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|                     |   |          |            |
|---------------------|---|----------|------------|
| Summary of          | WPL-A 09/12 HK 400 Plus                               | Reg. No. | 011-1W0440 |
| Certificate Holder  |   |          |            |
| Name                | STIEBEL ELTRON GmbH & Co KG                           |          |            |
| Address             | Dr. Stiebel Straße 33                                 | Zip      | 37603      |
| City                | Holzminden  | Country  | Germany    |
| Certification Body  | DIN CERTCO Gesellschaft für Konformitätsbewertung mbH |          |            |
| Subtype title       | WPL-A 09/12 HK 400 Plus                               |          |            |
| Heat Pump Type      | Outdoor Air/Water                                     |          |            |
| Refrigerant         | R410A   |          |            |
| Mass of Refrigerant | 5.5 kg  |          |            |
| Certification Date  | 14.10.2021  |          |            |
| Testing basis       | HP KEYMARK certification scheme rules rev. 8          |          |            |

## Model: WPL-A 09 HK 400 Plus

| Configure model                     |                                 |
|-------------------------------------|---------------------------------|
| Model name                          | WPL-A 09 HK 400 Plus            |
| Application                         | Heating (medium temp)           |
| Units                               | Outdoor                         |
| Climate Zone                        | Colder Climate + Warmer Climate |
| Reversibility                       | Yes                             |
| Cooling mode application (optional) | n/a                             |

| General Data |             |
|--------------|-------------|
| Power supply | 3x400V 50Hz |

### Heating

| EN 14511-2  |                 |                    |
|-------------|-----------------|--------------------|
|             | Low temperature | Medium temperature |
| Heat output | 8.66 kW         | 7.90 kW            |
| El input    | 1.88 kW         | 2.75 kW            |
| COP         | 4.61            | 2.87               |

| EN 14511-4                                 |        |
|--|--------|
| Shutting off the heat transfer medium flow | passed |
| Complete power supply failure              | passed |
| Defrost test                               | passed |
| Starting and operating test                | passed |

### Average Climate

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### EN 12102-1

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level outdoor | 55 dB(A)        | 55 dB(A)           |

### EN 14825

|                | Low temperature | Medium temperature |
|----------------|-----------------|--------------------|
| $\eta_s$       | 159 %           | 125 %              |
| Prated         | 10.29 kW        | 11.45 kW           |
| SCOP           | 4.04            | 3.21               |
| Tbiv           | -7 °C           | -7 °C              |
| TOL            | -10 °C          | -10 °C             |
| Pdh Tj = -7°C  | 9.10 kW         | 10.13 kW           |
| COP Tj = -7°C  | 3.11            | 2.56               |
| Cdh Tj = -7 °C | 0.900           | 0.900              |
| Pdh Tj = +2°C  | 7.30 kW         | 7.75 kW            |
| COP Tj = +2°C  | 3.93            | 3.31               |
| Cdh Tj = +2 °C | 0.990           | 0.900              |
| Pdh Tj = +7°C  | 8.92 kW         | 8.38 kW            |
| COP Tj = +7°C  | 5.04            | 4.14               |
| Cdh Tj = +7 °C | 0.980           | 0.900              |
| Pdh Tj = 12°C  | 9.10 kW         | 9.05 kW            |

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|   |             |             |
|---|-------------|-------------|
| COP Tj = 12°C                                       | 5.53        | 4.74        |
| Cdh Tj = +12 °C                                     | 0.980       | 0.900       |
| Pdh Tj = Tbiv                                       | 9.10 kW     | 10.13 kW    |
| COP Tj = Tbiv                                       | 3.11        | 2.56        |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 8.52 kW     | 9.40 kW     |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.94        | 2.26        |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh |             |             |
| WTOL  | 65 °C       | 65 °C       |
| Poff  | 10 W        | 10 W        |
| PTO   | 10 W        | 10 W        |
| PSB   | 10 W        | 10 W        |
| PCK   | 38 W        | 38 W        |
| Supplementary Heater: Type of energy input          | Electricity | Electricity |
| Supplementary Heater: PSUP                          | 1.77 kW     | 2.05 kW     |
| Annual energy consumption Qhe                       | 5265 kWh    | 7377 kWh    |

