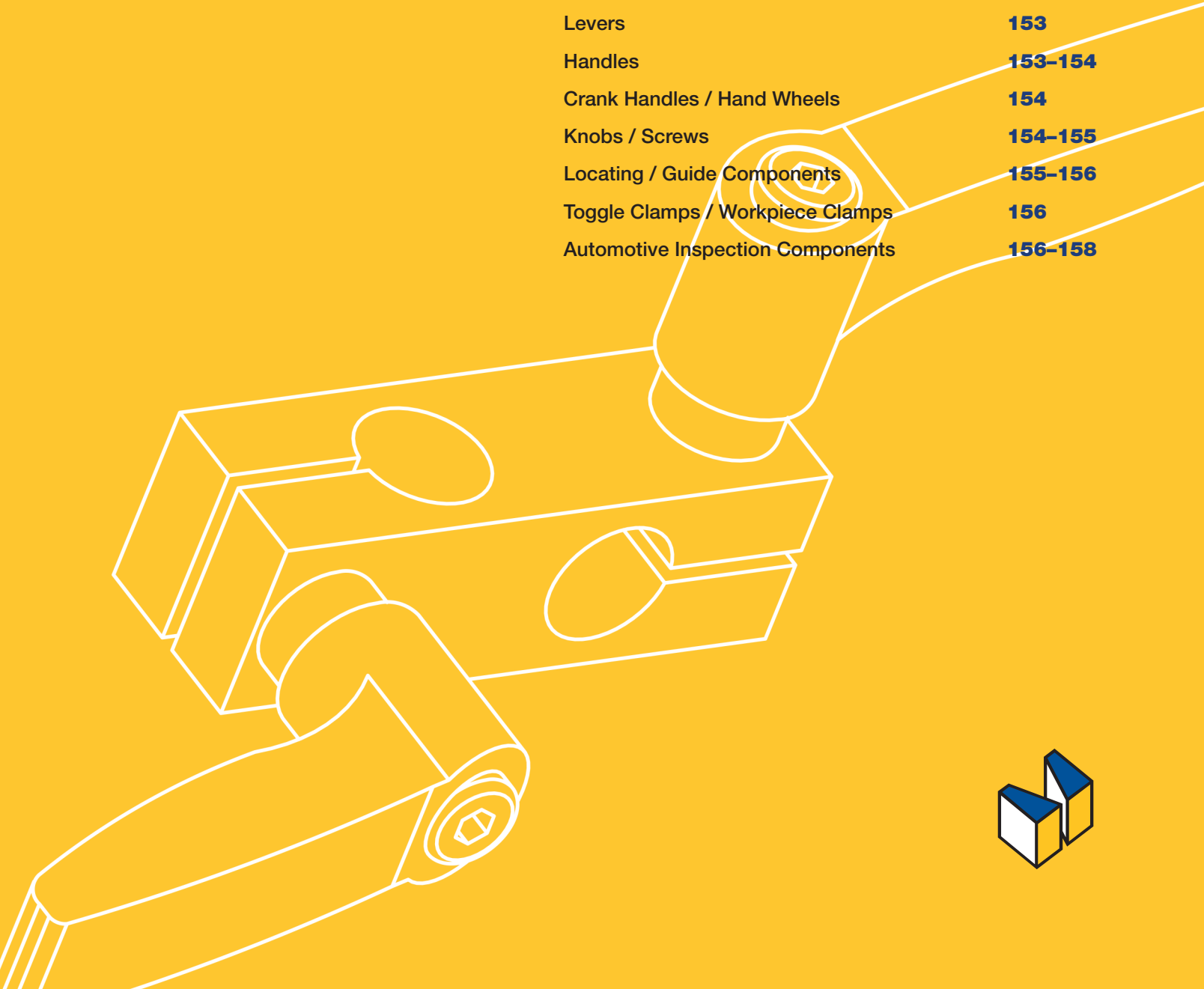


# JIGS & FIXTURES (NON-NAAMS)

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# Jigs & Fixtures (Non-NAAMS)





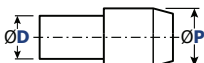
## LOCATING PINS / BUSHINGS

NEW NEW PRODUCT

★ BEST SELLER

✓ TYPICALLY IN STOCK

Jig & Fixture (Non-NAAMS)

|                                  | ← LOW CONFIGURABILITY LEVEL / COST → HIGH →   |   |   |   |
|----------------------------------|---|---|---|---|
| Product Name                     | Dowel Pins  | Height Adjusting/<br>Support Pins   | Locating Pins   | Automotive Style<br>Locating Pins   |
| Usage/Picture                    | <br>Pivot & Locate | <br>Support & Locate | <br>Jigs & Fixture |  |
| Size (Shank Dia.)                | Ø1 to 16 mm   | Ø3 to 15 mm   | Ø0.5 to 40mm  | Ø3 to 35 mm   |
| Max. Level of<br>Configurability | •   | •••   | •••••   | •••••   |
| Pin Configurable<br>Dimensions   | P Selectable<br>Configurability Level •   | P Configurable<br>Configurability Level •••   | P, L, B Configurable<br>Configurability Level ••••  | Fully Configurable<br>Configurability Level •••••                                   |
| Picture                          |                    |   |   |   |
| D (Shank Dia.)                   | Standard  | Standard  | Standard  | Standard  |
| P (Head Dia.)                    | Standard  | 0.01 mm increment   | 0.01 mm increment   | 0.01 mm increment   |
| B (Head Lg.)                     | Standard  | Standard  | 0.1 mm increment  | 0.1 mm increment  |
| L (Shank Lg.)                    | Standard  | Standard  | 1 mm increment  | 1 mm increment  |
| E (Lead Lg.)                     | Standard  | Standard  | Standard  | 0.1 mm increment  |
| A (Lead Angle)                   | Standard  | Standard  | Standard  | 15° increment   |
| Cost \$                          | \$  | \$\$  | \$\$\$  | \$\$\$\$  |

