



**DecFill®**  
**Aseptic Filling Solutions**  
Modular production lines  
adapted to your needs



# DecFill® Aseptic Filling Line: True End-to-End Solutions From Molecules to Final Dosage Forms



DecFill® aseptic filling lines are designed to offer easy to operate systems optimizing production and minimizing change over time. From manual to fully automated lines, Dec offers comprehensive solutions for small and laboratory to highly flexible production scale filling lines suited for a wide range of primary packaging including double-chamber syringes.

By using standard modules, DecFill® solutions are configured to meet a wide range of product and customer requirements. These include de-bagging, de-lidding and de-nesting units and various other options to accurately fill liquids, powders and gels into the various containers.

To ensure highest process performance within a controlled environment, DecFill® equipment can be integrated into the required containment systems such as an o-RABS or an aseptic isolator.

## Dec Experience



From standard to custom-tailored equipment solutions, Dec provides end-to-end solutions including aseptic filling for both liquids and powders.

Dec's engineered microdosing, filling and containment system technologies are designed to meet your particular needs for sterile primary packaging. Our filling solutions are cGMP compliant, perfectly adapted to each specific process requirements and accurately designed to comply with the most recent revisions of the EU GMP Annex 1: Manufacture of Sterile Medicinal Products guidelines.

DecFill® products can be easily combined and supplied with up- & downstream processing solutions from the raw material handling to the final dosage form, including continuous reaction, crystallization, filtration, drying, blending, micronizing and sampling.

## Controls



Production lines can be supplied with various control options such as FDA 21 CFR Part 11, Audit Trail, batch recording and reporting.

## Documentation & Support



Dec has years of experience in providing qualification documentation and support during projects: Therefore, we can support you with creating design, verification, qualification and validation documentation and provide support during the execution of documents.

## Filling Lines

### Product Container Dosing Range

Vials<sup>1</sup> (2–100 ml), Syringes<sup>1</sup> (0.5–20 ml), Cartridges<sup>1</sup> 0.5–20 ml, Dual Chamber Syringes<sup>1</sup>, Sachets / Pouches, Special Packaging

Capacity [max ppm]<sup>2</sup>: 300 ppm



### Process Options

	Vials	Syringes
Gross Net Weighing	•	•
Gas Flushing	•	•
Liquid Filling	•	•
Powder Filling	•	•
Stoppering	•	•
Half Stoppering for Freeze Drying	•	--
Aluminum Capping	•	--
LLA Capping	--	•
Washing/Drying	•	•
Printing/Scanning	•	•

### Powder Filling Techniques

Technology	µPTS	flexPTS	sPTS	Auger system
Principle	Volumetric by pre-defined chamber	Volumetric by pre-defined chamber	Volumetric by pre-defined chamber	Volumetric by Auger rotation and accurate level control
Dosing Range	1–500 mg	200 mg–10 g	100 g+	20 mg–5 g

### Liquid Filling Techniques

Technology	BoMa	Peristaltic Pump	(Rotary) Piston Pumps	Pinch Valve Net weight
Principle	Volumetric displacement	Positive displacement	Positive displacement	Pressure/Gravity displacement



### Containment – Barrier Technology

	o-RABS	Aseptic Isolator cRABS (Liquid)	Aseptic Isolator cRABS (Powder/Liquid)
Purpose	Product Protection	Product Protection	Operator and product protection
Airflow	Uni-Directional	Uni-Directional with recirculation through double visors	Uni-Directional with recirculation through terminal exhaust filters
Access to inside	Gloves or opening doors	Gloves through double air return visor	Gloves
Decontamination	Hand sanitization	H <sub>2</sub> O <sub>2</sub> gassing	H <sub>2</sub> O <sub>2</sub> gassing
Characteristics	Air handling IN/OUT from cleanroom Background cGMP ISO6	Higher level Product Protection SAL-6 Background cGMP ISO 7/8 Separate HVAC unit	High level of Product & Operator Protection SAL-6 Background cGMP ISO 7/8 Separate HVAC unit

