









UNDERFLOOR HEATING

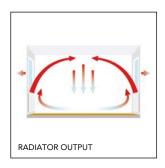
In recent years underfloor heating has been widely acknowledged as one of the most effective methods of heating. It has become the fastest growing market for both domestic and commercial heating sectors. As one of Europe's leading names in heating technology, MYSON FLOORTEC underfloor heating is at the forefront of the underfloor revolution. In addition to our manufacturing and technical expertise, we provide full planning, design and supply services to help you achieve your perfect home.

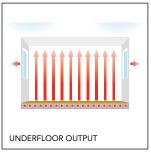


How it works

MYSON FLOORTEC underfloor heating works by heating your home from the floor upwards. This form of radiant heating is different to the convected heat provided by radiators, which works by drawing cold air across your floor, heating it and then convecting it upwards.

The main advantage of MYSON FLOORTEC underfloor heating is its high level of performance. Radiant heat means that the warmth is concentrated where you need it most. You'll enjoy uniform heat, with no cold spots or draughts, and it's perfect for human comfort - you won't get cold feet and you will keep a cool head.





Quotation service

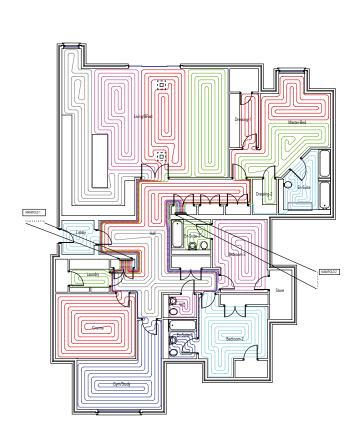
MYSON FLOORTEC underfloor heating pride ourselves on our market leading service. We offer a free 48hr quotation service that couldn't be easier. We do all the calculations for you and prepare a detailed quotation. All you need to do is send us your architect's floor plans or measurements and we'll take care of the rest.

E-mail your drawings to: underfloor@myson.co.uk

Post your drawings to:

Myson FLOORTEC Underfloor Heating Eastern Avenue Team Valley Gateshead Tyne & Wear NE11 0PG

Alternatively you can call us on 0845 402 3434





Design service

MYSON FLOORTEC underfloor heating provide a full design service, tailored to individual requirements. Our unique design will relate to your project, however large or small, and will make the installation of our underfloor heating even easier.

Our complete design service starts with an assessment of the customer's needs. We use architects plans to assess heat loss requirements and produce a computerised design of the most efficient layout.

This design service is completely free and carried out by our technical experts, who have years of experience in designing underfloor heating systems. And, as we are the only total solutions provider, we can also offer unbiased advice about other forms of heating. For example, it may be more effective to combine underfloor heating with radiators or other heat emitters. If this is the case, then we will provide you with a fully integrated design that includes both underfloor heating and radiators.

All we need to produce your designs are the full architectural drawings. All our drawings are advisory only based on our years of heating expertise.



Quality guaranteed

Every component of a MYSON FLOORTEC Complete Underfloor Heating System has undergone thousands of test cycles. Our underfloor heating systems are regularly assessed for quality by independent international institutions and consistently achieve top marks and quality certificates.

- Guaranteed for all operating conditions
- MYSON is a Member of UHMA (Underfloor Heating Manufacturers Association)
- All electrical components carry a 2 year warranty from date of installation
- MYSON FLOORTEC offer a comprehensive 10 year pipe warranty

Complete System Guarantee

MYSON FLOORTEC underfloor heating also offer a 10 year Complete System Guarantee that promotes the advantages of both tried and tested component compatibility and correct system design. We are confident that, when installed correctly*, our systems will perform to the highest standards, so eliminating unnecessary problems. Buy a bespoke system from MYSON and our Complete System Guarantee means you will benefit from complete peace of mind.



^{*}MYSON FLOORTEC cannot be held responsible for problems arising from poorly installed systems. All installations must be fitted in accordance with the CIBSE Underfloor Heating Design and Installation Guide 2004.

