



# 88200 Series Aluminum Rectangular Valve



### Product Features

- ❑ Virtually no particulate generation
- ❑ No vibration, smooth actuation
- ❑ Standard or custom flange options
- ❑ One million plus cycles before servicing (application dependent)

### Description

The HVA 88200 Series Direct Drive Rectangular Gate Valves offer one of the smallest interior surface areas in the vacuum valve industry. The body is machined from a single piece of aluminum. This eliminates the possibility of virtual leaks or entrapment areas and minimizes body distortion.

In the open position, the seal plate O-ring is completely out of sight preventing any particulate or media flow to accumulate on the sealing surface. In the closed position the one piece solid block design prevents any material buildup on the back side of the valve mechanism dramatically reducing service and maintenance requirements.

### Application

This valve design is especially engineered to meet the mechanical interface and vacuum containment requirements of the industry. The 88200 Series Valve/Interface incorporates a Direct Drive Gate. Direct Drive eliminates mechanical linkages and greatly reduces internal valve components. Significant improvements in the gate valve design have resulted in exceptional uptime cycles and extremely low particulate generation even well past one million cycles. Valves have been tested for 1,000,000+ cycles with no failures.

In operation, the HVA 88200 Series Valves are quiet and reliable. Because they seal with lower pressure, they last longer, and there is less stress to make a perfect seal. To meet the specific needs of modular integrated processing systems, the HVA valves are designed to isolate vacuum pressure on either side of the gate.

They can be used singly or in pairs to provide appropriate pass through or seal for any part of the system. A narrow profile design, including both actuator and controller, allows tight mounting between central, load-lock, handling and process chambers.



# 88200 Series Aluminum Rectangular Valve

## Standard Specifications

### Materials

Valve body and mechanism	6061-T6 Aluminum
Welded bellows shaft seal	AM-350
Drive shaft and pins	Hardened stainless steel
Bonnet / gate seals	Viton® elastomer

### Vacuum

Pressure range	
Standard	1 x 10 <sup>-9</sup> Torr
Leak rate	2 x 10 <sup>-9</sup> AtmCC/Sec
Differential pressure	760 Torr in either direction
Maximum Δ pressure before opening	20 Torr

### Bakeout Temperature

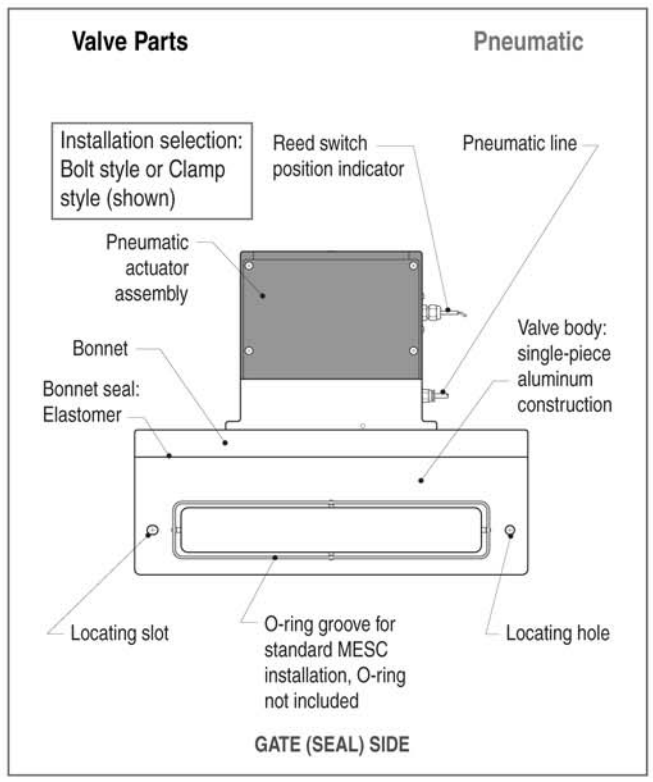
Elastomer sealed bonnet	150°C
Actuator	60°C

### Mechanism

Air service	80 psig
Solenoid	4.3 Watts
Latching-type solenoid, valve to remain in same position in the event of a power loss.	
supplied voltage	120 VAC 50/60 Hz
optional voltages	24, 200, 240 VAC 50/60 Hz or 12, 24 VDC
Position indicator, max.	
Reed switch	115 VAC or 28 VDC, 20 mA
Microswitch, optional	115 VAC, 5 A
optional voltages	250 VAC, 5 A or 28 VDC, 5 A resistive load 28 VDC, 3 A inductive load

### Cycles until service

All sizes, application dependent	1,000,000+ cycles
----------------------------------	-------------------



### Notes

- Dimensions given in U.S. System and [metric]
- Due to ongoing product development, prices, dimensions and specifications subject to change without notice

