

TYPE APPROVAL CERTIFICATE

This is to certify:

That the **Modular substructure system with accessories**

with type designation(s)
Würth VARIFIX® SCHIFFBAU KATALOG - DNV

Issued to

Adolf Würth GmbH & Co. KG
Künzelsau, Baden-Württemberg, Germany

is found to comply with

DNV class guideline DNV-CG-0339 – Environmental test specification for electrical, electronic and programmable equipment and systems
EN 1993-1-1:2005+AC:2009 Eurocode 3: Design of steel structures – Part 1-1: General rules and rules for buildings
EN 1993-1-3:2006+AC:2009 Eurocode 3: Design of steel structures – Part 1-3: General rules – Supplementary rules for cold-formed members and sheeting
EN 1993-1-8:2005+AC:2009 Eurocode 3: Design of steel structures – Part 1-8: Design of joints
EN 1363-1:2012 Fire resistance tests – Part 1: General requirements
VdS 2344:2014-07 Procedure for the testing, approval and certification of products and systems for fire protection and security technologies
VdS 2100-10:2022-08 VdS Guidelines for water extinguishing systems – Pipe fasteners – Requirements and test methods

Application :

Assembly system for the modular construction of piping support systems and support of other components on board ships and other structures classed by DNV.

Issued at **Hamburg** on **2024-02-26**

This Certificate is valid until **2029-02-25** .

for **DNV**

DNV local unit: **Augsburg**

Approval Engineer: **Hagen Markus**

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Sven Klinger
Head of Section

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 AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") 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.



Product description

This type approval certificate includes products of the Würth modular substructure system with accessories as specified in the Würth VARIFIX® SCHIFFBAU KATALOG – DNV.

Corrosion protection

Hot dip and Electro galvanised (Sendzimir galvanised) according to standard DIN EN ISO 10244-2, DIN EN ISO 1461. High Corrosion Protection System (HCP6000+) acc. to category C5 (extremely high) according to the DIN EN ISO 12944.

Applied corrosion protective surface coating depending on application and geometry.
The protection level is always equal or exceeds conventional hot dip galvanised surface coating.

Overview main components

Component	Material designation
VARIFIX® Profiles 41	Steel 1.0244 ¹
VARIFIX® Profiles 41	Stainless steel 1.4401/1.4571
Consols 41	Steel 1.0038 ¹
BEAM CLAMPS	Malleable cast iron ²
Mounting components	Steel 1.0038 ¹
VARIFIX® Quick fastener Powerknopf 41	
VARIFIX® Quick fastener Systemfix 41	
VARIFIX® Quick fastener Wing nuts 41	

Pipe clamps

Component	Material designation	Liner Rubber
Pipe clamp TIPP®-Smartlock GS	Steel 1.0332 ¹	SBR/EPDM, NBR
Pipe clamp TIPP®-EXPRESS		SBR/EPDM, NBR
Pipe clamp TIPP® Smartlock 2 GS		SBR/EPDM, NBR
Pipe clamp TIPP®-Robust		SBR/EPDM, NBR
Pipe clamp TIPP®-Robust Silikon		Silicone
Pipe clamp TIPP®-Massiv		SBR/EPDM, NBR
SPRINKLER CLAMP TIPP® VDS/FM		Not applicable
Ducting clamp TIPP® Aero		SBR/EPDM, NBR
Pipe clamp TIPP® Projekt		SBR/EPDM, NBR

Notes

Corrosion protection

¹ electro galvanized DIN EN ISO 4042 or hot dipped galvanized according DIN EN ISO 1461

² Zinc plated

Application/Limitation

The Würth **Modular substructure system with accessories** is type approved according to the standards specified on page 1.

Range of application, support system for piping systems on board ships and other structures classed by DNV.

For each application, the Würth “Technical manual system substructure” need to be observed in view of the project specific static and dynamic load calculations in conjunction with the actual product data sheets.

This Type Approval certificate is issued on voluntary basis confirming the standards mentioned on page 1 and test reports specified in this certificate.

Type Approval documentation

Tests carried out

- Type test acc. to
 - EN standards specified on page 1.
 - EAD 280016-00-0602 (02-2018)
 - DNV class guidelines CG-0339:2021
 - Vibration test. Vibration strain class A (0.7g) and $a_{max}= 1.0\text{mm}$, sweep rate max. 1 octave/minute
 - Salt mist test acc. to EN 60068-2-52:2018, test method 1.

Marking of product

Scope of marking	Example
Manufacturers Mark	Würth, S
Code for production site (in case multiple production site or approved products)	BC
Type - Material/Corrosion protection	41/41/2,5 – VA/HCP
Production date (year/month)	2022/11

Periodical assessment

For retention of the Type Approval, a DNV Surveyor shall perform periodical assessment to verify that the conditions for the Type Approval are complied with. Refer to the Class Programme DNV-CP-0338, Sec.4.

To check the validity of this certificate, please look it up in <https://approvalfinder.dnv.com>

End of certificate