Air Driven Liquid Intensifiers

A World Above The Rest...

E, P & H Series Pumps with custom, integrated hydraulic circuitry

Interface Devices, Inc.

www.interfacedevices.com

E, H & P Series Air/Oil intensifier pumps

State-of-the-art Integrated Circuit Designs Used In Both the Pneumatic and Hydraulic Sections Provide:

- ***Lowest installed cost***
  One order for the entire pumping system.
  Turn-key installation. No in-house labor to assemble, test and adjust.
- ***Customized hydraulic circuits to your exact requirements***
- ***Compact and lightweight***
  Minimum floor or wall space.
  Ideal for portable applications.

Double-Acting Operation Standard

- ***Energy efficient***
  One-third less air consumption for the same hydraulic output as single-acting pumps.
  (Or 50% more output for the same air input.)
- ***Smoother output***
  Power stroke in both directions minimizes cylinder hesitation.

Unique Hi/Lo Multi-ratio Pumps

- ***Low ratio mode***
  Moves cylinder rapidly in either direction under light to moderate loads.
- ***High ratio mode***
  At a predetermined increase in pressure, the pump automatically shifts into high pressure, low flow mode.
- ***Benefits***
  Twin pump performance for the price and the size of one. Achieve the desired cycle time while minimizing air consumption.

Polymeric Dynamic Seals and Bearings Standard

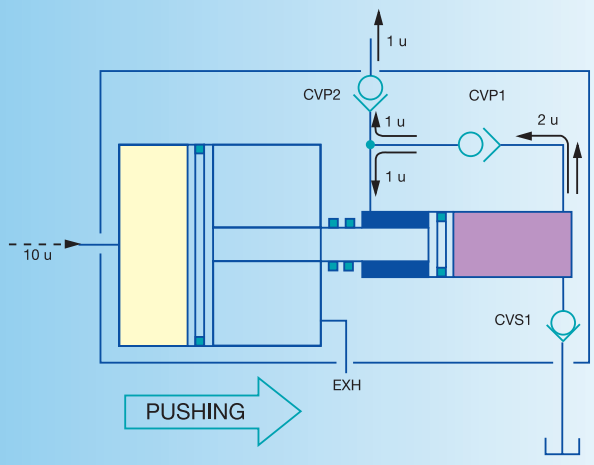
- ***High efficiency***
  Low breakout and running friction, even with low lubricity fluids.
- ***Prolonged life***
  No metal-to-metal or elastomer-to-metal contact.
  No air lubrication required.
- ***No hydraulic fluid migration***
  Twin seals with a vent between them isolate the hydraulic fluid from the air motor and vice-versa.

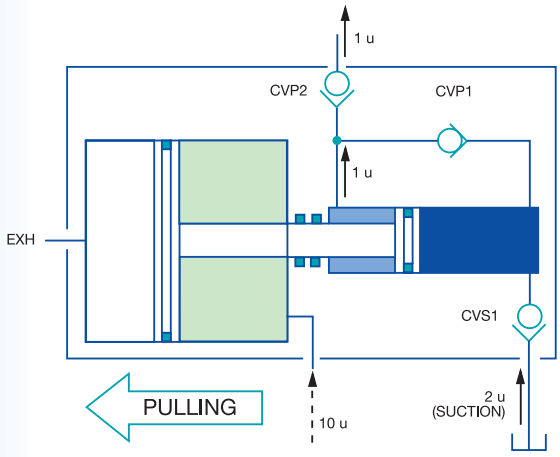
Double Acting Principal of Operation

Using compressed air as motive power, this reciprocating pump intensifies the hydraulic oil by the air to oil piston ratios. For example, 10:1 double-acting pump operates as follows:

Pushing

Air at 100 psi enters the left air cylinder chamber (air piston area = 10 sq. in.) pushing it to the right. The hydraulic piston is 2 sq. in. and the rod is 1 sq. in. Since the cross-over check valve allows oil to flow into the rod chamber as well as out of the pump, the “push” ratio is 10:1 (the rod area).