### Locating Pins / Bushings

|   |   |  |  |
|---|---|--|--|
| <br><b>#AFPB</b><br>Large Head, Tapered, High<br>Hardness Stainless Steel,<br>Press Fit, Tapped, Threaded | <br><b>#AKFA</b><br>High Hardness Stainless Steel,<br>Tapered, Configurable Taper Angle | <br><b>#AFPQ</b><br>High Hardness Stainless Steel,<br>Sphere Head               | <br><b>#AKFQ</b><br>High Hardness Stainless Steel,<br>Sphere Large Head,<br>D and P Selectable Tolerance |
|   |   |  |  |
|   |   |  |  |
|   |   |  |  |
| <br><b>#AFPD</b><br>High Hardness Stainless Steel,<br>Large Flat Head, Press Fit, Tapped,<br>Threaded    | <br><b>#AFPS</b><br>High Hardness Stainless Steel,<br>Small Head, Tapered              | <br><b>#ALPS</b><br>High Hardness Stainless Steel,<br>Straight, Tapered, Sphere | <br><b>#FPBA</b><br>Large Head, P Standard  |
|   |   |  |  |
|   |   |  |  |
|   |   |  |  |
| <br><b>#FPNA</b><br>Large Head, Threaded,<br>P Configurable  | <br><b>#KFAA</b><br>Large Head, Threaded, P/L/B &<br>Pilot Configurable                | <br><b>#FPNS</b><br>Large Head, Threaded, P/L/B<br>Configurable, Hex Socket     | <br><b>#FPTM</b><br>Large Head, Standard,<br>P Configurable, C'Bore Hole                                |
|   |   |  |  |
|   |   |  |  |
|   |   |  |  |
| <br><b>#FPQT</b><br>Spherical Large Head, Tapped,<br>P Configurable                                      | <br><b>#FPQN</b><br>Spherical Large Head, Threaded,<br>P Configurable                  | <br><b>#KFQA</b><br>Spherical Large Head, Threaded,<br>P/L/B Configurable       | <br><b>#FPDC</b><br>Large Flat Head, Standard,<br>P Standard   |
|   |   |  |  |
|   |   |  |  |
|   |   |  |  |
| <br><b>#FPBT</b><br>Large Head, Round, Tapped,<br>P Standard   | <br><b>#FPQA</b><br>Spherical Large Head, Standard,<br>P Configurable                | <br><b>#FPDT</b><br>Large Flat Head, Tapped, P Standard                       |  |
|   |   |  |  |
|   |   |  |  |
|   |   |  |  |

## Jigs &amp; Fixtures (Non-NAAMS)

## LOCATING PINS / BUSHINGS



## #FPFN

Large Flat Head, Threaded,  
P Configurable



## #KFFA

Large Flat Head, Threaded,  
P/L/B Configurable



## #FPYN

Side Locating – Standard



## #JPRB

Large Head, Round Tapered,  
Standard



## #KFPBA

Large Head, Round Tapered,  
D/P Tolerance Selectable



## #LPDE

Selectable Pilot Shape – Standard,  
p6 Shank



## #LPCA

Selectable Pilot Shape –  
Straight Tapped



## #LPAA

Selectable Pilot Shape – Threaded



## #LPAL

Selectable Pilot Shape – Threaded,  
Pilot Length Configurable



## #JPNG

Full Thread



## #JPLR

Marker Pins Hexagon Socket



## #JPLB

Marker Pins



## #FPCH

Bullet Nose, Miniature, Press Fit



## #JPPH

Large Head, Tapered, Plastic Tip



## #JPZA

Resin Locating Pins – Large Head,  
Sphere, P Configurable, Standard



## #HPSF

Locating Pilot Pins – Standard



## #WPG

Double Pilot, Standard,  
Configurable



## #CFPL

Locating Pins for Height Adjusting



## #AFPM

Large Head Round,  
Nonmagnetic, Standard



## #FPSA

Small Head, Round, Standard,  
P Standard



## #FPST

Small Head, Tapped, P Configurable



## #KFSA

Small Head, Standard,  
P/L/B & Pilot Configurable



## #JPCT

Setscrew Mounting Shank –  
Circumference Groove



## #FPQS

Spherical Small Head – Standard,  
P Configurable



## #FPQ2

Spherical Small Head – Tapped,  
P Configurable



## #KFQS

Spherical Small Head – Standard,  
P/L/B Configurable



## #JPCQ

Spherical Large Head – Setscrew  
Mounting Shank



## #FPDS

Small Flat Head, Standard,  
P Configurable



## #FPD2

Small Flat Head, Tapped,  
P Configurable



## #KFFS

Small Flat Head, Standard,  
P/L/B Configurable



## #JPRS

Small Head, Round Tapered,  
Standard



## #KFPS

Small Head, Round Tapered,  
Standard, DP Tolerance,  
R Selectable



## #JPZS

Resin Locating Pins – Small Head,  
Tapered, P Configurable



## #PPFJ

Pusher Pins – Straight, Flat



## #PPFS

Pusher Pins – Small Head, Flat

# Jigs & Fixtures (Non-NAAMS)

## LOCATING PINS / BUSHINGS

NEW NEW PRODUCT

★ BEST SELLER

✓ TYPICALLY IN STOCK

Jig & Fixture (Non-NAAMS)



