Ceiling air diffuser
INDULATHERM
INDULATHERM-e

Changeover from cooling to heating
Comfortable cooling and powerful heating

The need to use air-conditioning plant for more than comfortable room cooling arises repeatedly. Where ambient air conditioning calls for a heating mode, economic considerations demand that this function be incorporated into an existing air-conditioning plant. The alternative, static heating surfaces, would often be inconvenient. INDULTHERM is an outstanding way to fulfil the requirements for an air-only system to provide heating and cooling from a single installation.

In cooling mode, supply air is distributed, draught-free, through the entire room. And, in heating mode, the diffuser distributes warm supply air in the room so that it reaches practically to the floor. Many of the familiar solutions require electrical assistance and costly control equipment and switchgear. INDULTHERM is a cost-effective alternative.

Optimum room comfort
An INDULTHERM diffuser is a self-regulating supply air diffuser for cooling and heating; in cooling mode it operates as a highly inductive ceiling diffuser. In heating mode, as the supply air temperature rises, a thermo-mechanical setting device switches so that it becomes a vertical air outlet with great penetration depth; the switch operates independently and without an external power supply.

In this way a single diffuser can provide comfortable cooling and powerful heating with no additional measures. In contrast to many other solutions, the comfort conditions in the room satisfy the most stringent requirements.

Because it is highly inductive in cooling mode, an INDULTHERM diffuser is also best suitable for use with split or multi-split air conditioning systems. The INDULTHERM-e has been developed especially for the rapid changes in supply air temperatures that are necessary in these cases. INDULTHERM-e contains an actuator, which uses an external positioning signal (0-10 V) to achieve fast changeover.

INDULTHERM is available in square or circular form.
Heating and cooling just with supply air

**INDULTHERM in cooling mode:**
- The INDULTHERM operates as a highly inductive ceiling air diffuser.
- Air with a temperature difference down to -14 K is distributed, draught-free, in the room.

**INDULTHERM in heating mode:**
- In spite of the difference in density, warm air is distributed through the entire room practically to floor level.
- With warm supply air INDULTHERM switches automatically to a vertical air outlet with great penetration depth; no external power supply is needed.
- The INDULTHERM-e employs an electric actuator for switching.

**Advantages**

<table>
<thead>
<tr>
<th>INDULTHERM</th>
<th>INDULTHERM-e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooling and heating with a single air diffuser</td>
<td>Fully automatic changeover without an external power supply</td>
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<td>Suitable for high supply air temperature differences</td>
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<tr>
<td>Low ambient air velocities</td>
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<tr>
<td>Draught-free air distribution in cooling mode down to -14 K</td>
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</tr>
<tr>
<td></td>
<td>Low pressure losses</td>
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<td></td>
<td>Great penetration depth in heating mode</td>
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**INDULTHERM-e**
- Fast changeover from cooling to heating
- Especially in combination with split and multisplit-systems
- Flexible choice of changeover temperature
Kiefer develops and sells high-quality air diffusers around the world, such as linear diffusers, fan coil systems, chilled ceiling panels and concrete core cooling systems. In close collaboration with the Kiefer engineering plant experiences from planning, implementation, service and maintenance of comfort and industrial air conditioning slips in the development of the components and systems.