poliwater™

BATTLEFIELD MEDICINE

Tactical kits for stabilisation in demanding conditions.

Water-activated immobilising casts, evacuation litters and stabilisation equipment — assembled in one backpack.



PW LIGHT KIT

Full equipment for a team: TALON litter built to STANAG-2040, splints, pelvic slings and 25 Poliwater casts.

PW ULTRALIGHT KIT

Light and compact: QuikLitter Lite litter 340 g, Splint splints and 16 Poliwater casts.

CONFIGURATION ON REQUEST

Kit contents tailored for the task and the size of the team. Equipment tests available on request.

Medical devices for professional use. To be applied by healthcare professionals or by persons trained by them. Read the instructions for use before use.

The Poliwater cast in field conditions

Water is all you need for immobilisation.

The elastic polyester carrier is impregnated with a prepolymer. Contact with water starts a chemical reaction, and the material hardens directly on the casualty's limb. There is no plaster to mix and no treatment station to set up — water, gloves and scissors are enough.

Before activation the cast can be cut with ordinary scissors, and after dipping there is still time to shape it. The result is rigid and at the same time light and open-weave.

What this changes

- **Easy set up.** No plaster work, no separate station and no clean-up after application.
- **Weight and volume.** The packaged cast is flat and compact, and the finished immobilisation weighs a fraction of a classic plaster cast.
- **Open-weave structure.** The skin stays ventilated, also during long transport.
- **Hydrophobic.** It keeps its properties on contact with water; after wetting, the cast must be dried without delay to prevent skin maceration.
- **Radiolucency.** Bone structures can be assessed at the next level of evacuation without cutting the immobilisation open.
- **Removal.** Cast shears — no oscillating saw needed, causes no dust.

WATER	DIPPING	CURING	FULL RIGIDITY
20–30 °C	5–10 s	30 minutes	after 24 h



White is the standard colour. Military Green available to order.



The cast stays radiolucent — X-ray control is possible without removing the immobilisation.

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Easy application

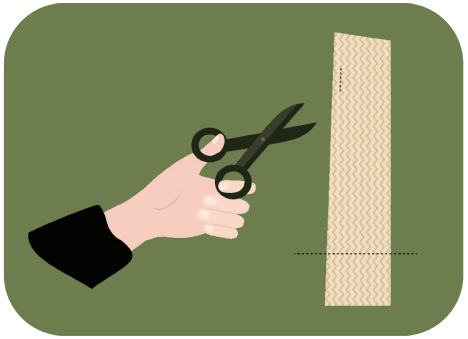
Four steps, one set in your hands. Application takes 2–3 minutes.



1

Size selection

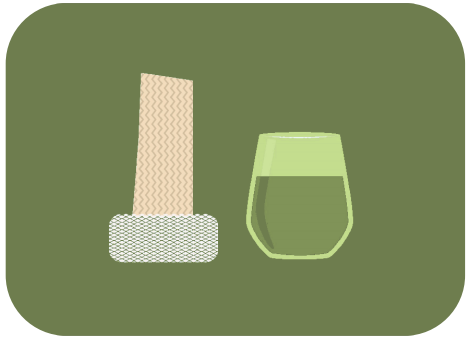
Size chosen for the injury site and the circumference of the limb. Before activation the cast is cut with ordinary scissors.



2

Preparing the cast

The cast padding from the set is applied before the cast — the product never touches the skin directly.



3

Activation with water

Dipping for 5–10 seconds in water at 20–30 °C. Half a litre of water is enough for more than a dozen casts.



4

Shaping

Unrolled on the limb and shaped before the material reaches full rigidity.

AFTER APPLICATION

The cast cures within 30 minutes and reaches full rigidity after 24 hours.

TRANSPORT

Flat and compact unit packaging. Non-sterile device, stored at room temperature, protected from moisture.

REMOVAL

Cutting is possible with cast shears. Disposal as ordinary waste.

To be applied by healthcare professionals or by persons trained by them. Complete conditions of use, contraindications and precautions are given in the instructions for use supplied with the package.

TACTICAL KIT

Poliwater PW Light

Full equipment for a medical team: evacuation, stabilisation of limbs, pelvis and cervical spine, and a supply of casts for a series of injuries.

- **Large medical backpack** — durable and ergonomic, designed for fast access to equipment and for transport in difficult conditions.
- **TALON STANAG-2040 litter** — aluminium, quad-fold, with retractable handles. Built to STANAG-2040 requirements and to the standards of NATO evacuation platforms. Weight 7.5 kg, load capacity 544.3 kg, rip-stop fabric.
- **2 × Kramer splints 120 × 12** in a cover that is impermeable to liquids, padded with foam, closed with hook-and-loop tape and easy to disinfect.
- **2 × Splint-type splint set** — foam-coated aluminium, shaped by hand, waterproof, radiolucent, latex-free.
- **2 × SAM PELVIC pelvic sling** — a circumferential sling with compression force control, for stabilising pelvic ring fractures.
- **2 × cervical collar** — light and adjustable, for stabilising the cervical spine.
- **Elastic bandage** 4 m × 12 cm.



