SPECIFICATION FOR APPROVAL

CUSTOMER : _____

CUSTOMER PART NO. : _____

CUSTOMER APPROVED	APPROVED BY	CHECKED BY	PREPARED BY
	[redacted]	[redacted]	[redacted]

MODEL NO. : AD1212HB-A71GL(9275)

DESCRIPTION : _____

SPEC NO. : SA-0120170725010

ISSUE DATE : 2020.02.03

REVISION : A01

THIS OFFER IS MADE ACCORDING TO YOUR CURRENT INQUIRY. UNLESS OTHERWISE REVISED, THIS SPECIFICATION WILL BE FINAL FOR ALL FUTURE PRODUCTION OF ORDERS FROM YOUR RESPECTED COMPANY

KINDLY STUDY IN DETAILS AND RETURN TO US THE DUPLICATE DULY SIGNED AS YOUR CONFIRMATION OF SAME.

[redacted]

ADDA CORP.
REGISTERED TO ISO 9001
ISO/TS 16949
CERTIFICATE NO.A8035

ADDA CORPORATION

Revised Record

Rev.	Revision Description	Change page	Date
A00	Preliminary		2017.07.26
A01	修正圖面	4/5	2020.02.03
	[redacted]		

D A T A - S H E E T

Engineering

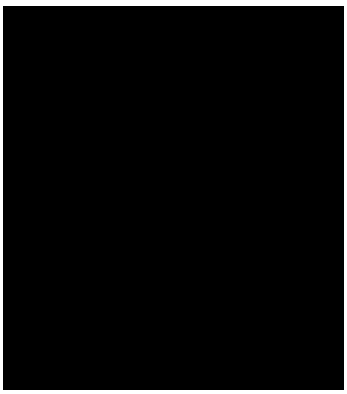
BRUSHLESS AXIAL COOLING FANS

Printed On: 20/02/03

Customer	:	Ref: (RoHS)
Adda Model No	: AD1212HB-A71GL(9275)	
Samples attached	: Piece(s),	
Safety Approval	: UL,CUL,TUV,CE	TUV:EN 60950-1:2006+A11+A1+A12+A2 UL:UL507 CE:EN 61000-6-1:2007 EN 61000-6-3:2007+A1

Specifications

ITEM	SPECIFICATION / CONDITION
DIMENSIONS	: 120x120x25 mm
BEARING TYPE	: TWO BALL
RATED VOLTAGE	: 12 VDC
OPERATING VOLTAGE RANGE	: 10.8 VDC — 13.2 VDC
START－UP VOLTAGE	: 7 VDC , NORMAL
REAL CURRENT	: 0.29 Amp
REAL POWER	: 3.48 Watt
RATED CURRENT	: 0.37 Amp + 10 %MAX
RATED POWER	: 4.44 Watt
RATED SPEED	: 2200 RPM ± 10 %
	(IN FREE AIR AT RATED VOLTAGE)
AIR FLOW	: 78.902 CFM (min.: 71.011 CFM)
AIR FLOW	: 2.232 CMM (min.: 2.008 CMM)
	(IN FREE AIR AT RATED VOLTAGE)
STATIC AIR PRESSURE	: 0.141 Inch H_2O (min.: 0.114 Inch H_2O)
STATIC AIR PRESSURE	: 3.581 mm H_2O (min.: 2.900 mm H_2O)
	(IN FREE AIR AT RATED VOLTAGE)
NOISE LEVEL	: 39.3 dB (A) (max.: 43.3 dB(A))
MOTOR PROTECTION	: BY IC
POLARITY PROTECTION	: YES
CONNECTION LEAD TYPE	: WIRE, AWG# 24
LIFE EXPECTANCY	: 70000 Hours at 40℃ / 65% RH
NET WEIGHT	: 156 Gram.
PACKING	: 60 pcs. Per Export Carton.



Unless otherwise stated, the relative humidity is 65%, and the temperature is 25℃ for the standard testing.

Should you have any doubt, please refer to the environmental conditions specified in the acknowledgement document.

SPECIFICATION

1 · 0 SCOPE

1.1 If the information or other related document is inconsistent with this acknowledgement document, please refer to the acknowledge document.

