

BLAST FREEZING TUNNEL UNIT COOLER

INDUSTRIAL RANGE

Food processing



4 > 63 kW

NW

- The 54 models of the NW range meet the requirements of rapid deep-freezing and refrigeration applications.
- The high air flow speed guarantees extremely rapid refrigeration of food.
- The height-adjustable legs favour homogenous distribution of air over the products.
- Available air pressure of up to 200 Pa.
- Large heat-exchanger surface, large fin spacing of 6,35 - 9 or 12 mm and optimized defrost.

* Operating pressure 40 bar



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FRIGA-BOHN

HK[®]
REFRIGERATION

DESCRIPTION

Casing

- The casing is made of pre-painted galvanized steel offering a high resistance to corrosion and impact damage.
- Intermediate aluminium drain pan to protect against the risk of condensation.

Ventilation

- Two types of fans are used in the NW range:

Axial fans

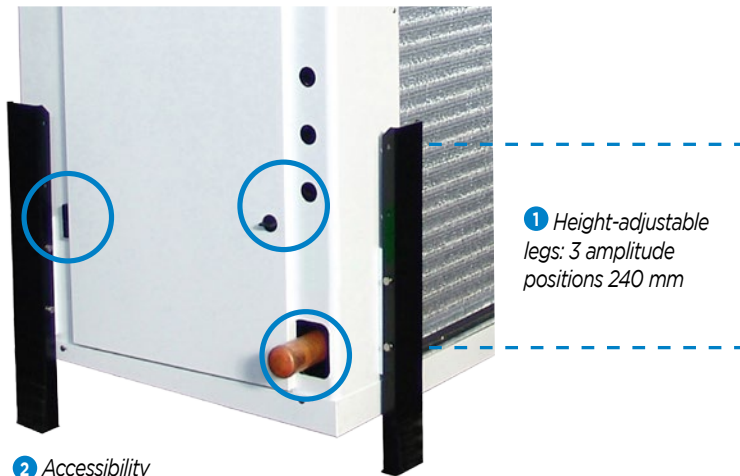
Models A - Externally mounted, their fan guards are compliant with safety standards. Three-phase external rotor motors, 400 V, 50 Hz, IP54, class F, 4 P (1,500 rpm), permanently lubricated, internal thermal overload protection. Available air pressure of up to 100 Pa.

Centrifugal fans

Models C - "Twin inlet" type with direct drive. Three-phase enclosed motors, 230/400V, 50 Hz, IP54, class F, 4 P (1,000 rpm), permanently lubricated, internal thermal overload protection. Available air pressure of up to 200 Pa.

Coil

- The high-performance and compact finned coils of the NW range are designed with flat-surface aluminium fins spaced at 6,35 - 9 or 12 mm, crimped onto copper tubes.
- The coils are supplied via R404A optimized Venturi distributor(s).
- For all other refrigerants, please contact us.



ADVANTAGES

Installation

Installation of the unit up against a wall allows maximum filling of the cold room.

The height-adjustable feet favour homogenous distribution of air over the products **1**

Two blowing positions possible: horizontal (H2) vertical (H4).

Floor mounting system for easy installation and maintenance.

Servicing / Maintenance

Easily removable main aluminium drain pan.

Hinged side panels offering easy access to electrical and refrigerant connections **2**

DESIGNATION

NW 11⁽¹⁾ A1⁽²⁾ S⁽³⁾ 100Pa⁽⁴⁾

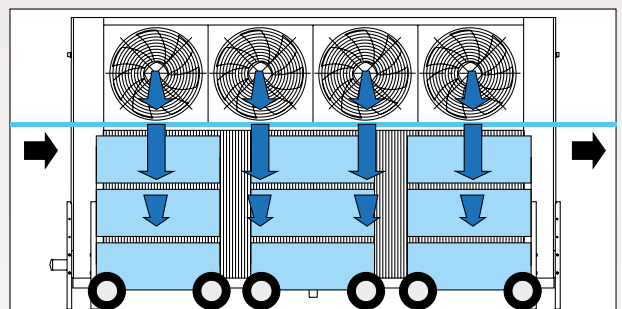
(1) Model

(2) **A** = Axial fan - **C** = Centrifugal fan / 1 = Number

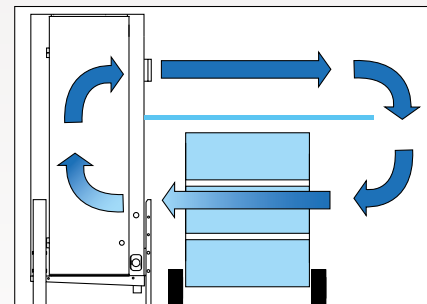
(3) Fin spacing: **R/C** = 6,35 mm - **L/S** = 9 mm - **M/T** = 12 mm

