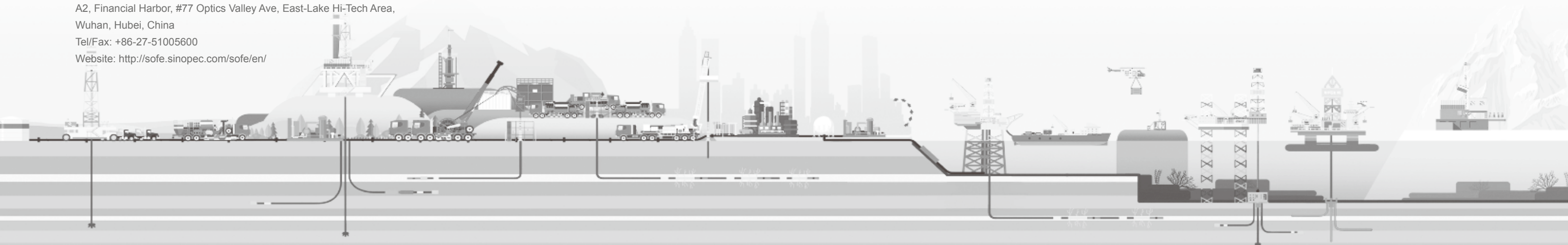




## SINOPEC OILFIELD EQUIPMENT CORPORATION

A2, Financial Harbor, #77 Optics Valley Ave, East-Lake Hi-Tech Area,  
Wuhan, Hubei, China  
Tel/Fax: +86-27-51005600  
Website: <http://sofe.sinopec.com/sofe/en/>





SINOPEC OILFIELD EQUIPMENT CORPORATION

TO BE A WORLD-CLASS R&D, MANUFACTURING AND  
SERVICE ENTERPRISE IN OIL & GAS INDUSTRY





## CONTENTS

01

Who We Are

02

Products

03

Quality Management

04

Inspection and  
Testing Capability

05

Service System



# WHO WE ARE



Sinopec Oilfield Equipment Corporation (SOFE), part of the Sinopec Group, is the only R&D, manufacturing and professional technical service center, a backbone enterprise and core manufacture base of oil and gas equipment in China.

SOFE has twelve technically advanced product portfolios which fit to work everywhere from onshore to offshore environments, covering three fields of petroleum engineering, E&P, gathering and transportation for oil & gas.

We can provide our customers with drilling rigs, cementing units, fracturing units, workover equipment, coiled tubing units, snubbing units, drill bits & tools, downhole tools, steel pipes, natural gas compressors, oil field environmental protection equipment, flow control products, integrated solution of petroleum equipment, petroleum and petrochemical equipment inspection, natural gas pressurization and equipment repair and maintenance.

SOFE has established a perfect science and technology R&D system, state-recognized technical center, workstations for Academician of Chinese Academy of Engineering, and post-doctorial scientific research, national R&D platforms for cementing & fracturing equipment.

Our experienced experts have been playing a critical role in scientific research projects. Our company has been awarded National Prizes for Progress in Science and Research, National Manufacturing Role Model and National Technology Innovator.

SOFE has 16 production lines with its proprietary rights on drill bits & tools, drilling rig, cementing and fracturing unit, steel pipe, etc. and built 6000hp pump test center, seven professional labs and quality inspection center of drilling and production equipment for oil and gas industry. We can provide you with a complete set of certification in accordance with API, GOST and CE. We have established a reliable quality management system insuring its top of line.

We are dedicated to striving for the international market. SOFE has exported its products to more than 40 countries and regions including North and South America, Russia, the Middle East, etc. SOFE has been taking the responsibility of providing our customer with supreme products and excellent service. We are leaning towards becoming a world-class enterprise.



# PRODUCTS

Providing integrated solutions for oil and gas exploration and development engineering equipment.



**Drilling and Completion Tools**

**Drilling Equipment**

**Cementing Unit**

**Production Equipment**

**Fracturing Equipment**

**CTUs and Snubbing Units**

**Welded Steel Pipe**

**Natural Gas Compressor Package**

**Offshore Equipment**

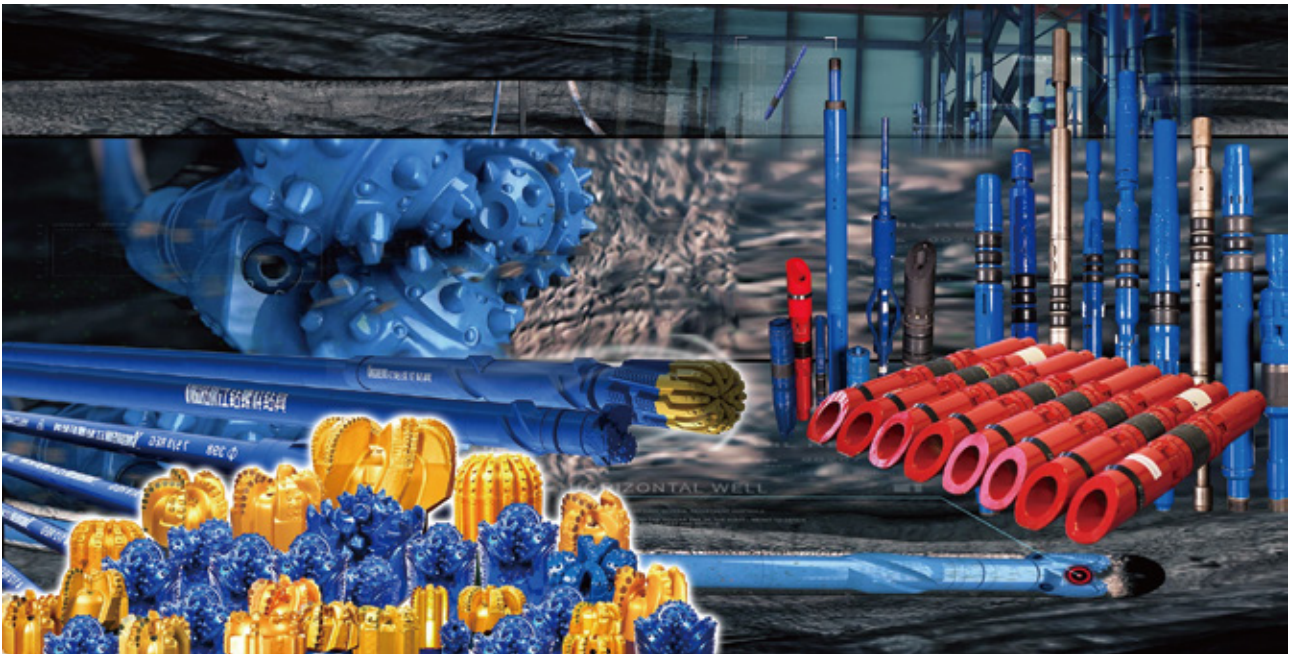
# DRILLING AND COMPLETION TOOLS

Dedicated to drill bits and tools for over 40 years in oil & gas industry, we have always been committed to providing the best service with a combination of premium roller cone bits, PDC bits, PDM tools, etc.

Annual production:

- Roller cone bits: 50,000 pcs
- PDC bits: 5,000 pcs
- PDM tools: 3,000 sets

The above products have widely been exported to North & South America, Canada, Russia, the Middle East and North Africa, Southeast Asia, etc.

