

PRODUCT INFORMATION SHEET

|   |        |   |   |                             |  |
|---|--------|---|---|-----------------------------|--|
| <b>Supplier's name or trade mark:</b>   |        | CYLINDA   |   |                             |  |
| <b>Supplier's address:</b>  |        | Elektroskandia Sverige AB, Norrvikenleden 97, 19270 Sollentuna, Sweden              |   |                             |  |
| <b>Model identifier:</b>  |        | KF7485NERFHE  |   |                             |  |
| <b>Type of refrigerating appliance:</b>   |        | Refrigerator - Freezer  |   |                             |  |
| Low-noise appliance:  | no     | Design type:  | freestanding  |                             |  |
| Wine storage appliance:   | no     | Other refrigerating appliance:  | no  |                             |  |
| <b>General product parameters:</b>  |        |   |   |                             |  |
| Parameter   |        | Value   | Parameter   |                             | Value  |
| Overall dimensions (millimeter)   | Height | 1852  | Total volume (dm <sup>3</sup> or l)   | 324                         |  |
|   | Width  | 595   |   |                             |  |
|   | Depth  | 670   |   |                             |  |
| EEL   | 99     | Energy efficiency class   | E   |                             |  |
| Airborne acoustical noise emissions (dB(A) re 1 pW)   | 38     | Airborne acoustical noise emission class  | C   |                             |  |
| Annual energy consumption (kWh/a)   | 248,93 | Climate class:  | SN-T  |                             |  |
| Minimum ambient temperature (°C), for which the refrigerating appliance is suitable   | 10     | Maximum ambient temperature (°C), for which the refrigerating appliance is suitable | 43  |                             |  |
| Winter setting  | no     |   |   |                             |  |
| <b>Compartment Parameters:</b>  |        |   |   |                             |  |
| Compartment type  |        | Compartment parameters and values   |   |                             |  |
|   |        | Compartment Volume (dm <sup>3</sup> or l)   | Recommended temperature setting for optimised food storage (°C) These settings shall not contradict the storage | Freezing capacity (kg/24 h) | Defrosting type (auto-defrost=A, manual defrost=M) |
| Pantry  | no     | -   | -   | -                           | -  |
| Wine storage  | no     | -   | -   | -                           | -  |
| Cellar  | no     | -   | -   | -                           | -  |
| Fresh food  | yes    | 215,0   | 4,0   | -                           | A  |
| Chill   | no     | -   | -   | -                           | -  |
| 0-star or ice-making  | no     | -   | -   | -                           | -  |
| 1-star  | no     | -   | -   | -                           | -  |
| 2-star  | no     | -   | -   | -                           | -  |
| 3-star  | no     | -   | -   | -                           | -  |
| 4-star  | yes    | 109,0   | -18,0   | 5,00                        | A  |
| 2-star section  | no     | -   | -   | -                           | -  |
| Variable temperature compartment  | -      | -   | -   | -                           | -  |
| For 4-star compartments   |        |   |   |                             |  |
| Fast freeze facility  |        | yes   |   |                             |  |
| <b>Light source parameters<sup>a,b</sup>:</b>   |        |   |   |                             |  |
| Type of light source  |        | LED   |   |                             |  |
| Energy efficiency class   |        | G   |   |                             |  |
| <b>Minimum duration of the guarantee offered by the manufacturer (b):</b>   |        |   |   |                             |  |
| <b>Additional information:</b>  |        |   |   |                             |  |
| Weblink to the manufacturer's website, where the information in point 4(a) Annex of Commission Regulation (EU) 2019/2019 (1)(b) is found: |        |   |   |                             |  |
| <a href="https://www.cylinda.se/support">https://www.cylinda.se/support</a>   |        |   |   |                             |  |
| a as determined in accordance with Commission Delegated Regulation (EU) 2019/2015 2.  |        |   |   |                             |  |
| b changes to these items shall not be considered relevant for the purposes of point 4 of Article 4 of Regulation (EU) 2017/1369.          |        |   |   |                             |  |

