



Quality Vacuum Valves Since 1973



伯东企业（上海）有限公司
美国 HVA 真空阀门中国总代理





High Vacuum Valves
Leader in Quality and Value

88200 Series

Aluminum Transfer Valve



Transfer and Load Locks

Semi / MESC Compatible

Extended Service Intervals

Very Low Vibration and Particles

Lifetime Warranty*

New HVA 88200 Series

OEM Integration. All our products are engineered to be compatible with the latest Semiconductor tools and offer a retrofit solution for upgrading previous generation tools. Whether it is an etch, CVD, PVD cluster tool or implanter, HVA offers easy OEM Integration for all your MESC applications. Our valves come equipped with standard interfaces for 150, 200, 300 and 450mm technologies.

Flexible Design. If you need more flexibility, we can design specific sizes and interfaces for your transfer or load lock application up to 4000mm.

Process Compatible. Every valve leaves our factory with the highest quality MIL SPEC type II Anodize finish. The inherent design of the HVA valve accommodates operation in high process temperatures up to 150C. Higher temperature options available.

Vacuum Performance. Body and gate are precision machined from High Grade 6061 T6 billet. No welding or casting is involved in the manufacturing process for reduced out gassing. When you use an HVA valve you know you are getting the best vacuum performance possible.

System Reliability. HVA valves are equipped with hardened stainless steel shafts and our moly wiper protection system to ensure the valves continue to operate during multiple substrate breakages and extends the service interval to >2,000,000 cycles.

Easy Service / Cost Effective. We design our products to be maintenance friendly. Standard service items can be exchanged by end user during a regular minor service reducing downtime and service costs.

Lifetime Warranty. You can be confident you have made the smart choice. We back up our craftsmanship on every valve that leaves the factory with our limited lifetime warranty*

(* standard service items, o-rings, bellows excluded. Frequency dependent on process conditions)

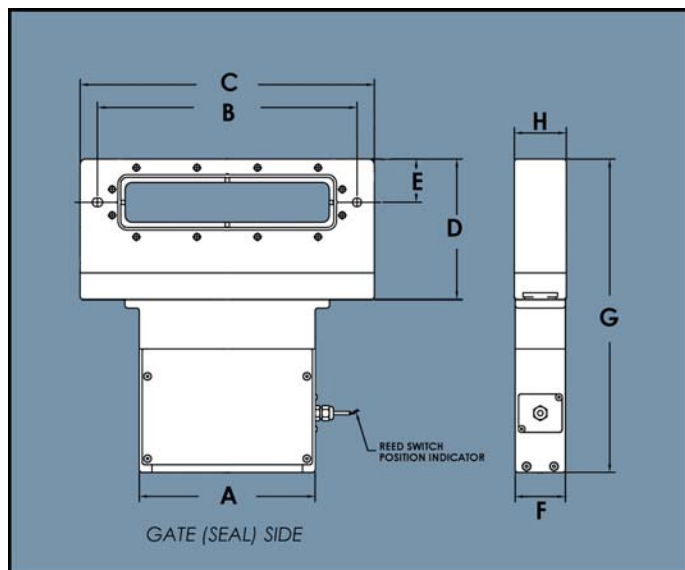




High Vacuum Valves
Leader in Quality and Value

88200 Series

Aluminum Transfer Valve



DN	mm	inch	32 x 222	46 x 236	50 x 336	56 x 496
			1.26 x 8.74	1.81 x 9.29	1.97 x 13.23	1.81 x 9.29
A	mm	inch	203.2	203.2	203.2	249.9
			8.00	8.00	8.00	9.84
B	mm	inch	300.0	300.0	400.0	586.0
			11.81	11.81	15.75	23.07
C	mm	inch	340.0	340.0	440.0	645.0
			13.39	13.39	17.32	25.39
D	mm	inch	162.1	162.1	162.1	210.8
			6.38	6.38	6.38	8.30
E	mm	inch	50.0	50.0	50.0	67.0
			1.97	1.97	1.97	2.64
F	mm	inch	58.0	58.0	58.0	60.0
			2.28	2.28	2.28	2.36
G	mm	inch	361.7	361.7	361.7	401.7
			14.24	14.24	14.24	15.82

*Dimensions subject to change

Ordering Guide

Pneumatic with Viton® Bonnet

mm	DN	inch	Model Number Bolted Body	Model Number Clamped Body
32 x 220		1.26 x 8.74	88212-0109RXJ	88212-0109RXX
32 x 332		1.26 x 13.07	88212-0113RXJ	88212-0113RXX
46 x 236		1.81 x 9.29	88212-0209RXJ	88212-0209RXX
50 x 336		1.97 x 13.23	88212-0213RXJ	88212-0213RXX
50 x 486		1.97 x 19.13	88212-0219RXJ	88212-0219RXX

Includes reed switch position indicator and 120VAC solenoid.
For 24V DC solenoid change to: 8821[1]-

88200 Series Standard Technical Specifications

Materials

Valve body and gate	6061-T6 Aluminum
Welded bellows	AM-350
Driveshaft and pins	Hardened stainless steel
Bonnet / gate seals	Viton® o-ring std, FFKM option

