The duct humidifier NKBD-6/3.1 is a product of the AIRWIN® brand of BOGA GmbH. It is used for the fully automatic production of aerosol mist from demineralised water according to the ultrasonic principle in air treatment systems and air ducts. The humidifier is controlled by an external ON/OFF signal, MODBUS RTU or by a customer-supplied, continuous control signal.

**Specification**

- **Housing made of demineralised water-resistant stainless steel (shiny surface)**
- **Control unit with electric and water-side functional elements**
- **Central electrical control connection to 9-pin connector**
- **MODBUS RTU interface designed as D-SUB**
- **Ultrasonic oscillating circuit with integrated fuse and temperature monitoring of the power transistors**
- **Stepless power control when operating with analog control signal**
- **Status messages for humidification and collective fault**
- **Integrated routines for error detection at water supply and drain**
- **Redundant level monitoring**
- **Current measurement of active components**
- **Electrical power connection 48 VAC to lead-through terminals for wire up to 25 mm²**
- **Possibility to connect standard control signals, e.g. 0-10 VDC, 4-10 mA**
- **Possibility to connect a hygrostat – also 2-stage**
- **Possibility to connect a safety chain**
- **Solenoid valve combination for water supply and water drainage**
- **Water-technical connection without tools by means of hose connectors for metric hoses/pipes**
- **Automatic level control of the water level, dry-running protection, overheat protection, protection against overvoltage peaks, overflow protection, disconnection protection**
- **AquaDrain plus**: integrated hygiene management for cyclical flushing of the water inlet pipe and cyclical or permanent emptying of the fluid tank according to pre-set parameters

**Technical data**

<table>
<thead>
<tr>
<th>Item</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. humidification output</td>
<td>3.6 kg/h</td>
</tr>
<tr>
<td>Number of transducers</td>
<td>6 units</td>
</tr>
<tr>
<td>Power consumption</td>
<td>185 VA</td>
</tr>
</tbody>
</table>

**Dimensions**

| Installation dimensions of humidifier – |       |
| height x width x depth                   | 241 x 286 x 288 mm |
| Hose water inlet                         | Ø 10 mm     |
| Hose water overflow/discharge            | Ø 14 mm     |
| Weight                                    | 6.0 kg      |

**Conditions of use**

| Power supply                              | V / Hz     |
| Conductivity of demineralised water       | 5...20 µS/cm|
| Ambient temperature                       | 5...45 °C   |
| Ambient humidity                          | 0...90 % RH |
| Water temperature                         | 5...40 °C   |
| Water pressure                            | 1...4 bar   |
| Air velocity                              | 1...4 m/s   |

**Scope of delivery**

- NKBD-6/3.1 duct humidifier
- Installation and operating instructions
- Stop cock Ø 10 mm
- Straight reducing connection Ø10 mm Ø6 mm
- D-SUB adapter 9-pin male / female 90 °

**Product specification**

| Brand                               | AIRWIN®    |
| Model                               | NKBD-6/3.1 |
| Item No.                            | 7900107    |

Rev 06/2021
The duct humidifier NKBD-12/3.1 is a product of the AIRWIN® brand of BOGA GmbH. It is used for the fully automatic production of aerosol mist from demineralised water according to the ultrasonic principle in air treatment systems and air ducts. The humidifier is controlled by an external ON/OFF signal, MODBUS RTU or by a customer-supplied, continuous control signal.

**Specification**
- Housing made of demineralised water-resistant stainless steel (shiny surface)
- Control unit with electric and water-side functional elements
- Central electrical control connection to 9-pin connector
- MODBUS RTU interface designed as D-SUB
- Ultrasonic oscillating circuit with integrated fuse and temperature monitoring of the power transistors
- Stepless power control when operating with analog control signal
- Status messages for humidification and collective fault
- Integrated routines for error detection at water supply and drain
- Redundant level monitoring
- Current measurement of active components
- Electrical power connection 48 VAC to lead-through terminals for wire up to 25 mm²
- Possibility to connect standard control signals, e.g. 0-10 VDC, 4-10 mA
- Possibility to connect a hygrostat – also 2-stage
- Possibility to connect a safety chain
- Solenoid valve combination for water supply and water drainage
- Water-technical connection without tools by means of hose connectors for metric hoses/pipes
- Automatic level control of the water level, dry-running protection, overheat protection, protection against overvoltage peaks, overflow protection, disconnection protection
- **AquaDrain plus**: integrated hygiene management for cyclical flushing of the water inlet pipe and cyclical or permanent emptying of the fluid tank according to pre-set parameters

