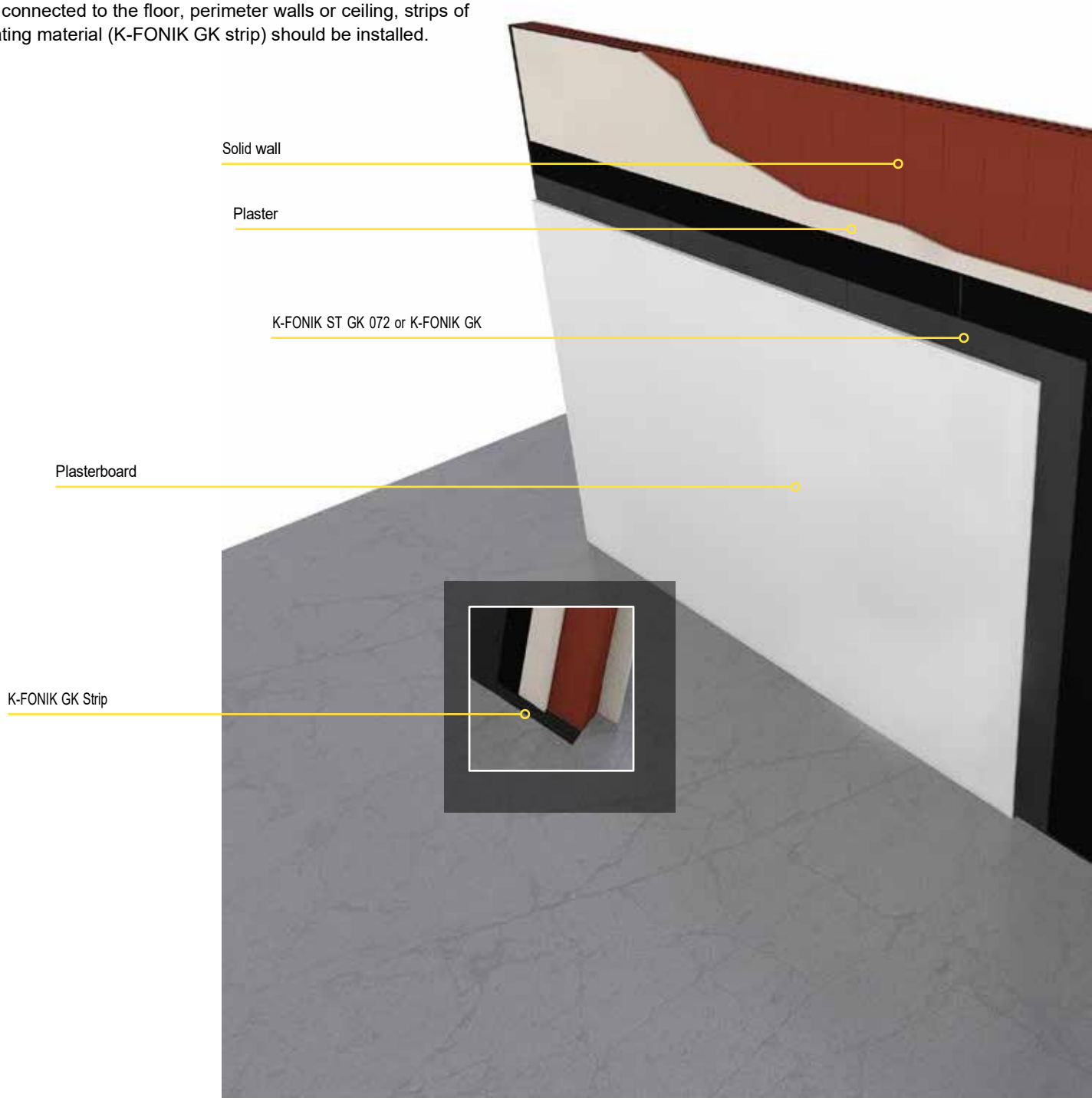
PLASTERBOARD ON SOLID WALL

Good insulation from airborne sound between different units can be achieved by correct installation of the appropriate dividing partitions. Sound insulation of solid or light walls is mainly determined by the mass per surface unit. An increase of mass corresponds to an increase of sound insulation wall Rw. Viscoelastic mass (K-FONIK ST GK 072 or K-FONIK GK) can be installed directly onto solid walls and single or double plasterboard installed on top. To further reduce lateral transmission of noise where connected to the floor, perimeter walls or ceiling, strips of separating material (K-FONIK GK strip) should be installed.



