

Explosion-safe air conditioners AR-051

Split systems



Features

- ATEX certified
- Suitable for environments in which gas or vapor is present, classified as Zone 2
- Cooling and heating
- Extremely efficient
- Refrigerant R410A / R32
- Light industrial, compact and corrosion resistant models available
- Additional coating of the fins possible
- Combination of explosion-safe and standard parts is possible



II 3 G Ex ic nAC h IIC T3 Gc



Description

ARTIDOR's explosion-safe air conditioners are made to safely ensure an agreeable climate in an area where a release of gas could possibly cause an explosive atmosphere. The air conditioners ensure a comfortable climate that can be worked in pleasantly and productively. A number of corrosion resistant versions are available for installation in corrosive environments.

The external unit is equipped with a quiet and energy efficient compressor. Dependent on the required capacity, the indoor unit can be either a wall or ceiling model. During the conversion of the units to make them explosion-safe, the greatest possible attention is given to maintainability and the ease with which the units can be installed.

In addition to supplying explosion-safe air conditioners, we can also convert supplied systems to explosion-safe.

The ARTIDOR air conditioners are explosion-safe and certified in accordance with the European Directive 2014/34/EU (ATEX 114) and have a CE mark. The air conditioners meet the requirements for product category 3 G, making them suitable for use in an area classified as Zone 2.



STANDARDS COMMITTEE MEMBER



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Technical data

Explosion safety:	ATEX II 3 G Ex ic nAC h IIC T3 Gc
European directives:	2014/34/EU (ATEX), 2014/30/EU (EMC), 2009/125/EC (EcoDesign)
Applied standards:	EN 60079-0:2012 / A11:2013, EN 60079-11:2012, EN 60079-15:2010, EN 80079-36:2016 and EN 80079-37:2016
Certificate:	EU Declaration of Conformity / Unit Assessment Certificate
Ambient temperature:	-20 °C up to +45 °C
Remote control:	All wall mounted models are equipped with an infra-red remote control, the ceiling mounted models with a fixed remote control (wired).
Refrigerant:	R410A

Light industrial use

The units for light industrial use have been designed for use, for instance, in office spaces and rooms that do not need to be continuously cooled. The design is extremely compact and elegant.

- Pipe lengths of up to 20 metres and a maximum difference in height of 10 metres are possible.
- Cooling from an outside temperature of -10 °C and heating from -15 °C.
- Infrared remote control. Using a fixed remote control is not possible.

Type number	Capacity Cooling [kW]	Capacity Heating [kW]	Supply Voltage [V AC]	Frequency [Hz]	Fuse rating [A]	Electrical Power [kW]	SEER / SCOP	Air flow [m ³ / hour]	Model
AR-051/0211 L	2,5	3,2	230	50 / 60	10	0,75	6,7 / 4,3	303 / 515	Wall
AR-051/0311 L	3,5	4,2	230	50 / 60	10	1,08	6,5 / 4,0	297 / 565	Wall
AR-051/0411 L	4,5	5,5	230	50 / 60	10	1,52	6,1 / 3,9	390 / 708	Wall
AR-051/0511 L	5,0	5,8	230	50 / 60	16	1,56	7,0 / 4,1	590 / 957	Wall
AR-051/0611 L	6,0	7,0	230	50 / 60	16	2,05	6,5 / 4,0	661 / 1.080	Wall

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Industrial use, low temperatures, long pipes

The industrial units have been designed for 24/7 operation, which may be the case in laboratories and measuring chambers, for instance. The systems are energy efficient and extremely reliable.

- Pipe lengths of up to 50 metres for wall models and up to 75 metres for ceiling-suspended models are possible.
- Cooling from an outside temperature of -15 °C and heating from -20 °C.
- Fixed remote controls on wall models are optional.

