

ORBITAL RWO-D

MSF
MASS
SURFACE FINISHING

OUR EXPERIENCE, YOUR RESULTS





ORBITAL VIBROFINISHING PROCESSES WITH MANUAL SEPARATION

**ROLL
WASCH**

ORBITAL
RWO-D



ORBITAL
A RANGE OF
MACHINES FOR
EVERY PRODUCTION NEED



ORBITAL
A RANGE OF
MACHINES FOR
DRY PROCESSES
TOO

ORBITAL
RWO-D



ORBITAL
FOR INNOVATIVE
VIBRATORY FINISHING PROCESSES
WITH MICROFLUID TECHNOLOGY





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Orbital machines stand out for their operating simplicity, as the working tank is manufactured for hand operated loading and unloading; the man sized tank edge allows the loading, unloading and control operations.

The abrasion resistant linings of the Orbital machines are made with high quality polyurethane, hot poured between the tank and a mould to grant uniform thickness with a $\sim 90\div 94$ Sha hardness.

The new series offers for all the models the possibility to choose among two manufacturing levels, respectively: PRO (Professional) and GM (Global Machine) that, under the same overall dimensions and geometry, give the possibility to satisfy different budget requirements. The vibrating motors of the ORBITAL series are of vertical monobloc type, manufactured according to original Rollwasch design, with suitable power depending on the loading capacity of each model, with possibility of angular and eccentric adjustments. Each machine of the Orbital series is equipped with a door for the total unloading of the contents: on request it is possible to supply the machine with a rectangular unloading door.

There is also the possibility to soundproof the machines thanks to separate modular solutions ("Afocop" covers); the edge of our covers are among the highest ones available on the European market with a consequent high level soundproofing.



[1] The Orbital series stands out for the circular tank with trapezoidal section for a perfect surface treatment.

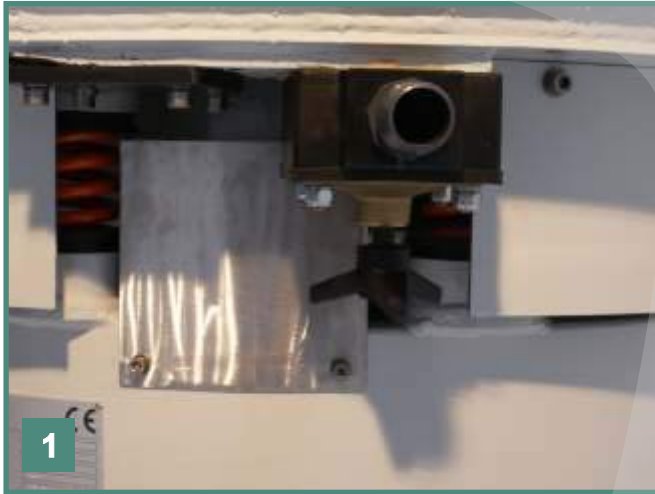
[2] On demand all the Orbital models can be equipped with rectangular door, which is always foreseen for the models 300,920 and 1900.



[3] Thanks to the MIX-KEM measuring stations (optional device), the machines of the Orbital series can carry out automatically multiphase working cycles.

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The **Orbital** machines, according to the most recent Rollwasch® design, are manufactured to satisfy the most different requirements of the European customers. Each machine can be equipped in the PRO or GM version, moreover each model can be supplied with bigger rectangular door instead of the circular one.

There are specific setting-up, i.e. for the marble treatment or for thermic process, available with accessories that are the results of developments, such as the water draining and feeling.

The versions foreseen for self-barreling processes ("piece against piece" treatment) are equipped with pneumatic opening door.

Thanks to the FRIBO bases that raise the series machines, it is possible to connect more units and arrange automatic plants.

The **Orbital** machines, according to the most recent Rollwasch® design, are in the position to satisfy the most different requirements.

Moreover the **Orbital** series, thanks to its manufacturing features, it is an investment suitable to adjust to the different manufacturing requirements in the time.

[1] The PRO (Professional) setting up of the Orbital series foresees the unloading pipe in polyurethane.

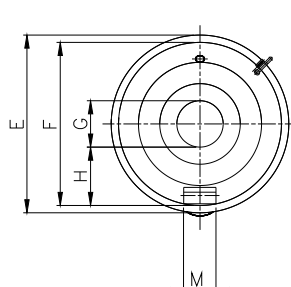
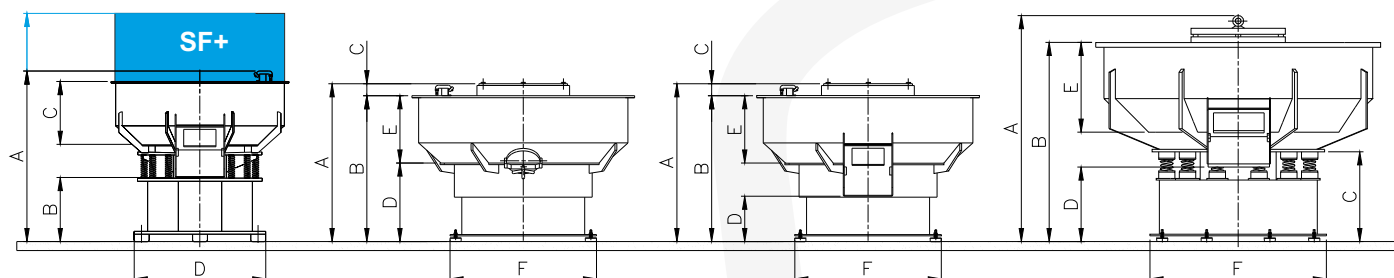
[2] The PRO (Professional) setting-up of the ORBITAL series foresees the rinsing water pipe in stainless steel.

