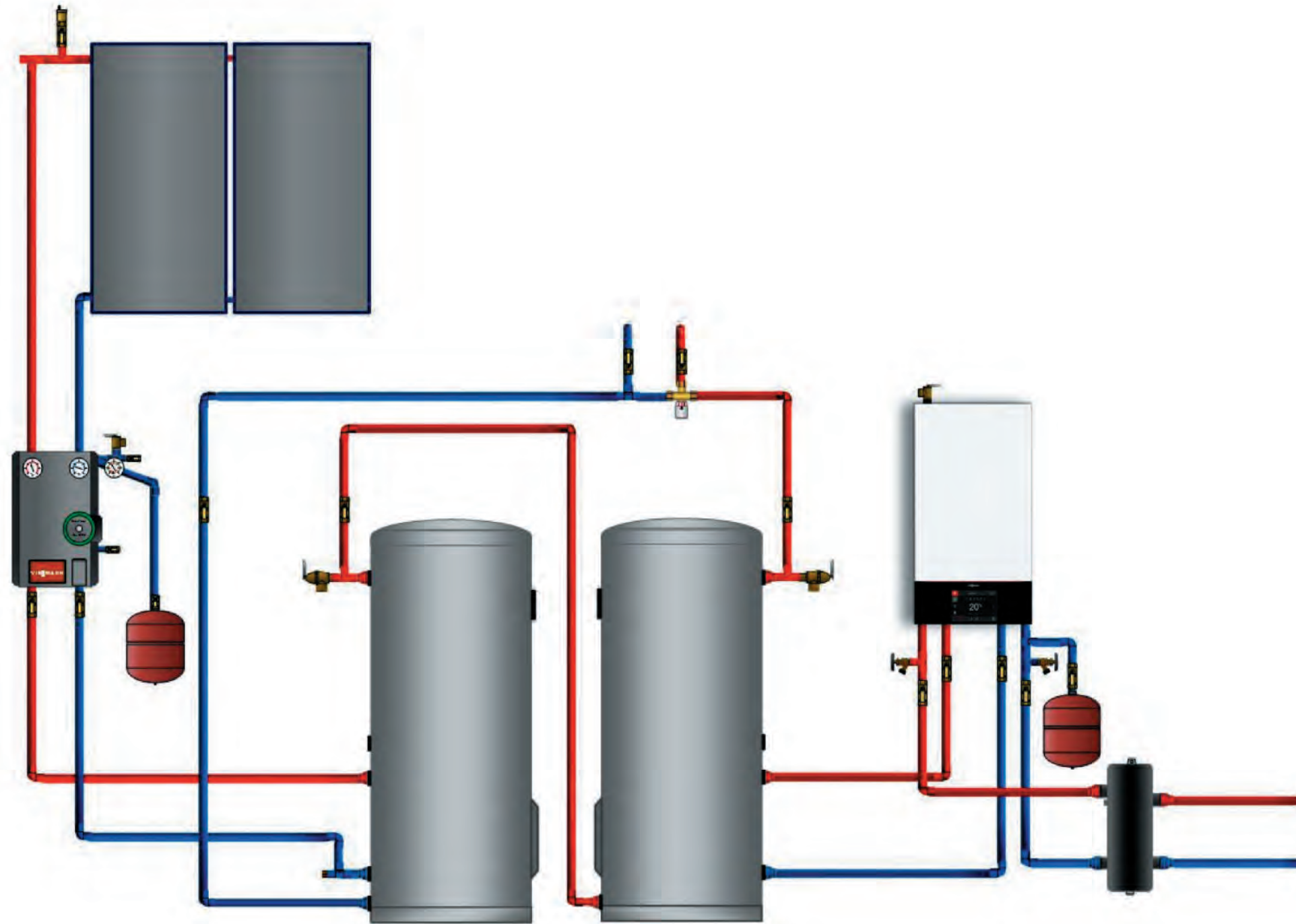


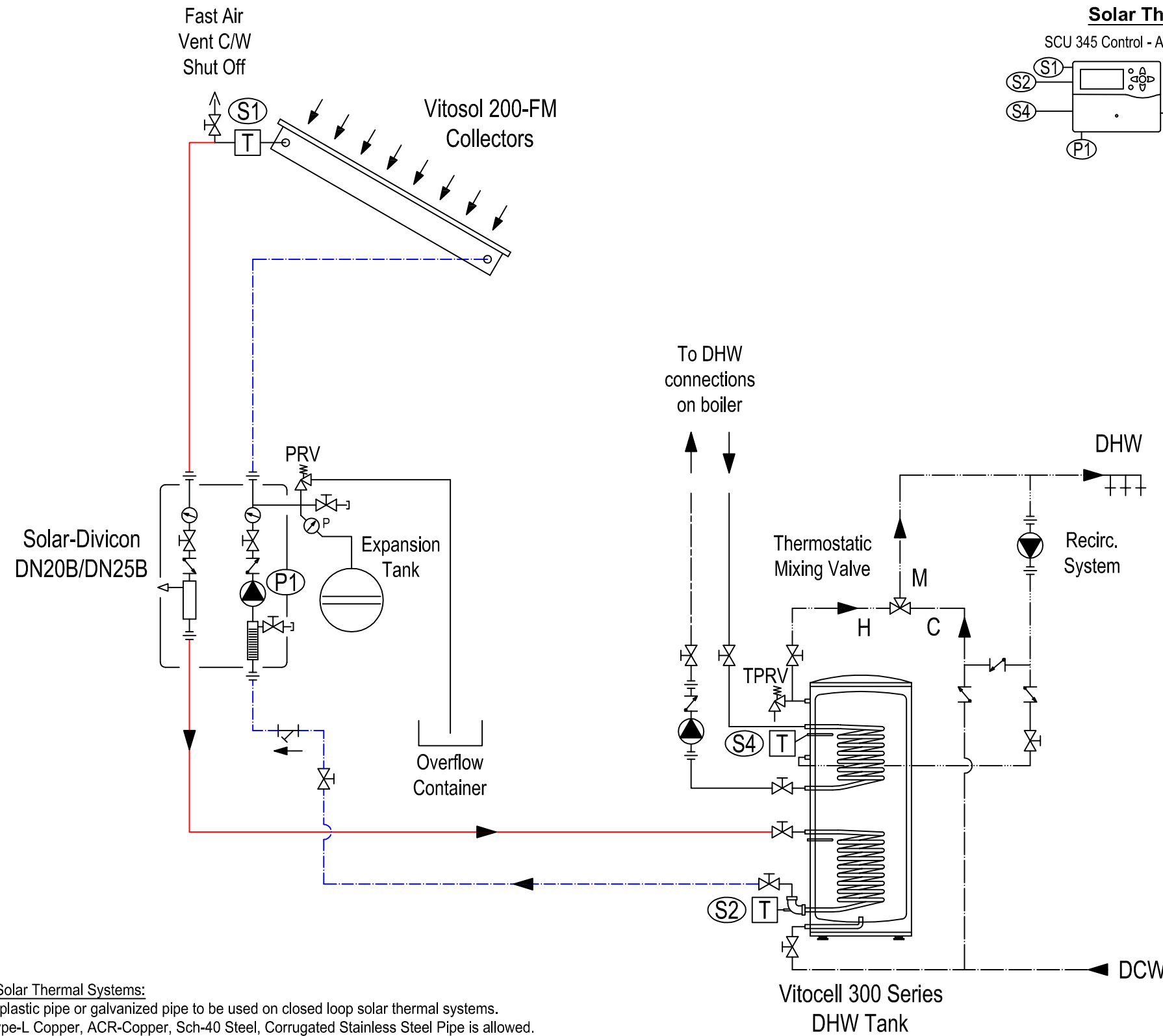


## Vitosol Sample Piping Layout Drawings

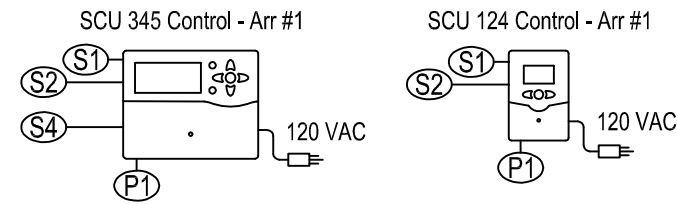


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### Solar Thermal Control Options:



### LEGEND

SYMBOLS	DESCRIPTION
	SOLAR WATER SUPPLY PIPE
	SOLAR WATER RETURN PIPE
	DOMESTIC COLD WATER PIPE
	DOMESTIC HOT WATER PIPE
	DOMESTIC COLD WATER PIPE
	DOMESTIC HOT WATER RECIRC. PIPE
	ISOLATION VALVE
	CIRCUIT SETTER
	WYE STRAINER
	CHECK VALVE
	PRESSURE RELIEF VALVE
	ANTISCALD / TEMPERING VALVE
	TEMPERATURE SENSOR
	PRESSURE GAUGE
	TEMPERING GAUGE

