UNIVERSAL FIXTURING

Protect your profits.



Products of Phillips Precision, Inc

www.starrett.com

Starrett®



| Category | Model Group | Model Size | Y in | LNL Bundle SKU (INCH in.) | Comments |
|----------------------|--------------------|-------------|------|------------------------------|----------|
| Comparator | Horiz. Bench OC | HB400 | 6 | SYS60: OCTR03 | |
| Comparator | Horiz. Bench OC | HB400 | 6 | SYS60: OCTR03 | |
| Comparator | Horiz. Bench OC | HD400 | 6 | SYS60: OCTR03 | |
| Comparator | Horiz. Bench OC | HE400 | 4 | SYS60: OCTR03 | |
| Comparator | Horiz. Floor OC | HF600 | 8 | SYS60: OCTR03 | |
| Comparator | Horiz. Floor OC | HF600 | 8 | SYS60: OCTR03 | |
| Comparator | Horiz. Floor OC | HF750 | 8 | SYS60: OCTR03 | |
| Comparator | Horiz. Floor OC | HF750 | 8 | SYS60: OCTR03 | |
| Comparator | Horiz. Floor OC | HS600 | 8 | SYS60: OCTR03 | |
| Comparator | Horiz. Floor OC | HS600 | 8 | SYS60: OCTR03 | |
| Comparator | Horiz. Floor OC | HS750 | 8 | SYS60: OCTR03 | |
| Comparator | Horiz. Floor OC | HS750 | 8 | SYS60: OCTR03 | |
| Comparator | Horiz. Floor OC | VF600 | 8 | SYS60: OCTR03 | |
| Comparator | Horiz. Floor OC | VF600 | 8 | SYS60: OCTR03 | |
| Comparator | Vert. Bench OC | VB300 | 4 | SYS60: OCTR03 | |
| Comparator | Vert. Bench OC | VB400 | 4 | SYS60: OCTR03 | |
| Multi-sensor | Multi-sensor | AV300+ | 6 | SYS01: DK06VIS01 | |
| Multi-sensor | Multi-sensor | AV300+MICRO | 6 | SYS01: DK06VIS01 | |
| Multi-sensor | Multi-sensor | AV350+ | 14 | SYS02: DK12VIS01 | |
| Vision (Video Meas.) | Horiz. Floor Video | HDV300 | 6 | SYS01: DK06VIS01 | |
| Vision (Video Meas.) | Horiz. Floor Video | HDV400 | 6 | SYS01: DK06VIS01 | |
| Vision (Video Meas.) | Horiz. Floor Video | HDV500 | 8 | SYS01: DK06VIS01 | |
| Vision (Video Meas.) | Manual Vision | MV300 | 6 | SYS01: DK06VIS01 | |
| Vision (Video Meas.) | Manual Vision | MVR200 | 4 | SYS01: DK06VIS01 | |
| Vision (Video Meas.) | Manual Vision | MVR300 | 8 | SYS01: DK06VIS01 | |
| Vision (Video Meas.) | Vert. Bench Video | AV300 | 6 | SYS01: DK06VIS01 | |
| Vision (Video Meas.) | Vert. Bench Video | AV300 FOV | 5 | SYS01: DK06VIS01 | |
| Vision (Video Meas.) | Vert. Bench Video | AVR200 | 4 | SYS01: DK06VIS01 | |
| Vision (Video Meas.) | Vert. Bench Video | AVR200 FOV | 4 | SYS01: DK06VIS01 | |
| Vision (Video Meas.) | Vert. Bench Video | AVR300 | 8 | SYS01: DK06VIS01 | |
| Vision (Video Meas.) | Vert. Bench Video | AVR300 FOV | 8 | SYS01: DK06VIS01 | |
| Vision (Video Meas.) | Vert. Floor Video | AV350 | 14 | SYS02: DK12VIS01 | |
| Vision (Video Meas.) | Vert. Floor Video | LF463 | 12 | SYS02: DK12VIS01 | |
| Vision (Video Meas.) | Vert. Floor Video | LF713 | 24 | SYS02: DK12VIS01 | |
| Comparator | Horiz. Bench OC | HVR100-FLIP | 7 | SYSSTR-FLP-1 | |







