AERMEC

air conditioning

NRL-NRLH

NRL - NRLH
MultiScroll Technology
+ saving
+ comfort
+ well-being

Multiscroll Technology Chillers and Heat Pumps Series **NRL - NRLH** with R410A

Green Comfort, Reliability and Savings

- High energy efficiency, especially at partial loads thanks to the ecological refrigerant R410A and MultiScroll Technology;
- Maximum reliability thanks to the MultiCircuit system;
- Unmatched versatility: over 12900 configurations;
- Free-Cooling and Free Heating options for maximum overall energy efficiency;
- Production of Domestic Hot Water all year round;
- Performance guaranteed by Eurovent certification for the entire range.

R410A

-35%

IT IS THE ANNUAL POWER SAVING COMPARED TO TRADITIONAL R407C SERIES.

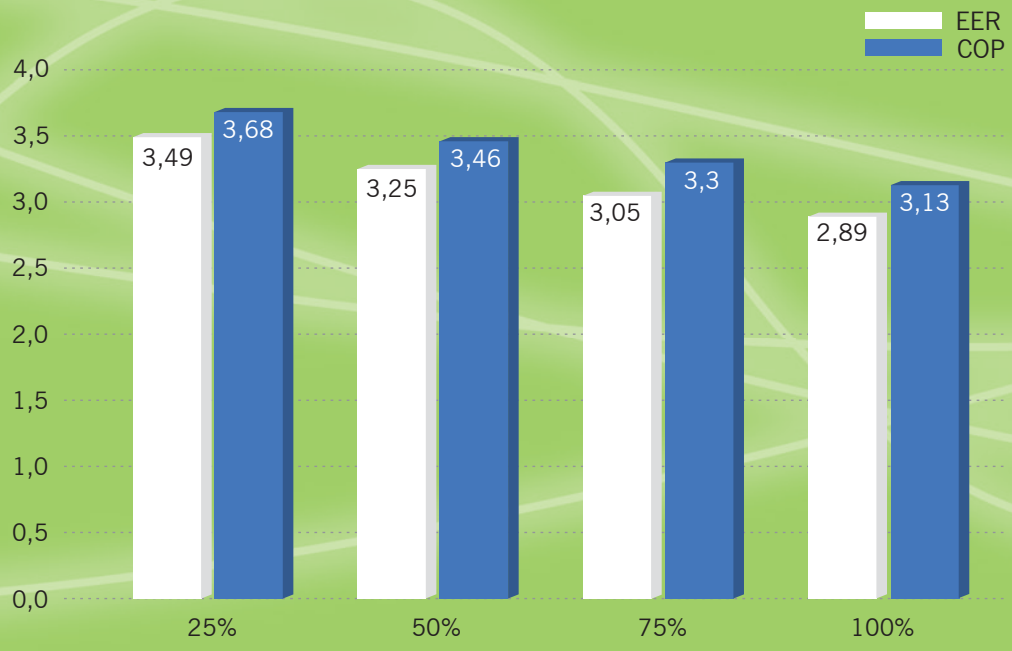
POWER CONSUMPTION OF THE TRADITIONAL R407C SCROLL CHILLERS-HEAT PUMPS

POWER CONSUMPTION OF THE NEW NRL/NRLH WITH R410A MULTISCROLL TECHNOLOGY

-35%

IT IS THE REDUCTION OF CO_2, CARBON DIOXIDE EMISSIONS RESPONSIBLE FOR THE GREENHOUSE EFFECT.

Energy efficiency ratio in cooling (EER) and heating (COP) in relation to the load variation



The Multiscroll Technology is the ideal choice for all civil and industrial applications where the machine is expected to operate at partial loads. In fact, with NRL/NRLH chillers and heat pumps, greater energy efficiencies are gradually obtained as the heating/cooling loads of the building being cooled/heated decrease.

-35%

IT IS THE ANNUAL SAVING OF ELECTRICITY COMPARED TO TRADITIONAL R407C SERIES.

-6dB(A)

IT IS THE AVERAGE NOISE LEVEL REDUCTION OF THE EXTRA SILENT MODELS IN RELATION TO THE STANDARD MODELS.

-35%

IT IS THE REDUCTION OF CO_2, CARBON DIOXIDE EMISSIONS RESPONSIBLE FOR THE GREENHOUSE EFFECT.

SAVINGS ON BILLS

Thanks to Multiscroll Technology and the NRL - NRLH chillers and heat pumps can achieve substantial savings in electricity bills, both for summer air conditioning and for heating purposes, as well as for domestic hot water production.
These savings can reach 35% a year compared to traditional R407C machines. That is to say that for every 100 euro spent on electricity, the new series will save you about 35 euros.

