

Hydraulic & Offshore SUPPLIES

Hose Protection

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FLEXSPIRAL



EN APPLICATION

Rigid **PVC** no crash **spiral** for protection of hydraulic hoses and wrapping of groups of hoses.

- **TEMPERATURE RANGE:** -10°C +70°C

CONSTRUCTION

- **Spiral:** abrasion, crush, UV, ozone and flame resistant. Self-extinguishing according to **UL94** regulation class **V0**.

Hardness: shore A 78±5

Breaking stretching (ISO R 527): 130%

Breaking load (ISO R 527): 40 kg/cm²

VICAT 5 KG (ISO R 306): 79 C° (±2)

IZOD + 23°C (ISO R 180): 250 J/m (±50)

Elastic modulation (ISO 178): 2800 N/mm² (±100)

| INNEN DRM INSIDE DIAMETER | | AUSSEN DRM OUTSIDE DIAMETER | | THEORETISCHES GEWICHT WEIGHT | | LÄNGE LENGTH | |
|------------------------------|----------|--------------------------------|----------|---------------------------------|--------|-----------------|------|
| mm | inch | mm | inch | kg/mt | lbs/ft | mt | ft |
| 8 | 5/16" | 12 | 15/12" | 0.05 | 0.03 | 50 | 164 |
| 12 | 5/12" | 16 | 5/8" | 0.06 | 0.04 | 50 | 164 |
| 16 | 5/8" | 20 | 25/32" | 0.08 | 0.05 | 50 | 164 |
| 20 | 25/32" | 25 | 1" | 0.12 | 0.08 | 50 | 164 |
| 24 | 15/16" | 29 | 1.5/32" | 0.19 | 0.13 | 50 | 164 |
| 27 | 1.1/16" | 32 | 1.1/4" | 0.22 | 0.15 | 50 | 164 |
| 30 | 1.3/16" | 35 | 1.3/8" | 0.25 | 0.17 | 50 | 164 |
| 35 | 1.3/8" | 40 | 1.9/16" | 0.33 | 0.22 | 50 | 164 |
| 44 | 1.23/32" | 50 | 2" | 0.48 | 0.32 | 25 | 82 |
| 56 | 2.7/32" | 63 | 2.1/2" | 0.80 | 0.54 | 20 | 65.5 |
| 67 | 2.41/64" | 75 | 3" | 0.88 | 0.59 | 20 | 65.5 |
| 80 | 3.5/32" | 90 | 3.17/32" | 1.39 | 0.93 | 10 | 32.5 |
| 100 | 4" | 110 | 4.3/8" | 1.90 | 1.19 | 7 | 23 |
| 120 | 4.23/32" | 130 | 5.1/8" | 2.50 | 1.69 | 6 | 19.6 |

All technical specifications apply to a temperature of 23° C ±2° C (ISO 291) – tolerance on all specifications ±5%.

FLEXSPIRAL/HDPE



EN APPLICATION

lei-

HPDE (high-density-polyethylene) spiral for protection of hydraulic hoses and wrapping groups of hoses.

• **TEMPERATURE RANGE:** -60°C +100°C

CONSTRUCTION

en,

• **Spiral:** abrasion crush, UV, ozone, low temperature resistant.

• **Resistance:** Acid, Oil, Solvents

Hardness: 66 SHw 5 (ISO 868)

Density: 0,96 gr/cc (ISO 1183)

Tensile strength: 30,00 mpa

• **Colours:** Black
Yellow
Green
Red
Blue

• **Available on request:**
with hole



| INNEN DRM INSIDE DIAMETER | AUSSEN DRM OUTSIDE DIAMETER | THEORETISCHES GEWICHT WEIGHT | | SPIRALTEILUNG SPIRAL PITCH | LÄNGE LENGTH | |
|------------------------------|--------------------------------|---------------------------------|--------|-------------------------------|-----------------|------|
| | | kg/mt | lbs/ft | | mt | ft |
| 9 | 12 | 0,04 | 0,02 | 10-11 | 25 | 82 |
| 13 | 16 | 0,06 | 0,04 | 10-11 | 25 | 82 |
| 16 | 20 | 0,10 | 0,06 | 18-19 | 25 | 82 |
| 20 | 25 | 0,12 | 0,08 | 20-21 | 25 | 82 |
| 27 | 32 | 0,24 | 0,16 | 22-23 | 25 | 82 |
| 30 | 35 | 0,27 | 0,18 | 25-26 | 25 | 82 |
| 34 | 40 | 0,30 | 0,20 | 25-26 | 25 | 82 |
| 43 | 50 | 0,45 | 0,30 | 29-31 | 25 | 82 |
| 56 | 64 | 0,52 | 0,35 | 38-40 | 25 | 82 |
| 67 | 76 | 0,73 | 0,67 | 42-45 | 20 | 65,5 |
| 80 | 90 | 1,10 | 0,73 | 44-47 | 20 | 65,5 |
| 100 | 111 | 1,75 | 1,17 | 50-53 | 15 | 49,2 |
| 127 | 140 | 1,98 | 1,32 | 58-63 | 10 | 32,8 |
| | | | | | | |
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| | | | | | | |

All technical specifications apply to a temperature of 23° C ±2° C (ISO 291) – tolerance on all specifications ±5%.

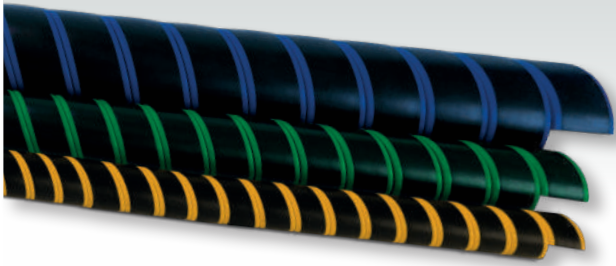


Spirals can be produced other than in standard rolls, even in lengths of use with hole



Boxes can be customized with your logo

FLEXSPIRAL/BI



EN APPLICATION

HDPE bi-extruded (high-density-polyethylene) **spiral for protection** of hydraulic hoses and wrapping groups of hoses.

- **TEMPERATURE RANGE:** -60°C +100°C

CONSTRUCTION

- **Spiral:** abrasion crush, UV, ozone, low temperature resistant,
- **Resistance:** Acid, Oil, Solvents
Hardness: 66 SHw 5 (ISO 868)
Density: 0,96 gr/cc (ISO 1183)
Tensile strength: 30,00 mpa
- **Colours:** the combination of all colors is available.



- **Available on request:**
with hole



| INNEN DRM INSIDE DIAMETER | AUSSEN DRM OUTSIDE DIAMETER | THEORETISCHES GEWICHT WEIGHT | | SPIRALTEILUNG SPIRAL PITCH | LÄNGE LENGTH | |
|------------------------------|--------------------------------|---------------------------------|--------|-------------------------------|-----------------|------|
| | | kg/mt | lbs/ft | | mt | ft |
| 9 | 12 | 0,04 | 0,02 | 10-11 | 25 | 82 |
| 13 | 16 | 0,06 | 0,04 | 10-11 | 25 | 82 |
| 16 | 20 | 0,10 | 0,06 | 18-19 | 25 | 82 |
| 20 | 25 | 0,12 | 0,08 | 20-21 | 25 | 82 |
| 27 | 32 | 0,24 | 0,16 | 22-23 | 25 | 82 |
| 30 | 35 | 0,27 | 0,18 | 25-26 | 25 | 82 |
| 34 | 40 | 0,30 | 0,20 | 25-26 | 25 | 82 |
| 43 | 50 | 0,45 | 0,30 | 29-31 | 25 | 82 |
| 56 | 64 | 0,52 | 0,35 | 38-40 | 25 | 82 |
| 67 | 76 | 0,73 | 0,67 | 42-45 | 20 | 65.5 |
| 80 | 90 | 1,10 | 0,73 | 44-47 | 20 | 65.5 |
| 100 | 111 | 1,75 | 1,17 | 50-53 | 15 | 49.2 |
| | | | | | | |
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All technical specifications apply to a temperature of 23° C ±2° C (ISO 291) – tolerance on all specifications ±5%.

FLEXSPIRAL/HT



In flacher Ausführung erhältlich - Available in the flat version.

EN APPLICATION

Polyamide (PA) spiral for protection of hydraulic hoses and wrapping of groups of hoses where is required an high temperature.

• **TEMPERATURE RANGE:** -35°C +125°C

CONSTRUCTION

• **Spiral:** abrasion, crush, UV, ozone and flame resistant. Self-extinguishing according to UL94 regulation class HB.

