

Application

The Coperion K-Tron P100 is designed to convey powders and meets the rigid 3A Dairy sanitary requirements. With the choice of various discharge valve types (powered flap and active driven butterfly valves) the P100 can be used for conveying only applications such as hopper loading, as well as loss-in-weight feeder refill applications, where the receiver is not always emptied completely.

Design

The P100 receiver is available in two outlet configurations: powered flap valve (FP) or butterfly valve (BV). The receiver body is made of stainless steel DIN 1.4404 [AISI 316L], with internal and external electropolished surface passivation. The modular construction and sanitary design without pockets or dead spaces allow for easy disassembly and cleaning as well as simple expansion with extension modules. Tri-Clover quick release fittings ensure quick disconnection from conveying and vacuum piping. All units have reverse jet filter cleaning.

Mechanical Features

- Sanitary design for easy cleaning
- Rugged modular design
- Steep cone angles ensure excellent discharge
- Large area reverse jet filter for efficient powder conveying

Controls

For single receiver applications, we offer the LSR Controller. In loss-in-weight feeder refill applications, the LSR Controller can also be interfaced with Coperion K-Tron SmartConnex™ feeder controls.

For systems with multiple receivers, Coperion K-Tron microprocessor controls or a variety of PLC control solutions are available, which can also be integrated into Coperion K-Tron feeder control systems.

Conveying Rates

P100-FP-300 flap valve version Ø 300 mm [12 in]
 up to 4000 kg/h [8800 lb/h]

P100-BV-200 butterfly valve version Ø 200 mm [8 in]
 up to 3600 kg/h [7920 lb/h]

Based on a distance of 15 m [50 ft] and bulk density of 0.5 kg/dm³ [31 lb/ft³]. Rates vary with material characteristics, conveying distance and plant layout.

Technical Data

Standard Mechanical Specifications

- Stainless steel DIN 1.4404 [AISI 316L] for material contact parts
- Surface finish electropolished
- Welds continuous as laid
- Holding capacity: P100-FP-300 96.2 dm³ [3.4 ft³]
 P100-BV-200 90.2 dm³ [3.2 ft³]
- Stainless steel band clamps
- Sealing and gaskets, FDA listed food grade materials:
 - Clamp ring: silicone, translucent
 - Tri-clamp: white silicone, FDA approved
 - Flap valve: flap bonded silicone sheet, translucent
 - Butterfly valve rubber sleeve: EPDM, black
- Convey line connection; spigots with Tri-clamps, 50.8 mm [2 in], 63.5 mm [2.5 in], 76.2 mm [3 in]



*P100 receiver,
 with 200 mm [8 in]
 butterfly valve*



*P100 receiver,
 with 300 mm [12 in]
 powered discharge valve*

- Integral fill valve with backside vent and Tri-clamp for quick removal
- Vacuum line connection 76.2 [3 in]
- Discharge valve:
 - P100-BV-200 butterfly valve, Ø DN 200 mm [8 in]
 - P100-FP-300 power flap valve, Ø 300 mm [12 in]
- 100% spunbond polyester pleated cartridge filters with stainless steel end caps
 6 filters, total area 3 m² [32.3 ft²]; length 400 mm [15.7 in]
- Automatic reverse jet filter
 4 dm³ [0.14 ft³] SS air reservoir; maximum 4 bar(g) [60 psi(g)]
- Maximum Allowable Vacuum (MAV): -0.8 bar(g) [-11.6 psi(g)]
- Maximum Allowable Working Pressure (MAWP) (dust tightness): 50 mbar [0.725 psi]
- Material certificate EN 10204-2.1

Standard Electrical Specifications

- Signal voltage 24 VDC

Weights

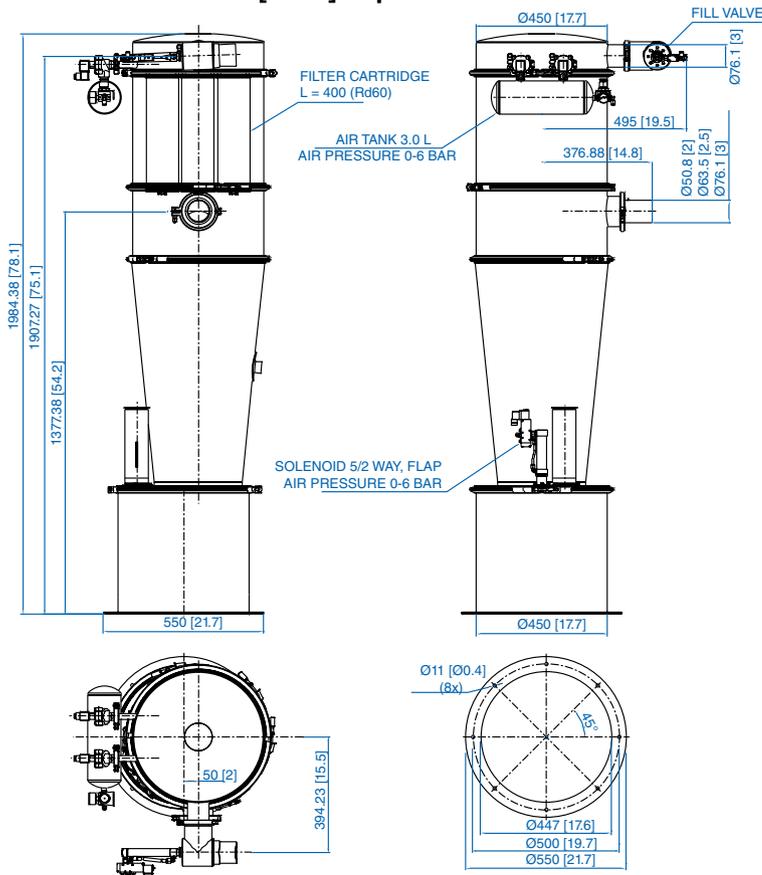
- P100, without options: 75 kg [165 lb]

