

MAXI-PUNCH

TN OR TiCN COATED PUNCHES
CAN GIVE YOU UP TO SEVEN TIMES
NORMAL LIFE EXPECTANCY OF STANDARD TOOLING



**AUSTRALIA'S LEADING
PRECISION TOOL MANUFACTURER**

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AMADA STYLE

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Section 'A'

Tooling

Manufactured by

F.M. TOOL & GAUGE PTY. LTD.

A.B.N. 91 008 262 520

CUDLEE CREEK, SOUTH AUSTRALIA, 5232

PH. (08) 8389 2272 FAX. (08) 8389 2309 or (08) 8389 2478

Free Call 1800 882 993 E-mail - sales@fmtool.com.au

www.fmtool.com.au

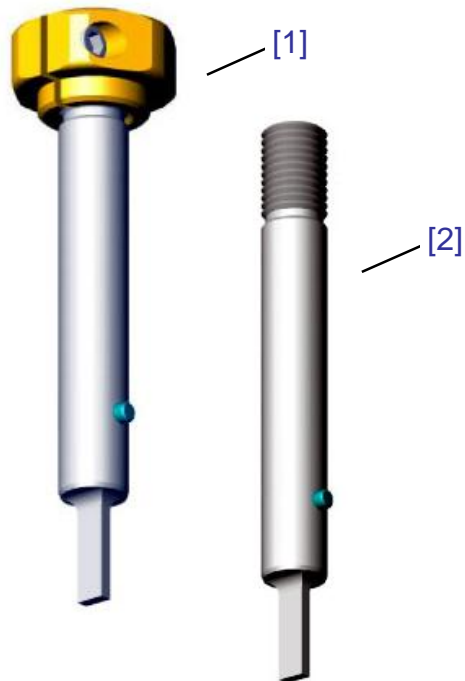


THIN TURRET

Amada / LVD

5/8" 'DROP IN' STYLE TOOLING

Maximum Tonnage - 9 ton

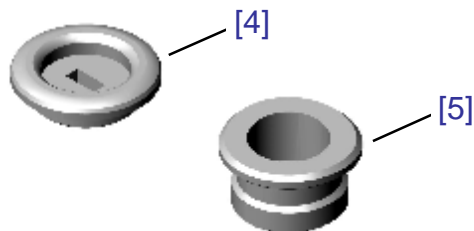


Shapes

[1] Punch & Head Assembly.....	S200674-XXX
[2] Punch.....	S200552-XXX
[3] Die.....	S49401-XXX
Super Locking Head.....	S200649-000

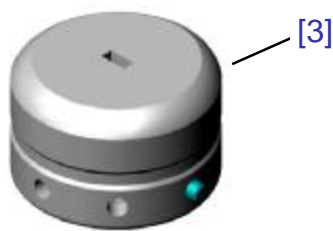
Rounds

[1] Punch & Head Assembly.....	S200673-000
[2] Punch.....	S200551-000
[3] Die.....	S48532-000
Super Locking Head.....	S200649-000



Strippers

[4] Strippit Style- Round	S61086-000
Shaped.....	S61089-XXX
[5] Wilson Style- Round.....	S00165-000
Shaped.....	S00169-XXX



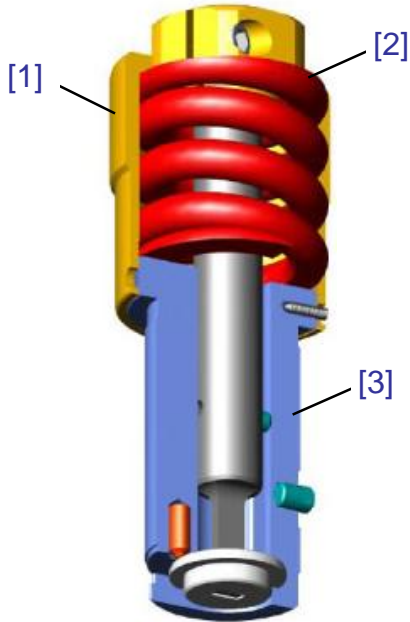
For **PRICING** and extended description of the tooling on this page log on to our web site at
www.fmtool.com.au

Select **TOOLING**; then under **THIN TURRET** click on **Tools for Amada & LVD**;
then select the tooling you require

*Pricing and description for all shapes, rounds and accessories for Thin Turret Tooling
is available at this site*

THIN TURRET
Amada / LVD

**5/8" TOOLING
STRIPPING GUIDE
ASSEMBLIES**

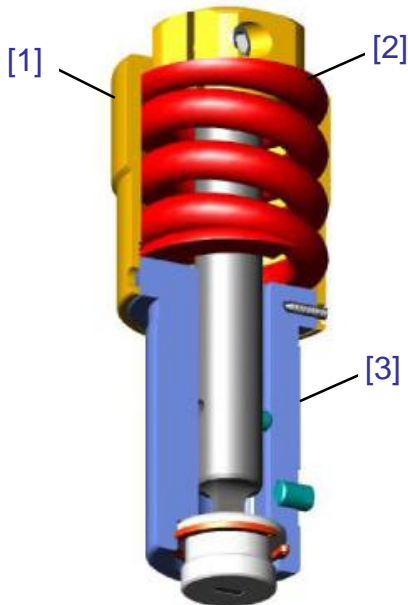


Strippit Style

Punch Holder Complete S200670-000
(punch, head & stripper button not included in assembly)

Assembly Parts

[1] Spring Retainer S200648-000
[2] Spring.....S48466-001
[3] Hardened Guide Body..... S200601-000



Wilson Style

Punch Holder Complete S00670-000
(punch, head & stripper button not included in assembly)

Assembly Parts

[1] Spring Retainer S200648-000
[2] Spring.....S48466-001
[3] Hardened Guide Body..... S00601-000

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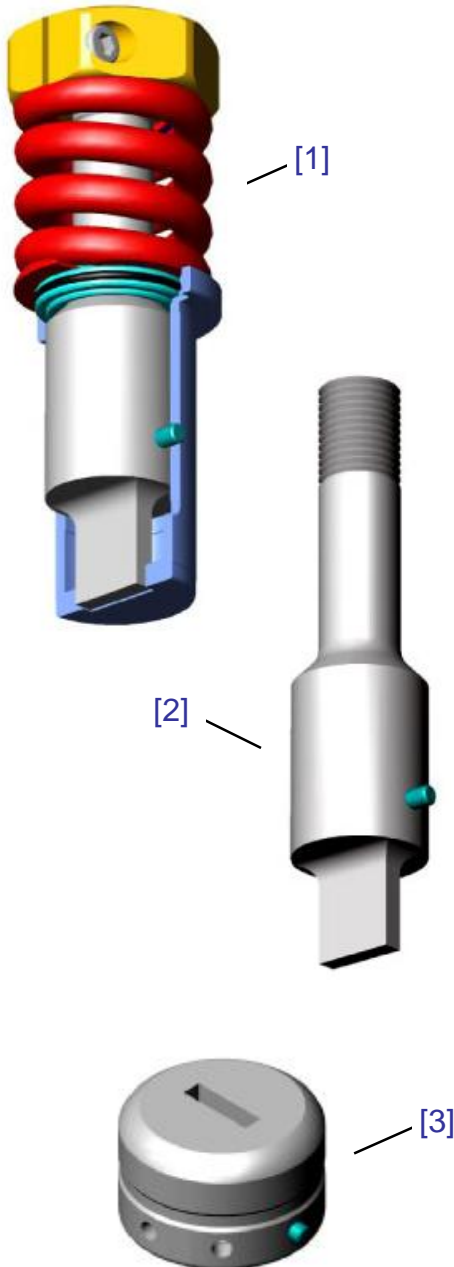
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THIN TURRET

Amada / LVD

1 ¼" TOOLING

up to 31.75mm dia max.



