
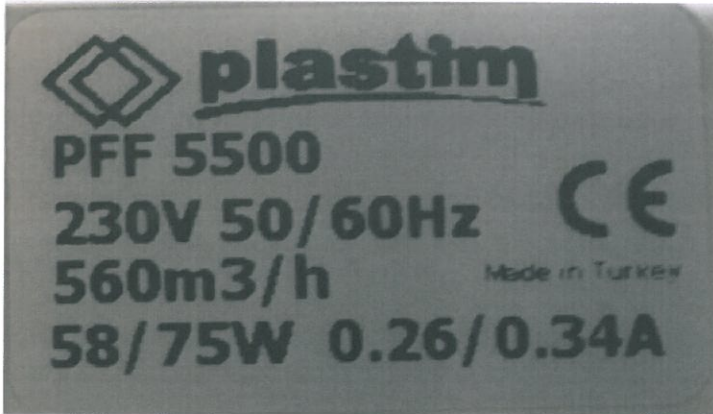


Prüfbericht-Nr.: <i>Test Report No.:</i>	27121920 001	Auftrags-Nr.: <i>Order No.:</i>	C-2015-0117	Seite 1 von 19 <i>Page 1 of 19</i>
Kunden-Referenz-Nr.: <i>Client Reference No.:</i>	N/A	Auftragsdatum: <i>Order date:</i>	05.01.2015	
Auftraggeber: <i>Client:</i>	Plastim Elektrik Malzemeleri San. Ve Tic.Ltd.Şti Alipaşa Mah. Boztepe Sokak No:5 Silivri, İstanbul			
Prüfgegenstand: <i>Test item:</i>	Roof Fan			
Bezeichnung / Typ-Nr.: <i>Identification / Type No.:</i>	PFF 5500			
Auftrags-Inhalt: <i>Order content:</i>	Partial Test			
Prüfgrundlage: <i>Test specification:</i>	IEC 60529:1989+A1:1999+A2:2013 Degrees of protection provided by enclosures (IP Code)			
Wareneingangsdatum: <i>Date of receipt:</i>	07.01.2015			
Prüfmuster-Nr.: <i>Test sample No.:</i>	N/A			
Prüfzeitraum: <i>Testing period:</i>	07.01.2015 – 28.01.2015			
Ort der Prüfung: <i>Place of testing:</i>	Refer to Page 2			
Prüflaboratorium: <i>Testing laboratory:</i>	Refer to Page 2			
Prüfergebnis*: <i>Test result*:</i>	Pass			
geprüft von / tested by:		kontrolliert von / reviewed by:		
28.01.2015	Enes Faruk BALLI / PE 	28.01.2015	Berk GÜNEY / PE 	
Datum <i>Date</i>	Name / Stellung <i>Name / Position</i>	Unterschrift <i>Signature</i>	Datum <i>Date</i>	Name / Stellung <i>Name / Position</i>
Sonstiges / Other: Within this test report Roof Fan PFF 5500 evaluated considering the requirements of international standard IEC 60529:1989+A1:1999+A2:2013 and found to be adequet to carry IP 54 degree. Please refer to page 2 for more details				
Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of the test item at delivery:</i>		Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged</i>		
* Legende: 1 = sehr gut 2 = gut 3 = befriedigend 4 = ausreichend 5 = mangelhaft P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet Legend: 1 = very good 2 = good 3 = satisfactory 4 = sufficient 5 = poor P(ass) = passed a.m. test specification(s) F(ail) = failed a.m. test specification(s) N/A = not applicable N/T = not tested				
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i>				

Prüfbericht - Nr.: <i>Test Report No.:</i>	27121920 001	Seite 2 von 19 <i>Page 2 of 19</i>
Ort der Prüfung: <i>Place of Testing:</i>	TÜV Rheinland Uluslararası Standartlar Sertifikasyon ve Denetim A.Ş. Saniye Ermutlu Sokak., Çolakoğlu Plaza No: 12 B Blok 34742 Kozyatağı - İstanbul / Turkey	
Prüflaboratorium: <i>Testing Laboratory:</i>	TÜV Rheinland Uluslararası Standartlar Sertifikasyon ve Denetim A.Ş. Saniye Ermutlu Sokak., Çolakoğlu Plaza No: 12 B Blok 34742 Kozyatağı - İstanbul / Turkey	
Sonstiges: <i>Other (Cont.):</i>	Trademark: plastim	
	Copy of Marking Plate:	
		
