

ContiTech



TAURUS EMERGÉ
high performance flexible
lines for oil industry

Fluid Technology



Continuous product development results in representing the state of the art in oil hose manufacturing



I am pleased to inform you that TAURUS EMERGÉ brand name is back on the market, and the hose products in this catalogue have been fully renewed both in terms of quality and technology, and they represent the state of the art in oil hose manufacturing around the world.

In line with TAURUS EMERGÉ traditions, we place special emphasis on quality and reliability. As a result of continuous development, we have introduced hoses with higher operating temperature range (121 °C), increased working pressure (15,000 psi), special chemical (sour gas) resistance, external mechanical protection and flame resistant cover, which meet the strictest safety standards, be it a road, offshore, surface or deep sea (3,000 m) application.

Exclusive products for demanding users, in outstanding quality, offering safety all around – this is the message of the old-new TAURUS EMERGÉ from Alaska to Australia and from Kamchatka to Brazil.

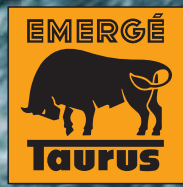
Our company, ContiTech Rubber Industrial Kft. is a wholly owned subsidiary of Continental ContiTech AG. We are a leading developer and manufacturer of high quality oil&marine rubber hoses for various applications.

Our high-standard of production technology, constructive professional competence and the well-controlled manufacturing process are the basis of a recognised quality product range, product safety, long service life and easy to handle solutions.

Although we have tried to present the whole range of TAURUS EMERGÉ high performance flexible line products for the oil industry in this catalogue, I stress that our research team and developing engineers are ready to take on and deliver individual and special orders so that we can offer the most suitable flexible pipeline product for the given application.

If the product you need is not included in this catalogue, please do not hesitate to contact me.

Dr. Tamás Katona, managing director,
ContiTech Rubber Industrial Kft., Szeged





High performance flexible lines for oil industry



ContiTech Rubber Industrial Kft. is a leading developer and manufacturer of rubber and composite hoses for various applications. The company is recognised world-wide as an innovative designer and manufacturer of high quality and technically advanced high pressure hoses. Over the decades the company has achieved many new developments in the field of manufacturing technology and product quality.

We are the only company in the world certified for all relevant API standards of high pressure rubber hoses and flexible pipes API Spec. 7K, API Spec. 16C and API Spec. 17K, running an API Spec. Q1 system with ISO TS 29001 and the first company who manufactures the Rotary & Vibrator hoses according to API Spec. 7K - FSL 2.

The compounds used in the manufacturing process are produced at our own mixing plant from top quality raw materials using sophisticated process control. All materials, compounds ingredients and reinforcing elements are specified and checked by rigorous internal standards to meet the requirements of high-tech applications where our improved design assures long service life and outstanding operational and environmental safety.

Recent changes in ownership and organizational structure of the company led to a further improvements in production technology and product quality resulting in new developments. Following these changes the decision was made to revitalize our former well known and popular brand-name TAURUS EMERGÉ in an upgraded form to give further success to our products.

Our TAURUS EMERGÉ or Phoenix branded hoses are in use world-wide wherever drilling, exploration or oil and gas production are in progress.

Example projects: Major oil companies such as BP, Petrobras and Chevron are among the end-users, as well as drilling contractors like Transocean, GlobalSantaFe, Helmerich&Payne, Nabors Drilling, KCA Deutag Drilling.

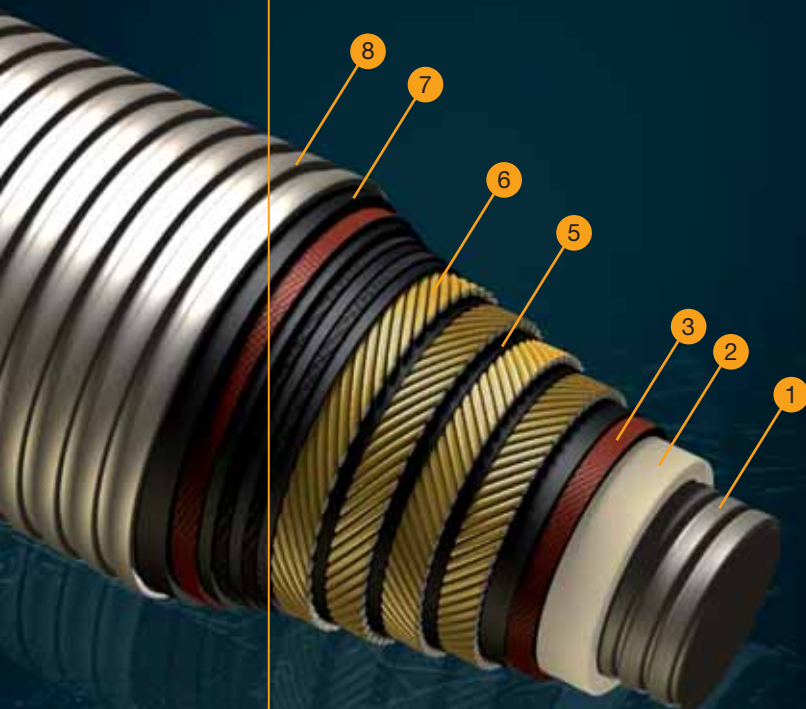
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General Construction of TAURUS EMERGÉ High Pressure Hoses

The main elements



The flexible hose lines are built from steel and elastomeric materials into a bonded construction. The main point of bonded construction is that the layers in the flexible hose wall are built individually, then combined into one unit by vulcanisation.

Hose assemblies are manufactured either as a single bonded unit to specified lengths, where the couplings are an integral part of the hose or they can be mounted on the cured hose by swaging.

- 1 Stainless steel interlock stipwound tube**
Function: protects the elastomeric lining from mechanical damage, prevents blistering in case of use with gas and decompression with vacuum service, supports the wall of flexible hose and facilitates pigging.
 The material can be AISI 304, 316L or 254 SMO quality stainless steel, depending on the conveyed medium.
- 2 Elastomeric polymer lining**
Function: Fluid barrier of the flexible line.
 Protects the hose construction from corrosive and abrasive effects of the conveyed medium. The thickness of lining depends upon the internal pressure, the inside diameter and the abrasiveness of the conveyed medium.
 The lining material is selected to withstand chemical and heat effects of crude oil, seawater, gases, hydraulic fluid or whatever substance is contained in the hose.
- 3 Textile plies**
Function: to distribute the forces of internal pressure
- 4 Stiffening spiral (not shown in the figure)**
Function: to protect the hose against collapse under axial pulling force and/or due to external pressure. Prevents kinking even in sharp bends.
- 5 Elastomeric cushion plies**
Function: to ensure adhesive bonding and interaction between different plies
- 6 High strength steel cable reinforcements**
Function: These are the most important load-bearing elements. They determine internal pressure resistance.
- 7 Elastomeric cover**
Function: to protect the flexible hose line from impact, abrasion, weather, seawater, oil, etc. On request, a fire rated cover can be applied.
- 8 Outer stainless steel stipwound protection**
Function: to protect the hose against external mechanical damage, material AISI 304



Customised Solutions

Bonded flexible pipes and high pressure hoses give freedom to the system designer, because their properties can be designed around the special needs of the end-user. ContiTech Rubber Industrial Ltd. is willing and able to meet even the strongest requirements and ready to look for the optimum solutions. The following is a shortlist of specific possibilities:

Neck reinforcement: all the hoses are built with neck reinforcement, if configuration analysis shows a need to increase the bend stiffness in the coupling region, then custom designed extra neck reinforcement is an option, increasing local bend stiffness to several times of that of the hose body. The length of the stiffer section is also variable.