Density: 1.12 g/cm³ (ISO 1183)

Viscosity Number: 228 cm³/g (ISO 307)

Tensile modulus: 3.300/1050 Mpa (ISO 527-2)

Nominal strain at break %: 50

Bending: 110/30 Mpa (ISO 178)

Electrical resistivity: 10 e 13 Ω

Available on request: [type MSHA IC 344-02.](#)

| INNEN DRM INSIDE DIAMETER | | AUSSEN DRM OUTSIDE DIAMETER | | THEORETISCHES GEWICHT WEIGHT | | LÄNGE LENGTH | |
|------------------------------|----------|--------------------------------|----------|---------------------------------|--------|-----------------|-------|
| mm | inch | mm | inch | kg/mt | lbs/ft | mt | ft |
| 8 | 5/16" | 12 | 15/12" | 0,04 | 0,03 | 50 | 164 |
| 13 | 5/12" | 16 | 5/8" | 0,05 | 0,03 | 50 | 164 |
| 16 | 5/8" | 20 | 25/32" | 0,07 | 0,04 | 50 | 164 |
| 19 | 25/32" | 25 | 1" | 0,09 | 0,06 | 50 | 164 |
| 22 | 7/8" | 27 | 1.1/16" | 0,12 | 0,08 | 50 | 164 |
| 25 | 1" | 29 | 1.5/32" | 0,14 | 0,09 | 50 | 164 |
| 27 | 1.1/16" | 32 | 1.1/4" | 0,15 | 0,10 | 50 | 164 |
| 30 | 1.3/16" | 35 | 1.3/8" | 0,17 | 0,11 | 50 | 164 |
| 35 | 1.3/8" | 40 | 1.9/16" | 0,21 | 0,14 | 50 | 164 |
| 44 | 1.23/32" | 50 | 2" | 0,32 | 0,21 | 25 | 82 |
| 56 | 2.7/32" | 63 | 2.1/2" | 0,61 | 0,40 | 20 | 65.5 |
| 67 | 2.4/64" | 75 | 3" | 0,75 | 0,50 | 20 | 65.5 |
| 80 | 3.5/32" | 90 | 3.17/32" | 1,30 | 0,87 | 10 | 32.75 |
| | | | | | | | |
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All technical specifications apply to a temperature of 23° C ±2° C (ISO 291) – tolerance on all specifications ±5%.

FLEXSPIRAL/FX (MSHA)



FRAS antistatische Version erhältlich (feuerbeständig)
Also available in FRAS version (Fire Resistant Antistatic)

EN APPLICATION

HDPE spiral suitable for protection of hydraulic pipes and wiring of multiple pipes, where an high degree of self-extinguishing and fire resistance is required.

Standards: MSHA IC- 344/01.

• **TEMPERATURE RANGE:** -55°C +100°C

CONSTRUCTION

• **Spiral:** abrasion, crush, UV, oils, chemical products, ozone and flame resistant. Self-extinguishing according to **UL94** regulation class **V0**. (halogen free).

Colour: Light grey

Density: 1.14 g/ml (ASTM D-792)

Hardness Shore D: 68

Melt Volume Rate(230° C/2,16kg): 10min 0.8 cc (ISO 1133)

VICAT softening point (50N): 75°C (ASTM D- 1525)

Tensile strength at yield: -1/-2 Mpa 18(ISO 527)

Tensil modulus: -1/-2 Mpa 1300(ISO 527)

Elongation at break: -1/-2 >20%(ISO 527)

Flame resistance: UL 94.V0

Available on request: antistatic type "FRAS" (Fire resistant).

| INNEN DRM INSIDE DIAMETER | AUSSEN DRM OUTSIDE DIAMETER | DICKE THICKNESS | THEORETISCHES GEWICHT WEIGHT | | SPIRALTEILUNG SPIRAL PITCH | ROLLE ROLLS |
|------------------------------|--------------------------------|--------------------|---------------------------------|--------|-------------------------------|----------------|
| mm | mm | mm | Kg/mt | lbs/ft | mm | mt |
| 9 | 12 | 1,4 | 0.05 | 0.033 | 10-11 | 25 |
| 13 | 16 | 1,6 | 0.07 | 0.046 | 10-11 | 25 |
| 16 | 20 | 2 | 0.11 | 0.073 | 18-19 | 25 |
| 20 | 25 | 2,5 | 0.14 | 0.090 | 20-21 | 25 |
| 27 | 32 | 2,7 | 0.26 | 0.174 | 22-23 | 25 |
| 34 | 40 | 3 | 0.32 | 0.214 | 25-26 | 25 |
| 43 | 50 | 3,3 | 0.48 | 0.322 | 29-31 | 25 |
| 56 | 64 | 4 | 0.55 | 0.370 | 38-40 | 25 |
| 67 | 76 | 4,5 | 0.76 | 0.510 | 45 | 20 |
| 80 | 90 | 5 | 1.13 | 0.760 | 45 | 20 |
| 100 | 111 | 5,5 | 1.79 | 1.200 | 50 | 15 |
| | | | | | | |
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All technical specifications apply to a temperature of 23° C ±2° C (ISO 291) – tolerance on all specifications ±5%.

FLEXSPIRAL/FR-EXTRA



EN APPLICATION

Spiral suitable for protection of hydraulic pipes and wiring of multiple pipes, where a high degree of self-extinguishing and fire resistance is required. Used for pipe protection in train constructions.

Standards: UNI EN 45545 - 2 : 2015 (for hazard levels HL1-HL2-HL3 set of requirements R22 and R23).

• **TEMPERATURE RANGE:** -30°C +110°C

CONSTRUCTION

• **Spiral:** abrasion, crush, UV, oils, chemical products, ozone and flame resistant. Self-extinguishing according to **UL94** regulation class **VO**. (halogen free)

Density: 1,05 g/ml (ASTM D-792)

Hardness Shore D: 68

Melt Volume Rate(230° C/2,16kg):10min 1 MVR

VICAT softening point (50N): 75°C (ASTM D- 1525)

Tensile strength at yield: -1/-2 Mpa 18(ISO 527)

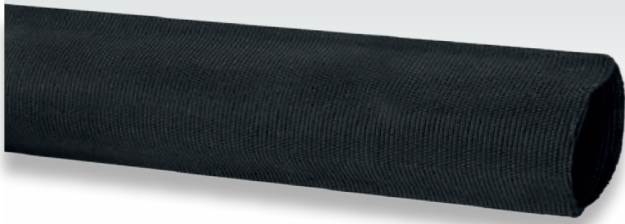
Elongation at break -1/-2 >100%(ISO 527)

Flame resistance: UL 94.VO

| INNEN DRM INSIDE DIAMETER | AUSSEN DRM OUTSIDE DIAMETER | DICKE THICKNESS | THEORETISCHES GEWICHT WEIGHT | | SPIRALTEILUNG SPIRAL PITCH | ROLLE ROLLS |
|------------------------------|--------------------------------|--------------------|---------------------------------|--------|-------------------------------|----------------|
| | | | kg/mt | lbs/ft | | |
| mm | mm | mm | kg/mt | lbs/ft | mm | mt |
| 13 | 16 | 2 | 0,080 | 0,050 | 12-14 | 25 |
| 16 | 20 | 2 | 0,115 | 0,077 | 18-19 | 25 |
| 20 | 25 | 2,5 | 0,140 | 0,090 | 20-21 | 25 |
| 27 | 32 | 2,7 | 0,260 | 0,174 | 22-23 | 25 |
| 34 | 40 | 3 | 0,300 | 0,201 | 25-26 | 25 |
| 43 | 50 | 3,3 | 0,520 | 0,349 | 29-31 | 25 |
| 56 | 64 | 4 | 0,600 | 0,403 | 38-40 | 25 |
| 67 | 76 | 4,5 | 0,840 | 0,564 | 45 | 20 |
| 80 | 90 | 5 | 1,100 | 0,740 | 45 | 20 |
| 100 | 111 | 5 | 1,300 | 0,870 | 47 | 15 |
| | | | | | | |
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All technical specifications apply to a temperature of 23° C ±2° C (ISO 291) – tolerance on all specifications ±5%.

PROTEX/PP



EN APPLICATION

Polypropylene sleeve covering hose suitable for hydraulic hoses and wrapping of multiple hoses.

Standards EN ISO 3457 - EN 4413.

• **TEMPERATURE RANGE:** -40°C +100°C

CONSTRUCTION

Hose: 100% polypropylene

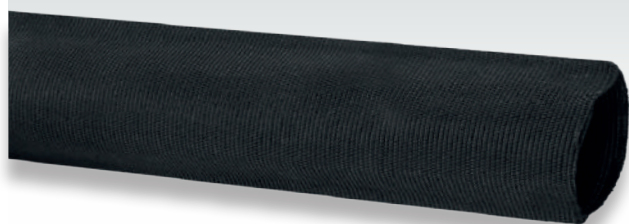
- **Thickness:** 1.40 mm (±1%)
- **Colour:** black
- **Abrasion resistance:** >25.000 Cycles
- **Stain at break:** up 428 to 1430 N
- **Tensile strenght:** up 29 to 33%
- **UV Resistant:** EN 14471
- **Ozonbeständig:** ISO 1431-1

Available on request: other colors and customizations with the customer's logo.

| FLACHE BREITE FLAT HEIGHT | | INNEN DRM INSIDE DIAMETER | | THEORETISCHES GEWICHT WEIGHT | | LÄNGE LENGTH | |
|------------------------------|----------|------------------------------|----------|---------------------------------|--------|-----------------|-----|
| mm | inch | mm | inch | kg/mt | lbs/ft | mt | ft |
| 30 | 1.3/16" | 18 | 2.3/32" | 0.025 | 0.016 | 100 | 328 |
| 35 | 1.3/8" | 20 | 25/32" | 0.027 | 0.018 | 100 | 328 |
| 40 | 1.9/16" | 22 | 7/8" | 0.030 | 0.020 | 100 | 328 |
| 45 | 1.3/4" | 25 | 1" | 0.032 | 0.022 | 100 | 328 |
| 50 | 2" | 28 | 1.3/32" | 0.036 | 0.025 | 100 | 328 |
| 55 | 2.5/32" | 32 | 1.1/4" | 0.040 | 0.027 | 100 | 328 |
| 60 | 2.3/8" | 35 | 1.3/8" | 0.045 | 0.030 | 100 | 328 |
| 65 | 2.9/16" | 38 | 1.1/2" | 0.049 | 0.033 | 100 | 328 |
| 80 | 3.5/32" | 45 | 1.3/4" | 0.060 | 0.040 | 100 | 328 |
| 90 | 3.17/32" | 50 | 2" | 0.068 | 0.046 | 100 | 328 |
| 100 | 4" | 55 | 2.5/32" | 0.070 | 0.047 | 100 | 328 |
| 120 | 4.3/4" | 70 | 1.3/4" | 0.085 | 0.057 | 100 | 328 |
| 150 | 6" | 90 | 3.17/32" | 0.120 | 0.081 | 100 | 328 |
| 202 | 8" | 127 | 5" | 0.150 | 0.100 | 100 | 328 |

All technical specifications apply to a temperature of 23° C ±2° C (ISO 291) – tolerance on all specifications ±5%.