<sup>1</sup> Optional nested ready-to-use vials, syringes, Dual Chamber Syringes, cartridges

<sup>2</sup> ppm = products per minute; depending on the number of filling modules, product containers and final machine configuration

<sup>3</sup> Based on water

**Product Range**

**DecFill® LAB (Laboratory)**



**Technical Specifications**

Container placement	Manual
Drug type	Liquid/Powder
<b>Product container dosing range</b>	
Vials	2–100 ml
Syringes	0.5–20 ml
Dual Chamber Syringes	--
Bottles	--
Cartridges	•
Ready-to-use	•
Sachets / Pouches	--
Special Packaging	--
Capacity [max ppm] <sup>1</sup>	3
<b>Containment systems</b>	
oRABS	•
Isolator	•
Container transport	Manual
IPC / Check weighing	•
Stoppering and/or (screw)capping	•
Audit trail / batch reporting	--
GDP documented design verification	•

**DecFill® MB (Micro Batch)**



**Technical Specifications**

Container placement	Manual
Drug type	Liquid/Powder/Gel
<b>Product container dosing range</b>	
Vials	2–100 ml
Syringes	0.5–20 ml
Dual Chamber Syringes	•
Bottles	--
Cartridges	0.5–20 ml
Ready-to-use	•
Sachets / Pouches	•
Special Packaging	•
Capacity [max ppm] <sup>1</sup>	10
<b>Containment systems</b>	
oRABS	•
Isolator	•
Container transport	Robotics
IPC / Check weighing	•
Stoppering and/or (screw)capping	•
Audit trail / batch reporting	•
GDP documented design verification	•

**DecFill® SB (Small Batch)**



**Technical Specifications**

Container placement	Semi-/Automatic
Drug type	Liquid/Powder/Gel
<b>Product container dosing range</b>	
Vials	2–100 ml
Syringes	0.5–20 ml
Dual Chamber Syringes	--
Bottles	--
Cartridges	0.5–20 ml
Ready-to-use	•
Sachets / Pouches	--
Special Packaging	•
Capacity [max ppm] <sup>1</sup>	60
<b>Containment systems</b>	
oRABS	•
Isolator	•
Container transport	Indexing-intermittent
IPC / Check weighing	•
Stoppering and/or (screw)capping	•
Audit trail / batch reporting	•
GDP documented design verification	•

**DecFill® PS (Production Scale)**



**Technical Specifications**

Container placement	Automatic
Drug type	Liquid/Powder/Gel
<b>Product container dosing range</b>	
Vials	2–100 ml
Syringes	0.5–20 ml
Dual Chamber Syringes	•
Bottles	--
Cartridges	0.5–20 ml
Ready-to-use	•
Sachets / Pouches	•
Special Packaging	•
Capacity [max ppm] <sup>1</sup>	300
<b>Containment systems</b>	
oRABS	•
Isolator	•
Container transport	Linear-individual
IPC / Check weighing	•
Stoppering and/or (screw)capping	•
Audit trail / batch reporting	•
GDP documented design verification	•

# DecFill® LAB

## Ideal for Laboratory Use on a Workbench for Liquids and/or Powders



DecFill® LAB for liquids

### DecFill® LAB (Laboratory)

DecFill® LAB is ideal for workbenches or the integration into existing containment systems (o/cRABS).

The product containers are placed manually by an operator. This tabletop unit is capable of handling a variety of container types such as Ready-to-Use (RTU) systems, vials, cartridges, and syringes.

