



SOLUTIONS FOR LEAN MANUFACTURING

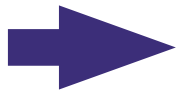
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Secondary tapping operation, welded or crimped nut



- ✓ Costly
- ✓ Not lean
- ✓ Quality issues



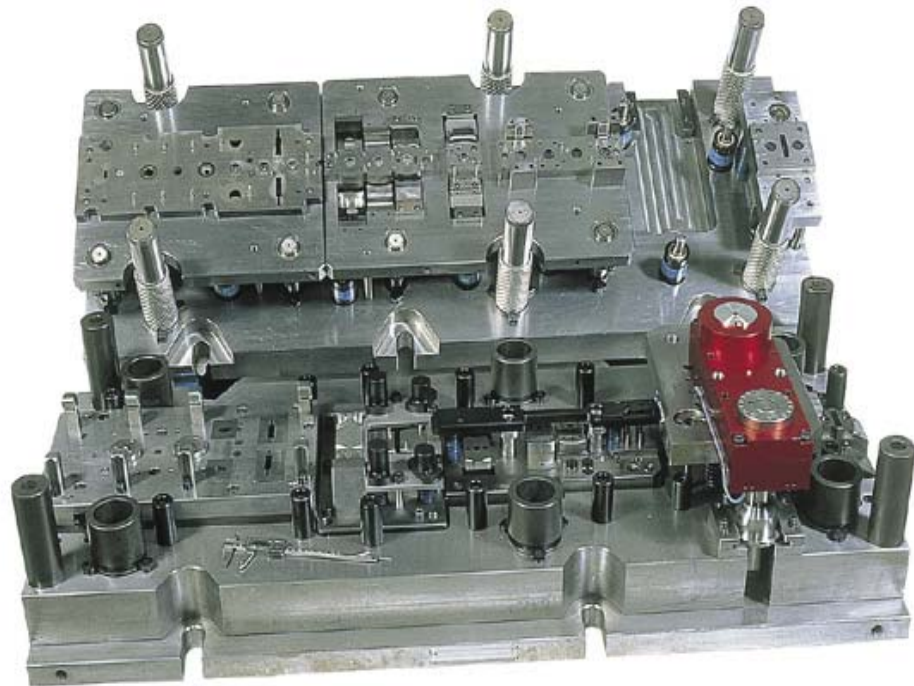
- ✓ LEAN
- ✓ Light
- ✓ Cost effective

Success depends on your strategical choices.





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TAPPING SOLUTIONS FOR:

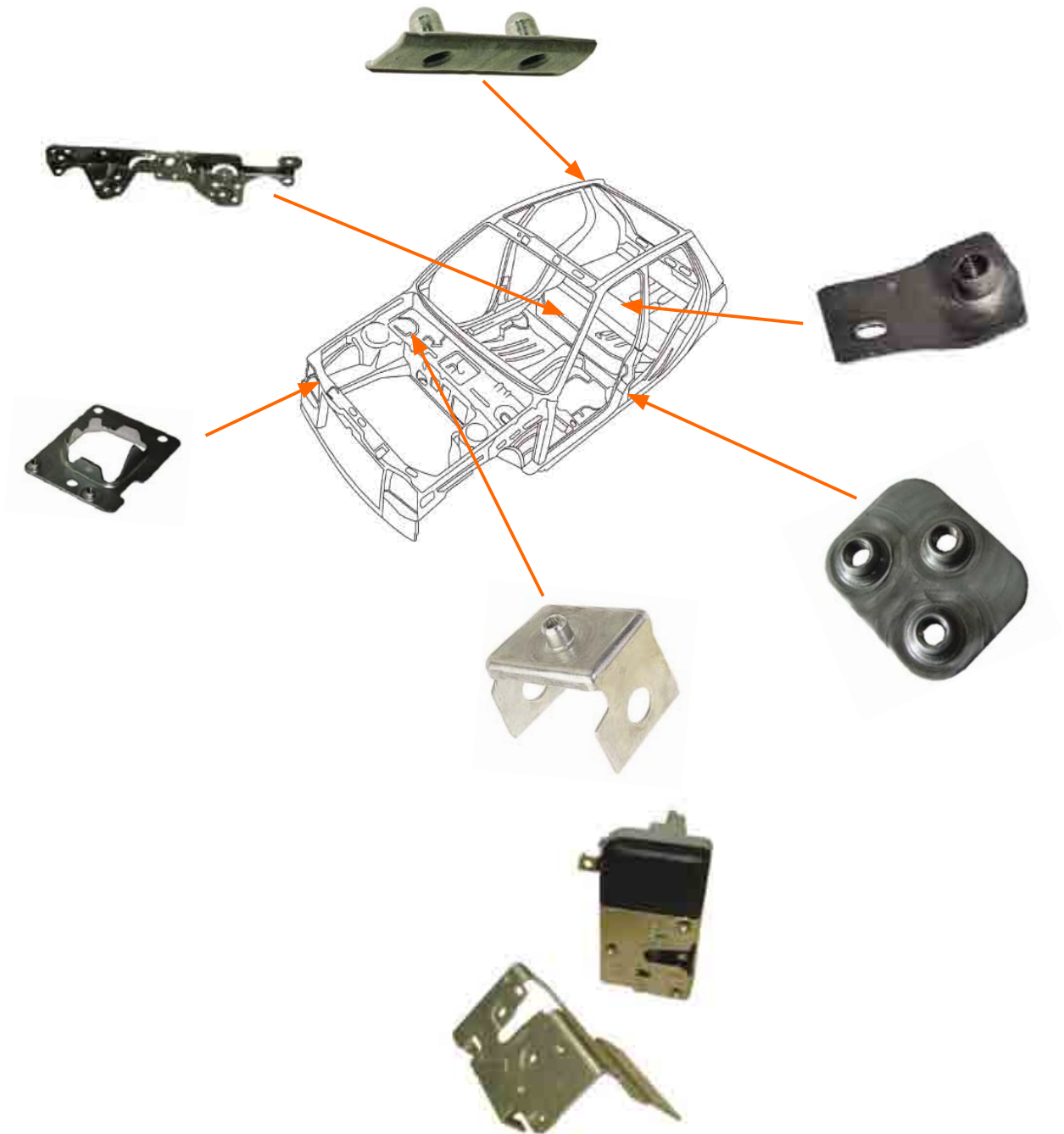
- ✓ Progressive dies
- ✓ Transfer presses
- ✓ Fine blanking dies
- ✓ Multi-slide presses
- ✓ Stand alone machines



