
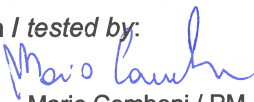





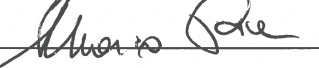
Prüfbericht-Nr.: <i>Test Report No.:</i>	28107452 001	Auftrags-Nr.: <i>Order No.:</i>	8737601	Seite 1 von 1+18 <i>Page 1 of 1+18</i>
Kunden-Referenz-Nr.: <i>Client Reference No.:</i>	8709353	Auftragsdatum: <i>Order date:</i>	13/11/2014	
Auftraggeber: <i>Client:</i>	ASJAGEN S.r.l. Via Ivrea 74 10098 Rivoli (TO)			
Prüfgegenstand: <i>Test item:</i>	Asynchronous Micro Cogenerator (CHP)			
Bezeichnung / Typ-Nr.: <i>Identification / Type No.:</i>	TOTEM 20 See complete list of models in GENERAL PRODUCT INFORMATION			
Auftrags-Inhalt: <i>Order content:</i>	Type test			
Prüfgrundlage: <i>Test specification:</i>	G59/3 Engineering Recommendation G59 Issue 03 (September 2013) Recommendations For The Connection Of Generating Plant to the Distribution System of Licensed Distribution Networks Operators			
Wareneingangsdatum: <i>Date of receipt:</i>	23/01/2015			
Prüfmuster-Nr.: <i>Test sample No.:</i>	150010			
Prüfzeitraum: <i>Testing period:</i>	26/01/2015 – 24/02/2015			
Ort der Prüfung: <i>Place of testing:</i>	TÜV Rheinland Italia S.r.l.			
Prüflaboratorium: <i>Testing laboratory:</i>	TÜV Rheinland Italia S.r.l.			
Prüfergebnis*: <i>Test result*:</i>	Pass			
geprüft von / tested by:			kontrolliert von / reviewed by:	
29/04/2015	Mario Comboni / PM_Pierangelo Lobbia PM	29/04/2015	Marco Piva / BFM	
Datum <i>Date</i>	Name / Stellung <i>Name / Position</i>	Unterschrift <i>Signature</i>	Datum <i>Date</i>	Name / Stellung <i>Name / Position</i>
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:	none			
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 P(ass) = entspricht o.g. Prüfgrundlage(n)	2 = gut F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	3 = befriedigend N/A = nicht anwendbar	4 = ausreichend N/T = nicht getestet
Legend:	1 = very good P(ass) = passed a.m. test specification(s)	2 = good F(ail) = failed a.m. test specification(s)	3 = satisfactory N/A = not applicable	4 = sufficient 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>				



TEST REPORT

G59/3

**Engineering Recommendation G59 Issue 03 (September 2013)
Recommendations For The Connection Of Generating Plant to the
Distribution System of Licensed Distribution Networks Operators**

Report reference no.	28107452 001
Tested by (name + signature).....	Mario Comboni /PM  Pierangelo Lobbia / PM 
Approved by (name + signature).....	Marco Piva / BFM 
Date of issue	29/04/2015
Total number of pages	18
Testing Laboratory	TÜV Rheinland Italia S.r.l.
Address	Via Mattei 3 - 20010 - Pogliano Milanese (MI) – Italy
Applicant's name.....	ASJAGEN srl
Address	Via Ivrea 74 10098 Rivoli (TO)
Test item description	Asynchronous Micro-Cogenerator (CHP)
Trade Mark	ASJAGEN
Manufacturer	ASJAGEN srl Via Ivrea 74 10098 Rivoli (TO)
Model/Type reference	TOTEM 20 See complete models' list in GENERAL PRODUCT INFORMATION
Ratings	400V 50Hz
Sample	Prototype selected by the customer
Samples received on.....	23/01/2015
TUV reference samples	Sample 01 / 150010
Samples tested n.	150010
Testing	Type test
Start Date:	26/01/2015
End Date:	24/02/2015

I risultati del rapporto di prova si riferiscono esclusivamente ai campioni sotto test. Senza l'autorizzazione scritta di TÜV Rheinland Italia S.r.l., questo documento può essere riprodotto solo integralmente

The results in this Test Report are exclusively referred to the tested samples. Without the written authorization of TÜV Rheinland Italia S.r.l., this document can be reproduced only integrally

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TOTEM 10 / 20

Testing procedure and testing location:

Testing Laboratory: TÜV Rheinland Italia S.r.l.
Testing location/ address.....: Via Mattei 3 - 20010 - Pogliano Milanese (MI) – Italy

Associated Laboratory:
Testing location/ address.....:
Tested by (name + signature): Mario Comboni / PM (signature on first page)
Pierangelo Lobbia / PM (signature on first page)
Approved by (+ signature): Marco Piva BFM (signature on first page)

