

# J-SERIES DIA VAC® Diaphragm Sampling Pumps

Compact and Powerful Single-Head Pumps for Gas Analyzers  
single head

The J-Series Dia-Vac® diaphragm sampling pumps are designed to be integrated into Continuous Emissions Monitoring Systems (CEMS) that include CO, CO<sub>2</sub>, NO<sub>x</sub>, or Fourier Transform Infrared (FTIR) analyzers. The J-Series are **light, quiet, perform at a low vibration**, and feature a **compact footprint** to easily fit into a gas analyser, making them popular among CEMS Original Equipment Manufacturers (OEMs).

The fully CE-approved J-Series Dia-Vac® offer a choice of dual voltage **115v/230v**, **dual cycle 50/60 Hz AC motors**, **12-24 volt DC brushless motors**, and are available in a **single head** configuration with an **elevated head option** to keep the motor safe and away from high temperatures. A **heated head option** allows the J-Series to keep the media in a stable gaseous state to **maintain sample integrity** as well as prevent condensate build-up and **reduce pump corrosion**.

Designed for high-accuracy and robust continuous operation, the J-Series flow rate performs in a range **up to 14.0 liters per minute (LPM)**. **Adjustable eccentric sizing** is available for greater adherence to system performance requirements and pump longevity. Manufactured using aluminum, 316 stainless steel, and optional Teflon/aluminum or Teflon/316SS wetted parts, the J-Series stands out as a top choice for OEM manufacturers.



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## YOUR BENEFITS



### DURABLE

Chemical, moisture and corrosion resistant. Features oversized bearings and motor shaft. A blocked inlet or outlet poses no risk of damage to the pump.



### LOW MAINTENANCE AND RELIABLE

Long product lifespan and easily field serviceable. Made of chemically inert material to keep sample integrity.



### 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.

\* Diaphragms are not covered under warranty and diaphragm lifetime will vary depending on operating conditions.

## APPLICATIONS



### GENERAL GAS SAMPLING



### PROCESS ANALYSIS AND MONITORING SYSTEMS

### CEMS

### CONTINUOUS EMISSIONS MONITORING SYSTEMS (CEMS)



## HIGHLY CONFIGURABLE to your specific needs

The J-Series can be customized with a heated head, elevated head, and various motor options. It can also operate in any position as long as the motor is properly supported.



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

Manufactured on-site at ADI's headquarters in Florida, USA so our experts can assemble pumps to match your application in a short amount of time.



## ROBUST, PROVEN DESIGN

Delivers leak, oil, contamination, and corrosion free gas samples, offering high chemical and corrosion resistance - can handle small amounts of liquid while continuing to operate.

## INDUSTRIES SERVED



REFINERIES/  
PETROCHEMICAL



CHEMICAL



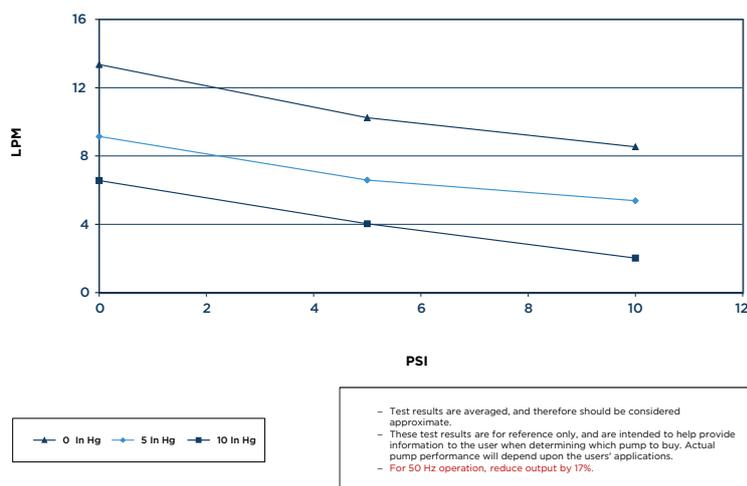
ENVIROMENTAL



GENERAL INDUSTRY  
AND MANUFACTURING

[www.airdimensions.com](http://www.airdimensions.com)

# COMBINATION CURVE



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 traditional 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 traditional 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.

## J-SERIES DIA-VAC® PERFORMANCE

Model	PSIG	bar	InHg	mbar	CFM	LPM
J161	29.0	2.0	23.7	802.6	0.48	14.0
J141	25.0	1.7	22.0	745	0.44	12.5
J081	10.5	0.7	16.4	555	0.24	6.7
J101	14.5	1.0	19.2	650	0.31	8.8
J121	20.9	1.44	21	711	0.37	10.6

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 modified eccentric options which allow you to customize your Dia-Vac® pump to meet your specific application requirements while at the same time increasing the life of the diaphragm and bearings. Please see "How to Specify and Order Pumps from ADI" (below) or call the factory direct at 954-428-7333 for more information.

## HOW TO ORDER

How to specify and order pumps from Air Dimensions.

CAPACITY			WETTED MATERIALS		POWER			OPTIONAL
STYLE	ECC.	HEADS	HEAD	DIAPHRAGM	TYPE	VOLTS	Hz	OPTIONS
J=J-Series	16 14*	1	A=Alum B=Tef/Alum F=316ss	F=Teflon/Viton P=All-Teflon(2-ply)	A=Gen. Purpose G*=ATEX Zone 1 P=BLDC (var speed) T=BLDC	A=115 AC B=230 AC H=12 DC J=24 DC	0=N/A 1=60 1Ph 2=50 1 Ph	<ul style="list-style-type: none"> <li>M*=Heated Head w/K T-couple</li> <li>L=Elevated Head</li> </ul>
*.140 Ecc required for Elevated and Heated Head option.								

### Example:

J161-FF-AA1 = Single Head J-Series Dia-Vac pump, .160 eccentric, 316 ss wetted parts, Teflon/Viton diaphragm, 115v/60Hz General Purpose motor.

\*.140 Ecc required for Elevated and Heated Head option.

\*Heated options available on 316 ss Head only.

\*ATEX option available on 316 ss Head 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.