





**1/4" - 4" Precision Vacuum Regulating Valves** MANUAL AND ELECTRONIC CONTROL OPTIONS

### **How It Works**

The Equilibar<sup>®</sup> vacuum regulator (EVR) works in a completely different way than traditional regulators and valves.

Instead of a single large valve seat the Equilibar vacuum regulator uses multiple orifices sealed by a flexible diaphragm. The Equilibar is dome-loaded by vacuum pressure on top of the diaphragm and controls the inlet vacuum pressure to closely equal this pilot vacuum pressure. As flow requirements change, the diaphragm moves a few millimeters to open and close over some or all of the orifices, providing instantaneous and frictionless control.

The pilot (reference) vacuum pressure may be set with a manual or electronic pilot pressure regulator (Fig. 1). The pilot regulator is a small, sensitive vacuum regulator which generates a precise setpoint pressure that is equal to the desired process vacuum. This small regulator is energized by the vacuum supply at the outlet port of the EVR. It allows a very small amount of air to be drawn into it to allow for reductions in vacuum set-

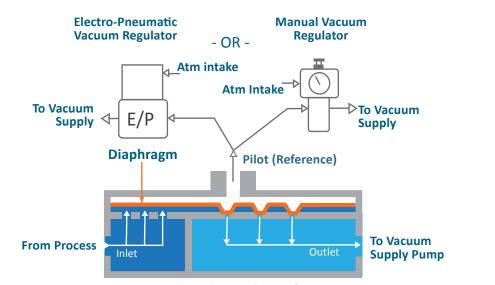
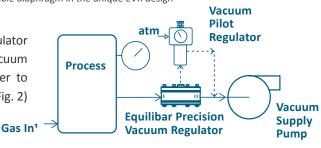
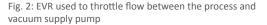


Fig. 1: Vacuum pilot regulator supplying a reference vacuum pressure to the flexible diaphragm in the unique EVR design

The EVR is a non-relieving<sup>1</sup> vacuum regulator that throttles flow between the vacuum supply pump and the process in order to precisely control the process vacuum (Fig. 2) to a specific setpoint.





Process A Process A EVR 1 Vac 14 inHg Process B EVR 2 Shared Vacuum Supply reg Vac 20 inHg reg Vac Vac Vac Shared Vac Shared Vac Supply reg Vac Shared Vac Supply reg Vac

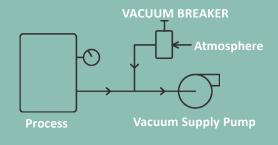
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Certain applications require the use of a **vacuum regulator** because vacuum breakers will not work in those cases. For instance, in a central vacuum distribution system where several processes are sharing one vacuum supply, a vacuum regulator is essential. There are also certain types of vacuum pumps that work more effectively when controlled by a vacuum regulator instead of a vacuum breaker.

#### Equilibar EVR is NOT a vacuum breaker

Equilibar vacuum regulators are **NOT** vacuum breakers, which let a large volume of air into the system to relieve pressure.

Note: While the EVR pilot regulator lets in air, similar to a breaker, the amount of air is less than if you were to use a breaker to control vacuum within the whole system.



<sup>1</sup>The EVR is intended for processes where at least a very small gas flow is present at all times. If your process is gas-tight, an Equlibar application engineer can discuss easy methods of providing a small gas bleed in the process.

#### EASE OF USE

Simply connect the vacuum pump or house vacuum utility to the outlet port of the EVR. Connect the process to be controlled to the inlet port. Add the vacuum pilot regulator and adjust vacuum pilot setting to achieve the desired vacuum level.

#### **EXCELLENT STABILITY**

As flow increases through any vacuum regulator, the vacuum pressure decreases due to friction in the regulator. Because of its unique design, the EVR delivers less vacuum loss with increasing flow than do traditional spring-operated regulators. The orange curve in Fig. 3 illustrates the vacuum stability of the 1" EVR across a range of flow rates. For those processes requiring further vacuum stability over a wide range of flow rates, Equilibar offers closed loop control configurations. That stability is illustrated in the green curve in Fig. 3 and is discussed further on pages 6-9.