Testing procedure: TMP
Testing location/ address.....:
Tested by (name + signature):
Approved by (+ signature).....:

Testing procedure: WMT
Testing location/ address.....:
Tested by (name + signature):
Witnessed by (+ signature).....:
Approved by (+ signature).....:

Testing procedure: SMT
Testing location/ address.....:
Tested by (name + signature):
Approved by (+ signature).....:
Supervised by (+ signature).....:

Testing procedure: RMT
Testing location/ address.....:
Tested by (name + signature):
Approved by (+ signature).....:
Supervised by (+ signature).....:

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TOTEM 10 / 20

Test item particulars: -

Equipment mobility: stationary fixed

Connection to the mains: permanent connection

Environmental category.....: outdoor

Over voltage category PV.....: [N/A]

Mains supply tolerance (%).....: -82 / +115 %

Tested for power systems.....: TN (230Vac Phase-Neutral)

IT testing, phase-phase voltage (V).....: none

Class of equipment.....: Class I

Mass of equipment (kg).....: 800

Test case verdicts

Test case does not apply to the test object: N/A

Test item does meet the requirement: P(ass)

Test item does not meet the requirement: F(ail)

Testing

Date of receipt of test item: See first page

Date(s) of performance of test: See first page

General remarks

This report shall not be reproduced except in full without the written approval of the testing laboratory.

The test results presented in this report relate only to the item(s) tested.

"(see remark #)" refers to a remark appended to the report.

"(see Annex #)" refers to an annex appended to the report.

Throughout this report a point is used as the decimal separator.

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TOTEM 10 / 20

Summary of testing:
Tests performed (name of test and test clause):

Test	§ G59/3	Ref. standard	Result	Sample
Power Quality. Harmonics. (A1.4.1 B1.4.1)	13.1	EN 61000-3-12	PASS	SAMPLE 1
Power quality. Power factor. (A1.4.2 B1.4.2)	13.1	G59/3	PASS	SAMPLE 1
Power Quality. Voltage fluctuations and Flicker. (A1.4.3 B1.4.3)	13.1	EN 61000-3-11	PASS	SAMPLE 1
Power quality. DC injection. (A1.4.4 B1.4.4)	13.1	G59/3	N/A	
Electronic Compatibility (EMC) (A1.4.8 B1.4.7)	13.1	EN 61000-6-2 EN 61000-6-3	PASS	Note ¹
Protection. Frequency tests.	13.1	G59/3	N/A	External Interface Protection
Protection. Voltage tests.	13.1	G59/3	N/A	External Interface Protection
a) Protection. Loss of Mains test.	13.1	EN 62116	N/A	External Interface Protection
b) Protection. Frequency change, Stability test .	13.1	G59/3	N/A	External Interface Protection
c) Protection. Re-connection timer.	13.1	G59/3	N/A	The asynchronous generator don't re-connect itself
d) Fault level contribution. (A1.4.6)	13.1	G59/3	PASS	SAMPLE 1
e) Self-Monitoring solid state switching.	13.1	G59/3	N/A	N/A

¹ NOTE 1: see test report no:28107694 001 issued by TÜV Rheinland Italia S.r.l.

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General product information

See Appendix 1 for technical and function detail, list of Firmware/software release.

See Appendix 2 for CDF (Constructional Data Form)

See Appendix 3 for data sheet

Verified product: Asynchronous Micro-Cogenerator (CHP)

TOTEM 20 (prototype)

Models of the same family:

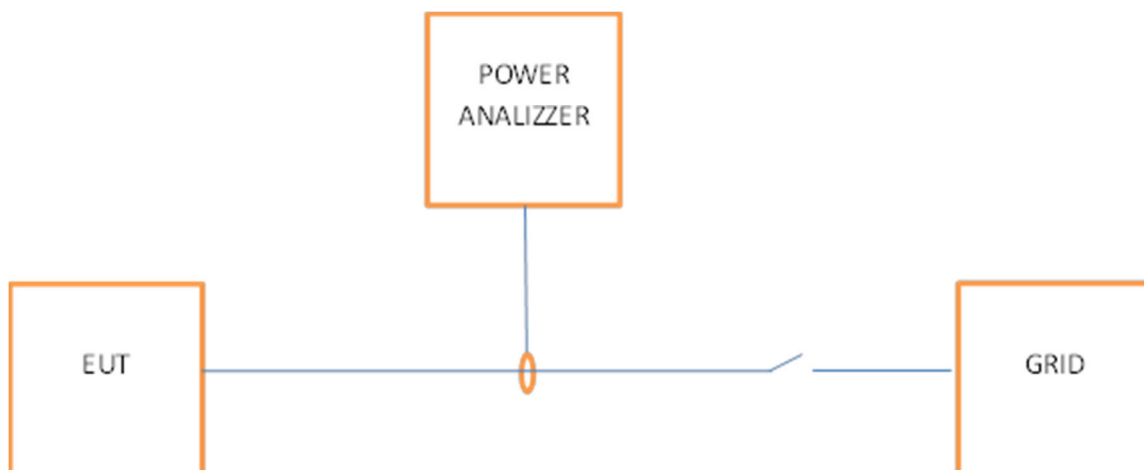
TOTEM 10

All models have the same release firmware version, electronic control boards.