STANDARD TOOLING

for punching up to 4mm m/s - 2.5mm s/s

Shapes

[1] Punch & Guide Assembly	S49295-XXX
[2] Punch Only	S48534-XXX
Guide Only.....	S49292-XXX
[3] Die	S49401-XXX

Rounds

[1] Punch & Guide Assembly	S49704-000
[2] Punch Only	S48531-000
Guide Only.....	S48528-000
[3] Die	S48532-000

Assembly Parts

Super Locking Head	S200867-000
Stripping Spring	S48466-000
Punch Collar (new & shim 3mm)	S49669-000
Punch Collar (shim 1 & 2mm).....	S49669-1&2MM
O'Ring for Collars	S49669-001

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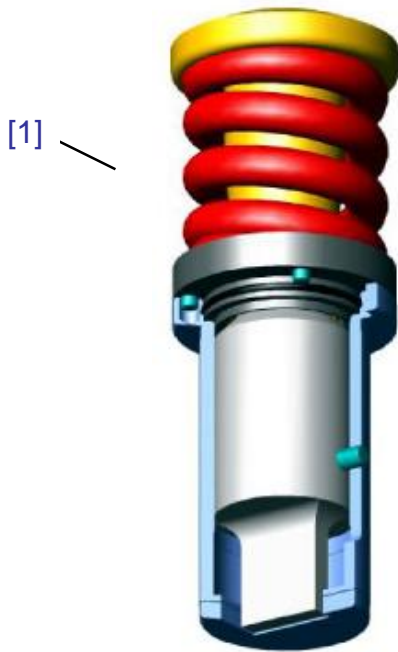
THIN TURRET

Amada / LVD

1 1/4" TOOLING

E. A. RANGE

Designed to allow for Easy Quick Adjustment
(in seconds)
of Standard 1 1/4" Punches

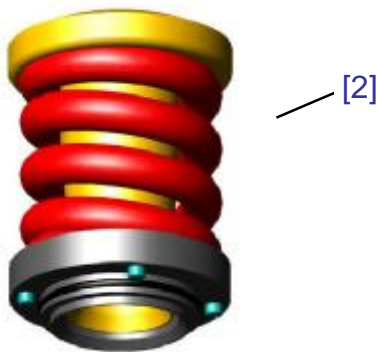


Shapes

[1] Complete Assembly (includes punch & guide)	EA49200-XXX
[2] Spring Pack (complete).....	EA48400-000
Punch	S48534-XXX
Guide	S49292-XXX

Rounds

[1] Complete Assembly (includes punch & guide)	EA49200-000
[2] Spring Pack (complete).....	EA48400-000
Punch	S48534-000
Guide	S49292-000



Standard 1 1/4" Dies are used with this style of tooling

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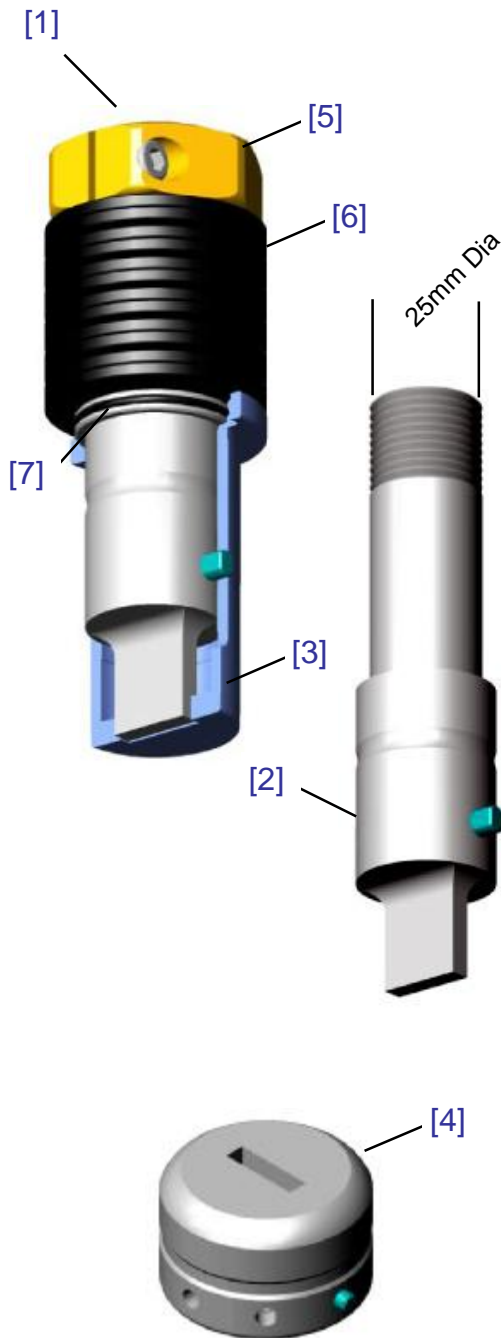
THIN TURRET

Amada / LVD

1 ¼" TOOLING

HEAVY DUTY

for punching up to 6mm m/s - 4mm s/s



Shapes

[1] Complete Assembly	S200252-XXX
[2] Punch Only	S200255-XXX
[3] Guide Only(Hardened)	S49292H-XXX
[4] Die	S200537-XXX

Rounds

[1] Complete Assembly	S200332-000
[2] Punch Only	S200333-000
[3] Guide Only (Hardened)	S48528H-000
[4] Die	S200537-000

Assembly Parts

[5] Super Locking Head	S200267-000
[6] Disc Springs ea	S11666-000 (12 per set)
[7] Punch Collar	S200259-000
Punch Collar (shim 1mm).....	S200259-1mm
Punch Collar (shim 2mm).....	S200259-2mm
Punch Collar (shim 3mm).....	S200259-3mm

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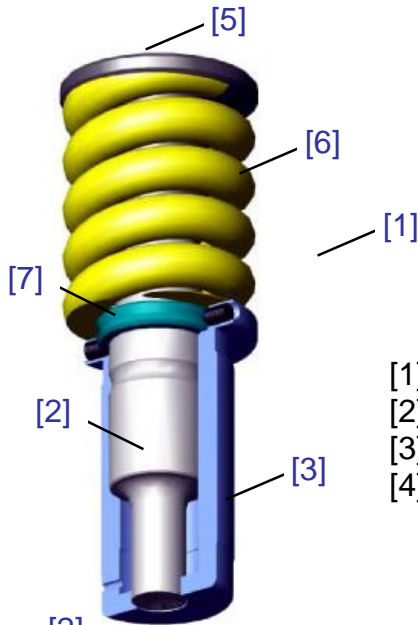
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THIN TURRET

Amada / LVD

ROUND NIBBLING TOOLS

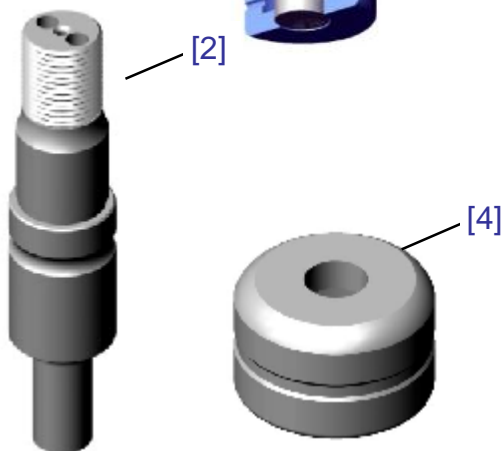
Up to 25.4mm (1") Max. Dia.
10, 13, 25mm Dia stock sizes



Round Only

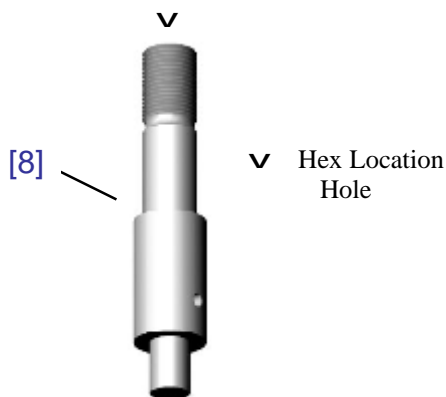
[1] Punch & Guide Assembly.....	S00417-000
[2] Punch.....	S00413-000
[3] Guide.....	S00415-000
[4] Die (manufactured in HSS).....	S200538-000

Assembly Parts



[5] Adjustable Punch Head.....	S00418-000
[6] Stripping Spring.....	S00418-001
[7] Punch Collar.....	S00418-002
Punch Collar (shim 1mm).....	S00418-1mm
Punch Collar (shim 2mm).....	S00418-2mm
Punch Collar (shim 3mm).....	S00418-3mm

Strippit Type for Open Guide



[8] Punch.....	S200236-000
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THIN TURRET

Amada / LVD

1 ¼" TOOLING

ADJUSTABLE SPIGOT STYLE

for punching up to 2mm m/s - 1.6mm s/s

(Wilson Series 90 Compatible)