Vacuum

Pressure Range	1×10^{-9} mbar
Helium leak rate	$< 2 \times 10^{-9}$ mbar l/s
Differential pressure closed	1.5 bar in either direction
Maximum Δ pressure before opening	≤ 30 mbar

Bakeout Temperature

Body	without solenoid
Actuator	150°C
	60°C

Mechanism

Pneumatic air service	2 - 7 bar
Solenoid (Upon power loss valve remains in same position)	4.3 Watts
Position indicator, max	115 VAC or 28 VDC, 20 mA

Mounting Position

any

Cycles Until Service

>2,000,000 cycles
dependent on process



Options: Body and gate hard anodized, electrical interface, temperature management, o-ring material, body flange interface, roughing port, valve body prep for sensors



28200 Series Stainless Steel 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 28200 Series Direct Drive Rectangular Gate Valves offer one of the smallest interior surface areas in the vacuum valve industry. The body and internal components are vacuum furnace brazed at 1100°C ensuring maximum joint integrity. This eliminates the possibility of virtual leaks or entrapment areas and minimizes body distortion, which can occur in conventionally welded valves. Furnace brazing 304 stainless steel reduces its outgassing, which results in obtaining a system base pressure in a shorter time.

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 28200 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 28200 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.



28200 Series Stainless Steel Rectangular Valve

Standard Specifications

Materials

Valve body and mechanism	304 stainless steel
Welded bellows shaft seal	AM-350
Drive shaft and pins	Hardened stainless steel
Bonnet / gate seals	Viton® elastomer

Vacuum

Pressure range	
Standard	1×10^{-9} Torr
Leak rate	2×10^{-9} AtmCC/Sec
Differential pressure	760 Torr in either direction
Maximum Δ pressure before opening	20 Torr

Bakeout Temperature

without solenoid

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

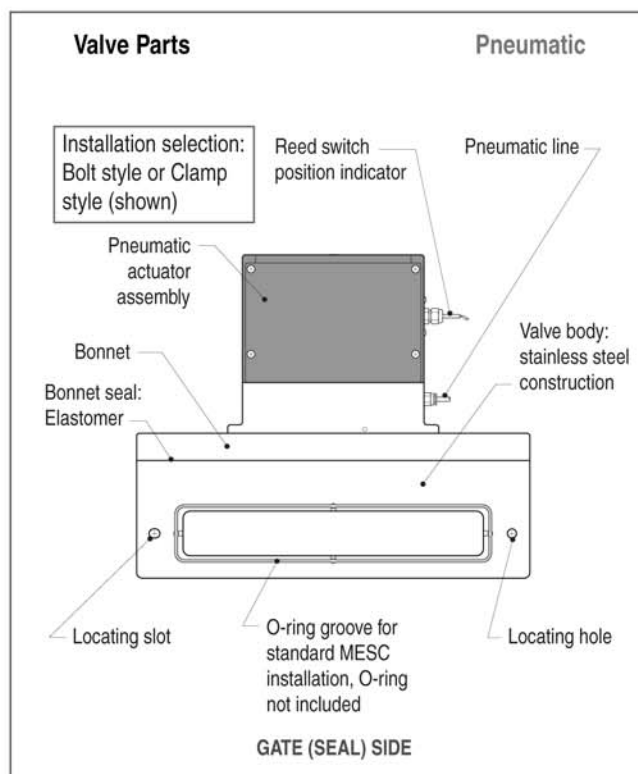
Position indicator, max.

Reed switch	115 VAC or 28 VDC, 20 mA
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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
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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 28200 Series Valves may be equipped with alternative flanges, solenoids and seals. Contact HVA to discuss your requirements.