### Features & Options

- Manual container placement
- Various containers filling - syringes, cartridges, vials etc.
- Tabletop unit ideal for workbench or in containment
- Recipe control via HMI, data collection by USB download
- Highly accurate, patented filling technologies for powders and liquids
- Automatic check weighing and stoppering
- Various aseptic Dec containment systems (oRABS, Isolators)



DecFill® LAB for powders

# DecFill® MB

## Robotic solutions for handling and transporting various container types



Fully robotized solution for product container handling

### DecFill® MB (Micro Batch)

DecFill® MB integrated into Dec's engineered containment system is capable of processing aseptic and high potent micro-batches suitable for R&D, clinical trials and laboratories.

The product containers are handled between the modules by a state-of-the-art robotic system. Due to Dec's patented liquid filling and powder dosing technologies, DecFill® MB performs filling with high accuracy.

### Features & Options

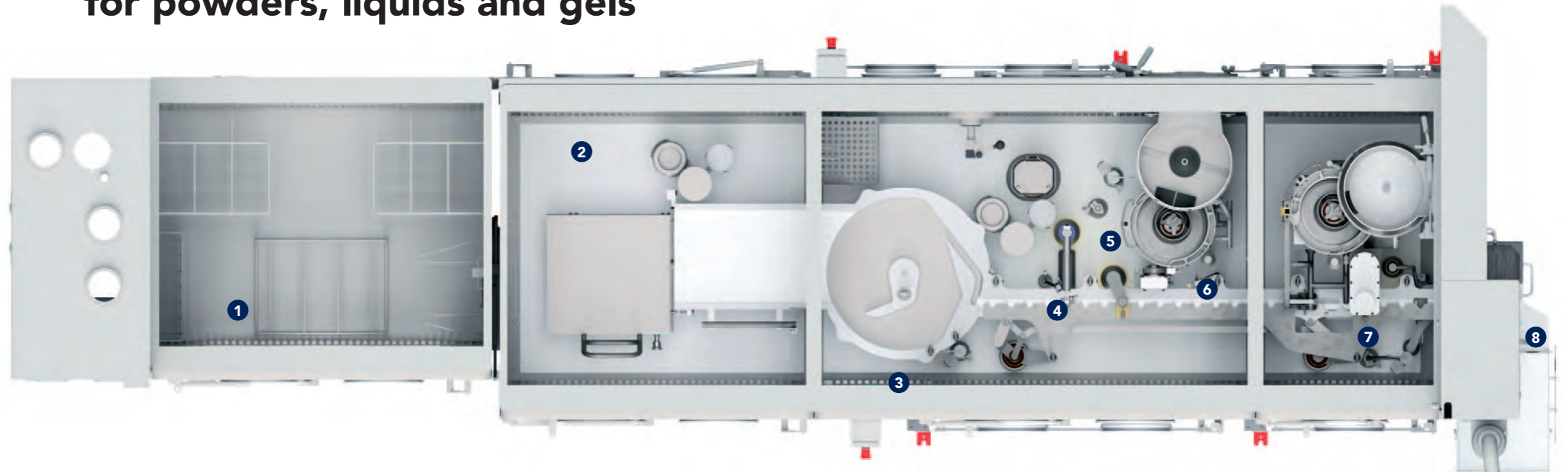
- Robotic moving the product between the modules
- Capable of handling multi-containers in one platform – RTU systems, vials, cartridges, syringes, etc.
- Flexible, modular and compact
- Highly accurate patented liquid filling and powder dosing technologies
- Various aseptic Dec containment systems (oRABS, Isolators)



# DecFill® SB

## Highly accurate, patented filling technology for powders, liquids and gels

- 1 **Fast Gassing**  
Decontamination of RTU products de-bagging
- 2 **Tray-offloading**
- 3 **Buffer Turntable**
- 4 **Main Transport**
- 5 **Liquid Filling & Check Weighing**
- 6 **Rubber Stopper**
- 7 **Capping**
- 8 **Outfeed & Reject**



### DecFill® SB (Small Batch)

DecFill® SB aseptic filling line is designed for small batches and ideal for small scale aseptic production. Its modular, simple and compact design is suitable for limited cleanroom space while maximizing the filling efficiency.

