

# 石油钻采软管

PETROLEUM DRILLING HOSE



# 企业简介

## company profile

始于2003年，利通科技专注于高分子材料共混、高分子材料改性、液压软管、石油钻采软管、压裂软管、橡塑复合软管、超高压树脂软管、流体连接件、软硬管总成及橡塑密封制品、超高压特种装备的生产、研发与销售，是一家提供流体输送高效解决方案、高分子材料共混物高性能解决方案、页岩油气增产酸化压裂管路高效输送解决方案、超高压水射流管路输送解决方案、汽车空调管路系统解决方案、氢气加注管路系统解决方案、智慧管网解决方案的国家级高新技术企业。

抢抓机遇，主动作为，多年来，利通科技各项经营指标稳居国内同行业前列，一路成长为拥有“国家级专精特新‘小巨人’企业”、“河南省优秀民营企业”、“中国胶管十强企业”等几十项荣誉称号的知名企业，2021年11月15日，利通科技(股票代码：832225)成为北京证券交易所第一批上市企业，迈向全新的发展阶段。

着眼于流体技术领域，利通科技以“低弯曲、高压力、长寿命、多功能”作为产品迭代的重点。主要产品包括各类高、中、低压液压软管、兼具耐磨、耐腐蚀、耐老化、大口径等特性的橡塑复合软管、获多方国际认证的超高压、等通径的石油钻采压裂软管、以高效、安全为主要特点的超高压树脂软管、应用范围广阔的高、中、低压树脂软管、氢气加注软管、汽车空调软管、流体连接件与软硬管总成，品种性能多样的混炼胶、改性树脂和橡塑密封制品以及安全、高效应用于管网病害整体解决方案的超高压水力盾构车等，产品广泛应用于工程机械、农用机械、石油钻采、建筑、清洗、水射流、钢铁、化工、能源、矿山、轨道交通、船舶制造、食品医药、市政管网等领域。

利通科技先后通过的产品认证包括安标(MA·KA)、MSHA、美国石油协会API产品认证、美国船级社ABS型式认可、挪威船级社DNV型式认可、俄罗斯GOST石油认证、劳氏防火认证等，已通过的管理体系认证包括质量管理体系(符合GB/T 19001-2016/ISO 9001:2015)、武器装备质量管理体系(符合GJB 9001C-2017)、石油天然气行业制造类组织的质量管理体系(符合API Specification Q1)、环境管理体系(符合GB/T 24001-2016/ISO14001:2015)、汽车质量管理体系(符合IATF 16949:2016)、职业健康安全管理体系(符合GB/T 45001-2020/ISO 45001:2018)等。利通科技检测中心自2016年起获CNAS认可，设有脉冲试验室、爆破试验室、耐火试验室、盐雾试验室等二十多个试验室，检测结果被认定具有客观性、准确性及权威性。利通超高压流体创新研究院下设高性能聚合物材料研究所、液压软管研究所、工业软管研究所、石油软管研究院、密封技术研究所、金属材料研究所、橡塑制品研究所、超高压水力盾构装备研究院和产品中试基地，为推动专、精、特、新项目发展和解决行业“卡脖子”难题夯实根基。

自成立以来，利通科技始终坚持“诚信为本，用户第一”的核心价值观，坚定不移的推进“独创引领，利他聚能”的发展战略，紧紧围绕流体技术上下游产业链开展高分子材料共混改性、液压橡塑软管、石油钻采压裂软管、物料输送多功能软管、化学品输送软管、超高压树脂软管、氢气加注软管、汽车空调软管、食品医药软管、流体连接件、橡塑密封制品、超高压特种装备等的技术研发与制造，以绿色发展为己任，以新能源、新材料、技术创新引领行业高质量发展，服务于全球装备制造，为“成为全球流体技术产业领航者”的伟大目标而奋斗。





Established in 2003, Letone Technology is an industry-recognized high-quality rubber hose manufacture and service company, which devotes to the production, R&D, and sale of polymer alloys, modified polymer materials, hydraulic hoses, petroleum drilling hoses, frac hoses, rubber-plastic composite hoses, ultra-high pressure thermoplastic hoses, fittings, hose assemblies, rubber-plastic seals and ultra-high pressure special equipment. As a high-efficiency fluid transfer solutions provider, Letone Technology offers high-performance polymer alloy solutions, shale oil and gas frac solutions, ultra-high pressure water jetting solutions, air conditioning fluid transfer solutions, hydrogen fueling system solutions and smart pipeline network solutions to the clients.

