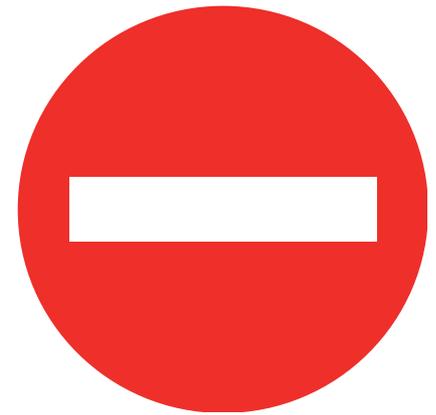


Chiller (racire si  
pompa de  
caldura)

**eComfort  
Therma**

- Chiller racit cu aer,  
optimizat pentru incalzire
- Incalzire: 220 - 500 KW
- Racire: 200 - 460 KW
- Refrigerant: R32



## Chiller capacitate medie & pompe de caldura tip eComfort Therma

### Tip

Chiller racit cu aer in pompa de caldura.

### Utilizare

Comercial.

### Capacitati

Racire:  
220 - 500 kW

### Exemplu de comanda

G(A) H(B) S(C) 220(D) D(E) P(F) 1(G) M(H)

(A) G = eComfort

(B) H = Optimizat pentru incalzire

(C) S = Standard compressor

(D) 220 = Putere aproximativa in kW

(E) D = Dublu circuit

(F) P = Refrigerant R32

(G) 1 = Numarul reviziei

(H) M = 400V/3/50Hz

Configuratii standard & Optionale		
eComfort Therma 220 - 500 KW		
REFRIGERANT CIRCUIT	R32	Standard
	R1234ze	
	R513a	
	R134a	
SAFETY PACK	Winter cooling operation	Optional
	Low leaving water temperature down to -10°C	Optional
COMPRESSOR	Refrigerant leak detection + PRV + acoustic and visual alarms	
	Multiscroll	Standard
	Screw	
EXPANSION VALVE	Inverter	Optional
	Low noise	Optional
	Super low noise	Optional
FAN	Thermostatic	
	Electronic	Standard
AIR COIL	AC fan	
	Variable air flow control of condensation : HP floating	Standard
	EC Fan	Standard
HEAT EXCHANGER	Fan static pressure	
	Standard copper tube/aluminium fin (1)	Standard
	Micro channel heat exchanger (2)	
ELECTRICAL	Heavy anti-corrosion coil treatment	Optional
	Coils protection guards	Optional
HYDRAULIC MODULE	Brazed plate heat exchanger	Standard
	Shell and Tube	
	Main disconnect switch	Standard
	Phase reversal protection	Optional
	Antifreeze protection	Optional
	Softstarter	Optional
	Water tank modulating electrical heater (Heat pump)	Optional
	Power factor correction	Optional
	Energy metter	Optional
	Paddle flow switch	Standard
CONTROL AND COMMUNICATION	Electronic flow switch	
	Water filter	Optional
	Flange connection	Optional
	Water tank	Optional
	Low-pressure single pump	Optional
	Low-pressure twin pump	Optional
	High-pressure single pump	Optional
	High-pressure twin pump	Optional
	eDrive high-pressure single pump (variable primary flow)	Optional
	eDrive high-pressure twin pump (variable primary flow)	Optional
ENERGY SAVING	By-pass valve for Delta P control (eDrive)	Optional
	Modbus RS485 communication interface	Optional
	BACnet MSTP communication interface	Optional
	Modbus/BACnet/Ethernet TCP/IP communication interface	Optional
	Basic display	na
	Advanced display	Standard
	Service display	Optional
	Remote confort display	Optional
	Extension board for additional input/output	Optional
	Distance Management System: RedgeCloud connectivity	Optional
MISCELLANEOUS	Distance Management System: RedgeOneWeb	Optional
	Partial heat recovery	Optional
MISCELLANEOUS	Total heat recovery	
	Free-cooling	
	Rubber anti-vibration mounts	Optional
	Spring antivibrations mounts	

## Avantaje

- Instalare si comisionare facile datorita integrarii modulului hidraulic complet cu rezervor.
- Optimizat pentru incalzire, chiar si pentru cele mai reci sezoane.
- Eficiente SCOP ridicate, depasind cerintele EcoDesign 2017 pentru aplicatii de incalzire.
- Control precis al temperaturii apei in modul de incalzire si cel de racire multumita componentelor cu eficienta ridicata.

