



# OG-300 Direct Flow Solar Hot Water Systems Schematics and Parts Lists

(Revision 1.0 - May 2011)

## **IMPORTANT INFORMATION**

Diagrams are conceptual only and not to scale. Final system design must adhere to all relevant codes, regulations and guidelines and may require the approval and stamp of a licensed engineer. It is the responsibility of the installer/contractor to ensure that the system design meets all relevant standards, regulations and guidelines and is safe and operating correctly. Any installer/contractor must be legally certified to install solar water heating systems and have attended an accredited Apricus training session before completing the installation of any Apricus products.

The installation of Apricus products must be in accordance with guidelines outlined in the latest version of the Apricus installation manual. For the latest version of the manual contact your local Apricus agent or email [office-usa@apricus.com](mailto:office-usa@apricus.com).

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## Naming Convention Overview

Apricus uses the following format coding to describe the systems in this document:

NAME\_TYPE\_EXHE\_TUBE\_1STTANK\_2NDTANK\_EXTBOOST

The following information describes the different options.

**NAME:** This describes the type of system

APSS - Apricus solar system

**TYPE:** This describes the type of system being installed

|        |                                    |
|--------|------------------------------------|
| DIRECT | - Direct flow solar thermal system |
| CLOSED | - Closed loop solar thermal system |

**EXHE<sub>1</sub>:** This describes the type of external heat exchanger

|      |                                                             |
|------|-------------------------------------------------------------|
| BPHE | - Dual wall brazed plate heat exchanger with leak detection |
|------|-------------------------------------------------------------|

**TUBE:** This describes the number of tubes installed

|       |                                            |
|-------|--------------------------------------------|
| AP-30 | - One AP-30 collector with 30 tubes total  |
| AP-60 | - Two AP-30 collectors with 60 tubes total |

**1stTANK:** This describes the type of tank the solar thermal system is connected to

|        |                                        |
|--------|----------------------------------------|
| FTD    | - Direct flow tank (no heat exchanger) |
| FTB    | - Internal coil tank                   |
| FTW    | - Dual internal coil tank              |
| DT-XXX | - Tank has a dip tube solar connection |
| XXX-E  | - Tank has an electric element         |

**2ndTANK<sub>1</sub>:** This describes the second tank in series in the solar thermal system

|       |                                  |
|-------|----------------------------------|
| STD-E | - Standard electric water heater |
| STD-G | - Standard gas water heater      |

**EXTBOOST<sub>1</sub>:** This describes the type of external auxiliary heating

|      |                                               |
|------|-----------------------------------------------|
| PBGT | - Tankless water heater                       |
| TBGT | - Top boosted by pumped tankless water heater |
| TBGB | - Top boosted by indirect boiler              |

*Example:*

APSS\_CLOSED\_BPHE\_AP30-DT-FTD-PBGT:

Apricus closed loop solar thermal system with external heat exchanger, one AP-30 with a dip tube connection to a standard tank feeding a tankless water heater.

Notes:

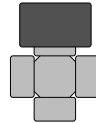
1. Depending on the type of system this position may not be filled.

## Symbol Guide

### System Symbols used in Diagrams



Air Vent



3 Way Solenoid Valve



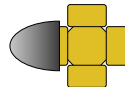
Drain Valve



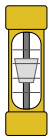
Circulation Pump



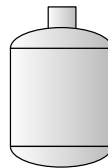
Drain Valve (on tank)



