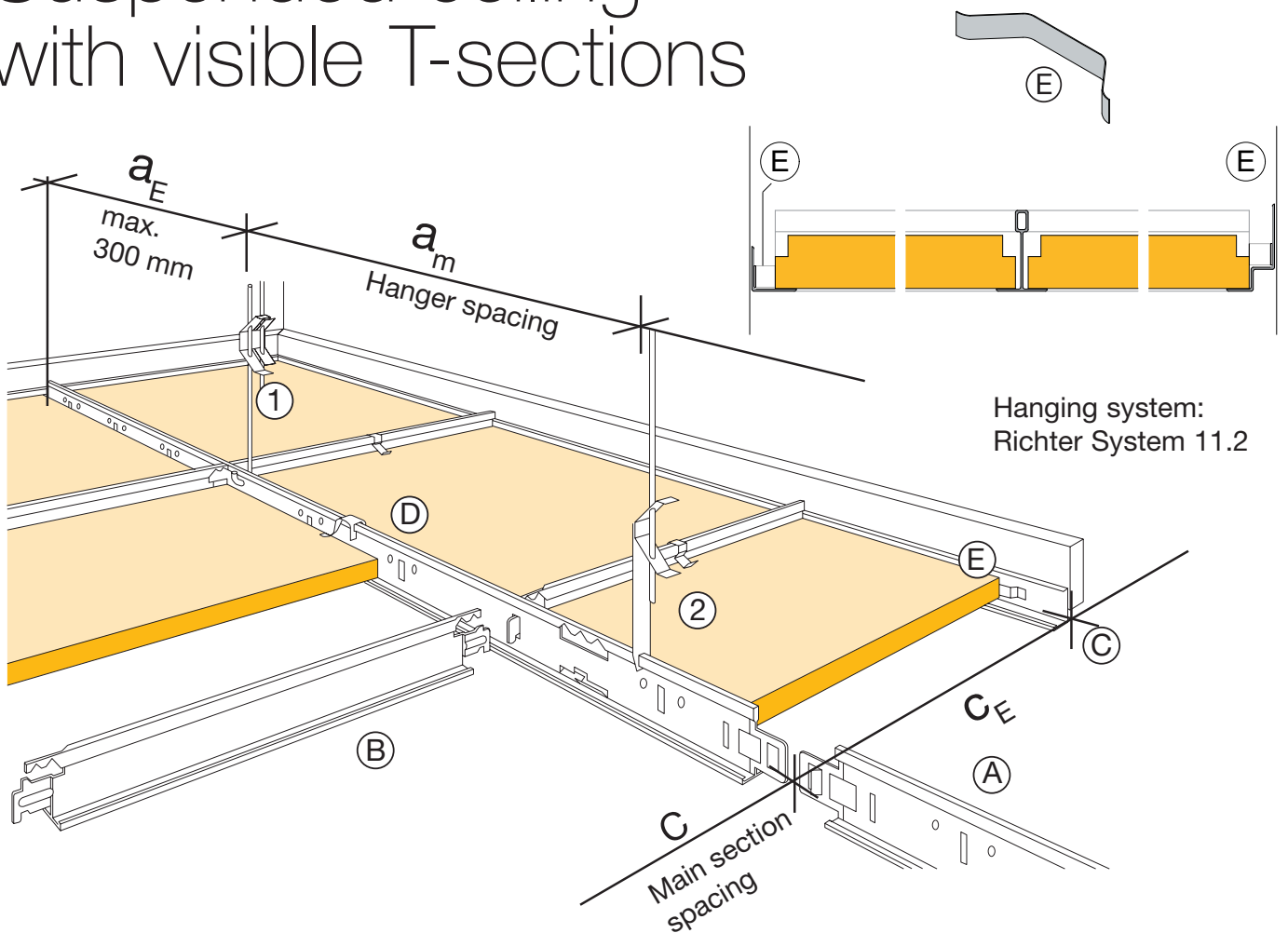




Suspended ceiling with visible T-sections



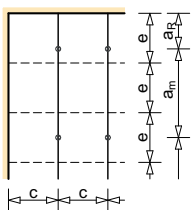
Products

	Product	Thickness mm	Weight kg/m ²	Edge Design **)	Centre distance of the cross joist mm	Panel dimensions*) mm
Product Range	Heradesign® <i>superfine</i>	15	7.8	SK-04	600/600 625/625	594/594; 1194/594 619/619; 1244/619
	Heradesign® <i>fine</i>	15	8.2			
	Heradesign® <i>superfine</i>	25 / 35	11.3 / 15.0	SK-04 SK-05 SK-06	600/600; 1200/600 625/625; 1250/625	
	Heradesign® <i>fine</i>	25 / 35	12.4 / 16.3			
	Heradesign® <i>micro</i>	25 / 35	15.0 / 19.0			
Product Range A2	Heradesign® <i>superfine A2</i>	15.0	12.0	SK-04	600/600; 1200/600	594/594; 1194/594 594/594; 1194/594
	Heradesign® <i>fine A2</i>	15.0	13.0			
	Heradesign® <i>superfine A2</i>	25.0	18.0	SK-04 SK-05 SK-06	600/600; 1200/600	
	Heradesign® <i>fine A2</i>	25.0	19.0			
Product Range Plus	Heradesign® <i>superfine plus</i>	55 (15/40)	11.4	SK-04 plus	1200/600	1194/594
		65 (25/40)	14.9			
	Heradesign® <i>fine plus</i>	55 (15/40)	11.8			
		65 (25/40)	16.0			
	Heradesign® <i>micro plus</i>	65 (25/40)	18.6			
Heradesign® <i>plano plus</i>	65 (25/40)	18.6				

*) Large format for 15 mm thick panels not suitable for outdoor applications and indoor swimming pools. For indoor applications up to max. stress class B as per EN 13964.
 **) Edge details see page 53.
Please note: Knauf Insulation GmbH is not a system holder according to DIN-EN 13964.

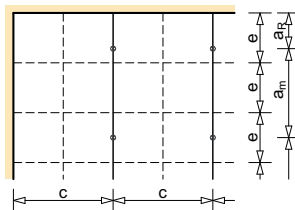
Suspended ceiling with visible T-sections

Installation method 1



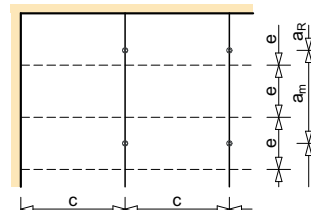
c = 600 or 625 mm
 e = 600 or 625 mm
 e = 1200 or 1250 mm

Installation method 2