### #LPST

Locating Pin - Straight, D Tolerance, Tapped



### #LPSQ

Straight, Sphere, Standard, Tapped



### #FPJA

Shoulder, Standard, P Standard



### #FPUA

Shoulder, Tapped, P Standard



### #FPTN

Shoulder, Threaded, P Configurable



### #KFHA

Shoulder, P/L/B Configurable, Threaded, Pilot Configurable



### #FPJAT

Configurable Shoulder Thickness, Standard



### #FPJATD

Configurable Shoulder Thickness & Diameter, Standard



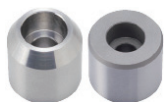
### #JPCJ

Shoulder, Setscrew Mounting Shank, Notch Shape



### #LPMB

Selectable Pilot Shape, Configurable Shoulder Thickness, Threaded



### #LPZ

Bolt Fixing, Standard



### #JPMA

Bolt Fixing with Pilot



### #LBNA

Large Bolt Fixing



### #JPEA

Eccentric, Standard



### #MASA

Flanged Locating Pins, Flat



### #FLPA

Flanged Locating Pins, Tapered, Standard



### #KKB

Height Adjusting Blocks - Standard



### #IPMA

Locating Pins for Grippers - Stepped



### #CMPA

Plate Centering Pins



### #LPN

With Air Vent, Threaded



### #SNPB

Resin Locating Pins - Small Diameter, Sphere, Standard Tolerance



### #FPAJ

Resin Locating Pins - Bolt Fixing, Precision Class



### #SFKK

Small Diameter Locating Pins - High Hardness, Stainless Steel, Straight



### #SFSK

Small Diameter Locating Pins - High Hardness, Stainless Steel, Small Head



### #SFSZ

Small Diameter with Head, Flat, Standard Tolerance



### #SFHH

Small Diameter Height Adjusting Pins



### #DSDP

Spring Loaded Small Diameter Pin Units



### #SFKS

Small Diameter, Flat, Standard Tolerance



### #SFNN

Small Diameter Locating Pins - Small Head



### #SFPS

Small Diameter with Shoulder



### #SFPN

Small Diameter with Shoulder, Threaded Shank



### #FESM

Feed Pins - Standard



### #FESG

Feed Pins - Tapped



### #FEPS

Feed Pins - Threaded



### #FEPN

Feed Pins with Shoulder - Standard

## Jigs &amp; Fixtures (Non-NAAMS)

LOCATING PINS / BUSHINGS



**#FEPP**  
Feed Pins with Shoulder – Tapped



**#FEPN**  
Feed Pins with Shoulder – Threaded



**#SDPA**  
Support Pins – Round, Pilot



**#SHFJ**  
Support Pins – Pilot, Round, Straight, Standard



**#LSPA**  
Support Pins – Tip Shape Selectable



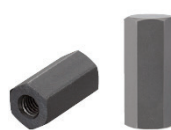
**#SRPA**  
Support Pins – Pilot Shape Selectable, Stepped Pilot



**#JPRA**  
Height Adjust Pins – Hex/B/F Standard



**#SRTA**  
Hex, Medium Accuracy, Threaded



**#JPRM**  
Height Adjust Pins – Tapped, Hex



**#SRTB**  
Hex, Medium Accuracy, Tapped



**#JPHF**  
Height Adjust Pins with Shoulder – F Standard



**#JPFA**  
Height Adjust Pins with Shoulder – F Standard



**#JPH2**  
Height Adjust Pins – Tapped, Round



**#JPAM**  
Height Adjust Pins – Press Fit, L Configurable



**#JPHU**  
Height Adjust Pins – Counterbored



**#SPFA**  
Support Pins – Flat, Round, Flat, Threaded



**#JPSR**  
Height Adjusting Pins Small Head Threaded



**#JPTU**  
Height Adjust Pins



**#JPTC**  
Height Adjusting Caps



**#LPHB**  
Compact Flange – Bolt Fixing



**#JBA**  
Bushings for Locating Pins – Straight, Standard



**#JBAU**  
Bushings for Locating Pins – Straight, Thin Wall



**#JBAF**  
Bushings for Locating Pins – Straight, Standard, Configurable



**#JBAAF**  
Bushings for Locating Pins – Straight, Thin Wall, Configurable



**#JBH**  
Bushings for Locating Pins – Flanged, Standard



**#JBHU**  
Bushings for Locating Pins – Flanged, Thin Wall



**#JBHF**  
Bushings for Locating Pins – Flanged, Standard, Configurable



**#JBHUF**  
Bushings for Locating Pins – Flanged, Thin Wall, Configurable



**#JBAG**  
Bushings for Locating Pins – Straight, Retaining



**#JBHG**  
Bushings for Locating Pins – Flanged



**#JBHY**  
Bushings for Locating Pins – Notched



**#JBEH**  
Bushings for Locating Pins Oval – Compact Flange



**#JBE**  
Bushings for Locating Pins – Oval, Shoulder



**#JBAD**  
Bushings for Locating Pins – Copper Alloy, Straight



**#JBHD**  
Bushings for Locating Pins – Copper Alloy, Shoulder



# Jigs & Fixtures (Non-NAAMS)

## LOCATING PINS / BUSHINGS

NEW NEW PRODUCT

★ BEST SELLER

✓ TYPICALLY IN STOCK

Jig & Fixture (Non-NAAMS)



