

#### **Domestic**

#### Oriental Precision & Engineering Co., Ltd. **Busan Factory**

1614-1, Songjeong-dong, Gangseo-gu, Busan, Korea Tel. +82-51-202-0101 Fax. +82-51-831-3306

#### Jinhae Factory

575-1, Myeong-dong, Jinhae-gu, Changwon-si, Gyeongsangnam-do,

Tel. +82-55-545-8300 Fax. +82-55-545-8309

#### Oriental Heavy Industries Co.,Ltd.

#### Jingyo Factory

802, Baengnyeon-ri, Jingyo-myeon, hadong-gun, Gyeongsangnam-do,

Tel. +82-55-880-5800 Fax. +82-55-880-5888

#### Kwangyang Factory

1676-3, Taein-dong, Kwangyang-si, Jeollanam-do, Korea Tel. +82-61-798-6666 Fax. +82-61-795-6661

Oriental Precision Machinery Co.,Ltd. 1591-7, Songjeong-dong, Gangseo-gu, Busan, Korea Tel. +82-51-831-8899 Fax. +82-51-831-8908

#### Oriental Inspection & Service Co.,Ltd.

25-1187, Shinho-dong, Gangseo-gu, Busan, Korea Tel. +82-51-831-2747 Fax. +82-51-831-6260

#### **Overseas**

Dalian Oriental Marine & Heavy Industry Co.,Ltd.

No.92 East Street Gushan Development Zone Dalian City Liaoning Province

Tel. +86-411-3920-8888 Fax. +86-411-3922-3999

#### Oriental Precision (Dalian) & Technical Service Co., Ltd.

No.92 East Street Gushan Development Zone Dalian City Liaoning Province

Tel. +86-411-3922-3805 Fax. +86-411-3922-4000 Yantai Oriental Precision & Engineering Co.,Ltd.

No.2 Qingdao Street, B-17 District, Yantai Economic Development Zone, Shandong Province, China

Tel. +86-535-6953-701 Fax. +86-535-6953-699

#### Oriental Vietnam Precision & Engineering Co., Ltd.

01 My Giang, Ninh Phuoc commune, Ninh Hoa District, Khanh Hoa province, Vietnam

Tel. +84-58-3622 722 Fax. +84-58-3622 721

#### Oriental Precision & Engineering(Singapore) Co.,Ltd.

No.3 International Business Park #04-02 Nordic European Centre Singapore Tel. +65-6569-5005 Fax. +65-6560-3797

#### OPCO JAPAN Co.,Ltd.

1-8-6-201 Ebisu Shibuya-ku Tokyo Japan Tel. +81-03-5798-3324 Fax. +81-03-3446-0946







## Oriental always prioritized customer satisfaction above all with the advanced technology, quality and impeccable services.

Our great efforts to keep trust of our customers all the times enabled us to extend our range of products from the small scale such as the fittings to the large scale such as Deck house produced on orders first in Korea. And we're taking the second step forward the world enthusiastically as we have entered Marine Plant Industry considered as the biggest power for future growth.

We have always been challenging difficult tasks to be the best and solved it with strong faith and great interest from all the customers and shareholders.

Now, OPCO is going to become even more competitive with the world by opening up rapidly developing overseas markets such as China, Singapore, Vietnam, etc. Therefore, OPCO established our now vision named "VISION 2015" zealously aimed as the medium & long-term goal to step towards future. Every workers and members of the board cooperate harmoniously to offer the best service to customers as the first priority, and also keep providing the highest quality products to customers with firm determination to be the best Shipbuilding and marine Industry company.

OPCO will never stop to generate even greater satisfaction of our customers by providing the best quality, the most reasonable price and the most efficient delivery system.

I firmly promise to show our limitless and invaluable potential to you, our great customers and shareholders who constantly give us interest and deserve the best service with your valuable time.

Thank you.

Oriental Precision & Engineering Co., Ltd. CEO Chong-suk, Suh





## **HISTORY**

1980. 07 ORIENTAL Fitting CO.,LTD. founded (Known today as ORIENTAL PRECISION & ENGINEERING CO.,LTD. with a starting capital of 10millions(KRW) 1982. 09 Moved the main office to busan factory (370-18 Sinpyung-dong, Saha-gu, Busan, Korea) 1987. 09

Chosen as one of the progressive small and medium enterprises by the Bank of Korea

1987. 11 Won the Best Export company Award for achieving \$1 million (USD) Sales



1990. 05 Renamed ORIENTAL PRECISION & ENGINEERING CO.,LTD.

