EN

WALTER Roller GERMANY

Dual side discharge industrial air cooler

DHNI/DHNIT

HFC | CO_2 | Water | Brine

AIR COOLERS, AIR CONDITIONERS AND
HEAT EXCHANGERS OF THE HIGHEST QUALITY

OUR PRODUCTS

High-performance air cooler for cooling and deep-freezing requirements in commercial and industrial refrigeration

Customized **heat exchangers** for your system-specific requirements

Fan coils for tailored and demanding air conditioning solutions in building engineering

Customized solutions...

ABOUT ROLLER

We develop and produce at the locations in Gerlingen our innovative air coolers. We can develop solutions for individual applications with you.

Either as standard or customized as a system solution.

Walter Roller offers with its broad product range of heat exchangers and air coolers for a wide performance range and every application in refrigeration technology the optimal solution.

...for your refrigeration requirements

OUR MARKETS

HVAC · Refrigeration · Logistics · IT · Process · Energy · Marine · Offshore · Heat recovery

WALTER Roller GERMANY

Quality Made in Germany

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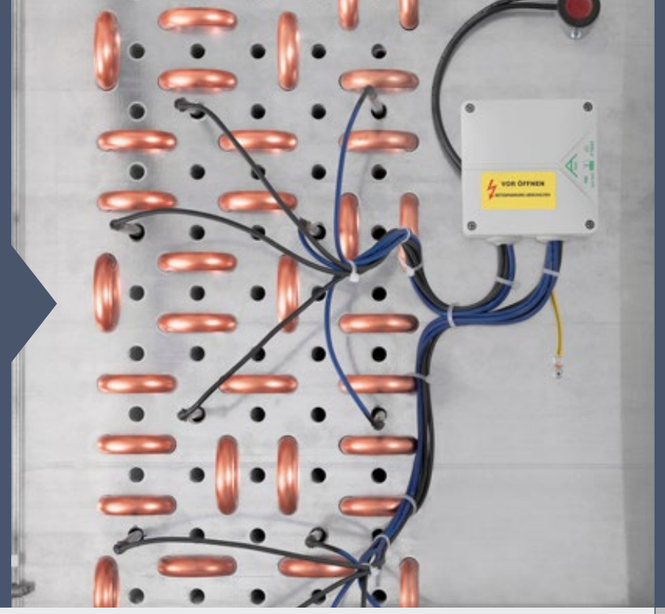
Your partner for more than 75 years

COMPANY DEVELOPMENT

2022	Plant III goes into operation
2021	Optimized fin system for CO_2 deep-freeze applications
2020	Expansion of production capacity at Plant II
2015	Own foothold in Asia
2008	New warehouse and logistics centre opened
2006	Upgrade to EC ventilator technology
1998	Increased performance due to inner finned tubes
1996	CO_2 evaporator for Supermarket refrigeration
1968	Development of air conditioning units
1958	Manufacture of the first high-performance evaporator
1946	Walter Roller founds the company

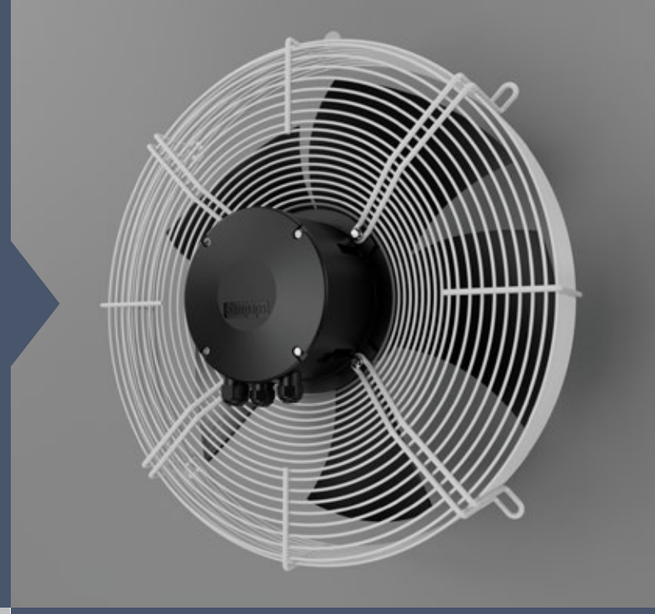
Optimal heating rod placement

Heating rods arranged to achieve the best possible heat distribution and reliable defrosting, in aluminium housing to prevent vapours.



