

MXC™

PN



RESPECT • SUPPORT • INSPIRE



MXC™ TOOLING SYSTEM

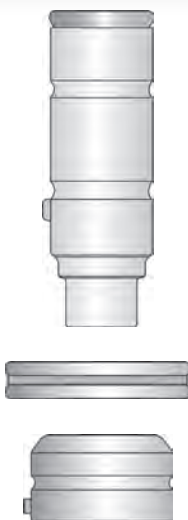
FOR THICK TURRET PUNCH PRESSES

FEATURES AND BENEFITS MXC™ THICK TURRET TOOLING SYSTEM

- DuraSteel™ with superior hardness and toughness for extended interval between regrinds.
- Hardened pin for precise orientation of punches for improved piece part quality.

- Smooth rounded edges to eliminate sheet marking and improve piece part quality.

- SLUG FREE® die geometry eliminates slug pulling to improve piece part quality and increase tool life.



- 1/4 degree back taper and near polished punch flanks to reduce friction, eliminate galling, and maximize punch life.
- Maxima™ coating available for extreme applications.

- Compatible with existing HP (Series 90) tooling inventory for maximum flexibility.

- Highly wear-resistant tool steel provides optimum balance between hardness and toughness, for extended life.

MATE DURASTEEL™ HIGH PERFORMANCE TOOL STEEL

Mate DuraSteel™ is an air hardening tool steel designed specifically for use in high performance tooling systems.

A combination of the chemical composition of Mate DuraSteel and the closely controlled manufacturing process results in an upgrade to conventional High Chrome D2 tool steel. It offers better wear resistance, greater toughness, better compressive strength, and higher attainable hardness.

Mate DuraSteel is a high quality tool steel which has many advantages when compared to alternative tool steels commonly available. These advantages include:

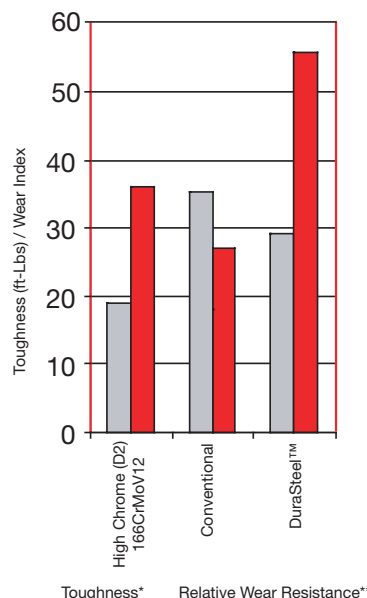
Superior Wear Resistance – Mate DuraSteel offers superior resistance to adhesive-wear and abrasive-wear to maximize the interval between regrinds.

- Increased Vanadium carbides – harder wearing than chromium carbides for greater resistance to abrasive-wear.
- Increased Tungsten carbides – harder wearing and offer better red hardness; increased resistance to high temperatures which may anneal or damage the material.
- Higher hardness – increased alloy content results in higher effective hardness for better wear resistance.

Increased Toughness – the chemical composition and heat treatment processes used with Mate DuraSteel make it tougher than conventional tool steels in impact strength tests.

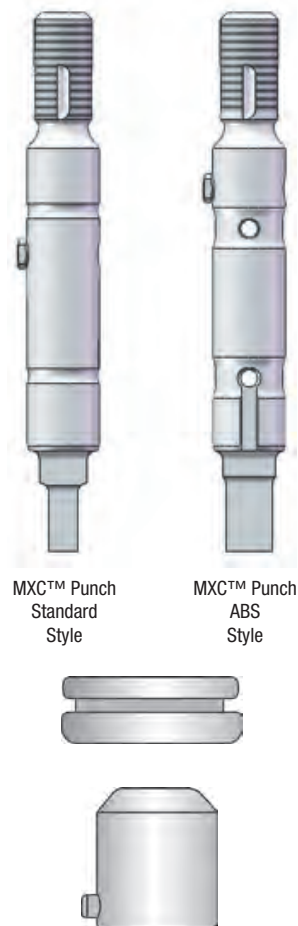
- The inclusion of tungsten and vanadium allows the carbon content to be reduced, which increases the toughness.

