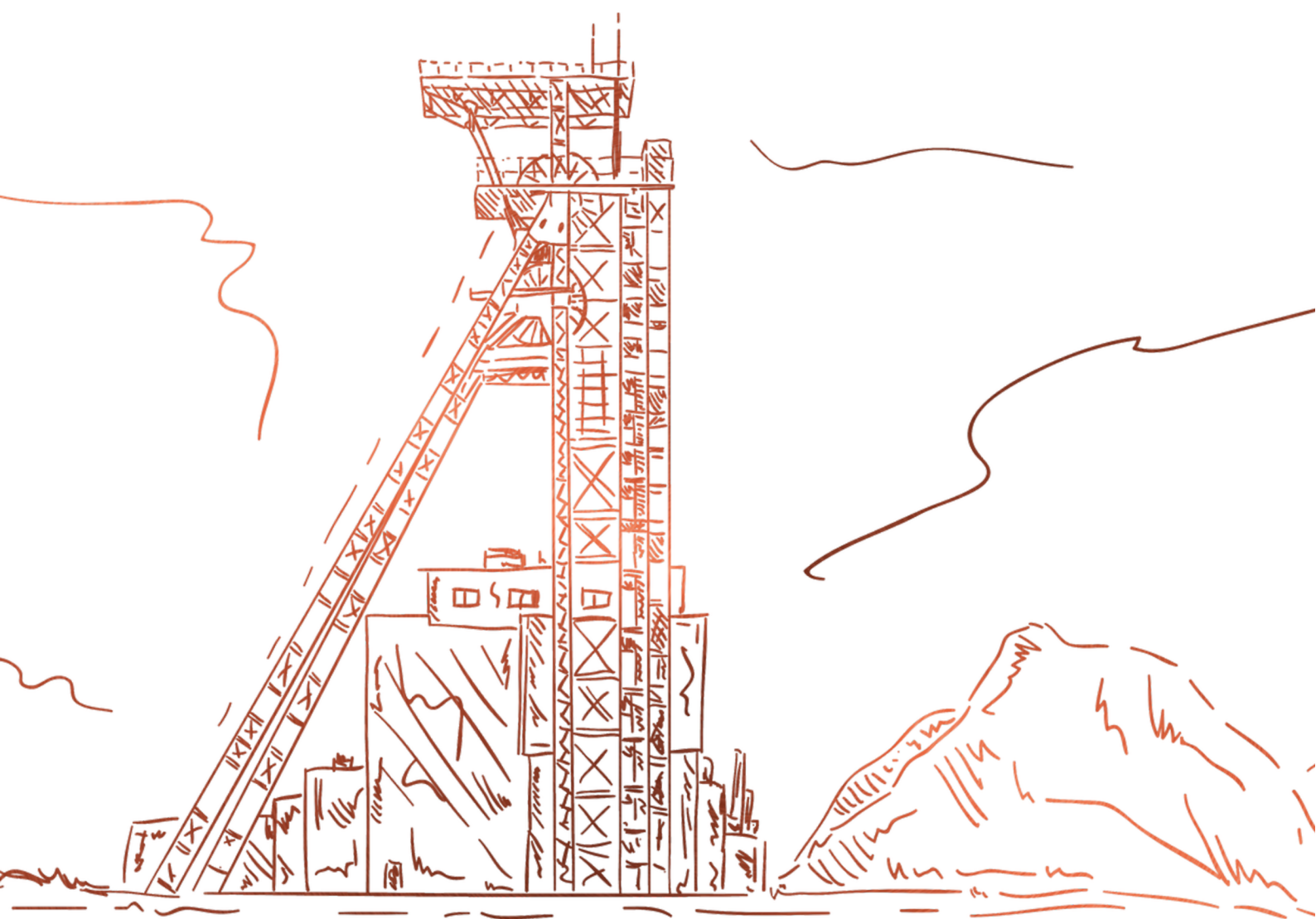


Cables, Wires & Accessories for

# MINING INDUSTRY



**(Channeling  
POWER)** 

# Cables and Wires

## HELUPOWER® MINING PUR



HELUPOWER® REELABILITY PUR-HF MINE

### Cable structure

1. Copper wire bare, finely stranded acc. to DIN VDE 0295 Cl. 5 / IEC 60228 cl.5
2. Core insulation: rubber acc. to DIN VDE 0207-363-1
3. Core identification acc. to DIN VDE 0293-308,
4. Protective conductor: starting with 3 cores,
5. Cores stranded in layers with optimal lay lengths
6. Outer sheath: rubber acc. to DIN VDE 0207-363-2-1
7. Sheath colour: black

### Properties

1. Flame retardant according to IEC 60332-1
2. Oil resistant according to HD/EN/IEC 60811-2-1 DIN/VDE 0473-811-2-1
3. Resistant to UV, Ozone and moisture
4. High mechanical resistance
5. Tear and abrasion resistant
6. Cold resistant
7. Ex-proof

## HELUPOWER® MINING NSSHÖU



### Cable structure

1. Tinned copper conductor, fine wire acc. to DIN VDE 0295 cl.5 / IEC 60228 cl.5
2. Core insulation of rubber (EPR) compound type 3GI3 acc. to DIN VDE 0207-20
3. Core identification acc. to DIN VDE 0293-308
4. GN-YE conductor, 3 cores and above
5. Cores stranded in layers with optimal lay length
6. Inner sheath of rubber compound type GM1b acc. to DIN VDE 0207-21
7. Outer sheath of rubber compound type 5GM5 acc. to DIN VDE 0207-21
8. Sheath colour: yellow

### Properties

1. Ozone resistant
2. High insulation resistance
3. Resistant against hot penetration
4. Low abrasion
5. High notch resistant
6. Resistant against: oils, ozone, fats and chemicals

## HELUPOWER® MINING (N)TSCGEWÖU



(N)TSCGEWÖU

### Cable structure

1. Conductor: Electrolytic, stranded, tinned copper wire DIN VDE 0295 Class 5
