

KRASO GMBH & CO. KG Baumannweg 1 | 46414 Rhede T +49(0)2872-9535-0 \$\sqrt{9} +49(0)2872-9535-888 info@kraso.de | **KRASO**.de

TEST CERTIFICATE



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Test report no.

220012828-18-02

Client

KRASO GmbH & Co. KG Max-Planck-Strasse 2

46414 Rhede

 Order date
 12/04/2018

 Receipt of samples
 13/04/2018

 MPA NRW no.:
 82/18

Test date 25/04 to 02/05/2018

Order

Testing the water pressure resistant

"KRASO® system cover with hose adapter"

Sample type

"KRASO® system cover with hose adapter"

Number of samples

1 unit

Underlying requirements

Test pursuant to customer specifications:

- 1. Pressure 2.0 bar, increase every 15 min by 0.5 bar to 3.5 bar.
- 2. 4 cycles of alternating water pressure, 15 min 3.5 bar / 5 min unpressurised.
- 3. 7 days of constant pressure at 3.5 bar.

The results of the tests relate solely to the samples/test object referred to above.

Without the consent of the MPA (Material Testing Institute) NRW, test certificates may be published or reproduced only unchanged in terms of form and content. The abridged reproduction of a test certificate is only permitted with the consent of the MPA NRW.

This test certificate comprises 2 pages and 1 appendix.

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1. Sampling process

The sample was submitted by the client to the MPA NRW Dortmund for testing on 13/04/2018.

2. Test setup (according to the client's specifications)

To test the water pressure tightness of the sealing system, the wall penetration was encased in C25/35 concrete. The component had the dimensions (L x W x H) $600 \times 600 \times 360$ mm. The component had an opening with a diameter of 177.8 mm, over which a clamping bell was placed (Appendix 1).

3. Test procedure

The tests listed below were carried out straight after one another:

Test sequence 1:

- Pressure 2.0 bar
- Increase every 15 min by 0.5 bar to 3.5 bar

Test sequence 2:

4 cycles of alternating water pressure

- 15 minutes at 3.5 bar
- 5 minutes unpressurised

Test sequence 3:

- 7 days of constant pressure at 3.5 bar

4. Result

No pressure drop or leakage was able to be detected over the entire test duration.

Dortmund, 16/05/2018 On behalf of

[Signature] [Stamp]

Minh Công, Trân Person responsible

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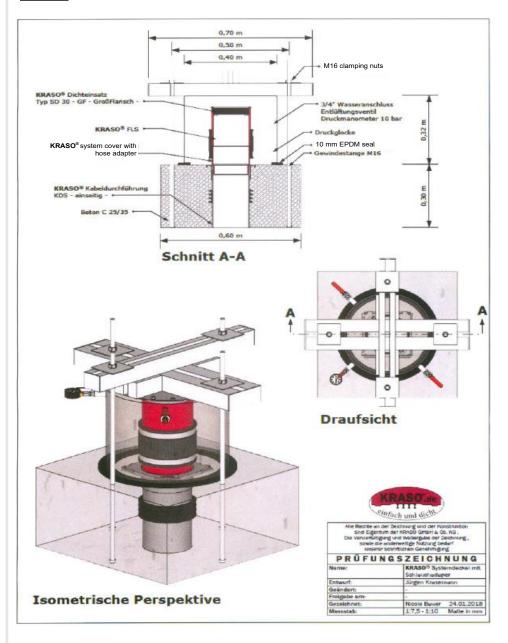
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Appendix 1

<u>Appendix</u>



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