DNV·GL

Certificate No:
TAP00000V6

TYPE EXAMINATION CERTIFICATE

This is to certify:

That the Temperature regulator

with type designation(s)
SERIES 226.0601 WITH MANUAL OVERRIDE, SERIES 227.0701 WITH MANUAL OVERRIDE, SERIES 227.0700

Issued to
AKO Regelungstechnik GmbH & Co. KG
Leverkusen Nordrhein-Westfalen, Germany

is found to comply with
VA 0001 – AKO Regelungstechnik GmbH & Co. KG – Verfahrensanweisung / quality system procedure revision A 01/2007

Application :

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

Temperature range:	**M.A.W.T.: -20 [°C] up to +120 [°C]**
Max. working press.:	**M.A.W.P.: 25 [bar], 40 [bar]**
Sizes:	**Size range: G 1/2" up to G 1 1/4"**

Issued at **Hamburg** on **2017-03-13**
This Certificate is valid until **2022-03-12**.
DNV GL local station: **Essen**

for **DNV GL**

Approval Engineer: **Peter Gierhan**

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 Examination Certificate and not to the approval of equipment/systems installed.

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Job Id: **262.1-023877-2**
Certificate No: **TAP00000V6**

Product description

The AKO THREE WAY TEMPERATURE REGULATORS with internal regulation elements (thermostatic elements) are equipped with expansion elements. The number of the elements in each valve is determined by its nominal diameter. Every thermostatic element has its own slider. The medium in question (e.g. cooling water or lubrication oil) flows around the thermostatic elements as they take its temperature. The characteristics of every controller are determined by the beginning of opening (i.e. the opening temperature) and the temperature at full opening of the expansion element. When the medium flowing through valve arrives at the opening temperature of the expansion element, one outlet of the 3-way valve is opened while at the same time the other outlet closes.The self actuating 3-way temperature controller can be used for mixing as well as for dividing purposes.

TECHNICAL DATA

Body:	Bronze (CuSn5Zn5Pb5; CC491K), Stainless steel (GX5CrNi19-10; 1.4308)
Inner parts:	Bronze (CuZn39Pb3; CW614N), Stainless steel (GX5CrNi19-10;1.4308 / X 10 CrNi 18-8;1.4310)
M.A.W.P.:	25 [bar], 40 [bar]
M.A.W.T.:	-20 [°C] up to 120 [°C]
Size range:	G 1/2" up to G 1 1/4"
Temperature range of thermostats:	4 [°C] - 11 [°C] up to 97 [°C] - 107 [°C]
Metallic gasket:	Copper

Application/Limitation

The thermal regulating devices are type approved for applications in

- cooling water systems
- lubrication oil systems

The selection of the devices for the corresponding service and the right installation are to be in accordance with the instructions of the manufactures.

Production Test / Certification

Each valve shall be subject to the following tests:

- Hydraulic test of body to 1.5 times the design pressure.

Type Examination documentation

Tests carried out

AKO pressure Test, dated 12.12.2016
Test Report of IVEF, dated 15.03.2010

Marking of product

For traceability to this type approval, each item is to be marked with:

- Manufacturers name or trade mark
- Type designation
- Serial No.

Certificate Retention Survey

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 TE applicant's production and quality system w.r.t ensuring continued consistent production of the type approved products at the TE applicant's own premises and at other companies that are given the responsibility for manufacturing of the products.
- Review of the TE 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
- Verification of the product marking

END OF CERTIFICATE