Type number	Capacity Cooling [kW]	Capacity Heating [kW]	Supply Voltage [V AC]	Frequency [Hz]	Fuse rating [A]	Electrical Power [kW]	SEER / SCOP	Air flow [m ³ / hour]	Model
AR-051/0511	5,0	5,6	230	50	10	1,50	5,8 / 4,0	660 / 840	Wall
AR-051/0512	5,0	5,6	230	50	10	1,37	5,5 / 4,3	540 / 900	Ceiling
AR-051/0711	7,1	8,0	230	50	16	2,34	5,9 / 3,9	660 / 1.020	Wall
AR-051/0712	7,1	8,0	230	50	16	1,92	6,2 / 4,1	750 / 1.410	Ceiling
AR-051/1012	10,0	11,2	230	50	20	2,45	6,2 / 4,3	1.020 / 1.860	Ceiling
AR-051/1022	10,0	11,2	400	50	3 x 10	2,53	6,4 / 4,4	1.020 / 1.860	Ceiling
AR-051/1212	12,5	14,0	230	50	25	3,90	3,2 / 3,9	1.200 / 2.040	Ceiling
AR-051/1222	12,5	14,0	400	50	3 x 10	3,72	3,4 / 3,9	1.200 / 2.040	Ceiling
AR-051/1422	14,0	16,0	400	50	3 x 16	4,50	3,1 / 3,7	1.260 / 2.040	Ceiling

Industrial use, compact design

The compact industrial units have been designed for 24/7 operation and are eminently suitable for application in mobile installations, container applications and crane cabins.

- Pipe lengths of up to 30 metres for wall models and up to 50 metres for ceiling-suspended models are possible.
- Cooling and heating from an outside temperature of -15 °C.
- Fixed remote controls on wall models are optional.

Type number	Capacity Cooling [kW]	Capacity Heating [kW]	Supply Voltage [V AC]	Frequency [Hz]	Fuse rating [A]	Electrical Power [kW]	SEER / SCOP	Air flow [m ³ / hour]	Model
AR-051/0211 C	2,5	3,4	230	50 / 60	10	0,85	5,9 / 4,0	300 / 516	Wall
AR-051/0311 C	3,6	4,0	230	50 / 60	10	1,13	5,4 / 4,1	300 / 516	Wall
AR-051/0312 C	3,6	4,0	230	50 / 60	10	0,78	6,0 / 5,0	540 / 900	Ceiling
AR-051/0511 C	5,0	5,3	230	50 / 60	10	1,66	5,8 / 4,0	660 / 840	Wall
AR-051/0512 C	5,0	5,3	230	50 / 60	10	1,61	5,4 / 4,2	540 / 900	Ceiling
AR-051/0711 C	6,7	7,7	230	50 / 60	16	2,61	5,6 / 4,0	660 / 1.020	Wall
AR-051/0712 C	6,9	7,7	230	50 / 60	16	2,38	5,6 / 4,0	750 / 1.410	Ceiling
AR-051/1012 C	10,0	11,2	230	50 / 60	20	3,11	5,8 / 4,3	1.020 / 1.860	Ceiling
AR-051/1212 C	12,1	12,8	230	50 / 60	25	4,42	2,7 / 3,7	1.200 / 2.040	Ceiling
AR-051/1412 C	14,0	16,0	230	50	32	4,65	3,0 / 3,5	1.260 / 2.040	Ceiling

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Industrial use, corrosion resistant

From a cooling technology point of view, the special anti-corrosive units are identical to the compact units but are better suited for use in corrosive conditions, such as in offshore or coastal industrial areas, thanks to the several effective measures which have been taken.

- Additional coating on louvres and copper pipeworks.
- Panels and base plate finished with two extra layers of acrylic coating.
- Stainless steel screws with Geomet anti-corrosion treatment and plastic washers.
- The ventilator motor axle is finished with an epoxy coating.

