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Fire resistance classification No. LBO – 776 – K/21E

(Replaces Fire resistance classification No. LBO – 776 – K/19)

Classified product:

Non-loadbearing walls –casing of risers and lift shafts (curtain walls) Norgips, one-sided cladded with 2x15 mm + 2x12.5 mm thick gypsum plasterboards Norgips GKF type DF or Norgips GKFI type DFH2

Sponsor:

Norgips Sp. z o.o.
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02-634 Warszawa

Prepared by:

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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 1364-1:2015-08 Fire resistance tests for non-loadbearing elements – Part 1: Walls.

1.3. Standard PN-EN 1363-1:2020-07 Fire resistance tests – Part 1: General requirements.

1.4. Test Report No. LBO-768/15 Non-loadbearing wall SO – 2x15 + 2x12.5 GKF DF CW 50 (curtain wall). Exposition to fire from the side of boards. Fire Tests Laboratory, GRYFITLAB Spółka z o.o., Łozienica 2016.

1.5. Test Report No. LBO-776/16 Non-loadbearing wall SO – 2x15 + 2x12.5 GKF DF CW 50 (curtain wall). Exposition to fire from the side of profiles. Fire Tests Laboratory, GRYFITLAB Spółka z o.o., Łozienica 2016.

1.6. Drawings and technical documentation provided by the Sponsor.

1.7. Technical evaluation of Norgips partition walls. Reference number of the evaluation: 06041/14/R20NK (LK00-06041/14/R20NK). Building Research Institute, Warsaw 2014.

2. Technical description of non-loadbearing walls – casing of risers and lift shafts (curtain walls) Norgips one-sided cladded with 2x15 mm + 2x12.5 mm thick gypsum plasterboards Norgips GKF type DF or Norgips GKFI type DFH2

2.1 Curtain walls SO - 2x15 + 2x12.5 GKF DF/CW 50, SO - 2x15 + 2x12.5 GKF DF/CW 75, SO - 2x15 + 2x12.5 GKF DF/CW 100, SO - 2x15 + 2x12.5 GKFI DFH2/CW 50, SO - 2x15 + 2x12.5 GKFI DFH2/CW 75, SO - 2x15 + 2x12.5 GKFI DFH2/CW 100, SO - 2x15 + 2x12.5 GKF DF/VP 66, SO - 2x15 + 2x12.5 GKF DF/VP 70, SO - 2x15 + 2x12.5 GKF DF/VP 95, SO - 2x15 + 2x12.5 GKF DF/VP 120, SO - 2x15 + 2x12.5 GKFI DFH2/VP 66, SO - 2x15 + 2x12.5 GKFI DFH2/VP 70, SO - 2x15 + 2x12.5 GKFI DFH2/VP 95, SO - 2x15 + 2x12.5 GKFI DFH2/VP 120 one-sided cladded with 2x15 mm + 2x12.5 mm thick gypsum plasterboards Norgips GKF type DF or Norgips GKFI type DFH2, with a single framework

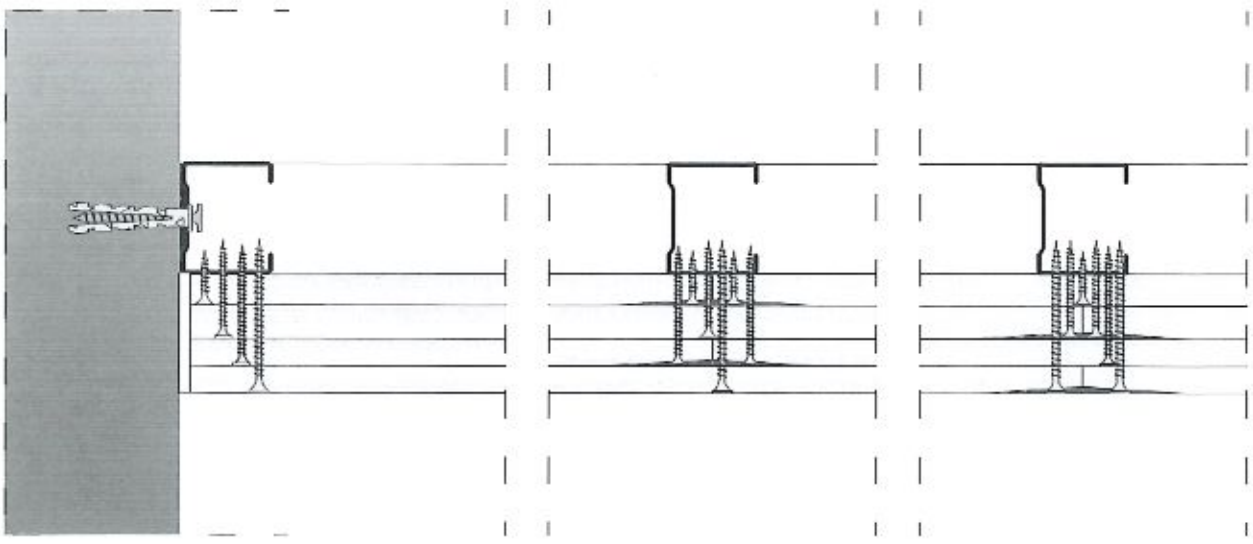

Figure A. Walls described in item 2.1

The construction of the walls is made of e.g. Norgips profiles **CW 50 and UW 50, CW 75, UW 75, CW 100 and UW 100, VP 66 and HP 66, VP 70 and HP 70, VP 95 and HP 95, VP 120 and HP 120**. 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).

