



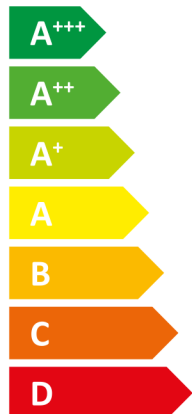
# ENERG

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## tecalor

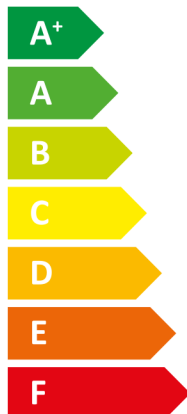
TTL 3.5 ACS TSBB  
180 eco Set



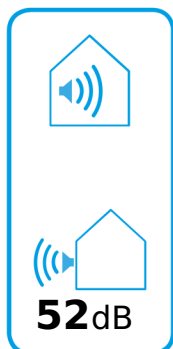
**A+**



XL



**A**



- 4 kW
- 4 kW
- 3 kW

2019

811/2013

**Product datasheet: Combination heater to Regulation (EU) No 811/2013 (S.I. 2019 No. 539 / Programme 2)**

|                                                                                                                            |       | <b>TTL 3.5 ACS TSBB 180 eco Set</b> |
|----------------------------------------------------------------------------------------------------------------------------|-------|-------------------------------------|
|                                                                                                                            |       | 190870                              |
| Manufacturer                                                                                                               |       | tecalor                             |
| Load profile                                                                                                               |       | L                                   |
| Space heating energy efficiency class under average climate conditions, medium-temperature applications                    |       | A+                                  |
| Energy efficiency class, space heating under average climate conditions, low-temperature applications                      |       | A++                                 |
| Energy efficiency class, DHW heating under average climate conditions                                                      |       | A                                   |
| Rated heating output under average climate conditions for medium-temperature applications (P rated)                        | kW    | 4                                   |
| Rated heating output under average climate conditions for low-temperature applications (P rated)                           | kW    | 4                                   |
| Annual energy consumption under average climate conditions for medium-temperature applications (QHE)                       | kWh/a | 2089                                |
| Annual energy consumption under average climate conditions for low-temperature applications (QHE)                          | kWh/a | 1769                                |
| Seasonal space heating energy efficiency under average climate conditions for medium-temperature applications ( $\eta_s$ ) | %     | 116                                 |
| Seasonal space heating energy efficiency under average climate conditions for low-temperature applications ( $\eta_s$ )    | %     | 166                                 |
| Option for operation only at off-peak times                                                                                |       | -                                   |
| Rated heating output under colder climate conditions for medium-temperature applications (P rated)                         | kW    | 4                                   |
| Rated heating output under colder climate conditions for low-temperature applications (P rated)                            | kW    | 3                                   |
| Rated heating output under warmer climate conditions for medium-temperature applications (P rated)                         | kW    | 3                                   |
| Rated heating output under warmer climate conditions for low-temperature applications (P rated)                            | kW    | 3                                   |
| Annual energy consumption under colder climate conditions for medium-temperature applications (QHE)                        | kWh/a | 4016                                |
| Annual energy consumption under colder climate conditions for low-temperature applications (QHE)                           | kWh/a | 2186                                |
| Annual energy consumption under warmer climate conditions for medium-temperature applications (QHE)                        | kWh/a | 1187                                |
| Annual energy consumption under warmer climate conditions for low-temperature applications (QHE)                           | kWh/a | 783                                 |
| Seasonal space heating energy efficiency under colder climate conditions for medium-temperature applications ( $\eta_s$ )  | %     | 102                                 |
| Seasonal space heating energy efficiency under colder climate conditions for low-temperature applications ( $\eta_s$ )     | %     | 148                                 |
| Seasonal space heating energy efficiency under warmer climate conditions for medium-temperature applications ( $\eta_s$ )  | %     | 137                                 |
| Seasonal space heating energy efficiency under warmer climate conditions for low-temperature applications ( $\eta_s$ )     | %     | 200                                 |
| Seasonal space heating energy efficiency under warmer climate conditions for low-temperature applications ( $\eta_s$ )     | %     | 200                                 |
| Sound power level, outdoor                                                                                                 | dB(A) | 52                                  |