Anti-scald Valve



Flow Meter



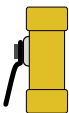
Expansion Tank



Check Valve



Quick-connect Fitting



Ball Valve

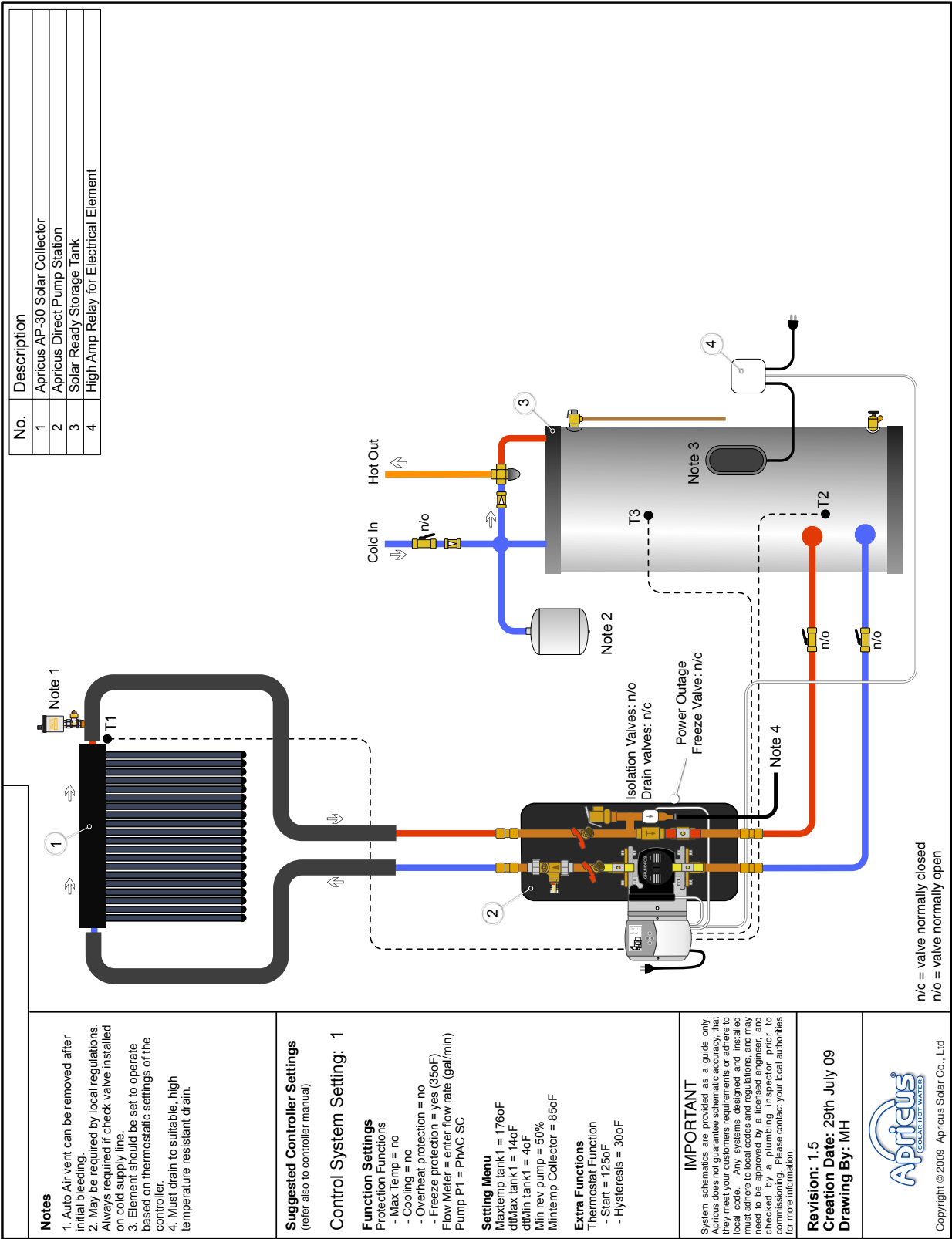


Temperature & Pressure Relief Valve



Pressure Relief Valve

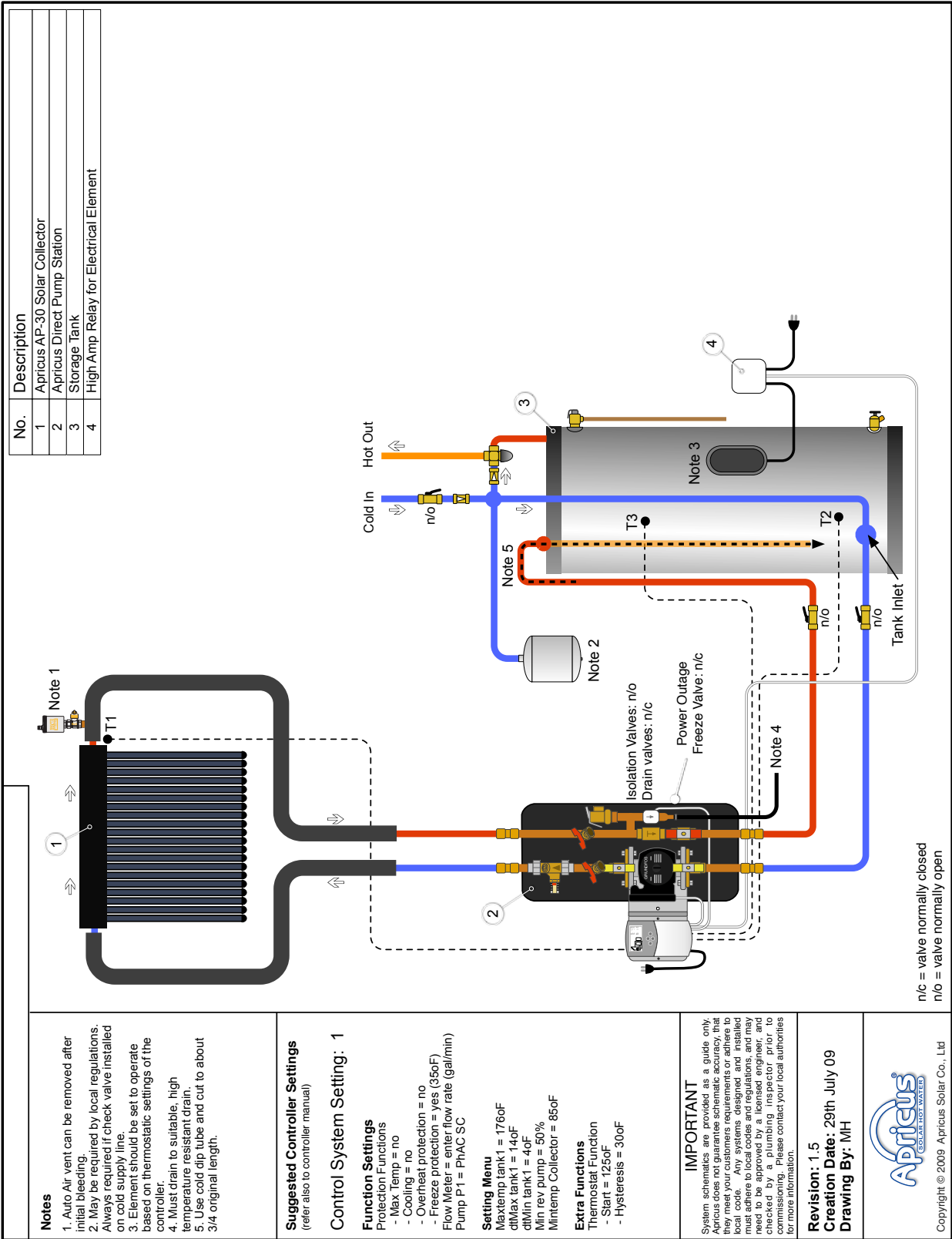
System Schematic: APSS\_DIRECT\_AP30\_FTD-E  
System Schematic: APSS\_DIRECT\_AP60\_FTD-E



## OG300 Parts List

| System                | APSS_DIRECT_AP30_FTD-E                                                                                              | APSS_DIRECT_AP60_FTD-E                                                                                              |
|-----------------------|---------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| Collector             | Apricus AP-30                                                                                                       | 2x Apricus AP-30                                                                                                    |
| Pump                  | Grundfos UPS 15-29SF                                                                                                | Grundfos UPS 15-29SF                                                                                                |
| Controller            | Watts Radiant Solar Control                                                                                         | Watts Radiant Solar Control                                                                                         |
| Tank                  | A.O.Smith ProMax SUN-80<br>Bradford White Solar Saver MS80R6SS<br>Rheem Solaraide 81VR80-1                          | A.O.Smith ProMax SUN-120<br>Bradford White Solar Saver MS120R6SS<br>Rheem Solaraide 81VR120-1                       |
| Expansion Tank        | Watts PLT-12 (Potable Water)                                                                                        | Watts PLT-12 (Potable Water)                                                                                        |
| Heat Exchanger        | n/a                                                                                                                 | n/a                                                                                                                 |
| Heat Transfer Fluid   | n/a                                                                                                                 | n/a                                                                                                                 |
| Piping                | Copper or Stainless Steel                                                                                           | Copper or Stainless Steel                                                                                           |
| Check Valve           | NSF/CSA Approved 3/4" Valve                                                                                         | NSF/CSA Approved 3/4" Valve                                                                                         |
| Mixing Valve          | NSF/CSA Approved 3/4" Anti-Scald Valve                                                                              | NSF/CSA Approved 3/4" Anti- Scald Valve                                                                             |
| Pressure Relief Valve | Watts 3/4" Pressure Relief Valve, 75psi                                                                             | Watts 3/4" Pressure Relief Valve, 75psi                                                                             |
| Insulation            | Outdoor: UV protected 7/8x1" Closed Cell EPDM Insulation >R-3.6<br>Indoor: 7/8x1" Closed Cell EPDM Insulation >R3.6 | Outdoor: UV protected 7/8x1" Closed Cell EPDM Insulation >R-3.6<br>Indoor: 7/8x1" Closed Cell EPDM Insulation >R3.6 |
| Air Vent              | Watts Regulator HAV Air Vent                                                                                        | Watts Regulator Air Vent                                                                                            |
| Isolation Valve       | Watts 600/800 WOG                                                                                                   | Watts 600/800 WOG                                                                                                   |
| Drain Valve           | Watts Radiant Drain Valve                                                                                           | Watts Radiant Drain Valve                                                                                           |
| Flow Control Valve    | Watts Radiant Flow Guard                                                                                            | Watts Radiant Flow Guard                                                                                            |
| Instrumentation       | n/a                                                                                                                 | n/a                                                                                                                 |
| Auto Valve            | Watts 24V Actuated Diverting Valve                                                                                  | Watts 24V Actuated Diverting Valve                                                                                  |

