



CERTIFICATION LICENCE TO USE KEYMARK

Certificate No OEM 10093.3.1

DQS Hellas grants the present certificate to the enterprise:

FERROLI S.p.A.

Via Ritonda 78/A, 37047 San Bonifacio (VR) 37047, Italy

for the product:

Solar Systems Family

**SOLAREVO NAT 125/2.1, SOLAREVO NAT 160/2.1, SOLAREVO NAT 160/2.6,
SOLAREVO NAT 160/2.6H, SOLAREVO NAT 200/2.1, SOLAREVO NAT 200/2.6,
SOLAREVO NAT 200/2.6H, SOLAREVO NAT 200/3, SOLAREVO NAT 200/4.2,
SOLAREVO NAT 300/3, SOLAREVO NAT 300/3H, SOLAREVO NAT 300/4.2,
SOLAREVO NAT 300/5.2, SOLAREVO NAT 300/6**

Trademarks: FERROLI

which is produced in conformity with the normative document:

EN 12976-1:2017

EN 12976-2:2019

EN 12975-1:2011

EN ISO 9806:2017

at the following location:



Kyra Vrasi Korinthias, P.O.Box 25 - Korinthos

The present certificate is granted in accordance with:

- *the DQS Hellas General Rules for the Certification of Products,*
- *the Specific Rule for Certification EKIII.001 «Specific Rule for Certification of Solar Collectors, and Thermal Solar Heating Systems for Domestic Hot Water»,*
- *the Specific CEN Keymark Scheme Rules for Solar Thermal Products,*

and is ruled by the terms of the relevant contract between DQS Hellas and the enterprise.

Date of issue: 2023-04-20

Date of valid: 2024-05-30

Ioannis Alexiou
Head of Products Certification

Panagiotis Giannoutsos
Director of Certification



Summary of	EN12976-2	SOLAR SYSTEM test results		Licence Number	OEM 10093.3.1					
Annex to Solar KEYMARK Certificate				Issued	2023-04-20					
Company	FERROLI S.p.A.			Country	Italy					
Brand (optional)	SOLAREVO NAT			Website	www.ferroli.com					
Street	Via Ritonda 78/A			E-mail	info@ferroli.it					
Postal Code	37047	San Bonifacio (VR)		Tel. / Fax	+39	0456139411				
System classification										
Application(s)	Hot water									
Solar loop, circulation principle	Thermosyphon									
Direct solar loop / heat exchanger	Heat exchanger									
Open, vented or closed solar loop	Closed									
Drain back/down	Always filled (no drain)									
Store location	Outdoor									
Store orientation (of main axis)	Horizontal									
Type of auxiliary heating (internal back-up heat)	Electric									
If other auxiliary/internal back-up heating, please specify:										
Solar+supplementary OR Solar-only / Solar pre-heat	Solar only / Solar preheat									
Collector(s)				Heat store(s)						
Company	FERROLI S.p.A.			Company	FERROLI S.p.A.					
Keymark lic.no. if available	OEM 10115.1.1			Keymark lic.no. if available						
Collector name	Per module			Store name	Total nominal volume	Gross height	Gross width	Gross depth	Auxiliary heated volume	Electrical aux. heating power
	Gross Area (AG)	Gross length	Gross width							
	m ²	mm	mm							
SOLAREVO 2.1 V	2,09	1696	1230	SOLAREVO NAT 125	118	1385	500		-	3,5
SOLAREVO 2.6 V	2,60	2111	1230	SOLAREVO NAT 160	151	1385	500		-	3,5
SOLAREVO 2.6 H	2,60	1230	2111	SOLAREVO NAT 200	192	1710	500		-	3,5
SOLAREVO 3 V	3,00	1996	1500	SOLAREVO NAT 300	295	2310	500		-	3,5
SOLAREVO 3 H	3,00	1500	1996							
Solar loop controller				Solar loop fluid						
Keymark lic.no. if available	-			Recommended/required	Recommended					
Company Name	-			Company Name	-					
Solar loop pump - power range	- W	to	- W	Freezing point	-55	°C				
System family overview										
Collector name	Number of collectors in each configuration for each store									
	Store name									
	SOLAREVO NAT 125	SOLAREVO NAT 160	SOLAREVO NAT 200	SOLAREVO NAT 300						
SOLAREVO 2.1 V	1				1		2			
SOLAREVO 2.6 V		1				1		2		
SOLAREVO 2.6 H			1				1			
SOLAREVO 3 V				1				1		2
SOLAREVO 3 H								1		
Testing Laboratory	NCSR "DEMOKRITOS"- SOLAR & ENERGY SYSTEMS LAB									
Website	www.solar.demokritos.gr									
Test report id. number	6121DE1, 6124DE1, 6124F1									
Date of test report	6/7/2021, 28/6/2021, 29/6/2021									
Comments of test lab	Stamp & signature of test lab									
Comments ...										



Summary of		EN12976-2		test results		Certification No.		OEM 10093.3.1					
Annex to Solar KEYMARK Certificate						Issued		2023-04-20					
Company		FERROLI S.p.A.				Country		Italy					
Brand (optional)		SOLAREVO NAT				Website		www.ferroli.com					
Street		Via Ritonda 78/A				E-mail		info@ferroli.it					
Postal Code		37047		San Bonifacio (VR)		Tel. / Fax		+39 0456139411					
System family overview													
For each storage and collector size, give number of collectors													
Collector name	SOLAREVO NAT 125	SOLAREVO NAT 160	SOLAREVO NAT 200	SOLAREVO NAT 300									
SOLAREVO 2.1 V	1	1	2	2									
SOLAREVO 2.6 V		1	1	2									
SOLAREVO 2.6 H		1	1										
SOLAREVO 3 V			1	1	2								
SOLAREVO 3 H				1									
Name of system configuration						SOLAREVO NAT 125/2.1							
Collector name		SOLAREVO 2.1 V		No. Collectors		1		Storage name		SOLAREVO NAT 125			
Calculated annual results for "solar-only / preheat system"													
Location	Qd,sh	Daily drawoff 80 l				Daily drawoff 110 l				Daily drawoff 140 l			
		Qd,hw	QL	Qpar	f _{sol}	Qd,hw	QL	Qpar	f _{sol}	Qd,hw	QL	Qpar	f _{sol}
	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%	
Stockholm SE	-	4478	2652	-	59	6150	3311	-	54	7821	3721	-	48
WürzburgDE	-	4289	2636	-	62	5897	3343	-	57	7506	3847	-	51
Davos CH	-	4857	3974	-	82	6654	4920	-	74	8483	5550	-	66
Athens GR	-	3343	3034	-	91	4573	3942	-	87	5834	4699	-	81
Perf. indicators for the table above													
Qd,sh	MJ/y	Not relevant for solar domestic hot water system											
Qd	MJ/y	Annual heat demand for domestic hot water											
QL	MJ/y	Annual heat energy delivered by the solar system											
Qpar	MJ/y	Annual parasitic energy: (electricity for pumps/controllers)											
f _{sol} =Q _l /Q _d	-	Solar fraction											
Ref. conditions		Stockholm SE	Würzburg DE	Davos CH	Athens GR								
	G	1.157	1.230	1.684	1.736								
	T _{a,ave}	7,5	9,0	3,2	18,5								
	T _{c,ave}	8,5	10,0	5,4	17,8								
	± ΔTc	6,4	3,0	0,8	7,4								
G	kWh/m ²	Annual irradiation South, 45°											
T _{a,ave}	°C	Annual average outdoor air temperature											
T _{c,ave}	°C	Annual average mains cold water temp.											
ΔTc	K	Seasonal variation of Tc											
Th	45 °C	Desired hot water temperature (mixing valve temperature).											
Max. operating press. - collector side		200		kPa		Max. operating press. - tank side		1000		kPa			
Testing Laboratory		NCSR "DEMOKRITOS"- SOLAR & ENERGY SYSTEMS LAB											
Website		www.solar.demokritos.gr											
Test report id. number		6121DE1, 6124DE1, 6124F1											
Date of test report		6/7/2021, 28/6/2021, 29/6/2021											
Test method		ISO 9459-5 (DST)											
Comments of test lab													
Extrapolated													