Better Value – Customer trials have shown that tools manufactured in Mate DuraSteel last 100% longer between regrinds than tools manufactured using conventional tool steels. By increasing the interval between regrinds, the tooling lasts longer and punches many more holes before needing to be replaced.



DuraSteel™ Chemical Composition	
Carbon	1.10%
Chromium	7.50%
Vanadium	2.40%
Tungsten	1.15%
Molybdenum	1.60%

MXC™ Punch - Standard		
Round	PXCA0A	
Shape	PXCA_A	
Maxima™ Coating		
MXC™ Punch - ABS Style*		
Round	PLCA0A	
Shape	PLCA_A	
Maxima™ Coating		
MXC™ Stripper		
Round	SXCA0A	
Shape	SXCA_A	
SLUG FREE® Die		
Round	DOAA00	
Shape	DOAA_0	
Slug Free Light™ Die		
Round		
Shape		
Die Shim Package of 12 total, 3 each of: 0.008(0.20) 0.016(0.40) 0.032(0.80) 0.048(1.20)	MSAA	



PUNCH

- DuraSteel™ with superior hardness and toughness for extended interval between regrinds.
- Hardened double-D key for precise orientation of punches for improved piece part quality.
- 1/4 degree back taper and near polished punch flanks to reduce friction, eliminate galling, and maximize punch life.
- Maxima™ coating available to reduce friction in extreme applications. Less friction means less heat build up, less galling and longer tool life.

STRIPPER

- Smooth rounded edges to eliminate sheet marking and improve piece part quality.
- Compatible with existing conventional tooling inventory for maximum flexibility.

SLUG FREE® DIE

- Slug Free die geometry eliminates slug pulling to improve piece part quality and increase tool life.
- Highly wear-resistant tool steel provides optimum balance between hardness and toughness, for extended life.

Mate's MXC™ Tooling System is a thick turret punching system which increases tool performance and flexibility, offers extended tool life and allows interchangeability with existing systems. Some features of the MXC system include:

- DuraSteel™ punches
- 100% Compatible with:
HP™
HP™ WLS®
HP™ ABS
- Compatible with:
Ultra TEC®
Ultra XT™
- SLUG FREE® die design

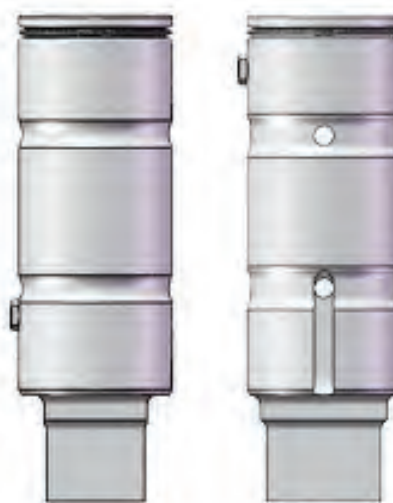
*ABS Style also works in WLS environment

Mate MXC™ A and B-station tooling is produced under license from Wilson Tool International, Inc.

See page 8 for Add-Ons and Accessories

1-1/4" B STATION MXC™ THICK TURRET TOOLING SYSTEM

MXC™ Punch - Standard		Part Number	Price
Round		PXCB0A	
Shape		PXCB_A	
Maxima™ Coating			
Anti-Rotation Pin		MATE00752	
Retaining Ring		RRI00010	
MXC™ Punch - ABS Style			
Round***		PLCB0A	
Shape***		PLCB_A	
Maxima™ Coating			
Anti-Rotation Pin		MATE00752	
Retaining Ring		RRI00010	
Felt Pad**		FLT00001	
MXC™ Stripper			
Round		SXCB0A	
Shape		SXCB_A	
Retaining Ring*		MATE00754	
SLUG FREE® Die			
Round		DOAB00	
Shape		DOAB_0	
Slug Free Light™ Die			
Round			
Shape			
Die Shim Package of 12 total, 3 each of: 0.008(0.20) 0.016(0.40) 0.032(0.80) 0.048(1.20)		MSAB	

