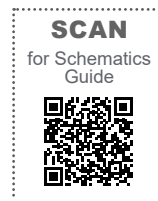




SCHEMATICS

LOGIC AIR MONOBLOC HEAT PUMP SYSTEM



When replacing any part on this appliance, use only spare parts that you can be assured conform to the safety and performance specification that we require. Do not use reconditioned or copy parts that have not been clearly authorised by Ideal Heating.

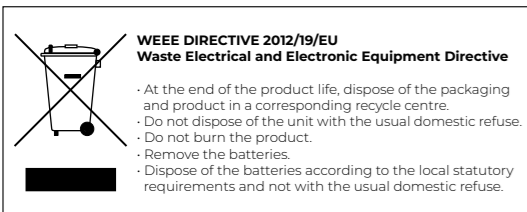
For the very latest copy of literature for specification and maintenance practices visit our website idealheating.com where you can download the relevant information in PDF format.



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① **IMPORTANT: PLEASE USE THIS MANUAL IN CONJUNCTION WITH THE LOGIC AIR MONOBLOC HEAT PUMP SYSTEM – INSTALLATION & SERVICING MANUAL**



THE MARK OF QUALITY FOR THE INSTALLATION, COMMISSIONING AND SERVICING OF DOMESTIC HEATING AND HOT WATER SYSTEMS

The code of practice for the installation, commissioning & servicing of central heating systems



Ideal Heating reserve the right to vary specification without notice

LEGEND

- CH WATER FLOW PIPEWORK
- CH WATER RETURN PIPEWORK
- DHW HOT WATER OUTLET PIPEWORK
- DHW COLD WATER INLET PIPEWORK
- SYSTEM BOUNDARY

COMPONENT SYMBOLS

- GATE VALVE
- BALL VALVE
- CHECK VALVE
- DOUBLE CHECK VALVE
- AUTOMATIC AIR VENT
- PRESSURE RELIEF VALVE
- PRESSURE REDUCING VALVE
- AUTOMATIC BY-PASS VALVE
- ANTI-FREEZE VALVE
- 2 WAY VALVE
- 3 WAY VALVE
- CIRCULATING PUMP
- FLEXIBLE HOSE
- IMMERSION HEATER
- PLATE HEAT EXCHANGER
- PIPE INSULATION
- MAGNETIC FILTER
- STRAINER
- REDUCER

INSTRUMENT ABBREVIATIONS (LOGIC AIR CONTROL BOX CONNECTIONS)

- FT: FLOW THERMISTOR
- RT: RETURN THERMISTOR
- HT: HEADER THERMISTOR
- DT: DHW THERMISTOR
- OTT: OUTDOOR TEMPERATURE THERMISTOR
- ZT1: ZONE 1 ON/OFF THERMOSTAT
- ZT2: ZONE 2 ON/OFF THERMOSTAT
- HAI: HALO AIR INTERFACE
- OH: OVERHEAT THERMOSTAT
- ZP1: HEATING ZONE PUMP 1
- ZP2: HEATING ZONE PUMP 2
- IM: IMMERSION HEATER
- DP: DHW PUMP
- 3WV: 3 WAY VALVE
- 2WV: 2 WAY VALVE
- BLR: GAS BOILER

COMPONENT SYMBOLS (continued)

- MONOBLOCK HEAT PUMP
- INDIRECT DHW CYLINDER WITH INTEGRATED BUFFER TANK
- INDIRECT DHW CYLINDER
- HEAT EMITTER
- EXPANSION VESSEL
- VOLUMISER
- INDIRECT DHW CYLINDER WITH INTEGRATED BUFFER TANK
- MULTI CONNECTION BUFFER TANK
- MULTI CONNECTION HYDRAULIC SEPARATOR
- HYDRAULIC SEPARATOR

Refer to Logic Air monobloc heat pump system installation and maintenance manual in conjunction with these schematic drawings.

CONNECTION POINT LIST

TP No	DESCRIPTION	SIZE	MATERIAL	TYPE
1	HEAT PUMP FLOW	1" BSP	BRASS	BSP MALE
2	HEAT PUMP RETURN	1" BSP	BRASS	BSP MALE
3	HEAT PUMP CONDENSATE DISPOSAL	-	-	-
4	PRESSURE RELIEF VALVE (PRV)	15MM	COPPER	COPPER PIPE OUTLET
5	CYLINDER HEAT PUMP FLOW	28MM	BRASS	COMPRESSION
6	CYLINDER HEAT PUMP RETURN	28MM	BRASS	COMPRESSION
7	ZONE 1 FLOW	28MM	BRASS	COMPRESSION
8	ZONE 1 RETURN	28MM	BRASS	COMPRESSION

