PLT® PNEUMATIC LINE THROWERS
SAFETY, WORK & RESCUE
Restech Norway AS was established in 1989 by an officer from the Life Saving Organization. Our main office is located in Bodø, a small city above the Arctic Circle in Norway.

Restech Norway AS is the manufacturer of the only Solas approved Pneumatic Line Thrower PLT®, and related high precision rescue and line throwing devices.

Our products are well known and recognized all over the world among users that needs a precise line-throwing tool. Both as a rescue tool and a working tool. Some of our end users are Coast Guards, Ferries and Cruisers, Fire Brigades, Sea Rescue Organizations, FPSO-installations, Marine Police, Special forces, Terminals, Navy, Cargo and tanker vessels, Ocean Research and Offshore.

Ideal in oil and gas environment

Operated on compressed air, the PLT is a safe working tool for the operators in oil and gas environment.

It has become the standard tool around the world.
The PLT® is ideal for an oil and gas environment and will be found in use in many types of maritime operations. Depending on the operation and choice of projectile, six types, the PLT® can provide a safety zone from 50-200 meters.

These are some of our users who take advantage of the PLT® system.

A.P. Møller-Maersk AS  Elf UK  Mowinckel Ship Management
Aker Marine Contractors AS  Euronav Ship Management  Naftomar Shipping & Trading Co.
Aker Maritime  Exxon Mobil  Norfield Shipping AS
Aker Oilfield Services AS  Farstad Shipping ASA  Ocean Rig
Aker Piping Technology  Finarge Armamento Genovesse S.R.L.  Odfjell Drilling Technology
Aker Pusnes AS  Fred Olsen & Co.  Odfjell Well Services
Alianca, Brazil  Fronape, Brazil  OMS UK
APL, National Oilwell Varco  Fugro Geoteam  Petrobras Transporte S.A.
Atlantic Power & Gas  GC Rieber Shipping AS  Petrobras, Brazil
Bergesen  GEMS Survey Limited  PGS Production AS
Bluewater  Golar Nor Offshore AS  Rederij Waterweg B.V.Holland
BOURBON  Gulf Offshore Norge A/S  Remoratech
Bukser og Berging AS  Havila Offshore AS  SBM-Single Buoy Moorings,
BW Offshore  Heerema Marine Contractors Ned. BV  Monaco
Canship Ugland Ltd  Hoyland Offshore AS  Shell UK
CBO  Hydro Olje & Energi  Simon Mekster Shipping A/S
CGG Veritas  INTERUNITY Management Corp.  Statoil Petroleum
Chevron UK  Island Offshore Management AS  Stolt Comes Seaway Ltd
Colombia Shipmanagement Ltd.  Japan Vietnam Petroleum Company Ltd  Subsea 7
COSL Offshore Management  Knutsen OAS Shipping AS  Swire Pacific Offshore Operations
Dalby Offshore Services Limited  Louis Dreyfus Armateurs  Teekay Corporation
Deep Sea Supply PLc  Maersk Drilling  The Torvald Klaveness Group
Dof Management  Maersk FPSOS  Thome Ship
Dolphin Geophysical  Maersk Oil  Transpetro, Brazil
Eidesvik AS  Management Pte Ltd  Ugland Marine Services AS
           Marathon Petroleum  V.Ships Norway AS
           Mobil UK  Varun Shipping Company Limited

Multipurpose Tool

PLT® 150

PLT® Line Pickup

SOLAS 74

PLT® 75
PLT® Launching Unit

No explosives
No expiry date
High precision

Article 1306  Air Cylinder  1

200 or 300 bars (2900/4350psi).

Article 1000  Launching Unit  1

Article 1017  Cover for air cylinder  1

The launching unit contains an air cylinder for filling of compressed air up to 200/300 bars (2900/4350psi). This is sufficient for 4/6 launches before refilling is necessary. The air cylinder is fitted with standard fittings for diving and BA-equipment for filling of dry and clean air from a high-pressure compressor.

- Launching distances up to 250m
- 4-6 multiple launches
- Can comply with IMO/SOLAS regulation 74/83
- 6 types of projectiles

Pivot Support

Due to the heavy recoil it is necessary to have a good support for the PLT.