All values are subject to some uncertainty; e.g. the uncertainty on system output is typically in the range of ± 5 % to ± 15 %

Version 4.5, 2017-10-24

Central Offices: 2, Kalavriton, 145 64 kifisia, Athens, Tel: +30 210 6233493-4 , Fax: +30 210 6233495, <http://www.dqs.gr>, e-mail: i.alexiou@dqs.gr

Stamp & signature of test lab



Summary of		EN12976-2	test results		Certification No.		OEM 10093.3.1						
Annex to Solar KEYMARK Certificate					Issued		2023-04-20						
Company		FERROLI S.p.A.			Country		Italy						
Brand (optional)		SOLAREVO NAT			Website		www.ferroli.com						
Street		Via Ritonda 78/A			E-mail		info@ferroli.it						
Postal Code		37047	San Bonifacio (VR)		Tel. / Fax		+39 0456139411						
System family overview													
For each storage and collector size, give number of collectors													
Collector name	SOLAREVO NAT 125		SOLAREVO NAT 160		SOLAREVO NAT 200		SOLAREVO NAT 300						
SOLAREVO 2.1 V	1		1		1	2	2						
SOLAREVO 2.6 V			1		1		2						
SOLAREVO 2.6 H			1		1								
SOLAREVO 3 V					1		2						
SOLAREVO 3 H						1							
Name of system configuration					SOLAREVO NAT 160/2.1								
Collector name		SOLAREVO 2.1 V		No. Collectors		1		Storage name					
								SOLAREVO NAT 160					
Calculated annual results for "solar-only / preheat system"													
Location	Qd,sh	Daily drawoff 110				Daily drawoff 140				Daily drawoff 170			
		Qd,hw	QL	Qpar	f _{sol}	Qd,hw	QL	Qpar	f _{sol}	Qd,hw	QL	Qpar	f _{sol}
	MJ/y	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%
Stockholm SE	-	6150	3311	-	54	7821	3816	-	49	9492	4163	-	44
WürzburgDE	-	5897	3343	-	57	7506	3942	-	53	9114	4352	-	48
Davos CH	-	6654	4951	-	74	8483	5708	-	67	10281	6150	-	60
Athens GR	-	4573	3974	-	87	5834	4793	-	82	7064	5456	-	77
Perf. indicators for the table above													
Qd,sh	MJ/y	Not relevant for solar domestic hot water system											
Qd	MJ/y	Annual heat demand for domestic hot water											
QL	MJ/y	Annual heat energy delivered by the solar system											
Qpar	MJ/y	Annual parasitic energy: (electricity for pumps/controllers)											
f _{sol} =Q _l /Q _d	-	Solar fraction											
Ref. conditions		Stockholm SE	Würzburg DE	Davos CH	Athens GR								
	G	1.157	1.230	1.684	1.736								
	T _{a,ave}	7,5	9,0	3,2	18,5								
	T _{c,ave}	8,5	10,0	5,4	17,8								
	± ΔT _c	6,4	3,0	0,8	7,4								
G	kWh/m ²	Annual irradiation South, 45°											
T _{a,ave}	°C	Annual average outdoor air temperature											
T _{c,ave}	°C	Annual average mains cold water temp.											
ΔT _c	K	Seasonal variation of T _c											
T _h	45 °C	Desired hot water temperature (mixing valve temperature).											
Max. operating press. - collector side			200	kPa	Max. operating press. - tank side			1000	kPa				
Testing Laboratory			NCSR "DEMOKRITOS"- SOLAR & ENERGY SYSTEMS LAB										
Website			www.solar.demokritos.gr										
Test report id. number			6121DE1, 6124DE1, 6124F1										
Date of test report			6/7/2021, 28/6/2021, 29/6/2021										
Test method			ISO 9459-5 (DST)										
Comments of test lab									Stamp & signature of test lab				
Extrapolated													

All values are subject to some uncertainty; e.g. the uncertainty on system output is typically in the range of ± 5 % to ± 15 %

Version 4.5, 2017-10-24

Central Offices: 2, Kalavriton, 145 64 kifisia, Athens, Tel: +30 210 6233493-4 , Fax: +30 210 6233495, http://www.dqs.gr, e-mail: i.alexiou@dqs.gr