Figure 2. Logic Air + Single Zone Pre-Plumbed Cylinder with Integrated Buffer

Notes:

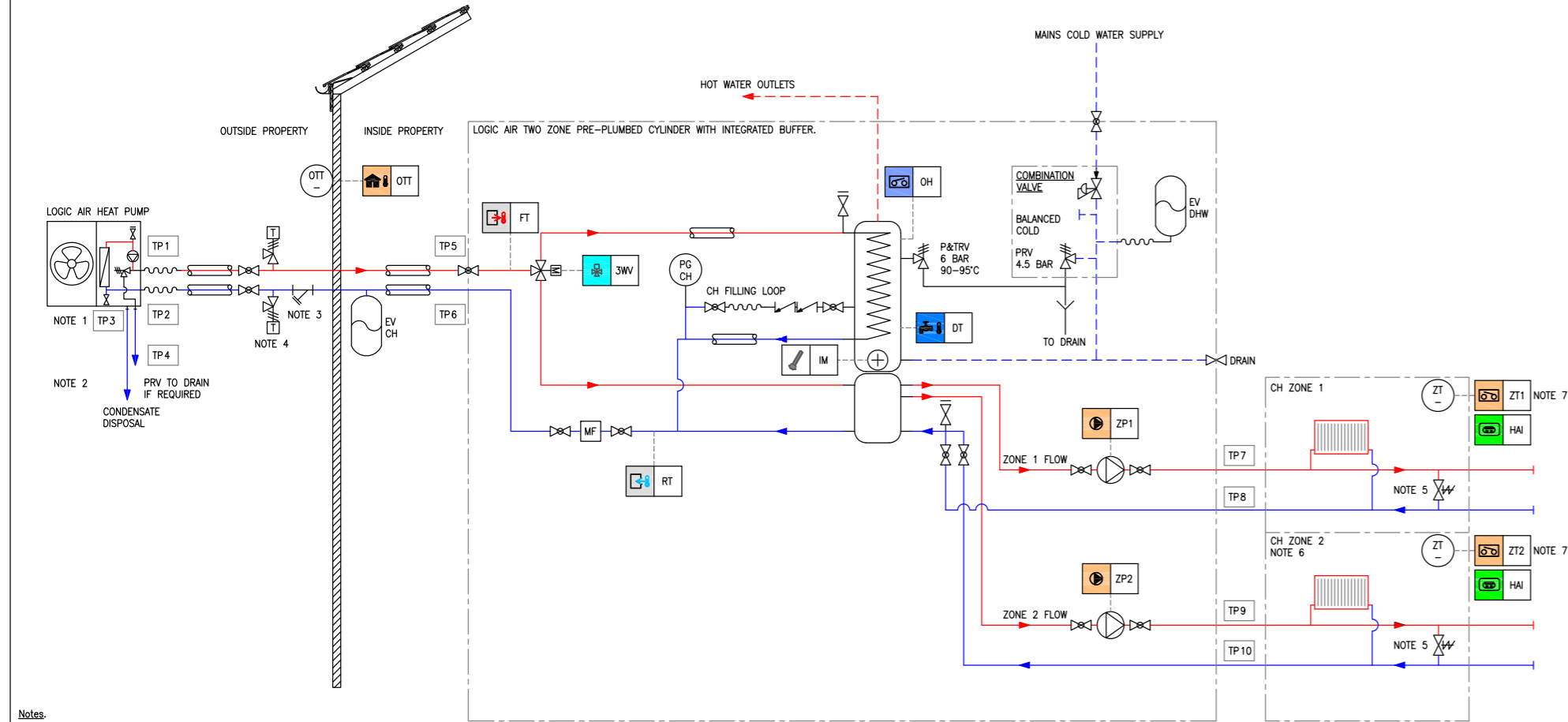
- Note 1. The heat pump must be installed on a secure level base capable of supporting its weight.
- Note 2. Refer to the installation manual for condensate and pressure relief discharge requirements.
- Note 3. A particle filter can be supplied as an option and it's recommended that a magnetic filter is installed. Logic Air Pre-plumbed cylinders are supplied complete with a combined magnetic and particle filter.
- Note 4. Anti-freeze valves are required if glycol is not used in the system.
- Note 5. Install an auto-bypass if no permanent open circuit is available to allow secondary side pump overrun and normal operation.
- Note 6. Logic Air two zone pre-plumbed arrangement is available.
- Note 7. Refer to the installation manual for smart or ON/OFF thermostat connection.

This drawing is for information and guidance only. It is the heating designer/ installers responsibility to adhere to the latest relevant standards.