Perimeter profiles **CW 50 and UW 50, CW 75, UW 75, CW 100 and UW 100, VP 66 and HP 66, VP 70 and HP 70, VP 95 and HP 95, VP 120 and HP 120** are fixed to the ceiling, floor and side walls by means of mechanical connectors, such as: wall plugs, dowels etc. placed every **80 cm**. **3 mm** thick Norgips polyethylene sealing tape is placed between the perimeter steel profiles and the ceiling, floor and side walls. Single profiles **CW 50, CW 75, CW 100, VP 66, VP 70, VP 95, VP 120** are vertically slid between the bottom and top webs of, respectively, profiles **UW 50, UW 75, UW 100, HP 66, HP 70, HP 95, HP 120.**

The maximum distance between the axes of profiles **CW 50, CW 75, CW 100, VP 66, VP 70, VP 95, VP 120** is **60 cm** or **62.5 cm**. The length of profiles **CW 50, CW 75, CW 100, VP 66, VP 70, VP 95, VP 120** should be 1.5 cm less than the distance between the webs of the bottom and top profiles **UW 50, UW 75, UW 100, HP 66, HP 70, HP 95, HP 120.**

The first layer of **1x15 mm thick boards GKF type DF** or **1x15 mm thick boards GKFI type DFH2** is fixed to the bottom profiles **UW or HP** and profiles **CW or VP** (studs) by means of e.g. Norgips screws **Ø3.5 x 25 mm** placed at most every **75 cm.** The second layer of **1x15 mm thick boards GKF type DF** or **1x15 mm thick boards GKFI type DFH2** is fixed to the bottom profiles **UW or HP** and profiles **CW or VP** (studs) by means of e.g. Norgips screws **Ø3.5 x 45 mm** placed at most every **50 cm.** The third layer of **1x12.5 mm thick boards GKF type DF** or **1x12.5 mm thick boards GKFI type DFH2** is fixed to the bottom profiles **UW or HP** and profiles **CW or VP** (studs) by means of e.g. Norgips screws **Ø3.5 x 55 mm** placed at most every **50 cm.** The fourth layer of **1x12.5 mm thick boards GKF type DF** or **1x12.5 mm thick boards GKFI type DFH2** is fixed to the bottom profiles **UW or HP** and profiles **CW or VP** (studs) by means of e.g. Norgips screws **Ø4.2 x 70 mm** placed at most every **25 cm.**

Vertical joints between boards of the second covering layer are shifted in relation to the respective vertical joints of the first layer by minimally **30 cm** and usually, **60 cm** or **62.5 cm**. Vertical joints between boards of the third covering layer are shifted in relation to the respective vertical joints of the second layer by minimally **30 cm** and usually, **60 cm** or **62.5 cm**. Vertical joints between boards of the fourth covering layer are shifted in relation to the respective vertical joints of the third layer by minimally **30 cm** and usually, **60 cm** or **62.5 cm**.

In case of surface horizontal joints between adjacent boards of the wall, the joints have to be shifted in relation to one another by minimally **40 cm**. Horizontal joints in the second covering layer are shifted in relation to the respective horizontal joints in the first layer by minimally **40 cm** and are shifted in relation to the horizontal joints between adjacent boards of the second layer by minimally **40 cm**. Horizontal joints in the third covering layer are shifted in relation to the respective horizontal joints in the second layer by minimally **40 cm** and are shifted in relation to the horizontal joints between adjacent boards of the third layer by minimally **40 cm**. Horizontal joints in the fourth covering layer are shifted in relation to the respective horizontal joints in the third layer by minimally

40 cm and are shifted in relation to the horizontal joints between adjacent boards of the fourth layer by minimally **40 cm**.

The screw heads as well as the vertical and horizontal joints between the **GKF** plasterboards **type DF** or the **GKFI** plasterboards type **DFH2** are filled with gypsum plaster jointing compound e.g. **Norgips Start, Norgips Super Filler or Norgips Standard**, while the vertical and horizontal joints in the fourth layer of boards are additionally strengthened with self-adhesive reinforcing tapes made of glass fibre or with reinforcing tapes made of interlining. For final filling of joints (Q2) and for thin-layer filling of entire boards surfaces (Q3 & Q4), it is recommended to apply ready to use jointing compounds eg **Norgips Extra Finish, Norgips Start & Finish** or **Norgips Finish**. Taking into account the acoustic considerations, it is possible to fill the wall with any mineral wool of the A1 reaction to fire class.

Details of the construction of the partition walls are presented in **Figures 1 ÷ 4.**

The fire resistance classification of the walls is presented in **Table 1 – columns 7 and 9**; the maximum heights of the walls are specified in **Table 1 – columns 8 and 10**. In places where there are constructional expansion joints of a building and in case when a wall section without expansion joints is longer than 15 m, one should provide expansion joints (**Figures 5 – 6**).

2.2 Curtain walls SO - 2x15 + 2x12.5 GKF DF/CW 50+CW 50, SO - 2x15 + 2x12.5 GKF DF/CW 75+CW 75, SO - 2x15 + 2x12.5 GKF DF/CW 100+CW 100, SO - 2x15 + 2x12.5 GKFI DFH2/CW 50+CW 50, SO - 2x15 + 2x12.5 GKFI DFH2/CW 75+CW 75, SO - 2x15 + 2x12.5 GKFI DFH2/CW 100+CW 100, SO - 2x15 + 2x12.5 GKF DF/VP 66+VP 66, SO - 2x15 + 2x12.5 GKF DF/VP 70+VP 70, SO - 2x15 + 2x12.5 GKF DF/VP 95+VP 95, SO - 2x15 + 2x12.5 GKF DF/VP 120+VP 120, SO - 2x15 + 2x12.5 GKFI DFH2/VP 66+VP 66, SO - 2x15 + 2x12.5 GKFI DFH2/VP 70+VP 70, SO - 2x15 + 2x12.5 GKFI DFH2/VP 95+VP 95, SO - 2x15 + 2x12.5 GKFI DFH2/VP 120+VP 120 one-sided cladded with 2x15 mm + 2x12.5 mm thick gypsum plasterboards Norgips GKF type DF or Norgips GKFI type DFH2, with a single framework and double CW profiles

