

RYR Fluid Solutions



Pumping Systems and Related Services

**Reduce Operating Costs
With Flexible Water
Management Solutions**



www.ryrfluidsolutions.com

Leadership Team



Team of former senior managers with unmatched experience across the spectrum of artificial lift and surface pumping business with vast operational background



Ariel Blanco – CEO

Oil and Gas Executive with **29 years of experience in the Artificial Lift Industry**. Petroleum Engineer with MBA in International Business Administration, Sales and Marketing. Extensive knowledge and reputation in the Management and Leadership of Companies in the Hydrocarbons sector, with important responsibilities in Business Management, and the Financial results of the companies under his charge. Local and international experience (Venezuela and Ecuador), for **17 years at Wood Group ESP**, and **2 years as GE Oil & Gas**, occupying multiple operational positions, including from field service, applications engineering, manufacturing, quality, sales, marketing, operations, finance, management and executive leadership. Joined **Valiant Artificial Lift Solutions in 2016 as Vice President for Latin America**, opened operations in Colombia, Ecuador, Peru and Venezuela. Most recently as **President for Latin America** of Borets International, responsible for Colombia, Venezuela, Ecuador and Brazil operations, led the incorporation of the HPS line of pumps in the region. **CEO of RYR Fluid Solutions** and visible leader of the company at a regional level.

Agenda

Business Concept

Scope of the Services

Product Portfolio

Packaging – Turnkey

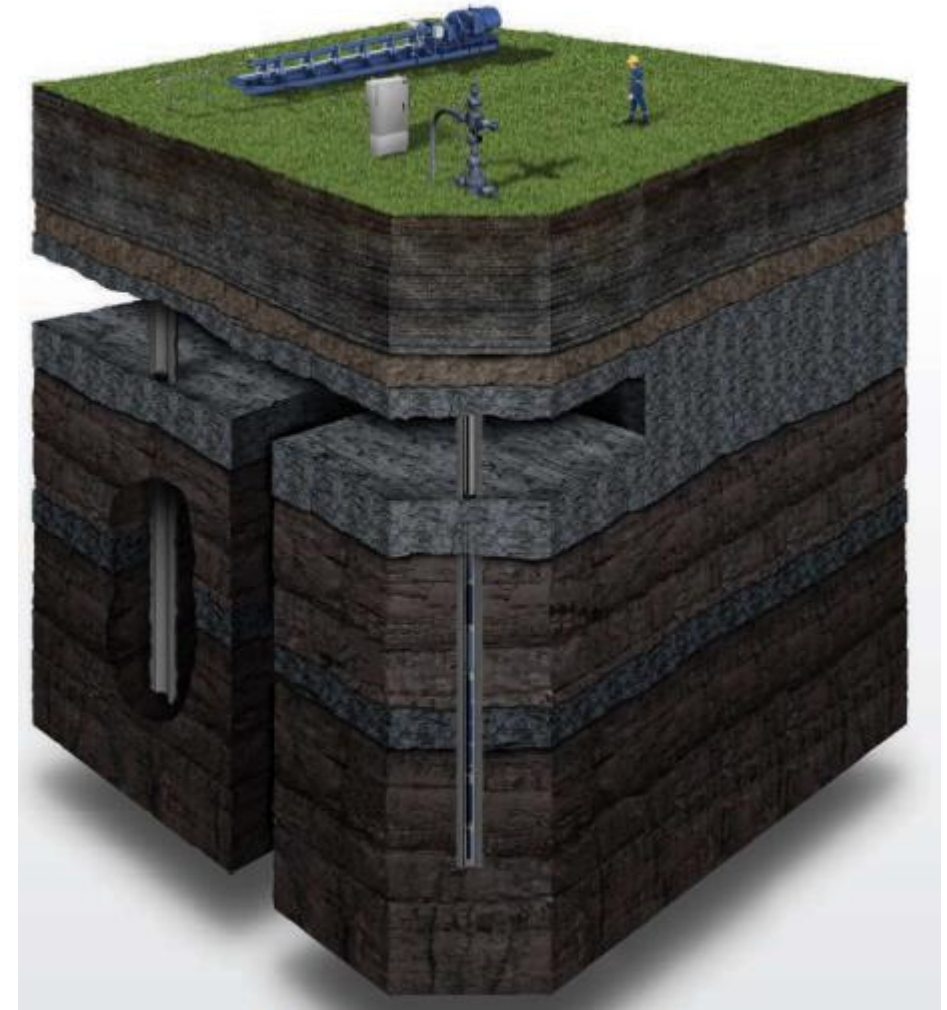
Services

Customers

Value Proposition

Business Concept

- Efficiency represents big money in **Power Savings** – Utilities cost.
- Artificial Lifting and Pumping Water, a **Global Need** for most of the Industries (Oil & Gas, Mining, Construction, Residential).
- **Is not just selling a pump**, is delivering a Pumping Solution with Flexible Alternatives.
- **Environmental regulations** demands Water Treatment, Disposal and Injection, Mining Dewatering, Minerals Transportation and Large Constructions (Residential and Commercial Buildings).
- Artificial Lift and Water Management requirements **Increase as Production Increase**.
- Pumping fluids is required **across the project's life** (early facilities, temporary installations, permanent production)



Services per Area



Manufacturing, Assembly and Distribution	<ul style="list-style-type: none"> – Distribution and Supply of Horizontal Pumping Systems (HPS), Electric Submersible Pumps (ESP), Variable Frequency Drives and Surface Controllers. 	
	<ul style="list-style-type: none"> – Electrical installations, instrumentation & control, PLC programming for Artificial Lift and Horizontal Pumping Systems. 	
	<ul style="list-style-type: none"> – Manufacture and assembly of Coolers Systems for Electric Motors and HPS Thrust Chambers. – Comprehensive small turnkey projects or EPC (engineering, procurement & construction), for HPS packaging systems, and operation of pumping facilities. – HPS Equipment Retrofits – All brands 	
Engineering for Surface Pumping Systems	<ul style="list-style-type: none"> – Conceptual, process, basic and detailed engineering for HPS. – Engineering Studies, Design and Analysis, Optimization to Improve Power Efficiency – Application Engineering and Sizing Support ESP's, HPS, Motors and Drives Selection 	
Maintenance and Field Services	<ul style="list-style-type: none"> – Commissioning, operation and integral maintenance of Pumping Systems. Preventive, predictive and corrective maintenance in mechanical, electrical, instrumentation and control equipment's 	