**#JBC**  
Bushings for Locating Pins –  
Ceramic



**#LCB**  
Bushings for Locating Pins with  
Oil Grooves – Hardened



**#JBT**  
Bushings for Locating Pins –  
Round Flanged, P/L Standard



**#JBS**  
Bushings for Locating Pins –  
Square Flanged, P/L Standard



**#JBOK**  
Bushings for Locating Pins Compact  
Flange – Economy



**#JBN**  
Bushings for Locating Pins –  
Compact Flanged, P/L Standard



**#ELAN**  
Standard Grade, Shoulder,  
Threaded



**#ELAT**  
Standard (h7), Shoulder,  
Circumference Groove



**#SELA**  
Standard (h7), Shoulder, Threaded,  
Tip Shape Selectable, Plated



**#SELT**  
Standard (h7), Shoulder,  
Circumference Groove, Tip  
Shape Selectable, Plated



**#ELNN**  
Locating Pins for Jigs –  
Standard (h7), Threaded



**#ELNT**  
Locating Pins for Jigs – Standard  
(h7), Circumference Groove



**#SELN**  
Standard (h7), Threaded, Tip Shape  
Selectable, Plated



**#SEL4**  
Standard (h7), Circumference  
Groove, Tip Shape Selectable,  
Plated



**#LANAN**  
Precision (g6), Shoulder, Threaded



**#LATA**  
Precision (g6), Shoulder, Setscrew



**#SLAN**  
Precision (g6), Shoulder, Threaded,  
Tip Shape Selectable, Plated



**#SLAT**  
Precision (g6), Shoulder, Setscrew,  
Tip Shape Selectable, Plated



**#LNAN**  
Locating Pins for Jigs –  
Precision (g6), Threaded



**#LNNTA**  
Locating Pins for Jigs –  
Precision (g6), Setscrew Fixing



**#SLNN**  
Precision (g6), Threaded, Tip Shape  
Selectable, Plated



**#SLNT**  
Precision (g6), Setscrew Fixing, Tip  
Shape Selectable, Plated



**#FLAN**  
Locating Pins for Jigs –  
Configurable, Shoulder, Threaded



**#FLAT**  
Configurable, Shoulder,  
Circumference Groove



**#FLNN**  
Locating Pins for Jigs – Configurable,  
Threaded



**#FLNT**  
Locating Pins for Jigs –  
Configurable, Circumference Groove



**#ELAS**  
Standard Grade, Short Setscrew,  
Shouldered



**#ELNS**  
Standard (h7) Setscrew,  
Circumference Groove



**#ELAC**  
Locating Pins for Jigs – Standard  
(h7) Setscrew, Notch Shape



**#ELNC**  
Locating Pins for Jigs – Standard  
(h7) Setscrew, Notch Shape



**#LANAR**  
Locating Pins for Jigs – Long Head,  
Shoulder, Threaded, Plated



**#LNNAR**  
Locating Pins for Jigs – Long  
Head, Threaded



**#ELAB**  
Standard Class (h6), Shoulder,  
Bolt Fixing



**#ELNB**  
Standard Class (h6), No Shoulder,  
Bolt Fixing



**#RANA**  
Locating Pin for Jig Round Edge  
Shoulder Nut

**NEW** NEW PRODUCT

★ **BEST SELLER**

✓ **TYPICALLY IN STOCK**

# Jigs & Fixtures (Non-NAAMS)

LOCATING PINS / BUSHINGS



## #RNNA

Locating Pin for Jig, Round Edge, No Shoulder Nut



## #HATA

Locating Pin for Jigs – Bullet Nose, Shoulder



## #HNTA

Bullet Nose, Selectable Shank, No Shoulder



## #LANQ

Locating Pins for Jigs – Square Head, Shoulder, Threaded



## #LNNQ

Locating Pins for Jigs – Square Head, No Shoulder, Threaded



## #NLAN

Locating Pins for Jigs – Oval, Shoulder, Threaded



## #NLNN

Locating Pins for Jigs – Oval, Threaded



## #ZLA

Insulating Locating Pins for Jigs & Fixtures – Threaded



## #HUPN

Height Adjusting Pins for Fixtures – Lock Nut



## #HUPT

Height Adjusting Pins for Fixtures – Setscrew



## #NUTK

Detection Pins for Weld Nuts



## #PICP

Tapered Spring Loaded Locating Pins

Jig & Fixture (Non-NAAMS)



# Other Jigs and Fixtures

POSTS / STRUT CLAMPS / STANDS

**NEW** NEW PRODUCT

★ BEST SELLER

✓ TYPICALLY IN STOCK

Jig & Fixture (Non-NAAMS)

## Posts / Strut Clamps / Stands



### #POST Posts



### #STND

Post Stands and Post Stand Sets



### #FGA

Free Guide Arm Sets and Holders



### #CLMP

Single Post Strut Clamps



### #DCLM

Dual Post Strut Clamps – Perpendicular



### #STCA

Strut Clamp Accessories

### #PIST

Pipe Stands

### #CIST

Rotating Supports

### #SPBL

Spacer Blocks



## Other Jigs and Fixtures

GUSSETS / ANGLE PLATES / WELDED STANDOFFS / METAL BOXES

## Gussets



## #RBDA

Gussets – Through Hole, Standard Precision



## #RBDP

Gussets – Counterbore Hole, High Precision



## #RBBA

Gussets – Tapped Holes, Position Fixed, Standard Precision



## #RBPA

Gussets – Standard, High Precision



## #RACA

Gussets – Reduced Weight, Tapped Hole



## #RBJW

Gussets – Bridge, Tapped Hole



## #RQDB

[Economy] Gussets – Precision Casting, Through Hole, Hole Position Fixed

## Angle Plates



## #IKD

Angle Plates – Cast Iron, Standard Dimensions, No Holes



## #AIKD

Angle Plate – Stainless Steel, Standard Dimensions, No Hole



## #IK

Angle Plates – Mounting Hole Selectable, Hole Position Fixed



## #IKFT

Angle Plates – Mounting Surface Tapped, Mounting Hole Position Configurable



## #IKF

Angle Plates – Cast Iron, Aluminum, Stainless Casting, Configurable Hole Position



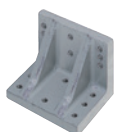
## #IKCD

Angle Plates – Bottom Surface Ground, w/ Through Holes



## #IKKB

Opposite Angle Dowels – Cast Iron, Aluminum Cast



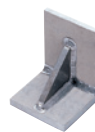
## #WIKD

Angle Plates Wide



## #BRWB

Welded Angles, Compact Type



## #IKYS

Welded Angle Plates – Configurable Hole Position

## Welded Standoffs / Metal Boxes



## #YSCT

Welded Steel Stands – Configurable Hole Position



## #YSCF

Welded Steel Stands – Selectable Hole



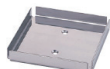
## #YSBP

Welded Steel Stands – Plate



## #KBXS

Metal Boxes



## #STXS

Mounting Base for Metal Boxes

# Jigs & Fixtures (Non-NAAMS)

## WASHERS / COLLARS

NEW NEW PRODUCT

★ BEST SELLER

✓ TYPICALLY IN STOCK

Jig & Fixture (Non-NAAMS)

| Metal Materials                       | Steel    |          |               | Stainless Steel |     |              | Special Steels         | Aluminum | Brass    |
|---------------------------------------|----------|----------|---------------|-----------------|-----|--------------|------------------------|----------|----------|
|                                       | 1018     | 1045     | 1045 Hardened | 304             | 316 | 420 Hardened | 01 Tool Steel Hardened | 2017     | C3604    |
| Corrosion Resistance                  | P        |          |               | E               |     | G            | P                      | G        | E        |
| Hardness* (Brinell HB / Rockwell HRC) | ~125HB   | ~180HB   | ~50HRC        | ~190HB          |     | ~50HRC       | ~55HRC                 | ~105HB   | ~202HB   |
| Tensile Strength* (MPa)               | ~410 MPa | ~596 MPa | ~1600 MPa     | ~520 MPa        |     | ~1780 MPa    | ~1900 MPa              | ~300 MPa | ~750 MPa |
| Density (g/cm <sup>3</sup> )          | 7.8      |          |               | 7.8             |     |              | 7.8                    | 2.7      | 8.8      |

