull Stud Assist Tool	Used when removing steel bore plugs		
<b>Base Centering Bottom Covers with Spuds</b>					
52	M5MAC-CBC30	Centering Bottom Cover with 30mm Spud		Replaces standard bottom cover	
52	M5MAC-CBC32	Centering Bottom Cover with 32mm Spud		Replaces standard bottom cover	
52	M5MAC-CBC50	Centering Bottom Cover with 50mm Spud		Replaces standard bottom cover	
96	M9MAC-CBC30	Centering Bottom Cover with 30mm Spud		Replaces standard bottom cover	
96	M9MAC-CBC32	Centering Bottom Cover with 32mm Spud		Replaces standard bottom cover	
96	M9MAC-CBC50	Centering Bottom Cover with 50mm Spud		Replaces standard bottom cover	
<b>Base Service Kit and Hex Wrench Socket Adapter</b>					
Refer to instructions found via Mate QuickSpecs for proper assembly			Metric	Inch	
52	M5MAC-BS	Kit of internal components not including hex wrench socket adapter			Service Kit common to all variations within the family
52	MATE02777	Hex Wrench Socket Adapter	16.3mm	0.642"	Use with base M5MBR-116-01
52	MATE02778	Hex Wrench Socket Adapter	36.9mm	1.453"	Use with base M5MBR-157-01
52	MATE02776	Hex Wrench Socket Adapter	12.4mm	0.488"	Use with base M5MBS-104-01
52	MATE02777	Hex Wrench Socket Adapter	16.3mm	0.642"	Use with base M5MBX-116150-02
96	M9MAC-BS	Kit of internal components not including hex wrench socket adapter			Service Kit common to all variations within the family
96	MATE02780	Hex Wrench Socket Adapter	26.7mm	1.053"	Use with base M9MBR-176-01
96	MATE02783	Hex Wrench Socket Adapter	61.8mm	2.433"	Use with base M9MBR-246-01
96	MATE02783	Hex Wrench Socket Adapter	61.8mm	2.433"	Use with base M9MBR-246-02
96	MATE02781	Hex Wrench Socket Adapter	34.7mm	1.365"	Use with base M9MBS-192-01
96	MATE02781	Hex Wrench Socket Adapter	34.7mm	1.365"	Use with base M9MBS-192-02
96	MATE02777	Hex Wrench Socket Adapter	16.3mm	0.642"	Use with base M9MBX-156192-02
96	MATE02783	Hex Wrench Socket Adapter	61.8mm	2.433"	Use with base M9MBX-192246-01
96	MATE02786	Hex Wrench Socket Adapter	21.3mm	0.840"	Use with base M9MBA-126150

[Dimensions in mm(in)]. Images are proportionate but not to scale.





DynoMount Bushing Kits			
52 96	M00AC-BU	Mount Hardware Kit, 4 Bushings and 4 Bolts	Use with all DynoMount products, M10x1.5 X 30 DIN 912-12.9 SHCS
52	M00AC-BU-01	Mount Hardware Kit, 24 Bushings and 24 Bolts	Kit for use with 3-Sided 52 Tombstone, M50T3-260
52	M00AC-BU-02	Mount Hardware Kit, 32 Bushings and 32 Bolts	Kit for use with 4-Sided 52 Tombstone, M50T4-260
96	M00AC-BU-03	Mount Hardware Kit, 48 Bushings and 48 Bolts	Kit for use with 4-Sided 96 Tombstone with 96 Bases, M90T4-668-02
96	M00AC-BU-04	Mount Hardware Kit, 80 Bushings and 80 Bolts	Kit for use with 4-Sided 96 Tombstone with 52 Bases, M90T4-668-01



Centering Gages			
52	M5MAC-CG	Used with machine indicator or probe	Used to precisely setup bases on machine table
96	M9MAC-CG	Used with machine indicator or probe	Used to precisely setup bases on machine table



Table T-Slot Keys			
52	M00AC-TSK-01	14mm Machine T-Slot Key (DIN6323)	Place in T-slot, loose fit. Engages the 20mm key slot on the bottom of the base
96	M00AC-TSK-02	18mm Machine T-Slot Key (DIN6323)	Place in T-slot, loose fit. Engages the 20mm key slot on the bottom of the base



**INFORMATION ROTATIONAL CLEARANCE**

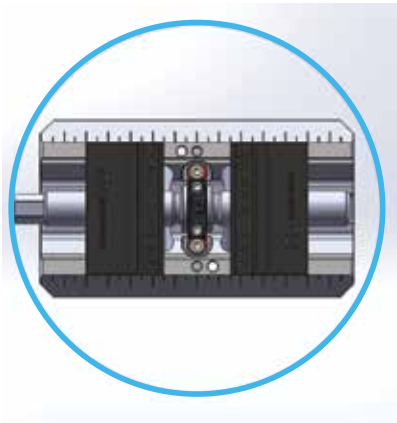
Vise Rotational Clearance

Rotational clearance can be described as the smallest diameter that has no interference with any part of the vise assembly