		

TEST REPORT
IEC 60529
Degrees of protection provided by enclosures (IP code)

Report Reference No.....: 27121920 001
 Tested by (name + signature).....: See Cover Page
 Approved by (name + signature).....: See Cover Page
 Date of issue.....: See Cover Page

Testing Laboratory..... See Cover Page
 Address See Cover Page

Applicant's name..... See Cover Page
 Address See Cover Page

Test specification:
 Standard.....: IEC 60529:1989/A2:2013
 Test procedure.....: Partial Test
 Non-standard test method.....: N/A

Test Report Form No: IEC 60529:1989+A1:1999+A2:2013
 TRF Originator.....: IMQ
 Master TRF.....: Dated 2006-06

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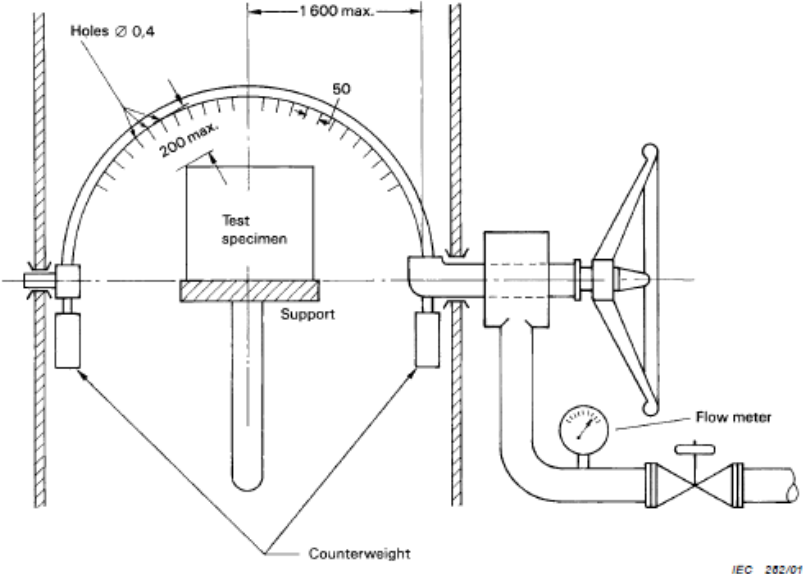
Possible test case verdicts:
 - test case does not apply to the test object N/A
 - test object does meet the requirement..... P (Pass)
 - test object does not meet the requirement..... F (Fail)

IEC 60529			
Clause	Requirement – Test	Result	Verdict

Test item description Fan Unit
 Trade Mark plastim
 Manufacturer Plastim Elektrik Malzemeleri San. Ve Tic.Ltd.Şti
 Model and/or Type reference PFF 5500

General remarks:
 The test results presented in this report relate only to the object tested.
 This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.
 "(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 is used as the decimal separator.

Test specifications:



NOTE The range of holes is shown as for second characteristic numeral 3 (see 14.2.3 a)).

Figure 4 – Test device to verify protection against spraying and splashing water; second characteristic numerals 3 and 4 (oscillating tube)

IEC 60529			
Clause	Requirement – Test	Result	Verdict
5	DEGREES OF PROTECTION AGAINST ACCESS TO HAZARDOUS PARTS AND AGAINST SOLID FOREIGN OBJECTS INDICATED BY THE FIRST CHARACTERISTIC NUMERAL		—
5	The designation with a first characteristic numeral implies that conditions stated in both 5.1 and 5.2 are met.		P
	The first characteristic numeral indicates that:		—
	the enclosure provides protection of persons against access to hazardous parts by preventing or limiting the ingress of a part of the human body or an object held by a person;		P
	and simultaneously the enclosure provides protection of equipment against the ingress of solid foreign objects.		P
	An enclosure shall only be designated with a stated degree of protection indicated by the first characteristic numeral if it also complies with all lower degrees of protection.		P
	However, the tests establishing compliance with any one of the lower degrees of protection need not necessarily be carried out provided that these tests would obviously be met if applied		P
5.1	Protection against access to hazardous parts		—
	Tab. I gives brief descriptions and definitions for the degrees of protection against access to hazardous parts.		P
	Degrees of protection listed in table I shall be specified only by the first characteristic numeral and not by reference to the brief description or definition.		P
	To comply with the conditions of the first characteristic numeral, adequate clearance shall be kept between the access probe and hazardous parts		P
	The tests are specified in Clause 12.		P