Hardware differences are the following:

Asynchronous Generator

- Totem 10: Rated Electric Power 10 kWe, synchronization to grid at 1500 rpm($\pm 2\%$)
- Totem 20: Rated Electric Power 20 kWe, synchronization to grid at 3000 rpm($\pm 2\%$)



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TOTEM 10 / 20

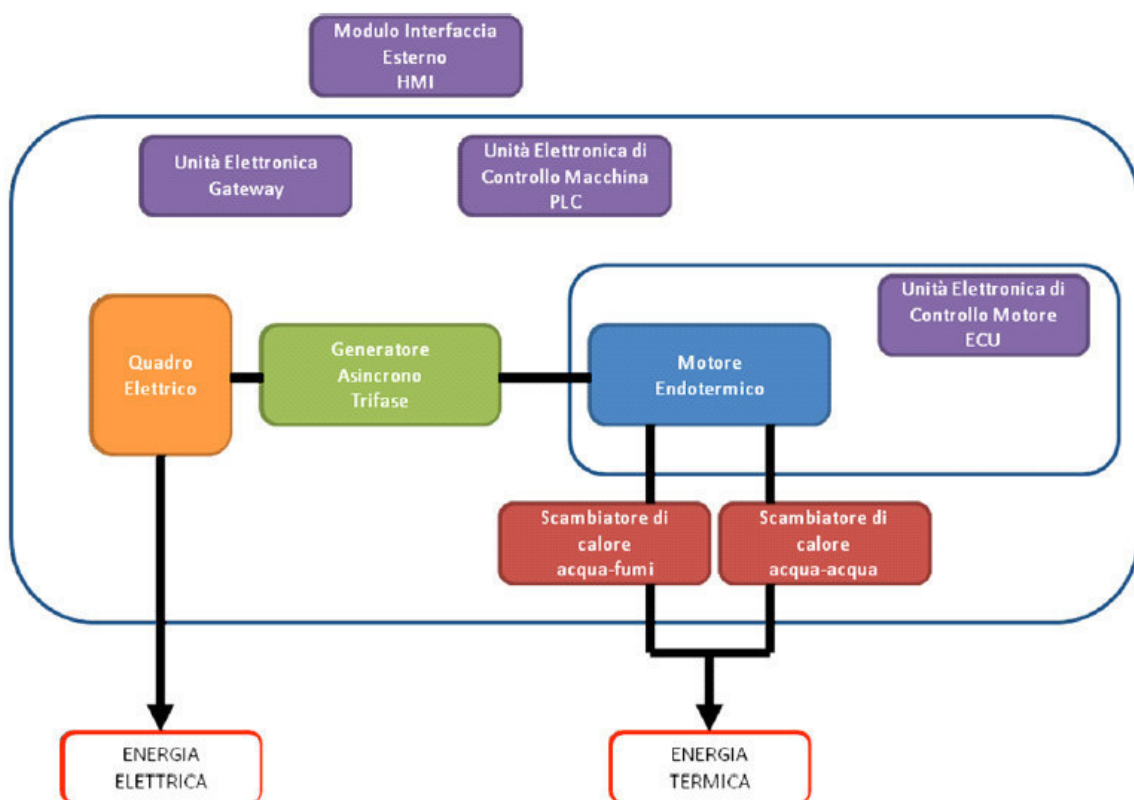
DATA-SHEET

MODELLI		10 kWe	20 kWe
Model			
POTENZA @ aria 25 °C e 101,3 kPa, alimentazione metano a 20 mbar, GPL a 20 mbar POWER air inlet @ 25 °C and 101.3 kPa, methane fueled @ 20 mbar			
Potenza elettrica nominale Rated Electric Power	kW	10,0	20,0
Potenza termica nominale Rated Thermal Power	kW	22,6	≥44,0
Rendimento elettrico Electric efficiency	%	≥30,0	≥30,0
Rendimento totale Total efficiency	%	97,0	≥95,0
Metano (CH ₄) Methane (CH ₄)	Nm ³ /h	≈3,5	7,0≤
DIMENSIONI E PESI / DIMENSIONS AND WEIGHTS			
h x p x l (con pannelli montati - versione standard)		mm 1.280 x 770 x 1.810	
Peso Weight		kg 800	
CIRCUITO IDRAULICO / HYDRAULIC CIRCUIT			
Massima temperatura acqua in ingresso Maximum inlet water temperature		°C 70	
Massima temperatura acqua in uscita Maximum outlet water temperature		°C 80	
Portata nominale acqua Rated water flow	l/h	2.500	4.000
Perdita di carico massima Maximum pressure drop	kPa	60	

