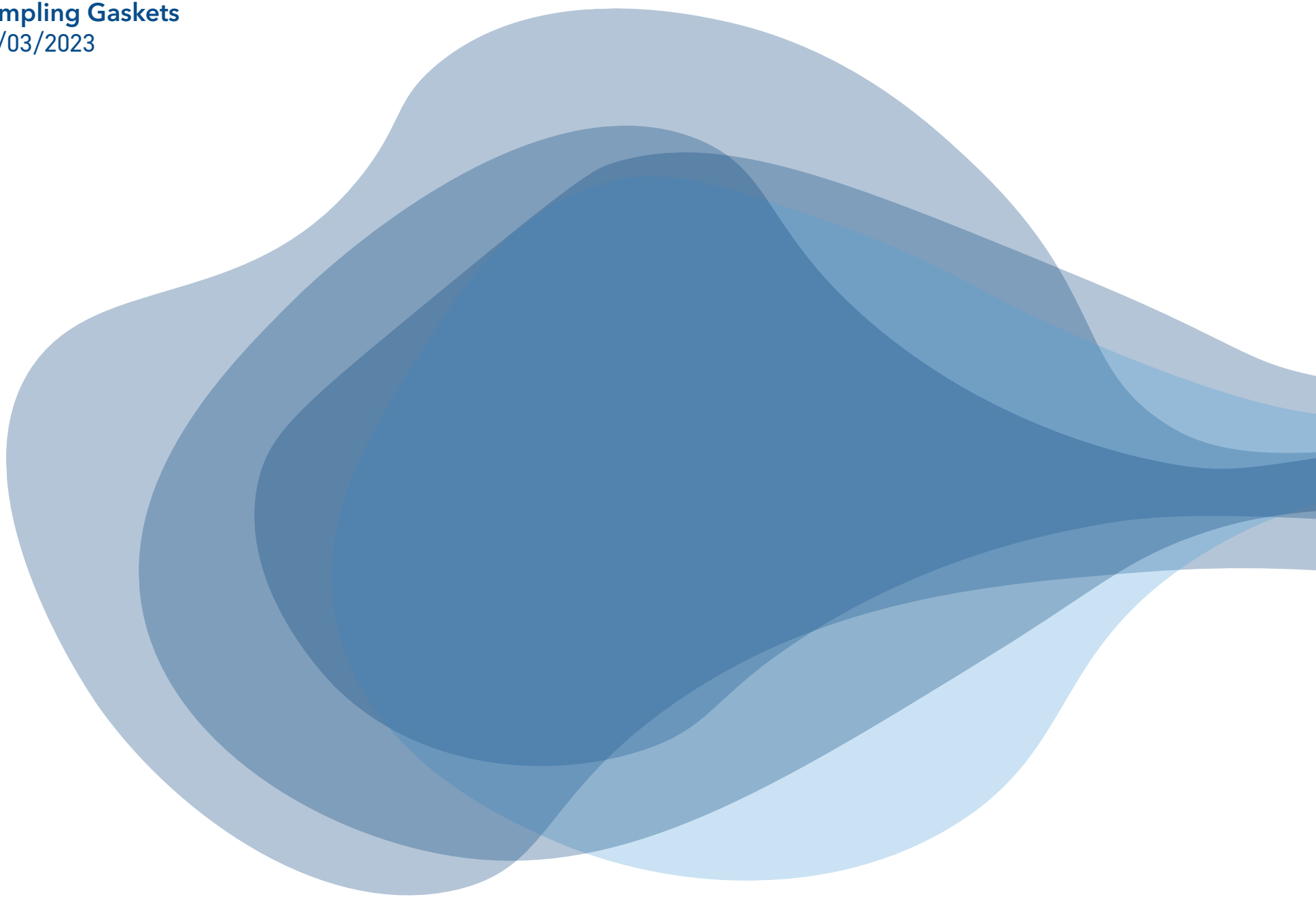


# Sampling Gaskets

Property of Ultrapharma BV

# Sampling Gaskets
30/03/2023



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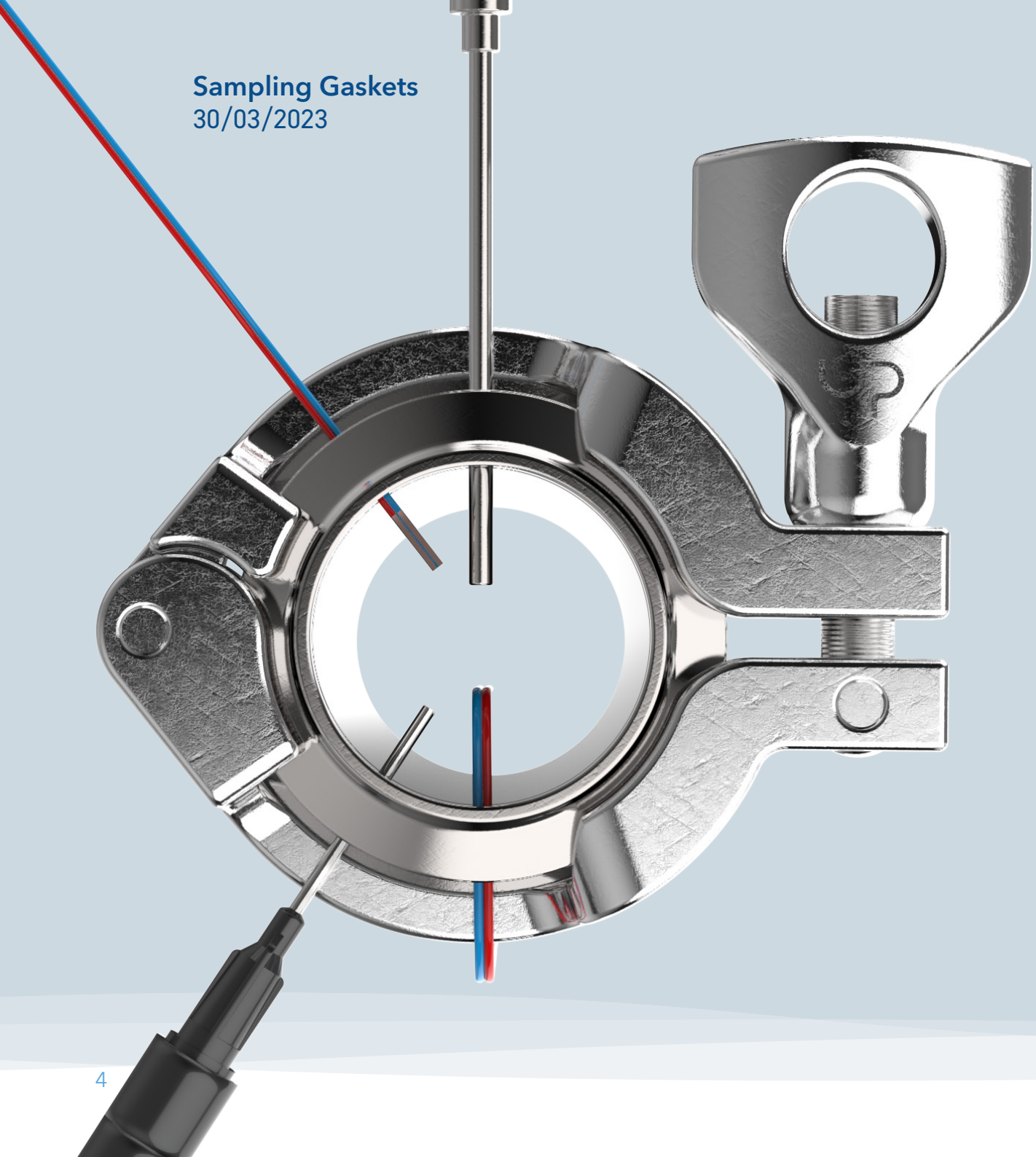


## 1. Introduction

Sampling gaskets are used for thermal mapping during validation. They can also be used to draw samples from the pipeline by means of a sampling tube.

