Qdos 20

Qdos chemical metering and dosing pump

Features and benefits

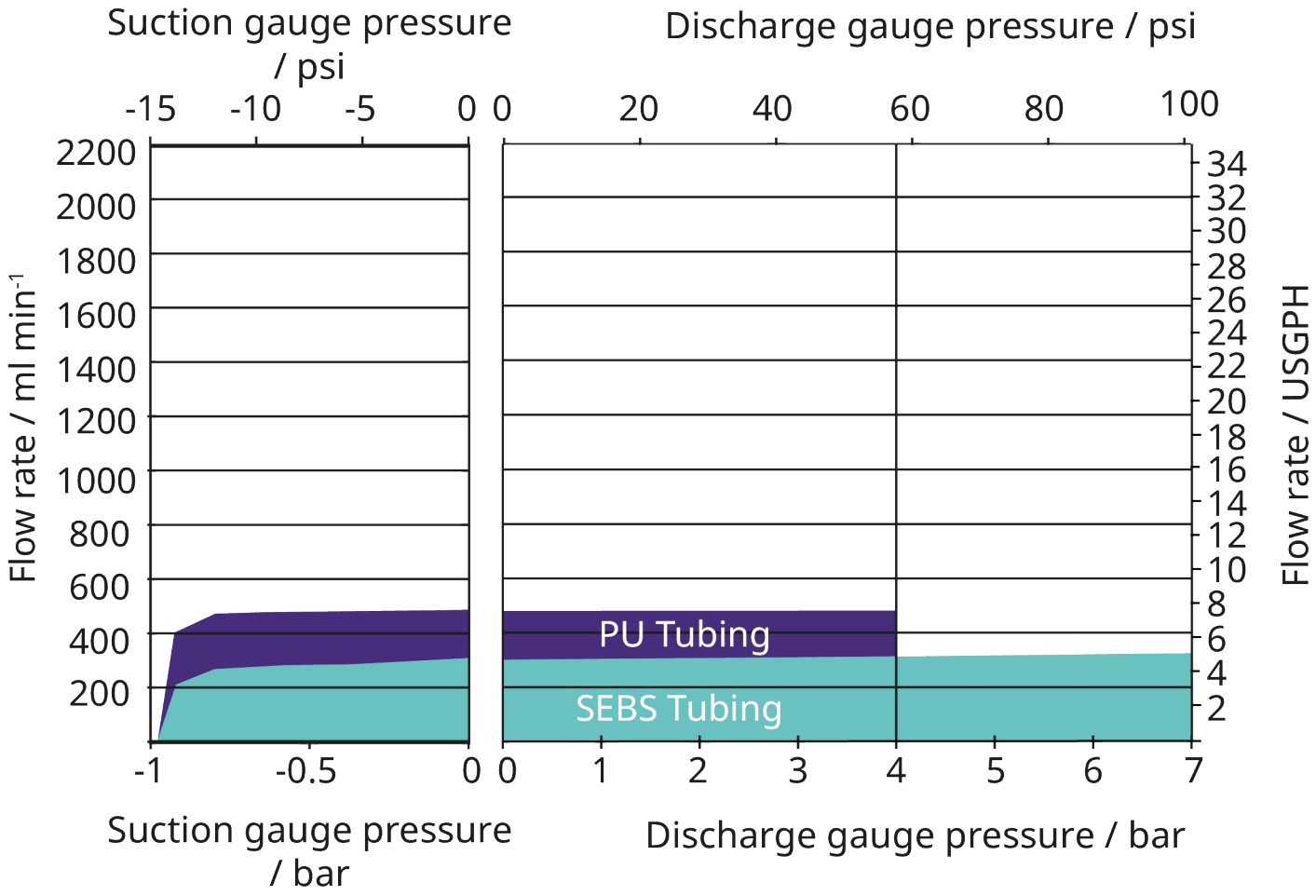
- Cut chemical cost through higher accuracy metering
- Simple drop-in installation eliminates ancillary equipment
- Reduced maintenance with single, no-tools, component replacement
- Cost of ownership is less than that of a diaphragm pump
- Flow rates from 0.1 to 450 ml/min at up to 7 bar
- No backpressure 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
Flow rate	0.1 ml/min to 450 ml/min
Flow rate	0.001 USGPH to 7.13 USGPH
Max. operating pressure	7 bar (100 psi)
Ambient temperature	5 °C to 40 °C (41 °F to 104 °F)
Weight	5.7 kg (12.6 lbs)
Control types	Manual, Profibus®, Remote, Universal, Universal+
Standards	CE, cETLus, CSA, C-Tick, 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 (6562 ft)
Drive power supply	AC (100—240 V AC 50/60 Hz, 180 W)., DC [(12V, 130 W), (24 V, 180 W)].

