WinPOWER ECO EXP

TXAEU 4370÷6830

Cooling capacity 352,7÷816,5 kW
Heating capacity 363,3÷791,5 kW

Features

Multi-purpose units with TER up to 8,25

Extended operating limits

SEER up to 5.29 with FIEC accessory (EC fans) and SCOP up to 3.89

R454B eco-friendly gas

Tax incentives*

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

• 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.
• Recovery side VPF_R control.
• 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 tanks, electric pumps and desuperheater, if applicable.
• 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
❶ 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	347,8	384,1	430,9	461,9	482,1	536,9	575,2	602,6
❸ Recovery heating capacity	kW	442,3	490,1	546,1	589,9	616	681,8	731,2	764,7
❸ T.E.R.		8,02	7,92	8,14	7,86	7,84	8,05	8,02	8,09
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
❷ 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
❶ 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	348,8	385,3	432,2	463,3	483,6	538,5	576,9	604,5
❸ Recovery heating capacity	kW	443,2	491,3	547,3	591,2	617,4	683,3	732,7	766,4
❸ T.E.R.		8,05	7,95	8,18	7,9	7,88	8,08	8,06	8,13
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
❷ 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 compressors/steps	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**	**6730**	**6780**	**6830**
COOLING OPERATIONS (AUTOMATIC 1 MODE)					
❶ Nominal cooling capacity	kW	641,5	714,5	763,5	816,5
❶ Absorbed power	kW	203	227,5	243,2	261,7
❶ E.E.R.		3,16	3,14	3,14	3,12
COOLING OPERATIONS + TOTAL RECOVERY (AUTOMATIC 2 MODE)					
❸ Nominal cooling capacity	kW	639,5	706,5	754,9	806,6
❸ Recovery heating capacity	kW	808,5	897,8	958,8	1026,6
❸ T.E.R.		8,22	8,03	8,05	7,98
HEATING OPERATIONS (MODE SELECT 1-2 AUTOMATIC 3)					
❷ Nominal heating capacity	kW	645,5	688,5	746,5	791,5
❷ Absorbed power	kW	196,8	212,5	230,4	245,8
❷ C.O.P.		3,28	3,24	3,24	3,22
TXAEQU MODEL		**6660**	**6730**	**6780**	**6830**
COOLING OPERATIONS (AUTOMATIC 1 MODE)					
❶ Nominal cooling capacity	kW	624,6	696,5	744,5	796,5
❶ Absorbed power	kW	202,1	229,1	244,9	263,7
❶ E.E.R.		3,09	3,04	3,04	3,02
COOLING OPERATIONS + TOTAL RECOVERY (AUTOMATIC 2 MODE)					
❸ Nominal cooling capacity	kW	641,6	709	757,8	809,3
❸ Recovery heating capacity	kW	810,4	900,3	961,6	1029,2
❸ T.E.R.		8,25	8,07	8,08	8,01
HEATING OPERATIONS (MODE SELECT 1-2 AUTOMATIC 3)					
❷ Nominal heating capacity	kW	636,5	678,5	735,5	779,5
❷ Absorbed power	kW	191,1	206,2	224,2	239,1
❷ C.O.P.		3,33	3,29	3,28	3,26
TXAETU-TXAEQU MODEL		**6660**	**6730**	**6780**	**6830**
❹ TXAETU sound pressure	dB(A)	66	67	67	68
❹ TXAEQU sound pressure	dB(A)	57	58	58	59
❺ TXAETU sound power	dB(A)	99	100	100	101
❺ TXAEQU sound power	dB(A)	90	91	91	92
Scroll compressors/steps	n.	6/6	6/6	6/6	6/6
Circuits	n.	2	2	2	2
Electrical supply	V-ph-Hz	400-3-50	400-3-50	400-3-50	400-3-50
DIMENSIONS AND WEIGHTS		**6660**	**6730**	**6780**	**6830**
L – Width	mm	7100	8200	9300	9300
H – Height	mm	2480	2480	2480	2480
P – Depth	mm	2260	2260	2260	2260
❻ TXAETU weight	kg	5340	5925	6450	6630
❻ TXAEQU weight	kg	6010	6615	7180	7360

SEASONAL ENERGY PERFORMANCE		**6660**	**6730**	**6780**	**6830**
TXAETU MODEL SEASONAL PERFORMANCE IN COOLING MODE					
① Pdesignc (EN 14825)	kW	641,5	714,5	763,5	816,5
① SEER (EN 14825)		4,84	4,84	4,86	4,8
② ηs,c	%	191	191	191	189
TXAEQU MODEL SEASONAL PERFORMANCE IN COOLING MODE					
① Pdesignc (EN 14825)	kW	624,6	696,5	744,5	796,5
① SEER (EN 14825)		4,8	4,81	4,83	4,77
② ηs,c	%	189	189	190	188
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 output water: 7°C, nominal flow rate. Recovery output water: 45°C, 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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