MATE®
PRECISION TOOLING

RESPECT • SUPPORT • INSPIRE

Trumpf® Style Tooling Systems

FOR TRUMPF PUNCH PRESSES

FIVE DECADES OF GLOBAL EXCELLENCE

Founded in 1962, Mate is a world-class manufacturer of superior sheet metal fabrication products and solutions. We manufacture tooling for every major CNC punch press. In North America, we also offer a complete line of press brake tooling, CO_2 and fiber laser consumables. Mate products and services are available worldwide, fully supported by over than 80 dealers in every industrialized country.

Headquartered in Anoka, Minnesota, in a 300,000 sq. ft. (28,000m²) state-of-the-art facility.

WE RESPECT YOU PERSONAL CONNECTIONS

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

WE SUPPORT YOU YOUR GO-TO SOURCE

In your plant. Or on the phone. From our Sales Engineers and Customer Service, to our machinists and shipping department, Mate is pulling for YOU. Mate's in-field sales engineers know from experience what happens on the shop floor. They speak your language, fully capable of helping you improve processes and solve problems. Inside Mate, Customer Service makes quoting and ordering tooling fast and easy, guiding it through our world class manufacturing systems to ensure you receive your order when you expect it.

WE INSPIRE YOU THINK BOLD, WE'VE GOT YOU COVERED

Whether it's on-site at your facility or in our Solution Center, Mate can inspire innovation from looking at new ways to use existing products or by developing new or specialty solutions that meet your specific requirements. Mate's team will assist you with a fast solution, whether it's a hinge, a building façade or a completely new challenge. Plus you're BACKED by our no-risk 100% customer satisfaction guarantee.

MATE'S MISSION AND PROMISE TO YOU:

To personally **respect, support** and **inspire** sheet metal professionals around the world with high-quality precision tooling and services.

[Dimensions in Inches (mm)]

TABLE OF CONTENTS

*All prices in this catalog are subject to change without notice.

[Dimensions in Inches (mm)]

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orders@mate.com

MATE TOOLING SYSTEMS FOR TRUMPF STYLE PUNCH PRESSES

Mate offers the most comprehensive range of tooling systems designed to accommoDADe any punching application in your Trumpf style punch press. Use this simple chart to determine which tooling system is right for your typical punching application.

LESS ● ●● ●●● ●●●● MORE	Mate NEXT™ Tooling System	Mate QuickLock™ Tooling System	Mate Trumpf Style Tooling System
Overall Value – The combination of: the features, the purchase price, and the operating costs.	●●●●	●●●	●●
Cost Savings – The ongoing cost savings of operating the tooling system over an extended period of time.	●●●●	●●●	●●
Ease of Use – Design features that make it faster to install, simpler for the operator to set up, and more convenient to maintain.	●●●●	●●●	●●
Interchangeability – The ability of a tooling system to be comPADible with popular systems from other major suppliers.	●●●	●●●	●●●●
Quick Set-up – Integral features which enable tools to be changed quickly and accurately, thus maximizing machine up time.	●●●●	●●●	●●
Grind Life – The sum of the number of holes punched between regrinds AND the total usable length of the punch tip.	●●●●	●●●	●●●
Features – Elements of a system that make it simple to use, easy to maintain, extend service life, and increase productivity.	●●●●	●●●	●●
Purchase Price – The initial purchase price of the system.	●●●	●●	●●

ECONOMY

MATE TRUMPF STYLE TOOLING SYSTEM

The Mate Trumpf Style Tooling System is designed to enable fabricators to produce high quality piece parts, economically. Features include:

Standard System

- Alignment Ring: Shock-resistant tool steel for maximum accuracy and durability.
- Punches: Abrasion resistant High Speed Steel for increased tool life. 1/4-degree back taper for improved stripping performance.
- Urethane Strippers reduce punching noise and eliminate sheet marking.
- Metal Strippers: High-strength tool steel for superior strength and flatness.
- Dies: Wear-resistant tool steel with uniform corner clearance radii for improved die strength and enhanced piece part quality.

See Pages 7-13

Maxima™ Coating:
Maxima Coating-Titanium Zirconium Nitride Ti(Zr)N coating is available for extreme applications to eliminate galling.

Slug Free® Dies:
Mate Slug Free® die geometry is available to eliminate slug pulling in extreme applications. Clearing the slug during each cycle improves piece part quality and extends tool life.

[Dimensions in Inches (mm)]

PERFORMANCE

MATE NEXT™ INSERT TOOLING SYSTEM FOR TRUMPF STYLE PRESSES

The Mate NEXT™ Insert Tooling System for Trumpf style presses, is a high performance tooling system designed to maximize tool life, minimize tool set-up times, improve accuracy, reduce punching costs, and maximize productivity.

The Mate NEXT Insert Tooling System includes:

- Two sizes of insert punch holders with precision orientation features for quick and accurate ~tool change without alignment fixtures.
  - Size 40: 0.031(0.80) to 1.575(40.00)
  - Size 76: 1.575(40.00) to 3.000(76.20)
- Interchangeable, highly abrasion-resistant, punch inserts for exceptional interval between regrinds. Size 40 punch inserts use exclusive M4PM™ tool steel for longest tool life.
- Precision ground shims which return the punch insert to the original length after 0.118(3.00) has been removed during regrinding.
- Push-on urethane stripper for size 40 punch holders provide positive on-the-die stripping without marking. Ideal for decorative material.

See Pages 20-25

CONVENIENCE

MATE QUICKLOCK™ TOOLING SYSTEM FOR TRUMPF STYLE PRESSES

The Mate QuickLock™ tooling system for Trumpf style presses combines the economy of conventional Trumpf style tooling with the convenience of alignment via a keyed alignment ring. The keyed alignment ring engages the alignment key in the punch for quick tool alignment without an alignment fixture. This results in quicker tool set-ups and increased machine productivity.

Features include:

- High Speed Steel punches, with 1/4 degree back taper and near polished flanks for extended interval between regrinds.
- Punches include an alignment key for use with the Mate QuickLock alignment ring.
- Alignment ring with a keyway that engages the key on both Mate QuickLock size 1 and size 2 punches for quick and consistent tool alignment.
- Urethane strippers, in an extended size range, for quieter operation and improved piece part quality.
  Available as push-on or screw-on, depending on punch point size.
- Highly wear-resistant punches and dies for maximum productivity.

See Pages 26-31

[Dimensions in Inches (mm)]

MAXIMA™ COATING / MATE SLUG FREE® DIES

Maxima™ Coating

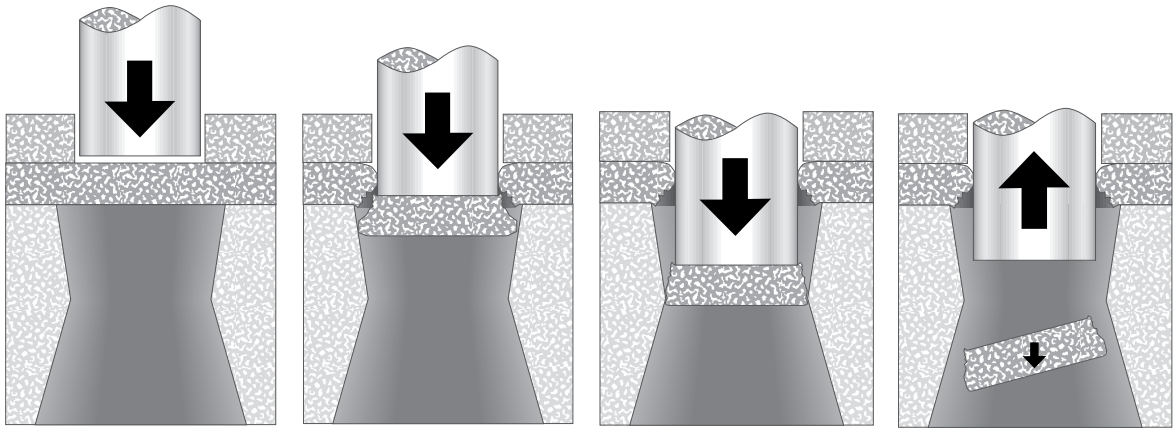
Maxima is a premium tool steel coating that has been specially formulated for punch press tooling applications. Maxima is a multilayer Zirconium Titanium Nitride (ZrTiN) coating that is hard, wear resistant, and lubricious. It acts as a barrier between the punch and the sheet metal being punched and, because of its exceptional lubricity, greatly improves stripping.

Maxima is applied to the precision ground surface of Mate's premium tool steel punches. Maxima is an extremely hard, wear resistant, slippery material which reduces the friction that occurs during the stripping portion of the punching cycle, it is particularly good for abrasive tooling applications. Less friction means less heat build up, less galling, and longer tool life.

Mate Slug Free® Dies

Mate Slug Free® dies eliminate slug pulling. Slug pulling is a condition where the slug returns to the top of the sheet during the stripping portion of the punching cycle. The slug comes between the punch and the top of the sheet on the next cycle. This causes damage to the piece part and the tooling. Slug Free dies eliminate this problem.

The Slug Free die has been designed with an opening that has a constriction point below the surface so the slug cannot return once it passes this point. Once the slug is separated from the punch, it is free to fall away from the punching area. Slug pulling is eliminated.



Material held securely by stripper before punch makes contact.

Punch penetrates the material. Slug fractures away from sheet.

Pressure point constricts slug. Punch stroke bottoms out as slug squeezes past pressure point.

Punch retracts and slug is free to fall down and away through exit taper of the Slug Free® die.

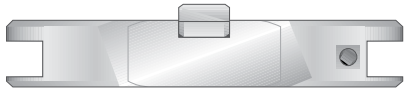
Slug Free® Dies:

- **Eliminate slug pulling**
- **Reduce tool breakage**
- **Improve tool life**
- **Increase quality**

[Dimensions in Inches (mm)]

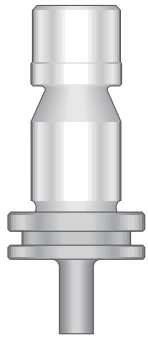
The sum of all of the features and benefits of each Mate product guarantee superior performance in every punching application. Here are just some of the features that make this a true statement.

Alignment Rings



- Precision machined and ground for accurate tool alignment.
- High impact-resistant steel to maintain superior flatness and durability.

Punches



- Premium high speed tool steel for longer tool life.
- 1/4º back taper and near polished flanks to reduce friction and eliminate galling.
- Minute corner radii on punch point to reduce chipping.
- Single point turned radii at base of punch point to reduce stress.
- Solid surface contact with alignment ring for superior alignment.
- Superior tolerances and surface finishes.
- 0.118 (3.00) grind life in 0.250 (6.35) material.
- Three replacement lengths (small, long, extra-long)

Urethane Strippers

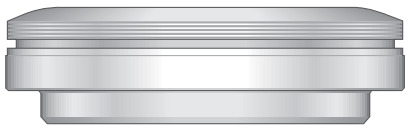
- Quiet.
- Cushions impact.
- Eliminates sheet rattle.
- Safe: will not shatter.
- Non-marring even on polished aluminum.
- Improved flatter sheets, no puckering.
- Positive stripping keeps sheets from moving.

Strippers

- E-F, non-E-F, and H-I based on machine group.
- High strength tool steel, will not deform or break.

Dies

- High chrome air hardened tool steel.
- 0.059 (1.50) grind life.
- Double-cut die opening to improve die strength.
- Uniform clearance radii in die corners.
- Precision slot orientation–die opening orientation and slot cut in single operation to improve accuracy.
- Improved die strength: Domed relief in size 1 and Stress Free® relief in size 2.
- Superior roundness and flatness.



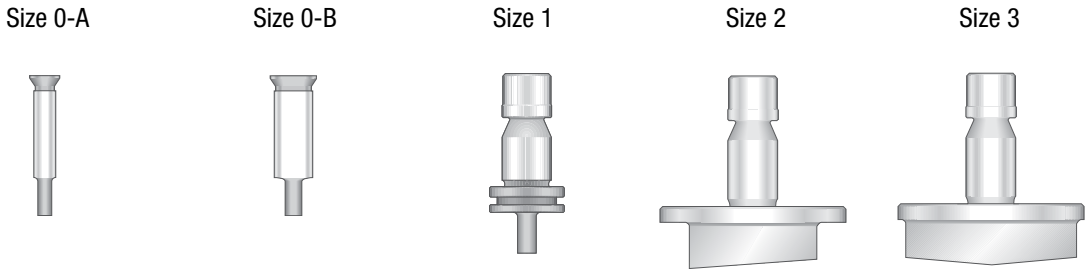
Die Adapters

- Permits size 1 dies to be used in machines with size 2 die bases.
- Precision machined in shock resistant tool steel for greater accuracy, superior machine fit, and longer life.

[Dimensions in Inches (mm)]

TRUMPF STYLE ROUND SIZE 0, 1, 2, 3

All size 0 and size 1 punches made from Premium M4PM™ Steel,
See page 51 for information



ROUND PUNCHES

Size	Range	Part Number	Without Shear	Whisper Shear	Rooftop™ Shear
Size 0-A	0.030(0.76) to 0.236(5.99)	PADA0A			
Size 0-B	0.237(6.02) to 0.413(10.50)	PADB0A			
Size 1-A	0.030(0.76) to 0.591(15.01)	PADC0A			
Size 1-B	0.592(15.04) to 1.181(30.00)	PADD0A			
Size 2-A	1.182(30.01) to 1.575(40.01)	PADE0A			
Size 2-B	1.575(40.03) to 2.000(50.80)	PADF0A			
Size 2-C	2.001(50.83) to 2.362(60.00)	PADG0A			
Size 2-D	2.363(60.00) to 3.0063(76.36)	PADH0A			
Size 3	3.006(76.36) to 4.134(105.00)	PADJ0A			

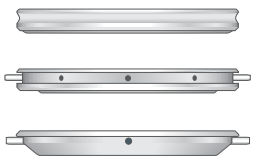
ROUND MACHINE STRIPPERS

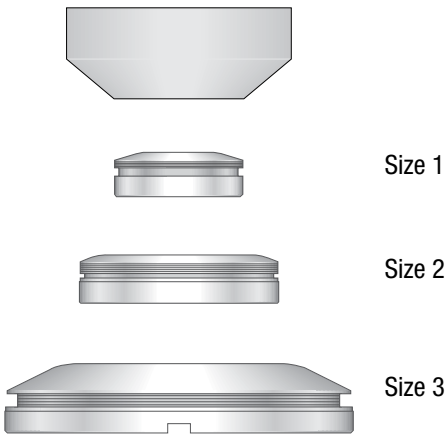
Size	Keyed	Non-Keyed	Rotational
Size 0	SKD00A	SND00A	SRD00A
Size 1	SKD10A	SND10A	SRD10A
Size 2	SKD20A	SND20A	SRD20A
Size 3	SKD30A	SND30A	N/A

PUSH-ON URETHANE STRIPPERS*

Size	Inside Diameter	Part Number
Size 0-A	0.250(6.35)	TP0A00US
Size 0-B	0.430(10.92)	TP0B00US
Size 1	0.590(14.98)	TP0106US
Size 1	0.890(22.60)	TP0109US
Size 1	1.065(27.05)	TP0112US

*For short (74,0) length; Custom molding available for most sizes





ROUND DIES

Size	Range	Part Number
Size 1	1.181(30.00) +0.079(2.00) Opening	D0D100
Size 2	3.000(76.20) +0.079(2.00) Opening	D0D200
Size 3	4.134(105.00) +0.079(2.00) Opening	D0D300

See Pages 12 – 13 for
- **Punch Chucks**
- **Alignment Rings**
- **Die Adapters**

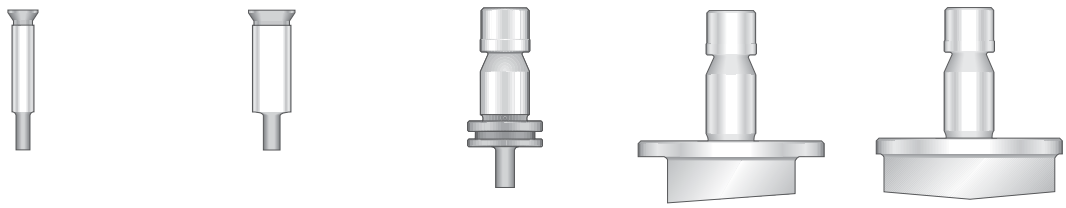
See Page 55 for critical tool dimensions

[Dimensions in Inches (mm)]

TRUMPF STYLE RECTANGLE SIZE 0, 1, 2, 3

All size 0 and size 1 punches made from Premium M4PM™ Steel,
See page 51 for information

Size 0-A | Size 0-B | Size 1 | Size 2 | Size 3



RECTANGLE PUNCHES

Size	Range	Part Number	Without Shear	Whisper Shear	Rooftop™ Shear
Size 0-A	0.030(0.76) to 0.236(5.99)	PADA1A			
Size 0-B	0.237(6.02) to 0.413(10.50)	PADB1A			
Size 1-A	0.030(0.76) to 0.591(15.01)	PADC1A			
Size 1-B	0.592(15.04) to 1.181(30.00)	PADD1A			
Size 2-A	1.182(30.01) to 1.575(40.01)	PADE1A			
Size 2-B	1.576(40.03) to 2.000(50.80)	PADF1A			
Size 2-C	2.001(50.83) to 2.362(60.00)	PADG1A			
Size 2-D	2.363(60.00) to 3.0063(76.36)	PADH1A			
Size 3	3.006(76.36) to 4.134(105.00)	PADJ1A			