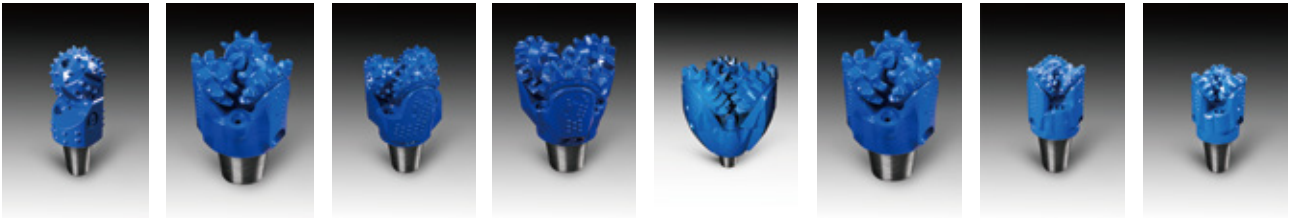


## Roller Cone Bit

The roller cone bit line is available from 3-1/2" to 36" in diameter with 12 bit series to satisfy requirements for different drilling applications and conditions.

Bit applicaton chart								
Bit applications	MD	MiniMD	KHD	YC	HJ/HJT	GJ/GJT	HA/HAT	GA/GAT
High RPM	•	•				•		
High temperature	•	•			•	•		
High WOB					•			
Highly abrasive	•	•			•			
Slim hole		•		•		•		
Hard formation-medium&low RPM					•			
Hard formation-high RPM	•	•						
Common formation	•	•	•	•	•	•	•	•

Bit structure features								
Bit structure features	MD	MiniMD	KHD	YC	HJ/HJT	GJ/GJT	HA/HAT	GA/GAT
Journal bearing				•	•		•	
Roller bearing			•			•		•
Floating bearing	•							
Bushing bearing		•						
Roller-journal bearing	•							
Metal face sealed	•	•			•	•		
Non-sealed bearing			•					
Rubber O-ring sealed			•	•			•	•
Enhanced gage protection	•	•						

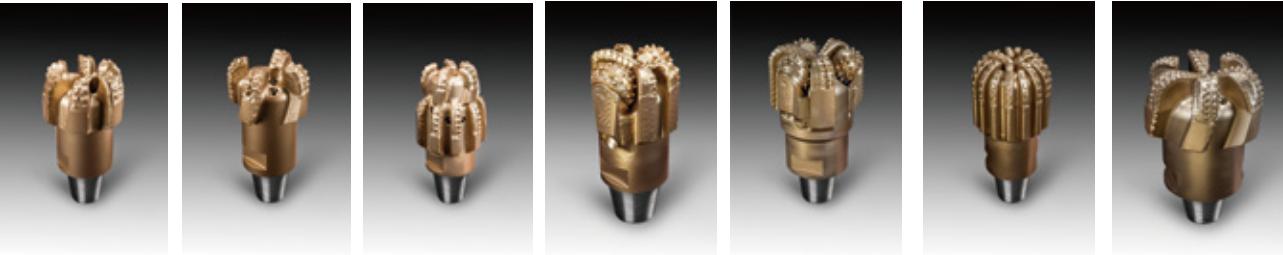




PDC Bit

The PDC bit line is available from 3-1/4" to 26" in diameter with 8 bit series for different drilling applications. Specialized cutting structure, hydraulic system and all the application engineering guarantee our bit performance to be excellent.

Table of Classification of Formation Hardness and Bit Selection						
Roller cone bit IADC code	Formation description	Rock type	Compressive strength (Mpa)	ROP m/h	IADC code of diamond bit	Recommended type of diamond bit
111/124	Very soft:sticky soft formation with low compressive strength.	Clay Siltstone Sandstone	< 25	> 20	M/S112 ~ M/S223	KS1952 KS1942 KM1952 KM/(S)D1952 KM1942 KM/(S)D1942
116/137	Soft:soft formation with low compressive strength and high drillability.	Clay rock Marl Lignite Sandstone	25~50	10~20	M/S222 ~ M/S323	KS1963 KS1952 KS1652 KS1642 KM1952 KM/(S)D1952 KM1652 KM/(S)D1652 KM1642
417/527	Medium soft:soft to medium formation with low compressive strength and streak.	Clay rock Marl Lignite Sandstone Siltstone Anhydrite Tuff	50~75	5~15	M/S323 ~ M/S433	KS1963 KS1652 KS1362 KM1953 KM/(S)D1953 KM1662 KM/(S)D1653 KM1375 KM/(S)D1375 KM/(S)D1363 KM1363
517/537	Medium:medium to hard formation with high compressive strength and thin abrasive strrak.	Mudstone Dark rock Shale	75~100	2~6	M322 ~ M443	KS1652 KS1362 KM1662 KM/(S)D1662 KM1375 KM/(S)D1375 KM1363 KM/(S)D1363
537/617	Medium hard:hard and dense formation with high compressive strength and medium abrasiveness.	Dark rok Hard shale Anhydrite Sandstone Dolomite	100~200	1.5~3	M422 ~ M444	KMH1673 KMH1662 KMH1653 KMH1375



ERT Downhole Motors

Patented product ERT(equal wall thickness) Motors with specialized linetype shows better performance compared with conventional PDM tool. The ERT Motors can obviously increase ROP and adapt to various drilling applications in the worldwide.



Downhole Tools

Testing, production and acid-fracturing tools for various oil fields can be designed and manufactured. 95 patents for downhole tools are granted among which 27 are invention patents.



References and Recommendation Letters



KOC



Daleel



ExxonMobil



Shell

# DRILLING EQUIPMENT

SOFE has custom-made, fully trailerized desert rigs, fast moving rigs, arctic rigs, helicopter rigs, cluster well drilling rigs.

Annual production: 250 sets

These rigs are engineered, fabricated and marketed abroad approximately 297 sets. i.e. North & South America (113 sets), Russia (102 sets), the Middle East and North Africa (49 sets), Southeast Asia (33 sets), etc.



## Modularized Drilling Rig

Model	Nominal drilling depth m (inch)	Max. hook load kN (lb) kN (lb)	Rated HP, drawworks kW (hp)	Mast type & effective heightm	Substructure type & effective heightm
SZJ170/DB/L (ZJ30)	3000 (9840)	1700 (380000)	600(800)	K-type, 33/41	Box-on-Box/Telescoping type, 5/6
SZJ225D/DB/LDB/L (ZJ40)	4000 (13120)	2250 (500000)	800 (1100)	K-type, 43	Swing-up type, 7.5
SZJ315D/DB/L (ZJ50)	5000 (16400)	3150 (700000)	1100 (1470)	K-type, 45.5	Swing-up type, 9
SZJ450D/DB/ (ZJ70)	7000 (22970)	4500 (1000000)	1470 (2000)	K-type, 45.5	Swing-up type, 10.5
SZJ585D/DB (ZJ80)	8000 (26247)	5850 (1300000)	2000 (2720)	K-type, 48	Slingshot type, 12
SZJ675D/DB (ZJ90)	9000 (29530)	6750 (1500000)	2210 (3000)	K-type, 48	Slingshot type, 13.7

- Three types of power systems are available for your selection: electric drive (DC/AC VFD), hybrid drive, mechanical drive.
- Customers can choose box-on-box type, swing-up type or slingshot type substructures to fit your design, and our drawworks can be installed in lower position or raised-up position for more options.
- K-type mast is adopted, and a top drive system can be installed.
- We can provide the rig unitized systems, such as drilling tools, drilling manifold system, drill fluid circulation system, well site electric system, well control system, etc.



