Dry construction: assembled partitions, suspended ceilings, floor structures

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introduction

- drywall systems
- dry linings
- suspended ceilings
- acoustic ceilings
- dry screeds
- raised floor system
- attics
systems and products

technical performance

drywall systems

- height: 2.75 - 10.0 +
- acoustic insulation capacity: 41 - 69 dB
- fire resistance: 0.2 - 1.5 (3.0) h

raised floor systems

- fire resistance = 0.5 h
- load-bearing capacity = 5 kN/m²
technical performance

fireshields
fire resistance=0.5 - 3.0 h
without framework as well

technical performance

gypsum plasterboard types

wallboard - Typ A
moisture board (impregnated board) - Typ H2
fire board (fire resistant board) - Typ DF
fire-moisture board - Typ DFH2

information on the labeling/by the color!!!
**Simple frame single-layer lining**

Distance of the studs (a)

![Diagram of simple frame single-layer lining]

**Simple frame double-layer lining**

Distance of the studs (a)

![Diagram of simple frame double-layer lining]
simple frame triple-layer lining

distance of the studs (a)

twin frame double-layer lining

distance of the studs (a)
security wall – simple frame  triple-layer lining + steal plate

distances of the studs

steel plates

expansion joint is required:

• in every 15 m
• at the geometrical turns of the partitions
• at the dilatations of the superstructure
Moving slab-connection joints

- If the expectable deflection of the slab is more than 15mm
- Recommended in case of over 7.00 meters of span
- Fire-protective or normal
- The figures in the catalogues are valid up to max. 25 mm deflection
assembled partition details

moving slab-connection joints

F 30

Uniflott
corner protective profile 23/15
joint filling
Knauf 6-8 cm wide wallboard stripes

F 90

corner protective profile 23/15
partition wall compound

a = 10-25 mm

dry lining

bases of dry lining

Vaulted surface – wet bending

the bended board is fastened with a lath

the board is placed into a CD or a UD stud

plasterboard stripe band

plasterboard shape

„tool“ for the bending
Vapour technique

differing outer boundary system should be checked (vapour barrier)

Supports

Ankerfix support system > 0.25 and 0.40 kN load bearing capacity
Nonius support => 0.40 kN

Nonius support => 0.40 kN
suspended ceiling  
suspended ceiling with split-level frame

distance of the supports

aligning the fixing profiles

aligning the main ribs

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suspended ceiling  
suspended ceiling with single-level frame

distance of the supports

aligning the fixing profiles

Achsabstand Grundprofil aligning of the main ribs

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suspended ceiling
Lining - aligning of the boards

**In case of fire** - protection gypsum plaster rendering on the whole surface

**Nonius - lower part** (0.4 kN)

**Nonius - fixing bolt**

**Nonius-support - upper part**

**dry lining**

**separation strip**

**fast-construction screw**

In case of fire-protection gypsum plaster rendering on the whole surface
Fitting to walls with „shadow” joint

UD-stud 28x27x06
edge trim 23x15
(in case of demand)

Do not fasten
to the UD-stud!

dowels

Stepped wall-connection joint

corner joint
CD 60 x 27
separation strip
fast-construction screw
CW-stud
TB fast-construction screw
UW- stud
separation strip
Movement control joints – in case of fire-protection

![Diagram of suspended ceiling with movement control joints and fire protection measures.]

**Movement control joints – in case of fire**

- Direct supports for the CD 60x27 studs
- LN 3,5x9 mm screw for fixing on the framework
- Edge trim profile (in case of claim)
- Fireshield fixed with joint filler on one side

**Suspended ceiling**

Installation of electrical fixture mounting box in fire-protective suspended ceiling

![Diagram of suspended ceiling installation with electrical fixture mounting box.]

The continuity of the suspended ceiling is ensured by the lining around the lamps.
Acoustic suspended ceilings

Gypsum fibre boards:
gypsum in combination with reinforcing cellulose fibres
two factory-glued 10 or 12.5mm thick 1500 x 500 mm Knauf Vidifloor board
connect the boards with overlapping (joint staggering) on each sides
two 10 or 12,5mm thick 1500 x 1000 mm Knauf Vidifloor board are glued together „in situ“ for double-layer lining

join the boards with half a board overlapping/joint staggering
Raised floors assemble with glue.
Combination of hollow and raised floor

Structure of raised floors

1 - pedestal  2 - panel  3 - vent  4 - perforated panel  5 - electrical box  6 - skirting  7 - suction grip tool
raised floors

raised floor system with cast surface
Thank you for your attention!
References