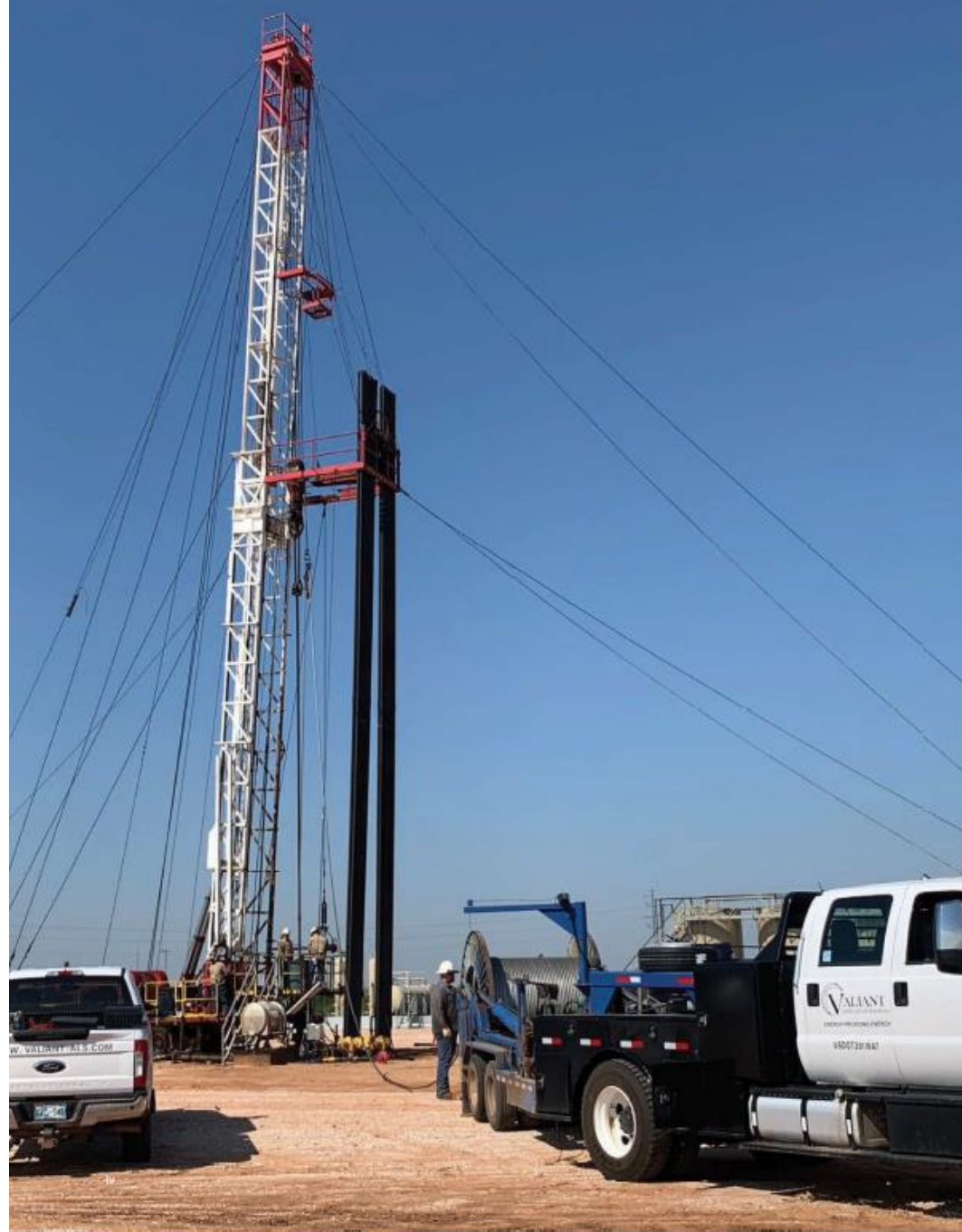
Why?



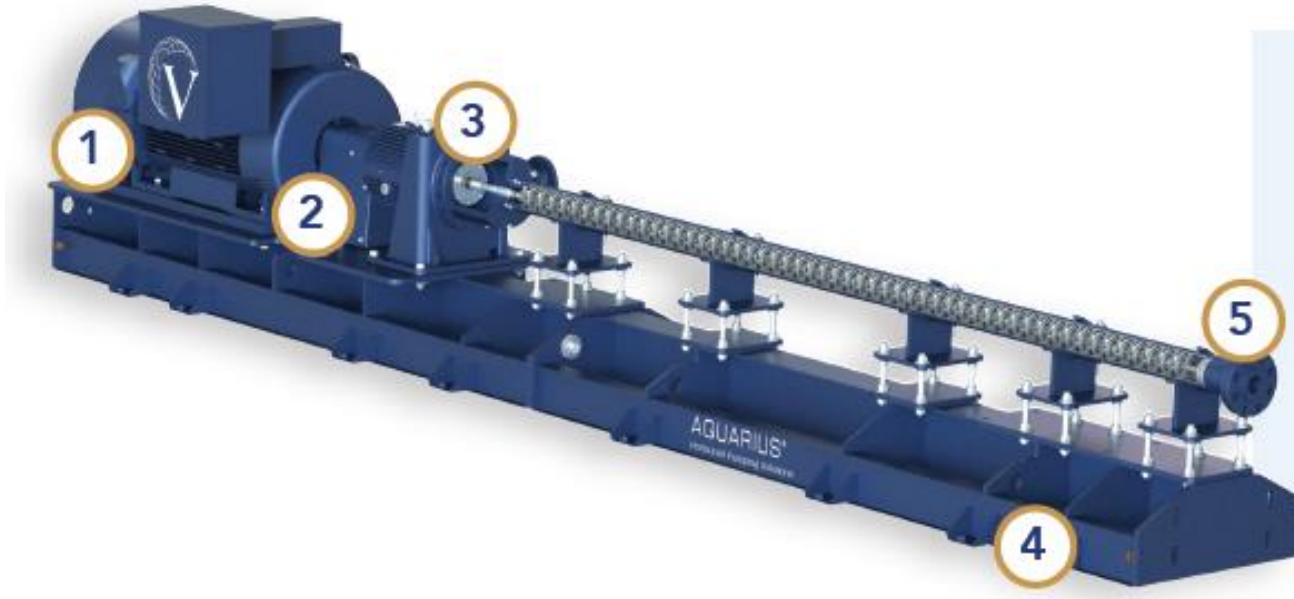
- 10% of all the world's electrical energy is used for Water Pumps.
- Oil Production will increase during the following 50 -100 years – EOR Projects
- Coal Bed Methane Dewatering, Copper and Gold Mines will demand huge volume of water.
- Construction, Residential, Commercial Facilities will increase water demand.
- Efficiency on Water Management represents big money in Power Savings – Utilities cost.