Short Series

Shapes

[2] Complete Assembly	S49296-XXX
[3] Punch Only (61.3mm)	S48535-XXX
[4] Guide Only (Hardened)	S49292H-XXX
Die.....	S49401-XXX

Rounds

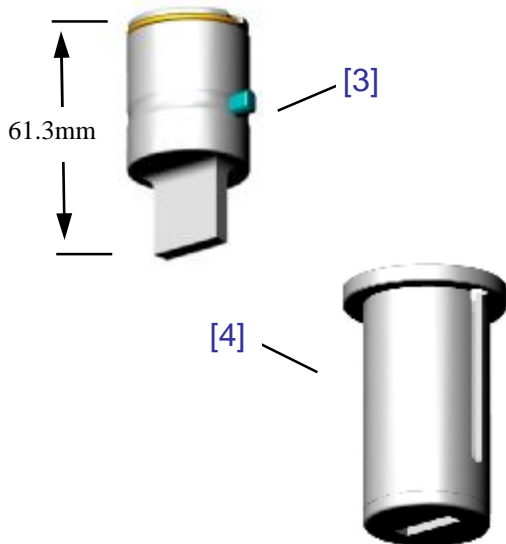
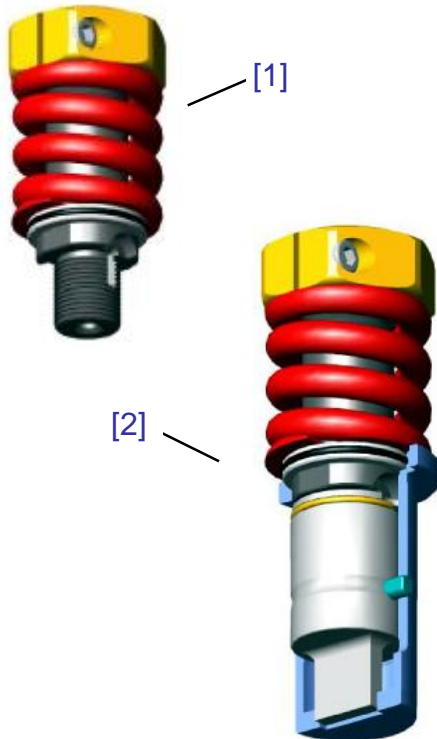
[2] Complete Assembly	S49296-000
[3] Punch Only (61.3mm)	S48530-000
[4] Guide Only (Hardened)	S48528H-000
Die.....	S48532-000

Stripping Units Complete

[1] S49280-000

Assembly Parts

Punch Head	S200267-000
Punch Driver	S48536-000
Stripping Spring.....	S48466-000
Punch Collar.....	S200259-000



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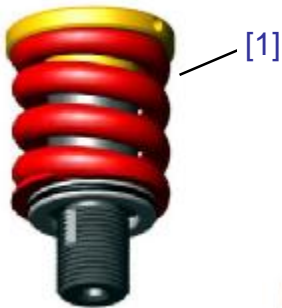
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THIN TURRET

Amada / LVD

1 ¼" TOOLING



ADJUSTABLE SPIGOT STYLE

for punching up to 2mm m/s - 1.6mm s/s

(Wilson Series 90 Compatible)

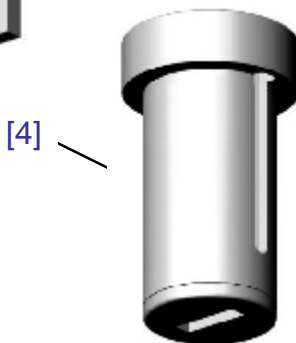
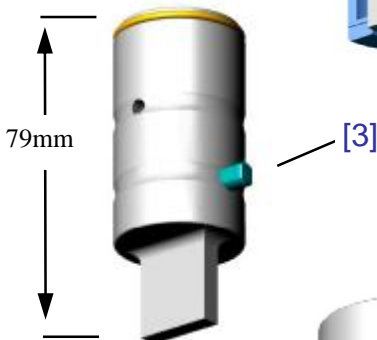
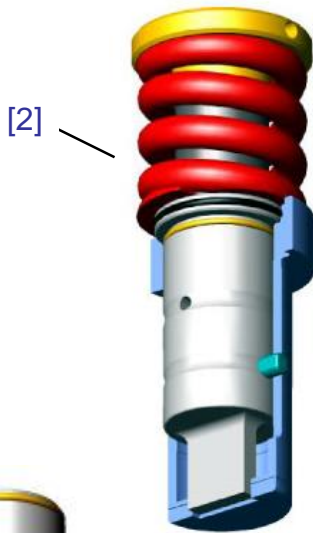
Long Series

Shapes

[2] Complete Assembly.....	S49297-XXX
[3] Punch Only (79mm).....	S48538-XXX
[4] Guide Only (Hardened)	S49290H-XXX
Die.....	S49401-XXX

Rounds

[2] Complete Assembly.....	S49297-000
[3] Punch Only (79mm).....	S48538-000
[4] Guide Only (Hardened)	S49290H-000
Die.....	S48532-000



Stripping Units Complete

[1] S49281-000

Assembly Parts

Punch Head.....	S49671-000
Punch Driver.....	S48537-000
Stripping Spring.....	S48466-000
Punch Collar.....	S49672-000

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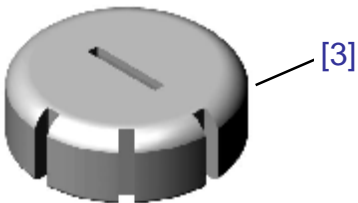
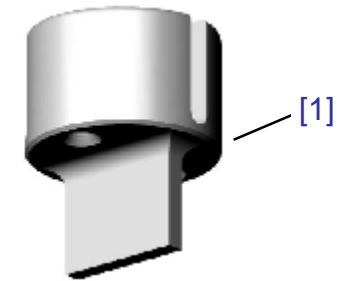
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THIN TURRET

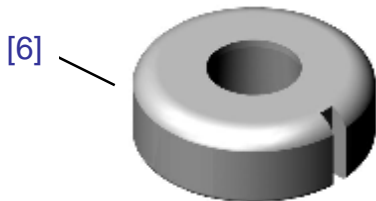
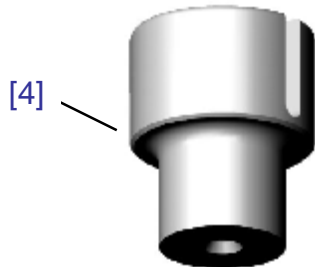
Amada / LVD

2" STATION



Shapes

Punch, Die & Stripper Set	SA520-XXX
[1] Punch	SA521-XXX
[2] Stripper.....	AA502-XXX
[3] Die.....	AA503-XXX



Rounds

Punch, Die & Stripper Set	SA620-000
[4] Punch	SA621-000
[5] Stripper.....	AA602-000
[6] Die.....	AA603-000

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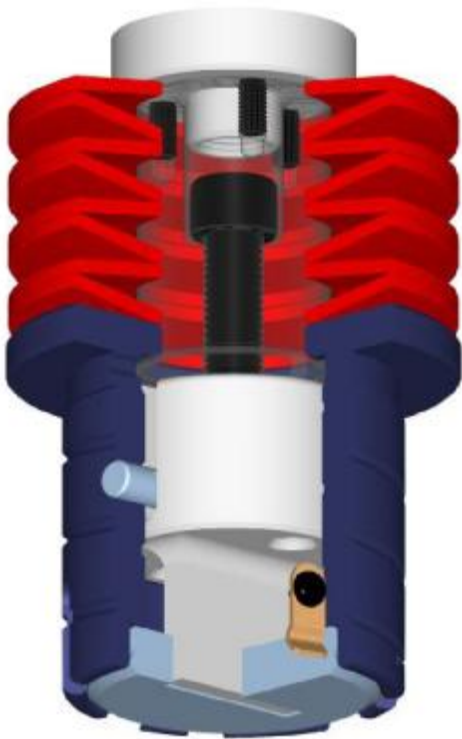
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THIN TURRET

Amada / LVD

2" STATION GUIDE ASSEMBLY



Complete Guide Assembly	SA650-000
Head.....	AA551-000
Spigot	SA652-000
Guide Body.....	SA653-000
Springs	AA554-000
Stripper Clips	AA960-000
Screws for Stripper Clips	AA961-000

