

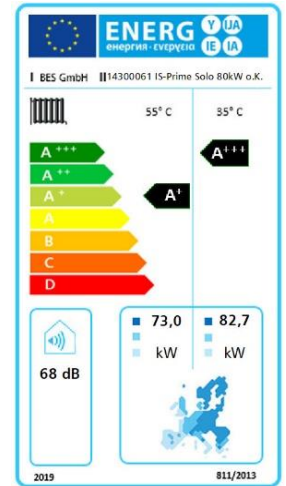
# Compact water-water heat pump



## IS-WP PRIME solo WW v1.8

Range of application :

- ▶ Ground water and surface water
- ▶ Power capacities: 28kW, 35kW, 58kW and 80kW
- ▶ for heating and cooling
- ▶ new construction and refurbishment



- ▶ Comfort control based on outside temperature with mixer and domestic hot water control
- ▶ High coefficient of performance through innovative heating and cooling technology
- ▶ Application range: water temperature in heating from 5 °C to 18 °C
- ▶ Can be used with ground water and surface water
- ▶ Can be expanded by adding modules in cascade
- ▶ Up to 60 °C supply temperature in heating
- ▶ Phase sequencer monitoring integrated
- ▶ Fully hermetic compressor heat pump
- ▶ Long service life due to soft start-up
- ▶ Remote monitoring via web portal
- ▶ High use of regenerative energy
- ▶ Maintenance-friendly housing
- ▶ Standard motor protection
- ▶ Extremely silent operation
- ▶ Few space required

