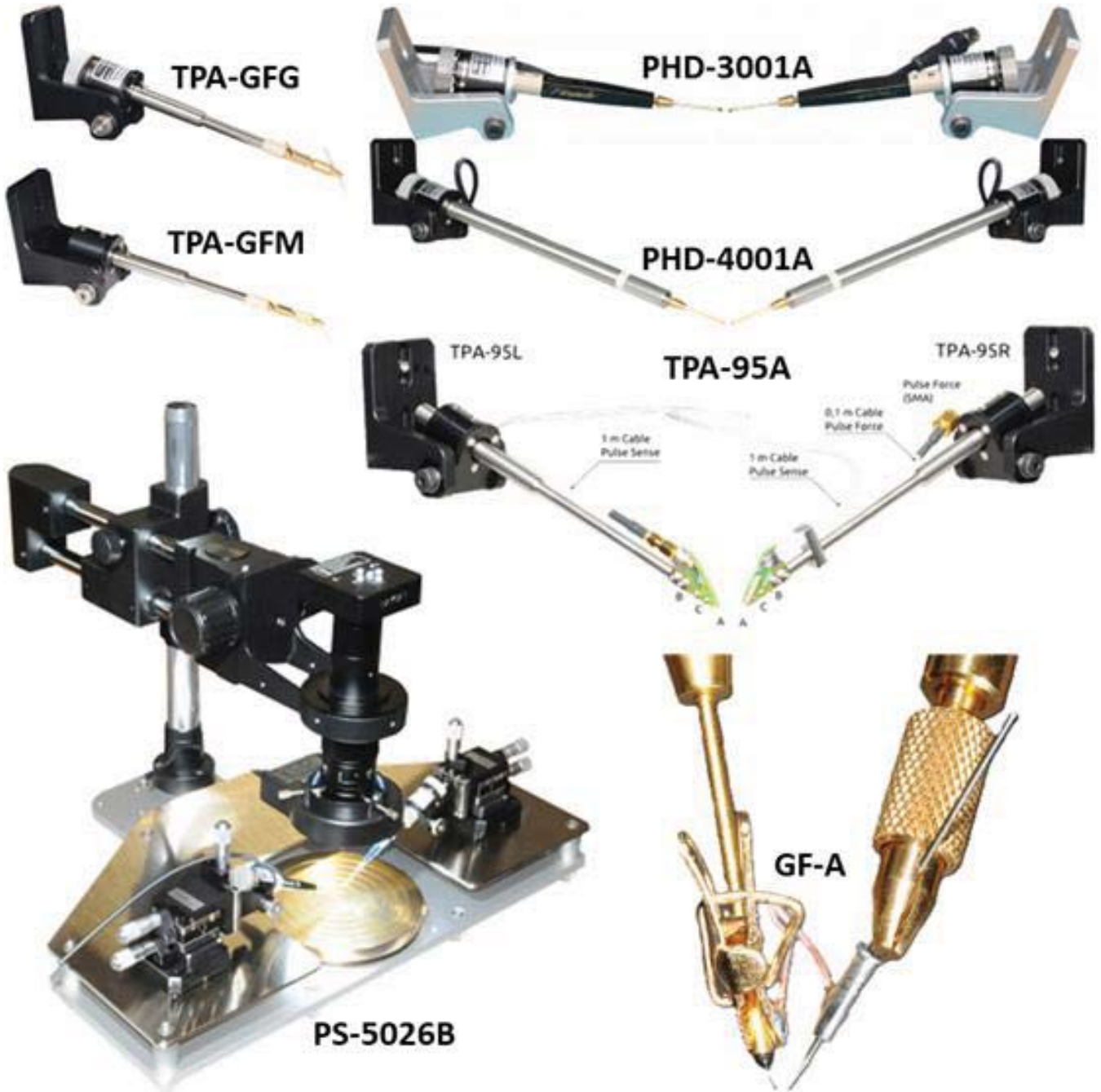


## TLP/VF-TLP/HMM/HBM PROBING SOLUTIONS

### PHD-4001A

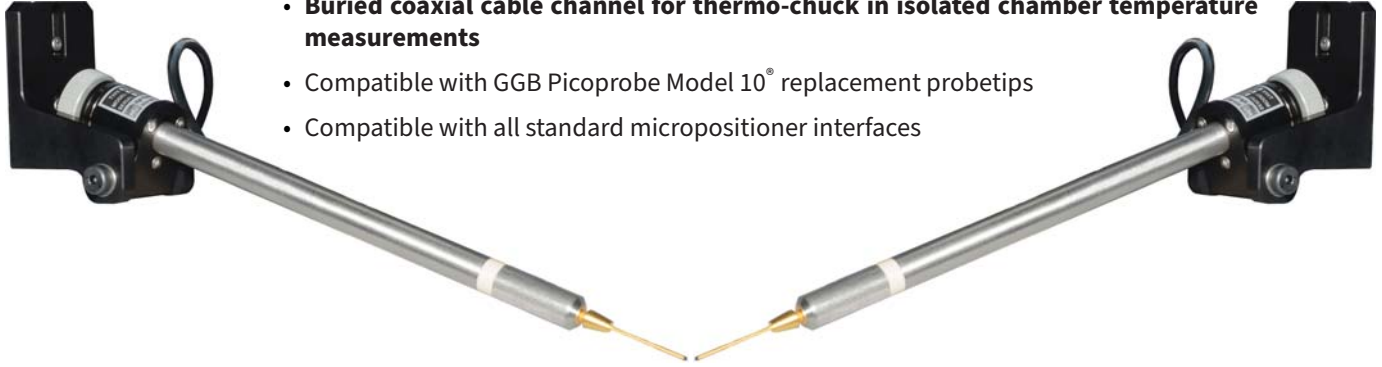


# Compact Probe Kit PHD-4001A

Advanced TLP/HMM/HBM Solutions

## 1 Features

- Electrically isolated probearm kit for VF-TLP, TLP, HMM, HBM force and sense probing based on the GGB Picoprobe Model 10<sup>®</sup> replacement probe tips
- **Buried coaxial cable channel for thermo-chuck in isolated chamber temperature measurements**
- Compatible with GGB Picoprobe Model 10<sup>®</sup> replacement probetips
- Compatible with all standard micropositioner interfaces



- High precision rotation of the probearm by backlash-free 80:1 gear
- Rugged stainless steel design
- SMA connectors

## 2 Description

The PHD-4001A is a multi-purpose, high-performance probe which can be used for VF-TLP/TLP/HMM/HBM force/sense probing, as well as general RF measurements using the GGB Picoprobe Model 10<sup>®</sup> replacement probetips.

Fig. 1 shows a typical application. The measurement bandwidth of the probing system is DC - 7 GHz for high pulse currents in the range of e.g. 120 A at 500 ns pulse width. The PHD-4001A was designed to be attached to any micropositioner for use on any probe station. The coaxial buried cable channel enables sealing of the probe for use in insulated thermo-chuck/chambers. The PHD-4001A will be shipped with 1 m cable length for pulse sense and 0.2 m cable length for pulse force, and components as listed in Sect. 3. The short cable is useful if the probe is used for pulse force with the current sensor connected as close as possible to the device-under-test. Custom probe-arm or cable length are available on request.



Figure 1: PHD-4001A typical application<sup>1</sup>

<sup>1</sup>Image source: <https://www.emft.fraunhofer.de/en/applications/2-pin-test-system-electrical-testing.html>, ©Fraunhofer EMFT/Bernd Müller.

# Compact Probe Kit PHD-4001A

Advanced TLP/HMM/HBM Solutions

Fig. 2 shows left- and right-sided arrangement to ensure ease access to the elevation adjustment screws in front of the wafer probing station.

