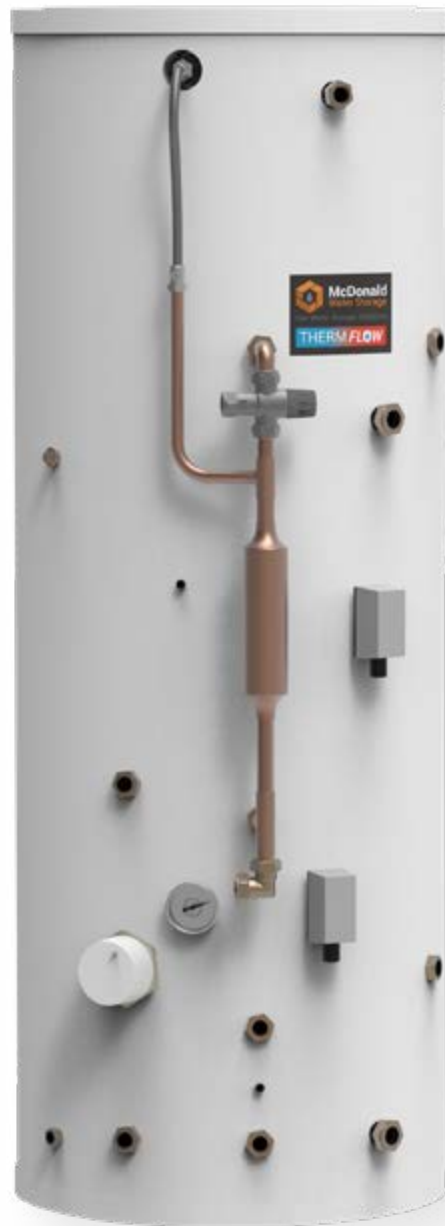


THERM FLOW

Thermal Store Range

The flexible thermal store solution providing both heating and hot water



McDonald
Water Storage
Hot Water Storage Solutions



Thermal Store Range Providing Both Wet Central Heating and Mains Pressure Hot Water

Our Thermaflow thermal store works at the heart of your heating and hot water system to supply the central heating system in addition to mains pressure hot water.

Our thermal store approach can incorporate multiple energy sources to heat the home as well as meet hot water demand to achieve improved efficiencies and cost savings.

With our unique design and manufacturing solution, we can offer significant cost savings both during installation and ongoing running costs.

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Thermal Store Selection

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Multifuel Cylinder

Open Vented Boiler
Combination

Open Vented Boiler Cylinder

Sealed System Boiler
Combination

Sealed System Boiler
Cylinder

Pressurised Thermal Store

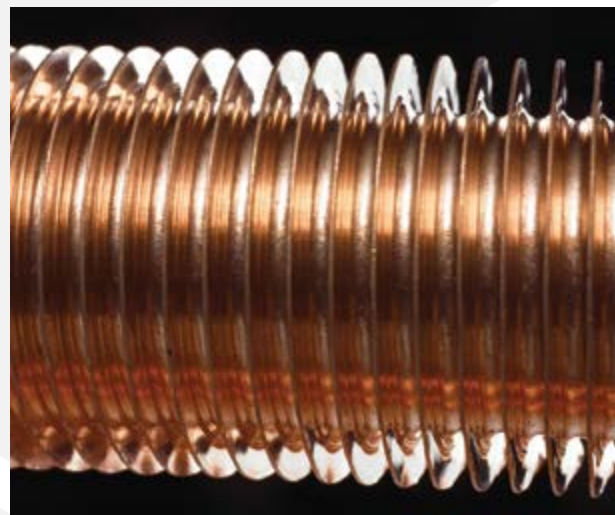
Solid Fuel Options

Feed and Expansion Tanks



Discover The Benefits Of **THERMflow** Thermal Stores

- Excellent heat retention and lower heat loss with the new improved white cased finish and high density foam insulation
- Provides heating to the wet central heating systems whilst delivering mains pressure hot water with scald protection, all with the inherent safety of an open vented system
- No costly pumps and electronic controls required - providing piping hot water even during a power outage
- Premium grade copper coils providing high heat transfer improving efficiency and ultimately reducing running costs
- Optional external pipework insulation packs to improve efficiency and reduce installation time



