

NRB

0800/3600
only cooling

Air/Water Chillers for Outdoor Installation
Scroll compressors, Shell&tube heat exchangers and axial fans
Cooling capacity 221 - 1047kW



Aermec
participate in the EUROVENT
program: LCP
the products are present on the site
www.eurovent-certification.com



- **MICROCHANNEL COIL**
- **HP FLOATING: ESEER +7% WITH INVERTER FANS**
- **NIGHT MODE**
- **SHELL AND TUBE HEAT EXCHANGER OPTION**

Characteristics

Outdoor chillers for the production of chilled water with high efficiency scroll compressors, axial fans, microchannel condenser coils, and Shell&tube heat exchanger. In the units (with desuperheater or total recovery) there is also the possibility of producing hot water for free. The base, the structure and the panels are made of steel treated with polyester paint.

Versions

NRB_°	Standard
NRB_L	Standard low noise
NRB_A	High efficiency
NRB_E	High efficiency low noise
NRB_U	Very high efficiency
NRB_N	Very high efficiency low noise

Range of operation: Work up to 50°C of outdoor air temperature at full load, depending on size and version. For further details refer to the selection software/technical documentation.

- Unit with 2 refrigerant circuits designed to provide maximum efficiency at full load, also ensuring high efficiency at partial loads and ensuring continuity in case one of the circuits stops.

- The full range uses aluminium microchannel coils, ensuring very high levels of efficiency. This allows the use less refrigerant compared to traditional copper coils.
- The possibility of using the electronic thermostatic valve brings significant benefits, particular in when the refrigerant is working at partial loads to the benefit of energy efficiency of the unit. It is supplied as standard from size 1800-3600 and is optional for all other sizes.
- Standard differential pressure switch
- Electrical heater for plate heat exchanger
- Possibility of integrated hydronic kit that encloses the main hydraulic components; it is available in different configurations with one or two pumps, with different static pressures available.
- Microprocessor adjustment, complete with a 7" touch screen keyboard, which allows to navigate intuitively among the various screens, allowing to modify the operating parameters and graphically view the progress of some variables in real time.
- The presence of a programmable timer allows setting time bands of operation and a possible second set-point.
- The temperature control takes place with the integral proportional logic, based on the water output temperature.
- **Floating HP:** is supplied as standard on all models. This modulates the fan speed according to the unit load and offers an improved ESEER (beyond the declared values) when applied with variable speed fans (i.e. units with DCPX option or inverter fans). **ESEER improvements of up to 7% are obtained with inverter equipped models.**
- **Night Mode:** it is possible to set a silenced operation profile. Perfect for night operation, since it guarantees greater acoustic comfort in the evenings, and a high efficiency in the time of greater load. **Night Mode is standard on all low noise versions. For all other versions either the DCPX accessory or "J" inverter fan must be specified to allow Night Mode to operate.**

Accessories

- **AER485P1:** RS-485 interface for supervision systems with MODBUS protocol.
 - **AERNET:** The device allows the control, the management and the remote monitoring of a Chiller with a PC, smartphone or tablet using Cloud connection. AERNET works as Master while every unit connected is configured as Slave (max. 6 unit); also, with a simple click is possible to save a log file with all the connected unit datas in the personal terminal for post analysis.
 - **PGD1:** Remote control of the chiller operating functions.
 - **MULTICHILLER_PCO:** Control system for multiple parallel installed constant flow chillers providing individual chiller on/off and control
 - **capability.**
 - **DCPX:** Device for condensation temperature control, with continuous speed modulation of fans by using a pressure transducer. **Standard in option low noise version or with desuperheater.**
 - **AVX:** Spring anti-vibration mounts.
 - **FL:** Flow Switch. **The accessory must be mounted or otherwise forfeit warranty**
 - **input current).**
 - **KRS: Evaporator trace heating for Shell&tube**
 - **GP:** Coil guards.
- COMPATIBILITY WITH THE VMF SYSTEM.**
For further system information please refer to the specific documentation.
- Accessories factory fitted only**
- **DRE:** Electronic soft starter which reduces starting current.
 - **RIF:** Power factor correction. Connected in parallel to the motor allowing about 10% reduction of