EC fans

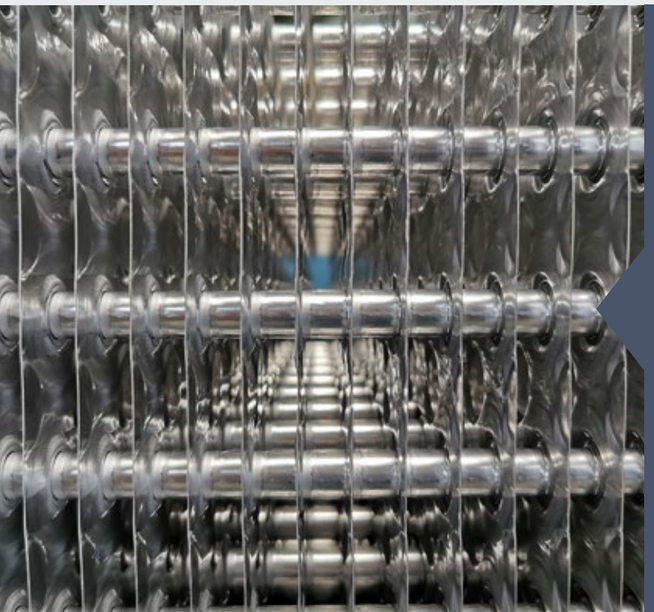
Powerful AxiEco fans for energy-efficient, quiet operation as standard



What makes the Roller air cooler so unique?

High efficiency heat exchanger

CuDHP tube, in-line; with flat, thick aluminium high efficiency fins.



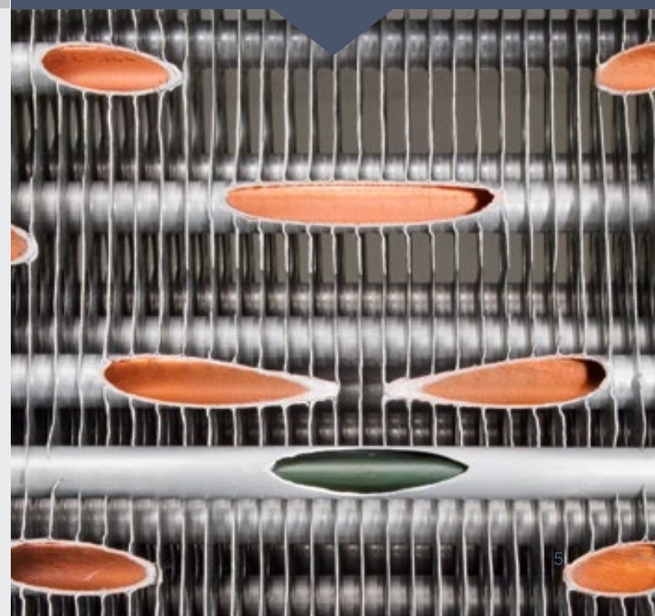
Aligned pipe system for increased frost storage and less defrosting

The aligned high-performance pipe system can hold more maturity in the block with less pressure loss on the air side.

Large housing side spaces

Large spaces on the side of the housing allow easy installation of pipes and valves.

Easy access via side doors, completely removable.