The Equilibar EVR also holds vacuum pressure stable across varying supply pressures. Traditional vacuum regulators are often sensitive to vacuum supply pressure, whereas Equilibar vacuum regulators effectively isolate upstream pressure from varying supply. (See Fig. 4)

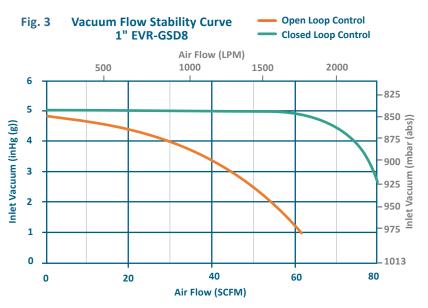
#### SMOOTH COMPUTER AUTOMATION

Equilibar vacuum regulators respond instantaneously to changes in vacuum supply or setpoint pressure. An electropneumatic vacuum pilot regulator can be combined with the EVR for smooth automated computer control.

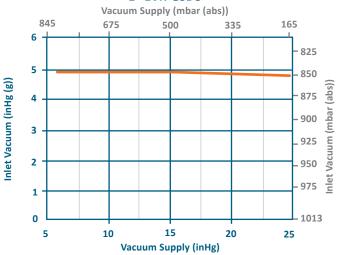
#### LIGHTNING FAST CONTROL

Unlike vacuum control valves using PID controllers, the EVR vacuum regulator responds within milliseconds to flow and pressure changes.









# CHEMICAL AND TEMPERATURE COMPATIBILITY

Equilibar vacuum regulators are available in 316SS, anodized aluminum or PVC, with O-rings and diaphragm materials to meet the needs of the most challenging vacuum environments. Certain designs can withstand process applications with ultrapure and aggressive chemical fumes and moisture. Options are also available for high temperature performance.

#### MULTIPLE PORT SIZES

EVR models are available in port sizes from  $\frac{1}{4}$ " to 4" and in a variety of fittings including NPT, BSPP and 150# Flange.

#### APPLICATION SPOTLIGHT

### **Centralized Vacuum Distribution**

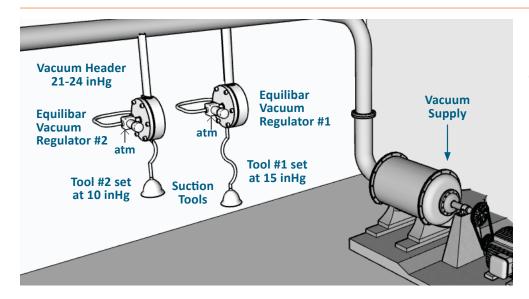


Fig. 5: Multiple Equilibar vacuum regulators that share a common vacuum supply

In industrial settings, it is common for a single vacuum utility header to supply several diverse processes, each with separate vacuum pressure requirements. For example, one piece of equipment might function best with 10 inHg vacuum, while another process requires 15 inHg vacuum.

For this application, a vacuum regulating valve is needed on each process line requiring lower vacuum than the supply vacuum. While vacuum breaking regulators (VBR) are commonly used on vacuum pumps that supply a single pressure, these VBRs are not suitable in the case of multiple users because the VBR sets the system vacuum for the entire header.

In the illustration above, Tool #1 requires a higher vacuum level than Tool #2. In order to use a shared vacuum supply pump, vacuum regulators are required on the Tool process lines to reduce the vacuum to the required level.

EVR Series vacuum regulators work by restricting the flow from the supply pump to the process and do not let any significant amount of air into the process.

### **Remote Sense Vacuum Pilot for Improved Control**

In many vacuum applications a filter or long run of piping exists between the vacuum regulator and the vacuum process to be controlled. In these situations, it is difficult to achieve accurate vacuum control with a standard vacuum regulator because the regulator cannot compensate for these significant pressure losses. For these applications, a "Remote Sense" at the process is needed to help the vacuum control valve control the process directly to the desired pressure.

