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Sampling Gaskets

Property of Ultrapharma BV

Sampling Gaskets
30/03/2023

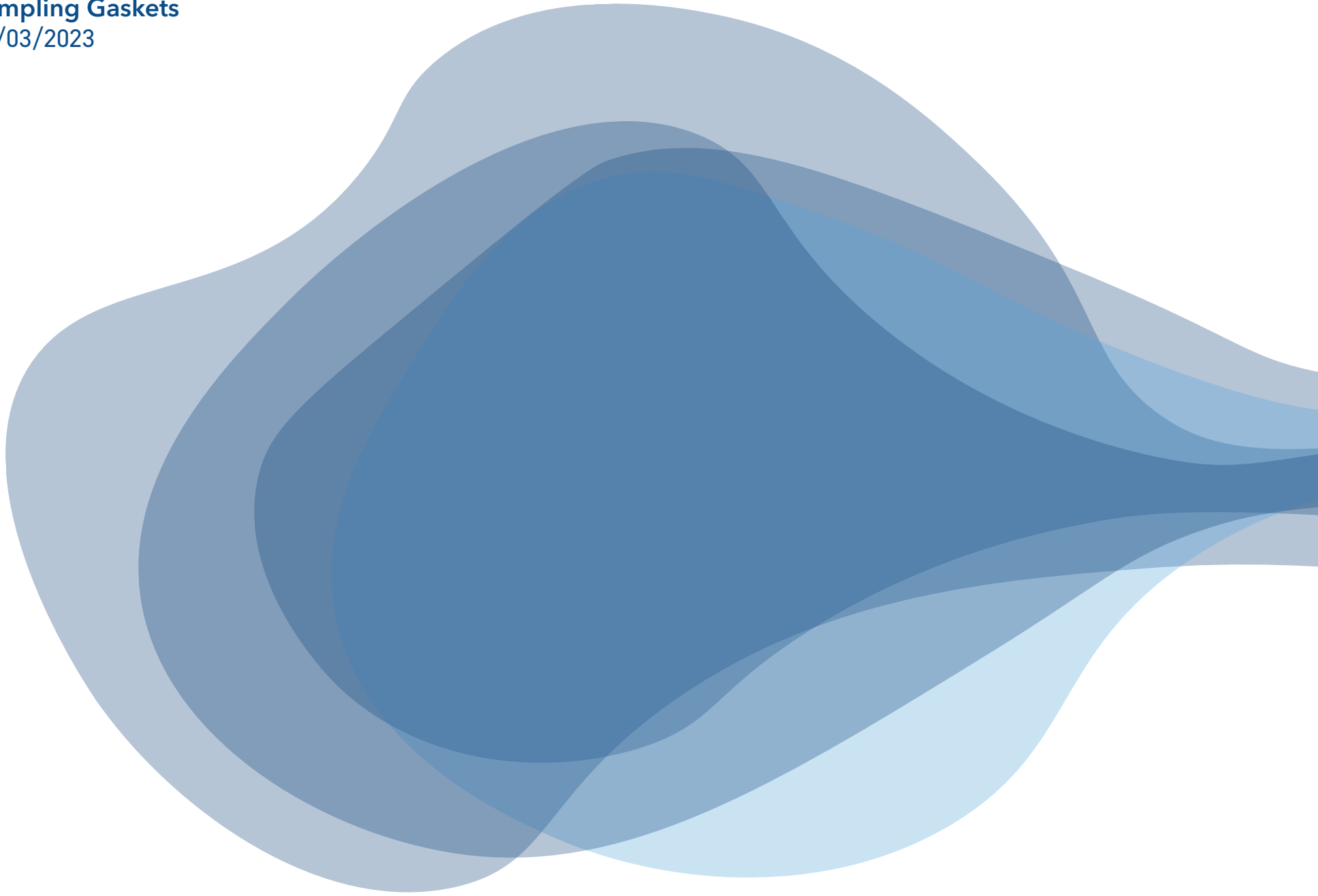
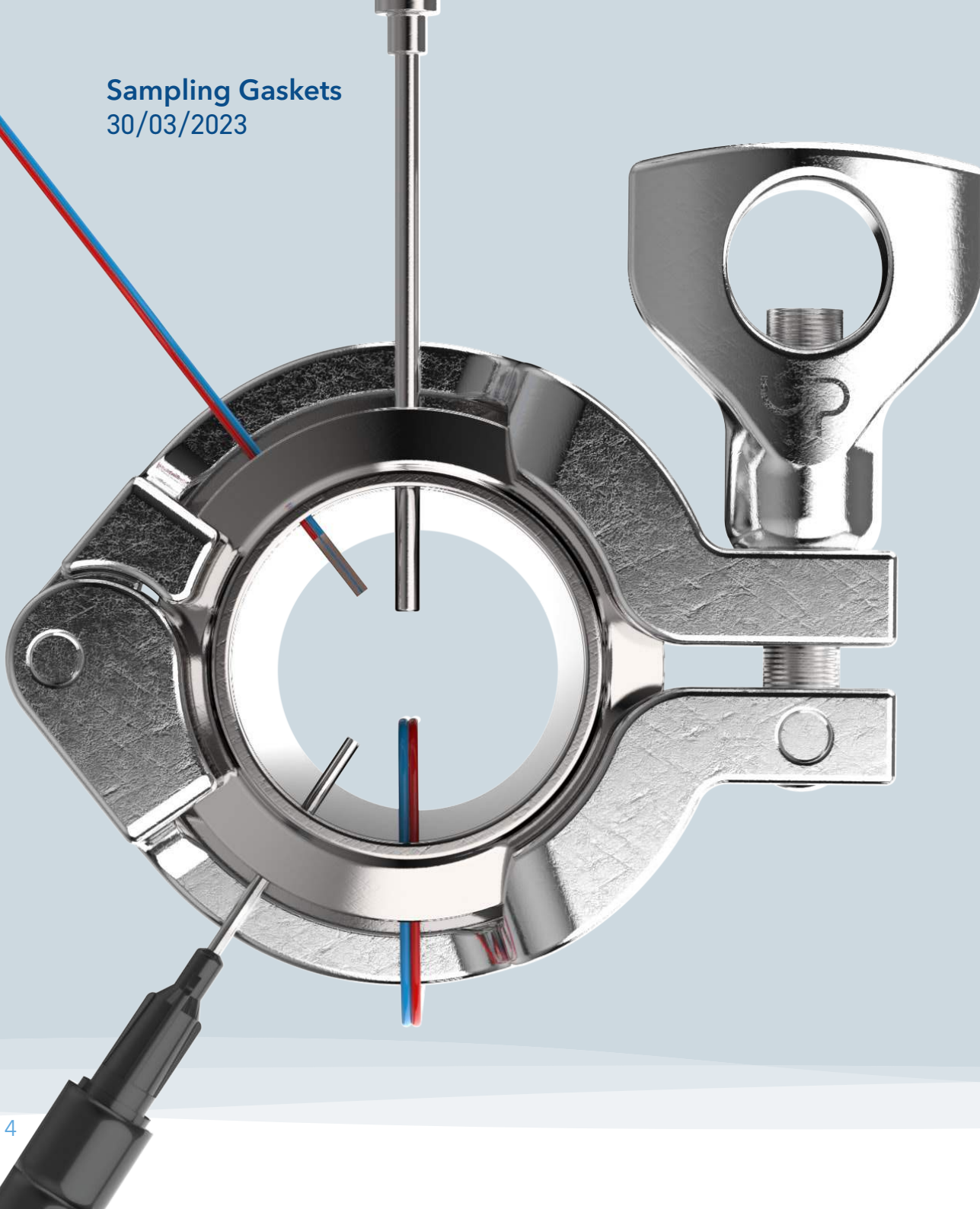