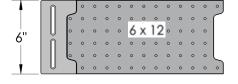
FLIP BUNDLED SYSTEM

OPTICAL COMPARATOR Loc-N-Load™ Bundled Systems by Inspection Arsenal™

Speed up your inspections and enhance the value of your optical comparators with a quick-swap fixture system of interlocking docking rails, fixture plates and work-holding clamps. Alternate set-ups between quick-swap fixture plates. Add fixture plates or mounting hardware as needed.

Purchase preconfigured bundles or purchase items individually. The small docking rail secures to the t-slot table while the magnetically interlocking plates quickly and accurately secure and release. By fixturing on quick-swap plates, operators can change parts in and out without building and breaking down setups. For high quantity part lots, affordable plates can be dedicated and kept with the job box for fast, repeatable setups. Add the work holding kit of your choice!

| Part # | FLIP BUNDLED SYSTEM | Price |
|--------------|--|--------|
| SYSSTR-FLP-1 | (1) 6 x 3" Docking Rail, (1) 6 x12" fixture plates plus 67 pc work holding kit | \$1449 |
| NUT-DT-ASY | Dovetail mounting hardware (1/4-20) | \$29 |



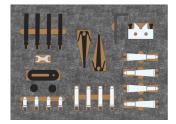




Plate sold separately

LNL-PLT-0618

LNL-ADPT-06

TR-KIT-FLP1

TR-KIT-03

LNL-ANGL-0603

WORK HOLDING

| | V |
|-------------------------------------|----|
| COMPLETE FLIP KIT | |
| V-Block, 1 set of 2 | 2 |
| Silver-Bullet™, 4 ea.: 1″, 2″, 3″ | 12 |
| Steel shaft / stand-off, stackable | 4 |
| Trigger-Finger™ | 2 |
| Hole Adjuster | 2 |
| Stand-off set (Full set-see chart) | 37 |
| Hex Keys, plus assorted screws | 8 |
| Total | 67 |

Work holding included in bundle.

| Stand-Off & Rest Pad Set | | |
|--------------------------------|----|--|
| Plastic height adjuster | 2 | |
| Plastic cone | 3 | |
| 1/2" dia. x 3/4" ht. stand-off | 3 | |
| 1/2" dia. x 1" ht. stand-off | 6 | |
| 1/2" dia. x 2" ht. stand-off | 3 | |
| Thumb screws (1/4-20) | 2 | |
| 1/2" dia. x 1/2" ht. pin rest | 3 | |
| 3/4" dia. x 1/2" ht. pin rest | 3 | |
| 3/4" dia. x 3/4" ht. stand-off | 3 | |
| 3/4" dia. x 1" ht. stand-off | 6 | |
| 3/4" dia. x 2" ht. stand-off | 3 | |
| Total | 37 | |

| TRADITIONAL OPTICAL COMPARATOR BUNDLE | D SYSTEM | 0 | |
|---------------------------------------|---------------|---|--------------------------|
| | 6" | $\begin{bmatrix} & & & & & & & & & & & & & & & & & & &$ | |
| | Part # | OPTICAL COMPARATOR E | BUNDLED SYSTEM |
| | SYS60_OC6TR03 | (1) 6 x 3" Docking Rail, (2) 6 x12" fixture p | lates plus 58-pc work ho |
| | | Deveteil meunting herdungen (1 (4 20) | |



\$320

\$119

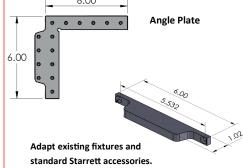
\$180

\$989

\$659

| Part # | OPTICAL COMPARATOR BUNDLED SYSTEM | Price |
|---------------|--|---------|
| SYS60_OC6TR03 | (1) 6 x 3" Docking Rail, (2) 6 x12" fixture plates plus 58-pc work holding kit | \$1,379 |
| NUT-DT-ASY | Dovetail mounting hardware (1/4-20) | \$29 |

