



WinPACK

**HIGH EFFICIENCY AIR-COOLED
WATER CHILLERS AND HEAT
PUMPS IN R410A**

Create ideal comfort seeking excellence.



Rhoss is the company specialised in the design and manufacture of products and systems for air conditioning and air handling.

Founded in 1968, it immediately became the leader in the sector of steel boilers for domestic heating.

It entered the world of air-conditioning in 1971 with the production of fan coils and subsequently with cooling units.

For more than 40 years, Rhoss has been a guarantee for innovation, quality and top level service. This is what makes us an ideal partner for HVAC (Heating, Ventilation and Air Conditioning) system specialists.

Rhoss' growth and development is an evolution that combines investments and projects in order to make the company a **point of reference also for international markets.**

Our renewal has followed market development and customer needs, in particular offering highly efficient products and systems that are in line with the requirements of the most modern Green Buildings.



Our **mission** is to achieve optimal climate comfort for every type of environment.

Our **objective** is to respond to new market needs in a dynamic and flexible manner with advanced and competitive products and services.

Our **choice** is to focus the range towards products with higher efficiency and low environmental impact.

Our **strategy** is to adopt the most innovative technological solutions, increase our international presence significantly and become a reference brand.



INNOVATION IS IN OUR DNA

Rhoss has always proven to be an innovative spirit throughout its history. Today, it confirms its propensity towards continuous technological evolution with

R&D Lab: a futuristic testing and inspection station of over 1000 m², among the largest in Europe, which allows new products, radiant systems and special units with capacities up to **1500 kW** to be tested in the harshest operating conditions and perform operating simulations to effectively respond to customer requirements.

R&D Lab, approved to test liquid chillers and heat pumps, can verify the performance of the products according to European regulations. Furthermore, with R&D Lab, research projects are promoted and developed in collaboration with the scientific community and universities both nationally and internationally.



WinPACK

HIGH EFFICIENCY AIR-COOLED WATER CHILLERS AND HEAT PUMPS IN R410A

WinPack: the concrete solution to the evolving HVAC market requirements!

Rhoss presents **WinPack**, the new generation chillers and heat pumps from **100 to 340 kW** in air-cooled R410A, developed in line with evolution in the HVAC market.

WinPack was in fact designed to meet the new standards in **energy efficiency and load reduction of greenhouse gases, to offer very low noise level** solutions, to solve the problems related to the efficiency of existing systems and refitting and to allow **heat pumps to be used even in harsh climates**.

WinPack is divided into eight different construction versions ranging from high **efficiency energy class A** units (according to the Eurovent standard) right up to the super-silenced versions with **reduced noise levels by almost 10 dB(A)**.

WinPack is efficient throughout the year!

Thanks to the technology applied, **WinPack** models involve 2 or 4 scroll compressors being used, with one and two cooling circuits respectively, designed and configured so as to guarantee greater **control flexibility** and increased energy efficiency even at partial **loads with high ESEER and SCOP**.



WinPack is flexible!

All models are equipped with R410A gas: therefore, they are perfect for commercial applications, hotels and medium and large buildings requiring air conditioning that provides a perfect balance between **low consumption and maximum comfort**.

Among the several options and accessories, **WinPack** can also be equipped with an innovative pumping system which, thanks to **brushless technology**, allows systems to be set up with only **variable primary flow**, thereby reducing energy costs and simplifying the system set up.



ADAPTIVE
FUNCTION

VPF
VARIABLE PRIMARY FLOW

MICROCHANNEL

BRUSHLESS
EC

SILENT

ERP READY

WinPack is environmentally friendly!

WinPack has been designed to be more **eco-sustainable** and in particular in line with the new regulations that are becoming more restrictive in terms of greenhouse gas content restrictions.

In particular, the **chillers involve micro-**

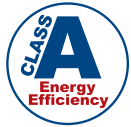
channel heat exchangers being used, which allow the refrigerant amount to be reduced by 30% compared to traditional technology.

