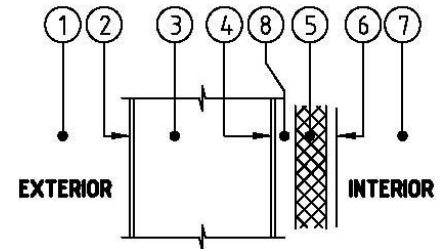


ENERGY EFFICIENCY/THERMAL INSULATION WITH 200mm DINCEL® - WALL

The calculation of thermal resistance (R value).

	OPTION 1	OPTION 2
1. Exterior air film.....	0.04.....	0.04
2. Exterior polymer skin.....	0.0174.....	0.0174
3. 200mm thick concrete wall (min. 2300kg/m ³ density) for Option 1.....	0.138.....	NIL
700kg/m ³ density concrete for Option 2.....	NIL.....	1.7
4. Interior polymer skin.....	0.0174.....	0.0174
5. 75mm thick extruded polystyrene sheet *.....	2.595.....	NIL
6. 10mm thick interior plasterboard.....	0.06.....	0.06
7. Indoor air film (still air).....	0.12.....	0.12
Total	R = 2.989m ² k/W	R = 1.95m ² k/W

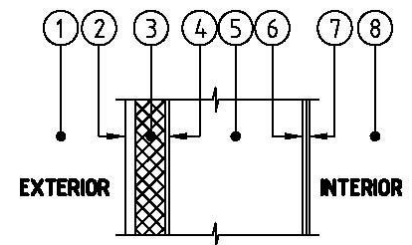


DINCEL®
FAÇADE WALLS

8. Minimum 25mm air gap between 4 & 5 or 6 if used additional R=0.16m² k/W can be added to the values shown above to achieve a higher rating, i.e. 28mm furring channels for internal plasterboard fixing achieves R = 1.95 + 0.16 = 2.11m² k/W for Option 2.

HIGH THERMAL MASS CONSTRUCTION (HOT HUMID CLIMATE)

1. Exterior air film.....	0.04.....	0.04
2. Optional 6mm thick fibre-cement board.....	0.06.....	0.06
or cement render		
3. 75mm thick extruded polystyrene sheet *.....	2.595.....	NIL
4. Exterior polymer skin.....	0.0174.....	0.0174
5. 200mm thick concrete wall (min 2300kg/m ³ density).....	0.138.....	NIL
700kg/m ³ density lightweight.....	NIL.....	1.7
6. Interior polymer skin.....	0.0174.....	0.0174
7. 10mm thick interior plasterboard.....	0.06.....	0.06
8. Indoor air film (still air).....	0.12.....	0.12
Total	R = 3.05m ² k/W	R = 2.01m ² k/W



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9. Minimum 25mm air gap between 6 & 7 if used additional R=0.16m² k/W can be added to the values shown above to achieve a higher rating. R = 2.01 + 0.16 = 2.17m² k/W for Option 2.

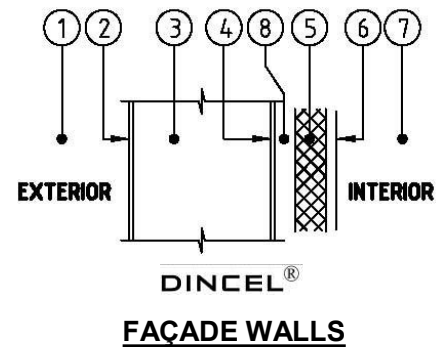
* XPS with thermal conductivity 0.0289 W/m.k (Total R value can be changed to suit varying XPS thicknesses and air gaps)

NOTE: The above information needs to be read together with [\(Download – Finishes\)](#) and [\(Download - Indoor Air Quality, Condensation, Mould, Mildew\)](#).

ENERGY EFFICIENCY/THERMAL INSULATION WITH 110mm DINCEL® - WALL

The calculation of thermal resistance (R value).

