



TYPE APPROVAL CERTIFICATE

Certificate No:
TAE00002U8
Revision No:
1

This is to certify:

That the Battery (Accumulator)

with type designation(s)
KL ... P, RL ..., KM ... P, RM ..., TP ..., KH ... P, RH ..., TSP ...

Issued to
GAZ Geräte- und Akkumulatorenwerk Zwickau GmbH
Zwickau, Sachsen, Germany

is found to comply with
IEC 60623 (2017-01)

Application :

UPS, Safety Lighting, Power Stations and Switching Stations, Alternative Energy Stations, Railway, Telecom

Issued at **Høvik** on **2022-06-11**

This Certificate is valid until **2027-06-10** .
DNV local unit: **Hamburg**

Approval Engineer: **Maik Gagern**



for **DNV**

Digitally Signed By: **Alonso Pontes, Marta**
Location: **DNV Høvik, Norway**

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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Product description

KH 280 P - KH 800 P; RH 280 P - RH 800 P; TSP 280 - TSP 800

NiCd-cells with pocket plates in plastic container, cells from 280 Ah up to 800Ah (5H) / 1,2V
The cells fulfil all requirements of IEC 60623 (2017-01).

KL 11 P - KL 625 P; RL 11 P - RL 625 P; KM 11 P - KM 570 P; RM 11 P - RM 570 P; KL 30 - KL 500; RL 30 - RL 500; KM 90 - KM 380; RM 90 - RM 380; KH 7,5 P - KH 235 P; RH 7,5 P - RH 235 P; TP 10 - TP 570

NiCd-cells with pocket type plate electrodes and batteries consisting of such cells, cells from 11Ah up to 625 Ah (5h) / 1,2 V

The cells / batteries fulfil all requirements of IEC 60623 (2017-01), the "TP" types the requirements of DIN 40 771-1 (2013-01).

KL 650 P - KL 1700 P; RL 650 P - RL 1700 P; KM 600 P - KM 1390 P; RM 600 P - RM 1390 P; TP 600 - TP 1390

NiCd-cells with pocket type plate electrodes, batteries from 650 Ah up to 1700 Ah (5h) / 1,2 V

The cells / batteries fulfil all requirements of IEC 60623 (2017-01), the "TP" types the requirements of DIN 40 771-1 (2013-01).

Application/Limitation

Temperature Class:	A
Humidity Class:	A
Vibration Class:	A
EMC Class:	N/A

For charging conditions manufacturer's specification should be observed.

For **KH 280 P - KH 800 P, RH 280 P - RH 800 P, TSP 280 - TSP 800, KL 650 P - KL 1700 P, RL 650 P - RL 1700 P, KM 600 P - KM 1390 P, RM 600 P - RM 1390 P and TP 600 - TP 1390** restricted angle of inclination according manufacturer's specification

Type Examination documentation

KH 280 P - KH 800 P, RH 280 - RH 800, TSP 280 - TSP 800:

Publication No: GAZ_Standard-range_10-2019.pdf

Declaration of Manufacturer_about RL_RM_RH_DH

Publication No: US-RH-RS-003; January 2014

Test report GAZ dated 2005-06-02

KL 11 P - KL 625 P; KM 11 P - KM 570 P; KL 30 - KL 500; KM 90 - KM 380; KH 7,5 P - KH 235 P; TP 10 - TP 570:

Publication EN-GAZ RSSR-002 11.2010; GAZ TP Range:2013; Vibration test report

Nos. 0201/2401/02 , 0201/1104/02, 0201/0312/02, 2/2012/99, 2/0302/97; Test

protocols as per letter of 07.02.2008;

Type test report KM 550 P: 22.01.2013

KL 650 P - KL 1700 P; KM 600 P - KM 1390 P, TP 600 - TP 1390:

Publication EN-GAZ RSSR-002 11.2010; GAZ TP Range :2013; Vibration test report

Nos. 0201/1104/02; 0201/0312/02; Test protocols according the overview of

26.02.2003 and letter of 07.02.2008;

Type test report KM 1390P: 22.01.2013

Tests carried out

DNV Guideline DNV-CG-0339, Edition August 2021

Marking of product

The products to be marked with:

- Model name
- Manufacturer name
- Serial number

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the Type approval are complied with and that no alterations are made to the product design or choice of materials.

The main elements of the assessment are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Routine Tests (RT) checked (if not available tests according to RT to be carried out)
- Review of type approval documentation
- Review of possible change in design, materials and performance
- Ensuring traceability between manufacturer's product type marking and Type Approval Certificate.

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

To check the validity of this certificate, please look it up in <https://approvalfinder.dnv.com>

END OF CERTIFICATE