Rotational clearance is important when calculating a full 360° rotation of the vise assembly

The clearance is calculated using a maximum lead screw adjustment

52 Family	Diameter Metric	Diameter Imperial	Interference Point
M5MVC-095060	146mm	5.75"	Lead Screw
M5MVC-095080	146mm	5.75"	Lead Screw
M5MVC-120060	168mm	6.61"	Lead Screw
M5MVC-120080	168mm	6.61"	Lead Screw
M5MVC-160080	208mm	8.19"	Lead Screw
M5MVC-200080	251mm	9.88"	Lead Screw
96 Family			
M9MVC-155080	214mm	8.43"	Corners
M9MVC-155125	214mm	8.43"	Corners
M9MVC-205080	259mm	10.20"	Lead Screw
M9MVC-205125	259mm	10.20"	Lead Screw
M9MVC-255125	307mm	12.09"	Lead Screw
M9MVC-305125	357mm	14.06"	Lead Screw
M9MVC-355125	407mm	16.02"	Lead Screw



[Dimensions in mm(in)]. Images are proportionate but not to scale.







## DYNOGRIP™ SELF-CENTERING VISE LUBRICATION/MAINTENANCE SCHEDULE

**DAILY: Clean vise and leadscrew of visible chips and debris.**

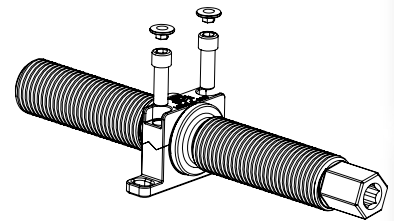
**MONTHLY: Clean and grease regularly (once a month or every 500 cycles) for optimal performance and reduced wear.**

- Mate Recommends MobileGrease XHP 322 grease which offers least wear and highest output force
- Apply a thin coat of grease on all sliding contact surfaces
  - Pushers: Grease the underside of the hook, the top and bottom of flanges and the very bottom
  - Vise Body: Both top surfaces, the upper opening sides where the jaw rails slide, the top and bottom of the rails where the pusher flanges slide in and the top pocket bottom surfaces on both sides of the ramps
  - Jaws: Outside portion of the rails, bottom sliding faces and inside the bottom pocket where the pusher hook engages
- Pull Studs: Inspect for signs of wear. If grooves are forming on one or more pull stud(s), replace to ensure precision location continuity.
  - Check for loosening pull studs. Hold unit up to a light — make sure there is no visible light under the stud. Re-tighten if needed.
- Grease leadscrew threads
  - Fill threads half way around diameter a thumb thickness wide on each side and then run threads of pushers over this area
  - To minimize chips and slivers clinging to the leadscrew, consider applying the grease in a location of known travel by the pushers based on the part length machined.

**Note:** Machine coolant has some inherent lubrication properties and is often used as a substitute for grease. Reduced output force and faster wear may occur when relying on machine coolant as compared to grease and its superior lubricating elements. If using water soluble coolant, maintain coolant concentration to the minimum recommendation from the manufacturer to inhibit corrosion and pitting.

**6 MONTHS: Center Support: Clean and grease every 6 months.**

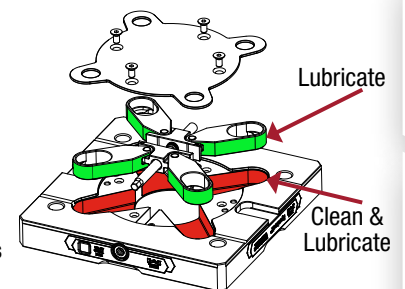
1. Remove jaws from vise and unscrew the pushers from leadscrew assembly
2. OPTIONAL: Remove leadscrew assembly from the vise (unscrew lower screws)
  - It is recommended to follow all steps to clean and grease the vise for best operation
3. 96 ONLY: Remove screw caps and screws at the top of the center support — save for reuse
4. Separate the center support into two pieces
5. Clean parts
6. Add enough new grease such that some squeezes out while reassembling the two center support pieces onto the leadscrew
7. Install screws and torque to 4.5 Nm (40 in-lb) for DynoGrip 52 and 10 Nm (90 in-lb) for DynoGrip 96
8. Snap screw caps back into place
9. Insert leadscrew assembly into center pocket of vise body orienting external hex to the “L” labeled side of vise body
10. Position the rectangular washers over slots of center support
11. Insert the screws through the washers, slots of center support and thread into vise body until snug, then back off a 1/4 turn to leave lead screw assembly loose
12. Insert flanges of pushers into vise body slots and symmetrically thread pushers onto leadscrew threads with desired hook orientation
13. Install jaws and follow precision vise calibration procedure (see page 6)



**STORAGE: Clean all chips and debris from vise.** Follow monthly and 6 month maintenance procedures. Coat entire vise with rust inhibitor.