(4) Available pressure

CERTIFICATIONS

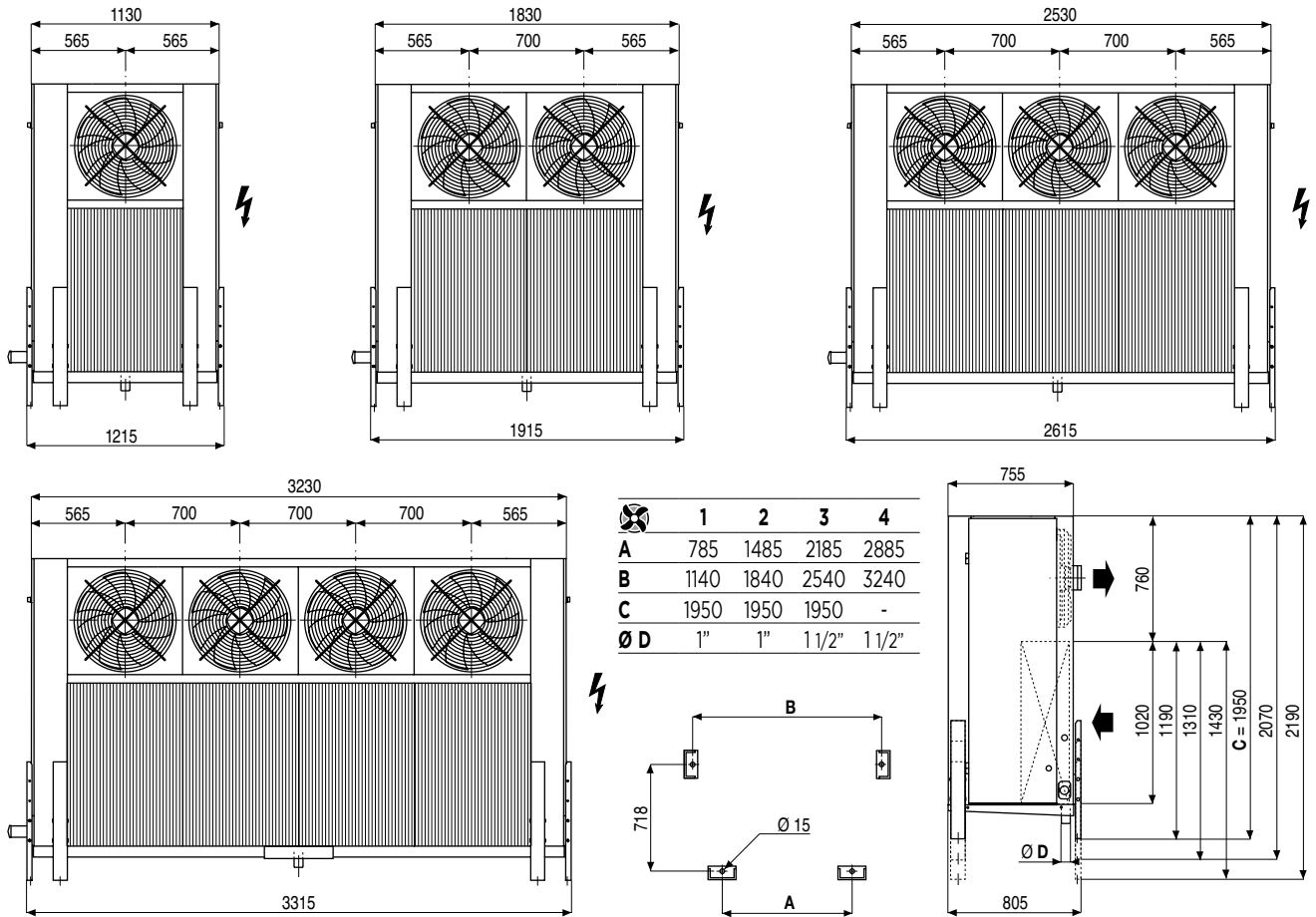


Deep-freeze tunnel principle with an NW

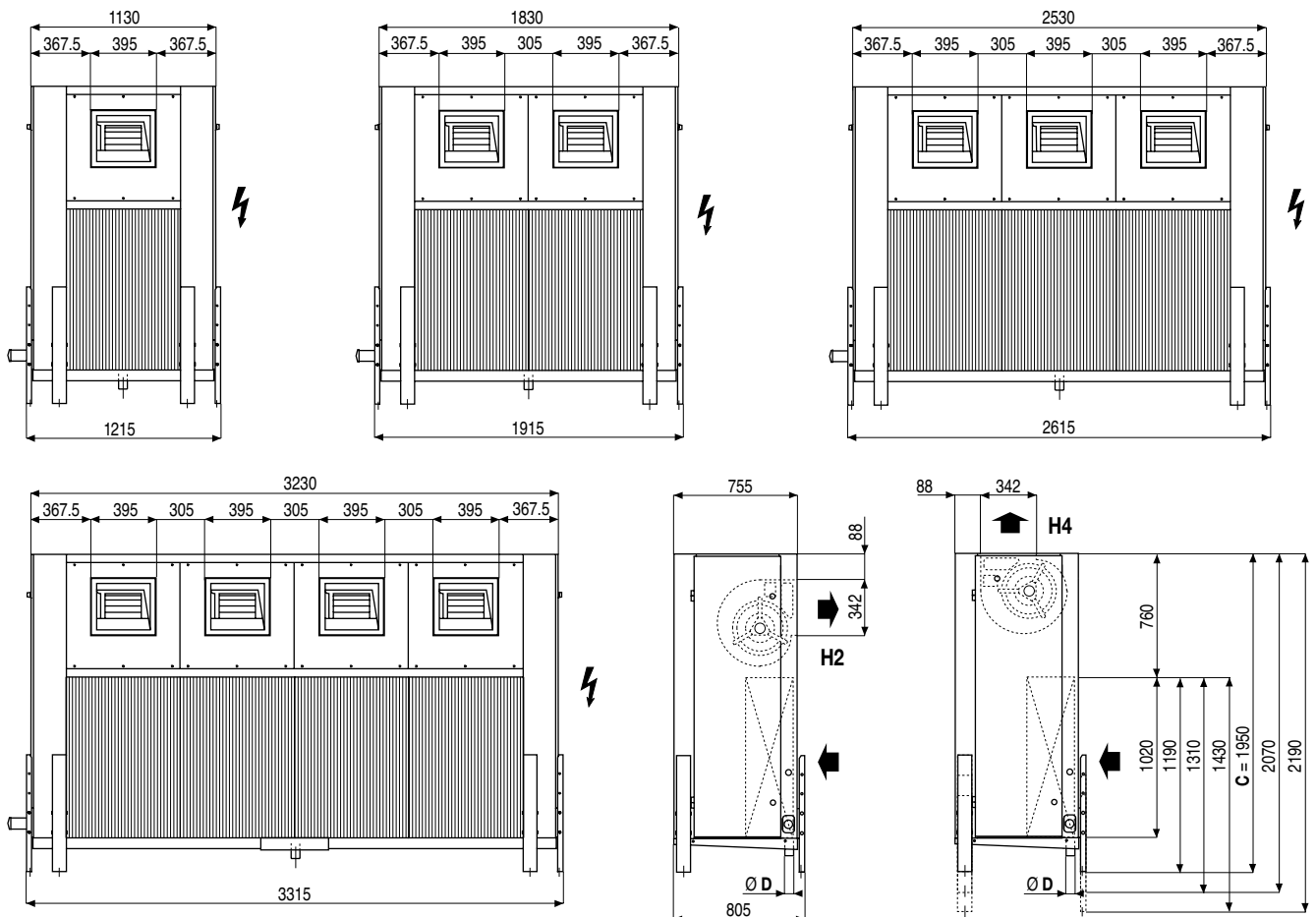


Kit	Factory	OPTIONS
	CMU	Motors factory wired.
	WCO	Glycol water, coolant (please contact us for details).
	CO2	R744 optimization (please contact us for details).
	DAE	Water defrost.
	EIU	Light electric defrost.
ECK	ECU	Additional coil electric defrost.
	HGT	Hot gas (coil and drain pan).
RVK	RVU	Shell defrost heaters.
	Miscellaneous	
	ECB	Wooden crate packaging.
	Other options	Please contact us for details.

