

WinPOWER ECO & WinPOWER ECO EXP



E&P SYSTEMS
Excellence in Polyvalent Technology

WinPOWER ECO

Passion for innovation

CHILLERS - HEAT PUMPS - EXP MULTIPURPOSE
units with scroll compressors and low GWP
R454B refrigerant: from 350 to 660 kW.

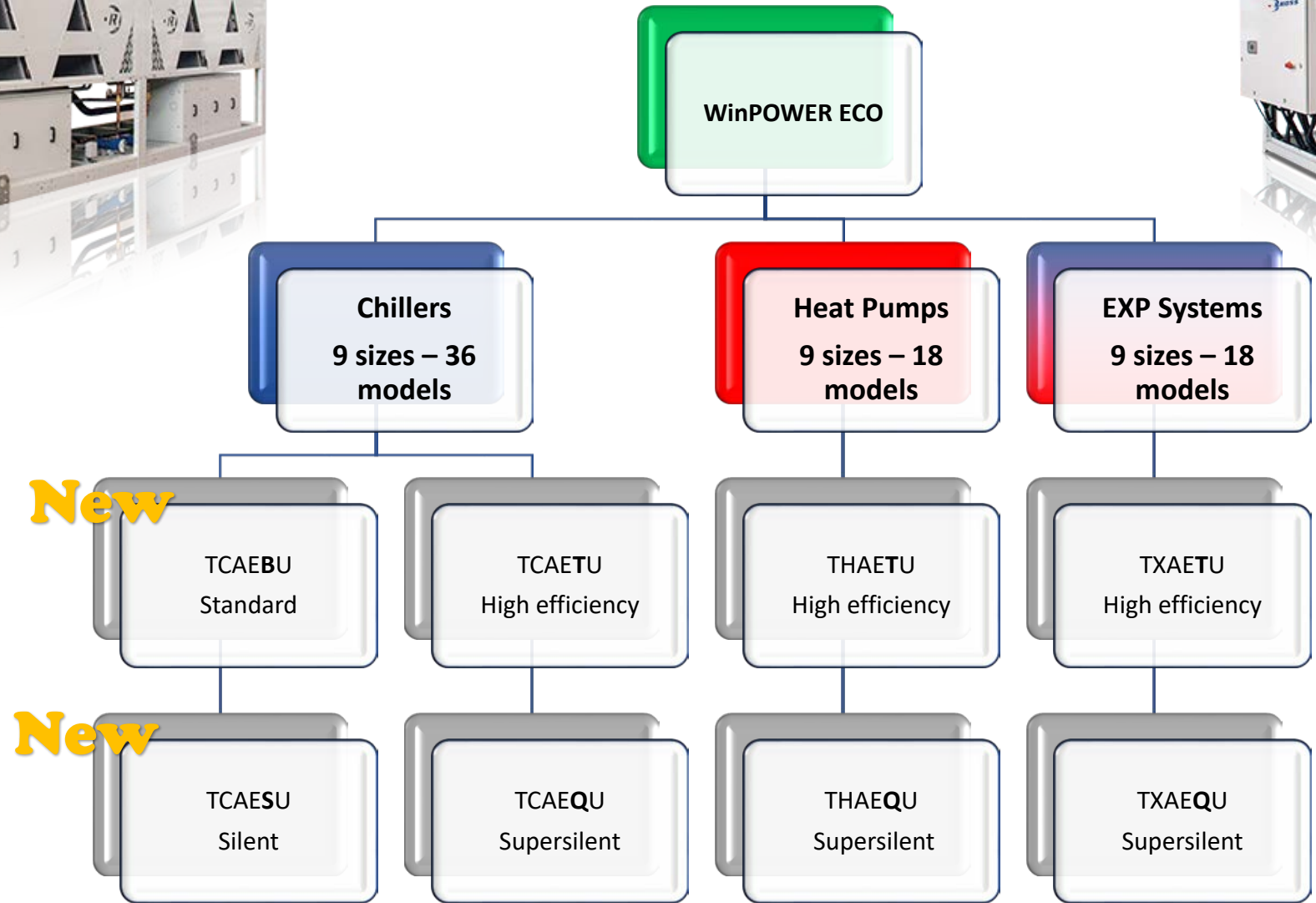




EXP SYSTEMS
EXcellence in Polyvalent technology



**FLEXIBILITY', EFFICENCY ALL YEAR ROUND
THE CONCRETE ANSWER TO MARKET NEEDS**



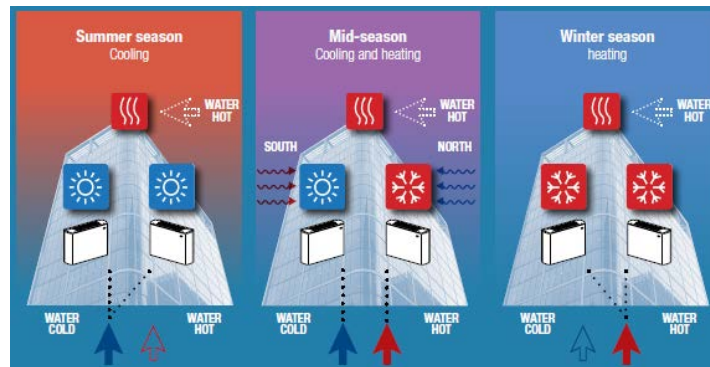
New

New

Chillers (2 pipes + DS/RC100)



