liftinstituut
SINCE 1933

Certificate of Compliance Report

Report supporting to Certificate of Compliance no.	:	NA22-0842-1004-008-24
Date of issue of original certificate	:	March 10, 2022
No. and date of revision	:	-
Certificate applies to	:	Component
Requirements	:	ASME A17.1-2016 / CSA B44-16 with Record 17-2735, ASME A17.1-2019 / CSA B44.1:19
Project no.	:	P220019

1. General Specifications

Description of the product	:	Energy accumulation type buffers with non-linear characteristics
Trademark	:	ACLA
Type	:	AUTAN HE, 300404Fx, ø220 mm x 80 mm
Name and address of the manufacturer	:	ACLA-WERKE GMBH Frankfurter Str. 142-190 D-51065 Köln, Germany
Laboratory	:	-
Data of examination	:	March 2022
Examination performed by	:	E. Verkaik

Liftinstituut B.V.
Buikslotermeerplein 381
NL - 1025 XE Amsterdam

VAT number: NL.8103.99.441.B.01
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under number 34157363

+31 (0)20 435 06 06
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2. Component Description

In the ASME A17.1-2016 / CSA B44-16 polyurethane buffers were introduced. The performance required were based on EN 81-20, but not taking into account the fact that EN 81-20 only considers a fully loaded car and ASME A17.1 an empty car with only one person inside the car as well. Under the A17.1-2019 / CSA B44-19 the design criteria of this type buffer is described. For the North American market the ACLA-Werke in Germany has designed a buffer with the following characteristics:

Type number	300404Fx	
Diameter	220 mm (8.66”)	
Buffer height	80 mm (3.15”)	
Max. compression (90%)	72 mm / (2.84”)	
Max nominal speed	1.0 m/s / 200 fpm	0.63 m/s / 125 fpm
Min. load	2192 kg / (4833 lb)	1297 kg / (2859 lb)
Max load	5303 kg / (11691lb)	5303 kg / (11691 lb)

The buffer is manufactured with five sub types. The differences are solely the mounting possibility. The buffer 300404F1 has a round steel plate which is glued to the polyurethane buffer. The buffer 300404F3 has a square steel plate. The buffer 300404F4 has an integrated steel plate which is foamed in during the production.
The buffer 300404F5 is a combination of 300404F4 with an additional round steel plate glued to buffer. The buffer 300404F6 is a combination of 300404F4 with an additional square steel plate glued to buffer.

See Annex 1 for a general overview of the product

3. Examinations and Tests

To prove the compliance with the requirements referred to on page 1, applicable examinations and test are carried out.
For testing a polyurethane buffer according the A17.1-2019/CSA B44.1-07 readily tests are described.
The following sequence of tests are performed and witnessed for the buffer:

1. 3 tests with maximum load at 115% of the nominal speed.
2. 3 tests with minimum load at 115% of the nominal speed.

The tests outcome is within the requirements of:

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- Average retardation maximum 1g for test series 1 and 2.
- Retardation above 2.5g limited to 0.04 s for test series 1 and 2.
- A maximum retardation of 10g for test series 1 and 2.
- The results are filtered with a 40 Hz low pass filter.

The tests reports showed all the tests are accepted.
Additional test have been made to verify there is no difference between the different mounting possibilities and the characteristics of the buffer itself.

ACLA-Werke has provided a risk assessment, a User Manual (part of the MCP), approval criteria and test results.

Based on the risk assessment the following steps are taken to mitigate the risks involved:

- To check environmental influences additional test were made:
  - Salt test according EN ISO 9227 SS.
  - Humidity test at 98% non-condensing
  - Temperature tests -31°C – +78°C.
  - UV light.
  - Static pressure influences.

4. Results

After the examination of the risk assessment, test reports etc., the technical documentation was found in accordance with the requirements.

5. Conditions

Additional to the applicable demands in the considered requirements / standards (see certificate and/or page 1 of this report), the following conditions shall be taken into account:

- The user manual for the polyurethane buffer shall be present with the elevator or be a part of the MCP. The buffer shall be inspected during every scheduled pit maintenance (minimum once per year). If the buffer is externally damaged or has been in contact with chemicals the buffer shall be replaced.
- The load range is as follows:

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Max nominal speed	1.0 m/s / 200 fpm	0.63 m/s / 125 fpm
Min. load	2192 kg / (4833 lb)	1297 kg / (2859 lb)
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- The application of the load range shall take into account the values of a fully loaded car and an empty car with one person inside (70 kg / 154 lbs).
- Maximum temperature range -15° – 60° C (5° – 140° F).
- Maximum relative humidity 98% non-condensing at room temperature.

6. Conclusions

Based upon the results of the compliance examination, Liftinstituut B.V. issues a Certificate of Compliance.

The Certificate of Compliance is only valid for products which are in conformity with the same specifications as the certified products. Products deviating of these specifications need additional examination by Liftinstituut in order to determine whether a new Certificate of Compliance is necessary. Additional examination shall be requested by the certificate owner.

