

Qdos 120

Qdos metering pump

Features and benefits

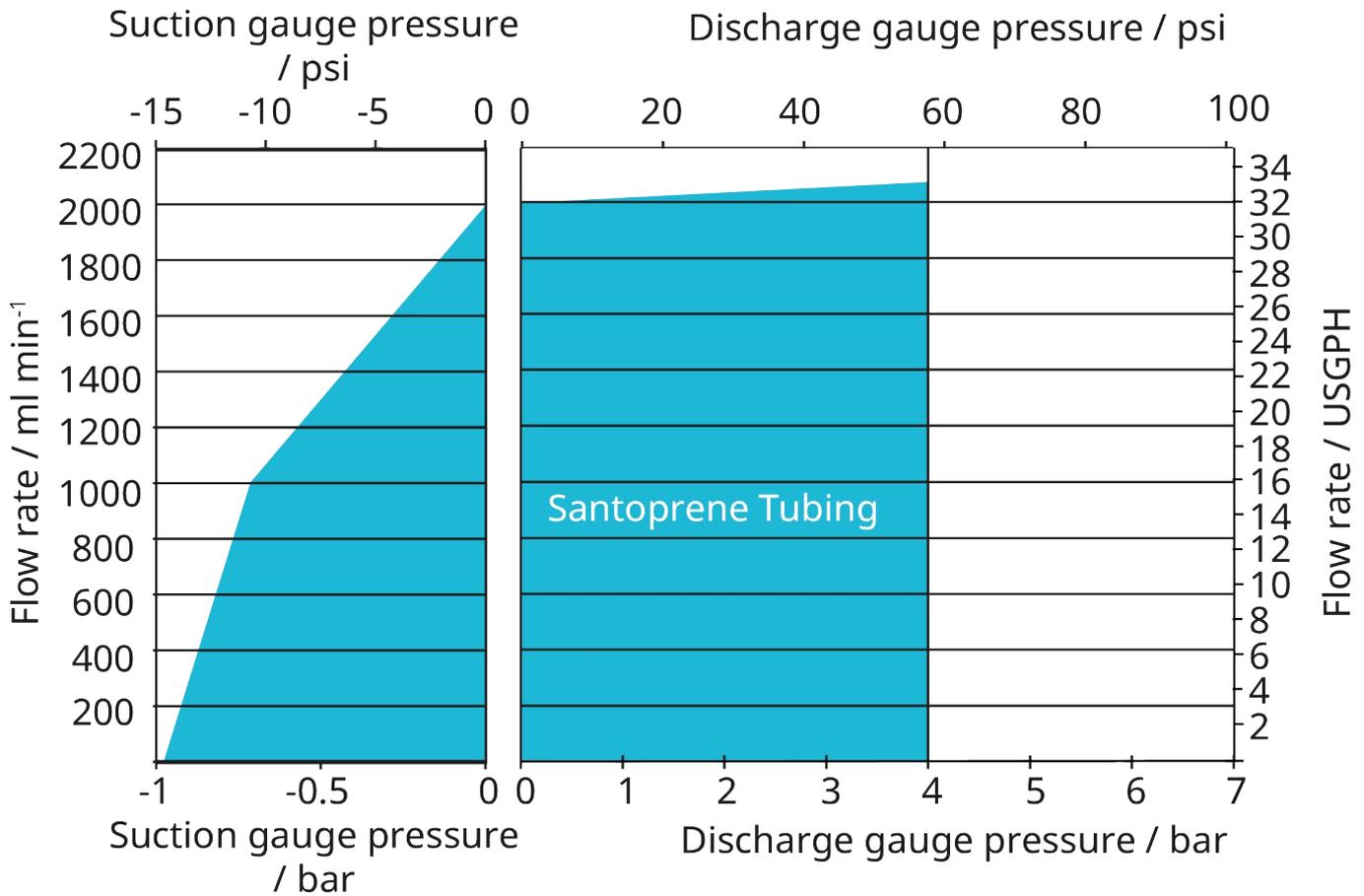
- Cut chemical cost through higher accuracy metering
- Simple drop-in installation eliminates ancillary equipment
- Reduced maintenance with single, no-tools, component replacement
- Cost of ownership is less than that of a diaphragm pump
- Flow rates from 0.1 to 2000 ml/min (0.001 to 31.7 USGPH) at up to 4 bar (60 psi)
- No backpressure valves, pulsation dampener, degassing valves, foot valves, strainers or float switches



Qdos 120 performance

| | qdos | | qdos remote | |
|----------|-------------|-----------------------|-------------|-----------------------|
| | Speed (rpm) | Flow ml/min (USGPH)* | Speed (rpm) | Flow ml/min(USGPH)* |
| qdos 120 | 0.006-140 | 0.1-2000 (0.001-31.7) | 0.078-140 | 1.25-2000 (0.02-31.7) |

