



DET NORSKE VERITAS

TYPE APPROVAL CERTIFICATE

CERTIFICATE NO. P-12847
This Certificate consists of 3 pages


This is to certify that the
Ball Valve
with type designation(s)
2-Way-ball valve

Manufactured by
Rötelmann GmbH
WERDOHL, Germany

is found to comply with
Det Norske Veritas' Rules for Classification of Ships
Offshore Standard DNV-OS-D101, Marine and Machinery Systems and Equipment
Det Norske Veritas' Standards for Certification 2.9 No. 5-794.40

Application
May be used for: Hydraulic systems (see cert.)/ Fresh and sea water/ Bilge and ballast
systems/ Cargo oil transfer on open deck/ Sanitary systems
Type: 2-Way-ball valve
Temperature range: Dep. on body and seat matr., see cert.
Max. working press.: Dep. on size and body matr., see cert.
Sizes: DN 4, 6, 8, 10, 12, 16, 20, 25, 32, 40 and 50


Place and date
Høvik, 2008-07-31
for DET NORSKE VERITAS AS



Hanne Anita Hjerpetjønn
Head of Section



This Certificate is valid until
2012-12-31



Mohsen Mohebbi
Surveyor

Notice: 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.

If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.



Cert. No.: P-12847
 File No.: 794.50
 Job Id.: 262.1-005457-1

Product description

2-way ball valve. Seat supported ball. Threaded end connectors:

- Male threads DIN 2353 S/ DIN 2353 L, for cut ring tube fittings
- BSP female thread according to ISO 228-1
- NPT female thread according to ANSI/ASME B1.20.1

Materials:

Body: Steel WNo. 1.0715 and 1.0601 or
 Stainless Steel WNo. 1.4571
 Ball: Steel or Stainless Steel
 Stem: Steel or Stainless Steel
 Ball Seat: POM, PTFE or PEEK,
 Stem Seal: NBR, FKM or FFKM

Application/Limitation

Max. working pressure at ambient temperature

Size	Body material WNo.				
DN	1.0715	1.4571	1.0601		
4	420 bar	420 bar	X		
6					
8					
10	350 bar				
12					
16					
20	250 bar				
25	X			315 bar	250 bar
32					
40					
50					

Max. working pressures to be reduced at elevated temperatures according to RÖTELMANN catalogue 077 pages 160-161.

Valves having threaded end connections where the sealing is performed by the threads, may not be used for inflammable fluids within machinery spaces of Category A.

Motob



Cert. No.: P-12847
File No.: 794.50
Job Id.: 262.1-005457-1

Temperature ranges depending on material in valve body and seat:

Valves made of steel : -10°C to 100°C, POM
-10°C to 220°C, PEEK
-10°C to 180°C, PTFE

Valves made of stainless steel: -55°C to 180°C, PTFE
-40°C to 100°C, POM
-55°C to 220°C, PEEK

The approval does not include any operating gear for remote control of the valves.

Each valve is to be subjected to a hydrostatic pressure test at minimum 1.5 times the design pressure.

Holding time: 2 minutes for all sizes. No leakage is permitted.

Each valve assembly shall be subjected to a hydrostatic seat leakage test at minimum 1.1 times the design pressure. The test shall be performed with closed valve with the other end open to atmosphere.

Holding time : 5 minutes for all sizes; Acceptable leakage : Drop tight

Type Approval documentation

- Catalogue: RÖTELMANN, Shut-off and control technology, 077
- Pressure testing of valve body performed on 1999-02-03, 1999-02-26 and 2004-01-21
- DNV Survey report dated ESN 03-6639 dated 2004-01-21
- Kern GmbH material datasheets
- Survey retention report dated 18,06,2008

Tests carried out

Burst pressure testing

Marking of product

For traceability to this type approval, each valve is at least to be marked with:

- Manufacturer's trade mark:
- Manufacturing data
- Size
- pressure class

Certificate retention survey

For retention of the Type Approval, a DNV Surveyor shall perform a survey - every second year and before the expiry date of this certificate - to verify that the conditions for the type approval are complied with.

END OF CERTIFICATE

Moyah