Summary of		EN12976-2		test results		Certification No.		OEM 10093.3.1					
Annex to Solar KEYMARK Certificate						Issued		2023-04-20					
Company		FERROLI S.p.A.				Country		Italy					
Brand (optional)		SOLAREVO NAT				Website		www.ferroli.com					
Street		Via Ritonda 78/A				E-mail		info@ferroli.it					
Postal Code		37047		San Bonifacio (VR)		Tel. / Fax		+39 0456139411					
System family overview													
For each storage and collector size, give number of collectors													
Collector name	SOLAREVO NAT 125		SOLAREVO NAT 160		SOLAREVO NAT 200		SOLAREVO NAT 300						
SOLAREVO 2.1 V	1		1		1	2		2					
SOLAREVO 2.6 V			1		1			2					
SOLAREVO 2.6 H			1		1								
SOLAREVO 3 V						1	1	2					
SOLAREVO 3 H							1						
Name of system configuration						SOLAREVO NAT 160/2.6							
Collector name		SOLAREVO 2.6 V		No. Collectors		1		Storage name		SOLAREVO NAT 160			
Calculated annual results for "solar-only / preheat system"													
Location	Qd,sh MJ/y	Daily drawoff 110				Daily drawoff 140				Daily drawoff 170			
		Qd,hw MJ/y	QL MJ/y	Qpar MJ/y	f _{sol} %	Qd,hw MJ/y	QL MJ/y	Qpar MJ/y	f _{sol} %	Qd,hw MJ/y	QL MJ/y	Qpar MJ/y	f _{sol} %
Stockholm SE	-	6150	3595	-	58	7821	4194	-	54	9492	4636	-	49
WürzburgDE	-	5897	3564	-	61	7506	4257	-	57	9114	4793	-	53
Davos CH	-	6654	5361	-	80	8483	6276	-	74	10281	6938	-	67
Athens GR	-	4573	4131	-	90	5834	5046	-	87	7064	5803	-	82
Perf. indicators for the table above													
Qd,sh	MJ/y	Not relevant for solar domestic hot water system											
Qd	MJ/y	Annual heat demand for domestic hot water											
QL	MJ/y	Annual heat energy delivered by the solar system											
Qpar	MJ/y	Annual parasitic energy: (electricity for pumps/controllers)											
f _{sol} =Q _l /Q _d	-	Solar fraction											
Ref. conditions		Stockholm SE	Würzburg DE	Davos CH	Athens GR								
	G	1.157	1.230	1.684	1.736								
	T _{a,ave}	7,5	9,0	3,2	18,5								
	T _{c,ave}	8,5	10,0	5,4	17,8								
	± ΔT _c	6,4	3,0	0,8	7,4								
G	kWh/m ²	Annual irradiation South, 45°											
T _{a,ave}	°C	Annual average outdoor air temperature											
T _{c,ave}	°C	Annual average mains cold water temp.											
ΔT _c	K	Seasonal variation of T _c											
T _h	45 °C	Desired hot water temperature (mixing valve temperature).											
Max. operating press. - collector side		200		kPa		Max. operating press. - tank side		1000		kPa			
Testing Laboratory		NCSR "DEMOKRITOS"- SOLAR & ENERGY SYSTEMS LAB											
Website		www.solar.demokritos.gr											
Test report id. number		6121DE1, 6124DE1, 6124F1											
Date of test report		6/7/2021, 28/6/2021, 29/6/2021											
Test method		ISO 9459-5 (DST)											
Comments of test lab										Stamp & signature of test lab			
Extrapolated													

All values are subject to some uncertainty; e.g. the uncertainty on system output is typically in the range of ± 5 % to ± 15 %

Version 4.5, 2017-10-24



Summary of		EN12976-2		test results		Certification No.		OEM 10093.3.1					
Annex to Solar KEYMARK Certificate						Issued		2023-04-20					
Company		FERROLI S.p.A.				Country		Italy					
Brand (optional)		SOLAREVO NAT				Website		www.ferroli.com					
Street		Via Ritonda 78/A				E-mail		info@ferroli.it					
Postal Code		37047		San Bonifacio (VR)		Tel. / Fax		+39 0456139411					
System family overview													
For each storage and collector size, give number of collectors													
Collector name	SOLAREVO NAT 125		SOLAREVO NAT 160		SOLAREVO NAT 200		SOLAREVO NAT 300						
SOLAREVO 2.1 V	1		1		1	2		2					
SOLAREVO 2.6 V			1		1			2					
SOLAREVO 2.6 H			1		1								
SOLAREVO 3 V					1		1	2					
SOLAREVO 3 H							1						
Name of system configuration						SOLAREVO NAT 160/2.6H							
Collector name		SOLAREVO 2.6 H		No. Collectors		1		Storage name		SOLAREVO NAT 160			
Calculated annual results for "solar-only / preheat system"													
Location	Qd,sh	Daily drawoff 110				Daily drawoff 140				Daily drawoff 170			
		Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol
	MJ/y	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%
Stockholm SE	-	6150	3595	-	58	7821	4194	-	54	9492	4636	-	49
WürzburgDE	-	5897	3564	-	61	7506	4257	-	57	9114	4793	-	53
Davos CH	-	6654	5361	-	80	8483	6276	-	74	10281	6938	-	68
Athens GR	-	4573	4131	-	90	5834	5046	-	87	7064	5803	-	82
Perf. indicators for the table above													
Qd,sh	MJ/y	Not relevant for solar domestic hot water system											
Qd	MJ/y	Annual heat demand for domestic hot water											
QL	MJ/y	Annual heat energy delivered by the solar system											
Qpar	MJ/y	Annual parasitic energy: (electricity for pumps/controllers)											
f _{sol} =Q _l /Q _d	-	Solar fraction											
Ref. conditions		Stockholm SE	Würzburg DE	Davos CH	Athens GR								
	G	1.157	1.230	1.684	1.736								
	T _{a,ave}	7,5	9,0	3,2	18,5								
	T _{c,ave}	8,5	10,0	5,4	17,8								
	± ΔTc	6,4	3,0	0,8	7,4								
G	kWh/m ²	Annual irradiation South, 45°											
T _{a,ave}	°C	Annual average outdoor air temperature											
T _{c,ave}	°C	Annual average mains cold water temp.											
ΔTc	K	Seasonal variation of Tc											
Th	45 °C	Desired hot water temperature (mixing valve temperature).											
Max. operating press. - collector side		200		kPa		Max. operating press. - tank side		1000		kPa			
Testing Laboratory		NCSR "DEMOKRITOS"- SOLAR & ENERGY SYSTEMS LAB											
Website		www.solar.demokritos.gr											
Test report id. number		6121DE1, 6124DE1, 6124F1											
Date of test report		6/7/2021, 28/6/2021, 29/6/2021											
Test method		ISO 9459-5 (DST)											
Comments of test lab										Stamp & signature of test lab			
Extrapolated													

All values are subject to some uncertainty; e.g. the uncertainty on system output is typically in the range of ± 5 % to ± 15 %