MXC™ Punch
Standard StyleMXC™ Punch
ABS Style

* Stripper retaining ring not included with stripper

** Add felt pad (not included with punch) to ABS style punch to work in WLS® environment

*** MXC™ ABS B-station punches are compatible with Wilson Fully Indexable R series 3 station MT for Finn-Power

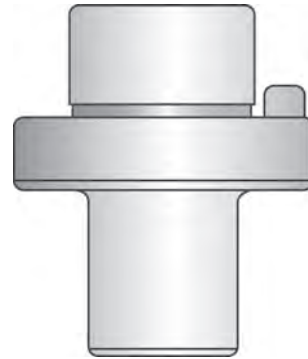
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See page 8 for Add-Ons and Accessories

STANDARD SHAPES (NUMBERING INDICATES SHAPE CODE):



MXC™ Punch - Standard	Part Number	Price
Round	PXCC0A	
Shape	PXCC_A	
Maxima™ Coating		
Ultra TEC® Adapter	A0VCWSPA	
MXC™ Stripper		
Round	SXCC0A	
Shape	SXCC_A	
SLUG FREE® Die		
Round	DOAC00	
Shape	DOAC_0	
Slug Free Light™ Die		
Round		
Shape		
Die Shim Package of 9 total, 3 each of: 0.016(0.40) 0.032(0.80) 0.048(1.20)	MSAC	



PUNCH

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- Maxima™ coating available to reduce friction in extreme applications. Less friction means less heat build up, less galling and longer tool life.

STRIPPER

- Smooth rounded edges to eliminate sheet marking and improve piece part quality.
- Compatible with existing conventional tooling inventory for maximum flexibility.

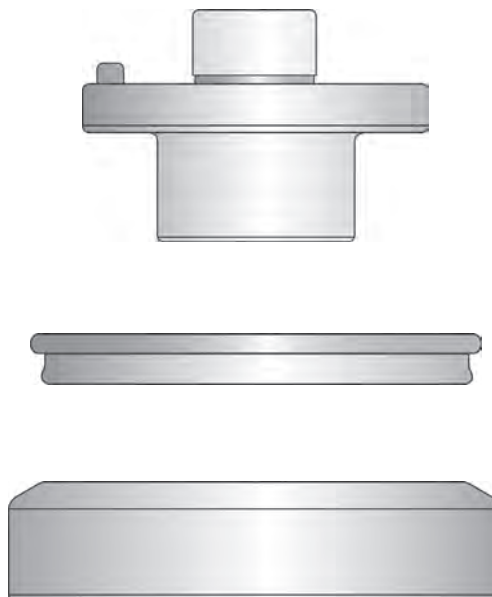
SLUG FREE® DIE

- Slug Free die geometry eliminates slug pulling to improve piece part quality and increase tool life.
- Highly wear-resistant tool steel provides optimum balance between hardness and toughness, for extended life.

See page 8 for Add-Ons and Accessories

3-1/2" D STATION MXC™ THICK TURRET TOOLING SYSTEM

MXC™ Punch - Standard	Part Number	Price
Round	PXCD0A	
Shape	PXCD_A	
Maxima™ Coating		
Ultra TEC® Adapter	A0VDWSPA	
MXC™ Stripper		
Round	SXCD0A	
Shape	SXCD_A	
SLUG FREE® Die		
Round	D0AD00	
Shape	D0AD_0	
Slug Free Light™ Die		
Round		
Shape		
Die Shim Package 3 each: 0.016(0.40) 0.032(0.80) 0.048(1.20)	MSAD	



PUNCH

- DuraSteel™ with superior hardness and toughness for extended interval between regrinds.
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- 1/4 degree back taper and near polished punch flanks to reduce friction, eliminate galling, and maximize punch life.
- Maxima™ coating available to reduce friction in extreme applications. Less friction means less heat build up, less galling and longer tool life.