IEC 60529			
Clause	Requirement – Test	Result	Verdict
	Tab. I-1 Degrees of protection against access to hazardous parts indicated by the first characteristic numeral		—
	First characteristic numeral	Test conditions (Clause)	—
	0	--	N/A
	1	12.2	N/A
	2	12.2	N/A
	3	12.2	N/A
	4	12.2	N/A
	5	12.2	No access to hazardous parts by access probes P
	6	12.2	N/A
	<i>In the case of the first characteristic numerals 3, 4, 5 and 6, protection against access to hazardous parts is satisfied if adequate clearance is kept. The adequate clearance should be specified by the relevant product committee in accordance with 12.3.</i>	(EN 60529/A1)	P
	<i>Due to the simultaneous requirement specified in Table II, the definition "shall not penetrate" is given in Table I.</i>	(EN 60529/A1)	P
5.2	Protection against solid foreign objects		—
	Tab. II gives brief descriptions and the definitions for the degrees of protection against the penetration of solid foreign objects including dust.		P
	Degrees of protection listed in Tab II shall only be specified by the first characteristic numeral and not by reference to the brief description or definition.		P
	The protection against the ingress of solid foreign objects implies that the object probes up to numeral 2 in Tab. II shall not fully penetrate the enclosure. This means that the full diameter of the sphere shall not pass through an opening in the enclosure.		P
	Object probes for numerals 3 and 4 shall not penetrate the enclosure at all.		P
	Dust-protected enclosures to numeral 5 allow a limited quantity of dust to penetrate under certain conditions.		P
	Dust-tight enclosures to numeral 6 do not allow any dust to penetrate.		N/A

IEC 60529			
Clause	Requirement – Test	Result	Verdict
	Note <i>Enclosures assigned a first characteristic numeral of 1 to 4 generally exclude both regularly and irregularly shaped solid foreign objects provided that three mutually perpendicular dimensions of the object exceed the appropriate figure in column 3 of Tab. II.</i>		N/A
	The tests are specified in Clause 13.		P
	Tab. II-2 Degrees of protection against solid foreign objects indicated by the first characteristic numeral		—
	First characteristic numeral	Test conditions (Clause)	—
	0	--	N/A
	1	13.2	N/A
	2	13.2	N/A
	3	13.2	N/A
	4	13.2	N/A
	5	13.4 13.5	With enclosure P
	6	13.4 13.6	N/A
6	DEGREES OF PROTECTION AGAINST INGRESS OF WATER INDICATED BY THE SECOND CHARACTERISTIC NUMERAL		—
	The second characteristic numeral indicates the degree of protection provided by enclosures with respect to harmful effects on the equipment due to the ingress of water.		P
	The tests for the second characteristic numeral are carried out with fresh water. The actual protection may not be satisfactory if cleaning operations with high pressure and/or solvents are used.		P
	Tab. III gives brief descriptions and definitions of the protection for the degrees represented by the second characteristic numeral.		P

IEC 60529			
Clause	Requirement – Test	Result	Verdict
	Degrees of protection listed in Tab. III shall be specified only by the second characteristic numeral and not by reference to the brief description or definition.		P
	The tests are specified in Clause 14.		P
	Up to and including second characteristic numeral 6, the designation implies compliance also with the requirements for all lower characteristic numerals.		P
	However, the tests establishing compliance with any one of the lower degrees of protection need not necessarily be carried out provided that these tests obviously would be met if applied.		P
	An enclosure designated with second characteristic numeral 7 or 8 only is considered unsuitable for exposure to water jets (designated by second characteristic numeral 5 or 6) and need not comply with requirements for numeral 5 or 6 unless it is dual coded .		N/A
	Enclosures for “versatile” application shall meet requirements for exposure to both water jets and temporary or continuous immersion.		N/A
	Enclosures for “restricted” application are considered suitable only for temporary or continuous immersion and unsuitable for exposure to water jets		N/A
	Tab. III-3 Degrees of protection against water indicated by the second characteristic numeral		—
	Second characteristic numeral	Test conditions (Clause)	—
	0	--	N/A
	1	14.2.1	N/A
	2	14.2.2	N/A
	3	14.2.3	N/A
	4	14.2.4	With enclosure P
	5	14.2.5	N/A

