

# Pumping Applications

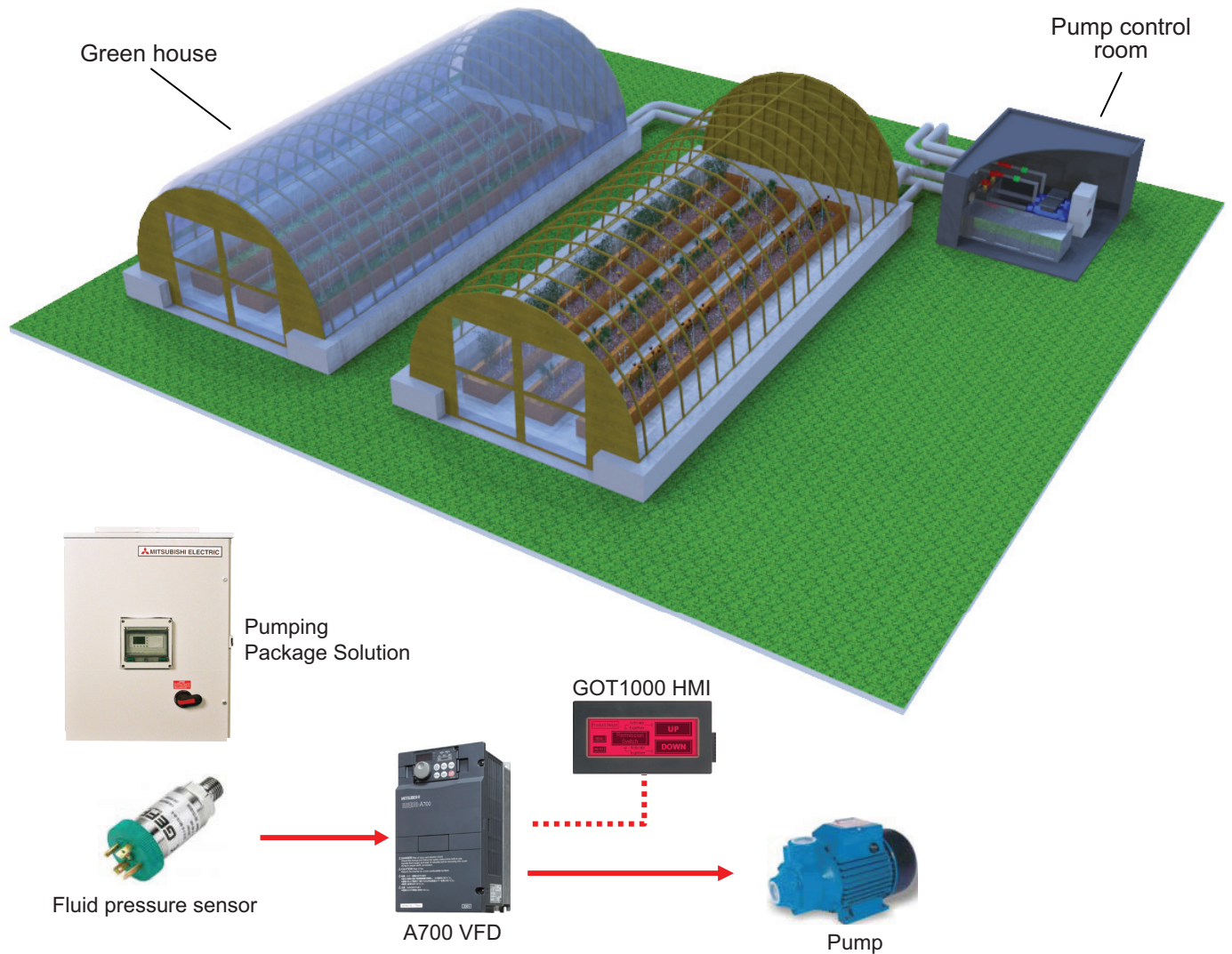
## Mitsubishi Solution

Inverter: A700 (NA5 Firmware)

Sensor: 3<sup>rd</sup> party pressure transducer

HMI: GOT1000 (optional)

Motor: 3<sup>rd</sup> party motor



## Example Applications

Pumping applications sit within a variety of different industries. Examples are listed below:

- ◆ Waste water treatment
- ◆ Building water management
- ◆ Irrigation
- ◆ Household water management

## Overview

Pumping can be defined as the ability to compress or drive a fluid. Within applications pumping can mean passing a fluid into or out of a system where either fluid pressure or flow rate is controlled. Typically an inverter operates at the center of the application determining the control characteristics of the pump.

## Features

## Advantages and Benefits

### Built-in PLC for independent inverter control

- Additional PLC cost no longer necessary
- 20% Reduced cabinet space for control system
- Improved system functionality such as user created error checks. i.e. transducer failure.

### Open networking

- Remote maintenance of the application
- Enhanced connectivity to third party devices within the application
- Improved data management

### Precise speed and torque control: Ultra-precise speeds across the control range +/-0.01%

- Precise control for pressure sensitive applications
- Fast pressure equalization

### Simplified parameter setup with Auto-tuning

- Up to 60%+ energy saving
- Optimized parameter setup
- Compensates for changes caused by temperature fluctuation

### Straightforward design: Removable terminal block

- Up to 80% reduced setup time when replacing the inverter

### Self-diagnostics:

- Monitoring of internal components prevents unnecessary downtime
- System protection and overload functions

- Enables accurate planning for maintenance checks of the pumping application
- Avoids prolonged downtime of application

### Unmatched product reliability: A700 Service life of up to 20 years

- 50% reduction in machine service costs over life time

### Direct connection to HMI

- Simplified machine operation for operator
- Straightforward machine maintenance

### FR-Configurator software

- Up to 80% time reduction pumping application setup time.

### GT1020 direct connection:

- Dedicated FREQROL driver
- Low cost HMI

- Intuitive screens for pumping control, monitoring and parameter setting and alarm logging.
- Up to 60%+ reduced programming time

Note: The values listed above are based on a real world application.

## Customer Testimonials

- *"The A700 has reduced our day-to-day running costs and helped to simplify the setup of our pumping system"*