

Air and water hoses – general information

Air and water hoses are designed for industrial water, sewage, cooling water, cold and hot water cleaning, for compressed air (compressors, pneumatic tools, hose reels). The hoses are made of rubber, PVC or polyethylene, reinforced with a braid, plastic helix or steel helix. In addition to hoses for general industrial applications, the group includes specialized hoses for:

- portable toilet emptying,
- cooling systems of metallurgical furnaces,
- engine cooling systems,
- motor boats and yachts,
- hot air in tanker trucks,
- fire protection systems,
- snow cannons.

Hose fittings for water and air (see INDUSTRIAL FITTINGS section) are normally mounted with bolt clamps or ear clips. They can also be crimped with ferrules using crimping machines.

For water and air hoses also see these chapters: general-purpose hoses, food hoses, pressure metal hoses, PTFE hoses, TYGON hoses, and sections: HIGH PRESSURE HYDRAULICS and PNEUMATICS. For specialist hoses for cleaning and washdown applications see CLEANING AND WASHDOWN section.

Water hoses



TRICOFLEX

Water hose for gardening and construction

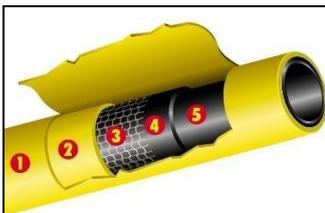
- Inner layer:** two-layer black PVC
- Reinforcement:** sturdy woven polyester braid
- Outer layer:** two-layer yellow PVC
- Work. temp.:** from -15°C to +60°C
(working pressure depends on temperature)

Flexible, general-purpose delivery hose for water, manufactured in France. The multi-layer construction and sturdy, woven braid provides high flexibility and resistance to twisting, for easy manual handling. Excellent resistance to repeated bending, crushing and pulling. Minor deformation under pressure. The smooth internal surface ensures good water flow. The outer layer is resistant to abrasion, ageing and UV radiation. With this construction, it is ideal for irrigation systems in agriculture, horticulture, and in the construction and road construction industries.

code	I.D. [mm]	O.D. [mm]	wall thickness [mm]	working pressure 20°C [bar]	burst pressure 20°C [bar]	bend radius [mm]	weight [kg/m]	coil length [m]
TR-TRICOFLEX-13	12.5	17.6	2.55	10	25	62.5	0.14	50
TR-TRICOFLEX-15	15	20.5	2.75	10	25	67.5	0.18	50
TR-TRICOFLEX-19	19	25.3	3.15	9	23	90	0.26	50
TR-TRICOFLEX-25	25	32.3	3.65	8	20	120	0.44	50
TR-TRICOFLEX-30	30	39	4.5	8	20	150	0.64	50
TR-TRICOFLEX-35	35	45	5	8	20	175	0.82	50
TR-TRICOFLEX-40	40	51	5.5	8	20	200	1.03	50
TR-TRICOFLEX-50	50	63	6.5	8	20	250	1.51	50

Note: colour marked codes - used most often.

The dependence of burst pressure and working pressure on temperature for typical PVC hoses	temperature	20°C	30°C	40°C	50°C	60°C	70°C
	pressure	100%	74%	55%	40%	30%	22%



The multi-layer design of TRICOFLEX hose ensures optimum handling characteristics:

- 1 – PVC outer layer, UV resistant
- 2 – flexible PVC middle layer
- 3 – woven polyester braid (“tricot”)
- 4 – soft PVC middle layer
- 5 – smooth PVC inner layer

TRICOFLEX hose DN13 with NiTO CLICK quick release coupling plug (NT-59600A3) made of nickel-plated brass mounted with an ear clip with an inner insert made of 316 steel (AB-23012407).



Water hoses



TUBES 2116

Industrial hose for cold and hot water

- Inner layer:** black EPDM rubber
- Reinforcement:** polyester braid
- Outer layer:** red EPDM rubber
- Work. temp.:** from -40°C to +100°C (with peaks up to 120°C)

Industrial hose for water and air. Widely used in the industry for hot water cleaning of floors and equipment. It is also suitable for outdoor use. Resistant to weather, ozone and abrasion. It is not resistant to oil, and not recommended for air with oil mist.

code	I.D. [mm]	O.D. [mm]	wall thickness [mm]	working pressure [bar]	burst pressure [bar]	bend radius [mm]	weight [kg/m]	coil length [m]
PR-TU2116-13	13	21	4	10	40	40	0.29	60
PR-TU2116-16	16	26	5	10	40	60	0.43	60
PR-TU2116-19	19	28.5	4.75	10	40	90	0.49	60
PR-TU2116-25	25	35	5	10	30	120	0.62	40

Note: colour marked codes - used most often.



TUBES 2116 T

Industrial hose for cold and hot water

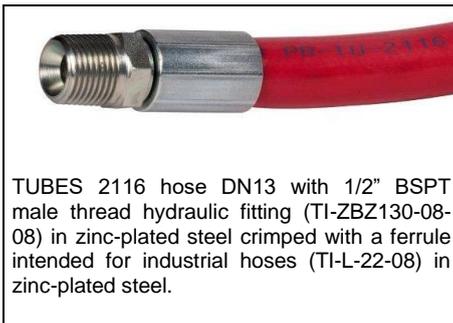
- Inner layer:** white EPDM rubber
- Reinforcement:** polyester braid
- Outer layer:** pinpricked, red or blue EPDM rubber
- Work. temp.:** from -40°C to +100°C



Industrial hose for water and air. Widely used in the industry for hot water cleaning of floors and equipment. It is also suitable for outdoor use. Resistant to weather and abrasion. It is not resistant to oil, and not recommended for air with oil mist.

code (red)	code (blue)	I.D. [mm]	O.D. [mm]	wall thickness [mm]	working pressure [bar]	burst pressure [bar]	bend radius [mm]	weight [kg/m]	coil length [m]
PR-TU2116T-13R	PR-TU2116T-13BL	13	23	5	10	40	152	0.44	50
PR-TU2116T-16R	PR-TU2116T-16BL	16	28	6	10	40	191	0.63	50
PR-TU2116T-19R	PR-TU2116T-19BL	19	32	6.5	10	40	228	0.79	50
PR-TU2116T-25R	PR-TU2116T-25BL	25	39	7	10	40	305	1.041	50

Note: colour marked codes - used most often.



TUBES 2116 hose DN13 with 1/2" BSPT male thread hydraulic fitting (TI-ZBZ130-08-08) in zinc-plated steel crimped with a ferrule intended for industrial hoses (TI-L-22-08) in zinc-plated steel.



TUBES 2116T hose, red colour, DN13 with 1/2" BSPT male thread hydraulic fitting (TI-ZBZ130-08-08) in zinc-plated steel crimped with a ferrule for industrial hoses (TI-L-24-08) in zinc-plated steel.



TUBES 2116T hose, blue colour, DN13 with 1/2" BSPT male thread industrial fitting (NM-VT123-08) in AISI 316 stainless steel mounted with EAR CLIP in AISI 304 stainless steel.

For specialist hoses for cleaning and washdown applications see CLEANING AND WASHDOWN section.

Water hoses



CODAN 1225, 1228, 1229

Industrial hose for cooling water and air

- Inner layer:** black EPDM rubber
- Reinforcement:** synthetic braid
- Outer layer:** smooth EPDM rubber (1225 black, 1228 blue, 1229 red)
- Work. temp.:** from -30°C to +95°C (20 bar)
from -30°C to +140°C (10 bar)
(with peaks up to +160°C).

Industrial, cold and hot water hoses for heavy-duty applications that demand high flexibility and resistance to abrasion, weather conditions and ozone. Used, for example, for cooling and temperature control in injection moulding. Can be used for air. Application at temperatures above +95°C reduces the service life of the hose. It is not resistant to oil, and not recommended for air with oil mist. Should be assembled with an ear clip or a ferrule.

code (black)	code (blue)	code (red)	I.D. [mm]	O.D. [mm]	wall thickness [mm]	working pressure [bar]	burst pressure [bar]	bend radius [mm]	weight [kg/m]	coil length [m]
CO-1225-10	CO-1228-10	CO-1229-10	9.5	16.5	3.5	20	60	50	0.23	50
CO-1225-13	CO-1228-13	CO-1229-13	12.7	21.5	4.4	20	60	65	0.36	50
CO-1225-19	CO-1228-19	CO-1229-19	19	27	4	20	60	105	0.45	30
CO-1225-25	CO-1228-25	CO-1229-25	25	35.5	5.25	20	60	145	0.80	30

Note: colour marked codes - used most often.

CODAN 1225 hose DN13 with ABA BEUL brass quick release coupling plug (ABB-QN-HT-13) mounted with EAR CLIP in AISI 304 stainless steel. ABA BEUL quick release couplings are commonly used for cold and hot water, in water networks and heating systems, including injection mould cooling.

For quick release couplings of this type, see "Water quick couplings - brass" in INSTRUMENTATION section.

CODAN 1228 hose DN13 with DYROS brass quick release coupling plug (DY-N928), crimped with a smooth ferrule (EC-104122) in zinc-plated steel. DYROS quick release couplings are mostly used for injection mould cooling.

For quick release couplings of this type, see "Quick release couplings for injection moulds" in INSTRUMENTATION section.

CODAN 1229 hose DN13 with DYROS brass quick release coupling socket (DY-VK918-45), crimped with a smooth ferrule (EC-104122) in zinc-plated steel. DYROS quick release couplings are mostly used for injection mould cooling.

For quick release couplings of this type, see "Quick release couplings for injection moulds" in INSTRUMENTATION section.



Water hoses



MONTANA 20®

Sturdy industrial hose for water and air

- Inner layer:** black SBR rubber
- Reinforcement:** synthetic cord
- Outer layer:** black or yellow EPDM rubber
- Work. temp.:** from -30°C to +70°C

Sturdy, industrial delivery hose for water and compressed air, designed for heavy-duty applications in the industry, construction of roads, and even in quarries. The inner layer is resistant to oil mist. Resistance to weather and abrasion. Because of its proven reliability, the hose is used in various industrial applications. MONTANA YELLOW version, with a slightly thinner and softer wall, has a yellow outer layer for greater visibility.

code	I.D. [mm]	O.D. [mm]	wall thickness [mm]	working pressure [bar]	burst pressure [bar]	weight [kg/m]	coil length [m]
MONTANA 20 STANDARD (black)							
IV-MONTANA20-010	10	19	4.5	20	60	0.29	60 / 120
IV-MONTANA20-013	13	23	5	20	60	0.38	60 / 120
IV-MONTANA20-016	16	26	5	20	60	0.42	60 / 120
IV-MONTANA20-019	19	30	5.5	20	60	0.59	60 / 120
IV-MONTANA20-022	22	32	5	20	60	0.60	60 / 120
IV-MONTANA20-025	25	35	5	20	60	0.60	60 / 120
IV-MONTANA20-032	32	44	6	20	60	0.95	60 / 120
IV-MONTANA20-035	35	45	5	20	60	1.05	60 / 120
IV-MONTANA20-038	38	51	6.5	20	60	1.18	60 / 120
IV-MONTANA20-040	40	54	7	20	60	1.28	60 / 120
IV-MONTANA20-045	45	58	6.5	20	60	1.37	60 / 120
IV-MONTANA20-051	51	69	9	20	60	2.25	60 / 120
IV-MONTANA20-063	63.5	81.5	9	20	60	2.69	60 / 120
IV-MONTANA20-076	76	94.5	9.25	20	60	3.17	60 / 120
IV-MONTANA20-080	80	96	8	20	60	2.77	60 / 120
IV-MONTANA20-090	90	110	10	20	60	3.99	60 / 120
IV-MONTANA20-102	102	122	10	20	60	4.40	60 / 120
MONTANA 20 YELLOW							
IV-MONTANA20-010Y	10	17	3.5	20	60	0.27	60 / 120
IV-MONTANA20-013Y	13	20	3.5	20	60	0.33	60 / 120
IV-MONTANA20-016Y	16	26	5	20	60	0.42	60 / 120
IV-MONTANA20-019Y	19	29	5	20	60	0.59	60 / 120
IV-MONTANA20-025Y	25	36	5.5	20	60	0.61	60 / 120
IV-MONTANA20-032Y	32	42	5	20	60	0.75	60 / 120
IV-MONTANA20-038Y	38	49	5.5	20	60	1.05	60 / 120
IV-MONTANA20-051Y	51	67	8	20	60	1.97	60 / 120
IV-MONTANA20-063Y	63.5	81	8.75	20	60	2.68	60 / 120
IV-MONTANA20-076Y	76	93	8.5	20	60	3.10	60 / 120
IV-MONTANA20-102Y	102	120	9	20	60	3.38	60 / 120

Note: colour marked codes - used most often.

MONTANA hose can be fabricated in countless ways by mounting different fittings with clips, bands, clamps, ferrules - depending on the tail of the fitting, hose diameter, medium, pressure, working conditions. Some examples: Assembly must always be performed by professional, qualified personnel!

MONTANA20 YELLOW DN13 with 1/2" BSPT male thread hydraulic fitting (TI-ZBW130-08-08), ferrule TI-L-22-08.

MONTANA20 DN13 with a hydraulic fitting (TI-ZBW110-08-08) and adapter (TI-A102-08-08), ferrule TI-L-24-08. The adapter makes installation easier.

MONTANA20 YELLOW DN25 with 1" BSP female thread hydraulic with 2" BSP male thread fitting with PN16 flange (TK-RKSS-100-102), fitting, with flat sealing, ferrule TI-L-37-16.

MONTANA20 YELLOW DN51 with 2" BSP male thread fitting with PN16 flange (TK-RKSS-100-102), safety clamp.

MONTANA20 DN102 with DN100 flat sealing (GD-VSLB-050-050-ST), safety clamps. For 16 bar air, cat. I (PED), CE marking.