**TECHNICAL DOCUMENTATION**

**A general description of the refrigerating model, sufficient for it to be unequivocally and easily identified:**

**Brand Name:** CYLINDA  
**Model Identifier:** KF7485NERFHE

**Product specifications:**

**General product specifications:**

| Parameter                          | Value  | Parameter                | Value |
|------------------------------------|--------|--------------------------|-------|
| Annual energy consumption (kWh/a)  | 249    | Auxiliary energy (kWh/a) | 0     |
| Standard annual energy consumption | 250,61 | EEL (%)                  | 99    |
| Temperature rise time (h)          | 18,00  | Combi parameter          | 1,52  |
| Door heat loss factor              | 1,000  | Load factor              | 1,0   |
| Anti-condensation heater type      | None   |                          |       |

**Additional product specifications for refrigerating appliances, except for low noise refrigerating appliances:**

| Parameter   | Value | Parameter   | Value |
|---|-------|---|-------|
| Daily energy consumption at 16 °C (kWh/24h)                       | 0,429 | Daily energy consumption at 32 °C (kWh/24h)                       | 0,935 |
| Incremental defrost and recovery energy consumption at 16 °C (Wh) | 83,0  | Incremental defrost and recovery energy consumption at 32 °C (Wh) | 85,0  |
| Defrost interval at 16 °C (h)                                     | 40,0  | Defrost interval at 32 °C (h)                                     | 40,0  |

**Additional product specifications for low noise refrigerating appliances:**

| Parameter                                   | Value | Parameter                     | Value |
|---|-------|-------------------------------|-------|
| Daily energy consumption at 25 °C (kWh/24h) | -     | Defrost interval at 25 °C (h) | -     |

**Compartment specifications:**

| Compartment type                 | Compartment parameters and values |                              |     |      |                     |                      |
|----------------------------------|-----------------------------------|------------------------------|-----|------|---------------------|----------------------|
|                                  | Target temperature (°C)           | Thermodynamic parameter (rc) | Nc  | Mc   | Defrost factor (Ac) | Built-in factor (Bc) |
| Pantry                           | -                                 | -                            | -   | -    | -                   | -                    |
| Wine storage                     | -                                 | -                            | -   | -    | -                   | -                    |
| Cellar                           | -                                 | -                            | -   | -    | -                   | -                    |
| Fresh food                       | 4                                 | 1,00                         | 75  | 0,12 | 1,00                | 1,00                 |
| Chill                            | -                                 | -                            | -   | -    | -                   | -                    |
| 0-star or ice making             | -                                 | -                            | -   | -    | -                   | -                    |
| 1-star                           | -                                 | -                            | -   | -    | -                   | -                    |
| 2-star                           | -                                 | -                            | -   | -    | -                   | -                    |
| 3-star                           | -                                 | -                            | -   | -    | -                   | -                    |
| 4-star                           | -18                               | 2,10                         | 138 | 0,15 | 1,10                | 1,00                 |
| 2-star section                   | -                                 | -                            | -   | -    | -                   | -                    |
| Variable temperature compartment | -                                 | -                            | -   | -    | -                   | -                    |

**Additional information:**

The references of the harmonised standards or other reliable accurate and reproducible methods applied:  
 EN 62552-1:2020 , EN 62552-2:2020 , EN 62552-3:2020 , EN60704-2-14:2019

## Calculations

### Annual energy consumption (kWh/a) , T average (°C) :

$$E_{\text{daily}} = P \times 24 + \frac{\Delta E_{df} \times 24}{\Delta t_{df}} \quad (2)$$

Where

$E_{\text{daily}}$  is the energy in Wh over a period of 24 h

24 is h/d

$P$  is the **steady state** power in watt for the selected **temperature control setting** as per Annex B.

$\Delta E_{df}$  is the representative incremental energy for **defrost and recovery** in Wh in accordance with Annex C (see C.5).

$\Delta t_{df}$  is the estimated **defrost interval** in hours in accordance with Annex D.

