



▲ INDUL – Louvre Abu Dhabi, Permanent Gallery. Photo © Marc Damage

## LINEAR DIFFUSER INDUL N



Narrow linear diffuser for ultimate comfort and unobtrusive installation in all types of ceilings. The special INDUL free-jet characteristic prevents dirt build-up along the air diffuser. This keeps ceilings dust-free for longer. The completely asymmetrical throat arrangement means it can also be installed in tricky spatial conditions.





Auditorium Allianz SE, Munich. Photo © Ken Schluchtmann

## LINEAR DIFFUSER INDUL

### Draught-free air distribution and aesthetic ceiling design

#### **Draught-free ceiling design for increased wellbeing**

The most important factor in creating a pleasant atmosphere in ventilated rooms is to avoid draughts. The Linear Diffuser INDUL offers the best technical prerequisites for the job. The air is divided into fine jets of only a few mm and distributes in the room in alternating directions with a spread of 45°. This results in a particularly uniform distribution of the air with a highly favourable flow of air through the room without noticeable draught.

INDUL Linear Diffusers allow for very slight fitting widths from 15 mm. They are available in various designs and can be integrated in all ceiling structures without any problems for high demands on ventilation comfort and aesthetic ceiling arrangements.

#### **A comfort Linear Diffuser for clean Ceilings**

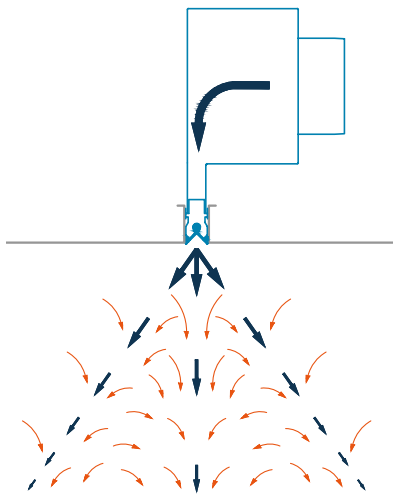
The reliable 90° free jet characteristic distributes the supply air directly into the common area, without contact with the ceiling. Precisely formed discharge profiles avoid the coanda effect. This keeps ceilings dust-free longer.

#### **Environment Protection and Health**

Back in 1993, Kiefer was the first manufacturer to use air gap instead of mineral fibres for the insulation of INDUL Linear Diffusers. The whole model series are produced with air gap insulation for an optimised insulation effect and is therefore completely recyclable.

## FUNCTION

The supply air is divided into fine alternating free jets, intensifying the induction of the ambient air. The high induction permits a very high temperature difference between the ambient air and the supply air. This makes it possible to make use of free cooling, to a certain extent. The required cooling capacity is thus minimised. In spite of the low temperatures, the air gap insulation largely prevents loss of energy. And the air diffuser scores points in terms of life cycle costs as evaluated by current certification systems due to the use of recycled aluminium.



### ENERGY

The extremely high induction of the INDUL Linear Diffusers enables draught-free operation even at very low supply air temperatures, resulting in significant energysaving potential through the use of free cooling.



### ARCHITECTURE

The delicate outlet profiles can be inserted into any desired ceiling architecture and keep ceilings dust-free for longer. Whether unobtrusive or deliberately accented, they meet all architectural requirements.