2. Inner semi-conducting layer
3. Core insulation of HEPR
4. Outer semi-conducting layer
5. Ground conductor with semi-conductive layer
6. Cores concentrically stranded
7. Inner sheath, sheath colour red
8. Antitorsional protection
9. Outer sheath of chloroprene rubber compound type 5GM3
10. Sheath colour red

### Properties

1. maximum permissible speed 200 m/min is allowed when operating drums in one direction
2. extremely torsion resistant
3. resistant against oils and fats, atmospheric exposure and UV-radiation

### Other types

1. Fixed
2. Wet
3. Trailing
4. Tunnel Boring Machine

## TOPFLEX®-EMV-UV-3-PLUS-2YSLCYK-J



### Cable structure

1. Copper wire bare, finely stranded acc. to DIN VDE 0295 Class 5 / IEC 60228 Class 5
2. Core insulation: PE
3. Core identification: brown, black, grey, green-yellow (divided into thirds)
4. Protective conductor: GN-YE divided into thirds (3+3-core structure)
5. Cores stranded with optimal lay lengths
  1. Screen: plastic-coated aluminium foil (St)
  2. Screen: braided screen of tinned copper wires, approx. coverage 85%
6. Outer sheath: Special-PVC
7. Sheath colour: black (RAL 9005)
8. Length marking: in metres

### Properties

1. Resistant to UV radiation and weather effects.
2. Free of cadmium, silicon and substances harmful to the wetness of the paint.
3. Symmetrical 3-PLUS composition with better EMC than 4 core composition.
4. Optimal separation enables uninterrupted frequency converter operation.
5. Low coupling resistance for good electromagnetic compatibility.
6. Low mutual capacitance at the core due to PE core insulation and low screen capacity, enabling low-loss power transmission.