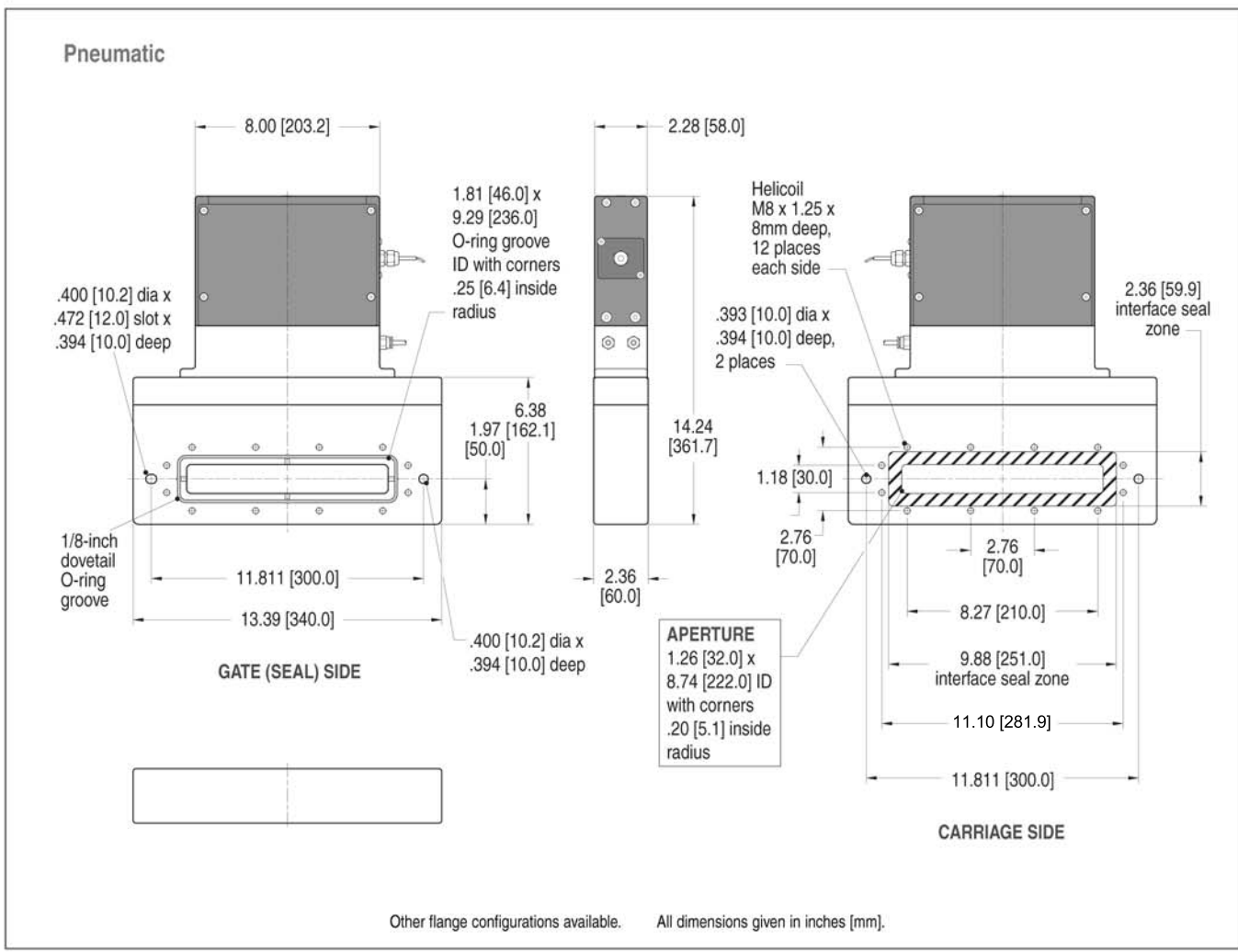
### Options

All 88200 Series Valves may be equipped with alternative flanges, solenoids and seals. Contact HVA to discuss your requirements.

- Alternate voltage controls
- Custom flange sizes
- Gauge ports
- Microswitches for position indicators
- Roughing ports
- High temperature components, including O-rings, microswitches and actuator
- Custom materials, such as 316L, Inconel® or Kalrez®



# 88200 Series Aluminum Rectangular Valve 32x222-mm 1x9-inch Bolt Style

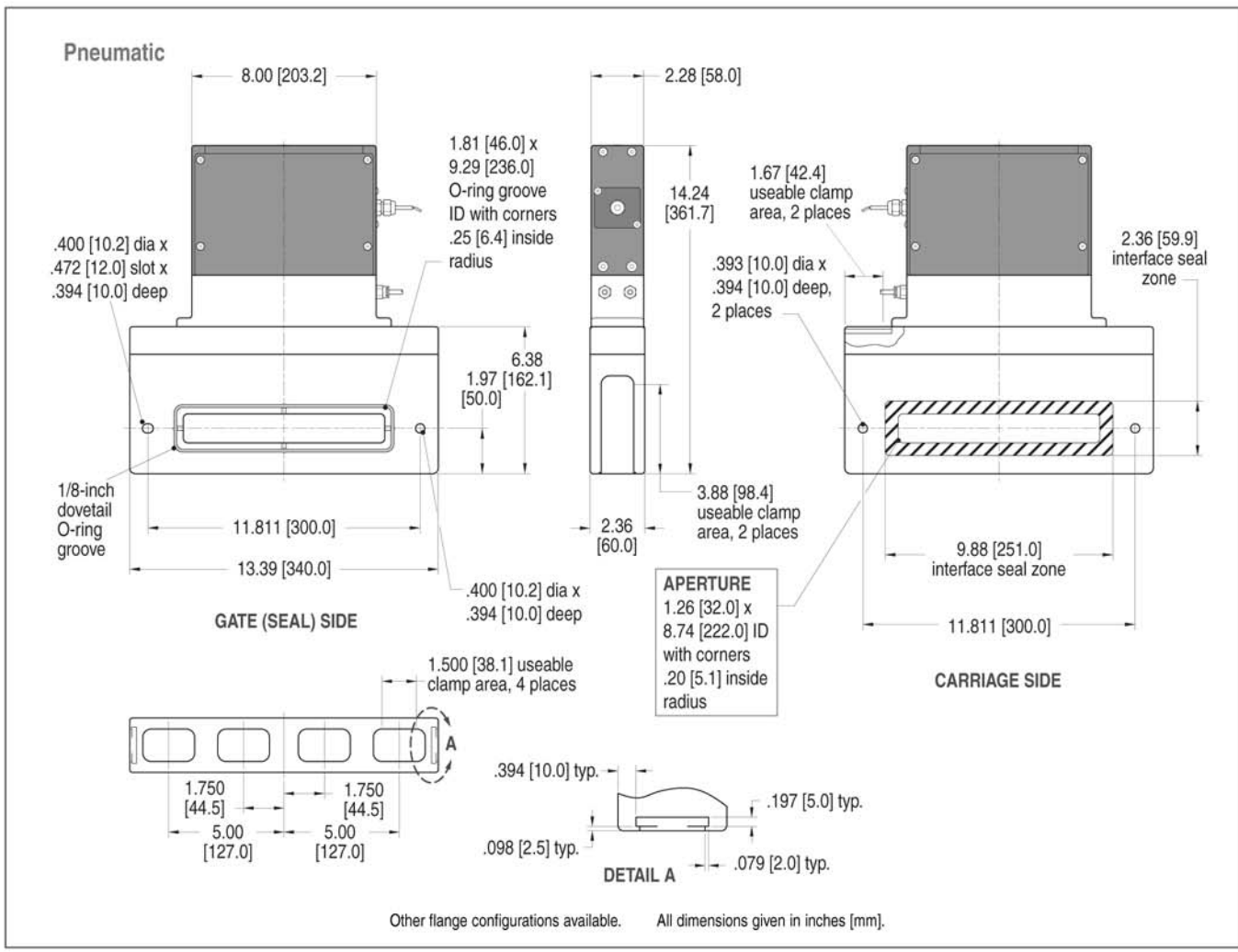


MESIC Flanges		32x222-mm 1x9-inch	
Bonnet-Gate	Flange Type	Ship Wt lbs [kg]	Model Number *
<b>Pneumatic</b>			
Viton-Viton	Bolt	78 [36]	88212-0109RXJ