## Warmer Climate

| <b>EN 12102-1</b>         |                        |                           |
|---------------------------|------------------------|---------------------------|
|                           | <b>Low temperature</b> | <b>Medium temperature</b> |
| Sound power level outdoor | 55 dB(A)               | 55 dB(A)                  |

| <b>EN 14825</b> |
|-----------------|
|-----------------|

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|   | Low temperature | Medium temperature |
|---|-----------------|--------------------|
| $\eta_s$  | 187 %           | 128 %              |
| Prated  | 7.90 kW         | 8.14 kW            |
| SCOP  | 4.76            | 3.28               |
| Tbiv  | 2 °C            | 2 °C               |
| TOL   | 2 °C            | 2 °C               |
| Pdh Tj = +2°C                                       | 7.90 kW         | 8.14 kW            |
| COP Tj = +2°C                                       | 3.75            | 2.78               |
| Cdh Tj = +2 °C                                      | 0.900           | 0.900              |
| Pdh Tj = +7°C                                       | 8.76 kW         | 8.04 kW            |
| COP Tj = +7°C                                       | 4.77            | 3.40               |
| Cdh Tj = +7 °C                                      | 0.990           | 0.900              |
| Pdh Tj = 12°C                                       | 9.09 kW         | 9.03 kW            |
| COP Tj = 12°C                                       | 5.41            | 4.48               |
| Cdh Tj = +12 °C                                     | 0.980           | 0.900              |
| Pdh Tj = Tbiv                                       | 7.90 kW         | 8.14 kW            |
| COP Tj = Tbiv                                       | 3.75            | 2.78               |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.90 kW         | 8.14 kW            |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.75            | 2.78               |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh |                 |                    |

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|  |             |             |
|--|-------------|-------------|
| WTOL                                       | 65 °C       | 65 °C       |
| Poff                                       | 10 W        | 10 W        |
| PTO  | 10 W        | 10 W        |
| PSB  | 10 W        | 10 W        |
| PCK  | 38 W        | 38 W        |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP                 | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Qhe              | 2218 kWh    | 3314 kWh    |

## Colder Climate

| <b>EN 12102-1</b>         |                        |                           |
|---------------------------|------------------------|---------------------------|
|                           | <b>Low temperature</b> | <b>Medium temperature</b> |
| Sound power level outdoor | 55 dB(A)               | 55 dB(A)                  |

| <b>EN 14825</b> |                        |                           |
|-----------------|------------------------|---------------------------|
|                 | <b>Low temperature</b> | <b>Medium temperature</b> |
| $\eta_s$        | 133 %                  | 112 %                     |
| Prated          | 14.53 kW               | 15.94 kW                  |
| SCOP            | 3.40                   | 2.88                      |
| Tbiv            | -7 °C                  | -7 °C                     |
| TOL             | -20 °C                 | -20 °C                    |

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|   |         |         |
|---|---------|---------|
| Pdh Tj = -7°C                                       | 8.80 kW | 9.65 kW |
| COP Tj = -7°C                                       | 3.27    | 2.82    |
| Cdh Tj = -7 °C                                      | 0.900   | 0.900   |
| Pdh Tj = +2°C                                       | 7.19 kW | 7.58 kW |
| COP Tj = +2°C                                       | 4.08    | 3.55    |
| Cdh Tj = +2 °C                                      | 0.980   | 0.900   |
| Pdh Tj = +7°C                                       | 9.02 kW | 8.57 kW |
| COP Tj = +7°C                                       | 5.21    | 4.46    |
| Cdh Tj = +7 °C                                      | 0.980   | 0.900   |
| Pdh Tj = 12°C                                       | 9.10 kW | 9.06 kW |
| COP Tj = 12°C                                       | 5.53    | 4.88    |
| Cdh Tj = +12 °C                                     | 0.980   | 0.900   |
| Pdh Tj = Tbiv                                       | 8.80 kW | 9.65 kW |
| COP Tj = Tbiv                                       | 3.27    | 2.82    |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.38 kW | 7.53 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.54    | 1.85    |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh |         |         |
| WTOL  | 65 °C   | 65 °C   |
| Poff  | 10 W    | 10 W    |
| PTO   | 10 W    | 10 W    |
| PSB   | 10 W    | 10 W    |

