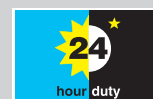


qdos 20, 30, 60, 120 and CWT

qdos
Peristaltic Metering
Watson-Marlow Pumps

FEATURES AND BENEFITS

- Flow rates 0.1–2000ml/min (0.001–31.7USGPH) and up to 7 bar (100psi) RMS pressure
- ReNu pumphead provides accurate, linear and repeatable flow
- Process uptime is maximised with no gas-locking, no valve blocking and rapid no-tools pumphead replacement
- Fluid recovery ensures operator safety and avoids chemical waste
- Flow control up to 20000:1 with $\pm 1\%$ accuracy
- Manual, analogue, PROFIBUS or contact mode functionality available
- PROFIBUS Bus speed 9.6–1,500 kb/s
- Compatible with 12–24V DC



Watson-Marlow...Innovation in Full Flow

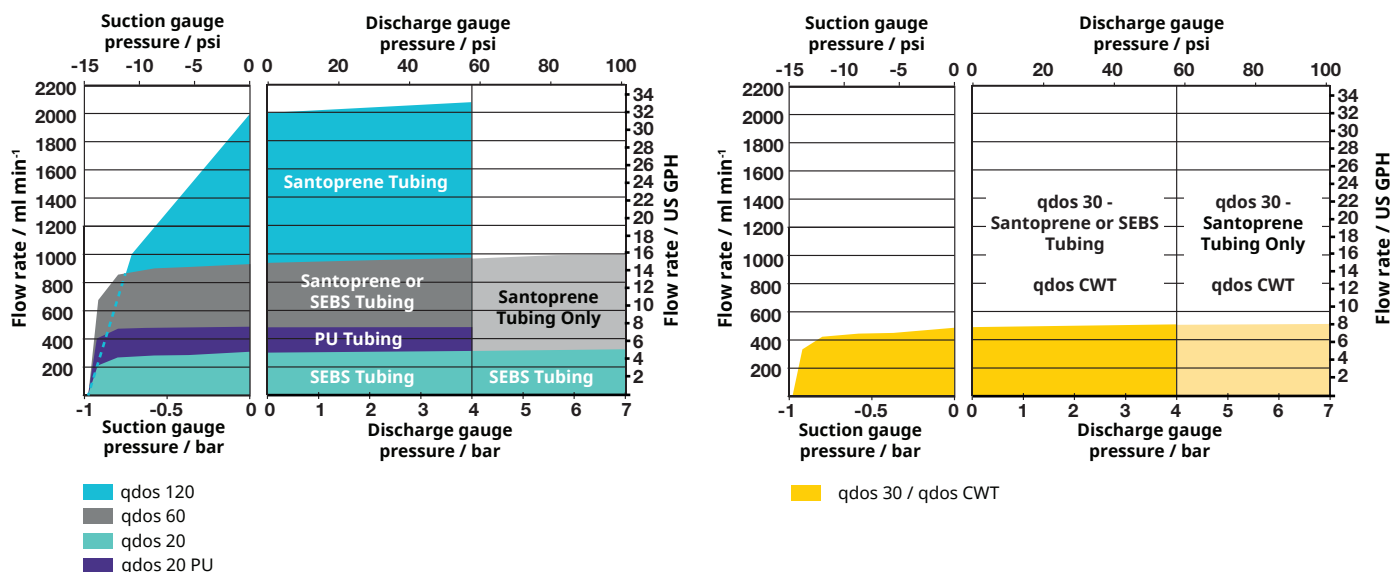
PERFORMANCE

qdos pump typical flow rates

	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	0.1-484 (0.001-7.67)	NA	NA
qdos 30 / qdos CWT	0.025-125	0.1-500 (0.001-7.93)	0.078-125	0.3-500 (0.005-7.93)
qdos 60	0.013-125	0.1-1000 (0.001-15.85)	0.078-125	0.6-1000 (0.01-15.85)
qdos 120	0.006-125	0.1-2000 (0.001-31.7)	0.078-125	1.25-2000 (0.02-31.7)

*accuracy $\pm 1\%$, repeatability $\pm 0.5\%$

Flow rate with discharge pressure for ReNu pumpheads



TECHNICAL SPECIFICATION

	qdos 20	qdos 30	qdos 60	qdos 120	qdos CWT
Ingress rating	IP66				
Enclosure	Watertight / dustproof				
Humidity	Non-condensing 5%–95%				
Temperature (Santoprene)	N/A	5C–45C (41F–113F)			N/A
Temperature (SEBS and PU)	5C–40C (41F–104F)			N/A	N/A
Temperature (EPDM)	N/A				5C–40C (41F–104F)
Drive weight	4.6 kg (10lb 2oz)	4.1 kg (9lb 1oz)	4.6 kg (10lb 2oz)		
Pumphead weight	1.1kg (2lb 7oz)	0.95kg (2lb 2oz)	1.1kg (2lb 7oz)		2.2kg (4lb 14oz)
Control ratio $\pm 1\%$ accuracy	3330:1	5000:1	10000:1	20000:1	5000:1
Control ratio (Remote)	1600:1				N/A
Noise	< 70dB(A) at 1m				
Standard	CE, NSF 61, cETLus, IRAM S Mark, C-Tick, CSA				
Power supply options	Switch mode power supply ~100-240V 50-60Hz 190VA Country specific plug options				
	12-24V DC power supply Typical 12V current (100W) = 10A Typical 24V current (100W) = 5A Terminal connectors: M8 (5/16") studs (hole diameter 8.33mm (0.328"))				