ADDITIONAL PLATES AND ACCESSORIES 6.00



| Clear Anodized Aluminum, .5" thick, 1x1" spacing, 1/4-20 thread holes and work holding. | | | |
|---|---------------------------|-------|--|
| PLATES | Description | Price | |
| OC-DOCK-06 | LNL Dock—6" | \$205 | |
| LNL-PLT-0606 | LNL Fixture Plate 6 x 6" | \$180 | |
| LNL-PLT-0612 | LNL Fixture Plate 6 x 12" | \$250 | |

LNL Fixture Plate 6 x 18"

Angle Plate/ Stop 6 x 6"

Flip Work Holding Kit - 67 pcs

Starter Work Holding Kit (58 pcs)

Adapter Plate 6 x 1"

Add fixture plates and work holding as necessary.

Inquire about metric (M6) for all plates and components.



OPEN-SIGHT[™] Vision Bundled Systems

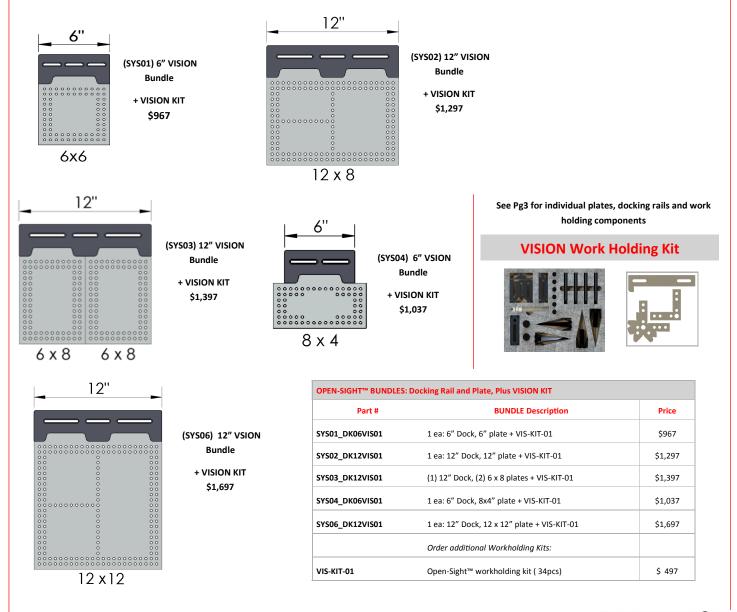




The Inspection Arsenal[™] LEAN fixture concept is available for Vision systems. Docking rails fit the stage of any optical machine. Docking rails are black anodized aluminum. Clear, polycarbonate plates—rails and plates are .5" thick, 1/4-20" holes.

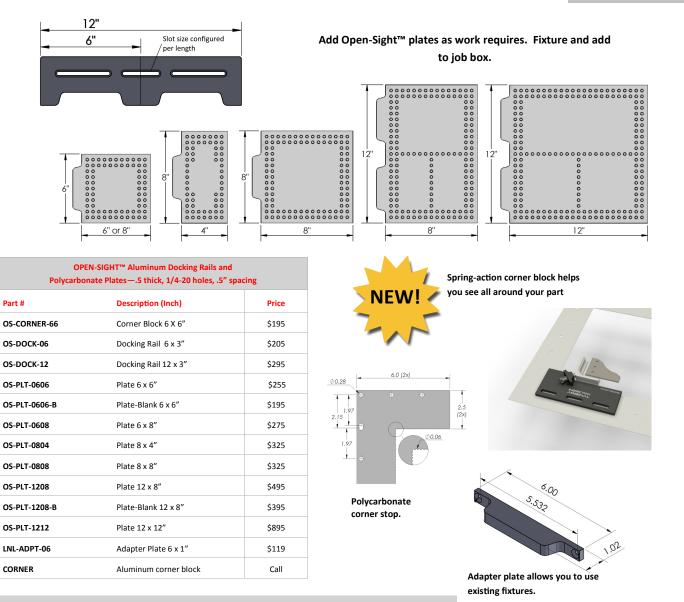
- Durable, scratch-resistant polycarbonate plates.
- Leveling feet available.
- More open viewing area.
- Blank plates available to customize.
- Dedicate a plate to *gauging* for fast re-calibration.
- Add multiple docking rails and plates for optimal coverage.
- Fixture design and custom plates available.

