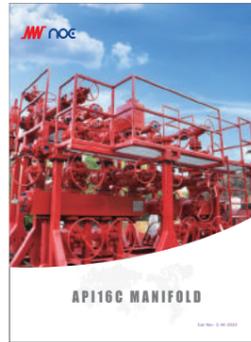
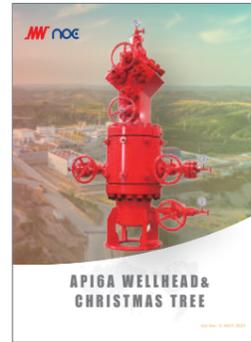




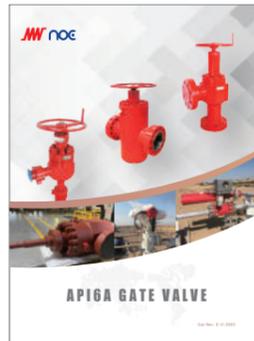
Product Summary



MANIFOLD



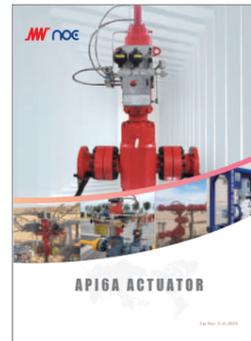
WLLHEAD & CHRISTMAS TREE



GATE VALVE



FRACTURING PRODUCTS



ACTUATOR



To be a Global Leading Manufacturer of Flow Equipment  
Complete Solutions for Smart High Pressure Flow Equipment

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WEBSITE



WECHAT

# SUBSEA PRODUCTS

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## About us

### Complete Solutions for Smart High Pressure Flow Equipment

Neway Oil Equipment (Suzhou) Co., Ltd (Hereafter: NOE), a unit of NEWAY Group (SSE 603699), is a professional smart high pressure flow equipment and always commits to provide customer with reliable quality for high pressure valve, wellhead equipment, Christmas tree and other upstream products.

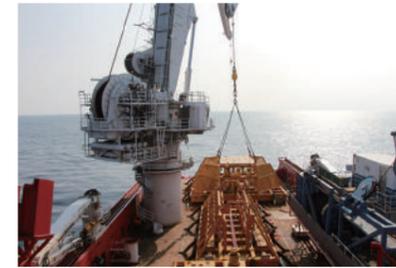
We are adhering to the business philosophy of Neway group, committing to developing and manufacturing the reliable oil and gas drilling equipment. Through continuous innovation, we provide engineering solutions for various working conditions to our clients, and to meet the requirements of the oil and gas industry on the health, safety and environment.

### Facilities & Service

We have our own R&D, manufacturing and sales, and have initially formed a product series based on Wellhead & X-mas tree, Fracturing Equipment, Control System, Choke Manifold, Subsea Equipment, Gate valve, Choke valve. Our products have been exported to Middle East, America, Asia, Europe and other countries and regions, and established a strategic partnership with many overseas agents and distributors. NOE is based on China to implement its global strategy. We have major production bases in China and Vietnam, and also we have professional casting plant, forging plant and R&D centers in China. We use SAP and MES system to control the traceability and statues of all products during the manufacturing process.

### High Quality, High Value

NOE is dedicated to the pursuit of providing Zero Defect products for our customers. Employ a Six Sigma quality management system and advanced statistical data analysis to continually enhance and improve our precesses and control our overall product quality. NOE's industrial certifications include ISO 9001, ISO14000, ISO45001, API6A, API16C, API 17D, API Q1, TS2710N10-2013, CE-PED qualification and hold PR2 certification issued by CA's like DNV, ABS & Lloyds.



Subsea valve, the valve used in shallow water or deep water, typically application: subsea manifold, PLEM, PLET, single buoy mooring systems and other subsea production system. At present, Neway's main subsea products include subsea ball valves, subsea gate valves and other subsea valve products and actuators, as well as other subsea peripheral products, such as hot stab, subsea flange and other single peripheral products, and also providing subsea component maintenance and processing services. Neway is one of the first companies in China to receive API 6DSS and API 17D certificates. Since in 2015 the first subsea orders, Neway has been breaking the technical bulwark and formed its own design features and the technical principle of subsea R&D center, and also form a complete set with 3000 meters water depth of the hyperbaric chamber, PR2 test chamber, subsea actuator tests bench and other special equipment. Neway has perfect subsea valve production, test capacity, and also to ensure the reliability and stability of subsea product performance by the strict subsea product quality management system. Neway commits to the steady development of subsea product localization and to develop more advanced subsea products.