Thermal Store Advantages For Both Installers and Homeowners



A thermal store provides many additional benefits over an unvented cylinder, not only for the homeowner but the installer and specifier including;

- No risk of legionella as the domestic hot water is mains cold water instantaneously heated, not stored water
- No annual safety service requirement as open vented and inherently safe, removing ongoing maintenance costs
- No discharge pipework providing flexibility of installation
- Bespoke manufacture to suit any installation requirement
- No G3 certification required for installation

The Most Customisable Thermal Store On The Market



Our unique approach to manufacturing our THERMflow thermal stores ensures the cylinder meets your exact requirements.

In addition to the standard configurations, every thermal store can be supplied with custom connections, positioned exactly where you need them to minimise pipework and installation costs.

We can bespoke design the THERMflow to fit into the tightest spaces, even as rectangular units (see the CUBEflow range). In addition we offer optional insulation thicknesses of 75mm and 100mm to minimise heat loss and improve efficiencies.

Maximise ALL Of Your Homes Available Energy Sources

In these times of high energy bills, it is essential to maximise all the available energy sources, especially renewables, to reduce your running costs.

THERMflow offers the perfect solution, with the ability to maximise all energy sources for both heating and hot water for the home.

With a wide range of standard models to incorporate heat sources such as solid fuel, solar thermal or low carbon generated electricity, or bespoke design your cylinder to suit your installation requirements.

