

Qdos 20

Qdos chemical metering and dosing pump



Features and benefits

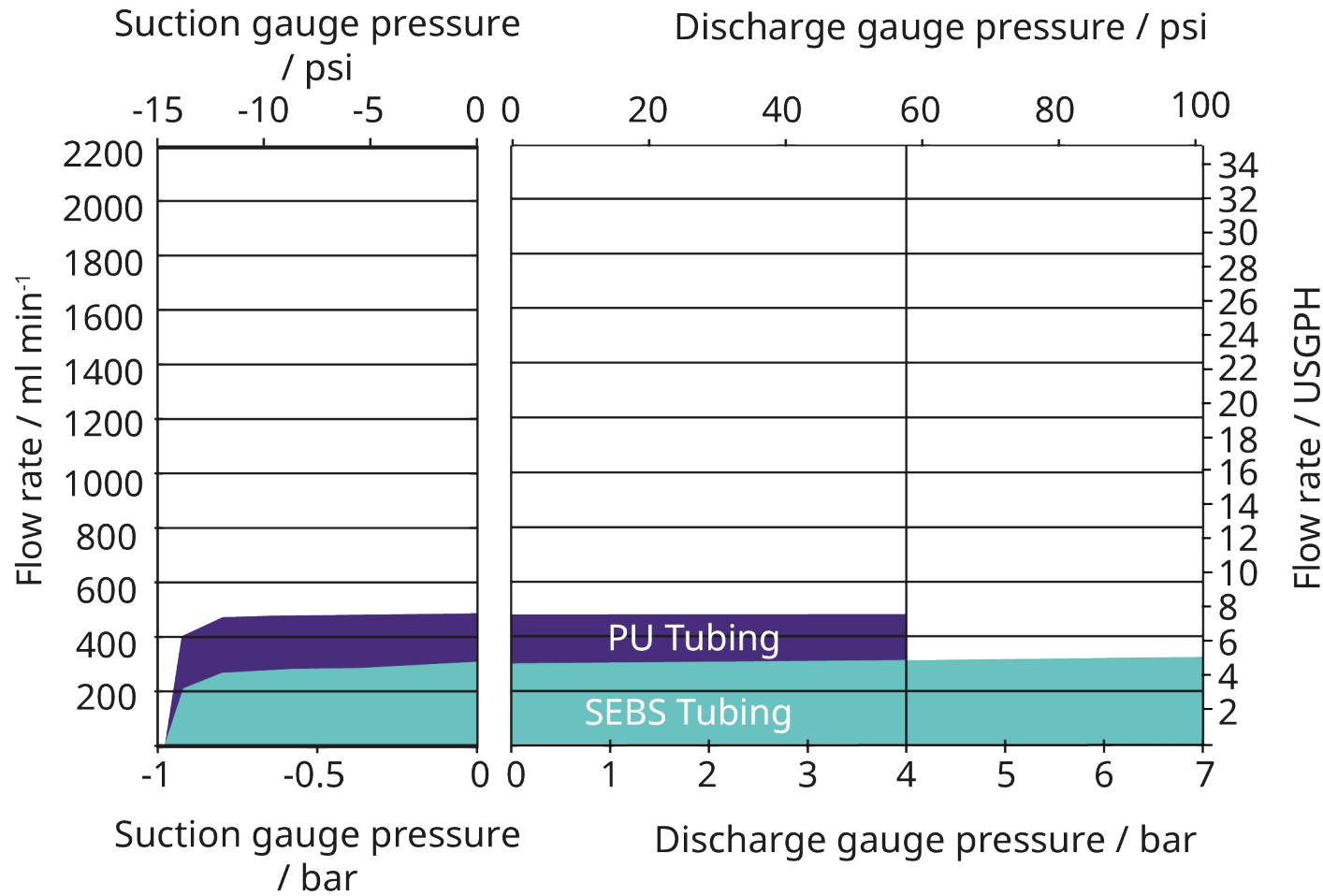
- Cut chemical cost through higher accuracy metering
- Simple drop-in installation eliminates ancillary equipment
- Reduced maintenance with single, no-tools, component replacement
- Cost of ownership is less than that of a diaphragm pump
- Flow rates from 0.1 to 450 ml/min at up to 7 bar
- No backpressure valves, pulsation dampener, degassing valves, foot valves, strainers or float switches



Qdos 20 performance

| | qdos | | qdos remote | |
|------------|-------------|----------------------|-------------|---------------------|
| | Speed (rpm) | Flow ml/min (USGPH)* | Speed (rpm) | Flow ml/min(USGPH)* |
| qdos 20 | 0.017-55 | 0.1-333 (0.001-5.3) | 0.034-55 | 0.2-333 (0.003-5.3) |
| qdos 20 PU | 0.017-55 | 0.1-450 (0.001-7.13) | NA | NA |

