

Application

The 2410 venturi powder loader is designed to handle fine bulk materials. The venturi power unit utilizes compressed air to create a vacuum convey source. The modular design of the loader allows flexibility in the selection of material construction, power, filtration and type of discharge to meet your current application requirements, as well as any future needs.

The 2410 venturi loader 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, slide/orifice and butterfly), depending on the application and material to be fed.

Loaders for keep-full applications are fitted with a gravity gate discharge valve. The loader 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 loader is kept full.

Loaders 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 loader 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

2410 venturi loaders are available in either aluminum (painted) or stainless steel construction. Components of different construction are interchangeable, allowing loaders to be specified with stainless steel material contact areas only.

Mechanical Features

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

Controls

The 2410 venturi loader is equipped with the LSR Controller. Front panel controls include a potentiometer to set the draw time and an on/off switch. The controls, on even the simplest loader are capable of handling future add-on options, such as pulse-clean powder filters. The control is provided by a 15 amp, 115/230 VAC, single-phase, grounded panel.

Conveying Rates

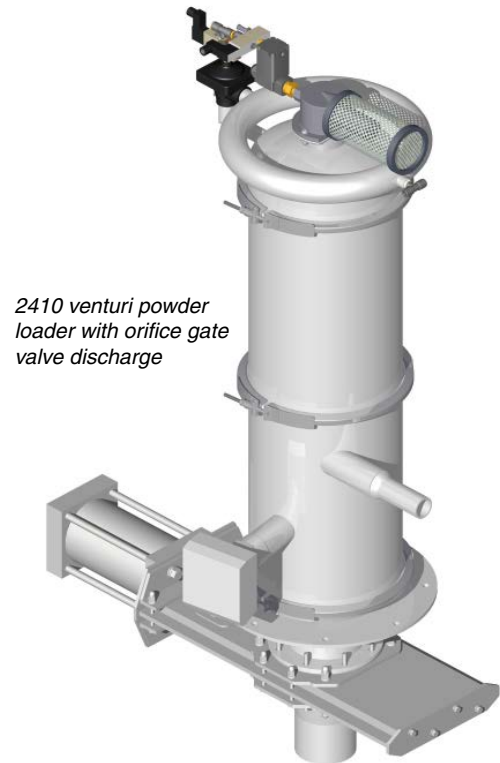
Based on granular powder at a distance of 6 m [20 ft] and bulk density of 0.5 kg/dm³ [31 lb/ft³]. Rates vary with material characteristics, conveying distance and plant layout.

Up to 225 kg/h [500 lb/h]

Technical Data

Standard Mechanical Specifications

- Available in painted RAL 7035 gray aluminum or 1.4301 (AISI 304) stainless steel construction
- Supply power for LSR: 115/230 VAC, 15 Amp, auto switching
- Venturi supply air: 6 bar(g) [87 psi(g)]
- Venturi air consumption: 14.2 Ndm³/s @ 6 bar(g) [31 SCFM @ 87 psi(g)]
- Holding capacity general conveying version: 11.7 dm³ [0.41 ft³]
- Holding capacity LIW refill version: 9.7 dm³ [0.34 ft³]
- 254 mm [10 in] diameter housing
- 38 mm [1.5 in] tangential inlet



*2410 venturi powder
loader with orifice gate
valve discharge*

- Stainless steel band clamps
- Discharge gate valve
 - Keep full version: One-piece stainless steel 127 mm [5 in] discharge gate with white Neoprene seal and inductive proximity switch level-sensing system (24 VDC) on gravity gate
 - LIW feeder refill version: Butterfly or slide/orifice gate valve; with single coil solenoid (energize to open valve)
- Automatic reverse jet cleaning
- 1.7 dm³ [.06 ft³] air reservoir; 6.9 bar max [100 psig]

Standard Filtration Configuration

- 454 g [16 oz] polyester cloth filter bag with snap-ring seal for powder loader, total 0.37 m² [4 ft²] filter area

Weights

- Aluminum: 23 kg [50 lb] depending on discharge configuration
- Stainless Steel: 45 kg [100 lb] depending on discharge configuration

Operating Temperature

- -10 to 50°C [14 to 122°F]