The Equilibar Remote Sense Vacuum (RSV) pilot is a highly sensitive mechanical vacuum pilot with remote sense capability designed specifically to provide closed loop control of an EVR. The RSV actively adjusts the pilot reference vacuum level to maintain an extremely steady vacuum setpoint despite large variations in flow and process pressure drop. In this schematic a tube runs between the remote sense port in the RSV and a line near the process to be controlled. The RSV works by using this remote sense input to carefully adjust the vacuum force that is applied to the pilot reference port of the Equilibar vacuum regulator. See page 8 for more details.

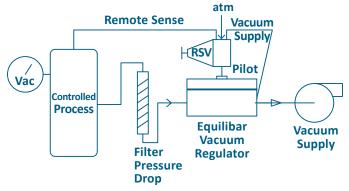
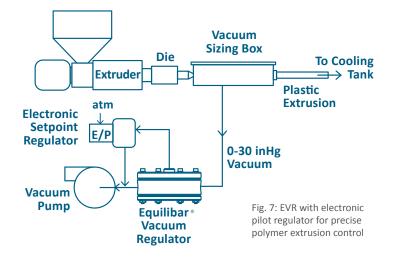


Fig. 6: EVR with RSV pllot for precision remote sense control

### **Extrusion Control with Vacuum Sizing Box**

Many tubular polymer extrusions, such as PVC pipe, are made using vacuum sizing boxes to shape the extruded plastic against a sizing tool before cooling. Vacuum stability is critical in this process



to create and maintain consistent shape and surface finish of the plastic product. The Equilibar vacuum regulator delivers improved product quality in this application by tightly controlling vacuum in the sizing box.

In a typical vacuum sizing application, the EVR is installed between the vacuum pump and the sizing box (Fig. 7). Because the EVR is extremely stable over widely varying flow rates, the pressure in the vacuum box is maintained in a tight range even during process fluctuations.

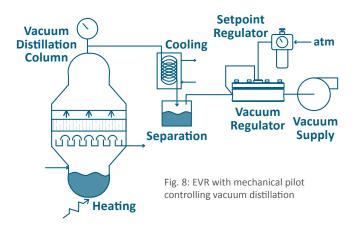
To enable sizing box process automation, the vacuum pilot setpoint signal can be provided by an electronic pressure regulator as shown in Fig. 7. A manual regulator would also work as an EVR pilot setpoint in this case.

### **Control for Precision Vacuum Distillation**

Vacuum distillation is used to reduce the pressure above a liquid to less than its vapor pressure, allowing the most volatile liquids to be selectively boiled off and distilled. This is particularly useful if the temperatures required for a fluid to boil at atmospheric pressures would be hot enough to damage sensitive molecules.

Precisely controlling the vacuum pressure is often critical because the mixture being distilled may contain several liquids with close boiling points. Accurately controlling the vacuum allows for much higher selectivity in the distillation process.

Many vacuum regulators simply do not offer the accuracy required to selectively distill fluids with close boiling points. Those regulators that are sensitive enough are so fragile that they cannot stand up to the corrosive chemistries or elevated temperatures often encountered in vacuum distilleries. Equilibar vacuum regulators are designed to meet the stringent accuracy and durability requirements of this process. The EVR controls vacuum pressure very accurately to a required setpoint regardless of fluctuations in the system flow rate or variations in the supply vacuum pressure.

