

# **Ultra Light™ Precision Stripping System**

## for Use on Thin or Decorative Materials

### PRECISION CONTROL OF STRIPPING FORCE FOR HIGH OUALITY PRECISION PUNCHING...

- Reduce spring pressure to eliminate unwanted sheet marking! Designed for thin or decorative materials!
- Perfect for high polish, textured, pre-painted or reflective metals where finish appearance is critical!
- Quieter punching in all applications! Reduce noise levels by as much as 10 decibels!
- Maximum control over total spring pressure! Combine two spring sets for nine pressure variations!

#### 1/2" A STATION



ULTRA LIGHT SPRING CANISTER ULTRA® STYLE MATE00276

ULTRA LIGHT SPRING CANISTER METRIC STYLE MATE00278

Ultra Light 1/2" A station canisters apply 70% of the stripping force of the standard Ultra Tec\* 1/2" A station canisters

ULTRA LIGHT SPRING ASSEMBLY MATE00038

MATEOOO38 is assembled with 9 medium pressure blue springs

#### 2" C STATION



(package of 9) HEAVY PRESSURE GOLD SPRINGS MATE00280 spring combinations compared to disc spring stack (%) 6 Blue 7% 9 Blue 10% 3 Gold 12% 3 Blue + 3 Gold 15% 6 Blue + 3 Gold 19% 6 Gold 24% 3 Blue + 6 Gold 27% 9 Gold 36%

Ultra Light stripping force

Chart 1

### 1 1/4" B STATION



SPRING CANISTER ULTRA® STYLE MATE00277



ULTRA LIGHT SPRING CANISTER METRIC STYLE MATE00279

Ultra Light 1 1/4 B station canisters apply 60% of the stripping force of the standard Ultra Tec\* 1 1/4" B station canisters

ULTRA LIGHT SPRING ASSEMBLY MATE00033

MATEOOO33 is assembled with 9 medium pressure blue springs

# 3 1/2" D STATION 4 1/2" E STATION



(package of 9)
MEDIUM HEAVY
PRESSURE
RED SPRINGS
MATE00281

Ultra Light stripping force spring combinations compared to disc spring stack (%) 3 Blue 6 Blue 10% 3 Red 11% 9 Rlue 15% 3 Blue + 3 Red 16% 6 Blue + 3 Red 21% 6 Red 22% 3 Blue + 6 Red 27% 9 Red 33%

Chart 2

#### INSTRUCTIONS FOR 2" C, 3 1/2" D AND 4 1/2" E STATION

#### To disassemble the holder to access the springs:

- 1. Use metric hex key (see chart) to loosen the four head bolts that hold the punch head onto the guide assembly.
- 2. Loosen each bolt 1/4 turn at a time, alternately loosening bolts symmetrically.

  Doing this allows a slow expansion of the springs until there is no preload pressure. The bolts will have some thread engagement when the springs are not preloaded. Failure to remove bolts in this manner may cause injury.
- 3. The punch head can now be removed.
- 4. Remove existing disc spring stack.
- 5. Clean quide surfaces.
- 6. Place the Ultra Light Spring Assembly onto the guide.
- 7. Reinstall the punch head.
- 8. Reinstall and tighten the head bolts. It is recommended to use a drop of Loctite 242 on each bolt and tighten to specific torque setting. (see chart)

Station	Hex Key	<b>Head Bolt</b>	Torque Nm	Torque inch lbs
2" C station head bolt	5mm	6mm	19	170
3 1/2" D station head bolt	6mm	8mm	45	410
4 1/2" E station head bolt	6mm	8mm	45	410

#### To change springs in the Ultra Light Spring Assembly:

- Place the Ultra Light spring Assembly in a vise and tighten slightly to relieve spring pressure.
- 2. Use 3mm hex key to loosen the three M5 shoulder bolts that hold the Ultra Light Spring Assembly together.
- 3. Loosen each bolt 1/4 turn at a time. Doing this allows a slow expansion of the springs until there is no preload pressure. The bolts will have some thread engagement when the springs are not preloaded.
- 4. Remove the upper portion of the Ultra Light Spring Assembly.
- Modify the spring configuration symmetrically using any option listed on Chart 1 for 2" C station or Chart 2 for 3 1/2" D and 4 1/2" E station.
- 6. Replace the upper portion of the Ultra Light Spring Assembly.
- 7. Reinstall and tighten the shoulder bolts to 62 inch lbs (6.9 Nm) of torque. It is recommended to use a drop of Loctite 242 on each bolt before tightening.



mate.com

# **MATE PRECISION TOOLING**

## **United States**

1295 Lund Boulevard · Anoka, Minnesota 55303 Phone 763-421-0230 · 800-328-4492 · Fax 763-421-0285 · 800-541-0285

# **United Kingdom**

Unit 3B Hadrians Way · Glebe Farm Industrial Estate · Rugby, Warwickshire CV21 1ST Phone 01788 536987 · 0800-413-408 · Fax 01788 568042 · 0800-413-409

Germany
Im Heidegraben 10 ⋅ 61440 Oberursel
Phone 06171 924202 ⋅ Fax 06171 924240

## Sweden

Ängsvägen 4 · 443 42 Gråbo Phone 46-302-45140 • Fax 46-302-40250

# Malaysia

33-18-3 Sri Penaga · Jalan Medang Serai · Bukit Bandaraya · 59100 Kuala Lumpur Phone 60-3253-1390 • Fax 60-3253-1568