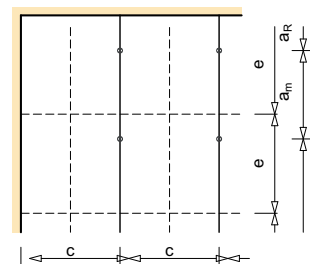
c = 1200 or 1250 mm
 e = 600 or 625 mm

Installation method 3



c = 1200 or 1250 mm
 e = 600 or 625 mm

Installation method 4



c = 1200 or 1250 mm
 e = 1200 or 1250 mm

Maximum spacing of the substructure and hanger material requirements

Maximum section and hanger spacing

for deflection class 1 according to EN 13964 (max. deflection L/500)

System		Max. spacing ^{2) 3)}		Approx. material requirements (without cutting losses or other losses)
Loading level ¹⁾ kN/m ²	Grid dimensions (mm)	Main sections c (mm) c _E (mm) ⁴⁾	Hangers ³⁾ a _m (mm) a _E (mm)	Hangers ³⁾ Pieces/m ²
0.08	600/600 600/1200	1.200	1200 300	0.70
	625/625 625/1250	1.250	1100 300	0.73
0.12	600/600 600/1200	1.200	1000 250	0.80
	625/625 625/1250	1.250	940 250	0.85
0.15	600/600 600/1200	600 ⁵⁾	900 250	0.90 ⁵⁾ / 1.50
	625/625 625/1250	625	1150 250	1.40
0.2	600/600 600/1200	600	1100 200	1.50
	625/625 625/1250	625	1050 200	1.50
0.25	600/600 600/1200	600	1000 200	1.70
	625/625 625/1250	625	950 200	1.65

- 1) The load limit is comprised of the dead weight of the Heradesign acoustic panel, the weight of the absorber layer plus any wind suction forces that may have to be included in the calculation. Fittings such as ceiling lights, sprinkler systems, etc. must be hung separately.
- 2) Applicable to T24/38 sections, material thickness at least 0.4 mm, as per DIN 18168.
- 3) Approved hanger load: at least 0.15 kN. Material requirements are dependent on the installation system. Observe manufacturer's information.
- 4) Max. distance c_E for EI-30 ceilings: 300 mm; for F 30 ceilings: 350 mm.
- 5) A distance of 1200 mm is permitted for T24/38 cross sections.

