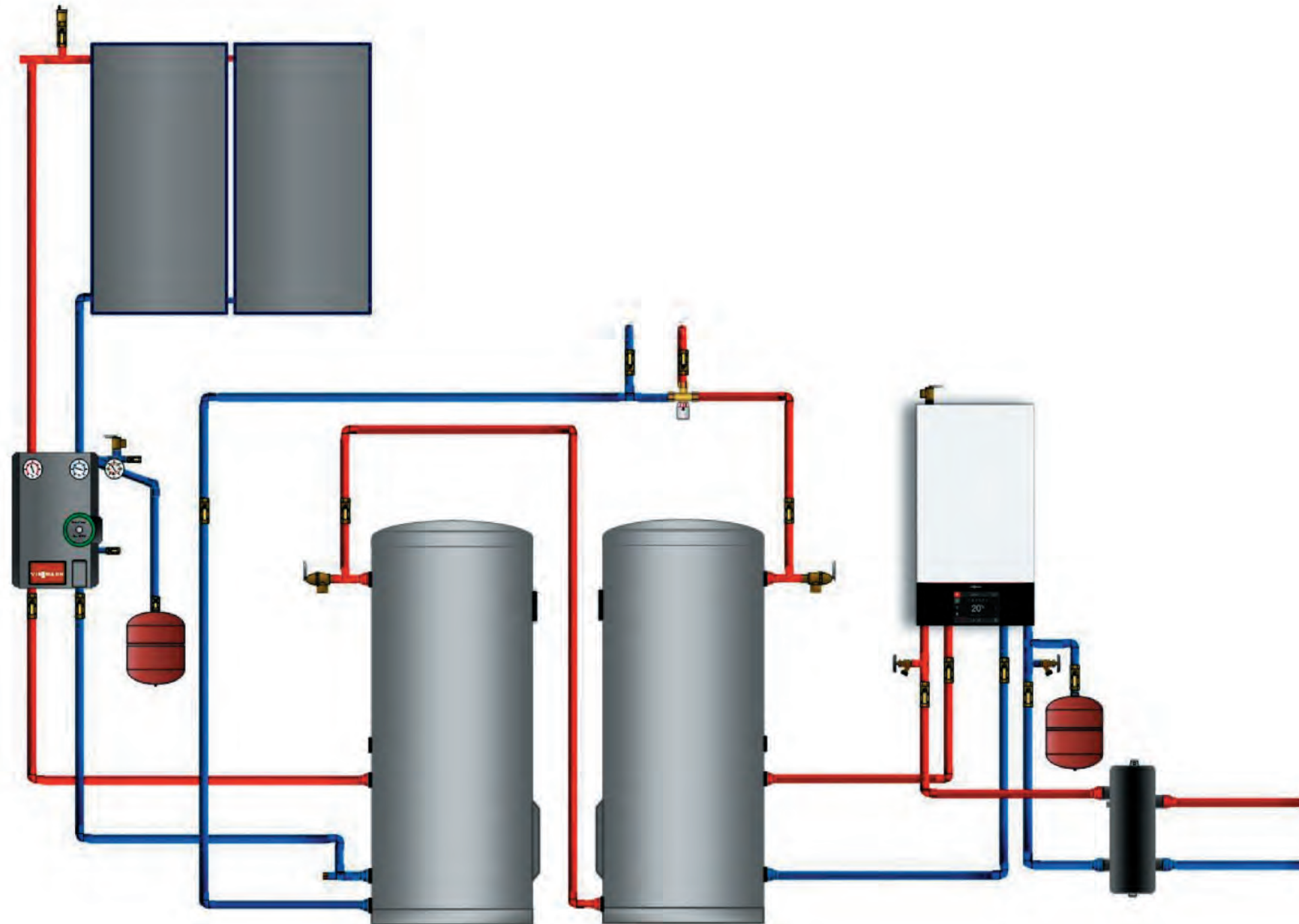
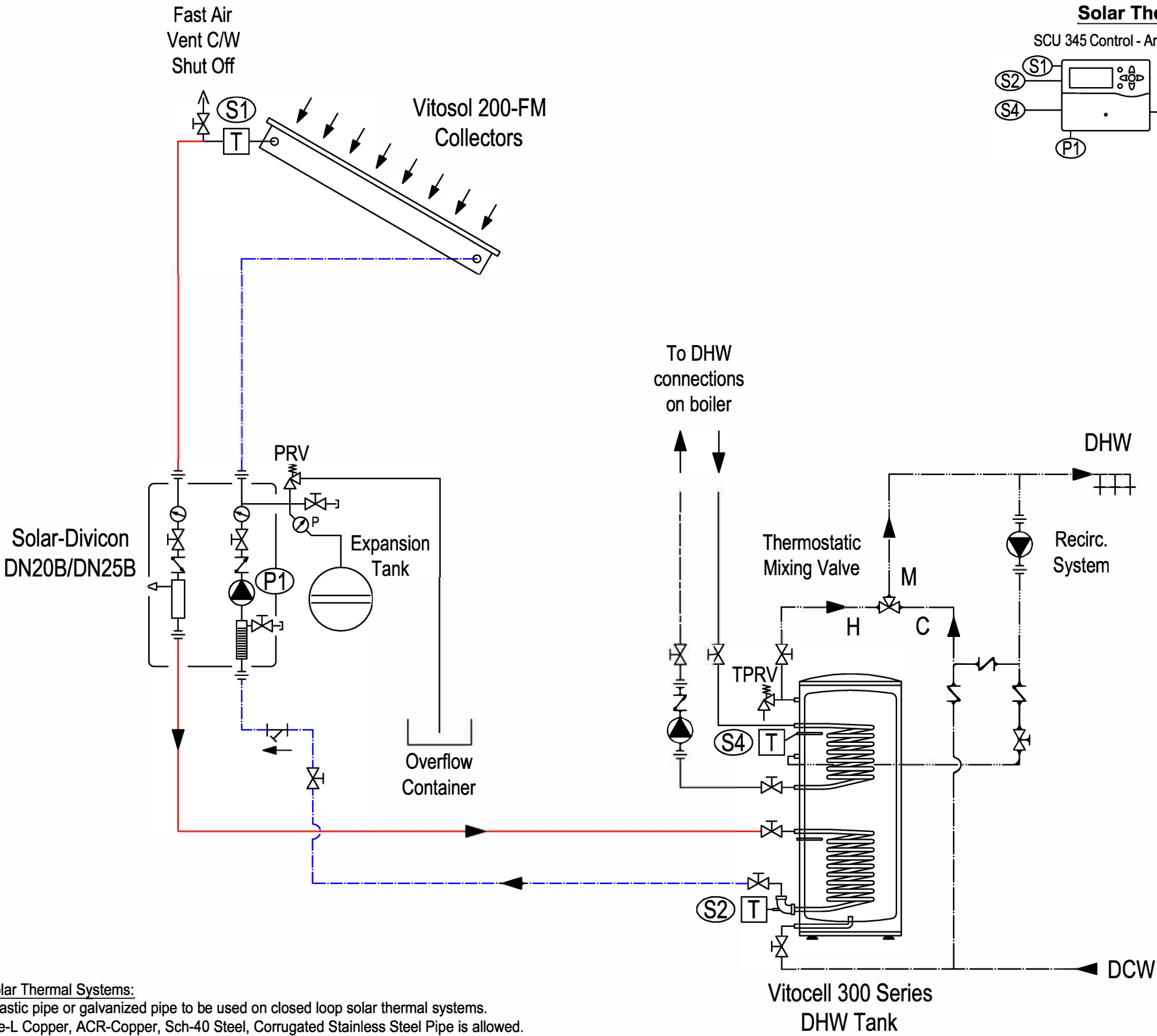