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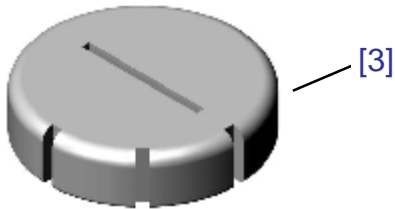
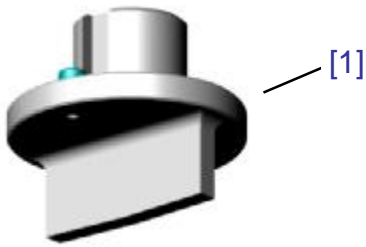
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THIN TURRET

Amada / LVD

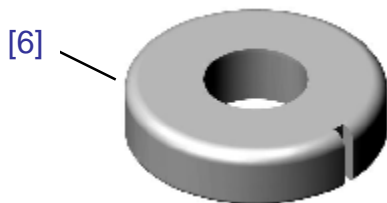
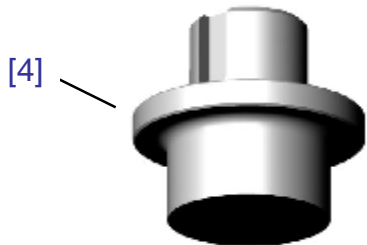
3 1/2" TOOLING

Style 1



Shapes

- [1] Punches
(31.8 to 60mm dia.) S49076-XXX
- Punches
(60 to 88.9mm dia.) S49077-XXX
- [2] Stripper SA88888-XXX
- [3] Die AA703-XXX



Rounds

- [4] Punches
(31.8 to 45mm dia.) S86717-000
- Punches
(45 to 65mm dia.) S86719-000
- Punches
(65 to 88.9mm dia.) S86721-000
- [5] Stripper SA88888-000
- [6] Die AA803-000

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THIN TURRET

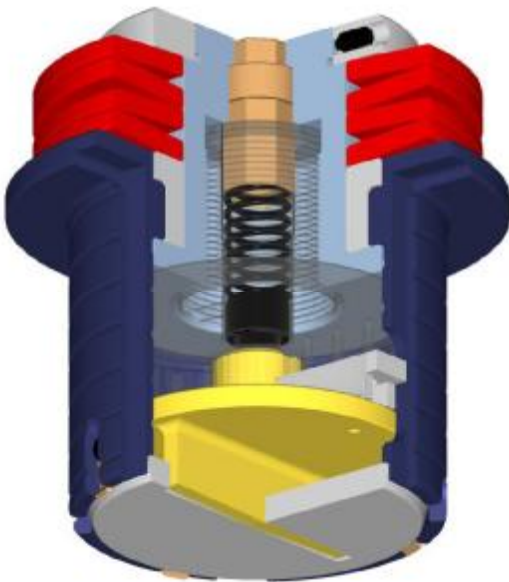
Amada / LVD

3 1/2" GUIDE ASSEMBLY

Style 1

PUSH BUTTON ADJUSTABLE GUIDE ASSEMBLY

(No Shims Required)



Complete Assembly	SA300738-000
Guide Body	SA300738-001
Spring Retaining Ring	SA300738-002
Disc Spring (127 x 64 x 6) (4 off)	SA300738-003
Keys (2 required)	SA300738-004
Punch Driver Spigot	SA300738-005
Spring Retaining Head	S300810-008
Spring Housing Spigot	S300810-009
Octagonal Indexing Button	AA952-002
Stripper Holding Clips	AA960-000
Stripper Clip Retaining Screws	AA961-000

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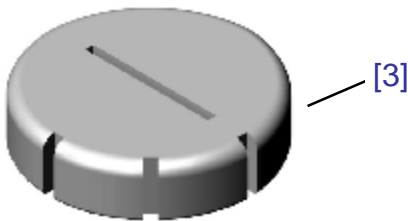
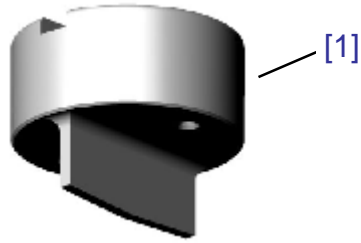
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THIN TURRET

Amada / LVD

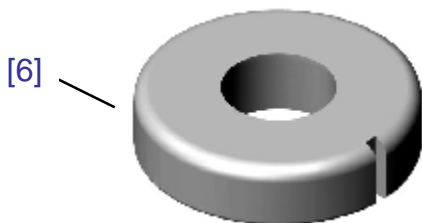
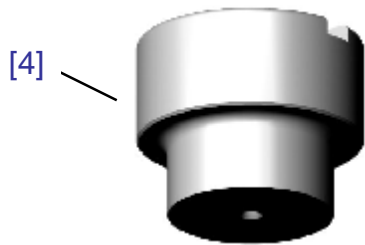
3 1/2" TOOLING

Style 2



Shapes

Punch, Die & Stripper Set SA720-XXX
[1] Punch SA721-XXX
[2] Stripper..... SA88888-XXX
[3] Die..... AA703-XXX



Rounds

Punch, Die & Stripper Set SA820-000
[4] Punch SA821-000
[5] Stripper..... SA88888-000
[6] Die..... AA803-000

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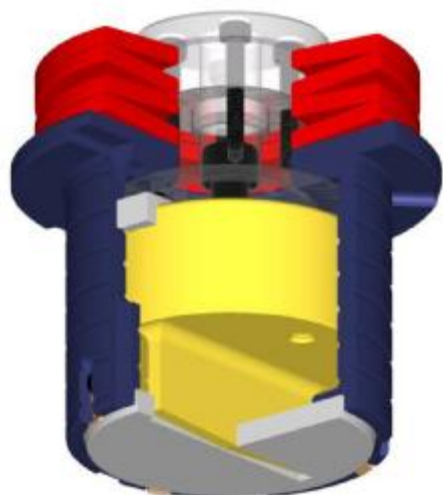
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THIN TURRET

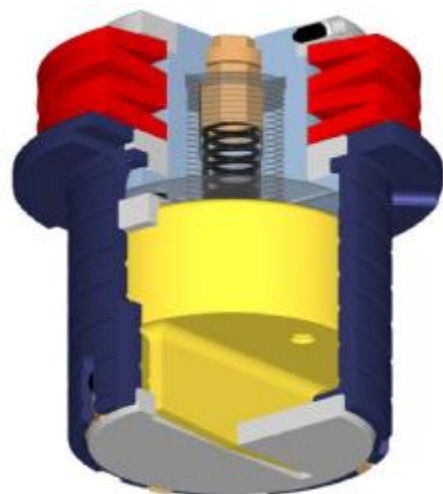
Amada / LVD

3 1/2" STATION GUIDE ASSEMBLIES Style 2



STRIPPING GUIDE ASSEMBLY (Shims Required)

Complete Assembly.....	SA200466-000
Guide Body.....	SA200466-001
Punch Retaining Stud.....	SA200466-002
Punch Alignment Key	AA950-000
Disc Spring (127 x 51 x 6)	SA200466-004
Punch Driver Spigot.....	SA200466-005
Spring Retaining Head	SA200466-008
Stripper Holding Clips.....	AA960-000
Stripper Clip Retaining Screws	AA961-000



PUSH BUTTON ADJUSTABLE GUIDE ASSEMBLY (No Shims Required)

Complete Assembly.....	SA300466-000
Guide Body.....	SA300466-001
Spring Retaining Ring.....	SA300466-002
Disc Spring (127 x 64 x 6)	SA300738-003
Punch Driver Spigot.....	SA300466-005
Octagonal Indexing Button	SA300466-006
Spring Retaining Head	SA300466-008
Spring Housing Spigot.....	SA300466-009
Punch Alignment Key	AA950-000
Stripper Holding Clips.....	AA960-000
Stripper Clip Retaining Screws	AA961-000