## DYNOLOCK™ BASES MAINTENANCE AND CLEANING

- Avoid unnecessary contact or immersion in water or water-based coolant
- **Note:** Machine coolant has some inherent lubrication properties and is often used as a substitute for grease. If using water soluble coolant, maintain coolant concentration to the minimum recommendation from the manufacturer to inhibit corrosion and pitting.
- Blow off top of base with air when vise or workpiece is changed
- Install plugs and caps when base is not in use
- When the base is in use, keep the caps in place on the unused holes unless they interfere with the vise.
- If base is to be stored long-term, spray or wipe with a rust inhibitor such as Acekote or Zerust
  - If the base is exposed to large amounts of machining, grinding particles or clamping operation becomes difficult, then refer to the Dynolock assembly instructions.
  - When base is reassembled:
    - Apply grease to any sliding or contact surfaces of the clamping mechanism
    - Use NLGI Grade 2 Li-based grease with MoS2 (MobilGrease XHP 322 Mine or similar)



## DYNAMOUNT™ LUBRICATION/MAINTENANCE SCHEDULE

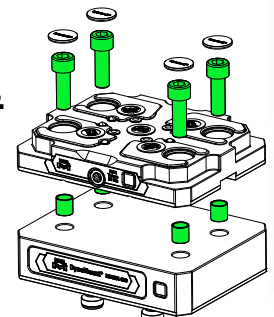
**DAILY: Clean mount of visible chips and debris.**

**MONTHLY: Clean and re-grease surfaces and pull studs regularly for optimal performance and reduced wear.**

- Mate Recommends MobileGrease XHP 322 grease which offers least wear and highest output force
- Apply a thin coat of grease on all sliding contact surfaces

**Note:** Machine coolant generally has some lubrication element and is often used as a substitute for grease. But note that faster wear may occur when compared to grease and its superior lubricating elements.

**STORAGE: Clean all chips and debris from mount** — Follow monthly maintenance procedure. Coat entire mount with rust inhibitor.



[Dimensions in mm(in)]. Images are proportionate but not to scale.



# WISE SETUP OPTIONS

WISE SETUP OPTIONS

## WISE BODY STANDARD

Jaws Facing In



Jaws Facing Out



## WISE BODY WITH CHAMFER

Jaws Facing In



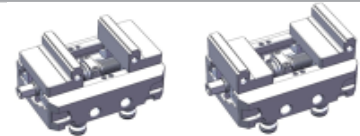
Jaws Facing Out



## WISE FORCE DIRECTION OPTIONS

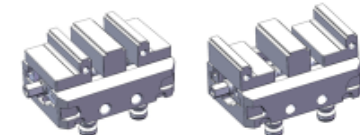
### Factory setup

One pair of jaws  
Force direction inward  
Jaws are reversible



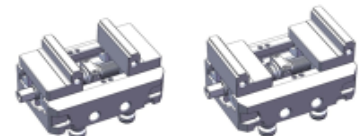
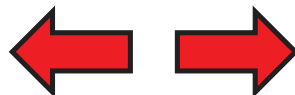
### Dual piece-part setup

Center jaws installed  
Force direction inward  
Jaws are reversible



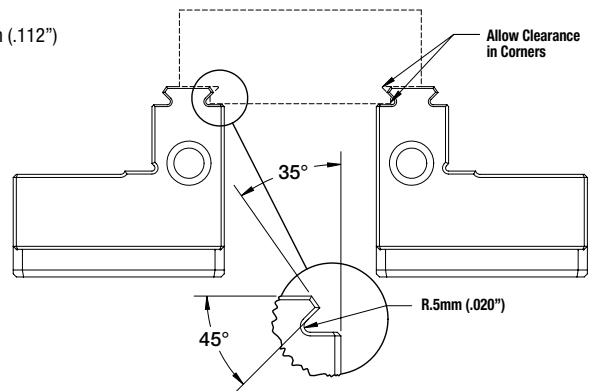
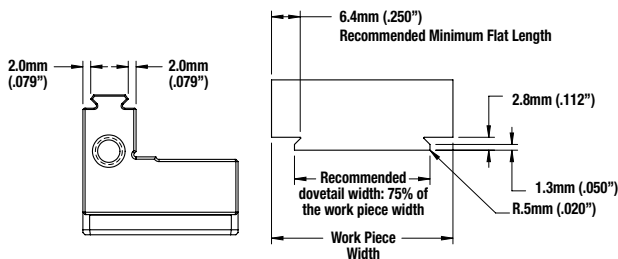
### Reverse force setup

Pushers are reversed  
Force direction outward  
Jaws are reversible



## DOVETAIL FEATURES AND OPTIONS

- 45° Precision Dovetail Geometry
- Recommended dovetail width: 75% of the work piece width
- Work piece body should have full contact with the top of the jaw (Minimum Flat Length)
- Maximum dovetail thickness, the extension from the work piece surface, should not exceed 2.8mm (.112")
- Work piece should not be held solely by the 45° angled surfaces
- 0.5mm (.020") internal radius provides clearance and maximum strength
- Top of tooth 35° angle provides clearance to the dovetail interior corner on the piece part