*accuracy ±1%, repeatability ±0.5%



Technical specifications

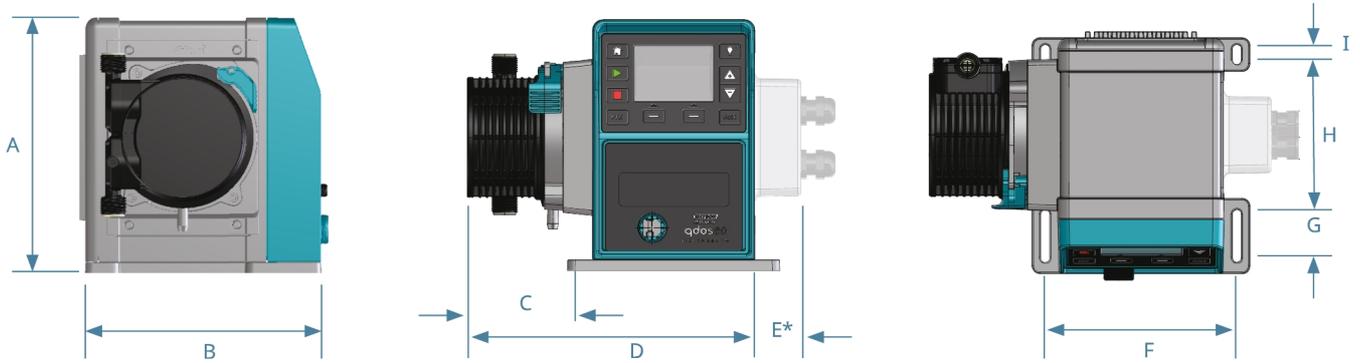
| | Qdos 120 |
|---------------------------|---|
| | 0.1 ml/min to 2000 |
| | 0.001 USGPH to 31.7 |
| Max. operating pressure | 4 bar |
| Max. operating pressure | 60 psi |
| Ambient Temperature Range | 5 – 45 °C |
| Ambient Temperature Range | 41 – 113 °F |
| Weight | 5.7 kg |
| Weight | 12.6 lbs |
| Control types | Manual, PROFIBUS®, Remote, Universal, Universal+ |
| Standards | CE, cETLus, CSA, C-Tick, IRAM S Mark, NSF 61 |
| Drive ingress protection | IP66, NEMA 4X |
| Drive humidity | 80% up to 31°C, 88°F, decreasing linearly to 50% at 40°C, 104°F |
| Drive noise | <70dB(A) at 1m |
| Max. altitude | 2000 m |
| Drive power supply | 100 to 240 VAC 50 to 60 Hz 190 VA, 12 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 120 |
|-------------------------|---|
| 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 |
| Drive keypad/HMI | Polyester |
| Lubricant | PFPE based |
| Pumphead body assembly | 30 % glass filled PPO/PS, 30% glass filled PPO/PS |
| Pumphead rotor assembly | Glass filled Nylon |
| Tubing | Santoprene |

Qdos 120 dimensions



Note: Pumphead appearance and fluid port positions may differ between models.

| Model | A | B | C | D | E | F | G | H | I |
|----------|--------------|--------------|----------------|---------------|-------------|--------------|-------------|--------------|-------------|
| qdos 120 | 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 | | ✓ | | | |

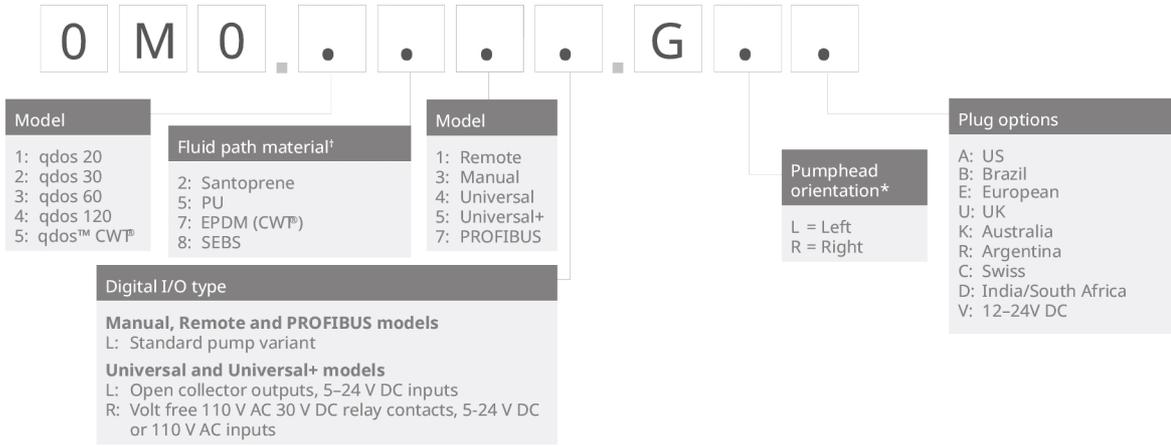
| Control methods | Manual | Remote | PROFIBUS | Universal | Universal+ |
|--|---|--------|---|---|---|
| Input/Output Options | | L | L | L or R | L or R |
| Manual control capability | ✓ | | ✓ | ✓ | ✓ |
| 4-20mA input | | ✓ | | ✓ | ✓ |
| 4-20mA input two point calibration | | | | | ✓ |
| 4-20mA output | | ✓ | | | ✓ |
| 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 open collector output | | ✓ | | L | |
| Alarm open collector output | | ✓ | | L | |
| Two configurable open collector outputs | | | | | L |
| Two configurable relay outputs | | | | R | |
| Four configurable relay outputs | | | | | R |
| Remote fluid recovery | | ✓ | | L | L |

| 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



† For guidance on chemical compatibility see www.qdospumps.com

* 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 120 pumphead Santoprene / PFPE 4 bar (60psi) | 0M3.4200.PFP |

Disclaimer: All flow rates shown were obtained pumping water at 20 °C (68 °F) with zero suction and delivery heads. qdos drives are not ATEX rated and should not be used within explosive atmospheres. 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 users responsibility to ensure product suitability for use within their application. Watson-Marlow, Qdos, ReNu, LoadSure, Bioprene, Pumpsil and Marprene are trademarks of Watson-Marlow Limited. STA-PURE PFL[®] and STA-PURE PCS[®] are registered trademarks of W.L Gore & Associates Inc. Please state the product code when ordering pumps and tubing.



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