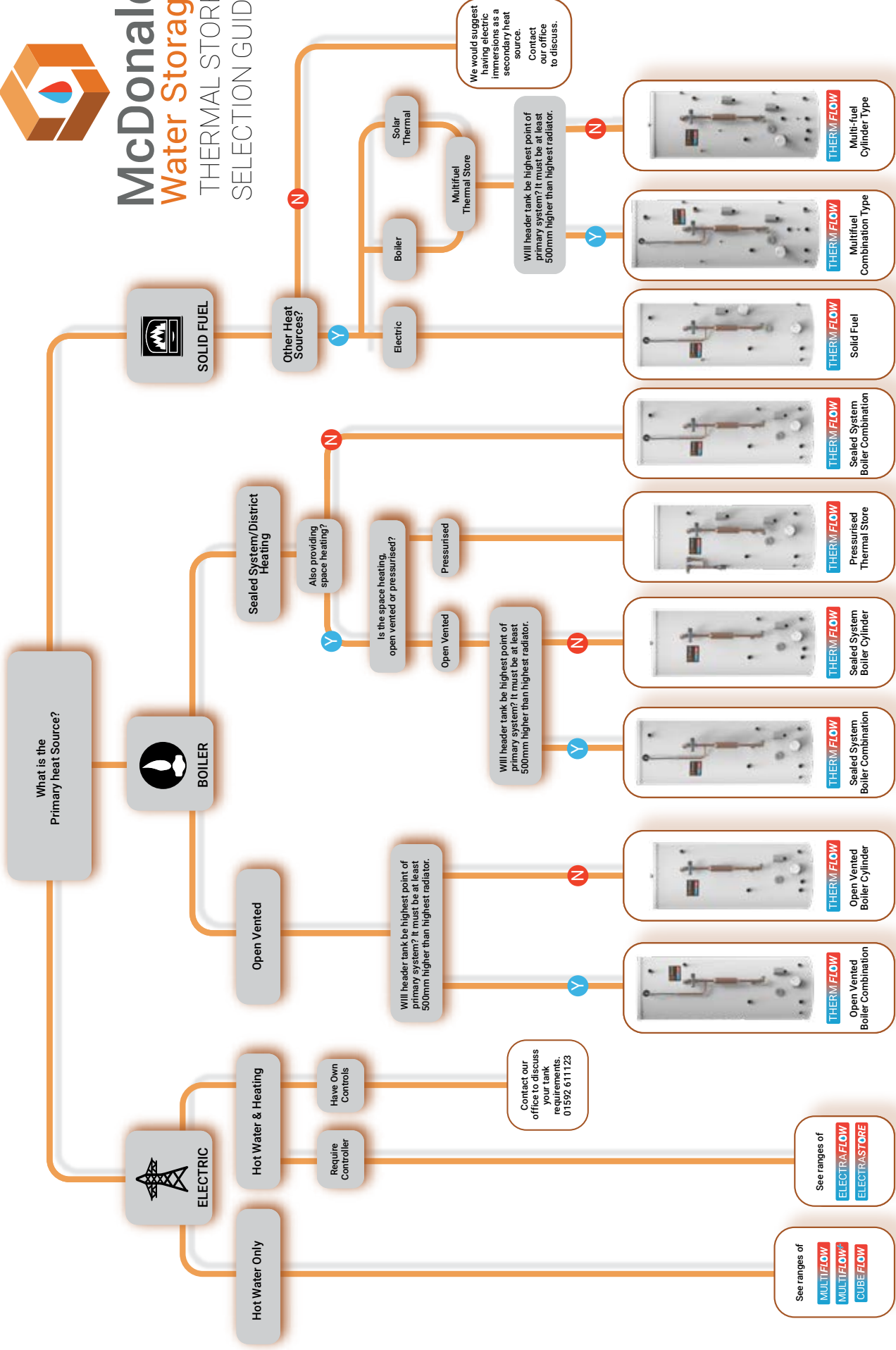




McDonald

Water Storage

THERMAL STORE SELECTION GUIDE



Multifuel Combination Type

The multi-fuel thermal store allows the incorporation of multiple heat sources into a single tank. Using your solid fuel appliance along with solar thermal, the system can be heated without the need for gas, oil or electric. Only at times where the other heat sources are unable to cope with demand, will the boiler come on to top up the temperature.

The combination type can be installed anywhere in the property, normally the top floor or attic. Providing the primary feed and expansion tank is at the highest level, the entire system can remain open vented. The minimum gap between highest radiator and base of header tank is 500mm. If this minimum distance can not be achieved then a sealed heating kit can be specified, or alternatively select the Cylinder Type.



COMPONENTS

1. Ball valve
2. 22mm Hot Draw Out (c/w TMV)
3. Expansion Chamber
4. 22mm Cold Mains In
5. Drain
6. 22mm Central Heating Flow
7. 22mm Central Heating Return
8. Solar Probe Pocket
9. Solar Coil
10. 3kW Immersion Heater
11. Control Stat
12. High-Limit Stat
13. Temperature Gauge
14. 22mm Vented Boiler Flow
15. 22mm Vented Boiler Return
16. 28mm Solid Fuel Flow
17. 28mm Solid Fuel Return
18. 1/2 inch Female for Relief Valve
19. 22mm Overflow

KEY BENEFITS

- Incorporates multiple heat inputs
- Connections positioned for optimum performance
- Solar thermal can contribute to hot water and space heating
- Bespoke design available with other sizes available on request
- Maintenance free ball valve & copper float
- Optional sealed system boiler coil
- Optional DHW pipework insulation

Model No.	TFI1MF	TFI2MF	TFI3MF	TFI4MF	TFI5MF	TFI6MF
Storage Capacity	120	140	180	210	250	300
Height	1130	1250	1500	1700	1700	2050
Diameter	550	550	550	550	600	600
Max Heating Load (kW)	11	13	16	19	23	27
ERP Class	B	B	C	C	C	C
Standing Heat Loss (watts)	51	54	60	65	72	80
Bedrooms	1	2	2-3	2-3	3-4	4-5
Baths & Showers	1	1	2	3	4	5

Sizes shown include 50mm insulation with protective casing and standard heating expansion.

Multifuel Cylinder Type

The multi-fuel thermal store allows the incorporation of multiple heat sources into a single tank. Using your solid fuel appliance along with solar thermal, the system can be heated without the need for gas, oil or electric. Only at times where the other heat sources are unable to cope with demand, will the boiler come on to top up the temperature.

The cylinder type can be installed anywhere in the property, and is linked with a separate copper feed and expansion tank which is normally located in an attic space.