## OVERVIEW

All standard Mate jaws can hold the work piece with any of the following jaw features

### (1) Precision Teeth

- 7.7 teeth per centimeters (17 teeth per inch)
- Anti-lift tooth geometry including 35° degree top of tooth angle
- Uniform penetration into the work piece
- Maximum 2.0mm (.079") material penetration
- Accurate tooth engagement across all teeth
- Manufactured using EDM technology for complete uniformity

### (2) Precision Parallel Flat Surfaces

- Low clamping, near the vise body, closest to the line of force
- High clamping on a smooth surface

### (3) Precision Dovetail Geometry

- 45° standard dovetail geometry
- Significant internal radius for maximum strength and clearance
- Top of tooth 35° angle provides clearance to the work piece interior dovetail corner

### Common Features on All Standard Jaws

- Fully reversible, no tools needed
- Anti-Lift geometry
- Mate "Black Diamond™" post heat treatment process, increases hardness
- Hardened tool steel to >65HRC
- End stop ready, standard M6 tapped hole on all jaws
- Available standard center jaw, easy to install, dimensionally equal with standard jaws

Securely holding multiple work pieces that are not identical to each other requires a vise design that accommodates the variance of the work pieces.

All standard Mate vises are designed to accommodate some amount of work piece size variance in a multiple work piece setup.

The setup procedure requires that the lead screw assembly be allowed to float and that the center jaw be securely attached.

## DUAL WORK PIECE MODE

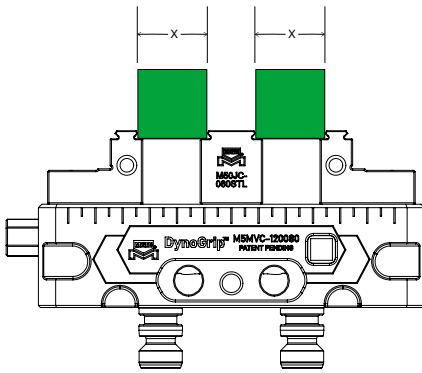
### 52 Vise Family

- Total work piece size variation maximum is 2.0mm (0.079")
- In dual work piece mode, loosen the lower center support screws by 1/4-1/2 turn and leave them loosened to accommodate work piece variance
- Exceeding the variation maximum may cause damage to the hardware or components

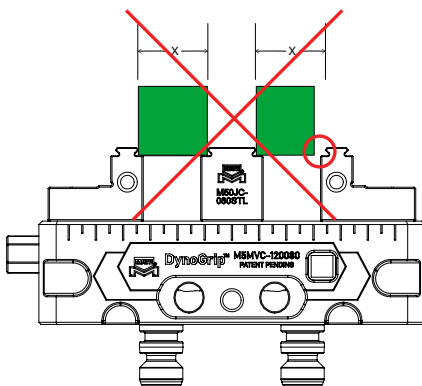
#### Example:

Work piece 1 is measured at "X". Work piece 2 must be <2.0mm larger or smaller than work piece 1

The total variation of both work pieces must be less than 2.0mm (0.079")



- The variation maximum has been exceeded when one of the work pieces is not securely clamped



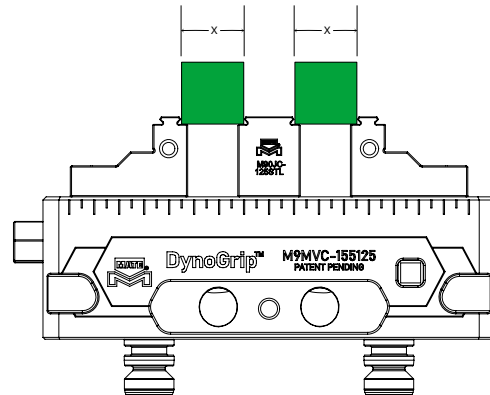
### 96 Vise Family

- Total work piece size variation maximum is 3.0mm (0.118")
- In dual work piece mode, loosen the lower center support screws by 1/4-1/2 turn and leave them loosened to accommodate work piece variance
- Exceeding the variation maximum may cause damage to the hardware or components

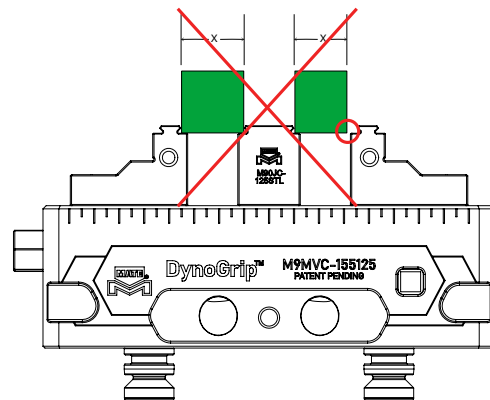
#### Example:

Work piece 1 is measured at "X". Work piece 2 must be <3.0mm larger or smaller than work piece 1

The total variation of both work pieces must be less than 3.0mm (0.118")



- The variation maximum has been exceeded when one of the work pieces is not securely clamped