We recommend using the Pivot Support. A steel tube can be welded or clamped at the launching areas (rail, i.e.).

In rough seas the Pivot will help personnel to keep balance and focus on aiming.
If you already have a PLT Launching unit, you can upgrade to also comply with your LTA requirements, Solas 74. The set has no expiry date, is reusable and non-dangerous.

NB! Needs the PLT Launching Unit to be operated and comply with Solas.

<table>
<thead>
<tr>
<th>Article 1303</th>
<th>Launching Tube Rescue 230</th>
</tr>
</thead>
<tbody>
<tr>
<td>Article 2101</td>
<td>Projectile Rescue 230</td>
</tr>
</tbody>
</table>

Typical shooting range with a dry and clean line of 3,2mm (Art No 2103): 230m. Breaking strength: 2000N.

In order to reload the line back into the projectile a reloading kit is necessary.

NB! Needs the PLT Launching Unit to be operated and comply with Solas.

NO EXPIRY DATE

The PLT Rescue 230 meets the IMO Solas regulation 74. You can launch 4-6 times without refilling the air cylinder.

Certificates:
- DNV – MED B 9174 and Type Approval
- DG Shipping – Approval 19-NT(3)/2013
- CCS – BG1ST00008
- US Coast Guard -160.040/ECO575/9174
150 Upgrade

Medium range line transfer

NB! Needs a PLT Launching Unit to be operated

<table>
<thead>
<tr>
<th>Article</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>3303</td>
<td>Launching Tube 125/150</td>
<td>1</td>
</tr>
<tr>
<td>7004</td>
<td>Projectile PL T 150</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Typical shooting range with a dry and clean line with 3.2mm (Art No 2103): 140m</td>
<td></td>
</tr>
<tr>
<td>5202</td>
<td>Linebox 3.2mm nylon</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Linebox containing 150m (164 yd) of 3.2mm (0.13 in) (Art No 2103) of line. Used for maximum range for projectile Art no 7004. Breaking strength : 200kg</td>
<td></td>
</tr>
</tbody>
</table>

Operations

The rubber tipped projectile can reach up to 140 meters and pulls the line after itself.

It is commonly used for Line transfer between FSO/FPSO and tanker and in Oil Spill operations.

Depending on your line requirements the launching distance will vary.
Short range Line Transfer

NB! Needs a PLT Launching Unit to be operated.

<table>
<thead>
<tr>
<th>Article 6303</th>
<th>Launching Tube PLT 75</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Article 6101</td>
<td>Projectile Ball</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Typical shooting range with a dry and clean line with 5mm (art no. 6109): 90m</td>
<td></td>
</tr>
<tr>
<td>Article 6201</td>
<td>Line box 5mm floating line</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Line box containing line art no 6109, polypropylene (120m). Breaking strength 440kg. Floats and has a very bright yellow color. Breaking strength: 440kg.</td>
<td></td>
</tr>
</tbody>
</table>

**Operations**

Launches an orange rubber ball that pulls a 5mm bright yellow floating line up to 90 meters. The ball can land on deck and it is filled with a liquid in order to avoid bouncing and freezing.

The PLT 75 increases your safety zone for your equipment and personnel.

It is commonly used in towing, vessel to vessel, docking and general line transfer operations.
**Line Retrieval Upgrade**

Picks up lines at medium range.

NB! Needs a PLT Launching Unit to be operated.

<table>
<thead>
<tr>
<th>Article</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>3303</td>
<td>Launching Tube 125/150</td>
<td>1</td>
</tr>
<tr>
<td>7002</td>
<td>PLT Line Pick-up Grapple</td>
<td>1</td>
</tr>
<tr>
<td>6201</td>
<td>Line box 5mm floating line</td>
<td>1</td>
</tr>
</tbody>
</table>

| Line box containing line art no 6109, polypropylene (120m). Breaking strength 440kg. Floats and has a very bright yellow color. Breaking strength: 440kg. |

**Operations**

Used for Emergency Towing, Bunkering, Streamer pick up and Anchor Handling.

The PLT is used by Anchor Handlers to safely and effectively grab the anchor buoy soft line. This is done by having a secondary small buoy attached to the free end of the soft line.

