HOSE SOLUTIONS FOR OIL&GAS INDUSTRY
Tubes International provides professional solutions concerning industrial hoses and couplings as well as hydraulic hose assemblies for all branches of industry. As early as the company was established (1993) its main focus was to provide specialist solutions for hoses and couplings for industry. Products and services are available through our own distribution network. The fact that from the very beginning Tubes International has been in cooperation with best manufacturers from all over the world ensures delivery of top quality products meeting highest technical, safety and environmental requirements.

Certificates:

Having in mind satisfaction of our customers working in Oil&Gas industry, we do our best to render services at world highest level and meet constantly growing requirements of quality, reliability and safety.

Key Certificates:

(full list available at www.tubes-international.com website)

- Quality Management System - in compliance with ISO 9001, approved by DNV GL and TDT- CERT
- UDT-CERT (1433) certifies pressure hose assemblies from Tubes International to Pressure Equipment Directive (2014/68/UE) Module A2 and allows for the placing of the CE mark on pressure hose assemblies
- NATO Commercial and Government Entity - 1767H

Tubes International guarantees meeting all technical parameters of offered products. As a confirmation of safety or conformity to customer’s requirements the company delivers quality certificates with provided products.

Reference letters:

Our experience in Oil&Gas sector is confirmed by numerous reference letters provided by industry leaders.

Milestones:

1993 Tubes International Sp. Z o.o. was founded
1993 - 1998 Sale and customer service from the company’s head office
1998 The new strategy of the company is to develop its own distribution network in Poland
2001 A modern company’s head office with warehouse and production facilities is built in Poznań at Bystra 15A
2002 Foreign market expansion strategy:
   - 2002 Tubes International S.r.o. Czech Republic
   - 2005 TOW Tubes International Ukraine
   - 2007 Tubes International S.r.o. Slovakia
   - 2007 UAB Tubes International Lithuania
   - 2008 OOO Tubes International Russia
   - 2010 TOO Tubes International Kazakhstan
   - 2015 Tubes International Norge A/S, Norway
2003 Quality management certificate ISO 9001:2000 issued by DNV is acquired
2007 A new production branch manufacturing custom-made fittings opens in Białystok
2008 Authorisation to mark pressure hose assemblies with CE according to 97/23/WE according Pressure Equipment Directive is obtained
2012 The launch of a new logistic centre in Poznań
2013 The launch of agency in Iraq
2015 The launch of agency in Germany
2015 E-shop opens
2016 We make a team of 400 highly qualified employees
2017 Implementation of a new ERP software
Hoses for air and water designed for industrial water, sewage, cooling water and compressed air. Made of rubber, PVC, polyethylene with textile braid, PVC or steel wire helix. Air and water hoses range from 4 to 320 mm, working pressure to 207 bar. Fittings for air and water hoses can be mounted with worm drive clamps, safety clamps or crimped.

**MONTANA RUBBER HOSE ASSEMBLY DN50**

Heavy duty rubber delivery hose assembly ended with 2” HAMMER LUG union fig. 100 (male part + nut on one side, female part on the other side) made of carbon steel. Complete length: 1700 mm

**Medium:** sea water  
**WP:** 10 bar  
**WT:** ambient  
**Application:** flexible connection of a pipe line used to rinse out sea water form oil rig forefoot.  
**Test:** 30 bar / hydrostatic  
**Assembly technology:** safety clamps according to DIN 2817 made of aluminium  
**Usage:**  
**Other applications:** water transfer between trip tanks, water transfer to blender during fracturing

Our offer also includes: **LOW PRESSURE QUICK RELEASE COUPLINGS**

Low pressure quick release couplings widely used in all branches of industry to transfer a wide range of liquid media, compressed air and different gases. Available in brass, carbon steel, nickel plated carbon steel or stainless steel material versions with different seal that enables matching couplings for almost all working conditions. Our offer includes a wide range of sizes, threads and connection types. Working pressure to 100 bar.
HOSE ASSEMBLIES FOR STEAM TRANSFER

Rubber hoses designed for steam are made of special rubber compounds (mostly EPDM) and are reinforced with textile or steel wire braid (depending on the pressure). Hoses for superheated steam are designed for 18 bar working pressure and working temperature 210°C, and sometimes even 232°C. DN range for steam rubber hoses is from 8 to 102 mm. Steam rubber hoses are used for industrial applications of heating steam, process steam and steam cleaning. Tubes International advice is to use only fittings specially designed for steam that are installed on a hose with the use of bolt screw clamps. For the use with hot water - water temperature cannot be higher than 100°C.

For steam rubber hoses only special fittings designed for steam applications can be used. Steam fittings are mounted on a hose with the use of bolt screw clamps. That enables connection between hose and fittings to be tightened after first period of service life and later its regular control. Hose internal diameter and wall thickness are the key parameters for appropriate choice of fittings and clamps. Correct assembly and regular check of connection are the most important features for a safe usage of steam hose assemblies.

