

# 6812W WARMUP WETROOM SYSTEM

## 1. GENERAL

This section relates to the supply and installation of **Warmup™ wetroom system** comprised of interior tiled shower and wet areas supplied and installed by **Warmup New Zealand Ltd** or Warmup authorized distributor.

It includes:

- underlay
- waterproofing membrane
- tiled wet areas and showers including proprietary shower tray, wastes, drains, shower screens and glass, fittings and accessories
- undertile heating and thermostat control

### 1.1 RELATED WORK

Refer to 6221 ARDEX TILING SOLUTIONS for the supply and installation of ceramic and stone tiles.

#### Documents

### 1.2 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

<a href="#">NZBC E3/AS1</a>	Internal moisture
<a href="#">NZBC G9/VM1</a>	Electricity, 1.0 Electrical installations
<a href="#">AS/NZS 1860.1</a>	Particleboard flooring - Specifications
<a href="#">AS/NZS 2208</a>	Safety glazing materials in buildings
<a href="#">AS/NZS 2269.0</a>	Plywood - Structural - Specifications
<a href="#">AS/NZS 2588</a>	Gypsum plasterboard
AS 3740	Waterproofing of wet areas within residential buildings
<a href="#">NZS 4223.3</a>	Glazing in buildings - Human impact safety requirements
<a href="#">AS/NZS 4858</a>	Wet area membranes
<a href="#">AS/NZS 60335.2.96</a>	Household and similar electrical appliances - Safety - Particular requirements for flexible sheet heating elements for room heating.
NZS 6110	Electrical installations - floor and ceiling heating systems
ASTM C630/C630M-96a	Water-resistant gypsum backing board
BRANZ	Good practice guide: Tiling
Electricity (safety) Regulations 2010	
New Zealand Electrical Codes of Practice	

### 1.3 MANUFACTURER/SUPPLIER DOCUMENTS

Warmup New Zealand Ltd documents relating to this part of the work:

Warmup™ product technical data sheets  
Warmup™ Wetroom technical literature  
BRANZ Appraisal 644 - Warmup Undertile Heating  
BRANZ Appraisal 774 - Warmup Wetroom System  
[BRANZ Appraisal 727](#) - Ardex WPM750 Undertile Butynol  
Ardex WPM750 Undertile Membrane technical literature

Manufacturer/supplier contact details

Company: **Warmup New Zealand Ltd**

Web: [www.warmup.co.nz](http://www.warmup.co.nz)

Email: [levi@warmup.co.nz](mailto:levi@warmup.co.nz)

Telephone: 09 820 2500

#### Warranties

### 1.4 WARRANTY - MANUFACTURER/SUPPLIER

Provide a Warmup™ manufacturer/supplier warranty:

15 years: For Warmup™ Insulation Board

15 years: For Warmup™ WPM750 Undertile Butynol  
15 years: For Warmup™ Shower drain clamp waste  
15 years: For Warmup™ Square drains and channel (strip) drains  
15 years: For Frameless glass screens, fittings and accessories

Lifetime warranty: For Warmup™ Undertile heating elements  
5 years: For Warmup™ Undertile heating controllers

- Provide this warranty on the Warmup™ New Zealand Ltd standard form.
- Commence the warranty from the date of practical completion of the contract works.

Refer to the general section 1237 WARRANTIES for additional requirements.

#### 1.5 WARRANTY - INSTALLER/APPLICATOR

Provide a Warmup™ installer/applicator warranty:

15 years: For Warmup™ Wetroom System

- Provide this warranty on the Warmup™ New Zealand Ltd standard form.
- Commence the warranty from the date of practical completion of the contract works.

Refer to the general section 1237 WARRANTIES for additional requirements.

### Requirements

#### 1.6 QUALIFICATIONS - GENERAL

Workers to be experienced, competent trades people familiar with the materials and techniques specified.

#### 1.7 QUALIFICATIONS - WATERPROOF MEMBRANE

Installers of Warmup™ WPM750 Undertile Butynol to also be Ardex approved applicators.

#### 1.8 WORK BY WARMUP

Supply and installation of Warmup™ Wetroom System to be carried out by Warmup New Zealand Ltd, or Warmup™ authorized distributor, except for the following:

- installation of shower drain clamp waste
- installation of square drains and channel (strip) drains
- supply and installation of tiles
- installation of electrical connection of heating controllers (thermostats).