You can launch the Line Pick-up Grapple up to 85 meters from a safe and elevated spot on your vessel.
R 150 Upgrade

Medium range line transfer
Re-usable

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3101</td>
<td>R 150 Projectile</td>
</tr>
<tr>
<td></td>
<td>The line is stored inside the projectile. Made from ABS plastic and aluminum. Typical shooting range with a dry and clean line of 3.2mm is 150 meters.</td>
</tr>
<tr>
<td></td>
<td>Breaking strength is 200kg</td>
</tr>
<tr>
<td>3303</td>
<td>150 Launching Tube</td>
</tr>
<tr>
<td></td>
<td>In order to reload the line back into the projectile a reloading kit is necessary.</td>
</tr>
</tbody>
</table>

Operations

Ideal for quick response operations for emergency towing, FPSO, standby and rescue vessels that uses the PLT Launching unit.

The line is stored inside the projectile and ready to launch right away in an emergency situation.

The projectile reaches 150 meters.
This is a re-usable projectile that contains an automatic inflatable life buoy. It will inflate within 2 seconds after entering the water. The Rescue Buoy can be used with both the PLT Mini and the PLT Launching Unit with the 150 Launching Tube.

<table>
<thead>
<tr>
<th>Article 4105</th>
<th>Rescue Buoy 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical shooting range with a dry and clean line of 3.2mm with the PLT is 115 meters. Breaking strength is 200kg</td>
<td></td>
</tr>
<tr>
<td>Typical shooting range with a dry and clean line of 2mm with the PLT Mini is 80 meters. Breaking strength is 190kg</td>
<td></td>
</tr>
<tr>
<td>The inflator has an expiry date and uses a 33 gram CO2 cartridge</td>
<td></td>
</tr>
</tbody>
</table>

**Operations**

The PLT Rescue Buoy reaches 115 meters with a 3.2 mm line. It is commonly used onboard standby and rescue vessels.
The PLT® Mini consists of a launching unit, several types of projectiles and a launching tube.

Launching Unit
The Launching Unit can be used with either disposable 33 grams CO2 cartridges or compressed air from a high-pressure air cylinder. CO2 is commonly used during operations for easier maneuvering.

Operations
High maneuverability
Launched from shoulder
Medium range operations
PLT® Mini Complete

Ideal for smaller rescue vessels or where high maneuverability is needed at sea or land.

<table>
<thead>
<tr>
<th>Article</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>4020</td>
<td>PLT Mini Launching Unit</td>
<td>1</td>
</tr>
<tr>
<td>4101</td>
<td>Projectile PLT Mini 100</td>
<td>2</td>
</tr>
<tr>
<td>4102</td>
<td>Projectile PLT Mini Rubber</td>
<td>1</td>
</tr>
<tr>
<td>4200</td>
<td>Loading Device</td>
<td>1</td>
</tr>
<tr>
<td>4202</td>
<td>Line box 2mm-nylon line</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Line box containing safety line (90m of art no 4110). Breaking strength : 190kg</td>
<td></td>
</tr>
<tr>
<td>4006</td>
<td>Disposable 33gr C02 cartridges.</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Comes in a 4-pack. Note that these can be shipped by Air as dangerous goods.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other options of line on request</td>
<td></td>
</tr>
<tr>
<td></td>
<td>User Manual and USB Stick included</td>
<td></td>
</tr>
</tbody>
</table>

**Operations**

The Mini is a light weight shoulder launched line thrower. It is very popular among users both at sea and on land, who requires a mobile linethrower. We currently have 7 different projectiles that can be used in various types of operations with a wide range of lines.
PLT® Mini Rescue Pack

