

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Pipe System with Couplings

with type designation(s)
XPress Press Fittings

Issued to

Pegler Yorkshire Group Limited
Doncaster South Yorkshire, United Kingdom

is found to comply with

DNV GL rules for classification – Ships Pt.4 Ch.6 Piping systems
DNV GL class programme DNVGL-CP-0185 – Type approval – Mechanical joints

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Temperature range: -20°C to 110°C
Max. pressure: 10 bar / 16 bar

This Certificate is valid until **2021-06-30**.

Issued at **Høvik** on **2017-11-21**

DNV GL local station: **Manchester**

for **DNV GL**

Approval Engineer: **Adel Samiei**

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Marianne Marveng
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.

Product description

Copper press-fittings with o-ring seal. Threaded connection in accordance with ISO 7-1.

Material:

Fittings : Copper 2.0090 (CW024A) according to DIN CEN/TS 13388
 Copper 2.1096.01 (G-CuSn 5ZnPb) according to EN1982
 Copper CC499K (CuSn5Zn5Pb2-C) according to EN1982
 O-ring : EPDM

Sizes	Maximum working pressure
DN10, 12, 15, 18, 22, 28, 35, 42	16 bar
DN54, 64, 76, 89, 108	10 bar

Manufactured at:

- 1) Pegler Yorkshire SDH – France
- 2) Yorkshire Fittings Gyarto Kft, Budapest Hungary
- 3) Pegler Yorkshire Group Distribution (Assemble & Pack)

Fitting types:

Product Description	Art. No
Female Elbow 90°	6090G
Male Elbow 90°	6092G
Bent female union connector	6096G
Female branch tee	6130G
Straight male connector	6243G
Female adaptor	6246G
Backplate elbow parallel female thread	6472G
Straight female connector	6270G
Male adaptor	6280G
Union coupling	S6330
Union connector	6330G
Female branch tee with multi ports	6331G
Union	6359

Product Description	Art. No
Obtuse Elbow 45° F/F	7041
Full crossover F/F	7085
Partial crossover M/F	7086
Street crossover M/M	7087
Equal & Reduced Tee	7130
Reducer	7240
Reducer	7243
Straight	7270
Straight, long	7270S
End cap (Stop end)	7301
Obtuse street elbow 45°	7040
Backplate elbow parallel female thread	6472L
Street Elbow 90°	7001A
Elbow 90°	7002A

Application/Limitation

Components covered by this certificate may be used in class III piping systems conveying fresh water (not inside machinery spaces of category A), potable water, Sanitary/drains/scuppers (Deck drain: Only above bulkhead deck of passenger ships and freeboard deck of cargo ships), Service air (non-essential).

The fittings are to be used with copper pipes according to EN1057 of the following dimensions:

Tube OD	Wall Thk.
10, 12, 15, 18 mm	1,2 / 1,5 mm
22, 28, 35, 42 mm	1,5 mm
54 mm	2,0 mm
64, 76, 89, 108 mm	2,5 mm

The piping system may not penetrate enclosed spaces below the freeboard deck (e.g. watertight- or fire bulkheads).

The components are to be mounted according to manufacturer's instructions.

Threaded joints are allowed for Class III piping systems when outside diameter is not more than 60.3 mm (reference is made to DNV GL Ship Rules pt.4 Ch.6 Sec.9 [5.2.6]).

Job Id: **262.1-012986-2**
Certificate No: **TAP00000T6**

Type Approval documentation

- Test reportno. 12 0354 8 98, 12 0354 8 98-11 dated 1998-06-26 from Materialprüfungsamt Nordrhein-Westfalen, Dortmund
- Testreport 398/2000 dated 2000-08-15 from Mannesmann Forschungsinstitut
- RYW Press Fittings, Technischer Katalog no. 364, March 2001
- RYW Press Fittings, Montageanleitung
- Drawingno TB-5000-001/-002/-003/-004 dated 2001-02-15
- DNV witnessed test report dated May 21, 2002
- DNV witnessed test surey/test report No. 261 7 0145
- Test report MPA NRW No.: 120001607-1 dated 2002-05-24, No.: 12000907 dated 2001-01-10
- Test report Danish Technological Institute No.: 192270 dated 2007-03-22
- Test report 8072387 dated 2015-12-10 by bis (leakage – pullout – dimensional check)
- Report number 120001607-16 dated 2016-07-13 (leakage test)
- Report number TR/12/185 dated 2012-10-05 (Impulse-vibration test – leakage test)
- Report numbers TR-018-17 and TR-019-17 dated 2017-04-12 & 2017-10-31

Tests carried out

Burst, vacuum, leakage, pull-out, impulse/vibration test

Marking of product

For traceability with this type approval, each fitting is at least to be marked with:

- Manufacturers name or trademark
- Size

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 approval are complied with. Reference is made to DNVGL-CP-0338.

Renewal assessment

For renewal of this certificate, during the renewal assessment (as described in DNVGL-CP-0338), burst pressure tests shall be witnessed on every 3rd sizes of each type in each manufacturing location.