



# High Performance Elastomer Tubings

PERISTALTIC PUMPS - PINCH VALVES  
FLUID MANAGEMENT - BIOPHARM SOLUTIONS

MEDICAL ○

PHARMA ○

LAB ○

FOOD ○

VACUUM ○

GASKETS ○

Welcome to our Company!

**PENTASIL MED-TECH ENGINEERING** designs, produces and supplies a great variety of flexible tubing and profiles made of High Performance Silicones, TPEs and Specialty Polymers for **medical, pharma, laboratory, food & beverage and industrial use.**

Our Company designs using highest quality Silicone Elastomers, Latex free, Thermoplastic & Specialty Polymers with long term tested chemical formulas, produces using state-in-the-art equipment & methods (on line control systems a.o.) and supplies the world market with products in conformity to International Standards i.e. **EN ISO 9001:2015, EN ISO 13485:2016, Directives MDR (EU) 2017/745 & 93/42/ EEC, European Pharmacopoeia, United States Pharmacopoeia, FDA** a.o. .

We use materials of highest purity and certification levels only. Our product portfolio is addressed to markets with strict specifications, such as medical a.o., and includes:

» **Silicone Tubings for health, pharma, peristaltic pumps a.o.**

Our Silicone Tubing Portfolio is based on our Penta-pure® (Platinum Cured), Pentaplast® (Peroxide Cured), Pentapure X & Pentaplast X® (X-Ray detectable), Pentaflow PPI® & Pentaflow PP® (for peristaltic pumps) silicone elastomers.

» **TPE (Thermoplastic Elastomer)**

Our TPE Tubing Portfolio is based on our Pentaflow TPI®, Pentaflow OF®, Pentalene® TPE based on SEBS, SEPS and other block copolymers.

» **TPV (Thermoplastic Vulcanisate)**

Our TPV Tubing Portfolio is based on our Pentaprene TVi® TPV based on EPDM/PP copolymers.

» **Vacuum Tubings made of highest purity and certification level materials**

Our Vacuum Tubings Portfolio is based on our PentaVac-S® silicones, PentaVac-V® PVC& Medivyl 505® elastomers.

» **Flexible Clear Thermoplastic Tubings**

Our alternative Thermoplastic Tubing Portfolio is based on our Medivyl®, Pentavin® & Pentavin/G® (DEHP free) families of Thermoplastic Polymers.

» **Silicone Gaskets**

Our Portfolio for gaskets is based on our PentaGask, PentaGask PHAR & PentaGask FG silicone elastomers.

» **Project Development**

## Why PENTASIL MED-TECH ENGINEERING

Our Company designs, produces (under licence) and supplies medical products made of ultra performance elastomers.

Our designing principles and manufacturing practices are:

- » Low leachables through post curing
- » Animal-derived content free (ADCF) materials
- » Low spallation

We focus our research on successful designing and engineering that meets individual customer's requirements. We, founders and owners of **PENTASIL MED-TECH ENGINEERING**, personally guarantee Top Quality, Reliability, Innovation and Customer Support.

We value what we do and that is why we build strong working relationships with our customers.

Direct service is always present and customer's satisfaction is among our top priorities.

Through vertical and automatic production we achieve cost efficient operational excellence for our customers.

Our vendors and co-workers are carefully selected in order to enhance customer's trust.

**PENTASIL MED-TECH ENGINEERING** with full respect to customers' exact needs supplies the global market with success.

## QUALITY

All our products are specially designed and engineered for our customers' needs.

Our company has as priority the intensive quality control. By providing technical solutions, by manufacturing innovative products using modern GMP and by being efficient and effective, our customers receive high quality products and services. All products are designed in Germany and manufactured in the European Union according to the European and USA standards and recommendations.

**PENTASIL MED-TECH ENGINEERING** has been approved by Lloyd's Register Quality Assurance to EN ISO 9001:2015 & EN ISO 13485:2016 Standards for the quality management system in designing, production and sales of elastomers and specialty polymers for Medical and Industrial use. Additional approval exists in compliance to the European Directives MDR (EU) 2017/745 & 93/42/EEC, Directive 10/2011/EU a.o.. All our products carry the CE Mark.

