



AirPLUS / AirONE / AirS / AirBLUE / AirDUCT Aircooled Scroll Chillers

Features

// Simple and reliable

Our units are designed for long and stable operation and excellent performance. We have used only high-quality compressors and other components. And design is optimized to be as simple as possible.

These product lines were created as a result of stepby-step development based on field experience. Choosing our units, you will have all what you need for you cooling plant. And you will be sure in operation without failures. Thanks to our advanced and simple design.



// Wide range of options and versions

All buildings and all cooling plants are different. We have developed the equipment that may be used in any of them due to options and versions. Working with us you will have an opportunity to choose the configuration what suits your individual case.



// Advanced control

Controls of our units is simple but advanced. All critical parameters are controlled by latest versions of controller software. Controller optimizes energy consumption, protects compressor and circuit components from invalid operation.

You can connect our units to building management system and receive all the information to your building's service monitor.

You can also use our controller to control the complete cooling plant with pumps, valves etc. without any additional control systems. Thus, reducing your installation costs.



// Choose refrigerant

HFC refrigerants with high GWP (Global worming potential) are subject to phase out. The unit will work for a long period. And you need to consider what refrigerants will be available in the future. You can choose old HFC refrigerant (R410a) or new low GWP mildly flammable refrigerants R32 or R454B.

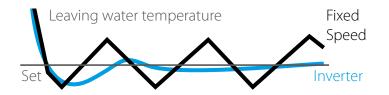


R410A GWP2088 R32

R454B GWP466

// Choose inverter or fixed speed compressor

You can choose units with step or continuous capacity regulation. The more steps you have the smoother is the supply liquid temperature. Inverter units not only better in regulation but also more energy efficient. And also consider the number of circuits for right stability level.



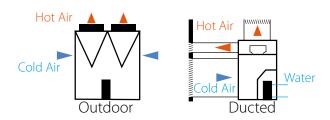
// Choose «cooling only» or «free cooling» or «reversible heat pump» unit

If you would like to chill the liquid in the wintertime consider Free cooling. You will decrease the electrical consumption. And if you would like not only chill but also heat water consider reversible heat pump version. See also NordicLIGHT heat pumps catalogue if heating is the main purpose.



// Choose outdoor or ducted installation

Usually units are installed outdoor. But indoor installation is interesting if you would like to chill water without brine, or if you would like to use hot air (for space heating). Or just if you cannot place the unit outdoor but prefer to use a monoblock unit.



// Choose standard or «low ambient» or «high water temperature» version

If you need to operate the unit in the wintertime without free cooling it's not a problem, we have options for up to -35°C ambient. Such our units work in Nordic Finland, Sweden and Russia all year around. If you need to chill hot water (>25°C) you can choose special options that allow to do this.





Optimal solution for 120-1500 kW units

// Small refrigerant charge due to microchannel condensers.

// High quality scroll compressors, heat exchangers and controllers.

// Modbus and Electronic Expansion Valve on all units. // Totally independent refrigerant circuits on 2 circuit

// No exclusives: only components available on your market.

// Wide selection of options.

// Advanced control of the unit and external devices from chiller controller. Possibility to build up to chilled water station. Remote evaporator available on request. // Available in R410a or low GWP (R32/R454B) refrigerant versions.

// Plastic (PVC) or stainless-steel pipes on request for operation without corrosion.

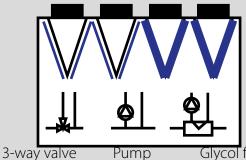
Key available options:

Inverter or On-Off pump and tank kits \\ Low temperature compressor operation at ambient down to -35°C \\ EC Fans \\ AxiTop-type diffusors \\ Coils e-coating \\ Touchscreen display \\ LON, BACnet \\ Heat recovery \\ Soft start \\ etc.

Free cooling options

Free cooling options allow to chill fluids directly by air without compressors. Thus the electric consumption may be decreased significantly if you operate the unit at low ambient temperatures and fluid temperature is high. Airplus product line offers wide range of possible free cooling solutions. Thanks to large Felzer experience in this field.

Dependent from Independent condensers from condensers



(standard) (on request)

Glycol free (on request)



Units with vertical condensers

// Small refrigerant charge due to microchannel condensers*.