Refer to Logic Air monobloc heat pump system installation and maintenance manual in conjunction with these schematic drawings.

TP No	DESCRIPTION	SIZE	MATERIAL	TYPE
1	HEAT PUMP FLOW	1" BSP	BRASS	BSP MALE
2	HEAT PUMP RETURN	1" BSP	BRASS	BSP MALE
3	HEAT PUMP CONDENSATE DISPOSAL	-	-	-
4	PRESSURE RELIEF VALVE (PRV)	15MM	COPPER	COPPER PIPE OUTLET
5	CYLINDER HEAT PUMP FLOW	28MM	BRASS	COMPRESSION
6	CYLINDER HEAT PUMP RETURN	28MM	BRASS	COMPRESSION
7	ZONE 1 FLOW	28MM	BRASS	COMPRESSION
8	ZONE 1 RETURN	28MM	BRASS	COMPRESSION
9	ZONE 2 FLOW	28MM	BRASS	COMPRESSION
10	ZONE 2 RETURN	28MM	BRASS	COMPRESSION

Figure 3. Logic Air + Two Zone Pre-Plumbed Cylinder with Integrated Buffer



Notes.

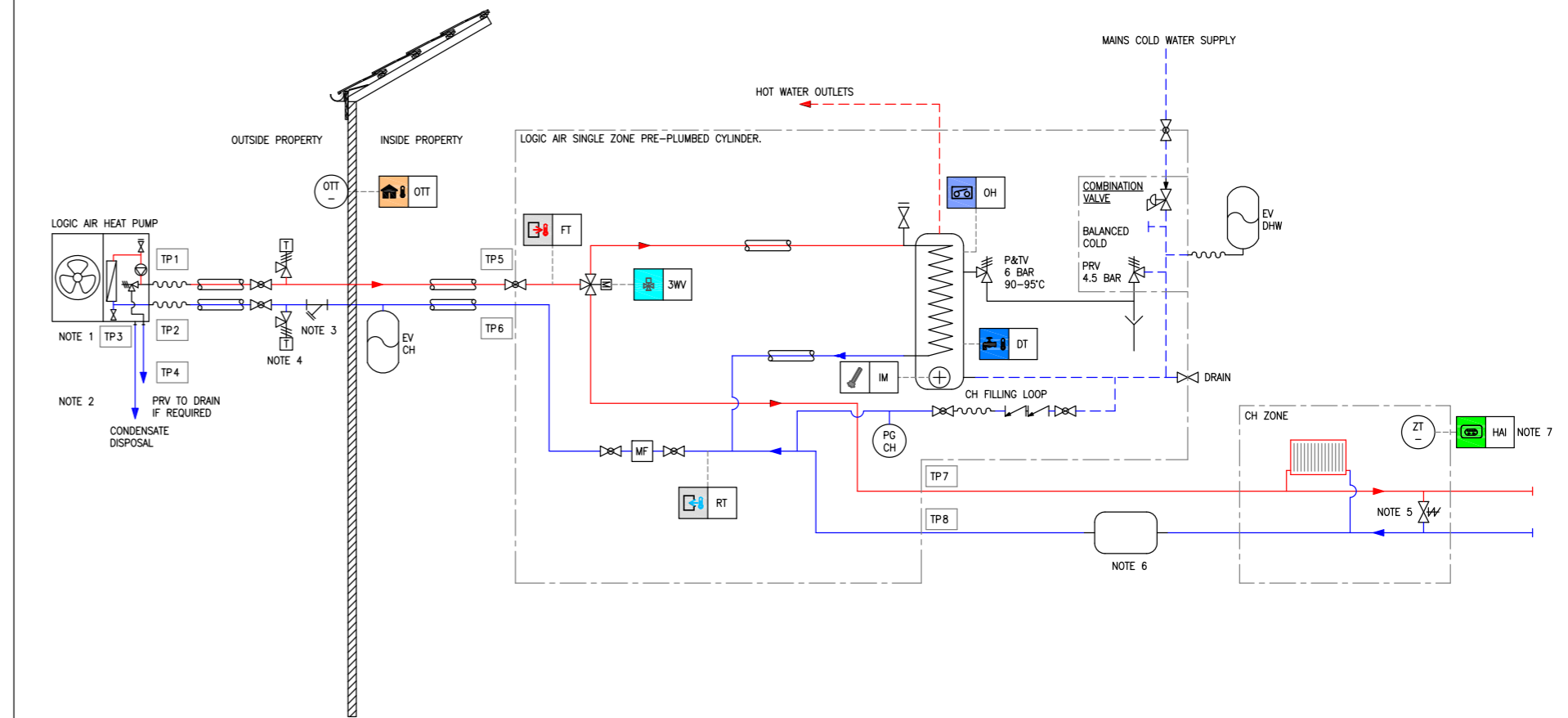
- Note 1. The heat pump must be installed on a secure level base capable of supporting its weight.
- Note 2. Refer to the installation manual for condensate and pressure relief discharge requirements.
- Note 3. A particle filter can be supplied as an option and it's recommended that a magnetic filter is installed. Logic Air Pre-plumbed cylinders are supplied complete with a combined magnetic and particle filter.
- Note 4. Anti-freeze valves are required if glycol is not used in the system.
- Note 5. Install an auto-bypass if no permanent open circuit is available to allow secondary side pump overrun and normal operation.
- Note 6. Logic Air single zone pre-plumbed arrangement is available.
- Note 7. Refer to the installation manual for smart or ON/OFF thermostat connection.