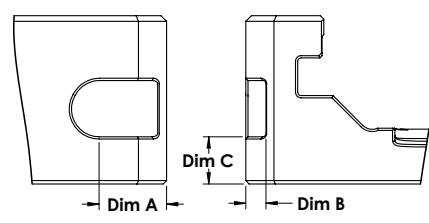
# INFORMATION VISE TOE CLAMP

VISE TOE CLAMP

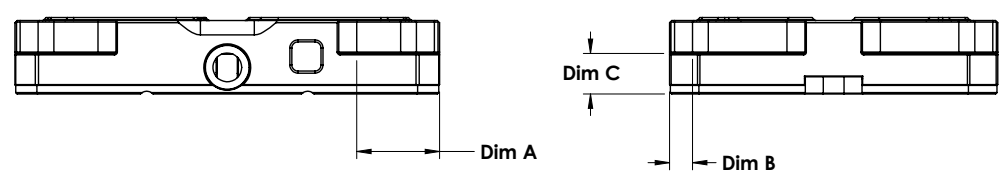
Clamping surface to enable direct mounting to a machine table using toe clamps.

	Family	Vise Part Number	A Dimension Shelf Length Clamping Surface	B Dimension Shelf Depth Clamping Surface	C Dimension Vise Bottom to Clamp Shelf
Metric	52	M5MVC-095060	10.2mm	3.8mm	10.7mm
Metric	52	M5MVC-095080	10.2mm	3.8mm	10.7mm
Metric	52	M5MVC-120060	12.7mm	3.8mm	10.7mm
Metric	52	M5MVC-120080	12.7mm	3.8mm	10.7mm
Metric	52	M5MVC-160080	15.2mm	3.8mm	10.7mm
Metric	52	M5MVC-200080	15.2mm	3.8mm	10.7mm
Metric	96	M9MVC-155080	15.7mm	3.8mm	10.7mm
Metric	96	M9MVC-155125	16.3mm	3.8mm	10.7mm
Metric	96	M9MVC-205080	19.1mm	3.8mm	10.7mm
Metric	96	M9MVC-205125	19.1mm	3.8mm	10.7mm
Metric	96	M9MVC-255125	19.1mm	3.8mm	10.7mm
Metric	96	M9MVC-305125	19.1mm	3.8mm	10.7mm
Metric	96	M9MVC-355125	19.1mm	3.8mm	10.7mm

	Family	Vise Part Number	A Dimension	B Dimension	C Dimension
Imperial	52	M5MVC-095060	0.400"	0.150"	0.420"
Imperial	52	M5MVC-095080	0.400"	0.150"	0.420"
Imperial	52	M5MVC-120060	0.500"	0.150"	0.420"
Imperial	52	M5MVC-120080	0.500"	0.150"	0.420"
Imperial	52	M5MVC-160080	0.600"	0.150"	0.420"
Imperial	52	M5MVC-200080	0.600"	0.150"	0.420"
Imperial	96	M9MVC-155080	0.620"	0.150"	0.420"
Imperial	96	M9MVC-155125	0.640"	0.150"	0.420"
Imperial	96	M9MVC-205080	0.750"	0.150"	0.420"
Imperial	96	M9MVC-205125	0.750"	0.150"	0.420"
Imperial	96	M9MVC-255125	0.750"	0.150"	0.420"
Imperial	96	M9MVC-305125	0.750"	0.150"	0.420"
Imperial	96	M9MVC-355125	0.750"	0.150"	0.420"



	Family	Base Part Number	A Dimension Clamping Edge	B Dimension Clamping Edge	C Dimension Clamping Edge
Metric	52	M5MBX-116150-02	29.3mm	8.1mm	14.3mm
Metric	96	M9MBX-156192-02	27.8mm	9.1mm	12.7mm
Imperial	52	M5MBX-116150-02	1.153"	0.320"	0.563"
Imperial	96	M9MBX-156192-02	1.095"	0.360"	0.501"



[Dimensions in mm(in)]. Images are proportionate but not to scale.





Index Pin M00AC-PN-01 uses a press fit engagement with the vise body, no screws  
Torque center screw to 87Nm (64 ft-lbs)

### 52 Family Vise 40mm Pin and Index Pin Compatibility Table

Vise Part Number	Use Index Pin	Use 40mm Type A Pin	Center Screw To Attach 40mm Pin	Center to Index Pin Center
M5MVC-095060	M00AC-PN-01	M00AC-PN-02	M10x1.5 X 35	50mm
M5MVC-095080	M00AC-PN-01	M00AC-PN-02	M10x1.5 X 35	50mm
M5MVC-120060	M00AC-PN-01	M00AC-PN-02	M10x1.5 X 35	50mm
M5MVC-120080	M00AC-PN-01	M00AC-PN-02	M10x1.5 X 35	50mm
M5MVC-160080	M00AC-PN-01	M00AC-PN-02	M10x1.5 X 35	66mm
M5MVC-200080	M00AC-PN-01	M00AC-PN-02	M10x1.5 X 35	66mm