// High quality scroll compressors, heat exchangers and controllers.

// No exclusives: only components available on your market.

// Wide selection of options.

// Advanced control of the unit and external devices from chiller controller. Possibility to build up to chilled water station. Remote evaporator available on request. // Available in R410a or low GWP (R32/R454B) refrigerant versions.

// Plastic (PVC) or stainless-steel pipes on request for operation without corrosion.

* - High capacity Ducted units are supplied with Copper-Aluminum coils with small DN copper tubes.

Key available options:

Inverter or On-Off pump and tank kits \\ Electronic expansion valve \\ Low temperature compressor operation at ambient down to -35°C \\ EC Fans \\ AxiToptype diffusors \\ Coils e-coating \\ Touchscreen display \\ LON, BACnet, Modbus \\ Heat recovery \\ Soft start \\ etc.

Free cooling from 20kW // All models (including ducted) are available as freckling chillers.

Compressors operation down to -35°C option // All models (including ducted) are available with liquid line modification and flooded condenser operation features.

Inverter pumps, tanks, coatings and other options starting from 20kW // All options usually used on large chillers may be ordered for small chillers.

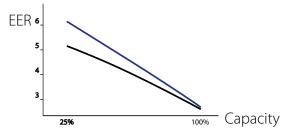
Ducts connection with vertical and horizontal flow. External actuator control available // All ducted units may be connected to vertical or horizontal ducts or both. External actuators may be controlled from controller.

All inverter Chillers. Capacity of each circuit is continuously controlled from 30% to 100%





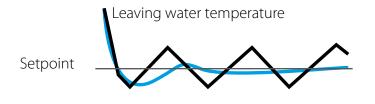
// Increased part-load efficiency (compare to fixed speed compressor or fixed speed + single inverter compressor units). ErP 2021compliant.



Inverter compressors chiller EER in part load.

Fixed Speed compressors chiller EER in part load.

// Exact temperature setpoint control



Fixed Speed compressors start and stop in stages close to required capacity. Each start/stop = energy loses.

Inverter compressor reaches exactly the required capacity.

// Each compressor is in a separate circuit. All compressors are inverter driven.

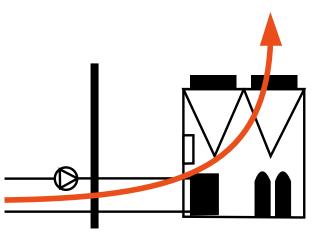
// Models from 33 to 450 kW

// High quality scroll compressors, heat exchangers and controllers.

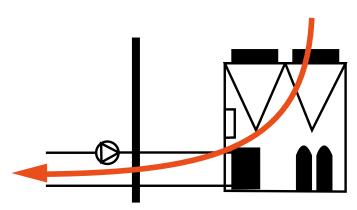
// No exclusives: only components available on your market.

// Wide selection of options. The same as for AirPLUS, AirONE and AirS.

Reversible chillers & heat pumps // Features







Heat pump mode (reversed Carnot cycle). Heat transfer from cold ambient air to hot fluid.

// HP (reversible) versions of AirPLUS, AirONE, AirS & AirDUCT chillers are optimal solutions for interseason heating or for the countries with warm winters.

Consider NordicLIGHT air to water special heat pumps as an alternative if heating is primary purpose with ambient temperatures down to -20°C.

Low refrigerant charge // Coils are designed based on small DN pipes to reduce refrigerant charge.

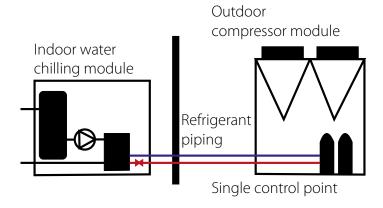
Chilling as efficient as nonreversible chillers // The units are designed as chillers. The components are selected in the way that in chiller mode the efficiency is the same as standard chillers.

Heat recovery as an option // Heat recovery in chiller mode is a good solution for chillers used for AHU in humidity control mode and for other application.

Pools friendly piping as an option // Special piping (PVC) and stainless-steel pumps can be used on request for pools heating application.