[3] Thanks to the FRIBO base (optional accessory), the machine can be raised to the requested height.

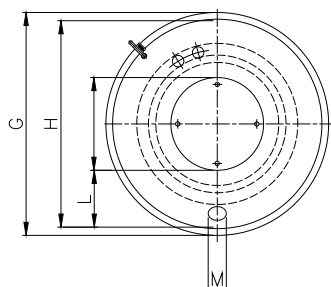


ORBITAL

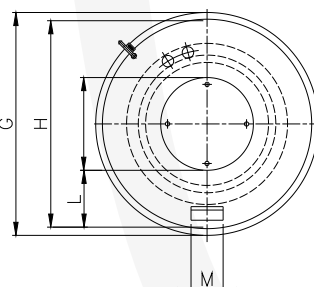
RWO-D



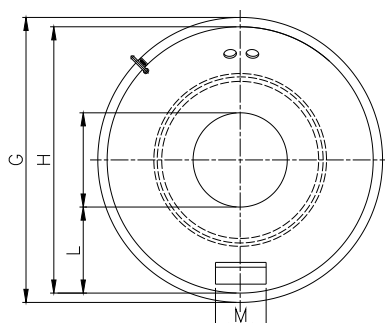
RWO-D-300



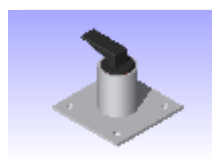
RWO-D-220/720



RWO-D-220/720-Q



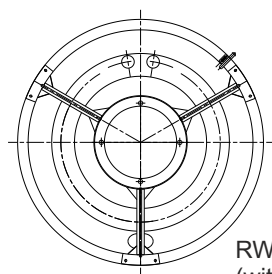
RWO-D-920-1900



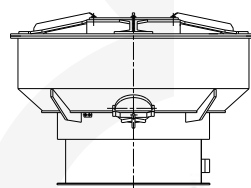
Unloading valve
GM version



Unloading valve
PRO version



RWO-D-720-GM/P-CF
(with RAGGIERA MPS-GM)



RAGGIERA MPS-PRO - as
modular accessory is also
available for retro-fit machines to
review;

The model RWO-D-720 is reinforced with a special top bracing called "raggiera" fitted as standard on all models new series - steel versions for GM and fitted with protections in PU over the PRO versions.

The loading and unloading heights can change from the dimensions shown in this catalogue due to the machine loading and feet regulation.

Dimensioni di ingombro ORBITAL RWO-D espresse in mm

ORBITAL RWO-D overall dimensions - mm

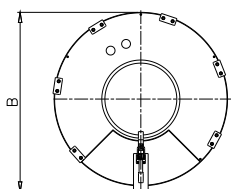
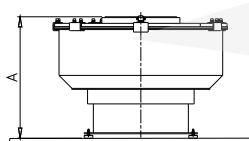
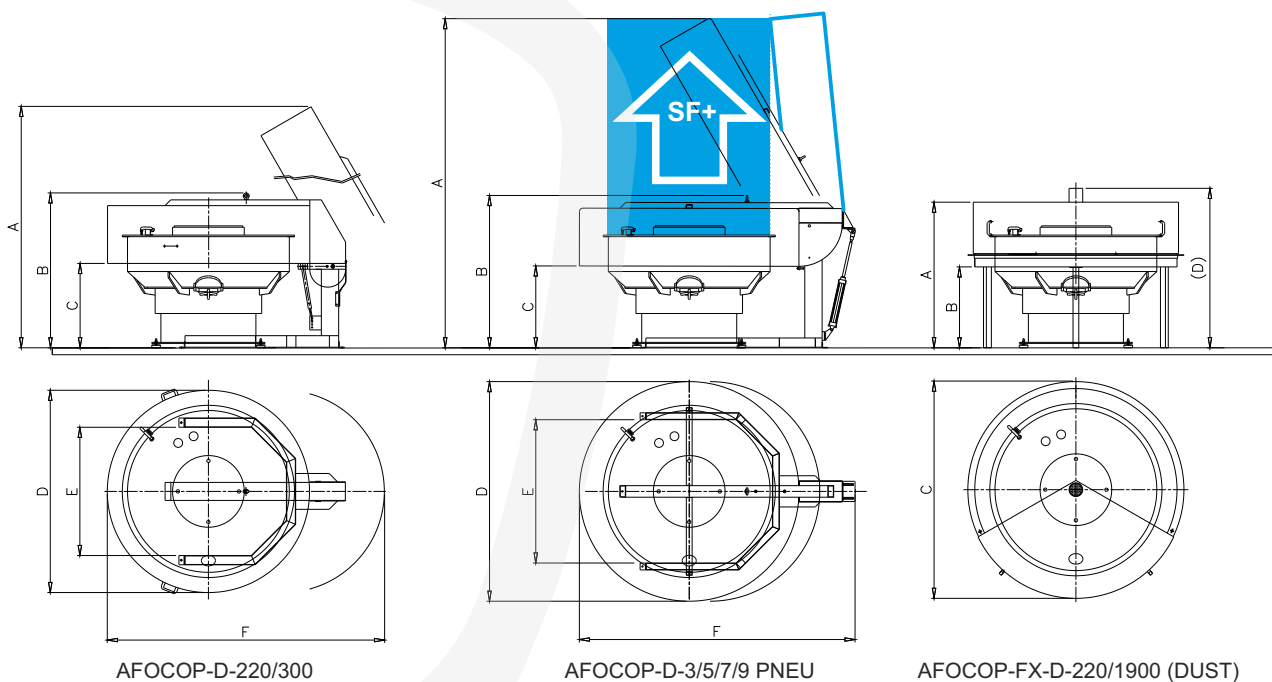
Modello/Model	A	B	C	D	E	F	G	H	I	L	M	Pot. tot. inst. Tot. inst.power	Cap. vasca Tank capacity
RWO-D-220	970	895	70	520	375	ø750	ø1066	ø980	ø470	255	ø100	1,1	150
RWO-D-220-Q	970	895	70	375	375	ø750	ø1066	ø980	ø470	255	125x80	1,1	150
RWO-D-330	1000	895	105	525	370	ø880	ø1286	ø1180	ø525	325	ø100	2	225
RWO-D-330-Q	1000	895	105	372	370	ø880	ø1286	ø1180	ø525	325	125x80	2	225
RWO-D-300	1170	455	420	880	ø1188	ø1100	ø310	400			130x190	4	250
RWO-D-300-SF+	1170	455	420	880	ø1188	ø1100	ø310	400			130x190	4	250
RWO-D-300-HD-SF+	1170	455	420	880	ø1188	ø1100	ø310	400			130x190	4	250
RWO-D-520	1055	975	80	525	450	ø980	ø1490	ø1380	ø620	380	ø130	4	410
RWO-D-520-Q	1055	975	80	304	450	ø980	ø1490	ø1380	ø620	380	185x140	4	410
RWO-D-720	1170	1057	80	525	532	ø1030	ø1660	ø1530	ø620	455	ø170	5	680
RWO-D-720-Q	1170	1057	80	290	532	ø1030	ø1660	ø1530	ø620	455	300x160	5	680
RWO-D-920	1510	1331	600	531	600	ø1180	ø1905	ø1760	ø630	565	300x160	6	830
RWO-D-1900	1734	1554	720	565	800	ø1465	ø2186	ø2046	ø686	ø680	300x160	14,7	1850

