



# Certificate

No. ESY 132944 0008 Rev. 00

## Unit Certificate

**Holder of Certificate:** **Heiwit S.p.A**  
Via Carlo Robbioni, 2  
21100 Varese VA  
ITALY

**Product:** **Converter**  
**(Hybrid Inverter)**

**Model(s):** **Virgo 6K-S-HW, Virgo 5K-S-HW,**  
**Virgo 4K6-S-HW, Virgo 4K-S-HW,**  
**Virgo 3K6-S-HW, Virgo 3K-S-HW**

**Parameters:** See page 2

**Applicable standards:** VDE-AR-N 4105:2018  
DIN VDE V 0124-100 (VDE V 0124-100):2020

This Certificate confirms the compliance with the above listed standards on a voluntary basis. It refers only to the sample submitted to TÜV SÜD Product Service GmbH and does not certify the quality or safety of the serial products. It was issued according to TÜV SÜD Product Service certification program Photovoltaics and Grid Integration. For details see: [www.tuvsud.com/ps-cert](http://www.tuvsud.com/ps-cert)

**Test report no.:** 64290263148001

**Date,** 2026-09-14

  
( Billy Qiu )

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## Parameters:

| Model                                                                    | Virgo<br>3K-S-<br>HW                  | Virgo<br>3K6-S-<br>HW | Virgo<br>4K-S-<br>HW | Virgo<br>4K6-S-<br>HW | Virgo<br>5K-S-<br>HW | Virgo<br>6K-S-<br>HW |
|--------------------------------------------------------------------------|---------------------------------------|-----------------------|----------------------|-----------------------|----------------------|----------------------|
| PV terminal parameters                                                   |                                       |                       |                      |                       |                      |                      |
| Maximum PV voltage [V <sub>DC</sub> ]                                    | 600                                   |                       |                      |                       |                      |                      |
| Rated voltage [V <sub>DC</sub> ]                                         | 360                                   |                       |                      |                       |                      |                      |
| MPPT voltage range [V <sub>DC</sub> ]                                    | 100 - 550                             |                       |                      |                       |                      |                      |
| MPPT voltage range (full load) [V <sub>DC</sub> ]                        | 250 - 520                             |                       |                      |                       |                      |                      |
| Maximum input current [A <sub>DC</sub> ]                                 | 16/16                                 |                       |                      |                       |                      |                      |
| Isc PV [A <sub>DC</sub> ]                                                | 20/20                                 |                       |                      |                       |                      |                      |
| MPPT tracker number                                                      | 2                                     |                       |                      |                       |                      |                      |
| Maximum input power [W]                                                  | 8000                                  | 8600                  | 9000                 |                       |                      |                      |
| Battery input/output parameters                                          |                                       |                       |                      |                       |                      |                      |
| Battery type                                                             | Lithium-ion/Lead-acid/Sodium-ion      |                       |                      |                       |                      |                      |
| Maximum voltage [V <sub>DC</sub> ]                                       | 60                                    |                       |                      |                       |                      |                      |
| Battery rated voltage [V <sub>DC</sub> ]                                 | 51.2                                  |                       |                      |                       |                      |                      |
| Battery voltage range [V <sub>DC</sub> ]                                 | 42 - 60/42 - 60/32 - 60               |                       |                      |                       |                      |                      |
| Maximum charge power [W]                                                 | 5000                                  |                       |                      |                       |                      |                      |