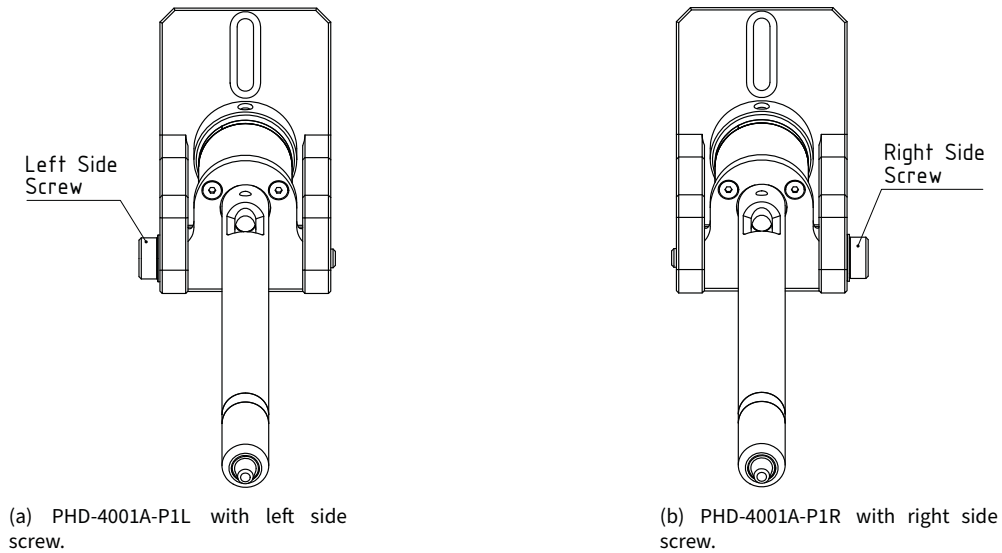


Figure 2: PHD-4001A with left sided (PHD-4001A-P1L) and right sided (PHD-4001A-P1R) screw, for better usability on the wafer probing station if the probe is located on the left or right side. If the probe is mounted on the left side on the wafer prober, the PHD-4001AL type is recommended.

Fig. 3 shows a PHD-4001A (left-sided) on a Cascade Microtech Elite 300™ probe station. Sealing of the chamber feed-through can be realized using the sealing kit PHD-4001-TH-Seal.