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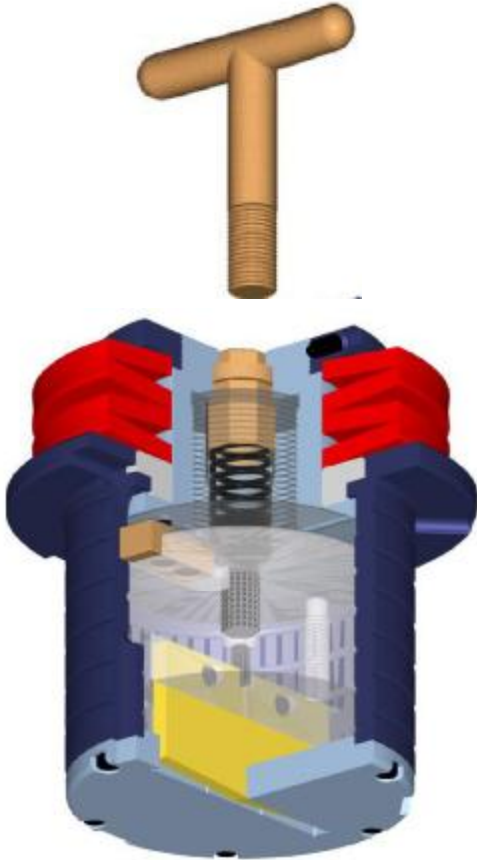
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Amada / LVD

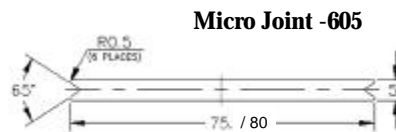
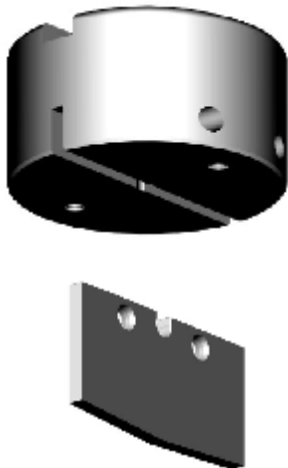
3 1/2" PARTING TOOL



ADJUSTABLE PARTING GUIDE ASSEMBLY (No Shims Required)

- Complete Assembly SA300466-SLIT
(does not include punch insert or stripper)
- Guide Body SA300466-001S
- Disc Spring (127 x 64 x 6) (4 off)..... SA300738-003
- Insert Holder..... SA300466-SLITH
- Rectangle Parting Punch Insert..... S49070-300
- Micro Joint Parting Punch Insert S49070-605
- Rectangle Stripper SA88880-300
- Micro Joint Stripper SA88880-605
- Rectangle Die AA703-300
- Micro Joint Die AA703-605

Stock Sizes 5 x 75mm & 5 x 80mm



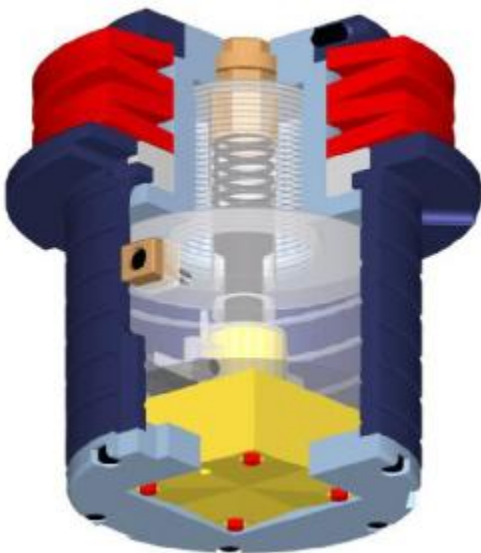
For **PRICING** and extended description of the tooling on this page log on to our web site at
www.fmtool.com.au

Select **TOOLING**; then under **THIN TURRET** click on **Tools for Amada & LVD**;
then select the tooling you require
Pricing and description for all shapes, rounds and accessories for Thin Turret Tooling
is available at this site

THIN TURRET

Amada / LVD

3 1/2" NOTCHING TOOL



ADJUSTABLE NOTCHING GUIDE ASSEMBLY

(No Shims Required)

Complete Assembly SA300738-NOTCH
(does not include punch or stripper)

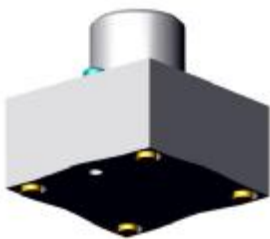
Guide Body SA300466-001S

Disc Spring (127 x 64 x 6) (4 off) SA300738-003

Square Notching Punch S200831-200

Square Notching Stripper SA88880-200

Square Die AA703-200



Stock Size 50 x 50mm
(Manufactured in HSS)

For **PRICING** and extended description of the tooling on this page log on to our web site at

www.fmtool.com.au

Select **TOOLING**; then under **THIN TURRET** click on **Tools for Amada & LVD**;
then select the tooling you require

**Pricing and description for all shapes, rounds and accessories for Thin Turret Tooling
is available at this site**

THIN TURRET

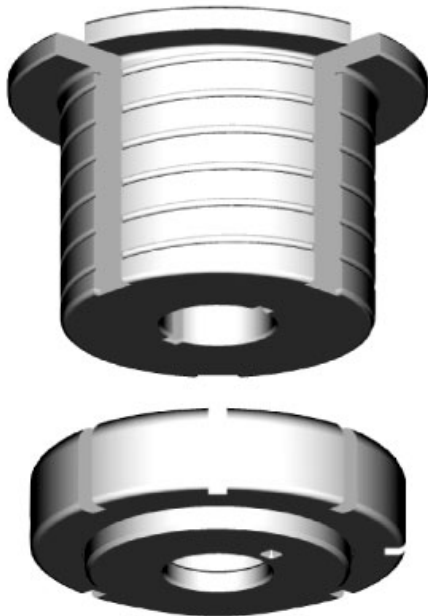
Amada / LVD

ACCESSORIES



LINE UP TOOL KITS

1 ¼" Station	S200293-000
3 ½" Station	SA700-888



ADAPTOR SLEEVES

1¼" to 3½" Station Guide.....	SA775-000
1¼" to 3½" Station Die.....	AA776-000

For **PRICING** and extended description of the tooling on this page log on to our web site at **www.fmtool.com.au**

Select **TOOLING**; then under **THIN TURRET** click on **Tools for Amada & LVD**; then select the tooling you require

Pricing and description for all shapes, rounds and accessories for Thin Turret Tooling is available at this site

THIN TURRET

Amada / LVD

1/2" TOOLING
SPLIT KEEPER TYPE



Shape

S200344-XXX

Round

S200330-000

1/2" TOOLING
SNAP APART TYPE



Shape

S00333-XXX

Round

S00195-000

F.M. TOOL & GAUGE PTY. LTD.

A.B.N. 91 008 262 520

CUDLEE CREEK, SOUTH AUSTRALIA

PH. (08) 8389 2272 FAX. (08) 8389 2309 or (08) 8389 2478

FREE CALL 1800 882 993 e-mail - sales@fmtool.com.au

www.fmtool.com.au

Design

Latest Inventor and AutoCAD 3D & 2D modelling and design, EdgeCAM for generating strategies and NC code for up to 5 axis simultaneous machining.

Machining

DMG 'GMX400 Linear' - 12 axis multi-tasking precision manufacturing cell with 5 axis simultaneous machining capability, complete with 90mm bar feeder and parts handling.

Mazak Integrez 200-IIIST - 9 axis multi-tasking precision manufacturing cell complete with bar feeder and parts handling.

2x Bridgeport Ezpath CNC lathes for low volume production

1 x Harrison centre lathe

2 x Bridgeport interact CNC vertical machining centres

Fexcac multi function over arm milling machine

Behringer automatic band saw for all billeting functions

Our Capability

Let us design and manufacture your precision parts and components



EDM & Wirecut

Creator EDM super drill capable of drilling 0.5mm dia. holes through up to 150mm thick hardened materials

2x Creator EDM spark eroder machines

3 x Fanuc CNC precision wirecut machines

Precision Grinding & Finishing

2 x high precision cylindrical grinders (Italian manufacture)

3 x high precision surface grinders (German & Japanese manufacture)

2 x ANCA 4 axis CNC high precision form grinders (Australian manufacture)

5 x high precision tool & cutter grinders (various)

Inspection & Measuring

Various digital micrometers, probes, gauges & other measuring equipment

Micro-Vu 1000 optical computerised measuring system

Laser Marking & Engraving

High quality German manufactured BAUBLYS YAG & CO₂ lasers for CODING, MARKING, ENGRAVING, DEEP ENGRAVING and MICROMACHINING on a large range of materials.