| Maximum discharge power [W]                                              | 5000                                  |                       |                      |                       |                      |                      |
| Maximum charge current [A <sub>DC</sub> ]                                | 100                                   |                       |                      |                       |                      |                      |
| Maximum discharge current [A <sub>DC</sub> ]                             | 100                                   |                       |                      |                       |                      |                      |
| Maximum charge power from grid to battery [W]                            | 3000                                  | 3680                  | 4000                 | 4600                  | 5000                 | 5000                 |
| Grid terminal input parameters                                           |                                       |                       |                      |                       |                      |                      |
| Rated input voltage [V <sub>AC</sub> ]                                   | 1P+N+PE, 230                          |                       |                      |                       |                      |                      |
| Rated input frequency [Hz]                                               | 50                                    |                       |                      |                       |                      |                      |
| Maximum continuous input current from grid to battery [A <sub>AC</sub> ] | 13.0                                  | 16.0                  | 17.4                 | 20.0                  | 21.7                 | 21.7                 |
| Maximum continuous input current [A <sub>AC</sub> ]                      | 26.0                                  | 32.0                  | 34.8                 | 40.0                  | 43.5                 | 43.5                 |
| Maximum continuous input power from grid to battery [W]                  | 3000                                  | 3680                  | 4000                 | 4600                  | 5000                 | 5000                 |
| Maximum continuous input active power [W]                                | 6000                                  | 7360                  | 8000                 | 9200                  | 10000                | 10000                |
| Maximum continuous input apparent power [VA]                             | 6000                                  | 7360                  | 8000                 | 9200                  | 10000                | 10000                |
| Power factor range                                                       | 0.8 under-excited to 0.8 over-excited |                       |                      |                       |                      |                      |
| Grid terminal output parameters                                          |                                       |                       |                      |                       |                      |                      |
| Rated output voltage [V <sub>AC</sub> ]                                  | 1P+N+PE, 230                          |                       |                      |                       |                      |                      |
| Rated output frequency [Hz]                                              | 50                                    |                       |                      |                       |                      |                      |
| Rated output current [A <sub>AC</sub> ]                                  | 13.0                                  | 16.0                  | 17.4                 | 20.0                  | 21.7                 | 26.1                 |
| Maximum continuous output current [A <sub>AC</sub> ]                     | 13.0                                  | 16.0                  | 17.4                 | 20.0                  | 21.7                 | 26.1                 |
| Rated output active power [W]                                            | 3000                                  | 3680                  | 4000                 | 4600                  | 5000                 | 6000                 |
| Maximum output active power P <sub>E<sub>max</sub></sub> [W]             | 3000                                  | 3680                  | 4000                 | 4600                  | 5000                 | 6000                 |
| Maximum output apparent power S <sub>E<sub>max</sub></sub> [VA]          | 3000                                  | 3680                  | 4000                 | 4600                  | 5000                 | 6000                 |
| Power factor range                                                       | 0.8 under-excited to 0.8 over-excited |                       |                      |                       |                      |                      |