Bend stiffness of the hose body: bend stiffness of the complete hose body can be increased by a factor of 10 or more. In some cases decrease of bend stiffness is also possible.

Location collars for floaters: vulcanized location collars for floaters can be added, preventing slip of the floaters and abrasion on the hose cover

External armour: besides the usual external strip-wound armouring, high impact resistant armour can be added, a stainless steel helix embedded in an extra thick rubber cover

Fire resistance: all hose types can be ordered to withstand 700°C fire for 30 min (Lloyd's OD 1000/499)

Sour service: hoses and couplings can be ordered to meet NACE MR 01-75 requirements

Heat traced hoses: for extreme cold conditions, or if fluid might freeze in the hose self regulating electric heating cable can be incorporated in the construction, using patented technology

Floating high pressure production lines: the first integral floating high pressure lines were launched in the late nineties

Long length lines: by newly developed splicing technology long length – lines up to 100m – with continuous vulcanized liner can be produced, without potential leak path and heavy intermediate couplings (Patent pending)

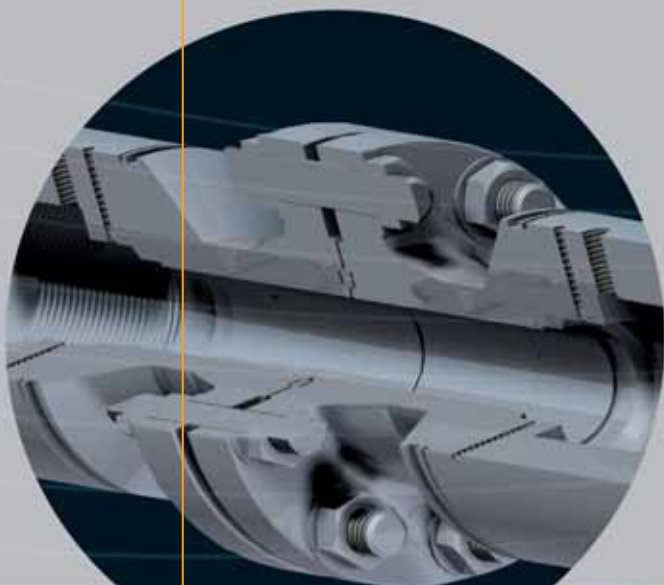
Extremely small bend radius: the inherent flexibility of rubber hoses can be further improved by vulcanizing the hose in a preformed shape, required by tight configurations (Patent pending)

Built in information technology: an additional innovation gives us the option to supply hoses equipped with a chip storing relevant hose data in easily retrievable manner





All your needs from one manufacturer!



R&D and design

Our company is at the cutting edge of high pressure hose and bonded flexible pipe development. Facilities are available for material and component testing and evaluation. In-house test facilities include programmed high temperature pressure pulsation, burst test up-to 4,000 bar (58,000 psi), mechanized bending tests with or without internal pressure, even at 1,034 bar (15,000 psi), controlled and programmable internal heating, fire test station, chemical compatibility testing etc. State of the art finite element and proprietary inhouse developed special programs are used for hose design. Cooperation with other ContiTech organizations, Hungarian and foreign universities, research institutes and private R+D firms broaden the possibilities.

Highlights of R&D include: invention of the epoxy bonded coupling, the conical coupling, hose building machinery, gas leading ply, major improvements in hose strength and flexibility, the first long length large bore high pressure line, the first floating high pressure line etc.

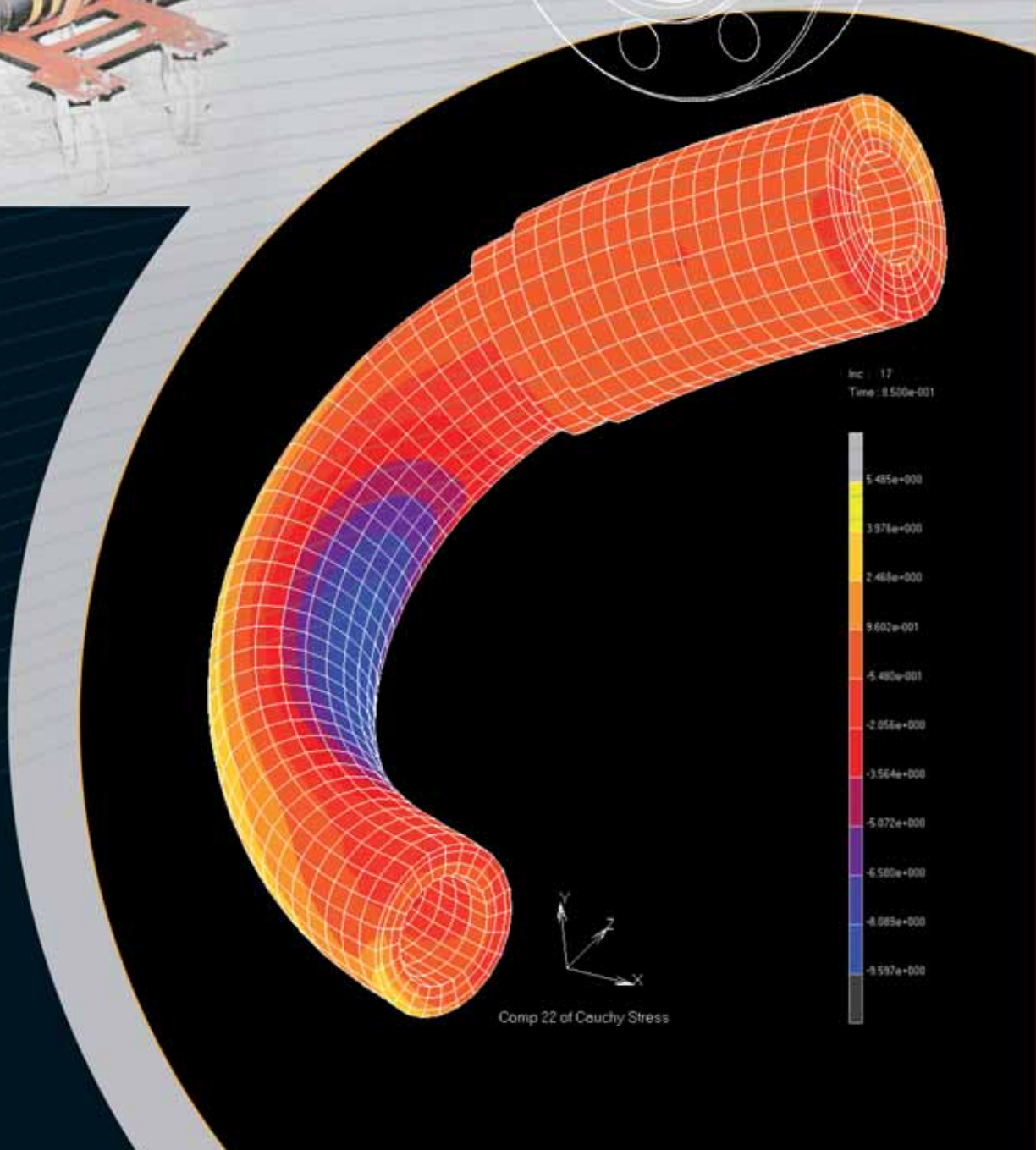
All prototype tests are carried out under the rigorous control of DNV, Lloyd's or other third parties, irrespective of where the test is done in-house: in Hungary or abroad.

