REFERENCES

OFFSHORE VESSELS & DREDGERS





OFFSHORE VESSELS & DREDGERS

April 2021

Over the years, IHC has built a large number of Offshore vessels. This list highlights a number of recent projects, followed by a brief overview of the projects over the past 10 years for respectively Offshore vessels, custom built Hopper dredgers and custom built Cutter Suction dredgers.

Year 2021
Client Subsea 7
Name Seven Vega
Length / Beam 149.00 m / 33 m

Speed 13.4 kn

Scope / Relevancy In close collaboration with Subsea 7, IHC has incorporated various innovations

into the design of the Seven Vega, making it the most technologically advanced pipelay vessel to date. Thanks to the creative placement of the 3 engine rooms and the main "reel", the efficient use of the superstructure and the relatively low pipe laying tower, the ship remains compact. The clever use of space results in a large working deck. In addition, weight distribution reduces the

amount of ballast water required.



OFFSHORE VESSELS & DREDGERS

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Year 2014 - 2016

Client Sapura Navegação Marítima

Name Sapura Rubi – YN 734

Sapura Jade - YN 732 Sapura Onyx – YN 730

Sapura Esmeralda – YN 13.001

Sapura Topazio - YN 729

Length / Beam 133.00 m - 146.00 m / 24.00 m - 30.00 m

Speed 13.6 kn - 14.7 kn

Scope / Relevancy Between 2014 and 2016 IHC delivered five Pipelay Support Vessels to Sapura

Navegação Marítima. They are fully integrated offshore vessels completely

designed, engineered and built by IHC.

The system comprises a single-tensioner lay tower, flexible product storage in two below-deck baskets, and support equipment for the spooling and routing of products. It includes a high capacity 340 ton abandonment and recovery (A&R) system, and a secondary lower capacity 100 ton A&R system for

increased operational flexibility.

A custom-designed control system integrates each aspect of the pipe-lay

spread to ensure excellent performance, safety and reliability.





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Year 2014 - 2016 Client Subsea 7

Name Seven Cruzeiro – YN 735

Seven Sun – YN 733 Seven Rio – YN 731 Seven Waves – YN 727

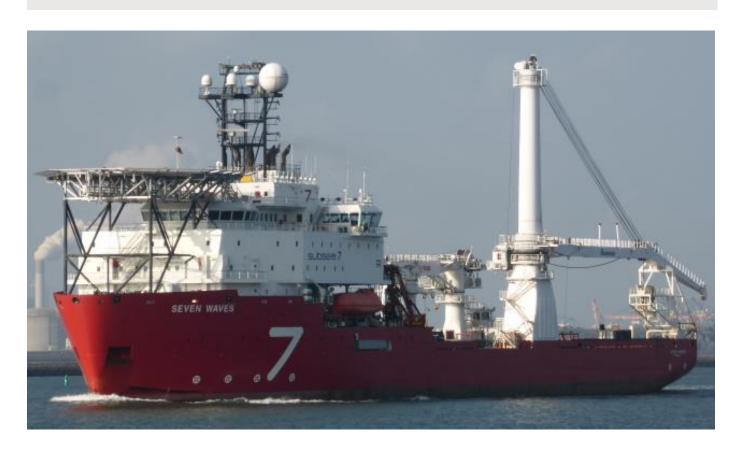
Length / Beam 146.00 m / 30.00 m

Speed 13.6 kn

Scope / Relevancy Between 2014 and 2016 IHC delivered four Pipelay Support Vessels to

Subsea 7. The vessels have an overall length of 146 metres, a beam of 30 metres and a Class-2 dynamic positioning system. Designed by IHC in close collaboration with Subsea 7, each vessel is fitted with two under-deck storage carousels, with a capacity for 2,500t and 1,500t of product respectively. A vertical (tiltable) lay system with a 550t top tension capacity is permanently installed for the deployment of a range of flexible products with a diameter of 50-650mm. The lay tower can operate at up to 10° from the vertical and is fitted with two wire centralizers and with two tensioners, each with a 275t capacity, that can be retracted clear of the firing line. Each vessel has two work-

class ROVs rated to 3,000 m.



