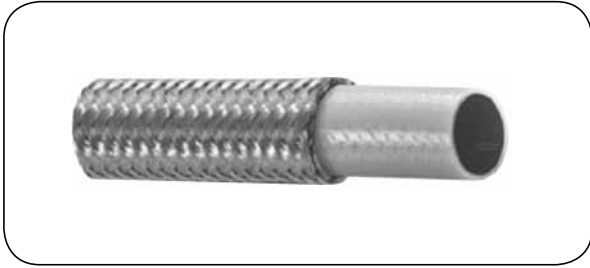


INDUSTRIAL HOSES - PTFE

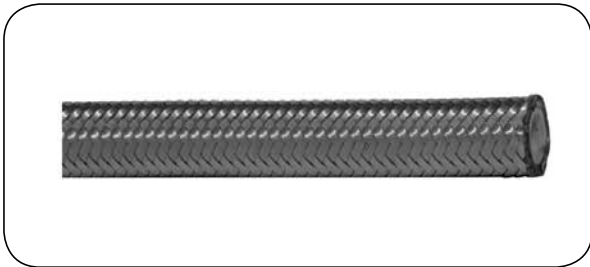


CHEMFLUOR TH

Internal layer: Black, conductive PTFE
Reinforcement: AISI 304 stainless steel braid
Working temp.: From -50°C up to +200°C

Flexible, PTFE hose designed for high pressure hydraulic, pneumatic and gas installations. The internal layer, made of conductive PTFE, prevents the build-up of electrostatic charges. Available as complete hose assemblies with fittings according to customer specification.

code	I.D. [mm]	O.D. [mm]	working press. 20°C [bar]	bursting press. 20°C/200°C [bar]	bending radius [mm]	maximum length [m]
VE-1704TH000	5.6	9.5	345	1100/820	38	12
VE-1706TH000	7.8	12	345	1100/820	64	10.5
VE-1708TH000	10.2	15.2	345	1100/820	73	10.5
VE-1710TH000	12.6	18	345	1100/820	83	10.5
VE-1712TH000	15.7	24.6	345	1100/820	102	10.5
VE-1716TH000	22	31.8	345	1100/820	127	10.5



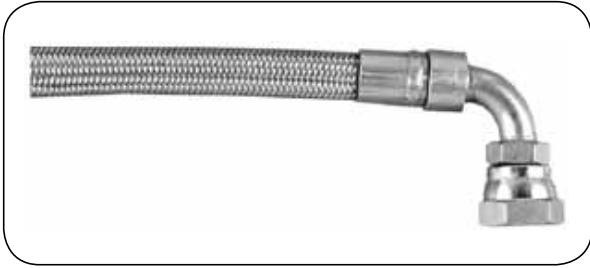
PRESSURE FLEX

Material: PTFE
Reinforcement: Double aramid braid,
 AISI 304 steel braid
Working temp.: From -60°C up to +260°C

Flexible, PTFE hose designed for high pressure hydraulic and gas installations. Lightweight, with a very small bending radius and small external diameter. Meets the requirements of SAE 100 R14 standard. For temperature above +150°C, working pressure depends on temperature - contact Sales or Technical Department of TUBES INTERNATIONAL®.

code	DN [inch]	I.D. [mm]	O.D. [mm]	working pressure [bar]	bursting pressure [bar]	bending radius [mm]
KA-PFLEX-06	1/4	6.2	12.3	485	1940	38
KA-PFLEX-08	5/16	8.1	14.2	450	1800	47
KA-PFLEX-10	3/8	9.5	16	430	1750	64
KA-PFLEX-12	1/2	12.2	19	425	1700	74
KA-PFLEX-15	5/8	15.1	22	360	1450	90
KA-PFLEX-20	3/4	20	27.5	275	1100	180
KA-PFLEX-23	1	23	31.8	250	1000	200

INDUSTRIAL HOSES - PTFE



SMOOTHBORE

Material: PTFE
Reinforcement: Single or double AISI 304 stainless steel braid
Working temp.: From -70°C up to +260°C (working pressure depends on temperature)

Characteristics: The internal layer made of seamless extruded, premium grade of PTFE that ensures minimum porosity, maximum flexibility and high resistance to vibration. The braid made of heat treated, AISI 304 stainless steel wire (tensile strength: 1700 MPa). There are several SMOOTHBORE versions available: standard or heavy wall, with a single or double braid (see tables below). Heavy wall is recommended for heavy-duty applications, gases (up to 150 bar) and applications with cyclic, rapid temperature changes. Double braid version is designed for high working pressure and applications where kink resistance is required as the hose undergoes constant bending.