1991. 11 Won the Best Export company Award for achieving \$5 million(USD) Sales and The encouraging Industry Award

1992. 06 Built Jinhae Factory (575-1, Myeong-dong, Jinhaegu, Changwon-si, Gyeongsangnam-do, Korea)

Won the Best Export company Award for achieving \$10 million(USD) Sales

1998. 12 ISO 9001 Certification (LRQA)-Busan Factory

1999. 06 ISO 9002 Certification (LRQA)-Jinhae Factory





2000. Built Jinhae 2 Factory 2001. 06 Moved and built the new Busan Factory (1614-1, Songjeong-dong, Gangseo-gu, Busan, Korea) Registered in KOSDAQ stock market 2002. ISO 9001:2000 Certification (LRQA) 2002. 2010. • 08 Established a subsidiary OPCO Japan 2003. 08 Established a subsidiary OMI 2003. Won the Best Export company Award for achieving \$50 million(USD) Sales and the Stone pagoda' medal of the Industry 2005. Established the R&D Center in Busan Factory 2006. Won the Best Export company Award for achieving \$100 million(USD) Sales and the Pusan Exprot award 2006. 12 Established a subsidiary YOPCO 2008. 05 Established a subsidiary OHI 2008. 7 07 Established a subsidiary OPCO(S) 2009. 01 Established a subsidiary VOPCO 2009. 05 Developed Deck Crane newly and delivered it 2009. Held a Ceremony for delivery of 1,000th Deck House. 2009. Obtain OHSAS 18001: 2007 (DNV), KOSHA 18001 (KOSHA) Certification-Jinhae Factory

2010. • 01

ISO 9001:2008 Certification (LRQA)-Jinhae Factory

2010. 02

Won the Capital-labor Collaboration Award

2010. • 07

30th Anniversary

2010. • 07 ISO 14001: 2004, OHSAS 18001: 2007 Certification(LRQA)

-Busan Factory

API Spec Q1, API Spec 2C, ISO/TS 29001 Certification(API) -Busan Factory







## **VISION 2015**

The best Master in Shipbuilding & Marine

## CQTST Customer-First Quality-First Technology-First Safety-First Trust-First

## THE BEST MASTER IN SHIPBUILDING & MARINE Sincerity-Harmony-Faith

Business Domain

Shipbuilding & Marine Global Leader **Quantitative Goal** 

Increase the total sales to \$1500 Million (USD) by 2015 (Including subsidiary company and affiliates),

Innovative business

the Best company

**Qualitative Goal** 

Employee development and growth

rewards for the result

Aiming Value

Development of Human resources

Enterprising spirit

Focus on customer satisfaction

#### **Medium & Long-term Strategy**

Strategic business

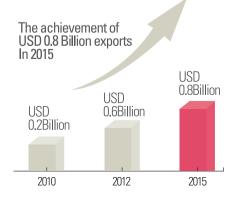
Design ability

Innovative proposal

Human Resources Management Partnership with affiliates

# The achievement of USD 1.5 Billion sales In 2015 USD 1.2Billion USD 1.2Billion 2010 2012 2015

#### **Exports Outlook**





OPCO is well equipped with the quality control system in order to maintain the best quality of our products. As one of the results, we eventually obtained ISO 9001: 2008 Certification regarding the ship machinery.



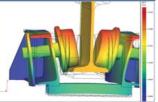
Our philosophy represents our strong will to contribute the best service towards our customers.





OPCO makes and efforts to insure customer's trust with keeping in-time delivery & innovative quality





OPCO fosters the technical development, automation of the manufacturing process and job education with greatly experienced technical human resources in order to progress productivity constantly.

#### Safety - First



OPCO practices the specific safety programme strictly to keep comfortable and safe working environment for our employees as one of the priorities the most importantly emphasized.

## **HSE**







### Health

OPCO offers a regular health checkup for employee health care every year. To prevent musculo-skeletal disorders, we have workers do stretching before work starts and run fitness center all the time.

