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Calibration

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OPG1 Hydraulic Pressure Generator / Controller

Highlights

OPG1-30000 provides an alternative for generating and adjusting high liquid pressures in calibration and test systems. This compact and easy to use system provides just the right balance between the simplicity and reliability of manual operation and the convenience of automated features.

- On-demand pressure up to 200 MPa (30,000 psi)
- High resolution pressure adjustment with push button adjustment
- Effortless operation
- Self-contained design with compact 30 x 54 cm (12 x 21 in) footprint
- Half-turn metering valves cannot be overtightened
- No "end of stroke" variable volume limitations
- High quality, long life construction
- Advanced ergonomics
- Applicable in both piston gauge and transfer standard based test and calibration systems

Description

OPG1 is a compact and easy to use system for generating and adjusting pressures between zero and 200 MPa (30,000 psi) with on-demand high pressure supply and pushbutton, precision pressure control. Time consuming and tiresome manual pumping and/or screw press operation are completely eliminated.

OPG1 is the ideal solution in a variety of applications where high pressure generation and precision control are required including piston gauge and transfer standard based calibration and test systems.

OPG1 is the standard pressure generation and control component in a Fluke Calibration PG7302 high accuracy piston gauge system.

A pneumatically driven hydraulic pump provides continuous high pressure oil supply to the high pressure inlet valve. The pump output pressure is set to the desired level using the front panel drive pressure regulator and indicator.

The high pressure inlet valve admits high pressure fluid from the pump for rough ascending pressure control and the high pressure outlet valve returns the fluid to the reservoir to decrease pressure. The high pressure valves are specially designed spring loaded metering valves that operate in a half-turn and cannot be overtightened.

Fine pressure adjustment is achieved using a pneumatically driven variable volume. Rather than being activated by rotational force like a screw press, the variable volume is pneumatically activated through a diaphragm.

Push button momentary valves adjust the air pressure on the diaphragm providing both effort free micro adjustment and very rapid piston movement as needed.

The physical efforts and "end of stroke" operational problems of conventional screw presses are completely eliminated. The variable volume piston position is indicated on the front panel.

Specifications




OPG1 General Specifications		
Pressure Range	0 to 200 MPa (30,000 psi)	
Operating Test Fluid	Di-2 Ethyl Hexyl Sebacate (synthetic oil) (inquire about alternate fluids)	
Test Connections	DH500 (gland and collar type for coned and left hand threaded tube, equivalent to AE F250C, HIP HF4, etc.)	
Drive Air Connection	1/4 in. NPT F	
Pump Drive Air	Max. desired hydraulic pressure/400, 350 slm (12 scfm), non-continuous flow	
PDVV Drive Air	70 MPa (10,000 psi) operation	550 kPa (80 psi)
	140 MPa (20,000 psi) operation	700 kPa (100 psi)
	200 MPa (30,000 psi) operation	850 kPa (120 psi)
Reservoir Capacity	200 cc (12 cu in)	
Weight (with Fluid)	27 kg (60 lbs)	
Dimensions	30 cm W x 53.5 cm D x 30 cm H	

(11.75 in. x 21.0 in. x 11.75 in.)

Models and Accessories

Model Name	Description
OPG1-30000	Hydraulic pressure generator Pneumatically-assisted manual hydraulic pressure generation and control to 30,000 psi (200 MPa)

Knowledge_and_information

Product Manuals
 Oil Intensifier System Instruction Sheet (189.16 KB)
 OPG1™ Operation and Maintenance Manual (1.69 MB)
Data Sheets
 OPG1-30000 Hydraulic Pressure Generator/Controller Technical Data (1.65 MB)

Product Images



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