

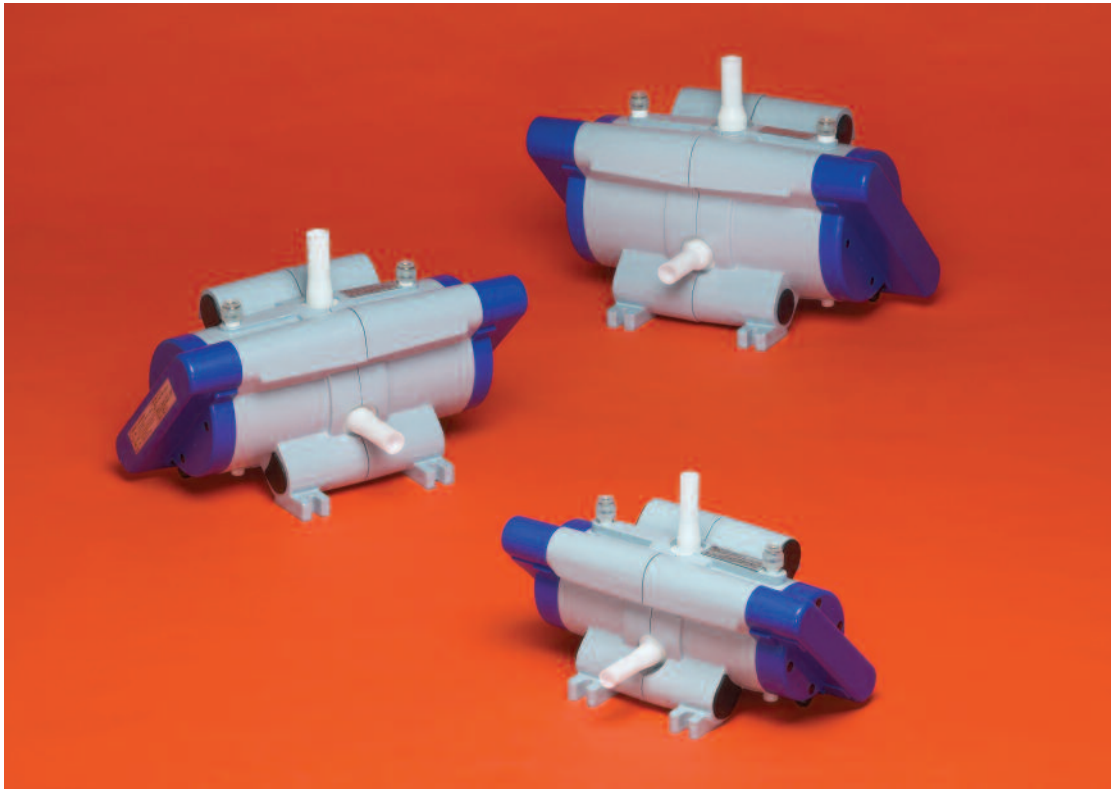


EJ SERIES CHEMICAL PUMPS

Robust, reliable product design increases fluid system productivity in critical high-purity chemical applications



increase fluid system productivity



Entegris' EJ Series pumps provide reliable, high-flow (up to 120 l/min) chemical delivery.

Pump Innovation

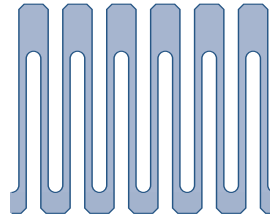
Entegris is dedicated to providing reliable, cost-saving solutions that increase the productivity of your fluid handling systems. It is this dedication coupled with more than 24 years of high-purity pump design experience that enables us to provide the EJ Series chemical pump. Leveraging our materials integrity management experience and semiconductor application knowledge, we have designed this pump to meet the strict processing requirements of today while providing extendibility for tomorrow.

Reduce Cost of Ownership

Unlike traditional all-plastic pump housings which tend to relax over time, Entegris' pump housing provides functional stability in high-temperature applications (up to 356°F [180°C]) without the need to re-torque housing bolts and caps every few months. The patented EJ pump housing provides long-term robustness and reliability while maintaining chemical integrity. The EJ Series pump carries an 18-month/25-million cycle hands-off warranty, eliminating the need for frequently scheduled maintenance and reducing overall cost of ownership.