Q = macchina con portella rettangolare (bxh) - predisposizione per accessorio PNEU-PORT opzionale

Q = machine with rectangular door (bxh) - set up for the optional PNEU-PORT device

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AFOLID-D-220



On the left it is shown a sound proofing cover of the AFOCOP-FX series and an example of a magnetic extractor of the ESMA-D series. On the right it is shown a sound proofing cover of the AFOCOP-BOX series, closed also in the lower side.

Dimensioni di ingombro AFOCOP per RWO-D - mm

RWO-D AFOCOP overall dimensions - mm

Modello/Model	A	B	C	Modello/Model	A	B	C	D	
AFOCOP-FX-D-220	1160	600	1427	AFOCOP-FX-D-220-DUST	1160	600	1427	1280	
AFOCOP-FX-D-330	1210	650	1625	AFOCOP-FX-D-330-DUST	1210	650	1625	1330	
AFOCOP-FX-D-300	1320	760	1575	AFOCOP-FX-D-300-DUST	1320	760	1575	1440	
AFOCOP-FX-D-520	1260	700	1880	AFOCOP-FX-D-520-DUST	1260	700	1880	1380	
AFOCOP-FX-D-720	1360	800	2028	AFOCOP-FX-D-720-DUST	1360	800	2028	1480	
AFOCOP-FX-D-920	1660	1100	2277	AFOCOP-FX-D-920-DUST	1660	1100	2277	1780	
AFOCOP-FX-D-1900	1840	1180	2577	AFOCOP-FX-D-1900-DUST	1840	1180	2577	1960	
Modello/Model	A	B	C	D	E	F	Modello/Model	A	B
AFOCOP-D-220	2157	1205	595	ø1350	925	1965	AFOLID-D-220	1050	1555
AFOCOP-D-300	2475	1395	780	ø1500	925	2115			
AFOCOP-D-300-PNEU-SF+	2770	1350	735	ø1500	925	2500			
AFOCOP-D-3/5-PNEU	2845	1320	705	ø1900	1240	2385			
AFOCOP-D-7-PNEU	3290	1465	850	ø2250	1290	2735			
AFOCOP-D-9-PNEU	3490	1665	1050	ø2250	1290	2735			



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The control boards of the Orbital machines are the result of a project that has the purpose to simplify and unify the most different use possibilities into a single solution. From a statistical macro-analysis of the most frequent combinations between machine and accessories, we have designed the new **MP** (or **MPE** in the expanded version) control board that is equipped with a microprocessor and a control digital panel always combined with a frequency converter. A control board equipped with microprocessor (or **PLC**) offers the advantage to be programmed, within fairly wide limits, according to the process requirements and to the used optional accessories by simply loading the most suitable software. The same control panel, equipped with frequency converter (or **INVERTER**), extends the use possibilities of a vibrating machine, since it allows a more flexible management, so that to adjust to any unforeseen variables with a simple “clic”.