STRIPPER

- Smooth rounded edges to eliminate sheet marking and improve piece part quality.
- Compatible with existing conventional tooling inventory for maximum flexibility.

SLUG FREE® DIE

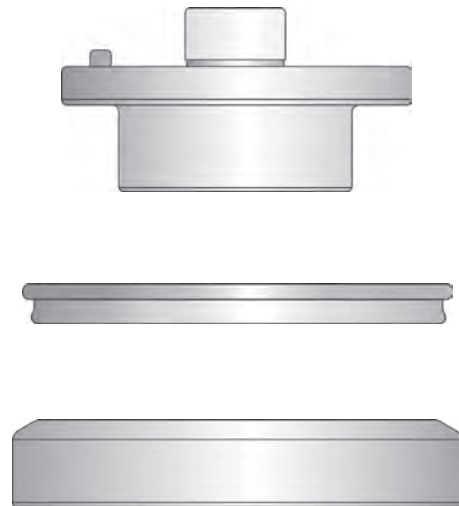
- Slug Free die geometry eliminates slug pulling to improve piece part quality and increase tool life.
- Highly wear-resistant tool steel provides optimum balance between hardness and toughness, for extended life.

See page 8 for Add-Ons and Accessories

STANDARD SHAPES (NUMBERING INDICATES SHAPE CODE):



MXC™ Punch - Standard	Part Number	Price
Round	PXCE0A	
Shape	PXCE_A	
Maxima™ Coating		
Ultra TEC® Adapter	A0VEWSPA	
MXC™ Stripper		
Round	SXCE0A	
Shape	SXCE_A	
SLUG FREE® Die		
Round	DOAE00	
Shape	DOAE_0	
Slug Free Light™ Die		
Round		
Shape		
Die Shim Package 3 each: 0.016(0.40) 0.032(0.80) 0.048(1.20)	MSAE	



PUNCH

- DuraSteel™ with superior hardness and toughness for extended interval between regrinds.
- Hardened double-D key for precise orientation of punches for improved piece part quality.
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- Maxima™ coating available to reduce friction in extreme applications. Less friction means less heat build up, less galling and longer tool life.

STRIPPER

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See page 8 for Add-Ons and Accessories

STANDARD SHAPES (NUMBERING INDICATES SHAPE CODE):



SYSTEM ADD-ONS MXC™ THICK TURRET TOOLING

Small Diameter Round Tools	
Point diameter 0.031(0.79) - 0.061(1.55) - to punch, stripper and die	
Point diameter 0.062(1.56) - 0.092(2.35) - to punch, stripper and die	
Narrow Width Shaped Tools	
Width is less than 0.079(2.00) - to punch, stripper and die	
Angle Setting	
Non-Standard Angle Setting - to punch, stripper and die	
Maxima™ Coating	
1/2" A Station	
1-1/4" B Station	
2" C Station	
3-1/2" D Station	
4-1/2" E Station	

MXC™ THICK TURRET TOOLING SYSTEM PARTS & ACCESSORIES



1-1/4" B Station Punch
Retaining Ring
RR100010

Replacement Part



1-1/4" B Station Punch
Anti Rotation Pin
MATE00752

Replacement Part



1-1/4" B Station Punch Felt
Pad
FLT00001

*To convert ABS punch to
WLS® style*



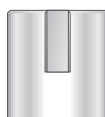
1-1/4" B Station Stripper
Retaining Ring
MATE00754