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## tecalor

TTL 3.5 ACS TSBB 180 eco Set



A<sup>+</sup>



A



A<sup>+++</sup>

A<sup>++</sup>

A<sup>+</sup>

A

B

C

D

E

F

G

A<sup>+</sup>

+



+



+



+



A<sup>+++</sup>

A<sup>++</sup>

A<sup>+</sup>

A

B

C

D

E

F

G

A

|                                                                                                                                         |   | TTL 3.5 ACS TSBB 180 eco Set |
|-----------------------------------------------------------------------------------------------------------------------------------------|---|------------------------------|
|                                                                                                                                         |   | 190870                       |
| Manufacturer                                                                                                                            |   | tecalor                      |
| Seasonal space heating energy efficiency under average climate conditions for medium-temperature applications ( $\eta_s$ )              | % | 116                          |
| Temperature control class                                                                                                               |   | VI                           |
| Contribution of temperature control to space heating energy efficiency                                                                  | % | 4                            |
| Space heating energy efficiency of package under average climate conditions                                                             | % | 120                          |
| Space heating energy efficiency of package under colder climate conditions                                                              | % | 109                          |
| Space heating energy efficiency of package under warmer climate conditions                                                              | % | 143                          |
| Value of differential between space heating energy efficiency under average climate conditions and that under colder climate conditions | % | 8                            |
| Value of differential between space heating energy efficiency under warmer climate conditions and that under average climate conditions | % | 26                           |
| Space heating energy efficiency class under average climate conditions, medium-temperature applications                                 |   | A+                           |
| Space heating energy efficiency class of package under average climate conditions                                                       |   | A+                           |
| Energy efficiency class, DHW heating under average climate conditions                                                                   |   | A                            |
| Load profile                                                                                                                            |   | L                            |