Seizing opportunities and taking proactive actions, Letone Technology has consistently ranked among the top in the domestic industry in various operational indicators, and has grown into a well-known enterprise with dozens of prestigious titles such as "National Level Specialized, Sophisticated, Unique, and New 'Little Giant' Enterprise", "National High-tech Enterprise", "Excellent Private Enterprise in Henan Province", and "Top Ten Rubber Hose Enterprises in China". On 15<sup>th</sup> Nov. 2021, Letone Technology (Stock Code: 832225) became the first batch of listed companies on the Beijing Stock Exchange, entering a new stage of development.

Focusing on the fluid technology industry, Letone Technology takes "**tight bend radius, high pressure, long service life, multipurpose**" as the keynotes of product innovation. Its main products include various high, medium, and low-pressure hydraulic hoses, abrasion, corrosion-resistant, anti-aging, big size **rubber-plastic composite hoses**, API & ABS certified UHP, full flow **petroleum drilling hoses**, high-efficiency **ultra-high pressure thermoplastic hoses**, various high, medium and low-pressure **thermoplastic hoses**, **hydrogen fueling hoses**, **air conditioning hoses**, **fluid connectors**, **hose assemblies**, **rubber compounds**, **modified resins**, **rubber-plastic seals** and safe&high-efficiency **ultra high pressure hydraulic shield tunneling vehicles** specially designed for pipeline network solutions, etc. Letone Technology products are widely applied to areas like construction machinery, agricultural machinery, oil and gas, construction, steel, chemical, energy, mining, railway, shipbuilding, food, and beverage processing and municipal pipeline network, etc.

As an experienced professional hose manufacturer, Letone Technology has obtained the **Safety Certificate of Approval for Mining Products(MA·KA)**, **Certificate of MSHA**, **API Type Approval**, **ABS Type Approval**, **DNV Type Approval**, **GOST Certificate**, **Lloyd's Fire Test Certificate**, and meets the requirements of quality management systems such as **ISO9001:2015**, **API Q1**, **IATF 16949:2016**, **ISO 45001:2018**, etc. Letone Technology also holds the environment management system international certification issued by IMS (comply with **ISO14001:2015** standard). The Letone Technology Testing Center has obtained the **Laboratory Accreditation Certificate issued by CNAS** in 2016, which has more than 20 laboratories, including an impulse test laboratory, burst test laboratory, fire test laboratory, salt spray laboratory, etc. The testing report is identified as objectivity, accuracy, and authority. Letone Ultra-high Pressure Fluid Innovation Research Institute consists of the High-performance Polymer Materials Research Institute, Hydraulic Hose Research Institute, Industrial Hose Research Institute, Petroleum Hose Research Institute, Sealing Technology Research Institute, Metal Materials Research Institute, Rubber and Plastic Products Research Institute, Ultra-high Pressure Hydraulic Shield Tunneling Equipment Research Institute, and Product Pilot Base. It aims to promote the development of specialized, sophisticated, unique, and new projects and solidify the foundation for solving industry bottlenecks.

