

## Section D

Timber Stud Walls

10/2025

# TIMBER STUD WALLS

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# INTRODUCTION

## Description

Knauf Timber Stud Wall Systems consist of single or multiple layers of plasterboard, fixed to one or both sides of timber stud framing.

## Design Options

Timber stud wall systems outlined in this manual provide Designers and Builders with a wide range of options to suit project specific requirements in regard to fire rating, acoustic insulation, water resistance and impact resistance. A large number of hybrid systems have been included, providing cost effective solutions where impact and/or water resistance requirements differ on each side of the wall.

Timber Stud Wall Systems are available in non-fire rated configurations with acoustic ratings up to  $R_w$  67,  $R_w + C_{tr}$  59 and in fire rated configurations with Fire Resistance Levels up to 120/120/120 and acoustic ratings up to  $R_w$  73,  $R_w + C_{tr}$  64.

The following types of Timber Stud Wall Systems are outlined in this manual:

- Lined One Side
- Lined Both Sides
- Furred Stud
- Staggered Stud
- Twin Stud.

## Materials

### Plasterboard Linings

- 10 mm / 13 mm SHEETROCK ONE
- 10 mm SHEETROCK PLUS
- 13 mm WetStop
- 13 mm / 16 mm FireStop
- 13 mm ImpactStop
- 13 mm / 16 mm MultiStop ONE
- 13 mm MultiStop ONE HI
- 13 mm / 16 mm FIBEROCK Aqua-Tough

### Other Lining

- 6 mm VILLABOARD

### Timber Sections

- 70 mm studs
- 90 mm studs
- 120 mm plates (staggered stud walls)
- 140 mm plates (staggered stud walls).

## Deflection Head Track

Rondo Deflection Head Track is used where allowance needs to be made for deflection of the floor/roof structure above a fire rated timber stud wall system (refer to Knauf online CAD Finder for details)

## Furring Channels and Fixing Clips

Rondo 129 Furring Channel and 237 Fixing Clip are used in Furred Systems:



Figure D1: Rondo 129 Furring Channel and 237 Fixing Clip

## Insulation

### Glasswool

- KI 50G11 - 50 mm glasswool insulation 11 kg/m<sup>3</sup> density
- KI 75G11 - 75 mm glasswool insulation 11 kg/m<sup>3</sup> density
- KI 90G11 - 90 mm glasswool insulation 11 kg/m<sup>3</sup> density

### Screws

Refer General Information – Materials for plasterboard screws suitable for timber framed systems.

### Sealants

H.B. Fuller Firesound™ sealant is recommended for use in Knauf fire rated and acoustic systems.

# TIMBER FRAMED WALLS

## Design Considerations

### Maximum Heights And Loads

Timber framed walls must be designed in accordance with AS 1684 Residential timber-framed construction or AS 1720.1 Timber structures; Part 1: Design Methods.

In addition to design loads under normal service conditions, fire rated timber framed walls must be checked for maximum loads under the design fire exposure.

Maximum design loads for fire rated timber framed walls depends on the extent of timber charring in a fire situation, stress grade and size of timber framing.

Where relevant maximum loads for Knauf timber framed walls systems are provided in the Charfactor Design Tables in this section. Contact Knauf where stud heights are not covered in design tables. Refer to project Structural Engineer for timber stud design and details.

### Multi-Residential Buildings

Separating walls in multi-residential buildings must satisfy NCC fire rating and acoustic requirements (refer to the Multi-Residential section).

### Class 1 Buildings

Knauf Partiwall® is a family of NCC compliant separating wall systems for attached dwellings in Class 1 buildings.

For more information on Partiwall separating walls refer to the Multi-Residential section and to [knauf.com/en-AU/knauf-gypsum/products-systems/systems/partiwall](https://knauf.com/en-AU/knauf-gypsum/products-systems/systems/partiwall).

# CHARFACTOR DESIGN TABLES – CF 11

## Load Bearing Timber Stud Walls – Axial Load Capacity in kN/Stud

TIMBER STRESS GRADE F5								
STUD SIZE (mm x mm)								
WALL HEIGHT m	140x45	140x35	120x45	120x35	90x45	90x35	70x45	70x35
2.0	28.5	20.0	22.2	15.6	12.9	9.0	7.2	5.0
2.1	28.1	19.7	21.8	15.2	12.5	8.7	6.9	4.8
2.2	27.6	19.4	21.3	14.9	12.1	8.4	6.5	4.5
2.3	27.2	19.0	20.8	14.6	11.6	8.1	6.2	4.3
2.4	26.7	18.7	20.4	14.2	11.2	7.8	5.8	4.0
2.5	26.2	18.4	19.9	13.9	10.7	7.5	5.5	3.8
2.6	25.8	18.0	19.4	13.5	10.3	7.2	5.2	3.6
2.7	25.3	17.7	18.9	13.2	9.9	6.9	5.0	3.4
2.8	24.8	17.3	18.4	12.8	9.5	6.6	4.7	3.2
2.9	24.3	17.0	17.9	12.5	9.1	6.3	4.4	3.0
3.0	23.7	16.6	17.4	12.1	8.7	6.1	4.2	2.9
3.1	23.2	16.2	16.9	11.8	8.4	5.8	4.0	2.7
3.2	22.7	15.8	16.4	11.4	8.0	5.5	3.7	2.6
3.3	22.2	15.5	16.0	11.1	7.7	5.3	3.5	2.4
3.4	21.7	15.1	15.5	10.8	7.3	5.1	3.3	2.3
3.5	21.2	14.7	15.0	10.4	7.0	4.8	3.1	2.1
3.6	20.6	14.4	14.5	10.1	6.7	4.6	3.0	2.0
3.7	20.1	14.0	14.1	9.8	6.4	4.4	2.8	
3.8	19.6	13.6	13.6	9.5	6.1	4.2	2.6	
3.9	19.1	13.3	13.2	9.1	5.9	4.0	2.5	
4.0	18.6	12.9	12.8	8.8	5.6	3.8	2.3	

TIMBER STRESS GRADE F8								
STUD SIZE (mm x mm)								
WALL HEIGHT m	140x45	140x35	120x45	120x35	90x45	90x35	70x45	70x35
2.0	48.8	35.2	38.2	27.5	22.4	16.1	12.6	9.0
2.1	48.0	34.6	37.4	26.9	21.6	15.5	12.0	8.5
2.2	47.2	34.0	36.5	26.3	20.7	14.9	11.3	8.1
2.3	46.4	33.4	35.6	25.6	19.9	14.3	10.7	7.6
2.4	45.5	32.8	34.7	25.0	19.1	13.7	10.1	7.2
2.5	44.6	32.1	33.8	24.3	18.3	13.1	9.6	6.8
2.6	43.7	31.5	32.9	23.6	17.6	12.6	9.0	6.4
2.7	42.8	30.8	32.0	23.0	16.8	12.0	8.5	6.1
2.8	41.9	30.1	31.1	22.3	16.1	11.5	8.1	5.7
2.9	40.9	29.4	30.2	21.7	15.4	11.0	7.6	5.4
3.0	40.0	28.7	29.3	21.0	14.7	10.5	7.2	5.1
3.1	39.0	28.1	28.4	20.4	14.1	10.1	6.8	4.9
3.2	38.1	27.4	27.5	19.7	13.5	9.6	6.5	4.6
3.3	37.2	26.7	26.7	19.1	12.9	9.2	6.1	4.3
3.4	36.2	26.0	25.8	18.5	12.3	8.8	5.8	4.1
3.5	35.3	25.3	25.0	17.9	11.8	8.4	5.5	3.9
3.6	34.4	24.6	24.2	17.3	11.3	8.0	5.2	3.7
3.7	33.4	24.0	23.4	16.7	10.8	7.7	4.9	3.5
3.8	32.5	23.3	22.6	16.2	10.3	7.4	4.7	3.3
3.9	31.6	22.7	21.9	15.6	9.9	7.0	4.4	3.1
4.0	30.8	22.0	21.1	15.1	9.4	6.7	4.2	3.0

TIMBER STRESS GRADE F14								
STUD SIZE (mm x mm)								
WALL HEIGHT m	140x45	140x35	120x45	120x35	90x45	90x35	70x45	70x35
2.0	84.4	62.0	65.5	48.0	37.5	27.4	20.7	15.0
2.1	82.7	60.7	63.6	46.6	35.8	26.1	19.4	14.1
2.2	80.8	59.3	61.7	45.3	34.1	24.9	18.2	13.2
2.3	79.0	58.0	59.9	43.9	32.5	23.7	17.1	12.4
2.4	77.1	56.6	58.0	42.5	30.9	22.6	16.1	11.7
2.5	75.2	55.1	56.1	41.1	29.4	21.5	15.1	11.0
2.6	73.2	53.7	54.2	39.7	28.0	20.4	14.2	10.3
2.7	71.3	52.3	52.4	38.3	26.7	19.4	13.3	9.7
2.8	69.4	50.8	50.6	37.0	25.4	18.5	12.6	9.1
2.9	67.4	49.4	48.8	35.7	24.1	17.6	11.8	8.6
3.0	65.5	48.0	47.0	34.4	23.0	16.7	11.1	8.1
3.1	63.6	46.6	45.3	33.1	21.8	15.9	10.5	7.6
3.2	61.7	45.2	43.7	31.9	20.8	15.2	9.9	7.2
3.3	59.8	43.8	42.1	30.7	19.8	14.4	9.4	6.8
3.4	58.0	42.5	40.5	29.6	18.9	13.8	8.9	6.4
3.5	56.2	41.1	39.0	28.5	18.0	13.1	8.4	6.1
3.6	54.4	39.8	37.5	27.4	17.2	12.5	7.9	5.8
3.7	52.7	38.6	36.1	26.4	16.4	11.9	7.5	5.5
3.8	51.0	37.3	34.8	25.4	15.6	11.4	7.1	5.2
3.9	49.4	36.1	33.5	24.5	14.9	10.9	6.8	4.9
4.0	47.8	35.0	32.3	23.6	14.2	10.4	6.4	4.7

TIMBER STRESS GRADE F22								
STUD SIZE (mm x mm)								
WALL HEIGHT m	140x45	140x35	120x45	120x35	90x45	90x35	70x45	70x35
2.0	134.0	99.4	102.2	75.7	56.3	41.5	30.1	22.1
2.1	130.4	96.7	98.5	73.0	53.2	39.2	28.0	20.6
2.2	126.6	93.9	94.9	70.2	50.3	37.1	26.1	19.2
2.3	122.9	91.1	91.2	67.5	47.5	35.0	24.4	17.9
2.4	119.1	88.3	87.6	64.9	44.9	33.1	22.7	16.7
2.5	115.4	85.5	84.1	62.2	42.4	31.3	21.2	15.6
2.6	111.6	82.7	80.7	59.7	40.1	29.5	19.9	14.6
2.7	107.9	79.9	77.4	57.2	37.9	27.9	18.6	13.7
2.8	104.2	77.2	74.2	54.8	35.8	26.4	17.5	12.8
2.9	100.6	74.5	71.0	52.5	33.9	25.0	16.4	12.1
3.0	97.1	71.9	68.1	50.3	32.1	23.7	15.4	11.3
3.1	93.7	69.3	65.2	48.2	30.4	22.4	14.5	10.7
3.2	90.3	66.8	62.4	46.1	28.8	21.3	13.7	10.0
3.3	87.0	64.4	59.8	44.2	27.4	20.2	12.9	9.5
3.4	83.9	62.1	57.3	42.3	26.0	19.2	12.2	8.9
3.5	80.8	59.8	54.9	40.6	24.7	18.2	11.5	8.5
3.6	77.9	57.6	52.6	38.9	23.5	17.3	10.9	8.0
3.7	75.0	55.5	50.4	37.3	22.3	16.5	10.3	7.6
3.8	72.3	53.5	48.3	35.7	21.3	15.7	9.7	7.2
3.9	69.7	51.5	46.4	34.3	20.3	14.9	9.2	6.8
4.0	67.1	49.7	44.5	32.9	19.3	14.3	8.8	6.5

# CHARFACTOR DESIGN TABLES – CF 21

Load Bearing Timber Stud Walls – Axial Load Capacity in kN/Stud

TIMBER STRESS GRADE F5								
STUD SIZE (mm x mm)								
WALL HEIGHT m	140x45	140x35	120x45	120x35	90x45	90x35	70x45	70x35
2.0	15.3	8.7	11.3	6.4	5.7	3.2	2.7	
2.1	15.0	8.6	11.0	6.3	5.5	3.1	2.5	
2.2	14.7	8.4	10.8	6.1	5.3	2.9	2.4	
2.3	14.5	8.2	10.5	5.9	5.1	2.8	2.2	
2.4	14.2	8.1	10.2	5.8	4.8	2.7	2.1	
2.5	13.9	7.9	9.9	5.6	4.6	2.6		
2.6	13.6	7.7	9.6	5.4	4.4	2.4		
2.7	13.3	7.5	9.4	5.3	4.2	2.3		
2.8	13.0	7.3	9.1	5.1	4.0	2.2		
2.9	12.7	7.1	8.8	4.9	3.8	2.1		
3.0	12.4	6.9	8.5	4.7	3.6			
3.1	12.1	6.8	8.2	4.6	3.5			
3.2	11.7	6.6	8.0	4.4	3.3			
3.3	11.4	6.4	7.7	4.2	3.1			
3.4	11.1	6.2	7.4	4.1	2.9			
3.5	10.8	6.0	7.2	3.9	2.8			
3.6	10.5	5.8	6.9	3.8	2.6			
3.7	10.2	5.6	6.7	3.6	2.5			
3.8	9.9	5.5	6.4	3.5	2.4			
3.9	9.6	5.3	6.2	3.3	2.2			
4.0	9.4	5.1	6.0	3.2	2.1			

TIMBER STRESS GRADE F8								
STUD SIZE (mm x mm)								
WALL HEIGHT m	140x45	140x35	120x45	120x35	90x45	90x35	70x45	70x35
2.0	30.9	19.8	23.2	14.8	12.3	7.8	6.1	3.9
2.1	30.3	19.4	22.6	14.5	11.8	7.5	5.8	3.6
2.2	29.7	19.0	22.0	14.1	11.3	7.2	5.5	3.4
2.3	29.1	18.7	21.5	13.7	10.8	6.9	5.1	3.2
2.4	28.6	18.3	20.9	13.3	10.4	6.6	4.8	3.0
2.5	27.9	17.9	20.3	12.9	9.9	6.3	4.6	2.9
2.6	27.3	17.5	19.7	12.6	9.5	6.0	4.3	2.7
2.7	26.7	17.1	19.1	12.2	9.1	5.7	4.0	2.5
2.8	26.1	16.6	18.6	11.8	8.7	5.5	3.8	2.4
2.9	25.5	16.2	18.0	11.4	8.3	5.2	3.6	2.2
3.0	24.8	15.8	17.4	11.1	7.9	5.0	3.4	2.1
3.1	24.2	15.4	16.9	10.7	7.5	4.7	3.2	
3.2	23.6	15.0	16.3	10.3	7.2	4.5	3.0	
3.3	23.0	14.6	15.8	10.0	6.9	4.3	2.8	
3.4	22.4	14.2	15.3	9.6	6.5	4.1	2.6	
3.5	21.8	13.8	14.7	9.3	6.2	3.9	2.5	
3.6	21.1	13.4	14.2	9.0	5.9	3.7	2.3	
3.7	20.6	13.0	13.8	8.7	5.7	3.5	2.2	
3.8	20.0	12.6	13.3	8.4	5.4	3.3	2.0	
3.9	19.4	12.3	12.8	8.1	5.1	3.2		
4.0	18.8	11.9	12.4	7.8	4.9	3.0		

TIMBER STRESS GRADE F14								
STUD SIZE (mm x mm)								
WALL HEIGHT m	140x45	140x35	120x45	120x35	90x45	90x35	70x45	70x35
2.0	59.9	40.9	45.0	30.7	23.9	16.2	12.1	8.2
2.1	58.6	40.0	43.7	29.8	22.8	15.5	11.4	7.7
2.2	57.2	39.0	42.3	28.8	21.7	14.7	10.7	7.2
2.3	55.8	38.1	41.0	27.9	20.7	14.0	10.0	6.8
2.4	54.4	37.1	39.7	27.0	19.7	13.3	9.4	6.3
2.5	53.0	36.1	38.3	26.1	18.7	12.7	8.8	5.9
2.6	51.6	35.2	37.0	25.2	17.8	12.1	8.3	5.6
2.7	50.2	34.2	35.7	24.3	16.9	11.5	7.8	5.2
2.8	48.8	33.2	34.5	23.4	16.1	10.9	7.3	4.9
2.9	47.4	32.3	33.2	22.6	15.3	10.4	6.9	4.6
3.0	46.0	31.3	32.0	21.7	14.6	9.8	6.5	4.4
3.1	44.6	30.4	30.9	20.9	13.9	9.4	6.1	4.1
3.2	43.3	29.4	29.7	20.2	13.2	8.9	5.8	3.9
3.3	41.9	28.5	28.6	19.4	12.6	8.5	5.4	3.6
3.4	40.6	27.6	27.5	18.7	12.0	8.1	5.1	3.4
3.5	39.4	26.7	26.5	18.0	11.4	7.7	4.8	3.2
3.6	38.1	25.9	25.5	17.3	10.8	7.3	4.6	3.0
3.7	36.9	25.0	24.6	16.6	10.3	6.9	4.3	2.9
3.8	35.7	24.2	23.6	16.0	9.8	6.6	4.1	2.7
3.9	34.6	23.4	22.7	15.4	9.4	6.3	3.8	2.5
4.0	33.4	22.7	21.9	14.8	9.0	6.0	3.6	2.4

TIMBER STRESS GRADE F22								
STUD SIZE (mm x mm)								
WALL HEIGHT m	140x45	140x35	120x45	120x35	90x45	90x35	70x45	70x35
2.0	101.9	71.7	75.7	53.2	39.4	27.6	19.8	13.8
2.1	99.0	69.7	73.0	51.3	37.3	26.1	18.5	12.9
2.2	96.1	67.6	70.2	49.3	35.2	24.6	17.2	12.0
2.3	93.2	65.6	67.5	47.4	33.3	23.3	16.0	11.2
2.4	90.3	63.5	64.8	45.5	31.4	22.0	15.0	10.4
2.5	87.4	61.4	62.2	43.6	29.7	20.8	14.0	9.8
2.6	84.5	59.4	59.6	41.9	28.1	19.6	13.1	9.1
2.7	81.6	57.4	57.2	40.1	26.6	18.6	12.3	8.5
2.8	78.8	55.4	54.8	38.4	25.1	17.6	11.5	8.0
2.9	76.1	53.5	52.5	36.8	23.8	16.6	10.8	7.5
3.0	73.4	51.6	50.3	35.3	22.5	15.7	10.1	7.1
3.1	70.8	49.7	48.2	33.8	21.3	14.9	9.5	6.6
3.2	68.3	47.9	46.2	32.4	20.2	14.1	9.0	6.2
3.3	65.8	46.2	44.2	31.0	19.2	13.4	8.5	5.9
3.4	63.4	44.5	42.4	29.7	18.2	12.7	8.0	5.5
3.5	61.1	42.9	40.6	28.5	17.3	12.1	7.5	5.2
3.6	58.9	41.3	38.9	27.3	16.5	11.5	7.1	4.9
3.7	56.7	39.8	37.3	26.1	15.7	10.9	6.7	4.7
3.8	54.7	38.4	35.8	25.1	14.9	10.4	6.4	4.4
3.9	52.7	37.0	34.3	24.0	14.2	9.9	6.0	4.2
4.0	50.8	35.6	32.9	23.1	13.5	9.4	5.7	3.9