Compatibility of Accessories

Mod. NRB	vers.	0800	0900	1000	1100	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3200	3400	3600
AER48SP1		.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
AERNET		.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
PGD1		.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
MULTICHILLER PCO		.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
DCPX	(1)	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
FL		.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
AVX	(1)	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Accessories factory fitted only																		
DRENRB		0800	0900	1000	1100	1200	1400	1600	-	-	-	-	-	-	-	-	-	-
	°	0800	0900	1000	1100	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3200	3400	3600
	L	0800	0900	1000	1100	1200	1400	1601	1800	2000	2200	2400	2600	2800	3000	3200	3400	3600
RIF	A	0800	0900	1000	1100	1200	1400	1601	1800	2000	2200	2400	2600	2800	3000	3200	3400	3600
	E	0800	0900	1000	1101	1201	1401	1601	1800	2000	2200	2400	2600	2800	3000	3200	3400	3600
	U	0800	0900	1000	1101	1201	1401	1601	1800	2000	2200	2400	2600	2800	3000	3200	3400	3600
	N	0801	0901	1001	1101	1201	1401	1601	1800	2000	2200	2400	2600	2800	3000	3200	3400	3600
KRS	(1)	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
GP	(1)	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	(2) °	-	-	-	-	-	-	-	.	.	.	.	.	.	.	.	.	.
XLA	(2) L	-	-	-	-	-	-	.	.	.	.	.	.	.	.	.	.	.
	(2) A	-	-	-	-	-	-	.	.	.	.	.	.	.	.	.	.	.
	(2) E	-	-	-	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	(2) U	-	-	-	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	(2) N	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

(1) Refer to the technical documentation; (2) with the accessory XLA do not use the DCPX

Unit Configurator

By suitably combining the numerous options available it is possible to configure each model in such a way as to meet the most demanding of system requirements.

Field	Description																	
1,2,3	NRB																	
4,5,6,7	Sizes (2)																	
	0800-0900-1000-1100-1200-1400-1600-1800-2000-2200-2400-2600-2800-3000-3200-3400-3600																	
8	Operational Limits																	
	° Standard (temperature of water produced up to +4 °C) (3)																	
	Y Low Temperature (temperature of water produced from +4°C a -8°C) (4)																	
	X Electronic Thermostatic Valve (temperature of water produced up to +4 °C)																	
	Z Low Temperature Electronic Thermostatic Valve (temperature of water produced from +4°C a -8°C) (4)																	
9	Model																	
	° Cooling Only																	
	C Motor Condensing Unit (5)																	
10	Heat recovery																	
	° Without Heat Recovery																	
	D With Desuperheater (6)																	
	T With Total Recovery (7)																	
11	Version																	
	° Standard																	
	L Low Noise Standard																	
	A High Efficiency																	
	E Low Noise High Efficiency																	
	U Very High Efficiency																	
	N Low noise very high efficiency																	
12	Coils																	
	° Aluminium microchannel																	
	O Painted Aluminium Microchannel																	
	R Copper - copper																	
Compatible with Total Recovery																		
13	S Copper - Tinned Fans																	
	° Standard																	
	M Increased																	
	J Inverter																	
	Power supply																	
	° 400V/3/50Hz magnet circuit breakers																	
14	Integrated hydronic kit																	
	00 Without hydronic kit																	
	With n°1 pump: (6)																	
	PA Pump A																	
	PB Pump B																	
	PC Pump C																	
	PD Pump D																	
	PE Pump E																	
	PF Pump F																	
	PG Pump G																	
	PH Pump H																	
	PI Pump I																	
	PJ Pump J																	
	With n°2 pump: (6)																	
	DA Pump A and Stand-by pump																	
	DB Pump B and Stand-by pump																	
	DC Pump C and Stand-by pump																	
	DD Pump D and Stand-by pump																	
	DE Pump E and Stand-by pump																	
	DF Pump F and Stand-by pump																	
	DG Pump G and Stand-by pump																	
	DH Pump H and Stand-by pump																	
	DI Pump I and Stand-by pump																	
	DJ Pump J and Stand-by pump																	

- (2) The availability of models is to be agreed with the Technical Sales
 - (3) Sizes from 1800-3600 standard with the electronic thermostatic valve
 - (4) In the versions A-E-U-N it's possible produce cooling water up to -10°C, for more information contact us
 - (5) The motor condensing units are not configurable with option Y/X/Z
 - The models with total recovery "D/T" are not configurable with Y/Z and with vers. "C"
 - (6) The Desuperheater is compatible with all models even in pump versions.
 - (7) For compatibility with Total Recovery see table below.
- For compatibility with the Hydronic Kit, see the table below.