Services & Products

Authorized Distributor Of:



Surface Pumping Systems



Pumping Applications:

- Waterflood injection – EOR - disposal
 - Saltwater disposal/injection
 - CO2 injection/sequestration
- Jet pumping power fluid
 - Crude oil transfer
 - Condensate transfer
- Mining & Municipal
 - Offshore fluids pumping



- Abrasion Resistance Stages - ARM
- High Viscosity Pumps
- High Gas Pumps
- High Volume and Hi-Efficiency Stages Configuration
- Improved Horizontal Pumping Solutions Design



Horizontal Pumping Systems

Authorized Distributor Of:

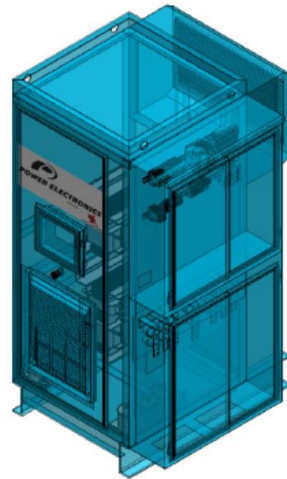


Additional Products:

- Mechanical Seals
- Pump Sections
- Instrumentation
- Controllers – PLC's
- Starters
- Electric Motors
- Field Services



HPS - Horizontal Pumping Systems



Variable Speed Drives



Coolers for Motors



Coolers for Thrust Chambers

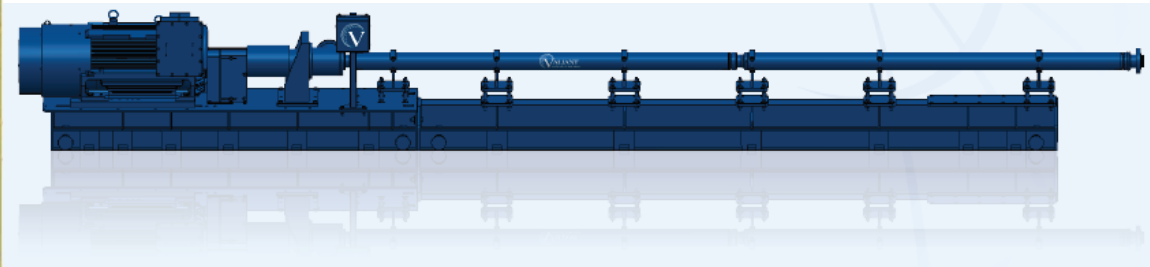


Hi-Load Thrust Chambers



Horizontal Pumping Systems

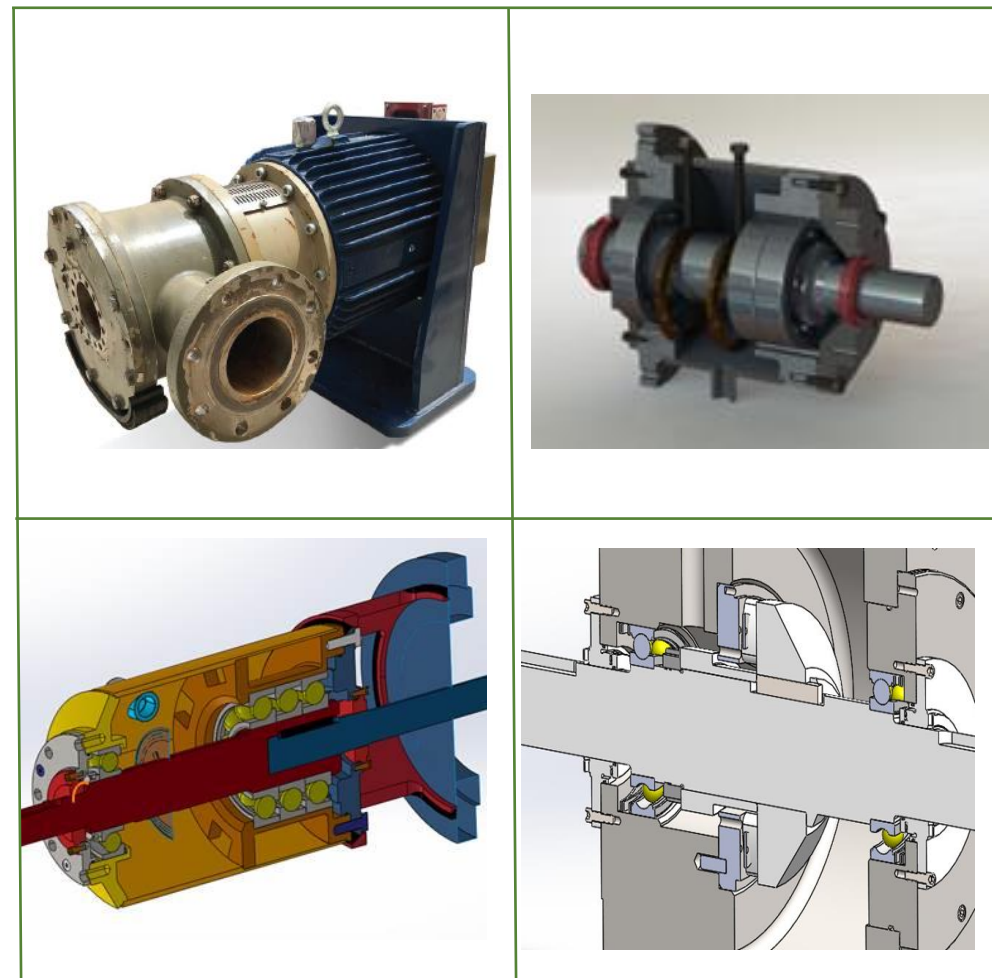
- Design of Modular Pump Systems
- Mechanical Integration of Pumps and Wellheads
- Mobile and Temporary Pumping Solutions
- Service and Packaging for all brands
- Operation, Maintenance, Repair of TC's – Aftermarket
- Complete HPS Units for Integrated Projects
- HPS Components Design and Spares Customization
- Retrofits – upgrades, compatibility with any brand
- Complimentary Pumping Equipment - Boosters, Mechanical Seals, Instrumentation