**PENTASIL MED-TECH ENGINEERING** is certified to EN ISO 9001:2015, EN ISO 13485:2016, all of its products carry the CE mark (MDR (EU) 2017/745 & 93/42/EEC a.o.) and is registered to IHK Heidelberg.

## Our Elastomer Tubings at a glance

### PENTAPURE® Silicone Tubing



MEDICAL | PHARMA | LAB | FOOD

PLATINUM CURED  
FORMULAS

see [page 4](#)

### PENTAPLUS® Silicone Tubing



MEDICAL | PHARMA | LAB | FOOD

PEROXIDE CURED  
FORMULAS

see [page 5](#)

### PENTAFLOW PPI® PENTAFLOW PP® Peristaltic Pumps Silicone Tubing

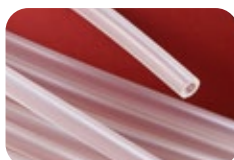


MEDICAL | PHARMA | LAB | FOOD

PLATINUM & PEROXIDE CURED  
FORMULAS

see [page 6](#)

### PENTAFLOW® PENTAFLOW OF® PENTAPRENE TVi® Thermoplastic Elastomer (TPE & TPV) Tubing for Peristaltic Pumps



MEDICAL | PHARMA | LAB | FOOD

PVC, SILICONE & LATEX FREE  
FORMULAS  
OIL FREE GRADES AVAILABLE

see [page 7](#)

### PENTALUMEN® Multi Lumen/Multi Channel Silicone Tubing



PHARMA | LAB

PLATINUM & PEROXIDE CURED  
FORMULAS

see [page 8](#)

### PENTAVAC-S® PENTAVAC-V® Silicone / PVC Vacuum Tubing



LAB | FOOD

PEROXIDE CURED FORMULAS  
DEHP FREE FORMULAS

see [page 9](#)

### PENTALENE® TPE Tubing

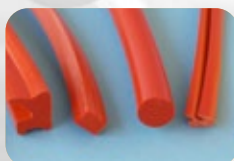


PHARMA | LAB | FOOD

PVC, SILICONE & LATEX FREE  
FORMULAS

see [page 10](#)

### PENTAGASK® Silicone Performance Gaskets

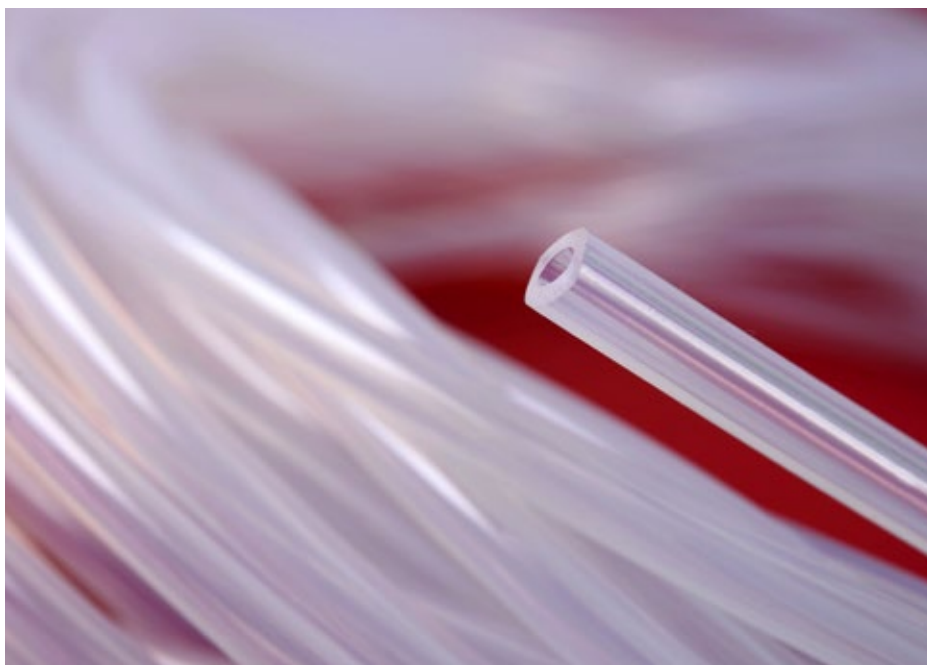


PHARMA | LAB

PEROXIDE CURED  
FORMULAS

see [page 11](#)

