

# ***EPTS*** ***by BOLZ INTEC***

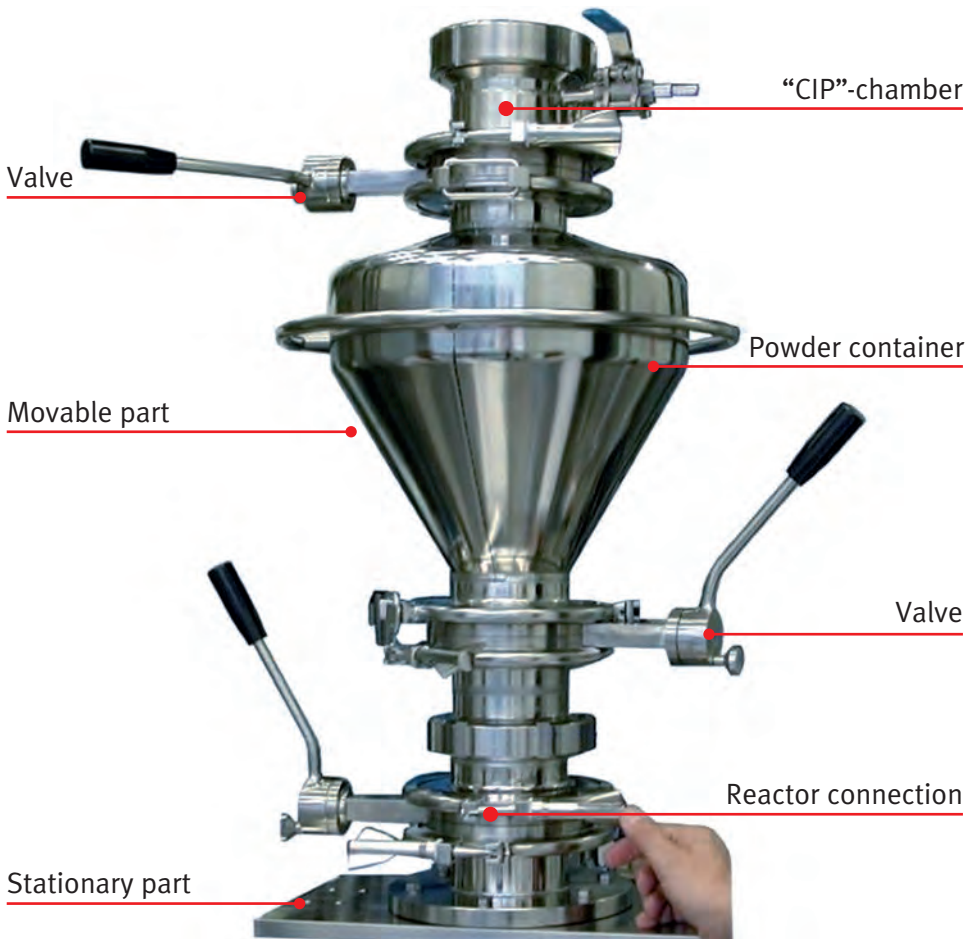
***The Emission-free Powder Transport System (EPTS)  
for the pharmaceutical industry***

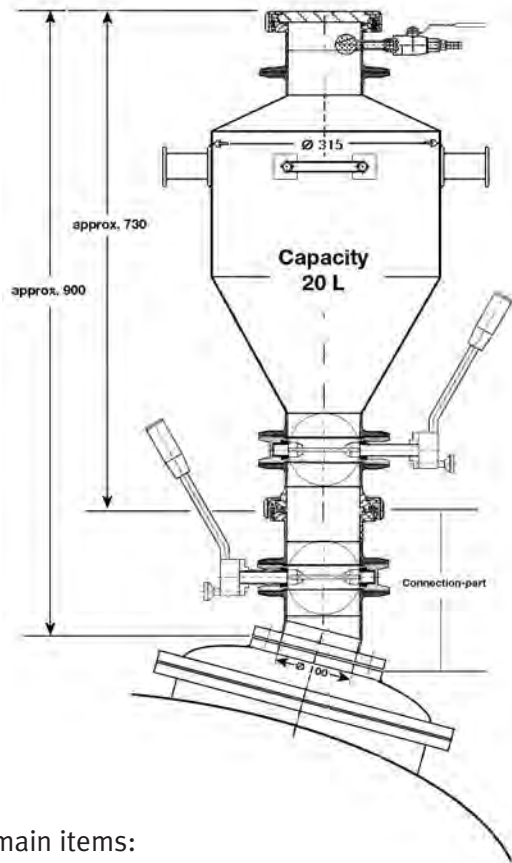


# ***The Emission-free Powder Transport System (EPTS)***

– environmentally friendly, product-protecting and in line with safety at work concepts!

- Ideal for closed transport of toxic media within a plant, e.g. from the weighing room to the reactor
- Guarantees emission-free transport of the solids
- Absolute employee and product-protection
- The active “Clean-in-Place-System” provides for 100% recovery of the toxic media as well as for careful cleaning of the whole system





## ***System:***

The complete EPTS consists of 2 main items:

### ***the movable part:***

- **Container with 3 compartments:**

CIP-chamber, powder container and the reactor connection – separated by 2 butterfly valves

- **Safety-trolley**
- **Special funnel**

### ***the stationary part:***

- Container connection
- Reactor assembly part (separated by 1 butterfly valve)

The installed valves are in easy-dismountable execution, which enables a very intensive and thoroughly cleaning of the internal valve-parts as gaskets etc.

## ***Filling:***

The filling funnel is flange-mounted on the top of the EPTS. The medium is then introduced with suction and weighed.