Water hoses



TORONTO LIGHT®

Suction - delivery industrial hose for water

- Inner layer:** black SBR rubber
- Reinforcement:** synthetic cord, steel helix
- Outer layer:** black SBR rubber
- Work. temp.:** from -30°C to +70°C

Suction-delivery hose designed to transfer industrial water, sewage, sludge, non-corrosive fluids, etc. Lightweight, flexible, kink and vacuum resistant. The external layer is resistant to ozone and atmospheric conditions. Widely used with pumps in the construction industry, agriculture and other industries. Assembly, depending on the diameter and type of fittings, with clips, clamps, ferrules and bands.

code	I.D. [mm]	O.D. [mm]	wall thickness [mm]	working pressure [bar]	burst pressure [bar]	vacuum [bar]	bend radius [mm]	weight [kg/m]	coil length [m]
IV-TORONTO-L-019	19	27	4	10	30	0.9	95	0.41	60 / 120
IV-TORONTO-L-025	25	33	4	10	30	0.9	125	0.51	60 / 120
IV-TORONTO-L-032	32	40	4	10	30	0.9	160	0.65	60 / 120
IV-TORONTO-L-038	38	47.5	4.75	10	30	0.9	190	0.92	60 / 120
IV-TORONTO-L-040	40	49.5	4.75	10	30	0.9	200	0.98	60 / 120
IV-TORONTO-L-051	51	60.5	4.75	10	30	0.9	255	1.14	60 / 120
IV-TORONTO-L-060	60	71	5.5	10	30	0.9	360	1.90	60 / 120
IV-TORONTO-L-063	63.5	75	5.75	10	30	0.9	381	2.06	60 / 120
IV-TORONTO-L-070	70	81	5.5	10	30	0.9	420	2.19	60 / 120
IV-TORONTO-L-076	76	87	5.5	10	30	0.9	456	2.36	60 / 120
IV-TORONTO-L-090	90	102	6	10	30	0.9	540	3.12	60 / 120
IV-TORONTO-L-102	102	114	6	10	30	0.9	612	3.62	60 / 120
IV-TORONTO-L-110	110	125	7.5	10	30	0.9	770	3.97	60
IV-TORONTO-L-127	127	143	8	10	30	0.9	889	5.14	60
IV-TORONTO-L-152	152	170.5	9.25	10	30	0.9	1064	7.26	60
IV-TORONTO-L-203	203	225	11	10	30	0.9	1421	12.08	60
IV-TORONTO-L-254	254	278	12	5	15	0.9	1778	22.43	12 / 60

Note: colour marked codes - used most often.

TORONTO LIGHT hose can be assembled in numerous ways by mounting different fittings with clips, bands, clamps, ferrules - depending on the tail of the fitting, hose diameter, medium, pressure, working conditions. Some examples: Assembly must always be performed by professional, qualified personnel!



TORONTO LIGHT hose DN19 with AISI 316 stainless steel fitting 3/4" BSPT taper male thread (NM- VT123-12), worm drive clamp in AISI 316 steel (AB-03017500).



TORONTO LIGHT hose DN51 with KING NIPPLE fitting 2" BSPT male thread (AC-CNP-200) in zinc-plated steel, W1 version worm drive clamps (AB-03009006) also in zinc-plated steel.



TORONTO LIGHT hose DN110 with aluminium STORZ coupling (lug distance 133 mm, ST-12-133110-11), W5 version DPC double bolt clamp in AISI 316 steel; 3 clamps placed between the serrations of the fitting.

Water hoses



OSLO 10[®]

Layflat rubber delivery hose for water

- Inner layer:** black synthetic rubber
- Reinforcement:** polyester cord
- Outer layer:** black synthetic rubber
- Work. temp.:** from -25°C to +70°C

Robust and lightweight delivery hose, with a thinner wall, almost flat when unpressurised, designed for heavy-duty operating conditions. Used for industrial water and waste water transfer, with submersible pumps, drainage and irrigation systems, mobile irrigation, etc. Resistant to abrasion, weather and ozone. Can be easily coiled up after use. Assembly with bands or clamps.

code	I.D. [mm]	O.D. [mm]	wall thickness [mm]	working pressure [bar]	burst pressure [bar]	weight [kg/m]	coil length [m]
IV-OSLO10-032	32	38	3	10	30	0.42	60 / 120
IV-OSLO10-038	38	45	3.5	10	30	0.53	60 / 120
IV-OSLO10-051	51	58	3.5	10	30	0.72	60 / 120
IV-OSLO10-063	63.5	70	3.25	10	30	0.75	60 / 120
IV-OSLO10-076	76	83	3.5	10	30	1.04	60 / 120
IV-OSLO10-090	90	98	4	10	30	1.37	60 / 120
IV-OSLO10-102	102	110	4	10	30	1.57	60 / 120
IV-OSLO10-110	110	118	4	10	30	1.64	60 / 120
IV-OSLO10-127	127	135	4	10	30	1.85	60 / 120
IV-OSLO10-152	152	160	4	10	30	2.20	60 / 120
IV-OSLO10-203	203	215.5	6.25	10	30	4.73	60
IV-OSLO10-254	254	270	8	10	30	7.82	60

Note: colour marked codes - used most often.

<p>OSLO 10 hose DN51 with a bronze NOR symmetrical coupling (GP-NOR1065052B) mounted using BAND-IT[®] banding system, used on board a rescue vessel in Drammen, Norway.</p>		
<p>OSLO 10 hose DN150 with a fixed flange and swivel flange, mounted with three T-bolt clamps. Here, the tail of the flange coupling was designed specifically for OSLO hose to fit 3 clamps between 3 barbs. Zinc-plated carbon steel fittings with yellow chromated surface finish are rarely used nowadays for environmental reasons. Example from 2005, Poland.</p>		

Water hoses



VACUPRESS FLEX

Robust suction - delivery hose for water, sewage and bulk materials

- Inner layer:** black PVC
- Reinforcement:** polyester braid, zinc-plated steel helix
- Outer layer:** black PVC
- Work. temp.:** from -25°C to +60°C (working pressure depends on temperature)

Highly flexible, lighter than rubber, suction - delivery hose designed to transfer water, sewage, sludge and dry bulk materials. Ideal for irrigation systems, loading and unloading tanker trucks, industrial systems, etc. maintains high flexibility even in extreme cold conditions. The smooth inner and outer walls allow for keeping the hose clean and increase unloading efficiency by 20%. Resistant to weather conditions and abrasion. The hose is also available in straight, non-bent lengths of 3 to 6 meters.

code	I.D. [mm]	O.D. [mm]	wall thickness [mm]	working pressure 20°C [bar]	burst pressure 20°C [bar]	vacuum 20°C [bar]	bend radius [mm]	weight [kg/m]	coil length [m]
ME-VACUPRFX-025	25	36	5.5	16	48	0.9	80	0.68	60
ME-VACUPRFX-032	32	42.5	5.25	16	48	0.9	100	0.80	60
ME-VACUPRFX-040	40	52	6	14	42	0.9	130	1.20	30
ME-VACUPRFX-050	50	63.5	6.75	12	36	0.9	150	1.60	30
ME-VACUPRFX-060	60	74	7	12	36	0.9	180	2.00	30
ME-VACUPRFX-063	63	77	7	12	36	0.9	190	2.10	30
ME-VACUPRFX-076	76	92	8	12	36	0.9	210	2.97	30
ME-VACUPRFX-080	80	96	8	10	30	0.9	220	3.02	30
ME-VACUPRFX-090	90	106.5	8.25	10	30	0.9	250	3.50	30
ME-VACUPRFX-102	102	119	8.5	10	30	0.9	300	4.15	30
ME-VACUPRFX-120	120	138	9	8	24	0.9	350	5.43	20
ME-VACUPRFX-127	127	145	9	7	21	0.9	370	5.95	20
ME-VACUPRFX-152	152	171	9.5	5	15	0.9	480	7.05	20

Note: colour marked codes - used most often.

The dependence of burst pressure and working pressure on temperature for typical PVC hoses	temperature	20°C	30°C	40°C	50°C	60°C	70°C
	pressure	100%	74%	55%	40%	30%	22%

VACUPRESS FLEX hose DN80 with an aluminium LAUX lever coupling (TF-KMS-076-080-AL) mounted with BAND-IT® banding system, designed for water and sludge suction application in Trondheim, Norway.



Water and sewage hoses



GREEN

Robust suction - delivery hose for water and sewage

Hose material: green PVC
Reinforcement: rigid PVC helix
Work. temp.: from -25°C to +55°C
 (working pressure depends on temperature)

Robust and flexible, suction-delivery hose designed for water and sewage. Smooth inner wall, slightly corrugated on the outside. Good resistance to external damage and heavier operating conditions. Flexible at low temperatures. Used in irrigation systems, vacuum tankers and trailers, sewer system cleaning, septic tank emptying, and in industrial systems.

code	I.D. [mm]	O.D. [mm]	wall thickness [mm]	working pressure 20°C [bar]	burst pressure 20°C [bar]	vacuum 20°C [bar]	bend radius [mm]	weight [kg/m]	coil length [m]
ME-GREEN-051	50.8	61	5.1	4.5	13.5	0.9	200	0.96	30
ME-GREEN-063	63.5	75.5	6	4	12	0.9	250	1.30	30
ME-GREEN-076	76.2	88.4	6.1	3.5	10.5	0.9	300	1.70	30
ME-GREEN-102	101.6	116.2	7.3	3	9	0.9	400	2.60	30
ME-GREEN-110	110.5	125.5	7.5	2.7	8	0.9	440	3.00	30
ME-GREEN-152	152.4	170.4	9	1.8	5.5	0.9	600	4.70	20/30

Note: colour marked codes - used most often.

The dependence of burst pressure and working pressure on temperature for typical PVC hoses	temperature	20°C	30°C	40°C	50°C	60°C	70°C
	pressure	100%	74%	55%	40%	30%	22%

<p>GREEN hose DN 76 with BAUER coupling (plug OM-B8-089-076 in stainless steel) assembled with robust T-bolt clamps in AISI 316 stainless steel intended to work on a large farm near Kalisz, Poland.</p>	
<p>Also near Kalisz, on another farm, GREEN hose DN51 with a suction strainer PM-RD25T in zinc-plated steel, fastened using BAND-IT® JUNIOR clamping system, is used for pumping water from a fish pond.</p>	





Water and sewage hoses



MULTIFLEX

Robust suction - delivery hose for water and sewage

Hose material: grey and purple PVC
Reinforcement: rigid PVC helix
Work. temp.: from -20°C to +50°C
 (working pressure depends on temperature)

Flexible and robust, suction-delivery hose intended for water and sewage. Corrugated on the outside, almost smooth on the inside. Good resistance to external damage and heavy operating conditions. Resistant to UV radiation and low temperatures. Used in irrigation systems, tanker trucks, sewer flushing and septic tank emptying. Suitable for industrial systems as well.

code	I.D. [mm]	O.D. [mm]	wall thickness [mm]	working pressure 20°C [bar]	burst pressure 20°C [bar]	vacuum 20°C [bar]	bend radius [mm]	weight [kg/m]	coil length [m]
FT-MULTIFLEX-025	25	32.6	3.8	8	24	0.9	90	0.48	50
FT-MULTIFLEX-032	32	40	4	7	21	0.9	120	0.57	50
FT-MULTIFLEX-038	38	46.4	4.2	6	18	0.9	140	0.67	50
FT-MULTIFLEX-040	40	48.6	4.3	6	18	0.9	150	0.76	50
FT-MULTIFLEX-051	51	61.2	5.1	5	15	0.9	190	1.05	50
FT-MULTIFLEX-063	63	73.8	5.4	5	15	0.9	230	1.32	50
FT-MULTIFLEX-070	70	81.6	5.8	4	12	0.9	260	1.57	50
FT-MULTIFLEX-076	76	88.4	6.2	4	12	0.9	280	1.65	50
FT-MULTIFLEX-080	80	92.6	6.3	4	12	0.9	290	1.83	30
FT-MULTIFLEX-090	90	103.6	6.8	4	12	0.9	330	2.14	30
FT-MULTIFLEX-102	102	115.6	6.8	4	12	0.9	370	2.57	30
FT-MULTIFLEX-110	110	124.8	7.4	3	9	0.9	400	2.95	30
FT-MULTIFLEX-127	127	143.2	8.1	3	9	0.9	460	3.71	20
FT-MULTIFLEX-152	152	170	9	3	9	0.9	550	4.99	20

Note: colour marked codes - used most often.

The dependence of burst pressure and working pressure on temperature for typical PVC hoses	temperature	20°C	30°C	40°C	50°C	60°C	70°C
	pressure	100%	74%	55%	40%	30%	22%

MULTIFLEX hose DN 110 with an aluminium STORZ coupling (ST-12133110-11) firmly clamped with sturdy zinc-plated steel double-bolt clamps (W1 version) will be used on a vacuum tanker in the eastern Czech Republic.



Water and sewage hoses



ARIZONA SUPERELASTIC

Robust suction - delivery hose for water and sewage

Hose material: grey and green PVC
Reinforcement: rigid PVC helix
Work. temp.: from -25°C to +55°C
 (working pressure depends on temperature)

Flexible and robust, suction-delivery hose designed for water, sewage. Corrugated on the outside, almost smooth on the inside. Good resistance to external damage and harsh operating conditions. Retains high flexibility at minus temperatures. Used for irrigation systems, industrial water systems, septic tank emptying, etc. ARIZONA EXTREME ELASTIC flexible at very low temperatures (down to - 40°C) is available on special request.

code	I.D. [mm]	O.D. [mm]	wall thickness [mm]	working pressure 20°C [bar]	burst pressure 20°C [bar]	vacuum 20°C [bar]	bend radius [mm]	weight [kg/m]	coil length [m]
ME-ARIZONA-SE-025	25	34.8	4.8	7	21	0.9	100	0.50	50
ME-ARIZONA-SE-032	32	41.4	4.7	6	18	0.9	130	0.60	50
ME-ARIZONA-SE-038	38.2	47.6	4.7	6	18	0.9	150	0.70	50
ME-ARIZONA-SE-045	45	55	5	5.5	16.5	0.9	180	0.90	50
ME-ARIZONA-SE-050	50	61	5.5	5	15	0.9	200	1.05	50
ME-ARIZONA-SE-060	60	71.2	5.6	4.5	13.5	0.9	240	1.25	50
ME-ARIZONA-SE-063	63.5	74.5	5.5	4.5	13.5	0.9	250	1.39	50
ME-ARIZONA-SE-075	75	88	6.5	4	12	0.9	300	1.70	30
ME-ARIZONA-SE-076	76.2	88.4	6.1	4	12	0.9	300	1.70	30
ME-ARIZONA-SE-080	80	92.6	6.3	3.5	10.5	0.9	320	1.85	30
ME-ARIZONA-SE-090	90	103.4	6.7	3.5	10.5	0.9	360	2.25	30
ME-ARIZONA-SE-100	100	114.6	7.3	3	9	0.9	400	2.70	30
ME-ARIZONA-SE-102	101.6	116.2	7.3	3	9	0.9	400	2.70	30
ME-ARIZONA-SE-110	110	125	7.5	3	9	0.9	440	3.10	20
ME-ARIZONA-SE-120	120	136.4	8.2	2.5	7.5	0.9	480	3.60	20
ME-ARIZONA-SE-125	125.5	142	8.3	2.5	7.5	0.9	500	3.90	20
ME-ARIZONA-SE-127	127	143.6	8.3	2.5	7.5	0.9	510	3.90	20
ME-ARIZONA-SE-130	130	147	8.5	2.5	7.5	0.9	520	4.10	20
ME-ARIZONA-SE-133	133	150	8.5	2.5	7.5	0.9	535	4.20	20
ME-ARIZONA-SE-150	150	168	9	2	6	0.9	600	5.00	20
ME-ARIZONA-SE-152	152.4	170.4	9	2	6	0.9	610	5.20	20
ME-ARIZONA-SE-160	160	178.8	9.4	2	6	0.9	640	5.60	20
ME-ARIZONA-SE-200	200	226	13	1.5	4.5	0.9	800	9.50	~
ME-ARIZONA-SE-203	203.2	229	13	1.5	4.5	0.9	800	9.50	~

Note: colour marked codes - used most often.

