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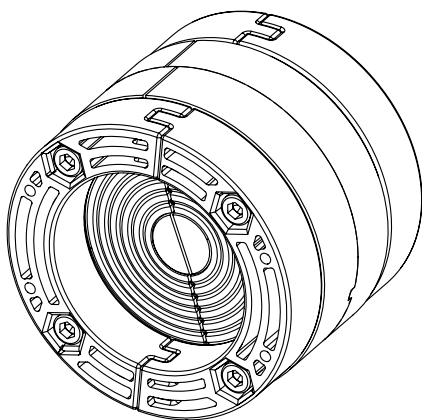
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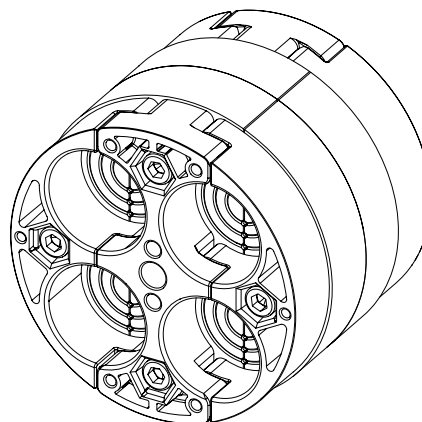


Installation instructions - **Standard Mechanical Seal**

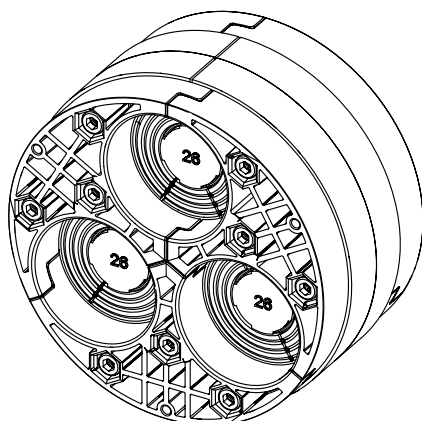
PHRK4/ PHRK6/ PHRK8 with super segmented ring technology



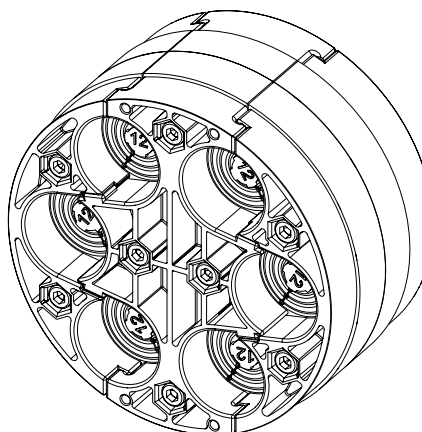
PHRK4-SSG-1



PHRK4-SSG-4



PHRK6-SSG-3



PHRK6-SSG-3

American Polywater Corporation

11222 60th Street North
Stillwater, MN 55082
support@polywater.com
www.polywater-haufftechnik.com



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2 Explanation of symbols

- 1** Work stages
 - Effect/result of a work step
- ① Reference numerals in drawing

1 Publishing notes

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American Polywater Corporation

11222 60th Street North

Stillwater, MN 55082

Tel.: 651-430-2270

E-mail: support@polywater.com

Internet: www.polywater-haufftechnik.com

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3 Required tool and auxiliaries

The tools required to install the complete range of PHRK seals are as follows or can be purchased from Polywater; Part number PHSI- TOOLSET.

