

**Multi Vibrator MV**

TROWAL MASS FINISHING TECHNOLOGY

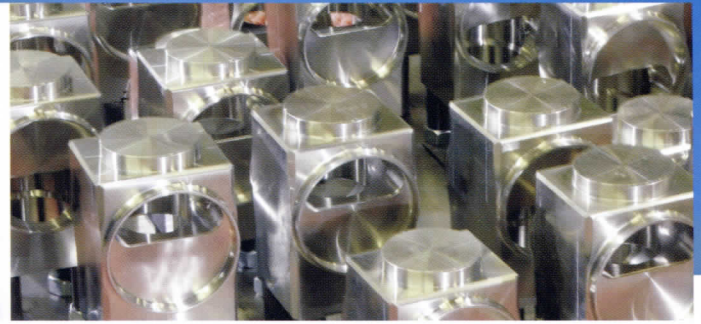
Multi Vibrator MV

Versatile and efficient

The MV machine range is perfectly suited for fine grinding and polishing of parts with difficult and complex contours. High reproducibility and a homogenous grinding pattern of the parts to be processed characterize this machine. Quality process results and smoothness in intricate corners, complex shapes or into difficult to access areas can be achieved automatically, efficiently and with the required precision.

How it works

The parts to be processed are using a clamping fixture at the bottom of the work bowl. The work bowl is then filled with media which is adapted to the process to be applied. Next, three specially configured vibratory motors start, which make the mass of media move in a defined way. Due to the relative movement between parts and media, the grinding/polishing process takes place. Since the parts are fixed to the bottom of the work bowl, the result is a high intensity process without damage of the parts.



Consumables

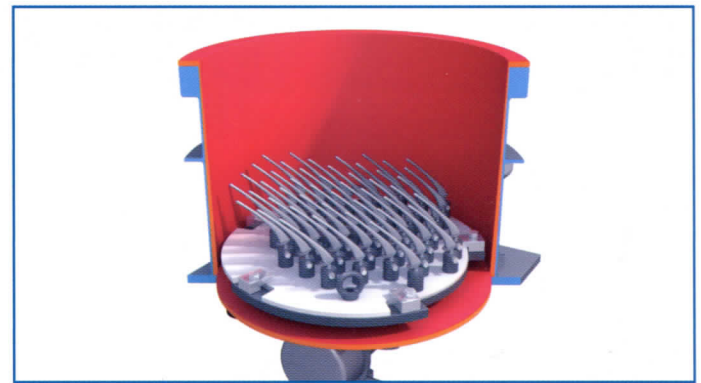
Optimum processing results are achieved by the right selection of consumables, such as media and compound. These are perfectly adapted and used by our test lab according to your individual requirements.

Part fixture

For easy handling of the parts, two different clamping systems are available. For the mechanical clamping system, a device is specially produced for the parts to be processed. For the electro-magnetic clamping system, the parts are quickly and easily fixed on the bottom of the work bowl by means of a magnetic plate.