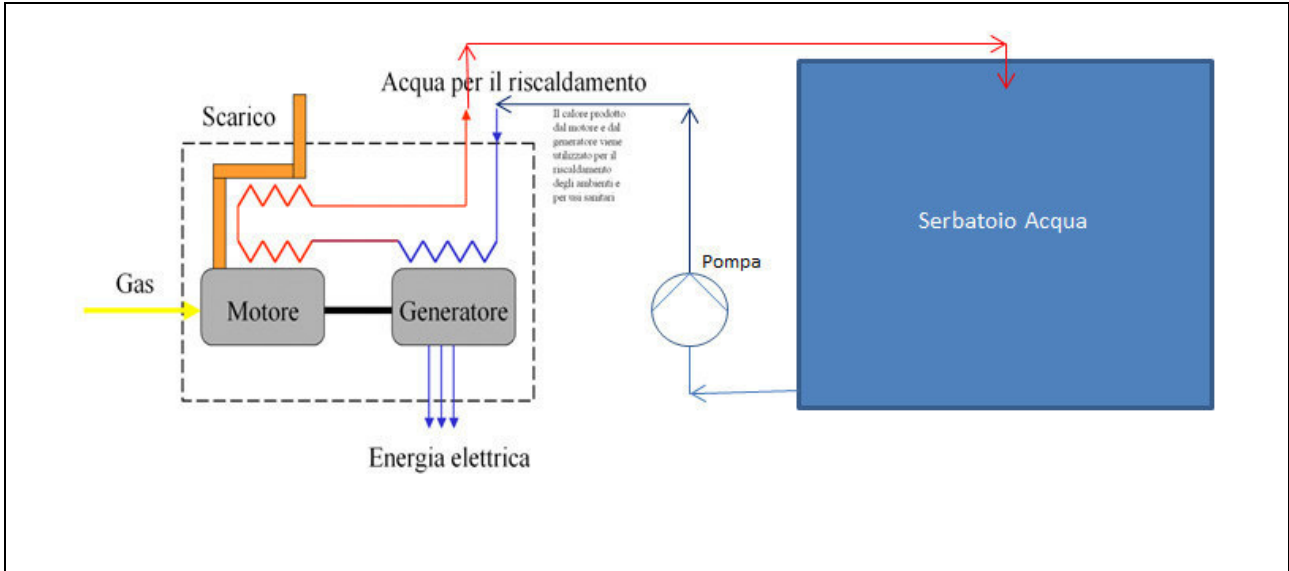
Block diagram:

La macchina TOTEM nelle versioni 10kW e 20kW è costituita dai seguenti gruppi funzionali:

- Motore endotermico
- Generatore asincrono trifase
- Quadro elettrico
- Scambiatori di calore
- Unità di controllo elettronico



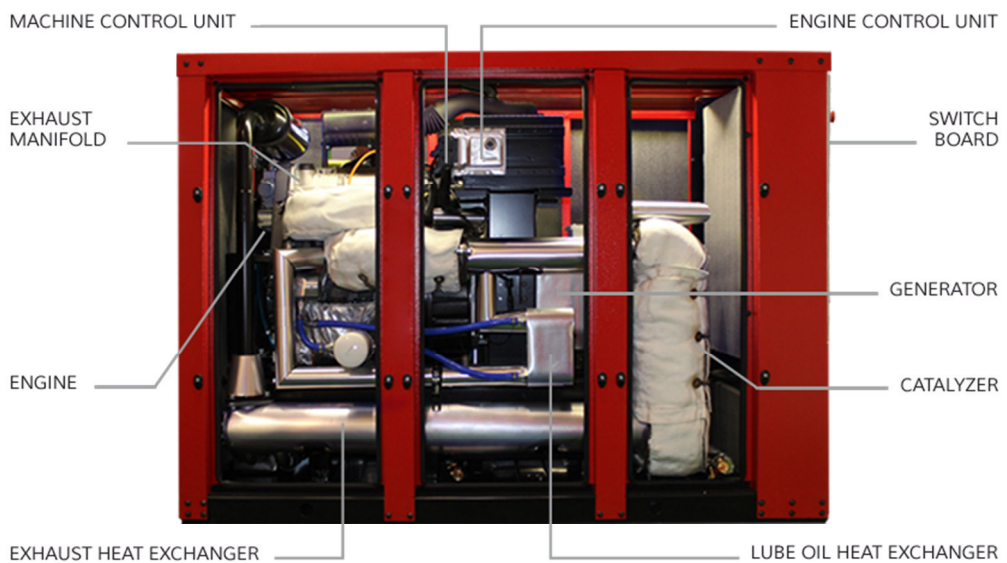
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TOTEM 10 / 20