PROTEX/PE



EN APPLICATION

Polyester sleeve covering hose suitable for hydraulic hoses and wrapping of multiple hoses.

Standards **EN ISO 3457 - EN 4413.**

- **TEMPERATURE RANGE:** -40°C +100°C

CONSTRUCTION

Hose: 100% Polyester

- **Thickness:** 1.40 mm
- **Colour:** Black
- **Stain at break:** up 1000 daN to 4600 daN
- **Abrasion:** ISO 6945:1991
- **UV Resistant:** ISO 4892-2
- **Ozone resistant:** ISO 1431-1

Available on request: other colors and customizations with the customer's logo.

Available on request: MHSA IC 344-03.

| FLACHE BREITE FLAT HEIGHT | | INNEN DRM INSIDE DIAMETER | | THEORETISCHES GEWICHT WEIGHT | | LÄNGE LENGTH | |
|------------------------------|----------|------------------------------|----------|---------------------------------|--------|-----------------|-----|
| mm | inch | mm | inch | kg/mt | lbs/ft | mt | ft |
| 30 | 1.3/16" | 17 | 21/32" | 0.028 | 0.018 | 100 | 328 |
| 35 | 1.3/8" | 20 | 25/32" | 0.030 | 0.020 | 100 | 328 |
| 40 | 1.9/16" | 22 | 7/8" | 0.034 | 0.021 | 100 | 328 |
| 45 | 1.3/4" | 25 | 1" | 0.038 | 0.023 | 100 | 328 |
| 50 | 2" | 28 | 1.3/32" | 0.043 | 0.025 | 100 | 328 |
| 55 | 2.5/32" | 32 | 1.1/4" | 0.047 | 0.030 | 100 | 328 |
| 60 | 2.3/8" | 35 | 1.3/8" | 0.051 | 0.032 | 100 | 328 |
| 65 | 2.9/16" | 38 | 1.1/2" | 0.055 | 0.035 | 100 | 328 |
| 80 | 3.5/32" | 45 | 1.3/4" | 0.068 | 0.042 | 100 | 328 |
| 90 | 3.17/32" | 50 | 2" | 0.077 | 0.050 | 100 | 328 |
| 100 | 4" | 55 | 2.5/32" | 0.085 | 0.052 | 100 | 328 |
| 102 | 4" | 65 | 2.9/16" | 0.092 | 0.061 | 100 | 328 |
| 120 | 4.3/4" | 70 | 1.3/4" | 0.101 | 0.060 | 100 | 328 |
| 127 | 5" | 75 | 3" | 0.115 | 0.077 | 100 | 328 |
| 150 | 6" | 90 | 3.17/32" | 0.125 | 0.083 | 100 | 328 |
| 165 | 2.5/8" | 100 | 4" | 0.135 | 0.090 | 100 | 328 |
| 202 | 8" | 127 | 5" | 0.150 | 0.101 | 100 | 328 |

All technical specifications apply to a temperature of 23° C ±2° C (ISO 291) – tolerance on all specifications ±5%.

CALZA/N/NYLON



EN APPLICATION

Nylon sleeve covering hose suitable for multiple hydraulic hoses protection.

Standards EN ISO 3457 - EN 4413.

• **TEMPERATURE RANGE:** -40°C +120°C

CONSTRUCTION

Hose: 100% polypropylene

- **Thickness:** 1.60 mm (±1%)
- **Abrasion resistance:** ISO 6945
- **Tensile strenght:** up 33 to 43%
- **UV Resistant:** EN 14471
- **Ozonbeständig:** ISO 1431-1

Available on request: other colors and customizations with customer's logo.

| FLACHE BREITE FLAT HEIGHT | | INNEN DRM INSIDE DIAMETER | | THEORETISCHES GEWICHT WEIGHT | | LÄNGE LENGTH | |
|------------------------------|----------|------------------------------|----------|---------------------------------|--------|-----------------|-----|
| mm | inch | mm | inch | kg/mt | lbs/ft | mt | ft |
| 30 | 1.3/16" | 17 | 21/32" | 0.031 | 0.021 | 100 | 328 |
| 34 | 1.3/8" | 20 | 3/4" | 0.037 | 0.025 | 100 | 328 |
| 39 | 1.17/32" | 23 | 29/32" | 0.042 | 0.028 | 100 | 328 |
| 42 | 1.21/32" | 25 | 1" | 0.046 | 0.031 | 100 | 328 |
| 45 | 1.3/4" | 27 | 1.1/16" | 0.049 | 0.033 | 100 | 328 |
| 52 | 2.1/16" | 31 | 1.1/4" | 0.054 | 0.036 | 100 | 328 |
| 55 | 2.5/32" | 33 | 1.13/32" | 0.060 | 0.040 | 100 | 328 |
| 60 | 2.3/8" | 36 | 1.3/8" | 0.062 | 0.042 | 100 | 328 |
| 66 | 2.9/16" | 40 | 1.9/16" | 0.072 | 0.048 | 100 | 328 |
| 77 | 3.1/32" | 47 | 1.27/32" | 0.084 | 0.056 | 100 | 328 |
| 80 | 3.5/32" | 50 | 1.7/8" | 0.087 | 0.058 | 100 | 328 |
| 89 | 3.17/32" | 56 | 2.1/4" | 0.093 | 0.062 | 100 | 328 |
| 97 | 3.5/32" | 60 | 2.3/8" | 0.105 | 0.070 | 50 | 164 |
| 107 | 4.7/32" | 66 | 2.19/32" | 0.116 | 0.077 | 50 | 164 |
| 120 | 4.3/4" | 74 | 3" | 0.130 | 0.086 | 50 | 164 |
| 136 | 4.5/8" | 85 | 3.11/32" | 0.148 | 0.098 | 50 | 164 |
| 149 | 6" | 93 | 3.21/32" | 0.162 | 0.108 | 50 | 164 |
| 179 | 7.1/32" | 112 | 4.3/8" | 0.195 | 0.130 | 50 | 164 |

All technical specifications apply to a temperature of 23° C ±2° C (ISO 291) – tolerance on all specifications ±5%.

MINETEX™



EN APPLICATION

Polyamide sleeve covering hose suitable for hydraulic hoses and wrapping of groups of hoses.

Standard: MSHA IC-312/1.

- **TEMPERATURE RANGE:** -40°C +120°C

CONSTRUCTION

- **HOSE: 100% Polyamide**
 Double thickness: **1.60 mm** (±1%)
 Colour: black (other colours available)
 Abrasion resistance: **ISO 6945** >100.000 cycles, with a loss in weight of 0.02 grams.
 Fire resistance: **ISO 8030** excellent fire resistance up to 15 sec.
 Electrical conductivity: **ISO 8031** between 3 and 5x10⁶ ohm/m
- **Branding:** MINETEX™ MSHA IC 312/1 I.D.

| FLACHE BREITE FLAT HEIGHT | | INNEN DRM INSIDE DIAMETER | | THEORETISCHES GEWICHT WEIGHT | | LÄNGE LENGTH | |
|------------------------------|----------|------------------------------|----------|---------------------------------|--------|-----------------|-----|
| mm | inch | mm | inch | kg/mt | lbs/ft | mt | ft |
| 30 | 1.1/16" | 17 | 21/32" | 0.033 | 0.022 | 100 | 328 |
| 34 | 1.11/32" | 20 | 25/32" | 0.038 | 0.030 | 100 | 328 |
| 39 | 1.17/32" | 23 | 29/32" | 0.042 | 0.028 | 100 | 328 |
| 42 | 1.21/32" | 25 | 1" | 0.046 | 0.031 | 100 | 328 |
| 45 | 1.3/4" | 27 | 1.1/16" | 0.050 | 0.032 | 100 | 328 |
| 52 | 2.1/16" | 31 | 1.7/32" | 0.058 | 0.040 | 100 | 328 |
| 55 | 2.5/32" | 33 | 1.5/16" | 0.060 | 0.040 | 100 | 328 |
| 60 | 2.1/4" | 36 | 1.13/32" | 0.062 | 0.042 | 100 | 328 |
| 66 | 2.19/32" | 40 | 1.9/16" | 0.073 | 0.050 | 100 | 328 |
| 72 | 2.27/32" | 44 | 1.23/32" | 0.080 | 0.054 | 100 | 328 |
| 77 | 3.1/32" | 47 | 1.27/32" | 0.085 | 0.060 | 100 | 328 |
| 86 | 3.3/8" | 53 | 2.3/32" | 0.095 | 0.061 | 100 | 328 |
| 97 | 3.13/16" | 60 | 2.3/8" | 0.107 | 0.071 | 100 | 328 |
| 107 | 4.7/32" | 66 | 2.19/32" | 0.110 | 0.073 | 50 | 164 |
| 118 | 4.21/32" | 73 | 2.7/8" | 0.130 | 0.090 | 50 | 164 |
| 125 | 4.3/4" | 77 | 3.1/32" | 0.136 | 0.092 | 50 | 164 |
| 136 | 4.5/8" | 85 | 3.11/32" | 0.148 | 0.098 | 50 | 164 |
| 149 | 6" | 93 | 3.21/32" | 0.165 | 0.110 | 50 | 164 |
| 179 | 7.1/16" | 112 | 4.13/32" | 0.200 | 0.130 | 50 | 164 |

All technical specifications apply to a temperature of 23° C ±2° C (ISO 291) – tolerance on all specifications ±5%.