We provide the employees with health consultation and first-aid by having a nurse stationed in health care room.



## **Safety**

OPCO drives for accident-free workplace by running safety programs along with the policy to care employee health and safety first. We do safety control thoroughly through daily safety education and premonition training of danger not only for site safety staff but also for site managers and supervisors and by having safety staff for each department.

## **Environment**

OPCO is doing company-wide activities e.g., energy saving, recycling maximization, development of energy-saving product, minimization of air and water pollution, environment-friendly green space placement, pleasant working environment, environment facilities and investment therein in consideration of neighbor residents and environment consciousness strengthening of employees.

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## **CERTIFICATION**







## Q Quality Management

Quality policy of OPCO is to realize customer satisfaction by supplying products that meet customer requirements and lawful regulations and by continuously improving and effectively applying quality management system including processor in order to guarantee compliance to customer requests.











## **ISO** 9001: 2008

OPCO prepares and runs the quality management system for all processes, i.e. design, P/O, purchase, production, inspection, test, delivery and service, in compliance with ISO 9001:2008 requirement. Also, all quality records are being maintained easy to read, easy to discern and retrieve.













## H&S Management

OHSAS 18001:2007, KOSHA 18001 are international occupational health and safety management system specification. Oriental gains assurance by managing to decrease the risk to employees, improve an existing H&S management system, demonstrate diligence.









## Main Business Overview









**MULTI PURPOSE CARRIER** 









**HOPPER BARGE** 

www.opco.co.kr CUSTOMER FIRST ORIENTAL 16+17

## **Jinhae Factory**









#### Jinhae Factory |

54,598 m<sup>2</sup>

#### Layout

- 1. Main Building
- 2. Welfare Building
- 3. Steel Plate Stock Area
- 4. Steel Cutting Shop

Main Item

Superstructure Offshore Structure 5. Assembly Shop

6. Pre-outfitting Area

7. Grand Assembly Shop

8. E/R Casing & Funnel Election Area

**Building Area** 

22.283 m²

Capacity(Hull, WT)

23,000 ton

9. Deck House Election Area

Main Item

Superstructure Offshore Structure

Layout

1. Main Building

2. Welfare Building

3. Assembly Area

Jinhae Factory ||

67,983 m²

4. Pre-Outfitting Area

5. Deck House Election Area

6. E/R Casing & Funnel Election Area

**Building Area** 4,872 m²

Capacity(Hull, WT) 26,000 ton

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## **Offshore Structure**

















#### **Accommodation Barge**

The Accommodation Barge is the Offshore structure which is anchored by a marine structure such as rig ship and provide comfortable and pleasant accommodation to workers who do marine and drilling work for long time. It accommodates generally 300 to 400 in number of persons, and is used to support Offshore structure.

100m x 30.5m
10,528 Ton
10,677 Ton
1,338 m²
350Men

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## **Offshore Structure**



#### **Heavy Cargo Carrier**

Heavy cargo carrier is a barge that transports freight loaded on its top. It has the unique charcteristic of being designed to be used as a sailing ship with easy stern docking, and to appropriately maintain its balance. It has the characteristic of allowing easy freight loading and unloading, and has an excellent workability with minimized ballast weight for the ship's balance.

LxBxD	151.2m x 38m x 8m
Gross Tonnage	12,144 Ton
Deadweight	15,000 DWT
Clear Deck Space	125m x 36m
Complement	24 Men



#### **Deck Box**

Deadweight

Semi-submersible Drilling Rig is Deep-sea drilling structure equipped with living space called Deck Box, so provides comportable acco mmodation to workers and increases efficiency of work.

rion sign

#### **Coal Carrier**

Coal carrier is one of ships for carrying coal, it's designed and manufactured according to characteristics to carry coal efficiently.

LxBxD	108.7m x 24m x 12.9m
Deadweight	10,000 DWT
Service Speed	12.0 Knots/Hour
Complement	14 Men





#### **Living Quarter**

For the living quarters installed on the ocean structure, we produce it as a turnkey base to provide convenient and pleasant living facilities to the sailors who work long time on the sea, so that they can improve their productivities at best.

