


FISH FARMING · INJECTION BRACKET

THOR-315 (3×) Injection Bracket.

HDPE injection-moulded fish cage bracket for three parallel Ø315 mm flotation pipes. The neck is single-shot injection moulded — no welding to the upright pipe; the body joins the neck by sleeve-and-pin, not fusion. The only weldless bracket geometry in offshore aquaculture.



VIEW IN 3D
Scan to launch
AR · 3D model
ASAKUA.COM/3D/THOR-315-3X

Ø315 mm

FLOTATION PIPE
COMPATIBILITY

0 welds

INJECTION NECK
WRAP-AND-PIN JOINT

29.6 kg

BRACKET SET
TOTAL WEIGHT

3×

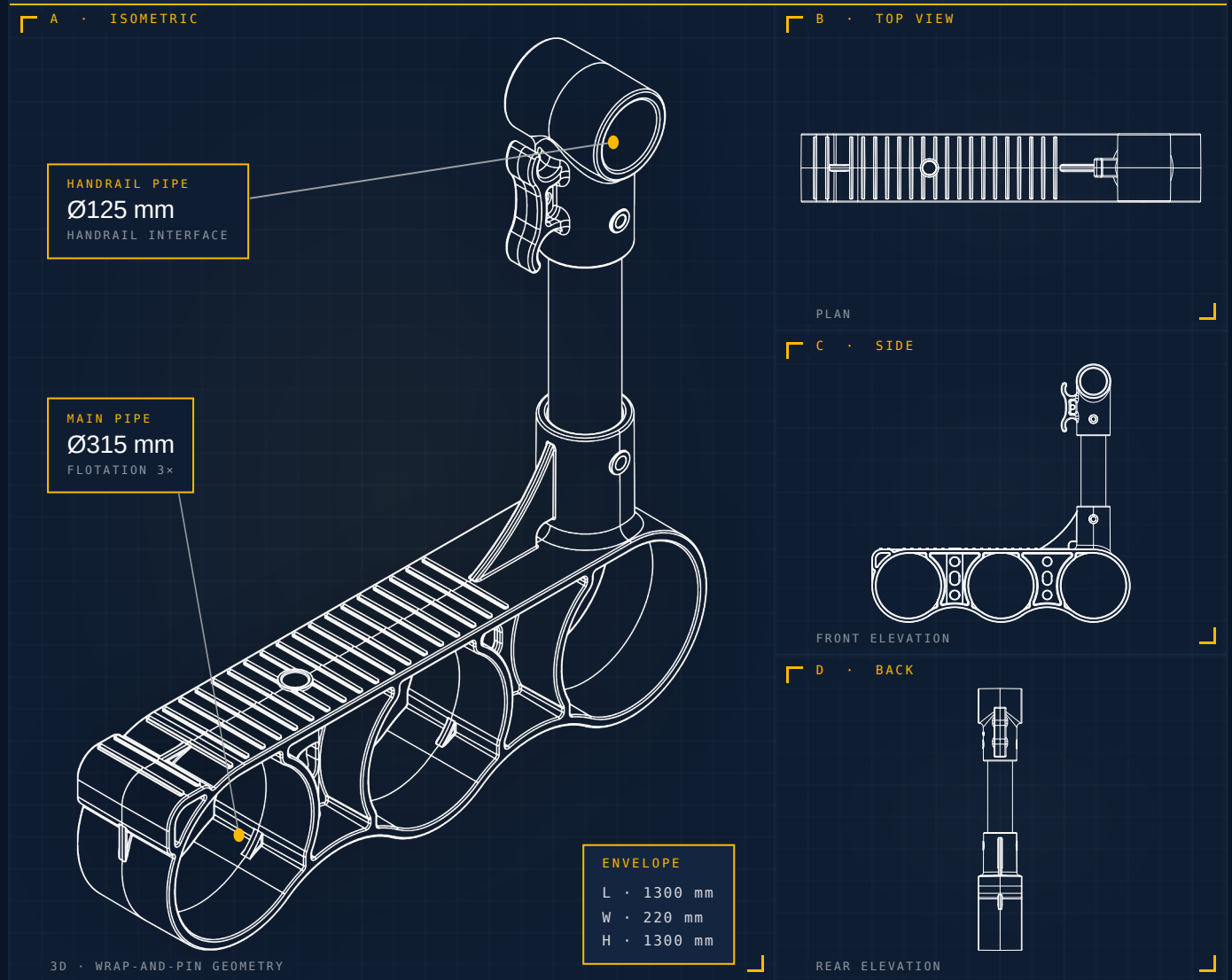
FLOTATION PIPES
PER BRACKET

NS9415

COMPLIANT
OFFSHORE STANDARD

FIG. 01 · THOR-315 (3×) — ORTHOGRAPHIC + ISOMETRIC PROJECTION

SCALE: NTS · UNITS: MM · DWG-THOR-315-3X-MV



TECHNICAL SPECIFICATION

Pin-locked. **Weldless.**

01 NECK — PRODUCTION

| | |
|-------------------|-----------------------------|
| Industry standard | PE100 pipe + welded fitting |
| ASAKUA | Single-shot HDPE injection |
| Fusion welding | None |
| Material | HDPE PE100 |
| Standard | EN 12201 certified |

03 BODY

| | |
|---------------------|--------------------------------|
| Material | HDPE PE100 |
| Method | Single-shot injection moulding |
| Min. wall thickness | 20 mm |
| Pipe interface | 3× Ø315 mm flotation pipes |
| Welding | None |

05 COMPATIBILITY

| | |
|--------------------|-------------------------------------|
| Flotation pipe | Ø315 mm HDPE only |
| Handrail interface | Ø125 mm pipe receptacle |
| Cage geometry | Triple-ring (3×) |
| Variants | 250 / 315 (2×) / 400 / 450 / 500 mm |

07 PRODUCTION

| | |
|----------|-------------------------------------|
| Facility | 5,000 m ² Menemen, İzmir |
| Method | Pressure injection moulded |
| Capacity | 90 kg max single shot |
| Heritage | Since 2009 · 100,000+ deployed |

02 NECK — BODY JOINT

| | |
|-------------------|------------------------------|
| Industry standard | Butt-fusion or extruder weld |
| ASAKUA | Wrap-and-pin sleeve |
| Fasteners | Ø25 mm HDPE pins |
| Pin points | 2 (upper + lower) |
| Special tooling | None required |

04 COMPLIANCE

| | |
|-------------------|-----------------------|
| Cage standard | NS 9415 compliant |
| Material standard | EN 12201 certified |