Automated Pipe Handling System



Automated Pipe Feeding System



Wellhead Mechanized Tools



Integrated Driller Cabin





### Cluster Drilling Rig

SOFE has designed several types of rig walking system to move the rig with all equipment and full setback being installed. There are guiderail type, train-rail type and stepping type rig walking systems available for pad drilling or cluster well applications.



### ZJ50DT Cold-weather Train-rail Type Drilling Rig for EuroAsia

- Special material and processes suitable for cold temperature are used for main structure, welding, machining and heat treatment processes.
- Windwalls and heat preservation shed are provided for open area operations.



### Fully-trailerized Desert Drilling Rig

- Fully-trailerized design for desert environment.
- 50-60km distance between well sites, with speed ranging from 10 to 15km/h.
- Max. temperature up to 55 °C, drilling depth up to 2000-7000m.



### Arctic Drilling Rig

- By using low-temperature material, processing and structural design, it can meet the requirements for operation at -45 °C and storage at -60 °C with humidity less than 90%.
- There is modularized, train-rail type, truck-mounted, or trailerized drilling rig, with GOST certification or EAC Customs Union certification.
- ZJ40D cold-weather drilling rig for ROSENEFT.



### ZJ70D Drilling Rig in Kuwait

- The DC drive drilling rig is designed with state-of-the-art electric drive technology.
- All the rig floor equipment and the mast can be installed in a low position. The parallelogram substructure can be lifted by the drawworks as a whole.



### ZJ70D Drilling Rig in Algeria

The rig is equipped with intelligent control system in the driller's cabin, realizing centralized electric, air and hydraulic controls, ergonomics instrumentation system, as well as anti-collision system for travelling block.

### ZJ90D Drilling Rig in West China

- Ultra-deep shale conventional, Geothermal, Horizontal drilling application.
- Advanced AC-SCR-DC electric drive technology.
- The parallelogram substructure lifted by the drawworks as a whole.
- A hydraulic disc brake adopted as main brake, magnetic eddy current brake or Eaton brake as auxiliary brake.
- Walking system or skidding system available.



### ZJ80D Drilling Rig in Saudi Arabia

Operation, monitoring and protection of full drilling process can be realized by PLC, and so are data storage, printing and remote transmission.





BIG EASY Drilling Rig



BE550 Drilling Rig for NABORS

The Big Easy drilling rig, jointly engineered and developed by SOFE and Loadmaster, was granted patents for this innovation and invention. Its optimal mast and substructure connected by pin shafts can be assembled quickly and easily without the demand of a crane on site.

Model	Max. hook load kN (lb)	Rated HP, drawworks kW (hp)
BE380L	1700 (380000)	550 (750)
BE550	2500 (550000)	735 (1000)
BE770	3500 (770000)	1100 (1500)
BE1100	5000 (1100000)	1470 (2000)

Mobile Drilling Rig

SOFE designs and builds a wide range of self-propelled and trailer-mounted mobile drilling rigs all around the world. Designed in accordance with and accommodate to applicable local specific standards in addition to API Specification, SOFE combines purpose-built components with the rigorous attention to quality and fabrication to provide drilling rig that performs reliably and safely.

Model	Max. hook load kN (lb)	Rated HP, drawworks kW (hp)
SZJ112CZ/TZ (ZJ10/1125CZ)	1120 (250000)	336 (450)
SZJ135CZ/TZ (ZJ15/1350CZ)	1350 (300000)	410 (550)
SZJ147CZ/TZ (ZJ20/1470CZ)	1470 (330000)	485 (650)
SZJ170CZ/TZ (ZJ30/1700CZ)	1700 (380000)	560 (750)
SZJ225CZ/TZ (ZJ40/2250CZ)	2250 (500000)	735 (1000)
SZJ170DBT (ZJ30DBT)	1700 (380000)	560 (750)
SZJ225DBT (ZJ40DBT)	2250 (500000)	735 (1000)

Helicopter Drilling Rig

Model	Max. hook load kN (lb)	Rated HP, drawworks kW (hp)
SLH147	1470 (330000)	410 (550)
SLH170DB	1580 (355000)	560 (750)
SLH225DB	2250 (500000)	735 (1000)
SLH315DB	3150 (700000)	1100 (1470)



SLH147 Helicopter Drilling Rig in PNG

SOFE has designed and manufactured helicopter transportable drilling rigs for installation and operation in a confined well site such as mountainous areas, forests, island, etc. The maximum drilling depths range from 2000 to 5000m. Being lightweight, they are modularized and packaged to meet airlift weight requirements. The installation configuration is optimized for fewest components, easy handling and assembling with minimal equipment on site.



SZJ225CZ (ZJ40)



SZJ180TZ (ZJ30T)



SZJ170TZ (ZJ30DBT) Trailerized Drilling Rig in Oman



SZJ225CZ (ZJ40) Truck-mounted Drilling Rig in Algeria



Well Control Products

- Available certifications of API 6A, 16C and the production licenses for National Special Equipment and the drilling fluid manifolds.
- Ranked No.1 in the SINOPEC.
- The only one Class A manufacturer of choke and kill manifolds for CNPC.



Ground Test Products

The ground test equipment consists of wellhead device, throttle control system, heat exchange and insulation system, separation system, metering system, safety control system, data acquisition system, etc.



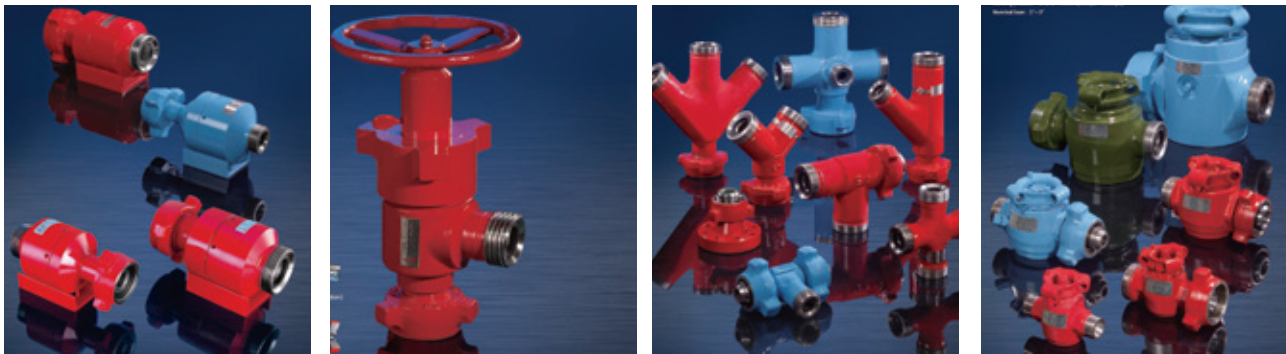
Three-phase Test Separator

Ground Test Process Equipment

Truck-mounted Ground Test Equipment

Flow Control Products

SOFE is a famous supplier of flowline products to the oilfield industry in both domestic and international market based on the design and manufacturing technologies introduced from SPM and FMC in the 1980s and continuous innovations for over 40 years. Our family of flowline products includes swivel joints, plugs valves, check valves, hose loops, hammer unions, integral connections and pipe, etc., and we can also supply various customized manifolds for a wide range of application. Annual production: 200,000 sets.



Check Valve

Choke Valve

Integral Connection

Plug Valve



Safety Valve

Straight Pipe

Swivel Joint

Union



# CEMENTING UNIT

Trailer-, skid-or truck-mounted cementing units are available. State-of-the-art automation control mixing (ACM) system can ensure the accuracy and consistency of the slurry density. These cementing units can be configured with triplex and quintuplex plunger pumps with proprietary technologies .