With implementation of index intermittent transport system, the walking beam moves containers to the next position. Due to Dec's patented liquid filling and powder dosing technology, DecFill® SB performs filling with high accuracy.

### Features & Options

- Small scale aseptic production
- Various solutions for the supply of packaging materials
- Integrated environmental monitoring
- Highly accurate, patented filling technologies for powders, liquids and gels
- Various aseptic Dec containment systems (oRABS, Isolators)
- Highly integrable, reflecting Dec's continuous manufacturing single source solutions

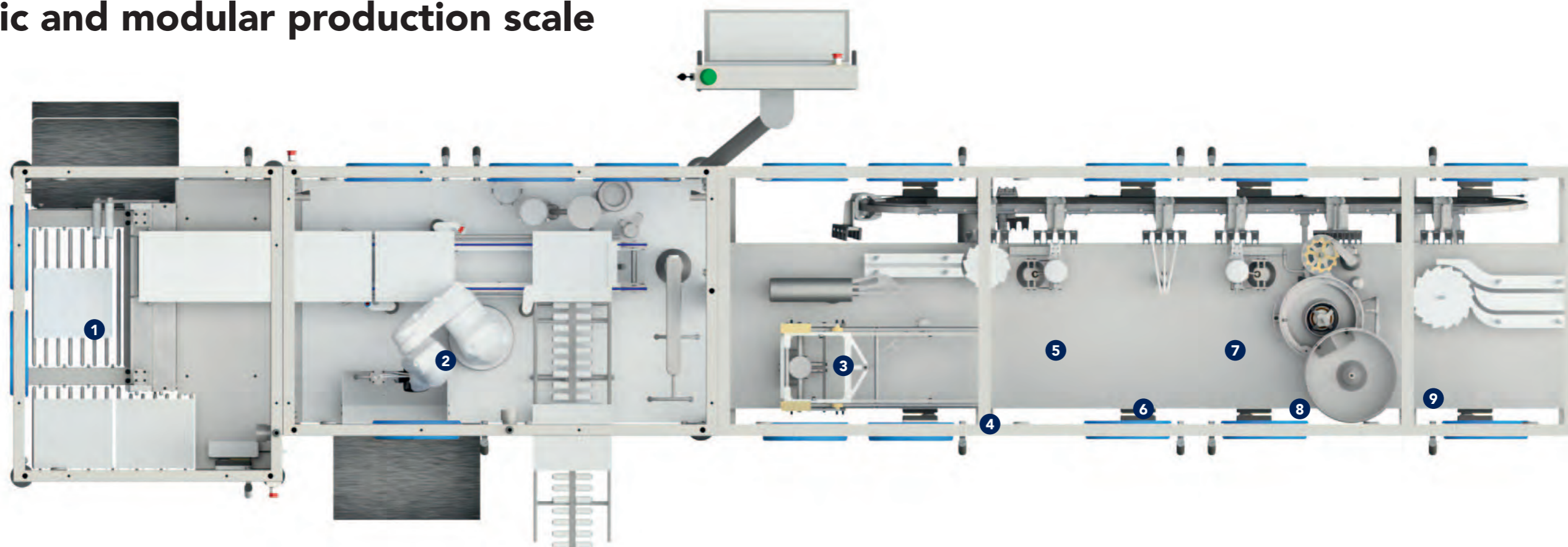
VHP decontamination: Fast Gassing Airlock integrated design for tray offloading



# DecFill® PS

## Fully automatic and modular production scale

- 1 **De-Bagging**  
Removing outer bag of Ready-To-Use products
- 2 **De-Lidding**  
Removing lid of Ready-To-Use products
- 3 **De-Nesting**
- 4 **Individual Product Holder**  
Moving the container with variable speed to any programmable position
- 5 **Gross Weighing**
- 6 **Filling**
- 7 **Net Weighing**
- 8 **End-Stoppering**
- 9 **Outfeed**



### DecFill® PS (Production Scale)

DecFill® PS aseptic filling line is designed for improved accessibility and reduced cleanroom space while maximizing the efficiency in the filler.

