



## **Hi-Vac® Model 830 Portable**

### **I. General**

The Hi-Vac® Model 830 is a heavy duty industrial vacuum loader consisting of a powerhead, material collection hopper, support frame and airlift. The Hi-Vac® Model 830 is an ideal industrial vacuum source to power permanent in-plant piping systems.

### **II. Power Module**

The Hi-Vac® Model 830 is electrically powered and features a 30 horsepower, 480 VAC, 3 Phase, 60 Hz, TEFC, electric motor. A NEMA 4 control panel is provided with all necessary controls and motor starters. All Hi-Vac® units feature a positive displacement rotary lobe type vacuum producer with ductile iron impellers and high temperature seals. A cast aluminum flap on the vacuum pump discharge silencer acts as a check valve to prevent the vacuum pump from reversing direction and pressurizing the system.

### **III. Material Collection Hopper**

The Hi-Vac® Model 830 features a large 1.5 cu. yd. (1.15 cu. m.) capacity main material collection hopper. The hopper is constructed of reinforced carbon steel and is designed to handle negative pressure over 18" Hg. The collected material enters the hopper through the centrifugal separator located at the side of the powerhead. The centrifugal action of the air as it enters the hopper assures that only the finest particles get carried into the linear separator and the baghouse for final separation from the airstream.

### **IV. Air Lift**

The Hi-Vac® Model 830 is equipped with an air lift device to raise the Power Module from the Material Collection Hopper allowing the hopper to be removed for emptying. The Air Lift requires an external compressed air supply of 80 PSI at 1.0 CFM. A separate compressed air supply is not required with machines using a diesel engine drive instead of an electric motor. Compressed air is supplied directly from the diesel engine.

### **V. Filtration System**

The Hi-Vac® Model 830 features a two stage filtration system consisting of the initial centrifugal separator and a fabric dust collector. The centrifugal separator removes the majority of the material, usually more than 90%, entering the Hi-Vac®. The dust collector is the second stage of separation. It includes 2 cartridge style filters having a total filtration area of more than 72 sq. ft. (6.7 sq. m). Filter cleaning is continuous and is accomplished by a timed pulse of compressed air. A minimum compressed air supply of 20 CFM (10 liter/sec.) at a pressure of 80 PSI (6 bar) is required for filter cleaning. Frequency and duration of the pulse cleaning cycle is adjustable from the main control panel.

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## Hi-Vac® Model 830 Portable (continued)

### VI. Anticipated Performance

The Model 830's 30 horsepower motor and positive displacement rotary lobe type vacuum producer provide the following performance specifications:

**Horsepower:** 30 HP (22 KW)

**Vacuum Rating:** 16" Hg (-0.542 Bar)

<b>Air Volume</b>		<b>Conveying Rate</b>		<b>Conveying Distance</b>	
No Load	= 765 CFM 1300 m <sup>3</sup> /hr	Nominal	= 135 lbs/min. 60 kg/min	Nominal	= 100 ft. 30 m.
Max. Load	= 630 CFM 1070 m <sup>3</sup> /hr	Maximum	= 267 lbs/min. 121 kg/min.	Maximum	= 200 ft. 60 m.

Material handling rates and conveying distance will vary based on the bulk density and particle size of the material, as well as the skill and efficiency of the operating personnel.

### VII. Controls

The Model 830 Hi-Vac® features a complete package of instrumentation for operation at 120V/1PH/60HZ and product protection controls. Standard features include the following:

- Start and Stop pushbuttons with system "Running" pilot light
- Filter bag differential gauge and automatic shutdown
- Vacuum gauge and mechanical high vacuum relief valve
- Hopper full level control with automatic shutdown and "Hopper Full" pilot light
- Low air pressure switch and light to shutdown machine if air pressure is too low