Annual production:

- Cementing unit: 200 sets
- Triplex pump: 1,000 sets

There have been more than 220 sets of cementing unit accumulatively exported to oversea markets including Indonesia, Algeria, UAE, Kenya, Turkey, Venezuela, etc.



## Cementing Plunger Pumps

SOFE offers a complete line of plunger pumps with capacity from 200hp to 1000hp for a variety of well service and slurry pumping applications.

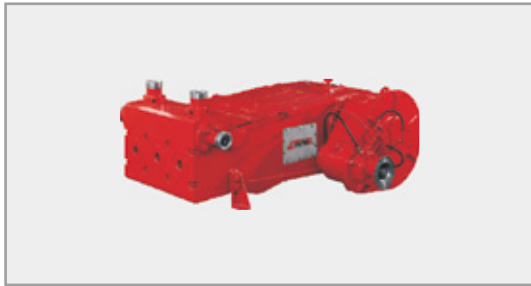
Plunger pump model	STP350	STP400	STP600	STP600S	SQP1000
Max. input power, kW (hp)	265 (350)	447 (600)	447 (600)	447 (600)	745 (1000)
Stroke, mm (in.)	127 (5")	203.2 (8")	152.4 (6")	152.4 (6")	152.4 (6")
Max. SPM:	350	350	450	450	450
Plunger size, in.:	5",4-1/2",4",3-3/4"	4-1/2",4"	3",3-1/2",4",4-1/2"	3",3-1/2",4",4-1/2"	3",3-1/2",4",4-1/2"
Gear ratio:	4.32:1	8.6:1	4.61:1	4.61:1	4.61:1
Overall Dim. (LxWxH), mm:	1760x1178x805	1970x1010x1160	1626x1366x607	1292x1366x607	1290x1910x860
Weight, kg (lbs)	2050 (4520)	2910 (6450)	2492 (5489)	2155 (4751)	(3180) 7000



STP350 Triplex Plunger Pump



STP400 Triplex Plunger Pump



STP600 Triplex Plunger Pump



SQP1000 Quintuplex Plunger Pump

## Automatic Mixing System



The automatic control mixing system can accurately control the slurry mixing operation according to the setted slurry density and displacement.

- Mixing capacity: 0-2300L/min
- Slurry density: 1-2.7g/cm³
- Manual mode available at emergency condition



SGJ350 Cementing Truck / Trailer / Skid

Model	Max. working pressure MPa (psi)	Max. working displacement L/min (GPM)
SGJ350-13 (GJC50-13)	50 (7252)	1376 (362)
SGJ350-17 (GJC40-17)	40 (5800)	1641 (434)
SGJ350-25 (GJC70-25)	70 (10153)	2473 (653)
SGJ350-30 (GJC50-30)	50 (7252)	2866 (757)



SGJ350-16 Single Pump Cementing Truck



SGJ350-25 Twin Pump Cementing Truck

SGJ400 Cementing Truck / Trailer / Skid

Model	Max. working pressure MPa (psi)	Max. working displacement L/min (GPM)
SGJ400-15 (GJC75-15)	77.2 (11200)	1527 (403)
SGJ400-27 (GJC95-27)	95 (14000)	2733 (722)
SGJ400-30 (GJC75-30)	77.2 (11200)	3054 (806)



SGJ400-27 Twin Pump Cementing Truck



SGJ400-27 Twin Pump Cementing Trailer

SGJ600 Cementing Truck / Trailer / Skid

Model	Max. working pressure MPa (psi)	Max. working displacement L/min (GPM)
SGJ600-13 (GJC70-13)	70 (10100)	1274 (336)
SGJ600-17 (GJC55-17)	55 (7976)	1662 (440)
SGJ600-21 (GJC45-21)	45 (6526)	2105 (558)
SGJ600-30 (GJC100-30)	97 (14456)	3041 (803)
SGJ600-33 (GJC70-33)	70 (10100)	3379 (893)
SGJ600-37 (GJC55-37)	55 (7976)	3767 (996)
SGJ600-42 (GJC45-42)	45 (6526)	4210 (1112)



SGJ600-21 Automatic Cementing Truck (ACM-4.2)



SGJ600-30 Full Automatic Cementing Truck

SGJ1000 Cementing Truck / Trailer / Skid

Model	Max. working pressure MPa (psi)	Max. working displacement L/min (GPM)
SGJ1000-21	70 (10100)	2105 (558)



SGJ1000-21 Single Pump Cementing Truck



Desert Cementing Truck

# PRODUCTION EQUIPMENT

SOFE's robust workover rigs are well-recognized globally. Truck-mounted, trailer-mounted workover rigs, and modular workover rigs with max. hook load ranging from 300KN to 2500KN are available.

Annual production: 250 sets

The workover rigs are widely exported to North & South America (352 sets), Russia (98 sets), the Middle East and North Africa (49 sets) and Southeast Asia (114 sets).



## Workover Rigs

Model	Nominal/Max. hook load kN (lb)	Rated HP, engine kW (hp)
SXJ150 (XJ150)	300 (67440) / 585 (131508)	175 (235)
SXJ250 (XJ250)	400 (89920) / 675 (151740)	242 (325)
SXJ350 (XJ350)	600 (134880) / 900 (1202320)	287 (385)
SXJ400 (XJ400)	980 (220304) / 1020 (229296)	335 (450)
SXJ450 (XJ450)	980 (220304) / 1125 (252900)	354 (475)
SXJ550 (XJ550)	1176 (264365) / 1350 (303480)	403 (540)
SXJ650 (XJ650)	1350 (303480) / 1470 (330456)	403x2 (540x2)
SXJ1000 (XJ1000)	1500 (337200) / 1700 (382160)	470x2 (630x2)
SXJ1200 (XJ1200)	1800 (404640) / 2250 (505800)	522x2 (700x2)

### Free-standing Workover Rig

- SXJ150-SXJ350 available.
- Small footprint in small area well site where wind load guylines are impossible to install.
- A free-standing workover rig, eliminating wind load guylines, has all the internal guylines.
- Less preparation time, quick and convenient rigging up and down.



### Double Fastline Workover Rig

- SXJ150-SXJ1200 available.
- Tripping speed is increased by 100%.
- Tee-sil / base beam and wellhead work platform is moved along with the main rig.
- Teeth type air-controlled disc brake as auxiliary braking.



### Self-tightening Guyline Workover Rig

- SXJ450-SXJ1200 available.
- Small footprint in small area well site where wind load guylines are impossible to install.
- Self-tightening guylines will be attached on the workover rig.
- Less preparation time, quick and convenient rigging up and down.





Desert Workover Rig

- SXJ150-SXJ1200 available
- Wide section low pressure tires are suitable for desert.
- Optimized engine and drawworks cooling water circulating system accommodate to high temperature environment.



Hybrid Workover Rig

- SXJ150-SXJ1200 available
- The automated operation solution for workover rigs is featured by fuel-electric double drive and centralized automatic control in driller's cabin.



Automated Solution for Workover Rig

- The rig is equipped with power catwalks, hydraulic pipe box, racking platform mechanical arm, iron roughneck, air slips, etc, to offer the state-of-the-art automatic workover package to promote overall operation benefit.



SPC Power Catwalks and Hydraulic Pipe Bin



Centralized Control in Driller Cabin



Iron Roughneck

Trailer-mounted Substructure for Rig

- The substructure is trailerized to achieve fast rig move and shorten the installation time.
- Hydraulically raised up or lowered the substructure without the need of crane.