CUSTOMER'S APPLICATIONS

AUTOMOTIVE

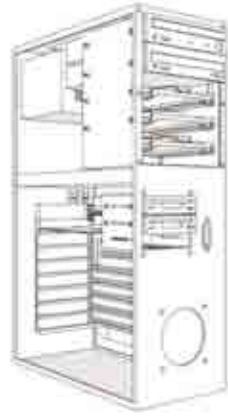
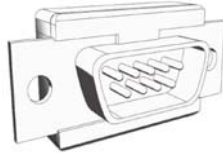
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ELECTRIC / ELECTRONIC

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HOUSEHOLD APPLIANCES





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MOUNTING CONFIGURATIONS

MOBILE SUPPORT MOUNTING

Tools with material lift.

- ✓ Best press speed / tap life balance.
- ✓ Maintain standard stripper travel.
- ✓ Tapping unit follows the strip.
- ✓ Thread the part as soon as material feeds into position.

	Top Dead Center	Bottom Dead Center
Tapping from top to bottom		
Tapping from bottom to top		
Tapping horizontally		

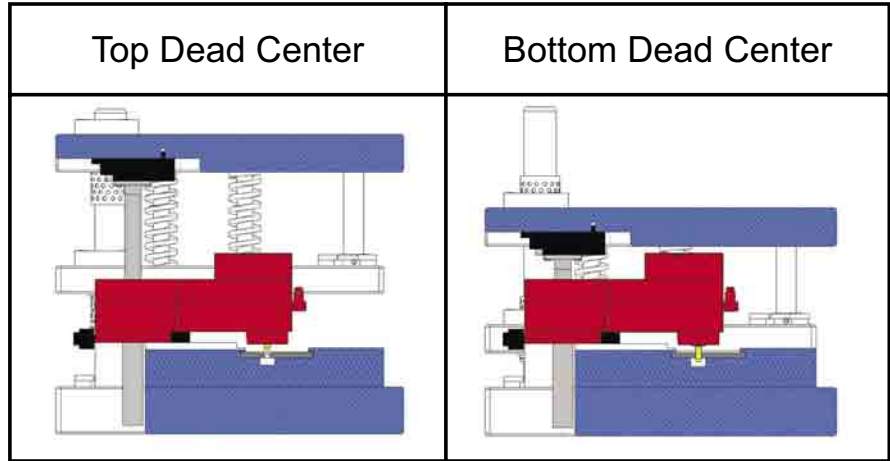


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SOLID MOUNTING

Tools with no strip lift (or under 1 mm).

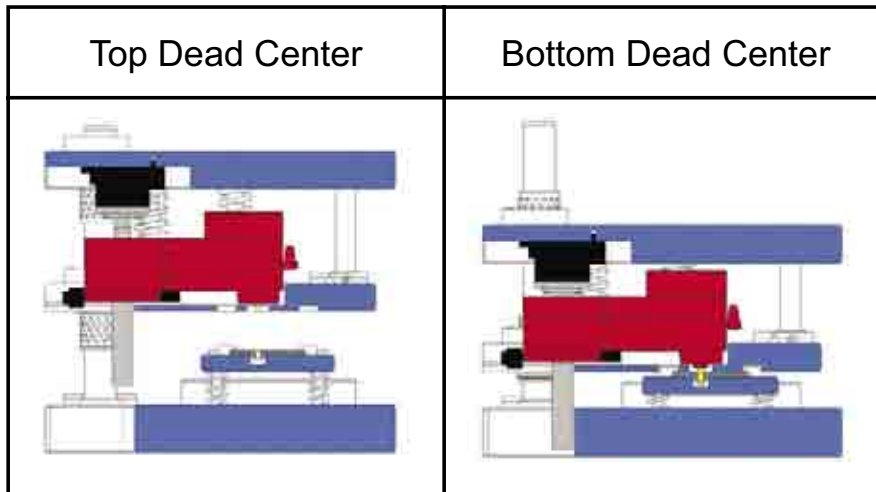
- ✓ Basic mounting.
- ✓ Requires a simplified tapping unit.



