

TEST REPORT

REPORT NO.: CTNT2606230090102R



Product name : DISAI BLOWER

Model No : FC10.5

Applicant : Shanghai Disai Company Limited.

Test procedure : Entrustment Test

Shenzhen Zhongwei Testing Technology Co.,Ltd.



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TEST REPORT

Commission Regulation (EU) 2024/1834 of 3 July 2024 with regard to Ecodesign requirements for fans driven by motors with an electric input power between 125 W and 500 kW.

Report Number.....: CTNT2606230090102R

Date of issue.....: July 24, 2026

Laboratory Name.....: Shenzhen Zhongwei Testing Technology Co.,Ltd.

Testing location/ address.....: Room 1A106 & 2C230, No.109, Lijia Road, Henggang, Henggang Subdistrict, Longgang District, Shenzhen, Guangdong, China

Prepared By(Reporting Engineer)....: Carl Li

Reviewed By(Supervisor).....: Oliver Long

Approved by(Chief Engineer).....: Flight Lee



Applicant's name.....: Shanghai Disai Company Limited.

Address.....: NO33,LuBin Rd,PuDong New Area,Shanghai,China

Manufacturer name.....: Shanghai Disai Company Limited.

Address.....: NO33,LuBin Rd,PuDong New Area,Shanghai,China

Test specification:

Standard.....: (EU) No 2024/1834
ISO 5801:2017

Sample arrival time.....: June 23, 2026

Test Period.....: July 14, 2026-July 15,2026

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General remarks:

"(See Enclosure #)" refers to additional information appended to the report.

"(See appended table)" refers to a table appended to the report.

Throughout this report a ☐ comma / ☒ point is used as the decimal separator.

Other important notes:

1. If you have any objection to the inspection results in this report, please submit a written report to the company within 15 days from the date of receipt of the report.
2. Entrusting test only responsible for the incoming samples, and the test results are used by the entrusting party to understand the quality of the samples.
3. This test report is invalid without the "test stamp".
4. This report may not be reproduced in part without permission to avoid ambiguous interpretation.
5. Test items with "*" are subcontracted items.
6. The remaining samples under test must be collected within three months of receipt of the inspection report. If the samples are not collected within the time limit, the laboratory will handle them by selves.

Company name: Shenzhen Zhongwei Testing Technology Co., Ltd.

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Email: admin@cnt-cert.com

Website: www.cnt-cert.com

General product information:

- This product is DISAI BLOWER.
- INPUT: 3~ 400V 50Hz
- Product nameplate Style:

www.disaico.com			
DISAI BLOWER			
SERIAL NO.		MFG DATE / YOM	
FAN MODEL: FC 10.5 0.18KW-2P 3~400V 50Hz			
ErP 2026 / Reg. (EU) 2024/1834			
TYPE: FORWARD CURVED CENTRIFUGAL FAN			
EFF: 68.1%	VSD: NO	MC: B	EC: TOTAL N: 57
BEP DATA	Pe 0.216 kW	qv 500 m3/h	pf 1059 Pa
n 2723 rpm	eta_min 39.5%	ISO 5801:2017	
Report No. CTNT2606230090102R		1094869945 	

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Test item description.....: DISAI BLOWER

Trade Mark.....: Disai

Model/Type reference.....: FC10.5

Ratings.....: 3~ 400V 50Hz

Possible test case verdicts:

- test case does not apply to the test object.....: N/A
- test object does meet the requirement.....: P (Pass)
- test object was not evaluated for the requirement: -
- test object does not meet the requirement.....: F (Fail)

Test data for Device:

Test Voltage/Frequency.....: 3~ 400V 50Hz

Test power(W): 216W

Test flow rate.....(m³/s): 0.139

Sound power level.....dB(A): 78.7

Attachments:

- Samples photo.