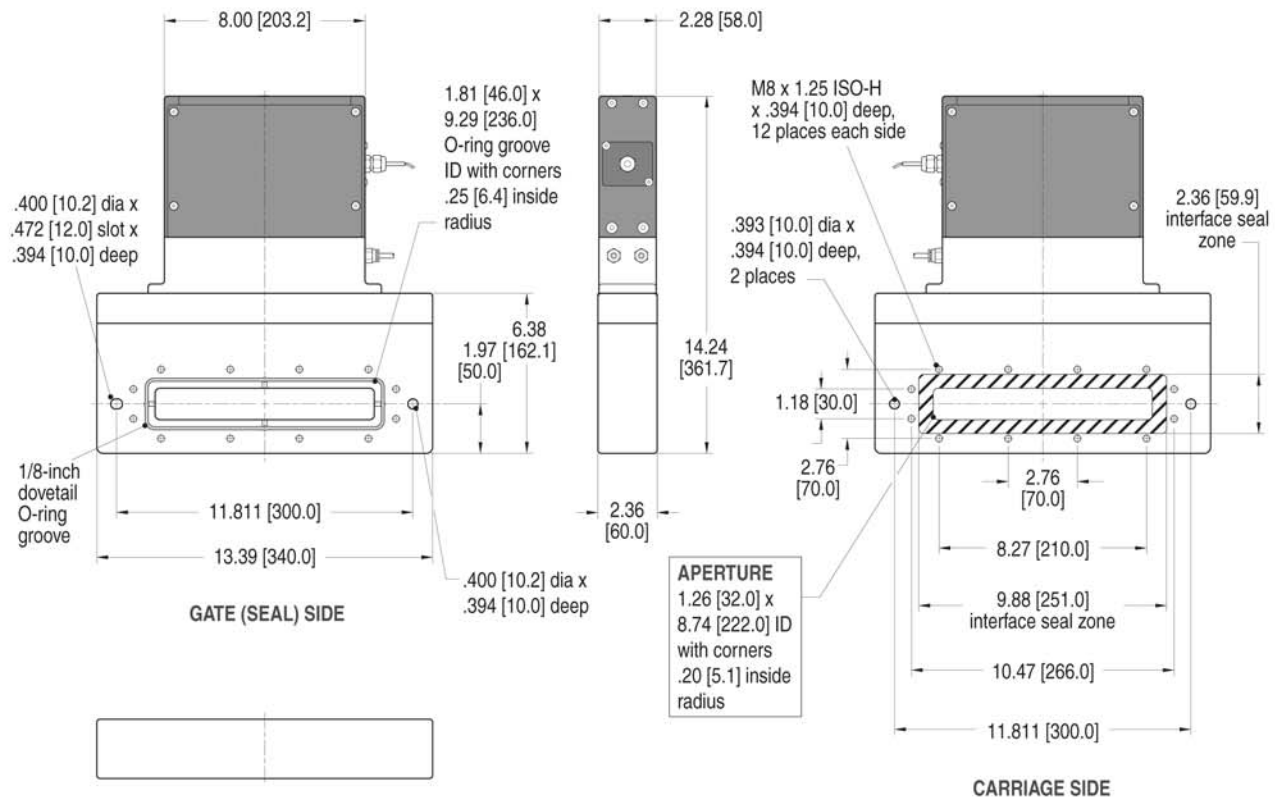
- Alternate voltage controls
- Custom flange sizes
- Gauge ports
- Microswitches for position indicators
- Roughing ports
- High temperature components, including O-rings, microswitches and actuator
- Custom materials, such as 316L, Inconel® or Kalrez®



28200 Series Stainless Steel Rectangular Valve

32x222-mm 1x9-inch Bolt Style

Pneumatic



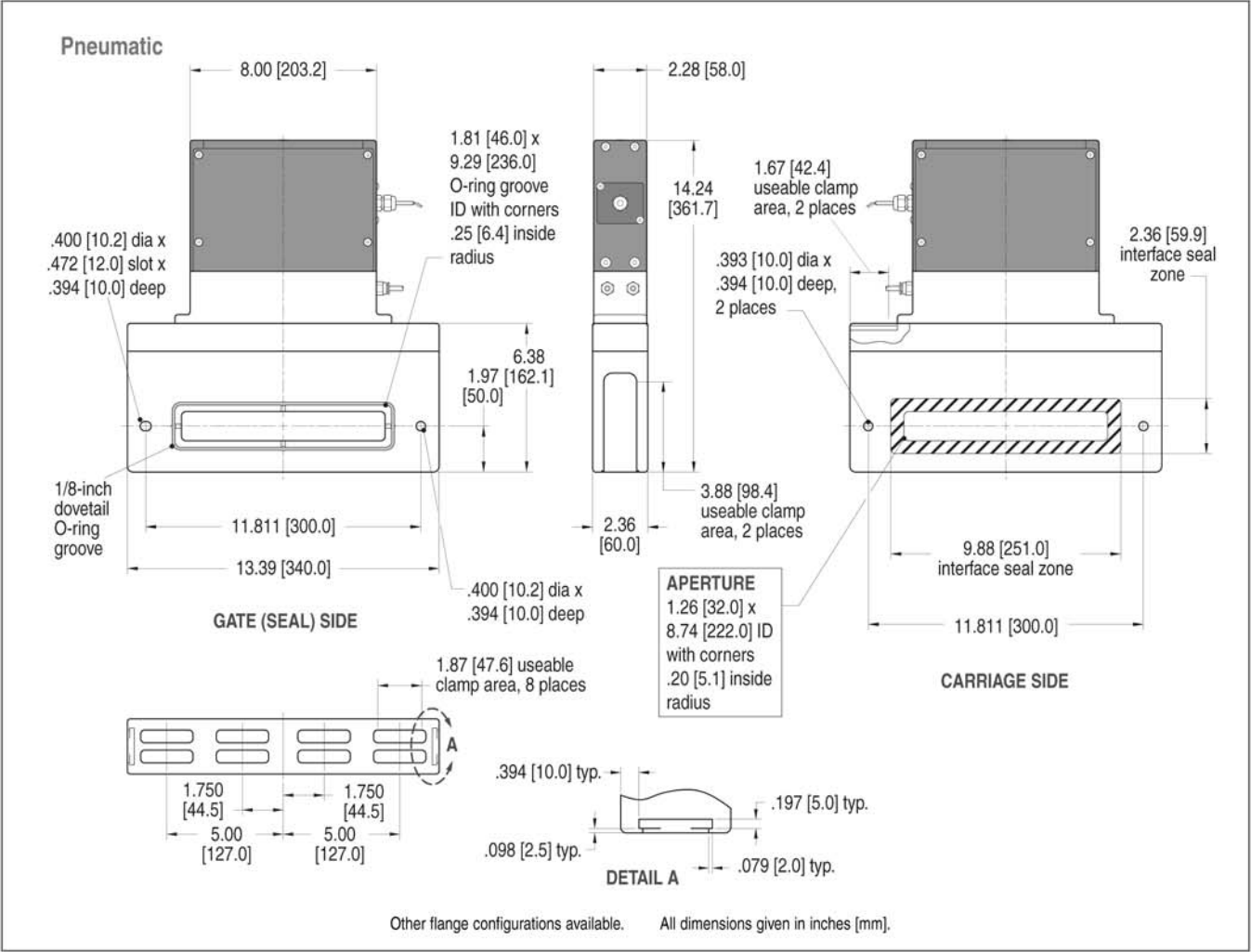
Other flange configurations available. All dimensions given in inches [mm].

