

SUSITARIMAS NR. 2

DĖL 2024-09-27 STATYBOS RANGOS SUTARTIES NR. 24-S1-TVD-1071 PAKEITIMO

Susitarimo data	2025-02-	Susitarimo Nr.	
Sutarties pavadinimas	Administracinės paskirties pastato, esančio adresu Mindaugo g. 12, Vilnius, remonto darbai		
Sutarties data	2024-09-27	Sutarties Nr.	24-S1-TVD-1071
Užsakovas	Valstybės įmonė Turto bankas, juridinio asmens kodas 112021042		
Rangovas	UAB „EKSTRA STATYBA“, juridinio asmens kodas 125859857		
Susitarimo pagrindas:	Sutarties BS 5.6.5, 5.6.6, 5.7.1, 5.7.1.1, 5.7.3, 11.5, 15.8, 15.9, 25 punktai, LR Viešųjų pirkimų įstatymo (toliau - VPĮ) 89 straipsnio 1. d. 1. p. (terminio pratęsimas) ir 2 dalis (nenumatytiems darbams)		
Susitarimo turinys:	<p>Šalys atsižvelgdamos į tai, kad:</p> <ol style="list-style-type: none"> 2024-09-27 Šalys pasirašė Statybos rangos sutartį Nr. 24-S1-TVD-1071 (toliau – Sutartis) dėl administracinio pastato, esančio adresu Mindaugo g. 12, Vilniuje remonto darbų atlikimo (toliau – Darbai). Sutarties kainos apskaičiavimui taikoma fiksuoto įkainio kainodara (SD 7.6 p.). Pradinė Sutarties vertė (toliau – PSV) – 7 697 777,77 Eur be PVM. Papildoma suma (toliau – PS) – 10 proc. PSV (be PVM) (SD 7.7 p.) – 769 777, 77 Eur be PVM. Papildomais darbais yra laikomi darbai, kurie nenurodyti Techniniame darbo projekte (toliau – TDP), tačiau yra tiesiogiai susiję su Darbais (BD 1.1.19 p.). Vykdamas Sutartyje numatytus darbus, buvo demontuotos Pastate buvusios „Armstrong“ tipo lubos ir tuomet paaiškėjo, kad pastato perdangos neatitinka gaisro saugos reikalavimų. Pažymėtina, kad Darbai yra vykdomi pagal Techninį darbo projektą (toliau – TDP), kurio gaisrinės saugos dalyje yra nurodyta, kad Pastatas priskiriamas I atsparumo ugniai laipsniui ir 3 gaisro apkrovos kategorijai. Tai reiškia, kad pagal Gaisrinės saugos pagrindinių reikalavimų (toliau – GSPR), patvirtintų Priešgaisrinės apsaugos ir gelbėjimo departamento prie Vidaus reikalų ministerijos (toliau – PAGD) direktoriaus 2010-12-07 įsakymu Nr. 1-338, 40 p., aukštų perdangų atsparumas ugniai privalo būti ne mažesnis kaip REI 45 (min). Atitinkamai pagal minėtas GSPR nuostatas, Pastato konstrukcijoms įrengti turi būti naudojami ne žemesnės kaip B-s3, d2 degumo klasės statybos produktai arba B-s3, d2 degumo klasę atitinkančios konstrukcinės sistemos, kurioms įrengti naudojami ne žemesnės kaip D-s2, d0 degumo klasės statybos produktai. 2024-12-23 PAGD raštu Nr. 9.4-7-1708/2024 „Dėl informacijos pateikimo“ taip pat nurodė, kad statinys turi būti suprojektuotas ir pastatytas taip, kad per ekonomiškai pagrįstą statinio naudojimo trukmę pagal jo naudojimo paskirtį atitiktų Reglamente (ES) Nr. 305/2011 nustatytus esminius statinių reikalavimus (LR Statybos įstatymo 4 straipsnio 1 dalis). Vienas iš esminių statinio reikalavimų yra gaisrinės saugos, t. y. kad kilus gaisrui statinio laikančiosios konstrukcijos tam tikrą laiką galėtų išlaikyti jas veikusias ir dėl gaisro atsiradusias apkrovas; būtų apribota: gaisro kilimo galimybė ir ugnies bei dūmų plitimas statinyje, gaisro išplitimas į gretimus statinius; statinyje esantys žmonės galėtų saugiai išeiti iš jo ar būtų galima juos išgelbėti kitomis priemonėmis; veiktų žmonių įspėjimo ir gaisro gesinimo sistemos; gelbėtojai (ugniagesiai) galėtų saugiai dirbti. Atsižvelgiant į tai, kad TDP nebuvo numatyta priemonių, užtikrinančių, kad, kilus gaisrui, Pastato perdangos (laikančiosios konstrukcijos) tam tikrą laiką galėtų išlaikyti jas veikiančias ir dėl gaisro atsiradusias apkrovas, Turto bankui atsirado poreikis įsigyti papildomus Sutartyje nenurodytus darbus, kurie būtų skirti atitinkamų GSPR nuostatų įgyvendinimui. Šių papildomų darbų aprašymas yra pateiktas šio susitarimo prieduose – denginių mazguose, gaminio atsparumo ugniai klasifikavime (aktualūs priedo 17 ir 18 psl. nurodyti mazgai) ir sąmatoje. 		

	<p>8) <i>Be to, TDP buvo numatyta vidinių pertvarų, kurios neturi būti demontuojamos, nuvalymas, glaistymas ir dažymas, tačiau darbų vykdymo metu, atidengus paslėptas pertvaras, paaiškėjo, kad faktinė pertvarų būklė yra labai blogos būklės, todėl TDP nurodyti pertvarų glaistymo ir dažymo darbai nėra galimi, prieš tai neatlikus papildomų darbų, skirtų šių pertvarų sutvarkymui. Šių papildomų darbų aprašymas pateiktas šio susitarimo priede pridedamoje sąmatoje.</i></p> <p>9) <i>Šalys sprendžia, kad šio susitarimo (toliau – Susitarimas) prieduose, t. y. denginių mazguose, gaminio atsparumo ugniai klasifikavime ir sąmatoje, nurodyti darbai yra laikytini papildomais darbais (toliau – Papildomi darbai) pagal Sutarties BD 5.7.1.1, 5.7.3, 15.8 ir 25 punktų nuostatas bei VPĮ 89 straipsnio 2 dalį (nes nėra numatyti TDP). Užsakovas konstatuoja, kad Papildomų darbų įkainiai, nurodyti sąmatoje, yra nustatyti atsižvelgiant į BS 15.8.3.1 – 15.8.3.4 punktuose nurodytus kriterijus, yra proporcingi ir priimtini Užsakovui.</i></p> <p>10) <i>Šalys sprendžia, kad Susitarime nurodytų Papildomų darbų atlikimui yra objektyviai pagrįstas poreikis pratęsti bendrą Sutarties vykdymo terminą 3 (trims) mėnesiams.</i></p> <p>11) <i>Priedamose prieduose, t. y. denginių mazguose, gaminio atsparumo ugniai klasifikavime (aktualūs priedo 17 ir 18 psl. nurodyti mazgai) ir sąmatoje, nurodytus Papildomus darbus bei papildomo termino poreikį nurodytų Papildomų darbų atlikimui pasirašydamas visus priedus patvirtino Užsakovo paskirtas statinio statybos techninis prižiūrėtojas.</i></p> <p>12) <i>Šio Susitarimo sąlygomis nepažeidžiami pagrindiniai viešųjų pirkimų principai (VPĮ 17 straipsnio 1 dalis) ir tikslas (VPĮ 17 straipsnio 2 dalies 1 punktą), Rangovui nepalengvinama Sutarties vykdymo našta ir neiškreipiama ekonominė Sutarties šalių pusiausvyra Rangovo naudai. Susitarimo sudarymo pagrindą sudarančios aplinkybės nebuvo žinomos viešojo pirkimo vykdymo metu ir su jomis susidurtų bet kuris rūpestingas ir apdairus rangovas.</i></p> <p>Sudarė šį Susitarimą ir susitarė:</p> <ol style="list-style-type: none"> 1. Šalys susitarė, kad Rangovas su Sutartyje numatytais Darbais atliks Papildomus darbus, kurių kiekiai ir įkainiai yra nurodyti Susitarimo priede pridedamoje Lokalinėje sąmatoje. Bendra papildomų darbų vertė – 626 534,35 Eur be PVM (šeši šimtai dvidešimt šeši tūkstančiai penki šimtai trisdešimt keturi eurai ir 35 ct). Papildomų darbų vertė su PVM – 758 106,56 Eur (septyni šimtai penkiasdešimt aštuoni tūkstančiai vienas šimtas šeši eurai ir 56 ct). 2. Pratęsti Sutarties SD 10.3 eil. numatytą Galutinį Darbų atlikimo terminą papildomam 3 mėnesių terminui ir atitinkamai pakeisti Galutinį terminą – 15 mėnesių. 3. Susitarime nurodyti darbai turi būti atliekami vadovaujantis Susitarimo priedais, t. y. Užsakovo pateiktais ir patvirtintais denginių mazgais ir gaminio atsparumo ugniai klasifikavimu (<i>aktualūs priedo 17 ir 18 psl. nurodyti mazgai</i>) bei Rangovo pateikta ir Užsakovo patvirtinta lokale sąmata. Rangovas patvirtina, kad jam yra aiškios ir suprantamos Susitarime nurodytų darbų apimtys (kiekiai). 4. Kitos Sutarties sąlygos, neapertos šiame Susitarime, lieka nepakeistos. 5. Šis Susitarimas įsigalioja nuo pasirašymo dienos ir yra neatskiriama Sutarties dalis. 6. Šis Susitarimas sudarytas Šalims jį pasirašius kvalifikuotu elektroniniu parašu. Jeigu Šalys Susitarimą pasirašo ne vienu metu, Susitarimas laikomas sudarytu ir įsigalioja tą dieną, kai jį pasirašo paskutinioji Susitarimo Šalis.
<p>Sutarties kaina po Susitarimo</p>	<p>Preliminari Sutarties kaina (mokėtina suma) po šio Susitarimo (įvertinus visus ankstesnius Sutarties pakeitimus ir Pradinės sutarties vertę) yra 8 396 531,41 Eur be PVM. Dėl šio Pakeitimo Pradinės sutarties vertė nekeičiama (VPT Kainodaros taisyklių nustatymo metodikos 51 ir 52 punktai).</p> <p>Galutinė Sutarties kaina (galutinė Rangovui mokėtina suma) bus nustatyta atlikus visus Sutartyje numatytus Darbus, pagal faktiškai atliktus Darbų kiekius (BS 15.2.1 p.).</p>

	Suma be PVM, Eur	Suma su PVM, Eur
Pradinė sutarties vertė	7 697 777,77	9 314 311,10
Preliminari Sutarties kaina (mokėtina suma) po Susitarimo Nr. 1	7 769 997,06	9 401 696,44
Preliminari Sutarties kaina (mokėtina suma) po Susitarimo Nr. 2	8 396 531,41	10 159 803,01
Darbų terminai po Susitarimo	Galutinis terminas (SD 10.3 eil.) – 15 mėnesių.	
Susitarimo priedai:	<ol style="list-style-type: none"> 1. Denginių mazgai – 5 lapai. 2. Gaminio atsparumo ugniai klasifikavimas – 22 lapai. 3. Papildomų darbų sąmata – 1 lapas. 	

