# WinPOWER ECO EXP
# TXAEU 4370÷6660

Cooling capacity: 352.7÷641.5 kW - Heating capacity: 363.3÷645.5 kW

√ **Multi-purpose units with TER up to 8**

√ **Extended operating limits**

√ **Units for systems with 2, 4 and 6 pipes**

√ **SEER up to 5,29 with FIEC accessory (EC fans) and SCOP up to 3,89**

√ **R454B eco-friendly gas**

√ **Innovative refrigerant distribution system to optimise operation of the unit, improving its performance and efficiency in heat pump mode (patent pending).**

**Web code: WPX05**

**EXPsystems - Air cooled multi-purpose ecological system with axial fans. Range with scroll hermetic compressors and R454B refrigerant gas.**

## Construction features

• Compressor: scroll type, rotary, hermetic complete with thermal protection and casing heater.
• Up to 6 capacity steps with high efficiency at partial loads.
• Main and secondary heat exchangers: crossed flow stainless steel plate exchangers, complete with antifreeze heater, closed cell polyurethane foam rubber insulation and water flow differential pressure switch.
• Air side heat exchanger: finned coil with copper pipes and aluminium fins.
• Fan: external rotor axial type electric fans equipped with internal thermal protection, accident protection grilles and proportional electronic device for continuous fan rotation speed adjustment.
• Control: microprocessor electronic control with Adaptive Function Plus logic.
• Structure: load-bearing structure made of galvanised and painted steel plate with polyester powder coating.
• The unit is also complete with:
- fan and compressor thermal magnetic circuit breakers, heat exchanger antifreeze heater;
- display of cooling circuit high and low pressure;
- electronic expansion valve;
- clock board;
- Master/Slave control up to 4 units in parallel;
- control of Variable Primary Flow (VPF_R).

## Versions

• T - High efficiency version.
Q - Super silenced version complete with compressor technical compartment soundproofing and reduced speed fans.

## Models

• TXAETU: EXPsystems unit.
• TXAEQU: super silenced EXPsystems unit.

## Factory fitted accessories

• PUMP with single or double electric pump, one of which automatic in standby. The electric pumps are available in the main and secondary/recovery heat exchanger low or high head set-ups.
• Inverter pump control for unit start-up.
• Desuperheater.
• Condensing control with fans with EC motor.
• Condensing control with over-pressure fans (T version only).
• Power factor correction capacitors ($\cos\phi > 0.94$).
• Forced limit of power consumption.
• Forced noise limit.
• Energy parameter measuring device.
• Soft starter.
• Compressor box and soundproofed cooling circuit.
• Compressor soundproof enclosures.
• Cooling circuit outlet valves.
• Refrigerant leak detector.
• Cooling circuit high and low pressure gauges.
• Double safety valves.
• Coil protection nets or buffer panels.
• Bottom compartment protection nets.
• Pre-painted copper/aluminium coils, copper/copper or with hydrophilic treatment.
• Digital input for double set-point.
• 4-20 mA analogue signal for shifting set-point.
• Electrical panel antifreeze heater, coil basement, electric pumps and desuperheater, if any.
• Interfaces for serial communication with other devices.

• Colour touch user keypad (fitted on the machine or remotely) with 7” display.
• Spring anti-vibration mounts.
• Protective packaging.

## Separately supplied accessories

• Remote keypad with display.
• Thermostat with display.
• Rhoss supervisors for unit monitoring and remote management.
• Rhoss sequencer for integrated management of multiple chillers.