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Name of ship Seven Vega
Type Reel-lay vessel
Owner Subsea 7
Year of delivery 2020

Yard number

Scope Design / Engineering / Construction

Length over all 149.00 m
Breadth 33 m
Depth 13 m
Draught 8.30 m
Speed 13.4 kn
DP Class 3



Name of ship Gulliver

Type Heavylift Crane Vessel

Owner Scaldis salvage & marine contractors NV

Year of delivery 2017 Yard number YN-736

Scope Design / Engineering / Construction

Length over all 108.00 m
Breadth 50.90 m
Depth 8.00 m
Draught 4.9 m

Speed 7 kn DP Class 2



Name of ship Seven Cruzeiro
Type Pipelay Vessel
Owner Subsea 7
Year of delivery 2016
Yard number YN-735

Scope Design / Engineering / Construction

Length over all146.00 mBreadth30.00 mDepth13.00 mDraught8.5 m

Speed 13.6 kn DP Class 2

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Name of ship Sapura Rubi

Type Pipelay Support Vessel
Owner Sapura Navegação Marítima

Year of delivery 2016 Yard number YN-734

Design / Engineering / Construction
Scope Pipelay spread / Electrical installation

Length over all146.00 mBreadth30.00 mDepth13.00 mDraught8.5 m

Speed 13.6 kn DP Class 2



Name of ship Seven Sun

Type Pipelay Support Vessel

Owner Subsea 7 Year of delivery 2015 Yard number YN-733

Scope Design / Engineering / Construction

Length over all 146.00 m
Breadth 30.00 m
Depth 13.00 m
Draught 8.5 m

Speed 13.6 kn

DP Class 2



Name of ship Sapura Jade

Type Pipelay Support Vessel
Owner Sapura Navegação Marítima

Year of delivery 2015 Yard number YN-732

Design / Engineering / Construction
Scope Pipelay spread / Electrical installation

Length over all146.00 mBreadth30.00 mDepth13.00 mDraught8.5 m

Speed 13.6 kn DP Class 2

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Name of ship Seven Rio

Type Pipelay Support Vessel

Owner Subsea 7 Year of delivery 2015 Yard number YN-731

Scope Design / Engineering / Construction

Length over all146.00 mBreadth30.00 mDepth13.00 mDraught8.5 m

Speed 13.6 kn DP Class 2



Name of ship Sapura Onyx

Type Pipelay Support Vessel
Owner Sapura Navegação Marítima

Year of delivery 2015 Yard number YN-730

Scope

Scope

Design / Engineering / Construction
Pipelay spread / Electrical installation

Length over all 146.00 m
Breadth 30.00 m
Depth 13.00 m
Draught 8.5 m

Speed 13.6 kn DP Class 2



Name of ship Sapura Esmeralda
Type Pipelay Support Vessel
Owner Sapura Navegação Marítima

Year of delivery 2015 Yard number YN-13.001

Design / Engineering / Construction Pipelay spread and main equipment

Length over all133.80 mBreadth24.00 mDepth10.00 mDraught6.75 m

Speed 14.7 kn DP Class 2

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Name of ship Sapura Topazio
Type Pipelay Support Vessel
Owner Sapura Navegação Marítima

Year of delivery 2014 Yard number YN-729

Design / Engineering / Construction
Scope Pipelay spread / Electrical installation

Length over all146.00 mBreadth30.00 mDepth13.00 mDraught8.5 m

Speed 13.6 kn DP Class 2



Name of ship Sapura Diamante
Type Pipelay Support Vessel
Owner Sapura Navegação Marítima

Year of delivery 2014 Yard number YN-728

Design / Engineering / Construction
Scope Pipelay spread / Electrical installation

Length over all146.00 mBreadth30.00 mDepth13.00 mDraught8.5 m

Speed 13.6 kn DP Class 2



Name of ship Seven Waves

Type Pipelay Support Vessel

Owner Subsea 7 Year of delivery 2014 Yard number YN-727

Scope Design / Engineering / Construction

Length over all146.00 mBreadth30.00 mDepth13.00 mDraught8.5 m

Speed 13.6 kn DP Class 2

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Name of ship Oleg Strashnov
Type Heavy lift crane vessel
Owner Seaway Heavy Lifting