With implementation of flexible magnetic linear transport system, DecFill® PS is capable of handling multi-containers in an isolator such as Ready-to-Use (RTU) systems, vials, cartridges, syringes, sachets/pouches, and special packaging with flexible speed and motion.

### Features & Options

Flexible Main Transport

Maximize filling efficiency by handling multi-container in one filling line

Slim machine design for improved accessibility and reduced cleanroom space

Suitable for all RTU systems, vials, cartridges, syringes, sachets/pouches and special packaging

Fully automatic and modular production scale enables a wide variety of configuration options

Highly accurate, patented filling technologies for powders, liquids & gels





### Dec R&D Center of Excellence and In-House Testing

Understanding the importance of operational and regulatory challenges our customers face, Dec has always been committed to improve process efficiency, productivity and safety. Our R&D Center of Excellence with a size of over 2,000 sqm includes state-of-the-art testing equipment to ensure innovation, high performance as well as regulatory compliance.



### Technical support, Maintenance, Training & Workshops

At Dec, customer service is an important part of every project. We accompany our customers over the entire life cycle of their project. Dec's support team will provide professional support to any problem worldwide.

All Dec equipment is designed for optimal performance and durability. However, parts of every machine are subject to wear and tear. We offer spare parts and various maintenance models to enhance production efficiency and productivity.

Dec provides various training sessions from workshops on existing workplace equipment to teach operators how to effectively do their job to inhouse seminars or convenient webinars.

The depth of Dec's knowledge and their ability to develop innovative new technologies make them an invaluable partner for both multinationals and specialist organizations. With true worldwide coverage through subsidiaries in Switzerland, Germany, Great Britain, Ireland, Netherlands, Poland, USA, India, China, its recent acquisitions of advanced containment and aseptic solution provider Extract Technology and AWL, specializing in continous manufacturing solutions as well as agents covering more than 60 countries, the Dec Group provides its customers with global expertise in process containment technologies and a reliable network for local support.

Dec Worldwide Factories and Offices

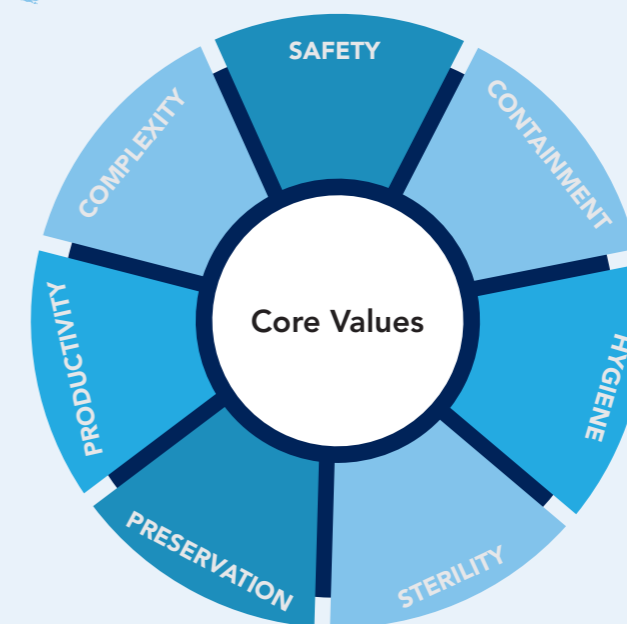


#### Industries

- Chemicals
- Pharma
- Cosmetics
- Food
- Advanced Materials

#### Certificates

- ✓ ISO 9001
- ✓ ISO 14001



**10,000+**

Delivered Projects Across our Product Divisions

- PHT** Powder Handling Technologies
- PST** Particle Size Technologies
- FST** Filling Solutions Technologies
- CST** Containment Solutions Technologies
- CPT** Continuous Processing Technologies

Employees

**750+**



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