

# Electric heaters ERH NV/NI/NIS



aluzinc coating



Two-stage overheat

protection



Integrated

automatic



IP 44 protection class

## Description

ERH NI/NV/NIS is a series of electric duct heaters with a **built-in automation system containing a heater power regulator.** The adjustment is performed by pulsation. The time between switching the heaters on and off is adjusted by the regulator to ensure that the set temperature is maintained. The NV/NI/NIS series differ in the way the target value is set:

NI – Temperature setpoint using potentiometer located on heater cover.

NV – Temperature setting using HR5K external setpoint.

LOW – Temperature setting using external control signal 0 - 10 V.

ERH heaters are designed for installation in rectangular ducts. Heating power range: 6.0 to 66.0 kW.

Each heater has a two-stage overheat protection:

I level at 50°C - automatic reset.

II level at 100°C – manual reset required.

# Usage

Duct heaters are used to heat clean air in domestic ventilation systems, especially in autumn and winter, as well as in industrial installations requiring a constant temperature of blown air.

ECH heaters also work as pre-heaters or secondary heaters, complementing installations based on ventilation units with heat recovery.

## Design

The heater cover is made of steel sheet coated with a high-quality aluzinc coating, which guarantees high corrosion resistance. The heating elements are made of AISI 304 stainless steel.

The junction box has an IP44 protection class.

### Power of heating elements

| Power [kW] | Heating elements [kW] | Power [kW] | Heating elements [kW] |
|------------|-----------------------|------------|-----------------------|
| 9          | 9                     | 36         | 9+12+15               |
| 12         | 12                    | 39         | 9+15+15               |
| 15         | 15                    | 42         | 12+15+15              |
| 18         | 9+9                   | 45         | 12+15+18              |
| 21         | 9+12                  | 51         | 9+12+12+18            |
| 24         | 9+15                  | 54         | 9+12+15+18            |
| 27         | 12+15                 | 60         | 12+15+15+18           |
| 30         | 15+15                 | 66         | 15+15+18+18           |
| 33         | 15+18                 | -          | -                     |