**Technical data**
- Max. humidification output: 7.2 kg/h
- Number of transducers: 12 units
- Power consumption: 375 VA

**Dimensions**
- Installation dimensions of humidifier – height x width x depth: 241 x 436 x 288 mm
- Hose water inlet: Ø10 mm
- Hose water overflow/discharge: Ø14 mm
- Weight: 7.7 kg

**Conditions of use**
- Power supply: 48 / 50 V / Hz
- Conductivity of demineralised water: 5...20 µS/cm
- Ambient temperature: 5...45 °C
- Ambient humidity: 0...90 % RH
- Water temperature: 5...40 °C
- Water pressure: 1...4 bar
- Air velocity: 1...4 m/s

**Scope of delivery**
- NKBD-12/3.1 duct humidifier
- Installation and operating instructions
- Stop cock Ø10 mm
- Straight reducing connection Ø10 mm Ø6 mm
- D-SUB adapter 9-pin male / female 90 °

**Product specification**
- Brand: AIRWIN®
- Model: NKBD-12/3.1
- Item No.: 7900113

Rev 06/2021

BOGA GmbH
Werkstraße 16
D-59494 Soest
www.boga.de
+49 2921 96943-0

[Image of humidifier]
The duct humidifier NKBD-18/3.1 is a product of the AIRWIN® brand of BOGA GmbH. It is used for the fully automatic production of aerosol mist from demineralised water according to the ultrasonic principle in air treatment systems and air ducts. The humidifier is controlled by an external ON/OFF signal, MODBUS RTU or by a customer-supplied, continuous control signal.

**Specification**
- Housing made of demineralised water-resistant stainless steel (shiny surface)
- Control unit with electric and water-side functional elements
- Central electrical control connection to 9-pin connector
- MODBUS RTU interface designed as D-SUB
- Ultrasonic oscillating circuit with integrated fuse and temperature monitoring of the power transistors
- Stepless power control when operating with analog control signal
- Status messages for humidification and collective fault
- Integrated routines for error detection at water supply and drain
- Redundant level monitoring
- Current measurement of active components
- Electrical power connection 48 VAC to lead-through terminals for wire up to 25 mm²
- Possibility to connect standard control signals, e.g. 0-10 VDC, 4-10 mA
- Possibility to connect a hygrostat – also 2-stage
- Possibility to connect a safety chain
- Solenoid valve combination for water supply and water drainage
- Water-technical connection without tools by means of hose connectors for metric hoses/ pipes
- Automatic level control of the water level, dry-running protection, overheat protection, protection against overvoltage peaks, overflow protection, disconnection protection
- *AquaDrain plus*: integrated hygiene management for cyclical flushing of the water inlet pipe and cyclical or permanent emptying of the fluid tank according to pre-set parameters

**Technical data**

<table>
<thead>
<tr>
<th>Item</th>
<th>NKBD-18/3.1</th>
<th>NKBD-18/3.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. humidification output</td>
<td>10.8</td>
<td>kg/h</td>
</tr>
<tr>
<td>Number of transducers</td>
<td>18</td>
<td>units</td>
</tr>
<tr>
<td>Power consumption</td>
<td>555</td>
<td>VA</td>
</tr>
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**Dimensions**

<table>
<thead>
<tr>
<th>Installation dimensions of humidifier –</th>
<th>NKBD-18/3.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>height x width x depth</td>
<td>241 x 586 x 288 mm</td>
</tr>
<tr>
<td>Hose water inlet</td>
<td>Ø 10 mm</td>
</tr>
<tr>
<td>Hose water overflow/discharge</td>
<td>Ø 14 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>9.5 kg</td>
</tr>
</tbody>
</table>

**Conditions of use**

<table>
<thead>
<tr>
<th>Power supply</th>
<th>NKBD-18/3.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conductivity of demineralised water</td>
<td>5...20 µS/cm</td>
</tr>
<tr>
<td>Ambient temperature</td>
<td>5...45 °C</td>
</tr>
<tr>
<td>Ambient humidity</td>
<td>0...90 % RH</td>
</tr>
<tr>
<td>Water temperature</td>
<td>5...40 °C</td>
</tr>
<tr>
<td>Water pressure</td>
<td>1...4 bar</td>
</tr>
<tr>
<td>Air velocity</td>
<td>1...4 m/s</td>
</tr>
</tbody>
</table>