In the past years, Letone Technology has adhered to the core value of "integrity-based, clients first", and followed the development strategy of "Original Leading, Altruistic Synergy " as guidance. Sticking to the upstream and downstream industrial chain of fluid technology, Letone Technology is carrying out technical R&D and manufacture on polymer alloy and modification, hydraulic rubber-plastic hoses, petroleum drilling hoses, frac hoses, multipurpose hoses, chemical hoses, ultra-high pressure thermoplastic hoses, hydrogen fueling hoses, air conditioning hoses, food & medical hoses, hose fittings, rubber-plastic seals and ultra-high pressure special equipment serve to global equipment manufacturers. Letone Technology is continuously contributing to global intelligent manufacture and striving to lead the fluid technology industry towards prosperity.

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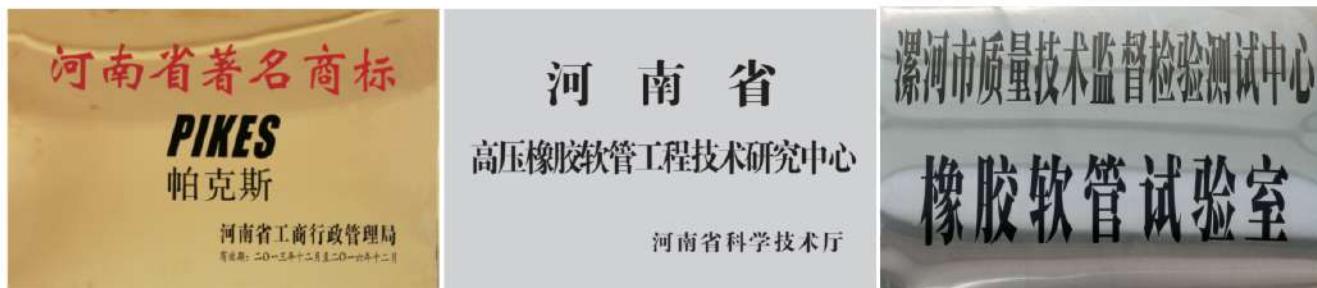
# QUALIFICATION & CERTIFICATE

## 企业资质



# COMPANY HONOR

## 企业荣誉





工业软管生产车间

Industrial Hose Workshop



工业软管生产线

Industrial Hose Production Line



工业软管生产线

Industrial Hose Production Line



VP 钢丝缠绕生产线

VP Steel Wire Spiral Production Line



大口径钢丝缠绕生产线

Big Diameter Steel Wire Spiral Production Line



工业软管总成扣压工序

Assembly Process



利通科技检测中心对利通科技所使用及生产的原材料、半成品及成品的质量检验负责，力求从各个环节杜绝质量问题，为用户提供优质产品。另一方面，利通科技检测中心完善的硬件设施也为产品研发迭代提供了有利的条件。利通科技检测中心目前设有：原材料分析室、半成品检测试验室、成品检测试验室、脉冲试验室、爆破试验室、总成拔脱试验室、化学分析室、物理性能试验室、盐雾试验室、耐火试验室、低温试验室、耐磨试验室、阻燃试验室、原子吸收试验室、影像测量室等多个高水准试验室，可实现对混炼胶、钢丝、橡胶软管、连接件、总成等的全方位检测试验，为产品制造与技术创新成果转化提供了保障。

The main function of Letone Testing Center is to ensure the raw materials, semi-finished products and finished products used and produced by Letone are qualified. The hardware facilities of Letone Testing Center provides favorable conditions for its product development. At present, Letone Testing Center has laboratories for raw materials test, semi-finished product & finished product test, impulse test, blasting test, assembly extraction test, chemical analysis, physical performance test, salt spray test, fire-resistant test, low-temperature test, abrasion-resistant test, flame retardant test, atomic absorption, image measuring, etc., which can make comprehensive tests on rubber compound, steel wire, rubber hose, hose connection, assembly and so on.