1.2 This documentation defines the mechanical & electrical characteristics of DC brushless fans.

1.3 The specification of this product is described in details in the acknowledgement document. No guarantee is given to our product under the use of over specifications.

1.4 For any change or amendment to the specifications, such change will be noticed in writing beforehand.

1.5 If the product is used on the MIS system, please specify the specification in the purchase order.

2 · 0 MATERIAL

2 · 1 Frame : UL94V-0 Glass Filled polyester (P.B.T)

2 · 2 Fan Blade : UL94V-0 Glass Filled polyester (P.B.T)

2 · 3 RoHS : (V) YES

HF : ( ) YES

3 · 0 DIMENSIONS & CONSTRUCTION

All dimensions, Direction of rotation and air flow were specified as per drawing attached.

4 · 0 CHARACTERISTICS & DEFINITION

4 · 1 All rated characteristics were specified as per data sheet enclosed.

4 · 2 Rated Current : Rated Current shall be measured after 3 minutes of continuous rotation at rated voltage.

4 · 3 Rated Speed : Rated Speed shall be measured after 3 minutes. of continuous rotation at rated voltage.

4 · 4 Start Voltage : The voltage which is able to start the fan to operate by suddenly switching ' ON ' .

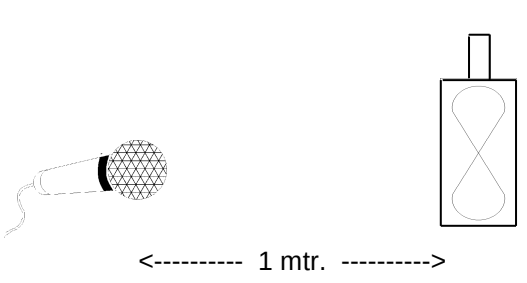
4 · 5 Input Power : Input Power shall be measured after 3 minutes of continuous rotation at rated voltage.

4 · 6 Locked Rotor Current : Locked current shall be measured within one minute of rotor locked, after 3 minutes of continuous rotation at rated voltage in clean air.

4 · 7 Air Flow & Static Pressure : The air flow data and static pressures should be determined in accordance with AMCA-210 standard in a doublechamber testing with intake – side measurement.

4 · 8 Noise Level : The measurement of noise level is carried out with reference to ISO7779 in a semi-anechoic chamber with the microphone positioned 1 meter from the air intake. Testing fan shall be hung in clean air .

NOISE LEVEL MEASUREMENT



5.0 MECHANICAL INSPECTION

5.1 Rotation Direction
Counterclockwise when look into impeller side.

5.2 Protection
All fans have integrated protection against locked rotor condition so that there will be no damage to winding or any electronic component.
Restarting is automatic as soon as any constraint to rotation has been released.
As fan placed at dead angle position, and the switch was changed from off to on. Restarting was automatic normal as soon as and proved that this fan is good fan.

5.3 Locked Rotor Protection
No damage shall be found after 72 hours continuously at condition of rotation locked.
Restarting is automatic as soon as constraint to running has been released.

5.4 Avoid the damage, check the correct voltage and proper polarity before connecting with power.

5.5 Free Drop Shock
In minimum package condition, the fan should withstand drops on any three faces from a height of 30cm onto a wood board of 10mm thick.

5.6 Please do not stick a grease and/or an oil to the fan housing or blade which may have a harmful influence by a chemical reaction at high humidity.

5.7 If the fan is reinstalled, please pay special attention to the noise due to the vibration (or resonance).

5.8 During the testing of the fan, please make sure the finger guard is used for safety.

6.0 ELECTRICAL INSPECTION

6.1 Insulation Resistance
Not less than 10M ohm between housing and positive end of lead wire (red) at 500V DC.

6.2 Dielectric Strength
No damage should be found at 500 VAC for 60 seconds, measured with 1mA trip current between housing and positive end of lead wire.

6.3 Life Expectancy
The continous duty life at given temperature after which, 90% of testing units shall still be running.

6.4 While the fan is running, do not intentionally lock the fan for a long time since the overheating of the motor produced by the long-time locking will damage the fan.