# Technical Data

| TXAETU MODEL | | 4370 | 4410 | 4450 | 5490 | 5520 | 5560 | 6600 | 6630 |
|---|---|---|---|---|---|---|---|---|---|
| **COOLING OPERATIONS (AUTOMATIC 1 MODE)** | | | | | | | | | |
| ❶ Nominal cooling capacity | kW | 360,7 | 391,7 | 431,7 | 474,6 | 494,6 | 542,6 | 585,5 | 611,6 |
| ❶ Absorbed power | kW | 110,3 | 125,1 | 137,9 | 151,1 | 159 | 174,5 | 184,1 | 192,9 |
| E.E.R. | | 3,27 | 3,13 | 3,13 | 3,14 | 3,11 | 3,11 | 3,18 | 3,17 |
| **COOLING OPERATIONS + TOTAL RECOVERY (AUTOMATIC 2 MODE)** | | | | | | | | | |
| ❸ Nominal cooling capacity | kW | 346,8 | 346,8 | 346,8 | 459,9 | 480,2 | 533,6 | 571,7 | 599,3 |
| ❸ Recovery heating capacity | kW | 442,4 | 442,4 | 442,4 | 589,6 | 615,6 | 680,6 | 729,6 | 763,6 |
| T.E.R. | | 7,89 | 7,89 | 7,89 | 7,7 | 7,7 | 7,86 | 7,85 | 7,92 |
| **HEATING OPERATIONS (MODE SELECT 1-2 AUTOMATIC 3)** | | | | | | | | | |
| ❷ Nominal heating capacity | kW | 368,3 | 400,3 | 435,4 | 482,4 | 508,4 | 544,4 | 591,5 | 623,4 |
| ❷ Absorbed power | kW | 110,6 | 121,7 | 133,1 | 145,7 | 154,1 | 165,5 | 179,8 | 189,5 |
| C.O.P. | | 3,33 | 3,29 | 3,27 | 3,31 | 3,3 | 3,29 | 3,29 | 3,29 |
| **TXAEQU MODEL** | | **4370** | **4410** | **4450** | **5490** | **5520** | **5560** | **6600** | **6630** |
| **COOLING OPERATIONS (AUTOMATIC 1 MODE)** | | | | | | | | | |
| ❶ Nominal cooling capacity | kW | 352,7 | 381,7 | 420,7 | 463,6 | 482,6 | 528,6 | 572,5 | 595,6 |
| ❶ Absorbed power | kW | 110,6 | 126 | 140,2 | 152 | 160,3 | 177,4 | 185,3 | 194,6 |
| E.E.R. | | 3,19 | 3,03 | 3 | 3,05 | 3,01 | 2,98 | 3,09 | 3,06 |
| **COOLING OPERATIONS + TOTAL RECOVERY (AUTOMATIC 2 MODE)** | | | | | | | | | |
| ❸ Nominal cooling capacity | kW | 346,8 | 382,2 | 427,6 | 459,9 | 480,2 | 533,6 | 571,7 | 599,3 |
| ❸ Recovery heating capacity | kW | 442,4 | 489,4 | 544,5 | 589,6 | 615,6 | 680,6 | 729,6 | 763,6 |
| T.E.R. | | 7,89 | 7,78 | 7,96 | 7,7 | 7,7 | 7,86 | 7,85 | 7,92 |
| **HEATING OPERATIONS (MODE SELECT 1-2 AUTOMATIC 3)** | | | | | | | | | |
| ❷ Nominal heating capacity | kW | 363,3 | 395,3 | 429,3 | 475,4 | 500,4 | 537,4 | 582,5 | 613,4 |
| ❷ Absorbed power | kW | 106,9 | 118,4 | 129,7 | 141,1 | 149,4 | 161,4 | 174,4 | 184,2 |
| C.O.P. | | 3,4 | 3,34 | 3,31 | 3,37 | 3,35 | 3,33 | 3,34 | 3,33 |
| **TXAETU-TXAEQU MODEL** | | **4370** | **4410** | **4450** | **5490** | **5520** | **5560** | **6600** | **6630** |