NOTES

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REV.	DESCRIPTION	BY	DATE	BY	DATE

**VISSMANN**  
Manufacturing Company Inc.  
750 McMURRAY ROAD, WATERLOO, ONTARIO N2V 2G5

### Vitosol Piping Layout 1

PAPER SIZE	SCALE	DRAWN BY	CHECKED BY	PROJECT ENGR.
11x17	NTS	ROYS	WITA	---
NO CONSTRUCTION PERMITTED UNLESS DWG. APPROVED				VISSMANN DRAWING NUMBER
---		JOB No.	DWG.No.	
VISSMANN:	DATE	0	1	
CLIENT:	May 4, 2022	SHEET 2 OF 12	REV.	0

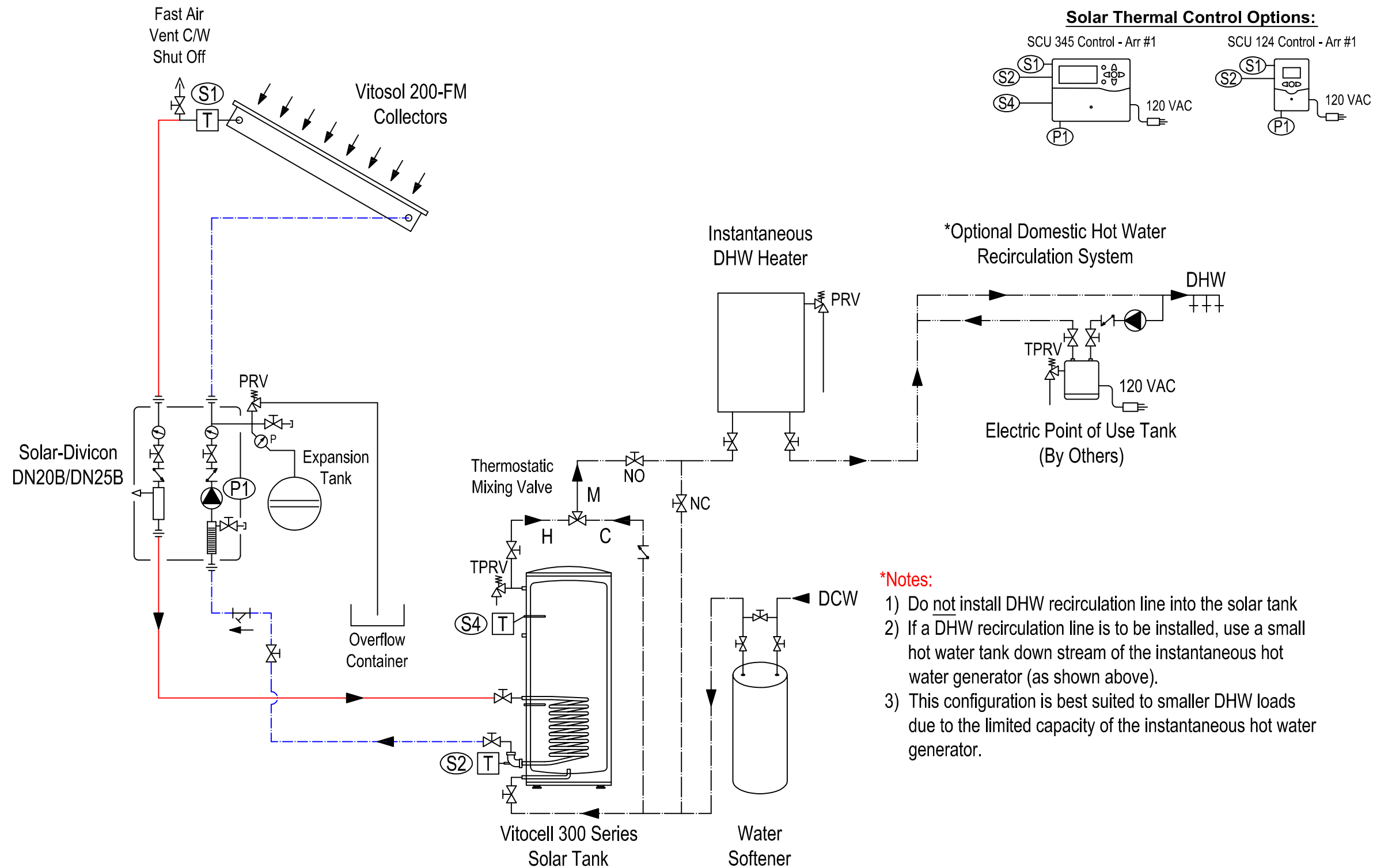
**Important Notes Regarding Solar Thermal Systems:**

- Under NO circumstance is plastic pipe or galvanized pipe to be used on closed loop solar thermal systems.
- Only metal pipe such as Type-L Copper, ACR-Copper, Sch-40 Steel, Corrugated Stainless Steel Pipe is allowed.
- When joining Type-L Copper tubing, only 95/5 Tin/Antimony (soft solder) or brazing should be used to join tubing.
- When using press fittings, use high temperature O-rings suitable for use with propylene glycol mixtures up to 50%.
- If a flat plate heat exchanger is to be used for potable water applications, the installation of a water softener is highly recommended to help protect the heat exchanger against fouling.
- If the solar system is used to supplement the space heating system, low temperature zones must be thermally protected using a mixing valve to protect against excessively high fluid temperatures.

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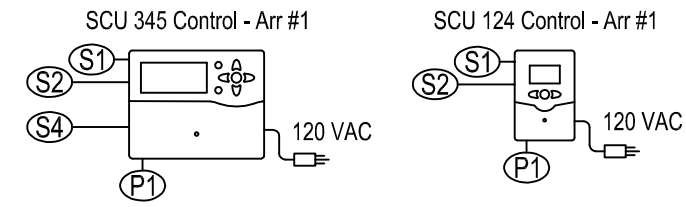
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- \*Notes:**
- 1) Do not install DHW recirculation line into the solar tank
  - 2) If a DHW recirculation line is to be installed, use a small hot water tank down stream of the instantaneous hot water generator (as shown above).
  - 3) This configuration is best suited to smaller DHW loads due to the limited capacity of the instantaneous hot water generator.

### Solar Thermal Control Options:



### LEGEND

SYMBOLS	DESCRIPTION
	SOLAR WATER SUPPLY PIPE
	SOLAR WATER RETURN PIPE
	DOMESTIC COLD WATER PIPE
	DOMESTIC HOT WATER PIPE
	DOMESTIC COLD WATER PIPE
	DOMESTIC HOT WATER RECIRC. PIPE
	ISOLATION VALVE
	CIRCUIT SETTER
	WYE STRAINER
	CHECK VALVE
	PRESSURE RELIEF VALVE
	ANTISCALD / TEMPERING VALVE
	TEMPERATURE SENSOR
	PRESSURE GAUGE
	TEMPERING GAUGE

**NOTES**

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REV.	DESCRIPTION	BY	DATE	BY	DATE

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### Vitosol Piping Layout 2

PAPER SIZE	SCALE	DRAWN BY	CHECKED BY	PROJECT ENGR.
11x17	NTS	ROYS	WITA	---
NO CONSTRUCTION PERMITTED UNLESS DWG. APPROVED				VISSMANN DRAWING NUMBER
---		JOB No.	DWG.No.	---
VISSMANN:	DATE	0	1	---
CLIENT:	May 4, 2022	SHEET 3 OF 12	REV.	0