7.0 ENVIRONMENTAL

7.1 Improper use such as disassembling the fan, being covered with dust, or dipping the fan in water that results in defects is not covered in the warranty. Do not use the fan in the environment with corrosive air or liquid.

7.2 Operating Temperature / Humidity
-10℃ to +70℃ at humidity 65%+/-20% RH.

7.3 Storage Temperature
All function shall be normal after 500 hours storage at -40℃ to +70 ℃ with a 24 hour recovery period at room temperature.

7.4 Humidity
After 96 hours, 95% RH, 40+/-2℃ per MIL-STD-202F, method 103B humidity test, the measured data on insulation resistance and dielectric strength shall meet the specificaiton.

7.5 Do not place or store the fan in the environment with high/low temperature/humidity. If the fan is stored for more than 6 months, functional test is highly recommended before using.

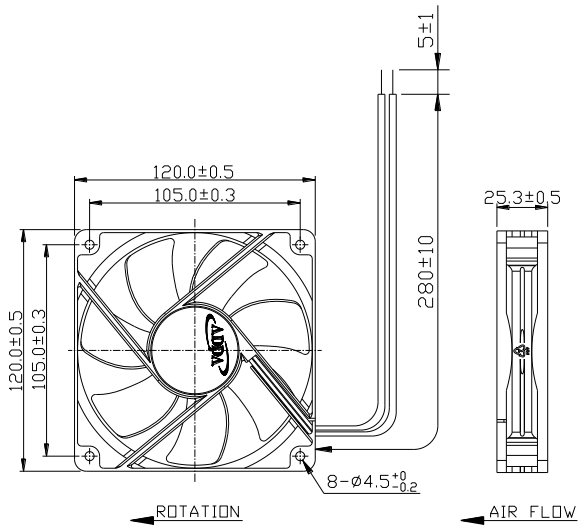
8.0 REMARKS

8.1 Material and construction are subject to change without advance notice. The changes should be within specification.

8.2 All fans shall meet the quality inspection under sampling plan MIL-STD-105E as follow:

Critical	0.25%
Major	1.00%
Minor	2.50%

9.0 OUTLINE STYLING & DIMENSIONS



LEAD WIRES : UL 1007, AWG24 ; L = 280± 10 mm
Red = positive ; Black = negative.

10.0 Notes:

10.1 Please do not touch and push Fan Blade with fingers or others, fan blade and ball bearings may be damaged and it causes noise defect.

10.2 Do not carry the fan by its lead wires.

10.3 If the fan does not have the polarity protection function, the connection of the colored wires should be red + red, and black + black, or else the fan will be damaged in no time.

10.4 For the models without reverse connection of polarity protection, please do not connect the lead wire in reverse

10.5 Please don't install this fan in series with 2x voltage inputs. For example, if a single fan rated at 12V, then don't install two of them in series with 24V input.

10.6. Every specific fan is designed for its certain application (project). Therefore, if you want to use this fan in other application (project), please inform ADDA first so that we can confirm whether there is any issue which might be incurred from the reason of this different application (project) or not.

