User Manual

0,5 litre Compensator

Document No

AC18-User Manual

KD Drawing Ref.

AC18-1000M01

Client Equipment No.

KYSTDESIGN AS

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Signature Legend

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Approver	Erik K. Bakkevig	EKB	Managing Director

Table of contents **Side**

1 INTRODUCTION

This document contains general data, and describes how to use and do the maintenance and preservation of KD AC18 0.5 L compensator.

2 GENERAL

The compensator compensates for variations in oil volume by a spring loaded piston which compresses a rolling diaphragm. The compensator has visual monitoring through slots in the compensator housing.

Key data:

Manufacturer	Kystdesign AS
Model code	AC18
Manufacturers Drawing Number	AC18-1000M01
Weight in air	1,6 kg without fluid
Active Volume	0,58L
Spring Pressure	0,15-0,55 Barg
Max. operation pressure	1.0 Barg
Max. test pressure	1.5 Barg
Depth rate compensator	Full ocean depth

3 PREPARATIONS AND CONNECTION

The compensator has five 1/4” BSPP hydraulic connection ports, normally blinded with plastic plugs prior to shipment. Before installing the compensator, remove all the plastic plugs and blind the connection ports not used with 1/4” VSTI ED71 blanking plugs or similar.

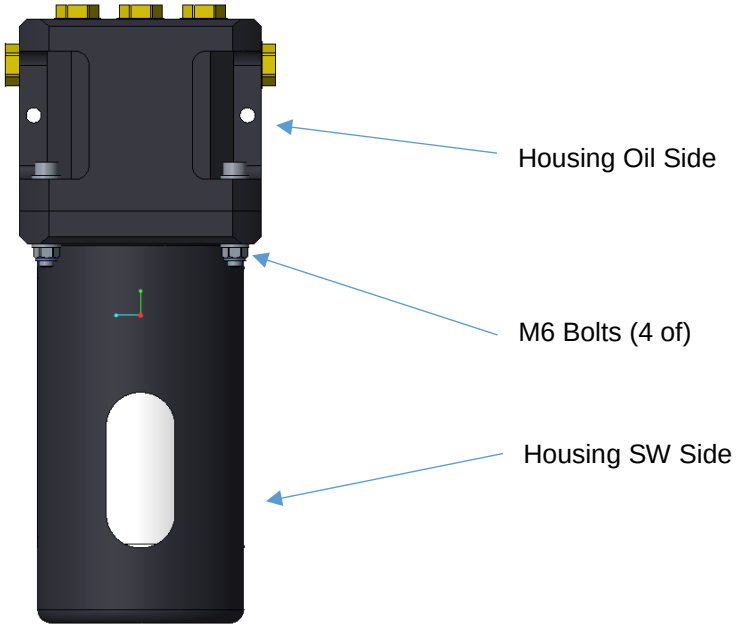
The compensator can be installed to external structure by using any of the Ø6,5 holes in the oil side housing, or by clamps around the Ø90mm cylindrical part.

4 MAINTENANCE

4.1 DISASSEMBLY OF COMPENSATOR FOR REPLACEMENT OF DIAPHRAGM

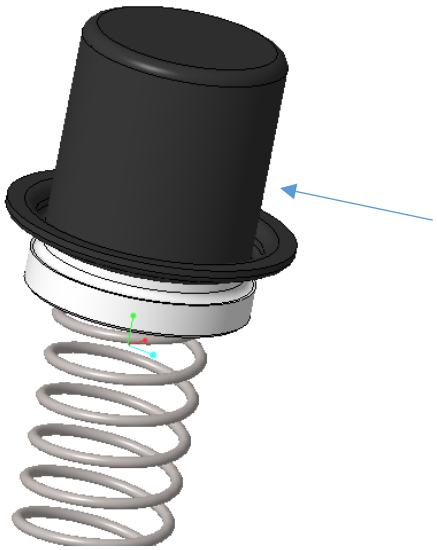
NB!
Drained and depressurized, the spring in the compensator is compressed 70mm, giving a separation force of ~90N on the two housings.

1. Drain the compensator
2. Disconnect compensator from the hydraulic circuit and move it to a clean maintenance area.
3. Place the compensator in an upright position. See picture 4.1.3.



Picture 4.1.3 Compensator placed in upright position.

4. Ensure that the separation force of ~90N can be controlled while the 4off M6 bolts is unscrewed and removed. This can normally be done by pressing the houses together by hand. When all bolts are removed, carefully lift the oil side housing and let the spring decompress.
5. Remove Oil Side Housing



Picture 4.1.6

6. Replace diaphragm with a new one. Lubricate diaphragm flange with Molycote 111 or similar.
7. Make sure that the new diaphragm is clean and not damaged.

4.2 ASSEMBLY OF COMPENSATOR

Assembly of the compensator to be done in reverse order of the steps in section 4.1.

4.3 BOLT PRETENSION AND TORQUE

A torque of 9,3Nm to be applied on all M6 bolts.

5 PRESERVATION

1. Drain compensator
2. Ensure that all connection ports are properly blinded.
3. Clean outside with lukewarm fresh water and dry with a clean rag.

6 STORAGE

It is recommended to store the compensator in a dry and dark area.