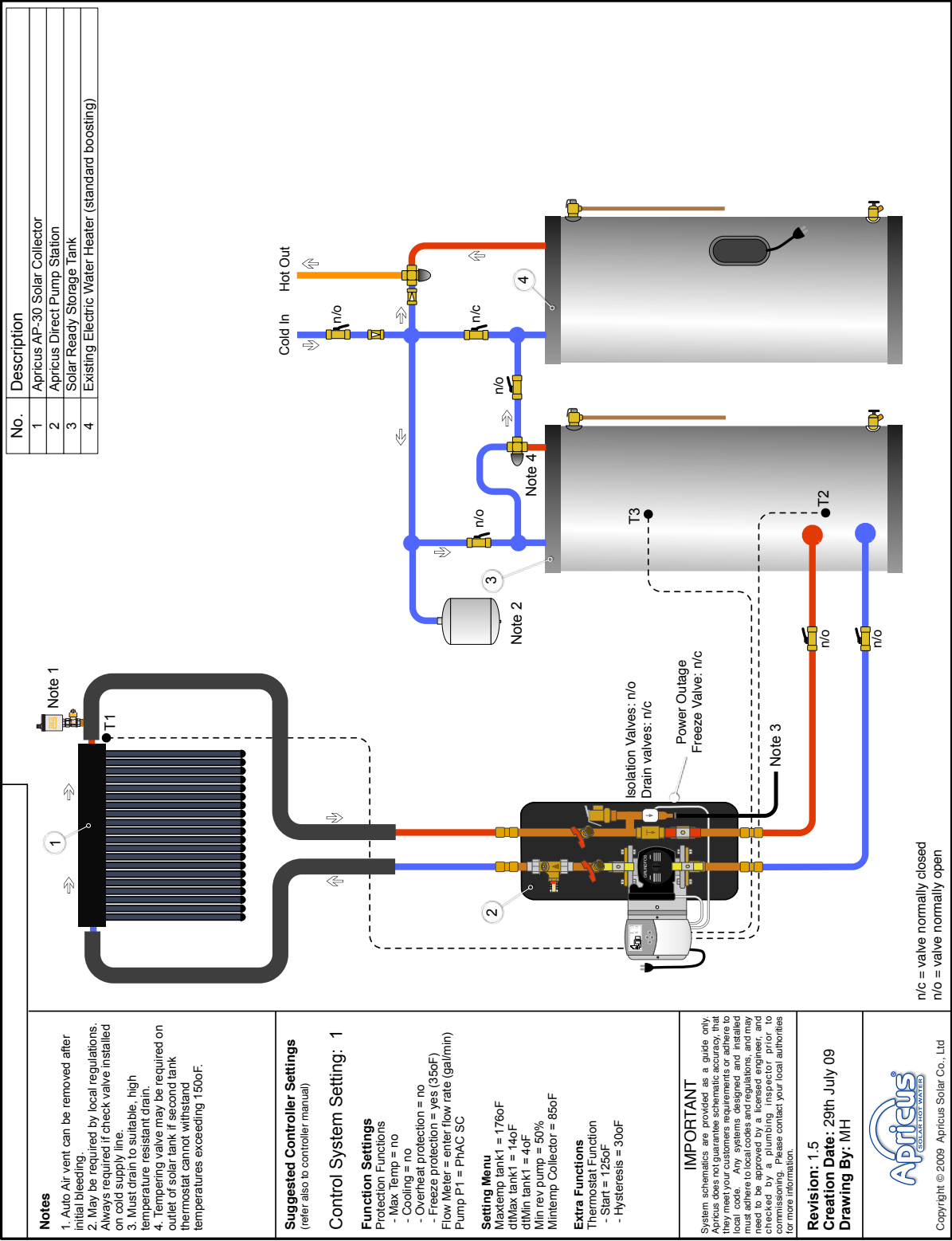
System Schematic: APSS\_DIRECT\_AP30\_DT-FTD-E  
System Schematic: APSS\_DIRECT\_AP60\_DT-FTD-E



## OG300 Parts List

| System                | APSS_DIRECT_AP30_DT-FTD-E                                                                                               | APSS_DIRECT_AP60_DT-FTD-E                                                                                                   |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Collector             | Apricus AP-30                                                                                                           | 2x Apricus AP-30                                                                                                            |
| Pump                  | Grundfos UPS 15-29SF                                                                                                    | Grundfos UPS 15-29SF                                                                                                        |
| Controller            | Watts Radiant Solar Control                                                                                             | Watts Radiant Solar Control                                                                                                 |
| Tank                  | American #SE62-80H-045S<br>A.O.Smith ProMax SUN-80<br>Bradford White Solar Saver MS80R6SS<br>Rheem Solaraide 81VR80TC-1 | American #SE62-119R-045S<br>A.O.Smith ProMax SUN-120<br>Bradford White Solar Saver MS120R6SS<br>Rheem Solaraide 81VR120TC-1 |
| Expansion Tank        | Watts PLT-12 (Potable Water)                                                                                            | Watts PLT-12 (Potable Water)                                                                                                |
| Heat Exchanger        | n/a                                                                                                                     | n/a                                                                                                                         |
| Heat Transfer Fluid   | n/a                                                                                                                     | n/a                                                                                                                         |
| Piping                | Copper or Stainless Steel                                                                                               | Copper or Stainless Steel                                                                                                   |
| Check Valve           | NSF/CSA Approved 3/4" Valve                                                                                             | NSF/CSA Approved 3/4" Valve                                                                                                 |
| Mixing Valve          | NSF/CSA Approved 3/4" Anti-Scald Valve                                                                                  | NSF/CSA Approved 3/4" Anti- Scald Valve                                                                                     |
| Pressure Relief Valve | Watts 3/4" Pressure Relief Valve, 75psi                                                                                 | Watts 3/4" Pressure Relief Valve, 75psi                                                                                     |
| Insulation            | Outdoor: UV protected 7/8x1" Closed Cell EPDM Insulation >R-3.6<br>Indoor: 7/8x1" Closed Cell EPDM Insulation >R3.6     | Outdoor: UV protected 7/8x1" Closed Cell EPDM Insulation >R-3.6<br>Indoor: 7/8x1" Closed Cell EPDM Insulation >R3.6         |
| Air Vent              | Watts Regulator HAV Air Vent                                                                                            | Watts Regulator Air Vent                                                                                                    |
| Isolation Valve       | Watts 600/800 WOG                                                                                                       | Watts 600/800 WOG                                                                                                           |
| Drain Valve           | Watts Radiant Drain Valve                                                                                               | Watts Radiant Drain Valve                                                                                                   |
| Flow Control Valve    | Watts Radiant Flow Guard                                                                                                | Watts Radiant Flow Guard                                                                                                    |
| Instrumentation       | n/a                                                                                                                     | n/a                                                                                                                         |
| Auto Valve            | Watts 24V Actuated Diverting Valve                                                                                      | Watts 24V Actuated Diverting Valve                                                                                          |