QUIET NIGHTS

The NRL - NRLH series Multiscroll Technology was designed with particular emphasis on quiet operation, thanks to the choice of components with the highest acoustic quality and the continuous monitoring of the machines being developed within the Aermec Research and development department. The NRL-NRLH Multiscroll Technology series features the extra Silent version, which achieves extra low sound levels (up to 8 db(A) less than the standard version). The accuracy of acoustic data reported by Aermec is guaranteed by the european body of certification Eurovent.

MAXIMUM VERSATILITY

The NRL-NRLH series Multiscroll Technology is available in over 12900 different configurations. One of the available configurations for example is with electronic expansion valve which allows a more efficient operation and a wider range of applications. Inverter fans are also available, for a quick and precise adjustment of the fan speeds resulting in low noise and savings. The heat recovery systems (partial or total) allow to recover free domestic hot water in large quantities, thus further raising the overall performance of the system. The versions with pumps and/or water tanks make the units really plug-and-play ones of great energy interest is the free Cooling version that allows to produce chilled water free of charge, using the ambient cold air. The free Cooling machines are also available in the Glycol free configuration. A wide range of accessories allow to choose the machine most suited for the specific system requirements.

LESS WEIGHT AND SIZE

The use of R410A refrigerant with higher specific efficiency and the optimisation of the hydraulic and refrigerant circuit layouts, makes the NRL-NRLH Multiscroll Technology series lighter and less bulky than the traditional R407C series.

RESPECT FOR THE ENVIRONMENT

The NRL-NRLH series is environmentally friendly thanks to the increased energy efficiency and the use of R410A refrigerant, which is harmless to the ozone layer: R410A is a refrigerant with high thermodynamic efficiency that allows, together with the use of Multiscroll Technology, to reduce Co_2 emissions. By adding up the savings obtained in air conditioning in summer, heating in winter and the production of domestic hot water, Co_2 emissions are reduced by 35% compared to traditional

+35%

IT IS THE INCREASE OF THE SEASONAL ENERGY EFFICIENCY ESEER COMPARED TO TRADITIONAL R407C CHILLERS.

+100%

IT IS THE INCREASED RELIABILITY OF DUAL COOLING CIRCUIT SYSTEMS IN RELATION TO SYSTEMS WITH MONO-CIRCUITS

-25%

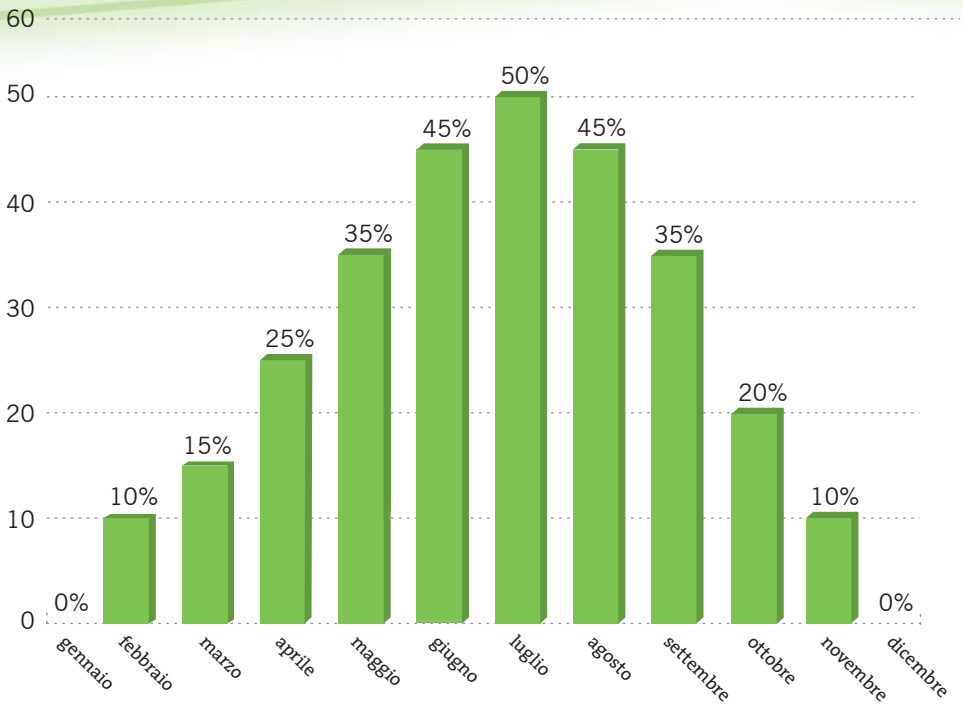
IT IS THE AVERAGE ANNUAL COST SAVING FOR THE PRODUCTION OF DOMESTIC HOT WATER IN RELATION TO A CONDENSING BOILER.