VICTORIA RUBBER HOSE ASSEMBLY DN19

Hose assembly designed for superheated steam transfer. Ended with PN16 flange one side, and ergonomically shaped and easy to operate steam gun on the other side. Approved for ATEX zone 1 and 2, steam gun safety features include control handle covered with robust plastic insulating material and safety guard helping to prevent accidental contact with hot metal parts. Complete length: 6000 mm.

Medium steam
WP: 18 bar
WT: 210°C
Application: defrosting of drilling rig elements
Test: 54 bar / hydrostatic
Assembly technology: safety clamps according to DIN 2826 made of brass
Usage:

Our offer also includes:

ACCESSORIES FOR STEAM

In steam applications many additional accessories such as: steam guns, extension fittings, swivel joints, dry disconnect couplings, quick connect couplings are used. Appropriate choice of such accessories especially its sealing material is possible only after verifying working conditions of particular application.
HOSE ASSEMBLIES FOR FOOD SUBSTANCES

Food hoses are made of substances that can have direct contact with food products. Such hoses have white internal taste free and odourless layer made of PVC, polyethylene or other polymers. Food hoses internal layer characteristics are high degree of purity and lack of substances deteriorating its organoleptic characteristic. Sizes DN ranges from 3 to 200 mm, working pressure till 27 bar. Hose fittings can be mounted with the use of worm drive hose clamps, safety clamps or crimped (ferrules). Electropolished AISI 316 fittings/couplings are mainly used for food hoses.

POTABLE HARDWALL RUBBER HOSE ASSEMBLY DN75

Suction-delivery rubber hose assembly with a stretching force of 4 tones ended with 3” HAMMER LUG union fig. 200 (male part + nut on one side, female part on the other side) made of carbon steel. Full flow ensured by using integral swaging technology. Complete length 45000 mm.

Assembly technology: Internal swaging allows permanent and safe fitting-hose connection ensuring full and unrestricted flow through the fitting of a flexible hose assembly. The fitting is internally expanded by pulling a hardened tool of the same size as the hose bore, called a dolly or a plug, down the inside of a hose tail. The compressive force exerted on the hose wall by the hose tail causes the hose material to flow into the serrated cavities of both hose tail and ferrule. As a result, a permanently attached, secure mechanical bond is achieved. The whole process is the opposite to the traditional external crimping. The main advantage of internal swaging over external crimping is the increase in a flow rate. When internally swaged, the wall of the hose tail is entirely pushed into the hose, the inside diameters of both the hose and its fitting are the same.

Our offer also includes:

HAMMER LUG UNIONS

HAMMER LUG unions, also known as „WECO“ unions are designed for quick connection of flexible hoses and pipelines. Widely used to transfer air, oil, water, crude oil, gas to name only a few. Available in threaded and butt welded version in sizes varying from 1” to 8”. Manufactured form carbon steel (pressure till 276 bar) or chrome molybdenum steel 4130 (pressure till 1378 bar). Type approved by DNV. Our offer also include other flowline elements such as swivel joints, valves, pipe joints, tees, crosses, redactors and many more.
HOSE ASSEMBLIES FOR CHEMICAL SUBSTANCES

Chemical hoses are designed for liquid chemicals (acids, bases, nonorganic and organic substances, hydrocarbons, paints, solvents, etc.) Widely used to transfer chemical substances in chemical plants, reloading applications (tank trucks and rail tank trucks), technological processes in food, chemical, oil & gas applications. Internal layer must be resistant to chemicals being transferred. Internal layer of chemical hoses are made of EPDM, EPM, PKM, polyamide, polyethylene and fluoropolymers. Reinforced with textile braid, textile cord or steel spiral. Diameters ranges from 6 to 152 mm. Working pressure to 50 bar. Fittings/couplings can be assembled with worm drive hose clamps, safety clamps or crimped (ferrules).

MANICHEM RUBBER HOSE ASSEMBLY DN50

Suction-delivery, antistatic (R<10⁵ Ω) rubber hose assembly with internal layer made of UPE ended with 2" CAMLOCK COUPLING (coupler on one side, adaptor on the other side) made of stainless steel. Complete length 3000 mm.

Medium: mixture of chemicals
WP: 16 bar
WT: 20°C
Application: Fracturing – low pressure part – supply chemicals to blender
Testing: 24 bar / hydrostatic
Assembly technology: external crimping

Usage: CAMLOCK COUPLINGS

Our offer also includes:

CAMLOCK couplings are made in compliance with MIL-C-27487 (A-A-59326) - American military specification. Simple structure and easy operation are their main features. In order to lock the adaptor in the coupler one simply needs to press the cam arms under normal hand pressure. A flat seal placed in the groove of a coupler tightens the connection. The couplings (couplers and adaptors) are available with male BSPT and female BSP thread, a hose tail, a flange, etc. The couplings can be made of aluminium, brass, stainless steel AISI 316, polypropylene. Sizes available: from 1/2" (DN13) to 6" (DN150). Working pressure from 4 up to 18 bar depending on the size and material. All types of CAMLOCK couplings are widely used as reloading couplings especially in petrochemical industry. SAFLOK® coupling is a variation of CAMLOCK coupling with additional level of safety against accidental disconnection. Safety is provided by a patented locking mechanism, built into the coupling arms. Such a design ensures that the arms are locked automatically when closed. Opening is a simple matter of tugging the finger rings.
HOSE ASSEMBLIES FOR PETROCHEMICAL SUBSTANCES