\* R = Reed switch, standard  
M = Microswitch, optional



# 88200 Series Aluminum Rectangular Valve 32x222-mm 1x9-inch Clamp Style

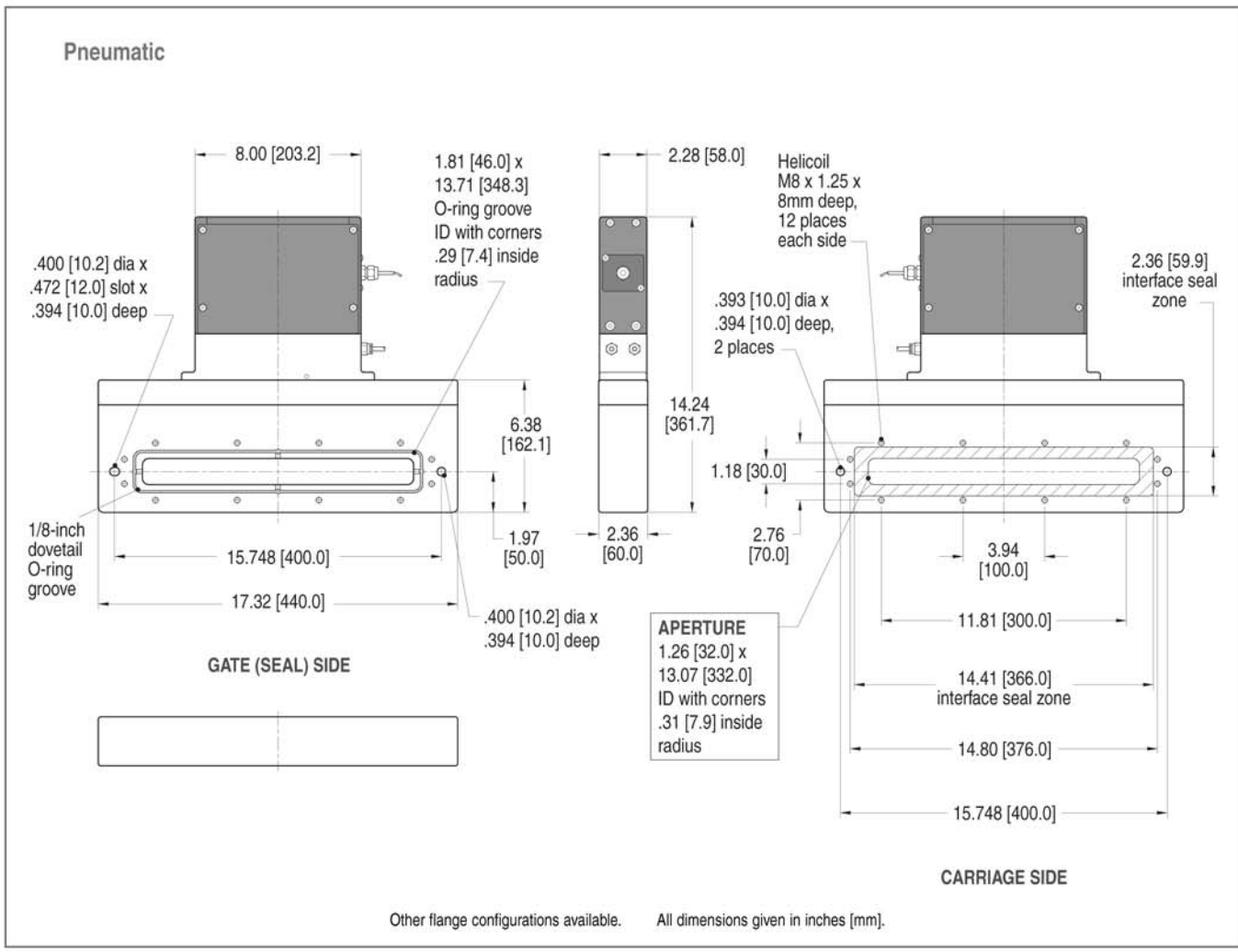


MESIC Flanges		32x222-mm 1x9-inch	
Bonnet-Gate	Flange Type	Ship Wt lbs [kg]	Model Number *
<b>Pneumatic</b>			
Viton-Viton	Clamp	78 [36]	88212-0109RXK