*accuracy ±1%, repeatability ±0.5%



Technical specifications

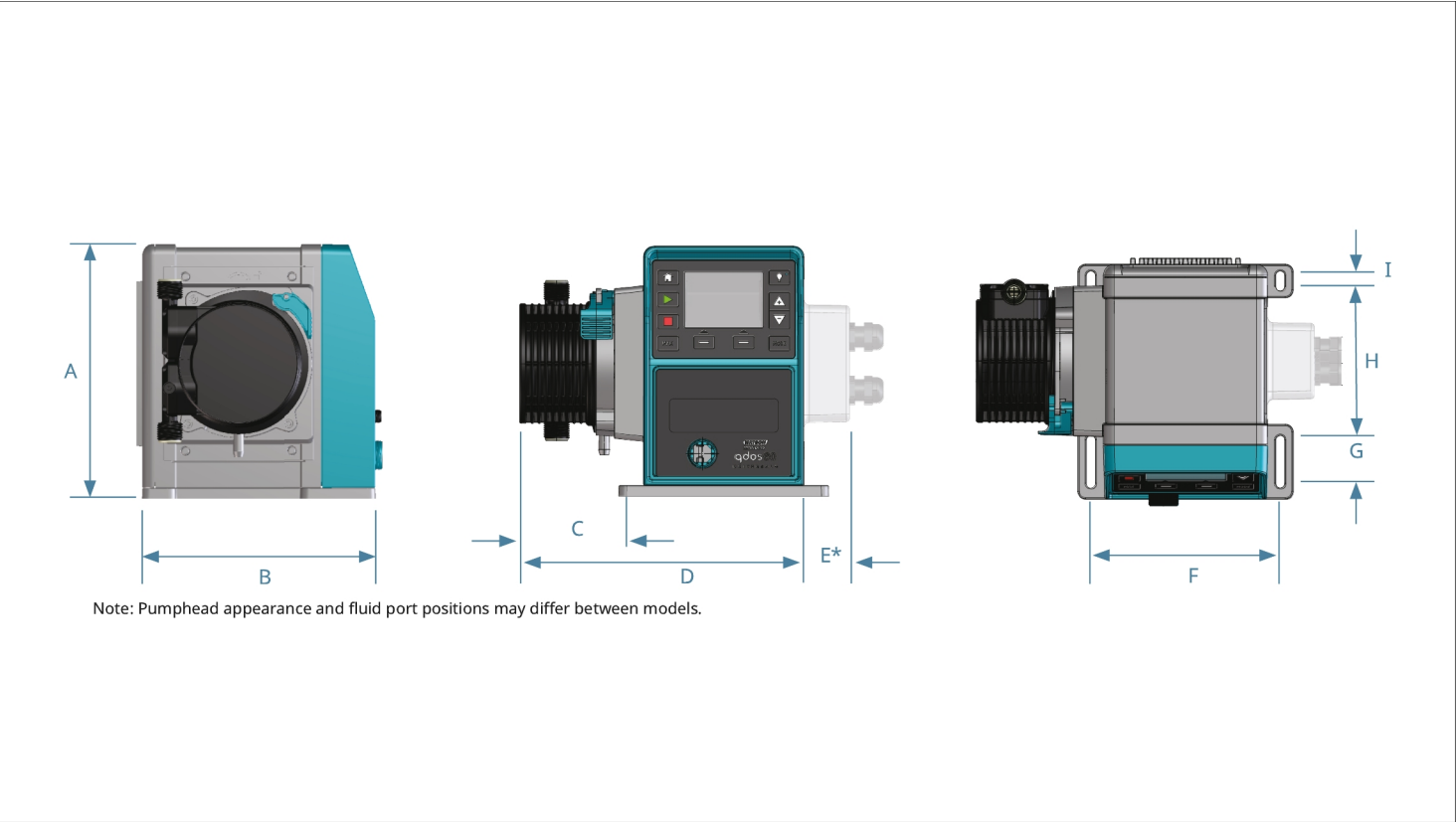
| | Qdos 20 |
|---------------------------|---|
| Max. flow rate | 450 ml/min |
| Min. flow rate | 0.1 ml/min |
| Max. flow rate | 7.13 USGPH |
| Min. flow rate | 0.001 USGPH |
| Max. operating pressure | 7 bar |
| Max. operating pressure | 100 psi |
| Max. operating speed | 55 rpm |
| Ambient Temperature Range | 5 °C to 40 °C |
| Ambient Temperature Range | 41 °F to 104 °F |
| Weight | 5.7 kg |
| Weight | 12.6 lbs |
| Control types | Manual, Profibus®, Remote, Universal, Universal+ |
| Standards | CE, cETLus, CSA, C-Tick, IRAM S Mark, NSF 61 |
| Ingress Protection | IP66, NEMA 4X |
| Humidity | 80 % up to 31 °C, 88 °F, decreasing linearly to 50 % at 40 °C, 104 °F |
| Noise | < 70dB(A) at 1m |
| Max. altitude | 2000 m |
| Power supply | 100 V to 240 V AC 50 Hz to 60 Hz 190 VA, 12 V to 24 V DC |

Minimum and maximum flow depends upon pumphead, flow unit and method of control. Pressure and speed depends on pumphead chosen.