The Certificate of Compliance is issued based on the requirements that are valid at the date of issue. Liftinstituut reserves all rights regarding the validity of the certificate with respect to changes in the requirements or changes in the state of the art of the product.

Prepared by:

E. Verkaik
Product specialist Certification

Certification decision by:

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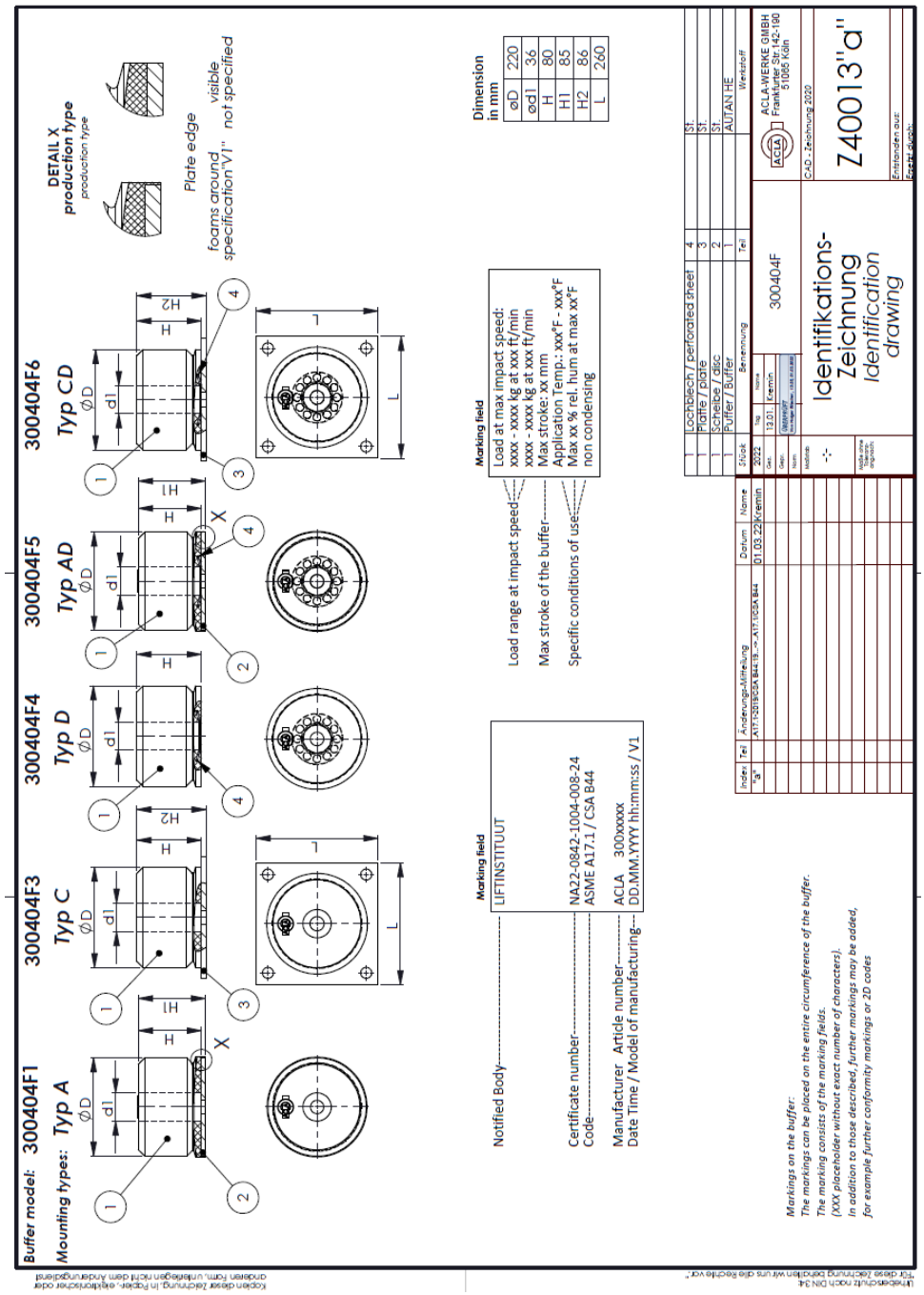
Annexes

Annex 1. General overview of the product



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PRODUCT CERTIFICATION BODY

Annex 2. Documents of the Technical File which were subject of the examination

Title	document number	date
Betriebsanleitung Puffer 300xxx FG xxx English	TB 282.07	09/2018
First statical curve for 300404Fxxx	TB 337.29	11/2017
Identification drawing	Z40013"a"	01.03.2022

Annex 3. Reviewed deviations from the standards

EN xx-x par.	Requirement	Accepted design
x.x.x		

Annex 4. Revision of the certificate and its report

Rev.:	**Date**	**Summary of revision**
-	March 10, 2022	Original

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