## MULTIFLEX 512®-C-PUR



### Cable structure

1. Copper wire bare, extra finely stranded acc. to DIN VDE 0295 Class 6
2. Core insulation: Special-PP
3. Protective conductor: starting with 3 cores,
  - G = with protective conductor GN-YE, in the outer layer,
  - x = without protective conductor
4. Cores stranded in layers with optimally matched lay lengths
5. Fleece wrapping over each stranding layer, from 4 mm<sup>2</sup> without fleece wrapping
6. Inner sheath: TPE
7. Screen: braided screen of tinned copper wires, approx. coverage 85%
8. Outer sheath: Special grade of full polyurethane acc. to DIN VDE 0207-363-10-2
9. Sheath colour: grey (RAL 7001)
10. Length marking: in metres

### Properties

1. resistant to: oil, UV radiation, ozone, oxygen, weathering effects, hydrolysis, microbes, coolants, hydraulic fluids, acids, alkalis, greases, seawater and wastewater
2. highly abrasion-resistant, notch-resistant, tear-resistant, cut-resistant, wear-resistant, low adhesion
3. for outdoor use
4. suitable for use in drag chains
5. halogen-free
6. the materials used during manufacturing are cadmium-free, contain no silicone and are free from substances harmful to the wetting properties of lacquers

## KOMPOSPEED® 600-C



### Cable structure

1. Tinned copper, extra fine wire conductors, bunch stranded to DIN VDE 0295 cl.6, col. 4, BS 6360 cl.6 and IEC 60228 cl.6
2. Core insulation of special thermoplastic polymer, natural coloured
3. Outer sheath of special polyolefin
4. Screen of tinned cu-braid, coverage approx. 85%
5. Outer sheath of special polyolefin
6. Sheath colour black (RAL 9005)

### Properties

1. Very good oil resistant
2. Halogen free
3. Abrasion resistant
4. Resistant to coolants, microbes UV-radiation, weather, hydrofluoric acid, hydrochloric acid, Diluted sulfuric acid
5. The materials used in manufacture are cadmium-free and contain silicone and free from substances harmful to the wetting properties of lacquers.=

## HELUPOWER® MINING (N)SHTÖU



### Cable structure

1. Copper conductor tinned, finely stranded acc. to DIN VDE 0295 Class 5 / IEC 60228 Class 5
2. Core insulation: rubber acc. to DIN VDE 0207-20 (compound type 3GI3)
3. Core identification acc. to DIN VDE 0293-308
4. G = with protective conductor GN-YE, in the outer layer
5. Cores stranded in layers with optimal lay lengths
6. Textile bandage
7. Inner sheath: Rubber
8. Anti-torsion protective layer
9. Outer sheath: rubber acc. to DIN VDE 0207-21 (compound type 5GM3)
10. Sheath colour: black

### Properties

1. Resistant to: oil, ozone, solvents, petrol, acids, chemicals, greases
2. Abrasion-resistant
3. For outdoor use
4. Operating parameters for reeling applications
5. Acceleration (max.): 0.4 m/s<sup>2</sup>
6. Velocity (max.): 120 m/min
7. For horizontal reeling operations

## HELUPOWER® MINING (N)SHTÖU-V



### Cable structure

1. Tinned copper conductor, to DIN VDE 0295 cl.5, fine wire, BS 6360 cl.5, IEC 60228 cl.5
2. Core insulation of special rubber compound type 3GI3 to DIN VDE 207 part 20
3. Core identification to DIN VDE 0293-308
4. GN-YE conductor
5. Depending on dimension/structure with Kevlar fillers
6. Inner sheath of special rubber compound type 5GM5 to DIN VDE 0207 part 21
7. Torsion protection between inner and outer sheath
8. Outer sheath of special rubber compound type 5GM5 to DIN VDE 0207 part 21
9. Sheath colour: yellow

### Properties

1. Designed and developed for vertical reeling applications.
2. Resistant against : acids, fats, gasoline, solvents and chemicals.