STRIPPER MOUNTING

Complex tools with no possibility for mobile support or solid mounting.

- ✓ Run the die with different press strokes with no modification of the tapping unit.
- ✓ Suit transfer presses.
- ✓ Requires a simplified tapping unit.
- ✓ Requires a transmission shock absorber.
- ✓ Tap operates during stripper stroke.



OTHER MOUNTINGS

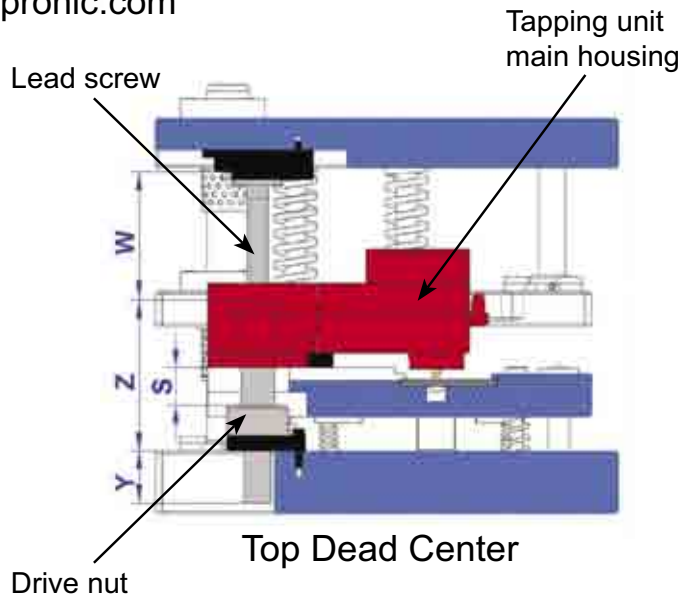
20 other configurations possible, please contact us.



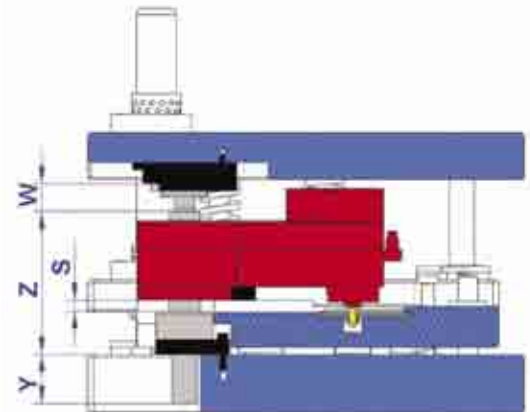
IN-DIE DESIGN CONSIDERATIONS *

* Mobile support example

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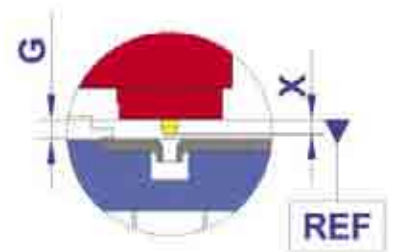
Top Dead Center



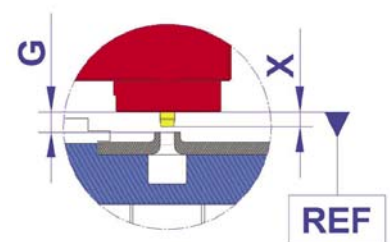
Bottom Dead Center

PARAMETERS

- G** = Distance between tapping unit lower face (REF) and top face of the material (or top of extrusion).
- Z** = Tapping unit drive nut height.
- W** = Lead screw's position in regard of the drive nut (at Top Dead Center, the lead screw must be engaged in the nut). PRONIC will provide you with W mini and W maxi.
- S** = Drive nut position in regard of the unit main housing. The drive nut must be engaged in the main housing. PRONIC will provide you with the S mini and S maxi.
- Y** = Lubrication tube (reservoir) length. For tapping unit lead screw lubrication.
- X** = Distance between the tip of the tap and the tapping unit lower face (REF).
To start your application, tap position has to be set up when the press is at Top Dead Center.
- Gear ratio** = Tap travel for 1 mm press stroke.