COMPONENTS

1. Vent to Header Tank
2. 22mm Hot Draw Out (c/w TMV)
3. Expansion Chamber
4. 22mm Cold Mains In
5. Drain/ Feed from Header Tank
6. 22mm Central Heating Flow
7. 22mm Central Heating Return
8. Solar Coil
9. Solar Probe Pocket
10. 3kW Immersion Heater
11. Control Stat
12. High-Limit Stat
13. Temperature Gauge
14. 22mm Vented Boiler Flow
15. 22mm Vented Boiler Return
16. 28mm Solid Fuel Flow
17. 28mm Solid Fuel Return
18. ½" Female for Relief Valve

KEY BENEFITS

- Incorporates multiple heat inputs
- Connections positioned for optimum performance
- Solar thermal can contribute to hot water and space heating
- Bespoke design available with other sizes available on request
- Optional sealed system boiler coil
- Optional DHW pipework insulation
- Use with our copper high temp header tank

Model No.	TFIC1MF	TFIC2MF	TFIC3MF	TFIC4MF	TFIC5MF	TFIC6MF
Storage Capacity	120	140	180	210	250	300
Height	950	1100	1350	1550	1850	1850
Diameter	550	550	550	550	550	600
Max Heating Load (kW)	11	13	16	19	23	27
ERP Class	B	B	C	C	C	C
Standing Heat Loss (watts)	51	54	60	65	72	80
Bedrooms	1	2	2-3	2-3	3-4	4-5
Baths & Showers	1	1	2	3	4	5

Sizes shown include 50mm insulation with protective casing.

Open Vented Boiler Combination Type

This thermal store simply accepts heat input from an open vented boiler to provide domestic hot water and central heating throughout the property.

The combination tank is best installed on an upper floor or in a loft or attic space keeping the primary feed and expansion tank at the highest level, keeping the entire system open vented. If the gap between highest radiator and base of header tank is less than 500mm then you will require a sealed heating coil.

An ideal alternative to a combi boiler, with the major benefit being high flow rate, mains pressure hot water with increased reliability and no annual service.



COMPONENTS

1. Ball valve
2. 22mm Hot Draw Out (c/w TMV)
3. Expansion Chamber
4. 22mm Cold Mains In
5. Drain
6. 22mm Central Heating Flow
7. 22mm Central Heating Return
8. 3kW Immersion Heater
9. Temperature Gauge
10. Thermostat
11. 22mm Boiler Flow
12. 22mm Boiler Return
13. 22mm Overflow

KEY BENEFITS

- No annual service
- Mains pressure hot water
- Immersion heater backup for entire system
- Connections positioned for optimum performance
- Bespoke design available with other sizes available on request
- Maintenance free ball valve & copper float
- Optional DHW pipework insulation

Model No.	TFI10V	TFI20V	TFI30V	TFI40V	TFI50V	TFI60V
Storage Capacity	120	140	180	210	250	300
Height	1130	1250	1500	1700	1700	2050
Diameter	550	550	550	550	600	600
Max Heating Load (kW)	11	13	16	19	23	27
ERP Class	B	B	C	C	C	C
Standing Heat Loss (watts)	51	54	60	65	72	80
Bedrooms	1	2	2-3	2-3	3-4	4-5
Baths & Showers	1	1	2	3	4	5

Sizes shown include 50mm insulation with protective casing and standard heating expansion.



Open Vented Boiler Cylinder Type

This thermal store simply accepts heat input from an open vented boiler to provide domestic hot water and central heating throughout the property.

The cylinder type can be installed almost anywhere in the property and requires a separate high temperature header tank installed at the highest point in the property, keeping the entire system open vented.

An ideal alternative to a combi boiler, with the major benefit being high flow rate, mains pressure hot water with increased reliability and no annual service.