Modular layout inside the backpack



TALON STANAG-2040 litter



Kramer splints in a cover



Splint-type splints



SAM PELVIC sling



Cervical collar

Poliwater casts in the kit

Forearm × 10 · arm × 10 · leg / shin × 5

25 pcs

The product line and the cast sizes are selected at the time of order. The contents of the kit can be adapted to the task and to the size of the team.

TACTICAL KIT

Poliwater PW Ultralight

Minimum weight and volume. The litter weighs 340 g and fits in a cargo pocket.

- **Medical backpack** — light, durable and ergonomic, with fast access to equipment.
- **QuikLitter Lite litter** — a soft evacuation litter for rapid deployment at mass casualty incidents and disasters. Light nylon with heavy-duty webbing, ten handles. Weight 340 g, load capacity 340 kg, latex-free, vacuum-packed.
- **2 × Splint 91 × 11** — foam-coated aluminium, shaped by hand, fitted to the limb.
- **8 × non-elastic bandage** for securing the splints.
- **2 × cervical collar** — light and adjustable, for stabilising the cervical spine.



Medical backpack


QuikLitter Lite litter


Vacuum-packed



Splint 91 × 11


Cervical collar


MOLLE attachment

Poliwater casts in the kit

Forearm × 8 · arm × 4 · leg / shin × 4

16 pcs

The product line and the cast sizes are selected at the time of order. The contents of the kit can be adapted to the task and to the size of the team.

Which kit to choose

Parameter	PW Light	PW Ultralight
Litter	TALON STANAG-2040 · 7.5 kg · aluminium, quad-fold	QuikLitter Lite · 340 g · soft, nylon
Litter load capacity	544.3 kg	340 kg
Poliwater casts	25 pcs	16 pcs
Stabilisation	Kramer splints, Splint splints, SAM PELVIC sling, collar	Splint splints, non-elastic bandages, collar
Suggested use	aid post, vehicle, base	team on the move, personal equipment

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Evacuation litters and stabilisation equipment

TALON STANAG-2040 litter



Weight	7.5 kg
Load capacity	544.3 kg
Folded	51 × 22 × 22 cm
Open	198 × 58 cm (handles retracted) 229 × 58 cm (handles extended)
Construction	quad-fold, retractable handles, hinges with automatic lock
Equipment	6 IV attachment points, 2 patient securing straps
Material	rip-stop, slip-resistant and chemical-resistant

QuikLitter Lite litter



Weight	340 g
Load capacity	340 kg
Litter bed	188 × 69 cm
Packaging	18 × 15 × 4.5 cm, vacuum-packed
Handles	10 — four on each side and one at each end
Material	nylon with heavy-duty webbing, resistant to wetting
Other	latex-free

Limb and spine stabilisation



Splint 91 × 11 cm · 155 g



Splint 50 × 11 cm · 75 g



Kramer splint 120 × 12



SAM PELVIC sling



Cervical collar



Litter carry bag



QuikLitter Lite — vacuum packaging



TALON litter in its bag, MOLLE attachment

Splint-type splints are made of foam-coated aluminium strip: they are shaped by hand, waterproof, radiolucent, reusable and latex-free. Kramer splints are supplied in a cover that is impermeable to liquids, secretions and excretions, closed with hook-and-loop tape.

Why the Poliwater kit

A kit assembled for one task: to secure the casualty even in the most difficult conditions.

- **Mobility and speed**
  A compact backpack holds everything a medic needs to immobilise a limb, the pelvis and the cervical spine, and to transport the casualty. The ultralight litter weighs 340 g and fits in a cargo pocket.

- **Water-activated casts**
  The Poliwater cast hardens on the limb after contact with water, with no plaster and no treatment station. It is light, open-weave and radiolucent, which matters at the next levels of medical evacuation.

- **Complete stabilisation**
  Kramer and Splint splints, pelvic slings and cervical collars cover the most common musculoskeletal injuries — from a finger to the pelvic ring.

- **Readiness**
  Non-sterile devices, stored at room temperature, with no requirements for power or technical facilities.



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Manufacturer details

LIGATIO P.S.A. is based in Warsaw, Poland.

We create solutions that support medical work and deliver them as products.

We work across healthcare sectors, starting with the challenge, then choosing the technology that solves it.

Currently on the market:

Poliwater — polymer-based materials for limb stabilization.

UV Polimer — laboratory grade resins for dental 3D printing.

> Poliwater casts are medical devices bearing the CE mark in accordance with Regulation (EU) 2017/745 (MDR) and registered in the European EUDAMED database.

Manufacturer

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Medical devices for professional use. To be applied by healthcare professionals or by persons trained by them. Read the instructions for use before use.

Complete conditions of use, contraindications and precautions are given in the instructions for use supplied with the packages. The other products included in the kits come from their own manufacturers and are subject to their own instructions for use; names and trademarks belong to their owners.

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