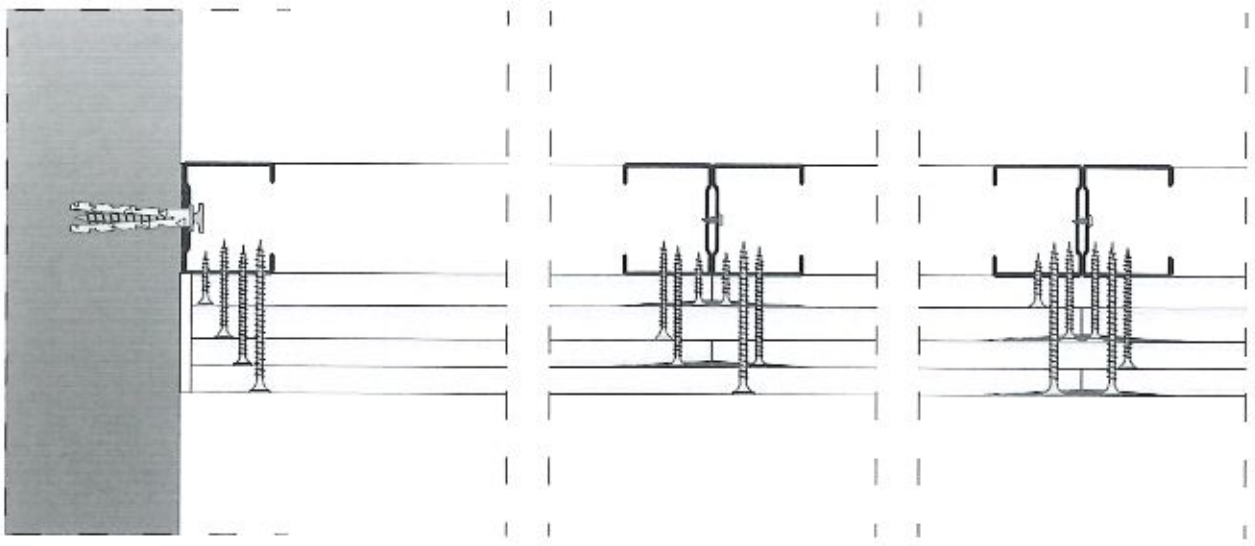

Figure B. Walls described in item 2.2

The construction of the walls is made of e.g. Norgips profiles **CW 50 and UW 50, CW 75, UW 75, CW 100 and UW 100, VP 66 and HP 66, VP 70 and HP 70, VP 95 and HP 95, VP 120 and HP 120**. 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).

Perimeter profiles **CW 50 and UW 50, CW 75, UW 75, CW 100 and UW 100, VP 66 and HP 66, VP 70 and HP 70, VP 95 and HP 95, VP 120 and HP 120** are fixed to the ceiling, floor and side walls by means of mechanical connectors, such as: wall plugs, dowels etc. placed every **80 cm**. **3 mm** thick Norgips polyethylene sealing tape is placed between the perimeter steel profiles and the ceiling, floor and side walls. Double profiles **CW 50, CW 75, CW 100, VP 66, VP 70, VP 95, VP 120** are vertically slid between the bottom and top webs of, respectively, profiles **UW 50, UW 75, UW 100, HP 66, HP 70, HP 95, HP 120.**
Each double profile consists of two single profiles screwed with one another along their webs, by means of screws Ø 3.5 x 9.5 with the self-drilling end; the screws are placed at most every 40 cm. The maximum distance between the axes of profiles constituting double profiles **CW 50, CW 75, CW 100, VP 66, VP 70, VP 95, VP 120** is **60 cm** or **62.5 cm**. The length of profiles **CW 50, CW 75, CW 100, VP 66, VP 70, VP 95, VP 120** should be 1.5 cm less than the distance between the webs of the bottom and top profiles **UW 50, UW 75, UW 100, HP 66, HP 70, HP 95, HP 120.**

The first layer of **1x15 mm thick boards GKF type DF** or **1x15 mm thick boards GKFI type DFH2** is fixed to the bottom profiles **UW or HP** and profiles **CW or VP** (studs) by means of e.g. Norgips screws **Ø3.5 x 25 mm** placed at most every **75 cm.** The second layer of **1x15 mm thick boards GKF type DF** or **1x15 mm thick boards GKFI type DFH2** is fixed to the bottom profiles **UW or HP** and profiles **CW or VP** (studs) by means of e.g. Norgips screws **Ø3.5 x 45 mm** placed at most every **50 cm.** The third layer of **1x12.5 mm thick boards GKF type DF** or **1x12.5 mm thick boards GKFI type DFH2** is fixed to the bottom profiles **UW or HP** and profiles **CW or VP** (studs) by means of e.g. Norgips screws **Ø3.5 x 55 mm** placed at most every **50 cm.** The fourth layer of **1x12.5 mm thick boards GKF type DF** or **1x12.5 mm thick boards GKFI type DFH2** is fixed to the bottom profiles **UW or HP** and profiles **CW or VP** (studs) by means of e.g. Norgips screws **Ø4.2 x 70 mm** placed at most every **25 cm.**

Vertical joints between boards of the second covering layer are shifted in relation to the respective vertical joints of the first layer by minimally **30 cm** and usually, **60 cm** or **62.5 cm**. Vertical joints between boards of the third covering layer are shifted in relation to the respective vertical joints of the second layer by minimally **30 cm** and usually, **60 cm** or **62.5 cm**. Vertical joints between boards of the fourth covering layer are shifted in relation to the respective vertical joints of the third layer by minimally **30 cm** and usually, **60 cm** or **62.5 cm**.

In case of surface horizontal joints between adjacent boards of the wall, the joints have to be shifted in relation to one another by minimally **40 cm**. Horizontal joints in the second covering layer are shifted in relation to the respective horizontal joints in the first layer by minimally **40 cm** and are shifted in relation to the horizontal joints between adjacent boards of the second layer by minimally **40 cm**. Horizontal joints in the third covering layer are shifted in relation to the respective horizontal joints in the second layer by minimally **40 cm** and are shifted in relation to the horizontal joints between adjacent boards of the third layer by minimally **40 cm**. Horizontal joints in the fourth

covering layer are shifted in relation to the respective horizontal joints in the third layer by minimally **40 cm** and are shifted in relation to the horizontal joints between adjacent boards of the fourth layer by minimally **40 cm**.

The screw heads as well as the vertical and horizontal joints between the **GKF** plasterboards **type DF** or the **GKFI** plasterboards type **DFH2** are filled with gypsum plaster jointing compound e.g. **Norgips Start, Norgips Super Filler or Norgips Standard**, while the vertical and horizontal joints in the fourth layer of boards are additionally strengthened with self-adhesive reinforcing tapes made of glass fibre or with reinforcing tapes made of interlining. For final filling of joints (Q2) and for thin-layer filling of entire boards surfaces (Q3 & Q4), it is recommended to apply ready to use jointing compounds eg **Norgips Extra Finish, Norgips Start & Finish** or **Norgips Finish**. Taking into account the acoustic considerations, it is possible to fill the wall with any mineral wool of the A1 reaction to fire class.

The fire resistance classification of the walls is presented in **Table 2 – columns 7 and 9**; the maximum heights of the walls are specified in **Table 2 – columns 8 and 10**.

In places where there are constructional expansion joints of a building and in case when a wall section without expansion joints is longer than 15 m, one should provide expansion joints.