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|   |             |             |
|---|-------------|-------------|
| PCK   | 38 W        | 38 W        |
| Supplementary Heater: Type of energy input            | Electricity | Electricity |
| Supplementary Heater: PSUP                            | 14.53 kW    | 15.94 kW    |
| Annual energy consumption Q <sub>he</sub>             | 10540 kWh   | 13625 kWh   |
| P <sub>dh</sub> T <sub>j</sub> = -15°C (if TOL<-20°C) |             |             |
| COP T <sub>j</sub> = -15°C (if TOL<-20°C)             |             |             |
| C <sub>dh</sub> T <sub>j</sub> = -15 °C               |             |             |



## Model: WPL-A 12 HK 400 Plus

| Configure model                     |                                 |
|-------------------------------------|---------------------------------|
| Model name                          | WPL-A 12 HK 400 Plus            |
| Application                         | Heating (medium temp)           |
| Units                               | Outdoor                         |
| Climate Zone                        | Colder Climate + Warmer Climate |
| Reversibility                       | Yes                             |
| Cooling mode application (optional) | n/a                             |

| General Data |             |
|--------------|-------------|
| Power supply | 3x400V 50Hz |

### Heating

| EN 14511-2  |                 |                    |
|-------------|-----------------|--------------------|
|             | Low temperature | Medium temperature |
| Heat output | 8.66 kW         | 7.90 kW            |
| El input    | 1.88 kW         | 2.75 kW            |
| COP         | 4.61            | 2.87               |

| EN 14511-4                                 |        |
|--|--------|
| Shutting off the heat transfer medium flow | passed |
| Complete power supply failure              | passed |
| Defrost test                               | passed |
| Starting and operating test                | passed |

### Average Climate

### EN 12102-1

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level outdoor | 55 dB(A)        | 55 dB(A)           |

### EN 14825

|                | Low temperature | Medium temperature |
|----------------|-----------------|--------------------|
| $\eta_s$       | 159 %           | 130 %              |
| Prated         | 12.80 kW        | 13.42 kW           |
| SCOP           | 4.05            | 3.32               |
| Tbiv           | -7 °C           | -7 °C              |
| TOL            | -10 °C          | -10 °C             |
| Pdh Tj = -7°C  | 11.30 kW        | 11.87 kW           |
| COP Tj = -7°C  | 2.84            | 2.43               |
| Cdh Tj = -7 °C | 0.900           | 0.900              |
| Pdh Tj = +2°C  | 7.24 kW         | 7.67 kW            |
| COP Tj = +2°C  | 4.01            | 3.42               |
| Cdh Tj = +2 °C | 0.900           | 0.900              |
| Pdh Tj = +7°C  | 8.94 kW         | 8.41 kW            |
| COP Tj = +7°C  | 5.08            | 4.19               |
| Cdh Tj = +7 °C | 0.980           | 0.900              |
| Pdh Tj = 12°C  | 9.10 kW         | 9.05 kW            |

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|   |             |             |
|---|-------------|-------------|
| COP Tj = 12°C                                       | 5.55        | 4.76        |
| Cdh Tj = +12 °C                                     | 0.980       | 0.900       |
| Pdh Tj = Tbiv                                       | 11.32 kW    | 11.87 kW    |
| COP Tj = Tbiv                                       | 2.84        | 2.43        |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 10.58 kW    | 11.10 kW    |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.83        | 2.16        |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh |             |             |
| WTOL  | 65 °C       | 65 °C       |
| Poff  | 10 W        | 10 W        |
| PTO   | 10 W        | 10 W        |
| PSB   | 10 W        | 10 W        |
| PCK   | 38 W        | 38 W        |
| Supplementary Heater: Type of energy input          | Electricity | Electricity |
| Supplementary Heater: PSUP                          | 2.22 kW     | 2.32 kW     |
| Annual energy consumption Qhe                       | 6537 kWh    | 8358 kWh    |

## Warmer Climate

| <b>EN 12102-1</b>         |                        |                           |
|---------------------------|------------------------|---------------------------|
|                           | <b>Low temperature</b> | <b>Medium temperature</b> |
| Sound power level outdoor | 55 dB(A)               | 55 dB(A)                  |

