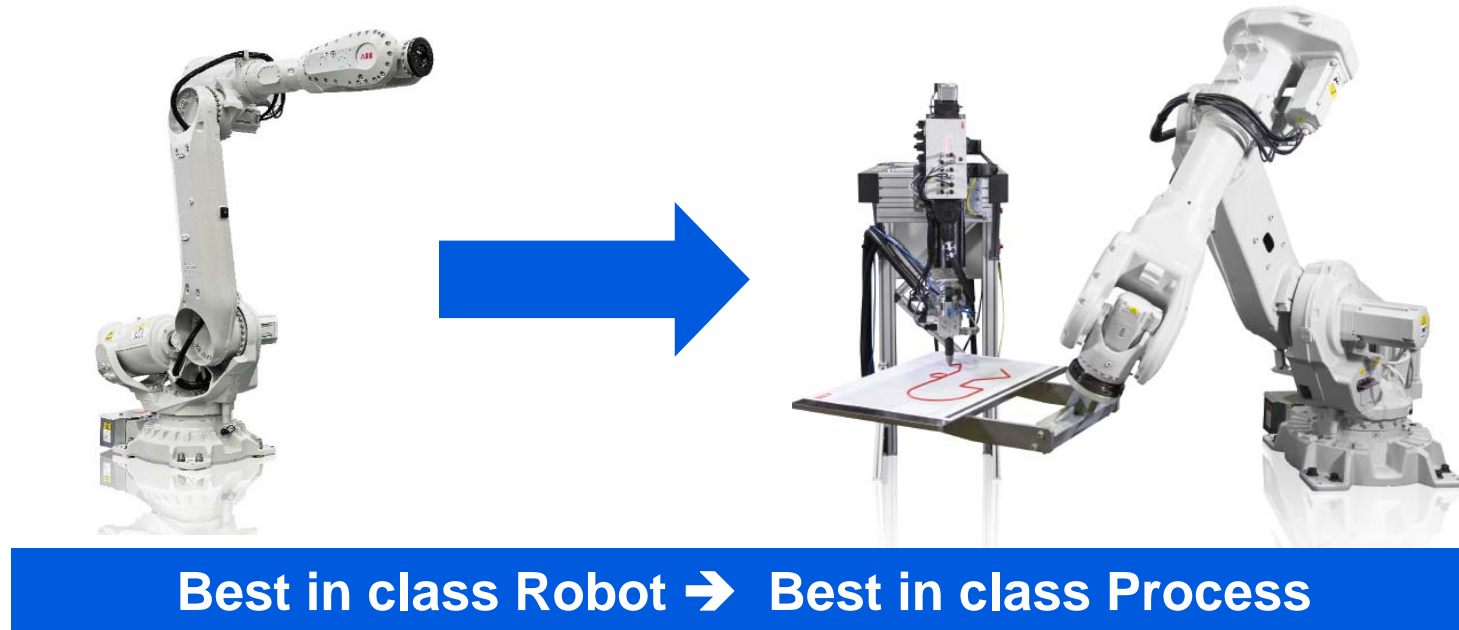


DMRO-D, June 2015

Integrated Dispensing Function Package

Robot gluing and sealing system

Integrated Dispensing Function Package Process Solution Package



Integrated Dispensing Function Package Process Solution Package

Traditional dispensing solutions:



Conventional
dispensing equipment

Robot Commissioning Engineer

Robot Supplier

Process Commissioning Engineer

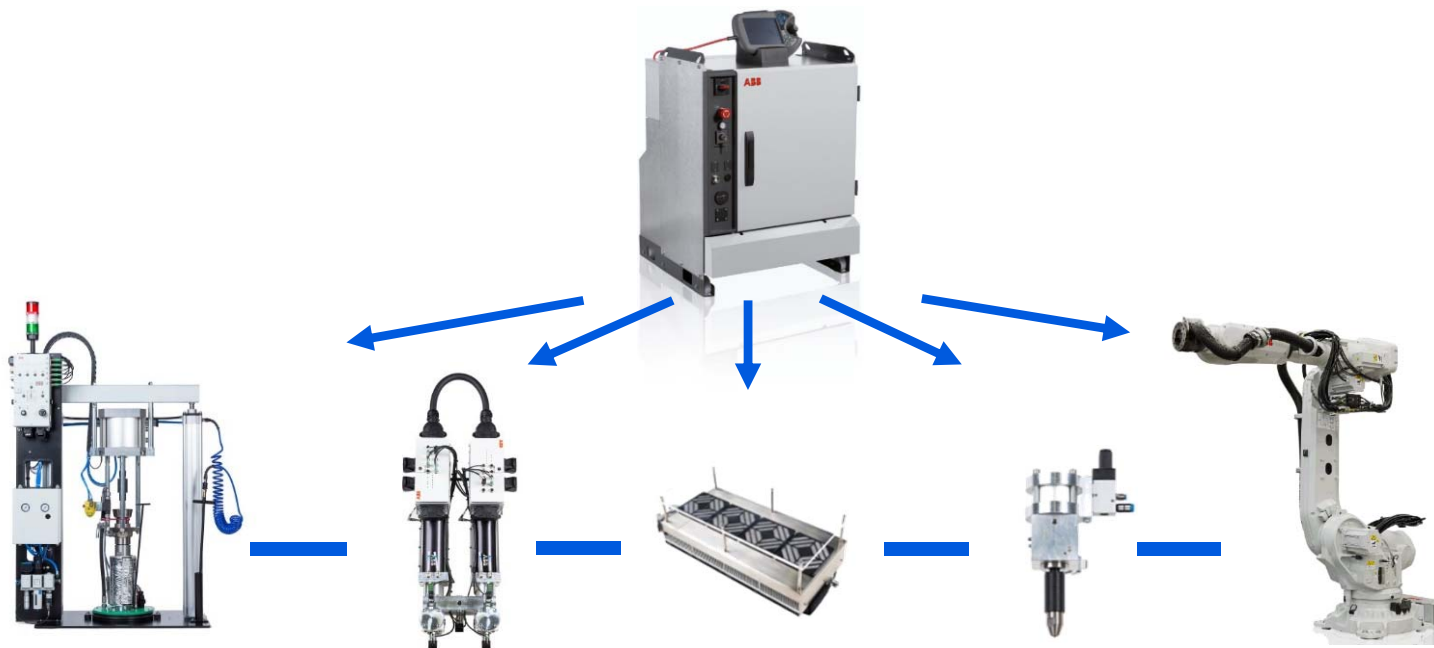
Equipment Supplier

Integrated Dispensing Function Package Process Solution Package

The ABB approach: An integrated solution based on ABB paint technology



Integrated Dispensing Function Package Concept



IRC5 integrated control:

- 0 to 4 cold or heated pumps
- 0 to 2 peltiers
- 1 to 4 cold or heated dosers and applicators
- 1 to 4 robots

Integrated Dispensing Function Package Concept



ABB Robot + IRC5

→ ABB motion planning for motion and dispensing

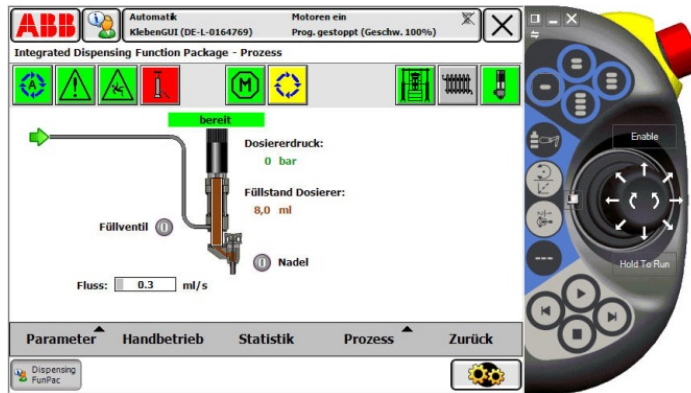
- High speed
- High path accuracy

Standardized high quality process equipment

→ ABB process know-how

- Predictable commissioning
- Efficient maintenance

Integrated Dispensing Function Package Concept



Integration of dispensing control into IRC5

➔ *Only few additional components*

- Short response time
- High quality of control
- Easy programming and operation

Integrated Dispensing Function Package

Product Description

The Integrated Dispensing Function Package...