Extrusion down



Extrusion up



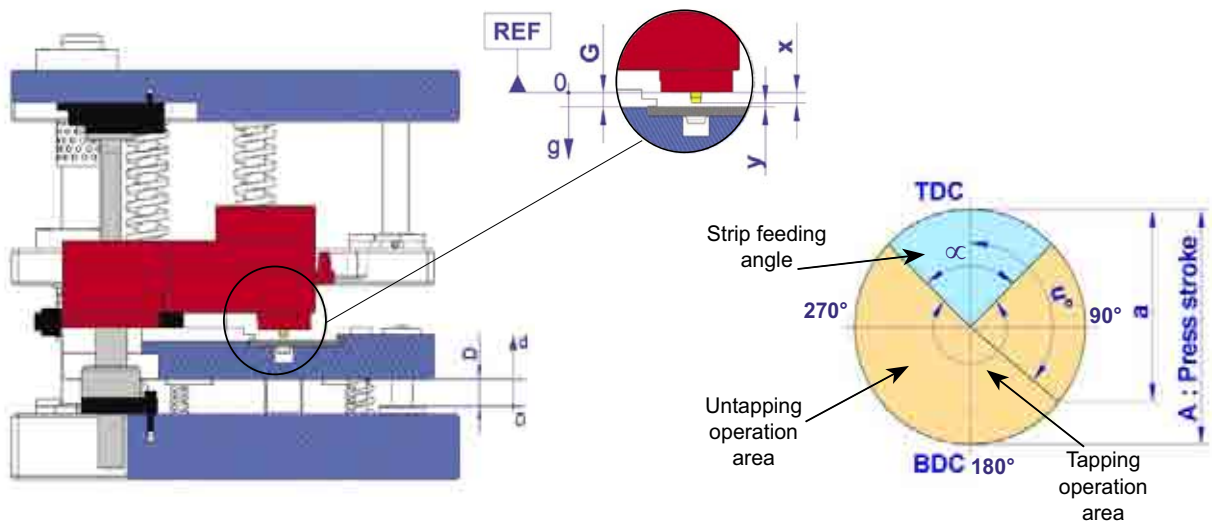
DESIGN PROCEDURE *

* Mobile support example

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1. Position the device above or underneath the material at recommended G distance (value provided by PRONIC).
2. Position the drive nut in the advised range: S Max - S Min.
3. Position the lead screw in the advised range: W Max - W Min.

KINEMATICS



Only for example :

TOTAL PRESS STROKE - A	250 mm	APPLICATION: DEPTH TO TAP: UNIT MODEL: GEAR RATIO:	1 x M10 x 1,50 10 mm M1D 0,0672
FEEDING ANGLE - α	60 °		
STRIP LIFT - D	30 mm		
STRIPPER TRAVEL - C	16 mm		
		Recommended speed	
		28 SPM	
DIST. DEVICE / STRIP - G	10 mm		
MOBILE SUPPORT TRAVEL - D	30 mm		

	u°	a	g	d	x	y
TOP DEAD CENTER	0	0,00	10,00	30,00	7,71	-2,29
END OF FEEDING	30	16,75	10,00	30,00	8,84	-1,16
STRIPPER CONTACT	129	204,00	10,00	30,00	21,41	11,41
STRIP DOWN - DIE LEVEL	150	234,00	10,00	0,00	23,43	13,43
BOTTOM DEAD CENTER	180	250,00	10,00	0,00	24,50	14,50
TAP FLUSH WITH MATERIAL	43	34,08	10,00	30,00	10,00	0,00

M1B - M1D TAPPING UNITS

The most popular single tap unit

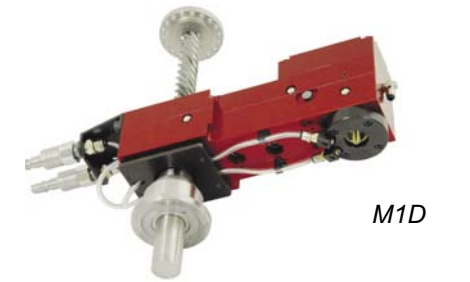


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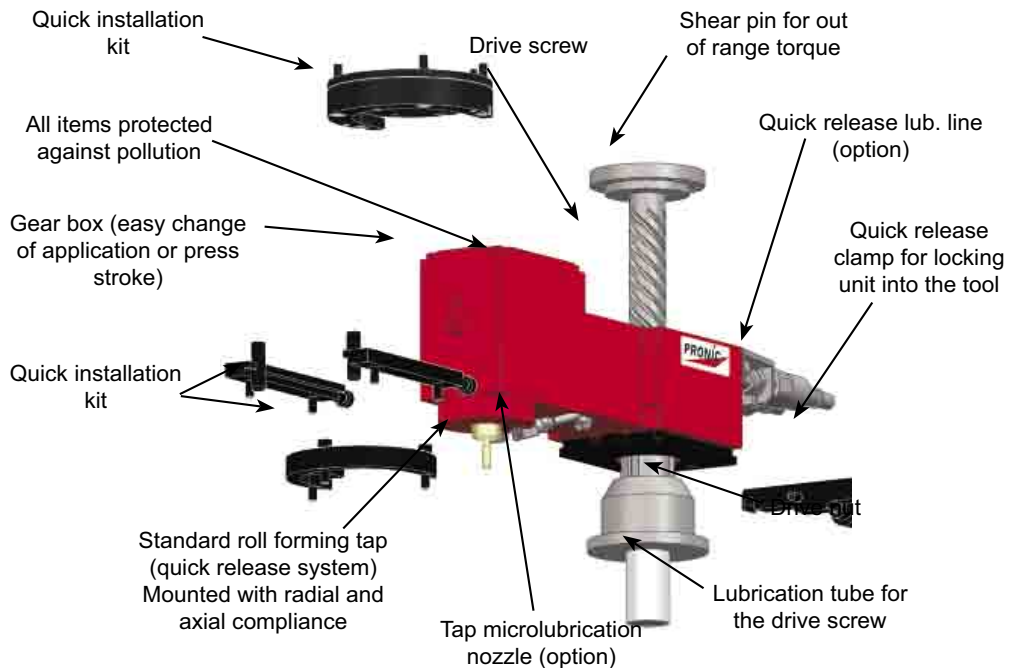
- ✓ **Flexibility**
 - . Different press strokes and tap diameters possible.
 - . Wide range of mounting configurations.
 - . Compact design.
 - . Simple installation.
- ✓ **Reliability**
 - . Cartridge system that equals same pitch as the tap assures quality threads.
 - . Low maintenance level.
 - . No pressure on the part necessary for the tapping operation.
- ✓ **Security**
 - . Misfeed protection that prevents tap breakage.
 - . Seals protecting from polluting particles.
- ✓ **Service**
 - . CAD files available (2D and 3D).
 - . Free checking of your tool design.