Summary of testing:

The Centrifugal fan meets the requirements of according to the implementation measure Commission Regulation (EU) No 2024/1834 of 3 July 2024

Uncertainty of measurement:

Voltage: $U_{rel}=0.10\%(k=2)$

Current: $U_{rel}=0.10\%(k=2)$

Power: $U_{rel}=0.06\%(k=2)$

Temperature: $U=0.2^{\circ}\text{C}(k=2)$

Relative Humidity: $U=1.0\%\text{RH}(k=2)$

Pressure: $U=0.15\%\text{FS}(k=2)$

Atmospheric Pressure: $U_{rel}=0.05\%(k=2)$

Rotational Speed: $U_{rel}=0.2\%(k=2)$

Airflow Rate: $U_{rel}=2\%(k=2)$

Generalremarks:

The test results presented in this report relate only to the object tested.

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"(see appended table)" refers to a table appended to the report.

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Remark:

- This product is Forward curved < 5 kW and backward inclined centrifugal fans.

Test Report Form No.....: (EU) No 2024/1834

Version.....: 1.0

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(EU) No 2024/1834

Clause	Requirement - Test	Result - Remark	Verdict
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ANNEX II	ECODESIGN REQUIREMENTS FOR FANS				P
1.	Minimum fan efficiency requirements				P
	With effect from 24 July 2026, the following rules shall apply:				P
	1.Fans, except jet fans, cross flow fans and fans referred to in point 7, shall have a fan efficiency (η) equal to or larger than the minimum fan efficiency ($\eta_{\min}$), which is a function of the electric input power P_e (in kW) and minimum efficiency grade N following the equations:				N/A
	— for fans with $P_e < 10$ kW: $\eta_{\min} = 4,56 \ln(P_e) - 10,5 + N$ [%]	$\eta_{\min}=39.51\%$			P
	— for fans with $P_e \geq 10$ kW: $\eta_{\min} = 1,1 \ln(P_e) - 2,6 + N$ [%]				N/A
	2.Jet fans shall have a fan efficiency (η_r) equal to or larger than the minimum jet fan efficiency ($\eta_{r,\min}$), which is a function of the electric input power P_e (in kW) and minimum efficiency grade N following the equations:				N/A
	— for jet fans with $P_e \geq 750$ W and < 10 kW: $\eta_{r,\min} = 7,32 \ln(P_e) - 21,25 + N$ [%]				N/A
	— for jet fans with $P_e \geq 10$ kW: $\eta_{r,\min} = 1,73 \ln(P_e) - 8,35 + N$ [%]				N/A
	3.Cross flow fans shall have a minimum total fan efficiency (B,D) of at least 0,21 (21 %) over the entire power range.				N/A
	4.The fan efficiency shall be established in accordance with the measurement and calculations methods set in Annex III.				P
	Except for cross flow fans, the values of the minimum efficiency grade N are set out in Table 1 per fan type, efficiency category (static or total) and measurement category (A to E) as appropriate				P
Table 1	Minimum efficiency grades				P
	Fan type	Measurement category	Efficiency	Minimum efficiency grades (N)	P
	Axial fan	A, C	static	50	N/A
		B, D	total	64	N/A
	Forward curved < 5 kW and backward inclined centrifugal fans	A,C	static	52	N/A
		B,D	total	57	P
	Other centrifugal fans	A, C	static	64	N/A
		B, D	total	67	N/A
	Mixed flow fans	A, C	static	$57 + 7 \cdot (\alpha - 45) / 25$	N/A
		B, D	total	67	N/A
	Jet fans ≥ 750 W	E		50	N/A