Choose the bundle combination of Open-Sight[™] Docking Rail and fixture plates to suit your needs. OR, bundle your own system from the list of options on Page 2. These bundled systems include the work holding kit shown below. Add docking rails on sides of stage to create more "locations" for inspection. Order blank plates and add only holes you need for greater savings.

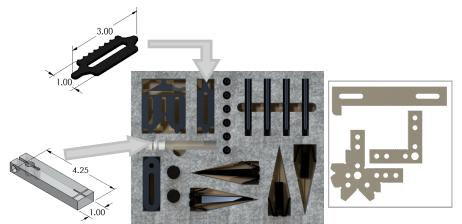




OPEN-SIGHT™ Vision Fixture Plates



Work-holding for Open-Sight[™] Vision Systems



Work Holding components versatile enough to hold most any part.

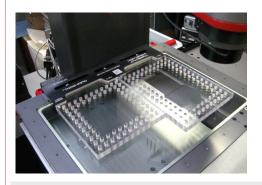
| VIS-KIT-01 — \$497 | | |
|-------------------------------------|----|--|
| VISION Kit (34 pcs) | | |
| Hole Adjuster | 2 | |
| Adjustable Platform | 1 | |
| Sliding Stop™ (with 1/4-20 button) | 2 | |
| Spring-Loc™ (with 1/4-20 button) | 2 | |
| Simple-Stop™ #01-OS, #06, #07 | 3 | |
| Trigger-Finger™ | 2 | |
| Trigger-Point™ | 2 | |
| Steel shaft/stand-off | 4 | |
| Hex Key, asst. screws | 16 | |
| TOTAL | 34 | |



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OPEN-SIGHT™ Bundled Systems – Metric

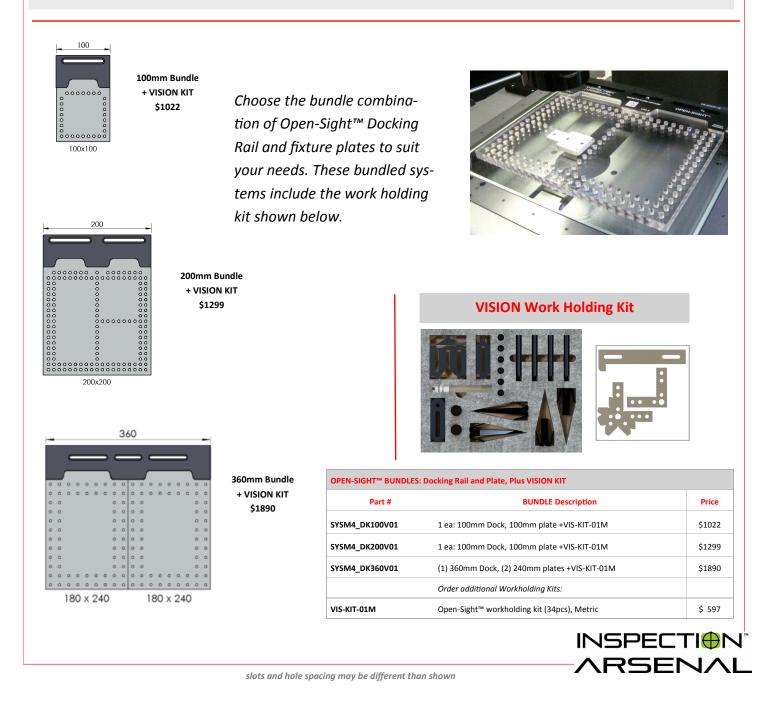




The Inspection Arsenal[™] LEAN fixture concept is available for Vision systems. Docking rails fit the stage of any optical machine. Docking rails are black anodized aluminum. Clear, polycarbonate plates—rails and plates are 12.7mm thick, 10mm spacing, M6 holes.

