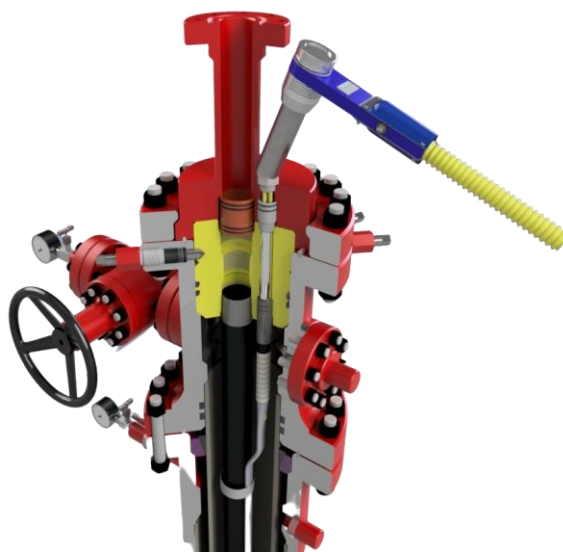


TECHNICAL SPECIFICATIONS OF SURFACE CONNECTOR

| | |
|---------------------|---|
| Product | WELLHEAD SURFACE CONNECTOR & PENETRATOR SYSTEM |
| Product Name | SCORPION WELLHEAD SURFACE CONNECTOR & PENETRATOR SYSTEM |
| Brand | SURFCO |



ELECTRICAL SPECIFICATIONS

| | |
|---------------------------|--|
| Voltage | 5000 VAC |
| Max Current | 215 A |
| AWG and cable type | Triple phase cable # 1/0 AWG, # 2 AWG, # 4 AWG, 3 cond. 1/0 AWG XLPE 5KV, CCW (continuously welded armor), 3 simetric ground connections |

MECHANICAL SPECIFICATIONS

| | |
|-------------------|---|
| Material | ANSI 4130/4140 nitrided or tropicalized, 304/321 stainless steel or other available alloys with API 60K minimum grade complying with NACE MR0175. |
| Insulation | Ultem / Derlin / Insulating epoxy Matrix |
| Orings | Viton or AFLAS |
| Contacts | Beryllum Copper |

GENERAL SPECIFICATIONS

| | |
|--------------------|---------------|
| Pressure | 5000 PSI |
| Temperature | -40°F a 400°F |

FEATURES

| | |
|---------------------------|--|
| Adaptability | For round or flat cable configurations and all AWG gauges. |
| Enclosure | Heavy duty (CSA C22.2 No 159) |
| Reusable | Redress kit |
| Splices | No splices |
| Splice box | N/A, direct plug |
| Penetratory system | Triple redundancy seals |

CLASSIFICATIONS

Class 1, Div 1, Groups C & D

APPLICABLE STANDARDS

| |
|--|
| NEMAN ICS6: System Enclosure: Proposed with elastomers, cork and plastic polyetherimide (PEI) Ultem. |
| NFPA 70: Take-up safety at the surface connector level. |
| NACE MR0175, Standard for H2S environments. Protected with inox joined with Viton and Aflas type elastomer system. |
| API 6A: Threading system at bonnet level, with a 90 a connection. |
| API RP 11S6: Compliance with Hi-Pot test certificates. |
| ASTM D 1414: Standard Test Methods for Rubber O-rings |
| CAN/CSA-C22.2 No 30-M1986 |
| CAN/CSA-C22.2 No. 174-M1984 |
| CSA-C22.2 No 159 -2016 |
| CSA-C22.2 No 182.1-2013 |
| CSA-C22.2 No 182.3-M1987 (R2014) |
| CSA C22.2 No 94.2-15 |
| CSA C22.2 No 60529:05 (R2015) |
| UL 1203 - 2013 |
| UL 2225 - 2013 |
| UL 1682 - 2013 |
| UL 1977 - 2016 |
| NEC, ANSI, CSA / UL, API, NACE, ASTM, NEMAN |

