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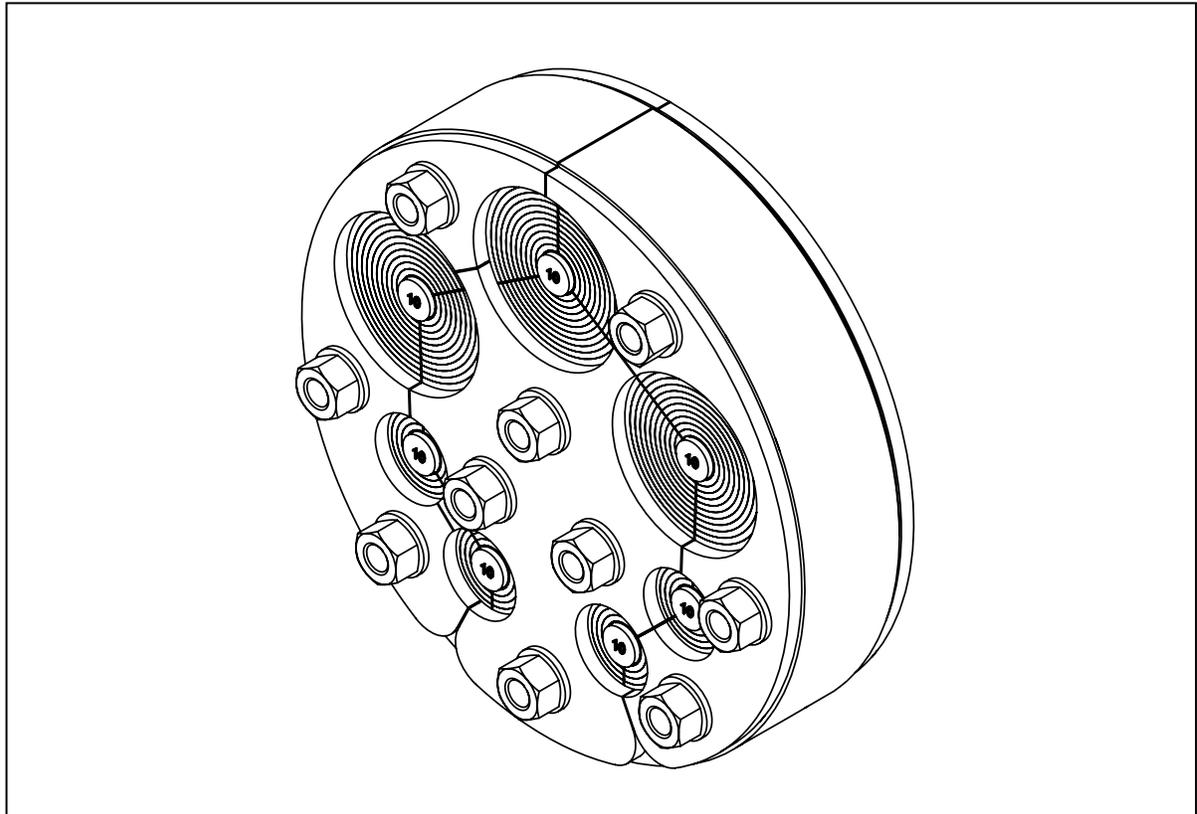
**Polywater**<sup>®</sup>

**hauff**  
**technik**



Assembly instructions - **PHRD-SG Standard-Press-seal**

**PHRD4/ PHRD6/ PHRD8 with segmented ring technology**



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## 1 Publishing notes

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These assembly instruction is component of the product.