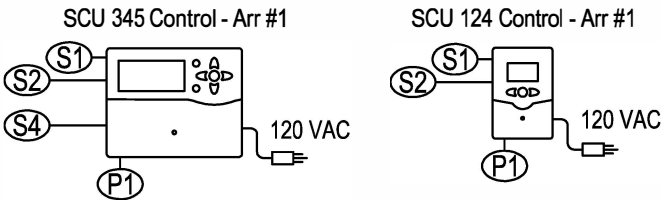
## Vitosol Sample Piping Layout Drawings



For Discussion Purposes Only



Solar Thermal Control Options:



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Conceptual Drawing Only  
DO NOT USE FOR CONSTRUCTION

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
		CHECKED		REV APPR.	

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750 McMURRAY ROAD, WATERLOO, ONTARIO N2V 2G5

Vitosol Piping Layout 1

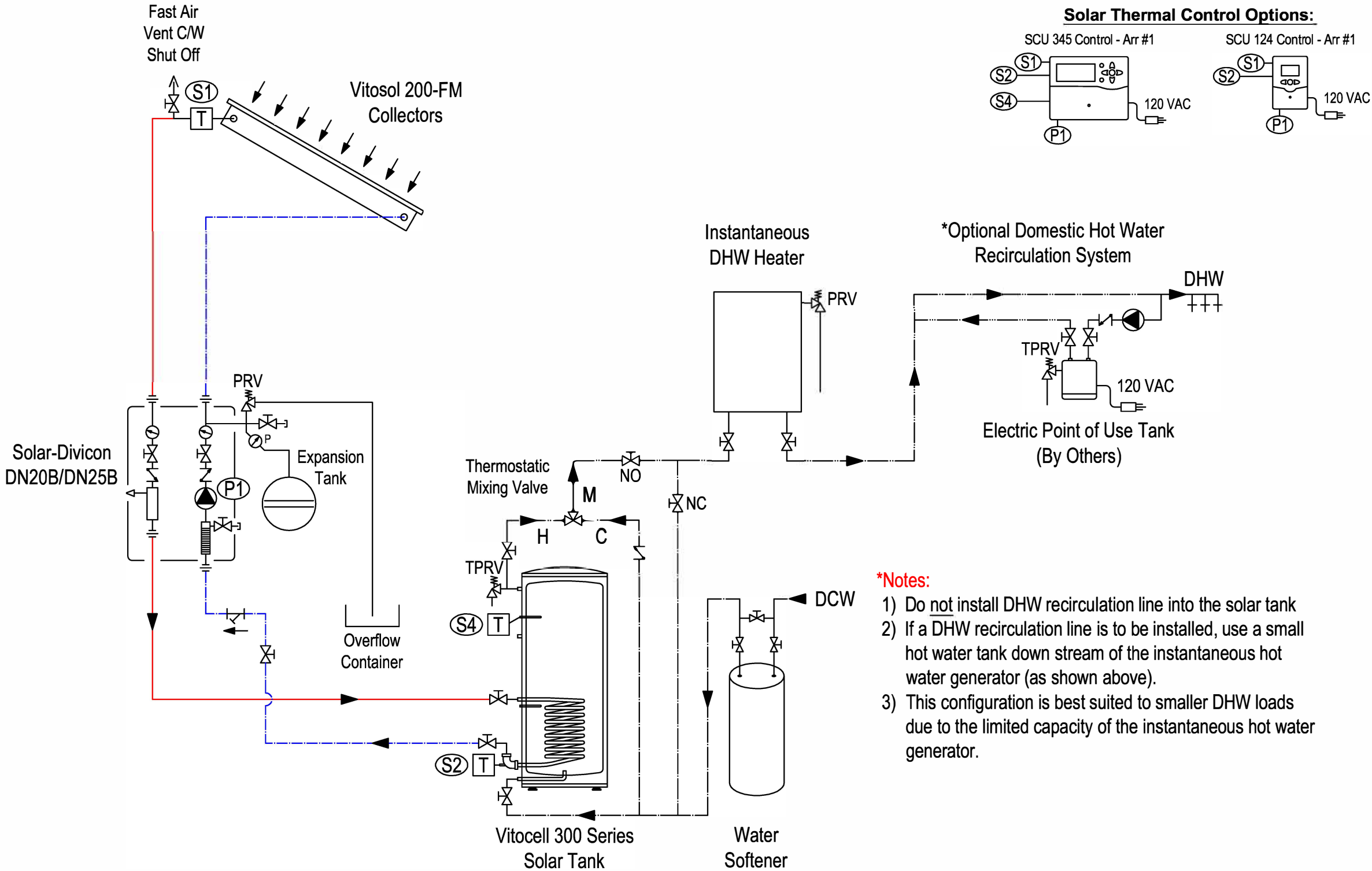
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		VISSMANN DRAWING NUMBER		
		JOB No.	DWG.No.	
VISSMANN:	DATE	0	1	
CLIENT:	May 4, 2022	SHEET 2 OF 12	REV.	0

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.
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- 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.
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LEGEND

SYMBOLS	DESCRIPTION
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	SOLAR WATER RETURN PIPE
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	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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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



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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

