

Lifemeta™ Tubing

Bioprocess Solutions

■ Quality Assurance

Cobetter establishes and continuously maintains the company's quality assurance system in accordance with the requirements of ISO 9001:2015 quality management system and cGMP. All the products are manufactured under strict quality system to ensure stable and reliable quality.

■ Raw Material Control

Cobetter has established a rigorous supplier selection and periodic evaluation system. The core materials are selected from internationally renowned raw material suppliers and manage the suppliers hierarchically. The outsourced materials or components are inspected according to the company's internal control standards to ensure the quality of raw materials is stable and reliable.

■ Environment Management

The entire manufacturing process of Cobetter Lifemeta tubing from raw material storage to product packaging is completed in the ISO Class 7 clean zones, which ensures the cleanliness of the product and prevents pollution. The air purification system is confirmed and maintained regularly to ensure that the cleanliness of environment continuously meets the requirements of ISO Class 7. The suspended particles, sedimentation bacteria, temperature, humidity and differential pressure are monitored periodically to provide for a highly controlled clean environment.

Overview Tubing Series



Lifemeta™ STT Pt-cured Silicone Tubing

Biopharmaceutical grade Pt-cured silicone tubing. Can be widely used in fluid transmission in different aspects of the biopharmaceutical industry. It has good resilience and tear resistance, translucent color and smooth inner surface.



Lifemeta™ STF TPE Tubing

High-performance tubing extruded from medical-grade thermoplastic elastomer (TPE) material. Compatible with common tube sealers and aseptic tube welders, achieving excellent performance of frequent aseptic disconnection and connection of tubings.



Lifemeta™ ST5P Pt-cured Silicone Pump Tubing

Biopharmaceutical grade Pt-cured silicone pump tubing, it can be applied to most peristaltic pumps and has a long pump life. Excellent wear resistance reduces wear on the outer wall of the tubing and improves the overall efficiency of the filtration system.



Lifemeta™ ST8H High Pressure Silicone Tubing

It has very good resilience and kink resistance and typically has a higher pressure rating than softer alternatives. It is the optimal choice for single-use applications such as TFF, virus filtration, inline integrity testing of filtration assemblies, and high volume fluid transfer.

■ Product Features

Tubing Series	Lifemeta™ STT	Lifemeta™ STF	Lifemeta™ ST5P	Lifemeta™ ST8H
Material	Pt-cured Silicone	TPE	Pt-cured Silicone	Pt-cured Silicone
Durometer Hardness (Shore A)	60 ± 5	60 ± 5	50 ± 5	82 ± 5
Appearance	Translucent	Translucent	Translucent	Translucent
Aseptic Sealing and Welding	No	√	No	No
Peristaltic Pump Life	Fair	Limited	Excellent	No
Min. Temperature	-59.8°F -51°C	-58°F -50°C	-59.8°F -51°C	-59.8°F -51°C
Max. Temperature	449.6°F 232°C	284°F 140°C	449.6°F 232°C	449.6°F 232°C
Gamma Stability (max. 50 kGy)	√	√	√	√
Sterilization Methods	Autoclave	Autoclave	Autoclave	Autoclave
	Gamma irradiation	Gamma irradiation	Gamma irradiation	Gamma irradiation
Validation Guide	√	√	√	√
Packaging	Double layer PE bag packaging			
Recommended usage	Culture media and buffers preparation Fermentation/Cultivation Purification	Culture media and buffers preparation Fermentation/Cultivation Purification Aseptic Sealing and Welding	Culture media and buffers preparation Fermentation/Cultivation Purification Peristaltic pump transfer applications	Online integrity testing Large volume fluid transfer

Lifemeta™ STT Platinum Cured Silicone Tubing

Cobetter Lifemeta™ STT platinum-cured silicone tubing is designed for efficient fluid transfer. The product is manufactured using high-purity medical-grade raw materials through advanced extrusion equipment and molding tools, and can withstand extreme temperatures, a wide range of acid-alkali salts, organic solvents, and radiation, while also exhibiting good resilience and tear resistance, suitable for use in peristaltic pumps. The Lifemeta™ STT tubing is semi-transparent with a smooth internal surface, providing a reliable solution for low adsorption applications.



