| Summary of | EN12976-2 | SOLAR SYSTEM test results | Licence Number | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2 102 829 446 |

| 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 specifiy: | n/a |
| Solar+supplementary OR Solar-only / Solar pre-heat | Solar only / Solar preheat |

**Collector(s)**

| Company | Dimas SA |
|---|---|
| *Keymark lic.no. if available* | *011-7S1491 F* |

| Collector name | Per module: Gross Area (AG) | Per module: Gross length | Per module: Gross width |
|---|---|---|---|
| | m² | mm | mm |
| ENERGY+EVO 15 | 1.51 | 1503 | 1007 |
| ENERGY+EVO 17 | 1.68 | 1420 | 1183 |
| ENERGY+EVO 19 | 1.96 | 1503 | 1305 |
| ENERGY+EVO 20 | 2.02 | 2006 | 1007 |
| ENERGY+EVO 23 | 2.24 | 1893 | 1183 |
| ENERGY+EVO 25 | 2.52 | 2006 | 1257 |
| ENERGY+EVO 27 | 2.67 | 2261 | 1183 |
| ENERGY+EVO 29 | 2.92 | 2006 | 1457 |

**Heat store(s)**

| Company | COSMOSUNGROUP E.E |
|---|---|
| *Keymark lic.no. if available* | -- |

| Store name | Total nominal volume | Gross height | Gross width | Gross depth | Auxiliary heated volume | Electrical aux. heating power |
|---|---|---|---|---|---|---|
| | litres | mm | mm | mm | litres | kW |
| HYDRO 120 | 120 | 500 | 1000 | - | - | - |
| HYDRO 150 | 150 | 500 | 1250 | - | - | - |
| HYDRO 170 | 170 | 530 | 1250 | - | - | - |
| HYDRO 200 | 200 | 580 | 1250 | - | - | - |
| HYDRO 250 | 250 | 580 | 1650 | - | - | - |
| HYDRO 300 | 300 | 580 | 1800 | - | - | - |

| Solar loop controller | | | Solar loop fluid | | |
|---|---|---|---|---|---|
| *Keymark lic.no. if available* | - | | Recommended/required | Required | |
| Company | - | | Company | n/a | |
| Name | - | | Name | n/a | |
| Solar loop pump - power range | - W | to - W | Freezing point | n/a | °C |

**System family overview**

| Collector name | Number of collectors in each configuration for each store: Store name | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | HYDRO 300 | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | 2 | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | 2 | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | 2 | 3 | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | 2 | 1 | |

| Testing Laboratory | TZS/IGTE |
|---|---|
| Website | www.igte.uni-stuttgart.de |
| Test report id. number | 23SYS156/1OEM02 |
| Date of test report | 2025-02-19 |

**Comments of test lab**

This SK data sheet replaces the SK data sheet dated 28 March 2025. Reason for replacement: incorrect DINCERTCO number.

TZS Forschungs- und Testzentrum für Solaranlagen
Institut für Thermodynamik und Wärmetechnik
Universität Stuttgart
Pfaffenwaldring 6, 70550 Stuttgart (Vaihingen)



DIN CERTCO ● Alboinstraße 56 ● 12103 Berlin, Germany
Tel: +49 30 7562-1131 ● Fax: +49 30 7562-1141 ● E-Mail: info@dincertco.de ● www.dincertco.de

| Summary of | EN12976-2 | test results | Certification No. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**Parameters for systems extrapolation (Annex D)**

| Collector of measured system | | Storage tank of measured system | |
|---|---|---|---|
| $A_{ref}$ [$m^2$] | 2.52 | Volume [l] | 147 |
| $\eta_0$ | 0.725 | $A_{hx}$ [$m^2$] | 0.75 |
| $a_1$ [$W/Km^2$] | 3.620 | Piping | |
| $a_2$ [$W/Km^2$] | 0.006 | $U_{loop,p}$ | 0.91 |
| IAM (50º) | 0.980 | | |

**System parameters**

| Name of System Configuration | Tested/Extrapol | $A_c$* [$m^2$] | $u_c$* [$W/Km^2$] | $U_s$ [W/K] | $C_s$ [MJ/K] | $S_c$ [-] | $D_L$ [-] | $f_{aux}$ [-] |
|---|---|---|---|---|---|---|---|---|
| 120.1.15 | Extrapol | 1.138 | 6.293 | 1.085 | 0.429 | 0.175 | 0.173 | - |
| 120.1.17 | Extrapol | 1.260 | 6.215 | 1.085 | 0.429 | 0.175 | 0.173 | - |
| 120.1.19 | Extrapol | 1.503 | 6.115 | 1.085 | 0.429 | 0.175 | 0.173 | - |
| 120.1.20 | Extrapol | 1.515 | 6.097 | 1.085 | 0.429 | 0.175 | 0.173 | - |
| 150.1.15 | Extrapol | 1.156 | 6.293 | 1.302 | 0.537 | 0.175 | 0.173 | - |
| 150.1.20 | Extrapol | 1.521 | 6.097 | 1.302 | 0.537 | 0.175 | 0.173 | - |
| 150.1.23 | Extrapol | 1.681 | 6.040 | 1.302 | 0.537 | 0.175 | 0.173 | - |
| 150.1.25 | Extrapol | 1.912 | 5.982 | 1.302 | 0.537 | 0.175 | 0.173 | - |
| 150.2.15 | Extrapol | 2.281 | 5.905 | 1.302 | 0.537 | 0.175 | 0.173 | - |
| 170.1.19 | Extrapol | 1.481 | 6.115 | 1.394 | 0.608 | 0.175 | 0.173 | - |
| 170.1.20 | Extrapol | 1.519 | 6.097 | 1.394 | 0.608 | 0.175 | 0.173 | - |
| 170.1.25 | Tested | 1.509 | 6.441 | 1.394 | 0.608 | 0.175 | 0.173 | - |
| 170.2.15 | Extrapol | 2.282 | 5.905 | 1.394 | 0.608 | 0.175 | 0.173 | - |
| 200.1.20 | Extrapol | 1.522 | 6.097 | 1.551 | 0.716 | 0.175 | 0.173 | - |
| 200.1.23 | Extrapol | 1.688 | 6.040 | 1.551 | 0.716 | 0.175 | 0.173 | - |
| 200.1.25 | Extrapol | 1.897 | 5.982 | 1.551 | 0.716 | 0.175 | 0.173 | - |
| 200.1.27 | Extrapol | 2.005 | 5.956 | 1.551 | 0.716 | 0.175 | 0.173 | - |
| 200.1.29 | Extrapol | 2.221 | 5.918 | 1.551 | 0.716 | 0.175 | 0.173 | - |
| 200.2.15 | Extrapol | 2.287 | 5.905 | 1.551 | 0.716 | 0.175 | 0.173 | - |
| 200.2.20 | Extrapol | 3.045 | 5.807 | 1.551 | 0.716 | 0.175 | 0.173 | - |
| 250.1.25 | Extrapol | 1.906 | 5.982 | 1.953 | 0.894 | 0.175 | 0.173 | - |
| 250.1.29 | Extrapol | 2.230 | 5.918 | 1.953 | 0.894 | 0.175 | 0.173 | - |
| 250.2.15 | Extrapol | 2.298 | 5.905 | 1.953 | 0.984 | 0.175 | 0.173 | - |
| 250.2.20 | Extrapol | 3.085 | 5.807 | 1.953 | 0.894 | 0.175 | 0.173 | - |
| 300.1.29 | Extrapol | 2.253 | 5.918 | 2.104 | 1.073 | 0.175 | 0.173 | - |
| 300.2.15 | Extrapol | 2.301 | 5.905 | 2.104 | 1.073 | 0.175 | 0.173 | - |
| 300.2.20 | Extrapol | 3.068 | 5.807 | 2.104 | 1.073 | 0.175 | 0.173 | - |
| 300.2.25 | Extrapol | 3.818 | 5.750 | 2.104 | 1.073 | 0.175 | 0.173 | - |
| 300.2.29 | Extrapol | 4.436 | 5.718 | 2.104 | 1.,073 | 0.175 | 0.173 | - |
| 300.3.25 | Extrapol | 5.834 | 5.672 | 2.104 | 1.073 | 0.175 | 0.173 | - |

| | |
|---|---|
| Testing Laboratory | TZS/IGTE |
| Website | www.igte.uni-stuttgart.de |
| Test report id. number | 23SYS156/1OEM02 |
| Date of test report | 2025-02-19 |
| Test method | ISO 9459-5 (DST) |

| Comments of test lab | |
|---|---|
| No comments | 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. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

**For each storage and collector size, give number of collectors**

| Collector name | HYDRO 120 | HYDRO 150 | HYDRO 170 | HYDRO 200 | HYDRO 250 | HYDRO 300 |
|---|---|---|---|---|---|---|
| ENERGY+EVO 15 | 1 | 2 1 | 2 | 2 | 2 | 2 |
| ENERGY+EVO 17 | 1 | | | | | |
| ENERGY+EVO 19 | 1 | | 1 | | | |
| ENERGY+EVO 20 | 1 | 1 | 1 | 1 2 | 2 | 2 |
| ENERGY+EVO 23 | | 1 | | 1 | | |
| ENERGY+EVO 25 | | 1 | 1 | 1 | 1 | 2 3 |
| ENERGY+EVO 27 | | | | 1 | | |
| ENERGY+EVO 29 | | | | 1 | 1 | 2 1 |

| Name of system configuration | | | | | 120.1.15 | | |
|---|---|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 15 | No. Collectors | 1 | Storage name | HYDRO 120 | | |

**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 | 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 | 0 | 4441 | 2545 | 0 | 57 | 6107 | 3078 | 0 | 50 | 7772 | 3398 | 0 | 44 |
| WürzburgDE | 0 | 4257 | 2567 | 0 | 60 | 5854 | 3155 | 0 | 54 | 7450 | 3546 | 0 | 48 |
| Davos CH | 0 | 4820 | 3827 | 0 | 79 | 6628 | 4587 | 0 | 69 | 8435 | 4994 | 0 | 59 |
| Athens GR | 0 | 3305 | 2994 | 0 | 91 | 4545 | 3804 | 0 | 84 | 5784 | 4413 | 0 | 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 | | Stockholm SE | Würzburg DE | Davos CH | Athens GR | | | |
|---|---|---|---|---|---|---|---|---|
| | G | 1 157 | 1 230 | 1 684 | 1 736 | | | |
| | Ta,ave | 7.5 | 9.0 | 3.2 | 18.5 | | | |
| | Tc,ave | 8.5 | 10.0 | 5.4 | 17.8 | | | |
| | ± ΔTc | 6.4 | 3.0 | 0.8 | 7.4 | | | |

| | | |
|---|---|---|
| G | kWh/m² | **Annual irradiation South, 45°** |
| Ta,ave | °C | **Annual average outdoor air temperature** |
| Tc,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 | 1 000 | kPa | Max. operating press. - tank side | 800 | kPa |
|---|---|---|---|---|---|

| | |
|---|---|
| **Testing Laboratory** | TZS/IGTE |
| **Website** | www.igte.uni-stuttgart.de |
| **Test report id. number** | 23SYS156/1OEM02 |
| **Date of test report** | 2025-02-19 |
| **Test method** | ISO 9459-5 (DST) |

**Comments of test lab**

No comments

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. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

| Name of system configuration | | | | | 120.1.17 | | |
|---|---|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 17 | No. Collectors | 1 | Storage name | HYDRO 120 | | |

**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 | 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 | 0 | 4441 | 2634 | 0 | 59 | 6107 | 3224 | 0 | 53 | 7772 | 3591 | 0 | 46 | | | | | | |
| WürzburgDE | 0 | 4257 | 2648 | 0 | 62 | 5854 | 3284 | 0 | 56 | 7450 | 3732 | 0 | 50 | | | | | | |
| Davos CH | 0 | 4820 | 3962 | 0 | 82 | 6628 | 4825 | 0 | 73 | 8435 | 5331 | 0 | 63 | | | | | | |
| Athens GR | 0 | 3305 | 3047 | 0 | 92 | 4545 | 3913 | 0 | 86 | 5784 | 4581 | 0 | 79 | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |

**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 | | | |
| | Ta,ave | 7.5 | 9.0 | 3.2 | 18.5 | | | |
| | Tc,ave | 8.5 | 10.0 | 5.4 | 17.8 | | | |
| | ± ΔTc | 6.4 | 3.0 | 0.8 | 7.4 | | | |

| | | |
|---|---|---|
| G | kWh/m² | **Annual irradiation South, 45°** |
| Ta,ave | °C | **Annual average outdoor air temperature** |
| Tc,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 | 1 000 | kPa | Max. operating press. - tank side | 800 | kPa |
|---|---|---|---|---|---|

| | |
|---|---|
| **Testing Laboratory** | TZS/IGTE |
| **Website** | www.igte.uni-stuttgart.de |
| **Test report id. number** | 23SYS156/1OEM02 |
| **Date of test report** | 2025-02-19 |
| **Test method** | ISO 9459-5 (DST) |

**Comments of test lab**

No comments

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. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

| Name of system configuration | | | | Storage name | 120.1.19 |
|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 19 | No. Collectors | 1 | | HYDRO 120 |

**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 | 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 | 0 | 4441 | 2776 | 0 | 63 | 6107 | 3450 | 0 | 57 | 7772 | 3917 | 0 | 50 |
| WürzburgDE | 0 | 4257 | 2767 | 0 | 65 | 5854 | 3483 | 0 | 60 | 7450 | 4016 | 0 | 54 |
| Davos CH | 0 | 4820 | 4155 | 0 | 86 | 6628 | 5183 | 0 | 78 | 8435 | 5854 | 0 | 69 |
| Athens GR | 0 | 3305 | 3110 | 0 | 94 | 4545 | 4072 | 0 | 90 | 5784 | 4835 | 0 | 84 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

**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 | | | |
| | Ta,ave | 7.5 | 9.0 | 3.2 | 18.5 | | | |
| | Tc,ave | 8.5 | 10.0 | 5.4 | 17.8 | | | |
| | ± ΔTc | 6.4 | 3.0 | 0.8 | 7.4 | | | |

| | | |
|---|---|---|
| G | kWh/m² | **Annual irradiation South, 45°** |
| Ta,ave | °C | **Annual average outdoor air temperature** |
| Tc,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 | 1 000 | kPa | Max. operating press. - tank side | 800 | kPa |
|---|---|---|---|---|---|

| | |
|---|---|
| **Testing Laboratory** | TZS/IGTE |
| **Website** | www.igte.uni-stuttgart.de |
| **Test report id. number** | 23SYS156/1OEM02 |
| **Date of test report** | 2025-02-19 |
| **Test method** | ISO 9459-5 (DST) |

**Comments of test lab**

No comments

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. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

| Name of system configuration | | | | Storage name | |
|---|---|---|---|---|---|
| | | | | | 120.1.20 |
| Collector name | ENERGY+EVO 20 | No. Collectors | 1 | Storage name | HYDRO 120 |

