PLT® PNEUMATIC LINE THROWERS
SAFETY, SURVIVAL & RESCUE
Restech Norway is the manufacturer of the 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. Close to 4000 ships are currently using our equipment.

Restech works with several distributors in:
Europe
America
Asia
Australia

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.
Some advantages using the PLT®

**Safety**
The PLT® has several safety features that will prevent any danger to the user. A reduction valve will regulate the air pressure to the ideal working pressure, 45 and 75 bars. A fail-to-close regulator will shut down the unit if something is wrong, and the unit can not be used. It is dimensioned to hold extreme pressure, 450 bars. There are no back fire gases such as found with propulsion driven projectiles.

**No explosives, sparks or flames**
Perfect in oil and gas environment.
Mandatory equipment with several companies operating in oil and gas environment.
Can be shipped with any type of transportation

**No expiry date**
Easy maintenance and long shelf life
Made of Stainless Steel, anodised aluminium and plastic

**High precision**
There are no propulsion driven projectiles, free fall flight, ensuring a straight flight in any wind direction.
At a distance of 250 meters, the projectile will land within 8 meters.
PLT® is used in many fields

Coast Guards  FPSO-installations  Navy
Ferries and Cruisers  Marine Police  Ocean Research
Fire Brigades  Special forces  Offshore activities
Sea Rescue Organizations  Terminals

The PLT® is ideal for oil and gas environment. In offshore mooring operations, the PLT® can provide a safety zone from 50-180 meters with three types of projectiles.

PLT 75
PLT 150
PLT 230

Picture
Projectile PLT 150 used on board FSO, providing a 100 meter safety zone.
Direct oil and gas clients of Restech Norway AS. In addition to our 50 distributors globally.

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

The Big PLT®
Launching distances up to 250m
4-6 multiple shots
Complies with IMO/SOLAS regulation 74/83
Heavy duty launcher

The PLT® Mini
High maneuverability
Shot from shoulder
Medium range operations
Basic Types of PLT® Devices

The PLT® consist of a launching unit, several types of projectiles and 3 types of launching tubes

Launching Unit
The launching unit contains a built-in air cylinder for filling of compressed air up to 200/300 bars (2900/4350psi). This is sufficient for 4/6 shots 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
Projectiles for the PLT®

**Launching Tubes**

- PLT R-230 Launching distance up to 230-250 meters with internal line
- PLT 125 Launching distance up to 150-160 meters
- PLT 150 Launching distance up to 140-150 meters
- PLT Line Pick-up Grapple Launching distance up to 90 meters
- PLT Rescue Buoy Launching distance up to 90 meters
- PLT Ball Launching distance up to 80-90 meters
# PLT® Rescue 230 Complete

<table>
<thead>
<tr>
<th>Article</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
</table>
| 1005     | PLT Launching Unit  
1 Air Cylinder, 300bars/4350psi or 200bars/2900psi  
1 Launching Unit  
1 Cover for air cylinder | 1 |
| 1303     | Launching Tube Rescue 230 | 1 |
| 2101     | Projectile Rescue 230  
Typical shooting range with a dry and clean line of 3,2mm(Art No 2103): 230m  
Breaking strength : 2000N | 4 |
| 2200     | Loading Device | 1 |
| 3303     | Launching Tube 125/150 | 1 |
| 7004     | Projectile PL T 150 | 1 |
| 6201     | Linebox 5mm floating line  
Linebox containing line art no 6109, polypropylene (120m). Breaking strength 440kg. Floats and has a very bright yellow color | 1 |

User Manual and CD Rom Disc included
## PLT® 150 Complete

**Medium range mooring operations**

**Emergency Towing Arrangements**

<table>
<thead>
<tr>
<th>Article</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1005</td>
<td>PLT Launching Unit</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>1 Air Cylinder, 300bars/4350psi or 200bars/2900psi</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 Launching Unit</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 Cover for air cylinder</td>
<td></td>
</tr>
<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>

**Other options of line on request**

**User Manual and CD Rom Disc included**
**PLT® 75 Complete**

Medium range mooring operations
Emergency Towing Arrangements
Rescue operations
Ideal for landing onto vessel deck etc

<table>
<thead>
<tr>
<th>Article</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1005</td>
<td><strong>PLT Launching Unit</strong>&lt;br&gt;1 Air Cylinder, 300bars/4350psi or 200bars/2900psi&lt;br&gt;1 Launching Unit&lt;br&gt;1 Cover for air cylinder</td>
<td>1</td>
</tr>
<tr>
<td>6303</td>
<td><strong>Launching Tube PL T 75</strong></td>
<td>1</td>
</tr>
<tr>
<td>6101</td>
<td><strong>Projectile Ball</strong>&lt;br&gt;Typical shooting range with a dry and clean line with&lt;br&gt;5mm (art no 6109): 90m</td>
<td>2</td>
</tr>
<tr>
<td>6201</td>
<td><strong>Linebox 5mm floating line</strong>&lt;br&gt;Linebox containing line art no 6109, polypropylene&lt;br&gt;(120m). Breaking strength 440kg. Floats and has a&lt;br&gt;very bright yellow color. Breaking strength: 440kg.</td>
<td>1</td>
</tr>
</tbody>
</table>

Other options of line on request
User Manual and CD Rom Disc included
Basic Types of PLT® Devices

The PLT® Mini consist of a launching unit, several types of projectiles and a launching tube.