IEC 60529			
Clause	Requirement – Test	Result	Verdict
	6	14.2.6	N/A
	7	14.2.7	N/A
	8	14.2.8	N/A

7	DEGREES OF PROTECTION AGAINST ACCESS TO HAZARDOUS PARTS INDICATED BY THE ADDITIONAL LETTER		—
	The additional letter indicates the degree of protection of persons against access to hazardous parts.	No additional letter	N/A
	Additional letters are only used:		—
	if the actual protection against access to hazardous parts is higher than that indicated by the first characteristic numeral;		N/A
	or if only the protection against access to hazardous parts is indicated, the first characteristic numeral being then replaced by an X		N/A
	For example, such higher protection may be provided by barriers, suitable shape of openings or distances inside the enclosure.		N/A
	Tab. IV gives access probes considered by convention as representative of parts of the human body or objects held by a person and the definitions for the degrees of protection against access to hazardous parts, indicated by additional letters.		N/A
	An enclosure shall only be designated with a stated degree of protection indicated by the additional letter if the enclosure also complies with all lower degrees of protection.		N/A
	However, the tests establishing compliance with any one of the lower degrees of protection need not necessarily be carried out provided that these tests obviously would be met if applied.		N/A
	The tests are specified in Clause 15.		N/A
	See Annex A for examples of the IP Coding		N/A

IEC 60529			
Clause	Requirement – Test		Verdict
	Tab. IV-4 Degrees of protection against access to hazardous parts indicated by the additional letter		—
	Additional letter	Test conditions (Clause)	—
	A	15.2	N/A
	B	15.2	N/A
	C	15.2	N/A
	D	15.2	N/A
8	SUPPLEMENTARY LETTERS		—
	In the relevant product standard, supplementary information may be indicated by a supplementary letter following the second characteristic numeral or the additional letter.	No supplementary letter	N/A
	Such exceptional cases shall conform with the requirements of this basic safety standard and the product standard shall state clearly the additional procedure to be carried out during tests for such a classification.		N/A
	The letters listed below have already been designated and have the significance as stated:		N/A
	Letter	Significance	—
	H	<i>High-voltage apparatus</i>	N/A
	M	<i>Tested for harmful effects due to the ingress of water when the movable parts of the equipment (e.g. the rotor of a rotating machine) are in motion</i>	N/A
	S	<i>Tested for harmful effects due to the ingress of water when the movable parts of the equipment (e.g. the rotor of a rotating machine) are stationary</i>	N/A
	W	<i>Suitable for use under specified weather conditions and provided with additional protective features or processes</i>	N/A
	Other letters may be used in product standards		N/A

IEC 60529			
Clause	Requirement – Test	Result	Verdict
	The absence of the letters S and M implies that the degree of protection does not depend on whether parts of the equipment are in motion or not.		N/A
	This may necessitate tests being done under both conditions.		N/A
	However, the test establishing compliance with one of these conditions is generally sufficient, provided that the test in the other condition obviously would be met if applied		N/A
9	EXAMPLES OF DESIGNATIONS WITH THE IP CODE		—
10	MARKING		—
	The requirements for marking shall be specified in the relevant product standard.		P
	Where appropriate, such a standard should also specify the method of marking which is to be used when:	Not required	N/A
	one part of an enclosure has a different degree of protection to that of another part of the same enclosure		N/A
	the mounting position has an influence on the degree of protection		N/A
	the maximum immersion depth and time are indicated		N/A
ZA	ANNEX ZA (NORMATIVE) Other International Publications quoted in this standard with the references of the relevant European Publications		—
	When the International Publication as been modified by CENELEC common modifications, indicated by (mod), the relevant EN/HD applies.	(EN 60529)	P

IEC 60529			
Clause	Requirement – Test	Result	Verdict

Test result tables:**Test 1: IP50**

First characteristic numeral	Information	Result
5	Dust-protected.	Pass (No dust contamination on live parts)