A standard sanitary Tri-Clamp flange utilizing the Sampling Thermocouple Gasket obtains the critical thermal mapping information needed during the validation process without interference due to incorrect installation.

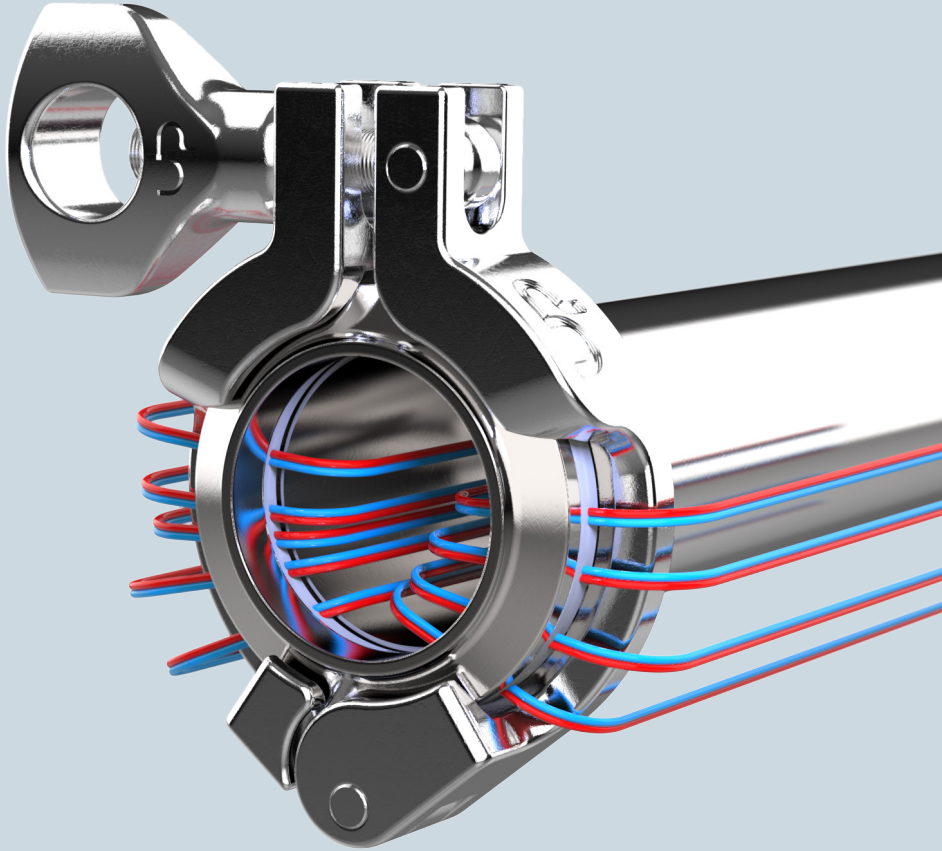
## 2. NEW - The Allport Sampling Clamp

The new standard in sampling: The Allport sampling clamp.