Materials of construction

| | Qdos 20 |
|-------------------------|--|
| Bearings | Stainless steel, Steel |
| Driveshaft | Stainless steel 440C |
| Drive casework | 20 % glass filled PPE/PS |
| Drive casework coating | 20 % glass filled PPE/PS |
| Fluid connectors | Polypropylene, PVDF |
| Keypad/HMI | Polyester |
| Lubricant | PFPE based |
| Pumphead body assembly | 30 % glass filled PPO/PS |
| Pumphead rotor assembly | Glass filled Nylon, PP (polypropylene) |
| Tubing | PU, SEBS |

Qdos 20 dimensions



| Model | A | B | C | D | E | F | G | H | I |
|------------------------|--------------|--------------|----------------|---------------|-------------|--------------|-------------|--------------|-------------|
| qdos 20 | 234mm (9.2") | 214mm (8.4") | 104.8mm (4.1") | 266mm (10.5") | 43mm (1.7") | 173mm (6.8") | 40mm (1.6") | 140mm (5.5") | 10mm (0.4") |
| *Optional relay module | | | | | | | | | |

Control options

| Operational modes | Manual | Remote | PROFIBUS | Universal | Universal+ |
|-----------------------------------|--------|--------|----------|-----------|------------|
| Manual | ✓ | | ✓ | ✓ | ✓ |
| PROFIBUS—bus speed 9.6–1,500 kb/s | | | ✓ | | |
| Contact | | | | ✓ | ✓ |
| 4-20mA | | ✓ | | ✓ | ✓ |
| Fault reporting | ✓ | ✓ | ✓ | ✓ | ✓ |

| Features | Manual | Remote | PROFIBUS | Universal | Universal+ |
|-------------------------------------|--------|--------|----------|-----------|------------|
| Numerical flow display | ✓ | | ✓ | ✓ | ✓ |
| Numerical speed display | ✓ | | ✓ | ✓ | ✓ |
| Fluid level monitor | ✓ | | ✓ | ✓ | ✓ |
| Max (prime) | ✓ | | ✓ | ✓ | ✓ |
| Auto restart (after power restored) | ✓ | ✓ | ✓ | ✓ | ✓ |
| Fluid recovery | ✓ | | ✓ | ✓ | ✓ |
| Leak detection | ✓ | ✓ | ✓ | ✓ | ✓ |
| 3.5" (88.9mm) colour TFT display | ✓ | | ✓ | ✓ | ✓ |
| LED Pump status icons | | ✓ | | | |

