

# TYPE-EXAMINATION CERTIFICATE

Issued by Liftinstituut B.V.

Certificate no. : NL17-400-1002-232-01      Revision no.: 1

Description of the product : Machineroom less lift and lift with machineroom

Trademark : KÖHLER

Type no. : SYMPHONY MRL and SYMPHONY SMR

Name and address of the manufacturer : KÖHLER Elevator GmbH  
Factory:  
Carl-Legien Str. 15  
63073 Offenbach/Main-Germany

Name and address of the certificate holder : KÖHLER Elevator GmbH  
Head Office:  
Benzstrasse 5  
72793 Pfullingen - Germany

Certificate issued on the following requirements : Lifts Directive 2014/33/EU

Certificate based on the following standard : Parts of: EN 81-1:1998+A3:2010

Test laboratory : None

Date and number of the laboratory report : None

Date of type examination : April 2016 – Jan. 2017, Jan. 2020


Additional document with this certificate : Report belonging to the EU-type examination certificate no.: NL17-400-1002-232-01 Rev.1

Additional remarks : This revision replaces certificate NL17-400-1002-232-01 of 24-01-2017


Conclusion : The (model) lift meets the requirements of the Lifts Directive 2014/33/EU taking into account any additional remarks mentioned above

Amsterdam

Date : 09-01-2020  
Valid until : 24-01-2022



ing. P.J. Peeters  
Manager Certification



Certification decision by

## Report type-examination

Report belonging to EU-type examination certificate no.	: NL17-400-1002-232-01
Date of issue of original certificate	: 24-01-2017
Concerns	: Machineroom less lift and lift with machineroom
No. and date of revision	: 1, 09-01-2020
Requirements	: Lifts Directive 2014/33/EU Standard: EN 81-1:1998+A3:2010
Project no.	: P160129-01, P190416

## 1. General specifications

Name and address manufacturer	: KÖHLER Elevator GmbH Head Office: Benzstrasse 5 72793 Pfullingen – Germany Factory: Carl-Legien Str. 15 63073 Offenbach/Main-Germany
Description of lift	: SYMPHONY MRL and SYMPHONY SMR
Type	: 450, 630, 1000 and 1200 kg
Laboratory	: -
Address of examined lift	: No.21 west third st. West Village Road, Tehran, Iran
Data of examination	: April 2016 – Jan. 2017, Jan. 2020
Examination performed by	: E. Verkaik
Name and address manufacturer	: KÖHLER Elevator GmbH Head Office: Benzstrasse 5 72793 Pfullingen – Germany Factory: Carl-Legien Str. 15 63073 Offenbach/Main-Germany

## 2. Description lift

The Köhler SYMPHONY MRL is a lift without a machine room and the SYMPHONY SMR is a similar lift with a small machine room. The concept is based on different rated loads of similar layout: 450, 630, 1000, 1200 kg. The rated speeds are 1,0, 1,6, 1,75 and 2,5 m/s.

The gearless machine is built in the top of the well or in the machine room, above the counterweight.

The machine is provided with dual brakes, checked by contacts.

The brakes are also used as ascending car overspeed protection means.

The drive is frequency controlled, the frequency converter is located in a control cabinet, which is located in the vicinity of the highest landing door or in the machine room. The overspeed governor is located in the well or in the machine room, nearby the machine. It can be activated for tests with remote control from inside of the control cabinet.

The SYMPHONY MRL and SYMPHONY SMR are equipped with 4, 5, or 6 steel ropes with a diameter of 8 mm, in a 2:1 configuration.

Because there is no maintenance in the headroom of the well which can cause risk of a uncontrolled moving car, there are no fixing measures of the car required.

**Table 1: Main characteristics of SYMPHONY MRL and SYMPHONY SMR**

Rated load	kg	450		630		1000		1200	
Lift type name		SYMPHONY MRL – SYMPHONY SMR							
Rated speed	m/s	1,0	1,6	1,0	1,6	1,0	1,6	1,75	1.0 ~ 2.5
Door type		telescopic single side and central opening doors							
Number of entrances		1 entrance or 2 entrances at 180°							
Maximum travel OVF	mm	1.0 m/s up to 32000 mm 1.6 m/s up to 58000 mm 1.75 m/s up to 67000 mm 2.0 m/s up to 90000 mm 2.5 m/s up to 120000 mm							
FCONTROLLER AND DRIVE		MPK 400C and UNIDRIVE SP							
Machine type		DAF210L for 1.0 m/s to 2.0 m/s - DAF270S for 2.5 m/s							
Traction sheave diameter	mm	320							
Brake ASD en cert. number		RSR/8010 / EU-BD 766							
Car buffers, number and certificate number		O3 A /O3 B/ O3 C EU-B 007 008 009			O1A /O1 B/ O1 C EU-B 001 002 003		O2 A /O2 B/ O2 C EU-B 004 005 006		
CW buffers, number and certificate number		O3 A /O3 B/ O3 C EU-B 007 008 009			O1A /O1 B/ O1 C EU-B 001 002 003		O2 A /O2 B/ O2 C EU-B 004 005 006		
Number of ropes		4		5		6		6	
Rope type		K8x19 Ø 8 mm							
Suspension ratio		2:1							
Door locks types and certificate numbers		M4TZS8 / EU-DL 720							
Car safety gear type and cert. number		6071/0 – EU-SG 345							
Counterweight safety gear type and cert. number		6071/3 – EU-SG 214							
Max. bracket distance guide rails	mm	2500							
Min. and max. car weight	kg	800 - 1600							
Car dimensions	width	To be confirmed per order							
	depth								
	height								

See annex 1 for a general overview of the product.