M1B



M1D



Options:

- . Shock absorber for stripper mounting configuration.
- . Stroke reducer for very short press strokes.
- . Simplified transmission for lower shoe or stripper mounting.
- . Built on tap microlubrication nozzles.
- . Horizontal tapping extension.



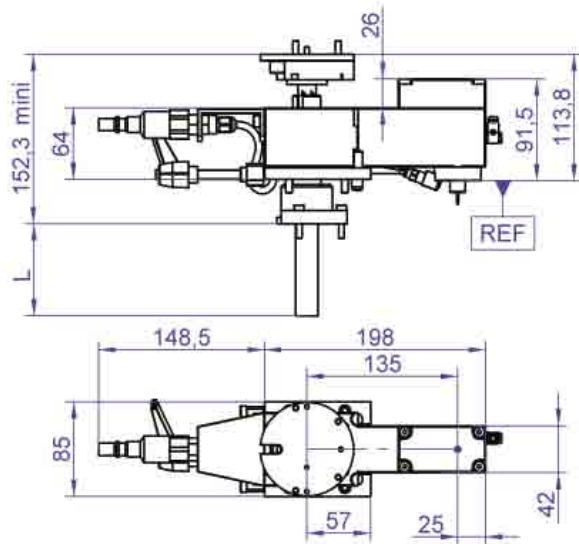
DIMENSIONS

(Specifications can change without notice - Please contact us)

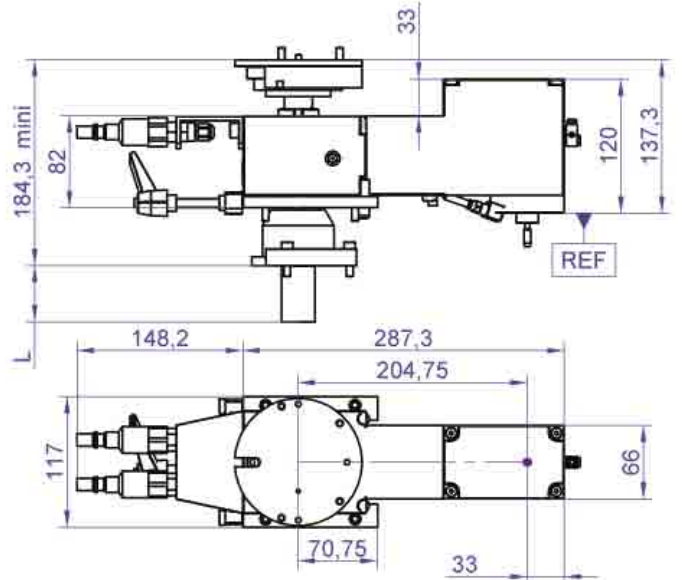
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M1B

M1D



M1B



M1D

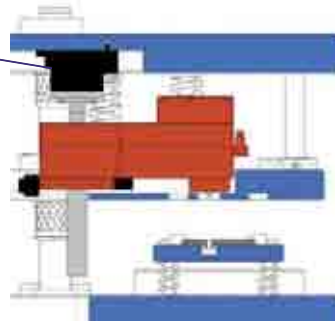
SPECIFICATIONS

Model	M1B	M1D
Tapping range	M2,5 - M6	M2,5 - M20
Press stroke - maximum	300 mm (12")	600 mm (24")
Strip lift value with mobile support configuration	0 to 80 mm (or more upon request)	

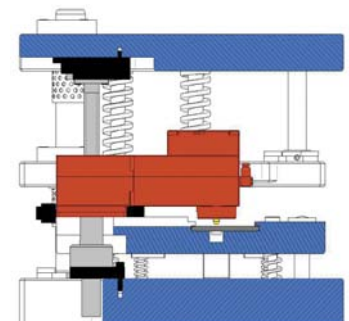
MOUNTINGS EXAMPLES

- . Solid mounting
- . Mobile support mounting
- . Stripper mounting
- . Tapping from top to bottom
- . Tapping from bottom to top
- . Horizontal tapping...

Schock absorber



Stripper mounting with shock absorber



Mobile support mounting



Horizontal tapping



MxB - MxD TAPPING UNITS

Total adaptability with removable heads

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✓ **Flexibility**

- . Different press strokes and tap diameters possible.
- . Wide range of mounting configurations.

✓ **Reliability**

- . Cartridge system that equals same pitch as the tap assures quality threads.
- . Low maintenance level.

✓ **Security**

- . Misfeed protection prevents tap breakage.
- . Seals protecting from polluting particles.