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

**VIESMANN**

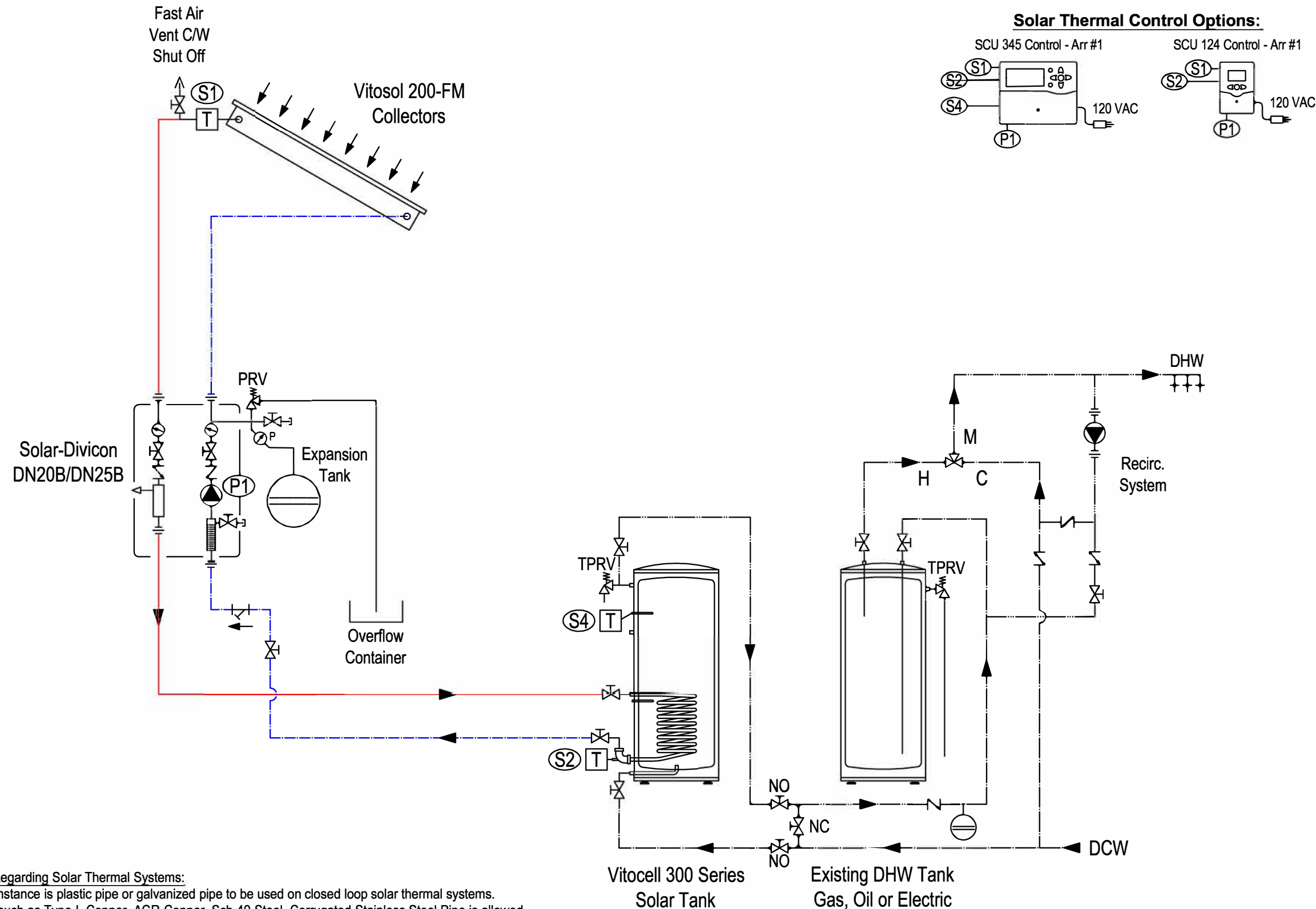
**Manufacturing Company ULC**  
750 McMURRAY ROAD, WATERLOO, ONTARIO N2V 2G5

### 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	
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VISSMANN:	DATE	0	1
CLIENT:	May 4, 2022	SHEET 4 OF 12	REV 0