Product Features

- High purity, medical-grade raw materials
- Continuous monitoring of the production process
- Semi-transparent tubing with a smooth internal surface
- Resistant to a wide range of acids, alkalis, salts, and organic solvents
- Excellent tensile strength to ensure the toughness of the tubing

Product Applications

- Culture media and buffers preparation
- Supply feed liquids to bioreactors and cultivation systems
- Upstream and downstream transfer of base liquids
- Integration of single-use assemblies systems
- Laboratory fluid transfer applications
- Food processing applications

Regulatory Compliance

Particulate Matter	Particulate matter in the product eluent meets the requirements in USP <788> for large volume parenterals.
Bacterial Endotoxin	Aqueous extraction contains < 0.25 EU/mL as determined by Amebocyte Lysate, USP <85>.
USP <87> Cytotoxicity	Meet the requirement of USP <87> In Vitro Biological Reactivity Test.
USP <88> Biological Reactivity	Meet the criteria of the USP <88> Biological Reactivity Test for Class VI plastics.
ISO 10993-4	Meet the requirement of ISO 10993-4 In Vitro Hemolytic Test.
Indirect Food Additive	The fluid contact component materials meet the FDA Indirect Food Additive requirements cited in 21 CFR 177–182.
Animal Derivative Content	Products do not contain animal derived components and are free from TSE risk.
Quality Assurance	These products are manufactured in a facility which adheres to ISO 9001:2015 Practices.

Sterilization Methods

Gamma Irradiation	Can be gamma irradiated at 25-45 kGy in sterile package and can not be re-sterilized.
Autoclave	Can be autoclaved 25 cycles for 30 minutes at 121 °C.

Physical characteristics

Item	Value	Procedure
Durometer Hardness (Shore A)	60 ± 5	ASTM D2240
Burst Strength	0.4-0.9 MPa	ASTM D380
Tensile Strength	7.05-8.96 MPa	ASTM D412
Elongation at Break	378-443 %	ASTM D412
Vacuum Resistance	> 30 kPa	ISO 7233: 2016
Temperature Range	-51-232 °C	

Note: Please refer to the validation guide document for detailed test methods and results.