Copy of marking plate:
Electronic label:

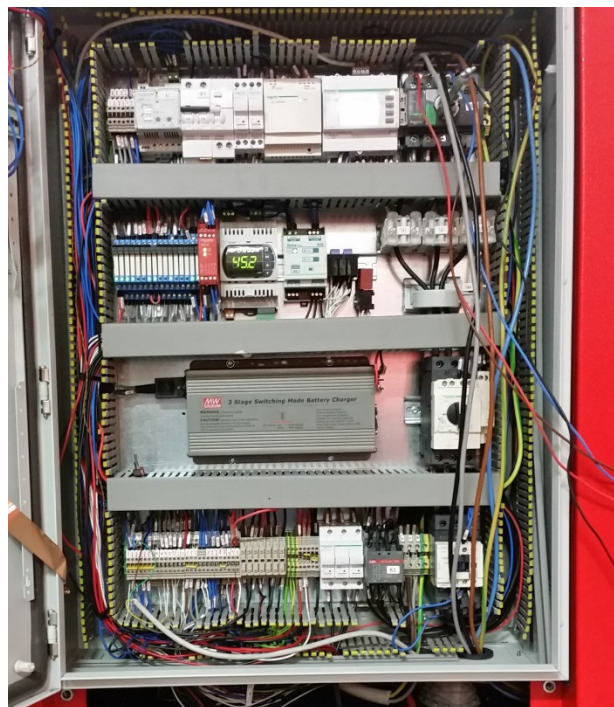
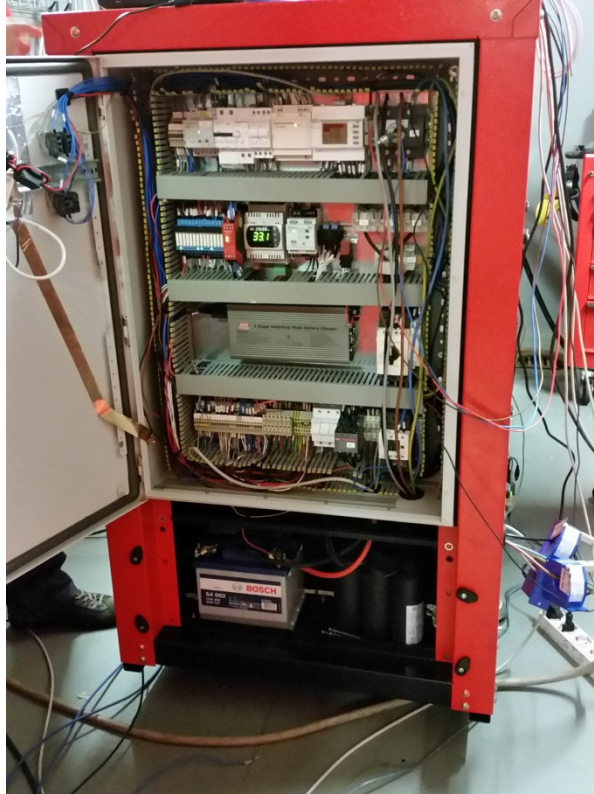
ECU Identification	ECU Identification
Customer identification	code ASJAGEN
ECU serial number	A0.14.0001
ECU production	line batch
ECU production	date 20140801
BootSW version identification	code S1.18.AR.1A
BSW version identification	code AR.11.81.0A
ASW version identification	code AAAAAA41
Programming date	20150215
Operator identification	code ALBSAN01

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Fotografie / Pictures



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TOTEM 10 / 20



G59/3 TOTEM 10 / 20

Power Quality. Harmonics.	
Nominal Values:	See General Product Information
Ambient temperature (°C)	25°C ± 5°C; Atmospheric pressure 96kPa ±10kPa
Humidity (RH %)	65%RH ±10%RH
Instrumentation list.....	See table "Measurement equipment and instrumentation"
Site:.....	TÜV Rheinland Italia S.r.l Via Mattei 3 - 20010 - Pogliano Milanese (MI) – Italy

Power Quality. Harmonics.						
MODELS: TOTEM 20 test results are valid also for derived models						
Generating Unit rating per phase (A)			10,6		Harmonic % = Measured Value (Amps) x 23/rating per phase (A)	
Harmonic	At 80% of rated output		100% of rated output		Limit in BS EN 61000-3-12	
	Measured Value in Amps	%	Measured Value in Amps	%	1 phase %	3 phase %
2	0,0135	0,0464	0,0259	0,089	8.00	8.00
3	1,0673	3,6823	1,2004	4,142	21.60	Not stated
4	0,0060	0,0206	0,0168	0,058	4.00	4.00
5	0,9560	3,2982	1,0593	3,654	10.70	10.70
6	0,0049	0,0169	0,0077	0,026	2.67	2.67
7	0,2976	1,0266	0,3625	1,251	7.20	7.20
8	0,0037	0,0126	0,0057	0,020	2.00	2.00
9	0,2585	0,8918	0,2889	0,997	3.80	Not stated
10	0,0032	0,0110	0,0045	0,016	1.60	1.60
11	0,0863	0,2977	0,1462	0,504	3.10	3.10
12	0,0044	0,0150	0,0049	0,017	1.33	1.33
13	0,5733	1,9780	0,5757	1,986	2.00	2.00
THD	-	6,562	-	0,065	23.00%	13.00%
PWHD	-	2,508	-	2,736	23.00%	22.00%