超高压工业软管总成试压工序  
Pressure Test for Industrial Hose Assemblies



脉冲试验  
Impulse Test

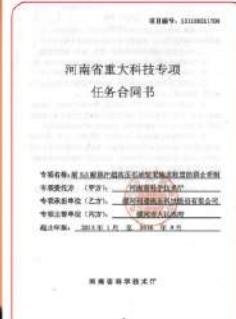
耐火试验  
Fire Test



化学分析室  
Chemical Analysis Laboratory



橡胶物理性能试验室  
Physical Performance Laboratory



2018年12月12日，河南省科技厅组织专家对利通科技承担的河南省重大科技专项“耐H<sub>2</sub>S耐脉冲超高压石油钻采输送软管的联合研制项目”完成情况进行了考察并以高度评价完成了验收。通过与青岛科技大学的合作，利通科技完成了 API 7K高压水泥软管、API 16C柔性节流和压井管汇、API 16D BOP井控软管三个系列石油钻采输送软管的研制。具体内容包括钢丝增强层及软管整体结构设计、石油钻采软管接头设计、软管内衬层、缓冲层及外保护层的研制、大口径软管成型装备开发等。经过“机械工业仪器仪表元器件质量检验所”检测，产品技术指标均符合API 7K、API 16C、API 16D标准要求。

On December 12, 2018, the Department of Science and Technology of Henan Province organized an expert team investigation on the completion of the provincial level major science and technology special project “Joint Development Project of H<sub>2</sub>S and Pulse Resistant Ultra-High Pressure Oil Drilling Hose” undertaken by Letone and gave the approval of it. Through the cooperation with Qingdao University of Science and Technology, Letone has completed the development of three series of oil drilling hoses, namely, API 7K high-pressure cementing hose, API 16C flexible choke and kill line and API 16D BOP control hose. The specific contents include the design of steel wire reinforced layer and hose overall structure, the design of oil drilling hose connectors, the R&D of hose inner liner, buffer layer and outer protective layer, and the development of large diameter hose forming equipment. According to the testing report issued by the “Quality Inspection Institute of Mechanical Industry Instruments and Components”, the technical indicators of the products meet the requirements of API 7K, API 16C and API 16D, and the main technical indicators cut the edge in China.

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**LT 301 D | API Spec. 7K FSL 1 FSL 2 | ABS**

## 旋转钻井和减震软管

ROTARY DRILLING AND VIBRATOR HOSE

**应用范围:** 钻井、固井、修井作业中立管上端与顶部驱动器/旋转装置之间和泵与立管下端之间的柔性连接，在石油钻探和勘探工作中以高压泵送泥浆。

### 软管结构

**内层:** 合成橡胶/HNBR/UPE/PTFE**增强层:** 多层缠绕的高强超柔钢丝**外胶层:** 耐磨、耐天候合成橡胶**温度范围:** -20°C~+121°C (-4°F~+250°F)**接头类型:** 整体由壬或整体法兰或其他形式**可定制等通径软管内层**

**Application:** Flexible connection between the upper end of the standpipe and the top drive/swivel and between the pump and the lower end of the standpipe for pumping mud at high pressure in oil drilling, cementing, and well workover operations.

### Hose Construction

**Inner Tube:** synthetic rubber/HNBR/UPE/PTFE**Reinforcement:** multi-spiraled high tensile super flexible steel wire**Outer Layer:** abrasion and weather resistant synthetic rubber**Temperature Range:** -20°C~+121°C (-4°F~+250°F)**Connector:** integral union, integral flange, or other connector types**Full bore can be customized based on the requirements**