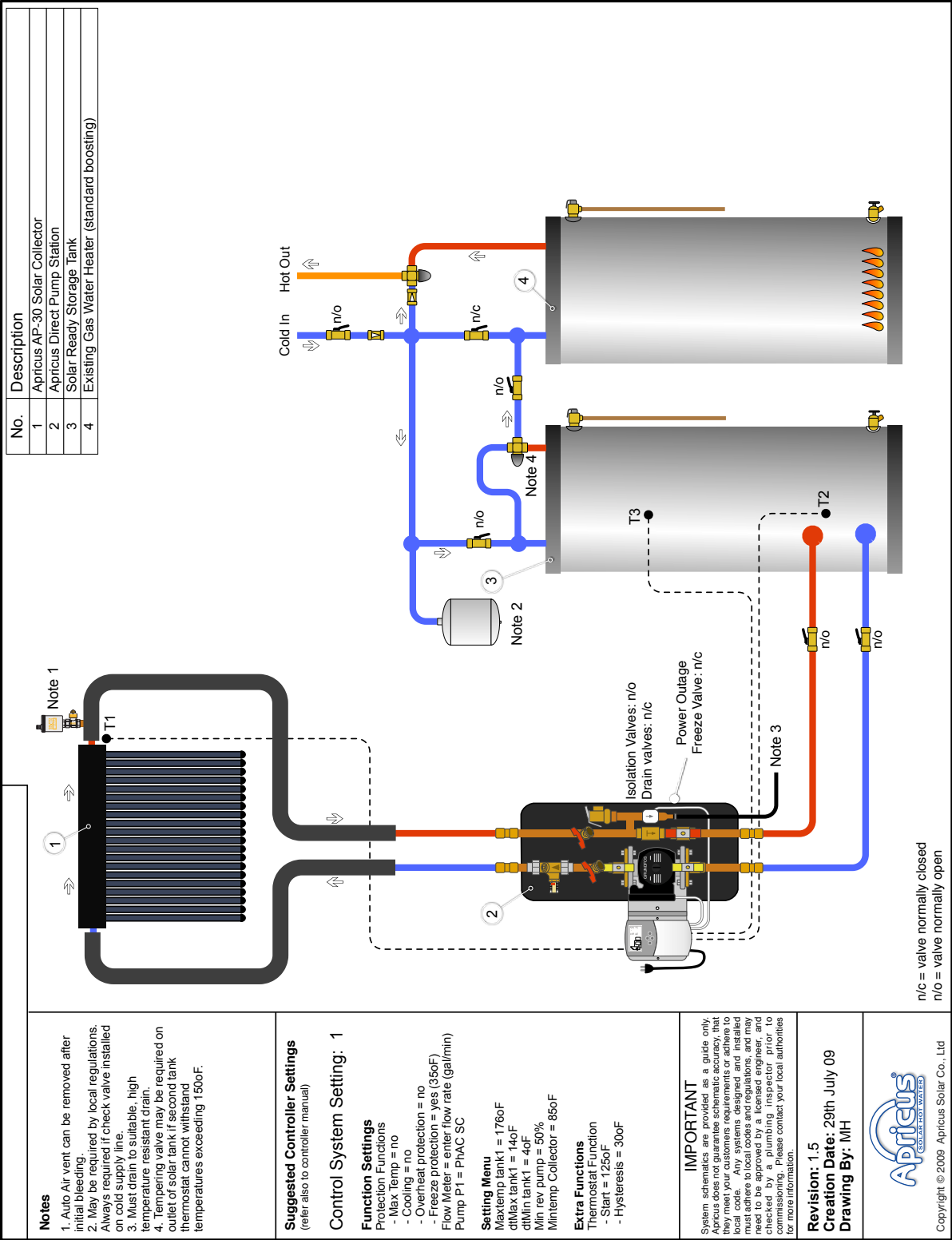
System Schematic: APSS\_DIRECT\_AP30\_FTD-STD-E  
System Schematic: APSS\_DIRECT\_AP60\_FTD-STD-E



## OG300 Parts List

| System                | APSS_DIRECT_AP30_FTD_STD-E                                                                                          | APSS_DIRECT_AP60_FTD_STD-E                                                                                          |
|-----------------------|---------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| Collector             | Apricus AP-30                                                                                                       | 2x Apricus AP-30                                                                                                    |
| Pump                  | Grundfos UPS 15-29SF                                                                                                | Grundfos UPS 15-29SF                                                                                                |
| Controller            | Watts Radiant Solar Control                                                                                         | Watts Radiant Solar Control                                                                                         |
| Tank                  | A.O.Smith ProMax SUN-80<br>Bradford White Solar Saver MS80R6SS<br>Rheem Solaraide 81VR80-1                          | A.O.Smith ProMax SUN-120<br>Bradford White Solar Saver MS120R6SS<br>Rheem Solaraide 81VR120-1                       |
| Expansion Tank        | Watts PLT-12 (Potable Water)                                                                                        | Watts PLT-12 (Potable Water)                                                                                        |
| Heat Exchanger        | n/a                                                                                                                 | n/a                                                                                                                 |
| Heat Transfer Fluid   | n/a                                                                                                                 | n/a                                                                                                                 |
| Piping                | Copper or Stainless Steel                                                                                           | Copper or Stainless Steel                                                                                           |
| Check Valve           | NSF/CSA Approved 3/4" Valve                                                                                         | NSF/CSA Approved 3/4" Valve                                                                                         |
| Mixing Valve          | NSF/CSA Approved 3/4" Anti-Scald Valve                                                                              | NSF/CSA Approved 3/4" Anti- Scald Valve                                                                             |
| Pressure Relief Valve | Watts 3/4" Pressure Relief Valve, 75psi                                                                             | Watts 3/4" Pressure Relief Valve, 75psi                                                                             |
| Insulation            | Outdoor: UV protected 7/8x1" Closed Cell EPDM Insulation >R-3.6<br>Indoor: 7/8x1" Closed Cell EPDM Insulation >R3.6 | Outdoor: UV protected 7/8x1" Closed Cell EPDM Insulation >R-3.6<br>Indoor: 7/8x1" Closed Cell EPDM Insulation >R3.6 |
| Air Vent              | Watts Regulator HAV Air Vent                                                                                        | Watts Regulator Air Vent                                                                                            |
| Isolation Valve       | Watts 600/800 WOG                                                                                                   | Watts 600/800 WOG                                                                                                   |
| Drain Valve           | Watts Radiant Drain Valve                                                                                           | Watts Radiant Drain Valve                                                                                           |
| Flow Control Valve    | Watts Radiant Flow Guard                                                                                            | Watts Radiant Flow Guard                                                                                            |
| Instrumentation       | n/a                                                                                                                 | n/a                                                                                                                 |
| Auto Valve            | Watts 24V Actuated Diverting Valve                                                                                  | Watts 24V Actuated Diverting Valve                                                                                  |