Oil and petroleum hoses include hoses for crude oil as well as distilled (fractional distillation) products such as: gasoline, naphtha, diesel oil, heating oil, hydraulic oil, hardening oil, solvents, maintenance lubricants, transformer oil, asphalt and liquid bitumen substances. Widely used during exploration, distillation, reloading (tankers, rail and tank trucks), distribution, refuelling as well for many technological processes and fuel and hydraulic lines, etc. Aromatic contents (different volume in lead-free petrol, diesel, transformer oil) as well as requirements regarding electrostatic characteristics (copper wires, antistatic rubber, conductive rubber) must be taken into account while choosing an appropriate hose for petrochemical substances. Couplings and fittings are assembled with the use of hose worm drive clamp, safety clamps or crimped (ferrules).

EXTREMEFLEX RUBBER HOSE ASSEMBLY DN 100

Extremely flexible (bending radius = internal diameter), suction-delivery rubber hose assembly ended with 4"HAMMER LUG union fig. 100 (male part + nut on one side, female part on the other side) made of carbon steel. Complete length 10000 mm.

Medium: drilling mud
WP: 6 bar
WT: ambient
Application: connection of bottom tanks and pumping unit on a PSV (Platform Supply Vessel)
Testing: 15 bar / hydrostatic
Assembly technology: internal swaging
Usage:

Other applications: crude oil transfer between trip tanks, loading crude oil on rail and tank trucks, electric power generators

Our offer also includes:

THREAD COUPLINGS

Threaded couplings designed for assembly of industrial hoses made of rubber, PVC or other plastic materials. Nominal diameter from 1/2" (DN13) to 4" (DN100). Available in carbon steel, stainless steel, brass and aluminium. Working pressure 25bar (16 bar for aluminium). Available with an aluminium safety clamp (designed for particular wall thickness of the hose) as a standard and different threads such as: BSP, BSPT, NPT, NPS, metric, ACME, DIN11. Depending from thread type different type of sealing i.e.: flat sealing (flat seal), taper sealing (metal-metal) or thread sealing (PTFE tape or different sealant). Widely used for all types of media: chemical substances, petrochemical substances, liquid gas - especially in reloading applications. For extremely aggressive chemical substances couplings with ECTFE liner available on request.


HOSE ASSEMBLIES FOR ABRASION SUBSTANCES

Material handling hoses designed to transfer abrasion substances (with big coefficient of friction) widely used for e.g. sandblasting, shot blasting, dry ice blasting, concrete, plaster, cement, sand and gravel transfer. Depending form medium being transferred internal layer made of SBR/NR rubber compound, PU/PVC compound or ceramic plates buried in internal layer. Abrasion of internal layer according DIN 53516 standards from 36 mm³ to 80 mm³ (better abrasion resistance means lower parameters). DN from 13 mm to 500 mm, working pressure to 80 bar. Fitting/couplings for industrial hoses are to be assembled with the use of worm drive hose clamps, safety clamps or ferrules (crimping).

ABRASIVE RUBBER HOSE ASSEMBLY DN 100

Suction-delivery rubber hose assembly resistant to sea water and working conditions on a drilling rig ended with 4” HAMMER LUG union fig. 602 (male part + nut on one side, female part on the other side) made of chromo-molybdenum steel. Ferrule colour coding according UKOOA (UK Offshore Operators Association). Hose assembly equipped with hookie hook to facilitate hose handling. Complete length 10000 mm.

Medium: dry cement  
WP: 10 bar  
WT: ambient  
Application: Supply line between oil rig and PSV (Platform Supply Vessel)  
Testing: 15 bar / hydrostatic  
Assembly technology: internal swaging  
Usage:  
Other applications: cement pumping unit

Our offer also includes:  
HOOKIE HOOK AND UKOOA COLOUR CODING

Special hooks allow to lift reloading hoses. Widely used in marine reloading systems to facilitate handling of hoses between oil rigs and supply vessels, in shipyards, etc. As a standard used with floating hoses. Made of forged carbon steel and mounted with clamps on a special type of fittings with swivel option.  
Possibility of colour coding (type of media being transferred) according to UKOOA. Yellow (cement), orange (barite), blue (potable water), brown (diesel), red (sea water), purple (glycol), etc.
Composite hoses make a new generation of light and very flexible, multi-layer hoses. Depending on types of layer material in its construction (polypropylene, polyamide, ECTFE, polyester, fibre glass or aramid) between internal and external wires a hose can be used to transfer a wide range of chemicals (aggressive as well), petrochemical products, liquefied gases, concentrated alcohol, etc. Composite hoses are mainly used in industrial, road and rail tankers and marine applications. Available as complete hose assemblies with a wide variety of end fittings (male thread, female thread) flanges, or couplings with Transportation Technical Supervision approval.