## H07RN-F / 07RN-F



### Cable structure

1. Copper wire bare, finely stranded acc. to DIN VDE 0295 Cl. 5 / IEC 60228 cl.5
2. Core insulation: rubber acc. to DIN VDE 0207-363-1
3. Core identification acc. to DIN VDE 0293-308,
4. Protective conductor: starting with 3 cores,
5. Cores stranded in layers with optimal lay lengths
6. Outer sheath: rubber acc. to DIN VDE 0207-363-2-1
7. Sheath colour: black

### Properties

1. resistant to: oil, weathering effects
2. for outdoor use



# Cables Glands

## HELUTOP® HT-MS

### Structure

1. Material: Brass, nickel plated
2. Clamp: Polyamide (PA) 6
3. Seal: Chloroprene rubber (CR)
4. O-ring: Nitrile butadiene rubber (NBR)



### Properties

1. optimum strain relief through clamping lamella
2. easy to assemble, time and cost savings
3. watertight, dust-tight
4. large clamping areas

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# Conduit

## Anaconda Sealtite® OR

### Structure

1. Material: steel galvanized
2. Outer sheath material: Polyvinylchlorid (PVC)
3. reinforced, galvanised and spiral wound steel band
4. with latched profile
5. continuous cord seal
6. extruded plastic sheath



### Properties

1. resistant to: oil, greases, alkalis, acids
2. UV resistant

## SPR-EDU-AS

### Structure

1. Material: Cold strip acc. to DIN 1624 St 2, Fe/ Zn 3, galvanized
2. with steel wire braiding
3. with latched profile



### Properties

1. high tensile and transverse pressure load rating
2. high flexible

# Drag Chains

## **SLE Steel Chain**

The ideal choice for long self-supporting lengths, large quantities of cable and heavy hydraulic hoses

### **Applications**

Machine tools, handling technology, conveyor and lifting technology, steelwork and drilling

### **Advantages**

1. Available in steel, stainless steel and hardened versions
2. Bar partitioning in many variants
3. Easy to shorten or extend
4. Cover plates protect joint mechanisms



## **GKA Large Customised Steel Chain**

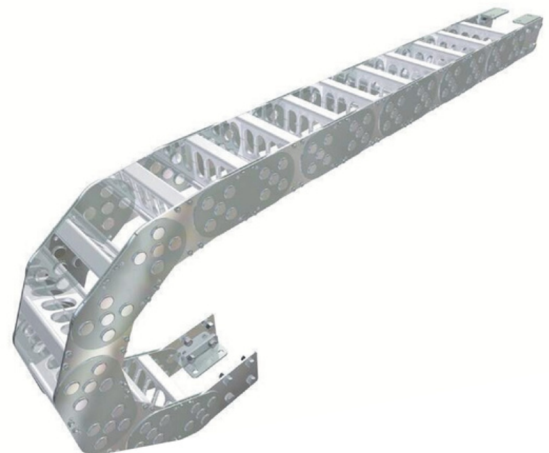
Large steel chain for high cable quantities and hoses with large outer diameters as well as unsupported lengths up to 18 m

### **Applications**

Rolling mills, offshore plants, large machine tools

### **Advantages**

1. Extra high stability
2. Variable interior design
3. Bar lengths up to 1,200 mm possible
4. Also available in stainless steel and customised versions



## **SFK Steel Spiral Tube**

Optimal protection of cables and hoses against hot metal chips, welding sputter and flying sparks

### **Applications**

Machine tools and special machines with short travel distance and low number of strokes

### **Advantages**

1. Closed steel jacket with retracted spring steel strip
2. Large usable cross-sections with small external dimensions
3. Optimum cable protection Several connection variants available





# Drag Chains

## Marathon System

1. No repeated bending
2. No increased starting torques abrasion and wear-minimizing
3. Moving forces reduced by up to 90% forces into the direction of energy chain