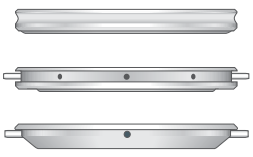
RECTANGLE MACHINE STRIPPERS

Size	Keyed	Non-Keyed	Rotational
Size 0	SKD01A	SND01A	SRD01A
Size 1	SKD11A	SND11A	SRD11A
Size 2	SKD21A	SND21A	SRD21A
Size 3	SKD31A	SND31A	N/A

PUSH-ON URETHANE STRIPPERS*

Size	Inside Diameter	Part Number
Size 0-A	0.250(6.35)	TP0A00US
Size 0-B	0.430(10.92)	TP0B00US
Size 1	0.590(14.98)	TP0106US
Size 1	0.890(22.60)	TP0109US
Size 1	1.065(27.05)	TP0112US

*For short (74,0) length; Custom molding available for most sizes

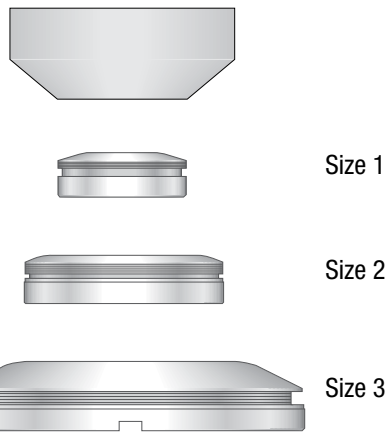


Type

Non-Keyed

Keyed

Rotational



Size 1

Size 2

Size 3

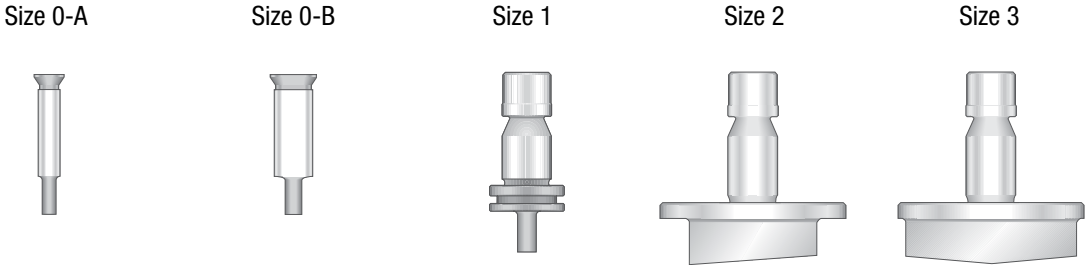
RECTANGLE DIES

Size	Range	Part Number
Size 1	1.181(30.00) +0.079(2.00) Opening	D0D110
Size 2	3.000(76.20) +0.079(2.00) Opening	D0D210
Size 3	4.134(105.00) +0.079(2.00) Opening	D0D310

[Dimensions in Inches (mm)]

TRUMPF STYLE STANDARD SHAPE SIZE 0, 1, 2, 3

All size 0 and size 1 punches made from Premium M4PM™ Steel,
See page 51 for information



SHAPED PUNCHES

Size	Range	Part Number	Without Shear	Whisper Shear	Rooftop™ Shear
Size 0-A	0.030(0.76) to 0.236(5.99)	PADA_A			
Size 0-B	0.237(6.02) to 0.413(10.49)	PADB_A			
Size 1-A	0.030(0.76) to 0.591(15.01)	PADC_A			
Size 1-B	0.592(15.04) to 1.181(30.00)	PADD_A			
Size 2-A	1.182(30.02) to 1.575(40.01)	PADE_A			
Size 2-B	1.576(40.03) to 2.000(50.80)	PADF_A			
Size 2-C	2.001(50.83) to 2.362(60.00)	PADG_A			
Size 2-D	2.363(60.01) to 3.0063(76.36)	PADH_A			
Size 3	3.006(76.36) to 4.134(105.00)	PADJ_A			

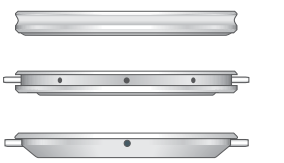
SHAPED MACHINE STRIPPERS

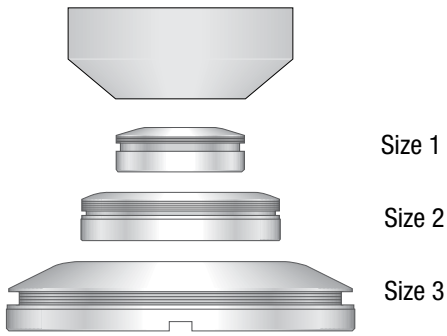
Size	Keyed	Non-Keyed	Rotational
Size 0	SKT0_A	SNT0_A	SRT0_A
Size 1	SKT1_A	SNT1_A	SRT1_A
Size 2	SKT2_A	SNT2_A	SRT2_A
Size 3	SKT3_A	SNT3_A	N/A

PUSH-ON URETHANE STRIPPERS*

Size	Inside Diameter	Part Number
Size 0-A	0.250(6.35)	TP0A00US
Size 0-B	0.430(10.92)	TP0B00US
Size 1	0.590(14.98)	TP0106US
Size 1	0.890(22.60)	TP0109US
Size 1	1.065(27.05)	TP0112US

*For short (74,0) length; Custom molding available for most sizes

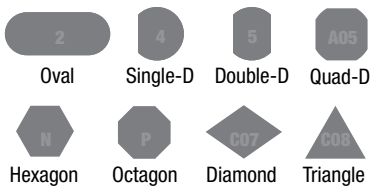




SHAPED DIES

Size	Range	Part Number
Size 1	1.181(30.00) +0.079(2.00) Opening	D0D1_0
Size 2	3.000(76.20) +0.079(2.00) Opening	D0D2_0
Size 3	4.134(105.00) +0.079(2.00) Opening	D0D3_0

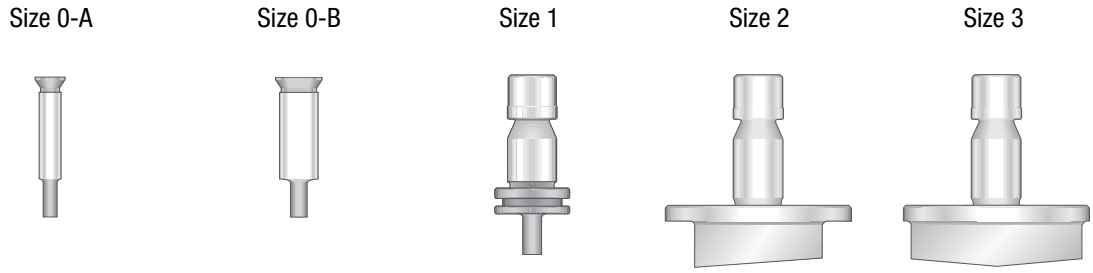
STANDARD SHAPES



[Dimensions in Inches (mm)]

TRUMPF STYLE SQUARE SIZE 0, 1, 2, 3

All size 0 and size 1 punches made from Premium M4PM™ Steel,
See page 51 for information

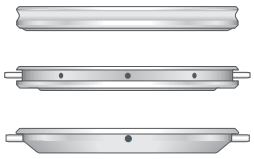


SQUARE PUNCHES

Size	Range	Part Number	Without Shear	Whisper Shear	Rooftop™ Shear
Size 0-A	0.030(0.76) to 0.236(5.99)	PADA3A			
Size 0-B	0.237(6.02) to 0.413(10.50)	PADB3A			
Size 1-A	0.030(0.76) to 0.591(15.01)	PADC3A			
Size 1-B	0.592(15.04) to 1.181(30.00)	PADD3A			
Size 2-A	1.182(30.01) to 1.575(40.01)	PADE3A			
Size 2-B	1.576(40.03) to 2.000(50.80)	PADF3A			
Size 2-C	2.001(50.83) to 2.362(60.00)	PADG3A			
Size 2-D	2.363(60.00) to 3.0063(76.36)	PADH3A			
Size 3	3.006(76.36) to 4.134(105.00)	PADJ3A			

SQUARE MACHINE STRIPPERS

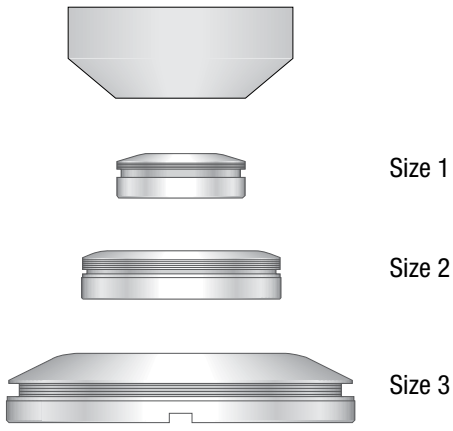
Size	Keyed	Non-Keyed	Rotational
Size 0	SKD03A	SND03A	SRD03A
Size 1	SKD13A	SND13A	SRD13A
Size 2	SKD23A	SND23A	SRD23A
Size 3	SKD33A	SND33A	N/A



PUSH-ON URETHANE STRIPPERS*

Size	Inside Diameter	Part Number
Size 0-A	0.250(6.35)	TP0A00US
Size 0-B	0.430(10.92)	TP0B00US
Size 1	0.590(14.98)	TP0106US
Size 1	0.890(22.60)	TP0109US
Size 1	1.065(27.05)	TP0112US

*For short (74,0) length; Custom molding available for most sizes



SQUARE DIES

Size	Range	Part Number
Size 1	1.181(30.00) +0.079(2.00) Opening	D0D130
Size 2	3.000(76.20) +0.079(2.00) Opening	D0D230
Size 3	4.134(105.00) +0.079(2.00) Opening	D0D330

See Page 55 for critical tool dimensions

[Dimensions in Inches (mm)]

ALIGNMENT RINGS

Size 1
Manual Tool Change
VANTD

(RECESSED)

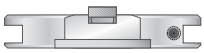
Sizes 2 and 3
Manual Tool Change
VAPTD

Replacement Dowel
8 x 16mm
DPI17304

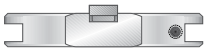
For all Sizes

Size 1
Automatic Tool Change
VANTE

(RECESSED)



Sizes 2 and 3
Automatic Tool Change
VAPTE



Alignment Key
For all Sizes
VKETE000

Size 1
Minimatic
VANTM

(RECESSED)

Size 1-X
Minimatic
VAPTM

Alignment Key
For Minimatic
VKETM000

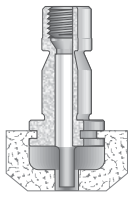
Size 1 and 2
Heavy Duty
VANTF

Alignment Key
For Heavy Duty
VKETF000

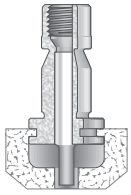
[Dimensions in Inches (mm)]

ACCESSORIES

Size 0-A Punch Chuck
VINTS010



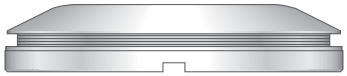
Sizes 0-B Punch Chuck
VINTS020



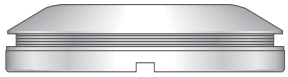
Punch Chuck Set Screw
VINSSS

Size 2 Die Adapter
Accepts Size 1 Dies
MAT20000

Size 3 Die Adapter
Accepts Size 2 Dies
MAT30000



Size 3 Die Adapter
Accepts Size 1 Dies
MAT40000



Size 1 Die Shim Pack
2x 0.004(0.1) Thickness
1x 0.012(0.30) Thickness
1x 0.024(0.61) Thickness
MST1020

Size 2 Die Shim Pack
2x 0.004(0.1) Thickness
1x 0.012(0.30) Thickness
1x 0.024(0.61) Thickness
MST2020

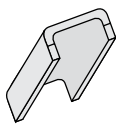
Size 1 Die Shims
0.004(0.1) Thickness MST1004 (6 minimum)
0.012(0.30) Thickness MST1012 (6 minimum)
0.024(0.61) Thickness MST1020 (6 minimum)

Size 2 Die Shims
0.004(0.1) Thickness MST2004 (6 minimum)
0.012(0.30) Thickness MST2012 (6 minimum)
0.024(0.61) Thickness MST2020 (6 minimum)

Size 3 Keyed Stripper Adapter
SKD3H000

Size 3 Keyed Stripper Adapter
SNT3H000

Die Slot Plug
MKPT000



Stripper Pins
MIS60003

Soft Face Urethane Stripper Pads
T00200SF

[Dimensions in Inches (mm)]

MINIMATIC TOOLING SYSTEM

MINIMATIC HSS PUNCHES - PUNCH CHUCKS

SIZE 0-A PART NUMBER

Punch Chuck Setscrew **VINSSS**
Size 0-A Punch Chuck **VINTS010**

Size range:
0.030(0.76) to
0.236(6.00)
Maximum Diagonal

PADA0A
PADA1A
PADA2A
PADA3A

Optional Push-On Stripper, .250(6.35) I.D. **TP0A00US**

SIZE 0-B

Punch Chuck Setscrew **VINSSS**
Size 0-B Punch Chuck **VINTS020**

Size range:
0.030(0.76) to
0.413(10.50)
Maximum Diagonal

PADB0A
PADB1A
PADB2A
PADB3A

Optional Push-On Stripper, .430(10.92) I.D. **TP0B00US**

SIZE 1-A

Size range:
0.030(0.76) to
0.590(15.00)
Maximum Diagonal

PADC0A
PADC1A
PADC2A
PADC3A

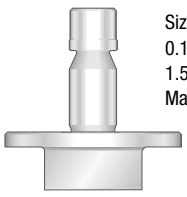
SIZE 1-B

Size range:
0.591(15.01) to
1.181(30.00)
Maximum Diagonal

PADD0A
PADD1A
PADD2A
PADD3A

Optional Push-On Stripper, .590(14.98) I.D. **TP0106US**
Optional Push-On Stripper, .890(22.60) I.D. **TP0109US**
Optional Push-On Stripper, 1.065(27.05) I.D. **TP0112US**

SIZE 1-X



Size range:
0.182(30.01) to
1.500(38.10)
Maximum Diagonal

PADX0A
PADX1A
PADX2A
PADX3A

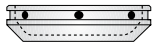
TRUMPF MACHINES THAT USE MINIMATIC STYLE TOOLS

AUTOMATIC TOOL CHANGE	KEYED
TRUMATIC	TRUMATIC
100	100
100M	100M
120	120
160	160

MINIMATIC STRIPPERS

SIZE 1 PART NUMBER

1.181 + .060(30.00 + 1.52) maximum



SKDX0A
SKDX1A
SKDX2A
SKDX3A

SIZE 1-X

1.500 + .060(38.10 + 1.52) maximum

SKDX0A
SKDX1A
SKDX2A
SKDX3A

MINIMATIC DIES

SIZE 1 PART NUMBER

1.181 + .079(30.00 + 2.00)
Maximum Actual Die Opening

D0D100
D0D110
D0D120
D0D130

SIZE 1-X

1.500 + .039(38.10 + 1.00)
Maximum Actual Die Opening

D0DX00
D0DX10
D0DX20
D0DX30

MINIMATIC ALIGNMENT RINGS

SIZE 1 PART NUMBER

(0-3) d, .030 - 1.181
(0.77 - 30.00)

VANTM

SIZE 1-X

(0-3) d, 1.182 - 1.500
(30.01 - 38.10)

VAPTM

[Dimensions in Inches (mm)]

HEAVY DUTY TOOLING

HEAVY DUTY HSS PUNCHES*

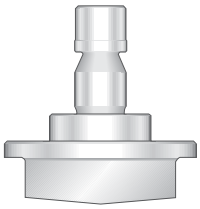
SIZE 1 PART NUMBER

(0-3) .250 - 1.181*
(6.35 - 30.00)
(3) .842(21.39)

PHDD0A
PHDD1A
PHDD2A
PHDD3A

*Punch width/diameter less than .250(6.35) NOT available in heavy duty style tooling

SIZE 2



0) d, 1.182 - 1.625
(30.01 - 41.27)
(1) d, 1.182 - 2.125
(30.01 - 53.97)
(2) d, 1.182 - 2.000
(30.01 - 50.80)
(3) d, 1.182 - 1.768
(30.01 - 44.90)
(3) a, 1.256(31.91)

PHDE0A
PHDE1A
PHDE2A
PHDE3A

*Punch width/diameter less than .250(6.35) NOT available in heavy duty style tooling

MACHINE STRIPPERS

	KEYED	NON-KEYED	ROTATIONAL
SIZE 1	**SND1_A**	**SKD1_A**	**SRD1_A**
SIZE 2I	**SND2_A**	**SKD2_A**	**SRD2_A**

HEAVY DUTY DIES

SIZE 1 PART NUMBER

.984 + .059(24.99 + 1.49)
Maximum Actual Die Opening

D4D100
D4D110
D4D120
D4D130

"Without Shear" and "Rooftop" are valid shear options for Size 1 punches less than or equal to 1.81(30.00).
"Without Shear" and "Whisper" are valid shear options for Size 1 punch inserts greater than 1.81(30.00).