✓ **Service**

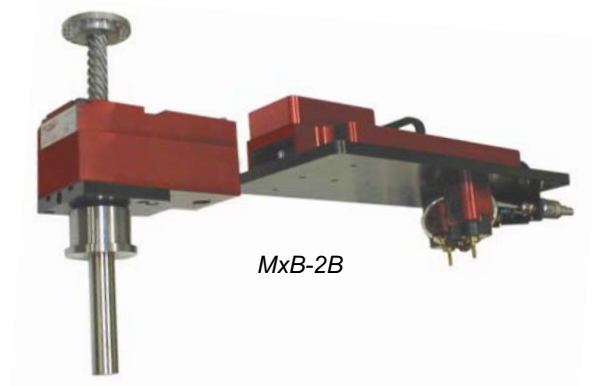
- . Free checking of your tool drawings.
- . CAD files available (2D - 3D).

✓ **Productivity**

- . For changing the taps, there's no need to remove the transmission.

✓ **Cost saving**

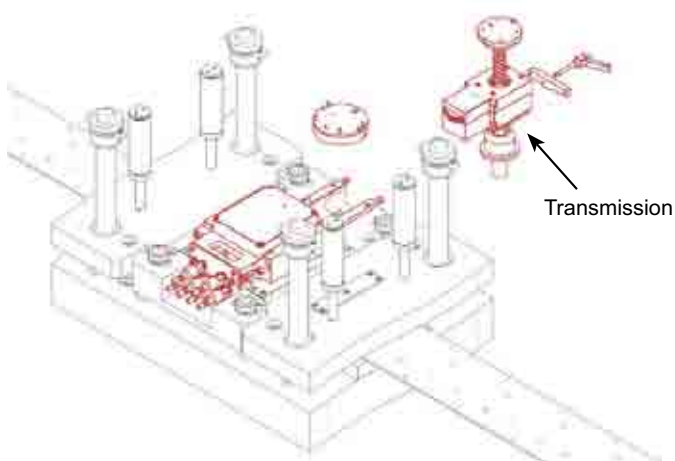
- . The transmission can be re-used for other applications (with other tapping heads) => buying a complete new unit is not necessary.
- . Require less tool space than multiple single tap units solutions.



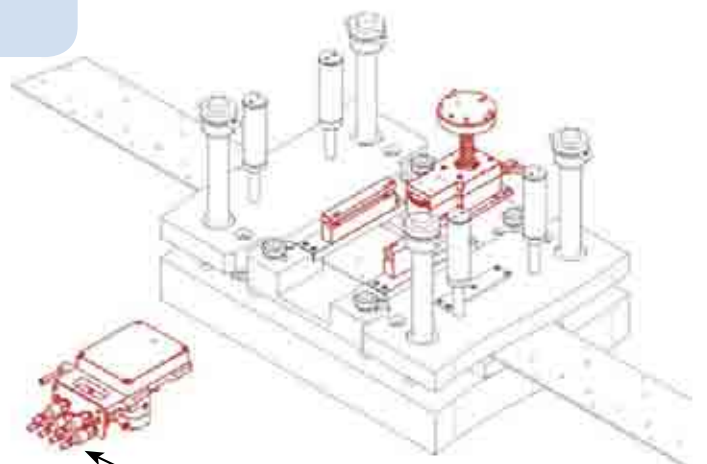
MxB-2B



MxD2-6D



Transmission



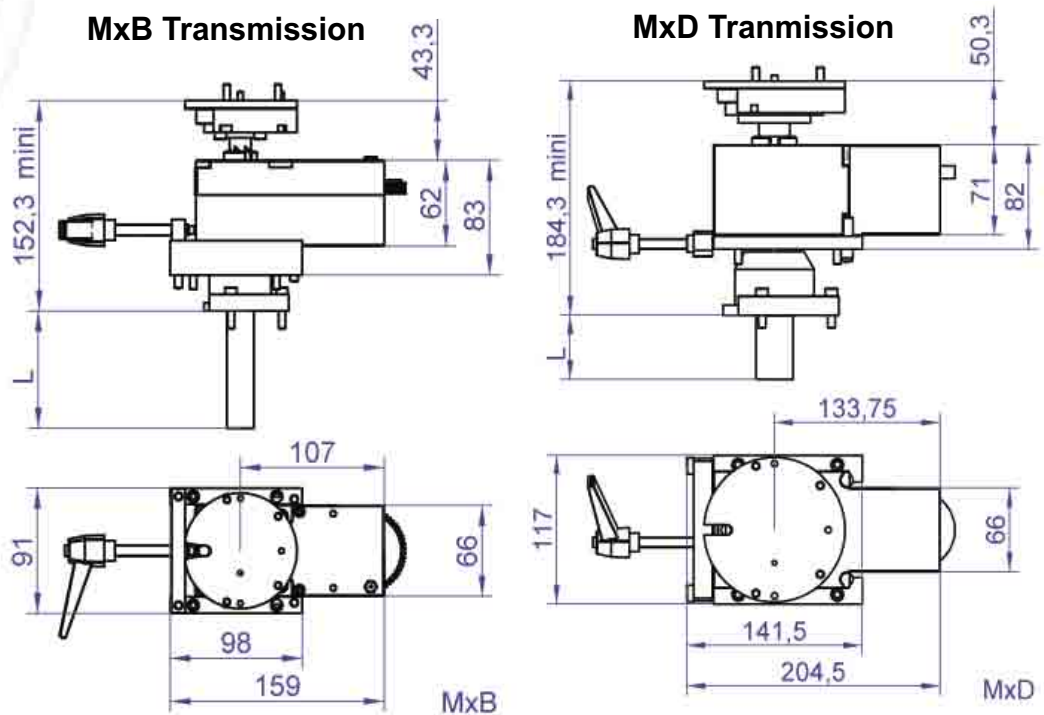
Removable head



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DIMENSIONS

(Specifications can change without notice - Please contact us)



Multi-cartridge heads will be designed depending on your specs.