MESIC Flanges		32x222-mm 1x9-inch	
Bonnet-Gate	Flange Type	Ship Wt lbs [kg]	Model Number *
Pneumatic			
Viton-Viton	Bolt	110 [50]	28212-0109RXJ

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



28200 Series Stainless Steel Rectangular Valve 32x222-mm 1x9-inch Clamp Style



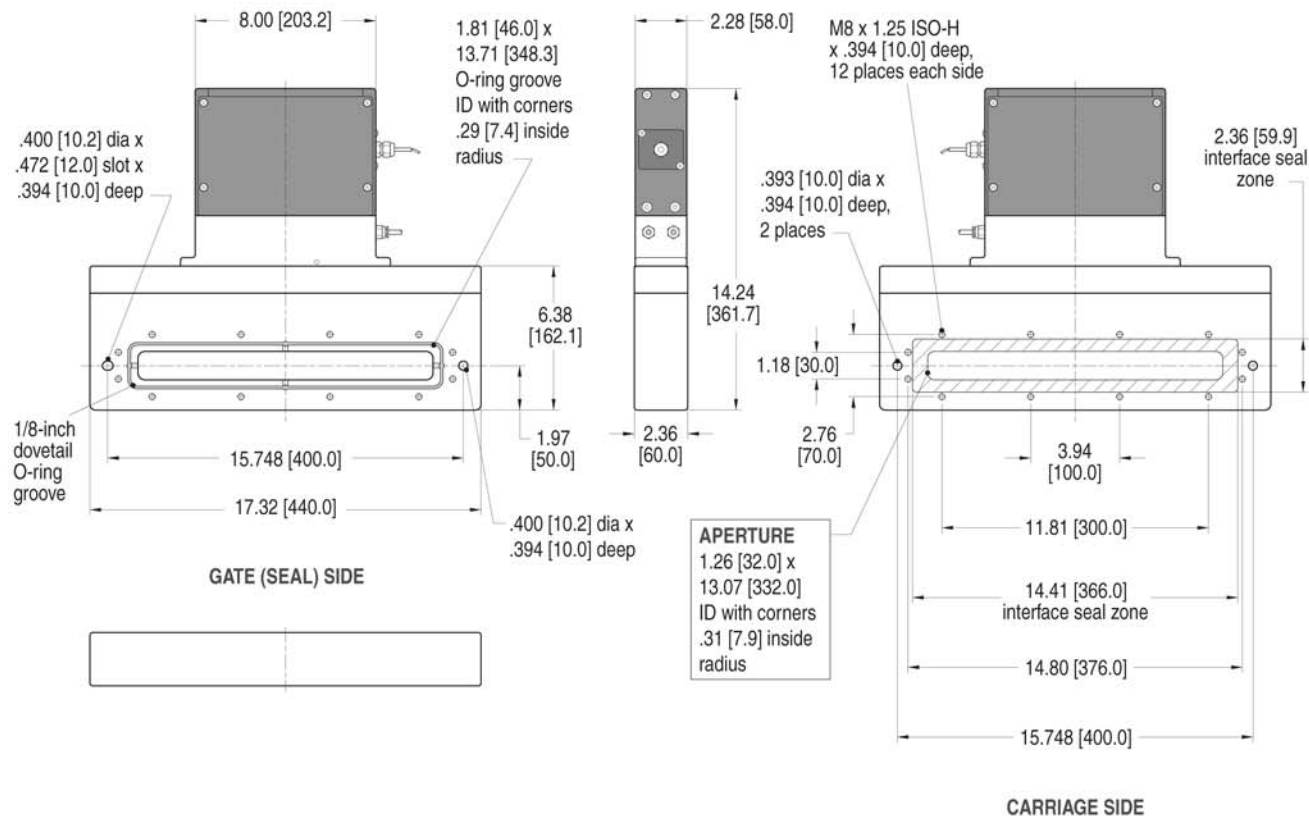
MESIC Flanges		32x222-mm 1x9-inch	
Bonnet-Gate	Flange Type	Ship Wt lbs [kg]	Model Number *
Pneumatic			
Viton-Viton	Clamp	110 [50]	28212-0109RXX

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



28200 Series Stainless Steel Rectangular Valve 32x332-mm 1x13-inch Bolt Style

Pneumatic



Other flange configurations available. All dimensions given in inches [mm].

