

12 GENERAL TECHNICAL DATA

Size		0800	0900	1000	1100	1200	1400	1600	1805	2006	2206	2406	2600	2800	3000	3200	3400	3600	
Compressor																			
Type	°A,E,L,N,U type		Scroll																
Compressor regulation	°A,E,L,N,U Type		Asynchronous																
Number	°A,E,L,N,U no.	4	4	4	4	4	4	4	5	6	6	6	5	6	6	6	6	6	
Circuits	°A,E,L,N,U no.	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Partialisation of the unit with mechanical thermostatic valve	°A,E,L,N,U %	25%	25%	25%	25%	25%	25%	25%	17%	17%	17%	17%	20%	17%	17%	17%	17%	17%	
Partialisation of the unit with electronic thermostatic expansion valve	°A,E,L,N,U %	25%	25%	25%	25%	25%	25%	25%	17%	17%	17%	17%	20%	17%	17%	17%	17%	17%	
Refrigerant	°A,E,L,N,U type		R410A																
Refrigerant load circuit 1 (1)	° kg	14,0	14,5	15,0	16,0	20,5	21,0	21,0	26,0	26,0	26,0	31,0	30,0	41,0	45,0	41,0	48,0	48,0	
	A,L kg	15,0	16,0	20,0	22,0	21,0	22,5	23,5	25,0	30,0	31,0	32,5	42,0	49,0	59,0	65,0	56,0	52,0	
	E,U kg	20,5	20,0	21,5	26,0	25,0	26,0	30,0	32,0	36,0	44,5	56,0	62,0	53,0	70,0	78,0	78,0	78,0	
	N kg	25,0	26,5	26,5	29,0	28,0	35,0	42,0	38,0	43,0	62,0	42,0	67,0	55,0	76,0	84,0	84,0	84,0	
Refrigerant load circuit 2 (1)	° kg	14,0	14,5	15,0	16,0	20,5	21,0	21,0	29,0	29,0	29,0	34,0	40,0	48,0	50,0	41,0	55,0	55,0	
	A,L kg	15,0	16,0	20,0	22,0	21,0	22,5	25,5	30,0	34,0	34,0	37,5	54,0	55,0	59,0	65,0	66,0	64,0	
	E,U kg	20,5	20,0	21,5	27,0	28,0	27,0	32,0	37,0	39,0	45,5	56,0	62,0	63,0	70,0	78,0	78,0	78,0	
	N kg	25,0	26,5	26,5	30,0	31,0	35,0	42,0	42,0	47,0	62,0	49,0	67,0	67,0	76,0	84,0	84,0	84,0	
Oil charge circuit 1	°A,E,L,N,U kg	9,3	11,5	13,6	13,1	12,6	12,6	12,6	16,6	24,9	24,9	12,6	18,6	27,9	27,9	27,9	27,9	27,9	
Oil charge circuit 2	°A,E,L,N,U kg	9,3	11,5	13,6	13,1	12,6	12,6	12,6	24,9	24,9	24,9	24,9	24,9	27,9	27,9	27,9	27,9	27,9	
System side heat exchanger																			

System side heat exchanger

10 PERFORMANCE SPECIFICATIONS

NRB 0800-3600

NRB - °

Size		0800	0900	1000	1100	1200	1400	1600	1805	2006	2206	2406	2600	2800	3000	3200	3400	3600
Cooling performance 12 °C / 7 °C (1)																		
Cooling capacity	kW	221,5	244,5	270,3	299,7	353,1	404,9	439,0	511,2	560,9	598,2	675,8	721,6	786,8	830,6	880,2	945,8	998,2
Input power	kW	73,3	83,1	94,1	110,3	117,5	135,4	155,1	175,7	194,0	216,6	236,5	256,0	270,3	292,6	314,7	329,4	355,2
Cooling total input current	A	128,3	143,1	160,0	185,5	201,6	229,9	260,8	299,7	329,8	366,5	404,6	434,0	459,4	498,2	534,6	562,9	606,0
EER	W/W	3,02	2,94	2,87	2,72	3,00	2,99	2,83	2,91	2,89	2,76	2,86	2,82	2,91	2,84	2,80	2,87	2,81
Water flow rate system side	l/h	38117	42077	46498	51565	60733	69640	75512	87913	96469	102883	116222	124100	135305	142813	151332	162608	171611
Pressure drop system side	kPa	46	55	58	45	44	39	46	40	47	53	52	58	60	36	39	46	43
Pressure drop on the service side with the filter installed	kPa	56	67	51	63	70	71	58	56	67	76	81	72	77	56	62	72	72