## Technical Capacity

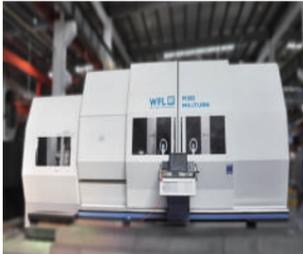
Neway has always been committed to technological progress and innovation, with more than 200 experts from different technical background to develop better subsea products. In order to make our subsea products more competitive, we are committed to creating deeper and safer subsea products. Neway, as one of the earliest manufacturers in China to develop key subsea equipment mainly based on subsea valves, of whom has accumulated rich experience in a number of subsea oil and gas projects, and has developed to a depth of 3,000 meters, truly realizing the full depth coverage of the company's subsea products from shallow sea to deep sea. Relying on the rich experience in the development and execution of subsea products, Neway aims to provide customers with comprehensive subsea equipment and solutions.





Neway Liyang Forging

Neway has a complete production line from raw material to final product, which includes forging casting raw materials, welding, machining, etc. Meanwhile, the latest computer technology has been widely used in Neway manufacturing. This includes a large number of CNC , automatic welding robots, intelligent paint lines, ERP manufacturing resource integration management system, MES system, etc. Data is shared across all Neway facilities through fibre-optic interconnections, which allows us to effectively concentrate manufacturing resources and increase productivity, as well as improve processing quality and process control.



CNC Machining Center



Automatic Welding Robot

In order to meet the requirements of various and high level testing, Neway has invested a large number of special testing equipment for subsea products which is to promote the steady development of Neway subsea products, and to meet the increasing requirements of customers for testing and verification.

To date, Neway has deployed a variety of equipment including hyperbaric test chamber, PR2 test chambers, ROV torque tool, etc.



PR2 Testing Chamber



Actuator Test Bench



Hyperbaric Testing Chamber



ROV Torque Tool



Hydraulic Flushing Equipment



Material Failure Analysis Center



Quantitative determination of metal composition



Mechanical test



Testing of nonmetallic properties



Detection of trace harmful elements



NDE Test



High precision dimension test



Microscopic metallographic test



Corrosion resistance testing

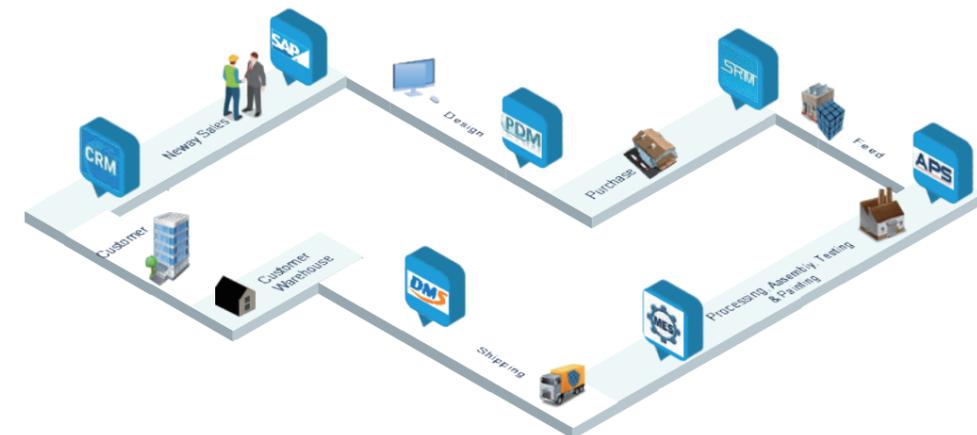


CNAS Lab

Neway has a sound and perfect quality control system to provide customers with comprehensive and assured quality guarantee. Neway's quality assurance goal is dedicated to the pursuit of providing customers with zero defect products. Neway implements six Sigma quality management actively and continuously improves process control management ability by advanced data statistical analysis. Meanwhile, according to the relevant standards and manufacturing requirements of subsea products, Neway has developed a comprehensive quality management program, which is applicable to the manufacturing process of subsea products and to control the quality of subsea products.