Pulling

Air at 100 psi enters the right air cylinder chamber, pushing it to the left (pulling the hydraulic piston). The “pull” ratio is also 10:1 as determined by the differential area in the hydraulic piston/rod (the actual ratio in the illustration is 9:1 to keep the math simple. In reality, the hydraulic piston area is adjusted to yield 10:1). Note also during this stroke, oil is being drawn into the piston end for the next “push stroke”.

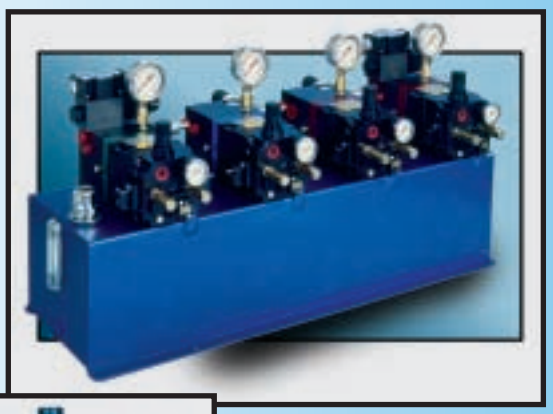
are literally a world above the rest.

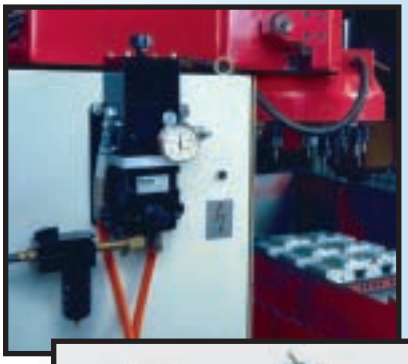
E, H & P Series Power Outputs

The E Series pumps have a peak hydraulic horsepower output of 1.35 at 2/3 of stall pressure. Air consumption is 30 scfm. Designed for fixed installation on our 1, 2 or 5 gallon reservoirs (or your own) to operate large actuators.

Our NEW H Series pump is designed for applications that require maximum life. The H Series combines the longer stroke of our E Series pump with the economy and compactness of the P Series.

The P Series pumps have a peak hydraulic horsepower output of 0.90 at 2/3 of stall pressure. Air consumption is 15 scfm. Designed for portable operations with self-contained reservoirs up to 160 cubic inches, or mounted on our 1, 2 or 5 gallon reservoirs (or your own) to operate small to medium actuators.





Applications

Let these pumps take care of your intermittent flow/pressure demands:

- Without the cost and complexities of a pressure compensated variable volume pump.
- Without the high cost of electricity and heat energy caused by a constantly running fixed delivery pump.
- In hazardous environments without the need for expensive explosion proof electrical apparatus.
- Emergency and remote operations used in conjuction with high pressure air or nitrogen cylinders.

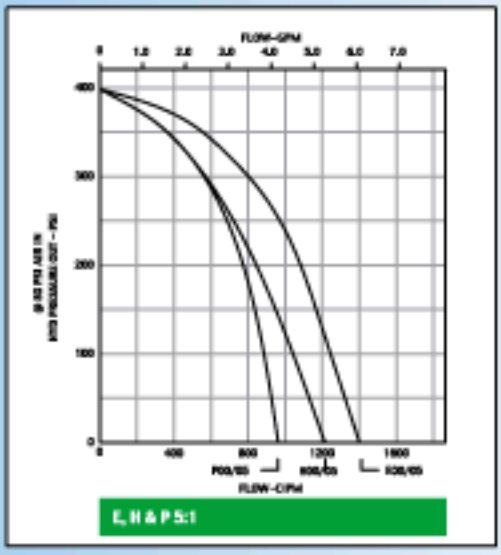
- Crimping
- Pressure Testing
- Swaging
- Braking
- Pressing
- Tensioning
- Indexing
- Calibrating
- Compacting
- Embossing
- Torquing