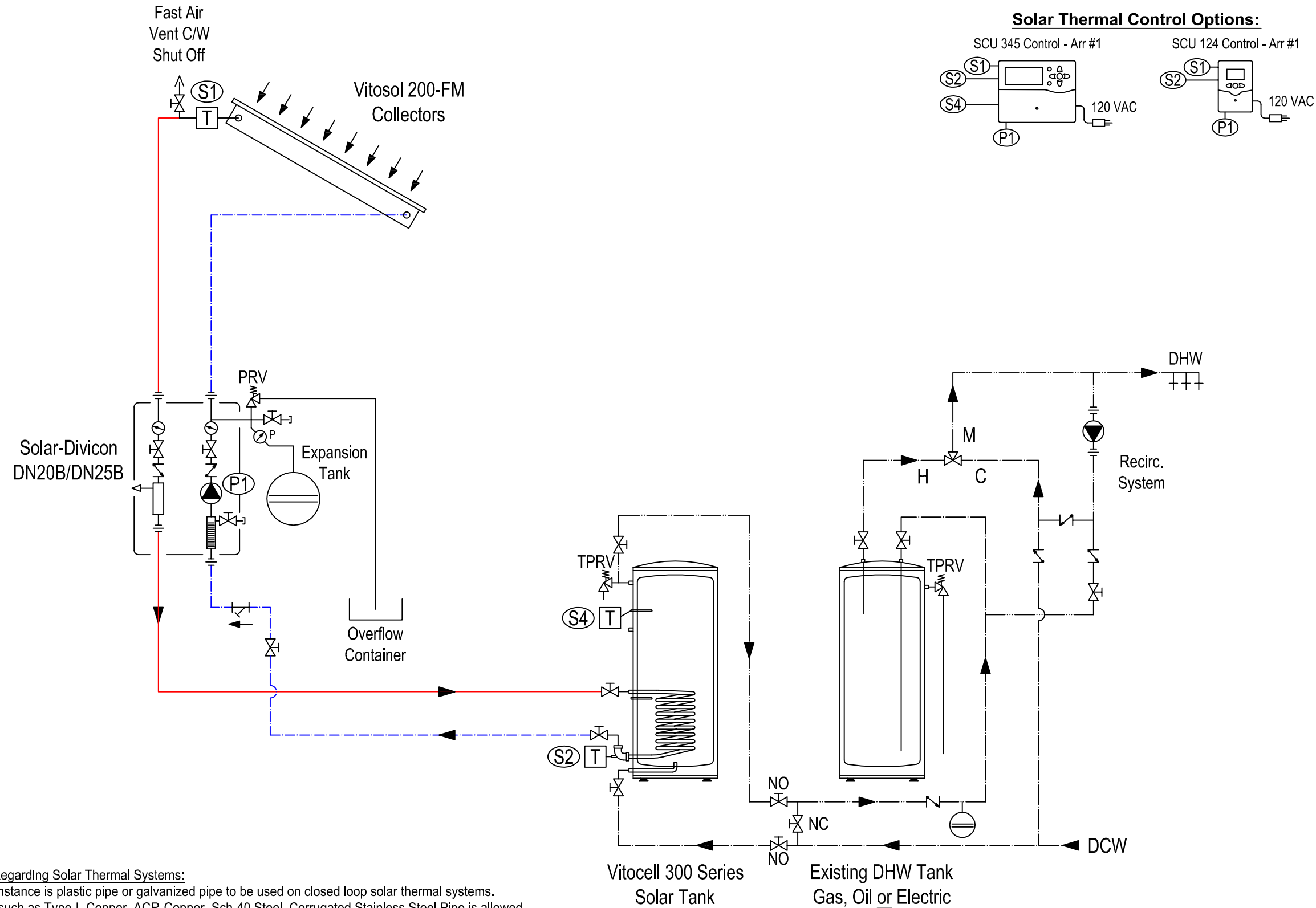
**Important Notes Regarding Solar Thermal Systems:**

- Under NO circumstance is plastic pipe or galvanized pipe to be used on closed loop solar thermal systems.
- Only metal pipe such as Type-L Copper, ACR-Copper, Sch-40 Steel, Corrugated Stainless Steel Pipe is allowed.
- When joining Type-L Copper tubing, only 95/5 Tin/Antimony (soft solder) or brazing should be used to join tubing.
- When using press fittings, use high temperature O-rings suitable for use with propylene glycol mixtures up to 50%.
- If a flat plate heat exchanger is to be used for potable water applications, the installation of a water softener is highly recommended to help protect the heat exchanger against fouling.
- If the solar system is used to supplement the space heating system, low temperature zones must be thermally protected using a mixing valve to protect against excessively high fluid temperatures.

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LEGEND	
SYMBOLS	DESCRIPTION
	SOLAR WATER SUPPLY PIPE
	SOLAR WATER RETURN PIPE
	DOMESTIC COLD WATER PIPE
	DOMESTIC HOT WATER PIPE
	DOMESTIC COLD WATER PIPE
	DOMESTIC HOT WATER RECIRC. PIPE
	ISOLATION VALVE
	CIRCUIT SETTER
	WYE STRAINER
	CHECK VALVE
	PRESSURE RELIEF VALVE
	ANTISCALD / TEMPERING VALVE
	TEMPERATURE SENSOR
	PRESSURE GAUGE
	TEMPERING GAUGE

NOTES

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REV.	DESCRIPTION	BY	DATE	BY	DATE

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Vitosol Piping Layout 3

PAPER SIZE	SCALE	DRAWN BY	CHECKED BY	PROJECT ENGR.
11x17	NTS	ROYS	WITA	---

NO CONSTRUCTION PERMITTED UNLESS DWG. APPROVED

VISSMANN DRAWING NUMBER	
JOB No.	DWG.No.
0	1

VISSMANN:	DATE	REV.
CLIENT:	May 4, 2022	SHEET 4 OF 12

**Important Notes Regarding Solar Thermal Systems:**

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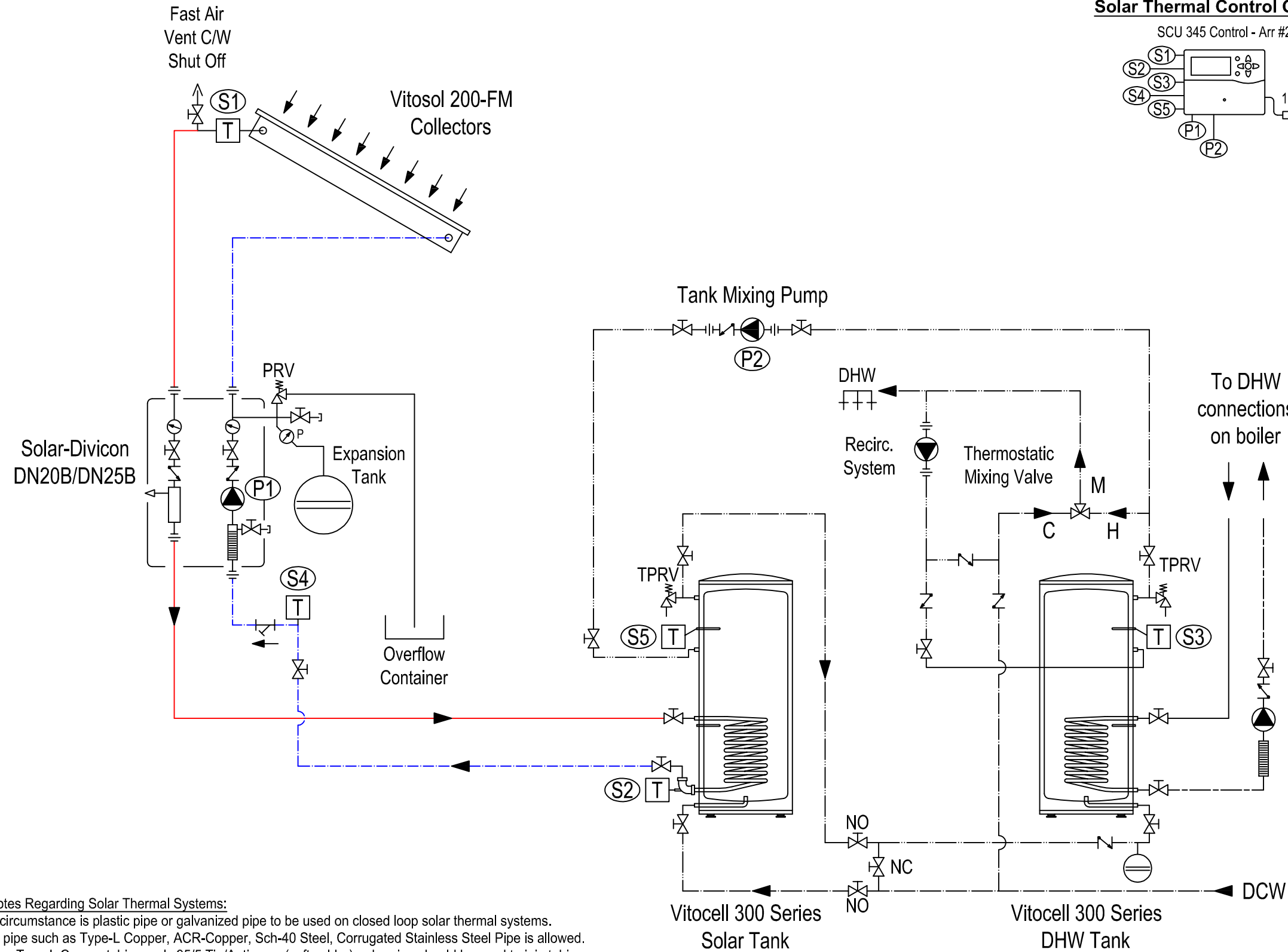
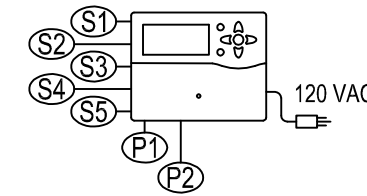


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### Solar Thermal Control Options:

SCU 345 Control - Arr #2



### LEGEND

SYMBOLS	DESCRIPTION
	SOLAR WATER SUPPLY PIPE
	SOLAR WATER RETURN PIPE
	DOMESTIC COLD WATER PIPE
	DOMESTIC HOT WATER PIPE
	DOMESTIC COLD WATER PIPE
	DOMESTIC HOT WATER RECIRC. PIPE
	ISOLATION VALVE
	CIRCUIT SETTER
	WYE STRAINER
	CHECK VALVE
	PRESSURE RELIEF VALVE
	ANTISCALD / TEMPERING VALVE
	TEMPERATURE SENSOR
	PRESSURE GAUGE
	TEMPERING GAUGE

NOTES

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REV.	DESCRIPTION	BY	DATE	BY	DATE



### Vitosol Piping Layout 4

PAPER SIZE	SCALE	DRAWN BY	CHECKED BY	PROJECT ENGR.
11x17	NTS	ROYS	WITA	---
NO CONSTRUCTION PERMITTED UNLESS DWG. APPROVED				VISSMANN DRAWING NUMBER
---		JOB No.	DWG.No.	---
VISSMANN:	DATE	0	1	---
CLIENT:	May 4, 2022	SHEET 5 OF 12	REV.	0

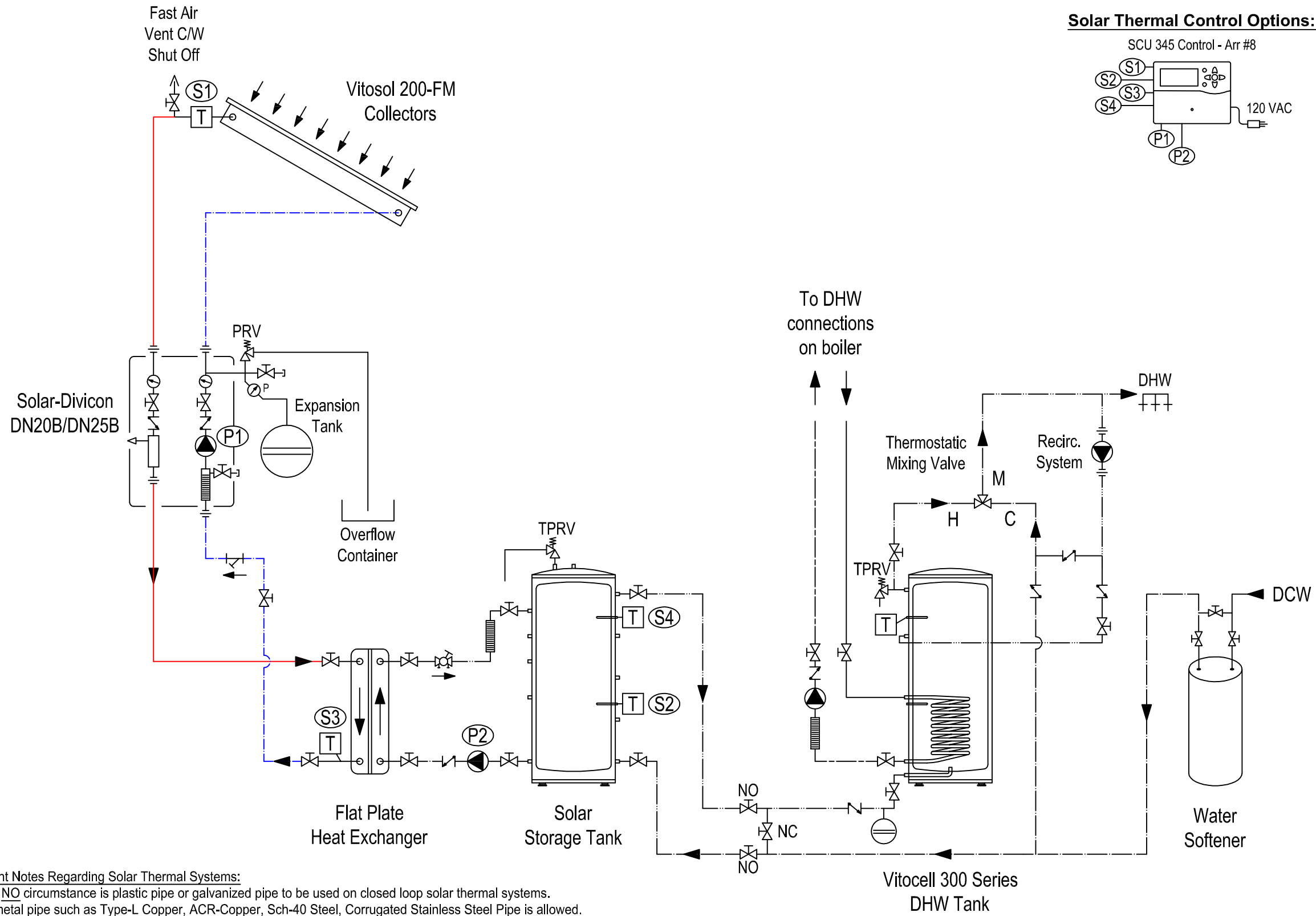
**Important Notes Regarding Solar Thermal Systems:**

- Under **NO** circumstance is plastic pipe or galvanized pipe to be used on closed loop solar thermal systems.
- **Only** metal pipe such as Type-L Copper, ACR-Copper, Sch-40 Steel, Corrugated Stainless Steel Pipe is allowed.
- When joining Type-L Copper tubing, only 95/5 Tin/Antimony (soft solder) or brazing should be used to join tubing.
- When using press fittings, use high temperature O-rings suitable for use with propylene glycol mixtures up to 50%.
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- If the solar system is used to supplement the space heating system, low temperature zones must be thermally protected using a mixing valve to protect against excessively high fluid temperatures.

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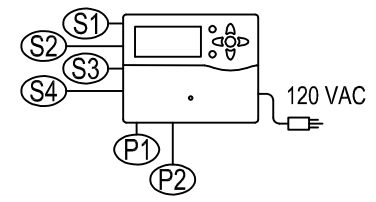
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### Solar Thermal Control Options:

SCU 345 Control - Arr #8



### LEGEND

SYMBOLS	DESCRIPTION
	SOLAR WATER SUPPLY PIPE
	SOLAR WATER RETURN PIPE
	DOMESTIC COLD WATER PIPE
	DOMESTIC HOT WATER PIPE
	DOMESTIC COLD WATER PIPE
	DOMESTIC HOT WATER RECIRC. PIPE
	ISOLATION VALVE
	CIRCUIT SETTER
	WYE STRAINER
	CHECK VALVE
	PRESSURE RELIEF VALVE
	ANTISCALD / TEMPERING VALVE
	TEMPERATURE SENSOR
	PRESSURE GAUGE
	TEMPERING GAUGE

### NOTES

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REV.	DESCRIPTION	BY	DATE	BY	DATE
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A					

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750 McMURRAY ROAD, WATERLOO, ONTARIO N2V 2G5

### Vitosol Piping Layout 5

PAPER SIZE	SCALE	DRAWN BY	CHECKED BY	PROJECT ENGR.
11x17	NTS	ROYS	WITA	---
NO CONSTRUCTION PERMITTED UNLESS DWG. APPROVED				
---			VIESSMANN DRAWING NUMBER	
---			JOB No.	DWG.No.
VIESSMANN:	DATE	0	1	
CLIENT:	May 4, 2022	SHEET 6 OF 12	REV.	0