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Sampling Gaskets

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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.

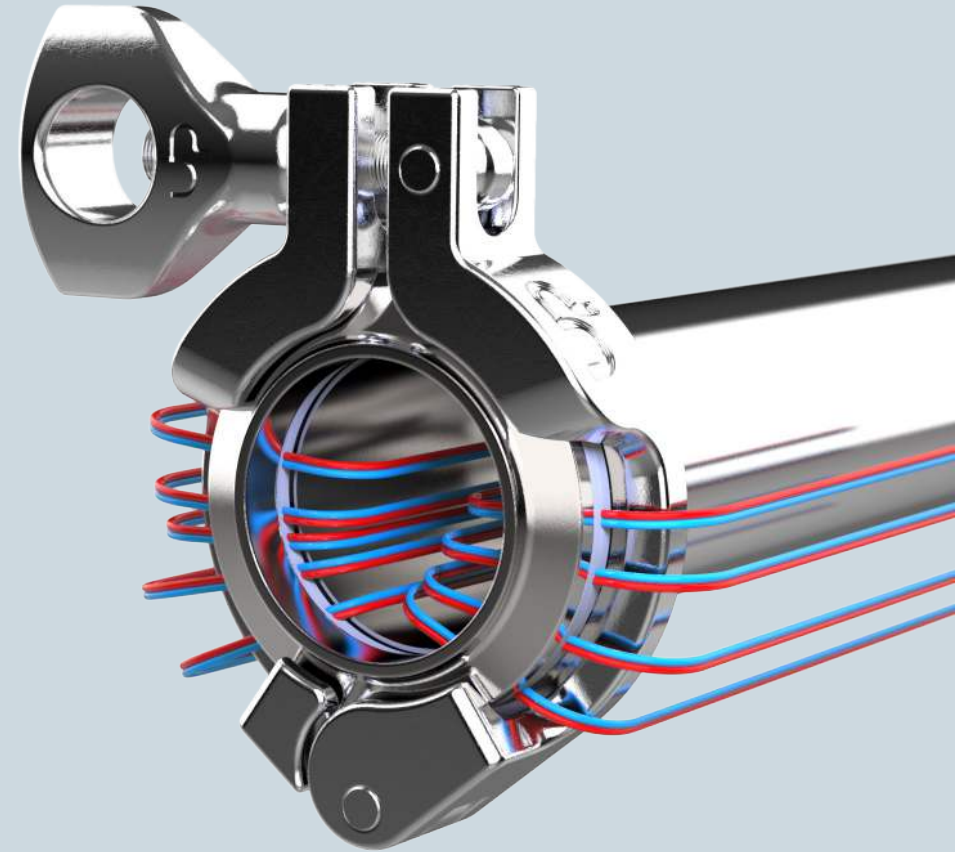
2. NEW - The Allport Sampling Clamp

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.



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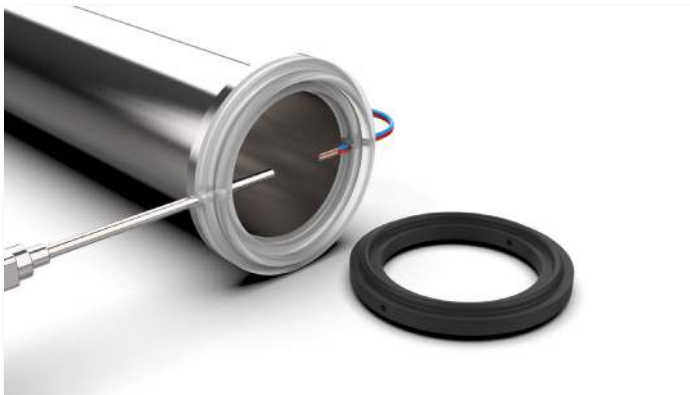
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3. New vs Old

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 possibility 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

FDA CFR 177.2600 / ADIF /
USP Class VI / EP 3.1.9

EPDM

CMD-1004

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/cm ³)			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/mm ²)	DIN 53504	≥ 7.0 N/mm ²	9.2 N/mm ²
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/cm ³
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

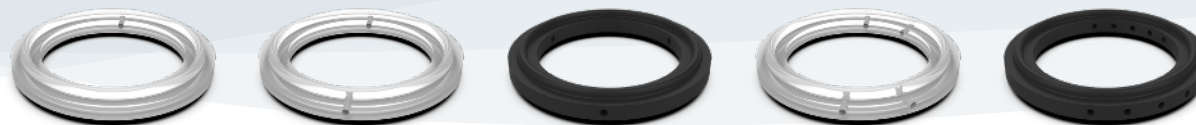
Platinum Silicone

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

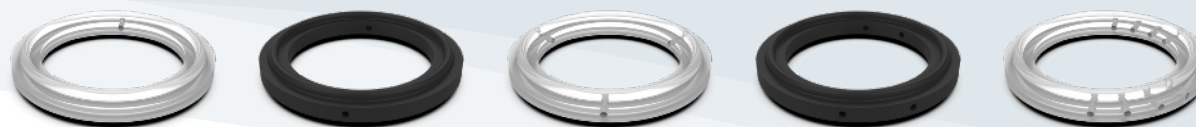
Platinum Silicone

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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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



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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

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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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