PROTEX/STRAP



EN APPLICATION

Softwall nylon covering hose suitable for hydraulic hoses and wrapping of multiple hoses.

- **TEMPERATURE RANGE:** -40°C +120°C

CONSTRUCTION

Hose: 100% nylon

- **Thickness:** 1.50 Mm ($\pm 1\%$)
- **Abrasion resistance:** >50.000 Cycles
- **Colour:** black

| FLACHE BREITE FLAT HEIGHT | INNEN DRM INSIDE DIAMETER | LÄNGE LENGTH |
|------------------------------|------------------------------|-----------------|
| mm | mm | mt |
| 76 | 15 | 25 |
| 90 | 20 | 25 |
| 135 | 30 | 25 |
| 165 | 40 | 25 |
| 200 | 50 | 25 |
| 227 | 60 | 25 |
| 295 | 80 | 25 |
| 347 | 90 | 25 |
| 360 | 100 | 25 |
| 420 | 120 | 25 |
| 515 | 150 | 25 |
| 595 | 175 | 25 |
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All technical specifications apply to a temperature of 23° C $\pm 2^\circ$ C (ISO 291) – tolerance on all specifications $\pm 5\%$.

VETROSIL/HT



EN APPLICATION

Fiberglass sleeving covered with red silicon in uses where is required an high insulation and temperatures resistance.

Standards: UL 1441 VW – I – EN 45545-1 EN 45545-2+A1.

- **TEMPERATURE RANGE:** -40°C +260°C

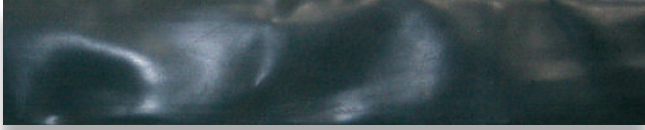
CONSTRUCTION

- **Fiberglass filament:** E-glass
- **Fiberglass diameter:** 9 micron
- **Silicone wall thickness:** 1 mm
- **Continuous operating temperature:** 260°C
- **Exposure up to 1090°C:** 15-20 minutes
- **Exposure up to 1650°C:** 15-30 seconds
- **Fire resistance:** self-extinguishes
- **Rolls:** random

| | | | | | | | | | | | |
|------------------------------|----|----|----|----|----|----|----|----|----|----|----|
| INNEN DRM INSIDE DIAMETER | 10 | 12 | 16 | 19 | 22 | 25 | 28 | 32 | 35 | 38 | 41 |
| | - | 44 | 52 | 59 | 65 | 70 | - | - | - | - | - |

All technical specifications apply to a temperature of 23° C ±2° C (ISO 291) – tolerance on all specifications ±5%.

PROTUBI/NL



EN APPLICATION

Softwall cable covering hose.

Standards: CEI 20-22 CEI 20-14

• TEMPERATURE RANGE: -15°C +60°C

CONSTRUCTION

- **Hose:** One-layer flame resistant black pvc
Hardness: shore A 75±5
Breaking stretching: 310%
Breaking load: 13.5 N/mm²

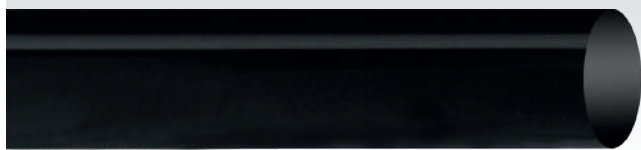
Available on request:

PROTUBI/EXTRA (more thickness).

| INNEN DRM INSIDE DIAMETER | | AUSSEN DRM OUTSIDE DIAMETER | | THEORETISCHES GEWICHT WEIGHT | | LÄNGE LENGTH | |
|------------------------------|----------|--------------------------------|----------|---------------------------------|--------|-----------------|-----|
| mm | inch | mm | inch | kg/mt | lbs/ft | mt | ft |
| 10 | 3/8" | 11 | 7/16" | 0.025 | 0.017 | 125 | 410 |
| 14 | 9/16" | 15 | 19/32" | 0.034 | 0.023 | 100 | 328 |
| 16 | 5/8" | 17 | 21/32" | 0.039 | 0.026 | 100 | 328 |
| 18 | 23/32" | 19.2 | 3/4" | 0.052 | 0.035 | 100 | 328 |
| 20 | 25/32" | 21.2 | 27/32" | 0.058 | 0.039 | 100 | 328 |
| 22 | 7/8" | 23.2 | 29/32" | 0.063 | 0.042 | 100 | 328 |
| 24 | 15/16" | 25.2 | 1" | 0.066 | 0.044 | 100 | 328 |
| 26 | 1.1/32" | 27.2 | 1.1/16" | 0.075 | 0.050 | 100 | 328 |
| 28 | 1.3/32" | 29.2 | 1.5/32" | 0.082 | 0.055 | 100 | 328 |
| 30 | 1.3/16" | 31.2 | 1.7/32" | 0.087 | 0.058 | 50 | 164 |
| 33 | 1.5/16" | 34.4 | 1.11/32" | 0.104 | 0.070 | 50 | 164 |
| 36 | 1.13/32" | 37.4 | 1.15/32" | 0.121 | 0.081 | 50 | 164 |
| 38 | 1.1/2" | 39.4 | 1.17/32" | 0.135 | 0.091 | 50 | 164 |
| 40 | 1.9/16" | 41.4 | 1.5/8" | 0.141 | 0.095 | 50 | 164 |
| 45 | 1.3/4" | 46.4 | 1.13/16" | 0.144 | 0.097 | 50 | 164 |
| 50 | 1.31/32" | 51.4 | 2" | 0.167 | 0.112 | 50 | 164 |
| 55 | 2.5/32" | 56.4 | 2.7/32" | 0.184 | 0.124 | 50 | 164 |

All technical specifications apply to a temperature of 23° C ±2° C (ISO 291) – tolerance on all specifications ±5%.

PROTUBI/PU/NL



EN APPLICATION

Polyurethane sleeve to protect hoses and cables, where is required excellent resistance to abrasion, and high temperature.

- **TEMPERATURE RANGE:** -15°C +85°C

CONSTRUCTION

- **Hose:** Monoextruded in black ether based PU.

| MERKMALE PROPERTY | MASSEINHEIT UNIT | WERT VALUE | NORM TEST |
|---|---------------------|---------------|---------------------|
| Härte - Hardness | Shore A | 84 | DIN ISO 7619-1 (3S) |
| Zugfestigkeit - Tensile strength | MPa | 45 | DIN 53504-S2 |
| Bruchdehnung - Elongation at break | % | 600 | DIN 53504-S2 |
| Spannung bei 20% Dehnung - Stress at 20% elongation | MPa | 2.5 | DIN 53504-S2 |
| Spannung bei 100% Dehnung - Stress at 100% elongation | MPa | 6 | DIN 53504-S2 |
| Spannung bei 300% Dehnung - Stress at 300% elongation | MPa | 10 | DIN 53504-S2 |
| Abriebverlust - Abrasion loss | mm ³ | 25 | DIN ISO4649-A |
| Feuerbeständigkeit - Flame resistance | - | HB | UL94 |

| INNEN DRM INSIDE DIAMETER | | AUSSEN DRM OUTSIDE DIAMETER | | THEORETISCHES GEWICHT WEIGHT | | LÄNGE LENGTH | |
|------------------------------|----------|--------------------------------|----------|---------------------------------|--------|-----------------|-----|
| mm | mm | mm | mm | kg/mt | lbs/ft | mt | ft |
| 16 | 5/8" | 17 | 21/32" | 0.031 | 0.020 | 100 | 328 |
| 18 | 23/32" | 19 | 3/4" | 0.035 | 0.023 | 100 | 328 |
| 20 | 3/4" | 21 | 27/32" | 0.039 | 0.026 | 100 | 328 |
| 23 | 29/32" | 24 | 15/16" | 0.044 | 0.029 | 100 | 328 |
| 26 | 1.1/32" | 27 | 1.1/6" | 0.050 | 0.033 | 100 | 328 |
| 29 | 1.5/32" | 30 | 1.3/16" | 0.055 | 0.036 | 100 | 328 |
| 32 | 1.1/4" | 33 | 1.5/16" | 0.061 | 0.040 | 50 | 164 |
| 34 | 1.3/8" | 35 | 1.3/8" | 0.065 | 0.043 | 50 | 164 |
| 36 | 1.13/32" | 37 | 1.15/32" | 0.069 | 0.046 | 50 | 164 |
| 40 | 1.9/16" | 41 | 1.5/8" | 0.075 | 0.050 | 50 | 164 |
| 42 | 1.21/32" | 43 | 1.11/16" | 0.080 | 0.053 | 50 | 164 |
| 45 | 1.3/4" | 46 | 1.13/16" | 0.090 | 0.060 | 50 | 164 |
| 50 | 1.31/32" | 52 | 2.1/16" | 0.150 | 0.100 | 50 | 164 |
| 60 | 2.3/8" | 62 | 2.1/2" | 0.230 | 0.154 | 50 | 164 |
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All technical specifications apply to a temperature of 23° C ±2° C (ISO 291) – tolerance on all specifications ±5%.

