



Klepo® Air-Operated Thread Protectors

Weatherford's *Klepo* air-operated thread protectors offer safe, reliable casing and tubing pin-end protection. The working principle of the *Klepo* protectors is based on pressurization by rig air (72 to 130 psi, or 496 to 896 kPa), ensuring easy installation and reliable protection for all API standard and premium threads.

Applications

Three types of *Klepo* protectors are available:

- The **HD protector** is designed for mild and cold climates.
- The **HDH protector** is designed for use in tropical areas like the Middle and Far East, Africa, South America, and parts of Australia.
- The **HD-T/HDH-T protector** is designed for tender-assisted rigs and pick-up/lay-down machines. The T-type protector features an aluminum reinforcement embedded in the buffer.



Features, Advantages and Benefits

- These durable protectors provide a 360° grip with greater, evenly divided holding power. Durability is enhanced because the outside of the protectors does not change in any way; only the inside inflates to provide a better grip on the pin.
- The absence of moving parts, metal clamping bars, or other mechanisms provides a long and virtually maintenance-free life cycle, reducing downtime.
- The bottom of each protector contains a rugged buffer, and only the inside of the protector inflates. These features afford excellent protection of pin seal surface.
- *Klepo* protectors provide firm attachment to all thread types for greater operational flexibility.
- Rugged construction makes *Klepo* protectors resistant to high temperatures and rough handling for a longer life cycle.
- Pressurization by air facilitates installation and release for operational efficiency.



Klepo[®] Air-Operated Thread Protectors

Specifications

Model			
	HD Protector Yellow top, black bottom	HDH Protector Orange top, black bottom	HD-T/HDH-T Protector Orange top, green bottom
Applications	Mild and cold climates	Tropical climates	Tender-assisted rigs and pick-up/lay-down machines
Hardness body/buffer	78/95 Shore A	88/95 Shore A	
Tensile strength	33/26 N/mm ²	33/26 N/mm ²	
Abrasion	40/100 mm ³	40/100 mm ³	
Temperature range	-31° to +100°F -35° to +38°C	+55° to +149°F +13° to +65°C	

Standard Sizes (in.)

2-3/8	7	14
2-7/8	7-5/8	16
3-1/2	8-5/8	17
4	9-5/8	18-5/8
4-1/2	9-7/8 to 10	20
5	10-3/4	24
5-1/2	11-3/4	24-1/2
6	11-7/8 to 12-7/8	26
6-5/8	13-3/8	30

Options

- Special *Klepo* protectors, with deeper cavities, are available for premium long-tapered threads, such as Hydril[®] SLX, VAM[®] SLIJ, etc.

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