## Sistemul termodinamic

- Compresoare multi-scroll, montate in tandem sau trio, pentru furnizarea celor mai bune eficiente.
- Schimbatoare de caldura cu suprafata mare, construite din tevi de cupru si aripioare din aluminiu.
- Ventilatoare de performanta cu palele profilate pentru eficienta ridicata si nivel redus de zgomot.
- Schimbatorul de caldura cu apa este izolat termic si protejat la inghet si este cosntruit din placi din inox, brazat in cupru.
- Unul sau doua circuite independente, fiecare echipat cu valva de expansiune electronica.
- Desuperheater (optional) : schimbator de caldura suplimentar cu placi pe fiecare circuit pentru a recupera caldura rejectata și a furniza apa calda gratuita in scopuri sanitare sau industriale.

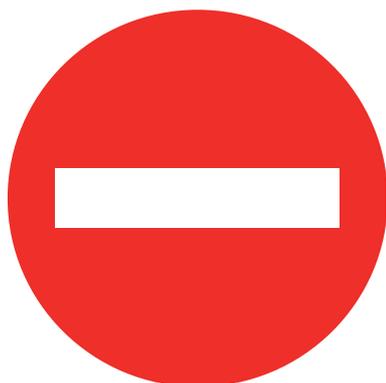
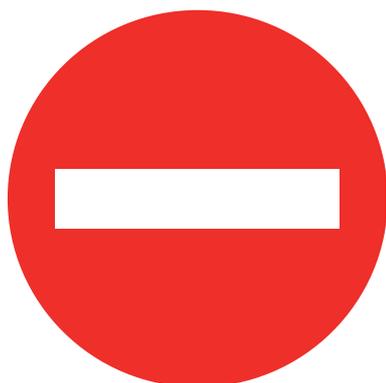
## eDrive

Pompa cu viteza variabila, care moduleaza debitul de apa prin schimbatorul de caldura reduce costurile energiei consumate:

- Economiseste consumul de energie in special la sarcina partiala si in perioadele de repaus, ajungand la o reducere de pana la 75% a consumului pompei.
- Economii in sistemul initial, datorita unui numar mai mic de pompe si racorduri decat in cazul sistemelor primar-secundar.
- Flexibilitate si precizie a controlului functionarii pompei: pornire si oprire lina, schimbare graduala a vitezei, precizie si stabilitate a controlului.
- Reducerea solicitarii repetate asupra pompei si conductelor, rezultand o durata de viata mai lunga a echipamentului.
- Eliminarea curentului de pornire datorita acționării cu frecvența variabila care controleaza alimentarea graduala a motorului pompei.

**Control**

- Controler electronic eClimatic și parametri de control inteligent care optimizeaza eficienta la sarcina partiala.
- Solutii de comunicare integrate care ofera flexibilitate (master/slave, Modbus).
- Afișaj DC Advanced, echipat cu un ecran grafic care ofera acces la principalii parametri ai utilizatorului, cu doua afișaje optionale:
  - -Afișaj la distanță
  - -Afișaj de service

**eCLIMATIC****DC Advanced****Carcasa si aspect**

- Carcasa din otel galvanizat vopsit in alb.
- Design compact, posibil prin instalarea schimbatoarelor cu dispunere in V.
- Toate componentele termodinamice si hidraulice sunt instalare sub schimbatoare.