PLASTERBOARD ON SOLID WALL
Weighted sound reduction index R_w= 45 dB
Correction terms: C= -1dB; C_{tr}= -6dB

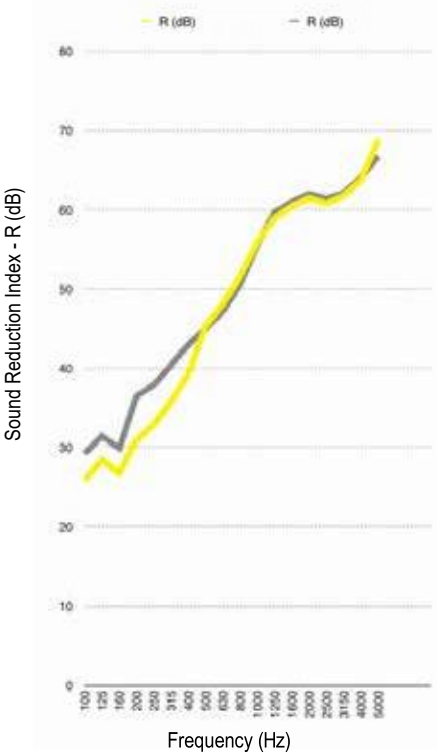
Description of components	Thickness (mm)
1 Solid wall	80
2 Plaster	15
3 K-FONIK ST GK 072	12
4 Plasterboard	13

K-FLEX® K-FONIK ST GK TECHNICAL DATA

Property	Value	Test method
Material	Flexible elastomeric foam with high-density elastomeric material	
Weight	2 kg/m²	
Fire rating	B - s3,d0	EN 13501-1
Thermal conductivity	0.036 W/(m•K)	EN 12667
Temperature	-40 °C +70 °C	
Dimensions	2000 x 1000 mm	
Surface	Smooth	
Base colour	Black	

K-FLEX® reserves the right to change data and technical requirements without notice.

PERFORMANCE



ACOUSTIC PERFORMANCE

R_w $(C;C_{tr})$=45(-1;-6)dB

Freq. (Hz)	Plasterboard R (dB)	Double Plasterboard R (dB)
100	25,9	29,2
125	28,5	31,5
160	26,8	29,9
200	31,0	36,5
250	32,9	37,9
315	35,8	40,4
400	39,3	43,0
500	45,3	45,0
630	48,1	47,2
800	51,6	50,6
1000	55,9	55,6
1250	59,0	59,7
1600	60,5	61,0
2000	61,5	62,0
2500	60,8	61,4
3150	61,8	62,1
4000	63,8	64,1
5000	68,8	66,8

DOUBLE PLASTERBOARD ON SOLID WALL


Double Plasterboard Configuration

DOUBLE PLASTERBOARD ON SOLID WALL
Weighted sound reduction index R_w= 49 dB
Correction terms: C= -2dB; C_{tr}= -7dB