PROCAVI/IT



EN APPLICATION

Softwall cable covering hose used for welding machines and torches. Electrical insulation over 5.000 volt.

• **TEMPERATURE RANGE:** -25°C +80°C

CONSTRUCTION

• **Tube:** white yarns visible inside with talcum powder to facilitate cables fitting up.

• **Cover:** black, abrasion and ageing resistant rubber.

• **Surface:** smooth fabric finished.

Tolerances on ID: ISO 1307/62

±0.6 mm from DI 16 up to DI 19 mm

±0.8 mm from DI 20 up to DI 25 mm

±1.0 mm from DI 28 up to DI 40 mm

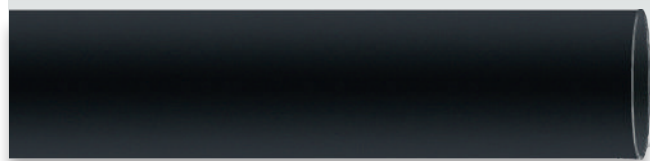
±1.2 mm from DI 42 up to DI 50 mm

Thickness tolerance ±0.25 mm

| INNEN DRM INSIDE DIAMETER | | AUSSEN DRM OUTSIDE DIAMETER | | THEORETISCHES GEWICHT WEIGHT | | LÄNGE LENGTH | |
|------------------------------|----------|--------------------------------|----------|---------------------------------|--------|-----------------|-------------|
| mm | inch | mm | inch | kg/mt | lbs/ft | mt | ft |
| 16 | 5/8" | 19 | 3/4" | 0.10 | 0.07 | 40+vari | 131+ sh.le. |
| 19 | 3/4" | 21 | 7/8" | 0.13 | 0.09 | 40+vari | 131+ sh.le. |
| 22 | 7/8" | 25 | 1" | 0.16 | 0.11 | 40+vari | 131+ sh.le. |
| 25 | 1" | 27 | 1.1/6" | 0.12 | 0.08 | 40+vari | 131+ sh.le. |
| 28 | 1.3/32" | 31 | 1.7/32" | 0.18 | 0.12 | 40+vari | 131+ sh.le. |
| 30 | 1.3/16" | 33 | 1.5/16" | 0.20 | 0.13 | 40+vari | 131+ sh.le. |
| 32 | 1.1/4" | 35 | 1.3/8" | 0.22 | 0.15 | 40+vari | 131+ sh.le. |
| 35 | 1.3/8" | 38 | 1.1/2" | 0.26 | 0.17 | 40+vari | 131+ sh.le. |
| 40 | 1.9/16" | 43 | 1.11/16" | 0.30 | 0.20 | 40+vari | 131+ sh.le. |
| 45 | 1.3/4" | 48 | 1.7/8" | 0.33 | 0.22 | 40+vari | 131+ sh.le. |
| 50 | 1.31/32" | 53 | 2.3/32" | 0.36 | 0.24 | 40+vari | 131+ sh.le. |
| 55 | 2.5/32" | 58 | 2.5/16" | 0.40 | 0.27 | 40+vari | 131+ sh.le. |
| 70 | 2.3/4" | 75 | 3" | 0.55 | 0.36 | 40+vari | 131+ sh.le. |
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All technical specifications apply to a temperature of 23° C ±2° C (ISO 291) – tolerance on all specifications ±5%.

TT/PROCAVI/65-EP/T



EN APPLICATION

Softwall cable covering hose used for torch and welding machines. Electrical insulation over 5.000 volt.

- **TEMPERATURE RANGE:** -35°C +100°C

CONSTRUCTION

- **Hose:** One-layer black EPDM rubber hose
Hardness: shore A 65±5
Compression set: ≤ 20%
Breaking stretching: 250%
Breaking load: 6 MPa

Packaging on cartoon reel

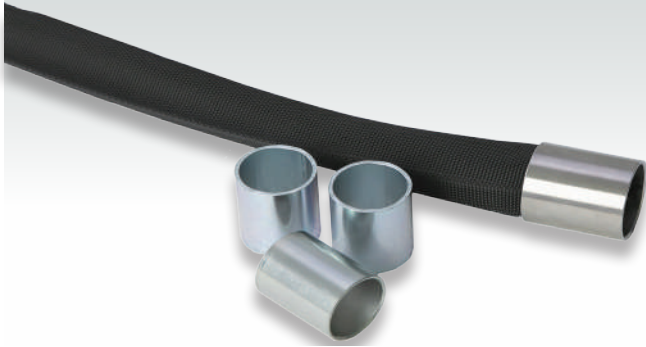
Tolerances on ID: ID 16 mm -0.5/+0.5
ID 20 mm -0.5/+1.0
ID 23 mm -0.8/+0.8
ID 26 mm -1.0/+1.0

Thickness tolerance -0.1/+0.2 mm

| INNEN DRM INSIDE DIAMETER | | AUSSEN DRM OUTSIDE DIAMETER | | THEORETISCHES GEWICHT WEIGHT | | LÄNGE LENGTH | |
|------------------------------|---------|--------------------------------|---------|---------------------------------|--------|-----------------|-----|
| mm | inch | mm | inch | kg/mt | lbs/ft | mt | ft |
| 16 | 5/8" | 18 | 23/32" | 0.09 | 0.06 | 75 | 246 |
| 20 | 25/32" | 22 | 7/8" | 0.12 | 0.08 | 75 | 246 |
| 23 | 29/32" | 25 | 1" | 0.13 | 0.09 | 50 | 164 |
| 26 | 1.1/32" | 28 | 1.3/32" | 0.15 | 0.10 | 50 | 164 |
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All technical specifications apply to a temperature of 23° C ±2° C (ISO 291) – tolerance on all specifications ±5%.

PROZINC



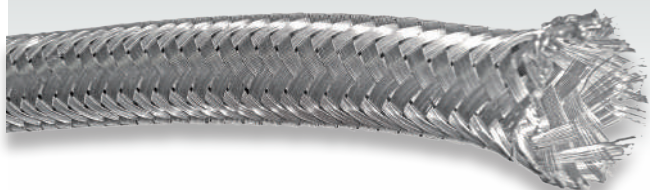
EN APPLICATION

To ensure the correct assembly of our textile protections, we recommend the use of PROZINC.

| INNEN DRM INSIDE DIAMETER | AUSSEN DRM OUTSIDE DIAMETER | LÄNGE LENGTH |
|------------------------------|--------------------------------|-----------------|
| mm | mm | mm |
| 21 | 24 | 31 |
| 22 | 25 | 31 |
| 24 | 27 | 31 |
| 27 | 30 | 34 |
| 29 | 32 | 35 |
| 32 | 35 | 36 |
| 35 | 38 | 36 |
| 37 | 40 | 38 |
| 39 | 42 | 40 |
| 42 | 45 | 42 |
| 46 | 50 | 46 |
| 48 | 52 | 46 |
| 51 | 55 | 48 |
| 62 | 65 | 51 |
| 66 | 70 | 54 |
| 72 | 76 | 56 |
| 80 | 85 | 64 |

All technical specifications apply to a temperature of 23° C ±2° C (ISO 291) – tolerance on all specifications ±5%.

INOX SLEEVE



EN APPLICATION

AISI 304 stainless **braided sleeve** to protect hoses and cables.

- **TEMPERATURE RANGE:** -35°C +120°C

CONSTRUCTION

Characteristics strand

- **Thickness:** 0.22 mm up to ID 16 mm included, 0.30 mm up
- **Numbers:** 10 strands for all diameters
- **Breaking Resistance:** 784 N/mm²
- **Breaking stretching:** 47%

Available on request: braid AISI 316.

| INNEN DRM INSIDE DIAMETER | | THEORETISCHES GEWICHT WEIGHT | | LÄNGE LENGTH | |
|------------------------------|---------|---------------------------------|--------|-----------------|------|
| mm | inch | kg/mt | lbs/ft | mt | ft |
| 10 | 3/8" | 0,098 | 0,052 | 50 | 164 |
| 12 | 1/2" | 0,12 | 0,080 | 50 | 164 |
| 16 | 5/8" | 0,157 | 0,105 | 50 | 164 |
| 20 | 25/32" | 0,195 | 0,131 | 50 | 164 |
| 25 | 1" | 0,240 | 0,161 | 50 | 164 |
| 32 | 1.1/4" | 0,300 | 0,202 | 25 | 82 |
| 40 | 1.9/16" | 0,375 | 0,252 | 25 | 82 |
| 51 | 2" | 0,450 | 0,302 | 25 | 82 |
| 63,5 | 2.1/2" | 0,580 | 0,390 | 20 | 65,5 |
| 76 | 3" | 0,690 | 0,465 | 10 | 32,8 |
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All technical specifications apply to a temperature of 23° C ±2° C (ISO 291) – tolerance on all specifications ±5%.

ZINC SLEEVE



EN APPLICATION

Galvanized **braided sleeve** to protect hoses and cables.

