Pump Drive Assembly (PDA) and Pump Control Station (PCS) Description

In addition to the stand-alone pump heads and Fuji-Techno's own portable units, we are able to offer a wide range of solutions for laboratory and factory based applications.

Pump Drive Assembly (PDA)

The PDA comprises a HY series pump mounted on a base plate with the driving elements including a gearbox, servo motor and coupling.

The servo drive is typically supplied loose for integration into the local control panel.

The PDA can be supplied with pre-confectioned cable sets and the software commissioning tools for the servo drive.

Supply options

The drive requires a rectified 24Vdc supply for the drive logic. Current rating is ~1Amp.

The required supply for the power stage is:

- Single phase 100...230Vac mains
- Three phase 230...480Vac mains

Control options

The servo motor incorporates a resolver unit which gives speed and positional data back to the servo drive.

As standard the motor/ pump speed can be controlled via an analogue signal 0...10Vdc, the CANbus interface, USB and EtherNET (also via the commissioning software) or digital inputs (pre-defined speeds).

Other options include:

- ProfiBUS
- ProfiNET
- EtherCAT

Environmental options

The pump, motor, gearbox and coupling are all IP54 rated (or higher), making them suitable for exposure to low pressure, non-corrosive, liquids.

If required we can provide increased protection:

- ATEX 2G compliance
- ATEX 3G compliance

For the ATEX variants, the servo drive is sited outside the ATEX zone.

Additional options

To aid implementation of the PDA:

- 24Vdc power supplies
- Low inductance cables for increased cable length between motor and drive
- ATEX terminal boxes

Pump Control Station (PCS)

The PDA can be supplied with the servo drive fully integrated in to our Pump Control Station (PCS).

The PCS incorporates a touch-screen panel and control electronics to allow setting the flow-rate and monitoring of the motor speed and current.

PCS options

- Switch over from local to remote control via PLC, DCS, etc.
- Data logging of pump run -time and motor speed & current, to removable SD card.

Typical applications include

• pharmaceutical and chemical processing • urethane and other resins • chromatography • explosives, • food processing • film • spraying and coating applications • cosmetics • line mixing for liquids • in-feed for extruders • water treatment

Pump Drive Assembly (PDA) and Pump Control Station (PCS) Requirements

Servo Drive (ARS)

Single phase, 230Vac ☐
Three phase, 415Vac ☐

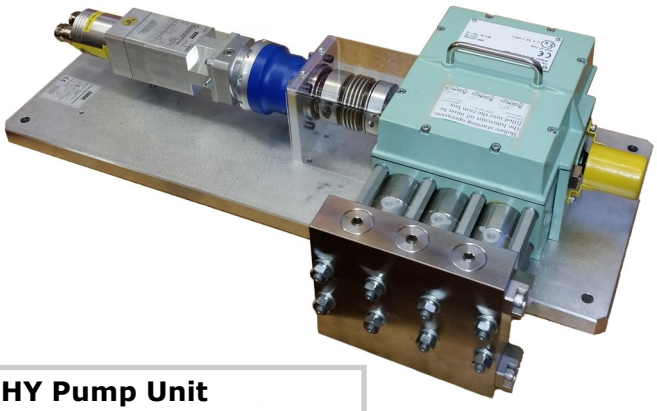
Power (PWR)
Resolver (RES)

Connections (drive/motor)

Direct ☐
or via TB ☐
(recommended for ATEX)

Cable Lengths PWR / RES

Drive to TB ___ / ___
TB to Motor ___ / ___
Direct ___ / ___



HY Pump Unit

Size _____

Flow Rate _____

Pressure _____

Control Options (PDA

Analogue
0...10Vdc ☐

Digital Inputs
(pre-defined speeds) ☐

Serial Comms
RS232 ☐
RS485 ☐
USB (max 2m) ☐
EtherNET ☐

FieldBUS
CANbus ☐
ProfiBUS ☐
ProfiNET ☐
EtherCAT ☐

Connections (control to drive)

Distance _____

Pump Control Station (PCS)

Floor standing enclosure with top mounted HMI for easy access. Servo drive, motion controller, HMI and all necessary PSUs, IO and safety circuitry integrated. Fully wired, tested and documented.

Additional options

24Vdc power supplies ☐
Low inductance cables ☐

Environmental

ATEX 2G (Zone 1 & 2) ☐
ATEX 3G (Zone 2 only) ☐