DNV·GL

Certificate No:
TAP00000TH

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Pipe Couplings, Flared or Welded Nipple Type

with type designation(s)
Parker Triple-Lok, 37 degr. flare couplings

Issued to
Parker Hannifin Manufacturing Germany GmbH & Co KG
BIELEFELD, Germany

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 :

The pipe couplings are type approved for application in pipe class I, II and III-piping systems, under consideration of the DNV GL Ship Rules Pt. 4, Ch. 6, Sec. 1 and 9.
Products approved by this certificate are accepted for installation on all vessels classed by DNV GL.

Temperature range:	**-40°C up to +400°C**
Max. working press.:	**210 bar up to 420 bar (refer to certifcate)**
Sizes:	**1/8 up to 2 inches (refer to certifcate)**

Issued at **Hamburg** on **2017-01-27**
This Certificate is valid until **2017-09-30**.
DNV GL local station: **Approval Centre Germany**

Approval Engineer: **Martin Zeller**

for **DNV GL**

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.

© DNV GL 2014. DNV GL and the Horizon Graphic are trademarks of DNV GL AS.

Product description

Triple Lok, 37degr. flare coupling made of stainless steel, steel and brass according catalogue 4100 and 4300.

Type: ISO 8434-2, SAE J514 / J516

Fitting Material:

Steel: ASTM A108 / A576, DIN EN 10277 / 10083 / 10087 / 10263
C1008 / C1010 / C1137 / 1214 / 12L14 / 1215 / SAE 1020 / SAE1045 / equivalent or higher quality

Stainless steel: ASTM A182 / A276 / A479, DIN EN 10088/ 316 / 316L / equivalent or higher quality

Brass: ASTM B16 / B111 / B121 / B124 / B371 / B453, DIN 17660
CA335 / CA345 / CA360 / CA377 / CA443 / CA444 / CA694, CuZn35Ni2 / equivalent or higher quality

Tube Material:
Carbon Steel acc. SAE J524 / J525, DIN EN 10305-4 / equivalent or higher quality
Stainless Steel acc. ASTM A213 / A249 / A269, DIN EN 10216-5 / equivalent or higher quality
Copper acc. SAE J528 / equivalent or higher quality

Manufactured by

This certificate is also valid for products manufactured at:
Parker Hannifin Sp.z.o.o.
ul. Eugeniusza. Kwiatkowskiego 16
55011 Siechnice
Poland

Parker Hannifin de Mexico, S.A. de C.V.
Antiguo Camino a San Lorenzo #338
Toluca, Edo. Mex,
Mexico, C.P. 50010

Shanghai Parker Hannifin Fluid Connectors Co., Ltd.
223 Yuejin Road, Lane 655
Baoan Highroad
Shanghai 201906,
P.R. China

Parker Hannifin (Australia) Ltd
9 Chapple Street
Wodonga
Victoria 3690
Australia

Parker Hannifin Corporation – Tube Fittings Division
80 Park Avenue
Brookville, Ohio 45309
USA

Parker Hannifin Corporation – Tube Fittings Division
725 North Beech Street,
Eaton, OH 45320
USA
Parker Hannifin Fluid Connectors (Qingdao) Co. Ltd.

East of Huojo branch road,
South of Xinye road, Qingdao National high-tech.
Industrial development zone
Qingdao
China

Responsibility

Parker Hannifin Manufacturing Germany GmbH & Co., KG
Tube Fittings Division Europe
Bielefeld, GERMANY

Application/Limitation

T-lok tube connection

	Tube O.D.		
Dash size	(mm)	(in)	WP (bar)
4	6	¼	420*
5	8	5/16	
6	10	3/8	
8	12	½	
10	14, 15, 16	5/8	350*
12	18, 20	¾	
14	22	7/8	280*
16	25	1	
20	28, 30	1 ¼	
24	35, 38	1 ½	210*

Temperature range:
Stainless steel: -55°C to 400°C
Carbon steel: -40°C to 250°C
Brass: -60°C to 175°C

Where elastomers are used the temperature is not to exceed the following:
NBR: -35°C to 100°C
FKM: -20°C to 200°C
EPDM: -40°C to 150°C

*: Max working pressure depend on pipe material and thickness.
Pressure reductions depending on design temperature are to be observed according to performance data of catalogue 4100, 4300. Tube preparation and final installation must be conducted by personel which is trained and currently certified by Parker.
All assemblies must be made with machines that are approved by Parker

For the use in seawater systems it is recommended not to use couplings with a high zinc content (>30%) due to the possibility of dezincification.

The wall thickness and material of the tubes are to be in accordance with the current Rules of Det Norske Veritas.

The approval is only valid when the couplings are assembled with tubing of correct temper and tolerances as recommended by the manufacturer.

These couplings should not be used on tubes in cold fabricated (hard temper) conditions.

Internal reinforcement ring for the tube to be used according to manufacturers instructions.

These couplings should not be used in high pressure fuel injection systems.

Type Approval documentation

Tests carried out

The couplings are tested in accordance with Det Norske Veritas` Standards for Certification 2.9 Type Approval Program No.
5-792.20

Marking of product

For traceability to this type approval the products are to be marked with:
- Manufacturer's name or trade mark
- Type designation

Periodical assessment

For retention of the type approval certificate periodical assessments shall be carried out by a DNV GL surveyor at the production places.
The objective of the periodical assessment is to verify that the design and production conditions for the type approval have not been altered.

Main scope of the assessment:
- verification of the production and quality control system
- review of quality control documentation of recent deliveries
- review of drawings in production to verify any design changes which may have an impact on data specified in the type approval certificate, performance and range of application
- verification of the product marking

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate

END OF CERTIFICATE