

## Series P

Non-Metallic, Air-Operated  
Diaphragm Pumps

**½"-3"**

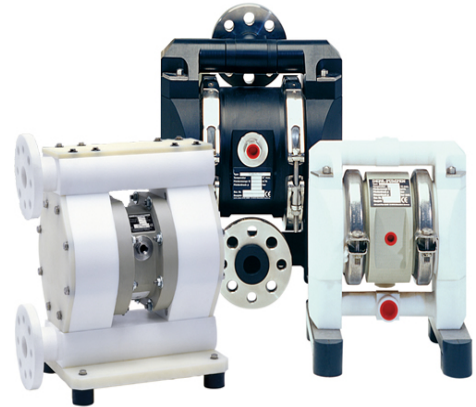
Pipe Sizes

**5-100 psi**

Air Pressure

**PP, PM, PL, PT, TL**

Pump Types



## About Non-Metallic Pumps

Non-metallic pumps are used in galvanic, coating, paint, varnish, pharmaceutical, chemical, waste water and building industries, and are made of mechanically manufactured or uniquely designed injection-molded plastic parts. Non-metallic pumps were designed for problem-free pumping of corrosive and abrasive products in such applications.

Technically, usable metals do not always possess the required chemical resistance when being used with corrosive media. Series P non-metallic pumps were subsequently developed, as the individual parts are made of plastic material. When developing the non-metallic pumps, the objective was to not introduce any pumping pressure reduction in contrast to the cast metal pumps. These pumps can also be used up to a maximum pressure of approximately 100 psig.

Despite the compact construction, Series P non-metallic pumps offer a high level of mechanical stability. Pumps constructed of electrically conductive plastic materials further enhance the product range. These enable the conveyance of non-conductive products in explosion-endangered environments. Depending on the application, there are five types of electrically conductive polypropylene or PTFE models available.

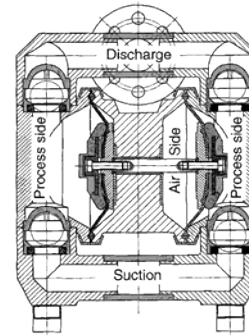
The wide range of construction materials enables the universal use of these non-metallic pumps. A choice can be made between internally or externally mounted air control valves. ANSI, DIN and JIS flanges, as well as threaded connections, are alternatively available. Product contact parts (diaphragms, valve seats and balls) are available in a selection of materials to ensure compatibility with a wide range of pumped media.

For information on pump operation, installation, and maintenance,  
please refer to our online product manual, available at  
<http://www.granzow.com/PDFs/XPUMPS.pdf>

### Operating Principle & Model Information

Double-acting, positive displacement Series P pumps operate with two alternating pumping chambers. The compressed air which drives the unit is admitted through a control valve, to the rear of each diaphragm in turn, so displacing the medium from alternate pumping chambers. In the pump illustrated below, the right-hand pumping chamber is in the intake position. A vacuum has been created by the retraction of the diaphragm and the pumped medium flows into the chamber. The left-hand diaphragm, which is supported by compressed air, simultaneously displaces the medium present in this chamber. Since the two diaphragms are connected by a common piston rod, suction always occurs in one chamber whilst discharge is occurring the other.

Model #	Pipe Size (Inches)	Available Pump Types				
		PP	PM	PL	PT	TL
DL 08	1/4"				✓	✓
DL 10	3/8"				✓	✓
DL 15	1/2"	✓	✓	✓	✓	✓
DL 25	1"	✓	✓	✓	✓	✓
DL 40	1½"	✓	✓	✓	✓	✓
DL 50	2"	✓		✓	✓	✓
DL 80	3"	✓		✓	✓	✓

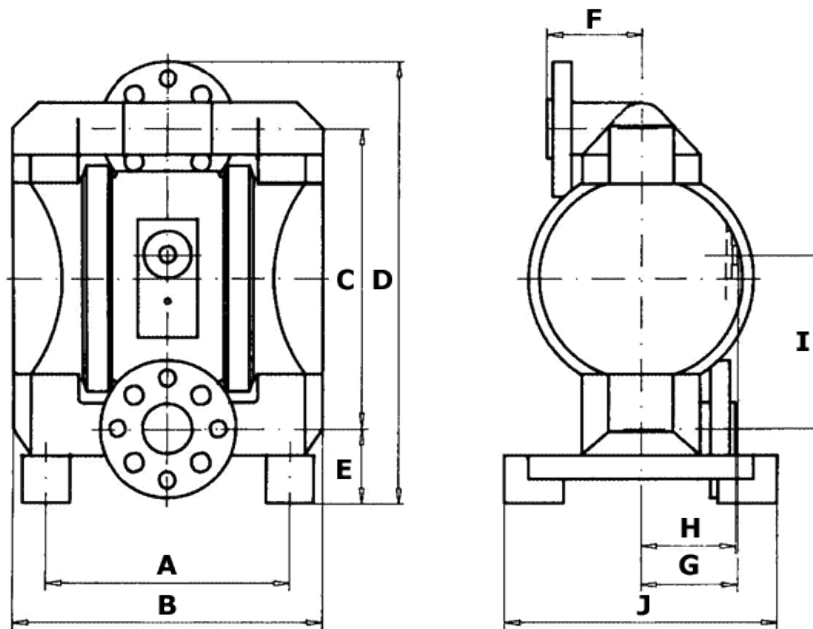


- **PP:** Polypropylene, Solid
- **PM:** Polypropylene, Injection-Moulded
- **PL:** Polypropylene, Conductive
- **PT:** PTFE
- **TL:** PTFE, Conductive