The company's R&D and engineering activities are supported by the application of cutting edge software such as:

- 2-D and 3-D CAD
- Non-linear FEA
- Hydrodynamic analysis
- Fatigue analysis
- In-house developed technical information system and simulation facilities

All these capabilities ensure efficiency and the ability to perform quick custom design of special hoses. We offer customised solutions for any application!

This is our philosophy,
which is strongly supported
by our R&D activity.





Rotary & Vibrator Hoses

with built-in coupling



Applications:

- Mud delivery hoses
- Mud jumper hoses
- Motion compensator hoses
- Decoking hoses
- Water injection

Rotary & Vibrator Hoses with built-in couplings

API Spec. 7K FSL1 - FSL2 - ISO 14693 / API Monogram License No: 7K-0008

I.D. (inches)	Working Pressure (psi / bar)		Test Pressure (psi / bar)		API Grade	Safety factor (+ W/P)	O.D. Hose Body (mm)	MBR storage (m)	MBR operation (m)	Weight of hose body (kg/m)	Note
2	4000	276	8000	552	C	2.5	97	0.6	0.7	11	-
	5000	345	10000	690	D	2.5	102	0.6	0.7	12	-
2.5	4000	276	8000	552	C	2.5	109	0.6	0.7	13	-
	5000	345	10000	690	D	2.5	111	0.6	0.7	15	-
	7500	517	15000	1035	E	2.5	132	0.7	0.8	25	-
3	4000	276	8000	552	C	2.5	124	0.6	0.7	16	-
	5000	345	10000	690	D	2.5	126	0.7	0.8	18	-
	7500	517	15000	1035	E	2.5	148	1.0	1.1	34	-
3.5	4000	276	8000	552	C	2.5	140	0.8	0.9	21	-
	5000	345	10000	690	D	2.5	140	0.8	0.9	21	-
	7500	517	15000	1035	E	2.5	162	1.2	1.3	38	-
4	4000	276	8000	552	C	2.5	166	1.0	1.2	33	-
	5000	345	10000	690	D	2.5	166	1.0	1.2	33	-
	7500	517	15000	1035	E	2.5	174	1.2	1.4	41	-
5	5000	345	10000	690	D	2.5	197	1.4	1.5	47	-
	7500	517	15000	1035	E	2.5	213	1.4	1.5	67	-
6	5000	345	7500	690	-	2.25	226	1.5	1.7	57	a
	7500	517	11250	776	-	2.25	234	1.6	1.8	76	a

Operating temperature: -30 to +82°C or -25 to +100°C as specified by purchaser

Maximum available length: 33.5 m up to 5" bore size and 30 m in 6" bore size

Production length tolerance: +/- 64 mm up to 6.4 m hose length or +/- 1%

- Minimum Bending Radius is referred to the centre-line of each hose
- On request fire rated versions are available according to Lloyd's Register OD 1000/499
- Additional external protection can be added according to customer request
- Different size API LPT from standard case is also available by applying reducer.
- Similar hoses are also available as designed in accordance with GOST 25676 standard
- Manufacturer Handling Instruction: TKO AS3 latest edition
- Hoses for gas drilling see at Underbalanced drilling

Notes:

a) hose properties differ from API Spec. 7K requirement



Rotary & Vibrator Hoses

with swaged coupling



Applications:

- Mud delivery hoses
- Mud jumper hoses
- Water injection

Rotary Drilling & Vibrator Hoses with swaged coupling

API Spec. 7K FSL 1 - ISO 14693 / API Monogram License No: 7K-0008

I.D. (inches)	Working Pressure (psi) (bar)	Test Pressure (psi) (bar)	API Grade	Safety factor (* WP)	O.D. Hose Body (mm)	MBR storage (m)	MBR operation (m)	Weight of hose body (kg/m)
2.5"	5000 345	10000 690	D	2.5	111	0.6	0.7	15
3"	5000 345	10000 690	D	2.5	126	0.7	0.8	18
3.5"	5000 345	10000 690	D	2.5	140	0.8	0.9	21

Rotary Drilling & Vibrator Hoses with swaged coupling

GOST standard - CT CЭB 3350

I.D. (inches)	Working Pressure (bar)	Test Pressure (bar)	Safety factor (* WP)	O.D. Hose Body (mm)	MBR storage (m)	MBR operation (m)	Weight of hose body (kg/m)
3	300	450	2	114	0.7	0.8	13
4	300	450	2	140	0.8	1.0	16

