



TYPE APPROVAL CERTIFICATE

Polish Register of Shipping certifies that the undernoted product type

TUBE FITTINGS – SCREW COUPLINGS

with type designation

**Danfoss Waltech
WalformPlus
WalformPlus-M**

Carbon steel (Series L and S)

Stainless steel (Series L and S)

See the parameter table overleaf

Company applying for Type Approval

Danfoss Power Solutions II GmbH
Genker Str. 18
53842 Troisdorf
Germany

manufactured tube fittings by

Danfoss, spol. s.r.o.
organizacna zlozka podniku
Areal ZTS a.s. 924
Dubnica nad Vahom 018 41
Slovakia

is approved as complying with the requirements of the

Polish Register of Shipping Rules for the Classification and Construction of Sea-going Ships - 2024,
the Classification and Construction of Small Sea-going Ships - 2023,
the Classification and Construction of Inland Waterways Vessels – 2019 (2022)

Certificate No. **TM/1659/710130/24**

Expiry date **2029-10-10**

Issued at

Gdańsk, 2024-10-11



C/020/51

Wojciech Kozyro
Signature
mailbox@prs.pl
www.prs.pl

Polski Rejestr Statków S.A.
al. Gen. Józefa Hallera 126
80-416 Gdańsk, Poland

Tel. +(48) 58 346 17 00
Fax +(48) 58 346 03 92

Continued overleaf

Technical data

Material/Series	Size [mm] M.A.W.P. [bar]	Approved tube fittings product range									
		6	8	10	12	15	18	22	28	35	42
Carbon steel L Series		500	500	500	400	400	400	250	250	250	250
Carbon steel S Series		800	800	800	630	630	420	420	420	420	
Stainless Steel L Series		400	400	400	400	315	315	160	160	160	160
Stainless Steel S Series		630	630	630	630	630	400	400	400	330	

Note: M.A.W.P. – Maximal Allowable Working Pressure

Metallic Tube Fittings : Screw couplings;

Designed of three parts: Fitting body and nut acc. DIN ISO 8434-1, WalformPlus, WalformPlus-M acc. Danfoss Waltech spec.;

Sealing principle: Elastomeric + metal on metal;

Material: Tube/pipe – E235 (1.0308), E355 (1.0580); SS 1.4571-316 Ti and 1.4404-316L (acc. DIN EN 10305-4);
Fitting Body and Nut – Carbon acc. DIN 3859-1 or SS 1.4571 (X6CrNiMoTi17122) as per DIN EN 10088-3 and DIN EN 10222-5;

Working temperature: Maximal working temperature should not exceed range: -20°C to +120°C carbon steel, -60°C to +400°C stainless steel .
When using different fastening and sealing materials, the temperature and maximum operating pressure are reduced - see Catalog below.

Documents and drawings:

Basic technical data in Danfoss Waltech tube fitting systems Catalog, AF403661682130en-000103 & AF403661682130de-000103 www.danfoss.com.

Approved technical documentation;

Bursting pressure test report of September 30, 2024 and reports from previous tests 40 951-86HH - WALPRO, WALPRO-X.

Application limitation:

Approved for use in the Class I, II and III piping systems in marine, offshore and industrial piping systems with the following clarification:

- Flammable fluids (flash point over 60°C),
- Inert gas,
- Flammable fluids (flash point under 60°C),
- Sea water, Fresh water, Vents, Sounding.

Minimal thickness of pipes is to be compliant with PRS rules.

Application in piping systems scheduled for Cat.A machinery spaces must comply with applicable PRS Rules;

All piping used with WalformPlus to be properly designed and terminated as per manufacturer procedures by trained service staff;

Fittings are approved to be used with genuine Danfoss Waltech produced fittings according technical documentation and instructions.

Requirements for manufacturing

The products are to be delivered compliant with data provided in this certificate.

Product marking

Acc. PRS Rules or as minimum the following is to be: manufacturer name and trade name, and model, size and nuts are marked with **D**

Other information

Details of results of the examination of the design for TAC are detailed in Survey Report TM/BD/31/24 and Inspection Report no TM/JPa/7/24.

Compliance with other PRS Rules and relevant technical information required may be obtained from Machinery and Equipment Department of PRS SA, Al. Gen J. Hallera 126, 80-464 Gdańsk, Poland.

Basis of approval

1. Danfoss Waltech – Tube fittings system – catalogue of products, datasheet and instructions.
2. Technical documentation of Tube fitting systems approved by PRS TM/MN/710130/1034/15 on 30.12.2015 and TM/JPa/710130/1164/24 on 10.10.2024.
3. Inspections carried out by PRS Surveyors in the company in Troisdorf, Germany on 30.09.2024 and in production plant in Dubnica nad Vahom, Slovakia on 01.10.2024.
4. Satisfactory results of testing carried out at the Danfoss Power Solutions II GmbH Troisdorf plant in the presence of PRS Surveyor 30.09.2024 and visit of PRS Surveyor in production plant of Danfoss spol. s.r.o. in Dubnica nad Vahom, Slovakia on 01.10.2024.

Notes

1. The approval is valid only when original Danfoss Waltech parts are being used in accordance with manufacturer's conditions.
Tests acc. To IACS P.2.11 Table 9 where performed with original Danfoss Waltech parts.
2. Changes of WalformPlus fittings design and change of materials which influence product performance and quality are to be agreed with PRS.
3. Type Approval Certificate will be cancelled in the case of dissatisfactory service results, modifications made in the product structure or materials without PRS consent, not advising PRS of the manufacturer's name change.

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