For temperatures above +130°C reduce the maximum working pressure given in the tables by 0.75% for each 1°C of temperature rise above +130°C.

**Example: at +170°C temperature, maximum working pressure for AF-SWSB-08 hose is:
 260 bar - (170°C - 130°C) x 0.75 = 260 bar - 30% = 182 bar.**

Safety factor (working pressure/ bursting pressure) is 1:3.

Applications: Due to the unique properties of PTFE (wide temperature range, excellent chemical resistance, non-stick surface), widely used to transfer chemicals, foodstuffs, fuels, oils, paints, solvents, adhesives, detergents, inks, steam, etc.

SWSB (standard wall, single braid)

code*	I.D.			O.D.		bending radius [mm]	working pressure [bar]	weight [kg/m]
	nominal [inch]	minimum [mm]	maximum [mm]	minimum [mm]	maximum [mm]			
AF-SWSB-06	1/4	6	6.5	8.3	8.7	60	280	0.09
AF-SWSB-08	5/16	7.5	8	9.8	10.5	70	260	0.11
AF-SWSB-10	3/8	9.1	9.6	11.5	12	80	220	0.12
AF-SWSB-13	1/2	11.9	12.8	14.5	15.4	110	155	0.21
AF-SWSB-16	5/8	15	16	17.8	18.9	150	120	0.26
AF-SWSB-19	3/4	18	19.2	21	22.3	200	100	0.32
AF-SWSB-25	1	24	25.4	27.6	28.7	300	80	0.43

* code example of an antistatic version: AF-SWSB-06AS

HWSB (heavy wall, single braid)

code*	I.D.			O.D.		bending radius [mm]	working pressure [bar]	weight [kg/m]
	nominal [inch]	minimum [mm]	maximum [mm]	minimum [mm]	maximum [mm]			
AF-HWSB-03	1/8	3	3.2	6	6.2	20	350	0.07
AF-HWSB-05	3/16	4.5	4.8	7.5	7.8	29	320	0.09
AF-HWSB-06	1/4	6	6.5	9	9.5	30	250	0.11
AF-HWSB-08	5/16	7.5	8	10.5	11.3	40	240	0.14
AF-HWSB-10	3/8	9.1	9.6	12.2	12.8	55	200	0.15
AF-HWSB-13	1/2	11.9	12.8	15.1	16.1	85	150	0.24
AF-HWSB-16	5/8	15	16	18.5	19.7	110	120	0.29
AF-HWSB-19	3/4	18	19.2	21.4	22.7	145	100	0.34
AF-HWSB-25	1	24	25.4	28.1	29.5	260	80	0.47

* code example of an antistatic version: AF-HWSB-06AS

INDUSTRIAL HOSES - PTFE

SWDB (standard wall, double braid)

code*	I.D.			O.D.		bending radius [mm]	working pressure [bar]	weight [kg/m]
	nominal [inch]	minimum [mm]	maximum [mm]	minimum [mm]	maximum [mm]			
AF-SWDB-03	1/8	3	3.2	6.8	6.9	20	380	0.10
AF-SWDB-05	3/16	4.6	4.75	8.6	8.8	30	350	0.14
AF-SWDB-06	1/4	6	6.5	9.9	10.2	40	310	0.16
AF-SWDB-08	5/16	7.5	8	11.3	11.8	50	300	0.19
AF-SWDB-10	3/8	9.1	9.6	13.2	13.5	60	250	0.21
AF-SWDB-13	1/2	11.9	12.8	16	16.8	90	200	0.34
AF-SWDB-16	5/8	15	16	19.5	20.4	130	150	0.42
AF-SWDB-19	3/4	18	19.2	22.6	23.6	170	120	0.50
AF-SWDB-25	1	24	25.4	29	30.2	270	90	0.70

