

Seasonal space heating energy efficiency of heat pump

I' %

Temperature control

From fiche of temperature control

Class I = 1 %, Class II = 2 %, Class III = 1,5 %,
Class IV = 2 %, Class V = 3 %, Class VI = 4 %, Class VII = 3,5 %, Class VIII = 5 %

+ **II'** %

Supplementary boiler

From fiche of boiler

Seasonal space heating energy efficiency (in %)

$$(\text{III}' - \text{I}') \times \text{II}' = - \text{III}'' \%$$

Solar contribution

From fiche of solar device

Collector size (in m²)

Tank volume (in m³)

Collector efficiency (in %)

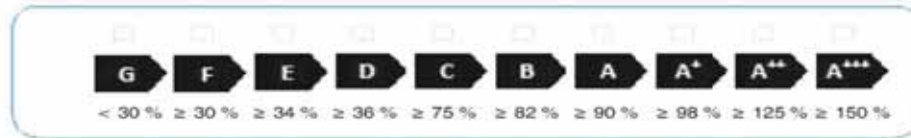
Tank rating
A* = 0,95, A = 0,91,
B = 0,86, C = 0,83,
D-G = 0,81

$$(\text{III}' \times \text{IV}' + \text{IV}' \times \text{V}') \times 0,45 \times (\text{VI}' / 100) \times \text{VII}' = + \text{III}''' \%$$

Seasonal space heating energy efficiency of package under average climate

III''' %

Seasonal space heating energy efficiency class of package under average climate



Seasonal space heating energy efficiency under colder and warmer climate conditions

Colder: **III'''** - 'V' = **III''''** %

Warmer: **III'''** + 'VI' = **III'''''** %

The energy efficiency of the package of products provided for in this fiche may not correspond to its actual energy efficiency once installed in a building, as the efficiency is influenced by further factors such as heat loss in the distribution system and the dimensioning of the products in relation to building size and characteristics.

	I	II	III	IV	V	VI
55°C	126%	0.02	4.46	1.74	34%	40%
35°C	183%	0.02	4.45	1.74	55%	79%

Model	HU091MR U44, HN0916M NK4 / HU091MR U44, HN091MR NK5
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Seasonal space heating energy efficiency of heat pump ① %

Temperature control
From fiche of temperature control ② %

Class I = 1 %, Class II = 2 %, Class III = 1,5 %,
Class IV = 2 %, Class V = 3 %, Class VI = 4 %, Class VII = 3,5 %, Class VIII = 5 %

Supplementary boiler
From fiche of boiler ③ %

Seasonal space heating energy efficiency (in %)

$(\text{ } - \text{'I'}) \times \text{'II'} = - \text{ } %$

Solar contribution
From fiche of solar device ④ %

Collector size (in m²)

Tank volume (in m³)

Collector efficiency (in %)

Tank rating
A* = 0,95, A = 0,91,
B = 0,86, C = 0,83,
D-G = 0,81

$(\text{'III'} \times \text{ } + \text{'IV'} \times \text{ }) \times 0,45 \times (\text{ } / 100) \times \text{ } = + \text{ } %$

Seasonal space heating energy efficiency of package under average climate ⑤ %

Seasonal space heating energy efficiency class of package under average climate

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

G F E D C B A A* A A*****

< 30 % ≥ 30 % ≥ 34 % ≥ 36 % ≥ 75 % ≥ 82 % ≥ 90 % ≥ 98 % ≥ 125 % ≥ 150 %

Seasonal space heating energy efficiency under colder and warmer climate conditions

Colder: ⑤ % Warmer: ⑤ %

Colder: $\text{ } - \text{'V'} = \text{ } %$ Warmer: $\text{ } + \text{'VI'} = \text{ } %$

The energy efficiency of the package of products provided for in this fiche may not correspond to its actual energy efficiency once installed in a building, as the efficiency is influenced by further factors such as heat loss in the distribution system and the dimensioning of the products in relation to building size and characteristics.

	I	II	III	IV	V	VI
55°C	126%	0.02	4.46	1.74	34%	40%
35°C	183%	0.02	4.45	1.74	55%	79%



Model HU091MR U44 / HN0916T NB1



Seasonal space heating energy efficiency of heat pump ① %

Temperature control
 From fiche of temperature control + ② %

Class I = 1 %, Class II = 2 %, Class III = 1,5 %,
 Class IV = 2 %, Class V = 3 %, Class VI = 4 %, Class VII = 3,5 %, Class VIII = 5 %

Supplementary boiler
 From fiche of boiler ③ %

Seasonal space heating energy efficiency (in %)

$$(\text{ } - 'I') \times 'II' = - \text{ } \%$$

Solar contribution
 From fiche of solar device ④ %

Collector size
(in m²)

Tank volume
(in m³)

Collector efficiency
(in %)

Tank rating
 A* = 0,95, A = 0,91,
 B = 0,86, C = 0,83,
 D-G = 0,81

$$('III' \times \text{ } + 'IV' \times \text{ }) \times 0,45 \times (\text{ } / 100) \times \text{ } = + \text{ } \%$$

Seasonal space heating energy efficiency of package under average climate ⑤ %

Seasonal space heating energy efficiency class of package under average climate

G	F	E	D	C	B	A	A*	A**	A***
<	≥	≥	≥	≥	≥	≥	≥	≥	≥
30 %	30 %	34 %	36 %	75 %	82 %	90 %	98 %	125 %	150 %

Seasonal space heating energy efficiency under colder and warmer climate conditions

Colder: ⑥ - 'V' = % Warmer: ⑦ + 'VI' = %

The energy efficiency of the package of products provided for in this fiche may not correspond to its actual energy efficiency once installed in a building, as the efficiency is influenced by further factors such as heat loss in the distribution system and the dimensioning of the products in relation to building size and characteristics.