MATERIALS OF CONSTRUCTION

Component	Material				
	qdos 20	qdos 30	qdos 60	qdos 120	qdos CWT
Keypad	Polyester				
Drive casework	20% Glass filled PPE/ PS				
Drive shaft	Stainless steel 440C				
Pumphead enclosure	30% Glass filled PPO/PS	40% Glass filled PPS	30% Glass filled PPO/PS		40% Glass filled PPS
Rotor	PP (qdos 20 PU) / Glass filled nylon	Glass filled nylon			Stainless steel
Rotor bearings	Steel, stainless steel (optional—contact Watson-Marlow applications)				
Tube*	PU (max 4 bar, 60 psi) / SEBS (max 7 bar, 100 psi)	Santoprene (max 7 bar, 100 psi) / SEBS (max 4 bar, 60 psi)			N/A
Membrane*	N/A				EPDM
Pumphead hydraulic ports	PVDF (SEBS or PU)	Polypropylene (Santoprene) or PVDF (SEBS)	Polypropylene (Santoprene) or PVDF (SEBS)	Polypropylene (Santoprene)	Polypropylene (Santoprene) or PVDF (SEBS)
Hydraulic connectors	Polypropylene (standard) PVDF (optional)				
Lubricant*	PFPE based				

*It is the user's responsibility to comply with local health and safety regulations, including ensuring chemical compatibility between the duty fluid, the tube and lubricant contained in the ReNu Pumphead. For guidance refer to www.qdospumps.com.

TECHNICAL DATA

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		•			

TECHNICAL DATA - CONTINUED

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
Run stop input		•		•	•
Run status output		•		•	L
Alarm output		•		•	L
Four configurable relay outputs					R
Remote fluid recovery		•		•	•

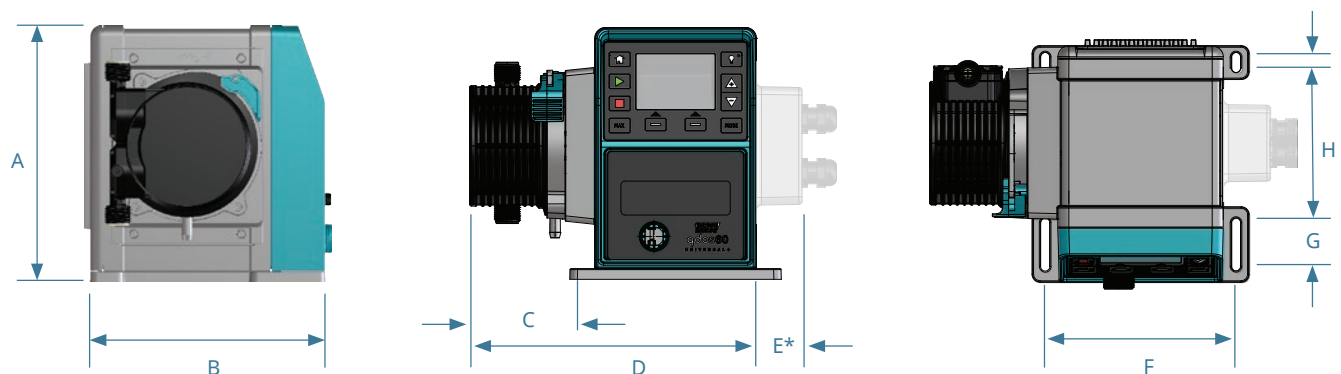
PROFIBUS	Manual	Remote	PROFIBUS	Universal	Universal+
Speed set point			•		
Speed feedback			•		
Flow calibration function			•		
Hours run			•		
Revolution counter			•		
Leak detection			•		
Low fluid level alarm			•		
Diagnostic feedback			•		

Security	Manual	Remote	PROFIBUS	Universal	Universal+
Keypad lock	•		•	•	•
PIN lock to protect set up	•		•	•	•

Power supply options	Manual	Remote	PROFIBUS	Universal	Universal+
12-24V DC	•	•		•	•
~100-240V AC	•	•	•	•	•

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

DIMENSIONS



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

Model	A	B	C	D	E—Optional relay modules (H or R)	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")
qdos 30	234mm (9.2")	214mm (8.4")	71.5mm (2.8")	233mm (9.2")	43mm (1.7")	173mm (6.8")	40mm (1.6")	140mm (5.5")	10mm (0.4")
qdos 60	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")
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")
qdos CWT	234mm (9.2")	214mm (8.4")	117.9mm (4.6")	291mm (11.5")	43mm (1.7")	173mm (6.8")	40mm (1.6")	140mm (5.5")	10mm (0.4")

ORDER INFORMATION

0M0....G..

Model

1: qdos 20
2: qdos 30
3: qdos 60
4: qdos 120
5: qdos CWT

Fluid path material†

2: Santoprene
5: PU
7: EPDM
8: SEBS

Model

1: Remote
3: Manual
4: Universal
5: Universal+
7: PROFIBUS

Plug options

A: US
E: European
U: UK
K: Australia
R: Argentina
C: Swiss
D: India/South Africa
V: 12–24V DC

Pumphead orientation*

L = Left
R = Right

Digital I/O type

Manual, Remote and PROFIBUS models
L: Standard pump variant

Universal and Universal+ models
L: Open collector outputs, 5–24V DC inputs
R: Volt free 110V AC 30V DC relay contacts, 5–24V DC or 110V AC inputs

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

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 CWT pumphead EPDM / PEEK / PFPE 7 bar (100 psi)	0M3.5700.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 120 pumphead Santoprene / PFPE 4 bar (60psi)	0M3.4200.PFP

* 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.

All flow rates shown were obtained pumping water at 20C (68F) with zero suction and delivery heads. qdos drives are not ATEX rated and should not be used within explosive atmospheres. Disclaimer: 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.

**WATSON
MARLOW
Pumps**

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