Lifemeta™ STT Ordering Information

Part No.*	I.D.		O.D.		Wall Thickness		Tube Number	Packaging**	Qty m/pk
	In.	mm.	In.	mm.	In.	mm.			
STT0816150N(-P)	1/32"	0.8	5/32"	4.0	1/16"	1.6	13#	Non-sterile	15
STT1216150N(-P)	3/64"	1.2	11/64"	4.4	1/16"	1.6	/	Non-sterile	15
STT1616150N(-P)	1/16"	1.6	3/16"	4.8	1/16"	1.6	14#	Non-sterile	15
STT1624150N(-P)	1/16"	1.6	1/4"	6.4	3/32"	2.4	119#	Non-sterile	15
STT2416150N(-P)	3/32"	2.4	7/32"	5.6	1/16"	1.6	19#	Non-sterile	15
STT2424150N(-P)	3/32"	2.4	9/32"	7.1	3/32"	2.4	/	Non-sterile	15
STT3060150N(-P)	/	3.0	/	6.0	/	1.5	/	Non-sterile	15
STT3224150N(-P)	1/8"	3.2	5/16"	8.0	3/32"	2.4	120#	Non-sterile	15
STTL150N(-P)	1/8"	3.2	1/4"	6.4	1/16"	1.6	16#	Non-sterile	15
STT25150N(-P)	3/16"	4.8	5/16"	8.0	1/16"	1.6	25#	Non-sterile	15
STT15150N(-P)	3/16"	4.8	3/8"	9.6	3/32"	2.4	15#	Non-sterile	15
STT4832150N(-P)	3/16"	4.8	7/16"	11.2	1/8"	3.2	/	Non-sterile	15
STT17150N(-P)	1/4"	6.4	3/8"	9.6	1/16"	1.6	17#	Non-sterile	15
STTR150N(-P)	1/4"	6.4	7/16"	11.2	3/32"	2.4	24#	Non-sterile	15
STT26150N(-P)	1/4"	6.4	1/2"	12.7	1/8"	3.2	26#	Non-sterile	15
STT35150N(-P)	5/16"	8.0	1/2"	12.7	3/32"	2.4	35#	Non-sterile	15
STT36150N(-P)	3/8"	9.6	9/16"	14.4	3/32"	2.4	36#	Non-sterile	15
STTY150N(-P)	3/8"	9.6	5/8"	15.9	1/8"	3.2	73#	Non-sterile	15
STTH150N(-P)	1/2"	12.7	3/4"	19.1	1/8"	3.2	82#	Non-sterile	15
STTE150N(-P)	1/2"	12.7	11/16"	17.5	3/32"	2.4	/	Non-sterile	15
STTX150N(-P)	5/8"	15.9	7/8"	22.2	1/8"	3.2	184#	Non-sterile	15
STTN150N(-P)	3/4"	19.1	1"	25.4	1/8"	3.2	90#	Non-sterile	15
STTM100N(-P)	3/4"	19.1	1-1/8"	28.6	3/16"	4.8	191#	Non-sterile	10
STTD050N(-P)	1"	25.4	1-3/8"	34.9	3/16"	4.8	92#	Non-sterile	5

Note: The table is the standard product number for sale, if you need special specifications (length, sterile packaging), please communicate the requirements in advance.

* Part No.: This product is available in labelled and non-labelled

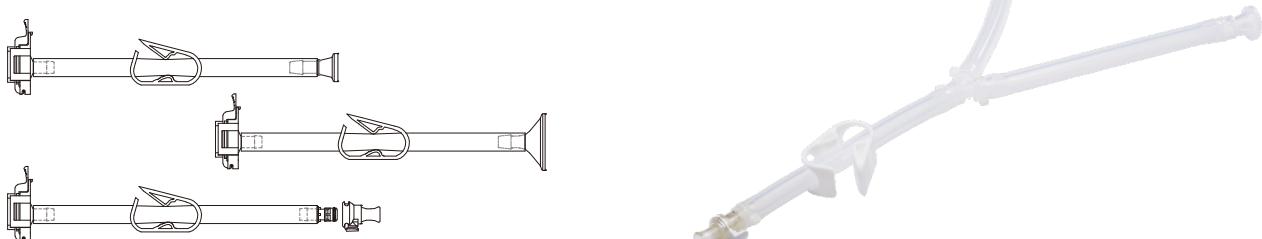
** Packaging: This product is available in sterile or non-sterile packaging. The sterilization method for sterile products is gamma irradiation, and the irradiation dose is 25~45 kGy. Naming of products with different packaging methods refer to the following:

1. Non-sterile: STT0816150N

2. Sterile: STT0816150S

3. Non-sterile (labelled): STT0816150N-P

4. Sterile (labelled): STT0816150S-P



Lifemeta™ STF TPE tubing

Cobetter Lifemeta™ STF TPE tubing is a high-performance flexible tube extruded from medical-grade thermoplastic elastomer (TPE) material, with excellent heat sealing and sterile welding performance. Its inner wall is smooth and low-flaking. The Lifemeta™ STF has demonstrated considerable welding compatibility and weldability in comparison to the leading TPE tubes in the market. Compared with traditional silicone and PVC tubes, this product has wide chemical compatibility and can maintain excellent physicochemical performance under various working conditions.