The dependence of burst pressure and working pressure on temperature for typical PVC hoses	temperature	20°C	30°C	40°C	50°C	60°C	70°C
	pressure	100%	74%	55%	40%	30%	22%



A massive ARIZONA SE hose DN250 L= 6 m to be used on a pump suctioning dirty water and sludge. The hose with swivel flange connectors DN250 PN10 in zinc-plated carbon steel attached using a band clamping system. A sleeve under the bands levels the hose surface to ensure even compression and prevent the band from cutting in.





Sewage hoses - portable toilet waste extraction



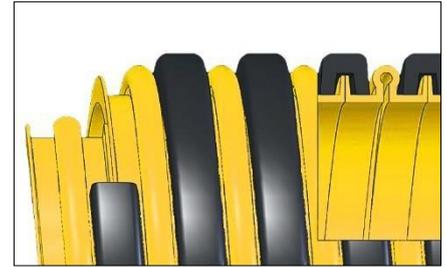
GENESIS® ToiVac N

Suction hose for portable toilets

Hose material: yellow polyethylene profile (PE)
1,4 mm thick

Reinforcement: black polyethylene profile (PE)

Work. temp.: from -40°C to +60°C



Flexible, suction hose designed for sewage and water. Corrugated on the outside, almost smooth on the inside. This special profile makes the hose resistant to vacuum and crushing (it returns to its original shape). As it is a polyethylene hose, it has very good resistance to chemicals and biological corrosion (rotting, decay). Flexible at low temperatures. The hose is commonly used for emptying septic tanks and portable toilets, in the construction industry, tourist accommodation and facilities, marinas, airports. Supplied as complete hose assemblies in lengths listed in the table, with fittings (cuffs) tightly welded to the hose.

The hose and cuffs are also sold separately, then the cuffs can be screwed onto the hose and glued with a special adhesive. Short hose sections (e.g. 1 m long) with cuffs can be used as a protection hose placed on the edge of a sewer opening into which a high pressure cleaning hose or inspection camera cable is inserted. The protection hose is kept in position by a rope attached to the cuff with a clamp.

picture	code	I.D. [mm]	vacuum 23°C [bar]	bend radius [mm]	weight [kg/m]	coil length [m]
	SC-GENESIS-TV-N-051	51	0.95	85	0.95	25
	SC-GENESIS-TV-N-063	63		105	1.15	25
	SC-GENESIS-TV-N-076	76		125	1.40	25
	SC-GENESIS-TV-N-102	102	0.85	165	1.80	25

picture	description	code	hose I.D. [mm]
	GENESIS ToiVac hose cuff Material: EVA	SC-GENESIS-TV-N-051K	51
		SC-GENESIS-TV-N-063K	63
		SC-GENESIS-TV-N-076K	76
		SC-GENESIS-TV-N-102K	102

picture	description	code	I.D. [mm]	length [m]
	Hose with factory-mounted fittings on both ends	SC-GENESIS-TV-N-051-10	51	10
		SC-GENESIS-TV-N-051-15,2		15.2
		SC-GENESIS-TV-N-051-18,3		18.3
		SC-GENESIS-TV-N-051-20		20
		SC-GENESIS-TV-N-051-25		25
		SC-GENESIS-TV-N-063-15,2	63	15.2
		SC-GENESIS-TV-N-076-10	76	10
		SC-GENESIS-TV-N-076-15,2		15.2
		SC-GENESIS-TV-N-102-20	102	20
	Hose with cuffs, band and 7.5 m rope	SC-GENESIS-TV-N-051-SP-1	51	1
		SC-GENESIS-TV-N-076-SP-1	76	1

Note: colour marked codes - used most often.



Cooling water hoses for metallurgy

In the metallurgical industry, many machines and their components require intensive cooling. Usually, flexible hose assemblies meet these cooling needs. The assemblies are made from steel or rubber hoses. The rubber hoses for cooling water, except for resistance to hot water with additives (e.g. glycol) flowing inside the hose, must offer resistance to the temperature in smelter or foundry plants and the temperature generated on the surface of the hose by heat radiation. Also, resistance to hot metal splatter may sometimes be critical. An additional requirement related to operations near electrical equipment (electric arc furnace, induction furnace) can be electrical resistance - the hose should then be non-conductive and resistant to electrical breakdown.



For heat resistant covers for hoses and cables, see „High-temperature covers” in MACHINES AND ACCESSORIES.



ESSEN[®]

Cooling water delivery hose for metallurgy

Inner layer: black EPDM rubber
Reinforcement: synthetic cord
Outer layer: EPDM rubber / glass fibre
Work. temp.: from -40°C to +120°C
 (ambient up to +530°C)

Delivery hose designed for cooling water in steel mills, foundries and in all applications where a rubber hose works close to a heat source. Glass fibre cover resistant to radiant heat up to +530°C. Used in cooling systems. Particularly recommended for water systems near metallurgical furnaces. Withstands short-term exposure to splashes of white-hot metal.

code	I.D. [mm]	O.D. [mm]	wall thickness [mm]	working pressure [bar]	burst pressure [bar]	weight [kg/m]	coil length [m]
IV-ESSEN-013	13	22	4.5	10	30	0.31	60 / 120
IV-ESSEN-019	19	30.5	5.75	10	30	0.56	60 / 120
IV-ESSEN-025	25	36	5.5	10	30	0.65	60 / 120
IV-ESSEN-032	32	43	5.5	10	30	0.80	60 / 120
IV-ESSEN-038	38	52.5	7.25	10	30	1.26	60 / 120
IV-ESSEN-045	45	61.5	8.25	10	30	1.73	60 / 120
IV-ESSEN-051	51	67	8	10	30	1.82	60 / 120
IV-ESSEN-063	63.5	79	7.75	10	30	2.20	60 / 120
IV-ESSEN-065	65	86.5	10.75	10	30	3.11	60 / 120
IV-ESSEN-076	76	95.5	9.75	10	30	3.17	60 / 120
IV-ESSEN-080	80	99.5	9.75	10	30	3.32	60 / 120
IV-ESSEN-085	85	109.5	12.25	10	30	4.63	60 / 120
IV-ESSEN-090	90	109.5	9.75	10	30	3.69	60 / 120
IV-ESSEN-102	102	123.5	10.75	10	30	4.60	60 / 120

Note: colour marked codes - used most often.

ESSEN hose DN32 mounted to a popular fitting, *King Combination Nipple*, AC-CNP-125), 1.1/4" BSPT male thread in zinc-plated carbon steel. Assembly with ASFA-L 9 mm worm drive clamps (AB-03015812) in AISI 316 stainless steel (W5 version).





Cooling water hoses for metallurgy



ESSEN 20®

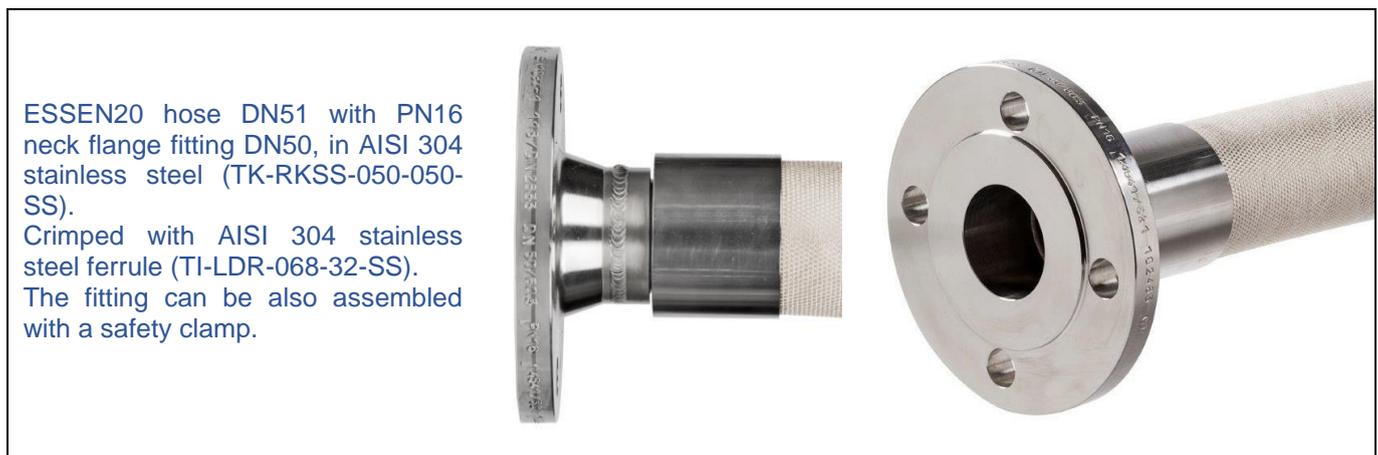
Non-conductive delivery hose for metallurgy

Inner layer:	white insulating EPDM rubber
Reinforcement:	synthetic cord
Outer layer:	EPDM rubber / glass fibre
Work. temp.:	from -40°C to +120°C (ambient up to +530°C)

Robust, delivery hose designed for cooling water in steel mills, foundries and in all applications where a rubber hose works close to a heat source. Glass fibre cover resistant to radiant heat up to +530°C. Used in cooling systems. Particularly recommended for water systems near metallurgical furnaces. Resistant to temporary exposure to splashes of white-hot metal. Non-conductive, electrical resistance of rubber compound $\geq 10^8 \Omega/m$.

code	I.D. [mm]	O.D. [mm]	wall thickness [mm]	working pressure [bar]	burst pressure [bar]	weight [kg/m]	coil length [m]
IV-ESSEN20-006	6	16	5	20	60	0.21	60 / 120
IV-ESSEN20-008	8	18	5	20	60	0.25	60 / 120
IV-ESSEN20-010	10	19	4.5	20	60	0.25	60 / 120
IV-ESSEN20-013	13	23	5	20	60	0.33	60 / 120
IV-ESSEN20-016	16	26	5	20	60	0.39	60 / 120
IV-ESSEN20-019	19	30	5.5	20	60	0.51	60 / 120
IV-ESSEN20-025	25	38.5	6.75	20	60	0.82	60 / 120
IV-ESSEN20-032	32	46.5	7.25	20	60	1.05	60 / 120
IV-ESSEN20-035	35	50	7.5	20	60	1.17	60 / 120
IV-ESSEN20-038	38	54	8	20	60	1.38	60 / 120
IV-ESSEN20-040	40	56	8	20	60	1.44	60 / 120
IV-ESSEN20-051	51	67	8	20	60	1.79	60 / 120
IV-ESSEN20-060	60	80	10	20	60	2.67	60 / 120
IV-ESSEN20-063	63.5	82.5	9.5	20	60	2.61	60 / 120
IV-ESSEN20-076	76	93.5	8.75	20	60	2.73	60 / 120
IV-ESSEN20-090	90	109.5	9.75	20	60	3.61	60 / 120
IV-ESSEN20-102	102	125	11.5	20	60	4.79	60 / 120

Note: colour marked codes - used most often.



ESSEN20 hose DN51 with PN16 neck flange fitting DN50, in AISI 304 stainless steel (TK-RKSS-050-050-SS).

Crimped with AISI 304 stainless steel ferrule (TI-LDR-068-32-SS).

The fitting can be also assembled with a safety clamp.

For heat resistant covers for hoses and cables, see „High-temperature covers” in MACHINES AND ACCESSORIES.





Cooling water hoses for metallurgy



GEYSER 20 ED FV

Non-conductive delivery hose for metallurgy

Inner layer: light blue insulating
EPDM rubber

Reinforcement: synthetic cord

Outer layer: EPDM rubber / glass fibre

Work. temp.: from -35°C to +120°C
(ambient up to +550°C)

Delivery hose specially designed to convey cooling water, used in steel furnaces, cooling systems of transformers and electrical converters. Popular in steel mills. Fibreglass-coated outer layer resistant to radiant heat up to +550°C (temporarily) and hot material splatter. Insulating (dielectric) inner layer, $R > 10^{11} \Omega$, electrical breakdown strength $E \geq 6000 \text{ V/mm}$, with increased resistance to water and vapour penetration at extreme operation parameters.

code	I.D. [mm]	O.D. [mm]	wall thickness [mm]	working pressure [bar]	burst pressure [bar]	bend radius * [mm]	weight [kg/m]	coil length [m]
MT-GEYSER20-EDFV-006	6	16	5	20	60	30	~	40
MT-GEYSER20-EDFV-008	8	18	5	20	60	40	~	40
MT-GEYSER20-EDFV-010	10	20	5	20	60	50	~	40
MT-GEYSER20-EDFV-013	13	24	5.5	20	60	65	0.44	40
MT-GEYSER20-EDFV-016	16	28	6	20	60	80	~	40
MT-GEYSER20-EDFV-019	19	31	6	20	60	95	0.60	40
MT-GEYSER20-EDFV-025	25	39	7	20	60	125	0.82	40
MT-GEYSER20-EDFV-032	32	48	8	20	60	160	1.22	40
MT-GEYSER20-EDFV-038	38	54	8	20	60	190	1.48	40
MT-GEYSER20-EDFV-045	45	63	9	20	60	225	~	40
MT-GEYSER20-EDFV-050	50	68	9	20	60	250	1.82	40
MT-GEYSER20-EDFV-060	60	80	10	20	60	300	2.50	40
MT-GEYSER20-EDFV-063	63.5	80	8.25	20	60	318	~	40
MT-GEYSER20-EDFV-075	75	95	10	20	60	380	3.20	40
MT-GEYSER20-EDFV-080	80	100	10	20	60	400	3.39	40
MT-GEYSER20-EDFV-100	100	124	12	20	60	500	5.32	40

*Minimum bend radius is for pressure above 3 bar. Note: colour marked codes - used most often.