Šalių atstovų parašai

UŽSAKOVAS

Valstybės įmonė Turto bankas

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AB bankas „SEB“

Gintaras Makšimas

Generalinis direktorius

RANGOVAS

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Marijus Drumsta

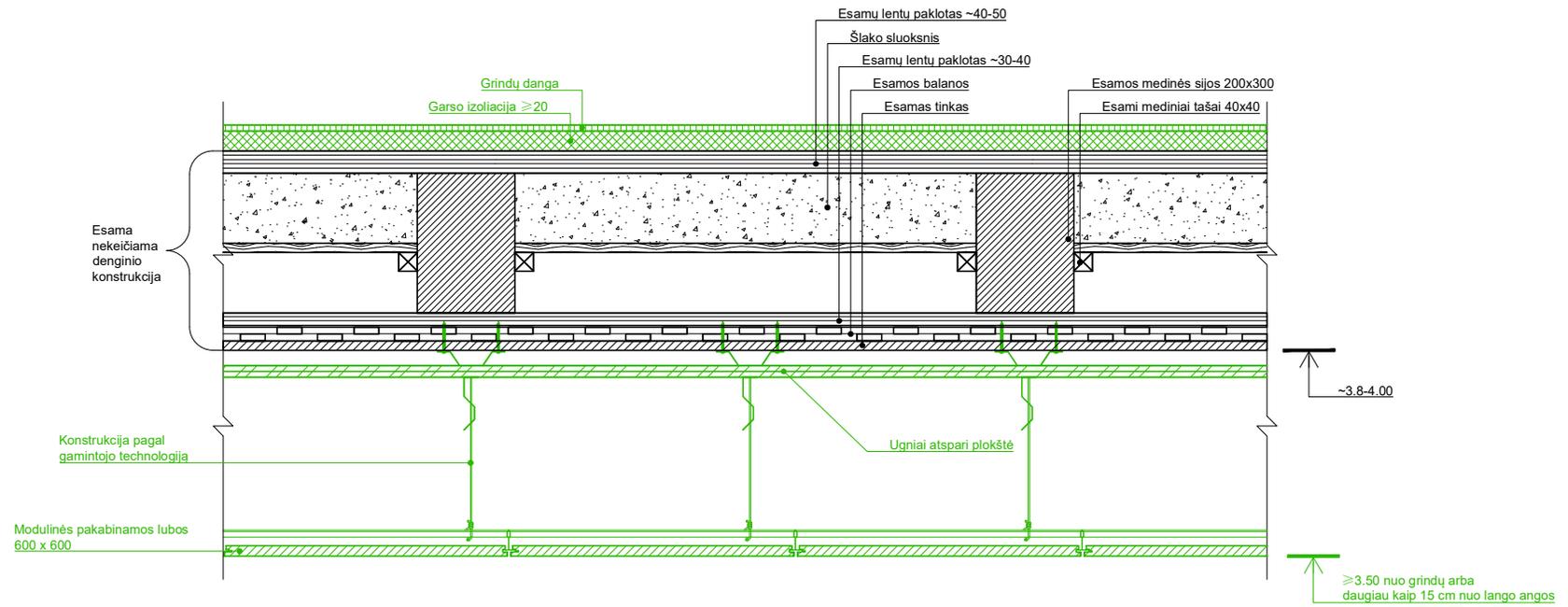
Direktorius

„BS“ *Susitarime reiškia Sutarties Bendrąsias sąlygas*

„SD“ – *Sutarties Specialiąsias sąlygas*

Detalė Nr. PR02 Tarpaukštinio denginio mazgas su modulinėmis lubomis.

- Sutartiniai žymėjimai:
-  Esama konstrukcija
 -  Demontuojama konstrukcija
 -  Projektuojama konstrukcija



- Pastabos
1. Matmenys pateikiami milimetrais, aukščiau metrais;
 2. Esant netikslumams tarp brėžinių ir situacijos, nedelsiant pranešti projekto autoriui;
 3. Visus matmenis tikslinti vietoje. Esant neatitikimams tarp esamos situacijos ir brėžinių, rangovas privalo nedelsiant informuoti projekto vykdymo priežiūros vadovą bei projekto techninės priežiūros vadovą.
 4. Įrengiant ugniai atsparią plokštę, vadovautis gamintojo reikalavimais.

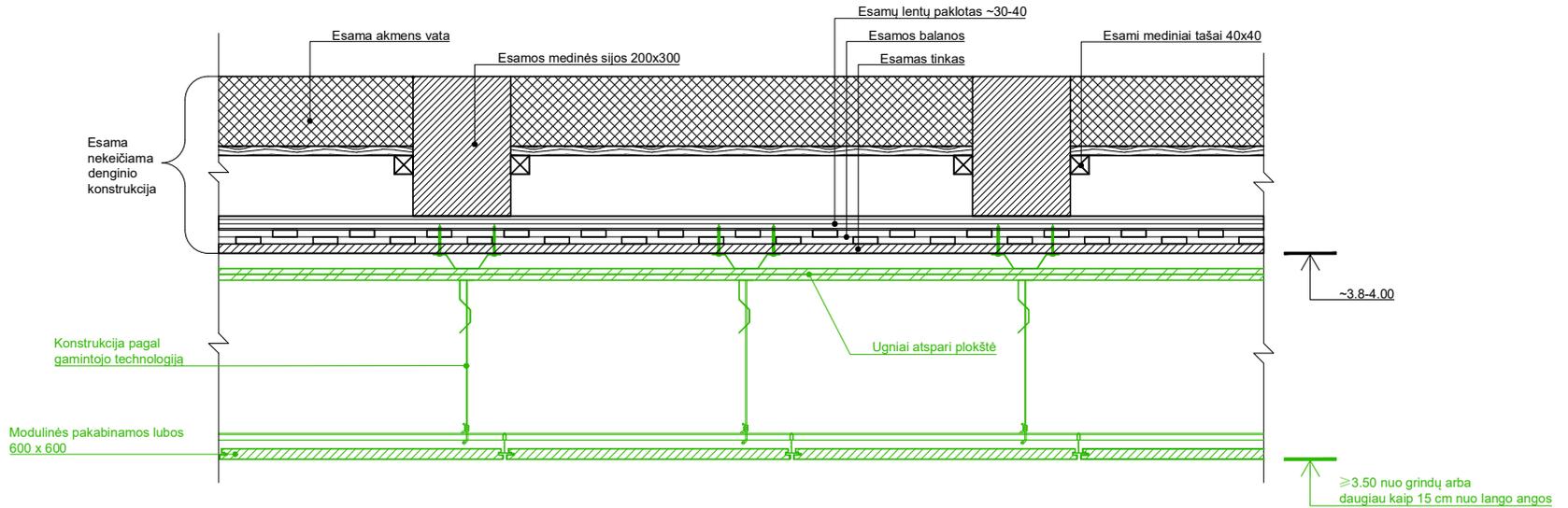
0	2024-12-04	
Laida	Išleidimo data	Laidos statusas. Keitimo priežastis (jei taikoma)

Kval. patv. dok. Nr.	PRB		PROJEKTŲ RENGIMO BIURAS	Statinio projekto pavadinimas	
	ADMINISTRACINĖS PASKIRTIES PASTATO (7.2) MINDAUGO G. 12, VILNIUJE - KAPITALINIO REMONTO PROJEKTAS				
A 1694	PV			Statinio numeris ir pavadinimas	
4059				Administracinis pastatas (Unikalus daikto numeris: 1094-0235-1017)	
				Dokumento pavadinimas	Laida
				Detalė Nr.PR02 - Tarpaukštinio denginio mazgas su modulinėmis lubomis	0
LT	Statytojas ir (arba) užsakovas	Dokumento žymuo		Lapas	Lapų
	VĮ Turto bankas	260-TDP-SK-11.4		1	1

Detalė Nr. PR03 Palėpės denginio mazgas.

Sutartiniai žymėjimai:

	Esama konstrukcija
	Demontuojama konstrukcija
	Projektuojama konstrukcija



Pastabos

1. Matmenys pateikiami milimetrais, aukščiau metrais;
2. Esant netikslumams tarp brėžinių ir situacijos, nedelsiant pranešti projekto autoriui;
3. Visus matmenis tikslinti vietoje. Esant neatitikimams tarp esamos situacijos ir brėžinių, rangovas privalo nedelsiant informuoti projekto vykdymo priežiūros vadovą bei projekto techninės priežiūros vadovą.
4. Įrengiant ugniai atsparią plokštę, vadovautis gamintojo reikalavimais.

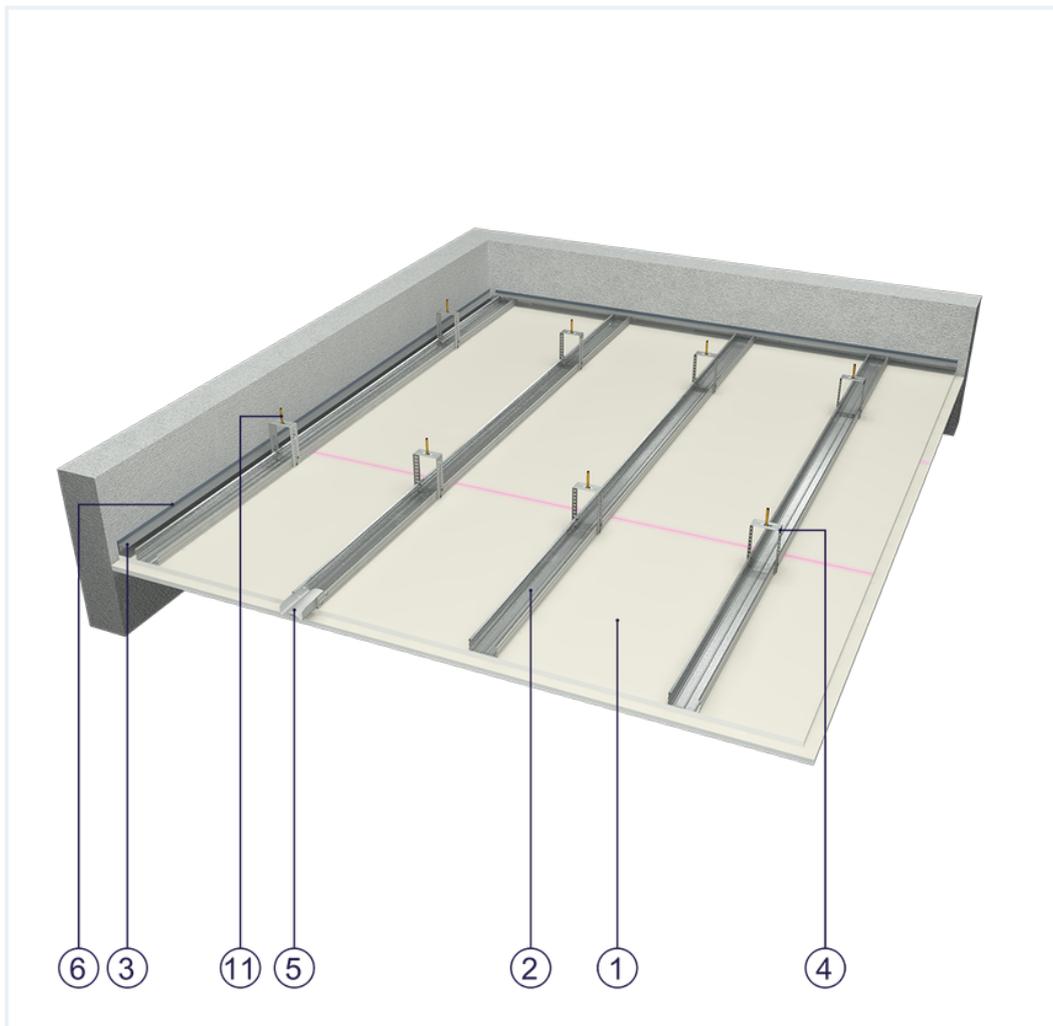
0	2024-12-04	
Laida	Išleidimo data	Laidos statusas. Keitimo priežastis (jei taikoma)

Kval. patv. dok. Nr.	PRB PROJEKTŲ RENGIMO BIURAS			Statinio projekto pavadinimas ADMINISTRACINĖS PASKIRTIES PASTATO (7.2) MINDAUGO G. 12, VILNIUJE - KAPITALINIO REMONTO PROJEKTAS	
	A 1694	PV		Statinio numeris ir pavadinimas Administracinis pastatas (Unikalus daikto numeris: 1094-0235-1017)	
4059				Dokumento pavadinimas Detalė Nr.PR03 - Palėpės denginio mazgas	
LT	Statytojas ir (arba) užsakovas VĮ Turto bankas			Dokumento žymuo 260-TDP-SK-11.5	Lapas 1
					Lapų 1

SISTEMOS LAPAS

Lubų danga OSF - 2x12,5 GKF DF/CD 60

iš CD 60 profilių karkaso su dviejų sluoksnių GKF tipo DF plokščių, kurių storis 12,5 mm, danga



Lubų dangos elementai

1. Norgips GKF tipo DF gipso kartono plokštės, kurių storis 12,5 mm
2. Norgips CD 60 profiliai, kurių maks. ašinis atstumas yra kas 40 cm
3. Norgips UD 30 profiliai
4. Norgips plokščia ES/ES Plus pakaba, maks. tarpai kas 85 cm
5. Norgips išilginė jungtis
6. Pasirinktinai Norgips sandarinimo juosta plotis 30 mm
7. Tarpai tarp Norgips savigręžių į metalą 3,5 x 25 mm, maks. kas 40 cm
8. Tarpai tarp Norgips savigręžių į metalą 3,5 x 35 mm, maks. kas 17 cm
9. Norgips savisriegiai į metalą 3,5 x 9,5 mm
10. Tvirtinimo kaiščiai min. Ø 6 x 40 mm, tarpai maks. kas 80 cm
11. Plieniniai kaiščiai min. Ø 6 x 40 mm
12. Norgips Extra Finish arba Norgips Light Ready Mix universalus glaistas
13. Norgips armavimo juosta
14. Norgips Extra Finish arba Norgips Light Ready Mix universalus glaistas

Techniniai duomenys



Atsparumas ugniai
EI 45 ¹⁾



Sienos svoris
22 kg/m²



Dangos svoris
24 kg/m²

Aukščiau nurodyti parametrai skirti pertvaroms įrengtoms iš profilių, kurių skardos storis 0,55 mm.

OSF - 2x12,5 GKF DF/CD 60 sistemoje profilių panaudojimas, kurių skardos storis, yra 0,5 mm yra draudžiamas.