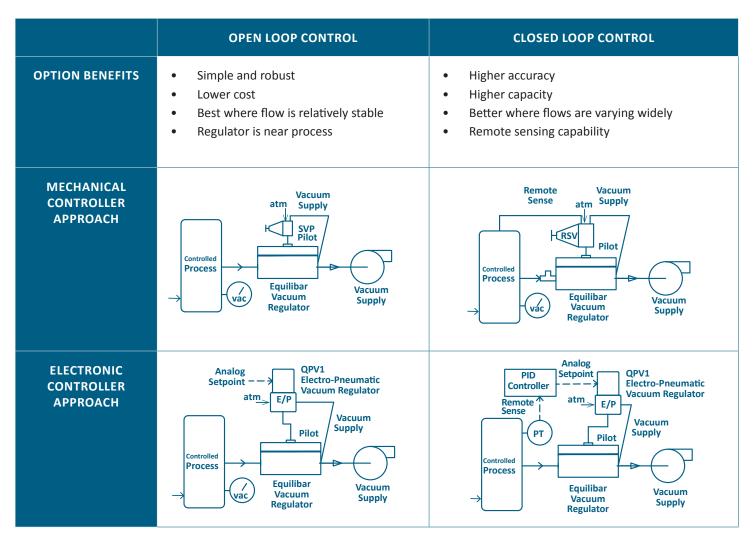


## **Pilot Options**

FOR USE WITH EVR SERIES VACUUM REGULATORS

The EVR Series vacuum regulators can be operated with a mechanical or an electronic pilot regulator in open loop or closed loop control schemes for precise vacuum control. The choice depends on the setup and performance requirements of the specific process. Contact an Equilibar application engineer with questions or for help determining the best design for your vacuum control process.

The table below shows the benefits of the various options.





Customers can use the standard SVP as a pilot regulator, or request an upgrade to the QPV or RSV pilot regulator described on the following pages.

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SVP2 pilot for 1 1/2" - 4" EVR
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**Note:** Equilibar vacuum pilot regulators and fittings are not compatible with corrosive chemicals. The flow from the pilot regulator is from atmosphere to the vacuum pump, so no process gases are entering the pilot in normal operation. If the process fluid contains corrosive gases, we recommend installing a check valve in the line from the pilot to the vacuum supply pump. Contact Equilibar for more details.

# **Pilot Options**

Vacuum pilot open loop and closed loop options are tabulated below. Each vacuum pilot regulator has a different air intake rate from atmosphere. See table for more information



	<b>3 1</b>	<b>3VP 2</b>	KSV	QPV
CONTROL TYPE	Open Loop Me	chanical Control	Closed Loop Mechanical Control	Open Loop or Closed Loop Electronic Control
EVR PORT SIZES	¼" - 1"	1 ½" - 4"	ALL	SIZES
DIM C <sup>1</sup>	3 ¾"	3 ¾"	5 ¼"	3 ¾"
ATM. INTAKE	<260 CC/MIN @ 30 INHG	600 CC/MIN MAXIMUM	1166 CC/MIN MAXIMUM	117 CC/MIN @30 INHG

#### **QPV ELECTRONIC PILOT REGULATOR**

For precise electronic control, using an Equilibar QPV electronic pilot regulator is an excellent option. It can be mounted near the process control system for easy process integration or mounted directly to the EVR. This pilot can be used in open loop or closed loop configuration depending on process requirements.

To upgrade to electronic vacuum control, it is easy to remove the mechanical standard vacuum pilot and replace it with a QPV electronic vacuum regulator from the chart below. Watch our YouTube video for detailed installation instructions, or contact an application engineer for assistance. For best stability, the tubing between the outlet of the electronic regulator and the dome of the valve requires a minimum volume of 2 cubic inches / 35cc.