Year of delivery 2011 Yard number YN-716

Scope Engineering / Construction

Length over all 183.00 m Breadth 47.00 m Depth 18.20 m Draught 13.84 m

Speed 14 kn DP Class 3



Name of ship Seven Pacific

Type Flexible pipelay vessel

Owner Subsea 7 Year of delivery 2010 Yard number YN-719

Scope Design / Engineering / Construction

Length over all133.15 mBreadth24.00 mDepth10.00 mDraught6.75 m

Speed 14.7 kn DP Class 2



Name of ship Seven Atlantic

Type Well Stimulation / Diving Support Vessel

Owner Subsea 7 Year of delivery 2009 Yard number YN-713

Scope Design / Engineering / Construction

Length over all144.85 mBreadth26.00 mDepth12.00 mDraught8 m

Speed 13.6 kn DP Class 3

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Over the years, IHC has built a large number of Dredgers. The following list shows a brief overview of all Trailing Suction Hopper Dredger projects of the past ten years. All Ships were built at IHC Shipyards in the Netherlands unless another country of construction is listed.



Year of delivery 2021 (under construction)

Order number 63484 Name Ship IMA

Owner Cohidro, Peru

Country of construction Brazil
Hopper capacity 500 m³
Installed power 1550 kW
Length overall 57.20 m



Year of delivery 2020 Order number CO 1308 Name Ship GHASHA

Owner NMDC, Abu Dhabi

 $\begin{array}{lll} \mbox{Hopper capacity} & 8,000 \ \mbox{m}^{3} \\ \mbox{Installed power} & 9,670 \ \mbox{kW} \\ \mbox{Length overall} & 123.00 \ \mbox{m} \end{array}$



Year of delivery 2020
Order number CO 1304
Name Ship RIVER TH

Name Ship RIVER THAMES
Owner DEME N.V., Belgium

Country of Construction Indonesia
Hopper capacity 2,300 m³
Installed power 3,600 kW
Length overall 79.95 m



Year of delivery 2020

Order number CO 1307

Name Ship MEUSE RIVER

Owner DEME N.V., Belgium

Hopper capacity 8,150 m³

Installed power 10,410 kW – Prepared for LNG

Length overall 113.00 m

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Year of delivery 2020

Order number CO 1305 / CO 1306
Name Ship BENGEL / DEUGNIET
Owner DEME N.V., Belgium

Country of Construction Indonesia

Hopper capacity 2 units 3,500 m³ split barge

Installed power Approx. 3,500 kW

Length overall 95.20 m



Year of delivery 2021
Order number CO 1297
Name Ship CHALLENGER 3
Owner under sale

Hopper capacity 2,700 m³, Easydredge®

Country of Construction Poland Installed power 4625 kW Length overall 81.75 m



Year of delivery 2020 Order number CO 1296

Name Ship MONT MANDARA

Owner Port Authority of Douala, Cameroon

Hopper capacity 2,700 m3, Easydredge®

Country of Construction Bulgaria Installed power 4625 kW Length overall 81.75 m



Year of delivery 2019 Order number 63438

Name Ship BIN GANG JUN 8

Owner BinZhou Port Group, Co., Ltd., P.R. of China

Country of ConstructionChinaHopper capacity7,200 m³Installed power10,288 kWLength overall111.25 m



Year of delivery 2019
Order number CO 1295
Name Ship LESSE

Owner Baggerbedrijf de Boer – Dutch Dredging, The

Netherlands
Country of Construction
Hopper capacity
Installed power
Length overall

Netherlands
Bulgaria
2,300 m³
3,600 kW
T9.95 m

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Year of delivery 2018 Order number CO 1292

Name Ship D11-21 de JULIO

Owner Administracion de Puertos Uruguayana,

Country of Construction Uruguay
Hopper capacity 4,200 m³
Installed power 5,338 kW
Length overall 91.00 m



Year of delivery 2019

Order number 63424-1 & 2

Name Ship HANG JUN 6008 / 6009

Owner CHECD (Shanghai Dredging Co), P.R of China

 $\begin{array}{lll} \mbox{Country of Construction} & \mbox{China} \\ \mbox{Hopper capacity} & \mbox{6,500 m}^{3} \\ \mbox{Installed power} & \mbox{9,600 kW} \\ \mbox{Length overall} & \mbox{108.70 m} \end{array}$



Year of delivery 2019
Order number CO 1288
Name Ship BONNY RIVER
Owner DEME N.V., Belgium