Increase Pump Cycle Life

Entegris machines the pump bellows using a proprietary process that eliminates stress concentration areas and contributes to increased cycle life. Since implementing the patented bellows design more than 24 years ago, there has not been one recorded bellows failure!



Entegris bellows design

Save Valuable Space

Entegris has designed the EJ Series pump with footprint in mind. Understanding the real-estate value inside chemical process equipment, we designed a smaller overall package that enables tighter fluid system configuration. Utilizing the proprietary bellows design, we are able to keep the footprint smaller and maintain higher flow than traditional diaphragm pumps.



Competitor X bellows design



Competitor Y bellows design

*Over the past quarter century,
Entegris has sold more than 30,000 pumps
with no recorded bellows failures!*

Optimize Pump Control

Entegris' pump controllers provide optimum control and monitoring of Entegris' EJ Series bellows pumps. The EPC-I model is designed to control the pump using a simple dial. Remote stroke speed settings and start/stop features provide easy, convenient operation in any environment.

Meanwhile, the NPC-II model Programmable Logic Controller (PLC) is designed to control the pump using various system sensor input signals. Stroke speed and driving pressure specifications can be set according to application needs, and the stroke control function fixes pump strokes regardless of a change in process temperature.

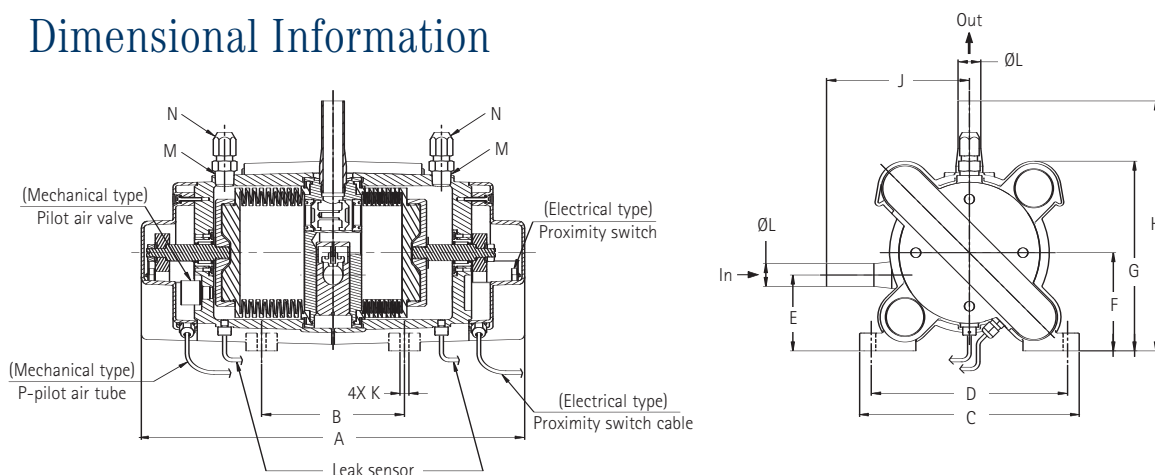


Entegris' EPC-I and NPC-II pump controllers are exclusively designed to provide optimum control of Entegris' bellows pumps.

Ordering Information

Entegris pumps are available with electrical or mechanical driving methods in 30 l/min, 60 l/min and 120 l/min flow capacities. For complete ordering information, visit the Chemical Pump section of our Web site, www.entegrisfluidhandling.com

Dimensional Information



Part Number	A	B	C	D	E
EJ-30E	14.20" (360.7 mm)	4.90" (124.5 mm)	7.90" (200.7 mm)	6.90" (175.3 mm)	2.30" (58.4 mm)
EJ-30M	14.20" (360.7 mm)	4.90" (124.5 mm)	7.90" (200.7 mm)	6.90" (175.3 mm)	2.30" (58.4 mm)
EJ-60E	16.90" (429.3 mm)	6.30" (160.0 mm)	9.70" (246.4 mm)	8.70" (221.0 mm)	3.30" (83.8 mm)
EJ-60M	16.90" (429.3 mm)	6.30" (160.0 mm)	9.70" (246.4 mm)	8.70" (221.0 mm)	3.30" (83.8 mm)
EJ-90E	17.90" (454.7 mm)	6.90" (175.3 mm)	10.90" (276.9 mm)	9.80" (248.9 mm)	3.70" (94.0 mm)
EJ-90M	17.90" (454.7 mm)	6.90" (175.3 mm)	10.90" (276.9 mm)	9.80" (248.9 mm)	3.70" (94.0 mm)

