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Wire table vacuum control system

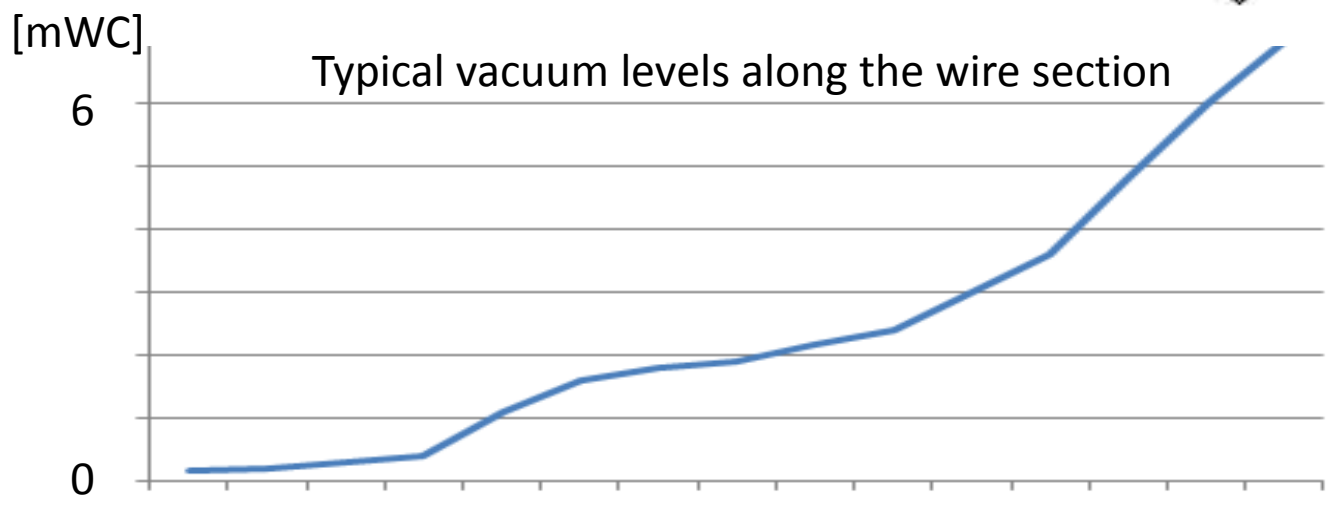
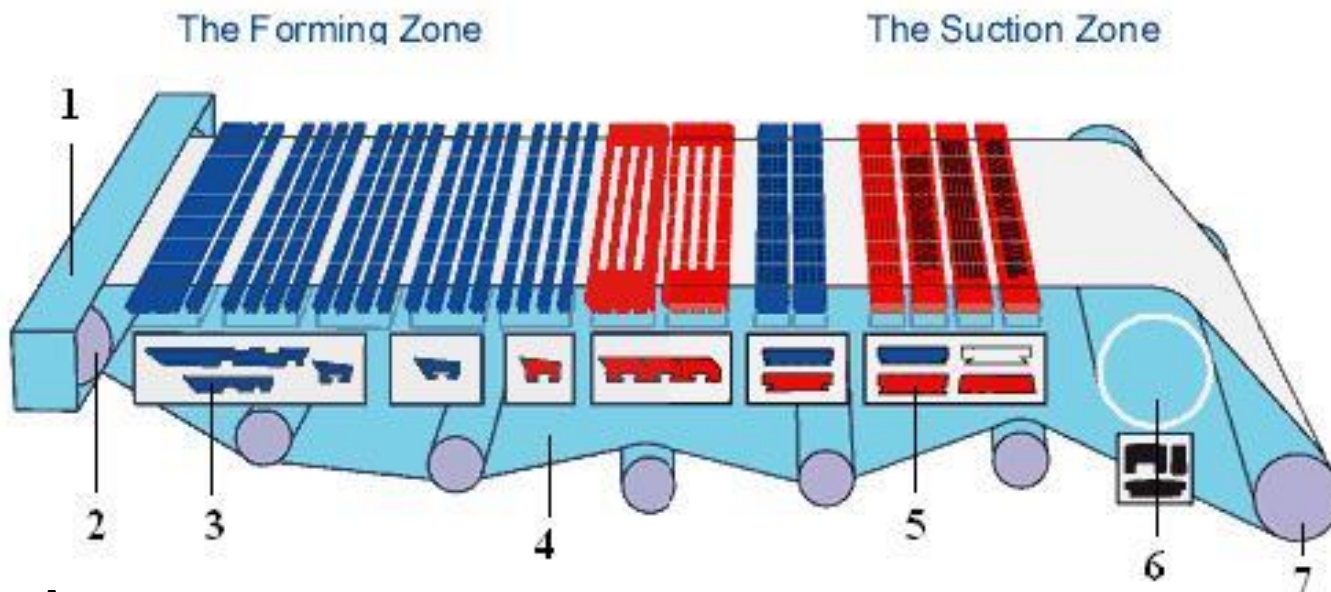