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	5.The calculation of the minimum efficiency grade N for mixed flow fans involves the fan flow angle α , in degrees rounded to the nearest integer, established in accordance with point 4 of Annex III.		N/A
	6.For fans having the following characteristics, the values of the minimum efficiency grades N set out in Table 1 shall be multiplied by the corresponding factor(s), as applicable:		N/A
	Fans characteristics	Forward curved centrifugal fans	P
	Dual use fans designed for both ventilation under normal conditions and emergency use as set out in Article 1(3) point b		N/A
	Reversible fans		N/A
	Low noise fans		N/A
	7.For centrifugal fans with specific speed $\sigma_{BEP} < 0,12$, electric input power $P_e < 10$ kW, measurement category B or D and efficiency category 'total', the minimum fan efficiency (η_{min}) is a function of σ_{BEP} as follows: $\eta_{min} = 2,95 * \sigma_{BEP} + 0,2$.		N/A
2.	Product information requirements on fans		P
	1.With effect from 24 July 2026, the information on fans set out in points 2(a) to (o) shall be visibly displayed in:		P
	(a)the technical data sheet or user manual supplied with the fan, unless an internet link or a QR code linking to the free access website referred to in point (c) is supplied with the fan. A pictogram as in ISO 7000:2019 reference n°1641 is displayed next to the link or QR code;		P
	(b)the technical documentation for the purposes of conformity assessment pursuant to Article 4, in the order as listed in points 2(a) to (q), the exact wording does not need to be repeated, information may be displayed using graphs, figures or symbols rather than text;		P
	(c)free access websites of the manufacturer of the fan, its authorised representative or the importer for a period of at least 20 years after the placing on the market of the last unit of the model concerned.		P
	2.The following information shall be displayed:		P
	(a)fan type: select one of the following types: axial fan, forward curved centrifugal fan, backward curved centrifugal fan, backward inclined centrifugal fan, cross flow fan, mixed flow fan, jet fan;	Forward curved centrifugal fan	P
	(b)fan efficiency (η or η_r), either as a number rounded to the nearest third decimal, or as a percentage (with symbol '%') rounded to the nearest decimal;		P

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Clause	Requirement - Test	Result - Remark	Verdict
	(c)whether the calculation of fan efficiency assumed use of a VSD and if so, whether the VSD is integrated in the fan or the VSD must be installed with the fan;		N/A
	(d)measurement category used to determine the fan efficiency (A-E);	B	P
	(e)efficiency category (static or total), except for jet fans;	Total	P
	(f)efficiency grade N at BEP or T_m , except for cross flow fans;		P
	(g)the electric input power P_e (in kW, rounded to the nearest third decimal), volume flow rate q_v (in m ³ /h rounded to the nearest integer, or alternatively, when flow rate is $\geq 0,50$ m ³ /s in m ³ /s rounded to the nearest second decimal), and applicable pressure difference Δp (in Pa, rounded to the nearest integer) at BEP or T_m ;	Refer to measurement section	P
	(h)special characteristics: select one or more of the following: dual use fan, reversible fan, low noise fan;		N/A
	(i)DC voltage lower than 100 V, with answer 'yes' or 'no';		N/A
	(j)list of all significant elements supplied with the fan;		N/A
	(k)specific speed σ_{BEP} , only for centrifugal fans with specific speed $\sigma_{BEP} < 0,12$, electric input power $P_e < 10$ kW, measurement category B or D and efficiency category 'total';		N/A
	(l)fan speed in revolutions per minute (in rpm, rounded to the nearest integer) at BEP or T_m ;	2723rpm	P
	(m)the specific ratio, rounded to the nearest second decimal;		P
	(n)manufacturer's name, registered trade name or registered trademark, and the address at which the manufacturer can be contacted;	See Product nameplate and user manual	P
	(o)the model identifier and, where appropriate, other codes and marks sufficient for the product to be unequivocally and easily identified;		P
	(p)information relevant for facilitating disassembly, recycling or disposal at end-of-life;	See user manual	P
	(q)information relevant to minimise impact on the environment and ensure optimal life expectancy as regards installation, use and maintenance of the fan.	See user manual	P
	For custom fans, the information listed in points (a) to (q) shall be provided with the commercial offers provided to the customers instead of on the free access websites.		P
	The information referred to in points 2(a), 2(b), 2(c), 2(d), 2(e) and 2(f) and year of manufacture shall be durably marked on or near the rating plate of the fan, and for point 2(c) one of the following forms of words must be used if applicable:		N/A
	— 'A variable speed drive must be installed with this fan',		N/A

