



TROWAL SURFACE FINISHING Tub vibrators – model range TFM

APPLICATIONS

Tub vibrators with their rectangular work bowl are ideal for finishing mid size to large parts, even, depending on the size of the work bowl, very large parts. Normally, the parts are placed into the work bowl loose where they are freely rotating within the processing media.

DELICATE PARTS

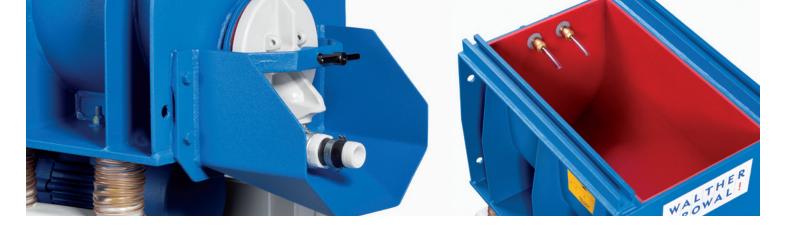
Parts which cannot touch each other during the process because of the risk of part impingement are either clamped with special work piece fixtures, or they are placed individually in separate processing chambers in the work bowl created by special dividers.

ALL-PURPOSE MACHINES

Tub vibrators are "all-round" mass finishing machines that are used for a broad range of applications:

- General deburring
- Heavy duty radiusing (edge breaking)
- Surface smoothing
- Polishing
- De-greasing
- Surface cleaning
- Pickling, descaling, derusting

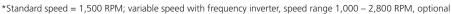
WE IMPROVE SURFACES



	49/21	58/32	83/37	110/46	165/46	120/56	220/56	120/91	150/125	210/150
Α	210	320	370	460	460	560	560	910	1,250	1,500
В	140	190	210	295	295	360	360	455	625	450
C	245	350	395	525	525	640	640	910	1,250	1,200
D	490	570	820	1,100	1,650	1,200	2,200	1,200	1,500	2,100
Е	532	622	880	1,160	1,710	1,260	2,264	1,274	1,580	2,180
F	200	200	200	250	250	250	250	260	260	260
G	620	625	630	665	665	680	665	720	850	1,050
Н	530	530	550	560	560	594	560	630	725	930
1	732	860	1,120	1,435	1,985	1,525	2,525	1,555	1,860	2,500
J (empty)	938	1,040	1,130	1,285	1,280	1,413	1,400	1,675	2,175	2,330
K	540	670	710	850	850	1,290	980	1,300	1,980	2,150
Outlet Ø	140	140	140	200	200	200	200	320	320	320
No of Outlets	1	1	1	1	2	1	2	1	2	2

Dimensions in mm

	49/21	58/32	83/37	110/46	165/46	120/56	220/56	120/91	150/125	210/150
Drive power – standard version (kW)*	1 x 0.37	1 x 0.4	1 x 1.0	1 x 2.0	2 x 2.0	1 x 3.5	2 x 3.5	1 x 4.5	1 x 7.0	2 x 7.0
Drive power – ball burnishing version (kW)*	1 x 0.75	1 x 0.75	1 x 1.2	1 x 3.0	2 x 3.5	1 x 7.0	2 x 7.0	n.a.**	n.a.**	n.a.**
Lining thickness (mm)	10	12	15	20	20	22	22	25	25	25
Usable volume (I)	15	42	80	165	250	270	485	700	1,650	3,300



^{**}Not available for ball burnishing

HIGHLY COST EFFECTIVE EQUIPMENT

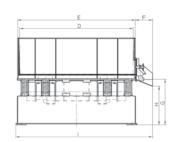
Despite their sturdy design the Trowal TFM tub vibrators are competitively priced and offer an excellent value relative to their purchase price.

CROSS SECTIONAL WORK BOWL PROFILE

The cross section of the TFM tub vibrators is U-shaped with straight walls, thus providing easy access for loading large components across the complete work bowl width. A triangular wedge built into the side wall of the work bowl for better rotation of the part/media mass is available as an option.

DRIVE SYSTEM

The induced vibratory energy in the TFM machine range is generated with proven standard foot mounted vibratory motors. Depending on the work bowl length the TFM tub vibrators are equipped with either one or two vibratory motors. All our vibratory motors are lifetime lubricated.





