

Tensioning Systems



Industrial hydraulic tightening: the solution for all your needs

Pilgrim HYDROCAM® specific hydraulic bolt tensioners

Access or size constraints, a specific application?

To meet your needs, Pilgrim can adapt a hydraulic bolt tensioner from its standard range, or design and manufacture a tailor-made design tensioner. This tensioner's operating principle stays the same, but new components and functionalities can be integrated.

Adapted from a standard bolt tensioner

The standard range of bolt tensioners can be adjusted by adapting the brace, skirt, turndown socket or reaction nut to your application's specific characteristics.

Tightening control-command with a bolt tensioner

The association of motorization and automation techniques with the Pilgrim HYDROCAM® hydraulic bolt tensioners meets the high tightening accuracy, uniformity and safety requirements.

Indeed, thanks to the command, regulation and control systems it is possible to adjust, to within one bar, the pressure in the tensioners, to automate nut turn down on each bolt and ensure simultaneous or remote tightening.

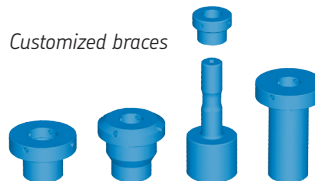
The handling phases can also be automated and included in the machine's operational process.

Types of automated functions

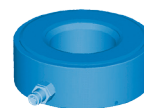
- Controlled pressure increase
- Turn down/up of the nuts to be tightened
- Automatic piston return
- Control of piston travel
- Measurement of stud elongations
- Continuous measurement of the tightening force
- Stud screwing and unscrewing

Customized standard tensioners

Customized braces



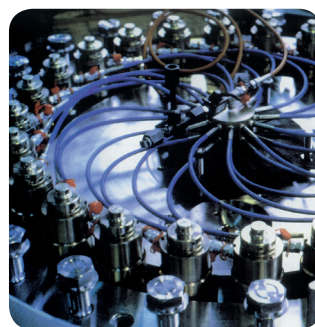
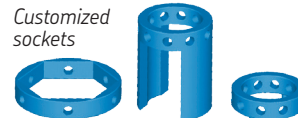
Standard hydraulic bodies



Customized skirts



Customized sockets



Simultaneous tightening with centralized power supply



Simultaneous tightening of wind turbine blade slewing bearings

Special applications

Special bolt tensioners Pilgrim HYDROCAM®

Made-to-measure hydraulic tensioner

Some applications require a special study before a tailor-made design tightening solution can be proposed. To meet these requirements, Pilgrim designs, optimizes and manufactures all the customized components needed for a hydraulic bolt tensioner in line with each application's specific characteristics. Materials such as titanium, the choice of power supply fluid – oil, polyglycol or water – or the integration of dedicated functionalities: a broad range of solutions that can all contribute to meeting your dimension, accessibility, uniformity and accuracy requirements.

Examples of specific tensioners

Stainless steel tensioner

- Water powered
- Small size
- Preserved assembly integrity

Monobloc ring

- Simultaneous and uniform tightening
- Speed of intervention
- High tightening quality of bolted assembly

Titanium tensioner

- Ultra lightweight
- Very easy to use
- Suitable for aquatic environment

Compact tensioner

- Dedicated to small spaces
- Controlled nut turndown

Micro-tensioner

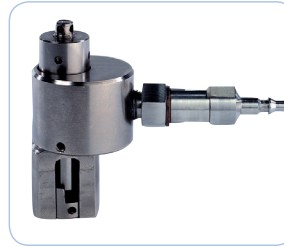
- Small size
- Very accurate
- Tightening for M5 type

Tensioner for large diameters

- Large-dimension tightening
- Reaction nut or clamping jaws
- Automatic piston return

"Quick Connect" HTQ R tensioner

- Easy to use
- Dedicated to fast, repetitive operations



Stainless steel tensioner



Monobloc 8-tensioner ring



Titanium tensioner



Compact tensioner



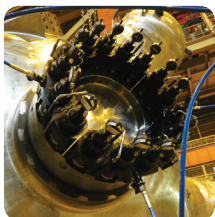
Micro-tensioner



Specific tensioner for MSTM*

"Quick Connect" HTQ R

Jaw clamping system for grasping the end of the stud. Fitted with an automatic piston return system.



Application areas

- Aerospace
- Energy
- Electrical equipments
- Hydroelectric industry
- Diesel engines
- Construction
- Wind energy
- Civil engineering
- Heavy industries
- Oil & Gas

And all other applications involving bolted assemblies.

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