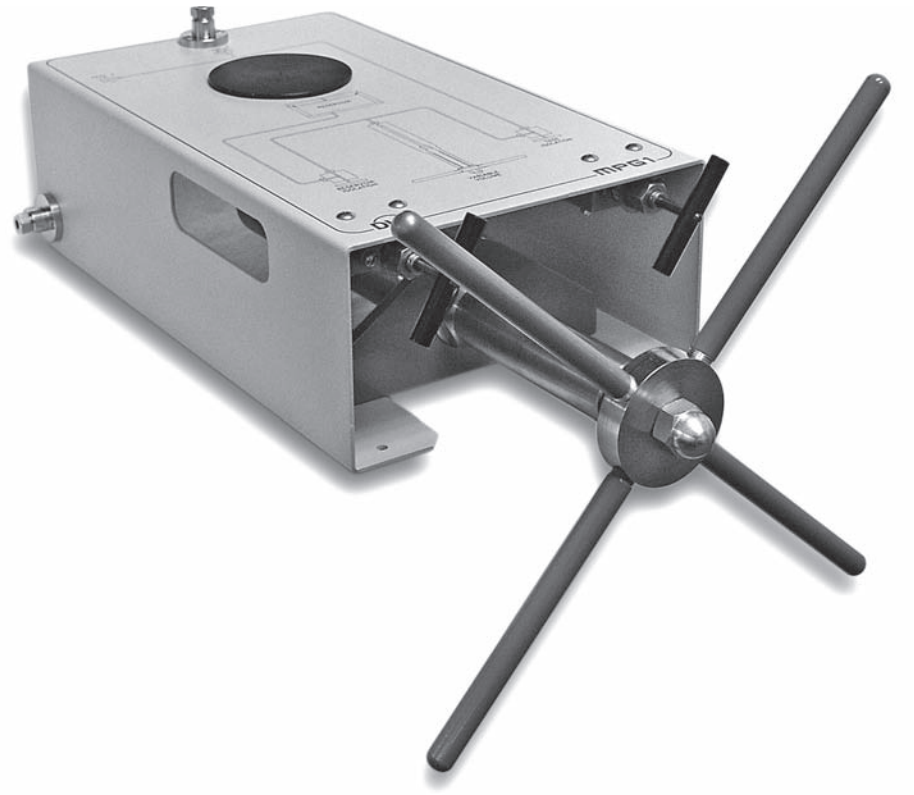
MPG1™

Manually Operated Pressure Generator/Controller For Hydraulic Pressure



PURPOSE / APPLICATIONS

MPG1 provides a compact, easy to use and economical system for manually generating and adjusting pressure from atmosphere to as high as 200 MPa (30 000 psi) in systems where precise pressure adjustment is required.

MPG1 is very well suited for use as the pressure generating and controlling mechanism in calibration and testing systems using a digital or analog pressure indicator as a reference. It is also ideal for working with oil operated piston gauges. MPG1 is the standard choice for manual pressure control in a **DHI** PG7302 high accuracy oil operated piston gauge system in which power assisted or automated pressure control is not needed.

The MPG1-200M is for pressure up to 200 MPa (30 000 psi).

DESCRIPTION

MPG1 uses a manually operated variable volume screw press to generate and adjust pressure. The screw press can both generate large pressure changes quickly and adjust pressure precisely at a setpoint. The variable volume has a long life design in which the pressure piston does not rotate.

Liquid is supplied to the variable volume from a reservoir mounted within the MPG1 housing. The reservoir holds up to 250 cc of fluid. It is easily accessible through the top of the unit. It's broad opening makes it easily to fill, empty or clean.

The reservoir is made of transparent plexiglass so the level and cleanliness of the fluid is easily observed through the open ends of the housing. The reservoir's large, close fitting lid can be used to force liquid from the reservoir through to the MPG1 to rapidly fill and purge gas from the system to be pressurized.

A high pressure needle valve isolates the reservoir from the variable volume and system into which pressure is generated. A second needle valve allows the variable volume and reservoir isolation valve to be isolated from the test ports so that the variable volume can be refilled or emptied without releasing pressure. This allows the variable volume to be refilled if it runs out of stroke while generating pressure.

Two test ports with standard, high pressure gland and collar fittings are provided to connect the MPG1 to a system into which pressure is to be generated. There are lateral and top test ports. The top test port is convenient for connecting a measuring device such as an indicator, reference or device under test.

All the operating elements of MPG1 are mounted in a compact, small footprint, protective housing. The housing is equipped with mounting holes so that it can be secured to a work surface. The individual MPG1 components are off the shelf parts that are easily accessed for repair or replacement.

DHI®

Calibration Solutions for Pressure and Flow™

For applications requiring partial or fully automated pressure generation and control, see the OPG1 power assisted generator and PPCH fully automated digital pressure controller.