TECHNICAL SPECIFICATIONS INJECTION MANDREL - HYDRACHEM

Product Name: HYDRACHEM INJECTION MANDREL

Brand: HYDRAHEAD

MECHANICAL SPECIFICATIONS

Material:
 Body: 304SS
 Injector Body: 316SS
 Injector Spring: Inconel X750

OD Max : Max OD: 4,56"

Connections: Threaded connections 2-7/8 EU or 2-3/8 EU

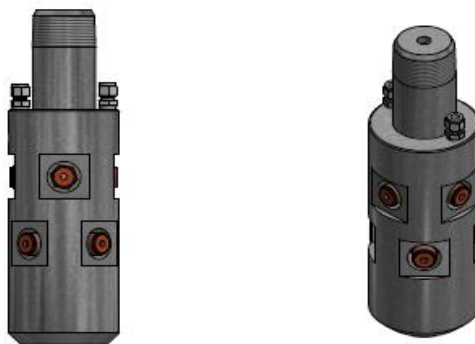
PHYSICAL SPECIFICATIONS

Work Pressure 5000 PSI

Temperature 500°F

Environments: CO₂ & H₂S

SCHEMATIC



ADVANTAGES

Greater efficiency in chemical injection downhole, increasing the run life of the equipment.

8 injection ports covering 360° of the annular.

EU PIN y BOX threaded connections allow assembly in tandem or with other centralizing components.

Compatible with Chemical Injector Crossover for applications with Desanders.

Resistant to corrosive environments.

Connection capacity of 2 chemical injection lines (compatible)

APPLICATIONS

Corrosion inhibitors

Organic inhibitors: Asphaltenes, scale, paraffins.

Demulsifying injection

Injection of flow enhancers


OTHER(S)

Adaptability: Equipment is assembled below the ESP equipment using EU threaded connections.

Workload: Sandy and gaseous wells

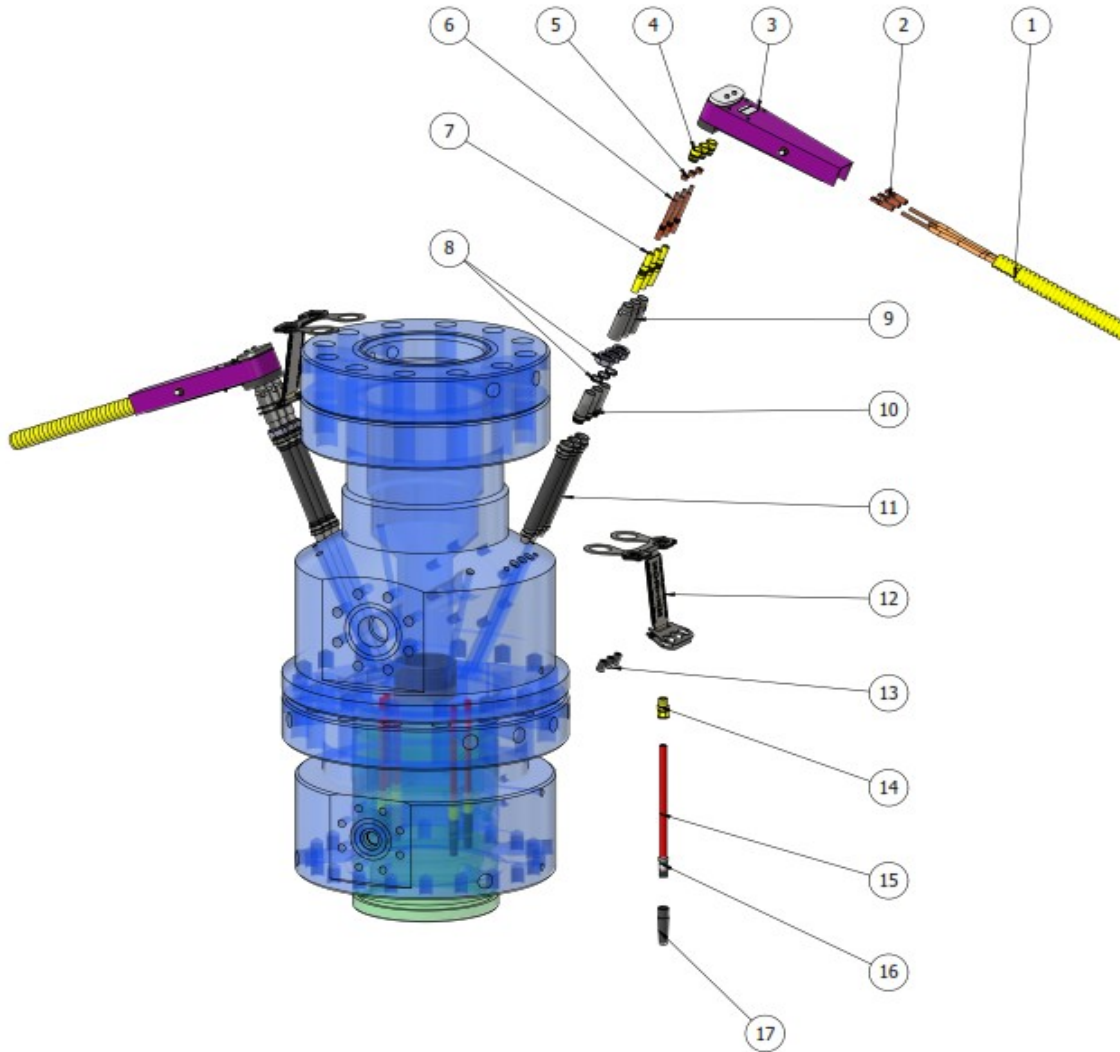
Reusable: Equipment repairable in 100% of its parts