<sup>1</sup>DIM C is approximate

QPV with optional digital display

#### QPV SPECIFICATIONS AND ORDERING INFORMATION

PART NUMBER	ТҮРЕ	MANIFOLD MATERIAL	THREAD TYPE	INPUT SIGNAL RANGE	MONITOR SIGNAL RANGE	PRESSURE RANGE	BLEED ORIFICE	DIGITAL DISPLAY?	TYPICALLY IN STOCK?
QPV1MANEEZN30IHGXCL	Single Loop	Aluminum	NPT	0 to 10 VDC	0 to 10 VDC	0-30 inHg (g)	Include Bleed Orifice	N	Y
QPV1MANISZN30IHGXCL	Single Loop	Aluminum	NPT	4 to 20 mADC	4 to 20 mADC (Sourcing)	0-30 inHg (g)	Include Bleed Orifice	N	Y
QPV1MANEEZP760TRACXL	Single Loop	Aluminum	NPT	0 to 10 VDC	0 to 10 VDC	0-760 torr (absolute)	Include Bleed Orifice	N	Y
QPV1MANEEZN30IHGXCL-DD	Single Loop	Aluminum	NPT	0 to 10 VDC	0 to 10 VDC	0-30 inHg (g)	Include Bleed Orifice	Y	Ν
QPV1MANISZN30IHGXCL-DD	Single Loop	Aluminum	NPT	4 to 20 mADC	4 to 20 mADC (Sourcing)	0-30 inHg (g)	Include Bleed Orifice	Y	N
QPV1MANEEZP760TRACXL-DD	Single Loop	Aluminum	NPT	0 to 10 VDC	0 to 10 VDC	0-760 torr (absolute)	Include Bleed Orifice	Y	N

IN STOCK ITEMS TYPICALLY SHIP WITHIN 2 DAYS, WHEREAS OTHERS TYPICALLY SHIP IN 8-10 WEEKS

## **Pilot Options**

#### **RSV CLOSED LOOP PILOT REGULATOR**



The Equilibar Remote Sense Vacuum (RSV) pilot is a highly sensitive mechanical vacuum pilot regulator designed specifically to provide closed loop control of any Equilibar vacuum regulator (EVR). The RSV has a remote sense port that can be connected to a line near the controlled process or to the inlet of the EVR. The RSV works by using this remote sense input to carefully adjust the vacuum force applied to the pilot reference port of the EVR.

During high flow conditions, the RSV increases the vacuum force applied to the pilot reference port to open the vacuum regulator more fully. The opposite occurs during low flow conditions. This active pilot adjustment coupled with the instantaneous response of the Equilibar EVR keeps the pressure stable from the lowest flow rates to the maximum capacity of the EVR. The RSV can be integrated with any Equilibar vacuum regulator to provide improved vacuum control at a wider flow range. A remote sense pilot is useful in processes where flow rates are varying widely.

#### **RSV SPECIFICATIONS**

Vacuum Supply Range

Preferred Supply Differential

Air Bleed

PORTING	OPTIONS
Vacuum Supply	<b>¼" ΝΡΤ</b>
Remote Sense	⁄4" ΝΡΤ
Pilot Output	¼" NPT
Automatic Bleed (in)	¼" (through filter provided)

SPECIFICATIONS

MATE	RIALS OF CONSTRUCTION'
Body	Aluminum
Trim	PTFE, Stainless, Buna Nitrile
Springs	Steel

#### **RSV ORDERING INFORMATION**

MODEL	VACUUM CONTRO	L RANGE							
RSV-2-10	0.5 - 10 inHg(g)	1000 - 675 mbar(abs)							
RSV-2-25	1 - 25 inHg(g)	980 - 165 mbar(abs)							
Custom	Contact an application engineer								

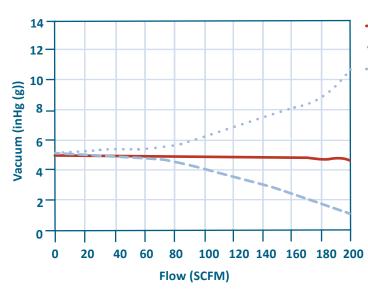
<sup>1</sup>The materials of construction for the RSV are not corrosion resistant. These regulators are for use with inert, non-corrosive gases.