\* R = Reed switch, standard  
M = Microswitch, optional



# 88200 Series Aluminum Rectangular Valve 32x332-mm 1x13-inch Bolt Style

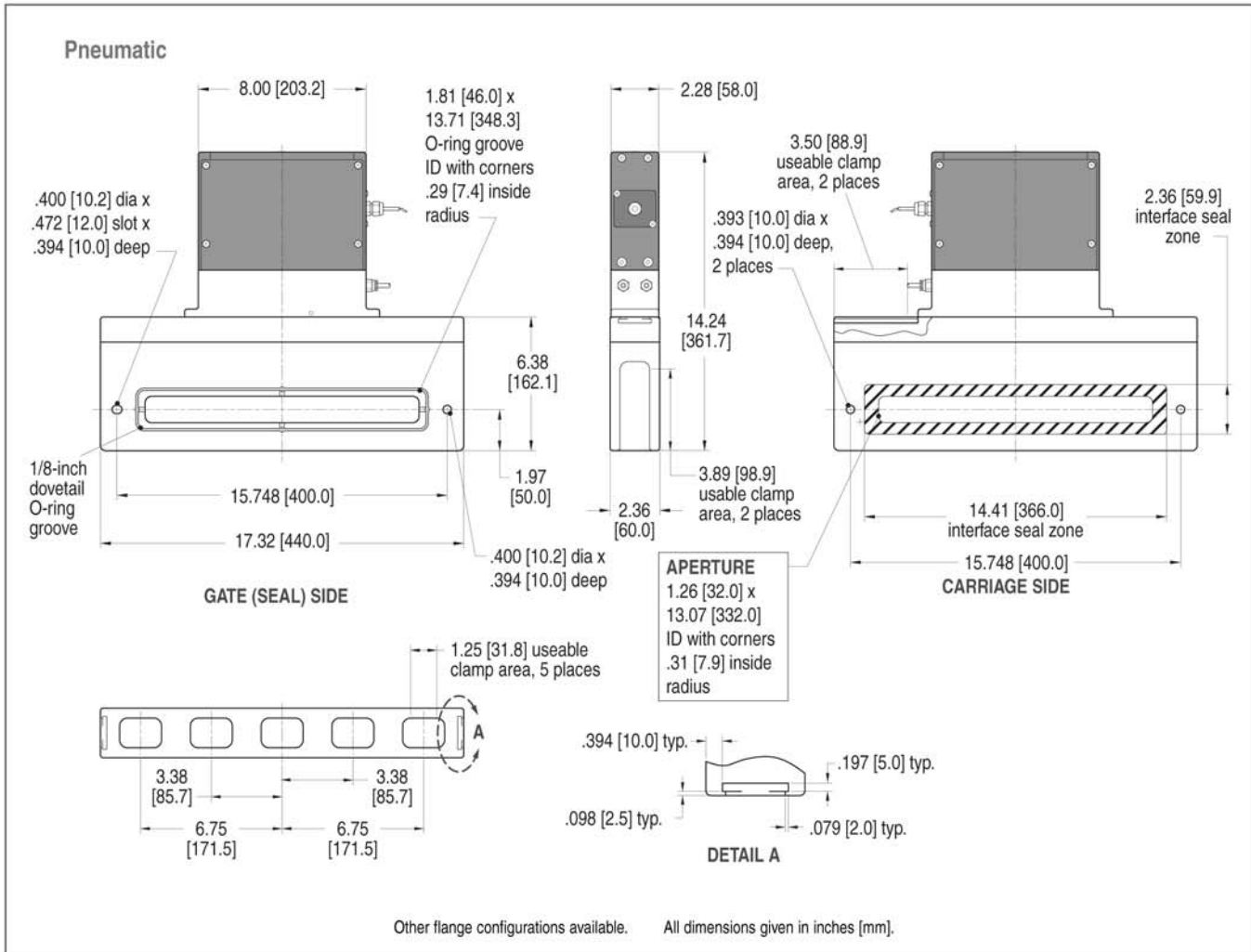


MESIC Flanges		32x332-mm 1x13-inch	
Bonnet-Gate	Flange Type	Ship Wt lbs [kg]	Model Number *
<b>Pneumatic</b>			
Viton-Viton	Bolt	82 [38]	88212-0113RXJ