Custom Designs

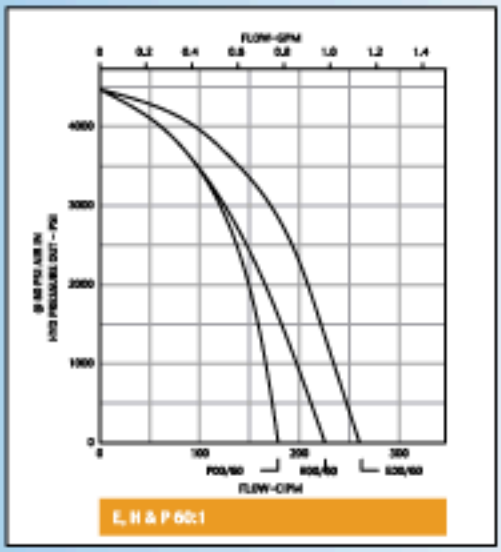
A typical example (Cutter spreader tool) Hi/Lo intensifier pump configured as an integral part of "Jaws-Of-Life®" rescue tools.

E, H & P Series Pump Performance*

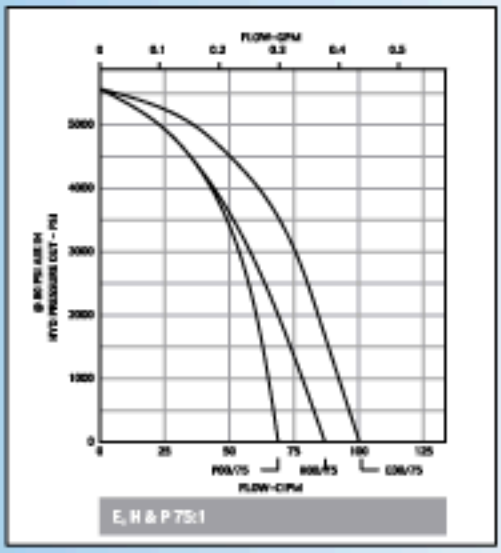
Single Acting Series



E, H & P 5:1

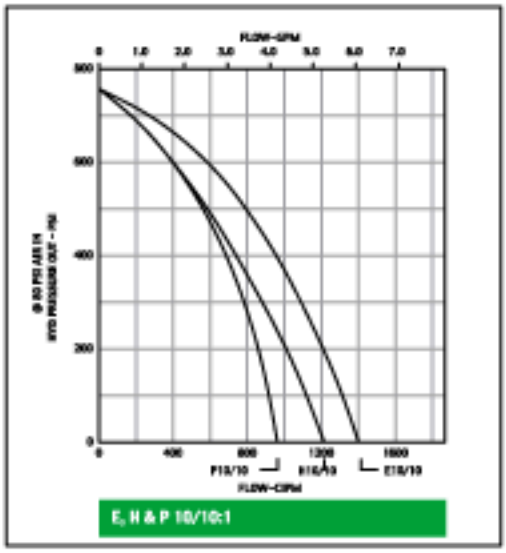