SIZE 2

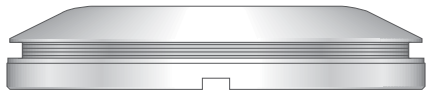
2.047 + .079(52.00 + 2.00)
Maximum Actual Die Opening

D4D200
D4D210
D4D220
D4D230

"Without Shear" and "Whisper" are valid shear options for Size 2 punch inserts.

SIZE 3

4.134 + .079(105.00 + 2.00)
Maximum Actual Die Opening



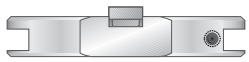
Size 3 dies specify 0°, 90°, or special angle setting

D0D300
D0D310
D0D320
D0D330

STANDARD STRIPPERS ARE USED WITH THE HEAVY DUTY TOOLING SYSTEM, SEE PAGES 8-11 OF THIS CATALOG

HEAVY DUTY ALIGNMENT RING

SIZE 1 AND 2 PART NUMBER



VANTF

TRUMPF MACHINE GROUPS BY ALIGNMENT RING STYLE

TRUMATIC	180W	235	300W
150K	180WD	240	400K
150W	185	260	400W
180K	200R	300K	500R
180LK	202K	300LW	600L
180LW	202W	300PK	2000R
180PK	225	300PW	5000

AUTOMATIC TOOL CHANGE

KEY FOR HEAVY DUTY ALIGNMENT RING - ALL SIZES

(Not interchangeable with OEM) **VKETF000**

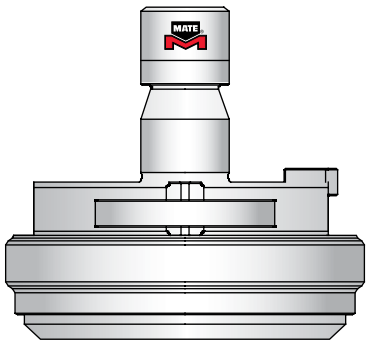
*Minimum width/diameter in heavy duty is 0.250(6.35)

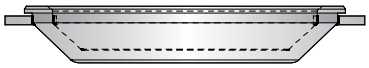
[Dimensions in Inches (mm)]

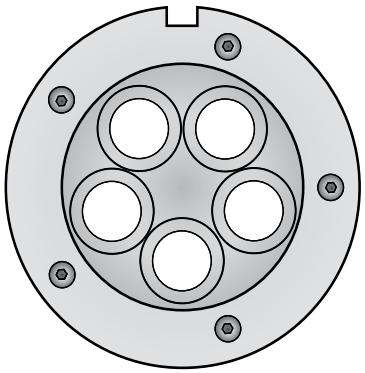
5-STATION MULTI TOOL TOOLING

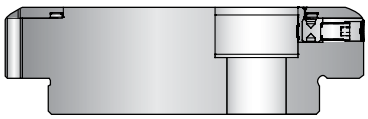
All Multi Tool punches and dies made from Premium M4PM™ Steel,
See page 51 for information

Punch Holder	MATE00559
Stripper	MATE00560
Die Holder	MATE00561









ROUND		
Punch	0.030(0.76) to 0.630(16.00)	PADV0A
Die	0.630(16.00) +0.024(0.60) Maximum Die Opening	DADV00
RECTANGLE		
Punch	0.030(0.76) to 0.630(16.00)	PADV1A
Die	0.630(16.00) +0.024(0.60) Maximum Die Opening	DADV10
SHAPED*		
Punch	0.030(0.76) to 0.630(16.00)	PADV_A
Die	0.630(16.00) +0.024(0.60) Maximum Die Opening	DADV_0
SQUARE		
Punch	0.030(0.76) to 0.630(16.00)	PADV3A
Die	0.630(16.00) +0.024(0.60) Maximum Die Opening	DADV30
DIE SHIMS		
Shims	0.004(0.10mm) Thick, 10 PCS	MTST501
Shims	0.012(0.30mm) Thick, 5 PCS	MTST502
Shims	0.020(0.51mm) Thick, 5 PCS	MTST503

Punches
- Premium particle metallurgy tool steel for exceptional interval between regrinds and maximum machine up time.
- 1/4 degree back taper and near polished punch flanks to reduce friction and extend tool life.
- Maxima™ coating available for extreme applications.

Dies
- High Speed Steel for extended life between regrinds.
- Uniform corner clearance radii for increased die strength and improved piece part quality.

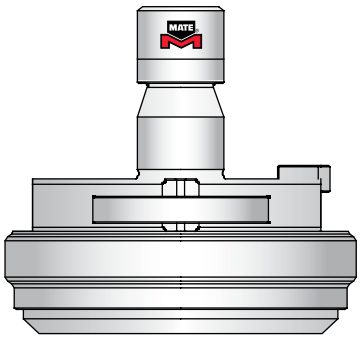
Note: 5 and 10 Station Multi Tools only work with Machine Group I.

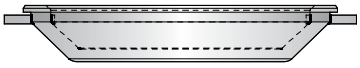
[Dimensions in Inches (mm)]

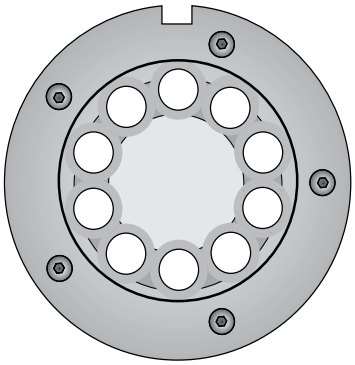
10-STATION MULTI TOOL TOOLING

All Multi Tool punches and dies made from Premium M4PM™ Steel,
See page 51 for information

Punch Holder	MATE00555
Stripper	MATE00556
Die Holder	MATE00550







ROUND		
Punch	0.030(0.76) to 0.413(10.49)	PADT0A
Die	0.413(10.50) +0.024(0.60) Maximum Die Opening	DADT00
RECTANGLE		
Punch	0.030(0.76) to 0.413(10.49)	PADT1A
Die	0.413(10.50) +0.024(0.60) Maximum Die Opening	DADT10
SHAPED*		
Punch	0.030(0.76) to 0.413(10.49)	PADT_A
Die	0.413(10.50) +0.024(0.60) Maximum Die Opening	DADT_0
SQUARE		
Punch	0.030(0.76) to 0.413(10.49)	PADT3A
Die	0.413(10.50) +0.024(0.60) Maximum Die Opening	DADT30
DIE SHIMS		
Shims	0.004(0.10mm) Thick, 20 PCS	MTST1001
Shims	0.012(0.30mm) Thick, 10 PCS	MTST1002
Shims	0.020(0.51mm) Thick, 10 PCS	MTST1003

Punches
- M4PM™ particle metallurgy High Speed Steel with excellent edge-wear resistance for exceptional interval between regrinds.
- 1/4 degree back taper and near polished punch flanks to reduce friction and extend tool life.
- Maxima™ coating available for extreme applications.

Dies
- High Speed Steel for maximum life between regrinds.
- Uniform corner clearance radii for increased die strength and improved piece part quality.

Note: 5 and 10 Station Multi Tools only work with Machine Group I.

[Dimensions in Inches (mm)]

4-STATION MULTI TOOL TOOLING

1-PIECE PUNCH STYLE

ROUND

Punch	0.030(0.76) to 0.630(16.00)	PAD50A
Die	0.630(16.00) +0.024(0.60) Maximum Die Opening	D0D400

RECTANGLE

Punch	0.030(0.76) to 0.630(16.00)	PAD51A
Die	0.630(16.00) +0.024(0.60) Maximum Die Opening	D0D410

SHAPED - SEE STANDARD SHAPES

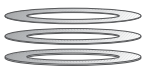
Punch	0.030(0.76) to 0.630(16.00)	PAD5_A
Die	0.630(16.00) +0.024(0.60) Maximum Die Opening	D0D4_0

SQUARE

Punch	0.030(0.76) to 0.630(16.00)	PAD53A
Die	0.630(16.00) +0.024(0.60) Maximum Die Opening	D0D430

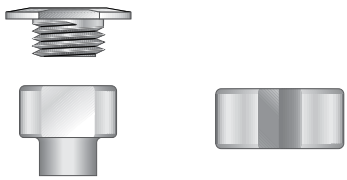
SHIM PACKAGE

Die	Shim Assortment 8x 0.004(0.10) 8x 0.012(0.03) 8x 0.024(0.60)	MSD4



Punch Cap
PAT4CAP

2-PIECE PUNCH STYLE



ROUND

Punch	0.030(0.76) to 0.630(16.00)	PAD40A
Die	0.630(16.00) +0.024(0.60) Maximum Die Opening	D0D400

RECTANGLE

Punch	0.030(0.76) to 0.630(16.00)	PAD41A
Die	0.630(16.00) +0.024(0.60) Maximum Die Opening	D0D410

SHAPED - SEE STANDARD SHAPES

Punch	0.030(0.76) to 0.630(16.00)	PAD43A
Die	0.630(16.00) +0.024(0.60) Maximum Die Opening	D0D4_0

SQUARE

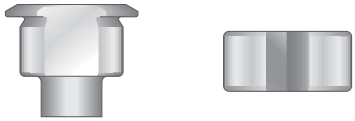
Punch	0.030(0.76) to 0.630(16.00)	PAD43A
Die	0.630(16.00) +0.024(0.60) Maximum Die Opening	D0D430

SHIM PACKAGE

Punch	Shim Assortment 6x 0.004(0.10) 6x 0.012(0.03) 6x 0.024(0.60) 6x 0.040(1.00)	VTST
Die	Shim Assortment 8x 0.004(0.10) 8x 0.012(0.03) 8x 0.024(0.60)	MTST4

[Dimensions in Inches (mm)]

1-PIECE PUNCH STYLE



ROUND

Punch	0.030(0.76) to 0.413(10.50)	PAD70A
Die	0.413(10.50) +0.024(0.60) Maximum Die Opening	D0D600

RECTANGLE

Punch	0.030(0.76) to 0.413(10.50)	PAD71A
Die	0.413(10.50) +0.024(0.60) Maximum Die Opening	D0D610

SHAPED*

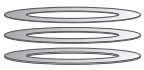
Punch	0.030(0.76) to 0.413(10.50)	PAD7_A
Die	0.413(10.50) +0.024(0.60) Maximum Die Opening	D0D6_0

SQUARE

Punch	0.030(0.76) to 0.413(10.50)	PAD73A
Die	0.413(10.50) +0.024(0.60) Maximum Die Opening	D0D630

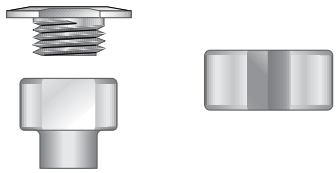
SHIM PACKAGE

Die	Shim Assortment 8x 0.004(0.10) 8x 0.012(0.03) 8x 0.024(0.60)	MST6



Punch Cap
PAT6CAP

2-PIECE PUNCH STYLE



ROUND

Punch	0.030(0.76) to 0.413(10.50)	PAT60A
Die	0.413(10.50) +0.024(0.60) Maximum Die Opening	D0T600

RECTANGLE

Punch	0.030(0.76) to 0.413(10.50)	PAD61A
Die	0.413(10.50) +0.024(0.60) Maximum Die Opening	D0D610

SHAPED*

Punch	0.030(0.76) to 0.413(10.50)	PAD6_A
Die	0.413(10.50) +0.024(0.60) Maximum Die Opening	D0D6_0

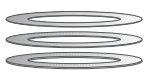
SQUARE

Punch	0.030(0.76) to 0.413(10.50)	PAD63A
Die	0.413(10.50) +0.024(0.60) Maximum Die Opening	D0D630

SHIM PACKAGE

Punch	Shim Assortment 6x 0.004(0.10) 6x 0.012(0.03) 6x 0.024(0.60) 6x 0.040(1.00)	VTST

Die	Shim Assortment 8x 0.004(0.10) 8x 0.012(0.03) 8x 0.024(0.60)	MST6



[Dimensions in Inches (mm)]

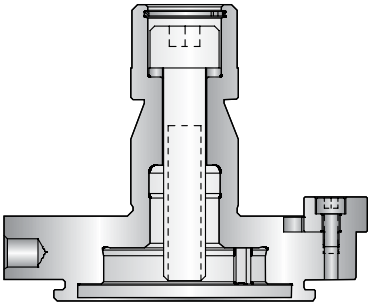
NEXT™ INSERT TOOLING SYSTEM

The new NEXT™ Insert Tooling System for Trumpf style presses, is designed to dramatically increase tool life and reduce punching costs.

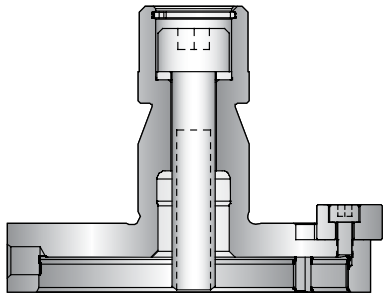
The NEXT™ Insert Tooling System includes:
- Interchangeable, abrasion-resistant, punch inserts.
- Two sizes of insert punch holders with precision orientation features.
- Precision ground punch shim returns the NEXT™ punch assembly to the original length after 0.118(3.00) has been removed during routine grinding.

SIZE 40

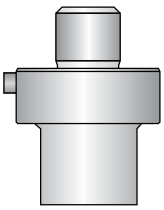
SIZE 76



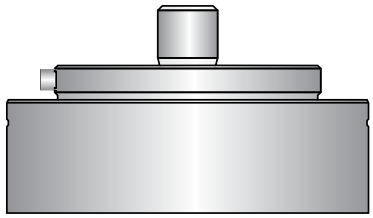
Insert Punch Holder
Available in two sizes.
Size 40 0.030-1.575(0.76-40.01)
Size 76 1.576-3.0063(40.03-76.36)



Precision Ground Shim

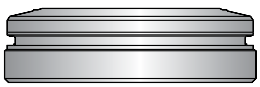


NEXT™ Punch Inserts
M4PM™ from 0.031(0.80) to 1.181(30.00)
M4PM™ from 1.182(30.01) to 3.000(76.20)



Push-on Urethane Stripper

The NEXT™ Insert Tooling System is fully comPADible with existing strippers and dies.



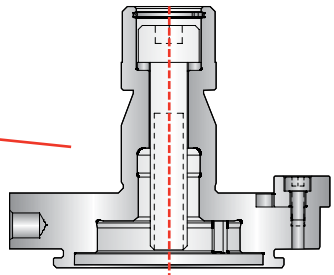
High strength steel strippers for reliable operation.

High wear resistant steel dies for exceptional tool life.

[Dimensions in Inches (mm)]

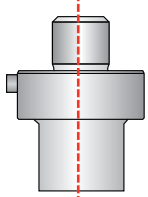
The NEXT™ Insert Tooling System holders, with integral precision alignment features and captive draw bolt, accept interchangeable punch inserts for faster and more accurate machine set-ups.

Size 40 0.030(0.76) to 1.575(40.01)
Size 76 1.576(40.03) to 3.0063(76.36)

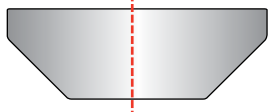


Precision ground punch shim returns the NEXT™ punch assembly to the original length after 0.118(3.00) has been removed during routine grinding.

M4 HSS from 0.031(0.80) to 1.181(30.00)
M2 HSS from 1.182(30.01) to 3.000(76.20)
High Speed Steel (HSS) NEXT™ punch inserts provide superior abrasion resistance to extend the interval between regrinds.



Push-on urethane stripper for Size 40 punch insert holders provide positive on-the-die stripping without sheet marking. Ideal when punching soft or decorative materials.

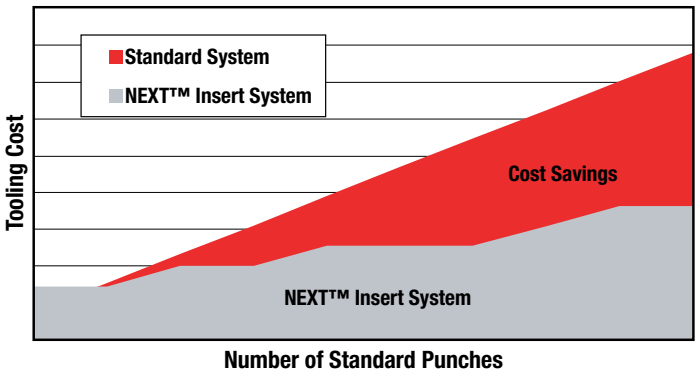


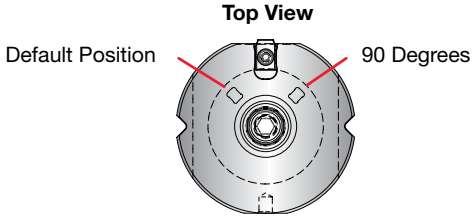
High strength steel stripper for reliable operation.

High wear resistant steel die for exceptional tool life. Optional Slug Free® die geometry available.

Mate NEXT™ Insert System Delivers Value!

The High Speed Steel punch inserts deliver exceptional edge wear resistance. The M4PM™ HSS Insert in sizes up to 0.031-1.181(0.80-30.00) delivers the longest possible interval between regrinds. In addition, by installing the shim after 0.118(3.00) has been removed from the punch during regrinding, the punch assembly is returned to its original length instead of being replaced. The result is that a single punch insert would last the same as multiple standard punches. The chart at right demonstrates the real value delivered by the NEXT™ Insert Tooling System from Mate.