### 96 Family Vise 40mm Pin and Index Pin Compatibility Table

Vise Part Number	Use Index Pin	Use 40mm Type A Pin	Center Screw To Attach 40mm Pin	Center to Index Pin Center
M9MVC-155080	M00AC-PN-01	M00AC-PN-02	M10x1.5 X 40	66mm
M9MVC-155125	M00AC-PN-01	M00AC-PN-02	M10x1.5 X 40	66mm
M9MVC-205080	M00AC-PN-01	M00AC-PN-02	M10x1.5 X 40	66mm
M9MVC-205125	M00AC-PN-01	M00AC-PN-02	M10x1.5 X 40	66mm
M9MVC-255125	M00AC-PN-01	M00AC-PN-02	M10x1.5 X 40	66mm
M9MVC-305125	M00AC-PN-01	M00AC-PN-02	M10x1.5 X 40	66mm
M9MVC-355125	M00AC-PN-01	M00AC-PN-02	M10x1.5 X 40	66mm



### 96 Family Vise Optional Configuration Type A and B Pins

Vise Part Number	Use Index Pin	Use 40mm Type A Pin	Center Screw To Attach 400mm Pin	Center to Index Pin Center	200mm Spacing	Use 40mm Type B Pin
M9MVC-255125	-	M00AC-PN-02	M10x1.5 X 40	-	200mm	M00AC-PN-03
M9MVC-305125	-	M00AC-PN-02	M10x1.5 X 40	-	200mm	M00AC-PN-03
M9MVC-355125	-	M00AC-PN-02	M10x1.5 X 40	-	200mm	M00AC-PN-03



Part Number	Description	What is Included	Image Example:
M00AC-PN-01	40mm Indexing Pin		
M00AC-PN-02	40mm Type A Pin Kit		
M00AC-PN-02	40mm Type A Pin Kit		
M00AC-PN-03	40mm Type B Pin Kit		

[Dimensions in mm(in)]. Images are proportionate but not to scale.



## Base Mounting Bore Configurations

Bore Spacing:	Shape	50mm	60mm	82mm	96mm	100mm	120mm	126mm	150mm	156mm	170mm	200mm	See Page
M5MBR-116-01	Round				96mm								24
M5MBR-157-01	Round					100mm							25
M5MBS-104-01	Square			82mm									26
M5MBX-116150-02	Rectangle	50mm				100mm							27
M9MBR-176-01	Round		60mm					126mm	150mm				28
M9MBR-246-01	Round							126mm			170mm		29
M9MBR-246-02	Round									156mm			30
M9MBS-192-01	Square						120mm		150mm				31
M9MBS-192-02	Square							126mm	150mm				32
M9MBX-156192-02	Rectangle	50mm				100mm			150mm				33
M9MBX-192246-01	Rectangle								150mm			200mm	34
M9MBA-126150	Adapter				96mm								35

## DynoLock Bases – 52 Family

See Page 24    M5MBR-116-01

See Page 25    M5MBR-157-01

See Page 26    M5MBS-104-01

See Page 27    M5MBX-116150-02

## DynoLock Bases – 96 Family

See Page 28    M9MBR-176-01

See Page 29    M9MBR-246-01

See Page 30    M9MBR-246-02

See Page 31    M9MBS-192-01

See Page 32    M9MBS-192-02

See Page 33    M9MBX-156192-02

See Page 34    M9MBX-192246-01

See Page 35    M9MBA-126150

[Dimensions in mm(in)]. Images are proportionate but not to scale.

