



S.T.A. BRANCA IDEALAIR



**PRECISION  
AIR CONDITIONING  
2018**



## **OVERVIEW**

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**S.T.A. BRANCA IDEALAIR** manufactures and provides climatic units for the **precision air conditioning of Laboratories**

Textile quality, paper and paperboard testing, Cements, Glues and Adhesives testing, Air quality laboratories are main application fields followed by S.T.A. Branca Idealair.

**Leader** in project and development of control rooms for **dimensional** and **three-dimensional metrology** with coordinate measuring machines.

Branca offers a wide range of units to cover specific requirements of air conditioning for laboratories that provides to the end-user the availability to find easily the proper solutions for **lab accreditation** in compliance with **ISO/IEC 9001** and **17025 standard**.

**QUALITY + SUSTAINABILITY at your service**



In terms of precision air conditioning, the concept of **innovation** represents the key elements for manufacturers in this specific application field.

Our company always promotes the **R&D of new products** updates **cooperating** together **with universities** and other **institutes** to make real our projects and new ideas.

**Branca Climatic unit** is a **technology advanced** device able to perform flexibly **close-control operation** modes both for the only temperature and climatic regulation assuring to obtain and maintain **uniform conditions** in every point of the working spaces in compliance with national and international UNI, EN, ISO, BS, ASTM, AATCC, BISFA, EDANA, IWTO standards.

# TYPE MINI



INDUSTRY 4.0



## FUNCTIONALITIES AND ADVANCED OPERATIONS

- Double unit: internal and external condensing unit;
- Electrical compatibility in compliance with **CE, UL, CSA**;
- Aeraulic circuit with tangential flow distribution and air velocity **< 0,15 m/s**;
- Reduction of convective air movements avoding Coanda effects under the ceiling;
- Refrigerant circuit modulation through solenoid or electronic valves;
- Water depuration with osmosis group
- Humidification device;
- Evaporator in copper/copper to obtain maximum performances;
- Centrifugal fan with speed modulation control;
- Air pre-filters or from ducts with filtration class **G3, G4**;
- Fresh air intake in compliance with UNI standard;
- ECO Energy and water saving logic system included;
- Final filtration with HEPA filters **F6**;
- **HMI Touch Screen 7"** for user interface;
- Compatible with communication protocols **MODBUS RTU/TCP-IP** in compliance with *IEC 60870*;
- Remote support;
- Probes accuracy at  $\pm 0,01^{\circ}\text{C}$  for temperature and  $\pm 0,01\%$  for Relative humidity reducing at minimum level the spatial and temporal gradients
- Alarms diagnostics and statistics with troubleshooting;
- Weekly ECO programming

- Suitable for samples conditioning inside air volumes of(9-25) m<sup>3</sup>;
- On request the supply of insulated cabin;

AIR VOLUME	(9÷25) m <sup>3</sup>
Heating:	1,5 KW
Cooling	0,8 KW
Humidification	0,3 KW
Blower model:	Centrifugal (Standard EU)
Blower capacity:	250 m <sup>3</sup> /h
Ventilazione:	0,20 KW
Air exchange (m <sup>3</sup> /h):	1 air volume/h
Condensation type:	by air
Cooling type:	by water cooled
Temperature (°C):	(10 ÷ 30) ± 0,5 °C On request ± 0,1 °C
Relative humidity (%):	(40 ÷ 80) ± 2 %
Water charge connector:	Ø ¼"
Water discharge connector:	Ø ½"
Condensing water connector:	Ø ½"
Power consumption:	3 KW
Internal noise level:	< 45 dBA
External noise level:	< 50 dBA
Refrigerant type:	<b>R290</b>
Refrigerant charge:	110 g
GWP	0
Lubrificant:	POE, PAG
Cable section:	3x6 mm <sup>2</sup>
Conductors:	1F+N+PE
Power supply:	230VAC/50HZ
Dimensions (LxPxA):	(60x30x180) cm (est) (70x30x180) cm (int)
Net weight:	150 Kg