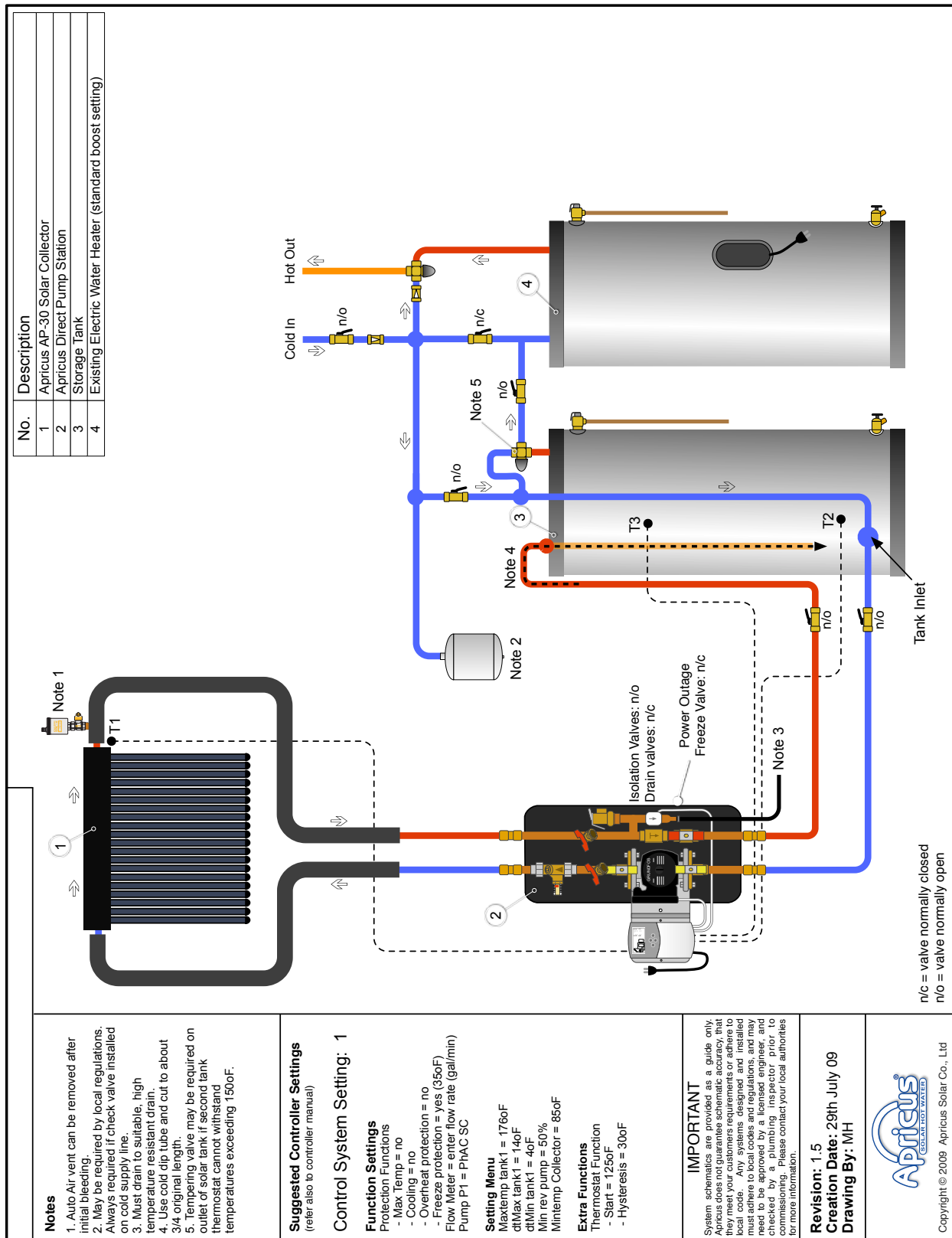
System Schematic: APSS\_DIRECT\_AP30\_FTD-STD-G  
 System Schematic: APSS\_DIRECT\_AP60\_FTD-STD-G



## OG300 Parts List

| System                | APSS_DIRECT_AP30_FTD_STD-G                                                                                          | APSS_DIRECT_AP60_FTD_STD-G                                                                                          |
|-----------------------|---------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| Collector             | Apricus AP-30                                                                                                       | 2x Apricus AP-30                                                                                                    |
| Pump                  | Grundfos UPS 15-29SF                                                                                                | Grundfos UPS 15-29SF                                                                                                |
| Controller            | Watts Radiant Solar Control                                                                                         | Watts Radiant Solar Control                                                                                         |
| Tank                  | A.O.Smith ProMax SUN-80<br>Bradford White Solar Saver MS80R6SS<br>Rheem Solaraide 81VR80-1                          | A.O.Smith ProMax SUN-120<br>Bradford White Solar Saver MS120R6SS<br>Rheem Solaraide 81VR120-1                       |
| Expansion Tank        | Watts PLT-12 (Potable Water)                                                                                        | Watts PLT-12 (Potable Water)                                                                                        |
| Heat Exchanger        | n/a                                                                                                                 | n/a                                                                                                                 |
| Heat Transfer Fluid   | n/a                                                                                                                 | n/a                                                                                                                 |
| Piping                | Copper or Stainless Steel                                                                                           | Copper or Stainless Steel                                                                                           |
| Check Valve           | NSF/CSA Approved 3/4" Valve                                                                                         | NSF/CSA Approved 3/4" Valve                                                                                         |
| Mixing Valve          | NSF/CSA Approved 3/4" Anti-Scald Valve                                                                              | NSF/CSA Approved 3/4" Anti- Scald Valve                                                                             |
| Pressure Relief Valve | Watts 3/4" Pressure Relief Valve, 75psi                                                                             | Watts 3/4" Pressure Relief Valve, 75psi                                                                             |
| Insulation            | Outdoor: UV protected 7/8x1" Closed Cell EPDM Insulation >R-3.6<br>Indoor: 7/8x1" Closed Cell EPDM Insulation >R3.6 | Outdoor: UV protected 7/8x1" Closed Cell EPDM Insulation >R-3.6<br>Indoor: 7/8x1" Closed Cell EPDM Insulation >R3.6 |
| Air Vent              | Watts Regulator HAV Air Vent                                                                                        | Watts Regulator Air Vent                                                                                            |
| Isolation Valve       | Watts 600/800 WOG                                                                                                   | Watts 600/800 WOG                                                                                                   |
| Drain Valve           | Watts Radiant Drain Valve                                                                                           | Watts Radiant Drain Valve                                                                                           |
| Flow Control Valve    | Watts Radiant Flow Guard                                                                                            | Watts Radiant Flow Guard                                                                                            |
| Instrumentation       | n/a                                                                                                                 | n/a                                                                                                                 |
| Auto Valve            | Watts 24V Actuated Diverting Valve                                                                                  | Watts 24V Actuated Diverting Valve                                                                                  |

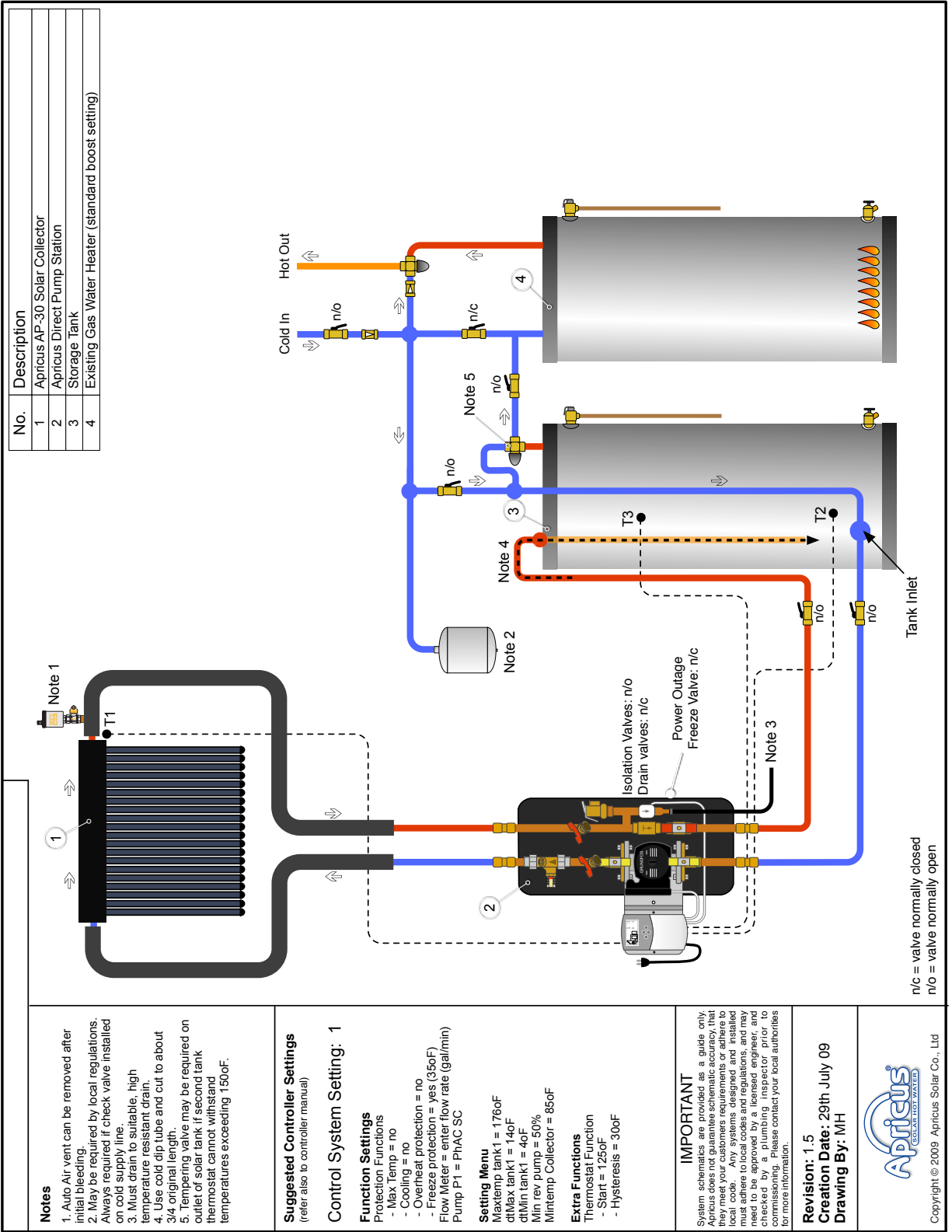
# System Schematic: APSS\_DIRECT\_AP30\_DT-FTD\_STD-E System Schematic: APSS\_DIRECT\_AP60\_DT-FTD\_STD-E