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TP No	DESCRIPTION	SIZE	MATERIAL	TYPE
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2	HEAT PUMP RETURN	1" BSP	BRASS	BSP MALE
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5	CYLINDER HEAT PUMP FLOW	28MM	BRASS	COMPRESSION
6	CYLINDER HEAT PUMP RETURN	28MM	BRASS	COMPRESSION
7	ZONE 1 FLOW	28MM	BRASS	COMPRESSION
8	ZONE 1 RETURN	28MM	BRASS	COMPRESSION

Figure 4. Logic Air + Single Zone Pre-Plumbed Cylinder



Notes.

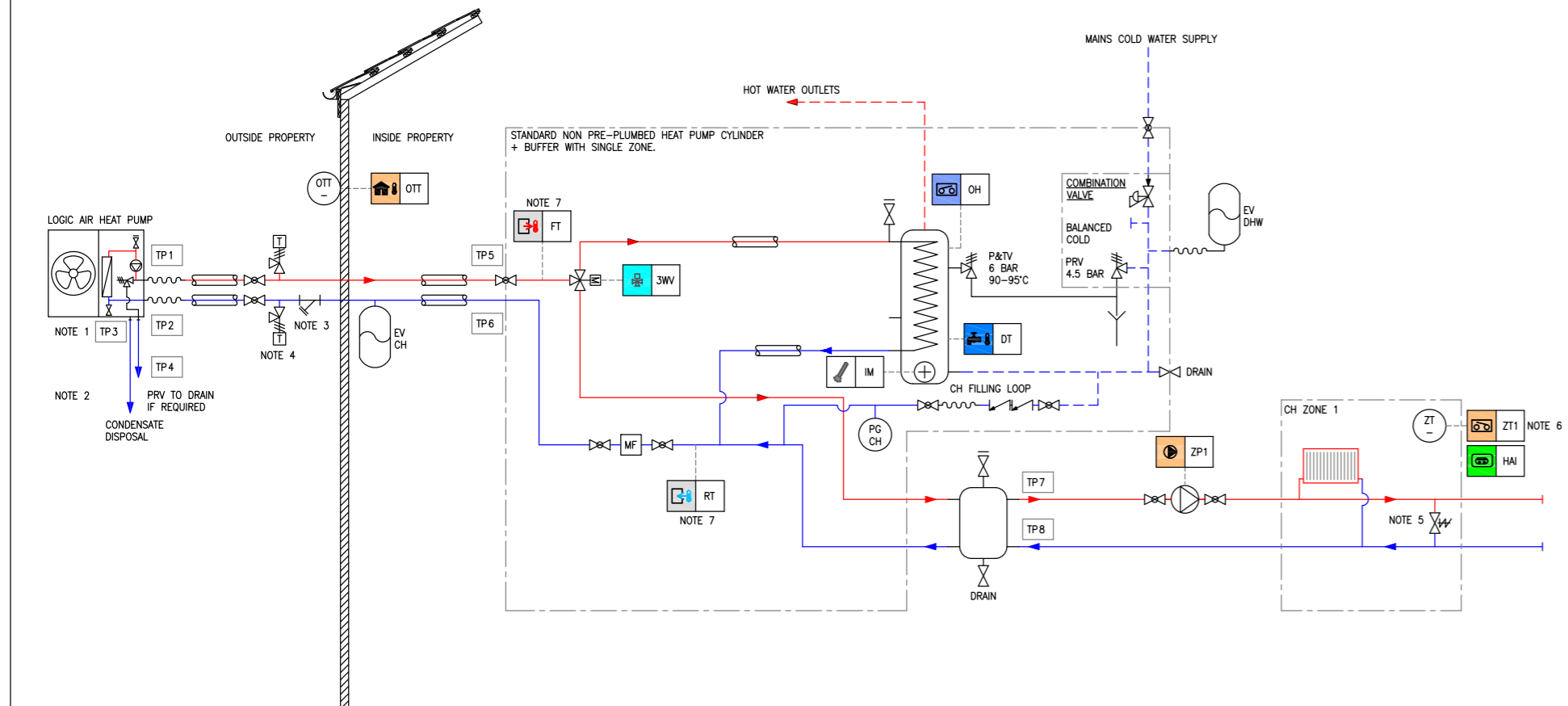
- Note 1. The heat pump must be installed on a secure level base capable of supporting its weight.
- Note 2. Refer to the installation manual for condensate and pressure relief discharge requirements.
- Note 3. A particle filter can be supplied as an option and it's recommended that a magnetic filter is installed. Logic Air Pre-plumbed cylinders are supplied complete with a combined magnetic and particle filter.
- Note 4. Anti-freeze valves are required if glycol is not used in the system.
- Note 5. Install an auto-bypass if no permanent open circuit is available to allow primary side pump overrun and normal operation. Ensuring minimum circulating water flow rate for heat pump defrost requirements.
- Note 6. If minimum free system water volume cannot be met, a volumiser or buffer vessel is required.
- Note 7. Refer to the installation manual for smart thermostat connection.