The **TCS** control board has all the same features already present in MP and MPE series control panels, with the following differences and additions: HMI - Man Machine Interface - Through Color Touch Screen Panel Inside the picture is available: A set of cables to connect to the TOUCH panel, microprocessor and inverter in software modification or operating system upgrade mode. These features make it possible, through any PC (not supplied) to the user, to: a. Upload Open Source operating system updates - available free of charge on the Internet; b. Load variations that may be agreed upon with Rollwasch (supply of software with variations could involve participation in costs) for work program.

To increase the safety and the isolation class of the control board, usually the cases are made of plastic material, excellent insulation. The IP55 isolation class is moreover a very good standard for the vibrating machines type of use.

[1] Frontal view of the control board of the **MP/MPE** series, 230V - 50Hz or 400V - 50 Hz depending from the type of machine.

[2] Frontal view of the control board of the **TCS** series, 230V - 50Hz or 400V - 50 Hz depending from the type of machine.

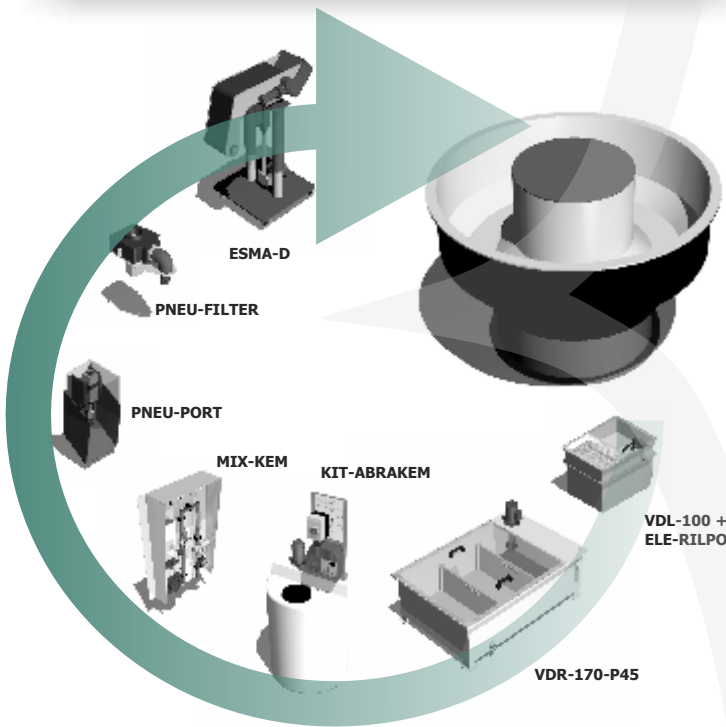


1

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The **Orbital** machines are manufactured in "P/CF" version (with wire – without any electric control) and can be combined with three types of standard solutions, respectively:

!“**E**” – magnetothermic switch with start and stop functions, with thermic protection of the motorvibrator;

!“**MP**” – Control board equipped with microprocessor, inverter, control panel with wide display and function keys, main and emergency (red/yellow) switch, IP55 class protection with high insulation degree thanks to the manufacturing material, specific and customized software for every single supply. Input/output presetting suitable for only one accessory of defined type.

!“**MPE**” – Control board like the “MP” type, but with input/output expansion in order to run max. two/three accessories of defined type.

The supply of the digital control board foresees also the language customization of the support information both of the controls and of the messages, such as the motor rotation speed. The standard software 2.0 release allows by means of a function-key to switch from a low speed to a high speed and vice versa, the speeds are pre-set. The machine working hours (hours counter function), etc. For further details about the possible “Machine/Accessories” combinations that can be run by the MP/MPE control boards, check with our technical/commercial department or ask for a quotation!

[1] “E” - magnetothermic switch with start and stop functions, with thermic protection of the motorvibrator;

[2] MACHINE ID/...TCS... CT

It has all the same features already present in the TCS series control panels, with the following additions: a. Module "C" controls the speed of the inverter with a simple analog potentiometer carried out outside the panel; b. "T" module - facilitates the operator in the timing change inputs (key + and key -); c. "CT" module - both options mentioned above



1



2



ORBITAL RWO-D



RWO-D-300-SF+

The central shaft may be unscrewed if requires space for pieces without fixing hole;



RWO-D-300-SF+

Through the bottom outlet, with fast open system, you can download all media;

Modello Model	Capacità l./kg. Capacity l./Kg.	Potenza Motore Kw/Hp Motor Power Kw/Hp
RWO-D-300-SF+	300/900	4,0 / 5,35
RWO-D-300-HD/SF+	450/900	4,0 / 5,35

A low priced machine, capable of performing high-paying jobs, with relatively low power consumption and small space needed.