| ❹ TXAETU sound pressure | dB(A) | 62,5 | 63,5 | 63,5 | 64,5 | 64,5 | 64,5 | 65 | 65 |
| ❹ TXAEQU sound pressure | dB(A) | 55 | 55,5 | 55,5 | 56,5 | 56,5 | 56,5 | 57 | 57 |
| ❺ TXAETU sound power | dB(A) | 95 | 96 | 96 | 97 | 97 | 97 | 98 | 98 |
| ❺ TXAEQU sound power | dB(A) | 87 | 88 | 88 | 89 | 89 | 89 | 90 | 90 |
| Scroll/step compressor | n. | 4/4 | 4/4 | 4/4 | 5/5 | 5/5 | 5/5 | 6/6 | 6/6 |
| Circuits | n. | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Electrical supply | V-ph-Hz | 400-3-50 | 400-3-50 | 400-3-50 | 400-3-50 | 400-3-50 | 400-3-50 | 400-3-50 | 400-3-50 |
| **DIMENSIONS AND WEIGHTS** | | **4370** | **4410** | **4450** | **5490** | **5520** | **5560** | **6600** | **6630** |
| L - Width | mm | 4840 | 4840 | 4840 | 5940 | 5940 | 5940 | 7100 | 7100 |
| H - Height | mm | 2480 | 2480 | 2480 | 2480 | 2480 | 2480 | 2480 | 2480 |
| P - Depth | mm | 2260 | 2260 | 2260 | 2260 | 2260 | 2260 | 2260 | 2260 |
| ❻ TXAETU weight | kg | 3430 | 3550 | 3600 | 4310 | 4380 | 4410 | 5240 | 5310 |
| ❻ TXAEQU weight | kg | 3890 | 4010 | 4060 | 4870 | 4940 | 4970 | 5910 | 5980 |
| **SEASONAL ENERGY PERFORMANCE** | | **4370** | **4410** | **4450** | **5490** | **5520** | **5560** | **6600** | **6630** |
| **TXAETU MODEL SEASONAL PERFORMANCE IN COOLING MODE** | | | | | | | | | |
| ① Pdesignc (EN 14825) | kW | - | - | - | - | 494,6 | 542,6 | 585,5 | 611,6 |
| ① SEER (EN 14825) | | - | - | - | - | 4,81 | 4,79 | 4,93 | 4,89 |
| ② ηs,c | % | - | - | - | - | 189 | 189 | 194 | 193 |
| **TXAEQU MODEL SEASONAL PERFORMANCE IN COOLING MODE** | | | | | | | | | |
| ① Pdesignc (EN 14825) | kW | - | - | - | - | 482,6 | 528,6 | 572,5 | 595,6 |
| ① SEER (EN 14825) | | - | - | - | - | 4,78 | 4,76 | 4,9 | 4,86 |
| ② ηs,c | % | - | - | - | - | 188 | 188 | 193 | 191 |
| **TXAETU MODEL SEASONAL PERFORMANCE IN HEATING MODE** | | | | | | | | | |
| ③ Pdesignh (EN 14825) | kW | 303 | 331 | 359 | 398 | - | - | - | - |
| ③ SCOP (EN 14825) | | 3,78 | 3,77 | 3,75 | 3,78 | - | - | - | - |
| ④ ηs | % | 148 | 148 | 147 | 148 | - | - | - | - |
| **TXAEQU MODEL SEASONAL PERFORMANCE IN HEATING MODE** | | | | | | | | | |
| ③ Pdesignh (EN 14825) | kW | 298 | 326 | 354 | 392 | - | - | - | - |
| ③ SCOP (EN 14825) | | 3,86 | 3,82 | 3,78 | 3,82 | - | - | - | - |
| ④ ηs | % | 151 | 150 | 148 | 150 | - | - | - | - |