Integrated Driller Cabin

- The driller's cabin on the carrier can be moved with the carrier.
- The driller's cabin can be raised up and lowered down to satisfy high operating efficiency.



Skid-mounted Piston Pump

SOFE designs and manufactures series skidded pump working with workover rig for well service operation.

Model	Max. working pre MPa (psi)	Max. working Dis. L/min (gpm)	Pump model
SNQ500-15	25 (3571)	1500 (396)	STP500M
SNQ800-20	35 (5000)	1970 (520)	STP800M
SNQ800Q-24	35 (5000)	2330 (618)	SQP800M
SZQ350-13/16/17	50/35/40	1216/1590/1641	STP350
SZQ600-13/18	70/40	1295/1834	STP600
SZQ900-22/18/14	50/40/30	2139/1730/1368	STP900

Well Servicing and Flushing Rig

- SXJ150-SXJ350 available
- Combining well servicing with well flushing application in one unit. Installing engine and transmission below the cab to save room to mount plunger pump and water tank on the chassis.





# FRACTURING EQUIPMENT

SOFE leads oil & gas industry with cutting-edge technology and expertise in R&D of fracturing equipment. A complete set of fracturing package has been designed, built and extensively applied in unconventional energy exploration & production.

Annual production: 200 sets

The dependable fracturing unit are widely exported to North & South America, Russia, the Middle East and North Africa, etc.



## Fracturing Pump Truck / Trailer / Skid

Model	Max.Working Pre.MPa (psi)	Power of Engine kW (hp)
SYL Q6000Q-140D	140 (20000)	4470 (6000)
SYL Q5000Q-140D	140 (20000)	3725 (5000)
SYL Q4500Q-140D	140 (20000)	3352 (4500)
SYL3000Q-140	140 (20000)	2350 (3150)
SYL300-140	140 (20000)	2350 (3150)
SYL2500Q-140	140 (20000)	2235 (3000)
SYL2300Q-140	140 (20000)	1860 (2500)
SYL2000Q-105	105 (15000)	1680 (2250)
SYL2000-105	105 (15000)	1680 (2250)
SYL1600-105	105 (15000)	1320 (1800)
SYL1300-105	105 (15000)	1150 (1500)
SYL1000-105	99.5 (14426)	1040 (1400)
SYL900-70	70 (10000)	845 (1135)
SYL600-70 (YLC70-670)	70 (10000)	700 (520)
SYL400-70 (YLC70-300)	70 (10000)	540 (403)
SYL300-70 (YLC70-265)	70 (10000)	450 (336)



SYL3000Q-140 Fracturing Pump Truck



SYL2500Q-140 Fracturing Pump Truck

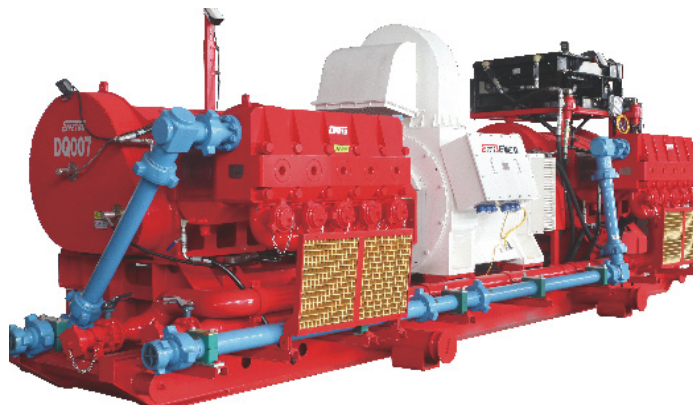


SYL2300Q-105 Fracturing Pump Truck



SYLQ2300Q-105 Fracturing Pump Skid





SYLQ5000Q-140D Electric Fracturing Pump Skid



SHS20(130bbl) Sand Blender



SYG140 Manifolds Truck



SCSGT-210 Frac-fluid Continuous Mixing Truck



Instrument Van

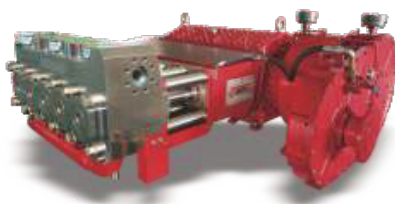


### Fracturing Pump

SOFE's fracturing pumps have evolved throughout history to accommodate the increasing demand of pressure pumping services companies in both domestic and international market as operators are required to push fracturing fluid into more complex geological formations to enhance oil & gas production. Our fracturing pumps with new material technology can ensure our customers with reliability and ultra long operation life for high-pressure high-displacement continuous operation.

Plunger pump model	STP900/1000	STP1500	STP1800	STP2000	SQP2500/2500H
Max. input power kW (hp):	670/750 (900/1000)	1120 (1500)	1342 (1800)	1491 (2000)	1866 (2500)
Stroke mm (in.):	203.2 (8")	203.2 (8")	203.2 (8")	203.2 (8")	203.2 (8")
Max. SPM:	300	330	330	330	330
Plunger size, in.:	5", 4-1/2", 4", 3-3/4"	5", 4-1/2", 4"	5", 4-1/2", 4"	5-1/2", 5", 4-1/2"	5", 4-1/2", 4", 3-3/4"
Gear ratio:	5.619:1 / 5.043:1	6.353:1	6.353:1	6.353:1	6.353:1
Overall DIM. (LxWxH) mm:	2012X1410X1016	2199X11472X1110	2280X1518X1126	2280X1518X1126	2199X1980X1113
weight kg:	4082/3856	4552	5398	5610	6760

Plunger pump model	SQP2800	STP3300	SQP3300	SQP5500
Max. input power kW (hp):	2088 (2800)	2460 (3300)	2460 (3300)	4045/5516 (5500/7500)
Stroke mm (in.):	203.2 (8")	279.4 (11")	279.4 (11")	279.4 (11")
Max. SPM:	350	250	250	250
Plunder size, in.:	5", 4-1/2", 4", 3-3/4"	5-1/2", 5", 4-3/4", 4-1/2"	5", 4-3/4", 4-1/2", 4", 3-3/4"	5-1/2", 5", 4-3/4", 4-1/2", 3-3/4"
Gear ratio:	6.333:1	7.514:1	7.514:1	7.514:1
Overall DIM.(LxWxH) mm:	2296X2310X1198	1290X1910X860	2465×2696×1141	2465×2696×1141
Weight kg:	9166	8800	9200	9200



SQP3300 Quintuplex Fracturing Pump  
(Stainless Steel Pump Cylinder)



STP3300 Triplex Fracturing Pump



SQP2800 Quintuplex Fracturing Pump



STP2000 Triplex Fracturing Pump



SQP2500 Quintuplex Fracturing Pump



STP1500 Triplex Fracturing Pump



# CTUS AND SNUBBING UNITS

A “fit-for-purpose” coiled tubing unit and snubbing unit has been successfully designed and applied for different circumstances. Currently, more than 30 sets of CTUs have been exported to North & South America, Russia, the Middle East and North Africa, etc.