**MEDICAL | PHARMA | LAB | FOOD**  
**PENTAPURE - PLATINUM CURED FORMULAS**



Material	Pentapure® Medical (Platinum Cured) New Generation Silicone (VMQ Quality – Medical Grade, Non-Recycled)
Appearance	Transparent
Colour	None
Shape	Circular
Temperature Range	-45°C to +180°C
Properties	Excellent heat stability, highly transparent, clear, odourless, tasteless, non-toxic, sterilizable (plasma, steam, EtO a.o.), CIP, unmeltable, highly elastic, non deformable, top mechanical properties, top clarity
Dimensions	From I.D. × O.D = 0,6 × 1,0 mm up to I.D. × O.D = 12,5 × 19,0 mm (over 150 combinations). Other dimensions after request
Uses	Suction (single use), liquid transportation & drainage in all human & veterinary surgical operations. Connection of all types medical, laboratory a.o. equipment & devices
Length/ Package	25 m rolls (or other length on request) in PE transparent bags firmly sealed
Standards/ Certification	EN ISO 9001:2015, EN ISO 13485:2016, CE Mark
Classification	Class I (MDR 2017/745 EU)

Available Diameters Inner Ø × Outer Ø in mm	
0,6 × 1	7 × 11
0,75 × 1,5	7 × 12
1 × 2	7 × 13
2 × 4	8 × 11
3 × 5	8 × 12
3 × 6	8 × 13
4 × 7	8 × 14
4 × 8	9 × 12
5 × 8	9 × 13
5 × 9	10 × 14
6 × 9	10 × 15
6 × 10	10 × 18
6 × 12	11 × 16
7 × 10	12,5 × 19
and over 150 other combinations	

**MEDICAL | PHARMA | LAB | FOOD**  
**PENTAPLUS - PEROXIDE CURED FORMULAS**



**PENTAPLUS - SILICONE TUBING**

Material	Pentaplus® Medical (Peroxide Cured) Silicone (VMQ Quality – Medical Grade, Non-Recycled)
Appearance	Transparent
Colour	None
Shape	Circular
Temperature Range	-45°C to +180°C
Properties	Excellent heat stability, transparent, odourless, tasteless, non-toxic, sterilizable (plasma, steam, EtO a.o.), CIP, unmelttable, highly elastic, non deformable, top mechanical properties, top safety
Dimensions	From I.D. × O.D = 1,0 × 2,0 mm up to I.D. × O.D = 12,5 × 19,0 mm (over 150 combinations). Other dimensions after request
Uses	Suction (single use), liquid transportation & drainage in all human & veterinary surgical operations. Connection of all types medical equipment & devices
Length/ Package	25 m rolls (or other length on request) in PE transparent bags firmly sealed
Standards/ Certification	EN ISO 9001:2015, EN ISO 13485:2016, CE Mark
Classification	Class I (MDR 2017/745 EU)

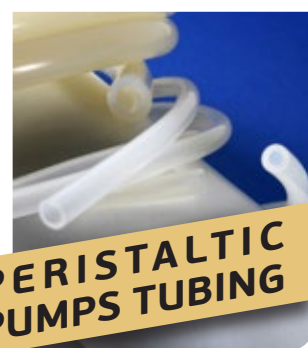
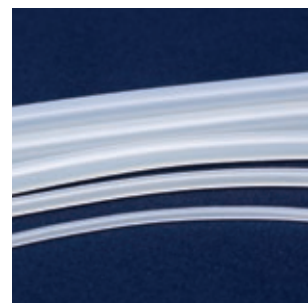
Available Diameters Inner Ø × Outer Ø in mm	
0,6 × 1	7 × 11
0,75 × 1,5	7 × 12
1 × 2	7 × 13
2 × 4	8 × 11
3 × 5	8 × 12
3 × 6	8 × 13
4 × 7	8 × 14
4 × 8	9 × 12
5 × 8	9 × 13
5 × 9	10 × 14
6 × 9	10 × 15
6 × 10	10 × 18
6 × 12	11 × 16
7 × 10	12,5 × 19
and over 150 other combinations	