**Scope of delivery**

- NKBD-18/3.1 duct humidifier
- Installation and operating instructions
- Stop cock Ø 10 mm
- Straight reducing connection Ø10 mm Ø6 mm
- D-SUB adapter 9-pin male / female 90 °

**Product specification**

<table>
<thead>
<tr>
<th>Product specification</th>
<th>AIRWIN® NKBD-18/3.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand</td>
<td>AIRWIN®</td>
</tr>
<tr>
<td>Model</td>
<td>NKBD-18/3.1</td>
</tr>
<tr>
<td>Item No.</td>
<td>7900119</td>
</tr>
</tbody>
</table>
The duct humidifier NKBD-24/3.1 is a product of the AIRWIN® brand of BOGA GmbH. It is used for the fully automatic production of aerosol mist from demineralised water according to the ultrasonic principle in air treatment systems and air ducts. The humidifier is controlled by an external ON/OFF signal, MODBUS RTU or by a customer-supplied, continuous control signal.

**Specification**
- Housing made of demineralised water-resistant stainless steel (shiny surface)
- Control unit with electric and water-side functional elements
- Central electrical control connection to 9-pin connector
- MODBUS RTU interface designed as D-SUB
- Ultrasonic oscillating circuit with integrated fuse and temperature monitoring of the power transistors
- Stepless power control when operating with analog control signal
- Status messages for humidification and collective fault
- Integrated routines for error detection at water supply and drain
- Redundant level monitoring
- Current measurement of active components
- Electrical power connection 48 V AC to lead-through terminals for wire up to 25 mm²
- Possibility to connect standard control signals, e.g. 0-10 VDC, 4-10 mA
- Possibility to connect a hygrostat – also 2-stage
- Possibility to connect a safety chain
- Solenoid valve combination for water supply and water drainage
- Water-technical connection without tools by means of hose connectors for metric hoses/pipes
- Automatic level control of the water level, dry-running protection, overheat protection, protection against overvoltage peaks, overflow protection, disconnection protection
- **AquaDrain plus**: integrated hygiene management for cyclical flushing of the water inlet pipe and cyclical or permanent emptying of the fluid tank according to pre-set parameters

**Technical data**
- Max. humidification output: 14.4 kg/h
- Number of transducers: 24 units
- Power consumption: 735 VA

**Dimensions**
- Installation dimensions of humidifier –
  - height x width x depth: 241 x 736 x 288 mm
  - Hose water inlet: Ø 10 mm
  - Hose water overflow/discharge: Ø 14 mm
  - Weight: 11.7 kg

**Conditions of use**
- Power supply: 48 / 50 V / Hz
- Conductivity of demineralised water: 5...20 µS/cm
- Ambient temperature: 5...45 °C
- Ambient humidity: 0...90 % RH
- Water temperature: 5...40 °C
- Water pressure: 1...4 bar
- Air velocity: 1...4 m/s

**Scope of delivery**
- NKBD-24/3.1 duct humidifier
- Installation and operating instructions
- Stop cock Ø 10 mm
- Straight reducing connection Ø10 mm Ø6 mm
- D-SUB adapter 9-pin male / female 90 °

**Product specification**
- Brand: AIRWIN®
- Model: NKBD-24/3.1
- Item No.: 7900125

Rev 06/2021
The duct humidifier NKBD-30/3.1 is a product of the AIRWIN® brand of BOGA GmbH. It is used for the fully automatic production of aerosol mist from demineralised water according to the ultrasonic principle in air treatment systems and air ducts. The humidifier is controlled by an external ON/OFF signal, MODBUS RTU or by a customer-supplied, continuous control signal.

**Specification**
- Housing made of demineralised water-resistant stainless steel (shiny surface)
- Control unit with electric and water-side functional elements
- Central electrical control connection to 9-pin connector
- MODBUS RTU interface designed as D-SUB
- Ultrasonic oscillating circuit with integrated fuse and temperature monitoring of the power transistors
- Stepless power control when operating with analog control signal
- Status messages for humidification and collective fault
- Integrated routines for error detection at water supply and drain
- Redundant level monitoring
- Current measurement of active components
- Electrical power connection 48 VAC to lead-through terminals for wire up to 25 mm²
- Possibility to connect standard control signals, e.g. 0-10 VDC, 4-10 mA
- Possibility to connect a hygrostat – also 2-stage
- Possibility to connect a safety chain
- Solenoid valve combination for water supply and water drainage
- Water-technical connection without tools by means of hose connectors for metric hoses/pipes
- Automatic level control of the water level, dry-running protection, overheat protection, protection against overvoltage peaks, overflow protection, disconnection protection
- **AquaDrain plus**: integrated hygiene management for cyclical flushing of the water inlet pipe and cyclical or permanent emptying of the fluid tank according to pre-set parameters