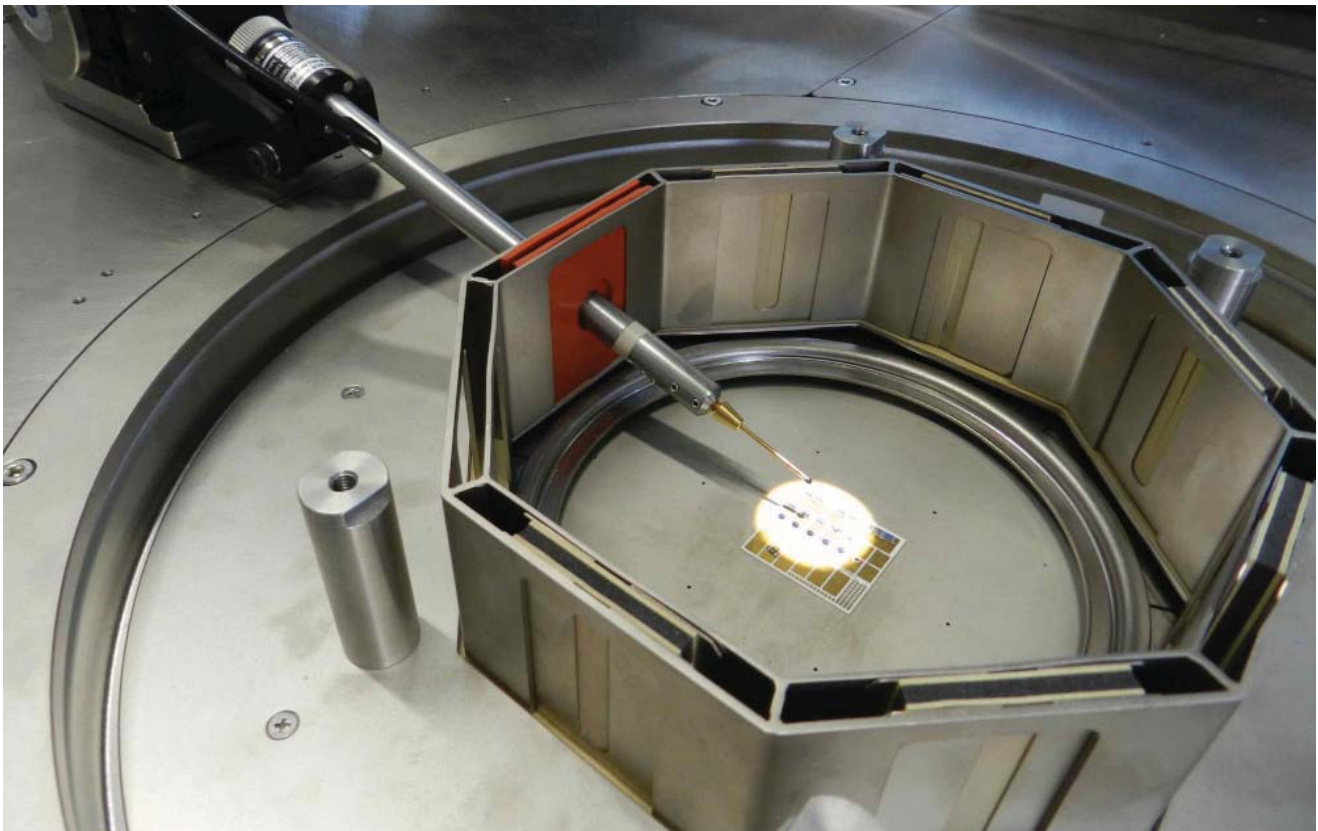


Figure 3: PHD-4001A (left-sided) on a Cascade Microtech Elite 300™ probe station. Sealing-Kit: [PHD-4001-TH-Seal](#)

# Compact Probe Kit PHD-4001A

Advanced TLP/HMM/HBM Solutions

## 2.1 Physical Dimensions

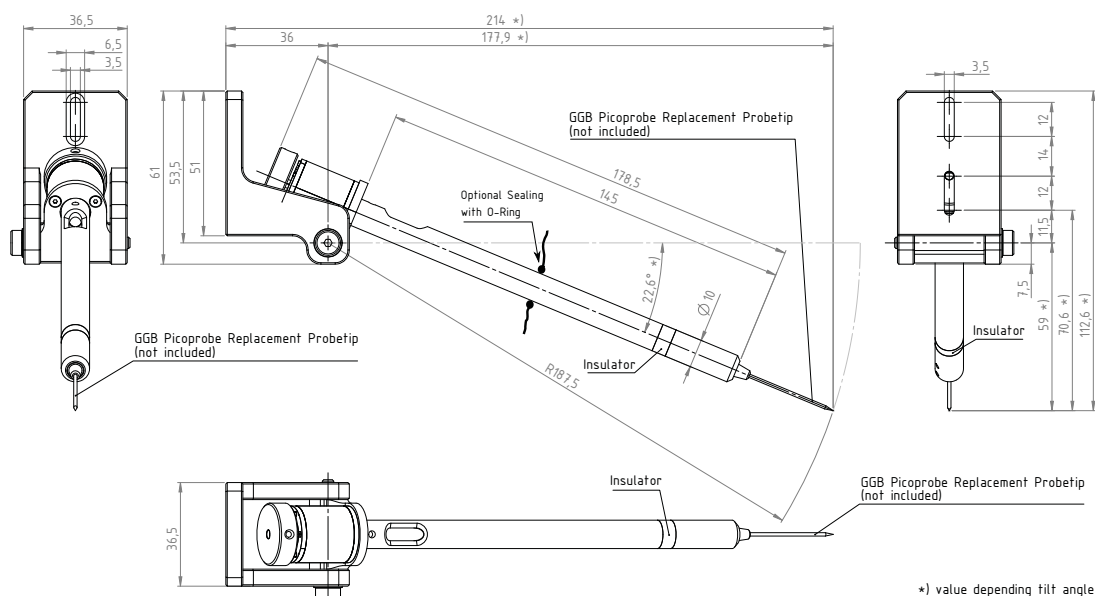


Figure 4: Physical dimensions PHD-4001A-P1L in [mm].

