

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Strainer**

with type designation(s)

08416, 08417, 08432, 08716, 08717

Issued to

**Herose GmbH Armaturen und Metalle
Bad Oldesloe Schleswig-Holstein, Germany**

is found to comply with

DNV GL rules for classification – Ships Pt.4 Ch.6 Piping systems**DNV GL rules for classification – Ships Pt.5 Ch.7 Liquefied gas tankers****DNV GL offshore standards****DNV GL class programme DNVGL-CP-0186 – Type approval – Valves****Application :****Strainer.****Products approved by this certificate are accepted for installation on all vessels classed by DNV GL.****For installation on Offshore units the requirements specified in the applicable DNV GL rules for classification of Offshore units (RU-OU) are to be observed.**

Type:	Temperature range:	Max. working press.:	Sizes:
08416	-196°C to + 120°C	PN 50	DN 10 to DN 50
08417	-196°C to +120°C	PN 50	DN 10 to DN 150
08432	-196°C to +120°C	PN 40	DN 15 to DN 150
08716	-255°C to +120°C	PN 50	DN 10 to DN 50
08717	-255°C to +120°C	PN 50	DN 10 to DN 150

This Certificate is valid until **2022-01-30**.Issued at **Hamburg** on **2017-01-31**DNV GL local station: **Hamburg**for **DNV GL**Approval Engineer: **Guido Friederich**

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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.

Job Id:
Certificate No: **TAP00000KE**

Product description

Type: 08416
Stainless steel body and cap with strainer screen mesh size 0.25 mm or other mesh sizes.
Female thread connection (G) acc. to ISO 228/1, (R) acc. to ISO 7-Rc, NPT acc. to ANSI B 1.20.1

Materials:		
Body:	Mat.No. 1.4308,	ASTM A351 CF8
Strainer screen:	Mat.No. 1.4301	ASTM A240 Grade 304
Bonnet gasket:	PTFE	
Bolts:	Mat.No. 1.4301/A2	ASTM A194 B8
Cap:	Mat.No. 1.4301	ASTM A276 Grade 304

Nominal sizes: DN 10, 15, 20, 25, 40, 50

Type: 08417
Stainless steel body and cap with strainer screen mesh size 0.25 mm or other mesh sizes
Butt weld or socket weld connection or stainless steel stubs according to DIN EN ISO 1127 or ASTM A312

Materials:		
Body:	Mat.No. 1.4308	ASTM A351 CF8
Strainer screen:	Mat.No. 1.4301	ASTM A240 Grade 304
Bonnet gasket:	PTFE	
Bolts:	Mat.No. 1.4301/A2	ASTM A194 B8
Cap:	Mat.No. 1.4301	ASTM A276 Grade 304

Nominal sizes: DN 10, 15, 20, 25, 32, 40, 50, 65, 80, 100 and 150

Type: 08432
Stainless steel body and cap with strainer screen mesh size 0.25 mm or other mesh sizes.
Flanged connection acc. to DIN EN 1092-1 PN40 or ANSI B16.5 Class 150 / 300

Materials:		
Body:	Mat.No. 1.4308	ASTM A351 CF8
Strainer screen:	Mat.No. 1.4301	ASTM A240 Grade 304
Bonnet gasket:	PTFE	
Bolts:	Mat.No. 1.4301/A2	ASTM A194 B8
Cap:	Mat.No. 1.4301	ASTM A276 Grade 304

Nominal sizes: DN 15, 20, 25, 40, 50, 65, 80, 100 and 150

Type: 08716
Stainless steel body and cap with strainer screen mesh size 0.25 mm or other mesh sizes
Female thread connection (G) acc. to ISO 228/1, (R) acc. to ISO 7-Rc, NPT acc. to ANSI B 1.20.1

Materials:		
Body:	Mat.No. 1.4409	ASTM A351 CF3M
Strainer screen:	Mat.No. 1.4404	ASTM A276 Grade 316L
Bonnet gasket:	Graphite	
Bolts:	Mat.No. 1.4571/A4	ASTM A194 B8T
Cap:	Mat.No. 1.4404	ASTM A276 Grade 316L

Nominal sizes: DN 10, 15, 20, 25, 40, 50

Product description

Type: 08717

Job Id:
Certificate No: **TAP00000KE**

Stainless steel body and cap with strainer screen mesh size 0.25 mm or other mesh sizes.
Butt weld or socket weld connection or stainless steel stubs according to DIN EN ISO 1127 or ASTM A312

Materials:

Body:	Mat.No. 1.4409	ASTM A351 CF3M
Strainer screen:	Mat.No. 1.4404	ASTM A276 Grade 316L
Bonnet gasket:	Graphite	
Bolts:	Mat.No. 1.4571/A4	ASTM A194 B8T
Cap:	Mat.No. 1.4404	ASTM A276 Grade 316L

Nominal sizes: DN 10, 15, 20, 25, 32, 40, 50, 65, 80, 100 and 150

Application/Limitation

May be used for:
Compressed air, gases, cryogenic liquified gases including LNG

Working temperature:	-196°C to + 120°C;
Type 08716 and 08717	-255°C to + 120°C

Working pressures:	08416 and 08716	PN 50
	08417	PN 50, DN 100 PN 40, DN 150 PN 25
	08432	PN 40
	08717	PN 50, DN 100 PN 40

Limitation

Strainers may not be used for sour gas and media specified as toxic and/or dangerous fluids

Type Approval documentation

Tests carried out

Burst test of housing

Marking of product

For traceability to this type approval the strainers are to be marked with:

- Manufacturers name or trade mark
- Type designation
- Size
- Maximum design pressure and temperature
- Arrow to indicate direction

Periodical assessment

A condition for retention of the Type Approval Certificate in its validity period is that periodical assessments are successfully carried out.

The objective of the periodical assessment is to verify that the conditions for the type approval have not been altered. The main scope of the periodical assessment will normally include:

- Verification of the TA applicant's production and quality system w.r.t ensuring continued consistent production of the type approved products at the TA applicant's own premises and at other companies that are given the responsibility for manufacturing of the products.
- Review of the TA documentation and that this is still used as a basis for the production
- Review of possible changes to the design, the material and the performance of the product



Job Id:
Certificate No: **TAP00000KE**

- Verification of the product marking

END OF CERTIFICATE