Our engineers at Ultrapharma always try to think out of the box, to make products and processes easier for you. Conventional products may work well, but there is always room for improvement. Like the sampling clamps with the standard 1, 2, 3 and 4 ports, always positioned in the same angles. This makes you very limited in sampling space and a specific clamp is only useful for one configuration.

This is why we introduce the Allport sampling clamp; a half open clamp that can be used for 1, 2, 3, 4 or as many ports as you want. So no need for different clamps, the Allport clamp is useful for all configurations. Combined with new gaskets where we repositioned the ports, which provides more workspace and much easier assembly.

We made sure that in our new configurations the ports are placed in the best position for accessibility and the least obstruction. If you frequently use 3 or 4 ports, you'll probably recognize the problems of difficult alignment or the wingnut that is obstructing your probe.



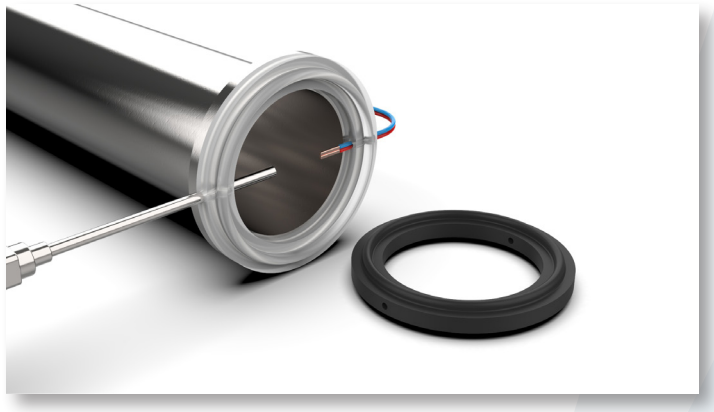


## 3. New vs Old

Besides producing the new Allport clamp, we will continue to manufacture the former 1/2/3/4-Port Clamps.

Therefore, we will also continue to produce the former suitable gaskets to the associated clamps.

However, as described in part 2 of this Brochure, the new Allport-Clamp offers the possiblility to add 4+ ports to the gasket. Therefore, in addition to our current sampling gasket assortment, we added a new gasketline which can easily be used with the newest asset of our assortment: The Allport-Clamp.



## 4. Materials

The Sampling gasket is 2x the thickness of a standard Tri-Clamp gasket and can therefore hold a probe with a 2,65 mm diameter. This probe can be a thermocouple a sampling tube or a thermocouple wire.

As the gasket is twice the thickness of a standard gasket a special clamp is required. Clamps are available with the number of ports matching the gaskets. Keep in mind that a 2 port clamp can also be used for a 1 port gasket application. If however one of the ports of the gaskets is not used, you need to use a hole plug to avoid leaking.

| | |
|---|---|
| **Platinum Silicone** | **CMD-1012**<br>FDA CFR 177.2600 / ADIF / USP Class VI / EP 3.1.9 |
| **EPDM** | **CMD-1004**<br>FDA CFR 177.2600 / ADIF / USP Class VI |

## EPDM (CMD-1004)

EPDM, Ethylene Propylene Diene Monomer, is an "M" class synthetic rubber elastomer. The M class comprises elastomers having a saturated chain of the polyethylene type (the M deriving from the more correct term polymethylene) EPDM is one of the most popular and versatile polymer in sealing applications. It remains flexible in a wide range of temperatures, this is why it has excellent sealing capacities.

Chemically, EPDM has good resistance to animal oils, vegetable oils, ozone, strong chemicals, and oxidizing chemicals. Do not use EPDM gaskets for mineral oils, solvents, or aromatic hydrocarbons.



**General Advice**

SIP --------- Good short exposure
CIP ---------- Good
Minerals Oils & Grease ----- Poor
WFI ---------- Good
Sterilization ---------- Excellent
Stam sterilization ---------- Good

**Working temperature and pressure**
The working range of CMD-1004 is -40°C to 150°C short 150°C. The gaskets can be used up to 10 Bar at 20°C.

| Typical general characteristics | Inspection Method | Requirements | Value |
|---|---|---|---|
| Hardness (Shore A) | ASTM D2240 | 70±5 | 74 |
| Tensile strength (MPa) | ASTM D412-06 | 7.0(min) | 10.7 |
| Elongation (%) | ASTM D412-06 | 150 (min) | 187 |
| Compression set, 22hrs @ 150°C | ASTM D395/B | 20% | 8.5 |
| Specific Gravity (g/cm³) | | | 1.156 |

## Platinum Silicone (CMD-1012)

Silicone is widely used in pharmaceutical applications for two major reasons. First, and foremost, is safety. Silicone does not contain plasticizers or other additives that could leach into a drug product and cause toxicological issues. Second, silicone is highly flexible and tear-resistant, making it a good choice for sealing fluids in downstream processes.