**MEDICAL | PHARMA | LAB | FOOD**

**PENTAFLW PPI | PENTAFLW PP**

**PLATINUM & PEROXIDE CURED FORMULAS FOR PERISTALTIC PUMPS**



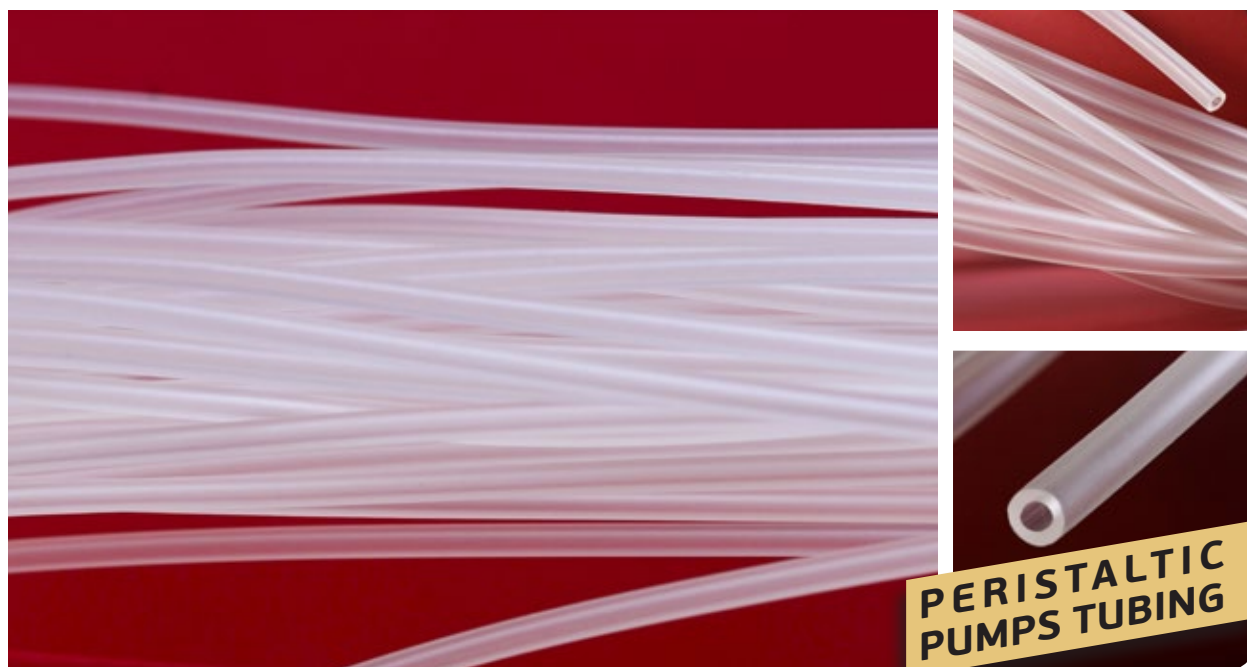
Material	Pentaflow® (Platinum & Peroxide Cured) Silicone (VMQ Quality – Medical & Pharma Grade, Non-Recycled)
Sterile	Sterile (in pouches) or non sterile (in bags) delivered
Appearance	Transparent
Colour	None
Shape	Circular
Temperature Range	-45°C to +180°C
Properties	Instant rebound, laminar flow, top quality, highly elastic, top mechanical properties.
Dimensions	From I.D. × O.D = 2,0 × 4,0 mm up to I.D. × O.D = 6,0 × 10,0 mm (and many other combinations). Other dimensions on request
Uses	For peristaltic pumps. Liquid transportation & drainage in all human & veterinary surgical operations. Absolute flow stability, highly recommended for research and labs. Connection of all types pumping devices
Length/ Package	Pre-cut lengths in pouches, 25 m rolls (PE transparent bags firmly sealed). Other length on request
Standards/ Certification	EN ISO 9001:2015, EN ISO 13485:2016, CE Mark
Classification	Class I (MDR 2017/745 EU)