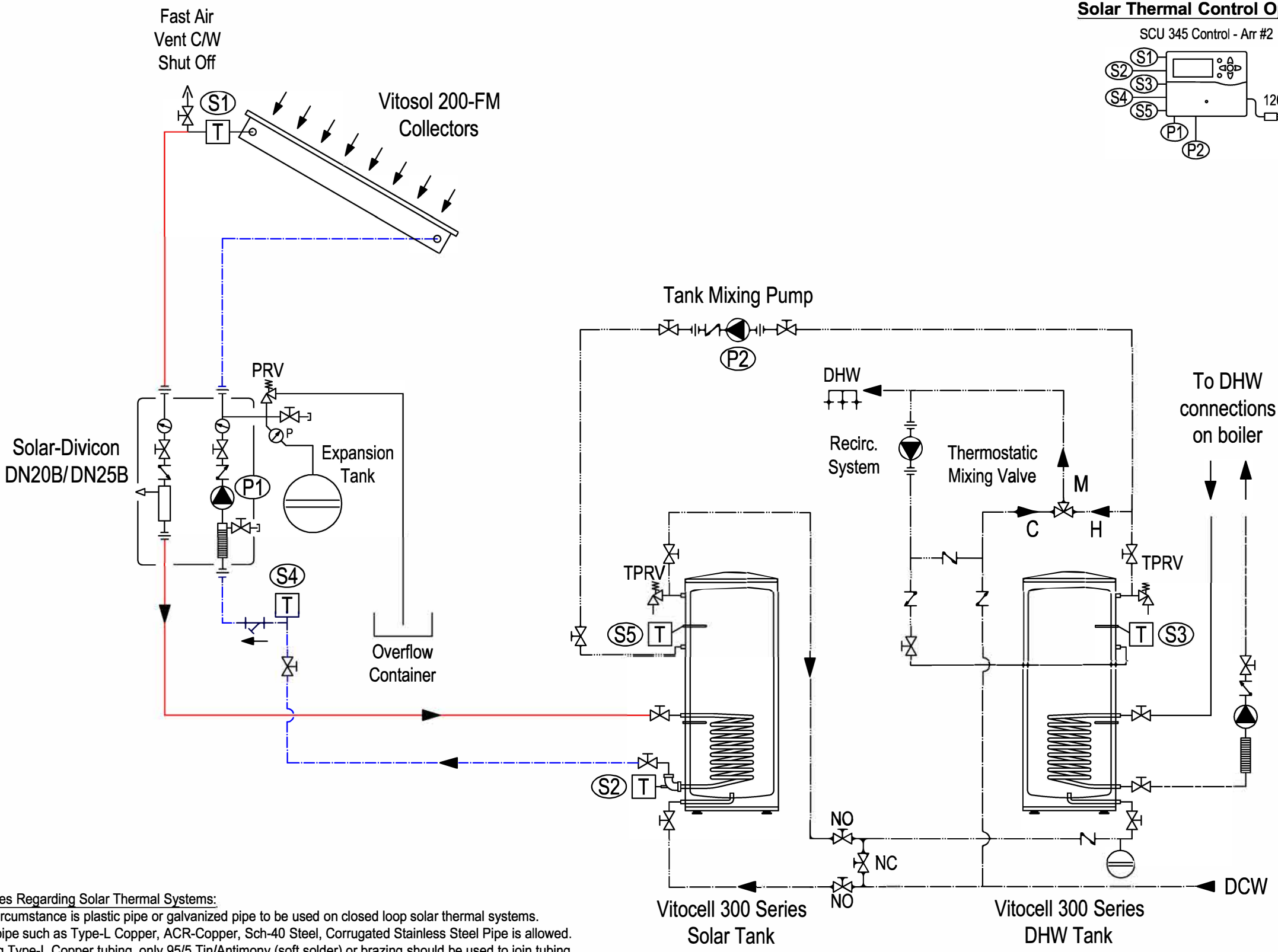


### Important Notes Regarding Solar Thermal Systems:

- | Important Notes Regarding Solar Thermal Systems:   | Water-Cooling System | Existing DHW Tank           |
|--|----------------------|-----------------------------|
| <ul style="list-style-type: none"> <li>- Under NO circumstance is plastic pipe or galvanized pipe to be used on closed loop solar thermal systems.</li> <li>- <u>Only</u> metal pipe such as Type-L Copper, ACR-Copper, Sch-40 Steel, Corrugated Stainless Steel Pipe is allowed.</li> <li>- When joining Type-L Copper tubing, only 95/5 Tin/Antimony (soft solder) or brazing should be used to join tubing.</li> <li>- When using press fittings, use high temperature O-rings suitable for use with propylene glycol mixtures up to 50%.</li> <li>- 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.</li> <li>- 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.</li> </ul> | Solar Tank           | Gas, Oil <u>or</u> Electric |

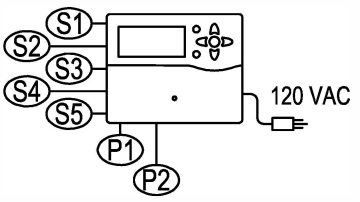
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Solar Thermal Control Options:

SCU 345 Control - Arr #2



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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
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REV.	DESCRIPTION	BY	DATE	BY	DATE

**VIESSMANN**

Manufacturing Company ULC  
750 McMURRAY ROAD, WATERLOO, ONTARIO N2V 2G5

Vitosol Piping Layout 4

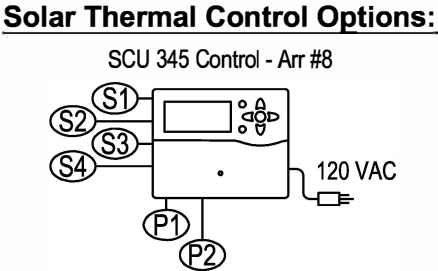
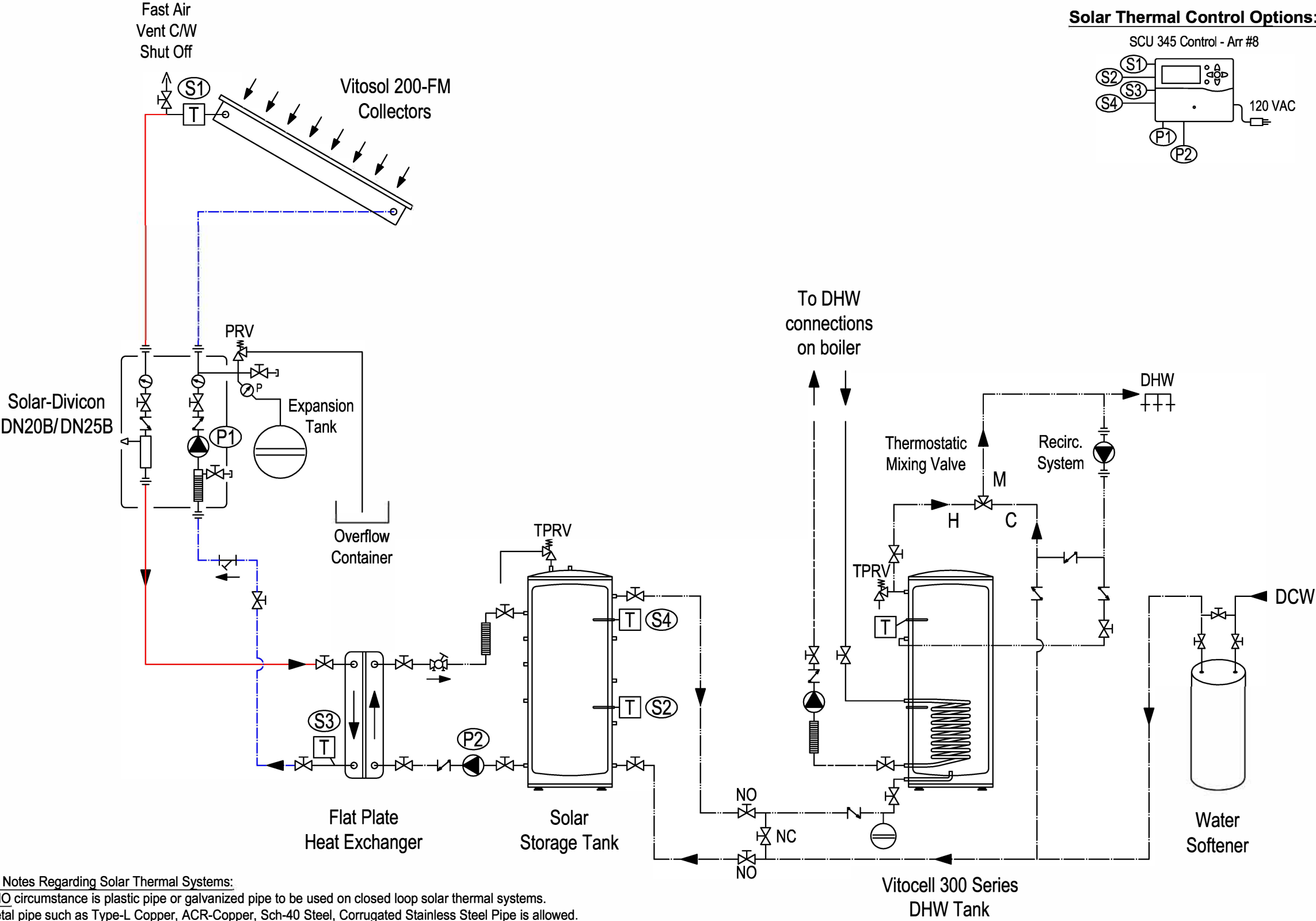
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11x17	NTS	ROYS	WITA	
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		VISSMANN DRAWING NUMBER		
		JOB No.	DWG.No.	
VISSMANN:	DATE	0	1	
CLIENT:	May 4, 2022	SHEET 5 OF 12	REV.	0

**Important Notes Regarding Solar Thermal Systems:**

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LEGEND

SYMBOLS	DESCRIPTION
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	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
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REV.	DESCRIPTION	BY	DATE	BY	DATE
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B					
C					
D					