Ideal for smaller rescue vessels or where high maneuverability is needed

<table>
<thead>
<tr>
<th>Article</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>4020</td>
<td>PLT Mini Launching unit</td>
<td>1</td>
</tr>
<tr>
<td>4006</td>
<td>CO2 cartridge 4-pack</td>
<td>5</td>
</tr>
<tr>
<td>4101</td>
<td>Projectile PLT Mini 100</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Typical shooting range with a dry and clean line of 2mm (Art No 4110) and Projectile PLT Mini 100 art no 4101: 100m.</td>
<td></td>
</tr>
<tr>
<td>4102</td>
<td>Projectile PLT Mini-rubber</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Typical shooting range with a dry and clean line of 2mm (Art No 4110) and Projectile PLT Mini-rubber art no 4102: 90m Breaking strength : 190kg</td>
<td></td>
</tr>
<tr>
<td>4104</td>
<td>Lightstick (5-pack)</td>
<td>1</td>
</tr>
<tr>
<td>4200</td>
<td>Loading device</td>
<td>1</td>
</tr>
<tr>
<td>4202</td>
<td>Line box PLT Mini 2mm nylon</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Other options of line on request</td>
<td></td>
</tr>
<tr>
<td></td>
<td>User Manual and USB Stick included</td>
<td></td>
</tr>
</tbody>
</table>

Operations

The Mini is a light weight shoulder launched line thrower. It is very popular among users both at sea and on land, who requires a mobile linethrower. We currently have 7 different projectiles that can be used in various types of operations with a wide range of lines.
PLT Mini Projectiles

PLT® Mini 100
100 meters

PLT® Mini Rubber
90 meters

PLT® Mini Line Pick-up Grapple 70 meters

PLT® Mini Sharp-Grapple 70 meters

PLT® Mini-Rescue Buoy
Inflates in 2 sec.
80 meters

PLT® Mini Rubber tip
95 meters

PLT® Mini Entering Grapple 3
30-65 vertical meters

www.restech.no
4100 Container

Waterproof, resistant to chemicals, humidity, dust.

<table>
<thead>
<tr>
<th>Article 4100</th>
<th>4100 Container</th>
<th>1</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Length</th>
<th>Width</th>
<th>Depth</th>
<th>Lid</th>
<th>Base</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal dim.</td>
<td>mm</td>
<td>580</td>
<td>440</td>
<td>220</td>
<td>60</td>
</tr>
<tr>
<td>External dim.</td>
<td>mm</td>
<td>650</td>
<td>510</td>
<td>245</td>
<td></td>
</tr>
</tbody>
</table>

- Made of Copolymer Polypropylene compound
- Resistant to harsh temperatures (-33°C / +90°C)
- Jam-free purge valve and latches
- Recommended for professional applications

Certifications
- 2002/95/EC Conformity with the Directive 2002/95/EC
- DEF STAN 81-41 (level J)
- IP67 Dustproof - Waterproof
- MIL-STD 810F Mod. 5822
- STANAG 4280 (edition 2)
9400 Container

Waterproof, resistant to chemicals, humidity, dust.

<table>
<thead>
<tr>
<th>Article 9400</th>
<th>9400 Container</th>
<th>1</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Internal dim.</th>
<th>Length</th>
<th>Width</th>
<th>Depth</th>
<th>Lid</th>
<th>Base</th>
</tr>
</thead>
<tbody>
<tr>
<td>mm</td>
<td>1350</td>
<td>350</td>
<td>135</td>
<td>42</td>
<td>93</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>External dim.</th>
<th>Length</th>
<th>Width</th>
<th>Depth</th>
</tr>
</thead>
<tbody>
<tr>
<td>mm</td>
<td>1410</td>
<td>415</td>
<td>159</td>
</tr>
</tbody>
</table>

- Made of Copolymer Polypropylene compound
- Resistant to harsh temperatures (-33°C / +90°C)
- Jam-free purge valve and latches
- Recommended for professional applications

Certifications

2002/95/EC Conformity with the Directive 2002/95/EC
DEF STAN 81-41 (level J)
IP67 Dustproof - Waterproof
STANAG 4280 (edition 2)
9401 Container

Waterproof, resistant to chemicals, humidity, dust.