E, H & P 60:1

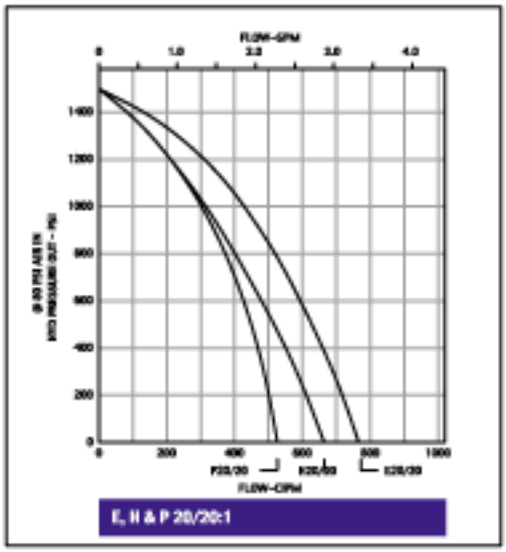


E, H & P 75:1

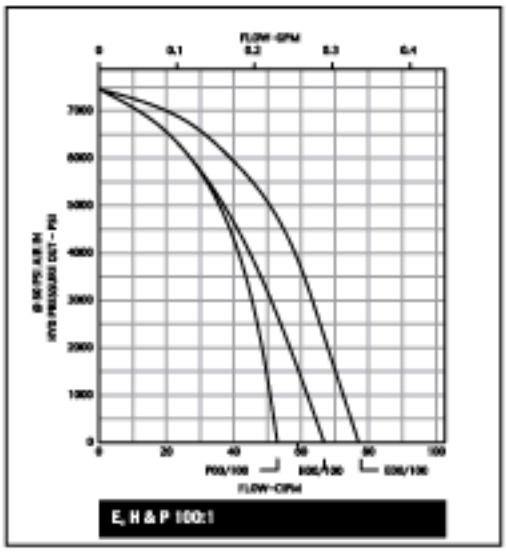
Double Acting Series



E, H & P 10/10:1



E, H & P 20/20:1

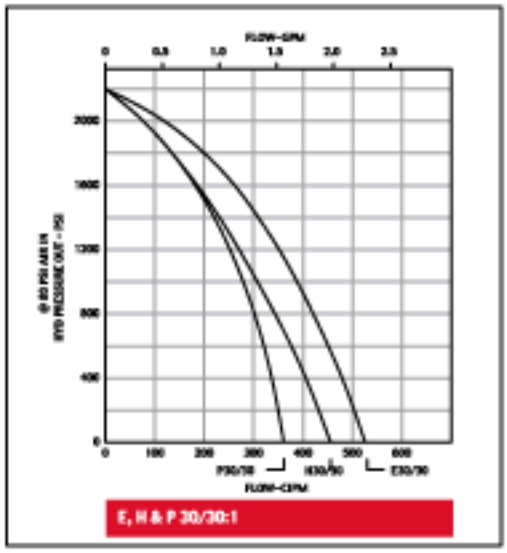


E, H & P 100:1

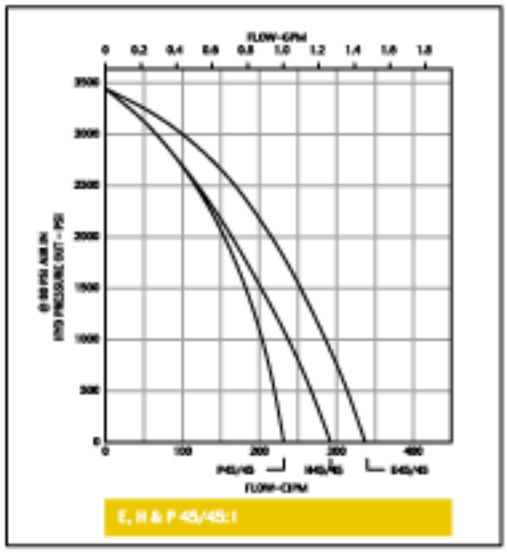
Data shown is for standard ratios. For other ratios, consult IDI

