



## Products & Services | DEC Group

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### Overview

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Dec provide various sampling solutions from the vacuum type MPTS (Micro Powder Transfer System) to take samples inline directly from equipment such as dryers, mixers or from a pack-off line to sampling from drums filled with incoming materials.

A wide range of sampling solutions is available to meet differing types and conditions of the processes to be sampled and varying levels of containment to be achieved.

### MPTS Micro Powder Transfer System

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The MPTS simplifies sampling procedures in difficult situations such as equipment with poor access or environments where, for safety reasons, personnel are not admitted. Samples are taken instantly, thus giving a true image of the condition of the powder during the process (degree of mixture, humidity, homogeneity, etc.).

Samples are extracted and transferred to their final destinations, whilst maintaining full containment, remaining homogeneous and representative as taken in dense flow, without using any mechanical device which could result in powder attrition.

The MPTS Sampling Device takes a predetermined quantity of powder, even down to gram level, in a fully automated manner. From single shot to continuous sampling, the system is easily integrated into any process. MPTS also allows to take samples from a transfer pipe under pressure.

The system is completely air tight and therefore particularly well suited for operations involving toxic, radioactive or explosive powders. It can be run with protective gas and be partly or fully integrated into a glove box or any other cabinet.

### MPTS Sterile Sampling / Bottle Safety Cabinet

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The MPTS system can be used to take samples during sterile processes without breaching sterility. A sterile barrier separates the system from the process to be sampled. The vacuum generated by the MPTS prevents any contamination of the process during the sampling

procedure. The system is fully automated with safety interlocks and an adequate valves arrangement for line clearance and sterilization.

The sampling bottle can be installed in a ventilated safety cabinet allowing full operator protection against bottle connection leakage or bursting during the procedure. The cabinet is connected to an extraction system maintaining safe conditions when removing and replacing the bottle. The panel includes a front window for a good visibility during the sampling operation and a drain connection for cleaning.

## Sampling Bottle Glove-Box

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When sampling toxic powders, it is sometimes necessary to connect and remove bottles under full containment, Dec can provide compact and ergonomic glove boxes for the integration of the sampling bottle providing high containment of less than  $0.1 \mu\text{g}/\text{m}^3$ .

The glove box can be either passive or with an active filtration and ventilation system and includes an RTP or airlock system for the introduction and removal of the bottles.

## Mobile MPTS

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MPTS can be provided as a portable version for sampling from various equipment at different locations.

The control panel and the MPTS are installed on a trolley and the powder flexible hose can be directly connected to the equipment to be sampled.

In order to operate the system, it is only required to connect the trolley to vacuum, compressed air and, if required, to nitrogen in cases where sampling must take place under inert atmosphere.

## Piston Type Sampling Device

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Compact sampling devices can be directly integrated into a chute to take sample from free falling powder. The system is automated and includes a pneumatic cylinder to activate the internal sampling piston. The system can take multiple samples and the permanent sampling thief installed inside the chute is flushed back by the moving piston before the sample is taken which allows a perfect representative sampling.

## Incoming Material Sampling with DCS<sup>®</sup>

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DCS<sup>®</sup> Sampling is an easy way to take representative samples out of drums with double liners. The system is based on the docking concept of the DCS<sup>®</sup> Drum Containment System for drum discharge and can achieve a high containment level of less than  $1 \mu\text{g}/\text{m}^3$ . The procedure provides contamination free handling of samples and guarantees no external contamination of the drum or outer liner. Samples can be taken under inert conditions.

Compact and mobile, the system can be moved to different places within the production

area. DCS® can also be built in Hastelloy or be coated when handling corrosive materials and be cleaned in place with water or solvents. DCS® Sampling features various options and can be used for combined operation of drum sampling and emptying. With safety always a priority, DCS® guarantees both primary and secondary containment, with a glove box enabling the operator to connect the liners within a sealed environment.



## Dec Group | Dietrich Engineering Consultants sa

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

[www.dec-group.net](http://www.dec-group.net) | [info@dec-group.net](mailto:info@dec-group.net)

Tel: +41 21 694 20 40

Fax: +41 21 694 20 59

Website: [www.dec-group.net](http://www.dec-group.net)

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