Replacement Part



Round Punches Only
Anti-rotation Clip
A0VBWBAC

Replacement Part



2" C Station HPT™
Punch Adapter
A0VCWSPA



3-1/2" D Station HPT™
Punch Adapter
A0VDWSPA



4-1/2" E Station HPT™
Punch Adapter
A0VEWSPA

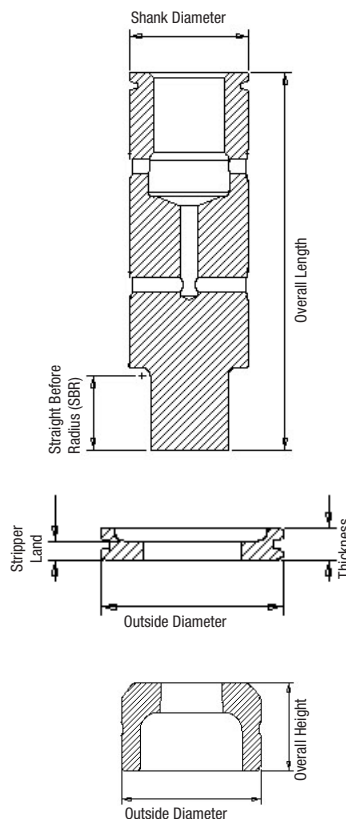
These Punch Adapters allow an HPT™ and/or MXC™ punch to be used
in an Original Style Thick Turret, Ultra TEC® or Ultra ABS® holder.

HPT™ is a trademark of Wilson Tool International, Inc.

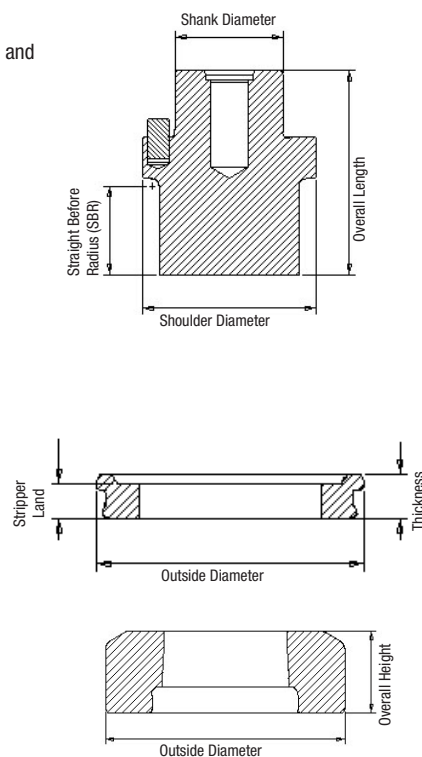


MXC™ PUNCH					
Station	1/2" A	1-1/4" B	2" C	3-1/2" D	4-1/2" E
Part Number	PXCA or PLCA	PXCB or PLCB	PXCC	PXCD	PXCE
Maximum Punch Diagonal	0.500(12.70)	1.250(31.75)	2.000(50.80)	3.500(88.90)	4.500(114.30)
Overall Length	4.640(117.86)	3.957(100.51)	2.360(59.94)	2.360(59.94)	2.360(59.94)
Shank Diameter	0.624(15.85)	1.249(31.72)	1.250(31.75)	1.250(31.75)	1.250(31.75)
Shoulder Diameter	n/a	n/a	2.000(50.80)	3.500(88.90)	4.500(114.30)
Straight Before Radius	0.740(18.80)	0.740(18.80)	1.004(25.50)	1.004(25.50)	1.004(25.50)
MXC™ STRIPPER					
Part Number	SXCA	SXCB	SXCC	SXCD	SXCE
Outside Diameter	0.768(19.51)	1.497(38.02)	2.356(59.84)	4.011(101.88)	4.866(123.60)
Thickness	0.272(6.91)	0.272(6.91)	0.390(9.91)	0.390(9.91)	0.390(9.91)
Stripper Land	0.157(3.99)	0.157(3.99)	0.315(8.00)	0.315(8.00)	0.315(8.00)
SLUG FREE® and SLUG FREE LIGHT™ DIES					
Part Number	DOAA	DOAB	DOAC	DOAD	DOAE
Outside Diameter	1.000(25.40)	1.875(47.63)	3.500(88.90)	4.938(125.43)	6.249(158.72)
Overall Height	1.187(30.15)	1.187(30.15)	1.187(30.15)	1.187(30.15)	1.187(30.15)
Die Penetration	0.118(3.00)	0.118(3.00)	0.118(3.00)	0.118(3.00)	0.118(3.00)