Operating Temperature

- -10 to 50°C [14 to 122°F]
 for indoor use only - not suitable for outdoor use

Dimensions of P100 mm [in]

P100 with 300 mm [12 in] flap valve



Options

Mechanical

- 60 dm³ [2.12 ft³] extension module
- Slide gate valves as alternative for butterfly type
- PTFE coated filter media
- Open pleated filter type for PTFE execution
- Filter basket with GORE-TEX® cloth
- EPDM white rubber sleeve for butterfly valve
- Vibrator as discharge aid
- Aeration pads as discharge aid
- Stainless steel enclosure for solenoids and pressure regulators supplied loose
- Material certificates type EN10204-2.1

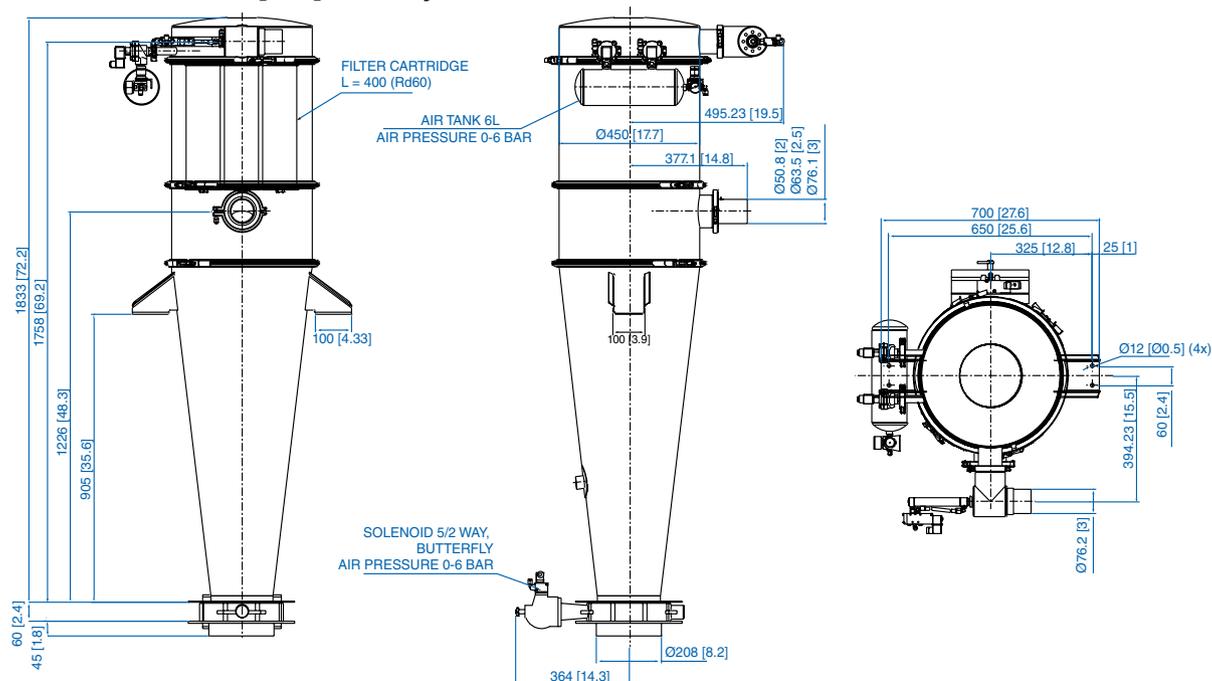
Electrical

- Level probes (capacitive or tuning fork type)
- Terminal box mounted, painted aluminum or stainless steel finish
- LSR Controller
- Central microprocessor or PLC controls
- CSA or UL certified solenoids

Hazardous Locations

- NEC Contact factory
 - ATEX (outside/inside/discharge)
 - with power flap: 3D / 1D / 2D
 - with butterfly valve: 3D / 1D / 1D
- EU-Type Examination Certificate SEV 17 ATEX 0149 X*

P100 with 200 mm [8 in] butterfly valve



Caution: Measurements are for general reference only. Please consult dimensional drawing for exact measurements.