Main features	
Application	space heating and hot water heating
Description	tepelné čerpadlo je vybaveno směšovacím ventilem s pohonem pro zajištění dodávky otopné vody o požadované teplotě, oběhovým čerpadlem pro připojení na okruh vrtu či zemní smyčky, akumulační nádrží s integrovaným měděným výměníkem pro dodávku teplé vody a řídícím systémem pro individuální nastavení a monitoring funkce; ve standartní dodávce je již obsaženo čidlo pokojové teploty
Working fluid	R407C (refrigerant), antifreeze fluid (brine circuit), water (heating c.)
Code	**13 443**

Electric data	
Power supply	3/N/PE ~ 400/230V 50Hz
Nominal output (35/55)	12 / 10 kW
Nominal power input	13,4 kW
Max. starting current	19,8 A
Max. compressor operating current	6,8 A
IP rating	IPX1

Backup source	
Max. output of backup source with circuit breaker size *	2,1 kW (16 A) 7,2 kW (20 A) 9,0 kW (25 A)

** the backup source output can be adjusted between 0 and 9.0 kW in 0.3 kW steps*

Heating system	
Nominal system flow	0,24 l/s
Min. system flow	unlimited
Max. heat pump flow temp.	65 °C
Thermal Store volume	223 l
Max. working pressure in Thermal Store	2,5 bar
Max. working temper. in Thermal Store	110 °C

Hot water circuit	
Water volume in DHW heat exchanger	5,7 l
Max. working pressure in heat exchange	10 bar
Max. temperature in heat exchanger	110 °C
Connections	2 x Cu22

Brine circuit	
Fluid volume	2,9 l
Nominal circuit flow (Δt = 3 K)	0,64 l/s
Min. circuit flow (Δt = 5 K)	0,38 l/s
Working temperature in circuit	-5 to 20 °C
Working pressure in circuit	0,2 to 3,0 bar
Connections	2 x Cu28

Other data	
Weight	272 kg
Sound level by EN 12 102	48,5 dB(A)
Refrigerant quantity	1,9 kg
CO2 equivalent	3,37 tun
Refrigerant	R407C
Compressor type	Scroll
High pressure switch	31 bar
Height x width x depth	1904 x 595 x 672 mm
Min. ceiling height	1925 mm

R E G U L U S spol. s r.o. Czech Republic
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Web: www.regulus.eu

Accessories

Pokojová bezdrátová jednotka

Energy Efficiency data **	
Energy Efficiency Class for space heating (W55)	A++
Energy Efficiency Class for hot water heating (W55)	A
Declared Load Profile	L

*** Energy Efficiency values are valid for average climatic conditions*

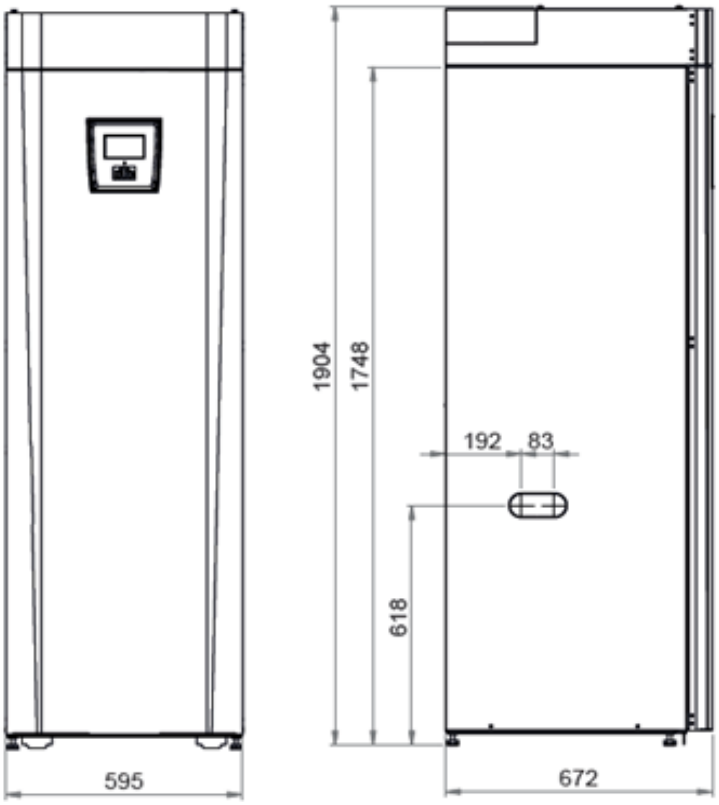
Accessories	
Pokojová bezdrátová jednotka	code 13 944
Internetový modul	code 15 085