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CONNECTION POINT LIST				
TP No	DESCRIPTION	SIZE	MATERIAL	TYPE
1	HEAT PUMP FLOW	1" BSP	BRASS	BSP MALE
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4	PRESSURE RELIEF VALVE (PRV)	15MM	COPPER	COPPER PIPE OUTLET
5	HEAT PUMP FLOW	28MM	BRASS	COMPRESSION
6	HEAT PUMP RETURN	28MM	BRASS	COMPRESSION
7	ZONE FLOW	28MM	BRASS	COMPRESSION
8	ZONE RETURN	28MM	BRASS </td <td>COMPRESSION</td>	COMPRESSION

Figure 5. Logic Air + Standard Non Pre-Plumbed Heat Pump Cylinder + Buffer with Single Zone

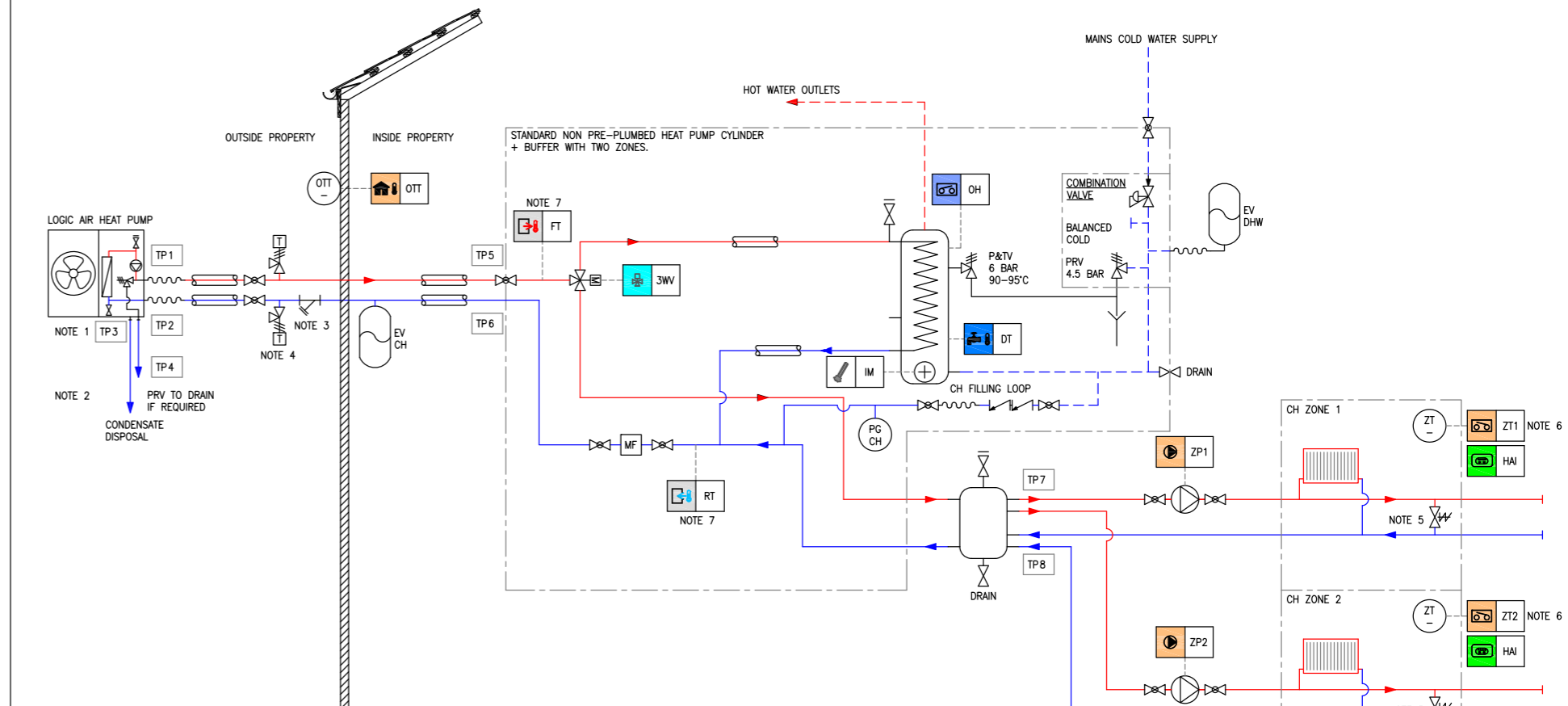


- Notes.**
- Note 1. The heat pump must be installed on a secure level base capable of supporting its weight.
 - Note 2. Refer to the installation manual for condensate and pressure relief discharge requirements.
 - Note 3. A particle filter is required and can be supplied as an option. It's recommended that a magnetic filter is installed.
 - Note 4. Anti-freeze valves are required if glycol is not used in the system.
 - Note 5. Install an auto-bypass if no permanent open circuit is available to allow secondary side pump overrun and normal operation.
 - Note 6. Refer to the installation manual for smart or ON/OFF thermostat connection.
 - Note 7. Flow and return pipe clip-on sensors must be installed on the 28mm copper pipe work.

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Refer to Logic Air monobloc heatpump system installation and maintenance manual in conjunction with these schematic drawings.

CONNECTION POINT LIST				
TP No	DESCRIPTION	SIZE	MATERIAL	TYPE
1	HEAT PUMP FLOW	1" BSP	BRASS	BSP MALE
2	HEAT PUMP RETURN	1" BSP	BRASS	BSP MALE
3	HEAT PUMP CONDENSATE DISPOSAL	-	-	-
4	PRESSURE RELIEF VALVE (PRV)	15MM	COPPER	COPPER PIPE OUTLET
5	HEAT PUMP FLOW	28MM	BRASS	COMPRESSION
6	HEAT PUMP RETURN	28MM	BRASS	COMPRESSION
7	ZONE FLOWS	28MM	BRASS	COMPRESSION
8	ZONE RETURNS	28MM	BRASS	COMPRESSION

Figure 6. Logic Air + Standard Non Pre-Plumbed Heat Pump Cylinder + Buffer with Two Zones

