

Underfloor Heating/Cooling - Design Request Form (DRF)



Project title: _____

Date of request: _____ Design deadline: _____ Requested by (REP/SO): _____

Customer Data

Building / Project details	Installer / Consultant details:
Name: _____	Company Name: _____
Address: _____	Contact Name: _____
_____	Address: _____
	Mobile: _____

Your experience with under floor heating systems: REHAU RAIN trained Other training/experience No experience
 (Note this design support is only available for trained or experienced installers and engineers.)

General

Requested design service (please tick):

	Approximate Bill of Material	Performance (Output) Calculation	CAD drawing with circuit layouts	Hydraulic Balancing / Valve settings (for the manifold)
<input type="checkbox"/> Bill of Material estimation (no charge)	✓	-	-	-
<input type="checkbox"/> DRAFT performance design (no charge)	✓	✓	-	-
<input type="checkbox"/> DETAILED design with CAD (A design charge will apply. Allow 5-8 working days for completion)	✓	✓	✓	✓

Please fill in the following sections:

> Section A

> Section A and B

> Section A and B

The estimation and/or the layout scheme will be prepared according to the received information and, in no case, shall it replace the existing project specification according to the applicable laws, which has been duly signed by a qualified engineer.

**Please note that the design process will not start until the required section(s) have been filled out.
 If you have any difficulties completing this form please contact the Technical department on +61 (0) 2 8741 4500.**

Additional design information:

_____ Date

_____ Customer Signature

Input Section A - General Information

		Customer Value Please choose <input checked="" type="checkbox"/> own selection, or leave blank for "Standard Value" (Standard Value in bold letters)	
Parameter	Description		
1	Heating/ Cooling	Select heating and/or cooling mode.	<input type="checkbox"/> Heating <input type="checkbox"/> Cooling* <input type="checkbox"/> Heating + Cooling*
	2	Floor System	<input type="checkbox"/> In-Slab <input type="checkbox"/> Tacker sheet <input type="checkbox"/> Diffusion Plates <input type="checkbox"/> RAUFIX Compressive Stress: <input type="checkbox"/> 70 kPa <input type="checkbox"/> 165 kPa
		For Tacker sheet system only: Specify compressive stress for Tacker sheet. Thickness = 25mm.	
3	Pipe type	Select pipe type for floor circuits.	<input type="checkbox"/> RAUTITAN pink <input type="checkbox"/> RAUTHERM S (red)
4	Pipe diameter	Select preferred pipe diameter for floor circuits.	<input type="checkbox"/> 16mm <input type="checkbox"/> 20mm
5	Heat Source	Specify the heat source for UFH.	<input type="checkbox"/> Condensing boiler <input type="checkbox"/> Standard Gas boiler <input type="checkbox"/> Solar with booster <input type="checkbox"/> Wood fired boiler <input type="checkbox"/> Heat Pump <input type="checkbox"/> _____
6	Area sizes	Specify the size of area with similar floor coverings.	Floor coverings#: Area sizes: Polished Concrete _____ m ² Tiles, thin _____ m ² Timber, thin, one layer _____ m ² Carpet, 10mm _____ m ²
			Polished concrete, tiles: <input type="checkbox"/> 150mm <input type="checkbox"/> 200mm <input type="checkbox"/> 250mm <input type="checkbox"/> 300mm Timber, Carpet: <input type="checkbox"/> 100mm <input type="checkbox"/> 150mm <input type="checkbox"/> 200mm
7	Pipe spacing	Select preferred pipe spacing (=pipe distance from center to center).	<input type="checkbox"/> 150mm <input type="checkbox"/> 200mm <input type="checkbox"/> 250mm <input type="checkbox"/> 300mm Timber, Carpet: <input type="checkbox"/> 100mm <input type="checkbox"/> 150mm <input type="checkbox"/> 200mm
8	Manifold	Brass: pre-assembled, with flow meters, up to 12 floor circuits per manifold Polymer: modular, with flow meters, up to 14 floor circuits per manifold	<input type="checkbox"/> Brass <input type="checkbox"/> Polymer (not available in NZ)
	Flow Temperature Control	Specify the device that provides the correct flow temperature to operate the UFH. <i>Note on REHAU E-Mix:</i> Mixer Units are typically used in case the heat source only provides a higher supply temperature than required to operate the UFH, eg. in systems where radiators and UFH manifolds are connected to the same boiler, or in solar/wood fire heated systems ("uncontrolled heat source") Mixer Units need to be operated with a 10°C higher flow temperature from the heat source than the temperature of the UFH circuits.	<input type="checkbox"/> None (Heat Source will provide the correct flow temperature and pump performance) <input type="checkbox"/> REHAU E-Mix Mixer Unit (attached to the manifold, see Notes on the left) <input type="checkbox"/> Other / External
10	Zone / Room Temperature Control	NEA: 24V modular control system, connects the room thermostats to the actuators, can connect up to 6 room thermostats for 6 zones (maximum total 14 actuators) per manifold. ADR-UFH: 230V room thermostat with timer function, can switch 1 boiler + 1 pump, or up to 12 actuators. 1 thermostat required for each temperature zone.	<input type="checkbox"/> NEA <input type="checkbox"/> ADR-UFH <input type="checkbox"/> Other /External
		Specify the number of different temperature / time zones > A zone is an area with the same temperature/time setting. A zone can comprise of one or several rooms. Total floor area for one zone should be >20m ²	<input type="checkbox"/> 1 Temperature/Time zone <input type="checkbox"/> _____ Temperature/Time zones
		For Nea control system only: _____ Specify if and where floor sensors are required. For further information contact your local sales office.	Floor Sensor: <input type="checkbox"/> No <input type="checkbox"/> Yes Specify Rooms: _____

*If cooling is required, Section B must be filled in before a material estimate can be provided.