1) Pagal klasifikaciją nr. LBO-786-K/19

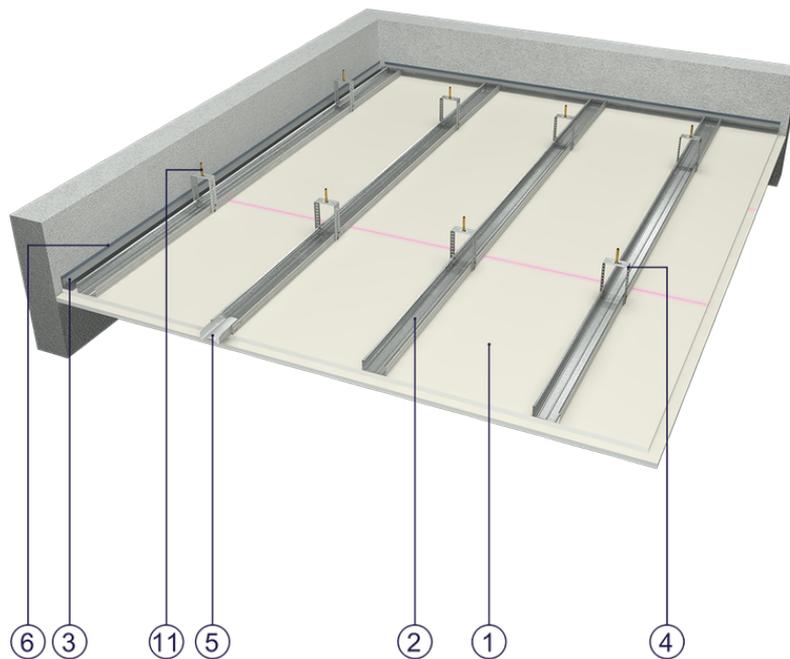
Lygis



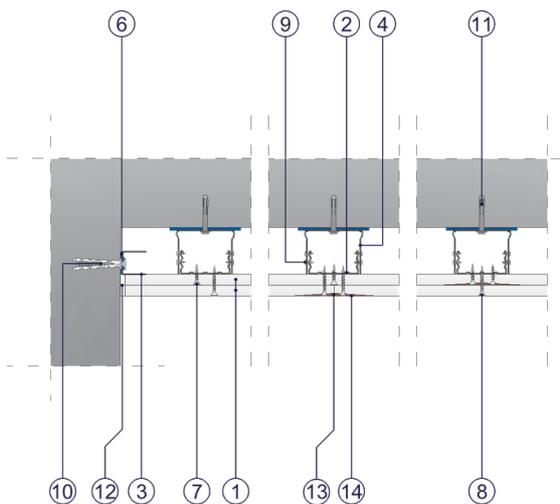
SUPER

Užtikrina labai stabilią konstrukciją, pasižyminčią aukščiausiais atsparumo ugniai, garso izoliavimo ir kietumo parametrais.

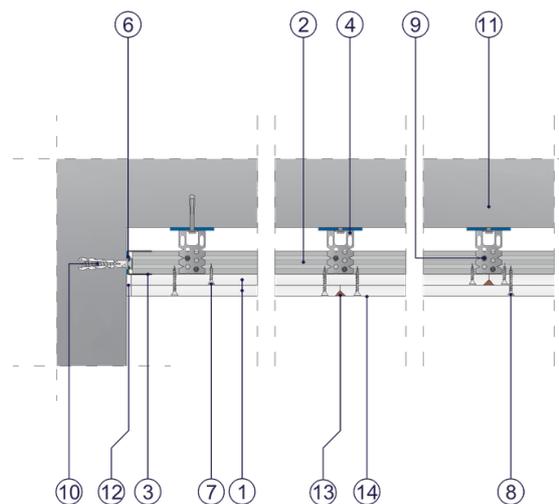




Pav. 1. Lubų dangos vaizdas



Pav. 2. Lubų dangos horizontalus pjūvis



Pav. 2. Lubų dangos horizontalus pjūvis



**GROUP OF TESTING LABORATORIES
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Fire resistance classification No. LBO – 786 – K/22E

Classified product:

**Suspended ceilings Norgips
faced with 2x12.5 mm thick gypsum plasterboards
Norgips GKF type DF or Norgips GKFI type DFH2
or Norgips Acoustic Super type DFH2IR**

Sponsor:

Norgips Sp. z o.o.
ul. Raclawicka 93
02-634 Warszawa

Prepared by:

Group of Testing Laboratories Gryfitlab
ul. Prosta 2, Łozienica
72-100 Goleniów

Place and date of issue:

Łozienica, 27.07.2022

Copy No. 1

The classification was printed in 3 copies. Copies Nos. 1, 2 – for the Sponsor, Copy No. 3 – AA

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1. **This classification has been prepared based on the following documents:**
 - 1.1. Standard PN-EN 13501-2:2016-07 Fire classification of construction products and building elements – Part 2: Classification using data from fire resistance tests, excluding ventilation services.
 - 1.2. Standard PN-EN 1364-2:2018-02 Fire resistance tests for non-loadbearing elements – Part 1: Ceilings.
 - 1.3. Standard PN-EN 1363-1:2020-07 Fire resistance tests – Part 1: General requirements.
 - 1.4. Test Report No. LBO-786/16 Suspended ceiling SP – 2x12.5 GKF DF CD 60. Fire Tests Laboratory, GRYFITLAB Spółka z o.o., Łozienica 2016.
 - 1.5. Test Report No. LBO-1587/21 16 Suspended ceiling SP – 2x12,5 GKB A + GKF DF CD 60, S. Fire Tests Laboratory, GRYFITLAB Spółka z o.o., Łozienica 2021.
 - 1.6. Drawings and technical documentation provided by the Sponsor.
2. **Technical description of suspended ceilings Norgips faced with 2x12.5 mm thick gypsum plasterboards Norgips GKF type DF or Norgips GKFI type DFH2 or Norgips Acoustic Super type DFH2IR**
 - 2.1 **Suspended ceilings SP - 2x12.5 GKF DF/CD60, SP - 2x12.5 GKFI DFH2/CD60 and SP - 2x12.5 AKU DFH2IR/CD60, faced with 2x12.5 mm thick gypsum plasterboards Norgips GKF type DF or Norgips GKFI type DFH2 or Norgips Acoustic Super type DFH2IR, with two level grids**

The construction of the ceilings consists of a two level grid. The grid is made of profiles e.g. **Norgips CD 60**. The profiles are made of cold bent galvanized steel; the nominal thickness of the steel used is **0.55 mm** (tolerance +/- 0.06 mm) or **0.6 mm** (tolerance +/- 0.06 mm). The profiles of the main (top) layer are aligned at maximum every **100 cm**. The profiles of the loadbearing (bottom) layer are aligned at maximum every **40 cm**. The profiles of the main and loadbearing layer are connected with one another by means of e.g. **Norgips cross connectors** for profiles CD 60. The profiles of the main layer are suspended by means of **rotating hangers with spring** e.g. **Norgips** or **rotating hangers with nonius** e.g. **Norgips** or by applying system hangers e.g. **Norgips ES 60** or e.g. **Norgips ES 60 plus** fixed to the construction of the floor or to the construction of the roof by means of mechanical connectors, such as steel dowels (minimum dimensions **Ø6 x 40 mm**), screws (minimum dimensions **Ø4 x 40 mm**), etc. Profiles **CD 60** of the main layer are fixed to hangers **ES 60** or **ES 60 plus** by means of 4 screws **Ø3.9 x 11 mm** or **Ø3.5 x 9.5 mm** with self-drilling ends. The hangers are placed maximally every **85 cm**.

Cold bent steel profiles e.g. **Norgips UD 30** are fixed to the walls on the perimeter of the ceiling by means of mechanical connectors, such as steel dowels (minimum dimensions: **Ø6 x 40 mm**), screws (minimum dimensions: **Ø4 x 40 mm**), etc. placed maximally every **60 cm**. It is recommended to apply 30 mm wide e.g. **Norgips sealing tape** between the perimeter steel profiles and the walls. The ceiling grid structure may be additionally loaded. The value of the uniform load can be up to **7 kg/m²**.

Gypsum plasterboards **Norgips GKF type DF** (thickness **2 x 12.5 mm**) or **Norgips GKFI type DFH2** (thickness **2 x 12.5 mm**) of the minimum surface density equal to at least **10.1 kg/m²** or gypsum plasterboards **Norgips Acoustic Super type DFH2IR** (thickness **2 x 12.5 mm**) of the

minimum surface density equal to at least 11.4 kg/m² are fixed to the profiles of the loadbearing layer.

The first layer of the plasterboards is fixed by means of e.g. **Norgips** screws **Ø3.5 x 25 mm**, placed at maximally **40 cm** centres. The second layer of the plasterboards is fixed by means of e.g. **Norgips** screws **Ø3.5 x 35 mm**, placed at maximally **17 cm** centres. The plasterboards are fixed in such a way as to ensure that their longer edges are perpendicular to the profiles of the loadbearing layer. The joints between shorter edges of boards always have to be placed within profiles **CD 60**. Adjacent shorter edges of boards in the first layer have to be shifted in relation to one another by minimally **40 cm**. Adjacent shorter edges of boards in the second layer have to be shifted in relation to one another by minimally **40 cm** and, at the same time, have to be shifted in relation to the respective shorter edges of the boards in the first layer by minimally **40 cm**. Longer edges of boards in the second layer have to be shifted in relation to the respective longer edges of the boards in the first layer by minimally **40 cm**.

The ceiling grid structure may be additionally loaded. The value of the uniform load can be up to 7 kg/m².

The screw heads as well as the joints between the **Norgips GKF** plasterboards **type DF** or the **Norgips GKFI** plasterboards **type DFH2** or the **Norgips AKU** plasterboards **type DFH2IR** are filled with gypsum plaster jointing compound e.g. **Norgips Start**, **Norgips Super Filler**, **Norgips Start & Finish** or **Norgips Strong Filler**. The joints in the second layer of boards are additionally strengthened with e.g. **Norgips** self-adhesive reinforcing tape made of glass fibre or with **Norgips** reinforcing tape made of interlining. For final filling, it is recommended to apply ready to use e.g. **Norgips** jointing compounds eg **Norgips Extra Finish**, **Norgips Start & Finish**, **Norgips Finish** or **Norgips Strong Filler**. Details of the construction of the suspended ceilings are presented in **Figures 1 – 6**.

If the diagonal of the suspended ceiling is longer than 15 m or in places where there are constructional expansion joints of a building, one should provide expansion joints in the suspended ceiling (**Figure 13**).

2.2 Suspended ceilings SPJ - 2x12.5 GKF DF/CD60, SPJ - 2x12.5 GKFI DFH2/CD60 and SPJ - 2x12.5 AKU DFH2IR/CD60, faced with 2x12.5 mm thick gypsum plasterboards Norgips GKF type DF or Norgips GKFI type DFH2 or Norgips Acoustic Super type DFH2IR, with one level grids

The construction of the ceilings consists of a one level grid. The grid is made of profiles e.g. **Norgips CD 60**. The profiles are made of cold bent galvanized steel; the nominal thickness of the steel used is **0.55 mm** (tolerance +/- 0.06 mm) or **0.6 mm** (tolerance +/- 0.06 mm). Main profiles are aligned at maximum every **120 cm**. Lateral profiles are aligned at maximum every **40 cm**. The lateral profiles and the main profiles are connected with one another by means of e.g. **Norgips lateral single-sided connectors** for profiles **CD 60**. These connectors are slid into the lateral profiles and then screwed with them by means of two screws (**Ø3.9 x 11 mm** or **Ø3.5 x 9.5 mm**) with self-drilling ends. Then, the lateral profiles are slid into the main profiles in such a way that a fastener of the lateral single-sided connector is slid into a web of the main profile. Then, the lateral single-sided connector is screwed to the main profile by means of two screws (**Ø3.9 x 11 mm** or **Ø3.5 x 9.5 mm**) with self-drilling ends. The main profiles are suspended by means of system

rotating hangers with spring e.g. **Norgips** or **rotating hangers with nonius** e.g. **Norgips** or by applying system hangers e.g. **Norgips ES 60** or e.g. **Norgips ES 60 plus** fixed to the construction of a floor or to the construction of a roof by means of mechanical connectors, such as steel dowels (minimum dimensions: **Ø6 x 40 mm**), screws (minimum dimensions: **Ø4 x 40 mm**), etc. Main profiles **CD 60** are fixed to hangers **ES 60** or **ES 60 plus** by means of 4 screws **Ø3.9 x 11 mm** or **Ø3.5 x 9.5 mm** with self-drilling ends. The hangers are placed maximally every **70 cm**.

Cold bent steel profiles e.g. **Norgips UD 30** are fixed to the walls on the perimeter of the ceiling by means of mechanical connectors, such as steel dowels (minimum dimensions: **Ø6 x 40 mm**), screws (minimum dimensions: **Ø4 x 40 mm**), etc. placed maximally every **60 cm**. It is recommended to apply 30 mm wide e.g. **Norgips** sealing tape between the perimeter steel profiles and the walls. The ceiling grid structure may be additionally loaded. The value of the uniform load can be up to **7 kg/m²**.