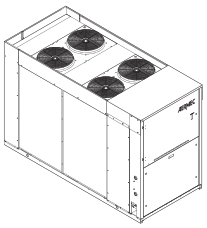
R407C heat pumps.

DOMESTIC HOT WATER

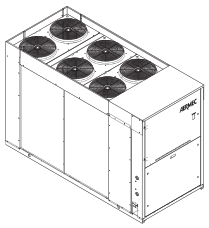
The NRLH Multiscroll Technology heat pumps can produce hot water with outside temperatures down to -15° C. The outlet water temperature can reach 55° C even in the summer. This allows the use of NRL -H Multiscroll Technology for the production of domestic hot water and swimming pool heating all year round.

% of savings for the production of domestic Hot Water compared to a condensing boiler [euro]

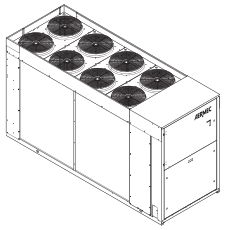




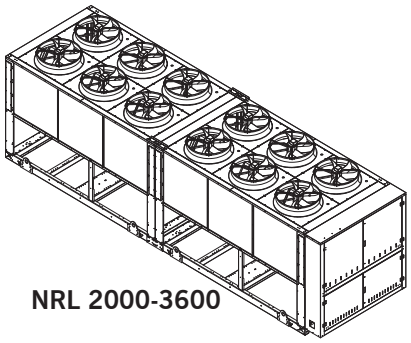
NRL 280-300



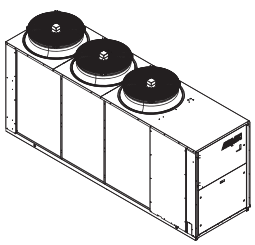
NRL 350



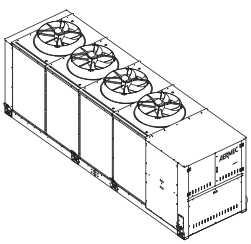
NRL 500-700



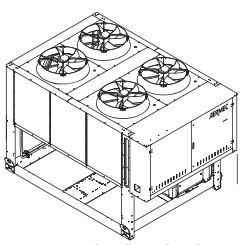
NRL 2000-3600



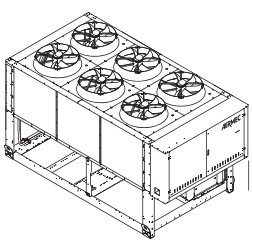
NRL 0750-0800-0900 °-L
NRL 750 A-E



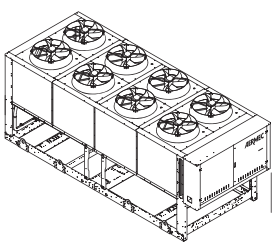
NRL 1250-1250 °-L



NRL 1404-1504
NRL 0800-0900 A-E
NRL 1000 A-E



NRL 1655-1800 °-L
NRL 0800-0900 A-E
NRL 1000 A_E



NRL 1650-1800 A-E

Technical data

Mod. NRL		Vers.	0280	0300	0330	0350	Vers.	0280	0300	0330	0350
Cooling capacity	(kW)	°	-	-	-	-	H	-	-	-	-
		L	53	63	68	80	HL	51	61	66	73
		A	-	-	-	-	HA	-	-	-	-
		E	57	65	74	83	HE	53	62	69	77
EER	(W/W)	°	-	-	-	-	H	-	-	-	-
		L	2,54	2,72	2,54	2,78	HL	2,48	2,65	2,46	2,31
		A	-	-	-	-	HA	-	-	-	-
		E	3,30	3,27	3,32	3,23	HE	2,92	3,04	2,95	2,85
ESEER	(W/W)	°	-	-	-	-	H	-	-	-	-
		L	3,01	3,22	3,01	3,29	HL	3,02	3,23	3,02	3,31
		A	-	-	-	-	HA	-	-	-	-
		E	3,75	3,72	3,80	3,68	HE	3,85	3,77	3,85	3,73
Heating capacity	(kW)						H	-	-	-	-
							HL	58	68	76	83
							HA	-	-	-	-
							HE	59	69	76	86
COP	(W/W)						H	-	-	-	-
							HL	3,07	3,15	3,04	2,91
							HA	-	-	-	-
							HE	3,38	3,36	3,34	3,30