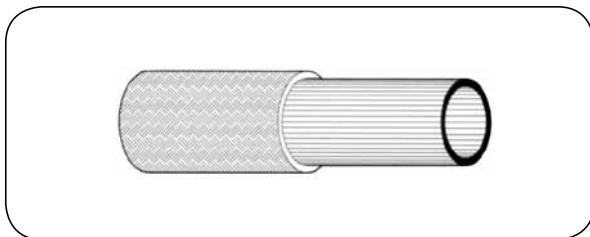
* code example of an antistatic version: AF-SWDB-06AS

HWDB (heavy wall, double braid)

code*	I.D.			O.D.		bending radius [mm]	working pressure [bar]	weight [kg/m]
	nominal [inch]	minimum [mm]	maximum [mm]	minimum [mm]	maximum [mm]			
AF-HWDB-03	1/8	3	3.2	7	7.1	18	370	0.11
AF-HWDB-05	3/16	4.5	4.8	8.8	9	25	340	0.14
AF-HWDB-06	1/4	6	6.5	10.6	10.9	26	300	0.18
AF-HWDB-08	5/16	7.5	8	12.1	12.6	35	290	0.21
AF-HWDB-10	3/8	9.1	9.6	13.9	14.3	50	240	0.24
AF-HWDB-13	1/2	11.9	12.8	16.5	17.3	75	190	0.37
AF-HWDB-16	5/8	15	16	20.3	21.2	100	150	0.45
AF-HWDB-19	3/4	18	19.2	23.3	24.3	135	120	0.53
AF-HWDB-25	1	24	25.4	30.2	31.2	250	90	0.73
AF-HWDB-32	1.1/4	30.4	32	36.3	37.5	400	80	0.95
AF-HWDB-38	1.1/2	36.2	38	42.8	44.7	800	65	1.17
AF-HWDB-51	2	48.8	50.8	55.4	57.4	1200	40	1.61

* code example of an antistatic version: AF-HWDB-06AS

SMOOTHBORE hose versions



AS - antistatic

Special additives reduce inherent, high resistance of PTFE meeting the requirements of ISO 8031 Annex A. The electrical resistance between an end fitting and an internal hose layer should not exceed $10^8 \Omega$. One of the end fittings must be grounded.

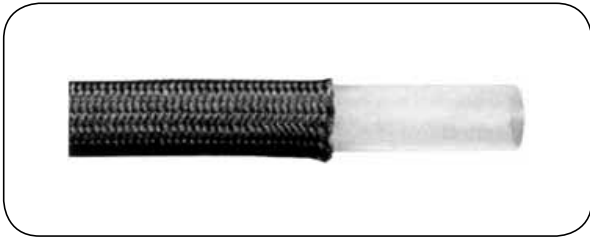


HPG - high pressure gases

Hose designed for gases with the pressure above 140 bar. Hose wall is made of specially processed PTFE. See „INDUSTRIAL HOSES - technical gas”

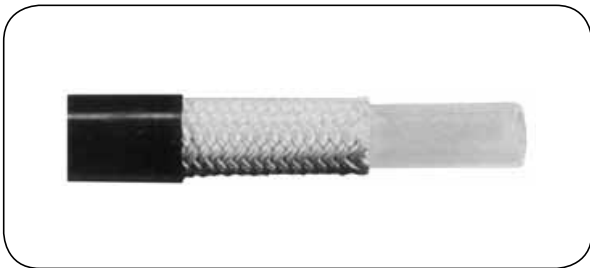
INDUSTRIAL HOSES - PTFE

SMOOTHBORE hose versions



Other braid materials

SMOOTHBORE hoses can be supplied with braids (standard or additional) made of AISI 316 stainless steel, Monel, Kevlar, Nomex, polyester or fibreglass.