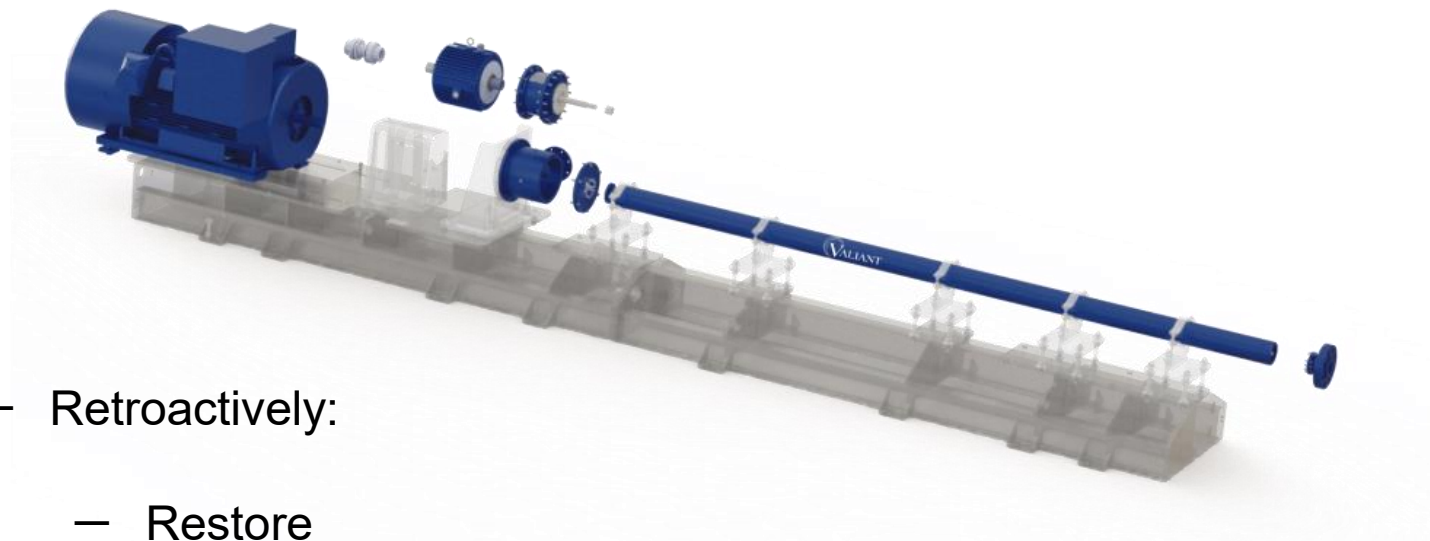
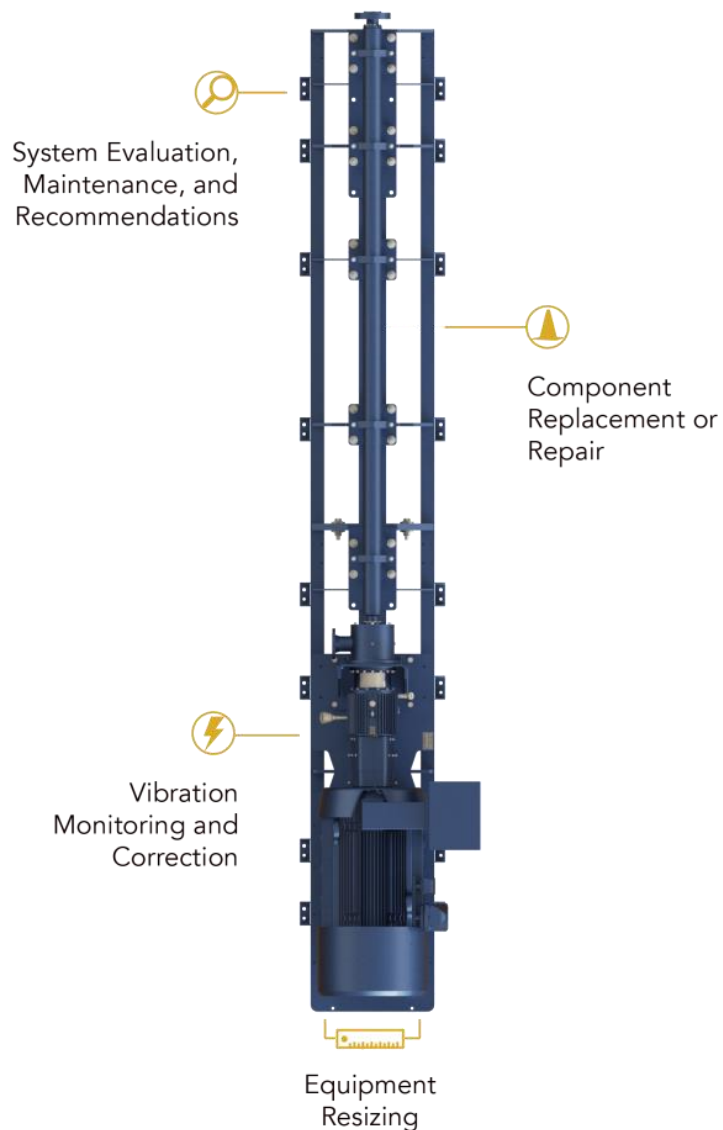
Horizontal Pumping Systems – TC's



- Thrust Chambers (TC's) Design and Manufacture, selecting the components required for each application (low or high load)
- Angular Contact Ball Bearings
- Tilting Pad Bearings
- Load capacity from 5,000 lbs. up to 45,000 lb.
- **TC's Retrofit Packages for different Brands.**
- TC all models available in Stock



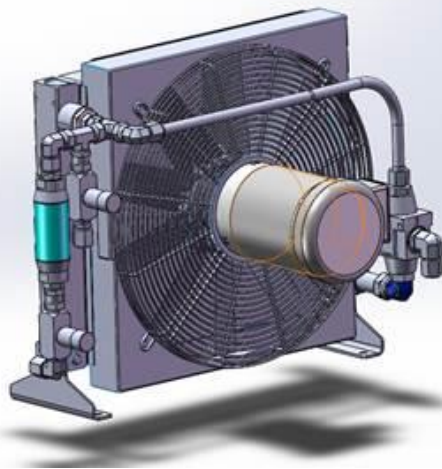
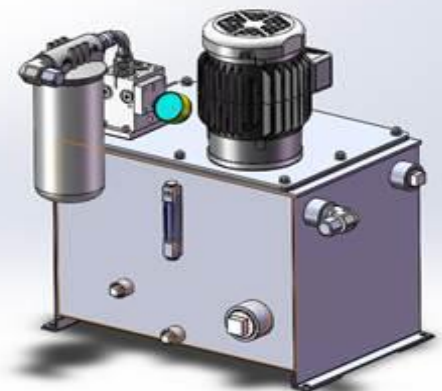
Horizontal Pumping Systems - Retrofits



- Retroactively:
 - Restore
 - Resize - optimization
 - Replace surface equipment
- Replace thrust chamber, pump, motor and seals.
- Extend system performance life.
- Upgrade components and incorporate newer technology.
- Compatibility with other brands.

Lubrication Systems - Coolers

- Design, **Local Manufacturing** and Supply of Lubrication Systems (Coolers) for Thrust Chambers, Motor Bearings.
- Proprietary Taylor Made Design for HPS applications (TC's and Motors)
- Repair and Maintenance Service
- RP API 614
 - To provide oil with the designed pressure, temperature, and quality for the bearings.
 - Minimum Requirements for Lubrication Systems
 - Cooling unit
 - Pumping unit – Motor API 841
 - Oil Reservoir - Tank
 - Oil control system – piping, fittings and instrumentation as per ECP approved vendor List
 - Minimum Requirements for Inspection and Testing
 - NDT (Radiographic, ultrasonic, magnetic particle, or liquid penetrant inspection of welds or materials)
 - Material Inspection
 - Mechanical Inspection
 - Hydrostatic Testing
 - Functional Test



Lubrication Systems - Coolers

- ECP Item Master Catalog

- Local Manufacturing Company

A: Acreedores general I: Acreedores por país/sociedad K: Acreedores p

✓ [X] [Q] [Q+] [★] [🔍] [📄] [🔗]

Conc.búsq.	Ps	CP	Población	Nombre 1	Acreedor	PBor
R&RFLUID	CO			R&R FLUID SOLUJTIONS S.A. R&RFLUID		<input type="checkbox"/>