Operating temperature: -30 to + 82°C

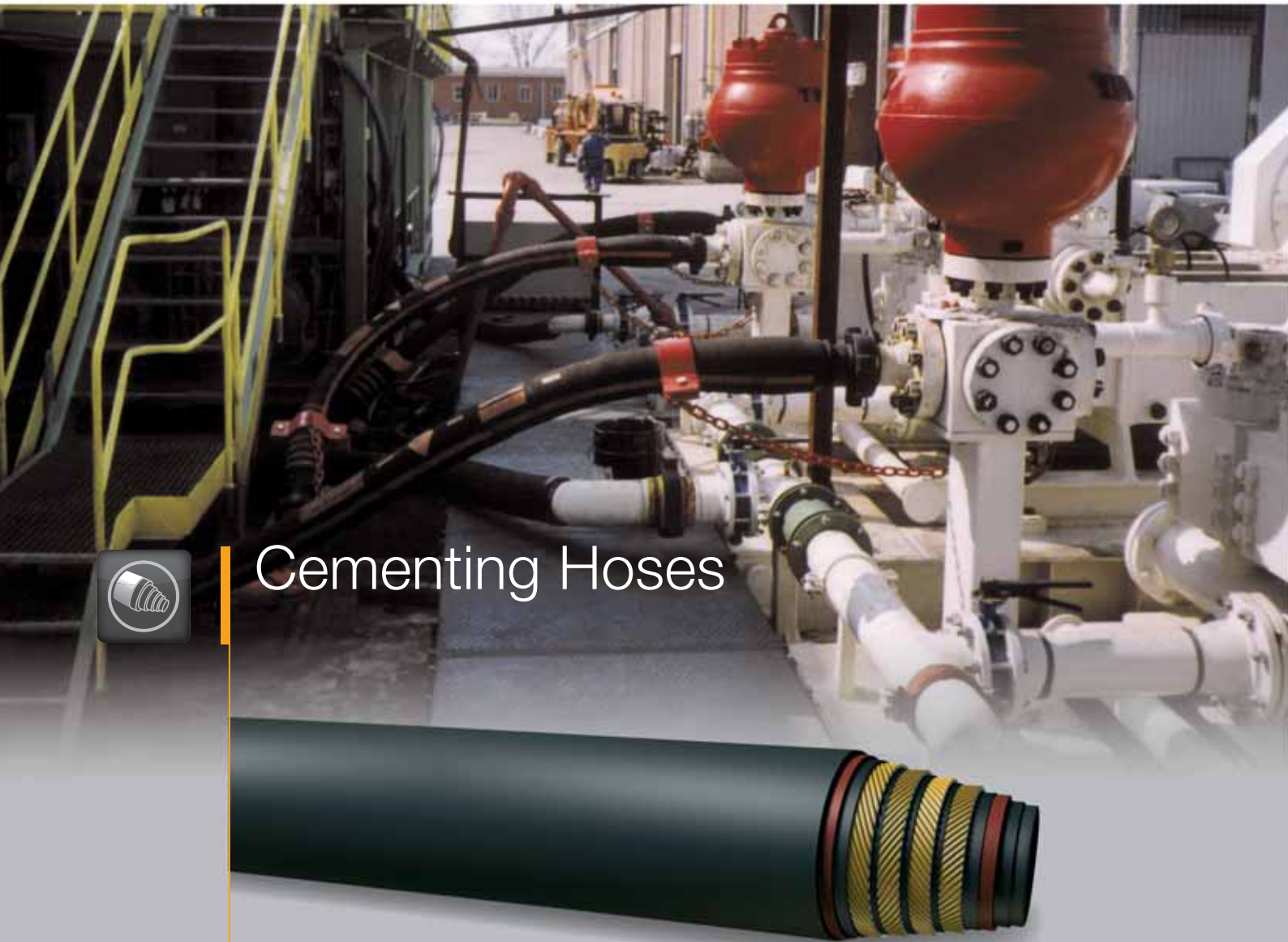
Maximum available length: 40 m

Production length tolerance:

+/- 64 mm up to 6.4 m hose length or +/- 1%

- Branded to TAURUS EMERGÉ
- Minimum Bending Radius is referred to the centre-line of each hose
- Manufacturer Handling Instruction: TKO AS0 latest edition





Cementing Hoses



Applications:

- Cementing hose
- Acidizing hose

Cementing Hoses										
API Spec. 7K FSL0 - ISO 14693 / API Monogram License No: 7K-0008										
I.D. (inches)	Working Pressure		Test Pressure		Safety factor (* WP)	O.D. Hose Body (mm)	MBR storage (m)	MBR operation (m)	Weight of hose body (kg/m)	Note
	(psi)	(bar)	(psi)	(bar)						
2	5000	345	10000	690	2.5	102	0.6	0.7	12.4	a
	10000	690	15000	1035	2.25	123	0.9	1.0	26.3	-
	15000	1035	22500	1552	2.25	141	1.1	1.4	39.6	-
2.5	5000	345	10000	690	2.5	111	0.6	0.7	15	a
	10000	690	15000	1035	2.25	136	1.0	1.1	30	-
	15000	1035	22500	1552	2.25	154	1.2	1.5	48	-
3	5000	345	10000	690	2.5	126	0.7	0.8	18	a
	10000	690	15000	1035	2.25	148	1.1	1.2	34	-
	15000	1035	22500	1552	2.25	185	1.4	1.6	72	-
4	5000	345	10000	690	2.5	166	1.0	1.2	33	a
	10000	690	15000	1035	2.25	192	1.5	1.7	61	b

Operating temperature: -30 to +82°C or -25 to +100°C as specified by purchaser

Maximum available length: 33.5 m

Production length tolerance:
+/- 64 mm up to 6.4 m hose length, or +/- 1%

⚠ WARNING!

The hoses must be rinsed by water after acidizing service until the rinsing water reaches neutral pH.

- Minimum Bending Radius is referred to the centre-line of each hose
- On request fire rated versions are available according to Lloyd's Register OD 1000/499
- Additional external protection can be added according to customer request
- Manufacturer Handling Instruction: TKO AS0 latest edition

Notes:

- a) hose prototype testing covered by API Spec. 7K FSL 1 and FSL 2 - ISO 14693
- b) without API Spec. 7K label



Underbalanced Drilling Hoses



Applications:

- Rotary drilling,
- Mud delivery hoses for gas drilling application

Underbalanced Drilling Hoses									
API Spec. 7K - ISO 14693									
I.D. (inches)	Working Pressure		Test Pressure		Safety factor (* WP)	O.D. Hose Body (mm)	MBR storage (m)	MBR operation (m)	Weight of hose body (kg/m)
	(psi)	(bar)	(psi)	(bar)					
2	4000	276	8000	552	2.5	94	0.8	0.9	10
	5000	345	10000	690	2.5	94	0.8	0.9	10
2.5	4000	276	8000	552	2.5	108	0.9	1.0	13
	5000	345	10000	690	2.5	110	0.9	1.0	15
	7500	517	15000	1035	2.5	124	1.0	1.2	22
3	4000	276	8000	552	2.5	122	1.0	1.2	15
	5000	345	10000	690	2.5	124	1.0	1.2	17
	7500	517	15000	1035	2.5	142	1.1	1.3	31
3.5	4000	276	8000	552	2.5	138	1.2	1.4	20
	5000	345	10000	690	2.5	138	1.2	1.4	20
	7500	517	15000	1035	2.5	156	1.3	1.5	35
4	4000	276	8000	552	2.5	154	1.3	1.5	22
	5000	345	10000	690	2.5	164	1.3	1.5	32
	7500	517	15000	1035	2.5	168	1.4	1.6	39

Test and burst pressure according to API Spec. 7K - ISO 14693

Operating temperature: -20 to +82°C

Maximum available length: 33.5 m

Production length tolerance:

+/- 64 mm up to 6.4 m hose length or +/- 1%

- Minimum Bending Radius is referred to the centreline of each hose
- On request fire rated versions are available according to Lloyd's Register OD 1000/499
- Additional external protection can be added according to customer request
- Manufacturer Handling Instruction: TKO AS0 latest edition





Flexible Choke and Kill Lines

smooth bore



Applications:

- General choke and kill service
- Sour service

Flexible Choke and Kill Lines - smooth bore											
API Spec. 16C / API Monogram License No: 16C-0004											
I.D. (inches)	Type	Working pressure (psi) (bar)		Test pressure (psi) (bar)		Safety factor (* WP)	O.D. hose body (mm)	MBR storage (m)	MBR operation (m)	Weight of hose body (kg/m)	Note
2	Standard	5000	345	10000	690	3	135	1.2	1.3	30.5	-
	Standard c/w st. st. wrap						145	1.2	1.3	35.5	-
	Fire rated						148	1.3	1.4	36.0	-
	Fire rated c/w st. st. wrap						158	1.3	1.4	40.0	-
	Standard	10000	690	15000	1035	2.25	135	1.2	1.3	30.5	-
	Standard c/w st. st. wrap						145	1.2	1.3	35.5	-
	Fire rated						148	1.3	1.4	36.0	-
	Fire rated c/w st. st. wrap						158	1.3	1.4	40.0	-
	Standard	15000	1035	22500	1552	2.25	153	1.3	1.5	47.0	-
	Standard c/w st. st. wrap						163	1.3	1.5	51.0	-
	Fire rated						159	1.4	1.6	50.0	-
	Fire rated c/w st. st. wrap						169	1.4	1.6	55.0	-
2.5	Standard	5000	345	10000	690	3	150	1.2	1.3	36.0	-
	Standard c/w st. st. wrap						160	1.2	1.3	40.0	-
	Fire rated						163	1.3	1.4	42.0	-
	Fire rated c/w st. st. wrap						174	1.3	1.4	49.5	-
	Standard	10000	690	15000	1035	2.25	150	1.2	1.3	37.0	-
	Standard c/w st. st. wrap						160	1.2	1.3	42.0	-
	Fire rated						163	1.3	1.4	43.0	-
	Fire rated c/w st. st. wrap						175	1.3	1.4	50.0	-
	Standard	15000	1035	22500	1552	2.25	168	1.3	1.5	54.0	-
	Standard c/w st. st. wrap						180	1.3	1.5	61.0	-
	Fire rated						174	1.4	1.6	57.0	-
	Fire rated c/w st. st. wrap						186	1.4	1.6	64.0	-
3	Standard	5000	345	10000	690	3	164	1.4	1.5	41.0	-
	Standard c/w st. st. wrap						174	1.4	1.5	46.0	-
	Fire rated						178	1.5	1.6	48.0	-
	Fire rated c/w st. st. wrap						189	1.5	1.6	55.0	-
	Standard	10000	690	15000	1035	2.25	165	1.4	1.6	42.2	-
	Standard c/w st. st. wrap						177	1.4	1.6	50.0	-
	Fire rated						178	1.5	1.7	49.0	-
	Fire rated c/w st. st. wrap						190	1.5	1.7	57.0	-
	Standard	15000	1035	22500	1552	2.25	158	1.2	1.4	52.0	-
	Standard c/w st. st. wrap						175	1.2	1.4	59.1	-
	Fire rated						173	1.4	1.7	58.9	-
	Fire rated c/w st. st. wrap						184	1.4	1.7	66.2	-
4	Standard	5000	345	10000	690	3	187	1.4	1.6	49.2	a
	Standard c/w st. st. wrap						198	1.4	1.6	56.0	a
	Fire rated						207	1.5	1.7	59.0	a
	Fire rated c/w st. st. wrap						219	1.5	1.7	68.0	a
	Standard	10000	690	15000	1035	2.25	196	1.5	1.7	62.2	a
	Standard c/w st. st. wrap						208	1.5	1.7	70.4	a
	Fire rated						216	1.6	1.8	74.0	a
	Fire rated c/w st. st. wrap						228	1.6	1.8	83.0	a

All the regulations of API Spec. 16C are met including 9.14.12 – Performance Verification Test and 10.5.2 – High Temperature Exposure Test

Lining material: H₂S resistant synthetic polymer

Operating temperature: -20 to +100°C

Survival temperature: 177°C for max. 1 hour

Maximum available length: 33.5 m

Production length tolerance:

+/- 64 mm up to 6.4 m hose length, or +/- 1%

- Minimum Bending Radius is referred to the centre-line of each hose
- On request fire rated versions are available according to Lloyd's Register OD 1000/499
- Additional external protection can be added according to customer request
- Choke & kill lines are not manufactured as completed with Line Pipe Threaded couplings
- Material of the couplings meet NACE MR0175/ISO 15156 latest edition

Notes:

a) without API label



Flexible Choke and Kill Lines

rough bore



Applications:

- High temperature choke and kill system
- Subsea choke and kill system
- Well test

Flexible Choke and Kill Lines - rough bore											
API Spec. 16C / API Monogram License No: 16C-0004											
I.D. (inches)	Type	Working Pressure		Test Pressure		Safety factor (* WP)	O.D. Hose Body (mm)	MBR storage (m)	MBR operation (m)	Weight of hose body (kg/m)	Note
		(psi)	(bar)	(psi)	(bar)						
2	Standard	5000	345	10000	690	3	141	1.0	1.1	36.5	a, c
	Standard c/w st. st. wrap						151	1.0	1.1	40.2	a, c
	Fire rated						155	1.1	1.2	42.4	a, c
	Fire rated c/w st. st. wrap						166	1.1	1.2	48.9	a, c
	Standard	10000	690	15000	1035	2.25	142	1.0	1.1	37.7	a, c
	Standard c/w st. st. wrap						152	1.0	1.1	42.0	a, c
	Fire rated						155	1.1	1.2	43.6	a, c
	Fire rated c/w st. st. wrap						167	1.1	1.2	50.0	a, c
	Standard	15000	1035	22500	1552	2.25	160	1.1	1.2	53.6	a
	Standard c/w st. st. wrap						172	1.1	1.2	60.3	a
	Fire rated						166	1.2	1.3	57.0	a
	Fire rated c/w st. st. wrap						178	1.2	1.3	64.0	a
2.5	Standard	5000	345	10000	690	3	155	1.1	1.2	41.2	a, c
	Standard c/w st. st. wrap						166	1.1	1.2	47.8	a, c
	Fire rated						168	1.2	1.3	47.6	a, c
	Fire rated c/w st. st. wrap						179	1.2	1.3	54.6	a, c
	Standard	10000	690	15000	1035	2.25	156	1.1	1.2	42.4	a, c
	Standard c/w st. st. wrap						167	1.1	1.2	48.9	a, c
	Fire rated						168	1.2	1.3	48.7	a, c
	Fire rated c/w st. st. wrap						180	1.2	1.3	55.8	a, c
	Standard	15000	1035	22500	1552	2.25	173	1.2	1.3	59.6	a
	Standard c/w st. st. wrap						184	1.2	1.3	66.8	a
	Fire rated						179	1.3	1.4	63.2	a
	Fire rated c/w st. st. wrap						190	1.3	1.4	70.7	a
3	Standard	5000	345	10000	690	3	168	1.2	1.3	47.0	a, c
	Standard c/w st. st. wrap						180	1.2	1.3	54.1	a, c
	Fire rated						181	1.3	1.4	54.0	a, c
	Fire rated c/w st. st. wrap						193	1.3	1.4	61.6	a, c
	Standard	10000	690	15000	1035	2.25	169	1.2	1.3	48.7	a, c
	Standard c/w st. st. wrap						181	1.2	1.3	55.8	a, c
	Fire rated						182	1.3	1.4	55.6	a, c
	Fire rated c/w st. st. wrap						194	1.3	1.4	63.2	a, c
	Standard	15000	1035	22500	1552	2.25	208	1.4	1.5	89.7	b
	Standard c/w st. st. wrap						217	1.4	1.5	97.3	b
	Fire rated						219	1.5	1.6	97.0	b
	Fire rated c/w st. st. wrap						230	1.5	1.6	106.0	b
4	Standard	5000	345	10000	690	3	194	1.5	1.7	59.3	a, d
	Standard c/w st. st. wrap						205	1.5	1.7	67.4	a, d
	Fire rated						214	1.6	1.8	71.2	a, d
	Fire rated c/w st. st. wrap						226	1.6	1.8	80.1	a, d
	Standard	10000	690	15000	1035	2.25	219	1.7	1.9	89.0	b, d
	Standard c/w st. st. wrap						230	1.7	1.9	98.1	b, d
	Fire rated						232	1.8	2.0	98.0	b, d
	Fire rated c/w st. st. wrap						243	1.8	2.0	107.6	b, d

All the regulations of API Spec. 16C are met including 9.14.12 – Performance Verification Test

Lining material: H₂S resistant synthetic polymer

Operating temperature:

-20 to +121°C for Choke and Kill Application

-20 to +100°C for Well Test Application

Maximum available length: 30 m or 33.5 m

Production length tolerance:

+/- 64 mm up to 6.4 m hose length, or +/- 1%

- Minimum Bending Radius is referred to the centre-line of each hose

- On request fire rated versions are available according to Lloyd's Register OD 1000/499
- Additional external protection can be added according to customer request
- Choke & Kill/Well test Lines are not manufactured with Line Pipe Threaded couplings
- Material of the couplings meet NACE MR0175/ISO 15156 latest edition
- Manufacturer Handling Instruction: TKO AS2 latest edition