TOOLS:

Assembly set for PHSI 150-DG/PHRK SSG
(Article no.: 2102200600), consisting of:

1 torque wrench 4-20 Nm, ¼-inch 1 adapter for
cordless screwdriver square end, ¼ inch

2 extensions, 150 mm, ¼ inch

1 extension, 100 mm , ¼ inch

1 wrench socket M6, SW 5, ¼ inch

1 wrench socket M6, 100 mm with ball head, ¼ inch

1 hexagon spanner M8, 50 mmwith ball head, ¼ inch

AUXILIARIES:

Polywater Cable Cleaner HP

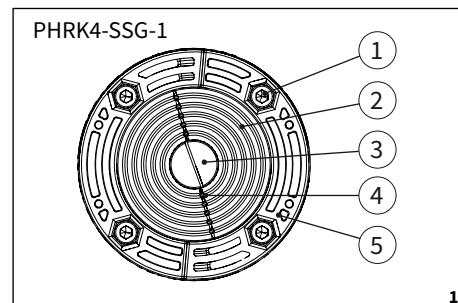


4 Description

Description: PHRK4-SSG-1 (see fig.: 1).

Legend for Fig. 1

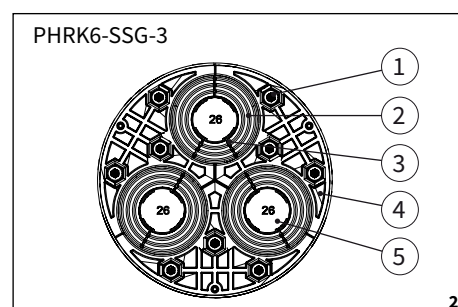
- | | |
|---|----------------------|
| 1 | Allen screw |
| 2 | Segment ring |
| 3 | Blind plug |
| 4 | Cut surface |
| 5 | Plastic press plates |



Description: PHRK6-SSG-3, PHRK4-SSG-1, PHRK-SSG-4 (see fig.: 2).

Legend for Fig. 2

- | | |
|---|----------------------|
| 1 | Allen screw |
| 2 | Segment ring |
| 3 | Cut surface |
| 4 | Plastic press plates |
| 5 | Blind plug |




5 Preparing for assembly

- 1 Clean the core drilling/wall sleeve and the media line.


Repair existing breaks and holes in the core drilling.

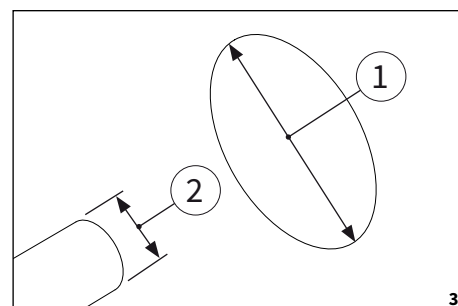
Check the diameter tolerance of the core drilling/wall sleeve (**D +0,079/-0,039 inch**) and medialine (**d +0,039/-0,079 inch**), as well as outer or drilling dimension of the press seal (see fig.: 3).

 The wall sleeve must be dimensionally accurate, smooth and inherently stable.

Legend for Fig. 3

- | | |
|---|---|
| 1 | Diameter (D) of the core drilling/wall sleeve/ conduit |
| 2 | Diameter (d) of the cable/pipe |

-  Cables may not have any continuous grooves or damage in the sealing area (possibly push cable back or forwards a little until grooves are no longer visible).
- The inside of the wall sleeve must be clean, dry and greaseless.
 - If the press seal is installed in an exposed duct, then the duct wall must be stabilized with a clamping strap at the location of the press seal.





6 Assembly the standard press seal Example: PHRK4-SSG-1

- 1** Open the standard press seal PHRK, use a sharp knife to cut into the individual selected segment ring of the standard press seal at the predetermined separation line, and pull it off until the required diameter area is visible on the segment (see fig.: 4 and 5).

Repeat this step until each cable/pipe opening has been adjusted to fit the cable/pipe to be fed through it.