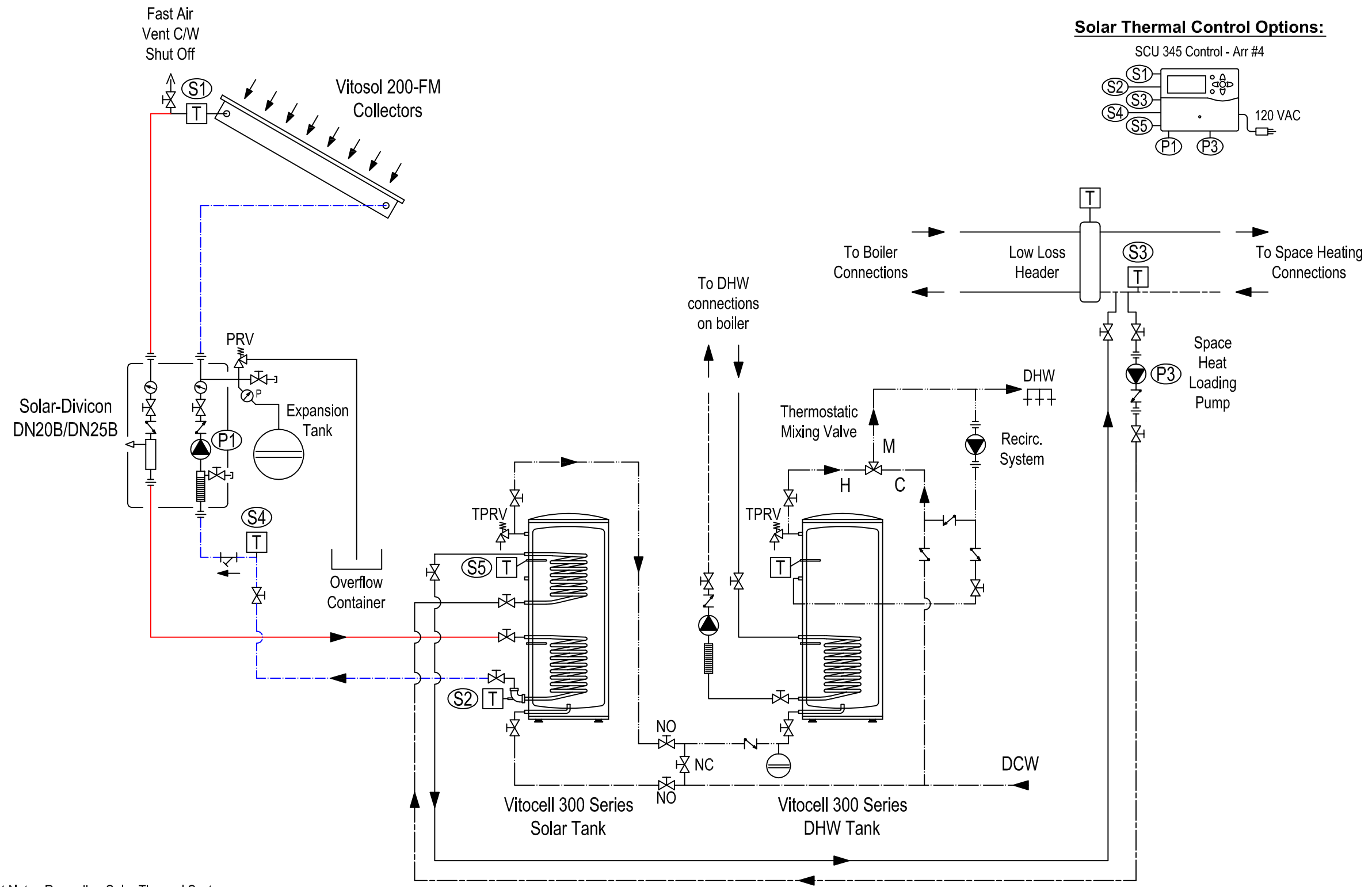
**Important Notes Regarding Solar Thermal Systems:**

- Under NO circumstance is plastic pipe or galvanized pipe to be used on closed loop solar thermal systems.
- Only metal pipe such as Type-L Copper, ACR-Copper, Sch-40 Steel, Corrugated Stainless Steel Pipe is allowed.
- When joining Type-L Copper tubing, only 95/5 Tin/Antimony (soft solder) or brazing should be used to join tubing.
- When using press fittings, use high temperature O-rings suitable for use with propylene glycol mixtures up to 50%.
- If a flat plate heat exchanger is to be used for potable water applications, the installation of a water softener is highly recommended to help protect the heat exchanger against fouling.
- If the solar system is used to supplement the space heating system, low temperature zones must be thermally protected using a mixing valve to protect against excessively high fluid temperatures.

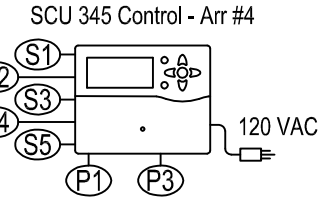
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### Solar Thermal Control Options:



### LEGEND

SYMBOLS	DESCRIPTION
	SOLAR WATER SUPPLY PIPE
	SOLAR WATER RETURN PIPE
	DOMESTIC COLD WATER PIPE
	DOMESTIC HOT WATER PIPE
	DOMESTIC COLD WATER PIPE
	DOMESTIC HOT WATER RECIRC. PIPE
	ISOLATION VALVE
	CIRCUIT SETTER
	WYE STRAINER
	CHECK VALVE
	PRESSURE RELIEF VALVE
	ANTISCALD / TEMPERING VALVE
	TEMPERATURE SENSOR
	PRESSURE GAUGE
	TEMPERING GAUGE

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REV.	DESCRIPTION	BY	DATE	BY	DATE
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C					
B					
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				CHECKED	REV. APPR.

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Manufacturing Company Inc.  
750 McMURRAY ROAD, WATERLOO, ONTARIO N2V 2G5

### Vitosol Piping Layout 6

PAPER SIZE	SCALE	DRAWN BY	CHECKED BY	PROJECT ENGR.
11x17	NTS	ROYS	WITA	---
NO CONSTRUCTION PERMITTED UNLESS DWG. APPROVED				
			VISSMANN DRAWING NUMBER	
			JOB No.	DWG.No.
VISSMANN:	DATE	0	1	
CLIENT:	May 4, 2022	SHEET 7 OF 12	REV.	0

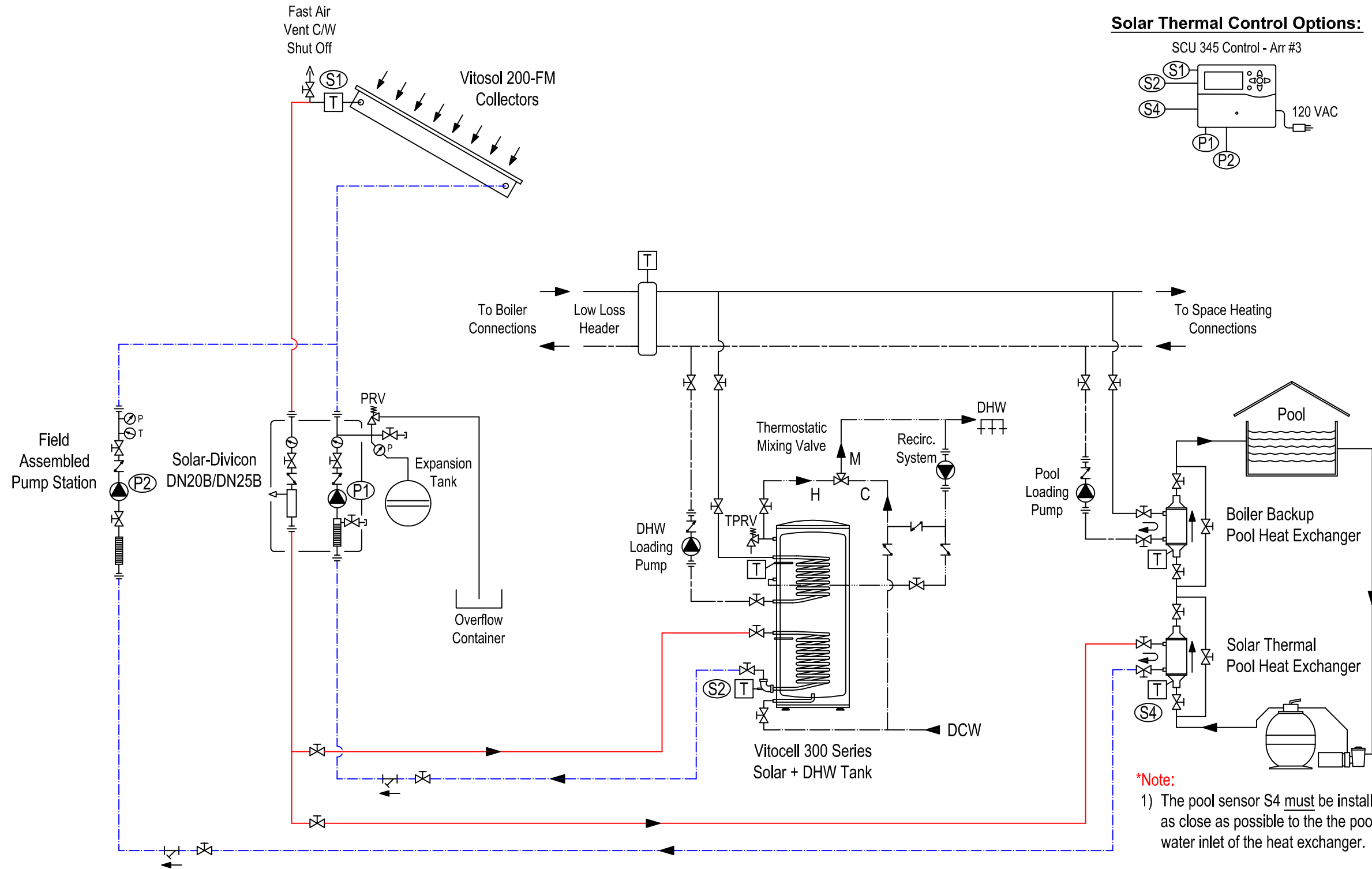
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- Under **NO** circumstance is plastic pipe or galvanized pipe to be used on closed loop solar thermal systems.
- **Only** metal pipe such as Type-L Copper, ACR-Copper, Sch-40 Steel, Corrugated Stainless Steel Pipe is allowed.
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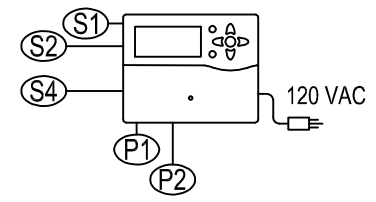
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### Solar Thermal Control Options:

SCU 345 Control - Arr #3



### LEGEND

SYMBOLS	DESCRIPTION
	SOLAR WATER SUPPLY PIPE
	SOLAR WATER RETURN PIPE
	DOMESTIC COLD WATER PIPE
	DOMESTIC HOT WATER PIPE
	DOMESTIC COLD WATER PIPE
	DOMESTIC HOT WATER RECIRC. PIPE
	ISOLATION VALVE
	CIRCUIT SETTER
	WYE STRAINER
	CHECK VALVE
	PRESSURE RELIEF VALVE
	ANTISCALD / TEMPERING VALVE
	TEMPERATURE SENSOR
	PRESSURE GAUGE
	TEMPERING GAUGE

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REV.	DESCRIPTION	BY	DATE	BY	DATE
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C					
B					
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		CHECKED		REV. APPR.	