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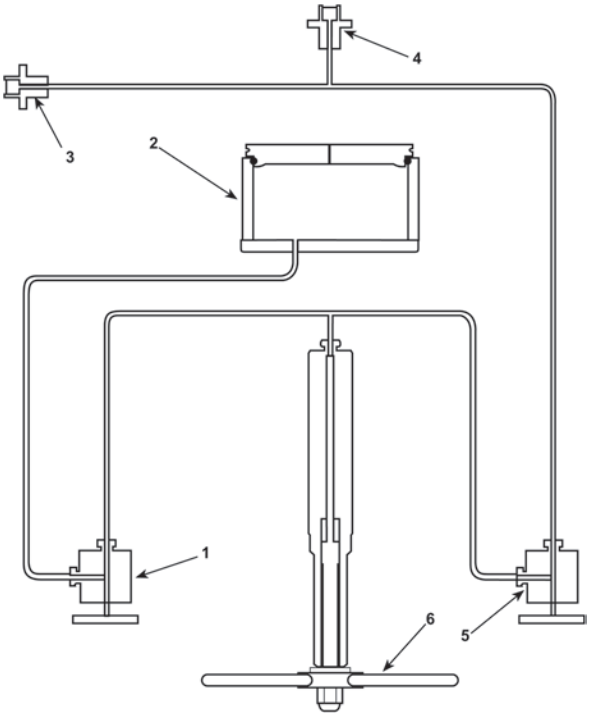
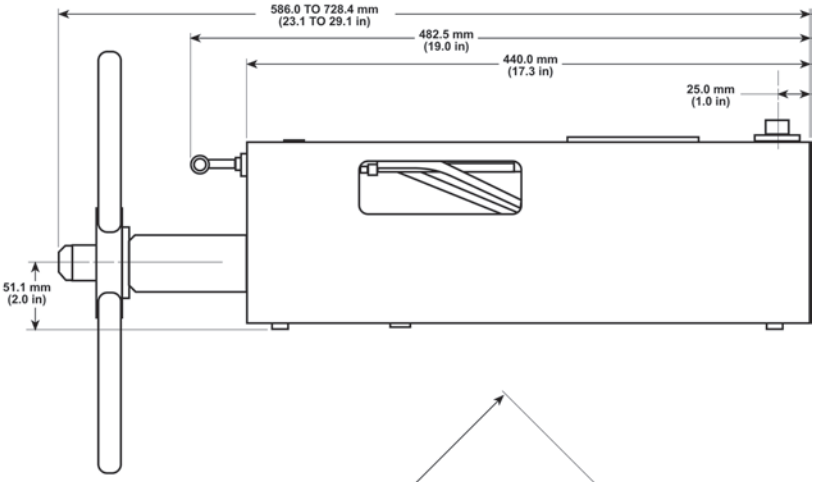
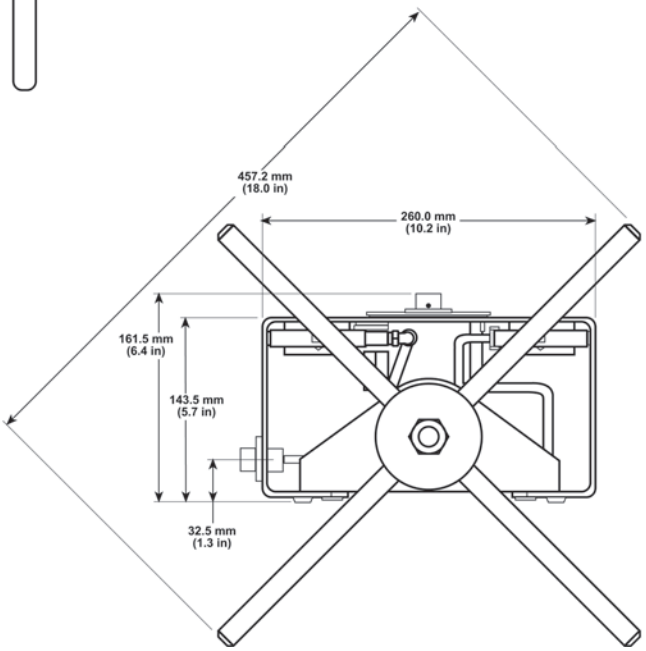
For Hydraulic Pressure

HYDRAULIC SCHEMATIC AND DIMENSIONS







1. RESERVOIR ISOLATION valve
2. Reservoir
3. TEST2 connection
4. TEST1 connection
5. TEST ISOLATION valve
6. Variable volume

SPECIFICATIONS

	MPG1-200M
Pressure Range:	200 MPa (30 000 psi)
Variable Volume Displacement:	11 cc
Reservoir Capacity:	250 cc
Test Connections:	DH500 (Equivalent to AE F250C, HIP HF4, etc.)
Weight:	20 kg (44 lb.)
Dimensions:	260 mm W x 144 mm H x 440 mm D (10.2 in. x 5.7 in. x 17.3 in.)
Operating Fluid:	Any non-corrosive oil, water, water/alcohol. Inquire about other fluids.

ORDERING INFORMATION

Product Designation	Part Number	Description
MPG1-200M	402122	Manual pressure generator complete with user's manual.

OPTIONS AND ACCESSORIES:

Fluid, Sebacate, 1 qt.	400503	Oil

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Printed in USA

Bro. No. 7020.1.B.1