Options on request

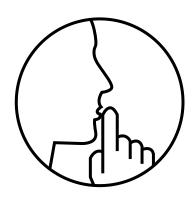
// Remote evaporator and hydraulic module



In the most of northern Europe regions the brine is required for outdoor installation. But you can chill water directly if buy remote evaporator units from us. You need to install refrigerant piping between two modules supplied from us - outdoor and indoor. Like in residential air conditioner. And the indoor module will chill the water directly.

Indoor modules are available with pumps, tanks, 3-way valves (for chilled beams). Also, VWF (variable water flow) system is available to allow assembly of all the fan coils in the system on 2-way valves and energy consumption reduction. Everything is Plug-And-Play and controlled from single controller.

// Low noise



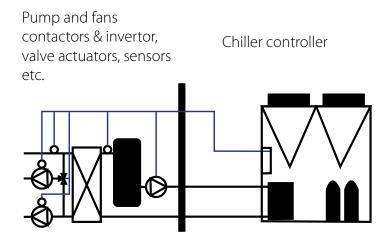
If you have noise restrictions we can offer several noise reduction options. Including compressor sound reducing boxes, low speed fans etc. The units can be configured according to your needs.

// Increased efficiency and efficiency to local standards



Basic models were optimized considering price to efficiency ratio. But if you would like to reach higher efficiency levels or if you have some restrictions (fans consumption to condenser capacity ratio, etc.) we can configure basic models, changing evaporators, condensers and fans to your requirements and offer them on request. Thanks to modular design such changes does not seriously affect price and delivery time.

// Plant control from chiller



The most of cooling systems components can be controlled from our chiller controller. And thus, you will eliminate the need for BMS. Reduce cost. And receive reliable solution as our engineers have very big and wide experience in cooling plant control. Inverter and fixed speed pumps, valve actuators, etc. can be controlled from digital or analogue outputs of our unit's controller. Pressure and temperature sensors, flow switches, leak detectors etc. can be connected to its analogue and digital inputs. You can also receive different signals from our unit to plant control monitor. So, if you would like to decrease costs you can agree additional control functions during design and order.

// Shell and tube heat exchanger



On some installations the water quality or other conditions require shell and tube evaporator instead of standard brazed plate heat exchanger. You can order it on request.

// Anti corrosion options: Coatings for coils \ Stainless-steel cabinet and pipes \ All copper coils \ Stainless-steel pipes \ PVC pipes



If you place the unit near the sea, or on the ship, or in industrial aggressive area we can configure it to be corrosion proof. Thanks to our own cabinet metal production and paint, the cabinets can be produces from stainless-steel. And painted in special paint. The coils can be e-coated. Or you can order on request coper-aluminum or all copper coils. Stainless-steel piping can be used on both water and refrigerant side.

Product range // R410a // AirPLUS

AirPLUS	40.2	50.2	60.2	70.2	80.2	80.4	90.3	100.4	120.3	120.4
Cooling capacities. System water 12/7°C	, Ambient	air tempe	rature +35	5°C						
Cooling capacity, kW	115	141	178	203	228	230	266	281	342	355
Power input, kW	37	44	58	64	72	76	86	89	107	116
EER	3,11	3,2	3,07	3,17	3,17	3,03	2,82	3,16	3,2	3,06
Product data										
Number of circuits	1	1	1	1	1	2	1	2	1	2
Number of compressors / steps	2	2	2	2	2	4	3	4	3	4
Number of fans	2	2	3	3	4	4	4	4	5	6
Length, m	1,22	1,22	2,44	2,44	2,44	2,44	2,44	2,44	3,96	3,96
Width, m	2,22	2,22	2,22	2,22	2,22	2,22	2,22	2,22	2,22	2,22
Height, m	2,30	2,30	2,30	2,30	2,30	2,30	2,30	2,30	2,3	2,30

AirPLUS	140.4	150.3	160.4	180.4	180.6	200.4	220.6	240.6	270.6	300.6
Cooling capacities. System water 12/7	°C, Ambient	air tempe	rature +35	5°C						
Cooling capacity, kW	406	422	456	509	533	562	634	685	764	843
Power input, kW	128	133	144	161	163	177	197	213	240	266
EER	3,17	3,17	3,17	3,16	3,27	3,18	3,22	3,22	3,18	3,17
Product data										
Number of circuits	2	1	2	2	2	2	2	2	2	2
Number of compressors / steps	4	3	4	4	6	4	4	6	6	6
Number of fans	6	6	8	8	8	8	8	10	12	12
Length, m	3,96	3,96	5,18	5,18	5,18	5,18	5,18	6,04	7,62	7,26
Width, m	2,22	2,22	2,22	2,22	2,22	2,22	2,22	2,22	2,22	2,22
Height, m	2,30	2,30	2,30	2,30	2,30	2,30	2,30	2,30	2,30	2,30