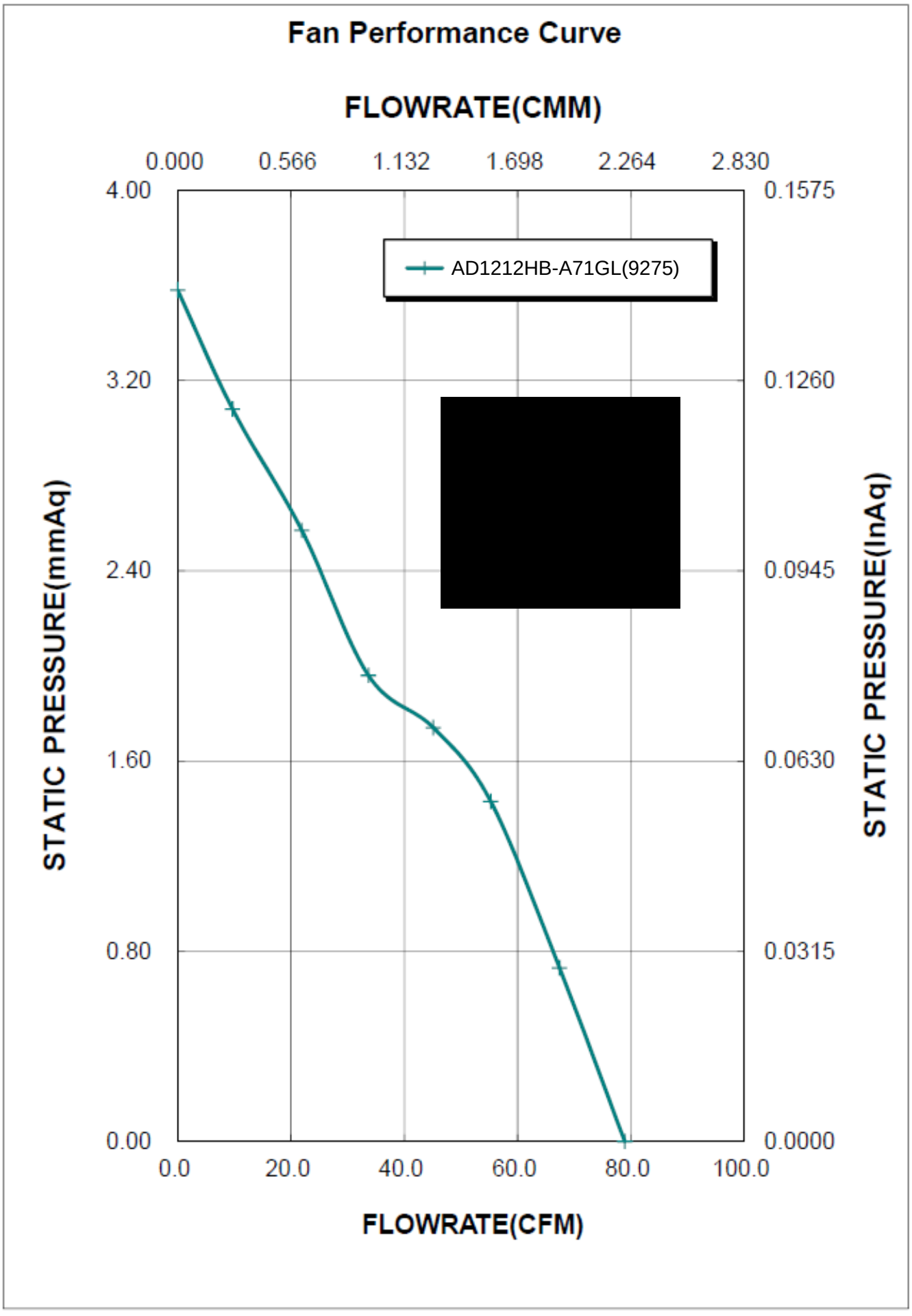
10.7 The"Life Expectancy" of this fan has not been evaluated for use in combination with any end application. Therefore,the Life Expectancy in the Test Reports(L10 and MTTF Report) that relate to this fan is for reference only and shall not construe any kind of warranty of ADDA to the life of any specific fan,either expressed or implied.

10.8 The period of product warranty,unless otherwise agreed by ADDA in written,shall be 12 months starting from the date of production.

10.9 In Lead Wire, there is a possibility to come off from frame.

10.10 In order to avoid abnormal bumping or interference caused by deformed impeller when fan is fastened , suggested distance of at least 0.5mm is strongly reserved in front of the frame (the sight from the impeller face) .

10.11 Hot swapping or Hot plugging is not allowed to cause damage to fans . Notice in advance is strongly requested if design for Hot swapping or Hot plugging is needed


Fan Performance Curve
FLOWRATE(CMM)
0.000
0.566
1.132
1.698
2.264
2.830
4.00
3.20
2.40
1.60
0.80
0.00
0.1575
0.1260
0.0945
0.0630
0.0315
0.0000
AD1212HB-A71GL(9275)
STATIC PRESSURE(mmAq)
STATIC PRESSURE(InAq)
0.0
20.0
40.0
60.0
80.0
100.0
FLOWRATE(CFM)

Zertifikat *Certificate*

TÜV

Zertifikat Nr. *Certificate No.*
R 50068602

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0020

Ihr Zeichen *Client Reference*	**Unser Zeichen** *Our Reference*	**Ausstellungsdatum**	*Date of Issue (day/mo/yr)*
12031916	ZTW2-MRC- 11005418 015	09.05.2006	