LAB  
PROJECT

# TYPE 0



INDUSTRY 4.0



## FUNCTIONALITIES AND ADVANCED PERFORMANCES

- Wide operation ranges with critical atmospheres from (-20 ÷ 40) °C of temperature and (10 ÷ 90) % of relative humidity;
- Electrical compatibility in compliance with **CE, UL, CSA**, etc.;
- Air flow distribution with tangential diffusion and air velocities < **0,15 m/s** on the work tops;
- Refrigerant circuit modulation through solenoid or electronic valves;
- Water depuration with osmosis group;
- Humidification device;
- Centrifugal blower with automatic speed control in compliance with EU standard;
- Air pre-filters with filtration class **G3 - G4**;
- ECO Energy and water saving logic system;
- Final air HEPA filters (**F6**);
- **HMI Touch Screen 7"** for user interface and monitor screen;
- Remote support;
- Probes resolution at  $\pm 0,01^{\circ}\text{C}$  for temperature and  $\pm 0,01\%$  for relative humidity to reduce at minimum level thermal and temporal gradients;
- Alarms diagnostics and statistics with troubleshooting areas;
- Integrated datalogging system and trend graphs analyses;
- ECO Weekly programming;

AIR VOLUME	(20 ÷ 50) m <sup>3</sup>
Heating:	4,5 KW
Cooling:	1 KW
Humidification:	1,8 KW
Blower type:	Centrifugal (Standard EU)
Blower capacity:	500 m <sup>3</sup> /h
Blower consumption:	0,8 KW
Air exchange (m <sup>3</sup> /h):	1 air volume/h
Condensation:	by air
Cooling mode:	by cooled water
Temperature (°C):	(10 ÷ 30) ± 0,5 °C On request ± 0,1 °C
Relative humidity (%):	(40 ÷ 80) ± 2 %
Water charge:	Ø ¼"
Water discharge	Ø ½"
Condensing water discharge:	Ø ½"
Power consumption:	9 KW
Internal noise level:	< 45 dBA
External noise level:	< 60 dBA
Refrigerant:	<b>HFO R1234ze</b> 
Pipes Send/Return	Ø 12 mm
GWP	< 1
Lubrificant:	POE, PAG
Cable section:	5x10 mm <sup>2</sup>
Conductors:	3F+N+PE
Power supply:	400V - 50HZ
Dimensions (LxPxA):	70x50x190cm
Net weight (Kg):	200 Kg

LAB  
PROJECT

# TYPE 1



INDUSTRY 4.0



## FUNCTIONALITIES AND ADVANCED PERFORMANCES

- Wide operation ranges with critical atmospheres from (-20 ÷ 40) °C of temperature and (10 ÷ 90) % of relative humidity;
- Electrical compatibility in compliance with **CE, UL, CSA**, etc.;
- Air flow distribution with tangential diffusion and air velocities < **0,15 m/s** on the work tops;
- Refrigerant circuit modulation through solenoid or electronic valves;
- Water depuration with osmosis group;
- Humidification device;
- Centrifugal blower with automatic speed control in compliance with EU standard;
- Air pre-filters with filtration class **G3 - G4**;
- ECO Energy and water saving logic system;
- Final air HEPA filters (**F6**);
- **HMI Touch Screen 7"** for user interface and monitor screen;
- Remote support;
- Probes resolution at  $\pm 0,01^{\circ}\text{C}$  for temperature and  $\pm 0,01\%$  for relative humidity to reduce at minimum level thermal and temporal gradients;
- Alarms diagnostics and statistics with troubleshooting areas;
- Integrated datalogging system and trend graphs analyses;
- ECO Weekly programming;