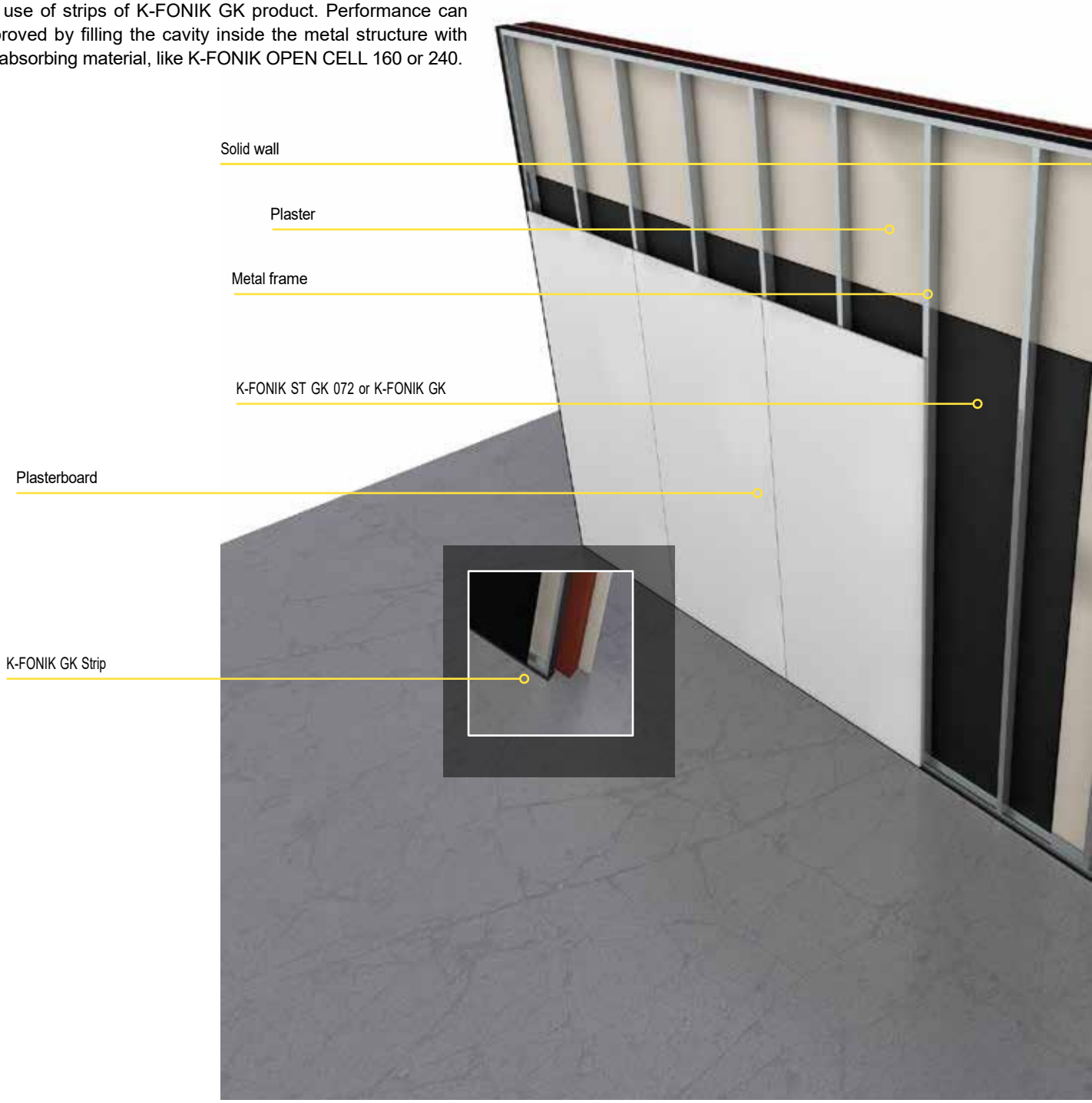
Description of components	Thickness (mm)
1 Solid wall	80
2 Plaster	15
3 K-FONIK ST GK 072	12
4 Plasterboard	13
5 Plasterboard	13

ACOUSTIC PERFORMANCE

R_w $(C;C_{tr})$=49(-2;-7)dB

SOLID WALL WITH PLASTERBOARD ON METAL FRAME

An alternative solution is to install plasterboard onto metal framework fixed to the existing solid wall. A layer of K-FONIK ST GK 072 or K-FONIK GK viscoelastic insulation material is applied to the existing solid wall. Plasterboard is applied to the metal framework. The metal framework is separated from the wall by the use of strips of K-FONIK GK product. Performance can be improved by filling the cavity inside the metal structure with sound absorbing material, like K-FONIK OPEN CELL 160 or 240.