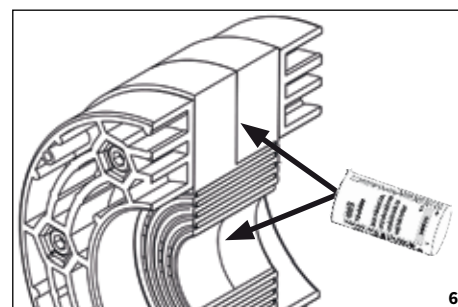
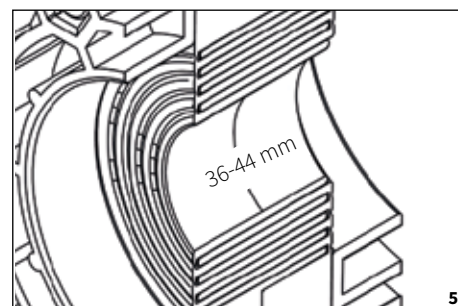
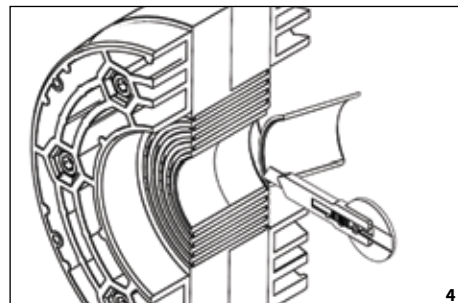


- The number of segments that are removed must correspond at all the associated press seal sections.
- Segment rings must be removed without leaving any residual rubber.
- If more segments are removed than necessary, the entire cable/pipe seal will need to be replaced.
- Unused openings must remain sealed (see Fig.: 9).

- 2** Though not required, lubricant may be applied to the cut surfaces and cable sealing surface of the seal. (see fig.: 6).



Do not lubricate the outer sealing surface of the cable/pipe seal. The outer sealing surface of the cable/pipe seal must be free from grease and dry.

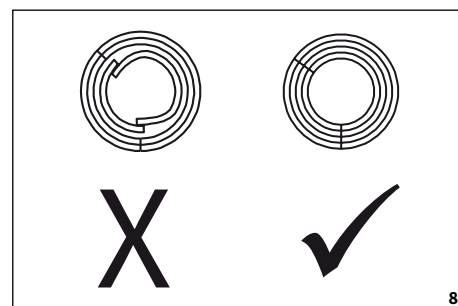
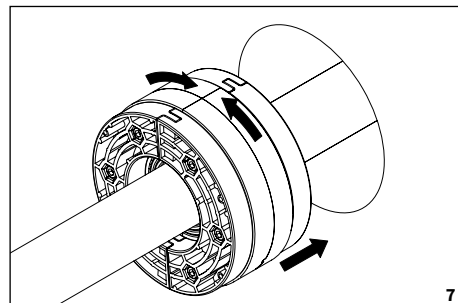




- 3** Swing the seal over the cables/pipes that have been installed (Internal hexagon of the screws visible) and push it into the core drilling/conduit so that it is flush with the wall (see fig.: 7).



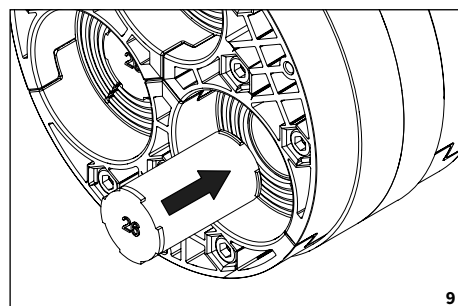
Segmented rings must not overlap in installation (see fig.: 8).



- 4** Unused openings of the standard press seal (with multiple cable entry) must be sealed with the supplied blind plugs (see fig.: 9)



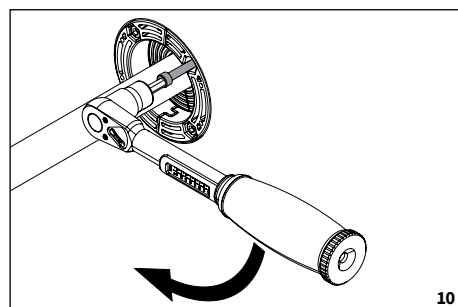
Segmented rings must not overlap in installation (see fig.: 8).