Gypsum plasterboards **Norgips GKF type DF** (thickness **2 x 12.5 mm**) or **Norgips GKFI type DFH2** (thickness **2 x 12.5 mm**) of the minimum surface density equal to at least **10.1 kg/m²** or gypsum plasterboards **Norgips Acoustic Super type DFH2IR** (thickness **2 x 12.5 mm**) of the minimum surface density equal to at least **11.4 kg/m²** are fixed to the main profiles and to the lateral profiles. The first layer of the plasterboards is fixed by means of e.g. **Norgips** screws **Ø3.5 x 25 mm**, placed at maximally **40 cm** centres. The second layer of the plasterboards is fixed by means of e.g. **Norgips** screws **Ø3.5 x 35 mm**, placed at maximally **17 cm** centres. The plasterboards are fixed in such a way as to ensure that their longer edges are perpendicular to the lateral profiles. The joints between shorter edges of boards always have to be placed within lateral profiles. Adjacent shorter edges of boards in the first layer of boards have to be shifted in relation to one another by minimally **40 cm**. Adjacent shorter edges of boards in the second layer of boards have to be shifted in relation to one another by minimally **40 cm** and, at the same time, have to be shifted in relation to the respective shorter edges of the boards in the first layer by minimally **40 cm**. Longer edges of boards in the second layer of boards have to be shifted in relation to the respective longer edges of the boards in the first layer by minimally **40 cm**.

The screw heads as well as the joints between the **Norgips GKF** plasterboards **type DF** or the **Norgips GKFI** plasterboards **type DFH2** or the **Norgips AKU** plasterboards **type DFH2IR** are filled with gypsum plaster jointing compound e.g. **Norgips Start**, **Norgips Super Filler**, **Norgips Start & Finish** or **Norgips Strong Filler**. The joints in the second layer of boards are additionally strengthened with e.g. **Norgips** self-adhesive reinforcing tape made of glass fibre or with **Norgips** reinforcing tape made of interlining. For final filling, it is recommended to apply ready to use **Norgips** jointing compounds e.g. **Norgips Extra Finish**, **Norgips Start & Finish**, **Norgips Finish** or **Norgips Strong Filler**. Details of the construction of the suspended ceilings are presented in **Figure 7**.

If the diagonal of the suspended ceiling is longer than **15 m** or in places where there are constructional expansion joints of a building, one should provide expansion joints in the suspended ceiling.

2.3 Ceiling linings OSF - 2x12.5 GKF DF/CD60, OSF - 2x12.5 GKFI DFH2/CD60 and OSF - 2x12.5 AKU DFH2IR/CD60, faced with 2x12.5 mm thick gypsum plasterboards Norgips GKF type DF or Norgips GKFI type DFH2 or Norgips Acoustic Super type DFH2IR

The construction of the ceiling linings consists of profiles e.g. **Norgips CD 60**. The profiles are made of cold bent galvanized steel; the nominal thickness of the steel used is **0.55 mm** (tolerance +/- 0.06 mm) or **0.6 mm** (tolerance +/- 0.06 mm); the profiles are aligned every **40 cm**.

The profiles used are suspended by applying system hangers e.g. **Norgips ES 60** or e.g. **Norgips ES 60 plus** fixed to the construction of a floor or to the construction of a roof by means of 2 mechanical connectors, such as steel dowels (**minimum dimensions: Ø6 x 40 mm**), screws (minimum dimensions: **Ø4 x 40 mm**), etc. Profiles **CD 60** are fixed to hangers **ES 60** or **ES 60 plus** by means of 4 screws **Ø3.9 x 11 mm** or **Ø3.5 x 9.5 mm** with self-drilling ends. The hangers are placed maximally every **85 cm**.

Cold bent steel profiles e.g. **Norgips UD 30** are fixed to the walls on the perimeter of the ceiling by means of mechanical connectors, such as steel dowels (minimum dimensions: **Ø6 x 40 mm**), screws (minimum dimensions: **Ø4 x 40 mm**), etc. placed maximally every **60 cm**. It is recommended to apply 30 mm wide e.g. Norgips sealing tape between the perimeter steel profiles and the walls.

Gypsum plasterboards **Norgips GKF type DF** (thickness **2 x 12.5 mm**) or **Norgips GKFI type DFH2** (thickness **2 x 12.5 mm**) of the minimum surface density equal to at least 10.1 kg/m² or gypsum plasterboards **Norgips Acoustic Super type DFH2IR** (thickness **2 x 12.5 mm**) of the minimum surface density equal to at least 11.4 kg/m² are fixed to the **CD 60** profiles. The first layer of the plasterboards is fixed by means of e.g. **Norgips** screws **Ø3.5 x 25 mm**, placed at maximally **40 cm** centres. The second layer of the plasterboards is fixed by means of e.g. **Norgips** screws **Ø3.5 x 35 mm**, placed at maximally **17 cm** centres. The plasterboards are fixed in such a way as to ensure that their longer edges are perpendicular to the **CD 60** profiles. The joints between shorter edges of lateral boards always have to be placed within profiles **CD 60**. Adjacent shorter edges of boards in the first layer of boards have to be shifted in relation to one another by minimally **40 cm**. Adjacent shorter edges of boards in the second layer of boards have to be shifted in relation to one another by minimally **40 cm** and, at the same time, have to be shifted in relation to the respective shorter edges of the boards in the first layer by minimally **40 cm**. Longer edges of boards in the second layer of boards have to be shifted in relation to the respective longer edges of the boards in the first layer by minimally **40 cm**.

The ceiling grid structure may be additionally loaded. The value of the uniform load can be up to 7 kg/m².

The screw heads as well as the joints between the **Norgips GKF** plasterboards **type DF** or the **Norgips GKFI** plasterboards **type DFH2** or the **Norgips AKU** plasterboards **type DFH2IR** are filled with gypsum plaster jointing compound e.g. **Norgips Start**, **Norgips Super Filler**, **Norgips Start & Finish** or **Norgips Strong Filler**. The joints in the second layer of boards are additionally strengthened with e.g. Norgips self-adhesive reinforcing tape made of glass fibre or with e.g. Norgips reinforcing tape made of interlining. For final filling, it is recommended to apply ready to use e.g. **Norgips** jointing compounds e.g. **Norgips Extra Finish**, **Norgips Start & Finish**, **Norgips Finish** or **Norgips Strong Filler**. Details of the construction of the ceiling linings are presented in **Figures 8 – 9**.

If the diagonal of the ceiling lining is longer than 15 m or in places where there are constructional expansion joints of a building, one should provide expansion joints in the ceiling lining.

2.4 Ceiling linings OSF - 2x12.5 GKF DF/KAP, OSF - 2x12.5 GKFI DFH2/KAP and OSF - 2x12.5 AKU DFH2IR/KAP, faced with 2x12.5 mm thick gypsum plasterboards Norgips GKF type DF or Norgips GKFI type DFH2 or Norgips Acoustic Super type DFH2IR

The construction of the ceiling linings consists of e.g. **Norgips hat** profiles. The profiles are made of cold bent galvanized steel; the nominal thickness of the steel used is **0.55 mm** (tolerance +/- 0.06 mm) or **0.6 mm** (tolerance +/- 0.06 mm); the profiles are aligned every **40 cm**.

The profiles are fixed to the construction of a floor or to the construction of a roof by means of 2 mechanical connectors, such as steel dowels (minimum dimensions: **Ø6 x 40 mm**), screws (minimum dimensions: **Ø4 x 40 mm**), etc. placed maximally every **100 cm**.

Gypsum plasterboards **Norgips GKF type DF** (thickness **2 x 12.5 mm**) or **Norgips GKFI type DFH2** (thickness **2 x 12.5 mm**) of the minimum surface density equal to at least 10.1 kg/m² or gypsum plasterboards **Norgips Acoustic Super type DFH2IR** (thickness **2 x 12.5 mm**) of the minimum surface density equal to at least 11.4 kg/m² are fixed to the **hat** profiles. The first layer of the plasterboards is fixed by means of e.g. **Norgips screws Ø3.5 x 25 mm**, placed at maximally **40 cm** centres. The second layer of the plasterboards is fixed by means of e.g. **Norgips screws Ø3.5 x 35 mm**, placed at maximally **17 cm** centres. The plasterboards are fixed in such a way as to ensure that their longer edges are perpendicular to the **hat** profiles. The joints between shorter edges of lateral boards always have to be placed within **hat** profiles. Adjacent shorter edges of boards in the first layer have to be shifted in relation to one another by minimally **40 cm**. Adjacent shorter edges of boards in the second layer of boards have to be shifted in relation to one another by minimally **40 cm** and, at the same time, have to be shifted in relation to the respective shorter edges of the boards in the first layer by minimally **40 cm**. Longer edges of boards in the second layer of boards have to be shifted in relation to the respective longer edges of the boards in the first layer by minimally **40 cm**.

The ceiling grid structure may be additionally loaded. The value of the uniform load can be up to 7 kg/m².

The screw heads as well as the joints between the **Norgips GKF** plasterboards **type DF** or the **Norgips GKFI** plasterboards **type DFH2** or the **Norgips AKU** plasterboards **type DFH2IR** are filled with gypsum plaster jointing compound e.g. **Norgips Start, Norgips Super Filler, Norgips Start & Finish or Norgips Strong Filler**. The joints in the second layer of boards are additionally strengthened with e.g. Norgips self-adhesive reinforcing tape made of glass fibre or with e.g. Norgips reinforcing tape made of interlining. For final filling, it is recommended to apply ready to use **Norgips** jointing compounds e.g. **Norgips Extra Finish, Norgips Start & Finish, Norgips Finish or Norgips Strong Filler**. Details of the construction of the ceiling linings are presented in **Figures 10 – 12**.

If the diagonal of the ceiling lining is longer than 15 m or in places where there are constructional expansion joints of a building, one should provide expansion joints in the ceiling lining.

3. Fire resistance tests

Fire resistance tests of Norgips suspended ceiling made of 2x12.5 mm thick gypsum plasterboards were carried out in the Fire Tests Laboratory of Gryfitlab Spółka z.o.o., in Łozienica.

Test reports: No. LBO-786/16 [1.4], LBO-1587/21 [1.5].

4. Fire resistance classification of suspended ceilings Norgips faced with 2x12.5 mm thick gypsum plasterboards Norgips GKF type DF or Norgips GKFI type DFH2 or Norgips Acoustic Super type DFH2IR

Based on the analysis of test results indicated in item 3, suspended ceilings Norgips faced with 2x12.5 mm thick gypsum plasterboards Norgips GKF type DF or Norgips GKFI type DFH2 or Norgips Acoustic Super type DFH2IR, manufactured and installed in accordance with the technical description presented in item 2, are classified according to standard PN-EN 13501-2:2016-07 [1.1] as belonging to the following fire resistance class:

EI 45 (a←b)

5. Suspended ceilings Norgips faced with 2x12.5 mm thick gypsum plasterboards Norgips GKF type DF or Norgips GKFI type DFH2 or Norgips Acoustic Super type DFH2IR, used as fire separation

Horizontal fire separation elements, in the form of a floor or a flat roof with suspended ceiling Norgips faced with 2x12.5 mm thick gypsum plasterboards Norgips GKF type DF or Norgips GKFI type DFH2 or Norgips Acoustic Super type DFH2IR, manufactured and installed in accordance with the technical description specified in item 2 herein, which – taking into account the classification provided in item 4 herein – constitute fire separation when being exposed to fire from below, meet the respective REI fire resistance criteria according to standard PN-EN 13501-2:2016-07 [1.1], as follows:

- Systems: floor – suspended ceiling and floor – ceiling lining (the construction of a ceiling is designed according to the Polish Standards and Eurocodes)
fire resistance class **REI 45 (a←b)**
- Systems: roof – suspended ceiling and roof – ceiling lining (the construction of a roof is designed according to the Polish Standards and Eurocodes)
fire resistance class **REI 45 (a←b)**

6. Restriction

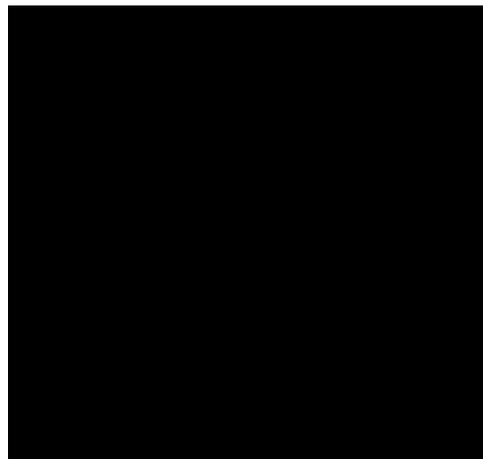
The classification presented in item 4 is valid for elements made of 12.5 mm thick Norgips gypsum plasterboards, manufactured in accordance with standard PN-EN 520+A1:2012, and of the surface density not less than:

10.1 kg/m² – for boards type DF and DFH2
11.4 kg/m² – for boards type DFH2IR

Classification No. LBO – 786 – K/22E replaces Classification No. LBO – 786 – K/19E.
Classification No. LBO – 786 – K/19E may only be used or reproduced in its entirety.

7. Validity

This classification is valid until 27.05.2027 on the condition that there are no changes in the construction or materials of the classified products.