In order to make silicone gaskets there are two cure system options with silicones, however, that produces materials with different characteristics, whose impact should be considered before selection. Silicone materials may be cured using free radical (peroxide) or addition (platinum) cure mechanisms.

Platinum-cured and peroxide-cured silicone gaskets can both be made to USP Class VI and other industry specifications, but a platinum-cured gasket has a higher purity and lower leachability than peroxide-cured silicone.



**General Advice**

SIP ----------Very good
CIP ---------- Very good
Minerals Oils & Grease ------ Bad
WFI ---------- Good
Sterilization ---------- Excellent
Steam Sterilization------- Excellent

**Working temperature and pressure**
The working range of platinum silicone is -60°C to 200°C. Platinum Silicone gaskets can be used up to 10 Bar at 20°C.

| Typical general characteristics | Inspection Method | Requirements | Value |
|---|---|---|---|
| Hardness (Shore A) | ASTM D2240-04 | 70±5 | 71 |
| Appearance | | | Transparent |
| Tensile strength (N/mm²) | DIN 53504 | ≥ 7.0 N/mm2 | 9.2 N/mm2 |
| Elongation (%) | ISO 37 | ≥ 400 % | 620 % |
| Tear strength (N/mm) | ASTM D 624 B | ≥ 35.0 N/mm | 40.9 N/mm |
| Specific Gravity | ISO 1183-1 | | 1.18 g/cm³ |
| Compression set (22h@175°C, DIN ISO 815-B) | | | 10 % |

## 5. Gasket size options

DIN32676 Series C (ASME BPE) EPDM Platinum Silicone

| DN | Article Number | Article Number | Ports | Size |
|---|---|---|---|---|
| 1/2'' | UP-G-TH-050-E-1 | UP-G-TH-050-S-1 | 1 port | 22 x 10.8 |
| 1/2'' | UP-G-TH-050-E-2 | UP-G-TH-050-S-2 | 2 ports | 22 x 10.8 |
| 1/2'' | UP-G-TH-050-E-3 | UP-G-TH-050-S-3 | 3 ports | 22 x 10.8 |
| 1/2'' | UP-G-TH-050-E-4 | UP-G-TH-050-S-4 | 4 ports | 22 x 10.8 |

| DN | Article Number | Article Number | Ports | Size |
|---|---|---|---|---|
| 3/4'' | UP-G-TH-075-E-1 | UP-G-TH-075-S-1 | 1 port | 22 x 16.2 |
| 3/4'' | UP-G-TH-075-E-2 | UP-G-TH-075-S-2 | 2 ports | 22 x 16.2 |
| 3/4'' | UP-G-TH-075-E-3 | UP-G-TH-075-S-3 | 3 ports | 22 x 16.2 |
| 3/4'' | UP-G-TH-075-E-4 | UP-G-TH-075-S-4 | 4 ports | 22 x 16.2 |

| DN | Article Number | Article Number | Ports | Size |
|---|---|---|---|---|
| 1'' | UP-G-TH-100-E-1 | UP-G-TH-100-S-1 | 1 port | 50.5 x 22.5 |
| 1'' | UP-G-TH-100-E-2 | UP-G-TH-100-S-2 | 2 ports | 50.5 x 22.5 |
| 1'' | UP-G-TH-100-E-3 | UP-G-TH-100-S-3 | 3 ports | 50.5 x 22.5 |
| 1'' | UP-G-TH-100-E-3-V2 | UP-G-TH-100-S-3-V2 | 3 ports (Allport Clamp) | 50.5 x 22.5 |
| 1'' | UP-G-TH-100-E-4 | UP-G-TH-100-S-4 | 4 ports | 50.5 x 22.5 |
| 1'' | UP-G-TH-100-E-4-V2 | UP-G-TH-100-S-4-V2 | 4 ports (Allport Clamp) | 50.5 x 22.5 |

| DN | Article Number | Article Number | Ports | Size |
|---|---|---|---|---|
| 1.5'' | UP-G-TH-150-E-1 | UP-G-TH-150-S-1 | 1 port | 50.5 x 35.3 |
| 1.5'' | UP-G-TH-150-E-2 | UP-G-TH-150-S-2 | 2 ports | 50.5 x 35.3 |
| 1.5'' | UP-G-TH-150-E-3 | UP-G-TH-150-S-3 | 3 ports | 50.5 x 35.3 |
| 1.5'' | UP-G-TH-150-E-3-V2 | UP-G-TH-150-S-3-V2 | 3 ports (Allport Clamp) | 50.5 x 35.3 |
| 1.5'' | UP-G-TH-150-E-4 | UP-G-TH-150-S-4 | 4 ports | 50.5 x 35.3 |
| 1.5'' | UP-G-TH-150-E-4-V2 | UP-G-TH-150-S-4-V2 | 4 ports (Allport Clamp) | 50.5 x 35.3 |