| 压力等级<br>PRESSURE LEVEL | 内径<br>I.D. | 外径<br>O.D. | 工作压力<br>W.P. | 试验压力<br>P.P. | 最小爆破压力<br>Min.B.P. | 最小弯曲半径<br>Min.B.R. | 重量<br>W.T |
|------------------------|------------|------------|--------------|--------------|--------------------|--------------------|-----------|
| Psi                    | in         | mm         | Psi          | Psi          | Psi                | mm                 | kg/m      |
| 1500<br>A级Grade A      | 2          | 68         | 1500         | 2250         | 3750               | 800                | 4.3       |
|                        | 2 1/2      | 84         | 1500         | 2250         | 3750               | 800                | 5.6       |
| 2000<br>B级Grade B      | 2          | 68         | 2000         | 3000         | 5000               | 800                | 4.3       |
|                        | 2 1/2      | 84         | 2000         | 3000         | 5000               | 800                | 5.6       |
|                        | 3          | 97         | 2000         | 3000         | 5000               | 950                | 6.5       |
|                        | 3 1/2      | 113        | 2000         | 3000         | 5000               | 1000               | 8.5       |
|                        | 4          | 127        | 2000         | 3000         | 5000               | 1000               | 10.4      |
|                        | 5          | 157        | 2000         | 3000         | 5000               | 1200               | 14.0      |
| 4000<br>C级Grade C      | 6          | 183        | 2000         | 3000         | 5000               | 1300               | 18.0      |
|                        | 2          | 72         | 4000         | 6000         | 10000              | 800                | 6.4       |
|                        | 2 1/2      | 87         | 4000         | 6000         | 10000              | 800                | 8.7       |
|                        | 3          | 102        | 4000         | 6000         | 10000              | 1000               | 11.1      |
|                        | 3 1/2      | 119        | 4000         | 6000         | 10000              | 1200               | 14.4      |
|                        | 4          | 132        | 4000         | 6000         | 10000              | 1200               | 16.0      |
| 5000<br>D级Grade D      | 5          | 162        | 4000         | 6000         | 10000              | 1400               | 24.5      |
|                        | 6          | 194        | 4000         | 6000         | 10000              | 1500               | 33        |
|                        | 2          | 75         | 5000         | 7500         | 12500              | 800                | 6.4       |
|                        | 2 1/2      | 90         | 5000         | 7500         | 12500              | 800                | 8.7       |
|                        | 3          | 104        | 5000         | 7500         | 12500              | 1000               | 11.1      |
|                        | 3 1/2      | 121        | 5000         | 7500         | 12500              | 1200               | 14.4      |
| 7500<br>E级Grade E      | 4          | 134        | 5000         | 7500         | 12500              | 1200               | 16.0      |
|                        | 5          | 164        | 5000         | 7500         | 12500              | 1400               | 24.5      |
|                        | 6          | 196        | 5000         | 7500         | 12500              | 1600               | 33        |
|                        | 2          | 77         | 7500         | 11250        | 18750              | 900                | 8.5       |
|                        | 2 1/2      | 94         | 7500         | 11250        | 18750              | 1000               | 10.5      |
|                        | 3          | 110        | 7500         | 11250        | 18750              | 1000               | 18.5      |
| 7500<br>E级Grade E      | 3 1/2      | 128        | 7500         | 11250        | 18750              | 1200               | 20        |
|                        | 4          | 150        | 7500         | 11250        | 18750              | 1400               | 30        |
|                        | 5          | 185        | 7500         | 11250        | 18750              | 1600               | 49        |
|                        | 6          | 212        | 7500         | 11250        | 18750              | 1600               | 60        |




**LT 301 C** | API Spec. 7K FSL0 | ABS

# 高压水泥软管

HIGH PRESSURE CEMENTING HOSE

**应用范围:**作为固井管汇的柔性连接件,在高压下输送水基泥浆、油基泥浆、水泥等。

## 软管结构

**内胶层:**UPE和合成橡胶或HNBR

**增强层:**多层缠绕的高强超柔钢丝

**外胶层:**耐磨、耐天候合成橡胶

**温度范围:**-20°C~+121°C (-4°F~+250°F)

**接头类型:**整体由壬或整体法兰



**Application:** Flexible connection in the manifold for delivery water-based and oil-based cement slurries under high pressure.