\*The provided values are for reference only.

| Resin Material             | Polyacetal |       | MC Nylon   |            | Bakelite   |            | Flouro Resin | PEEK          | Epoxy Glass | Polycarbonate |             |
|----------------------------|------------|-------|------------|------------|------------|------------|--------------|---------------|-------------|---------------|-------------|
|                            |            |       | Standard   | Conductive | Paper Base | Cloth Base |              |               |             |               |             |
| Color                      | White      | Black | Blue       | Ivory      | Black      | Brown      | Light Brown  | White         | Gray        | Green         | Transparent |
| Tensile Strength* (MPa)    | 61 MPa     |       | 96 MPa     |            | 68 MPa     | 113 MPa    | 97 MPa       | 13.7~34.3 MPa | 98 MPa      | 309 MPa       | 59 MPa      |
| Operating Temperature (°C) | -45~95 °C  |       | -40~120 °C |            |            | -50~100 °C |              | -40~250 °C    | -50~250 °C  | -150~180 °C   | ~110 °C     |
| Sliding Properties         | G          |       | G          |            | G          | A          | A            | E             | G           | A             | A           |
| Heat Resistance            | A          |       | A          |            | A          | G          | G            | G             | G           | A             | G           |
| Insulation                 | G          |       | G          |            | G          | G          | G            | G             | G           | E             | E           |
| Abrasion Resistance        | A          |       | G          |            | A          | P          | P            | G             | G           | P             | P           |
| Dimensional Stability      | G          |       | A          |            | A          | G          | G            | P             | E           | G             | G           |
| Machinability              | E          |       | G          |            | G          | G          | G            | G             | G           | A             | G           |

● Excellent ● Good ● Acceptable ● Fair ● Poor

### Washers / Collars



**#WSF**  
Washers for Precision Linear Shafts



**#PPWT**  
Metal Washers (Pkg.)



**#WSSB**  
Metal Washers – Thickness Configurable, Precision Grade



**#WASB**  
Metal Washers – Thickness Configurable, Precision Grade



**#FWS**  
Metal Washers – Standard Class, Configurable



**#SWMB**  
Metal Washers – Standard Class, ID & OD Tolerance Selectable



**#WASH**  
Hardened Metal Washers – Thickness Selectable



**#FWAS**  
Hardened Metal Washers – ID / OD & Thickness Configurable



**#AWSB**  
Metal Washers – Standard, Precision Class, Thickness Tolerance Selectable



**#FTCB**  
Metal Washers – Standard Class, Flanged



**#WZAB**  
Metal Washers – Standard Class, Counterbored



**#WTAB**  
Metal Washers – Standard Class, Tapped



**#WSRB**  
Metal Washers – Standard Class, Countersunk



**#WBAA**  
Metal Washers – Standard Class with Clearance Holes



**#KWSB**  
Metal Washers – Standard Class with Selectable Shape



**#WLM**  
Metal Washers – Standard Class, with Slotted Hole and Pilot



**#TASC**  
Thin-Walled Metal Collars



**#SGP**  
Pipe Collars



**#SMKB**  
Spacers

**NEW** NEW PRODUCT

★ **BEST SELLER**

✓ **TYPICALLY IN STOCK**

# Jigs & Fixtures (Non-NAAMS)

WASHERS / COLLARS / SHIMS

Jig & Fixture (Non-NAAMS)



**#DWSS**  
Simultaneous Grinding Spacers



**#DCLB**  
Stepped Spacers



**#KNCLB**  
Metal Collars – Standard Class



**#AASC**  
Metal Collars – Precision Class



**#FAC**  
Collars – Standard & Precision Class,  
ID / OD & Length Configurable



**#SNCB**  
Collars – Standard & Precision Class,  
ID & OD Tolerance Selectable



**#ASC**  
Hardened Collars – Standard &  
Precision Class, Length  
Configurable



**#TCLA**  
Collars – Standard & Precision  
Class, Flanged, ID & OD Selectable



**#WSJB**  
Resin Washers – Standard



**#SWSP**  
Extra Thin Resin Washers Abrasion  
Resistance



**#SWSJ**  
Resin Washers



**#FWHJ**  
Resin Washers – Flanged, Solid,  
Configurable



**#CLJB**  
Resin Collars – Standard



**#CLJH**  
Resin Collars – Flanged



**#WZJB**  
Resin Washers – Counterbored,  
Standard



**#CLJT**  
Resin Collars – Tapped



**#CLJG**  
Resin Collars with Guide



**#CERC**  
Ceramic Washers – Sheets, Collars



**#CERA**  
Ceramic Collars with Flange



**#DJC**  
Thermal Insulation Washers – Collars



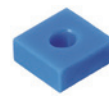
**#DJB**  
Thermal Insulation Collars with  
Flange



**#PKC**  
Resin Washers – Collars (PEEK,  
Epoxy Glass, Fluororesin)



**#PKB**  
Resin Collar with Flange – PEEK,  
Epoxy Glass, Fluororesin



**#WSRJ**  
Square Resin Washers



**#LOWA**  
Standard Metal Washers for  
Fastening

## Shims



**#CIMRF**  
Shim Rings – Standard, Pack



**#CIMR**  
Shim Rings – Standard



**#CIMA**  
Precision Shim Rings – Standard  
(10 Pcs Pack)



**#PWVW**  
Wave Washers (Pack)



**#CIMW**  
Split Shims – Standard



**#ASAF**  
Square Shims – Slotted Hole,  
Configurable



**#ASAC**  
Square Shims – Round Hole,  
Configurable



**#CIMM**  
Square Shims for Motor Bases



**#PCIM**  
Square Shims for Motor Base for  
Pillow Block Package

# Jigs & Fixtures (Non-NAAMS)

SHIMS / METAL MATERIALS

NEW NEW PRODUCT

★ BEST SELLER

✓ TYPICALLY IN STOCK

Jig & Fixture (Non-NAAMS)