Product Features

- Sterile welding and heat sealing
- Excellent low absorption and low binding
- Lower permeability compared to silicone resin
- Smooth inner wall, excellent fluidity
- Outstanding tensile strength

Product Applications

- Cell culture media and buffer preparation
- Liquid sampling systems
- Filtration processes
- Sterile filling
- Sterile disconnect and connection
- Single-use tubing assemblies

Regulatory Compliance

Bacterial Endotoxin	Aqueous extraction contains < 0.25 EU/mL as determined by Amebocyte Lysate, USP <85>.
USP <87> Cytotoxicity	Meet the requirement of USP <87> In Vitro Biological Reactivity Test.
USP <88> Biological Reactivity	Meet the criteria of the USP <88> Biological Reactivity Test for Class VI plastics.
Animal Derivative Content	Products do not contain animal derived components and are free from TSE risk.
Quality Assurance	These products are manufactured in a facility which adheres to ISO 9001:2015 Practices.

Sterilization Methods

Gamma Irradiation	Can be gamma irradiated at 25-45 kGy in sterile package and can not be re-sterilized.
Autoclave	Can be autoclaved 25 cycles for 30 minutes at 121 °C.

Physical characteristics

Item	Value	Procedure
Durometer Hardness (Shore A)	60 ± 5	ASTM D2240
Burst Strength	0.4-0.6 MPa	ASTM D380
Tensile Strength	5.17-5.18 MPa	ASTM D412
Elongation at Break	742-776 %	ASTM D412
Vacuum Resistance	> 30 kPa	ISO 7233: 2016
Temperature Range	-50-140 °C	

Note: Please refer to the validation guide document for detailed test methods and results.

Lifemeta™ STF Ordering Information

Part No.*	I.D.		O.D.		Wall Thickness		Tube Number	Packaging**	Qty m/pk
	In.	mm.	In.	mm.	In.	mm.			
STFL150N(-P)	1/8"	3.2	1/4"	6.4	1/16"	1.6	16#	Non-sterile	15
STF25150N(-P)	3/16"	4.8	5/16"	8.0	1/16"	1.6	25#	Non-sterile	15
STF15150N(-P)	3/16"	4.8	3/8"	9.6	3/32"	2.4	15#	Non-sterile	15
STF17150N(-P)	1/4"	6.4	3/8"	9.6	1/16"	1.6	17#	Non-sterile	15
STFR150N(-P)	1/4"	6.4	7/16"	11.2	3/32"	2.4	24#	Non-sterile	15
STF26150N(-P)	1/4"	6.4	1/2"	12.7	1/8"	3.2	26#	Non-sterile	15
STF35150N(-P)	5/16"	8.0	1/2"	12.7	3/32"	2.4	35#	Non-sterile	15
STFY150N(-P)	3/8"	9.6	5/8"	15.9	1/8"	3.2	73#	Non-sterile	15
STFH150N(-P)	1/2"	12.7	3/4"	19.1	1/8"	3.2	82#	Non-sterile	15
STFN150N(-P)	3/4"	19.1	1"	25.4	1/8"	3.2	90#	Non-sterile	15
STFM100N(-P)	3/4"	19.1	1-1/8"	28.6	3/16"	4.8	191#	Non-sterile	10
STFD050N(-P)	1"	25.4	1-3/8"	34.9	3/16"	4.8	92#	Non-sterile	5

Note: The table is the standard product number for sale, if you need special specifications (length, sterile packaging), please communicate the requirements in advance.

* Part No.: This product is available in labelled and non-labelled

** Packaging: This product is available in sterile or non-sterile packaging. The sterilization method for sterile products is gamma irradiation, and the irradiation dose is 25~45 kGy. Naming of products with different packaging methods refer to the following:

1. Non-sterile: STFL150N
2. Sterile: STFL150S
3. Non-sterile (labelled): STFL150N-P
4. Sterile (labelled): STFL150S-P

Lifemeta™ ST5P Pt-cured Silicone Pump Tubing

Cobetter Lifemeta™ ST5P Pt-cured silicone pump tubing can be used in process applications such as ultrapure liquid transfer in production, aseptic filling, packaging and other single-use systems. Fluid transmission is mainly carried out through a peristaltic pump, which reduces the risk of fluid contacting any part of the pump body. Good wear resistance can reduce damage to the outer wall of the tubing, thereby improving the overall transmission efficiency of the filtration system.