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## E.4 Unit certificate

| Unit certificate                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                               |                                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| Manufacturer                                                                                                                                                                                                                                                                                                                           | Heiwit S.p.A                                                                                                                                                                                                                                                                                                                                                                                                  |                                   |
| Power generation unit type                                                                                                                                                                                                                                                                                                             | [Hybrid Inverter]:<br><u>Virgo 3K-S-HW, Virgo 3K6-S-HW, Virgo 4K-S-HW, Virgo 4K6-S-HW, Virgo 5K-S-HW, Virgo 6K-S-HW.</u><br><br>Remark: certified on representative model <u>Virgo 6K-S-HW</u> of family design products, results of the measurement of <u>Virgo 6K-S-HW</u> can be transferred to other models based on transferability rule of measurements in DIN VDE V 0124-100 (VDE V 0124-100):2020-06. |                                   |
| Assessment values                                                                                                                                                                                                                                                                                                                      | max. active power $P_{\text{Emax}}$                                                                                                                                                                                                                                                                                                                                                                           | <u>6000 W (Virgo 6K-S-HW)</u>     |
|                                                                                                                                                                                                                                                                                                                                        | max. apparent power $S_{\text{Emax}}$                                                                                                                                                                                                                                                                                                                                                                         | <u>6000 VA (Virgo 6K-S-HW)</u>    |
|                                                                                                                                                                                                                                                                                                                                        | Rated voltage                                                                                                                                                                                                                                                                                                                                                                                                 | <u>1/N/PE~, 230V<sub>AC</sub></u> |
|                                                                                                                                                                                                                                                                                                                                        | Rated current (AC) $I_r$                                                                                                                                                                                                                                                                                                                                                                                      | <u>26.1 A (Virgo 6K-S-HW)</u>     |
|                                                                                                                                                                                                                                                                                                                                        | Initial short-circuit AC current $I''_k$                                                                                                                                                                                                                                                                                                                                                                      | <u>26.1 A (Virgo 6K-S-HW)</u>     |
| Network connection rule                                                                                                                                                                                                                                                                                                                | <b>VDE-AR-N 4105:2018-11 “Generators connected to the low-voltage distribution network”</b><br><br>Technical minimum requirements for connection and parallel operation of power generation systems connected to the low-voltage network                                                                                                                                                                      |                                   |
| Test requirement                                                                                                                                                                                                                                                                                                                       | <b>DIN VDE V 0124-100 (VDE V 0124-100):2020-06 “Network integration of power generation systems – Low voltage”</b><br><br>Test requirements for power generation units intended for connection to and parallel operation on the low-voltage network                                                                                                                                                           |                                   |
| Test report                                                                                                                                                                                                                                                                                                                            | <u>64.290.26.31480.01</u> from <u>2026-09-03</u>                                                                                                                                                                                                                                                                                                                                                              |                                   |
| The above designated power generation unit meets the requirements of VDE-AR-N 4105:2018-11.                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                               |                                   |
| The model <u>Virgo 5K-S-HW, Virgo 6K-S-HW</u> may be connected single-phase, a storage unit and a balancing device must be used to ensure that the requirements of maximum permissible unbalance $\leq 4.6\text{kVA}$ according to 5.5.2 of VDE-AR-N 4100 are met and a registration with the grid operators the finally installation. |                                                                                                                                                                                                                                                                                                                                                                                                               |                                   |

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E.5    Test report "Network interactions" for power generation units with an input current > 75 A

| Extract of the test report for power generation units<br>"Determination of electrical properties" |                                                                                              |                                                                                                                                                                                                               |
|---------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| System manufacturer:                                                                              | <div>Heiwit S.p.A</div> <div>Via Carlo Robbioni, 2, 21100 Varese VA, ITALY</div>             |                                                                                                                                                                                                               |
| Manufacturer indications:                                                                         | Type of system                                                                               | Hybrid Inverter                                                                                                                                                                                               |
|                                                                                                   | Max. active power $P_{E_{max}}$                                                              | <div>3000 W (Virgo 3K-S-HW)</div> <div>3680 W (Virgo 3K6-S-HW)</div> <div>4000 W (Virgo 4K-S-HW)</div> <div>4600 W (Virgo 4K6-S-HW)</div> <div>5000 W (Virgo 5K-S-HW)</div> <div>6000 W (Virgo 6K-S-HW)</div> |
|                                                                                                   | Rated voltage                                                                                | 1/N/PE~, 230V <sub>AC</sub>                                                                                                                                                                                   |
| Measurement period:                                                                               | <div>From 2024-05-25 to 2024-06-24, 2026-08-01 to 2026-08-02, 2026-09-01 to 2026-09-01</div> |                                                                                                                                                                                                               |

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| Rapid voltage change                                                 |                       |
|----------------------------------------------------------------------|-----------------------|
| Model                                                                | <u>Virgo 3K6-S-HW</u> |
| Connection without provisions (regarding the primary energy carrier) | $K_i=0.31$            |
| Most adverse case when switching between generator levels            | $K_i=0.51$            |
| Connection at nominal conditions (of the primary energy carrier)     | $K_i=0.31$            |
| Disconnection at rated power                                         | $K_i=0.99$            |
| Worst value of all switching operations                              | $K_{i\max}=0.99$      |