Version	0800	0900	1000	1100	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3200	3400	3600
standard	°	-	-	-	-	-	-	•	•	•	•	•	•	•	•	•	•
Silenced standard	L	-	-	-	-	-	•	•	•	•	•	•	•	•	•	•	•
High efficiency	A	-	-	-	-	-	•	•	•	•	•	•	•	•	•	•	•
Silenced high efficiency	E	-	-	-	•	•	•	•	•	•	•	•	•	•	•	•	•
Very high efficiency	U	-	-	-	-	-	•	•	•	•	•	•	•	•	•	•	•
Silenced very high efficiency	N	-	-	-	•	•	•	•	•	•	•	•	•	•	•	•	•

• = it is possible to install pumping units. Standard differential pressure switch. Water filter not supplied

Technical Data

NRB - °		0800	0900	1000	1100	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3200	3400	3600
		V/ph/Hz																
	Cooling capacity	(1) kW	221	244	270	299	352	404	438	510	559	596	674	719	784	829	878	943
	Total power input	(1) kW	73	83	94	110	117	135	155	176	194	217	236	256	270	293	315	355
	EER	(1)	3,02	2,93	2,87	2,71	3,00	2,98	2,82	2,90	2,88	2,75	2,85	2,81	2,90	2,83	2,79	2,86
	ESEER	(1)	4,16	4,07	4,00	3,84	4,14	4,12	3,96	4,04	4,02	3,88	3,98	3,94	4,04	3,97	3,92	4,00
	ESEER HP floating		ESEER improvements of up to 7%															
	Cooling Energy Class Eurovent	(1)	B	B	C	C	B	B	C	B	C	C	C	B	C	C	C	
	Water flow rate	(1) l/h	38160	42120	46550	51620	60800	69720	75600	88010	96580	103000	116350	124240	135450	142970	151500	162790
	Pressure drop	(1) kPa	46	55	38	45	44	39	46	40	47	53	52	58	60	36	39	46

NRB - L		0800	0900	1000	1100	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3200	3400	3600
		V/ph/Hz																
	Cooling capacity	(1) kW	217	237	272	307	343	390	438	497	554	607	665	726	769	833	885	950
	Total power input	(1) kW	73	86	92	107	123	139	152	173	192	214	234	247	270	285	307	348
	EER	(1)	2,97	2,76	2,96	2,86	2,8	2,81	2,88	2,87	2,89	2,84	2,94	2,85	2,93	2,88	2,94	2,88
	ESEER	(1)	4,23	4,09	4,22	4,15	4,11	4,12	4,17	4,16	4,18	4,14	4,21	4,14	4,20	4,17	4,21	4,17
	ESEER HP floating		ESEER improvements of up to 7%															
	Cooling Energy Class Eurovent	(1)	B	C	B	C	C	C	C	C	C	C	C	B	C	B	C	
	Water flow rate	(1) l/h	37360	40940	46960	52990	59200	67320	75460	85760	95600	104710	114690	125170	132530	143570	152590	163960
	Pressure drop	(1) kPa	25	20	27	24	29	23	30	28	37	36	44	28	31	30	34	43

NRB - A		0800	0900	1000	1100	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3200	3400	3600
		V/ph/Hz																
	Cooling capacity	(1) kW	224	252	283	326	361	411	461	518	575	632	696	756	804	865	927	978
	Total power input	(1) kW	71	81	90	105	115	132	148	166	183	203	223	240	256	277	297	314
	EER	(1)	3,17	3,11	3,14	3,11	3,13	3,12	3,13	3,12	3,13	3,11	3,12	3,14	3,12	3,12	3,11	3,10
	ESEER	(1)	4,32	4,23	4,27	4,23	4,25	4,24	4,25	4,24	4,26	4,23	4,24	4,28	4,27	4,25	4,24	4,21
	ESEER HP floating		ESEER improvements of up to 7%															
	Cooling Energy Class Eurovent	(1)	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
	Water flow rate	(1) l/h	38600	43440	48860	56140	62190	70870	79580	89370	99160	109010	120100	130380	138690	149210	159850	168810
	Pressure drop	(1) kPa	27	22	30	27	32	25	34	30	39	39	48	30	34	32	38	41