Training

MYSON FLOORTEC underfloor heating offers free training workshops for installers or developers to show how easy it is to install our underfloor heating systems.

Training takes place at our head office in Gateshead and is carried out by our technical experts, who have years of experience designing and installing underfloor heating systems.

To find out when the next training session is, call 0845 402 3434 or e-mail underfloor@myson.co.uk

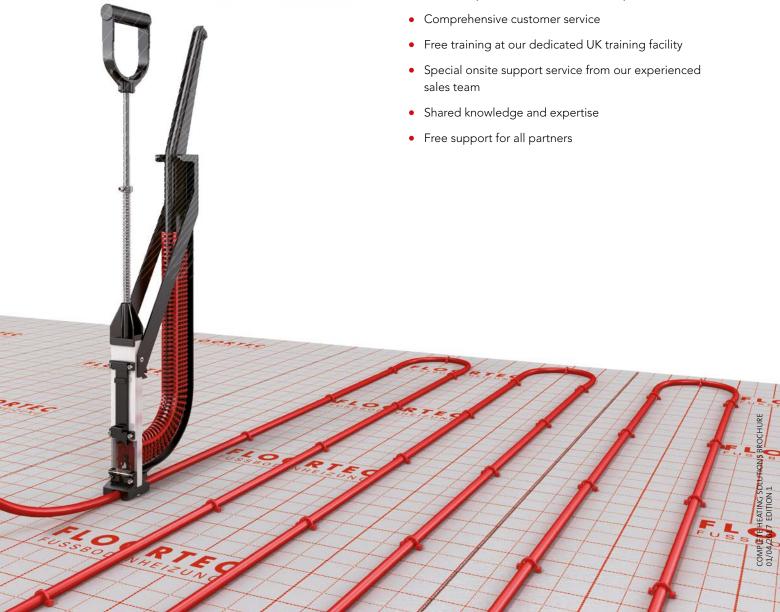
After sales service

Our first class service doesn't stop once we've sold our systems. We want our customers to enjoy the benefits of our systems to the full, and as such we offer a special ServicePlus after sales service.

Our ServicePlus technical support team are available to help you get the most out of our products. Our helpful team of technical advisors are always on hand to answer any questions regarding MYSON FLOORTEC underfloor heating.

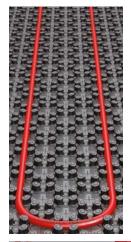
We offer:

• Swift and practical advice from our experts











CLIPRAIL



TACKERNAIL

FIXING SYSTEMS

MYSON FLOORTEC underfloor heating offer a full and comprehensive range of fixing systems for all floor types. Our systems are suitable for any project, and include solutions for solid, suspended, floating and retrofit floors.

SOLID FLOORS are a common type of floor system and are cost effective for underfloor heating. Underfloor heating pipes are embedded into concrete or screed.

SUSPENDED FLOORS include joisted floors with conventional joists supported on end walls of sleeper walls as well as solid floors with battens fixed to the floor.

FLOATING FLOOR structures are ideal for underfloor heating as they have a low thermal mass and therefore a rapid response to changes in temperature.

RETROFIT FLOORS allow you to install underfloor heating in older and existing properties without the need for expensive excavation.

TACKERNAIL

MYSON FLOORTEC underfloor heating Tackernails are exclusive to MYSON, and are the strongest nail solution available. The Tackernail system is suitable for solid floor types.

The Tackernail is made entirely out of plastic so there is no clogging from sticking tape. It also has more barbs, so there is no worry about nails lifting. The pipe is positioned in place and the Tackernail is fixed over the pipe using a MYSON FLOORTEC Tackertool. The Tackertool is specifically designed to work with our Tackernails for easy and efficient operation. It can be purchased or rented from MYSON FLOORTEC.

Tackernail and Tackertool have been designed with the installer in mind, as it is a fast and effective method of anchoring the MYSON FLOORTEC underfloor heating pipework. It is also very flexible allowing both spiral and serpentine laying patterns.