Notes:

- limit of the maximum available hose length: 33.5 m
- limit of the maximum available hose length: 30 m
- without API label until 2nd edition of API 16C issued
- without API label



Flexible Production Lines

for gas service



Applications:

- Live crude oil
- Gas export
- Gas injection
- Gas lift
- Sour service
- Topside jumper
- Subsea jumper
- Tie-in
- Riser
- Flow line

Flexible Production Lines for gas service

API Spec. 17K – ISO 13628 -10 / API Monogram License No: 17K -0001

I.D. (inches)	Type	Design pressure max.				Test pressure max.		Safety factor (* WP)	O.D. hose body (mm)	MBR storage (m)	MBR static (m)	MBR dynamic (m)	Weight of hose body (kg/m)	Note
		for gas (psi)	for gas (bar)	for liquid (psi)	for liquid (bar)	(psi)	(bar)							
2	Standard							2.25	148	0.8	0.9	1.2	39	a
	Standard c/w st. st. wrap								158	0.8	0.9	1.2	44	a
	Fire rated	5000	345	7500	517	11250	776		168	0.9	1.0	1.4	49	a
	Fire rated c/w st. st. wrap								174	0.9	1.0	1.4	55	a
2.5	Standard							2.25	159	0.8	0.9	1.2	44	a
	Standard c/w st. st. wrap								171	0.8	0.9	1.2	51	a
	Fire rated	5000	345	7500	517	11250	776		180	0.9	1.0	1.4	54	a
	Fire rated c/w st. st. wrap								191	0.9	1.0	1.4	62	a
3	Standard							2.25	176	1.0	1.1	1.5	54	a
	Standard c/w st. st. wrap								188	1.0	1.1	1.5	62	a
	Fire rated	5000	345	7500	517	11250	776		197	1.1	1.2	1.7	65	a
	Fire rated c/w st. st. wrap								208	1.1	1.2	1.7	73	a
3.5	Standard							2.25	190	1.1	1.2	1.7	60	a
	Standard c/w st. st. wrap								202	1.1	1.2	1.7	68	a
	Fire rated	5000	345	7500	517	11250	776		211	1.2	1.4	1.8	72	a
	Fire rated c/w st. st. wrap								222	1.2	1.4	1.8	81	b
4	Standard							2.25	202	1.2	1.4	1.8	67	a
	Standard c/w st. st. wrap								214	1.2	1.4	1.8	75	a
	Fire rated	5000	345	7500	517	11250	776		223	1.3	1.5	2.0	79	a
	Fire rated c/w st. st. wrap								239	1.3	1.5	2.0	91	b
5	Standard							2.25	231	1.3	1.5	2.0	83	b
	Standard c/w st. st. wrap								243	1.3	1.5	2.0	92	b
	Fire rated	5000	345	6000	414	9000	621		252	1.4	1.6	2.1	97	b
	Fire rated c/w st. st. wrap								263	1.4	1.6	2.1	107	b
6	Standard							2.25	257	1.6	1.8	2.4	96	b
	Standard c/w st. st. wrap								269	1.6	1.8	2.4	106	b
	Fire rated	5000	345	6000	414	9000	621		278	1.7	1.9	2.6	112	b
	Fire rated c/w st. st. wrap								289	1.7	1.9	2.6	123	b
7	Standard							2.25	279	1.8	2.0	2.7	101	b
	Standard c/w st. st. wrap								291	1.8	2.0	2.7	117	b
	Fire rated	4250	293	5000	345	7500	517		299	1.9	2.2	2.9	117	b
	Fire rated c/w st. st. wrap								312	1.9	2.2	2.9	135	b
8	Standard							2.25	311	1.9	2.2	2.9	121	b
	Standard c/w st. st. wrap								325	1.9	2.2	2.9	136	b
	Fire rated	3750	259	5000	345	7500	517		331	2.1	2.4	3.2	139	b
	Fire rated c/w st. st. wrap								346	2.1	2.4	3.2	156	b
10	Standard							2.25	362	2.2	2.5	3.3	146	b
	Standard c/w st. st. wrap								374	2.2	2.5	3.3	161	b
	Fire rated	2250	155	3500	241	5250	362		383	2.3	2.6	3.5	168	b
	Fire rated c/w st. st. wrap								394	2.3	2.6	3.5	184	b
12	Standard							2.25	410	2.4	2.7	3.6	169	b
	Standard c/w st. st. wrap								421	2.4	2.7	3.6	186	b
	Fire rated	2250	155	3500	241	5250	362		430	2.5	2.8	3.8	194	b
	Fire rated c/w st. st. wrap								442	2.5	2.8	3.8	212	b
13	Standard							2.25	434	2.6	2.9	3.9	181	b
	Standard c/w st. st. wrap								445	2.6	2.9	3.9	199	b
	Fire rated	1500	103	3000	207	4500	310		454	2.7	3.0	4.1	207	b
	Fire rated c/w st. st. wrap								466	2.7	3.0	4.1	226	b
14	Standard							2.25	457	2.8	3.1	4.2	189	b
	Standard c/w st. st. wrap								469	2.8	3.1	4.2	196	b
	Fire rated	1250	86	3000	207	4500	310		477	2.9	3.2	4.4	215	b
	Fire rated c/w st. st. wrap								489	2.9	3.2	4.4	224	b



Flexible Production Lines

for extreme gas service



Applications:

- Live crude oil
- Gas export
- Gas injection
- Gas lift
- Sour service
- Topside jumper
- Subsea jumper
- Tie-in
- Riser
- Flow line

Flexible Production Lines for extreme HP gas service

API Spec. 17K – ISO 13628-10 / API Monogram License No: 17K -0001

I.D. (inches)	Type	Design pressure max.		Test pressure max.		Safety factor (+ WP)	O.D. hose body (mm)	MBR storage (m)	MBR static (m)	MBR dynamic (m)	Weight of hose body (kg/m)	Note		
		for gas (psi)	for liquid (bar)	(psi)	(bar)								(psi)	(bar)
2	Standard						142	1.0	1.1	1.5	38	a		
	Standard c/w st. st. wrap						152	1.0	1.1	1.5	42	a		
	Fire rated	7500	517	10000	690	15000	1035	2.25	163	1.1	1.2	1.7	47	a
	Fire rated c/w st. st. wrap								174	1.1	1.2	1.7	53	a
2.5	Standard						153	1.1	1.2	1.7	41	a		
	Standard c/w st. st. wrap						167	1.1	1.2	1.7	49	a		
	Fire rated	7500	517	10000	690	15000	1035	2.25	174	1.2	1.4	1.8	50	a
	Fire rated c/w st. st. wrap								180	1.2	1.4	1.8	56	a
3	Standard						169	1.2	1.4	1.8	49	a		
	Standard c/w st. st. wrap						180	1.2	1.4	1.8	56	a		
	Fire rated	7500	517	10000	690	15000	1035	2.25	189	1.3	1.5	2.0	59	a
	Fire rated c/w st. st. wrap								201	1.3	1.5	2.0	67	a
3.5	Standard						195	1.4	1.6	2.1	68	a		
	Standard c/w st. st. wrap						207	1.4	1.6	2.1	76	a		
	Fire rated	7500	517	10000	690	15000	1035	2.25	208	1.5	1.8	2.3	76	a
	Fire rated c/w st. st. wrap								227	1.5	1.8	2.3	88	b
4	Standard						219	1.4	1.6	2.1	89	b		
	Standard c/w st. st. wrap						230	1.4	1.6	2.1	98	b		
	Fire rated	7500	517	10000	690	15000	1035	2.25	239	1.5	1.8	2.3	102	b
	Fire rated c/w st. st. wrap								251	1.5	1.8	2.3	112	b
5	Standard						245	1.8	2.0	2.7	104	b		
	Standard c/w st. st. wrap						257	1.8	2.0	2.7	114	b		
	Fire rated	6000	414	8000	552	12000	828	2.25	266	1.9	2.2	2.9	118	b
	Fire rated c/w st. st. wrap								277	1.9	2.2	2.9	130	b