\* R = Reed switch, standard  
M = Microswitch, optional



# 88200 Series Aluminum Rectangular Valve 32x332-mm 1x13-inch Clamp Style

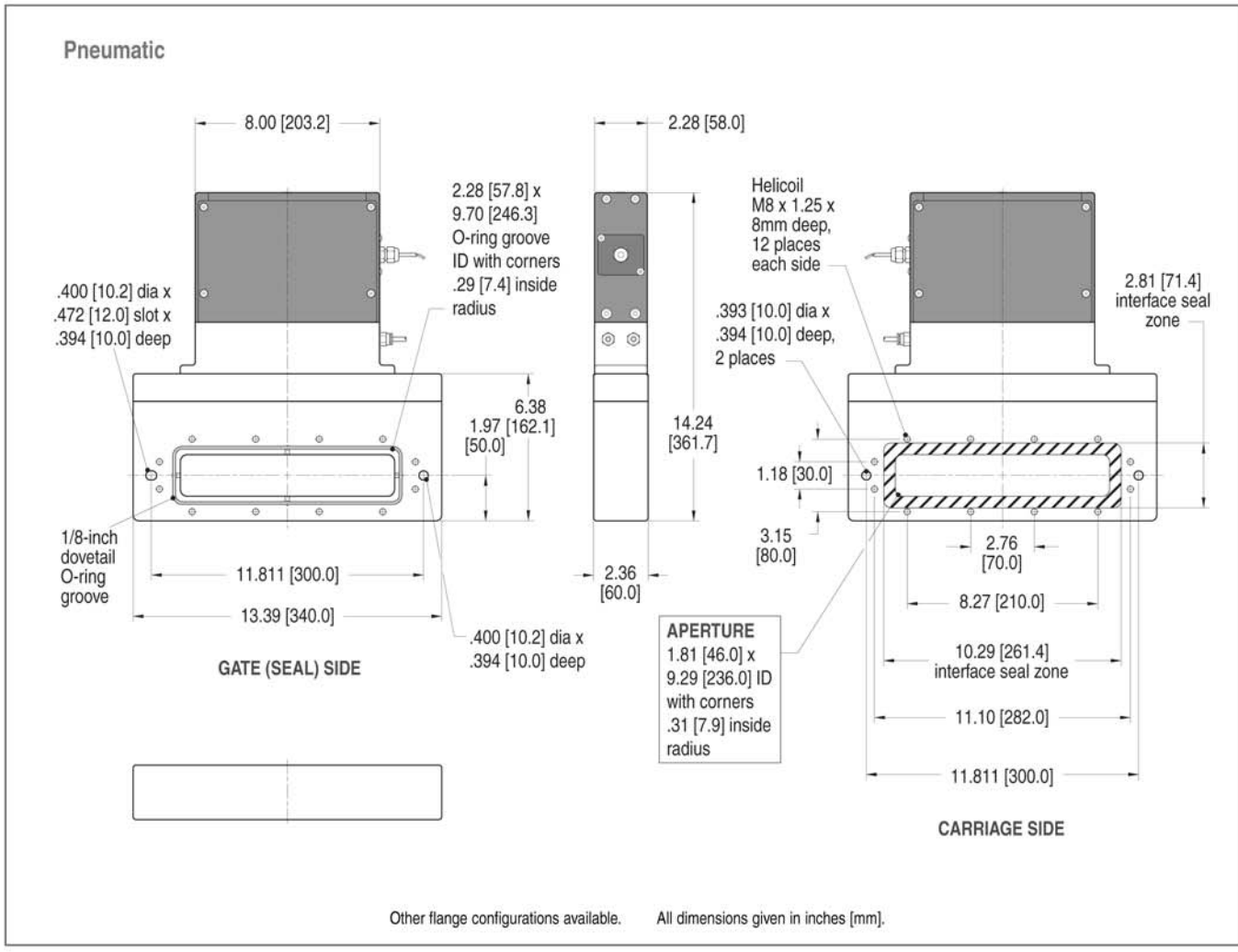


MESIC Flanges		32x332-mm 1x13-inch	
Bonnet-Gate	Flange Type	Ship Wt lbs [kg]	Model Number *
<b>Pneumatic</b>			
Viton-Viton	Clamp	82 [38]	88212-0113RXK

\* R = Reed switch, standard  
M = Microswitch, optional



# 88200 Series Aluminum Rectangular Valve 46x236-mm 2x9-inch Bolt Style



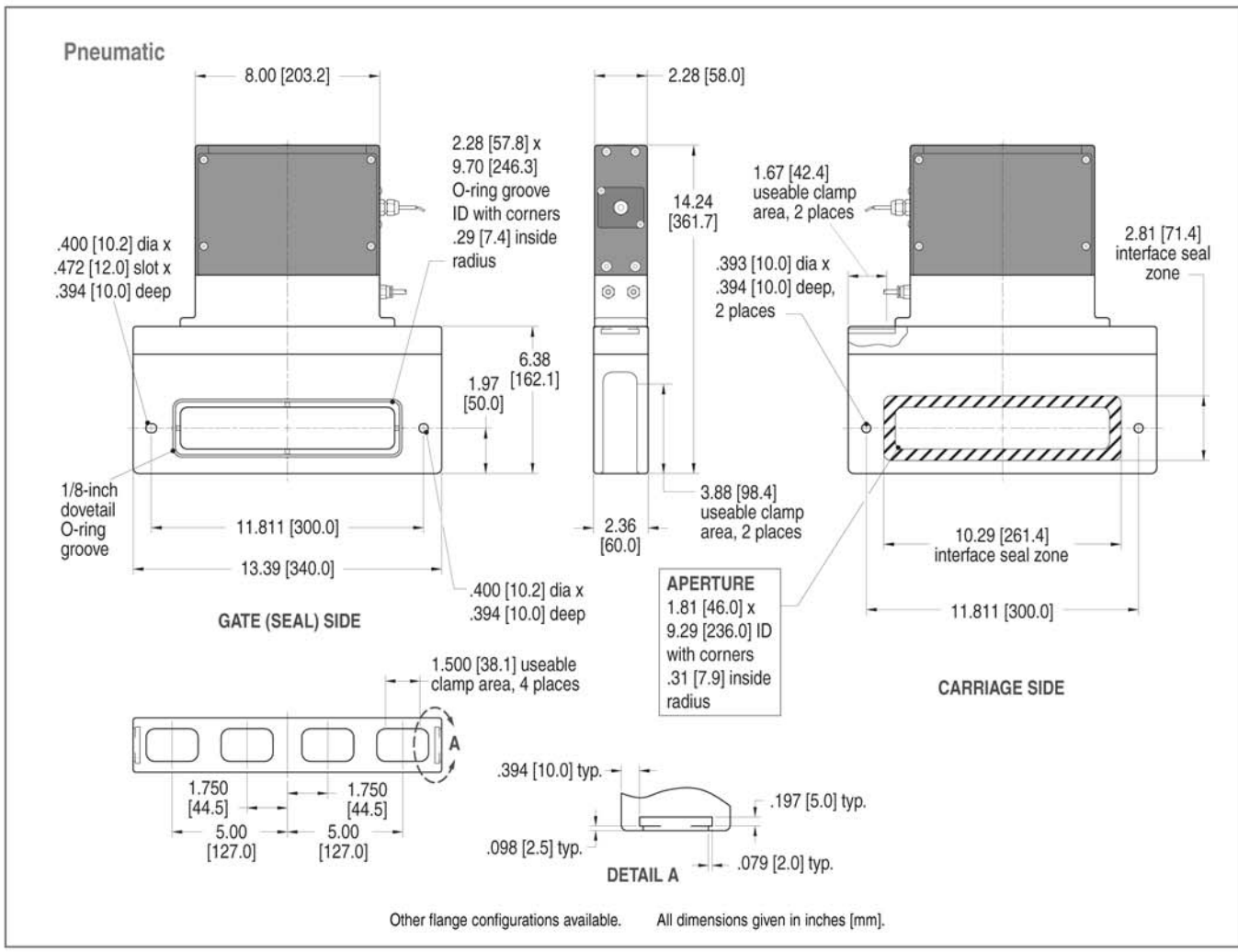
MESIC Flanges		46x236-mm 2x9-inch	
Bonnet-Gate	Flange Type	Ship Wt lbs [kg]	Model Number *
<b>Pneumatic</b>			
Viton-Viton	Bolt	82 [38]	88212-0209RXJ