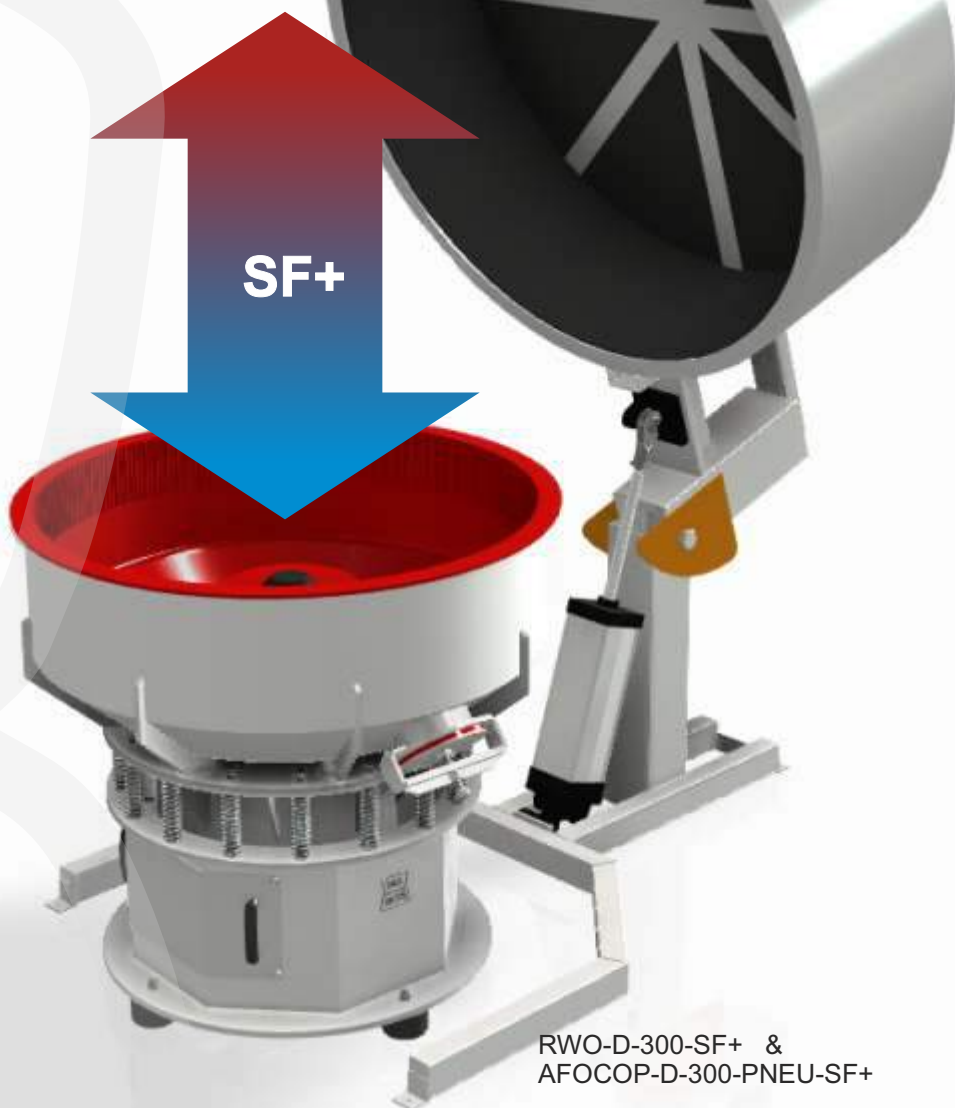
The machine **ORBITAL RWO-D-300-SF+** takes up something more than one square meter of ground surface and it is powered by a 400 V/50 Hz - three phase connection.

With the supply of the machine, it is also possible to buy media and compounds, produced by Rollwasch®. Our sales staff will be happy to provide the following support services:

- offer comprehensive of machine & products;
- free finishing test on your sample;
- technical report with recommended time & method of use;



RWO-D-300-HD-SF+



RWO-D-300-SF+ &
AFOCOP-D-300-PNEU-SF+

The series **ORBITAL** includes a peculiar model, **SF+**, designed with bowl «centerless» and available with capacity of 300 l.

The finishing of big size components, when limited to small series, may be most successful when using vibratory finishing techniques.

The most important condition is using a machine that can fix the workpieces to its centre or, alternatively, they can be simply contained in order to achieve the process in a suitable way.

The machine range **ORBITAL** model **RWO-D-300-SF+**, is the most suitable solution for these applications. It is a solid machine, equipped with a powerful vibrator of considerable centrifugal force.



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Caratteristiche standard delle macchine
Standard features of the machines

Soluzioni disponibili per il comando elettrico
Available solutions for electric control

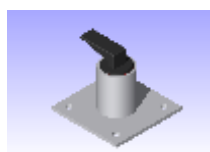
Macchine Standard Tipo	Versione	Spessore PU (fondo vasca)	Codice Comando Interruttore magnetotermico "E"	Codice Quadro Comandi "MP" (PLC+Inverter) max 1 accessorio	Codice Quadro Comandi "MPE" (PLC+Inverter) max 2/3 accessori
Standard Machines Type	Version	PU thickness (bowl bottom)	Magnetothermal Switch "E" control code	Control Board "MP" code (PLC+inverter) max 1 accessory	Control Board max 2/3 accessories
RWO-D-220/P-CF	PRO	15 mm **	E2	MP2	MP2E o/or TCS-2-E
RWO-D-220-GM/P-CF	GM	12 mm **	E2	MP2	MP2E o/or TCS-2-E
RWO-D-330/P-CF	PRO	15 mm **	E3	MP3	MP3E o/or TCS-3-E
RWO-D-330-GM/P-CF	GM	12 mm **	E3	MP3	MP3E o/or TCS-3-E
RWO-D-300/P-CF	PRO	20 mm **	E4	MP4	MP4E o/or TCS-4-E
RWO-D-300-SF+/P-CF	PRO	20 mm **	E4	MP4	MP4E o/or TCS-4-E
RWO-D-300-HD-SF+/P-CF	PRO	20 mm **	E4	MP4	MP4E o/or TCS-4-E
RWO-D-520/P-CF	PRO	20 mm **	E4	MP4	MP4E o/or TCS-4-E
RWO-D-520-GM/P-CF	GM	15 mm **	E4	MP4	MP4E o/or TCS-4-E
RWO-D-720/P-CF	PRO	20 mm **	E6	MP6	MP6E o/or TCS-4-E
RWO-D-720-GM/P-CF	GM	15 mm **	E6	MP6	MP6E o/or TCS-4-E
RWO-D-920/P-CF	PRO	25 mm **	E8	MP8	MP8E o/or TCS-8-E
RWO-D-920-GM/P-CF	GM	20 mm **	E8	MP8	MP8E o/or TCS-8-E
RWO-D-1900/P-CF	PRO	30 mm **	E15	MP15	MP15E

