

EasyFLOW ECO EXP

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TXHET 245÷2195



Features

Cooling capacity 44,9÷186,6 kW
Heating capacity 53,1÷221,5 kW

Multi-purpose units with TER up to 7,83

Efficient and eco-friendly range in R454B

Applications with well water, water mains, geothermal probes or dry cooler.

Extended operating limits

Touch interface (optional)

Integrated MASTER/SLAVE control

Tax incentives*



EXPsystems - Polyvalent ecological water-cooled system. Series with scroll hermetic compressors and R454B or R410A refrigerant gas.

Construction features

- Compressor: hermetic rotary scroll complete with thermal protection and crankcase heater.
- Primary side (user), secondary (recovery) and disposal side heat exchanger (well, mains, geothermal probes or dry cooler): with stainless steel plates, complete with closed cell polyurethane foam rubber insulation and water flow differential pressure switch.
- Control: microprocessor electronic control with Adaptive Function Plus logic.
- Structure: made of galvanised and painted steel plate with polyester powder coating.
- The unit is also complete with:
 - compressor circuit breaker switches;
 - electronic expansion valve;
 - display of cooling circuit high and low pressure;
 - Master/Slave control up to 4 units in parallel;

- clock board;
- 0-10V analogue signal for condensing/evaporating control performed by external device;
- control of Variable Primary Flow (VPF_R).

Versions

- T - High efficiency version

Models

- TXHETU: EXPsystems units with R454B gas.
- TXHETY: EXPsystems units with R410A gas.

Factory fitted accessories

- Primary side (user) PUMP: with single or double electric pump, one of which automatic in standby. The electric pumps are available in the low or high pressure head versions. ➔
- PUMP disposal side (well, mains, geothermal probes or dry cooler): with single or double electric pump (possibly regulated via inverter) including an automatic actuation pump in standby. The electric pumps are available in the low or high pressure head versions. ➔
- Primary side (user) inverter pump management.
- Power factor correction capacitors ($\cos\phi > 0.94$).
- Soft-starter.
- Energy parameter measuring device.
- Cooling circuit outlet and intake valves (TXHETY)
- Cooling circuit outlet valves (TXHETU).
- Refrigerant leak detector.
- Forced limit of power consumption.
- Cooling circuit high and low pressure gauges.
- Double safety valves.
- Technical compartment soundproofing.
- Compressor soundproof enclosures
- Control of min/max power supply voltage.
- Low temperature water production.
- Digital input for double set-point.
- 4-20mA analogue signal for shifting set-point.
- Antifreeze heaters for heat exchangers, electrical panel and electric pumps.
- Interfaces for serial communication with other devices.
- Colour touch user keypad (fitted on the machine or remotely) with 7" display.
- Set-up for outdoor installation.
- Rubber anti-vibration mounts.

Separately supplied accessories

- 3-way modulating condensing control valve.
- 2-way modulating condensing control valve.
- Outdoor air temperature probe for set-point compensation.
- Water filter.
- 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