Part Number	F	G	H	J	K
EJ-30E	3.30" (83.8 mm)	6.50" (165.1 mm)	9.00" (228.6 mm)	5.50" (139.7 mm)	0.40" (10.2 mm)
EJ-30M	3.30" (83.8 mm)	6.50" (165.1 mm)	9.00" (228.6 mm)	5.50" (139.7 mm)	0.40" (10.2 mm)
EJ-60E	4.30" (109.2 mm)	8.40" (213.4 mm)	11.00" (279.4 mm)	6.30" (160.0 mm)	0.40" (10.2 mm)
EJ-60M	4.30" (109.2 mm)	8.40" (213.4 mm)	11.00" (279.4 mm)	6.30" (160.0 mm)	0.40" (10.2 mm)
EJ-90E	4.90" (124.5 mm)	9.60" (243.8 mm)	12.40" (315.0 mm)	7.10" (180.3 mm)	0.40" (10.2 mm)
EJ-90M	4.90" (124.5 mm)	9.60" (243.8 mm)	12.40" (315.0 mm)	7.10" (180.3 mm)	0.40" (10.2 mm)

Part Number	ØL	M	N	P
EJ-30E	3/4"	Rc 1/4	3/8" (9.5 mm)	N/A
EJ-30M	3/4"	Rc 1/4	3/8" (9.5 mm)	0.236" (6.0 mm)
EJ-60E	1"	Rc 1/2	1/2" (12.7 mm)	N/A
EJ-60M	1"	Rc 1/2	1/2" (12.7 mm)	0.236" (6.0 mm)
EJ-90E	1"	Rc 1/2	1/2" (12.7 mm)	N/A
EJ-90M	1"	Rc 1/2	1/2" (12.7 mm)	0.236" (6.0 mm)

Note: For pump connection styles and sizes, visit the Chemical Pump section of our Web site, www.entegrisfluidhandling.com.

Specifications

	EJ-30	EJ-60	EJ-90
Maximum discharge capacity:	30 l/min	60 l/min	90 l/min*
Flow per stroke:	350 ml	750 ml	1150 ml
Driving air connection size:	3/8" (9.52mm)	1/2" (12.7 mm)	1/2" (12.7 mm)
Maximum driving air pressure:	58 PSIG (0.4 MPa)	58 PSIG (0.4 MPa)	58 PSIG (0.4 MPa)
Minimum driving air pressure:	10 PSIG (0.07 MPa)	10 PSIG (0.07 MPa)	10 PSIG (0.07 MPa)
Maximum air consumption:	480 NI/min	620 NI/min	800 NI/min
Temperature range:	38° to 356°F (5° to 180°C), fluid 0° to 140°F (0° to 60°C), ambient	38° to 356°F (5° to 180°C), fluid 0° to 140°F (0° to 60°C), ambient	38° to 356°F (5° to 180°C), fluid 0° to 140°F (0° to 60°C), ambient
Driving method:	Electrical/mechanical	Electrical/mechanical	Electrical/mechanical
Stroke sensor:	Proximity switch/pilot air valve	Proximity switch/pilot air valve	Proximity switch/pilot air valve
Pilot air connection size:	0.236" (6 mm)	0.236" (6 mm)	0.236" (6 mm)
Pilot pressure range:	44 to 58 PSIG (0.3 to 0.4 MPa)	44 to 58 PSIG (0.3 to 0.4 MPa)	44 to 58 PSIG (0.3 to 0.4 MPa)
Proximity switch cable:			
Diameter:	0.22" (5.5 mm)	0.22" (5.5 mm)	0.22" (5.5 mm)
Length:	78.7" (2 m)	78.7" (2 m)	78.7" (2 m)
Length-explosion proof:	196.8" (5 m)	196.8" (5 m)	196.8" (5 m)
Leak sensor cable:	0.18" (4.5 mm) Ø × 78.7" (2 m) long	0.18" (4.5 mm) Ø × 78.7" (2 m) long	0.18" (4.5 mm) Ø × 78.7" (2 m) long
Total weight:	21 lbs (9.6 kg)	46 lbs (21 kg)	64 lbs (29 kg)
Materials:	All wetted surfaces are PTFE. Exterior surfaces are epoxy and PTFE coated aluminum. Proximity switch and leak sensor cables have a polypropylene jacket. PFA-jacketed cables are available by special request.		