- Durable, scratch-resistant polycarbonate plates.
- Leveling feet available.
- More open viewing area. Or order blank plates to customize.
- Dedicate a plate to *gauging* for fast re-calibration.

"We are very pleased with the reduction in set up times it offers us allowing quick changeovers between set up. The product is proving to be a great help. We now make our inspection fixtures to attach directly to the rail which allows us to automate more of our inspection programs as we are starting from known locations." **Andrew Walmsley, President at Volo Aero MRO, Springfield, MA**



OPEN-SIGHT[™] Vision Fixture Plates– Metric





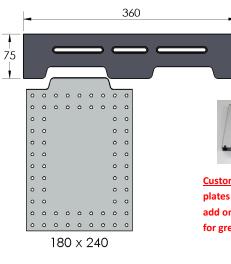
"We were looking for a quick change fixture system for our CMM's and believe that your solution is just that! We are always focused on lean activities and as we expand our use of CMM's on our shop floor this solution will be instrumental in our having a "self serve" inspection process." Harvey Smith, VP Operations, Kennebec Technologies

Add Open-Sight[™] plates as work requires. Fixture and add to job box.

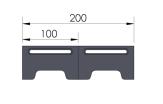
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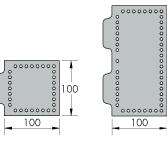


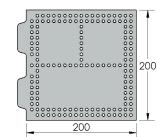
| Open-Sight [™] Aluminum Docking Rails and Polycarbonate Plates | | | |
|---|-----------------------|-----------------|-------|
| Part # | Description | Size (mm) | Price |
| OS-DOCK-M100 | Docking Rail, 100 mm | 100 mm x 60 mm | \$185 |
| OS-DOCK-M200 | Docking Rail, 200 mm | 200 mm x 60 mm | \$255 |
| OS-DOCK-M360 | Docking Rail, 360 mm | 360 mm x 75 mm | \$439 |
| OS-M100100 | Plate 100 x 100 | 100 mm x 100 mm | \$250 |
| OS-M200100 | Plate 200 x 100 | 200 mm x 100 mm | \$320 |
| OS-M200200 | Plate 200 x 200 | 200 mm x 200 mm | \$460 |
| OS-M180240 | Plate 180 x 240 | 180 mm x 240 mm | \$429 |
| OS-M100100-B | Blank plate 100 x 100 | 100 mm x 100 mm | \$225 |
| OS-M200200-B | Blank plate 200 x 200 | 200 mm x 200 mm | \$410 |



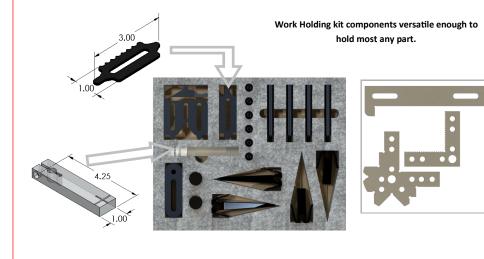
Customize: Order Blank plates (no holes) - and add only holes you need for greater savings.







Workholding for Open-Sight[™] Vision Systems



| VIS-KIT-01M— \$597 | | |
|-------------------------------|----|--|
| VISION Kit (34 pcs) | | |
| Hole Adjuster | 2 | |
| Adjustable Platform | 1 | |
| Sliding Stop™ (w/ M6 screws) | 2 | |
| Spring-Loc™ (w/ M6 screws) | 2 | |
| Simple-Stop™ #01-OS, #06, #07 | 3 | |
| Trigger-Finger™ | 2 | |
| Trigger-Point™ | 2 | |
| Steel shaft/stand-off | 4 | |
| Hex Key, asst. screws | 16 | |
| TOTAL | 34 | |



