

EcoSupply P Special Paint Supply System

More Colour Diversity

The number of colours that are used in painting has increased significantly in recent years. Nowadays customers often specify their own individual colours. These special colours have been the norm for some time in HGV cab painting. Car manufacturers and their attached part suppliers have also picked up this trend. Special paint supply systems that are flexible, easy to purge and have minimum colour change times are the solution to this problem.



EcoSupply P deployment in production

Method of operation **EcoSupply P Special Paint Supply System**

The heart of this special paint supply system made by Dürr is the pig, which is an oversized plug that completely seals off the spaces in front of and behind it inside a paint hose. The pig is propelled by the paint or another pig propulsion medium, which is usually air. Almost 100% of the content of hoses can be emptied using a pig. The cleaning effect of the pig is also beneficial, since no visible traces of paint are left behind in paint hoses after the pig has passed through.

Process A distinction is made between pigging processes depending on the direction in which the paint is flowing.

Push-out Process

The pig is propelled by compressed air and pushes the paint from the paint supply unit towards the atomizer.

Reflow Process

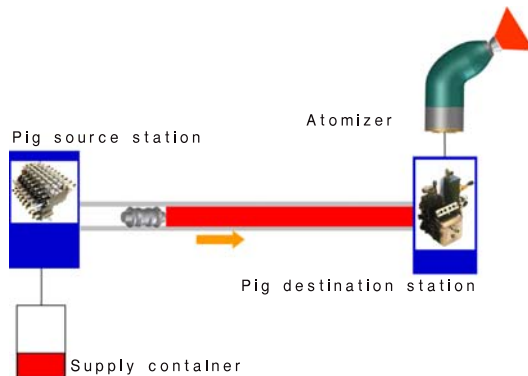
The paint is pushed back into the supply container after the application process.

Combination of Pushout and Reflow Processes

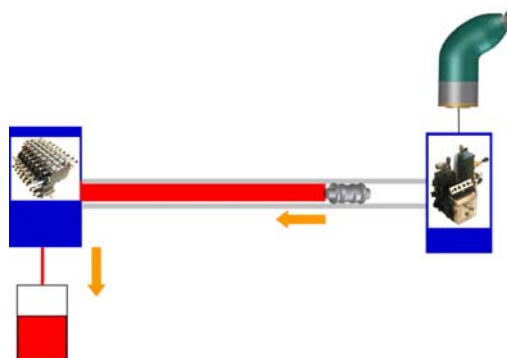
The EcoSupply P combines the pushout and reflow processes using a dual-pig technique. This makes it possible to reduce the filling volume and recover the paint.

Supply **Single-Pass or Main Stubs**

Depending on the size of the paint container that is used, single-pass stubs from the paint system straight to each atomizer are used, or main stubs to each side of the booth are deployed. The paint is branched from the main stubs to the atomizers with or without pigs.



Pushout procedure diagram



Reflow process diagram

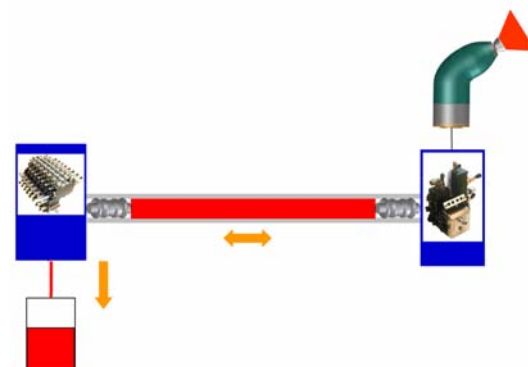


Diagram of standard EcoSupply P combination of pushout and reflow processes



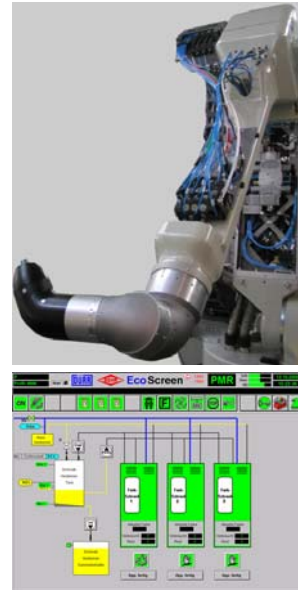
Technical Data / Scope of Delivery



25 l painting booth Source booth



Pigging module in source cabinet



Destination station with robot arm (with EcoCharge P/PD or EcoPurge P/PD)

System display on screen

Highlights Filling Quantity Reduction, Paint Reclaiming

Minimum Paint Loss

Minimum paint loss and solvent consumption during colour changes and minimum disposal quantities.

Reduction of non-piggable sections by integrating the pig stations in the colour changer next to the atomizer and having the best possible component purging capability.

Fastest Colour Change Times

The use of an automatic painting booth makes it possible to reduce manual effort when filling and provides the fastest colour change times.

e.g. with 4 removal points < 13 min. (reflow, purging, hobcock change, preloading)

Long Pig Service Life

e.g. with 20 colour changes per day with 3 EcoSupply P systems – pig change every 6 months.

Modular Design

The modular design allows the system to be combined with different paint supply units (25 - 250 l) and adapted to many different system configurations.

Identical pigging technology and paint changer components provide flexible expansion capability.

Standardised Components

Painting booth, top-up booth, source booth (pigging booth), connection to paint container, pigging stations.

Pigs

Material suitable for:
Water and solvent

Position detection:

Diameter:

Service life:

based paints

Inductive

DN 9, DN 12, DN 16

100 km or 1000 cycles
(paint-dependent)

Pigging Hose

Material:

Diameter:

PFA

DN 9, DN 12, DN 16

Routed in cable ducts

Paint System

Pump paint pressure:

Pig pushing pressure:

Pump capacity:

max. 18 bar

max. 18 bar

9 - 11 l/min.

Paint Supply Unit

Automatic painting booth (25 l)

800 x 1100 x 2200 (w x d x h)

or manual painting station (25 - 250 l)

Scope of Delivery and Services

Paint supply unit, pig source, distribution and destination stations

Connection to application equipment, solenoid valve equipment, control equipment, displays, planning, installation, commissioning, training

Options

Top-up booth

Barcode technology for paint management

Remote displays

(also in explosion-proof zone 1)