Product Features

- Excellent peristaltic pump life
- The operating life in the pump is over 100 h
- Excellent wear resistance, low flaking
- Good chemical compatibility
- Excellent tensile strength
- Smooth inner wall, excellent fluidity
- Low adsorption performance

Product Applications

- Aseptic filling and dispensing systems
- Diagnostic equipment
- Vaccine production
- Biological filtration and fermentation
- Bioreactor applications
- Shear sensitive fluid transport

Regulatory Compliance

Particulate Matter	Particulate matter in the product eluent meets the requirements in USP <788> for large volume parenterals.
Bacterial Endotoxin	Aqueous extraction contains < 0.25 EU/mL as determined by Amebocyte Lysate, USP <85>.
USP <87> Cytotoxicity	Meet the requirement of USP <87> In Vitro Biological Reactivity Test.
USP <88> Biological Reactivity	Meet the criteria of the USP <88> Biological Reactivity Test for Class VI plastics.
ISO 10993-4	Meet the requirement of ISO 10993-4 In Vitro Hemolytic Test.
Indirect Food Additive	The fluid contact component materials meet the FDA Indirect Food Additive requirements cited in 21 CFR 177-182.
Animal Derivative Content	Products do not contain animal derived components and are free from TSE risk.
Quality Assurance	These products are manufactured in a facility which adheres to ISO 9001:2015 Practices.

Sterilization Methods

Gamma Irradiation	Can be gamma irradiated at 25-45 kGy in sterile package and can not be re-sterilized.
Autoclave	Can be autoclaved 25 cycles for 30 minutes at 121 °C.

Physical characteristics

Item	Value	Procedure
Durometer Hardness (Shore A)	50 ± 5	ASTM D2240
Burst Strength	0.74-0.97 MPa	ASTM D380
Vacuum Resistance	> 75 kPa	ISO 7233: 2016
Temperature Range	-51-232 °C	

Note: Please refer to the validation guide document for detailed test methods and results.