Operating temperature: -30 to +90 °C

Allowed aromatic content: max. 30 %

Max. allowed H₂S content: H₂S content up to 60°C 3000 ppm or 15 psi whichever greater; H₂S content up to 90°C 1000 ppm or 5 psi whichever greater

Recommended maximum flow velocity: 20 m/sec for dry gas; 15 m/sec for liquid; 8 m/sec for gaseous oil

Maximum available length: 30 m to 33.5 m

Production tolerance: +/- 64 mm up to 6.4 m hose length, or +/- 1 %

- Minimum Bending Radius is referred to the centre-line of each hose
- On request fire rated versions are available according to Lloyd's Register OD 1000/499
- Additional external protection can be added according to customer request
- Material of the couplings is either Carbon Steel or Duplex Relevant to all cases

Notes:

- a) limit of the maximum available hose length: 33.5 m
- b) limit of the maximum available hose length: 30 m





High Pressure Flexible Lines

smooth bore – for liquid service with helix stiffening spiral



Applications:

- Water injection hoses
- Mud delivery hoses
- High pressure oil export hoses
- High pressure loading hoses

Flexible Production Lines for liquid service

API Spec. 17K – ISO 13628 -10 / API Monogram License No: 17K -0001

I.D. (inches)	Type	Design pressure max.		Test pressure		Safety factor (+ WP)	O.D. Hose Body (mm)	MBR storage (m)	MBR static (m)	MBR dynamic (m)	Weight of hose body (kg/m)	Note
		(psi)	(bar)	(psi)	(bar)							
4	Standard Fire rated	6000	414	9000	621	2.25	196	1.4	1.6	2.1	61	a
							217	1.5	1.7	2.3	71	a
5	Standard Fire rated	6000	414	9000	621	2.25	222	1.4	1.6	2.1	72	a
							242	1.5	1.7	2.3	85	b
5.5	Standard Fire rated	6000	414	9000	621	2.25	235	1.5	1.7	2.3	77	a
							255	1.6	1.8	2.4	91	b
6	Standard Fire rated	6000	414	9000	621	2.25	254	1.6	1.8	2.4	91	b
							276	1.7	1.9	2.6	102	b
7	Standard Fire rated	5000	345	7500	514	2.25	284	1.8	2.1	2.7	109	b
							306	2.0	2.2	3.0	127	b
8	Standard Fire rated	4500	310	6750	466	2.25	314	2.0	2.2	3.0	120	b
							336	2.2	2.4	3.3	137	b

Operating temperature: -25 to +90°C for oily medium without gas, or -25 to +60°C for water

Allowed aromatic content: max. 40%

Recommended maximum flow velocity: 15 m/sec

Maximum available length: 30 m to 33.5 m

Production length tolerance:

+/- 64 mm up to 6.4 m hose length or +/- 1%

- Minimum Bending Radius is referred to the centre-line of each hose
- On request fire rated versions are available according to Lloyd's Register OD 1000/499
- Additional external protection can be added according to customer request
- Material of the couplings is either Carbon Steel or Duplex Relevant to all cases
- Manufacturer Handling Instruction: TKO AS0 latest edition

Notes:

- a) limit of the maximum available hose length: 33.5 m
- b) limit of the maximum available hose length: 30 m





Couplings

Built-in and swaged Couplings



1 Built-in couplings

TAURUS EMERGÉ couplings and built-in bend restrictors are the strongest parts of hoses produced by ContiTech Rubber Industrial Kft. Our company was the first to patent a coupling where the bonding strength between the coupling and hose body increases in proportion of the internal pressure.

The patented in-house developed built-in couplings, the special design, the hose construction with integral neck reinforcement and the composite fire resistant layer give unique features to accommodate external collapse resistance, chemical resistance, fatigue resistance, heat insulation and provide low bending radius and light compact hose construction with excellent flexibility.

















2 Swaged couplings

ContiTech Rubber Industrial Kft. also supplies Rotary Drilling hoses, Vibrator hoses and Jumper hoses with swaged couplings in accordance with API Spec. 7K (FSL1) - ISO 14693 and GOST standards and allows us to offer fast delivery.

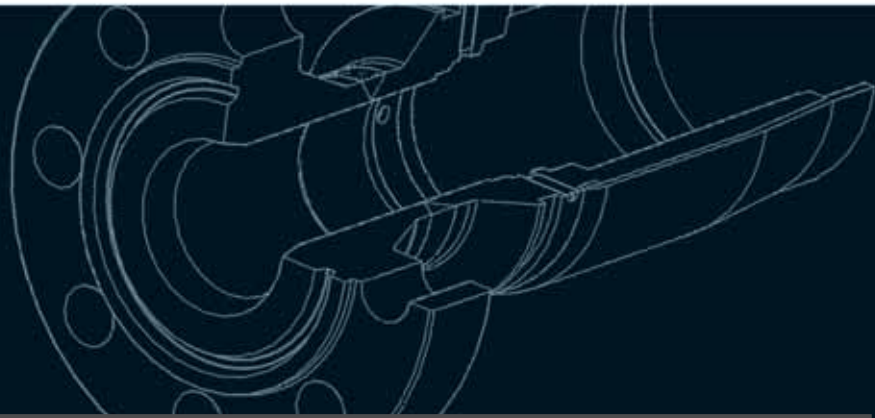




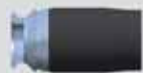








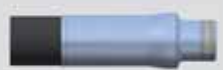




Basic coupling selection

for high pressure hoses supplied by ContiTech Rubber Industrial Kft.

	End fitting types	Description	Typical applications	End fitting types
A		Standard API or GOST line pipe thread	Rotary and vibrator, Cementing, Decoking, Mud delivery hoses	
B		Flanges with API or GOST line pipe thread	Rotary and vibrator, Cementing, Decoking, Mud delivery hoses	
C		Hammer lug union with line pipe thread	Rotary and vibrator, Cementing, Decoking, Mud delivery hoses	
D		Hammer lug union male and nut sub	For every hose type for top-side application without gas service	
E		Hammer lug union female sub	For every hose type for top-side application without gas service	
F		Flanges API type 17SV	Choke and kill hoses, Flow lines for subsea application	
G		Flanges API Spec. 6A or ASME (ANSI) B 16.5	For every hose type	
H		Lapped joint flanges ASME (ANSI) B 16.5	For every hose type	

Other end fittings are available on request.