**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 | 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 | 0 | 4441 | 2780 | 0 | 63 | 6107 | 3463 | 0 | 57 | 7772 | 3933 | 0 | 51 |
| WürzburgDE | 0 | 4257 | 2776 | 0 | 65 | 5854 | 3489 | 0 | 60 | 7450 | 4030 | 0 | 54 |
| Davos CH | 0 | 4820 | 4164 | 0 | 86 | 6628 | 5203 | 0 | 79 | 8435 | 5879 | 0 | 70 |
| Athens GR | 0 | 3305 | 3117 | 0 | 94 | 4545 | 4081 | 0 | 90 | 5784 | 4847 | 0 | 84 |
| | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | |

**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 | | | |
| | Ta,ave | 7.5 | 9.0 | 3.2 | 18.5 | | | |
| | Tc,ave | 8.5 | 10.0 | 5.4 | 17.8 | | | |
| | ± ΔTc | 6.4 | 3.0 | 0.8 | 7.4 | | | |

| | | |
|---|---|---|
| G | kWh/m² | **Annual irradiation South, 45°** |
| Ta,ave | °C | **Annual average outdoor air temperature** |
| Tc,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 | 1 000 | kPa | Max. operating press. - tank side | 800 | kPa |
|---|---|---|---|---|---|

| | |
|---|---|
| **Testing Laboratory** | TZS/IGTE |
| **Website** | www.igte.uni-stuttgart.de |
| **Test report id. number** | 23SYS156/1OEM02 |
| **Date of test report** | 2025-02-19 |
| **Test method** | ISO 9459-5 (DST) |

**Comments of test lab**

No comments

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. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

| Name of system configuration | | | | | 150.1.15 | | |
|---|---|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 15 | No. Collectors | 1 | | Storage name | HYDRO 150 | |

**Calculated annual results for "solar-only / preheat system"**

| Location | Qd,sh | Daily drawoff 110 l | | | | Daily drawoff 140 l | | | | Daily drawoff 170 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 | 0 | 6107 | 3121 | 0 | 51 | 7772 | 3497 | 0 | 45 | 9437 | 3699 | 0 | 39 |
| WürzburgDE | 0 | 5854 | 3202 | 0 | 55 | 7450 | 3636 | 0 | 49 | 9047 | 3908 | 0 | 43 |
| Davos CH | 0 | 6628 | 4653 | 0 | 70 | 8435 | 5137 | 0 | 61 | 10243 | 5388 | 0 | 53 |
| Athens GR | 0 | 4545 | 3841 | 0 | 85 | 5784 | 4500 | 0 | 78 | 7023 | 5007 | 0 | 71 |
| | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | |

**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 | | | |
| | Ta,ave | 7.5 | 9.0 | 3.2 | 18.5 | | | |
| | Tc,ave | 8.5 | 10.0 | 5.4 | 17.8 | | | |
| | ± ΔTc | 6.4 | 3.0 | 0.8 | 7.4 | | | |

| | | |
|---|---|---|
| G | kWh/m² | **Annual irradiation South, 45°** |
| Ta,ave | °C | **Annual average outdoor air temperature** |
| Tc,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 | 1 000 | kPa | Max. operating press. - tank side | 800 | kPa |
|---|---|---|---|---|---|

| | |
|---|---|
| **Testing Laboratory** | TZS/IGTE |
| **Website** | www.igte.uni-stuttgart.de |
| **Test report id. number** | 23SYS156/1OEM02 |
| **Date of test report** | 2025-02-19 |
| **Test method** | ISO 9459-5 (DST) |

**Comments of test lab**

No comments

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. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

| Name of system configuration | | | | Storage name | |
|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 20 | No. Collectors | 1 | | 150.1.20 |
| | | | | Storage name | HYDRO 150 |

**Calculated annual results for "solar-only / preheat system"**

| Location | Qd,sh | Daily drawoff 110 l | | | | Daily drawoff 140 l | | | | Daily drawoff 170 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 | 0 | 6107 | 3505 | 0 | 57 | 7772 | 4034 | 0 | 52 | 9437 | 4388 | 0 | 47 |
| WürzburgDE | 0 | 5854 | 3530 | 0 | 60 | 7450 | 4120 | 0 | 55 | 9047 | 4560 | 0 | 50 |
| Davos CH | 0 | 6628 | 5269 | 0 | 80 | 8435 | 6031 | 0 | 72 | 10243 | 6515 | 0 | 64 |
| Athens GR | 0 | 4545 | 4118 | 0 | 91 | 5784 | 4928 | 0 | 85 | 7023 | 5583 | 0 | 80 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

**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 | | | |
| | Ta,ave | 7.5 | 9.0 | 3.2 | 18.5 | | | |
| | Tc,ave | 8.5 | 10.0 | 5.4 | 17.8 | | | |
| | ± ΔTc | 6.4 | 3.0 | 0.8 | 7.4 | | | |

| | | |
|---|---|---|
| G | kWh/m² | **Annual irradiation South, 45°** |
| Ta,ave | °C | **Annual average outdoor air temperature** |
| Tc,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 | 1 000 | kPa | Max. operating press. - tank side | 800 | kPa |
|---|---|---|---|---|---|

| | |
|---|---|
| **Testing Laboratory** | TZS/IGTE |
| **Website** | www.igte.uni-stuttgart.de |
| **Test report id. number** | 23SYS156/1OEM02 |
| **Date of test report** | 2025-02-19 |
| **Test method** | ISO 9459-5 (DST) |

**Comments of test lab**

No comments

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. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

| Name of system configuration | | | | | 150.1.23 | | |
|---|---|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 23 | No. Collectors | 1 | Storage name | HYDRO 150 | | |

**Calculated annual results for "solar-only / preheat system"**

| Location | Qd,sh | Daily drawoff 110 l | | | | Daily drawoff 140 l | | | | Daily drawoff 170 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 | 0 | 6107 | 3621 | 0 | 59 | 7772 | 4205 | 0 | 54 | 9437 | 4624 | 0 | 49 |
| WürzburgDE | 0 | 5854 | 3635 | 0 | 62 | 7450 | 4276 | 0 | 57 | 9047 | 4768 | 0 | 53 |
| Davos CH | 0 | 6628 | 5442 | 0 | 82 | 8435 | 6309 | 0 | 75 | 10243 | 6904 | 0 | 67 |
| Athens GR | 0 | 4545 | 4186 | 0 | 92 | 5784 | 5055 | 0 | 87 | 7023 | 5773 | 0 | 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 | | | |
| | Ta,ave | 7.5 | 9.0 | 3.2 | 18.5 | | | |
| | Tc,ave | 8.5 | 10.0 | 5.4 | 17.8 | | | |
| | ± ΔTc | 6.4 | 3.0 | 0.8 | 7.4 | | | |

| | | |
|---|---|---|
| G | kWh/m² | **Annual irradiation South, 45°** |
| Ta,ave | °C | **Annual average outdoor air temperature** |
| Tc,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 | 1 000 | kPa | Max. operating press. - tank side | 800 | kPa |
|---|---|---|---|---|---|

| | |
|---|---|
| **Testing Laboratory** | TZS/IGTE |
| **Website** | www.igte.uni-stuttgart.de |
| **Test report id. number** | 23SYS156/1OEM02 |
| **Date of test report** | 2025-02-19 |
| **Test method** | ISO 9459-5 (DST) |

**Comments of test lab**

No comments

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. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

| Name of system configuration | | | | Storage name | |
|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 25 | No. Collectors | 1 | | 150.1.25 |
| | | | | Storage name | HYDRO 150 |

**Calculated annual results for "solar-only / preheat system"**

| Location | Qd,sh | Daily drawoff 110 l | | | | Daily drawoff 140 l | | | | Daily drawoff 170 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 | 0 | 6107 | 3762 | 0 | 62 | 7772 | 4414 | 0 | 57 | 9437 | 4898 | 0 | 52 |
| WürzburgDE | 0 | 5854 | 3752 | 0 | 64 | 7450 | 4448 | 0 | 60 | 9047 | 5003 | 0 | 55 |
| Davos CH | 0 | 6628 | 5640 | 0 | 85 | 8435 | 6630 | 0 | 79 | 10243 | 7334 | 0 | 72 |
| Athens GR | 0 | 4545 | 4254 | 0 | 94 | 5784 | 5200 | 0 | 90 | 7023 | 5977 | 0 | 85 |
| | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | |

**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 | | | |
| | Ta,ave | 7.5 | 9.0 | 3.2 | 18.5 | | | |
| | Tc,ave | 8.5 | 10.0 | 5.4 | 17.8 | | | |
| | ± ΔTc | 6.4 | 3.0 | 0.8 | 7.4 | | | |

| | | |
|---|---|---|
| G | kWh/m² | **Annual irradiation South, 45°** |
| Ta,ave | °C | **Annual average outdoor air temperature** |
| Tc,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 | 1 000 | kPa | Max. operating press. - tank side | 800 | kPa |
|---|---|---|---|---|---|

| | |
|---|---|
| **Testing Laboratory** | TZS/IGTE |
| **Website** | www.igte.uni-stuttgart.de |
| **Test report id. number** | 23SYS156/1OEM02 |
| **Date of test report** | 2025-02-19 |
| **Test method** | ISO 9459-5 (DST) |

**Comments of test lab**

No comments

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. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

**For each storage and collector size, give number of collectors**

| Collector name | HYDRO 120 | HYDRO 150 | HYDRO 170 | HYDRO 200 | HYDRO 250 | HYDRO 300 |
|---|---|---|---|---|---|---|
| ENERGY+EVO 15 | 1 | 2 1 | 2 | 2 | 2 | 2 |
| ENERGY+EVO 17 | 1 | | | | | |
| ENERGY+EVO 19 | 1 | | 1 | | | |
| ENERGY+EVO 20 | 1 | 1 | 1 | 1 2 | 2 | 2 |
| ENERGY+EVO 23 | | 1 | | 1 | | |
| ENERGY+EVO 25 | | 1 | 1 | 1 | 1 | 2 3 |
| ENERGY+EVO 27 | | | | 1 | | |
| ENERGY+EVO 29 | | | | 1 | 1 | 2 1 |

| Name of system configuration | | | | | 150.2.15 | | |
|---|---|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 15 | No. Collectors | 2 | Storage name | HYDRO 150 | | |

**Calculated annual results for "solar-only / preheat system"**

| Location | Qd,sh | Daily drawoff 110 l | | | | Daily drawoff 140 l | | | | Daily drawoff 170 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 | 0 | 6107 | 3939 | 0 | 65 | 7772 | 4671 | 0 | 60 | 9437 | 5238 | 0 | 56 |
| WürzburgDE | 0 | 5854 | 3910 | 0 | 67 | 7450 | 4656 | 0 | 63 | 9047 | 5292 | 0 | 59 |
| Davos CH | 0 | 6628 | 5866 | 0 | 89 | 8435 | 6993 | 0 | 83 | 10243 | 7867 | 0 | 77 |
| Athens GR | 0 | 4545 | 4322 | 0 | 95 | 5784 | 5344 | 0 | 92 | 7023 | 6222 | 0 | 84 |
| | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | |

**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 | | | |
| | Ta,ave | 7.5 | 9.0 | 3.2 | 18.5 | | | |
| | Tc,ave | 8.5 | 10.0 | 5.4 | 17.8 | | | |
| | ± ΔTc | 6.4 | 3.0 | 0.8 | 7.4 | | | |

| | | |
|---|---|---|
| G | kWh/m² | **Annual irradiation South, 45°** |
| Ta,ave | °C | **Annual average outdoor air temperature** |
| Tc,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 | 1 000 | kPa | Max. operating press. - tank side | 800 | kPa |
|---|---|---|---|---|---|

| | |
|---|---|
| **Testing Laboratory** | TZS/IGTE |
| **Website** | www.igte.uni-stuttgart.de |
| **Test report id. number** | 23SYS156/1OEM02 |
| **Date of test report** | 2025-02-19 |
| **Test method** | ISO 9459-5 (DST) |

**Comments of test lab**

No comments

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. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

| Name of system configuration | | | | | 170.1.19 | | |
|---|---|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 19 | No. Collectors | 1 | | Storage name | HYDRO 170 | |

**Calculated annual results for "solar-only / preheat system"**

| Location | Qd,sh | Daily drawoff 140 l | | | | Daily drawoff 170 l | | | | Daily drawoff 200 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 | 0 | 7772 | 4018 | 0 | 52 | 9437 | 4388 | 0 | 47 | 11103 | 4630 | 0 | 42 |
| WürzburgDE | 0 | 7450 | 4112 | 0 | 55 | 9047 | 4560 | 0 | 50 | 10643 | 4853 | 0 | 46 |
| Davos CH | 0 | 8435 | 6006 | 0 | 71 | 10243 | 6504 | 0 | 64 | 12050 | 6772 | 0 | 56 |
| Athens GR | 0 | 5784 | 4922 | 0 | 85 | 7023 | 5583 | 0 | 80 | 8263 | 6123 | 0 | 74 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

| 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 | | | |
| | Ta,ave | 7.5 | 9.0 | 3.2 | 18.5 | | | |
| | Tc,ave | 8.5 | 10.0 | 5.4 | 17.8 | | | |
| | ± ΔTc | 6.4 | 3.0 | 0.8 | 7.4 | | | |

| | | |
|---|---|---|
| G | kWh/m² | **Annual irradiation South, 45°** |
| Ta,ave | °C | **Annual average outdoor air temperature** |
| Tc,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 | 1 000 | kPa | Max. operating press. - tank side | 800 | kPa |
|---|---|---|---|---|---|

| | |
|---|---|
| **Testing Laboratory** | TZS/IGTE |
| **Website** | www.igte.uni-stuttgart.de |
| **Test report id. number** | 23SYS156/1OEM02 |
| **Date of test report** | 2025-02-19 |
| **Test method** | ISO 9459-5 (DST) |

**Comments of test lab**

No comments

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. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

| Name of system configuration | | | | Storage name | |
|---|---|---|---|---|---|
| | | | 170.1.20 | | |
| Collector name | ENERGY+EVO 20 | No. Collectors | 1 | Storage name | HYDRO 170 |

**Calculated annual results for "solar-only / preheat system"**

| Location | Qd,sh | Daily drawoff 140 l | | | | Daily drawoff 170 l | | | | Daily drawoff 200 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 | 0 | 7772 | 4065 | 0 | 52 | 9437 | 4454 | 0 | 47 | 11103 | 4697 | 0 | 42 |
| WürzburgDE | 0 | 7450 | 4157 | 0 | 56 | 9047 | 4614 | 0 | 51 | 10643 | 4928 | 0 | 46 |
| Davos CH | 0 | 8435 | 6082 | 0 | 72 | 10243 | 6607 | 0 | 65 | 12050 | 6905 | 0 | 57 |
| Athens GR | 0 | 5784 | 4957 | 0 | 86 | 7023 | 5632 | 0 | 80 | 8263 | 6189 | 0 | 75 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

| 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 | | | |
| | Ta,ave | 7.5 | 9.0 | 3.2 | 18.5 | | | |
| | Tc,ave | 8.5 | 10.0 | 5.4 | 17.8 | | | |
| | ± ΔTc | 6.4 | 3.0 | 0.8 | 7.4 | | | |

| | | |
|---|---|---|
| G | kWh/m² | **Annual irradiation South, 45°** |
| Ta,ave | °C | **Annual average outdoor air temperature** |
| Tc,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 | 1 000 | kPa | Max. operating press. - tank side | 800 | kPa |
|---|---|---|---|---|---|

| | |
|---|---|
| **Testing Laboratory** | TZS/IGTE |
| **Website** | www.igte.uni-stuttgart.de |
| **Test report id. number** | 23SYS156/1OEM02 |
| **Date of test report** | 2025-02-19 |
| **Test method** | ISO 9459-5 (DST) |

