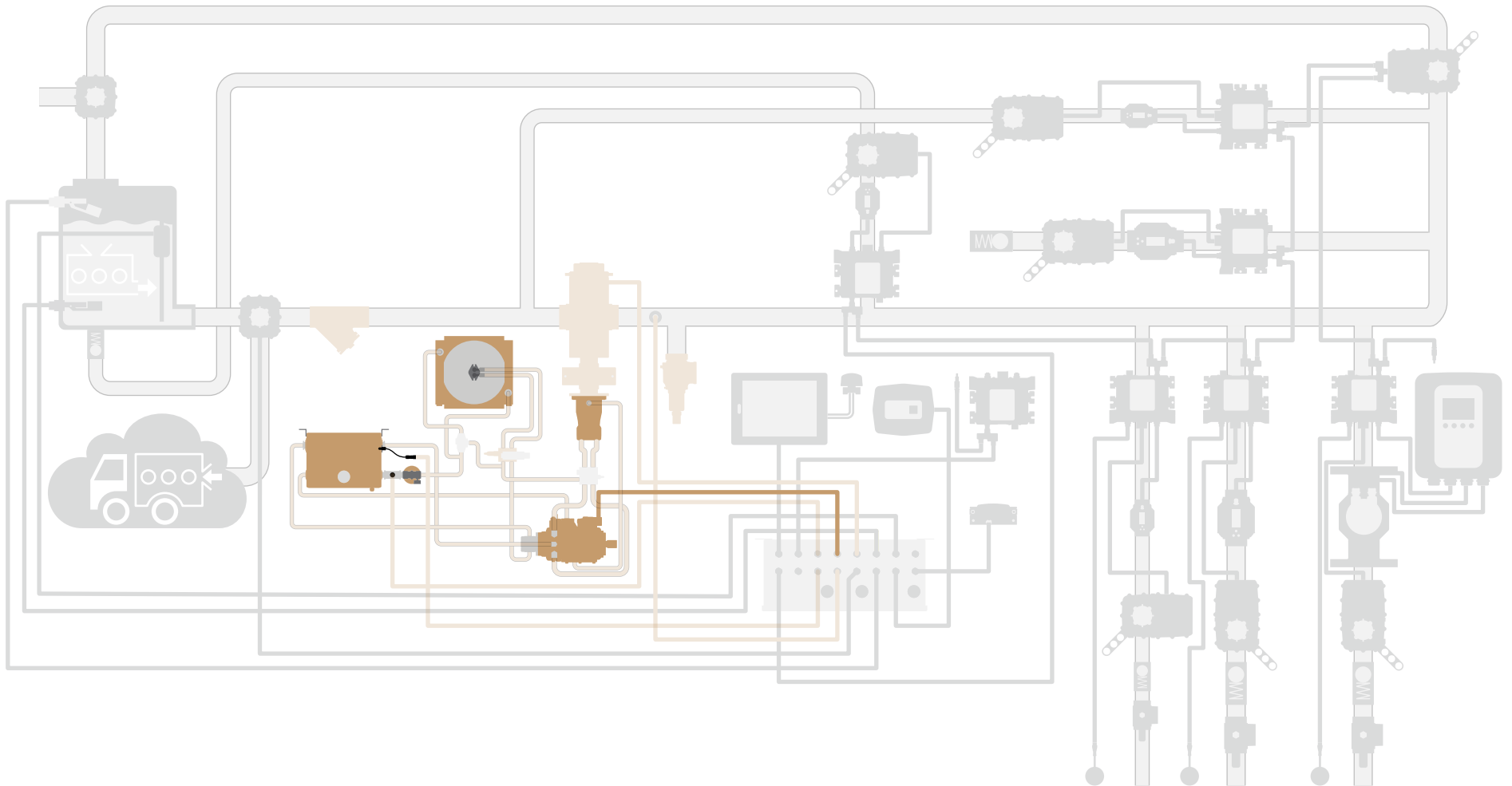


WATEROUS

Form Number: F-3046

Issue Date: Aug 7, 2024

AQUIS™ ULTRAFLOW 500 Hydraulic Component Requirements

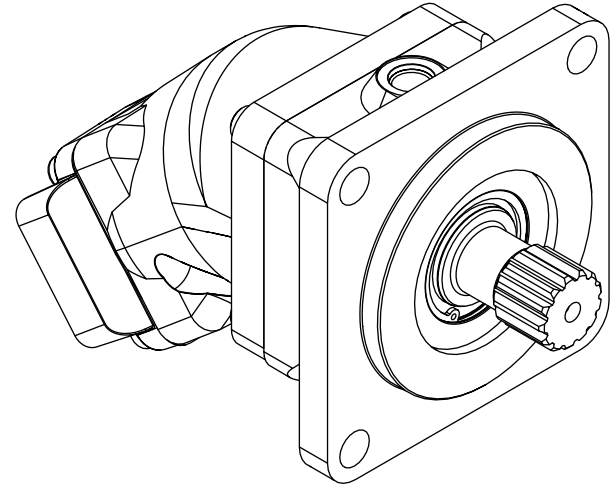
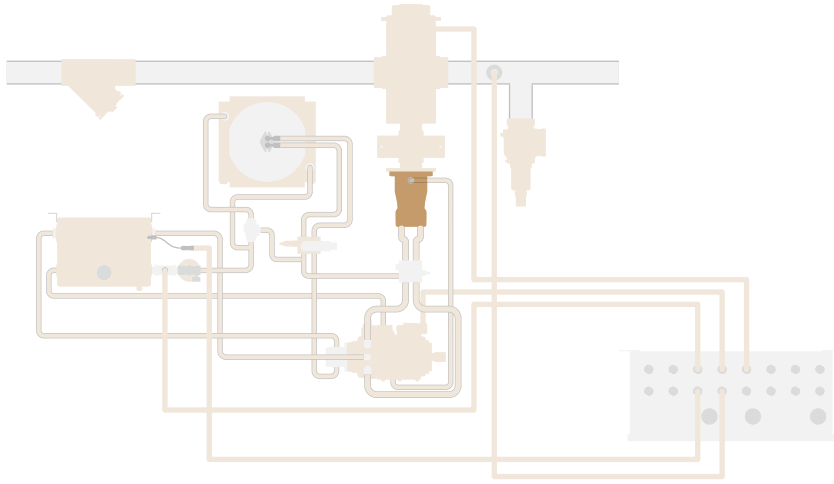


How To Use This Document

The Aquis UltraFlow industrial foam proportioner system supplies concentrate into a solution-capable discharge line. A Tellurus™ control panel, or human machine interface (HMI), shows system activity and provides control of the system using a CANbus protocol. Foam concentrate is sourced from an on-board supply tank or an auxiliary source. The concentrate pump distributes concentrate through the discharge line assembly (DLA) using hydraulic components. The concentrate is then measured, controlled, and introduced into the solution-capable discharge line to produce foam solution. Understand that your application will include all or portions of the components described.

If you source any hydraulic components for your application outside of Waterous, use the information in this document to guide you in selecting substitute components. UltraFlow component compatibility concerns are outlined for each component that you can substitute. The example components referenced in this document are used in the 500 gpm UltraFlow system. Select appropriate components to achieve the required output for your application. Understand that the compatibility of the substitute components is the responsibility of the installer and is outside the purview of Waterous.