After filling, the flap valve is closed and the CIP chamber remounted. The EPTS can now be moved to the reactor.



## ***Internal transport: (example)***

The route inside the plant, will depend of course, always on the local circumstances.



In this particular situation, it was required that the container should be delivered as far as possible up to the level of the reactor. It is there, as near as possible to the reactor, that the container is removed from the trolley and placed on the stationary part. The operation can be done without any problems.

## ***Functions:***

The EPTS and the reactor have the same specifications regarding pressure and vacuum so that several required functions are possible as:

- Inertisation
- Filling under a vacuum



CIP-chamber

## ***Recovery and Cleaning***

Cleaning by means of the CIP-system has a double function:

1. Complete recovering of the powder, which is very important for the exactly dosage in the reactor.
2. Cleaning of the lower container-valve, to avoid emission, after removal of the container from the reactor.

Important for an efficient and optimal discharging, are the conditions of all, process side surfaces.



## ***Technical properties:***

|                               |   |
|-------------------------------|---|
| Volumes:                      | 200 ml – 300 l  |
| Pressure:                     | full vacuum / +1.5 bar                                  |
| Surface quality process side: | RA < 0,25 $\mu\text{m}$                                 |
| Surface quality all others:   | RA < 0,8 $\mu\text{m}$<br>all surfaces electro-polished |
| Material/process side:        | 1.4435 AISI 316L<br>Hastelloy C 22 (optional)           |
| All others:                   | 1.4301 AISI 304   |
| Seals:                        | EPDM and/or PTFE (FDA-compliant)                        |

## ***Examples of use:***



*Cylindrical-shaped EPTS-hopper and CIP-chamber*

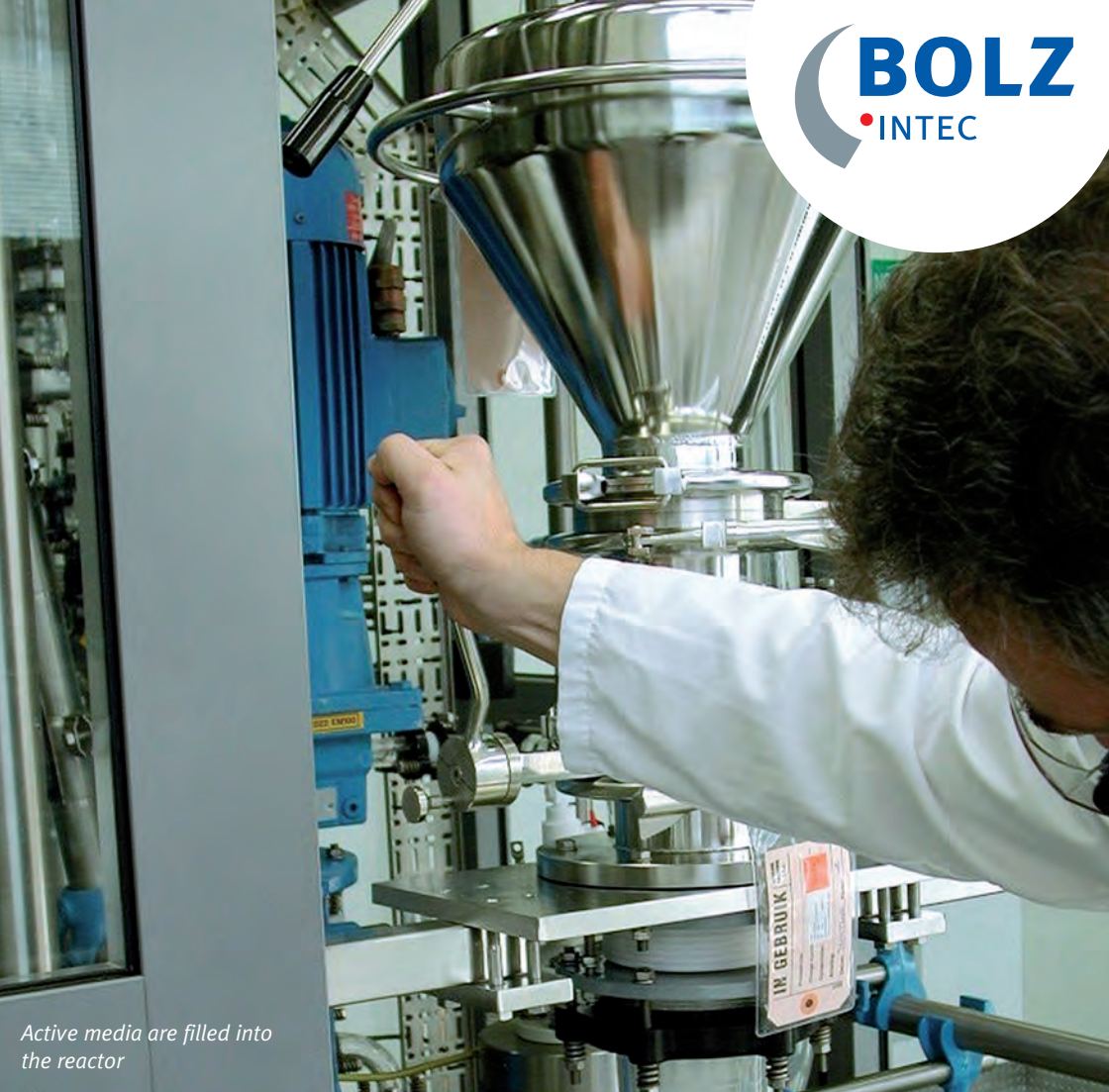


*EPTS in anti-static PTFE (black)*



*The EPTS on top of the reactor*





*Active media are filled into the reactor*

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