#### Accessories



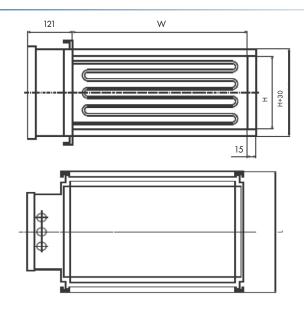
PSH Pressure switch page 173

TJK10K Duct temperature sensor page 173



HR5K

External temperature setpoint page 174



# Standard dimensions [mm]

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| ERH NI/NV/I   | NIS-4020; \   | N×H =                                  | 400x                                      | 200  |                |                |                |                             |          |          |                 |          |                |               |          |                 |     |                  |
|---|---|--|---|--|----------------|----------------|----------------|-----------------------------|----------|----------|-----------------|----------|----------------|---------------|----------|-----------------|-----|------------------|
| Length L  | mm  |  | 370                                       |  | 420            | 520            |                |                             |          |          |                 |          |                |               |          |                 |     |                  |
| Power   | kW  | 6                                      | 9   | 12   | 15             | 21             |                |                             |          |          |                 |          |                |               |          |                 |     |                  |
| ERH NI/NV/I   | NIS-5025; \   | WxH =                                  | 500x                                      | 250  |                |                |                |                             |          |          |                 |          |                |               |          |                 |     |                  |
| Length L  | mm  | 37                                     | 0   | 420  | 520            | 600            | 820            | 970                         |          |          |                 |          |                |               |          |                 |     |                  |
| Power   | kW  | 9                                      | 12  | 15   | 21             | 24             | 36             | 45                          |          |          |                 |          |                |               |          |                 |     |                  |
| ERH NI/NV/I   | NIS-5030; \   | WxH =                                  | 500x                                      | 300  |                |                |                |                             |          |          |                 |          |                |               |          |                 |     |                  |
| Length L  | mm  |  |   | 37   | 70             |                |                |                             | 440      |          | 520             | 60       | 00             |               |          |                 |     |                  |
| Power   | kW  | 9                                      | 12  | 15   | 18             | 21             | 24             | 27                          | 30       | 33       | 36              | 42       | 45             |               |          |                 |     |                  |
|   |   | A/11 =                                 | 400                                       | 200  |                |                |                |                             |          |          |                 |          |                |               |          |                 |     |                  |
| ERH NI/NV/1<br>Length L   | mm  | /VXH =                                 | 600x                                      |  | 70             |                |                |                             | 440      |          | 500             |          | 00             |               |          |                 |     |                  |
|   |   |  |   | 37   | 0              |                |                |                             | 440      |          | 520             | 00       |                |               |          |                 |     |                  |
| ······  |   | ~                                      | 10  |  | 10             | 01             | 0.4            | 07                          | 20       | 22       | · · · ·         | 40       | 4 5            |               |          |                 |     |                  |
| Power   | kW  | 9                                      | 12  | 15   | 18             | 21             | 24             | 27                          | 30       | 33       | 36              | 42       | 45             |               |          |                 |     |                  |
| ······  | kW  |  |   | 15   | 18             | 21             | 24             | 27                          | 30       | 33       | 36              | 42       | 45             |               |          |                 |     |                  |