| Quality system | ISO 9001 certified |
| Design reference | DNV-OS-E403 compliant |

06 GEOMETRY

| | |
|---------------------|---------------------------|
| Neck rotation | 360° rotatable |
| Net hook | Integrated, moulded |
| Rope mounting holes | Hook + body inner / outer |
| Walkway surface | Integrated body top |

08 SERVICE LIFE

| | |
|---------------|-------------------------|
| UV protection | Carbon-black stabilised |
| Corrosion | None – full HDPE |
| Design life | 20+ years |
| Replacement | Pin-out, no cutting |

INSTALLATION

Wrap, pin, **deploy.**

STEP 01

≈10 min

BODY FIT ON PIPES

STEP 02

4 pin

LOCK — NO WELDING

SERVICE

20+ yr

DESIGN LIFE

Weldless installation.

The body slides over the three flotation pipes; the upright pipe joins to the body with two pins (lower point), and the neck wraps over the upright pipe with two more pins (upper point). Total four pins, two pairs. No butt-fusion, no extruder weld, no special tooling — deployable by trained farm crew on-site.

SHIPPING & LOGISTICS

Container-optimised set packing.

Brackets ship as flat-pack 5-component sets (1 body, 1 upright pipe, 1 upright T, 2 stoppers, 4 pins). Bodies nest; uprights, stoppers and pins palletise compactly.

| | |
|--------------------------|-----------|
| Per-set weight | ≈ 29.6 kg |
| 20 ft container capacity | 150 sets |
| 40 ft container capacity | 330 sets |
| Welding consumables | None |

USER NOTES

- **Compatibility:** Ø315 mm HDPE flotation pipe only. For other pipe diameters see THOR-250 / 315 (2×) / 400 / 450 / 500 mm variants.
- **Weldless geometry:** the neck is single-shot injection moulded (not welded onto a pipe), and joins the body by sleeve-and-pin (not by fusion). The only bracket design in the world using this approach — ASAKUA proprietary.
- **Cage architecture:** designed for NS 9415 compliant cage systems. Bracket spacing depends on cage diameter; consult the engineering team for project-specific layouts.
- **Set composition:** 1 body · 1 upright pipe · 1 upright T · 2 stoppers · 4 pins (5 distinct components, 9 pieces total).
- **Manufacturing:** single-shot injection moulded in 5,000 m² Menemen, İzmir facility. EN 12201 certified raw material, ISO 9001 quality system.