**Technical data**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value 1</th>
<th>Value 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. humidification output</td>
<td>18 kg/h</td>
<td></td>
</tr>
<tr>
<td>Number of transducers:</td>
<td>30 units</td>
<td></td>
</tr>
<tr>
<td>Power consumption</td>
<td>915 VA</td>
<td></td>
</tr>
</tbody>
</table>

**Dimensions**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value 1</th>
<th>Value 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installation dimensions of humidifier –</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Height x width x depth</td>
<td>241 x 886 x 288 mm</td>
<td></td>
</tr>
<tr>
<td>Hose water inlet</td>
<td>Ø 10 mm</td>
<td></td>
</tr>
<tr>
<td>Hose water overflow/discharge</td>
<td>Ø 14 mm</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>13.7 kg</td>
<td></td>
</tr>
</tbody>
</table>

**Conditions of use**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value 1</th>
<th>Value 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power supply</td>
<td>48 / 50 V / Hz</td>
<td></td>
</tr>
<tr>
<td>Conductivity of demineralised water</td>
<td>5...20 µS/cm</td>
<td></td>
</tr>
<tr>
<td>Ambient temperature</td>
<td>5...45 °C</td>
<td></td>
</tr>
<tr>
<td>Ambient humidity</td>
<td>0...90 % RH</td>
<td></td>
</tr>
<tr>
<td>Water temperature</td>
<td>5...40 °C</td>
<td></td>
</tr>
<tr>
<td>Water pressure</td>
<td>1...4 bar</td>
<td></td>
</tr>
<tr>
<td>Air velocity</td>
<td>1...4 m/s</td>
<td></td>
</tr>
</tbody>
</table>

**Scope of delivery**

- NKBD-30/3.1 duct humidifier
- Installation and operating instructions
- Stop cock Ø 10 mm
- Straight reducing connection Ø10 mm Ø6 mm
- D-SUB adapter 9-pin male / female 90°

**Product specification**

<table>
<thead>
<tr>
<th>Brand</th>
<th>AIRWIN®</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>NKBD-30/3.1</td>
</tr>
<tr>
<td>Item No.</td>
<td>7900131</td>
</tr>
</tbody>
</table>

Rev 06/2021

BOGA GmbH
Werkstraße 16
D-59494 Soest
www.boga.de
+49 2921 96943-0
The duct humidifier NKBD-36/3.1 is a product of the AIRWIN® brand of BOGA GmbH. It is used for the fully automatic production of aerosol mist from demineralised water according to the ultrasonic principle in air treatment systems and air ducts. The humidifier is controlled by an external ON/OFF signal, MODBUS RTU or by a customer-supplied, continuous control signal.

**Specification**
- Housing made of demineralised water-resistant stainless steel (shiny surface)
- Control unit with electric and water-side functional elements
- Central electrical control connection to 9-pin connector
- MODBUS RTU interface designed as D-SUB
- Ultrasonic oscillating circuit with integrated fuse and temperature monitoring of the power transistors
- Stepless power control when operating with analog control signal
- Status messages for humidification and collective fault
- Integrated routines for error detection at water supply and drain
- Redundant level monitoring
- Current measurement of active components
- Electrical power connection 48 VAC to lead-through terminals for wire up to 25 mm²
- Possibility to connect standard control signals, e.g. 0-10 VDC, 4-10 mA
- Possibility to connect a hygrostat – also 2-stage
- Possibility to connect a safety chain
- Solenoid valve combination for water supply and water drainage
- Water-technical connection without tools by means of hose connectors for metric hoses/pipes
- Automatic level control of the water level, dry-running protection, overheat protection, protection against overvoltage peaks, overflow protection, disconnection protection
- **AquaDrain plus**: integrated hygiene management for cyclical flushing of the water inlet pipe and cyclical or permanent emptying of the fluid tank according to pre-set parameters

**Technical data**

<table>
<thead>
<tr>
<th>Item</th>
<th>Max. humidification output</th>
<th>Power consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>kg/h</td>
<td>21.6</td>
<td>1095 VA</td>
</tr>
<tr>
<td>Number of transducers:</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td>units</td>
<td>1095 VA</td>
<td></td>
</tr>
</tbody>
</table>