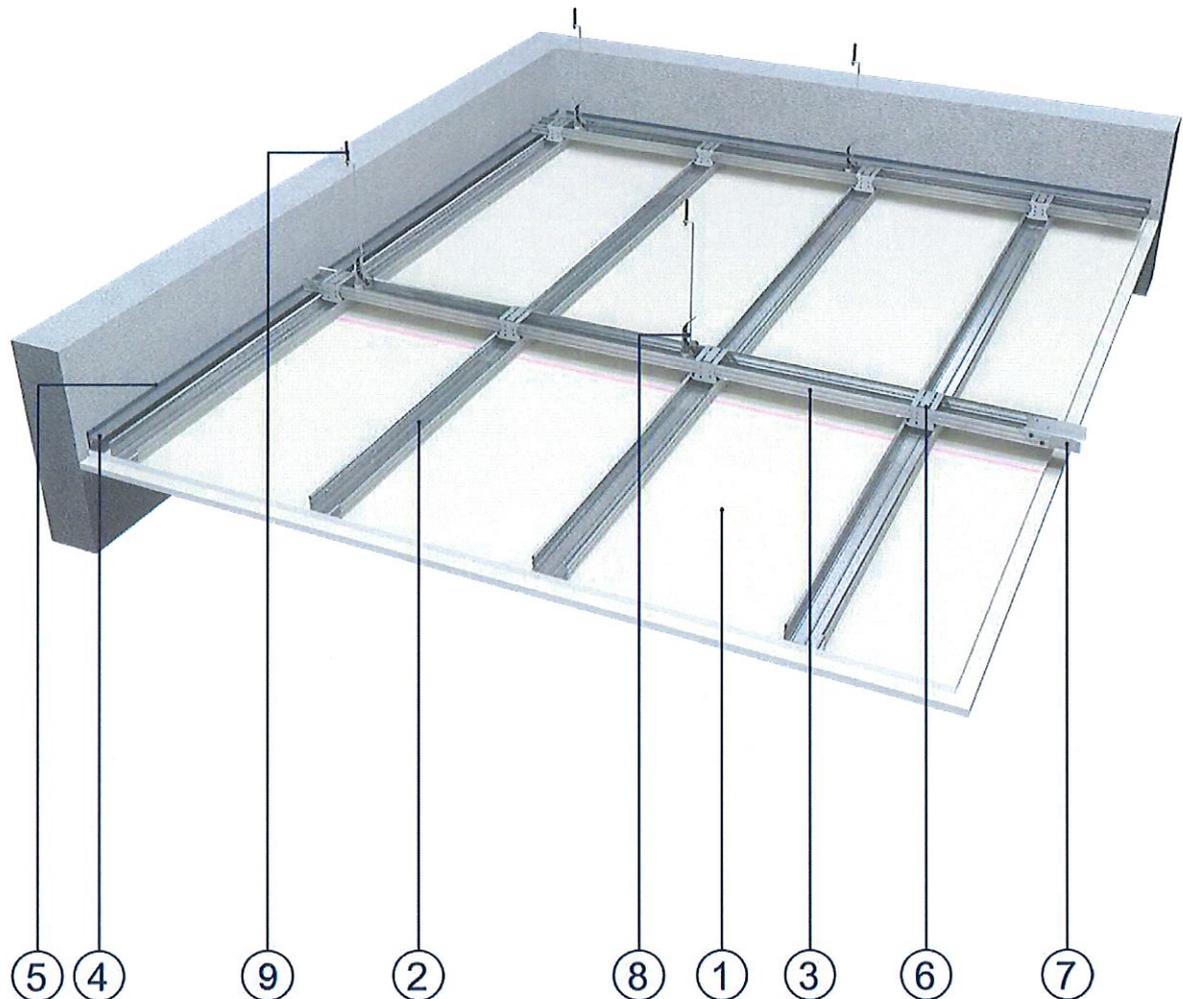


8. Figures

Suspended ceilings Norgips

faced with 2x12.5 mm thick gypsum plasterboards

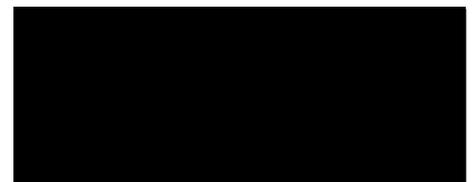
**Norgips GKF type DF or Norgips GKFI type DFH2 or Norgips Acoustic Super type
DFH2IR**

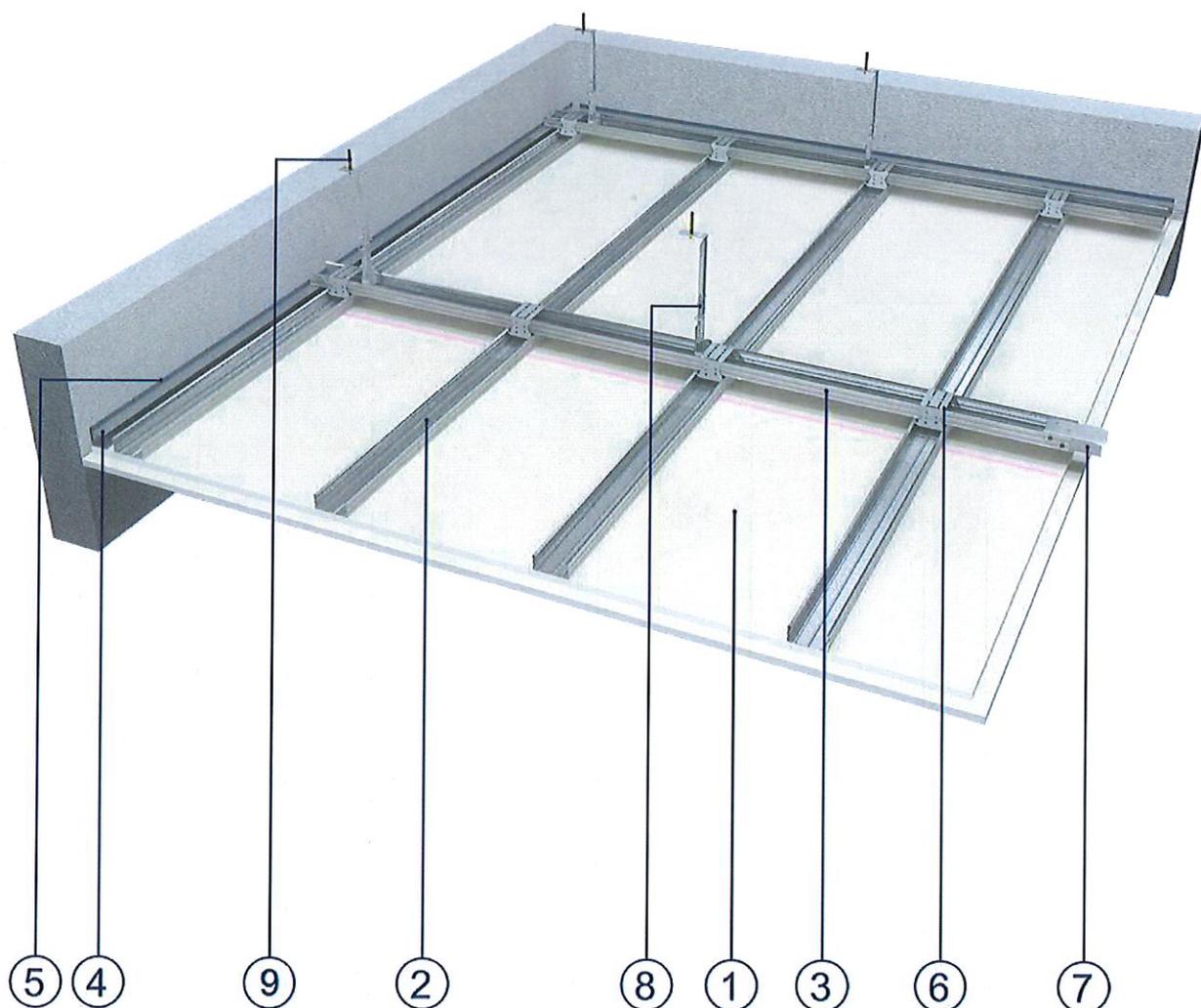


Ceiling elements

1. Covering made of boards Norgips GKF type DF or Norgips GKFI type DFH2 or Norgips Acoustic Super type DFH2IR (thickness: 2x12.5 mm)
2. Profile e.g. Norgips CD 60 of the loadbearing layer, minimum thickness: 0.55 mm placed max. every 40 cm
3. Profile e.g. Norgips CD 60 of the main layer, minimum thickness: 0.55 mm placed max. every 100 cm
4. Profile e.g. Norgips UD 30
5. Sealing tape e.g. Norgips
6. Cross connector e.g. Norgips for profiles CD 60
7. Lengthwise connectors e.g. Norgips
8. Hanger e.g. Norgips rotating hanger with spring placed max. every 85 cm
9. Mechanical connectors, such as steel dowels (min. dimensions $\text{Ø}6 \times 40 \text{ mm}$)

Figure 1 View of the suspended ceiling – two level cross construction on rotating hangers with spring

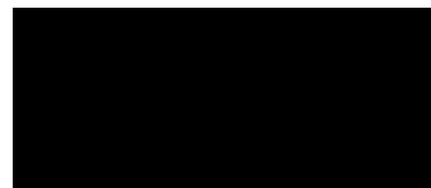


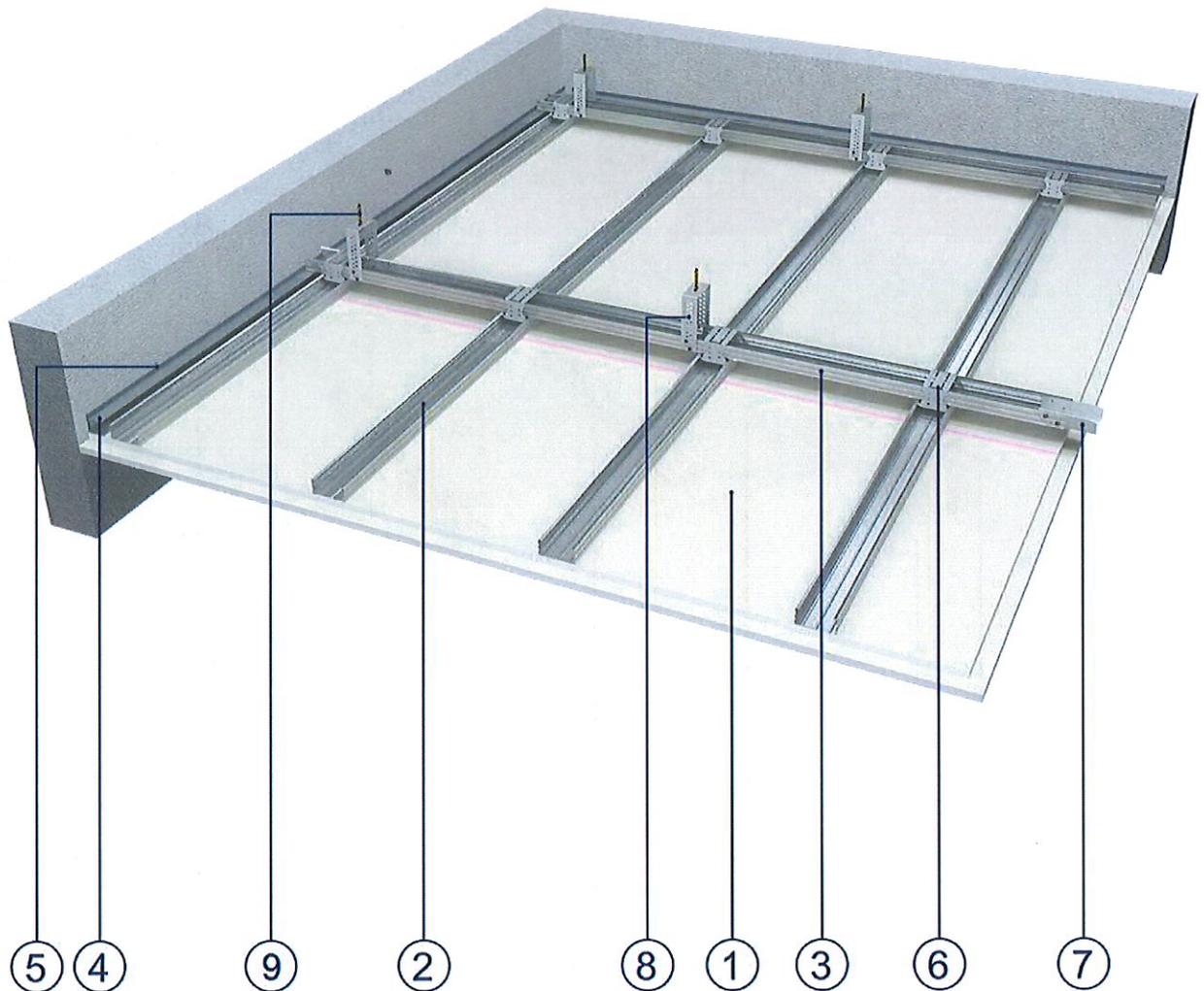


Ceiling elements

1. Covering made of boards Norgips GKF type DF or Norgips GKFI type DFH2 or Norgips Acoustic Super type DFH2IR (thickness: 2x12.5 mm)
2. Profile e.g. Norgips CD 60 of the loadbearing layer, minimum thickness: 0.55 mm placed max. every 40 cm
3. Profile e.g. Norgips CD 60 of the main layer, minimum thickness: 0.55 mm placed max. every 100 cm
4. Profile e.g. Norgips UD 30
5. Sealing tape e.g. Norgips
6. Cross connector e.g. Norgips for profiles CD 60
7. Lengthwise connectors e.g. Norgips
8. Hanger e.g. Norgips rotating hanger with nonius placed max. every 85 cm
9. Mechanical connectors, such as steel dowels (min. dimensions $\text{Ø}6 \times 40 \text{ mm}$)