#### 1.9 NO SUBSTITUTIONS

Substitutions are not permitted to any of the specified Warmup™ systems, components and associated products listed in this section.

### Compliance information

#### 1.10 INFORMATION REQUIRED FOR CODE COMPLIANCE

Provide the following compliance documentation: -

- Manufacturer's warranty
- Manufacturer's, importers or distributors warranty
- Installer's / applicator's warranty
- Producer Statement - Construction from the applicator / installer
- Other information required by the BCA in the Building Consent Approval documents.

### Performance

#### 1.11 QUALITY ASSURANCE

Maintain quality necessary to assure that work is performed in accordance with this specification and qualifying requirements of Warmup New Zealand Ltd.

#### 1.12 INTERNAL / EXTERNAL MOISTURE

Wet area membranes under tiled areas to AS 3740, [NZBC E3](#)/AS1 and to BRANZ Good Tiling Practice.

- 1.13 ELECTRICITY  
Comply with Electricity (Safety) Regulations 2010, [NZBC G9/VM1](#) Electricity, 1.0 Electrical installations, New Zealand Electrical Codes of Practice, NZS 6110 Electrical installations - floor and ceiling heating systems and [AS/NZS 60335.2.96](#) Household and similar electrical appliances - Safety - Particular requirements for flexible sheet heating elements for room heating.

## 2. PRODUCTS

### Materials - substrate linings

- 2.1 COMPRESSED FIBRE CEMENT SHEET  
18mm thick high density sheet of Portland cement, fine sand, cellulose fibre and water, with a smooth finish both sides.
- 2.2 FIBRE CEMENT FLOOR AND WALL OVERLAY/UNDERLAY  
6mm or 9mm thick sheet of Portland cement, sand, fine cellulose fibre and water, with a smooth finish.
- 2.3 CONSTRUCTION PLYWOOD  
Rotary cut radiata pine veneer ply, face sanded, treated H3 for wet areas and to [AS/NZS 2269.0](#).
- 2.4 PARTICLEBOARD  
Medium density resin bonded to [AS/NZS 1860.1](#).
- 2.5 GYPSUM PLASTERBOARD - WATER RESISTANT  
Gypsum plaster core containing a wax emulsion encased in a durable face and backing paper formed for standard and fire rated use to [AS/NZS 2588](#) and for water resistance use to ASTM C630/C630M-96a.

### Tiles

- 2.6 TILING  
Refer to 6221 ARDEX TILING SOLUTIONS for tiles, adhesives and installation of tiles.

### Floor levelling compound

- 2.7 FLOOR LEVELLING COMPOUND  
Warmup™ Thermal Screed.

### Primer

- 2.8 PRIMER  
Warmup™ proprietary primer.

### Tile underlay

- 2.9 TILE UNDERLAY AND SHOWER TRAY  
Warmup™ Insulation Board (by Marmox), a cement reinforced waterproof underlay, available in sheets 1250mm x 600mm x 6mm or 10mm thick. Shower trays have a high density topping, sized to suit the application, with an in-built preformed fall to waste of 1:50 for point drains and 1:100 for channel drains.

### Waterproofing membrane

- 2.10 SHEET WATERPROOFING MEMBRANE  
Warmup™ WPM750 Undertile Butynol (by Ardex), a single ply sheet membrane, to [AS/NZS 4858](#), available in rolls 1.4m wide x 20m long x 0.5mm thick.

### Adhesives

2.11 ADHESIVE - SOLVENT FREE  
Warmup™ proprietary adhesive.

2.12 CATALYST - SOLVENT FREE  
Warmup™ proprietary catalyst.

### **Sealants**

2.13 PROPRIETARY SEALANT  
Ardex CA20P proprietary sealant.

### **Anti fracture membrane**

2.14 ANTI FRACTURE/UNCOUPLING MEMBRANE  
Warmup™ WPM750 Undertile Butynol (by Ardex), a heat weldable single ply sheet membrane, to [AS/NZS 4858](#), available in rolls 1.4m wide x 20m long x 0.5mm thick. Acts as an anti-fracture/uncoupling membrane.