**Comments of test lab**

No comments

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. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

| Name of system configuration | | | | | 170.1.25 | | |
|---|---|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 25 | No. Collectors | 1 | | Storage name | HYDRO 170 | |

**Calculated annual results for "solar-only / preheat system"**

| Location | Qd,sh | Daily drawoff 140 l | | | | Daily drawoff 170 l | | | | Daily drawoff 200 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 | 0 | 7772 | 4018 | 0 | 52 | 9437 | 4398 | 0 | 47 | 11103 | 4630 | 0 | 42 |
| WürzburgDE | 0 | 7450 | 4105 | 0 | 55 | 9047 | 4551 | 0 | 50 | 10643 | 4864 | 0 | 46 |
| Davos CH | 0 | 8435 | 5997 | 0 | 71 | 10243 | 6504 | 0 | 64 | 12050 | 6784 | 0 | 56 |
| Athens GR | 0 | 5784 | 4922 | 0 | 85 | 7023 | 5583 | 0 | 80 | 8263 | 6131 | 0 | 74 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

**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 | | | |
| | Ta,ave | 7.5 | 9.0 | 3.2 | 18.5 | | | |
| | Tc,ave | 8.5 | 10.0 | 5.4 | 17.8 | | | |
| | ± ΔTc | 6.4 | 3.0 | 0.8 | 7.4 | | | |

| | | |
|---|---|---|
| G | kWh/m² | **Annual irradiation South, 45°** |
| Ta,ave | °C | **Annual average outdoor air temperature** |
| Tc,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 | 1 000 | kPa | Max. operating press. - tank side | 800 | kPa |
|---|---|---|---|---|---|

| | |
|---|---|
| **Testing Laboratory** | TZS/IGTE |
| **Website** | www.igte.uni-stuttgart.de |
| **Test report id. number** | 23SYS156/1OEM02 |
| **Date of test report** | 2025-02-19 |
| **Test method** | ISO 9459-5 (DST) |

**Comments of test lab**

No comments

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. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

| Name of system configuration | | | | | 170.2.15 | | |
|---|---|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 15 | No. Collectors | 2 | Storage name | HYDRO 170 | | |

**Calculated annual results for "solar-only / preheat system"**

| Location | Qd,sh | Daily drawoff 140 l | | | | Daily drawoff 170 l | | | | Daily drawoff 200 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 | 0 | 7772 | 4718 | 0 | 61 | 9437 | 4917 | 0 | 52 | 11103 | 5785 | 0 | 52 |
| WürzburgDE | 0 | 7450 | 4701 | 0 | 63 | 9047 | 5030 | 0 | 56 | 10643 | 5918 | 0 | 56 |
| Davos CH | 0 | 8435 | 7069 | 0 | 84 | 10243 | 7375 | 0 | 72 | 12050 | 8676 | 0 | 72 |
| Athens GR | 0 | 5784 | 5373 | 0 | 93 | 7023 | 5998 | 0 | 85 | 8263 | 7057 | 0 | 85 |
| | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | |

| 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 | | | |
| | Ta,ave | 7.5 | 9.0 | 3.2 | 18.5 | | | |
| | Tc,ave | 8.5 | 10.0 | 5.4 | 17.8 | | | |
| | ± ΔTc | 6.4 | 3.0 | 0.8 | 7.4 | | | |

| | | |
|---|---|---|
| G | kWh/m² | **Annual irradiation South, 45°** |
| Ta,ave | °C | **Annual average outdoor air temperature** |
| Tc,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 | 1 000 | kPa | Max. operating press. - tank side | 800 | kPa |
|---|---|---|---|---|---|

| Testing Laboratory | TZS/IGTE |
|---|---|
| Website | www.igte.uni-stuttgart.de |
| Test report id. number | 23SYS156/1OEM02 |
| Date of test report | 2025-02-19 |
| Test method | ISO 9459-5 (DST) |

| Comments of test lab | |
|---|---|
| No comments | 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. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

| Name of system configuration | | | | Storage name | |
|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 20 | No. Collectors | 1 | | 200.1.20 |
| | | | | Storage name | HYDRO 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 | 0 | 9437 | 4511 | 0 | 48 | 11103 | 4796 | 0 | 43 | 13878 | 5024 | 0 | 36 |
| WürzburgDE | 0 | 9047 | 4668 | 0 | 52 | 10643 | 5023 | 0 | 47 | 13304 | 5322 | 0 | 40 |
| Davos CH | 0 | 10243 | 6689 | 0 | 65 | 12050 | 7025 | 0 | 58 | 15063 | 7290 | 0 | 48 |
| Athens GR | 0 | 7023 | 5682 | 0 | 81 | 8263 | 6255 | 0 | 76 | 10328 | 7013 | 0 | 68 |
| | | | | | | | | | | | | | |
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**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 | | | |
| | Ta,ave | 7.5 | 9.0 | 3.2 | 18.5 | | | |
| | Tc,ave | 8.5 | 10.0 | 5.4 | 17.8 | | | |
| | ± ΔTc | 6.4 | 3.0 | 0.8 | 7.4 | | | |

| | | |
|---|---|---|
| G | kWh/m² | **Annual irradiation South, 45°** |
| Ta,ave | °C | **Annual average outdoor air temperature** |
| Tc,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 | 1 000 | kPa | Max. operating press. - tank side | 800 | kPa |
|---|---|---|---|---|---|

| | |
|---|---|
| **Testing Laboratory** | TZS/IGTE |
| **Website** | www.igte.uni-stuttgart.de |
| **Test report id. number** | 23SYS156/1OEM02 |
| **Date of test report** | 2025-02-19 |
| **Test method** | ISO 9459-5 (DST) |

**Comments of test lab**

No comments

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. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

| Name of system configuration | | | | | 200.1.23 | | |
|---|---|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 23 | No. Collectors | 1 | | Storage name | HYDRO 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 | 0 | 9437 | 4766 | 0 | 51 | 11103 | 5107 | 0 | 46 | 13878 | 5399 | 0 | 39 |
| WürzburgDE | 0 | 9047 | 4894 | 0 | 54 | 10643 | 5311 | 0 | 50 | 13304 | 5707 | 0 | 43 |
| Davos CH | 0 | 10243 | 7109 | 0 | 69 | 12050 | 7543 | 0 | 63 | 15063 | 7893 | 0 | 52 |
| Athens GR | 0 | 7023 | 5885 | 0 | 84 | 8263 | 6520 | 0 | 79 | 10328 | 7354 | 0 | 71 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

**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 | | | |
| | Ta,ave | 7.5 | 9.0 | 3.2 | 18.5 | | | |
| | Tc,ave | 8.5 | 10.0 | 5.4 | 17.8 | | | |
| | ± ΔTc | 6.4 | 3.0 | 0.8 | 7.4 | | | |

| | | |
|---|---|---|
| G | kWh/m² | **Annual irradiation South, 45°** |
| Ta,ave | °C | **Annual average outdoor air temperature** |
| Tc,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 | 1 000 | kPa | Max. operating press. - tank side | 800 | kPa |
|---|---|---|---|---|---|

| | |
|---|---|
| **Testing Laboratory** | TZS/IGTE |
| **Website** | www.igte.uni-stuttgart.de |
| **Test report id. number** | 23SYS156/1OEM02 |
| **Date of test report** | 2025-02-19 |
| **Test method** | ISO 9459-5 (DST) |

**Comments of test lab**

No comments

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. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

| Name of system configuration | | | | | 200.1.25 | | |
|---|---|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 25 | No. Collectors | 1 | | Storage name | HYDRO 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 | 0 | 9437 | 5030 | 0 | 53 | 11103 | 5440 | 0 | 49 | 13878 | 5843 | 0 | 42 |
| WürzburgDE | 0 | 9047 | 5130 | 0 | 57 | 10643 | 5609 | 0 | 53 | 13304 | 6133 | 0 | 46 |
| Davos CH | 0 | 10243 | 7529 | 0 | 74 | 12050 | 8098 | 0 | 67 | 15063 | 8586 | 0 | 57 |
| Athens GR | 0 | 7023 | 6082 | 0 | 87 | 8263 | 6784 | 0 | 82 | 10328 | 7715 | 0 | 75 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

**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 | | | |
| | Ta,ave | 7.5 | 9.0 | 3.2 | 18.5 | | | |
| | Tc,ave | 8.5 | 10.0 | 5.4 | 17.8 | | | |
| | ± ΔTc | 6.4 | 3.0 | 0.8 | 7.4 | | | |

| | | |
|---|---|---|
| G | kWh/m² | **Annual irradiation South, 45°** |
| Ta,ave | °C | **Annual average outdoor air temperature** |
| Tc,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 | 1 000 | kPa | Max. operating press. - tank side | 800 | kPa |
|---|---|---|---|---|---|

| | |
|---|---|
| **Testing Laboratory** | TZS/IGTE |
| **Website** | www.igte.uni-stuttgart.de |
| **Test report id. number** | 23SYS156/1OEM02 |
| **Date of test report** | 2025-02-19 |
| **Test method** | ISO 9459-5 (DST) |

**Comments of test lab**

No comments

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. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

| Name of system configuration | | | | | 200.1.27 | | |
|---|---|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 27 | No. Collectors | 1 | Storage name | HYDRO 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 | 0 | 9437 | 5143 | 0 | 55 | 11103 | 5585 | 0 | 50 | 13878 | 6037 | 0 | 44 |
| WürzburgDE | 0 | 9047 | 5238 | 0 | 58 | 10643 | 5747 | 0 | 54 | 13304 | 6333 | 0 | 48 |
| Davos CH | 0 | 10243 | 7723 | 0 | 75 | 12050 | 8339 | 0 | 69 | 15063 | 8917 | 0 | 59 |
| Athens GR | 0 | 7023 | 6166 | 0 | 88 | 8263 | 6908 | 0 | 84 | 10328 | 7880 | 0 | 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 | | Stockholm SE | Würzburg DE | Davos CH | Athens GR | | | |
|---|---|---|---|---|---|---|---|---|
| | G | 1 157 | 1 230 | 1 684 | 1 736 | | | |
| | Ta,ave | 7.5 | 9.0 | 3.2 | 18.5 | | | |
| | Tc,ave | 8.5 | 10.0 | 5.4 | 17.8 | | | |
| | ± ΔTc | 6.4 | 3.0 | 0.8 | 7.4 | | | |

| | | |
|---|---|---|
| G | kWh/m² | **Annual irradiation South, 45°** |
| Ta,ave | °C | **Annual average outdoor air temperature** |
| Tc,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 | 1 000 | kPa | Max. operating press. - tank side | 800 | kPa |
|---|---|---|---|---|---|

| | |
|---|---|
| **Testing Laboratory** | TZS/IGTE |
| **Website** | www.igte.uni-stuttgart.de |
| **Test report id. number** | 23SYS156/1OEM02 |
| **Date of test report** | 2025-02-19 |
| **Test method** | ISO 9459-5 (DST) |

**Comments of test lab**

No comments

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. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

| Name of system configuration | | | | Storage name | |
|---|---|---|---|---|---|
| | 200.1.29 | | | | |
| Collector name | ENERGY+EVO 29 | No. Collectors | 1 | Storage name | HYDRO 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 | 0 | 9437 | 5351 | 0 | 57 | 11103 | 5585 | 0 | 50 | 13878 | 6037 | 0 | 44 |
| WürzburgDE | 0 | 9047 | 5410 | 0 | 60 | 10643 | 5747 | 0 | 54 | 13304 | 6333 | 0 | 48 |
| Davos CH | 0 | 10243 | 8041 | 0 | 79 | 12050 | 8339 | 0 | 69 | 15063 | 8917 | 0 | 59 |
| Athens GR | 0 | 7023 | 6314 | 0 | 90 | 8263 | 6908 | 0 | 84 | 10328 | 7880 | 0 | 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 | | Stockholm SE | Würzburg DE | Davos CH | Athens GR | | | |
|---|---|---|---|---|---|---|---|---|
| | G | 1 157 | 1 230 | 1 684 | 1 736 | | | |
| | Ta,ave | 7.5 | 9.0 | 3.2 | 18.5 | | | |
| | Tc,ave | 8.5 | 10.0 | 5.4 | 17.8 | | | |
| | ± ΔTc | 6.4 | 3.0 | 0.8 | 7.4 | | | |

| | | |
|---|---|---|
| G | kWh/m² | **Annual irradiation South, 45°** |
| Ta,ave | °C | **Annual average outdoor air temperature** |
| Tc,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 | 1 000 | kPa | Max. operating press. - tank side | 800 | kPa |
|---|---|---|---|---|---|

| | |
|---|---|
| **Testing Laboratory** | TZS/IGTE |
| **Website** | www.igte.uni-stuttgart.de |
| **Test report id. number** | 23SYS156/1OEM02 |
| **Date of test report** | 2025-02-19 |
| **Test method** | ISO 9459-5 (DST) |

**Comments of test lab**

No comments

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. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

| Name of system configuration | | | | | 200.2.15 | | |
|---|---|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 15 | No. Collectors | 2 | Storage name | HYDRO 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 | 0 | 9437 | 5407 | 0 | 57 | 11103 | 5929 | 0 | 53 | 13878 | 6509 | 0 | 47 |
| WürzburgDE | 0 | 9047 | 5455 | 0 | 60 | 10643 | 6035 | 0 | 57 | 13304 | 6758 | 0 | 51 |
| Davos CH | 0 | 10243 | 8133 | 0 | 79 | 12050 | 8881 | 0 | 74 | 15063 | 9686 | 0 | 64 |
| Athens GR | 0 | 7023 | 6349 | 0 | 90 | 8263 | 7156 | 0 | 87 | 10328 | 8262 | 0 | 80 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

**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 | | | |
| | Ta,ave | 7.5 | 9.0 | 3.2 | 18.5 | | | |
| | Tc,ave | 8.5 | 10.0 | 5.4 | 17.8 | | | |
| | ± ΔTc | 6.4 | 3.0 | 0.8 | 7.4 | | | |

| | | |
|---|---|---|
| G | kWh/m² | **Annual irradiation South, 45°** |
| Ta,ave | °C | **Annual average outdoor air temperature** |
| Tc,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 | 1 000 | kPa | Max. operating press. - tank side | 800 | kPa |
|---|---|---|---|---|---|

| | |
|---|---|
| **Testing Laboratory** | TZS/IGTE |
| **Website** | www.igte.uni-stuttgart.de |
| **Test report id. number** | 23SYS156/1OEM02 |
| **Date of test report** | 2025-02-19 |
| **Test method** | ISO 9459-5 (DST) |