- SAP Catalog Code

Material	Texto Breve Material	Descripción Ampliada	Texto Nota Interna
71500223378	COOLER, FLUID, INDUSTRIAL	CAPACITY RATING: 30 G...	REFERENCE: 72442031; OIL COOLER FOR TAG: 400-P-0512A/B/C; DWG: E00012; QUALITY CERTIFICATE:
<div> <div> <div></div> <div>Texto ampliado / 71500223378 - COOLER, FLUID, INDUSTRIAL</div> <div></div> </div> <div></div> </div>			



Horizontal Pumping Systems (TC Services)

- Local (TC) Test Bench - Quality Assurance
- Local Inventory (spare parts, components, units)
- Capabilities to Repair TC - Others Brands

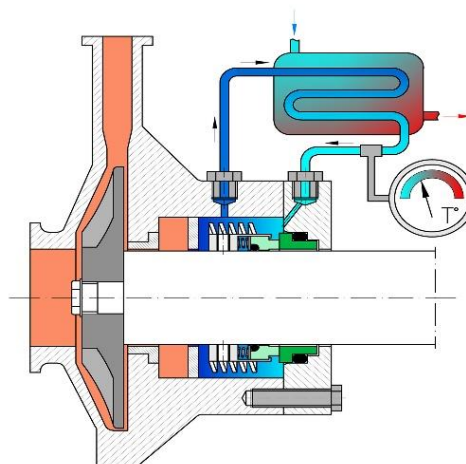


Complementary Pumping Equipment

- Booster/Centrifugal Pumps:
 - ANSI
 - HI
 - API 610
- Supply, Repair and Packaging of Industrial Centrifugal Pumps of a variety of Industrial Brands.
- Surface Pumping Units Rental for Water Injection, Early Facilities, Infield



Mechanical Seals and Flushing Plans



Supply, Repair and Installation of Mechanical Seals – single or cartridge, API 682 , Flushing Plans.



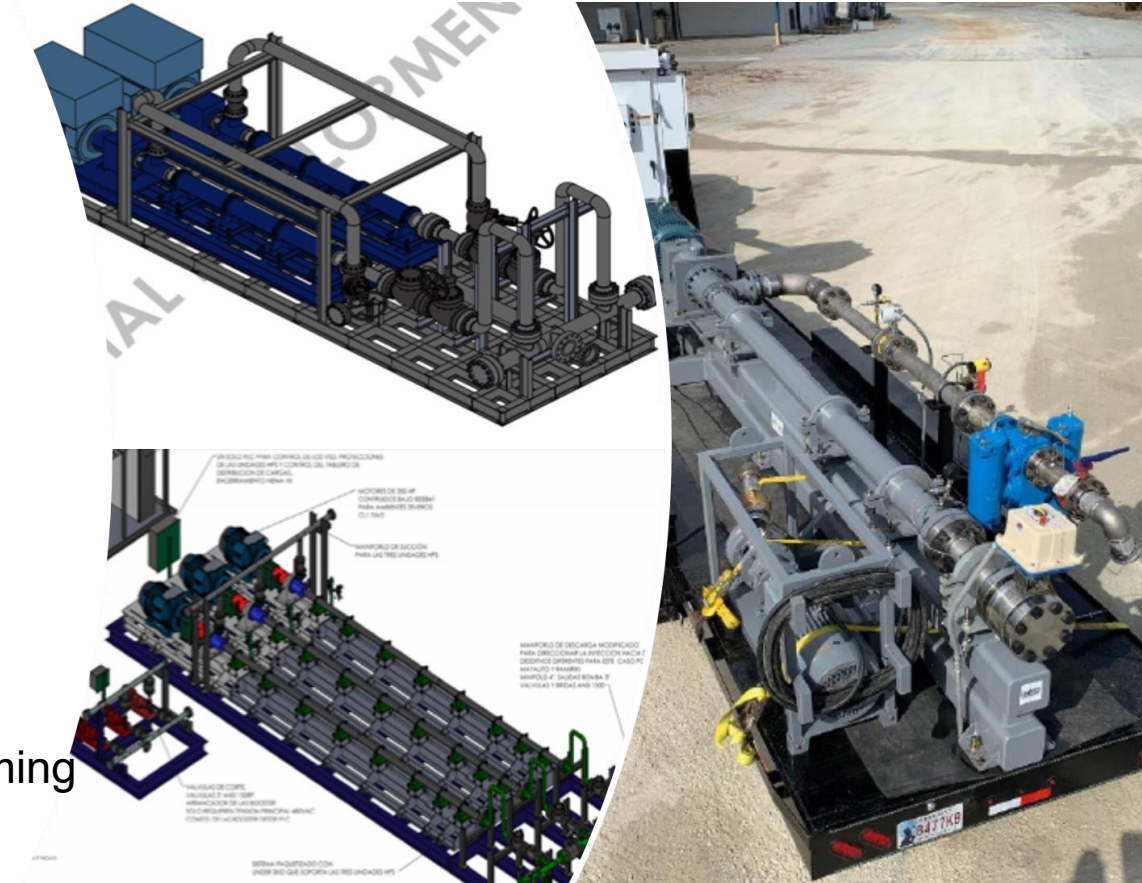
Turnkey Pumping Systems Prefabricated Configuration

Prefabrication:

- Packaging as the customer needs regarding pumping
- **Integral/Portable/Upgradable/Removable/Reusable/Ready to Start Solution**
- Basic Engineering
- Detail Engineering
- Procure and Build
- Commissioning and Start up

Disciplines Involved:

- Mechanical Engineering
- Electric Engineering
- Instrumentation and Control
- Process Engineering
- Logic Control and Programming
- Control Electrical Wiring
- Filtration Systems
- Boosting Units



Variable Speed Drives, Switchboards, Soft Starters and Controllers

Commercial agreement with Power Electronics to supply Variable Speed Drives for a variety of applications, with focus in Low and Medium Voltage configuration.



SD300
Variador de velocidad
230V – 480V
0,4kW – 30kW



SD500
Variador de velocidad
230V – 480V
0,75kW – 90kW



SD700
Variador de velocidad
230V – 690V
1,5kW – 2,2MW



SD750
Variador de velocidad
380V – 480V
1,5kW – 1750MW



VS65
Arrancador electrónico MT
2,3kV – 13,8kV
150kW – 6,3MW



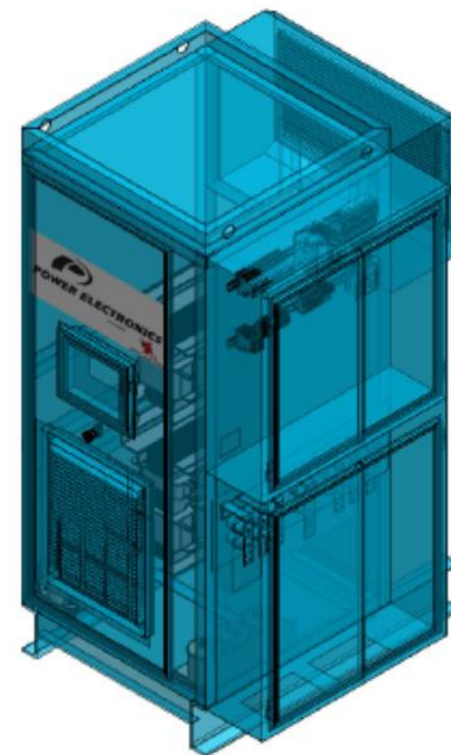
XMV660
Variador de velocidad MT
2,3kV – 13,8kV
280kW – 8,8MW