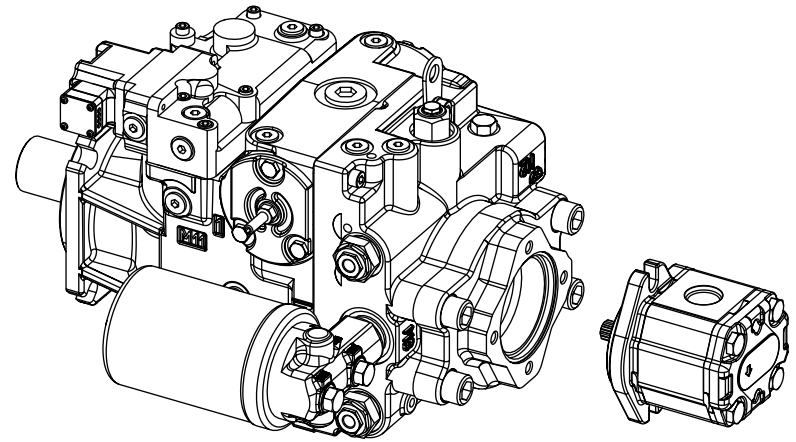
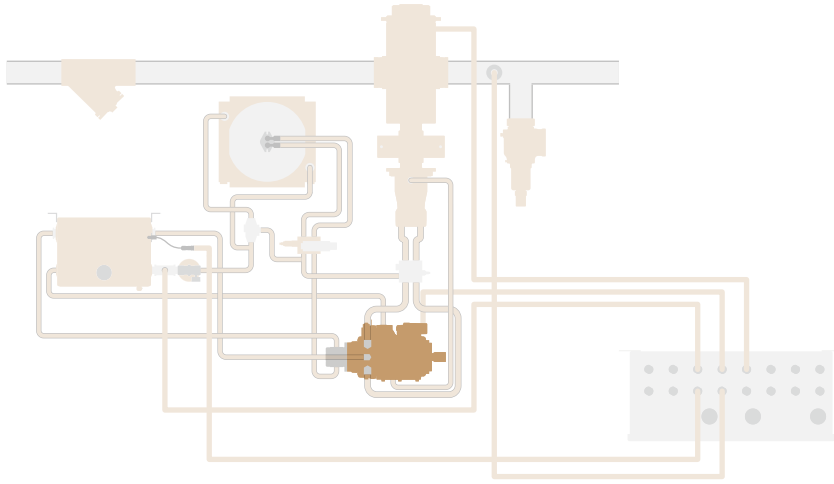
Hydraulic Motor Requirements



Use the following information to source a hydraulic motor compatible with the UltraFlow system.

- Make sure that you source a shaft coupler capable of mating with the shaft on the substitute concentrate pump. To match the 500 gpm UltraFlow concentrate pump, source a coupler compatible with an SAE-D spline, 1-3/4 inch, 13T external involute spline, 8/16 pitch.
- Refer to *F-3044 AQUIS ULTRAFLOW 500 Hydraulics Installation and Operation* for installation instructions and placement within the UltraFlow system.

Hydraulic Pump and Hydraulic Fan Pump Requirements



Use the following information to source a hydraulic pump compatible with the UltraFlow system.

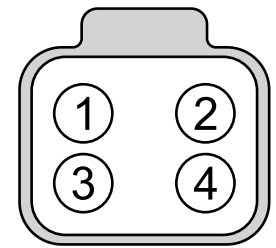
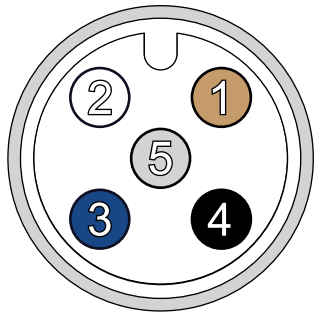
- Refer to the Danfoss hydraulic pump part number 90R100KT1AB80P4F1F03GBA353524 used in the 500 gpm UltraFlow system to compare the compatibility of your substitute hydraulic pump.
- Make sure that the hydraulic pump that you source is compatible with the communication protocols used by the UltraFlow system control box. Refer to **“Hydraulic Pump Cable—Schematic” on page 5** for more information.
- Refer to *F-3044 AQUIS ULTRAFLOW 500 Hydraulics Installation and Operation* for installation instructions and placement within the UltraFlow system.

Use the following information to source a hydraulic fan pump compatible with the UltraFlow system.

- Refer to the Danfoss hydraulic fan pump part number SNP2NN/8 0RN06SAP1E6E5NNNNNNNN used in the 500 gpm UltraFlow system to compare the compatibility of your substitute hydraulic fan pump.
- Refer to *F-3044 AQUIS ULTRAFLOW 500 Hydraulics Installation and Operation* for installation instructions and placement within the UltraFlow system.

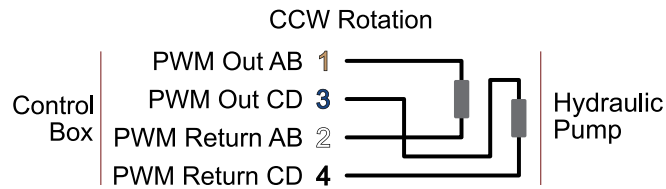
Hydraulic Pump Cable—Schematic

Use the information below to construct a cable to connect to the ULTRAFLOW control box.