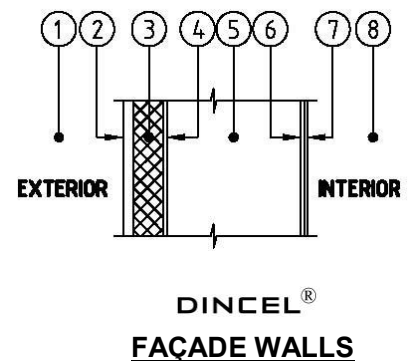
1. Exterior air film.....	0.04
2. Exterior polymer skin.....	0.0174
3. 110mm thick concrete wall (min. 2300kg/m ³ density) for Option 1.....	0.076
4. Interior polymer skin.....	0.0174
5. 75mm thick extruded polystyrene sheet *.....	2.595
6. 10mm thick interior plasterboard.....	0.06
7. Indoor air film (still air).....	<u>0.12</u>
Total	R = 2.92m² k/W



8. Minimum 25mm air gap between 4 & 5 or 6 if used additional R=0.16m² k/W can be added to the values shown above to achieve a higher rating.

HIGH THERMAL MASS CONSTRUCTION (HOT HUMID CLIMATE)

1. Exterior air film.....	0.04
2. Optional 6mm thick fibre-cement board.....	0.06
or cement render	
3. 75mm thick extruded polystyrene sheet *.....	2.595
4. Exterior polymer skin.....	0.0174
5. 110mm thick concrete wall (min 2300kg/m ³ density).....	0.076
6. Interior polymer skin.....	0.0174
7. 10mm thick interior plasterboard.....	0.06
8. Indoor air film (still air).....	<u>0.12</u>
Total	R = 2.979m² k/W



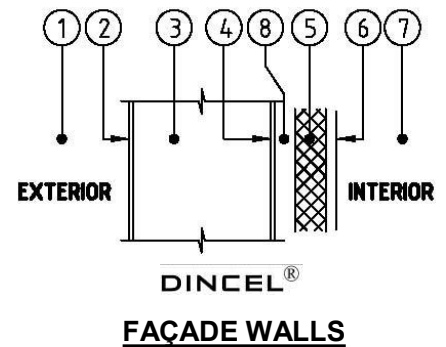
9. Minimum 25mm air gap between 6 & 7 if used additional R=0.16m² k/W can be added to the values shown above to achieve a higher rating.

* XPS with thermal conductivity 0.0289 W/m.k (Total R value can be changed to suit varying XPS thicknesses and air gaps)

ENERGY EFFICIENCY/THERMAL INSULATION WITH 155mm DINCEL® - WALL

The calculation of thermal resistance (R value).

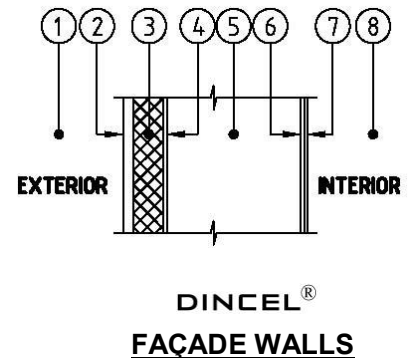
1. Exterior air film.....	0.04
2. Exterior polymer skin.....	0.0174
3. 155mm thick concrete wall (min. 2300kg/m ³ density) for Option 1.....	0.108
4. Interior polymer skin.....	0.0174
5. 75mm thick extruded polystyrene sheet *.....	2.595
6. 10mm thick interior plasterboard.....	0.06
7. Indoor air film (still air).....	<u>0.12</u>
Total	R = 2.95m² k/W



8. Minimum 25mm air gap between 4 & 5 or 6 if used additional R=0.16m² k/W can be added to the values shown above to achieve a higher rating.

HIGH THERMAL MASS CONSTRUCTION (HOT HUMID CLIMATE)

1. Exterior air film.....	0.04
2. Optional 6mm thick fibre-cement board.....	0.06
or cement render	
3. 75mm thick extruded polystyrene sheet *.....	2.595
4. Exterior polymer skin.....	0.0174
5. 155mm thick concrete wall (min 2300kg/m ³ density).....	0.108
6. Interior polymer skin.....	0.0174
7. 10mm thick interior plasterboard.....	0.06
8. Indoor air film (still air).....	<u>0.12</u>
Total	R = 3.011m² k/W



9. Minimum 25mm air gap between 6 & 7 if used additional R=0.16m² k/W can be added to the values shown above to achieve a higher rating.

* XPS with thermal conductivity 0.0289 W/m.k (Total R value can be changed to suit varying XPS thicknesses and air gaps)