Country of Construction China Hopper capacity 15,000 m³

Installed power 17,520 kW – Prepared for LNG

Length overall 158.20 m



Year of delivery 2018 Order number CO 1291

Name Ship MARIO OLIVA PEREZ
Owner Obras Maritimas, Cuba

Hopper capacity 3,350 m³, Easydredge© 3700

Installed power 6,725 kW Length overall 92.95 m

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Year of delivery 2018
Order number CO 1290
Name Ship DC ORISANT

Owner Zandexploitatie mij. Den Herder,

The Netherlands

Hopper capacity 5,450 m³ - marine aggregates dredger

Installed power 10,778 kW Length overall 142.50 m



Year of delivery 2018
Order number CO 1289
Name Ship ARZANA

Owner NMDC, Abu Dhabi

Hopper capacity 6,000 m³ Installed power 9,670 kW Length overall 109.00 m



Year of delivery 2017

Order number CO 1285 / CO 1286

Name Ship SHANTI SAGAR - 17 /
SHANTI SAGAR - 18

Owner Mundra Port development, India Hopper capacity 2 units 8,000 m³, Beagle® 8

Installed power 8,760 kW Length overall 104.50 m



Year of delivery 2017 Order number CO 1287

Name Ship MAHAA JARRAAFU

Owner Maldives Transport and Trading Comp.,

Maldives

Country of Construction China

Hopper capacity 3,700m³, Easydredge[©] 3700 Installed power 6,130 kW

Length overall 92.95 m



Year of delivery 2017
Order number CO 1283
Name Ship MINERVA

Owner DEME N.V., Belgium

Hopper capacity 3,500m³

Installed power 5,300 kW – LNG Dual fuel

Length overall 83.50 m

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Year of delivery 2017 Order number CO 1282

Name Ship SCHELDT RIVER
Owner DEME N.V., Belgium

Hopper capacity 7,950 m³

Installed power 10,410 kW – LNG Dual fuel

Length overall 113.00 m



Year of delivery 2017
Order number CO 1271
Name Ship MAGDALEN

Owner Weeks Marine, USA

Country of Construction USA
Hopper capacity 6,540 m³
Installed power 10,320 kW
Length overall 106.60 m



Year of delivery 2016
Order number CO 1275
Name Ship JUN YANG 1

Owner Guangzhou Dredging Company,

P.R. of China
Hopper capacity 21,028 m³
Installed power 24,400 kW
Length overall 167.50 m



Year of delivery 2016 Order number CO 1279 Name Ship MAHURY

Owner Baggerbedrijf de Boer - Dutch Dredging, The

Netherlands

Country of Construction Bulgaria
Hopper capacity 1,840 m³
Installed power 3,180 kW
Length overall 75.00 m



Year of delivery 2016 Order number CO 1274 Name Ship DASA 1

Owner Dragados Argentinas SA, Argentina

Country of Construction Bulgaria

Hopper capacity 2,700 m³, Easydredge© 2700

Installed power 4,450 kW Length overall 81.75 m

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Year of delivery 2015 Order number CO 1278 Name Ship ILEMBE

Owner Transnet National Port Authority,

South Africa
Hopper capacity 5,500 m³
Installed power 7,660 kW
Length overall 101.50 m



Year of delivery 2014
Order number 11010
Name Ship ITALENI

Owner Transnet National Ports Authority,

South Africa
Country of Construction Bulgaria

Hopper capacity 750 m³ with grab

Installed power 3,203 kW Length overall 62.00 m



Year of delivery 2014 Order number CO 1266

Name Ship DCI DREDGE XXI

Owner Dredging Corporation of India Ltd., India

Hopper capacity 5,500m³
Installed power 9,373 kW
Length overall 114.00 m



Year of delivery 2013
Order number CO 1265
Name Ship DCI DREDGE XX

Maine Ship Dei Die Dei Zie

Owner Dredging Corporation of India Ltd., India Hopper capacity 5,500m³

Installed power 9,373 kW

Length overall 114.00 m



Year of delivery 2012 Order number CO 1264

Name Ship DCI DREDGE XIX

Owner Dredging Corporation of India Ltd., India

Hopper capacity 5,500m³
Installed power 9,373 kW
Length overall 114.00 m

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Year of delivery 2013 Order number CO 1272 Name Ship ALBATROS

Owner Baggerbedrijf de Boer - Dutch Dredging,

The Netherlands

Country of Construction Bulgaria
Hopper capacity 1,500 m³
Installed power 3,189 kW
Length overall 75.00 m