Please note:

Max. free span of the acoustic panels is 600 or 625 mm.

For F 30, EI 30 ceilings, only certified substructures may be used.

The processing guidelines of the manufacturer must be observed.

For certified ceiling structures, no changes may be made to the design as set out in the certified construction.

Material requirements

Assembly component		Approx. material requirements / m ² ceiling area ¹⁾				Comment	
		600/600	1200/600	625/625	1250/625		
A	Main section ²⁾ T24/38	r.m.	1.70 0.85	1.70 0.85	1.60 0.80	1.60 0.80	Installation scheme 1:c = 600; 625 mm Inst. scheme: 2+3+4:c = 1200; 1250 mm
B	Cross section ³⁾ T24/38, T24/32 or T24/28	r.m.	1.70	0.85	1.60	0.80	Inst. scheme 1:c = 600; 625 mm
			1.70 0.85	1.70 ---	1.60 0.80	1.60 ---	Inst. scheme 2:c = 1200; 1250 mm e = 600; 625 mm
			---	1.70	---	1.60	Inst. scheme 3:c = 1200; 1250 mm
			---	1.70	---	1.60	Inst. scheme 4:c = 1200; 1225 mm e = 1200; 1250 mm
C	Wall angle	r.m.	0.40	0.40	0.40	0.40	Requirements are dependent on floor plan
D	Panel clamp ⁴⁾	approx. pieces	6	3	6	3	Only for panel thickness of 15 mm
E	Wall spring	approx. pieces	0.80	0.40	0.80	0.40	Requirements are dependent on floor plan
Hangers: see Table 14, page 28							

- 1) The material requirements are dependent on the installation system. Observe information from manufacturer. The specified values are non-binding guide values without cutting losses or other losses.
- 2) Stagger the section joints and place an additional hanger beside each joint.
- 3) Cross section must not lie on the lower flange of the main section. Only use cross sections with a disengaged lower flange. Max. span for T24/28 sections: 625 mm.
- 4) Panel clamps are recommended to hold down the panels if high wind pressure loads occur. Attention: limited access possibility to the ceiling cavity.

Please note:

Special corrosion protection is needed for all metallic parts in indoor swimming pools, outdoor applications, or applications with an increased risk of corrosion.

For F 30, EI 30 ceilings, only certified substructures may be used. Ceiling structures as per certificate: no changes may be made to the design as set out in the certified construction.

Minimum hanging heights:

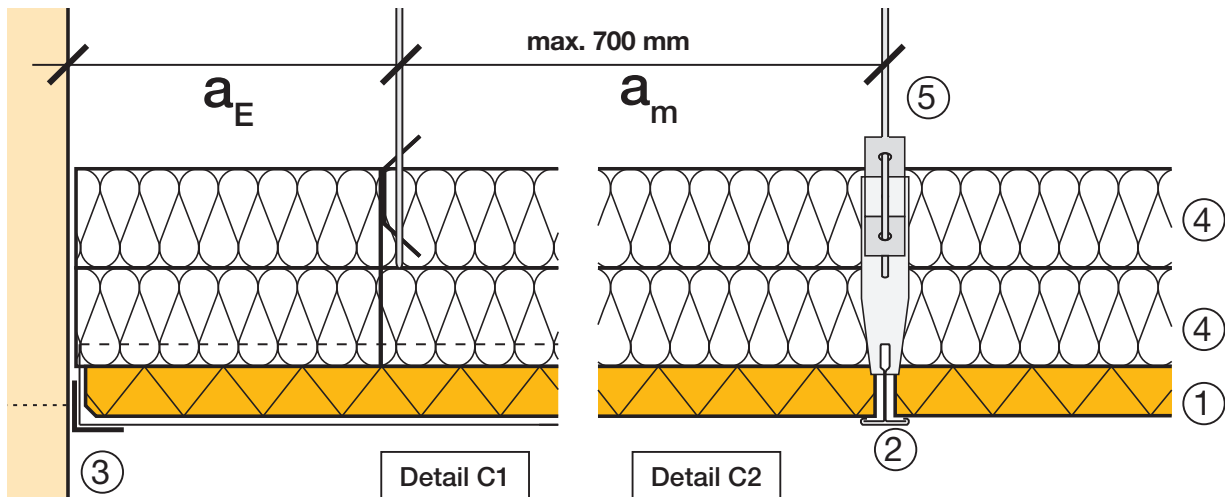
In order to be able to insert the acoustic panels in preinstalled hanging systems, the following minimum hanging heights (HH = lower edge of T-section to lower edge of bare ceiling) must be maintained.

