Pharmaceutical-Grade Pressure-Resistant Silicone Tubing & Crimped Tubing

Customized solutions for high-pressure fluid transmission

In biopharmaceutical manufacturing, fluid transfer occurs under harsh conditions such as high pressure, high flow rates, vacuum, and repeated CIP/SIP cycles—demanding piping with exceptional pressure resistance and longer service life.

LePure Biotech's pharmaceutical-grade pressure-resistant silicone hose series delivers outstanding pressure resistance, flexibility, and resistance to aging. Constructed as a composite of high-purity medical-grade silicone and a high-strength reinforcement layer, it is manufactured via precision extrusion with enhanced process. Custom integrated crimped assemblies are available in a full range of sizes, ideal for high-pressure fluid transfer and long-term circulation applications.

The entire series complies with GMP, USP Class VI, and ISO 10993 biosafety standards, delivering safe, stable, and traceable quality assurance for high-pressure fluid transfer in biopharmaceutical process.

Features

- Specification: Inner diameter 6.4-102 mm
- Working pressure up to 22 bar
- Excellent biocompatibility
- Wide temperature tolerance: -60 °C to 200 °C
- Integrated crimped assembly with precision workmanship, minimizing leakage risk
- Full batch traceability





Compliance with regulations

- ISO 10993-5 Cytotoxicity testing
- USP<87> In vitro bioreaction tests
- USP<88> Class VI in vivo biosafety
- FDA 21CFR 177.2600 food-contact silicone elastomer

Advantages

- Superior High-Pressure Stability: Constructed with a composite reinforcement layer, delivering high pressure resistance, burst resistance, and kink resistance for long-term stable operation under high-pressure conditions
- Integrated crimped design, supporting standard and custom configurations
- Withstands repeated SIP/CIP cycles; resists aging and hardening
- End-to-End Quality Assurance: Manufactured in cleanrooms with precision process and rigorous testing, ensuring high batch consistency and long service life

Applications

Biopharmaceutical high-pressure process fluid transfer (buffers, culture media, bulk solutions)

- High-pressure feed/recirculation for bioreactors and fermenters
- Chromatography system, liquid preparation system high-pressure delivery and cross-device connection
- Vacuum delivery, high temperature sterilization (SIP), and long-term cycle CIP conditions
- Production scale-up and process high-pressure fluid transfer

Product Range

Technical Parameters	Mesh braided silicone hose	Transparent steel wire silicone hose	Steel wire reinforced silicone hose
Reinforcing layer structure	Polyester fiber braid	Single-layer stainless steel wire winding	High-strength synthetic fiber + stainless steel wire
Vacuum rating	Not applicable	-0.4 bar	-0.91 bar
Appearance transparency	Translucent	High transparency	General

Ordering Information

Mesh braided silicone hose -BT62 series

Product code	Inner diameter (mm)× outer diameter (mm)	Working pressure (bar)	Bending radius (mm)	Packaging
BT62006	6.4 × 13.2	17	45.0	15 m/ roll; Double-layer packaging
BT62008	7.9 x 15	15	55.0	15 m/ roll; Double-layer packaging
BT62009	9.6 × 16.6	14	70.0	15 m/ roll; Double-layer packaging
BT62013	12.7 × 22.2	11	85.0	15 m/ roll; Double-layer packaging
BT62016	15.9 × 25.0	10	95.0	15 m/ roll; Double-layer packaging
BT62019	19.1 × 31.0	7	135.0	15 m/ roll; Double-layer packaging
BT62025	25.4 × 37.0	7	160.0	15 m/ roll; Double-layer packaging
BT62032	31.8 × 43.8	6	200.0	15 m/ roll; Double-layer packaging
BT62038	38.0 × 50.0	5	300.0	15 m/ roll; Double-layer packaging

Ordering Information

Transparent steel wire silicone hose -ST63 series

Product code	Inner diameter (mm)× outer diameter (mm)	Working pressure (bar)	Bending radius (mm)	Packaging
ST63019	19.1 × 30.1	4.2	90.0	6 m/ roll; Double-layer packaging
ST63025	25.4 × 36.4	3.9	121.0	6 m/ roll; Double-layer packaging
ST63032	31.8 × 42.8	3.4	137.0	6 m/ roll; Double-layer packaging
ST63038	38.1 × 49.1	3.1	163.0	6 m/ roll; Double-layer packaging
ST63051	50.8 × 61.8	2.4	238.0	6 m/ roll; Double-layer packaging
ST63063	63.5 × 76.0	2.2	337.0	6 m/ roll; Double-layer packaging
ST63076	76.2 × 88.0	1.8	491.0	6m/ roll; Double-layer packaging
ST63089	88.9 × 101.0	1.6	626.0	6 m/ roll; Double-layer packaging
ST63102	101.6 × 114.0	1.0	985.0	6 m/ roll; Double-layer packaging

Ordering Information

Steel wire reinforced silicone hose -GS65 series

Product code	Inner diameter (mm)× outer diameter (mm)	Working pressure (bar)	Bending radius (mm)	Packaging
GS65009	9.6 × 21.0	22.0	33.0	6 m/ roll; Double-layer packaging
GS65013	12.7 × 23.7	19.9	38.0	6 m/ roll; Double-layer packaging
GS65016	15.9 × 26.9	18.3	44.0	6 m/ roll; Double-layer packaging
GS65019	19.1 × 30.1	16.5	50.0	6 m/ roll; Double-layer packaging
GS65025	25.4 × 36.4	14.1	66.0	6 m/ roll; Double-layer packaging
GS65032	31.8 × 42.8	12.8	92.0	6 m/ roll; Double-layer packaging
GS65038	38.1 × 49.1	11.5	110.0	6 m/ roll; Double-layer packaging
GS65051	50.8 × 61.8	9.2	140.0	6 m/ roll; Double-layer packaging
GS65063	63.5 × 76.0	7.5	178.0	6 m/ roll; Double-layer packaging
GS65076	76.2 × 88.0	6.1	226.0	6 m/ roll; Double-layer packaging
GS65102	102.0 × 114.0	3.8	360.0	6 m/ roll; Double-layer packaging

Custom pressure-resistant crimping tube numbering principles

Non-crimped hose series code	Corresponding to the crimped hose series number
BT62	BH62
ST63	SH63
GS65	GH65

BH62	025	1000	K50
Product line	Inner diameter of pipe	Pipe length	Crimping fitting codes
BH62 SH63 GH65	Units: mm	Unit: mm	K25: TC25 at both ends K50: TC50 at both ends K64: TC64 at both ends K78: TC78 at both ends K91: TC91 at both ends K106: TC106 at both ends K119: TC119 at both ends

For non-standard pipe diameters, reducers, or special configurations, contact your dedicated sales consultant

LePure Biotech
Building 1-3, No.269, Rongxin Road, Songjiang District, Shanghai, China
Tel: +86-400-902-0506 Email: support@lepurebiotech.com

LePure Biotech LLC
2200 West Park Drive, Suite 300, Westborough, MA 01581, USA
Tel: +1-978-355-8050 Email: contacts@lepurebiotech.com

www.lepurebiotech.com

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Official Website