[Dimensions in Inches (mm)]

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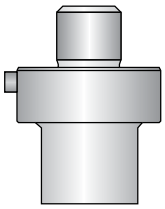
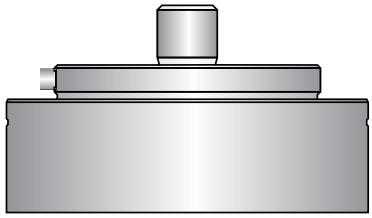
orders@mate.com

All NEXT™ punches made from premium M4PM™ steel,
See page 51 for information

SIZE 40



SIZE 76



ROUND PUNCHES

Size	Range	Part Number	Without Shear	Whisper Shear
Size 40	0.030 (0.76) to 1.181 (30.00)	PBTD0A		
Size 40	1.182 (30.02) to 1.575 (40.01)	PBTE0A		
Size 76	1.576 (40.03) to 2.205 (56.01)	PBTF0A		
Size 76	2.206 (56.03) to 2.599 (66.01)	PBTG0A		
Size 76	2.600 (66.04) to 3.0063 (76.36)	PBTH0A		

Size	Keyed	Rotational
Size 1	SKD10A	SRD10A
Size 2	SKD20A	SRD20A

PUSH-ON URETHANE STRIPPERS

Size	Inside Diameter	Part Number
Size 40	0.984 (25.00)	MATE00374
Size 40	1.181 (30.00)	MATE00375
Size 40	1.378 (35.00)	MATE00376
Size 40	1.575 (40.00)	MATE00377

Type

Keyed

Rotational

ROUND DIES

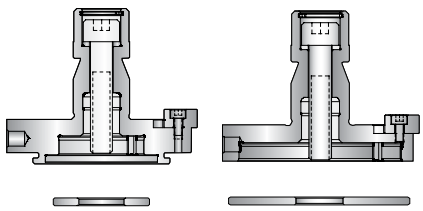
Size	Range	Part Number
Size 1	1.181(30.00) +0.079(2.00) Opening	D0D100
Size 2	3.000(76.20) +0.079(2.00) Opening	D0D200

Size 1

Size 2

PUNCH HOLDER AND SHIM

Size 40	Punch Holder with Shim	MATE00371
Size 40	Shim	MATE00364
Size 76	Punch Holder with Shim	MATE00372
Size 76	Shim	MATE00365
Draw Bolt		SHC12191
Snap Ring		SRI00001

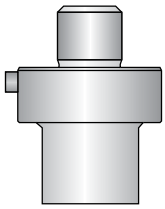


See Page 55 for critical tool dimensions

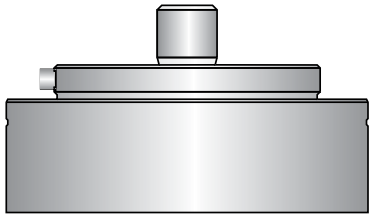
[Dimensions in Inches (mm)]

All NEXT™ punches made from premium M4PM™ steel,
See page 51 for information

SIZE 40



SIZE 76



RECTANGLE PUNCHES

Size	Range	Part Number	Without Shear	Whisper Shear
Size 40	0.030 (0.76) to 1.181 (30.00)	PBTD1A		
Size 40	1.182 (30.02) to 1.575 (40.01)	PBTE1A		
Size 76	1.576 (40.03) to 2.205 (56.01)	PBTF1A		
Size 76	2.206 (56.03) to 2.599 (66.01)	PBTG1A		
Size 76	2.600 (66.04) to 3.0063 (76.36)	PBTH1A		

RECTANGLE MACHINE STRIPPERS

Size	Keyed	Rotational
Size 1	SKD11A	SRD11A
Size 2	SKD21A	SRD21A

Type

Keyed

Rotational

PUSH-ON URETHANE STRIPPERS

Size	Inside Diameter	Part Number
Size 40	0.984 (25.00)	MATE00374
Size 40	1.181 (30.00)	MATE00375
Size 40	1.378 (35.00)	MATE00376
Size 40	1.575 (40.00)	MATE00377

RECTANGLE DIES

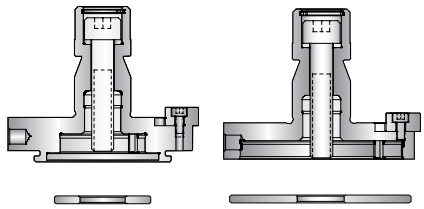
Size	Range	Part Number
Size 1	1.181(30.00) +0.079(2.00) Opening	D0D110
Size 2	3.000(76.20) +0.079(2.00) Opening	D0D210

Size 1

Size 2

PUNCH HOLDER AND SHIM

Size 40	Punch Holder with Shim	MATE00371
Size 40	Shim	MATE00364
Size 76	Punch Holder with Shim	MATE00372
Size 76	Shim	MATE00365
Draw Bolt		SHC12191
Snap Ring		SRI00001

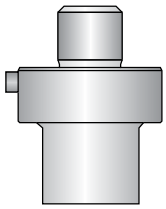


[Dimensions in Inches (mm)]

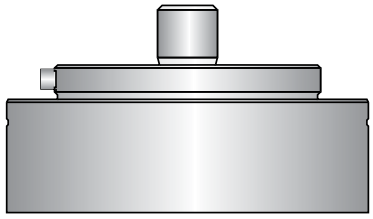
NEXT™ TOOLING SYSTEM STANDARD SHAPE SIZE 40 AND SIZE 76

All NEXT™ punches made from premium M4PM™ steel,
See page 51 for information

SIZE 40



SIZE 76



PUNCH

Size	Range	Part Number	Without Shear	Whisper Shear
Size 40	0.030(0.76) to 1.181(30.00)	PBTD_A		
Size 40	1.182(30.02) to 1.575(40.01)	PBTE_A		
Size 76	1.576(40.03) to 2.205(56.01)	PBTF_A		
Size 76	2.206(56.03) to 2.599(66.01)	PBTG_A		
Size 76	2.600(66.04) to 3.0063(76.36)	PBTH_A		

STRIPPER

Size	Keyed	Rotational
Size 1	SKD1_A	SRD1_A
Size 2	SKD2_A	SRD2_A

Type (Group)

Keyed (E & F)

Rotational (H & I)

PUSH-ON URETHANE STRIPPERS*

Size	Inside Diameter	Part Number
Size 40	0.984(25.00)	MATE00374
Size 40	1.181(30.00)	MATE00375
Size 40	1.378(35.00)	MATE00376
Size 40	1.575(40.00)	MATE00377

SHAPED DIES

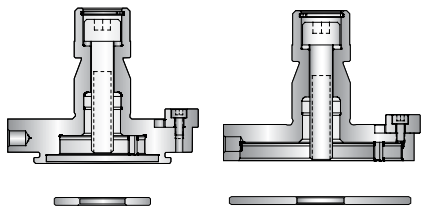
Size	Range	Part Number
Size 1	1.181(30.00) +0.079(2.00) Opening	D0D1_0
Size 2	3.000(76.20) +0.079(2.00) Opening	D0D2_0

Size 1

Size 2

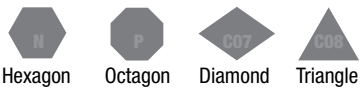
PUNCH HOLDER AND SHIM

Size 40	Punch Holder with Shim	MATE00371
Size 40	Shim	MATE00364
Size 76	Punch Holder with Shim	MATE00372
Size 76	Shim	MATE00365
Draw Bolt		SHC12191
Snap Ring		SRI00001



**STANDARD SHAPES

Oval Single-D Double-D Quad-D

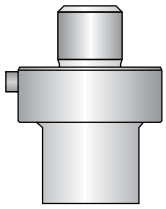


Hexagon Octagon Diamond Triangle

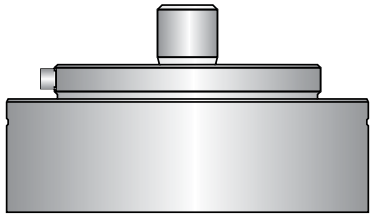
[Dimensions in Inches (mm)]

All NEXT™ punches made from premium M4PM™ steel,
See page 51 for information

SIZE 40



SIZE 76



PUNCH

Size	Range	Part Number	Without Shear	Whisper Shear
Size 40	0.030(0.76) to 1.181(30.00)	PBTD3A		
Size 40	1.182(30.02) to 1.575(40.01)	PBTE3A		
Size 76	1.576(40.03) to 2.205(56.01)	PBTF3A		
Size 76	2.206(56.03) to 2.599(66.01)	PBTG3A		
Size 76	2.600(66.04) to 3.0063(76.36)	PBTH3A		

STRIPPER

Size	Keyed	Rotational
Size 1	SKD13A	SRD13A
Size 2	SKD23A	SRD23A

Type (Group)

Keyed (E & F)

Rotational (H & I)

PUSH-ON URETHANE STRIPPERS*

Size	Inside Diameter	Part Number
Size 40	0.984(25.00)	MATE00374
Size 40	1.181(30.00)	MATE00375
Size 40	1.378(35.00)	MATE00376
Size 40	1.575(40.00)	MATE00377

SHAPED DIES

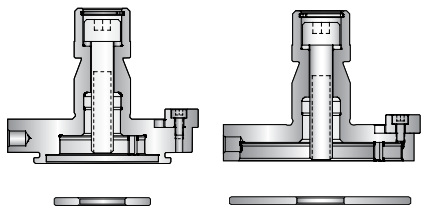
Size	Range	Part Number
Size 1	1.181(30.00) +0.079(2.00) Opening	D0D130
Size 2	3.000(76.20) +0.079(2.00) Opening	D0D230

Size 1

Size 2

PUNCH HOLDER AND SHIM

Size 40	Punch Holder with Shim	MATE00371
Size 40	Shim	MATE00364
Size 76	Punch Holder with Shim	MATE00372
Size 76	Shim	MATE00365
Draw Bolt		SHC12191
Snap Ring		SRI00001



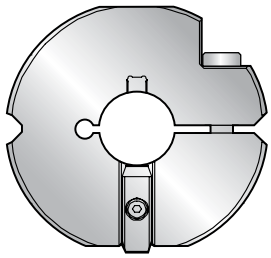
[Dimensions in Inches (mm)]

QUICKLOCK™ TOOLING SYSTEM OVERVIEW

QuickLock™ size 1 punches made from premium M4PM™ steel,
See page 51 for information

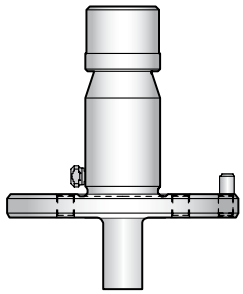
Introducing Mate QuickLock™ Tooling System

Mate QuickLock™ is a new tooling system for Trumpf style presses that combines the economy of conventional Trumpf style tooling with the convenience of alignment via a keyed alignment ring. The hardened and ground key (located in the shank or shoulder, depending on punch point size) engages the keyway in the alignment ring for fast and consistent alignment without a dedicated alignment fixture.



Mate QuickLock™ Tooling System Features:

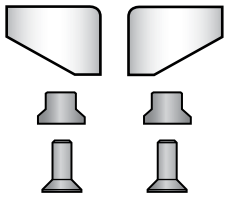
- High-speed steel punches for extended interval between sharpening.
- Punches include an alignment key for use with the Mate QuickLock™ alignment ring.
- Alignment ring with a keyway that engages the key on both Mate QuickLock™ size 1 and size 2 punches for quick and consistent tool alignment of both.
- Urethane strippers, in an extended size range, for quieter operation and improved piece part quality.
- Highly wear-resistant punches and dies for maximum productivity.



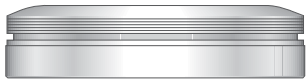
Mate QuickLock™ Universal Alignment Ring

- Precision machined keyway to accept the hardened punch key for accurate alignment, relative to the die aperture, without the need for a fixture.
- Precision ground upper and lower surfaces for positive contact with the punch shoulder for reduced tool stress and maximum service life.
- Elimination of the possibility of punch rotation, with a solid contact between the punch key and the alignment ring keyway.
- Shock resistant tool steel to eliminate cracking, for longer service life.
- ComPADible with conventional Trumpf style size 2 punches.
- Universal for both Mate QuickLock™ size 1 and size 2 punches.

Mate QuickLock™ Push-On Urethane Stripper



Mate QuickLock™ Screw-On Urethane Stripper. Supplied in pairs. Fixed to the punch shoulder with a retainer and flat head screw.

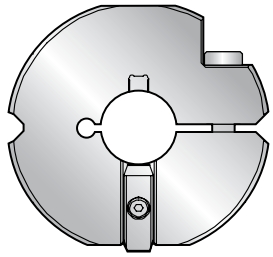


[Dimensions in Inches (mm)]

QuickLock™ size 1 punches made from premium M4PM™ steel,
See page 51 for information

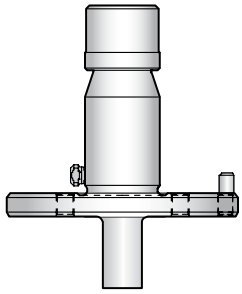
Mate QuickLock™ Punches

- High speed steel, for extended intervals between sharpening.
- Hardened and ground key for quick and consistent punch alignment.
  - For punches with a diagonal dimension up to 2.000(50.80) the alignment pin is located on the shank.
  - For punches with a diagonal dimension greater than 2.000(50.80) the alignment pin is located on the shoulder.
- 1/4-degree back taper and near polished punch flanks to reduce friction, eliminate galling, and extend punch grind life.
- Maxima™ coating or Nitride treatment available for extreme punching applications.
- Optional extended length punch available, with 3.057(77.60) overall length.



Mate QuickLock™ Urethane Strippers

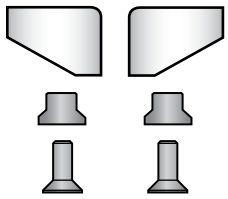
- Positive, on-the-die stripping to eliminate sheet rattle and reduce punching noise.
- Two types available (dependent on punch point size).
  - Push-On Urethane Stripper
    - Locks securely onto punch and alignment ring for reliable operation.
    - Available for all extended length punches with a diagonal dimension up to 2.000(50.80).
  - Screw-On Urethane Stripper
    - Available in two sizes: for shaped punches with width up to 0.394(10.00) and length up to 2.362(60.00), or length up to 3.000(76.20).
    - Supplied in pairs, and fixed to the punch shoulder with a flat head screw.
    - Punch must have rooftop shear, and length over 2.000(5.08).



Mate QuickLock™ Push-On Urethane Stripper

Mate Dies

- Highly wear-resistant tool steel with optimized heat treatment for perfect balance of wear and toughness for maximum interval between regrinds. Up to 0.059(1.50) grind life.
- Double-cut die opening for improved accuracy.
- Uniform clearance radii in die corners for improved component edge quality.
- Improved die strength with domed relief to evenly distribute punching forces.
- Superior roundness and flatness for improved piece part quality.

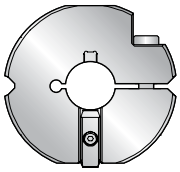


Mate QuickLock™ Screw-On Urethane Stripper. Supplied in pairs. Fixed to the punch shoulder with a retainer and flat head screw.

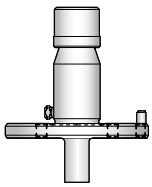
[Dimensions in Inches (mm)]

QUICKLOCK™ TOOLING SYSTEM ROUND SIZE 1 AND SIZE 2

QuickLock™ size 1 punches made from premium M4PM™ steel,
See page 51 for information



Mate QuickLock™ Universal Alignment Ring. The integral keyway allows for fast and consistent alignment of the Mate QuickLock™ punch for faster machine set-up without a dedicated alignment fixture. Also comPADible with conventional size 2 punches.



Mate QuickLock™ Punch with Alignment Pin. The hardened and ground key (located in the shank or shoulder, depending on punch point size) engages the keyway in the alignment ring for fast and consistent alignment without a dedicated alignment fixture.

QUICKLOCK™ UNIVERSAL ALIGNMENT RING

Size 1 and 2	Universal Alignment Ring	MATE00480

ROUND QUICKLOCK™ PUNCHES

Size	Range	Part Number	Without Shear	Whisper Shear
Size 1	0.030 (0.76) to 1.181 (30.00)	PDTD0A		
Size 2	1.182 (30.02) to 1.575 (40.01)	PDTE0A		
Size 2	1.576 (40.03) to 2.000 (50.80)	PDTF0A		
Size 2	2.001 (50.83) to 2.362 (60.00)	PDTG0A		
Size 2	2.363 (60.00) to 3.0063 (76.36)	PDTH0A		

ROUND MACHINE STRIPPERS

Size	Keyed	Rotational
Size 1	SKD10A	SRD10A
Size 2	SKD20A	SRD20A

QUICKLOCK™ PUSH-ON URETHANE STRIPPERS*

Inside Diameter	Part Number
0.590(15.00)	MATE00532
0.787(20.00)	MATE00533
1.181(30.00)	MATE00534
1.378(35.00)	MATE00548
1.574(40.00)	MATE00535
2.047(52.00)	MATE00536

Type (Group)

Keyed (E & F)

Rotational (H & I)

ROUND DIES

Size	Range	Part Number
Size 1	1.181(30.00) +0.079(2.00) Opening	D0D100
Size 2	3.000(76.20) +0.079(2.00) Opening	D0D200

Size 1

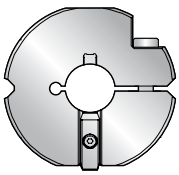
Size 2

*Standard length QuickLock™ punches use standard push-on urethane strippers.
Extended length QuickLock punches use QuickLock™ urethane strippers.