## OG300 Parts List

| System                | APSS_DIRECT_AP30_DT-FTD_STD-E                                                                                           | APSS_DIRECT_AP60_DT-FTD_STD-E                                                                                               |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Collector             | Apricus AP-30                                                                                                           | 2x Apricus AP-30                                                                                                            |
| Pump                  | Grundfos UPS 15-29SF                                                                                                    | Grundfos UPS 15-29SF                                                                                                        |
| Controller            | Watts Radiant Solar Control                                                                                             | Watts Radiant Solar Control                                                                                                 |
| Tank                  | American #SE62-80H-045S<br>A.O.Smith ProMax SUN-80<br>Bradford White Solar Saver MS80R6SS<br>Rheem Solaraide 81VR80TC-1 | American #SE62-119R-045S<br>A.O.Smith ProMax SUN-120<br>Bradford White Solar Saver MS120R6SS<br>Rheem Solaraide 81VR120TC-1 |
| Expansion Tank        | Watts PLT-12 (Potable Water)                                                                                            | Watts PLT-12 (Potable Water)                                                                                                |
| Heat Exchanger        | n/a                                                                                                                     | n/a                                                                                                                         |
| Heat Transfer Fluid   | n/a                                                                                                                     | n/a                                                                                                                         |
| Piping                | Copper or Stainless Steel                                                                                               | Copper or Stainless Steel                                                                                                   |
| Check Valve           | NSF/CSA Approved 3/4" Valve                                                                                             | NSF/CSA Approved 3/4" Valve                                                                                                 |
| Mixing Valve          | NSF/CSA Approved 3/4" Anti-Scald Valve                                                                                  | NSF/CSA Approved 3/4" Anti- Scald Valve                                                                                     |
| Pressure Relief Valve | Watts 3/4" Pressure Relief Valve, 75psi                                                                                 | Watts 3/4" Pressure Relief Valve, 75psi                                                                                     |
| Insulation            | Outdoor: UV protected 7/8x1" Closed Cell EPDM Insulation >R-3.6<br>Indoor: 7/8x1" Closed Cell EPDM Insulation >R3.6     | Outdoor: UV protected 7/8x1" Closed Cell EPDM Insulation >R-3.6<br>Indoor: 7/8x1" Closed Cell EPDM Insulation >R3.6         |
| Air Vent              | Watts Regulator HAV Air Vent                                                                                            | Watts Regulator Air Vent                                                                                                    |
| Isolation Valve       | Watts 600/800 WOG                                                                                                       | Watts 600/800 WOG                                                                                                           |
| Drain Valve           | Watts Radiant Drain Valve                                                                                               | Watts Radiant Drain Valve                                                                                                   |
| Flow Control Valve    | Watts Radiant Flow Guard                                                                                                | Watts Radiant Flow Guard                                                                                                    |
| Instrumentation       | n/a                                                                                                                     | n/a                                                                                                                         |
| Auto Valve            | Watts 24V Actuated Diverting Valve                                                                                      | Watts 24V Actuated Diverting Valve                                                                                          |

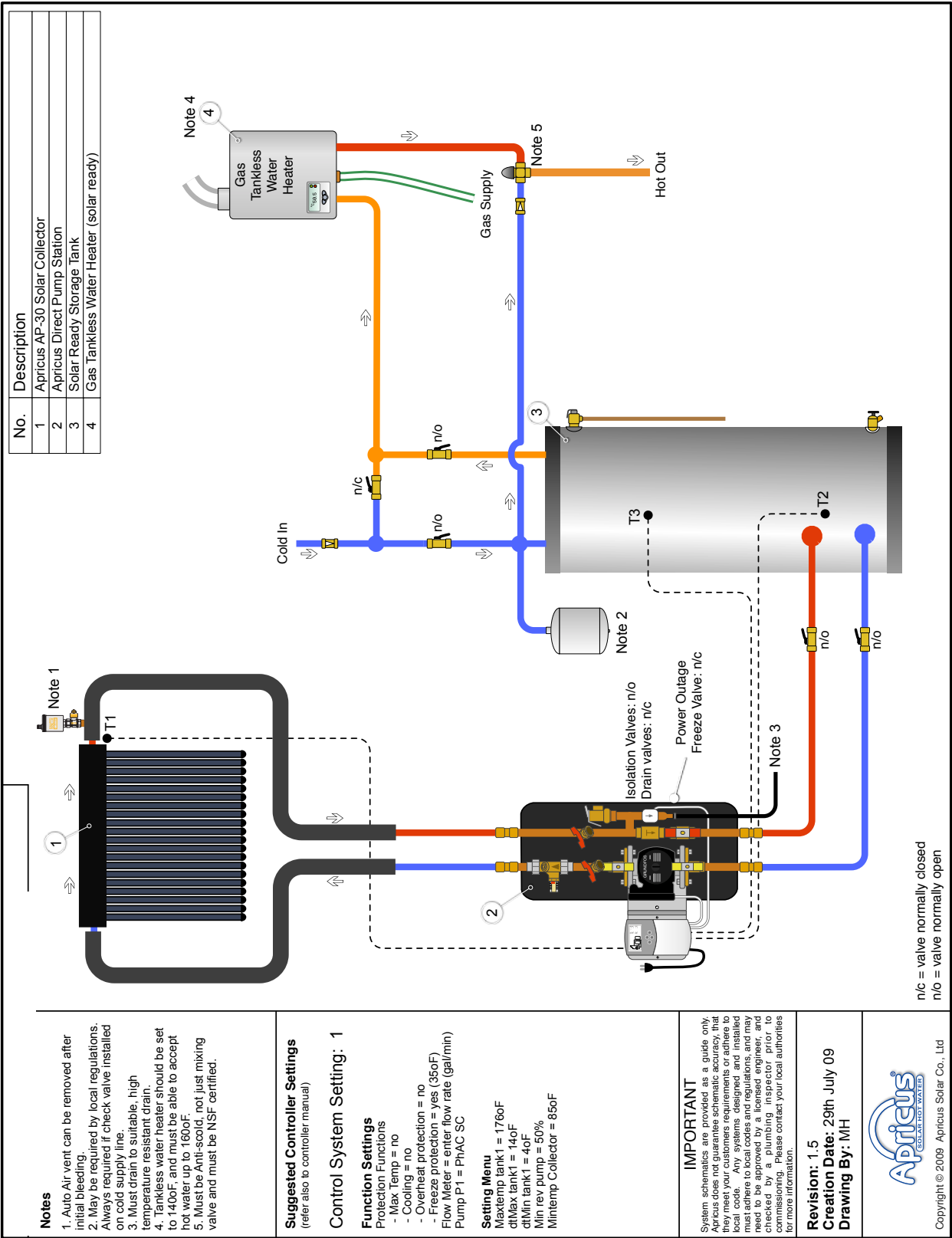
System Schematic: APSS\_DIRECT\_AP30\_DT-FTD\_STD-G  
System Schematic: APSS\_DIRECT\_AP60\_DT-FTD\_STD-G