AirPLUS	330.9	360.9	420.9	450.9	
Cooling capacities. System water 12/7°C	, Ambient	air tempe	rature +35	5°C	
Cooling capacity, kW	951	1027	1185	1265	
Power input, kW	300	319	374	398	
EER	3,17	3,22	3,17	3,18	
Product data					
Number of circuits	3	3	3	3	
Number of compressors / steps	9	9	9	9	
Number of fans	15	15	18	18	
Length, m	10,06	10,06	8,47	11,28	
Width, m	2,22	2,22	2,22	2,22	
Height, m	2,30	2,30	2,30	2,30	

Product range // R410a // AirONE // AirS



AirS	08.1	09.1	10.1	12.1	13.1	15.1	16.2	AirONE	18.2	20.2
Cooling capacities. System water 12/7°C	, Ambient	air tempe	rature +35	5°C						
Cooling capacity, kW	19,6	23	26,9	32,1	33,6	39,6	39		46	56
Power input, kW	6,77	7,8	8,94	10,92	11,6	13,35	13,4		15,5	18
EER	2,90	2,95	3,01	2,94	2,90	2,97	2,91		2,97	3,09
Product data										
Number of circuits	1	1	1	1	1	1	1		1	1
Number of compressors	1	1	1	1	1	1	2		2	2
Number of fans	1	1	1	1	1	1	1		1	1
Length, m	1,1	1,1	1,1	1,6	1,6	1,6	1,6		1,9	1,9
Width, m	1	1	1	1	1	1	1		1,1	1,1
Height, m	1,6	1,6	1,6	1,6	1,6	1,6	1,6		1,49	1,49

AirONE	24.2	26.2	30.2	36.3	39.3	40.2	45.3	50.2	52.4	60.2	60.4
Cooling capacities. System water 12/7°C	, Ambient	air tempe	rature +35	5°C							
Cooling capacity, kW	63	73	82	91	107	104	127	133	145	170	164
Power input, kW	21	25	28,5	31	34,5	34	41	44	47	57	56
EER	3,00	2,92	2,88	2,94	3,10	3,06	3,10	3,02	3,09	2,98	2,93
Product data											
Number of circuits	1	1	1	1	1	1	1	1	2	1	2
Number of compressors / steps	2	1	2	3	3	2	3	2	4	2	4
Number of fans	1	1	2	2	2	2	2	3	3	4	4
Length, m	2,2	2,2	2,2	2,2	2,2	2,2	2,2	2,2	2,2	2,2	2,2
Width, m	1,1	1,1	1,1	2	2	2	2	2	2	2	2
Height, m	1,49	1,49	1,49	1,49	1,49	1,49	1,49	1,49	1,49	1,49	1,49

Product range // R410a // AirBLUE



// Each circuit is equipped with single inverter scroll compressor.

// Each compressor may operate in a range from 25 to 100 Hz.

// Choosing the size for your project mind that efficiency of inverter scroll compressors on full load at reduced Hz is higher than at 100Hz. Oversized chiller may be more energy efficient.

AirBLUE	11.1iN	15.1iN	18.1iN	26.1iN	26.1EiN	36.2iN	52.2iN	52.2EiN	54.3iN	72.4iN	78.3EiN	104.4EiN	130.5EiN
Cooling capacities (at	100 Hz). S	System wa	ater 12/7°	°C, Ambie	nt air tem	perature ·	+35°C						
Cooling capacity, kW	33,3	49,8	57,4	81,6	85,1	115	163	170	172	230	255	340	425
Power input, kW	11,7	16,9	19,7	31,5	28,8	39	63	58	59	79	86	115	144
EER	2,85	2,95	2,91	2,59	2,96	2,91	2,59	2,96	2,91	2,91	2,96	2,96	2,96
Product data													
Number of circuits	1	1	1	1	1	2	2	2	3	4	3	4	5
Number of compressors	1	1	1	1	1	2	2	2	3	4	3	4	5
Number of fans	1	1	1	2	2	2	4	4	3	4	6	8	10
Length, m	1,6	2,2	2,2	2,2	2,22	2,22	2,2	2,42	2,42	2,42	3,63	4,84	6,05
Width, m	1	1,1	1,1	1,1	1,21	1,21	2,00	2,22	2,22	2,22	2,22	2,22	2,22
Height, m	1,6	1,5	1,5	1,5	2,3	2,3	1,5	2,3	2,3	2,3	2,3	2,3	2,3