NRB - E		0800	0900	1000	1100	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3200	3400	3600
		V/ph/Hz																
	Cooling capacity	(1) kW	219	248	275	321	358	403	454	514	568	636	687	740	793	856	910	963
	Total power input	(1) kW	70	79	89	102	115	130	144	165	183	203	221	237	255	275	291	310
	EER	(1)	3,14	3,12	3,10	3,14	3,12	3,10	3,15	3,12	3,10	3,13	3,10	3,12	3,13	3,10	3,12	3,10
	ESEER	(1)	4,33	4,3	4,27	4,33	4,29	4,27	4,33	4,29	4,27	4,31	4,27	4,31	4,27	4,31	4,26	4,27
	ESEER HP floating		ESEER improvements of up to 7%															
	Cooling Energy Class Eurovent	(1)	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
	Water flow rate	(1) l/h	37750	42770	47360	55330	61750	69420	78330	88560	97950	109670	118450	127560	136720	147660	156920	166120
	Pressure drop	(1) kPa	19	23	20	27	21	27	26	33	33	22	25	30	34	33	38	41

NRB - U		0800	0900	1000	1100	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3200	3400	3600
		V/ph/Hz																
	Cooling capacity	(1) kW	227	257	286	329	369	414	466	528	593	654	716	764	814	877	939	997
	Total power input	(1) kW	69	78	87	99	112	125	140	158	176	195	213	229	249	266	282	303
	EER	(1)	3,30	3,31	3,30	3,31	3,31	3,28	3,31	3,31	3,31	3,32	3,33	3,27	3,30	3,33	3,30	3,28
	ESEER	(1)	4,37	4,39	4,37	4,39	4,38	4,35	4,39	4,39	4,39	4,41	4,42	4,33	4,38	4,41	4,37	4,34
	ESEER HP floating		ESEER improvements of up to 7%															
	Cooling Energy Class Eurovent	(1)	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
	Water flow rate	(1) l/h	39190	44360	49350	56750	63360	71380	80370	91100	102250	112740	123390	131760	140330	151290	161950	172070
	Pressure drop	(1) kPa	20	25	21	28	23	28	27	34	34	23	26	30	35	34	39	42

Date (14511:2013)

(1) Water evaporator 12°C/7°C, External air 35°C

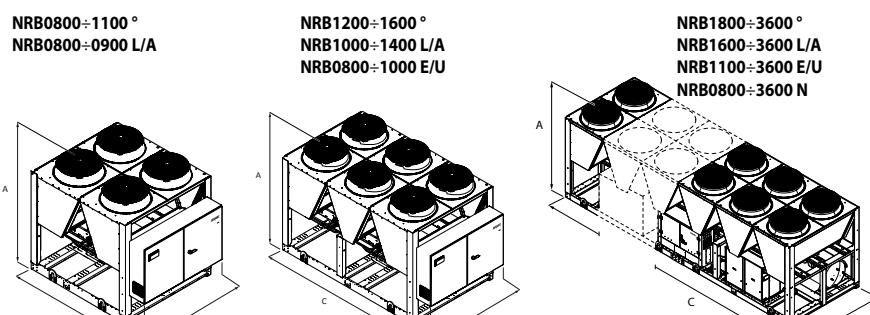
Dimensions (mm)