- 5a** In case of standard press seal PHRK, with single cable entry, tighten the screws in several stages in a crosswise sequence until the specified tightening torque is reached (see fig.: 10 and table 1).

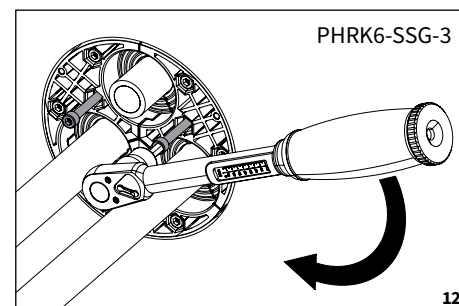
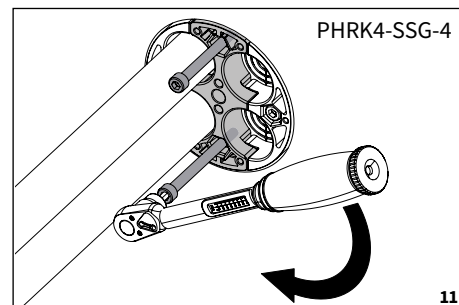


Segmented rings must not overlap in installation (see fig.: 8).





- 5b** In case of standard press seal PHRK, with multiple cable entry, first slightly tighten the inner screws and/ or the middle press plate then slightly tighten the outer screws. Repeat this action till the specified torque is reached (see fig.: 11, 12 and table 1).

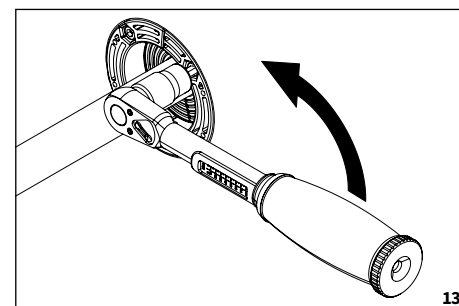


7 Disassemble the standard press seal PHRK

- 1** Disassembly takes place in reverse order to assembly (see fig.: 13).



- Ensure there is no head pressure in the core drill/wall sleeve.
- The press seal must be secured against sliding out of the core drill hole/wall sleeve before starting disassembly.



- 2** After disassembly, the standard press seal must be dismantled into its individual components and recycled according to the valid environmental regulations.



Table 1

Designation	Number of openings	Cable Diameter OD (inch)	Cable Diameter OD (mm)	Tightening torque (Nm)
PHRK-SSG-1	1	0.709 - 2.559	18-65	8
PHRK4-SSG-4	4	0.315 - 1.181	18-65	10
PHRK4-SSG-4	1	1.417 - 2.756	18-65	8
PHRK6-SSG-1L	1	2.756 - 4.409	18-65	8
PHRK6-SSG-3	3	0.945 - 2.126	24-54	8
PHRK6-SSG-6	6	0.394 - 1.417	10-36	8
PHRK8-SSG-1	1	4.331 - 6.378	110-162	8
PHRK8-SSG-3	3	11.575 - 2.835	40-72	8



Safety instructions and information

The installation may only be carried out by technical experts.

Qualified and trained individuals carrying out installation must experts.

- knowledge of general safety and accident prevention regulations as amended,
- knowledge of how to use safety equipment,
- knowledge of how to use hand tools and electric tools,
- knowledge of the relevant standards and guidelines for laying pipes cables and for backfilling utility trenches, as amended,
- knowledge of the regulations and installation guidelines of the supply company as amended,
- knowledge of the impermeable concrete directive and building waterproofing standards as amended.

General information and intended use

According to their intended use, our products have been designed exclusively for installation in buildings made from state-of-the-art construction materials. We do not accept liability for use deviating from or beyond this unless our express written confirmation has been obtained in advance.