NW .. A ..



NW .. C ..



NW .. A. R (Axial fans)

6,35 mm

			NW ... R	12 A1	14 A1	25 A2	30 A2	45 A3	60 A4
0 Pa (1)	Capacity R404A (2)	DT1 = 8K - SC 2	kW	13,2	15,5	26,8	31,5	47,4	63,4
	Capacity CO ₂ (6)	DT1 = 8K - SC 2	kW	12,8	14,7	25,2	29,6	44,6	59,5
	Air flow		m ³ /h	7920	7590	15840	15190	22780	30380
	Air throw (3)		m	19	18	22	21	26	30
100 Pa (1)	Puissance R404A (2)	DT1 = 8K - SC 2	kW	11,4	13,1	23,2	26,6	40,1	53,4
	Puissance CO ₂ (6)	DT1 = 8K - SC 2	kW	11,0	12,3	21,7	24,7	37,2	49,7
	Air flow		m ³ /h	6000	5640	12000	11290	16940	22580
	Air throw (3)		m	15	14	17	16	20	23
Surface			m ²	44,7	59,6	89,3	119,1	178,7	238,3
Circuit volume			dm ³	12,6	16,8	25,2	33,6	50,4	67,2
Net weight			kg	180	195	280	305	420	530
Connections	Inlet		∅	5/8"	5/8"	7/8"	7/8"	1 1/8"	1 3/8"
R404A	Outlet		∅	1 3/8"	1 3/8"	1 5/8"	1 5/8"	2 1/8"	2 1/8"

NW .. A. L (Axial fans)

9 mm

			NW ... L	9 A1	11 A1	20 A2	24 A2	36 A3	49 A4
0 Pa (1)	Capacity R404A (2)	DT1 = 8K - SC 2	kW	10,0	12,1	20,3	24,8	37,6	50,2
	Capacity CO ₂ (6)	DT1 = 8K - SC 2	kW	10,6	12,5	21,3	25,2	38,2	50,7
	Air flow		m ³ /h	8070	7770	16130	15530	23300	31070
	Air throw (3)		m	21	21	25	24	29	34
100 Pa (1)	Puissance R404A (2)	DT1 = 8K - SC 2	kW	8,8	10,6	18,1	21,7	32,8	43,9
	Puissance CO ₂ (6)	DT1 = 8K - SC 2	kW	9,2	10,6	18,5	21,4	32,2	43,1
	Air flow		m ³ /h	6230	5870	12460	11740	17610	23480
	Air throw (3)		m	17	16	20	19	23	27
Surface			m ²	40,8	54,4	81,6	108,8	163,2	217,6
Circuit volume			dm ³	16,1	21,4	32,1	42,8	64,2	85,6
Net weight			kg	185	205	295	325	445	565
Connections	Inlet		∅	5/8"	5/8"	5/8"	7/8"	7/8"	1 1/8"
R404A	Outlet		∅	1 1/8"	1 1/8"	1 3/8"	1 5/8"	2 1/8"	2 1/8"

NW .. A. M (Axial fans)

12 mm

			NW ... M	9 A1	11 A1	19 A2	23 A2	34 A3	47 A4
0 Pa (1)	Capacity R404A (2)	DT1 = 8K - SC 2	kW	8,8	10,9	18,0	22,3	33,6	45,0
	Capacity CO ₂ (6)	DT1 = 8K - SC 2	kW	8,5	10,4	17,0	20,9	29,8	41,9
	Air flow		m ³ /h	8230	7950	16460	15900	23840	31790
	Air throw (3)		m	22	21	26	25	30	34
100 Pa (1)	Puissance R404A (2)	DT1 = 8K - SC 2	kW	7,9	9,6	16,0	19,5	29,4	39,4
	Puissance CO ₂ (6)	DT1 = 8K - SC 2	kW	7,5	9,0	15,0	18,1	26,2	36,3
	Air flow		m ³ /h	6420	6080	12850	12170	18250	24340
	Air throw (3)		m	17	17	21	20	24	27
Surface			m ²	31,7	42,2	63,4	84,5	126,7	169
Circuit volume			dm ³	16,1	21,4	32,1	42,8	64,2	85,6
Net weight			kg	185	200	290	320	435	555
Connections	Inlet		∅	5/8"	5/8"	5/8"	7/8"	7/8"	1 1/8"
R404A	Outlet		∅	1 1/8"	1 1/8"	1 3/8"	1 5/8"	1 5/8"	2 1/8"