AIR VOLUME	(50 ÷ 100) m <sup>3</sup>
Heating:	9 KW
Cooling:	2,2 KW
Humidification:	3 KW
Blower type:	Centrifugal (Standard EU)
Blower capacity:	1100 m <sup>3</sup> /h
Blower consumption:	0,8 KW
Air exchange (m <sup>3</sup> /h):	1 air volume/h
Condensation:	by air
Cooling mode:	by cooled water
Temperature (°C):	(10 ÷ 30) $\pm 0,5^{\circ}\text{C}$ On request $\pm 0,1^{\circ}\text{C}$
Relative humidity (%):	(40 ÷ 80) $\pm 2\%$
Water charge:	$\varnothing 1/4''$
Water discharge	$\varnothing 1/2''$
Condensing water discharge:	$\varnothing 1/2''$
Power consumption:	14 KW
Internal noise level:	< 45 dBA
External noise level:	< 60 dBA
Refrigerant:	<b>HFO R1234ze</b> 
Pipes Send/Return	$\varnothing 18\text{ mm}$
GWP	< 1
Lubricant:	POE, PAG
Cable section:	5x10 mm <sup>2</sup>
Conductors:	3F+N+PE
Power supply:	400V/50HZ
Dimensions (LxPxA):	100x60x190cm
Net weight (Kg):	300 Kg

LAB  
PROJECT

# TYPE 2



INDUSTRY 4.0



## FUNCTIONALITIES AND ADVANCED PERFORMANCES

- Wide operation ranges with critical atmospheres from (-20 ÷ 40) °C of temperature and (10 ÷ 90) % of relative humidity;
- Electrical compatibility in compliance with **CE, UL, CSA**, etc.;
- Air flow distribution with tangential diffusion and air velocities < **0,15 m/s** on the work tops;
- Refrigerant circuit modulation through solenoid or electronic valves;
- Water depuration with osmosis group;
- Humidification device;
- Centrifugal blower with automatic speed control in compliance with EU standard;
- Air pre-filters with filtration class **G3 - G4**;
- ECO Energy and water saving logic system;
- Final air HEPA filters (**F6**);
- **HMI Touch Screen 7"** for user interface and monitor screen;
- Remote support;
- Probes resolution at  $\pm 0,01^{\circ}\text{C}$  for temperature and  $\pm 0,01\%$  for relative humidity to reduce at minimum level thermal and temporal gradients;
- Alarms diagnostics and statistics with troubleshooting areas;
- Integrated datalogging system and trend graphs analyses;
- ECO Weekly programming;

AIR VOLUME	(100 ÷ 180) m <sup>3</sup>
Heating:	9 KW
Cooling:	3,9 KW
Humidification:	3 KW
Blower type:	Centrifugal (Standard EU)
Blower capacity:	1600 m3/h
Blower consumption:	0,8 KW
Air exchange (m <sup>3</sup> /h):	(100 ÷ 180) m <sup>3</sup> 1 air volume/h
Condensation:	by air
Cooling mode:	by water-cooled
Temperature (°C):	(10 ÷ 30) ± 0,5 °C On request ± 0,1 °C
Relative humidity (%):	(40 ÷ 80) ± 2 %
Water charge:	Ø ¼"
Water discharge	Ø ½"
Condensing water discharge:	Ø ½"
Power consumption:	16 KW
Internal noise level:	< 45 dBA
External noise level:	< 60 dBA
Refrigerant:	<b>HFO R1234ze</b> 
Pipes Send/Return	Ø 22 mm
GWP	< 1
Lubricant:	POE, PAG
Cable section:	5x16 mm <sup>2</sup>
Conductors:	3F+N+PE
Power supply:	400V/ 50HZ
Dimensions (LxPxA):	100x60x190cm
Net weight (Kg):	320 Kg

LAB  
PROJECT

# TYPE 2S



INDUSTRY 4.0



## FUNCTIONALITIES AND ADVANCED PERFORMANCES

- Wide operation ranges with critical atmospheres from (-20 ÷ 40) °C of temperature and (10 ÷ 90) % of relative humidity;
- Electrical compatibility in compliance with **CE, UL, CSA**, etc.;
- Air flow distribution with tangential diffusion and air velocities < **0,15 m/s** on the work tops;
- Refrigerant circuit modulation through solenoid or electronic valves;
- Water depuration with osmosis group;
- Humidification device;
- Centrifugal blower with automatic speed control in compliance with EU standard;
- Air pre-filters with filtration class **G3 - G4**;
- ECO Energy and water saving logic system;
- Final air HEPA filters (**F6**);
- **HMI Touch Screen 7"** for user interface and monitor screen;
- Remote support;
- Probes resolution at **± 0,01°C** for temperature and **± 0,01%** for relative humidity to reduce at minimum level thermal and temporal gradients;
- Alarms diagnostics and statistics with troubleshooting areas;
- Integrated datalogging system and trend graphs analyses;
- ECO Weekly programming;