### **Acoustic underlay**

2.15 ACOUSTIC UNDERLAY  
Regupo® 4515, Impact Sound Acoustic Underlay, comprised of PUR-bound cork particles and PUR-foam, tested to AS/ISO 717.2 and AS/ISO 140.6, available in sheets 3mm - 9mm thick.

### **Undertile heating**

2.16 HEATING ELEMENTS  
Warmup™ heating elements, 2.2mm in diameter comprised of double insulation, full screen earth, teflon primary and multi-stranded heating conductors. Tested to [AS/NZS 60335.2.96](#). Available in a number of lengths, wattages and coverage. Refer to SELECTIONS for options.

2.17 THERMOSTATS  
A range of Warmup™ models of programmable and non-programmable temperature controllers available with Warmup™ Undertile System.

### **Accessories - Warmup™ wetroom system**

2.18 CLAMP WASTE  
Warmup™ Clamp Flange, moulded PVC-U, supplied 75mm in diameter (overall flange diameter 180mm).

2.19 SHOWER DRAINS  
Warmup™ 316 stainless steel drain range, available in standard drain range - square and channel drains (7 styles), centre or off centre point drains, and offset or full length channel drains. Refer to SELECTIONS for style and size options.

2.20 FRAMELESS GLASS SHOWER SCREENS  
Frameless glass shower screen, comprised of 10mm thick A grade toughened safety glass, to [NZS 4223.3](#) and [AS/NZS 2208](#), custom made to fit the application. Incorporates pre-channelling for glass installed prior to tiling. Refer to SELECTIONS for details.

2.21 SHOWER NICHES  
Warmup™ Shower Niches, available in various sizes, refer to SELECTIONS for range.

2.22 ELEMENT MONITOR  
Warmup™ "Watchdog" audible alarm connected to the heating element during tiling to advise of any adverse treatment. Once installed the alarm must be left "ON" until removed.

### **Thermostat controls**

- 2.23 THERMOSTAT - PROGRAMMABLE  
Warmup™ TH115 with on/standby switch, remote input, on-screen heating command indicator, temporary bypass and floor model with easy access floor sensor connector (and air, floor or air with floor limitation).
- 2.24 THERMOSTAT - NON-PROGRAMMABLE  
Warmup™ MTC, electronic thermostat with remote floor sensor and locking mechanism.

#### **Accessories - general**

- 2.25 STRIPS, WEATHER BARS AND EXPANSION JOINTS  
Refer to 6221 ARDEX TILING SOLUTIONS tiling section.

### **3. EXECUTION**

#### **Conditions -general**

- 3.1 DELIVERY, STORAGE AND HANDLING  
Take delivery of materials and goods and store on site and protect from damage. Protect finished surfaces, edges and corners from damage. Move/handle goods in accordance with manufactures requirements. Reject and replace goods that are damaged or will not provide the required finish.
- 3.2 COMPLY  
Comply with AS 3740 and the requirements and instructions of Warmup New Zealand Ltd.

#### **Conditions - substrate**

- 3.3 CHECK SUBSTRATE  
Ensure that substrate is level, not subject to movement, deflection and is structurally sound. Ensure all surfaces are clean dry and free from dust and dirt, oil and grease with no projection of sharp materials. Complete all remedial work before commencing installation.
- 3.4 SURFACE PREPARATION  
Ensure surface to receive Warmup™ insulating board is clean, dry and free of any foreign matter that may adversely affect the adhesion of the membrane. Do not use the products in the following situations:  
- areas subject to negative hydrostatic pressure or rising damp  
- when the substrate is wet  
- where the substrate temperature is below 10°C or above 35°C.
- 3.5 SUBSTRATE - CONCRETE  
Ensure slab is level, smooth, clean, cured for a minimum of 28 days, and dried to a relative humidity not exceeding 65% or until the moisture content does not exceed 5.5%. Add cure and seal catalytic agent to concrete or seal as required. Remove loose material and dust.
- 3.6 SUBSTRATE - FIBRE CEMENT SHEETING  
Ensure fibre cement sheeting is wet area grade and suitable for the membrane installation. Check that fixing, thickness and sheet layout is in accordance with manufacturer's requirements.
- 3.7 SUBSTRATE - PLYWOOD  
Ensure plywood is a minimum of 17mm thick structural grade treated to H3.2 (CCA treated) with support framing a minimum of 400mm centres in both directions and moisture content less than 20% before commencing installation. LOSP treated plywood not to be used.