M12 Connector	
1	PWM out—AB
2	PWM out—CD
3	PWM return—AB
4	PWM return—CD
5	Shield

Phoenix Contact—1405879 or equivalent



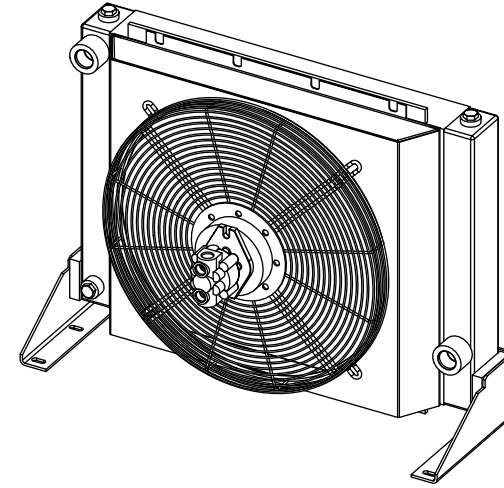
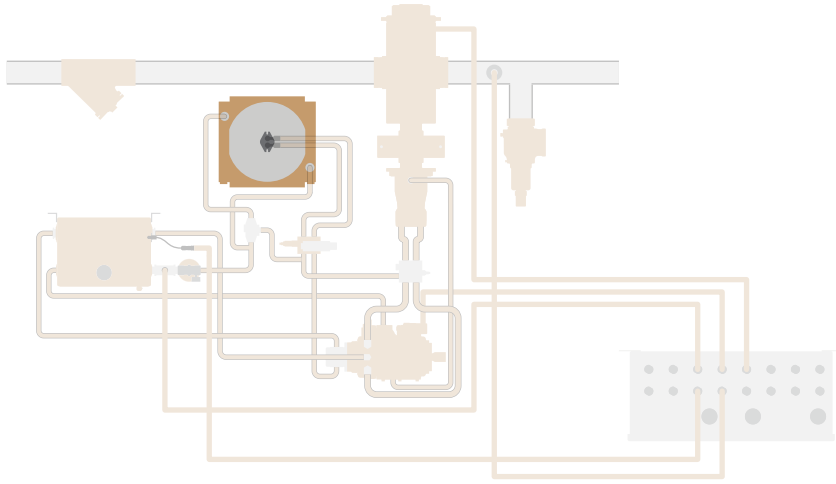
Make sure that your hydraulic pump meets the following parameters:

- 20Ω coil impedance
- Parallel configuration
- 80mA maximum current

Connector	
1	PWM out—AB
2	PWM out—CD
3	PWM return—AB
4	PWM return—CD

Shell—DT06-4S (1)
Wedge—W4S (1)
Sockets—match to counterpart or equivalents

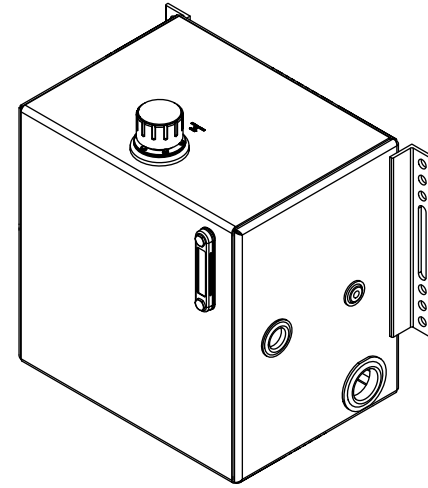
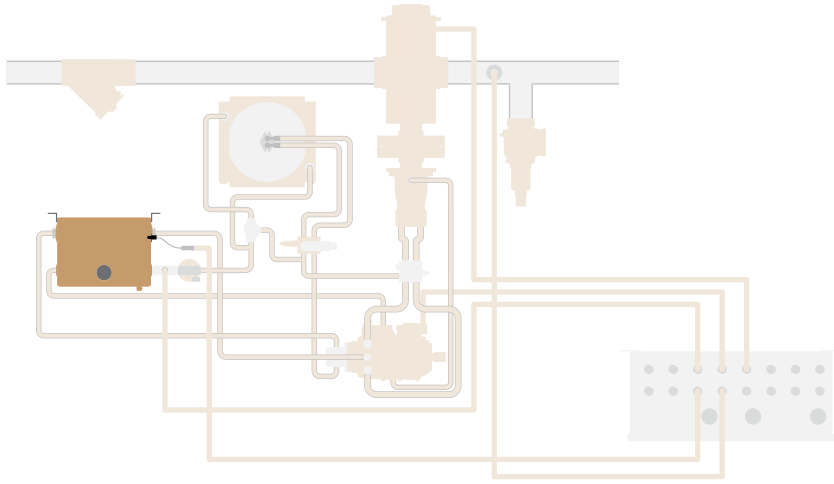
Hydraulic Heat Exchanger Requirements