Type number	Capacity Cooling [kW]	Capacity Heating [kW]	Supply Voltage [V AC]	Frequency [Hz]	Fuse rating [A]	Electrical Power [kW]	SEER / SCOP	Air flow [m ³ / hour]	Model
AR-051/0211 CR	2,5	3,4	230	50 / 60	10	0,85	5,9 / 4,0	300 / 516	Wall
AR-051/0311 CR	3,6	4,0	230	50 / 60	10	1,13	5,4 / 4,1	300 / 516	Wall
AR-051/0312 CR	3,6	4,0	230	50 / 60	10	0,78	6,0 / 5,0	540 / 900	Ceiling
AR-051/0511 CR	5,0	5,3	230	50 / 60	10	1,66	5,8 / 4,0	660 / 840	Wall
AR-051/0512 CR	5,0	5,3	230	50 / 60	10	1,61	5,4 / 4,2	540 / 900	Ceiling
AR-051/0711 CR	6,7	7,7	230	50 / 60	16	2,61	5,6 / 4,0	660 / 1.020	Wall
AR-051/0712 CR	6,9	7,7	230	50 / 60	16	2,38	5,6 / 4,0	750 / 1.410	Ceiling
AR-051/1012 CR	10,0	11,2	230	50 / 60	20	3,11	5,3 / 3,5	1.020 / 1.860	Ceiling
AR-051/1212 CR	12,1	12,8	230	50 / 60	25	4,42	2,7 / 3,7	1.200 / 2.040	Ceiling

Options

Type number	Description
AR-051/9900	Explosion-safe work switch.
AR-051/9901	Fixed remote control (wired) on any of the industrial wall models.
AR-051/9902	Infra-red remote control for any of the ceiling mounted indoor units.
AR-051/9910	Blygold PoluAl XT coating of the condenser coils.
AR-051/9920	Export packing in palletized wooden crates meeting the requirements of ISPM 15.

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Dimensions and weight

Type number	Indoor unit				Outdoor unit				Piping size
	Height [mm]	Width [mm]	Depth [mm]	Weight [kg]	Height [mm]	Width [mm]	Depth [mm]	Weight [Kg]	
AR-051/0211 L	275	790	217	10	550	780	290	33	1/4"x 3/8"
AR-051/0211 C / CR	275	790	217	10	550	780	290	33	1/4"x 3/8"
AR-051/0311 L	275	790	217	10	550	780	290	33	1/4"x 3/8"
AR-051/0311 C / CR	275	790	217	10	550	780	290	39	1/4"x 1/2"
AR-051/0312 C / CR	235	950	690	23	550	780	290	39	1/4"x 1/2"
AR-051/0411 L	275	790	217	10	550	780	290	38	1/4"x 1/2"
AR-051/0511	320	1.050	228	12	550	780	290	44	1/4"x 1/2"
AR-051/0511 L	320	1.050	229	13	550	780	290	39	1/4"x 1/2"
AR-051/0511 C / CR	320	1.050	228	12	550	780	290	40	1/4"x 1/2"
AR-051/0512	235	950	690	23	550	780	290	44	1/4"x 1/2"
AR-051/0512 C / CR	235	950	690	23	550	780	290	40	1/4"x 1/2"
AR-051/0611 L	320	1.050	229	13	550	780	290	41	1/4"x 1/2"
AR-051/0711	320	1.050	228	12	890	900	320	63	3/8"x 5/8"
AR-051/0711 C / CR	320	1.050	228	12	550	780	290	44	3/8"x 5/8"
AR-051/0712	235	1.270	690	29	890	900	320	63	3/8"x 5/8"
AR-051/0712 C / CR	235	1.270	690	29	550	780	290	44	3/8"x 5/8"
AR-051/1012	235	1.586	690	35	1.340	900	320	93	3/8"x 5/8"
AR-051/1012 C / CR	235	1.586	690	35	890	900	320	68	3/8"x 5/8"
AR-051/1022	235	1.586	690	35	1.340	900	320	95	3/8"x 5/8"
AR-051/1212	235	1.586	690	35	1.340	900	320	93	3/8"x 5/8"
AR-051/1212 C / CR	235	1.586	690	35	890	900	320	68	3/8"x 5/8"
AR-051/1222	235	1.586	690	35	1.340	900	320	95	3/8"x 5/8"
AR-051/1412 C	235	1.586	690	35	1.340	900	320	99	3/8"x 5/8"
AR-051/1422	235	1.586	690	35	1.340	900	320	95	3/8"x 5/8"