### Rough material quality control

Critical metallic & non-metallic material quality control: Prepare specifications for special subsea materials, including but not limited to body materials, trim materials, fastener materials, sealing materials. The material specifications are prepared with full consideration to the requirements of API standards and customer standards to meet the high requirements of customers and API standards. Neway subsea product material implementation standards are derived from API standards and customer standards, but are higher than these standards with universal applicability.



In addition to demanding quality control specifications, Neway is bending to develop suppliers that meet the requirements of subsea performance, and assisting suppliers in process solidification and process improvement to ensure the reliability of subsea product quality and the stability of quality in production process.

Since 2014, Neway has developed a series of high quality suppliers in special for subsea products, and has carried out process evaluation that aims at common subsea materials and special processes to ensure the qualified rate of subsea product parts. Neway has established complete subsea supply chain.



## Welding process control

For overlaying requirements. In general, due to the harsh subsea conditions and the long service life of subsea equipment, for which it is necessary to overlaying on the wet surfaces of the channel in the equipment to improve the corrosion resistance of the equipment and prolong the service life. It is a complicated process for the whole channel surfacing welding of subsea equipment, especially for some parts with complicated curved surfaces. Automatic welding robot is general needed, in order to make up for the instability of manpower. On the other hand, the stability and reliability of welding quality will be controlled by the specified welding process. In order to ensure the rationality and authority of welding process evaluation, it is usually required to be witnessed by a third party.



## Subsea painting control

Subsea products have critical requirements on paint selection and paint line qualification. The paint uses for subsea products is functional type, which is to provide a certain protective effect on the product outer surfaces for subsea application. The commonly used paints include epoxy glass flake paint or epoxy resin paint etc.

NORSOK M501 Series 7 paint requirements are generally required for subsea project products. Similarly, the subsea products paint lines also need to satisfy with the standard.



## Maintenance services

Neway has a complete subsea supply chain and machining manufacture capability to provide customized design, production and machining services. Customer oriented, think about what customers think. Through the subsea product quality control system, we provide customers with complete quality assurance from raw materials to machining and to final products.



Subsea BOP control POD  
The typical customized product

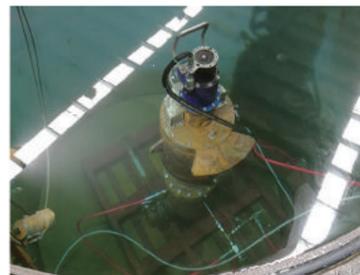
Neway has invested a lot of work in obtaining qualification of subsea valve products. At present, the company's equipment can meet the requirements of completing all type test items in the factory. The certified product water depth has reached 3000m.



API 17D

API 6DSS

API 6A



Typical qualified valves:  
3000m subsea valve prototype qualified—ROV and hydraulic

## Subsea ball valves

- Standards: API 6DSS
- Size: 1/2"~48"
- Pressure: CIASS 150-2500
- Water depth: ≤3000m
- Valve type: Side-entry, top entry, full welded
- Operation type: Handle, gearbox, hydraulic (ROV bucket applicable for all type)
- Application: Subsea manifold, PLEM, PLET, PLR, Pipeline, other subsea systems, etc



## Technical features:

- 1 Multiple seal guarantee;
- 2 It can be used for long-term or temporary subsea service conditions. According to different service life requirements, from which there being the different material chosen.
- 3 Excellent bi-direction sealing performance
- 4 Seat sealing structure is available with SPE or DPE.
- 5 Metal-sealing and soft-sealing are available to valve seat and body.
- 6 Multi-channel sealing leak detection which to fully detect the sealing performance of each sealing part;
- 7 The structure is of stem blow in and blowout proof.



## Subsea gate valves

- Standards: API 17D
- Size: 1"~9"
- Pressure: 5000 psi – 15000 psi
- Water depth: ≤3000m
- Valve type: Top entry
- Operation type: Handle, gearbox, hydraulic (ROV bucket applicable for all type)
- Application: Subsea X-mas tree, manifold, PLEM, PLET, PLR, Pipeline, other subsea systems, etc



### Technical features :

- 1 Multiple seal guarantee;
- 2 It can be used for long-term or temporary subsea service conditions;
- 3 Excellent bi-direction sealing performance;
- 4 Rising stem or rotary stem is alternative;
- 5 Stem back seat seal design(Both applicable for close and open position)
- 6 Single seat floating structure that with good high and low pressure sealing performance;
- 7 Valve seat and gate metal-seal structure design.