(1) Data EN 14511:2018; Heat exchanger water (services side) 12 °C / 7 °C; outside air 35 °C

SIZES (IN/OUT)		°	A	E	L	N	U	Ø	3"	3"	3"	3"	3"	3"	3"	4"	4"	4"	4"	4"	4"	5"	5"	5"	5"	5"	5"
Hydraulic connections with hydronic kit																											
Sizes (in/out)		°	A	E	L	N	U	Ø	3"	3"	3"	3"	3"	3"	3"	4"	4"	4"	4"	4"	4"	5"	5"	5"	5"	5"	5"
Sound data calculated in cooling mode (2)																											
Sound power level	°	dB(A)	87,8	87,8	87,8	87,8	90,0	90,0	90,0	90,0	90,0	90,0	92,0	92,5	93,0	94,7	94,7	95,6	95,6	95,6	95,6	96,5	96,5	96,5	96,5	96,5	96,5
	A	dB(A)	87,8	87,8	90,0	90,0	90,0	90,0	91,5	92,0	93,7	94,2	95,6	96,5	96,5	96,5	96,5	96,5	96,5	96,5	96,5	97,2	97,2	97,2	97,2	97,2	97,2
	E	dB(A)	84,8	84,8	84,8	86,3	86,3	86,3	87,5	89,0	89,5	90,8	91,3	92,0	92,6	93,2	93,2	93,2	93,2	93,2	93,2	93,2	93,2	93,2	93,2	93,2	93,2
	L	dB(A)	82,7	82,7	84,8	84,8	84,8	85,6	86,3	87,7	88,5	89,8	90,5	91,3	92,1	92,0	92,0	92,0	92,0	92,0	92,0	92,0	92,0	92,0	92,0	92,0	92,0
	N	dB(A)	86,3	86,3	86,3	87,5	87,5	87,5	88,5	89,8	90,3	91,5	92,0	92,6	92,6	93,2	93,7	93,7	93,7	93,7	93,7	93,7	93,7	93,7	93,7	93,7	93,7
	U	dB(A)	90,0	90,0	90,0	91,5	91,5	91,5	92,7	94,2	94,7	96,0	96,5	97,2	97,2	97,8	98,4	98,4	98,4	98,4	98,4	98,4	98,4	98,4	98,4	98,4	98,4
Sound pressure level (10 m)	°	dB(A)	55,7	55,7	55,7	55,7	57,7	57,7	57,7	57,7	59,1	59,6	60,1	60,6	62,1	62,2	63,0	63,0	63,0	63,0	63,0	63,0	63,0	63,0	63,0	63,0	63,0
	A	dB(A)	55,7	55,7	57,7	57,7	57,7	57,7	59,1	59,6	61,1	61,6	63,0	63,7	63,7	63,7	63,7	63,7	63,7	63,7	63,7	64,3	64,3	64,3	64,3	64,3	64,3
	E	dB(A)	52,5	52,5	52,5	54,0	54,0	54,0	55,0	56,3	56,8	58,0	58,5	59,1	59,1	59,6	60,0	60,0	60,0	60,0	60,0	60,0	60,0	60,0	60,0	60,0	60,0
	L	dB(A)	50,6	50,6	52,5	52,5	52,5	53,4	54,0	55,3	56,0	57,3	57,8	58,5	58,5	59,4	59,1	59,9	59,9	59,9	59,9	59,9	59,9	59,9	59,9	59,9	59,9
	N	dB(A)	54,0	54,0	54,0	55,0	55,0	55,0	55,8	57,0	57,5	58,6	59,1	59,6	59,6	60,0	60,4	60,4	60,4	60,4	60,4	60,4	60,4	60,4	60,4	60,4	60,4
	U	dB(A)	57,7	57,7	57,7	59,2	59,2	59,2	60,3	61,6	62,1	63,3	63,8	64,4	64,4	64,9	65,4	65,4	65,4	65,4	65,4	65,4	65,4	65,4	65,4	65,4	65,4
Sound pressure level (1 m)	°	dB(A)	68,7	68,7	68,7	68,7	70,2	70,2	70,2	71,6	72,1	72,6	73,8	74,0	74,5	74,5	74,5	74,5	74,5	74,5	74,5	74,5	74,5	74,5	74,5	74,5	74,5
	A	dB(A)	68,7	68,7	70,2	70,2	70,2	70,2	71,3	71,6	72,8	73,3	74,5	74,9	74,9	74,9	74,9	75,2	75,2	75,2	75,2	75,2	75,2	75,2	75,2	75,2	75,2
	E	dB(A)	65,0	65,0	65,0	66,2	66,2	66,2	66,8	67,8	68,3	69,2	69,7	70,0	70,0	70,3	70,3	70,3	70,3	70,3	70,3	70,3	70,3	70,3	70,3	70,3	70,3
	L	dB(A)	63,5	63,5	65,0	65,0	65,0	65,0	65,8	66,2	67,3	67,7	69,0	69,3	69,7	69,7	70,5	70,0	70,9	70,9	70,9	70,9	70,9	70,9	70,9	70,9	70,9
	N	dB(A)	66,2	66,2	66,2	66,8	66,8	66,8	67,3	68,2	68,7	69,5	70,0	70,3	70,3	70,5	70,7	70,7	70,7	70,7	70,7	70,7	70,7	70,7	70,7	70,7	70,7
	U	dB(A)	70,2	70,2	70,2	71,3	71,3	71,3	72,0	73,0	73,5	74,4	74,9	75,2	75,2	75,5	75,7	75,7	75,7	75,7	75,7	75,7	75,7	75,7	75,7	75,7	75,7