- **TEMPERATURE RANGE:** -35°C +120°C

CONSTRUCTION

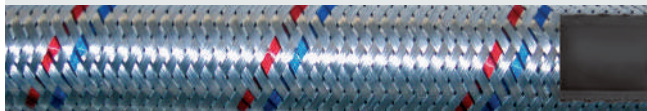
Characteristics strand

- **Thickness:** 0.30 mm
- **Numbers:** 8-10 strands
- **Breaking Resistance:** 410 N/mm²
- **Breaking stretching:** 20-23 %

| INNEN DRM INSIDE DIAMETER | | THEORETISCHES GEWICHT WEIGHT | | LÄNGE LENGTH | |
|------------------------------|---------|---------------------------------|--------|-----------------|------|
| mm | inch | kg/mt | lbs/ft | mt | ft |
| 10 | 3/8" | 0,10 | 0,067 | 50 | 164 |
| 12 | 1/2" | 0,12 | 0,080 | 50 | 164 |
| 16 | 5/8" | 0,16 | 0,107 | 50 | 164 |
| 20 | 3/4" | 0,20 | 0,134 | 50 | 164 |
| 25 | 1" | 0,25 | 0,168 | 50 | 164 |
| 32 | 1.1/4" | 0,32 | 0,215 | 25 | 82 |
| 40 | 1.9/16" | 0,40 | 0,269 | 25 | 82 |
| 51 | 2" | 0,51 | 0,342 | 25 | 82 |
| 63,5 | 2.1/2" | 0,64 | 0,430 | 20 | 65,5 |
| 76 | 3" | 0,76 | 0,510 | 10 | 32,8 |
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All technical specifications apply to a temperature of 23° C ±2° C (ISO 291) – tolerance on all specifications ±5%.

TT/EPDM/ZINC



EN APPLICATION

Galvanized steel wire braid cover one-layer rubber hose suitable for hot water and non corrosive liquids.

- **TEMPERATURE RANGE:** -30°C +100°C

CONSTRUCTION

- **Tube:** black, smooth, heat resistant EPDM rubber. Hardness Shore A: 80±5.
- **Reinforcement/Cover:** galvanized steel wire braid with two stripe: red and blue.
- **Surface:** galvanized braided finished.

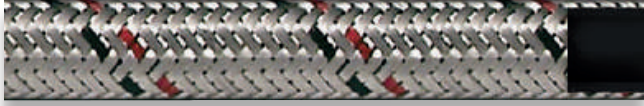
Available on request:

TT/EPDM/INOX: stainless wire braided Cover AISI 304 or 316.

| INNEN DRM INSIDE DIAMETER | | AUSSEN DRM OUTSIDE DIAMETER | | THEORETISCHES GEWICHT WEIGHT | | BETRIEBSDRUCK WORKING PRESSURE | | BERSTDRUCK BURST PRESSURE | | BIEGERADIUS BENDING RADIUS | | LÄNGE LENGTH | |
|------------------------------|---------|--------------------------------|----------|---------------------------------|--------|-----------------------------------|-----|------------------------------|------|-------------------------------|--------|-----------------|------|
| mm | inch | mm | inch | kg/mt | lbs/ft | bar | psi | bar | psi | mm | inch | mt | ft |
| 10 | 3/8" | 15 | 19/32" | 0.25 | 0.17 | 25 | 375 | 75 | 1125 | 100 | 3.94" | 100 | 328 |
| 13 | 1/2" | 19 | 3/4" | 0.40 | 0.27 | 25 | 375 | 75 | 1125 | 130 | 5.12" | 100 | 328 |
| 16 | 5/8" | 23 | 29/32" | 0.49 | 0.33 | 20 | 300 | 60 | 900 | 160 | 6.30" | 50 | 164 |
| 19 | 3/4" | 26 | 1.1/32" | 0.58 | 0.39 | 20 | 300 | 60 | 900 | 190 | 7.48" | 50 | 164 |
| 25 | 1" | 33 | 1.5/16" | 0.80 | 0.54 | 15 | 225 | 45 | 675 | 250 | 9.84" | 50 | 164 |
| 32 | 1.1/4" | 43 | 1.11/16" | 1.13 | 0.76 | 10 | 150 | 30 | 450 | 320 | 12.60" | 40 | 131 |
| 38 | 1.1/2" | 51 | 2" | 1.52 | 1.02 | 10 | 150 | 30 | 450 | 380 | 14.96" | 30 | 98.4 |
| 40 | 1.9/16" | 53 | 2.3/32" | 1.57 | 1.06 | 10 | 150 | 30 | 450 | 400 | 15.75" | 30 | 98.4 |
| 50 | 2" | 64 | 2.17/32" | 2.01 | 1.35 | 10 | 150 | 30 | 450 | 510 | 20.08" | 20 | 65.5 |
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All technical specifications apply to a temperature of 23° C ±2° C (ISO 291) – tolerance on all specifications ±5%.

TT/NBR/ZINC



EN APPLICATION

Galvanized steel wire braid cover one-layer rubber hose suitable for oils and diesel.

Standards: EN ISO 6806 - DIN73379.

• **TEMPERATURE RANGE:** -20°C +90°C

CONSTRUCTION

- **Tube:** black, smooth, petroleum products up to 40% aromatic content resistant NBR rubber.
- **Reinforcement/Cover:** galvanized steel wire braid with black and red stripe.
- **Surface:** galvanized braided finished.

Available on request:

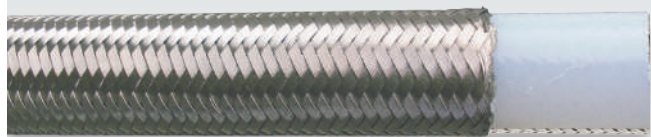
TT/NBR/INOX: stainless wire braided cover.

TT/NBR-73379/ZINC: for fuel up to 50% aromatic.

| INNEN DRM INSIDE DIAMETER | | AUSSEN DRM OUTSIDE DIAMETER | | THEORETISCHES GEWICHT WEIGHT | | BETRIEBSDRUCK WORKING PRESSURE | | BERSTDRUCK BURST PRESSURE | | BIEGERADIUS BENDING RADIUS | | LÄNGE LENGTH | |
|------------------------------|-------|--------------------------------|---------|---------------------------------|--------|-----------------------------------|-----|------------------------------|------|-------------------------------|-------|-----------------|-----|
| mm | inch | mm | inch | kg/mt | lbs/ft | bar | psi | bar | psi | mm | inch | mt | ft |
| 5 | 3/16" | 10 | 3/8" | 0.14 | 0.09 | 25 | 375 | 75 | 1125 | 25 | 1" | 100 | 328 |
| 6 | 1/4" | 11 | 7/16" | 0.16 | 0.11 | 25 | 375 | 75 | 1125 | 30 | 1.18" | 100 | 328 |
| 8 | 5/16" | 13 | 1/2" | 0.23 | 0.15 | 25 | 375 | 75 | 1125 | 40 | 1.57" | 100 | 328 |
| 10 | 3/8" | 15 | 19/32" | 0.28 | 0.19 | 25 | 375 | 75 | 1125 | 50 | 1.97" | 100 | 328 |
| 13 | 1/2" | 19 | 3/4" | 0.38 | 0.26 | 20 | 300 | 60 | 900 | 65 | 2.56" | 100 | 328 |
| 16 | 5/8" | 22 | 7/8" | 0.46 | 0.31 | 20 | 300 | 60 | 900 | 80 | 3.15" | 50 | 164 |
| 19 | 3/4" | 25 | 1" | 0.57 | 0.38 | 15 | 225 | 45 | 675 | 95 | 3.74" | 50 | 164 |
| 25 | 1" | 33 | 1.5/16" | 0.66 | 0.44 | 15 | 225 | 45 | 675 | 125 | 4.92" | 50 | 164 |
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All technical specifications apply to a temperature of 23° C ±2° C (ISO 291) – tolerance on all specifications ±5%.

TT/PTFE/INOX



EN APPLICATION

Stainless wire braided one-layer P.T.F.E hose suitable for hydraulic and lubricant system, fuel and steam high temperature delivery.

- **TEMPERATURE RANGE:** -70°C +260°C

CONSTRUCTION

- **Tube:** P.T.F.E one-layer.
- **Reinforcement/Cover:** stainless AISI 304 wire braid.
- **Surface:** braided.

Available on request:

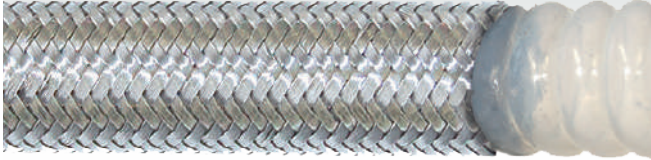
TT/PTFE/INOX/2TR double INOX braided.

TT/PTFE/CON/INOX convoluted.

| INNEN DRM INSIDE DIAMETER | | DICKE THICKNESS | | AUSSEN DRM OUTSIDE DIAMETER | | BETRIEBSDRUCK WORKING PRESSURE | | BERSTDRUCK BURST PRESSURE | | LÄNGE LENGTH | |
|------------------------------|-------|--------------------|--------|--------------------------------|---------|-----------------------------------|------|------------------------------|-------|-----------------|--------|
| mm | inch | mm | inch | mm | inch | bar | psi | bar | psi | mt | ft |
| 3.2 | 1/8" | 0.7 | ± 0.10 | 5.8 | 1/4" | 250 | 3750 | 1000 | 15000 | >10 | >32.8" |
| 5 | 3/16" | 0.7 | ± 0.10 | 7.6 | 5/18" | 200 | 3000 | 800 | 12000 | >10 | >32.8" |
| 6.5 | 1/4" | 0.7 | ± 0.10 | 9 | 11/32" | 175 | 2625 | 700 | 10500 | >10 | >32.8" |
| 8 | 5/16" | 0.7 | ± 0.10 | 11 | 7/16" | 150 | 2250 | 600 | 9000 | >10 | >32.8" |
| 9.5 | 3/8" | 0.7 | ± 0.10 | 12.3 | 15/32" | 135 | 2025 | 540 | 8100 | >10 | >32.8" |
| 13 | 1/2" | 0.7 | ± 0.10 | 16.2 | 5/8" | 120 | 1800 | 480 | 7200 | >10 | >32.8" |
| 16 | 5/8" | 0.7 | ± 0.10 | 19 | 3/4" | 100 | 1500 | 400 | 6000 | >10 | >32.8" |
| 19 | 3/4" | 0.8 | ± 0.10 | 23.1 | 7/8" | 90 | 1350 | 360 | 5400 | >10 | >32.8" |
| 25 | 1" | 0.8 | ± 0.10 | 29.2 | 1.5/32" | 65 | 975 | 260 | 3900 | >10 | >32.8" |
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All technical specifications apply to a temperature of 23° C ±2° C (ISO 291) – tolerance on all specifications ±5%.