Supplementary information: Minimum power output for Asynchronous Generator is 80% Pn In the table above, the worst harmonic measure of the 3 phases is reported. Test Performed on model TOTEM 20 are representative of whole family.	
Operator	Pierangelo Lobbia
Supervisor	Mario Comboni
Test Date.....	24/02/2015

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TOTEM 10 / 20

Power Quality. Voltage fluctuations and Flicker.	
Nominal Values:	See General Product Information
Ambient temperature (°C)	25°C ± 5°C; Atmospheric pressure 96kPa ±10kPa
Humidity (RH %)	65%RH ±10%RH
Instrumentation list	See table "Measurement equipment and instrumentation"
Site	TÜV Rheinland Italia S.r.l Via Mattei 3 - 20010 - Pogliano Milanese (MI) – Italy

Power Quality. Voltage fluctuations and Flicker. The requirement is specified in section 5.4.2, test procedure in Annex A or B 1.4.3								
MODELS: TOTEM 20 test results are valid also for derived models								
	Starting			Stopping			Running	
	dmax	dc	d(t)	dmax	dc	d(t)	Pst	Plt 2 hours
Measured Values	2,005	1,607	0	1,625	1,491	0	1,700	0,1712
Normalised to standard impedance and 3.68kW for multiple units	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Limits set under BS EN 61000-3-2	4%	3.30%	3.3% 500ms	4%	3.30%	3.3% 500ms	1	0.65
Test start date	24/02/2015			Test end date	24/02/2015			
Test location	TÜV Rheinland Italia S.r.l							

Supplementary information: In the table above, the worst flicker measure of the 3 phases is reported.	
Test Performed on model Totem 20 representative of whole family	
Operator	Pierangelo Lobbia
Supervisor	Mario Comboni
Test Date.....	24/02/2015

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Power quality. Power Factor.	
Nominal Values:	See General Product Information
Ambient temperature (°C)	25°C ± 5°C; Atmospheric pressure 96kPa ±10kPa
Humidity (RH %)	65%RH ±10%RH
Instrumentation list	See table "Measurement equipment and instrumentation"
Site	TÜV Rheinland Italia S.r.l Via Mattei 3 - 20010 - Pogliano Milanese (MI) – Italy

Power quality. Power Factor.		
MODEL: TOTEM 20 test results are valid also for derived models		
-	230V	Measured at three voltage levels and at full output. Voltage to be maintained within ±1.5% of the stated level during the test.
Measured value	0.962	
Limit	>0.95	

Supplementary information: Asynchronous generator works at Fix Cos-fi	
In the table above, the worst power factor measure of the 3 phases is reported. Test condition: Pout, 80% and 100% of rated power worst power factor is reported.	
Test Performed on model TOTEM 20 representative of whole family	
Operator	Pierangelo Lobbia
Supervisor	Mario Comboni
Test Date	24/02/2015

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c) Fault level contribution.	
Nominal Values:	See General Product Information
Ambient temperature (°C)	25°C ± 5°C; Atmospheric pressure 96kPa ±10kPa
Humidity (RH %)	65%RH ±10%RH
Instrumentation list	See table "Measurement equipment and instrumentation"
Site	TÜV Rheinland Italia S.r.l Via Mattei 3 - 20010 - Pogliano Milanese (MI) – Italy

Fault level contribution.						
Ambient temperature (°C)	25°C ± 5°C; Atmospheric pressure 96kPa ±10kPa					
Humidity (RH %)	65%RH ±10%RH					
Instrumentation list	See table "Measurement equipment and instrumentation"					
Uncertainty	See table "Uncertainty"					
Site	TÜV Rheinland Italia S.r.l Via Mattei 3 - 20010 - Pogliano Milanese (MI) – Italy					
Grid frequency f [Hz]	50Hz					
Grid voltage U_n [V]	400 (P-P)					
Rated current I_n [A]	32					
Test No.	L1		L2		L3	
	I _{max} [A]	k _i	I _{max} [A]	k _i	I _{max} [A]	k _i
Shutdown with derating	26,923	0,841	29,382	0,918	30,356	0,949
Shutdown to Emergency botton	27,089	0,847	29,421	0,919	30,535	0,954
Shutdown to disconnecter	27,122	0,848	29,213	0,913	30,347	0,948
Shutdown to grid	27,342	0,854	28,844	0,901	30,257	0,946
Start up	68,264	2,133	60,696	1,897	54,900	1,716
Ki max	2,133					
Supplementary information: In the table above are reported the worst condition of operating for Asynchronous generator Test Performed on model TOTEM 20, representative of whole family In the table above, the worst current measure of the 3 phases is reported.						
Operator	Pierangelo Lobbia					
Supervisor	Mario Comboni					
Test Date.....	24/02/2015					