E, H & P Series Pump Performance*

Double Acting Series

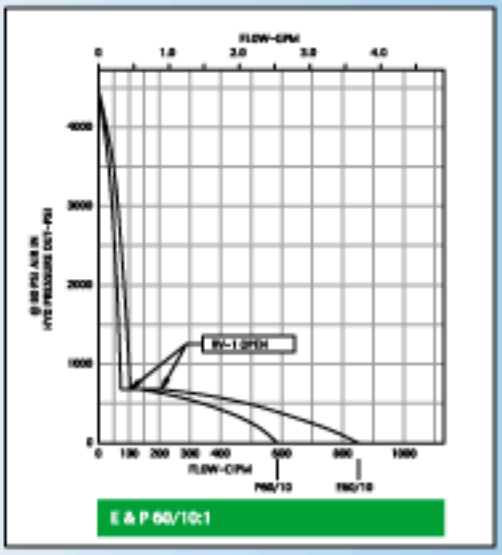


E, H & P 30/30:1

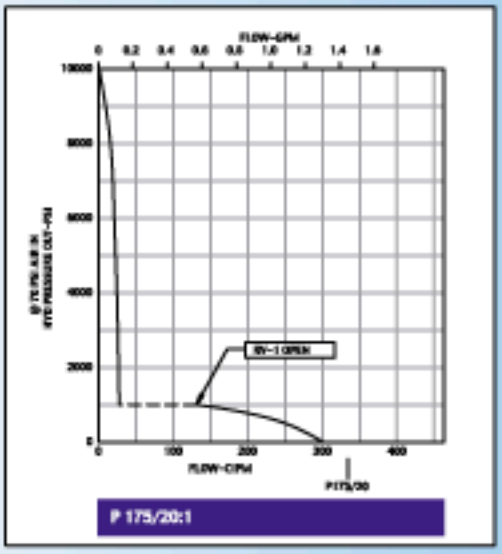


E, H & P 45/45:1

High/Low Series

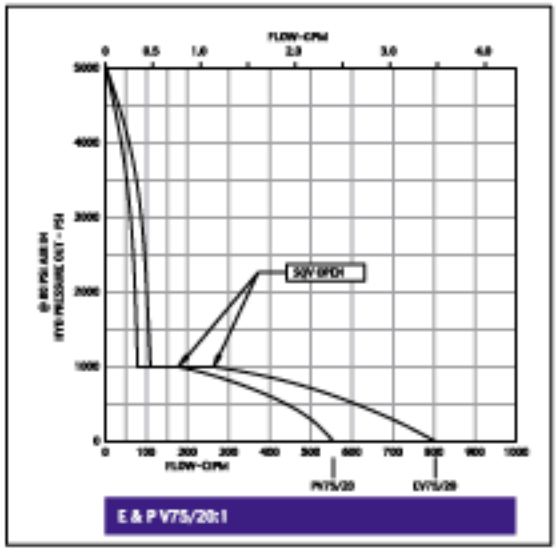


E & P 60/10:1

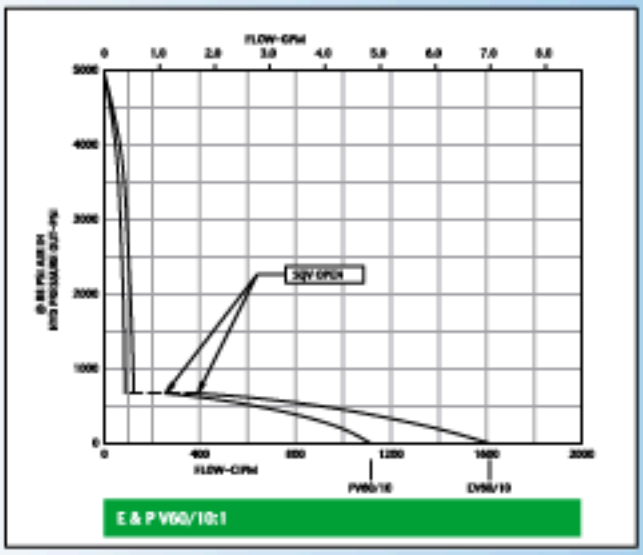