Version 4.5, 2017-10-24



Summary of		EN12976-2		test results		Certification No.		OEM 10093.3.1					
Annex to Solar KEYMARK Certificate						Issued		2023-04-20					
Company		FERROLI S.p.A.				Country		Italy					
Brand (optional)		SOLAREVO NAT				Website		www.ferroli.com					
Street		Via Ritonda 78/A				E-mail		info@ferroli.it					
Postal Code		37047		San Bonifacio (VR)		Tel. / Fax		+39 0456139411					
System family overview													
For each storage and collector size, give number of collectors													
Collector name	SOLAREVO NAT 125		SOLAREVO NAT 160		SOLAREVO NAT 200		SOLAREVO NAT 300						
SOLAREVO 2.1 V	1		1		1	2		2					
SOLAREVO 2.6 V			1		1			2					
SOLAREVO 2.6 H			1		1								
SOLAREVO 3 V						1	1		2				
SOLAREVO 3 H							1						
Name of system configuration						SOLAREVO NAT 200/2.1							
Collector name		SOLAREVO 2.1 V		No. Collectors		1		Storage name		SOLAREVO NAT 200			
Calculated annual results for "solar-only / preheat system"													
Location	Qd,sh MJ/y	Daily drawoff 170				Daily drawoff 200				Daily drawoff 250			
		Qd,hw MJ/y	QL MJ/y	Qpar MJ/y	f _{sol} %	Qd,hw MJ/y	QL MJ/y	Qpar MJ/y	f _{sol} %	Qd,hw MJ/y	QL MJ/y	Qpar MJ/y	f _{sol} %
Stockholm SE	-	9492	4226	-	46	11164	4510	-	40	13939	4730	-	34
WürzburgDE	-	9114	4415	-	49	10691	4762	-	44	13371	5077	-	38
Davos CH	-	10281	6213	-	60	12110	6559	-	54	15137	6843	-	45
Athens GR	-	7064	5519	-	78	8326	6086	-	73	10407	6812	-	65
Perf. indicators for the table above													
Qd,sh	MJ/y	Not relevant for solar domestic hot water system											
Qd	MJ/y	Annual heat demand for domestic hot water											
QL	MJ/y	Annual heat energy delivered by the solar system											
Qpar	MJ/y	Annual parasitic energy: (electricity for pumps/controllers)											
f _{sol} =Q _l /Q _d	-	Solar fraction											
Ref. conditions		Stockholm SE	Würzburg DE	Davos CH	Athens GR								
	G	1.157	1.230	1.684	1.736								
	T _{a,ave}	7,5	9,0	3,2	18,5								
	T _{c,ave}	8,5	10,0	5,4	17,8								
	± ΔT _c	6,4	3,0	0,8	7,4								
G	kWh/m ²	Annual irradiation South, 45°											
T _{a,ave}	°C	Annual average outdoor air temperature											
T _{c,ave}	°C	Annual average mains cold water temp.											
ΔT _c	K	Seasonal variation of T _c											
T _h	45 °C	Desired hot water temperature (mixing valve temperature).											
Max. operating press. - collector side		200		kPa		Max. operating press. - tank side		1000		kPa			
Testing Laboratory		NCSR "DEMOKRITOS"- SOLAR & ENERGY SYSTEMS LAB											
Website		www.solar.demokritos.gr											
Test report id. number		6121DE1, 6124DE1, 6124F1											
Date of test report		6/7/2021, 28/6/2021, 29/6/2021											
Test method		ISO 9459-5 (DST)											
Comments of test lab										Stamp & signature of test lab			
Extrapolated													

All values are subject to some uncertainty; e.g. the uncertainty on system output is typically in the range of ± 5 % to ± 15 %

Version 4.5, 2017-10-24



Summary of		EN12976-2		test results		Certification No.		OEM 10093.3.1								
Annex to Solar KEYMARK Certificate						Issued		2023-04-20								
Company		FERROLI S.p.A.				Country		Italy								
Brand (optional)		SOLAREVO NAT				Website		www.ferroli.com								
Street		Via Ritonda 78/A				E-mail		info@ferroli.it								
Postal Code		37047		San Bonifacio (VR)		Tel. / Fax		+39 0456139411								
System family overview																
For each storage and collector size, give number of collectors																
Collector name	SOLAREVO NAT 125		SOLAREVO NAT 160		SOLAREVO NAT 200		SOLAREVO NAT 300									
SOLAREVO 2.1 V	1		1		1	2		2								
SOLAREVO 2.6 V			1		1			2								
SOLAREVO 2.6 H			1			1										
SOLAREVO 3 V						1	1		2							
SOLAREVO 3 H							1									
Name of system configuration						SOLAREVO NAT 200/2.6										
Collector name		SOLAREVO 2.6 V		No. Collectors		1		Storage name		SOLAREVO NAT 200						
Calculated annual results for "solar-only / preheat system"																
Location	Qd,sh	Daily drawoff				170	Daily drawoff				200	Daily drawoff				250
		Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol			
	MJ/y	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%			
Stockholm SE	-	9492	4730	-	50	11164	5109	-	46	13939	5487	-	39			
WürzburgDE	-	9114	4857	-	53	10691	5330	-	50	13371	5803	-	44			
Davos CH	-	10281	7033	-	69	12110	7569	-	63	15137	8042	-	53			
Athens GR	-	7064	5866	-	83	8326	6591	-	79	10407	7506	-	72			
Perf. indicators for the table above																
Qd,sh	MJ/y	Not relevant for solar domestic hot water system														
Qd	MJ/y	Annual heat demand for domestic hot water														
QL	MJ/y	Annual heat energy delivered by the solar system														
Qpar	MJ/y	Annual parasitic energy: (electricity for pumps/controllers)														
f _{sol} =Q _l /Q _d	-	Solar fraction														
Ref. conditions		Stockholm SE	Würzburg DE	Davos CH	Athens GR											
	G	1.157	1.230	1.684	1.736											
	T _{a,ave}	7,5	9,0	3,2	18,5											
	T _{c,ave}	8,5	10,0	5,4	17,8											
± ΔTc	6,4	3,0	0,8	7,4												
G	kWh/m ²	Annual irradiation South, 45°														
T _{a,ave}	°C	Annual average outdoor air temperature														
T _{c,ave}	°C	Annual average mains cold water temp.														
ΔTc	K	Seasonal variation of Tc														
Th	45 °C	Desired hot water temperature (mixing valve temperature).														
Max. operating press. - collector side				200	kPa	Max. operating press. - tank side				1000	kPa					
Testing Laboratory				NCSR "DEMOKRITOS"- SOLAR & ENERGY SYSTEMS LAB												
Website				www.solar.demokritos.gr												
Test report id. number				6121DE1, 6124DE1, 6124F1												
Date of test report				6/7/2021, 28/6/2021, 29/6/2021												
Test method				ISO 9459-5 (DST)												
Comments of test lab										Stamp & signature of test lab						
Extrapolated																

All values are subject to some uncertainty; e.g. the uncertainty on system output is typically in the range of ± 5 % to ± 15 %

