



## Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

<b>Manufacturer</b>	<b>Hilti Aktiengesellschaft</b>
<b>Address</b>	Feldkircherstrasse 100, Schaan, 9494, Liechtenstein
<b>Type</b>	Building Construction Elements
<b>Description</b>	Hilti DX Direct Mechanical Fastening System, comprising Hilti X-E fastenings produced using the Hilti DX process.
<b>Trade Name</b>	General Purpose nails: X-U, EDS, and DS. Nails for fastening thin sheeting: X-ENP-19 and X-ENP2K. Threaded stud connections: X-EM, X-EW, and X-EF. Composite fasteners: X-HS, X-CC, X-FCM and X-FCPn.
<b>Application</b>	For use in fastening carbon steel components to carbon steel base components in marine, offshore and industrial environments in accordance with Hilti Product Information.
<b>Specified Standard</b>	Hilti Direct Fastening Technology Manual, Product Information.
<b>Other Conditions</b>	<p>This Type Approval certificate should be read in conjunction with LR Technical Report no. 2003/CSG/TI/6331</p> <p>Unless otherwise stated in the Hilti Direct Fastening Technology Manual, the fastened and base materials are to be carbon steel with a tensile strength greater than 360 N/mm<sup>2</sup>.</p> <p>The end user must ensure that the base and fastened materials posses</p>

**Fran Arguello Casteleiro**

Engineering - Machinery - Specialist to Lloyd's Register EMEA  
A member of the Lloyd's Register group

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## Type Approval Certificate

adequate corrosion resistance for the environments in which they are to be used.

For use on LR Classed ships, the locations and systems for which they are to be used are to be subject to a ship specific agreement.

This certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid Certificate.

The Design Appraisal Document and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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## Type Approval Certificate Extension

This is to certify that Certificate No. 97/ 00077(E3) for the undernoted products is extended and renumbered as shown.

This certificate is issued to:

<b>PRODUCER</b>	Hilti Corporation								
<b>PLACE OF PRODUCTION</b>	Feldkircherstrasse 100 9494 Schaan Liechtenstein								
<b>DESCRIPTION</b>	Hilti DX Direct Mechanical Fastening System, comprising Hilti X-E fastenings produced using the Hilti DX process								
<b>TYPE</b>	X-E Zinc coated threaded studs and nails identified with an 'H' marking (standard fastening element).  <table border="0" style="width: 100%;"> <tr> <td style="padding-left: 20px;">General Purpose nails:</td> <td>X-U, EDS, and DS</td> </tr> <tr> <td style="padding-left: 20px;">Nails for fastening thin sheeting:</td> <td>X-ENP-19 and X-ENP2K</td> </tr> <tr> <td style="padding-left: 20px;">Threaded stud connections:</td> <td>X-EM, X-EW, and X-EF</td> </tr> <tr> <td style="padding-left: 20px;">Composite fasteners:</td> <td>X-HS, X-CC, X-FCM and X-FCP</td> </tr> </table>	General Purpose nails:	X-U, EDS, and DS	Nails for fastening thin sheeting:	X-ENP-19 and X-ENP2K	Threaded stud connections:	X-EM, X-EW, and X-EF	Composite fasteners:	X-HS, X-CC, X-FCM and X-FCP
General Purpose nails:	X-U, EDS, and DS								
Nails for fastening thin sheeting:	X-ENP-19 and X-ENP2K								
Threaded stud connections:	X-EM, X-EW, and X-EF								
Composite fasteners:	X-HS, X-CC, X-FCM and X-FCP								
<b>APPLICATION</b>	For use in fastening carbon steel components to carbon steel base components in marine, offshore and industrial environments in accordance with Hilti Product Information.								
<b>Certificate No.</b>	97/ 00077(E4)								
<b>Issue Date</b>	25 January 2019								
<b>Expiry Date</b>	24 January 2024								
<b>Sheet</b>	1 of 2								

Maria del Agua Sires

UK&I Technical Support Office

**Lloyd's Register EMEA**

LR427.1.2016.09

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**DESIGN CODE**

Hilti Direct Fastening Technology Manual, Product Information.

**CONDITIONS OF  
APPROVAL**

This Type Approval certificate should be read in conjunction with  
LR Technical Report no. 2003/ CSG/ TI/ 6331

Unless otherwise stated in the Hilti Direct Fastening Technology  
Manual, the fastened and base materials are to be carbon steel with a  
tensile strength greater than 360 N/ mm<sup>2</sup>

The end user must ensure that the base and fastened materials posses  
adequate corrosion resistance for the environments in which they are  
to be used.

For use on LR Classed ships, the locations and systems for which  
they are to be used are to be subject to a ship specific agreement.

*"This Certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied  
from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes  
to the equipment in order to obtain a valid certificate."*

*The attached Design Appraisal Document No. 97/00077(E4) and its supplementary Type Approval Terms and  
Conditions form part of this Certificate*

All other details remain as the previous Certificate No. 97/ 00077(E3) to which this extension should be  
attached.

**Certificate No.** 97/ 00077(E4)  
**Issue Date** 25 January 2019  
**Expiry Date** 24 January 2024  
**Sheet** 2 of 2



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