DNV·GL

Certificate No:
TAP00000TJ

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Pipe Coupling With O-Ring Seal

with type designation(s)
O-LOK, O-ring face seal tube fittings acc. to SAE J1453

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 DNV GL Ship Rules Pt. 4, Ch. 6, Sec. 1 and 9.
Product approved by this certificate are accepted for installation on all vessels classed by DNV GL.

Temperature range:	**-40°C up to +400°C (refer to certificate)**
Max. working press.:	**up to 630bar (refer to certificate)**
Sizes:	**6mm up to 38mm**

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

Approval Engineer: **Hagen Markus**

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.

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Product description

The tube is 90° flared against a sleeve. The sleeve forms a support for a nut used to tighten the coupling. Sealing is provided by an elastomeric O-ring at the front of the flared tube acc. to catalogue no. 4100 and 4300.

Materials

Fitting materials
Steel: ASTM A108/A576
C1010/11L37/1214/1215/12L14
SAE 1020, SAE 1045, equivalent or higher material

Stainless steel: ASTM A182/A276/A479
316/316L
Equivalent or higher material grade

Tube material
Steel: Acc. to SAE J524/J525, DIN EN 10305-4, equivalent or higher material grade

Stainless steel: Acc. to ASTM A213/A249/A269, DIN EN 10216-5, equivalent or higher material grade

Elastomeric seal of NBR, FKM, Neporene and EPDM

Manufactured by

This certificate is also valid for products manufactured at:

Parker Hannifin Sp.z.o.o.
Ul. E. Kwiatkowskiego 16
PL- 55011 Siechnice
Poland

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

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

Parker Hannifin Corporation – Tube Fitting Division
725 North Beech Street,
Eaton, OH 45320
USA

Parker Hannifin Corp.
Tube Fittings Division
80 Parker Ave.
Brookville, Ohio 45309
USA

Responsibility

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

Application/Limitation

Max. working pressure (bar)

Dash Size	Tube O.D.		WP (bar)*
	(mm)	(in)	
4	6	¼	590
6	8	3/8	
6	10	3/8	630
8	12	½	
10	14, 15, 16	5/8	420
12	18, 20	¾	
14		7/8	
16	22, 25	1	
20	28, 30	1 ¼	320
24	35, 38	1 ½	350

*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

Temperature range

Stainless steel: -60ºC to +400ºC
Carbon steel: -40ºC to +120ºC

Where elastomers are being used, the following temperature range is applicable:

NBR: -35ºC to +100ºC
FKM: -20ºC to +200ºC
EPDM: -40ºC to +150ºC
Neoprene: -40ºC to +120ºC

Carbon steel couplings with a wall thickness of more than 6mm that are to be used at design temperature below -10ºC shall have acceptable impact properties. When the wall thickness is less than 6mm, the charpy testing can be waived provided that the material is normalized.

The wall thickness and material of the tubes to be in accordance with the current Rules of DNV GL.

Couplings with O-ring made of EPDM shall not be used for hydrocarbon service.

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 in high pressure fuel injection systems.

Type Approval documentation

Tests carried out

The couplings are tested in accordance with DNV GL CP-0185.

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 at production places by DNVGL surveyor.
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