Additional hose covers

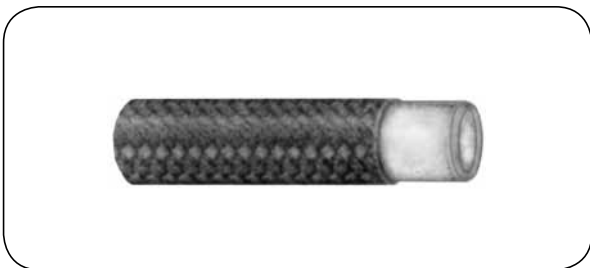
For braid protection or for the ease of cleaning, hoses can be supplied with additional external covers made of Hytrel, PVC, polyolefin, polyamide or various kinds of rubber. The covers can be labelled with a brand name, working pressure, etc.



SMOOTHBORE hose fittings

Standard SMOOTHBORE hose fittings: BSP (straight) female thread (cone 60°) or BSPT male thread, made of zinc-plated steel or AISI 316. Other fittings such as metric, JIC, NPT, flanges, pipe ends, DIN 11851, SMS, TRICLOVER, and many more can be used as well.

TUBES INTERNATIONAL® produces a hose assembly according to customer specifications (length, diameter, type of fittings) on request.



AX 1603

Material: PTFE

External layer: Steel wire / textile braid

Lightweight, flexible hose designed for steam. Used in ironing machines, rinsers, coffee machines, etc.

code	I.D. [inch]	O.D. [inch]	wall thickness [mm]	bending radius [mm]	working pressure [bar]	bursting pressure [bar]
AX-1603	3/16	5/16	0.76	63.50	287	862

INDUSTRIAL HOSES - PTFE



HYPERLINE SB (HYDRAFLON)

Material: PTFE
Reinforcement: Single or double AISI 304 stainless steel braid
Working temp.: From -70°C up to +260°C (working pressure depends on temperature)

Characteristics: The internal layer made of seamless extruded, premium grade PTFE that ensures minimum porosity, maximum flexibility and high resistance to vibration. The braid made of heat treated AISI 304 stainless steel wire (tensile strength: 1700 MPa). HYPERLINE hose is a version of SMOOTHBORE hose, however its wall is medium thick and inside diameter suitable for standard hydraulic fittings. Supplied with a single braid as a standard (double braid on special request).

For temperatures above +130°C reduce the maximum working pressure given in the tables by 0.75% for each 1°C of temperature rise above +130°C.

Example: at +170°C temperature, maximum working pressure for AF-HDSB-05 hose is:
 $320 \text{ bar} - (170^\circ\text{C} - 130^\circ\text{C}) \times 0.75 = 320 \text{ bar} - 30\% = 224 \text{ bar}.$

Safety factor (working pressure/ bursting pressure) is 1:3.

Applications: Due to the unique properties of PTFE (wide temperature range, excellent chemical resistance, non-stick surface), widely used to transfer chemicals, foodstuffs, fuels, oils, paints, solvents, adhesives, detergents, inks, steam, etc.

HYPERLINE SB (medium wall, single braid)

code*	I.D.		O.D. [mm]	working pressure [bar]	bending radius [mm]	weight [kg/m]
	[inch]	[mm]				
AF-HDSB-03	1/8	3.5	6.45	350	20	0.07
AF-HDSB-05	3/16	5	7.65	320	45	0.08
AF-HDSB-06	1/4	6.7	9.3	240	60	0.11
AF-HDSB-08	5/16	8.5	11.1	220	70	0.14
AF-HDSB-10	3/8	10	12.75	190	80	0.17
AF-HDSB-13	1/2	13.6	16.35	150	130	0.21
AF-HDSB-16	5/8	16.6	19.5	130	163	0.28
AF-HDSB-19	3/4	19.8	22.5	110	180	0.33
AF-HDSB-25	1	26.4	30.1	80	230	0.52

* code example of an antistatic version: AF-HDSB-06AS

Standard fittings for HYPERLINE SB: Z type fittings (see: HIGH PRESSURE).

TUBES INTERNATIONAL® produces hose assemblies according to customer specification (length, diameter, fitting type) on request.