

Innovative Tooling Solutions For Sheet Metal Fabricators

EasyTap™

Flexible Thread
Tapping System



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**PRECISION
TOOLING**

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Mate Tooling Lasts Longer

New Mate EasyTap™

Flexible Thread Tapping System For Thick Turret Presses

Mate leads the punching industry with an all-new tool system designed to produce threaded holes in previously punched or extruded holes, in all types of sheet metal. Called Mate EasyTap™, this unique tool system extends the punching capabilities of today's CNC punch presses by producing precisely located threaded holes at high speed, automatically and with repeatable quality.

With a full array of patented* design features, the Mate EasyTap™ system is yet another major milestone for Mate in designing and delivering innovative tooling that sets the pace for the fabricating industry. Read on to see why there's nothing else like Mate EasyTap™.



EasyTap™ Tooling Benefits:

- Produces threaded holes in a single punch press set-up. No need for secondary tapping operations either by machine or manually.
- Threaded holes are produced at pre-programmed locations on the sheet material with repeatable accuracy.
- Taps a full range of threaded hole diameters in popular materials including stainless steel, mild steel and aluminum.
- High speed operation equal to the coordinated speed of the turret press auto index station rotation and the ram stroke.
- Requires the use of a single auto index station to maximize machine turret flexibility.
- Eliminates the need for extra fastening components such as self-clinching fasteners and nuts with lock washers as well as assembly tools.
- Use standard taps available from multiple sources to eliminate reliance on proprietary tooling and reduce tooling inventory cost.
- Adds new versatility to existing punch press capabilities with only nominal tool investment. Gives the part designer a new option for superior manufacturability.
- Very easy to use. Requires minimal operator training for quick collet and tap change mechanism and installation.
- Eliminates adjacent secondary operation staging tables and fixtures. Helps conserve valuable factory floor space because off-press tapping operations can now be performed on the punch press.
- Reduces punch press downtime while increasing machine productivity.
- Ideal tool system to use in combination with other Mate application tooling for producing hinges, bends, interlocking components, custom markings, etc.



EasyTap™ Design Features:



- Has automatic lubrication system which dispenses pre-set amount of lubrication to the tap point with each tapping cycle. Built in sight gauge shows lubrication level.



- Lower tool assembly includes ball bearing mounted mechanism for smooth rotation. Prevents unwanted undersheet marking.



- Has pre-pierce hole “miss protection” feature to prevent tool and part damage in the event of a missing pre-pierce hole.



- Robust construction, with hardened guide for accurate, long life operation.



- Uses standard taps and standard Bilz brand collets. Minimizes tooling costs and inventory. Accommodates all standard tap sizes and popular shank standards including: DIN 371, ANSI/ASME, ISO 529 and JIS. See table on page 4.



- Mate EasyTap™ produces high quality threads in punched or extruded holes.

Additional Features Include:

- Precision machined of hardened tool steel for accurate, long-life operation.
- One Mate EasyTap™ tool system can be used interchangeably in multiple machine models equipped with suitable auto index, ram stroke and software features.
- Supplied with compact table-top setup and storage stand. Protects tooling and makes setup easy.
- 100% unconditional customer satisfaction guaranteed like all Mate products.



Available for use with selected Finn-Power presses including the C5. Also operates with additional thick turret auto index stations in turret presses with programmable ram depth control and suitable machine software. Requires software download from press manufacturer.



Bilz Collet Kits



Mate EasyTap™ Utilizes Standard Bilz Quick-Change Collets

Use the table below to select the appropriate Bilz brand collet for your specific application. Collets accept multiple tap shank size standards. Bilz brand quick change collets are positive drive type, Series WE Size 0 and are commonly available.

DIN 371							MATE PART NUMBER
FORMING TAP SIZE	M2.5	M3	M4	M5	M6	M8	*MATE00527
SHANK & SQUARE SIZE (mm)	2.8 x 2.1	3.5 x 2.7	4.5 x 3.4	6 x 4.9	6 x 4.9	8 x 6.2	
BILZ PART NUMBER	29 100 007	29 100 025	29 100 044	29 100 067	29 100 067	29 100 087	

*MATE00527 INCLUDES (1) EACH OF THE FOLLOWING COLLETS: 29 100 007, 29 100 025, 29 100 044, 29 100 067, 29 100 087

**DIN 376

ANSI/ASME							MATE PART NUMBER
FORMING TAP SIZE	M2.5	M3	M4	M5	M6	M8	*MATE00528
SHANK & SQUARE SIZE (IN)	0.141 x 0.110	0.141 x 0.110	0.168 x 0.131	0.194 x 0.152	0.255 x 0.191	0.318 x 0.238	
BILZ PART NUMBER	29 100 028	29 100 028	29 100 041	29 100 052	29 100 077	29 100 101	
FORMING TAP SIZE	#3 - #6	#8	#10	#12	1/4" - 20	5/16" - 18	
SHANK & SQUARE SIZE (IN)	0.141 x 0.110	0.168 x 0.131	0.194 x 0.152	0.220 x 0.165	0.255 x 0.191	0.318 x 0.238	
BILZ PART NUMBER	29 100 028	29 100 041	29 100 052	29 100 062	29 100 077	29 100 101	

*MATE00528 INCLUDES (1) EACH OF THE FOLLOWING COLLETS: 29 100 028, 29 100 041, 29 100 052, 29 100 062, 29 100 077, 29 100 101