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Wire table vacuum control system



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What are the benefits from a reliable working vacuum control system?

- Optimized machine performance
- Controlled and constant Paper quality
- Controlled dewatering management
 - Optimized, constant retention
 - Pinhole management
 - Two-sidedness optimization
 - Formation control
 - Stable dryline
 - Prevent rewetting
- Easier grade changes
- Energy savings
- Improved wire life time
- Operating safety
- Can be connected to an optional dewatering control system



Wire table vacuum control system



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Vacuum control in principle, low vacuum boxes

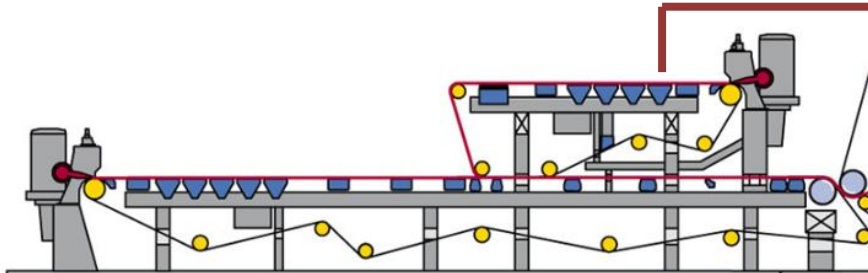


2 x 4 - 20mA

DCS system

- Vacuum control
- Indication of actual vacuum level
- Adjustment of vacuum target level
- Indication of vacuum control valve position

Vacuum pick up line



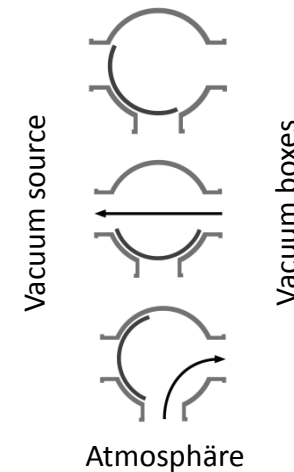
Paper machine

Vacuum boxes to be controlled

Vacuum measurement



Vacuum control valve



Pressurized air

Wire table vacuum control system



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Vacuum control in principle, mid and high vacuum boxes



DCS system

- Vacuum control
- Indication of actual vacuum level
- Adjustment of vacuum target level
- Indication of vacuum control valve position

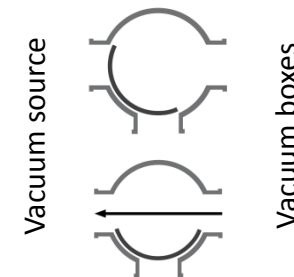
2 x 4 - 20mA

Vacuum pick up line

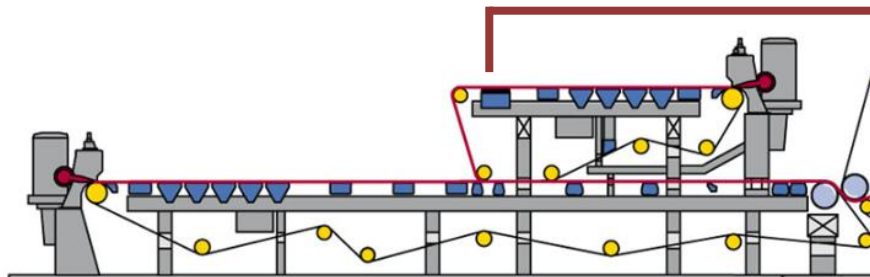
Vacuum measurement



Vacuum control valve



Pressurized air



Paper machine

Vacuum boxes to be controlled

Wire table vacuum control system



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Typical Bakony scope of delivery