Output parameters ***

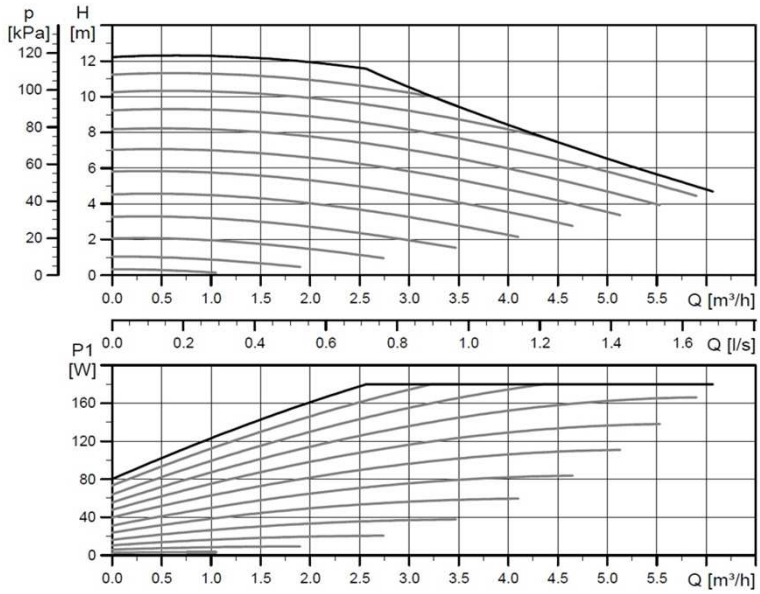
	[°C]	-5/25	-5/35	-5/45	-5/55
Output	**[kW]**	-	-	8,33	-
Power input	**[kW]**	-	-	2,52	-
COP	**[-]**	-	-	3,30	-
	[°C]	**0/25**	**0/35**	**0/45**	**0/55**
Output	**[kW]**	10,40	9,97	9,55	9,28
Power input	**[kW]**	1,87	2,17	2,60	3,11
COP	**[-]**	5,55	4,60	3,68	2,98
	[°C]	**5/25**	**5/35**	**5/45**	**5/55**
Output	**[kW]**	-	*11,42*	*10,99*	*10,58*
Power input	**[kW]**	-	*2,20*	*2,64*	*3,22*
COP	**[-]**	-	*5,20*	*4,16*	*3,28*

**** values measured according to EN 14 511 at the manufacturer's test lab and confirmed by EHPA Quality label*

Dimensions



Performance curves for brine circuit pump



UPMXL GEO 25-125 180 PWM	
Min. P_1	3,0 W
Max. P_1	180,0 W
EEI *	≤ 0,23

** Energy Efficiency Index*

PRODUCT FICHE

EcoHeat 410 Heat Pump

The energy efficiency of the package of products provided for in 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.

Supplier: ***R E G U L U S spol. s.r.o.***

Model: ***EcoHeat 406***

I	The value of the seasonal space heating energy efficiency of the preferential space heater	**125**	%
II	The factor for weighting the heat output of preferential and supplementary heaters of a package	**-**	-
III	The value of the mathematical expression $294/(11 \cdot P_{rated})$	**2,43**	-
IV	The value of the mathematical expression $115/(11 \cdot P_{rated})$	**0,95**	-
V	The value of the difference between the seasonal space heating energy efficiencies under average and colder climate co	**2,00**	%
VI	The value of the difference between the seasonal space heating energy efficiencies under warmer and average climate c	**1,00**	%

Seasonal space heating energy efficiency of heat pump **I =** **1** **125** %

Temperature control (from fiche of temperature control)

Class I = 1,0%	Class II = 2,0%	Class III = 1,5%
Class IV = 2,0%	Class V = 3,0%	Class VI = 4,0%
Class VII = 3,5%	Class VIII = 5,0%	

+ **2** **3,5** %

Supplementary boiler (from fiche of boiler)

Seasonal space heating energy efficiency (in %)

(**-** - **I**) · **II** = **-** **3** **-** %

Solar contribution (from fiche of solar device)

Collector size (in m^2) — Collector efficiency (in %)

(**III** **-** + **IV** · **-**) · 0,45 · (**-** / 100) · **-** = **+** **4** **-** %

Tank volume (in m^3)

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

Seasonal space heating energy efficiency of package under average climate **5** **129** %

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** **123** - V = **127** %

Warmer: **5** **123** + VI = **130** %

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PRODUCT FICHE

EcoHeat 410 Heat Pump

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I	Water heating energy efficiency of combination heater	87	%
II	The value of the mathematical expression $(220 \cdot Q_{ref})/Q_{nonsol}$	-	-
III	The value of the mathematical expression $(2,5 \cdot Q_{aux})/(220 \cdot Q_{ref})$	-	-

Water heating energy efficiency of combination heater I = 1 87 %

Declared load profile L

Solar contribution (from fiche of solar device)

Auxiliary electricity

(1,1 · I - 10 %) · II - III - I = + 2 - %

Water heating energy efficiency of package under average climate 3 87 %

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 %
☐	XL	< 27 %	≥ 27 %	≥ 30 %	≥ 35 %	≥ 38 %	≥ 55 %	≥ 80 %	≥ 123 %	≥ 160 %	≥ 200 %
☐	XXL	< 28 %	≥ 28 %	≥ 32 %	≥ 36 %	≥ 40 %	≥ 60 %	≥ 85 %	≥ 131 %	≥ 170 %	≥ 213 %

Water heating energy efficiency of package under colder and warmer climate conditions

Colder: 3 78 - 0,2 · 2 - = 87 %

Warmer: 3 78 + 0,4 · 2 - = 87 %

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