Standard Diameters Inner Ø × Wall Thickness in mm
2 × 1,0
3 × 1,0
3 × 1,5
4 × 1,0
4 × 1,5
5 × 1,5
6 × 1,5
6 × 2,0
and other after request also available in inches

**MEDICAL | PHARMA | LAB | FOOD**

**PENTAFLOW TPI, PENTAFLOW OF, PENTAPRENE TVi**

PVC, SILICONE & LATEX FREE FORMULAS / OIL FREE GRADES AVAILABLE



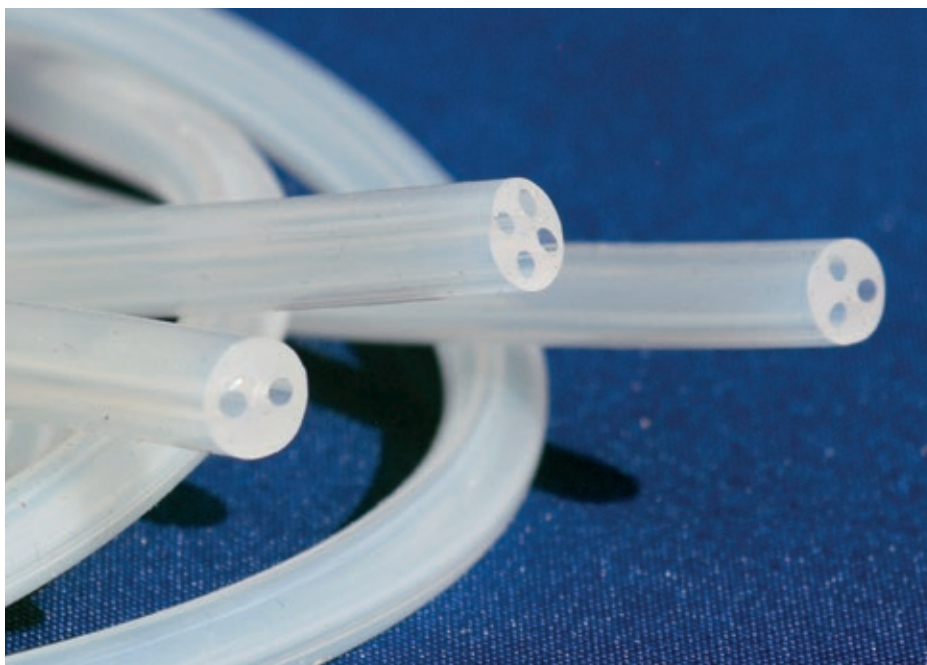
Material	Medical Grade Thermoplastic Elastomers (various compositions), hardnesses from 50 ShA to 75 ShA
Appearance	Transparent or translucent
Colour	None
Shape	Circular
Temperature Range	From -50°C to +125°C (unstressed material)
Properties	Excellent heat stability, transparent or translucent, odourless, tasteless, non-toxic, sterilizable (plasma, steam, EtO a.o.), hardly meltable, high modulus, non deformable, top mechanical properties
Dimensions	From I.D. × O.D = 1,0 × 2,0 mm up to I.D. × O.D = 7,0 × 11,0 mm (over 100 combinations). Other dimensions after request
Uses	Top quality intensively tested tubing. Special grades for over 1.000 hours lifetime. Absolute flow stability, highly recommended for research and labs.
Length/ Package	30 m rolls (or other length on request) in PE transparent bags firmly sealed
Standards/ Certification	EN ISO 9001:2015, EN ISO 13485:2016, CE Mark
Classification	Class I (MDR 2017/745 EU)

Available Diameters Inner Ø × Outer Ø in mm	
1 × 2	6 × 9
1,6 × 3,2	6 × 10
2 × 4	6 × 12
2,4 × 4	7 × 10
3,2 × 6,4	7 × 11
4,5 × 7,5	and many other com- binations
6,5 × 9,5	