SOLID WALL WITH PLASTERBOARD ON METAL FRAME
Weighted sound reduction index R_w= 45 dB
Correction terms: C= -1dB; C_{tr}= -6dB

Description of components	Thickness (mm)
1 Solid wall	80
2 Plaster	15
3 K-FONIK ST GK 072	12
4 Metal frame	50
5 Plasterboard	13

Property	Value	Test method
Material	Flexible elastomeric foam with high-density elastomeric material	
Weight	2 kg/m²	
Fire rating	B - s3,d0	EN 13501-1
Thermal conductivity	0.036 W/(m•K)	EN 12667
Temperature	-40 °C +70 °C	
Dimensions	2000 x 1000 mm	
Surface	Smooth	
Base colour	Black	

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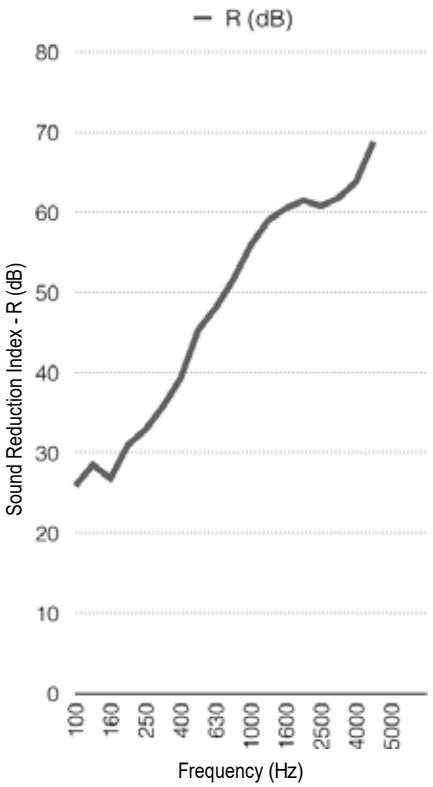
PERFORMANCE



Freq.	R (dB)
100	25,9
125	28,5
160	26,8
200	31,0
250	32,9
315	35,8
400	39,3
500	45,3
630	48,1
800	51,6
1000	55,9
1250	59,0
1600	60,5
2000	61,5
2500	60,8
3150	61,8
4000	63,8
5000	68,8

