

UNIKA

HDRM Preload Device



Get faster in the new space race.

The UNIKA tensioning device is designed for applications up to 50 kN. Typical use is for preload of **Hold Down and Release Mechanisms** on spacecraft. Preload is achieved electronically by controlled heating of the Shape Memory Alloy.

The device is corrosion resistive, clean, without use of any fluid or grease. It can be safely operated in **clean room environment**. The device is light and transportable and designed to be operated in **small and difficult to access locations**. Final tightening of the nut is achieved through the device itself – **no side access to nut is required**.

Except cleanrooms, UNIKA can be operated hand held out-door in severe environmental conditions of other industries.



UNIKA features

Mechanical interface	User customized mating head (minimal outer D = 32mm)
Release bolt thread	User customized up to M12
Maximal generated preload	50 kN
Mass	< 1500 g (without harness and connector)
Preload control	PC or handheld controlled through build-in load cell
Reset	Mechanical reset of SMA element after 20 TBC preloads
Life of the SMA element	> 100 guaranteed preloads TBC
Life of the device	> 1000 preloads TBC
Preload time	TBC minutes (initial temperature dependent)
Power at max. preload	250 W TBC
Power supply	Socket / external battery
Temperature range	-50°C to 75°C
Expected qualification	Q1 2025

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