FM TOOL & GAUGE
Excellence in Engineering

Section 'B'

*Special Shapes &
Technical Information*





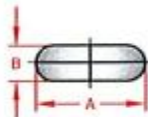
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Category 'A' Tool Selection Guide

- 000



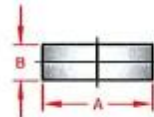
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- 200



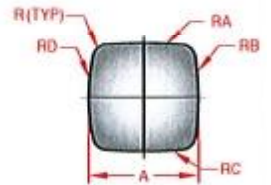
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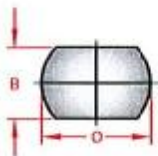
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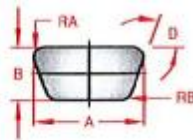
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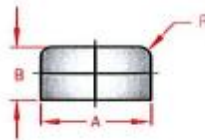
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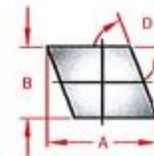
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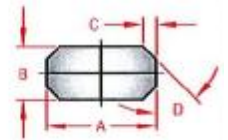
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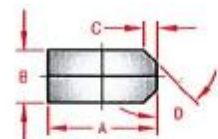
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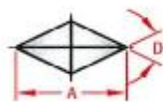
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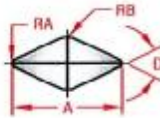
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- 517



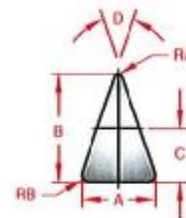
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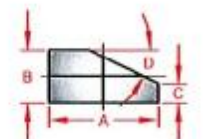
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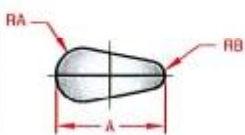
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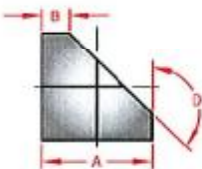
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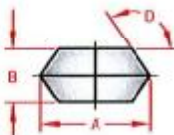
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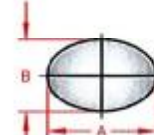
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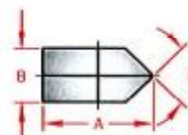
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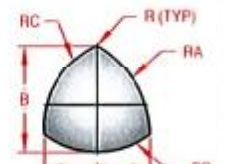
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- 545



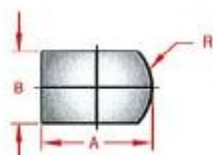
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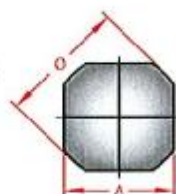
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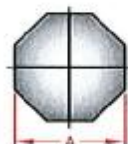
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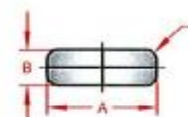
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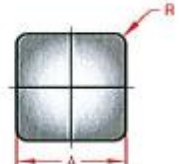
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- 850



- 860

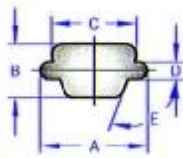




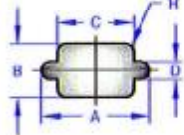
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Category 'B' Tool Selection Guide

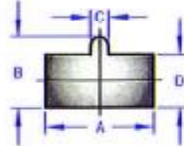
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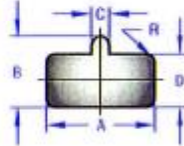
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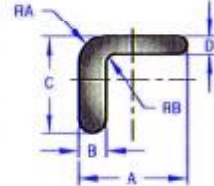
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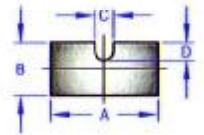
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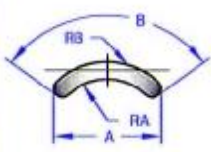
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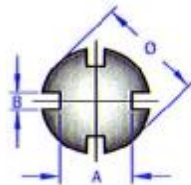
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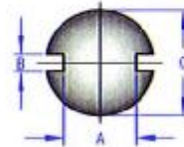
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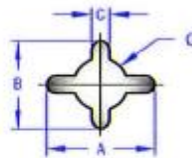
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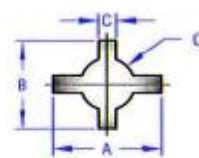
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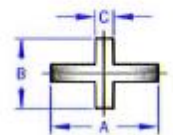
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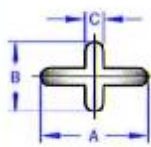
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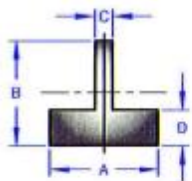
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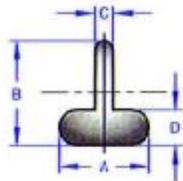
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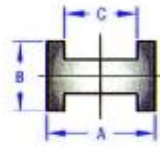
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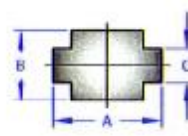
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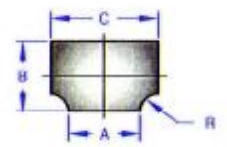
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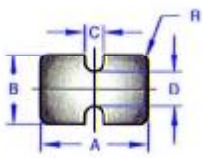
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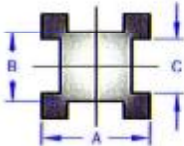
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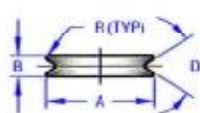
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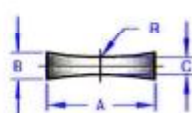
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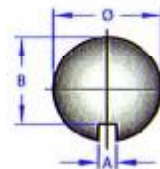
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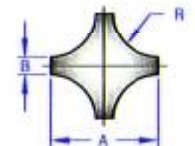
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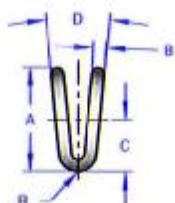
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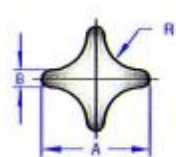
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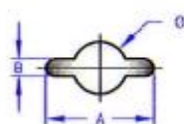
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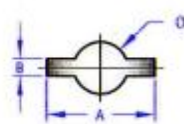
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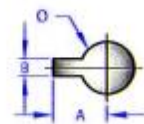
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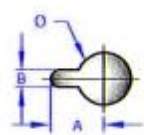
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- 780



- 790

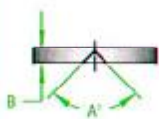




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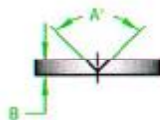
Category 'C' Tool Selection Guide