	I	II	III	IV	V	VI
55°C	118%	0.02	4.77	1.87	19%	45%
35°C	175%	0.02	4.24	1.66	47%	78%



Water heating energy efficiency of combination heater

¹
 %

Declared load profile:

Solar contribution

From fiche of solar device:

Auxiliary electricity

$$(1,1 \times \text{I} - 10\%) \times \text{II} - \text{III} - \text{I} =$$

²
 + %

Water heating energy efficiency of package under average climate

³
 %

Water heating energy efficiency class of package under average climate:

	G	F	E	D	C	B	A	A ⁺	A ⁺⁺	A ⁺⁺⁺
M	< 27 %	≥ 27 %	≥ 30 %	≥ 33 %	≥ 36 %	≥ 39 %	≥ 65 %	≥ 100 %	≥ 130 %	≥ 163 %
L	< 27 %	≥ 27 %	≥ 30 %	≥ 34 %	≥ 37 %	≥ 50 %	≥ 75 %	≥ 115 %	≥ 150 %	≥ 188 %
XI	< 27 %	≥ 27 %	≥ 30 %	≥ 35 %	≥ 38 %	≥ 55 %	≥ 80 %	≥ 123 %	≥ 160 %	≥ 200 %
XXI	< 28 %	≥ 28 %	≥ 32 %	≥ 36 %	≥ 40 %	≥ 60 %	≥ 85 %	≥ 131 %	≥ 170 %	≥ 213 %

Water heating energy efficiency under colder and warmer climate conditions

Colder: ³ - 0,2 × ² = %

Warmer: ³ + 0,4 × ² = %

The energy efficiency of the package of products provided for in this fiche may not correspond to its actual energy efficiency once installed in a building, as the efficiency is influenced by further factors such as heat loss in the distribution system and the dimensioning of the products in relation to building size and characteristics.

I
125%

Model HU091MR U44/HN0916M NK4



Seasonal space heating energy efficiency of heat pump 1 %

Temperature control
From fiche of temperature control 2 %

Class I = 1 %, Class II = 2 %, Class III = 1,5 %, Class IV = 2 %, Class V = 3 %, Class VI = 4 %, Class VII = 3,5 %, Class VIII = 5 %

Supplementary boiler
From fiche of boiler 3 %

Seasonal space heating energy efficiency (in %)

$$(\text{1} - \text{2}) \times \text{3} = - \text{4} \%$$

Solar contribution
From fiche of solar device 5 %

Collector size (in m²) Tank volume (in m³) Collector efficiency (in %)

Tank rating
A* = 0,95, A = 0,91, B = 0,86, C = 0,83, D-G = 0,81

$$(\text{3} \times \text{5} + \text{4} \times \text{6}) \times 0,45 \times (\text{7} / 100) \times \text{8} = + \text{9} \%$$

Seasonal space heating energy efficiency of package under average climate 6 %

Seasonal space heating energy efficiency class of package under average climate

	G	F	E	D	C	B	A	A*	A**	A***
	< 30 %	≥ 30 %	≥ 34 %	≥ 36 %	≥ 37 %	≥ 42 %	≥ 49 %	≥ 58 %	≥ 68 %	≥ 75 %

Seasonal space heating energy efficiency under colder and warmer climate conditions

Colder: 7 - 8 = %

Warmer: 9 + 10 = %

The energy efficiency of the package of products provided for in this fiche may not correspond to its actual energy efficiency once installed in a building, as the efficiency is influenced by further factors such as heat loss in the distribution system and the dimensioning of the products in relation to building size and characteristics.

	I	II	III	IV	V	VI
55°C	126%	0,00	4,45	1,74	0%	-100%

Model HU091MR U44/HN0916M NK4/OSHW-200F AEU

Water heating energy efficiency of combination heater 1 %

Declared load profile:

Solar contribution
From fiche of solar device 2 %

Auxiliary electricity 3 %

$$[1,1 \times \text{1} - 10 \%] \times \text{2} - \text{3} = + \text{4} \%$$

Water heating energy efficiency of package under average climate 5 %

Water heating energy efficiency class of package under average climate

	G	F	E	D	C	B	A	A*	A**	A***
M	< 27 %	≥ 27 %	≥ 30 %	≥ 33 %	≥ 36 %	≥ 39 %	≥ 45 %	≥ 100 %	≥ 130 %	≥ 163 %
L	< 27 %	≥ 27 %	≥ 30 %	≥ 34 %	≥ 37 %	≥ 40 %	≥ 45 %	≥ 115 %	≥ 150 %	≥ 188 %
SL	< 27 %	≥ 27 %	≥ 30 %	≥ 35 %	≥ 38 %	≥ 41 %	≥ 46 %	≥ 125 %	≥ 160 %	≥ 200 %
CKL	< 28 %	≥ 28 %	≥ 32 %	≥ 35 %	≥ 40 %	≥ 45 %	≥ 50 %	≥ 131 %	≥ 170 %	≥ 213 %

Water heating energy efficiency under colder and warmer climate conditions

Colder: 7 - 0,2 × 8 = %

Warmer: 9 + 0,4 × 10 = %

The energy efficiency of the package of products provided for in this fiche may not correspond to its actual energy efficiency once installed in a building, as the efficiency is influenced by further factors such as heat loss in the distribution system and the dimensioning of the products in relation to building size and characteristics.

I
118%