# CHARFACTOR DESIGN TABLES – CF 23

Load Bearing Timber Stud Walls – Axial Load Capacity in kN/Stud

TIMBER STRESS GRADE F5								
STUD SIZE (mm x mm)								
WALL HEIGHT m	140x45	140x35	120x45	120x35	90x45	90x35	70x45	70x35
2.0	12.1	6.7	8.9	4.8	4.4	2.4	2.0	
2.1	11.9	6.5	8.7	4.8	4.3	2.3	1.9	
2.2	11.6	6.5	8.4	4.6	4.1	2.2	1.8	
2.3	11.4	6.3	8.2	4.5	3.9	2.1		
2.4	11.2	6.1	8.0	4.3	3.7	2.0		
2.5	11.0	6.0	7.8	4.3	3.6	1.9		
2.6	10.7	5.9	7.6	4.1	3.4	1.8		
2.7	10.5	5.7	7.3	4.0	3.2			
2.8	10.2	5.5	7.1	3.8	3.1			
2.9	10.0	5.4	6.9	3.7	2.9			
3.0	9.8	5.3	6.6	3.6	2.8			
3.1	9.5	5.1	6.5	3.4	2.6			
3.2	9.3	5.0	6.2	3.3	2.5			
3.3	9.0	4.8	6.0	3.1	2.4			
3.4	8.8	4.7	5.8	3.1	2.2			
3.5	8.5	4.5	5.6	2.9	2.1			
3.6	8.2	4.4	5.4	2.8	2.0			
3.7	8.0	4.3	5.2	2.7	1.9			
3.8	7.8	4.1	5.0	2.6	1.8			
3.9	7.6	4.0	4.8	2.5				
4.0	7.3	3.8	4.7	2.4				

TIMBER STRESS GRADE F8								
STUD SIZE (mm x mm)								
WALL HEIGHT m	140x45	140x35	120x45	120x35	90x45	90x35	70x45	70x35
2.0	25.0	15.7	18.7	11.7	9.8	6.1	4.8	3.0
2.1	24.5	15.5	18.2	11.5	9.4	5.9	4.5	2.8
2.2	24.1	15.1	17.8	11.1	9.0	5.6	4.3	2.6
2.3	23.5	14.8	17.3	10.9	8.7	5.4	4.0	2.5
2.4	23.0	14.5	16.8	10.5	8.2	5.1	3.8	2.3
2.5	22.6	14.2	16.3	10.2	7.9	4.9	3.6	2.2
2.6	22.1	13.9	15.8	9.9	7.6	4.9	3.4	2.0
2.7	21.6	13.5	15.4	9.6	7.2	4.5	3.1	2.0
2.8	21.1	13.2	14.9	9.4	6.9	4.3	3.0	1.8
2.9	20.6	12.9	14.5	9.0	6.5	4.1	2.8	
3.0	20.1	12.6	14.0	8.8	6.3	3.8		
3.1	19.6	12.2	13.5	8.4	6.0	3.7		
3.2	19.0	11.9	13.1	8.2	5.7	3.5		
3.3	18.5	11.6	12.7	7.9	5.4	3.3		
3.4	18.0	11.2	12.2	7.6	5.2	3.1		
3.5	17.5	11.0	11.8	7.3	4.9	3.0		
3.6	17.1	10.6	11.4	7.1	4.7	2.9		
3.7	16.6	10.3	11.1	6.8	4.5	2.7		
3.8	16.1	10.0	10.6	6.5	4.3	2.6		
3.9	15.6	9.7	10.3	6.3	4.1	2.5		
4.0	15.1	9.4	9.9	6.1	3.8	2.3		

TIMBER STRESS GRADE F14								
STUD SIZE (mm x mm)								
WALL HEIGHT m	140x45	140x35	120x45	120x35	90x45	90x35	70x45	70x35
2.0	49.1	33.2	36.8	24.8	19.4	13.0	9.8	6.5
2.1	48.0	32.5	35.7	24.1	18.5	12.4	9.2	6.1
2.2	46.9	31.7	34.6	23.4	17.6	11.8	8.6	5.7
2.3	45.7	30.9	33.5	22.6	16.7	11.2	8.1	5.4
2.4	44.6	30.1	32.4	21.8	16.0	10.7	7.6	5.0
2.5	43.4	29.3	31.3	21.1	15.2	10.2	7.1	4.8
2.6	42.2	28.6	30.3	20.4	14.5	9.7	6.6	4.4
2.7	41.1	27.7	29.2	19.6	13.7	9.2	6.3	4.2
2.8	40.0	26.9	28.1	19.0	13.1	8.8	5.9	3.9
2.9	38.8	26.2	27.1	18.3	12.4	8.3	5.5	3.7
3.0	37.7	25.4	26.2	17.6	11.8	7.9	5.2	3.5
3.1	36.6	24.7	25.2	16.9	11.2	7.5	4.9	3.2
3.2	35.4	23.9	24.2	16.3	10.7	7.1	4.6	3.1
3.3	34.3	23.1	23.4	15.6	10.2	6.8	4.3	2.9
3.4	33.2	22.4	22.4	15.1	9.7	6.5	4.1	2.7
3.5	32.2	21.7	21.7	14.5	9.2	6.1	3.8	2.6
3.6	31.2	21.0	20.8	13.9	8.8	5.9	3.7	2.4
3.7	31.0	20.3	20.1	13.4	8.3	5.5	3.4	2.3
3.8	29.2	19.6	19.3	12.9	8.0	5.3	3.2	2.1
3.9	28.3	19.0	18.5	12.4	7.6	5.0	3.1	2.0
4.0	27.4	18.4	17.9	12.0	7.2	4.8	2.9	1.9

TIMBER STRESS GRADE F22								
STUD SIZE (mm x mm)								
WALL HEIGHT m	140x45	140x35	120x45	120x35	90x45	90x35	70x45	70x35
2.0	84.2	58.9	62.4	43.6	32.3	22.4	16.2	11.1
2.1	81.8	57.2	60.1	42.0	30.5	21.3	15.0	10.4
2.2	79.4	55.5	57.8	40.4	28.8	20.1	14.0	9.7
2.3	76.9	53.8	55.6	38.8	27.3	19.0	13.1	9.0
2.4	74.5	52.1	53.4	37.2	25.8	17.9	12.2	8.4
2.5	72.2	50.4	51.3	35.7	24.3	16.9	11.4	7.9
2.6	69.8	48.7	49.1	34.3	23.0	16.0	10.6	7.4
2.7	67.4	47.1	47.1	32.8	21.8	15.1	9.9	6.9
2.8	65.1	45.5	45.1	31.5	20.6	14.3	9.4	6.5
2.9	62.8	43.9	43.3	30.2	19.5	13.5	8.8	6.0
3.0	60.6	42.3	41.4	28.9	18.4	12.8	8.2	5.7
3.1	58.5	40.8	39.7	27.6	17.5	12.2	7.7	5.4
3.2	56.4	39.4	38.0	26.5	16.6	11.5	7.3	5.0
3.3	54.3	37.9	36.4	25.3	15.7	10.9	6.9	4.8
3.4	52.4	36.6	34.9	24.3	15.0	10.4	6.5	4.5
3.5	50.5	35.2	33.4	23.3	14.2	9.9	6.1	4.3
3.6	48.6	33.9	32.0	22.3	13.5	9.4	5.8	4.0
3.7	46.8	32.6	30.7	21.4	12.8	8.9	5.4	3.7
3.8	45.1	31.5	29.5	20.5	12.2	8.5	5.2	3.6
3.9	43.5	30.3	28.3	19.6	11.6	8.1	4.8	3.4
4.0	41.9	29.2	27.1	18.9	11.1	7.7	4.6	3.1

# TIMBER FRAME CONSTRUCTION

## Class 2 and 3 Buildings

The NCC allows the use of timber framed construction in low rise multi-residential Class 2 or 3 buildings of Type C Construction, and for Type A and B Construction provided that appropriate concessions are met (Refer to the NCC for height limitations, sprinkler and additional requirements of such buildings).

Various structural elements in Class 2 and 3 buildings must satisfy NCC fire rating and acoustic requirements as summarised in the Multi-Residential section.

Knauf Multiframe™ system is a compilation of timber framed wall and floor/ceiling and roof/ceiling solutions satisfying NCC requirements for Class 2 and 3 buildings. For more information refer to the Multi-Residential section and to [knauf.com/en-AU/knauf-gypsum/products-systems/systems/multiframe](http://knauf.com/en-AU/knauf-gypsum/products-systems/systems/multiframe)

## Penetrations

Penetrations in a fire rated system must be treated strictly in accordance with relevant test reports and approved installation details in order to maintain the system's Fire Resistance Level.

Where components by others are specified in Knauf fire rated penetration details (ie dampers, GPOs, fire collars, etc), such components must be installed in accordance with the manufacturer's specifications. It is the responsibility of the component manufacturer to ensure that the fire rating performance of the system is not affected.

## Installation

Fire rated and acoustic systems must be assembled strictly in accordance with specifications outlined in this manual and in the relevant Knauf publications in order to achieve stated Fire Resistance Levels and acoustic ratings.

## Framing

- Accurately mark wall layouts. Always check individual measurements against overall site dimensions.
- Cut timber studs to length allowing for deflection of floor/roof structure above.
- Use suitable fasteners and clips for anchoring top and bottom plates. Locate fasteners 50 mm from each end and spaced at maximum 600 mm centres along the wall plate.
- Noggings are required as headers above doorways, for reinforcement behind fixture attachments, and where special circumstances require additional stiffening of the frame.

## Plasterboard application

- Plasterboard linings can be installed vertically or horizontally. Refer Knauf online CAD Finder for optional plasterboard configurations in fire rated timber stud walls.
- Cut plasterboard sheets to provide 10 mm maximum gap at floor and ceiling (refer to Knauf online CAD Finder for typical head and base details).
- Vertical sheet ends and edges in fire rated systems are to fall on studs.
- Fasten plasterboard sheets to timber framing with appropriate screws as outlined in General Information section. Place screws 10 mm–16 mm from sheet ends and edges UNO.
- Offset plasterboard joints on opposite sides and in adjacent layers in fire rated systems refer to Knauf online CAD Finder for details.
- For maximum screw spacings in fire rated wall systems refer to Knauf online CAD Finder for details.
- Refer to Knauf Installation Manual for plasterboard fixing specification for non–fire rated timber stud wall systems.

## Jointing and Finishing

- Finish all joints and internal and external corners in face layers with the appropriate Knauf jointing system (refer to Knauf Installation Manual). Joints and junctions in inner layers of multiple layer systems are not required to be stopped.
- Paper tape must be used in fire rated and wet area systems
- Stop exposed fasteners on face layers.

## Caulking

Perimeter gaps and penetrations in fire rated and acoustic systems must be caulked with an appropriate sealant.

## Decoration

Apply paint or other decorative finishes as required. Refer to General Information – Appearance for recommendations on decorating of plasterboard.

To view the full range of system CAD details, scan QR code below.



## LINED ONE SIDE

## TO.1

NON-FIRE RATED



## SYSTEM DESCRIPTION

Side 1: 1x10 mm non-fire resistant pbd

Framing: Timber studs

Insulation: Refer to table

Side 2: NA.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R5)

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	10 + STUD
			STUD SIZE mm	ANY STUD
			INSULATION	$R_w (R_w + C_{tr})$
TO.1A	1x10 mm SHEETROCK ONE	NA	Nil	26(23)
TO.1E	1x10 mm SHEETROCK PLUS	NA	Nil	28(25)

## TO.2

NON-FIRE RATED



## SYSTEM DESCRIPTION

Side 1: 2x10 mm non-fire resistant pbd

Framing: Timber studs

Insulation: Refer to table

Side 2: NA.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R5)

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	20 + STUD
			STUD SIZE mm	ANY STUD
			INSULATION	$R_w (R_w + C_{tr})$
TO.2A	2x10 mm SHEETROCK ONE	NA	Nil	32(27)
TO.2D	2x10 mm SHEETROCK PLUS	NA	Nil	34(31)

## LINED ONE SIDE

TO.3

NON-FIRE RATED



## SYSTEM DESCRIPTION

**Side 1:** 1x13 mm non-fire resistant pbd

**Framing:** Timber studs

**Insulation:** Refer to table

**Side 2:** NA.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4)

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	13 + STUD
			STUD SIZE mm	ANY STUD
			INSULATION	$R_w (R_w + C_{tr})$
TO.3A	1x13 mm SHEETROCK ONE	na	Nil	27(25)
TO.3D	1x13 mm WETSTOP	na	Nil	28(26)

## LINED ONE SIDE

## TO30.2

## FIRE RESISTANCE LEVEL

NLB -/30/30

LB 30/30/30

FROM LINED SIDE ONLY

FRL Basis: FC16195, FC15834



## SYSTEM DESCRIPTION

Side 1: 2x13 mm fire resistant pbd

Framing: Timber studs

Insulation: Refer to table

Side 2: NA.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4)

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	26 + STUD
			STUD SIZE mm	ANY STUD
			INSULATION	$R_w (R_w + C_{tr})$
TO30.2A	2x13 mm FIRESTOP	NA	Nil	35(32)
TO30.2B	2x13 mm MULTISTOP ONE	NA	Nil	35(33)

MULTISTOP ONE HI may be a direct substitute for MULTISTOP ONE for FRL and acoustic performance of the same board thickness

## TO60.1

## FIRE RESISTANCE LEVEL

NBL -/60/60

LB 60/60/60

FROM LINED SIDE ONLY

FRL Basis: FC16195, FC15834



## SYSTEM DESCRIPTION

Side 1: 2x16 mm fire resistant pbd

Framing: Timber studs

Insulation: Refer to table

Side 2: NA.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4)

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	32 + STUD
			STUD SIZE mm	ANY STUD
			INSULATION	$R_w (R_w + C_{tr})$
TO60.1A	2x16 mm FIRESTOP	NA	Nil	36(33)
TO60.1B	2x16 mm MULTISTOP ONE	NA	Nil	36(34)

## LINED ONE SIDE

## TO90.1

## FIRE RESISTANCE LEVEL

NLB -/90/90

LB 90/90/90

FROM LINED SIDE ONLY

FRL Basis: FC16195, FC15834



## SYSTEM DESCRIPTION

Side 1: 3x13 mm fire resistant pbd

Framing: Timber studs

Insulation: Refer to table

Side 2: NA.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4)

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	39 + STUD
			STUD SIZE mm	ANY STUD
			INSULATION	$R_w (R_w + C_{tr})$
TO90.1A	3x13 mm FIRESTOP	NA	Nil	38(36)
TO90.1B	3x13 mm MULTISTOP ONE	NA	Nil	39(36)

MULTISTOP ONE HI may be a direct substitute for MULTISTOP ONE for FRL and acoustic performance of the same board thickness

## TO120.1

## FIRE RESISTANCE LEVEL

NLB -/120/120

LB 120/120/120

FROM LINED SIDE ONLY

FRL Basis: FC16195, FC15834



## SYSTEM DESCRIPTION

Side 1: 3x16 mm fire resistant pbd

Framing: Timber studs

Insulation: Refer to table

Side 2: NA.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4)

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	48 + STUD
			STUD SIZE mm	ANY STUD
			INSULATION	$R_w (R_w + C_{tr})$
TO120.1A	3x16 mm FIRESTOP	NA	Nil	39(37)
TO120.1B	3x16 mm MULTISTOP ONE	NA	Nil	40(38)

## FIBEROCK® AQUA-TOUGH™ – LINED ONE SIDE

## TOF.3

NON-FIRE RATED



## SYSTEM DESCRIPTION

Side 1: 1x13 mm FIBEROCK

AQUA-TOUGH

Framing: Timber studs

Insulation: Refer to table

Side 2: NA.

## ACOUSTIC RATINGS BASIS: SLR-FB-T-01

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	13 + STUD
			STUD SIZE mm	ANY STUD
			INSULATION	$R_w (R_w + C_{tr})$
TOF.3A	1x13 mm FIBEROCK AQUA-TOUGH	NA	Nil	30(27)

## TOF30.1

FIRE RESISTANCE LEVEL

NLB -/30/30

FROM LINED SIDE ONLY

FRL Basis: Contact Knauf



## SYSTEM DESCRIPTION

Side 1: 1x16 mm FIBEROCK

AQUA-TOUGH

Framing: Timber studs

Insulation: Refer to table

Side 2: NA.

## ACOUSTIC RATINGS BASIS: SLR-FB-T-01

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	16 + STUD
			STUD SIZE mm	ANY STUD
			INSULATION	$R_w (R_w + C_{tr})$
TOF30.1A	1x16 mm FIBEROCK AQUA-TOUGH	NA	Nil	30(28)

## FIBEROCK® AQUA-TOUGH™ – LINED ONE SIDE

## TOF60.1

**FIRE RESISTANCE LEVEL**  
**NLB -/60/60**  
 FROM LINED SIDE ONLY

FRL Basis: Contact Knauf



## SYSTEM DESCRIPTION

**Side 1:** 2x16 mm FIBEROCK  
AQUA-TOUGH

**Framing:** Timber studs

**Insulation:** Refer to table

**Side 2:** NA.

## ACOUSTIC RATINGS BASIS: SLR-FB-T-01

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	32 + STUD
			STUD SIZE mm	ANY STUD
			INSULATION	$R_w (R_w + C_{tr})$
TOF60.1A	2x16 mm FIBEROCK AQUA-TOUGH	NA	Nil	36(33)

## TOF90.1

**FIRE RESISTANCE LEVEL**  
**NLB -/90/90**  
 FROM LINED SIDE ONLY

FRL Basis: Contact Knauf



## SYSTEM DESCRIPTION

**Side 1:** 3x16 mm FIBEROCK  
AQUA-TOUGH

**Framing:** Timber studs

**Insulation:** Refer to table

**Side 2:** NA.

## ACOUSTIC RATINGS BASIS: SLR-FB-T-01

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	48 + STUD
			STUD SIZE mm	ANY STUD
			INSULATION	$R_w (R_w + C_{tr})$
TOF90.1A	3x16 mm FIBEROCK AQUA-TOUGH	NA	Nil	40(38)

## LINED BOTH SIDES

## TB.1

NON-FIRE RATED



## SYSTEM DESCRIPTION

**Side 1:** 1x10 mm non-fire resistant pbd  
**Framing:** Timber studs  
**Insulation:** Refer to table  
**Side 2:** 1x10 mm non-fire resistant pbd.

ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4), SLR-SR-T-S-01

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	90	110
			STUD SIZE mm	70	90
			INSULATION*	$R_w (R_w + C_{tr})$	
TB.1A	1x10 mm SHEETROCK ONE	1x10 mm SHEETROCK ONE	Nil	27(19)	28(20)
			KI 50G11	34(25)	35(26)
			KI 75G11	35(26)	36(27)
			KI 90G11	-	36(27)
TB.1H	1x10 mm SHEETROCK PLUS	1x10 mm SHEETROCK PLUS	Nil	31(26)	32(26)
			KI 50G11	38(31)	39(32)
			KI 75G11	39(32)	40(33)
			KI 90G11	-	40(33)
TB.1I	1x10 mm SHEETROCK ONE	1x10 mm SHEETROCK PLUS	Nil	30(22)	31(23)
			KI 50G11	37(28)	38(29)
			KI 75G11	38(29)	38(30)
			KI 90G11	-	39(30)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

## LINED BOTH SIDES

## TB.2

NON-FIRE RATED



## SYSTEM DESCRIPTION

**Side 1:** 2x10 mm non-fire resistant pbd

**Framing:** Timber studs

**Insulation:** Refer to table

**Side 2:** 2x10 mm non-fire resistant pbd.

ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4), SLR-SR-T-S-01

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	110	130
			STUD SIZE mm	70	90
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )	
TB.2A	2x10 mm SHEETROCK ONE	2x10 mm SHEETROCK ONE	Nil	33(25)	34(26)
			KI 50G11	41(32)	42(33)
			KI 75G11	41(32)	42(33)
			KI 90G11	-	42(33)
TB.2H	2x10 mm SHEETROCK PLUS	2x10 mm SHEETROCK PLUS	Nil	37(30)	38(31)
			KI 50G11	46(39)	46(40)
			KI 75G11	46(39)	46(40)
			KI 90G11	-	46(40)
TB.2I	2x10 mm SHEETROCK ONE	2x10 mm SHEETROCK PLUS	Nil	36(29)	37(29)
			KI 50G11	44(35)	45(36)
			KI 75G11	44(35)	45(36)
			KI 90G11	-	45(36)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

## LINED BOTH SIDES

## TB.3

NON-FIRE RATED



## SYSTEM DESCRIPTION

**Side 1:** 1x13 mm non-fire resistant pbd  
**Framing:** Timber studs  
**Insulation:** Refer to table  
**Side 2:** 1x13 mm non-fire resistant pbd.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4)

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	96	116
			STUD SIZE mm	70	90
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )	
TB.3A	1x13 mm SHEETROCK ONE	1x13 mm SHEETROCK ONE	Nil	32(26)	33(26)
			KI 50G11	39(29)	40(32)
			KI 75G11	40(30)	41(33)
			KI 90G11	-	41(33)
TB.3B	1x13 mm WETSTOP	1x13 mm WETSTOP	Nil	33(27)	34(28)
			KI 50G11	40(31)	41(32)
			KI 75G11	41(32)	42(33)
			KI 90G11	-	42(33)
TB.3E	1x13 mm SHEETROCK ONE	1x13 mm WETSTOP	Nil	33(27)	34(28)
			KI 50G11	40(31)	41(33)
			KI 75G11	41(32)	42(34)
			KI 90G11	-	42(34)
TB.3K	1x13 mm SHEETROCK ONE	1x13 mm IMPACTSTOP	Nil	34(28)	35(29)
			KI 50G11	41(32)	41(33)
			KI 75G11	42(33)	42(34)
			KI 90G11	-	42(34)
TB.3L	1x13 mm WETSTOP	1x13 mm IMPACTSTOP	Nil	33(28)	34(29)
			KI 50G11	41(34)	41(34)
			KI 75G11	42(35)	42(35)
			KI 90G11	-	42(35)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

## LINED BOTH SIDES

## TB.4

NON-FIRE RATED



## SYSTEM DESCRIPTION

**Side 1:** 1x13 mm non-fire resistant pbd  
**Framing:** Timber studs  
**Insulation:** Refer to table  
**Side 2:** 2x13 mm non-fire resistant pbd.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4)

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	109	129
			STUD SIZE mm	70	90
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )	
TB.4A	1x13 mm SHEETROCK ONE	2x13 mm SHEETROCK ONE	Nil	36(29)	37(30)
			KI 50G11	42(34)	43(34)
			KI 75G11	42(34)	43(34)
			KI 90G11	-	44(35)
TB.4B	1x13 mm WETSTOP	2x13 mm WETSTOP	Nil	38(31)	39(33)
			KI 50G11	43(34)	44(36)
			KI 75G11	43(34)	44(36)
			KI 90G11	-	45(37)
TB.4E	1x13 mm SHEETROCK ONE	2x13 mm WETSTOP	Nil	37(30)	38(32)
			KI 50G11	43(34)	44(35)
			KI 75G11	43(34)	44(35)
			KI 90G11	-	45(37)
TB.4K	1x13 mm SHEETROCK ONE	2x13 mm IMPACTSTOP	Nil	39(34)	40(34)
			KI 50G11	44(37)	45(38)
			KI 75G11	44(37)	45(38)
			KI 90G11	-	46(40)
TB.4L	1x13 mm WETSTOP	2x13 mm IMPACTSTOP	Nil	39(33)	39(33)
			KI 50G11	44(36)	44(36)
			KI 75G11	44(36)	44(36)
			KI 90G11	-	45(37)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

## LINED BOTH SIDES

## TB.5

NON-FIRE RATED



## SYSTEM DESCRIPTION

**Side 1:** 2x13 mm non-fire resistant pbd  
**Framing:** Timber studs  
**Insulation:** Refer to table  
**Side 2:** 2x13 mm non-fire resistant pbd.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4)

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	122	142
			STUD SIZE mm	70	90
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )	
TB.5A	2x13 mm SHEETROCK ONE	2x13 mm SHEETROCK ONE	Nil	40(34)	41(35)
			KI 50G11	46(39)	47(40)
			KI 75G11	46(39)	47(40)
			KI 90G11	-	47(40)
TB.5B	2x13 mm WETSTOP	2x13 mm WETSTOP	Nil	41(35)	42(36)
			KI 50G11	47(40)	47(41)
			KI 75G11	47(40)	47(41)
			KI 90G11	-	47(41)
TB.5E	2x13 mm SHEETROCK ONE	2x13 mm WETSTOP	Nil	41(35)	42(36)
			KI 50G11	47(40)	47(40)
			KI 75G11	47(40)	47(40)
			KI 90G11	-	47(40)
TB.5K	2x13 mm SHEETROCK ONE	2x13 mm IMPACTSTOP	Nil	43(37)	43(38)
			KI 50G11	48(41)	48(42)
			KI 75G11	48(41)	48(42)
			KI 90G11	-	48(42)
TB.5L	2x13 mm WETSTOP	2x13 mm IMPACTSTOP	Nil	42(37)	43(37)
			KI 50G11	47(41)	47(41)
			KI 75G11	47(41)	47(41)
			KI 90G11	-	47(41)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

## LINED BOTH SIDES

## TB30.1

## FIRE RESISTANCE LEVEL

NLB -/30/30

LB 30/30/30

FROM BOTH SIDES

FRL Basis: FC16195, FC15834



## SYSTEM DESCRIPTION

Side 1: 1x13 mm fire resistant pbd

Framing: Timber studs

Insulation: Refer to table

Side 2: 1x13 mm fire resistant pbd.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4)

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	96	116
			STUD SIZE mm	70	90
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )	
TB30.1A	1x13 mm FIRESTOP	1x13 mm FIRESTOP	Nil	32(26)	33(28)
			KI 50G11	40(32)	40(33)
			KI 75G11	41(33)	41(34)
			KI 90G11	-	41(34)
TB30.1B	1x13 mm MULTISTOP ONE	1x13 mm MULTISTOP ONE	Nil	34(29)	35(30)
			KI 50G11	41(33)	41(35)
			KI 75G11	42(34)	42(36)
			KI 90G11	-	43(36)
TB30.1C	1x13 mm FIRESTOP	1x13 mm MULTISTOP ONE	Nil	33(27)	34(29)
			KI 50G11	40(33)	40(33)
			KI 75G11	41(34)	41(34)
			KI 90G11	-	41(34)
TB30.1D	1x13 mm IMPACTSTOP	1x13 mm IMPACTSTOP	Nil	34(29)	35(30)
			KI 50G11	41(33)	41(35)
			KI 75G11	42(34)	42(36)
			KI 90G11	-	43(36)
TB30.1E	1x13 mm FIRESTOP	1x13 mm IMPACTSTOP	Nil	33(27)	34(29)
			KI 50G11	40(33)	40(33)
			KI 75G11	41(34)	41(34)
			KI 90G11	-	41(34)

MULTISTOP ONE HI may be a direct substitute for MULTISTOP ONE for FRL and acoustic performance of the same board thickness

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

## TB30.2

## FIRE RESISTANCE LEVEL

NLB -/30/30

LB 30/30/30

FROM BOTH SIDES

FRL Basis: FC16195, FC15834



## SYSTEM DESCRIPTION

Side 1: 1x13 mm fire resistant pbd

Framing: Timber studs

Insulation: Refer to table

Side 2: 2x13 mm fire resistant pbd.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4)

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	109	129
			STUD SIZE mm	70	90
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )	
TB30.2A	1x13 mm FIRESTOP	2x13 mm FIRESTOP	Nil	39(32)	39(32)
			KI 50G11	44(35)	44(37)
			KI 75G11	44(35)	44(37)
			KI 90G11	-	45(38)
TB30.2B	1x13 mm MULTISTOP ONE	2x13 mm MULTISTOP ONE	Nil	39(34)	40(34)
			KI 50G11	44(37)	45(38)
			KI 75G11	44(37)	45(38)
			KI 90G11	-	46(40)
TB30.2C	1x13 mm FIRESTOP	2x13 mm MULTISTOP ONE	Nil	39(33)	40(33)
			KI 50G11	44(36)	44(37)
			KI 75G11	44(36)	44(37)
			KI 90G11	-	45(38)
TB60.2D	1x13 mm IMPACTSTOP	2x13 mm IMPACTSTOP	Nil	39(34)	40(34)
			KI 50G11	44(37)	45(38)
			KI 75G11	44(37)	45(38)
			KI 90G11	-	46(40)
TB60.2E	1x13 mm FIRESTOP	2x13 mm IMPACTSTOP	Nil	39(33)	40(33)
			KI 50G11	44(36)	44(37)
			KI 75G11	44(36)	44(37)
			KI 90G11	-	45(38)

MULTISTOP ONE HI may be a direct substitute for MULTISTOP ONE for FRL and acoustic performance of the same board thickness

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

For the full range of Knauf systems refer to [knauf.com/en-AU/knauf-gypsum/services/tools/eselector](http://knauf.com/en-AU/knauf-gypsum/services/tools/eselector)  
 Blue text indicates systems and products suitable for wet areas.

## LINED BOTH SIDES

## TB60.3

## FIRE RESISTANCE LEVEL

NLB -/60/60

LB 60/60/60

CF 23<sup>†</sup>

FROM BOTH SIDES

FRL Basis: FC16195, FC15834



## SYSTEM DESCRIPTION

Side 1: 1x16 mm fire resistant pbd

Framing: Timber studs

Insulation: Refer to table

Side 2: 1x16 mm fire resistant pbd.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4)

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	102	122
			STUD SIZE mm	70	90
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )	
TB60.3A	1x16 mm FIRESTOP	1x16 mm FIRESTOP	Nil	34(28)	34(29)
			KI 50G11	41(35)	41(36)
			KI 75G11	42(36)	42(37)
			KI 90G11	-	42(38)
TB60.3B	1x16 mm MULTISTOP ONE	1x16 mm MULTISTOP ONE	Nil	34(29)	35(30)
			KI 50G11	41(36)	41(37)
			KI 75G11	42(37)	42(38)
			KI 90G11	-	42(38)
TB60.3C	1x16 mm FIRESTOP	1x16 mm MULTISTOP ONE	Nil	34(28)	35(30)
			KI 50G11	41(36)	41(37)
			KI 75G11	42(37)	42(38)
			KI 90G11	-	42(38)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

† Refer to Charfactor design tables for maximum vertical loads on load bearing fire-rated walls

## TB90.1

## FIRE RESISTANCE LEVEL

NLB -/90/90

LB 90/90/90

CF 11<sup>†</sup>

FROM BOTH SIDES

FRL Basis: FC16195, FC15834



## SYSTEM DESCRIPTION

Side 1: 2x13 mm fire resistant pbd

Framing: Timber studs

Insulation: Refer to table

Side 2: 2x13 mm fire resistant pbd.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4)

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	122	142
			STUD SIZE mm	70	90
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )	
TB90.1A	2x13 mm FIRESTOP	2x13 mm FIRESTOP	Nil	39(33)	40(34)
			KI 50G11	48(44)	48(44)
			KI 75G11	48(44)	48(44)
			KI 90G11	-	48(44)
TB90.1B	2x13 mm MULTISTOP ONE	2x13 mm MULTISTOP ONE	Nil	43(37)	43(38)
			KI 50G11	48(41)	48(42)
			KI 75G11	48(41)	48(42)
			KI 90G11	-	48(42)
TB90.1C	2x13 mm FIRESTOP	2x13 mm MULTISTOP ONE	Nil	40(34)	40(35)
			KI 50G11	48(44)	48(45)
			KI 75G11	48(44)	48(45)
			KI 90G11	-	48(45)
TB90.1D	2x13 mm IMPACTSTOP	2x13 mm IMPACTSTOP	Nil	43(37)	43(38)
			KI 50G11	48(41)	48(42)
			KI 75G11	48(41)	48(42)
			KI 90G11	-	48(42)
TB90.1E	1x13 mm FIRESTOP	2x13 mm IMPACTSTOP	Nil	40(34)	40(35)
			KI 50G11	48(44)	48(45)
			KI 75G11	48(44)	48(45)
			KI 90G11	-	48(45)

MULTISTOP ONE HI may be a direct substitute for MULTISTOP ONE for FRL and acoustic performance of the same board thickness

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

† Refer to Charfactor design tables for maximum vertical loads on load bearing fire-rated walls

## LINED BOTH SIDES

## TB120.1

## FIRE RESISTANCE LEVEL

NLB -/120/120

LB 120/120/120

CF 21<sup>†</sup>

FROM BOTH SIDES

FRL Basis: FC16195, FC15834



## SYSTEM DESCRIPTION

Side 1: 2x16 mm fire resistant pbd

Framing: Timber studs

Insulation: Refer to table

Side 2: 2x16 mm fire resistant pbd.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4)

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	134	154
			STUD SIZE mm	70	90
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )	
TB120.1A	2x16 mm FIRESTOP	2x16 mm FIRESTOP	Nil	41(35)	41(36)
			KI 50G11	48(45)	48(45)
			KI 75G11	48(45)	48(45)
			KI 90G11	-	48(45)
TB120.1B	2x16 mm MULTISTOP ONE	2x16 mm MULTISTOP ONE	Nil	41(36)	41(37)
			KI 50G11	48(45)	48(45)
			KI 75G11	48(45)	48(45)
			KI 90G11	-	48(45)
TB120.1C	2x16 mm FIRESTOP	2x16 mm MULTISTOP ONE	Nil	41(36)	41(36)
			KI 50G11	48(45)	48(45)
			KI 75G11	48(45)	48(45)
			KI 90G11	-	48(45)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

† Refer to Charfactor design tables for maximum vertical loads on load bearing fire-rated walls.

## TB120.3

## FIRE RESISTANCE LEVEL

NLB -/120/120

LB 120/120/120

FROM BOTH SIDES

FRL Basis: FC16195, FC15834



## SYSTEM DESCRIPTION

Side 1: 3x16 mm fire resistant pbd

Framing: Timber studs

Insulation: Refer to table

Side 2: 3x16 mm fire resistant pbd.

## ACOUSTIC RATINGS BASIS: RT&amp;A TK778-15F01

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	134	154
			STUD SIZE mm	70	90
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )	
TB120.3A	3x16 mm FIRESTOP	3x16 mm FIRESTOP	Nil	46(38)	46(39)
			KI 50G11	52(46)	52(47)
			KI 75G11	52(46)	52(47)
			KI 90G11	-	52(47)
TB120.3B	3x16 mm MULTISTOP ONE	3x16 mm MULTISTOP ONE	Nil	46(39)	46(40)
			KI 50G11	52(47)	52(48)
			KI 75G11	52(47)	52(48)
			KI 90G11	-	52(48)
TB120.3C	3x16 mm FIRESTOP	3x16 mm MULTISTOP ONE	Nil	46(38)	46(39)
			KI 50G11	52(46)	52(47)
			KI 75G11	52(46)	52(47)
			KI 90G11	-	52(47)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

## FIBEROCK® AQUA-TOUGH™ - LINED BOTH SIDES

## TBF30.1

**FIRE RESISTANCE LEVEL**  
 NLB -/30/30  
 LB 30/30/30  
 FROM BOTH SIDES

FRL Basis: Contact Knauf



## SYSTEM DESCRIPTION

**Side 1:** 1x13 mm FIBEROCK  
AQUA-TOUGH  
**Framing:** Timber studs  
**Insulation:** Refer to table  
**Side 2:** 1x13 mm FIBEROCK  
AQUA-TOUGH

## ACOUSTIC RATINGS BASIS: SLR-FB-T-S-02

Acoustic ratings are based on  
studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	96	116
			STUD SIZE mm	70	90
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )	
TBF30.1A	1x13 mm FIBEROCK AQUA-TOUGH	1x13 mm FIBEROCK AQUA-TOUGH	Nil	37(33)	37(33)
			KI 50G11	41(36)	41(36)
			KI 75G11	41(36)	41(36)
			KI 90G11	-	41(36)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

## TBF30.2

**FIRE RESISTANCE LEVEL**  
 NLB -/30/30  
 LB 30/30/30  
 FROM BOTH SIDES

FRL Basis: Contact Knauf



## SYSTEM DESCRIPTION

**Side 1:** 1x13 mm FIBEROCK  
AQUA-TOUGH  
**Framing:** Timber studs  
**Insulation:** Refer to table  
**Side 2:** 2x13 mm FIBEROCK  
AQUA-TOUGH

## ACOUSTIC RATINGS BASIS: SLR-FB-T-S-02

Acoustic ratings are based on  
studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	109	129
			STUD SIZE mm	70	90
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )	
TBF30.2A	1x13 mm FIBEROCK AQUA-TOUGH	2x13 mm FIBEROCK AQUA-TOUGH	Nil	39(34)	39(34)
			KI 50G11	43(39)	43(39)
			KI 75G11	43(39)	43(39)
			KI 90G11	-	43(39)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

## FIBEROCK® AQUA-TOUGH™ – LINED BOTH SIDES

### TBF60.1

#### FIRE RESISTANCE LEVEL

NLB –/60/60

LB 60/60/60

CF 23<sup>†</sup>

FROM BOTH SIDES

FRL Basis: Contact Knauf



#### SYSTEM DESCRIPTION

**Side 1:** 1x16 mm FIBEROCK  
AQUA-TOUGH

**Framing:** Timber studs

**Insulation:** Refer to table

**Side 2:** 1x16 mm FIBEROCK  
AQUA-TOUGH

#### ACOUSTIC RATINGS BASIS: SLR-FB-T-S-02

Acoustic ratings are based on  
studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	102	122
			STUD SIZE mm	70	90
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )	
TBF60.1A	1x16 mm FIBEROCK AQUA-TOUGH	1x16 mm FIBEROCK AQUA-TOUGH	Nil	37(33)	37(33)
			KI 50G11	40(36)	40(36)
			KI 75G11	40(36)	40(36)
			KI 90G11	-	40(36)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.

KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.

KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

† Refer to Charfactor design tables for maximum vertical loads on load bearing fire-rated walls

# FIBEROCK® AQUA-TOUGH™ – LINED BOTH SIDES

## TBF90.1

**FIRE RESISTANCE LEVEL**  
NLB **-/90/90**  
FROM BOTH SIDES

FRL Basis: Contact Knauf



### SYSTEM DESCRIPTION

**Side 1:** 2x13 mm FIBEROCK  
AQUA-TOUGH  
**Framing:** Timber studs  
**Insulation:** Refer to table  
**Side 2:** 2x13 mm FIBEROCK  
AQUA-TOUGH

### ACOUSTIC RATINGS BASIS: SLR-FB-T-S-02

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	122	142
			STUD SIZE mm	70	90
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )	
TBF90.1A	2x13 mm FIBEROCK AQUA-TOUGH	2x13 mm FIBEROCK AQUA-TOUGH	Nil	40(35)	41(35)
			KI 50G11	44(39)	44(40)
			KI 75G11	44(39)	44(40)
			KI 90G11	-	44(40)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

## TBF120.1

**FIRE RESISTANCE LEVEL**  
NLB **-/120/120**  
FROM BOTH SIDES

FRL Basis: Contact Knauf



### SYSTEM DESCRIPTION

**Side 1:** 2x16 mm FIBEROCK  
AQUA-TOUGH  
**Framing:** Timber studs  
**Insulation:** Refer to table  
**Side 2:** 2x16 mm FIBEROCK  
AQUA-TOUGH

### ACOUSTIC RATINGS BASIS: SLR-FB-T-S-02

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	134	154
			STUD SIZE mm	70	90
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )	
TBF120.1A	2x16 mm FIBEROCK AQUA-TOUGH	2x16 mm FIBEROCK AQUA-TOUGH	Nil	41(33)	41(35)
			KI 50G11	45(39)	45(39)
			KI 75G11	45(39)	45(39)
			KI 90G11	-	45(39)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

## FURRED STUD

TF.1

NON-FIRE RATED



## SYSTEM DESCRIPTION

**Side 1:** 1x10 mm non-fire resistant pbd  
**Framing:** Timber studs  
**Furring:** Rondo 129 furring channel  
**Insulation:** Refer to table  
**Side 2:** 1x10 mm non-fire resistant pbd.

ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4), SLR-SR-T-SF-01

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	120	140
			STUD SIZE mm	70	90
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )	
TF.1A	1x10 mm SHEETROCK ONE	1x10 mm SHEETROCK ONE	Nil	30(24)	31(25)
			KI 50G11	37(29)	38(30)
			KI 75G11	38(30)	39(31)
			KI 90G11	38(30)	39(31)
TF.1H	1x10 mm SHEETROCK PLUS	1x10 mm SHEETROCK PLUS	Nil	37(30)	38(31)
			KI 50G11	45(35)	46(37)
			KI 75G11	45(35)	46(37)
			KI 90G11	45(35)	46(37)
TF.1I	1x10 mm SHEETROCK ONE	1x10 mm SHEETROCK PLUS	Nil	33(27)	34(28)
			KI 50G11	40(32)	41(33)
			KI 75G11	41(33)	42(34)
			KI 90G11	41(33)	42(34)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

## FURRED STUD

## TF.2

NON-FIRE RATED



## SYSTEM DESCRIPTION

**Side 1:** 2x10 mm non-fire resistant pbd  
**Framing:** Timber studs  
**Furring:** Rondo 129 furring channel  
**Insulation:** Refer to table  
**Side 2:** 2x10 mm non-fire resistant pbd.

ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4), SLR-SR-T-SF-01

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	140	160
			STUD SIZE mm	70	90
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )	
TF.2A	2x10 mm SHEETROCK ONE	2x10 mm SHEETROCK ONE	Nil	36(27)	37(28)
			KI 50G11	44(34)	45(35)
			KI 75G11	44(34)	46(36)
			KI 90G11	45(35)	46(36)
TF.2H	2x10 mm SHEETROCK PLUS	2x10 mm SHEETROCK PLUS	Nil	46(38)	47(39)
			KI 50G11	54(46)	55(48)
			KI 75G11	55(47)	55(48)
			KI 90G11	55(47)	55(48)
TF.2I	2x10 mm SHEETROCK ONE	2x10 mm SHEETROCK PLUS	Nil	39(30)	40(31)
			KI 50G11	47(38)	48(38)
			KI 75G11	47(38)	49(39)
			KI 90G11	48(38)	49(39)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

## FURRED STUD

## TF.3

NON-FIRE RATED



## SYSTEM DESCRIPTION

**Side 1:** 1x13 mm non-fire resistant pbd  
**Framing:** Timber studs  
**Furring:** Rondo 129 furring channel  
**Insulation:** Refer to table  
**Side 2:** 1x13 mm non-fire resistant pbd.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4)

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	126	146
			STUD SIZE mm	70	90
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )	
TF.3A	1x13 mm SHEETROCK ONE	1x13 mm SHEETROCK ONE	Nil	37(31)	38(32)
			KI 50G11	44(35)	46(37)
			KI 75G11	44(35)	46(38)
			KI 90G11	45(36)	46(38)
TF.3B	1x13 mm WETSTOP	1x13 mm WETSTOP	Nil	38(32)	39(32)
			KI 50G11	46(37)	47(39)
			KI 75G11	46(37)	47(39)
			KI 90G11	46(37)	47(39)
TF.3E	1x13 mm SHEETROCK ONE	1x13 mm WETSTOP	Nil	38(32)	39(32)
			KI 50G11	45(36)	46(38)
			KI 75G11	45(36)	47(38)
			KI 90G11	45(36)	47(38)
TF.3K	1x13 mm SHEETROCK ONE	1x13 mm IMPACTSTOP	Nil	39(33)	40(33)
			KI 50G11	47(39)	48(41)
			KI 75G11	47(39)	48(41)
			KI 90G11	47(39)	48(41)
TF.3L	1x13 mm WETSTOP	1x13 mm IMPACTSTOP	Nil	39(33)	40(33)
			KI 50G11	48(40)	48(41)
			KI 75G11	48(40)	49(41)
			KI 90G11	48(40)	49(41)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

## FURRED STUD

## TF.4

NON-FIRE RATED



## SYSTEM DESCRIPTION

**Side 1:** 2x13 mm non-fire resistant pbd  
**Framing:** Timber studs  
**Furring:** Rondo 129 furring channel  
**Insulation:** Refer to table  
**Side 2:** 2x13 mm non-fire resistant pbd.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4)

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	152	172
			STUD SIZE mm	70	90
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )	
TF.4A	2x13 mm SHEETROCK ONE	2x13 mm SHEETROCK ONE	Nil	46(38)	47(39)
			KI 50G11	55(45)	55(47)
			KI 75G11	55(46)	56(47)
			KI 90G11	55(46)	56(47)
TF.4B	2x13 mm WETSTOP	2x13 mm WETSTOP	Nil	47(39)	48(40)
			KI 50G11	56(47)	56(48)
			KI 75G11	56(47)	57(48)
			KI 90G11	56(47)	57(48)
TF.4E	2x13 mm SHEETROCK ONE	2x13 mm WETSTOP	Nil	46(39)	47(39)
			KI 50G11	55(46)	56(47)
			KI 75G11	55(46)	56(48)
			KI 90G11	55(46)	56(48)
TF.4K	2x13 mm SHEETROCK ONE	2x13 mm IMPACTSTOP	Nil	48(40)	49(41)
			KI 50G11	56(48)	57(49)
			KI 75G11	57(48)	57(49)
			KI 90G11	57(48)	57(50)
TF.4L	2x13 mm WETSTOP	2x13 mm IMPACTSTOP	Nil	49(41)	50(41)
			KI 50G11	57(49)	57(50)
			KI 75G11	57(49)	58(50)
			KI 90G11	57(49)	58(50)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

## TF30.1

## FIRE RESISTANCE LEVEL

NLB -/30/30

LB 30/30/30

FROM BOTH SIDES

FRL Basis: FC16195, FC15834



## SYSTEM DESCRIPTION

**Side 1:** 1x13 mm fire resistant pbd  
**Framing:** Timber studs  
**Furring:** Rondo 129 furring channel  
**Insulation:** Refer to table  
**Side 2:** 1x13 mm fire resistant pbd.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4)

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	126	146
			STUD SIZE mm	70	90
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )	
TF30.1A	1x13 mm FIRESTOP	1x13 mm FIRESTOP	Nil	39(33)	40(33)
			KI 50G11	47(39)	48(40)
			KI 75G11	47(39)	48(40)
			KI 90G11	47(39)	48(40)
TF30.1B	1x13 mm MULTISTOP ONE	1x13 mm MULTISTOP ONE	Nil	40(34)	41(34)
			KI 50G11	48(41)	49(42)
			KI 75G11	49(41)	50(42)
			KI 90G11	49(41)	50(42)
TF30.1C	1x13 mm FIRESTOP	1x13 mm MULTISTOP ONE	Nil	40(33)	41(34)
			KI 50G11	48(41)	49(41)
			KI 75G11	48(41)	49(41)
			KI 90G11	48(41)	49(41)
TF30.1D	1x13 mm IMPACTSTOP	1x13 mm IMPACTSTOP	Nil	40(34)	41(34)
			KI 50G11	48(41)	49(42)
			KI 75G11	49(41)	50(42)
			KI 90G11	49(41)	50(42)
TF30.1E	1x13 mm FIRESTOP	1x13 mm IMPACTSTOP	Nil	40(33)	41(34)
			KI 50G11	48(41)	49(41)
			KI 75G11	48(41)	49(41)
			KI 90G11	48(41)	49(41)

MULTISTOP ONE HI may be a direct substitute for MULTISTOP ONE for FRL and acoustic performance of the same board thickness

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

For the full range of Knauf systems refer to [knauf.com/en-AU/knauf-gypsum/services/tools/eselector](http://knauf.com/en-AU/knauf-gypsum/services/tools/eselector)  
 Blue text indicates systems and products suitable for wet areas.

## FURRED STUD

## TF30.2

## FIRE RESISTANCE LEVEL

NLB -/30/30

LB 30/30/30

FROM BOTH SIDES

FRL Basis: FC16195



## SYSTEM DESCRIPTION

**Side 1:** 1x13 mm FIRESTOP**Framing:** Timber stud**Furring:** Rondo 129 furring channel**Insulation:** Refer to table**Side 2:** 1x13 mm MULTISTOP ONE  
+ 1x6 mm VILLABOARD.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4)

Acoustic ratings are based on  
studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	134	154
			STUD SIZE mm	70	90
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )	
TF30.2B	1x13 mm FIRESTOP	1x13 mm MULTISTOP ONE +1x6 mm VILLABOARD	KI 50G11	52(43)	53(44)

MULTISTOP ONE HI may be a direct substitute for MULTISTOP ONE for FRL and acoustic performance of the same board thickness

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.

## FURRED STUD

## TF30.3

## FIRE RESISTANCE LEVEL

NLB -/30/30

LB 30/30/30

FROM BOTH SIDES

FRL Basis: FC16195



## SYSTEM DESCRIPTION

**Side 1:** 1x13 mm MULTISTOP ONE  
+ 1x13 mm FIBEROCK  
AQUA-TOUGH

**Framing:** Timber studs

**Furring:** Rondo 129 furring channel

**Insulation:** Refer to table

**Side 2:** 1x13 mm MULTISTOP ONE  
+ 13 mm FIBEROCK  
AQUA-TOUGH

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4)

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	152	172
			STUD SIZE mm	70	90
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )	
TF30.3A	1x13 mm MULTISTOP ONE + 1x13 mm FIBEROCK AQUA-TOUGH	1x13 mm MULTISTOP ONE + 1x13 mm FIBEROCK AQUA-TOUGH	Nil	49(41)	50(42)
			KI 50G11	55(49)	55(50)
			KI 75G11	55(49)	55(50)
			KI 90G11	55(49)	55(50)

MULTISTOP ONE HI may be a direct substitute for MULTISTOP ONE for FRL and acoustic performance of the same board thickness

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

## TF30.4

## FIRE RESISTANCE LEVEL

NLB -/30/30

LB 30/30/30

FROM BOTH SIDES

FRL Basis: FC16195, FC15834



## SYSTEM DESCRIPTION

**Side 1:** 1x13 mm fire resistant pbd

**Framing:** Timber studs

**Furring:** Rondo 129 furring channel

**Insulation:** Refer to table

**Side 2:** 2x13 mm fire resistant pbd.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4)

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	139	159
			STUD SIZE mm	70	90
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )	
TF30.4A	1x13 mm FIRESTOP	2x13 mm FIRESTOP	Nil	44(37)	45(37)
			KI 50G11	52(43)	52(44)
			KI 75G11	52(43)	53(44)
			KI 90G11	52(43)	53(44)
TF30.4B	1x13 mm MULTISTOP ONE	2x13 mm MULTISTOP ONE	Nil	45(38)	46(39)
			KI 50G11	53(45)	54(46)
			KI 75G11	53(45)	54(46)
			KI 90G11	53(45)	54(46)
TF30.4C	1x13 mm FIRESTOP	2x13 mm MULTISTOP ONE	Nil	45(38)	46(38)
			KI 50G11	52(44)	53(45)
			KI 75G11	53(44)	53(45)
			KI 90G11	53(44)	54(45)
TF30.4D	1x13 mm IMPACTSTOP	2x13 mm IMPACTSTOP	Nil	45(38)	46(39)
			KI 50G11	53(45)	54(46)
			KI 75G11	53(45)	54(46)
			KI 90G11	53(45)	54(46)
TF30.4E	1x13 mm FIRESTOP	2x13 mm IMPACTSTOP	Nil	45(38)	46(38)
			KI 50G11	52(44)	53(45)
			KI 75G11	53(44)	53(45)
			KI 90G11	53(44)	54(45)

MULTISTOP ONE HI may be a direct substitute for MULTISTOP ONE for FRL and acoustic performance of the same board thickness

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

## FURRED STUD

## TF60.5

## FIRE RESISTANCE LEVEL

NLB -/60/60

LB 60/60/60

CF 23<sup>†</sup>

FROM BOTH SIDES

FRL Basis: FC16195, FC15834



## SYSTEM DESCRIPTION

**Side 1:** 1x16 mm fire resistant pbd  
**Framing:** Timber studs  
**Furring:** Rondo 129 furring channel  
**Insulation:** Refer to table  
**Side 2:** 1x16 mm fire resistant pbd.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4)

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	132	152
			STUD SIZE mm	70	90
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )	
TF60.5A	1x16 mm FIRESTOP	1x16 mm FIRESTOP	Nil	42(35)	42(36)
			KI 50G11	49(41)	50(42)
			KI 75G11	50(41)	51(43)
			KI 90G11	50(41)	51(43)
TF60.5B	1x16 mm MULTISTOP ONE	1x16 mm MULTISTOP ONE	Nil	42(36)	43(36)
			KI 50G11	50(42)	51(43)
			KI 75G11	51(42)	51(43)
			KI 90G11	51(43)	52(44)
TF60.5C	1x16 mm FIRESTOP	1x16 mm MULTISTOP ONE	Nil	42(36)	43(36)
			KI 50G11	50(41)	51(43)
			KI 75G11	50(42)	51(43)
			KI 90G11	50(42)	51(43)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

† Refer to Charfactor design tables for maximum vertical loads on load bearing fire-rated walls

## TF60.6

## FIRE RESISTANCE LEVEL

NLB -/60/60

LB 60/60/60

CF 23<sup>†</sup>

FROM BOTH SIDES

FRL Basis: FC16195



## SYSTEM DESCRIPTION

**Side 1:** 1x16 mm FIRESTOP  
**Framing:** Timber studs  
**Furring:** Rondo 129 furring channel  
**Insulation:** Refer to table  
**Side 2:** 1x16 mm MULTISTOP ONE  
 + 1x6 mm VILLABOARD.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4)

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	138	158
			STUD SIZE mm	70	90
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )	
TF60.6B	1x16 mm FIRESTOP	1x16 mm MULTISTOP ONE +1x6 mm VILLABOARD	KI 50G11	53(45)	54(47)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.

† Refer to Charfactor design tables for maximum vertical loads on load bearing fire-rated walls

## FURRED STUD

### TF60.7

#### FIRE RESISTANCE LEVEL

NLB -/60/60

LB 60/60/60

CF 23<sup>†</sup>

FROM BOTH SIDES

FRL Basis: FC16195



#### SYSTEM DESCRIPTION

**Side 1:** 1x16 mm MULTISTOP ONE  
+ 1x13 mm FIBEROCK  
AQUA-TOUGH

**Framing:** Timber studs

**Furring:** Rondo 129 furring channel

**Insulation:** Refer to table

**Side 2:** 1x16 mm MULTISTOP ONE  
+ 1x13 mm FIBEROCK  
AQUA-TOUGH

#### ACOUSTIC RATINGS BASIS: RT&A TE405-20S04(R4)

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	150	170
			STUD SIZE mm	70	90
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )	
TF60.7A	1x16 mm MULTISTOP ONE + 1x13 mm FIBEROCK AQUA-TOUGH	1x16 mm MULTISTOP ONE + 1x13 mm FIBEROCK AQUA-TOUGH	Nil	50(43)	51(43)
			KI 50G11	58(51)	58(52)
			KI 75G11	58(51)	58(52)
			KI 90G11	58(51)	58(52)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.

KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.

KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

† Refer to Charfactor design tables for maximum vertical loads on load bearing fire-rated walls

### TF90.1

#### FIRE RESISTANCE LEVEL

NLB -/90/90

LB 90/90/90

CF 11<sup>†</sup>

FROM BOTH SIDES

FRL Basis: FC16195, FC15834



#### SYSTEM DESCRIPTION

**Side 1:** 2x13 mm fire resistant pbd

**Framing:** Timber studs

**Furring:** Rondo 129 furring channel

**Insulation:** Refer to table

**Side 2:** 2x13 mm fire resistant pbd.

#### ACOUSTIC RATINGS BASIS: RT&A TE405-20S04(R4)

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	152	172
			STUD SIZE mm	70	90
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )	
TF90.1A	2x13 mm FIRESTOP	2x13 mm FIRESTOP	Nil	49(41)	49(41)
			KI 50G11	57(49)	57(50)
			KI 75G11	57(49)	57(50)
			KI 90G11	57(49)	58(50)
TF90.1B	2x13 mm MULTISTOP ONE	2x13 mm MULTISTOP ONE	Nil	50(42)	51(43)
			KI 50G11	58(51)	58(52)
			KI 75G11	58(51)	58(52)
			KI 90G11	58(51)	59(52)
TF90.1C	2x13 mm FIRESTOP	2x13 mm MULTISTOP ONE	Nil	49(41)	50(42)
			KI 50G11	57(50)	58(51)
			KI 75G11	57(50)	58(51)
			KI 90G11	57(50)	58(51)
TF120.1D	2x13 mm IMPACTSTOP	2x13 mm IMPACTSTOP	Nil	50(42)	51(43)
			KI 50G11	58(51)	58(52)
			KI 75G11	58(51)	58(52)
			KI 90G11	58(51)	59(52)
TF120.1E	2x13 mm FIRESTOP	2x13 mm IMPACTSTOP	Nil	49(41)	50(42)
			KI 50G11	57(50)	58(51)
			KI 75G11	57(50)	58(51)
			KI 90G11	57(50)	58(51)

MULTISTOP ONE HI may be a direct substitute for MULTISTOP ONE for FRL and acoustic performance of the same board thickness

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.

KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.

KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

† Refer to Charfactor design tables for maximum vertical loads on load bearing fire-rated walls

## FURRED STUD

## TF120.1

## FIRE RESISTANCE LEVEL

NLB -/120/120

LB 120/120/120

CF 21<sup>†</sup>

FROM BOTH SIDES

FRL Basis: FC16195, FC15834



## SYSTEM DESCRIPTION

Side 1: 2x16 mm fire resistant pbd

Framing: Timber studs

Furring: Rondo 129 furring channel

Insulation: Refer to table

Side 2: 2x16 mm fire resistant pbd.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4)

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	164	184
			STUD SIZE mm	70	90
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )	
TF120.1A	2x16 mm FIRESTOP	2x16 mm FIRESTOP	Nil	51(43)	52(44)
			KI 50G11	58(50)	59(51)
			KI 75G11	59(50)	59(51)
			KI 90G11	59(50)	59(51)
TF120.1B	2x16 mm MULTISTOP ONE	2x16 mm MULTISTOP ONE	Nil	52(44)	53(45)
			KI 50G11	59(51)	60(53)
			KI 75G11	59(52)	60(53)
			KI 90G11	59(52)	60(53)
TF120.1C	2x16 mm FIRESTOP	2x16 mm MULTISTOP ONE	Nil	52(44)	53(45)
			KI 50G11	59(51)	59(52)
			KI 75G11	59(51)	59(52)
			KI 90G11	59(51)	59(52)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

† Refer to Charfactor design tables for maximum vertical loads on load bearing fire-rated walls

## TF120.3

## FIRE RESISTANCE LEVEL

NLB -/120/120

LB 120/120/120

FROM BOTH SIDES

FRL Basis: FC16195, FC15834



## SYSTEM DESCRIPTION

Side 1: 3x16 mm fire resistant pbd

Framing: Timber studs

Furring: Rondo 129 furring channel

Insulation: Refer to table

Side 2: 3x16 mm fire resistant pbd.

## ACOUSTIC RATINGS BASIS: RT&amp;A TK778-15F01

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	196	216
			STUD SIZE mm	70	90
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )	
TF120.3A	3x16 mm FIRESTOP	3x16 mm FIRESTOP	Nil	54(47)	55(48)
			KI 50G11	61(55)	62(56)
			KI 75G11	61(55)	62(56)
			KI 90G11	-	62(56)
TF120.3B	3x16 mm MULTISTOP ONE	3x16 mm MULTISTOP ONE	Nil	55(48)	56(49)
			KI 50G11	62(56)	63(57)
			KI 75G11	62(56)	63(57)
			KI 90G11	-	63(57)
TF120.3C	3x16 mm FIRESTOP	3x16 mm MULTISTOP ONE	Nil	54(47)	55(48)
			KI 50G11	61(55)	62(56)
			KI 75G11	61(55)	62(56)
			KI 90G11	-	62(56)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

## FIBEROCK® AQUA-TOUGH™ – FURRED STUD

## TFF30.1

## FIRE RESISTANCE LEVEL

NLB -/30/30

LB 30/30/30

FROM BOTH SIDES

FRL Basis: Contact Knauf



## SYSTEM DESCRIPTION

Side 1: 1x13 mm FIBEROCK

AQUA-TOUGH

Framing: Timber studs

Furring: Rondo 129 furring channel

Insulation: Refer to table

Side 2: 1x13 mm FIBEROCK

AQUA-TOUGH

## ACOUSTIC RATINGS BASIS: SLR-FB-T-FS-01

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	126	146
			STUD SIZE mm	70	90
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )	
TFF30.1A	1x13 mm FIBEROCK AQUA-TOUGH	1x13 mm FIBEROCK AQUA-TOUGH	Nil	41(33)	42(34)
			KI 50G11	50(41)	50(41)
			KI 75G11	51(43)	52(43)
			KI 90G11	52(44)	52(44)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

## TFF30.2

## FIRE RESISTANCE LEVEL

NLB -/30/30

LB 30/30/30

FROM BOTH SIDES

FRL Basis: Contact Knauf



## SYSTEM DESCRIPTION

Side 1: 1x13 mm FIBEROCK

AQUA-TOUGH

Framing: Timber studs

Furring: Rondo 129 furring channel

Insulation: Refer to table

Side 2: 2x13 mm FIBEROCK

AQUA-TOUGH

## ACOUSTIC RATINGS BASIS: SLR-FB-T-FS-01

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	139	159
			STUD SIZE mm	70	90
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )	
TFF30.2A	1x13 mm FIBEROCK AQUA-TOUGH	2x13 mm FIBEROCK AQUA-TOUGH	Nil	46(38)	47(38)
			KI 50G11	54(46)	54(46)
			KI 75G11	55(47)	55(47)
			KI 90G11	56(47)	56(47)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

## FIBEROCK® AQUA-TOUGH™ – FURRED STUD

## TFF60.1

**FIRE RESISTANCE LEVEL**  
 NLB –/60/60  
 LB 60/60/60  
 CF 23<sup>†</sup>  
 FROM BOTH SIDES

FRL Basis: Contact Knauf



## SYSTEM DESCRIPTION

**Side 1:** 1x16 mm FIBEROCK  
AQUA-TOUGH  
**Framing:** Timber studs  
**Furring:** Rondo 129 furring channel  
**Insulation:** Refer to table  
**Side 2:** 1x16 mm FIBEROCK  
AQUA-TOUGH

## ACOUSTIC RATINGS BASIS: SLR-FB-T-FS-01

Acoustic ratings are based on  
studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	132	152
			STUD SIZE mm	70	90
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )	
TFF60.1A	1x16 mm FIBEROCK AQUA-TOUGH	1x16 mm FIBEROCK AQUA-TOUGH	Nil	45(37)	46(37)
			KI 50G11	53(45)	53(45)
			KI 75G11	54(47)	54(47)
			KI 90G11	55(47)	55(47)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

† Refer to Charfactor design tables for maximum vertical loads on load bearing fire-rated walls

## TFF90.1

**FIRE RESISTANCE LEVEL**  
 NLB –/90/90  
 FROM BOTH SIDES

FRL Basis: Contact Knauf



## SYSTEM DESCRIPTION

**Side 1:** 2x13 mm FIBEROCK  
AQUA-TOUGH  
**Framing:** Timber studs  
**Furring:** Rondo 129 furring channel  
**Insulation:** Refer to table  
**Side 2:** 2x13 mm FIBEROCK  
AQUA-TOUGH

## ACOUSTIC RATINGS BASIS: SLR-FB-T-FS-01

Acoustic ratings are based on  
studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	152	172
			STUD SIZE mm	70	90
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )	
TFF90.1A	2x13 mm FIBEROCK AQUA-TOUGH	2x13 mm FIBEROCK AQUA-TOUGH	Nil	52(42)	53(44)
			KI 50G11	58(47)	59(49)
			KI 75G11	60(49)	60(50)
			KI 90G11	61(50)	61(51)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

# FIBEROCK® AQUA-TOUGH™ – FURRED STUD

## TFF120.1

**FIRE RESISTANCE LEVEL**  
 NLB **-/120/120**  
 FROM BOTH SIDES

FRL Basis: Contact Knauf



### SYSTEM DESCRIPTION

**Side 1:** 2x16 mm FIBEROCK  
AQUA-TOUGH  
**Framing:** Timber studs  
**Furring:** Rondo 129 furring channel  
**Insulation:** Refer to table  
**Side 2:** 2x16 mm FIBEROCK  
AQUA-TOUGH

### ACOUSTIC RATINGS BASIS: SLR-FB-T-FS-01

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	164	184
			STUD SIZE mm	70	90
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )	
TFF120.1A	2x16 mm FIBEROCK AQUA-TOUGH	2x16 mm FIBEROCK AQUA-TOUGH	Nil	53(44)	56(46)
			KI 50G11	60(53)	60(54)
			KI 75G11	61(56)	61(56)
			KI 90G11	62(56)	62(56)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

## STAGGERED STUD

## TS.1

NON-FIRE RATED



## SYSTEM DESCRIPTION

**Side 1:** 1x10 mm non-fire resistant pbd  
**Framing:** Staggered timber studs  
**Insulation:** Refer to table  
**Side 2:** 1x10 mm non-fire resistant pbd.

## ACOUSTIC RATINGS

BASIS: RT&amp;A TE405-20S04(R4), TK778-12S01 &amp; SLR-SR-T-SS-01

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	110	140	160
			PLATE SIZE mm	90	120	140
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )		
TS.1A	1x10 mm SHEETROCK ONE	1x10 mm SHEETROCK ONE	Nil	28(19)	30(21)	31(22)
			KI 50G11	34(26)	36(28)	37(29)
			KI 75G11	35(26)	37(28)	38(29)
			KI 90G11	36(28)	38(30)	39(31)
TS.1H	1x10 mm SHEETROCK PLUS	1x10 mm SHEETROCK PLUS	Nil	36(27)	37(28)	37(28)
			KI 50G11	44(33)	45(36)	45(37)
			KI 75G11	45(34)	46(37)	46(38)
			KI 90G11	45(34)	46(37)	47(39)
TS.1I	1x10 mm SHEETROCK ONE	1x10 mm SHEETROCK PLUS	Nil	33(24)	35(26)	36(26)
			KI 50G11	39(31)	41(33)	42(33)
			KI 75G11	40(31)	42(33)	43(33)
			KI 90G11	41(33)	43(35)	44(35)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

## TS.2

NON-FIRE RATED



## SYSTEM DESCRIPTION

**Side 1:** 2x10 mm non-fire resistant pbd  
**Framing:** Staggered timber studs  
**Insulation:** Refer to table  
**Side 2:** 2x10 mm non-fire resistant pbd.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4), SLR-SR-T-SS-01

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	130	160	180
			PLATE SIZE mm	90	120	140
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )		
TS.2A	2x10 mm SHEETROCK ONE	2x10 mm SHEETROCK ONE	Nil	34(23)	36(25)	37(26)
			KI 50G11	43(33)	45(35)	46(36)
			KI 75G11	44(33)	46(35)	47(36)
			KI 90G11	45(35)	47(37)	48(38)
TS.2H	2x10 mm SHEETROCK PLUS	2x10 mm SHEETROCK PLUS	Nil	42(34)	44(35)	44(36)
			KI 50G11	52(45)	53(46)	53(47)
			KI 75G11	53(46)	54(47)	54(48)
			KI 90G11	54(47)	55(48)	55(49)
TS.2I	2x10 mm SHEETROCK ONE	2x10 mm SHEETROCK PLUS	Nil	39(28)	41(30)	42(30)
			KI 50G11	48(38)	50(40)	51(40)
			KI 75G11	49(38)	51(40)	52(40)
			KI 90G11	50(40)	52(42)	53(42)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

## STAGGERED STUD

## TS.3

NON-FIRE RATED



## SYSTEM DESCRIPTION

**Side 1:** 1x13 mm non-fire resistant pbd

**Framing:** Staggered timber studs

**Insulation:** Refer to table

**Side 2:** 1x13 mm non-fire resistant pbd.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4)

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	116	146	166
			PLATE SIZE mm	90	120	140
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )		
TS.3A	1x13 mm SHEETROCK ONE	1x13 mm SHEETROCK ONE	Nil	35(28)	36(29)	37(29)
			KI 50G11	44(34)	44(34)	45(35)
			KI 75G11	45(35)	45(35)	46(37)
			KI 90G11	45(36)	45(36)	46(38)
TS.3B	1x13 mm WETSTOP	1x13 mm WETSTOP	Nil	36(29)	37(30)	38(30)
			KI 50G11	44(33)	45(36)	45(36)
			KI 75G11	45(34)	46(37)	47(37)
			KI 90G11	45(34)	46(37)	47(37)
TS.3E	1x13 mm SHEETROCK ONE	1x13 mm WETSTOP	Nil	35(28)	36(29)	37(29)
			KI 50G11	44(34)	45(35)	45(36)
			KI 75G11	45(35)	46(36)	46(37)
			KI 90G11	45(35)	46(36)	46(37)
TS.3K	1x13 mm SHEETROCK ONE	1x13 mm IMPACTSTOP	Nil	37(30)	38(30)	38(31)
			KI 50G11	44(34)	45(37)	46(37)
			KI 75G11	45(35)	47(38)	47(38)
			KI 90G11	45(35)	47(38)	47(38)
TS.3L	1x13 mm WETSTOP	1x13 mm IMPACTSTOP	Nil	37(31)	38(31)	39(31)
			KI 50G11	45(35)	46(37)	46(38)
			KI 75G11	46(36)	47(38)	47(39)
			KI 90G11	46(36)	47(39)	47(39)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.

KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.

KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

## TS.4

NON-FIRE RATED



## SYSTEM DESCRIPTION

**Side 1:** 1x13 mm non-fire resistant pbd

**Framing:** Staggered timber studs

**Insulation:** Refer to table

**Side 2:** 2x13 mm non-fire resistant pbd.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4)

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	129	159	179
			PLATE SIZE mm	90	120	140
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )		
TS.4A	1x13 mm SHEETROCK ONE	2x13 mm SHEETROCK ONE	Nil	40(34)	41(34)	41(34)
			KI 50G11	48(39)	49(41)	49(42)
			KI 75G11	49(41)	50(43)	50(43)
			KI 90G11	50(42)	51(44)	51(45)
TS.4B	1x13 mm WETSTOP	2x13 mm WETSTOP	Nil	41(35)	42(35)	42(35)
			KI 50G11	49(41)	50(43)	50(44)
			KI 75G11	50(42)	51(44)	51(45)
			KI 90G11	51(43)	52(45)	52(46)
TS.4E	1x13 mm SHEETROCK ONE	2x13 mm WETSTOP	Nil	40(35)	41(34)	42(35)
			KI 50G11	48(40)	49(42)	50(43)
			KI 75G11	50(41)	50(43)	51(44)
			KI 90G11	52(46)	52(47)	53(48)
TS.4K	1x13 mm SHEETROCK ONE	2x13 mm IMPACTSTOP	Nil	42(36)	43(36)	43(36)
			KI 50G11	49(42)	50(44)	50(45)
			KI 75G11	51(43)	51(45)	52(46)
			KI 90G11	52(44)	52(46)	53(47)
TS.4L	1x13 mm WETSTOP	2x13 mm IMPACTSTOP	Nil	42(36)	43(36)	44(37)
			KI 50G11	50(43)	50(44)	51(45)
			KI 75G11	51(44)	51(45)	52(46)
			KI 90G11	52(45)	52(46)	53(47)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.

KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.

KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

For the full range of Knauf systems refer to [knauf.com/en-AU/knauf-gypsum/services/tools/eselector](http://knauf.com/en-AU/knauf-gypsum/services/tools/eselector)  
Blue text indicates systems and products suitable for wet areas.

## STAGGERED STUD

## TS.5

NON-FIRE RATED



## SYSTEM DESCRIPTION

**Side 1:** 2x13 mm non-fire resistant pbd

**Framing:** Staggered timber studs

**Insulation:** Refer to table

**Side 2:** 2x13 mm non-fire resistant pbd.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4)

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	142	172	192
			PLATE SIZE mm	90	120	140
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )		
TS.5A	2x13 mm SHEETROCK ONE	2x13 mm SHEETROCK ONE	Nil	44(37)	45(37)	45(38)
			KI 50G11	53(46)	53(47)	54(48)
			KI 75G11	54(47)	54(48)	55(49)
			KI 90G11	55(48)	56(50)	56(50)
TS.5B	2x13 mm WETSTOP	2x13 mm WETSTOP	Nil	45(38)	46(38)	47(39)
			KI 50G11	53(47)	54(48)	54(49)
			KI 75G11	54(48)	55(49)	55(50)
			KI 90G11	55(49)	56(51)	56(51)
TS.5E	2x13 mm SHEETROCK ONE	2x13 mm WETSTOP	Nil	44(37)	45(38)	46(38)
			KI 50G11	53(46)	54(48)	54(49)
			KI 75G11	54(47)	55(49)	55(50)
			KI 90G11	55(48)	56(50)	56(51)
TS.5K	2x13 mm SHEETROCK ONE	2x13 mm IMPACTSTOP	Nil	45(39)	47(39)	47(40)
			KI 50G11	54(48)	54(49)	54(50)
			KI 75G11	55(49)	55(50)	55(51)
			KI 90G11	56(50)	56(51)	56(52)
TS.5L	2x13 mm WETSTOP	2x13 mm IMPACTSTOP	Nil	46(39)	47(40)	48(40)
			KI 50G11	54(48)	54(50)	54(50)
			KI 75G11	55(49)	55(51)	55(51)
			KI 90G11	56(50)	56(52)	56(52)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.

KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.

KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

## STAGGERED STUD

## TS30.1

## FIRE RESISTANCE LEVEL

NLB -/30/30

LB 30/30/30

FROM BOTH SIDES

FRL Basis: FC16195, FC15834



## SYSTEM DESCRIPTION

**Side 1:** 1x13 mm fire resistant pbd**Framing:** Staggered timber studs**Insulation:** Refer to table**Side 2:** 1x13 mm fire resistant pbd.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4)

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	116	146	166
			PLATE SIZE mm	90	120	140
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )		
TS30.1A	1x13 mm FIRESTOP	1x13 mm FIRESTOP	Nil	38(31)	38(31)	39(31)
			KI 50G11	45(34)	46(37)	46(38)
			KI 75G11	46(35)	47(38)	47(39)
			KI 90G11	46(35)	47(38)	47(39)
TS30.1B	1x13 mm MULTISTOP ONE	1x13 mm MULTISTOP ONE	Nil	38(32)	39(32)	40(32)
			KI 50G11	46(37)	46(38)	46(39)
			KI 75G11	47(38)	47(39)	48(40)
			KI 90G11	47(38)	47(39)	48(40)
TS30.1C	1x13 mm FIRESTOP	1x13 mm MULTISTOP ONE	Nil	38(31)	39(31)	40(32)
			KI 50G11	45(35)	46(37)	46(38)
			KI 75G11	46(37)	47(39)	47(39)
			KI 90G11	46(37)	47(39)	47(39)
TS30.1D	1x13 mm IMPACTSTOP	1x13 mm IMPACTSTOP	Nil	38(32)	39(32)	40(32)
			KI 50G11	46(37)	46(38)	46(39)
			KI 75G11	47(38)	47(39)	48(40)
			KI 90G11	47(38)	47(39)	48(40)
TS30.1E	1x13 mm FIRESTOP	1x13 mm IMPACTSTOP	Nil	38(31)	39(31)	40(32)
			KI 50G11	45(35)	46(37)	46(38)
			KI 75G11	46(37)	47(39)	47(39)
			KI 90G11	46(37)	47(39)	47(39)

MULTISTOP ONE HI may be a direct substitute for MULTISTOP ONE for FRL and acoustic performance of the same board thickness

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

## TS30.2

## FIRE RESISTANCE LEVEL

NLB -/30/30

LB 30/30/30

FROM BOTH SIDES

FRL Basis: FC16195



## SYSTEM DESCRIPTION

**Side 1:** 1x13 mm fire resistant pbd + 1x13 mm non-fire resistant pbd**Framing:** Staggered timber studs**Insulation:** Refer to table**Side 2:** 1x13 mm fire resistant pbd + 1x13 mm non-fire resistant pbd.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4)

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	142	172	192
			PLATE SIZE mm	90	120	140
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )		
TS30.2A	1x13 mm FIRESTOP + 1x13 mm SHEETROCK ONE	1x13 mm FIRESTOP + 1x13 mm SHEETROCK ONE	KI 90G11	53(47)	54(48)	54(49)
TS30.2B	1x13 mm MULTISTOP ONE + 1x13 mm WETSTOP	1x13 mm MULTISTOP ONE + 1x13 mm WETSTOP	KI 90G11	54(48)	54(49)	54(50)

MULTISTOP ONE HI may be a direct substitute for MULTISTOP ONE for FRL and acoustic performance of the same board thickness

\* KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

## STAGGERED STUD

## TS30.3

## FIRE RESISTANCE LEVEL

NLB -/30/30

LB 30/30/30

FROM BOTH SIDES

FRL Basis: FC16195



## SYSTEM DESCRIPTION

- Side 1:** 1x13 mm FIRESTOP  
**Framing:** Staggered timber studs  
**Insulation:** Refer to table  
**Side 2:** 1x13 mm MULTISTOP ONE +  
 1x6 mm VILLABOARD.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4)

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	122	152	172
			PLATE SIZE mm	90	120	140
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )		
TS30.3B	1x13 mm FIRESTOP	1x13 mm MULTISTOP ONE + 1x6 mm VILLABOARD	KI 50G11	49(42)	49(43)	49(44)
			KI 90G11	50(44)	51(45)	51(45)

MULTISTOP ONE HI may be a direct substitute for MULTISTOP ONE for FRL and acoustic performance of the same board thickness

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

## TS30.4

## FIRE RESISTANCE LEVEL

NLB -/30/30

LB 30/30/30

FROM BOTH SIDES

FRL Basis: FC16195



## SYSTEM DESCRIPTION

- Side 1:** 1x13 mm MULTISTOP ONE +  
 1x6 mm VILLABOARD  
**Framing:** Staggered timber studs  
**Insulation:** Refer to table  
**Side 2:** 1x13 mm MULTISTOP ONE +  
 1x6 mm VILLABOARD.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4)

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	128	158	178
			PLATE SIZE mm	90	120	140
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )		
TS30.4B	1x13 mm MULTISTOP ONE + 1x6 mm VILLABOARD	1x13 mm MULTISTOP ONE + 1x6 mm VILLABOARD	Nil	46(38)	47(39)	48(40)
			KI 50G11	54(46)	55(48)	55(49)
			KI 75G11	55(47)	56(49)	56(50)
			KI 90G11	56(48)	57(50)	57(51)

MULTISTOP ONE HI may be a direct substitute for MULTISTOP ONE for FRL and acoustic performance of the same board thickness

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

## STAGGERED STUD

## TS30.5

## FIRE RESISTANCE LEVEL

NLB -/30/30

LB 30/30/30

FROM BOTH SIDES

FRL Basis: FC16195, FC15834



## SYSTEM DESCRIPTION

Side 1: 1x13 mm fire resistant pbd

Framing: Staggered timber studs

Insulation: Refer to table

Side 2: 2x13 mm fire resistant pbd.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4)

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	129	159	179
			PLATE SIZE mm	90	120	140
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )		
TS30.5A	1x13 mm FIRESTOP	2x13 mm FIRESTOP	Nil	42(35)	43(36)	44(36)
			KI 50G11	49(43)	50(44)	50(45)
			KI 75G11	50(44)	51(45)	51(46)
			KI 90G11	51(45)	52(46)	52(47)
TS30.5B	1x13 mm MULTISTOP ONE	2x13 mm MULTISTOP ONE	Nil	43(36)	44(37)	44(38)
			KI 50G11	50(44)	50(45)	51(46)
			KI 75G11	51(45)	51(46)	52(47)
			KI 90G11	52(46)	52(47)	53(48)
TS30.5C	1x13 mm FIRESTOP	2x13 mm MULTISTOP ONE	Nil	42(36)	44(37)	44(37)
			KI 50G11	50(43)	50(45)	51(45)
			KI 75G11	51(44)	51(46)	52(46)
			KI 90G11	52(45)	52(47)	53(48)
TS30.5D	1x13 mm IMPACTSTOP	2x13 mm IMPACTSTOP	Nil	43(36)	44(37)	44(38)
			KI 50G11	50(44)	50(45)	51(46)
			KI 75G11	51(45)	51(46)	52(47)
			KI 90G11	52(46)	52(47)	53(48)
TS30.5E	1x13 mm FIRESTOP	2x13 mm IMPACTSTOP	Nil	42(36)	44(37)	44(37)
			KI 50G11	50(43)	50(45)	51(45)
			KI 75G11	51(44)	51(46)	52(46)
			KI 90G11	52(45)	52(47)	53(48)

MULTISTOP ONE HI may be a direct substitute for MULTISTOP ONE for FRL and acoustic performance of the same board thickness

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

## TS30.6

## FIRE RESISTANCE LEVEL

NLB -/30/30

LB 30/30/30

FROM BOTH SIDES

FRL Basis: FC16195



## SYSTEM DESCRIPTION

Side 1: 1x13 mm fire resistant pbd + 1x13 mm non-fire resistant pbd

Framing: Staggered timber studs

Insulation: Refer to table

Side 2: 2x13 mm fire resistant pbd.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4)

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	142	172	192
			PLATE SIZE mm	90	120	140
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )		
TS30.6A	1x13 mm FIRESTOP + 1x13 mm SHEETROCK ONE	2x13 mm FIRESTOP	KI 90G11	53(48)	54(49)	54(49)
TS30.6B	1x13 mm MULTISTOP ONE + 1x13 mm WETSTOP	2x13 mm FIRESTOP	KI 90G11	54(48)	54(49)	54(50)

MULTISTOP ONE HI may be a direct substitute for MULTISTOP ONE for FRL and acoustic performance of the same board thickness

\* KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.For the full range of Knauf systems refer to [knauf.com/en-AU/knauf-gypsum/services/tools/eselector](http://knauf.com/en-AU/knauf-gypsum/services/tools/eselector)

Blue text indicates systems and products suitable for wet areas.

## STAGGERED STUD

## TS60.7

## FIRE RESISTANCE LEVEL

NLB -/60/60

LB 60/60/60

CF 23<sup>†</sup>

FROM BOTH SIDES

FRL Basis: FC16195, FC15834



## SYSTEM DESCRIPTION

Side 1: 1x16 mm fire resistant pbd

Framing: Staggered timber studs

Insulation: Refer to table

Side 2: 1x16 mm fire resistant pbd.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4)

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	122	152	172
			PLATE SIZE mm	90	120	140
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )		
TS60.7A	1x16 mm FIRESTOP	1x16 mm FIRESTOP	Nil	39(32)	40(33)	41(33)
			KI 50G11	46(38)	47(39)	47(40)
			KI 75G11	47(39)	48(40)	48(41)
			KI 90G11	47(39)	48(40)	48(41)
TS60.7B	1x16 mm MULTISTOP ONE	1x16 mm MULTISTOP ONE	Nil	39(33)	41(34)	41(34)
			KI 50G11	46(39)	47(40)	47(41)
			KI 75G11	48(40)	48(41)	48(42)
			KI 90G11	48(40)	48(41)	48(42)
TS60.7C	1x16 mm FIRESTOP	1x16 mm MULTISTOP ONE	Nil	39(33)	41(34)	41(34)
			KI 50G11	46(39)	47(40)	47(40)
			KI 75G11	47(40)	48(41)	48(41)
			KI 90G11	47(40)	48(41)	48(41)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

† Refer to Charfactor design tables for maximum vertical loads on load bearing fire-rated walls

## TS60.8

## FIRE RESISTANCE LEVEL

NLB -/60/60

LB 60/60/60

CF 23<sup>†</sup>

FROM BOTH SIDES

FRL Basis: FC16195



## SYSTEM DESCRIPTION

Side 1: 1x16 mm fire resistant pbd +  
1x13 mm non-fire rated pbd

Framing: Staggered timber studs

Insulation: Refer to table

Side 2: 1x16 mm fire resistant pbd +  
1x13 mm non-fire rated pbd.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4)

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	148	178	198
			PLATE SIZE mm	90	120	140
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )		
TS60.8A	1x16 mm FIRESTOP + 1x13 mm SHEETROCK ONE	1x16 mm FIRESTOP + 1x13 mm SHEETROCK ONE	KI 90G11	53(48)	53(49)	53(50)
TS60.8B	1x16 mm MULTISTOP ONE + 1x13 mm WETSTOP	1x16 mm MULTISTOP ONE + 1x13 mm WETSTOP	KI 90G11	54(49)	54(50)	54(50)

\* KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

† Refer to Charfactor design tables for maximum vertical loads on load bearing fire-rated walls

## STAGGERED STUD

## TS60.9

## FIRE RESISTANCE LEVEL

NLB -/60/60

LB 60/60/60

CF 23<sup>†</sup>

FROM BOTH SIDES

FRL Basis: FC16195



## SYSTEM DESCRIPTION

- Side 1:** 1x16 mm FIRESTOP  
**Framing:** Staggered timber studs  
**Insulation:** Refer to table  
**Side 2:** 1x16 mm MULTISTOP ONE +  
 1x6 mm VILLABOARD.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-05F09

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	128	158	178
			PLATE SIZE mm	90	120	140
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )		
TS60.9B	1x16 mm FIRESTOP	1x16 mm MULTISTOP ONE + 1x6 mm VILLABOARD	KI 50G11	50(44)	50(45)	50(46)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.

† Refer to Charfactor design tables for maximum vertical loads on load bearing fire-rated walls

## TS60.10

## FIRE RESISTANCE LEVEL

NLB -/60/60

LB 60/60/60

CF 23<sup>†</sup>

FROM BOTH SIDES

FRL Basis: FC16195



## SYSTEM DESCRIPTION

- Side 1:** 1x16 mm MULTISTOP ONE +  
 1x6 mm VILLABOARD  
**Framing:** Staggered timber studs  
**Insulation:** Refer to table  
**Side 2:** 1x16 mm MULTISTOP ONE +  
 1x6 mm VILLABOARD.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4)

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	134	1764	184
			PLATE SIZE mm	90	120	140
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )		
TS60.10B	1x16 mm MULTISTOP ONE + 1x6 mm VILLABOARD	1x16 mm MULTISTOP ONE + 1x6 mm VILLABOARD	Nil	47(40)	48(41)	49(41)
			KI 50G11	54(48)	55(49)	55(50)
			KI 75G11	55(49)	56(50)	56(51)
			KI 90G11	56(50)	57(51)	57(51)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

† Refer to Charfactor design tables for maximum vertical loads on load bearing fire-rated walls

## STAGGERED STUD

## TS90.1

## FIRE RESISTANCE LEVEL

NLB -/90/90

LB 90/90/90

CF 11<sup>†</sup>

FROM BOTH SIDES

FRL Basis: FC16195, FC15834



## SYSTEM DESCRIPTION

Side 1: 2x13 mm fire resistant pbd

Framing: Staggered timber studs

Insulation: Refer to table

Side 2: 2x13 mm fire resistant pbd.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4)

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	142	172	192
			PLATE SIZE mm	90	120	140
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )		
TS90.1A	2x13 mm FIRESTOP	2x13 mm FIRESTOP	Nil	46(39)	48(41)	49(42)
			KI 50G11	54(48)	54(49)	54(50)
			KI 75G11	55(49)	55(50)	55(51)
			KI 90G11	56(50)	56(51)	56(52)
TS90.1B	2x13 mm MULTISTOP ONE	2x13 mm MULTISTOP ONE	Nil	47(40)	48(41)	49(42)
			KI 50G11	54(49)	54(50)	54(51)
			KI 75G11	55(50)	55(51)	55(52)
			KI 90G11	56(51)	56(52)	56(53)
TS90.1C	2x13 mm FIRESTOP	2x13 mm MULTISTOP ONE	Nil	47(39)	48(40)	48(41)
			KI 50G11	54(49)	54(50)	54(50)
			KI 75G11	55(50)	55(51)	55(51)
			KI 90G11	56(51)	56(52)	56(52)
TS90.1D	2x13 mm IMPACTSTOP	2x13 mm IMPACTSTOP	Nil	47(40)	48(41)	49(42)
			KI 50G11	54(49)	54(50)	54(51)
			KI 75G11	55(50)	55(51)	55(52)
			KI 90G11	56(51)	56(52)	56(53)
TS90.1E	2x13 mm FIRESTOP	2x13 mm IMPACTSTOP	Nil	47(39)	48(40)	48(41)
			KI 50G11	54(49)	54(50)	54(50)
			KI 75G11	55(50)	55(51)	55(51)
			KI 90G11	56(51)	56(52)	56(52)

MULTISTOP ONE HI may be a direct substitute for MULTISTOP ONE for FRL and acoustic performance of the same board thickness

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

† Refer to Charfactor design tables for maximum vertical loads on load bearing fire-rated walls

## STAGGERED STUD

## TS120.1

## FIRE RESISTANCE LEVEL

NLB -/120/120

LB 120/120/120

CF 21<sup>†</sup>

FROM BOTH SIDES

FRL Basis: FC16195, FC15834



## SYSTEM DESCRIPTION

**Side 1:** 2x16 mm fire resistant pbd**Framing:** Staggered timber studs**Insulation:** Refer to table**Side 2:** 2x16 mm fire resistant pbd.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4)

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	154	184	204
			PLATE SIZE mm	90	120	140
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )		
TS120.1A	2x16 mm FIRESTOP	2x16 mm FIRESTOP	Nil	48(41)	49(42)	50(43)
			KI 50G11	54(50)	54(51)	54(51)
			KI 75G11	55(51)	55(52)	55(52)
			KI 90G11	56(52)	56(53)	56(53)
TS120.1B	2x16 mm MULTISTOP ONE	2x16 mm MULTISTOP ONE	Nil	48(42)	49(43)	50(44)
			KI 50G11	54(51)	54(51)	54(52)
			KI 75G11	55(52)	55(52)	55(53)
			KI 90G11	56(53)	56(53)	56(54)
TS120.1C	2x16 mm FIRESTOP	2x16 mm MULTISTOP ONE	Nil	48(42)	49(43)	50(43)
			KI 50G11	54(50)	54(51)	54(51)
			KI 75G11	55(51)	55(52)	55(52)
			KI 90G11	56(52)	56(53)	56(53)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

† Refer to Charfactor design tables for maximum vertical loads on load bearing fire-rated walls

## TS120.3

## FIRE RESISTANCE LEVEL

NLB -/120/120

LB 120/120/120

FROM BOTH SIDES

FRL Basis: FC16195, FC15834



## SYSTEM DESCRIPTION

**Side 1:** 3x16 mm fire resistant pbd**Framing:** Staggered timber studs**Insulation:** Refer to table**Side 2:** 3x16 mm fire resistant pbd.

## ACOUSTIC RATINGS BASIS: RT&amp;A TK778-15F01

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	186	216	236
			PLATE SIZE mm	90	120	140
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )		
TS120.3A	3x16 mm FIRESTOP	3x16 mm FIRESTOP	Nil	50(45)	51(47)	51(48)
			KI 50G11	59(55)	60(56)	60(57)
			KI 75G11	59(55)	60(56)	60(57)
			KI 90G11	59(55)	60(56)	60(57)
TS120.3B	3x16 mm MULTISTOP ONE	3x16 mm MULTISTOP ONE	Nil	50(46)	51(48)	51(49)
			KI 50G11	59(56)	60(57)	60(58)
			KI 75G11	59(56)	60(57)	60(58)
			KI 90G11	59(56)	60(57)	60(58)
TS120.3C	3x16 mm FIRESTOP	3x16 mm MULTISTOP ONE	Nil	50(45)	51(47)	51(48)
			KI 50G11	59(55)	60(56)	60(57)
			KI 75G11	59(55)	60(56)	60(57)
			KI 90G11	59(55)	60(56)	60(57)

MULTISTOP ONE HI may be a direct substitute for MULTISTOP ONE for FRL and acoustic performance of the same board thickness

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

# FIBEROCK® AQUA-TOUGH™ – STAGGERED STUD

## TSF30.1

**FIRE RESISTANCE LEVEL**  
NLB **-/30/30**  
FROM BOTH SIDES

FRL Basis: Contact Knauf



### SYSTEM DESCRIPTION

**Side 1:** 1x13 mm FIBEROCK  
AQUA-TOUGH  
**Framing:** Staggered timber studs  
**Insulation:** Refer to table  
**Side 2:** 1x13 mm FIBEROCK  
AQUA-TOUGH

### ACOUSTIC RATINGS BASIS: SLR-FB-T-SS-01

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	116	146	166
			PLATE SIZE mm	90	120	140
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )		
TSF30.1A	1x13 mm FIBEROCK AQUA-TOUGH	1x13 mm FIBEROCK AQUA-TOUGH	Nil	41(33)	42(34)	43(35)
			KI 50G11	46(39)	47(41)	48(43)
			KI 75G11	48(41)	49(43)	50(44)
			KI 90G11	49(42)	50(43)	51(44)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

## TSF30.2

**FIRE RESISTANCE LEVEL**  
NLB **-/30/30**  
LB **30/30/30**  
FROM BOTH SIDES

FRL Basis: Contact Knauf



### SYSTEM DESCRIPTION

**Side 1:** 1x13 mm FIBEROCK  
AQUA-TOUGH  
**Framing:** Staggered timber studs  
**Insulation:** Refer to table  
**Side 2:** 2x13 mm FIBEROCK  
AQUA-TOUGH

### ACOUSTIC RATINGS BASIS: SLR-FB-T-SS-01

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	129	159	179
			PLATE SIZE mm	90	120	140
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )		
TSF30.2A	1x13 mm FIBEROCK AQUA-TOUGH	2x13 mm FIBEROCK AQUA-TOUGH	Nil	46(37)	46(38)	47(40)
			KI 50G11	50(43)	50(44)	51(45)
			KI 75G11	51(44)	51(45)	52(46)
			KI 90G11	52(45)	52(46)	54(47)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

# FIBEROCK® AQUA-TOUGH™ – STAGGERED STUD

## TSF60.1

### FIRE RESISTANCE LEVEL

NLB –/60/60

LB 60/60/60

CF 23<sup>†</sup>

FROM BOTH SIDES

FRL Basis: Contact Knauf



### SYSTEM DESCRIPTION

**Side 1:** 1x16 mm FIBEROCK  
AQUA-TOUGH

**Framing:** Staggered timber studs

**Insulation:** Refer to table

**Side 2:** 1x16 mm FIBEROCK  
AQUA-TOUGH

### ACOUSTIC RATINGS BASIS: SLR-FB-T-SS-01

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	122	152	172
			PLATE SIZE mm	90	120	140
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )		
TSF60.1A	1x16 mm FIBEROCK AQUA-TOUGH	1x16 mm FIBEROCK AQUA-TOUGH	Nil	44(36)	45(37)	46(38)
			KI 50G11	48(42)	49(43)	50(44)
			KI 75G11	49(44)	51(44)	51(45)
			KI 90G11	50(44)	51(45)	52(46)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.

KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.

KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

† Refer to Charfactor design tables for maximum vertical loads on load bearing fire-rated walls

# FIBEROCK® AQUA-TOUGH™ – STAGGERED STUD

## TSF90.1

**FIRE RESISTANCE LEVEL**  
 NLB **-/90/90**  
 FROM BOTH SIDES

FRL Basis: Contact Knauf



### SYSTEM DESCRIPTION

**Side 1:** 2x13 mm FIBEROCK  
AQUA-TOUGH  
**Framing:** Staggered timber studs  
**Insulation:** Refer to table  
**Side 2:** 2x13 mm FIBEROCK  
AQUA-TOUGH

### ACOUSTIC RATINGS BASIS: SLR-FB-T-SS-01

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	142	172	192
			PLATE SIZE mm	90	120	140
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )		
TSF90.1A	2x13 mm FIBEROCK AQUA-TOUGH	2x13 mm FIBEROCK AQUA-TOUGH	Nil	48(42)	48(43)	49(43)
			KI 50G11	52(44)	53(46)	55(48)
			KI 75G11	54(46)	55(48)	56(49)
			KI 90G11	55(47)	56(48)	56(50)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

## TSF120.1

**FIRE RESISTANCE LEVEL**  
 NLB **-/120/120**  
 FROM BOTH SIDES

FRL Basis: Contact Knauf



### SYSTEM DESCRIPTION

**Side 1:** 2x16 mm FIBEROCK  
AQUA-TOUGH  
**Framing:** Staggered timber studs  
**Insulation:** Refer to table  
**Side 2:** 2x16 mm FIBEROCK  
AQUA-TOUGH

### ACOUSTIC RATINGS BASIS: SLR-FB-T-SS-01

Acoustic ratings are based on studs @ 600 mm ctrs

SYSTEM	LINING SIDE 1	LINING SIDE 2	NOM WALL WIDTH mm	154	184	204
			PLATE SIZE mm	90	120	140
			INSULATION*	R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )		
TSF120.1A	2x16 mm FIBEROCK AQUA-TOUGH	2x16 mm FIBEROCK AQUA-TOUGH	Nil	49(43)	49(43)	50(43)
			KI 50G11	53(48)	53(49)	55(50)
			KI 75G11	55(50)	55(51)	56(52)
			KI 90G11	55(51)	56(52)	56(53)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

## TWIN STUD

TT.1

NON-FIRE RATED



## SYSTEM DESCRIPTION

**Side 1:** 1x10 mm non-fire resistant pbd  
**Framing:** Twin timber studs  
**Gap:** 20 mm  
**Insulation:** Refer to table  
**Side 2:** 1x10 mm non-fire resistant pbd.

ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4), TK778-12S01 &amp; SLR-SR-T-DS-01

SYSTEM	LINING SIDE 1	LINING SIDE 2	MIN WALL WIDTH mm		180	220
			STUD SIZE mm		70	90
			INSULATION*		R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )	
TT.1A	1x10 mm SHEETROCK ONE	1x10 mm SHEETROCK ONE	Nil		31(23)	32(24)
			One Side	KI 50G11	40(33)	41(34)
				KI 75G11	41(33)	42(34)
				KI 90G11	-	43(36)
			Both Sides	KI 50G11	42(35)	43(36)
				KI 75G11	43(35)	44(36)
KI 90G11	-	45(38)				
TT.1H	1x10 mm SHEETROCK PLUS	1x10 mm SHEETROCK PLUS	Nil		39(32)	40(32)
			One Side	KI 50G11	50(40)	51(42)
				KI 75G11	50(40)	51(42)
				KI 90G11	-	51(42)
			Both Sides	KI 50G11	53(43)	54(45)
				KI 75G11	53(43)	54(45)
KI 90G11	-	54(45)				
TT.1I	1x10 mm SHEETROCK ONE	1x10 mm SHEETROCK PLUS	Nil		36(28)	37(29)
			One Side	KI 50G11	45(38)	46(39)
				KI 75G11	46(38)	47(39)
				KI 90G11	-	48(41)
			Both Sides	KI 50G11	46(40)	48(41)
				KI 75G11	48(40)	49(41)
KI 90G11	-	50(43)				

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

## TWIN STUD

## TT.2

NON-FIRE RATED



## SYSTEM DESCRIPTION

**Side 1:** 2x10 mm non-fire resistant pbd  
**Framing:** Twin timber studs  
**Gap:** 20 mm  
**Insulation:** Refer to table  
**Side 2:** 2x10 mm non-fire resistant pbd.

ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4), TK778-12S01 &amp; SLR-SR-T-DS-01

SYSTEM	LINING SIDE 1	LINING SIDE 2	MIN WALL WIDTH mm		200	240	
			STUD SIZE mm		70	90	
			INSULATION*		R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )		
TT.2A	2x10 mm SHEETROCK ONE	2x10 mm SHEETROCK ONE	Nil		40(32)	43(34)	
			KI 50G11	One Side	48(39)	49(42)	
					KI 75G11	49(39)	50(42)
						KI 90G11	-
			KI 50G11	Both Sides	49(40)	51(44)	
					KI 75G11	51(41)	52(44)
KI 90G11	-	53(46)					
TT.2H	2x10 mm SHEETROCK PLUS	2x10 mm SHEETROCK PLUS	Nil		48(39)	49(39)	
			KI 50G11	One Side	58(48)	59(50)	
					KI 75G11	58(48)	59(50)
						KI 90G11	-
			50G11	Both Sides	61(51)	62(53)	
					75G11	61(51)	62(53)
90G11	-	62(53)					
TT.2I	2x10 mm SHEETROCK ONE	2x10 mm SHEETROCK PLUS	Nil		44(34)	45(37)	
			KI 50G11	One Side	53(44)	54(47)	
					KI 75G11	54(44)	55(47)
						KI 90G11	-
			KI 50G11	Both Sides	54(46)	56(49)	
					KI 75G11	56(46)	57(49)
KI 90G11	-	58(51)					

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

## TWIN STUD

TT.3

NON-FIRE RATED



## SYSTEM DESCRIPTION

**Side 1:** 1x13 mm non-fire resistant pbd  
**Framing:** Twin timber studs  
**Gap:** 20 mm  
**Insulation:** Refer to table  
**Side 2:** 1x13 mm non-fire resistant pbd.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4)

SYSTEM	LINING SIDE 1	LINING SIDE 2	MIN WALL WIDTH mm		186	226	
			STUD SIZE mm		70	90	
			INSULATION*		R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )		
TT.3A	1x13 mm SHEETROCK ONE	1x13 mm SHEETROCK ONE	Nil		39(32)	39(32)	
			KI 50G11	One Side	51(40)	52(42)	
					KI 75G11	51(40)	52(42)
					KI 90G11	-	52(42)
			KI 50G11	Both Sides	54(43)	55(45)	
					KI 75G11	54(43)	55(45)
KI 90G11	-	55(45)					
TT.3B	1x13 mm WETSTOP	1x13 mm WETSTOP	Nil		40(33)	41(33)	
			KI 50G11	One Side	52(42)	53(43)	
					KI 75G11	52(42)	53(43)
					KI 90G11	-	53(44)
			KI 50G11	Both Sides	55(45)	56(46)	
					KI 75G11	55(45)	56(46)
KI 90G11	-	56(47)					
TT.3K	1x13 mm SHEETROCK ONE	1x13 mm IMPACTSTOP	Nil		41(34)	42(34)	
			KI 50G11	One Side	53(43)	54(44)	
					KI 75G11	54(43)	54(45)
					KI 90G11	-	55(45)
			KI 50G11	Both Sides	56(46)	57(47)	
					KI 75G11	57(46)	57(48)
KI 90G11	-	58(48)					
TT.3L	1x13 mm WETSTOP	1x13 mm IMPACTSTOP	Nil		41(34)	42(35)	
			KI 50G11	One Side	54(43)	55(45)	
					KI 75G11	54(44)	55(45)
					KI 90G11	-	55(45)
			KI 50G11	Both Sides	57(46)	58(48)	
					KI 75G11	57(47)	58(48)
KI 90G11	-	58(48)					

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

## TWIN STUD

## TT.4

NON-FIRE RATED



## SYSTEM DESCRIPTION

**Side 1:** 2x13 mm non-fire resistant pbd

**Framing:** Twin timber studs

**Gap:** 20 mm

**Insulation:** Refer to table

**Side 2:** 2x13 mm non-fire resistant pbd.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4)

SYSTEM	LINING SIDE 1	LINING SIDE 2	MIN WALL WIDTH mm		212	252		
			STUD SIZE mm		70	90		
			INSULATION*		R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )			
TT.4A	2x13 mm SHEETROCK ONE	2x13 mm SHEETROCK ONE	Nil		48(40)	49(41)		
			KI 50G11	KI 75G11	KI 90G11	One Side	57(47)	58(49)
							58(48)	59(50)
							-	60(51)
			KI 50G11	KI 75G11	KI 90G11	Both Sides	60(50)	61(52)
							61(51)	62(53)
-	63(54)							
TT.4B	2x13 mm WETSTOP	2x13 mm WETSTOP	Nil		49(41)	51(42)		
			KI 50G11	KI 75G11	KI 90G11	One Side	58(49)	59(51)
							59(50)	60(52)
							-	61(53)
			KI 50G11	KI 75G11	KI 90G11	Both Sides	61(52)	62(54)
							62(53)	63(55)
-	64(56)							
TT.4K	2x13 mm SHEETROCK ONE	2x13 mm IMPACTSTOP	Nil		50(42)	52(43)		
			KI 50G11	KI 75G11	KI 90G11	One Side	60(50)	60(52)
							61(51)	61(53)
							-	62(54)
			KI 50G11	KI 75G11	KI 90G11	Both Sides	63(53)	63(55)
							64(54)	64(56)
-	65(57)							
TT.4L	2x13 mm WETSTOP	2x13 mm IMPACTSTOP	Nil		51(42)	52(43)		
			KI 50G11	KI 75G11	KI 90G11	One Side	60(51)	61(52)
							61(52)	62(53)
							-	63(54)
			KI 50G11	KI 75G11	KI 90G11	Both Sides	63(54)	64(55)
							64(55)	65(56)
-	66(57)							

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

## TWIN STUD

## TT30.1

## FIRE RESISTANCE LEVEL

NLB -/30/30

LB 30/30/30

FROM BOTH SIDES

FRL Basis: FC16195, FC15834



## SYSTEM DESCRIPTION

Side 1: 1x13 mm fire resistant pbd

Framing: Twin timber studs

Gap: 20 mm

Insulation: Refer to table

Side 2: 1x13 mm fire resistant pbd.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4)

SYSTEM	LINING SIDE 1	LINING SIDE 2	MIN WALL WIDTH mm		186	226		
			STUD SIZE mm		70	90		
			INSULATION*		R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )			
TT30.1A	1x13 mm FIRESTOP	1x13 mm FIRESTOP	Nil		41(34)	42(35)		
			KI 50G11	KI 75G11	KI 90G11	One Side	54(43)	54(45)
							54(43)	54(45)
							-	55(45)
			KI 50G11	KI 75G11	KI 90G11	Both Sides	57(46)	57(48)
							57(46)	57(48)
-	58(48)							
TT30.1B	1x13 mm MULTISTOP ONE	1x13 mm MULTISTOP ONE	Nil		42(35)	43(36)		
			KI 50G11	KI 75G11	KI 90G11	One Side	55(45)	56(47)
							55(45)	56(47)
							-	56(47)
			KI 50G11	KI 75G11	KI 90G11	Both Sides	58(48)	59(50)
							58(48)	59(50)
-	59(50)							
TT30.1C	1x13 mm FIRESTOP	1x13 mm MULTISTOP ONE	Nil		42(35)	43(35)		
			KI 50G11	KI 75G11	KI 90G11	One Side	55(44)	55(46)
							55(44)	56(46)
							-	56(46)
			KI 50G11	KI 75G11	KI 90G11	Both Sides	58(47)	58(49)
							58(47)	59(49)
-	59(49)							
TT30.1D	1x13 mm IMPACTSTOP	1x13 mm IMPACTSTOP	Nil		42(35)	43(36)		
			KI 50G11	KI 75G11	KI 90G11	One Side	55(45)	56(47)
							55(45)	56(47)
							-	56(47)
			KI 50G11	KI 75G11	KI 90G11	Both Sides	58(48)	59(50)
							58(48)	59(50)
-	59(50)							
TT30.1E	1x13 mm FIRESTOP	1x13 mm IMPACTSTOP	Nil		42(35)	43(35)		
			KI 50G11	KI 75G11	KI 90G11	One Side	55(44)	55(46)
							55(44)	56(46)
							-	56(46)
			KI 50G11	KI 75G11	KI 90G11	Both Sides	58(47)	58(49)
							58(47)	59(49)
-	59(49)							

MULTISTOP ONE HI may be a direct substitute for MULTISTOP ONE for FRL and acoustic performance of the same board thickness

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

## TWIN STUD

## TT30.2

## FIRE RESISTANCE LEVEL

NLB -/30/30

LB 30/30/30

FROM BOTH SIDES

FRL Basis: FC16195



## SYSTEM DESCRIPTION

- Side 1:** 1x13 mm FIRESTOP  
**Framing:** Twin timber stud  
**Gap:** 20 mm  
**Insulation:** Refer to table  
**Side 2:** 1x13 mm fire resistant +  
 1x13 mm non-fire resistant pbd.

## ACOUSTIC RATINGS BASIS: RT&amp;ATE405-20S04(R4)

SYSTEM	LINING SIDE 1	LINING SIDE 2	MIN WALL WIDTH mm		R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )	
			199	239		
			STUD SIZE mm		70	90
			INSULATION*			
TT30.2A	1x13 mm FIRESTOP	1x13 mm FIRESTOP + 1x13 mm SHEETROCK ONE	KI 50G11	Both Sides	59(50)	60(51)
			KI 75G11		60(51)	61(52)
TT30.2B	1x13 mm FIRESTOP	1x13 mm MULTISTOP ONE + 1x13 mm WETSTOP	KI 50G11	Both Sides	59(50)	60(52)
			KI 75G11		61(51)	61(53)

MULTISTOP ONE HI may be a direct substitute for MULTISTOP ONE for FRL and acoustic performance of the same board thickness

- \* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

## TT30.3

## FIRE RESISTANCE LEVEL

NLB -/30/30

LB 30/30/30

FROM BOTH SIDES

FRL Basis: FC16195



## SYSTEM DESCRIPTION

- Side 1:** 1x13 mm FIRESTOP  
**Framing:** Twin timber studs  
**Gap:** 20 mm  
**Insulation:** Refer to table  
**Side 2:** 1x13 mm MULTISTOP ONE + 1x6 mm VILLABOARD.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4)

SYSTEM	LINING SIDE 1	LINING SIDE 2	MIN WALL WIDTH mm		R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )	
			192	232		
			STUD SIZE mm		70	90
			INSULATION*			
TT30.3B	1x13 mm FIRESTOP	1x13 mm MULTISTOP ONE + 1x6 mm VILLABOARD	KI 50G11	Both Sides	60(50)	60(52)
			KI 75G11		61(51)	62(53)

MULTISTOP ONE HI may be a direct substitute for MULTISTOP ONE for FRL and acoustic performance of the same board thickness

- \* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.

## TWIN STUD

## TT30.4

## FIRE RESISTANCE LEVEL

NLB -/30/30

LB 30/30/30

FROM BOTH SIDES

FRL Basis: FC16195



## SYSTEM DESCRIPTION

**Side 1:** 1x13 mm MULTISTOP ONE +  
1x6 mm VILLABOARD

**Framing:** Twin timber studs

**Gap:** 20 mm

**Insulation:** Refer to table

**Side 2:** 1x13 mm MULTISTOP ONE  
+ 1x6 mm VILLABOARD.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4)

SYSTEM	LINING SIDE 1	LINING SIDE 2	MIN WALL WIDTH mm			
			198	238		
			STUD SIZE mm			
			70	90		
INSULATION*			R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )			
TT30.4B	1x13 mm MULTISTOP ONE + 1x6 mm VILLABOARD	1x13 mm MULTISTOP ONE + 1x6 mm VILLABOARD	Nil		50(41)	51(42)
			One Side	KI 50G11	58(48)	59(50)
				KI 75G11	60(49)	60(51)
				KI 90G11	-	61(52)

MULTISTOP ONE HI may be a direct substitute for MULTISTOP ONE for FRL and acoustic performance of the same board thickness

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.

KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.

KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

## TWIN STUD

## TT30.5

## FIRE RESISTANCE LEVEL

NLB -/30/30

LB 30/30/30

FROM BOTH SIDES

FRL Basis: FC16195, FC15834



## SYSTEM DESCRIPTION

Side 1: 1x13 mm fire resistant pbd

Framing: Twin timber studs

Gap: 20 mm

Insulation: Refer to table

Side 2: 2x13 mm fire resistant pbd.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4)

SYSTEM	LINING SIDE 1	LINING SIDE 2	MIN WALL WIDTH mm		199	239	
			STUD SIZE mm		70	90	
			INSULATION*		R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )		
TT30.5A	1x13 mm FIRESTOP	2x13 mm FIRESTOP	Nil		46(38)	47(39)	
			KI 50G11	One Side	56(45)	56(47)	
					KI 75G11	57(46)	57(48)
					KI 90G11	-	59(49)
			KI 50G11	Both Sides	59(48)	59(50)	
					KI 75G11	60(49)	60(51)
KI 90G11	-	62(52)					
TT30.5B	1x13 mm MULTISTOP ONE	2x13 mm MULTISTOP ONE	Nil		47(40)	48(40)	
			KI 50G11	One Side	57(47)	58(49)	
					KI 75G11	58(48)	59(50)
					KI 90G11	-	60(51)
			KI 50G11	Both Sides	60(50)	61(52)	
					KI 75G11	61(51)	62(53)
KI 90G11	-	63(54)					
TT30.5C	1x13 mm FIRESTOP	2x13 mm MULTISTOP ONE	Nil		47(39)	48(40)	
			KI 50G11	One Side	57(46)	57(48)	
					KI 75G11	58(47)	59(49)
					KI 90G11	-	60(50)
			KI 50G11	Both Sides	60(49)	60(51)	
					KI 75G11	61(50)	62(52)
KI 90G11	-	63(53)					
TT30.5D	1x13 mm IMPACTSTOP	2x13 mm IMPACTSTOP	Nil		47(40)	48(40)	
			KI 50G11	One Side	57(47)	58(49)	
					KI 75G11	58(48)	59(50)
					KI 90G11	-	60(51)
			KI 50G11	Both Sides	60(50)	61(52)	
					KI 75G11	61(51)	62(53)
KI 90G11	-	63(54)					
TT30.5E	1x13 mm FIRESTOP	2x13 mm IMPACTSTOP	Nil		47(39)	48(40)	
			KI 50G11	One Side	57(46)	57(48)	
					KI 75G11	58(47)	59(49)
					KI 90G11	-	60(50)
			KI 50G11	Both Sides	60(49)	60(51)	
					KI 75G11	61(50)	62(52)
KI 90G11	-	63(53)					

MULTISTOP ONE HI may be a direct substitute for MULTISTOP ONE for FRL and acoustic performance of the same board thickness

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

## TWIN STUD

## TT60.6

## FIRE RESISTANCE LEVEL

NLB -/60/60

LB 60/60/60

CF 23<sup>†</sup>

FROM BOTH SIDES

FRL Basis: FC16195, FC15834



## SYSTEM DESCRIPTION

**Side 1:** 1x16 mm fire resistant pbd  
**Framing:** Twin timber studs  
**Gap:** 20 mm  
**Insulation:** Refer to table  
**Side 2:** 1x16 mm fire resistant pbd.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4)

SYSTEM	LINING SIDE 1	LINING SIDE 2	MIN WALL WIDTH mm		192	232	
			STUD SIZE mm		70	90	
			INSULATION*		R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )		
TT60.6A	1x16 mm FIRESTOP	1x16 mm FIRESTOP	Nil		44(36)	45(37)	
			KI 50G11	One Side	55(46)	56(47)	
					KI 75G11	57(47)	57(49)
					KI 90G11	-	59(50)
			KI 50G11	Both Sides	58(49)	59(50)	
					KI 75G11	60(50)	60(52)
KI 90G11	-	62(53)					
TT60.6B	1x16 mm MULTISTOP ONE	1x16 mm MULTISTOP ONE	Nil		44(37)	45(38)	
			KI 50G11	One Side	57(48)	57(49)	
					KI 75G11	58(49)	59(50)
					KI 90G11	-	60(52)
			KI 50G11	Both Sides	60(51)	60(52)	
					KI 75G11	61(52)	62(53)
KI 90G11	-	63(55)					
TT60.6C	1x16 mm FIRESTOP	1x16 mm MULTISTOP ONE	Nil		44(37)	45(38)	
			KI 50G11	One Side	56(47)	57(48)	
					KI 75G11	57(48)	58(50)
					KI 90G11	-	59(51)
			KI 50G11	Both Sides	59(50)	60(51)	
					KI 75G11	60(51)	61(53)
KI 90G11	-	62(54)					

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

† Refer to Charfactor design tables for maximum vertical loads on load bearing fire-rated walls

## TT60.7

## FIRE RESISTANCE LEVEL

NLB -/60/60

LB 60/60/60

CF 23<sup>†</sup>

FROM BOTH SIDES

FRL Basis: FC16195



## SYSTEM DESCRIPTION

**Side 1:** 1x16 mm MULTISTOP ONE +  
1x6 mm VILLABOARD  
**Framing:** Twin timber studs  
**Gap:** 20 mm  
**Insulation:** Refer to table  
**Side 2:** 1x16 mm MULTISTOP ONE +  
1x6 mm VILLABOARD.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4)

SYSTEM	LINING SIDE 1	LINING SIDE 2	MIN WALL WIDTH mm		204	244	
			STUD SIZE mm		70	90	
			INSULATION*		R <sub>w</sub>		
TT60.7B	1x16 mm MULTISTOP ONE + 1x6 mm VILLABOARD	1x16 mm MULTISTOP ONE + 1x6 mm VILLABOARD	Nil		52(43)	53(44)	
			KI 50G11	One Side	60(50)	61(52)	
					KI 75G11	62(51)	62(53)
					KI 90G11	-	64(54)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

† Refer to Charfactor design tables for maximum vertical loads on load bearing fire-rated walls

## TWIN STUD

## TT90.1

**FIRE RESISTANCE LEVEL**  
 NLB -/90/90  
 LB 90/90/90  
 CF 11'  
 FROM BOTH SIDES

FRL Basis: FC16195, FC15834



## SYSTEM DESCRIPTION

**Side 1:** 2x13 mm fire resistant pbd  
**Framing:** Twin timber studs  
**Gap:** 20 mm  
**Insulation:** Refer to table  
**Side 2:** 2x13 mm fire resistant pbd.

## ACOUSTIC RATINGS BASIS: RT&amp;A TE405-20S04(R4)

SYSTEM	LINING SIDE 1	LINING SIDE 2	MIN WALL WIDTH mm		212	252		
			STUD SIZE mm		70	90		
			INSULATION*		R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )			
TT90.1A	2x13 mm FIRESTOP	2x13 mm FIRESTOP	Nil		51(42)	52(43)		
			KI 50G11	KI 75G11	KI 90G11	One Side	60(51)	60(51)
							61(52)	61(52)
							-	62(53)
			KI 50G11	KI 75G11	KI 90G11	Both Sides	63(54)	63(54)
							64(55)	64(55)
-	65(56)							
TT90.1B	2x13 mm MULTISTOP ONE	2x13 mm MULTISTOP ONE	Nil		52(44)	53(45)		
			KI 50G11	KI 75G11	KI 90G11	One Side	61(53)	62(54)
							62(54)	63(55)
							-	64(56)
			KI 50G11	KI 75G11	KI 90G11	Both Sides	64(56)	65(57)
							65(57)	66(58)
-	67(59)							
TT90.1C	2x13 mm FIRESTOP	2x13 mm MULTISTOP ONE	Nil		52(43)	53(44)		
			KI 50G11	KI 75G11	KI 90G11	One Side	61(52)	61(53)
							62(53)	62(54)
							-	63(55)
			KI 50G11	KI 75G11	KI 90G11	Both Sides	64(55)	64(56)
							65(56)	65(57)
-	66(58)							
TT90.1D	2x13 mm IMPACTSTOP	2x13 mm IMPACTSTOP	Nil		52(44)	53(45)		
			KI 50G11	KI 75G11	KI 90G11	One Side	61(53)	62(54)
							62(54)	63(55)
							-	64(56)
			KI 50G11	KI 75G11	KI 90G11	Both Sides	64(56)	65(57)
							65(57)	66(58)
-	67(59)							
TT90.1E	2x13 mm FIRESTOP	2x13 mm IMPACTSTOP	Nil		52(43)	53(44)		
			KI 50G11	KI 75G11	KI 90G11	One Side	61(52)	61(53)
							62(53)	62(54)
							-	63(55)
			KI 50G11	KI 75G11	KI 90G11	Both Sides	64(55)	64(56)
							65(56)	65(57)
-	66(58)							

MULTISTOP ONE HI may be a direct substitute for MULTISTOP ONE for FRL and acoustic performance of the same board thickness

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.

KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.

KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

† Refer to Charfactor design tables for maximum vertical loads on load bearing fire-rated walls

# TWIN STUD

## TT120.1

**FIRE RESISTANCE LEVEL**  
 NLB ~~-~~/120/120  
 LB 120/120/120  
 CF 21<sup>†</sup>  
 FROM BOTH SIDES

FRL Basis: FC16195, FC15834



### SYSTEM DESCRIPTION

**Side 1:** 2x16 mm fire resistant pbd  
**Framing:** Twin timber studs  
**Gap:** 20 mm  
**Insulation:** Refer to table  
**Side 2:** 2x16 mm fire resistant pbd.

### ACOUSTIC RATINGS BASIS: RT&A TE405-20S04(R4)

SYSTEM	LINING SIDE 1	LINING SIDE 2	MIN WALL WIDTH mm		224	264
			STUD SIZE mm		70	90
			INSULATION*		R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )	
TT120.1A	2x16 mm FIRESTOP	2x16 mm FIRESTOP	Nil		50(42)	51(43)
			One Side	KI 50G11	61(51)	61(53)
				KI 75G11	62(52)	62(54)
				KI 90G11	-	63(55)
			Both Sides	KI 50G11	64(54)	64(56)
				KI 75G11	65(55)	65(57)
KI 90G11	-	66(58)				
TT120.1B	2x16 mm MULTISTOP ONE	2x16 mm MULTISTOP ONE	Nil		51(43)	52(45)
			One Side	KI 50G11	62(53)	62(55)
				KI 75G11	63(54)	63(56)
				KI 90G11	-	64(57)
			Both Sides	KI 50G11	65(56)	65(58)
				KI 75G11	66(57)	66(59)
KI 90G11	-	67(60)				
TT120.1C	2x16 mm FIRESTOP	2x16 mm MULTISTOP ONE	Nil		51(43)	52(44)
			One Side	KI 50G11	61(52)	62(54)
				KI 75G11	62(53)	63(55)
				KI 90G11	-	64(56)
			Both Sides	KI 50G11	64(55)	65(57)
				KI 75G11	65(56)	66(58)
KI 90G11	-	67(59)				

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

† Refer to Charfactor design tables for maximum vertical loads on load bearing fire-rated walls

## TT120.3

**FIRE RESISTANCE LEVEL**  
 NLB ~~-~~/120/120  
 LB 120/120/120  
 FROM BOTH SIDES

FRL Basis: FC16195, FC15834



### SYSTEM DESCRIPTION

**Side 1:** 3x16 mm fire resistant pbd  
**Framing:** Twin timber studs  
**Gap:** 20 mm  
**Insulation:** Refer to table  
**Side 2:** 3x16 mm fire resistant pbd.

### ACOUSTIC RATINGS BASIS: RT&A TK778-15F01

SYSTEM	LINING SIDE 1	LINING SIDE 2	MIN WALL WIDTH mm		256	296
			STUD SIZE mm		70	90
			INSULATION*		R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )	
TT120.1A	3x16 mm FIRESTOP	3x16 mm FIRESTOP	Nil		54(48)	55(49)
			One Side	KI 50G11	63(56)	64(57)
				KI 75G11	63(56)	64(57)
				KI 90G11	63(56)	64(57)
			Both Sides	KI 50G11	66(59)	67(60)
				KI 75G11	66(59)	67(60)
KI 90G11	-	67(60)				
TT120.1B	3x16 mm MULTISTOP ONE	3x16 mm MULTISTOP ONE	Nil		55(49)	56(50)
			One Side	KI 50G11	64(57)	65(58)
				KI 75G11	64(57)	65(58)
				KI 90G11	64(57)	65(58)
			Both Sides	KI 50G11	67(60)	68(61)
				KI 75G11	67(60)	68(61)
KI 90G11	-	68(61)				
TT120.1C	3x16 mm FIRESTOP	3x16 mm MULTISTOP ONE	Nil		54(48)	55(49)
			One Side	KI 50G11	63(56)	64(57)
				KI 75G11	63(56)	64(57)
				KI 90G11	63(56)	64(57)
			Both Sides	KI 50G11	66(59)	67(60)
				KI 75G11	66(59)	67(60)
KI 90G11	-	67(60)				

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

For the full range of Knauf systems refer to [knauf.com/en-AU/knauf-gypsum/services/tools/eselector](http://knauf.com/en-AU/knauf-gypsum/services/tools/eselector)  
 Blue text indicates systems and products suitable for wet areas.

## FIBEROCK® AQUA-TOUGH™ – TWIN STUD

## TTF30.1

**FIRE RESISTANCE LEVEL**  
NLB **-/30/30**  
FROM BOTH SIDES

FRL Basis: Contact Knauf



## SYSTEM DESCRIPTION

**Side 1:** 1x13 mm FIBEROCK  
AQUA-TOUGH  
**Framing:** Twin timber studs  
**Gap:** 20 mm  
**Insulation:** Refer to table  
**Side 2:** 1x13 mm FIBEROCK  
AQUA-TOUGH

## ACOUSTIC RATINGS BASIS: SLR-FB-T-DS-01

SYSTEM	LINING SIDE 1	LINING SIDE 2	MIN WALL WIDTH mm			
			186	226		
			STUD SIZE mm			
		70		90		
INSULATION*			$R_w (R_w + C_{tr})$			
TTF30.1A	1x13 mm FIBEROCK AQUA-TOUGH	1x13 mm FIBEROCK AQUA-TOUGH	Nil		45(38)	46(40)
			One Side	KI 50G11	53(43)	55(45)
				KI 75G11	54(44)	56(46)
				KI 90G11	-	56(46)
			Both Sides	KI 50G11	55(45)	57(47)
				KI 75G11	56(46)	58(48)
				KI 90G11	-	59(50)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

## TTF30.2

**FIRE RESISTANCE LEVEL**  
NLB **-/30/30**  
FROM BOTH SIDES

FRL Basis: Contact Knauf



## SYSTEM DESCRIPTION

**Side 1:** 1x13 mm FIBEROCK  
AQUA-TOUGH  
**Framing:** Twin timber studs  
**Gap:** 20 mm  
**Insulation:** Refer to table  
**Side 2:** 2x13 mm FIBEROCK  
AQUA-TOUGH

## ACOUSTIC RATINGS BASIS: SLR-FB-T-DS-01

SYSTEM	LINING SIDE 1	LINING SIDE 2	MIN WALL WIDTH mm			
			199	239		
			STUD SIZE mm			
		70		90		
INSULATION*			$R_w (R_w + C_{tr})$			
TTF30.2A	1x13 mm FIBEROCK AQUA-TOUGH	2x13 mm FIBEROCK AQUA-TOUGH	Nil		49(41)	51(43)
			One Side	KI 50G11	58(48)	60(51)
				KI 75G11	59(49)	61(52)
				KI 90G11	-	61(52)
			Both Sides	KI 50G11	60(50)	62(52)
				KI 75G11	61(51)	63(53)
				KI 90G11	-	64(54)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

## FIBEROCK® AQUA-TOUGH™ – TWIN STUD

## TTF60.1

## FIRE RESISTANCE LEVEL

NLB -/60/60

LB 60/60/60

CF 23'

FROM BOTH SIDES

FRL Basis: Contact Knauf



## SYSTEM DESCRIPTION

**Side 1:** 1x16 mm FIBEROCK  
AQUA-TOUGH

**Framing:** Twin timber studs

**Gap:** 20 mm

**Insulation:** Refer to table

**Side 2:** 1x16 mm FIBEROCK  
AQUA-TOUGH

## ACOUSTIC RATINGS BASIS: SLR-FB-T-DS-01

SYSTEM	LINING SIDE 1	LINING SIDE 2	MIN WALL WIDTH mm		192	232	
			STUD SIZE mm		70	90	
			INSULATION*		R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )		
TTF60.1A	1x16 mm FIBEROCK AQUA-TOUGH	1x16 mm FIBEROCK AQUA-TOUGH	Nil		48(40)	49(42)	
			KI 50G11	One Side	57(47)	59(50)	
					KI 75G11	58(48)	60(51)
					KI 90G11	-	60(51)
			KI 50G11	Both Sides	59(49)	61(51)	
					KI 75G11	60(50)	62(52)
					KI 90G11	-	63(53)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

† Refer to Charfactor design tables for maximum vertical loads on load bearing fire-rated walls

## TTF90.1

## FIRE RESISTANCE LEVEL

NLB -/90/90

FROM BOTH SIDES

FRL Basis: Contact Knauf



## SYSTEM DESCRIPTION

**Side 1:** 2x13 mm FIBEROCK  
AQUA-TOUGH

**Framing:** Twin timber studs

**Gap:** 20 mm

**Insulation:** Refer to table

**Side 2:** 2x13 mm FIBEROCK  
AQUA-TOUGH

## ACOUSTIC RATINGS BASIS: SLR-FB-T-DS-01

SYSTEM	LINING SIDE 1	LINING SIDE 2	MIN WALL WIDTH mm		212	252	
			STUD SIZE mm		70	90	
			INSULATION*		R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )		
TTF90.1A	2x13 mm FIBEROCK AQUA-TOUGH	2x13 mm FIBEROCK AQUA-TOUGH	Nil		56(47)	57(51)	
			KI 50G11	One Side	65(54)	67(58)	
					KI 75G11	66(55)	68(59)
					KI 90G11	-	68(59)
			KI 50G11	Both Sides	67(56)	69(60)	
					KI 75G11	68(57)	70(61)
					KI 90G11	-	71(62)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.

## FIBEROCK® AQUA-TOUGH™ – TWIN STUD

## TTF120.1

**FIRE RESISTANCE LEVEL**  
**NLB –/120/120**  
 FROM BOTH SIDES

FRL Basis: Contact Knauf



### SYSTEM DESCRIPTION

**Side 1:** 2x16 mm FIBEROCK  
AQUA-TOUGH  
**Framing:** Twin timber studs  
**Gap:** 20 mm  
**Insulation:** Refer to table  
**Side 2:** 2x16 mm FIBEROCK  
AQUA-TOUGH

### ACOUSTIC RATINGS BASIS: SLR-FB-T-DS-01

SYSTEM	LINING SIDE 1	LINING SIDE 2	MIN WALL WIDTH mm	224	264	
			STUD SIZE mm	70	90	
INSULATION*			R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> )			
TTF120.1A	2x16 mm FIBEROCK AQUA-TOUGH	2x16 mm FIBEROCK AQUA-TOUGH	Nil	58(49)	60(53)	
			One Side	KI 50G11	67(56)	69(60)
				KI 75G11	68(57)	70(61)
				KI 90G11	-	70(61)
			Both Sides	KI 50G11	69(58)	71(62)
				KI 75G11	70(59)	72(63)
				KI 90G11	-	73(64)

\* KI 50G11 – 50 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 75G11 – 75 mm glasswool insulation 11 kg/m<sup>3</sup> density.  
 KI 90G11 – 90 mm glasswool insulation 11 kg/m<sup>3</sup> density.