AIR VOLUME	(180 ÷ 300) m <sup>3</sup>
Heating:	9 KW
Cooling:	5 KW
Humidification:	4,5 KW
Blower type:	Centrifugal (Standard EU)
Blower capacity:	3300 m <sup>3</sup> /h
Blower consumption:	1,6 KW
Air exchange (m <sup>3</sup> /h):	(180 ÷ 300) m <sup>3</sup> 1 air volume/h
Condensation:	by air
Cooling mode:	by water-cooled
Temperature (°C):	(10 ÷ 30) ± 0,5 °C On request ± 0,1 °C
Relative humidity (%):	(40 ÷ 80) ± 2 %
Water charge:	Ø ¼"
Water discharge	Ø ½"
Condensing water discharge:	Ø ½"
Power consumption:	21 KW
Internal noise level:	< 45 dBA
External noise level:	< 60 dBA
Refrigerant:	<b>HFO R1234ze</b> 
Pipes Send/Return	Ø 22 mm
GWP	< 1
Lubrificant:	POE, PAG
Cable section:	5x16 mm <sup>2</sup>
Conductors:	3F+N+PE
Power supply:	400V/50HZ
Dimensions (LxPxA):	125x60x190cm
Net weight (Kg):	400 Kg

LAB  
PROJECT

# TYPE 3



INDUSTRY 4.0



## AIR VOLUME

(300 ÷ 450) m<sup>3</sup>

Heating:	18 KW
Cooling:	7,7 KW
Humidification:	12 KW
Blower type:	Centrifugal (Standard EU)
Blower capacity:	5000 m <sup>3</sup> /h
Blower consumption:	1,6 KW
Air exchange (m <sup>3</sup> /h):	1 air volume/h
Condensation:	by air
Cooling mode:	by cooled-water
Temperature (°C):	(10 ÷ 30) ± 0,5 °C On request ± 0,1 °C
Relative humidity (%):	(40 ÷ 80) ± 2 %
Water charge:	Ø ¼"
Water discharge	Ø ½"
Condensing water discharge:	Ø ½"
Power consumption:	38 KW
Internal noise level:	< 45 dBA
External noise level:	< 60 dBA
Refrigerant:	<b>HFO R1234ze</b> 
Pipes Send/Return	Ø 25 mm
GWP	< 1
Lubrificant:	POE, PAG
Cable section:	5x25 mm <sup>2</sup>
Conductors:	3F+N+PE
Power supply:	400V/50HZ
Dimensions (LxPxA):	190x65x190cm
Net weight (Kg):	550 Kg

## FUNCTIONALITIES AND ADVANCED PERFORMANCES

- Wide operation ranges with critical atmospheres from (-20 ÷ 40) °C of temperature and (10 ÷ 90) % of relative humidity;
- Electrical compatibility in compliance with **CE, UL, CSA**, etc.;
- Air flow distribution with tangential diffusion and air velocities < **0,15 m/s** on the work tops;
- Refrigerant circuit modulation through solenoid or electronic valves;
- Water depuration with osmosis group;
- Humidification device;
- Centrifugal blower with automatic speed control in compliance with EU standard;
- Air pre-filters with filtration class **G3 - G4**;
- ECO Energy and water saving logic system;
- Final air HEPA filters (**F6**);
- **HMI Touch Screen 7"** for user interface and monitor screen;
- Remote support;
- Probes resolution at ± **0,01°C** for temperature and ± **0,01%** for relative humidity to reduce at minimum level thermal and temporal gradients;
- Alarms diagnostics and statistics with troubleshooting areas;
- Integrated datalogging system and trend graphs analyses;
- ECO Weekly programming;