			NW ...	9 A1	11 A1	19 A2	23 A2	34 A3	47 A4
Acoustic	Lp 4m (4)		dB(A)	52	52	55	55	57	58
	Lw		dB(A)	82	82	85	85	87	88
Turbine 1,500 rpm.	∅ 560 mm	400 V/3/50 Hz	Nb	1	1	2	2	3	4
			kW/u	1,2	1,2	1,2	1,2	1,2	1,2
			A max/u	2,4	2,4	2,4	2,4	2,4	2,4
Electric defrost EIU (5)	Ω	230-400 V/3/50 Hz	Nb	4 + 2	7 + 2	4 + 2	7 + 2	7 + 2	7 + 2
			W total	3900	5850	6600	9900	14400	22500
			A total	9,8/5,6	14,7/8,4	16,6/9,5	24,9/14,3	36,1/20,8	56,5/32,5

(1) Additional air pressure available in Pascal.

(2) Standard conditions (Eurovent) : SC2 / 0°C (air inlet temp.) / -8°C (evaporating temp.) / DT1 = 8K

(3) Residual air speed: 0.25 m/s.

(4) Average sound pressure level in dB(A) measured at 4 m, at fan height, in direct line of sight on a reflective surface, given for information only.

(5) Electric defrost option.

(6) Operating pressure 40 bar - Tube diameter to define the order.

CMU	WCO	CO ₂	DAE	EIU	ECK	HGT	RVK	ECB
0			0	0	0	0	0	0

NW .. C. R (Centrifugal fans)

6,35 mm

		NW ... R	12 C1	14 C1	24 C2	28 C2	43 C3	58 C4	
200 Pa (1)	Capacity R404A (2)	DT1 = 8K - SC 2	kW	11,0	12,6	22,2	25,5	38,5	51,5
	Capacity CO ₂ (6)	DT1 = 8K - SC 2	kW	10,1	11,4	20,0	22,9	32,5	44,5
	Air flow		m ³ /h	5220	5000	10450	10000	15000	20000
	Air throw (3)		m	18	18	22	21	25	28
Surface			m ²	44,7	59,6	89,3	119,1	178,7	238,3
Circuit volume			dm ³	12,6	16,8	25,2	33,6	50,4	67,2
Net weight			kg	180	195	280	305	420	530
Connections	Inlet		∅	5/8"	5/8"	7/8"	7/8"	1"1/8	1"3/8
R404A	Outlet		∅	1"1/8	1"3/8	1"5/8	1"5/8	2"1/8	2"1/8

NW .. C. L (Centrifugal fans)

9 mm

		NW ... L	9 C1	10 C1	18 C2	22 C2	33 C3	44 C4	
200 Pa (1)	Capacity R404A (2)	DT1 = 8K - SC 2	kW	8,0	9,6	16,3	19,5	29,2	39,1
	Capacity CO ₂ (6)	DT1 = 8K - SC 2	kW	8,4	9,8	16,9	19,8	28,2	39,8
	Air flow		m ³ /h	5360	5160	10710	10320	15490	20650
	Air throw (3)		m	19	18	23	22	26	29
Surface			m ²	40,8	54,4	81,6	108,8	163,2	217,6
Circuit volume			dm ³	16,1	21,4	32,1	42,8	64,2	85,6
Net weight			kg	185	205	295	325	445	565
Connections	Inlet		∅	5/8"	5/8"	5/8"	7/8"	7/8"	1"1/8
R404A	Outlet		∅	1"1/8	1"1/8	1"3/8	1"5/8	2"1/8	2"1/8

NW .. C. M (Centrifugal fans)

12 mm

		NW ... M	8 C1	10 C1	17 C2	21 C2	31 C3	42 C4	
200 Pa (1)	Capacity R404A (2)	DT1 = 8K - SC 2	kW	7,0	8,5	14,3	17,4	26,2	35,0
	Capacity CO ₂ (6)	DT1 = 8K - SC 2	kW	6,8	8,3	13,3	16,7	24,3	33,4
	Air flow		m ³ /h	5460	5280	10910	10560	15840	21120
	Air throw (3)		m	19	19	23	23	26	30
Surface			m ²	31,7	42,2	63,4	84,5	126,7	169
Circuit volume			dm ³	16,1	21,4	32,1	42,8	64,2	85,6
Net weight			kg	185	200	290	320	435	555
Connections	Inlet		∅	5/8"	5/8"	5/8"	7/8"	7/8"	7/8"
R404A	Outlet		∅	1"1/8	1"1/8	1"3/8	1"3/8	1"5/8	2"1/8