**PENTAFLOW, PENTAFLOW OF, PENTAPRENE TVi - THERMOPLASTIC ELASTOMER (TPE) TUBING**

**PHARMA | LAB**

**PENTALUMEN** - PLATINUM & PEROXIDE CURED FORMULAS



Material	Pentalumen® (Platinum Cured & Peroxide Cured) Silicone (VMQ Quality – Medical & Pharma Grade, Non-Recycled)
Appearance	Transparent
Colour	None
Shape	Circular, Rectangular
Lumens	up to 6
Temperature Range	-45°C to +180°C
Properties	Excellent heat stability, transparent, odourless, tasteless, non-toxic, sterilizable (plasma, steam, EtO a.o.), unmeltable, highly elastic, non deformable, top mechanical properties
Dimensions	From Lumen O.D = 1,0 × 6,0 mm up to I.D. × O.D = 5,0 × 15,0 mm (over 150 combinations). Other dimensions after request
Uses	Multi-purpose component for pharma and lab applications
Length / Package	25 m rolls (or other length on request) in PE transparent bags firmly sealed
Standards/ Certification	EN ISO 9001:2015, EN ISO 13485:2016, DY8d/1348 (M.o.H.), CE Mark
Classification	Class I (MDR 2017/745 EU)

**Available Diameters**  
in mm

*Inner diameter:*  
from 1mm to 8mm

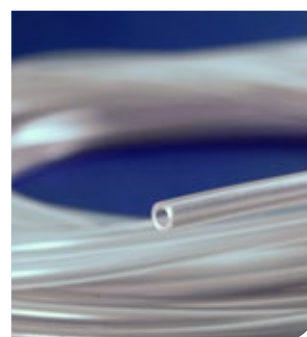
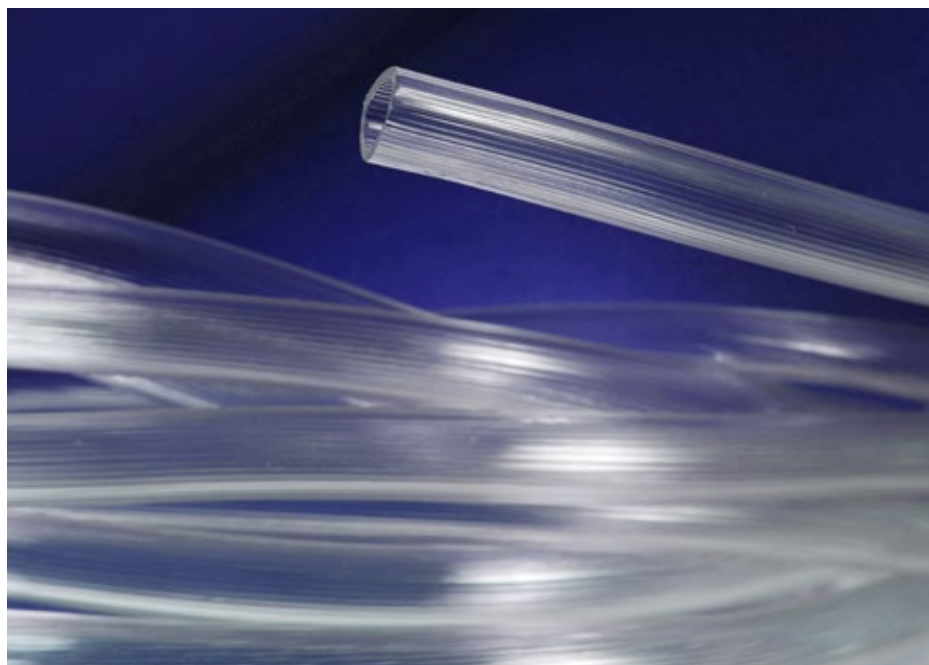
*Outer diameter:*  
from 4mm to 10mm