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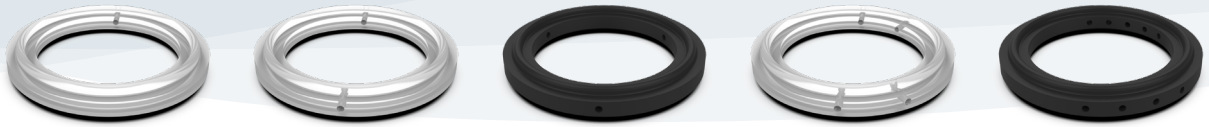
DIN32676 Series C (ASME BPE) EPDM Platinum Silicone

| DN | Article Number | Article Number | Ports | Size |
|---|---|---|---|---|
| 2'' | UP-G-TH-200-E-1 | UP-G-TH-200-S-1 | 1 port | 64 x 47.8 |
| 2'' | UP-G-TH-200-E-2 | UP-G-TH-200-S-2 | 2 ports | 64 x 47.8 |
| 2'' | UP-G-TH-200-E-3 | UP-G-TH-200-S-3 | 3 ports | 64 x 47.8 |
| 2'' | UP-G-TH-200-E-4 | UP-G-TH-200-S-4 | 4 ports | 64 x 47.8 |

| DN | Article Number | Article Number | Ports | Size |
|---|---|---|---|---|
| 2.5'' | UP-G-TH-250-E-1 | UP-G-TH-250-S-1 | 1 port | 77.5 x 61 |
| 2.5'' | UP-G-TH-250-E-2 | UP-G-TH-250-S-2 | 2 ports | 77.5 x 61 |
| 2.5'' | UP-G-TH-250-E-3 | UP-G-TH-250-S-3 | 3 ports | 77.5 x 61 |
| 2.5'' | UP-G-TH-250-E-4 | UP-G-TH-250-S-4 | 4 ports | 77.5 x 61 |

| DN | Article Number | Article Number | Ports | Size |
|---|---|---|---|---|
| 3'' | UP-G-TH-300-E-1 | UP-G-TH-300-S-1 | 1 port | 91 x 73.5 |
| 3'' | UP-G-TH-300-E-2 | UP-G-TH-300-S-2 | 2 ports | 91 x 73.5 |
| 3'' | UP-G-TH-300-E-3 | UP-G-TH-300-S-3 | 3 ports | 91 x 73.5 |
| 3'' | UP-G-TH-300-E-4 | UP-G-TH-300-S-4 | 4 ports | 91 x 73.5 |

| DN | Article Number | Article Number | Ports | Size |
|---|---|---|---|---|
| 4'' | UP-G-TH-400-E-1 | UP-G-TH-400-S-1 | 1 port | 119 x 98.2 |
| 4'' | UP-G-TH-400-E-2 | UP-G-TH-400-S-2 | 2 ports | 119 x 98.2 |
| 4'' | UP-G-TH-400-E-3 | UP-G-TH-400-S-3 | 3 ports | 119 x 98.2 |
| 4'' | UP-G-TH-400-E-4 | UP-G-TH-400-S-4 | 4 ports | 119 x 98.2 |



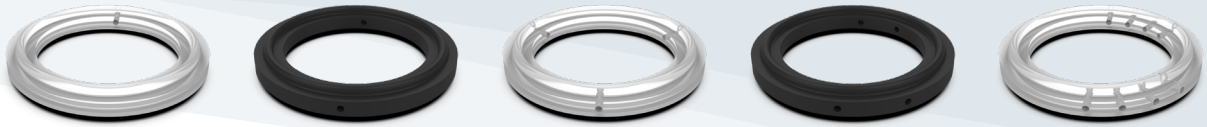
DIN32676 Series A EPDM Platinum Silicone

| DN | Article Number | Article Number | Ports | Size |
|---|---|---|---|---|
| DN20 | UP32G-TH-DN20-E-1 | UP32G-TH-DN20-S-1 | 1 port | 34 x 20.2 |
| DN20 | UP32G-TH-DN20-E-2 | UP32G-TH-DN20-S-2 | 2 ports | 34 x 20.2 |
| DN20 | UP32G-TH-DN20-E-3 | UP32G-TH-DN20-S-3 | 3 ports | 34 x 20.2 |
| DN20 | UP32G-TH-DN20-E-4 | UP32G-TH-DN20-S-4 | 4 ports | 34 x 20.2 |

| DN | Article Number | Article Number | Ports | Size |
|---|---|---|---|---|
| 50.5-DN20 | UP32G-TH-50.5-DN20-E-1 | UP32G-TH-50.5-DN20-S-1 | 1 port | 50.5 x 20.2 |
| 50.5-DN20 | UP32G-TH-50.5-DN20-E-2 | UP32G-TH-50.5-DN20-S-2 | 2 ports | 50.5 x 20.2 |
| 50.5-DN20 | UP32G-TH-50.5-DN20-E-3 | UP32G-TH-50.5-DN20-S-3 | 3 ports | 50.5 x 20.2 |
| 50.5-DN20 | UP32G-TH-50.5-DN20-E-3-V2 | UP32G-TH-50.5-DN20-S-3-V2 | 3 ports (Allport Clamp) | 50.5 x 20.2 |
| 50.5-DN20 | UP32G-TH-50.5-DN20-E-4 | UP32G-TH-50.5-DN20-S-4 | 4 ports | 50.5 x 20.2 |
| 50.5-DN20 | UP32G-TH-50.5-DN20-E-4-V2 | UP32G-TH-50.5-DN20-S-4-V2 | 4 ports (Allport Clamp) | 50.5 x 20.2 |