Where there are additional defrost systems (each with its own **defrost control cycle**), the value of term based on  $\Delta E_{df}$  and  $\Delta t_{df}$  is also added in Formula (2) for each additional defrost system.

$$T_{\text{average}} = T_{ss} + \frac{\Delta T h_{df}}{\Delta t_{df}} \quad (3)$$

Note : EN 60552-3:2020 , 6.8.2 clause, Equation 2-3 ,

### Annual Energy , Daily energy consumption at 16 °C/ 32°C (kWh/24h) :

$$AE = 365 \times E_{\text{daily}}/L + E_{\text{aux}} \quad E_{\text{daily}} = 0,5 \times (E_{16} + E_{32})$$

Note : EN 60552-3:2020 , 6.8.2 clause, Equation 4,(EU) 2019/2019 Ecodesign Requirements Directive

### Standard annual energy consumption (kWh/a)

SAE, expressed in kWh/a and rounded to two decimal places, is calculated as follows:

$$SAE = C \times D \times \sum_{c=1}^n A_c \times B_c \times [V_c/V] \times (N_c + V \times r_c \times M_c)$$

The modelling parameters are set out in Table 4.

Table 4

The values of the modelling parameters per compartment type

| Compartment type    | $r_c$ ( <sup>1)</sup> ) | $N_c$ | $M_c$ | C  |
|---------------------|-------------------------|-------|-------|--|
| Pantry              | 0,35                    | 75    | 0,12  | between 1,15 and 1,56 for combi appliances with 3- or 4-star compartments ( <sup>2)</sup> , 1,15 for other combi appliances, 1,00 for other refrigerating appliances |
| Wine storage        | 0,60                    |       |       |  |
| Cellar              | 0,60                    |       |       |  |
| Fresh food          | 1,00                    | 138   | 0,12  |  |
| Chill               | 1,10                    |       |       |  |
| 0-star & ice-making | 1,20                    |       |       |  |
| 1-star              | 1,50                    |       |       |  |
| 2-star              | 1,80                    |       |       |  |
| 3-star              | 2,10                    |       |       |  |
| Freezer (4-star)    | 2,10                    | 138   | 0,15  |  |

(<sup>1</sup>)  $r_c = (T_c - T_f)/20$ ; with  $T_c = 24$  °C and  $T_f$  with values as set out in Table 3.

(<sup>2</sup>) C for combi appliances with 3- or 4-star compartments is determined as follows:

where  $fr_{ef}$  is the 3- or 4-star compartment volume  $V_f$  as a fraction of V with  $fr_{ef} = V_f/V$ :

— if  $fr_{ef} \leq 0,3$  then  $C = 1,3 + 0,87 \times fr_{ef}$ ;  
 — else if  $0,3 < fr_{ef} < 0,7$  then  $C = 1,87 - 1,0275 \times fr_{ef}$ ;  
 — else  $C = 1,15$ .

The compensation factors are set out in Table 5.

Table 5

The values of the compensation factors per compartment type

| Compartment type    | A <sub>i</sub> |              | B <sub>i</sub>         |                    | D       |       |       |         |
|---------------------|----------------|--------------|------------------------|--------------------|---------|-------|-------|---------|
|                     | Manual defrost | Auto-defrost | Freestanding appliance | Built-in appliance | ≤ 2 (*) | 3 (*) | 4 (*) | > 4 (*) |
| Pantry              | 1,00           |              | 1,00                   | 1,02               | 1,00    | 1,02  | 1,035 | 1,05    |
| Wine storage        |                |              |                        |                    |         |       |       |         |
| Cellar              |                |              |                        |                    |         |       |       |         |
| Fresh food          |                |              |                        |                    |         |       |       |         |
| Chill               |                |              |                        | 1,03               |         |       |       |         |
| 0-star & ice-making | 1,00           | 1,10         |                        | 1,05               |         |       |       |         |
| 1-star              |                |              |                        |                    |         |       |       |         |
| 2-star              |                |              |                        |                    |         |       |       |         |
| 3-star              |                |              |                        |                    |         |       |       |         |
| Freezer (4-star)    |                |              |                        |                    |         |       |       |         |

(\*) number of external doors or compartments, whichever is lowest.