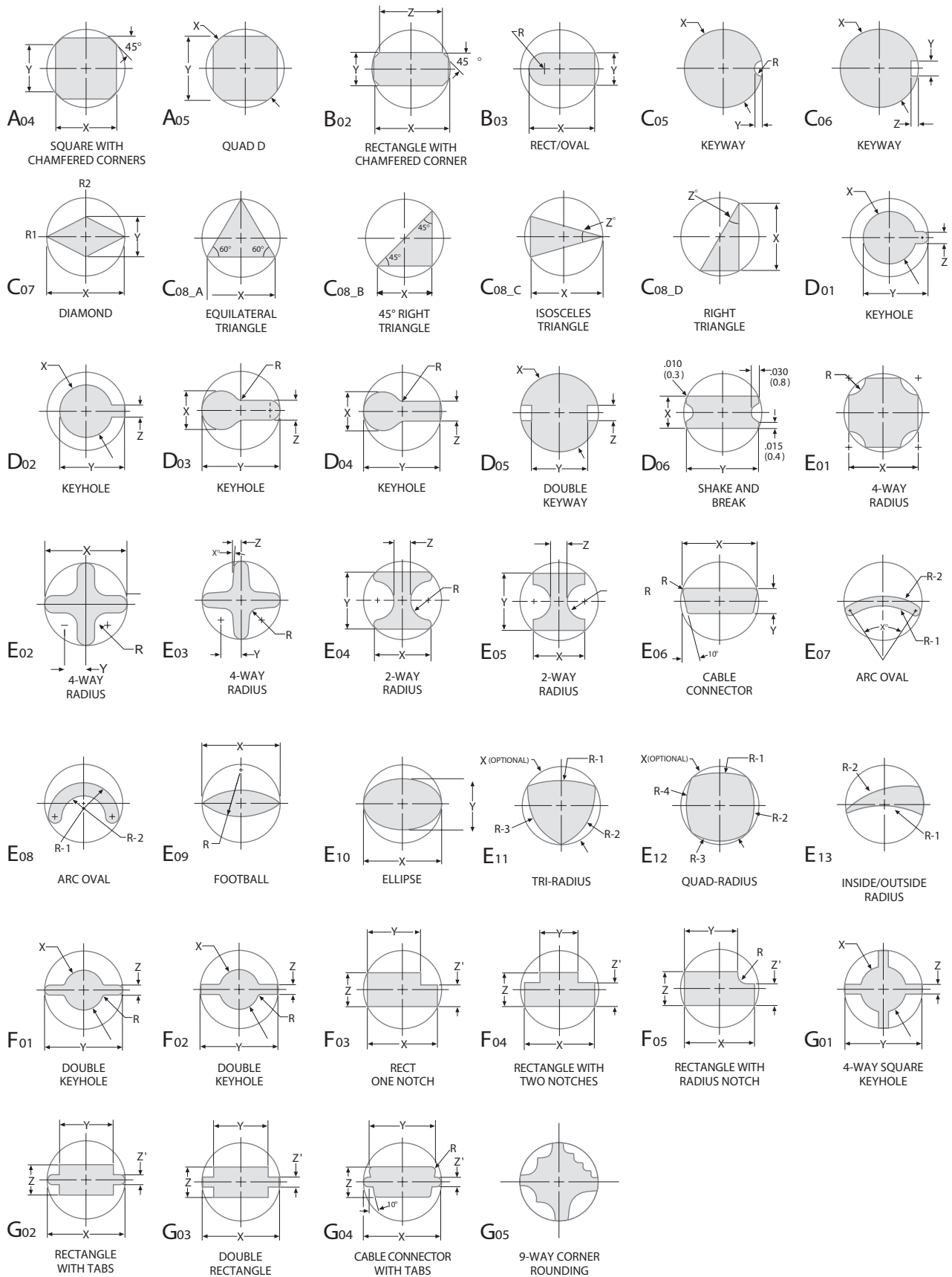
For 1/2" A and
1-1/4" B Station
(B station shown)