# VIESSMANN

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750 McMURRAY ROAD, WATERLOO, ONTARIO N2V 2G5

### Vitosol Piping Layout 7

PAPER SIZE	SCALE	DRAWN BY	CHECKED BY	PROJECT ENGR.
11x17	NTS	ROYS	WITA	---
NO CONSTRUCTION PERMITTED UNLESS DWG. APPROVED				
---		VIESSMANN DRAWING NUMBER		
		JOB No.	DWG.No.	
VIESSMANN:	DATE	0	1	
CLIENT:	May 4, 2022	SHEET 8 OF 12	REV.	0

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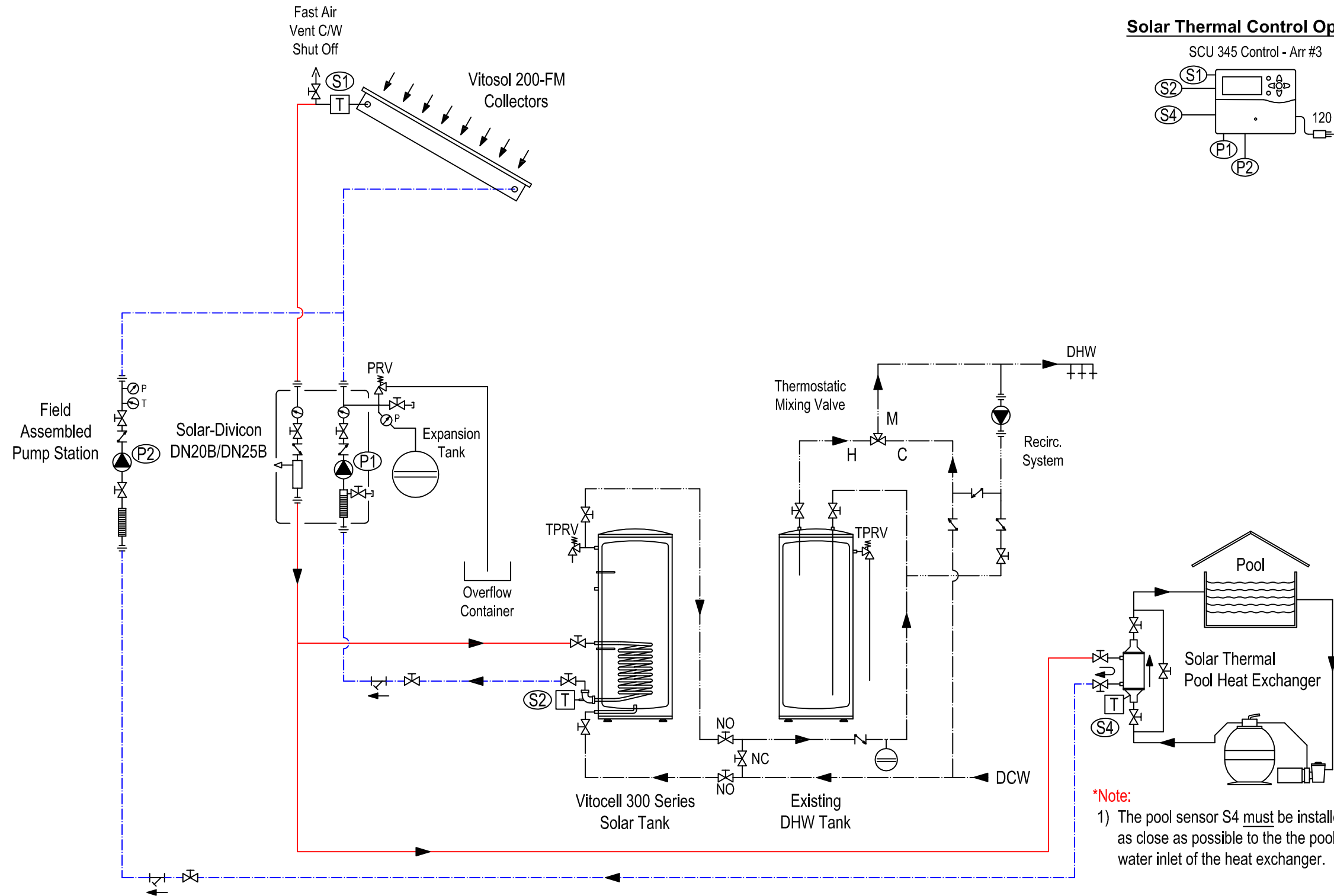
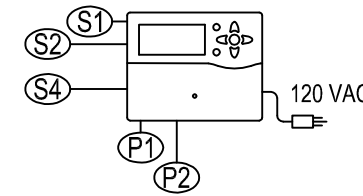


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### Solar Thermal Control Options:

SCU 345 Control - Arr #3



### LEGEND

SYMBOLS	DESCRIPTION
	SOLAR WATER SUPPLY PIPE
	SOLAR WATER RETURN PIPE
	DOMESTIC COLD WATER PIPE
	DOMESTIC HOT WATER PIPE
	DOMESTIC COLD WATER PIPE
	DOMESTIC HOT WATER RECIRC. PIPE
	ISOLATION VALVE
	CIRCUIT SETTER
	WYE STRAINER
	CHECK VALVE
	PRESSURE RELIEF VALVE
	ANTISCALD / TEMPERING VALVE
	TEMPERATURE SENSOR
	PRESSURE GAUGE
	TEMPERING GAUGE

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REV.	DESCRIPTION	BY	DATE	BY	DATE

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750 McMURRAY ROAD, WATERLOO, ONTARIO N2V 2G5

### Vitosol Piping Layout 8

PAPER SIZE	SCALE	DRAWN BY	CHECKED BY	PROJECT ENGR.
11x17	NTS	ROYS	WITA	---
NO CONSTRUCTION PERMITTED UNLESS DWG. APPROVED				
---			VIESSMANN DRAWING NUMBER	
			JOB No.	DWG.No.
VIESSMANN:	DATE	0	1	
CLIENT:	May 4, 2022	SHEET 9 OF 12	REV.	0

