



Type Approval Certificate

Germanischer Lloyd

This is to certify that the undernoted product(s) has/have been tested in accordance with the relevant requirements of the GL Type Approval System.

Certificate No. 12 250 - 98 HH

Company Georg Fischer WAGA N.V.
Lange Veenteweg 19
NL-8161 PA Epe

Product Description FLAME RESISTANT PIPE COUPLINGS

Type Georg Fischer WAGA Type 500E, 500A2E TO 500D2E, 500 AND 500A2 TO 500D2

Environmental Category • None

Technical Data / TECHNICAL DATA (see page 2)

Range of Application

RANGE OF APPLICATION

The above mentioned couplings may be used in the following piping systems: Bilge and ballast lines, fuel and oil lines, seawater lines, fresh and seawater cooling lines, fire fighting and deckwash lines, cargo oil lines, vent pipes, fill and sounding pipes, drinking water lines, sanitary discharge lines, inert gas lines on free deck, discharge lines from inert gas washers and deck water seals.

LIMITATIONS

The pipe couplings may not be used in bilge lines inside ballast and fuel tanks, seawater and ballast lines including air and overflow pipes inside cargo holds and fuel tanks, fuel and oil lines including air and overflow pipes inside machinery spaces, cargo holds and ballast tanks, dry pipe water spraying systems.

Test Standard • Regulations for the Performance of Type Tests, Part 6-Test Requirements for Mechanical Components and Equipment of Germanischer Lloyd.

Documents • Test Reports
• Approval Documentation
• Material Specifications and Dimensions

Remarks • None

Valid until 2007-06-19

Page 1 of 2

Type Approval Symbol



File No. II.C.06

Hamburg, 2002-07-09

Germanischer Lloyd

D. Roßmanith

W. Lippke



Type Approval Certificate

Germanischer Lloyd

This is to certify that the undemoted product(s) has/have been tested in accordance with the relevant requirements of the GL Type Approval System.

Certificate No. 12 250 - 98 HH

TECHNICAL DATA

Type: 500 + 500E
Size Range: 26.9 [mm] to 168.3 [mm] pipe O.D.
Nominal Pressure: PN 16

Size Range Pipe O.D. [mm]	Type 500A2/500A2E M.A.W.P. [bar]	Type 500B2/500B2E M.A.W.P. [bar]	Type 500C2/500C2E M.A.W.P. [bar]	Type 500D2/500D2E M.A.W.P. [bar]
180.0	9.2	13.7	18.5	23.5
219.1	9.2	13.7	18.5	23.5
273.0	7.0	12.0	13.5	18.5
323.9	5.0	9.0	10.5	15.0
355.6	5.2	9.0	10.5	13.2
406.4	5.2	7.5	10.2	12.3
508.0	3.2	5.5	6.5	7.5
609.6	4.5	5.5	6.2	
711.2	4.0	4.5	5.0	
812.8	3.2	3.5	4.5	
1200.0	2.0	2.3	3.3	

Temp. Range: -20 [°C] to 80 [°C] -30 [°C] to 125 [°C] -20 [°C] to 80 [°C]
Size Range (Pipe O.D.): 26.9 [mm] to 1200 [mm] 26.9 [mm] to 168.3 [mm] 180 [mm] to 1200 [mm]
Sleeve Material: NBR NBR EPDM EPDM

MATERIALS

Material Combination	W2		W4		W5	
	DIN	AISI	DIN	AISI	DIN	AISI
Housing	1.4301	304	1.4301	304	1.4571	316Ti
Cheese head screw	10.9, 12.9, 1.4404	10.9, 12.9, 316L	1.4404	316L	1.4404	316L
Threaded bolt	1.0737	12 L 14	1.4301	304	1.4401	316
Guide bolt	1.0737	12 L 14	1.4301	304	1.4401	316
Steel band layer	1.4571	316Ti	1.4571	316Ti	1.4571	316Ti
or polyamide band inlay	of type Grivory HTV - 4 x 1 for all material combinations					
Protective ring	1.4571	316Ti	1.4571	316Ti	1.4571	316Ti

- Material combination W2 is not available for the series 500E and 500A2E to 500D2E.
- The selection of the pipe couplings for the corresponding application and the right installation are to be in accordance with the instructions of the manufacturer.

Valid until 2007-06-19

Page 2 of 2

Type Approval Symbol



File No. II.C.06

Hamburg, 2002-07-09

Germanischer Lloyd

[Signature]
D. Roßmanith

[Signature]
W. Lipke