For 2" C, 3-1/2" D and
4-1/2" E Station
(C station shown)



SPECIAL SHAPES FOR THICK TURRET TOOLING



MXC™ COMPATIBILITY CHART

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COMPATIBILITY CHART

Station	Style	Mate Part Number	HP™ & HP2™	HP™ WLS® & HP2™ WLS®	HP™ ABS & HP2™ ABS	Wilson Adjustable Length HP ABS 3 Station 35307	Wilson Adjustable MT3RI for Prima Power 45293	Amada Alpha	Amada GT7	ULTRA TEC®	ULTRA XT™	ULTRA ABS™	Mate OS	Ultra MT3/8 Station Multi Tool ++
1/2" A	MXC™	PXCA	•						•					
1/2" A	MXC™	SXCA	•	•	•****				•					
1/2" A	MXC™	DOAA	•	•	•				•	•	•	•	•	•
1/2" A	MXC™ ABS Style	PLCA		•	•				•					
1/2" A	MXC™	SXCA	•	•	•****				•					
1/2" A	MXC™	DOAA	•	•	•				•	•	•	•	•	•
1-1/4" B	MXC™	PXCB	•						•	•*	•*	•*		•
1-1/4" B	MXC™	SXCB	•	•	•****				•					•
1-1/4" B	MXC™	DOAB	•	•	•				•	•	•	•	•	•
1-1/4" B	MXC™ ABS Style	PLCB		•+	•	•	•		•	•*	•*****	•*		•
1-1/4" B	MXC™	SXCB	•	•	•****		•		•					•
1-1/4" B	MXC™	DOAB	•	•	•				•	•	•	•	•	•
2" C	MXC™	PXCC	•	•					•	•**	•**	•**		
2" C	MXC™	SXCC	•	•	•****			•	•		•		•	
2" C	MXC™	DOAC	•	•	•			•	•	•	•	•	•	
3-1/2" D	MXC™	PXCD	•	•					•	•**	•**	•**		
3-1/2" D	MXC™	SXCD	•	•	•****			•	•		•		•	
3-1/2" D	MXC™	DOAD	•	•	•			•	•	•	•	•	•	
4-1/2" E	MXC™	PXCE	•	•					•	•**	•**	•**		
4-1/2" E	MXC™	SXCE	•	•	•****			•	•		•		•	
4-1/2" E	MXC™	DOAE	•	•	•			•	•	•	•	•	•	

* To use round or shaped MXC™ B-Station punches in Mate ULTRA TEC® or Ultra XT™ guides, first remove both the retaining ring (RRI00019) and anti-rotation pin (MATE00752). Shaped punches are then ready to use. For round punches, install the anti-rotation clip (A0VBWBAC) in place of the retaining ring. Please note that shaped MXC™ ABS Style B-Station punches cannot be made to work in Ultra XT™ guides.

** Use an HP™ Adapter to allow an HP™ punch, or MXC™ C, D, and E punches to be used in Mate ULTRA TEC® or Mate ULTRA ABS® guide assemblies. For more information about the Mate ULTRA® precision tooling system, please visit www.mate.com/ultra

*** HP™ was formerly known as Series 90®.

**** Mate has verified in testing that the standard strippers with normal clearance delivers sufficient lubrication to the punch point.

***** Rounds only

+ When using MXC™ ABS Style B-station punches in a WLS® environment, Mate recommends use of the optional felt pad (FLT00001) to increase effectiveness.

+ + Works on newer units only which are identified with groove in punch guide and stripper retainer. Look for vertical grooves in punch drivers as well.

- MXC 1-1/4" B station ABS Punch and Stripper along with MTG 3 station die compatible with Wilson R-series MT3RI (#45293) multi tool for Prima-Power machines
- MXC 1-1/4" B station ABS Punch along with MTG 3 station stripper and die compatible with Wilson MT3B (#35307) multi tool for LVD/Strippit machines

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MATE PRECISION TOOLING GLOBAL COVERAGE

WORLDWIDE HEADQUARTERS:

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