Origin Country Ecuador

| SURFCO | TECHNICAL DATA SHEET | | Código: | A-IP-005-02 |
|--|---|--|----------|-------------|
| | | | Versión | 02 |
| | | | Emisión: | 10/01/2024 |
| TECHNICAL SPECIFICATIONS OF SURFACE CONNECTOR | | | | |
| Product | WELLHEAD SURFACE ELECTRICAL CONNECTOR | | | |
| Product Name | ZODIAK WELLHEAD SURFACE ELECTRICAL CONNECTOR (3-LEG) | | | |
| Brand | SURFCO | | | |
|  | | | | |
| ELECTRICAL SPECIFICATIONS | | | | |
| Voltage | 5000 VAC | | | |
| Max Current | 215 A | | | |
| AWG and cable type | Three-phase cable # 1/0 AWG, # 2 AWG, # 4 AWG, 5KV, shielded, MC/HL Metal Clad/Hazardous Locations, CCW (continuously welded armor), 3 simetric ground conections | | | |
| MECHANICAL SPECIFICATIONS | | | | |
| Material: | AISI 4130/4140 nitrided or tropicalized, 304/321 stainless steel or other available alloys with API 60K minimum grade complying with NACE MR0175. | | | |
| Insulation | Ultem™ / EPDM / Insulating epoxy Matrix | | | |
| Orings | VITON or AFLAS. | | | |
| Contacts | Cobre Beryllium. | | | |
| GENERAL SPECIFICATIONS | | | | |
| Pressure | 5000 PSI | | | |
| Temperature | -40°F a 400°F | | | |
| FEATURES | | | | |
| Adaptability | For round or flat cable configuration and all AWG gauges. | | | |
| Enclosure | Heavy duty (CSA C22,2 No 159). | | | |
| Reusable | Redress kit | | | |
| Splices | No splices | | | |
| Splice box | N/A, direct plug | | | |
| Penetratory system | Triple redundancy seals | | | |
| CLASSIFICATIONS | | | | |
| Class 1, Divisions. 1&2, Groups D (NEC National Electric Code) | | | | |
| APPLICABLE STANDARDS | | | | |
| NEMA ICS6: Industrial Control and System Enclosure: Proposed with elastomers, cork and plastic polyetherimide (PEI) Ultem. | | | | |
| NFPA 70: Take-up safety at the surface connector level. | | | | |
| NACE MR0175, Standard for H2S environments. Protected with inox joined with Viton and Aflas type elastomer system. | | | | |
| API 6A: Specification for Wellhead and Christmas Tree Equipment: Threading system at bonnet level, with a 90 a connection. | | | | |
| API RP 11S6: Testing of Electric Submersible Pump Cable Systems: Compliance with Hi-Pot test certificates. | | | | |
| ASTM D 1414: Standard Test Methods for Rubber O-rings | | | | |
| CSA-C22.2 No 30:20 Explosion-proof equipment | | | | |
| CSA-C22.2 No. 174-18 (R2022) Cable and cable glands for use in hazardous locations | | | | |
| CSA-C22.2 No 159:18 (R2022) Plugs, connectors, receptacles, and similar wiring devices for use in hazardous locations | | | | |
| CSA-C22.2 No 182.1:17 (R2021) Plugs receptables, and cable connectors of the pin and sleeve type | | | | |
| CSA-C22.2 No 182.3-16 (R2021) Special use attachmente plugs, receptacles and connectors | | | | |
| CSA C22.2 No 94.2:20 Enclosures for electrical equipment, environmental considerations | | | | |
| CSA C22.2 No 60529:16 (R2021) Degrees of protection provided by enclosures (IP Code). | | | | |
| UL 1203 - 2023 Explosion Proof and Dust-Ignition Proof Electrical Equipment for Use in Hazardous (Classified) Locations | | | | |
| UL 2225 - 2022 Cables and Cable-Fitting For Use In Hazardous (Classified) Locations | | | | |
| UL 1682 - 2017 Plugs, Receptacles, and Cable Connectors of the Pin and Sleeve Type | | | | |
| UL 1977 - 2022 Component Connectors for Use in Data, Signal, Control and Power Applications | | | | |
| NEC, ANSI, CSA / UL, API, NACE, ASTM, NEMA | | | | |