| Rapid voltage changes                                                |                      |
|----------------------------------------------------------------------|----------------------|
| Model                                                                | <u>Virgo 6K-S-HW</u> |
| Connection without provisions (regarding the primary energy carrier) | $K_i=0.19$           |
| Most adverse case when switching between generator levels            | $K_i=0.51$           |
| Connection at nominal conditions (of the primary energy carrier)     | $K_i=0.19$           |
| Disconnection at rated power                                         | $K_i=1.00$           |
| Worst value of all switching operations                              | $K_{i\max}=1.00$     |

| Flicker ( <u>Virgo 3K6-S-HW</u> )                |     |     |     |     |       |
|--------------------------------------------------|-----|-----|-----|-----|-------|
| Network impedance angle $\Psi_k$                 | 30° | 50° | 70° | 85° | 32°   |
| Coefficient of system flicker $C_\Psi$ (Maximum) |     |     |     |     |       |
| L1                                               | --  | --  | --  | --  | 0.396 |

| Flicker ( <u>Virgo 6K-S-HW</u> )                 |     |     |     |     |       |
|--------------------------------------------------|-----|-----|-----|-----|-------|
| Network impedance angle $\Psi_k$                 | 30° | 50° | 70° | 85° | 32°   |
| Coefficient of system flicker $C_\Psi$ (Maximum) |     |     |     |     |       |
| L1                                               | --  | --  | --  | --  | 0.396 |