slots and hole spacing may be different than shown

Inspection Arsenal[™] Work Holding Kits



STARTER Kit — \$659 TR-KIT-03



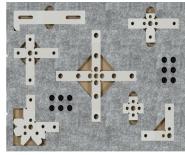
| STARTER Kit (58 pcs.) | |
|--|----|
| Cross-Bow™ Clamp | 2 |
| D-Block™ Stop | 2 |
| V-Block, 1 set of 2 | 2 |
| Silver-Bullet™, 4 ea.: 1″, 3″ | 8 |
| Steel shaft / stand-off, stackable | 2 |
| Trigger-Finger™ | 2 |
| Hole Adjuster | 2 |
| Simple-Stop [™] , 2 ea.: #01, #07 | 4 |
| Stand-offs, assorted sizes | 13 |
| Hex Keys, plus assorted screws | 21 |
| Total | 58 |

INSPECTION ARSENAL[™] — for

- *Fast* trigger-action; Non-marring, low-profile.
- *Stackable*, versatile components.
- *Fixture-up* affordably—Add sets or plates as needed.
- Affordably create multi-part fixtures.
- 1/4-20" threads (inquire about metric)

COMPLETE Kit - \$699 TR-KIT-02





The WORKS Kit — \$2229 TR-KIT-01

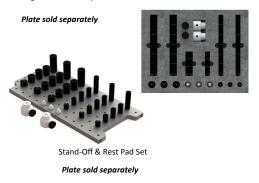
| COMPLETE Kit (70 pcs.) | |
|------------------------------------|----|
| Cross-Bow™ Clamp | 4 |
| D-Block™ Stop | 4 |
| Trigger-Block™ Clamp | 2 |
| Silver-Bullet™, 4 sets / 3 | 12 |
| V-Block, 1 set of 2 | 2 |
| Steel shaft / stand-off, stackable | 4 |
| Trigger-Finger™ | 2 |
| Hole Adjuster | 2 |
| Simple-Stop™ Rails, 1 set / 7 | 7 |
| Hex Keys, plus assorted screws | 31 |
| Total | 70 |

The WORKS Kit is a combination of components found in Inspection Arsenal[™] sets, including clamps, rails, stand-offs, and magnetic risers.

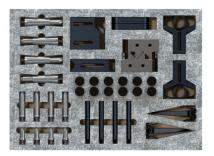
This kit contains everything you need to create



Magnetic Riser Component Set

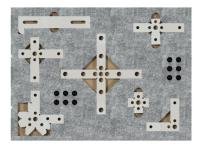








Spring-Loc™, Sliding Stop™



Inquire about metric components.

| The WORKS Kit (146 pcs.) | Qty |
|---|-----|
| Spring Clamps | |
| Cross-Bow [™] Spring Clamp | 4 |
| D-Block™ Spring Stop | 4 |
| Trigger-Block™ Spring Clamp | 2 |
| Trigger-Finger™ hold-downs | 2 |
| Stackable steel shafts | 4 |
| Spring-Loc™ Low-profile Clamp | 2 |
| Risers & Stand-offs | |
| Silver-Bullet [™] Stand-off , 4 Sets / 3 | 12 |
| V-Block, 1 set of 2 | 2 |
| Stops & Rails | |
| Simple-Stop™ Rails, 1 Set / 7 | 7 |
| Hole Adjuster for Trigger-Finger™ | 2 |
| Sliding Stop™ Low-profile Stop | 2 |
| Hex Keys, plus assorted screws | 43 |
| STAND—OFF & RISER SETS | |
| See next page for Set descriptions | |
| Stand-Off & Rest Pad Set | 37 |
| Magnetic Riser Component Set | 23 |
| Total | 146 |
| PLUS 5S FOAM DRAWER INSERTS | |

slots and hole spacing may be different than shown

Inspection Arsenal[™] Work Holding Sets



Magnetic Riser Set -\$989

MAGN-SET-30

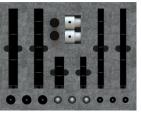


Magnetic Riser Component Set

Plate sold separately

Stand-Off & Rest Pad Set -\$525 STOF-SET-30





Stand-Off & Rest Pad Set

Plate sold separately



High quality stand-offs and rest pads add flexibility to CMM fixture design. Made of plastic and steel with 1/4-20 threads. Combine with Starter, Complete and The Works kits.