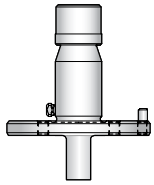
See Page 55 for critical tool dimensions

[Dimensions in Inches (mm)]

QuickLock™ size 1 punches made from premium M4PM™ steel,
See page 51 for information



Mate QuickLock™ Universal Alignment Ring. The integral keyway allows for fast and consistent alignment of the Mate QuickLock™ punch for faster machine set-up without a dedicated alignment fixture. Also comPADible with conventional size 2 punches.



Mate QuickLock™ Punch with Alignment Pin. The hardened and ground key (located in the shank or shoulder, depending on punch point size) engages the keyway in the alignment ring for fast and consistent alignment without a dedicated alignment fixture.

QUICKLOCK™ UNIVERSAL ALIGNMENT RING

Size 1 and 2	Universal Alignment Ring	MATE00480

RECTANGLE PUNCHES

Size	Range	Part Number	Without Shear	Whisper Shear
Size 1	0.030(0.76) to 1.181(30.00)	PDTD1A		
Size 2	1.182(30.02) to 1.575(40.01)	PDTE1A		
Size 2	1.576(40.03) to 2.000(50.80)	PDTF1A		
Size 2	2.001(50.83) to 2.362(60.00)	PDTG1A		
Size 2	2.363(60.00) to 3.0063(76.36)	PDTH1A		

RECTANGLE MACHINE STRIPPERS

Size	Keyed	Rotational
Size 1	SKD1_A	SRD1_A
Size 2	SKD2_A	SRD2_A

Type (Group)

Keyed (E & F)

Rotational (H & I)

QUICKLOCK™ PUSH-ON URETHANE STRIPPERS*

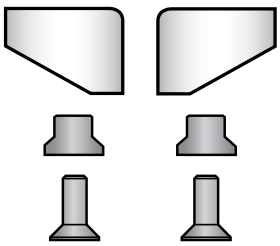
Inside Diameter	Part Number
0.590(15.00)	MATE00532
0.787(20.00)	MATE00533
1.181(30.00)	MATE00534
1.378(35.00)	MATE00548
1.574(40.00)	MATE00535
2.047(52.00)	MATE00536

Size 1

Size 2

RECTANGLE DIES

Size	Range	Part Number
Size 1	1.181(30.00) +0.079(2.00) Opening	D0D1_0
Size 2	3.000(76.20) +0.079(2.00) Opening	D0D2_0



MATE QUICKLOCK™ Screw-On Urethane Stripper

For use with shaped Mate QuickLock™ Punches with optional rooftop shear and width up to 0.394(10.00). Two sizes available.

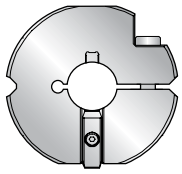
G-Station with punch length 2.001(5.08) – 2.362 (60.00)	MATE00538
H-Station with punch length up to 3.000(76.20)	MATE00539
Retainer – pair	MATE00578
Screw – pair	MATE00579

*Standard length QuickLock™ punches use standard push-on urethane strippers. Extended length QuickLock punches use QuickLock™ urethane strippers.

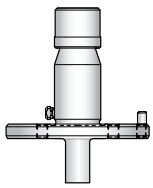
[Dimensions in Inches (mm)]

QUICKLOCK™ TOOLING SYSTEM STANDARD SHAPE SIZE 1 AND SIZE 2

QuickLock™ size 1 punches made from premium M4PM™ steel,
See page 51 for information



Mate QuickLock™ Universal Alignment Ring. The integral keyway allows for fast and consistent alignment of the Mate QuickLock™ punch for faster machine set-up without a dedicated alignment fixture. Also comPADible with conventional size 2 punches.



Mate QuickLock™ Punch with Alignment Pin. The hardened and ground key (located in the shank or shoulder, depending on punch point size) engages the keyway in the alignment ring for fast and consistent alignment without a dedicated alignment fixture.

QUICKLOCK™ UNIVERSAL ALIGNMENT RING

Size 1 and 2	Universal Alignment Ring	MATE00480

PUNCH

Size	Range	Part Number	Without Shear	Whisper Shear
Size 1	0.030(0.76) to 1.181(30.00)	PDTD_A		
Size 2	1.182(30.02) to 1.575(40.01)	PDTE_A		
Size 2	1.576(40.03) to 2.000(50.80)	PDTF_A		
Size 2	2.001(50.83) to 2.362(60.00)	PDTG_A		
Size 2	2.363(60.00) to 3.0063(76.36)	PDTH_A		

STRIPPER

Size	Keyed	Rotational
Size 1	SKD1_A	SRD1_A
Size 2	SKD2_A	SRD2_A

QUICKLOCK™ PUSH-ON URETHANE STRIPPERS*

Inside Diameter	Part Number
0.590(15.00)	MATE00532
0.787(20.00)	MATE00533
1.181(30.00)	MATE00534
1.378(35.00)	MATE00548
1.574(40.00)	MATE00535
2.047(52.00)	MATE00536

Type (Group)

Keyed (E & F)

Rotational (H & I)

Size 1

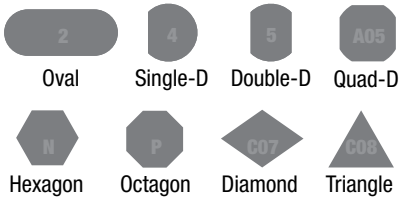
Size 2

SHAPED DIES

Size	Range	Part Number
Size 1	1.181(30.00) +0.079(2.00) Opening	D0D1_0
Size 2	3.000(76.20) +0.079(2.00) Opening	D0D2_0

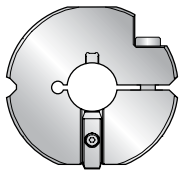
*Standard length QuickLock™ punches use standard push-on urethane strippers. Extended length QuickLock punches use QuickLock™ urethane strippers.

**STANDARD SHAPES

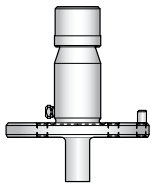


[Dimensions in Inches (mm)]

QuickLock™ size 1 punches made from premium M4PM™ steel,
See page 51 for information



Mate QuickLock™ Universal Alignment Ring. The integral keyway allows for fast and consistent alignment of the Mate QuickLock™ punch for faster machine set-up without a dedicated alignment fixture. Also comPADible with conventional size 2 punches.



Mate QuickLock™ Punch with Alignment Pin. The hardened and ground key (located in the shank or shoulder, depending on punch point size) engages the keyway in the alignment ring for fast and consistent alignment without a dedicated alignment fixture.

QUICKLOCK™ UNIVERSAL ALIGNMENT RING

Size 1 and 2	Universal Alignment Ring	MATE00480

SQUARE QUICKLOCK™ PUNCHES

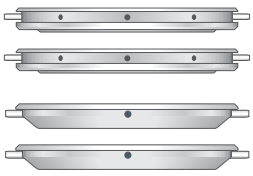
Size	Range	Part Number	Without Shear	Whisper Shear
Size 1	0.030(0.76) to 1.181(30.00)	PDTD3A		
Size 2	1.182(30.02) to 1.575(40.01)	PDTE3A		
Size 2	1.576(40.03) to 2.000(50.80)	PDTF3A		
Size 2	2.001(50.83) to 2.362(60.00)	PDTG3A		
Size 2	2.363(60.00) to 3.0063(76.36)	PDTH3A		

SQUARE MACHINE STRIPPERS

Size	Keyed	Rotational
Size 1	SKD13A	SRD13A
Size 2	SKD23A	SRD23A

QUICKLOCK™ PUSH-ON URETHANE STRIPPERS*

Inside Diameter	Part Number
0.590(15.00)	MATE00532
0.787(20.00)	MATE00533
1.181(30.00)	MATE00534
1.378(35.00)	MATE00548
1.574(40.00)	MATE00535
2.047(52.00)	MATE00536



Type (Group)

Keyed (E & F)

Rotational (H & I)

SQUARE DIES

Size	Range	Part Number
Size 1	1.181(30.00) +0.079(2.00) Opening	D0D130
Size 2	3.000(76.20) +0.079(2.00) Opening	D0D230

Size 1

Size 2

*Standard length QuickLock™ punches use standard push-on urethane strippers.
Extended length QuickLock punches use QuickLock™ urethane strippers.

See Page 55 for critical tool dimensions

[Dimensions in Inches (mm)]

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orders@mate.com

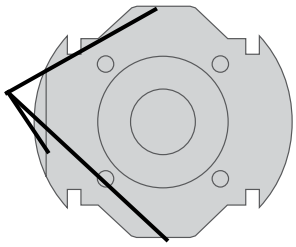
Precision and rigidity of the guided shearing assembly extend punch and die life ***up to three times*** more than non-guided assemblies...

A guided, spring-loaded stripper with on-the-die performance is built into the punching assembly. The stripper is guided by the inside surface of the retainer and by the sides of the punch insert. The punch point is guided by the stripper as it enters the material. This protects slitting punches against deflection at the point of impact so they last much longer. Spring pressure yields positive stripping action and clamps material against the die for clean, accurate punching, and flatter piece parts.

Three Alignment Flats...

- Three alignment flats on the punch holder allow immediate 0° or 90° alignment without disassembly.
- The guided stripper allows for on-die stripping which is essential for material control with minimal slippage. The greater accuracy eliminates secondary finishing, while the punching operation can be accomplished in fewer hits.

External alignment flats allow for simple 0 and 90 degree alignment ring setting without disassembly.

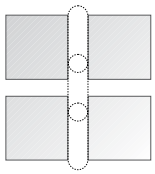


Slitting Options...

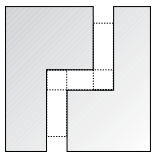
Standard with radius corners for smooth blending of successive cuts in slitting operations.

Shake-and-break (See D06 on Page 36) with Square corners for precise gaps needed for holding corner tabs.

The oval punch is used for a smooth transition between punch hits. No “pips” or edge irregularities.



The rectangular punch is used for precision corner cutting.



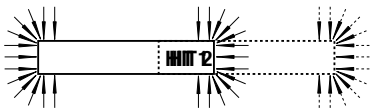
Smooth Slitting Tip...

To reduce edge irregularities left by square ended tools, it is common practice to order oval punches and rectangular dies with 0.060(1.50) radius corners as sets.

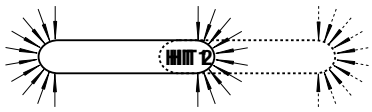
Slitting with a rectangular punch and die can result in small “pips” which are visually undesirable. This is the result of natural forces that take place when performing this operation.

The sharp corners of a rectangular punch and die force an abrupt change in the direction that the material flows prior to the fracture of the slug from the sheet. This abrupt change in the direction of flow can be decreased by placing a radius on the corners of the rectangle. As the radius increases in size, a more uniform flow of material is achieved.

When the size of the radius is increased to 1/2 the width of the rectangle, the shape becomes an oval. This oval shaped punch and die will result in an improved edge appearance when slitting.



Abrupt change in material flow occurs at the sharp corners of the rectangle

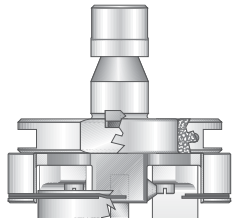


Material flows uniformly at the ends of the oval

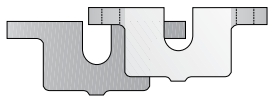
Punch insert can be removed from tool without disassembly to facilitate sharpening and punch replacement.

[Dimensions in Inches (mm)]

	5.00 X 56.00mm Slitting Assembly	5.00 X 76.20mm Slitting Assembly
PUNCH ASSEMBLY		
RECTANGLE	XPD2170500M5600	XPD2170500M7620
RECTANGLE, WITH MAXIMA® COATING	XPD21M0500M5600	XPD21M0500M7620
OVAL	XPD2270500M5600	XPD2270500M7620
OVAL, WITH MAXIMA® COATING	XPD22M0500M5600	XPD22M0500M7620



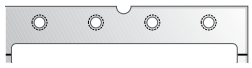
URETHANE SPRINGS		
URETHANE SPRINGS	UTS1	UTS1
REPLACEMENT SSTRIPPERS (NOT SHOWN)		
OVAL 5.00 X 61.00	MATE00459	N/A
OVAL 5.00 X 76.20	N/A	MATE00460



REPLACEMENT PUNCH INSERT		
RECTANGLE	PADS1A0500M5600	PADS1A0500M7620
RECTANGLE, WITH MAXIMA® COATING	PADS1M0500M5600	PADS1M0500M7620
OVAL	PADS2A0500M5600	PADS2A0500M7620
OVAL, WITH MAXIMA® COATING	PADS2M0500M5600	PADS2M0500M7620

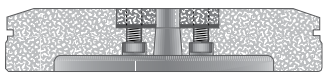
REPLACEMENT DIE INSERT		
RECTANGLE	D0DS1_0500M5600*	D0DS1_0500M7620*
RECTANGLE WITH 1.500MM RADIUS CORNERS	D0DS8_0500M5600*	D0DS8_0500M7620*

*PLUS TOTAL CLEARANCE



RECTANGLE	XDD21_0500M5600*	XDD21_0500M7620*
RECTANGLE WITH 1.500MM RADIUS CORNERS	XDD28_0500M5600*	XDD28_0500M7620*

*PLUS TOTAL CLEARANCE



NOT FOR TC500 AND NEWER MACHINES

[Dimensions in Inches (mm)]

LONGLIFE™ SLITTING TOOL SYSTEM

Mate's LongLife™ slitting tool system for Trumpf style punch presses is designed to deliver exceptional value combining premium tool steel punch and die inserts with robust punch and die holders. Fully OEM comPADible, Mate LongLife provides you with the most cost-effective slitting tool solution.

PUNCH INSERT*

- LongLife™ Premium M4PM™ high speed steel provides maximum interval between regrinds and improves piece part quality
- Available in four standard shapes: rectangle, oval, dovetail and trapezoid
- Metric and inch sizes: Size 56 0.787(19.98) to 2.205(55.88) Size 76 2.206(56.01) to 3.000(76.08)
- Widths up to 0.250(6.35)
- Optional Maxima™ coating available
- ComPADible with Trumpf style

PUNCH HOLDER

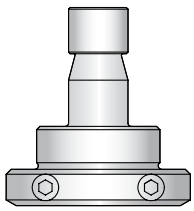
- LongLife™ tool system offers two styles of punch holders:
  - Integral alignment ring for fast, precise tool set up
  - Separate heavy duty alignment ring (additional) to allow manual angle setting flexibility
- Works with conventional machine strippers

DIE INSERT*

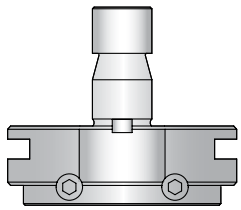
- Premium M4PM™ high speed steel for high wear resistance and exceptional die strength
- Metric and inch sizes: Size 56 0.787(19.98) to 2.205(55.88) 1-piece or 2-piece insert Size 76 0.787(19.98) to 3.000(76.08) 1-piece or 2-piece insert
- Widths up to 0.250(6.35)
- 11 standard discrete die clearances 0.004(0.10) to 0.024(0.60) in 0.002(0.05) increments
- ComPADible with Trumpf style

DIE HOLDER ASSEMBLY

- Includes full shim set with two thicknesses
- Two sizes: Size 56 for up to .250 x 2.000(6.35 x 55,88) Size 76 for up to .250 x 3.000(6.35 x 76.08)

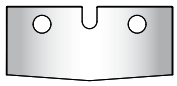


DESCRIPTION	Part Number
SLITTING PUNCH HOLDER	PPD2HA

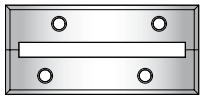


DESCRIPTION	Part Number
SLITTING PUNCH HOLDER WITH INTE-GRATED ALIGNMENT RING	PPD2HAVANTF

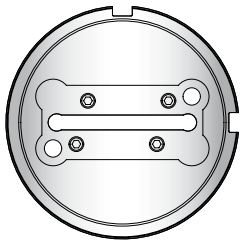
5.00 X 55.88 mm



DESCRIPTION	Part Number
PUNCH INSERT	PPDE_A

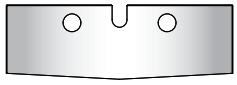


DESCRIPTION	Part Number
ONE-PIECE INSERT	DSDE_A
TWO-PIECE INSERT	DTDE_A

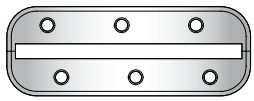


DESCRIPTION	Part Number
DIE BASE ASSEMBLY	DPD2H056

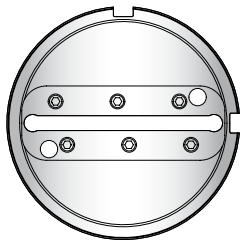
5.00 X 76.08 mm



DESCRIPTION	Part Number
PUNCH INSERT	PPDF_A



DESCRIPTION	Part Number
ONE-PIECE INSERT	DSDF_A
TWO-PIECE INSERT	DTDF_A



DESCRIPTION	Part Number
DIE BASE ASSEMBLY	DPD2H076

Die Shims

5.00 x 56.00(0.30mm thickness)	MATE01326 $2.00
5.00 x 56.00(0.51mm thickness)	MATE01327 $2.00
5.00 x 76.20(0.30mm thickness)	MATE01328 $2.00
5.00 x 76.20(0.51mm thickness)	MATE01329 $2.00

Available Shapes:

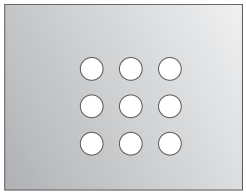
1 2 T V

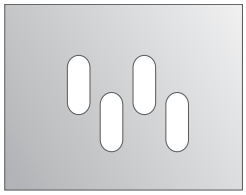
*SPECIAL NOTE WHEN REPLACING TRUMPF-MANUFACTURED INSERTS:
Please take caution and inform your Mate representative if you are replacing Trumpf-manufactured inserts for this tooling system. Trumpf etches the length of the inserts as either "56.00" or "76.20"; the actual lengths are 0.12mm shorter (55.88mm or 76.08mm). Damage is possible if you order replacements for Trumpf-manufactured inserts at the etched length.