\* R = Reed switch, standard  
M = Microswitch, optional



# 88200 Series Aluminum Rectangular Valve

## 46x236-mm 2x9-inch Clamp Style

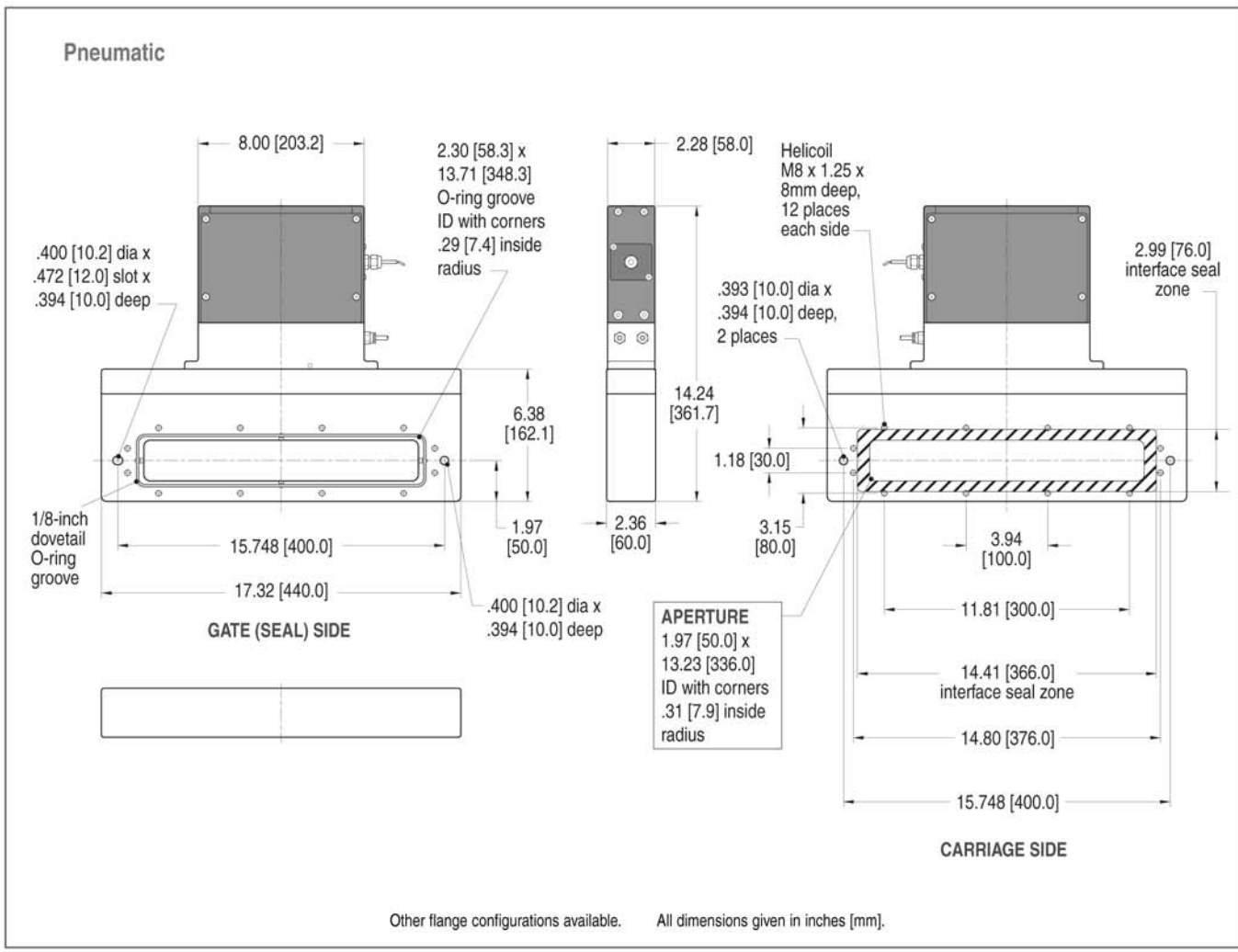


MESIC Flanges		46x236-mm 2x9-inch	
Bonnet-Gate	Flange Type	Ship Wt lbs [kg]	Model Number *
<b>Pneumatic</b>			
Viton-Viton	Clamp	82 [38]	88212-0209RXX

