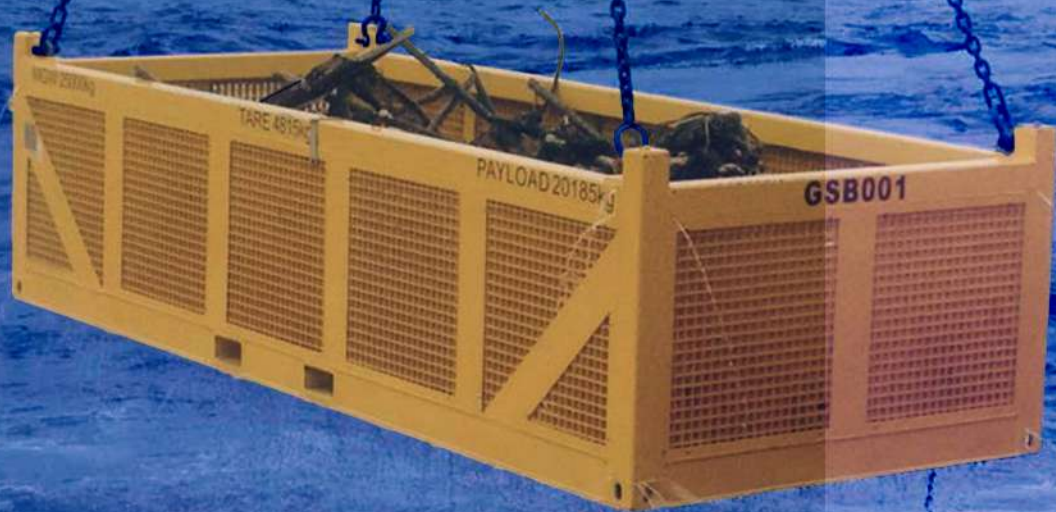


水下机器人 作业工具 Subsea Offshore



赋能深海卓越：为应对深海作业而打造的
刷具、篮筐和水下机器人辅助工具！

**Empowering Subsea Excellence:
Brushes, Baskets, and Underwater Robot AIDS
Built for Deep Sea Operations!**



目录 Content

公司简介 About Us

自 2010 年以来，我们一直向北海供应海上 / 海底产品，我们的客户也在世界各地使用它们，包括篮子、鱼尾手柄、刷子、切割工具、扭矩扳手、钻孔工具……我在后面随附一些照片供参考。

我们在中国和挪威拥有自己的设计团队和加工车间，拥有完整专业的内部设计工艺和技术，并且采用了 OEM 生产模式。能够对海底作业的特殊需求做出非常快速的反应。

例如，我们根据客户的想法制造了 25Te ROV 操作卸扣，该卸扣已于 2019 年在北海通过了实际测试，目前我们正在进行 12Te 和 35Te 卸扣的开发设计；我们开发了液压水下磁铁以满足不同需求的海底作业，该设计于 2020 年 6 月获得专利。

Since 2010, we have been supplying offshore/subsea products to the North Sea, our clients also use them in all of the world, including baskets, fishtail handles, brushes, cutting tools, torque tools, drilling tools...

We have a complete and professional design in house process and technology, and adopt OEM production mode. With our own designing team and workshop in China and Norway, we are able to react very fast for special demand of subsea work.

For example, we manufactured 25Te ROV operated shackle accord to client's idea which has been approved by practical test in the North Sea in 2019, currently we are developing 12Te & 35Te shackles; we have developed hydraulic magnet to meet variety subsea work demands, it was patterned in June, 2020.

产品目录 **Product Content**



切割工具 Cutting Tools

液压链锯

Hydradulic Cainsaw

液压剪刀

Hydraulic Scissors

液压软吊索切割器

Hydraulic Soft Sling
Cutter

水下机器人打磨机

ROV Grinder



扭矩扳手 Torque Tools

史丹利 IW12
液压冲击扳手

Stanley IW12 Impact

史丹利 IW16
液压冲击扳手

WrenchStanley IW16

扭矩工具

Torque Tools



钻井工具 Drilling Tools



新型吊篮 New type hanging basket



取样工具 **Sampling Tools**

气体取样器
取样瓶 Gas Sampler
Sampling Bottle



水下机器人工具 **ROV Tools**

鱼尾式 ROV 手柄 Fishtail ROV handle
ROV 刀嵌入鱼尾 ROV-knife
带法兰的 ROV 手
柄 ROV handles with
flange