**Confort acustic**

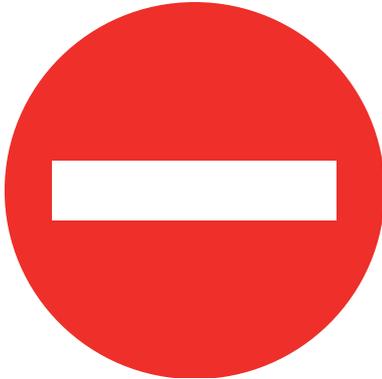
Trei configuratii diferite ale nivelului de zgomot disponibile:

- Funcționare silențoasa (standard), obtinuta prin design compact, compresoare si pompe silentioase si cu ventilatoare cu elice de inalta performanța, toate instalate într-o incinta închisa.
- Optiune de nivel redus de zgomot: izolatia acustica a compresorului de înalta performanta poate prelua zgomotul produs de unitate.
- Sistemul activ de atenuare acustica cu viteza variabilă a ventilatorului permite adaptarea progresiva a unitatii la sarcina cladirii respectand in acelasi timp constrangerile privind nivelul de zgomot si limitele de functionare (optional).

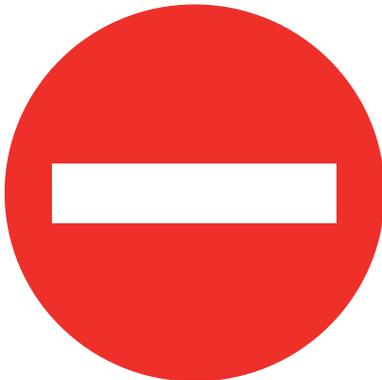
**Monitorizare la distanta**

- Conectivitate prin RedgeCloud
- BMS prin: e-savvy

**e-savvy**



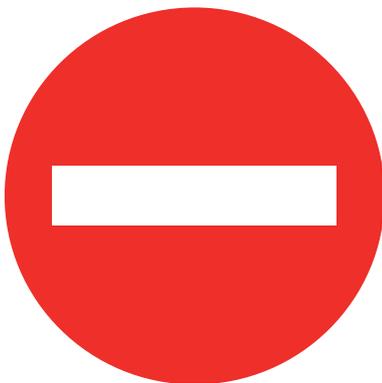
**Touch panel**



			Pompa de caldura - air source						
			220D	250D	280D	320D	360D		
<b>eCOMFORT THERMA - GHS</b>									
<b>Nominal thermal performances - Heating mode</b>									
Heating capacity (1)			kW	217,0	251,8	272,9	313,8	354,3	
Total absorbed power (1)			kW	69,7	82,8	90,0	99,3	118,1	
COP (1)				3,11	3,04	3,03	3,16	3,00	
Comfort	Standard Fans	Seasonal Coefficient of Performance (6)			3,875	3,85	3,8	3,9	3,875
Application		SCOP							
		Seasonal energy efficiency (7)		%	152	151	149	153	152
		s,h							
<b>Nominal thermal performances - Cooling mode</b>									
Cooling capacity (1)			kW	201,0	237,7	255,7	287,7	328,0	
Total absorbed power (1)			kW	74,2	86,9	97,1	105,0	119,9	
EER (1)				2,71	2,74	2,63	2,74	2,74	
Comfort	Standard Fans	Seasonal Energy Efficiency Ratio (2)			4,625	4,3	4,225	4,475	4,4
Application		SEER							
		Seasonal energy efficiency (3)		%	182	169	166	176	173
		s,c							
Process Application		Seasonal Energy Performance Ratio (4)			6,12	6,07	5,84	6,36	6,05
		SEPR - High temperature (7°C)							
		Seasonal Energy Performance Ratio (5)			3,76	3,78	3,72	3,82	3,76
		SEPR - Medium temperature (-8°C)							
<b>Acoustic data</b>									
Global sound power level - Standard unit			dB(A)	91,1	93,0	93,0	92,4	94,5	
Sound power level - Standard unit + LNCJ option + QUIET setting			dB(A)	90,6	92,3	92,3	92,1	94,6	
Heating capacity HM2 40/45°C LNCJ option + QUIET setting			kW	204,0	238,0	257,0	295,0	334,0	
<b>Electrical data</b>									
Maximum power			kW	95,6	111,9	122,3	134,6	158,1	
Maximum current			A	158,9	181,4	198,9	218,4	257,2	
Starting current			A	323,6	332	380,8	369	439,1	
Short circuit current			kA	50,0	50,0	50,0	50,0	50,0	
<b>Refrigeration circuit</b>									
Number of circuits				2	2	2	2	2	
Number of compressors				scroll/2+2	scroll/2+2	scroll/2+2	scroll/2+3	scroll/2+3	
Total refrigerant load - R32			kg	41,0	42,0	44,0	57,0	58,0	
<b>Evaporator</b>									
Nominal water flow rate			m³/h	37,4	43,4	47,1	54,1	61,1	
Nominal pressure drop			kPa	30,8	29,5	34,4	45,0	52,5	
<b>Hydraulic connection</b>									
Type				Victaulic					
Diameter				4"					

