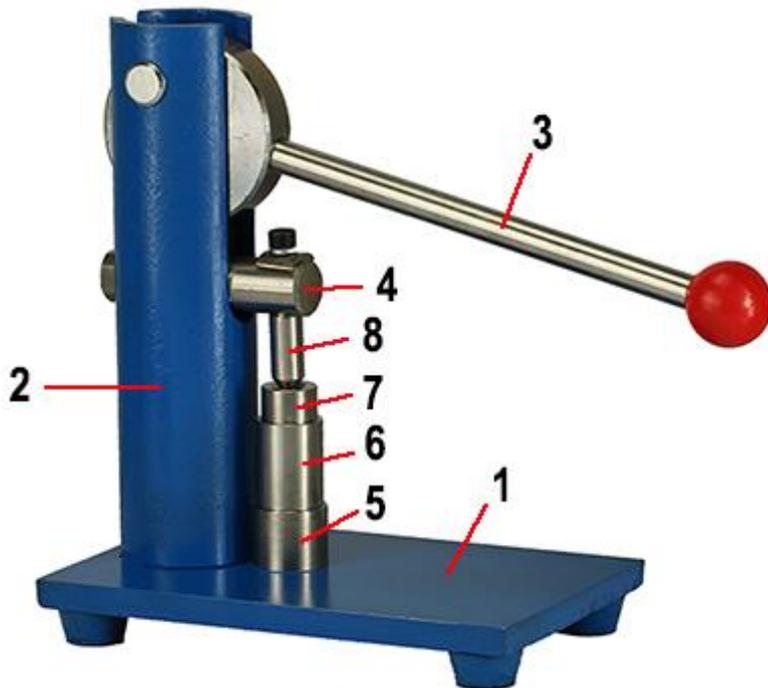




Technical Support Bulletin

Micro-Tec MTB Manual Tablet Press

Products #52-007203, 52-007206, 52-007208, 52-007210 and 52-007212



- 1 – Tablet press stand
- 2 - Tablet press pillar assembly
- 3 – Tablet press handle
- 4 - Tablet die punch holding bar
- 5 – Tablet die support
- 6 - Tablet die base part
- 7 – Tablet die mould
- 8 – Tablet die punch

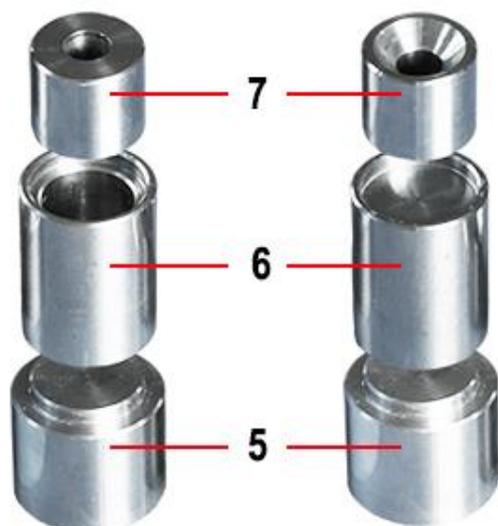
Description

The Micro-Tec MTB Manual press is a low volume manual tablet press with integrated tablet die mould, tablet die base, tablet punch and die support. Overall size is 185 x 120 x 210mm with a handle length of 195mm. An integrated compression spring forces the tablet punch up and keeps the punch above the tablet die mould. Leverage of the handle is approx. 4-5 x. Weight is 4.6kg; made from carbon steel. It is intended for making tablets of materials



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in powder form, so that the tablets can be analysed in an analytical SEM or X-ray equipment. For tablet integrity, it might be needed to add an “adhesive” such as wax. This needs to be mixed with the material in powder form. The Micro-Tec MTB manual tablet press is available for making round tablets with diameters of 3, 6, 8, 10 and 12mm.



Transport position

After reposition, by turning around 6 and 7



Alignment in 2 directions

Installation:

- Unpack the parts and remove all packaging materials. Discard the packaging material in a safe way.
- Place the tablet press on a solid and level support such as a lab bench
- Remove the strap holding the handle (3) down (hold down the handle (3) against the internal spring)
- Move the handle (3) in the fully upright position: the tablet punch (8) moves upward and remove tablet dies
- Warning: the tablet die parts are shipped to protect the tablet die punch and need repositioning
- Reposition the tablet die base part (6) with the hollowed out side downwards on the tablet die support (5); top of the tablet die base part (6) is flat with a rim and should be upwards
- Place the tablet die mould (7) on the base part; funnel shaped side up
- Carefully check if the tablet punch (8) and mould (7) are aligned; if not adjustment is needed.
- The tablet die punch (8) and tablet die stack (7/6/5) can be aligned in 2 directions:
 1. Circular by loosening the socket cap screw under the base (1) and turning the pillar assembly (2) to align with the tablet die support (5). If aligned, re-fasten the socket cap screw.
 2. Linear by moving the die punch (8) back- or for-wards by gently tapping the die punch holding bar (4) with a soft capped hammer. This adjustment should be checked regularly since it is moving part.

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Operation of the Micro-Tec tablet press

- We suggest wearing examination gloves to prevent contamination when handling chemicals
- Clean tablet die punch, mould and support (8, 7, 6) before filling with powder
- Move the handle (3) in the fully upright position
- Place tablet die base (6), with its flat side up, on table die support (5)
- Place tablet die mould (7) on tablet die base part (funnel side up)
- Fill tablet die mould (7) with required amount powder or powder mixture
- Remove excess powder and move hand away from tablet die assembly ((5,6,7)
- Lower tablet press handle (3) to compress powder and to form the tablet with the tablet die punch (8)

- Press firmly
- After forming the tablet, move the handle (3) in the fully upright position to move the die punch upwards (8)
- Lift tablet die mould (7) and remove tablet
- If tablet sticks in the mold (7), pressing against the punch (8) might dislodge the tablet
- If tablet firmly sticks in the mould (7) an anti-sticking spray might be used before filling the tablet mould, however this would potentially contaminate the tablet.

Maintenance

The Micro-Tec MTB Tablet press requires regular maintenance, depending on usage

- Check alignment of mould stack (5,6,7) and punch (8) and re-align if needed
- Lubricate tablet press pillar assembly (2) with a small amount of lithium grease
- Keep tablet press clean and remove powder material
- Punch, mould and die base are made from carbon steel and can be cleaned with acid free solvents

Warning

Do not use any chemicals which are not compatible with steel parts!

TSB 52-007203 Micro-Tec MTB Manual Tablet Press, 2023-0823 Revision 1