		NW ...		8 C1	10 C1	17 C2	21 C2	31 C3	42 C4
Acoustic	Lp 4m (4)		dB(A)	48	48	51	51	53	54
	Lw		dB(A)	78	78	81	81	83	84
Turbine 1,000 rpm.	12/12	230-400 V/3/50 Hz	Nb	1	1	2	2	3	4
			kW/u	2,0	2,0	2,0	2,0	2,0	2,0
			A max/u	3,3	3,3	3,3	3,3	3,3	3,3
Electric defrost EIU (5)	Ω	230-400 V/3/50 Hz	Nb	4 + 2	7 + 2	4 + 2	7 + 2	7 + 2	7 + 2
			W total	3900	5850	6600	9900	14400	22500
			A total	9,8/5,6	14,7/8,4	16,6/9,5	24,9/14,3	36,1/20,8	56,5/32,5

(1) Additional air pressure available in Pascal.

(2) Standard conditions (Eurovent) : SC2 / 0°C (air inlet temp.) / -8°C (evaporating temp.) / DT1 = 8K

(3) Residual air speed: 0.25 m/s.

(4) Average sound pressure level in dB(A) measured at 4 m, at fan height, in direct line of sight on a reflective surface, given for information only.

(5) Electric defrost option.

(6) Operating pressure 40 bar - Tube diameter to define the order.

CMU	WCO	CO ₂	DAE	EIU	ECK	HGT	RVK	ECB
0			0	0	0	0	-	0

NW .. A. C (Axial fans)

6,35 mm

		NW ... C		12 A1	14 A1	25 A2	29 A2	45 A3	60 A4
0 Pa (1)	Capacity R404A (2)	DT1 = 7K - SC 3	kW	10,2	12,0	20,8	24,5	35,8	48,0
		DT1 = 6K - SC 4	kW	7,9	9,5	16,3	19,4	28,0	37,6
	Capacity CO ₂ (6)	DT1 = 7K - SC 3	kW	10,4	12,4	21,0	24,9	37,2	47,7
		DT1 = 6K - SC 4	kW	8,4	10,0	16,9	20,3	30,2	38,4
	Air flow		m ³ /h	7920	7590	15840	15190	22780	30380
	Air throw (3)		m	19	18	22	21	26	30
100 Pa (1)	Capacity R404A (2)	DT1 = 7K - SC 3	kW	8,8	10,2	18,0	20,7	30,7	41,2
		DT1 = 6K - SC 4	kW	6,9	8,1	14,2	16,5	24,3	32,5
	Capacity CO ₂ (6)	DT1 = 7K - SC 3	kW	9,0	9,9	18,1	20,0	31,1	40,3
		DT1 = 6K - SC 4	kW	7,3	8,4	14,7	16,2	25,4	32,7
	Air flow		m ³ /h	6000	5640	12000	11290	16940	22580
	Air throw (3)		m	15	14	17	16	20	23
Surface		m ²	44,7	59,6	89,3	119,1	178,7	238,3	
Circuit volume		dm ³	12,6	16,8	25,2	33,6	50,4	67,2	
Net weight		kg	180	195	280	305	420	530	
Connections	Inlet	Ø	5/8"	7/8"	1 1/8"	1 1/8"	1 1/8"	1 3/8"	
R404A	Outlet	Ø	1 3/8"	1 5/8"	2 1/8"	2 1/8"	2 1/8"	2 5/8"	

NW .. A. S (Axial fans)