TT/PTFE/CON/INOX



EN APPLICATION

Stainless wire braided one-layer P.T.F.E convoluted hose suitable for hydraulic and lubricant system, fuel and steam high temperature delivery.

- **TEMPERATURE RANGE:** -70°C +250°C

CONSTRUCTION

- **Tube:** convoluted P.T.F.E.
- **Reinforcement/Cover:** stainless AISI 304 wire braid.
- **Surface:** braided.

| INNEN DRM INSIDE DIAMETER | | AUSSEN DRM OUTSIDE DIAMETER | | BETRIEBSDRUCK WORKING PRESSURE | | BERSTDRUCK BURST PRESSURE | | BIEGERADIUS BENDING RADIUS | | LÄNGE LENGTH | |
|------------------------------|--------|--------------------------------|----------|-----------------------------------|------|------------------------------|------|-------------------------------|-------|-----------------|--------|
| mm | inch | mm | inch | bar | psi | bar | psi | mm | Inch | mt | ft |
| 6.4 | 1/4" | 9 | 11/32" | 170 | 2550 | 510 | 7650 | 18 | 0.71" | > 10 | > 32.8 |
| 7.9 | 5/16" | 12 | 15/32" | 155 | 2325 | 465 | 6975 | 20 | 0.78" | > 10 | > 32.8 |
| 9.5 | 3/8" | 13 | 1/2" | 140 | 2100 | 420 | 6300 | 22 | 0.87" | > 10 | > 32.8 |
| 12.7 | 1/2" | 18 | 23/32" | 103 | 1545 | 309 | 4635 | 25 | 0.98" | > 10 | > 32.8 |
| 15.9 | 5/8" | 21 | 7/8" | 83 | 1245 | 249 | 3735 | 51 | 2" | > 10 | > 32.8 |
| 19.0 | 3/4" | 24 | 15/16" | 70 | 1050 | 210 | 3150 | 64 | 2.50" | > 10 | > 32.8 |
| 25.4 | 1" | 32 | 1.1/4" | 46 | 690 | 138 | 2070 | 89 | 3.50" | > 10 | > 32.8 |
| 32 | 1.1/4" | 40 | 1.9/16" | 35 | 525 | 105 | 1575 | 125 | 4.92" | > 10 | > 32.8 |
| 38 | 1.1/2" | 49 | 1.15/16" | 30 | 450 | 90 | 1350 | 150 | 5.90" | > 10 | > 32.8 |
| 51 | 2" | 59 | 2.5/16" | 23 | 345 | 69 | 1035 | 200 | 7.88" | > 10 | > 32.8 |
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All technical specifications apply to a temperature of 23° C ±2° C (ISO 291) – tolerance on all specifications ±5%.

SAE 100/R4/ZINC



EN APPLICATION

Galvanized steel wire rubber hose suitable for suction and delivery of hydraulic fluids, mineral oils and fuels.

Standards: SAE J 517 SAE 100 R4.

• **TEMPERATURE RANGE:** -40°C +100°C

CONSTRUCTION

• **Tube:** black, smooth, petroleum products up to 50% aromatic content resistant NBR rubber.

• **Reinforcement:** steel wire helix with high strength synthetic textile plies. Copper wire.

• **Cover:** smooth, fabric finished, black, abrasion, heat, oils, fuels and weathering resistant CR/NBR rubber.

• **Surface:** galvanized braided finished.

• **Branding:** H.T. - FUEL & OIL - S&D - SAE 100 R4.

Available on request:

SAE 100/R4/INOX-Aisi 304 or Aisi 316

| INNEN DRM INSIDE DIAMETER | | AUSSEN DRM OUTSIDE DIAMETER | | THEORETISCHES GEWICHTT WEIGHT | | BETRIEBSDRUCK WORKING PRESSURE | | BERSTDRUCK BURST PRESSURE | | ABSAUGUNG VACUUM | BIEGERADIUS BENDING RADIUS | | LÄNGE LENGTH | |
|------------------------------|----------|--------------------------------|----------|----------------------------------|--------|-----------------------------------|-----|------------------------------|------|---------------------|-------------------------------|--------|-----------------|------|
| mm | inch | mm | inch | kg/mt | lbs/ft | bar | psi | bar | psi | bar | mm | inch | mt | ft |
| 13 | 1/2" | 24 | 15/16" | 0.64 | 0.43 | 10 | 150 | 30 | 450 | 0.8 | 80 | 3.15" | 40 | 131 |
| 16 | 5/8" | 27 | 1.1/16" | 0.71 | 0.47 | 10 | 150 | 30 | 450 | 0.8 | 95 | 3.74" | 40 | 131 |
| 19 | 3/4" | 30 | 1.3/16" | 0.84 | 0.56 | 21 | 315 | 84 | 1260 | 0.8 | 115 | 4.53" | 40 | 131 |
| 22 | 7/8" | 33 | 1.5/16" | 0.91 | 0.61 | 10 | 150 | 30 | 450 | 0.8 | 130 | 5.12" | 40 | 131 |
| 25 | 1" | 37 | 1.15/32" | 1.08 | 0.72 | 17 | 255 | 68 | 1020 | 0.8 | 150 | 5.90" | 40 | 131 |
| 30 | 1.3/16" | 43 | 1.11/16" | 1.37 | 0.91 | 10 | 150 | 30 | 450 | 0.8 | 180 | 7.09" | 40 | 131 |
| 32 | 1.1/4" | 44 | 1.23/32" | 1.44 | 0.96 | 14 | 210 | 56 | 840 | 0.8 | 190 | 7.48" | 40 | 131 |
| 35 | 1.3/8" | 48 | 1.7/8" | 1.63 | 1.09 | 10 | 150 | 30 | 450 | 0.8 | 210 | 8.27" | 40 | 131 |
| 38 | 1.1/2" | 50 | 2" | 1.67 | 1.12 | 10 | 150 | 40 | 600 | 0.8 | 230 | 9.06" | 40 | 131 |
| 40 | 1.9/16" | 53 | 2.3/32" | 1.80 | 1.20 | 10 | 150 | 30 | 450 | 0.8 | 240 | 9.45" | 40 | 131 |
| 42 | 1.21/32" | 56 | 2.7/32" | 2.03 | 1.35 | 10 | 150 | 30 | 450 | 0.8 | 255 | 10.04" | 40 | 131 |
| 45 | 1.3/4" | 59 | 2.5/16" | 2.19 | 1.46 | 10 | 150 | 30 | 450 | 0.8 | 270 | 10.63" | 40 | 131 |
| 51 | 2" | 64 | 2.17/32" | 2.31 | 1.54 | 10 | 150 | 30 | 450 | 0.8 | 305 | 12.00" | 40 | 131 |
| 48 | 1.29/32" | 62 | 2.7/16" | 2.25 | 1.50 | 10 | 150 | 30 | 450 | 0.8 | 610 | 24.02" | 40 | 131 |
| 60 | 2.3/8" | 75 | 3" | 2.97 | 1.98 | 10 | 150 | 30 | 450 | 0.8 | 360 | 14.17" | 40 | 131 |
| 63.5 | 2.1/2" | 78 | 3.1/16" | 3.25 | 2.33 | 10 | 150 | 30 | 450 | 0.8 | 380 | 14.96" | 20 | 65.5 |
| 70 | 2.3/4" | 86 | 3.3/8" | 3.95 | 2.63 | 10 | 150 | 30 | 450 | 0.8 | 420 | 16.53" | 20 | 65.5 |
| 76 | 3" | 92 | 3.5/8" | 4.21 | 2.80 | 10 | 150 | 30 | 450 | 0.8 | 460 | 18.11" | 20 | 65.5 |
| 80 | 3.5/32" | 96 | 3.25/32" | 4.50 | 3.00 | 10 | 150 | 30 | 450 | 0.8 | 480 | 18.90" | 20 | 65.5 |
| 90 | 3.17/32" | 107 | 4.1/8" | 5.01 | 3.34 | 10 | 150 | 30 | 450 | 0.8 | 540 | 21.26" | 20 | 65.5 |
| 102 | 4" | 119 | 4.21/34" | 5.68 | 3.78 | 10 | 150 | 30 | 450 | 0.8 | 610 | 24.02" | 20 | 65.5 |

All technical specifications apply to a temperature of 23° C ±2° C (ISO 291) – tolerance on all specifications ±5%.

SAE 100/R6/ZINC



EN APPLICATION

Galvanized steel wire rubber hose suitable for delivery of hydraulic fluid, oils, lubricants and air.