| DN | Article Number | Article Number | Ports | Size |
|---|---|---|---|---|
| DN25 | UP32G-TH-DN25-E-1 | UP32G-TH-DN25-S-1 | 1 port | 50.5 x 26.2 |
| DN25 | UP32G-TH-DN25-E-2 | UP32G-TH-DN25-S-2 | 2 ports | 50.5 x 26.2 |
| DN25 | UP32G-TH-DN25-E-3 | UP32G-TH-DN25-S-3 | 3 ports | 50.5 x 26.2 |
| DN25 | UP32G-TH-DN25-E-3-V2 | UP32G-TH-DN25-S-3-V2 | 3 ports (Allport Clamp) | 50.5 x 26.2 |
| DN25 | UP32G-TH-DN25-E-4 | UP32G-TH-DN25-S-4 | 4 ports | 50.5 x 26.2 |
| DN25 | UP32G-TH-DN25-E-4-V2 | UP32G-TH-DN25-S-4-V2 | 4 ports (Allport Clamp) | 50.5 x 26.2 |

| DN | Article Number | Article Number | Ports | Size |
|---|---|---|---|---|
| DN32 | UP32G-TH-DN32-E-1 | UP32G-TH-DN32-S-1 | 1 port | 50.5 x 32.2 |
| DN32 | UP32G-TH-DN32-E-2 | UP32G-TH-DN32-S-2 | 2 ports | 50.5 x 32.2 |
| DN32 | UP32G-TH-DN32-E-3 | UP32G-TH-DN32-S-3 | 3 ports | 50.5 x 32.2 |
| DN32 | UP32G-TH-DN32-E-3-V2 | UP32G-TH-DN32-S-3-V2 | 3 ports (Allport Clamp) | 50.5 x 32.2 |
| DN32 | UP32G-TH-DN32-E-4 | UP32G-TH-DN32-S-4 | 4 ports | 50.5 x 32.2 |
| DN32 | UP32G-TH-DN32-E-4-V2 | UP32G-TH-DN32-S-4-V2 | 4 ports (Allport Clamp) | 50.5 x 32.2 |



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DIN32676 Series A EPDM Platinum Silicone

| DN | Article Number | Article Number | Ports | Size |
|---|---|---|---|---|
| DN40 | UP32G-TH-DN40-E-1 | UP32G-TH-DN40-S-1 | 1 port | 50.5 x 38.2 |
| DN40 | UP32G-TH-DN40-E-2 | UP32G-TH-DN40-S-2 | 2 ports | 50.5 x 38.2 |
| DN40 | UP32G-TH-DN40-E-3 | UP32G-TH-DN40-S-3 | 3 ports | 50.5 x 38.2 |
| DN40 | UP32G-TH-DN40-E-3-V2 | UP32G-TH-DN40-S-3-V2 | 3 ports (Allport Clamp) | 50.5 x 38.2 |
| DN40 | UP32G-TH-DN40-E-4 | UP32G-TH-DN40-S-4 | 4 ports | 50.5 x 38.2 |
| DN40 | UP32G-TH-DN40-E-4-V2 | UP32G-TH-DN40-S-4-V2 | 4 ports (Allport Clamp) | 50.5 x 38.2 |

| DN | Article Number | Article Number | Ports | Size |
|---|---|---|---|---|
| DN50 | UP32G-TH-DN50-E-1 | UP32G-TH-DN50-S-1 | 1 port | 64 x 50.2 |
| DN50 | UP32G-TH-DN50-E-2 | UP32G-TH-DN50-S-2 | 2 ports | 64 x 50.2 |
| DN50 | UP32G-TH-DN50-E-3 | UP32G-TH-DN50-S-3 | 3 ports | 64 x 50.2 |
| DN50 | UP32G-TH-DN50-E-4 | UP32G-TH-DN50-S-4 | 4 ports | 64 x 50.2 |

| DN | Article Number | Article Number | Ports | Size |
|---|---|---|---|---|
| DN65 | UP32G-TH-DN65-E-1 | UP32G-TH-DN65-S-1 | 1 port | 91 x 66.2 |
| DN65 | UP32G-TH-DN65-E-2 | UP32G-TH-DN65-S-2 | 2 ports | 91 x 66.2 |
| DN65 | UP32G-TH-DN65-E-3 | UP32G-TH-DN65-S-3 | 3 ports | 91 x 66.2 |
| DN65 | UP32G-TH-DN65-E-4 | UP32G-TH-DN65-S-4 | 4 ports | 91 x 66.2 |

| DN | Article Number | Article Number | Ports | Size |
|---|---|---|---|---|
| DN100 | UP32G-TH-DN100-E-1 | UP32G-TH-DN100-S-1 | 1 port | 119 x 100.2 |
| DN100 | UP32G-TH-DN100-E-2 | UP32G-TH-DN100-S-2 | 2 ports | 119 x 100.2 |
| DN100 | UP32G-TH-DN100-E-3 | UP32G-TH-DN100-S-3 | 3 ports | 119 x 100.2 |
| DN100 | UP32G-TH-DN100-E-4 | UP32G-TH-DN100-S-4 | 4 ports | 119 x 100.2 |