Furthermore, the possibility of equipping the **desuperheater or heat recovery** unit for the production of hot water allows the **energy** available at the compressor outlet **to be recovered**, which would normally be dispersed in the environment.

Low consumption WinPACK HE-A

Cooling capacity: 91,6÷345 kW - Heating capacity: 110,5÷357 kW

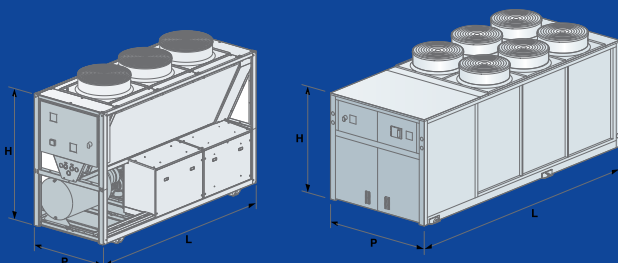
TCAEY-THAEY



- A class water chillers and heat pumps
- ESEER up to 4,32
- Standard electronic expansion valve



TCAEY-TCAEQY MODEL		2110	2120	2140	2150	2170	2200	2220	4240	4270	4310	4340
❶ Nominal cooling capacity	kW	110,5	121,5	138,4	156,4	175,4	200,3	223,2	241,3	276,3	309,1	345,1
❶ Nominal cooling capacity	kW	100,6	108,6	126,5	140,5	155,5	181,4	199,4	218,4	251,4	280,2	318,2
❶ E.E.R.		3,13	3,1	3,13	3,11	3,1	3,11	3,1	3,1	3,11	3,1	3,1
❶ E.E.R.		2,73	2,6	2,69	2,65	2,6	2,64	2,61	2,57	2,68	2,62	2,63
❶ E.S.E.E.R.		4,28	4,32	4,13	4,22	4,28	4,18	4,21	4,3	4,28	4,25	4,23
❶ E.S.E.E.R.+		5,02	5,09	4,96	4,98	5,04	4,89	4,95	5,1	5,06	5	5,03
❶ Absorbed power	kW	35,3	39,2	44,2	50,3	56,6	64,4	72	77,8	88,8	99,7	111,3
❶ Absorbed power	kW	36,8	41,8	47	53	59,8	68,7	76,4	85	93,8	106,9	121
THAEY-THAEQY MODEL		2110	2120	2140	2150	2170	2200	2220	4240	4270	4310	4340
❷ Nominal heating capacity	kW	114,5	124,5	141,6	161,6	181,7	204,8	233,9	249,8	282,8	321	357
❷ Nominal heating capacity	kW	110,5	118,5	136,5	153,6	171,6	194,7	221,8	236,7	266,7	301	341,9
❷ C.O.P.		3,22	3,22	3,21	3,22	3,23	3,22	3,21	3,2	3,2	3,2	3,2
❷ C.O.P.		3,28	3,29	3,27	3,26	3,26	3,23	3,26	3,12	3,11	2,95	3,08
❶ Nominal cooling capacity	kW	101,6	112,6	126,5	145,4	161,4	186,3	209,3	231,3	263,3	301,1	334,1
❶ Nominal cooling capacity	kW	91,6	100,6	118,6	130,6	144,5	169,5	187,4	206,5	238,4	270,3	302,2
❷ Absorbed power	kW	35,6	38,7	44,1	50,2	56,3	63,6	72,9	78,1	88,4	100,3	111,6
❷ Absorbed power	kW	33,7	36	41,7	47,1	52,6	60,3	68	75,9	85,8	102	111
TCAEY-TCAEQY-THAEY-THAEQY MODEL		2110	2120	2140	2150	2170	2200	2220	4240	4270	4310	4340
❸ TCAEY sound pressure	dB(A)	55	56	57	57	58	59	59	58	60	60	62
❸ THAEY sound pressure	dB(A)	53	54	55	55	56	57	57	58	60	60	62
❸ TCAEQY-THAEQY sound pressure	dB(A)	47	47	48	48	49	50	50	51	53	53	54
❹ TCAEY sound power	dB(A)	87	88	89	89	90	91	91	90	92	92	94
❹ THAEY sound power	dB(A)	85	86	87	87	88	89	89	90	92	92	94
❹ TCAEQY-THAEQY sound power	dB(A)	79	79	80	80	81	82	82	83	85	85	86
Scroll/step compressor	no.	2/3	2/3	2/2	2/3	2/2	2/3	2/2	4/4	4/4	4/4	4/4
Circuits	no.	1	1	1	1	1	1	1	2	2	2	2
Electric power 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	400-3-50	400-3-50	400-3-50
SIZES AND WEIGHTS		2110	2120	2140	2150	2170	2200	2220	4240	4270	4310	4340
L - Width	mm	3.600	3.600	3.600	3.600	4.550	4.550	4.550	4.800	4.800	5.300	5.300
H - Height	mm	2.440	2.440	2.440	2.440	2.440	2.440	2.440	2.030	2.030	2.030	2.030
P - Depth	mm	1.350	1.350	1.350	1.350	1.350	1.350	1.350	2.090	2.090	2.090	2.090
❺ TCAEY weight	kg	1.090	1.100	1.110	1.130	1.280	1.300	1.320	2.290	2.390	2.520	2.640
❺ TCAEQY weight	kg	1.250	1.260	1.270	1.290	1.440	1.460	1.480	2.420	2.520	2.650	2.770
❺ THAEY weight	kg	1.380	1.410	1.420	1.500	1.670	1.690	1.780	2.470	2.570	2.720	2.840
❺ THAEQY weight	kg	1.420	1.450	1.460	1.540	1.710	1.730	1.820	2.600	2.700	2.850	2.970