Please note: No floor insulation is supplied with this fixing system.





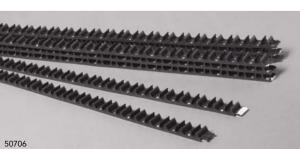






Description	Order Code
3D Short (38mm) Tackernail* (Box of 400)	50250
3D Medium (42mm) Tackernail* (Box of 400)	50251
3D Long (58mm) Tackernail* (Box of 400)	50252
3D Tackertool UNI	50253
Red Insulated Pipe Sleeve (10m Roll)	50069
Flexible Pipe Cover (400mm Length)	50078
Expansion Profile (2m)	50076
Expansion Joint Strip (2m)	50077
Border Insulation (30m Roll)	50220
Screed Tape (75m Roll)	50226









CLIPRAIL

Cliprail systems are for use on solid floor types. The Cliprails are designed to attach the MYSON FLOORTEC underfloor heating pipework to floor insulation (supplied by others) using the adhesive and Cliprail pins supplied. The Cliprail consists of a robust, u-shaped channel that is 1m in length, with fixing positions every 50mm.

This is a fast and cost effective method of installing underfloor heating and is suitable for both traditional and liquid screeds. The pipe is installed in a serpentine laying pattern.

Please note: No floor insulation is supplied with this fixing system.



DELIVERY 2 - 5 working days.

Description	Order Code
17mm Black Cliprail (1m length)	50706
50mm Red Cliprail Pins (Pack of 500)	50710
Anchor Clips (Bag of 50)	50228
Red Insulated Pipe Sleeve (10m Roll)	50069
Flexible Pipe Cover (400mm Length)	50078
Expansion Profile (2m)	50076
Expansion Joint Strip (2m)	50077
Border Insulation (30m Roll)	50220
Screed Tape (75m Roll)	50226

PREFORMED PLATE

Preformed Plate is a fast and effective fixing system and is ideal for single person installations. It is suitable for solid floor types. It is a castellated fixing system that comprises of an expanded 11mm polystyrene insulation base with raised burls that are designed to firmly grip the MYSON FLOORTEC underfloor heating pipe. The pipe is fixed easily into the desired pattern by lightly pressing with your foot.

It is suitable for 14 - 17mm pipework and is very flexible, allowing both spiral and serpentine laying patterns.











Description	Order Code
Preformed Plate 14 to 17mm Pipe (1500 x 800mm - Box of 8)	50236
Foam Perimeter Tube (50m)	50235
Red Insulated Pipe Sleeve (10m Roll)	50069
Flexible Pipe Cover (400mm Length)	50078
Expansion Profile (2m)	50076
Expansion Joint Strip (2m)	50077
Border Insulation (30m Roll)	50220



50537





NAKED PREFORMED PLATE

Naked Preformed Plate is a fast and effective fixing system and is ideal for single person installations. It is suitable for solid floor types. It excludes the 11mm polystyrene insulation that comes with Preformed Plate and is a cost-effective alternative. It is more streamlined and therefore ideal for areas where space is critical. It is a castellated fixing system with raised burls that are designed to firmly grip the MYSON FLOORTEC underfloor heating pipe. The pipe is fixed easily into the desired pattern by lightly pressing with your foot.

It is suitable for 14 - 17mm pipework and is very flexible, allowing both spiral and serpentine laying patterns.



Description	Order Code
Naked Preformed Plate 14 to 17mm Pipe (1440 x 840mm - Box of 14)	50537
Fixing Dowel (Box of 70)	50538
Red Insulated Pipe Sleeve (10m Roll)	50069
Flexible Pipe Cover (400mm Length)	50078
Expansion Profile (2m)	50076
Expansion Joint Strip (2m)	50077
Border Insulation (30m Roll)	50220

TACKER

Tacker fixing system is suitable for solid floor types and incorporates all the advantages of our Tackernail fixing system. It is supplied with 25 or 50mm insulation with a webbing foil bonded to the surface. This foil acts as a protective layer, but also helps to assist the positioning of the pipework with a handy 50mm grid marked on. The pipe is then positioned in place using our exclusive Tackernails and Tackertool. It is also very flexible allowing both spiral and serpentine laying patterns.