** disponibile su richiesta versioni con spessori maggiorati - available on request with increased thickness

Principali accessori specifici per Orbital
Main specific accessories for Orbital

Altri accessori opzionali comuni
Other common optional accessories

Macchina Standard Tipo	Codice Copertura opzionale	Codice Porta pneumatica opzionale	Codice Filtro pneumatico opzionale	Valvola	Codice di stazione dosaggio automatico acqua/composto (esempio)	Codice Vasca di riciclo acqua/composto
Standard Type Machine	Optional cover code	Optional Pneu-port code	Optional Pneumatic filter code	Valve	Water/compound Automatic Measuring Station Code (example)	Water/compound Recycling tank Code
RWO-D-220/P-CF	AFOCOP-D-220 o FX-D-220	PNEU-PORT-2	PNEU-FILTER	PRO	MIX-KEM	VDR
RWO-D-220-GM/P-CF	AFOCOP-D-220 o FX-D-220	PNEU-PORT-2	PNEU-FILTER	GM	MIX-KEM	VDR
RWO-D-330/P-CF	AFOCOP-D-3/5-PNEU o FX-D-330	PNEU-PORT-3	PNEU-FILTER	PRO	MIX-KEM	VDR
RWO-D-330-GM/P-CF	AFOCOP-D-3/5-PNEU o FX-D-330	PNEU-PORT-3	PNEU-FILTER	GM	MIX-KEM	VDR
RWO-D-300/P-CF	AFOCOP-D-300 o FX-D-300	PNEU-PORT-5	PNEU-FILTER	PRO	MIX-KEM	VDR
RWO-D-300-SF+...	AFOCOP-D-300-PNEU-SF+	PNEU-PORT-5	PNEU-FILTER	PRO	MIX-KEM	VDR
RWO-D-300-HD-SF+...	AFOCOP-D-300-PNEU-HD-SF+	PNEU-PORT-5	PNEU-FILTER	PRO	MIX-KEM	VDR
RWO-D-520/P-CF	AFOCOP-D-3/5-PNEU o FX-D-520	PNEU-PORT-5	PNEU-FILTER	PRO	MIX-KEM	VDR
RWO-D-520-GM/P-CF	AFOCOP-D-3/5-PNEU o FX-D-520	PNEU-PORT-5	PNEU-FILTER	GM	MIX-KEM	VDR
RWO-D-720/P-CF	AFOCOP-D-7-PNEU o FX-D-720	PNEU-PORT-9	PNEU-FILTER	PRO	MIX-KEM	VDR
RWO-D-720-GM/P-CF	AFOCOP-D-7-PNEU o FX-D-720	PNEU-PORT-9	PNEU-FILTER	GM	MIX-KEM	VDR
RWO-D-920/P-CF	AFOCOP-D-9-PNEU o FX-D-920	PNEU-PORT-9	PNEU-FILTER	PRO	MIX-KEM	VDR
RWO-D-920-GM/P-CF	AFOCOP-D-9-PNEU o FX-D-920	PNEU-PORT-9	PNEU-FILTER	GM	MIX-KEM	VDR
RWO-D-1900/P-CF	AFOCOP-FX-D-1900	PNEU-PORT-11	PNEU-FILTER	PRO	MIX-KEM	VDR



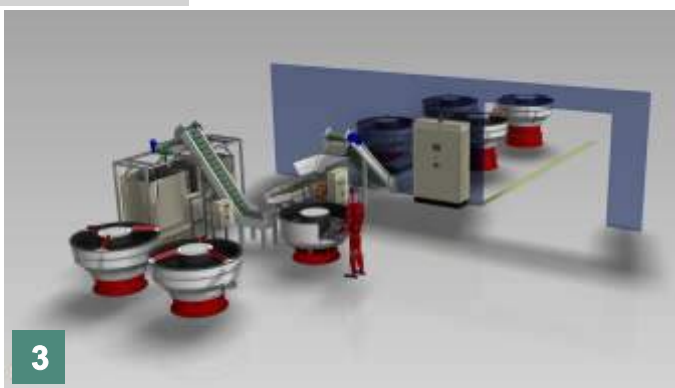
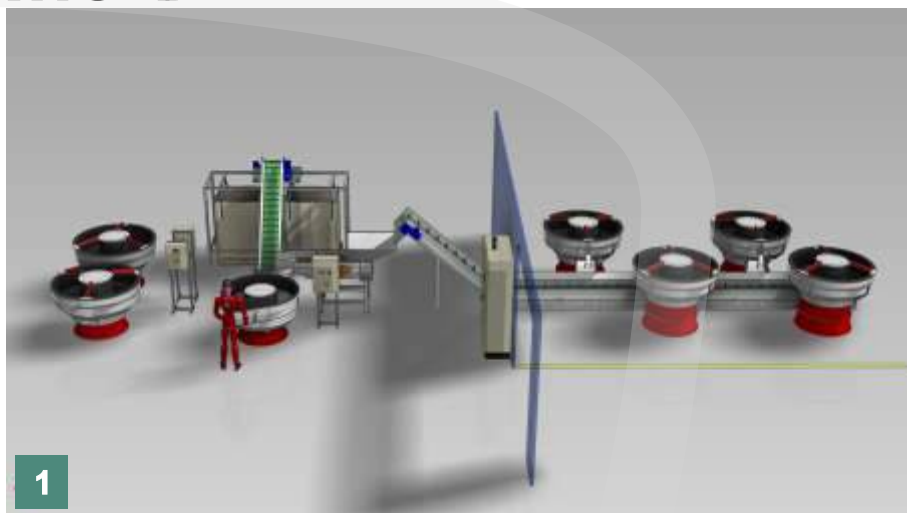
Unloading valve GM version