Seasonal energy efficiency  
in heating  
**210 %**

**Efficiency class**  
**A+++**

| Efficiency | 28 kW without cooling |                   |                        |                         |                                      |                                | 28 kW active cooling |                        |                         |                                      |                                |                       |
|------------|-----------------------|-------------------|------------------------|-------------------------|--------------------------------------|--------------------------------|----------------------|------------------------|-------------------------|--------------------------------------|--------------------------------|-----------------------|
|            | Operating point       | Heating capacity* | Power consumption (kW) | Current consumption (A) | Coefficient of performance (COP/EER) | Refrigeration capacity (kW)    | Heating capacity*    | Power consumption (kW) | Current consumption (A) | Coefficient of performance (COP/EER) | Refrigeration capacity (kW)    | Cooling capacity (kW) |
|            | W10 / W35             | 28,2              | 4,3                    | 9,0                     | 6,6                                  | 23,9                           | 27,9                 | 4,4                    | 9,2                     | 6,3                                  | 23,5                           | -                     |
|            | W10 / W55             | 25,1              | 6,8                    | 12,2                    | 3,7                                  | 18,3                           | 24,8                 | 6,9                    | 12,4                    | 3,6                                  | 17,9                           | -                     |
|            | W15 / W35             | 32,1              | 4,3                    | 9,2                     | 7,4                                  | 27,8                           | 31,8                 | 4,4                    | 9,4                     | 7,2                                  | 27,4                           | -                     |
|            | W15 / W55             | 28,3              | 6,8                    | 12,3                    | 4,2                                  | 21,5                           | 28,0                 | 7,0                    | 12,6                    | 4,0                                  | 21,0                           | -                     |
|            | W30 / W10             |                   |                        |                         |                                      |                                | -                    | 4,1                    | 8,9                     | 5,1                                  | -                              | 21,0                  |
|            | W30 / W12             |                   |                        |                         |                                      |                                | -                    | 4,1                    | 8,9                     | 5,6                                  | -                              | 22,8                  |
|            | W30 / W15             |                   |                        |                         |                                      |                                | -                    | 4,1                    | 9,0                     | 6,2                                  | -                              | 25,5                  |
|            | Clima                 | ηs (%)** 35 °C    | ηs (%)** 55 °C         | Efficiency class 35     | Efficiency class 55                  | Sound power in dB/A (interior) | ηs (%)** 35 °C       | ηs (%)** 55 °C         | Efficiency class 35     | Efficiency class 55                  | Sound power in dB/A (interior) |                       |
| cold       | 206%                  | 115%              | A+++                   | A+                      | 62 dB/A                              | 196%                           | 113%                 | A+++                   | A+                      | 62 dB/A                              |                                |                       |
| Efficiency | 35 kW without cooling |                   |                        |                         |                                      |                                | 35 kW active cooling |                        |                         |                                      |                                |                       |
|            | Operating point       | Heating capacity* | Power consumption (kW) | Current consumption (A) | Coefficient of performance (COP/EER) | Refrigeration capacity (kW)    | Heating capacity*    | Power consumption (kW) | Current consumption (A) | Coefficient of performance (COP/EER) | Refrigeration capacity (kW)    | Cooling capacity (kW) |
|            | W10 / W35             | 36,0              | 5,7                    | 11,6                    | 6,3                                  | 30,3                           | 35,6                 | 5,8                    | 11,9                    | 6,1                                  | 29,8                           | -                     |
|            | W10 / W55             | 31,7              | 8,7                    | 15,3                    | 3,6                                  | 23,0                           | 31,4                 | 8,9                    | 15,6                    | 3,5                                  | 22,5                           | -                     |
|            | W15 / W35             | 40,8              | 5,8                    | 11,7                    | 7,0                                  | 35,0                           | 40,4                 | 5,9                    | 11,9                    | 6,8                                  | 34,5                           | -                     |
|            | W15 / W55             | 35,5              | 8,7                    | 15,3                    | 4,1                                  | 26,8                           | 35,2                 | 8,9                    | 15,6                    | 4,0                                  | 26,3                           | -                     |
|            | W30 / W10             |                   |                        |                         |                                      |                                | -                    | 5,5                    | 11,5                    | 4,9                                  | -                              | 26,8                  |
|            | W30 / W12             |                   |                        |                         |                                      |                                | -                    | 5,5                    | 11,5                    | 5,3                                  | -                              | 28,9                  |
|            | W30 / W15             |                   |                        |                         |                                      |                                | -                    | 5,6                    | 11,6                    | 5,8                                  | -                              | 32,4                  |
|            | Clima                 | ηs (%)** 35 °C    | ηs (%)** 55 °C         | Efficiency class 35     | Efficiency class 55                  | Sound power in dB/A (interior) | ηs (%)** 35 °C       | ηs (%)** 55 °C         | Efficiency class 35     | Efficiency class 55                  | Sound power in dB/A (interior) |                       |
| cold       | 194%                  | 112 %             | A+++                   | A+                      | 63 dB/A                              | 188 %                          | 109 %                | A+++                   | A+                      | 63 dB/A                              |                                |                       |
| Efficiency | 58 kW without cooling |                   |                        |                         |                                      |                                | 58 kW active cooling |                        |                         |                                      |                                |                       |
|            | Operating point       | Heating capacity* | Power consumption (kW) | Current consumption (A) | Coefficient of performance (COP/EER) | Refrigeration capacity (kW)    | Heating capacity*    | Power consumption (kW) | Current consumption (A) | Coefficient of performance (COP/EER) | Refrigeration capacity (kW)    | Cooling capacity (kW) |
|            | W10 / W35             | 63,4              | 9,8                    | 21,8                    | 6,5                                  | 53,6                           | 62,8                 | 10,0                   | 22,3                    | 6,3                                  | 52,8                           | -                     |
|            | W10 / W55             | 56,2              | 14,9                   | 27,6                    | 3,8                                  | 41,3                           | 55,6                 | 15,2                   | 28,2                    | 3,7                                  | 40,4                           | -                     |
|            | W15 / W35             | 71,9              | 10,0                   | 22,1                    | 7,2                                  | 61,9                           | 71,2                 | 10,2                   | 22,5                    | 7,0                                  | 61,0                           | -                     |
|            | W15 / W55             | 63,3              | 14,9                   | 27,7                    | 4,3                                  | 48,4                           | 62,7                 | 15,2                   | 28,2                    | 4,1                                  | 47,5                           | -                     |
|            | W30 / W10             |                   |                        |                         |                                      |                                | -                    | 9,8                    | 22,1                    | 4,7                                  | -                              | 46,2                  |
|            | W30 / W12             |                   |                        |                         |                                      |                                | -                    | 9,9                    | 22,2                    | 5,0                                  | -                              | 49,9                  |
|            | W30 / W15             |                   |                        |                         |                                      |                                | -                    | 10,0                   | 22,3                    | 5,6                                  | -                              | 55,7                  |
|            | Clima                 | ηs (%)** 35 °C    | ηs (%)** 55 °C         | Efficiency class 35     | Efficiency class 55                  | Sound power in dB/A (interior) | ηs (%)** 35 °C       | ηs (%)** 55 °C         | Efficiency class 35     | Efficiency class 55                  | Sound power in dB/A (interior) |                       |
| cold       | 203%                  | 120%              | A+++                   | A+                      | 67 dB/A                              | 197%                           | 116 %                | A+++                   | A+                      | 67 dB/A                              |                                |                       |
| Efficiency | 80 kW without cooling |                   |                        |                         |                                      |                                | 80 kW active cooling |                        |                         |                                      |                                |                       |
|            | Operating point       | Heating capacity* | Power consumption (kW) | Current consumption (A) | Coefficient of performance (COP/EER) | Refrigeration capacity (kW)    | Heating capacity*    | Power consumption (kW) | Current consumption (A) | Coefficient of performance (COP/EER) | Refrigeration capacity (kW)    | Cooling capacity (kW) |
|            | W10 / W35             | 82,7              | 12,4                   | 23,1                    | 6,7                                  | 70,3                           | 81,9                 | 12,6                   | 23,5                    | 6,5                                  | 69,3                           | -                     |
|            | W10 / W55             | 73,0              | 20,9                   | 33,7                    | 3,5                                  | 52,1                           | 72,3                 | 21,3                   | 34,4                    | 3,4                                  | 51,0                           | -                     |
|            | W15 / W35             | 93,3              | 12,3                   | 23,3                    | 7,6                                  | 81,0                           | 92,3                 | 12,5                   | 23,7                    | 7,4                                  | 79,8                           | -                     |
|            | W15 / W55             | 82,0              | 21,1                   | 33,8                    | 3,9                                  | 60,9                           | 81,2                 | 21,5                   | 34,5                    | 3,8                                  | 59,7                           | -                     |
|            | W30 / W10             |                   |                        |                         |                                      |                                | -                    | 12,7                   | 23,4                    | 4,8                                  | -                              | 60,8                  |
|            | W30 / W12             |                   |                        |                         |                                      |                                | -                    | 12,7                   | 23,5                    | 5,2                                  | -                              | 65,5                  |
|            | W30 / W15             |                   |                        |                         |                                      |                                | -                    | 12,6                   | 23,6                    | 5,8                                  | -                              | 73,0                  |
|            | Clima                 | ηs (%)** 35 °C    | ηs (%)** 55 °C         | Efficiency class 35     | Efficiency class 55                  | Sound power in dB/A (interior) | ηs (%)** 35 °C       | ηs (%)** 55 °C         | Efficiency class 35     | Efficiency class 55                  | Sound power in dB/A (interior) |                       |
| cold       | 210%                  | 110 %             | A+++                   | A+                      | 68 dB/A                              | 204 %                          | 107 %                | A+++                   | A+                      | 68 dB/A                              |                                |                       |