Test2: IPX4

Second characteristic numeral	Information	Result
4	Protected against splashing water	Pass (No water contamination on live parts)

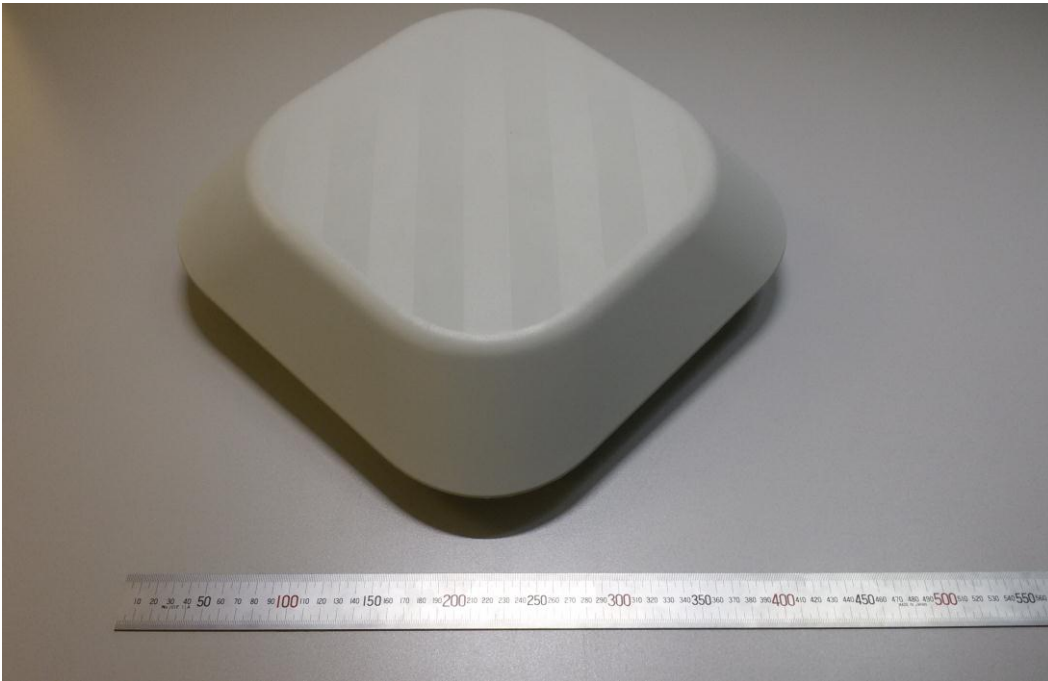
Measuring test equipments:

Equipment name	Manufacturer	Type code	Last calibration	Next calibration
Dust Chamber IST-E-0309	iTS GmbH	SK1000	-	-
Differential Pressure Transmitter for Dust Chamber IST-E-0310	Honeywell	DPTM 1000	28.06.2014	28.06.2015
Splash Nozzle IST-E-0054	Testing Ljubljana	T1-43	-	-
RIGID STEEL WIRE IST-E-0092	Testing Ljubljana	T5-51	17.05.2014	17.05.2015
RIGID STEEL WIRE IST-E-0093	Testing Ljubljana	T5-51	07.05.2014	07.05.2015

IEC 60529			
Clause	Requirement – Test	Result	Verdict

-PHOTO DOCUMENTS-

General product view:



IEC 60529			
Clause	Requirement – Test	Result	Verdict

While mounted on a suitable surface:

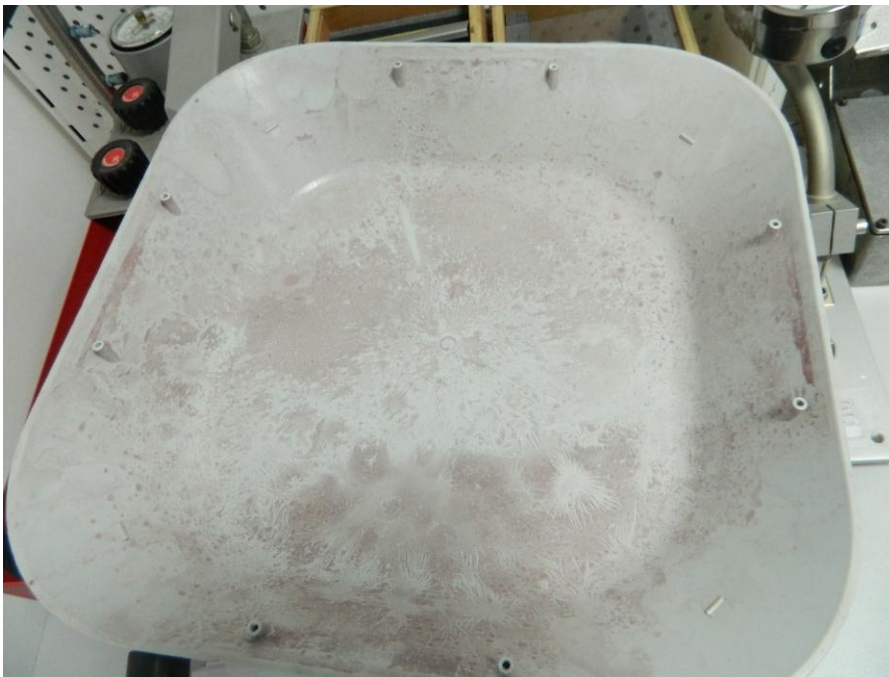


IEC 60529			
Clause	Requirement – Test	Result	Verdict

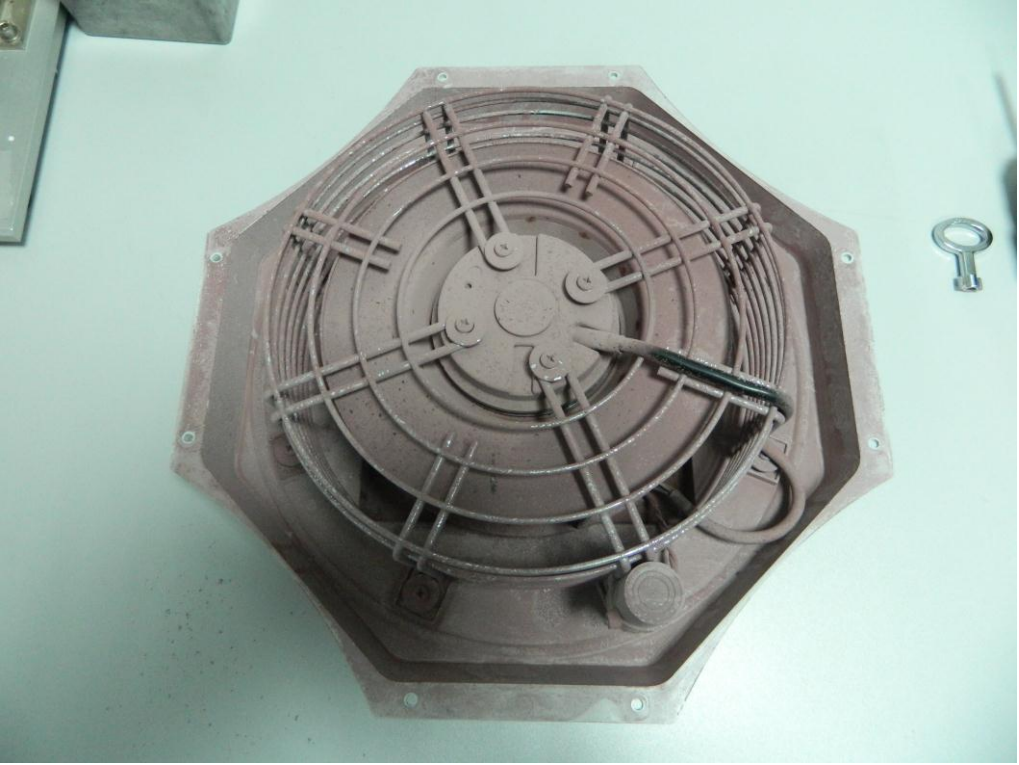
Inside the dust chamber:



Inspection for dust ingress:



IEC 60529			
Clause	Requirement – Test	Result	Verdict



TRF No.: IEC60529A

IEC 60529			
Clause	Requirement – Test	Result	Verdict



TRF No.: IEC60529A

IEC 60529			
Clause	Requirement – Test	Result	Verdict



IEC 60529			
Clause	Requirement – Test	Result	Verdict

Under water nozzle:



= End Of Test Report =