## 2 Explanation of symbols

**1** Work stages

▶ Effect/result of a work step

① Reference numerals in drawing

## 3 Required tool and auxiliaries

For correctly assembly of the the standard press seal PHRD-SG you will need the following tools and aids in addition to the usual tools:

1 Torque wrench, 1/4 inch

1 Extention 4 inch (100 mm), 1/4 inch

1 Adapter for cordless screwdriver, square, 1/4 inch

1 Socket, 1/4 inch

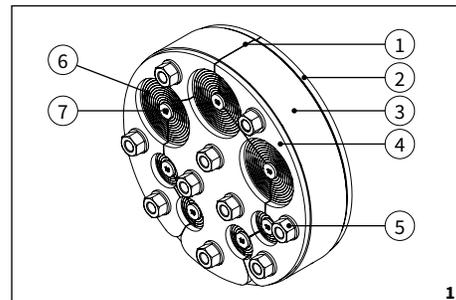


## 4 Description

Description: PHRD8-SG-15 (figure 1).

Legend for Fig. 1 (PHRD8-SG-15)

- |   |  |
|---|--|
| 1 | Cut surface                            |
| 2 | Rear press plate                       |
| 3 | Elastomer segment (Grade: EPDM or NBR) |
| 4 | Front press plate                      |
| 5 | Press-seal nut                         |
| 6 | Segment ring                           |
| 7 | Plug                                   |



## 5 Preparing for assembly

- 1 Clean the core drilling/wall sleeve/conduit and cables.

Level out any chips and/or voids which may be present.

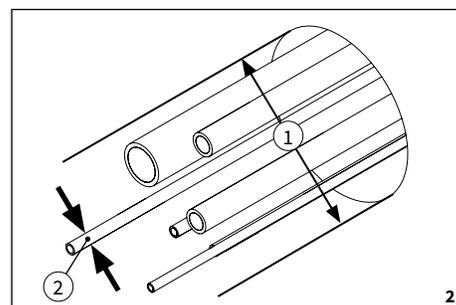
Check the diameter tolerance of the core drilling/wall sleeve/ conduit (**D +0.079/-0.039 inch**) (**D +2/-1 mm**) and cables/pipes (**d**) (see table 1), as well as outer or drilling dimension of the press seal (see fig 2).

Legend for Fig. 2

Diameter **1(D)** core drilling/wall sleeve/conduit

Diameter **2(d)** cables/pipes

-  *There must not be any continuous longitudinal score marks on the cables in the seal area. If necessary, move the cables slightly forwards or backwards until there are no longitudinal score marks visible!*





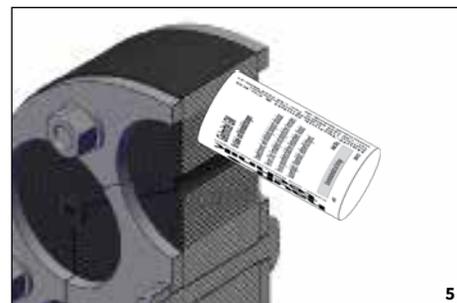
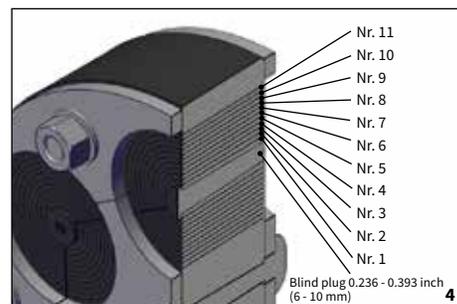
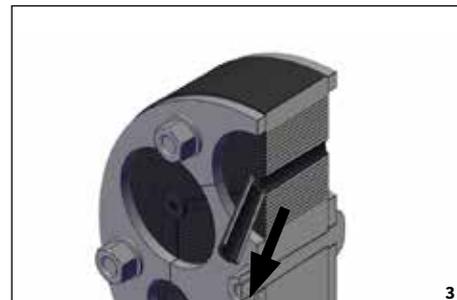
## 6 Install the standard mechanical seal PHRD-SG

- 1 Swing open the Standard-Press seal PHRD-SG, remove the relevant plug and push up the segment rings to separate them (see fig.: 3).

If necessary, cut the segment rings with a sharp knife at the sectioning point and then pull off.

Remove the number of segment rings according to the measured cable diameter (**see table 1**) (see fig.: 4).