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Manufacturing Company ULC  
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				
		VISSMANN DRAWING NUMBER		
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VISSMANN:	DATE	0	1	
CLIENT:	May 4, 2022	SHEET 6 OF 12	REV. 0	

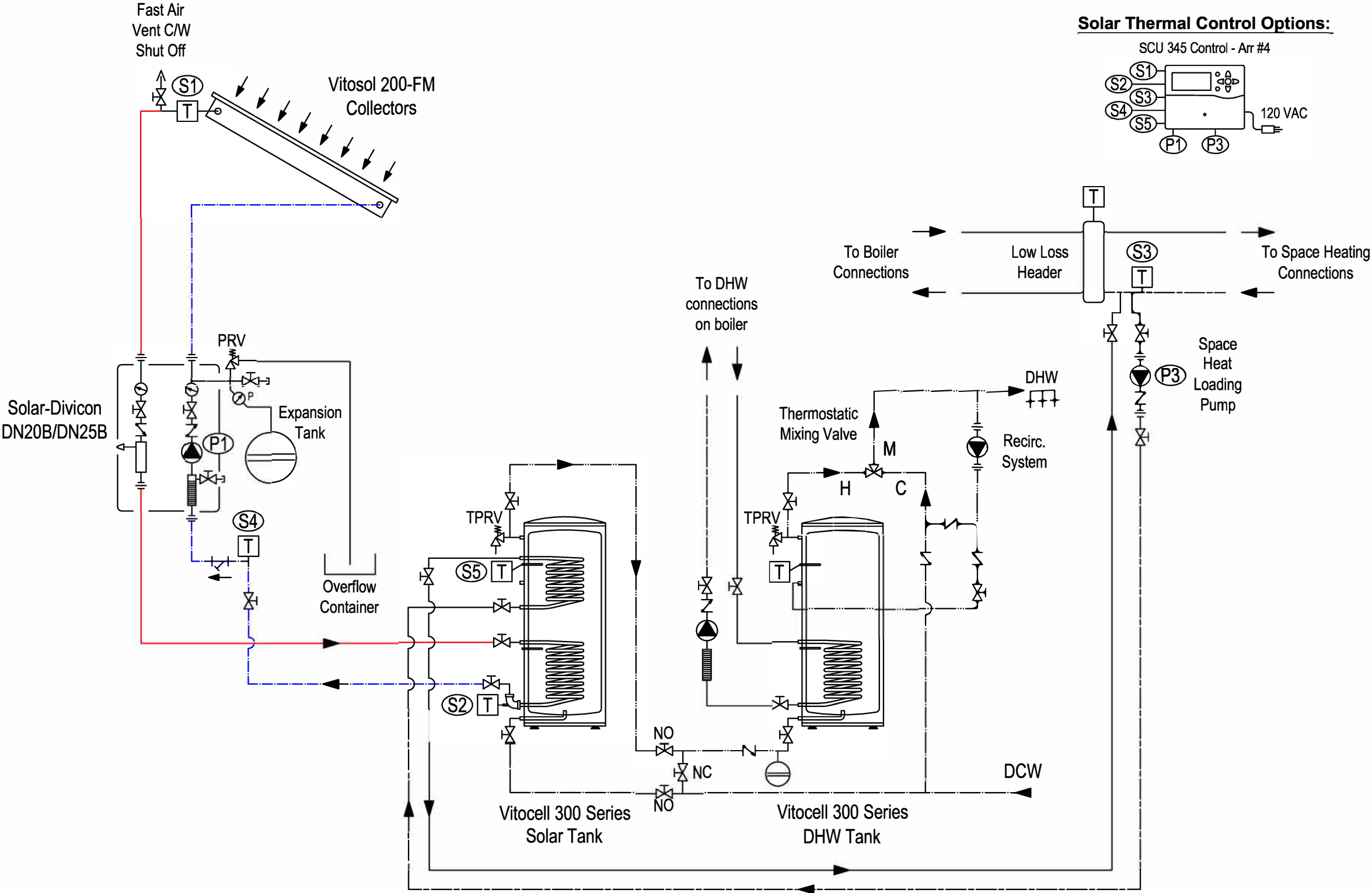
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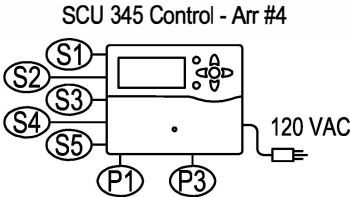
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Solar Thermal Control Options:



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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
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	TEMPERING GAUGE

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REV.	DESCRIPTION	BY	DATE	BY	DATE
A					
B					
C					
D					