| Power   | kW  |  |   | 15   |                | 21<br>70       | 24             | 27                          | 30       | 33       | 36<br>420       | 42       |                | 00            |          |                 |     |                  |
| Power<br>ERH NI/NV/1  | kW<br>NIS-6035; ۱   |  |   | 15   |                |                | 24<br>24       | 27<br>27                    | 30<br>30 | 33<br>33 |                 | 42<br>39 |                | 00<br>45      |          |                 |     |                  |
| Power<br>ERH NI/NV/I<br>Length L<br>Power   | kW<br><b>NIS-6035; \</b><br>mm<br>kW  | <b>WxH =</b><br>9                      | <b>600x</b>                               | 15<br><b>350</b><br>15                     | 3              | 70             |                |                             |          |          | 420             |          | 50             |               |          |                 |     |                  |
| Power<br>ERH NI/NV/M<br>Length L<br>Power<br>ERH NI/NV/M  | kW<br><b>NIS-6035; \</b><br>mm<br>kW  | <b>WxH =</b><br>9                      | <b>600x</b>                               | 15<br><b>350</b><br>15                     | 3              | 70             |                | 27                          |          |          | 420             |          | 50             | 45            | 40       | 520             |     |                  |
| Power<br>ERH NI/NV/I<br>Length L<br>Power   | kW<br>NIS-6035; \<br>mm<br>kW<br>NIS-7040; \  | <b>WxH =</b><br>9                      | <b>600x</b>                               | 15<br><b>350</b><br>15                     | 3              | 70             | 24             | 27                          |          |          | 420             |          | 50             | 45            | 40<br>60 | 520<br>66       |     |                  |
| Power<br>ERH NI/NV/M<br>Length L<br>Power<br>ERH NI/NV/M<br>Length L<br>Power                               | kW<br>NIS-6035; \<br>mm<br>kW<br>NIS-7040; \<br>mm<br>kW                            | WxH =<br>9<br>WxH =<br>9               | 600x3<br>12<br>700x4<br>12                | 15<br><b>350</b><br>15<br><b>400</b><br>15 | 31<br>18       | 70<br>21       | 24<br>37       | 27<br>70                    | 30       | 33       | 420<br>36       | 39       | 50<br>42       | 45<br>4       |          |                 |     |                  |
| Power<br>ERH NI/NV/I<br>Length L<br>Power<br>ERH NI/NV/I<br>Length L<br>Power<br>ERH NI/NV/I                | kW<br>NIS-6035; \<br>mm<br>kW<br>NIS-7040; \<br>mm<br>kW<br>NIS-8050; \             | WxH =<br>9<br>WxH =<br>9               | 600x3<br>12<br>700x4<br>12                | 15<br><b>350</b><br>15<br><b>400</b><br>15 | 31<br>18       | 70<br>21       | 24<br>37       | 27<br>70<br>27              | 30       | 33       | 420<br>36       | 39       | 50<br>42       | 45<br>4       | 60       | 66              | 440 | 500              |
| Power<br>ERH NI/NV/M<br>Length L<br>Power<br>ERH NI/NV/M<br>Length L<br>Power                               | kW<br>NIS-6035; \<br>mm<br>kW<br>NIS-7040; \<br>mm<br>kW                            | WxH =<br>9<br>WxH =<br>9               | 600x3<br>12<br>700x4<br>12                | 15<br><b>350</b><br>15<br><b>400</b><br>15 | 31<br>18       | 70<br>21       | 24<br>37       | 27<br>70<br>27<br>370       | 30       | 33<br>33 | 420<br>36<br>36 | 39<br>42 | 50<br>42       | 45<br>4       | 60       |                 | 440 |                  |
| Power<br>ERH NI/NV/I<br>Length L<br>Power<br>ERH NI/NV/I<br>Length L<br>ERH NI/NV/I<br>Length L<br>Power    | kW<br>NIS-6035; \<br>mm<br>kW<br>NIS-7040; \<br>mm<br>kW<br>NIS-8050; \<br>mm<br>kW | WxH =<br>9<br>WxH =<br>9<br>WxH =<br>9 | 600×3<br>12<br>700×4<br>12<br>800×3<br>12 | 15<br>350<br>15<br>400<br>15<br>500<br>15  | 3:<br>18<br>18 | 70<br>21<br>21 | 24<br>37<br>24 | 27<br>70<br>27              | 30<br>30 | 33       | 420<br>36       | 39       | 5(<br>42<br>45 | 45<br>4<br>51 | 60       | 66<br>420       |     |                  |
| Power<br>ERH NI/NV/I<br>Length L<br>Power<br>ERH NI/NV/I<br>Length L<br>Power<br>ERH NI/NV/I<br>ERH NI/NV/I | kW<br>NIS-6035; \<br>mm<br>kW<br>NIS-7040; \<br>mm<br>kW<br>NIS-8050; \<br>mm<br>kW | WxH =<br>9<br>WxH =<br>9<br>WxH =<br>9 | 600×3<br>12<br>700×4<br>12<br>800×3<br>12 | 15<br>350<br>15<br>400<br>15<br>500<br>15  | 3:<br>18<br>18 | 70<br>21<br>21 | 24<br>37<br>24 | 27<br>70<br>27<br>370<br>27 | 30<br>30 | 33<br>33 | 420<br>36<br>36 | 39<br>42 | 5(<br>42<br>45 | 45<br>4<br>51 | 60<br>   | 66<br>420<br>54 | 60  | 66               |
| Power<br>ERH NI/NV/I<br>Length L<br>Power<br>ERH NI/NV/I<br>Length L<br>ERH NI/NV/I<br>Length L<br>Power    | kW<br>NIS-6035; \<br>mm<br>kW<br>NIS-7040; \<br>mm<br>kW<br>NIS-8050; \<br>mm<br>kW | WxH =<br>9<br>WxH =<br>9<br>WxH =<br>9 | 600×3<br>12<br>700×4<br>12<br>800×3<br>12 | 15<br>350<br>15<br>400<br>15<br>500<br>15  | 3:<br>18<br>18 | 70<br>21<br>21 | 24<br>37<br>24 | 27<br>70<br>27<br>370       | 30<br>30 | 33<br>33 | 420<br>36<br>36 | 39<br>42 | 5(<br>42<br>45 | 45<br>4<br>51 | 60<br>   | 66<br>420       |     | 500<br>66<br>500 |