TXHETU MODEL		245	255	260	270	280	290	2105	2120
COOLING OPERATIONS (AUTOMATIC 1 MODE)									
❶ Nominal cooling capacity	kW	44,9	53	60,3	69,1	75,9	89,8	103,5	117,4
❶ Absorbed power	kW	10,1	12,2	14	15,7	17,1	20	23,9	26,3
❶ E.E.R.		4,43	4,36	4,31	4,4	4,43	4,49	4,33	4,47
COOLING OPERATIONS + TOTAL RECOVERY (AUTOMATIC 2 MODE)									
❷ Nominal cooling capacity	kW	43	49,8	56,3	64,1	69	81,6	94,7	107,9
❷ Recovery heating capacity	kW	55	63,9	72,4	82,3	88,9	105	122,3	138,4
❷ T.E.R.		7,83	7,72	7,67	7,75	7,63	7,68	7,54	7,78
HEATING OPERATIONS (MODE SELECT 1-2 AUTOMATIC 3)									
❸ Nominal heating capacity	kW	53,1	62,2	71	80,2	87,1	103,1	120,9	135,8
❸ Total absorbed power	kW	12,9	15,3	17,4	19,7	21,5	25,1	29,9	32,7
❸ C.O.P.		4,11	4,07	4,07	4,08	4,05	4,11	4,05	4,15
TXHETU MODEL		245	255	260	270	280	290	2105	2120
❹ Sound pressure	dB(A)	38	40	39	41	41	42	42	44
❹ Sound power	dB(A)	69	71	70	72	72	74	74	76
❹ Sound power with soundproofing set-up	dB(A)	66,5	68,5	67,5	69,5	69,5	71,5	71,5	73,5
Scroll compressor/steps	no.	2/2	2/2	2/2	2/2	2/3	2/2	2/3	2/3
Circuits	no.	1	1	1	1	1	1	1	1
Electrical supply	V-ph-Hz	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50
DIMENSIONS AND WEIGHTS		245	255	260	270	280	290	2105	2120
❺ L – Width	mm	1190	1190	1190	1190	1190	1500	1500	1500
❺ L – Width	mm	2060	2060	2060	2060	2060	2460	2460	2460
H – Height	mm	1450	1450	1450	1450	1450	1860	1860	1860
P – Depth	mm	720	720	720	720	720	870	870	870
❺ Weight	kg	455	470	485	500	505	715	765	815
SEASONAL ENERGY PERFORMANCE									
TXHETU MODEL SEASONAL PERFORMANCE IN HEATING MODE		245	255	260	270	280	290	2105	2120
❸ Pdesignh (EN 14825)	kW	64	76	86	98	106	125	147	165
❸ SCOP (EN 14825)		6,49	6,52	6,38	6,33	6,49	6,32	6,28	6,5
❹ ηs	%	252	253	247	245	251	245	243	252
Energy class		A+++	-	-	-	-	-	-	-
TXHETY MODEL		245	255	260	270	280	290	2105	2120
COOLING OPERATIONS (AUTOMATIC 1 MODE)									
❶ Nominal cooling capacity	kW	46,6	54,9	61,8	70,9	77,8	92,1	106	120,3
❶ Absorbed power	kW	10,8	12,9	14,7	16,5	18	20,9	25,1	27,5
❶ E.E.R.		4,33	4,26	4,19	4,31	4,33	4,4	4,22	4,37
COOLING OPERATIONS + TOTAL RECOVERY (AUTOMATIC 2 MODE)									
❷ Nominal cooling capacity	kW	43,7	51	57,4	65,1	70,3	82,9	96,2	109,9
❷ Recovery heating capacity	kW	56,4	66,2	74,4	84,3	91,2	107,3	125,4	142
❷ T.E.R.		7,56	7,43	7,45	7,5	7,4	7,52	7,29	7,56
HEATING OPERATIONS (MODE SELECT 1-2 AUTOMATIC 3)									
❸ Nominal heating capacity	kW	54,5	64,4	73	82,2	89,4	105,4	124	139,3
❸ Total absorbed power	kW	13,7	16,3	18,5	20,7	22,6	26,2	31,5	34,4
❸ C.O.P.		3,97	3,94	3,95	3,97	3,95	4,03	3,94	4,05
TXHETY MODEL		245	255	260	270	280	290	2105	2120
❹ Sound pressure	dB(A)	38	40	39	41	41	42	42	44
❹ Sound power	dB(A)	69	71	70	72	72	74	74	76
❹ Sound power with soundproofing set-up	dB(A)	66,5	68,5	67,5	69,5	69,5	71,5	71,5	73,5
Scroll compressor/steps	no.	2/2	2/2	2/2	2/2	2/3	2/2	2/3	2/3
Circuits	no.	1	1	1	1	1	1	1	1
Electrical supply	V-ph-Hz	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50
DIMENSIONS AND WEIGHTS		245	255	260	270	280	290	2105	2120
❺ L – Width	mm	1190	1190	1190	1190	1190	1500	1500	1500