\* all output specifications in accordance with DIN 14 511

\*\* seasonal energy efficiency in heating

IS-WP PRIME solo WW v1.8

|                                             | 28 kW<br>w/o C.               | 28 kW<br>a.C. | 35 kW<br>w/o C. | 35 kW<br>a.C. | 58 kW<br>w/o C. | 58 kW<br>a.C. | 80 kW<br>w/o C. | 80 kW<br>a.C. |
|---------------------------------------------|-------------------------------|---------------|-----------------|---------------|-----------------|---------------|-----------------|---------------|
| <b>Condenser (heating secondary)</b>        |                               |               |                 |               |                 |               |                 |               |
| Type                                        | plate heat exchanger AISI 316 |               |                 |               |                 |               |                 |               |
| Recommended flow rate                       | 4,0 m³/h                      |               | 6,2 m³/h        |               | 8,6 m³/h        |               | 14,0 m³/h       |               |
| Pressure loss at nominal volume             | 82 mbar                       |               | 104 mbar        |               | 106 mbar        |               | 148 mbar        |               |
| Max. operating pressure                     | 30 bar                        |               |                 |               |                 |               |                 |               |
| Max. temperature                            | 150 °C                        |               |                 |               |                 |               |                 |               |
| Connections heating                         | 2 x 2" ET flat sealing        |               |                 |               |                 |               |                 |               |
| Max. / min. supply line temperature heating | 60 °C / 10 °C                 |               |                 |               |                 |               |                 |               |
| Max. / min. supply line temperature cooling | 40 °C / 10 °C                 |               |                 |               |                 |               |                 |               |