海底吊篮 **Subsea Basket**

10 英尺篮子 10ft basket
13 英尺篮子 13ft basket
20 英尺篮子 20ft basket



起重工具 **Lifting Tools**

液压磁铁 Hydraulic Magnet
水下机器人链式
起重机 ROV Chain Hoist
卸扣 Shackle



水下刷子 **Subsea Brush**

- 不锈钢钢丝刷刷 Stainless steel wire brush
- 聚氨酯刷 Brush-polyurethane
- 多功能刷 Multi-purpose-brushing-tool
- PU 刷 PU Brush
- 黄铜链条刷 Brass-chain-brush-tool



运输桶 **Transponder bucket**



液压链锯 Hydradulic Chainsaw

水下液压链锯

Subsea hydraulic chain saw.



液压剪刀 Hydraulic Scissors

切割电线、软吊带、液压软管、圆杆等。
剪刀可以修改，
以方便进入工作现场。
剪刀尺寸：180, 260 和
270 毫米
还有一种更小的
剪刀可供选择。
可切割 28-32mm 圆棒。
电源输入：175Bar
输出功率：700Bar
其它：内置助推器

Cuts wire, soft slings, hydraulic hoses, round bar, etc.
The scissors can be modified to ease access on the job site.
Scissor Size: 180, 260 & 270 mm
Also a smaller version of the scissors is available.
Can cut round bar from 28-32mm.
Power input: 175Bar
Power output: 700Bar
Other: Built-in booster



液压软吊索切割器
Hydraulic Soft Sling Cutter

海底液压软吊索切割器
叶片尺寸：300mm。

Subsea soft-sling cutter
Blade size: 300 mm.



水下机器人打磨机 ROV Grinder

多功能超级磨床 - 设计用于极端水下螺栓连接
这款真正的多功能超级磨床是为快速有效地切割混凝土和钢铁材料而设计的。
磨床可以切割几乎任何东西与它的 300 毫米的金刚石刀片。
超级磨床由弯轴可变位移电机驱动，可以在两个方向上运行。

Versatile Super Grinder -
Designed for extreme underwater bolting
This truly Versatile Super Grinder is designed for quick and effective cutting of concrete and steel materials.
The grinder can cut through almost anything with it's 300 mm. diamond blade.
The Super Grinder is powered by a bent axis variable displacement motor, and can run in both directions.



液压冲击扳手 Stanley IW16

IW16 液压冲击扳手，适用于 16 GPM (加仑每分钟) 的液压流量
带 1 英寸连接，非常适合海底螺栓连接作业。

Stanley IW16 with 1 inch connection.
Perfect for subsea bolting operations.



液压冲击扳手 Stanley IW12 Impact Wrench

IW12 冲击扳手适用于 12 GPM(加仑每分钟)的液压流量。
具有可调强度，可以处理各种各样的应用。
设计用于各种液压回路，可在最极端的应用中进行水下螺栓固定。

The IW12 Impact Wrench features adjustable intensity and can handle a wide variety of applications.
Designed to run from a wide range of hydraulic circuits, the IW12 allows underwater bolting in the most extreme applications.



扭矩工具 Torque Tools

不同尺寸，也可根据要求提供。

Different sizes, also available on request.

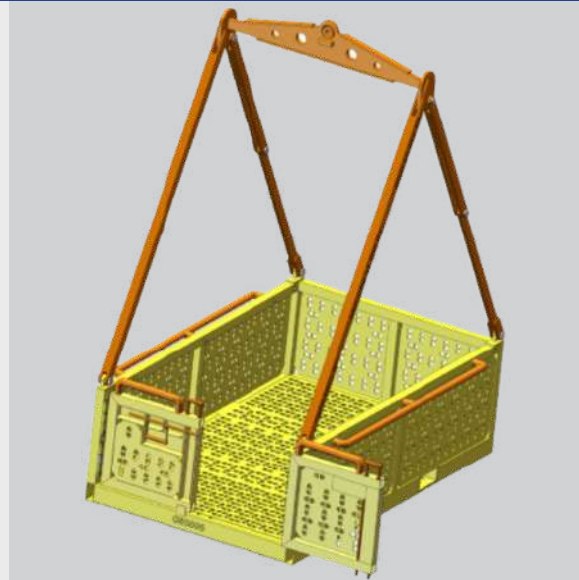
钻孔工具 Drilling tool



可采用立平磁力附着在表面进行钻孔，也可附着在钻杆上进行钻孔作业。
管道必须最小为 450 毫米。

Can be used standing flat magnetically attached to the surface for drilling, and attached to pipe for drilling operations.
Pipe must be minimum $\varnothing 450$ mm.

