

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.

Manufacturer	FKB GmbH
Address	Wehrstraße 15/27, Oberndorf, 78727, Germany
Type	Support Clamps
Description	Tube clamps, Flat steel clamps, U-Bolts and Pipe saddles TYPES Tube clamps Series A (light series), Series B (twin tube clamp) and Series C (heavy series)
Trade Name	Tube clamps Series A (light series), Series B (twin tube clamp) and Series C (heavy series)
Application	General use in marine, offshore and industrial piping systems classed or intended for Classification with Lloyd's Register. For essential systems inside machinery spaces Category A and accommodation spaces only the tube clamp versions with two bolts in conjunction with a steel cover plate are to be used.
Specified Standard	DIN 3015, Part 1, 2 and 3; DIN 3567 Lloyd's Register Rules and Regulations for the Classification of Ships, 2020
Other Conditions	Selection and installation are to be in accordance with the manufacturer's instructions and recommendations.

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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.

Previous Version: 10/20029(E1)

The Design Appraisal Document ENS 25773-10, Issue No. 2 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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Appendix

RATINGS	Series	sizes	O.D. [mm]		
	A	Light series	0 - 8	6 – 101,8	For normal mechanical loads
	B	Twin tube clamp	1 – 5	6 – 42	
	C	Heavy series	1 - 10	6 – 406,4	For high mechanical loads

Clamp material	Design temperature range:
P = Polypropylene	-30 up to +90°C
N = Polyamide (Nylon)	-40 up to +120°C
V = Rubber ¹⁾	-50 up to +120°C
A = Aluminium ²⁾	Up to +300°C

Interior surface: standard grooved, G = smooth³⁾

- 1) Rubber only available for series A and B, inside smooth and series C grooved design (R)
- 2) Aluminium only available for series A size 1 to 6 and series C size 1 to 8
- 3) Smooth interior surface in series C only for size 4, Aluminium clamps in grooved design (R), Inside smooth series A size 1 to 6

Assembly is possible on to metal welding plates, support rails or construction assembly.
 Screw tightening torques and axial pipe shearing forces depending on bolt and clamp material are to be observed according the manufacturer's catalogue.
 All steel parts are also available in stainless steel.

RESTRICTIONS Series A, size 0 and Series B with only one central bolt for each clamp are not to be used for essential systems inside machinery spaces of Category A or accommodation spaces.