P 175/20:1

Very High Flow High/Low Series



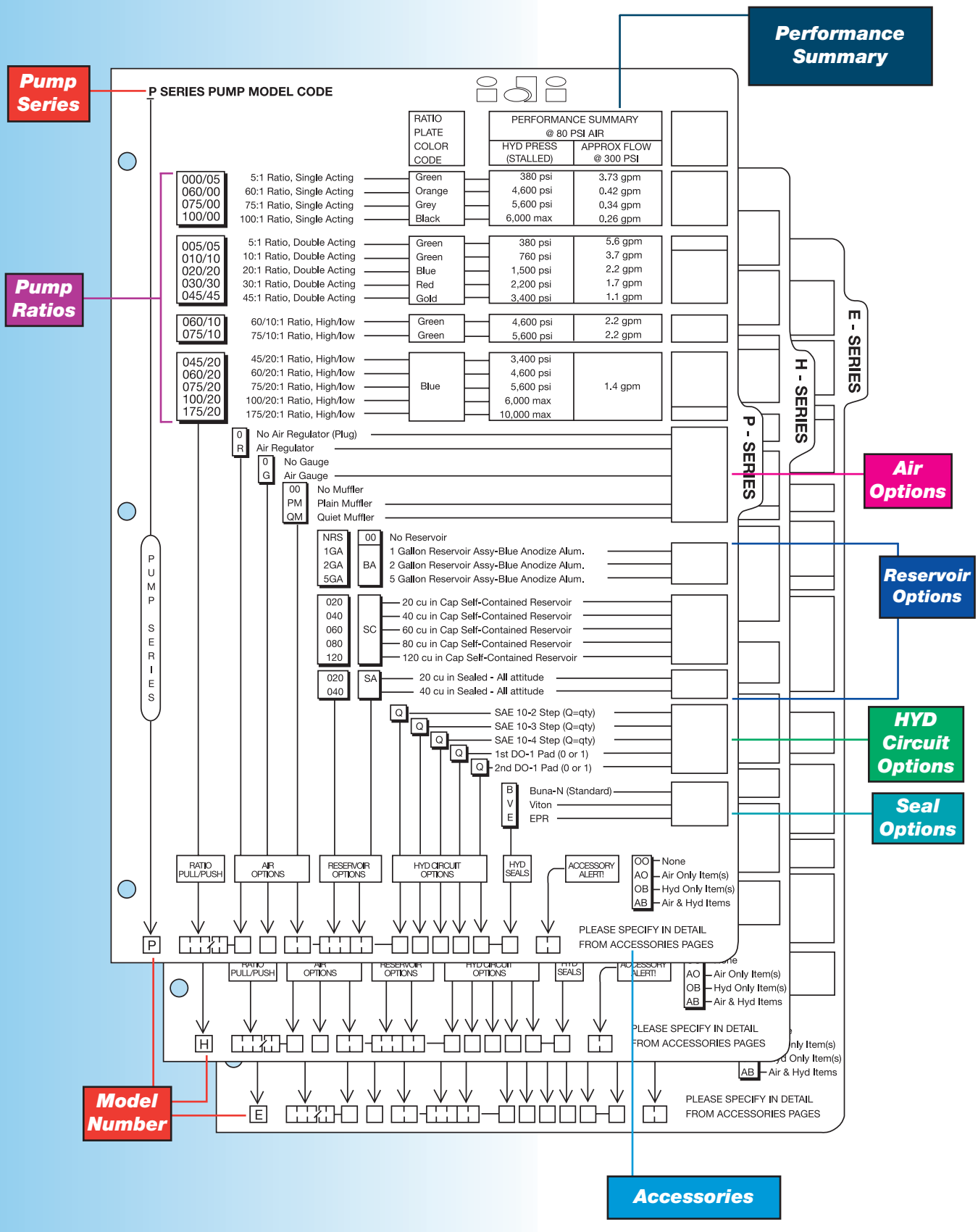
E & P V75/20:1



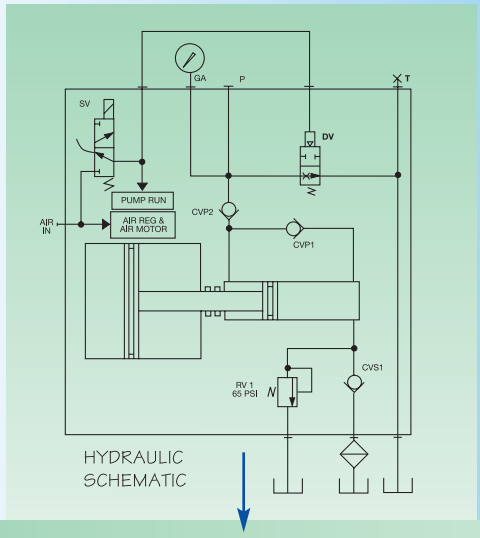
E & P V60/10:1

*Performance data shown is typical only. For pressures/flows for a specific application, consult IDI