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| Harmonics (≤16 A) (Virgo 3K6-S-HW) |        |        |        |        |        |        |        |        |        |        |        |             |
|------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------------|
| Active power<br>P/Pn[%]            | 0      | 10     | 20     | 30     | 40     | 50     | 60     | 70     | 80     | 90     | 100    | Limit value |
| Ordinal<br>number                  | A      | A      | A      | A      | A      | A      | A      | A      | A      | A      | A      | A           |
| 2                                  | 0.013  | 0.013  | 0.011  | 0.014  | 0.012  | 0.012  | 0.012  | 0.012  | 0.012  | 0.011  | 0.011  | 1.080       |
| 3                                  | 0.021  | 0.004  | 0.010  | 0.029  | 0.041  | 0.057  | 0.072  | 0.086  | 0.098  | 0.111  | 0.124  | 2.300       |
| 4                                  | 0.002  | 0.002  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.002  | 0.001  | 0.001  | 0.430       |
| 5                                  | 0.010  | 0.012  | 0.008  | 0.006  | 0.005  | 0.003  | 0.002  | 0.001  | 0.002  | 0.002  | 0.002  | 1.140       |
| 6                                  | 0.002  | 0.001  | 0.002  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.300       |
| 7                                  | 0.004  | 0.002  | 0.002  | 0.003  | 0.003  | 0.005  | 0.007  | 0.008  | 0.009  | 0.011  | 0.013  | 0.770       |
| 8                                  | 0.001  | 0.002  | 0.003  | 0.002  | 0.002  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.230       |
| 9                                  | 0.002  | 0.002  | 0.001  | 0.003  | 0.004  | 0.005  | 0.006  | 0.008  | 0.009  | 0.010  | 0.011  | 0.400       |
| 10                                 | 0.001  | 0.002  | 0.002  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.184       |
| 11                                 | 0.001  | 0.002  | 0.002  | 0.003  | 0.004  | 0.004  | 0.005  | 0.006  | 0.007  | 0.009  | 0.010  | 0.330       |
| 12                                 | 0.001  | 0.001  | 0.002  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.153       |
| 13                                 | 0.001  | 0.001  | 0.002  | 0.002  | 0.003  | 0.003  | 0.003  | 0.004  | 0.005  | 0.006  | 0.007  | 0.210       |
| 14                                 | 0.002  | 0.001  | 0.002  | 0.002  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.131       |
| 15                                 | 0.002  | 0.001  | 0.001  | 0.002  | 0.002  | 0.002  | 0.003  | 0.003  | 0.004  | 0.004  | 0.005  | 0.150       |
| 16                                 | 0.002  | 0.002  | 0.002  | 0.002  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.115       |
| 17                                 | 0.001  | 0.001  | 0.001  | 0.002  | 0.002  | 0.002  | 0.002  | 0.003  | 0.003  | 0.003  | 0.004  | 0.132       |
| 18                                 | 0.001  | 0.001  | 0.002  | 0.002  | 0.002  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.102       |
| 19                                 | 0.001  | 0.001  | 0.002  | 0.003  | 0.003  | 0.003  | 0.003  | 0.003  | 0.003  | 0.003  | 0.004  | 0.118       |
| 20                                 | 0.001  | 0.001  | 0.001  | 0.002  | 0.002  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.092       |
| 21                                 | 0.001  | 0.001  | 0.002  | 0.002  | 0.003  | 0.003  | 0.003  | 0.003  | 0.003  | 0.003  | 0.003  | 0.107       |
| 22                                 | 0.002  | 0.002  | 0.001  | 0.002  | 0.002  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.084       |
| 23                                 | 0.001  | 0.001  | 0.001  | 0.002  | 0.003  | 0.003  | 0.003  | 0.003  | 0.002  | 0.002  | 0.002  | 0.098       |
| 24                                 | 0.001  | 0.002  | 0.002  | 0.002  | 0.002  | 0.002  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.077       |
| 25                                 | 0.001  | 0.001  | 0.002  | 0.002  | 0.003  | 0.003  | 0.003  | 0.003  | 0.003  | 0.003  | 0.003  | 0.090       |
| 26                                 | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.071       |
| 27                                 | 0.001  | 0.001  | 0.002  | 0.002  | 0.003  | 0.003  | 0.003  | 0.003  | 0.003  | 0.003  | 0.003  | 0.083       |
| 28                                 | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.066       |
| 29                                 | 0.001  | 0.001  | 0.002  | 0.002  | 0.002  | 0.003  | 0.003  | 0.003  | 0.003  | 0.003  | 0.002  | 0.078       |
| 30                                 | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.000  | 0.061       |
| 31                                 | 0.001  | 0.001  | 0.002  | 0.002  | 0.002  | 0.003  | 0.003  | 0.003  | 0.003  | 0.002  | 0.002  | 0.073       |
| 32                                 | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.058       |
| 33                                 | 0.001  | 0.001  | 0.002  | 0.002  | 0.002  | 0.003  | 0.003  | 0.003  | 0.003  | 0.003  | 0.003  | 0.068       |
| 34                                 | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.054       |
| 35                                 | 0.001  | 0.001  | 0.002  | 0.002  | 0.002  | 0.002  | 0.003  | 0.003  | 0.003  | 0.003  | 0.003  | 0.064       |
| 36                                 | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.051       |
| 37                                 | 0.001  | 0.001  | 0.002  | 0.002  | 0.002  | 0.002  | 0.002  | 0.003  | 0.003  | 0.002  | 0.002  | 0.061       |
| 38                                 | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.048       |
| 39                                 | 0.001  | 0.001  | 0.002  | 0.002  | 0.002  | 0.002  | 0.002  | 0.002  | 0.002  | 0.003  | 0.002  | 0.058       |
| 40                                 | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.046       |
| THD                                | 0.176% | 0.122% | 0.122% | 0.219% | 0.283% | 0.372% | 0.465% | 0.552% | 0.631% | 0.710% | 0.795% | 5%          |
| Remark:<br>1. Iref=16.0A.          |        |        |        |        |        |        |        |        |        |        |        |             |