COMPONENTS

1. Vent to Header Tank
2. 22mm Hot Draw Out (c/w TMV)
3. Expansion Chamber
4. 22mm Cold Mains In
5. Drain/ Feed from Header Tank
6. 22mm Central Heating Flow
7. 22mm Central Heating Return
8. 3kW Immersion Heater
9. Temperature Gauge
10. Thermostat
11. 22mm Boiler Flow
12. 22mm Boiler Return

KEY BENEFITS

- No annual service
- Mains pressure hot water
- Immersion heater backup for entire system
- Connections positioned for optimum performance
- Bespoke design available with other sizes available on request
- Optional DHW pipework insulation
- Use with our copper high temp header tank

Model No.	TFIC10V	TFIC20V	TFIC30V	TFIC40V	TFIC50V	TFIC60V
Storage Capacity	120	140	180	210	250	300
Height	950	1100	1350	1550	1850	1850
Diameter	550	550	550	550	550	600
Max Heating Load (kW)	11	13	16	19	23	27
ERP Class	B	B	C	C	C	C
Standing Heat Loss (watts)	51	54	60	65	72	80
Bedrooms	1	2	2-3	2-3	3-4	4-5
Baths & Showers	1	1	2	3	4	5

Sizes shown include 50mm insulation with protective casing.

Sealed System Boiler Combination Type

This thermal store simply accepts heat input from a pressurised boiler to provide domestic hot water and central heating throughout the property.

The combination tank is best installed on an upper floor or in a loft or attic space keeping the primary feed and expansion tank at the highest level, to keep the central heating system open vented. If the gap between highest radiator and base of header tank is less than 500mm then you will require a sealed heating coil. Alternatively have a look at our pressurised thermal store on page 11.



COMPONENTS

1. Ballvalve
2. 22mm Hot Draw Out (c/w TMV)
3. Expansion Chamber
4. 22mm Cold Mains In
5. Drain
6. 22mm Central Heating Flow
7. 22mm Central Heating Return
8. 3kW Immersion Heater
9. Temperature Gauge
10. Thermostat
11. 22mm Sealed Boiler Coil Flow
12. 22mm Sealed Boiler Coil Return
13. 22mm Overflow

KEY BENEFITS

- No annual service
- Mains pressure hot water
- Immersion heater backup for entire system
- Connections positioned for optimum performance
- Bespoke design available with other sizes available on request
- Maintenance free ball valve & copper float
- Optional DHW pipework insulation

Model No.	TFI1SB	TFI2SB	TFI3SB	TFI4SB	TFI5SB	TFI6SB
Storage Capacity	120	140	180	210	250	300
Height	1130	1250	1500	1700	1700	2050
Diameter	550	550	550	550	600	600
Max Heating Load (kW)	11	13	16	19	23	27
ERP Class	B	B	C	C	C	C
Standing Heat Loss (watts)	51	54	60	65	72	80
Bedrooms	1	2	2-3	2-3	3-4	4-5
Baths & Showers	1	1	2	3	4	5

Sizes shown include 50mm insulation with protective casing and standard heating expansion.

Sealed System Boiler Cylinder Type

This thermal store simply accepts heat input from a pressurised boiler to provide domestic hot water and central heating throughout the property.

The cylinder type can be installed almost anywhere in the property and requires a separate high temperature header tank installed at the highest point in the property, keeping the entire system open vented.

An ideal alternative to a combi boiler, with the major benefit being high flow rate, mains pressure hot water with increased reliability and no annual service.



COMPONENTS

1. Vent to Header Tank
2. 22mm Hot Draw Out (c/w TMV)
3. Expansion Chamber
4. 22mm Cold Mains In
5. Drain/ Feed from Header Tank
6. 22mm Central Heating Flow
7. 22mm Central Heating Return
8. 3kW Immersion Heater
9. Temperature Gauge
10. Thermostat
11. 22mm Boiler Flow
12. 22mm Boiler Return

KEY BENEFITS

- No annual service
- Mains pressure hot water
- Immersion heater backup for entire system
- Connections positioned for optimum performance
- Bespoke design available with other sizes available on request
- Optional DHW pipework insulation
- Use with our copper high temp header tank

Model No.	TFIC1SB	TFIC2SB	TFIC3SB	TFIC4SB	TFIC5SB	TFIC6SB
Storage Capacity	120	140	180	210	250	300
Height	950	1100	1350	1550	1850	1850
Diameter	550	550	550	550	550	600
Max Heating Load (kW)	11	13	16	19	23	27
ERP Class	B	B	C	C	C	C
Standing Heat Loss (watts)	51	54	60	65	72	80
Bedrooms	1	2	2-3	2-3	3-4	4-5
Baths & Showers	1	1	2	3	4	5

Sizes shown include 50mm insulation with protective casing.

