HF0224B23068A

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# 能 效 证 书

*电梯能量效率*

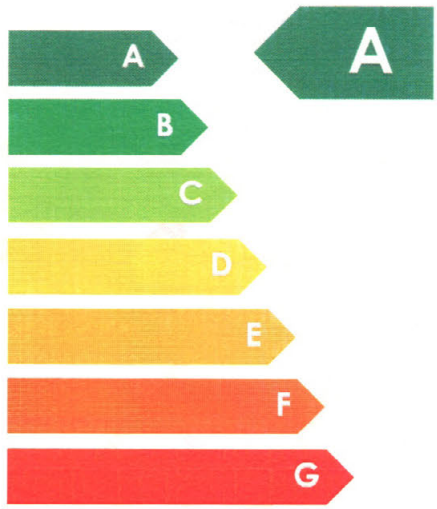
*依据 VDI 4707 第一部分*

证书编号：**086-03-026-00988**

签发日期：**09/03/2023**

| | | |
|---|---|---|
| **制造商** | ： | **恒达富士电梯有限公司** |
| **(名称和地址)** | | 浙江省湖州市南浔区练市镇练溪大道 688 号 |
| **测试地点** | ： | 浙江省湖州市南浔区练市镇练溪大道 688 号 |
| **电梯类型** | ： | **乘客电梯（无机房）** |
| **电梯型号** | ： | **FHNP60** |
| **报告编号** | ： | **086-03-011-06915** |

SWISS APPROVAL TECHNISCHE BEWERTUNG S.A. 作为独立的审核和认证机构，在此证明：以上的涉及的电梯设备的测试是在本机构检验员的目击下进行的。依据目击的测试以及对电梯的全面检查，我们确认此电梯设备具有资格粘贴以下能效等级标识：

| | |
|---|---|
| **制造商:** 恒达富士电梯有限公司<br>**地点:** 浙江省湖州市南浔区练市镇练溪大道 688 号<br>**电梯类型:** 乘客电梯（无机房）<br>**电梯型号:** FHNP60 | **能量效率等级**<br> |
| **额定载重:** 1600 kg<br>**额定速度:** 2.5 m/s<br>**每年运行天数:** 365 | |
| **待机功率需求:**<br>81.7 W<br>(能量需求等级 **B**)<br><br>**特定运行能量需求:**<br>0.510 mWh/(kg·m)<br>(能量需求等级 **A**) | |
| **根据 VDI 4707 使用类型 3 类**<br>能效等级的比较只在同等使用类别的条件下。<br><br>日期: 22/02/2023<br>参考标准: VDI 4707 第一部分（2009 年 3 月发行） | 在额定标称值下的电梯每年额定需求:<br>**4695 kWh** |

此证书在电梯未做变更的情况下有效期至 21/02/2028。

Simon Jiang

*检验员*

*Simon Jiang*

SWISS APPROVAL TECHNISCHE BEWERTUNG S.A. SWISS No.01 INSPECTION

Tzaferis

*签发代表*

*Tzaferis Meletis*




**SWISS APPROVAL TECHNISCHE BEWERTUNG S.A.**
Trapezountos and Digeni Akrita, Elefsina, 19200 Greece
tel +30 2105562130, fax +30 2105565155
www.swissapproval.ch, info@swissapproval.ch


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# ENERGY PERFORMANCE CERTIFICATE

*Lifts Energy Efficiency*
*according to VDI 4707 Part 1*

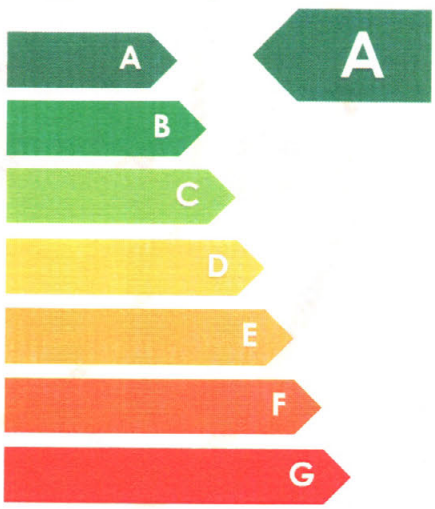
Certificate No : **086-03-026-00988**
Date of issue : **09/03/2023**

| | |
|---|---|
| **Manufacturer (Name & Address)** | : **HENGDA FUJI ELEVATOR CO., LTD.** NO.688, LIANXI AVENIDA, LIANSHI NANXUN HUZHOU, ZHEJIANG, CHINA |
| **Test Location** | : NO.688, LIANXI AVENIDA, LIANSHI NANXUN HUZHOU, ZHEJIANG, CHINA |
| **Lift Type** | : **Passenger Lift** (Machine-Room-Less) |
| **Lift Model** | : **FHNP60** |
| **Report No.** | : **086-03-011-06915** |

