

TYPE APPROVAL CERTIFICATE

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

with type designation(s)

KTR-STOP XS-4-F-B-20, KTR-STOP XS-4-F-B-30, KTR-STOP XS-7-F-B-20, KTR-STOP XS-7-F-B-30, KTR-STOP XS-11-F-B-20, KTR-STOP XS-11-F-B-30, KTR-STOP XS-15-F-B-20, KTR-STOP XS-15-F-B-30

Issued to

KTR Brake Systems GmbH
Schloss Holte-Stukenbrock, Germany

is found to comply with

DNV GL standard DNVGL-ST-0378 – Standard for offshore and platform lifting appliances**Application :****Offshore and platform lifting appliances**Issued at **Høvik** on **2020-12-08**This Certificate is valid until **2025-12-07**.for **DNV GL**DNV GL local station: **Magdeburg**Approval Engineer: **Antonio Sendin Alvarez**

Aldo Matteucci
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.



Product description

Spring activated and hydraulic released caliper brakes, with the following configurations:

Designation	Clamping force (KN)	Theoretical braking force (KN)	Disc Thickness (mm)	Opening pressure (bar)
KTR-STOP XS-4-F-B-20	4	2.4	20	50
KTR-STOP XS-4-F-B-30	4	2.4	30	50
KTR-STOP XS-7-F-B-20	7	4.2	20	90
KTR-STOP XS-7-F-B-30	7	4.2	30	90
KTR-STOP XS-11-F-B-20	11	6.6	20	150
KTR-STOP XS-11-F-B-30	11	6.6	30	150
KTR-STOP XS-15-F-B-20	15	9	20	190
KTR-STOP XS-15-F-B-30	15	9	30	190

Design Temperature, Td: -20 degrees Celsius

Application/Limitation

1. The theoretical braking force has been calculated assuming a friction coefficient = 0.3. Actual figure to be provided and verified for the end-user and braking force to be adjusted accordingly for each application.
2. Load-bearing parts are to be delivered with 3.1 certificates (EN 10204:2004), to be reviewed by the attending DNV GL surveyor.
3. Fixation of the brakes are not covered by this type approval, to be separately considered/ approved in each case.
4. Manufacturer's instructions are to be followed before putting the brake into service.

Type Approval documentation

Tests carried out

Prototype tests carried out and witnessed by DNV GL Magdeburg on 2020-11-17

In order to obtain a DNV GL Product Certificate, testing proving that the minimum braking torque is reached to be witnessed by the DNV GL surveyor.

Marking of product

Each brake shall be marked according to DNVGL-ST-0378 Sec. 14.5

Periodical assessment

For retention of the Type Approval, a DNV GL Surveyor shall perform periodical assessment after two years (+/- 90 days) and after 3.5 years (+/- 90 days) to verify that the conditions for the approval are complied with. Reference is made to DNVGL-CP-0338.

END OF CERTIFICATE