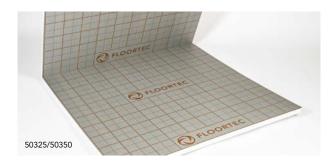
The Tackernail is made entirely out of plastic so there is no clogging from sticking tape. It also has more barbs, so there is no worry about nails lifting. The Tackertool is specifically designed to work with our Tackernails for easy and efficient operation. It can be purchased or rented from MYSON FLOORTEC.











Description	Order Code
25mm PS20 Flatpack Insulation (10m²)	50325
50mm PS20 Flatpack Insulation (10m²)	50350
3D Short (38mm) Tackernail* (Box of 400)	50250
3D Medium (42mm) Tackernail* (Box of 400)	50251
3D Long (58mm) Tackernail* (Box of 400)	50252
3D Tackertool UNI	50253
Red Insulated Pipe Sleeve (10m Roll)	50069
Flexible Pipe Cover (400mm Length)	50078
Expansion Profile (2m)	50076
Expansion Joint Strip (2m)	50077
Border Insulation (30m Roll)	50220
Screed Tape (75m Roll)	50226



PLATED

Suspended floor systems include both joisted floors with conventional joists supported on end walls of sleeper walls, as well as solid floors with battens fixed to the floor. The underfloor heating system consists of aluminium diffusion plates fitted between joists or battens. These are grooved to accept the underfloor heating pipework. The aluminium plate is used for its excellent thermal conduction as well as its low weight. It is suitable for 16 and 17mm pipework.









Description	Order Code
Double Floor Plate (1000 x 388mm)	50550
3 Channel Floor Plate (1000 x 388mm)	50548
3 Channel Floor Plate (1000 x 588mm)	50553

FLOATING FLOOR

The MYSON FLOORTEC floating floor system has been uniquely developed to meet the increasing demand for this type of flooring structure. Floating floor systems have a low thermal mass and consequently have a swift response time to changes in temperature. Floating floors also reduce the overall load on the building, minimising the weight of the floor compared to the other floor systems. It is suitable for 16mm multi-layer pipework only.

The grooves are designed to accept MYSON FLOORTEC preformed aluminium diffusion plates, which spread the heat laterally across the floor from the heating pipework.

TECHNICAL DATA		
		30/40/50mm Panel
Nominal Density (Kg/m²)		30
Thermal Conductivity (W/mK)		0.029
Minimum Compressive Streng	jth (kPa)	200
Long Term Static Load (kPa)	Design Loads*	40
Occasional Loading (kPa)	Design Loads*	66
Water Vapour Resistance (MN	s/gm)	480
Moisture Absorption (by vol.)		0.3%
Continuous Service Temp Lim	its (°C)	-50 to +75

*Design loads by calculated methods (BBA)



DELIVERY

2 - 5 working days.



Description	Order Code
30mm XPS Floating Floor Panel (2400 x 1200mm)	50545
40mm XPS Floating Floor Panel (2400 x 1200mm)	50546
50mm XPS Floating Floor Panel (2400 x 1200mm)	50547
Flat Floor Plate (1000 x 400mm)	50552
Double Floor Plate (1000 x 388mm)	50550
Compact Pipe De-Coiler	50018
Hot Cutter	50008
Replacement Hot Cutter Blade	50007



MICROBOARD

MICROBOARD, from MYSON FLOORTEC, is a retrofit, low profile underfloor heating system. It can be installed over an existing floor, or be used as part of a new build project, making it our most flexible system yet. At only 18mm in depth it allows for underfloor heating to be easily installed into older and existing properties without the need for expensive and disruptive excavation.

It is available in two panel types, straight and return, and our 10mm PEXcellent5 pipe is easily laid into the panels.