Cool to the chilled goods – gentle to the personnel

Housing
- Corrosion-ressistant aluminium casing, powder coated
- Edge-enclosing, cratch-resistant powder coating
- Ceiling flush stainless steel suspension

High efficient heat exchanger
- Thick fins (0.3 mm) for great stability during cleaning
- Optimized, in-line tube configuration with planar fins guarantee low air side pressure loss and provide high air volume
- CO_2 evaporator block with PS 80 bar
- Brine: heat exchanger for refrigerant operation
- Fin spacing: 4 and 7 mm

Fans
- Pressure-stable, high-efficiency EC fans of the latest design, AxiEcoDiagonal
- Fans hinged for easy cleaning
- Air intake from below, horizontal discharge
- Version for air intake from above available
- Fan speed/air volume load-dependent controllable
- ErP compliant fans

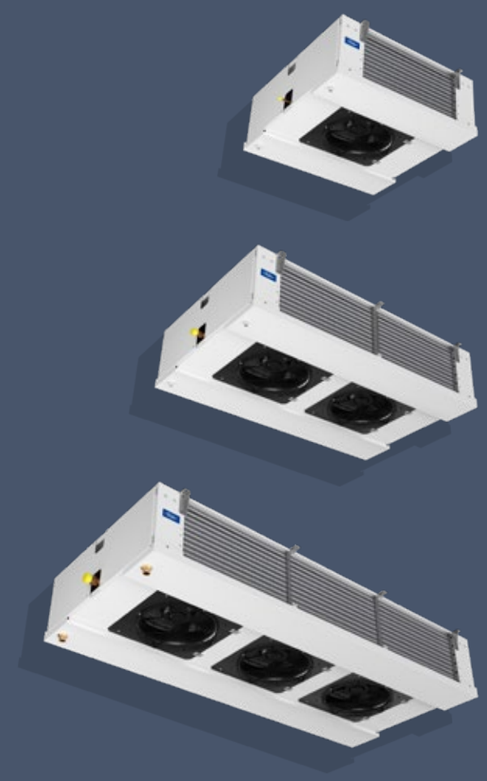
Energy efficiency
- Roller tube system for high efficiency
- Air volume controlled process-dependently via 0 - 10V signal
- Air cooler energy efficiency up to class “A”

DHNI/ DHNIT

Maximum flexibility

The requirements for cooling in warehouse logistics could not be more diverse. There is often a high level of moisture entry due to frequent door opening during loading, and when processing of goods, pleasant conditions should prevail. Due to its high design flexibility, the ceiling-mounted air cooler is the ideal unit for use in workrooms with longer staff stay times and in refrigerated and deep-freeze logistics.

Defrosting
- Heater rods made of stainless steel sleeve tube with special vulcanisation
- Heater rods inside the coil block for reliable defrost, inserted into aluminium sleeve tubes to avoid steam formation
- Drip tray to prevent condensation on the housing
- Heated drip tray (DHNIT)



Maximum flexibility guaranteed

The dual-discharge industrial air cooler DHNI/DHNIT is characterized by a very high load capacity, the use with CO_2 up to 80 bar operating pressure and AxiEco diagonal EC fans for energy-efficient and pressure-stable operation. The DHNI also offers maximum flexibility thanks to an easy-to-install housing with particularly generously dimensioned accessibility, as well as optional upward or downward air distribution.

Installation & Maintenance

- Position of drip tray drains flexibly reversible
- Generous unit side spaces for valve placement
- Large inspection openings with swivel-mounted fans and hinged drip trays
- Housing corners and drip tray with large radii for better cleanability
- Mounting flush with ceiling for perfect hygiene and max. room height utilization

Hinged fans
for effortless assembly and maintenance as well as cleaning

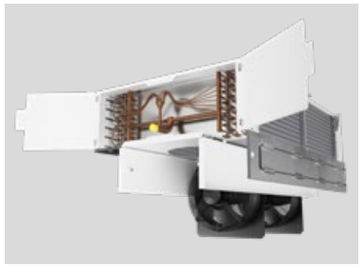
Separately hinged drip trays
for hygienic work. Heating plate additionally hingeable

Full accessibility

to all components

for best cleanability

What makes the DHNI so unique?

