

# ASTA TYPE CERTIFICATE

## VERIFICATION OF TEST

**Project No:** G105056292    **Certificate No:** ASTA-TYPE-0001900

**Applicant:** RTR ENERGÍA, S.L., RTR ENERGÍA, CALLE GAVILANES Nº 11 ,  
PINTO, MADRID, SPAIN, 28320.

**Apparatus:** 500kVAr, 8kV/38kV/95kV ( $U_M/U_i$ ), 50Hz, single-phase, MV shunt capacitor  
unit for power factor correction applications, intended for indoor/outdoor  
use.

**Manufactured By:** RTR ENERGÍA, S.L., RTR ENERGÍA, CALLE GAVILANES Nº 11 ,  
PINTO, MADRID, SPAIN, 28320.

**Test Report No:** CPRIBLRPCD22T0059 & CPRIBLRPCD22T0065

**Designation:** BO/R MT



The apparatus which is representative of the designation, supplied drawings and photographs has been evaluated in accordance with:

**IEC 60871-1 Edition 4.0 2014-05, Clauses 7, 8, 9.3,10, 11, 12, 13, 14, 15.1, 15.2, 16, 17 and  
IEC 60871-4 Edition 2.0 2014-03, Clauses 5.1.2 and 5.3**

The results are shown in the record of tests attached hereto. The values obtained and the general performance is considered to comply with the above Standard(s) and to justify the ratings assigned by the manufacturer as stated on the ratings page(s) of this Certificate. This Certificate applies only to the apparatus tested. Responsibility for conformity of any apparatus having the same or other designations rests with the Manufacturer.



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R W Hayward  
Certification Reviewer

G Parker  
Certification Officer

8th November 2023  
.....

Date

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**Authenticity:**

Authenticity of any ASTA document can be confirmed by contacting the Intertek ASTA Certification Office at the following address:

Intertek Testing & Certification Ltd., Centre Court, Meridian Business Park, Leicester, LE19 1WD,  
United Kingdom. Email: [asta@intertek.com](mailto:asta@intertek.com)

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Verification of a MV shunt capacitor unit for power factor correction

CHARACTERISTIC VERIFIED	CLAUSE/ SUBCLAUSE IEC 60871-1: Edition 4.0: 2014	VERIFIED TESTS AND RATINGS
<b>ROUTINE TESTS:</b>		
Capacitance measurement	7	Verified, Capacitance: 25.374 $\mu$ F
Measurement of the tangent of the loss angle (tan $\delta$ ) of the capacitor	8	Verified tan $\delta$ : 0.00017at 25 $^{\circ}$ C
Voltage test between terminals	9.3	Verified 4 x $U_N$ for 10s
AC voltage test between terminals and container	10	Verified 38kV rms for 10s
Test of internal discharge device	11	Verified
Sealing test	12	Verified
Discharge test on internal fuses	5.1.2 of IEC 60871-4:2014	Verified
<b>TYPE TESTS :</b>		
Disconnecting test on internal fuses	5.3 of IEC 60871-4:2014	Verified
Thermal stability test	13	Verified 500kVar
Measurement of the tangent of the loss angle (tan $\delta$ ) of the capacitor at elevated temperature	14	Verified tan $\delta$ : 0.00016 at 50 $^{\circ}$ C
AC voltage test between terminals and container	15.1	Verified 38kV rms for 60 s
Lightning impulse voltage test between terminals and container	15.2	Verified 95kV peak
Overvoltage test	16	Verified
Short-circuit discharge test	17	Verified

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## Certificate Contents:

The following documents are attached to and form part of this certificate:

Documents:	Number of pages
Test report no: CPRIBLRPCD22T0059 & CPRIBLRPCD22T0065 dated 10 July 2022, including oscillograms and photographs	43
Drawings	2

## Certificate Revision Amendment Table

Certificate Number	Issue Date	Amendment
ASTA-TYPE-0001900	See page 1	Initial issue