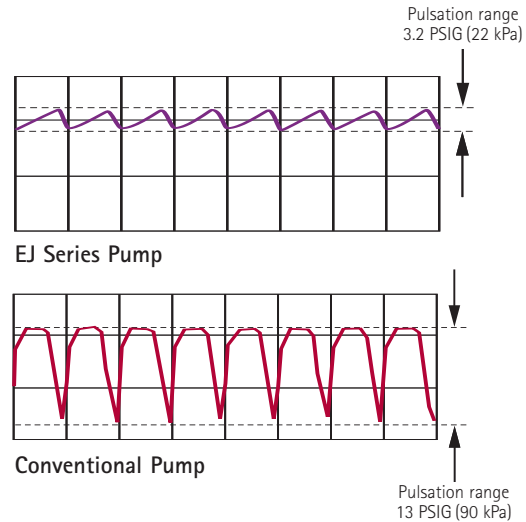
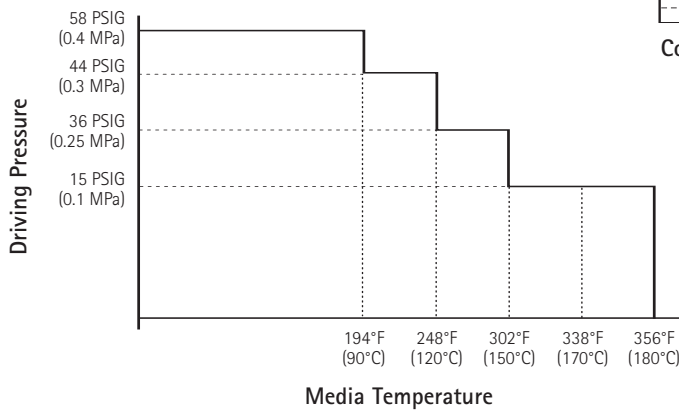
* 120 l/min achieved with 1 1/4" PTFE tube connection on the EJ-90 pump.

Performance Data

Discharge Pulsation Effects

The unique check valve design inside the EJ Series pump minimizes particle generation and reduces pump pulsation. Having reduced fluid system noise by approximately two times that of a conventional pump, we improve process performance while putting less stress on system mechanics, successfully increasing fluid system productivity and component life.

Driving Pressure Operating Range



For More Information

To learn more about EJ Series Chemical Pumps and how they can improve your fab efficiency, contact your local Entegris distributor or Entegris, Inc.

To review our complete line of fluid handling product solutions see Entegris' *Fluid Handling Systems* catalog, visit Entegris' Web site at www.entegrisfluidhandling.com or contact Entegris Customer Service for your free *Fluid Handling Systems* catalog on CD-ROM.

Terms and Conditions of Sale

WARRANTY – Entegris warrants each new product against defects in materials and workmanship for the following periods of time from shipment: Microelectronic products, Custom products – 90 days; Entegris® Cleaning Systems and AutoPod® Wafer Carriers – 1 year; Fluid Handling products (except as separately identified below) including FluoroPure® Chemical Container products – 1 year; Sheetlined Chemical Container products and FluoroPure® PFA Liners (blistering, cracking or leakage only) – 18 months; FluoroPure® o-rings and gasket materials – 90 days. Entegris makes no warranty, express or implied, with respect to any components, products or services provided by any third party. With respect to products specially manufactured to Buyer's specifications, Entegris warrants only that such products have been manufactured, without testing, to Buyer's specifications but makes no other warranty, express or implied. Upon Entegris' confirmation of defects, Entegris agrees, as its **exclusive remedy** to repair or, in its discretion, replace defective product without charge. Entegris is not responsible for product damage resulting from accident, misuse, or lack of reasonable care. **IMPORTANT: No other warranty, written or verbal, is authorized by Entegris. Entegris is not liable for any special, incidental or consequential damages. Implied warranties of merchantability and fitness for a particular purpose are specifically disclaimed.**

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ENTEGRIS, INC.

Corporate Headquarters / 3500 Lyman Boulevard / Chaska, Minnesota 55318 USA
Customer Service Tel. 952-556-4196 in North America 800-394-4084 / Customer Service Fax 952-556-8022
www.entegris.com / www.entegrisfluidhandling.com

The materials integrity management company

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