## Subsea valve blocks / compact manifold

- Standards: API 17D
- Size: 1"~9"
- Pressure: 5000 psi – 15000 psi
- Water depth: ≤3000m
- Valve type: Top entry
- Operation type: Handle, gearbox, hydraulic (ROV bucket applicable for all type)
- Application: Subsea X-mas tree, manifold, PLEM, PLET, PLR, Pipeline, other subsea systems, etc

### Technical features :

- 1 Integral body structure;
- 2 Compact structure and light weight;
- 3 Conform to the modular and integrated design concept.
- 4 Conforms to modular and integrated design concepts



## Non-standard small size rotary gate valve

- Standards: API 17D
- Size: 1/2" ~1"
- Pressure: 5000 psi – 10000 psi
- Water depth: ≤3000m
- Valve type: top entry
- Operation type: Handle, ROV
- Application: Subsea hydro-system, chemical injection, X-mas tree, etc.

### Technical features :

- 1 Non-standard design;
- 2 Rotary operation type, operation stroke 90°;
- 3 With good bi-directional sealing performance;
- 4 Downstream seal;
- 5 Multiple seal structure;
- 6 Low torque ROV receptacle.



## Quarter turn gearboxes

- Type: Planetary gear
- Valve applicable: Subsea ball valves, rotary type gate valves, check valves
- Input torque: 2711 N.m (conform with API 17H CLASS 4)
- Output torque: 150000 N.m (max)
- Position indicator: Diver visible (O/S), anti-corrosion
- Connect flange: Conform to ISO 5211
- Compensator: Close type (install with safety relief valve), open type
- Features: High efficiency, transmission, etc.



## Linear motion gearboxes

- Type: Trapezoidal thread drive + multi-gears
- Valve applicable: Linear type subsea gate valves
- Input torque: 2711 N.m (conform with API 17H CLASS 4)
- Output force: 1500 KN (max)
- Position indicator: Diver visible (O/S), anti-corrosion
- Connect flange: Conform to ISO 5211 or customization
- Compensator: Close type (install with safety relief valve), open type
- Features: Smooth transmission and high output force



## Linear motion hydraulic actuators

- Type: Single acting, double acting (ROV bucket applicable for all type)
- Valve applicable: Linear type subsea gate valves
- Fail type: Fail safe close(FSC), fail safe open(FSO), fail as is(FAI)
- Operation force: 3000 psi, 5000 psi
- Cleanness level: Conform to SAE AS4059 Class 6B-F
- Input torque (if applicable): 2711 N.m (conform with API 17H CLASS 4)
- Output force: 1500 KN (max)
- Position indicator: Diver visible (O/S), anti-corrosion
- Connect flange: Conform to ISO 5211 or customization
- Compensator: Close type (install with safety relief valve), open type

### Technical features:

- 1 Hydraulic and ROV operation are both applicable;
- 2 Reset spring (FSC, FSO) design considering 1.5-2 times of safety margin;
- 3 With anti-spring deviation force guiding structure design;
- 4 Hydraulic operation is equipped with Anti vibration joints;
- 5 Rotary position indicator that indicate valve position effectively;
- 6 Internal and external pressure balance design;
- 7 Bi-directional sealing design;
- 8 Standard ROV operating interface in compliance with API 17H requirements;
- 9 Spline oriented design.



## Self-support extension shaft

Suitable for the extension of ROV bucket in specific working condition. The extension shaft is supported on the actuator topside which can bear higher torque and a certain bending moment.

The extension shaft selects 25Cr which has good corrosion resistance in subsea working condition; the extension cavity is carbon steel and coated with subsea painting.

Recommended height: below 1500 mm.



## Non self-support extension shaft

This type extension shaft is supported with mounting plate on the protection structure of the subsea system. The length or height can be adjusted. The extension shaft selects 25Cr which has good corrosion resistance in subsea working condition.

Non self-support extension shaft is well-suited for higher height requirement.

## ROV protection covers

Suitable for many kinds of ROV types and can be customized. The ROV protection covers can protect the ROV buckets from be polluted by marine growth.



## Hot stab

Suitable for hydro-system, size customized.



