Air hydraulic boosters *Application & selection*

Shown: AHB-46, B-5003, B-3006

AHB and B-series boosters

Large effective area of air piston allows compressed air to generate high output hydraulic pressure.

For high production applications

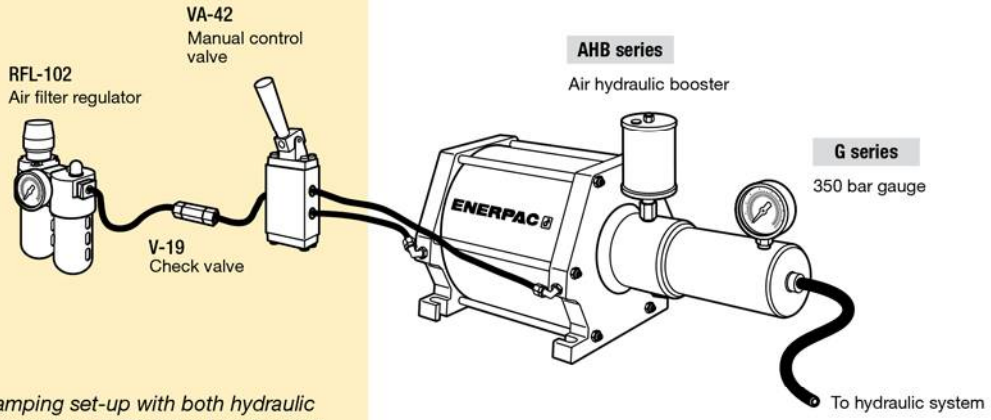
- High speed operation
- Extended service life
- Constant hydraulic output
- Large oil delivery per stroke allows quick filling of cylinders for clamping or punching

AHB series boosters

- Fiberglass wound air chamber eliminates possibility of rust due to moisture in air system
- Designed for fully automated production applications
- Double-acting, one-shot, high speed operation of air piston

B series boosters

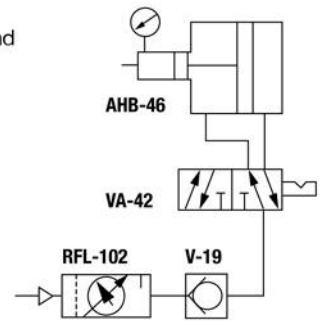
- One-shot spring return
- Steel and cast iron construction
- Built-in stroke sensor for automatic cycle operation
  30 VDC switch closes 25 mm before end of full air piston stroke
- Internal self-bleeding
  Automatically purges air from system when booster piston is at highest point in circuit



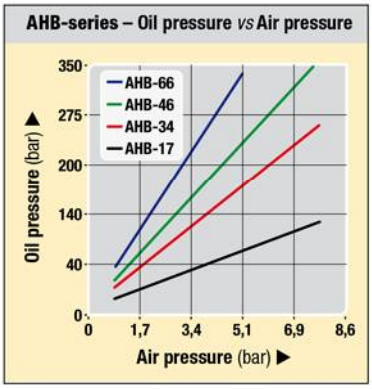
In an automated clamping set-up with both hydraulic and pneumatic components, AHB series boosters are used as a power source for the hydraulic system.

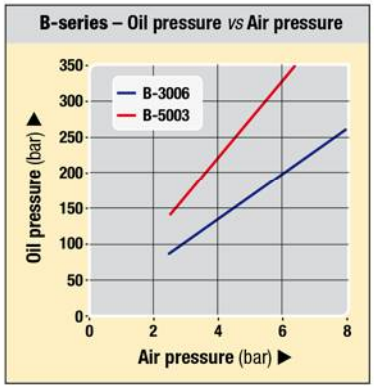
Hydraulic system schematics

Complete power systems eliminate the guesswork of selecting valves and other system components. Plug in your 1 to 8 bar shop air line and connect your hydraulic components for a total system.