XMV660 OUTDOOR
Variador de velocidad MT
2,3kV – 13,8kV
280kW – 8,8MW



V5
Arrancador electrónico
230V – 1000V
2kW – 1500kW

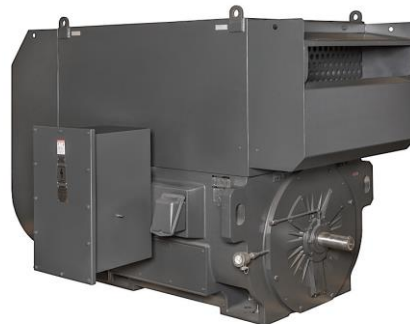


PowerInnova

Surface Motors

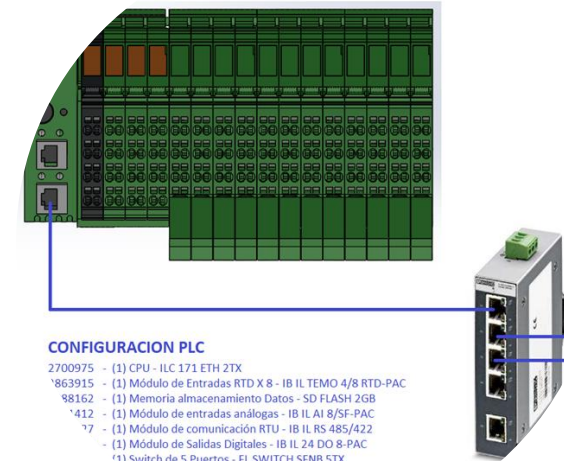
Almost any customer needs for driver type Industry Standard 2 pole NEMA and IEC foot mounted **electric motors**, typically used to comply customer requirements such as: enclosure type, voltage, frequency, insulation class, hazardous areas, among others. Additional drive options available include **PMM, gas or diesel engine** with speed increasers

Frecuencia	60 Hz	50 Hz
RPM, 2 Polos	3600 rpm	3000 rpm
Bajo Voltaje	460 – 480 V	380 – 415 V
Medio Voltaje	2300 - 4160 V	1000-3000 V
Diseño	Nema	I.E.C



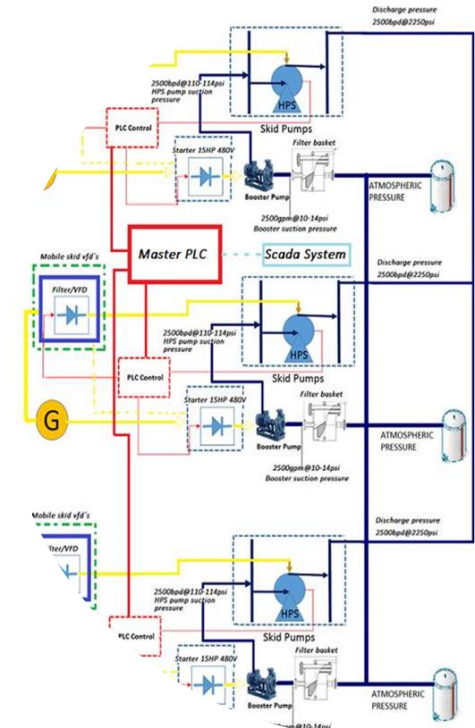
Control Systems, Turnkey Projects

- Equipment **Control Solutions** Tailored for Specific Applications.
- **Controllers** for a variety of applications such as Surface Pumping Units (**HPS**), and artificial lift methods (ESP y PCP).
- CCM, shelters, SCADA supervision systems, control mimics, **remote operation systems** and satellite monitoring.
- Repair and Maintenance of existing equipment, all brands (**VFD - PLC**).
- **Flexible** adaptability for **Programming** any preferred customer Controller brands.



CONFIGURACION PLC

2700975 - (1) CPU - ILC 171 ETH 2TX
863915 - (1) Módulo de Entradas RTD X 8 - IB IL TMO 4/8 RTD-PAC
98162 - (1) Memoria almacenamiento Datos - SD FLASH 2GB
412 - (1) Módulo de entradas analógicas - IB IL AI 8/SF-PAC
7 - (1) Módulo de comunicación RTU - IB IL RS 485/422
- (1) Módulo de Salidas Digitales - IB IL 24 DO 8-PAC
*1 Switch de 5 Puertos - FL SWITCH SFNB 5TX
*Antalla Touch Muy Alta Resistencia - WP 07T/WT



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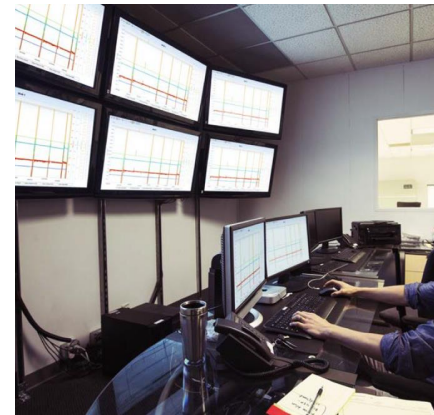
Field Services – H Surface Pumps

- Local Customer Field Support – Customer Visits
- On Call Services 24 X 7 – Emergency Response
- Field Service Installation of Motors and Drives
- Preventive Maintenance Routines
- Corrective Maintenance of Minor Failures
- Field Troubleshooting
- Spare Parts and Components Allocation
- Customer Training For Field Operations Personnel
- Prepare and Sale Recommended Safety Stock of Parts and Components
- Motor Vibration Analysis – Field Service Reports and Recommendations
- Application Engineering and Sizing Support of Motors and Drives Selection