**VISSMANN**

Manufacturing Company ULC  
750 McMURRAY ROAD, WATERLOO, ONTARIO N2V 2G5

Vitosol Piping Layout 6

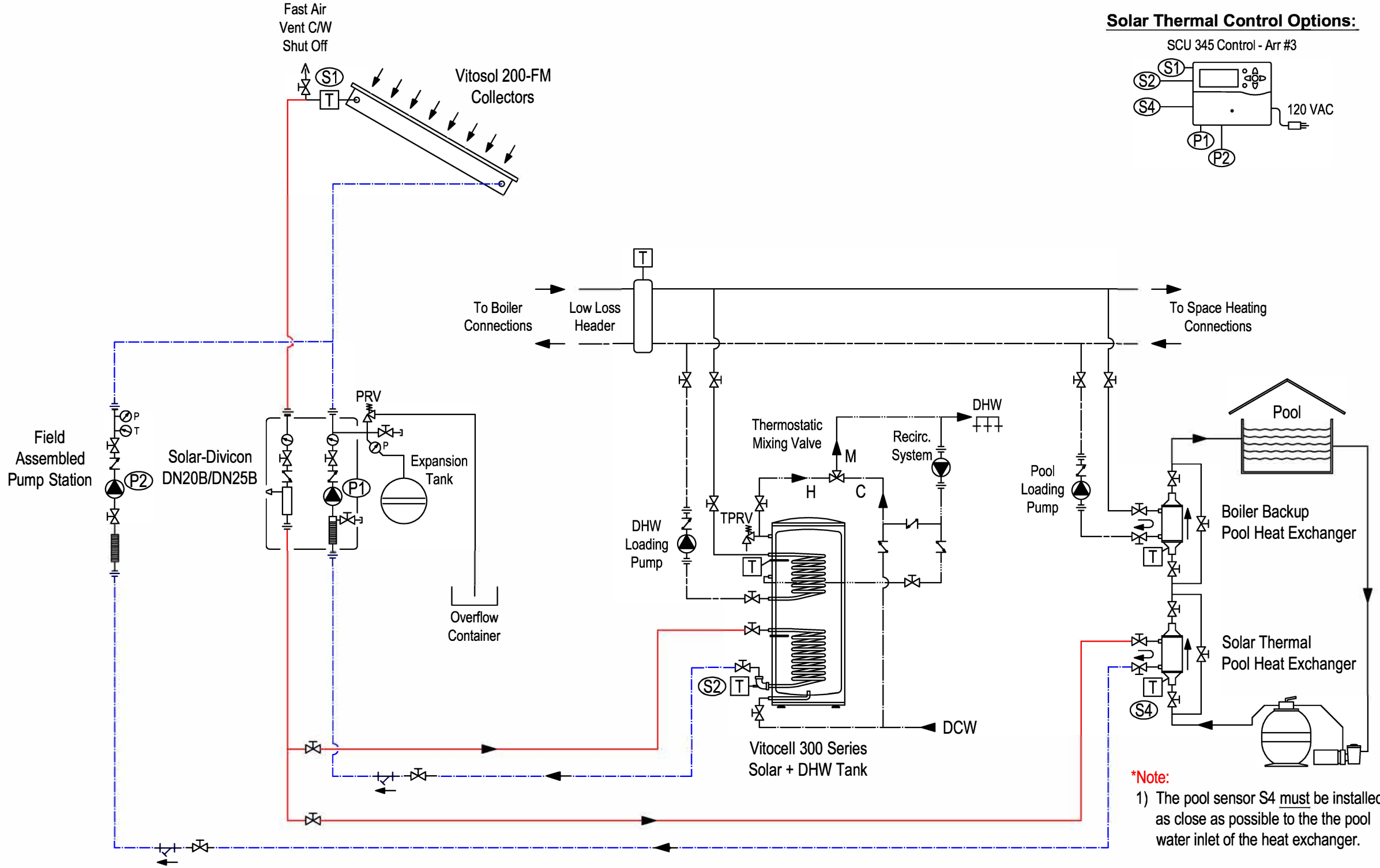
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		VISSMANN DRAWING NUMBER		
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VISSMANN:	DATE	0	1	
CLIENT:	May 4, 2022	SHEET 7 OF 12	REV.	0

Important Notes Regarding Solar Thermal Systems:

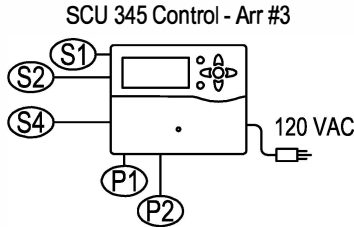
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Solar Thermal Control Options:



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LEGEND

SYMBOLS	DESCRIPTION
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	SOLAR WATER RETURN PIPE
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	CIRCUIT SETTER
	WYE STRAINER
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	PRESSURE RELIEF VALVE
	ANTISCALD / TEMPERING VALVE
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REV.	DESCRIPTION	BY	DATE	BY	DATE

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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				
		VISSMANN DRAWING NUMBER		
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VISSMANN:		DATE	0	1
CLIENT:		May 4, 2022	SHEET 8 OF 12	REV. 0

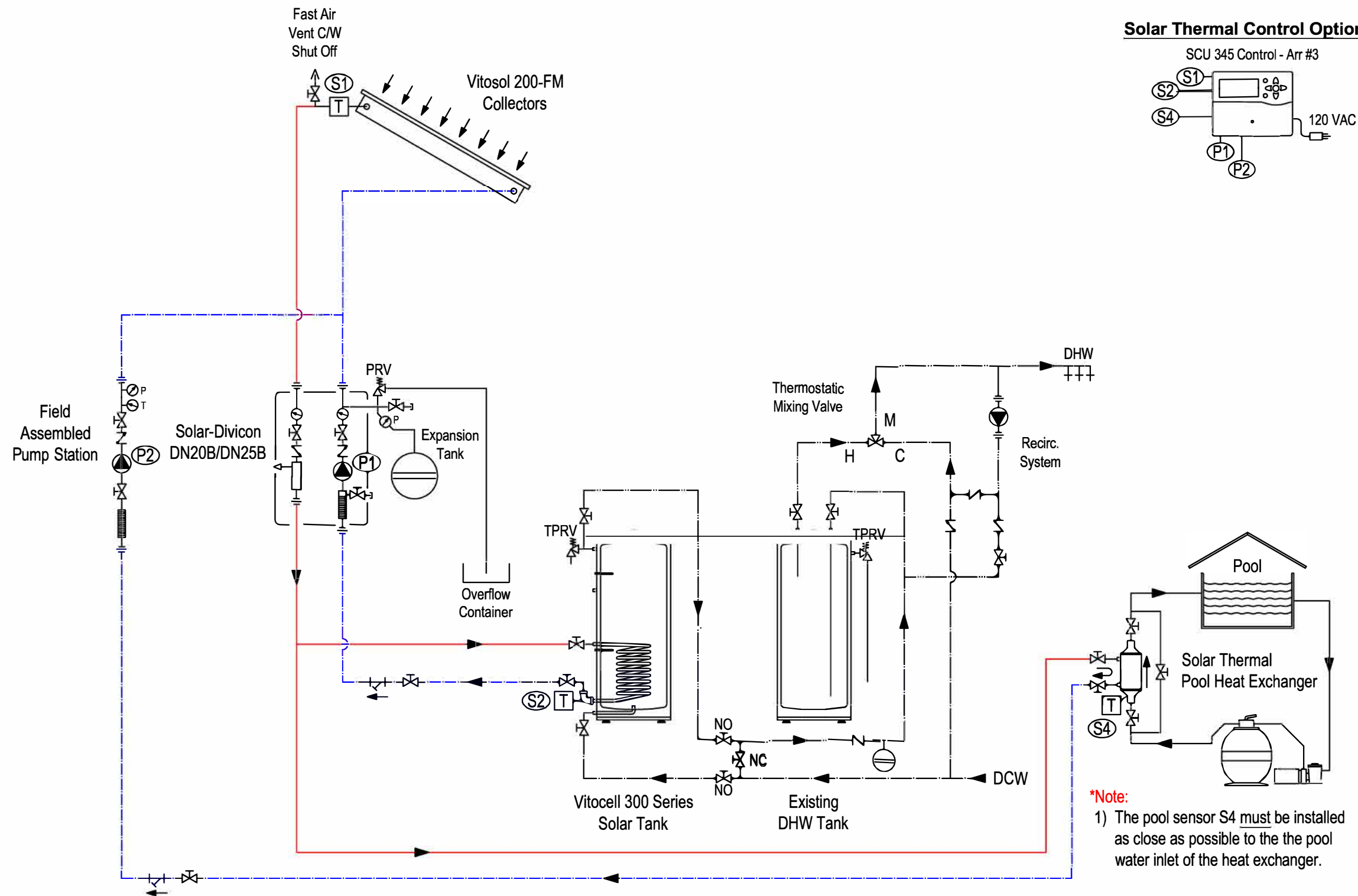
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






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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
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REV.	DESCRIPTION	BY	DATE	BY	DATE
		CHECKED	REV APPR.		