Unloading valve PRO version

ORBITAL

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Some examples of systems with Orbital series machines.

An example of plant solution RW-1792 for the vibratory finishing of zamak articles where it is foreseen:

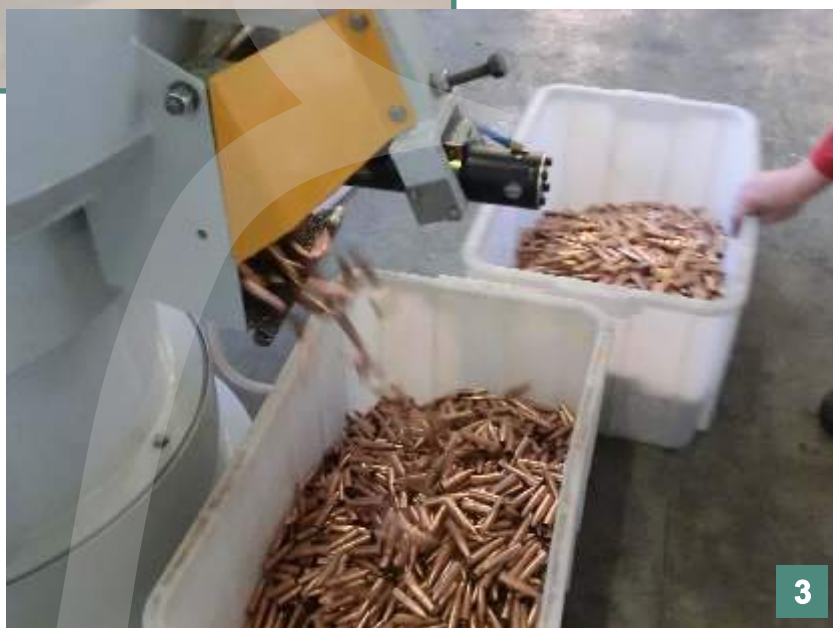
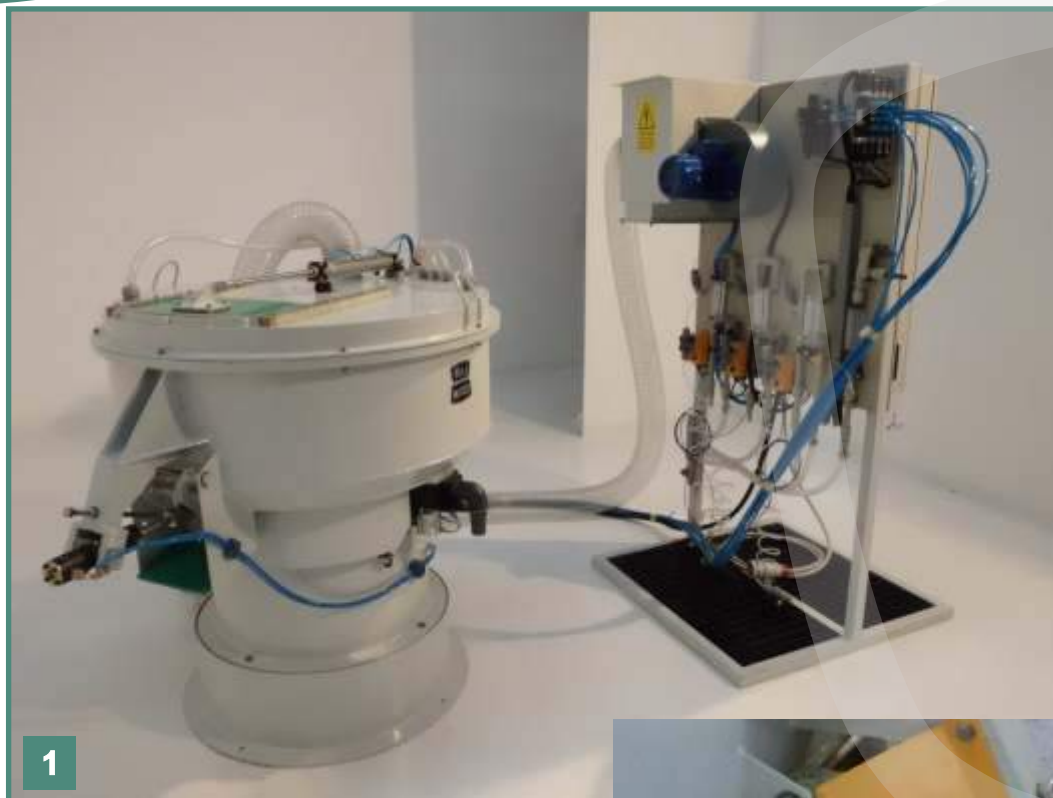
Step A. Smoothing with nr.4 Orbital RWO-D-720 equipped with pneumatic door on the tank bottom to enable the automatic discharge of the whole mass, consisting of the workpieces and the abrasive media;

Phase B. Vibratory screen with reverse separation (media are larger than workpieces), addressing the pieces to the drying unit and the media to the system of automatic recovery in big-bag.