Product range // R410a & R32 - R454B // AirDUCT



// Evaporator is separated from airflow.

// Control of external actuators for dumpers on request.



AirDUCT / AirDUCT3	20.2	24.2	26.2	30.2	40.2	50.2	60.2	60.4	70.4	80.4	90.4	100.4	110.4	120.4
AirDUCT // Cooling capacities R4	10A. Syst	em wate	r 12/7°C	, Ambier	nt air ten	peratur	e +35°C							
Cooling capacity, kW	57	64	73	84	102	129	161	168	186	205	232	258	291	323
Power input, kW	20	23	26	31	38	48	59	59	66	76	83	94	104	115
EER	2,88	2,82	2,77	2,68	2,71	2,67	2,73	2,86	2,84	2,71	2,79	2,76	2,78	2,80
AirDUCT3 // Cooling capacities R	32. Syste	n water	12/7°C, <i>i</i>	Ambient	air temp	erature	+35℃							
Cooling capacity, kW	57	64	72	85	110	138	183	171	196	221	249	276	321	366
Power input, kW	20	22	24	31	40	52	65	60	68	80	89	101	114	127
EER	2,85	2,90	2,96	2,73	2,76	2,66	2,81	2,87	2,87	2,76	2,80	2,74	2,82	2,88
AirDUCT3 // Cooling capacities Re	454B. Sys	tem wat	er 12/7°	C, Ambie	nt air te	mperatu	re +35°C							
Cooling capacity, kW	51	57	64	75	97	123	163	150	172	195	220	245	285	325
Power input, kW	18	19	21	28	36	47	58	53	61	71	79	90	101	113
EER	2,88	2,99	3,00	2,67	2,73	2,63	2,81	2,83	2,84	2,73	2,78	2,72	2,81	2,89
Product data						,								
Number of circuits	1	1	1	1	1	1	1	2	2	2	2	2	2	2
Number of compressors / steps	2	2	2	2	2	2	2	4	4	4	4	4	4	4
Number of fans	1	1	1	2	2	3	3	3	3	4	4	5	5	5
Length, m	2,20	2,20	2,20	2,20	3,04	4,04	4,04	3,75	3,75	4,75	4,75	5,75	5,75	5,75
Width, m	1,1	1,1	1,1	1,1	1,23	1,23	1,23	1,15	1,15	1,15	1,15	1,15	1,15	1,15
Height, m	2,2	2,2	2,2	2,2	2,27	2,27	2,27	2,27	2,27	2,27	2,27	2,27	2,27	2,27

Product range // R32 - R454B // AirPLUS3

AirPLUS3	40.2	50.2	60.2	70.2	80.2	80.4	90.4	90.3	100.4	110.4	120.3
Cooling capacities R32 (GWP 675). Syste	em water 1	2/7°C, Am	bient air t	emperatu	re +35°C						
Cooling capacity, kW	111	139	184	203	223	222	250	275	278	322	335
Power input, kW	38	48	62	70	77	76	85	94	95	111	114
EER	2,92	2,87	2,94	2,92	2,91	2,93	2,93	2,94	2,92	2,92	2,93
Cooling capacities R454B (GWP 466). Sy	stem wate	r 12/7°C, A	mbient ai	r tempera	ture +35°0	-					
Cooling capacity, kW	98	123	163	181	198	196	221	245	246	286	297
Power input, kW	33	42	55	60	66	67	75	82	83	98	98
EER	2,93	2,94	2,98	3,01	2,99	2,93	2,95	3,00	2,96	2,93	3,03
Product data											
Number of circuits	1	1	1	1	1	2	2	1	2	2	1
Number of compressors / steps	2	2	2	2	2	4	4	3	4	4	3
Number of fans	2	2	3	3	4	4	4	4	4	6	5
Length, m	1,21	1,21	2,42	2,42	2,42	2,42	2,42	2,42	2,42	3,63	3,63
Width, m	2,22	2,22	2,22	2,22	2,22	2,22	2,22	2,22	2,22	2,22	2,22
Height, m	2,30	2,30	2,30	2,30	2,30	2,30	2,30	2,30	2,30	2,30	2,30