**DANOIL TRANSPORT COMPOSITE HOSE ASSEMBLY DN 50**

Lightweight, flexible and electrically conductive suction-delivery composite hose assembly ended with 2” DRY DISCONNECT COUPLING (HOSE UNIT) made of aluminium with NBR seals. Hose external layer made of PVC-coated fabric provide excellent resistant to abrasion. Complete length 10000 mm.

Medium: diesel oil  
WP: 10 bar  
WT: 20°C  
Application: Diesel oil supply lines of power units on a drilling rig  
Testing: 15 bar / hydrostatic  
Assembly technology: external crimping  
Usage: ![pump], ![tank]  
Other applications: reloading systems of drilling rigs

Our offer also includes: DRY CONNECT COUPLING AND BRAKEAWAY COUPLINGS

Dry disconnect couplings designed for spill free connection/disconnection of reloading hoses and industrial installations. Interchangeable with AVERY HARDOLL, TODO-MATIC and FULCRUM. Manufactured in compliance with NATO STANAG 3756. Meets ATEX, TDT, PED 97/23/WE requirements. Available in aluminium, brass, AISI 316, PEEK, PVDF, Hastelloy or Titan. Sizes ranges from DN25 mm to DN150 mm.

Emergency breakaway couplings also known as breakaway couplings act as a safety component that protects from unintentional strain of the hose connected to the installation. Before the reloading hose is stressed by external forces the two halves of the emergency breakaway coupling are separated from each other. Available in aluminium, brass, stainless steel AISI 316, stainless steel AISI 316 with ECTFE liner, Hastelloy. Sizes ranges from: DN25mm to DN150mm.
STEEL HOSE ASSEMBLIES

Flexible pressure metallic hoses manufactured by parallel or spiral corrugation of thin-walled metallic pipe (mechanical or by hydroforming). Made of austenitic types of stainless steel and used for aggressive chemicals and applications with working temperature up to 800°C. Working pressure till 293 bar. Available in no braid, one braid or two braid versions in sizes from 1” to 10”. Available as complete hose assemblies with threaded fittings, flanges or custom-made fittings. High quality approved by DNV GL certificates and Transportation Technical Supervision compliance with PED 97/23/WE.

PARNOR STEEL HOSE ASSEMBLY DN 50

DNV GL approved stainless steel hose assembly with 2” HAMMER LUG union fig. 206 (male part + nut on one side, female part on the other side). Parallel corrugations of the hose obtained by hydroforming ensure extreme resistance to fatigue and stress corrosion and thus makes it perfectly suitable for dynamic application. Complete length 6000 mm.

Our offer also includes:

Fittings, flanges and ring gaskets

Made of carbon steel (working temperature from -20°C to +400°C), stainless steel AISI 304 and AISI 316/316L. Threaded fittings available with male BSPT, BSP, NPT and metric threads. On special request special threads such as W21, 8 NPTF etc. All fittings are available in 45° and 90° versions.

Fixed or swivel flanges according to EN 1092-1, API 6A or ANSI B16,5 standards. Made of carbon steel, AISI 304 or AISI 316. Our offer also includes API ring gaskets, designed for connection of grooved flanges, according to API B16,5 and API 6A.
Polytetrafluoroethylene (trade names: teflon, teflon, fluon) due to unique qualities, it is widely used in all branches of industry including production of flexible hoses of various structure and usage. General qualities of PTFE:

- exceptional chemical resistance – only a handful of substances affect PTFE
- wide range of temperature resistance (from -70°C to +260°C)
- very good aging and weather conditions resistance
- self-cleaning properties - substances do not stick to hose walls

Hoses are manufactured not only from PTFE but also from PTFE copolymers (FEP, PFA, MFA, ETFE, ECTFE) with similar to PTFE properties but increased mechanical resistance and processing qualities. PTFE, and PTFE copolymer hoses are widely used in all branches of industry for steam, hot oil, fuel, paints, adhesives, technical gases, chemicals, acids, solvents and bases to name the most important ones.

**VISIFLON PTFE HOSE ASSEMBLY DN 32**

Internally and externally corrugated thus perfectly flexible, premium grade PTFE hose assembly with a polypropylene braid ended with a 1_1/4” fitting with male thread (stainless steel). Polypropylene braid ensures lightweight and high resistance to chemicals. Complete length 6000 mm.

**Medium:** glycol  
**WP:** 2 bar  
**WT:** 100°C  
**Application:** Dehydration systems – removing water from natural gas  
**Testing:** 6 bar / hydrostatic  
**Assembly technology:** internal crimping  
**Usage:**

Fittings for high pressure hoses have connections according to PN-81/M-69229 and DIN 477-1 standards (specified connection for a particular type of gas). Fittings material must be resistant to medium being transferred. Made of stainless steel AISI 304 (brass nut) as a standard and designed for a type and size of hose they are to be assembled on.