| <b>EN 14825</b> |
|-----------------|
|-----------------|

This information was generated by the HP KEYMARK database on 18 Mar 2022

|   | Low temperature | Medium temperature |
|---|-----------------|--------------------|
| $\eta_s$  | 188 %           | 128 %              |
| Prated  | 8.10 kW         | 8.14 kW            |
| SCOP  | 4.77            | 3.28               |
| Tbiv  | 2 °C            | 2 °C               |
| TOL   | 2 °C            | 2 °C               |
| Pdh Tj = +2°C                                       | 8.10 kW         | 8.14 kW            |
| COP Tj = +2°C                                       | 3.74            | 2.78               |
| Cdh Tj = +2 °C                                      | 0.900           | 0.900              |
| Pdh Tj = +7°C                                       | 8.76 kW         | 8.04 kW            |
| COP Tj = +7°C                                       | 4.77            | 3.40               |
| Cdh Tj = +7 °C                                      | 0.990           | 0.900              |
| Pdh Tj = 12°C                                       | 9.09 kW         | 9.03 kW            |
| COP Tj = 12°C                                       | 5.41            | 4.48               |
| Cdh Tj = +12 °C                                     | 0.980           | 0.900              |
| Pdh Tj = Tbiv                                       | 8.10 kW         | 8.41 kW            |
| COP Tj = Tbiv                                       | 3.74            | 2.78               |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 8.10 kW         | 8.14 kW            |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.74            | 2.78               |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh |                 |                    |

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|  |             |             |
|--|-------------|-------------|
| WTOL                                       | 65 °C       | 65 °C       |
| Poff                                       | 10 W        | 10 W        |
| PTO  | 10 W        | 10 W        |
| PSB  | 10 W        | 10 W        |
| PCK  | 38 W        | 38 W        |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP                 | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Qhe              | 2271 kWh    | 3314 kWh    |

## Colder Climate

| <b>EN 12102-1</b>         |                        |                           |
|---------------------------|------------------------|---------------------------|
|                           | <b>Low temperature</b> | <b>Medium temperature</b> |
| Sound power level outdoor | 55 dB(A)               | 55 dB(A)                  |

| <b>EN 14825</b> |                        |                           |
|-----------------|------------------------|---------------------------|
|                 | <b>Low temperature</b> | <b>Medium temperature</b> |
| $\eta_s$        | 133 %                  | 115 %                     |
| Prated          | 18.44 kW               | 19.19 kW                  |
| SCOP            | 3.39                   | 2.94                      |
| Tbiv            | -7 °C                  | -7 °C                     |
| TOL             | -20 °C                 | -20 °C                    |

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|   |          |          |
|---|----------|----------|
| Pdh Tj = -7°C                                       | 11.16 kW | 11.61 kW |
| COP Tj = -7°C                                       | 3.15     | 2.69     |
| Cdh Tj = -7 °C                                      | 0.900    | 0.900    |
| Pdh Tj = +2°C                                       | 7.13 kW  | 7.49 kW  |
| COP Tj = +2°C                                       | 4.16     | 3.66     |
| Cdh Tj = +2 °C                                      | 0.900    | 0.900    |
| Pdh Tj = +7°C                                       | 9.05 kW  | 8.61 kW  |
| COP Tj = +7°C                                       | 5.25     | 4.53     |
| Cdh Tj = +7 °C                                      | 0.980    | 0.900    |
| Pdh Tj = 12°C                                       | 9.10 kW  | 9.06 kW  |
| COP Tj = 12°C                                       | 5.55     | 4.91     |
| Cdh Tj = +12 °C                                     | 0.980    | 0.900    |
| Pdh Tj = Tbiv                                       | 11.16 kW | 11.61 kW |
| COP Tj = Tbiv                                       | 3.15     | 2.69     |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 9.29 kW  | 9.65 kW  |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.47     | 1.85     |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh |          |          |
| WTOL  | 65 °C    | 65 °C    |
| Poff  | 10 W     | 10 W     |
| PTO   | 10 W     | 10 W     |
| PSB   | 10 W     | 10 W     |

This information was generated by the HP KEYMARK database on 18 Mar 2022

|   |             |             |
|---|-------------|-------------|
| PCK   | 38 W        | 38 W        |
| Supplementary Heater: Type of energy input            | Electricity | Electricity |
| Supplementary Heater: PSUP                            | 18.44 kW    | 19.19 kW    |
| Annual energy consumption Q <sub>he</sub>             | 13397 kWh   | 16099 kWh   |
| P <sub>dh</sub> T <sub>j</sub> = -15°C (if TOL<-20°C) |             |             |
| COP T <sub>j</sub> = -15°C (if TOL<-20°C)             |             |             |
| C <sub>dh</sub> T <sub>j</sub> = -15 °C               |             |             |