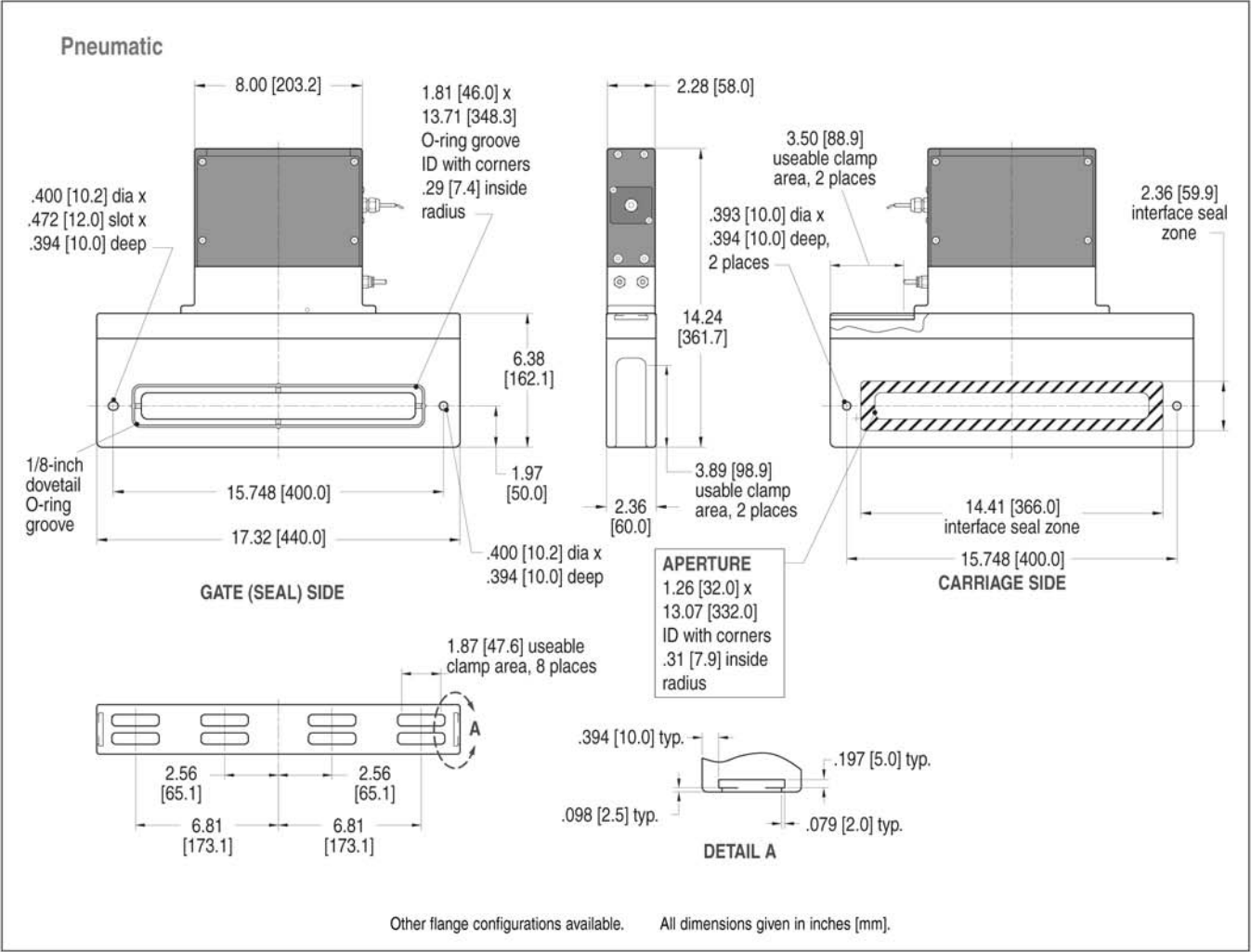
MESIC Flanges		32x332-mm 1x13-inch	
Bonnet-Gate	Flange Type	Ship Wt lbs [kg]	Model Number *
Pneumatic			
Viton-Viton	Bolt	115 [53]	28212-0113RXJ