On request different types of fittings according to customer specification, different standards, type of material e.g. carbon steel, AISI 316, brass, aluminium, Monel, PA, PTFE. Due to experience in machining, qualified staff, new machine park and ISO 9001 quality management we can meet any demands either in piece or serial production.
FLOATING HOSE ASSEMBLIES

Floating hoses are widely used on all kinds of water basins. Their most common applications are as follows: reloading of oil in ports, transfer of crude oil from an oil rig to a ship, dredging, etc. There are several techniques that can be used to keep a hose afloat (floats assembled on a hose or special hoses with integral “built-in” layers of foam) so as to protect it against damage by the ship’s propeller and allow the vessel to be steered. Floating hoses are perfectly visible even in adverse weather conditions. They are made of foam which does not absorb water or sink in any operation conditions.

RIG SOFTWALL RUBBER HOSE ASSEMBLY DN 100
WITH ASSEMBLED FLOATS

Delivery rubber hose with two antistatic wires ended with 4" DRY DISCONNECT COUPLING (HOSE UNIT made of aluminium with Viton seals) on one side and HAMMER LUG union fig 200 (male part + nut) on the other side. Hose assembly equipped (in the middle) with DRY BRAKE COUPLING MARINE type, made of aluminium with Viton seals; (on the end) with HOOKIE HOOK lifting eye; (on the whole length) with FLOWSAFE floaters to allow hose to stay afloat. Complete length 45000 mm.

Medium: Diesel Oil
WP: 10 bar
WT: ambient
Application: Supply line between oil rig and PSV (Platform Supply Vessel)
Testing: 15 bar / hydrostatic
Assembly technology: internal swaging
Usage: 

Our offer also includes: FLOTERS

FLOWSAFE floating devices designed to fit all hoses for offshore applications especially supply hoses used between ships and rigs. With floats on supply hoses, the transfer between ships and rigs becomes much safer. The hose stays afloat so it is clearly visible, which prevents its damage by the ship's propeller and avoids the problem of the ship becoming unable to manoeuvre. The floats protect the hose against wear and tear and therefore they are excellent fenders for both delivery hoses (without steel wire) and suction-delivery hoses (with steel wire) of 3", 4" and 5" in diameter. There are plastic bands placed in the grooves of the floats so they can be easily fastened. When the floating devices are applied for the delivery hoses a special wire strap should be used. The strap prevents the float from being displaced when the hose is being handled and without pressure. The floats are flexible, do not sink or absorb any water (the cells of foam are closed in 100%). They do not shrink or deform. UV radiation resistant.
Hose assemblies for technical gases include low pressure hose assemblies (acetylene, oxygen, propane-butane, LPG, natural and inert gases). Made of rubber and PVC with textile cord or braid with diameters ranging from 4 to 102 mm, working pressure to 30 bar, according to EN 559 (welding hoses) and EN 1762 (hoses for LPG and natural gas transfer) standards. Fittings assembled with the use of worm drive hose clamps or crimped (ferrules).

**CO₂ RUBBER HOSE ASSEMBLY DN 100**

“Custom-made” suction-delivery rubber hose DN100 with 4” integral vulcanised HAMMER LUG union fig. 602 (male part + nut on one side, female part on the other side). Tested and marked with CE category II according to Pressure Equipment Directive (97/23/WE ). Complete length 6000 mm.

- **Medium**: CO₂
- **WP**: 42 bar
- **WT**: 20°C
- **Application**: Reloading of CO₂ from a tank truck
- **Testing**: 63 bar / hydrostatic
- **Usage**: ![ ]
- **Assembly technology**: build-in (vulcanised) couplings. Couplings vulcanised during hose production process – embedded in rubber.

Hoses designed for gases with working pressure above 140 bar. Widely used for filling up/emptying gas cylinders, industrial processes. Most typical gases are oxygen, nitrogen, hydrogen, helium, argon, carbon dioxide, acetylene, and many more. Wide range of DN ranges from 6 to 12 mm, working pressure to 300 bar.
HIGH PRESSURE RUBBER HOSE ASSEMBLIES

Rubber hydraulic hoses are used for power transmission and control in hydraulic systems. Designed for hydraulic oil, working temperatures from -40 to +100°C and working pressure till 420 bar (42 Mpa). Hydraulic hoses are manufactured in imperial sizes and standardised. The most popular standards defining requirements for hoses are as follows: American SAE, German DIN, International ISO and European EN.

Apart from standardised hoses (according to above mentioned norms) our offer includes hoses with increased flexibility, higher working temperature, increased abrasion resistance of external layer or better chemical resistance.

4SP HYDRAULIC RUBBER HOSE ASSEMBLY DN 38

Hydraulic multispiral rubber hose DN38 ended with 1_1/2” QUICK RELEASE COUPLING DP-PVV3 (SOCKET on one side, PLUG on the other side) made of galvanised steel with NBR seal. Additional protection sleeve PROTECTOR, resistant to acids, oils, solvents and UV radiation, eliminates problems connecting with abrasion, impact and squeezing thus prolonging hose life. Complete length 4000 mm.