<table>
<thead>
<tr>
<th>Article 9401</th>
<th>9401 Container</th>
<th>1</th>
</tr>
</thead>
</table>

| Internal dim. | mm | 939 | 352 | 137 | 43 | 94 |
| External dim. | mm | 989 | 415 | 157 |

- Made of Copolymer Polypropylene compound
- Resistant to harsh temperatures (-33°C / +90°C)
- Jam-free purge valve and latches
- Recommended for professional applications

Certifications
2002/95/EC Conformity with the Directive 2002/95/EC
DEF STAN 81-41 (level J)
IP67 Dustproof - Waterproof
STANAG 4280 (edition 2)
9500 Container

- Made of Copolymer Polypropylene compound
- Resistant to harsh temperatures (-33°C / +90°C)
- Jam-free purge valve and latches
- Recommended for professional applications

<table>
<thead>
<tr>
<th>Article 9500</th>
<th>9500 Container</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal dim.</td>
<td>Length</td>
<td>Width</td>
</tr>
<tr>
<td></td>
<td>mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1350</td>
<td>350</td>
</tr>
<tr>
<td>External dim.</td>
<td>mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1430</td>
<td>415</td>
</tr>
</tbody>
</table>

Certifications
2002/95/EC Conformity with the Directive 2002/95/EC
DEF STAN 81-41 (level J)
IP67 Dustproof - Waterproof
STANAG 4280 (edition 2)
Bag 94

Padded to protect the equipment. Inclusive of a number of features to secure Launcher together with necessary accessories.

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BAG 94 is designed to perfectly fit into our storage container 9401. Built with durable, 600D tear resistant polyester and robust zipper with lockable Velcro pull zipper for the main compartment. The main compartment features two neoprene hook-and-loop side flaps and adjustable straps to secure parts. The front central compartment is equipped with adjustable interior straps to secure smaller parts. The two side smaller pouches are designed to storage accessories. Both the main and front compartments are padded on all sides to protect and transport gear.

This bag features top and bottom compression straps and come with a removable shoulder strap. Personal ID window on the backside and front removable hook-and-loop screen-printable band.

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**Extras**

The bag can easily become a backpack by fixing the BACKPACK KIT in its rear side (see BACKPACK KIT for more details).
Bag 135

Padded to protect the equipment. Inclusive of a number of features to secure Launcher together with necessary accessories.

Article Bag 135  Bag 135

1

L 1300 x W 300 x D 70 mm

BAG 135 is designed to perfectly fit into our storage container 9400. Built with durable, 600D tear resistant polyester and robust zipper with lockable Velcro pull zipper for the main compartment. The main compartment features two neoprene hook-and-loop side flaps and adjustable straps to secure parts. The front central compartment is equipped with adjustable interior straps to secure smaller parts.

The two side smaller pouches are designed to storage accessories. Both the main and front compartments are padded on all sides to protect and transport gear.

This bag features top and bottom compression straps and come with a removable shoulder strap. Personal ID window on the backside and front removable hook-and-loop screen-printable band.

Extras

The bag can easily become a backpack by fixing the BACKPACK KIT in its rear side (see BACKPACK KIT for more details).
Backpack Kit

Padded to protect the equipment. Inclusive of a number of features to secure Launcher together with necessary accessories.

Artikel Backpack Kit  Backpack Kit 1

Practical and easy to fix kit to turn the bags into backpacks to safely transport your PLT.

The detachable, padded shoulder straps, clip right in the back of the bags D-rings.

The ergonomic straps are designed to be fully adjustable in length.

Types

It works on BAG 94 and BAG 135.
Color: black
PLT Wall Mount

Module A right
Module B left

<table>
<thead>
<tr>
<th>Article 9012</th>
<th>PLT Wall Mount</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module A</td>
<td>PLT Base unit and its parts (5)</td>
<td>1</td>
</tr>
<tr>
<td>Module B</td>
<td>Projectiles and extra equipment (6)</td>
<td>1</td>
</tr>
</tbody>
</table>

Mounting:
over/under (600mm wall space) or
Side by side (1200mm wall space)

The height is given by the length of base unit (670 mm) and projectiles (1220mm)
Each module consists of 2 parts (bottom bracket and strapping bracket)

Weight:
Empty brackets: 5.2 kg
Weight with equipment: approx. 28 kg

Material
The brackets are made of PE polyethylene plates welded and soft rounded according to regulations.
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          N-8001 Bodø, Norway

Office address: Olav V gate 112
               N-8004 Bodø

Phone: +47 7554 2440

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