DNV·GL

Certificate No:
TAP0000214

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Pipe Support

with type designation(s)
Single Bossed Pipe Clamps with inlay DÄMMGULAST® (JUNIOR, yellow, blue, red) and without inlay

Issued to
MÜPRO GmbH
Hofheim-Wallau, Germany

is found to comply with
RAL-GZ 655 – Pipe Supports – Quality Assurance, Edition April 2008
DNV GL class guideline DNVGL-CG-0339 – Environmental test specification for electrical, electronic and programmable equipment and systems
EN 1363-1:2012 Fire resistance tests – Part 1: General requirements

Application :

Refer to section Application in the certificate.

Max. axial force:	**up to 6.666 N**
Max. working temp.:	**up to 225°C**
Sizes:	**3/8" up to 8" and 12mm up to 241mm**

Issued at **Hamburg** on **2020-09-29**
This Certificate is valid until **2025-09-28** .
DNV GL local unit: **Augsburg**

for **DNV GL**

Approval Engineer: **Thilo Pabst**

Olaf Drews
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.

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PRODUCT DESCRIPTION

The single Bossed Pipe Clamps are made from galvanized (electrolytic, hot dip) carbon steel DD11 or S 235 JR or from stainless steel V2A or V4A and in "heavy-duty" versions.
Design consists of 2-part pipe clamp (both parts/shells have an angle of deflection of 180°).
The subshell of the clamp is outfitted with two locking screws (equipped with a "non-lost-shim") for fixing this subshell to the upper shell.
On the upper shell an equal female tread for the locking screws is available and a connection sleeve with a metric two size combination tread is attached for fixing the clamp to the framework.
Pipe clamps are available with different acoustic insulation inlays:
DÄMMGULAST® JUNIOR (green), DÄMMGULAST® Yellow, DÄMMGULAST® Blue, DÄMMGULAST® Red and without inlay.
Products are tested according EN1363-1 – Fire resistance tests.

Reference for the type approval of pipe clamps specified in this certificate:
MÜPRO Catalogue Pipe Clamps issue date 03/2019.

Pipe Clamp Types

Pipe clamp "JUNIOR", with DÄMMGULAST® green

Clamp Sizes (diameter)	Connection sleeve (tread sizes)	max. stress load[1] [N]
12mm to 160mm	M8/M10	700 to 2.500
3/8" to 6"		

Pipe Clamp "Single bossed clamps" with inlay DÄMMGULAST® yellow, blue, red

Clamp Sizes (diameter)	Connection sleeve (tread sizes)	max. stress load[1] [N]
57mm to 170mm	M8/M10	yellow: 1.700 to 5.800 (4.166 to 6.666)
3/8" to 6"		
57mm to 225mm	M10/M12	blue: 1.500 to 5.800
3/8" to 8"		
144mm to 225mm	M12/M16/1/2"	red: 1.300 to 5.300 (5.000 to 6.666)
5" to 8"		

Pipe Clamp "Single bossed clamps" without inlay

Clamp Sizes (diameter)	Connection sleeve (tread sizes)	max. stress load[1] [N]
40mm to 174mm	M8/M10	1.900 to 5.000 (5.000 to 6.666)
3/8" to 6"		
40mm to 210mm	M10/M12	
3/4" to 6"		
147mm to 241mm	M12/M16/1/2"	
5" to 6"		

Note1: Values for max. stress load [N] at 20°C.
Values in brackets for "heavy duty" versions
Max. stress load is depending from pipe clamp type, diameter and environment/pipe clamp temperature.
Max. stress level specified by manufacturer are to be observed.

Materials

Item	Kind of material	short name	Material no. / description
Clamps	Carbon Steel	DD11 S 235 JR	1.0332 1.0038
Clamps	Stainless steel	V2A V4A	1.4301 1.4571
Inlays	Rubber	DÄMMGULAST®	based on rubber types: EPDM, NBR, CR, silicone

Temperature Range Inlays

The temperature range is valid for medium/pipe wall temperatures and depending of pipe clamp type and rubber material (DÄMMGULAST®) used:

Pipe Clamp Type	Basis Rubber Type	Temperature Range
blue	CR	-40°C up to 110°C
yellow / green	EPDM	-50°C up to 110°C
red	Silicone	-60°C up to 225°C
black[2]	NBR	-10°C up to 100°C

Note2: Inlay black is available as inlay only and not in combination with a clamp

APPLICATION/LIMITATION

The products approved by this certificate are accepted for installation on all vessels classed by DNV GL.

The permissible operating temperatures are to be in accordance with manufacturers instruction.

The selection of the pipe clamps for the corresponding application shall be in accordance with manufacturers instruction.

Limitation

The use of the pipe clamps outside the range of application is subject to special consideration by DNVGL in each individual case.

Assembling and Installation

For the assembling and installation, the instructions specified in the MÜPRO Catalogue Pipe Clamps issue date 03/2019 are to be observed.

RESPONSIBILITIES

The company MÜPRO GmbH, Hofheim-Wallau, Germany takes the responsibility that the design and the production of the products is in compliance with the Rules, Standards and/or Regulations listed on page 1 of this certificate.

TYPE APPROVAL DOCUMENTATION

TESTS CARRIED OUT

Stress Test (pull out test and load test)
Vibration test
Fire resistant test

MARKING OF PRODUCT

For traceability of products, marking shall be legible and indelible.
Products are to be marked at least as follows:

- Manufacturer's name or trademark - Type designation, inlay short sign (*e.g. Eg = **E**inlage **g**elb/Inlay Yellow) - Size / clamping range - connection thread - surface treatment (*e.g. vz = **v**er**z**inkt/galvanized)	Sample of marking: SRS Eg* 180/177-183 M8/M10 vz*

PERIODICAL ASSESSMENT

A condition for retention of the type approval certificate in its validity period is that periodical assessments are successfully carried out.

The objective of the periodical assessment is to verify that the conditions for the type approval have not been altered.
Regulations for the periodical assessment of the type approval certificate are to be find in the DNVGL Class Programme CP-0338.

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

It is further to be noted that the Society shall be informed of any:

- Modifications to the product which are liable to affect its characteristics and functions, as originally specified and tested;
- Shifting of the production site and additional production site.

If such notifications are not made, the validity of the type approval certificate terminates.

END OF CERTIFICATE