Medium: hydraulic oil
WP: 210 bar
WT: 20°C
Application: hydraulic connection of a top drive power unit
Testing: 420 bar / hydrostatic
Assembly technology: external crimping
Usage: ⛧ ⛧

Our offer also includes:

HIGH PRESSURE QUICK RELEASE COUPLINGS

High pressure quick release couplings made of carbon steel, stainless steel or brass. Designed for working pressure to several hundred bar. Widely used for oil as well as other liquid and gas media. Available in push-in or screw-to-connect versions according to ISO-A; ISO-B; ISO-F standards. Depending on application our offer includes straight through, single shut off, double shut off quick release coupling. Dry brake (Flat face) coupling as well as special versions with pressure eliminator are available on request.
HIGH PRESSURE THERMOPLASTIC HOSE ASSEMBLIES

Hoses for medium and high pressure made of thermoplastic polymers (such as polyester, polyamide, polyurethane) reinforced by max 2 layers of steel or textile braids. Most types manufactured to certain standards i.e.: SAE J517 (for hoses SAE 100R7 and SAE 100R8), DIN 24951, ISO 3949 and PN-EN 855. Those standards in details describe two types of hoses: with double textile braid (R7) and double aramid braid (R8). Thermoplastic hoses widely used in hydraulics, air and compressed gases. It is recommended to use for thermoplastic hoses Z type fittings (assembled with the use of crimping machines). In some cases S type reusable fittings can be used.

TEST THERMOPLASTIC HOSE ASSEMBLY DN 8

Lightweight, flexible, designed to hydraulic control and measuring systems thermoplastic hose. Ended both sides with female fitting made of carbon steel with female metric thread M16x2. Complete length 6000 mm.

Our offer also includes:

MEASURING SETS AND PRESSURE GAUGES

Measuring system designed to control static, dynamic pressure as well as vacuum in hydraulic and pneumatic applications. The measuring system consist of a basic set and accessories such as: measuring nipples, hoses, adapters that allow measurements in hard to reach places. Self venting device guarantees correct and exact measured values (removes air bubbles trapped between the measuring nipple and the pressure gauge that have an effect on measured values). A quick release coupling designed to be connected with measuring nipple has integrated shut-off valves that ensure spill free connection and disconnection of measuring system. Pressure gauges designed for pressure measurement of liquid and gas substances with 1,6 accuracy class.
Fittings for high pressure hoses are assembled on hydraulic hoses with the use of special ferrules. Designed especially for rubber hydraulic hoses and thermoplastic hoses but widely used for industrial hoses as well. Assembled by screwing (reusable) or on crimping machines (permanent connection). Our offer includes a wide range of fitting types - depending on a connection part (metric, imperial, etc.).

**R15 RUBBER HYDRAULIC HOSE ASSEMBLY DN 50**

General purpose hydraulic R15 rubber hose assembly DN50. Ended with 2" integral Hammer Lug fig. 1502 union (male part + nut from one, female part from the other side) made of 4130 steel. Complete length 25000 mm.

**Medium:** drilling fluid, cement  
**WP:** 350 bar  
**WT:** ambient  
**Application:** general purpose hose assembly (cementing, manifold connection, injection)  
**Testing:** 700 bar/ hydrostatic  

**Assembly technology:** crimping of integral fittings – once piece HAMMER LUG union (with integrated ferrule) used on R13/R15 hydraulic hose. Eliminates the risk of unscrewing of Hammer Lug union from NPT thread.

Our offer also includes:  
**SWIVEL JOINTS, PUMPS AND DIVIDERS**

Rotary unions are used in systems that need rotary connection to eliminate stress of the hose. Compact built and small torque are its main characteristics. Gear pump main purpose is transmission of mechanical power supplied from the outside into pressurized hydraulic fluid power. Directional control valves allow fluid flow into different paths of a hydraulic system.
PROTECTIVE ELEMENTS

Protective elements made of plastic (PE, HDPE, PVC) in a form of band or steel (galvanized, stainless) in the form of wire, band or braid. Widely used as an external mechanical protection against abrasion, kinking and crushing of hoses and cables. Plastic protective elements (in yellow or black) also widely used to wrap group of hoses (cables) to form bundles.

4SP RUBBER HYDRAULIC HOSE ASSEMBLY DN 25

Multispiral 4SP rubber hose assembly DN25. Ended with 1” HAMMER LUG union FIG.602 (male part + nut on one side, female part on the other side) made of 4130 steel. Additional GRIPLOCK/304 protection secures against mechanical cuts. Complete length 12000 mm.