81m x 30.5m x 5.5m

10.200 DWT



LxBxD	33.5m x 15.2m x 8m
Complement	24 Men



#### **Hopper Barge**

Hopper barge is a kind of non-mechanical vessel that cannot move around by itself. Designed to carry materials, like rocks, sand, soil and rubbish, for dumping into the ocean, a river or lake for land

Hopper barges are seen in two distinctive types; raked hopper or box hopper barges. The raked hopper barges move faster than the box hoppers; they are both designed for movement of dry bulky

LxBxD	134m x 26m x 9.15m
Gross Tonnage	3,917 Ton
Deadweight	4,200 DWT



#### **Floating Dock**

Floating Dock generally represents special equipment used on the sea rather than Dock which is space for shipbuilding. By using Floating Dock, the budget and time for building Dock could be saved and the land space could be used effectively to enormously increase productivity

LxBxD	102m x 30m x 6m
Deadweight	60,000 DWT

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## Superstructure















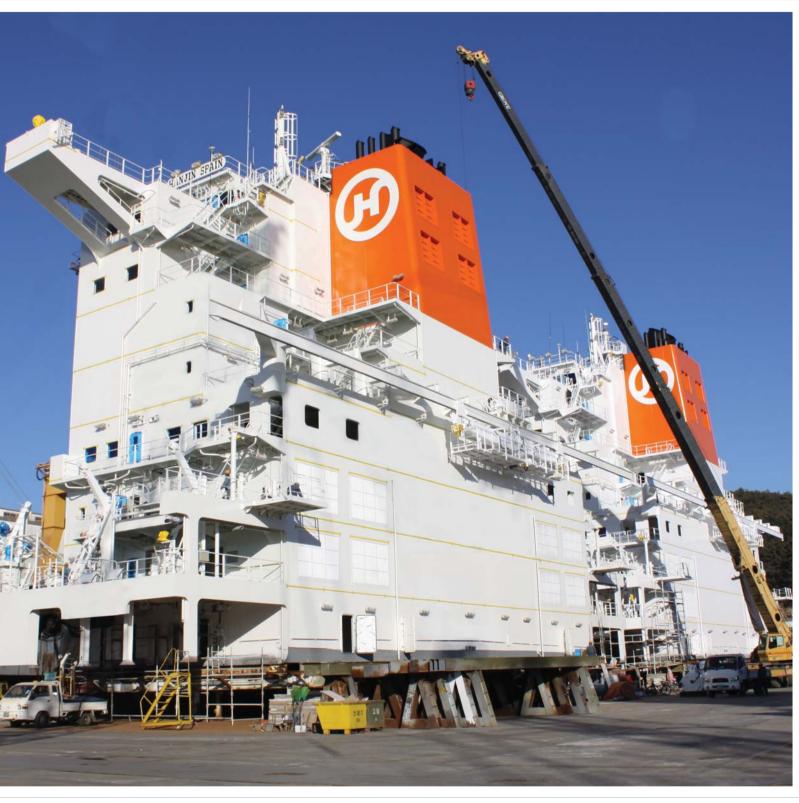
















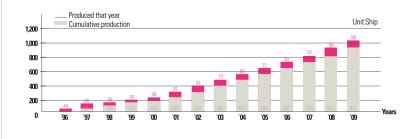




#### **Deck House**

Deck House is our main product that is large and heavy structure of 9 stories and 1,500 tons at max. It is delivered to shipbuilding yard after completion of interior works. The inside of Deck House has the residential facilities for crews' daily life, offices, cargo control room and navigation room.

room.
The first production was put in 1994; the annual production capacity is 100 units a year that is the world's top in terms of production of a single plant. Since 2004, we have been improving technical competitiveness by designing overall system for ourselves



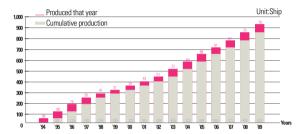
ORIENTAL WWW.opco.co.kr CUSTOMER FIRST ORIENTAL 24+25

## Superstructure



#### **Engine Room Casing**

Engine Room Casing is Engine room cover placed in the upper of ship engine room adding emergency generator, auxiliary boiler and ventilation fan. The structure has a passage function connecting to the funnel. We are now producing 70 units a year since the first production in 1993.