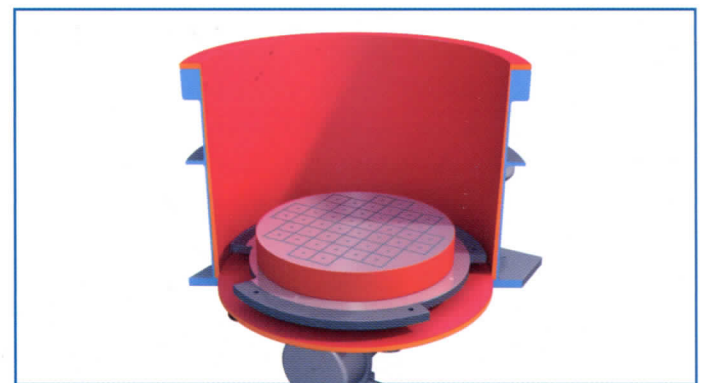
Adjustable imbalance motor



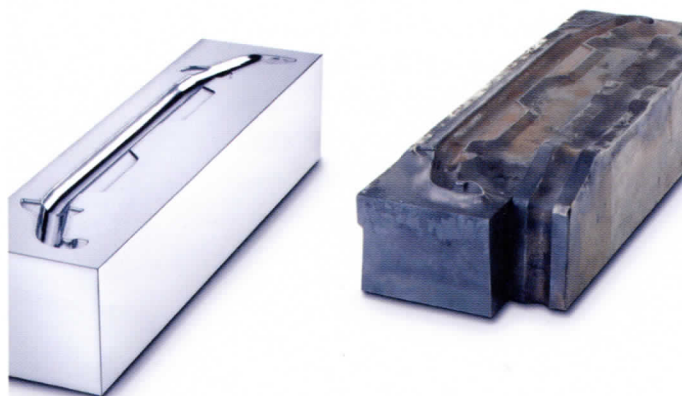
Mechanical clamping system (fixured implants shown)

Imbalance motors

Two or three imbalance motors are fixed to the work bowl, which can be adjusted according to the special finishing process (amplitude, orientation, speed, direction), so that an optimum result is reached with an economical processing time.



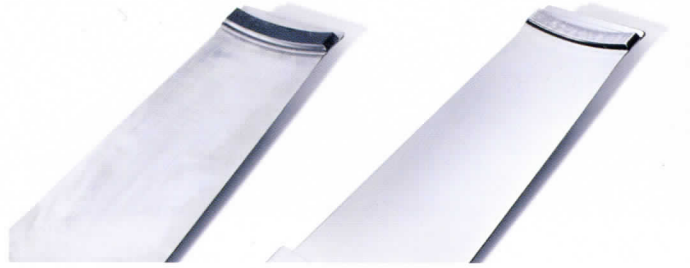
Electro-magnetic clamping system



Cleaned and refurbished forging molds



Smoothed die cast mold

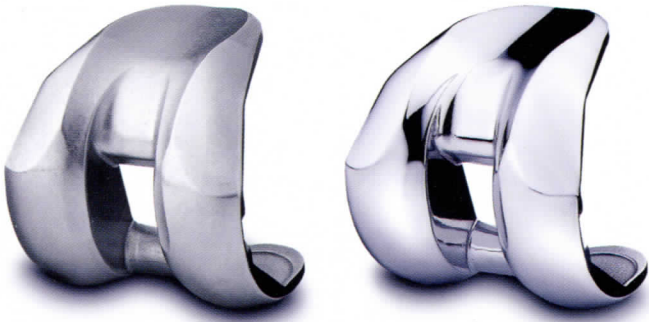


Typical fields of application are:

- Smoothing of forging molds
- Polishing of die-cast molds
- Deburring of complex components (inside and outside)
- Grinding and polishing of implants
- Smoothing of turbine blades
- Refurbishing and overhaul of used tools
- Grinding and polishing of wheel rims
- and many more similar applications...



Fixed con-rods for motor sport



Pre-ground and polished knee implant

Advantages of automatic processing

- uniform and reproducible processing quality of the grinding and polishing process results
- best results also achievable in difficult to access areas
- absolutely uniform grinding pattern
- no damage to parts
- preservation of sensitive part contours and features
- 24-hour unmanned operation possible



Polished aluminum casting



Mass finished compressor wheel

	MV 21	MV 25	MV 32
A	1,250	1,480	1,910
B	925	1,030	1,270
C	1,118	1,400	1,560
D	850	900	1,145
E (approx.)	616	750	1,000
F	470	600	750
G	612	700	700
H	1,040	1,150	1,560

