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Production Services

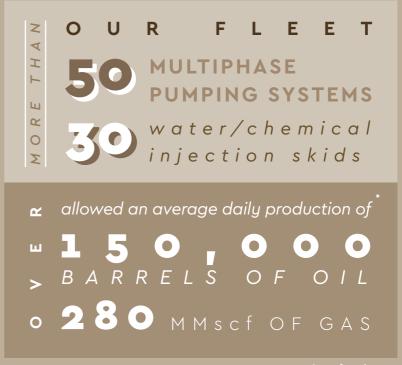
- The main services are:

 Multiphase pumping

 Water injection

 Salt dilution and chemical injection

 Gas storage and boosting







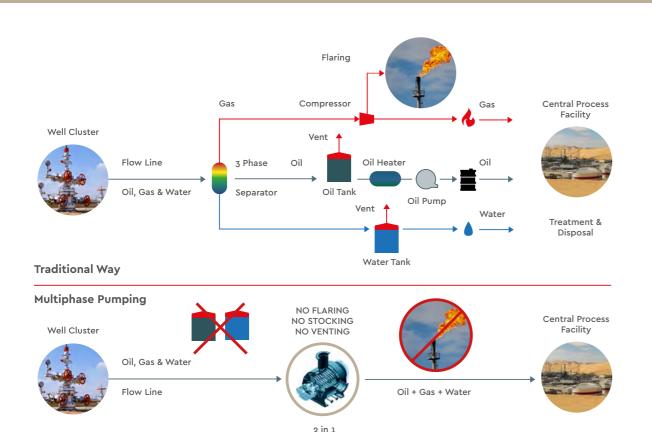
WPS technologies

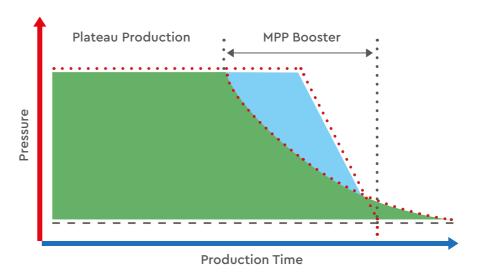


Multiphase Pumping

Multiphase pump technology allows to boost a multiphase fluid by using a single pumping package (no other usual facilities are required: no separate flowlines, no separators, no dedicated oil/gas/water pumps, no heater treaters, no intermediate storage tanks, no gas flares, no compressors...).

Such a minimal footprint plant is faster to be mobilized, started-up and, in case, also inter-mobilized among different well-sites. Obviously it implies also lower operating costs and lower downtime risks.





Boosting with multiphase pumps is an efficient tool to considerably extend plateau production, enhancing oil recovery during the ultimate stages of wolls! life

The available technology is based on progressive cavity pumps for small volumes and on twin screw pumps for medium and large volumes; Bonatti is deploying a wide fleet of multiphase pumping systems based on those technologies, significantly improved throughout 16-years of on-the-ground operations. Thanks to such a long experience as well as to a continous technological enhancement with selected partners, Bonatti is granting the best performances in the market, both tecnical (greatest differential pressure and gas-oil ratio capability) and operational (shortest mobilization time and highest availability in running conditions).

Especially this last advantage, especially when operating in a volatile commodity price marke, is bringing an extra level of security in satisfying investors and other stakeholders

low temperature application

TECHNOLOGIES

Fully packaged solutions, with three standardized "sizes".

high temperature application



Small Size:

based on Progressive Cavity Pumps technology



Main technical features: Pump flow: from 11,000 to 29,000 EBPD* Pump differential pressure: up to 60 bar Gas Volume Fraction (GVF): up to 97% Pump Installed Power: up to 180 kW Remotely monitored



Medium Size:

based on Twin Screw Pumps technology



Main technical features:
Pump flow: up to 100,000 EBPD*
Pump differential pressure: up to 60 bar
Gas Volume Fraction (GVF): up to 100%
Pump Installed Power: 750 kW Remotely monitored



Big Size:

based on Twin Screw Pumps technology



Main technical features:

Pump flow: up to 420,000 EBPD*
Pump differential pressure: up to 65 bar
Gas Volume Fraction (GVF): up to 100%
Pump Installed Power: up to 2.500 kW
Remotely monitored



*Note: The "E" in front of the flow unit stands for "Equivalent" or in some cases called "Actual" flow, i.e. flow at suction pressure and temperature (when gas portion is compressed to "Suction" as opposed to "Standard").





Water Injection

Injecting water into wells increases their internal pressure, stimulating the production especially interms of oil recovery.

Our fleet solution, based on high pressure piston pump technology, has been improved during the years, thanks to a strong relationship with our partner, granting the highest availability and uptime rates in the market.

TECHNOLOGIES

Main technology: diesel engine driven TRIPLEX reciprocating pumps.

Main technical features: Pump flow: up to 33 m3/h Pressure: from up to 370 bar Diesel engine: 600HP/440kW Remotely monitored





Salt Dilution/ Chemical Injection

The packages allow the dilution of the salt solution contained in the oil, injecting high pressure water with chemicals into the well, preventing the crystallization and accumulation of salt, which causes clogging of the wells' completion.

Advantages of the service:

- Reduced downtime and profit loss for lack of production
- Reduced costs of special operations

TECHNOLOGIES

Fully packaged solution.

The injection at the bottom and at the surface of the well, is performed independently by two separate reciprocating pumps.

Main technical features:
Flow rate: from 4,5 l/min at 125 rpm up to 30 l/min at 800 rpm
Max Pressure: 600 bar
Installed Power: 30 kW
Remotely monitored

Gas Boosting

Bonatti compression service is a "fully embedded" solution, mainly designed with "flange-to-flange" concept, in order to assure fast mobilization activity.

Flow rate flexibility is given by variable speed drive application and bypass use.

Gas and compressor cooling can be assured with gas-air cooler, water cooler and/or chiller, just in case low gas temperature is required.

Onshore and offshore solution are both available.

TECHNOLOGIES

Fully packaged solution, skid or trailer mounted.

Main technology: high speed reciprocating compressors and screw compressors, equipped with all the necessaries auxiliary systems (gas filter system, gas cooling system and flaring).

Main technical features:
Total flow: up to 1.5 MSm3/day
Suction pressure: from 0 up to 70 barG
Discharge pressure: up to 230 barG
Installed power: up to 3200 kW
Powering solution: electric motor & VFD, diesel engine, gas engine
Remotely monitored





Desalting and treatment plant

Fully customized desalting unit (according to customer necessities), multy stage, based on electostatic desalters, oil heat ecxhangers, water and oil pumps, AC trasformers and all necessary equipments usefull for oil and associated gas treatment

TECHNOLOGIES

Main technical features:
Double stage desalting unit
Oil heaters
Double stage-double pumps skid for oil export
Hot and cold flares
Fuel gas skid for gas meter and gas generation
Reboiling «pumparound» units
Oil tanks
Water KO drum
Water pump skid
Stabilization columns

Remote Monitoring

All Bonatti Well Production Services applications are equipped with a remote monitoring system, allowing full remote control of the whole unit; hundreds of parameters are continuously monitored and controlled by our dedicated team, on duty 24/7 in our centralized control room also to activate as quick as possible any fast-response maybe necessary.

Thanks to such a system each unit performances can be monitored via internet, in real-time from anywhere; and any operational data can be anytime retrieved, trended and analysed, to prevent any disruption and optimize the production.

TECHNOLOGIES

Main technical features: PLCs Electrical racks Servers Satellite connection Proprietary control logic









Working for you improving Production Sharing targets

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