#### PERFORMANCE OF REMOTE SENSE RSV PILOT COMPARED TO STANDARD SVP PILOT

0 - 30 inHg (g)

1 inHg (Supply Control) Through 0.015" orifice (2.5 SCFH or

70 liters/hour at higher setpoints)



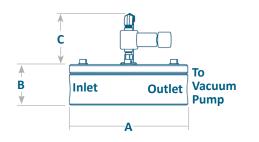
- Controlled Vacuum with RSV
- Controlled Vacuum with SVP
- • Pilot Vacuum set by RSV



**EVR-GSD4S with RSV pilot** 

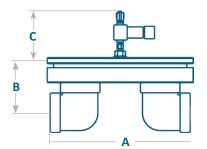
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### **EVR Series Specifications**



#### Ref Fig. 1: Dimensional Drawing for Regulators with Line Size ¼" to 1"

see page 7 for DIM C values



Ref Fig. 2: Dimensional Drawing for Regulators with Line Size 1 1/2" to 4"

			see page 7 for	DIM C values		
MODEL INLET / NUMBER DOPT		STANDARD BODY MATERIALS	DIM A	CV RANGE (PRECISION)		
	PORT		INCH	(мм)	MIN <sup>1</sup>	МАХ
	IN (DN)	REGULATORS WI	TH LINE SIZE 1/8" TO	0 1" REFERENCE	FIGURE 1	
EVR-LF1 or LF2	⅓"(6) or ¼" (8)	Stainless Steel 316	2.5 (64)	1.5 (39)	1E-08	0.07
EVR-HF1 or HF2	<sup>1</sup> %"(6) or ¼" (8)	Stainless Steel 316	2.5 (64)	1.5 (39)	1E-05	0.41
EVR-GSD2A	1⁄4" (8)	Anodized Aluminum	3 (76)	1.3 (33)	1E-03	1.2
EVR-GSD2S	1⁄4" (8)	Stainless Steel 316	3 (76)	1.3 (33)	1E-03	1.2
EVR-GSD2P	1⁄4" (8)	PVC	3.25 (83)	1.5 (38)	1E-03	1.2
EVR-GSD3A	³∕s" (10)	Anodized Aluminum	3.5 (89)	1.4 (36)	1E-03	1.8
EVR-GSD3S	3∕8" (10)	Stainless Steel 316	3.5 (89)	1.4 (36)	1E-03	1.8
EVR-GSD3P	∛≋" (10)	PVC	3.75 (95)	1.6 (41)	1E-03	1.8
EVR-GSD4A	1⁄2" (15)	Anodized Aluminum	4.5 (114)	1.6 (41)	1E-03	3.2
EVR-GSD4S	1⁄2" (15)	Stainless Steel 316	4.5 (114)	1.6 (41)	1E-03	3.2
EVR-GSD4P	1⁄2" (15)	PVC	4.75 (121)	1.8 (46)	1E-03	3.2
EVR-GSD6A	³∕₄'' (20)	Anodized Aluminum	6 (152)	2 (51)	1E-02	5.5
EVR-GSD6S	¾" (20)	Stainless Steel 316	6 (152)	2 (51)	1E-02	5.5
EVR-GSD6P	¾" (20)	PVC	6.25 (159)	2.25 (57)	1E-02	5.5
EVR-GSD8A	1" (25)	Anodized Aluminum	7 (178)	2.6 (66)	1E-02	8.5
EVR-GSD8S	1" (25)	Stainless Steel 316	7 (178)	2.6 (66)	1E-02	8.5
EVR-GSD8P	1" (25)	PVC	7.25 (184)	2.9 (74)	1E-02	8.5
	IN (DN)	REGULATORS WIT	H LINE SIZE 1 ½" T	O 4" REFERENCE	FIGURE 2	•
EVR-BD12A	1.5" (40)	Anodized Aluminum	9.5 (241)	3.9 (99)	1E-02	13
EVR-BD12S	1.5" (40)	Stainless Steel 316	7.6 (193)	3.7 (94)	1E-02	13
EVR-BD12P	1.5" (40)	PVC	9 (229)	4.3 (109)	1E-02	13
EVR-BD16A	2" (50)	Anodized Aluminum	9 (229)	4.3 (109)	3E-02	28
EVR-BD16S	2" (50)	Stainless Steel 316	11 (279)	4.1 (104)	3E-02	28
EVR-BD16P	2" (50)	PVC	11 (279)	5.1 (130)	3E-02	28
EVR-BD24A	3" (80)	Anodized Aluminum	12.5 (316)	5.9 (150)	6E-01	60
EVR-BD24S	3" (80)	Stainless Steel 316	13 (330)	5.3 (135)	6E-01	60
EVR-BD24P	3" (80)	PVC	15 (381)	8.8 (226)	6E-01	60
EVR-BD32A	4" (100)	Anodized Aluminum	20 (508)	8.1 (206)	1.5E-01	160
EVR-BD32S	4" (100)	Stainless Steel 316	20 (508)	8.1 (206)	1.5E-01	160
EVR-BD32P	4" (100)	PVC	20 (508)	9.6 (244)	1.5E-01	160