TECHNICAL SPECIFICATIONS OF SURFACE CONNECTOR

| | |
|--------------|--|
| Product | WELLHEAD SURFACE ELECTRICAL CONNECTOR |
| Product Name | ZODIAC WELLHEAD SURFACE ELECTRICAL CONNECTOR (3-LEG) |
| Brand | SURFCO |

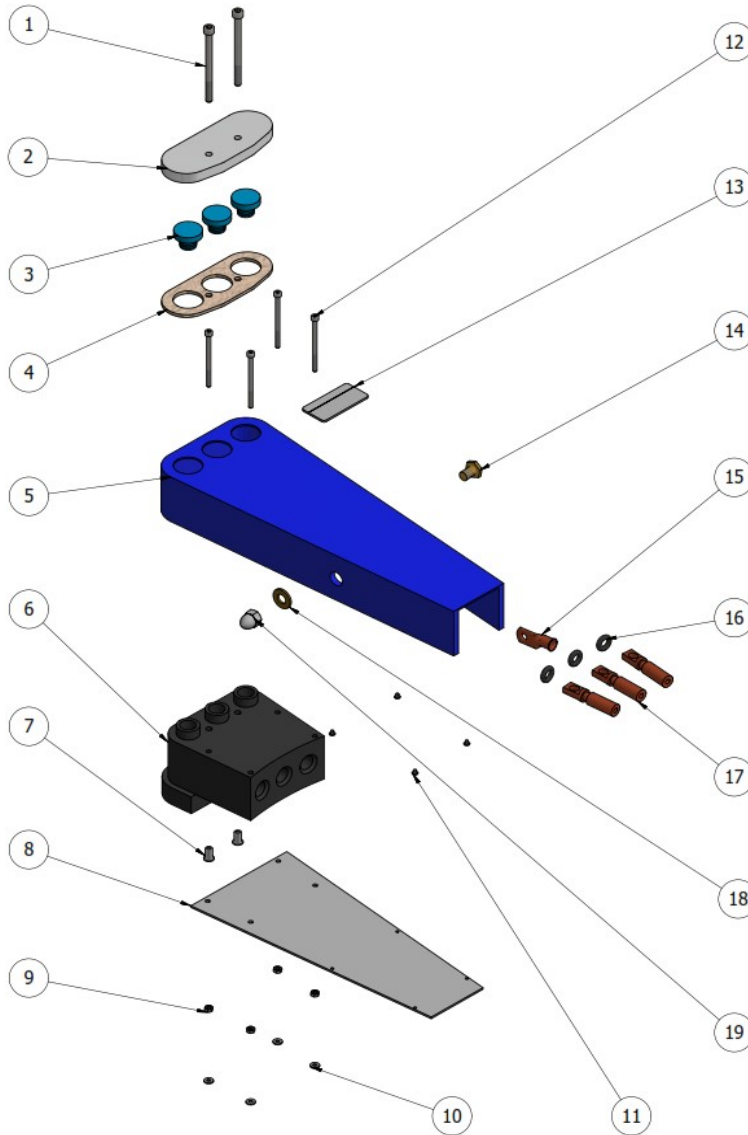


INTERNAL COMPONENTS - SINGLE & DUAL COMPLETION

| No. | PARTS | QUANTITY / (1EA) |
|-----|---|------------------|
| 1 | SURFACE CABLE ROUND OR FLAT | 1 |
| 2 | CABLE ADAPTOR Z (3ea O-Ring 0-632) | 3 |
| 3 | SHELL DUAL Z | 1 |
| 4 | CROWN Z (3ea O-Ring M1x23,5 ID - BN7 / 3ea O-Ring M1x19,5 ID - BN7) | 3 |
| 5 | MINIPEN NUT Z | 3 |
| 6 | MINIPEN CONDUCTOR Z (6ea O-Ring 2-012) | 3 |
| 7 | MINIPEN INSULATOR (9ea O-Ring 2-016) | 3 |
| 8 | FITTING 1/2 NPT X 1" ID Z (Nut & Ferrule) | 3 |
| 9 | HEAD Z UPPER (6ea O-Ring 2-022) | 3 |
| 10 | HEAD Z LOWER (6ea O-Ring M1x19,5 ID - BN7) | 3 |
| 11 | HIGH PRESSURE HOSE Z x 3/4" or 1/2" NPT | 3 |
| 12 | STAND ZODIAC | 3 |
| 13 | HOLE SEAL Z FOR 1/2" or 3/4" | 3 |
| 14 | FITTING 1/2" or 3/4" NPT x ID 5/8" TBG Z | 3 |