\* R = Reed switch, standard  
 M = Microswitch, optional



# 88200 Series Aluminum Rectangular Valve 50x336-mm 2x13-inch Bolt Style

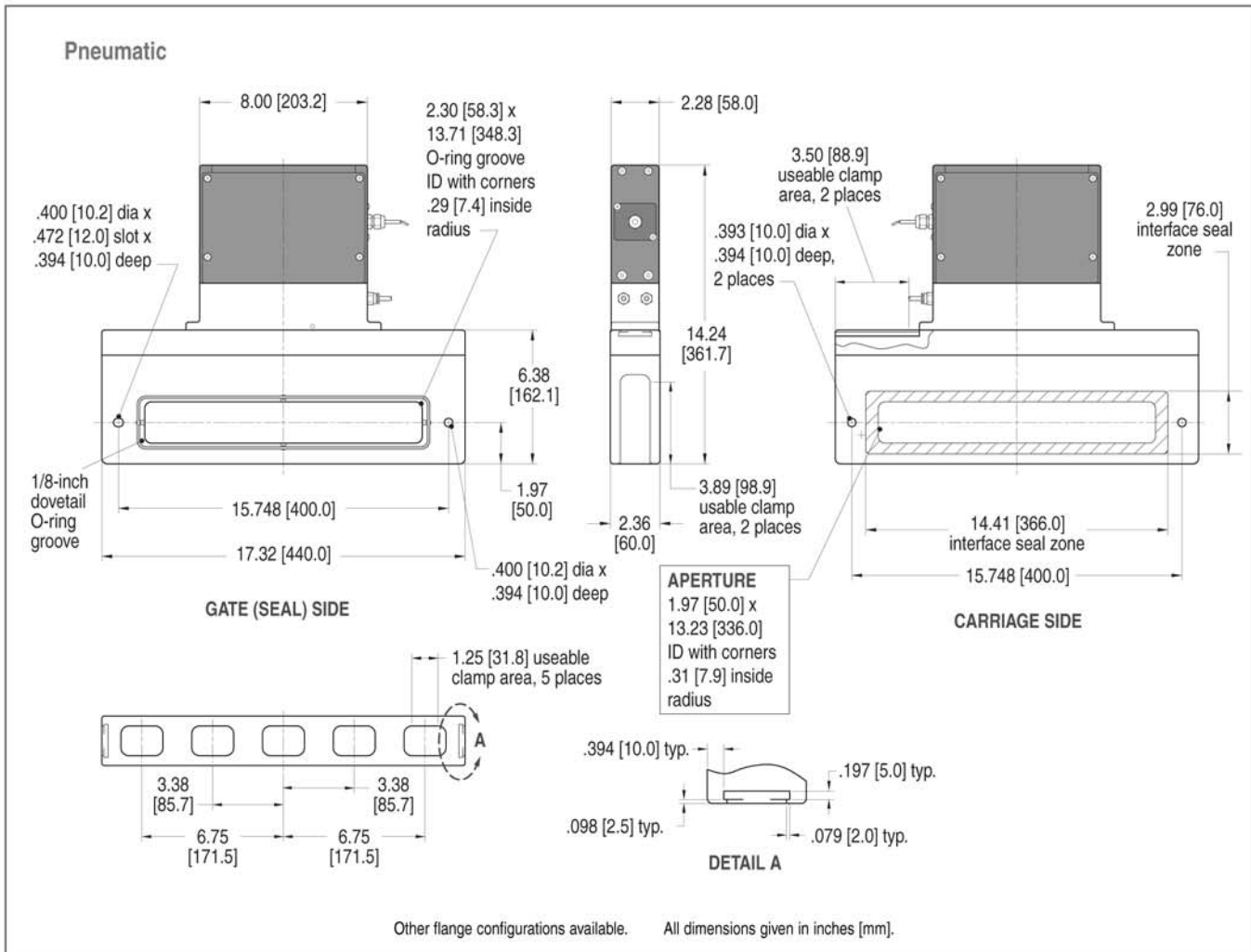


MESIC Flanges		50x336-mm 2x13-inch	
Bonnet-Gate	Flange Type	Ship Wt lbs [kg]	Model Number *
<b>Pneumatic</b>			
Viton-Viton	Bolt	85 [39]	88212-0213RXJ

\* R = Reed switch, standard  
M = Microswitch, optional



# 88200 Series Aluminum Rectangular Valve 50x336-mm 2x13-inch Clamp Style



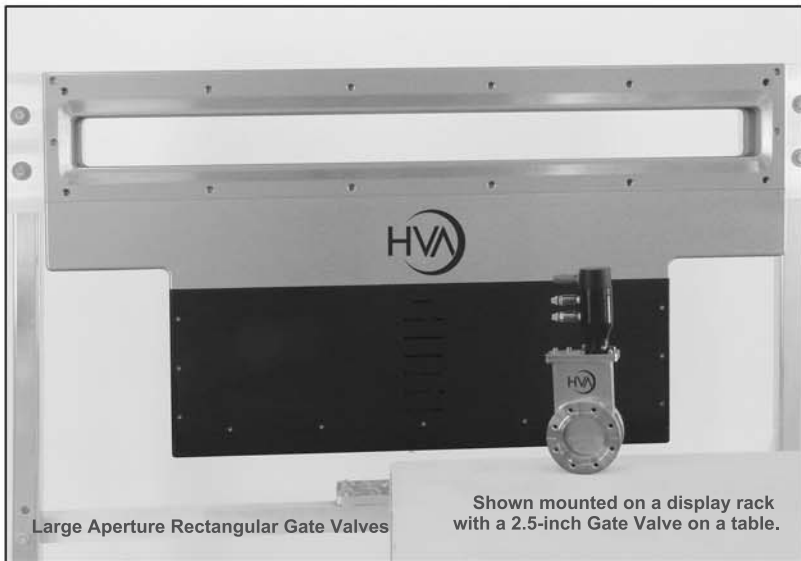
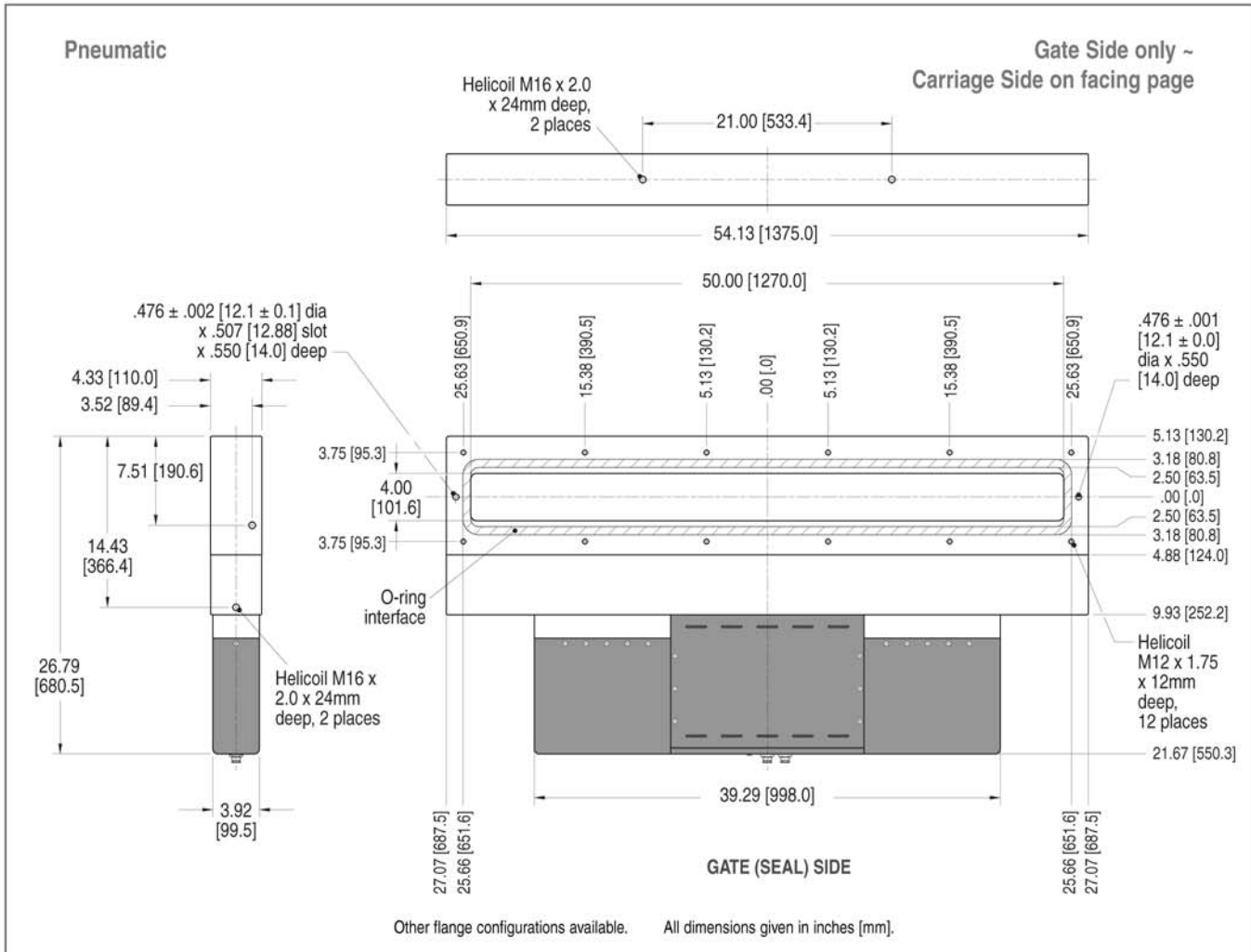
MESIC Flanges		50x336-mm 2x13-inch	
Bonnet-Gate	Flange Type	Ship Wt lbs [kg]	Model Number *
<b>Pneumatic</b>			
Viton-Viton	Clamp	85 [39]	88212-0213RXK