**Comments of test lab**

No comments

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. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

| Name of system configuration | | | | Storage name | |
|---|---|---|---|---|---|
| | | | 200.2.20 | | |
| Collector name | ENERGY+EVO 20 | No. Collectors | 2 | Storage name | HYDRO 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 | 0 | 9437 | 5898 | 0 | 63 | 11103 | 6551 | 0 | 59 | 13878 | 7383 | 0 | 53 |
| WürzburgDE | 0 | 9047 | 5862 | 0 | 65 | 10643 | 6556 | 0 | 62 | 13304 | 7517 | 0 | 57 |
| Davos CH | 0 | 10243 | 8799 | 0 | 86 | 12050 | 9821 | 0 | 82 | 15063 | 11086 | 0 | 74 |
| Athens GR | 0 | 7023 | 6595 | 0 | 94 | 8263 | 7569 | 0 | 92 | 10328 | 8934 | 0 | 87 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

**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 | | | |
| | Ta,ave | 7.5 | 9.0 | 3.2 | 18.5 | | | |
| | Tc,ave | 8.5 | 10.0 | 5.4 | 17.8 | | | |
| | ± ΔTc | 6.4 | 3.0 | 0.8 | 7.4 | | | |

| | | |
|---|---|---|
| G | kWh/m² | **Annual irradiation South, 45°** |
| Ta,ave | °C | **Annual average outdoor air temperature** |
| Tc,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 | 1 000 | kPa | Max. operating press. - tank side | 800 | kPa |
|---|---|---|---|---|---|

| | |
|---|---|
| **Testing Laboratory** | TZS/IGTE |
| **Website** | www.igte.uni-stuttgart.de |
| **Test report id. number** | 23SYS156/1OEM02 |
| **Date of test report** | 2025-02-19 |
| **Test method** | ISO 9459-5 (DST) |

**Comments of test lab**

No comments

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. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

| Name of system configuration | | | | | | | | 250.1.25 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 25 | | | No. Collectors | 1 | | | Storage name | HYDRO 250 | | |

**Calculated annual results for "solar-only / preheat system"**

| Location | Qd,sh | Daily drawoff 200 l | | | | Daily drawoff 250 l | | | | Daily drawoff 300 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 | 0 | 11103 | 5507 | 0 | 50 | 13878 | 6023 | 0 | 43 | 16654 | 6279 | 0 | 38 |
| WürzburgDE | 0 | 10643 | 5673 | 0 | 53 | 13304 | 6306 | 0 | 47 | 15965 | 6657 | 0 | 42 |
| Davos CH | 0 | 12050 | 8194 | 0 | 68 | 15063 | 8842 | 0 | 59 | 18076 | 9128 | 0 | 51 |
| Athens GR | 0 | 8263 | 6850 | 0 | 83 | 10328 | 7849 | 0 | 76 | 12394 | 8639 | 0 | 70 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

**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 | | | |
| | Ta,ave | 7.5 | 9.0 | 3.2 | 18.5 | | | |
| | Tc,ave | 8.5 | 10.0 | 5.4 | 17.8 | | | |
| | ± ΔTc | 6.4 | 3.0 | 0.8 | 7.4 | | | |

| | | |
|---|---|---|
| G | kWh/m² | **Annual irradiation South, 45°** |
| Ta,ave | °C | **Annual average outdoor air temperature** |
| Tc,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 | 1 000 | kPa | Max. operating press. - tank side | 800 | kPa |
|---|---|---|---|---|---|

| | |
|---|---|
| **Testing Laboratory** | TZS/IGTE |
| **Website** | www.igte.uni-stuttgart.de |
| **Test report id. number** | 23SYS156/1OEM02 |
| **Date of test report** | 2025-02-19 |
| **Test method** | ISO 9459-5 (DST) |

**Comments of test lab**

No comments

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. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

| Name of system configuration | | | | | | | | 250.1.29 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 29 | | | No. Collectors | | 1 | | Storage name | | HYDRO 250 | |

**Calculated annual results for "solar-only / preheat system"**

| Location | Qd,sh | Daily drawoff 200 l | | | | Daily drawoff 250 l | | | | Daily drawoff 300 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 | 0 | 11103 | 5929 | 0 | 53 | 13878 | 6606 | 0 | 48 | 16654 | 6978 | 0 | 42 |
| WürzburgDE | 0 | 10643 | 6045 | 0 | 57 | 13304 | 6838 | 0 | 51 | 15965 | 7344 | 0 | 46 |
| Davos CH | 0 | 12050 | 8893 | 0 | 74 | 15063 | 9806 | 0 | 65 | 18076 | 10267 | 0 | 57 |
| Athens GR | 0 | 8263 | 7172 | 0 | 87 | 10328 | 8324 | 0 | 81 | 12394 | 9234 | 0 | 75 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

**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 | | | |
| | Ta,ave | 7.5 | 9.0 | 3.2 | 18.5 | | | |
| | Tc,ave | 8.5 | 10.0 | 5.4 | 17.8 | | | |
| | ± ΔTc | 6.4 | 3.0 | 0.8 | 7.4 | | | |

| | | |
|---|---|---|
| G | kWh/m² | **Annual irradiation South, 45°** |
| Ta,ave | °C | **Annual average outdoor air temperature** |
| Tc,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 | 1 000 | kPa | Max. operating press. - tank side | 800 | kPa |
|---|---|---|---|---|---|

| | |
|---|---|
| **Testing Laboratory** | TZS/IGTE |
| **Website** | www.igte.uni-stuttgart.de |
| **Test report id. number** | 23SYS156/1OEM02 |
| **Date of test report** | 2025-02-19 |
| **Test method** | ISO 9459-5 (DST) |

**Comments of test lab**

No comments

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. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | | | HYDRO 300 | | | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | | | 2 | | | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 2 | 3 | | | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | | | 2 | 1 | | | | |

| Name of system configuration | | | | Storage name | |
|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 15 | No. Collectors | 2 | | 250.2.15 |
| | | | | Storage name | HYDRO 250 |

**Calculated annual results for "solar-only / preheat system"**

| Location | Qd,sh | Daily drawoff 200 l | | | | Daily drawoff 250 l | | | | Daily drawoff 300 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 | 0 | 11103 | 6007 | 0 | 54 | 13878 | 6717 | 0 | 48 | 16654 | 7111 | 0 | 43 |
| WürzburgDE | 0 | 10643 | 6120 | 0 | 58 | 13304 | 6931 | 0 | 52 | 15965 | 7472 | 0 | 47 |
| Davos CH | 0 | 12050 | 9013 | 0 | 75 | 15063 | 9972 | 0 | 66 | 18076 | 10484 | 0 | 58 |
| Athens GR | 0 | 8263 | 7230 | 0 | 88 | 10328 | 8407 | 0 | 81 | 12394 | 9345 | 0 | 75 |
| | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | |

**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 | | | |
| | Ta,ave | 7.5 | 9.0 | 3.2 | 18.5 | | | |
| | Tc,ave | 8.5 | 10.0 | 5.4 | 17.8 | | | |
| | ± ΔTc | 6.4 | 3.0 | 0.8 | 7.4 | | | |

| | | |
|---|---|---|
| G | kWh/m² | **Annual irradiation South, 45°** |
| Ta,ave | °C | **Annual average outdoor air temperature** |
| Tc,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 | 1 000 | kPa | Max. operating press. - tank side | 800 | kPa |
|---|---|---|---|---|---|

| | |
|---|---|
| **Testing Laboratory** | TZS/IGTE |
| **Website** | www.igte.uni-stuttgart.de |
| **Test report id. number** | 23SYS156/1OEM02 |
| **Date of test report** | 2025-02-19 |
| **Test method** | ISO 9459-5 (DST) |

**Comments of test lab**

No comments

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. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

| Name of system configuration | | | | Storage name | |
|---|---|---|---|---|---|
| | | | 250.2.20 | | |
| Collector name | ENERGY+EVO 20 | No. Collectors | 2 | Storage name | HYDRO 250 |

**Calculated annual results for "solar-only / preheat system"**

| Location | Qd,sh | Daily drawoff 200 l | | | | Daily drawoff 250 l | | | | Daily drawoff 300 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 | 0 | 11103 | 6673 | 0 | 60 | 13878 | 7647 | 0 | 55 | 16654 | 8327 | 0 | 50 |
| WürzburgDE | 0 | 10643 | 6673 | 0 | 63 | 13304 | 7756 | 0 | 58 | 15965 | 8573 | 0 | 54 |
| Davos CH | 0 | 12050 | 10014 | 0 | 83 | 15063 | 11478 | 0 | 76 | 18076 | 12472 | 0 | 69 |
| Athens GR | 0 | 8263 | 7652 | 0 | 93 | 10328 | 9120 | 0 | 88 | 12394 | 10324 | 0 | 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 | | | |
| | Ta,ave | 7.5 | 9.0 | 3.2 | 18.5 | | | |
| | Tc,ave | 8.5 | 10.0 | 5.4 | 17.8 | | | |
| | ± ΔTc | 6.4 | 3.0 | 0.8 | 7.4 | | | |
| G | kWh/m² | **Annual irradiation South, 45°** | | | | | | |
| Ta,ave | °C | **Annual average outdoor air temperature** | | | | | | |
| Tc,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 | 1 000 | kPa | Max. operating press. - tank side | 800 | kPa |
|---|---|---|---|---|---|

| | |
|---|---|
| **Testing Laboratory** | TZS/IGTE |
| **Website** | www.igte.uni-stuttgart.de |
| **Test report id. number** | 23SYS156/1OEM02 |
| **Date of test report** | 2025-02-19 |
| **Test method** | ISO 9459-5 (DST) |

**Comments of test lab**

No comments

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. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | **1** | | |

| Name of system configuration | | | | | 300.1.29 | | |
|---|---|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 29 | No. Collectors | 1 | Storage name | HYDRO 300 | | |

**Calculated annual results for "solar-only / preheat system"**

| Location | Qd,sh | Daily drawoff 250 l | | | | Daily drawoff 300 l | | | | Daily drawoff 400 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 | 0 | 13878 | 6745 | 0 | 49 | 16654 | 7228 | 0 | 43 | 22206 | 7617 | 0 | 34 |
| WürzburgDE | 0 | 13304 | 6971 | 0 | 52 | 15965 | 7567 | 0 | 47 | 21287 | 8068 | 0 | 38 |
| Davos CH | 0 | 15063 | 10017 | 0 | 67 | 18076 | 10593 | 0 | 59 | 24101 | 11014 | 0 | 46 |
| Athens GR | 0 | 10328 | 8438 | 0 | 82 | 12394 | 9407 | 0 | 76 | 16525 | 10791 | 0 | 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 | | | |
| | Ta,ave | 7.5 | 9.0 | 3.2 | 18.5 | | | |
| | Tc,ave | 8.5 | 10.0 | 5.4 | 17.8 | | | |
| | ± ΔTc | 6.4 | 3.0 | 0.8 | 7.4 | | | |

| | | |
|---|---|---|
| G | kWh/m² | **Annual irradiation South, 45°** |
| Ta,ave | °C | **Annual average outdoor air temperature** |
| Tc,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 | 1 000 | kPa | Max. operating press. - tank side | 800 | kPa |
|---|---|---|---|---|---|

| | |
|---|---|
| **Testing Laboratory** | TZS/IGTE |
| **Website** | www.igte.uni-stuttgart.de |
| **Test report id. number** | 23SYS156/1OEM02 |
| **Date of test report** | 2025-02-19 |
| **Test method** | ISO 9459-5 (DST) |

**Comments of test lab**

No comments

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. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

| Name of system configuration | | | | Storage name | 300.2.15 |
|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 15 | No. Collectors | 2 | | HYDRO 300 |

**Calculated annual results for "solar-only / preheat system"**

| Location | Qd,sh | Daily drawoff 250 l | | | | Daily drawoff 300 l | | | | Daily drawoff 400 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 | 0 | 13878 | 6828 | 0 | 49 | 16654 | 7311 | 0 | 44 | 22206 | 7728 | 0 | 35 |
| WürzburgDE | 0 | 13304 | 7038 | 0 | 53 | 15965 | 7663 | 0 | 48 | 21287 | 8195 | 0 | 39 |
| Davos CH | 0 | 15063 | 10152 | 0 | 67 | 18076 | 10755 | 0 | 60 | 24101 | 11207 | 0 | 47 |
| Athens GR | 0 | 10328 | 8500 | 0 | 82 | 12394 | 9481 | 0 | 77 | 16525 | 10907 | 0 | 66 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

**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 | | | |
| | Ta,ave | 7.5 | 9.0 | 3.2 | 18.5 | | | |
| | Tc,ave | 8.5 | 10.0 | 5.4 | 17.8 | | | |
| | ± ΔTc | 6.4 | 3.0 | 0.8 | 7.4 | | | |

| | | |
|---|---|---|
| G | kWh/m² | **Annual irradiation South, 45°** |
| Ta,ave | °C | **Annual average outdoor air temperature** |
| Tc,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 | 1 000 | kPa | Max. operating press. - tank side | 800 | kPa |
|---|---|---|---|---|---|

| | |
|---|---|
| **Testing Laboratory** | TZS/IGTE |
| **Website** | www.igte.uni-stuttgart.de |
| **Test report id. number** | 23SYS156/1OEM02 |
| **Date of test report** | 2025-02-19 |
| **Test method** | ISO 9459-5 (DST) |

**Comments of test lab**

No comments

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. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

| Name of system configuration | | | | Storage name | |
|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 20 | No. Collectors | 2 | | 300.2.20 |
| | | | | Storage name | HYDRO 300 |

**Calculated annual results for "solar-only / preheat system"**

| Location | Qd,sh | Daily drawoff 250 l | | | | Daily drawoff 300 l | | | | Daily drawoff 400 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 | 0 | 13878 | 7758 | 0 | 56 | 16654 | 8544 | 0 | 51 | 22206 | 9371 | 0 | 42 |
| WürzburgDE | 0 | 13304 | 7863 | 0 | 59 | 15965 | 8765 | 0 | 55 | 21287 | 9877 | 0 | 46 |
| Davos CH | 0 | 15063 | 11674 | 0 | 78 | 18076 | 12762 | 0 | 71 | 24101 | 13834 | 0 | 57 |
| Athens GR | 0 | 10328 | 9213 | 0 | 89 | 12394 | 10473 | 0 | 85 | 16525 | 12361 | 0 | 75 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