Version 4.5, 2017-10-24



Summary of		EN12976-2		test results		Certification No.		OEM 10093.3.1					
Annex to Solar KEYMARK Certificate						Issued		2023-04-20					
Company		FERROLI S.p.A.				Country		Italy					
Brand (optional)		SOLAREVO NAT				Website		www.ferroli.com					
Street		Via Ritonda 78/A				E-mail		info@ferroli.it					
Postal Code		37047		San Bonifacio (VR)		Tel. / Fax		+39 0456139411					
System family overview													
For each storage and collector size, give number of collectors													
Collector name	SOLAREVO NAT 125		SOLAREVO NAT 160		SOLAREVO NAT 200		SOLAREVO NAT 300						
SOLAREVO 2.1 V	1		1		1	2		2					
SOLAREVO 2.6 V			1		1			2					
SOLAREVO 2.6 H			1		1								
SOLAREVO 3 V						1	1		2				
SOLAREVO 3 H							1						
Name of system configuration						SOLAREVO NAT 200/2.6H							
Collector name		SOLAREVO 2.6 H		No. Collectors		1		Storage name		SOLAREVO NAT 200			
Calculated annual results for "solar-only / preheat system"													
Location	Qd,sh	Daily drawoff 170 l				Daily drawoff 200 l				Daily drawoff 250 l			
		Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol
	MJ/y	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%
Stockholm SE	-	9492	4730	-	50	11164	5140	-	46	13939	5487	-	39
WürzburgDE	-	9114	4857	-	54	10691	5330	-	50	13371	5834	-	44
Davos CH	-	10281	7064	-	69	12110	7600	-	63	15137	8073	-	53
Athens GR	-	7064	5897	-	83	8326	6591	-	79	10407	7506	-	72
Perf. indicators for the table above													
Qd,sh	MJ/y	Not relevant for solar domestic hot water system											
Qd	MJ/y	Annual heat demand for domestic hot water											
QL	MJ/y	Annual heat energy delivered by the solar system											
Qpar	MJ/y	Annual parasitic energy: (electricity for pumps/controllers)											
f _{sol} =Q _l /Q _d	-	Solar fraction											
Ref. conditions		Stockholm SE	Würzburg DE	Davos CH	Athens GR								
	G	1.157	1.230	1.684	1.736								
	T _{a,ave}	7,5	9,0	3,2	18,5								
	T _{c,ave}	8,5	10,0	5,4	17,8								
	± ΔTc	6,4	3,0	0,8	7,4								
G	kWh/m ²	Annual irradiation South, 45°											
T _{a,ave}	°C	Annual average outdoor air temperature											
T _{c,ave}	°C	Annual average mains cold water temp.											
ΔTc	K	Seasonal variation of Tc											
Th	45 °C	Desired hot water temperature (mixing valve temperature).											
Max. operating press. - collector side		200		kPa		Max. operating press. - tank side		1000		kPa			
Testing Laboratory		NCSR "DEMOKRITOS"- SOLAR & ENERGY SYSTEMS LAB											
Website		www.solar.demokritos.gr											
Test report id. number		6121DE1, 6124DE1, 6124F1											
Date of test report		6/7/2021, 28/6/2021, 29/6/2021											
Test method		ISO 9459-5 (DST)											
Comments of test lab										Stamp & signature of test lab			
Extrapolated													

All values are subject to some uncertainty; e.g. the uncertainty on system output is typically in the range of ± 5 % to ± 15 %

Version 4.5, 2017-10-24



Summary of	EN12976-2	test results	Certification No.	OEM 10093.3.1														
Annex to Solar KEYMARK Certificate			Issued	2023-04-20														
Company	FERROLI S.p.A.		Country	Italy														
Brand (optional)	SOLAREVO NAT		Website	www.ferroli.com														
Street	Via Ritonda 78/A		E-mail	info@ferroli.it														
Postal Code	37047	San Bonifacio (VR)	Tel. / Fax	+39 0456139411														
System family overview																		
Collector name	For each storage and collector size, give number of collectors																	
	SOLAREVO NAT 125				SOLAREVO NAT 160				SOLAREVO NAT 200				SOLAREVO NAT 300					
SOLAREVO 2.1 V	1				1				1			2			2			
SOLAREVO 2.6 V						1				1					2			
SOLAREVO 2.6 H							1				1							
SOLAREVO 3 V													1			2		
SOLAREVO 3 H														1				
Name of system configuration			SOLAREVO NAT 200/3															
Collector name	SOLAREVO 3 V	No. Collectors	1	Storage name	SOLAREVO NAT 200													
Calculated annual results for "solar-only / preheat system"																		
Location	Qd,sh MJ/y	Daily drawoff 170 l				Daily drawoff 200 l				Daily drawoff 250 l								
		Qd,hw MJ/y	QL MJ/y	Qpar MJ/y	fsol %	Qd,hw MJ/y	QL MJ/y	Qpar MJ/y	fsol %	Qd,hw MJ/y	QL MJ/y	Qpar MJ/y	fsol %					
Stockholm SE	-	9492	5109	-	54	11164	5550	-	50	13939	5992	-	43					
WürzburgDE	-	9114	5235	-	57	10691	5740	-	54	13371	6307	-	47					
Davos CH	-	10281	7663	-	75	12110	8262	-	68	15137	8799	-	58					
Athens GR	-	7064	6150	-	87	8326	6875	-	83	10407	7884	-	76					
Perf. indicators for the table above																		
Qd,sh	MJ/y	Not relevant for solar domestic hot water system																
Qd	MJ/y	Annual heat demand for domestic hot water																
QL	MJ/y	Annual heat energy delivered by the solar system																
Qpar	MJ/y	Annual parasitic energy: (electricity for pumps/controllers)																
f _{sol} =Q _L /Q _d	-	Solar fraction																
Ref. conditions	G	Stockholm SE	Würzburg DE	Davos CH	Athens GR													
	T _{a,ave}	7,5	9,0	3,2	18,5													
	T _{c,ave}	8,5	10,0	5,4	17,8													
	± ΔTc	6,4	3,0	0,8	7,4													
G	kWh/m ²	Annual irradiation South, 45°																
T _{a,ave}	°C	Annual average outdoor air temperature																
T _{c,ave}	°C	Annual average mains cold water temp.																
ΔTc	K	Seasonal variation of Tc																
Th	45 °C	Desired hot water temperature (mixing valve temperature).																
Max. operating press. - collector side		200	kPa	Max. operating press. - tank side		1000	kPa											
Testing Laboratory		NCSR "DEMOKRITOS"- SOLAR & ENERGY SYSTEMS LAB																
Website		www.solar.demokritos.gr																
Test report id. number		6121DE1, 6124DE1, 6124F1																
Date of test report		6/7/2021, 28/6/2021, 29/6/2021																
Test method		ISO 9459-5 (DST)																
Comments of test lab																		
Tested													Stamp & signature of test lab					

All values are subject to some uncertainty; e.g. the uncertainty on system output is typically in the range of ± 5 % to ± 15 %

