

Application

The 2420 receiver is designed to handle free-flowing granular, powder, regrind, pelletized materials and PVC compound. It features a large filter area with automatic cleaning for fine powders and wear-resistant carbon steel (or optional stainless steel) material contact areas for conveying mildly abrasive materials.

The 2420 receiver is available in two versions for either general keep full conveying or loss-in-weight (LIW) feeder refill applications, with a selection of various discharge valve types (gravity, orifice and butterfly), depending on the application and material to be fed.

Receivers for keep-full applications are fitted with a gravity gate discharge valve. The receiver sequences draw cycles of material as long as inductive proximity switch on the gravity discharge gate is in the almost closed position or a signal from a secondary level indicator in the hopper is detected, ensuring the hopper below the receiver is kept full.

Receivers designed for loss-in-weight feeder refill applications are fitted with a level sensor in the housing and require a slide/orifice or butterfly valve. The receiver draws material until it is full and waits for a signal from the feeder below to open the discharge valve and dispense the material. This cycle is then repeated.

Design

The receiver features a low overall height by incorporating a cyclonic primary separator coupled with an internal cartridge secondary separator with automatic air pulse cleaning. Available in carbon steel construction with epoxy coated interior and enamel painted exterior or with 1.4301 (AISI 304) stainless steel material contact.

A tangential material inlet tube provides gentle material entry to reduce degradation of the conveyed product, which includes an internal check-valve that allows the receiver to be used in vacuum sequencing systems with multiple receivers.

Mechanical Features

- Low overall height
- Rugged modular design
- Quick-connect clamps for easy cleaning and filter maintenance
- Full support discharge flange for mounting

Controls

The receiver is available with controls suitable for use with either a solid state microprocessor controller (MPC) or a programmable logic controller (PLC). Both control systems utilize 24 VDC low voltage and are available with installation kits making installation easy and more economical. The receiver controls include color coded quick connectors and provide communication to the central controller.

For single receiver applications, we offer the LSR Controller. In loss-in-weight feeder refill applications, the LSR Controller seamlessly interfaces with Coperion K-Tron Feeder controls.

Conveying Rates

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.

Powder Receiver

up to 1225 kg/hr [2700 lb/hr]



*2420 receiver
in painted carbon steel
with gravity discharge gate*

Technical Data

Standard Mechanical Specifications

- Available in carbon steel with painted primer interior and painted RAL 7035 gray exterior or 1.4301 (AISI 304) stainless steel construction
- Holding capacity 33 dm³ [1.16 ft³] (general version)
Holding capacity 19.8 dm³ [0.7 ft³] (feeder refill version)
- 610 mm [24 in] diameter housing
- 76.2 mm [3 in] tangential inlet with stainless steel check valve
- 60° sloped hopper to promote material discharge
- Stainless steel band clamps
- Integral fill valve with backside vent, dual acting air cylinder with solenoid control 24 VDC
- Discharge gate valve
 - Keep full version: One-piece stainless steel 150 mm [6 in] gravity gate discharge with white Neoprene seal and inductive proximity switch level-sensing system (24 VDC) on gravity gate
 - LIW feeder refill version: Butterfly or orifice gate valve; with single coil solenoid (energize to open valve)
- 100% spunbond polyester cartridge filters, including black gaskets 1 filter, total are 2.89 m² [31.1 ft²]; length 355 mm [14 in]
- Automatic self cleaning cartridge assembly
- Automatic reverse jet cleaning
9 dm³ [0.3 ft³] air reservoir; max. 6.9 bar(g) [100 psi(g)]