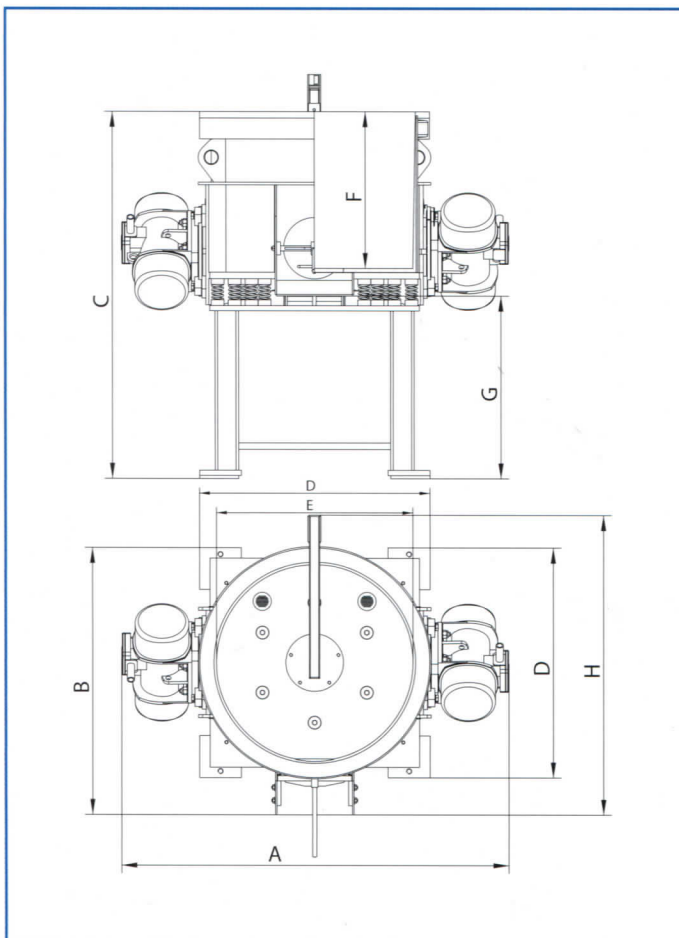
Dimensions (in mm)

	MV 21	MV 25	MV 32
Weight empty (kg)	475*	780*	1,420*
Electrical load (kVA)	3.5	5.0	13.0
Filling of ceramic media (kg)	230	470	950
Filling of plastic media (kg)	150	310	630
Max. usable volume (liter)	130	260	530
Max. part size** (mm)	570*	700*	950*
Max speed*** (RPM)	3,000	3,000	3,000

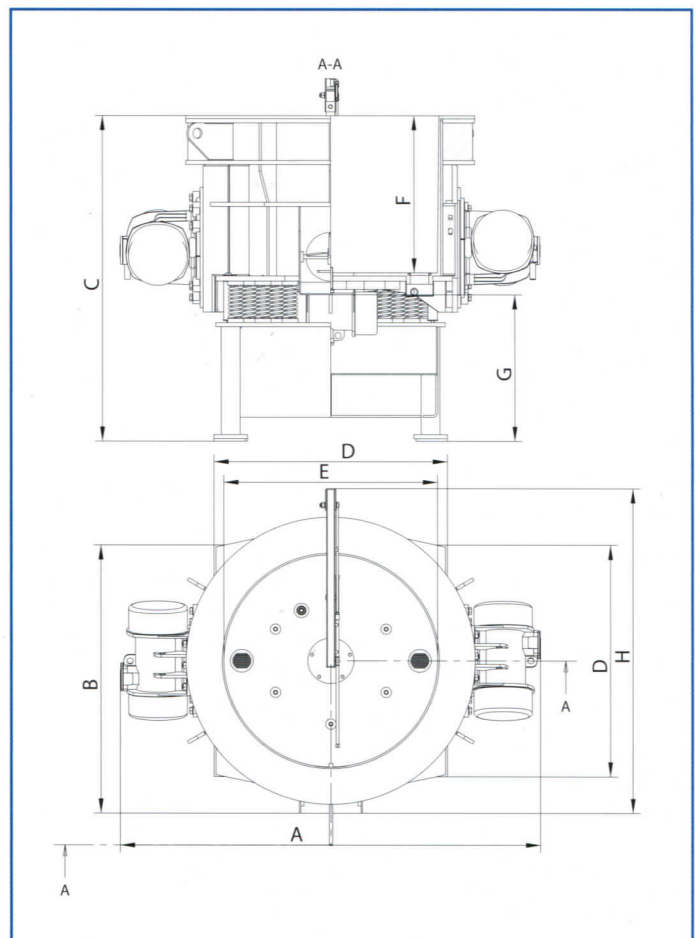
* approximately

** measured diagonally

*** infinitely adjustable speed by means of frequency converter



MV 21 / 25



MV 32