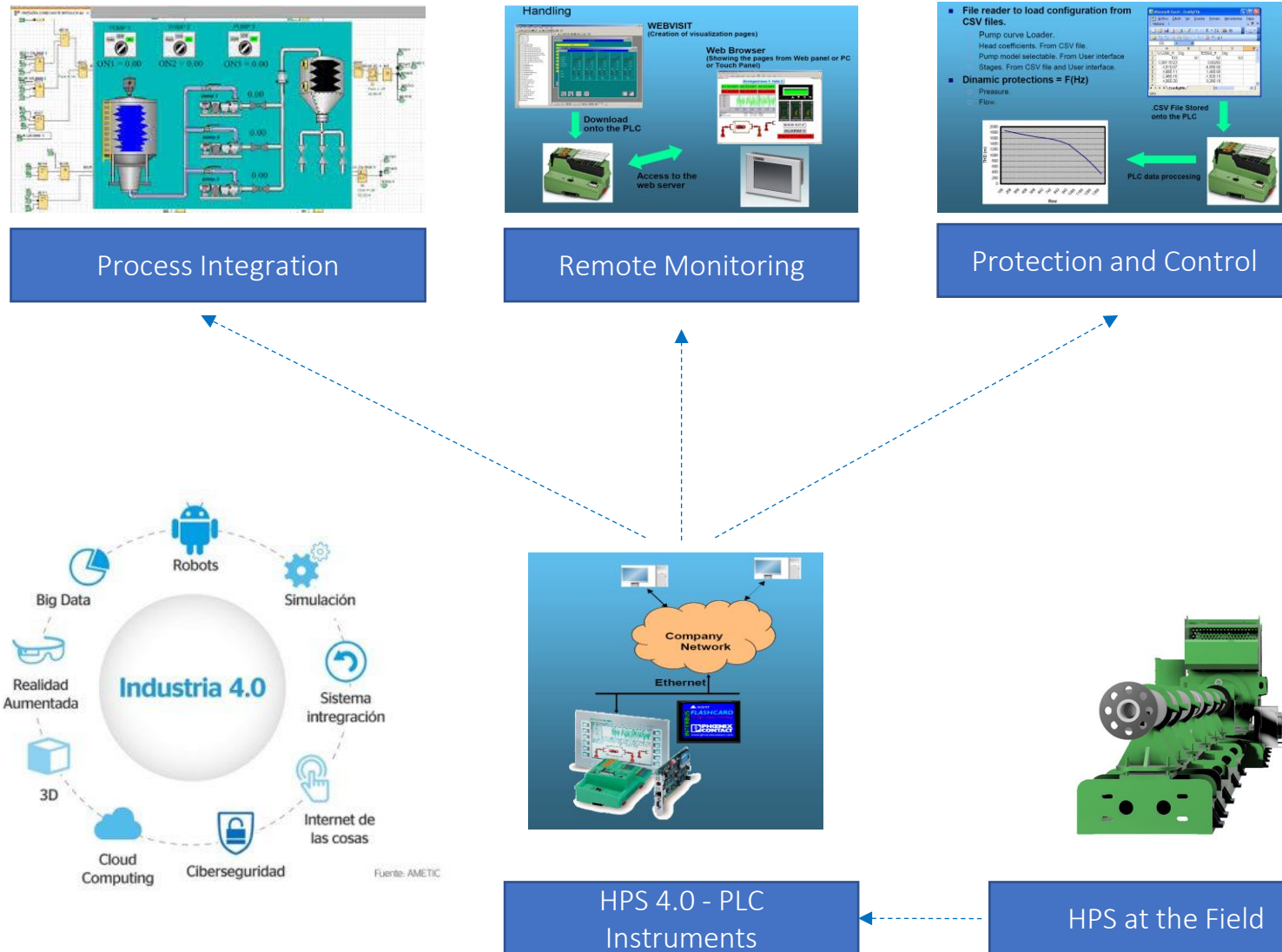


Other Services – H Surface Pumps

- Engineering Studies, Design and Analysis, Optimization (Injectivity Analysis)
- Automation and Control
- Prefabricated Electrical Systems - Integrated Design and Installation
- Project Management
- Systems Monitoring – Power Quality
- HPS Equipment Retrofits
- UPS and Battery services Installation, Start-up and Commissioning
- Consulting and engineering services related to pumping systems



HPS 4.0 Intelligent Solutions – Industrial Internet



Valiant Aquarius® HPS Market Share Info



NORTH AMERICA TOTALS:

- Full Systems : 118
- Retrofits : 249

SOUTH AMERICA TOTALS:

- Full Systems : 17
- Retrofits : 52

GRAN TOTAL:

Full Systems : 135
Retrofits : 301

CUSTOMERS:

Calyx Energy, Capturepoint, Chaparral Energy, Chevron, ConocoPhillips, Diamondback, GPS, Industrious Energy Services, KM Treating, Lagoon Water Solutions, Lario, Latigo Petroleum, Merit Energy, OEX-1, P4 Operating, Permian Resource/Centennial, Red Bluff, Scout Energy, Sheridan Production, Spur Energy, Stephens & Johnson, Weatherford International, Whiting Petroleum

CUSTOMERS:

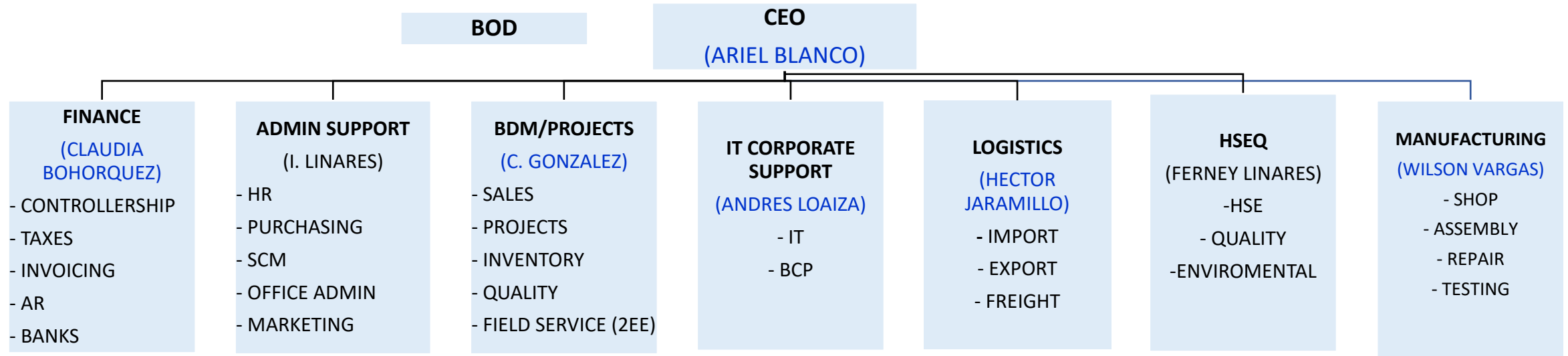
Apergy, Compañía de Alquiler y Suministro Petrolero, Drummond Energy, Ecopetrol SA, Hocol S.A., San Agustin Resources, Lemixdata - Peru, Nikoil Energy Corp, Perenco Colombia, Petroleos Sudamericanos Sucursal Colombia, Schlumberger Surency SA, Stork, Technical Services Holding B.V., Novomet, Geopark Ltd.