## Pig lock Pin

The pin is applicable for PLR equipment, which can hold the pig in-position during installation, transportation, etc. Size customized.



## SPM valves

The high quality and long life characteristics of the SPM valves can satisfy with the subsea hydro-system requirements.



## Subsea vent valves

The small size (1/2"-1") vent valves can satisfy with uni-direction or bi-direction pressure relief requirements, suitable for overpressure protection.



## Subsea flanges

We can supply single type flange or API 17SV swivel flange which meet the requirements of API 6DSS or API 17D.



Neway, as a leading manufacturer of subsea equipment in China, has participated in many subsea productions system projects, and through these projects, it continues to make breakthroughs and optimize its products. Neway had set up a complete subsea product production, procurement and quality control system.



**Project:** WC9-2/9-3/10-3 Gas field cluster project  
**Supply products:** Subsea gate valve, subsea ball valve, ROV protector  
**Water depth:** 142 m



**Project:** LH16-2/29-1/29-2 Gas Field Subsea PLRs Project and LS17-2 head project  
**Supply products:** Subsea ball valve, Portable handwheel, Flange  
**Water depth:** Max.1550 m



**Project:** LD 22-1 gas South project  
**Supply products:** Subsea Gate valve, Subsea Ball Valve, Portable handwheel, ROV Protection Cover, ROV Extension Shaft  
**Water depth:** 500 m



**Project:** Bo Nan Region Gas Recovery  
**Supply products:** Subsea ball valve  
**Water depth:** 20 m



**Project:** JZ gas filed 31-1 subsea valve Project  
**Supply products:** Subsea gate valve, Subsea ball valve, Portable handwheel, ROV Protection Cover, ROV Extension Shaft  
**Water depth:** 27.1 m



**Project:** J1750 Seagreen Offshore Windfarm Jacket Fabrication  
**Supply products:** Subsea ball valve  
**Water depth:** 100 m



**NEWAY Head Office**      Founded in 2014  
 Total area: 2,295sqm  
 Office area: 6,885sqm



**NEWAY Oil Equipment**      新建于2007, 扩建于2014  
 Main products: Wellhead & X-mas tree, Frac Equipment, Mainfold, Subsea Equipment, Gate valve  
 Building area: 33,000 sqm  
 Work shop: 20,000 sqm



**NEWAY Manufacturing Base**      Founded in 2006 and expanded in 2013  
 Main products: Ball Valve, Butterfly Valve, Gate Valve, Globe Valve, Check Valve, Control Valve  
 Building area: 230,000 sqm  
 Work shop: 140,061 sqm



**NEWAY Foundry (Dafeng)**      Founded in 2004  
 Main products: Lost wax investment casting  
 Building area: 46,000 sqm  
 Work shop: 12,000 sqm



**NEWAY Foundry (Suzhou)**      Founded in 2008 and expanded in 2015  
 Main products: Sand Casting  
 Building area: 112,500 sqm  
 Work shop: 98000 sqm



**NEWAY Forging (Liyang)**      Founded in 2017  
 Main products: Hammer forging, annular forging  
 Office area: 3,000 sqm  
 Work shop: 30,000 sqm



Seller will replace without charge or refund the purchase price of products provided by Seller which prove to be defective in material or workmanship, provided in each case that the product is properly installed and is used in the service for which Seller recommends it and that written claim, specifying the alleged defect, is presented to the Seller within 18 months from the date of shipment or 12 months after installation, whichever occurs first. Seller shall in no event bear any labor, equipment, engineering or other costs incurred in connection with repair or replacement. The warranty stated in this paragraph is in lieu of all other warranties, either expressed or implied. With respect to warranties, this paragraph states Buyer's exclusive remedy and seller's exclusive liability.

## Neway Overseas Subsidiaries

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 Fax: 0512-66618930-4715  
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 Postcode: 215129

### NOE America

Address : 9757 Stafford Centre Drive, Stafford TX  
 Tel : +281-969-5850  
 E-mail : NOEsales@newayvalve.com  
 Postcode: 77477

### NOE Vietnam

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 E-mail : noe@neway.com.cn  
 Postcode: 790000

### NOE Singapore

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 Fax : +65 6684 7970  
 E-mail : noe@neway.com.cn  
 Postcode : 118523

### NOE Dubai

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 Tel : +971 4 4562947  
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## After-sales Service