- Dewatering elements
 - Water separators
- Vacuum measurements (incl. vacuum pick up line to the box, transmitter)
 - Vacuum control valves (incl. actuator and positioner)
 - Manual shut off valves
- All sizing is based on the expertise of Bakony specialists



Low vacuum
DN 40 - 80



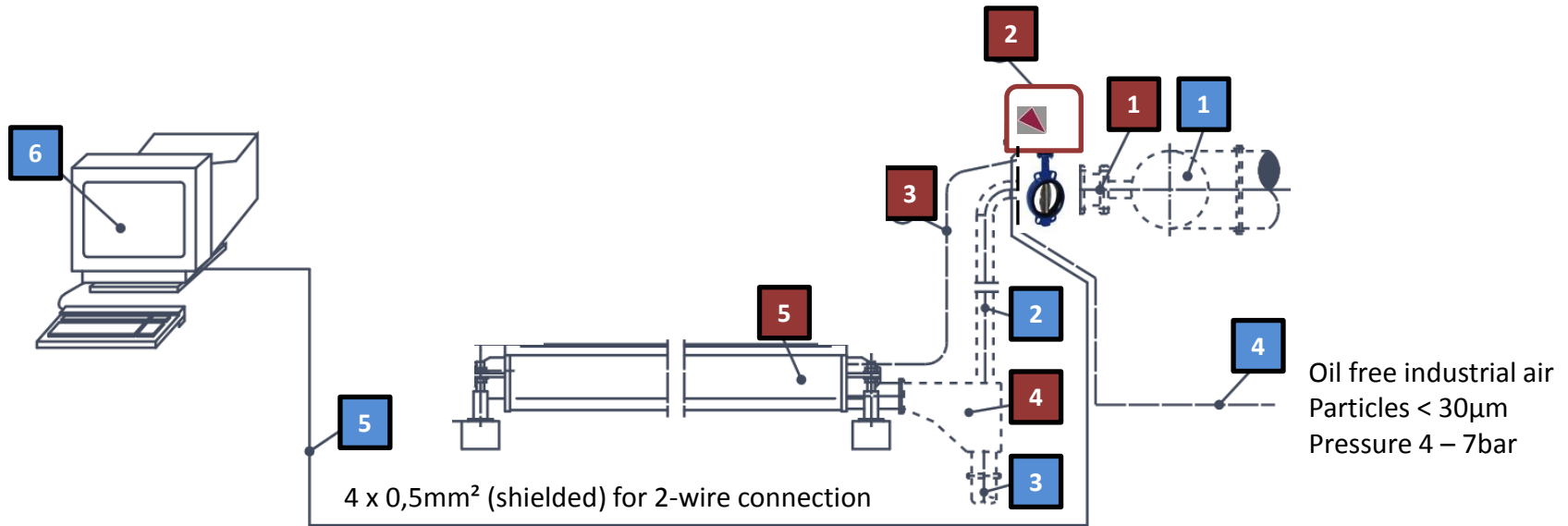
Mid, high vacuum
DN 65 - 200

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General layout



- 1...Vacuum header
- 2...Vacuum pipe
- 3...Drain pipe
- 4...Air supply
- 5...Electric wiring
- 6...Process control system

- 1...Manual valve
- 2...Automatic control unit
- 3...Vacuum pick up line
- 4...Water separator
- 5...Dewatering element