Mod. NRL		Vers.	0500	0550	0600	0650	0700
Cooling capacity	(kW)	°	96	102	125	136	155
		L	87	92	112	126	143
		A	97	103	128	142	162
		E	90	95	116	128	149
EER	(W/W)	°	2,72	2,63	2,68	2,49	2,54
		L	2,22	2,15	2,18	2,17	2,18
		A	3,17	2,97	3,14	3,13	3,04
		E	2,67	2,54	2,59	2,45	2,60
ESEER	(W/W)	°	3,28	3,17	3,66	3,42	3,48
		L	3,27	3,17	3,66	3,42	3,48
		A	3,68	3,45	4,07	4,04	3,93
		E	3,65	3,43	3,97	3,95	3,83
Mod. NRL		**Vers.**	**0500**	**0550**	**0600**	**0650**	**0700**
Cooling capacity	(kW)	H	89	94	114	133	144
		HL	83	89	109	123	139
		HA	94	100	121	137	149
		HE	90	95	114	127	142
EER	(W/W)	H	2,42	2,30	2,30	2,46	2,26
		HL	2,06	2,06	2,09	2,09	2,10
		HA	3,04	2,92	2,92	2,83	2,87
		HE	2,68	2,57	2,50	2,39	2,43
ESEER	(W/W)	H	3,30	3,19	3,69	3,42	3,50
		HL	3,28	3,18	3,66	3,42	3,48
		HA	3,71	3,48	4,13	4,09	3,98
		HE	3,67	3,45	4,03	3,99	3,87
Heating capacity	(kW)	H	98	104	127	138	157
		HL	100	107	130	151	166
		HA	104	111	136	153	172
		HE	104	111	136	153	172
COP	(W/W)	H	2,89	2,83	2,89	2,82	2,79
		HL	2,95	2,91	2,95	3,08	2,95
		HA	3,26	3,22	3,33	3,34	3,24
		HE	3,26	3,22	3,33	3,34	3,24

Performance values refer to the following conditions:

Data declared in accordance with UNI EN 14511: 2011

COOLING:
- Water outlet temperature 7 °C;
- Ambient temp. 35 °C;
- Δt = 5 °C

HEATING:
- Water outlet temperature 45 °C;
- Ambient temp. 7 °C D.B. 6 °C W.B.;
- Δt = 5 °C

Aermec participate in the EUROVENT program: LCP/A/P/C, up to 600 kW
The products are present on the site www.eurovent-certification.com

For futhers informations, please refer to the technical booklet available in the web site www.aermec.com

Aermec reserves the right to make all the modifications considered necessary to improve the product at any time.

Technical data

Mod. NRL	U.M.	Vers.	0750	0800	0900	1000	1250	1404	1504	1655	1800
Cooling capacity	(kW)	°	189	210	230	255	301	336	373	410	447
		L	173	189	209	234	270	301	334	365	392
		A	194	217	241	269	320	355	397	435	467
		E	179	202	223	249	296	327	365	407	434
EER	(W/W)	°	2,67	2,65	2,46	2,42	2,45	2,33	2,28	2,32	2,36
		L	2,27	2,13	2,05	2,05	1,99	1,90	1,87	1,88	1,87
		A	3,06	3,09	2,92	2,85	2,97	2,81	2,76	2,79	2,76
		E	2,59	2,62	2,50	2,43	2,54	2,41	2,35	2,44	2,40
ESEER	(W/W)	°	3,63	3,96	3,76	3,75	3,71	3,55	3,46	3,57	3,64
		L	3,65	3,91	3,78	3,76	3,65	3,49	3,44	3,51	3,49
		A	3,91	4,14	4,01	3,93	4,06	3,85	3,84	3,88	3,88
		E	3,82	4,06	3,98	3,88	4,04	3,82	3,79	3,87	3,86

