

High containment pharmaceutical manufacturing with Dec PTS solutions



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Dec's PTS Powder Transfer System® forms the basis for a suite of system for safe handling and high containment of highly potent active pharmaceutical ingredients (HPAPIs) in pharma manufacturing.

Containment has become an increasing concern for the pharmaceutical industry, due to two major factors.

One is the increasing potency of the ingredients themselves, driven by the constant need to find ever-more potent drugs.

The other is the ever-greater reach and rigor of enforcement, with latest guidelines from the US Occupational Safety and Health Administration (OSHA) and the EU's Registration, Evaluation, Authorization & Restriction of Chemicals (REACH) regulations insisting that potential hazards must be tackled at source, within the handling and manufacturing processes and by way of mechanical/process isolation to make operator personal protective equipment (PPE) redundant.

Dec Group meets these imperatives with a systems approach to powder and liquids handling and processing that emphasizes integration of new or existing equipment and provision of comprehensive safe, ergonomic and dedicated solutions achieving high containment down to the nanogram level.

Dec powder and liquid handling technologies are based on a proven track record in managing highly technical and challenging projects extending back more than 30 years.

PTS technology for high containment

At the heart of the Dec approach to high containment is PTS with its unique 'push-pull' approach to moving powders under total containment, using vacuum to draw powders into and through the system and pressure to push them into designated receptacles.

The PTS principle as applied to a series of designate process modules that can be securely connected to the high containment network. These include drum filling and emptying systems, contained bulk handling including big bags, toxic liquids handling, dosing and micro dosing equipment, sampling, blending & mixing, micronizers and process isolators.

These solutions cover the full range of process disciplines and challenges involved in high containment pharmaceutical and fine chemicals manufacturing, linking together a portfolio of complementary and integrated proprietary technologies, many of which are versatile in addressing multiple needs and applications, notably aseptic processing and the handling of flammable or explosive substances.

Cleaning and Sterility

The inevitably corollary of systems that need to handle hazardous substances under high containment is that they must also support Cleaning and Sterilizing in Place (CIP/SIP).

Most of Dec's solutions are engineered with CIP/SIP in mind with integrated Wash in Place (WIP) options, easy access and support for the full thermal mapping needed to complete SIP with clean steam.

High containment process support

From containing drums for charging reactors to a fully contained micronizing suite for highly toxic and sterile products, Dec can offer the best customized solution.

This includes full technological support from the front end design to the validation and the final equipment supply whether in terms of conceiving new manufacturing facilities or upgrading existing processes allowing being in line with the most stringent containment requirements for both toxic and sterile/toxic processes.

With safety being a large issue in today's industries Dec also adopts a holistic approach providing a comprehensive range of services such as industry expertise, testing facilities, safety and regulatory advice, IQ/OQ and validation as well as global service capabilities.



PTS Batchmixer®



Dec PTSbased high containment handling system showing filter dryer discharge isolator (left) and pack-off and milling chamber (right)

Dec Group

Address: Z. I. Grandes Pièces A, Chemin du Dévent, P. O. Box 9, 1024 Ecublens/Lausanne, Switzerland

Tel: +41 21 694 20 40

Fax: +41 21 694 20 59

Website: www.dec-group.net