Figure 2 View of the suspended ceiling – two level cross construction on rotating hangers with nonius

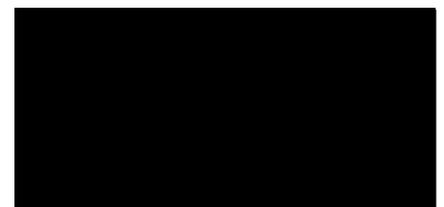


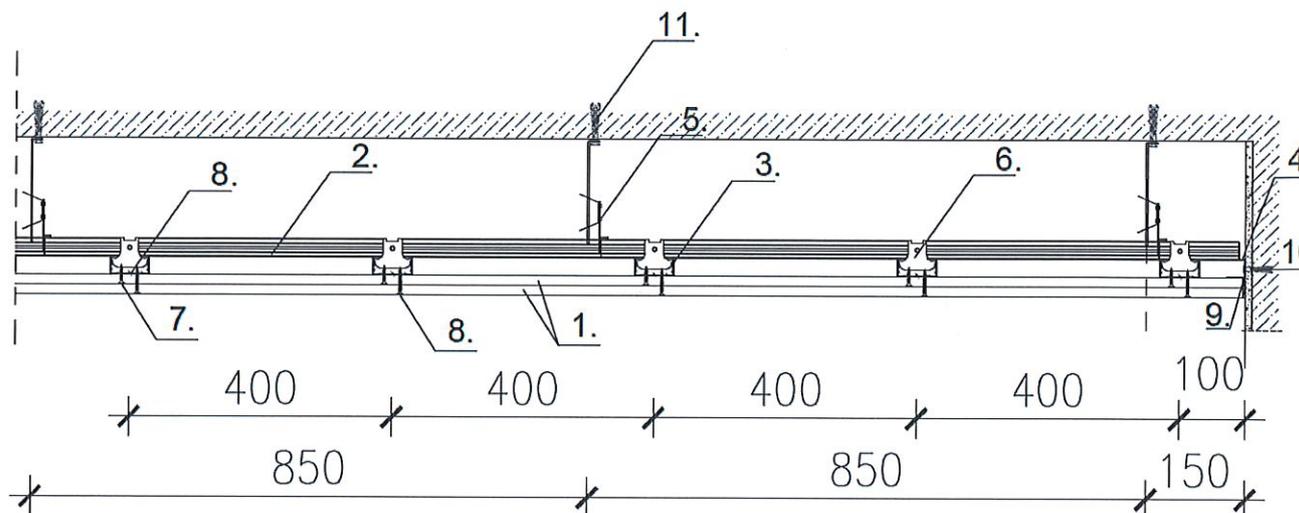


Ceiling elements

1. Covering made of boards Norgips GKF type DF or Norgips GKFI type DFH2 or Norgips Acoustic Super type DFH2IR (thickness: 2x12.5 mm)
2. Profile e.g. Norgips CD 60 of the loadbearing layer, minimum thickness: 0.55 mm placed max. every 40 cm
3. Profile e.g. Norgips CD 60 of the main layer, minimum thickness: 0.55 mm placed max. every 100 cm
4. Profile e.g. Norgips UD 30
5. Sealing tape e.g. Norgips
6. Cross connector e.g. Norgips for profiles CD 60
7. Lengthwise connectors e.g. Norgips
8. Hanger e.g. Norgips hanger ES 60 or hanger ES 60 plus placed max. every 85 cm
9. Mechanical connectors, such as steel dowels (min. dimensions $\text{Ø}6 \times 40 \text{ mm}$)

Figure 3 View of the suspended ceiling – two level cross construction on rotating hangers ES 60 or ES 60 plus

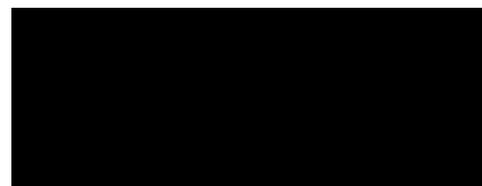


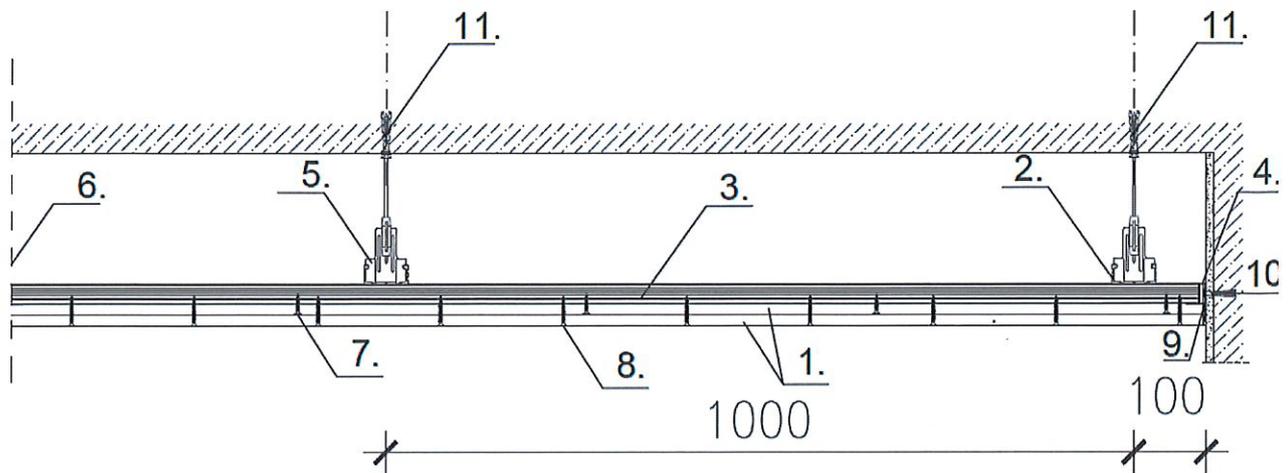


Ceiling elements

1. Two layers of boards Norgips GKF type DF or Norgips GKFI type DFH2 or Norgips Acoustic Super type DFH2IR, thickness: 12.5 mm
2. Profile e.g. Norgips CD 60 of the main layer, minimum thickness: 0.55 mm
3. Profile e.g. Norgips CD 60 of the loadbearing layer, minimum thickness: 0.55 mm
4. Profile e.g. Norgips UD 30, minimum thickness: 0.55 mm
5. Hanger e.g. Norgips: rotating hanger with spring or rotating hanger with nonius or hanger ES 60 or hanger ES 60 plus placed max. every 85 cm
6. Cross connector e.g. Norgips for profiles CD 60
7. Screws e.g. Norgips $\text{Ø}3.5 \times 25$ mm placed every 40 cm
8. Screws e.g. Norgips $\text{Ø}3.5 \times 35$ mm placed every 17 cm
9. Sealing tape e.g. Norgips, width: 30 mm
10. Mechanical connector, e.g. wall plug, dowel (min. dimensions $\text{Ø}6 \times 40$ mm)
11. Mechanical connector, e.g. screw, steel dowel (min. dimensions $\text{Ø}6 \times 40$ mm)

Figure 4 Suspended ceiling of the two level cross construction – section parallel to the profiles of the main layer

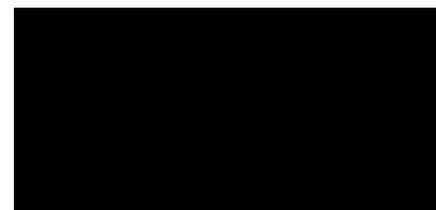


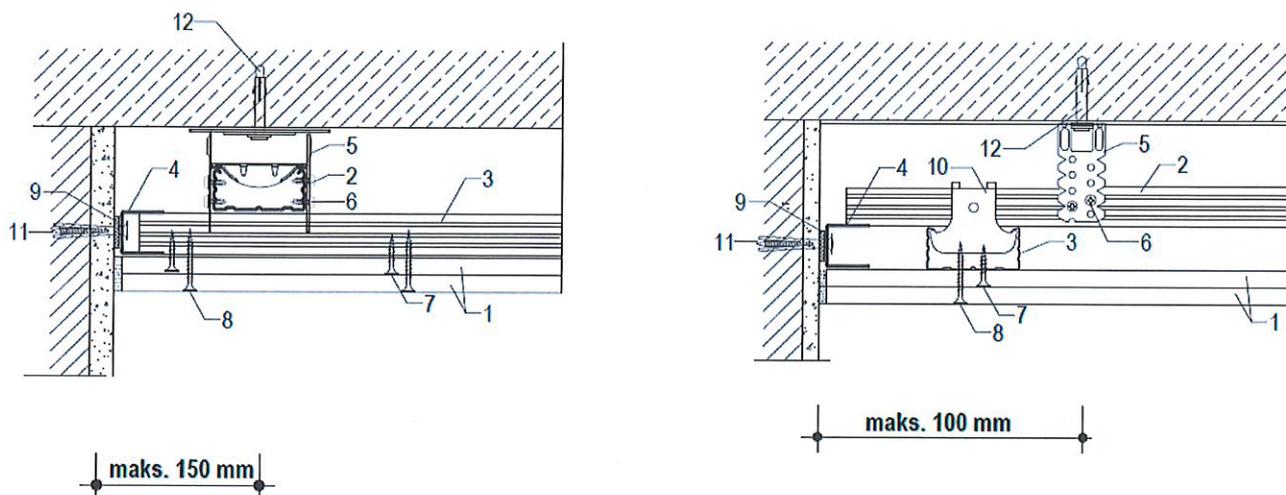


Ceiling elements

1. Two layers of boards Norgips GKF type DF or Norgips GKFI type DFH2 or Norgips Acoustic Super type DFH2IR, thickness: 12.5 mm
2. Profile e.g. Norgips CD 60 of the main layer, minimum thickness: 0.55 mm
3. Profile e.g. Norgips CD 60 of the loadbearing layer, minimum thickness: 0.55 mm
4. Profile e.g. Norgips UD 30, minimum thickness: 0.55 mm
5. Hanger e.g. Norgips: rotating hanger with spring or rotating hanger with nonius or hanger ES 60 or hanger ES 60 plus placed max. every 85 cm
6. Screws e.g. Norgips $\text{Ø}3.5 \times 25$ mm placed every 40 cm
7. Screws e.g. Norgips $\text{Ø}3.5 \times 35$ mm placed every 17 cm
8. Sealing tape e.g. Norgips, width: 30 mm
9. Mechanical connector, e.g. wall plug, dowel (min. dimensions $\text{Ø}6 \times 40$ mm)
10. Mechanical connector, e.g. screw, steel dowel (min. dimensions $\text{Ø}6 \times 40$ mm)

Figure 5 Suspended ceiling of the two level cross construction – section perpendicular to the profiles of the main layer