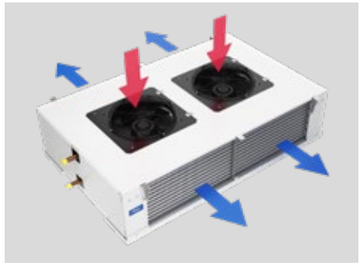


LARGE INSPECTION OPENINGS

with swivel-mounted fans and hinged drip trays

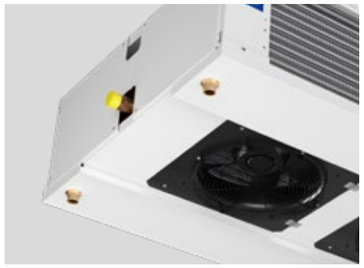
AXIECO EC-FANS

Pressure-stable AxiEco Diagonal EC fans hinged as standard.
High air throw for optimal flushing of the rooms.



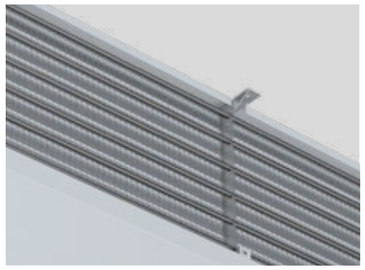
VERSION FOR AIR INTAKE FROM ABOVE

The standard version of the DHNI is with air intake from below, alternatively, the air intake can be selected from above.
For a pleasant working climate in cold rooms.



DRIP TRAY DRAINS

Flexible turning and folding.



CLIMATE HEATING

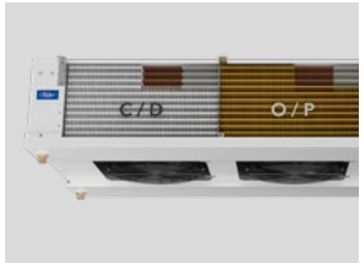
Electrical heating rods connected after the cooler can be used for efficient dehumidification operation. (optional)

MOUNTING FLUSH WITH CEILING

With stainless steel suspension bracket

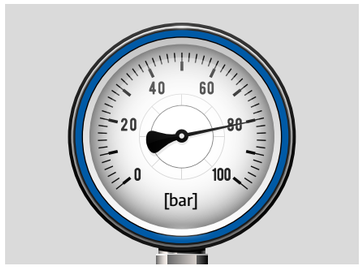
HINGED FANS

For better accessibility and easy cleaning of the heat exchanger (standard).



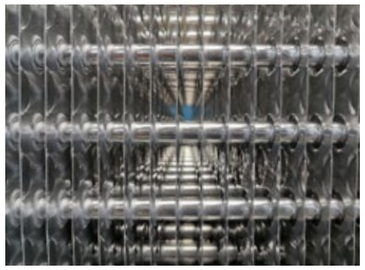
OPTIMAL CORROSION PROTECTION

Roller offers you effective corrosion protection for all applications, enabling you to operate the air coolers safely and, above all, tightly over their entire life cycle.



VERSION WITH 80 bar

For use with the high-pressure refrigerant CO_2/R744, the air coolers are available for operating pressures up to 80 bar.



STRONGLY DIMENSIONED FINS

Heat exchanger with strongly dimensioned fins for good heat transfer as well as for cleaning work by means of high-pressure cleaners.

Optimal corrosion protection

CORROSION PROTECTION FOR ALL REFRIGERATION APPLICATIONS

There are hardly any applications where there is no corrosive influence on the refrigeration components. In cold rooms alone, heat exchangers are often exposed to a variety of different substances that influence their lifetime. Be it salt, vinegar, smoke or even cleaning substances - it is important to know the effect of these influences on corrosion. Roller offers you effective corrosion protection for all applications with which you can operate the heat exchangers safely and, above all, tightly over their entire life cycle.

Corrosion protection - Variant “C”

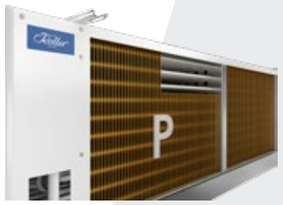
The protection variant consists of a combination of **copper core tube** and **coated fin package**. The block, which is completely coated with 2-component lacquer, offers reliable corrosion protection against aggressive substances such as organic acids, amines, and cleaning chemicals.