VACUUM RANGES 0 to 29.5 inHg (g) [1013 to 15 mbar (abs)] 0 - 10 inHg (g) [1013 to 675 mbar(abs)] \*Vacuum ranges as low as 0 to -2 in H<sub>2</sub>O [0 to -5 mbar] Custom vacuum ranges available with electronic options. Consult an application engineer for assistance. FITTINGS NPT (Standard) BSPP SAE 150# Flange **DIAPHRAGM OPTIONS** Buna - N (Nitrile) FKM EPDM PTFE (Glass Reinforced) PTFE (Virgin) **O-RING OPTIONS** Buna - N (Nitrile) Viton FFKM (Kalrez or similar) EPDM PTFE **TEMPERATURE RATING** Polymer Units: 40°C Metallic Units: 60°C \*High temperature models are available Consult an application engineer Consult an application engineer for

Consult an application engineer fo other available options.

<sup>1</sup>Min Cv is dependent on diaphragm option. Contact an application engineer for specific details. Available in vacuum-only, absolute, and vacuum-to-positive options.

## **EVR Part Number Key**

This part number key explains our part numbering system and possible model options. All of our BPRs are custom-configured by our engineers based on the customer's specific application's parameters (process media, pressures, flow rates, temperature, etc.). Our engineers will request process operating parameters in order to build and quote a full part number for a suitable regulator. This chart is a reference to help understand the chosen part number.