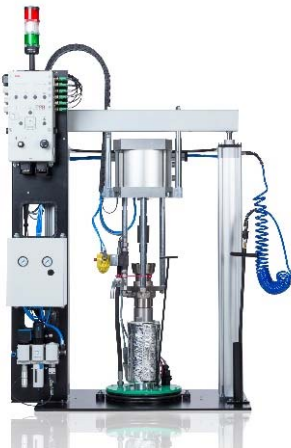
- is a dispensing solution for robot application of high viscose liquids
- comprises all components to turn an ABB robot into a “dispensing machine”: doser, control, material supply and temperature conditioning as well as applicators
- Applications:
 - Sealing: Underbody coating, seam sealing, sound deadener, rocker panel
 - Gluing: structural glue, anti-flutter, 2K, liquid gasket

Integrated Dispensing Function Package

The components



- Industrial robot with IRC5 controller
- Pump
 - Single or double barrel
 - Barrel sizes: 30 l, 50 l or 200 l
 - Heated or not heated



Integrated Dispensing Function Package

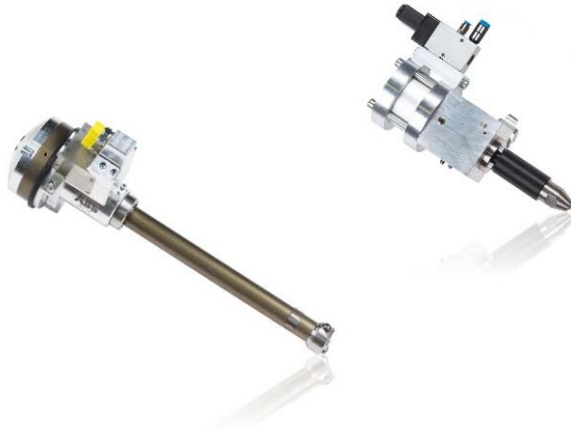
The components



- Doser
 - Single or double doser available
 - Heated or not heated
 - Gross volume: 80 cm³, 155 cm³ or 560 cm³
- Material Temperature conditioning (Peltier)
 - 600 W, 800 W or 1.000 W
 - Air or water cooled