**Dimensions**

<table>
<thead>
<tr>
<th>Installation dimensions of humidifier –</th>
<th>mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>height x width x depth</td>
<td>241 x 1036 x 288</td>
</tr>
<tr>
<td>Hose water inlet</td>
<td>Ø 10</td>
</tr>
<tr>
<td>Hose water overflow/discharge</td>
<td>Ø 14</td>
</tr>
<tr>
<td>Weight</td>
<td>15.2 kg</td>
</tr>
</tbody>
</table>

**Conditions of use**

<table>
<thead>
<tr>
<th>Power supply</th>
<th>V / Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conductivity of demineralised water</td>
<td>5...20 µS/cm</td>
</tr>
<tr>
<td>Ambient temperature</td>
<td>5...45 °C</td>
</tr>
<tr>
<td>Ambient humidity</td>
<td>0...90 % RH</td>
</tr>
<tr>
<td>Water temperature</td>
<td>5...40 °C</td>
</tr>
<tr>
<td>Water pressure</td>
<td>1...4 bar</td>
</tr>
<tr>
<td>Air velocity</td>
<td>1...4 m/s</td>
</tr>
</tbody>
</table>

**Scope of delivery**

- NKBD-36/3.1 duct humidifier
- Installation and operating instructions
- Stop cock Ø 10 mm
- Straight reducing connection Ø10 mm Ø6 mm
- D-SUB adapter 9-pin male / female 90 °

**Product specification**

<table>
<thead>
<tr>
<th>Brand</th>
<th>AIRWIN®</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>NKBD-36/3.1</td>
</tr>
<tr>
<td>Item No.</td>
<td>7900137</td>
</tr>
</tbody>
</table>
The duct humidifier NKBD-42/3.1 is a product of the AIRWIN® brand of BOGA GmbH. It is used for the fully automatic production of aerosol mist from demineralised water according to the ultrasonic principle in air treatment systems and air ducts. The humidifier is controlled by an external ON/OFF signal, MODBUS RTU or by a customer-supplied, continuous control signal.

**Specification**
- Housing made of demineralised water-resistant stainless steel (shiny surface)
- Control unit with electric and water-side functional elements
- Central electrical control connection to 9-pin connector
- MODBUS RTU interface designed as D-SUB
- Ultrasonic oscillating circuit with integrated fuse and temperature monitoring of the power transistors
- Stepless power control when operating with analog control signal
- Status messages for humidification and collective fault
- Integrated routines for error detection at water supply and drain
- Redundant level monitoring
- Current measurement of active components
- Electrical power connection 48 VAC to lead-through terminals for wire up to 25 mm²
- Possibility to connect standard control signals, e.g. 0-10 VDC, 4-10 mA
- Possibility to connect a hygrostat – also 2-stage
- Possibility to connect a safety chain
- Solenoid valve combination for water supply and water drainage
- Water-technical connection without tools by means of hose connectors for metric hoses/pipes
- Automatic level control of the water level, dry-running protection, overheat protection, protection against overvoltage peaks, overflow protection, disconnection protection
- **AquaDrain plus**: integrated hygiene management for cyclical flushing of the water inlet pipe and cyclical or permanent emptying of the fluid tank according to pre-set parameters

**Technical data**
- Max. humidification output: 25.2 kg/h
- Number of transducers: 42 units
- Power consumption: 1275 VA

**Dimensions**
- Installation dimensions of humidifier – height x width x depth: 241 x 1186 x 288 mm
- Hose water inlet: Ø 10 mm
- Hose water overflow/discharge: Ø 14 mm
- Weight: 17.2 kg

**Conditions of use**
- Power supply: 48 / 50 V / Hz
- Conductivity of demineralised water: 5...20 µS/cm
- Ambient temperature: 5...45 °C
- Ambient humidity: 0...90 % RH
- Water temperature: 5...40 °C
- Water pressure: 1...4 bar
- Air velocity: 1...4 m/s

**Scope of delivery**
- NKBD-42/3.1 duct humidifier
- Installation and operating instructions
- Stop cock Ø 10 mm
- Straight reducing connection Ø10 mm Ø6 mm
- D-SUB adapter 9-pin male / female 90 °

**Product specification**
- Brand: AIRWIN®
- Model: NKBD-42/3.1
- Item No.: 7900143