Version 4.5, 2017-10-24



Summary of		EN12976-2		test results		Certification No.		OEM 10093.3.1					
Annex to Solar KEYMARK Certificate						Issued		2023-04-20					
Company		FERROLI S.p.A.				Country		Italy					
Brand (optional)		SOLAREVO NAT				Website		www.ferroli.com					
Street		Via Ritonda 78/A				E-mail		info@ferroli.it					
Postal Code		37047		San Bonifacio (VR)		Tel. / Fax		+39 0456139411					
System family overview													
For each storage and collector size, give number of collectors													
Collector name	SOLAREVO NAT 125		SOLAREVO NAT 160		SOLAREVO NAT 200		SOLAREVO NAT 300						
SOLAREVO 2.1 V	1		1		1	2							
SOLAREVO 2.6 V			1		1		2						
SOLAREVO 2.6 H			1		1								
SOLAREVO 3 V					1		1	2					
SOLAREVO 3 H							1						
Name of system configuration						SOLAREVO NAT 200/4.2							
Collector name		SOLAREVO 2.1 V		No. Collectors		2		Storage name		SOLAREVO NAT 200			
Calculated annual results for "solar-only / preheat system"													
Location	Qd,sh	Daily drawoff 170 l				Daily drawoff 200 l				Daily drawoff 250 l			
		Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol
	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%	
Stockholm SE	-	9492	5613	-	59	11164	6244	-	56	13939	7001	-	50
Würzburg DE	-	9114	5613	-	62	10691	6307	-	59	13371	7190	-	54
Davos CH	-	10281	8420	-	82	12110	9398	-	78	15137	10533	-	70
Athens GR	-	7064	6433	-	91	8326	7348	-	88	10407	8672	-	83
Perf. indicators for the table above													
Qd,sh	MJ/y	Not relevant for solar domestic hot water system											
Qd	MJ/y	Annual heat demand for domestic hot water											
QL	MJ/y	Annual heat energy delivered by the solar system											
Qpar	MJ/y	Annual parasitic energy: (electricity for pumps/controllers)											
f _{sol} =Q _l /Q _d	-	Solar fraction											
Ref. conditions		Stockholm SE	Würzburg DE	Davos CH	Athens GR								
	G	1.157	1.230	1.684	1.736								
	T _{a,ave}	7,5	9,0	3,2	18,5								
	T _{c,ave}	8,5	10,0	5,4	17,8								
± ΔTc	6,4	3,0	0,8	7,4									
G	kWh/m ²	Annual irradiation South, 45°											
T _{a,ave}	°C	Annual average outdoor air temperature											
T _{c,ave}	°C	Annual average mains cold water temp.											
ΔTc	K	Seasonal variation of Tc											
Th	45 °C	Desired hot water temperature (mixing valve temperature).											
Max. operating press. - collector side		200		kPa		Max. operating press. - tank side		1000		kPa			
Testing Laboratory		NCSR "DEMOKRITOS"- SOLAR & ENERGY SYSTEMS LAB											
Website		www.solar.demokritos.gr											
Test report id. number		6121DE1, 6124DE1, 6124F1											
Date of test report		6/7/2021, 28/6/2021, 29/6/2021											
Test method		ISO 9459-5 (DST)											
Comments of test lab													
Extrapolated													

All values are subject to some uncertainty; e.g. the uncertainty on system output is typically in the range of ± 5 % to ± 15 %

Version 4.5, 2017-10-24

Central Offices: 2, Kalavriton, 145 64 kifisia, Athens, Tel: +30 210 6233493-4 , Fax: +30 210 6233495, <http://www.dqs.gr>, e-mail: i.alexiou@dqs.gr



Summary of		EN12976-2		test results		Certification No.		OEM 10093.3.1					
Annex to Solar KEYMARK Certificate						Issued		2023-04-20					
Company		FERROLI S.p.A.				Country		Italy					
Brand (optional)		SOLAREVO NAT				Website		www.ferroli.com					
Street		Via Ritonda 78/A				E-mail		info@ferroli.it					
Postal Code		37047		San Bonifacio (VR)		Tel. / Fax		+39 0456139411					
System family overview													
For each storage and collector size, give number of collectors													
Collector name	SOLAREVO NAT 125		SOLAREVO NAT 160		SOLAREVO NAT 200		SOLAREVO NAT 300						
SOLAREVO 2.1 V	1		1		1	2		2					
SOLAREVO 2.6 V			1		1			2					
SOLAREVO 2.6 H			1		1								
SOLAREVO 3 V						1	1	2					
SOLAREVO 3 H							1						
Name of system configuration						SOLAREVO NAT 300/3							
Collector name		SOLAREVO 3 V		No. Collectors		1		Storage name		SOLAREVO NAT 300			
Calculated annual results for "solar-only / preheat system"													
Location	Qd,sh	Daily drawoff 250				Daily drawoff 300				Daily drawoff 400			
		Qd,hw	QL	Qpar	f _{sol}	Qd,hw	QL	Qpar	f _{sol}	Qd,hw	QL	Qpar	f _{sol}
	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%	
Stockholm SE	-	13939	6244	-	45	16746	6654	-	40	22327	7159	-	32
WürzburgDE	-	13371	6496	-	49	16052	7064	-	44	21413	7569	-	35
Davos CH	-	15137	9177	-	61	18165	9745	-	54	24220	10218	-	42
Athens GR	-	10407	8105	-	78	12488	9082	-	73	16651	10312	-	62
Perf. indicators for the table above													
Qd,sh	MJ/y	Not relevant for solar domestic hot water system											
Qd	MJ/y	Annual heat demand for domestic hot water											
QL	MJ/y	Annual heat energy delivered by the solar system											
Qpar	MJ/y	Annual parasitic energy: (electricity for pumps/controllers)											
f _{sol} =Q _l /Q _d	-	Solar fraction											
Ref. conditions		Stockholm SE	Würzburg DE	Davos CH	Athens GR								
	G	1.157	1.230	1.684	1.736								
	T _{a,ave}	7,5	9,0	3,2	18,5								
	T _{c,ave}	8,5	10,0	5,4	17,8								
	± ΔT _c	6,4	3,0	0,8	7,4								
G	kWh/m ²	Annual irradiation South, 45°											
T _{a,ave}	°C	Annual average outdoor air temperature											
T _{c,ave}	°C	Annual average mains cold water temp.											
ΔT _c	K	Seasonal variation of T _c											
T _h	45 °C	Desired hot water temperature (mixing valve temperature).											
Max. operating press. - collector side		200		kPa		Max. operating press. - tank side		1000		kPa			
Testing Laboratory		NCSR "DEMOKRITOS"- SOLAR & ENERGY SYSTEMS LAB											
Website		www.solar.demokritos.gr											
Test report id. number		6121DE1, 6124DE1, 6124F1											
Date of test report		6/7/2021, 28/6/2021, 29/6/2021											
Test method		ISO 9459-5 (DST)											
Comments of test lab										Stamp & signature of test lab			
Extrapolated													

All values are subject to some uncertainty; e.g. the uncertainty on system output is typically in the range of ± 5 % to ± 15 %