## Coiled Tubing Units



SLG380 Coiled Tubing Units (Main unit )



SLG380 coiled tubing units (auxiliary unit)

Model	Max. rated pull kN (lbs)	Max. snubbing capacity kN (lbs)	Injector head
SLG50	50 (11000)	25 (5600)	SZR50
SLG90	90 (20000)	45 (10000)	SZR90
SLG130	127 (28000)	63.5 (14000)	SZR130
SLG180	180 (40000)	90 (20000)	SZR180
SLG230	227 (50000)	113.5 (25000)	SZR230
SLG290	290 (65000)	145 (32500)	SZR290
SLG380	380 (85000)	190 (42500)	SZR380
SLG450	470 (106000)	235 (42500)	SZR470
SLG620	620 (139000)	310 (42500)	SZR620



SLG380T Skid-mounted Coiled Tubing Unit



SLG380T trailer-mounted Coiled Tubing Unit



SLG290 Coiled Tubing Unit (Low-temperature) in Russia.



SLG290 Shipborne Coiled Tubing Unit in Venezuela.



SLG380T Shipborne Coiled Tubing Unit in Venezuela.



SLG450 Coiled Tubing Unit in Fuling, Chongqing.



**Injector Stability**  
- Min. stable speed 0.1m/min  
- Chain synchronous drive  
- Quick disassembly and assembly of gripper block



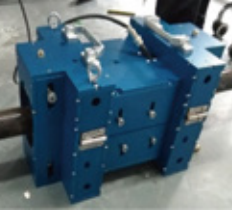
**Large Capacity of Reel**  
2"-6100m  
2"-8000m  
2 3/8"-5100m



**Quick Installation**  
- 30min quick change reel  
- 30min tubing connection  
- Quick reeving of injector



**Mobility**  
- Turning radius ≤ 15m  
- Adapt to mountain roads  
- Harsh terrain application



**Safety Operation**  
- Reduction of manpower  
- Real-time detection  
- Alarm and automatic shut down

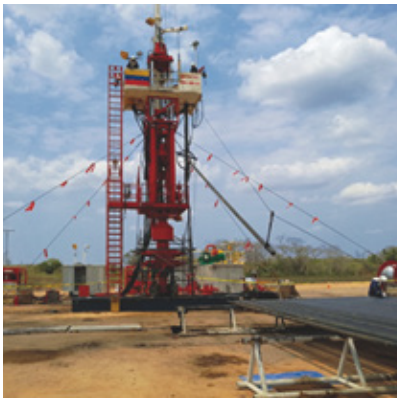


Snubbing Unit

Snubbing units are engineered and produced to directly perform downhole solutions without the need of killing well and releasing pressure from well, making it a very cost effective ideal solution, including an environmental protection and energy-saving scenario.

The series of snubbing units are designed and manufactured in accordance with API, DOT and NACE MR-01-75-96.

It is new style stand-alone full-hydraulic workover equipment based on our research experience of offshore workover rigs and stand-alone snubbing units in combination with offshore platform workover operation need. This equipment is featured by simple structure, less footprint and light weight. It is fitted with hydraulic skidding base and integrated wellhead device, meeting the requirements for offshore cluster-well operation.



SDYJ225D  
(Venezuela Well Site)



SDYJ270 (Shipborne Type)



SDY F70  
(Skid-mounted Auxiliary Type)



SDYJ270(Offshore Platform  
Explosion Proof Type)



SDYJ225 (Skid-mounted Stand-alone Type)



SDYJ160 Offshore Snubbing Rig in Bohai



SDYJ160D (Skid-mounted Stand-alone Type)

Model	Max. lifting load kN (lb)	Max. snubbing force kN (lb)	Engine power kW (hp)
SDYJ40	400 (90000)	280 (63000)	175 (235)
SDYJ70	675 (135000)	350 (135000)	242 (325)
SDYJ90	900 (202500)	550 (1242000)	287 (385)
SDYJ110	1125 (253000)	850 (191000)	335 (450)
SDYJ160	1575 (354000)	1000 (225000)	354 (475)
SDYJ225	2250 (506000)	1160 (261000)	403 (540)
SDYJ270	2700 (608000)	1700 (382160)	403x2 (540x2)



## WELDED STEEL PIPE

The LSAW, SSAW, ERW pipe, bend pipe and coating, have mainly been catering for various application in oil & gas industry such as crude oil & natural gas delivery, fuel pipelines, and infrastructure construction for porting, roads & bridges, i.e. water pipeline, slurry pipes, piling pipes, etc.

Annual production: 500,000 tons

More than 600,000 tons steel pipes are exported to Saudi Arabia, Kuwait, Iraq, Bangladesh, Pakistan, Sudan, Ghana, Kenya, Chile, Brunei, etc.



- In accordance with different standards such as API 5L, API 5CT, ISO 3183, ISO 11960, ASME B16.49, DIN 30670/30678, AWWAC210, GB/T9711, GB/T23257, SY/T5037, SY/T 0315, SY/T 5257, etc.
- Certificated by API monogram, ISO 9000 quality system, ISO 14001 system and ISO 17025 laboratory accreditation.
- Approved by Saudi Aramco, SABIC, SWCC, KOC, KNPC, PETROBRAS, AUSENCO PSI.



LONGITUDINAL SUBMERGED ARC WELDED STEEL PIPE	
Diameter: Φ508-1422mm	Wall thickness: 6.4-32mm
Steel grade: ≤X80	Annual output (ton): 180000-400000



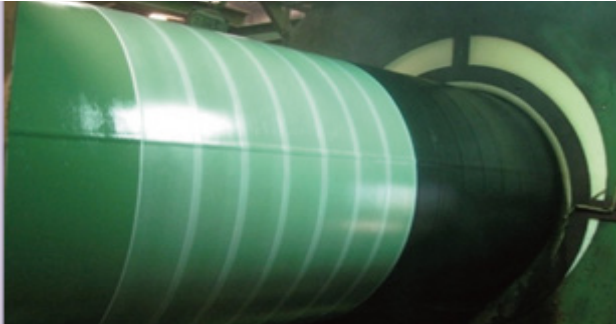
SPIRAL SUBMERGED ARC WELDED STEEL PIPE	
Diameter: Φ323.9-1626mm	Wall thickness: 6.4-20.6mm
Steel grade: ≤X80	Annual output (ton): 220000-450000



HIGH FREQUENCY WELDED PIPE	
Diameter: Φ219-610mm	Wall thickness: 4-19.1mm
Steel grade: ≤X80	Annual output (ton): 100000-150000



BEND PIPE	
Diameter: Φ159-1220mm	Wall thickness: ≤35mm
Steel grade: ≤X80	Annual output (ton): 20000



COATING SERVICE	
Single or double layer fusion bonded epoxy powder	Double or three layer PE/PP
Liquid epoxy internal drag reduction or internal coating	
Pipe sizes: Diameter:Φ273-1422mm	Annual output (ton): 6,000,000m²



Certificates



Aramco Certificate



KNPC Certificate



KOC Certificate



SABIC Certificate



Ausenco PSI Certificate



Petrobras Certificate



Petrobras Certificate



SWCC Certificate

References

Saudi Aramco JAZAN Refinery Project (10500 tons)



Saudi Aramco MGSE Project (39000 tons)



LSAW Pipe Size

API 5L, ISO 3183, 01-SAMSS-035, GB/T9711, SY/T 5037, SY/T5040, SY/T 5768

Grade X80 below X70 below X60 below

Dia.		W.T ( mm )																				
inch	mm	6.4	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20.6	22.2	23.8	25.4	27	28.6	30.2	31.8
20	508																					
22	559																					
24	610																					
26	660																					
28	711																					
30	762																					
32	813																					
34	864																					
36	914																					
38	965																					
40	1016																					
42	1067																					
44	1118																					
46	1168																					
48	1219																					
52	1321																					
56	1422																					