BALL BURNISHING AND PRESSURE DEBURRING

The smaller TFM models are also suitable for ball burnishing and pressure deburring with steel media. The ball burnishing versions feature

- a specially re-enforced work bowl
- vibratory motors with a higher drive power
- Acid resistant work bowl lining and painting of the complete machine with acid resistant paint



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TROWAL SURFACE FINISHING Tub vibrators – model range TMV

APPLICATIONS

Tub vibrators with their rectangular work bowl are ideal for finishing mid size to large parts, even, depending on the size of the work bowl, very large parts. Normally, the parts are placed into the work bowl loose where they are freely rotating within the processing media.

DELICATE PARTS

Parts which cannot touch each other during the process because of the risk of part impingement are either clamped with special work piece fixtures, or they are placed individually in separate processing chambers in the work bowl created by special dividers.

ALL-PURPOSE MACHINES FOR HEAVY DUTY APPLICATIONS

The TMV tub vibrators are especially powerful "all-round" mass finishing machines that are used for a broad range of applications:

- General deburring
- Heavy duty radiusing (edge breaking)
- Surface smoothing
- Polishing
- De-greasing
- Surface cleaning
- Pickling, descaling, derusting

WE IMPROVE SURFACES



	175/41	260/41	345/41	175/55	260/55	345/55	175/65	260//65	345/65	175/85	260/85	385/85
Drive power – standard version (kW)*	5.5	7.5	7.5	5.5	7.5	11.0	5.5	7.5	11.0	11.0	15.0	18.5
Drive power – ball burnishing version (kW)*	7.5	11.0	15.0	11.0	15.0	18.5	15.0	n.a.**	n.a.**	22.0	n.a.**	n.a.**
Quantity of imbalance units	2	3	4	2	3	4	2	3	4	2	3	4
Lining thickness (mm)	15	15	15	22	22	22	25	25	25	25	25	25
Usable volume (l)	210	310	410	375 !!!!!!!!!!!!!!!!!!!!	555 	735	525	775	1,030	895	1,175 !!!!!!!!!!!!!!!!	1,760

^{*}Standard speed = 1,500 RPM; variable speed with frequency inverter, speed range 1,000 – 2,800 RPM, optional **Not available for ball burnishing

	175/41	260/41	345/41	175/55	260/55	345/55	175/65	260/65	345/65	175/85	260/85	345/85
Α	410	410	410	550	550	550	650	650	650	850	850	850
В	515	515	515	661	661	661	785	785	785	885	885	885
С	1,696	2,546	3,396	1,682	2,532	3,382	1,676	2,526	3,376	1,676	2,526	3,376
D	1,750	2,600	3,450	1,750	2,600	3,450	1,750	2,600	3,450	1,750	2,600	3,450
Е	306	306	306	306	306	306	306	306	306	306	306	306
F	ca. 450	ca. 420	ca. 435	ca. 380	ca. 365	ca. 370	ca. 370	ca. 350	ca. 340	ca. 360	ca. 340	ca. 360
G	670	676	670	471	471	471	583	599	700	775	775	775
Н	2,685	3,535	4,385	2,685	3,580	4.430	2,670	3,520	4,435	2,685	3,535	4,385
1	1,320	1,320	1,320	1,390	1,390	1,390	1,500	1,500	1,600	1,740	1,740	1,740
J	1,380	1,380	1,380	1,580	1,580	1,580	1,680	1,680	1,800	2,000	2,000	2,000

Dimensions in mm

IDEAL FOR HEAVY DUTY MASS FINISHING APPLICATIONS

The specially designed Multivib vibratory drive system generates a very dynamic, homogeneous rotary movement of the part/media mass over the complete work bowl length. The Multivib system prevents any "dead" areas in the work bowl with less intensive movement and produces the desired finishing results in lower cycle times.

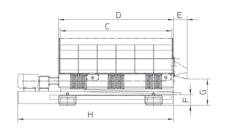
IDEAL FOR THE TOUGHEST BALL BURNISHING PROCESSES

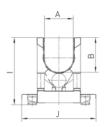
Because of their powerful vibratory drive system and their heavy-duty work bowl construction the TMV machines are the ideal solution for the most challenging ball burnishing and pressure deburring tasks utilizing steel media.

A WIDE RANGE OF MODELS TO CHOOSE FROM

The TMV machine range is designed in a modular fashion allowing the combination of different work bowl widths and lengths:

- Work bowl widths are available in 410, 550, 650 and 850 mm and
- Work bowl lengths are available in 1,750; 2,600; 3,450; 4,300; 5,150; 6,000 and 6,850 mm







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