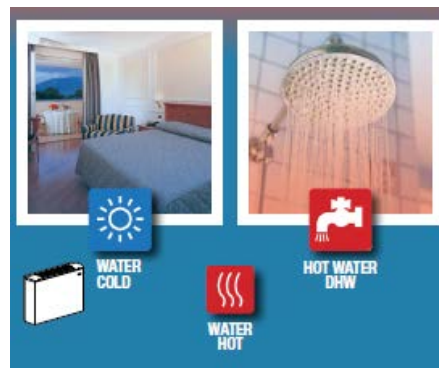
EXP units (4 pipes + DS)



Heat Pumps (2 pipes + DS)



EXP units (2 pipes + ACS)



SUSTAINABILITY: ECODESIGN DIRECTIVE & F-GAS REGULATION



The 2030 climate and energy framework comprehends many goals for UE in the 2021 – 2030 period.

2021

2030



+32,5%

Energy
efficiency

-40%

Greenhouse gas
emissions

+32%

Energy from
Renewable sources



Composition: 69% R32 + 31% R1234yf



GWP = 466

-76% vs R410A (GWP 2088)

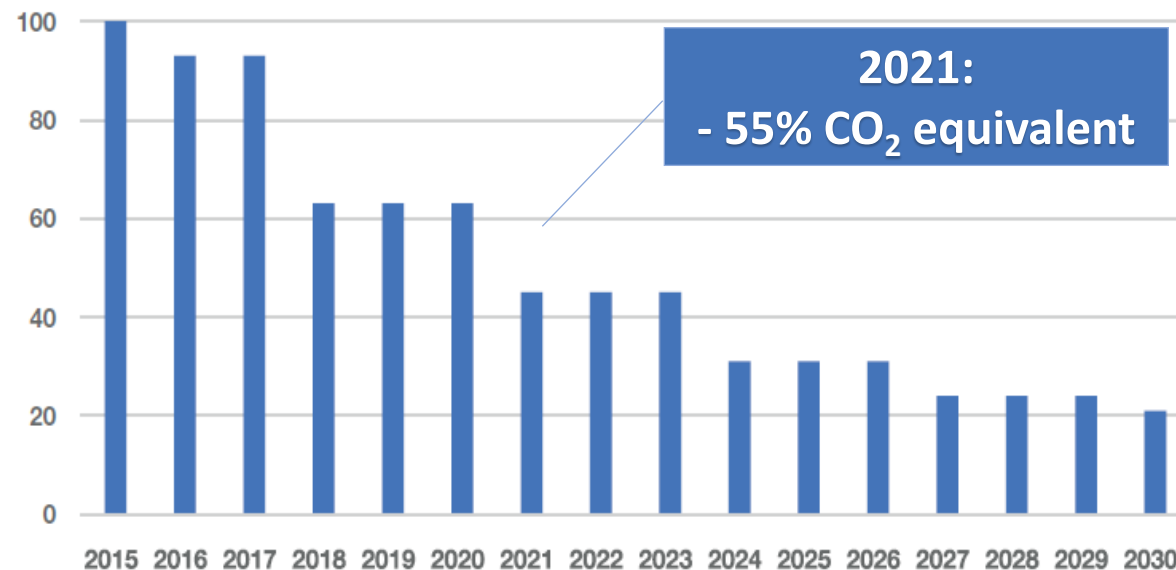
-31% vs R32 (GWP 675)



Safety classification: **A2L** mildly flammable, not toxic



Rhoss produces units where **sustainability** is a value.



(*) Reference volume (100%) corresponding to the mean annual total of CO₂ equivalent introduced in UE's atmosphere between 2009 and 2012.

GWP=GLOBAL WORMING POTENTIAL



TCAEBU

Standard version with electronic device to adjust the fan speed (FI) – only chiller



TCAESU

Silent version with electronic device to adjust the fan speed (FI) – only chiller



TCAETU - THAETU - TXAETU

High efficiency version with electronic device to adjust the fan speed (FI) and big condensing surface – chiller/heat pump and EXP



TCAEQU - THAEQU - TXAEQU

Supersilent version with electronic device to adjust the fan speed (FI) and big condensing surface – chiller/heat pump and EXP



VPF_R: standard



EEO

EEO (Energy Efficiency Optimizer): standard

Condensing control



FI – electronic device for the condensing control through fans rotation speed regulation: standard on the B-S-T-Q versions

Axial Fans:

- New generation AC fans "ERP next step";
- FI standard;
- FIEC (option with EC fans);
- FIAP (option with high ESP on the B and T version).