SSAW Pipe Size

API 5L, ISO 3183, 01-SAMSS-035, GB/T9711, SY/T 5037, SY/T5040, SY/T 5768

Grade X80 below X70 below X60 below X52 below

Dia.		W.T ( mm )													
inch	mm	6.4	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7	14.3	15.9	17.5	19.1	20.6
12 3/4	323.9														
14	355.6														
16	406.4														
18	457														
20	508														
22	559														
24	610														
26	660														
28	711														
30	762														
32	813														
34	864														
36	914														
38	965														
40	1016														
42	1067														
44	1118														
46	1168														
48	1219														
52	1321														
56	1422														
64	1626														



ERW Pipe Size

API 5L, ISO 3183, GB/T9711, SY/T5040, SY / T 5768

Grade

X80 below

X70 below

Dia.		W.T. ( mm )															
inch	mm	4	4.8	5.2	5.6	6.4	7.1	7.9	8.7	9.5	10.3	11.9	12.7	14.3	15.9	17.5	19.1
8 5/8	219.1																
10 3/4	273.1																
12 3/4	323.9																
14	355.6																
16	406.4																
18	457.2																
20	508																
22	559																
24	610																

API 5CT, ISO 11960

P110 below

N80 below

Dia.		W.T. ( mm )															
inch	mm																
8 5/8	219.1	6.71			7.72		8.94		10.16								
9 5/8	244.5				7.92		8.94		10.13		11.05		11.99				
10 3/4	273.1				7.09		8.89		10.16		11.43						
11 3/4	298.5						8.46		9.52		11.05		12.42				
13 3/8	339.7						8.38		9.65		10.92		12.19				
16	406.4								9.52		11.13		12.57		16.66		
18 5/8	473										11.05						
20	508										11.13		12.7		16.1		

Bend Pipe Size

DN	R	Grade	W.T.	Bending
150	3D、4D、5D、6D、7D、8D	≤X80	≤35mm	≤90°
200	3D、4D、5D、6D、7D、8D			
250	3D、4D、5D、6D、7D、8D			
300	3D、4D、5D、6D、7D			
350	3D、4D、5D、6D、7D			
400	3D、4D、5D、6D、7D			
450	3D、4D、5D、6D、7D			
500	3D、4D、5D、6D、7D			
550	3D、4D、5D、6D、7D			
600	3D、4D、5D、6D			
650	3D、4D、5D、6D			
700	3D、4D、5D、6D			
750	3D、4D、5D、6D			
800	3D、4D、5D、6D			
850	3D、4D、5D、6D			
900	3D、4D、5D、6D			
950	3D、4D、5D、6D			
1000	3D、4D、5D、6D			
1200	3D、4D、5D、6D			

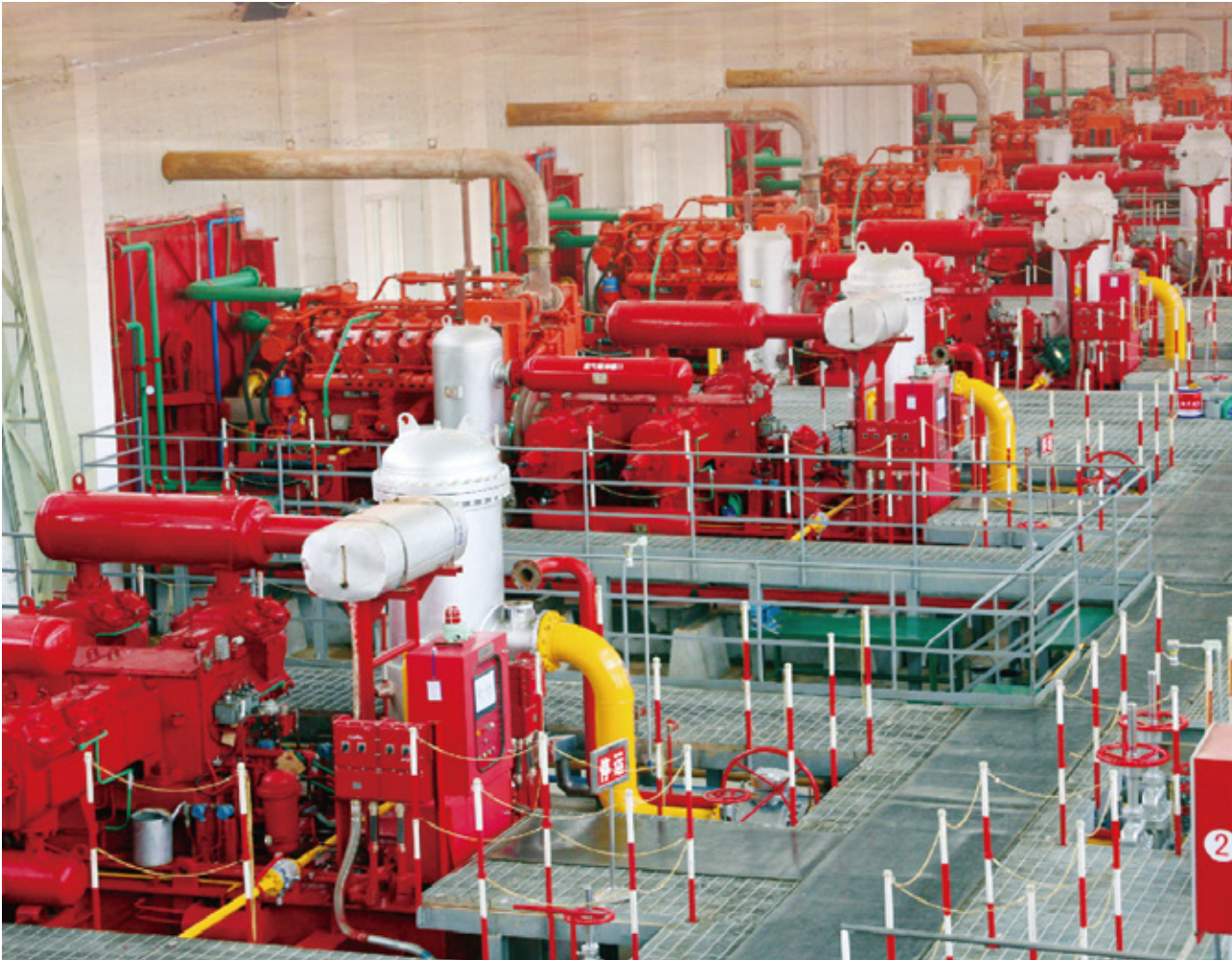


NATURAL GAS COMPRESSOR PACKAGE

The technologies of the reciprocating natural gas compressor have been transferred from Dresser-Rand. Nowadays, we offer 9 categories products structured of symmetrical balance and completed balance. Products are widely used in natural gas gathering & transporting, boosting, CNG gas fueling station, BOG recovery, etc.

Annual production: 100 sets

The products are exported to Rwanda.