TECHNICAL DATA		
	18mm Board	
Density (Kg/m³)	1150±50	
Thermal Conductivity (W/mK)	0.32	
Minimum Compressive Strength (kPa / N/mm²)	8500 / 8.5	
Airborne Sound (Rw)	28dB	
Impact Sound (Ln,w)	86dB	
Specific Heat Capacity (kJ/kgK)	1.1	



DELIVERY

2 - 5 working days.

Description	Order Code
Straight Board (1200 x 600 x 18mm)	50535
Return Board (1200 x 600 x 18mm)	50539



MULTI-LAYER PIPE



PIPE



PEXCELLENT5 PIPE

MYSON FLOORTEC has been manufacturing our own underfloor heating pipe since 1974. Our plant, based in Germany, combines all the advantages of precision German engineering with our own unrivalled expertise in the field of heating.

MYSON FLOORTEC produce a full range of quality pipework that is suitable for all our fixing systems. Our pipe is environmentally friendly and quality guaranteed and conforms to all European quality standards, being tested to DIN4726 and BS7291-1:2001. It comes as part of our 10 year Complete System Guarantee, so you can be confident you are installing the best pipe available on the market.

We offer two types of pipe, 10, 17 and 20mm PEXcellent5 and 16mm multi-layer pipe.

PEXCELLENT5

MYSON FLOORTEC PExcellent5 underfloor heating pipe is a polyethylene pipe with five layers, which includes an integral oxygen barrier. It is available in 10mm, 17mm and 20mm diameters and is compatible with most MYSON FLOORTEC heating systems, including MICROBOARD, our low-profile heating system. It is environmentally friendly and is produced with no chemical additives in either the production or disposal processes. It is quality guaranteed for 10 years and conforms to DIN4726 and BS7291-1:2001.









Description	Order Code
PEXcellent5 pipe 10mm (80m Coil)	54052
PEXcellent5 pipe 10mm (120m Coil)	54053
PEXcellent5 pipe 10mm (240m Coil)	54054
PEXcellent5 pipe 17 x 2mm (80m Coil)	54046
PEXcellent5 pipe 17 x 2mm (120m Coil)	54047
PEXcellent5 pipe 17 x 2mm (200m Coil)	54048
PEXcellent5 pipe 17 x 2mm (600m Coil)	54049
PEXcellent5 pipe 20mm (240m Coil)	54044
PEXcellent5 pipe 20mm (500m Coil)	54050

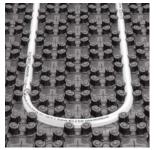


MULTI-LAYER

MYSON FLOORTEC's multi-layer pipe is available in 16mm diameter. It is a flexible pipe, making it extremely easy to install. It is compatible with most MYSON FLOORTEC underfloor systems, the only exception being MICROBOARD, where specially manufactured 10mm pipe is required. It is quality guaranteed for 10 years and conforms to DIN4726 and BS7291-1:2001.









Description	Order Code
Multi-layer pipe 16 x 2mm (100m Coil)	53002
Multi-layer pipe 16 x 2mm (200m Coil)	53005
Multi-layer pipe 16 x 2mm (400m Coil)	53004

GENERAL INFORMATION



MANIFOLD



CONTROLS



MPRT

MYSON FLOORTEC underfloor heating offer a full range of quality controls to ensure that you get the most out of our underfloor heating systems. Our controls are designed by our heating experts to meet the requirements of our customers and will perfectly complement our systems.