SPECIFICATIONS

Multi-cartridge head

Model	B	D
Tapping range	M2,5 - M6	M2,5 - M20
Minimum center distance between taps	37,5 mm (Under this value, contact us)	48 mm (Under this value, contact us)

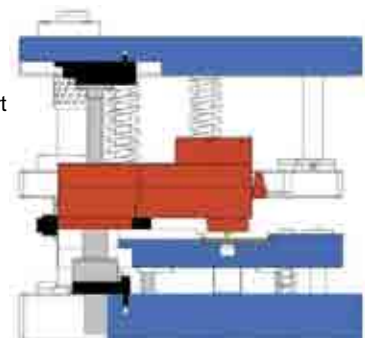
Transmission

Model	MxB	MxD
Press stroke maximum	300 mm (12")	600 mm (24")
Strip lift value	0 to 80 mm	

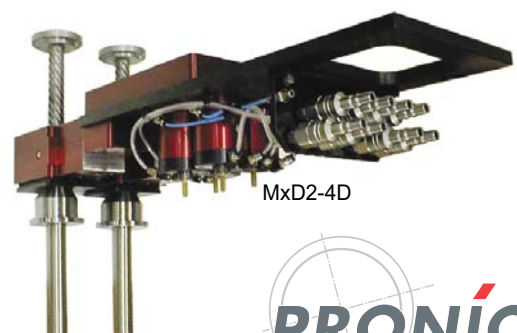
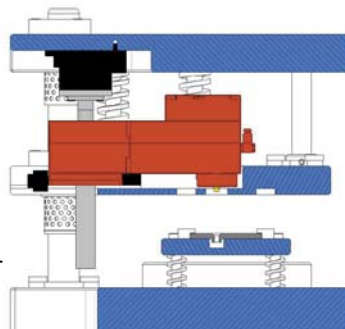
MOUNTINGS EXAMPLES

- . Solid mounting
- . Mobile support mounting
- . Stripper mounting
- . Tapping from top to bottom
- . Tapping from bottom to top
- . Horizontal tapping...

Mobile support mounting



Stripper mounting with shock absorber



MxD2-4D

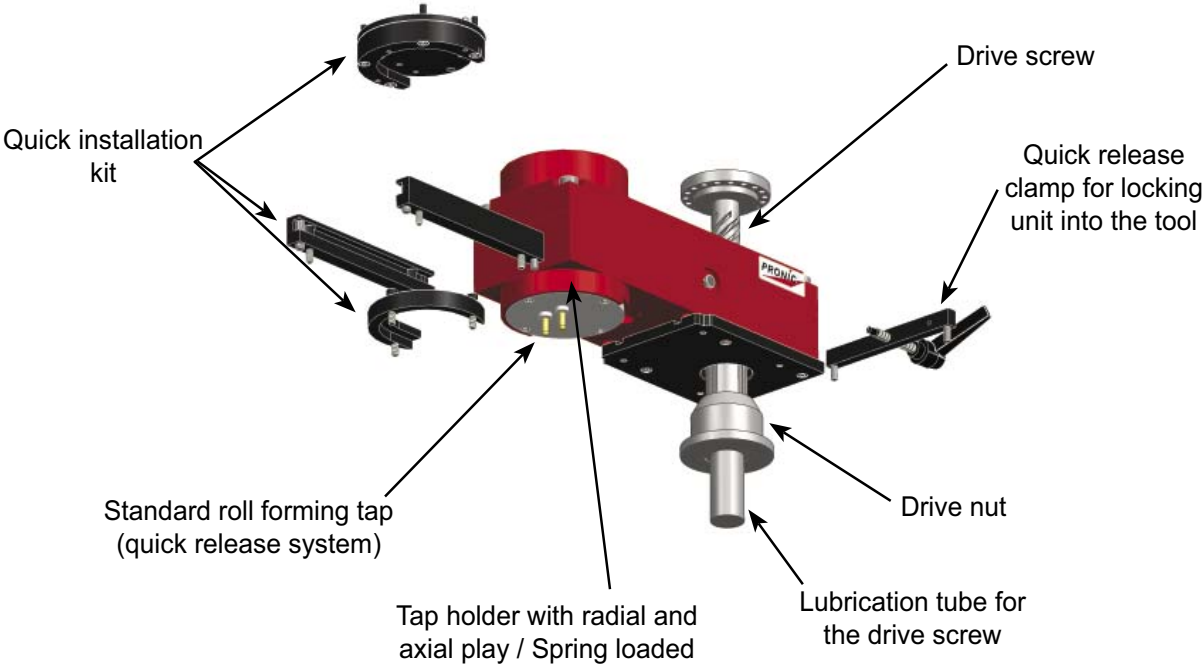
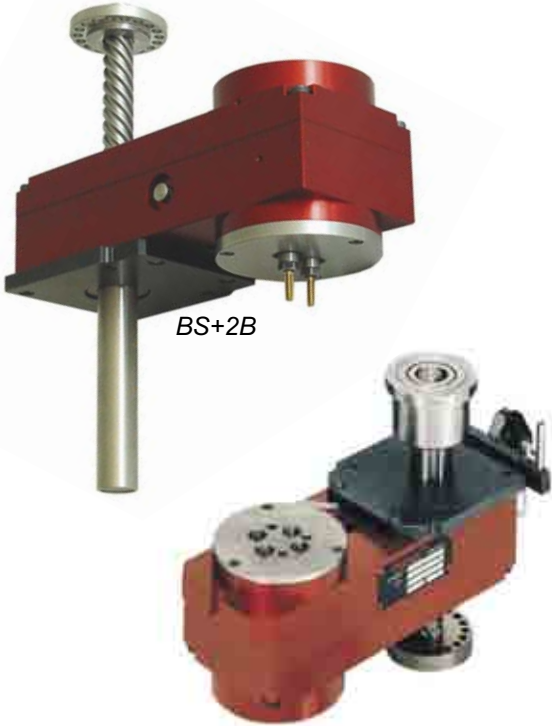