SWISS APPROVAL TECHNISCHE BEWERTUNG S.A. as an independent Inspection and Certification Body, hereby certify that the above mentioned Lift was witnessed by the body during testing. Following the witness of testing and fullness examination of the lift, we confirm that the lift facility is eligible to be labelled with the energy efficiency class as following:

| | |
|---|---|
| **Manufacturer:** | HENGDA FUJI ELEVATOR CO., LTD. |
| **Location:** | NO.688, LIANXI AVENIDA, LIANSHI NANXUN HUZHOU, ZHEJIANG, CHINA |
| **Lift Type:** | Passenger Lift (Machine-Room-Less) |
| **Lift Model:** | FHNP60 |
| **Nominal load:** | 1600 kg |
| **Nominal speed:** | 2.5 m/s |
| **Operating days per year:** | 365 |
| **Standby Demand:** 81.7 W (Energy demand class **B**) | **Travel Demand:** 0.510 mWh/(kg·m) (Energy demand class **A**) |
| **Usage category 3 according to VDI 4707** Comparison of energy efficiency classes is only possible under equal usage category. Date: 22/02/2023 Reference: VDI 4707 Part 1 (issue 03-2009) | |

**Energy efficiency class**




Nominal demand per year for nominal values as shown:
**4695 kWh**

This certificate is valid until 21/02/2028 without modification of the lift.

Simon Jiang
***Inspector***
*Simon Jiang*

SWISS APPROVAL TECHNISCHE BEWERTUNG S.A. SWISS INSPECTION No.01

TZAFERIS

***on behalf of Company***
*Tzaferis Meletis*




**SWISS APPROVAL TECHNISCHE BEWERTUNG S.A.**
Trapezountos and Digeni Akrita, Elefsina, 19200 Greece
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www.swissapproval.ch, info@swissapproval.ch

# TEST REPORT Lifts Energy Efficiency
According to VDI 4707 Part 1
电梯能效测试报告（依据 VDI 4707 第一部分）

AR No. 报告编号 : 086-03-011-06915
Date of issue 签发日期 : 09/03/2023

| | |
|---|---|
| **Manufacturer**<br>**制造商** | HENGDA FUJI ELEVATOR CO., LTD.<br>NO.688, LIANXI AVENIDA, LIANSHI NANXUN HUZHOU, ZHEJIANG, CHINA<br>恒达富士电梯有限公司<br>浙江省湖州市南浔区练溪大道688号 |
| **Operator**<br>**运行者** | HENGDA FUJI ELEVATOR CO., LTD.<br>NO.688, LIANXI AVENIDA, LIANSHI NANXUN HUZHOU, ZHEJIANG, CHINA<br>恒达富士电梯有限公司<br>浙江省湖州市南浔区练溪大道688号 |
| **Date of application**<br>**申请日期** | 22/02/2023 |
| **Inspection Body / Department**<br>**检验机构/部门** | SWISS APPROVAL TECHNISCHE BEWERTUNG S.A.<br>Trapezountos & Digeni Akrita, Elefsina, 19200 Greece |
| **Test object**<br>**测试对象** | Passenger Lift (Machine-Room-Less)<br>乘客电梯（无机房） |
| **Type**<br>**型号** | FHNP60 |
| **Serial No.**<br>**序列号** | 2016-03314 |
| **Test Specification**<br>**测试规范** | VDI 4707 Part 1 (issue 03-2009)<br>VDI 4707 第一部分（2009年3月发行） |
| **Inspector**<br>(Name & Signature):<br>**检验员**（姓名和签字） | Simon Jiang |



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Trapezountos & Digeni Akrita, Elefsina, 19200 Greece
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## 1 Description of the Test Object 测试对象

Passenger Lift (Machine-Room-Less)
乘客电梯（无机房）

Technical Data技术参数:

| | | | |
|---|---|---|---|
| Lift Model<br>电梯型号 | FHNP60 | Series No.<br>序列号 | 2016-03314 |
| Lifting Height [m]<br>提升高度 | 55 | Usage Category<br>使用类型 | 3 |
| Rated Speed [m/s]<br>额定速度 | 2.5 | Average Travel Time [h]<br>平均运行时间 | 1.5 |
| Mode of Drive<br>驱动方式 | Tractor | Average Standby Time [h]<br>平均待机时间 | 22.5 |
| Nominal Load [kg]<br>额定载重 | 1600 | Load Factor: 0.7/1/1.2<br>载荷系数 | 0.7 |