Customer supply

Typical scope split

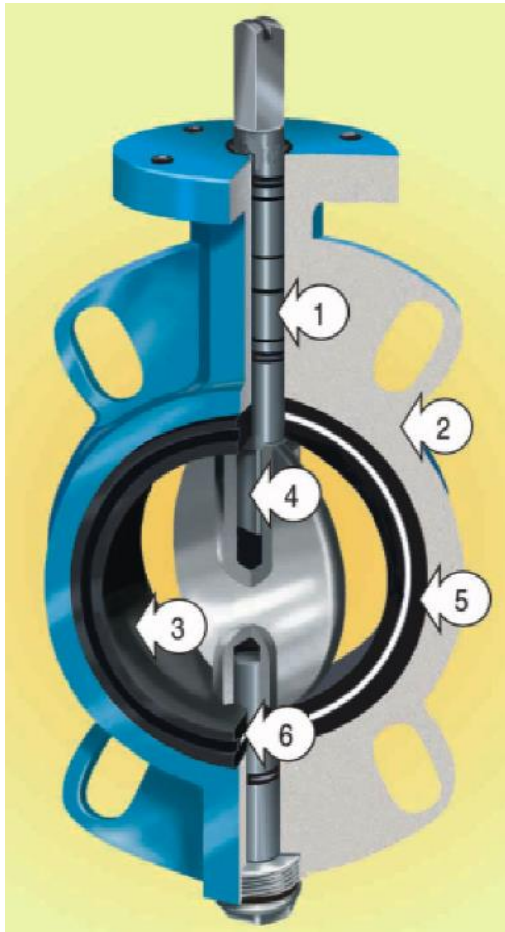
Bakony supply

Wire table vacuum control system

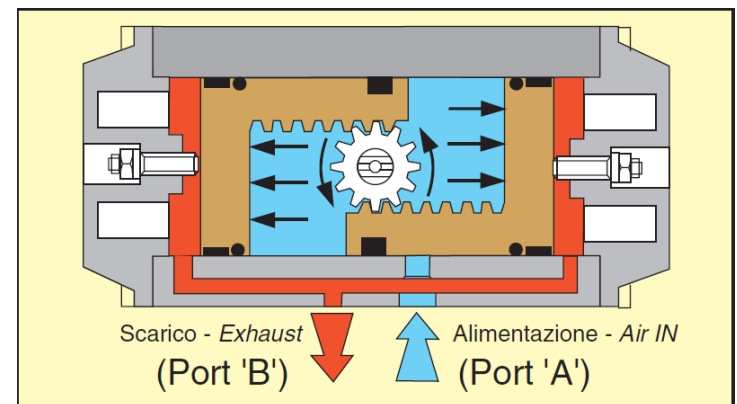
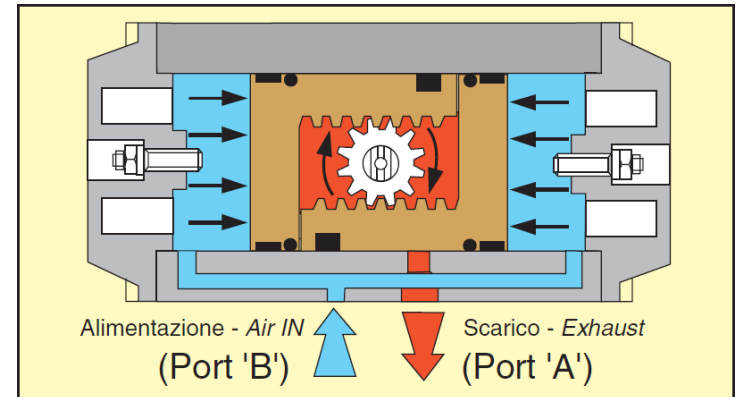


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Valve and actuator



- ① The upper stem is locked by manual or motorized control while the O-ring assures a life-time lubrication. Moreover, a mark is machined on the top part of the stem, which reproduces exactly the disc position, when the valve is inserted between the flanges.
- ② The one - piece valve body casting ensures high strength with minimum weight. It can be supplied in a wide choice of materials, for both WAFER and LUG models, so as to meet all possible installation requirements.
- ③ Thanks to the special internal profile of the surface of contact between disc - seat, the reciprocal back pressures ensure tight shut - off.
- ④ The stem has a square end which fits directly in the disc; hence no fastening elements are needed. This allows the disc to float on the stem and to be self-centering inside the seal so as to form a continuous tight shut-off line with the latter. Thanks to the special shape of the SIRCA disc, pressure drops and forces of rotation are appreciably reduced.
- ⑤ The resilient seat is vulcanized on metallic support ring. Thanks to its straight-forward design it is easily replaceable without use of special tools.
- ⑥ Thanks to the special profile of the seat, no seal is required between the flanges.