2110÷4340

Low consumption WinPACK SE

Cooling capacity: 97,6÷328,6 kW - Heating capacity: 109,5÷354,6 kW



- High performance range with extended working limits
- Rich range of accessories
- B compact version for replacement markets.



OUTDOOR
INSTALLATION



TCAEBY-TCAESY MODEL		2110	2120	2140	2150	2170	2200	2220	4240	4270	4310	4340
① Nominal cooling capacity	kW	106,5	114,4	127,4	147,3	165,2	188,1	212,1	229,2	256	299,9	328,7
① Nominal cooling capacity	kW	102,5	110,4	122,4	142,3	159,2	183,2	205,1	224,2	250,1	291	319,7
① E.E.R.		2,81	2,79	2,8	2,81	2,81	2,8	2,8	2,8	2,8	2,81	2,76
① E.E.R.		2,72	2,67	2,65	2,71	2,7	2,66	2,7	2,68	2,66	2,68	2,61
● E.S.E.E.R.		3,91	3,94	3,96	3,85	3,93	4	3,87	4,07	4,11	3,98	3,98
⊕ E.S.E.E.R.+		4,62	4,63	4,66	4,52	4,61	4,75	4,57	4,8	4,84	4,7	4,69
① Absorbed power	kW	37,9	41	45,5	52,4	58,8	67,2	75,8	81,9	91,4	106,7	119,1
① Absorbed power	kW	37,7	41,3	46,2	52,5	59	68,9	76	83,7	94	108,6	122,5
THAEBY-THAESY MODEL												
⊕ Nominal heating capacity	kW	112,6	123,7	139,7	158,8	176,9	198	229,1	249	281,4	319,3	354,6
⊕ Nominal heating capacity	kW	109,5	121,7	135,7	155,8	173,9	195,9	226	245	278,3	315,2	345,5
⊕ C.O.P.		3,05	3,08	3,08	3,04	3,06	3,07	3,07	3,03	3,01	3,01	2,98
⊕ C.O.P.		3,1	3,13	3,1	3,13	3,1	3,09	3,13	3,09	3,05	3,07	3,03
① Nominal cooling capacity	kW	99,5	110,4	123,4	142,3	159,3	182,2	206,1	227,1	253,9	295,9	324,7
① Nominal cooling capacity	kW	97,6	106,5	117,5	136,4	152,3	175,3	199,2	220,2	248	286,1	313,8
⊕ Absorbed power	kW	36,9	40,2	45,4	52,2	57,8	64,5	74,6	82,2	93,5	106,1	119
⊕ Absorbed power	kW	35,3	38,9	43,8	49,8	56,1	63,4	72,2	79,3	91,2	102,7	114