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**Manufacturing Company ULC**  
750 McMURRAY ROAD, WATERLOO, ONTARIO N2V 2G5

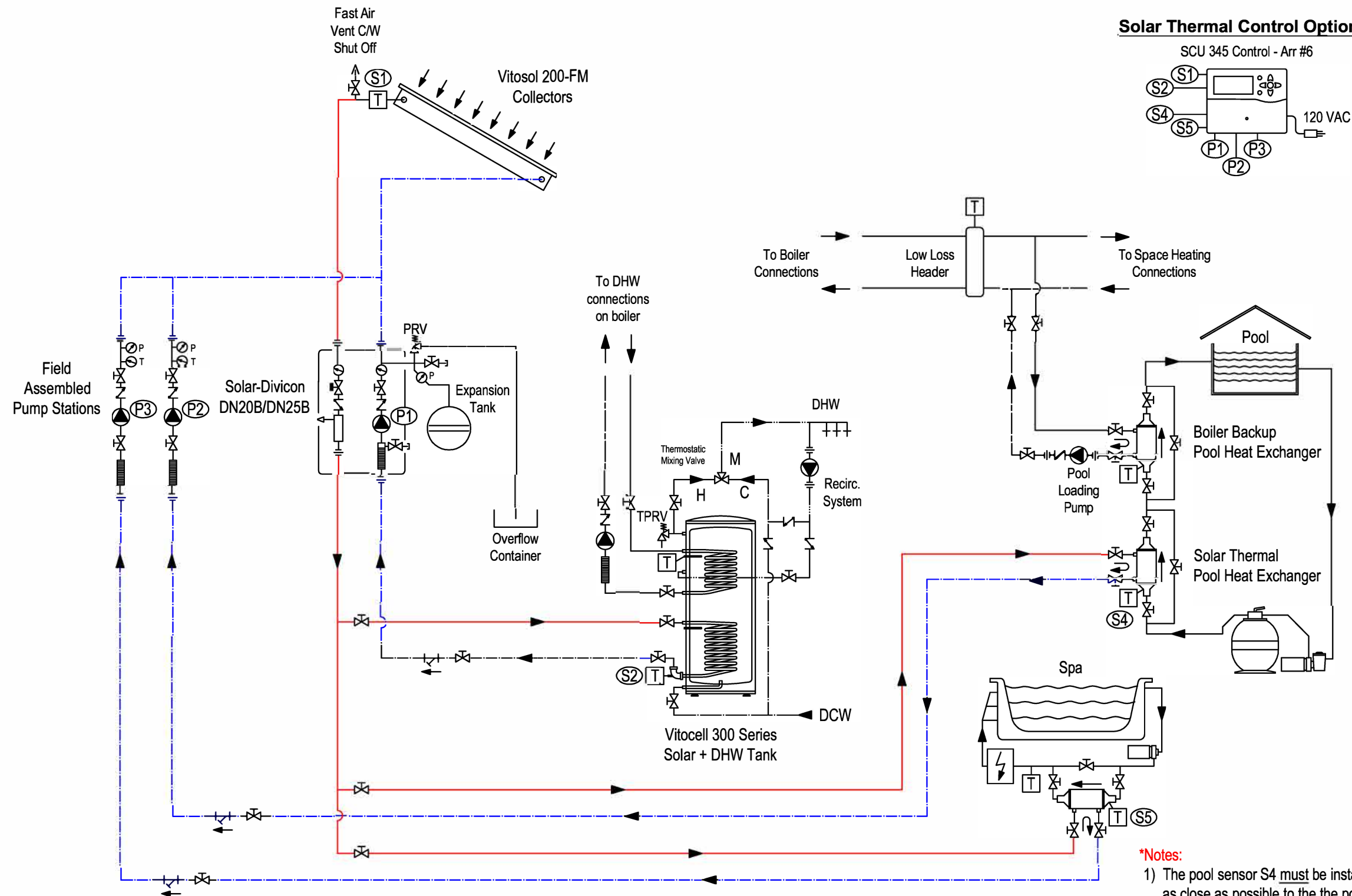
### Vitosol Piping Layout 8

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

NO CONSTRUCTION PERMITTED UNLESS DWG. APPROVED

		VISSMANN DRAWING NUMBER	
		JOB No.	DWG.No.
VISSMANN:	DATE	0	1
CLIENT:	May 4, 2022	SHEET 9 OF 12	REV. 0

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




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\*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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## 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.

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

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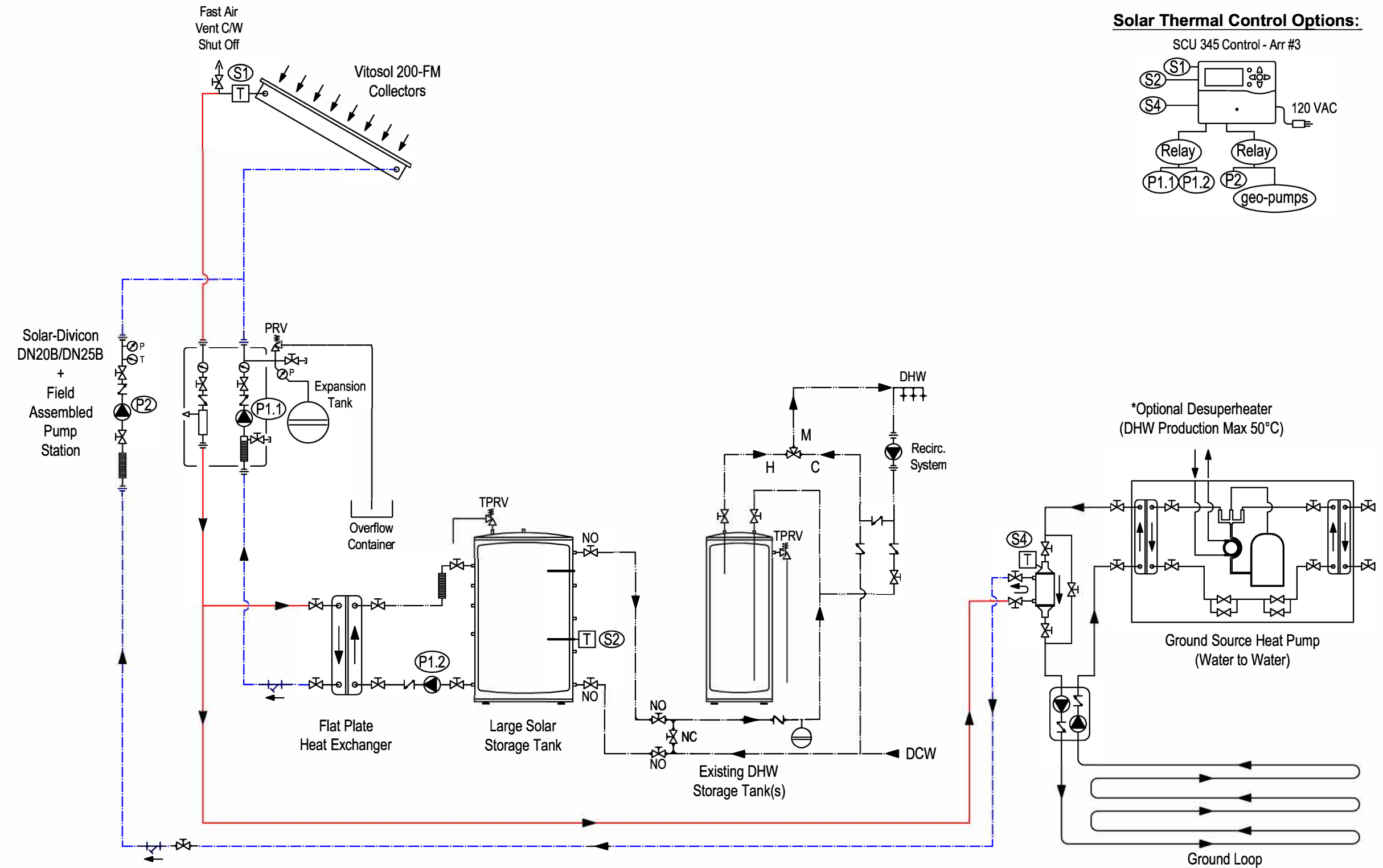
### Vitosol Piping Layout 9