Mod. NRL	U.M.	Vers.	0750	0800	0900	1000	1250	1404	1504	1655	1800
Cooling capacity	(kW)	H	175	200	221	261	299	332	366	421	452
		HL	164	183	199	236	264	301	331	372	396
		HA	179	210	238	260	313	350	386	435	470
		HE	174	193	212	230	283	318	354	397	424
COP	(W/W)	H - HL	3,03	3,00	2,98	3,02	3,03	3,02	3,00	2,99	3,00
		HA - HE	3,28/3,29	3,11	3,13	3,11	3,09	3,10	3,08	3,13	3,17
Heating capacity	(kW)	H	203	228	257	295	342	386	429	470	505
		HA - HE	205	234	264	295	346	390	435	486	526
EER	(W/W)	H	2,46	2,44	2,33	2,55	2,46	2,35	2,28	2,51	2,50
		HL	2,09	2,02	1,88	2,09	1,93	1,94	1,89	1,98	1,93
		HA	2,79	2,84	2,86	2,73	2,83	2,74	2,67	2,85	2,87
		HE	2,49	2,36	2,23	2,13	2,29	2,25	2,22	2,34	2,31
ESEER	(W/W)	H	3,66	3,85	3,66	3,67	3,63	3,50	3,44	3,45	3,53
		HL	3,67	3,79	3,66	3,66	3,56	3,42	3,39	3,39	3,37
		HA	3,98	4,01	3,90	3,82	3,96	3,80	3,72	3,74	3,71
		HE	3,87	3,92	3,87	3,78	3,93	3,77	3,66	3,72	3,74

Mod. NRL	U.M.	Vers.	2000	2250	*2500	*2808	*3008	*3310	*3600
Cooling capacity	(kW)	°	-	-	-	671	741	820	894
		L	-	-	-	600	669	730	783
		A	538	589	*640	709	793	884	949
		E	497	545	594	656	731	815	869
EER	(W/W)	°	-	-	-	2,34	2,29	2,32	2,36
		L	-	-	-	1,90	1,87	1,88	1,87
		A	2,87	2,98	2,97	2,82	2,77	2,95	2,93
		E	2,44	2,50	2,55	2,41	2,35	2,45	2,40
ESEER	(W/W)	°	-	-	-	3,61	3,53	3,62	3,68
		L	-	-	-	3,54	3,50	3,55	3,52
		A	3,99	4,25	4,14	3,93	3,89	3,93	3,89
		E	3,93	4,02	4,11	3,89	3,83	3,91	3,91

Mod. NRL		Vers.	2000	2250	*2500	*2808	*3008	*3310	*3600
Cooling capacity	kW	H	-	-	-	665	732	844	905
		HL	-	-	-	601	663	743	792
		HA	518	572	626	699	772	870	940
		HE	461	513	566	637	707	792	849
EER	W/W	H	-	-	-	2,36	2,29	2,52	2,50
		HL	-	-	-	1,94	1,89	1,97	1,93
		HA	2,71	2,78	2,84	2,75	2,68	2,84	2,87
		HE	2,14	2,22	2,29	2,26	2,23	2,33	2,32
ESEER	W/W	H	-	-	-	3,52	3,45	3,47	3,54
		HL	-	-	-	3,44	3.40	3.40	3,38
		HA	3,84	3,90	3,98	3,82	3,74	3,75	3,73
		HE	3,80	3,86	3,95	3,78	3,68	3,74	3,75
Heating capacity	kW	H - HL	-	-	-	770	858	940	1009
		HA - HE	588	639	692	780	870	972	1050
COP	W/W	H - HL	-	-	-	3,02	3,01	2,99	2,99
		HA - HE	3,13	3,11	3,09	3,09	3,10	3,14	3,17

Performance values refer to the following conditions:

Data declared in accordance with UNI EN 14511: 2011

COOLING:
- Water outlet temperature 7 °C;
- Ambient temp. 35 °C;
- Δt = 5 °C

HEATING:
- Water outlet temperature 45 °C;
- Ambient temp. 7 °C D.B. 6 °C W.B.;
- Δt = 5 °C

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

Aermec participate in the EUROVENT program: LCP/A/P/C, up to 600 kW
The products are present on the site www.eurovent-certification.com

*Not certified model

For futhers informations, please refer to the technical booklet available in the web site www.aermec.com

NRL - NRLH MultiScroll Technology
THE INTELLIGENT EVOLUTION OF THE WINNING NRA RANGE

Aermec, productive reality and reference brand in Italy and Europe for air conditioning and climate control, has concentrated all its know-how and resources to the achievement of a complete series of chillers and heat pumps that can be used in applications ranging from domestic up to high capacity industrial ones. Within this range the NRA series was the successful response to the cooling and heating needs of medium and large users. Today, this range is improved by the new NRL-NRLH with R410A Multiscroll technology, putting innovation at the service of comfort and energy savings. A new stage in the technological evolution that makes Aermec a company keeping pace with the times.

AERMEC
air conditioning

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