**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 | | | |
| | Ta,ave | 7.5 | 9.0 | 3.2 | 18.5 | | | |
| | Tc,ave | 8.5 | 10.0 | 5.4 | 17.8 | | | |
| | ± ΔTc | 6.4 | 3.0 | 0.8 | 7.4 | | | |

| | | |
|---|---|---|
| G | kWh/m² | **Annual irradiation South, 45°** |
| Ta,ave | °C | **Annual average outdoor air temperature** |
| Tc,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 | 1 000 | kPa | Max. operating press. - tank side | 800 | kPa |
|---|---|---|---|---|---|

| | |
|---|---|
| **Testing Laboratory** | TZS/IGTE |
| **Website** | www.igte.uni-stuttgart.de |
| **Test report id. number** | 23SYS156/1OEM02 |
| **Date of test report** | 2025-02-19 |
| **Test method** | ISO 9459-5 (DST) |

**Comments of test lab**

No comments

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. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
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| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | **2** | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

| Name of system configuration | | | | | 300.2.25 | | |
|---|---|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 25 | No. Collectors | 2 | Storage name | HYDRO 300 | | |

**Calculated annual results for "solar-only / preheat system"**

| Location | Qd,sh | Daily drawoff 250 l | | | | Daily drawoff 300 l | | | | Daily drawoff 400 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 | 0 | 13878 | 8355 | 0 | 60 | 16654 | 9326 | 0 | 56 | 22206 | 10592 | 0 | 48 |
| WürzburgDE | 0 | 13304 | 8355 | 0 | 63 | 15965 | 9435 | 0 | 59 | 21287 | 10984 | 0 | 52 |
| Davos CH | 0 | 15063 | 12547 | 0 | 83 | 18076 | 14027 | 0 | 78 | 24101 | 15810 | 0 | 66 |
| Athens GR | 0 | 10328 | 9564 | 0 | 93 | 12394 | 11055 | 0 | 89 | 16525 | 13336 | 0 | 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 | | | |
| | Ta,ave | 7.5 | 9.0 | 3.2 | 18.5 | | | |
| | Tc,ave | 8.5 | 10.0 | 5.4 | 17.8 | | | |
| | ± ΔTc | 6.4 | 3.0 | 0.8 | 7.4 | | | |

| | | |
|---|---|---|
| G | kWh/m² | **Annual irradiation South, 45°** |
| Ta,ave | °C | **Annual average outdoor air temperature** |
| Tc,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 | 1 000 | kPa | Max. operating press. - tank side | 800 | kPa |
|---|---|---|---|---|---|

| | |
|---|---|
| **Testing Laboratory** | TZS/IGTE |
| **Website** | www.igte.uni-stuttgart.de |
| **Test report id. number** | 23SYS156/1OEM02 |
| **Date of test report** | 2025-02-19 |
| **Test method** | ISO 9459-5 (DST) |

**Comments of test lab**

No comments

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. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

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| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | **2** | 1 | | |

| Name of system configuration | | | | Storage name | |
|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 29 | No. Collectors | 2 | | 300.2.29 |
| | | | | Storage name | HYDRO 300 |

**Calculated annual results for "solar-only / preheat system"**

| Location | Qd,sh | Daily drawoff 250 l | | | | Daily drawoff 300 l | | | | Daily drawoff 400 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 | 0 | 13878 | 8715 | 0 | 63 | 16654 | 9809 | 0 | 59 | 22206 | 11325 | 0 | 51 |
| WürzburgDE | 0 | 13304 | 8661 | 0 | 65 | 15965 | 9818 | 0 | 62 | 21287 | 11601 | 0 | 55 |
| Davos CH | 0 | 15063 | 13014 | 0 | 86 | 18076 | 14696 | 0 | 81 | 24101 | 16991 | 0 | 71 |
| Athens GR | 0 | 10328 | 9719 | 0 | 94 | 12394 | 11341 | 0 | 92 | 16525 | 13898 | 0 | 84 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

**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 | | | |
| | Ta,ave | 7.5 | 9.0 | 3.2 | 18.5 | | | |
| | Tc,ave | 8.5 | 10.0 | 5.4 | 17.8 | | | |
| | ± ΔTc | 6.4 | 3.0 | 0.8 | 7.4 | | | |

| | | |
|---|---|---|
| G | kWh/m² | **Annual irradiation South, 45°** |
| Ta,ave | °C | **Annual average outdoor air temperature** |
| Tc,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 | 1 000 | kPa | Max. operating press. - tank side | 800 | kPa |
|---|---|---|---|---|---|

| | |
|---|---|
| **Testing Laboratory** | TZS/IGTE |
| **Website** | www.igte.uni-stuttgart.de |
| **Test report id. number** | 23SYS156/1OEM02 |
| **Date of test report** | 2025-02-19 |
| **Test method** | ISO 9459-5 (DST) |

**Comments of test lab**

No comments

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. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
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| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

| Name of system configuration | | | | | 300.3.25 | | |
|---|---|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 25 | No. Collectors | 3 | Storage name | HYDRO 300 | | |

**Calculated annual results for "solar-only / preheat system"**

| Location | Qd,sh | Daily drawoff 250 l | | | | Daily drawoff 300 l | | | | Daily drawoff 400 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 | 0 | 13878 | 9271 | 0 | 67 | 16654 | 10542 | 0 | 63 | 22206 | 12480 | 0 | 56 |
| WürzburgDE | 0 | 13304 | 9140 | 0 | 69 | 15965 | 10425 | 0 | 65 | 21287 | 12538 | 0 | 59 |
| Davos CH | 0 | 15063 | 13647 | 0 | 91 | 18076 | 15636 | 0 | 87 | 24101 | 18654 | 0 | 77 |
| Athens GR | 0 | 10328 | 9915 | 0 | 96 | 12394 | 11663 | 0 | 94 | 16525 | 14691 | 0 | 89 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

**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 | | | |
| | Ta,ave | 7.5 | 9.0 | 3.2 | 18.5 | | | |
| | Tc,ave | 8.5 | 10.0 | 5.4 | 17.8 | | | |
| | ± ΔTc | 6.4 | 3.0 | 0.8 | 7.4 | | | |

| | | |
|---|---|---|
| G | kWh/m² | **Annual irradiation South, 45°** |
| Ta,ave | °C | **Annual average outdoor air temperature** |
| Tc,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 | 1 000 | kPa | Max. operating press. - tank side | 800 | kPa |
|---|---|---|---|---|---|

| | |
|---|---|
| **Testing Laboratory** | TZS/IGTE |
| **Website** | www.igte.uni-stuttgart.de |
| **Test report id. number** | 23SYS156/1OEM02 |
| **Date of test report** | 2025-02-19 |
| **Test method** | ISO 9459-5 (DST) |

**Comments of test lab**

No comments

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. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

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| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | HYDRO 300 | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | 2 | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | 2 | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | 2 | 3 | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | 2 | 1 | |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Name of system configuration | | | | | 120.1.15 |
|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 15 | No. Collectors | 1 | Storage name | HYDRO 120 |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Load profile | M | L | XL | XXL | |
|---|---|---|---|---|---|
| Annual heat demand (kWh) | 1523 | 2799 | 4427 | 5626 | |
| Auxiliary heat contribution | | | Qnonsol | | section 5.9.3.6, see note 1 |
| Average climate (kWh) | 146 | 648 | 1503 | 2205 | Strasbourg |
| Cold climate (kWh) | 387 | 964 | 1844 | 2555 | Helsinki |
| Hot climate (kWh) | 0 | 175 | 942 | 1627 | Athens |
| Qaux (kWh) | - | - | - | - | section 5.9.3.4, see note 1 |
| Comply to the load profile (Yes/No) | - | - | - | - | section 5.10.6 , see note 1 |
| ηwh_nonsol (%) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qelec (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qfuel (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| V40, measured (l) | - | - | - | - | section 5.10.7, see note 1 |

| Auxiliary thermostat setting | - | ºC | Effective power of auxiliary heater | - | kW |
|---|---|---|---|---|---|

Note 1: Clause of EN 12976-2:2017

| Testing Laboratory | TZS/IGTE |
|---|---|
| Website | www.igte.uni-stuttgart.de |
| Test report id. number | 23SYS156/1OEM02 |
| Date of test report | 2025-02-19 |
| Test method | ISO 9459-5 (DST) |

| Comments of test lab | |
|---|---|
| No comments | Stamp & signature of test lab |



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| Summary of | EN12976-2 | test results | Certification No. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Name of system configuration | | | | | 120.1.17 |
|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 17 | No. Collectors | 1 | Storage name | HYDRO 120 |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Load profile | M | L | XL | XXL | |
|---|---|---|---|---|---|
| Annual heat demand (kWh) | 1523 | 2799 | 4427 | 5626 | |
| Auxiliary heat contribution | | Qnonsol | | | section 5.9.3.6, see note 1 |
| Average climate (kWh) | 102 | 561 | 1398 | 2100 | Strasbourg |
| Cold climate (kWh) | 353 | 894 | 1766 | 2467 | Helsinki |
| Hot climate (kWh) | 0 | 62 | 802 | 1478 | Athens |
| Qaux (kWh) | - | - | - | - | section 5.9.3.4, see note 1 |
| Comply to the load profile (Yes/No) | - | - | - | - | section 5.10.6 , see note 1 |
| ηwh_nonsol (%) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qelec (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qfuel (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| V40, measured (l) | - | - | - | - | section 5.10.7, see note 1 |

| Auxiliary thermostat setting | - | ºC | Effective power of auxiliary heater | - | kW |
|---|---|---|---|---|---|

Note 1: Clause of EN 12976-2:2017

| Testing Laboratory | TZS/IGTE |
|---|---|
| Website | www.igte.uni-stuttgart.de |
| Test report id. number | 23SYS156/1OEM02 |
| Date of test report | 2025-02-19 |
| Test method | ISO 9459-5 (DST) |

| Comments of test lab | |
|---|---|
| No comments | Stamp & signature of test lab |



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| Summary of | EN12976-2 | test results | Certification No. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
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| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Name of system configuration | | | | | 120.1.19 |
|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 19 | No. Collectors | 1 | Storage name | HYDRO 120 |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Load profile | M | L | XL | XXL | |
|---|---|---|---|---|---|
| Annual heat demand (kWh) | 1523 | 2799 | 4427 | 5626 | |
| Auxiliary heat contribution | | Qnonsol | | | section 5.9.3.6, see note 1 |
| Average climate (kWh) | 49 | 421 | 1205 | 1898 | Strasbourg |
| Cold climate (kWh) | 302 | 780 | 1617 | 2319 | Helsinki |
| Hot climate (kWh) | 0 | 0 | 557 | 1215 | Athens |
| Qaux (kWh) | - | - | - | - | section 5.9.3.4, see note 1 |
| Comply to the load profile (Yes/No) | - | - | - | - | section 5.10.6 , see note 1 |
| ηwh_nonsol (%) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qelec (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qfuel (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| V40, measured (l) | - | - | - | - | section 5.10.7, see note 1 |

| Auxiliary thermostat setting | - | ºC | Effective power of auxiliary heater | - | kW |
|---|---|---|---|---|---|

Note 1: Clause of EN 12976-2:2017

| Testing Laboratory | TZS/IGTE |
|---|---|
| Website | www.igte.uni-stuttgart.de |
| Test report id. number | 23SYS156/1OEM02 |
| Date of test report | 2025-02-19 |
| Test method | ISO 9459-5 (DST) |

| Comments of test lab | |
|---|---|
| No comments | Stamp & signature of test lab |



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| Summary of | EN12976-2 | test results | Certification No. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Name of system configuration | | | | | 120.1.20 |
|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 20 | No. Collectors | 1 | Storage name | HYDRO 120 |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Load profile | M | L | XL | XXL | |
|---|---|---|---|---|---|
| Annual heat demand (kWh) | 1523 | 2799 | 4427 | 5626 | |
| Auxiliary heat contribution | | Qnonsol | | | section 5.9.3.6, see note 1 |
| Average climate (kWh) | 41 | 412 | 1196 | 1889 | Strasbourg |
| Cold climate (kWh) | 299 | 780 | 1608 | 2310 | Helsinki |
| Hot climate (kWh) | 0 | 0 | 548 | 1206 | Athens |
| Qaux (kWh) | - | - | - | - | section 5.9.3.4, see note 1 |
| Comply to the load profile (Yes/No) | - | - | - | - | section 5.10.6 , see note 1 |
| ηwh_nonsol (%) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qelec (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qfuel (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| V40, measured (l) | - | - | - | - | section 5.10.7, see note 1 |

| Auxiliary thermostat setting | - | ºC | Effective power of auxiliary heater | - | kW |
|---|---|---|---|---|---|

Note 1: Clause of EN 12976-2:2017

| Testing Laboratory | TZS/IGTE |
|---|---|
| Website | www.igte.uni-stuttgart.de |
| Test report id. number | 23SYS156/1OEM02 |
| Date of test report | 2025-02-19 |
| Test method | ISO 9459-5 (DST) |

| Comments of test lab | |
|---|---|
| No comments | Stamp & signature of test lab |



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| Summary of | EN12976-2 | test results | Certification No. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

**For each storage and collector size, give number of collectors**

| Collector name | HYDRO 120 | HYDRO 150 | HYDRO 170 | HYDRO 200 | HYDRO 250 | HYDRO 300 |
|---|---|---|---|---|---|---|
| ENERGY+EVO 15 | 1 | 2 1 | 2 | 2 | 2 | 2 |
| ENERGY+EVO 17 | 1 | | | | | |
| ENERGY+EVO 19 | 1 | | 1 | | | |
| ENERGY+EVO 20 | 1 | 1 | 1 | 1 2 | 2 | 2 |
| ENERGY+EVO 23 | | 1 | | 1 | | |
| ENERGY+EVO 25 | | 1 | 1 | 1 | 1 | 2 3 |
| ENERGY+EVO 27 | | | | 1 | | |
| ENERGY+EVO 29 | | | | 1 | 1 | 2 1 |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Name of system configuration | | | | | 150.1.15 |
|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 15 | No. Collectors | 1 | Storage name | HYDRO 150 |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Load profile | M | L | XL | XXL | |
|---|---|---|---|---|---|
| Annual heat demand (kWh) | 1523 | 2799 | 4427 | 5626 | |
| Auxiliary heat contribution | | Qnonsol | | | section 5.9.3.6, see note 1 |
| Average climate (kWh) | 128 | 605 | 1441 | 2135 | Strasbourg |
| Cold climate (kWh) | 379 | 929 | 1801 | 2503 | Helsinki |
| Hot climate (kWh) | 0 | 97 | 846 | 1521 | Athens |
| Qaux (kWh) | - | - | - | - | section 5.9.3.4, see note 1 |
| Comply to the load profile (Yes/No) | - | - | - | - | section 5.10.6 , see note 1 |
| ηwh_nonsol (%) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qelec (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qfuel (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| V40, measured (l) | - | - | - | - | section 5.10.7, see note 1 |

| Auxiliary thermostat setting | - | ºC | Effective power of auxiliary heater | - | kW |
|---|---|---|---|---|---|

Note 1: Clause of EN 12976-2:2017

| Testing Laboratory | TZS/IGTE |
|---|---|
| Website | www.igte.uni-stuttgart.de |
| Test report id. number | 23SYS156/1OEM02 |
| Date of test report | 2025-02-19 |
| Test method | ISO 9459-5 (DST) |

| Comments of test lab | |
|---|---|
| No comments | Stamp & signature of test lab |