**Remark备注:**

Load factor: 载荷系数
- = 1 Load spectrum特定的载荷谱
- = 0.7 Lifts with counterbalance weight (car weight plus 40 % to 50 % of the nominal weight)带有平衡重量（轿厢重量加上30%~50%的额定载重）的电梯
- = 1.2 Lifts without the compensation weight or a compensation weight of up to 30 % of the car weight没有补偿重量或补偿重量小于30%轿厢重量的电梯

## 2 Documents for the basis of the tests 测试的基本依据

Application Form for Lifts Energy Efficiency Certification
电梯能效认证申请表
VDI 4707 Part 1 Lifts - Energy efficiency, issued March 2009.
VDI 4707第一部分（2009年3月发行）

## 3 Testing Procedures 测试的流程

### 3.1 Defaults 要求

The applied procedure is described in VDI 4707 part 1.
使用VDI 4707 第一部分中规定的测试流程。

### 3.2 Tests in Detail 测试的细节

### 3.2.1 Measuring of energy consumption levels 测量能效消耗水平:

- In power circuit 动力电路:

  Standby 待机功率 [W], reference trip 参考行程能耗 [Wh]

- In light circuit 照明电路:

  Standby 待机功率 [W], reference trip 参考行程能耗 [Wh]



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### 3.2.2 Determination of usage category 确定使用类型:

by number of trips 依据行程次数

| | | |
|---|---|---|
| Travel rate per day<br>每天的行程次数 | 250 | Usage Category:<br>使用类型 |
| Average travel distance [m]<br>平均行程距离 | 55 | **3** |

## 4 Details of test procedure 测试的详细流程

### 4.1 Test location 测试地点

NO.688, LIANXI AVENIDA, LIANSHI NANXUN HUZHOU, ZHEJIANG, CHINA
浙江省湖州市南浔区练溪大道688号

### 4.2 Date of test 测试时间

22/02/2023

### 4.3 Participants 参与人员

Simon Jiang - SWISS APPROVAL TECHNISCHE BEWERTUNG S.A.
Liu Wanbin 刘万宾 - HENGDA FUJI ELEVATOR CO., LTD. 恒达富士电梯有限公司

### 4.4 Inspections means which have been used 使用的测试设备

Fluke 1736 Power Logger 福禄克1763能量记录仪
Serial Number 序列号: 35463682

## 5 Findings 测量数据

The measurements have been carried out as described in VDI 4707 Part1, issued March 2009.
测量是根据VDI 4707第一部分（2009年3月发行）的要求进行。

Number of Reference trips 参考行程次数: 3

| **Standby P [W]<br>待机功率** | 1 | 2 | 3 |
|---|---|---|---|
| **Measurement Result<br>测量结果** | 82 | 81 | 82 |

| **Travel E [Wh]<br>参考行程功耗** | 1 | 2 | 3 |
|---|---|---|---|
| **Measurement Result<br>测量结果** | 129 | 128 | 128 |

## 6 Test result 测试结果

| | |
|---|---|
| **Usage Category** | **3** |



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| **使用类型** | |
|---|---|

| **Travel 运行** | **Test Result 测试结果** |
|---|---|
| E reverence trip [Wh]<br>参考行程能量需求 | 128.3 |
| E travel/spec [mWh/kg·m]<br>特定的运行需求 | 0.510 |
| E travel/day [Wh]<br>日运行能量需求 | 11025.0 |
| Energy Demand Class (Travel)<br>运行能量需求等级 | **A** |

| **Standby 待机** | **Test Result 测试结果** |
|---|---|
| P standby [W]<br>待机功率需求 | 81.7 |
| W standby/day [Wh]<br>日待机能量需求 | 1837.5 |
| Energy Demand class (Standby)<br>待机能量需求等级 | **B** |

| **Energy Consumption 能耗** | **Test Result 测试结果** |
|---|---|
| E lift/day [Wh]<br>整梯日能量需求 | 12862.5 |
| E lift/year [kWh]<br>整梯年额定能量需求 | 4695 |

| **Energy Efficiency 能效** | **Test Result 测试结果** |
|---|---|
| E lift/spec [mWh/kg·m]<br>整梯特定的能量需求 | 0.595 |
| Energy efficiency class (Lift)<br>整梯能效等级 | **A** |

## 7 Remarks 备注

Tested in test tower.
测试是在测试塔中进行的。

(END 结束)



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