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



28200 Series Stainless Steel Rectangular Valve

32x332-mm 1x13-inch Clamp Style



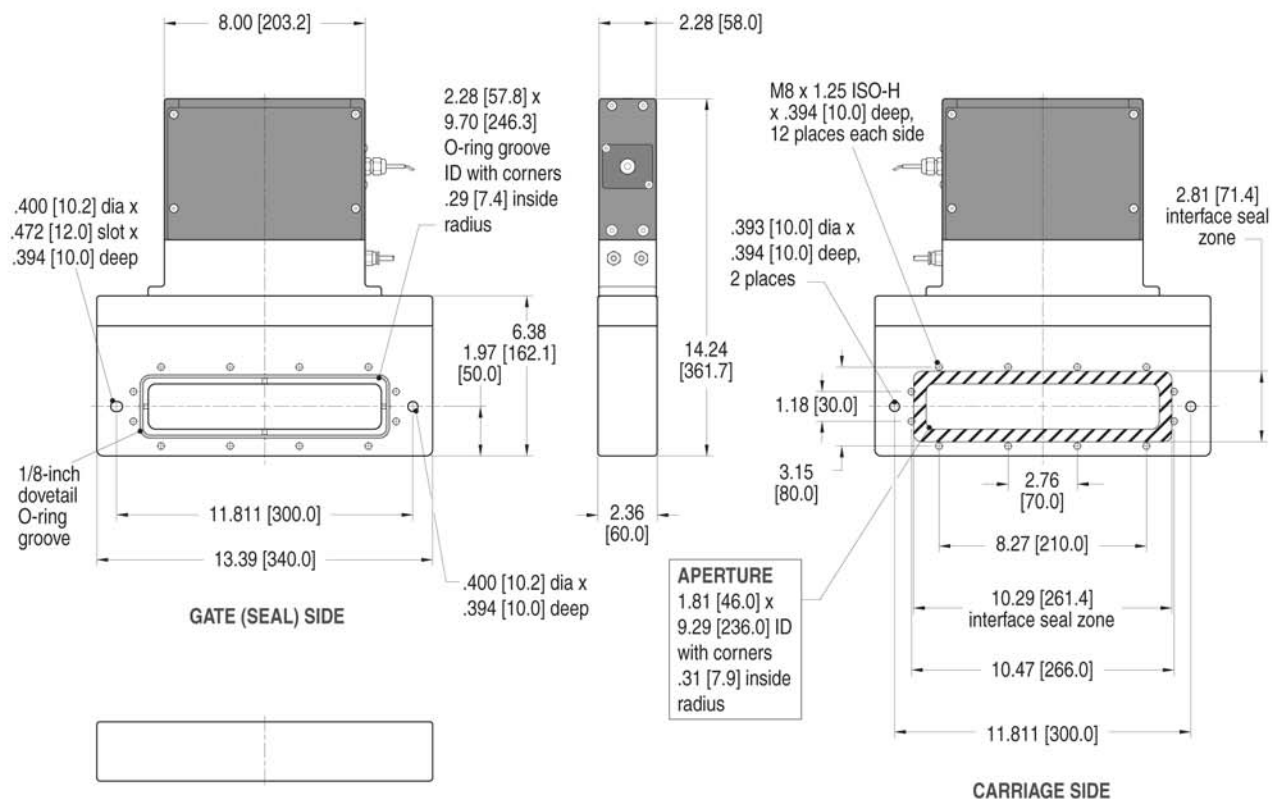
MESIC Flanges		32x332-mm 1x13-inch	
Bonnet-Gate	Flange Type	Ship Wt lbs [kg]	Model Number *
Pneumatic			
Viton-Viton	Clamp	115 [53]	28212-0113RXK

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



28200 Series Stainless Steel Rectangular Valve 46x236-mm 2x9-inch Bolt Style

Pneumatic



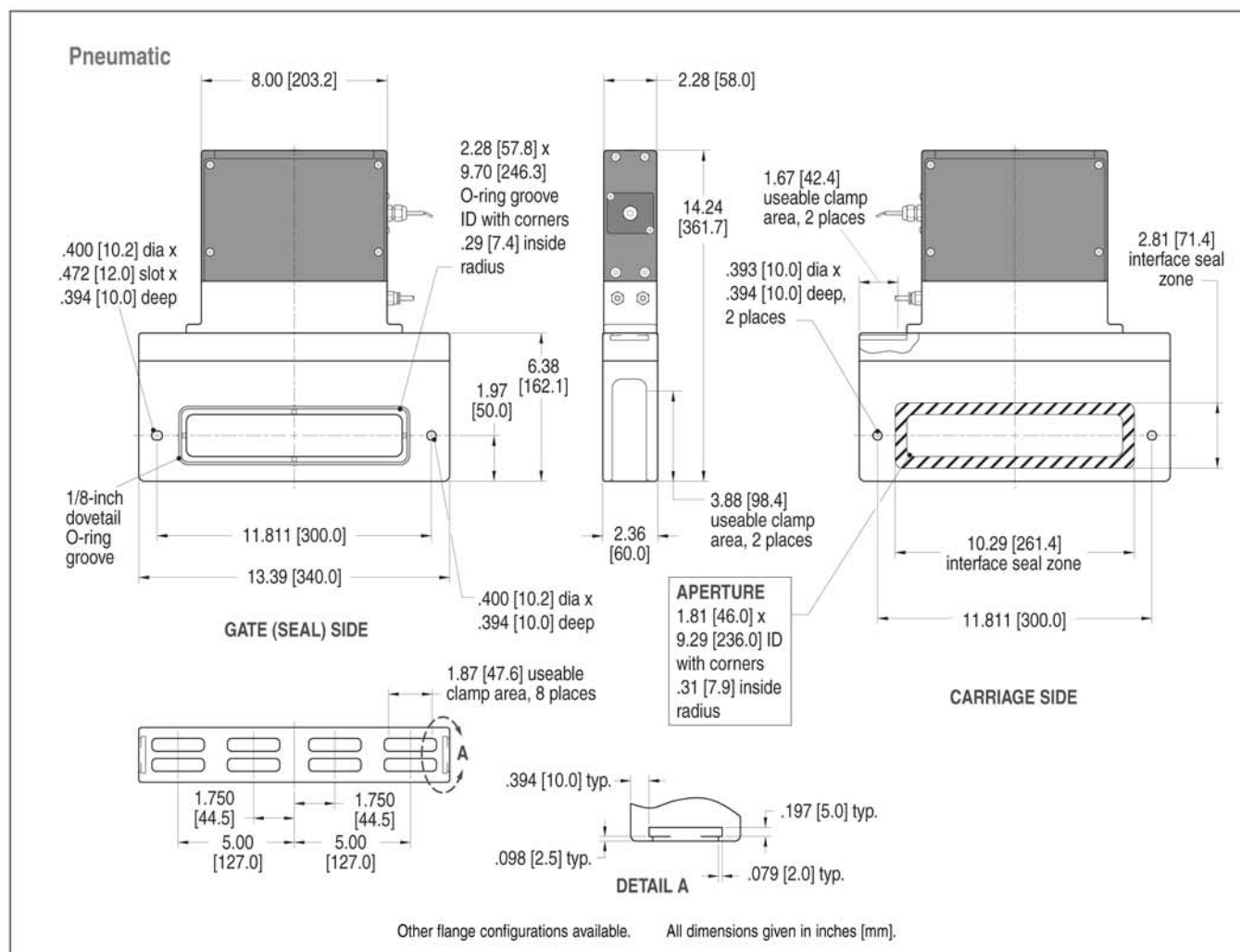
Other flange configurations available. All dimensions given in inches [mm].