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| Summary of | EN12976-2 | test results | Certification No. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

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| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
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| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Name of system configuration | | | | | |
|---|---|---|---|---|---|
| | 150.1.20 | | | | |
| Collector name | ENERGY+EVO 20 | No. Collectors | 1 | Storage name | HYDRO 150 |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Load profile | M | L | XL | XXL | |
|---|---|---|---|---|---|
| Annual heat demand (kWh) | 1523 | 2799 | 4427 | 5626 | |
| Auxiliary heat contribution | | Qnonsol | | | section 5.9.3.6, see note 1 |
| Average climate (kWh) | 32 | 359 | 1126 | 1802 | Strasbourg |
| Cold climate (kWh) | 293 | 745 | 1555 | 2240 | Helsinki |
| Hot climate (kWh) | 0 | 0 | 434 | 1075 | Athens |
| Qaux (kWh) | - | - | - | - | section 5.9.3.4, see note 1 |
| Comply to the load profile (Yes/No) | - | - | - | - | section 5.10.6 , see note 1 |
| ηwh_nonsol (%) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qelec (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qfuel (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| V40, measured (l) | - | - | - | - | section 5.10.7, see note 1 |

| Auxiliary thermostat setting | - | ºC | Effective power of auxiliary heater | - | kW |
|---|---|---|---|---|---|

Note 1: Clause of EN 12976-2:2017

| Testing Laboratory | TZS/IGTE |
|---|---|
| Website | www.igte.uni-stuttgart.de |
| Test report id. number | 23SYS156/1OEM02 |
| Date of test report | 2025-02-19 |
| Test method | ISO 9459-5 (DST) |

| Comments of test lab | |
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| No comments | Stamp & signature of test lab |



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| Summary of | EN12976-2 | test results | Certification No. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
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| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | |
|---|---|---|---|---|---|
| | HYDRO 120 | HYDRO 150 | HYDRO 170 | HYDRO 200 | HYDRO 250 | HYDRO 300 |
| ENERGY+EVO 15 | 1 | 2 1 | 2 | 2 | 2 | 2 |
| ENERGY+EVO 17 | 1 | | | | | |
| ENERGY+EVO 19 | 1 | | 1 | | | |
| ENERGY+EVO 20 | 1 | 1 | 1 | 1 2 | 2 | 2 |
| ENERGY+EVO 23 | | 1 | | 1 | | |
| ENERGY+EVO 25 | | 1 | 1 | 1 | 1 | 2 3 |
| ENERGY+EVO 27 | | | | 1 | | |
| ENERGY+EVO 29 | | | | 1 | 1 | 2 1 |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Name of system configuration | | | | | 150.1.23 |
|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 23 | No. Collectors | 1 | Storage name | HYDRO 150 |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Load profile | M | L | XL | XXL | |
|---|---|---|---|---|---|
| Annual heat demand (kWh) | 1523 | 2799 | 4427 | 5626 | |
| Auxiliary heat contribution | | Qnonsol | | | section 5.9.3.6, see note 1 |
| Average climate (kWh) | 6 | 281 | 1003 | 1670 | Strasbourg |
| Cold climate (kWh) | 268 | 683 | 1459 | 2143 | Helsinki |
| Hot climate (kWh) | 0 | 0 | 276 | 899 | Athens |
| Qaux (kWh) | - | - | - | - | section 5.9.3.4, see note 1 |
| Comply to the load profile (Yes/No) | - | - | - | - | section 5.10.6 , see note 1 |
| ηwh_nonsol (%) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qelec (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qfuel (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| V40, measured (l) | - | - | - | - | section 5.10.7, see note 1 |

| Auxiliary thermostat setting | - | ºC | Effective power of auxiliary heater | - | kW |
|---|---|---|---|---|---|

Note 1: Clause of EN 12976-2:2017

| Testing Laboratory | TZS/IGTE |
|---|---|
| Website | www.igte.uni-stuttgart.de |
| Test report id. number | 23SYS156/1OEM02 |
| Date of test report | 2025-02-19 |
| Test method | ISO 9459-5 (DST) |

| Comments of test lab | |
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| Summary of | EN12976-2 | test results | Certification No. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

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| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
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| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Name of system configuration | | | | | 150.1.25 |
|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 25 | No. Collectors | 1 | Storage name | HYDRO 150 |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Load profile | M | L | XL | XXL | |
|---|---|---|---|---|---|
| Annual heat demand (kWh) | 1523 | 2799 | 4427 | 5626 | |
| Auxiliary heat contribution | | Qnonsol | | | section 5.9.3.6, see note 1 |
| Average climate (kWh) | 0 | 184 | 837 | 1495 | Strasbourg |
| Cold climate (kWh) | 233 | 605 | 1336 | 2012 | Helsinki |
| Hot climate (kWh) | 0 | 0 | 75 | 680 | Athens |
| Qaux (kWh) | - | - | - | - | section 5.9.3.4, see note 1 |
| Comply to the load profile (Yes/No) | - | - | - | - | section 5.10.6 , see note 1 |
| ηwh_nonsol (%) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qelec (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qfuel (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| V40, measured (l) | - | - | - | - | section 5.10.7, see note 1 |

| Auxiliary thermostat setting | - | ºC | Effective power of auxiliary heater | - | kW |
|---|---|---|---|---|---|

Note 1: Clause of EN 12976-2:2017

| Testing Laboratory | TZS/IGTE |
|---|---|
| Website | www.igte.uni-stuttgart.de |
| Test report id. number | 23SYS156/1OEM02 |
| Date of test report | 2025-02-19 |
| Test method | ISO 9459-5 (DST) |

| Comments of test lab | |
|---|---|
| No comments | Stamp & signature of test lab |



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Tel: +49 30 7562-1131 ● Fax: +49 30 7562-1141 ● E-Mail: info@dincertco.de ● www.dincertco.de

| Summary of | EN12976-2 | test results | Certification No. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Name of system configuration | | | | | |
|---|---|---|---|---|---|
| | 150.2.15 | | | | |
| Collector name | ENERGY+EVO 15 | No. Collectors | 2 | Storage name | HYDRO 150 |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Load profile | M | L | XL | XXL | |
|---|---|---|---|---|---|
| Annual heat demand (kWh) | 1523 | 2799 | 4427 | 5626 | |
| Auxiliary heat contribution | | Qnonsol | | | section 5.9.3.6, see note 1 |
| Average climate (kWh) | 0 | 70 | 618 | 1250 | Strasbourg |
| Cold climate (kWh) | 190 | 500 | 1161 | 1819 | Helsinki |
| Hot climate (kWh) | 0 | 0 | 0 | 365 | Athens |
| Qaux (kWh) | - | - | - | - | section 5.9.3.4, see note 1 |
| Comply to the load profile (Yes/No) | - | - | - | - | section 5.10.6 , see note 1 |
| ηwh_nonsol (%) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qelec (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qfuel (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| V40, measured (l) | - | - | - | - | section 5.10.7, see note 1 |

| Auxiliary thermostat setting | - | ºC | Effective power of auxiliary heater | - | kW |
|---|---|---|---|---|---|

Note 1: Clause of EN 12976-2:2017

| Testing Laboratory | TZS/IGTE |
|---|---|
| Website | www.igte.uni-stuttgart.de |
| Test report id. number | 23SYS156/1OEM02 |
| Date of test report | 2025-02-19 |
| Test method | ISO 9459-5 (DST) |

| Comments of test lab | |
|---|---|
| No comments | Stamp & signature of test lab |



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| Summary of | EN12976-2 | test results | Certification No. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

**For each storage and collector size, give number of collectors**

| Collector name | HYDRO 120 | HYDRO 150 | HYDRO 170 | HYDRO 200 | HYDRO 250 | HYDRO 300 |
|---|---|---|---|---|---|---|
| ENERGY+EVO 15 | 1 | 2 1 | 2 | 2 | 2 | 2 |
| ENERGY+EVO 17 | 1 | | | | | |
| ENERGY+EVO 19 | 1 | | 1 | | | |
| ENERGY+EVO 20 | 1 | 1 | 1 | 1 2 | 2 | 2 |
| ENERGY+EVO 23 | | 1 | | 1 | | |
| ENERGY+EVO 25 | | 1 | 1 | 1 | 1 | 2 3 |
| ENERGY+EVO 27 | | | | 1 | | |
| ENERGY+EVO 29 | | | | 1 | 1 | 2 1 |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Name of system configuration | | | | | 170.1.19 |
|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 19 | No. Collectors | 1 | Storage name | HYDRO 170 |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Load profile | M | L | XL | XXL | |
|---|---|---|---|---|---|
| Annual heat demand (kWh) | 1523 | 2799 | 4427 | 5626 | |
| Auxiliary heat contribution | | Qnonsol | | | section 5.9.3.6, see note 1 |
| Average climate (kWh) | 32 | 359 | 1117 | 1793 | Strasbourg |
| Cold climate (kWh) | 298 | 745 | 1555 | 2240 | Helsinki |
| Hot climate (kWh) | 0 | 0 | 425 | 1057 | Athens |
| Qaux (kWh) | - | - | - | - | section 5.9.3.4, see note 1 |
| Comply to the load profile (Yes/No) | - | - | - | - | section 5.10.6 , see note 1 |
| ηwh_nonsol (%) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qelec (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qfuel (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| V40, measured (l) | - | - | - | - | section 5.10.7, see note 1 |

| Auxiliary thermostat setting | - | ºC | Effective power of auxiliary heater | - | kW |
|---|---|---|---|---|---|

Note 1: Clause of EN 12976-2:2017

| Testing Laboratory | TZS/IGTE |
|---|---|
| Website | www.igte.uni-stuttgart.de |
| Test report id. number | 23SYS156/1OEM02 |
| Date of test report | 2025-02-19 |
| Test method | ISO 9459-5 (DST) |

| Comments of test lab | |
|---|---|
| No comments | Stamp & signature of test lab |



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| Summary of | EN12976-2 | test results | Certification No. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Name of system configuration | | | | | 170.1.20 |
|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 20 | No. Collectors | 1 | Storage name | HYDRO 170 |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Load profile | M | L | XL | XXL | |
|---|---|---|---|---|---|
| Annual heat demand (kWh) | 1523 | 2799 | 4427 | 5626 | |
| Auxiliary heat contribution | | Qnonsol | | | section 5.9.3.6, see note 1 |
| Average climate (kWh) | 23 | 342 | 1082 | 1758 | Strasbourg |
| Cold climate (kWh) | 291 | 727 | 1529 | 2213 | Helsinki |
| Hot climate (kWh) | 0 | 0 | 382 | 1013 | Athens |
| Qaux (kWh) | - | - | - | - | section 5.9.3.4, see note 1 |
| Comply to the load profile (Yes/No) | - | - | - | - | section 5.10.6 , see note 1 |
| ηwh_nonsol (%) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qelec (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qfuel (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| V40, measured (l) | - | - | - | - | section 5.10.7, see note 1 |

| Auxiliary thermostat setting | - | ºC | Effective power of auxiliary heater | - | kW |
|---|---|---|---|---|---|

Note 1: Clause of EN 12976-2:2017

| Testing Laboratory | TZS/IGTE |
|---|---|
| Website | www.igte.uni-stuttgart.de |
| Test report id. number | 23SYS156/1OEM02 |
| Date of test report | 2025-02-19 |
| Test method | ISO 9459-5 (DST) |

| Comments of test lab | |
|---|---|
| No comments | Stamp & signature of test lab |



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| Summary of | EN12976-2 | test results | Certification No. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Name of system configuration | | | | | |
|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 25 | No. Collectors | 1 | Storage name | HYDRO 170 |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Load profile | M | L | XL | XXL | |
|---|---|---|---|---|---|
| Annual heat demand (kWh) | 1523 | 2799 | 4427 | 5626 | |
| Auxiliary heat contribution | | Qnonsol | | | section 5.9.3.6, see note 1 |
| Average climate (kWh) | 32 | 359 | 1109 | 1775 | Strasbourg |
| Cold climate (kWh) | 300 | 745 | 1547 | 2231 | Helsinki |
| Hot climate (kWh) | 0 | 0 | 399 | 1031 | Athens |
| Qaux (kWh) | - | - | - | - | section 5.9.3.4, see note 1 |
| Comply to the load profile (Yes/No) | - | - | - | - | section 5.10.6 , see note 1 |
| ηwh_nonsol (%) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qelec (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qfuel (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| V40, measured (l) | - | - | - | - | section 5.10.7, see note 1 |

| Auxiliary thermostat setting | - | ºC | Effective power of auxiliary heater | - | kW |
|---|---|---|---|---|---|

Note 1: Clause of EN 12976-2:2017

| Testing Laboratory | TZS/IGTE |
|---|---|
| Website | www.igte.uni-stuttgart.de |
| Test report id. number | 23SYS156/1OEM02 |
| Date of test report | 2025-02-19 |
| Test method | ISO 9459-5 (DST) |

| Comments of test lab | |
|---|---|
| No comments | Stamp & signature of test lab |



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| Summary of | EN12976-2 | test results | Certification No. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
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| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Name of system configuration | | | | | 170.2.15 |
|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 15 | No. Collectors | 2 | Storage name | HYDRO 170 |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Load profile | M | L | XL | XXL | |
|---|---|---|---|---|---|
| Annual heat demand (kWh) | 1523 | 2799 | 4427 | 5626 | |
| Auxiliary heat contribution | | Qnonsol | | | section 5.9.3.6, see note 1 |
| Average climate (kWh) | 0 | 44 | 557 | 1171 | Strasbourg |
| Cold climate (kWh) | 190 | 482 | 1126 | 1758 | Helsinki |
| Hot climate (kWh) | 0 | 0 | 0 | 260 | Athens |
| Qaux (kWh) | - | - | - | - | section 5.9.3.4, see note 1 |
| Comply to the load profile (Yes/No) | - | - | - | - | section 5.10.6 , see note 1 |
| ηwh_nonsol (%) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qelec (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qfuel (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| V40, measured (l) | - | - | - | - | section 5.10.7, see note 1 |

| Auxiliary thermostat setting | - | ºC | Effective power of auxiliary heater | - | kW |
|---|---|---|---|---|---|

Note 1: Clause of EN 12976-2:2017

| Testing Laboratory | TZS/IGTE |
|---|---|
| Website | www.igte.uni-stuttgart.de |
| Test report id. number | 23SYS156/1OEM02 |
| Date of test report | 2025-02-19 |
| Test method | ISO 9459-5 (DST) |

| Comments of test lab | |
|---|---|
| No comments | Stamp & signature of test lab |



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| Summary of | EN12976-2 | test results | Certification No. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