3. Fire resistance tests

Fire resistance tests of Norgips non-loadbearing (curtain) walls made of 2x15 + 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-768/15 [1.4], No. LBO-776/15 [1.5].

4. Fire resistance classification of non-loadbearing walls – casing of risers and lift shafts (curtain walls) Norgips, one-sided cladded with 2x15 mm + 2x12.5 mm thick gypsum plasterboards Norgips GKF type DF or Norgips GKFI type DFH2

Based on the analysis of test results indicated in item 3, non-loadbearing walls – casing of risers and lift shafts (curtain walls) Norgips, one-sided cladded with 2x15 mm + 2x12.5 mm thick gypsum plasterboards Norgips GKF type DF or Norgips GKFI type DFH2, manufactured and installed in accordance with the technical description presented in item 2, are classified as follows:

- according to standard PN-EN 13501-2:2016-07 [1.1]: as belonging to fire resistance classes specified in Tables 1 to 2, in column 7 – for the maximum height of the walls specified in column 8,
- according to the criteria of standard PN-EN 13501-2:2016-07 [1.1]: as belonging to fire resistance classes specified in Tables 1 to 2, in column 9 – for the maximum height of the walls specified in column 10.

5. Non-loadbearing walls – casing of risers and lift shafts (curtain walls) Norgips, one-sided cladded with 2x15 mm + 2x12.5 mm thick gypsum plasterboards Norgips GKF type DF or Norgips GKFI type DFH2, used as fire separation

In view of fire safety, according to the requirements specified in the ordinance of the Minister of Infrastructure of 12th April 2002 on technical requirements to be fulfilled by buildings and their localization (Journal of Laws of 2001, No. 75, item 690 with later amendments), taking into account the classification presented in item 4 herein, non-loadbearing walls – casing of risers and lift shafts (curtain walls) Norgips, one-sided cladded with 2x15 mm + 2x12.5 mm thick gypsum plasterboards Norgips GKF type DF or Norgips GKFI type DFH2, manufactured and installed in accordance with the technical description specified in item 2 herein, may be used as fire separation meeting the classification criteria for the REI fire resistance class specified in the ordinance in question, if the following conditions are fulfilled:

- the walls are either fixed to or placed on a construction which meets the EI criteria for a fire resistance class not lower than the fire resistance class of the partition wall,
- the walls are not subjected to mechanical loads generated by the construction of a building,
- the walls are fixed to the elements of a building in accordance with the solution presented in the construction design.

6. Restriction

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

10.1 kg/m^2 – for 12.5 mm thick boards type DF and DFH2
12.0 kg/m^2 – for 15 mm thick boards type DF and DFH2

Classification No. LBO – 776 – K/21E replaces Classification No. LBO – 776 – K/19E.
Classification No. LBO – 776 – K/19E may only be used or reproduced in its entirety.

7. Validity

This classification is valid until 18.11.2026 on the condition that there are no changes in the construction or materials of the classified products.

Prezes Zarządu
Andrzej Szarycki

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8. Tables, figures

Non-loadbearing walls – casing of risers and lift shafts (curtain walls) Norgips, one-sided cladded with 2x15 mm + 2x12.5 mm thick gypsum plasterboards Norgips GKF type DF or Norgips GKFI type DFH2

Table 1

Technical details of non-loadbearing walls – casing of risers and lift shafts (curtain walls) Norgips – for the following walls:

SO - 2x15 + 2x12.5 GKF DF/CW 50, SO - 2x15 + 2x12.5 GKF DF/CW 75, SO - 2x15 + 2x12.5 GKF DF/CW 100, SO - 2x15 + 2x12.5 GKFI DFH2/CW 50, SO - 2x15 + 2x12.5 GKFI DFH2/CW 75, SO - 2x15 + 2x12.5 GKFI DFH2/CW 100, SO - 2x15 + 2x12.5 GKF DF/VP 66, SO - 2x15 + 2x12.5 GKF DF/VP 70, SO - 2x15 + 2x12.5 GKF DF/VP 95, SO - 2x15 + 2x12.5 GKF DF/VP 120, SO - 2x15 + 2x12.5 GKFI DFH2/VP 66, SO - 2x15 + 2x12.5 GKFI DFH2/VP 70, SO - 2x15 + 2x12.5 GKFI DFH2/VP 95, SO - 2x15 + 2x12.5 GKFI DFH2/VP 120

SO - 2x15 + 2x12.5 GKF DF/CW 50, SO - 2x15 + 2x12.5 GKF DF/CW 75, SO - 2x15 + 2x12.5 GKF DF/CW 100, SO - 2x15 + 2x12.5 GKFI DFH2/CW 50, SO - 2x15 + 2x12.5 GKFI DFH2/CW 75, SO - 2x15 + 2x12.5 GKFI DFH2/CW 100, SO - 2x15 + 2x12.5 GKF DF/VP 66, SO - 2x15 + 2x12.5 GKF DF/VP 70, SO - 2x15 + 2x12.5 GKF DF/VP 95, SO - 2x15 + 2x12.5 GKF DF/VP 120, SO - 2x15 + 2x12.5 GKFI DFH2/VP 66, SO - 2x15 + 2x12.5 GKFI DFH2/VP 70, SO - 2x15 + 2x12.5 GKFI DFH2/VP 95, SO - 2x15 + 2x12.5 GKFI DFH2/VP 120