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

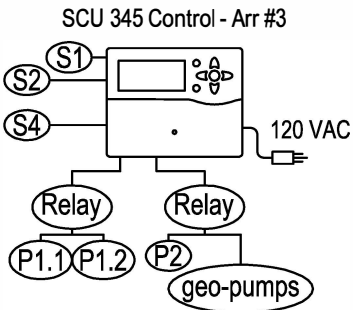
NO CONSTRUCTION PERMITTED UNLESS DWG. APPROVED

		VISSMANN DRAWING NUMBER	
		JOB No.	DWG.No.
VISSMANN:	DATE	0	1
CLIENT:	May 4, 2022	SHEET 10 OF 12	REV. 0

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Solar Thermal Control Options:



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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
A					
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D					

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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				
		VIESSMANN DRAWING NUMBER		
		JOB No.	DWG.No.	
VIESSMANN:		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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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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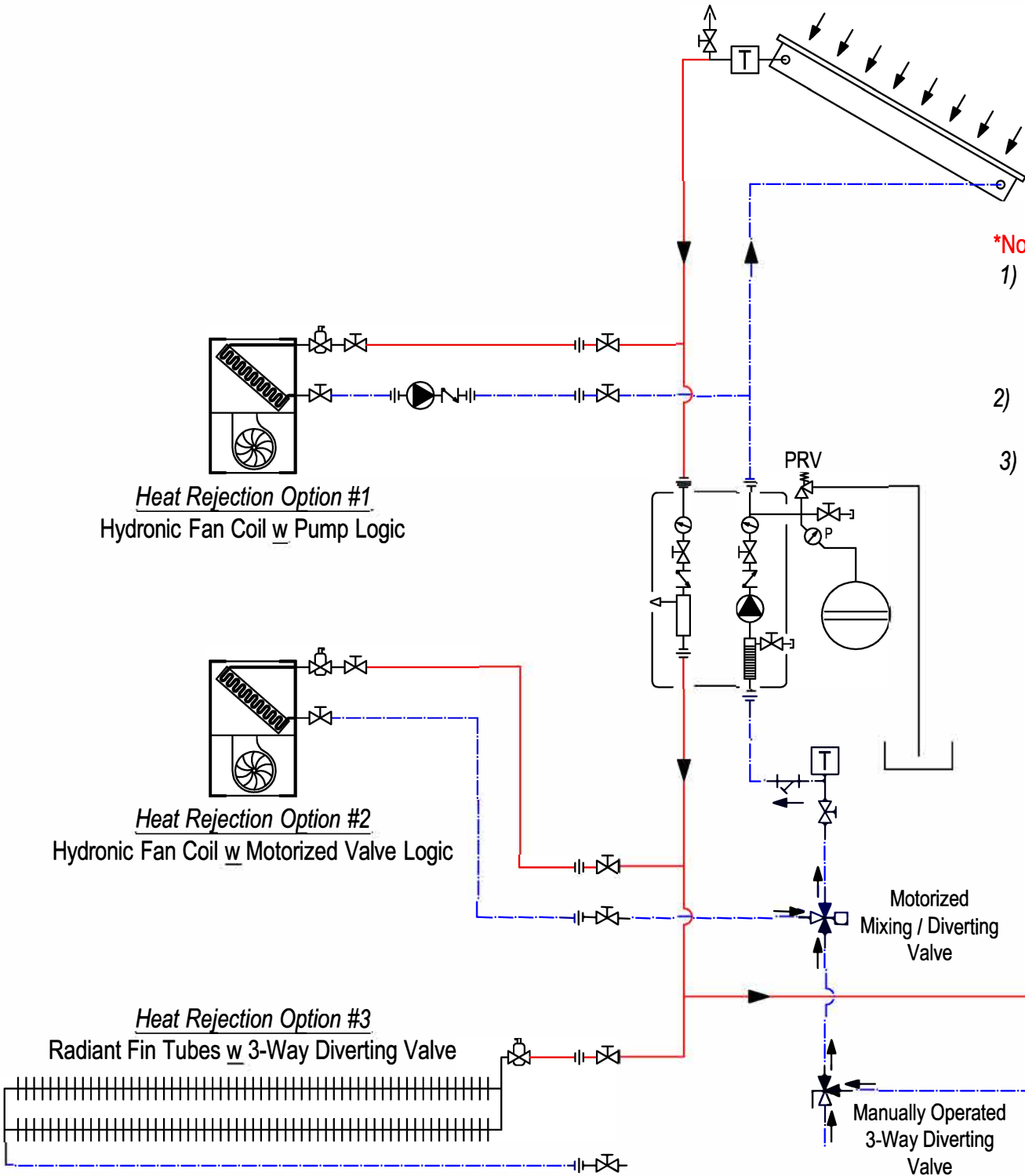
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REV.	DESCRIPTION	BY	DATE	BY	DATE
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Vitosol Piping Layout 11

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 12 OF 12	REV. 0



\*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.

Important Notes Regarding Solar Thermal Systems:

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