Standard Electrical Specifications

- Signal voltage 24 VDC

Weights

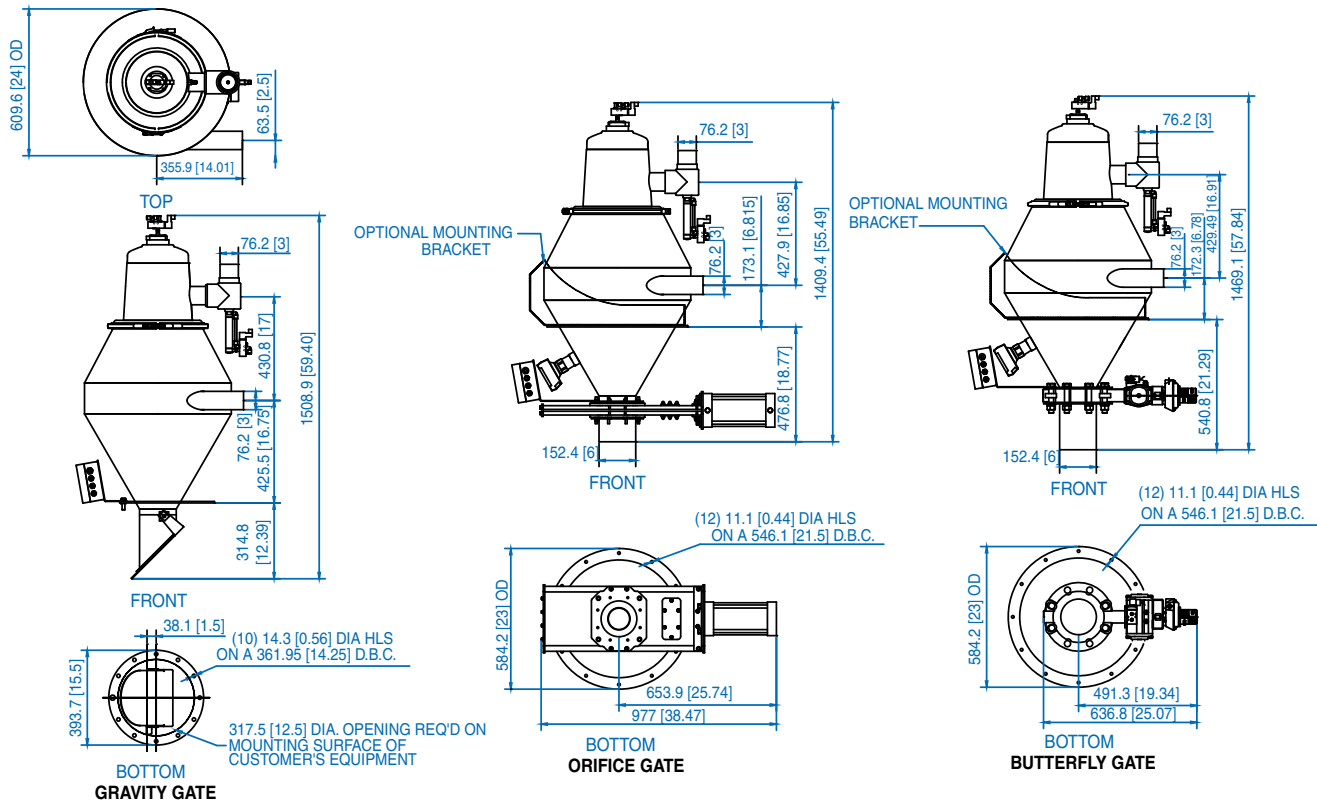
- 80 kg [176 lb] depending on discharge configuration

Operating Temperature

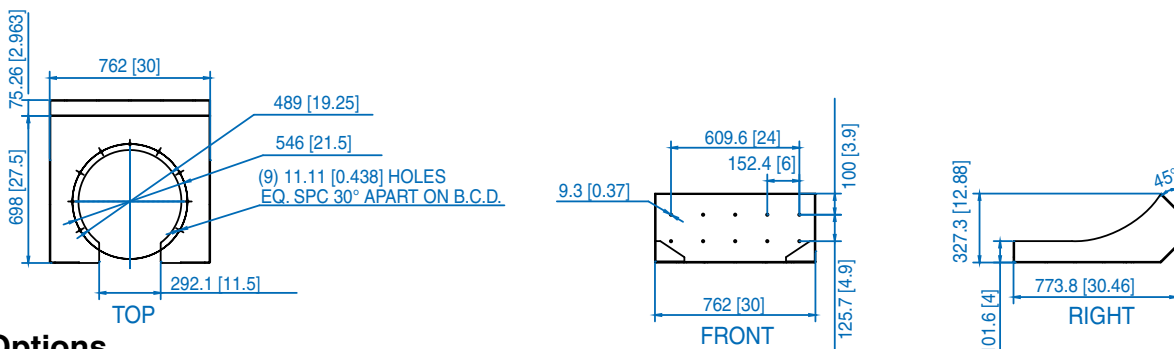
- -10 to 50°C [14 to 122°F]

Dimensions of 2420 Receiver mm [in]
for general keep full conveying

for loss-in-weight feeder refill



Dimensions Optional Mounting Bracket mm [in]



Options

Mechanical

- Mounting bracket for LIW feeder refill versions
- Bead blast surface finish (1.8 micron Ra)
- Flange for alternate discharge gate valve
- Various filter media - Including PTFE laminated cartridges with stainless steel end caps
- Weatherhood for outdoor use
- Custom material combinations
- Reduced inlet tube size to meet smaller capacity applications
- Vibrator as discharge aid
- Aeration pads as discharge aid
- Enclosure for solenoids

Electrical

- Mounting bracket for terminal box or controller
- Level probes (capacitive or tuning fork type)
- Limit switches on butterfly or slide gate valve
- LSR Controller
- Central Microprocessor or PLC Control
- Stainless steel options on solenoids, gauges as required
- Solenoid boxes supplied loose in mild or stainless steel
- Terminal box mounted in mild or stainless steel
- For NEC and ATEX compliant options contact factory
- For CSA or UL certified solenoid contact factory

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