

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Pressure Regulator

with type designation(s)
DRP.88, DRP.87, DRI.88, DRI 87

Issued to

Knocks Fluid-Technik GmbH
Selm, Germany

is found to comply with
DNV GL rules for classification – Ships
DNV GL rules for classification – Yachts
DNV GL rules for classification – Offshore units

Application :

Products approved by this certificate are accepted for installation on all vessels classed by DNV GL.

Temperature range: up to 80°C
Max. working press.: up to 50 bar
Sizes: N/A

This Certificate is valid until **2021-05-03**.

Issued at **Hamburg** on **2016-05-03**

DNV GL local station: **Magdeburg**

Approval Engineer: **Peter Gierhan**

for **DNV GL**

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: **262.1-022551-1**
Certificate No: **TAP00000BM**

Production Places

KNOCKS Fluid-Technik GmbH
Otto-Hahn-Str. 4
59379 Selm
Germany

Product description

The DRP.88 / 87 pilot-operating regulators consists of a main-and integrated pilot regulator. The main regulator uses a pneumatic spring above the diaphragm. The pressure will be tuned by the pilot regulator. If the secondary pressure (Pa) increases, the secondary relieve and the air escapes in the atmosphere.

The DRI.88 / 87 is an air line regulator with a diaphragm and relieving feature and is pneumatic pilot-operated.

Technical Data

DRP.88 / 87

Supply pressure: max. 50 bar
Media and
ambient temperature: max. 60°C
Operating temperature: compressed air, non corrosive gases and neutral gases
Fixing: arbitrary

DRI.88 / 87

Supply pressure: max. 50 bar
Media and
ambient temperature: max. 80°C
Operating temperature: compressed air, non corrosive gases and neutral gases
Fixing: arbitrary

Materials

Cap: GK-ALSi10MgK (EN 1706 AC-43000K)
Housing: GK-ALSi10MgK T6 (EN 1706 AC-43000K)

Application/Limitation

Type	Designation Pressure Regulator	Thread
DRI.87	G1 1/2 remote controlled pneumatically (1/4), P1 max=50bar	G1 1/2
DRI.87c	Rc1 1/2 remote controlled pneumatically (1/4), P1 max=50bar	Rc1 1/2
DRI.87n	1 1/2-11 1/2 NPT remote controlled pneumatically (1/4), P1 max=50bar	1 1/2-11 1/2 NPT
DRP.87	G1 1/2, 0,5-25 bar max., pilot-operating, P1 max=50bar,	G1 1/2
DRP.87c	Rc1 1/2, 0,5-25 bar max., pilot-operating, P1 max=50bar	Rc1 1/2
DRP.87n	1 1/2-11 1/2 NPT, 0,5-25 bar max., pilot-operating, P1 max=50bar	1 1/2-11 1/2 NPT
DRI.88	G2 remote controlled pneumatically (1/4), P1 max=50bar und P2 max=20 bar	G2
DRI.88c	Rc2 remote controlled pneumatically (1/4-18 NPT), P1 max=50bar	Rc2
DRI.88n	2-11 1/2 NPT remote controlled pneumatically (1/4-18 NPT), P1 max=50bar	2-11 1/2 NPT
DRP.88	G2, 0,5-25 bar max., pilot-operating, P1 max=50bar	G2
DRP.88c	Rc2, 0,5-25 bar max., pilot-operating, P1 max=50bar	Rc2
DRP.88n	2-11 1/2 NPT, 0,5-25 bar max., pilot-operating, P1 max=50bar	2-11 1/2 NPT

Threated fittings using sealing tapes, fluids or similar shall not be used at the inlet and outlet ports of the pressure regulator.

The use of the pressure regulators outside the range of application is subject to special consideration by DNV GL in each individual case. The installation, operating and maintenance instructions of the manufacturer are to be strictly adhered to.

Type Approval documentation

Drawings

DRP.88 / 87

Cap, drawing-no.: 4.1588.77.000 (Index q), dated: 2015-10-23
Housing, drawing-no.: 4.1587.91.000, 4.1587.92.000, 4.1587.93.000,
4.1588.91.000, 4.1588.92.000, 4.1588.93.000, (Index v) dated: 2016-02-16

DRI.88 / 87

Cap, drawing-no.: 4.1588.07.100 (Index h), dated: 2015-10-23
Housing, drawing-no.: 4.1587.91.000, 4.1587.92.000, 4.1587.93.000,
4.1588.91.000, 4.1588.92.000, 4.1588.93.000, (Index v) dated: 2016-02-16

Type test report

Phoenix test lab report : U153931E1, dated: 2016-02-11

Type tests carried out

Pressure test, Vibration test

Marking of product

For traceability to this type approval each pressure regulator shall be marked on the shoulder or on a reinforced part of the pressure regulator or on a permanently fixed collar or neck ring:

- Manufacturer name or trade mark
- Type designation
- Design pressure

Periodical assessment

For retention of the Type Approval a DNV GL Surveyor shall perform a periodical assessment every second year. The objective of the periodical assessment is to verify that the conditions for the Type Approval are not altered since the Type Approval Certificate was issued.

The main scope of the periodical assessment will normally include:

- Verification of the Type Approval applicant's production and quality system and ensuring continued.
- Consistent production of the type approved products at the Type Approval applicant's own premises.
- Review of the Type Approval documentation and that this is still used as basis for the production.
- Review of possible changes to the design, the material and the performance of the product.
- Verification of the product marking