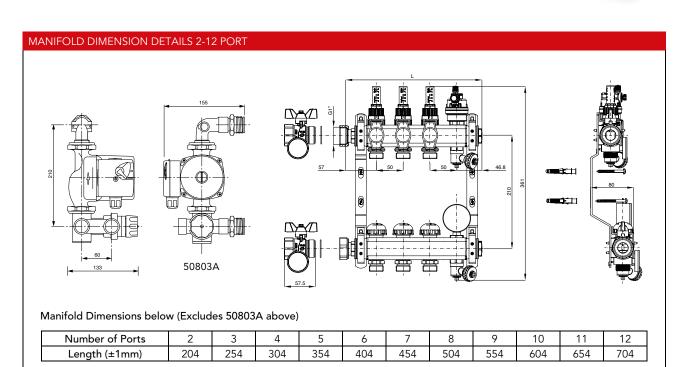
Controls are an essential part of every underfloor heating system. Each system requires at least one manifold, control centre, wiring centre and thermostat. MYSON FLOORTEC supply quality manifolds, isolating and blending valves and an A-rated pump. MYSON FLOORTEC also supplies wiring centres as well as a range of thermostats from basic digital thermostats to WiFi enabled touch controls.

MANIFOLD & CONTROL CENTRE

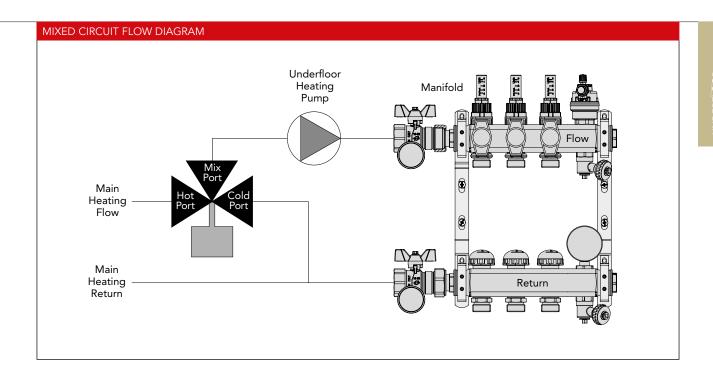
The MYSON FLOORTEC underfloor heating manifold is the central point to most underfloor heating systems. The manifold is responsible for distributing mixed water provided by the manifold control centre to each heating circuit.

Underfloor heating requires water flow temperatures between 35°C and 55°C (depending on the design). The MYSON FLOORTEC manifold control centre mixes return water from the underfloor heating with flow water from the primary pipework. The mixed temperature is controlled at a constant temperature and the proportions of flow and return water are varied accordingly. Mixing is undertaken in a three port mixing valve, incorporating a thermo-electrical valve controller.





99305PR



PREMIUM MANIFOLDS

Description	Order Code
2 port Premium Manifold	99302PR
3 port Premium Manifold	99303PR
4 port Premium Manifold	99304PR
5 port Premium Manifold	99305PR
6 port Premium Manifold	99306PR
7 port Premium Manifold	99307PR
8 port Premium Manifold	99308PR
9 port Premium Manifold	99309PR
10 port Premium Manifold	99310PR
11 port Premium Manifold	99311PR
12 port Premium Manifold	99312PR
Pipe Bend Support 14-17mm	50070
Pipe Bend Support 18-23mm	50071