Medium: hydraulic oil
WP: 210 bar
WT: 20°C
Application: blowout preventers control
Testing: 420 bar/hydrostatic
Assembly technology: external crimping
Usage:

Our offer also includes: API 16C CERTIFIED HYDRAULIC RUBBER HOSE ASSEMBLIES

Hydraulic rubber BOP hose assemblies from Gates, used for control of Blowout preventers, with API 16D Type Approval. Supplied as a complete hose assemblies from ¼” to 2” ended with male NPT thread of Hammer Lug union fig. 602
**UHP (ULTRA HIGH PRESSURE) HOSE ASSEMBLY**

As UHP (Ultra high pressure) we categorise hose assemblies, fittings, adaptors and accessories designed for working pressure above 700 bar. In this range we distinguish WATERBLAST rubber hoses (working pressure from 700 to 1250 bar), thermoplastic hoses (working pressure 700 – 800 bar), SPIR STAR hoses (working pressure to 3200 bar). Depending on application above stated working pressures are reached by different safety factors (waterblast $n = 2.5$, hydraulics $n = 4$, gases $n = 4$ to $6$). Usage of UHP fittings, adaptors, quick release couplings and crimping method should always be determined by pressure in a particular application. Hose assemblies must always be pressure tested!

**SPIR STAR® HOSE ASSEMBLY DN6**

UHP (ultra high pressure) hose assembly designed for extremely high working pressure, ended both sides with 3/8” male UNF LH thread made of stainless steel. Complete length 3000 mm.

- **Medium:** methanol
- **WP:** 1000 bar
- **WT:** ambient
- **Aplikacja:** Dehydration of natural gas
- **Testing:** 1560 bar/ hydrostatic

**Assembly technology:** external crimping with the use of special crimping machine and special die sets (slow dice movement to eliminate the risk of microcracks).

**Our offer also includes:**

**QUICK RELEASE COUPLINGS FOR ULTRA HIGH PRESSURE**

Hydraulic quick release couplings designed for maximum pressure of 3000 bar. Made of hardener steel to ensure long life. Compact build and easiness to connect/disconnect makes them a perfect choice for bearing pullers, bolts lighteners, rescue equipment, cable cutting machines, precision actuators, rotary tools, hydraulic torque wrenches, etc.
CUSTOM-MADE HOSE ASSEMBLIES

**OFFSHORE SEAEATER RUBBER HOSE ASSEMBLY DN 200**

Medium: woda morska  
WP: 10 bar  
WT: 20°C  
Application: engine cooling on a drilling rig.  
Testing: 30 bar/hydrostatic  
Assembly technology: vulcanised flanges  
Usage:  

Rubber hose assembly ended with both sides vulcanized flange DN200 PN 10 made of carbon steel. Complete length 12500 mm.

**GATES BLACK GOLD ROTARY DRILLING RUBBER HOSE ASSEMBLY DN 75**

Medium: drilling mud  
WP: 395 bar (5000 psi)  
WT: ambient  
Application: flexible connection between swivel (gooseneck) and standpipe.  
Testing: 690 bar (10000 psi)/hydrostatic  
Assembly technology: external crimping  
Usage:  

Rubber hose assembly, ended with (both sides) Hammer Lug union FIG. 1502 (male part + nut on one side, female part on the other side). Hose assembly according to API 7K. Complete length 12000 mm.

**GATES CHOKE & KILL DRILLING RUBBER HOSE ASSEMBLY DN 75**

Medium: drilling mud/cement  
WP: 690 bar (10000 psi)  
WT: ambient  
Application: choke and kill lines in BOP systems  
Testing: 1035 bar (15000 psi)/hydrostatic  
Assembly technology: vulcanised flanges  
Usage:  

Rubber hose assembly, ended with (both sides) API 3_1/16“ flange and additional steel external braid. Hose assembly according to API 16C. Complete length 10000 mm.
ADDITIONAL PRODUCTS IN THE OFFER

BELLOWS

Used in all kinds of industrial applications. Designed to absorb any kind of movements: axial, lateral and angular or their combinations. A compensator consists of a bellow made of different kinds of material (elastomers reinforced with synthetic cord, steel, PTFE or fabric) and parts that connect it with a pipeline (most often steel flange). They compensate for thermal elongation and misalignment of a pipeline. They isolate vibrations, dampen noise and pressure surges coming from hydraulic impact.

Type of compensators: general purpose, lateral, axial, angular
Temperature range: to 600°C
Pressure rating: from – 1 bar (full vacuum) to 40 bar
Diameter range: from DN15 to DN6000mm

PNEUMATIC

"Industrial pneumatics" concerns not only couplings and hoses, but also air preparation units, control valves, actuators and other necessary equipment.

Externally calibrated hoses are usually made of polyamide, polyurethane, polyethylene but also of PVDF and PTFE. Due to a wide range of diameters, they can be easily connected by e.g. push-in fittings designed for pneumatics in particular. These fittings in nickel-plated brass or plastic as a standard, can also come in stainless steel for unlimited application in every industry branch.

Push-in fittings are designed for connection of pneumatic hose (with calibrated external diameter). The connection is achieved by pushing the hose into the fitting. To disconnect, the releasing collet must be pressed down. The most suitable hose material for push-in fittings is polyamide. Series R push-in fittings and series Fox miniature fittings are the best elements for connecting pipes and actuators in pneumatic systems. Quick and easy to use, the push-in fittings can be re-used thousands of times without affecting the pneumatic and mechanical seal in any way. Coming in various configurations and guaranteeing a virtually unlimited, highly flexible use. The clamping spring of special shape grips the pipe without scratching or deforming it, which facilitates release.