(1) The load indicated in the table is an estimated and preliminary value. The final value of the refrigerant load is indicated on the unit's technical label. For further information contact the office.
(2) Sound power calculated on the basis of measurements made in accordance with UNI EN ISO 9614-2, as required for Eurovent certification. Sound pressure (cold functioning) measured in free field, 10m away from the unit external surface (in compliance with UNI EN ISO 3744).

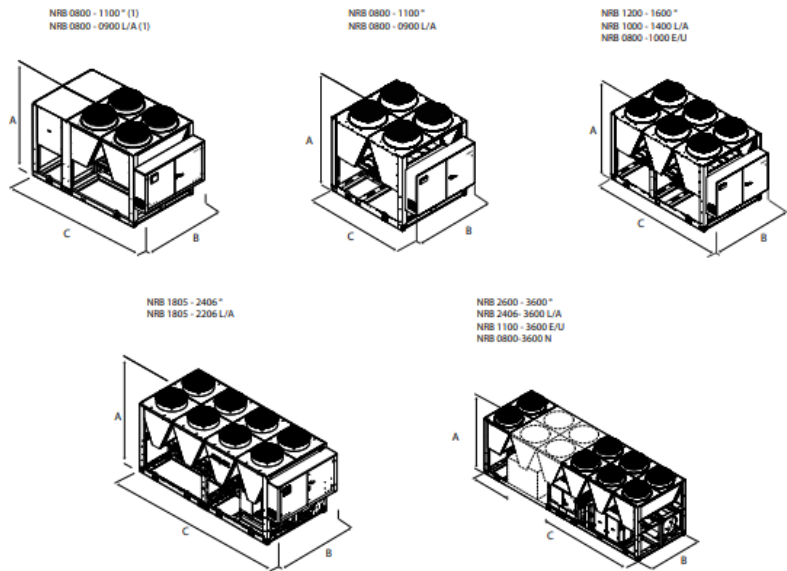
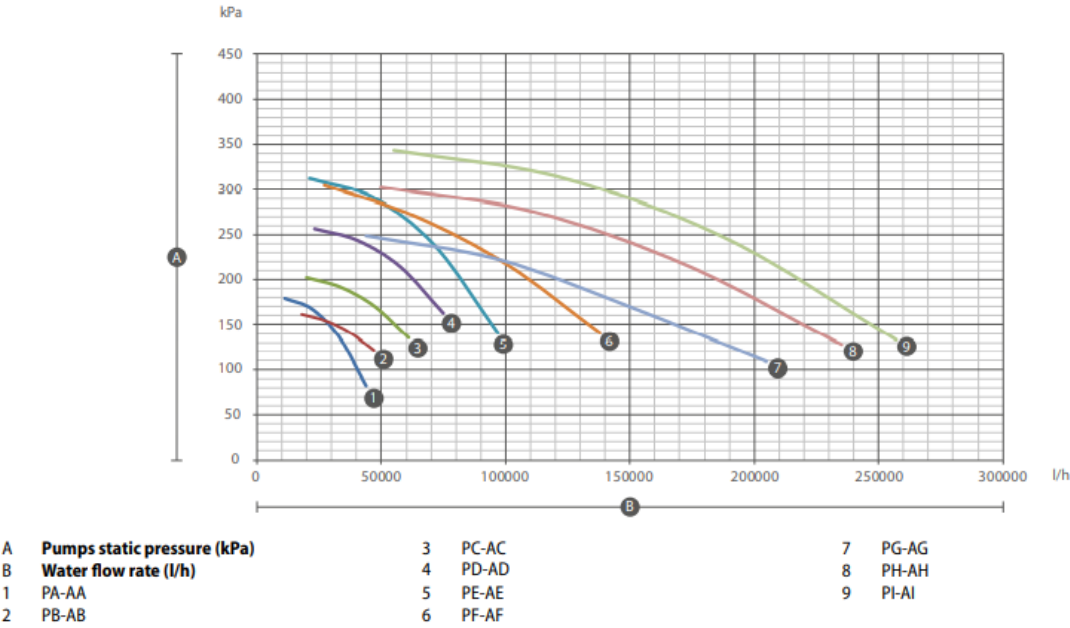
In the versions without a hydronic kit, the water filter is supplied with a connection point for making the connection. In the versions with a hydronic kit, it is supplied ready-mounted.