DIN32676 Series B (ISO 1127) EPDM Platinum Silicone

| DN | Article Number | Article Number | Ports | Size |
|---|---|---|---|---|
| DN15 | UP11G-TH-DN15-E-1 | UP11G-TH-DN15-S-1 | 1 port | 34 x 18.2 |
| DN15 | UP11G-TH-DN15-E-2 | UP11G-TH-DN15-S-2 | 2 ports | 34 x 18.2 |
| DN15 | UP11G-TH-DN15-E-3 | UP11G-TH-DN15-S-3 | 3 ports | 34 x 18.2 |
| DN15 | UP11G-TH-DN15-E-4 | UP11G-TH-DN15-S-4 | 4 ports | 34 x 18.2 |

| DN | Article Number | Article Number | Ports | Size |
|---|---|---|---|---|
| 50.5-DN15 | UP11G-TH-50.5-DN15-E-1 | UP11G-TH-50.5-DN15-S-1 | 1 port | 50.5 x 18.4 |
| 50.5-DN15 | UP11G-TH-50.5-DN15-E-2 | UP11G-TH-50.5-DN15-S-2 | 2 ports | 50.5 x 18.4 |
| 50.5-DN15 | UP11G-TH-50.5-DN15-E-3 | UP11G-TH-50.5-DN15-S-3 | 3 ports | 50.5 x 18.4 |
| 50.5-DN15 | UP11G-TH-50.5-DN15-E-3-V2 | UP11G-TH-50.5-DN15-S-3-V2 | 3 ports (Allport Clamp) | 50.5 x 18.4 |
| 50.5-DN15 | UP11G-TH-50.5-DN15-E-4 | UP11G-TH-50.5-DN15-S-4 | 4 ports | 50.5 x 18.4 |
| 50.5-DN15 | UP11G-TH-50.5-DN15-E-4-V2 | UP11G-TH-50.5-DN15-S-4-V2 | 4 ports (Allport Clamp) | 50.5 x 18.4 |

| DN | Article Number | Article Number | Ports | Size |
|---|---|---|---|---|
| DN20 | UP11G-TH-DN20-E-1 | UP11G-TH-DN20-S-1 | 1 port | 50.5 x 23.9 |
| DN20 | UP11G-TH-DN20-E-2 | UP11G-TH-DN20-S-2 | 2 ports | 50.5 x 23.9 |
| DN20 | UP11G-TH-DN20-E-3 | UP11G-TH-DN20-S-3 | 3 ports | 50.5 x 23.9 |
| DN20 | UP11G-TH-DN20-E-3-V2 | UP11G-TH-DN20-S-3-V2 | 3 ports (Allport Clamp) | 50.5 x 23.9 |
| DN20 | UP11G-TH-DN20-E-4 | UP11G-TH-DN20-S-4 | 4 ports | 50.5 x 23.9 |
| DN20 | UP11G-TH-DN20-E-4-V2 | UP11G-TH-DN20-S-4-V2 | 4 ports (Allport Clamp) | 50.5 x 23.9 |

| DN | Article Number | Article Number | Ports | Size |
|---|---|---|---|---|
| DN25 | UP11G-TH-DN25-E-1 | UP11G-TH-DN25-S-1 | 1 port | 50.5 x 29.9 |
| DN25 | UP11G-TH-DN25-E-2 | UP11G-TH-DN25-S-2 | 2 ports | 50.5 x 29.9 |
| DN25 | UP11G-TH-DN25-E-3 | UP11G-TH-DN25-S-3 | 3 ports | 50.5 x 29.9 |
| DN25 | UP11G-TH-DN25-E-3-V2 | UP11G-TH-DN25-S-3-V2 | 3 ports (Allport Clamp) | 50.5 x 29.9 |
| DN25 | UP11G-TH-DN25-E-4 | UP11G-TH-DN25-S-4 | 4 ports | 50.5 x 29.9 |
| DN25 | UP11G-TH-DN25-E-4-V2 | UP11G-TH-DN25-S-4-V2 | 4 ports (Allport Clamp) | 50.5 x 29.9 |



# Sampling Gaskets
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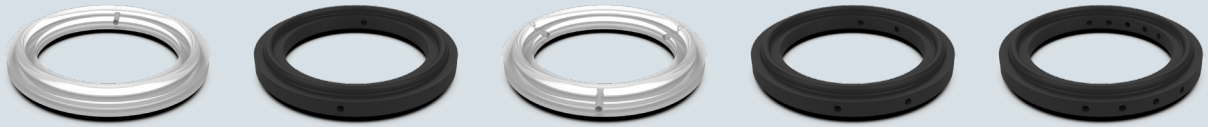
DIN32676 Series B (ISO 1127) EPDM Platinum Silicone

| DN | Article Number | Article Number | Ports | Size |
|---|---|---|---|---|
| DN32 | UP11G-TH-DN32-E-1 | UP11G-TH-DN32-S-1 | 1 port | 64 x 38.6 |
| DN32 | UP11G-TH-DN32-E-2 | UP11G-TH-DN32-S-2 | 2 ports | 64 x 38.6 |
| DN32 | UP11G-TH-DN32-E-3 | UP11G-TH-DN32-S-3 | 3 ports | 64 x 38.6 |
| DN32 | UP11G-TH-DN32-E-4 | UP11G-TH-DN32-S-4 | 4 ports | 64 x 38.6 |

