

OTHER EQUIPMENT (also referred to as Ancillary Equipment)

The following equipment is **NOT provided** with an OilPro Oil Management System, but is necessary as part of a full bulk oil system installation:

- **Oil Solenoid Valves:** Oil Solenoid Valves are used to control the oil flow. (to switch oil on and off). An Oil Solenoid Valve must be installed at each dispensing point. Solenoid Valves must be rated to handle the viscosity and pressure of the oil/product being dispensed. Solenoids should be 24 V, AC OR 24 V, DC (do not combine). The solenoids should be able to handle a pressure of 50 BAR, and a viscosity of 400 ~cStokes.
- **Air Solenoid Valves:** An air solenoid valve should be installed at each pump. This valve switches the air to the pump on and off so that the system is not constantly pressurized. Should there be a pipeline burst/leak, fluid spill will be contained to the quantity in the pipeline, preventing the contents of the bulk tank from spilling. An air solenoid valve can be assigned to any free switch (depending on the configuration). Solenoids should be 24 V, AC OR 24 V, DC (do not combine). (If AC oil solenoids are used, the air solenoid valve should also be AC. If DC oil solenoids are used, the air solenoid valve should also be DC.)
- **Non-return valves:** Non-return valves prevent oil from flowing backwards in the oil line. If oil flows backwards in the oil line, the pulse meter might count the same oil twice, causing incorrect readings.
- **Pulse Meters:** The pulse meter sends digital signals to the OilPro System. The OilPro System uses this information to "count" fluid flow. For simultaneous dispensing, a pulse meter must be fitted at every nozzle. Pulse meters must adhere to the following:

Standard:

PPL: 100
Flow range: 1/30 l/m
Max Pressure: 50 Bar
Max Load: 3W

Viscosity: 5/2500 mPas
Max Current: 100mA
Max Voltage: 28V

Other:

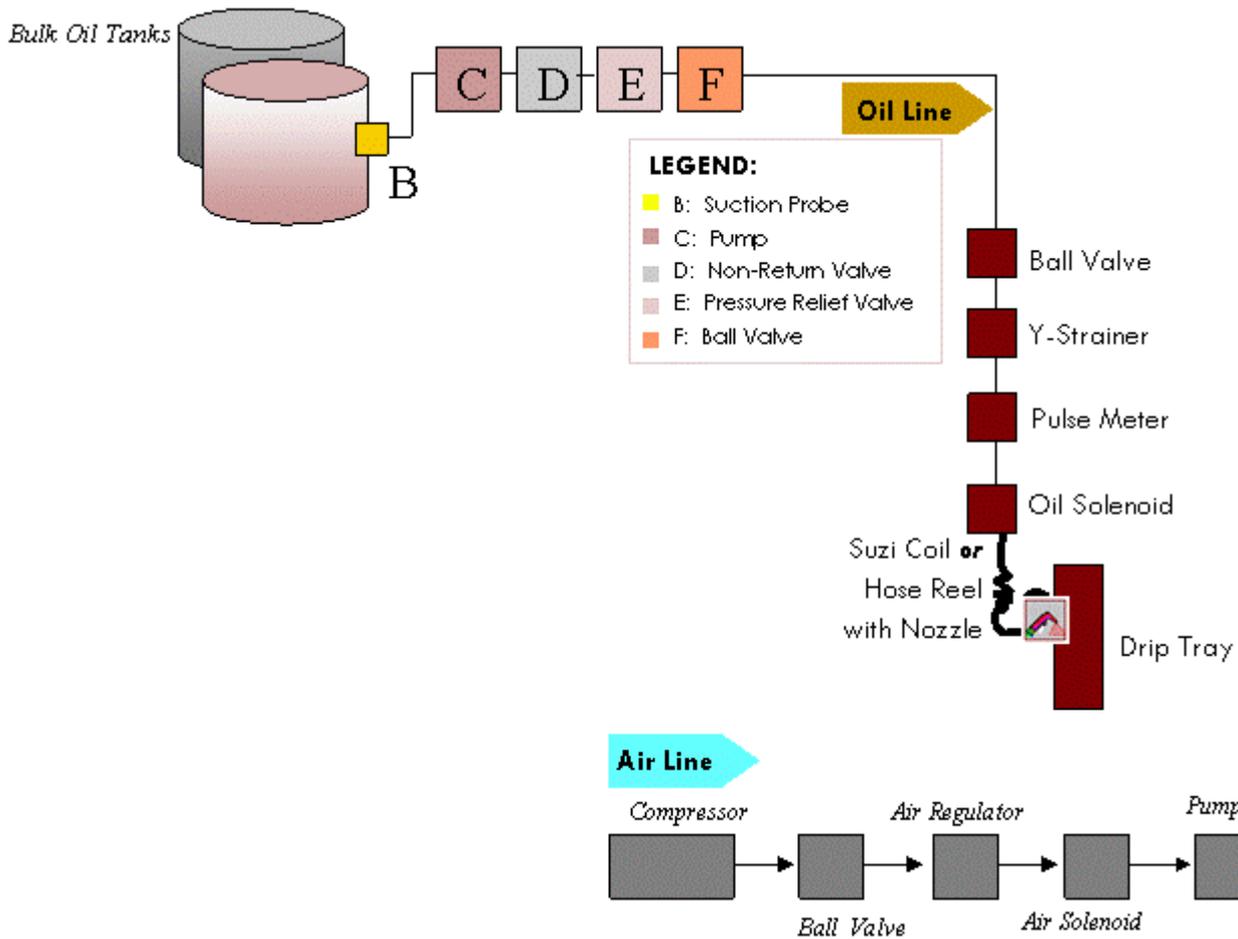
PPL: 52 or 35 or 325

Please contact OilPro to check whether the pulse meter you are intending to use is suitable.

Wiring: The solenoid valves are each connected to the Relay Connecting card on the OilPro system via 0.5mm² (PVC PVC insulated) cabtyre cables (0.75mm² is also acceptable). Each pulse meter must be connected with screened cable to the system as this will prevent any interference from outside the cable that can influence the readings. The same applies for the keypad and computer cables. The keypads and computer are each connected to the system with a separate screened length of cable. Should there be a ticket printer installed, then it must be connected to its nearest keypad. The cable that should be used for the connection of sensitive equipment (PC, Keypad, Printer and Pulsemeter) is 0.22mm² OAM (Over-All Mylar) Screened (PVC insulated) cable.

Interference and signal degradation might occur if the screened cable (keypad and computer cable) is longer than 50m. This will result in incorrect readings and incorrect commands sent to and from the keypads(s) and computer. The resistance of the solenoid coils are in the region of 10Ω for AC Solenoid coils and between 30Ω and 50Ω for DC solenoid coils. The length of wire connecting the OilPro system to the solenoids is also to be kept below 80m because all wire has resistance which increases with length, and if the resistance of the wire becomes too much the voltage drop over the cable will cause the voltage at the solenoid to drop and it will not be sufficient to fully magnetize the solenoid coil and thereby open the valve. A **wiring diagram** is provided with every OilPro System sold.

The following diagram gives an indication of how ancillary equipment should be installed to work correctly together with the OilPro Oil Management System:



- Cable Ties, Plugs, Bolts, Screws, Isolator Plugs, piping, cabling, pumps, bulk tanks, nozzles, oil controls etc are all needed for bulk oil system installations. Refer to the manufacturer specifications for information about these items.