Corrosion protection - Variant “D”

For applications in a more aggressive atmosphere, where the copper tube must also be additionally protected, the corrosion protection variant “D” is recommended. It consists of a **copper core tube** with **additional tin coating** and a **fin package coated with 2-component lacquer**.

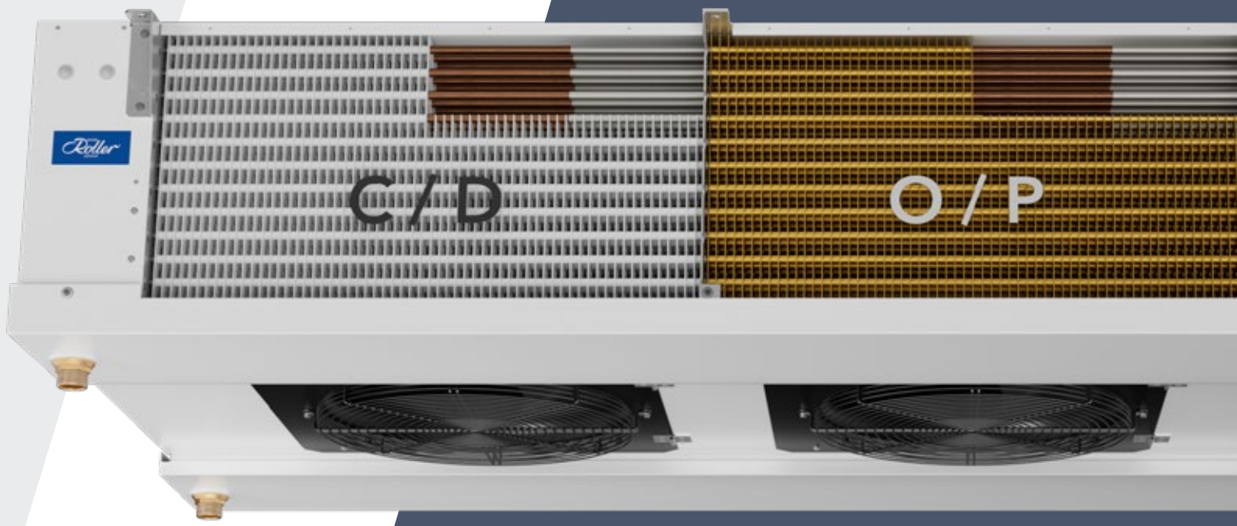
Corrosion protection - Variant “O”

PET coated fins are used wherever corrosion protection against atmospheres containing ammonia or acetic acid and cleaning chemicals must be guaranteed. The corrosion protection variant “O” forms a combination of **copper core tube** and **PET coated aluminium fin**.



Corrosion protection - Variant “P”

The corrosion protection variant “P” combines the properties of variant “O” and is supplemented by additional protection of the copper tube. Here, the **copper core tube** is additionally equipped with a **tin coating** and offers itself as a **sacrificial anode**.



CORROSION PROTECTION

Material/Protection	Alu fins	Cupper tube	Tin-plated core tube	Housing powder coating	Bend sides and connections powder coating
Standard	Alu	⊘	⊘		⊘	✓
Corro C	2-c-lacquer	⊘	⊘		⊘	⊘
Corro D	2-c-lacquer	⊘	⊘	⊘	⊘	⊘
Corro O	PET	⊘	⊘		⊘	✓
Corro P	PET	⊘	⊘	⊘	⊘	⊘

⊘ standard ✓ optional

For detailed information on corrosion protection, see:

www.walterroller.de/en/technology/corrosion-protection

Technology at a glance

POWER RANGE

HFC	6 – 45 kW	Brine	3 – 21 kW
CO_2	6 – 40 kW	H_2O	3 – 109 kW

FANS

EC-Technology	✓
Fixed speed	
Variable speed	✓
Silent design	✓
Diameter	450
Number	1 / 2 / 3

HEAT EXCHANGER

Tube system	Aligned
Tubes	Internally grooved
Fin spacing	4 / 7 / 10* / 12* mm

DEFROSTING

	Block	Drain pan
Electrical	✓	✓
Hot gas	✓	✓
Brine	✓	

READY FOR USE WITH ALL REFRIGERANTS / MEDIA

HFC

The DHNI / DHNIT can be designed for all relevant HFCs and has been in proven use.