	0800	0900	1000	1100	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3200	3400	3600
Electrical data																	
Total input current (cooling)	(2)	A	128	143	160	186	202	230	261	300	330	367	405	434	459	498	535
Maximum current (FLA)	(2)	A	164	181	197	226	262	291	320	367	408	449	497	529	569	610	650
Starting current (LRA)	(2)	A	353	408	424	477	513	625	654	637	678	719	766	799	838	879	920
Total input current (cooling)	(2)	A	123	142	154	179	203	232	251	290	319	359	390	413	449	479	513
Maximum current (FLA)	L	A	177	193	222	252	281	310	352	393	446	487	547	592	625	666	720
Starting current (LRA)	A	A	366	421	450	503	532	644	686	662	716	757	816	862	895	936	989
Total input current (cooling)	(2)	A	124	140	159	182	198	224	252	284	316	349	386	418	442	476	513
Maximum current (FLA)	A	A	177	193	222	252	281	310	352	393	446	487	547	592	625	666	720
Starting current (LRA)	A	A	366	421	450	503	532	644	686	662	716	757	816	862	895	936	989
Total input current (cooling)	(2)	A	119	135	149	172	193	216	240	275	306	343	373	397	426	460	488
Maximum current (FLA)	E	A	190	206	222	265	294	323	365	424	465	519	560	605	638	692	745
Starting current (LRA)	A	A	378	434	450	515	545	657	699	693	734	788	829	874	907	961	1015
Total input current (cooling)	(2)	A	124	138	153	176	196	218	244	278	312	348	377	401	432	463	494
Maximum current (FLA)	U	A	190	206	222	265	294	323	365	424	465	519	560	605	638	692	745
Starting current (LRA)	A	A	378	434	450	515	545	657	699	693	734	788	829	874	907	961	1015
Total input current (cooling)	(2)	A	118	135	147	167	189	209	234	264	295	329	360	385	412	442	475
Maximum current (FLA)	N	A	203	219	235	277	307	336	383	437	478	531	572	618	651	704	758
Starting current (LRA)	A	A	391	446	463	528	557	670	717	706	747	801	842	887	920	974	1027
Scroll Compressor																	
Compressors / Circuit	n°	4/2	4/2	4/2	4/2	4/2	4/2	4/2	4/2	4/2	4/2	4/2	5/2	6/2	6/2	6/2	6/2
Refrigerant	Type	R410A															
Shell&Tube Heat exchanger system side																	
Exchanger	n°	1															
hydraulic connections (In/Out)	Ø	Please refer to technical documentation															
Axial fans																	
Fan	°	n°	4	4	4	4	6	6	6	8	8	8	10	10	12	12	14
Air flow rate	m³/h	64000	64000	64000	64000	96000	96000	128000	128000	128000	160000	160000	192000	192000	192000	224000	224000
Fan	L	n°	4	4	6	6	6	6	8	8	10	10	12	14	14	16	16
Air flow rate	m³/h	46000	46000	69000	69000	69000	92000	92000	115000	115000	138000	161000	161000	161000	184000	184000	208000
Fan	A	n°	4	4	6	6	6	6	8	8	10	10	12	14	14	16	16
Air flow rate	m³/h	64000	64000	96000	96000	96000	96000	128000	128000	160000	160000	192000	224000	224000	256000	256000	288000
Fan	E	n°	6	6	6	8	8	8	10	12	12	14	14	16	16	18	20
Air flow rate	m³/h	69000	69000	69000	92000	92000	92000	115000	138000	161000	161000	184000	184000	207000	230000	230000	230000
Fan	U	n°	6	6	8	8	8	8	10	12	12	14	14	16	16	18	20
Air flow rate	m³/h	96000	96000	96000	128000	128000	128000	160000	192000	192000	224000	224000	256000	288000	320000	320000	320000
Fan	N	n°	8	8	8	10	10	10	12	14	14	16	16	18	18	20	22
Air flow rate	m³/h	92000	92000	92000	115000	115000	115000	138000	161000	161000	184000	184000	207000	207000	230000	253000	253000
Sound data (cooling)																	
Sound power level	°	dB(A)	88	88	88	88	90	90	90	92	92	93	95	95	96	96	96
	L	dB(A)	83	83	85	85	85	86	86	88	89	90	90	91	91	92	93
	A	dB(A)	88	88	90	90	90	90	91	92	94	94	96	96	96	97	97
	E	dB(A)	85	85	85	86	86	86	88	89	89	91	91	92	93	93	93
	U	dB(A)	90	90	90	91	91	91	93	94	95	96	96	97	97	98	98
	N	dB(A)	86	86	86	88	88	88	88	90	90	91	92	93	93	94	94

(2) Unit standard configuration without hydronic kit

Sound power Aermec determines sound power values on the basis of measurements made in accordance with UNI EN ISO 9614-2, as required for Eurovent certification.

Dimensions (mm)



NRB		0800	0900	1000	1100	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3200	3400	3600
Height	A	Alls	mm	2450	2450	2450	2450	2450	2450	2450	2450	2450	2450	2450	2450	2450	2450	2450
Width	B	Alls	mm	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
	°	mm	2780	2780	2780	2780	3970	3970	3970	4760	4760	4760	5950	5950	7140	7140	8330	8330
	L	mm	2780	2780	3970	3970	3970	3970	4760	4760	4760	5950	5950	7140	8330	8330	9520	9520
Depht	C	A	mm	2780	2780	3970	3970	3970	3970	4760	4760	4760	5950	5950	7140	8330	8330	9520
	E	mm	3970	3970	3970	4760	4760	4760	5950	5950	7140	7140	8330	8330	9520	10710	11900	11900
	U	mm	3970	3970	3970	4760	4760	4760	5950	5950	7140	8330	8330	9520	10710	11900	13090	13090
	N	mm	4760	4760	4760	5950	5950	5950	7140	8330	8330	9520	9520	10710	11900	13090	13090	13090

Aermec reserves the right to make all modification deemed necessary for improving the product at any time with any modification of technical data.

Aermec S.p.A.
Via Roma, 996 - 37040 Bevilacqua (VR) - Italia
Tel. 044263111 - Telefax 044293577
www.aermec.com