Panel thickness 15 mm	min. HH approx. 180 mm
Panel thickness 25 mm	min. HH approx. 200 mm
Panel thickness 35 mm	min. HH approx. 220 mm
Vernier hanging:	min. HH approx. 190 mm

Increased installation complexity!

Ceiling in an F 30 design with Heradesign® *fine* or Heradesign® *micro* acoustic panels

Thickness 25 mm, insertion installation in visible T24-sections
 Certificate: iBMB 3564/905/08 / Test Institute: iBMB Braunschweig
 (max. deflection $L/500 \leq 4$ mm)

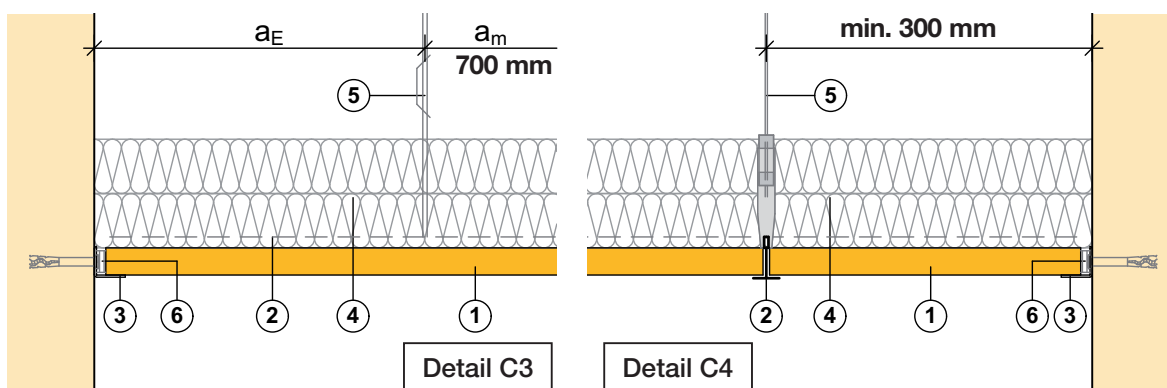


- 1 Heradesign acoustic panel, 25 or 35 mm
- 2 T-24/38 Profil
- 3 Contact angle $\geq 24 \times 24 \times 0.5$ mm
Screws 6 x 50 in metal expansion plugs

- 4 KI DP-5 lining, 2 x 50 mm
Alternative: KI DP-4 lining, 2 x 60 mm
- 5 Quick hanger with tension spring or vernier hanger
max. spacing a_E see the table on page 28

Ceiling in an F 30 design with Heradesign® *superfine* acoustic panels

Thickness 25 mm, insertion installation in visible T24-sections
 Certificate: iBMB 3564/905/08 / Test Institute: iBMB Braunschweig



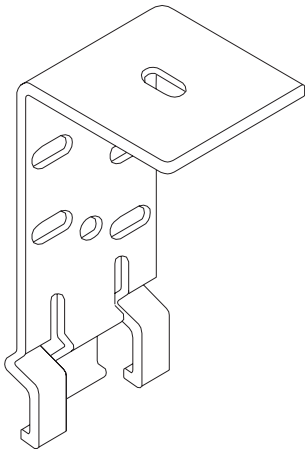
- 1 Heradesign *superfine*, 25 mm
- 2 Main section T-24/38 mm
Cross section T-24/38 mm
- 3 Contact angle $\geq 21 \times 21 \times 0.5$ mm with
metal expanding nail 6/35, spacing 600 mm