End fitting types	Description	Typical applications	End fitting types
I	 API type 16BX integral hub connectors with in-house type clamp	For every hose type	
J	 Techlok type hub	For every hose type	
K	 ISO 6164 Retain ring flanges	For every hose type	
L	 Unibolt plain hub with nut	Rotary and vibrator	
M	 Unibolt lug hub	Rotary and vibrator	
N	 Swagged coupling Standard API or GOST line pipe thread	Rotary and vibrator, Cementing, Decoking, Mud delivery hoses	
O	 Swagged coupling Hammer lug union male and nut sub	Rotary and vibrator, Cementing, Decoking, Mud delivery hoses	
P	 Special reducer for API or GOST line pipe thread	For every line pipe threaded hoses	

Other end fittings are available on request.



Quality, Packaging and Transport



Quality management/qualifications

ContiTech Rubber Industrial Kft. is committed to quality and environmental responsibilities.

The company works closely with customers and approved suppliers to ensure the highest quality standards. The quality management system is in accordance with EN ISO 9001:2000 and API Spec. Q1. The system's performance is regularly checked and audited by independent auditors. Currently the Company's Quality Management System is approved and certified by DNV and API.

Our products, such as high pressure mud hoses, cementing hoses, choke and kill hoses as well as flexible production lines, fully comply with the latest edition of API Spec. 7K, API Spec. 16C, API RP 17B and API Spec. 17K standards. Hose sizes range from 2" to 20" with pressure ratings up to 15,000 psi. We are the only company in the world certified for all relevant API standards of high pressure rubber hoses and flexible pipes.

The environmental thinking of the management and the employees is reflected by their daily activities and documented by the ISO 14001 environmental management system applied in the company.

Packaging and Transport

ContiTech Rubber Industrial Kft. transport their products mainly on road, by rail or by ship to their destination, however air freight is also possible.

Method of packaging/transport depending on the diameter and length of hose can be as follows:

Short units:

in straight position: on pallets or in wooden crates

Long units:

reeled onto drum, on pallets or in wooden crates

Handling and periodic inspection:

To achieve the longest service life, ContiTech Rubber Industrial Kft. supply specific handling and service instructions. The documents can be downloaded from homepage: www.contitech-rubber.hu or requested from your sales contact.





TAURUS EMERGÉ or Phoenix branded hoses are in use world-wide





Reference list

Country	Partner of ContiTech Rubber Industrial Kft.
Albania	Simmons Drilling
Algéria	ENTP, ENAFOR
Australia	TransHose Australia
Belorussia	Belorusneft
Brazil	Petrobras
Bulgaria	Bulgarian Drilling
Cameroon	TOTAL E&P CAMEROON
China	China Oilfield Services Ltd., China Perfect International Ltd.
Croatia	Crosco d.o.o.
Denmark	MAERSK CONTRACTORS
Egypt	Egyptian Drilling Co.
Germany	KCA Deutag Drilling GmbH, C.A.T. GMBH,Ruhr Pumpen, Bentec GMBH, Herrenknecht
Hungary	Rotary Fúrási Zrt
India	ONGC, Oil India Ltd, Bongaigaon Refinery Ltd
Iran	KalaNaft
Italy	Saipem
Jemen	Consolidated Contractors /oil & gas
Kazakhstan	TengizChevron
Korea	Samsung Heavy Industries
Kuwait	Kuwait Drilling Company
Mexico	Pemex
Middle East	DALMA ENERGY, TECHNICAL OILFIELD SUPPLIES CENTRE, Pool Arabia Co.Ltd
Norway	Mento, Statoil, Stena Drilling, Norson Services, Odfjell Drilling
Poland	ELCOM Sp.z.o.o, HERB
Romania	S.C. PHOENIX UNIO S.R.L, DAFORA, GROUP SERVICII PETROLIERE
Russia	Uralmash, Lukoil, Shakalin, Gazprom
Serbia	Nis Nafta Gas
Singapore	Marine Hub, Resource Rig Supply
Turkmenistan	Continental Industrial Supply Ltd.
Ukraina	Chornomorneftegas
United Kingdom	COFOR, Dolphin Drilling, ENSCO, ESSO, Seadrill Ltd, Sedco Drilling, NATIONAL OILWELL-VARCO, Petrolia Drilling Ltd., RB Pipetech, Transocean, Wood Group Engineering
USA	Chevron North America, Global Santafe, Helmerich & Payne, Lewis & Goetz, Pride, Halliburton, Nabors Drilling, Noble Drilling, Resource Rig Supply, Pioneer, Rowan, Transocean, Wilson Supply



Purchasing Questionnaire

for bonded flexible pipes

Doc. No.:
 Rev. No.:
 Sign:

Hose description	<input type="text"/>			
Standards to meet	<input type="text"/>			
Application	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Topside		Subsea	
	Static		Dynamic	
Dimension	Inside diameter	<input type="text"/>	Unit	<input type="text"/>
	Overall length	<input type="text"/>	Unit	<input type="text"/>
	Manufacturing length tolerance if not normal	<input type="text"/>	Unit	<input type="text"/>
Pressure	Working pressure	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Design pressure	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Factory test pressure	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Safety factor	<input type="text"/>	<input type="text"/>	<input type="text"/>
External Loads	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Water depth	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Temperature	Design internal temperature	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Operating internal temperature	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Ambient temperature	<input type="text"/>	<input type="text"/>	<input type="text"/>
Chemical composition or characteristic of fluid	Fluid 1	<input type="text"/>		
	Fluid 2	<input type="text"/>		
	Fluid 3	<input type="text"/>		
	Aromatic content	<input type="text"/>	<input type="text"/>	<input type="text"/>
	H ₂ S Service	Yes <input type="checkbox"/>	No <input type="checkbox"/>	<input type="text"/>
	H ₂ S content	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Acid service	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Acid is inhibited?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	<input type="text"/>
	Gas service	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Gas wet <input type="checkbox"/> Gas dry <input type="checkbox"/>
	Flowrate	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Sand content	<input type="text"/>	<input type="text"/>	<input type="text"/>
Service conditions	Continuous service for fluid 1	Yes <input type="checkbox"/>	No <input type="checkbox"/>	<input type="text"/>
	Continuous service for fluid 2	Yes <input type="checkbox"/>	No <input type="checkbox"/>	<input type="text"/>
	Continuous service for fluid 3	Yes <input type="checkbox"/>	No <input type="checkbox"/>	<input type="text"/>
	Vacuum service	Yes <input type="checkbox"/>	No <input type="checkbox"/>	<input type="text"/>
	Pigging requirements	Soft <input type="checkbox"/>	Hard <input type="checkbox"/>	No <input type="checkbox"/>
	Fire resistance	Yes <input type="checkbox"/>	No <input type="checkbox"/>	<input type="text"/>
	S/S external protection	Yes <input type="checkbox"/>	No <input type="checkbox"/>	<input type="text"/>
End fittings	A end	<input type="text"/>		
	Coupling material	<input type="text"/>		
	B end	<input type="text"/>		
	Coupling material	<input type="text"/>		
Safety clamp		Yes <input type="checkbox"/>	No <input type="checkbox"/>	<input type="text"/>
Lifting collar		Yes <input type="checkbox"/>	No <input type="checkbox"/>	<input type="text"/>
C elements		Yes <input type="checkbox"/>	No <input type="checkbox"/>	<input type="text"/>
Others	<input type="text"/>			
Date	<input type="text"/>			

Contact:

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