Electrical Panel:

- Compact and ventilated (IP54).

Soudproof compressors box BCI/BCIP:

- BCI: - 2 dB(A)
- BCIP: - 4 dB(A)

Compressors inlet shut-off valves for heat pumps/EXP Systems.**Exchanger**

- Brazed plate exchanger (PN10). Victaulic connections.
- Shell&tube exchanger (STE option)

4-5-6 compressors in 2 refrigerant circuits:

4 - 350÷450 kW

5 - 450÷560 kW

6 - 560÷660 kW

**Electronic expansion valve.****Standard or touch 7 " Keyboard.**

- **Standard:** keyboard with display LCD (on board or supplied loose)
- **TOBT:** on board multi-colour 7" touch interface
- **TRT:** multi-colour 7" touch interface for remote installation

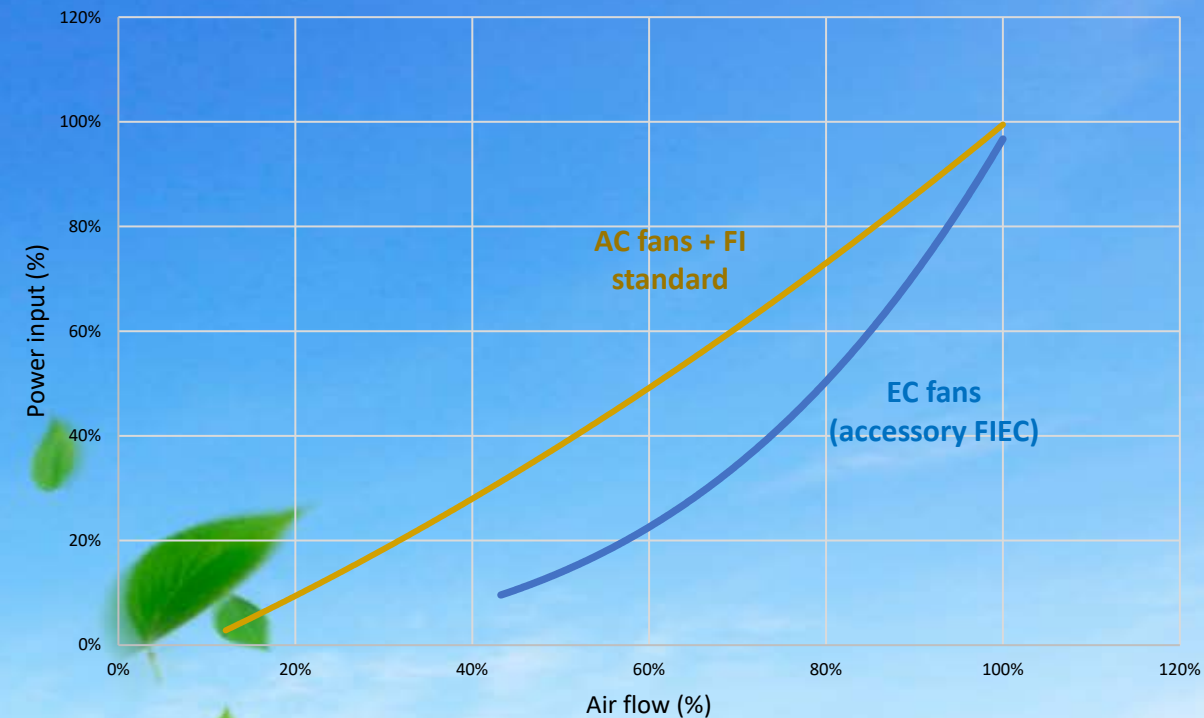


The image displays several screenshots of the WinPOWER ECO control interface. The top screenshot shows the 'User settings' menu with options like Setpoint, Working hours, Clock adjust, Schedulers, BMS, Language switch, Power reduction, Terminal emulation, Noise reduction, I/O status, and System info. The middle screenshot shows the 'Language selection' screen with options for English, Español, and Italiano. The bottom screenshot shows the unit status screen with a 3D model of the unit and various control buttons and data points.