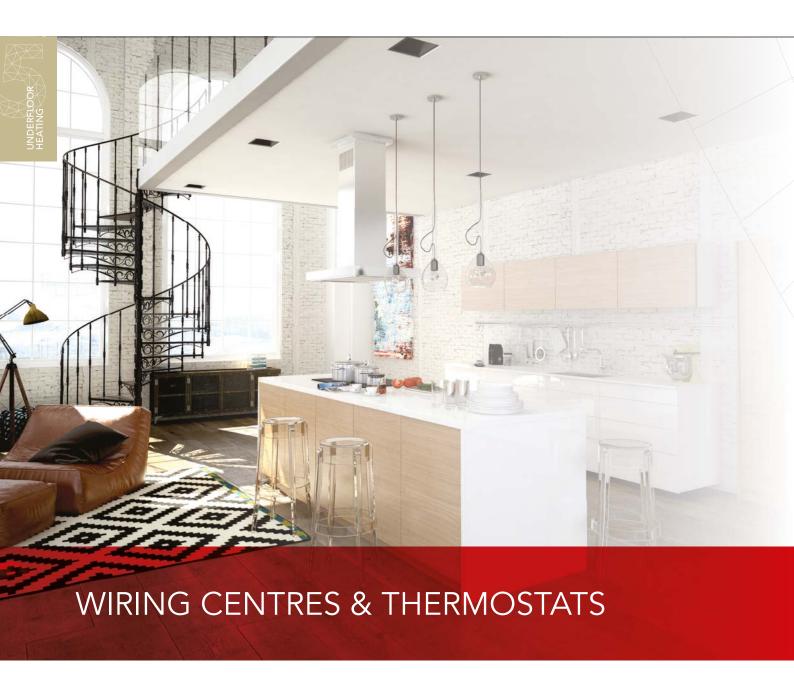
CONTROL PACKS

'A' Rated Pump Pack	50803A
'A' Rated Single Zone Control Unit	50810A
Y-Splitters (Pair)	53036VN
22mm Mixing Valve	52014

ADAPTORS

Manifold Coupling for 17 x 2mm Pex	50114
Straight Coupling for 17 x 2mm Pex	50010
Manifold Coupling for 14 x 2mm Pex	50019
Straight Coupling for 14 x 2mm Pex	50020
Manifold Coupling for 20 x 2mm Pex	50113
Straight Coupling for 20 x 2mm Pex	50011
10mm Manifold Coupling	50117
Manifold Coupling for 16 x 2mm Multi-layer	53033
Straight Coupling for 16 x 2mm Multi-layer	53032
15mm Copper Adaptor	40213
14mm x ½" Male Iron Adaptor	50115
17mm x ½" Male Iron Adaptor	50116
Coupling Central Core	50009





Wiring centres

MYSON FLOORTEC wiring centres come in two different types. A low voltage version for a 24V power supply and a 230V version for a 230V power supply. The wiring centre controls the thermostats and actuators. The 24V model includes a built-in transformer that is compatible with 24Vactuators and thermostats.



WIRING CENTRES & ACCESSORIES

Description	Order Code
240V Actuator Head	50240
24V Actuator Head	50243
240V Wiring Centre	50598
24V Wiring Centre	50599
Locking Ring for 50140/50143	59990





The MYSON MRTE is a slimline thermostat for users that require greater accuracy of temperature control. Suitable with a 24V or 230V wiring centre. Please see page 231.

MPRT and MPRT RF - Programmable room thermostat

The MYSON MPRT is an easy to use programmable room thermostat. It utilises Smart Start technology which could save up to 10% on heating bills. The MYSON MPRT RF has all the benefits of the MPRT, but is a radio frequency version. Both are suitable with a 24V or 230V wiring centre. Please see page 233.

MYSON TOUCH - Programmable touch screen room thermostat

The MYSON TOUCH range of programmable thermostats allow you to set different room temperatures for the morning, day, evening and night time. The Smart Start function will save both energy and money by delaying the heating start up time when the weather is warmer.



The range includes the MYSON TOUCH and MYSON TOUCH RS with remote sensor, primarily designed for underfloor systems. Suitable with a 230V wiring centre. Please see page 234.

MYSON TOUCH2 WiFi - Programmable room thermostat

The TOUCH2 WiFi is the second generation WiFi thermostat from MYSON and allows you to control your heating from anywhere in the world. It is easy to set up and configure on your smart phone or tablet and is controlled using the MYSON TOUCH2 app. Suitable with a 230V wiring centre. Please see page 235.

MEP1c - Programmer

The MYSON MEP1c is a single channel time switch for use with combi boilers, or as a domestic hot water control when using a programmable thermostat for the central heating circuit. Please see page 236.