|                                                                                                                    |    | TTL 3.5 ACS TSBB 180 eco Set |
|--------------------------------------------------------------------------------------------------------------------|----|------------------------------|
|                                                                                                                    |    | 190870                       |
| Manufacturer                                                                                                       |    | tecalor                      |
| Heat source                                                                                                        |    | Luft                         |
| Low temperature heat pump                                                                                          |    | -                            |
| With auxiliary heater                                                                                              |    | -                            |
| Combination heater with heat pump                                                                                  |    | -                            |
| Rated heating output under colder climate conditions for medium-temperature applications (P rated)                 | kW | 4                            |
| Rated heating output under average climate conditions for medium-temperature applications (P rated)                | kW | 4                            |
| Rated heating output under warmer climate conditions for medium-temperature applications (P rated)                 | kW | 3                            |
| Tj = -7 °C heating output, partial load range under colder climate conditions (Pdh)                                | kW | 2,65                         |
| Tj = -7 °C heating output, partial load range under average climate conditions (Pdh)                               | kW | 3,1                          |
| Tj = 2 °C heating output, partial load range under colder climate conditions (Pdh)                                 | kW | 1,6                          |
| Tj = 2 °C heating output, partial load range under average climate conditions (Pdh)                                | kW | 1,6                          |
| Tj = 2 °C heating output, partial load range under warmer climate conditions (Pdh)                                 | kW | 3,1                          |
| Tj = 7 °C heating output, partial load range under colder climate conditions (Pdh)                                 | kW | 1,3                          |
| Tj = 7 °C heating output, partial load range under average climate conditions (Pdh)                                | kW | 1,3                          |
| Tj = 7 °C heating output, partial load range under warmer climate conditions (Pdh)                                 | kW | 2,0                          |
| Tj = 12 °C heating output, partial load range under colder climate conditions (Pdh)                                | kW | 1,5                          |
| Tj = 12 °C heating output, partial load range under average climate conditions (Pdh)                               | kW | 1,5                          |
| Tj = 12 °C heating output, partial load range under warmer climate conditions (Pdh)                                | kW | 1,5                          |
| Tj = dual mode temperature under colder climate conditions (Pdh)                                                   | kW | 3,0                          |
| Tj = dual mode temperature under average climate conditions (Pdh)                                                  | kW | 2,4                          |
| Tj = dual mode temperature under warmer climate conditions (Pdh)                                                   | kW | 3,1                          |
| Tj = operating temperature limit under colder climate conditions (Pdh)                                             | kW | 2,6                          |
| Tj = operating temperature limit under average climate conditions (Pdh)                                            | kW | 3,1                          |
| Tj = operating temperature limit under warmer climate conditions (Pdh)                                             | kW | 3,1                          |
| For air source heat pumps: Tj = -15 °C (if TOL< -20 °C) (Pdh)                                                      | kW | 0,0                          |
| Dual mode temperature under colder climate conditions (Tbiv)                                                       | °C | -10                          |
| Dual mode temperature under average climate conditions (Tbiv)                                                      | °C | -5                           |
| Dual mode temperature under warmer climate conditions (Tbiv)                                                       | °C | 2                            |
| Seasonal space heating energy efficiency under colder climate conditions for medium-temperature applications (ηs)  | %  | 102                          |
| Seasonal space heating energy efficiency under average climate conditions for medium-temperature applications (ηs) | %  | 116                          |
| Seasonal space heating energy efficiency under warmer climate conditions for medium-temperature applications (ηs)  | %  | 137                          |
| Tj = -7 °C COP, partial load range under colder climate conditions (COPd)                                          |    | 3,45                         |
| Tj = -7 °C COP, partial load range under average climate conditions (COPd)                                         |    | 2,07                         |
| Tj = 2 °C COP, partial load range under colder climate conditions (COPd)                                           |    | 3,45                         |
| Tj = 2 °C COP, partial load range under average climate conditions (COPd)                                          |    | 2,93                         |
| Tj = 2 °C COP, partial load range under warmer climate conditions (COPd)                                           |    | 2,19                         |
| Tj = 7 °C COP, partial load range under colder climate conditions (COPd)                                           |    | 4,66                         |
| Tj = 7 °C COP, partial load range under average climate conditions (COPd)                                          |    | 4,13                         |
| Tj = 7 °C COP, partial load range under warmer climate conditions (COPd)                                           |    | 3,27                         |
| Tj = 12 °C COP, partial load range under colder climate conditions (COPd)                                          |    | 6,65                         |
| Tj = 12 °C COP, partial load range under average climate conditions (COPd)                                         |    | 5,97                         |
| Tj = 12 °C COP, partial load range under warmer climate conditions (COPd)                                          |    | 5,15                         |
| Tj = dual mode temperature under colder climate conditions (COPd)                                                  |    | 2,09                         |
| Tj = dual mode temperature under average climate conditions (COPd)                                                 |    | 2,17                         |
| Tj = dual mode temperature under warmer climate conditions (COPd)                                                  |    | 2,19                         |
| Tj = operating temperature limit under colder climate conditions (COPd)                                            |    | 2,30                         |
| Tj = operating temperature limit under average climate conditions (COPd)                                           |    | 2,07                         |
| Tj = operating temperature limit under warmer climate conditions (COPd)                                            |    | 2,19                         |
| For air source heat pumps: Tj = -15 °C (if TOL< -20 °C) (COPd)                                                     |    | 1,90                         |
| Operating temperature limit under colder climate conditions (TOL)                                                  | °C | -15                          |
| Operating temperature limit under average climate conditions (TOL)                                                 | °C | -5                           |
| Operating temperature limit under warmer climate conditions (TOL)                                                  | °C | 2                            |
| Operating temperature limit of heating water under colder climate conditions (WTOL)                                | °C | 60                           |
| Operating temperature limit of heating water under average climate conditions (WTOL)                               | °C | 60                           |

|                                                                                                                |       |              |
|----------------------------------------------------------------------------------------------------------------|-------|--------------|
| Operating temperature limit of heating water under warmer climate conditions (WTOL)                            | °C    | 60           |
| Power consumption, off-mode (Poff)                                                                             | W     | 17           |
| Power consumption, thermostat off-mode (PTO)                                                                   | W     | 30           |
| Power consumption, standby state (PSB)                                                                         | W     | 17           |
| Power consumption, operating state, with crankcase heating (PCK)                                               | W     | 5            |
| Rated heating output of auxiliary heater under average climate conditions (PSUP)                               | kW    | 2,9          |
| Type of energy supply, auxiliary heater                                                                        |       | elektrisch   |
| Output control                                                                                                 |       | veränderlich |
| Sound power level, outdoor                                                                                     | dB(A) | 52           |
| Annual energy consumption under colder climate conditions for medium-temperature applications (QHE)            | kWh/a | 4016         |
| Annual energy consumption under average climate conditions for medium-temperature applications (QHE)           | kWh/a | 2089         |
| Annual energy consumption under warmer climate conditions for medium-temperature applications (QHE)            | kWh/a | 1187         |
| Flow rate on heat source side                                                                                  | m³/h  | 1300         |
| Load profile                                                                                                   |       | L            |
| Seasonal space heating energy efficiency under warmer climate conditions for low-temperature applications (ηs) | %     | 200          |