Available in 5 languages :
IT-EN-ES-DE-FR

AC/EC axial fans

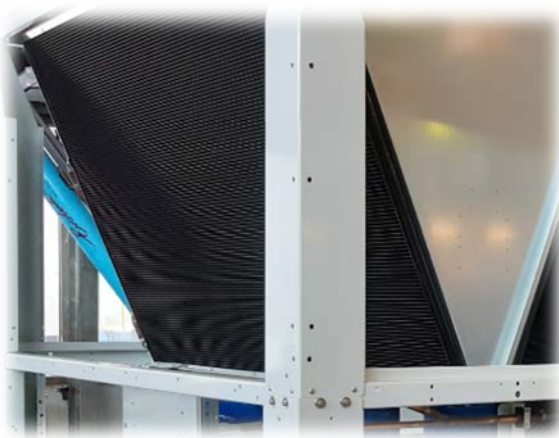
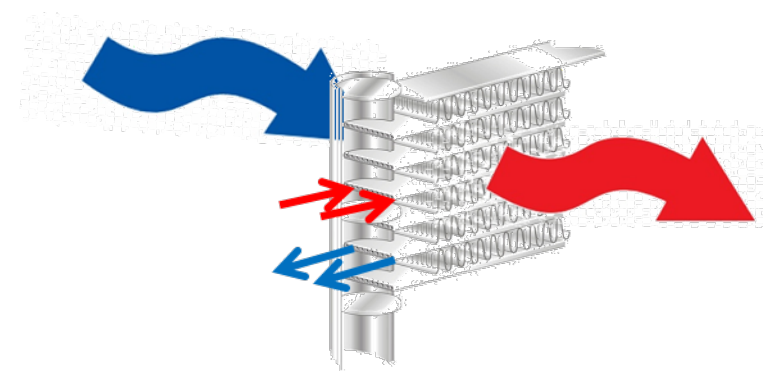
- High efficiency Ø800mm AC fans (ERP next future step);
- Dedicated version selectable from Up To Date with EC fans (option FIEC);
- SEER, Seasonal efficiency, increased up to 5,38



	N	Family	Model	PF (gross) [kW]	PF (14511) [kW]	PaF (gross) [kW]	Qe [m ³ /h]	dPe [kPa]
+	0	WinPOWER ECO	TCAEBU 4370	360	359,7	114,4	61,9	23
+	1	WinPOWER ECO	TCAEBU 4370 FIEC	360	359,7	114,4	61,9	23
+	2	WinPOWER ECO	TCAEBU 4410	394	393,7	126,9	67,8	24
+	3	WinPOWER ECO	TCAEBU 4410 FIEC	394	393,7	126,9	67,8	24
+	4	WinPOWER ECO	TCAEBU 4450	437	436,6	141,7	75,2	27
+	5	WinPOWER ECO	TCAEBU 4450 FIEC	437	436,6	141,7	75,2	27
+	6	WinPOWER ECO	TCAEBU 4490	473	472,6	154,5	81,1	33



Coils
 Microchannel MCHX for chiller and Cu/Al for heat pumps/EXP, with drain pan.




Heat pump/EXP	BRA	RAP-BRR-BRH	TYPE	BATTERIA / COIL
ALL	STD	OPTION	MCHX	Microchannel
Chiller	MCHX	MCHXE-BRA-RAP-BRR	MCHX-E	E-coated Microchannel
ALL	STD	OPTION	BRA	Cu-Al
			RAP	Prepainted Cu-Al
			BRR	Copper-Copper
			BRH	Hydrophilic


With MCHX down to -45% of refrigerant charge vs Cu/Al!

 **CHILLERS: 9 sizes - 4 versions**

- B = STANDARD (Cooling 360 – 647 kW)
- S = SILENT (Cooling 350 – 627 kW)
- T = HIGH EFFICIENCY (Cooling 375 – 665 kW)
- Q = SUPERSILENT (Cooling 365 – 645 kW)

CHILLERS**EER up to 3,36**
SEER up to 5,38 **HEAT PUMPS: 9 sizes - 2 versions**

- T = HIGH EFFICIENCY (Heating 375 – 655 kW)
- Q = SUPERSILENT (Heating 368 – 646 kW)

HEAT PUMPS**COP up to 3,47**
SCOP up to 3,96 **EXP SYSTEMS: 9 sizes - 2 versions**

- T = HIGH EFFICIENCY (Cooling 361 – 642 kW, Heating 368 – 645 kW)
- Q = SUPERSILENT (Cooling 353 – 625 kW, Heating 363 – 636 kW)

EXP SYSTEMS**TER up to 8**



- **Chiller | Heat Pumps | EXP** high efficiency both at full and partial load! over T2...!
- **Innovative refrigerant distribution system** to optimise operation of the unit, improving its performance and efficiency in heat pump mode.
- **Units with R454B low GWP** refrigerant
- **Wide operation range** down to -15°C of external air and production of hot water up to 57°C
- **Different sound configurations** for low noise operation
- **Wide range of accessories** to better meet customer needs.