Version 4.5, 2017-10-24



Summary of		EN12976-2		test results		Certification No.		OEM 10093.3.1					
Annex to Solar KEYMARK Certificate						Issued		2023-04-20					
Company		FERROLI S.p.A.				Country		Italy					
Brand (optional)		SOLAREVO NAT				Website		www.ferroli.com					
Street		Via Ritonda 78/A				E-mail		info@ferroli.it					
Postal Code		37047		San Bonifacio (VR)		Tel. / Fax		+39 0456139411					
System family overview													
For each storage and collector size, give number of collectors													
Collector name	SOLAREVO NAT 125		SOLAREVO NAT 160		SOLAREVO NAT 200		SOLAREVO NAT 300						
SOLAREVO 2.1 V	1		1		1	2		2					
SOLAREVO 2.6 V			1		1			2					
SOLAREVO 2.6 H			1		1								
SOLAREVO 3 V					1		1		2				
SOLAREVO 3 H							1						
Name of system configuration						SOLAREVO NAT 300/3H							
Collector name		SOLAREVO 3 H		No. Collectors		1		Storage name		SOLAREVO NAT 300			
Calculated annual results for "solar-only / preheat system"													
Location	Qd,sh	Daily drawoff 250				Daily drawoff 300				Daily drawoff 400			
		Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol
	MJ/y	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%
Stockholm SE	-	13939	6276	-	45	16746	6686	-	40	22327	7159	-	32
WürzburgDE	-	13371	6528	-	49	16052	7096	-	44	21413	7569	-	35
Davos CH	-	15137	9209	-	61	18165	9776	-	54	24220	10249	-	42
Athens GR	-	10407	8136	-	78	12488	9082	-	73	16651	10344	-	62
Perf. indicators for the table above													
Qd,sh	MJ/y	Not relevant for solar domestic hot water system											
Qd	MJ/y	Annual heat demand for domestic hot water											
QL	MJ/y	Annual heat energy delivered by the solar system											
Qpar	MJ/y	Annual parasitic energy: (electricity for pumps/controllers)											
f _{sol} =Q _l /Q _d	-	Solar fraction											
Ref. conditions		Stockholm SE	Würzburg DE	Davos CH	Athens GR								
	G	1.157	1.230	1.684	1.736								
	T _{a,ave}	7,5	9,0	3,2	18,5								
	T _{c,ave}	8,5	10,0	5,4	17,8								
± ΔTc	6,4	3,0	0,8	7,4									
G	kWh/m ²	Annual irradiation South, 45°											
T _{a,ave}	°C	Annual average outdoor air temperature											
T _{c,ave}	°C	Annual average mains cold water temp.											
ΔTc	K	Seasonal variation of Tc											
Th	45 °C	Desired hot water temperature (mixing valve temperature).											
Max. operating press. - collector side				200	kPa	Max. operating press. - tank side				1000	kPa		
Testing Laboratory				NCSR "DEMOKRITOS"- SOLAR & ENERGY SYSTEMS LAB									
Website				www.solar.demokritos.gr									
Test report id. number				6121DE1, 6124DE1, 6124F1									
Date of test report				6/7/2021, 28/6/2021, 29/6/2021									
Test method				ISO 9459-5 (DST)									
Comments of test lab										Stamp & signature of test lab			
Extrapolated													

All values are subject to some uncertainty; e.g. the uncertainty on system output is typically in the range of ± 5 % to ± 15 %

Version 4.5, 2017-10-24



Summary of		EN12976-2		test results		Certification No.		OEM 10093.3.1					
Annex to Solar KEYMARK Certificate						Issued		2023-04-20					
Company		FERROLI S.p.A.				Country		Italy					
Brand (optional)		SOLAREVO NAT				Website		www.ferroli.com					
Street		Via Ritonda 78/A				E-mail		info@ferroli.it					
Postal Code		37047		San Bonifacio (VR)		Tel. / Fax		+39 0456139411					
System family overview													
For each storage and collector size, give number of collectors													
Collector name	SOLAREVO NAT 125		SOLAREVO NAT 160		SOLAREVO NAT 200		SOLAREVO NAT 300						
SOLAREVO 2.1 V	1		1		1	2	2						
SOLAREVO 2.6 V			1		1		2						
SOLAREVO 2.6 H			1		1								
SOLAREVO 3 V					1		2						
SOLAREVO 3 H							1						
Name of system configuration						SOLAREVO NAT 300/4.2							
Collector name		SOLAREVO 2.1 V		No. Collectors		2		Storage name		SOLAREVO NAT 300			
Calculated annual results for "solar-only / preheat system"													
Location	Qd,sh	Daily drawoff 250				Daily drawoff 300				Daily drawoff 400			
		Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol
	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%	
Stockholm SE	-	13939	7379	-	53	16746	8073	-	48	22327	8988	-	40
WürzburgDE	-	13371	7506	-	56	16052	8389	-	52	21413	9429	-	44
Davos CH	-	15137	11038	-	73	18165	12078	-	67	24220	13087	-	54
Athens GR	-	10407	8925	-	86	12488	10186	-	82	16651	12078	-	73
Perf. indicators for the table above													
Qd,sh	MJ/y	Not relevant for solar domestic hot water system											
Qd	MJ/y	Annual heat demand for domestic hot water											
QL	MJ/y	Annual heat energy delivered by the solar system											
Qpar	MJ/y	Annual parasitic energy: (electricity for pumps/controllers)											
f _{sol} =Q _l /Q _d	-	Solar fraction											
Ref. conditions		Stockholm SE	Würzburg DE	Davos CH	Athens GR								
	G	1.157	1.230	1.684	1.736								
	T _{a,ave}	7,5	9,0	3,2	18,5								
	T _{c,ave}	8,5	10,0	5,4	17,8								
	± ΔT _c	6,4	3,0	0,8	7,4								
G	kWh/m ²	Annual irradiation South, 45°											
T _{a,ave}	°C	Annual average outdoor air temperature											
T _{c,ave}	°C	Annual average mains cold water temp.											
ΔT _c	K	Seasonal variation of T _c											
Th	45 °C	Desired hot water temperature (mixing valve temperature).											
Max. operating press. - collector side		200		kPa		Max. operating press. - tank side		1000		kPa			
Testing Laboratory				NCSR "DEMOKRITOS"- SOLAR & ENERGY SYSTEMS LAB									
Website				www.solar.demokritos.gr									
Test report id. number				6121DE1, 6124DE1, 6124F1									
Date of test report				6/7/2021, 28/6/2021, 29/6/2021									
Test method				ISO 9459-5 (DST)									
Comments of test lab										Stamp & signature of test lab			
Extrapolated													

All values are subject to some uncertainty; e.g. the uncertainty on system output is typically in the range of ± 5 % to ± 15 %

