

# TUMBLE *Dryer*



Rotary  
Cylindrical  
Vacuum Dryer



italvacuum

# Tumble Dryer

## Rotary Cylindrical Vacuum Dryer

Italvacuum rotary cylindrical vacuum dryers are mainly intended for drying processes, mixing and solid state post-condensation of granulated plastic materials, namely:

- ▶ *polyester (PET, PBT, PEN, PTT, PES)*
- ▶ *polyamide (nylon: PA 6, PA 66).*

Their manufacturing features make them particularly suitable for processes where it is necessary to operate at high vacuum levels in combination with high heating temperature.

The skewed cylindrical shape and the continuous rotation ensure an effective product mixing, making sure that each granule is subjected to the same process conditions.

The final result is a high molecular weight polymer, very pure and with a low rate of acetaldehyde (less than 1 ppm), which presents a high homogeneity, in terms of both viscosity and residual moisture, and a higher quality than the one achieved in continuous processes.

Furthermore the Tumble Dryer ensures reduced drying times thanks to the action of the high vacuum and to the considerable heat exchange surface.

Thanks to the vacuum technology there is also the elimination of the oxygen in the air, situation that prevents the formation of unwanted secondary compounds, or explosive mixtures with the extracted solvents.

The action on the product is very delicate and light, so that mechanical shocks are avoided, and formation of fine powders eliminated as requested in these types of production.

The oil recirculating heating jacket (or other heating fluid), peculiarity of the Tumble Dryer, prevents from the condensation of the extracted solvents.

A valve mounted on the port-lid allows taking product samples, without breaking the vacuum anytime.

Other features of Italvacuum rotary cylindrical dryers are the easy inner and outer cleaning with simple access for inspection and the wide availability of weldable materials and inner coatings.

The Tumble Dryer guarantees absolute safety for operators, environment and product.

## Turn-key plants for every process requirement

With the Tumble Dryer Italvacuum also supplies all the units which complete the plant, adequately dimensioned in order to meet every process requirement:

- ▶ *Heating and cooling unit for the thermoregulation of the system*
- ▶ *Vacuum condensing unit with tank for the recovery of the extracted solvents*
- ▶ *External safety filter*
- ▶ *High vacuum unit composed by the new Italvacuum pump SAURUS939*
- ▶ *Control panels with PLC for the complete management of the plant, able to ensure the reproducibility between the dried batch and to connect with centralized supervision systems.*



## The Italtvacuum post-sales service: another warranty for your productions

The start-up of the installation is just the beginning of our relation with the customer. This relation will last for years starting with an efficient policy of preventive maintenance with planned interventions. The maintenance plans are organized individually considering the customer's specific processes. This means a remarkable cost saving and more tranquillity.

Furthermore Italtvacuum offer prompt and efficient technical assistance services both at the customer's site with the intervention of specialized personnel or, in case the customer's installation has a control system supplied by our company, from its site through on-line diagnostic.

For an efficient management of the spare parts, Italtvacuum has a computerized warehouse that allows the prompt and immediate delivery of original spare parts anywhere in the world.

Moreover Italtvacuum can fully overhaul its own used plants and regularly supports the customer in upgrading the delivered installations with new technical solutions developed in the meantime as well as adapting the machines to the new ATEX regulations.

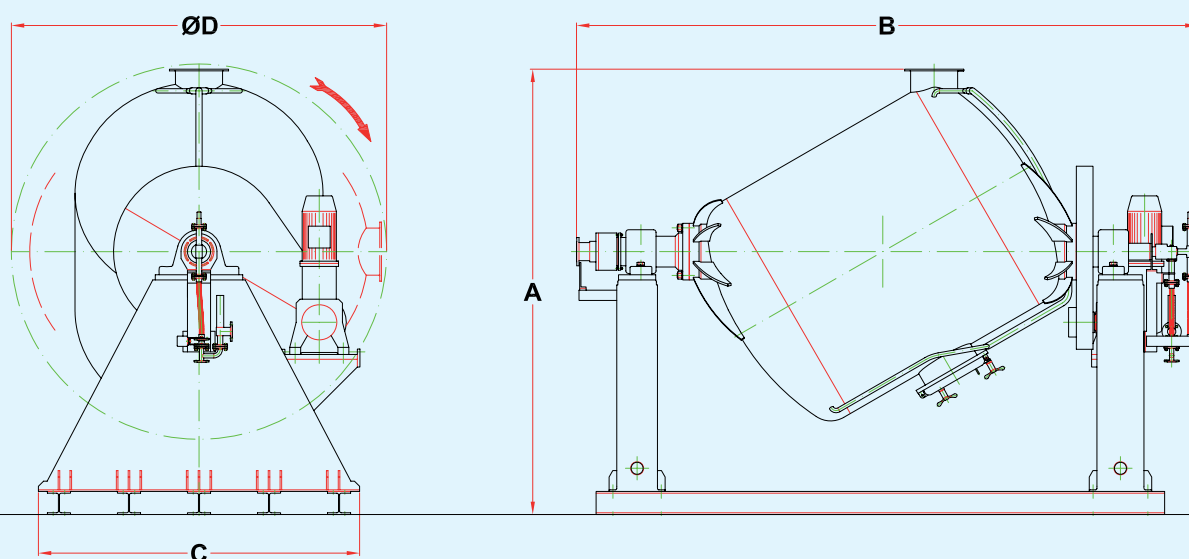
## Integrated quality

ITALVACUUM has implemented a Quality Management System with ISO 9001 certification covering from design to production of every single component, from end product sale to plant installation and technical assistance. In addition, acknowledging the importance of the welding process in the qualitative result and the reliability of the end product, ITALVACUUM has considered to certify its own processes and personnel complying to ISO 3834-2 norms.



## Dimensions

The Tumble Dryer can be built with total volumes ranging from 600 to 36,000 litres offering that way a wide range of possible dimensions.



Model		R600	R1000	R2000	R4000	R4000	R6000	R8000	R12000	R16000	R20000	R24000	R32000	R36000
Total Capacity	Litres	600	1000	2000	4000	4000	6000	8000	12000	16000	20000	24000	32000	36000
A	mm	220	2400	2800	3000	3000	3500	4000	4200	4400	4600	4800	5000	5500
B	mm	2900	3400	3800	4400	4400	4800	5300	6000	6500	7000	7500	8300	8500
C	mm	1300	1600	1800	2100	2100	2500	2500	2800	3000	3200	3400	3800	3800
D	mm	1600	1800	2100	2600	2600	3100	3300	3700	4000	4300	4500	5000	5600

### Disclaimer

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*Dryer*

Vacuum process innovations since 1939

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