# Oil/oil intensifiers

Shown: PID-402

## 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.

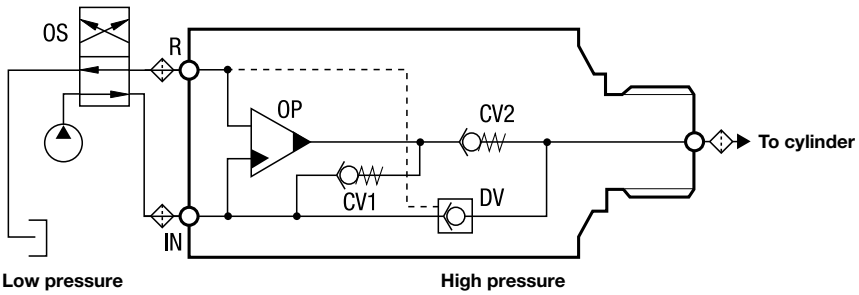
### PID-series

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.

## 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

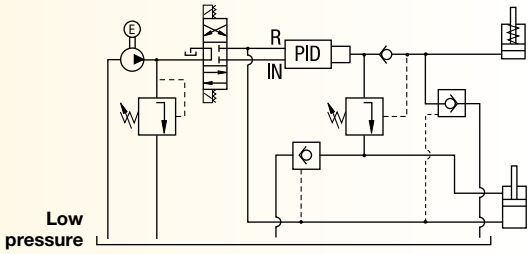
| Maximum pressure | Pressure intensification ratio | Maximum input flow | Maximum output flow | Model number with dump valve | Inlet pressure range | |
|---|---|---|---|---|---|---|
| bar | | l/min | l/min | | bar | kg |
| 700 | 1 : 3,2 | 10,0 | 2,5 | **PID-322F** | 21 - 107 | 1,2 |
| 700 | 1 : 4,0 | 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)**

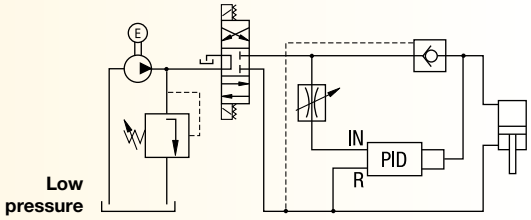
The intensifier with the dump valve is used to achieve high pressure on the advance side of a double-acting cylinder.

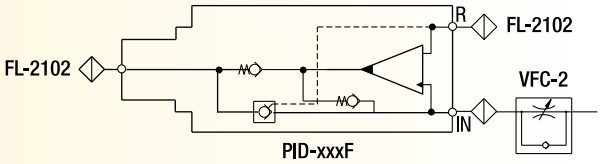


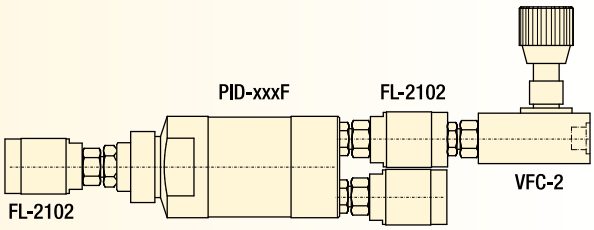

**With external dump valve**

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.

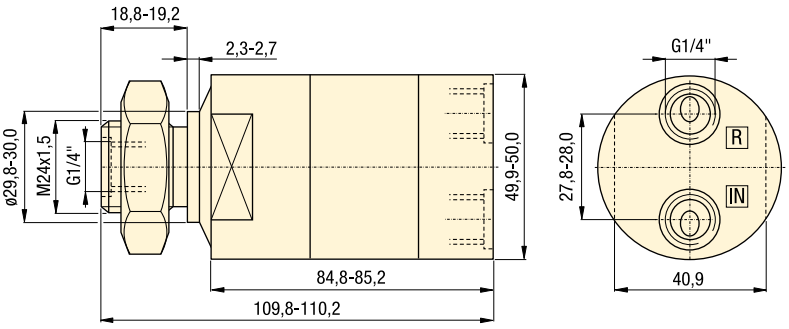



## Product dimensions in mm [ ⊳⊕ ]

**PID-series**




**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 Druckübersetzer**

## 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).**