ELECTRIC DATA

Size		Ø800	0900	1000	1100	1200	1400	1600	1805	2006	2206	2406	2600	2800	3000	3200	3400	3600
Electric data																		
Maximum current (FLA)	°	A	164,3	180,7	197,0	226,4	262,1	291,1	320,1	371,3	416,0	445,0	480,4	529,4	568,6	609,5	650,4	697,7
	A,L	A	177,1	193,4	222,5	251,8	281,2	310,2	351,9	396,7	454,2	483,2	530,8	592,5	625,4	666,3	719,9	760,8
	E,U	A	189,8	206,1	222,5	264,5	293,9	322,9	364,6	428,0	472,8	514,5	543,5	605,2	638,1	691,7	745,4	786,3
	N	A	202,5	218,8	235,2	277,3	306,6	335,6	383,2	440,7	485,5	527,2	556,2	617,9	650,8	704,4	758,1	799,0
Peak current (LRA)	°	A	352,9	408,1	424,4	477,1	512,8	625,3	654,3	705,5	750,3	779,3	814,6	798,7	837,9	878,8	919,7	967,0
	A,L	A	365,6	420,8	449,9	502,5	531,9	644,4	686,1	730,9	788,4	817,4	865,0	861,8	894,6	935,6	989,2	1030,1
	E,U	A	378,3	433,5	449,9	515,3	544,6	657,1	698,8	762,2	807,0	848,7	877,7	874,5	907,4	961,0	1014,6	1055,6
	N	A	391,1	446,2	462,6	528,0	557,3	669,8	717,4	774,9	819,7	861,4	890,4	887,2	920,1	973,7	1027,4	1068,3

Data calculated without hydronic kit and accessories.
Add the pump consumption (see chapter: Single hydronic kits' data p. 61) to the consumption of the standard version without the hydronic kit. For further details refer to the selection program.

The table shows the characteristic curves of the pumps, **and therefore they do not represent the useful static pressures of the system.**
The useful heads of the system must be calculated by subtracting the unit's pressure drops (Δp) from the useful head of the pump shown in this diagram (see chapter: 16 Pressure drops p. 54).



(1) Additional module needed to contain the hydronic kit with "accumulation" option in sizes:
0800°, 0900°, 1000°, 1100°
0800L, 0900L
0800A, 0900A

Size		0800	0900	1000	1100	1200	1400	1600	1805	2006	2206	2406	2600	2800	3000	3200	3400	3600
Dimensions and weights																		
A	°A,E,L,N,U mm	2450	2450	2450	2450	2450	2450	2450	2450	2450	2450	2450	2450	2450	2450	2450	2450	2450
B	°A,E,L,N,U mm	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
	° mm	2780	2780	2780	2780	3970	3970	3970	5160	5160	5160	6350	5950	7140	7140	7140	8330	8330
	A,L mm	3200	2780	3970	3970	3970	3970	4760	5160	6350	6350	7140	8330	8330	8330	9520	9520	9520

16 PRESSURE DROPS

SERVICE SIDE - WITHOUT HYDRONIC KIT (00) - HEAT EXCHANGER ONLY

The water flow rate is calculated with the following formula: $Q = Pc \times 860 / \Delta T$

Q Water flow rate (l/h)

Pc Cooling capacity (kW)

ΔT Water heat drop (°C)

Pressure drops are calculated with the following formula: $\Delta p = K \times (Q)^2$

Δp Pressure drops (kPa)

Coefficient for the various sizes and versions

Q Water flow rate (l/h)