Easy to Use Worksheets for Pump Selection

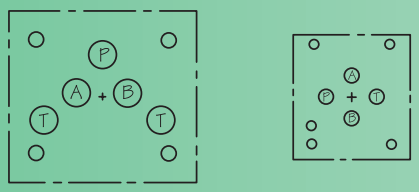


Options & Accessories

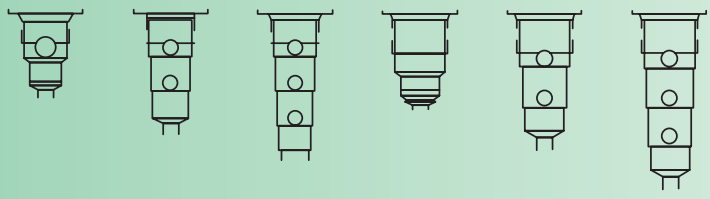


HYD Circuit Options

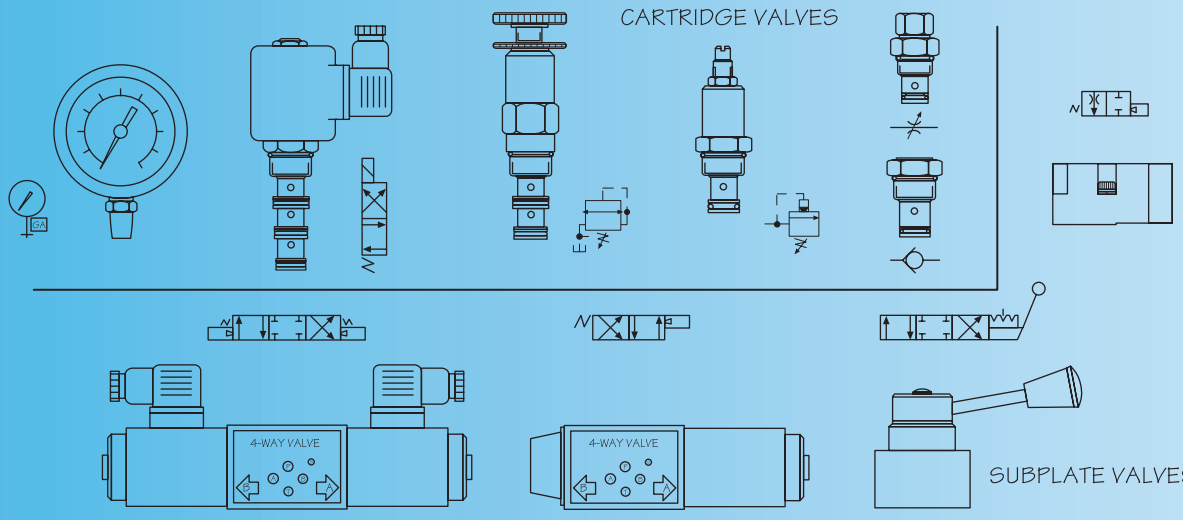
SUBPLATE VALVE PADS



CARTRIDGE VALVE CAVITIES



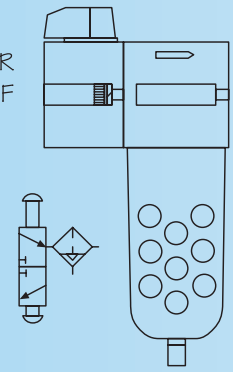
Hydraulic Accessories



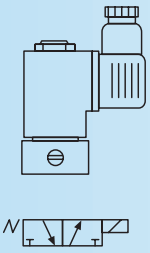
Air Accessories

OSHA AIR SHUT OFF VALVE

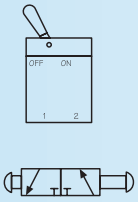
AIR FILTER



SOLENOID VALVE (PUMP ON/OFF)



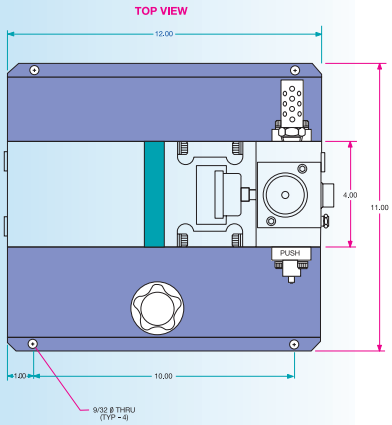
TOGGLE VALVE (PUMP ON/OFF)