| DN | Article Number | Article Number | Ports | Size |
|---|---|---|---|---|
| DN40 | UP11G-TH-DN40-E-1 | UP11G-TH-DN40-S-1 | 1 port | 64 x 44.5 |
| DN40 | UP11G-TH-DN40-E-2 | UP11G-TH-DN40-S-2 | 2 ports | 64 x 44.5 |
| DN40 | UP11G-TH-DN40-E-3 | UP11G-TH-DN40-S-3 | 3 ports | 64 x 44.5 |
| DN40 | UP11G-TH-DN40-E-4 | UP11G-TH-DN40-S-4 | 4 ports | 64 x 44.5 |

| DN | Article Number | Article Number | Ports | Size |
|---|---|---|---|---|
| DN50 | UP11G-TH-DN50-E-1 | UP11G-TH-DN50-S-1 | 1 port | 77.5 x 56.5 |
| DN50 | UP11G-TH-DN50-E-2 | UP11G-TH-DN50-S-2 | 2 ports | 77.5 x 56.5 |
| DN50 | UP11G-TH-DN50-E-3 | UP11G-TH-DN50-S-3 | 3 ports | 77.5 x 56.5 |
| DN50 | UP11G-TH-DN50-E-4 | UP11G-TH-DN50-S-4 | 4 ports | 77.5 x 56.5 |

| DN | Article Number | Article Number | Ports | Size |
|---|---|---|---|---|
| DN65 | UP11G-TH-DN65-E-1 | UP11G-TH-DN65-S-1 | 1 port | 91 x 72.3 |
| DN65 | UP11G-TH-DN65-E-2 | UP11G-TH-DN65-S-2 | 2 ports | 91 x 72.3 |
| DN65 | UP11G-TH-DN65-E-3 | UP11G-TH-DN65-S-3 | 3 ports | 91 x 72.3 |
| DN66 | UP11G-TH-DN65-E-4 | UP11G-TH-DN65-S-4 | 4 ports | 91 x 72.3 |



## 6. Clamp sizes



| DN | Article Number | Ports | Size |
|---|---|---|---|
| 1'' - 1.5'' | CL-TH-100/150-ALLPORT | 1/2/3/4+ ports | 50.5 mm |

*Additional sizes are under development, special sized upon request.

| DN | Article Number | Ports | Size |
|---|---|---|---|
| 1/2'' - 3/4'' | CL-TH-050/075-1P | 1 port | 25 mm |
| 1/2'' - 3/4'' | CL-TH-050/075-2P | 2 ports | 25 mm |
| 1/2'' - 3/4'' | CL-TH-050/075-3P | 3 ports | 25 mm |
| 1/2'' - 3/4'' | CL-TH-050/075-4P | 4 ports | 25 mm |

| DN | Article Number | Ports | Size |
|---|---|---|---|
| DN15 | CL-TH-034-2P | 2 ports | 34 mm |
| DN15 | CL-TH-034-3P | 3 ports | 34 mm |
| DN15 | CL-TH-034-4P | 4 ports | 34 mm |

| DN | Article Number | Ports | Size |
|---|---|---|---|
| 1'' - 1.5'' | CL-TH-100/150-1P | 1 port | 50.5 mm |
| 1'' - 1.5'' | CL-TH-100/150-2P | 2 ports | 50.5 mm |
| 1'' - 1.5'' | CL-TH-100/150-3P | 3 ports | 50.5 mm |
| 1'' - 1.5'' | CL-TH-100/150-4P | 4 ports | 50.5 mm |

# Sampling Gaskets

30/03/2023

| DN | Article Number | Ports | Size |
|---|---|---|---|
| 2'' | CL-TH-200-1P | 1 port | 64 mm |
| 2'' | CL-TH-200-2P | 2 ports | 64 mm |
| 2'' | CL-TH-200-3P | 3 ports | 64 mm |
| 2'' | CL-TH-200-4P | 4 ports | 64 mm |

| DN | Article Number | Ports | Size |
|---|---|---|---|
| 2.5'' | CL-TH-250-1P | 1 port | 77.5 mm |
| 2.5'' | CL-TH-250-2P | 2 ports | 77.5 mm |
| 2.5'' | CL-TH-250-3P | 3 ports | 77.5 mm |
| 2.5'' | CL-TH-250-4P | 4 ports | 77.5 mm |

| DN | Article Number | Ports | Size |
|---|---|---|---|
| 3'' | CL-TH-300-2P | 2 ports | 91 mm |
| 3'' | CL-TH-300-3P | 3 ports | 91 mm |
| 3'' | CL-TH-300-4P | 4 ports | 91 mm |

| DN | Article Number | Ports | Size |
|---|---|---|---|
| 4' | CL-TH-400-2P | 2 ports | 119 mm |
| 4' | CL-TH-400-3P | 3 ports | 119 mm |
| 4' | CL-TH-400-4P | 4 ports | 119 mm |









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## Notes

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