MESIC Flanges		46x236-mm 2x9-inch	
Bonnet-Gate	Flange Type	Ship Wt lbs [kg]	Model Number *
Pneumatic			
Viton-Viton	Bolt	115 [53]	28212-0209RXJ

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



28200 Series Stainless Steel Rectangular Valve 46x236-mm 2x9-inch Clamp Style



MESIC Flanges		46x236-mm 2x9-inch	
Bonnet-Gate	Flange Type	Ship Wt lbs [kg]	Model Number *
Pneumatic			
Viton-Viton	Clamp	115 [53]	28212-0209RXK

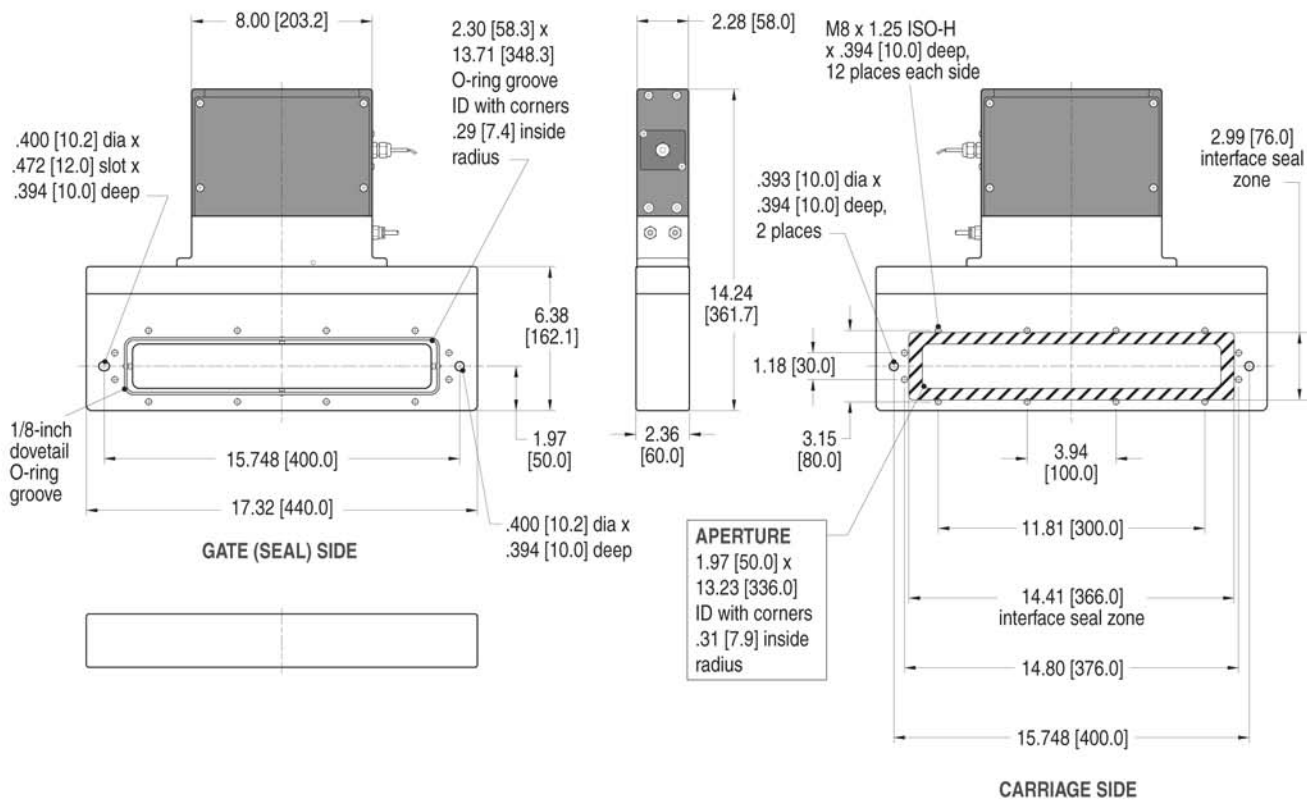
* R = Reed switch, standard
M = Microswitch, optional



28200 Series Stainless Steel Rectangular Valve

50x336-mm 2x13-inch Bolt Style

Pneumatic



Other flange configurations available. All dimensions given in inches [mm].

