WALTHER TROWAL!

M-TMD 4/2 & 6/2

MINI DRAG FINISHING MACHINE

Range M-TMD 4/2 and 6/2

Applications

The drag finishing systems developed by TROWAL represent a special technology for surface finishing of:

- high-value, delicate components
- components with many contours and complex geometry
- extremely hard materials which are difficult to machine

The applications for the TROWAL drag finishing technology range from grinding and edge radiussing, all the way to surface smoothing and high gloss polishing of decorative parts. Processing examples include:

- end mills
- drill bits
- milling cutters
- cylinder roller cutters
  made of hard metal carbide or CBN

Functional Principle

The components are attached to special fixtures and "dragged" in a planetary movement through a bed of grinding or polishing media.

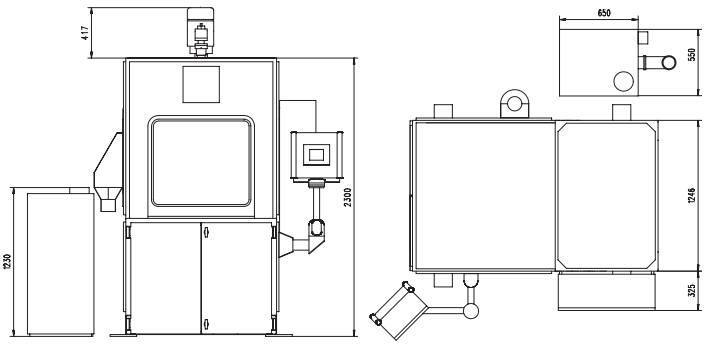
- geometrically precise radii with uniform rotation of the spindle
- adjustable grinding performance due to variable immersion depth
- components cannot touch or damage each other during the finishing process

Technical Characteristics

- main drive by means of robust geared motor
- raising / lowering of the rotary station into and out of the work bowl
- quick and easy change of media, e.g. from grinding to polishing media via simple replacement of movable work bowls
- integrated, easy-to-handle industrial PC with touch screen
- individual speed adjustment of all drives
- optional upgrade for automatic loading and unloading of the components

Processing aim

- production of defined and reproducible edge radiussing on hard metal carbide tools
- improvement of the surface quality within the chip groove and free surfaces of hard metal carbide tools
- improvement of the uptime of tools when processing difficult to machine materials
- improvement of the surface for subsequent coating processes
- smoothing of the surface after coating



Advantages

- precise edge radiussing with extremely short processing times
- fully reproducible process
- surface improvement of the free surfaces and the chip groove
- improvement of the durability of surface coatings
- extreme cost reduction due to considerably longer uptime of the tools

Equipment

- rotary disc driven via main drive
- work stations driven via separate motor
- RPM and direction of rotation of main drive and work stations independent from each other
- main drive and work stations with infinitely variable speed drives
- precise adjustment of immersion depth into the mass of grinding media

Tooling stations

- pneumatic tooling stations for quick loading and unloadin
- special chucks for tools
- different shaft diameter (automatic mode)
- optional four or six tooling stations

Technical data	M-TMD 4/2	M-TMD 6/2
Dimensions	1700x1600x2550	2100x1800x2800
Weight	1580 kg	2580 kg
Inner diameter / Volume of work bowl	600 mm; 100 litre	800 mm; 140 litre
RPM range - main drive	5-30 RPM	10-50 RPM
RPM range - fixturing device	5-15 RPM	5-15 RPM
Max. immersion depth	300 mm	350 mm
Diameter of components	3-21 mm	3-30 mm
Special fixturing device	Upon request	Upon request
Dust removal	optional	optional
Conditioning of grinding media	optional	optional

WALTHER TROWAL

Walther Trowal GmbH & Co. KG
Rheinische Straße 35-37 I D-42781 Haan
Tel. +49(0)21 29-5 71-0 I Fax +49(0)21 29-5 71-2 25
info@walther-trowal.de I www.walther-trowal.de