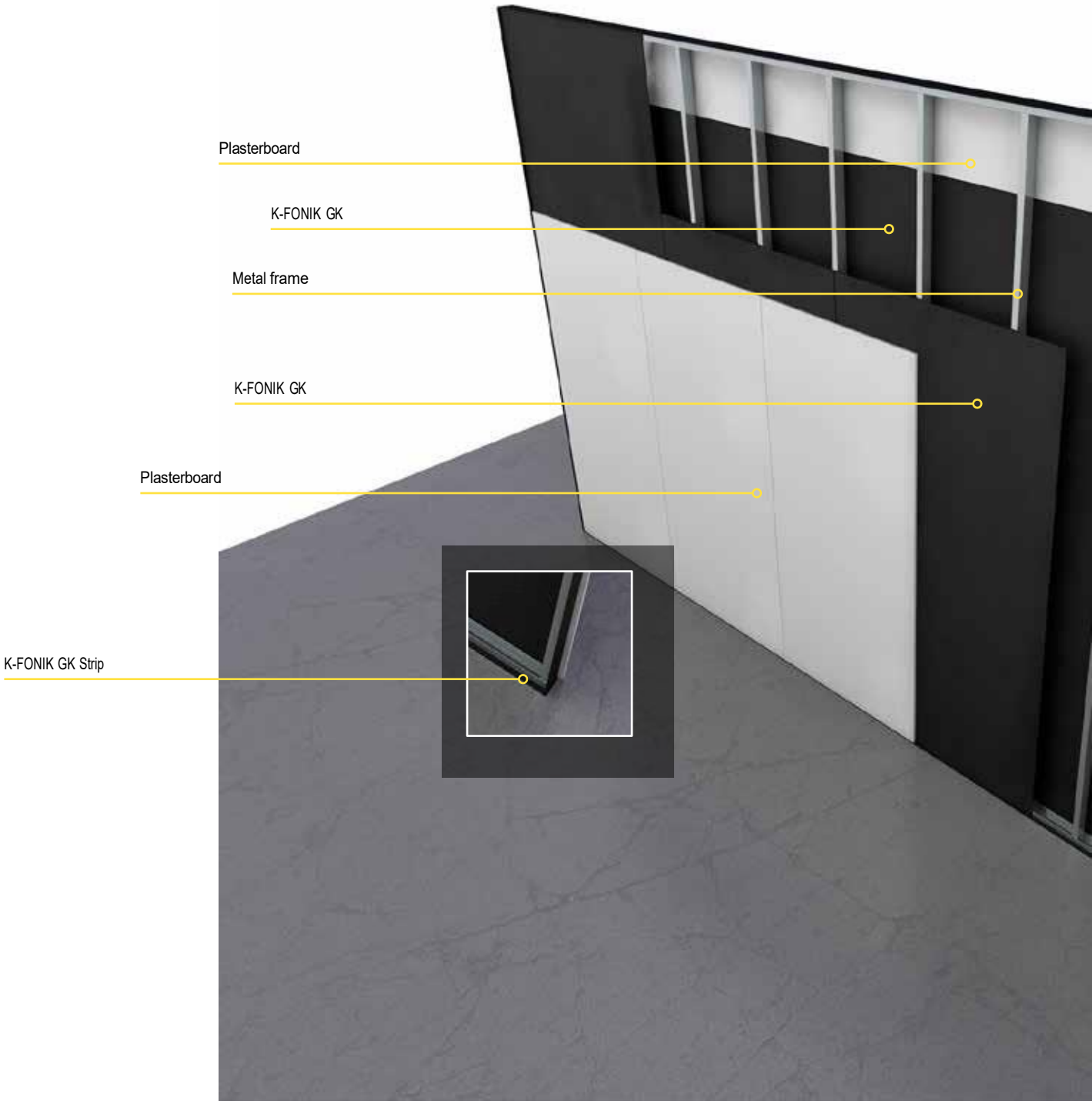
To reduce lateral transmission of noise at the connection between the floor and the perimeter walls or ceiling, strips of separating material should be installed underneath the metal frame.

ACOUSTIC PERFORMANCE

R_w ($C;C_{tr}$)=45(-1;-6)dB

LIGHTWEIGHT PLASTERBOARD WALLS

A typical installation of partition walls between rooms in residential, commercial or office buildings involves the construction of lightweight walls with plasterboard on a metal framework. A layer of soundproofing material is applied to the plasterboard. The boards are then fixed to the metal structure. Performance can be improved by filling the cavity inside the metal structure with sound absorbing material.



LIGHTWEIGHT PLASTERBOARD WALLS
Weighted sound reduction index R_w= 42 dB
Correction terms: C= -2dB; C_{tr}= -7dB