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**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Name of system configuration | | | | | 200.1.20 |
|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 20 | No. Collectors | 1 | Storage name | HYDRO 200 |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Load profile | M | L | XL | XXL | |
|---|---|---|---|---|---|
| Annual heat demand (kWh) | 1523 | 2799 | 4427 | 5626 | |
| Auxiliary heat contribution | | Qnonsol | | | section 5.9.3.6, see note 1 |
| Average climate (kWh) | 23 | 307 | 1039 | 1705 | Strasbourg |
| Cold climate (kWh) | 290 | 710 | 1503 | 2178 | Helsinki |
| Hot climate (kWh) | 0 | 0 | 311 | 943 | Athens |
| Qaux (kWh) | - | - | - | - | section 5.9.3.4, see note 1 |
| Comply to the load profile (Yes/No) | - | - | - | - | section 5.10.6 , see note 1 |
| ηwh_nonsol (%) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qelec (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qfuel (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| V40, measured (l) | - | - | - | - | section 5.10.7, see note 1 |

| Auxiliary thermostat setting | - | ºC | Effective power of auxiliary heater | - | kW |
|---|---|---|---|---|---|

Note 1: Clause of EN 12976-2:2017

| Testing Laboratory | TZS/IGTE |
|---|---|
| Website | www.igte.uni-stuttgart.de |
| Test report id. number | 23SYS156/1OEM02 |
| Date of test report | 2025-02-19 |
| Test method | ISO 9459-5 (DST) |

| Comments of test lab | |
|---|---|
| No comments | Stamp & signature of test lab |



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| Summary of | EN12976-2 | test results | Certification No. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Name of system configuration | | | | | 200.1.23 |
|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 23 | No. Collectors | 1 | Storage name | HYDRO 200 |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Load profile | M | L | XL | XXL | |
|---|---|---|---|---|---|
| Annual heat demand (kWh) | 1523 | 2799 | 4427 | 5626 | |
| Auxiliary heat contribution | | Qnonsol | | | section 5.9.3.6, see note 1 |
| Average climate (kWh) | 0 | 228 | 898 | 1556 | Strasbourg |
| Cold climate (kWh) | 260 | 640 | 1389 | 2065 | Helsinki |
| Hot climate (kWh) | 0 | 0 | 136 | 742 | Athens |
| Qaux (kWh) | - | - | - | - | section 5.9.3.4, see note 1 |
| Comply to the load profile (Yes/No) | - | - | - | - | section 5.10.6 , see note 1 |
| ηwh_nonsol (%) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qelec (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qfuel (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| V40, measured (l) | - | - | - | - | section 5.10.7, see note 1 |

| Auxiliary thermostat setting | - | ºC | Effective power of auxiliary heater | - | kW |
|---|---|---|---|---|---|

Note 1: Clause of EN 12976-2:2017

| Testing Laboratory | TZS/IGTE |
|---|---|
| Website | www.igte.uni-stuttgart.de |
| Test report id. number | 23SYS156/1OEM02 |
| Date of test report | 2025-02-19 |
| Test method | ISO 9459-5 (DST) |

| Comments of test lab | |
|---|---|
| No comments | Stamp & signature of test lab |



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| Summary of | EN12976-2 | test results | Certification No. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

**For each storage and collector size, give number of collectors**

| Collector name | HYDRO 120 | HYDRO 150 | HYDRO 170 | HYDRO 200 | HYDRO 250 | HYDRO 300 |
|---|---|---|---|---|---|---|
| ENERGY+EVO 15 | 1 | 2 1 | 2 | 2 | 2 | 2 |
| ENERGY+EVO 17 | 1 | | | | | |
| ENERGY+EVO 19 | 1 | | 1 | | | |
| ENERGY+EVO 20 | 1 | 1 | 1 | 1 2 | 2 | 2 |
| ENERGY+EVO 23 | | 1 | | 1 | | |
| ENERGY+EVO 25 | | 1 | 1 | 1 | 1 | 2 3 |
| ENERGY+EVO 27 | | | | 1 | | |
| ENERGY+EVO 29 | | | | 1 | 1 | 2 1 |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Name of system configuration | | | | | 200.1.25 |
|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 25 | No. Collectors | 1 | Storage name | HYDRO 200 |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Load profile | M | L | XL | XXL | |
|---|---|---|---|---|---|
| Annual heat demand (kWh) | 1523 | 2799 | 4427 | 5626 | |
| Auxiliary heat contribution | | Qnonsol | | | section 5.9.3.6, see note 1 |
| Average climate (kWh) | 0 | 132 | 741 | 1381 | Strasbourg |
| Cold climate (kWh) | 233 | 561 | 1266 | 1924 | Helsinki |
| Hot climate (kWh) | 0 | 0 | 0 | 514 | Athens |
| Qaux (kWh) | - | - | - | - | section 5.9.3.4, see note 1 |
| Comply to the load profile (Yes/No) | - | - | - | - | section 5.10.6 , see note 1 |
| ηwh_nonsol (%) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qelec (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qfuel (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| V40, measured (l) | - | - | - | - | section 5.10.7, see note 1 |

| Auxiliary thermostat setting | - | ºC | Effective power of auxiliary heater | - | kW |
|---|---|---|---|---|---|

Note 1: Clause of EN 12976-2:2017

| Testing Laboratory | TZS/IGTE |
|---|---|
| Website | www.igte.uni-stuttgart.de |
| Test report id. number | 23SYS156/1OEM02 |
| Date of test report | 2025-02-19 |
| Test method | ISO 9459-5 (DST) |

| Comments of test lab | |
|---|---|
| No comments | Stamp & signature of test lab |



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| Summary of | EN12976-2 | test results | Certification No. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
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| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Name of system configuration | | | | | 200.1.27 |
|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 27 | No. Collectors | 1 | Storage name | HYDRO 200 |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Load profile | M | L | XL | XXL | |
|---|---|---|---|---|---|
| Annual heat demand (kWh) | 1523 | 2799 | 4427 | 5626 | |
| Auxiliary heat contribution | | Qnonsol | | | section 5.9.3.6, see note 1 |
| Average climate (kWh) | 0 | 97 | 662 | 1294 | Strasbourg |
| Cold climate (kWh) | 216 | 526 | 1205 | 1854 | Helsinki |
| Hot climate (kWh) | 0 | 0 | 0 | 400 | Athens |
| Qaux (kWh) | - | - | - | - | section 5.9.3.4, see note 1 |
| Comply to the load profile (Yes/No) | - | - | - | - | section 5.10.6 , see note 1 |
| ηwh_nonsol (%) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qelec (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qfuel (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| V40, measured (l) | - | - | - | - | section 5.10.7, see note 1 |

| Auxiliary thermostat setting | - | ºC | Effective power of auxiliary heater | - | kW |
|---|---|---|---|---|---|

Note 1: Clause of EN 12976-2:2017

| Testing Laboratory | TZS/IGTE |
|---|---|
| Website | www.igte.uni-stuttgart.de |
| Test report id. number | 23SYS156/1OEM02 |
| Date of test report | 2025-02-19 |
| Test method | ISO 9459-5 (DST) |

| Comments of test lab | |
|---|---|
| No comments | Stamp & signature of test lab |



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| Summary of | EN12976-2 | test results | Certification No. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Name of system configuration | | | | | 200.1.29 |
|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 29 | No. Collectors | 1 | Storage name | HYDRO 200 |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Load profile | M | L | XL | XXL | |
|---|---|---|---|---|---|
| Annual heat demand (kWh) | 1523 | 2799 | 4427 | 5626 | |
| Auxiliary heat contribution | | Qnonsol | | | section 5.9.3.6, see note 1 |
| Average climate (kWh) | 0 | 18 | 522 | 1127 | Strasbourg |
| Cold climate (kWh) | 190 | 464 | 1100 | 1732 | Helsinki |
| Hot climate (kWh) | 0 | 0 | 0 | 190 | Athens |
| Qaux (kWh) | - | - | - | - | section 5.9.3.4, see note 1 |
| Comply to the load profile (Yes/No) | - | - | - | - | section 5.10.6 , see note 1 |
| ηwh_nonsol (%) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qelec (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qfuel (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| V40, measured (l) | - | - | - | - | section 5.10.7, see note 1 |

| Auxiliary thermostat setting | - | ºC | Effective power of auxiliary heater | - | kW |
|---|---|---|---|---|---|

Note 1: Clause of EN 12976-2:2017

| Testing Laboratory | TZS/IGTE |
|---|---|
| Website | www.igte.uni-stuttgart.de |
| Test report id. number | 23SYS156/1OEM02 |
| Date of test report | 2025-02-19 |
| Test method | ISO 9459-5 (DST) |

| Comments of test lab | |
|---|---|
| No comments | Stamp & signature of test lab |



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| Summary of | EN12976-2 | test results | Certification No. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
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| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Name of system configuration | | | | | 200.2.15 |
|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 15 | No. Collectors | 2 | Storage name | HYDRO 200 |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Load profile | M | L | XL | XXL | |
|---|---|---|---|---|---|
| Annual heat demand (kWh) | 1523 | 2799 | 4427 | 5626 | |
| Auxiliary heat contribution | | | Qnonsol | | section 5.9.3.6, see note 1 |
| Average climate (kWh) | 0 | 0 | 487 | 1083 | Strasbourg |
| Cold climate (kWh) | 181 | 447 | 1074 | 1697 | Helsinki |
| Hot climate (kWh) | 0 | 0 | 0 | 129 | Athens |
| Qaux (kWh) | - | - | - | - | section 5.9.3.4, see note 1 |
| Comply to the load profile (Yes/No) | - | - | - | - | section 5.10.6 , see note 1 |
| ηwh_nonsol (%) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qelec (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qfuel (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| V40, measured (l) | - | - | - | - | section 5.10.7, see note 1 |

| Auxiliary thermostat setting | - | ºC | Effective power of auxiliary heater | - | kW |
|---|---|---|---|---|---|

Note 1: Clause of EN 12976-2:2017

| Testing Laboratory | TZS/IGTE |
|---|---|
| Website | www.igte.uni-stuttgart.de |
| Test report id. number | 23SYS156/1OEM02 |
| Date of test report | 2025-02-19 |
| Test method | ISO 9459-5 (DST) |

| Comments of test lab | |
|---|---|
| No comments | Stamp & signature of test lab |



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| Summary of | EN12976-2 | test results | Certification No. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
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| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Name of system configuration | | | | | |
|---|---|---|---|---|---|
| | 200.2.20 | | | | |
| Collector name | ENERGY+EVO 20 | No. Collectors | 2 | Storage name | HYDRO 200 |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Load profile | M | L | XL | XXL | |
|---|---|---|---|---|---|
| Annual heat demand (kWh) | 1523 | 2799 | 4427 | 5626 | |
| Auxiliary heat contribution | | | Qnonsol | | section 5.9.3.6, see note 1 |
| Average climate (kWh) | 0 | 0 | 145 | 619 | Strasbourg |
| Cold climate (kWh) | 119 | 307 | 802 | 1337 | Helsinki |
| Hot climate (kWh) | 0 | 0 | 0 | 0 | Athens |
| Qaux (kWh) | - | - | - | - | section 5.9.3.4, see note 1 |
| Comply to the load profile (Yes/No) | - | - | - | - | section 5.10.6 , see note 1 |
| ηwh_nonsol (%) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qelec (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qfuel (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| V40, measured (l) | - | - | - | - | section 5.10.7, see note 1 |

| Auxiliary thermostat setting | - | ºC | Effective power of auxiliary heater | - | kW |
|---|---|---|---|---|---|

Note 1: Clause of EN 12976-2:2017

| Testing Laboratory | TZS/IGTE |
|---|---|
| Website | www.igte.uni-stuttgart.de |
| Test report id. number | 23SYS156/1OEM02 |
| Date of test report | 2025-02-19 |
| Test method | ISO 9459-5 (DST) |

| Comments of test lab | |
|---|---|
| No comments | Stamp & signature of test lab |



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Tel: +49 30 7562-1131 ● Fax: +49 30 7562-1141 ● E-Mail: info@dincertco.de ● www.dincertco.de

| Summary of | EN12976-2 | test results | Certification No. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Name of system configuration | | | | | 250.1.25 |
|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 25 | No. Collectors | 1 | Storage name | HYDRO 250 |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Load profile | M | L | XL | XXL | |
|---|---|---|---|---|---|
| Annual heat demand (kWh) | 1523 | 2799 | 4427 | 5626 | |
| Auxiliary heat contribution | | Qnonsol | | | section 5.9.3.6, see note 1 |
| Average climate (kWh) | 0 | 114 | 679 | 1302 | Strasbourg |
| Cold climate (kWh) | 233 | 552 | 1231 | 1872 | Helsinki |
| Hot climate (kWh) | 0 | 0 | 0 | 391 | Athens |
| Qaux (kWh) | - | - | - | - | section 5.9.3.4, see note 1 |
| Comply to the load profile (Yes/No) | - | - | - | - | section 5.10.6 , see note 1 |
| ηwh_nonsol (%) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qelec (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qfuel (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| V40, measured (l) | - | - | - | - | section 5.10.7, see note 1 |

| Auxiliary thermostat setting | - | ºC | Effective power of auxiliary heater | - | kW |
|---|---|---|---|---|---|

Note 1: Clause of EN 12976-2:2017

| Testing Laboratory | TZS/IGTE |
|---|---|
| Website | www.igte.uni-stuttgart.de |
| Test report id. number | 23SYS156/1OEM02 |
| Date of test report | 2025-02-19 |
| Test method | ISO 9459-5 (DST) |

| Comments of test lab | |
|---|---|
| No comments | Stamp & signature of test lab |



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| Summary of | EN12976-2 | test results | Certification No. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

**For each storage and collector size, give number of collectors**

| Collector name | HYDRO 120 | HYDRO 150 | HYDRO 170 | HYDRO 200 | HYDRO 250 | HYDRO 300 |
|---|---|---|---|---|---|---|
| ENERGY+EVO 15 | 1 | 2 1 | 2 | 2 | 2 | 2 |
| ENERGY+EVO 17 | 1 | | | | | |
| ENERGY+EVO 19 | 1 | | 1 | | | |
| ENERGY+EVO 20 | 1 | 1 | 1 | 1 2 | 2 | 2 |
| ENERGY+EVO 23 | | 1 | | 1 | | |
| ENERGY+EVO 25 | | 1 | 1 | 1 | 1 | 2 3 |
| ENERGY+EVO 27 | | | | 1 | | |
| ENERGY+EVO 29 | | | | 1 | 1 | 2 1 |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Name of system configuration | | | | | 250.1.29 |
|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 29 | No. Collectors | 1 | Storage name | HYDRO 250 |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Load profile | M | L | XL | XXL | |
|---|---|---|---|---|---|
| Annual heat demand (kWh) | 1523 | 2799 | 4427 | 5626 | |
| Auxiliary heat contribution | | Qnonsol | | | section 5.9.3.6, see note 1 |
| Average climate (kWh) | 0 | 0 | 460 | 1040 | Strasbourg |
| Cold climate (kWh) | 198 | 456 | 1056 | 1670 | Helsinki |
| Hot climate (kWh) | 0 | 0 | 0 | 58 | Athens |
| Qaux (kWh) | - | - | - | - | section 5.9.3.4, see note 1 |
| Comply to the load profile (Yes/No) | - | - | - | - | section 5.10.6 , see note 1 |
| ηwh_nonsol (%) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qelec (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qfuel (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| V40, measured (l) | - | - | - | - | section 5.10.7, see note 1 |

| Auxiliary thermostat setting | - | ºC | Effective power of auxiliary heater | - | kW |
|---|---|---|---|---|---|