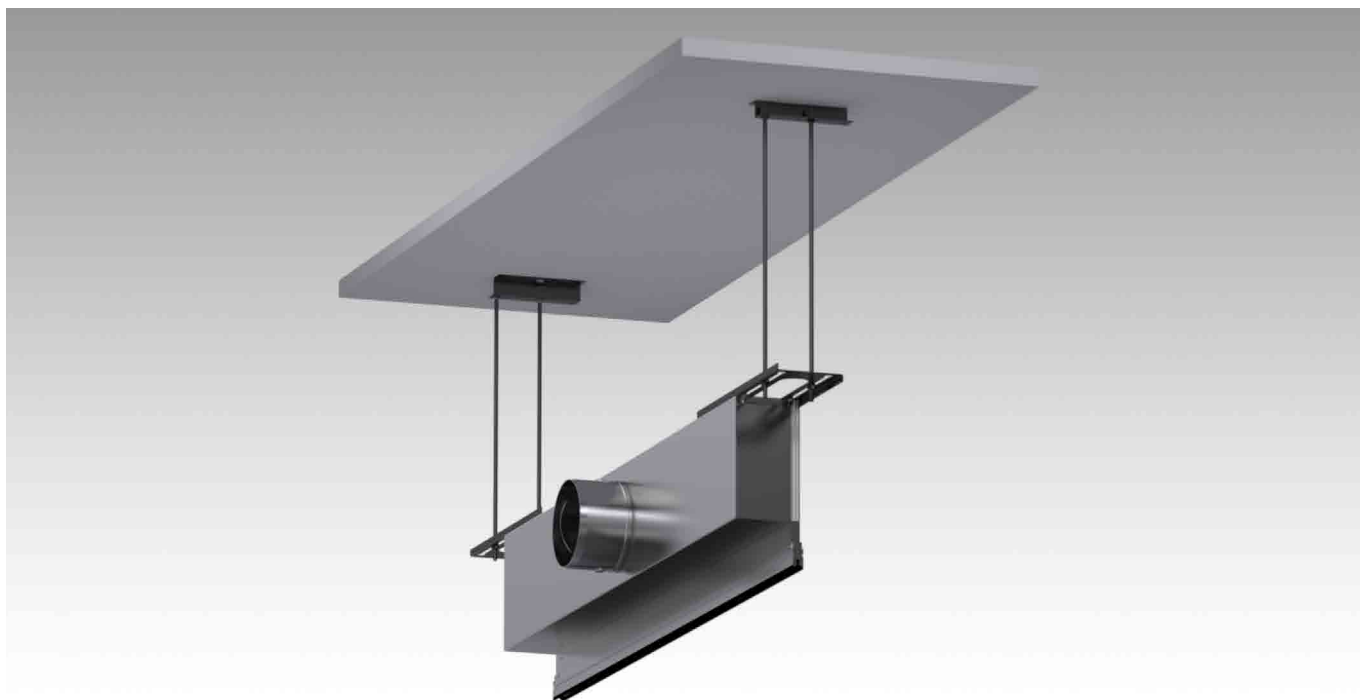
### TECHNOLOGY

Only the INDUL free jet characteristic enables a uniformly diffuse ambient air flow and permits temperature differences of up to -14K while meeting even the highest demands in terms of comfort.

## TECHNICAL DATA

Air flow rate	20 - 250 m <sup>3</sup> /hm
Installation width	15, 18, 24 and 45 mm
Installation length	500 - 2500 mm
Special dimensions	On request
Throat height	37 - 130 mm
Temperature difference	Down to -14 K

Further information can be found on [www.kieferklima.de/en/indul](http://www.kieferklima.de/en/indul)

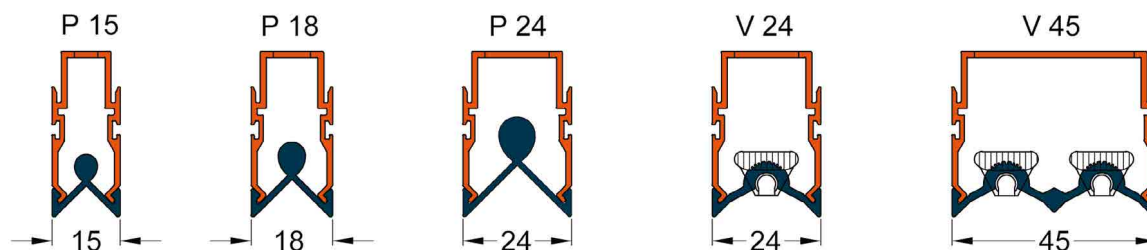


## INSTALLATION SITUATION INDUL

### Freedom in aesthetic ceiling design

INDUL Linear Diffusers allow for very slight slot widths from 15 mm, which can be integrated in all ceiling joints without any problems. They offer architects freedom when designing elegant, creative and sophisticated

ceilings and live up to the high ventilation requirements which are essential for that feeling of well-being.



INDUL Type P is designed for rooms with the highest comfort demands. This is achieved thanks to the diffuse, entirely non-centrifugal ambient air flow.

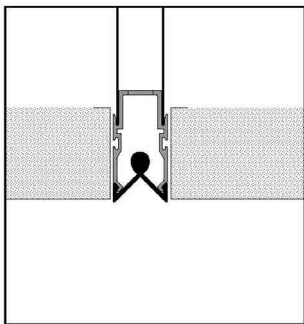
INDUL Type V is designed for rooms with high comfort demands and large supply air flow rates.

## SIMPLE AND QUICK INSTALLATION

For any ceiling architecture

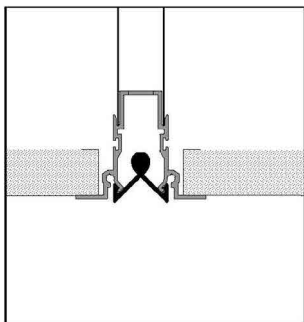
The INDUL mounting accessories allow a simple and quick installation and easy adjustment. The plug-in system for installation in series or as individual elements has been well proven in practice.

