

# R-SERIES DIA-VAC<sup>®</sup>

## Diaphragm Sampling Pumps

single head / double head / quad head



An Ingersoll Rand Business

The rugged R-Series Dia-Vac<sup>®</sup> gas diaphragm vacuum pump has withstood the test of time. Trusted for its durability and dependable performance in gas analysis applications worldwide since 1971, its evolutionary improvements have only increased its reputation in the market as the Gold Standard for reliable and robust diaphragm gas sampling pumps.

Designed for continuous use, and available in **single, double, and quadruple head** configurations, the R-Series provides a flexible performance range of **up to 150 liters per minute (LPM)** to meet your specific gas sample system's exact requirements. In addition, proven reliability ensured by a robust construction composed of state-of-the-art components make the R-Series the perfect match for **Continuous Emissions Monitoring Systems (CEMS)** and **Process Analytics** applications.



### HIGHLY CONFIGURABLE to your specific needs

The R-Series' modular design allows for customizations such as a Heated, Elevated or Extended Heads, Double Diaphragms, and various Motor options.



### MADE IN THE USA AND AVAILABLE FOR QUICK DELIVERY!

The R-Series is manufactured on-site at ADI's headquarters in Florida, USA so our experts can assemble most pumps to match your application in a short amount of time - as fast as same day in emergency situations.



### LONG LASTING, EASY TO MAINTAIN

The R-Series is built for continuous operation so your uptime is maximized. Its high quality components are made from state-of-the-art materials making the R-Series truly a dependable key component of your gas sampling system.



### ROBUST, PROVEN DESIGN

The R-Series was built to deliver leak, oil, contamination, and corrosion free gas samples. This product family also offers high chemical resistance and it can withstand small amounts of water within the pump.

## INDUSTRIES SERVED



## YOUR BENEFITS



### DURABLE

Rugged design built to withstand particularly harsh environments.



### RELIABLE

Long product lifespan and easily field serviceable.



### EXPLOSION PROOF

CSA/NEC/ATEX/IECEX certified options available for hazardous area applications.



### LOW TOTAL COST OF OWNERSHIP (TCO)

compared to industry standards due to low maintenance requirements, long-life high-quality components, and reasonably priced service kits.

## APPLICATIONS



GENERAL GAS SAMPLING, ANALYSIS, AND MONITORING



GROUND WATER REMEDIATION (OZONE INJECTION)



GAS CHROMATOGRAPHY

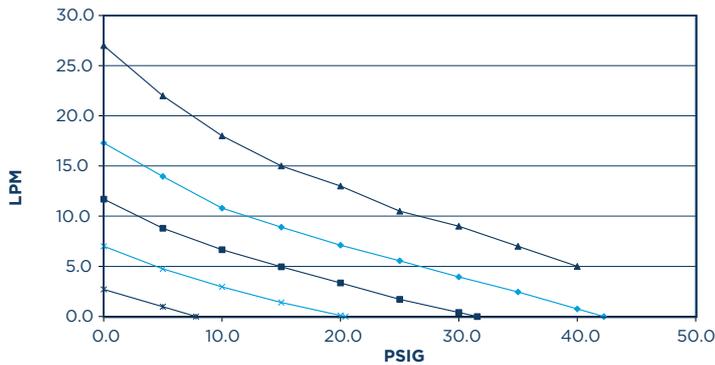


FENCE LINE MONITORING



EMISSIONS TESTING

# COMBINATION CURVE



▲ 0 In Hg   
 ◆ 5 In Hg   
 ■ 10 In Hg  
× 15 In Hg   
 ● 20 In Hg

\* Test results are averaged, and therefore should be considered approximate.  
 \* These test results are for reference only, and are intended to help provide information to the user when determining which pump to buy. Actual pump performance will depend upon the users' applications.  
 \* For 50 Hz operation, reduce output by 17%.

One of the key benefits of the Dia-Vac® pump is its ability to act as a vacuum pump, compressor, or both depending on the application.

Instead of showing a performance curve, that only shows the unit as a vacuum pump OR a compressor, the combination curve illustrates the relationship between (inlet) vacuum, (outlet) pressure, and flow rate. The primary benefit compared to a standard performance curve is that it covers applications where the pump is providing both vacuum and pressure at a given flow rate instead of just pressure OR vacuum at a given flow rate.