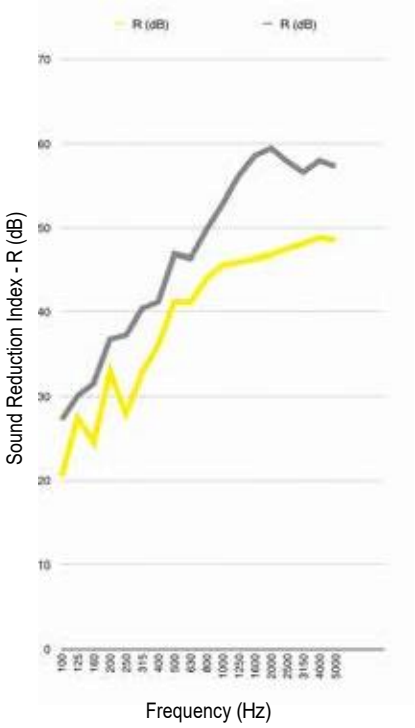
Description of components	Thickness (mm)
1 Plasterboard	13
2 K-FONIK GK	2
3 Metal frame	75
4 K-FONIK GK	2
5 Plasterboard	13

Property	Value	Test method
Material	High density elastomeric material	
Fire rating	B - s3,d0, FMVSS 302 Class 0	EN 13501 BS 476 Part 6/7
Temperature	-40 °C +70 °C	
Dimensions	1000 x 2000 mm; 1200 x 2000 mm; 1500 x 2000 mm - Roll 25 or 50 m	
Surface	Smooth1	
Weight	from 2 kg/m² to 8 kg/m²	
Base colour	Black	
Density	2000 kg/m³ (±10%)	

1 Different finishes available: ALU and non-woven fabric

K-FLEX® reserves the right to change data and technical requirements without notice.

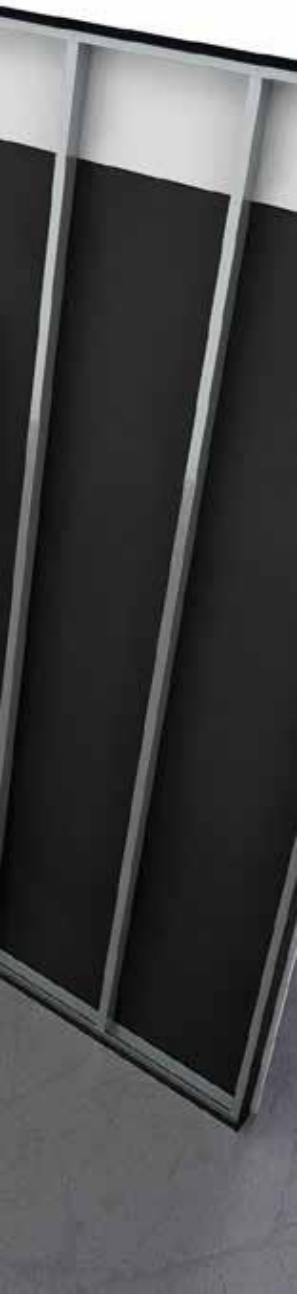
PERFORMANCE



Freq. (Hz)	Plasterboard R (dB)	Double Plasterboard R (dB)
100	20,5	27,2
125	27,4	30,1
160	24,5	31,6
200	32,9	36,8
250	27,9	37,3
315	32,8	40,4
400	36,1	41,2
500	41,2	46,9
630	41,1	46,4
800	44,0	49,8
1000	45,6	52,9
1250	46,0	56,2
1600	46,3	58,6
2000	46,8	59,5
2500	47,5	57,9
3150	48,1	56,6
4000	48,8	58,0
5000	48,6	57,3

ACOUSTIC PERFORMANCE

R_w $(C;C_{tr})$=42(-2;-7)dB



LIGHTWEIGHT DOUBLE PLASTERBOARD WALLS

LIGHTWEIGHT DOUBLE PLASTERBOARD WALLS
Weighted sound reduction index R_w= 48 dB
Correction terms: C= -1dB; C_{tr}= -6dB

Description of components	Thickness (mm)
1 Plasterboard	13
2 Plasterboard	13
3 K-FONIK GK	2
4 Metal frame	75
5 K-FONIK GK	2
6 Plasterboard	13
7 Plasterboard	13

Using a double plasterboard configuration will improve performance.


Double Plasterboard Configuration

ACOUSTIC PERFORMANCE

R_w $(C;C_{tr})$=48(-1;-6)dB