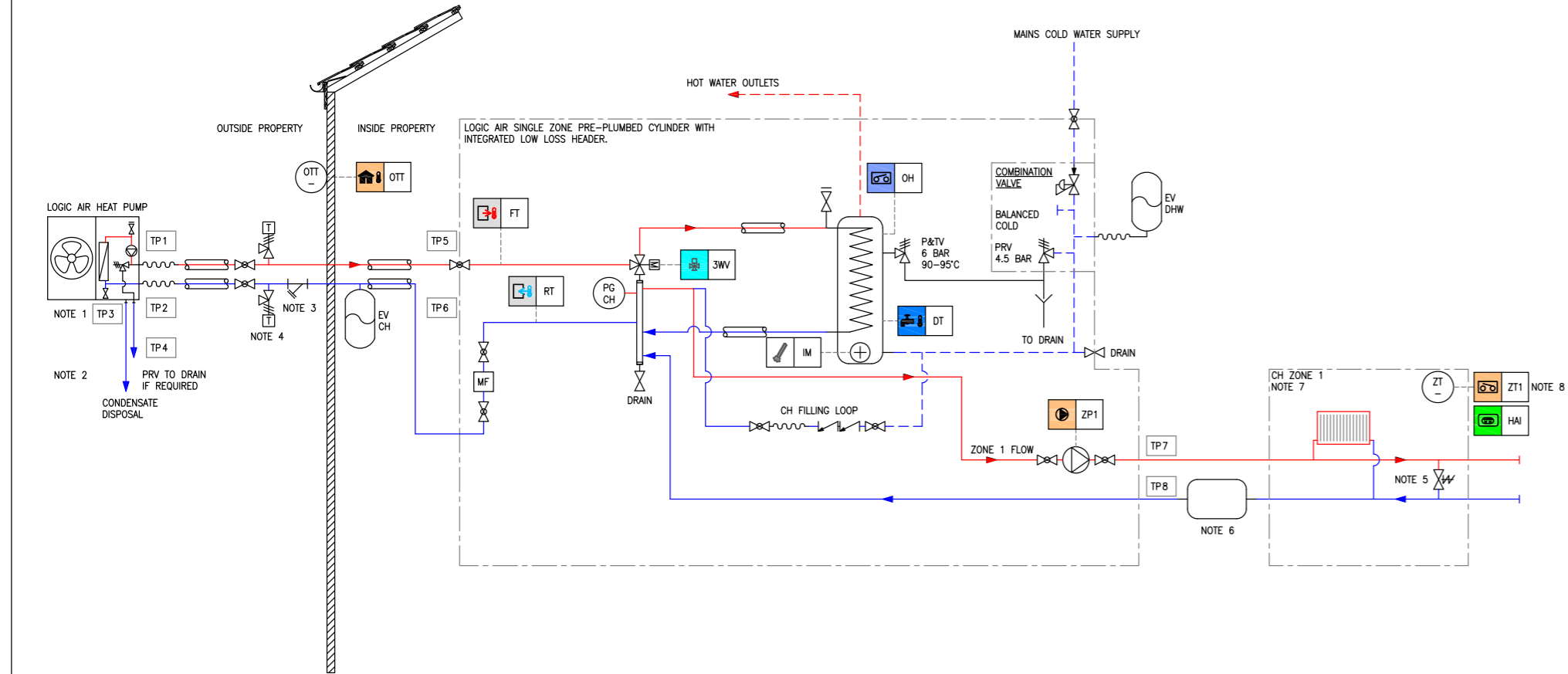


- Notes.**
- Note 1. The heat pump must be installed on a secure level base capable of supporting its weight.
 - Note 2. Refer to the installation manual for condensate and pressure relief discharge requirements.
 - Note 3. A particle filter is required and can be supplied as an option. It's recommended that a magnetic filter is installed.
 - Note 4. Anti-freeze valves are required if glycol is not used in the system.
 - Note 5. Install an auto-bypass if no permanent open circuit is available to allow secondary side pump overrun and normal operation.
 - Note 6. Refer to the installation manual for smart or ON/OFF thermostat connection.
 - Note 7. Flow and return pipe clip-on sensors must be installed on the 28mm copper pipe work.

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3	HEAT PUMP CONDENSATE DISPOSAL	-	-	-
4	PRESSURE RELIEF VALVE (PRV)	15MM	COPPER	COPPER PIPE OUTLET
5	CYLINDER HEAT PUMP FLOW	28MM	BRASS	COMPRESSION
6	CYLINDER HEAT PUMP RETURN	28MM	BRASS	COMPRESSION
7	ZONE 1 FLOW	28MM	BRASS	COMPRESSION
8	ZONE 1 RETURN	28MM	BRASS	COMPRESSION

Figure 7. Logic Air + Single Zone Pre-Plumbed Cylinder with Integrated Low Loss Header



