



Delta

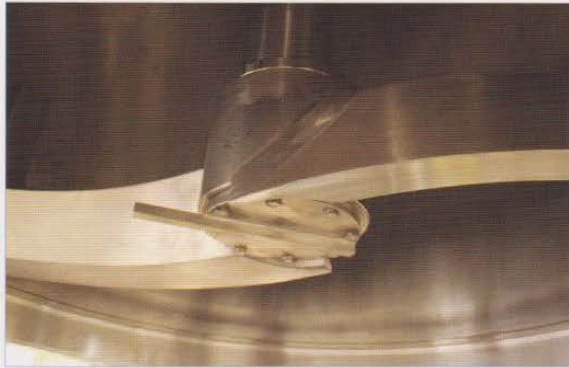
VVD – VERTICAL VACUUM DRYER



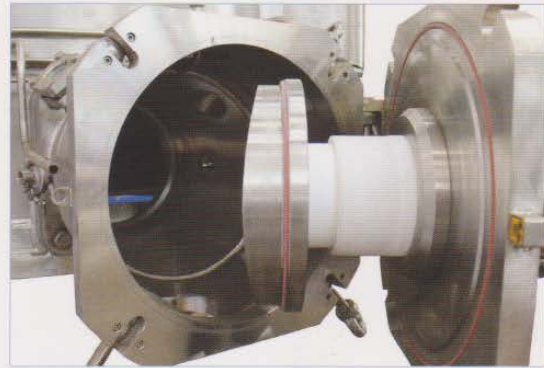
Delta VVD (Vertical Vacuum Dryer) is a flexible, compact and robust drying equipment suitable for several processes in pharmaceutical and chemical industry.

The VVD is equipped with a special design Agitator in order to:

- Move the cake during drying process
- Automatically discharge the product
- Perform a translation movement where possible



The agitator is internally heated for a better drying process and it can be operated at different speed, direction of rotation and height.



The side discharge valve has a particular conical shape that allows to minimize friction and dead volume.

Designed for easy cleaning and inspection.

TECHNICAL DATA

Delta VVD is available with the following construction materials:

- Austenitic stainless
- Nickel based Alloy
- 904L, duplex stainless steel
- Other materials on request.

Accessories:

- CIP with spray rotating washing balls that can be extractable
- Sintered stainless steel wire mesh cartridge sterilizable on vacuum line and easy extractable
- Hydraulic power pack
- Electrical and hydraulic panel
- Sample port Instrumentation
- Condensation unit
- Vacuum unit
- Control system with PLC
- Local operator interface
- Hot water production unit

Design and construction according to the highest quality standards:

- FDA and GMP
- ASME BPE
- ASME U-Stamp
- PED
- ATEX

VVD STANDARD UNITS

Model	Diameter [mm]	Nominal Capacity [l]
VVD 25	600	160
VVD 50	800	300
VVD 100	1.200	1.200
VVD150	1.400	1.500
VVD 200	1.700	3.000
VVD 300	2.000	4.300
VVD 400	2.300	6.000
VVD 500	2.600	8.000
VVD 600	2.800	9.000
VVD 700	3.000	11.000
VVD 800	3.300	13.000

* Standard units can be modified upon specific customer request



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DVRF – HORIZONTAL VACUUM DRYER

DVRF vacuum dryers are horizontal cylindrical machines with internal agitator, manufactured to the highest standard of quality and safety.

The high rate "exchange surface/product volume", combined with the special design of agitator, gives a very effective drying, far better than the other vacuum dryers.

The agitator is designed to optimize efficiency of heat exchange and of mixing during drying. In addition the shape of the blades allows the automatic discharge of the final product. The all parts are designed to minimize the heel.

A special cartridge filter in sintered wire mesh on vacuum line an optimal powder captation, avoiding contamination of product.



Continuous research and development allow DELTA to offer high quality and competitive products.



Design and construction according to the highest quality standards:

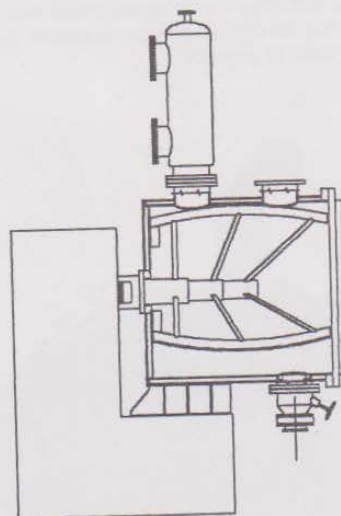
- FDA and GMP
- ASME BPE
- ASME U-Stamp
- PED
- ATEX
- All main international codes



TECHNICAL DATA

FEATURES:

- From 0,1 m³ to 15 m³ total standard size (other sizes available)
- Heated agitator with "increased" diameter shaft
- Austenitic stainless steel or nickel alloys for parts in contact
- Sanitary insulation
- "Through the wall" installation
- Bottom or "on the door" discharge valve
- Special sintered cartridge on vacuum line with total product recovery



Optional / Ancillaries:

- Special sample port
- Jointed blades
- Alternative construction material
- SIP design
- Solvent recovery system
- Vacuum unit
- Heating-cooling system
- PLC control system with operating panel
- Mucon or Clapè valve for control of discharging



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