Identification symbol of a Norgips partition wall	Type of profiles	Maximum distance between CW profiles [cm]	Type of gypsum plasterboard cladding		Total thickness of the wall [mm]	Filling with mineral wool	Fire resistance classification of the wall			
							As per PN-EN 13501-2:2016-07		As per the criteria of PN-EN 13501-2:2016-07	
			Type/ thickness [mm]	Minimum surface density [kg/m²]			Fire resistance class	Maximum height [cm]	Fire resistance class	Maximum height [cm]
1	2		3	4	5	6	7	8	9	10
SO-2x15 + 2x12.5GKF DF/CW 50	CW 50, UW 50	60/62.5				No filling or any mineral wool of the A1 reaction to fire class		310		310
SO-2x15 + 2x12.5GKF DF/VP 66	VP 66, HP 66	40/41.7	DF;	12.5 – 10.1	105		EI 120	340	EI 120	340
SO-2x15 + 2x12.5GKF DF/VP 70	VP 70, HP 70	30/31.3	2x15 + 2x12.5	15 – 12.0				400		410
SO-2x15 + 2x12.5GKFI DFH2/CW 50	CW 50, UW 50	60/62.5						310		310
SO-2x15 + 2x12.5GKFI DFH2/VP 66	VP 66, HP 66	40/41.7	DFH2;	12.5 – 10.1	105		EI 120	340	EI 120	340
SO-2x15 + 2x12.5GKFI DFH2/VP 70	VP 70, HP 70	30/31.3	2x15 + 2x12.5	15 – 12.0				400		410
		60/62.5						400		440
SO-2x15 + 2x12.5GKF DF/CW 75	CW 75, UW 75	40/41.7	DF;	12.5 – 10.1	130		EI 120	400	EI 120	490
SO-2x15 + 2x12.5GKF DF/VP 95	VP 95, HP 95	30/31.3	2x15 + 2x12.5	15 – 12.0				400		580
		60/62.5						400		440
SO-2x15 + 2x12.5GKFI DFH2/CW 75	CW 75, UW 75	40/41.7	DFH2;	12.5 – 10.1	130		EI 120	400	EI 120	490
SO-2x15 + 2x12.5GKFI DFH2/VP 95	VP 95, HP 95	30/31.3	2x15 + 2x12.5	15 – 12.0				400		580
		60/62.5						400		460
SO-2x15 + 2x12.5GKF DF/CW 100	CW 100, UW 100	40/41.7	DF;	12.5 – 10.1	155		EI 120	400	EI 120	550
SO-2x15 + 2x12.5GKF DF/VP 120	VP 120, HP 120	30/31.3	2x15 + 2x12.5	15 – 12.0				400		640

Table 1, continued

Identification symbol of a Norgips partition wall	Type of profiles	Maximum distance between CW profiles [cm]	Type of gypsum plasterboard cladding		Total thickness of the wall [mm]	Filling with mineral wool	Fire resistance classification of the wall			
			Type/ thickness [mm]	Minimum surface density [kg/m²]			As per PN-EN 13501-2:2016-07		As per the criteria of PN-EN 13501-2:2016-07	
							Fire resistance class	Maximum height [cm]	Fire resistance class	Maximum height [cm]
1	2		3	4	5	6	7	8	9	10
SO-2x15 + 2x12.5GKFI DFH2/CW 100	CW 100, UW 100	60/62.5 40/41.7	DFH2;	12.5 – 10.1	155	1)	EI 120	400 400	EI 120	460 550
SO-2x15 + 2x12.5GKFI DFH2/VP 95	VP 120, HP 120	30/31.3	2x15 + 2x12.5	15 – 12.0				400		640

1) No filling or any mineral wool of the A1 reaction to fire class

NOTE: Taking into account the acoustic considerations, it is possible to use thicker mineral wool and gypsum plasterboards, and additional layers of boards.

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Table 2

Technical details of non-loadbearing walls – casing of risers and lift shafts (curtain walls) Norgips – for the following walls:

SO - 2x15 + 2x12.5 GKF DF/CW 50+CW 50, SO - 2x15 + 2x12.5 GKF DF/CW 75+CW 75, SO - 2x15 + 2x12.5 GKF DF/CW 100+CW 100, SO - 2x15 + 2x12.5 GKFI DFH2/CW 50+CW 50, SO - 2x15 2x12.5 GKFI DFH2/CW 75+CW 75, SO - 2x15 + 2x12.5 GKFI DFH2/CW 100+CW 100, SO - 2x15 + 2x12.5 GKF DF/VP 66+VP 66, SO - 2x15 + 2x12.5 GKF DF/VP 70+VP 70, SO - 2x15 + 2x12.5 GK DF/VP 95+VP 95, SO - 2x15 + 2x12.5 GKF DF/VP 120+VP 120, SO - 2x15 + 2x12.5 GKFI DFH2/VP 66+VP 66, SO - 2x15 + 2x12.5 GKFI DFH2/VP 70+VP 70, SO - 2x15 + 2x12.5 GKFI DFH2/V 95+VP 95, SO - 2x15 + 2x12.5 GKFI DFH2/VP 120+VP 120, SO - 2x15 + 2x12.5 GKF DF/CW 50+CW 50, SO - 2x15 + 2x12.5 GKF DF/CW 75+CW 75, SO - 2x15 + 2x12.5 GKF DF/CW 100+CW 10 SO - 2x15 + 2x12.5 GKFI DFH2/CW 50+CW 50, SO - 2x15 + 2x12.5 GKFI DFH2/CW 75+CW 75, SO - 2x15 + 2x12.5 GKFI DFH2/CW 100+CW 100, SO - 2x15 + 2x12.5 GKF DF/VP 66+VP 66, SO 2x15 + 2x12.5 GKF DF/VP 70+VP 70, SO - 2x15 + 2x12.5 GKF DF/VP 95+VP 95, SO - 2x15 + 2x12.5 GKF DF/VP 120+VP 120, SO - 2x15 + 2x12.5 GKFI DFH2/VP 66+VP 66, SO - 2x15 + 2x12.5 GKI DFH2/VP 70+VP 70, SO - 2x15 + 2x12.5 GKFI DFH2/VP 95+VP 95, SO - 2x15 + 2x12.5 GKFI DFH2/VP 120+VP 120, SO - 2x15 + 2x12.5 GKF DF/CW 50+CW 50, SO - 2x15 + 2x12.5 GKF DF/C 75+CW 75, SO - 2x15 + 2x12.5 GKF DF/CW 100+CW 100, SO - 2x15 + 2x12.5 GKFI DFH2/CW 50+CW 50, SO - 2x15 + 2x12.5 GKFI DFH2/CW 75+CW 75, SO - 2x15 + 2x12.5 GKFI DFH2/C 100+CW 100, SO - 2x15 + 2x12.5 GKF DF/VP 66+VP 66, SO - 2x15 + 2x12.5 GKF DF/VP 70+VP 70, SO - 2x15 + 2x12.5 GKF DF/VP 95+VP 95, SO - 2x15 + 2x12.5 GKF DF/VP 120+VP 120, SO 2x15 + 2x12.5 GKFI DFH2/VP 66+VP 66, SO - 2x15 + 2x12.5 GKFI DFH2/VP 70+VP 70, SO - 2x15 + 2x12.5 GKFI DFH2/VP 95+VP 95, SO - 2x15 + 2x12.5 GKFI DFH2/VP 120+VP 120