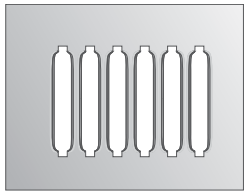
**Solid size 2 die, Rectangle or Oval only D0D2_0

[Dimensions in Inches (mm)]

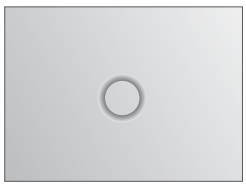
SPECIAL APPLICATIONS


Cluster – Round

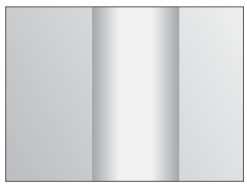

Cluster – Shape


Card Guide

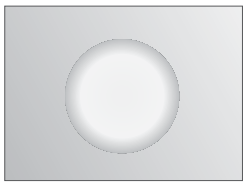

Centerpoint


Countersink – Round


Countersink – Shape


Emboss – Beading


Emboss – Edgeform

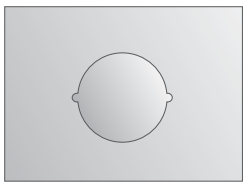

Emboss – Formed (Round and Shaped)

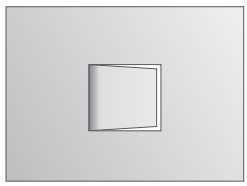
Emboss – Cold Forged

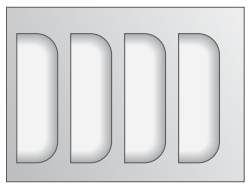

Extrusion – Tapping

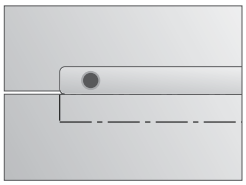

Extrusion – Flanged Hole

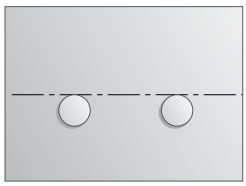

Hinge Tool


Knockout


Lance And Form


Louver

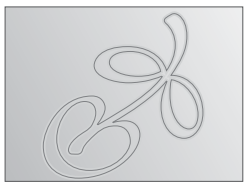

Scissortool™

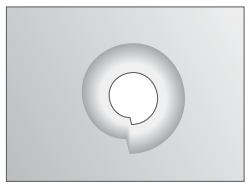

Shearbutton (Round and Shaped)

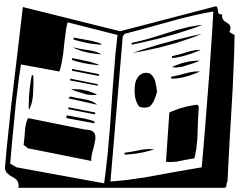

Rollerball™

Sheetmarker™

Stamping – Alpha Numeric


Stamping – V-line


Threadform



See **MATE** Forming Tool Order Guide for forming tool ordering specifications...

Ask for Part-Number
LIT00002

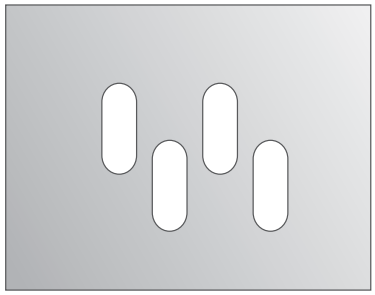
[Dimensions in Inches (mm)]

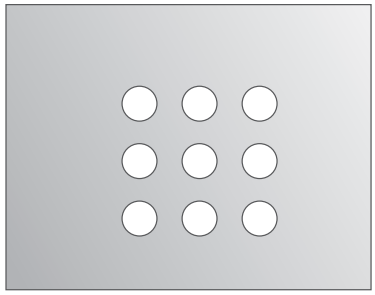
Cluster

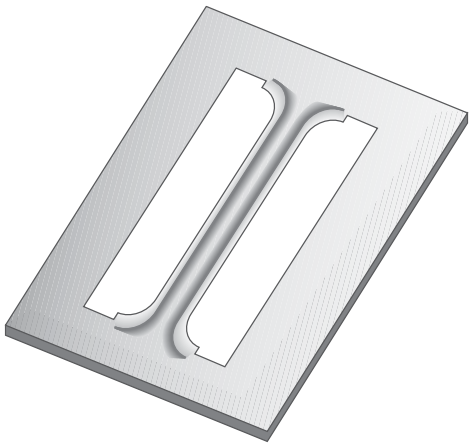
Produce multiple holes with minimal hits.

Typical Application:
- Material thickness from 0.020(0.50) to 0.157(4.00).
- Other restraints dependent upon station size, punch size and shape and press tonnage.

Comments:
- For greater hole uniformity and flatter sheets, spread the punches to avoid punching adjacent holes in the same hit.
- Do not re-punch through previously punched holes to complete a PADtern. A single hit tool may be necessary.







Card Guide

A retainer for printed circuit boards.

Typical Application:
- Material thickness from 0.040(1.00) to 0.078(2.00).
- Maximum recommended top-of-sheet to top-of-form height is 0.125(3.20).

Comments:
- Length of the card guide is dependent upon station size and machine tonnage.
- Also available as a continuous form to increase productivity and flexibility.

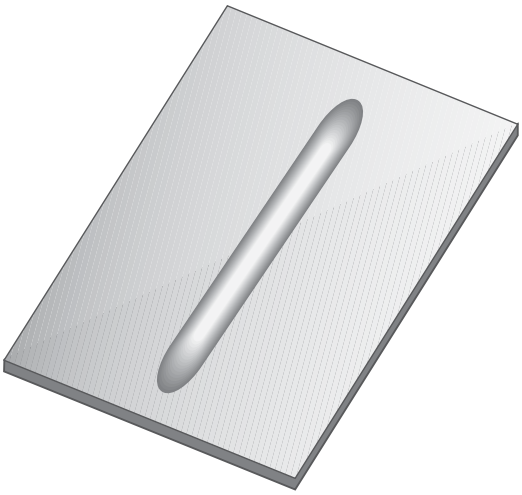
[Dimensions in Inches (mm)]

Countersink—Dedicated

Allows screw and rivet head to sit flush or below the surface of the material.

Typical Application:
- Material thickness from 0.048(1.22) to 0.250(6.35), dependent upon press tonnage capacity.

Comments:
- The shoulder (dedicated) style is generally ordered for one material thickness and screw size.
- The shoulder style coins the surrounding area, producing a clean flat countersink with minimal burring.



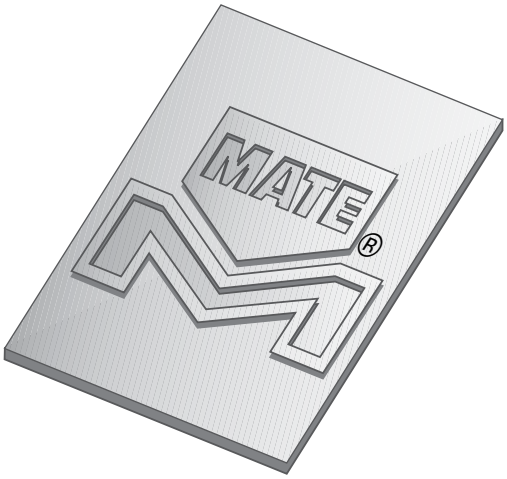
Emboss—Beading

A stiffener to add rigidity to sheet metal panels.

Typical Application:
- Material thickness from 0.027(0.70) to 0.250(6.35), dependent upon press tonnage capacity.

Comments:
- The increment between hits is determined by the cosmetic requirements for the finished part. Smaller increments result in improved appearance.
- The form height should be as low as possible to minimize sheet distortion.

[Dimensions in Inches (mm)]



Emboss—Cold Forged

Produce a logo or design on a part.

Typical Application:
- Material thickness from 0.018(0.46) to 0.118(3.00).
- Best results in material thickness from 0.040(1.00) to 0.078(2.00).
- Maximum size dependent on the tooling style, station size, and press tonnage capacity.

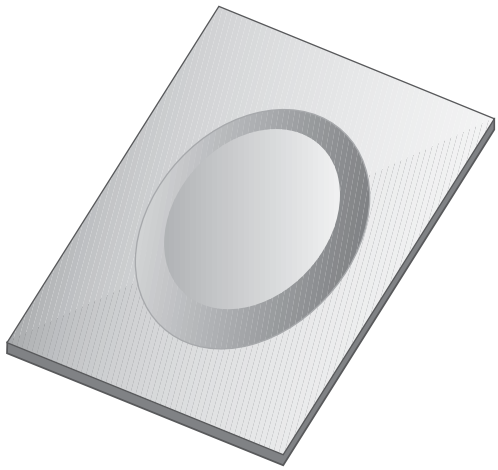
Comments:
- An exact drawing, CAD file, or artwork of logo is required to produce this type of assembly.

Emboss—Formed

Provide a recess or a protrusion.

Typical Application:
- Material thickness from 0.027(0.70) to 0.250(6.35), dependent upon press tonnage capacity.

Comments:
- Best results are attained when the side wall angle is 45° or less.
- Optimum form height is 3 x the material thickness or less.



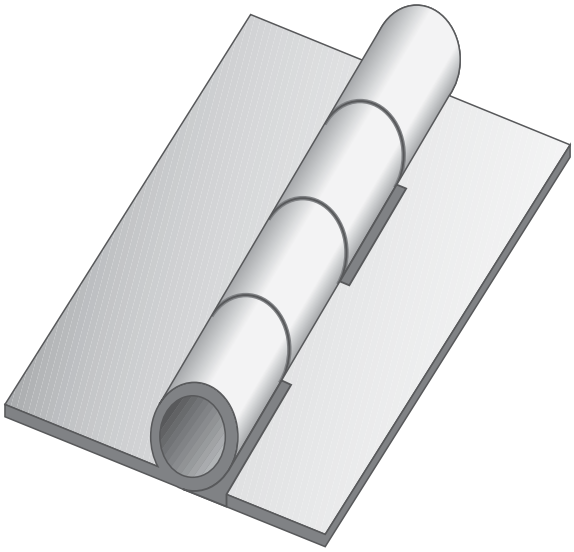
[Dimensions in Inches (mm)]

Extrusion—Tapping

Threading for screws and increased bearing area for tubes, etc.

Typical Application:
- Material thickness from 0.031(0.80) to 0.106(2.70).
- Overall Height – 2x to 2.5x material thickness.
- Diameter – 0.374(9.50) (M10 screw thread).

Comments:
- Additional inverted dies are required to accommoDADe alternate material thickness.



Hinge

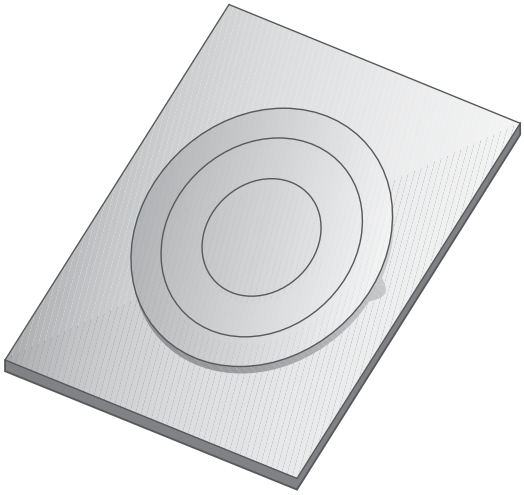
Creates hinge knuckles as integral elements on sheet metal components.

Typical Application:
- The range in inches(mm) of this application is dependent on a combination of the material thickness, pin diameter and feed gap of the press.

Comments:
- An integral hinge knuckle on a component will eliminate the costly process of purchasing and assembling separate hinges.

[Dimensions in Inches (mm)]

Knockout



Allows optional PADhway for electrical cable.

Typical Application:
- Material thickness from 0.024(0.60) to 0.118(3.00).
- Maximum size dependent upon material, thickness, and press tonnage capacity.

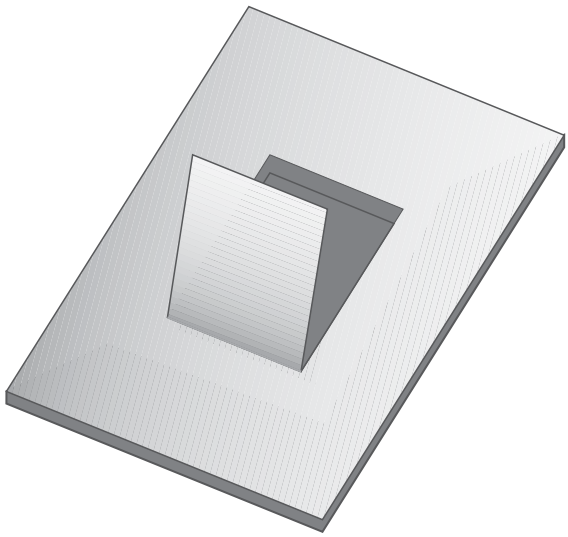
Comments:
- The tool can normally be used with other material thickness within a range in inches(mm) of + or - 0.016(0.41) from design thickness.
- Maintain 0.236(6.00) difference between diameters used for knockout.

Lance And Form

For air flow, decoration, as card guides, location markers, shear tabs, wire harnesses, or clip attachments.

Typical Application:
- Material thickness from 0.020(0.50) to 0.118(3.00).
- Maximum recommended top-of-sheet to top-of-form height is 0.250(6.40).
- Other limitations include material, station size, and press tonnage capacity.

Comments:
- The inclusion of a 5° draft angle is recommended to assure reliable operation of open ground forms.



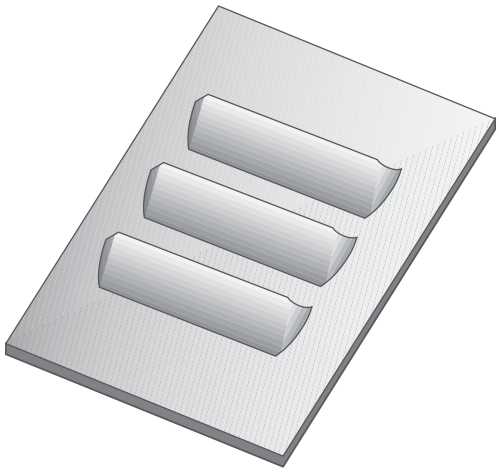
[Dimensions in Inches (mm)]

Louver

Provides air flow or ventilation.

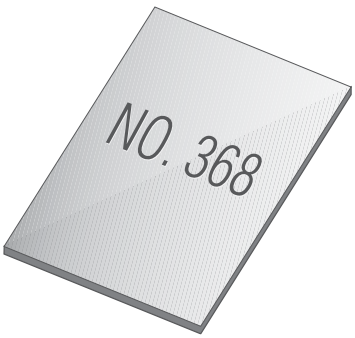
Typical Application:
- Material thickness from 0.028(0.70) to 0.106(2.70).
- Maximum recommended top-to-top height is 0.255(6.50).

Comments:
- One tool cuts the sheet and produces the form in the same operation.
- The tool is designed for a specific material thickness.



Insert Sizes Available

Fractional	Decimal	Metric
3/32	0.094	2.40
1/8	0.125	3.12
3/16	0.188	4.50
1/4	0.250	6.34



Stamp—Alpha Numeric

Provides indelible marking of alpha-numeric characters on the top or bottom of a sheet.

Typical Application:
- Material thickness 0.032(0.80) up to machine capacity.
- Characters available in 4 popular sizes. See table.

Comments:
- Individual characters can be easily changed.

[Dimensions in Inches (mm)]

Threadform

Provides a form to accept a sheet metal screw.

Typical Application:
- Material thickness 0.020(0.50) to 0.048(1.20).
- Size is dependent upon screw size selected.
- Thicker material requires a countersink operation or thinning prior to threadforming.

V-Line Stamping

Produce logos, messages, or symbols.

Typical Application:
- Material thickness from 0.032(0.80) up to machine capacity.
- Maximum Size is dependent on station size, size of symbols and characters, and press tonnage capacity.

Comments:
- V-Line Stamping -- renders the image with a sharp line stamped into the surface.
- An exact drawing, CAD file, or artwork of logo is required in order to produce this of assembly.