LAB | FOOD

**PENTAVAC-S - PEROXIDE CURED FORMULAS**

**PENTAVAC-V - DEHP CURED FORMULAS**



**PENTAVAC-S & PENTAVAC-V - SILICONE & PVC VACUUM TUBING**

Material	Pentavac-S Silicone / Pentavac-V PVC
Appearance	Transparent
Colour	none
Temperature Range	Constant properties from -45°C to +180°C
Properties	No Latex containing! Excellent heat stability, transparent, odourless, tasteless, non-toxic, unmeltable, highly elastic, non deformable, top mechanical properties
Dimensions	From I.D. × O.D = 1,0 × 2,0 mm up to I.D. × O.D = 11,0 × 16,0 mm (over 150 combinations). Other dimensions after request.
Uses	Special tubings for strict vacuum requirements
Length/ Package	Standard lengths: 1.5, 2.0, 2.5 meters / Pouches in carton box (approx. 100 pcs)
Standards/ Certification	EN ISO 9001:2015, EN ISO 13485:2016, CE Mark
Classification	Class I (MDR 2017/745 EU)

Standard Diameters Inner Ø × Outer Ø in mm	
1 × 2	7 × 10
2 × 4	7 × 11
3 × 5	8 × 12
3 × 6	8 × 13
4 × 8	9 × 12
5 × 8	9 × 13
5 × 9	10 × 14
6 × 9	10 × 15
6 × 10	11 × 16
and many combinations	

PHARMA | LAB | FOOD

**PENTALENE** - PVC, SILICONE & LATEX FREE FORMULAS



Material	Tubing: Pentapure® Medical (Platinum Cured) & Pentaplast® Medical (Peroxide Cured) Silicone (VMQ Quality – Medical Grade, Non-Recycled) Radio Opaque Line: Pentapure®X (Platinum Cured) & Pentaplast®X (Peroxide Cured) Silicone (VMQ Quality – Medical Grade, Non-Recycled)
Appearance	Transparent
Colour	Tubing: None   Radio Opaque Line: Blue (green and yellow available)
Shape	Circular
Temperature Range	-45°C to +180°C
Properties	X-Ray detectable coextruded (not glued) line. Excellent heat stability, transparent, odourless, tasteless, non-toxic, sterilizable (plasma, steam, EtO a.o.), unmeltable, highly elastic, non deformable, top mechanical properties, TOP SAFE
Dimensions	From I.D. × O.D = 3,0 × 5,0 mm up to I.D. × O.D = 12,5 × 19,0 mm (over 150 combinations). Other dimensions after request
Uses	Suction (single use), liquid transportation & drainage in all human & veterinary surgical operations. Connection of all types medical equipment & devices
Length/ Package	25 m rolls (or other length on request) in PE transparent bags firmly sealed
Standards/ Certification	EN ISO 9001:2015, EN ISO 13485:2016, CE Mark
Classification	Class I (MDR 2017/745 EU)

Available Diameters Inner Ø × Outer Ø in mm	
3 × 5	8 × 11
4 × 8	8 × 12
5 × 8	8 × 13
5 × 9	8 × 14
6 × 9	9 × 12
6 × 10	9 × 13
6 × 12	10 × 14
7 × 10	10 × 15
7 × 11	10 × 18
7 × 12	11 × 16
7 × 13	12,5 × 19
and over 150 combinations	

PHARMA | LAB | FOOD

## PENTAGASK - PEROXIDE CURED FORMULAS



PENTAGASK - SILICONE PERFORMANCE GASKETS

Material	PentaGask®, PentaGask® PHAR, PentaGask® FG & Elsil® VLD various pharma & food grades HCR peroxide cured silicone elastomers (over 500 recipes)
Appearance	Various colors
Colour	Transparent, translucent & wide range RAL colors
Shape	Circular, Rectangular, a.o. complex shapes
Lumens	3 (acc. to drawing, for optimum flexibility)
Temperature Range	-45°C to +250°C
Properties	Top solution for absolute vacuum processes (freeze dryers a.o.), milk processing, excellent stability against all mild chemical media incl. lactose, fats & oils and solvent vapors, top sealing properties, long working life, CIP
Dimensions	From 1 mm to 30 mm (acc. to drawing)
Uses	Unique sealing properties for freeze dryers & processing equipment
Length / Package	After agreement, in PE transparent bags firmly sealed
Standards/ Certification	EN ISO 9001:2015, EN ISO 13485:2016
Classification	Class I (MDR 2017/745 EU)

**Cross-Sections:**  
Circular (with lumen or solid rod), Rectangular and over 1.000 other complex 2-D shapes

**Special Gaskets for Freeze Dryers**





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