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List of measurement units used for investigation

INSTRUMENTS		MANUFACTURER	MODEL	TÜV RHEINLAND ITALIA Ref.
<input type="checkbox"/>	Power Analyzer	YOKOGAWA	WT500	87020193
<input type="checkbox"/>	Power Analyzer	YOKOGAWA	WT230	87010027
<input checked="" type="checkbox"/>	Power Quality Analyzer (with 6 probes)	Chauvin Arnoux	C.A 87334B	87010232
<input checked="" type="checkbox"/>	Current Shunt DC	RS	100A dc	98020198
<input type="checkbox"/>	Oscilloscope	YOKOGAWA	DLM2054	87020194
<input type="checkbox"/>	Current probe	YOKOGAWA	7011930	87020195
<input type="checkbox"/>	Differential voltage probe	YOKOGAWA	7011926	87020196
<input type="checkbox"/>	Scope corder	YOKOGAWA	SL 1400	87020239
<input type="checkbox"/>	Current probe	YOKOGAWA	96033	87020240 87020241 87020242
<input type="checkbox"/>	RLC Load	N.B.N AUTOMATION RLC	Load	87020226
<input type="checkbox"/>	Grid Simulator	AMETEK	MX30	87010273
<input type="checkbox"/>	Dc Power Supply	REGATRON	Top Con Quadro	87010278
<input type="checkbox"/>	Harmonics and Flicker analyzer	EM Test	DPA503	87010274
<input type="checkbox"/>	Artificial lumped impedance for flicker	EM Test	AIF503N32	87010275
<input checked="" type="checkbox"/>	Digital Multimeter	AGILENT TECHNOLOGIES	U1242A	87010022
<input type="checkbox"/>	Current Clamp For Digital Multimeter	ALCRON	DT-98	87010033
<input type="checkbox"/>	Digital Multimeter	ISO-TECH	IDM 305	87020142
<input checked="" type="checkbox"/>	Test Fingernail	ATS GALBUSERA	01.10	87010127
<input type="checkbox"/>	Safety Tester	FLUKE	601PRO XL	87010179
<input checked="" type="checkbox"/>	Data Acquisition Unit	AGILENT TECHNOLOGIES	34970A	87010205
<input type="checkbox"/>	Probe For Oscilloscope	GMW	GE 3121	87010220
<input checked="" type="checkbox"/>	Earth Continuity Tester	KIKUSUI	TOS6210	87010238
<input checked="" type="checkbox"/>	HV Tester	SCHLEICH	GLP1-e HV-AC	87010239
<input checked="" type="checkbox"/>	Dummy Load For HV Tester	SCHLEICH	4000987	87010240
<input type="checkbox"/>	Surge Generator	EMTEST	VSS 500 N6	87010269

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TOTEM 10 / 20

INSTRUMENTS		MANUFACTURER	MODEL	TÜV RHEINLAND ITALIA Ref.
<input type="checkbox"/>	Load Cell	LAUMAS ELETTRONICA	CTL 200	87010245
<input type="checkbox"/>	Phono-meter	BRÜEL & KJÆR	2236	87020108
<input type="checkbox"/>	Thermal chamber	VÖTSCH	VT4004	87020091
<input type="checkbox"/>	Thermal chamber	Angelantoni Industrie	Higros 50	87020030
<input type="checkbox"/>	Thermal chamber	Weiss Technik	SB22/300/40	87020044
<input type="checkbox"/>	Thermal chamber	Vötsch	VT7012S2	87020094
<input type="checkbox"/>	Thermal chamber	Vötsch	VCV4057-5	87020093
<input type="checkbox"/>	Caliper	MITUTOYO	CD-6°C	87020051
<input checked="" type="checkbox"/>	Power Analyzer	Elspec	Blackbox G4500	ELSPW001
<input checked="" type="checkbox"/>	Current probes:	LEM	IT-200S Ultrstb	SLEMW001-2-3