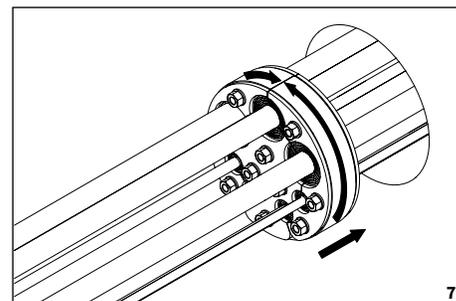
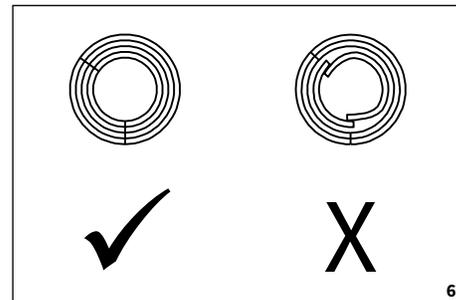
- 2 Lubricate only the cut surfaces and cable sealing surfaces with the lubricant. (see fig.: 5).





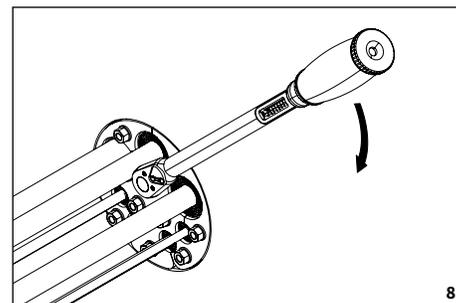
- 3**  *Segmented rings must not overlap in installation (see fig.: 6)!*

Place the standard press seal PHRD-SG over the cable and push into the core drilling/wall sleeve/conduit until it is flush with the wall face (see fig.: 7).



- 4** Finally, tighten the nuts in several stages in a crosswise sequence until the relevant tightening torques is reached (**see table 1**) (see fig.: 8).

-  • *If installation is carried out correctly, it will not be necessary to retighten the nuts!*
- *Tighten nuts evenly so the press plates do not overlap*





**Table 1**

Application range	Segment ring	Cable size range $d_a$	Wrench/allen screw size	Wrench/hexagon screw size	Torque
<b>PHRD4-SG-8</b>					
<b>8 openings of 0.157 - 0.650 (4 - 16.5 mm)</b>	Plug	0.236 - 0.394 inch 4 - 7 mm	5	-	6 ft lbs or 71 in lbs (8 Nm)
	No. 1	0.236 - 0.394 inch 7 - 11 mm			
	No. 2	0.236 - 0.394 inch 11 - 16.5 mm			
<b>PHRD4-SG-5</b>					
<b>2 openings of 0.315 - 1.181 inch (8 - 30 mm)</b>	Plug	0.315 - 0.394 inch 8 - 10 mm	5	-	4.43 ft lbs or 53 in lbs (6Nm)
	No. 1	0.394 - 0.551 inch 10 - 14 mm			
	No. 2	0.551 - 0.709 inch 14 - 18 mm			
	No. 3	0.709 - 0.866 inch 18 - 22 mm			
	No. 4	0.866 - 1.024 inch 22 - 26 mm			
	No. 5	1.024 - 1.181 inch 26 - 30 mm			
<b>3 openings of 0.157 - 0.650 inch (4 - 16.5 mm)</b>	Plug	0.157 - 0.197 inch 4 - 5 mm	5	-	4.43 ft lbs or 53 in lbs (6Nm)
	No. 1	0.197 - 0.276 inch 5 - 7 mm			
	No. 2	0.276 - 0.433 inch 7 - 11 mm			
	No. 3	0.433 - 0.631 inch 11 - 16.5 mm			