THERMOSTATS & PROGRAMMERS

Description	Order Code
24V Room Thermostat (Dial)	50507
Floor Sensor (for use with 50507)	50508
MPRT Programmable Thermostat	50562
MPRT Chrome Programmable Thermostat	50562CR
MRT1 Room Thermostat (Dial)	50565
MRTE Digital Room Thermostat	50504
MEP1c Single Channel Programmer	50808
TOUCH Screen Thermostat 240V	50516
TOUCH Screen Thermostat 240V with Remote Sensor	50517
TOUCH2 WiFi Thermostat 240V	50520
TOUCH2 WiFi Thermostat and Hub	50521
Floor Sensor (For TOUCH Controls)	50522
Thimble Air Sensor (For TOUCH Controls)	50523
MPRT RF Programmable Thermostat	50511
MPRT RF Chrome Programmable Thermostat	50511CR





PUNCH PACK



AREA PACK

SINGLE ROOM PACKS

MYSON FLOORTEC offer a wide range of underfloor heating single room packs. These systems complement MYSON FLOORTEC's bespoke underfloor range. The single room packs are easy to install using a variety of our fixing methods. There are no design requirements and the packs are competitively priced. The single room packs are for water-based heating and are available in a range of sizes to suit various room layouts. Area packs are supplied with 17/2mm pipework, although other pipework is available on request. Punch Packs are supplied with 16mm multi-layer pipe.

The single room packs contain everything you need for underfloor heating in one handy box and are available in pack sizes from 12m² to 40m². They also include a touch screen thermostat.

AREA PACKS

MYSON FLOORTEC offer a range of single room packs for screeded and joisted floor types. They are available for a range of fixing systems and are ideal for smaller areas, extensions and refurbishments. The packs are supplied with everything you need, including 17/2mm PEXcellent5 pipe and a touch screen thermostat.









Description	Order Code
Underfloor Heating Pack - Cliprail 12m ²	CLIPRAIL12AY
Underfloor Heating Pack - Cliprail 15m²	CLIPRAIL15AY
Underfloor Heating Pack - Cliprail 20m²	CLIPRAIL20AY
Underfloor Heating Pack - Cliprail 30m²	CLIPRAIL30AY
Underfloor Heating Pack - Cliprail 40m²	CLIPRAIL40AY
Underfloor Heating Pack - Preformed Plate 12m ²	PFP12AY
Underfloor Heating Pack - Preformed Plate 15m ²	PFP15AY
Underfloor Heating Pack - Preformed Plate 20m ²	PFP20AY
Underfloor Heating Pack - Preformed Plate 25m ²	PFP25AY
Underfloor Heating Pack - Preformed Plate 30m ²	PFP30AY
Underfloor Heating Pack - Preformed Plate 40m ²	PFP40AY
Underfloor Heating Pack - Naked Preformed Plate 12m ²	NAKEDPFP12AY
Underfloor Heating Pack - Naked Preformed Plate 15m ²	NAKEDPFP15AY
Underfloor Heating Pack - Naked Preformed Plate 20m²	NAKEDPFP20AY
Underfloor Heating Pack - Naked Preformed Plate 25m ²	NAKEDPFP25AY
Underfloor Heating Pack - Naked Preformed Plate 30m ²	NAKEDPFP30AY
Underfloor Heating Pack - Naked Preformed Plate 40m²	NAKEDPFP40AY
Underfloor Heating Pack - Plated 12m ²	PLATED12AY
Underfloor Heating Pack - Plated 15m ²	PLATED15AY
Underfloor Heating Pack - Plated 20m ²	PLATED20AY
Underfloor Heating Pack - Plated 30m ²	PLATED30AY
Underfloor Heating Pack - Plated 40m ²	PLATED40AY



MYSON

PUNCH PACKS

MYSON FLOORTEC's new range of single room packs are designed for a screeded floor. Our Punch Packs include specially selected items to provide unbeatable quality and value. Punch Packs come with MYSON's innovative Tackernails, so are easy to install, and everything you need is in one handy box. They also come with 16mm multi-layer pipe, our A-rated single zone control unit and a touch screen thermostat complete with floor sensor. They are available in 20m² and 40m² pack (based on 200mm spacings). They're a cost effective solution for underfloor heating and backed by MYSON FLOORTEC's technical support and product guarantees.



DELIVERY 2 - 5 working days.





	Description	Order Code
Punch Pack 20		PUNCHPACK20
Punch Pack 40		PUNCHPACK40