Magnetic clamping allows for unlimited probe access and MORE holding options for steel parts during CMM inspection. Combine with stand-offs and other work-holding kits for fixture

building. (1/4-20 threads)

| Magnetic Riser Set | |
|---|----|
| 1/2" dia. x 1" ht. Magnetic Rest Pad | 3 |
| 3/4" dia. x 1" ht. Magnetic Rest Pad | 3 |
| 1/2" dia. x 1" ht. Magnetic Pin Rest | 3 |
| 3/4" dia. x 1" ht. Magnetic Pin Rest | 3 |
| 1/2" dia. x 1" ht. Magnetic V stand-off | 2 |
| 1" dia. x 1" Magnetic V stand-off | 2 |
| 1" H Magnetic V-Block Set | 2 |
| (set includes 1 hex key and 4 bolts) | |
| Total | 23 |

| Stand-Off & Rest Pad Set | |
|--------------------------------|----|
| Plastic height adjuster | 2 |
| Plastic cone | 3 |
| 1/2" dia. x 3/4" ht. stand-off | 3 |
| 1/2" dia. x 1" ht. stand-off | 6 |
| 1/2" dia. x 2" ht. stand-off | 3 |
| Thumb screws (1/4-20) | 2 |
| 1/2" dia. x 1/2" ht. pin rest | 3 |
| 3/4" dia. x 1/2" ht. pin rest | 3 |
| 3/4" dia. x 3/4" ht. stand-off | 3 |
| 3/4" dia. x 1" ht. stand-off | 6 |
| 3/4" dia. x 2" ht. stand-off | 3 |
| Total | 37 |

Inquire about metric

| Enhanced Stand-Off Set | | |
|---------------------------------------|--------|--|
| 1/2" dia. adjustable stand-off | 2 | |
| 3/4" dia. adjustable stand-off | 2 | |
| 3/4" dia. x 1" ht. adjustable knuckle | 2 | |
| Plastic ht. adjuster | 2 | |
| 1/2" thumb screws | 2 | |
| Plastic cone | 2 | |
| 1/2" dia. x 1" ht. stand-off | 2 | |
| 3/4" dia. x 1" ht. stand-off | 2 | |
| То | tal 16 | |

Enhanced Stand-Off Set -\$749 STOFE-SET-30





Enhanced Stand-Off Set Plate sold separately

Enhance other work holding with height adjusters and stand-offs that can be angled in any direction. This set adds flexibility to inspection setups. Plastic and steel with 1/4-20 threads. Combine with other kits.

Inquire about metric

Inspection Arsenal[™] Clamps, Risers and Stand-offs

Inspection Arsenal[™] provides an arsenal of tools to fight inefficiency and waste. Set up quickly and cleanly with Trigger-Block[™], Cross-Bow[™] and D-Block[™] non-marring spring clamps, Trigger-Finger[™] hold-down, Silver-Bullet[™] stand-offs, and Simple-Stop[™] low-profile rails and stops. Also available is the new **Riser-Grip[™]**, which elevates parts for full access, and V-Blocks that can be used horizontally or vertically.