Identification symbol of a Norgips partition wall	Type of profiles	Maximum distance between CW profiles [cm]	Type of gypsum plasterboard cladding		Total thickness of the wall [mm]	Filling with mineral wool	Fire resistance classification of the wall			
							As per PN-EN 13501-2:2016-07		As per the criteria of PN-EN 13501-2:2016-07	
			Type/ thickness [mm]	Minimum surface density [kg/m²]			Fire resistance class	Maximum height [cm]	Fire resistance class	Maximum height [cm]
1	2		3	4	5	6	7	8	9	10
SO-2x15+2x12.5GKF DF/CW 50+CW 50	CW 50, UW 50	60/62.5				No filling or any mineral wool of the A1 reaction to fire class		350		350
SO-2x15+2x12.5GKF DF/VP 66+VP 66	VP 66, VP 66	40/41.7	DF;	12.5 – 10.1	105		EI 120	400	EI 120	410
SO-2x15+2x12.5GKF DF/VP 70+VP 70	VP 70, VP 70	30/31.3	2x15 + 2x12.5	15 – 12.0				400		420
SO-2x15+2x12.5GKFI DFH2/CW 50+CW 50	CW 50, UW 50	60/62.5						350		350
SO-2x15+2x12.5GKFI DFH2/VP 66+VP 66	VP 66, HP 66	40/41.7	DFH2;	12.5 – 10.1	105		EI 120	400	EI 120	410
SO-2x15+2x12.5GKFI DFH2/VP 70+VP 70	VP 70, HP 70	30/31.3	2x15 + 2x12.5	15 – 12.0				400		420
		60/62.5						400		490
SO-2x15+2x12.5GKF DF/CW 75+CW 75	CW 75, UW 75	40/41.7	DF;	12.5 – 10.1	130		EI 120	400	EI 120	570
SO-2x15+2x12.5GKF DF/VP 95+VP 95	VP 95, HP 95	30/31.3	2x15 + 2x12.5	15 – 12.0				400		620
		60/62.5						400		490
SO-2x15 + 2x12.5GKFI DFH2/CW 75+CW 75	CW 75, UW 75	40/41.7	DFH2;	12.5 – 10.1	130		EI 120	400	EI 120	570
SO-2x15+2x12.5GKFI DFH2/VP 95+VP 95	VP 95, HP 95	30/31.3	2x15 + 2x12.5	15 – 12.0				400		620
		60/62.5						400		590
SO-2x15 + 2x12.5GKF DF/CW 100+CW 100	CW 100, CW 100	40/41.7	DF;	12.5 – 10.1	155		EI 120	400	EI 120	650
SO-2x15+2x12.5GKF DF/VP 120+VP 120	VP 120, HP 120	30/31.3	2x15 + 2x12.5	15 – 12.0				400		650

Table 2, continued

Identification symbol of a Norgips partition wall	Type of profiles	Maximum distance between CW profiles [cm]	Type of gypsum plasterboard cladding		Total thickness of the wall [mm]	Filling with mineral wool	Fire resistance classification of the wall			
							As per PN-EN 13501-2:2016-07		As per the criteria of PN-EN 13501-2:2016-07	
			Type/ thickness [mm]	Minimum surface density [kg/m²]			Fire resistance class	Maximum height [cm]	Fire resistance class	Maximum height [cm]
1	2		3	4	5	6	7	8	9	10
SO-2x15 + 2x12.5GKFI DFH2/CW 100+CW 100	CW 100, UW 100	60/62.5 40/41.7	DFH2;	12.5 – 10.1	155	1)	EI 120	400 400	EI 120	590 650
SO-2x15+2x12.5GKF DFH2/VP 120+VP 120	VP 120, HP 120	30/31.3	2x15 + 2x12.5	15 – 12.0				400		650

1) No filling or any mineral wool of the A1 reaction to fire class

NOTE: Taking into account the acoustic considerations, it is possible to use thicker mineral wool and gypsum plasterboards, and additional layers of boards.

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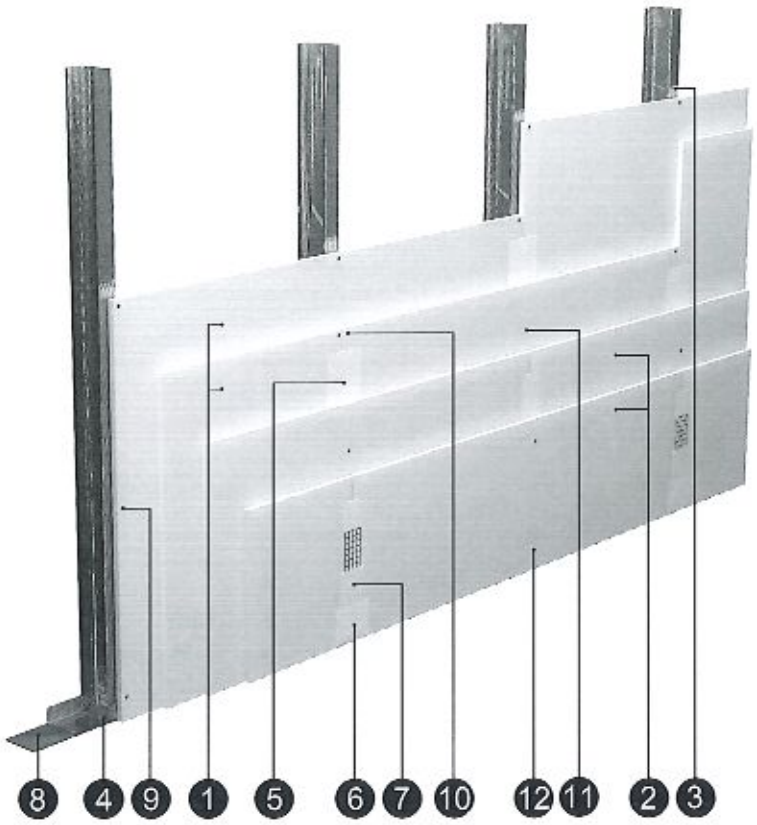

Figure 1 – view of the wall

Symbols:

1. 2x15 mm thick gypsum plasterboard Norgips GKF type DF or GKFI type DFH2
2. 2x12.5 mm thick gypsum plasterboard Norgips GKF type DF or GKFI type DFH2
3. Profiles e.g. Norgips CW or VP made of at least 0.55 mm thick steel sheet, placed maximally every 60 cm or 62.5 cm
4. Profiles e.g. Norgips UW or HP made of at least 0.55 mm thick steel sheet
5. Gypsum plaster jointing compound e.g. Norgips Start or Norgips Super Filler
6. Ready to use filling mass e.g. Norgips Start & Finisz or Norgips Extra Finish or gypsum plaster jointing compound Norgips Finish
7. Gypsum plaster jointing compound e.g. Norgips Start or Norgips Super Filler + self-adhesive reinforcing tape made of glass fibre or interlining
8. Sealing tape e.g. Norgips
9. Screws e.g. Norgips Ø3.5 x 25 mm placed maximally every 75 cm
10. Screws e.g. Norgips Ø3.5 x 45 mm placed maximally every 50 cm
11. Screws e.g. Norgips Ø3.5 x 55 mm placed maximally every 50 cm
12. Screws e.g. Norgips Ø4.2 x 70 mm placed maximally every 25 cm

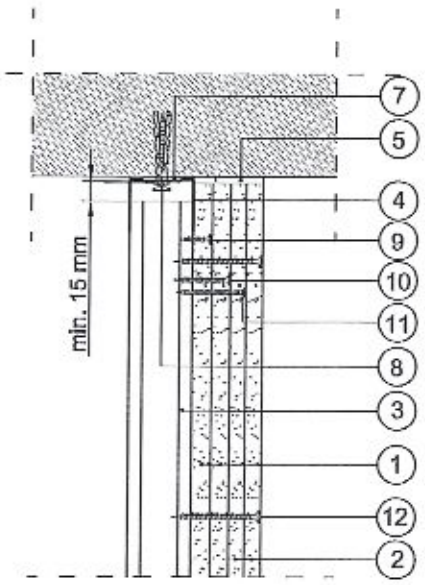

Figure 2 – vertical section, top connection

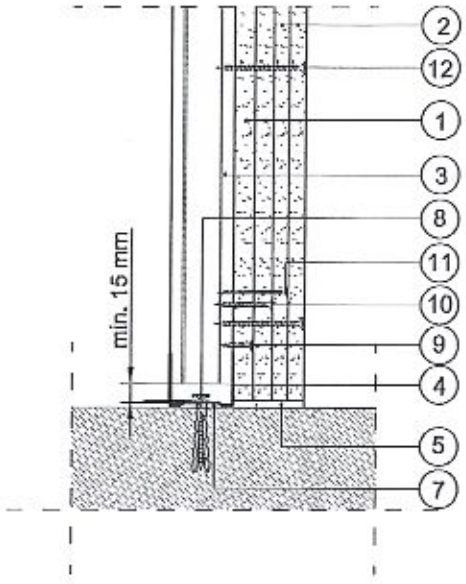

Figure 3 – vertical section, bottom connection

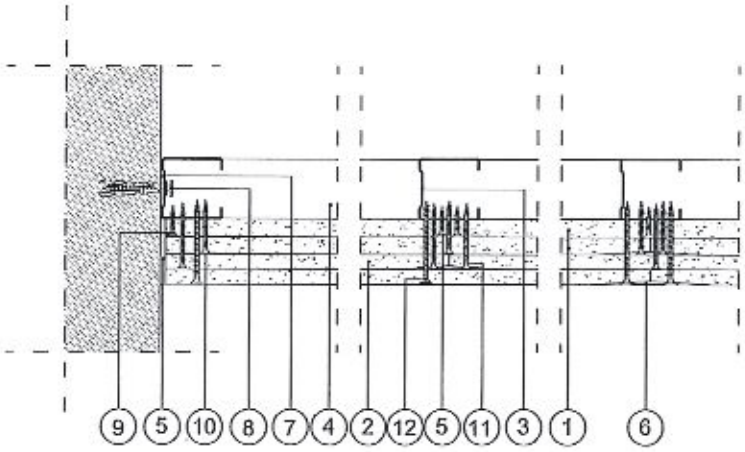

Figure 4 – horizontal section

Symbols:

1. 2x15 mm thick gypsum plasterboard Norgips GKF type DF or GKFI type DFH2
2. 2x12.5 mm thick gypsum plasterboard Norgips GKF type DF or GKFI type DFH2
3. Profiles e.g. Norgips CW or VP made of at least 0.55 mm thick steel sheet, placed maximally every 60 cm or 62.5 cm
4. Profiles e.g. Norgips UW or HP made of at least 0.55 mm thick steel sheet
5. Gypsum plaster jointing compound e.g. Norgips Start or Norgips Super Filler
6. Gypsum plaster jointing compound e.g. Norgips Start or Norgips Super Filler + self-adhesive reinforcing tape made of glass fibre or interlining
7. Sealing tape e.g. Norgips
8. Mechanical connector, e.g. wall plug, dowel minimum Ø6 x 40 mm, placed maximally every 80 cm
9. Screws e.g. Norgips Ø3.5 x 25 mm placed maximally every 75 cm
10. Screws e.g. Norgips Ø3.5 x 45 mm placed maximally every 50 cm
11. Screws e.g. Norgips Ø3.5 x 55 mm placed maximally every 50 cm
12. Screws e.g. Norgips Ø4.2 x 70 mm placed maximally every 25 cm