Version 4.5, 2017-10-24



Summary of		EN12976-2		test results		Certification No.		OEM 10093.3.1					
Annex to Solar KEYMARK Certificate						Issued		2023-04-20					
Company		FERROLI S.p.A.				Country		Italy					
Brand (optional)		SOLAREVO NAT				Website		www.ferroli.com					
Street		Via Ritonda 78/A				E-mail		info@ferroli.it					
Postal Code		37047		San Bonifacio (VR)		Tel. / Fax		+39 0456139411					
System family overview													
For each storage and collector size, give number of collectors													
Collector name	SOLAREVO NAT 125		SOLAREVO NAT 160		SOLAREVO NAT 200		SOLAREVO NAT 300						
SOLAREVO 2.1 V	1		1		1	2		2					
SOLAREVO 2.6 V			1		1			2					
SOLAREVO 2.6 H			1		1								
SOLAREVO 3 V					1		1		2				
SOLAREVO 3 H							1						
Name of system configuration						SOLAREVO NAT 300/5.2							
Collector name		SOLAREVO 2.6 V		No. Collectors		2		Storage name		SOLAREVO NAT 300			
Calculated annual results for "solar-only / preheat system"													
Location	Qd,sh	Daily drawoff 250				Daily drawoff 300				Daily drawoff 400			
		Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol
	MJ/y	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%
Stockholm SE	-	13939	8010	-	57	16746	8893	-	53	22327	10155	-	46
WürzburgDE	-	13371	8042	-	60	16052	9082	-	57	21413	10533	-	49
Davos CH	-	15137	11984	-	79	18165	13371	-	74	24220	15011	-	62
Athens GR	-	10407	9303	-	90	12488	10754	-	86	16651	13024	-	78
Perf. indicators for the table above													
Qd,sh	MJ/y	Not relevant for solar domestic hot water system											
Qd	MJ/y	Annual heat demand for domestic hot water											
QL	MJ/y	Annual heat energy delivered by the solar system											
Qpar	MJ/y	Annual parasitic energy: (electricity for pumps/controllers)											
$f_{sol}=Q_L/Q_d$	-	Solar fraction											
Ref. conditions		Stockholm SE	Würzburg DE	Davos CH	Athens GR								
	G	1.157	1.230	1.684	1.736								
	T _{a,ave}	7,5	9,0	3,2	18,5								
	T _{c,ave}	8,5	10,0	5,4	17,8								
	± ΔTc	6,4	3,0	0,8	7,4								
G	kWh/m ²	Annual irradiation South, 45°											
T _{a,ave}	°C	Annual average outdoor air temperature											
T _{c,ave}	°C	Annual average mains cold water temp.											
ΔTc	K	Seasonal variation of Tc											
Th	45 °C	Desired hot water temperature (mixing valve temperature).											
Max. operating press. - collector side				200	kPa	Max. operating press. - tank side				1000	kPa		
Testing Laboratory				NCSR "DEMOKRITOS"- SOLAR & ENERGY SYSTEMS LAB									
Website				www.solar.demokritos.gr									
Test report id. number				6121DE1, 6124DE1, 6124F1									
Date of test report				6/7/2021, 28/6/2021, 29/6/2021									
Test method				ISO 9459-5 (DST)									
Comments of test lab										Stamp & signature of test lab			
Extrapolated													

All values are subject to some uncertainty; e.g. the uncertainty on system output is typically in the range of ± 5 % to ± 15 %

Version 4.5, 2017-10-24



Summary of		EN12976-2		test results		Certification No.		OEM 10093.3.1					
Annex to Solar KEYMARK Certificate						Issued		2023-04-20					
Company		FERROLI S.p.A.				Country		Italy					
Brand (optional)		SOLAREVO NAT				Website		www.ferroli.com					
Street		Via Ritonda 78/A				E-mail		info@ferroli.it					
Postal Code		37047		San Bonifacio (VR)		Tel. / Fax		+39 0456139411					
System family overview													
For each storage and collector size, give number of collectors													
Collector name	SOLAREVO NAT 125		SOLAREVO NAT 160		SOLAREVO NAT 200		SOLAREVO NAT 300						
SOLAREVO 2.1 V	1		1		1	2		2					
SOLAREVO 2.6 V			1		1			2					
SOLAREVO 2.6 H			1		1								
SOLAREVO 3 V					1		1	2					
SOLAREVO 3 H							1						
Name of system configuration						SOLAREVO NAT 300/6							
Collector name		SOLAREVO 3 V		No. Collectors		2		Storage name		SOLAREVO NAT 300			
Calculated annual results for "solar-only / preheat system"													
Location	Qd,sh	Daily drawoff 250				Daily drawoff 300				Daily drawoff 400			
		Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol
	MJ/y	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%
Stockholm SE	-	13939	8357	-	60	16746	9366	-	56	22327	10880	-	49
WürzburgDE	-	13371	8326	-	62	16052	9492	-	59	21413	11164	-	52
Davos CH	-	15137	12520	-	83	18165	14097	-	78	24220	16178	-	67
Athens GR	-	10407	9524	-	92	12488	11038	-	88	16651	13529	-	81
Perf. indicators for the table above													
Qd,sh	MJ/y	Not relevant for solar domestic hot water system											
Qd	MJ/y	Annual heat demand for domestic hot water											
QL	MJ/y	Annual heat energy delivered by the solar system											
Qpar	MJ/y	Annual parasitic energy: (electricity for pumps/controllers)											
f _{sol} =Q _l /Q _d	-	Solar fraction											
Ref. conditions		Stockholm SE	Würzburg DE	Davos CH	Athens GR								
	G	1.157	1.230	1.684	1.736								
	T _{a,ave}	7,5	9,0	3,2	18,5								
	T _{c,ave}	8,5	10,0	5,4	17,8								
	± ΔTc	6,4	3,0	0,8	7,4								
G	kWh/m ²	Annual irradiation South, 45°											
T _{a,ave}	°C	Annual average outdoor air temperature											
T _{c,ave}	°C	Annual average mains cold water temp.											
ΔTc	K	Seasonal variation of Tc											
Th	45 °C	Desired hot water temperature (mixing valve temperature).											
Max. operating press. - collector side				200	kPa	Max. operating press. - tank side				1000	kPa		
Testing Laboratory				NCSR "DEMOKRITOS"- SOLAR & ENERGY SYSTEMS LAB									
Website				www.solar.demokritos.gr									
Test report id. number				6121DE1, 6124DE1, 6124F1									
Date of test report				6/7/2021, 28/6/2021, 29/6/2021									
Test method				ISO 9459-5 (DST)									
Comments of test lab										Stamp & signature of test lab			
Extrapolated													

All values are subject to some uncertainty; e.g. the uncertainty on system output is typically in the range of ± 5 % to ± 15 %

Version 4.5, 2017-10-24