LAB  
PROJECT

# TYPE 4



INDUSTRY 4.0



## FUNCTIONALITIES AND ADVANCED PERFORMANCES

- Wide operation ranges with critical atmospheres from (-20 ÷ 40) °C of temperature and (10 ÷ 90) % of relative humidity;
- Electrical compatibility in compliance with **CE**, **UL**, **CSA**, etc.;
- Air flow distribution with tangential diffusion and air velocities < **0,15 m/s** on the work tops;
- Refrigerant circuit modulation through solenoid or electronic valves;
- Water depuration with osmosis group;
- Humidification device;
- Centrifugal blower with automatic speed control in compliance with EU standard;
- Air pre-filters with filtration class **G3 - G4**;
- ECO Energy and water saving logic system;
- Final air HEPA filters (**F6**);
- **HMI Touch Screen 7"** for user interface and monitor screen;
- Remote support;
- Probes resolution at **± 0,01°C** for temperature and **± 0,01%** for relative humidity to reduce at minimum level thermal and temporal gradients;
- Alarms diagnostics and statistics with troubleshooting areas;
- Integrated datalogging system and trend graphs analyses;
- ECO Weekly programming;

AIR VOLUME	(450 ÷ 800) m <sup>3</sup>
Heating:	18 KW
Cooling:	18 KW
Humidification:	12 KW
Blower type:	Centrifugal (Standard EU)
Blower capacity:	7000 m <sup>3</sup> /h
Blower consumption:	2,4 KW
Air exchange (m <sup>3</sup> /h):	1 air volume/h
Condensation:	by air
Cooling mode:	by cooled-water
Temperature (°C):	(10 ÷ 30) ± 0,5 °C On request ± 0,1 °C
Relative humidity (%):	(40 ÷ 80) ± 2 %
Water charge:	Ø ¼"
Water discharge	Ø ½"
Condensing water discharge:	Ø ½"
Power consumption:	50 KW
Internal noise level:	< 45 dBA
External noise level:	< 60 dBA
Refrigerant:	<b>HFO R1234ze</b> 
Pipes Send/Return	Ø 36 mm
GWP	< 1
Lubrificant:	POE, PAG
Cable section:	5x25 mm <sup>2</sup>
Conductors:	3F+N+PE
Power supply:	400V/50HZ
Dimensions (LxPxA):	190x65x190cm
Net weight (Kg):	590 Kg

LAB  
PROJECT

Our technical team proceeds as follows:

- ☑ **1. C.I.C. - MAINTENANCE "CYCLE"**, or preventive servicing, is applied in cases where it is possible to identify the frequency of failures or for items that, regardless of the life condition of the units, require a periodical action established by the contract requirements of customer policy;
- ☑ **2. O.N.C. - MAINTENANCE "ON CONDITION"**, or periodic servicing, consists in carrying out visual or mechanical inspections through the mapping of laboratories, evaluating the uniformity of thermo-hygrometric variables and modifying specific parameters or technical upgrades of the systems during their standard operation after the inspections performed by the technician;
- ☑ **3. C.O.R. - MAINTENANCE "FAILURE"**, or corrective servicing, which is only applies to those components whose frequency of failure can't be predicted, but only detected and solved by the inspection of technician including its direct parts substitution;

The servicing plan involves the collaboration of the whole technical team, who performs servicing activities giving assistance to the customer and taking special care of all individual practices.

The new applications of **Quality Management System (QMS)** of S.T.A. BRANCA IDEALAIR are correlated to the highest requirements for all users, whose goal is to follow the correct protocol performing valid measures and applying the best solutions.

Since the beginning, S.T.A. Branca Idealair's Policy of Quality for servicing is exclusively concentrated on training, development and consolidation of a specific goals for trained and only employed staff embracing all planned, logistical and commercial tasks.

Since 2011, the S.T.A. BRANCA IDEALAIR develops *Remote Control*, also known as "MONITOR&CONTROL" that is focuses on remote assistance to the Climatic units.

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