Distribution valves and actuators are usually selected to match a particular application, function and flow rate. The actuators, compliant with ISO standard among other, are manufactured of different materials, with standard piston diameters, different working stroke lengths, with an option of sealing selection, can be applied to all machines – those in the making as well as already in use.

The pneumatic elements sold, utilized in European Union and intended for operation in potentially explosive atmospheres are always marked (according to Directive 2014/34/EU – ATEX) and supplied with the certificate of conformity.
PRECISION PIPES, DIN 2353 AND WALTERSCHEID™ PIPE CONNECTORS

Cold drawn seamless precision pipes according to DIN 2391 made of toughened steel (three grades - 37.4, 44.4 and 52.4). Available (external diameter) from 6 mm to 42mm with different wall thicknesses and lengths to 6 meters. Widely used in hydraulic systems for control and power transfer. Assembled in hydraulic systems with DIN 2353 pipe fittings (connection with a cutting ring) and SAE-J514 or SAE-J51453 where connection is possible due to pipe ends 74 or 90° flaring.

Threaded (pipe) fittings with 24° cone sealing and cutting ring are widely used in many branches of industry to connect steel and non-ferrous metal pipes with outside diameter from 4 to 42 mm. Fittings according to DIN 2353 can also be used to connect flexible hose assemblies (as a body without nut and cutting ring). Manufactured according to ISO 8437-1 or DIN 2353. Used in hydraulic and pneumatic drive and control systems as well as general industrial applications.

DIN2353 Eaton Walterscheid™ pipe connectors are designed to the most demanding applications with 24° cone sealing. Eaton Walterscheid™ ensures full leak tightness till 800 bar (for heavy series) and 500 bar (for light series). DIN2353 Eaton Walterscheid™ pipe connections are made of carbon steel with additional nickel free galvanized Guardian Seal™ layer. Eaton Walterscheid™ system is available in 3 types depending from working conditions: WalPro, WalRing and WALFORMplus.
LET-LOK® connectors for pipes and threaded connectors are designed mainly for chemical, petrochemical, pharmaceutical and power industry, nuclear power plants and process engineering. Designed to work under high pressure, vacuum, vibration, high temperatures, and where high leak tightness of connections is required. LET-LOK® connectors are available as couplings (to connect several tubes) and connectors (to join tubes with fittings with male or female thread), made of stainless steel AISI 316, brass, Monel 400 alloy and Hastelloy C-276. Threaded connectors made of AISI 316 stainless steel and brass with NPT threads.

Top grade single shut-off and double shut-off quick connectors. Used in laboratories, aircraft, gas, medical and pharmaceutical industry. Available in three sizes QC4, QC6 and QC8. Connections: male and female thread NPT (BSPT, BSP), LET-LOK® tube connection. Every quick connector is factory tested for proper assembly by leakage detection. Interchangeable with quick connectors “Instrumentation” standard from other manufacturers.

TUBES HOSE SUPERVISOR

Modern TAG & TRACE system for information management and product tracing. Hose assembly is permanently marked with DataMatrix type tags by DPM method Direct Part Marking (dot peening), by RFID tag embedded or by the label with standard bar code. Customer receives complete database containing information required, plus scalable software. TUBES INTERNATIONAL manager software can be designed up to the end user needs and located on mobile devices such as PSION handheld or standard PC systems. In case of a PC, an extra DPM, RFID or bar code reader have to be applied. Information that can be provided include basic hose data, test results, QC and material document scans, photos and many more. Software options are: editable notes, e-mail or SMS service warnings.
Industrial valves, that are available in our offer, are widely used in many types of industry. We offer ball valves, gate valves, non-return valves, butterfly valves from 5,5mm to 300mm and working pressure from 5 to 64 bar. Available in material versions such as: brass, stainless steel and other available on request. This group also include valves from American producers dedicated to Oil & Gas sector with heavy duty construction and increased lifespan such as plug valves from American Block, floating ball valves, trunnion valves from Balon Corporation. Available material 4130 steel (for plug valves), carbon steel, ductile iron, bronze (for remaining ones).

High pressure ball valves designed for high pressure hydraulic and industrial applications. Available in carbon steel and stainless steel (on request) material versions. Its main purpose is to control the flow of working fluid. Maximum working pressure 500 bar (depending on a valve type). Available in 2-way, 3-way (L and T type) and multiway type (X type) in sizes from DN4 to DN50 with female threads (BSP and NPT) as well as male threads (metric).

Top grade, precision valves of different types (ball, needle, check valves and many other) used in control and measuring equipment for chemical, petrochemical, pharmaceutical and power industry, nuclear power plants and process engineering. Available in many different versions depending on working temperature, pressure and connection size. Made of AISI 316 stainless steel as a standard.
CONTACT AND SALES NET:

Tubes International Sp. z o.o. sales net includes 24 branches in biggest industrial cities in Poland and 13 branches in industrial cities in Czech Republic, Slovakia, Lithuania, Russia, Ukraine, Kazakhstan and Norway.

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