Lifemeta™ ST5P Ordering Information

Part No.*	I.D.		O.D.		Wall Thickness		Tube Number	Packaging**	Qty m/pk
	In.	mm.	In.	mm.	In.	mm.			
ST5P0816150N(-P)	1/32"	0.8	5/32"	4.0	1/16"	1.6	13#	Non-sterile	15
ST5P0824150N(-P)	1/32"	0.8	7/32"	5.6	3/32"	2.4	/	Non-sterile	15
ST5P1216150N(-P)	3/64"	1.2	11/64"	4.4	1/16"	1.6	/	Non-sterile	15
ST5P1616150N(-P)	1/16"	1.6	3/16"	4.8	1/16"	1.6	14#	Non-sterile	15
ST5P1624150N(-P)	1/16"	1.6	1/4"	6.4	3/32"	2.4	119#	Non-sterile	15
ST5P2416150N(-P)	3/32"	2.4	7/32"	5.6	1/16"	1.6	19#	Non-sterile	15
ST5P2424150N(-P)	3/32"	2.4	9/32"	7.1	3/32"	2.4	/	Non-sterile	15
ST5P3224150N(-P)	1/8"	3.2	5/16"	8.0	3/32"	2.4	120#	Non-sterile	15
ST5P3218150N(-P)	1/8"	3.2	/	6.8	/	1.8	/	Non-sterile	15
ST5P1L150N(-P)	1/8"	3.2	1/4"	6.4	1/16"	1.6	16#	Non-sterile	15
ST5P25150N(-P)	3/16"	4.8	5/16"	8.0	1/16"	1.6	25#	Non-sterile	15
ST5P4820150N(-P)	3/16"	4.8	/	8.8	/	2.0	/	Non-sterile	15
ST5P15150N(-P)	3/16"	4.8	3/8"	9.6	3/32"	2.4	15#	Non-sterile	15
ST5P4832150N(-P)	3/16"	4.8	7/16"	11.2	1/8"	3.2	/	Non-sterile	15
ST5P17150N(-P)	1/4"	6.4	3/8"	9.6	1/16"	1.6	17#	Non-sterile	15
ST5P1R150N(-P)	1/4"	6.4	7/16"	11.2	3/32"	2.4	24#	Non-sterile	15
ST5P26150N(-P)	1/4"	6.4	1/2"	12.7	1/8"	3.2	26#	Non-sterile	15
ST5P35150N(-P)	5/16"	8.0	1/2"	12.7	3/32"	2.4	35#	Non-sterile	15
ST5P36150N(-P)	3/8"	9.6	9/16"	14.4	3/32"	2.4	36#	Non-sterile	15
ST5PY150N(-P)	3/8"	9.6	5/8"	15.9	1/8"	3.2	73#	Non-sterile	15
ST5PH150N(-P)	1/2"	12.7	3/4"	19.1	1/8"	3.2	82#	Non-sterile	15
ST5PE150N(-P)	1/2"	12.7	11/16"	17.5	3/32"	2.4	/	Non-sterile	15
ST5PX150N(-P)	5/8"	15.9	7/8"	22.2	1/8"	3.2	184#	Non-sterile	15
ST5PN150N(-P)	3/4"	19.1	1"	25.4	1/8"	3.2	90#	Non-sterile	15
ST5PM100N(-P)	3/4"	19.1	1-1/8"	28.6	3/16"	4.8	191#	Non-sterile	10
ST5PD050N(-P)	1"	25.4	1-3/8"	34.9	3/16"	4.8	92#	Non-sterile	5

Note: The table is the standard product number for sale, if you need special specifications (length, sterile packaging), please communicate the requirements in advance.

* Part No.: This product is available in labelled and non-labelled

** Packaging: This product is available in sterile or non-sterile packaging. The sterilization method for sterile products is gamma irradiation, and the irradiation dose is 25~45 kGy. Naming of products with different packaging methods refer to the following:

1. Non-sterile: ST5P0816150N-P
2. Sterile: ST5P0816150S-P
3. Non-sterile (labelled): ST5P0816150N-P
4. Sterile (labelled): ST5P0816150S-P

Lifemeta™ ST8H High Pressure Silicone Tubing

Cobetter Lifemeta™ ST8H high pressure silicone tubing is a high-quality, cost-effective fluid transfer solution. It can be used to increase the flow rate during the production process and reduce the liquid transfer time. ST8H high pressure silicone tubing is the optimal choice for single-use applications such as TFF, virus filtration, inline integrity testing of filtration assemblies, and high volume fluid transfer.



Product Features

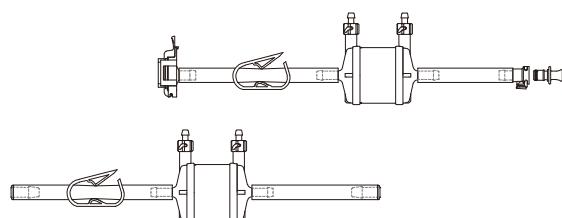
- Allows for processing at higher flow rate
- Full vacuum capabilities on most sizes
- Flexible, translucent and durable
- Excellent resistance to compression set
- Good kink resistance
- Less particle shedding when cutting

Product Applications

- TFF
- Virus filtering
- Online integrity testing of filter components
- High volume fluid transfer
- Laboratory fluid transfer applications
- Single-use tubing assemblies