- 4 KI-DP-5 rock wool, thickness 50 mm, 2-layer
- 5 Quick hanger with tension spring, hanging wire $\varnothing 4$ mm
max. spacing a_E see Technical Manual, Table 14, page 28
- 6 Wall spring as a spacer

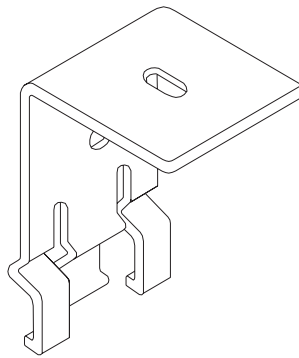
Attention: the classifications only apply to the tested structures. A change in the ceiling structure is not permitted.
 The exact test assemblies can be found in the indicated certificates or data sheet of the respective design.

Short hangers

Type 21,1 HH = 100 mm
CMC-Clips

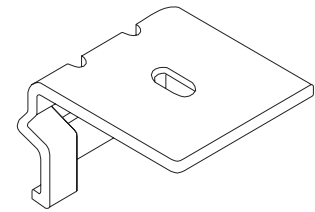


Type 21,8 HH = 80 mm
CMC-Clips

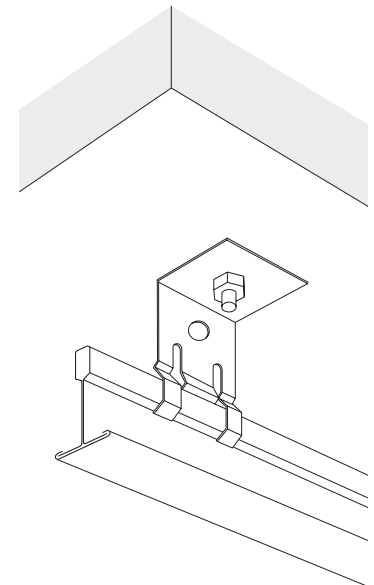
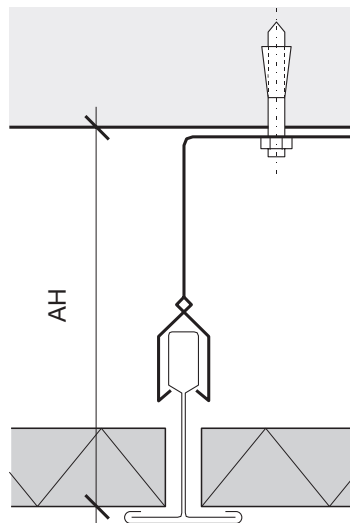
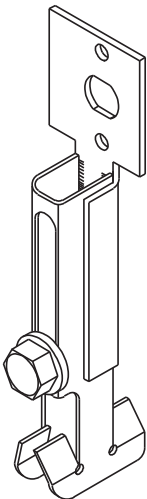


Type 21,5 HH = 50 mm
CMC-Clips
 only for 15/25 mm
 panel thickness

HH = hanging height



**Short hangers for Clix T-sections
 Richter System**



Type	Height	Max. load
CMC-Clips 21.5	HH = 50 mm	45 kg
CMC-Clips 21.8	HH = 80 mm	
CMC-Clips 21.1	HH = 100 mm	
Short hangers for Clix T-sections	HH = 82 bis 113 mm	15 kg

Attention: for these installation heights, the panels must slide in from the side using T-sections. The hanging system and the panels can only be installed section for section. Increased installation complexity!

Installation photos



Construction of ceiling grid, making sure of equally sized end fields. Stagger the section joints. An additional hanger must be placed beside each joint. Max. spacing see table on page 28.



Only use cross sections with a disengaged lower flange. Set all securing pegs of vernier hangers in the **same direction** and pinch hooks of hanging wires. This simplifies the insertion of the panels.