ESSEN LL[®]

Suction - delivery cooling water hose for metallurgy

Inner layer: black SBR rubber

Reinforcement: synthetic cord, steel helix

Outer layer: EPDM rubber / glass fibre

Work. temp.: from -40°C to +70°C
(ambient up to +530°C)

Vacuum resistant, suction-delivery hose designed for cooling water in steel mills, foundries and in all applications where a rubber hose works close to a heat source. Glass fibre cover resistant to radiant heat up to +530°C. Used in cooling systems. Particularly recommended for water systems near metallurgical furnaces. Withstands short-term exposure to splashes of white-hot metal.

code	I.D. [mm]	O.D. [mm]	wall thickness [mm]	working pressure [bar]	burst pressure [bar]	vacuum [bar]	bend radius [mm]	weight [kg/m]	coil length [m]
IV-ESSEN-LL-012	12	22.5	5.25	10	30	0.9	84	0.45	60 / 120
IV-ESSEN-LL-019	19	30.5	5.75	10	30	0.9	95	0.73	60 / 120
IV-ESSEN-LL-025	25	36.5	5.75	10	30	0.9	125	0.89	60 / 120
IV-ESSEN-LL-032	32	43	5.5	10	30	0.9	160	1.05	60 / 120
IV-ESSEN-LL-038	38	50.5	6.25	10	30	0.9	190	1.45	60 / 120
IV-ESSEN-LL-051	51	63.5	6.25	10	30	0.9	255	1.91	60 / 120
IV-ESSEN-LL-065	65	78.5	6.75	10	30	0.9	325	2.70	60 / 120
IV-ESSEN-LL-076	76	91.5	7.75	10	30	0.9	304	3.51	60 / 120
IV-ESSEN-LL-102	102	119.5	8.75	10	30	0.9	408	5.27	60 / 120

Note: colour marked codes - used most often.



Cooling system hoses



DERBY RADIATOR

Cooling system hose DIN 73411-79

Inner layer:	black EPDM rubber
Reinforcement:	synthetic cord
Outer layer:	black EPDM rubber
Work. temp.:	from -40°C to +120°C

Delivery hose designed for hot water mixed with antifreeze. Used in cooling and heating systems, for pumps in engines and machinery. Inner layer resistant to heat and cooling fluids. Outer layer resistant to heat and ageing. Manufactured in compliance with DIN 73411:79.

code	I.D. [mm]	O.D. [mm]	wall thickness [mm]	working pressure [bar]	burst pressure [bar]	weight [kg/m]	coil length [m]
IV-RADIATOR-008	8	15	3.5	4	12	0.15	60 / 120
IV-RADIATOR-010	10	18	4	4	12	0.19	60 / 120
IV-RADIATOR-012	12	19	3.5	4	12	0.19	60 / 120
IV-RADIATOR-013	13	20	3.5	4	12	0.21	60 / 120
IV-RADIATOR-015	15	22	3.5	4	12	0.23	60 / 120
IV-RADIATOR-016	16	23	3.5	4	12	0.22	60 / 120
IV-RADIATOR-018	18	25	3.5	4	12	0.27	60 / 120
IV-RADIATOR-019	19	28	4.5	4	12	0.37	60 / 120
IV-RADIATOR-020	20	27	3.5	4	12	0.30	60 / 120
IV-RADIATOR-022	22	29	3.5	4	12	0.33	60 / 120
IV-RADIATOR-025	25	32	3.5	4	12	0.36	60 / 120
IV-RADIATOR-028	28	36	4	4	12	0.44	60 / 120
IV-RADIATOR-030	30	38	4	4	12	0.47	60 / 120
IV-RADIATOR-032	32	40	4	4	12	0.49	60 / 120
IV-RADIATOR-035	35	43	4	4	12	0.54	60 / 120
IV-RADIATOR-038	38	48	5	4	12	0.78	60 / 120
IV-RADIATOR-040	40	50	5	4	12	0.81	60 / 120
IV-RADIATOR-042	42	52	5	4	12	0.85	60 / 120
IV-RADIATOR-045	45	55	5	4	12	0.90	60 / 120
IV-RADIATOR-048	48	58	5	4	12	0.96	60 / 120
IV-RADIATOR-050	50	60	5	3	9	0.99	60 / 120
IV-RADIATOR-055	55	65	5	3	9	1.08	60 / 120
IV-RADIATOR-060	60	70	5	3	9	1.17	60 / 120
IV-RADIATOR-065	65	75	5	3	9	1.26	60 / 120
IV-RADIATOR-070	70	80	5	3	9	1.35	60 / 120
IV-RADIATOR-075	75	85	5	3	9	1.45	60 / 120
IV-RADIATOR-080	80	91.5	5.75	3	9	1.73	60 / 120
IV-RADIATOR-100	100	112.5	6.25	2	6	2.37	60 / 120
IV-RADIATOR-110	110	122	6	2	6	2.44	60 / 120
IV-RADIATOR-114	114	126	6	2	6	2.52	60

Note: colour marked codes - used most often.

DERBY RADIATOR hose DN16 with a brass 1/2" BSPT male thread fitting (NT-2664NA4) mounted with a worm drive clamp in zinc-plated steel.





Cooling system hoses



RADIATOR LCL CR

Oil-resistant coolant hose with reinforcing helix, square-corrugated

Inner layer: black CR rubber
Reinforcement: synthetic cord, steel helix
Outer layer: black CR rubber
Work. temp.: from -40°C to +100°C

Square-corrugated hose with steel helix reinforcement, for hot water and antifreeze fluids, designed for automotive and industrial cooling systems. Resistant to vacuum. Inner layer resistant to heat and cooling fluids. Outer layer resistant to overheating, oil and ageing.

code	I.D. [mm]	O.D. [mm]	wall thickness [mm]	working pressure [bar]	burst pressure [bar]	vacuum [bar]	bend radius [mm]	weight [kg/m]	coil length [m]
IV-RADIATOR-LCL-16	16	26	5	4	12	~	56	0.42	60
IV-RADIATOR-LCL-18	18	26	4	4	12	~	63	0.46	60
IV-RADIATOR-LCL-20	20	28	4	4	12	~	70	0.50	60
IV-RADIATOR-LCL-22	22	32	5	4	12	~	77	0.51	60
IV-RADIATOR-LCL-25	25	35	5	4	12	~	87.5	0.57	60
IV-RADIATOR-LCL-28	28	36	4	4	12	~	95	0.59	60
IV-RADIATOR-LCL-30	30	38	4	4	12	~	98	0.63	60
IV-RADIATOR-LCL-32	32	42	5	4	12	~	112	0.70	60
IV-RADIATOR-LCL-35	35	45	5	4	12	~	122.5	0.76	60
IV-RADIATOR-LCL-38	38	48	5	4	12	~	133	0.82	60
IV-RADIATOR-LCL-40	40	50	5	4	12	~	140	0.85	60
IV-RADIATOR-LCL-42	42	52	5	4	12	~	147	0.89	60
IV-RADIATOR-LCL-45	45	55	5	4	12	~	157.5	0.95	60
IV-RADIATOR-LCL-50	50	60	5	4	12	~	175	1.04	60
IV-RADIATOR-LCL-51	51	61	5	4	12	~	178.5	1.06	60
IV-RADIATOR-LCL-55	55	65	5	4	12	~	192.5	1.13	60
IV-RADIATOR-LCL-60	60	72	6	4	12	~	210	1.30	60
IV-RADIATOR-LCL-70	70	82	6	4	12	~	245	1.50	60
IV-RADIATOR-LCL-76	76	89	6.5	4	12	~	266	2.10	60
IV-RADIATOR-LCL-90	90	102	6	4	12	~	315	2.45	60

Note: colour marked codes - used most often.



RADIATOR LCL CR hose DN45 mounted with T-bolt clamp in zinc-plated steel to the pipe of a cooling system in a military vehicle engine.

For hoses for cooling systems, also check "Automotive hoses and connectors".





Cooling system hoses



RADIATOR LIGHT

Coolant hose with reinforcing helix

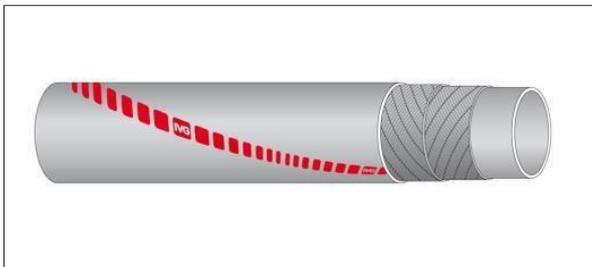
Inner layer:	black EPDM rubber
Reinforcement:	synthetic cord, steel helix
Outer layer:	black EPDM rubber
Work. temp.:	from -40°C to +120°C

Hose with steel helix reinforcement, designed for hot water mixed with antifreeze. Used in cooling systems, heating systems and pumps in engines and machinery. Resistant to vacuum. Inner layer resistant to heat and cooling fluids. Outer layer resistant to heat and ageing. Rubber compound according to DIN 73411:79.

code	I.D. [mm]	O.D. [mm]	wall thickness [mm]	working pressure [bar]	burst pressure [bar]	vacuum [bar]	bend radius [mm]	weight [kg/m]	coil length [m]
IV-RADIATOR-L-15	15	23	4	4	12	~	55	0.34	60
IV-RADIATOR-L-16	16	24	4	4	12	~	57	0.36	60
IV-RADIATOR-L-20	20	28.5	4.25	4	12	~	70	0.49	60
IV-RADIATOR-L-22	22	30.5	4.25	4	12	~	80	0.53	60
IV-RADIATOR-L-25	25	33.5	4.25	4	12	~	85	0.58	60
IV-RADIATOR-L-28	28	36.5	4.25	4	12	~	95	0.64	60
IV-RADIATOR-L-30	30	38.5	4.25	4	12	~	100	0.68	60
IV-RADIATOR-L-32	32	40.5	4.25	4	12	~	105	0.72	60
IV-RADIATOR-L-35	35	45	5	4	12	~	110	0.98	60
IV-RADIATOR-L-38	38	48	5	4	12	~	125	1.07	60
IV-RADIATOR-L-40	40	50	5	4	12	~	133	1.10	60
IV-RADIATOR-L-42	42	52	5	4	12	~	140	1.15	60
IV-RADIATOR-L-51	51	61	5	4	12	~	160	1.36	60
IV-RADIATOR-L-60	60	70	5	4	12	~	190	1.57	60

Note: colour marked codes - used most often.

Humidifier hose



CONDITIONER HUMIDIFIER®

Hose for steam humidifiers in air conditioning

Inner layer:	white, odourless, butyl rubber (IIR)
Reinforcement:	synthetic cord
Outer layer:	white, odourless, butyl rubber (IIR)
Work. temp.:	from -30°C to +110°C

Specialized hose designed to transfer low-temperature steam for humidifiers in industrial air-conditioning systems. Soft and flexible, odourless, resistant to steam, hot water and condensate.

code	I.D. [mm]	O.D. [mm]	wall thickness [mm]	working pressure [bar]	burst pressure [bar]	weight [kg/m]	coil length [m]
IV-CONDITIONER-22	22	32	5	1	40	0.50	60 / 120
IV-CONDITIONER-30	30	40	5	1	40	0.65	60 / 120

Note: colour marked codes - used most often.





Motor boat and yacht hoses



BOAT ETNA

Marine wet exhaust hose

Inner layer:	black synthetic rubber (CR)
Reinforcement:	synthetic cord, steel helix
Outer layer:	black corrugated synthetic rubber (CR)
Work. temp.:	from -30°C to +100°C

Lightweight, very flexible, suction-delivery hose designed for exhaust systems of water-cooled diesel engines of motor boats and yachts (free discharge of mixed exhaust and cooling water). Used in short sections between the pipes of a system. Inner layer resistant to exhaust gases. Outer layer resistant to fire and weather conditions. Resistant to vacuum. Complies with Lloyd's Register Type Approval Certificate No. 99/00169 (E4), VTT approved in accordance with Nordic Boat Standard MC9.

code	I.D. [mm]	working pressure [bar]	burst pressure [bar]	bend radius [mm]	weight [kg/m]	coil length [m]
IV-ETNA-032	32	2	5	130	0.65	60
IV-ETNA-035	35	2	5	140	0.70	60
IV-ETNA-038	38	2	5	150	0.75	60
IV-ETNA-040	40	2	5	160	0.78	60
IV-ETNA-045	45	2	5	170	0.87	60
IV-ETNA-051	51	2	5	180	1.07	60
IV-ETNA-058	58	2	5	190	1.20	60
IV-ETNA-063	63.5	2	5	200	1.30	60
IV-ETNA-076	76	2	5	250	1.46	60
IV-ETNA-090	90	2	5	330	1.73	60
IV-ETNA-102	102	2	5	410	2.06	60
IV-ETNA-127	127	2	5	560	2.58	60
IV-ETNA-152	152	2	5	680	3.18	60
IV-ETNA-203	203	2	5	995	5.52	60



SANITARY STAR

Water and sewage hose for boats and yachts

Inner layer:	white synthetic rubber
Reinforcement:	synthetic cord, steel helix
Outer layer:	white synthetic rubber
Work. temp.:	from -30°C to +100°C

Specialized, suction-delivery hose for water and waste water in sanitary systems on ships, motor boats, yachts, etc. It is odourless and odour-impermeable, so sewage odour does not escape through the hose (5-year warranty). Outer layer resistant to marine and weather conditions. Resistant to vacuum. Complies with EN ISO 8099 standard.

code	I.D. [mm]	O.D. [mm]	wall thickness [mm]	working pressure [bar]	burst pressure [bar]	bend radius [mm]	weight [kg/m]	coil length [m]
IV-SANITARY-S-016	16	24	4	3	9	50	0.38	60 / 120
IV-SANITARY-S-019	19	27	4	3	9	60	0.43	60 / 120
IV-SANITARY-S-025	25	33	4	3	9	75	0.54	60 / 120
IV-SANITARY-S-038	38	46.5	4.25	3	9	150	0.87	60 / 120

SANITARY STAR hose DN25 with a brass STORZ coupling (ST-12-031025-30X) mounted with AISI 316 stainless steel worm-drive clamp used on a marine patrol boat. Usually, the hose is installed in sections inside a boat hull between the stub pipes of a sanitation system.





Compressed air hoses

Compressed air is used in all industries. Clean, cool air is not an aggressive medium, and many hoses of different materials and designs are suitable for compressed air. However, it is important to pay attention to:

- Compressibility of air, as of any gas, poses a serious risk that is much greater than with fluids, especially in the event of incidents such as: hose bursts, fitting blow-off, disconnection of quick couplings under pressure. Expanding air causes rapid, uncontrolled movement of the hose, fittings or attached tools, which can cause injury to the operator.
- Slow penetration of gases, including air, through the hose wall may cause blisters, delamination and eventually, hose failure.
- Substances and contaminants in the air (e.g. oil mist) can act aggressively on the hose material, causing damage.
- Increased temperature not only has a direct effect on the properties of the material, but also causes faster chemical degradation through the influence of oxygen contained in the air. Hot, dry air must be regarded as an aggressive medium.