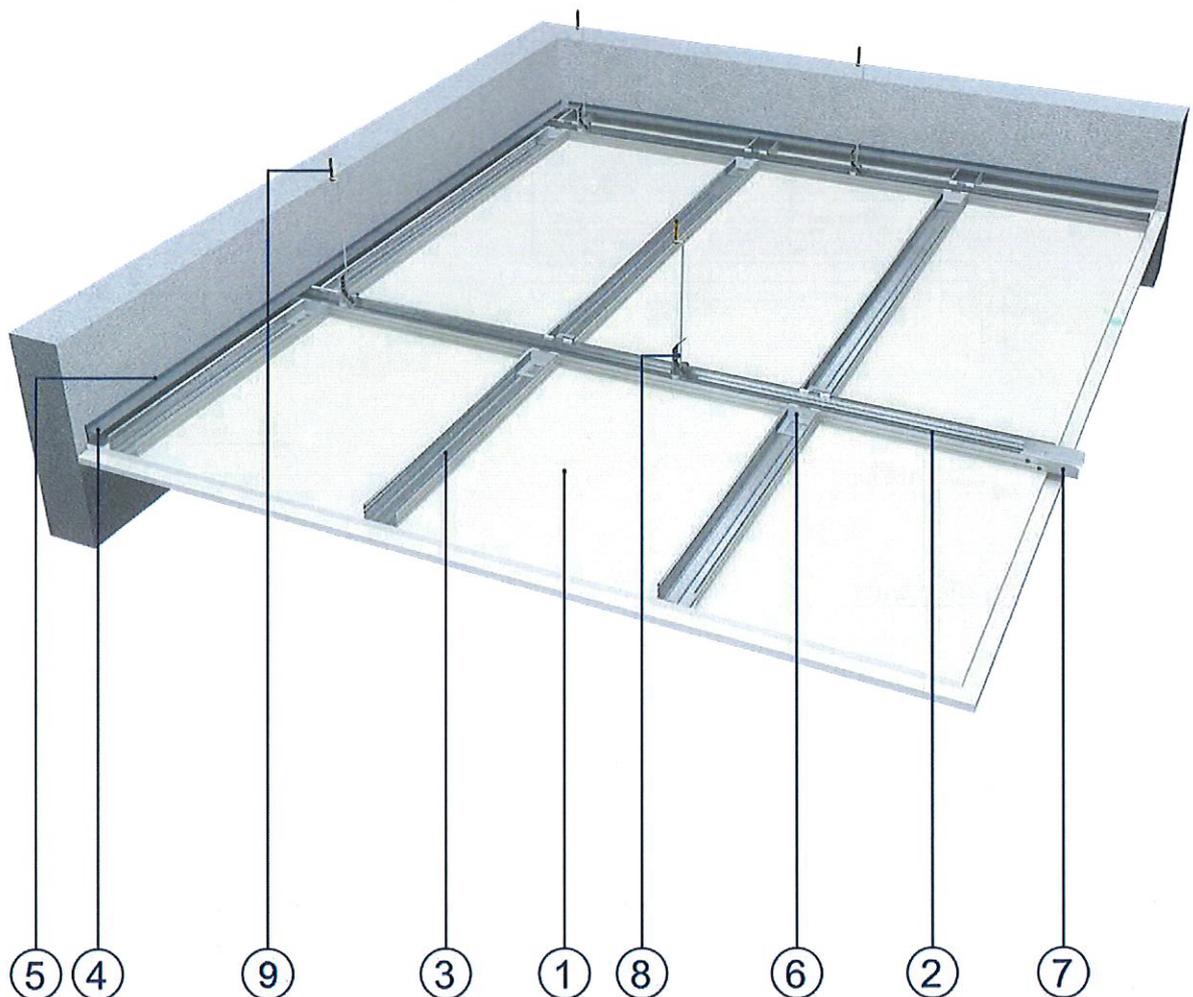




Ceiling elements

1. Two layers of boards Norgips GKF type DF or Norgips GKF1 type DFH2 or Norgips Acoustic Super type DFH2IR, 12.5 mm
2. Profile e.g. Norgips CD 60 of the main layer, minimum thickness: 0.55 mm
3. Profile e.g. Norgips CD 60 of the loadbearing layer, minimum thickness: 0.55 mm
4. Profile e.g. Norgips UD 30, minimum thickness: 0.55 mm
5. Hanger e.g. Norgips: hanger ES 60 or hanger ES 60 plus placed max. every 85 cm
6. Screws e.g. Norgips $\text{Ø}3.9 \times 11$ mm or Norgips $\text{Ø}3.5 \times 9.5$ mm with self-drilling ends (4 pieces per hanger ES or hanger ES plus)
7. Screws e.g. Norgips $\text{Ø}3.5 \times 25$ mm placed every 40 cm
8. Screws e.g. Norgips $\text{Ø}3.5 \times 35$ mm placed every 17 cm
9. Sealing tape e.g. Norgips, width: 30 mm
10. Cross connector e.g. Norgips for profiles CD 60
11. Mechanical connector, e.g. wall plug, dowel (min. dimensions $\text{Ø}6 \times 40$ mm)
12. Mechanical connector, e.g. screw, steel dowel (min. dimensions $\text{Ø}6 \times 40$ mm)

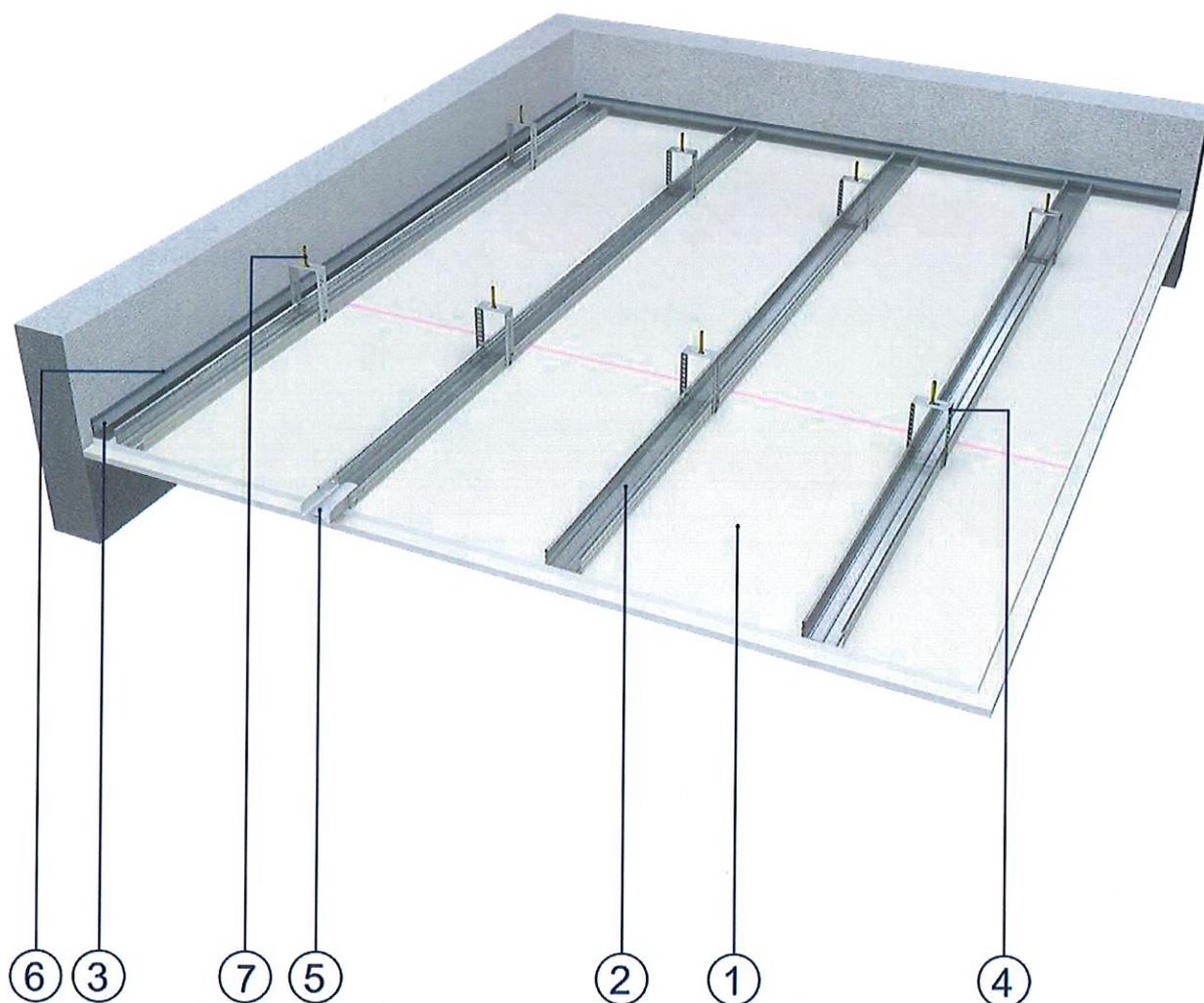
Figure 6 Suspended ceiling of the two level cross construction – section perpendicular; and section parallel to the profiles of the main layer



Ceiling elements

1. Covering made of boards Norgips GKF type DF or Norgips GKFI type DFH2 or Norgips Acoustic Super type DFH2IR (thickness: 2x12.5 mm)
2. Profile e.g. Norgips CD 60 of the main layer, minimum thickness: 0.55 mm placed max. every 100 cm
3. Profile e.g. Norgips CD 60 of the loadbearing layer, minimum thickness: 0.55 mm placed max. every 40 cm
4. Profile e.g. Norgips UD 30
5. Sealing tape e.g. Norgips
6. Lateral single-sided connectors e.g. Norgips for profiles CD 60 connected to profiles CD 60 with screws e.g. Norgips $\text{Ø}3.9 \times 11$ mm or e.g. Norgips $\text{Ø}3.5 \times 9.5$ mm with self-drilling ends (4 pieces per one connection)
7. Lengthwise connectors e.g. Norgips
8. Hanger e.g. Norgips: rotating hanger with spring or rotating hanger with nonius or hanger ES 60 or hanger ES 60 plus placed max. every 70 cm
9. Mechanical connectors, such as steel dowels (min. dimensions $\text{Ø}6 \times 40$ mm)

Figure 7 View of the suspended ceiling – one level cross construction

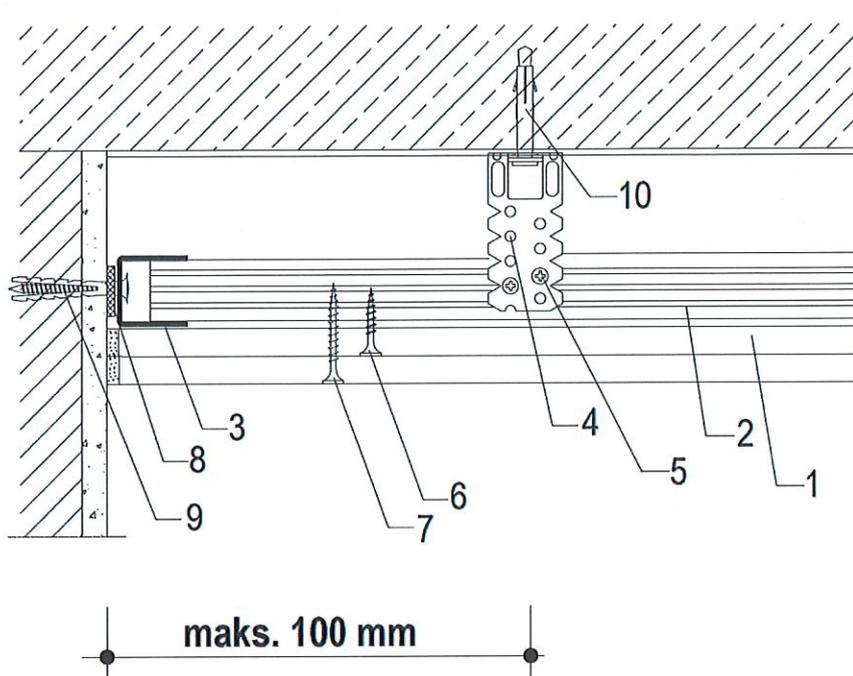


Ceiling elements

1. Covering made of boards Norgips GKF type DF or Norgips GKFI type DFH2 or Norgips Acoustic Super type DFH2IR (thickness: 2x12.5 mm)
2. Profile e.g. Norgips CD 60 minimum thickness: 0.55 mm placed max. every 40 cm
3. Profile e.g. Norgips UD 30
4. Hanger e.g. Norgips: ES 60 or hanger ES 60 plus placed max. every 85 cm
5. Lengthwise connectors e.g. Norgips
6. Sealing tape e.g. Norgips
7. Mechanical connectors, such as steel dowels (min. dimensions $\text{Ø}6 \times 40 \text{ mm}$)