Pompa de caldura - air source				370D	380D	410D	450D	500D
<b>eCOMFORT THERMA - GHS</b>								
<b>Nominal thermal performances - Heating mode</b>								
Heating capacity (1)				364,9	380,6	412,5	451,7	484,0
Total absorbed power (1)				121,7	125,6	130,9	149,9	158,3
COP (1)				3,00	3,03	3,15	3,01	3,06
Comfort	Standard Fans	Seasonal Coefficient of Performance (6)		3,85	3,85	4,025	3,8	3,875
Application		SCOP						
		Seasonal energy efficiency (7)		%	151	151	158	149
		s,h						
<b>Nominal thermal performances - Cooling mode</b>								
Cooling capacity (1)				336,9	352,3	385,0	423,0	455,3
Total absorbed power (1)				125,0	130,9	138,1	152,7	164,4
EER (1)				2,69	2,69	2,79	2,77	2,77
Comfort	Standard Fans	Seasonal Energy Efficiency Ratio (2)		4,375	4,275	4,975	4,75	4,35
Application		SEER						
		Seasonal energy efficiency (3)		%	172	168	196	187
		s,c						
Process Application	Standard Fans	Seasonal Energy Performance Ratio (4)		5,99	5,82	6,28	6	5,94
		SEPR - High temperature (7°C)						
		Seasonal Energy Performance Ratio (5)						
		SEPR - Medium temperature (-8°C)		3,74	3,68	3,79	3,72	3,68
<b>Acoustic data</b>								
Global sound power level - Standard unit				94,5	95,8	94,1	95,6	97,4
Sound power level - Standard unit + LNC option + QUIET setting				86,9	88,1	86,4	87,9	89,8
Heating capacity HM2 40/45°C LNC) option + QUIET setting				344,0	359,0	388,0	426,0	457,0
<b>Electrical data</b>								
Maximum power				163,3	168,4	180,9	204,4	214,4
Maximum current				265,9	277	294,1	333	355,1
Starting current				447,8	586,8	476	514,8	664,9
Short circuit current				50,0	50,0	50,0	50,0	50,0
<b>Refrigeration circuit</b>								
Number of circuits				2	2	2	2	2
Number of compressors				scroll/2+3	scroll/2+2	scroll/3+3	scroll/3+3	scroll/2+2
Total refrigerant load - R32				59,0	60,0	79,0	80,0	82,0
<b>Evaporator</b>								
Nominal water flow rate				62,9	65,6	71,2	77,9	83,5
Nominal pressure drop				55,6	58,2	34,0	40,5	38,8
<b>Hydraulic connection</b>								
Type				Victaulic				
Diameter				4"			5"	

### Dimensiuni



		Pompe de caldura - air source									
eCOMFORT - GHS		220D	250D	280D	320D	360D	370D	380D	410D	450D	500D
A			2765			2765				2765	
B	mm		2264			2264				2765	
C			2402			2264				2765	
<b>Weight of standard units</b>											
Basic unit	kg	1950	2080	2090	2720	2746	2765	2796	3412	3498	3529