Year of delivery 2013 Order number CO 1260

Name Ship CHANG JIANG KOU 02

Owner Yangtzhe Estuary, P.R. of China

Country of Construction China
Hopper capacity 12,000m³
Installed power 16,578 kW
Length overall 132.00 m



Year of delivery 2012 Order number CO 1259

Name Ship CHANG JIANG KOU 01

Owner Yangtzhe Estuary, P.R. of China

Hopper capacity 12,000m³
Installed power 16,578 kW
Length overall 132.00 m



Year of delivery 2012 Order number CO 1270 Name Ship DOHUK

Owner Toyota Tsusho Corp., Japan

Hopper capacity 500 m³ with grab

Installed power 1,638 kW Length overall 57.00 m

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Year of delivery 2012
Order number CO 1269
Name Ship KARBALA

Owner Toyota Tsusho Corp., Japan

 $\begin{array}{lll} \mbox{Hopper capacity} & 3,500 \ \mbox{m}^{3} \\ \mbox{Installed power} & 7,646 \ \mbox{kW} \\ \mbox{Length overall} & 90.65 \ \mbox{m} \end{array}$



Year of delivery 2011
Order number CO 1267
Name Ship BREUGHEL

Owner DEME N.V., Belgium

 $\begin{array}{lll} \mbox{Hopper capacity} & 11,650 \mbox{m}^{3} \\ \mbox{Installed power} & 11,250 \mbox{ kW} \\ \mbox{Length overall} & 122.90 \mbox{ m} \end{array}$



Year of delivery 2011 Order number CO 1263

Name Ship CONGO RIVER

Owner DEME N.V., Belgium

Hopper capacity 30,000m³
Installed power 25,445 kW
Length overall 168.00 m



Year of delivery 2010
Order number CO 1258
Name Ship JUHU BEACH

Owner Mark Shipping, The Netherlands

 $\begin{array}{lll} \mbox{Hopper capacity} & 2,400\mbox{m}^{3} \\ \mbox{Installed power} & 3,009\mbox{ kW} \\ \mbox{Length overall} & 82.80\mbox{ m} \end{array}$

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The following list shows a brief overview of all Custom built cutter suction dredger projects of the past ten years.



Year of delivery	2020 / 2021 (under construction)
Order number	CO 1299 / CO 1300
Name Ship	MOHAB MAMEESH / 26 TH OF JULY
	2 units Heavy Duty cutter suction
Туре	dredger, cutter power 4.800kW
Installed power	29.190 kW



Year of delivery	2020 (under construction)
Order number	CO 1277
Name Ship	KRIOS
	Self-propelled rock cutter suction
Type	dredger, cutter power 7.000kW
Installed power	23.684 kW



n dredger



Year of delivery	2019
Order number	15051
Name Ship	JULIA
	2,500 kVA electric heavy mineral sands
Туре	cutter suction dredger
Installed power	2,500 kVA

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Year of delivery	2021 (under construction)
Order number	CO 1294
Name Ship	SPARTACUS
	Self-propelled mega rock cutter suction
Туре	dredger, LNG powered
Installed power	44.180kW



Year of delivery	2018
Order number	CO 1293
Name Ship	JARASH
	Salt mushroom cutter suction dredger,
Туре	cutter power 900 kW
''	'
Installed power	3.557kW



Year of delivery	2019
Order number	CO 1281
Name Ship	EMBARKA 11
	Cutter suction dredger, cutter power
Туре	1.500kW
Installed power	5.940 kW



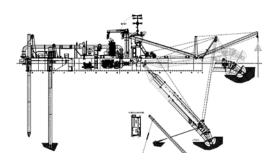
Year of delivery	2018
Order number	02940
Name Ship	
	SWSD 40; Swivel ladder wheel suction
Type	dredger
In shall a din access	Anaras 400 MM
Installed power	Approx. 480 kW

OFFSHORE VESSELS & DREDGERS

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Year of delivery	2018
Order number	02923
Name Ship	MUTAH
	Beaver 40 MkII modified Salt pond
	maintenance cutter suction dredger,
Туре	cutterpower 120kW
La atalla dia avvan	Angeres FFO IAM
Installed power	Approx 550 kW