Options

Mechanical

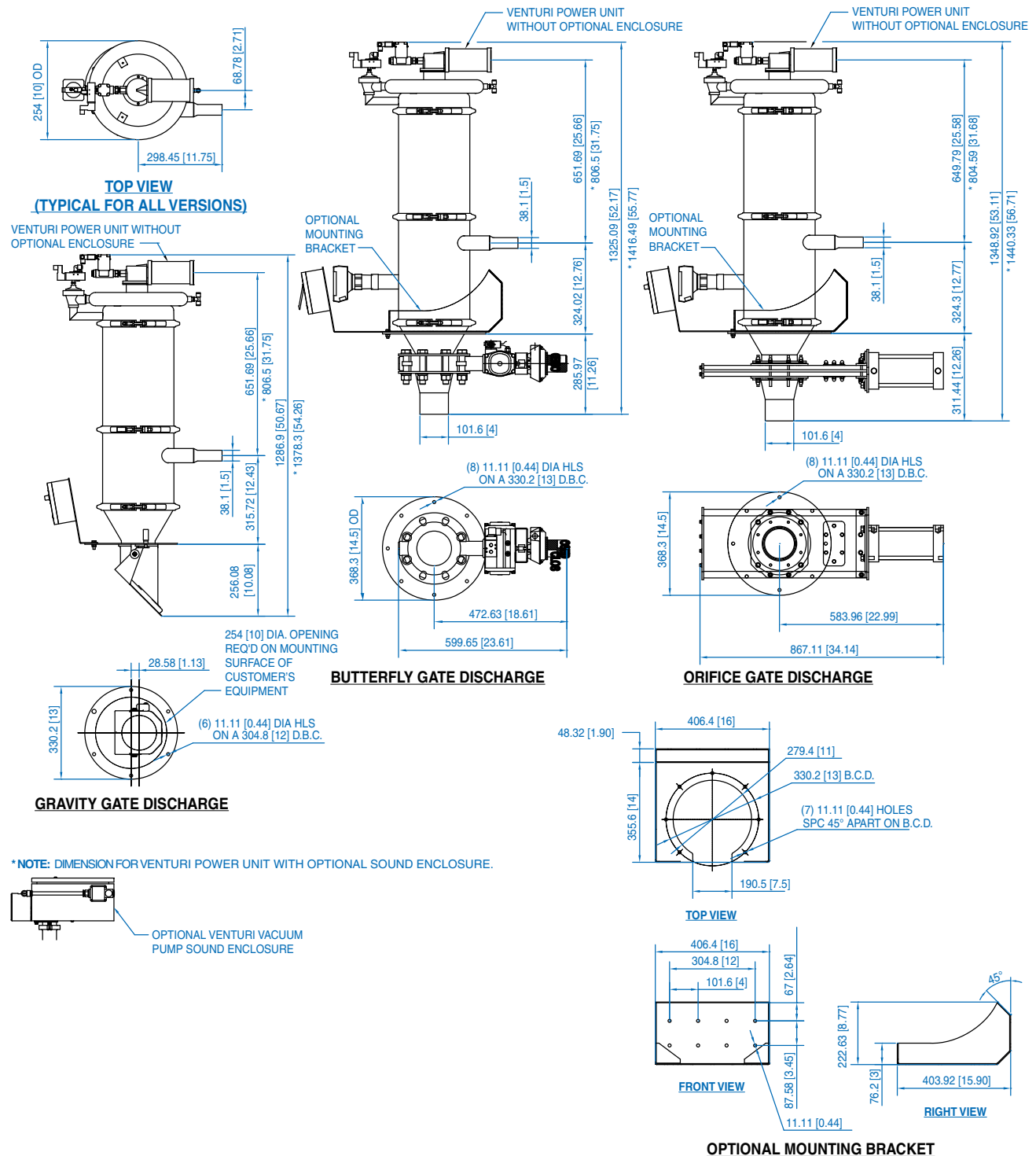
- Flange for alternate discharge gate valve
- PTFE membrane on filter elements
- Custom material combinations
- Mounting bracket for LIW feeder refill versions
- Bead blast surface finish (1.8 micron Ra)
- Venturi vacuum pump sound enclosure

Electrical

- Level probes (capacitive or tuning fork type)
- Limit switches on butterfly or slide gate valve
- For NEC and ATEX compliant options contact factory
- For CSA or UL certified solenoid contact factory

Dimensions of 2410 Venturi Powder Loader

mm [in]



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