								EXAMI	PLE									
EVR	- BD	12	s	N	G	x	-	N	S	x	Р	30	т	100	v	x	vvvv	-
EVR	-																	
1	2	3	4	5	6	7	-	8	9	10		11		12	13	14	15	16
1	MODEL									10	BOLTS							
EVR	Equilibar	Vacuum	n Use Re	egulator							(Factor	y Select	ed)					
2	MODEL	ТҮРЕ			2 мо	DEL TYP	PE			11	PRESS	URE RA	TING					
GSD	1⁄4" - 1" ([	ON 8-25)	)	В	D 1½	" - 4" (DI	40-100	)		30	30 inH	g						
3	PORT SI	ZE - IN (	(DN)		3 POI	RT SIZE ·	IN (DN	)	_	10	10 inH	g						
2	1⁄4" (8)			1	<b>2</b> 1 ½	" (40)				12	TEMP	ERATUR	E RAT	ING				
3	∛ଃ" (10)			1	<b>6</b> 2"	(50)				40	40°C (F	Polymer	Units)					
4	½" (15)			2	<b>4</b> 3"	(80)				60	60°C (N	Metallic	Units)					
6	¾" (20)			3	<b>2</b> 4"	(100)			c	thers avail)	able. Consi	ult an appl	ication e	ngineer fo	or assistant	ce.		
8	1" (25)							_		13	DIAPH	RAGM	MATE	RIAL				
4	BODY M	ATERIA	L							G	PTFE (O	Glass Re	inforce	d)				
S	Stainless	Steel 31	16/316L	-						В	Buna-N	N (Nitrile	e)					
Р	PVC									V	FKM FI	uoroela	stome					
Α	Anodized	d Alumin	num							Μ	EPDM							
thers avail	able. Consult	an applica	ition engir	neer for ass	sistance.					E	Polyet	nylene						
5	PORT CO	ONNECT	ΓΙΟΝ							F	PTFE ()	/irgin)						
N	NPT								_	1	Polyim	ide						
В	BSPP									14	DIAPH	RAGM	тніск	NESS				
F	ANSI Clas	ss 150 Fl	lange								(Factor	y Select	ed)					
D	DIN EN 1	092-1 Fl	lange							15	15	O-R	NG M	ATERIA		ONS		
0	VCO <sup>®</sup> (fo	r port si	zes 1" a	and smal	ler)					GSD	BD	(wet	ted)					
R	VCR <sup>®</sup> (fo									vv	VVVV	Vito	n® Sho	re 75 (F	KM)			
S	SAE (for	port size	es 1" an	d smalle	r)					КК	КККК	FFKN	Л (Kalr	ez® or s	imilar)			
6										ZZ	ZZZZ	Mar	kez FFk	(M (Nur	nber va	ries by g	grade)	
	(Factory	Selected	d)							FF	FFFF	PTFE						
7	MOD #									EE	EEEE	EPDI	М					
	(Factory									BB	BBBB	Buna	a-N (Ni	trile)				
8		NCE POI	RT THR	EADS					G	SD Series r	egulators h	nave 2 O-ri	ngs and I	3D regulat	tors have 4			
N	NPT									16	SPECIA		ONS					
В	BSPP									В	Mount	ing Bracl	ket (Po	rt Size 2	2 & 3 On	ly)		
9					)					0	Oxyger	n Cleanir	ıg				0	
S	Stainless	Steel 31	16/316	ρL							_							1
Р	PVC																10	FC
Α	Anodized	d Alumin	num								1					0 0	T	-5-
ems in	blue typ	oically i	in stoc	ck for fa	ast shi	pment									-110-	4 1 m		-

EVR-BD24S with SVP2 Pilot

**EVR-GSD8P with SVP1 Pilot** 

#### PATENTS https://www.equilibar.com/support/patents/

## **About Equilibar**

Equilibar provides innovative and robust pressure control technology for researchers and engineers worldwide. We are proud to design, manufacture and test our patented back pressure regulators in our factory overlooking the Blue Ridge Mountains near Asheville, NC, and we are equally proud to work with clients around the world each and every day.

# APPLICATION ENGINEERING - WHAT SETS US APART

Unlike mass-market regulator distributors, we focus on working with you, the scientist or engineer with a complex pressure control scenario.

Our application engineers work collaboratively with clients to identify the optimal model, trim, and diaphragm for each application's unique challenges. No matter where you are on the globe, you can stay in close contact with your engineer by email, telephone, videoconferencing or fax.

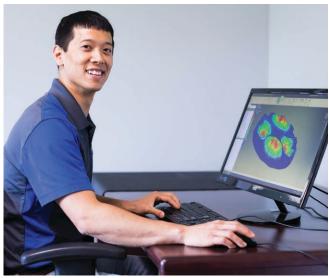
After installation, your application engineer will support you with start-up information and fine-tuning as needed.



Equilibar, LLC 320 Rutledge Rd. Fletcher, North Carolina 28732 United States Tel: +1-828-650-6590 Fax: +1-801-504-4439 Monday - Friday 8:00 AM - 5:00 PM EST 12:00 - 21:00 GMT inquiry@equilibar.com



Each application is reviewed by our engineering team to ensure quality performance of our products.



Our engineers offer custom designed solutions for the most difficult pressure control challenges. Feel free to contact us to discuss your situation.



Made in the USA

Equilibar's quality system is **ISO 9001:2015** certified.

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