For compressed air hoses, look in this entire section and in the following sections: general-purpose hoses, food hoses, pressure metal hoses.

In the section: HIGH PRESSURE HDRAULICS, check hoses for high pressure, from several tens to hundreds of bar. Many of them can be used for air.

In the section: PNEUMATICS look for typical pneumatics and industrial automation hoses, i.e. non-reinforced hoses with calibrated outer diameter, made of polyamide, polyurethane and other materials.



AIR 20

General-purpose hose for compressed air and water

Inner layer: black synthetic rubber
Reinforcement: synthetic braid
Outer layer: black synthetic rubber
Work. temp.: from -25°C to +80°C

Robust and flexible, standard rubber hose for compressed air (also oiled), water and chemically non-aggressive fluids in the industry and agriculture. Outer layer resistant to abrasion, ageing, ozone and atmospheric conditions.

code	I.D. [mm]	O.D. [mm]	wall thickness [mm]	working pressure [bar]	burst pressure [bar]	bend radius [mm]	weight [kg/m]	coil length [m]
IV-AIR20-06	6	14	4	20	60	60	0.17	100
IV-AIR20-08	8	17	4.5	20	60	65	0.24	100
IV-AIR20-10	10	19	4.5	20	60	80	0.28	100
IV-AIR20-13	13	23	5	20	60	105	0.39	60
IV-AIR20-16	16	26	5	20	60	130	0.45	60
IV-AIR20-19	19	30	5.5	20	60	150	0.58	60
IV-AIR20-25	25	37	6	20	60	200	0.78	40

Note: colour marked codes - used most often.

AIR20 hose DN13 with M22x1,5 female thread hydraulic elbow fitting (TI-ZMW221-22-08) crimped with a ferrule for industrial hoses (TI-L-24-08).



AIR20 hose DN6 with RECTUS quick release coupling socket for pressure-free disconnection (RE-26KETF06MPN), mounted with EAR CLIP in zinc-plated steel.





Compressed air hoses



SUPER NOBELAIR SOFT

Hose for pneumatic tools

Inner layer: black PVC
Reinforcement: polyester braid
Outer layer: blue PVC
Work. temp.: from -20°C to +60°C
(working pressure depends on temperature)

Extremely flexible hose designed for compressed air. Due to such features as: light weight, flexibility at low temperatures, resistance to elongation under pressure, resistance to pressure changes, it is ideal for pneumatic tools, compressors, hose reels, etc. Widely used on assembly lines and in workshops.

code	I.D. [mm]	O.D. [mm]	wall thickness [mm]	working pressure 20°C [bar]	burst pressure 20°C [bar]	bend radius [mm]	weight [kg/m]	coil length [m]
TR-SUPNOB-S-06	6.3	11	2.35	15	60	22.5	0.08	50
TR-SUPNOB-S-08	8	13	2.5	15	60	28	0.11	50
TR-SUPNOB-S-09	9	14.5	2.75	15	60	31.5	0.13	50
TR-SUPNOB-S-10	10	15.5	2.75	15	60	35	0.14	50
TR-SUPNOB-S-12	12.7	19	3.15	15	60	44.5	0.20	50
TR-SUPNOB-S-16	16	23	3.5	15	60	56	0.27	50
TR-SUPNOB-S-19	19	26.5	3.75	15	60	72.5	0.34	50
TR-SUPNOB-S-25	25	33.5	4.25	15	60	105	0.49	50

Note: colour marked codes - used most often.

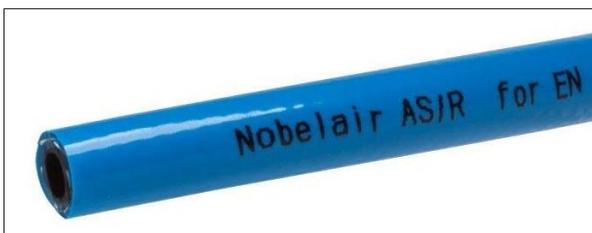
The dependence of burst pressure and working pressure on temperature for typical PVC hoses	temperature	20°C	30°C	40°C	50°C	60°C	70°C
	pressure	100%	74%	55%	40%	30%	22%



SUPER NOBELAIR SOFT hose DN10 with NITTO KOHKI quick release coupling socket (NK-30SH-SS) in stainless steel mounted with a stainless steel EAR CLIP-W with inner insert. The ear clip with the inner insert grips the hose tight and protects its cover.



NOBELAIR AS/R hose DN6 with TEMA chrome-nickel-plated brass quick release coupling socket (TA-P-1400) mounted to the hose with special 1/4" BSP male thread fitting with a screw-on sleeve that is screwed with the socket and sealed via a flat gasket.



NOBELAIR AS / R

Antistatic hose for breathing air

Inner layer: black antistatic PVC
Reinforcement: polyester braid
Outer layer: matt blue PVC
Work. temp.: -20°C to +70°C (peaks to +80°C)
(working pressure depends on temperature)

Flexible five-layer compressed air hose. Lightweight, highly flexible even at low temperatures, resistant to elongation. Antistatic ($R < 10^6 \Omega/m$, EN ISO 8031), resistant to elevated ambient temperatures, suitable for disinfection. Specially designed for breathing apparatus according to EN 14593 and EN 14594 standards. Used in the paint and varnish, petrochemical, construction and nuclear power industries. On special request, DN6 or DN10 hoses in green colour.

code	I.D. [mm]	O.D. [mm]	wall thickness [mm]	working pressure 20 / 70°C [bar]	burst pressure 20°C [bar]	bend radius [mm]	weight [kg/m]	coil length [m]
TR-NOB-ASR-06	6	12	3	15 / 6	60	20	0.10	50
TR-NOB-ASR-08	8	14	3	15 / 6	60	25	0.13	50
TR-NOB-ASR-10	10	16	3	15 / 6	60	32.5	0.15	50
TR-NOB-ASR-13	12.7	19	3.15	15 / 6	60	40	0.19	50
TR-NOB-ASR-19	19	28	4.5	15 / 6	60	60	0.41	50

Note: colour marked codes - used most often.





Compressed air hoses – for heavy-duty pneumatic tools



STONEHOSE

Hose for pneumatic jack hammers and auger drills

Inner layer: black PVC/NBR compound
Reinforcement: two polyester braids
Outer layer: black or yellow PVC/PU compound
Work. temp.: from -10°C to +60°C
 (working pressure depends on temperature)

Lightweight, very flexible compressed air hose with good resistance to mineral oils. Excellent abrasion resistance. It comes in yellow colour for excellent visibility. The hose has a thickened outer layer section every 20 m, marked on the hose by „TAGLIO / CUT” and this is where the hose should be cut and the fittings mounted. The fittings are then mounted on a reinforced hose section, more resistant to bending. Three hose assemblies of 20 m each, with fittings, can be made from 60 m coil. The hose can, however, be used with the fittings installed in non-thickened sections. The hose is used for pneumatic jack hammers and auger drills.

code	I.D. [mm]	O.D. [mm]	wall thickness [mm]	working pressure 20°C [bar]	working pressure 40°C [bar]	working pressure 60°C [bar]	burst pressure 20°C [bar]	weight [kg/m]	coil length [m]
ME-STONE-19	19	27 / 30	4 / 5.5	20	16	12	60	0.39	60
ME-STONE-25	25	35 / 37	5 / 6	20	16	12	60	0.60	60

Note: colour marked codes - used most often.



STONEHOSE DN19 with an American-style compressed air claw coupling (41 mm claw distance) in zinc-plated cast iron (MU-1702) mounted with a malleable iron claw clamp (MU-1323).

Cutting in the thickened section is best for mounting the fittings.

STONEHOSE DN19 with a standard compressed air claw coupling (42 mm claw distance) in zinc-plated cast iron (MU-706) mounted with a malleable iron clamp (MU-1352).



ALASKA®

Robust compressed air hose with steel braid reinforcement

Inner layer: black SBR rubber
Reinforcement: double steel braid
Outer layer: yellow EPDM rubber
Work. temp.: from -30°C to +70°C

Very robust and high pressure resistant compressed air hose. Designed for heavy duty applications. Outer layer resistant to ageing, ozone and external conditions. Used in the industry, mining, quarrying, construction, road building, etc. On special request: 1. outer layer in compliance with MSHA; 2. inner layer resistant to oil mist; 3. other diameter, pressure and colour; 4. version resistant to temperature up to 100°C. Assembly of fittings – contact Tubes International.

code	I.D. [mm]	O.D. [mm]	wall thickness [mm]	working pressure [bar]	burst pressure [bar]	weight [kg/m]	coil length [m]
IV-ALASKA-013	13	25.5	6.25	70	210	0.57	60 / 120
IV-ALASKA-019	19	31.5	6.25	50	150	0.75	60 / 120
IV-ALASKA-025	25	37.5	6.25	45	135	0.92	60 / 120
IV-ALASKA-032	32	48	8	45	135	1.56	60 / 120
IV-ALASKA-038	38	55	8.5	45	135	1.93	60 / 120
IV-ALASKA-051	51	68	8.5	40	120	2.38	60 / 120
IV-ALASKA-063	63.5	80	8.25	35	105	2.84	60 / 120
IV-ALASKA-076	76	96.5	10.25	35	105	4.59	60 / 120
IV-ALASKA-102	102	127	12.5	30	90	7.17	60

Note: colour marked codes - used most often.





Hot air hoses for silo trailer unloading

Tanker trucks (road silo tankers) for bulk material transportation (cement, sand, lime, ash, granulate, feed, flour, sugar, etc.) usually have a system of pneumatic unloading, using compressed air. The air, at a pressure of several bar, is supplied from a compressor installed on a silo trailer or tractor unit and distributed through a system of pipes and flexible hoses to the chambers of the silo tanker to aerate the product and to the unload it through the hopper. As a result of compression, the air heats up and its temperature (depending on the ambient temperature, type of compressor and possible use of a radiator) can reach over 200°C.



The hoses used in this system should be resistant to hot, non-oiled air. They can also be used in stationary pneumatic transfer systems in many industries.



SAHARA BD[®]

Hot air delivery hose

Inner layer:	white EPR rubber
Reinforcement:	synthetic cord
Outer layer:	blue EPDM rubber
Work. temp.:	from -40°C to +200°C (with peaks up to +240°C)

Hardwall, robust, flexible, kink-resistant delivery hose designed to transfer hot, dry air from a compressor to a silo tanker discharge system. Used in road tankers for bulk material transportation: cement trucks, feed trucks, etc., and in other industrial systems. Outer layer resistant to ozone and atmospheric conditions.

code	I.D. [mm]	O.D. [mm]	wall thickness [mm]	working pressure [bar]	burst pressure [bar]	weight [kg/m]	coil length [m]
IV-SAHARA-BD-025	25	41	8	10	30	0.88	60 / 120
IV-SAHARA-BD-032	32	48	8	10	30	1.06	60 / 120
IV-SAHARA-BD-038	38	54	8	10	30	1.22	60 / 120
IV-SAHARA-BD-040	40	56	8	10	30	1.27	60 / 120
IV-SAHARA-BD-051	51	69	9	10	30	1.80	60 / 120
IV-SAHARA-BD-060	60	78	9	10	30	2.12	60 / 120
IV-SAHARA-BD-063	63.5	82	9.25	10	30	2.29	60 / 120
IV-SAHARA-BD-076	76	94	9	10	30	2.55	60 / 120
IV-SAHARA-BD-090	90	108	9	10	30	3.05	60 / 120
IV-SAHARA-BD-102	102	125	11.5	10	30	4.52	60 / 120

Note: colour marked codes - used most often.

SAHARA BD hose DN25 with 1" BSP male thread fitting (GD-VSLB-025-025-SS) in stainless steel mounted with an aluminium safety clamp.





Hot air hoses for silo trailer unloading



SAHARA LL BD®

Suction - delivery hose for hot air

Inner layer: white EPR rubber
Reinforcement: synthetic braid, steel helix
Outer layer: blue EPDM rubber
Work. temp.: from -40°C to +200°C (with peaks up to +240°C)

Robust, flexible, kink-resistant, suction-delivery hose designed to transfer hot, dry air from a compressor to a silo tanker discharge system. Ideal where a small bend radius is required. Used in road tankers for bulk material transportation: cement trucks, feed trucks, etc., and in other industrial systems. Outer layer resistant to ozone and atmospheric conditions.

code	I.D. [mm]	O.D. [mm]	wall thickness [mm]	working pressure [bar]	burst pressure [bar]	vacuum [bar]	bend radius [mm]	weight [kg/m]	coil length [m]
IV-SAHARA-LL-BD-025	25	37	6	10	30	0.9	85	0.83	60 / 120
IV-SAHARA-LL-BD-032	32	44	6	10	30	0.9	112	1.01	60 / 120
IV-SAHARA-LL-BD-038	38	50	6	10	30	0.9	133	1.25	60 / 120
IV-SAHARA-LL-BD-040	40	53	6.5	10	30	0.9	140	1.35	60 / 120
IV-SAHARA-LL-BD-051	51	64	6.5	10	30	0.9	178.5	1.87	60 / 120
IV-SAHARA-LL-BD-060	60	78	9	10	30	0.9	210	2.12	60 / 120
IV-SAHARA-LL-BD-063	63.5	77.5	7	10	30	0.9	222	2.50	60 / 120
IV-SAHARA-LL-BD-076	76	91	7.5	10	30	0.9	266	2.95	60 / 120
IV-SAHARA-LL-BD-090	90	105.5	7.75	10	30	0.9	315	4.03	60 / 120
IV-SAHARA-LL-BD-102	102	117.5	7.75	10	30	0.9	408	4.38	60 / 120

Note: colour marked codes - used most often.

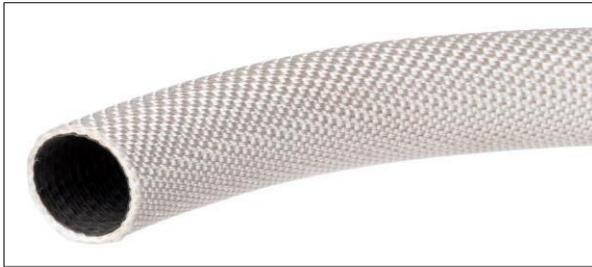


SAHARA LL BD hose DN51 with STORZ coupling (ST-13-066050-43) in stainless steel mounted with an aluminium safety clamp. Fitting (type ST-13...) has a smooth tail and a safety lock matching a safety clamp. STORZ gasket is made of Viton, heat resistant, standard for STORZ stainless steel couplings. On road tankers for bulk materials, a cheaper STORZ coupling made of aluminium is often used. It has a heat resistant silicone gasket.