- 240



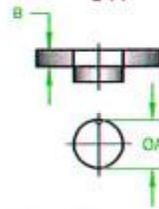
Centre Punch Up

- 241



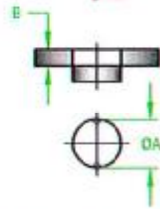
Centre Punch Down

- 541



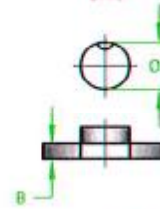
1 Tap K/Out Down

- 542



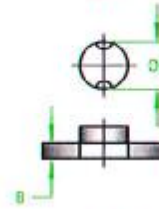
2 Tap K/Out Down

- 543



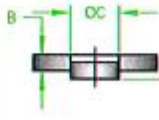
1 Tap K/Out Up

- 544



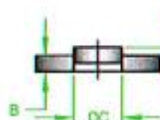
2 Tap K/Out Up

- 562



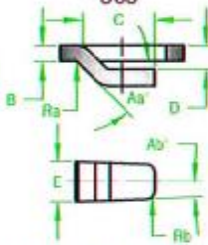
Part Shear Down

- 563



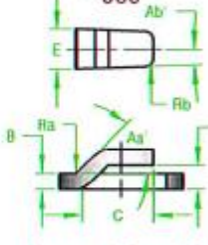
Part Shear Up

- 565



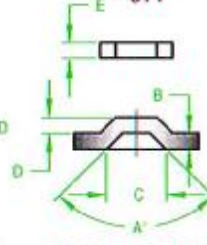
Lance & Form Down

- 566



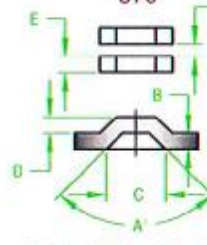
Lance & Form Up

- 577



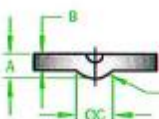
Bridge Tool Up

- 578



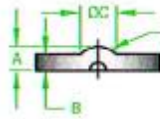
Twin Bridge Tool Up

- 645



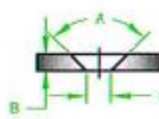
Dimple Down

- 646



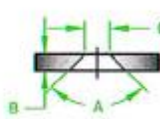
Dimple Up

- 653



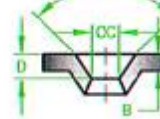
Coined C/Sink Down

- 654



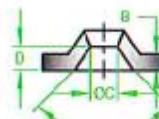
Coined C/Sink Up

- 655



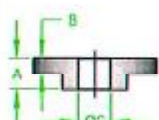
Formed C/Sink Down

- 656



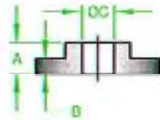
Formed C/Sink Up

- 675



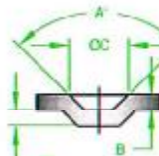
Extrusion Down

- 676



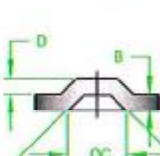
Extrusion Up

- 755



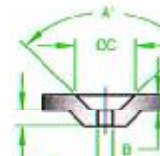
Emboss Down

- 756



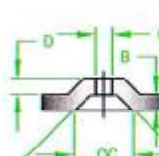
Emboss Up

- 757



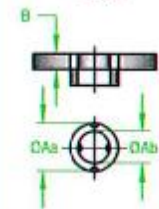
Pierced Emboss Down

- 758



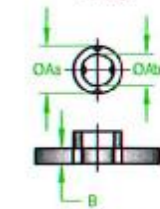
Pierced Emboss Up

- 775



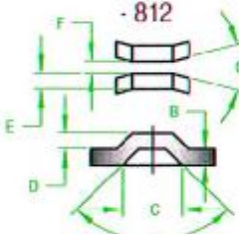
Double K/Out Down

- 776



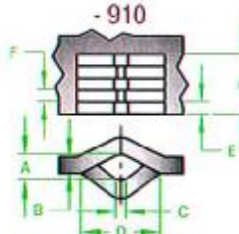
Double K/Out Up

- 812



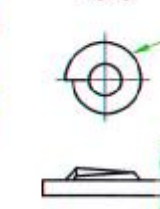
Card Holder Tool Up

- 910



Edge Fix Tool

- 920



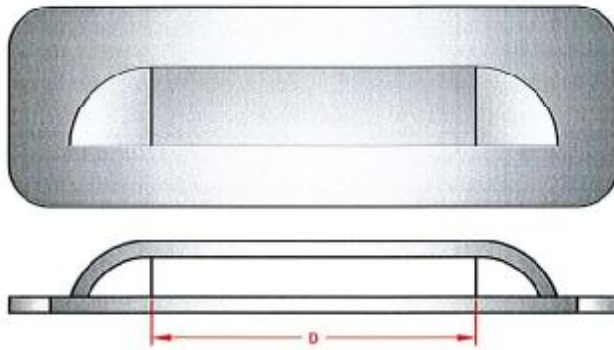
Thread Form

*A = Thread Form & Pitch

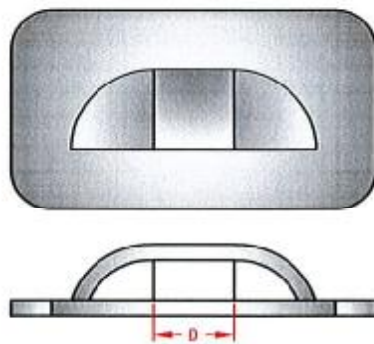
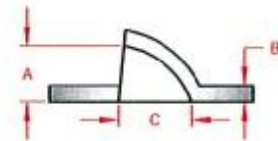


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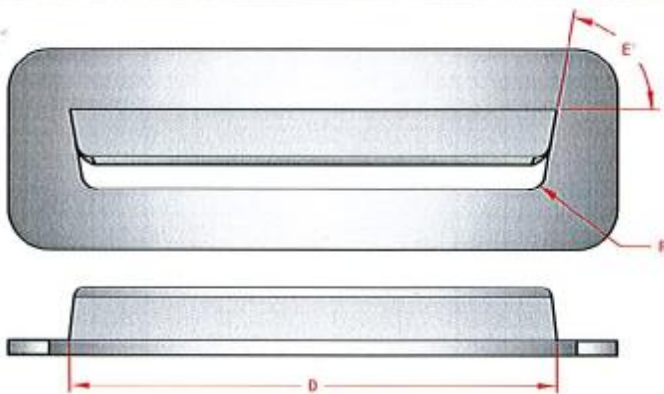
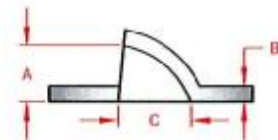
Category 'C' Tool Selection Guide



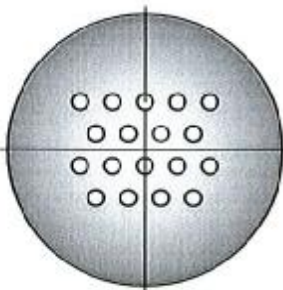
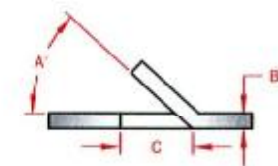
Louvre Tool Up
-999



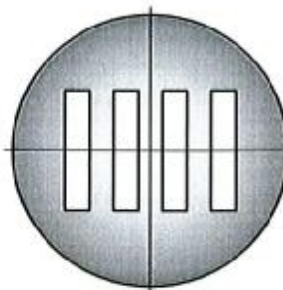
Nibble Louvre Tool Up
-995



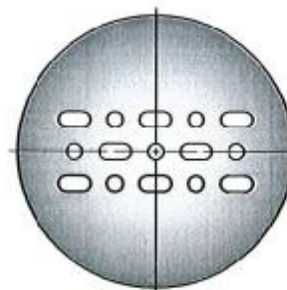
Air Louvre Tool Up
-997



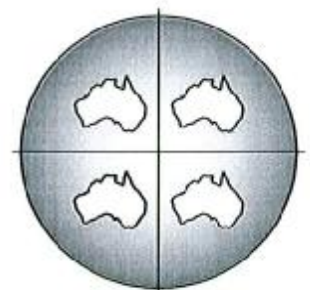
Pin Hole Cluster



Shaped Cluster



Multi Shaped Cluster



Special Shaped Cluster

Material Multiplication Factor (F)

Material Description	Multiplier (F)	Material Description	Multiplier (F)
Aluminium - Soft Sheet	0.30	Steel - Mila	1.00
Aluminium - Half Hara	0.38	Steel - ASTM-A36	1.20
Aluminium - Hara	0.50	Steel - 50 Carbon	1.40
Brass - Soft Sheet	0.60	Steel - Cold Drawn	1.20
Brass - Half Hara	0.70	Steel - Stainless	1.40
Copper - Rolled	0.57	Spring Steel (Tempered)	4.00

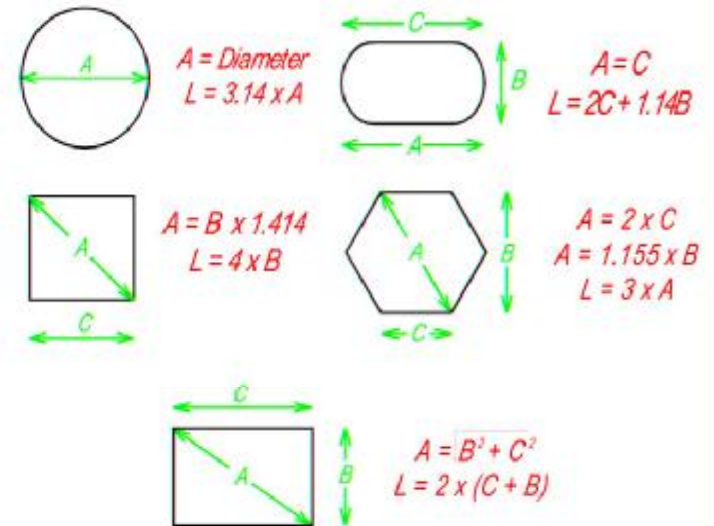
Based on Mild Steel Shear Strength of 50,000 P.S.I (345 MPa)

Total Cutting Edge

In order to calculate the tonnage required to cut out a shape, it is necessary to work out the total length of the cutting edge, ("L").

ie. The perimeter of the shape to be cut.