## 3 List of Parts

The Precision Picoprobe™ Micropositioner Kit PHD-4001A consists of the following parts:

Qty.	Description	Part No.
1	Micromanipulator interface (right sided)	PHD-4001A-P1R
1	Micromanipulator interface (left sided)	PHD-4001A-P1L
2	Picoprobe™ Model 10 including SMA 50 Ω cables (1 m and 0.2 m length)	PHD-4001A-PM10
2	Fixed pitch replacement probe tip 50 Ω, right, 100 μm pad pitch	10-50/30-125-W-2-R-100
2	Fixed pitch replacement probe tip 5 kΩ, left, 100 μm pad pitch	10-5k(0502)-125-W-2-L-100
2	Flex pitch pulse force replacement probe tip 50 Ω	10-50/30-125-W-1
2	Flex pitch pulse sense replacement probe tip 5 kΩ	10-5k(0502)-125-W-1
1	GND fixture clamp set, 2 clamps, right- and left sided, including 2 tungsten needles	GF-A

## 4 Ordering Information

Pos.	Description	Part No.
01	PHD-4001A Probe Kit	PHD-4001A
02	Sealing Kit (optional)	PHD-4001-TH-Seal

### General

The product data contained in this data-sheet is exclusively intended for technically trained staff. You and your technical departments will have to evaluate the suitability of the product for the intended application and the completeness of the product data with respect to such application. Our products are solely intended to be commercially used internally and should not be sold to consumers. This data-sheet is describing the specifications of our products for which a warranty is being granted by HPPI GmbH. Any such warranty is granted exclusively pursuant to the terms and conditions of the respective supply agreement. There will be no guarantee of any kind for the product and its specifications. For further information on technology, specific applications of our product, delivery terms, conditions and prices please contact HPPI:

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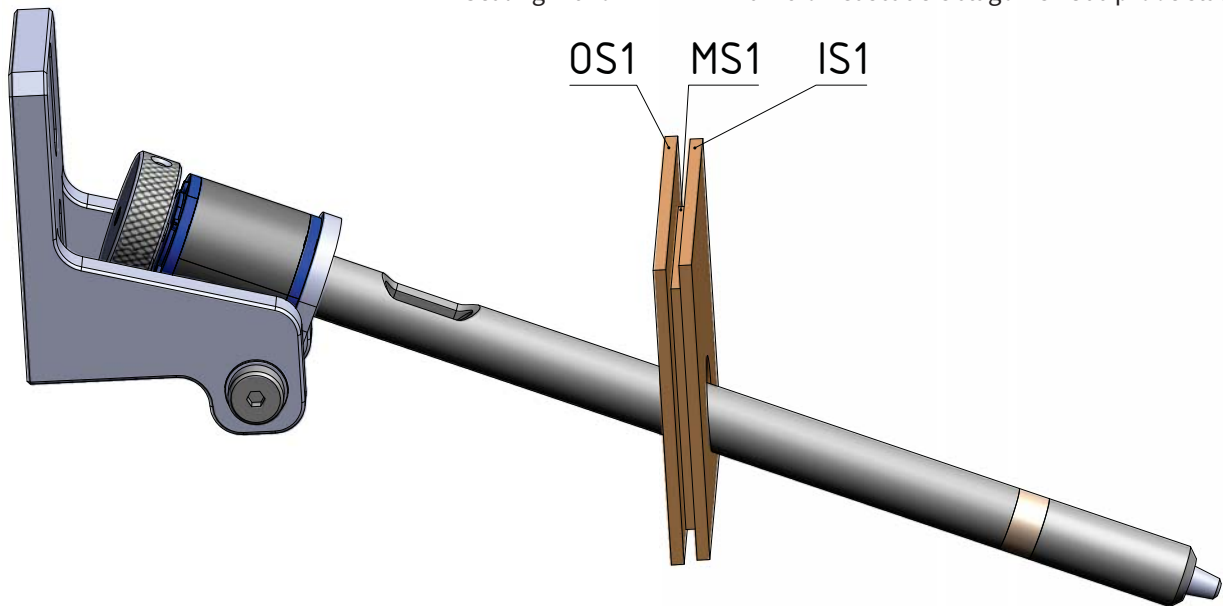
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# Sealing Kit PHD-4001-TH-Seal