Note 1: Clause of EN 12976-2:2017

| Testing Laboratory | TZS/IGTE |
|---|---|
| Website | www.igte.uni-stuttgart.de |
| Test report id. number | 23SYS156/1OEM02 |
| Date of test report | 2025-02-19 |
| Test method | ISO 9459-5 (DST) |

| Comments of test lab | |
|---|---|
| No comments | Stamp & signature of test lab |



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| Summary of | EN12976-2 | test results | Certification No. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Name of system configuration | | | | | 250.2.15 |
|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 15 | No. Collectors | 2 | Storage name | HYDRO 250 |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Load profile | M | L | XL | XXL | |
|---|---|---|---|---|---|
| Annual heat demand (kWh) | 1523 | 2799 | 4427 | 5626 | |
| Auxiliary heat contribution | | | Qnonsol | | section 5.9.3.6, see note 1 |
| Average climate (kWh) | 0 | 0 | 417 | 987 | Strasbourg |
| Cold climate (kWh) | 190 | 438 | 1021 | 1627 | Helsinki |
| Hot climate (kWh) | 0 | 0 | 0 | 0 | Athens |
| Qaux (kWh) | - | - | - | - | section 5.9.3.4, see note 1 |
| Comply to the load profile (Yes/No) | - | - | - | - | section 5.10.6 , see note 1 |
| ηwh_nonsol (%) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qelec (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qfuel (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| V40, measured (l) | - | - | - | - | section 5.10.7, see note 1 |

| Auxiliary thermostat setting | - | ºC | Effective power of auxiliary heater | - | kW |
|---|---|---|---|---|---|

Note 1: Clause of EN 12976-2:2017

| Testing Laboratory | TZS/IGTE |
|---|---|
| Website | www.igte.uni-stuttgart.de |
| Test report id. number | 23SYS156/1OEM02 |
| Date of test report | 2025-02-19 |
| Test method | ISO 9459-5 (DST) |

| Comments of test lab | |
|---|---|
| No comments | Stamp & signature of test lab |



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| Summary of | EN12976-2 | test results | Certification No. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Name of system configuration | | | | | 250.2.20 |
|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 20 | No. Collectors | 2 | Storage name | HYDRO 250 |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Load profile | M | L | XL | XXL | |
|---|---|---|---|---|---|
| Annual heat demand (kWh) | 1523 | 2799 | 4427 | 5626 | |
| Auxiliary heat contribution | | | Qnonsol | | section 5.9.3.6, see note 1 |
| Average climate (kWh) | 0 | 0 | 57 | 479 | Strasbourg |
| Cold climate (kWh) | 128 | 281 | 732 | 1241 | Helsinki |
| Hot climate (kWh) | 0 | 0 | 0 | 0 | Athens |
| Qaux (kWh) | - | - | - | - | section 5.9.3.4, see note 1 |
| Comply to the load profile (Yes/No) | - | - | - | - | section 5.10.6 , see note 1 |
| ηwh_nonsol (%) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qelec (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qfuel (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| V40, measured (l) | - | - | - | - | section 5.10.7, see note 1 |

| Auxiliary thermostat setting | - | ºC | Effective power of auxiliary heater | - | kW |
|---|---|---|---|---|---|

Note 1: Clause of EN 12976-2:2017

| Testing Laboratory | TZS/IGTE |
|---|---|
| Website | www.igte.uni-stuttgart.de |
| Test report id. number | 23SYS156/1OEM02 |
| Date of test report | 2025-02-19 |
| Test method | ISO 9459-5 (DST) |

| Comments of test lab | |
|---|---|
| No comments | Stamp & signature of test lab |



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| Summary of | EN12976-2 | test results | Certification No. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
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| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Name of system configuration | | | | | 300.1.29 |
|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 29 | No. Collectors | 1 | Storage name | HYDRO 300 |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Load profile | M | L | XL | XXL | |
|---|---|---|---|---|---|
| Annual heat demand (kWh) | 1523 | 2799 | 4427 | 5626 | |
| Auxiliary heat contribution | | | Qnonsol | | section 5.9.3.6, see note 1 |
| Average climate (kWh) | 0 | 0 | 390 | 943 | Strasbourg |
| Cold climate (kWh) | 198 | 438 | 1012 | 1600 | Helsinki |
| Hot climate (kWh) | 0 | 0 | 0 | 0 | Athens |
| Qaux (kWh) | - | - | - | - | section 5.9.3.4, see note 1 |
| Comply to the load profile (Yes/No) | - | - | - | - | section 5.10.6 , see note 1 |
| ηwh_nonsol (%) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qelec (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qfuel (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| V40, measured (l) | - | - | - | - | section 5.10.7, see note 1 |

| Auxiliary thermostat setting | - | ºC | Effective power of auxiliary heater | - | kW |
|---|---|---|---|---|---|

Note 1: Clause of EN 12976-2:2017

| Testing Laboratory | TZS/IGTE |
|---|---|
| Website | www.igte.uni-stuttgart.de |
| Test report id. number | 23SYS156/1OEM02 |
| Date of test report | 2025-02-19 |
| Test method | ISO 9459-5 (DST) |

| Comments of test lab | |
|---|---|
| No comments | Stamp & signature of test lab |



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| Summary of | EN12976-2 | test results | Certification No. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

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|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
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| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Name of system configuration | | | | | 300.2.15 |
|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 15 | No. Collectors | 2 | Storage name | HYDRO 300 |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Load profile | M | L | XL | XXL | |
|---|---|---|---|---|---|
| Annual heat demand (kWh) | 1523 | 2799 | 4427 | 5626 | |
| Auxiliary heat contribution | | | Qnonsol | | section 5.9.3.6, see note 1 |
| Average climate (kWh) | 0 | 0 | 364 | 899 | Strasbourg |
| Cold climate (kWh) | 190 | 421 | 986 | 1574 | Helsinki |
| Hot climate (kWh) | 0 | 0 | 0 | 0 | Athens |
| Qaux (kWh) | - | - | - | - | section 5.9.3.4, see note 1 |
| Comply to the load profile (Yes/No) | - | - | - | - | section 5.10.6 , see note 1 |
| ηwh_nonsol (%) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qelec (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qfuel (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| V40, measured (l) | - | - | - | - | section 5.10.7, see note 1 |

| Auxiliary thermostat setting | - | ºC | Effective power of auxiliary heater | - | kW |
|---|---|---|---|---|---|

Note 1: Clause of EN 12976-2:2017

| Testing Laboratory | TZS/IGTE |
|---|---|
| Website | www.igte.uni-stuttgart.de |
| Test report id. number | 23SYS156/1OEM02 |
| Date of test report | 2025-02-19 |
| Test method | ISO 9459-5 (DST) |

| Comments of test lab | |
|---|---|
| No comments | Stamp & signature of test lab |



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| Summary of | EN12976-2 | test results | Certification No. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Name of system configuration | | | | | |
|---|---|---|---|---|---|
| | 300.2.20 | | | | |
| Collector name | ENERGY+EVO 20 | No. Collectors | 2 | Storage name | HYDRO 300 |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Load profile | M | L | XL | XXL | |
|---|---|---|---|---|---|
| Annual heat demand (kWh) | 1523 | 2799 | 4427 | 5626 | |
| Auxiliary heat contribution | | | Qnonsol | | section 5.9.3.6, see note 1 |
| Average climate (kWh) | 0 | 0 | 5 | 391 | Strasbourg |
| Cold climate (kWh) | 128 | 272 | 688 | 1180 | Helsinki |
| Hot climate (kWh) | 0 | 0 | 0 | 0 | Athens |
| Qaux (kWh) | - | - | - | - | section 5.9.3.4, see note 1 |
| Comply to the load profile (Yes/No) | - | - | - | - | section 5.10.6 , see note 1 |
| ηwh_nonsol (%) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qelec (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qfuel (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| V40, measured (l) | - | - | - | - | section 5.10.7, see note 1 |

| Auxiliary thermostat setting | - | ºC | Effective power of auxiliary heater | - | kW |
|---|---|---|---|---|---|

Note 1: Clause of EN 12976-2:2017

| Testing Laboratory | TZS/IGTE |
|---|---|
| Website | www.igte.uni-stuttgart.de |
| Test report id. number | 23SYS156/1OEM02 |
| Date of test report | 2025-02-19 |
| Test method | ISO 9459-5 (DST) |

| Comments of test lab | |
|---|---|
| No comments | Stamp & signature of test lab |



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| Summary of | EN12976-2 | test results | Certification No. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Name of system configuration | | | | | 300.2.25 |
|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 25 | No. Collectors | 2 | Storage name | HYDRO 300 |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Load profile | M | L | XL | XXL | |
|---|---|---|---|---|---|
| Annual heat demand (kWh) | 1523 | 2799 | 4427 | 5626 | |
| Auxiliary heat contribution | | | Qnonsol | | section 5.9.3.6, see note 1 |
| Average climate (kWh) | 0 | 0 | 0 | 67 | Strasbourg |
| Cold climate (kWh) | 84 | 167 | 495 | 899 | Helsinki |
| Hot climate (kWh) | 0 | 0 | 0 | 0 | Athens |
| Qaux (kWh) | - | - | - | - | section 5.9.3.4, see note 1 |
| Comply to the load profile (Yes/No) | - | - | - | - | section 5.10.6 , see note 1 |
| ηwh_nonsol (%) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qelec (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qfuel (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| V40, measured (l) | - | - | - | - | section 5.10.7, see note 1 |

| Auxiliary thermostat setting | - | ºC | Effective power of auxiliary heater | - | kW |
|---|---|---|---|---|---|

Note 1: Clause of EN 12976-2:2017

| Testing Laboratory | TZS/IGTE |
|---|---|
| Website | www.igte.uni-stuttgart.de |
| Test report id. number | 23SYS156/1OEM02 |
| Date of test report | 2025-02-19 |
| Test method | ISO 9459-5 (DST) |

| Comments of test lab | |
|---|---|
| No comments | Stamp & signature of test lab |



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| Summary of | EN12976-2 | test results | Certification No. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Name of system configuration | | | | | 300.2.29 |
|---|---|---|---|---|---|
| Collector name | ENERGY+EVO 29 | No. Collectors | 2 | Storage name | HYDRO 300 |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Load profile | M | L | XL | XXL | |
|---|---|---|---|---|---|
| Annual heat demand (kWh) | 1523 | 2799 | 4427 | 5626 | |
| Auxiliary heat contribution | | | Qnonsol | | section 5.9.3.6, see note 1 |
| Average climate (kWh) | 0 | 0 | 0 | 0 | Strasbourg |
| Cold climate (kWh) | 58 | 105 | 373 | 733 | Helsinki |
| Hot climate (kWh) | 0 | 0 | 0 | 0 | Athens |
| Qaux (kWh) | - | - | - | - | section 5.9.3.4, see note 1 |
| Comply to the load profile (Yes/No) | - | - | - | - | section 5.10.6 , see note 1 |
| ηwh_nonsol (%) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qelec (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qfuel (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| V40, measured (l) | - | - | - | - | section 5.10.7, see note 1 |

| Auxiliary thermostat setting | - | ºC | Effective power of auxiliary heater | - | kW |
|---|---|---|---|---|---|

Note 1: Clause of EN 12976-2:2017

| Testing Laboratory | TZS/IGTE |
|---|---|
| Website | www.igte.uni-stuttgart.de |
| Test report id. number | 23SYS156/1OEM02 |
| Date of test report | 2025-02-19 |
| Test method | ISO 9459-5 (DST) |

| Comments of test lab | |
|---|---|
| No comments | Stamp & signature of test lab |



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| Summary of | EN12976-2 | test results | Certification No. | 011-7S3284 A |
|---|---|---|---|---|
| Annex to Solar KEYMARK Certificate | | | Issued | 2025-03-31 |

| | | | | | |
|---|---|---|---|---|---|
| Company | COSMOSUNGROUP E.E | | Country | GREECE | |
| Brand (optional) | COSMOSUN | | Website | https://cosmosun.gr/ | |
| Street | IRAKLEIOY AV. 375 | | E-mail | sales@cosmosungroup.gr | |
| Postal Code | 14122 | N. HERAKLEIO | Tel. / Fax | 30 | 2102829446 |

**System family overview**

| Collector name | For each storage and collector size, give number of collectors | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HYDRO 120 | | | | | | HYDRO 150 | | | | | | HYDRO 170 | | | | | | HYDRO 200 | | | | | | HYDRO 250 | | | | HYDRO 300 | | | |
| ENERGY+EVO 15 | 1 | | | | | | 2 | 1 | | | | | 2 | | | | | | 2 | | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 17 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 19 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| ENERGY+EVO 20 | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | 2 | | | | | 2 | | | | 2 | | | |
| ENERGY+EVO 23 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 25 | | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | | | 1 | | | | 2 | 3 | | |
| ENERGY+EVO 27 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| ENERGY+EVO 29 | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | 1 | | |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Name of system configuration | | | | | |
|---|---|---|---|---|---|
| | 300.3.25 | | | | |
| Collector name | ENERGY+EVO 25 | No. Collectors | 3 | Storage name | HYDRO 300 |

**Annual performance parameters in the frame of the EU regulation CDR 811, 812 and 813 dated 2013**

| Load profile | M | L | XL | XXL | |
|---|---|---|---|---|---|
| Annual heat demand (kWh) | 1523 | 2799 | 4427 | 5626 | |
| Auxiliary heat contribution | | Qnonsol | | | section 5.9.3.6, see note 1 |
| Average climate (kWh) | 0 | 0 | 0 | 0 | Strasbourg |
| Cold climate (kWh) | 14 | 53 | 180 | 461 | Helsinki |
| Hot climate (kWh) | 0 | 0 | 0 | 0 | Athens |
| Qaux (kWh) | - | - | - | - | section 5.9.3.4, see note 1 |
| Comply to the load profile (Yes/No) | - | - | - | - | section 5.10.6 , see note 1 |
| ηwh_nonsol (%) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qelec (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| Qfuel (kWh) | - | - | - | - | section 5.9.3.5 , see note 1 |
| V40, measured (l) | - | - | - | - | section 5.10.7, see note 1 |

| Auxiliary thermostat setting | - | ºC | Effective power of auxiliary heater | - | kW |
|---|---|---|---|---|---|

Note 1: Clause of EN 12976-2:2017

| Testing Laboratory | TZS/IGTE |
|---|---|
| Website | www.igte.uni-stuttgart.de |
| Test report id. number | 23SYS156/1OEM02 |
| Date of test report | 2025-02-19 |
| Test method | ISO 9459-5 (DST) |

| Comments of test lab | |
|---|---|
| No comments | Stamp & signature of test lab |



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