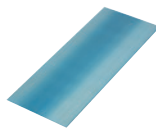
#ASA

Square Shims with Single Slot



#CIRA

Shim Plates – Standard



#CIRK

Shim Plates – SK Hardened Steel, Standard, Configurable



#FGSM

Shim Tapes – 1 m Length



#CMBO

Shim Tape (Box)

LOW

ACCURACY

HIGH

| Type                     | Unpolished (Drawn) | Milled Finish                                 | Rotary Grinding Finish  | Surface Grinding Finish                                      |
|--------------------------|--------------------|---|-------------------------|--|
| Finished Surface         |                    |   |                         |  |
| Surface Roughness        | —                  | Side Surface 1.6a,<br>Top-Bottom Surface 6.3a | Top-Bottom Surface 3.2a | Top-Bottom Surface (Iron) 1.6a,<br>(Stainless/Aluminum) 3.2a |
| Flatness (mm)            | —                  | 0.03~0.015 mm                                 | 0.012~0.05 mm           | 0.012~0.05 mm  |
| Parallelism (Top-Bottom) | —                  | 0.05~0.1                                      | 0.012                   | 0.012  |

## Material Selection

|                                 |                           |               |                            |                 |                                   |       |
|---------------------------------|---------------------------|---------------|----------------------------|-----------------|-----------------------------------|-------|
| Carbon Steel                    | 1018                      | 1018 Annealed | 1049                       | 1055 Normalized | 1049 Thermaly Refined             |       |
| Tool Steel                      | A2                        | D2            | DC53                       | M2              | O1                                | SKS93 |
| Pre-Hardened Steel              | PX5                       | NAK55         | Toolox44                   | G-Star          |                                   |       |
| Alloy Steel                     | 4140                      |               |                            |                 |                                   |       |
| Stainless Steel                 | 430                       |               |                            | 440C            |                                   |       |
| Aluminum Alloy                  | 6061                      | 50552         | 5052 High Precision        | 2017            | ANP79 (7000Series)                | 7075  |
| Roller Copper Brass<br>Titanium | Tough Pitch Copper C11000 |               | Oxygen Free Copper C10200  |                 | Chrome Copper (JIS Z3234 Class 2) |       |
|                                 | Brass (C28000 Brass 1/4)  |               | Titanium (Class 2 TP3240H) |                 |                                   |       |

## Metal Materials



#MTPB

Metal Plates, Blocks



#MTCP

Metal Circular Plates



#MTRD

Metal Rods



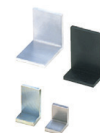
#MTHR

Metal Hex Rods



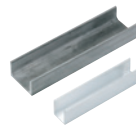
#MTPI

Metal Pipes, Metal Tubes



#MTLA

Metal L-Shaped Angles



#MTUC

U-Shaped Channels



#MTLB

L-Shaped Blocks



#MTUB

U-Shaped Blocks



#MTTB

T-Shaped Blocks



#MTIB

Inclined Blocks

NEW NEW PRODUCT

★ BEST SELLER

✓ TYPICALLY IN STOCK

# Jigs & Fixtures (Non-NAAMS)

LEVERS / HANDLES

## Levers



**#CLDF**  
Clamp Levers – Threaded



**#CLCF**  
Clamp Levers – Stainless Steel,  
Threaded, Chrome Plated



**#CLCC**  
Miniature Clamp Levers –  
Threaded



**#CLDT**  
Flat Clamp Levers



**#CLDM**  
Y-Shaped Clamp Levers



**#CLDC**  
Double Arm Clamp Levers



**#CLDS**  
Clamp Levers – Threaded with  
Washer



**#CLDP**  
Push Button Clamp Levers



**#CLRM**  
Clamp Levers with Pad, Radiused Tip



**#CLNP**  
Resin Clamp Levers – Curved Handle



**#LNF**  
Resin Clamp Levers – Straight  
Handle



**#CLNC**  
Miniature Resin Clamp Levers



**#CLN2**  
Resin Clamp Levers with Push  
Button



**#CLN3**  
Safety Resin Clamp Levers



**#CLRA**  
Ratcheting Clamp Levers



**#CLCK**  
Cam Lever



**#LFTM**  
Flat Tension Levers



**#LFTF**  
With Hexagonal Socket Head –  
Threaded



**#ALDM**  
Tension Levers – Safety Tension  
Levers



**#LAG**  
Stationary Handles – Offset,  
Spherical Knob

## Handles



**#CLR**  
Stationary Levers – Cost Efficient  
Product



**#CGM**  
Revolving Handles – Cost Efficient  
Product



**#CGRW**  
Revolving Handles with Hex Socket –  
Cost Efficient Product



**#CGB**  
Folding Handles – Cost Efficient  
Product



**#CPBG1**  
Revolving Ball Knobs –  
Cost Efficient Product



**#CLG**  
Cone Shaped Levers –  
Cost Efficient Product



**#LBG**  
Stationary Handles –  
Cylindrical Knob



**#BGW**  
Ball Knobs – Resin



**#GRAF**  
Stationary Handle



**#GRMS**  
Stationary/Revolving Handles –  
Stainless Steel



**#GRMK**  
Revolving Grips – Ergonomic



**#GRM**  
Revolving Grips – Hexagon Socket  
Head Cap Screw



**#GRC**  
Revolving Grips – Flat Head  
Screwdriver

Jig & Fixture (Non-NAAMS)



# Jigs & Fixtures (Non-NAAMS)

HANDLES / CRANK HANDLES / HAND WHEELS / KNOBS / SCREWS

NEW NEW PRODUCT

★ BEST SELLER

✓ TYPICALLY IN STOCK

Jig & Fixture (Non-NAAMS)