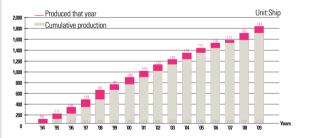






#### **Funnel**

Funnel is placed in the upper of Engine room Casing. It finally discharges various waste gases from the ship. Inside it has gas pipes and outside it carries a logo, shipping company symbol. We are now producing 130 units a year since the first production in 1989.



#### Mega Block

In our largest factory, it is produced as one form of stern block and engine room unit block. Work period is reduced by all-weather working inside the factory, and using 100-ton overhead crane, the product is released after finishing post-work inside the largest factory.

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## **Busan Factory**









#### Layout

- Head Office
   Cutting Shop
- 3. Fabrication Shop
- 4. Crane Assembly Shop 5. Crane Test Area
- 6. Painting Shop
- 7. Stock Area

#### **Capacity**

#### Main Item

Machinery Land

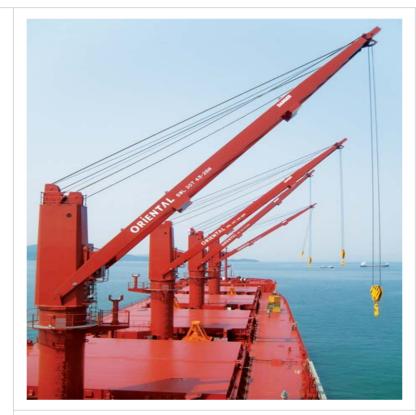
23,731m<sup>2</sup>

**Building Area** 13,595 m<sup>2</sup>

#### **Manufacturing Products**

Deck Crane Knuckle Crane Provision Crane Hose Handling Crane Monorail Crane Engine Room Crane Life Boat Davit Free Fall Davit Life Raft & Rescue Davit DRIENTAL WWW.opco.co.kr Customer first oriental 28+29

## **Ship Machinery**



#### **Deck Crane**

Deck crane is the compulsory equipment for loading and unloading, and it is installed on the bulk carrier or container ship. And deck crane is complex machinary applied hydraulics, electric system and functions like the body of crane, winch, hydraulics components, slewing bearing.

#### **PARTICULARS**

Lift Capacity	20 ~ 45Ton
Working Radius	20~45M
Hoisting Speed	0 ~ 20 m/min (Full Load) , 0 ~ 40 m/min(0~SWL x 30%)



#### **Hose Handling Crane**

This electro-hydraulic driven hose handling crane is manufactured and tested in compliance with the requirement of "OCIMF" and "Lifting Appliance". The OPCO's hose handling crane designed by compact and durable construction has the best advantage of handling oil hose for the ships of tanker, VLCC, ULCC, LNG and LPG carriers.

The lifting capacity is available up to 20 tons and max.30m jib length, and slewing angle is available "Endless"

#### **PARTICULARS**

Lift Capacity	5 ~ 25Ton
Working Radius	15.5 ~ 30M
<b>Hoisting Speed</b>	10 m/min(Full Load) , 20m/min (No Load)



#### **Provision Crane**

This crane is electro-hydraulic driven self contained power pack, cylinder luffing type, and used generally for the handling provisions and engine spares for most ships, and manufactured & tested in compliance with requirements of lifting appliances. The OPCO's hydraulic provision crane is available with lifting capacity up to 12.5 tons and out reach up to 22 meter.

#### **PARTICULARS**

Lift Capacity	2~12.5Ton
Working Radius	6~22M
Hoisting Speed	0 ~ 10 m/min



#### **Knuckle Crane**

Knuckle crane is special crane which is composed of 2 Jibs and the Hinge Part, so it can operate in the narrow space. It is installed on the special ship complexed upper deck, such as drellship, FPSO.

#### **PARTICULARS**

Lift Capacity	3~150Ton
Working Radius	2~48M
Hoisting Speed	0 ~ 60 m/min

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## **Ship Machinery**

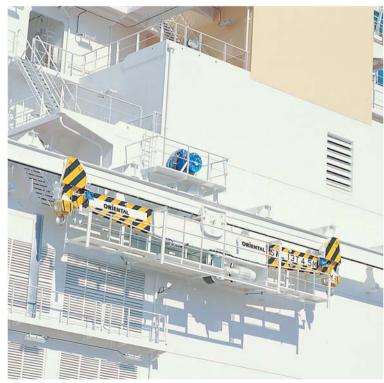


#### **Electric Slewing Crane**

Electric slewing crane is installed on the dredger ship and works collecting and transporting the sand of the under water.