**Table 1**

Application range	Segment ring	Cable size range $d_a$	Wrench/allen screw size	Wrench/hexagon screw size	Torque
<b>PHRD5-SG-3</b>					
<b>3 openings of 0.394 - 1.575 inch (10 - 40 mm)</b>	Plug	0.394 - 0.472 inch 10 - 12 mm	5	-	6 ft lbs or 71 in lbs (8 Nm)
	No. 1	0.472 - 0.630 inch 12 - 16 mm			
	No. 2	0.630 - 0.787 inch 16 - 20 mm			
	No. 3	0.787 - 0.945 inch 20 - 24 mm			
	No. 4	0.945 - 1.102 inch 24 - 28 mm			
	No. 5	1.102 - 1.260 inch 28 - 32 mm			
	No. 6	1.260 - 1.417 inch 32 - 36 mm			
	No. 7	1.417 - 1.575 inch 36 - 40 mm			
<b>PHRD5-6</b>					
<b>^ openings of 0.236 - 1.220 in (6 - 31 mm)</b>	Plug	0.236 - 0.315 inch 6 - 8 mm	5	-	6 ft lbs or 71 in lbs (8 Nm)
	No. 1	0.236 - 0.315 inch 8 - 12 mm			
	No. 2	0.472 - 0.630 inch 12 - 16 mm			
	No. 3	0.472 - 0.630 inch 16 - 20 mm			
	No. 4	0.787 - 0.945 inch 20 - 24 mm			
	No. 5	0.945 - 1.102 inch 24 - 28 mm			
	No. 6	1.102 - 1.220 inch 28 - 31 mm			
<b>PHRD5-10</b>					
<b>10 openings of 0.157 - 0.650 in (4 - 16 mm)</b>	Plug	0.157 - 0.315 inch 4 - 8 mm	5	-	6 ft lbs or 71 in lbs (8 Nm)
	No. 1	0.315 - 0.472 inch 8 - 12 mm			
	No. 2	0.472 - 0.631 inch 12 - 16.5 mm			



**Table 1**

Application range	Segment ring	Cable size range $d_a$	Wrench/allen screw size	Wrench/hexagon screw size	Torque
<b>PHRD6-SG-9</b>					
<b>9 openings of 0.236 - 0.984 in (6 - 25 mm)</b>	Plug	0.236 - 0.354 inch 6 - 9 mm			4.43 ft lbs or 53 in lbs (6 Nm)
	No. 1	0.354 - 0.512 inch 9 - 13 mm			
	No. 2	0.512 - 0.669 inch 13 - 17 mm			
	No. 3	0.669 - 0.827 inch 17 - 21 mm			
	No. 4	0.827 - 0.984 inch 21 - 25 mm			
<b>PHRD6-SG-10</b>					
<b>4 openings of 0.315 - 1.181 in (8 - 30 mm)</b>	Plug	0.315 - 0.394 inch 8 - 10 mm	5	-	4.43 ft lbs or 53 in lbs (6Nm)
	No. 1	0.394 - 0.551 inch 10 - 14 mm			
	No. 2	0.551 - 0.709 inch 14 - 18 mm			
	No. 3	0.709 - 0.866 inch 18 - 22 mm			
	No. 4	0.866 - 1.024 inch 22 - 26 mm			
	No. 5	1.024 - 1.181 inch 26 - 30 mm			
<b>6 openings of 0.157 - 0.650 in (4 - 16.5 mm)</b>	Plug	0.157 - 0.197 inch 4 - 5 mm			
	No. 1	0.197 - 0.276 inch 5 - 7 mm			
	No. 2	0.276 - 0.433 inch 7 - 11 mm			
	No. 3	0.433 - 0.631 inch 11 - 16.5 mm			
<b>PHRD8-SG-7</b>					