### CEILING CONNECTION PROFILES



#### INDUL N – Installation without ceiling connection profile

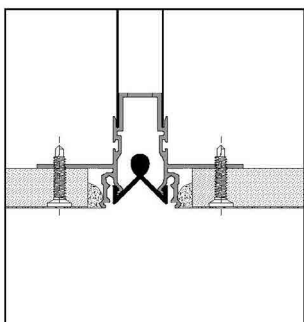
For example in wooden or metal coffered ceilings.



#### INDUL NA – Installation with overlay bracket

For example in mineral fibre ceilings.

Also available as a type W-NA loose version for sliding in. Ideal for double-sided ceiling supports or as a connecting element between two different ceiling systems.



#### INDUL NG – Installation with plaster bracket

Available in loose and moulded versions. For straightforward installation in plasterboard ceilings. It also protects the discharge profile during painting and plastering work thanks to the protective strip supplied. Clean edges are created when the strip is removed.





Photo © Ken Schluchtmann

## ALLIANZ AUDITORIUM, MUNICH

**PROPRIETOR** Allianz Munich  
**ARCHITECTS** dan pearlman Markenarchitektur GmbH, Berlin  
 Reichwald Schultz, Hamburg, Berlin  
**PLANNING OFFICE** ITG GmbH, Eching / Weixerau

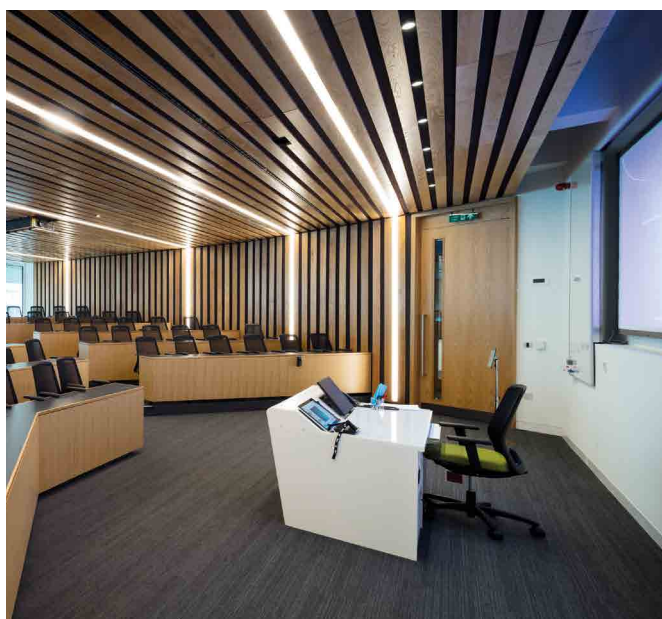


Photo © Diane Auckland/Photohaus

## LONDON BUSINESS SCHOOL

**PROPRIETOR** Wates Ltd, Leatherhead. UK  
**ARCHITECTS** Sheppard Robson, London. UK  
**PLANNING OFFICE** Long & Partners, London. UK



Photo © Waldorf Astoria, Berlin

## WALDORF ASTORIA, BERLIN

**PROPRIETOR** Hotel Waldorf Astoria, Berlin  
**ARCHITECTS** Prof. Christoph Mäckler Architects  
**PLANNING OFFICE** Ingenieurgesellschaft Grabe mbH, Hannover