#### **PARTICULARS**

Lift Capacity	5 ~ 15Ton
Working Radius	10~25M
Hoisting Speed	0 ~ 10 m/min



#### **Monorail Crane**

This sliding beam monorail crane is manufactured and tested in compliance with the rules of lifting appliances, and is used for handling of provisions and engine spares for containers ship, tankers and VLCC.

The OPCO's monorail crane is available with lifting capacity 13 tons and outreach max.7.5 meters from ship's parallel body.

#### **PARTICULARS**

Lift Capacity	3 ~ 13Ton
Working Radius	outreach 5~6 m From Ship side shell
Hoisting Speed	10 m/min



#### **Deck Machinery**

The high-pressure hydraulic winches & windlass are designed / manufactured in compliance with rules and regulations of classification society, ISO and OCIMF. The capacity of mooring winch is available up to 35ton.

#### **PARTICULARS**

AITHOULAIT	
Windlass Rated load	14.7 ~ 72.1Ton
Windlass Rated speed	9 m/min
Mooring Winch Rated load	10 ~ 30Ton
Mooring Winch Rated speed	15 m/min



#### **Engine Room Crane**

The OPCO's engine room crane is manufactured and tested in compliance with the rules of lifting appliances, and used for the maintenance of main engine for all kind of ships.

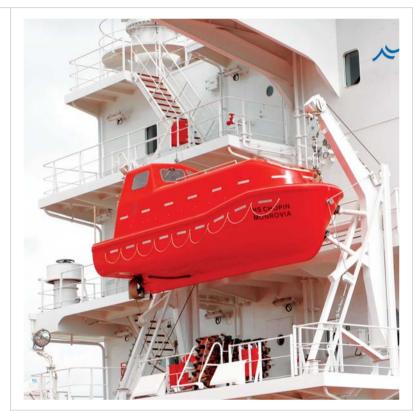
The OPCO's engine room crane is available with lifting capacity up to 13 tons and crane span max.10 meters.

#### **PARTICULARS**

Lift Capacity	2 ~ 13Ton
Crane Span	5~12M
Hoisting Speed	Dual speed (High / Creep)

CUSTOMER FIRST ORIENTAL 32+33

## **Ship Machinery**



#### **Life Boat Davit**

A gravitiational-depression type Davit which is designed into the precise and strong structure of OPCO has the best condition to control the equipped life boats on Tanker, BC, Ro-Ro ship, passenger ship and CONT.

#### **PARTICULARS**

Capacity	HGD-057-24, HGD-062-26, HGD-073-30, HGD-082-30, HGD-100-32
Davit Load	4,000 ~ 10,000 kg
Hoisting Speed	Life: 0~3m/min, Life/Rescue: 0~18m/min

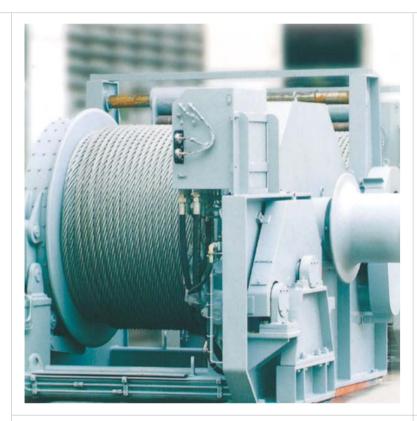


#### Free-fall Davit

A Free fall davit of OPCO which is equipped the stem of a ship is designed to launch the life boats on a Tank ship and BC by its own grawity.

#### **PARTICULARS**

Capacity	FD6240
Davit Load	6,200 kg
Launching	By free fall or by davit arm
Recovery	By ship power, Approx. 4m/min



#### **Positioning & Anchor Mooring Winch**

The high-pressure hydraulic positioning mooring winches are designed manufactured to allow cast anchor deployment and secured mooring.

The capacity is available up to max 100 tons with strong sturdy structural design. The winch control are available by local control as well as wheelhouse central control with rope tension and length readouts, and programmable mooing parameter. It is also available emergency release with coordinated multiple winch release function. The reguired guide sheaves and fairleaders are also available as parts of mooring winches.