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TOTEM 10 / 20

Metodi di Prova /Testing Methods.	Incertezza /Uncertainty	Fattore di copertura k /coverage factor K
Misura di Tensione in Continua <i>/direct voltage measurement</i>	0,50% lett	2,00
Misura di Corrente in Continua <i>/direct current measurement</i>	0,35% lett	2,00
Misura di Tensione Alternata in regime Dinamico <i>/Alternate Voltage measurement (Dynamic regime)</i>	0,75% lett	2,10
Misura di Tensione Alternata in regime Statico <i>/Alternate Voltage measurement (Static regime)</i>	0,40% lett	2,00
Misura di Corrente Alternata in regime Dinamico <i>/Alternate current measurement (Dynamic regime)</i>	0,75% lett	2,10
Misura di Corrente Alternata in regime Statico <i>/Alternate Current measurement (Static regime)</i>	0,35% lett	2,00
Misura di Potenza Attiva/Reattiva/Apparente in regime dinamico <i>/Active/Reactive/Apparend power measure ment (Dynamic regime)</i>	1,4% lett	2,20
Misura di Potenza Attiva/Reattiva/Apparente in regime statico <i>/Active/Reactive/Apparend power measurement (Static regime)</i>	0,40% lett	2,00
Misura del fattore di potenza <i>/Power factor measurement</i>	0,014	2,20
Prova di Riscaldamento - Misura mediante Termocoppie <i>/Heating test – Thermocouples method</i>	4,1 °C	2,20
Prova di Riscaldamento – Misura della Variazione di Resistenza <i>/Heating test – change of resistance method</i>	4,5 °C	2,00
Prova di Riscaldamento nel triedro di prova <i>/Heating on test corner</i>	3,3 °C	2,16
Prova di Rigidità Dielettrica <i>/Dielectric strength test</i>	2,4% lett	2,00
Misura della Resistenza di Isolamento <i>/insulation resistance test</i>	2,5% lett	2,00
Misura della Continuità di Terra <i>/Earth continuity test</i>	2,3% lett	2,05
Misura della Corrente di Dispersione <i>/Leakage current test</i>	3,0% lett	2,00
Misura della Tensione Residua ai Capi della Spina <i>/Residual voltage test</i>	5,2%	2,06
Prova di Freddo IEC/EN 60068-2-1 <i>/Cold test</i>	1,9 °C	2,05
Prova di Caldo Secco IEC/EN 60068-2-2 <i>/Dry heat test</i>	2,3 °C	2,11
Prova di Caldo Umido IEC/EN 60068-2-78 <i>/Humidity test</i>	5,7%RH	2,00
Prova del Filo Incandescente (Glow Wire test)	11,2 °C	2,11
Prova di Resistenza alla Fiamma ad Ago <i>/Niddle flame resistance</i>	0,63 sec	2,23
Prova di Vibrazioni Sinusoidali IEC/EN 60068-2-6 <i>/Sinusoidal vibration test</i>	3,5% acc.gen.	2,00
Prova di Nebbia Salina IEC/EN 60068-2-11 <i>/Salt mist test</i>	2,3 °C	2,11
Prova del cambio di temperatura IEC/EN 60068-2-14 <i>/Change of temperature test</i>	2,3 °C	2,11

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Metodi di Prova /Testing Methods.	Incertezza /Uncertainty	Fattore di copertura k /coverage factor K
Misura della Correnti Armoniche IEC/EN 61000-3-2 e IEC/EN 61000-3-12 /Harmonics current test IEC/EN 61000-3-2 and IEC/EN 61000-3-12	4,1% lett	2,00
Misura delle Fluttuazioni di Tensione e dei Flicker IEC/EN 61000-3-3 e IEC/EN 61000-3-11 /Flicker test IEC/EN 61000-3-3 and IEC/EN 61000-3-11	5,0%	2,00
Misura dei Tempi / Frequenza /Time measurement - frequency	0,025%	2,13
Prova dell'Impulso di tensione (Surge test)	4,2% Vset 90 ns salita 1,9 us emival	2,00 2,23 2,23
Grado di Protezione IPX3 / Degrees of protection IPX3	4,0 % lett.	2,00
Grado di Protezione IPX4 / Degrees of protection IPX4	1,7 % lett.	2,00
Grado di Protezione IPX5 / Degrees of protection IPX5	3,5 % lett.	2,00
Grado di Protezione IPX6 / Degrees of protection IPX6	2,9 % lett.	2,00
<p>Tutte le incertezze sopra riportate sono espresse normalmente con livello di fiducia 95%. All the above mentioned uncertainties are expressed with a coverage probability of 95%.</p> <p>Throughout this Table a [x] comma / <input type="checkbox"/> point is used as the decimal separator.</p>		

This test report includes the following Appendixes:

Appendix No.	Description	Page(s)
Document not attached recalled into this test report		
1	Relazione tecnico descrittiva (relazione Tecnica firmware PLC/RT001_rev 3 / 10/03/2015	83
2	CDF (Constructional Data Form)	-
3	Test report no:28107694 001 issued by TÜV Rheinland Italia S.r.l.	-

TEST REPORT END