Standards: SAE J 517 100 R6.

- **TEMPERATURE RANGE:** -40°C +100°C

CONSTRUCTION

- **Tube:** black, smooth NBR rubber.
- **Reinforcement:** high strength synthetic textile braids.
- **Cover:** smooth, fabric finished, black, abrasion, oils and weathering resistant CR rubber.
- **Surface:** galvanized braided finished.
- **Branding:** ink marking "H.T. - SAE 100 R6 1TE - i.d. - production quarter - Lot"

Available on request:

SAE 100/R6/CO: black cotton braid cover.

SAE 100/R6/CO/ZINC: black cotton braid and galvanized steel wire braid cover.

SAE 100/R6/INOX AISI 304 or AISI 316: stainless wire braided.

| INNEN DRM INSIDE DIAMETER | | AUSSEN DRM OUTSIDE DIAMETER | | THEORETISCHES GEWICHT WEIGHT | | BETRIEBSDRUCK WORKING PRESSURE | | BERSTDRUCK BURST PRESSURE | | BIEGERADIUS BENDING RADIUS | | LÄNGE LENGTH | |
|------------------------------|-------|--------------------------------|---------|---------------------------------|--------|-----------------------------------|-----|------------------------------|------|-------------------------------|-------|-----------------|--------|
| mm | inch | mm | inch | kg/mt | lbs/ft | bar | psi | bar | psi | mm | inch | mt | ft |
| 4.8 | 3/16" | 12 | 15/32" | 0.21 | 0.14 | 34 | 510 | 136 | 2040 | 50 | 1.97" | > 10 | > 32.8 |
| 6.4 | 1/4" | 14 | 9/16" | 0.23 | 0.15 | 28 | 420 | 112 | 1680 | 65 | 2.56" | > 10 | > 32.8 |
| 7.9 | 5/16" | 15.5 | 5/8" | 0.26 | 0.17 | 28 | 420 | 112 | 1680 | 80 | 3.15" | > 10 | > 32.8 |
| 9.5 | 3/8" | 17.0 | 21/32" | 0.29 | 0.19 | 28 | 420 | 112 | 1680 | 90 | 3.54" | > 10 | > 32.8 |
| 12.7 | 1/2" | 21.0 | 27/32" | 0.40 | 0.27 | 28 | 420 | 112 | 1680 | 100 | 3.94" | > 10 | > 32.8 |
| 15.9 | 5/8" | 24.3 | 29/32" | 0.48 | 0.32 | 24 | 360 | 96 | 1440 | 125 | 4.92" | > 10 | > 32.8 |
| 19 | 3/4" | 28.0 | 1.3/32" | 0.59 | 0.40 | 21 | 315 | 84 | 1260 | 140 | 5.51" | > 10 | > 32.8 |
| 25.4 | 1" | 35.5 | 1.3/8" | 0.86 | 0.58 | 20 | 300 | 80 | 1200 | 170 | 6.69" | > 10 | > 32.8 |
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All technical specifications apply to a temperature of 23° C ±2° C (ISO 291) – tolerance on all specifications ±5%.

TRECOIL/CO/ZINC



EN APPLICATION

Cotton braided galvanized steel wire rubber hose suitable for delivery of mineral oils, lubricants, unleaded fuel and common cooling liquids. Used for internal combustion engines.

- **TEMPERATURE RANGE:** -20°C +100°C

CONSTRUCTION

- **Tube:** black, smooth, petroleum products up to 50% aromatic content resistant NBR rubber.
- **Reinforcement/Cover:** braided black cotton thread and dipped in a neoprene selfextinguishing solution.
- **Surface:** galvanized braided finished.
- **Branding:** ink marking "H.T.- ECO FUEL - SP482 - B10 TGB/FA DIN 73379/2A TYPE B".

Available on request:
TRECOIL/CO/INOX-Aisi 304 or Aisi 316

| INNEN DRM INSIDE DIAMETER | | AUSSEN DRM OUTSIDE DIAMETER | | THEORETISCHES GEWICHT WEIGHT | | BETRIEBSDRUCK WORKING PRESSURE | | BERSTDRUCK BURST PRESSURE | | BIEGERADIUS BENDING RADIUS | | LÄNGE LENGTH | |
|------------------------------|-------|--------------------------------|---------|---------------------------------|--------|-----------------------------------|-----|------------------------------|-----|-------------------------------|-------|-----------------|-----|
| mm | inch | mm | inch | kg/mt | lbs/ft | bar | psi | bar | psi | mm | inch | mt | ft |
| 3 | 1/8" | 8 | 5/16" | 0.11 | 0.07 | 10 | 150 | 30 | 450 | 25 | 0.98" | 50 | 164 |
| 4 | 1/6" | 9 | 11/32" | 0.13 | 0.09 | 10 | 150 | 30 | 450 | 35 | 1.38" | 50 | 164 |
| 5 | 3/16" | 11 | 7/16" | 0.17 | 0.11 | 10 | 150 | 30 | 450 | 40 | 1.57" | 50 | 164 |
| 6 | 1/4" | 12 | 15/32" | 0.20 | 0.13 | 10 | 150 | 30 | 450 | 50 | 1.97" | 50 | 164 |
| 6 | 1/4" | 14 | 9/16" | 0.25 | 0.17 | 10 | 150 | 30 | 450 | 50 | 1.97" | 50 | 164 |
| 7 | 5/18" | 14 | 9/16" | 0.24 | 0.16 | 10 | 150 | 30 | 450 | 55 | 2.17" | 50 | 164 |
| 7.5 | 5/16" | 15 | 19/32" | 0.29 | 0.19 | 10 | 150 | 30 | 450 | 60 | 2.36" | 50 | 164 |
| 8 | 5/16" | 16 | 5/8" | 0.29 | 0.19 | 10 | 150 | 30 | 450 | 65 | 2.56" | 50 | 164 |
| 10 | 3/8" | 16 | 5/8" | 0.28 | 0.19 | 10 | 150 | 30 | 450 | 80 | 3.15" | 50 | 164 |
| 10 | 3/8" | 18 | 23/32" | 0.33 | 0.22 | 10 | 150 | 30 | 450 | 80 | 3.15" | 50 | 164 |
| 13 | 1/2" | 21 | 27/32" | 0.41 | 0.27 | 10 | 150 | 30 | 450 | 130 | 5.12" | 50 | 164 |
| 16 | 5/8" | 24 | 15/16" | 0.49 | 0.33 | 10 | 150 | 30 | 450 | 160 | 6.30" | 50 | 164 |
| 19 | 3/4" | 28 | 1.3/32" | 0.63 | 0.42 | 10 | 150 | 30 | 450 | 190 | 7.48" | 20 | 82 |
| 25 | 1" | 35 | 1.3/8" | 0.81 | 0.54 | 10 | 150 | 30 | 450 | 250 | 9.84" | 20 | 82 |

All technical specifications apply to a temperature of 23° C ±2° C (ISO 291) – tolerance on all specifications ±5%.

TT/CR/ASTMC542/ZINC



EN APPLICATION

Galvanized steel wire braid Cover one-layer rubber hose suitable for methane, oxygen and other inert gases.

Standards: **ASTM C542**

- **TEMPERATURE RANGE:** -30°C +100°C

CONSTRUCTION

- **Tube:** one-layer, black, smooth self-extinguishing CR rubber. Electrical conductivity $3 \times 10^8 \Omega$. Shore A 75±5 hardness.
- **Reinforcement/Cover:** galvanized steel wire braid with yellow stripe.
- **Surface:** galvanized braided finished.
- **Branding:** ink marking "H.T.- GAS AUTOESTINGUENTE - ASTM C542".

| INNEN DRM INSIDE DIAMETER | | AUSSEN DRM OUTSIDE DIAMETER | | THEORETISCHES GEWICHT WEIGHT | | BETRIEBSDRUCK WORKING PRESSURE | | BERSTDRUCK BURST PRESSURE | | BIEGERADIUS BENDING RADIUS | | LÄNGE LENGTH | |
|------------------------------|------|--------------------------------|----------|---------------------------------|--------|-----------------------------------|-----|------------------------------|-----|-------------------------------|-------|-----------------|-----|
| mm | inch | mm | inch | kg/mt | lbs/ft | bar | psi | bar | psi | mm | inch | mt | ft |
| 13 | 1/2" | 20 | 25/32" | 0.40 | 0.27 | 10 | 150 | 30 | 450 | 80 | 3.15" | 100 | 328 |
| 19 | 3/4" | 30 | 1.3/16" | 0.80 | 0.54 | 10 | 150 | 30 | 450 | 120 | 4.72" | 40 | 131 |
| 25 | 1" | 36 | 1.13/32" | 0.95 | 0.64 | 10 | 150 | 30 | 450 | 150 | 5.91" | 30.5 | 100 |
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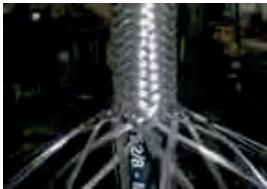
All technical specifications apply to a temperature of 23° C ±2° C (ISO 291) – tolerance on all specifications ±5%.

BRAIDED PRODUCTION



STEEL WIRE

Steel wire braiding from outside diameter 10 mm. up to outside diameter 120 mm.



STAINLESS WIRE BRAID AISI 304 / AISI 316

Stainless wire braiding from outside diameter 6 mm. up to outside diameter 120 mm.



TEXTILE YARN BRAID

Textile yarn braiding from outside diameter 3 mm. up to outside diameter 33 mm.



Hydraulic & Offshore SUPPLIES



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