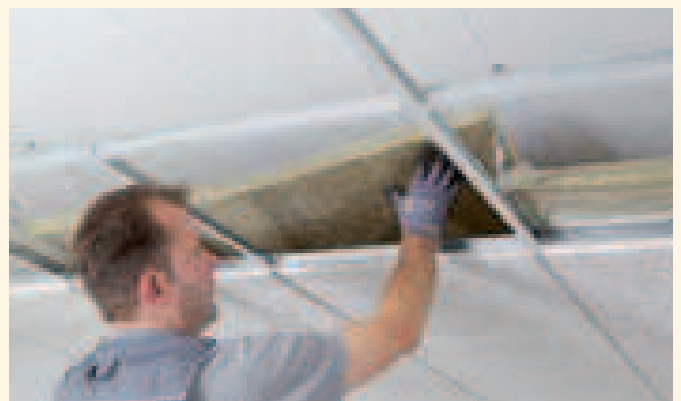
Lift the Heradesign acoustic panels by tilting the acoustic panels and using the ceiling cavity. Take into consideration the minimum hanging heights. Observe the installation direction marked on the back when installing square panels.



Press down the Heradesign acoustic panels. The panels are cut exactly to size; therefore they have to be pressed past the hangers.



Edge panels must be secured with wall springs to avoid displacement.

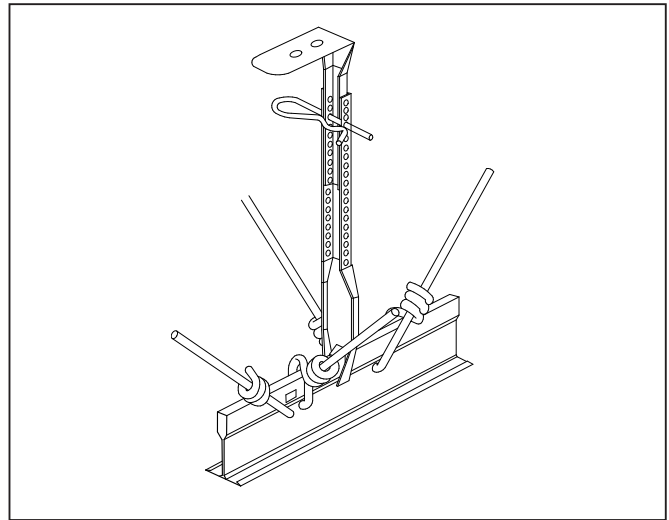


Install Heradesign acoustic lining piece by piece along with the Heradesign acoustic panels.

Mounting information

- For the implementation requirements, see DIN 18168 T.1 “Lightweight ceiling linings and suspended ceilings”, or alternatively DIN-EN 13964 “Suspended ceilings – requirements and test methods”.
- Before you start mounting, check the base for sufficient load-bearing capacity.
- Mount the wall angle section C at the desired height.
- Distribute the main load-bearing axes while making sure of equal edge fields. Minimum width of the edge fields: 300 mm.
- Mount the quick hangers with tension spring 1 and hook/slider or Twist hanger 2; hang and adjust the main sections A. Hanging wire: 4 mm minimum diameter. Pinch hook with pliers after hanging in. Set all securing pegs of vernier hangers to the same direction. This simplifies the insertion of the panels.
- Stagger and place the track joints and hangers; one additional hanger must be placed beside each joint.
- Put the cross sections B together with the main sections A for each field, making sure of equally sized end fields.
- Insert the Heradesign acoustic panels section for section starting in the centre of the room and then moving out. Observe the installation direction marked on the back when installing square panels. Panels with the edge design GK – straight edge must not be installed. The panel dimensions are too big for the grid dimensions SK-04.
- Insert the edge panels into the wall angle section C with approx. 10 mm of airspace and fasten with wall spring E. Minimum support width for Heradesign panels on the contact angle: 10 mm.
- 15 mm thick panels must be fastened from above with panel clamps.

• Diagonal hanging and vernier hanger



- Please note: for suspended ceilings that are subject to swaying and for large suspension heights, or where the hangers are fastened to steel or wood structures, an adequate number of hangers must be set diagonally in both directions in order to minimise the swaying of the ceiling. Ceiling statics are necessary.
- For F 30/EI 30 constructions: only use approved hanging systems.
- Mineral wool is inserted piece by piece with the installation of the acoustic panels.
- The corrosion protection of all metal parts must be matched to the conditions prevailing in the room.
- Ceiling grids of T24/38 or T35/39 rails may not be walked on.
- Damaged or soiled panels or panels with colour deviations may not be installed.

Wall mounting	34
Light installation details	58
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Please request expert opinion if required.