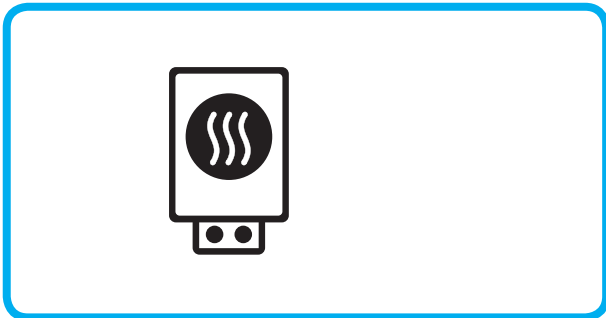
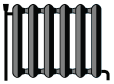
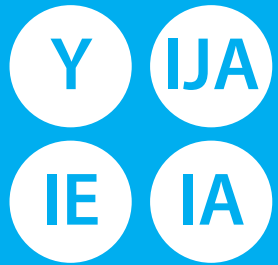




# ENERG

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package (heat pumps and combination heater with heat pump)

Seasonal space heating energy efficiency of heat pump ( $\eta_s$ )

①  %

**Rated heat output of the heat pump ( $P_{rated}$  kW)**

Temperature control

Class

(Table 1)

+

②  %

Supplementary boiler

package with hot water storage tank

$P_{sup}$  kW (rated heat output of supplementary heater)

$\eta_s$  % ( $\sigma_{\pi}$ )

$(\eta_s \% (sup) - ①) \times (\alpha_{WP}) = -$  ③  %

( $\alpha_{WE}$ : see Table 3)

( $\alpha_{WE}$ )

solar contribution

( $A_{Koll}$  m<sup>2</sup>)

( $\eta_{Koll}$  %)

( $V_{Sp}$  m<sup>3</sup>)

(standstill heat loss of the hot water storage tank in W)

( $\eta_{Sp}$ : Table 2)

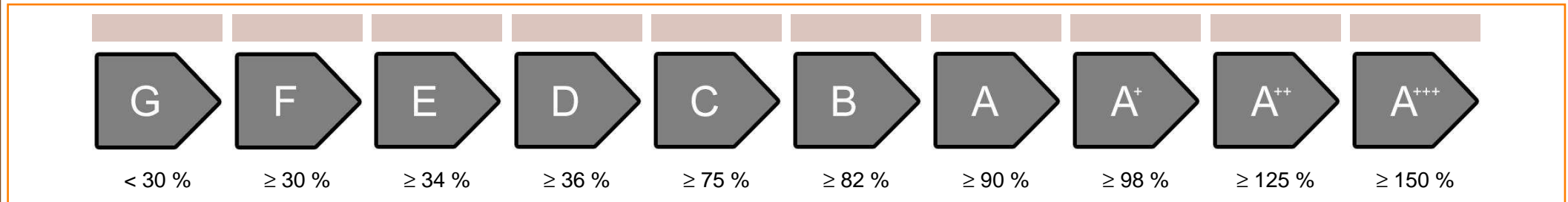
$((294/P_{rated} \times 11) \times (A_{Koll} \text{ m}^2) + (115/P_{rated} \times 11) \times (V_{Sp} \text{ m}^3)) \times 0,45 \times ((\eta_{Koll} \%) / 100) \times (\eta_{Sp}) = +$  ④  %

Seasonal space heating energy efficiency of package

⑤  %

rounded to the nearest integer

Seasonal space heating energy efficiency class of package



Seasonal space heating energy efficiency under colder or warmer climate conditions

**Seasonal space heating energy efficiency of the heat pump ( $\eta_s$ ) under colder climate conditions**

%

**Seasonal space heating energy efficiency of the heat pump ( $\eta_s$ ) under warmer climate conditions**

%

colder ⑤  -V  =  warmer ⑤  +VI  =