Year of delivery	2018
Order number	BD 63428 / 63427 / 63426
	CSD 650 1 – 5 / CSD 500 1 – 5 / CSD 450
Name Ship	1 - 10
	5 units CSD 650, 5 units CSD 500 and 10
	units CSD 450 Cutter dredger pump
Туре	gearbox package



Year of delivery	2017
Order number	02910 - 02914
Name Ship	PSD 45
	5 units Electric Plain Suction Dredger
Туре	450mm,
Installed power	IHC HR MD 91-19-45 pump



Year of delivery	2017
Order number	02915 - 02919
Name Ship	PSD 35
	5 units Plain Suction Dredger 350mm,
Туре	diesel-hydraulic
In at all a directions	W.C. TT. 200222 25
Installed power	IHC TT pump 35

OFFSHORE VESSELS & DREDGERS

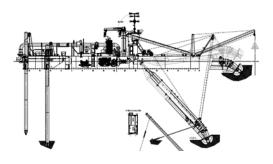
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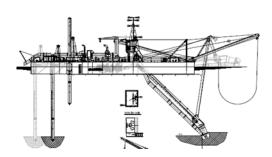
Year of delivery	2017
Order number	BD 63396 – local built
Name Ship	ROBERT M WHITE
	Wide cutwidth Cutter suction dredger w
	DD ladderpump +2 boosterpumps,
Туре	cutter power 746kW

7.112 kW

Installed power



Year of delivery	2017
Order number	BD 63421 – local built
Name Ship	CSD 650 1 - 6
Туре	6 units CSD 650 cutter suction dredger
Installed power	2.270kW
mstaneu power	Z.Z/UNVV



2017
BD 63420 – local built
CSD 500 1 - 4
4 units CSD 500 cutter suction dredger
1.261kW



Year of delivery	2017
Order number	CO 1276
Name Ship	HELIOS
	Self-propelled rock cutter suction
Туре	dredger, cutter power 7.000kW
Installed power	23.684 kW

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Year of delivery	2016
Order number	02839
Name Ship	
	Stationary deep water cutter suction dredger IHC 4035 C, environmental
Type	clean-up
Installed newer	900 kW
Installed power	SOO KVV



Year of delivery	2015
Order number	02806
Name Ship	
	Self-propelled Beaver 1200 cutter
Туре	suction dredger
Installed newer	992 1444
Installed power	882 kW



2014
02800
AL BAHAR C/D
Self-propelled rock cutter suction
dredger, cutter power 3.500kW
23.545 kW



Year of delivery	2013
Order number	15043 / 15044
Name Ship	DRAGA 18 / DRAGA 19
	2 units Electric wheel suction dredger,
Туре	wheel power 250kW
Installed power	1.600 kVA

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r of delivery	2013
er number	CO 1262
ne Ship	ARTEMIS
	Self-propelled rock cutter suction
e	dredger, cutter power 7.000 kW
alled power	24.700 kW
	er number ne Ship



Year of delivery	2012
Order number	02798
Name Ship	MIONDO
	Stationary rock cutter suction dredger,
Type	cutter power 1.100 kW
	4.005.114
Installed power	4.286 kW



Year of delivery	2012
Order number	CO 1268
Name Ship	AMBIORIX
	Self-propelled rock cutter suction
Туре	dredger, cutter power 6.000 kW
Installed power	26.100 kW



Year of delivery	2011
Order number	CO 1261
Name Ship	ATHENA
	Self propelled rock cutter suction
Туре	dredger, cutter power 7.000 kW
	0.4.700.1.11
Installed power	24.700 kW

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Year of delivery	2012
Order number	02784
Name Ship	SHANTI SAGAR XVI

Cutter suction dredger IHC9029, cutter

Type power 1.500 kW

Installed power 13.000 kW



Year of delivery	2010
Order number	02732 / 02733
Name Ship	ZHONG 08 / ZHONG 09
Туре	2 units Cutter suction dredger IHC9029, cutter power 1.500 kW
Installed power	13.000 kW



Year of delivery	2010
Order number	02482
Name Ship	AL SAKAB
	Cutter suction dredger, cutter power
Туре	1.500 kW
	45 500 1111
Installed power	16.500 kW



Year of delivery	2010
Order number	02730
Name Ship	QUIBÍAN I
	Cutter suction dredger, cutter power
Туре	1.500 kW
Installed power	11.787 kW