新型吊篮 New type hanging basket



新型吊篮，快速开关锁定。

New type hanging basket, fast switch lock.

取样工具 Sampling Tools



气体采样器 Gas Sampler

气 / 液取样器设计用于测量气 / 液流量，并从海底泄漏中带回样品。
漏斗下部可与气体取样器分离，以便在密闭空间内获得更好的通道。
它也被设计成由工作级 ROV 操作。

The Gas/Liquid Sampler is designed to measure gas/liquid flow and bring back samples from a subsea leakage.
The lower part of the funnel can be separated from the gas sampler, in order to get better access in confined spaces.



采样瓶 Sampling Bottle

ROV 取样瓶。
该工具由远程操作车辆 (ROV) 操作，非常适合从难以到达的水下环境中收集气体、液体或沉积物样本。

Sampling bottle for ROV.
This tool, operated by a remotely operated vehicle (ROV), is ideal for collecting gas, liquid, or sediment samples from difficult-to-reach underwater environments.

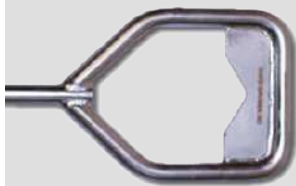
鱼尾式 ROV 手柄 Fishtail ROV handle



ROV 鱼尾手柄适用于多种工作场合
长度: 310×Ø16mm

ROV fishtail handles are suitable for a variety of work scenarios
Length: 310×Ø16mm

D 型 ROV 手柄 D-Type ROV handle



D 型 ROV 手柄适用于多种工作场合
长度: 310×Ø16mm

D-Type ROV fishtail handles are suitable for a variety of work scenarios
Length: 310×Ø16mm

ROV 刀嵌入鱼尾 ROV-knife



ROV 刀嵌入鱼尾
可用于各种场合, 如切割绳索, 软管, 电线等。
长度: 500mm × 15mm。

ROV knife embedded in a fishtail.
Can be used in a wide variety of situations such as for cutting rope, hoses, and wires, etc.
Length: 500 mm. x 15 mm.

带法兰的 D 型 ROV 手柄 D-Type ROV handles with flange



D 型把手 法兰 70 mm
D-tail 4 孔 6.5 mm
Flexjoint PCD 56 mm

Handle Flange Ø 70 mm
D-tail 4 holes Ø 6.5 mm
Flexjoint PCD 56 mm

带法兰的 ROV 手柄 ROV handles with flange



鱼尾 法兰 70 mm
D-tail 4 孔 6.5 mm
Flexjoint PCD 56 mm

Fishtail Flange Ø 70 mm
D-tail 4 holes Ø 6.5 mm
Flexjoint PCD 56 mm



海底吊篮采用坚固的实心钢吊装装置，确保了海上作业的耐久性和可靠性。

Subsea basket designed with a robust solid steel lifting arrangement, ensuring durability and reliability for demanding offshore operations.

海底吊篮 Subsea Basket

10 英尺篮子 10ft basket

承载 11400kg,
总重量 15000kg。
Lifts 11400kg, total
weight 15000kg.
10ft basket size



Basic Information

External Dimensions LxWxH mm	3000x2802x4229mm
Internal Dimensions LxWxH mm	2800x2250x1030mm
TARE Load	3600KG
Payload	11400KG
Max Gross Weight	15000KG
Main Material	Q345B
Coating	HDG+Painting

13 英尺篮子 13ft basket

承载 15600kg,
总重量 20000kg。
Lifts 15600 kg, total
weight 20000 kg.
13 ft basket size.



Basic Information

External Dimensions LxWxH mm	4000x2802x5032mm
Internal Dimensions LxWxH mm	3800x2250x1030mm
TARE Load	4400KG
Payload	15600KG
Max Gross Weight	20000KG
Main Material	Q345B
Coating	HDG+Painting

20 英尺篮子 20ft basket

承载 20185kg,
总重量 25000kg。
Lifts 20185kg, total
weight 25000 kg.
20 ft basket size.