TCAEBY-TCAESY-THAEBY-THAESY MODEL		2110	2120	2140	2150	2170	2200	2220	4240	4270	4310	4340
⊕ TCAEBY sound pressure	dB(A)	55	56	56	57	58	58	59	60	60	60	61
⊕ THAEBY sound pressure	dB(A)	53	54	54	55	56	56	57	58	60	60	61
⊕ TCAESY sound pressure	dB(A)	49	50	50	51	52	52	53	54	54	56	57
⊕ THAESY sound pressure	dB(A)	49	50	50	51	52	52	53	54	55	56	57
⊕ TCAEBY sound power	dB(A)	87	88	88	89	90	90	91	92	92	92	93
⊕ THAEBY sound power	dB(A)	85	86	86	87	88	88	89	90	92	92	93
⊕ TCAESY sound power	dB(A)	81	82	82	83	84	84	85	86	86	88	89
⊕ THAESY sound power	dB(A)	81	82	82	83	84	84	85	86	87	88	89
Scroll/step compressor	no.	2/3	2/3	2/2	2/3	2/2	2/3	2/2	4/4	4/4	4/4	4/4
Circuits	no.	1	1	1	1	1	1	1	2	2	2	2
Electric power 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	400-3-50	400-3-50	400-3-50
SIZES AND WEIGHTS												
L - TCAEBY-TCAESY width	mm	2.650	2.650	2.650	3.600	3.600	3.600	4.550	4.550	4.550	4.800	4.800
L - THAEBY-THAESY width	mm	2.650	2.650	2.650	3.600	3.600	3.600	4.550	4.800	4.800	4.800	4.800
H - TCAEBY-TCAESY height	mm	2.440	2.440	2.440	2.440	2.440	2.440	2.440	2.440	2.440	2.030	2.030
H - THAEBY-THAESY height	mm	2.440	2.440	2.440	2.440	2.440	2.440	2.440	2.030	2.030	2.030	2.030
P - TCAEBY-TCAESY depth	mm	1.350	1.350	1.350	1.350	1.350	1.350	1.350	1.350	1.350	2.090	2.090
P - THAEBY-THAESY depth	mm	1.350	1.350	1.350	1.350	1.350	1.350	1.350	2.090	2.090	2.090	2.090
⊕ TCAEBY weight	kg	990	1.000	1.010	1.160	1.180	1.180	1.340	1.670	1.690	2.400	2.410
⊕ TCAESY weight	kg	1.110	1.120	1.130	1.280	1.300	1.300	1.460	1.830	1.850	2.440	2.450
⊕ THAEBY weight	kg	1.250	1.310	1.320	1.470	1.480	1.565	1.730	2.375	2.460	2.580	2.595
⊕ THAESY weight	kg	1.250	1.310	1.320	1.470	1.480	1.565	1.730	2.415	2.500	2.620	2.635

Details under the following conditions:

- ① Air: 35°C - Water: 12/7°C.
- ⊕ Air: 7°C, B.S. 6°C B.U. - Water: 40/45°C.
- ⊕ 10 m from the unit in free field (Q = 2).
- ① Total sound power level in dB(A) on the basis of measurements taken in accordance with UNI EN-ISO 9614.
- ⊕ Weight refers to the non-accessorised unit when empty.
- ESEER (European Seasonal EER) - Average European seasonal efficiency.
- ⊕ ESEER with Adaptive Function Plus software. ESERR+ is not Eurovent certified.
- TCAEQY-THAEQY super-silenced versions.
- TCAESY-THAESY silenced versions. Performance according to EN 14511:2013.



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Rhoss is involved in the Eurovent certification programme.
The products in question are included in the guide to Eurovent certified products, which can be found at
www.eurovent-certification.com - www.certiflash.com