# FORCE AND TORQUE CONVERSIONS

Force		Force		Torque			Torque		
KiloNewtons	Pounds Force	Pounds Force	KiloNewtons	Newton Meters	Foot Pounds	Inch Pounds	Foot Pounds	Newton Meters	Inch Pounds
kN	lbs-f	lbs-f	kN	Nm	ft-lbs	in-lbs	ft-lbs	Nm	in-lbs
10	2250	1000	4.4	1	0.7	9	1	1.4	12
11	2475	1100	4.9	2	1.5	18	2	2.7	24
12	2700	1200	5.3	3	2.2	27	3	4.1	36
13	2925	1300	5.8	4	3.0	35	4	5.4	48
14	3150	1400	6.2	5	3.7	44	5	6.8	60
15	3375	1500	6.7	6	4.4	53	6	8.1	72
16	3600	1600	7.1	7	5.2	62	7	9.5	84
17	3825	1700	7.6	8	5.9	71	8	10.8	96
18	4050	1800	8.0	9	6.6	80	9	12.2	108
19	4275	1900	8.4	10	7.4	89	10	13.6	120
20	4500	2000	8.9	11	8.1	97	11	14.9	132
21	4725	2100	9.3	12	8.9	106	12	16.3	144
22	4950	2200	9.8	13	9.6	115	13	17.6	156
23	5175	2300	10.2	14	10.3	124	14	19.0	168
24	5400	2400	10.7	15	11.1	133	15	20.3	180
25	5625	2500	11.1	16	11.8	142	16	21.7	192
26	5850	2600	11.6	17	12.5	151	17	23.1	204
27	6075	2700	12.0	18	13.3	159	18	24.4	216
28	6300	2800	12.4	19	14.0	168	19	25.8	228
29	6525	2900	12.9	20	14.8	177	20	27.1	240
30	6750	3000	13.3	21	15.5	186	21	28.5	252
31	6975	3100	13.8	22	16.2	195	22	29.8	264
32	7200	3200	14.2	23	17.0	204	23	31.2	276
33	7425	3300	14.7	24	17.7	213	24	32.5	288
34	7650	3400	15.1	25	18.5	221	25	33.9	300
35	7875	3500	15.6	30	22.1	266	30	40.7	360
36	8100	3600	16.0	35	25.8	310	35	47.5	420
37	8325	3700	16.4	40	29.5	354	40	54.2	480
38	8550	3800	16.9	45	33.2	399	45	61.0	540
39	8775	3900	17.3	50	36.9	443	50	67.8	600
40	9000	4000	17.8	55	40.6	487	55	74.6	660
41	9225	4100	18.2	60	44.3	531	60	81.4	720
42	9450	4200	18.7	65	48.0	576	65	88.1	780
43	9675	4300	19.1	70	51.7	620	70	94.9	840
44	9900	4400	19.6	75	55.4	664	75	101.7	900
45	10125	4500	20.0	80	59.0	708	80	108.5	960
46	10350	4600	20.4	85	62.7	753	85	115.3	1020
47	10575	4700	20.9	90	66.4	797	90	122.0	1080
48	10800	4800	21.3	95	70.1	841	95	128.8	1140
49	11025	4900	21.8	100	73.8	886	100	135.6	1200
50	11250	5000	22.2	105	77.5	930	105	142.4	1260
51	11475	5100	22.7	110	81.2	974	110	149.2	1320
52	11700	5200	23.1	115	84.9	1018	115	155.9	1380
53	11925	5300	23.6	120	88.6	1063	120	162.7	1440
54	12150	5400	24.0	125	92.3	1107	125	169.5	1500
55	12375	5500	24.4	130	95.9	1151	130	176.3	1560
56	12600	5600	24.9	135	99.6	1196	135	183.1	1620
57	12825	5700	25.3	140	103.3	1240	140	189.8	1680
58	13050	5800	25.8	145	107.0	1284	145	196.6	1740
59	13275	5900	26.2	150	110.7	1328	150	203.4	1800
60	13500	6000	26.7	155	114.4	1373	155	210.2	1860

[Dimensions in mm(in)]. Images are proportionate but not to scale.

# Workholding That Works™

No Variability.  
No Surprises.

**Machinists hate surprises.**

They want their machines up and running without production interruptions. That's why the metalheads at Mate developed Mate Workholding.

Designed to be the industry's most accurate and repeatable on the market. See the test results and read what other metalheads are saying.

## Best In Class - Accuracy

DynoGrip™ Vises	±0.015mm	±0.0006"
DynoLock™ Bases	±0.013mm	±0.0005"

## Best In Class - Repeatability

DynoGrip™ Vises	0.010mm	0.0004"
DynoLock™ Bases	0.005mm	0.0002"

**"Damn you guys are the s\*\*\*!**  
I have the vise. Your stuff eats it all day and doesn't even look used."

-John Robinette,  
United Machine

"I have run the same part on other vises however, when I switched to MATE I could **instantaneously hear and notice the difference.**"

-Daniel Strubel,  
Siemens Industry, Inc.

"Mate workholding did a phenomenal job. It worked in perfect harmony with the rest of the setup, **providing a nice stable cut!**"

-Ruvim Mosijchuk,  
Able MTS



**MATE**  
**M**  
**PRECISION  
TECHNOLOGIES**

**MADE FOR**  
**METAL HEADS**  
**MATE ZERO POINT WORKHOLDING SYSTEM**



## CONVERSION CHART

mm	inch
0.01mm	0.0004
0.02mm	0.0008
0.03mm	0.0012
0.04mm	0.0016
0.05mm	0.0020
0.06mm	0.0024
0.07mm	0.0028
0.08mm	0.0031
0.09mm	0.0035
0.10mm	0.0039
0.25mm	0.0098
0.50mm	0.0197
0.75mm	0.0295
1.00mm	0.0394
1.50mm	0.0591
2.00mm	0.0787
2.50mm	0.0984
3.00mm	0.1181
3.50mm	0.1378
4.00mm	0.1575
4.50mm	0.1772
5.00mm	0.1969
6.00mm	0.2362
7.00mm	0.2756
8.00mm	0.3150
9.00mm	0.3543
10.00mm	0.3937
11.00mm	0.4331
12.00mm	0.4724
13.00mm	0.5118
14.00mm	0.5512
15.00mm	0.5906
16.00mm	0.6299
17.00mm	0.6693
18.00mm	0.7087
19.00mm	0.7480
20.00mm	0.7874
21.00mm	0.8268
22.00mm	0.8661
23.00mm	0.9055
24.00mm	0.9449
25.00mm	0.9843
26.00mm	1.0236
27.00mm	1.0630
28.00mm	1.1024
29.00mm	1.1417
30.00mm	1.1811
31.00mm	1.2205
32.00mm	1.2598
33.00mm	1.2992
34.00mm	1.3386
35.00mm	1.3780
36.00mm	1.4173
37.00mm	1.4567
38.00mm	1.4961
39.00mm	1.5354
40.00mm	1.5748
50.00mm	1.9685
60.00mm	2.3622
65.00mm	2.5591
70.00mm	2.7559
75.00mm	2.9528
80.00mm	3.1496
90.00mm	3.5433
100.00mm	3.9370