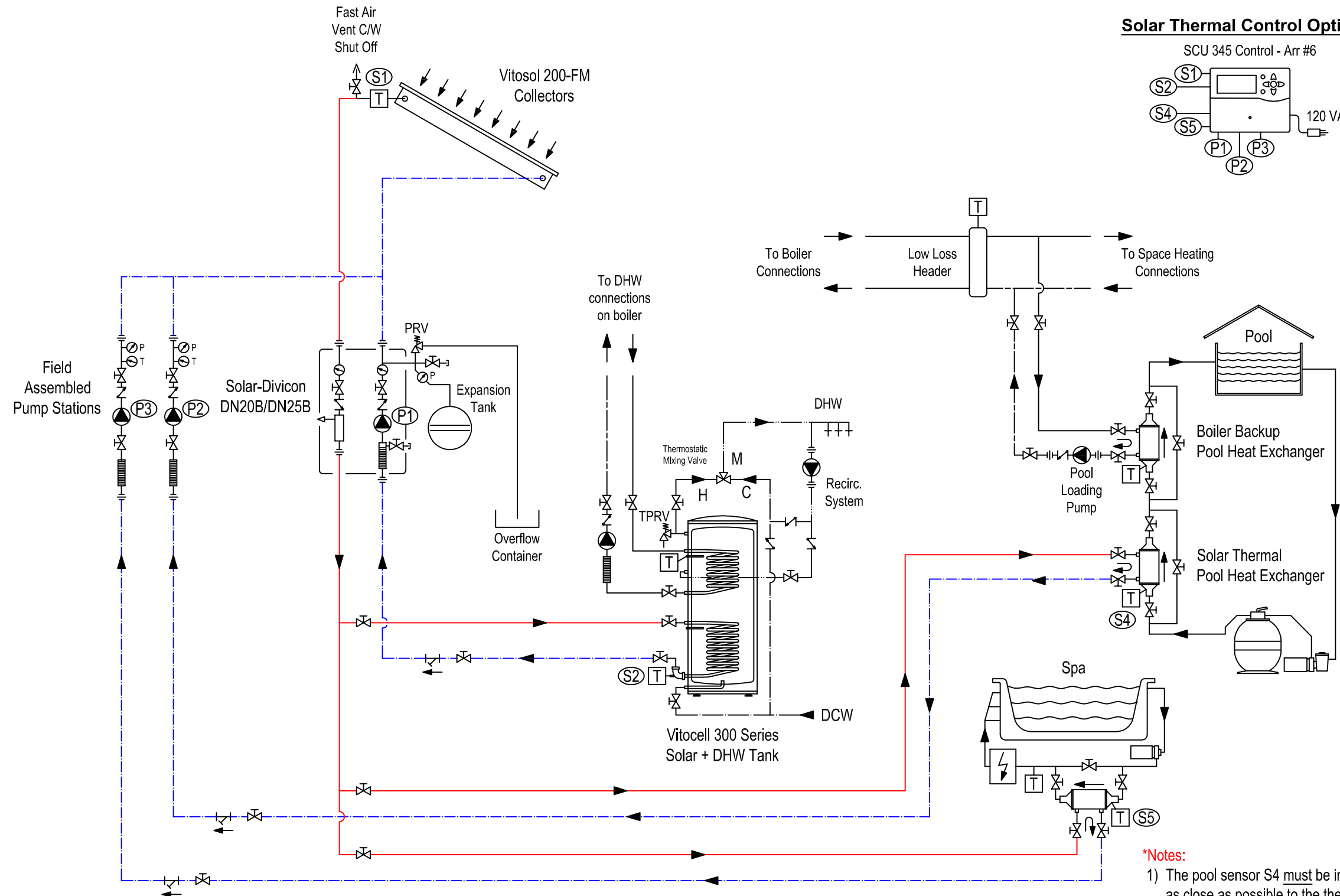
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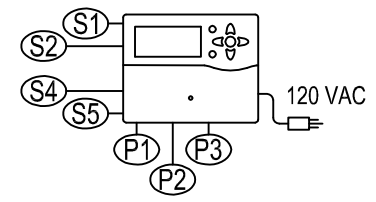
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### Solar Thermal Control Options:

SCU 345 Control - Arr #6



### LEGEND

SYMBOLS	DESCRIPTION
	SOLAR WATER SUPPLY PIPE
	SOLAR WATER RETURN PIPE
	DOMESTIC COLD WATER PIPE
	DOMESTIC HOT WATER PIPE
	DOMESTIC COLD WATER PIPE
	DOMESTIC HOT WATER RECIRC. PIPE
	ISOLATION VALVE
	CIRCUIT SETTER
	WYE STRAINER
	CHECK VALVE
	PRESSURE RELIEF VALVE
	ANTISCALD / TEMPERING VALVE
	TEMPERATURE SENSOR
	PRESSURE GAUGE
	TEMPERING GAUGE

### NOTES

- THIS IS A CONCEPTUAL DRAWING ONLY AND DOES NOT REPRESENT ALL SAFETY CONTROLS WHICH MAY BE REQUIRED. THE CONTRACTOR IS RESPONSIBLE FOR THE SAFE INSTALLATION OF FUEL BURNING EQUIPMENT. THE DESIGNER MUST DETERMINE IF A SUGGESTED SYSTEM WILL WORK IN HIS/HER APPLICATION AND ADD THE NECESSARY ISOLATION VALVES, SAFETY DEVICES AND MODIFICATIONS WHICH MAY BE REQUIRED BY LOCAL AUTHORITIES.

REV.	DESCRIPTION	BY	DATE	BY	DATE

**VIESSMANN**  
Manufacturing Company Inc.  
750 McMURRAY ROAD, WATERLOO, ONTARIO N2V 2G5

### Vitosol Piping Layout 9

PAPER SIZE	SCALE	DRAWN BY	CHECKED BY	PROJECT ENGR.
11x17	NTS	ROYS	WITA	---

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VISSMANN DRAWING NUMBER	
JOB No.	DWG.No.
0	1

VISSMANN: DATE May 4, 2022 SHEET 10 OF 12 REV. 0

### Important Notes Regarding Solar Thermal Systems:

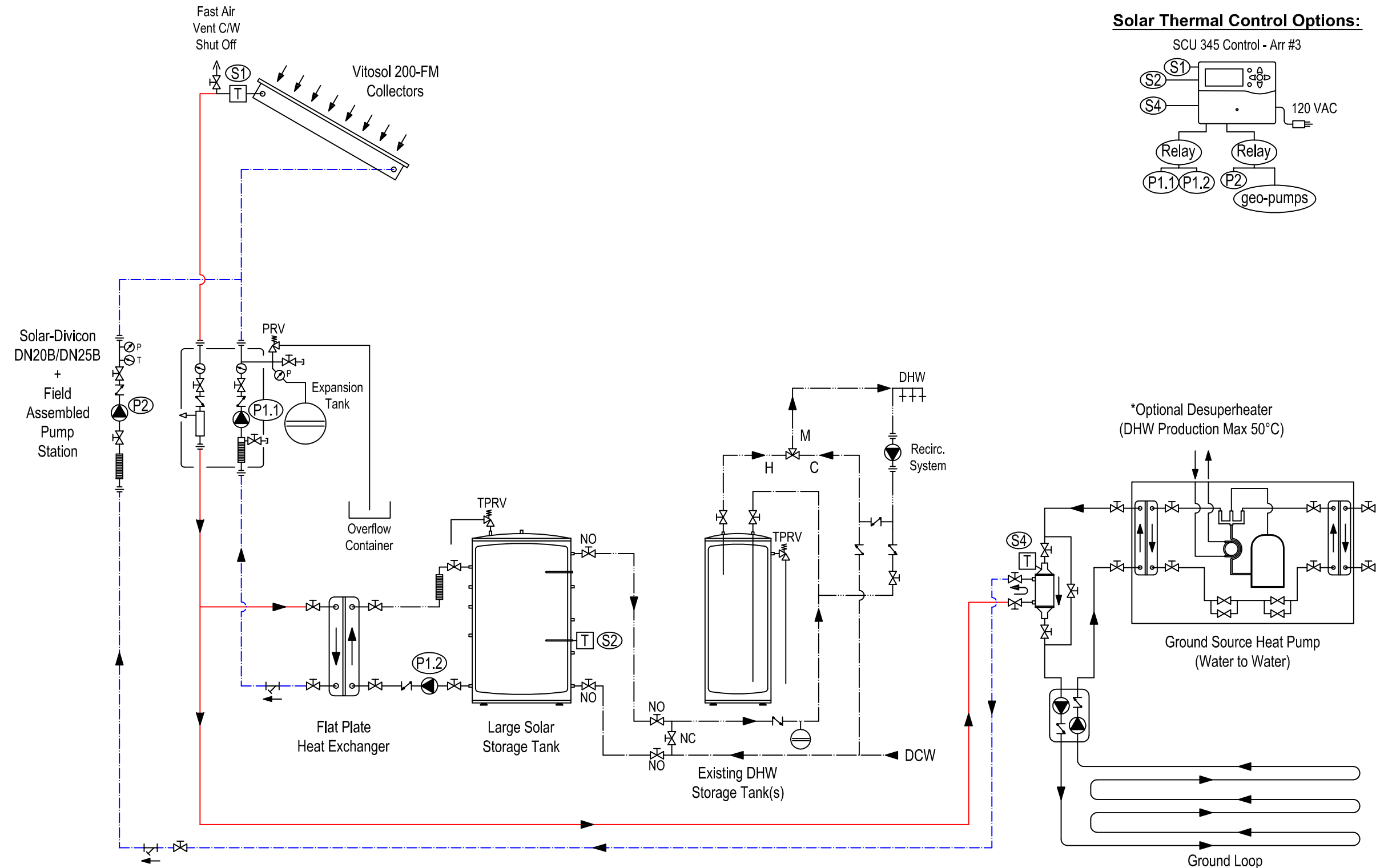
- Under NO circumstance is plastic pipe or galvanized pipe to be used on closed loop solar thermal systems.
  - Only metal pipe such as Type-L Copper, ACR-Copper, Sch-40 Steel, Corrugated Stainless Steel Pipe is allowed.
  - When joining Type-L Copper tubing, only 95/5 Tin/Antimony (soft solder) or brazing should be used to join tubing.
  - When using press fittings, use high temperature O-rings suitable for use with propylene glycol mixtures up to 50%.
  - If a flat plate heat exchanger is to be used for potable water applications, the installation of a water softener is highly recommended to help protect the heat exchanger against fouling.
  - If the solar system is to supplement the space heating system, low temperature zones must be thermally protected using a mixing valve to protect against excessively high fluid temperatures.
- The information and designs in this drawing are confidential and proprietary. Reproducing, modifying or forwarding this drawing or any information or design contained therein requires the prior written consent of Viessmann Manufacturing Company Inc.