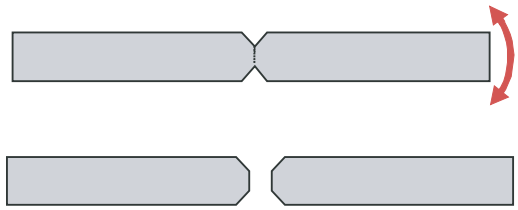
[Dimensions in Inches (mm)]

Mate EasySnap™

Scrapless retention system to allow fabricator to snap punched parts out of sheet metal.

Typical Application:
- Material thickness from 0.020(0.50) up to 0.078(2.00) for mild steel and aluminium, and 0.020(0.50) up to 0.059(1.50) for stainless steel.
- Maximum length of form is 36.00(914.40).

Comments:
- Reduces the need for slitting and micro joints for part retention.
- Material and thickness must be specified at time of order.

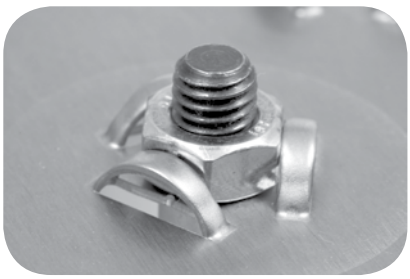


Mate HexLock™

Provides a reliable and secure method of retaining common threaded fasteners in sheet metal.

Typical Application:
- Material thickness from 0.020(0.50) up to 0.118(3.00)
- Other limitations include material, station size, and press tonnage capacity.

Comments:
- Suitable for hexagon nuts and hexagon headed bolts that conform to DIN933 or DIN934.

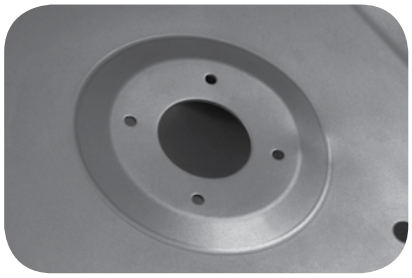


[Dimensions in Inches (mm)]

Rollerball™

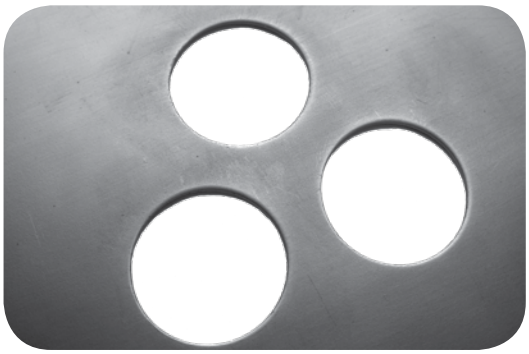
The Rollerball is an exciting concept designed by Mate Precision Tooling to take advantage of the extended programming capabilities of hydraulic and other punch presses capable of operating in the x and y axis with the ram down. The Rollerball is capable of making forms not possible with single hit forming tools.

Typical Application:
- Maximum workable material thickness is 0.105(2.70) mild steel.



Comments:
- The press must be capable of holding the ram down while the sheet is moved in the x and/or y.

Patent Numbers (Rollerball and Rollerball Deburr):
US: 6,131,430
EP: 0 995 510 B1
CA 2,314,987 A1
JP 4406898
SG 74237
MX 222040



Rollerball Deburr™

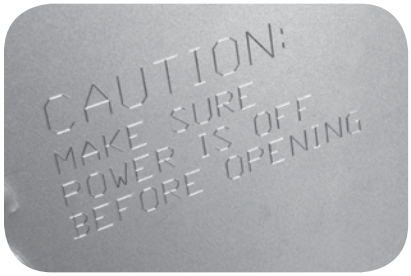
Punching processes frequently cause burrs on sheet metal parts. They are unavoidable. Removing them requires secondary deburring operations that are either performed manually or use specialized equipment. Now Mate helps you eliminate these costly secondary operations with the new Rollerball Deburr™ tool!

Typical Application:
- Materials of any thickness in mild steel, stainless steel and aluminum.

Comments:
- The Mate Rollerball Deburr tool takes advantage of Mate's Rollerball™ technology by using the extended programming capabilities of punch presses that can operate in the x and y axis with the ram down.

- Rollerball Deburr pushes the burr away and creates a radius on the side of the part. Sold as a set, Rollerball Deburr comes complete with everything you need.

[Dimensions in Inches (mm)]



Sheetmarker™

For markings or etchings on the surface of sheet metal. The tool uses a diamond pointed insert in a spring loaded holder to create the marking.

Typical Application:
- The Sheetmarker Tool can be used on all materials and thicknesses.

Comments:
- A wide variety of results can be produced, ranging from very light etching to fairly deep grooves in the sheet.
- Variations are achieved with a combination of three spring pressures and two insert point angles.
- The press must be capable of holding the ram down while the sheet is moved in the x and/or y.

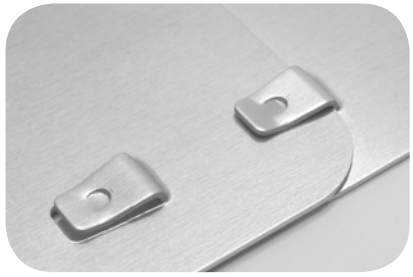
Patent Numbers: US 7,168,364 B2.
Europe 1 099 509. Singapore: 88336

Mate SnapLock™

Use:
For joining materials, thus eliminating secondary operations such as spot welding, riveting, or fastening with threaded hardware.

Typical Application:
- Material thickness from 0.020(0.50) up to 0.118(3.00).
- Other limitations include material, station size, and press tonnage capacity.

Comments:
- Suitable for joining materials of dissimilar and/or thickness.
- Positive locking and locating feature for fast and accurate assembly.

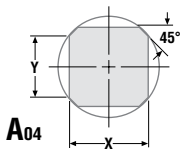


[Dimensions in Inches (mm)]

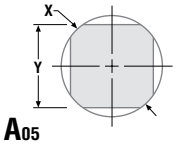
NOTES

[Dimensions in Inches (mm)]

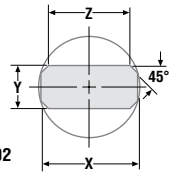
SPECIAL SHAPES



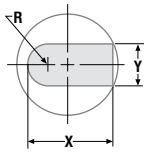
A04 SQUARE WITH CHAMFERED CORNERS



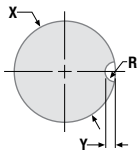
A05 QUAD D



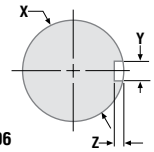
B02 RECTANGLE WITH CHAMFERED CORNER



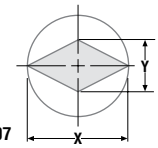
B03 RECT/OVAL



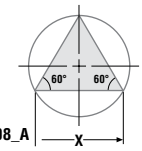
C05 KEYWAY



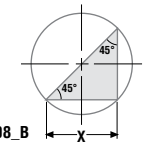
C06 KEYWAY



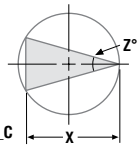
C07 DIAMOND



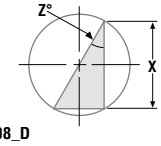
C08_A EQUILATERAL TRIANGLE



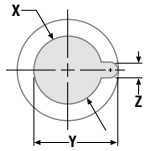
C08_B 45° RIGHT TRIANGLE



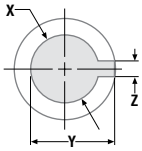
C08_C ISOSCELES TRIANGLE



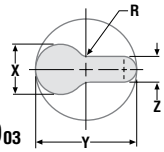
C08_D RIGHT TRIANGLE



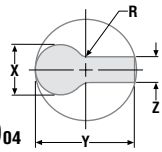
D01 KEYHOLE



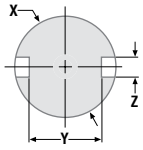
D02 KEYHOLE



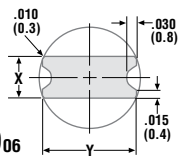
D03 KEYHOLE



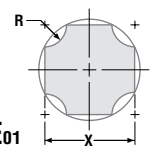
D04 KEYHOLE



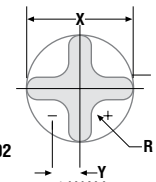
D05 DOUBLE KEYWAY



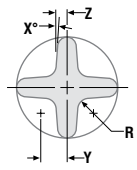
D06 SHAKE AND BREAK



E01 4-WAY RADIUS



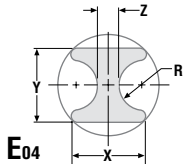
E02 4-WAY RADIUS



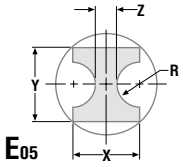
E03 4-WAY RADIUS

[Dimensions in Inches (mm)]

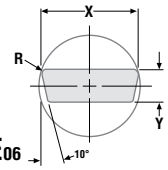
SPECIAL SHAPES



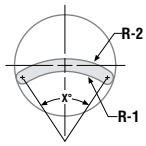
E04 2-WAY RADIUS



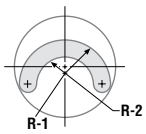
E05 2-WAY RADIUS



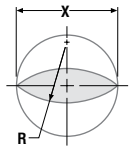
E06 CABLE CONNECTOR



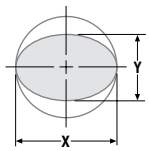
E07 ARC OVAL



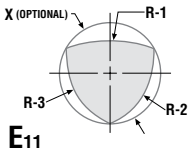
E08 ARC OVAL



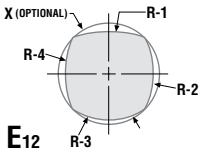
E09 FOOTBALL



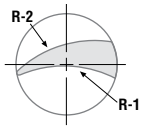
E10 ELLIPSE



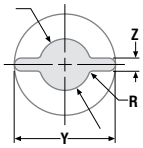
E11 TRI-RADIUS



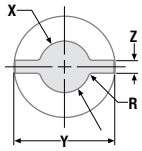
E12 QUAD-RADIUS



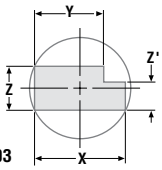
E13 INSIDE/OUTSIDE RADIUS



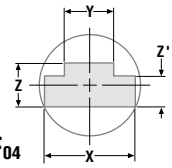
F01 DOUBLE KEYHOLE



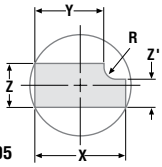
F02 DOUBLE KEYHOLE



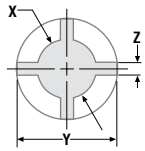
F03 RECT ONE NOTCH



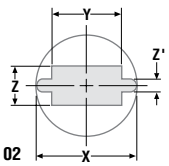
F04 RECTANGLE WITH TWO NOTCHES



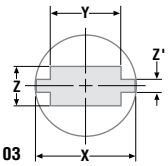
F05 RECTANGLE WITH RADIUS NOTCH



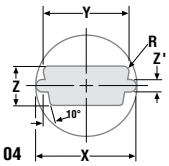
G01 4-WAY SQUARE KEYHOLE



G02 RECTANGLE WITH TABS



G03 DOUBLE RECTANGLE

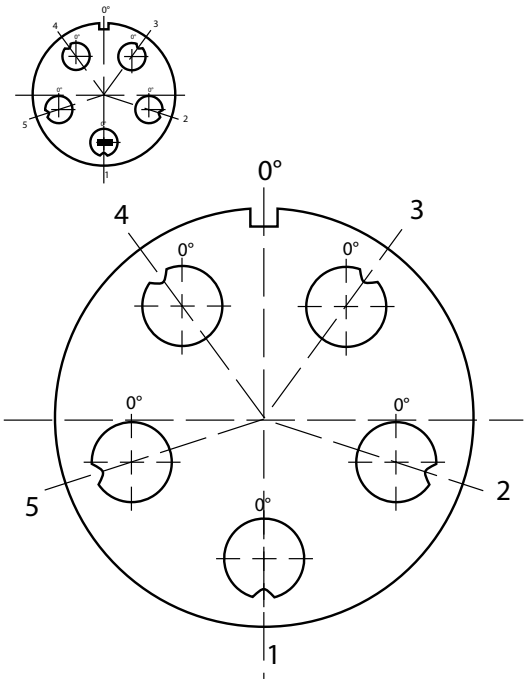


G04 CABLE CONNECTOR WITH TABS

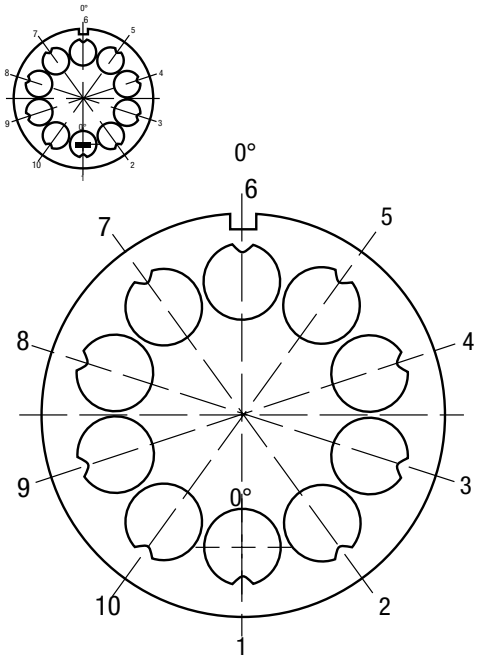
G05 9-WAY CORNER ROUNDING

[Dimensions in Inches (mm)]

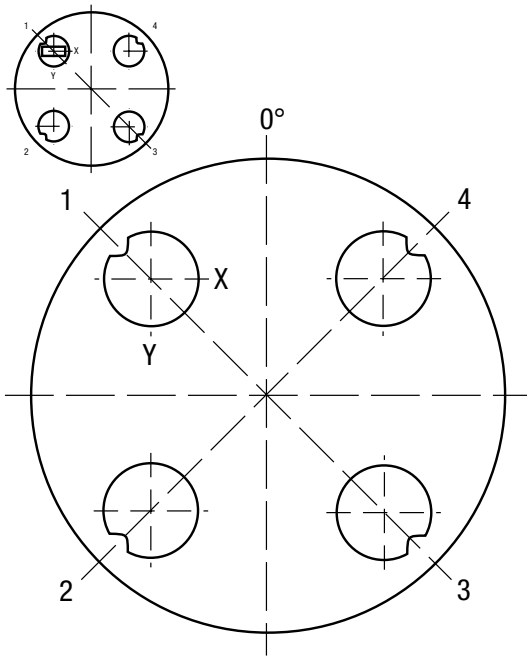
5-Station



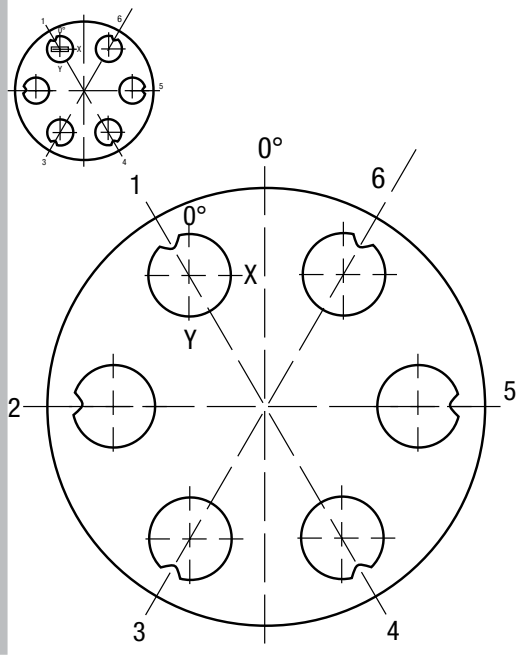
10-Station



4-Station



6-Station



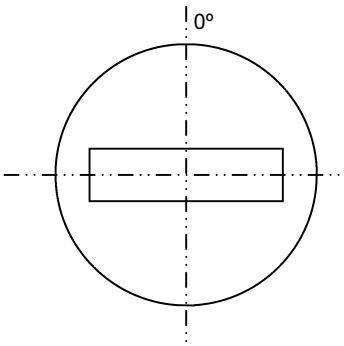
Custom angle settings

Custom angle settings are achievable. Contact your customer service representative to discuss your specific needs.

[Dimensions in Inches (mm)]

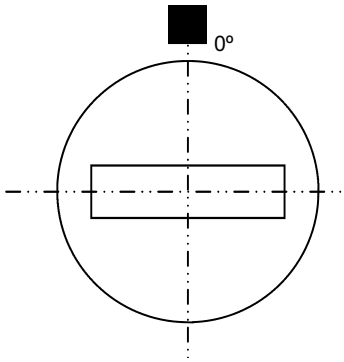
This page shows the location of the primary or (zero degree) orientation feature for punches, strippers, and dies.
The orientation feature of a punch is a pin which engages with the alignment ring (Quicklock™) or punch holder (NEXT™).
The orientation of a die is via a keyway, and strippers are oriented by a pair of pins.