| TXAETU MODEL | | 6660 |
|---|---|---|
| **COOLING OPERATIONS (AUTOMATIC 1 MODE)** | | |
| ❶ Nominal cooling capacity | kW | 641,5 |
| ❶ Absorbed power | kW | 203 |
| E.E.R. | | 3,16 |
| **COOLING OPERATIONS + TOTAL RECOVERY (AUTOMATIC 2 MODE)** | | |
| ❸ Nominal cooling capacity | kW | 635,1 |
| ❸ Recovery heating capacity | kW | 806,6 |
| T.E.R. | | 8,02 |
| **HEATING OPERATIONS (MODE SELECT 1-2 AUTOMATIC 3)** | | |
| ❷ Nominal heating capacity | kW | 645,5 |
| ❷ Absorbed power | kW | 196,8 |
| C.O.P. | | 3,28 |
| **TXAEQU MODEL** | | **6660** |
| **COOLING OPERATIONS (AUTOMATIC 1 MODE)** | | |

| | | | |
|---|---|---|---|
| ❶ | Nominal cooling capacity | kW | 624,6 |
| ❶ | Absorbed power | kW | 202,1 |
| | E.E.R. | | 3,09 |
| | **COOLING OPERATIONS + TOTAL RECOVERY (AUTOMATIC 2 MODE)** | | |
| ❸ | Nominal cooling capacity | kW | 635,1 |
| ❸ | Recovery heating capacity | kW | 806,6 |
| | T.E.R. | | 8,02 |
| | **HEATING OPERATIONS (MODE SELECT 1-2 AUTOMATIC 3)** | | |
| ❷ | Nominal heating capacity | kW | 636,5 |
| ❷ | Absorbed power | kW | 191,1 |
| | C.O.P. | | 3,33 |
| | **TXAETU-TXAEQU MODEL** | | **6660** |
| ❹ | TXAETU sound pressure | dB(A) | 66 |
| ❹ | TXAEQU sound pressure | dB(A) | 57 |
| ❺ | TXAETU sound power | dB(A) | 99 |
| ❺ | TXAEQU sound power | dB(A) | 90 |
| | Scroll/step compressor | n. | 6/6 |
| | Circuits | n. | 2 |
| | Electrical supply | V-ph-Hz | 400-3-50 |
| | **DIMENSIONS AND WEIGHTS** | | **6660** |
| | L - Width | mm | 7100 |
| | H - Height | mm | 2480 |
| | P - Depth | mm | 2260 |
| ❻ | TXAETU weight | kg | 5340 |
| ❻ | TXAEQU weight | kg | 6010 |
| | **SEASONAL ENERGY PERFORMANCE** | | **6660** |
| | **TXAETU MODEL SEASONAL PERFORMANCE IN COOLING MODE** | | |
| ① | Pdesignc (EN 14825) | kW | 641,5 |
| ① | SEER (EN 14825) | | 4,84 |
| ② | ηs,c | % | 191 |
| | **TXAEQU MODEL SEASONAL PERFORMANCE IN COOLING MODE** | | |
| ① | Pdesignc (EN 14825) | kW | 624,6 |
| ① | SEER (EN 14825) | | 4,8 |
| ② | ηs,c | % | 189 |
| | **TXAETU MODEL SEASONAL PERFORMANCE IN HEATING MODE** | | |
| ③ | Pdesignh (EN 14825) | kW | - |
| ③ | SCOP (EN 14825) | | - |
| ④ | ηs | % | - |
| | **TXAEQU MODEL SEASONAL PERFORMANCE IN HEATING MODE** | | |
| ③ | Pdesignh (EN 14825) | kW | - |
| ③ | SCOP (EN 14825) | | - |
| ④ | ηs | % | - |

Data at the following conditions:

❶ Air: 35°C - Water: 12/7°C.

❷ Air: 7°C D.B. - 6°C W.B. - Water: 40/45°C.

❸ Evaporator water: 12/7℃. Recovery output water 45℃ - Nominal flow rate.

❹ In open field (Q = 2) at 10 m from the unit.

❺ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.

❻ Weight refers to the unit without load.

Performance according to EN 14511.

T.E.R.: Total efficiency ratio

① Low temperature application (7°C)

② Seasonal energy efficiency: low temperature cooling (EU Regulation 2016/2281)

③ In Average climatic conditions, low temperature application (35°C)

④ Seasonal energy efficiency: low temperature heating in Average climate (EU Regulations No.811/2013 and No.813/2013)



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