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Positioner



HART protocol

For 4 ... 20 mA two-wire technology

Low operating cost

Compact design

Well-proven technology

Robust and environmentally ruggedized

Wide operating temperature range

— -40 ... 85 °C (-40 ... 185 °F)

Easy to commission, “single pushbutton” operating philosophy

Mechanical position indicator

ATEX, FM, CSA, GOST and IECEx approvals

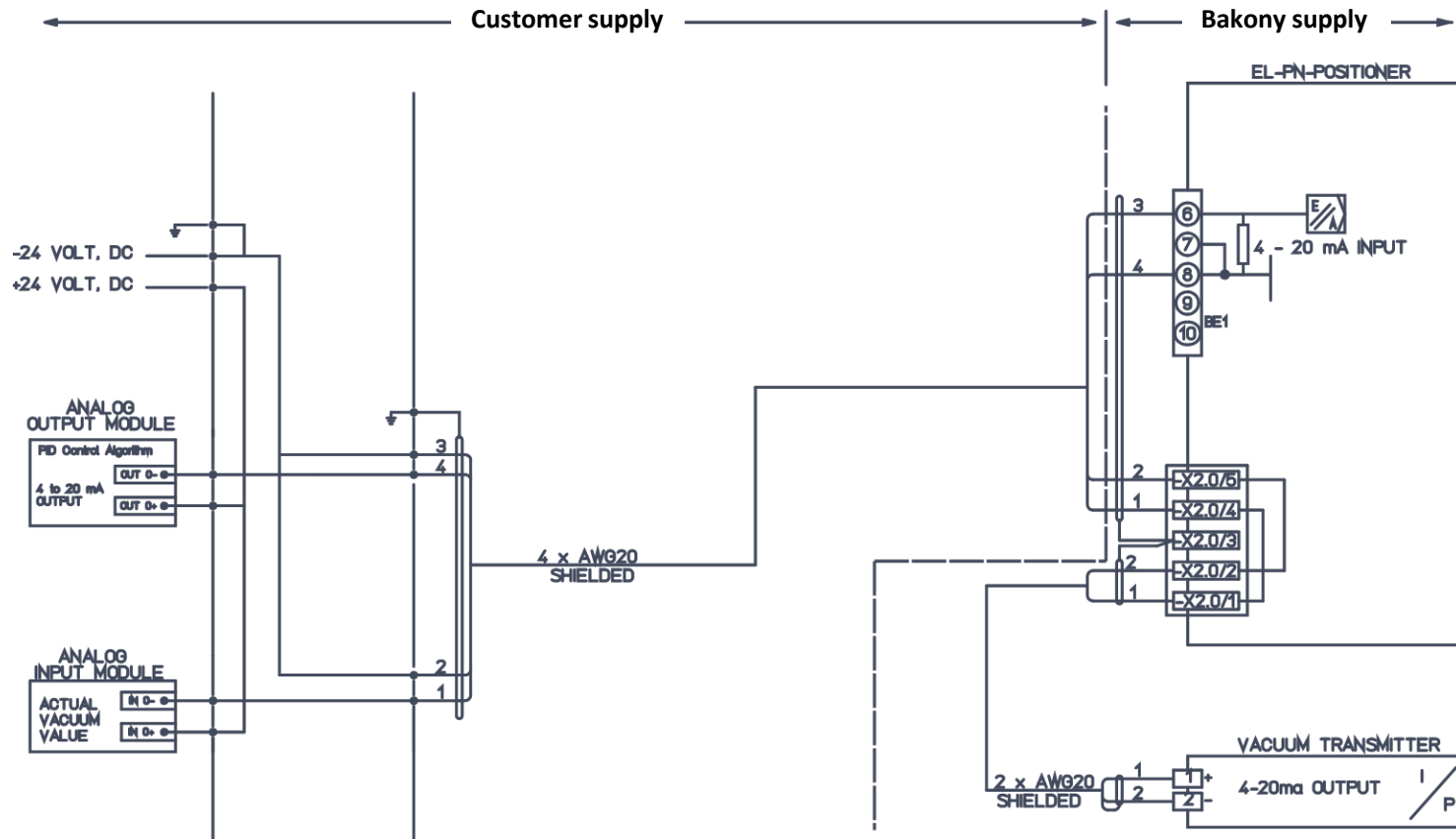
For SIL2 safety loops

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Electric connections



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Vacuum control in principle, all vacuum boxes

- Automatic start up:
 - Control valves are closed
 - Start up vacuum source (fan and or other)
 - As soon as stock is opened to the PM
 - Control valves go to fixed, pre-set opening
 - After pre-set time vacuum control is released
 - Control valves are operated according to target adjusted vacuum level
- Automatic stop:
 - As soon as the stock to the PM is closed
 - After pre-set time the control valves will be closed