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Technical data sheet

Item number: **4.00002** 10-47430GE
MatchCode/Type: EPD2000

Designation: **pressure- and volume-flow-machine / volume measurement system**

Generation of cell pressure and saturation pressure (back-pressure)

www.geomation.de/en/produkte/epd2000/

Intrastat code: **Country of origin:** DE **Net weight (kg):** 26,160

Drawing number:
Electrical data: 230 VAC, 50 Hz
Dimensions: 120 x 120 x 1100 mm
Standards: DIN 18137-2, DIN EN ISO 17892-8+9
Catchwords: Triaxialanlage, Durchlässigkeit, triaxial application, permeability tests

Description:
The EPD 2000 is designed to generate pressure and volume changes in a connected system or to realize a controllable flow rate. The pressure and the flow rate can be set as steps or increase by time or other testing parameters with a standard PC and the software GeoDESC.
The EPD2000 uses a plunger piston with a displacement (volume) of approx. 1100 ml. The plunger generates pressures up to 20 bar. The volume measurement is performed by the measurement of the piston movement and correction by the stress-strain curve of the completely hydraulic system. The stress-strain curve will be automatically recorded and saved by the EPD2000 themselves. The characteristic can be recorded as often as required by the operator.
The pressure measurement can be done by the built-in transducer or with an external pressure transducer.
The reference value for the pressure or flow rate is given by touch screen or by the connected PC with the software GeoDESC. It is possible to use the internal pressure sensor or a sensor, mounted at any place in the hydraulic system. (The data acquisition for an external pressure transducer is not in the scope of this item)

Features:
• intuitive operation and easy handling with 4,3” touch screen with separate function keys and haptics;
• serial interface for PC-controlled testing with data logging; cyclic measurement data logging, displaying and transfering to Microsoft EXCEL for advanced evaluation purposes
• realization of static pressure steps or a free controllable pressure changing rate per time unit
• displaying the inflow or outflow water volume
• recording the stress-strain curve to consider the elasticity of the test equipment on volume measuring
• realization of a free controllable flow rate [cm³/min] in positive and negative flow direction
• realize a constant volume on a connected system

Applications:
• generation of cell pressure and pore water pressure during triaxial testing
• indirect measurement of the sample volume changing during triaxial testing
• pressure generation and volume measurement in permeability system

Specification:
• maximum pressure: 10 bar (EPD2000-10)
16 bar (EPD2000-16)
20 bar (EPD2000-20)
(Observe the system pressure of connected cells!)
• pressure gauge: 0 - 2000 kN/m² (with 20bar) in steps of 1 kN/m²
• volume measurement: 0 - 1000,00 ml in steps of 0,01 ml
• controlled volume flow: -100,0 ml/min ... +100,0 ml/min
• accuracy pressure meas.: 0,2 % FRO
• pressure connection: 2x coupling plug NW5 (other connections on request)
• dimensions pressure cylinder: 120mm x 120mm x 1100 mm (L x B x H)
• Dimensions control unit: 330 mm x 255 mm x 155 mm (L x B x H)
• power supply: 230 V AC, 50/60 Hz
• Power consumption: 25 W

Note:
Please specify the pressure range when ordering (10, 16 or 20 bar): f.e. EPD2000-16

Scope of delivery (for 1 pcs.):

Quantity	Article-No.		Discription
1 pcs.	F.00453		pressure controler EPD2000 - basic device
1 pcs.	E.00043	SML.10.M12	Pressure transmitter SML -0.5..10 bar
1 pcs.	E.00044	SML.16.M12	Pressure transmitter SML -0.5..16 bar
1 pcs.	E.00303	SML.20.M12	Pressure transmitter SML -0.5..20 bar
1 pcs.	F.00410	EPD2000. Control	EPD2000 control unit
1 pcs.	E.00100	KGNW3SW1	Mains cable with IEC plug 3m
1 pcs.	E.00104	RS232-CABL-5M	Serial data cable 9-pin, RS232, length 5m
3 pcs.	8.00037	KSK4NW5MSV	Coupling plug NW5, hose 6x4 mm, nickel-plated brass
1 pcs.	8.00195	FCK4MSV	T-piece / T-screw connection, hose 6x4, brass nickel.

Recommended accessories (not included):

Quantity	Article-No.		Discription
1 pcs.	4.00044	EPD2000-STAT	Quad-mounting rack for EPD2000
1 pcs.	4.00003	EPD2000-STAT	Quad-mounting rack for EPD2000
1 pcs.	4.00053	EPD2000-STAT1	single tripod for EPD2000
1 pcs.	4.00056	EPD2000.A4	

Triax system with ELS25, 2x EPD2000 and TCS50

EPD2000 control box