### \*Notes:

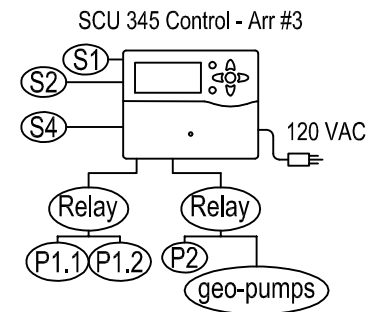
- 1) The pool sensor S4 must be installed as close as possible to the the pool water inlet of the heat exchanger.
- 2) The spa sensor S5 must be installed as close as possible to the the spa water inlet of the heat exchanger.

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### Solar Thermal Control Options:



### LEGEND

SYMBOLS	DESCRIPTION
	SOLAR WATER SUPPLY PIPE
	SOLAR WATER RETURN PIPE
	DOMESTIC COLD WATER PIPE
	DOMESTIC HOT WATER PIPE
	DOMESTIC COLD WATER PIPE
	DOMESTIC HOT WATER RECIRC. PIPE
	ISOLATION VALVE
	CIRCUIT SETTER
	WYE STRAINER
	CHECK VALVE
	PRESSURE RELIEF VALVE
	ANTISCALD / TEMPERING VALVE
	TEMPERATURE SENSOR
	PRESSURE GAUGE
	TEMPERING GAUGE

NOTES

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REV.	DESCRIPTION	BY	DATE	BY	DATE

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### Vitosol Piping Layout 10

PAPER SIZE	SCALE	DRAWN BY	CHECKED BY	PROJECT ENGR.
11x17	NTS	ROYS	WITA	---
NO CONSTRUCTION PERMITTED UNLESS DWG. APPROVED				VISSMANN DRAWING NUMBER
---		JOB No.	DWG.No.	
VISSMANN:	DATE	0	1	
CLIENT:	May 4, 2022	SHEET 11 OF 12	REV.	0

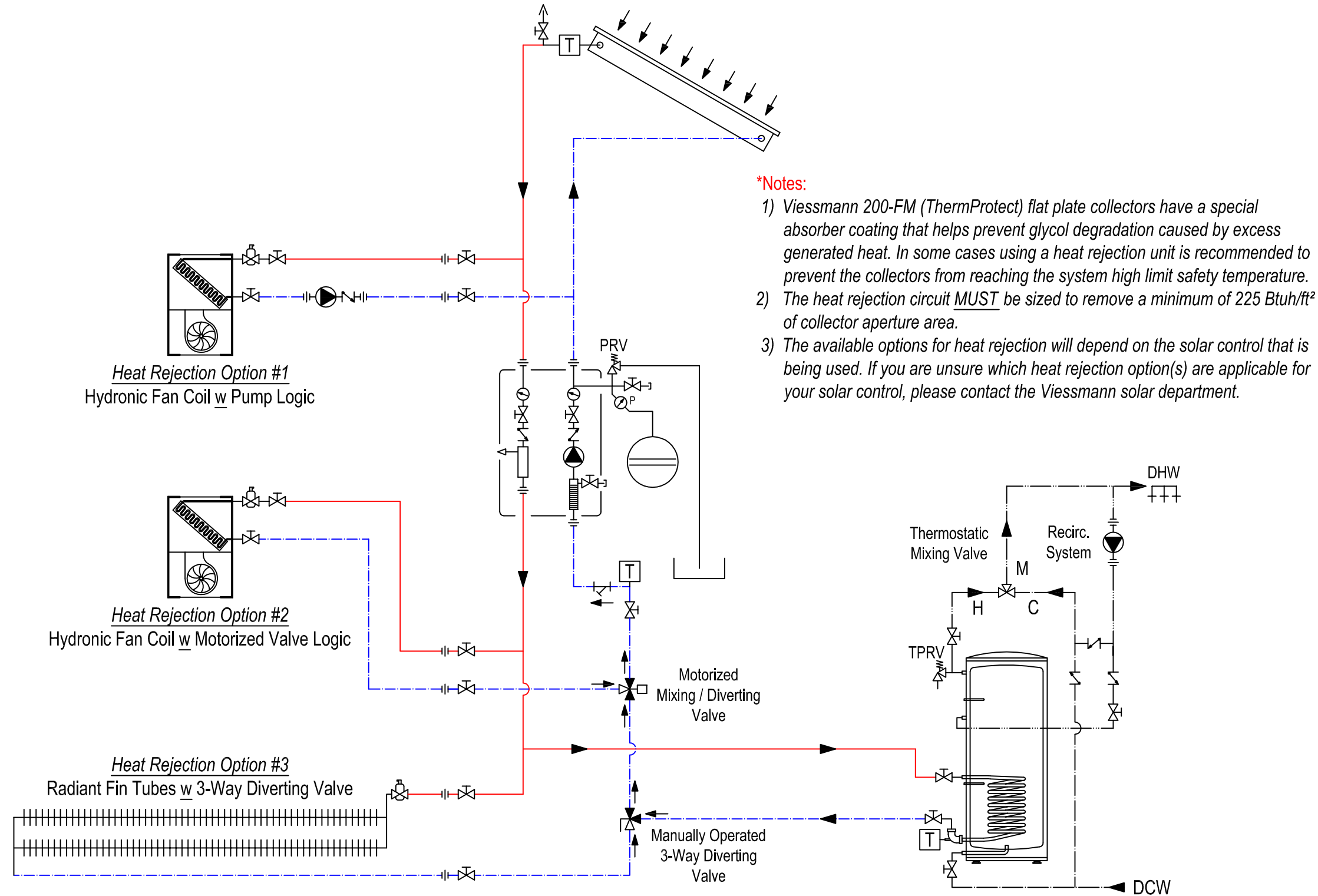
**Important Notes Regarding Solar Thermal Systems:**

- Under NO circumstance is plastic pipe or galvanized pipe to be used on closed loop solar thermal systems.
- Only metal pipe such as Type-L Copper, ACR-Copper, Sch-40 Steel, Corrugated Stainless Steel Pipe is allowed.
- When joining Type-L Copper tubing, only 95/5 Tin/Antimony (soft solder) or brazing should be used to join tubing.
- When using press fittings, use high temperature O-rings suitable for use with propylene glycol mixtures up to 50%.
- If a flat plate heat exchanger is to be used for potable water applications, the installation of a water softener is highly recommended to help protect the heat exchanger against fouling.
- If the solar system is used to supplement the space heating system, low temperature zones must be thermally protected using a mixing valve to protect against excessively high fluid temperatures.

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- \*Notes:**
- 1) Viessmann 200-FM (ThermProtect) flat plate collectors have a special absorber coating that helps prevent glycol degradation caused by excess generated heat. In some cases using a heat rejection unit is recommended to prevent the collectors from reaching the system high limit safety temperature.
  - 2) The heat rejection circuit **MUST** be sized to remove a minimum of 225 Btuh/ft<sup>2</sup> of collector aperture area.
  - 3) The available options for heat rejection will depend on the solar control that is being used. If you are unsure which heat rejection option(s) are applicable for your solar control, please contact the Viessmann solar department.

## LEGEND

SYMBOLS	DESCRIPTION
	SOLAR WATER SUPPLY PIPE
	SOLAR WATER RETURN PIPE
	DOMESTIC COLD WATER PIPE
	DOMESTIC HOT WATER PIPE
	DOMESTIC COLD WATER PIPE
	DOMESTIC HOT WATER RECIRC. PIPE
	ISOLATION VALVE
	CIRCUIT SETTER
	WYE STRAINER
	CHECK VALVE
	PRESSURE RELIEF VALVE
	ANTISCALD / TEMPERING VALVE
	TEMPERATURE SENSOR
	PRESSURE GAUGE
	TEMPERING GAUGE

**NOTES**

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REV.	DESCRIPTION	BY	DATE	BY	DATE

# VIESSMANN

Manufacturing Company Inc.  
750 McMURRAY ROAD, WATERLOO, ONTARIO N2V 2G5

## Vitosol Piping Layout 11

PAPER SIZE	SCALE	DRAWN BY	CHECKED BY	PROJECT ENGR.
11x17	NTS	ROYS	WITA	---
NO CONSTRUCTION PERMITTED UNLESS DWG. APPROVED				
			VISSMANN DRAWING NUMBER	
			JOB No.	DWG.No.
VISSMANN:	DATE	0	1	
CLIENT:	May 4, 2022	SHEET 12 OF 12	REV.	0

**Important Notes Regarding Solar Thermal Systems:**

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- **Only** metal pipe such as Type-L Copper, ACR-Copper, Sch-40 Steel, Corrugated Stainless Steel Pipe is allowed.
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- If the solar system is used to supplement the space heating system, low temperature zones must be thermally protected using a mixing valve to protect against excessively high fluid temperatures.

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