Our Customers

Item	Customer	Country	Order Date	PO/ Contract Number	Order Scope
1	e2 Energia Eficiente	COL	23-Nov-21	E2OS-2021-325	Technical Support for Optimization of 22 EA HPS Equipment, including the following scope: Equipment selection and sizing - data sheets, performance curves, technical specifications; Energy optimization of injection systems - redesigns; Remote Technical Support; Preparation of budgets, business cases and action plans associated with pumping plants; Equipment maintenance plans (preventive, corrective) - monitoring reports; Recommendations on technological initiatives; Support during meetings. For Ecopetrol Castilla and Chichimene Fields
2	Petroleos Sudamericanos - PetroSud	COL	30-Nov-21	3000002045	RCFA for a Halliburton HPS Unit premature failure, root cause analysis, technical report and recommendations.
3	Petroleos Sudamericanos - PetroSud	COL	4-Nov-21	3000002054	Field Service Support for HPS Maintenance and Monitoring, PLC programming and setup
4	Schlumberger	COL	23-Dec-21	4790872026 4790866382 4790871936	9EA Lube Oil System - Coolers for ABB and GE Motors to be Installed in HPS Units for Ecopetrol Operations, including Engineering Drawings and Field Service Support
5	Novomet	COL	30-Nov-21	COL0002968	4EA Lube Oil System - Coolers with Panel for TC's to be Installed in HPS Units for Ecopetrol Operations, including Engineering Drawings and Field Service Support
6	Cepsa	PER	16-Dec-21	600006687	Vibration Transmitters-ST5484E-121-0112-00, 1/2"- TC Application
7	Petroleos Sudamericanos - PetroSud	COL	5-Jan-22	2000001793	Retrofit Halliburton HPS Pump failed, recommended after DIFA services rendered.
8	Alkhorayef	COL	8-Feb-22	IHSA-COL-17022022	Field Service Support for HPS Retrofit Analysis
9	Novomet	COL	9-Jun-22	REQ0006555	1EA Control System for a HPS Unit including PLC Hardware, Logic Programming and Field Service Installation in a Power Electronics VFD.
10	e2 Energia Eficiente	COL	17-Jun-22	E2OS-2022-294	Technical Support for Optimization of 8 EA HPS Equipment, including the following scope: Energy optimization of injection systems - redesigns; Remote Technical Support; Preparation of budgets, business cases and action plans associated with pumping plants; Equipment maintenance plans (preventive, corrective) - monitoring reports; Recommendations on technological initiatives; Support during meetings. For Hocol - Ocelote Field
11	Novomet	COL	15-Jul-22	COL0003318	1EA Lube Oil System - Coolers with Panel for TC's to be Installed in HPS Units for Ecopetrol Operations, including Engineering Drawings and Field Service Support
12	Borets	COL	25-Oct-22	11908	3EA Set of Instrumentation for HPS systems - Pressure Switches 600/6000PSI, Switch Gage Liquid Level
13	Borets	COL	17-Nov-22	12007	5EA Reel, Power Cable WTC-78in Class II Carbon Steel
14	Flowserve	COL	9-Dec-22	PO000000000052725	Field Service Installation - Cooler for ABB Motor - ECP Rubiales Field
15	Ecopetrol	COL	14-Dec-22	1400374	Field Service Monitoring - Cooler for ABB Motor - ECP Rubiales Field
16	Profesionales Asociados	COL	14-Feb-23	1400374-2	Service of Reaconditioning of 2 units - Coolers for Motors manufactured by R&R - w/Power Cables
17	e2 Energia Eficiente	COL	12-Jul-23	OS-552	Technical Support for Optimization of 20EA HPS Equipment, including the following scope: Equipment selection and sizing - data sheets, performance curves, technical specifications; Energy optimization of injection systems - redesigns; Remote Technical Support; Preparation of budgets, business cases and action plans associated with pumping plants; Equipment maintenance plans (preventive, corrective) - monitoring reports; Recommendations on technological initiatives; Support during meetings. For SIERRACOL - Caricare Fields
18	Drummond Energy	COL	28-May-24	7400005565	Equipment Instrumentation for HPS units installed - Pressure and Temperature Transmitters
19	Ecopetrol SA	COL	17-Sep-24	5206786	Suministro De Bomba De Inyeccion (P-714c) En Estacion PIA Llanito 15K, 5500 BPD @ 2583 PSI, Para El Proyecto Cierre De Brechas Llanito, Perteneciente Al Hub Central De La Vicepresidencia De Desarrollo, Proyectos, Perforación Y Completamiento De Ecopetrol S.A.
19	GeoPark	COL	22-Nov-24	4400023671	Cooler TC - HPS Repair & Testing
20	Novomet	COL	24-Jan-25	COL0004428	2EA Lube Oil System - Coolers with Panel for TC's to be Installed in HPS Units for Ecopetrol Operations, including Engineering Drawings and Field Service Support

Summary	Total
Customers	12
Countries	2

Organizational Structure



Supported by Strong Team:

All members of the team with wide and deep experience in the artificial lift business, with specific knowledge in **HPS & ESP systems**, working in strategic leadership positions with outstanding performance records in previous international oil and gas service companies such as **Wood Group**, **GE**, and **Valiant Artificial Lift Solutions**, among others.

- **Claudia Bohorquez** – Accounting Leader – Wood Group (10 years), **Valiant Artificial Lift Solutions** (4 years).
- **Hector Jaramillo** – Logistics Leader – BP (8 years), Wood Group (12 years), **Valiant Artificial Lift Solutions** (2,5 years)
- **Andres Loaiza** – IT leader – Wood Group (11 years), **Valiant Artificial Lift Solutions** (3 years).
- **Cesar Gonzalez** – BDM – Wood Group (11 years), **Valiant Artificial Lift Solutions** (3 years).

Team (More that 125 Years of Cumulative Experience in ESP/HPS Business)

Turnkey Pumping Systems

Prefabricated Configuration - *Colombia*



Capacidad	Presión	Potencia
5,000 BPD Water Injection	2,575 psi	400HP

Other HPS Projects - *Colombia*



Customer: ECOPETROL COLOMBIA, Llanito Field
Project: Water Injection System 2 X VE5500 X 118 STG X 400HP



Customer: Ecopetrol, Castilla Field
Project: Repair, Tests and Start UP 2 HPS 80,000BPD@1200PSI-2500HP



Customer: HOCOL COLOMBIA, La Hocha Field
Project: Pump Retrofit 1 X VE7000 X 106 STG



Turnkey Pumping Systems

Prefabricated Configuration - *Peru*



Caudal	Presión	Potencia
2,700 BPD Water Injection	2200 psi	150 HP

Turnkey Pumping Systems

Prefabricated Configuration - *Ecuador*



Capacidad	Presión	Potencia
10,000 BPD Water Injection	2,900 psi	900HP

Turnkey Pumping Systems

HPS Stand Alone Unit - *Colombia*



Capacidad	Presión	Potencia
5,500 BPD Water Injection	2,639 psi	400HP
Ecopetrol	Llanito	Mayo, 2025

Value Proposition



Regional pumping solutions supplier focused in HPS services and components with vast expertise in water the injection business

We understand oil price fluctuations impact your bottom line – delivery issues cause unneeded losses – poor product quality affects your cash flow...

*All Customers needs is a partner focused on **optimize your cash flow** economically and effectively by **partnering** with a regional independent solutions provider committed on **reducing project costs**, increasing efficiencies, exceeding your service expectations and providing unmatched product quality.*



Company Profile

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Thanks

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