



Lloyd's
Register

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.

This certificate supersedes certificate number 00/20017 (E3) issued on 24.08.2016 which is hereby cancelled.

This certificate is issued to:

PRODUCER	Parker Hannifin Manufacturing Germany GmbH & Co.KG Am Metallwerk 9 33659 Bielefeld Germany
DESCRIPTION	Steel and stainless steel weld nipples with either 24° cone with o-ring or EO-2 soft seal tube fitting or flange connectors according to Catalogue 4100-10/UK, Chapters M and N
TYPE	EO-Weld Fittings and Flanges
APPLICATION	General use in marine, offshore and industrial piping systems classed or intended for Classification with Lloyd's Register. <u>Restriction:</u> Separable joints of ND 25 mm or less are not to be used for applications with rotary flexure loads.
STANDARDS	Lloyd's Register Rules and Regulations for the Classification of Ships, 2016; ISO 8434-1; IACS P2.11

Certificate No.	00 / 20017 (E4)
Issue Date	29 June 2017
Expiry Date	28 June 2022
Sheet	1 of 2

Lloyd's Register EMEA
71 Fenchurch Street, London EC3M 4BS



LR031.1.2016.06

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RATINGS	Series	Size O.D. (mm)	PN (bar)	Material	Operat. Temp. (°C)
	light	6L-42L	315-160	Steel	-40 to + 200
	heavy	6S-38S	630-315	Stainl. Steel	-60 to + 400
				NBR Seal	-35 to + 100
				FKM Seal	-25 to + 200

Maximum working pressures depend on pipe material and thickness.
Pressure reductions depending on design temperature are to be observed according performance data of catalogue 4100-10/UK, C2.

OTHER CONDITIONS Selection and installation to be in accordance with the producer's instructions and recommendations.

PLACE OF PRODUCTION	Parker Hannifin Manufacturing Germany GmbH & Co.KG Am Metallwerk 9 33659 Bielefeld Germany	Parker Hannifin Poland Sp.z.o.o. UL.E. Kwiatkowskiego 16 50-011 Siechnice Poland
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The Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations.

If the specified standards are amended during the validity of this certificate, the product is to be re-approved prior to it being supplied to vessels to which the amended standards apply.

The Design Appraisal Document No. HPC/HMD 3097-00, Issue No. 5 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

Certificate No.	00 / 20017 (E4)
Issue Date	29 June 2017
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Sheet	2 of 2

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Design Appraisal Document

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Date
29 June 2017

Please quote this reference number on all future communications
HPC1561054/36273-17/TS

**THE LLOYD'S REGISTER'S TYPE APPROVAL SYSTEM, 2014
ISSUED TO: PARKER HANNIFIN MANUFACTURING GERMANY
FOR: EO – WELD FITTINGS
TYPE APPROVAL CERTIFICATE NO. 00/20017 (E4)**

**This Marine Design Appraisal Document supersedes and cancels
document number HPC/HMD 3097-00, Issue 4, dated 24.08.2016.**

The undernoted documents have been reviewed for compliance with the requirements of the Lloyd's Register's Type Approval System Procedure TA14 and this Design Appraisal Document forms part of the Certificate.

COMMENTS

1. The materials are to be in compliance with the Rules respectively the new alternative Supply Chain Assurance Assessment Scheme as agreed between Parker and Lloyd's Register.
2. The minimum unweakened carbon steel pipe thicknesses are to be calculated in accordance with the Rules Part 5, Chapter 12, Section 2.1, and stainless steel pipes according to Section 10.

APPROVAL DOCUMENTATION

- Application for Type Approval
4100-10/UK Catalogue, Chapters M and N

28.02.2017

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FINAL ACCEPTANCE OF ACTUAL ITEM(S) DEPEND(S) ON SATISFACTORY SURVEY AND TESTING

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TEST REPORTS

HPC1561054	Supply Chain Assessment Manufacturer Audit for plant Bielefeld	21.02.2017
KAT1700225	Supply Chain Assessment Manufacturer Audit for plant Siechnice	03.04.2017
KAT1500562/1	LR Production Quality Assessment at Works in Siechnice, Poland	10.09.2015
HPC1561054	LR Production Quality Assessment at Works in Bielefeld, Germany	30.06.2015
--	Various test reports (sealing test, assembly test, burst test, pull out test, pressure impulse and vibration test, fire test) referring to the above Type Approval Certificate No. 88/20411 (E1)	-



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LR031.1.2016.06

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Supplementary Type Approval Terms and Conditions

Type Approval certifies that a representative sample of the product(s) referred to herein has/have been found to meet the applicable design criteria for the use specified herein. It does not mean or imply approval for any other use, nor approval of any product(s) designed or manufactured otherwise than in strict conformity with the said representative sample.

Type Approval is based on the understanding that the manufacturer's recommendations and instructions and any relevant requirements of the Rules and Regulations are complied with.

Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations.

Lloyd's Register EMEA reserves the right to cancel or withdraw this Type Approval Certificate in accordance with the LR Type Approval System Procedure.

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