## Hose Construction

**Inner Tube:** UPE and synthetic rubber or HNBR

**Reinforcement:** multi-spiraled high tensile super flexible steel wire

**Outer Layer:** abrasion and weather resistant synthetic rubber

**Temperature Range:** -20°C~+121°C (-4°F~+250°F)

**Connector:** integral union or integral flange

| 压力等级<br>PRESSURE LEVEL<br>Psi | 内径<br>I.D.<br>in | 外径<br>O.D.<br>mm | 工作压力<br>W.P.<br>Psi | 试验压力<br>P.P.<br>Psi | 最小爆破压力<br>Min.B.P.<br>Psi | 最小弯曲半径<br>Min.B.R.<br>mm | 重量<br>W.T<br>kg/m |
|-------------------------------|------------------|------------------|---------------------|---------------------|---------------------------|--------------------------|-------------------|
| 10000                         | 2                | 83               | 10000               | 15000               | 22500                     | 1000                     | 10.8              |
|                               | 2 1/2            | 98               | 10000               | 15000               | 22500                     | 1000                     | 19.4              |
|                               | 3                | 129              | 10000               | 15000               | 22500                     | 1400                     | 28                |
|                               | 3 1/2            | 137              | 10000               | 15000               | 22500                     | 1400                     | 33                |
|                               | 4                | 154              | 10000               | 15000               | 22500                     | 1600                     | 38.5              |
| 15000                         | 2                | 101              | 15000               | 22500               | 33750                     | 1200                     | 20.5              |
|                               | 3                | 125              | 15000               | 22500               | 33750                     | 1500                     | 36                |
| 20000                         | 2                | 106              | 20000               | 30000               | 45000                     | 1500                     | 24                |
|                               | 3                | 142              | 20000               | 30000               | 45000                     | 1700                     | 44                |

**LT 302 | API Spec. 16C FSL0 FSL1 FSL2 FSL3 | ABS**

# 柔性节流和压井管线

FLEXIBLE CHOKE AND KILL LINE

**应用范围:** 节流压井管汇等的柔性连接管线, 在高压下输送含有硫化氢(H<sub>2</sub>S)及其他危险气体的油气混合物及各种水基、油基、泡沫压井液等。

## 软管结构

**内层:** HNBR/UPE

**内径类型:** 等通径

**增强层:** 多层缠绕的高强超柔钢丝

**外胶层:** 耐高温、耐火合成橡胶 (耐+704°C明火30分钟)

**外保护层:** 不锈钢铠装

**温度范围:** -29°C~+121°C (-20°F~+250°F)

**接头类型:** 整体由壬或整体法兰



**Application:** Flexible connection in the choke and kill manifolds for delivery oil-gas mixture that containing hydrogen sulfide (H<sub>2</sub>S) and other dangerous gases and various water-based, oil-based and foam killing fluids under high pressure.

## Hose Construction

**Inner Tube:** HNBR/UPE

**Bore Type:** full bore

**Reinforcement:** multi-spiraled high tensile super flexible steel wire

**Outer Layer:** high temperature and fire resistant synthetic rubber (resistant to 704 °C open fire for 30 minutes)

**Protective Layer:** stainless steel armor

**Temperature Range:** -29°C~+121°C (-20°F~+250°F)

**Connector:** integral union or integral flange

| 压力等级<br>PRESSURE LEVEL | 内径<br>I.D. | 外径<br>O.D. | 工作压力<br>W.P. | 试验压力<br>P.P. | 最小爆破压力<br>Min. B.P. | 最小弯曲半径<br>Min.B.R. | 重量<br>W.T |
|------------------------|------------|------------|--------------|--------------|---------------------|--------------------|-----------|
| Psi                    | in         | mm         | Psi          | Psi          | Psi                 | mm                 | kg/m      |
| 5000                   | 2          | 89         | 5000         | 7500         | 11250               | 1000               | 9.5       |
|                        | 3          | 115        | 5000         | 7500         | 11250               | 1200               | 14.8      |
|                        | 3 1/2      | 133        | 5000         | 7500         | 11250               | 1400               | 20        |
|                        | 4          | 147        | 5000         | 7500         | 11250               | 1600               | 30        |
| 10000                  | 2          | 96         | 10000        | 15000        | 22500               | 1200               | 15        |
|                        | 2 1/2      | 126        | 10000        | 15000        | 22500               | 1600               | 25        |
|                        | 3          | 140        | 10000        | 15000        | 22500               | 1600               | 33        |
|                        | 4          | 167        | 10000        | 15000        | 22500               | 1800               | 52        |
| 15000                  | 2          | 101        | 15000        | 22500        | 33750               | 1400               | 21        |
|                        | 3          | 141        | 15000        | 22500        | 33750               | 1600               | 33        |
|                        | 4          | 171        | 15000        | 22500        | 33750               | 2000               | 56        |