⑦ L – Width	mm	2060	2060	2060	2060	2060	2460	2460	2460
H – Height	mm	1450	1450	1450	1450	1450	1860	1860	1860
P – Depth	mm	720	720	720	720	720	870	870	870
⑥ Weight	kg	455	470	485	500	505	715	765	815
SEASONAL ENERGY PERFORMANCE		245	255	260	270	280	290	2105	2120
TXHETY MODEL SEASONAL PERFORMANCE IN HEATING MODE									
③ Pdesignh (EN 14825)	kW	66	78	89	100	109	128	151	169
③ SCOP (EN 14825)		6,4	6,42	6,3	6,24	6,41	6,21	6,19	6,38
④ ηs	%	248	249	244	242	248	240	239	247
Energy class		A+++	-	-	-	-	-	-	-
TXHETU MODEL					2135	2155	2175	2195	
COOLING OPERATIONS (AUTOMATIC 1 MODE)									
① Nominal cooling capacity			kW	131,4	145,1	163,2	181,7		
① Absorbed power			kW	30,2	32,5	37,5	42,9		
① E.E.R.				4,35	4,46	4,35	4,24		
COOLING OPERATIONS + TOTAL RECOVERY (AUTOMATIC 2 MODE)									
② Nominal cooling capacity			kW	121,5	135,5	151,6	168,5		
② Recovery heating capacity			kW	156,7	173,5	195,3	217,7		
② T.E.R.				7,6	7,82	7,61	7,52		
HEATING OPERATIONS (MODE SELECT 1-2 AUTOMATIC 3)									
⑥ Nominal heating capacity			kW	154,6	170,1	192,6	215,8		
⑥ Total absorbed power			kW	37,8	40,8	47,2	53,2		
⑥ C.O.P.				4,09	4,17	4,08	4,06		
TXHETU MODEL					2135	2155	2175	2195	
④ Sound pressure			dB(A)	44	46	47	48		
⑤ Sound power			dB(A)	76	78	79	80		
⑤ Sound power with soundproofing set-up			dB(A)	73,5	75,5	76,5	77,5		
Scroll compressor/steps			no.	2/3	2/2	2/3	2/2		
Circuits			no.	1	1	1	1		
Electrical supply			V-ph-Hz	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50		
DIMENSIONS AND WEIGHTS					2135	2155	2175	2195	
⑥ L – Width			mm	1500	1500	1500	1500		
⑦ L – Width			mm	2460	2460	2460	2460		
H – Height			mm	1860	1860	1860	1860		
P – Depth			mm	870	870	870	870		
⑧ Weight			kg	860	900	945	990		
SEASONAL ENERGY PERFORMANCE					2135	2155	2175	2195	
TXHETU MODEL SEASONAL PERFORMANCE IN HEATING MODE									
③ Pdesignh (EN 14825)			kW	188	206	233	261		
③ SCOP (EN 14825)				6,45	6,44	6,55	6,5		
④ ηs			%	250	250	254	252		
Energy class				-	-	-	-		
TXHETY MODEL					2135	2155	2175	2195	
COOLING OPERATIONS (AUTOMATIC 1 MODE)									
① Nominal cooling capacity			kW	134,7	150,2	167,7	186,6		
① Absorbed power			kW	31,8	34,1	39,5	45,1		
① E.E.R.				4,23	4,4	4,25	4,14		
COOLING OPERATIONS + TOTAL RECOVERY (AUTOMATIC 2 MODE)									
② Nominal cooling capacity			kW	123,8	138,1	154,5	172,1		
② Recovery heating capacity			kW	160,7	177,9	200,2	223,4		
② T.E.R.				7,4	7,64	7,43	7,37		
HEATING OPERATIONS (MODE SELECT 1-2 AUTOMATIC 3)									
⑥ Nominal heating capacity			kW	158,6	174,5	197,5	221,5		
⑥ Total absorbed power			kW	39,8	42,7	49,4	55,7		
⑥ C.O.P.				3,98	4,09	4	3,98		
TXHETY MODEL					2135	2155	2175	2195	
④ Sound pressure			dB(A)	44	46	47	48		
⑤ Sound power			dB(A)	76	78	79	80		
⑤ Sound power with soundproofing set-up			dB(A)	73,5	75,5	76,5	77,5		

Scroll compressor/steps	no.	2/3	2/2	2/3	2/2
Circuits	no.	1	1	1	1
Electrical supply	V-ph-Hz	400-3+N-50	400-3+N-50	400-3+N-50	400-3+N-50
DIMENSIONS AND WEIGHTS		2135	2155	2175	2195
⑥ L – Width	mm	1500	1500	1500	1500
⑦ L – Width	mm	2460	2460	2460	2460
H – Height	mm	1860	1860	1860	1860
P – Depth	mm	870	870	870	870
⑧ Weight	kg	860	900	945	990
SEASONAL ENERGY PERFORMANCE		2135	2155	2175	2195
TXHETY MODEL SEASONAL PERFORMANCE IN HEATING MODE					
③ Pdesignh (EN 14825)	kW	193	212	239	268
③ SCOP (EN 14825)		6,36	6,37	6,47	6,43
④ ηs	%	246	247	251	249
Energy class		-	-	-	-

Data at the following conditions:

- ① Chilled water (user): 12/7°C – Condenser water (disposal unit-source): 30/35°C
 - ② Chilled water (user) outlet: 7°C, nominal flow rate – Condenser water outlet (recovery unit): 45°C, nominal flow rate.
 - ③ Evaporator water (disposal-source): 10/7°C – Hot water (utility): 40/45°C.
 - ④ In open field (Q = 2) at 10 m from the unit.
 - ⑤ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.
 - ⑥ Width referred to a unit with standard set up.
 - ⑦ Width referring to the PUMP setup, up to a maximum of 2 pumps.
 - ⑧ Weight refers to the unit empty with soundproofing.
- Performance according to EN 14511.
T.E.R.: Total efficiency ratio
- 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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