Launching Unit
The Launching Unit can be used either with disposable 33 grams CO2 cartridges or compressed air from a high pressure air cylinder. CO2 is commonly used during operations and air cylinders for training purposes.
Projectiles for the PLT® Mini

- **PLT Mini 100**: 100 meters
- **PLT Mini Rubber**: 90 meters
- **PLT Mini Rubber tip**: 95 meters
- **PLT Mini Line Pick-up Grapple**: 70 meters
- **PLT Mini Sharp-Grapple**: 70 meters
- **PLT Mini Entering grapple**: 50 meters
- **PLT Mini-Rescue Buoy**: Inflates in 2 sec. 80 meters

Heavy Duty water-proof storage container
Due to the heavy recoil it is necessary to have a good support for the PLT®. The back cushion of the PLT® can be placed against a solid point as support.

We recommend however using the Pivot Support (fig 1). A steel tube shown on fig 2 shall be welded or clamped at the launching area (rail, i.e.). Tubes can be installed at different places on board.

In rough seas the Pivot will help personnel to keep balance and focus on aiming.
DET NORSKE VERITAS
EC TYPE-EXAMINATION CERTIFICATE


CERTIFICATE NO: MED-B-6519

This is to certify that the
Line-throwing appliances (pyrotechnics)
with type designation(s):

Pneumatic Line Thrower Rescue 230

Manufacturer
Restech Norway AS
BODØ, Norway

is found to comply with the requirements in the following Regulations/Standards:


Further details of the equipment and conditions for certification are given overleaf.

Havik, 2010-10-21
for Det Norske Veritas AS

Notified Body No: 6575

Thord Myhrand
Head of Department

DNV local office:
Bodø

Surveyor

This Certificate is valid until
2014-06-09

The Certificate is subject to terms and conditions stated. Any significant changes in design or construction of the product, or amendments to the directive or Standard referenced above may render the Certificate invalid. This product liability risks with the manufacturer or his representative in accordance with Council Directive 89/392/EEC, as amended. The mark of conformity may only be affixed to the product and a Declaration of Conformity may only be issued when the production and product assessment module referred to in the Council directive, is fully completed with.

APPENDIX, REV. NO. 1

QS - Certificate of Assessment – EC, Certificate no. MED-B-6519

<table>
<thead>
<tr>
<th>Type designation</th>
<th>EC Type-Examination Certificate No.</th>
<th>Expiry date</th>
<th>QSI Asses. Report dated</th>
<th>USCGS approval number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pneumatic Line Thrower Rescue 230</td>
<td>MED-B-6519</td>
<td>2014-06-09</td>
<td>2009-06-09</td>
<td>160.040/EC/05/576/6519</td>
</tr>
</tbody>
</table>

The manufacturer complies with the Council Directive 90/68/EC on Marine Equipment and is allowed to affix the Mark of Conformity followed by the DNV identification number 0576 and the last two digits of the number of the year in which the product is produced.

Example: 057610

The manufacturer shall issue a Declaration of Conformity for each product with reference to the EC Type-Examination Certificate and this QS – Certificate of Assessment – EC.

USCG Approval

Based on the "Agreement between the United States of America and the EEA EFTA states on the mutual recognition of certificates of conformity for marine equipment" signed 17 October 2005, the manufacturer is allowed to affix the U.S. Coast Guard approval number mentioned in the table above (when applicable).

Place and date: Havik, 2010-10-21

for Det Norske Veritas AS

Surveyor

Name in block letters: ØYVIND HOFF

DNV Norske Veritas AS, Verkseiven 1, NO-1322 Havik, Norway, Tel.: +47 67 67 67 67, Fax: +47 67 67 67 11, Org. No. NO 945 740 301 MVA www.dnv.com Form No.: MED-D8 Issue: April 2010

PLT® Certificates

DNV Norske Veritas AS, Verkseiven 1, NO-1322 Havik, Norway, Tel.: +47 67 67 67 67, Fax: +47 67 67 67 11, Org. No. NO 945 740 301 MVA www.dnv.com Form No.: MED-D8 Issue: December 2009
RESTECH NORWAY AS

RESTECH NORWAY AS
P.O.Box624
N-8001 Bodø, Norway
Phone: (+47) 7554 2440
E-mail: restech@restech.no
Enterprise no. NO 951 274 763
Office address: Olav V gt 112
N-8004 Bodø
Fax: (+47) 7554 2441

Generalagent Sverige:

APTUM

APTUM AB
Norra Obbolavägen 133
904 22 UMEÅ
Tel: +46-(0)90-780 80 00
Email: kontakt@aptum.se
Fax: +46-(0)90-780 80 30
www.aptum.se