**LT 303** | API Spec. 16D | Lloyds

# BOP 井控软管

BOP CONTROL HOSE

**应用范围:** 在井控系统中用于远程控制防喷器开合。

## 软管结构

**内胶层:** NBR

**内管类型:** 等通径

**增强层:** 4层缠绕的高强超柔钢丝

**外胶层:** 耐高温、耐火合成橡胶

**外保护层:** 不锈钢铠装

**温度范围:** -40°C~+100°C (-40°F~+212°F)

耐火符合API Spec. 16D, 704°C×5分钟耐火测试无泄漏。



**Application:** Hydraulic control line for remotely control the blowout preventer (BOP) at high pressure.

## Hose Construction

**Inner Tube:** NBR

**Bore Type:** full bore

**Reinforcement:** 4 plies of spiraled high tensile super flexible steel wire

**Outer Layer:** high temperature and fire resistant synthetic rubber

**Protective Layer:** stainless steel armor

**Temperature Range:** -40°C~+100°C (-40°F~+212°F)

Fire resistance meets API Spec. 16D, 704°C×5min

| 软管内径<br>I.D. | 工作压力<br>W.P. | 试验压力<br>P.P. | 最小爆破压力<br>Min.B.P. | 最小弯曲半径<br>Min.B.R. | 重量<br>W.T |
|--------------|--------------|--------------|--------------------|--------------------|-----------|
| in           | Psi          | Psi          | Psi                | mm                 | kg/m      |
| 1/2          | 5000         | 7500         | 15000              | 300                | 1.9       |
| 3/4          | 5000         | 7500         | 15000              | 400                | 2.7       |
| 1            | 5000         | 7500         | 15000              | 500                | 3.6       |
| 1 1/2        | 5000         | 7500         | 15000              | 700                | 5.3       |
| 2            | 5000         | 7500         | 15000              | 800                | 7.2       |


**LT 304**

# 多功能原油输送软管

MULTI - PURPOSE CRUDE OIL HOSE

**应用范围:**适用于输送燃油、原油、汽油等石油产品,高分子复合材料内附层使该软管具有强大的耐腐蚀、高润滑等特性,其极佳的化学稳定性使其不与石油产品中的化学物质发生反应,保证流体介质安全高效的运输。

## 软管结构

**内胶层:**高分子复合材料

**增强层:**多层帘子布缠绕及高灵活度螺旋钢丝

**外胶层:**合成橡胶

**温度范围:**-40°C~+180°C (-40°F~+356°F)

**压力与尺寸均可定制**


**Application:** The hose is suitable for delivering petroleum products such as fuel oil, crude oil, gasoline, etc. The hose inner layer is made of polymer composites, which makes the hose with strong corrosion resistance and high lubrication characteristics. Its excellent chemical stability prevents it from reacting with chemical substances in petroleum products, ensuring safe and efficient transportation of the medium.