BxB - B+xB AND CxD TAPPING UNITS

The preferred tapping units for small tap center-distances or small taps.

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- ✓ **Reliability**
 - . The tap is controlled by its own system.
 - . Low maintenance level.
- ✓ **Adaptability**
 - . Tapping from different diameters possible with close center-distances.
 - . Compact design.
- ✓ **Security**
 - . Safety system for missing hole.
 - . Seals protecting from polluting particles.
- ✓ **Service**
 - . Free checking of your tool drawings.
 - . CAD files available (2D - 3D).



- Options:**
- . Shock absorber for stripper mounting configuration
 - . Stroke reducer for very short press strokes
 - . Simplified transmission for lower shoe or stripper mounting
 - . Built onto tap microlubrication nozzle



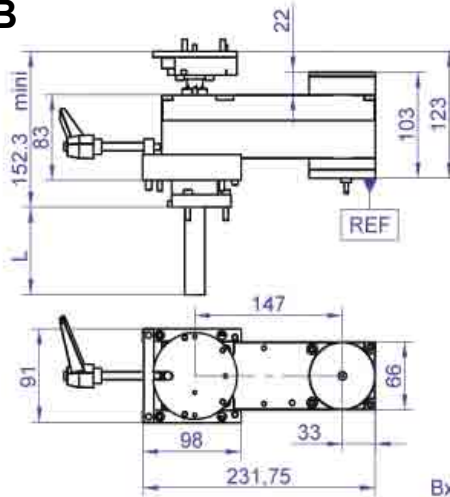


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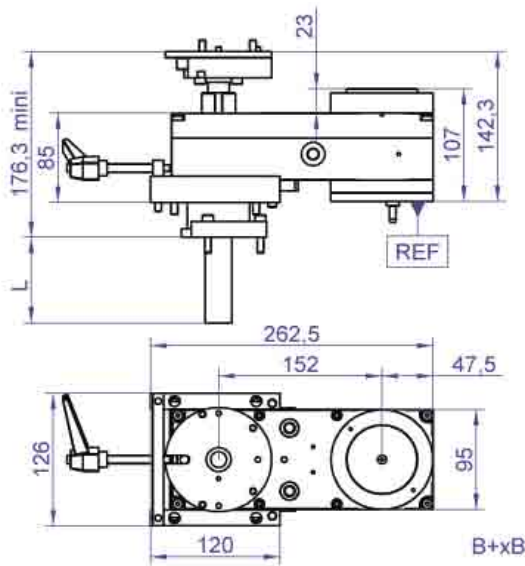
DIMENSIONS

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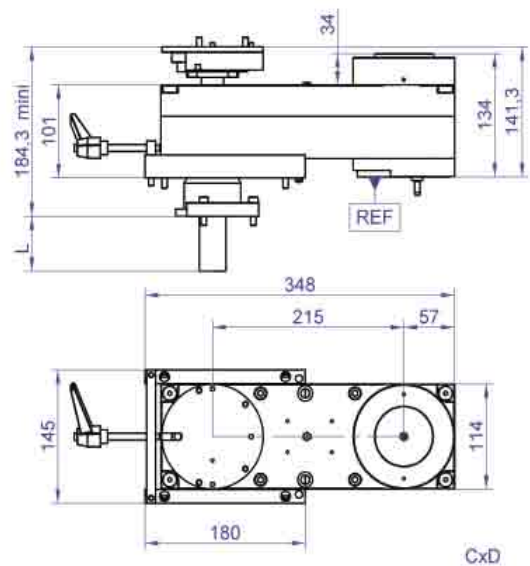
BxB



B+xB



CxD



SPECIFICATIONS

Model	BxB	B+xB	CxD
Tapping range	M0,6 to M5	M0.6 to M8	M0,6 to M10
Min / Max center-distance *	10 - 25	10 - 45	10 - 55
Strip lift value with mobile support mounting	0 to 80 mm		

* Depends on tap size

MOUNTINGS EXAMPLES

- . Solid mounting
- . Mobile support mounting
- . Stripper mounting
- . Tapping from top to bottom
- . Tapping from bottom to top

Stripper mounting with shock absorber

Mobile support mounting