For warranty conditions, please see our current General Terms and Delivery Conditions. The PHRK modular seal is intended to provide an entry for round, pressure-stable individual pipes and cables in core drillings/wall sleeves and reliable sealing of annular spaces. PHRD modular seals are not fixed settlement points or bearings and therefore cannot absorb any mechanical forces. Any anticipated reductions must be compensated for by the installation of centering guides in the conduits or core drillings and/or by spacers.

Safety

This section provides an overview of the main safety aspects for optimum protection of personnel and a safe installation process. If there is a failure to observe the instructions and safety information set out here, this may result in significant hazards.

PHRD modular seal installation must comply with the relevant professional associations regulations, federal, state and local safety and accident prevention regulations as well as company regulations (work and procedural instructions).

The fitter must wear the relevant protective clothing.

Only intact components may be installed.

The following instructions are to be observed prior to installation of the PHRD modular seal:

! Note!

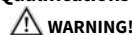
No sealing due to incorrect assembly!

Improper installation can result in damage.

- Prior to installing the cable seal, any existing breaks or blow holes in the cored hole have to be repaired.
- We recommend using cable cleaner or Polywater® Type HP.
- For details of other accessories and further information, see www.polywater-haufftechnik.com and the technical specification sheets.
- Do not apply lubricant to the outer sealing surface of the PHRD modular seal.

Personnel requirements

Qualifications



WARNING!

Risk of injury in the event of improper installation!

Improper installation can result in significant bodily harm and property damage.

- Installation may only be carried out by qualified and trained individuals who have read and understood these instructions.

Skilled experts

Based on their specialist training, skills, experience and familiarity with the relevant provisions, standards and regulations, skilled experts are able to carry out the work assigned, independently identifying and avoiding potential hazards.

Transport, packaging, scope of delivery and storage

Safety instruction in connection with transport



Note!

Damage in the event of improper transport

Significant damage can occur in the event of improper transport.

- When unloading packaging items on delivery and in the course of in-house transport, proceed with care and observe the symbols on the packaging.

Transport inspection

Inspect the delivery immediately on receipt for completeness and transport damage.

In the event of transport damage being visible from the outside, proceed as follows:

- Do not accept the delivery or only do so subject to reservations.
- Make a note of the extent of damage in the transport documentation or delivery note provided by the transporter.



- Submit a claim for every defect as soon as it has been identified
- Make a note of the extent of damage in the transport documentation or delivery note provided by the transporter.

Scope of delivery

The scope of delivery of the press seal includes:

- 1 PHRK seal
- 1 lubricant
- 1 set of instructions

NOTE!

Damage due to improper storage!

Significant damage can occur in the event of improper storage.

- Protect the PHRK modular seal from damage, damp and soiling prior to installation. Only intact components may be installed.
- The PHRK modular seal must be stored in such a way that it is not exposed to low temperatures 40°F (<5° C), high temperatures 85°F (>30° C) or direct sunlight.

Disposal

If no return or disposal agreement has been concluded, recycle dismantled components after they have been properly dismantled:

- Metal remains are to be scrapped according to existing environmental regulations.
- Dispose of elastomer segments according to existing environmental regulations.
- Dispose of plastics according to existing environmental regulations.
- Dispose of packaging material according to existing environmental regulations.

Important Notice:

The statements here are made in good faith based on tests and observations we believe to be reliable. However, the completeness and accuracy of the information is not guaranteed. Before using, the end-user should conduct whatever evaluations are necessary to determine that the product is suitable for the intended use. American Polywater expressly disclaims any implied warranties and conditions of merchantability and fitness for a particular purpose. American Polywater's only obligation shall be to replace such quantity of the product proven to be defective. Except for the replacement remedy, American Polywater shall not be liable for any loss, injury, or direct, indirect, or consequential damages resulting from product's use, regardless of the legal theory asserted.

American Polywater Corporation

11222 60th Street North
Stillwater, MN 55082
support@polywater.com
www.polywater-haufftechnik.com

Read the Instructions prior to installation and keep them in a safe place!