- 3.8 SUBSTRATE - PARTICLE BOARD  
Ensure particle board is wet area grade and suitable for the membrane installation. Check that fixing, thickness and sheet layout is in accordance with manufacturer's requirements.
- 3.9 SUBSTRATE - PLASTERBOARD  
Ensure plasterboard is wet area grade and suitable for the membrane installation. Check that fixing, thickness and sheet layout is in accordance with manufacturer's requirements. Ensure plasterboard is stopped before commencing installation. Must only be used for wet area walls not included in shower enclosure area.

**Installation - tiles**

- 3.10 INSTALL TILES  
Refer to 6221 ARDEX TILING SOLUTIONS tiling section for installation of tiles, adhesives, grouting, movement joints, sealants and accessories.

**Installation - anti fracture membrane**

- 3.11 INSTALL ANTI FRACTURE/UNCOUPLING MEMBRANE  
Install Warmup™ WPM750 Undertile Butynol (by Ardex), in accordance with manufacturer's requirements.

**Installation - acoustic underlay**

- 3.12 INSTALL ACOUSTIC UNDERLAY  
Install Regupol® 4515, Impact Sound Acoustic Underlay, in accordance with manufacturer's requirements.

**Installation - Warmup™ wetroom system**

- 3.13 INSTALL WARMUP WETROOM SYSTEM  
Install Warmup™ wet room system in accordance with Warmup™ installation instructions. Application includes:  
- Level entry (set down) shower on concrete or timber  
- Threshold shower on concrete or timber.
- 3.14 INSTALL WASTE OUTLET  
Install Warmup™ Shower Drain Clamp waste outlet and set top surface flush with the surface receiving the Warmup™ WPM750 Undertile Butynol (by Ardex) application. Complete with shower gully trap and selected Warmup™ shower drain.
- 3.15 INSTALL UNDERLAY  
Lay Warmup™ Insulation Board (by Marmox) in accordance with Warmup™ installation instructions, glued and screwed on timber floor or adhesive fixed with Warmup™ proprietary flexible tile adhesive.
- 3.16 INSTALL WATERPROOFING MEMBRANE  
Roll out Warmup™ WPM750 Undertile Butynol (by Ardex) and cut to measured length. Install membrane under the pre-formed shower tray. Smooth the membrane on contact to minimize air entrapment beneath the membrane. Apply adhesive between the clamp waste and membrane prior to clamping.
- Extend membrane up wall at least 150mm. Ensure membrane is laid tightly into corners. Overlap wall sheets to the 150mm upstand. Weld seams and laps with the Leister Triac S hot air gun. Roll with rubber roller to ensure seams and laps are secure.
- 3.17 INSTALL SHOWER TRAY  
Position Warmup™ Insulation Board (by Marmox) shower tray using Warmup™ proprietary flexible adhesive. Lay tray level with falls to waste (1:100 for channel drain, 1:50 for centre or off-centre waste). Seal all joints between substrate and waterproofing using Warmup™ proprietary sealant.

3.18 **INSTALL SHOWER THRESHOLD**  
Adhesive fix Warmup™ Insulation Board (by Marmox) threshold using Warmup™ proprietary flexible adhesive. Ensure all joints between tray and threshold are sealed.

3.19 **INSTALL GLASS CHANNELLING**  
Adhesive fix proprietary glass channelling to the inside upper edge of the threshold and up the walls to height as shown on the drawings. Install channels flat, level and plumb.

3.20 **INSTALL FRAMELESS GLASS SHOWER SCREEN**  
Install frameless glass shower screen and accessories in accordance with the manufacturer's installation instructions.

#### **Conditions - undertile heating**

3.21 **GENERALLY**  
All work and materials to be in accordance with Warmup™ undertile heating installation instructions.

3.22 **CONFIRM LAYOUT**  
Before commencing work confirm the proposed location of heating cables and controls.

3.23 **CO-ORDINATE SERVICES**  
Co-ordinate and co-operate with other sub-trades to avoid any conflict with the installation of the system with other subcontractors work.

#### **Installation - undertile heating**

3.24 **PRELIMINARY WORK**  
Clean and prime floor prior to installing the heating cables. All fixings such as door stops and floor mounted cabinetry to be clearly marked out on the floor.