Phase C. DIA-FINISH polishing (with porcelain) separated from the rest of the plant, with nr.2 standard Orbital RWO-D-720;



ORBITAL RWO-D

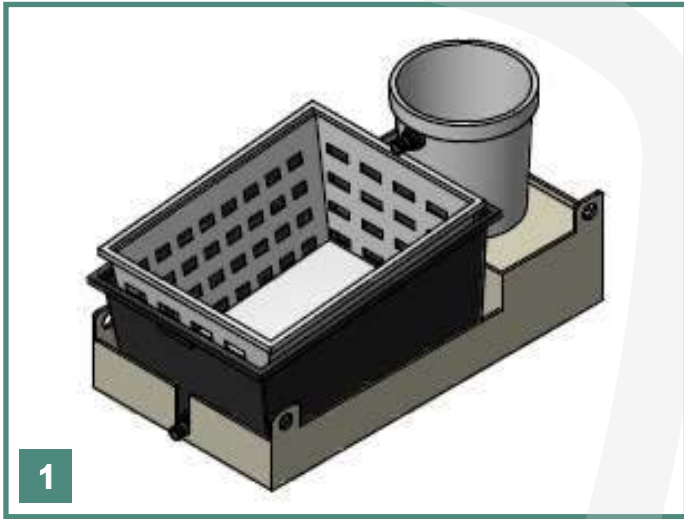


Some examples of systems with Orbital series machines.

An example of ORBITAL machine RWO-D-220-Q-AIF-MF-3, in ' configuration «wash&dry» is designed to realize finishing processes in «self barrelling» (piece against piece), as processes of washing, degreasing, de-oxidation, polishing with fully automated stages which comprise the final rinse, dropping-out, final drying and pneumatic discharge [3]. The load can be automated via a pneumatic door that opens and closes automatically [1].

The whole cycle is governed by a PLC [2] with a software configured to be customized with a variety of programs.

ORBITAL RWO-D



Modultek: modular accessories; Rollnoise: sound proofing solutions

Few examples:

1. & 2. example of tank **VDS-160-MIX** for the filtration of the suspended solids contained in the effluents discharged from the machine (suitable for processes type **MICROFLUID**-Patent Pending-I)
3. example of pneumatic outlet door **PNEU-PORT**, to discharge the full content of the working-bowl towards the lower outlet door, automated with a specific pneumatic cylinder;
4. example of automatic dosing station for liquid and gel chemical compounds, designed to run automatic **MICROFLUID** processes (Patent Pending - I);

Note: for the MICROFLUID process and the related machines, with their suitable configurations, see the specific technical catalogue;



ORBITAL RWO-D



1



2



5



4



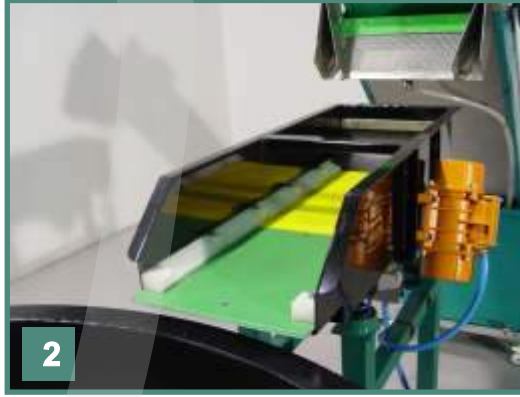
3

Modultek: modular accessories; Rollnoise: sound proofing solutions

Few examples:

1. Magnetic separator with demagnetizer type ESMA-D-330 foreseen for an Orbital vibratory machine type RWO-D-330, complete with soundproof cover AFOCOP-FX-D-330;
2. DOS-KEM-QF column, a technological support frame designed to hold the control panel of the machine and equipped with a metering station for automatic processes such QF (Abragrip phase and final automatic rinsing phase with water / compound mixture);
3. Automatic dosing station for mixing water and liquid chemical compound type DOS-KEM-150;
4. Raised basement for circular machines type FRIBO;
5. Stainless steel tank for workpieces immersion rinsing, complete of transport band, series UNIVAR-PVC.

ORBITAL RWO-D



Modultek: modular accessories; Rollnoise: sound proofing solutions

Few examples:

1. example of "raggiera" fitted as standard on Orbital RWO-D-720 (with Red Shock-protections in PU, for the PRO series);
2. example of vibratory channel UNID-ES-AIR for the gravitational dropping-out, with the option to take even jets of compressed air on the workpieces that are transported towards vibration;
3. Combined dosing station, MIX-KEM-80-GM together with KIT-ABRAKEM;
4. Automatic station for dosing and mixing water and liquid compound, MIX-KEM-80-GM;
5. Recycling tank with electro-pump, capacity about 170 lts.;
6. Completely closed sound proofing lid type AFOCOP-FX-ES;



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