inch	inch	mm
	0.0001	0.003mm
	0.0010	0.03mm
	0.0020	0.05mm
	0.0030	0.08mm
	0.0040	0.10mm
	0.0050	0.13mm
1/128	0.0078	0.20mm
	0.0100	0.25mm
	0.0120	0.30mm
	0.0150	0.38mm
1/64	0.0156	0.40mm
	0.0300	0.76mm
1/32	0.0313	0.79mm
3/64	0.0469	1.19mm
	0.0600	1.52mm
1/16	0.0625	1.59mm
5/64	0.0781	1.98mm
	0.0900	2.29mm
3/32	0.0938	2.38mm
7/64	0.1094	2.78mm
	0.1200	3.05mm
1/8	0.1250	3.18mm
9/64	0.1406	3.57mm
5/32	0.1563	3.97mm
3/16	0.1875	4.76mm
7/32	0.2188	5.56mm
1/4	0.2500	6.35mm
9/32	0.2813	7.14mm
5/16	0.3125	7.94mm
3/8	0.3750	9.53mm
7/16	0.4375	11.11mm
1/2	0.5000	12.70mm
9/16	0.5625	14.29mm
5/8	0.6250	15.88mm
3/4	0.7500	19.05mm
7/8	0.8750	22.23mm
1	1.0000	25.40mm
1 1/8	1.1250	28.58mm
1 1/4	1.2500	31.75mm
1 1/2	1.5000	38.10mm
1 3/4	1.7500	44.45mm
2	2.0000	50.80mm
2 1/4	2.2500	57.15mm
2 1/2	2.5000	63.50mm
2 3/4	2.7500	69.85mm
3	3.0000	76.20mm
3 1/2	3.5000	88.90mm
4	4.0000	101.60mm
4 1/2	4.5000	114.30mm
5	5.0000	127.00mm
5 1/2	5.5000	139.70mm
6	6.0000	152.40mm
12	12.0000	304.80mm

inch	mm
0.0001	0.003mm
0.0010	0.025mm
0.0100	0.254mm
0.1000	2.54mm
1.0000	25.40mm

mm	inch
0.01mm	0.0004
0.10mm	0.0039
1.00mm	0.0394

mm	inch	feet
1000mm	39.4	3.3
1050mm	41.3	3.4
1250mm	49.2	4.1
1500mm	59.1	4.9
2000mm	78.7	6.6
2050mm	80.7	6.7
2500mm	98.4	8.2
3000mm	118.1	9.8
3050mm	120.1	10.0
3500mm	137.8	11.5
4000mm	157.5	13.1
4050mm	159.4	13.3
4500mm	177.2	14.8
5000mm	196.9	16.4

feet	inch	mm
1 ft	12 inch	305mm
2 ft	24 inch	610mm
3 ft	36 inch	914mm
4 ft	48 inch	1219mm
5 ft	60 inch	1524mm
6 ft	72 inch	1829mm
7 ft	84 inch	2134mm
8 ft	96 inch	2438mm
9 ft	108 inch	2743mm
10 ft	120 inch	3048mm
11 ft	132 inch	3353mm
12 ft	144 inch	3658mm



	gauge size	aluminum & brass	mild steel	stainless steel
metal gauges	8GA	.129(3.28)	.164(4.17)	.172(4.37)
	9GA	.114(2.90)	.150(3.81)	.156(3.96)
	10GA	.102(2.59)	.135(3.43)	.141(3.58)
	11GA	.091(2.31)	.120(3.05)	.125(3.18)
	12GA	.081(2.06)	.105(2.67)	.109(2.77)
	13GA	.072(1.83)	.090(2.29)	.094(2.39)
	14GA	.064(1.63)	.075(1.91)	.078(1.98)
	16GA	.051(1.30)	.060(1.52)	.063(1.60)
	18GA	.040(1.02)	.048(1.22)	.050(1.27)
	20GA	.032(0.81)	.036(0.91)	.038(0.97)
	22GA	.025(0.64)	.030(0.76)	.031(0.79)
	24GA	.020(0.51)	.024(0.61)	.025(0.64)
	26GA	.016(0.41)	.018(0.46)	.019(0.48)
	28GA	.013(0.33)	.015(0.38)	.016(0.41)



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