

# TYPE APPROVAL CERTIFICATE

## This is to certify:

### That the Structural Connecting Elements

with type designation(s)

**Channel Systems incl. channels, brackets, connectors and accessories: MT, MQ-21, MQ-21D, MQ 21.5, MQ-41, MQ-41-L, Pipe Clamps: MP-MI, MP-MIS, MP-MI-F, MP-MRI, MP-MRXI, MP-MXI, MP-MXI-F, MP-U, MP-U-I**

Issued to

**Hilti AG**  
**Schaan, Liechtenstein**

is found to comply with

**EN 1990:2002 Eurocode: Basis of structural design**

**EN 1991-1-1:2002 Eurocode 1: Actions on structures – Part 1-1: General actions – Densities, self-weight, imposed loads for buildings**

**EN 1993-1-1:2005 Eurocode 3: Design of steel structures – Part 1-1: General rules and rules for buildings**

**EN 1993-1-3:2006 Eurocode 3: Design of steel structures – Part 1-3: General rules – Supplementary rules for cold-formed members and sheeting**

**EN 1993-1-5:2006 Eurocode 3: Design of steel structures – Part 1-5: Plated structural elements**

**EN 1993-1-8:2005 Eurocode 3: Design of steel structures – Part 1-8: Design of joints**

**VdS 2344:2014 Procedure for the testing, approval, certification and conformity assessment of products and systems for fire protection and security technologies**

**VdS 2100-10:2018-02 VdS Guidelines for water extinguishing systems – Pipe fasteners – Requirements and test methods**

**VDE 0100-540:2012-06 Low-voltage electrical installations – Part 5-54: Selection and erection of electrical equipment – Earthing arrangements and protective conductors (IEC 60364-5-54:2011)**

**VDE 0660-600-1:2012-06 Low-voltage switchgear and controlgear assemblies – Part 1: General rules (IEC 61439-1:2011)**

**EAD 280016-00-0602:2018 Products for installation systems for supporting technical building equipment**

**VDMA 24364:2018-05 Testing for paint wetting impairment substances (LABS-conformity)**

**DIN EN ISO 9227:2017 Corrosion tests in artificial atmospheres – Salt spray tests**

**DIN 55635:2019-05 Paints and varnishes – Cyclic corrosion testing of coating systems on materials and components in automotive construction**

**ASTM D4169:16 Standard Practice for Performance Testing of Shipping Containers and Systems**

**EN 12825:2001 Raised access floors**

**CISCA Recommended Test Procedures for Access Panels (2007)**

**IEC 61914:2015-11 Cable cleats for electrical installations**

**2018, 2015, 2012, and 2009 International Building Code (IBC)**

## Application :

**The HILTI-Channel-System and the HILTI-Pipe-Clamps are type approval for installation on board ships and other structures classed by DNV GL.**



Job Id: **262.1-027595-2**  
Certificate No: **TAS00002XE**  
Revision No: **1**

Issued at **Hamburg** on **2021-03-03**

for **DNV GL**

This Certificate is valid until **2023-07-07** .

DNV GL local unit: **Essen**

Approval Engineer: **Ana Cristina Do Carmo Insfran**

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**Olaf Drews**  
**Head of Section**

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This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.

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## Product description

### HILTI - Channel System

Type designation: MT, MQ-21, MQ-21D, MQ 21.5, MQ-41, MQ-41-L are made of either galvanized steel or stainless steel. The channel system contains the installation channels, brackets, connectors, and accessories.

#### Materials:

	Material	Standard
<b>Galvanized Steel</b>	S 250 GD	DIN EN 10346
	GTW45	DIN 1692
	DD11 MOD	HN 547
	S 355 J2	DIN EN 10025-2
	S 355 MC	DIN EN 10149-2
	S 280 GD	DIN EN 10346
	S350 GD+ZM310 A-C	EN10346
	Q235B	GB/T 700 2007.2
	Q355B	GB/T 1591
	S280GD+Z275-M-A-C	DIN EN 10346 2009.7
	S280GD+ZM310 A-C	EN 10346
	S460MC	DIN EN 10149-2 1995.11
	Prop. class 8.8	ISO 898-1
	C10B21	SAE J403 2001.11
	SWRCH35 K	JIS G 3507-1

	Material	Standard
<b>Hot- dip galvanized (HDG / HDG plus)</b>	S 235 JR	DIN EN 10025
	S 235 JRG2	DIN EN 10025
	EN-GJMW-450-7	DIN EN 1562
	C4C	DIN EN 10263
	DD11	DIN EN 10111

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	<b>Material</b>	<b>Standard</b>
<b>Stainless Steel (A2 / A4)</b>	1.4571/1.4404	EN 10088, AISI 316Ti, AISI 316L
	1.4301	EN 10088
	1.4581	DIN EN 10283
	1.4401	DIN 17440

### **HILTI - Pipe Clamps**

Type designation: MP-MI, MP-MIS, MP-MI-F, MP-MRI, MP-MRXI, MP-MXI, MP-MXI-F, MP-U, MP-U-I are made of either galvanized steel or stainless steel with rubber EPDM or TPE inlay material. The pipe clamp system contains the pipe clamps and accessories.


#### Materials:

	<b>Material</b>	<b>Standard</b>
<b>Steel</b>	S235JR	DIN EN 10025
	S235JR + C	DIN EN 10025-2
	1.4571/1.4404 (A4)	EN 10088, AISI 316Ti, AISI 316L
	DD11	DIN EN 10111
	DC01 MOD	HN 703
	DD11 MOD	HN 555-5

### **Application/Limitation**

**Channel System** intended to be fastened on ceilings, walls, structures.

**Pipe Clamps** intended to fasten pipes with diameters <= DN250.



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## Tests carried out

Scope of type tests according standards specified in page 1.

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## Marking of product

For traceability to this type approval certificate the products are to be marked with:

- Manufacturers name or trademark
- Type designation

## Periodical assessment

For retention of the Type Approval, a DNV GL Surveyor shall perform periodical assessment after two years (+/- 90 days) and after 3.5 years (+/- 90 days) to verify that the conditions for the Type Approval are complied with. Refer to DNVGL-CP-0338, Sec.4.

- The certificate is only valid if required periodical assessments are carried out with satisfactory results. To check the validity of this certificate, please look it up in <https://approvalfinder.dnvgl.com>

**END OF CERTIFICATE**