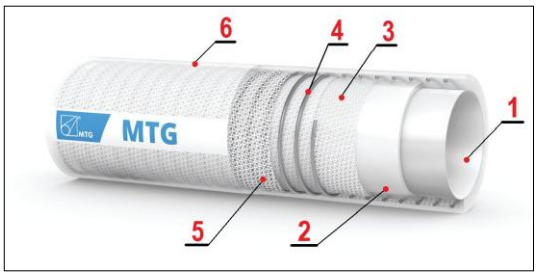
Silicone hoses with a layer of fluoropolymer for biopharmaceutical applications

DYNAMIC® Cleanroom-Platinum

Platinum-cured pressure silicone hose with a liner of fluoropolymer - for demanding applications

Inner layer: white, smooth fluoropolymer PFA
semi-transparent silicone
Reinforcement: synthetic fabric layers,
spiral (stainless steel AISI 302)
Outer layer: semi-transparent silicone
Working temperature: from -30°C to +150°C



A hose of patented design, combining the excellent technical and hygienic properties of fluoropolymer PFA (with properties similar to PTFE) with the flexibility, hygiene and temperature resistance of silicone. Designed to ensure the highest purity when conveying pharmaceutical, cosmetic, food and chemical products under aseptic conditions. The inner layer of the hose is a tube of fluoropolymer PFA (1), white, mirror-smooth, odourless and tasteless. It offers very good resistance to repeated flexing cycles (ASTM D 2176). It complies with USP Class VI, 3A 20-27, FDA, DM 21/03/73, 10/2011/EU, ISO 10993-4, -10 and -11, non-cytotoxic ISO 10993-5, ICH Q3D. The main hose construction consists of: a silicone layer (2), spirally arranged layers of high-strength, light, white synthetic fabric (3 and 5), a steel spiral (4) and an outer silicone layer (6). The outer layer is smooth, with a low friction coefficient, easy to clean with a mild detergent, compliant with USP Class VI, 3-A 18-03 Class I, FDA, BfR, European Pharmacopoeia 3.1.9, ISO 10993-4, -10 and -11, non-cytotoxic ISO 10993-5. The hose silicone is platinum-cured and the entire hose is produced in a certified clean zone (ISO 14644-1 Class 8). Compliant with EC 1935/2004 and 2023/2006/EC (GMP). The hose production process is free of animal-derived substances, phthalates, adipates, nitrosamines and materials restricted under the RoHS material directive 2011/65/EU and the REACH regulation 1907/2006/EU.
Sterilisation: with steam max. +135°C at 3.5 bar pressure for max. 30 min.
Cleaning: water up to 95°C; sodium hydroxide 3%, 80°C; nitric / phosphoric / peracetic acid 3%, 80°C; hydrochloric acid, sodium hypochlorite 200 ppm, 80°C, max. 30 min.

index	diameter inner* [mm]	diameter outer [mm]	wall wall* [mm]	pressure working [bar]	pressure burst [bar]	vacuum [bar]	bending radius static / dynamic [mm]	weight [kg/m]	length max. [m]
MT-DYNAMIC-CP-10	10	22	6	10	30	0,9	35 / 50	0,36	20
MT-DYNAMIC-CP-13	13	25	6	10	30	0,9	45 / 60	0,42	20
MT-DYNAMIC-CP-16	16	28	6	10	30	0,9	55 / 75	0,57	20
MT-DYNAMIC-CP-19	19	31	6	10	30	0,9	65 / 90	0,65	30
MT-DYNAMIC-CP-25	25	37	6	10	30	0,9	85 / 140	0,80	30
MT-DYNAMIC-CP-32	32	44	6	10	30	0,9	120 / 200	1,00	30
MT-DYNAMIC-CP-38	38	51	6,5	10	30	0,9	140 / 250	1,27	30
MT-DYNAMIC-CP-51	51	67	8	10	30	0,9	180 / 300	1,98	30
MT-DYNAMIC-CP-63	63,5	79,5	8	5	15	0,9	320 / 380	2,53	20
MT-DYNAMIC-CP-76	76	92	8	5	15	0,9	380 / 460	3,62	20
MT-DYNAMIC-CP-100	100	118	9	3	9	0,9	500 / 600	5,02	20

* Inner diameter tolerance: ISO 1307; wall thickness tolerance: ± 0.8 mm

MT-DYNAMIC-CP-25 hose with a TRICLOVER hygienic end in stainless steel AISI 316 (NH-TCR-050-22-025) fitted with a TI-LR-037-16-SS ferrule

Silicone hoses for pharmaceutical and biotechnology applications