Figure 8 View of the ceiling lining suspended on hangers Norgips ES 60 plus

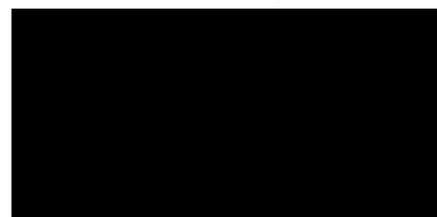


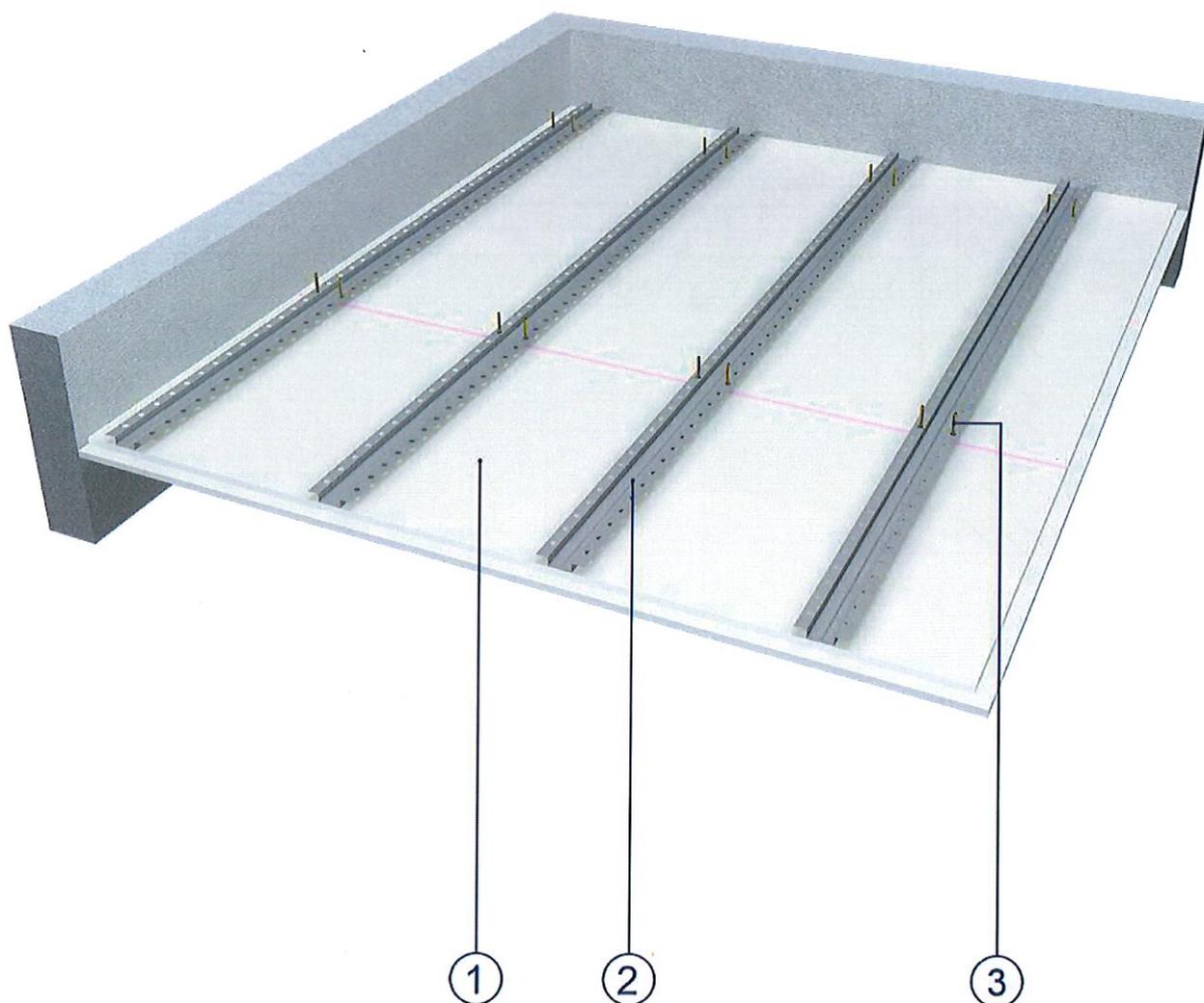


Ceiling elements

1. Two layers of boards Norgips GKF type DF or Norgips GKFI type DFH2 or Norgips Acoustic Super type DFH2IR, 12.5 mm
2. Profile e.g. Norgips CD 60, minimum thickness: 0.55 mm placed max. every 40 cm
3. Profile e.g. Norgips UD 30, minimum thickness: 0.55 mm
4. Hanger e.g. Norgips: hanger ES 60 or hanger ES 60 plus placed max. every 85 cm
5. Screws e.g. Norgips $\text{Ø}3.9 \times 11$ mm or e.g. Norgips $\text{Ø}3.5 \times 9.5$ mm with self-drilling ends (4 pieces per hanger ES or hanger ES plus)
6. Screws e.g. Norgips $\text{Ø}3.5 \times 25$ mm placed every 40 cm
7. Screws e.g. Norgips $\text{Ø}3.5 \times 35$ mm placed every 17 cm
8. Sealing tape e.g. Norgips, width: 30 mm
9. Mechanical connector, e.g. wall plug, dowel (min. dimensions $\text{Ø}6 \times 40$ mm)
10. Mechanical connector, e.g. screw, steel dowel (min. dimensions $\text{Ø}6 \times 40$ mm)

Figure 9 Ceiling lining suspended on hangers Norgips ES 60 or Norgips ES 60 plus – section parallel to profiles CD 60



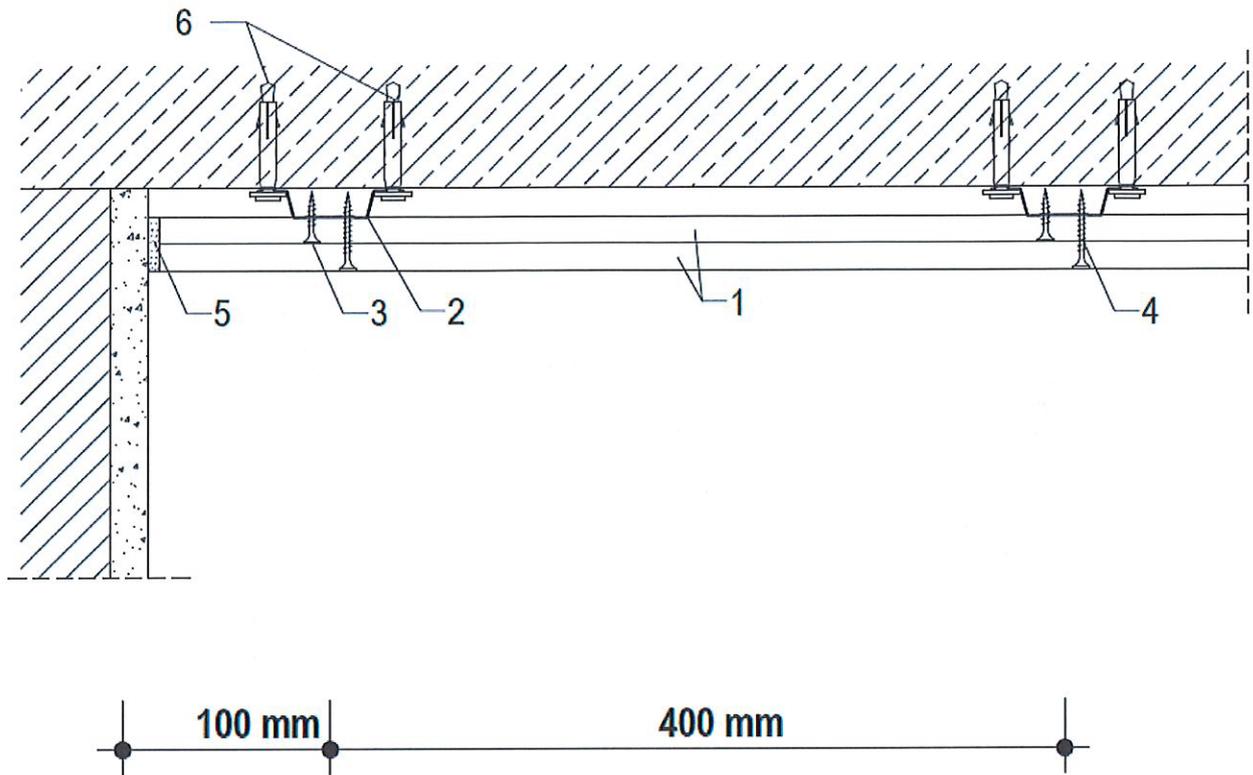


Ceiling elements

1. Covering made of 2x12.5 mm thick plasterboards Norgips GKF type DF or Norgips GKFI type DFH2 or Norgips Acoustic Super type DFH2IR
2. Hat profile e.g. Norgips, minimum thickness: 0.55 mm placed max. every 40 cm
3. Mechanical connector, e.g. screw, steel dowel (min. dimensions $\text{Ø}6 \times 40 \text{ mm}$)

Figure 10 View of the ceiling lining suspended on hat profiles



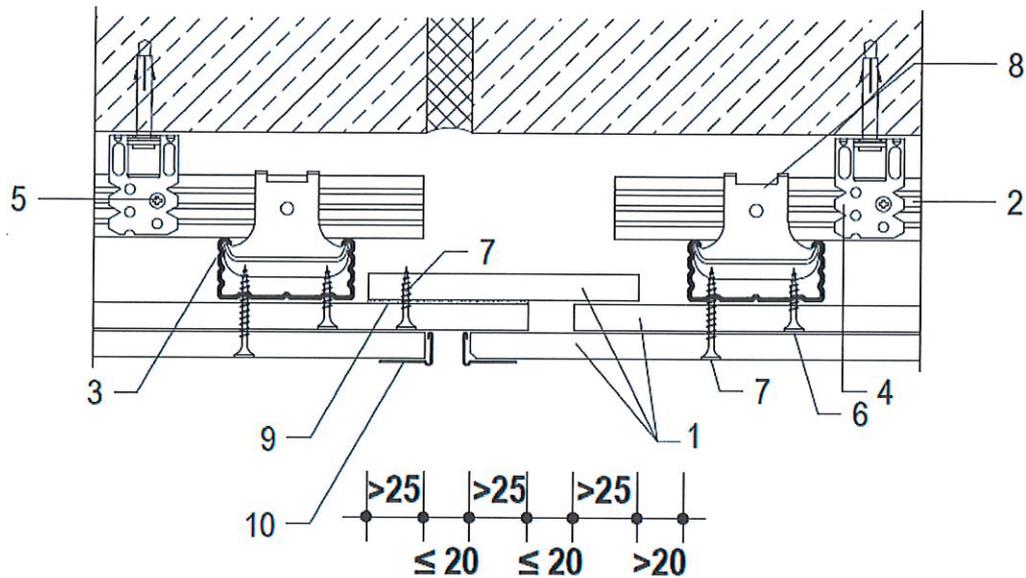


Ceiling elements

1. Two layers of boards Norgips GKF type DF or Norgips GKFI type DFH2 or Norgips Acoustic Super type DFH2IR, 12.5 mm
2. Hat profile e.g. Norgips, minimum thickness: 0.55 mm placed max. every 40 cm
3. Screws e.g. Norgips $\text{Ø}3.5 \times 25$ mm placed every 40 cm
4. Screws e.g. Norgips $\text{Ø}3.5 \times 35$ mm placed every 17 cm
5. Gypsum plaster jointing compound e.g. Norgips Start, Norgips Super Filler, Norgips Start & Finish or Norgips Strong Filler
6. Mechanical connector, e.g. screw, steel dowel (min. dimensions $\text{Ø}6 \times 40$ mm)

Figure 11 Ceiling lining suspended on hat profiles – section perpendicular to the profiles

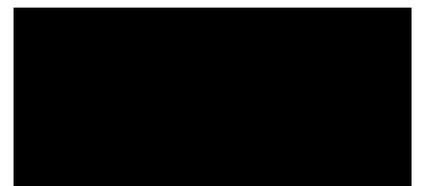




Ceiling elements

1. Boards Norgips GKF type DF or Norgips GKFI type DFH2 or Norgips Acoustic Super type DFH2IR, thickness: 12.5 mm
2. Profile e.g. Norgips CD 60 of the main layer, minimum thickness: 0.55 mm
3. Profile e.g. Norgips CD 60 of the loadbearing layer, minimum thickness: 0.55 mm
4. Hanger e.g. Norgips: hanger ES 60 or hanger ES 60 plus or rotating hanger with spring or rotating hanger with nonius
5. Screws e.g. Norgips Ø3.9 x 11 mm or e.g. Norgips Ø3.5 x 9.5 mm with self-drilling ends (4 pieces per hanger ES or hanger ES plus)
6. Screws e.g. Norgips Ø3.5 x 25 mm placed every 40 cm
7. Screws e.g. Norgips Ø3.5 x 35 mm placed every 17 cm
8. Cross connector e.g. Norgips for profiles CD 60
9. Gypsum plaster jointing compound e.g. Norgips Start, Norgips Super Filler, Norgips Start & Finish or Norgips Strong Filler
10. Protection corner

Figure 12 Suspended ceiling – expansion joints



P a p i l d o m ų d a r b ų s ū m a t a

Kompleksa. Administracinės paskirties pastato (7.2) Mindaugo g. 12 Vilniuje, kapitalinis

Objektas: Administracinės paskirties pastato (7.2) Mindaugo g. 12
Vilniuje, kapitalinis remontas. Papildomi darbai

Žiniaraštis. Architektūra. Sienos, lubos. Papildomi darbai.

758 106.56 €

Eil. Nr.	Darbų ir išlaidų aprašymai	Mato vnt	Kiekis	Vieneto kaina	Iš viso
1	3	4	5	6	7
1	Lubų aptaisymas gipskartonio plokštėmis, įrengiant metalinį karkasą, užtaisant ir glaistant siūles	100m2	71.74	5500.0049	394570.35
2	Lubų karkasų apkalimas plokštėmis tolesnei apdailai* gipskartonio papildomas sluoksnis.	m2	7174	12.4776	89514.30
3	Paviršių apklijavimas tinkleliu vienu sluoksniu	m2	9528	7.9188	75450.12
4	Viensluoksnių gipskartonio pertvarų su metaliniu karkasu ir 50mm izoliacijos sluoksniu įrengimas	100m2	13.2641	4818.6543	63915.11
5	Dvisluoksnių gipskartonio pertvarų su metaliniu karkasu ir 100mm izoliacijos sluoksniu įrengimas	100m2	0.544	5669.9755	3084.47

Iš viso #1		626 534.35 €
PVM	21%	131 572.21 €
Iš viso #2		758 106.56 €

Sudarė:

