

# 530 Drive with 520R Pumphead

500 series cased pump

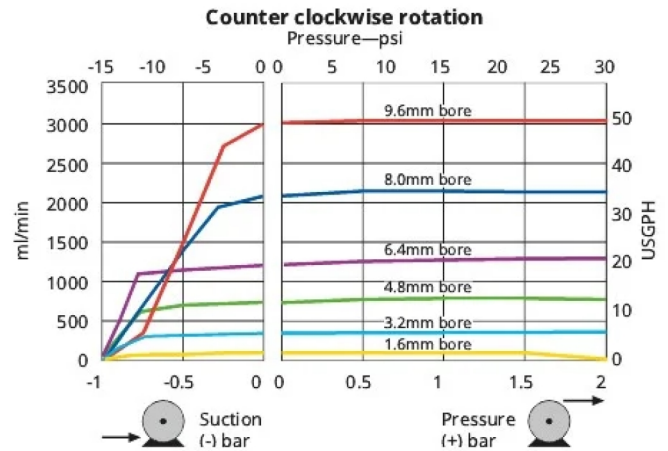
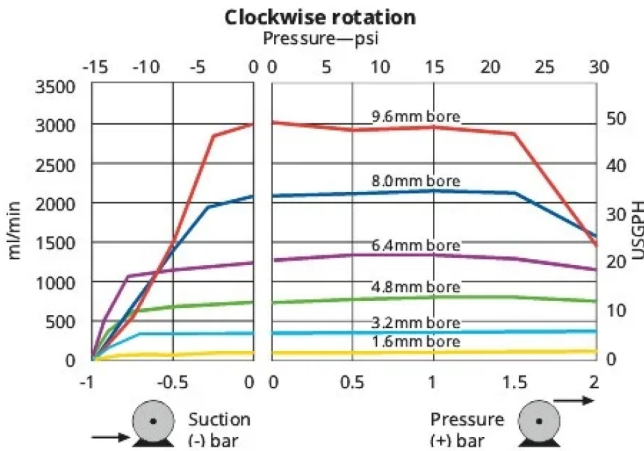
## Features and benefits

- Colour display and intuitive menu structures provide visual status indication and minimal key presses
- Flow rates from 0.004 ml/min (0.0006 USGPH) to 2400 ml/min (38.4 USGPH)
- 520R, 520R2, 520REL, 520REM, 520REH, 520RET and 505L pumpheads available as standard, others available on request
- 2,200:1 speed control range from 0.1 rpm to 220 rpm in 0.1 rpm increments
- Keypad incorporates 3-level security PIN lock
- IP31 (NEMA 2) and IP66 (NEMA 4X) cased pumps
- Dual voltage, 115 V/230 V 50/60 Hz
- Remote Analogue/Digital, RS232, RS485, PROFIBUS®, PROFINET®, SCADA and EtherNet/IP™ control options



## 530 Drive with 520R Pumphead performance

| 520R twin sprung roller pumpheads for continuous 1.6 mm wall thickness tubing – Tube bore and flow rates – ml/min (USGPH) |            |                    |                  |                   |                      |                       |                       |       |    |
|---|------------|--------------------|------------------|-------------------|----------------------|-----------------------|-----------------------|-------|----|
| Tube material   | Speed      | 0.5mm              | 1.6mm            | 3.2mm             | 4.8mm                | 6.4mm                 | 8.0mm                 | 9.6mm |    |
| Pumpsil®, GORE® STA-PURE® Pump Tubing - Series PCS, GORE® STA-PURE® Pump Tubing - Series PFL                              | 0.1-220rpm | 0.004-9.5 (0-0.15) | 0.04-97 (0-1.54) | 0.18-390 (0-6.18) | 0.40-870 (0.01-13.8) | 0.70-1500 (0.01-23.8) | 1.10-2400 (0.02-38)   |       | NA |
| Marprene®, Bioprene®, PureWeld XL®  | 0.1-220rpm | 0.004-9.0 (0-0.14) | 0.04-92 (0-1.46) | 0.17-370 (0-5.86) | 0.38-830 (0-13.2)    | 0.67-1500 (0.01-23.8) | 1.10-2300 (0.02-36.5) |       | NA |



## Technical specifications

|                              | 530 Drive with 520R Pumphead  |
|------------------------------|---|
| Pumphead number of rollers   | 2   |
| Pumphead number of channels  | 1   |
| Flow rate range              | 0.004 ml/min to 2400 ml/min   |
| Flow rate range              | 0.0006 USGPH to 38.4 USGPH  |
| Drive speed control ratio    | 2200:1  |
| Drive speed                  | 0.1 - 220 rpm   |
| Operating temperature ranges | 5 °C to 40 °C (40 °F to 104 °F)   |
| Weight ranges                | 10.6 - 11.5 kg (23.4 - 25.4 lbs)  |
| Drive weight                 | 9.82, 10.7 kg   |
| Drive weight                 | 21.6, 23.6 lbs  |
| NEMA module weight           | 0.9 kg  |
| NEMA module weight           | 2 lbs   |
| Control types                | EtherNet/IP™, Profibus®, Profinet®, Remote Analogue/Digital, RS232, RS485, SCADA        |
| Drive control options        | Bp, BpN, Du, DuN, DuS, En, EnN, Pn, PnN, S, SN, U, UN, US                               |
| Standards                    | CE, cETLus, C-Tick, IRAM, NSF/ANSI 61 (for Marprene tubing and LoadSure elements), RoHS |
| Drive ingress protection     | IP31, IP66, NEMA 2, NEMA 4X   |
| Drive humidity               | (Non-condensing) 80 % up to 31 °C (88 °F) decreasing linearly to 50 % at 40 °C (104 °F) |
| Drive noise                  | <70dBA at 1m  |
| Max. altitude                | 2000 m (6562 ft)  |
| Drive power supply           | 115/230 V 1ph 50/60 Hz 135 VA   |
| Compatible tubing bore size  | 0.5, 1.6, 3.2, 4.8, 6.4, 8 mm   |

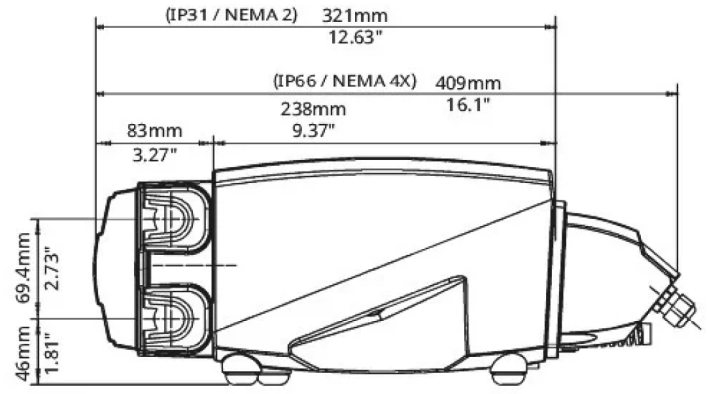
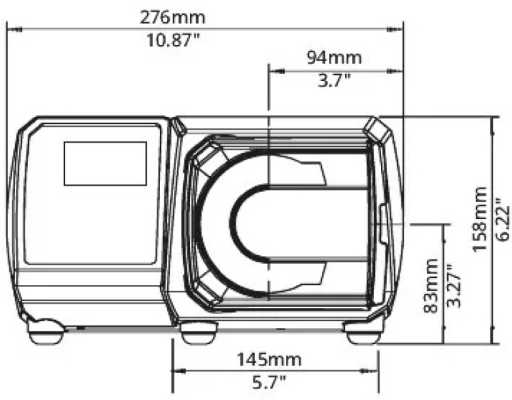
## Materials of construction

|                           | 530 Drive with 520R Pumphead  |
|---------------------------|---|
| Bearings                  | Stainless steel   |
| Driveshaft                | Electroless nickel plated carbon steel  |
| Drain port assembly       | Hytrel, PP (polypropylene)  |
| Drive casework            | Pressure die-cast aluminium LM24  |
| Drive casework coating    | Alocrom pre-treatment, Exterior grade polyester powder coat                                 |
| Guide roller assembly     | MoS2 filled Nylon 6 (Nylatron)  |
| Drive keypad/HMI          | Polyester   |
| Drive rear blanking plate | Stainless steel 304   |
| Pumphead body assembly    | Acetal, Aluminium, Aluminium alloy, Brass, Polycarbonate (PC), Polyphenylene sulphide (PPS) |
| Pumphead guard            | Polycarbonate (PC)  |
| Pumphead roller assembly  | MoS2 filled Nylon 6 (Nylatron), Polyphenylene sulphide (PPS), Stainless steel 316           |
| Pumphead rotor assembly   | Polyphenylene sulphide (PPS), Stainless steel 316   |
| Pumphead track            | Polyphenylene sulphide (PPS)  |
| Pumphead seals            | Neoprene, PTFE  |
| Switch-plate              | Glass filled ABS plastic  |

Information listed covers the complete range.

For detailed specifications of individual models/components refer to user manual or contact WMFTS representative.

## Dimensions



## Control options

| Key to pump drive models |                         |           |                          |                   |                                  |                     |                                    |                                  |  |             |                              |           |                            |
|--------------------------|-------------------------|-----------|--------------------------|-------------------|----------------------------------|---------------------|------------------------------------|----------------------------------|--|-------------|------------------------------|-----------|----------------------------|
| 530S                     | 530SN                   | 530U      | 530UN                    | 530Du             | 530DuN                           | 530Bp               | 530BpN                             | 530US                            | 530DuS                                   | 530En       | 530EnN                       | 530Pn     | 530PnN                     |
| Standard                 | Standard IP66 / NEMA 4X | Universal | Universal IP66 / NEMA 4X | Digital Universal | Digital Universal IP66 / NEMA 4X | Bus Pump / Profibus | Bus Pump / Profibus IP66 / NEMA 4X | Universal SCADA / IP66 / NEMA 4X | Digital Universal SCADA / IP66 / NEMA 4X | EtherNet/IP | EtherNet/IP / IP66 / NEMA 4X | PROFINET® | PROFINET® / IP66 / NEMA 4X |

| Manual control                             |      |       |      |       |       |        |       |        |       |        |       |        |       |        |   |  |
|--|------|-------|------|-------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|---|--|
| Pump drive                                 | 530S | 530SN | 530U | 530UN | 530Du | 530DuN | 530Bp | 530BpN | 530US | 530DuS | 530En | 530EnN | 530Pn | 530PnN |   |  |
| Intuitive keypad and colour display        | ✓    | ✓     | ✓    | ✓     | ✓     | ✓      | ✓     | ✓      | ✓     | ✓      | ✓     | ✓      | ✓     | ✓      | ✓ |  |
| Choice of flowrate or speed display        | ✓    | ✓     | ✓    | ✓     | ✓     | ✓      | ✓     | ✓      | ✓     | ✓      | ✓     | ✓      | ✓     | ✓      | ✓ |  |
| Full calibration with choice of flow units | ✓    | ✓     | ✓    | ✓     | ✓     | ✓      | ✓     | ✓      | ✓     | ✓      | ✓     | ✓      | ✓     | ✓      | ✓ |  |
| MemoDose function                          | ✓    | ✓     | ✓    | ✓     | ✓     | ✓      |       |        | ✓     | ✓      |       |        |       |        |   |  |
| Auto restart facility                      | ✓    | ✓     | ✓    | ✓     | ✓     | ✓      | ✓     | ✓      | ✓     | ✓      | ✓     | ✓      | ✓     | ✓      | ✓ |  |
| Leak detection                             | ✓    | ✓     | ✓    | ✓     | ✓     | ✓      | ✓     | ✓      | ✓     | ✓      | ✓     | ✓      | ✓     | ✓      | ✓ |  |
| Dispensing (Network Control)               |      |       |      |       |       |        |       |        |       |        | ✓     | ✓      | ✓     | ✓      | ✓ |  |

| Remote control  |      |       |      |       |       |        |       |        |       |        |       |        |       |        |   |  |
|---|------|-------|------|-------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|---|--|
| Pump drives   | 530S | 530SN | 530U | 530UN | 530Du | 530DuN | 530Bp | 530BpN | 530US | 530DuS | 530En | 530EnN | 530Pn | 530PnN |   |  |
| Configurable Start/Stop and leak detector, via contact closure or 5V TTL or 24V industrial logic***   |      |       |      | ✓     | ✓     | ✓      | ✓     |        |       |        |       | ✓      | ✓     | ✓      | ✓ |  |
| Pressure switch input, via contact closure or 5V TTL or 24V industrial logic***                       |      |       |      | ✓     |       | ✓      |       |        |       |        |       |        |       |        |   |  |
| Configurable Start/Stop, leak detector and pressure switch input via 110 V industrial logic           |      |       |      |       |       |        |       |        |       | ✓      | ✓     |        |       |        |   |  |
| Direction change and auto/manual toggle input via contact closure or 5 V TTL or 24 V industrial logic |      |       |      | ✓     | ✓     | ✓      | ✓     |        |       |        |       |        |       |        |   |  |
| Direction change and auto/manual toggle input via 110 V industrial logic                              |      |       |      |       |       |        |       |        |       | ✓      | ✓     |        |       |        |   |  |
| Remote operation of MemoDose (foot/hand-switch or logic input)  |      |       |      | ✓     | ✓     | ✓      | ✓     |        |       |        |       |        |       |        |   |  |
| Four configurable digital status outputs through 24 V, 30 W relays                                    |      |       |      |       | ✓     |        | ✓     |        |       |        |       |        |       |        |   |  |
| Four configurable digital status outputs through 110 V relays   |      |       |      |       |       |        |       |        |       | ✓      | ✓     |        |       |        |   |  |
| Menu configurable logic outputs   |      |       |      | ✓     |       | ✓      |       |        |       |        |       |        |       |        |   |  |
| Remote pressure/flow sensors  |      |       |      |       |       |        |       |        |       |        | ✓     | ✓      | ✓     | ✓      | ✓ |  |

| Analogue speed control   |      |       |      |       |       |        |       |        |       |        |       |        |       |        |   |  |
|--|------|-------|------|-------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|---|--|
| Pump drives  | 530S | 530SN | 530U | 530UN | 530Du | 530DuN | 530Bp | 530BpN | 530US | 530DuS | 530En | 530EnN | 530Pn | 530PnN |   |  |
| Fully configurable inputs; 0-10 V or 4-20 mA                   |      |       | ✓    | ✓     | ✓     | ✓      |       |        | ✓     | ✓      |       |        |       |        |   |  |
| Analogue outputs; 0-10 V, 4-20 mA                              |      |       | ✓    | ✓     | ✓     | ✓      |       |        | ✓     | ✓      |       |        |       |        |   |  |
| Keypad/analogue input scaling (replacement of diaphragm pumps) |      |       |      |       | ✓     | ✓      |       |        |       | ✓      |       |        |       |        |   |  |
| Tacho frequency output; 0-991 Hz                               |      |       | ✓    | ✓     | ✓     | ✓      |       |        |       |        |       |        |       |        |   |  |
| 2x sensor inputs 4-20 mA or 0-1000Hz*                          |      |       |      |       |       |        |       |        |       |        | ✓     | ✓      | ✓     | ✓      | ✓ |  |

| Security                  |      |       |      |       |       |        |       |        |       |        |       |        |       |        |   |  |
|---------------------------|------|-------|------|-------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|---|--|
| Pump drives               | 530S | 530SN | 530U | 530UN | 530Du | 530DuN | 530Bp | 530BpN | 530US | 530DuS | 530En | 530EnN | 530Pn | 530PnN |   |  |
| 3-level Security PIN lock | ✓    | ✓     | ✓    | ✓     | ✓     | ✓      | ✓     | ✓      | ✓     | ✓      | ✓     | ✓      | ✓     | ✓      | ✓ |  |

| Network communication |      |       |      |       |       |        |       |        |       |        |       |        |       |        |  |  |
|-----------------------|------|-------|------|-------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|--|--|
| Pump drives           | 530S | 530SN | 530U | 530UN | 530Du | 530DuN | 530Bp | 530BpN | 530US | 530DuS | 530En | 530EnN | 530Pn | 530PnN |  |  |
| RS485 network control |      |       |      |       |       | ✓      |       |        |       | ✓      |       |        |       |        |  |  |
| RS232 network control |      |       |      |       | ✓     |        |       |        |       |        |       |        |       |        |  |  |

| Digital pump commands (Profibus / EtherNet/IP)            |      |       |      |       |       |        |       |        |       |        |       |        |       |        |   |  |
|---|------|-------|------|-------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|---|--|
| Pump drives   | 530S | 530SN | 530U | 530UN | 530Du | 530DuN | 530Bp | 530BpN | 530US | 530DuS | 530En | 530EnN | 530Pn | 530PnN |   |  |
| PROFIBUS® DP V0   |      |       |      |       |       |        | ✓     | ✓      |       |        |       |        |       |        |   |  |
| PROFINET® (CC-B & Netload Class III)                      |      |       |      |       |       |        |       |        |       |        |       |        | ✓     | ✓      |   |  |
| EtherNet/IP™  |      |       |      |       |       |        |       |        |       |        | ✓     | ✓      |       |        |   |  |
| Communication speeds from 9.6 kbits/s up to 12000 kbits/s |      |       |      |       |       |        | ✓     | ✓      |       |        |       |        |       |        |   |  |
| Network speed: 10/100 Mbps - Full Duplex Operation        |      |       |      |       |       |        |       |        |       |        | ✓     | ✓      |       |        |   |  |
| Network speed: 100 Mbps - Full Duplex Operation           |      |       |      |       |       |        |       |        |       |        |       |        | ✓     | ✓      |   |  |
| Auto-detect bus speed                                     |      |       |      |       |       |        | ✓     | ✓      |       |        |       |        |       |        |   |  |
| Speed set point   |      |       |      |       |       |        | ✓     | ✓      |       |        | ✓     | ✓      | ✓     | ✓      | ✓ |  |
| Speed feedback  |      |       |      |       |       |        | ✓     | ✓      |       |        | ✓     | ✓      | ✓     | ✓      | ✓ |  |
| Flow calibration function                                 |      |       |      |       |       |        | ✓     | ✓      |       |        | ✓     | ✓      | ✓     | ✓      | ✓ |  |
| Hours run   |      |       |      |       |       |        | ✓     | ✓      |       |        | ✓     | ✓      | ✓     | ✓      | ✓ |  |
| Revolution counter  |      |       |      |       |       |        | ✓     | ✓      |       |        | ✓     | ✓      | ✓     | ✓      | ✓ |  |
| Leak detection  |      |       |      |       |       |        | ✓     | ✓      |       |        | ✓     | ✓      | ✓     | ✓      | ✓ |  |
| Low fluid level alarm                                     |      |       |      |       |       |        | ✓     | ✓      |       |        | ✓     | ✓      | ✓     | ✓      | ✓ |  |
| Diagnostic feedback                                       |      |       |      |       |       |        | ✓     | ✓      |       |        | ✓     | ✓      | ✓     | ✓      | ✓ |  |
| Flow Totaliser  |      |       |      |       |       |        |       |        |       |        | ✓     | ✓      | ✓     | ✓      | ✓ |  |
| Sensor scaling  |      |       |      |       |       |        |       |        |       |        | ✓     | ✓      | ✓     | ✓      | ✓ |  |
| Dispensing (Network Control)**                            |      |       |      |       |       |        |       |        |       |        | ✓     | ✓      | ✓     | ✓      | ✓ |  |

\*Range of 3rd party pressure/flow sensors supported—see compatible sensor list

\*\*Dispensing (Network/Manual) - Store up to 100 recipes locally or via network control. Features include volume, flow rate, anti-drip, ramp and time delays. Run these as batches using local, network or manual keypad control.

\*\*\*If you can't see the option you need, contact the engineered products team at WML to discuss