Basic Information

External Dimensions LxWxH mm	6058x2438x1550mm
Internal Dimensions LxWxH mm	5758x2138x1275mm
TARE Load	4815KG
Payload	20185KG
Max Gross Weight	25000KG
Main Material	Q345B
Coating	HDG+Painting



液压磁铁 Hydraulic Magnet

磁铁也可用作抓取杆，在用另一只手臂执行操作时，用一只手臂保持 ROV 静止。磁力可达 3600 公斤。

The magnet is also used as a grabber bar that holds the ROV still with one arm, when executing operations with the other.

Magnetic capacity of up to 3600 kg.



水下机器人链式起重机 ROV Chain Hoist

安装 d 型尾的链式起重机。
可选 4 种，容量如下：
2 吨，3 吨，5 吨，10 吨

Chain hoists with mounted D-tail.

4 options available, with following capacities:

2 ton, 3 ton, 5 ton, 10 ton



卸扣 Shackle

尺寸和重量
最大工作荷载：25Te
长度：615mm
宽度：412mm
高度：415mm
空气重量：49 公斤
水重：42kg

Dimensions and weight

WLL: 25 Te

Length: 615 mm.

Width Ø: 412 mm.

Height: 415 mm.

Weight in air: 49 kg.

Weight in water: 42 kg.

运输桶

Transponder bucket

用于 CNode 迷你转发器的转发器桶。

Transponder bucket for CNode mini transponders.

可配吊车线、TMS 等夹具。

Can be equipped with clamps for crane wire, TMS etc.

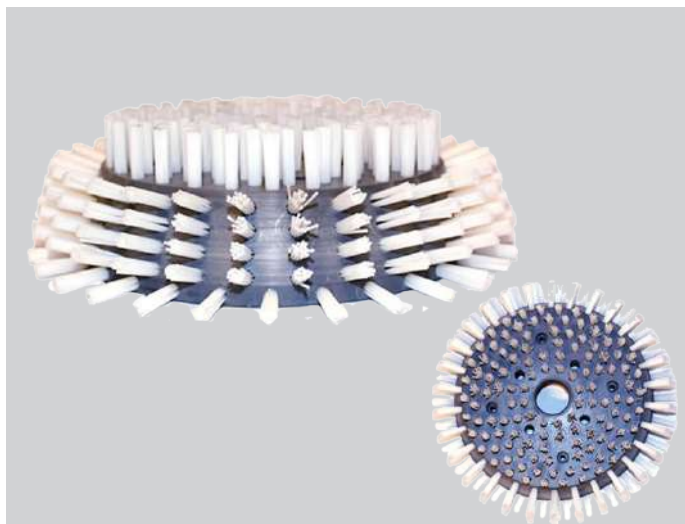




不锈钢钢丝刷 Stainless steel wire brush

不锈钢钢丝刷
非常适合工况恶劣的清洁和去毛刺
可配不锈钢或碳钢丝
尺寸和重量：
线材 : $\text{Ø}8\text{mm}/\text{Ø}10\text{mm}$
线长: 150mm、100mm 工作长度
旋转时: 总工作直径 400mm (15.7")
空气重量: 3.20/3.90kg

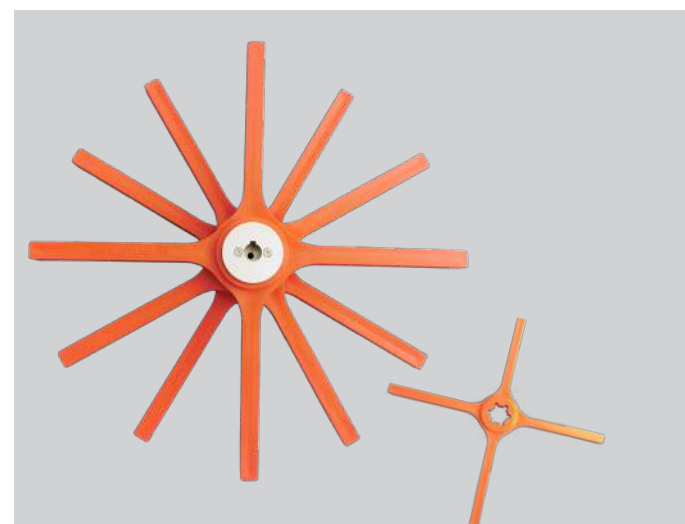
Stainless steel wire brush.
Perfect for tough cleaning and deburring.
Can be fitted with stainless steel or carbon steel wires.
Dimensions and weight:
Wire $\text{Ø}8\text{mm}/\text{Ø}10\text{mm}$
Wire length: 150 mm., 100 mm. working length
When rotating: Total working diameter 400 mm. (15.7")
Air weight: 3.20/3.90kg