#### **PARTICULARS**

Туре	High pressure hyddriven, Single drum
Lifting load	30~200 Ton
Rated speed	0~30m/min
Control	Bridge Control or Local Control



#### **Offshore Crane**

Pedestal mounted oriental offshore crane is designed manufactured in complaince with the latest international standards for offshore cranes with certification requirements by all of leading classification societies.

Optimal design is available to various sea states, different offshore requirements and comply with API-2C.

#### **PARTICULARS**

Lift Capacity	20 ~ 400Ton
Working Radius	20 ~ 70M
Hoisting Speed	0 ~ 40 m/min (Full Load) , 0 ~ 55 m/min

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## **AFFILIATES(DOMESTIC)**





Company Name	Oriental Heavy Industries Co.,Ltd.
Foundation Date	1995.08.01
Capital Assets	3,800 millions (KRW)
Business Field	Superstructure (Deck House, Engine Room Casing, Funnel, Hull Block)
	Offshore Structure (Accommodation Work Barge, Self Propelling Barge)
	Surface Preparation & Steel Cutting, Interior, Painting
Land Site	208,795 m²









#### **OPI**

Land Site

Company Name	Oriental Inspection & Service Co.,Ltd.
Foundation Date	2005.07.19
Capital Assets	200 millions(KRW)
Business Field	Overseas A/S, Sale of Spare Parts, Training & Education

1,000 millions(KRW)

17,823 <sub>m</sub>²

Deck Machinery (Crane, Winch, Davit, Parts of Machinery)

## **AFFILIATES(OVERSEAS)**



#### **OMI**

Company Name	Dalian Oriental Marine & Heavy Industry Co.,Ltd.
Foundation Date	2003.08.08
Capital Assets	USD 52,500,000
Business Field	Superstructure (Deck House, Engine Room Casing, Funnel, Hull Block)
	Offshore Structure (Accommodation Work Barge, Skid Barge, Hopper Barge)
Land Site	262,509 m²



#### **YOPCO**

Company Name	Yantai Oriental Precision & Engineering Co.,Ltd.
Foundation Date	2006.12.04
Capital Assets	USD 5,600,000
Business Field	Deck Machinery (Crane, Winch, Davit, Pipe, Outfitting)
Land Site	28,050 m²



#### **DOTS**

Company Name	Oriental Precision (Dalian) Technical Service Co.,Ltd.
Foundation Date	2007.07.23
Capital Assets	USD 200,000
Business Field	Special Design of Shipbuilding & Offshore Structure



#### **VOPCO**

Company Name	Oriental Vietnam Precision & Engineering Co.,Ltd.
Foundation Date	2008.09.09
Capital Assets	USD 1,200,000
Business Field	Superstructure (Deck House, Engine Room Casing, Funnel)



#### **OPCO Singapore**

Company Name	OPCO Singapore
Foundation Date	2008.06.03
Capital Assets	SGD 100,000
Business Field	Support of Offshore Business in Southeast Asia



#### OPCO Japan

Company Name	OPCO Japan
Foundation Date	2002.08.02
Capital Assets	JPY 15,000,000
Business Field	Support of Offshore Business in Japan

Oriental realizes customer satisfaction with the best quality We enhance the quality of Oriental products by specializing each process until our products are completed.

#### **Offshore Structure**

#### Business

Tel. +82-51-979-0850 Fax. +82-51-832-2064 E-mail.ms@opco.co.kr **Design Part** 

Tel. +82-55-548-5255 Fax. +82-55-548-5342 E-mail.joung@opco.co.kr

#### **Ship Machinery**

Tel. +82-51-979-0862 Fax. +82-51-979-0827 E-mail.opcoas@opco.co.kr Spare Part

Tel. +82-51-831-2747 Fax. +82-51-831-6260 E-mail.opcois@opco.co.kr **Business** 

Tel. +82-51-979-0819 Fax. +82-51-832-2064 E-mail.me@opco.co.kr Design Part

Tel. +82-51-979-0860 Fax. +82-51-831-3308 E-mail.md@opco.co.kr

#### Superstructure A/S

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