Size		0800	0900	1000	1100	1200	1400	1600	1805	2006
Pressure drops coefficient										
	°	3,1690E-08	3,1144E-08	1,7365E-08	1,7056E-08	1,2062E-08	8,0315E-09	8,0408E-09	5,1683E-09	5,0540E-09
	A	1,7959E-08	1,1700E-08	1,2488E-08	8,5435E-09	8,3752E-09	5,0319E-09	5,3366E-09	3,8103E-09	4,0125E-09
Pressure drops coefficient without hydronic kit	E	1,3284E-08	1,2671E-08	8,7453E-09	8,9201E-09	5,6364E-09	5,5583E-09	4,2437E-09	4,1883E-09	3,4356E-09
	L	1,7959E-08	1,1700E-08	1,2489E-08	8,5435E-09	8,3753E-09	5,0318E-09	5,3366E-09	3,8104E-09	4,0125E-09
	N	1,3285E-08	1,2671E-08	8,7452E-09	8,9201E-09	5,6364E-09	5,5582E-09	4,2436E-09	4,1883E-09	3,4356E-09
	U	1,3285E-08	1,2672E-08	8,7453E-09	8,9201E-09	5,6363E-09	5,5581E-09	4,2436E-09	4,1883E-09	3,4356E-09
Size		2206	2406	2600	2800	3000	3200	3400	3600	
Pressure drops coefficient										
	°	5,0511E-09	3,8450E-09	3,7390E-09	3,2605E-09	1,7442E-09	1,7102E-09	1,7328E-09	1,4520E-09	
	A	3,2813E-09	3,3201E-09	1,7925E-09	1,7767E-09	1,4604E-09	1,4784E-09	1,4525E-09	1,4511E-09	
Pressure drops coefficient without hydronic kit	E,U	1,8322E-09	1,7792E-09	1,8315E-09	1,8121E-09	1,5380E-09	1,5345E-09	1,5020E-09	1,4982E-09	
	L	3,2820E-09	3,3201E-09	1,7925E-09	1,7768E-09	1,4604E-09	1,4784E-09	1,4525E-09	1,4511E-09	
	N	1,8322E-09	1,7792E-09	1,8315E-09	1,8121E-09	1,5379E-09	1,5345E-09	1,5020E-09	1,4982E-09	

Size			0800	900	1000	1100	1200	1400	1600	1805	2006	2206	2406	2600	2800	3000	3200	3400	3600
System side heat exchanger																			
Minimum water flow rate	°	l/h	19080	1060	23275	25810	30400	34860	37800	44005	48290	51500	58175	62120	67725	71485	75750	81395	85900
	A	l/h	19300	1720	24430	28070	31095	35435	39790	44685	49580	54505	60050	65190	69345	74605	79925	84405	88365
	E	l/h	18875	1385	23680	27665	30875	34710	39165	44280	48975	54835	59225	63780	68360	73830	78460	83060	87730
	L	l/h	18680	1470	23480	26495	29600	33660	37730	42880	47800	52355	57345	62385	66265	71785	76295	81980	86410
	N	l/h	19605	2420	24515	28215	31650	35490	40120	44895	49840	55565	60460	64495	69255	74565	79750	83780	88635
	U	l/h	19595	2180	24675	28375	31835	35690	40185	45550	51125	56370	61695	65880	70165	75645	80975	86035	90320
Maximum water flow rate	°	l/h	63600	10200	77583	86033	101333	116200	126000	146683	160967	171667	193917	207067	225750	238283	252500	271317	286333
	A	l/h	64333	2400	81433	93567	103650	118117	132633	148950	165267	181683	200167	217300	231150	248683	266417	281350	294550
	E	l/h	62917	1283	78933	92217	102917	115700	130550	147600	163250	182783	197417	212600	227867	246100	261533	276867	292433
	L	l/h	62267	8233	78267	88317	98667	112200	125767	142933	159333	174517	191150	208617	220883	239283	254317	273267	288033
	N	l/h	65350	4733	81717	94050	105500	118300	133733	149650	166133	185217	201533	214983	230850	248550	265833	279267	295450
	U	l/h	65317	3933	82250	94583	106117	118967	133950	151833	170417	187900	205650	219600	233883	252150	269917	286783	301067

Inlet water temperature 12 °C

Outlet water temperature 7 °C

External air temperature 35 °C

Average water temperature 10 °C

ATTENTION: For average water temperature different than 10 °C refer to the chapter "Corrective factors for average water temperatures different from nominal values"