

Smallest Amounts into Big Batches

Industries: Paints, Colorants, Additives, Resins, Flavours etc.

FÜLL Hybrid Dispensing System for Production Batches

In combination with a standard gravimetric dispensing system, our volumetric dispenser HX5 is used for the simultaneous dispensing of small components into production batches without operator interference or separate weighing. Whenever the repeatability of the floor scale is insufficient, the HX5 will automatically move into the central dispensing position and the required small amounts will be dispensed simultaneously.

The HX5 can be connected to the main piping system, but can also be supplied with separate storage containers. This will depend on the chemical and physical properties of the components as well as the local situation at the client's site.

- ▶ Dispensing of small amounts without operator interference and separate weighing
- ▶ Continuous dispensing with optional agitation
- ▶ Supply of the HX5 via direct connection to the main piping or via buffer tanks
- ▶ Time saving due to simultaneous dispensing of the small components
- ▶ No costs for cleaning and disposal of separate dispensing containers

FÜLL Hybrid Dispensing System for "In-Can-Tinting"

For "in-can-tinting" systems the HX5 will be installed down-stream of a gravimetric dispensing system. After dispensing basis, slurries etc. at the gravimetric dispensing system, the cans are automatically conveyed to the HX5 and the colorants are dispensed. Further downstream the cans are closed, mixed etc.



Hybrid Dispensing: gravimetric dispensing system FS 182 with HX5 simultaneous dispenser



„In-Can-Tinting“-System with the HX5 and a standard gravimetric dispensing system

HX5 – Simultaneous Dispenser



HX5 – Simultaneous Dispenser

- ▶ Dispensing unit with up to 18 or 32 components
- ▶ Patented double-action piston pumps for doubled dispensing speed
- ▶ Pump capacity of 1.0 – 1.5 l/min
- ▶ Smallest dispensing amount 0.05 ml
- ▶ Accuracy of $\pm 1\%$ ^{*)}
- ▶ Automatic pump selector, significantly reducing wear
- ▶ 100% support for the new UDCP^{**)} standard, allowing easy connection to external formulation and spectro-software

^{*)} Depending on the fluid's rheology and dispensed amount

^{**)} Universal Dispenser Communication Protocol

FÜLL Pump-Technology

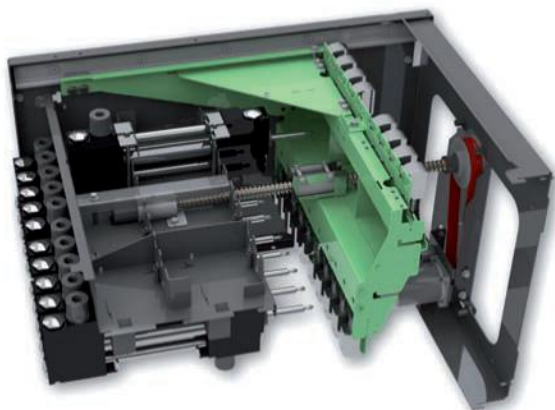
The patented double-action piston pump is equipped with a bi-directional piston and valve system. This eliminates the need for a separate suction-stroke to fill the pump with fluid before dispense, resulting in two major advantages: The dispensing speed is doubled and the canister-level only sinks as much as is needed for the dispense, without additional level fluctuations. This significantly reduces the air-circulation in the canisters. Additionally, the horizontal mounting of the double-action piston pumps prevents the build-up of air in the system. Combined with the long, steady stroke of the piston, a consistent and accurate dispense is assured.



Double-Action Piston Pump

Pump Drive-Unit

A patented pump drive-unit with pump-selector allows the operation of only those pumps that are part of the formulation to dispense. This means that all other pumps not part of the formulation remain idle, reducing wear by more than 80% (based on a typical formulation of 3 components dispensed by a machine with 18 pumps).



Pump Drive-Unit

Dispenser Software

The FÜLL dispensing system HX5 is equipped with the new standard UDCP interface, allowing optimal connection to external formulation and spectro-software. The Universal Dispenser Communication Protocol (UDCP) was developed in cooperation with the leading dispenser manufacturers and paint suppliers in Europe, to standardize communication between dispensers and external control-software.

Customized solutions are available on request.