|                                              |                               |          |              |           |
|----------------------------------------------|-------------------------------|----------|--------------|-----------|
| Evaporator (source primary)                  |                               |          |              |           |
| Type                                         | plate heat exchanger AISI 316 |          |              |           |
| Insulation                                   | PVC- and CFC-free             |          |              |           |
| Recommended flow rate                        | 6,2 m³/h                      | 9,6 m³/h | 14,3 m³/h    | 22,3 m³/h |
| Pressure loss at nominal volume              | 135 mbar                      | 162 mbar | 170 mbar     | 220 mbar  |
| Max. operating pressure                      | 30 bar                        |          |              |           |
| Max. temperature                             | 150 °C                        |          |              |           |
| Connections source                           | 2 x 2" ET flat sealing        |          |              |           |
| Max. / min. source inlet temperature heating | 18 °C / 5 °C                  |          | 15 °C / 5 °C |           |
| Max. / min. source inlet temperature cooling | 40 °C / 5 °C                  |          | 40 °C / 5 °C |           |
| Expansion valve                              | electronical                  |          |              |           |

|                           |                   |  |        |  |         |  |         |  |
|---------------------------|-------------------|--|--------|--|---------|--|---------|--|
| <b>Cooling cycle</b>      |                   |  |        |  |         |  |         |  |
| Insulation cooling cycle  | PVC- and CFC-free |  |        |  |         |  |         |  |
| Compressor                | Scroll            |  |        |  |         |  |         |  |
| Refrigerant               | R 407 C           |  |        |  |         |  |         |  |
| Filling capacity          | 5,5 kg            |  | 8,0 kg |  | 10,0 kg |  | 14,0 kg |  |
| Ester oil content (liter) | 1,77              |  | 3,38   |  | 3,38    |  | 4,7     |  |

|                             |                           |        |        |        |        |        |        |        |
|-----------------------------|---------------------------|--------|--------|--------|--------|--------|--------|--------|
| <b>Housing/Modulbox</b>     |                           |        |        |        |        |        |        |        |
| Dimensions (WxDxH)          | 770 mm x 881 mm x 1215 mm |        |        |        |        |        |        |        |
| Colour                      | RAL 7016                  |        |        |        |        |        |        |        |
| Weight                      | 242 kg                    | 248 kg | 245 kg | 250 kg | 339 kg | 345 kg | 345 kg | 350 kg |
| Material / sound insulation | Arma Sound RD 240         |        |        |        |        |        |        |        |

| Electrical date                              |                      |               |                     |               |
|----------------------------------------------|----------------------|---------------|---------------------|---------------|
| Nominal voltage (heat pump)                  | 3 Ph/50 Hz/ 400V     |               |                     |               |
| Compressor startup current (with soft-start) | 18 A                 | 20 A          | 40 A                | 45 A          |
| Compressor startup current (w/o soft-start)  | 101 A                | 110 A         | 174 A               | 225 A         |
| Max. compressor operating current            | 15 A                 | 17 A          | 34 A                | 40 A          |
| Motor overload protection                    | 20 A                 | 20 A          | 42 A                | 42 A          |
| Fuse protection slow-blow (compressor)       | D 25 A 4-pol.        | D 25 A 4-pol. | D 50 A 4-pol.       | D 50 A 4-pol. |
| Fuse protection (controller)                 | B 13 A - 2-pol.      |               |                     |               |
| Fuse protection (load current)               | C 20 A - 2-pol.      |               |                     |               |
| Type of proteccton                           | IP 24                |               |                     |               |
| Supply compressor                            | 5 x 6 mm² flexible   |               | 5 x 10 mm² flexible |               |
| Supply controller                            | 3 x 1,5 mm² flexible |               |                     |               |
| Supply circulation pump                      | 3 x 2,5 mm² flexible |               |                     |               |

|           |          |          |          |          |          |          |          |          |
|-----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Art.- Nr. | 14300029 | 14310029 | 14300031 | 14310031 | 14300056 | 14310056 | 14300061 | 14310061 |
|-----------|----------|----------|----------|----------|----------|----------|----------|----------|

\* all output specifications in accordance with DIN 14 511



BES BuildingEnergySolutions GmbH  
Robert-Koch-Str. 50 Tel.: +49 (0) 6131 25 06 17-0 E-Mail: info@bes-eu.com  
D-55129 Mainz Fax: +49 (0) 6131 25 06 17-9 www.bes-eu.com