9 mm

		NW ... S		9 A1	11 A1	19 A2	24 A2	36 A3	48 A4
0 Pa (1)	Capacity R404A (2)	DT1 = 7K - SC 3	kW	7,2	8,9	14,6	18,3	27,7	37,1
		DT1 = 6K - SC 4	kW	5,5	6,8	11,1	14,0	21,2	28,5
	Capacity CO ₂ (6)	DT1 = 7K - SC 3	kW	8,6	9,9	17,5	20,1	31,6	42,1
		DT1 = 6K - SC 4	kW	6,8	7,7	13,8	15,8	25,0	33,3
	Air flow		m ³ /h	8070	7770	16130	15530	23300	31070
	Air throw (3)		m	21	21	25	24	29	34
100 Pa (1)	Capacity R404A (2)	DT1 = 7K - SC 3	kW	6,5	7,9	13,0	16,1	24,3	32,7
		DT1 = 6K - SC 4	kW	4,9	6,0	9,9	12,4	18,8	25,3
	Capacity CO ₂ (6)	DT1 = 7K - SC 3	kW	7,6	8,5	15,3	17,4	26,9	35,8
		DT1 = 6K - SC 4	kW	6,0	6,8	12,1	13,8	21,4	28,6
	Air flow		m ³ /h	6230	5870	12460	11740	17610	23480
	Air throw (3)		m	17	16	20	19	23	27
Surface		m ²	40,8	54,4	81,6	108,8	163,2	217,6	
Circuit volume		dm ³	16,1	21,4	32,1	42,8	64,2	85,6	
Net weight		kg	185	205	295	325	445	565	
Connections	Inlet	Ø	5/8"	5/8"	7/8"	7/8"	1 1/8"	1 1/8"	
R404A	Outlet	Ø	1 3/8"	1 3/8"	1 5/8"	2 1/8"	2 1/8"	2 5/8"	

NW .. A. T (Axial fans)

12 mm

		NW ... T		9 A1	11 A1	18 A2	22 A2	34 A3	46 A4
0 Pa (1)	Capacity R404A (2)	DT1 = 7K - SC 3	kW	6,3	8,0	12,9	16,5	24,8	33,4
		DT1 = 6K - SC 4	kW	4,8	6,1	9,8	12,6	19,1	25,7
	Capacity CO ₂ (6)	DT1 = 7K - SC 3	kW	7,0	8,3	14,1	16,9	26,0	34,7
		DT1 = 6K - SC 4	kW	5,5	6,6	11,1	13,4	20,7	27,6
	Air flow		m ³ /h	8230	7950	16460	15900	23840	31790
	Air throw (3)		m	22	21	26	25	30	34
100 Pa (1)	Capacity R404A (2)	DT1 = 7K - SC 3	kW	5,6	7,1	11,5	14,5	21,9	29,4
		DT1 = 6K - SC 4	kW	4,2	5,4	8,8	11,2	16,9	22,8
	Capacity CO ₂ (6)	DT1 = 7K - SC 3	kW	6,2	7,3	12,5	14,8	22,5	30,1
		DT1 = 6K - SC 4	kW	4,9	5,8	9,9	11,8	18,0	24,0
	Air flow		m ³ /h	6420	6080	12850	12170	18250	24340
	Air throw (3)		m	17	17	21	20	24	27
Surface		m ²	31,7	42,2	63,4	84,5	126,7	169,0	
Circuit volume		dm ³	16,1	21,4	32,1	42,8	64,2	85,6	
Net weight		kg	185	200	290	320	435	555	
Connections	Inlet	Ø	5/8"	5/8"	7/8"	7/8"	1 1/8"	1 1/8"	
R404A	Outlet	Ø	1 3/8"	1 3/8"	1 5/8"	1 5/8"	2 1/8"	2 1/8"	

		NW ...		9 A1	11 A1	18 A2	22 A2	34 A3	46 A4
Acoustic	Lp 4m (4)		dB(A)	52	52	55	55	57	58
	Lw		dB(A)	82	82	85	85	87	88
Fan 1,500 rpm.	Ø 560 mm	400 V/3/50 Hz	Nb	1	1	2	2	3	4
			kW/u	1,2	1,2	1,2	1,2	1,2	1,2
Electric defrost EIU (5)	230-400 V/3/50 Hz		A max/u	2,4	2,4	2,4	2,4	2,4	2,4
			Nb	7 + 2	10 + 2	7 + 2	10 + 2	10 + 2	10 + 2
			W total	5850	7800	9900	13200	19200	30000
			A total	14,7/8,4	19,6/11,3	24,9/14,3	33,1/19,1	48,2/27,7	75,3/43,3

CMU	WCO	CO ₂	DAE	EIU	ECK	HGT	RVK	ECB
0	-	☺	0	-	-	0	0	0