### Pump Dimensions, By Model

Model #	Dimensions (Inches)									
	A	B	C	D	E	F	G	H	I	J
DL 08	-	-	-	-	-	-	-	-	-	-
DL 10	-	-	-	-	-	-	-	-	-	-
DL 15	6.7"	8.3"	7.3"	10.4"	2.4"	1.1"	2.2"	1.1"	3.7"	7.7"
DL 25	8.1"	10.4"	9.9"	14.6"	2.4"	3.1"	3.2"	3.1"	4.2"	9.1"
DL 40	10.5"	13.9"	13.1"	19.1"	3.1"	3.6"	3.4"	3.6"	5.8"	10.0"
DL 50	13.4"	17.7"	17.6"	24.5"	3.6"	5.0"	4.8"	5.0"	9.9"	13.4"
DL 80	16.5"	22.0"	22.8"	30.9"	4.2"	4.9"	6.0"	4.9"	12.4"	16.5"

Note: For DL 15 model, above dimensions are without flange.

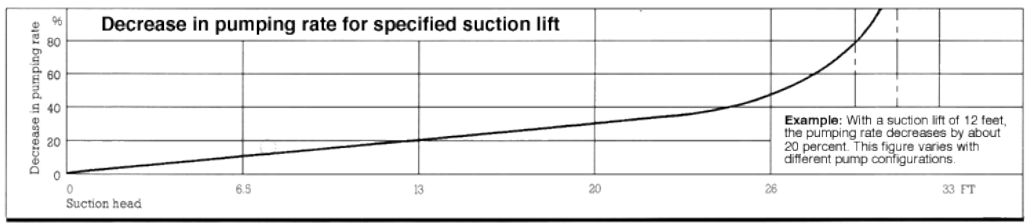
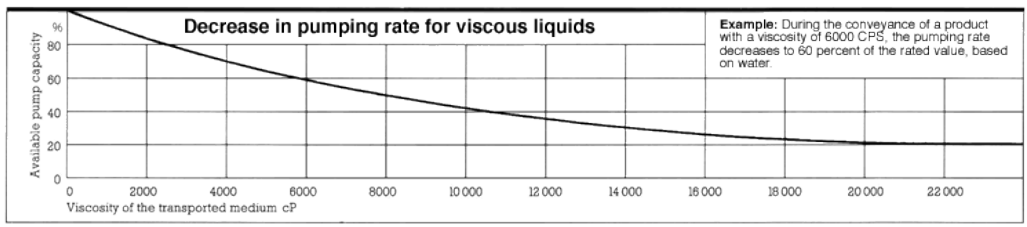
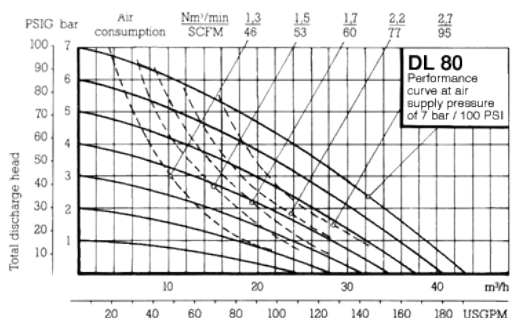
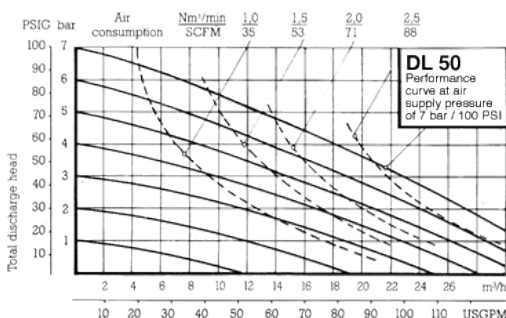
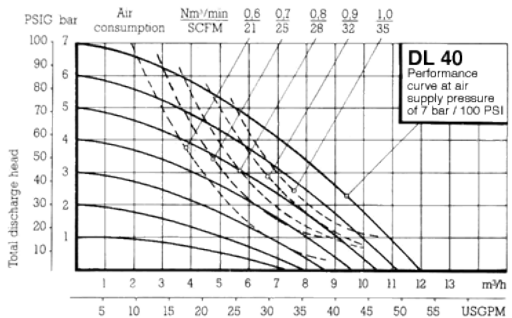
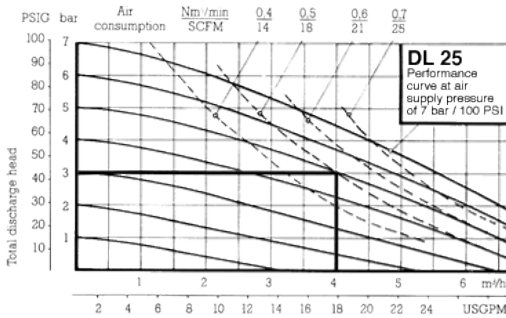
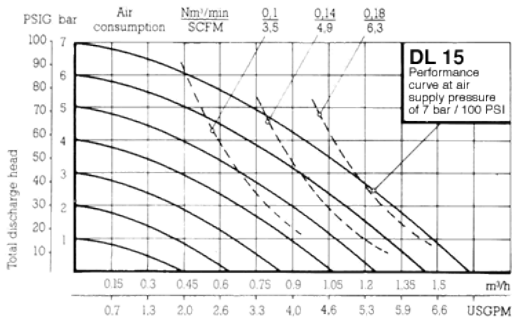


### Performance Characteristics for Non-Metallic Pumps

**Example: To help you in selecting the correct pump size.**

Required pump rate is 18 GPM, required total discharge head is 43 PSI. The correct selection is DL 25, the required air pressure is 73 PSI, and the air consumption is 18 SCFM.

The indicated pumping rates are based on water.



### Parts Diagram for Series P Pumps