Genehmigungsinhaber *License Holder*

[redacted]

Fertigungsstätte *Manufacturing Plant*

[redacted]

Prüfzeichen *Test Mark*

TÜV Rheinland Product Safety | BAUART GEPRÜFT / TYPE APPROVED

Geprüft nach *Tested acc. to*
EN 60950-1:2001+A11

Zertifiziertes Produkt (Geräteidentifikation)
Certified Product *(Product Identification)*

Ventilator (DC Fan)

Wie Blatt (As Page) 01

Ergänzung (Addition)

Bezeichnung (Type Designation)	: ADZ1Z2Z3Z4-Z5Z6Z7Z8
Z1 steht für (stands for)	: 20, 02, 03, 35, 04, 45, 05, 50, 06, 07, 08, 09, 12 oder (or) 75
Z2 steht für (stands for)	: 05, 12, 24 oder (or) 48
Z3 steht für (stands for)	: U, H, M, L oder (or) D
Z4 steht für (stands for)	: B, S oder (or) X
Z5 steht für (stands for)	: A, C, D, F, J, K, Q, R, Y oder (or) G
Z6 steht für (stands for)	: 5, 7, 9, A, B oder (or) C
Z7 steht für (stands for)	: 0, 1, 2, 3, 4, 6, 8, A oder (or) B
Z8 steht für (stands for)	: freibleibend (blank) oder (or) GL

Lizenzentgelte - Einheit
License Fee - Unit

[redacted]

TÜV Rheinland Product Safety GmbH — TÜV Rheinland — Zertifizierungsstelle — BS

ANLAGE (Appendix): 1

Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde.
Das Produkt entspricht den o.g. Anforderungen, die Herstellung wird überwacht.
This certificate is based on our Testing and Certification Regulation. The product fulfills above-mentioned-requirements, the production is subject to surveillance.

Zertifizierungsstelle

TÜV Rheinland Product Safety GmbH, Am Grauen Stein, D-51105 Köln

Tel.:(+49/221)8 06 - 13 71 Fax:(+49/221)8 06 - 39 35 e-mail: Althofff@dc.tuv.com

Dipl.-Ing. B. Scheirer

Zertifikat *Certificate*

TÜVRheinland®

Zertifikat Nr. *Certificate No.*
R 50068602

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0117

Ihr Zeichen *Client Reference*	**Unser Zeichen** *Our Reference*	**Ausstellungsdatum**	*Date of Issue* (day/mo/yr)
12086425/ST	ZTW1-YML- 11005418 099	13.04.2016	

Genehmigungsinhaber *License Holder*

[redacted]

Fertigungsstätte *Manufacturing Plant*

[redacted]

Prüfzeichen *Test Mark*

TÜVRheinland ZERTIFIZIERT
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Geprüft nach *Tested acc. to*
EN 60950-1:2006+A11+A1+A12+A2

Zertifiziertes Produkt (Geräteidentifikation)
Certified Product *(Product Identification)*

Ventilator (DC Fan)

wie Blatt (as page) 01

Änderung
(Change)

Prüfgrundlage : siehe oben
(Test Requirement) (see above)

Lizenzentgelte - Einheit
License Fee - Unit

[redacted]

ANLAGE (Appendix): 1 - 1.79

Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde und es bestätigt die Konformität des Produktes mit den oben genannten Standards und Prüfgrundlagen. Zusätzliche Anforderungen in Ländern, in denen das Produkt in Verkehr gebracht werden soll, müssen zusätzlich betrachtet werden. Die Herstellung des zertifizierten Produktes wird überwacht.
This certificate is based on our Testing and Certification Regulation and states the conformity of the product with the standards and testing requirements as indicated above. Any additional requirements in countries where the product is going to be marketed have to be considered additionally. The manufacturing of the certified product is subject to surveillance.

TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg

[redacted]

Zertifizierungsstelle

TÜV Rheinland LGA Products GmbH TÜVRheinland Zertifizierungsstelle

Dipl.-Ing. (FH) A. Klinker

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