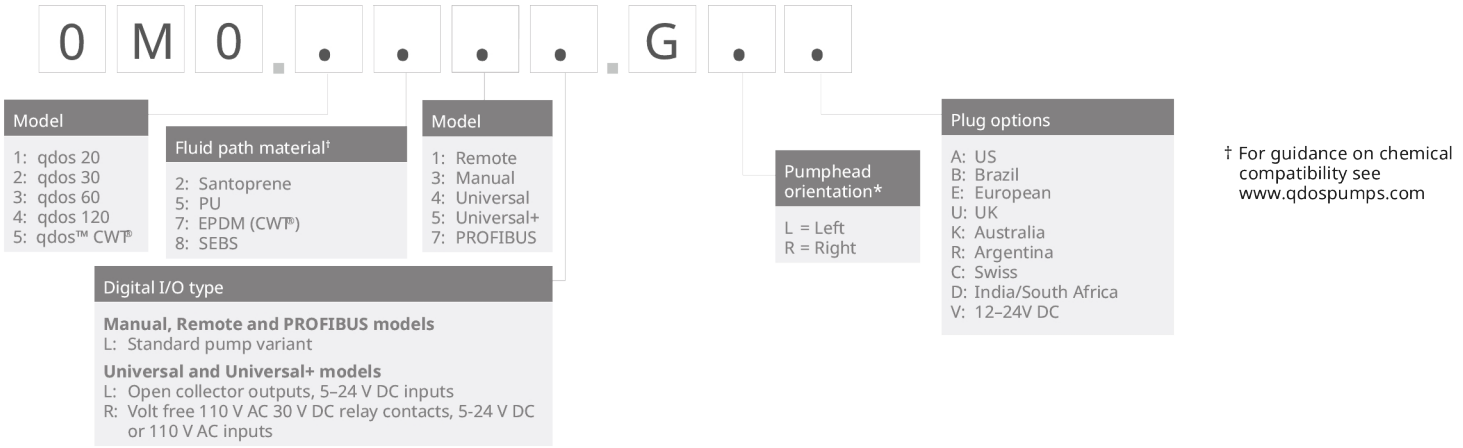
| Control methods | Manual | Remote | PROFIBUS | Universal | Universal+ |
|--|---|--------|---|---|---|
| Input/Output Options | | L | L | L or R | L or R |
| Manual control capability | ✓ | | ✓ | ✓ | ✓ |
| 4-20mA input | | ✓ | | ✓ | ✓ |
| 4-20mA input two point calibration | | | | | ✓ |
| 4-20mA output | | ✓ | | | ✓ |
| Contact input (pulse/batch) | | | | L or R | L or R |
| Manual speed adjustment range | 3333:1 (Qdos 20) 5000:1 (Qdos 30) 10000:1 (Qdos 60) 20000:1 (Qdos 120) | | 3333:1 (Qdos 20) 5000:1 (Qdos 30) 10000:1 (Qdos 60) 20000:1 (Qdos 120) | 3333:1 (Qdos 20) 5000:1 (Qdos 30) 10000:1 (Qdos 60) 20000:1 (Qdos 120) | 3333:1 (Qdos 20) 5000:1 (Qdos 30) 10000:1 (Qdos 60) 20000:1 (Qdos 120) |
| Minimum motor adjustment speed increment (Dependent upon the operating mode and chosen flow unit) | 0.006 | 0.078 | 0.100 | 0.003 | 0.003 |
| 4-20mA resolution | | 1600:1 | | 1600:1 | 1600:1 |
| Profibus speed resolution | | | 550:1 (Qdos 20) 1250:1 (Qdos 30) 1250:1 Qdos 60 1400:1 (Qdos 120) | | |
| Run stop input | | ✓ | | ✓ | ✓ |
| Run status output | | ✓ | | ✓ | L |
| Alarm output | | ✓ | | ✓ | L |
| Four configurable relay outputs | | | | | R |
| Remote fluid recovery | | ✓ | | ✓ | ✓ |

| PROFIBUS | Manual | Remote | PROFIBUS | Universal | Universal+ |
|---------------------------|--------|--------|----------|-----------|------------|
| Speed set point | | | ✓ | | |
| Speed feedback | | | ✓ | | |
| Flow calibration function | | | ✓ | | |
| Hours run | | | ✓ | | |
| Revolution counter | | | ✓ | | |
| Leak detection | | | ✓ | | |
| Low fluid level alarm | | | ✓ | | |
| Diagnostic feedback | | | ✓ | | |

| Security | Manual | Remote | PROFIBUS | Universal | Universal+ |
|----------------------------|--------|--------|----------|-----------|------------|
| Keypad lock | ✓ | | ✓ | ✓ | ✓ |
| PIN lock to protect set up | ✓ | | ✓ | ✓ | ✓ |

| *Control options - Universal and Universal+ models | | |
|--|-------------------|---------------------------------------|
| Variant | Standard pump (L) | Relay Module (R) |
| Input | 5-24V DC | 5-24V DC or 110V AC |
| Output | Open collector | Contact rating 110V AC, 4A 30V DC, 4A |

Product codes



* The pumphead side location is required when ordering. The left/right perspective assumes the user is looking at the front of the pump. The pump in the dimensions diagram is considered a pumphead located to the left.

| Description | Partcode |
|---|--------------|
| ReNu 20 pumphead PU / PFPE 4 bar (60psi) | 0M3.1500.PFP |
| ReNu 20 pumphead SEBS / PFPE 7 bar (100psi) | 0M3.1800.PFP |

Disclaimer: All flow rates shown were obtained pumping water at 20 °C (68 °F) with zero suction and delivery heads. The information contained in this document is believed to be correct but Watson-Marlow Limited accepts no liability for any errors it contains and reserves the right to alter specifications without notice. It is the user's responsibility to ensure product suitability for use within their application. Watson-Marlow, LoadSure, Pumpsil, PureWeld XL, Bioprene, Marprene are registered trademarks of Watson-Marlow Limited. Tri-Clamp is a registered trademark of Alfa Laval Corporate AB. GORE and STA-PURE are registered trademarks of W.L. Gore and Associates. Please state the product code when ordering pumps and tubing.

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