OPERATING INSTRUCTIONS

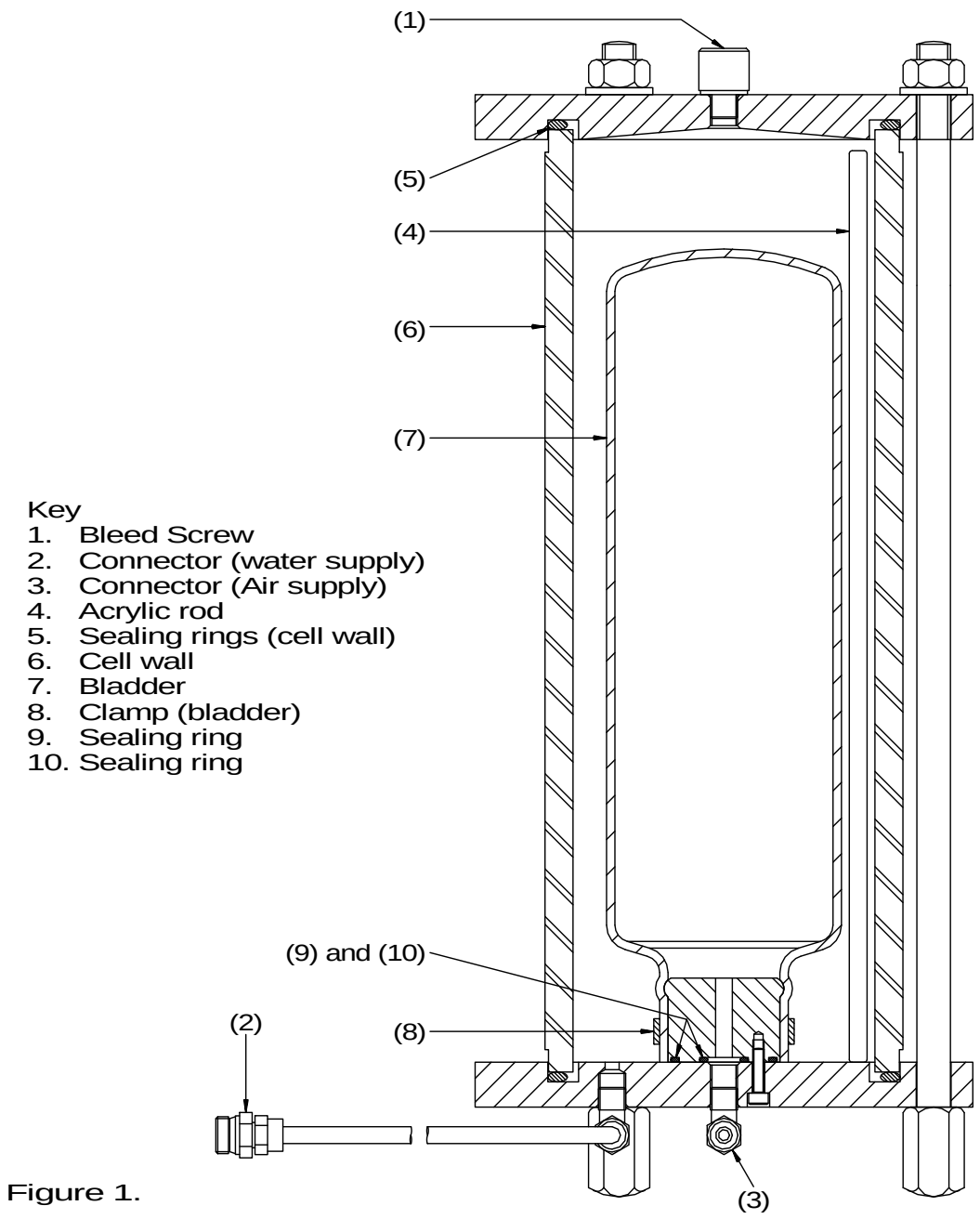
Bladder Type Air/Water Pressure Assembly

26-1746

ELE International Chartmoor Road, Chartwell Business Park Leighton Buzzard, Bedfordshire, LU7 4WG England phone: +44 (0) 1525 249200 fax: +44 (0) 1525 249249 email: ele@eleint.co.uk http://www.ele.com ELE International, a division of Hach Lange Ltd.	***Distributor:***	**ELE International** Soiltest Product Division PO Box 389, Loveland, CO 80539 USA phone: +1 (800) 323 1242 fax: +1 (970) 663 9781 email: soiltest@eleusa.com http://www.eleusa.com

Contents

Section		Page
1	Introduction	3
2	Operation	4
3	Maintenance	4
4	Spares	4



Key
1. Bleed Screw
2. Connector (water supply)
3. Connector (Air supply)
4. Acrylic rod
5. Sealing rings (cell wall)
6. Cell wall
7. Bladder
8. Clamp (bladder)
9. Sealing ring
10. Sealing ring

Figure 1.

1 Introduction

1.1 When using compressed air to apply pressure to de-aired water, an impervious interface is required. This is achieved by using an air/water cylinder containing a bladder.

1.2 The Bladder Type Air/Water Pressure Assembly with acrylic chamber is designed for safe working to 1000 kPa.

1.3 Each cell is pressure tested at 150% of maximum working pressure at temperatures similar to normal laboratory conditions i.e. 18-24ºC. Cells ***must*** only be used under stable ambient conditions.

1.4 **Note:** the vessels are pressure tested at manufacturing stage, and components should not be mixed from other similar vessels, otherwise the warranty is void.

If it is felt necessary that parts such as 'Cell Walls' must be replaced, it is recommended that the devices are re-pressure tested by ELE International.

It is essential that the user does not try to remove any of the nuts holding the end plates without disconnecting the device from the air supply.

2 **Operation** (Refer figure 1)

2.1 Fill the cell through the connection at (2). At the same time allow air to evacuate the cell by opening the bleed screw (1). When the water flows from the bleed screw, check that all air pockets have been evacuated from the cell, close the bleed screw.

2.2 Ensure the cell is completely full of water before applying air pressure to the bladder (7).

When first introducing air into the bladder, it may sometimes be necessary to bleed off a little water from the cell via the bleed screw.

2.3 Connect a suitable air supply (maximum 1000 kPa) to connection (3).

2.4 The air pressure can now be adjusted to produce the correct water pressure in the cell.

Compressors available from ELE
83-1730 series 700 kPa
83-1735 series 1000 kPa

Pneumatic pressure reducing panel
26-1760 – 1000 kPa

Nylon Tube
26-1769

2.5 A piece of acrylic rod (4) is placed inside the cell and this should not be removed as it prevents the bladder from sealing against the inside of the cell.

3 Maintenance

3.1 It may be necessary from time to time to dismantle the cell for cleaning.

3.2 Use only soft soapy water to clean.

3.3 Do ***not*** use abrasive cleaners or solvents to clean the cell wall (6).

Note: replace cell wall (6) if scratched.

4 Spares

Sealing ring (5)	8847X1143
Cell wall (6)	1068B0012
Bladder (7)	26-1746/10
Sealing ring (9)	8447X0126
Sealing ring (10)	8447X0316
Bladder clamp (8)	8412X0260