**#GRW**  
Revolving Grips – Hexagonal  
Socket Head



**#GRMB**  
Revolving Handles – Folding



**#GRML**  
Revolving Handles – Folding



**#GRF**  
Revolving Handles – Short,  
Threaded



**#GRMM**  
Miniature Revolving Handle –  
Stainless Steel



**#PBG**  
Revolving Ball Knobs

## Crank Handles / Hand Wheels



**#CNO**  
Balance Handles – Cost  
Efficient Product



**#CMB**  
Revolving Crank Handles –  
Square/Round Bore,  
Cost Efficient Product



**#CPH**  
Handwheels – Spoked, Cost  
Efficient Product



**#CAH**  
Handwheels – Five Spoked,  
Cost Efficient Product



**#CAN**  
Handwheels – Spoked, No Handle,  
Cost Efficient Product



**#UPF1**  
Handwheels – Solid Disk,  
Cost Efficient Product



**#CPHS**  
Handwheels – Solid Disk,  
Retractable Handle, Cost  
Efficient Product



**#SSCH**  
Crank Handles – Square Hole, Ribbed



**#MBCH**  
Crank Handles – Square Hole



**#NOCH**  
Crank Handles



**#PHLK**  
Offset Handwheels – Three Spoked



**#AHSK**  
Offset Handwheels – Solid



**#SCOL**  
Collar with Scale



**#AHSL**  
Handwheels – Folding



**#AHNF**  
Handwheels – Flat



**#AHLN**  
Handwheels – Five Spoked



**#AHTN**  
Handwheels – Two Spoked,  
Stainless Steel



**#HBK**  
Knurled Handwheels – Aluminum

## Knobs / Screws



**#NKB**  
Knurled Knobs – L Dimension  
Standard



**#NKBA**  
Knurled Knobs – Thick,  
L Dimension Standard



**#NKOT**  
Knurled Knobs with Washer



**#NKCR**  
Stepped Knob (not Knurled)



**#NKRK**  
Knurled Knobs – Large Diameter



**#NKBC**  
Knurled Knobs – Small Diameter



**#NKBR**  
Knurled Knobs – Hexagonal  
Socket Head



**#NKBX**  
Twill Knurled Knobs



**#NKBD**  
Knurled Knobs – Drop-Proof



**NEW** NEW PRODUCT

★ **BEST SELLER**

✓ **TYPICALLY IN STOCK**

# Jigs & Fixtures (Non-NAAMS)

KNOB / SCREWS / LOCATING / GUIDE COMPONENTS

Jig & Fixture (Non-NAAMS)



**#NOOS**

Knurled Knobs with Tip Pad



**#NKOS**

Knurled Knobs - Socket Head Cap Screws



**#NOBW**

Knurled Knobs - Flat Head Screwdriver



**#NRL**

Knurled Knob Screws - Short



**#NRLS**

Knurled Knob Screws - SR Tip



**#KNB**

Knurled Clamp Knobs



**#NPFS**

Stainless Steel Knobs - Round



**#NPFC**

Stainless Steel Knobs - Wingnut



**#NPBF**

Stainless Steel Knobs - Five Lobed



**#NBMS**

Plastic Knurled Knobs with Pad



**#NBMP**

Plastic Knurled Knobs



**#NAF**

Plastic Clamp Knobs



**#NBF**

Knurled Knobs - Straight Cut



**#NBFX**

Knurled Knobs - Diamond Cut



**#NKRK**

Knurled Knobs - Large Diameter



**#NMF**

Plastic Knobs - Mushroom Shaped



**#NWGM**

Plastic Knobs - Tab Shaped



**#NWGF**

Plastic Knobs - Wingnut



**#NTM**

Plastic Knobs - Three Lobed



**#NKPF**

Plastic Knobs - Star



**#NCRF**

Plastic Knobs - Cross



**#NPEF**

Plastic Knobs - Five Lobed



**#NHF**

Plastic Knobs - Six Lobed



**#NKSF**

Plastic Knobs - Seven Lobed



**#SKN**

Super Knobs



**#ASKN**

Adjustment Screws with Knobs



**#PPKN**

For Socket Head Cap Screws



**#DPCH**

Drop-Prevention Chains for Knobs

Locating /  
Guide  
Components



**#RGP**

Basic Guide Pins - Tip Shape Selectable



**#RGPE**

Rough Guide Pins - Eccentric



**#RGPN**

Basic Guide Pins - Tip Shape Selectable



**#RGH**

Rough Guide - Standard



**#WGHA**

Guides - Straight



**#WGHA**

Guides - L-Shaped

# Jigs & Fixtures (Non-NAAMS)

LOCATING / GUIDE COMPONENTS / TOGGLE CLAMPS / WORKPIECE CLAMPS /  
AUTOMOTIVE INSPECTION COMPONENTS

**NEW** NEW PRODUCT

★ **BEST SELLER**

✓ **TYPICALLY IN STOCK**

Jig & Fixture (Non-NAAMS)