Water fire hoses



INDUSTRIAL SR

Lightweight semi-rigid fire hose for water

Inner layer:	smooth synthetic rubber
Reinforcement:	polyester braid with stiffening PET helix
Work. temp.:	from -20°C to +60°C

Extremely lightweight, flexible, water delivery hose for internal fire protection systems of buildings. The inner layer is made of high quality synthetic rubber. The outer layer is a sturdy, dense polyester braid with thin and densely arranged PET plastic helix. The hose is used in indoor hydrant cabinets: 20 m to 30 m hose on a hose reel, with a jet nozzle mounted on the hose end. Complies with EN 694 (class 5).

As for fire protection, it holds a certificate of conformity issued by CNBOP-PIB (Poland).

It can be used in the industry - for seawater, industrial water and some light diluted chemicals, and for air, dust and light solid particles.

It is not suitable for use in harsh external conditions.

Mounted with clamps or crimped with ferrules on fittings with smooth, non-serrated tails, to protect the inner layer from cutting.

code	I.D. [mm]	O.D. [mm]	wall thickness [mm]	working pressure [bar]	burst pressure [bar]	weight [kg/m]	coil length [m]
BZ-INDUSTRIAL-SR-19	19	23	2	12	42	0.15	20 / 25 / 30
BZ-INDUSTRIAL-SR-25	25	29	2	12	42	0.17	20 / 30 / 60
BZ-INDUSTRIAL-SR-33	33	37	2	7	24.5	0.26	20 / 30

Note: colour marked codes - used most often.



ANKARA®

Fire hose for hose reels 20 bar

Inner layer:	black conductive NR/SBR rubber
Reinforcement:	synthetic cord
Outer layer:	black SBR rubber
Work. temp.:	from -40°C to +70°C

Robust, flexible hose suitable for coiling on hose reels. Designed for high pressure firefighting equipment. Compliant with DIN 14817. Electrically conductive inner layer resistant to powder and foam extinguishing agents. Outer layer resistant to abrasion and atmospheric conditions.

code	I.D. [mm]	O.D. [mm]	wall thickness [mm]	working pressure [bar]	burst pressure [bar]	weight [kg/m]	coil length [m]
IV-ANKARA-25	25	37	6	20	60	0.65	60 / 120
IV-ANKARA-32	32	46	7	20	60	0.88	60 / 120
IV-ANKARA-38	38	54	8	20	60	1.25	60 / 120

Note: colour marked codes - used most often.

ANKARA hose DN32 with 1.1/4" BSP male thread hydraulic fitting in zinc-plated steel crimped with TI-L-48-20 ferrule with ISO-A hydraulic quick release coupling (DG-IA32-F-20G) attached via TI-UDB-20 seal.





Water fire hoses



FIRE CHICAGO[®]

Fire hose for hose reels 40 bar

- Inner layer:** black EPDM rubber
- Reinforcement:** synthetic cord
- Outer layer:** black EPDM rubber
- Work. temp.:** from -40°C to +100°C

Robust, flexible water hose suitable for coiling on hose reels. Intended for high pressure firefighting equipment and fire engines. Inner layer resistant to extinguishing agents and foaming agents. Thick reinforcement with layers of high-strength cord. Outer layer resistant to weather conditions. On special request, versions compliant with the following standards: EN 1947, ASTM, BS3169 and with luminescent outer layer.

code	I.D. [mm]	O.D. [mm]	wall thickness [mm]	working pressure [bar]	burst pressure [bar]	weight [kg/m]	coil length [m]
IV-CHICAGO-19	19	32	6.5	40	120	0.58	60 / 120
IV-CHICAGO-25	25	38	6.5	40	120	0.72	60 / 120
IV-CHICAGO-28	28	44	8	40	120	1	60 / 120
IV-CHICAGO-32	32	45	6.5	40	120	0.88	60 / 120
IV-CHICAGO-38	38	52	7	40	120	1.05	60 / 120

Note: colour marked codes - used most often.



CHICAGO hose DN19 with 3/4" BSP female thread hydraulic fitting, with flat seal, in AISI 316 stainless steel, crimped with TI-L-33-12-SS ferrule, with HANDIFIGHTER 20 bar jet nozzle. Working pressure of a hose assembly with a jet nozzle is 20 bar. To take full advantage of the capabilities of the hose, 40 bar jet nozzle should be attached.

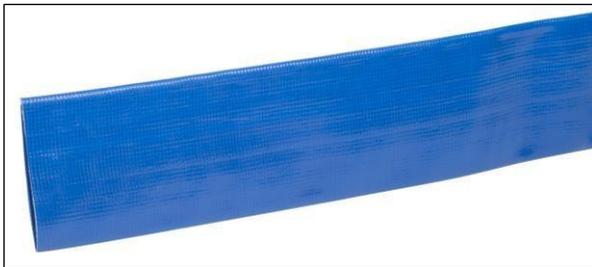




Layflat hoses

Layflat hoses are a special category in the group of air and water hoses. These are thin-wall delivery hoses, flat when unpressurised. They are widely used as fire hoses, fire hydrant hoses, irrigation hoses in agriculture and as dewatering hoses at construction sites. Suitable for such applications as: transfer of seawater, industrial water, solutions of certain chemicals, used in the industry and road construction industry. The main advantages of layflat hoses are their light weight, flexibility, and their resistance to weather conditions - as they are usually used outdoors.

The fittings for layflat hoses (for light-duty applications and low operating pressures) are usually mounted using worm drive clamps or T-bolt clamps, see section: INDUSTRIAL FITTINGS - bands, clamps, ferrules. Though, they can also be mounted using binding wire, Band-It® bands, and in some cases, crimped with ferrules using crimping machines. Sometimes, special segment clamps developed for layflat hoses are used. Not all types of fittings, clamps and ferrules are suitable for the layflat hoses due to the small thickness of the hose wall.



JAMAICA X

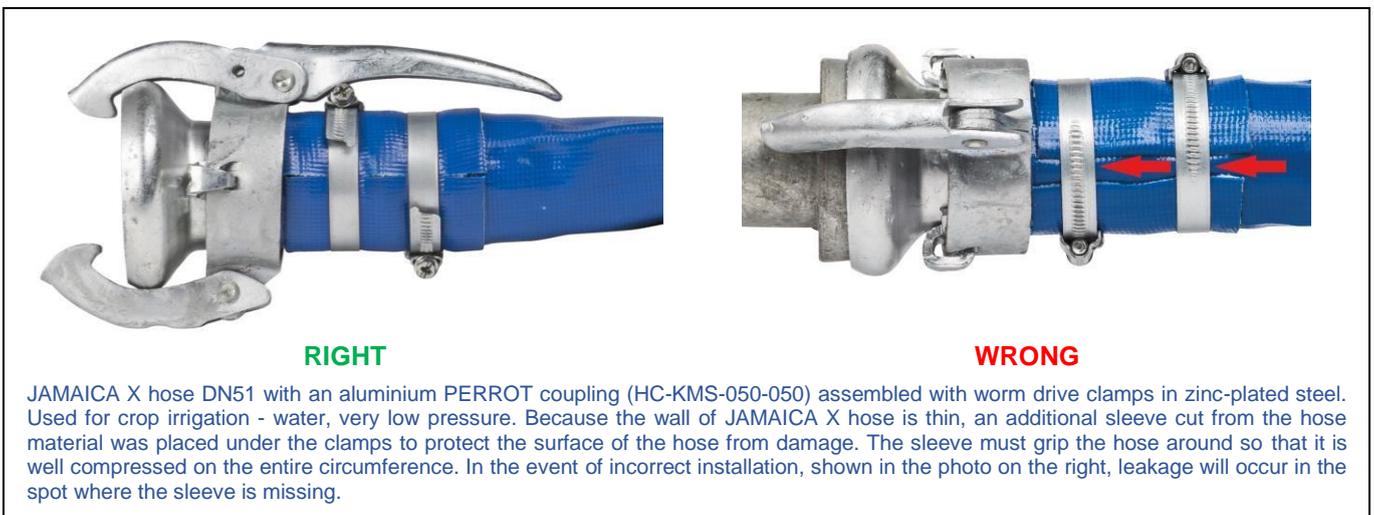
Lightweight and cheap layflat hose for water

Hose material: blue PVC
Reinforcement: polyester braid
Work. temp.: from -5°C to +60°C
 (working pressure depends on temperature)

Very lightweight, layflat, delivery hose designed for water transfer. An economical solution for low operating pressures and light-duty operating conditions. Used in agriculture, construction and other industries.

code	I.D. [mm]	working pressure 20°C [bar]	burst pressure 20°C [bar]	coil length [m]
ME-JAMAIX-038	38	3	9	50
ME-JAMAIX-051	51	3	9	50
ME-JAMAIX-063	63	3	9	50
ME-JAMAIX-076	76	3	9	50
ME-JAMAIX-102	102	3	9	50
ME-JAMAIX-127	127	3	9	50
ME-JAMAIX-152	152	3	9	50
ME-JAMAIX-203	203	3	9	50

Note: colour marked codes - used most often.



RIGHT

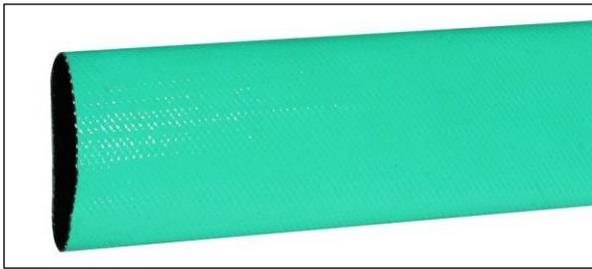
WRONG

JAMAICA X hose DN51 with an aluminium PERROT coupling (HC-KMS-050-050) assembled with worm drive clamps in zinc-plated steel. Used for crop irrigation - water, very low pressure. Because the wall of JAMAICA X hose is thin, an additional sleeve cut from the hose material was placed under the clamps to protect the surface of the hose from damage. The sleeve must grip the hose around so that it is well compressed on the entire circumference. In the event of incorrect installation, shown in the photo on the right, leakage will occur in the spot where the sleeve is missing.





Layflat water hoses



HIFLAT LD / HIFLAT HD

Lightweight layflat hose for water

Inner layer: black PVC
Reinforcement: polyester braid
Outer layer: green PVC (LD), blue PVC (HD)
Work. temp.: from -20°C to +60°C
 (working pressure depends on temperature)

Very lightweight, layflat, delivery hose designed for water transfer. A cost-effective solution for average working conditions. Used in agriculture, construction and other industries.

HIFLAT LD, green					
code	I.D. [mm]	working pressure 20°C [bar]	burst pressure 20°C [bar]	weight [kg/m]	coil length [m]
FT-HIFLAT-LD-025	25	6	18	0.18	50
FT-HIFLAT-LD-032	32	6	18	0.19	50
FT-HIFLAT-LD-035	35	6	18	0.21	50
FT-HIFLAT-LD-038	38	5	15	0.23	50
FT-HIFLAT-LD-040	40	5	15	0.24	50
FT-HIFLAT-LD-045	45	5	15	0.27	50
FT-HIFLAT-LD-051	51	4	12	0.28	50
FT-HIFLAT-LD-060	60	4	12	0.35	50
FT-HIFLAT-LD-063	63	4	12	0.37	50
FT-HIFLAT-LD-070	70	4	12	0.42	50
FT-HIFLAT-LD-076	76	4	12	0.46	50
-	-	-	-	-	-
FT-HIFLAT-LD-090	90	4	12	0.58	50
FT-HIFLAT-LD-102	102	4	12	0.61	50
FT-HIFLAT-LD-127	127	3	9	0.95	50
FT-HIFLAT-LD-153	153	2.5	7.5	1.20	50
FT-HIFLAT-LD-203	203	2	6	1.94	50

HIFLAT HD, blue					
code	I.D. [mm]	working pressure 20°C [bar]	burst pressure 20°C [bar]	weight [kg/m]	coil length [m]
FT-HIFLAT-HD-025	25	10	30	0.17	50
FT-HIFLAT-HD-032	32	9	27	0.21	50
FT-HIFLAT-HD-035	35	8	24	0.24	50
FT-HIFLAT-HD-038	38	8	24	0.25	50
FT-HIFLAT-HD-040	40	8	24	0.27	50
FT-HIFLAT-HD-045	45	8	24	0.29	50
FT-HIFLAT-HD-051	51	8	24	0.34	50
FT-HIFLAT-HD-060	60	8	24	0.43	50
FT-HIFLAT-HD-063	63	8	24	0.45	50
FT-HIFLAT-HD-070	70	7	21	0.49	50
FT-HIFLAT-HD-076	76	7	21	0.53	50
FT-HIFLAT-HD-080	80	7	21	0.56	50
FT-HIFLAT-HD-090	90	7	21	0.66	50
FT-HIFLAT-HD-102	102	7	21	0.75	50
FT-HIFLAT-HD-127	127	6	18	1.11	50
FT-HIFLAT-HD-153	153	4	12	1.42	50
FT-HIFLAT-HD-203	203	2.5	7.5	2.10	50

Note: colour marked codes - used most often.

HIFLAT HD hose DN80 with an aluminium STORZ coupling (ST-12-089080-11), 89 mm lug distance, fastened with binding wire. Wire binding is a traditional, very good method of mounting STORZ couplings to layflat hoses. However, it must be performed professionally by a trained technician.





Layflat water hoses



JAMAICA L

Lightweight industrial layflat hose for water and fluids

Inner layer: black PVC
Reinforcement: polyester braid
Outer layer: blue PVC
Work. temp.: from -10°C to +60°C
 (working pressure depends on temperature)

Very lightweight, layflat PVC industrial delivery hose. Textile polyester braid reinforcement offers good resistance to elongation. Suitable for pressure transfer of water and fluids. Widely used in agriculture, construction, shipbuilding, mining, etc.

code	I.D. [mm]	O.D. [mm]	wall thickness [mm]	working pressure 20°C [bar]	working pressure 40°C [bar]	working pressure 60°C [bar]	burst pressure 20°C [bar]	weight [kg/m]	coil length [m]
ME-JAMAIL-020	20	23	1.5	8.5	7	4	25.5	0.13	50 / 100
ME-JAMAIL-025	25	28	1.5	8.5	7	4	25.5	0.15	50 / 100
ME-JAMAIL-032	32	35	1.5	8.5	7	4	25.5	0.21	50 / 100
ME-JAMAIL-035	35	38	1.5	8.5	7	4	25.5	0.22	50 / 100
ME-JAMAIL-038	38	41	1.5	8.5	7	4	25.5	0.24	50 / 100
ME-JAMAIL-040	40	43	1.5	8.5	7	4	25.5	0.25	50 / 100
ME-JAMAIL-045	45	48	1.5	6.5	5	2.5	19.5	0.28	50 / 100
ME-JAMAIL-051	51	54	1.5	6.5	5	2.5	19.5	0.32	50 / 100
ME-JAMAIL-060	60	64	2	6.5	5	2.5	19.5	0.36	50 / 100
ME-JAMAIL-063	63.5	67.5	2	6.5	5	2.5	19.5	0.42	50 / 100
ME-JAMAIL-070	70	74	2	5.5	4	2	16.5	0.45	50 / 100
ME-JAMAIL-076	76	80	2	5.5	4	2	16.5	0.52	50 / 100
ME-JAMAIL-080	80	84	2	5.5	4	2	16.5	0.58	50 / 100
ME-JAMAIL-090	90	94	2	5.5	4	2	16.5	0.66	50 / 100
ME-JAMAIL-102	102	106	2	5.5	4	2	16.5	0.72	50 / 100
ME-JAMAIL-110	110	115	2.5	5.5	4	2	16.5	0.78	50 / 100
ME-JAMAIL-127	127	132	2.5	3	2	0.5	9	1.13	50 / 100
ME-JAMAIL-152	152	157	2.5	3	2	0.5	9	1.35	50 / 100
ME-JAMAIL-204	204	209	2.5	2.5	1.5	0.3	7	2.00	50

Note: colour marked codes - used most often.