## OG300 Parts List

| System                | APSS_DIRECT_AP30_DT-FTD_STD-G                                                                                           | APSS_DIRECT_AP60_DT-FTD_STD-G                                                                                               |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Collector             | Apricus AP-30                                                                                                           | 2x Apricus AP-30                                                                                                            |
| Pump                  | Grundfos UPS 15-29SF                                                                                                    | Grundfos UPS 15-29SF                                                                                                        |
| Controller            | Watts Radiant Solar Control                                                                                             | Watts Radiant Solar Control                                                                                                 |
| Tank                  | American #SE62-80H-045S<br>A.O.Smith ProMax SUN-80<br>Bradford White Solar Saver MS80R6SS<br>Rheem Solaraide 81VR80TC-1 | American #SE62-119R-045S<br>A.O.Smith ProMax SUN-120<br>Bradford White Solar Saver MS120R6SS<br>Rheem Solaraide 81VR120TC-1 |
| Expansion Tank        | Watts PLT-12 (Potable Water)                                                                                            | Watts PLT-12 (Potable Water)                                                                                                |
| Heat Exchanger        | n/a                                                                                                                     | n/a                                                                                                                         |
| Heat Transfer Fluid   | n/a                                                                                                                     | n/a                                                                                                                         |
| Piping                | Copper or Stainless Steel                                                                                               | Copper or Stainless Steel                                                                                                   |
| Check Valve           | NSF/CSA Approved 3/4" Valve                                                                                             | NSF/CSA Approved 3/4" Valve                                                                                                 |
| Mixing Valve          | NSF/CSA Approved 3/4" Anti-Scald Valve                                                                                  | NSF/CSA Approved 3/4" Anti- Scald Valve                                                                                     |
| Pressure Relief Valve | Watts 3/4" Pressure Relief Valve, 75psi                                                                                 | Watts 3/4" Pressure Relief Valve, 75psi                                                                                     |
| Insulation            | Outdoor: UV protected 7/8x1" Closed Cell EPDM Insulation >R-3.6<br>Indoor: 7/8x1" Closed Cell EPDM Insulation >R3.6     | Outdoor: UV protected 7/8x1" Closed Cell EPDM Insulation >R-3.6<br>Indoor: 7/8x1" Closed Cell EPDM Insulation >R3.6         |
| Air Vent              | Watts Regulator HAV Air Vent                                                                                            | Watts Regulator Air Vent                                                                                                    |
| Isolation Valve       | Watts 600/800 WOG                                                                                                       | Watts 600/800 WOG                                                                                                           |
| Drain Valve           | Watts Radiant Drain Valve                                                                                               | Watts Radiant Drain Valve                                                                                                   |
| Flow Control Valve    | Watts Radiant Flow Guard                                                                                                | Watts Radiant Flow Guard                                                                                                    |
| Instrumentation       | n/a                                                                                                                     | n/a                                                                                                                         |
| Auto Valve            | Watts 24V Actuated Diverting Valve                                                                                      | Watts 24V Actuated Diverting Valve                                                                                          |

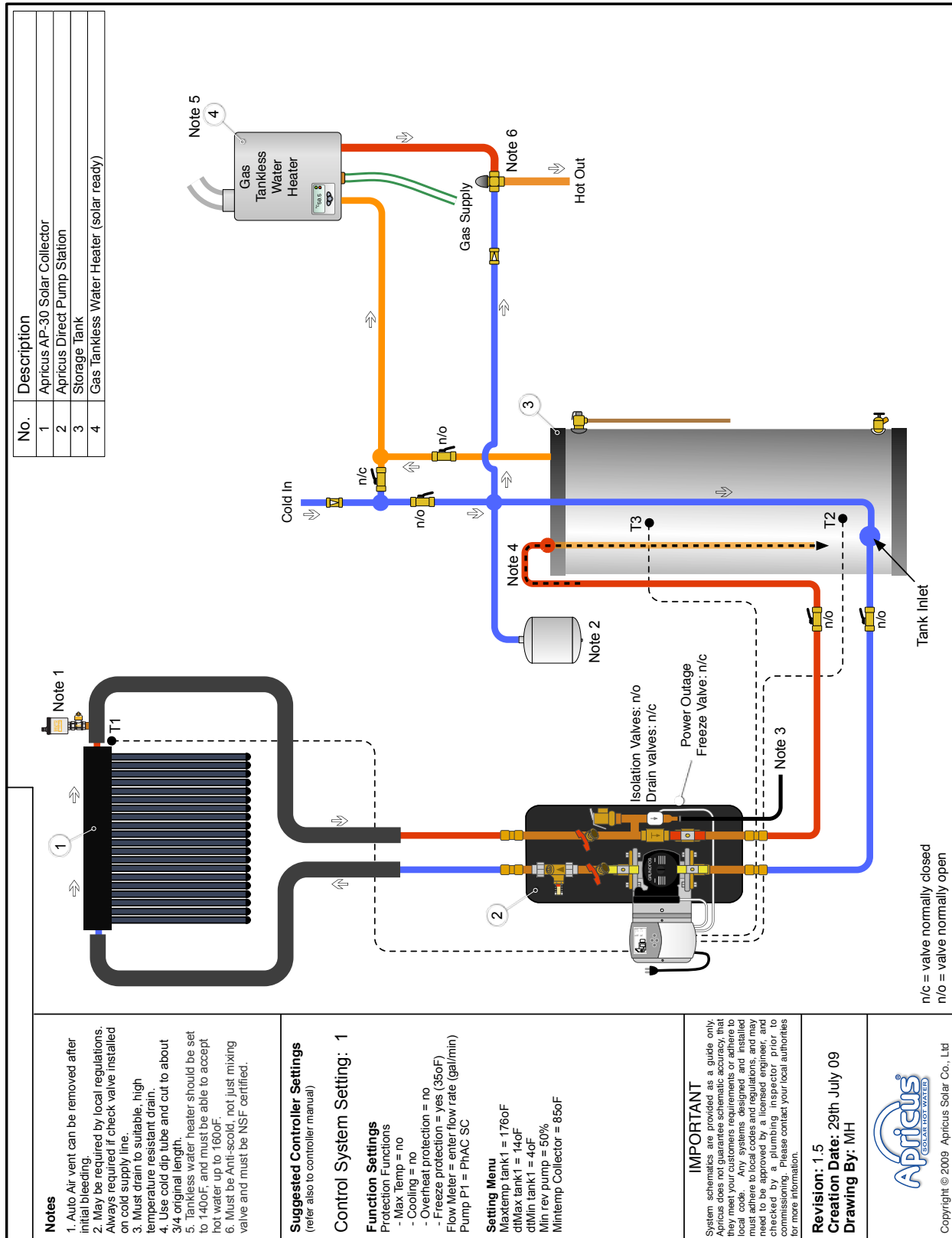
System Schematic: APSS\_DIRECT\_AP30\_FTD\_PBGT  
 System Schematic: APSS\_DIRECT\_AP60\_FTD\_PBGT