Example:



Tonnage Calculation

The tonnage required for punching any shape hole in a material is given by the following formula:

Required Tonnage = $L \times G \times S$ where:-

"L" is the total length of the cutting edge

"G" is the material thickness

"S" is the shear strength of the material

Hence required tonnage.

Example 1: For a 50.mm square in 2.mm mild steel

$$L = 50 \times 4 = 200 \quad G = 2 \quad \text{and} \quad S = 0.345$$

Hence required tonnage.

$$T = 200 \times 2 \times 0.345 = 137.95 \text{ KN}$$

Punches with Shear

The tonnage required for punching with shear is given by the

$$\text{formula:- } T = L \times G \times S \times F$$

Where "F" is the shear factor (see "Calculating the effect of shear")

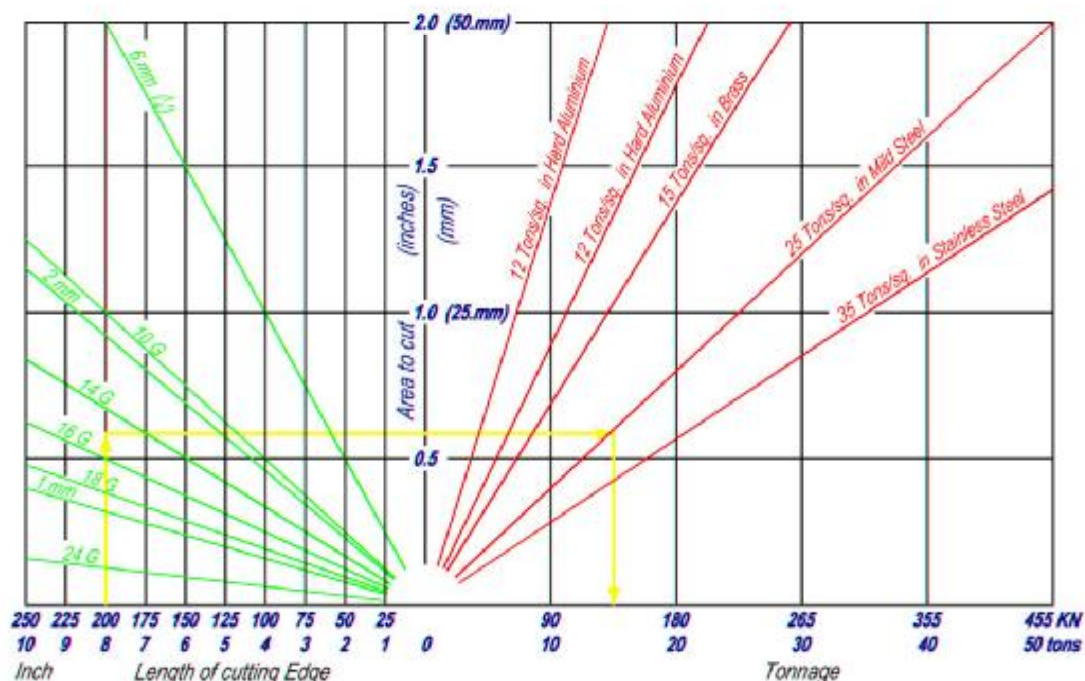
Example 2: For a 3/8" x 3" Slitting Tool with 3/16" Shear Cutting 1/4" Hard Aluminium

$$F = 0.63 \text{ (from graph below)}$$

$$L = 2 (3/8 \times 3) = 2.25 \quad G = 0.25 \quad S = 12 \quad F = 0.63$$

Hence required tonnage:

$$T = 2.25 \times 0.25 \times 12 \times 0.63 = 4.25 \text{ ton}$$



Recommended Clearances

Total Clearance Calculated

Material	% of Material Thickness	Material Thickness					
		20G	18G	16G	14G	10G	¼'
		0.9	1.2	1.6	2.0	3.0	6.0
Aluminium	15%	0.14	0.18	0.24	0.3	0.45	0.9
Mild Steel	20%	0.18	0.24	0.32	0.4	0.6	1.2
Stainless Steel	25%	0.23	0.3	0.4	0.5	0.75	1.5

Please Note Measurements in mm

This is a recommended guide. If any problems or queries arise please contact F.M. Tool & Gauge for our expert advice.

Shear is used on punches to reduce tonnage and noise whilst punching.
A full shear can reduce the tonnages by up to 50%.

Rooftop Shear:

- Ideal when punching at high loads
- Avoid excessive side loading by Taking large cuts (over 75%)

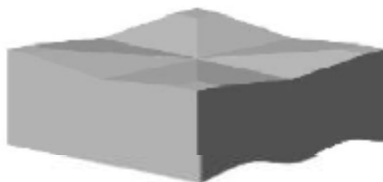


Inverted Rooftop:

- Very effective
- Easy to produce and regrind
- Avoid sharp corner in the centre, as this provides a stress point, making the tool more susceptible

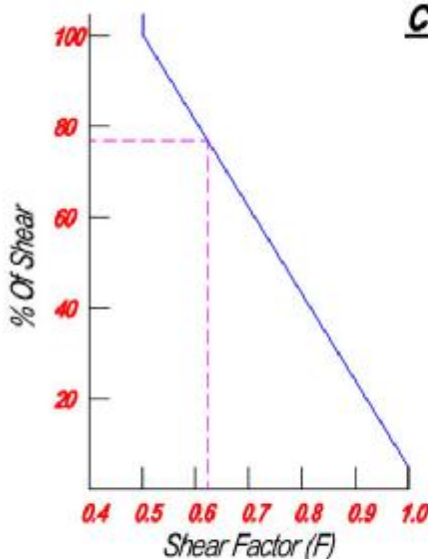
Concave:

- Best for nibbling
- More difficult to regrind Than inverted rooftop



Four Way Shear:

- Ideal for large squares
- always avoid sharp inside corners, as these encourage breakage



Calculating The Effect Of Shear

$$\text{Shear Factor (F)} = \frac{104 - (\text{Shear \%} \times 0.54)}{100}$$

eg. 75% Shear = 0.63
Shear Factor

$$\% \text{ Of Shear} = \frac{\text{Shear Depth} \times 100}{\text{Material Thickness}}$$

eg. ¼' Material with
3/16' shear on tool

$$= \frac{0.1875 \times 100}{0.250}$$

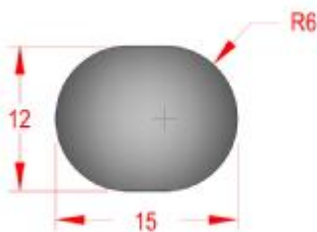
= 75%

“Handy Hints on Ordering”

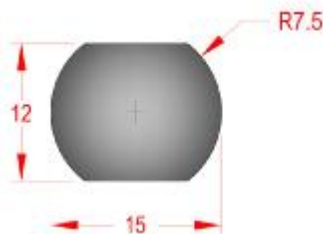
- ◆ *When placing orders please give as much information as possible. The greater the information given, the less likely there is of a mistake or problem occurring with the order. (we will query you if we see a possible problem)*
- ◆ *All relevant dimensions are required. A very common problem can occur when requesting a round ended shape. **Eg: 15 x 12mm**. This can mean 1 of several shapes. (see example below)*
- ◆ *Using part numbers helps to eliminate misunderstandings.*
- ◆ *We suggest you advise material and gauge being punched.*
- ◆ *Show keyways and centre lines on special shapes.*
- ◆ *Standard practise is to put clearance on the die. Punch size will give you hole size and die size will give you slug size. (if you require the slug please advise)*
- ◆ *Solid or re-inforced dies can be supplied on request.*
- ◆ *On special shapes we recommend rads on any sharp corner, this will give added strength to your tool.*
- ◆ **TROUBLESHOOTING**:- *for problems such as slug pull please ring and ask, as each situation is different. **Good advise is cheap.***
- ◆ **Don't forget**—it is extremely easy to place orders direct from the internet—just remember www.fmtool.com.au
Please Note: First time users need to be registered with a password

Example: (from above)

12 x 15 Oblong



12 x 15 Double Dee



12 x 15 x R9 Doorlock

