MICRON DENSPACK™
Rotary Feed Vacuum Densifier

Making it easy to save space and process costs

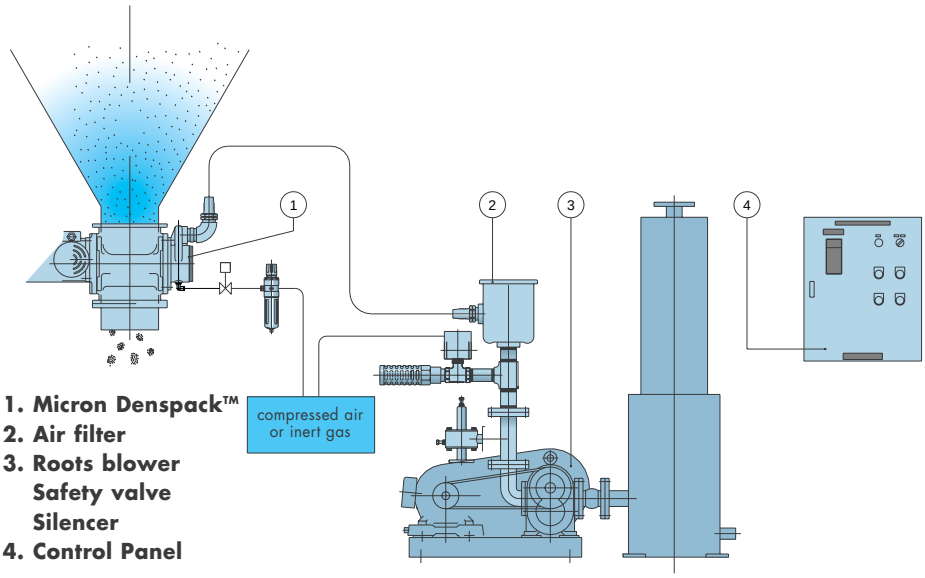
HOSOKAWA MICRON B.V.

Leaders in powder processing technology

BEPEX • MICRON • STOTT • VRIECO-NAUTA®

The densifier 'Micron Denspack™' is designed specially to de-aerate powders. By de-aerating powders, an increase of the bulk density prior to filling in bags, containers a.o. is obtained. With the Micron Denspack™, densification of powders can be achieved without damaging the particles. The unit easily fits any situation. The configuration of the system is simple and compact. Moreover it is to be installed easily in line in any process.

MORE EFFICIENCY. LESS COSTS. BETTER POWDERS. THE MICRON DENSPACK™.



1. Micron Denspack™
2. Air filter
3. Roots blower
Safety valve
Silencer
4. Control Panel

Main features of the Micron Denspack™

- Space savings, due to the simple and compact construction
- Improvement of powder characteristics, to avoid flushing and reduce dust emissions
- Capable of dealing with very difficult materials with adhesive nature
- Saving of storage and transportation costs, due to reduction of the powder volume
- Increase of the filling efficiency, when applied as prime feeder in filling systems
- Increase of granulator efficieny, when applied as pre-compactor
- Ease of installation
- Ease of operation
- Ease of (dis)assembling and cleaning
- Pay-back within very short notice

Successful combination with Stott systems

The Micron Denspack™ is also applied as prime feeder to the Stott hygienic filling and weighing systems. This combination has proven to be successful at various leading manufacturers of powders.

Insight in the working principle

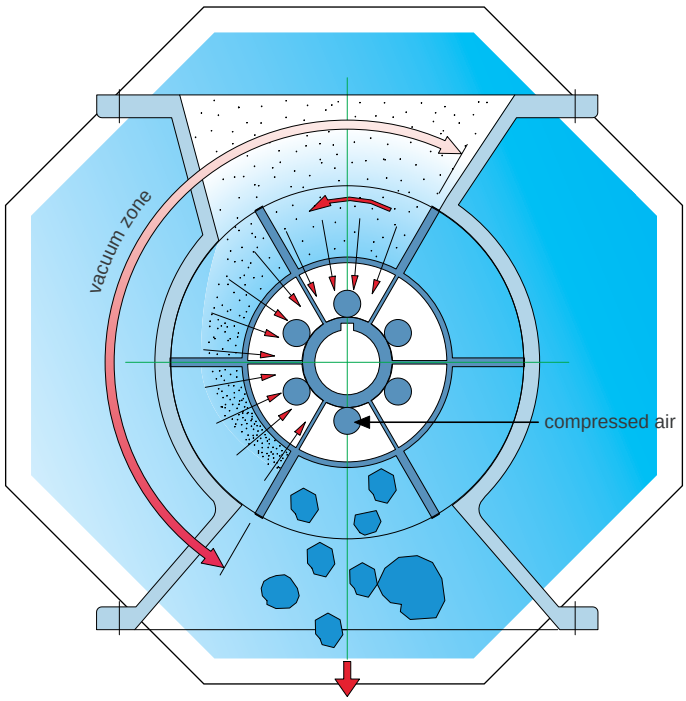
In this view the rotor turns counter-clockwise. The following activities can be distinguished:

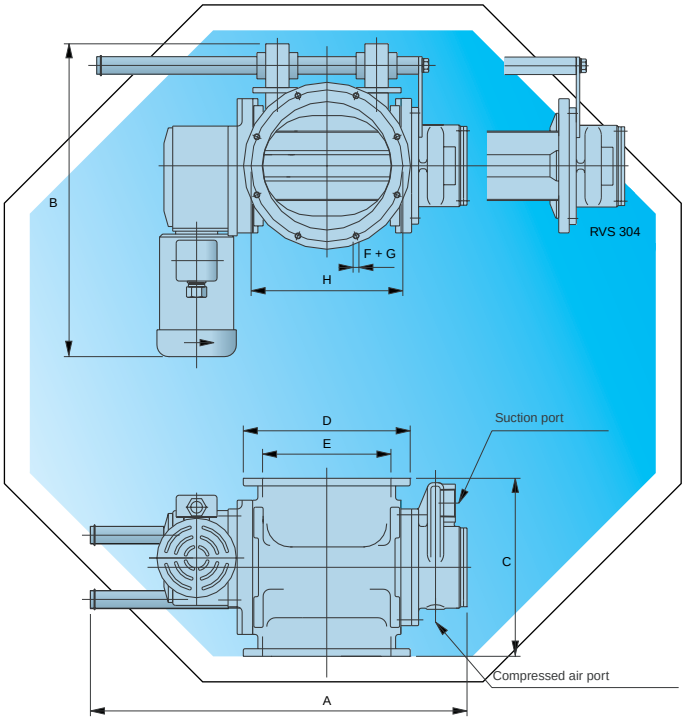
- When the pocket is in the twelve o'clock position, powder flows into the pocket by both gravity and the vacuum that is created by a vacuum pump. The under pressure in the center of the rotor creates an air flow through the sintered metal plate.

- While rotating from the position above to the lower position, vacuum remains in the centre. This causes the escaping of the air which is entrapped in the powder.

- At the lowest position, vacuum is no longer applied. From the center, a small blast of compressed air is given from the centre. This air pressure serves the following two purposes:
  1) easy discharge of the material
  2) cleaning of the sintered metal plate

- Under atmospheric pressure the pocket rotates from bottom to top. Now the process starts again.





Two models

Type	MCOM-20	MCOM-30
Rotor diameter (mm)	203	304
Rotor volume (1)	4.6	18.5
Speed range (RPM)	max. 36	max. 22.5
Capacity (m^3/h)	max. 10	max. 25
Motor power	0.4 kW	0.75 kW
A	791	1251.5
B	511	703
C	305	450
D	286	470
E	220	390
F-G	8-M 10	12-M12
H	260	440
Blower capacity for air suction motor power	2 m3/min x -4000 daPa 3.7 kW	5 m3/min x -4000 daPa 7.5 kW
Purge air pressure consumption	2 bar 250 l/min	2 bar 1000 l/min

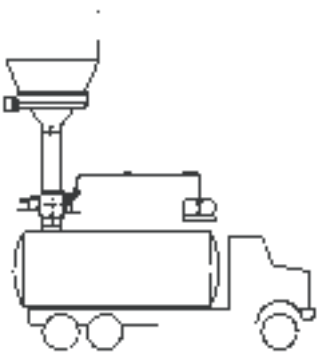
Dimensions for reference only

Typical examples

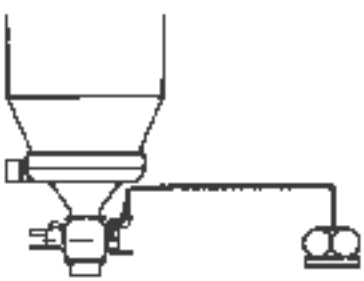
Product	Bulk density (kg/dm3) without Micron Denspack™	Bulk density (kg/dm3) with Micron Denspack™	Increase (%)	Capacity (kg/hr)
Titanium dioxide	0.30	0.49	63	450
Toner	0.44	0.63	43	1900
Gypsum	0.53	0.82	55	9800
Manganese dioxide	1.40	1.80	29	21600
Acrylic polymer	0.31	0.47	52	4200
Pigment (needle shape)	0.14	0.31	121	1850
Pigment	0.08	0.22	175	670
Talc	0.15	0.38	153	550

Technical features

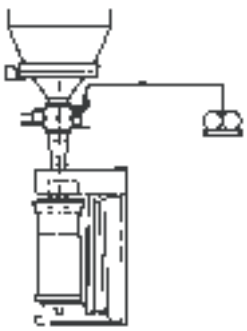
- Densification of aerated powders up to 100 % or more
- No mechanical degradation of the product
- Easy access for cleaning and inspection
- Compact and fully self contained
- Easily integrated with packaging, mechanical compaction, bulk loading and bin discharging processes
- Easy to operate
- Stable continuous operation by automatic cleaning system
- Constant feeding/discharging independent of silo filling.



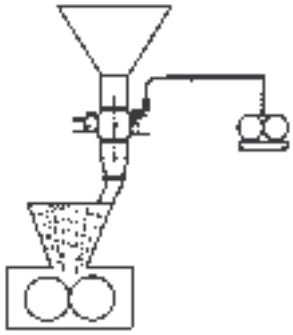
Bulk loading



Bin Discharging



Packaging lines



Mechanical compaction

Process engineers for: mixing-drying-grinding-separating-metering-weighing

Hosokawa Micron b.v.
Gildenstraat 26,
P.O.Box 98, 7000 AB Doetinchem,
the Netherlands.
Tel. +31 314 37 33 33.
Fax +31 314 37 34 56.
E-mail: info@hmbv.hosokawa.com

Visit our Website at: http://www.hosokawamicron.com

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