Pressurised Thermal Store

This thermal store accepts heat input from a pressurised boiler, often a biomass boiler, to provide domestic hot water and central heating throughout the property.

It allows the store to be installed almost anywhere in the property and creates a fully pressurised system, which requires a suitably sized heating expansion vessel. Where a boiler is the only heat source, and locating a header tank is not an option this could be the ideal solution.

Consideration must be taken for the relief valves that come factory fitted, and will operate the same as an unvented cylinder.



COMPONENTS

1. Auto Air Vent
2. 22mm Hot Draw Out (c/w TMV)
3. Expansion Chamber
4. 22mm Cold Mains In
5. Drain
6. 22mm Central Heating Flow
7. 22mm Central Heating Return
8. 3kW Immersion Heater
9. Thermostat
10. Temperature Gauge
11. 22mm Boiler Flow
12. 22mm Boiler Return
13. Pressure & Temp. Relief Valve
14. Expansion Relief Valve
15. Tundish
16. High Limit Thermostat

KEY BENEFITS

- Mains pressure hot water
- Immersion heater backup for entire system
- Connections positioned for optimum performance
- Bespoke design available with other sizes available on request
- Optional DHW pipework insulation

Model No.	TFIC1SS	TFIC2SS	TFIC3SS	TFIC4SS	TFIC5SS	TFIC6SS
Storage Capacity	120	140	180	210	250	300
Height	950	1100	1350	1550	1850	1850
Diameter	550	550	550	550	550	600
Max Heating Load (kW)	11	13	16	19	23	27
ERP Class	B	B	C	C	C	C
Standing Heat Loss (watts)	51	54	60	65	72	80
Bedrooms	1	2	2-3	2-3	3-4	4-5
Baths & Showers	1	1	2	3	4	5

Sizes shown include 50mm insulation with protective casing.

Solid Fuel Compatibility

Our Thermflow Solid Fuel thermal store enables you to harness the energy generated by your wood burning stove, AGA or Rayburn and integrate it with other energy sources such as your gas or oil burner or even an electric immersion.

The solid fuel connections can be added to any of the models shown in this brochure, just ask the team when specifying the model for your installation.



COMPONENTS

1. Solid Fuel Flow 28mm
2. Solid Fuel Return 28mm
3. High Limit Stat
4. 1/2" Female for Temp. Relief Valve

KEY BENEFITS

- Maximise your solid fuel energy
- Mains pressure hot water
- Immersion heater backup for entire system
- Connections positioned for optimum performance
- Add the solid fuel connections to any model to suit installation requirements
- Optional DHW pipework insulation



Copper High Temperature Feed and Expansion Tanks

Our high temperature feed and expansion tanks are designed to be used with open vented thermal storage systems, especially when combined with additional fuel sources such as wood burning stoves, where high temperatures are prevalent.

Manufactured from premium grade copper to withstand temperatures of over 100°C, our feed and expansion tanks can be manufactured to any shape and size to suit your requirements.

All feed and expansion tanks are supplied complete with

- Maintenance free ball valve
- 4.5" float
- 35mm polyurethane foam lagging
- Alloy lid

COMPONENTS

1. Ballvalve
2. Expansion from Cylinder / Overflow
3. Expansion from Cylinder / Overflow
4. Feed to Cylinder

KEY BENEFITS

- Suitable for use where temperatures may exceed 100°C
- A wide range of sizes and capacities to suit installation requirements
- Compression connections as standard
- Connection sizes and positions either standard or to your specification
- Factory fitted insulation minimises dangers of freezing
- Manufactured from 100% recyclable copper

Storage Capacity	30	40	50	60	70	100
Diameter	470	470	520	520	520	520
Height	375	470	500	570	650	850

Sizes shown include insulation

Technical

Discover Our Complete Range Of Hot Water Storage Solutions

Thermal Stores

Unvented Cylinders

Elson Replacement Solutions

Open Vented and Combination Cylinders

Commercial Cylinders

Bespoke Design and Manufacture



For full details on a product range
click on the category above or
go to mcdonaldwaterstorage.com



McDonald Water Storage

Hot Water Storage Solutions

Pride in our
service, quality
and tradition



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