	Normalkühlung	Tiefkühlung
HFC	✓	✓
CO_2	✓	✓
Sole	✓	✓

Brine

The DHNI/DHNIT can be operated very efficiently in cooling mode as well as in defrosting with common brine operated.

CO_2

CO_2 has become the most important natural refrigerant in refrigeration technology for the food retail trade. The DHNI/DHNIT offers you the use of CO_2 up to PS 80bar.

*on request ✓ standard ✓ optional

Options & accessories

DEFROSTING BY BRINE CIRCUIT

Very efficient defrosting method due to the high energy density of the defrost medium.

MS HEATING RODS

For flexible defrosting at temperatures around freezing point. Easy to retrofit.

HEATED DRIP TRAY

Double tray design consisting of inner drip tray with heating rod and embossing for melt water drainage and outer tray with condensate drainage nozzle.

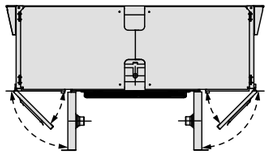
CONDENSATE DRAIN PIPE HEATING (SI)

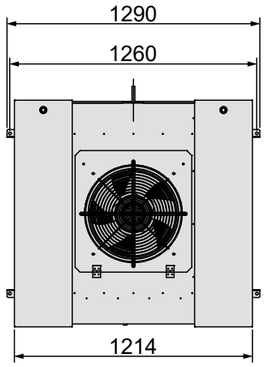
Ensures the drainage of the condensate in the external condensate drain pipe from the cold room.

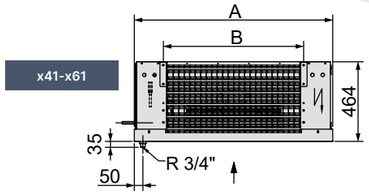
DEFROST SAFETY THERMOSTAT (AST)

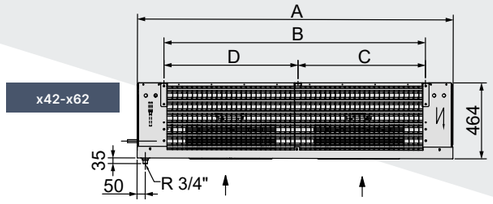
Interrupts electric defrosting if the defrost control system malfunctions