AirPLUS3	120.4	140.4	160.4	180.6	200.6	220.6	240.6	
Cooling capacities R32 (GWP 675). Syste	m water 1	2/7°C, Aml	bient air t	emperatur	e +35°C			
Cooling capacity, kW	367	407	446	551	590	630	670	
Power input, kW	124	138	153	186	200	216	228	
EER	2,95	2,94	2,91	2,96	2,95	2,92	2,94	
Cooling capacities R454B (GWP 466). Sys	stem water	r 12/7°C, A	mbient ai	r tempera	ture +35°0	2		
Cooling capacity, kW	326	361	396	490	524	559	594	
Power input, kW	109	120	130	163	173	184	196	
EER	2,99	3,02	3,04	3,01	3,03	3,04	3,04	
Product data								
Number of circuits	2	2	2	2	2	2	2	
Number of compressors / steps	4	4	4	6	6	6	6	
Number of fans	6	6	6	8	8	8	10	
Length, m	3,63	3,63	3,63	4,84	4,84	4,84	6,05	
Width, m	2,22	2,22	2,22	2,22	2,22	2,22	2,22	
Height, m	2,30	2,30	2,30	2,30	2,30	2,30	2,30	

AirS3	10.1	12.1	13.1	15.1	AirONE3	20.2	24.2
Cooling capacities R32 (GWP 675). Syst	em water 12/	7°C, Ambie	nt air temp	erature +3	5℃		
Cooling capacity, kW	29	32	36	43		57	65
Power input, kW	10	11	13	15		20	22
EER	2,76	2,84	2,89	2,89		2,90	3,00
Cooling capacities R454B (GWP 466). Sy	stem water 1	2/7°C, Amk	oient air tei	nperature	+35°C		
Cooling capacity, kW	26	29	32	38		51	57
Power input, kW	9	10	11	13		17	18
EER	2,81	2,93	2,94	2,92		3,05	3,18
Product data		,					
Number of circuits	1	1	1	1		2	2
Number of compressors / steps	1	1	1	1		1	1
Number of fans	1	1	1	1		1	1
Length, m	1,1	1,6	1,6	1,6		1,8	2,2
Width, m	1	1	1	1		1,1	1,1
Height, m	1,6	1,6	1,6	1,6		1,49	1,49

AirONE3	26.2	30.2	36.3	39.3	40.2	45.3	50.2	52.4	60.2	60.4
Cooling capacities R32 (GWP 675). System	water 12/2	7°C, Ambie	nt air temp	erature +3	5°C					
Cooling capacity, kW	73	86	97	109	111	129	139	145	184	172
Power input, kW	25	31	33	36	38	42	49	49	69	60
EER	2,93	2,74	2,97	2,99	2,89	3,06	2,81	2,97	2,67	2,85
Cooling capacities R454B (GWP 466). System	em water 1	2/7°C, Amb	oient air ter	nperature	+35℃					
Cooling capacity, kW	64	75	86	97	98	113	123	129	163	150
Power input, kW	21	26	28	31	33	37	43	42	58	52
EER	3,12	2,87	3,10	3,09	2,92	3,06	2,84	3,05	2,83	2,91
Product data										
Number of circuits	1	1	1	1	1	1	1	2	1	2
Number of compressors / steps	2	2	3	3	2	3	2	4	2	4
Number of fans	1	2	2	2	2	2	3	3	4	4
Length, m	2,2	2,2	2,2	2,2	2,2	2,2	2,2	2,2	2,2	2,2
Width, m	1,1	1,1	2	2	2	2	2	2	2	2
Height, m	1,49	1,49	1,49	1,49	1,49	1,49	1,49	1,49	1,49	1,49





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