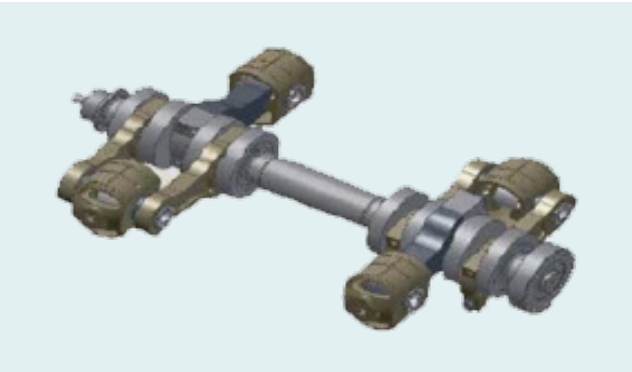




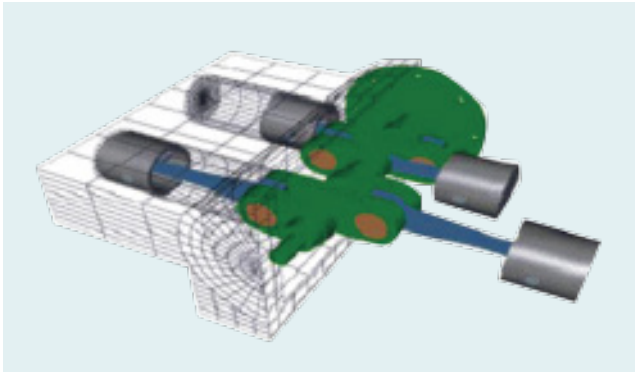
Power range: 75~8400 kW Max. outlet pressure: 52 MPa			Max. speed: 1500 r/min Max. capacity: 4260000 Nm³/d
FB series- complete balance	Bar load	Max. power	Application area
	5 T	420 kW	Recovery of test gas/test-production gas Gathering wellhead gas gas lift and drainage, gas injection for oil production
	13 T	1500 kW	Small-middle-power pipeline pressuriza- tion,gas gathering/transferring
	25 T	4500 kW	Offshore platform, pipeline pressuriza- tion, gas gathering/transferring
RDS series- symmetrical balance	Bar load	Max. power	Application area
	9 T	1350 kW	CNG Parent Fuelling Statio, Gas filled drilling
	15 T	1800 kW	Gas storage LNG feed gas pressuriza- tionBOG recoveryPipeline gas pressur- ization, gathering/transferring
	22 T	3600 kW	
	27 T	4600 kW	
	33 T	6500 kW	
	40 T	8400 kW	



Two Compressor Packages on the Ship, Rwanda



FBC Series: Complete Balance



RDS Series: Symmetrical Balance

## Applications



Natural Gas Storage



Natural Gas Gathering/Transferring



Offshore Platform Compressor Unit



BOG Compressor Unit



Sour Gas Compressor Unit



Gas Injection For Oil/gas Production



Flare Gas Recovery



Sales Gas Pressurization



CNG Refueling Station



Trucked Compressor Unit



## OFFSHORE EQUIPMENT

With more than 30 years of experience, SOFE can offer a variety of offshore workover rig / drilling rigs, jack-up platform rig, submersible platform rig, offshore cementing & fracturing equipment, ROV, subsea well factory, oil enhanced vessel. We have produced more than 400 sets of large-scale offshore equipment. Our products are widely used in Bohai Sea, East Sea and South Sea, and exported to North America, Malaysia. Additionally, we provided a set of unique cementing unit package which has been successfully operating on the Deep-water Semisubmersible Drilling Platform (HD-981) with sophisticated technologies. This cementing unit package is a solely China-made product in this platform.



SHXJ180MB Removable Marine Workover Rig



SJK675DB Jack-up Platform Rig



SJF180DB Fixed Platform Rig



SJF225DB Fixed Platform Rig



SJF450DB Fixed Platform Rig



SJK158DB Jack-up Platform Rig





Model 2000 Offshore Acidizing and Sand Control Skid for CPOE



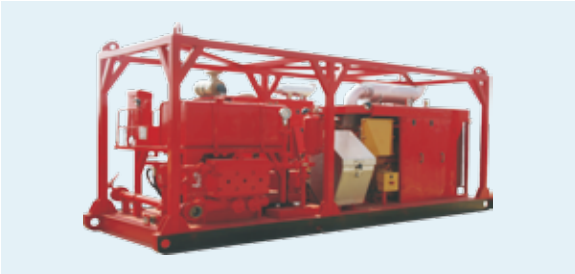
13000HP Offshore Oil and Gas Enhanced Vessel



SGJ600-30Q Offshore Cementing Skid



Offshore Cementing Skid on Offshore Platform 981



SZQ600-13 Offshore Skid-mounted Pump



SYLQ2000-105 Fracturing Skid



SGJ600-30Q Offshore Cementing Skid



PCS-521B Offshore Cementing Skid With Double Engines and Double Pumps



PCS-1500B Offshore Cementing Skid With Large Displacement and Double Pumps



PCSE-621A Electric Drive Offshore Cementing Skid With Double Engines and Doule Pumps

Jack-up / Fixed Platform Drilling Rigs

Model	Max. hook load kN (lb)	Rated HP, drawworks kW (hp)
SJK900DB	9000 (200,000)	4413 (6000)
SJK675DB	6750 (150,000)	2200 (3000)
SJK450DB	4500 (100,000)	1470 (2000)
SJF450DB	4500 (1000000)	1470 (2000)
SJF315DB	3150 (700000)	1100 (1500)
SJF225DB	2250 (500000)	735 (1000)
SJF180DB	1800 (400000)	550 (750)

Offshore Cementing Equipment

Model	Max. working pressure MPa (psi)	Max. working displacement L/min (GPM)
SGJ600-30Q (GJQ100-30)	97.5 (14137)	3050 (794)
SGJ600-33Q (GJQ70-30)	70 (10150)	3379 (893)
SGJ600-37Q (GJQ55-35)	55 (7976)	3767 (996)
SGJ600-42Q (GJQ45-42)	45 (6526)	4210 (1112)
SGJ400-30Q (GJQ75-35)	75 (10875)	3504 (806)
SGJ400-27Q (GJQ95-27)	95 (13775)	2733 (722)
SGJ350-30Q (GJQ50-30)	50 (7251)	3000 (792)
SGJ350-25Q (GJQ70-25)	70 (10150)	2500 (660)

Offshore Workover Rigs

Model	Max. hook load kN (lb)	Rated HP, drawworks kW (hp)
SHXJ90	900 (200000)	257~330
SHXJ112	1125 (250000)	280~400
SHXJ135	1350 (300000)	330~450
SHXJ158	1575 (350000)	400~500
SHXJ180	1800 (400000)	450~600
SHXJ225	2250 (550000)	550~735



# QUALITY MANAGEMENT

It is our policy to fully comply with or exceed the requirements of the customers and continually improve the effectiveness of the quality management system.

SOFE builds a complete and reliable quality management system based on API Q1/ISO9001, with products certified by API 7K, 7-1, 8C, 4F, 6A, 16C, 5L, 11B, 11E.



## Certificates





# INSPECTION AND TESTING CAPABILITY

SOFE has established National Inspection & Testing Centers for oilfield equipment, which are available for the real-time simulation of well site operation.

## Key Labs

- Rubber Materials Lab
- Key Lab for Cutting Materials Inspection & Testing, Rock-breaking Tools
- 6000hp Plunger Pump Testing Center
- 700MPa High Pressure Testing Center
- ROCKWELL Automation Control Lab
- Testing Yard for 140MPa Cementing Equipment
- Rig-up & Commissioning Yards for 800T Workover Rig/Drilling Rig Package



## Inspection Capabilities

- CNAS Certified
- Collaboration with reputed third party inspection entities i.e. DNV, Lloyd's, BV, ABS, TUV and Moduspec.





# SERVICE SYSTEM

SOFE has established a service network with 4 regional and 15 global Representative Offices, providing products promotion, face to face technical communication, recertification, upgrade and modification, genuine spare parts, as well as aftersales services in a fast-track manner. Field and in-house training can be provided extensively on our product lines to ensure the highest quality service and supports for your equipment operation on site.