## OG300 Parts List

| System                | APSS_DIRECT_AP30_FTD_PBGT                                                                                           | APSS_DIRECT_AP60_FTD_PBGT                                                                                           |
|-----------------------|---------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| Collector             | Apricus AP-30                                                                                                       | 2x Apricus AP-30                                                                                                    |
| Pump                  | Grundfos UPS 15-29SF                                                                                                | Grundfos UPS 15-29SF                                                                                                |
| Controller            | Watts Radiant Solar Control                                                                                         | Watts Radiant Solar Control                                                                                         |
| Tank                  | A.O.Smith ProMax SUN-80<br>Bradford White Solar Saver MS80R6SS<br>Rheem Solaraide 81VR80-1                          | A.O.Smith ProMax SUN-120<br>Bradford White Solar Saver MS120R6SS<br>Rheem Solaraide 81VR120-1                       |
| Tankless Heater       | Quietside ODW-99A<br>Takagi T-Kjr.                                                                                  | Takagi T-H1<br>Takagi T-K3-SP                                                                                       |
| Expansion Tank        | Watts PLT-12 (Potable Water)                                                                                        | Watts PLT-12 (Potable Water)                                                                                        |
| Heat Exchanger        | n/a                                                                                                                 | n/a                                                                                                                 |
| Heat Transfer Fluid   | n/a                                                                                                                 | n/a                                                                                                                 |
| Piping                | Copper or Stainless Steel                                                                                           | Copper or Stainless Steel                                                                                           |
| Check Valve           | NSF/CSA Approved 3/4" Valve                                                                                         | NSF/CSA Approved 3/4" Valve                                                                                         |
| Mixing Valve          | NSF/CSA Approved 3/4" Anti-Scaled Valve                                                                             | NSF/CSA Approved 3/4" Anti- Scaled Valve                                                                            |
| Pressure Relief Valve | Watts 3/4" Pressure Relief Valve, 75psi                                                                             | Watts 3/4" Pressure Relief Valve, 75psi                                                                             |
| Insulation            | Outdoor: UV protected 7/8x1" Closed Cell EPDM Insulation >R-3.6<br>Indoor: 7/8x1" Closed Cell EPDM Insulation >R3.6 | Outdoor: UV protected 7/8x1" Closed Cell EPDM Insulation >R-3.6<br>Indoor: 7/8x1" Closed Cell EPDM Insulation >R3.6 |
| Air Vent              | Watts Regulator HAV Air Vent                                                                                        | Watts Regulator Air Vent                                                                                            |
| Isolation Valve       | Watts 600/800 WOG                                                                                                   | Watts 600/800 WOG                                                                                                   |
| Drain Valve           | Watts Radiant Drain Valve                                                                                           | Watts Radiant Drain Valve                                                                                           |
| Flow Control Valve    | Watts Radiant Flow Guard                                                                                            | Watts Radiant Flow Guard                                                                                            |
| Instrumentation       | Watts Radiant DPTG-3 Temperature & Pressure Gauge                                                                   | Watt Radiant DPTG-3 Temperature & Pressure Gauge                                                                    |
| Auto Valve            | Watts 24V Actuated Diverting Valve                                                                                  | Watts 24V Actuated Diverting Valve                                                                                  |

# System Schematic: APSS\_DIRECT\_AP30\_DT-FTD\_PBG System Schematic: APSS\_DIRECT\_AP60\_DT-FTD\_PBG



## OG300 Parts List

| System                | APSS_DIRECT_AP30_DT-FTD_PBG                                                                                             | APSS_DIRECT_AP60_DT-FTD_PBG                                                                                                 |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Collector             | Apricus AP-30                                                                                                           | 2x Apricus AP-30                                                                                                            |
| Pump                  | Grundfos UPS 15-29SF                                                                                                    | Grundfos UPS 15-29SF                                                                                                        |
| Controller            | Watts Radiant Solar Control                                                                                             | Watts Radiant Solar Control                                                                                                 |
| Tank                  | American #SE62-80H-045S<br>A.O.Smith ProMax SUN-80<br>Bradford White Solar Saver MS80R6SS<br>Rheem Solaraide 81VR80TC-1 | American #SE62-119R-045S<br>A.O.Smith ProMax SUN-120<br>Bradford White Solar Saver MS120R6SS<br>Rheem Solaraide 81VR120TC-1 |
| Tankless Heater       | Quietside ODW-99A<br>Takagi T-Kjr.                                                                                      | Takagi T-H1<br>Takagi T-K3-SP                                                                                               |
| Expansion Tank        | Watts PLT-12 (Potable Water)                                                                                            | Watts PLT-12 (Potable Water)                                                                                                |
| Heat Exchanger        | n/a                                                                                                                     | n/a                                                                                                                         |
| Heat Transfer Fluid   | n/a                                                                                                                     | n/a                                                                                                                         |
| Piping                | Copper or Stainless Steel                                                                                               | Copper or Stainless Steel                                                                                                   |
| Check Valve           | NSF/CSA Approved 3/4" Valve                                                                                             | NSF/CSA Approved 3/4" Valve                                                                                                 |
| Mixing Valve          | NSF/CSA Approved 3/4" Anti-Scaled Valve                                                                                 | NSF/CSA Approved 3/4" Anti- Scaled Valve                                                                                    |
| Pressure Relief Valve | Watts 3/4" Pressure Relief Valve, 75psi                                                                                 | Watts 3/4" Pressure Relief Valve, 75psi                                                                                     |
| Insulation            | Outdoor: UV protected 7/8x1" Closed Cell EPDM Insulation >R-3.6<br>Indoor: 7/8x1" Closed Cell EPDM Insulation >R3.6     | Outdoor: UV protected 7/8x1" Closed Cell EPDM Insulation >R-3.6<br>Indoor: 7/8x1" Closed Cell EPDM Insulation >R3.6         |
| Air Vent              | Watts Regulator HAV Air Vent                                                                                            | Watts Regulator Air Vent                                                                                                    |
| Isolation Valve       | Watts 600/800 WOG                                                                                                       | Watts 600/800 WOG                                                                                                           |
| Drain Valve           | Watts Radiant Drain Valve                                                                                               | Watts Radiant Drain Valve                                                                                                   |
| Flow Control Valve    | Watts Radiant Flow Guard                                                                                                | Watts Radiant Flow Guard                                                                                                    |
| Instrumentation       | Watts Radiant DPTG-3 Temperature & Pressure Gauge                                                                       | Watt Radiant DPTG-3 Temperature & Pressure Gauge                                                                            |
| Auto Valve            | Watts 24V Actuated Diverting Valve                                                                                      | Watts 24V Actuated Diverting Valve                                                                                          |