## R - SERIES DIA-VAC® PERFORMANCE

Model #	Eccentric	PSIG	BarG	InHg	Mbar	CFM	LPM
R061	0.060	5.7	0.39	8.6	291	0.34	9.7
R081	0.080	8.4	0.58	11.6	393	0.45	12.7
R101	0.100	10.4	0.72	13.6	461	0.47	13.3
R121	0.120	15.0	1.04	16.1	545	0.56	15.8
R151	0.150	22.0	1.51	18.8	637	0.65	18.6
R181	0.180	33.0	2.27	21.4	725	0.75	21.2
R201	0.200	42.1	2.90	22.4	759	0.82	23.4
R221 (Std.)	0.222	53.0	3.66	24.0	812	0.92	26.0
R251	0.250	60.0	4.14	24.5	830	0.97	27.4
R271	0.275	70.0	4.83	25.4	860	1.06	30.0
R221 (HS)	.222 (High Speed)	59.7	4.10	23.8	805	1.34	38.2
R222 (para/series)	.222 (Double)	59.7	4.10 / 5.0	24.3 / 28.5	819 / 965	1.73 / .93	49.1 / 26.3
R222 (para/series)	.222 (Double High Speed)	67.5 / 75	4.65	24.1 / 28.6	816 / 968	2.57 / 1.29	72.7 / 36.5
R224 (para/series)	.222 (Quad)	55 / 75	3.8 / 5.0	24 / 29.5	812 / 998	3.5 / .95	100 / 27

ADI's Dia-Vac® Pumps can Pass Your Gas at the Speed of Need! Due to an increased interest in reducing the pressure, vacuum, and/or flow on the Dia-Vac® pumps, our engineers designed a modified eccentric. This allows you to customize your Dia-Vac® pump to meet your application requirements while at the same time increasing the diaphragm and bearing life.

## HOW TO ORDER

How to specify and order pumps from Air Dimensions.

CAPACITY			WETTED MATERIALS		MOTOR			OPTIONS
STYLE	ECC.	HEADS	HEAD	DIAPHRAGM	TYPE	VOLTS	Hz	OPTIONS
R=Std.	27	1	A=Alum	E=Encapsulated*	A=Gen Pur.	A=115	0=N/A	<ul style="list-style-type: none"> <li>A = 416 ss Valve Discs</li> <li>B = Head at Both Ends</li> <li>C = Power Cord</li> <li>D = Double Diaphragm</li> <li>E1 = Extended Head</li> <li>L = Elevated Head</li> <li>M = Heated w/K Thermocouple</li> <li>M1 = RTD Sensor PT100</li> <li>M2 = Heated 65° Thermostat</li> <li>M3 = Heated 100° Thermostat</li> <li>M4 = Heated 140° Thermostat</li> <li>M5 = Heated 163° Thermostat</li> <li>M6 = Heated 200° Thermostat</li> <li>M8 = Heated Steam</li> </ul>
	25	2	B=Alum (TefCo)	N=EPDM	B=Gen Pur. HS	B=230	1=60 1Ph	
	22	4	F=316ss	P=All Teflon	C= TEFC	C=115/230	2=50 1Ph	
	20	8	G=316ss (TefCo)	T=Tef/EPDM	D= Air Driven	D=220/380	3=60 3Ph	
	18		H=Hast C	V=Viton	Q=XP ATEX/IECEX IIC .55 kW	E=230/460	4=50 3Ph	
	15		J=Hast C (TefCo)		Y= XP ATEX/IECEX IIC	X=N/A	5=50/60 1Ph	
	12		L=Silconert®		M= TEFC 1/2 HP		6=50/60 3Ph	
	10		T=Teflon		N=XP CD UL/CSA 1/2 HP			
	08				R= XP BCD UL/CSA			
	06			*Solid Teflon only				



### OVER 50 YEARS OF EXCEEDING INDUSTRY STANDARDS

Built to exceed industry standards, ADI's pumps have long been known as premium quality products designed to stand up to the rigorous demands of gas sampling and monitoring even in the harshest environments. Whatever the application, our range of products and manufacturing capabilities allow us to meet your exact requirements.