JAMAICA L hose DN80 with an aluminium KLAUDIA coupling (HC-KMS-070-080) mounted with worm drive clamps.

Medium: water, working pressure up to 5,5 bar (5,5 bar because of the hose – KLAUDIA coupling up to 8 bar).





Layflat water hoses



AQUAMAN

Layflat potable water hose

Hose material: blue polyurethane - polyether (PU) extruded through the braid (textile weave) in a hose extrusion process

Work. temp.: from -50°C to +75°C (for clean water)

Lightweight, abrasion-resistant delivery hose designed for transporting large volumes of water at high working pressure. Flat, when not in use, for easier operation and compact storage. Minimum elongation under pressure; no snaking, twisting. Reinforcement made from circular woven polyester braid, fully bonded and covered in and out by thermoplastic polyurethane in an original production process, in which polyurethane is hot extruded through the braid. **It meets the requirements for cold potable water transfer according to PZH, KTW-DVGW, WRAS (BS6920) and NSF61.** Designed for permanent, temporary or emergency potable water supply systems.

Used to supply water to ships, in military field systems, humanitarian operations, at concerts, festivals, large events, etc. Other diameters, up to 305 mm, available to special order.

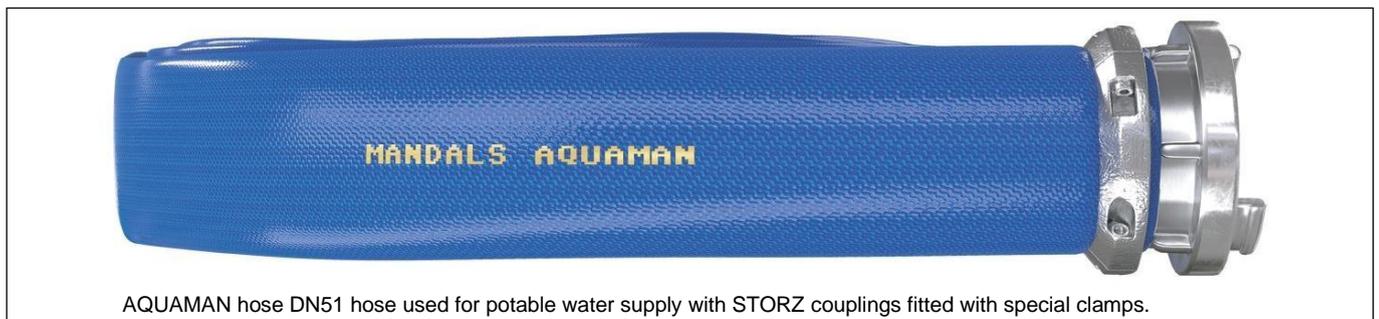


code	I.D. [mm]	wall thickness [mm]	O.D. [mm]	working pressure 20°C* [bar]	burst pressure 20°C [bar]	weight [kg/m]	coil length [m]	hose breaking load (calculated)** [kG]
MR-AQUAMAN-025	25.4+1.6	1.9	29.2	25	50	0.20	200	1500
MR-AQUAMAN-051	51.0+2.0	2.2	55.4	22.5	45	0.44	200	3400
MR-AQUAMAN-076	76.0+2.0	2.4	80.8	21	42	0.75	200	4800
MR-AQUAMAN-102	102.0+2.5	3.0	108.0	18	36	1.07	200	10400

Note: colour marked codes - used most often. *Max. working pressure for temporary use based on 2:1 safety factor approved by the manufacturer (only for water and safe, non-flammable fluids). **For maximum service life, it is not recommended to exceed 1/3 of burst pressure and of specified breaking load.



Access to clean drinking water has become one of the world's biggest challenges. Designed and manufactured in Norway, AQUAMAN hose offers an efficient, easy and economical way to install a drinking water system. Layflat hoses are the best solution for fast construction of water supply systems in terms of flexibility, compact dimensions of components, easy handling, system extension and modification options.



AQUAMAN hose DN51 hose used for potable water supply with STORZ couplings fitted with special clamps.





Layflat fire hoses



FIRE UNIVERSAL

Basic layflat fire hose

Inner layer: PVC lining (PU for DN110)
Reinforcement: polyester braid
Work. temp.: from -30°C to +60°C

Very lightweight and flexible layflat water delivery hose for fire hydrants and fire pumps. As a hydrant hose, it complies with EN 14540 and is used for indoor fire hydrants according to EN-671-2. As a fire pump hose, it is used for firefighting, rescue and forestry fire motor pumps. Apart from firefighting purposes, it is widely used in the industry, construction, agriculture and mining. It can be used to transfer water, sea water, industrial water, solutions of certain chemicals. The smooth inner layer is resistant to mould and rotting. The high-strength outer layer (braid) is resistant to weather conditions and abrasion.

Certificates (Poland): Hoses compliant with the technical conditions of the Ministry of the Interior and Administration Regulation of 27.04.2010, hoses with couplings (complete hose assemblies) hold CNBOP-PIB certificates of admittance.

description	code	I.D. [mm]	working pressure [bar]	test pressure [bar]	burst pressure [bar]	type - STORZ coupling lug distance	weight [kg] [(kg/m)]	hose length (coil) [m]
hydrant DN25, without couplings	BZ-FIRE-U-025	25	15	22.5	45	-	(0.12)	(40)
hydrant DN25, with couplings	BZ-FIRE-U-025-15	25	15	22.5	45	D-31	2.0	15
hydrant DN25, with couplings	BZ-FIRE-U-025-20	25	15	22.5	45	D-31	2.6	20
hydrant DN52, without couplings	BZ-FIRE-U-052	52	15	22.5	45	-	(0.24)	(40)
hydrant DN52, with couplings	BZ-FIRE-U-052-15	52	15	22.5	45	C-66	4.3	15
hydrant DN52, with couplings	BZ-FIRE-U-052-20	52	15	22.5	45	C-66	5.4	20
pump DN52, with couplings	BZ-FIRE-U-052-20P	52	15	22.5	45	C-66	5.3	20
pump DN75, without couplings	BZ-FIRE-U-075	75	15	22.5	45	-	(0.37)	(40)
pump DN75, with couplings	BZ-FIRE-U-075-20	75	15	22.5	45	B-89	8.45	20
pump DN110, without couplings	BZ-FIRE-U-110	110	12	18	36	-	(0.64)	(40)
pump DN110, with couplings	BZ-FIRE-U-110-20	110	12	18	36	A-133	15.4	20

Note: codes in bold - used most often.



FIRE UNIVERSAL – PU

Layflat coated fire hose

Inner layer: smooth polyurethane (PU)
Reinforcement: polyester braid
Outer layer: red polyurethane coating
Work. temp.: from -30°C to +70°C

Very lightweight and flexible layflat water delivery hose for fire pumps. Suitable for firefighting, rescue and forestry fire motor pumps. Apart from firefighting purposes, it is widely used to convey water in the industry, construction, agriculture and mining. The smooth inner layer is resistant to mould and rotting. The high-strength outer layer (braid) with polyurethane coating, which does not absorb dirt, increases resistance to abrasion and contact with flame.

Certificates (Poland): Hoses compliant with the technical conditions of the Ministry of the Interior and Administration Regulation of 27.04.2010, hoses with couplings (complete hose assemblies) hold CNBOP-PIB certificates of admittance.

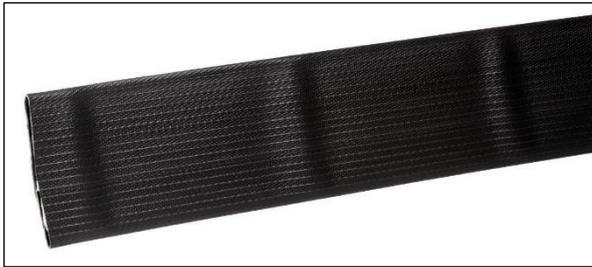
description	code	I.D. [mm]	working pressure [bar]	test pressure [bar]	burst pressure [bar]	type - STORZ coupling lug distance	weight [kg] [(kg/m)]	hose length (coil) [m]
pump DN52, without couplings	BZ-FIRE-U-PU-052	52	15	22.5	45	-	(0.23)	(40)
pump DN52, with couplings	BZ-FIRE-U-PU-052-20	52	15	22.5	45	C-66	5.3	20
pump DN75, without couplings	BZ-FIRE-U-PU-075	75	15	22.5	45	-	(0.36)	(40)
pump DN75, with couplings	BZ-FIRE-U-PU-075-20	75	15	22.5	45	B-89	8.5	20
pump DN110, without couplings	BZ-FIRE-U-PU-110	110	12	18	36	-	(0.63)	(40)
pump DN110, with couplings	BZ-FIRE-U-PU-110-20	110	12	18	36	A-133	16.5	20

Note: codes in bold - used most often.





Layflat hose for water and air



HILCOFLEX

General-purpose layflat hose for heavy-duty use

Hose material: black NBR/PVC compound extruded through polyester-polyamide braid in a hose extrusion process

Work. temp.: from -20°C to +80°C (water) with peaks up to +100°C (water)

Robust delivery hose for water or compressed air transfer in irrigation systems, agriculture, mines, construction sites, etc. The inner layer is smooth for minimal flow loss. The outer layer has slight ribs running lengthwise, which increase abrasion resistance and protect against contact with hot objects. External resistance to abrasion, ozone, weather conditions, oils, fuels and a wide range of chemicals. Lighter and more flexible than standard rubber hoses. Flat when unpressurised, for easier operation and compact storage. Requires no washing or drying. Resistant to longitudinal strains - during unrolling and pulling (longitudinal load should never exceed 1/3 of specified breaking load, the installation of the fittings should account for this longitudinal load). Using the hoses for air should always be preceded by a risk analysis in case of accidental disconnection or rupture.

code	I.D. [mm]	wall thickness [mm]	O.D. [mm]	working pressure 20 °C [bar]		burst pressure 20 °C [bar]	weight [kg/m]	coil length [m]	hose breaking load [kG]
				water	air				
GH-HFLEX-020	20	2	24	25	18	75	0.18	100	1000
GH-HFLEX-026	26	2.2	30.4	25	18	75	0.21	100	1200
GH-HFLEX-032	32	2.2	36.4	20	15	60	0.24	100	1600
GH-HFLEX-035	35	2.2	39.4	16	12	50	0.25	100	1600
GH-HFLEX-038	38	2.3	42.6	16	12	50	0.30	100	1700
GH-HFLEX-045	45	2.3	49.6	16	12	50	0.34	100	3000
GH-HFLEX-052	52	2.5	57	16	12	50	0.40	100	3900
GH-HFLEX-055	55	2.5	60	16	12	50	0.42	100	3900
GH-HFLEX-060	60	2.5	65	16	12	50	0.55	100	4100
GH-HFLEX-065	65	2.5	70	16	12	50	0.54	100	4300
GH-HFLEX-070	70	2.8	75.6	16	12	50	0.60	100	6300
GH-HFLEX-076	76	2.9	81.8	16	12	50	0.65	100	6500
GH-HFLEX-080	80	3.2	86.4	16	12	50	0.80	100	7500
GH-HFLEX-090	90	3.3	96.6	16	12	50	0.90	100	8500
GH-HFLEX-102	102	3.3	108.6	16	12	50	1.00	100	9500
GH-HFLEX-110	110	3.3	116.6	15	11	45	1.20	100	10500
GH-HFLEX-120	120	3.5	127	14	10	42	1.40	100	11000
GH-HFLEX-127	127	3.5	134	14	10	42	1.40	100	17000
GH-HFLEX-152	152	3.7	159.4	14	10	42	1.80	100	17900
GH-HFLEX-203	203	3.9	210.8	10	7	30	2.60	100	26900
GH-HFLEX-254	254	5.2	264.4	10	7	30	4.20	100	43200

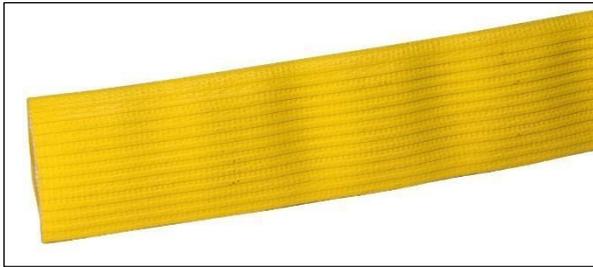
Note: colour marked codes - used most often.

HILCOFLEX hose DN110 with an aluminium PERROT lever coupling clamped using BAND-IT® banding system, used for the dewatering of a railway tunnel construction site.





Layflat hose for water and air



HILCOFLEX SPEZIAL 90

High pressure layflat hose for water and compressed air

Hose material: yellow NBR/PVC compound extruded through polyester-polyamide braid in a hose extrusion process

Work. temp.: from -20°C to +80°C (water)
from 20°C to +75°C (air)

Robust delivery hose designed for water or compressed air transfer. Used in the construction industry (by demolition companies in particular), in industrial and mining sectors. Suitable for heavy-duty applications. It comes in yellow colour for excellent visibility. The inner layer is smooth to ensure minimal flow loss. The outer layer has slight ribs running lengthwise, which increase abrasion resistance and protect against contact with hot objects. External resistance to abrasion, ozone, weather conditions, oils, fuels and a wide range of chemicals. Lighter and more flexible than standard rubber hoses. Flat, when not in use, for easier operation and compact storage. Requires no washing or drying. Resistant to longitudinal strains - during unrolling and pulling (longitudinal load should never exceed 1/3 of specified breaking load, the installation of the fittings should account for this longitudinal load). Using the hoses for air should always be preceded by a risk analysis in case of accidental disconnection or rupture.

code	I.D. [mm]	wall thickness [mm]	O.D. [mm]	working pressure 20 °C [bar]		burst pressure 20 °C [bar]	weight [kg/m]	coil length [m]	hose breaking load [kG]
				water	air				
GH-HFLEX-S90-020	20	2.5	25	30	22	90	0.19	100	1200
GH-HFLEX-S90-026	26	2.5	31	30	22	90	0.23	100	1400
GH-HFLEX-S90-038	38	3.2	44.4	30	22	90	0.40	100	2700
GH-HFLEX-S90-052	52	3.5	59	30	22	90	0.60	100	5300

Note: colour marked codes - used most often.