Integrated Dispensing Function Package

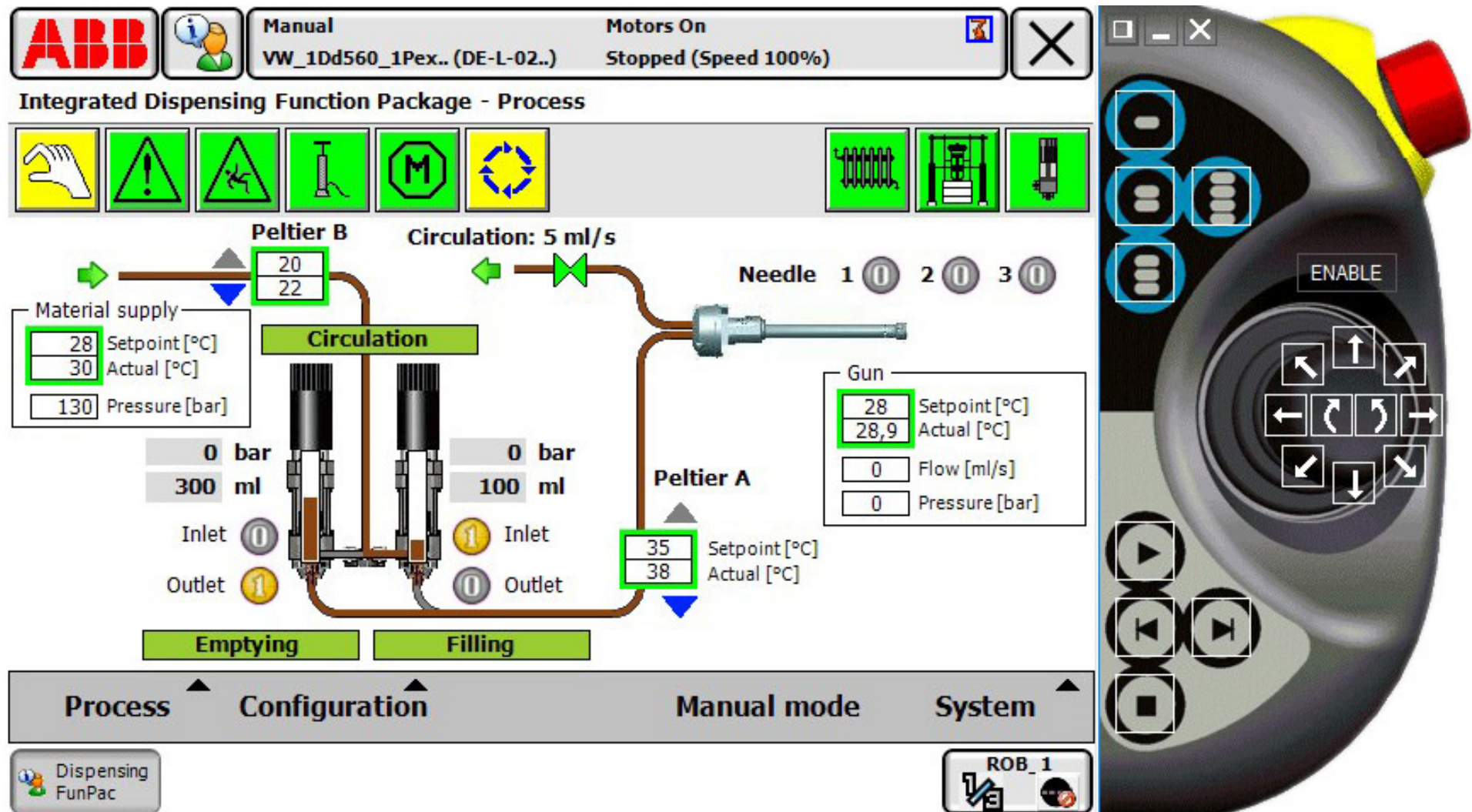
The components



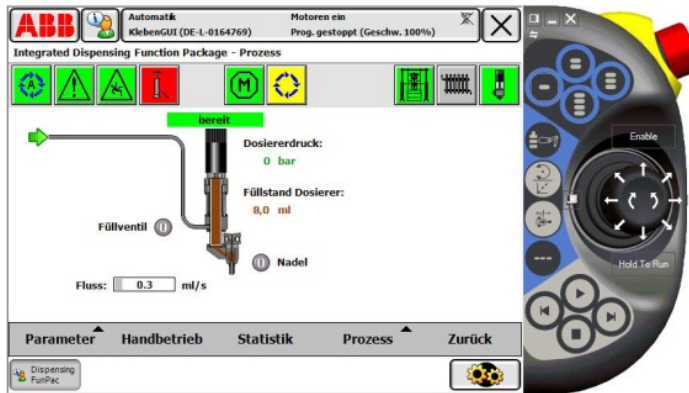
- Applicators
 - Gluing nozzle
 - SPA 470 Sealing Nozzle
 - 1 nozzle for cosmetic sealing
 - SPA 410 Sealing Nozzle
 - 3 nozzles for flatstream, airless, slot
- Heated supply hoses



Integrated Dispensing Function Package FlexPendant Integrated Process-HMI



Integrated Dispensing Function Package Technical Advantages

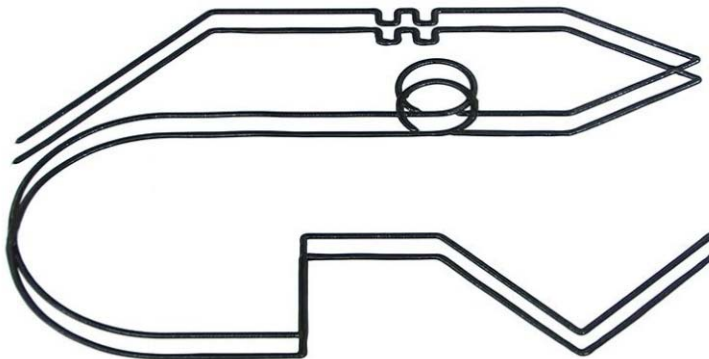


Integrated dispensing...

- enables a single robot commissioning engineer to optimize robot and process together
- enables high production quality independent of robot motion