Use the following information to source a hydraulic heat exchanger compatible with the Waterous UltraFlow system.

- Make sure the heat exchanger includes a method to monitor and manage its operation.
- Refer to *F-3044 AQUIS ULTRAFLOW 500 Hydraulics Installation and Operation* for installation instructions and placement within the UltraFlow system.

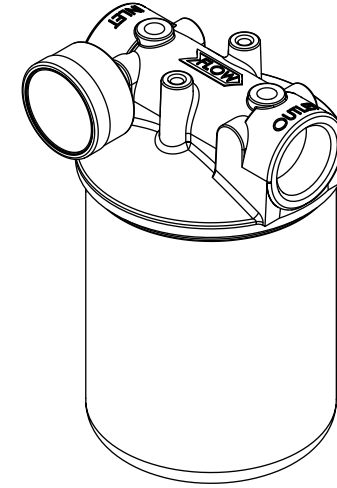
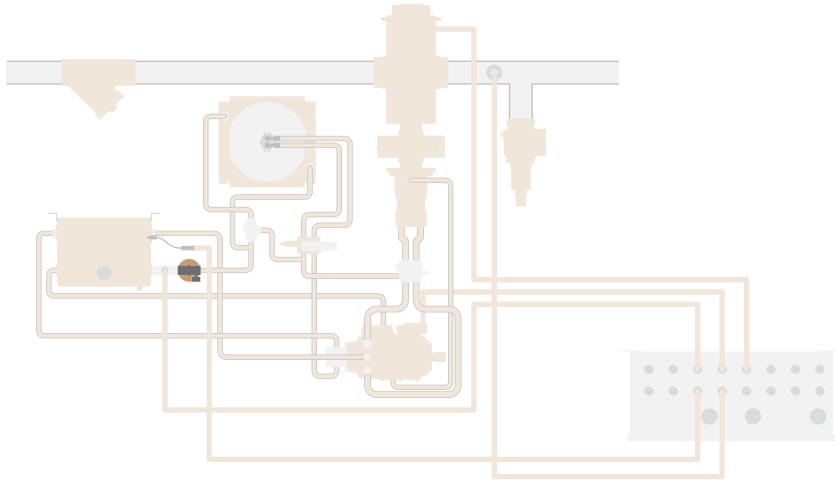
Hydraulic Reservoir Requirements



Use the following information to source a hydraulic reservoir compatible with the Waterous UltraFlow system.

- Make sure that there is a 1/4-inch NPT accessory port located near the bottom of the reservoir to install the hydraulic temperature sensor.
- Make sure that there is a 1/4-inch NPT accessory port to properly place the hydraulic level sensor. Place the sensor so that it triggers before the reservoir reaches the minimum hydraulic fluid levels required to operate and effectively cool the system. Understand that the fluid level in the reservoir may be lower during operation than when not in operation. Locate the sensor to account for the change in fluid level during operation to prevent a shutdown. Also, placing the hydraulic level sensor too low in the reservoir may prevent a system with a leak from detecting a low-fluid condition before the minimum level is reached and cause damage.
- Refer to *F-3044 AQUIS ULTRAFLOW 500 Hydraulics Installation and Operation* for installation instructions and placement within the UltraFlow system.

Hydraulic Filter Requirements



Use the following information to source a hydraulic filter compatible with the UltraFlow system.

- Make sure that you include a filter life gauge in your application.
- Refer to *F-3044 AQUIS ULTRAFLOW 500 Hydraulics Installation and Operation* for installation instructions and placement within the UltraFlow system.