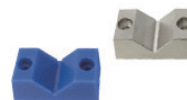
**#WGDL**  
Guides – Height Adjusting



**#WGDB**  
Guides – Pedestal



**#WGNA**  
Guides – Angle



**#WGVA**  
Guides – V-Shaped



**#WGTB**  
Guides – Plates



**#VBT**  
V Blocks – Standard, T-Shaped



**#VZB**  
V Blocks – Precision Class



**#CVTA**  
Locating Block Sets – V-Shaped,  
Flat Bottom, Standard



**#CVTB**  
Locating Block Sets – V-Shaped,  
Plate Holding, Standard



**#CAT**  
Locating Block Set – CAT



**#TPCZ**  
Tapered Pin Locating Block Sets –  
Counterbored



**#TPCS**  
Tapered Pin Locating Block  
Sets – Short



**#GMLH**  
Rough Guides – Round Pole



**#GIRH**  
Rough Guides – Plate



**#RGHK**  
Rough Guides – Angle



**#CPGP**  
Guide Plates



**#RLLP**  
Roller Pushers – Low Particle  
Generation



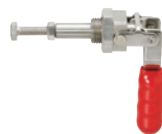
**#LPCE**  
Lift Pins – B Standard



**#TCH**  
Horizontal Handle



**#TCV**  
Vertical Handle



**#TCP**  
Push-Pull Clamps



**#TCW**  
Welded-Heavy Duty Clamps



**#TCA**  
Clamps Accessories



**#BFPP**  
Absorbing Pusher Pins



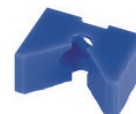
**#SPCS**  
Spring Clamps – Small



**#SPCP**  
Spring Clamp – Large



**#GPH**  
Guide Plungers with Hexagon  
Socket



**#GP**  
Nose Attachments for Guide  
Plungers – V-Shaped



**#SLDP**  
Slide Pushers

**Automotive  
Inspection  
Components**



**#KJPS**  
Slot Pins for Inspection  
Components – Straight



**#KJ01**  
Slot Pins for Inspection  
Components – Straight



**#KJPD**  
Slot Pins for Inspection  
Components – Stepped, Straight



**#KJPZ**  
Slot Pins for Inspection  
Components – Stepped, Straight

# Jigs & Fixtures (Non-NAAMS)

AUTOMOTIVE INSPECTION COMPONENTS



**#KJP2**  
Slot Pins for Inspection Jigs –  
Stepped Diamond, Straight



**#KJPV**  
Slot Pins for Inspection Jigs –  
Stepped Diamond, Straight



**#KJP1**  
Slot Pins for Inspection Jigs –  
Oval Straight



**#KJP3**  
Slot Pins for Inspection Jigs –  
Square Straight



**#KJPN**  
Slot Pins for Inspection Jigs –  
Stepped and Threaded



**#KJP8**  
Slot Pins for Inspection Jigs –  
Straight Long



**#KJPM**  
Slot Pins for Inspection Jigs –  
Stepped and Threaded



**#KJPL**  
Slot Pins for Inspection Jigs –  
Stepped Long



**#KJPG**  
Straight Threaded with Step –  
2 Steps



**#KJP7**  
Slot Pins for Inspection Jigs –  
1 Stepped, Threaded End



**#KJP4**  
Slot Pins for Inspection Jigs –  
Tapered



**#KJ02**  
Slot Pins for Inspection Jigs –  
Tapped Ends



**#KJP5**  
Slot Pins for Inspection Jigs –  
Stepped Diamond and Tapered



**#KJP6**  
Slot Pins for Inspection Jigs –  
Stepped Diamond, Taper,  
Configurable



**#KJP9**  
Slot Pins for Inspection  
Components – Threaded, Tapered



**#KJPH**  
Marking Pins



**#KJPC**  
Slot Pins for Inspection  
Components – Clamp, Straight



**#KJPK**  
Slot Pins for Inspection Jigs –  
Taper and Threaded Revolving  
Diamond-Shaped



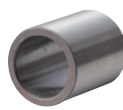
**#KJPT**  
Slot Pins for Inspection Jigs –  
Clamp Design, Straight and Taper



**#KJPR**  
Pins for Inspection Jigs – GO and  
NO-GO, Reversible



**#KJPB**  
Slot Pins for Inspection Jig –  
Check Pin with Groove



**#KJBA**  
Bushings for Inspection Jigs –  
Straight



**#KJBP**  
Bushings for Inspection Jigs –  
Straight



**#KJBS**  
Bushings for Inspection Jigs –  
Shouldered



**#KJBF**  
Bushings for Inspection Jigs –  
Shouldered



**#KJBD**  
Bushings for Inspection  
Jigs – Stepped Bore and  
Optional Shoulder



**#KJBM**  
Bushings for Inspection  
Components – Stepped and  
Threaded for Straight Pins



**#KJB1**  
Bushings for Inspection  
Components – Stepped and Thread-  
ed for Straight Pins, Shouldered



**#KJBW**  
Bushings for Inspection  
Components – Stepped and  
Threaded for Taper Pins



**#KJBT**  
Bushings for Inspection  
Components – Stepped and  
Threaded for Taper Pins



**#KJBK**  
Bushings for Inspection  
Components – D-Shape



**#KJB5**  
Bushings for Inspection  
Components – D-Shape,  
Shouldered



**#KJBC**  
Bushings for Inspection  
Components – Oval



**#KJB4**  
Bushings for Inspection  
Components – Oval, Shouldered



**#KJBR**  
Bushings for Inspection  
Components – Square

# Jigs & Fixtures (Non-NAAMS)

## AUTOMOTIVE INSPECTION COMPONENTS

**NEW** NEW PRODUCT

★ **BEST SELLER**

✓ **TYPICALLY IN STOCK**

Jig & Fixture (Non-NAAMS)



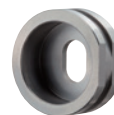
**#KJB6**  
Bushings for Inspection Components – Square, Shouldered



**#KJBN**  
Bushings for Inspection Jigs – Threaded Bore



**#KJB2**  
Locating Blocks for Inspection Components



**#KJRB**  
Round/Oval/Square Opening Shape for Resin Panels



**#KJTC**  
Inspection Jigs – Shim Plates, Square and Round Shape



**#KJT1**  
Inspection Jigs – Shim Plates, Square and Round Shape



**#KJTP**  
Inspection Jigs – Shim Plates, Square and Round Shape



**#KJTM**  
Inspection Jigs – Shim Plates, Square and Round Shape



**#JHR**  
Inspection Jigs – Hinge Units, Horizontal Travel



**#JSR**  
Inspection Jigs – Hinge Units, Horizontal Travel



**#JHSP**  
Inspection Jigs – Hinge Units, Horizontal Travel



**#JHTS**  
Inspection Jigs – Hinge Units, Vertical Travel



**#JIFL**  
Inspection Jigs – Angle Plate Units



**#JIST**  
Support Stand for Angle Plate Unit



**#JIP**  
Base Plate for Angle Plate Unit



**#KJCS**  
Clamp Plates for Inspection Components



**#KJCP**  
Inspection Jigs – Clamp Angle Plate



**#KJL**  
Components for Inspection Jigs – L Pins



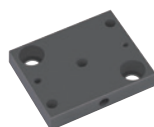
**#KJTS**  
Inspection Jigs – L and T Shape Pin



**#KJLP**  
Inspection Jigs – Locating Kits



**#CRB**  
Inspection Jigs – Locating Ball



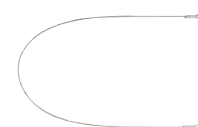
**#CRBP**  
Inspection Jigs – Locating Pad



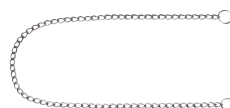
**#CRBC**  
Inspection Jigs – Locating Pad Bracket



**#CLIP**  
Inspection Jigs – Pin Clips



**#KJW**  
Inspection Jigs – Wires for Pins



**#KJWC**  
Inspection Jigs – Chains For Slot Pins