尼龙盘刷 Nylon coil brush

尼龙盘刷在深度达 1.5 公里的海底维护任务中被广泛使用。它们安装在机器人臂上，可靠地清除管道上的藻类和污垢，从而使管道能够被检查是否漏水或受损。在此过程中，刷子必须能够承受高水压和盐分的需求。

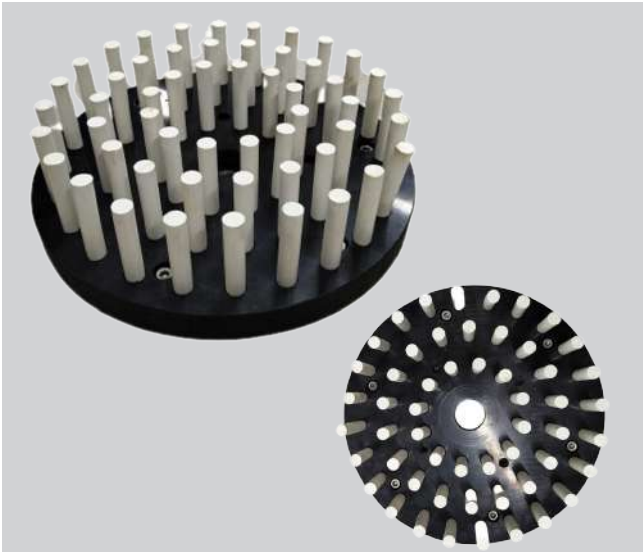
The Nylon coil brushes are used for these maintenance tasks at depths of up to 1.5 kilometers. Mounted on the robot arms, the Mink disc brushes reliably remove algae and dirt from the pipelines so that the pipes can be inspected for leaks and damage. Here, the brushes must be able to withstand requirements such as high water pressure and salt content.



PU 刷 PU Brush

PU 刷
3 件 / 套
尺寸和重量：
直径: $\text{Ø}630\text{mm}$
空气重量: 4.35kg (含铝件)

New PU Brush
3 pieces/set
Size and weight:
Diameter: $\text{Ø}630\text{mm}$
Air weight: 4.35kg (including aluminum)



聚氨酯刷 Brush-polyurethane

聚氨酯刷
适合船底赘物清理及综合性清洁

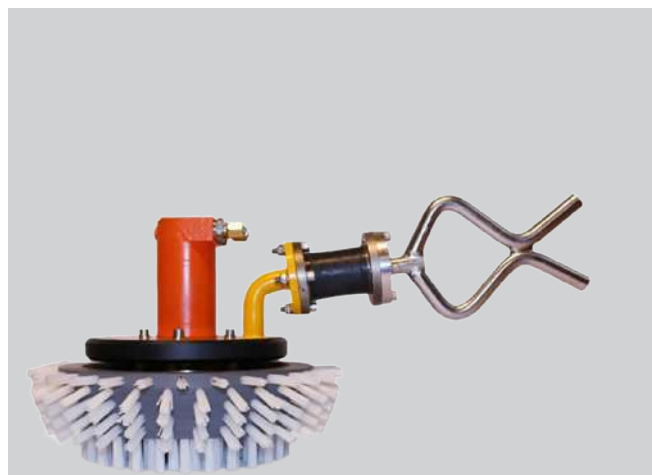
Brush made from polyurethane.
Suitable for cleaning and comprehensive cleaning of ship bottom



黄铜链条刷 Brass-chain-brush-tool

非常适合重型清理
可配黄铜或钢制链条
尺寸和重量
链条 : 8 毫米 (5/16")
链条长度: 500 毫米, 250 毫米工作长度
纺纱时: 总工作直径 540 毫米 (21")
空气重量: 21 公斤。(46 磅) 与黄铜链
可以配置手柄 F5, 7F 可以配置鱼尾或 d 型手柄