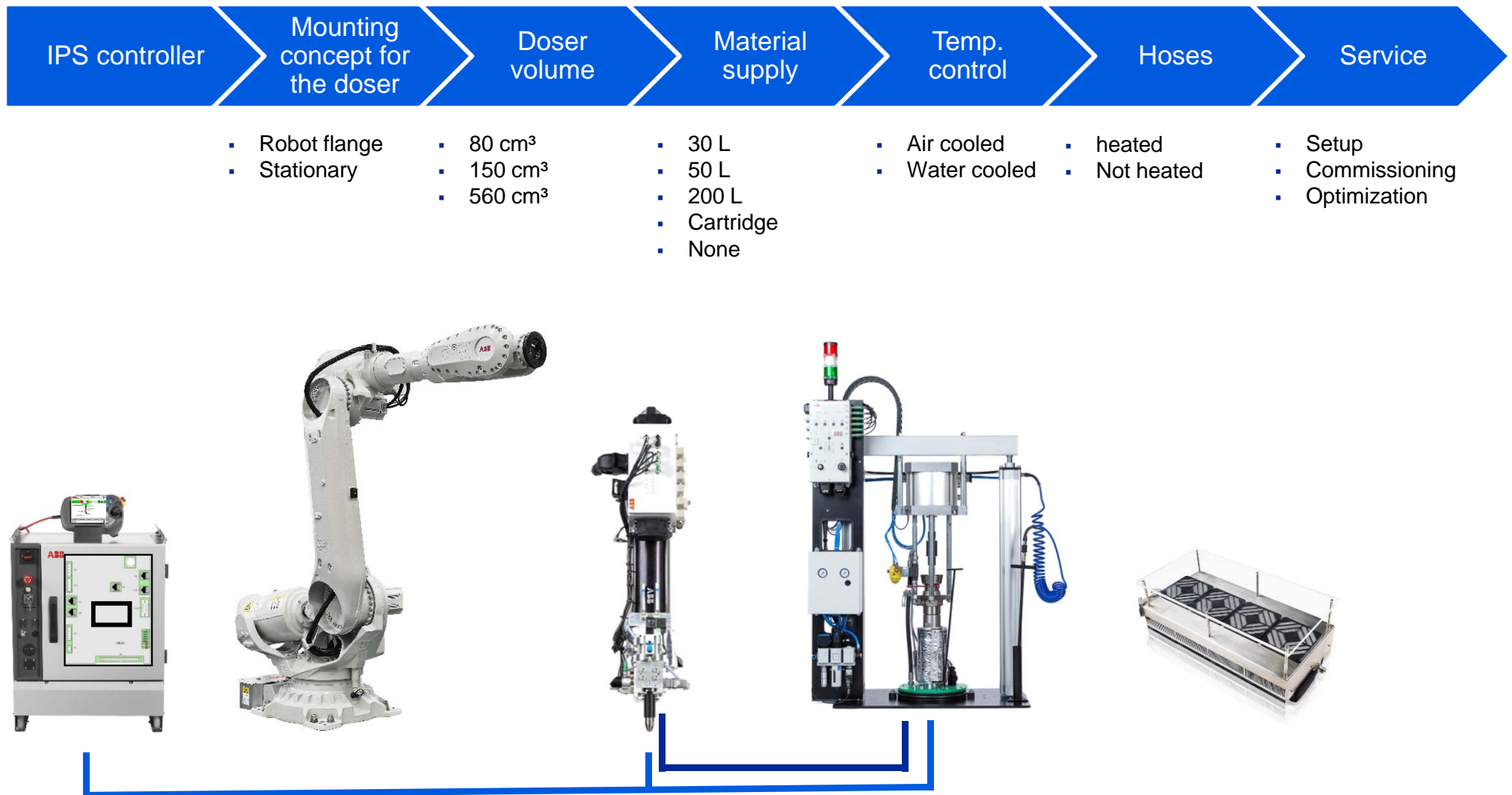
Example:

- Speed change of 1000 mm/s to 500 mm/s and back to 1000 mm/s without influencing process quality



Integrated Dispensing Function Package

7 Configuration Steps to a „Dispensing-Machine“



Integrated Dispensing Function Package Service Concept



Integrated service of robot and process

- Look-ahead maintenance
- Standardized spare parts
- Remote Service

Integrated Dispensing Function Package

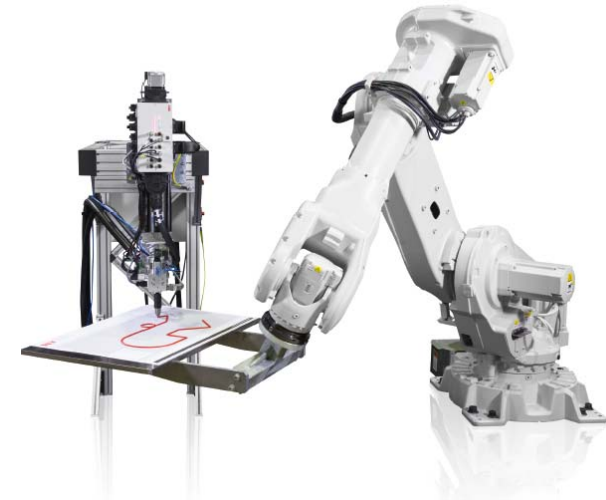
Selected References



Integrated Dispensing Function Package Summary

Integrated dispensing enables...

- **High Performance**
reduce production costs
- **Standardized setup and service**
no delays of SOP commissioning and little maintenance costs
- **Fewer components/suppliers**
reduced system complexity



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for a better world™**