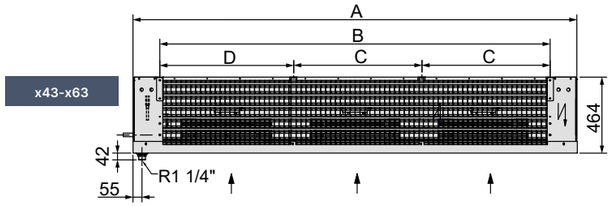
Capacities, dimensions & weights











Model	Capacity Q_0 R404A		Capacity Q_0 R744		Capacity Q_0 H_2O	Capacity Q_0 Brine (25%) Propylene glycol	Surface		Air flow	Energy efficiency class R404A	Energy efficiency class R744		per fan (Ø 250 mm, operating values at 230V, 50/60Hz)			Sound pressure level*	Dimensions				Weights			
	t_o = -8 °C DT1 = 8 K (SC2)	t_o = -25 °C DT1 = 7 K (SC3)	t_o = -8 °C DT1 = 8 K (SC2)	t_o = -25 °C DT1 = 7 K (SC2)	t_{in} /t_{out} 6/12 °C tr = 27 °C 47% r.F. max. 75 kPa	t_{in} /t_{out} -5/0 °C tr = 5 °C 85% r.F. max. 75 kPa	HFC	COI					No.	Power input	Air throw		A	B	C	D	HFC		COI	
																					DHNI	DHNIT	DHNI	DHNIT
DHNI/T..EC	kW	kW	kW	kW	kW	kW	m²	m²	m³/h					W	m	dB(A)	mm	mm	mm	mm	kg	kg	kg	kg
441 - 463	**Fin spacing: 4 mm**																							
441 N	9,76	7,43	11,07	8,78	28,23	6,34	40,8	41,8	6000	D	D		1	114	11	58	1156	817	-	-	120	122	123	125
441 L	8,69	6,71	9,86	7,81	25,04	5,93	40,8	41,8	4970	C	B		1	114	9	54	1156	817	-	-	120	122	123	125
441 S	7,23	5,67	8,24	6,50	20,87	5,37	40,8	41,8	3770	A	A		1	114	8	46	1156	817	-	-	120	122	123	125
442 N	18,70	14,34	22,13	17,27	56,50	10,80	81,6	83,8	12000	D	D		2	114	13	61	1930	1600	783	817	229	233	234	238
442 L	16,62	12,90	19,90	15,55	50,12	10,18	81,6	83,8	9940	C	B		2	114	11	57	1930	1600	783	817	229	233	234	238
442 S	13,78	10,85	16,82	13,14	41,72	9,26	81,6	83,8	7540	A	A		2	114	10	49	1930	1600	783	817	229	233	234	238
443 N	28,31	21,14	32,71	19,22	81,50	14,65	122,5	125,7	18000	D	D		3	114	14	62	2713	2384	783	817	344	350	351	357
443 L	25,36	19,21	29,57	17,40	72,32	13,86	122,5	125,7	14910	C	B		3	114	12	58	2713	2384	783	817	344	350	351	357
443 S	21,27	16,40	25,17	14,89	60,25	12,68	122,5	125,7	11310	A	A		3	114	11	50	2713	2384	783	817	344	350	351	357
461 N	12,52	9,34	13,83	10,57	36,12	8,83	60,6	62,2	5800	C	C		1	114	10	58	1156	817	-	-	125	127	128	130
461 L	11,05	8,36	12,32	9,42	31,62	8,19	60,6	62,2	4810	B	A		1	114	8	54	1156	817	-	-	125	127	128	130
461 S	9,05	6,93	10,23	7,82	25,76	7,31	60,6	62,2	3650	A+	A+		1	114	7	46	1156	817	-	-	125	127	128	130
462 N	23,62	18,20	28,32	21,11	71,32	15,05	121,3	124,5	11600	C	C		2	114	12	61	1930	1600	783	817	236	240	241	245
462 L	20,63	16,04	25,68	19,22	62,46	14,14	121,3	124,5	9620	B	A		2	114	10	57	1930	1600	783	817	236	240	241	245
462 S	16,66	13,07	21,81,	16,39	50,96	12,74	121,3	124,5	7300	A	A+		2	114	9	49	1930	1600	783	817	236	240	241	245
463 N	36,11	27,20	40,67	30,38	109,04	20,62	182	186,9	17400	C	C		3	114	13	62	2713	2384	783	817	354	360	361	367
463 L	31,78	24,21	37,23	27,55	95,49	19,38	182	186,9	14430	B	A		3	114	11	58	2713	2384	783	817	354	360	361	367
463 S	25,92	19,97	32,01	23,84	77,88	17,61	182	186,9	10950	A	A+		3	114	10	50	2713	2384	783	817	354	360	361	367
741 - 763	**Fin spacing: 7mm**																							
741 N	6,97	5,63	7,80	6,33	20,38	5,16	24,5	24,9	6200	D	D		1	114	12	58	1156	817	-	-	112	114	115	117
741 L	6,20	5,05	6,99	5,66	18,30	4,83	24,5	24,9	5140	C	B		1	114	10	54	1156	817	-	-	112	114	115	117
741 S	5,15	4,24	5,91	4,77	15,50	4,35	24,5	24,9	3900	A	A		1	114	9	46	1156	817	-	-	112	114	115	117
742 N	13,30	10,79	16,03	12,89	40,80	7,75	49,1	49,9	12400	D	D		2	114	14	61	1930	1600	783	817	229	224	225	229
742 L	11,80	9,65	14,46	11,62	36,60	7,34	49,1	49,9	10280	C	B		2	114	12	57	1930	1600	783	817	229	224	225	229
742 S	9,81	8,10	12,32	9,89	31,04	6,73	49,1	49,9	7800	A	A		2	114	11	49	1930	1600	783	817	229	224	225	229
743 N	20,61	16,36	24,06	19,22	62,86	21,40	73,8	74,9	18600	D	D		3	114	15	62	2713	2384	783	817	335	341	342	348
743 L	18,41	14,75	21,76	17,40	56,48	18,68	73,8	74,9	15420	C	B		3	114	13	58	2713	2384	783	817	335	341	342	348
743 S	15,44	12,50	18,62	14,89	47,95	11,49	73,8	74,9	11700	A	A		3	114	12	50	2713	2384	783	817	335	341	342	348
761 N	9,55	7,53	10,68	8,44	28,99	9,65	36,5	37,0	6000	C	C		1	114	11	58	1156	817	-	-	117	119	120	122
761 L	8,44	6,70	9,55	7,56	25,73	8,19	36,5	37,0	4970	B	A		1	114	9	54	1156	817	-	-	117	119	120	122
761 S	6,96	5,58	8,04	6,34	21,46	6,51	36,5	37,0	3770	A+	A+		1	114	8	46	1156	817	-	-	117	119	120	122
762 N	17,57	14,21	22,25	17,25	57,37	12,44	73,1	74,2	12000	C	C		2	114	13	61	1930	1600	783	817	229	234	232	236
762 L	15,39	12,53	20,11	15,66	50,92	11,68	73,1	74,2	9940	B	A		2	114	11	57	1930	1600	783	817	229	234	232	236
762 S	12,53	10,28	17,14	13,37	42,45	10,56	73,1	74,2	7540	A	A+		2	114	10	49	1930	1600	783	817	229	234	232	236
763 N	27,39	21,72	-1,00	25,06	84,33	29,05	109,7	111,3	18000	C	C		3	114	14	62	2713	2384	783	817	345	351	352	358
763 L	24,15	19,29	29,74	22,91	74,84	24,62	109,7	111,3	14910	B	A		3	114	12	58	2713	2384	783	817	345	251	352	358
763 S	19,86	15,99	25,52	19,77	62,40	16,26	109,7	111,3	11310	A	A+		3	114	11	50	2713	2384	783	817	345	351	352	358