### 3. Examinations and tests

The examination covered a check whether compliance with the Lift Directive 2014/33/EU is met, if possible based on the harmonized product standard EN 81-1:1998+A3:2010.

Issues not covered by or not complying these Standards are directly related to the above mentioned essential requirements based on the risk assessment, where applicable with the aid of harmonized A-and B-standards.

The examination included:

- Examination of the technical file (See annex 2).
- Check of performed calculations according to EN 81-1:1998+A3:2010.
- Examination of the representative model in order to establish conformity with the technical file.
- Inspections and tests to check compliance with the requirements.

### 4. Results

After the final examination the product and the technical file were found in accordance with the requirements. The functional tests passed without remarks. The load tests passed without remarks and did not lead to permanent deformations or loss of stability.

#### 4.1 Calculations

The calculations were found accordance with the requirements. As far as needed system limits such as maximum car mass and maximum bracketing distance for guide rails are given in chapter 5 with respect to the possibility to conduct final inspections on the installed products without the need of performing calculations.

#### 4.2. Measurements

The measurements were found accordance with the requirements.



## 5. Conditions

The type-examination certificate is only valid for products which are in conformity with the same specifications as the type certified product. Products deviating of these specifications need additional examination by Liftinstituut in order to determine whether a new type-examination certificate is necessary.

Additional examination shall be requested by the certificate holder.

All components and systems not explicitly described in this report shall fulfil the requirements of EN 81-1:1998+A3:2010.

Additional to or in deviation of 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:

- Nominal load 450 - 1200 kg.
- Number of persons 6 – 16.
- Maximum nominal speed 1,0 – 2,5 m/s.
- Maximum travel about 30 m.
- Maximum guide rail bracket distance 2500 mm.
- The machine is mounted in top of the well or in the machine room. Because there is no maintenance in the headroom of the well which can cause risk of a uncontrolled moving car, there are no fixing measures of the car required.
- The overspeed governor is located in the well or in the machine room, nearby the machine.
- The control cabinet is located in the vicinity of the highest landing door or in the machine room.
- The door of the control cabinet must be closed and relocked without a key.
- Only lifts without levelling, re-levelling and preliminary operations with doors open are allowed. Also the stroke of the car due to loading and un-loading does not exceed the maximum levelling accuracy of 20 mm, so no detection of the unintended car movement needs to be provided.

## 6. Conclusions

Based upon the results of the type-examination Liftinstituut B.V. issues a type-examination certificate.

The type-examination certificate is only valid for products which are in conformity with the same specifications as the type certified product. The type-examination certificate is issued based on the requirements that are valid at the date of issue. In case of changes of the product specifications, changes in the requirements or changes in the state of the art the certificate holder shall request Liftinstituut B.V. to reconsider the validity of the type-examination certificate.

Prepared by:



*E. Verkaik*  
Product Specialist Certification  
Liftinstituut B.V.

Certification decision by:





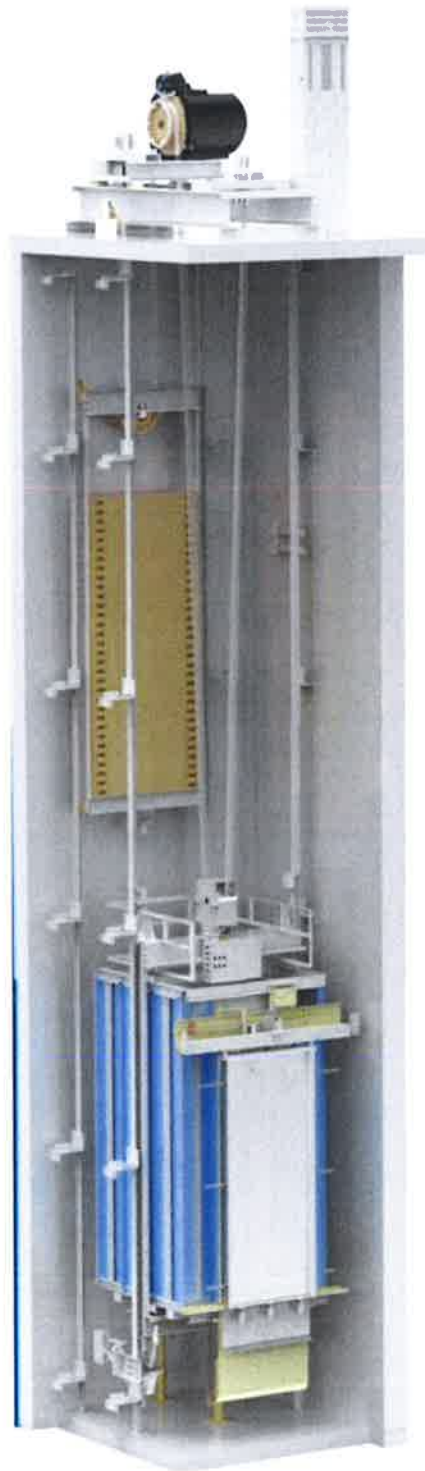
## Annexes

Annex 1 : General overview of the product



**SYMPHONY MRL**





**SYMPHONY SMR**

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NL17-400-1002-232-01 rev. 1

Date: 09-01-2020

Page 8 of 9

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

title	document number	date
Blue Comfort MRL Elevator System	-	-
Elevator operation maintenance manual	-	-

## 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
-	24-01-2017	Original
1	09-01-2020	Valid date changed, type names MRL 1100 and SMR 1000 changed into SYMPHONY MRL and SYMPHONY SMR, Address Head Office changed, Type-examination was EU-type examination