Advanced TLP/HMM/HBM Solutions

## 1 Features

- Sealing Kit for PHD-PPM10-H9 on Cascade Octagon CM300 probe station



## 2 Description

Fig. 1 shows the physical dimensions and arrangement of the sealing kit. Fig. 2 shows the typical arrangement on the octagon CM300 wafer prober.

In case of no feed-through is required, the hole can be closed by rotating the MS1 by 180°.

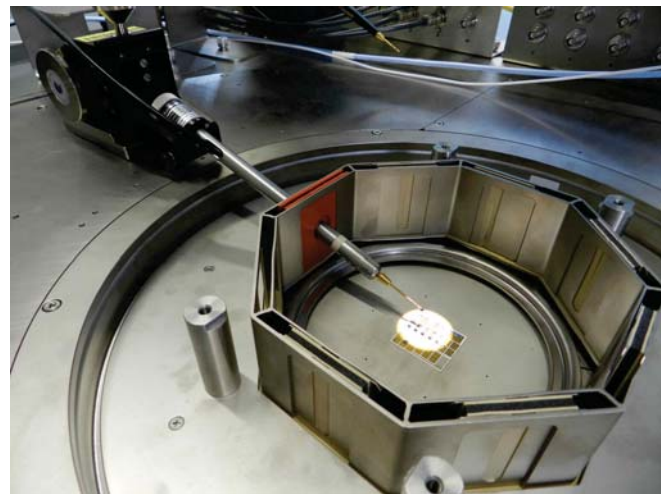


Figure 2: Typical application on CM300 probe station

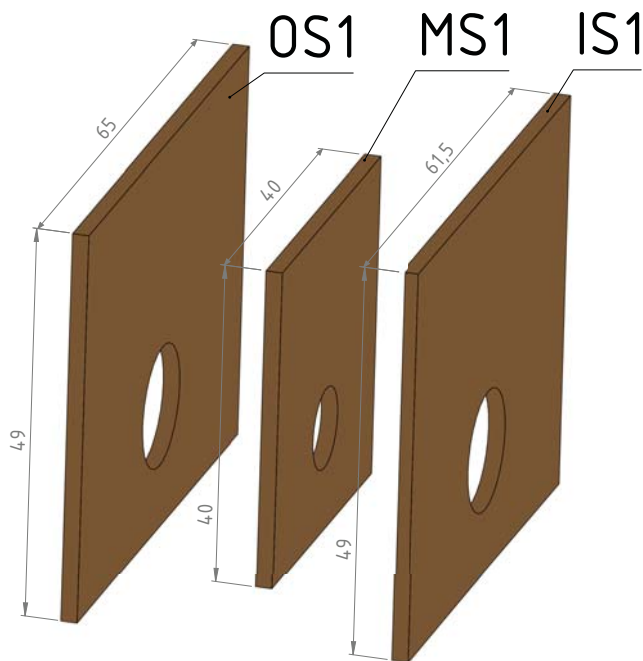


Figure 1: Physical dimensions PHD-4001-TH-Seal in [mm]

## 3 Ordering Information

Pos.	Description	Part No.
01	Sealing Kit OS1/MS1/IS1	PHD-4001-TH-Seal

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