## Hose Construction

**Inner Tube:** polymer composites

**Reinforcement:** multi-spiraled high tensile textile cords and highly flexible steel helix wire

**Outer Layer:** synthetic rubber

**Temperature Range:** -40°C~+180°C (-40°F~+356°F)

**The hose pressure and inner diameter can be customized based on the requirements**

| 软管内径<br>I.D. |     | 工作压力<br>W.P. | 安全系数<br>Safety Factor |
|--------------|-----|--------------|-----------------------|
| in           | mm  | MPa          |                       |
| 2            | 51  | 2~35         | 2.5倍                  |
| 2 1/2        | 63  | 2~35         | 2.5倍                  |
| 3            | 76  | 2~35         | 2.5倍                  |
| 3 1/2        | 90  | 2~35         | 2.5倍                  |
| 4            | 102 | 2~35         | 2.5倍                  |
| 5            | 127 | 2~35         | 2.5倍                  |
| 6            | 152 | 2~35         | 2.5倍                  |


**LT 1202L**

## UPE低压多功能软管

UPE LOW PRESSURE MULTIPURPOSE HOSE

**应用范围:**此产品广泛应用于化工、钢铁、建筑、食品、医药等领域,其具有超耐磨、耐腐蚀的产品特性与高饱和度内衬层,几乎不与任何物质(油脂、腐蚀性化学物等)起反应,绝对中性的气味也决定着其适用于食品饮料及医药行业。

**Application:** widely apply to industries like chemical, iron and steel smelting, construction, F&B, and medication etc. It is rarely reacting with any substance (oil, fats, corrosion chemicals etc.) because of its highly saturation materials. Its neutral taste and odor illustrates that it is safe to use in the F&B and medication industries.

### 软管结构

**内胶层:**UPE及EPDM合成橡胶

**增强层:**高张力合成纤维缠绕及高灵活度螺旋钢丝缠绕

**外胶层:**黑色或蓝色EPDM合成橡胶(可外覆UPE耐磨层)

**温度范围:**-30°C~82°C (-22°F~180°F)

**压力与尺寸均可定制**



### Hose Construction

**Inner Tube:** UPE and EPDM synthetic rubber

**Reinforcement:** multi-spiraled high tensile synthetic fibers and highly flexible steel helix wire

**Outer Layer:** black or blue EPDM synthetic rubber (UPE layer is available)

**Temperature Range:** -30°C~82°C (-22°F~180°F)

**The hose pressure and inner diameter can be customized based on the requirements**

| 软管内径<br>I.D |     | 软管外径<br>O.D |      | 工作压力<br>W.P | 最小<br>爆破压力<br>Min.B.P | 最小<br>弯曲半径<br>Min.B.R | 参考重量<br>W.T |
|-------------|-----|-------------|------|-------------|-----------------------|-----------------------|-------------|
| in          | mm  | in          | mm   | psi         | psi                   | mm                    | kg/m        |
| 1/2         | 13  | 0.89        | 22.5 | 290         | 870                   | 130                   | 0.34        |
| 5/8         | 16  | 1.04        | 26.5 | 290         | 870                   | 150                   | 0.44        |
| 3/4         | 19  | 1.17        | 29.7 | 290         | 870                   | 180                   | 0.52        |
| 1           | 25  | 1.39        | 35.2 | 290         | 870                   | 205                   | 0.52        |
| 1-1/4       | 32  | 1.77        | 45   | 290         | 870                   | 250                   | 0.95        |
| 1-1/2       | 38  | 2.04        | 52   | 290         | 870                   | 300                   | 1.2         |
| 2           | 51  | 2.64        | 67   | 300         | 750                   | 400                   | 1.65        |
| 3           | 76  | 3.82        | 97   | 300         | 750                   | 570                   | 2.75        |
| 4           | 102 | 4.84        | 123  | 300         | 750                   | 750                   | 4.65        |



# LT301F超耐磨酸化压裂软管应用案例

LT301F SUPER ABRASION RESISTANT FRAC HOSE CASE STUDY

➤ 塔里木油田钻探项目高效、低更换率的钻井解决方案：

*Letone Effective-Drilling solution on a project in Tarim Oilfield in Xinjiang, China.*



➤ 美国休斯顿压裂项目柔性压裂解决方案：

*Letone Flex-Frac solution on a project in Houston, USA.*



➤ 吐哈油田压裂项目柔性压裂解决方案：

*Letone Flex-Frac solution on a project in Tuha oilfield in Xinjiang, China.*



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