\* R = Reed switch, standard  
M = Microswitch, optional



# 88200 Series Aluminum Rectangular Valve

## 100x1250-mm 4x50-inch



### Large Aperture Load-Lock Isolation Transfer Valve

The aperture on this valve will accommodate flat substrates with a width up to 48-inches [1220-mm]. Most additional sizes can be manufactured to customer specifications.

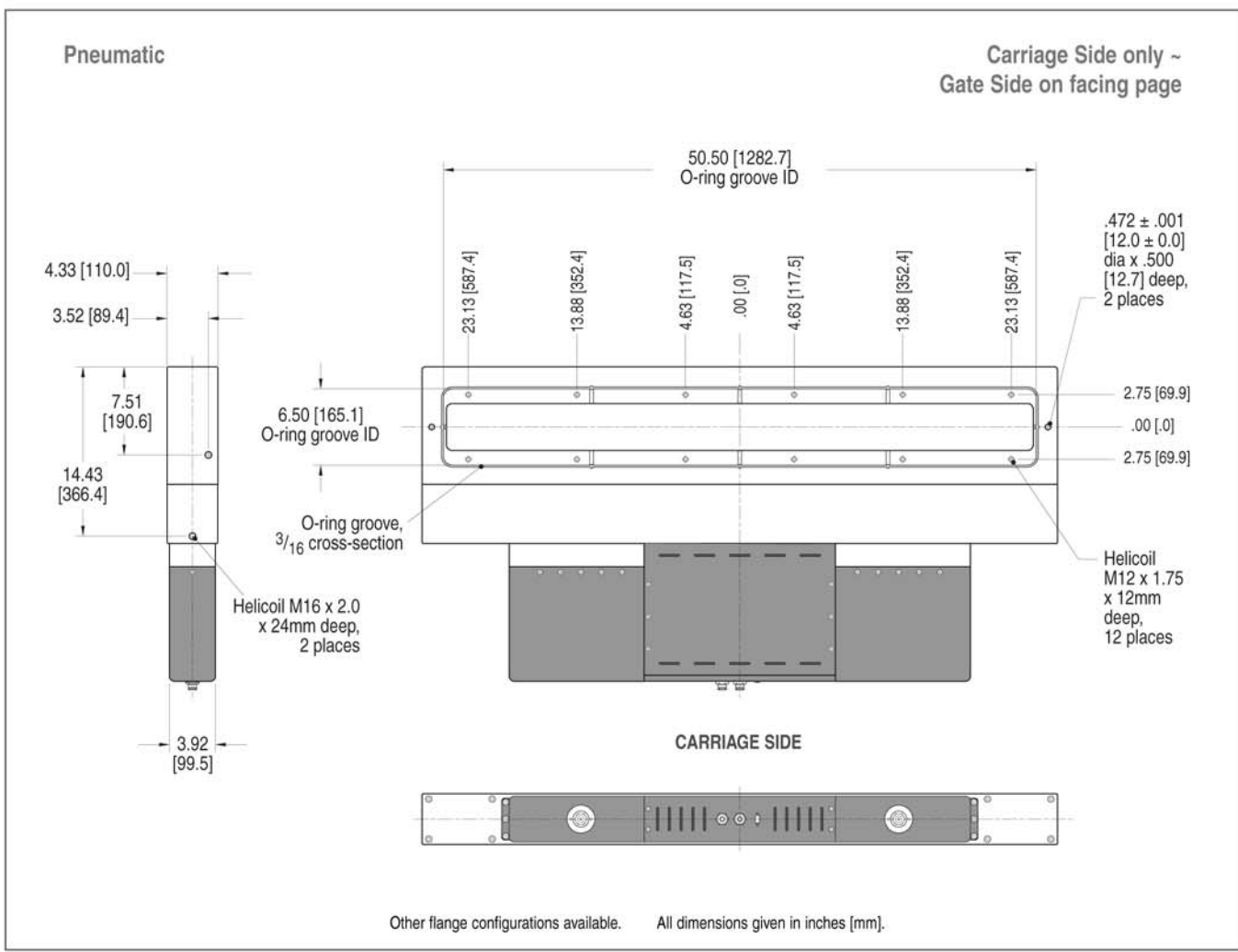
The actuator mechanism is based on smaller sized Half-Profile rectangular valves, and adds additional pistons for smooth action and reliable sealing. No part of the gate and carriage mechanism comes in contact with the valve body, which eliminates vibration during actuation.

In the photo to the left, a standard 2.5-inch gate valve is positioned alongside the Large Aperture valve for size comparison.



# 88200 Series Aluminum Rectangular Valve

## 100x1250-mm 4x50-inch



MESIC Flanges		100x1250-mm 4x50-inch	
Bonnet-Gate	Flange Type	Ship Wt lbs [kg]	Model Number *
<b>Pneumatic</b>			
Viton-Viton	Clamp	750 [341]	88212-0450RXB

\* R = Reed switch, standard  
 M = Microswitch, optional