#If the required floor covering is not available in the list, Section B must be filled in before a material estimate can be provided.

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Input Section B - Specific Information for Performance Calculation

Parameter		Description	Customer Value Please choose <input checked="" type="checkbox"/> own selection, or leave blank for "Standard Value" (Standard Value in bold letters)																																			
11	Drawing	Provide an architectural drawing in PDF format or DWG format.	<input type="checkbox"/> PDF attached <input type="checkbox"/> DWG attached																																			
12	Required Output	Specify the required Heating/Cooling [^] output for all conditioned areas.	Heating: <input type="checkbox"/> 80 W/m² Other: _____ W/m ² (30...100 W/m ²) Cooling [^] : <input type="checkbox"/> 30 W/m² Other: _____ W/m ² (10...60 W/m ²) <input type="checkbox"/> see separate document attached																																			
13	Cooling Source	Specify cooling source for Underfloor Cooling [^]	<input type="checkbox"/> None <input type="checkbox"/> Chiller <input type="checkbox"/> _____																																			
14	Anti Freeze	Specify content of Anti Freeze (Glycol) in the heating water.	<input type="checkbox"/> None <input type="checkbox"/> 10% <input type="checkbox"/> 20% <input type="checkbox"/> _____% <i>The use of Anti Freeze is recommended when the UFH is intended to be non-operating for a period of time during sub-zero conditions.</i>																																			
15	Zone Details	Specify which rooms belong to one zone. <i>A zone is an area with the same temperature/time setting. A zone can comprise of one or several rooms. Minimum total floor area for one zone is 20m²</i>	Zone 1: _____ Zone 2: _____ Zone 3: _____ Zone 4: _____ Zone 5: _____ Zone 6: _____ <i>If no information is provided, all rooms are considered to be in one zone.</i>																																			
16	Room Details	Specify which rooms have equal floor coverings, and specify the design room air temperature for each group of rooms:	<table border="1"> <thead> <tr> <th>Floor Covering</th> <th>Room(s)</th> <th>Room Temp.</th> <th>Room Temp.[^]</th> </tr> </thead> <tbody> <tr> <td>Polished Concrete</td> <td>_____</td> <td>_____ °C</td> <td>_____ °C</td> </tr> <tr> <td>Stone Tiles</td> <td>_____</td> <td>_____ °C</td> <td>_____ °C</td> </tr> <tr> <td>Tiles, 10mm</td> <td>_____</td> <td>_____ °C</td> <td>_____ °C</td> </tr> <tr> <td>Timber, thin</td> <td>_____</td> <td>_____ °C</td> <td>_____ °C</td> </tr> <tr> <td>Carpet, 10mm</td> <td>_____</td> <td>_____ °C</td> <td>_____ °C</td> </tr> <tr> <td>_____</td> <td>_____</td> <td>_____ °C</td> <td>_____ °C</td> </tr> <tr> <td>_____</td> <td>_____</td> <td>_____ °C</td> <td>_____ °C</td> </tr> </tbody> </table>				Floor Covering	Room(s)	Room Temp.	Room Temp. [^]	Polished Concrete	_____	_____ °C	_____ °C	Stone Tiles	_____	_____ °C	_____ °C	Tiles, 10mm	_____	_____ °C	_____ °C	Timber, thin	_____	_____ °C	_____ °C	Carpet, 10mm	_____	_____ °C	_____ °C	_____	_____	_____ °C	_____ °C	_____	_____	_____ °C	_____ °C
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17	Floor Structure		Basement#	Ground Floor#	Level 1	Level 2	_____																															
	<u>Floor Type:</u>	a) Suspended slab (eg elevated on studs) b) Slab-on-ground (eg slab directly on soil) c) Concrete slab for upper levels d) Wooden joists floor (400mm center)	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>																															
	<u>Insulation:</u>	a) Waffle Pod b) Insulation (specify type e.g "EPS 70kPa"): Thickness: _____ R-value: _____	<input type="checkbox"/> _____ mm	<input type="checkbox"/> _____ mm	_____ mm	_____ mm	_____ mm																															
	<u>Thicknesses of all floor layers:</u>	Slab thickness: _____ mm Screed [†] thickness: _____ mm Pipe cover [*] : _____ mm (recommended 30mm for in-slab systems, minimum 45mm for in-screed systems) Use first page for additional information.	_____ mm _____ mm _____ mm	_____ mm _____ mm _____ mm	_____ mm _____ mm _____ mm	_____ mm _____ mm _____ mm	_____ mm _____ mm _____ mm																															
	<u>System:</u>	a) In-slab b) In-screed (Tacker) c) RAUFIX d) Diffusion Plates	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>																															

[^] For cooling mode (Summer)

[†] 'Screed' defines a second slab pour on top of the base slab and a load bearing insulation layer within a room. Screeds are usually made of a sand and cement mixture.

^{*} 'Pipe cover' defines thickness of concrete between the top of the pipe and the top of finished height of the slab or screed. Minimum values are based on residential floor area loads and strictly proposals only.

[#] Depth of Ground Water assumed to be >2m. Soil type assumed to be Sand/Gravel (Enter changes, if necessary)