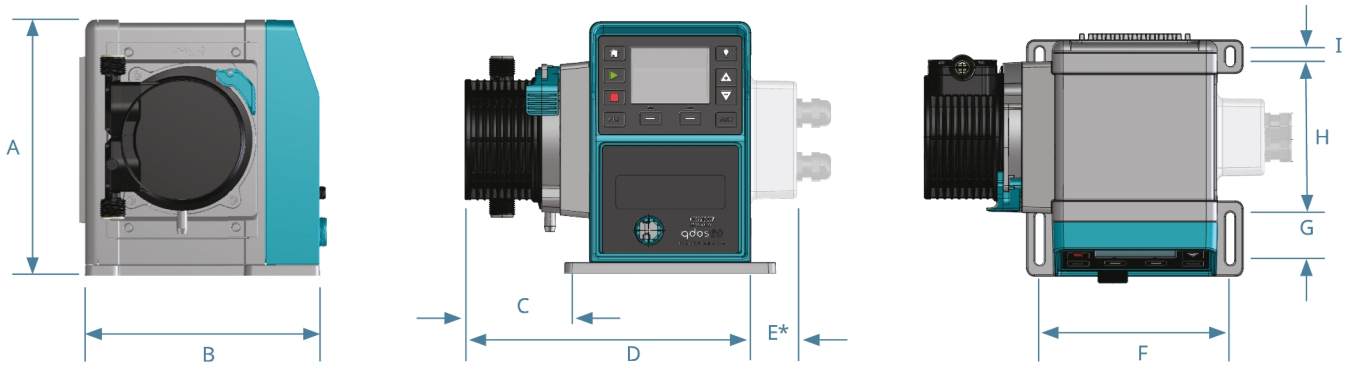
Minimum and maximum flow depends upon pumphead, flow unit and method of control. Pressure and speed depends on pumphead chosen.

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
Drive 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

Material depends on pumphead chosen.

Qdos 20 dimensions



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

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		✔			

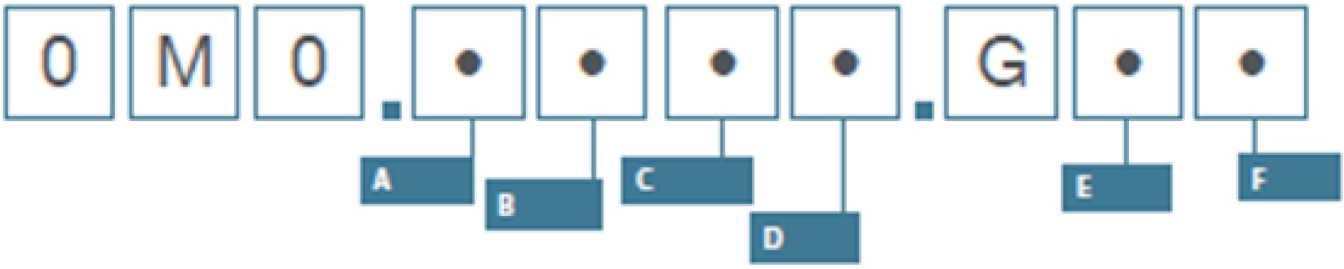
Control methods	Manual	Remote	PROFIBUS	Universal	Universal+
Input/Output Options		L	L	L or R	L or R
Manual control capability	✔		✔	✔	✔
4-20mA input		✔		✔	✔
4-20mA input two point calibration					✔
4-20mA output		✔			✔
Contact input (pulse/batch)				L or R	L or R
Manual speed adjustment range	3333:1 (Qdos 20) 5000:1 (Qdos 30) 10000:1 (Qdos 60) 20000:1 (Qdos 120) 5000:1 (Qdos CWT)		3333:1 (Qdos 20) 5000:1 (Qdos 30) 10000:1 (Qdos 60) 20000:1 (Qdos 120) 5000:1 (Qdos CWT)	3333:1 (Qdos 20) 5000:1 (Qdos 30) 10000:1 (Qdos 60) 20000:1 (Qdos 120) 5000:1 (Qdos CWT)	3333:1 (Qdos 20) 5000:1 (Qdos 30) 10000:1 (Qdos 60) 20000:1 (Qdos 120) 5000:1 (Qdos CWT)
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) 1250:1 (Qdos CWT)		
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	Volt free relay contacts. Maximum: 240 V AC, 4A or 24 V DC, 4A

Product codes



Pump product codes

A	B	C	D	E	F
Model	**Pumphead**	**Drive Variant**	**Digital I/O type**	**Pumphead orientation**	**Power plug**
1: Qdos 20 2: Qdos 30 3: Qdos 60 4: Qdos 120 5: Qdos CWT®	2: Santoprene 5: PU 7: EPDM 8: SEBS	1: Remote 3: Manual 4: Universal 5: Universal+ 7: PROFIBUS	L: Standard pump variant (Manual, Remote and PROFIBUS models) L: Open collector outputs, 5 – 24 V DC inputs (Universal, Universal+ models) R: Relay module, Volt free relay contacts, Maximum:240 V AC, 4A or 24 V DC, 4A (Universal, Universal+ models)	L: Left R: Right	A: US E: European U: UK K: Australia R: Argentina C: Swiss D: India, South Africa B: Brazil V: 12-24 V DC Z: China

Pumphead product codes

Description	Partcode
ReNu 20 pumphead PU / PFPE 4 bar (60psi)	0M3.1500.PFP
ReNu 20 pumphead SEBS / PFPE 7 bar (100psi)	0M3.1800.PFP
ReNu 30 pumphead Santoprene / PFPE 7 bar (100psi)	0M3.2200.PFP
ReNu 30 pumphead SEBS / PFPE 4 bar (60psi)	0M3.2800.PFP
ReNu 60 pumphead Santoprene / PFPE 7 bar (100psi)	0M3.3200.PFP
ReNu 60 pumphead SEBS / PFPE 4 bar (60psi)	0M3.3800.PFP
ReNu 60 pumphead PU 5 bar (70psi)	0M3.3500.PFP
ReNu 120 pumphead Santoprene / PFPE 4 bar (60psi)	0M3.4200.PFP
CWT 30 pumphead EPDM/PEEK/PFPE 9 bar (130 psi)	0M3.5700.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.