### VIII. Miscellaneous

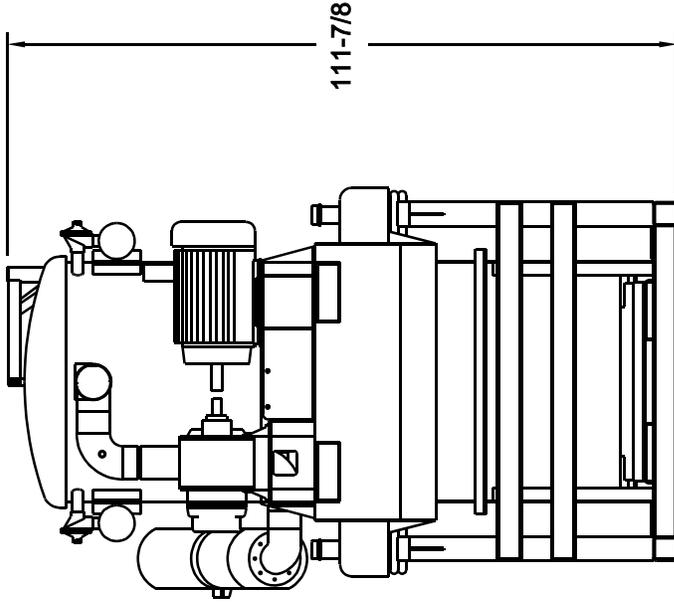
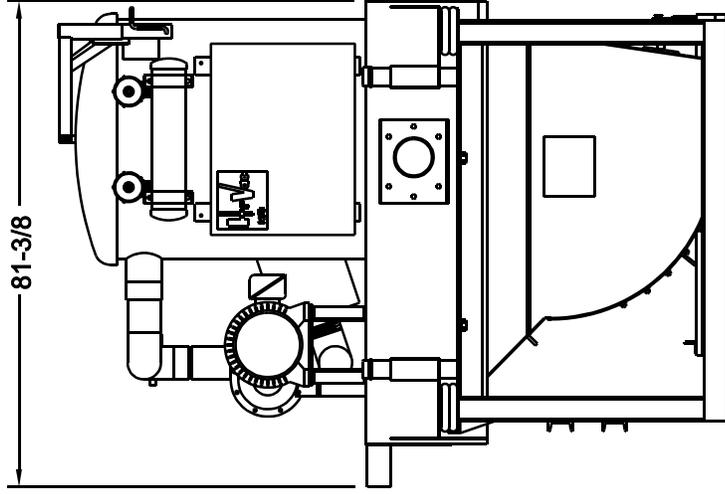
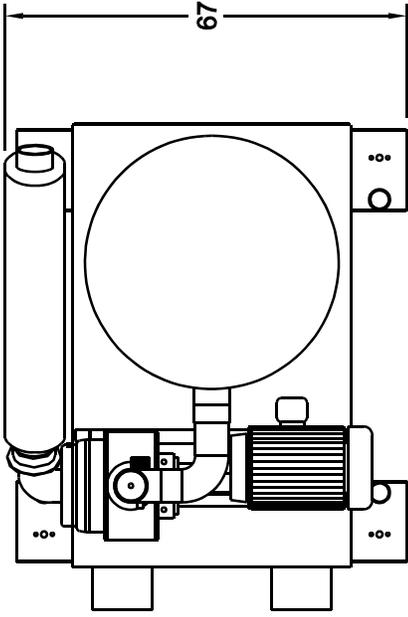
All Hi-Vac® units include two (2) Operation and Maintenance Manuals as standard. Additional manuals are available at \$100.00 each. Units are primed and painted with a durable industrial enamel. Standard color is yellow or your choice of any single color specified on written order. All Hi-Vac® equipment is covered by our twelve (12) month warranty covering defects in materials and workmanship excluding normal wear components such as filters and hose.

### IX. Additional Equipment

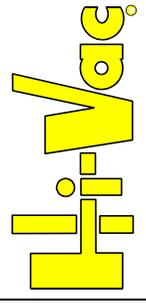
The proposed Hi-Vac® includes the following equipment in addition to the features listed above:

- NONE

**NOTE:** MODELS 825, 850 AND 875 ARE DIRECT DRIVE AS SHOWN  
 MODELS 820, 830 AND 840 ARE V-BELT DRIVE



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**TITLE:** 800 SERIES HI-VAC® WITH 1.5 OR 2 CUBIC YARD SUPPORT STAND AND AIR LIFT  
**DATE:** 02/23/05  
**DRAWN BY:** CGT  
**SCALE:** NONE  
**DRAWING NUMBER:** 503220-1  
**REV.:** -