Dimensions & Options AHB, B-series





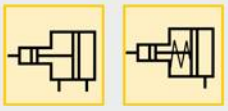
Ratio: 1:16 - 1:64

Pressure: 100 - 350 bar

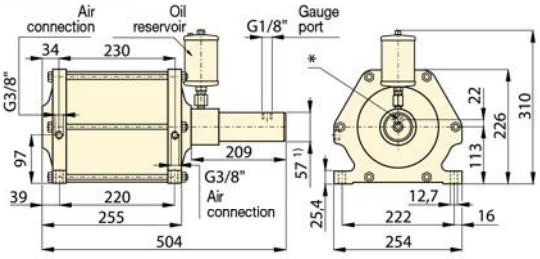
Oil flow: 60-295 cm³/stroke

Air: 27 - 64 dm³/cycle

(E) Multiplicadores
(F) Multiplicateurs
(D) Drucübersetzer

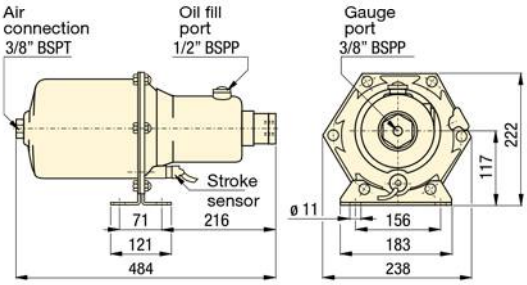


AHB series



1) Ø 72 mm for model **AHB-17**
* Oil connection (G1/4")
*** Adapter to 3/8" NPT air connection is included.
NOTE: FZ-2060 Adaptor available for gauge port.

B series



Options

Air valves 106,158 ▶

Regulator-filter-lubricator 106,158 ▶

Fittings 194 ▶

Important

Boosters can provide high oil flow rates based on the volume of in-coming air.

Do not exceed the flow rate requirements of the components being used.

For vertical mounting of booster, an elbow fitting is recommended for the oil reservoir.

Selection chart

Oil pressure bar		Oil volume per stroke	Air to oil pressure ratio	Model number	Air consumption per cycle 1)	Air piston diameter	Hydraulic piston diameter	Hydraulic stroke	Air operating pressure	
at 5 bar air pressure	at 7 bar air pressure	cm³			dm³ at 6 bar air	mm	mm	mm	bar	kg
▼ **AHB series**										
83	110	295,0	1:16	**AHB-17**	62,6	203	51	145	1-8	18,8
175	235	139,3	1:34	**AHB-34**	63,6	203	35	145	1-8	16,8
240	315	100,0	1:46	**AHB-46**	63,9	203	30	145	1-8	16,4
330	–	73,7	1:64	**AHB-66**	64,1	203	25	145	1-5	16,0
▼ **B series**										
155	210	101,6	1:30	**B-3006**	27	180	31	132	3-9	14,0
260	350	60,6	1:50	**B-5003**	27	180	24	132	3-9	14,0

1) One cycle = advance + retract stroke.
Note: Seal material: Buna-N, Polyurethane.

Oil/oil intensifiers

Shown: PID-402

PID-series

When hydraulic pressure from an existing power source is limited, Enerpac oil-to-oil intensifiers serve to increase output pressure to satisfy the required application.

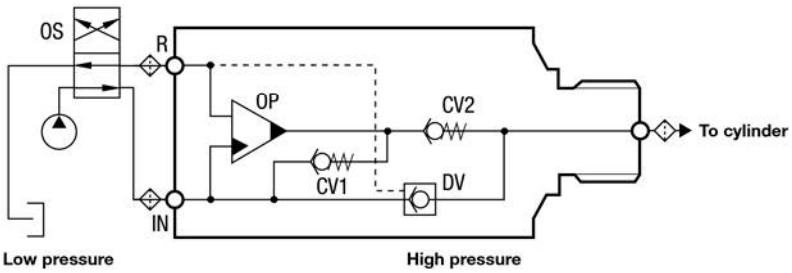
High flow units intensify low inlet oil pressure to high outlet pressure

- Internal bypass valving enables high output flow rates
- Wide range of intensification ratios allows for adapting to various operating pressure requirements
- Compact and self-contained design allows for ease of installation
- Includes dump valve eliminating the need for an external pilot check valve
- Select fit of all internal components provides long operating life.