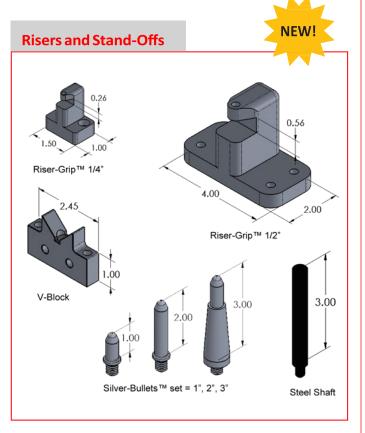
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| Spring Clamps (1/4-20) | | | |
|------------------------|-------------------------------------|------|----------|
| Part# | Description | Qty. | Price |
| CRBW-30 | Cross-Bow [™] spring clamp | 8 | \$59.00 |
| D-BLK-30 | D-Block [™] spring-stop | 8 | \$56.00 |
| TRBL-30 | Trigger-Block™ spring clamp | 6 | \$56.00 |
| SPR-LOC | Spring-Loc™low-profile clamp | 2 | \$79.95 |
| TRFN-20 | Trigger-Finger™ and steel shaft | 4 | \$99.95 |
| TRFN-10 | Trigger-Finger™ sold separately | 1 | \$10.95 |
| TRPT-20 | Trigger-Point™, 3 tips, steel shaft | 4 | \$199.00 |

Creating a LEAN QC department need not be expensive!

Get started with a docking rail, a plate and some work-holding, and add components as work requires.



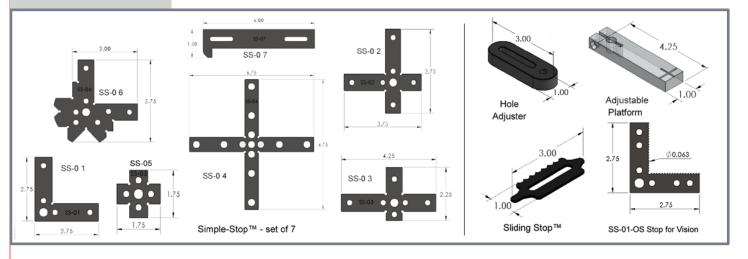
| Risers and Stand-Offs | | | |
|-----------------------|---|------|----------|
| Part# | Description | Qty. | Price |
| RG-250 | Riser-Grip™ 1/4" opening riser | 1 | \$89.95 |
| RG-500 | Riser-Grip™ 1/2" opening riser | 1 | \$159.95 |
| VB-001 | V-Block 90° included angle | 2 | \$99.95 |
| SIBU-SO-100 | Silver-Bullet™standoff (set= 1",2",3") | 4 | \$199.00 |
| TRFN-SHAFT | 3" steel shaft, stand-off | | \$16.95 |

Inquire about metric components





Stops and Rails



| Stops and Rails | | | |
|-----------------|---|------|---------|
| Part# | Description | Qty. | Price |
| Set pn | Stainless steel. Set of 7, SS-01, SS-2, SS-03, SS-04, SS-05, SS- | | |
| SS-01-OS | Simple-Stop™ for vision, serrated edge | 1 | \$69.95 |
| ADJ-PLT-10 | Adjustable platform for TRFN, TRPT | 1 | \$49.95 |
| SLI-STOP | Sliding Stop™ low-profile stop | 2 | \$39.95 |

Inquire about metric



Trigger-Block™ multi-part fixture.



Riser-Grip[™] full access clamp.

According to lean practitioners, Inspection Arsenal[™] provides an opportunity to make significant quality improvements while uncovering hidden profits.

"The Inspection Arsenal[™] product line eliminates many non-value added setup steps through their CMM and vision fixture plates and work holding. By 'fixturing-up' and simplifying the inspection task for repeatable and documented steps, a standard work opportunity has been created to speed inspection and increase the number of parts inspected, even with a less-skilled inspector. Implementation will reduce the downtime of expensive machines on the shop floor – higher machine utilization (e.g., running spindles, cutting chips) increases profits."

Dwighd Delgado, LEAN Six Sigma Instructor and Practitioner, CQE









Inspection Arsenal[™]: Cross-Bow[™] D-Block[™] Loc-N-Load[™] Open-Sight[™] Rapid-Loc[™] Silver-Bullet[™] Simple-Stop[™] Trigger-Block[™] Trigger-Block[™] Trigger-Finger[™] Air-Glide[™] Modular Tower System Magnetic Stand-Offs Traditional and Enhanced Stand-Offs

For helpful product videos visit: www.youtube.com/user/InspectionArsenal/leaninspection.com/videos



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