HILCOFLEX SPEZIAL 90 hose DN52 with an aluminium STORZ coupling (ST-12-066052-11) fastened with binding wire. Medium: water; working pressure of the hose assembly 16 bar (limited by the maximum pressure of STORZ coupling). In this case, the choice of HILCOFLEX SPEZIAL 90 hose was based on its overall strength, durability and yellow colour, rather than the working pressure of the hose.



DN 20 hose and DN 25 hose in 20 m length, with 42 mm claw couplings or with screw-connection DIN 8537/20033 couplings at both ends are often used for compressed air in the construction industry, for jack hammers and augers drills.



Layflat air hoses



MANTEX

Original layflat hose for compressed air

Hose material: yellow NBR/PVC compound with UV barrier, extruded through polyester braid (textile weave) in a hose extrusion process

Work. temp.: from -30°C to +75°C (peaks up to +80°C)

Delivery hose designed to transfer compressed air, for compressors, hammers, augers and other pneumatic tools. With its low weight, flexibility, sturdy design and high working pressure, the hose has been recognised by the industry and used in the construction industry (by demolition companies in particular), industrial and mining sectors for many years. Combines excellent design and high quality materials for exceptional strength and durability. Reinforcement made from circular woven polyester braid, fully bonded and covered in and out by rubber in an original production process, in which rubber compound is hot extruded through the braid. Resistant to UV radiation. The inner layer is smooth, ensuring minimal flow loss. The yellow, ribbed outer surface is resistant to abrasion, oil and ozone, and perfectly visible on the construction site. Flat, when not in use, for easier operation and compact storage. Resistant to longitudinal stress. Usually used with air claw couplings (42 or 41 mm lug distance) mounted with malleable iron clamps. Also available in black. Using air hoses at high pressure should always be preceded by a risk analysis in case of accidental disconnection or rupture of the hose and possible application of safety devices.

code	I.D. [mm]	wall thickness [mm]	O.D. [mm]	working pressure 20°C* [bar]	burst pressure 20°C [bar]	weight [kg/m]	coil length [m]	hose breaking load (calculated)** [kG]
MR-MANTEX-020	20.0+1.6	2.3	24.6	25.0	100	0.21	200	1900
MR-MANTEX-025	25.4+1.6	2.5	30.4	25.0	100	0.27	200	2300
MR-MANTEX-038	38.0+1.6	2.5	43.0	21.25	85	0.38	200	3500
MR-MANTEX-051	51.0+2.0	2.5	56.0	15.0	60	0.53	200	4700
MR-MANTEX-065	65.0+2.0	2.9	70.8	12.5	50	0.68	200	6700
MR-MANTEX-076	76.0+2.0	3.1	82.2	12.5	50	0.95	200	8100

Note: colour marked codes - used most often. *Max. working pressure approved by the manufacturer for air, based on 4:1 safety factor. **As recommended by the manufacturer, 1/3 of specified breaking load should not be exceeded.



MANTEX HP

Original high pressure layflat hose for compressed air

Inner layer : polyurethane (PU)
Reinforcement: double polyester braid
Outer layer: : orange polyurethane (PU)
Work. temp.: from -50°C to +110°C

High pressure, very durable hose for compressed air transfer. Designed for heavy-duty use on construction sites, in mines, etc. to supply power to devices with high compressed air consumption. It is made of high quality materials combined with **double jacket design** – double reinforcement of circular woven high-strength polyester braid, fully covered and lined with thermoplastic polyurethane (PU) for superior strength and durability. It has excellent abrasion resistance, also puncture, wear and oil resistance. The hose does not elongate under pressure and is resistant to longitudinal loads. Flat, when not in use, for easier operation and compact storage. **Available as complete hose assemblies** in 20m or 40 m lengths, factory assembled with fittings. Using the hose for air at high pressure should always be preceded by a risk analysis in case of accidental disconnection or rupture of the hose and by potential application of safety devices.

hose assembly			MANTEX HP hose						
code	hose assembly length [m]	fittings	I.D. [mm]	wall thickness [mm]	O.D. [mm]	working pressure 20°C* [bar]	burst pressure 20°C [bar]	weight [kg/m]	hose breaking load (calculated)** [kG]
MR-MANTEXHP-051-20	20	2 x Rd 65x1/6" female thread, flat seal	51.0+2.0	4.4	59.8	43.75	175	0.82	14300
MR-MANTEXHP-051-40	40								
MR-MANTEXHP-076-20	20	2 x BSP 3" female thread, seal on cone	76.0+2.0	4.5	85	30.00	120	1.24	21000
MR-MANTEXHP-076-40	40								

Note: colour marked codes - used most often. *Max. working pressure approved by the manufacturer for air, based on 4:1 safety factor. **As recommended by the manufacturer, 1/3 of specified breaking load should not be exceeded.



Layflat hoses for special uses



DRAGMAN

Agricultural drag hose for crop fertilisation

Hose material: orange polyurethane (PU) extruded through high-strength polyester braid in a hose extrusion process

Work. temp.: from -50°C to +65°C

Sturdy, specialized drag hose used by farmers, designed for the application of organic fertilisers in crop production (slurry, liquid manure spreading). Used in slurry distribution systems, e.g. umbilical slurry application systems. In this system the slurry is pumped via a hose from the tank and fed by a drag hose to the distribution system fitted to the tractor and then spread directly onto the soil surface. Combines excellent design and high quality materials for maximum strength and durability. Reinforcement made from circular woven high-strength polyester braid, fully bonded and covered in and out by polyurethane in an original production process, in which thermoplastic polyurethane is hot-extruded through the braid. With high tensile strength, resistance to abrasion, puncture, weather conditions, UV radiation and small bend radius, it is commonly used for fertilising crops. Also available as DRAGMAN EXTRA (with higher tensile strength) and DRAGMAN PREMIUM (with increased abrasion resistance) and in longer lengths.

code	I.D. [mm]	wall thickness [mm]	O.D. [mm]	working pressure 20°C* [bar]	burst pressure 20°C [bar]	weight [kg/m]	coil length [m]	hose breaking load (calculated)** [kG]
MR-DRAGMAN-090	90.0+2.0	3.4	96.8	22.5	45	1.05	200	13000
MR-DRAGMAN-102	102.0+2.5	3.6	109.2	21	42	1.35	200	14900
MR-DRAGMAN-114	114.0+2.5	3.6	121.2	18	36	1.50	200	17900
MR-DRAGMAN-127	127.0+2.5	3.6	134.2	16	32	1.65	200	19900
MR-DRAGMAN-140	140.0+3.0	3.8	147.6	15	30	1.92	200	21800
MR-DRAGMAN-152	152.0+3.0	3.8	159.6	14	28	2.10	200	25500
MR-DRAGMAN-203	203.0+3.0	4.2	211.4	15	30	3.30	200	46500

Note: colour marked codes - used most often. *Max. working pressure for temporary use based on 2:1 safety factor approved by the manufacturer (only for water and safe, non-flammable fluids). **For maximum service life, it is not recommended to exceed 1/3 of burst pressure and of specified breaking load.



Layflat hoses for special uses



ULTRAMAN

Lightweight and durable layflat hose for water, sewage, fluids and slightly aggressive chemicals

Hose material: black polyurethane - polyether (PU) extruded through polyester braid in a hose extrusion process
Work. temp.: from -50°C to +75°C (water)

Lightweight, durable, general-purpose, high-quality layflat hose used in the mining, petroleum, power industry and in agriculture. Primarily used for water, slurry, sewage and fertilisers. Made of **polyurethane - polyether** resistant to hydrolysis and microbes. Reinforcement made from circular woven polyester braid, fully bonded and covered in and out by polyurethane in an original production process, in which thermoplastic polyurethane is hot-extruded through the braid. The hose with great tensile strength, with only little elongation under pressure (up to 2%), not prone to snaking or twisting. As the hose combines durability with ease of handling (uncoiling, laying, storage), it is extensively used in water systems (open-pit mine dewatering, water supply, drainage and sewage disposal) and more. Resistant to a wide range of chemicals, microbes, mould, hydrolysis, weather conditions, UV and ozone. With good abrasion resistance. Longer lengths (longer than 200 m) in diameters up to 6" are available on special request.

Chemical resistance check: PU chemical resistance chart (initial selection), confirmation of resistance and conditions of use by Tubes International.

code	I.D. [mm]	wall thickness [mm]	O.D. [mm]	working pressure 20°C* [bar]	burst pressure 20°C [bar]	weight [kg/m]	coil length [m]	hose breaking load (calculated)** [kG]
MR-ULTRAMAN-051	51.0 _{+2.0}	2.7	56.4	32.5	65	0.52	200	5400
MR-ULTRAMAN-076	76.0 _{+2.0}	2.8	81.6	27	54	0.84	200	7900
MR-ULTRAMAN-102	102.0 _{+2.5}	3.2	108.4	21	42	1.20	200	10100
MR-ULTRAMAN-127	127.0 _{+2.5}	3.2	133.4	17.5	35	1.52	200	12000
MR-ULTRAMAN-152	152.0 _{+3.0}	3.2	158.4	15	30	1.73	200	14900
MR-ULTRAMAN-178	178.0 _{+3.0}	3.2	184.4	13.5	27	2.05	200	17100
MR-ULTRAMAN-203	203.0 _{+3.0}	3.2	209.4	13	26	2.44	200	18900
MR-ULTRAMAN-254	254.0 _{+4.0}	3.3	260.6	10.5	21	3.08	200	23700
MR-ULTRAMAN-305	305.0 _{+5.0}	3.4	311.8	8	16	4.05	200	38200

Note: colour marked codes - used most often. *Max. working pressure for temporary use based on 2:1 safety factor approved by the manufacturer (only for water and safe, non-flammable fluids). **For maximum service life, it is not recommended to exceed 1/3 of burst pressure and of specified breaking load.



SUPERMAN HVT

Very sturdy and durable layflat hose for water, sewage and light chemicals, for rough terrain use

Hose material: black polyurethane - polyether (PU) extruded through polyester braid in a hose extrusion process
Work. temp.: from -50°C to +75°C (water)

Very sturdy and durable layflat hose designed for trouble-free and maintenance-free operation in rough terrain conditions. Used mainly for water, slurry, sewage and other fluids. Made of **polyurethane - polyether** resistant to hydrolysis and microbes. Reinforcement made from circular woven polyester braid, fully bonded and covered in and out by polyurethane in an original production process, in which thermoplastic polyurethane is hot-extruded through the braid. The hose with great tensile strength, with only little elongation under pressure, not prone to snaking or twisting. Excellent resistance to abrasion and puncture enables operation in heavy, rough terrain and helps reduce wear on the water-laden hose in case of pressure pulsations. Due to its strength and durability combined with ease of use (coiling - uncoiling), it is used in permanent and temporary water systems with high pressure and capacity, in mines, power plants, agriculture, and in firefighting applications. Resistant to a wide range of chemicals, microbes, mould, hydrolysis, weather conditions, UV and ozone.

Chemical resistance check: PU chemical resistance chart (initial selection), confirmation of resistance and conditions of use by Tubes International.

code	I.D. [mm]	wall thickness [mm]	O.D. [mm]	working pressure 20°C* [bar]	burst pressure 20°C [bar]	weight [kg/m]	coil length [m]	hose breaking load (calculated)** [kG]
MR-SUPERMAN-127	127.0 _{+2.5}	3.5	134.0	21	42	1.60	200	15800
MR-SUPERMAN-152	152.0 _{+3.0}	3.7	159.4	22.5	45	2.00	200	21000
MR-SUPERMAN-178	178.0 _{+3.0}	4.0	186.0	22.5	45	2.40	200	31800
MR-SUPERMAN-203	203.0 _{+3.0}	4.2	211.4	21	42	3.20	200	37000
MR-SUPERMAN-254	254.0 _{+5.0}	4.3	262.6	18	36	4.10	200	46000
MR-SUPERMAN-305	305.0 _{+5.0}	4.5	314.0	15	30	5.05	200	54500

Note: colour marked codes - used most often. *Max. working pressure for temporary use based on 2:1 safety factor approved by the manufacturer (only for water and safe, non-flammable fluids). **For maximum service life, it is not recommended to exceed 1/3 of burst pressure and of specified breaking load.



Layflat hoses for special uses



SNOWBLAST

Snow cannon hose

Inner layer:	EPDM rubber
Reinforcement:	double polyester braid
Outer layer:	yellow, abrasion resistant special coating
Work. temp.:	from -40°C to +80°C (water)

Special, high pressure water hose for snow cannons, resistant to abrasion, ageing, decay, UV radiation, weather conditions and ozone. Designed for continuous operation at high pressure. Flexible at low temperatures. It is yellow, perfectly visible on the snow, even at twilight. Supplied as complete hose assemblies with CAMLOCK couplings (C socket and E plug), 60 bar high pressure version in AISI 316 stainless steel. DN52 hose assembly is also available in other lengths (e.g. 25, 30 and 40 m). Max. hose length 60 m.

code	hose assembly length [m]	I.D. [mm]	O.D. [mm]	wall thickness [mm]	working pressure [bar]	burst pressure [bar]	hose weight [kg/m]
GH-SNOWBLAST-52-05	5	52	60	4	60	150	0.7
GH-SNOWBLAST-52-10	10						
GH-SNOWBLAST-52-15	15						
GH-SNOWBLAST-52-20	20						

Note: colour marked codes - used most often.

<p>This precisely engineered, special CAMLOCK coupling made from stainless steel components with tail and ferrule intended for SNOWBLAST layflat hose, ensure safe operation with high pressure water at low ambient temperatures.</p>		
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Layflat hoses – options and special projects

State-of-the-art materials, specially designed reinforcing braids are combined in a unique manufacturing process to produce layflat hoses with a very broad range of applications in all industries, not limited to water and air transfer. It is also possible to develop customised solutions for specific operating conditions, where these unique features of layflat hoses will be utilised - contact Tubes International.



Layflat hoses DN203 with grooved couplings mounted with special clamps, designed for a mine dewatering system.