Standard Punch



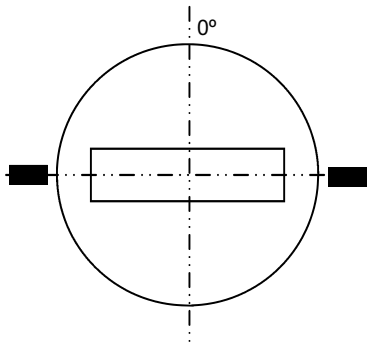
The standard punch is aligned with the alignment ring, and thus does not require an orientation feature.

Size 1 or 2 Die



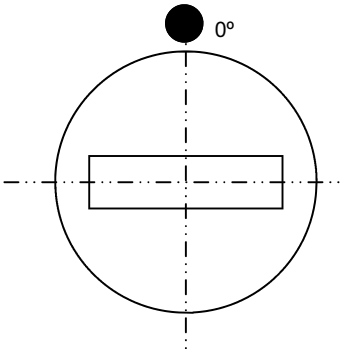
Additional keyways are provided dependant on shape symmetry, with the zero degree position on the longest flat edge, which is at the top. Examples: Rectangle has two keyways and the single-D has four keyways. The default angle setting is 90 degrees, as shown.

Size 1 or 2 Stripper



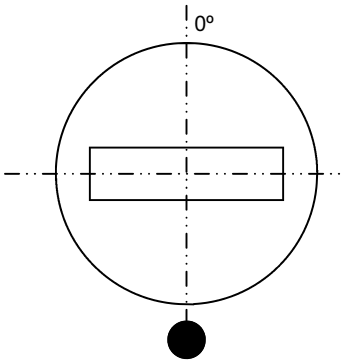
Additional pin locations are provided dependant on shape symmetry. The default angle setting is 90 degrees, as shown.

QuickLock™ Punch



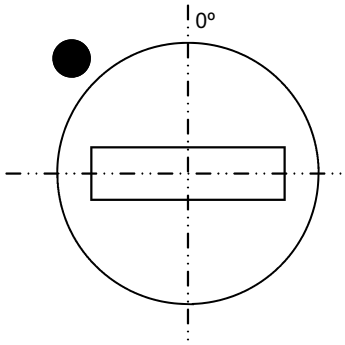
Where punch point diagonal is <2.000(50.80) the pin is positioned on the shank of the punch. The default angle setting is 90 degrees, as shown.

QuickLock™ Punch



Where punch point diagonal is >2.000(50.80) this pin is positioned on the shoulder of the punch. The default angle setting is 90 degrees, as shown.

NEXT™ Punch



The orientation pin is positioned on the shoulder of the punch. The default angle setting is 90 degrees, as shown. The holder has keyways at + and – 45 degrees, to allow setting the shape at 0 or 90 degrees.

[Dimensions in Inches (mm)]

Mate has long offered the most comprehensive range of tooling for Trumpf-style punch presses: the economy of conventional Trumpf-Style tooling, the convenience of QuickLock™ with its keyed alignment ring and the high performance NEXT™ insert tooling system.

Mate's Trumpf-style tooling is even better with the ***superior performance and longevity of Mate's M4PM™ tool steel,*** now standard on the following products:

- All conventional Trumpf-style Size 0 and Size 1 punches
- All QuickLock™ Size 1 punches
- All NEXT™ Size 40 and 76 punches
- All Trumpf-style Size 5 and Size 10 Multi Tool punches
- All Trumpf-style Size 5 and Size 10 Multi Tool dies
- All LongLife™ slitting punch and die inserts

M4PM™ Steel

Designed for use in high performance tooling systems, M4PM is a high speed, particle metallurgy steel that combines the chemical composition of M4, particle metallurgy manufacturing and a triple temper heat treatment process.

M4PM offers superior resistance to adhesive and abrasive-wear to maximize the interval between regrinds. The increased alloy content results in higher effective hardness for better wear resistance. A more uniform distribution of smaller carbides results in significantly reduced tool breakage and edge chipping.

Longer Lasting Tooling

Combining the clear advantage of M4PM steel with Mate's superior accuracy and precision, you have a winning combination: reliable, consistent, long-lasting tooling. Compared to conventional high speed steel used by other manufacturers, Mate's Trumpf-style tooling with M4PM has at least 50% or greater wear resistance.*

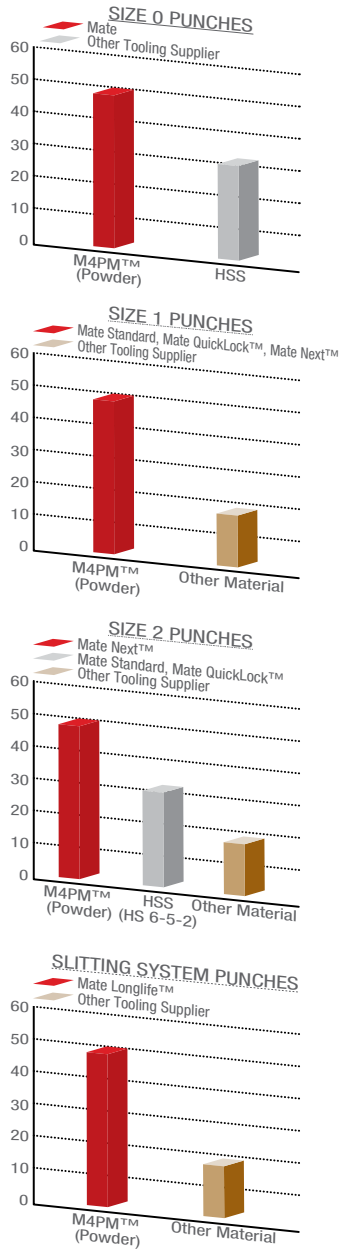
What does long-lasting tooling mean to you?

- *Increased* machine uptime.
- *Improved* sheet metal products.
- *Reduced* overall tooling costs.
- *Lower* overall production costs.

Put Mate Trumpf-Style Tooling to the Test

Like all Mate products, Mate Trumpf-style tooling is backed by our 100% customer satisfaction guarantee. You have nothing to lose. If you are not satisfied, we'll take the tooling back...no questions asked.

WEAR RESISTANCE INDEX COMPARISONS



**Wear Resistance index values were developed by an independent metallurgical expert, evaluating both adhesive and abrasive wear characteristics of tool steels at typical levels of hardening.*

[Dimensions in Inches (mm)]

ADD-ONS

General		
Radius Corner	no charge	
Non-Standard Straight Before Radius (SBR) Dimension	Add	to Punch
Extra Back Taper (1 degree per side)	Add	to Punch
Special Angle Settings	Add	to Die
Optional shear (Limited Options)		no charge
Shock Steel for Rectangles and Squares when total clearance is greater than 0.024(0.60)	Add	to Die
Optional 77,00mm (long) or 77,50mm (extended) lengths - Flat shear only; Size 1, Size 2, Size 40 and Size 76		no charge
Optional MPM82 tool steel for Size 2 Dies only	Add	to Die
Small Diameter Round Tools		
Diameter 0.031(0.79) to 0.061(1.55)	Add	to Punch and Die
Diameter 0.062(1.56) to 0.092(2.34)	Add	to Punch and Die
Narrow Width Shaped Tools		
Widths under 0.125 (3.18)	Add	to Punch, Stripper, and Die

Coating & Treatment

Trumpf Style Tooling				
Size 0-A and Size 0-B	Add	to Punch	Add	to Punch
Size 1 and Size 1-X	Add	to Punch	Add	to Punch
Size 2	Add	to Punch	Add	to Punch
Size 3	Add	to Punch	Add	to Punch
Slitting Insert	Add	to Punch	Add	to Punch
Multi Tool: 4, 5, 6, and 10 station	Add	to Punch	Add	to Punch
Mate QuickLock™				
Size 1	Add	to Punch	Add	to Punch
Size 2	Add	to Punch	Add	to Punch
Mate NEXT™				
Size 40	Add	to Punch	Add	to Punch
Size 76	Add	to Punch	Add	to Punch

Non-Standard Design Features: Call for Quote

[Dimensions in Inches (mm)]

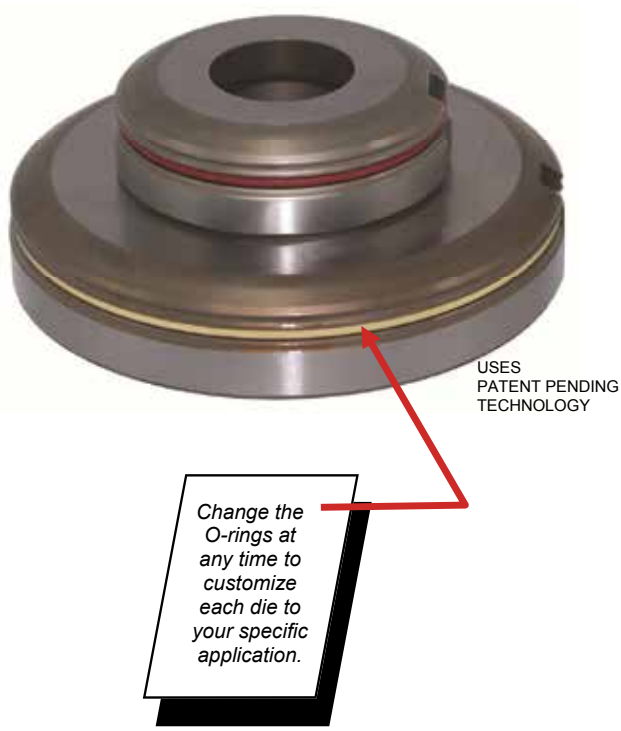
Introducing Lean Visual Management Capability for size 1 and size 2 Trumpf style dies.
Mate's patent pending EasyView™ technology uses a colored O-ring for clear and instant identification.

- **Fully compatible with existing Trumpf die inventories**
- **No die key interference**
- **O-rings manufactured from oil resistant butyl rubber for years of service life**
- **Available in five distinct colors for optimum differentiation**

Use the simple removable O-ring to identify a specific feature of the die making it faster and easier for the user to make the correct decision every time. Eliminate wasted time looking for the correct tool.

Order Trumpf EasyView™ today!

Examples of Use	Criteria	Color
Material Type	Mild Steel	Black
	Aluminum	Red
	Stainless Steel	Yellow
Material Thickness	0.040(1.00)	Green
	0.059(1.50)	Yellow
	0.078(2.00)	White
Die Clearance	0.008(0.20)	Red
	0.012(0.30)	Yellow
	0.016(0.40)	Green
Machine Location	Machine #1	Red
	Machine #2	White
	Machine #3	Black
Shift	Days	White
	Nights	Black
Status	OK to use	Green
	To be Sharpened	Red



Ordering Information		BLACK	RED	GREEN	YELLOW	WHITE
TRUMPF SIZE 1 O-RING	PACK OF 5	MATE01349	MATE01350	MATE01351	MATE01352	MATE01353
TRUMPF SIZE 2 O-RING	PACK OF 5	MATE01354	MATE01355	MATE01356	MATE01357	MATE01358

Size 1 packs Size 2 packs
Not available for Minimatic dies.

[Dimensions in Inches (mm)]

MACHINE GROUP MODEL CLASSIFICATION

	Non Keyed	Keyed	Rotational	Minimatic
	A	**E**	**H**	**S**
	CN 700	400	190R	100
	CN 900	150K	200R	120R
	CN 701	151K	500R	160
	CN 901	152K	600L	
		180K		
	B	180.2K	**I**	
	CN 901E	180KD	2000R	
	CN 902	180LK	2010R	
	CS 75	180.2LK	2020R	
	CS 75.2	202K	5000R	
		225K	6000L	
	C	235K	3000	
	CN 1200S	300K	3000L	
	CN 1200A	300LK		
	CS 15	300PK		
	CS 20	400K		
	CS 20A			
	MP 25	**F**		
	MP 25D	150W		
		152W		
	D	180W		
	20	180.2W		
	20A	180R		
	202M	180LW		
		180.2LW		
	G	ELX/SWIFT		
	Trumatic	185		
		240		
		240R		
		250		
		260R		
Alignment Rings				
Size 1	VANTD	VANTE	VANTE	VANTM
Size 2 and 3	VAPTD	VAPTE	VAPTE	-
Heavy Duty	-	VANTF	VANTF	-
Size 1-X	-	-	-	VAPTM
QuickLock™ Alignment Ring				
Size 1 and 2	-	MATE00480	MATE00480	-
NEXT™ Tool Holders				
Size 40	-	MATE00371	MATE00371	-
Size 76	-	MATE00372	MATE00372	-
Stripper Styles				
Size 1	SNT1	SKD1	SRD1	SKDX
Size 2 and 3	SNT2	SKD2	SRD2	-
Size 3	SNT3	SKD3	-	-
Size 1-X	-	-	-	SKDX

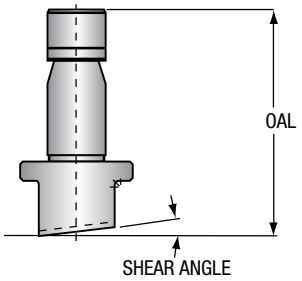
[Dimensions in Inches (mm)]

CRITICAL TOOL DIMENSIONS

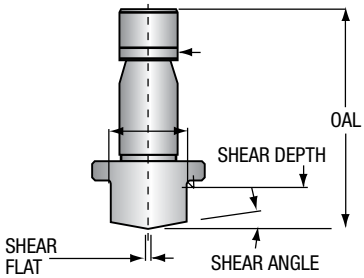
			Flat (without shear)			Whisper		Rooftop	
	Overall Punch Length Inch		2.910	3.030	3.050	3.030	3.050	3.030	3.050
	Overall Punch Length Millimeters		74.00	77.00	77.50	77.00	77.50	77.00	77.50
Trumpf Style	Size 0-A	PADA_A*	●	❍	-	-	-	-	-
	Size 0-B	PADB_A*	●	❍	-	-	-	-	-
	Size 1	PADD_A	●	❍	❍	❍	-	❍	-
	Size 1-X	PADX_A	●	-	-	-	-	-	-
	Size 2	PADE_A	❍	❍	❍	●	-	❍	-
	Size 2	PADF_A	❍	❍	❍	●	-	❍	-
	Size 3	PADJ_A	-	-	-	-	-	●	-
QuickLock™	Size 1	PCTD_A	●	❍	❍	❍	❍	❍	❍
	Size 2	PCTE_A	❍	❍	❍	●	❍	❍	❍
	Size 2	PCTF_A	❍	❍	❍	●	❍	❍	❍
	Size 2	PCTG_A	❍	❍	❍	●	❍	❍	❍
	Size 2	PCTH_A	❍	❍	❍	●	❍	❍	❍
NEXT™	Size 40	PBTD_A**	●	❍	❍	❍	-	❍	-
	Size 40	PBTE_A**	●	❍	❍	❍	-	❍	-
	Size 76	PBTF_A**	❍	❍	❍	●	-	❍	-
	Size 76	PBTG_A**	❍	❍	❍	●	-	❍	-
	Size 76	PBTH_A**	❍	❍	❍	●	-	❍	-

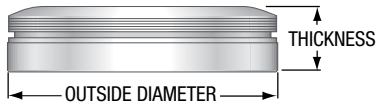
● Standard ❍ No Charge Option - Option not available.
* Overall length when assembled into punch chuck
** Overall length when assembled into NEXT™ punch holder

WHISPER SHEAR



ROOFTOP SHEAR





	Station	Maximum Punch Point Diagonal	Whisper Shear Depth/Angle	Rooftop Shear Depth/Angle	Rooftop Shear Shear Flat	Die Dimensions Outside Diameter	Die Dimensions Thickness
Trumpf Style	Size 1	0.591(15.01)	5 degrees	10 degrees	0.050(1.27)	2.362(60.00)	0.709(18.00)
	Size 1	1.181(30.00)	5 degrees	5 degrees	0.050(1.27)	2.362(60.00)	0.709(18.00)
	Size 2	3.0063(76.36)	0.110(2.79)	0.110(2.79)	0.100(2.54)	3.937(100.00)	0.789(20.00)
	Size 3	4.134(105.00)	0.110(2.79)	0.110(2.79)	0.100(2.54)	5.905(150.00)	
QuickLock™	Size 1	0.643(16.33)	5 degrees	10 degrees	0.050(1.27)	2.362(60.00)	0.709(18.00)
	Size 1	1.181(30.00)	5 degrees	5 degrees	0.050(1.27)	2.362(60.00)	0.709(18.00)
	Size 2	3.000(76.20)	0.110(2.79)	0.110(2.79)	0.100(2.54)	3.937(100.00)	0.789(20.00)
NEXT™	Size 40	0.643(16.33)	5 degrees	10 degrees	0.050(1.27)	See size 1	
	Size 40	1.181(30.00)	5 degrees	5 degrees	0.050(1.27)	See size 2	
	Size 40	1.575(40.01)	0.110(2.79)	0.110(2.79)	0.100(2.54)	See size 2	
	Size 76	3.0063(76.36)	0.110(2.79)	0.110(2.79)	0.100(2.54)	See size 2	

Torque Settings (Pre-set torque wrench recommended)
6mm NEXT™ Holder Draw Bolt – 288 in-lbs (22Nm)
6mm Alignment Ring Bolt – 132 in-lbs (15Nm)
Punch Chuck Set Screw – 240 in-lbs (27Nm)

[Dimensions in Inches (mm)]

MATE PRECISION TOOLING GLOBAL COVERAGE

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LIT00500 Rev E IL PN 2018