Intensifier principle

- When oil is supplied to the inlet (IN) port it flows freely past the check valves (CV) and the dump valve to the cylinder and advances it.
- As the inlet pressure increases the oscillating pump (OP) automatically increases the outlet pressure by the chosen intensification.
- Once the maximum pressure is reached, the pump frequency lowers and balances at the maximum pressure.
- Free flow from the cylinder to tank occurs when the directional control valve is switched to supply the R-port.
- 10 micron filtration is required on all ports in the circuit to ensure trouble free operation. Filters and flow control included.

PID Series



PID-Series intensifier utilizes low pressure machine hydraulics to power clamping cylinders.

Product selection

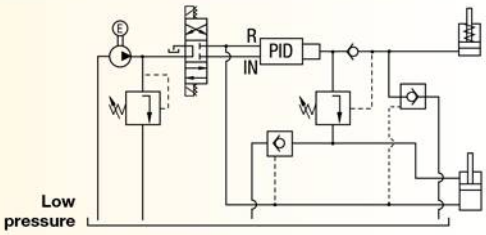
Maximum pressure	Pressure intensification ratio	Maximum input flow	Maximum output flow	Model number	Inlet pressure range	
bar		l/min	l/min	with dump valve	bar	kg
700	1 : 3,2	10,0	2,5	**PID-322F**	21 - 107	1,2
700	1 : 4,0	9,5	2,0	**PID-402F**	21 - 86	1,2
700	1 : 5,0	9,0	1,5	**PID-502F**	21 - 69	1,2
700	1 : 6,6	8,7	1,2	**PID-662F**	21 - 56	1,2

* Operating pressures above 350 bar require high pressure fittings or intensifier models with BSPP ports. Contact Enerpac for details.

System set-up information:

With dump valve (PID models)

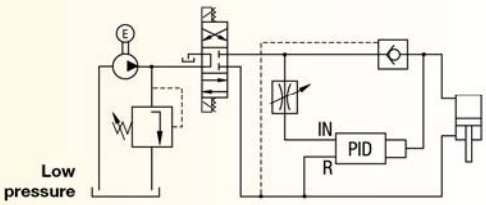
The intensifier with the dump valve is used to achieve high pressure on the advance side of a double-acting cylinder.

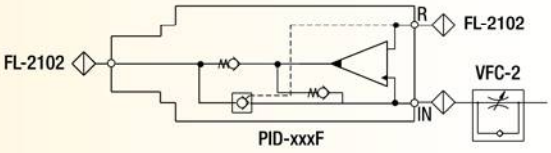


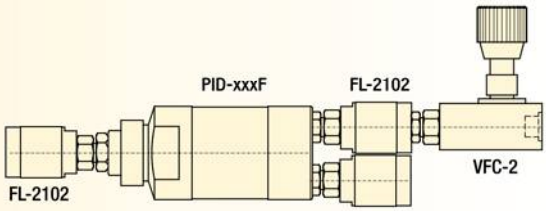
With external dump valve

In a system where the pump's oil flow is higher than the maximum inlet oil flow of the intensifier, an external check valve and flow control valve reduces the pump's oil flow.

This application can be set up when machines are equipped with low pressure hydraulics but the pressure to clamp the workpiece must be higher.







Ratio: 1 : 3,2 - 1 : 6,6

Flow: 1,2 - 2,5 l/min

Pressure: 65 - 700 bar

(E) Multiplicadores

(F) Multiplicateur

(D) Öl-Öl Drucküberseter

Options

FL-series, high-pressure filters 193

Directional valves 135

FZ-series fittings 194

Important

Do not exceed maximum allowable inlet pressure.

10 micron filtration is included to ensure trouble-free operation.

Applications above 350 bar require high pressure fittings or intensifier models with BSPP ports. Contact Enerpac for details.

PID models with dump valve provide an economical means of relieving pressure from the system.

Can be panel mounted into machine (M24x1,5 thread).

Product dimensions in mm [▱ ◎]

PID-series