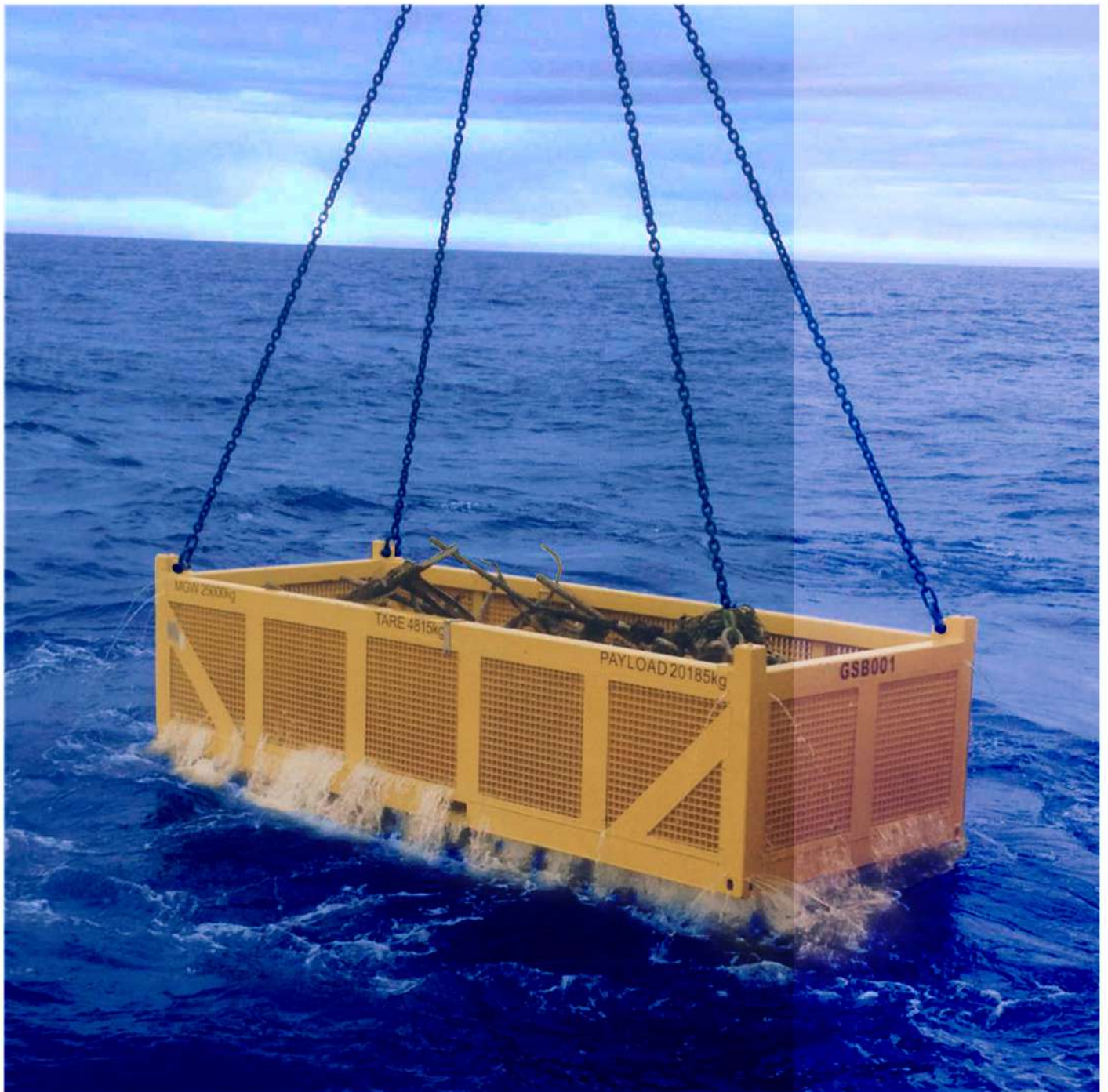
Perfect for heavy cleaning.
Can be equipped with brass or steel chain.
Dimensions and wight
Chain Ø: 8 mm. (5/16")
Chain length: 500 mm., 250 mm. working length
When spinning: Total work diameter 540 mm. (21")
Weight in air: 21 kg. (46 lbs) with brass chain
Can be equipped with handle F5, and fishtail or D-handle for 7F



多功能刷 Multi-purpose-brushing-tool

多用途涂刷工具
理想的各种清洁任务
可安装尼龙或钢刷毛
尺寸和重量:
旋转时: 总工作直径 500mm (19.5")
重量: 18 公斤。(40 磅) 尼龙刷毛
与手柄 F3 兼容, 并与可选的环或 t 型手柄增强控制。

Multi-purpose brushing tool.
Ideal for a variety of cleaning tasks.
Can be fitted with either nylon or steel bristles.
Dimensions and weight:
When rotating: Total working diameter 500 mm. (19.5")
Weight: 18 kg. (40 lbs) with nylon bristles
Compatible with handle F3, and available with optional loop or T-handle for enhanced control.



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