Note : (EU) 2019/2019 Ecodesign Requirements Directive, Clause 5, Table 4-5

5. Determination of the EEI:

EEI, expressed in % and rounded to the first decimal place, calculated as:

$$EEI = AE/SAE.$$

Note : (EU) 2019/2019 Ecodesign Requirements Directive, Clause 5

### Auxiliary energy (kWh/a)

$$W_{heaters} = \left[ \sum_{i=1}^k (R_i \times P_{H_i}) \right] \times 1,3 \quad (40)$$

Table F.1 — Format for temperature and humidity data – Ambient controlled anti-condensation heaters

| Relative Humidity | RH band mid-point | Probability R <sub>i</sub> at 16 °C | Probability R <sub>i</sub> at 22 °C | Probability R <sub>i</sub> at 32 °C | Heater W at 16 °C | Heater W at 22 °C | Heater W at 32 °C |
|-------------------|-------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------|-------------------|-------------------|
| 0 to 10 %         | 5 %               | 0,00 %                              | 0,00 %                              | 0,34 %                              | P <sub>H1</sub>   | P <sub>H11</sub>  | P <sub>H21</sub>  |
| 10 to 20 %        | 15 %              | 0,61 %                              | 6,86 %                              | 2,01 %                              | P <sub>H2</sub>   | P <sub>H12</sub>  | P <sub>H22</sub>  |
| 20 to 30 %        | 25 %              | 3,11 %                              | 14,57 %                             | 1,61 %                              | P <sub>H3</sub>   | P <sub>H13</sub>  | P <sub>H23</sub>  |
| 30 to 40 %        | 35 %              | 5,03 %                              | 14,83 %                             | 0,86 %                              | P <sub>H4</sub>   | P <sub>H14</sub>  | P <sub>H24</sub>  |
| 40 to 50 %        | 45 %              | 5,09 %                              | 11,67 %                             | 0,18 %                              | P <sub>H5</sub>   | P <sub>H15</sub>  | P <sub>H25</sub>  |
| 50 to 60 %        | 55 %              | 4,67 %                              | 8,31 %                              | 0,01 %                              | P <sub>H6</sub>   | P <sub>H16</sub>  | P <sub>H26</sub>  |
| 60 to 70 %        | 65 %              | 3,39 %                              | 5,54 %                              | 0,00 %                              | P <sub>H7</sub>   | P <sub>H17</sub>  | P <sub>H27</sub>  |

| Relative Humidity | RH band mid-point | Probability R <sub>i</sub> at 16 °C | Probability R <sub>i</sub> at 22 °C | Probability R <sub>i</sub> at 32 °C | Heater W at 16 °C | Heater W at 22 °C | Heater W at 32 °C |
|-------------------|-------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------|-------------------|-------------------|
| 70 to 80 %        | 75 %              | 3,17 %                              | 2,51 %                              | 0,00 %                              | P <sub>H8</sub>   | P <sub>H18</sub>  | P <sub>H28</sub>  |
| 80 to 90 %        | 85 %              | 2,85 %                              | 0,66 %                              | 0,00 %                              | P <sub>H9</sub>   | P <sub>H19</sub>  | P <sub>H29</sub>  |
| 90 to 100 %       | 95 %              | 2,05 %                              | 0,07 %                              | 0,00 %                              | P <sub>H10</sub>  | P <sub>H20</sub>  | P <sub>H30</sub>  |

Note : EN 62552-3:2020, Annex F 2.5, Equation 40, Table F.1

**Incremental defrost and recovery energy consumption at 16 /32 °C (Wh)**

$$\Delta E_{df} = (E_{end-F} - E_{start-D}) - \frac{(P_{SS-D} + P_{SS-F})}{2} \times (t_{end-F} - t_{start-D}) \quad (19)$$

$$\Delta E_{df} = \frac{\sum_{j=1}^m \Delta E_{df}}{m} \quad (22)$$

Note : EN 62552-3:2020 Annex C, Clause C.3.3, Equation 19-22

**Defrost interval at 16 /32 °C (h)**

for Compressor Run Time Defrost Controller

$$\Delta t_{df} = \frac{\Delta t_{rt} - \Delta t_{dr} - \Delta t_{dh}}{CRT_{SS}} + \Delta t_{axy} \quad (26)$$

for Variable Defrost Controller

$$\Delta t_{df32} = \frac{\Delta t_{d-max} \times \Delta t_{d-min}}{[0.2 \times (\Delta t_{d-max} - \Delta t_{d-min}) + \Delta t_{d-min}]} \quad (27)$$

$$\Delta t_{df16} = 2 \times \Delta t_{df32}$$