HEAVY DUTY LIQUID FILLED AIR GAUGE

Dimensional Information

E-Series



RESERVOIRS		
OIL CAP US GAL	H	h
1.0	11.63	3.25
2.0	13.63	5.25
5.0	19.63	11.25

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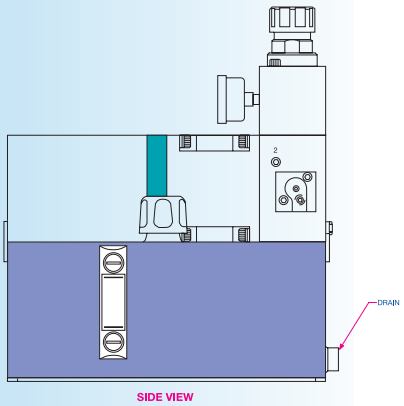
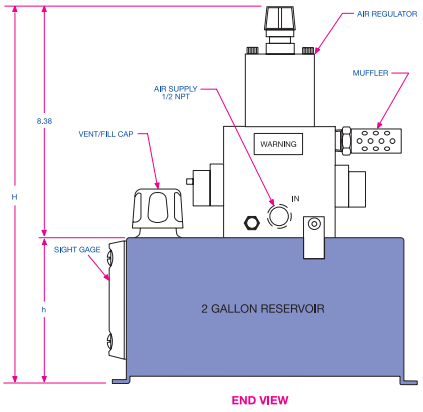
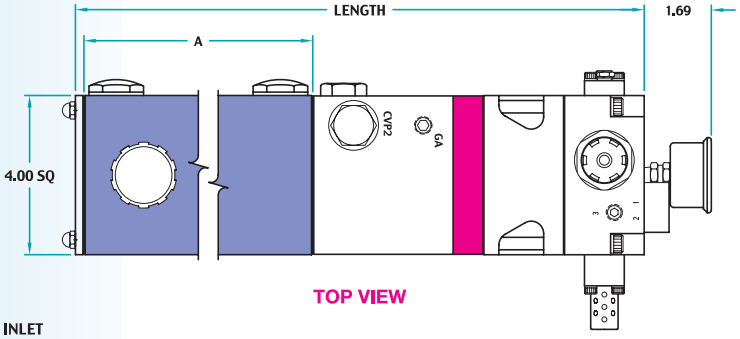


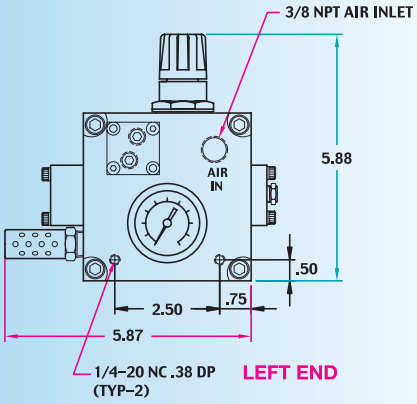


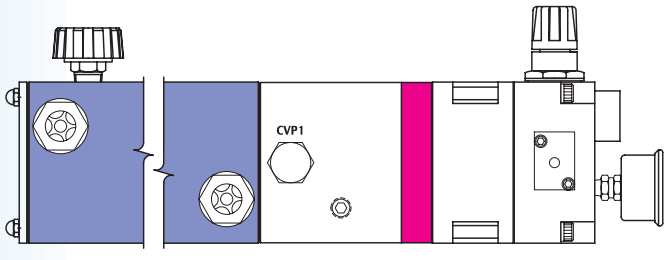
H & P-Series

For H Series add 3.25 to lengths

VOLUME (CU IN)	"A"	LENGTH
20	1.50	10.04
40	3.00	11.54
60	4.50	13.04
80	5.75	14.29
100	7.25	15.79
120	8.75	17.29
160	11.50	20.04







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