**Table 1**

Application range	Segment ring	Cable size range $d_a$	Wrench/allen screw size	Wrench/hexagon screw size	Torque
<b>4 openings of 0.236 - 1.024 in (6 - 26 mm)</b>	Plug	0.236 - 0.394 inch 6 - 10 mm	-	17	18.44 ft lbs or 221 in lbs (25 Nm)
	No. 1	0.394 - 0.551 inch 10 - 14 mm			
	No. 2	0.551 - 0.709 inch 14 - 18 mm			
	No. 3	0.709 - 0.866 inch 18 - 22 mm			
	No. 4	0.866 - 1.024 inch 22 - 26 mm			
<b>3 openings of 0.236 - 2.126 in (6 - 54 mm)</b>	Plug	0.236 - 0.394 inch 6 - 10 mm			
	No. 1	0.394 - 0.551 inch 10 - 14 mm			
	No. 2	0.551 - 0.709 inch 14 - 18 mm			
	No. 3	0.709 - 0.866 inch 18 - 22 mm			
	No. 4	0.866 - 1.024 inch 22 - 26 mm			
	No. 5	1.024 - 1.181 inch 26 - 30 mm			
	No. 6	1.181 - 1.339 inch 30 - 34 mm			
	No. 7	1.339 - 1.496 inch 34 - 38 mm			
	No. 8	1.496 - 1.654 inch 38 - 42 mm			
	No. 9	1.654 - 1.811 inch 42 - 46 mm			
	No. 10	1.811 - 1.969 inch 46 - 50 mm			
No. 11	1.969 - 2.126 inch 50 - 54 mm				
<b>PHRD8-SG-15</b>					



## Safety instructions and information

### Target group

**The installation may only be carried out by technical experts.**

Qualified and trained individuals carrying out installation must have

- 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 standard press seal is for sealing cables in core drills or wall sleeves. Split design for sealing new cables to be installed or cables that have already been laid.

The standard press seals are suitable for the installation and insertion of 1 to 15 cables/pipes with outer diameter 0.157 - 2.126 (4 - 54 mm) in core drills/wall sleeves with inner diameter 4 - 8 inch (100 - 200 mm).

### Safety

This section provides an overview of all 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.

Standard press seal installation must comply with the relevant professional association regulations, VDE provisions, national 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 standard press seal:



#### **WARNING!**

#### **Risk of injury in the event of improper installation!**

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

- The nationally applicable laying and filling regulations for pipes and cables are to be observed at all times.
- Seal the underground and cable substructure well prior to laying pipes/cables so that the latter cannot subside.



#### **Note!**

#### **No sealing due to incorrect assembly!**

Improper installation can result in damage.

- Standard press 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.
- For one-sided installation of the standard press seal into core drillings, seal from outside of building.
- Prior to installing the standard press seal, any existing breaks or blowholes in the cored hole have to be repaired.
- Ensure that the medium pipe is centered and horizontal in the core drilling/wall sleeve.
- 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.
- The number of segments that are removed must correspond at all the associated press seal sections.
- Segment rings must be removed without leaving any residue.
- If more segments are removed than necessary, the entire cable/pipe seal will need to be replaced.
- Unused openings must remain sealed.
- Do not lubricate the outer sealing surface of the press seal with lubrication.
- The outer sealing surface of the press seal with must be free from grease and dry.
- If sealing is to be applied to the outside of the building, the torque has to be checked and if necessary tightened before filling the trench and completing all laying and connection work.
- No cleaning agents containing solvent may be used to clean the standard Polywater HP press seal.  
We recommend using cable cleaner KR M.T.X.
- For details of other accessories and further information, see [www.polywater-haufftechnik.com](http://www.polywater-haufftechnik.com) and the technical specification sheets.

### Personnel requirements

#### Qualifications



#### **WARNING!**

#### **Risk of injury in case of inadequate qualification!**

- 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 worked 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 standard press seal PHRD-SG includes:

- 1 Standard press seal PHRD-SG
- 1 Lubricating stick GM (Art no.: 0804020000)

#### Storage

##### NOTE!

#### **Damage due to improper storage!**

Significant damage can occur in the event of improper storage.

- Protect the standard press seal from damage, damp and soiling prior to installation. Only intact components may be installed.
- The standard press seal must be stored in such a way that it is not exposed to low temperatures (<5° C), high temperatures (>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.

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