| 15 | PIPE OD 5/8" X 17" | 3 |
| 16 | D-ADAPTOR | 3 |
| 17 | CONSTRUCTOR | 3 |

TECHNICAL SPECIFICATIONS OF SURFACE CONNECTOR

| | |
|--------------|--|
| Product | WELLHEAD SURFACE ELECTRICAL CONNECTOR |
| Product Name | ZODIAC WELLHEAD SURFACE ELECTRICAL CONNECTOR (3-LEG) |
| Brand | SURFCO |



INTERNAL COMPONENTS

| No. | PARTS | QUANTITY |
|-----|--|----------|
| 1 | SOCKET SCREW 3/16" X 1/4"-20 X 3-1/2"Z | 2 |
| 2 | CAP Z | 1 |
| 3 | SEAL NITRILE CAP Z | 3 |
| 4 | SPACER GASKET Z | 1 |
| 5 | SHELL DUAL Z | 1 |
| 6 | COBRA D ZODIAC | 1 |
| 7 | SEX BOLT 5/16" BARREAL 1/4"-20 Z | 2 |
| 8 | SHELL ZODIAC LID | 1 |
| 9 | MACHINE NUT 3/8" #10-24 Z | 4 |
| 10 | FLAT WASHER 18-8 #10-Z | 4 |
| 11 | MACHINE SCREW #4-40 X 3/8" Z | 4 |
| 12 | MACHINE SCREW 5/32w #10-24 X 2-1/2"Z | 4 |
| 13 | IDENTIFICATION PLATE | 1 |
| 14 | GROUND BOLT Z | 1 |
| 15 | GROUND COPPER TERMINAL Z | 1 |
| 16 | O-RING 0-632 | 3 |
| 17 | CABLE ADAPTOR Z | 3 |
| 18 | WASHER GROUND BOLT | 1 |
| 19 | GROUND NUT | 1 |