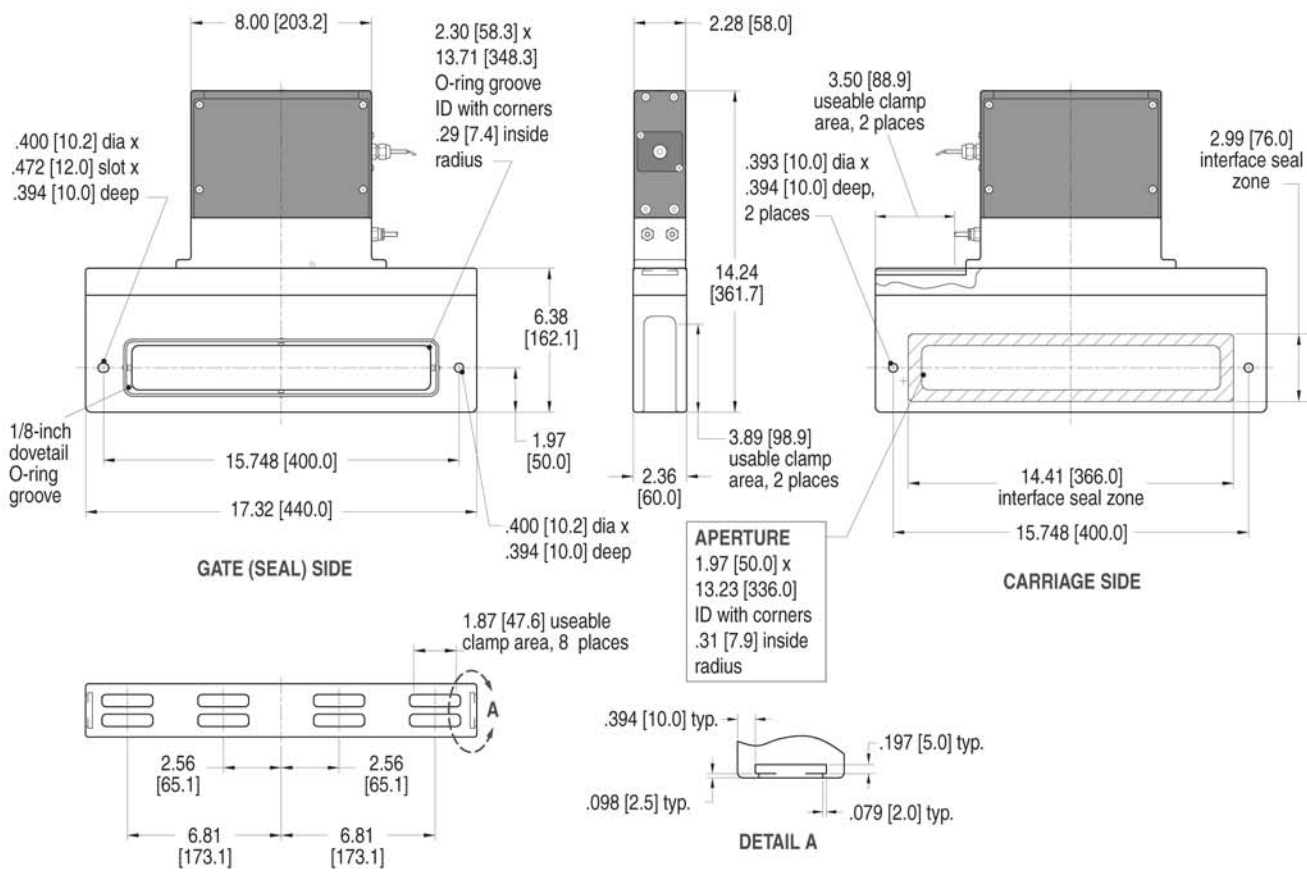
MESIC Flanges		50x336-mm 2x13-inch	
Bonnet-Gate	Flange Type	Ship Wt lbs [kg]	Model Number *
Pneumatic			
Viton-Viton	Bolt	124 [57]	28212-0213RXJ

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



28200 Series Stainless Steel Rectangular Valve 50x336-mm 2x13-inch Clamp Style

Pneumatic



Other flange configurations available. All dimensions given in inches [mm].

MESIC Flanges		50x336-mm 2x13-inch	
Bonnet-Gate	Flange Type	Ship Wt lbs [kg]	Model Number *
Pneumatic			
Viton-Viton	Clamp	124 [57]	28212-0213RXK

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



伯东企业（上海）有限公司
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上海伯东 -- 您理想的真空合作伙伴！

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伯东公司在国内主要城市：上海，北京，苏州，广州，深圳，成都及厦门设有营业据点。

上海伯东真空产品事业部已累计为超过 10,000 家企业提供真空服务

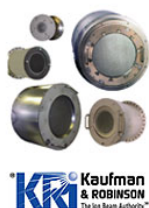
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