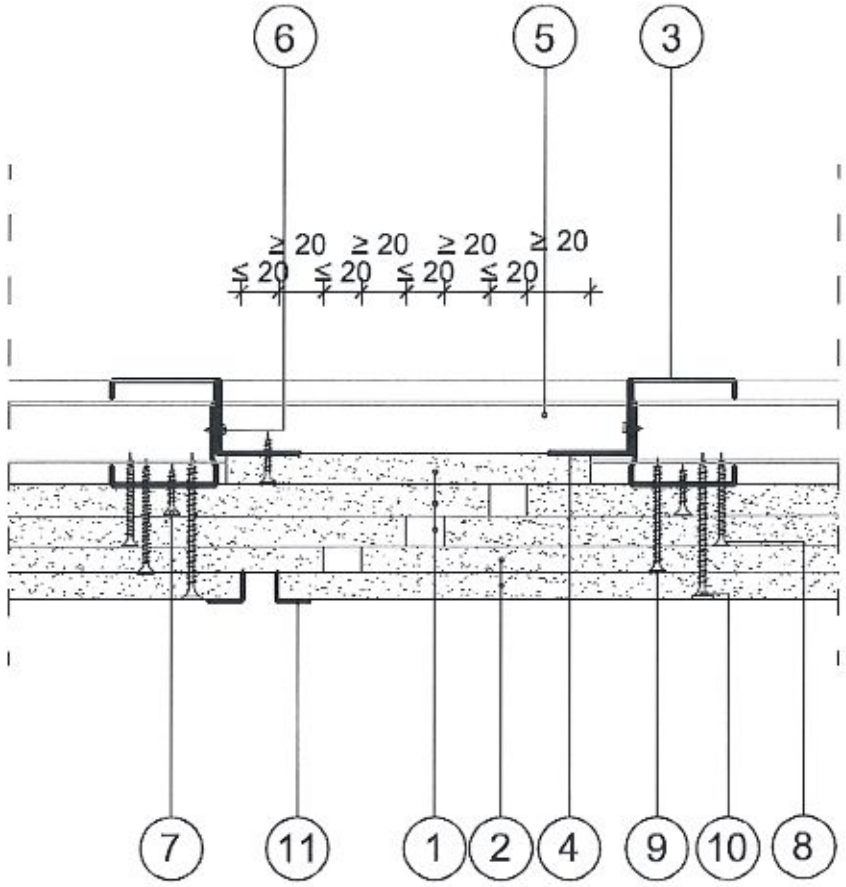

Figure 5 – expansion joints

Symbols:

1. 3x15 mm thick gypsum plasterboard Norgips GKF type DF or GKFI type DFH2
2. 2x12.5 mm thick gypsum plasterboard Norgips GKF type DF or GKFI type DFH2
3. Profiles e.g. Norgips CW or VP made of at least 0.55 mm thick steel sheet
4. Angle elements minimally L 25x50/profile UD 30 made of at least 0.55 mm thick steel sheet, screwed to profiles CW or VP by means of screws Ø3.5 x 9.5 mm with self-drilling ends placed maximally every 40 cm
5. Profiles e.g. Norgips UW or HP made of at least 0.55 mm thick steel sheet
6. Screws e.g. Norgips Ø3.5 x 9.5 mm with self-drilling ends placed maximally every 40 cm
7. Screws e.g. Norgips Ø3.5 x 25 mm placed maximally every 75 cm
8. Screws e.g. Norgips Ø3.5 x 45 mm placed maximally every 50 cm
9. Screws e.g. Norgips Ø3.5 x 55 mm placed maximally every 50 cm
10. Screws e.g. Norgips Ø4.2 x 70 mm placed maximally every 25 cm
11. Corner for gypsum plasterboards (recommended)

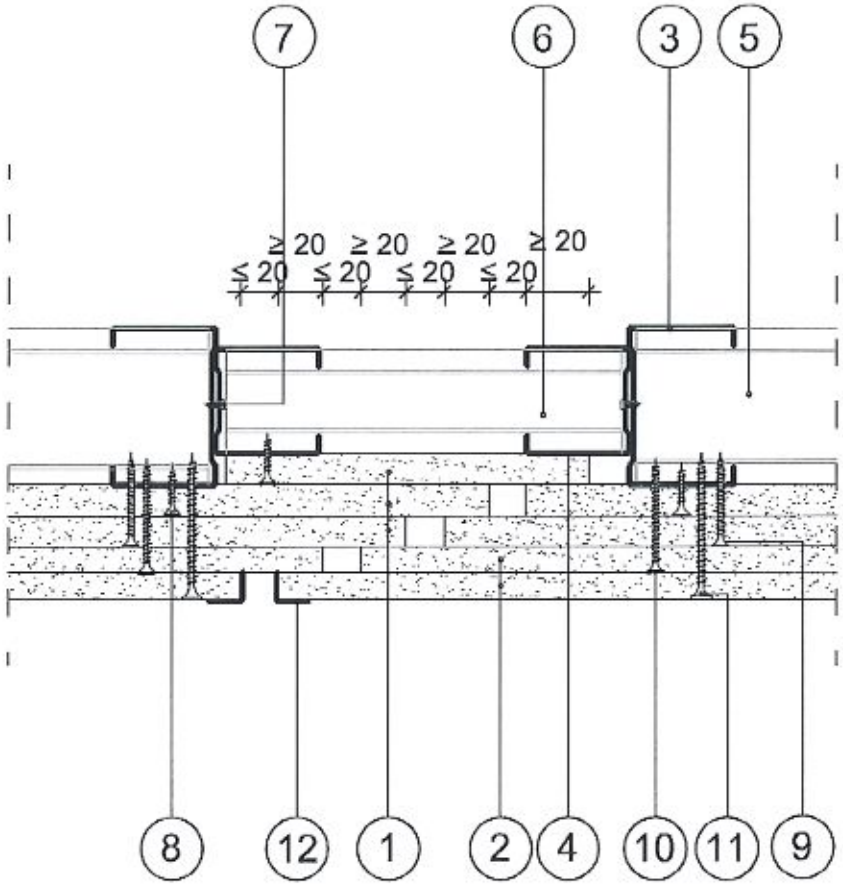

Figure 6 – expansion joints

Symbols:

1. 3x15 mm thick gypsum plasterboard Norgips GKF type DF or GKFI type DFH2
2. 2x12.5 mm thick gypsum plasterboard Norgips GKF type DF or GKFI type DFH2
3. Profiles e.g. Norgips CW or VP made of at least 0.55 mm thick steel sheet
4. Profiles e.g. Norgips CW or VP made of at least 0.55 mm thick steel sheet
5. Profiles e.g. Norgips UW or HP made of at least 0.55 mm thick steel sheet
6. Profiles e.g. Norgips UW or HP made of at least 0.55 mm thick steel sheet
7. Screws e.g. Norgips Ø3.5 x 9.5 mm with self-drilling ends placed maximally every 40 cm
8. Screws e.g. Norgips Ø3.5 x 25 mm placed maximally every 75 cm
9. Screws e.g. Norgips Ø3.5 x 45 mm placed maximally every 50 cm
10. Screws e.g. Norgips Ø3.5 x 55 mm placed maximally every 50 cm
11. Screws e.g. Norgips Ø4.2 x 70 mm placed maximally every 25 cm
12. Corner for gypsum plasterboards (recommended)