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| Harmonics (>16 A and ≤75 A) (Virgo 6K-S-HW) |                                      |       |       |       |       |       |       |       |       |       |       |             |
|---------------------------------------------|--------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------------|
| Active power<br>P/Pn[%]                     | 0                                    | 10    | 20    | 30    | 40    | 50    | 60    | 70    | 80    | 90    | 100   | Limit value |
| Ordinal<br>number                           | I <sub>h</sub> /I <sub>ref</sub> [%] |       |       |       |       |       |       |       |       |       |       | [%]         |
| 2                                           | 0.043                                | 0.034 | 0.031 | 0.030 | 0.034 | 0.042 | 0.043 | 0.044 | 0.045 | 0.044 | 0.045 | 8           |
| 3                                           | 0.091                                | 0.007 | 0.102 | 0.206 | 0.291 | 0.391 | 0.474 | 0.559 | 0.640 | 0.721 | 0.799 | 21.6        |
| 4                                           | 0.007                                | 0.011 | 0.004 | 0.006 | 0.004 | 0.008 | 0.004 | 0.005 | 0.006 | 0.005 | 0.007 | 4           |
| 5                                           | 0.041                                | 0.040 | 0.021 | 0.017 | 0.012 | 0.008 | 0.008 | 0.010 | 0.016 | 0.022 | 0.030 | 10.7        |
| 6                                           | 0.006                                | 0.009 | 0.005 | 0.006 | 0.003 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 2.67        |
| 7                                           | 0.011                                | 0.006 | 0.006 | 0.016 | 0.032 | 0.042 | 0.053 | 0.057 | 0.058 | 0.058 | 0.061 | 7.2         |
| 8                                           | 0.006                                | 0.007 | 0.011 | 0.003 | 0.003 | 0.004 | 0.004 | 0.004 | 0.003 | 0.004 | 0.005 | 2           |
| 9                                           | 0.007                                | 0.003 | 0.007 | 0.022 | 0.026 | 0.034 | 0.042 | 0.053 | 0.057 | 0.060 | 0.062 | 3.8         |
| 10                                          | 0.006                                | 0.006 | 0.008 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 0.003 | 0.003 | 1.6         |
| 11                                          | 0.005                                | 0.006 | 0.010 | 0.014 | 0.021 | 0.027 | 0.036 | 0.043 | 0.052 | 0.057 | 0.056 | 3.1         |
| 12                                          | 0.005                                | 0.005 | 0.005 | 0.007 | 0.002 | 0.004 | 0.003 | 0.004 | 0.005 | 0.004 | 0.003 | 1.33        |
| 13                                          | 0.005                                | 0.006 | 0.009 | 0.008 | 0.017 | 0.023 | 0.029 | 0.036 | 0.041 | 0.046 | 0.054 | 2           |
| 14                                          | 0.006                                | 0.006 | 0.006 | 0.006 | 0.004 | 0.004 | 0.003 | 0.005 | 0.004 | 0.004 | 0.003 | -           |
| 15                                          | 0.005                                | 0.004 | 0.009 | 0.008 | 0.011 | 0.015 | 0.019 | 0.025 | 0.030 | 0.035 | 0.042 | -           |
| 16                                          | 0.006                                | 0.006 | 0.007 | 0.005 | 0.005 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 0.006 | -           |
| 17                                          | 0.005                                | 0.003 | 0.008 | 0.008 | 0.008 | 0.011 | 0.015 | 0.018 | 0.023 | 0.026 | 0.027 | -           |
| 18                                          | 0.006                                | 0.006 | 0.007 | 0.005 | 0.005 | 0.004 | 0.002 | 0.004 | 0.004 | 0.004 | 0.004 | -           |
| 19                                          | 0.003                                | 0.005 | 0.010 | 0.010 | 0.010 | 0.011 | 0.015 | 0.018 | 0.020 | 0.022 | 0.027 | -           |
| 20                                          | 0.006                                | 0.005 | 0.007 | 0.005 | 0.004 | 0.004 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | -           |
| 21                                          | 0.003                                | 0.004 | 0.009 | 0.009 | 0.008 | 0.011 | 0.013 | 0.016 | 0.018 | 0.020 | 0.023 | -           |
| 22                                          | 0.006                                | 0.005 | 0.007 | 0.005 | 0.003 | 0.004 | 0.002 | 0.003 | 0.003 | 0.003 | 0.004 | -           |
| 23                                          | 0.002                                | 0.004 | 0.008 | 0.010 | 0.009 | 0.008 | 0.011 | 0.011 | 0.014 | 0.015 | 0.013 | -           |
| 24                                          | 0.005                                | 0.006 | 0.007 | 0.006 | 0.004 | 0.004 | 0.002 | 0.003 | 0.003 | 0.004 | 0.003 | -           |
| 25                                          | 0.002                                | 0.004 | 0.008 | 0.011 | 0.010 | 0.008 | 0.009 | 0.010 | 0.012 | 0.013 | 0.013 | -           |
| 26                                          | 0.005                                | 0.005 | 0.006 | 0.005 | 0.004 | 0.004 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | -           |
| 27                                          | 0.002                                | 0.004 | 0.007 | 0.009 | 0.009 | 0.011 | 0.010 | 0.009 | 0.010 | 0.012 | 0.013 | -           |
| 28                                          | 0.004                                | 0.004 | 0.005 | 0.005 | 0.003 | 0.004 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | -           |
| 29                                          | 0.003                                | 0.005 | 0.008 | 0.010 | 0.009 | 0.011 | 0.009 | 0.008 | 0.008 | 0.010 | 0.010 | -           |
| 30                                          | 0.005                                | 0.004 | 0.005 | 0.004 | 0.004 | 0.004 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | -           |
| 31                                          | 0.002                                | 0.005 | 0.007 | 0.009 | 0.010 | 0.008 | 0.008 | 0.007 | 0.008 | 0.007 | 0.008 | -           |
| 32                                          | 0.004                                | 0.004 | 0.005 | 0.005 | 0.004 | 0.004 | 0.002 | 0.003 | 0.002 | 0.002 | 0.002 | -           |
| 33                                          | 0.002                                | 0.005 | 0.007 | 0.009 | 0.010 | 0.011 | 0.009 | 0.008 | 0.007 | 0.007 | 0.005 | -           |
| 34                                          | 0.004                                | 0.004 | 0.005 | 0.004 | 0.004 | 0.004 | 0.003 | 0.003 | 0.003 | 0.002 | 0.003 | -           |
| 35                                          | 0.004                                | 0.006 | 0.007 | 0.009 | 0.010 | 0.011 | 0.009 | 0.009 | 0.008 | 0.007 | 0.010 | -           |
| 36                                          | 0.004                                | 0.004 | 0.005 | 0.004 | 0.004 | 0.004 | 0.002 | 0.003 | 0.003 | 0.002 | 0.005 | -           |
| 37                                          | 0.003                                | 0.005 | 0.006 | 0.008 | 0.009 | 0.008 | 0.008 | 0.007 | 0.006 | 0.006 | 0.003 | -           |
| 38                                          | 0.003                                | 0.003 | 0.004 | 0.004 | 0.004 | 0.004 | 0.001 | 0.002 | 0.003 | 0.002 | 0.004 | -           |
| 39                                          | 0.003                                | 0.005 | 0.006 | 0.007 | 0.008 | 0.008 | 0.008 | 0.007 | 0.006 | 0.006 | 0.008 | -           |
| 40                                          | 0.004                                | 0.003 | 0.004 | 0.004 | 0.004 | 0.004 | 0.002 | 0.003 | 0.003 | 0.002 | 0.005 | -           |
| THC/I <sub>ref</sub>                        | 0.113                                | 0.062 | 0.117 | 0.215 | 0.300 | 0.401 | 0.485 | 0.571 | 0.653 | 0.734 | 0.812 | 23          |
| PWHC/I <sub>ref</sub>                       | 0.108                                | 0.127 | 0.179 | 0.191 | 0.190 | 0.205 | 0.204 | 0.222 | 0.248 | 0.273 | 0.307 | 23          |

Remark: I<sub>ref</sub>=26.1A.