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Clause	Requirement - Test	Result - Remark	Verdict
	— 'A variable speed drive is integrated within the fan'.		N/A
	Manufacturers shall provide information in the user manual on specific precautions to be taken when fans are assembled, installed or maintained, including cleaning.	See user manual	P

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Noise test					
Position	1	2	3	4	5
Sound power level (dB)	78.1	78.7	79.7	78.4	78.8
Average Sound power level (dB)	78.7				

Summary of test results				
Item	Symbol	Unit	Tested	Verdict
Barometric pressure	-	kPa	99.8	P
Dry-bulb temperature of ambience	-	°C	27.1	P
Relative Humidity	-	%	55.9	P
Applied voltage / Herz	-	V/Hz	3~ 400V 50Hz	P
Fan type	-	-	Forward curved centrifugal fans	P
Measurement category	-	-	B	P
Efficiency category	-	-	Total Pressure Efficiency	P
Efficiency grade	N	-	57	P
Sound power level	-	dB(A)	78.7	P
Volume flow rate	q _v	m ³ /s	0.139	P
Fan total pressure	p _f	Pa	1058.6	P
Electric input power	P _e	kW	0.216	P
Rotations at optimum efficiency point	-	rpm	2723	P
Specific ratio	r	-	1.011	P
Minimum fan efficiency	η _{min}	%	39.51	P
Fan gas powe	P _u	kW	0.147	P
Power conversion correction	C _p	-	1.0	P
Part load compensation	C _c	-	1.0	P
Guard compensation	C _{guard}	-	1.0	P
Fan efficiency	η	%	68.06	P
The calculation formula is as follows: $\eta = C_p \cdot C_c \cdot C_{guard} \cdot P_u/P_e$				

Samples photo

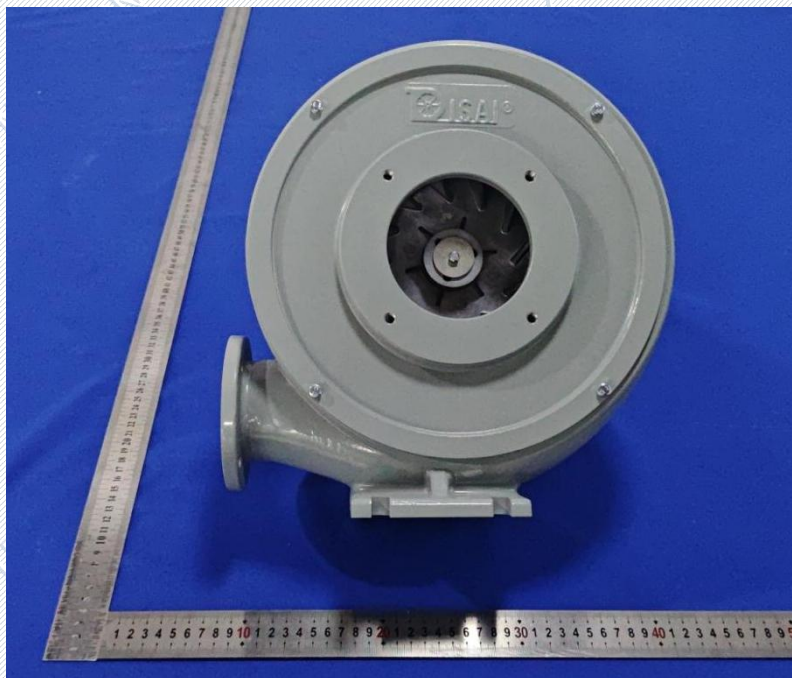


Photo 1: Sample Appearance



Photo 2: Sample Appearance

---END OF REPORT---

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