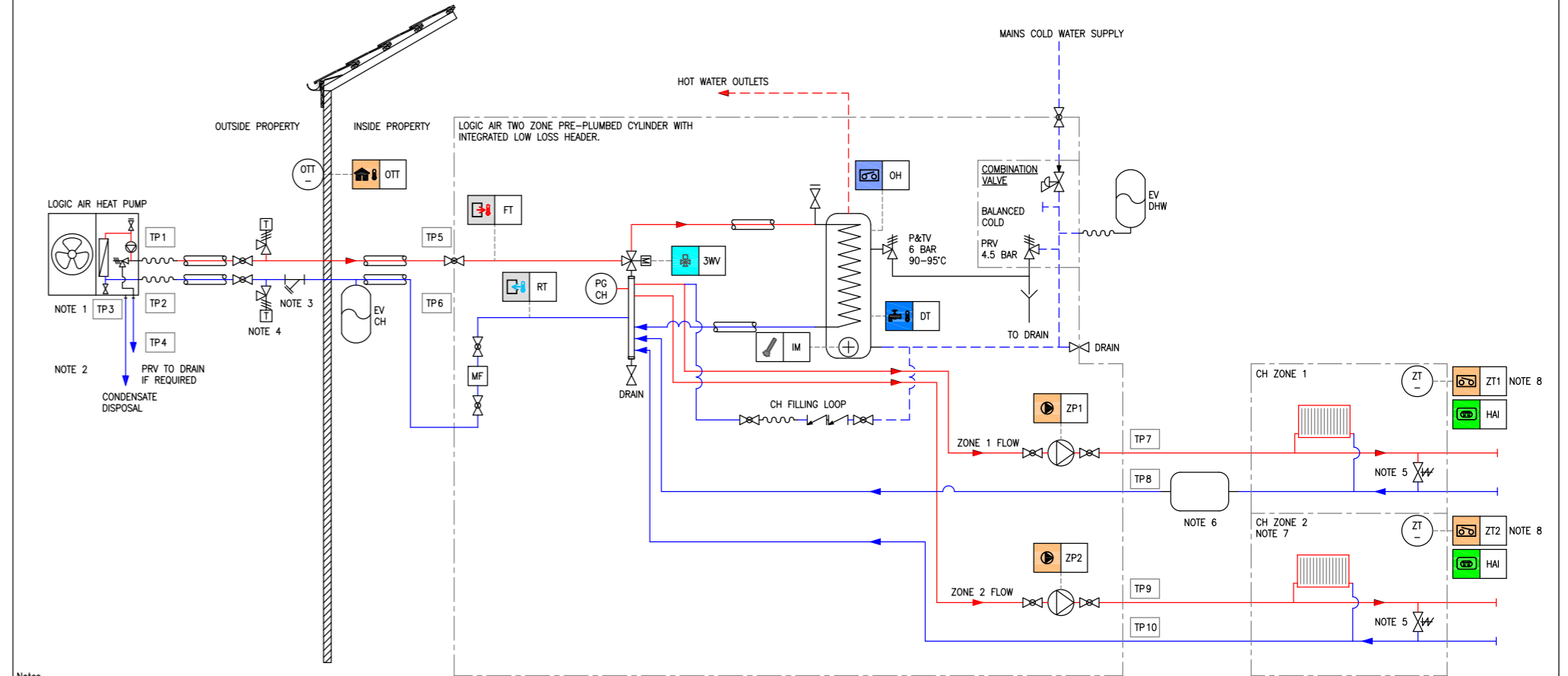
- Notes.
- Note 1. The heat pump must be installed on a secure level base capable of supporting its weight.
 - Note 2. Refer to the installation manual for condensate and pressure relief discharge requirements.
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 - Note 4. Anti-freeze valves are required if glycol is not used in the system.
 - Note 5. Install an auto-bypass if no permanent open circuit is available to allow secondary side pump overrun and normal operation.
 - Note 6. If minimum free system water volume cannot be met, a volumiser or buffer vessel is required.
 - Note 7. Logic Air two zone pre-plumbed arrangement is available.
 - Note 8. Refer to the installation manual for smart or ON/OFF thermostat connection.

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CONNECTION POINT LIST				
TP No	DESCRIPTION	SIZE	MATERIAL	TYPE
1	HEAT PUMP FLOW	1" BSP	BRASS	BSP MALE
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3	HEAT PUMP CONDENSATE DISPOSAL	-	-	-
4	PRESSURE RELIEF VALVE (PRV)	15MM	COPPER	COPPER PIPE OUTLET
5	CYLINDER HEAT PUMP FLOW	28MM	BRASS	COMPRESSION
6	CYLINDER HEAT PUMP RETURN	28MM	BRASS	COMPRESSION
7	ZONE 1 FLOW	28MM	BRASS	COMPRESSION
8	ZONE 1 RETURN	28MM	BRASS	COMPRESSION
9	ZONE 2 FLOW	28MM	BRASS	COMPRESSION
10	ZONE 2 RETURN	28MM	BRASS	COMPRESSION

Figure 8. Logic Air + Two Zone Pre-Plumbed Cylinder with Integrated Low Loss Header



- Notes.
- Note 1. The heat pump must be installed on a secure level base capable of supporting its weight.
 - Note 2. Refer to the installation manual for condensate and pressure relief discharge requirements.
 - Note 3. A particle filter can be supplied as an option and it's recommended that a magnetic filter is installed. Logic Air Pre-plumbed cylinders are supplied complete with a combined magnetic and particle filter.
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 - Note 7. Logic Air single zone pre-plumbed arrangement is available.
 - Note 8. Refer to the installation manual for smart or ON/OFF thermostat connection.

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At Ideal Heating we take our environmental impact seriously, therefore when installing any Ideal Heating product please make sure to dispose of any previous appliance in an environmentally conscious manner. Households can contact their local authority to find out how. See <https://www.gov.uk/managing-your-waste-an-overview> for guidance on how to efficiently recycle your business waste.



Technical Training

Our Expert Academy offer a range of training options designed and delivered by our experts in heating. For details please contact: expert-academy.co.uk

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