The data in the above table are based on measurements with refrigerant R404A and operation of the fans at 50/60 Hz.

* Average sound pressure level at 3 m distance

More Service.
More Performance.
More Partnership.

MADE IN GERMANY

... IS NOT ONLY A PROMISE OF QUALITY FOR US

- Use of the highest quality materials from primarily German brand manufacturers
- Robust products with maximum energy efficiency and durability
- Fast processing times for shortest delivery times
- Quality manufacturer with unusual flexibility
- Reliable spare parts supply at short notice
- 75 years of strong relationships with our customers

SHORT LEAD TIME GUARANTEED!

- The Roller Logistics Center stocks constantly air coolers for you!
- 2000 units in stock for you
- 3-5 days lead time on stock units
- 24 / 7 online stock information
- Well sorted spare parts store

Roller EASY SELECT

SELECTION SOFTWARE

- Thermodynamic calculation of the performance data
- Free calculation, without registration and password
- Web-based program with permanent data up-to-dateness
- Precise design for your application
- 5+ languages to select from
- Large range of F-gas compliant refrigerants as well as refrigerant media
- Input of manual fluid data for calculation with own coolants possible
- Selection of different designs, materials, options and types of corrosion protection
- Price and delivery time for calculated air coolers
- Complete documentation for the selected unit
- Quick calculation with just a few clicks
- Multiple filter function
- Optimised also for mobile devices, incl. optional app installation directly from the browser
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Roller EasySelect can be found at:

www.WalterRoller.de/en

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