3.25 **INSTALL UNDERTILE HEATING**  
Install Warmup™ undertile heating system in accordance with Warmup™ installation instructions, ensuring as much of the floor area is covered in each of the zones shown on the plan / Warmup™ schedule.

Install Warmup™ "Watchdog" audible alarm must be installed and remain turned on until tiling, grouting and all perimeters and movement joints are sealed. Electrical connection of heating controller must be carried out by registered electrician once tiling is completed.

#### **Installation - thermostat controls**

3.26 **INSTALL THERMOSTAT SENSORS**  
Install thermostat sensors for each zone in accordance with the Warmup™ schedule. Install sensors within a conduit so they are easily replaced after completion. For a timber floor install the sensor higher than the heating cables / directly under the flooring.

3.27 **COMMISSION**  
Allow to commission the system fully to Warmup™ instructions.

3.28 **TEST ALL ELEMENTS**  
All elements to be tested for continuity, resistance and insulation resistance prior installation of flooring, and after installation and prior to livening. Fill out the pre and post floor placement test result sheets and forward these results to the owner. It is recommended that all elements are tested at prewired stage of the installation.

3.29 **TEST AND ACTIVATE ALL CONTROLS**  
All thermostats to be activated and checked for correct operation. Where programmable or intelligent thermostats are installed the correct day and time to be programmed in. Once these thermostats have been checked, leave in manual and off unless instructed otherwise.

- 3.30 **TIMBER FLOORS**  
For timber overlay floors ensure:
- If a moisture test has not been carried out, turn off the underfloor heating 1 week prior to the test.
  - Turn off underfloor heating during and for 48 hours either side of the flooring work period.
  - Post flooring installation, turn on heating with thermostat set at 5°C and increase by 5°C increments daily, until desired maximum temperature is reached.
  - Ensure the thermostat is fitted with a maximum temperature of 27°C.

- 3.31 **CONNECTION TO POWER SUPPLY**  
Connect from wall mounted flush box to power supply protected by an RCD. Refer to the appropriate electrical section for electrical connections of the heating mats.

### **Completion**

- 3.32 **ROUTINE CLEANING**  
Carry out routine trade cleaning of this part of the work including periodic removal all debris, unused materials and elements from the site.

- 3.33 **DEFECTIVE OR DAMAGED WORK**  
Repair damaged or marked components. Replace damaged or marked items where repair is not possible or will not be acceptable. Leave work to the standard required for following procedures.

- 3.34 **PROTECTION**  
Provide temporary protection of the finished work:  
Warmup™ Wetrooms unsuitable as a trafficable surface.  
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- 4. SELECTIONS**  
For further details on selections go to [www.warmup.co.nz](http://www.warmup.co.nz).  
Substitutions are not permitted to the following, unless stated otherwise.

### **Materials**

- 4.1 **TILES**  
Refer to 6221 ARDEX TILING SOLUTIONS tiling section.

### **Undertile heating**

- 4.2 **HEATING ELEMENTS**
- |           |         |
|-----------|---------|
| Location: | ~       |
| Brand:    | Warmup™ |
| Area:     | ~       |
| Coverage: | ~       |

### **Warmup™ wetroom system**

- 4.3 **WARMUP WETROOM SYSTEM**
- |                         |                                             |
|-------------------------|---------------------------------------------|
| Location:               | ~                                           |
| Brand:                  | Warmup™                                     |
| Tile underlay:          | Warmup™ Insulation Board (by Marmox) ~      |
| Waterproofing membrane: | Warmup™ WPM750 Undertile Butynol (by Ardex) |
| Sealant:                | Ardex CA20P proprietary sealant             |
| Clamp waste:            | Warmup™ Shower Drain clamp waste            |
| Shower drains:          | Warmup™ stainless steel ~                   |
| Shower screen:          | Warmup™ ~                                   |
| Shower fittings:        | Warmup™ ~                                   |
| Shower niches:          | ~                                           |

### **Thermostat controls**



- 4.4 THERMOSTAT - PROGRAMMABLE  
Location: ~  
Brand: Warmup™ TH115  
Type: ~
- 4.5 THERMOSTAT - NON-PROGRAMMABLE  
Location: ~  
Brand: Warmup™ ~  
Type: ~