ISO 529							MATE PART NUMBER
FORMING TAP SIZE	M2.5	M3	M4	M5	M6	M8	*MATE00529
SHANK & SQUARE SIZE (mm)	2.8 x 2.24	3.15 x 2.5	3.15 x 2.5	5 x 4	6.3 x 5	6.3 x 5	
BILZ PART NUMBER	29 100 008	29 100 015	29 100 015	29 100 054	29 100 074	29 100 074	
FORMING TAP SIZE	#4	#6	#10	#12	1/4" - 20	5/16" - 18	
SHANK & SQUARE SIZE (mm)	3.15 x 2.5	3.55 x 2.8	5 x 4	5.6 x 4.5	6.3 x 5	8 x 6.3	
BILZ PART NUMBER	29 100 015	29 100 027	29 100 054	29 100 063	29 100 074	29 100 087	

*MATE00529 INCLUDES (1) EACH OF THE FOLLOWING COLLETS: 29 100 008, 29 100 015, 29 100 027, 29 100 054, 29 100 063, 29 100 074, 29 100 087

JIS							MATE PART NUMBER
FORMING TAP SIZE	M2.5	M3	M4	M5	M6	M8	*MATE00530
SHANK & SQUARE SIZE (mm)	3 x 2.5	4 x 3.2	5 x 4	5.5 x 4.5	6 x 4.5	6.2 x 5	
BILZ PART NUMBER	29 100 014	29 100 122	29 100 054	29 100 060	29 100 090	29 100 073	

*MATE00530 INCLUDES (1) EACH OF THE FOLLOWING COLLETS: 29 100 014, 29 100 122, 29 100 054, 29 100 060, 29 100 090, 29 100 073

Bilz Quick-Change Collet Kits

For additional convenience, kits of Bilz brand quick change collets are available to suit the following tap shank size standards.

- DIN 371 (MATE00527)
- ANSI/ASME (MATE00528)
- ISO 529 (MATE00529)
- JIS (MATE00530)



New Mate EasyTap™

Set Up Instructions

The patented* design features of Mate EasyTap™ make installation fast and easy. By following the steps described, you will maximize machine uptime and increase your productivity. See *page 3 for call-outs*.

1. Prepare for installation

- Confirm oil reservoir cap (1) is installed to prevent oil spillage.
- Remove EasyTap assembly from maintenance stand (2) and turn upside down.
- Remove end cap (3) using two screwdrivers (4) provided.



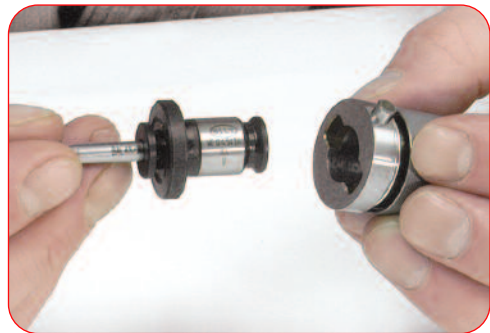
2. Remove length adjustment assembly (5)

- Hold end of tap (10) with thumb and first finger.
- Push length adjustment button (6) to release.
- Remove length adjustment assembly (5) from EasyTap assembly.



3. Separate collet and tap assembly (7) from collet holder assembly (8)

- Slide spring-loaded collet release sleeve (9) forward to release collet and tap assembly (7).
- Pull end of tap (10) to remove collet and tap assembly (7) from collet holder assembly (8).
- Release spring-loaded collet release sleeve (9).



4. Replace collet and tap assembly (7)

- Hold spring-loaded collet release sleeve (9) with thumb and first finger.
- Insert collet and tap assembly (7) into collet holder assembly (8) engaging lugs on collet (11) with recesses in collet holder assembly (8).
- Release spring-loaded collet release sleeve (9).
- To change tap (10) within collet (11), see steps 8 and 9.



5. Replace length adjustment assembly (5)

- Hold tap end with thumb and first finger.
- Align collet holder key (12) with keyway in EasyTap assembly.
- Hold length adjustment button (6) in until length adjustment assembly (5) is fully installed.



6. Set Tap Length

- Turn EasyTap assembly upright and insert into maintenance stand (2).
- Push length adjustment button (6) until tip of tap (10) touches stand base plate.
- Release length adjustment button (6).



7. Prepare for use

- Remove EasyTap assembly from maintenance stand (2).
- Turn EasyTap assembly upside down.
- Replace end cap (3).
- Turn EasyTap assembly upright.
- Remove oil reservoir cap (1) and refill with hydraulic oil as indicated by site gauge (13). (Use Mobil DTE26 or equivalent.) Note: oil reservoir cap must be removed during normal operation to avoid vacuum build-up.
- Install Mate EasyTap assembly into punch press.



8. To remove the tap from the Bilz brand collet

- Hold the collet (11) between the thumb and first fingers.
- Depress the spring loaded locking mechanism.
- Remove the tap (10) and release the mechanism.



9. To install the tap into a Bilz brand collet

- Hold the collet (11) in one hand and the new tap (10) in the other hand.
- Slide the square end of the tap (10) into the collet (11).
- Rotate the tap (10), while pushing the tap into the collet (11), until the square end of the tap engages securely with the square socket within the collet.
- The assembled tap and collet assembly (7) is now ready to use.





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1295 Lund Boulevard, Anoka, Minnesota 55303 USA
Call 763-421-0230 Fax 763-421-0285 mate.com