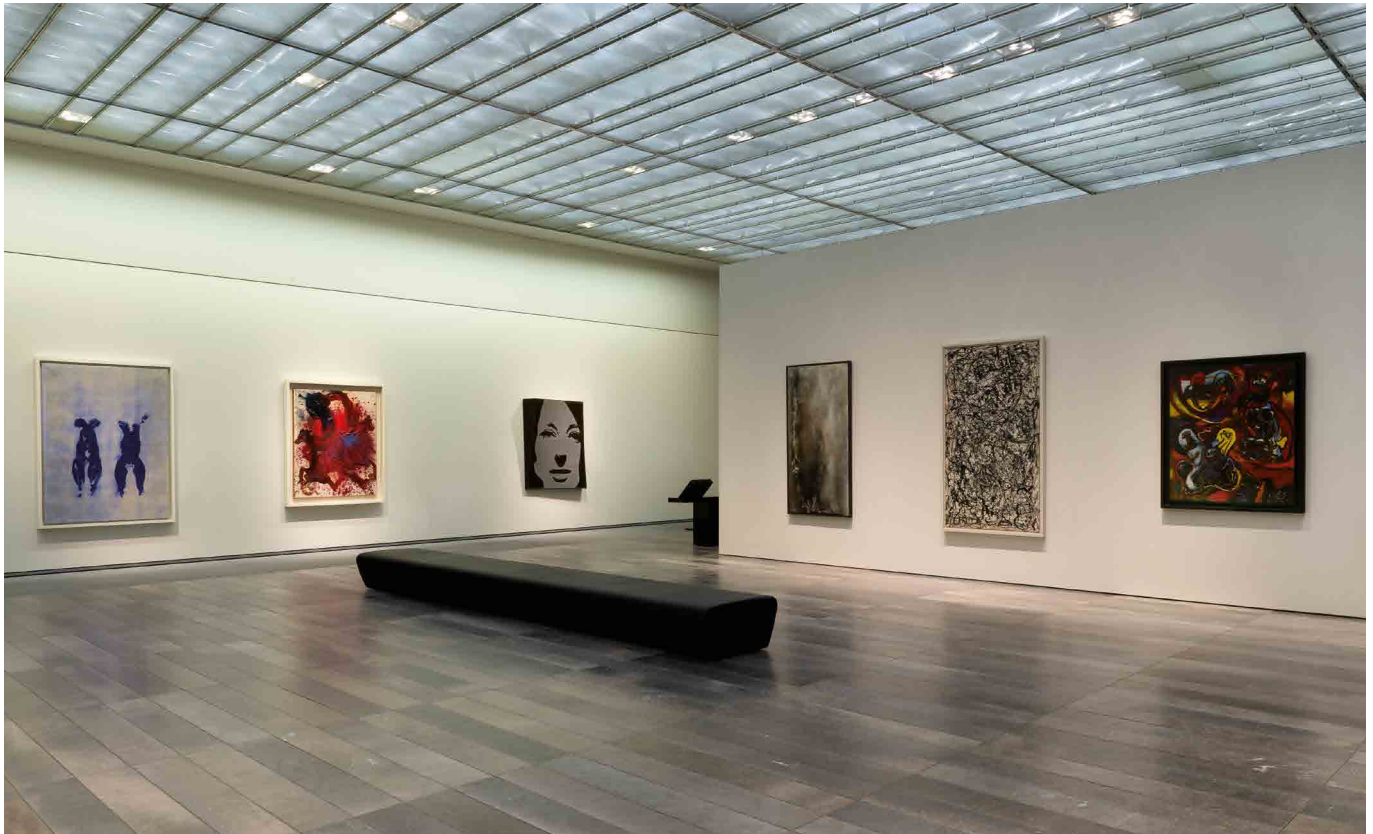


Photo © Marc Domage

### MUSEUM LOUVRE, ABU DHABI

**PROPRIETOR** Tourism Development & Investment Company  
**ARCHITECTS** Ateliers Jean Nouvel, Paris. FR  
**PLANNING OFFICE** Buro Happold, Bath. UK

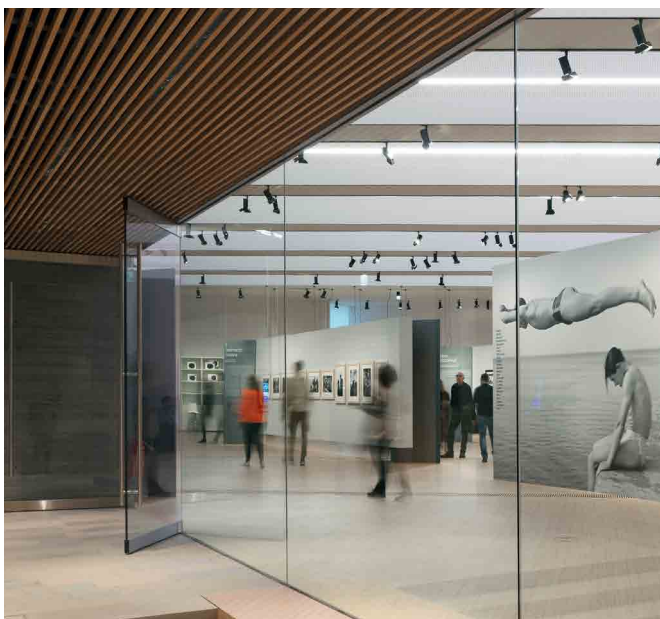


Photo © janbitter.de

### M9 MUSEUMSQUARTIER, VENEDIG-MESTRE

**PROPRIETOR** Polymnia Venezia S.r.l. (Venedig)  
**ARCHITECTS** Sauerbruch Hutton, Berlin –  
 Matthias Sauerbruch, Louisa Hutton,  
 Juan Lucas Young  
**PLANNING OFFICE** SCE Project S.r.l., Milan. IT



Photo © Studio Simon Menges

### JAMES-SIMON-GALERIE, BERLIN

**PROPRIETOR** Bundesamt für Bauwesen und  
 Raumordnung, Berlin  
**ARCHITECTS** David Chipperfield Architects, Berlin  
**PLANNING OFFICE** INROS LACKNER AG, Berlin



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