Regulatory Compliance

Particulate Matter	Particulate matter in the product eluent meets the requirements in USP <788> for large volume parenterals.
Bacterial Endotoxin	Aqueous extraction contains < 0.25 EU/mL as determined by Amebocyte Lysate, USP <85>.
USP <87> Cytotoxicity	Meet the requirement of USP <87> In Vitro Biological Reactivity Test.
USP <88> Biological Reactivity	Meet the criteria of the USP <88> Biological Reactivity Test for Class VI plastics.
ISO 10993-4	Meet the requirement of ISO 10993-4 In Vitro Hemolytic Test.
Indirect Food Additive	The fluid contact component materials meet the FDA Indirect Food Additive requirements cited in 21 CFR 177–182.
Animal Derivative Content	Products do not contain animal derived components and are free from TSE risk.
Quality Assurance	These products are manufactured in a facility which adheres to ISO 9001:2015 Practices.



Sterilization Methods

Gamma Irradiation	Can be gamma irradiated at 25-45 kGy in sterile package and can not be re-sterilized.
Autoclave	Can be autoclaved 25 cycles for 30 minutes at 121 °C.

Physical characteristics

Item	Value	Procedure
Durometer Hardness (Shore A)	82 ± 5	ASTM D2240
Burst Strength	0.6-1.6 MPa	ASTM D380
Vacuum Resistance	> 80 kPa	ISO 7233: 2016
Temperature Range	-51-232 °C	

Note: Please refer to the validation guide document for detailed test methods and results.

Lifemeta™ ST8H Ordering Information

Part No.*	I.D.		O.D.		Wall Thickness		Tube Number	Packaging**	Qty m/pk
	In.	mm.	In.	mm.	In.	mm.			
ST8H3224150N(-P)	1/8"	3.2	5/16"	8.0	3/32"	2.4	120#	Non-sterile	15
ST8H15150N(-P)	3/16"	4.8	3/8"	9.6	3/32"	2.4	15#	Non-sterile	15
ST8H4832150N(-P)	3/16"	4.8	7/16"	11.2	1/8"	3.2	/	Non-sterile	15
ST8HR150N(-P)	1/4"	6.4	7/16"	11.2	3/32"	2.4	24#	Non-sterile	15
ST8H26150N(-P)	1/4"	6.4	1/2"	12.7	1/8"	3.2	26#	Non-sterile	15
ST8H35150N(-P)	5/16"	8.0	1/2"	12.7	3/32"	2.4	35#	Non-sterile	15
ST8H36150N(-P)	3/8"	9.6	9/16"	14.4	3/32"	2.4	36#	Non-sterile	15
ST8HY150N(-P)	3/8"	9.6	5/8"	15.9	1/8"	3.2	73#	Non-sterile	15
ST8HH150N(-P)	1/2"	12.7	3/4"	19.1	1/8"	3.2	82#	Non-sterile	15
ST8HE150N(-P)	1/2"	12.7	11/16"	17.5	3/32"	2.4	/	Non-sterile	15
ST8HX150N(-P)	5/8"	15.9	7/8"	22.2	1/8"	3.2	184#	Non-sterile	15
ST8HN150N(-P)	3/4"	19.1	1"	25.4	1/8"	3.2	90#	Non-sterile	15
ST8HM100N(-P)	3/4"	19.1	1-1/8"	28.6	3/16"	4.8	191#	Non-sterile	10
ST8HD050N(-P)	1"	25.4	1-3/8"	34.9	3/16"	4.8	92#	Non-sterile	5

Note: The table is the standard product number for sale, if you need special specifications (length, sterile packaging), please communicate the requirements in advance.

* Part No.: This product is available in labelled and non-labelled

** Packaging: This product is available in sterile or non-sterile packaging. The sterilization method for sterile products is gamma irradiation, and the irradiation dose is 25-45 kGy. Naming of products with different packaging methods refer to the following:

1. Non-sterile: ST8H3224150N

2. Sterile: ST8H3224150S

3. Non-sterile (labelled): ST8H3224150N-P

4. Sterile (labelled): ST8H3224150S-P