

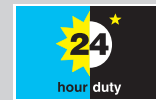
# qdos 20, 30, 60 and 120

**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 kb/s up to 1,500 kb/s



*Watson-Marlow...Innovation in Full Flow*

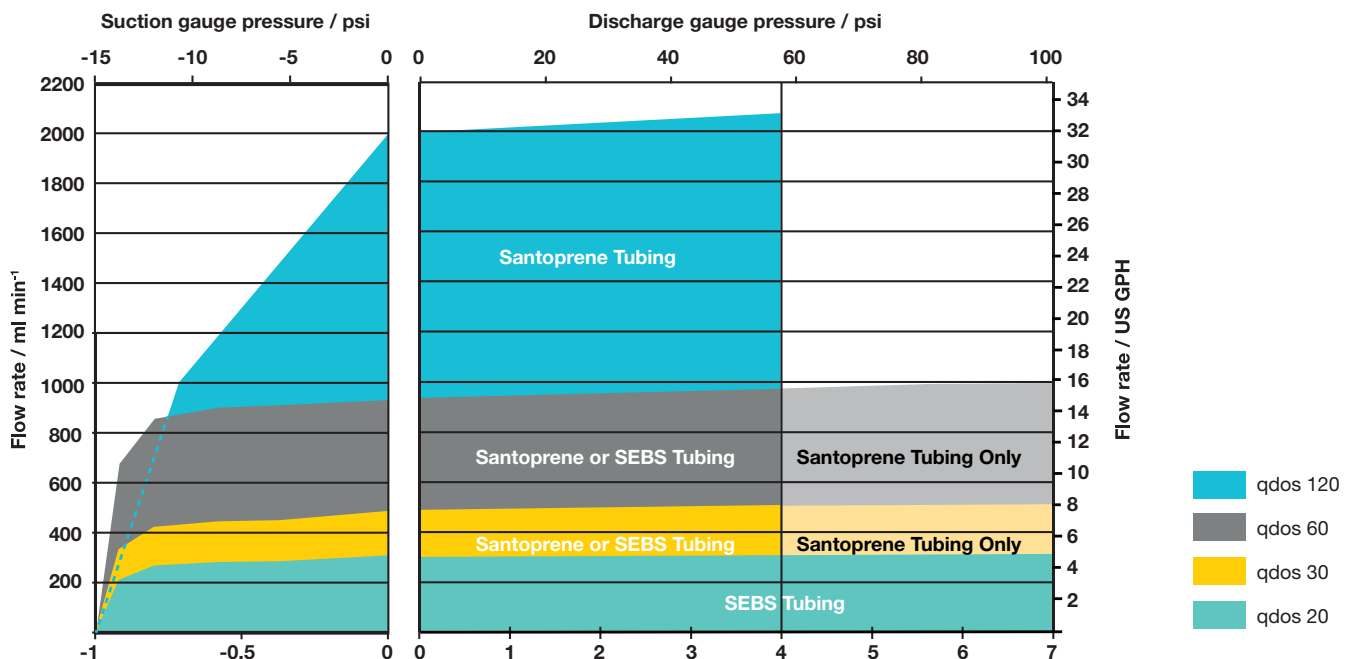
## PERFORMANCE

### 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 30	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
Ingress rating	IP66			
Enclosure	Watertight / dustproof			
Humidity	Non-condensing 5% to 95%			
Temperature (Santoprene)	N/A	5C to 45C (41F to 113F)		
Temperature (SEBS)	5C to 40C (41F to 104F)			N/A
Drive weight	4.6kg (10lb 2oz)	4.1kg (9lb 1oz)	4.6kg (10lb 2oz)	
Pumphead weight	1.1kg (2lb 7oz)	0.95kg (2lb 2oz)	1.1kg (2lb 7oz)	
Control ratio $\pm 1\%$ accuracy	3330:1	5000:1	10000:1	20000:1
Control ratio (Remote)	1600:1			
Noise	< 70dB(A) at 1m			
Standard	CE, NSF 61, cETLus, IRAM S Mark, C-Tick, CSA			
Power supply	Switch mode power supply ~100-240V 50-60Hz 190VA			

## MATERIALS OF CONSTRUCTION

Component	Material			
	qdos 20	qdos 30	qdos 60	qdos 120
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	
Rotor	Glass filled nylon			
Rotor bearings	Steel, stainless steel (optional—contact Watson-Marlow applications)			
Tube*	Santoprene (max 7 bar, 100 psi) / SEBS (max 4 bar, 60 psi)			
Pumphead hydraulic ports	PVDF (SEBS)	Polypropylene (Santoprene) or polypropylene (SEBS)	Polypropylene (Santoprene) or PVDF (SEBS)	Polypropylene (Santoprene)
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](http://www.qdospumps.com).

## TECHNICAL DATA

Operational modes	Manual	Remote	PROFIBUS	Universal	Universal+
Manual	•		•	•	•
PROFIBUS— bus speed 9.6 to 1,500 kb/s			•		
Contact				• L or R	• L or R
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		•			

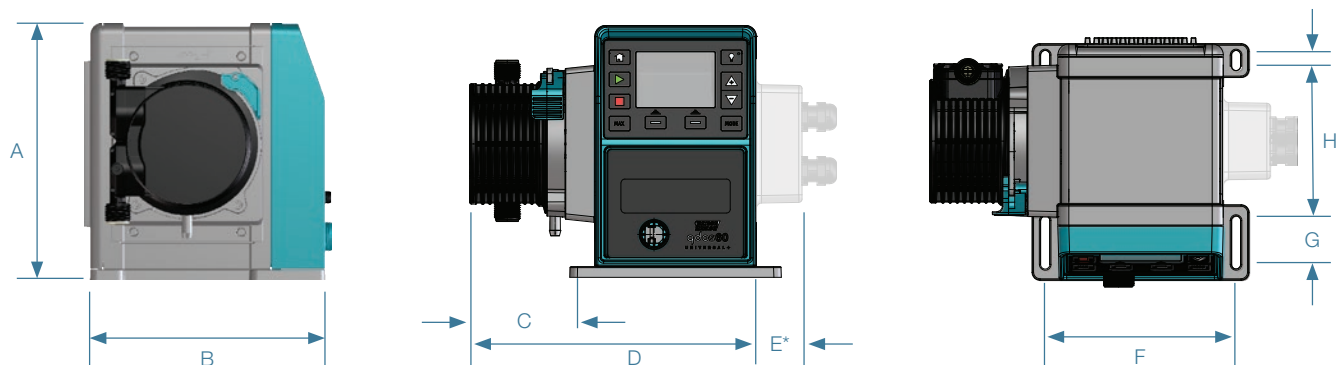
Control methods	Manual	Remote	PROFIBUS	Universal	Universal+
Input/Output Options*		L	L	L, H or R	L, H or R
Manual control capability	•		•	•	•
4-20mA input		•		•	•
4-20mA input two point calibration					•
4-20mA output		•			•
Contact input (pulse/batch)				• L or R	• L or R
Run stop input		•		•	•
Run status output		•		•	•
Alarm output		•		•	•
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	•		•	•	•

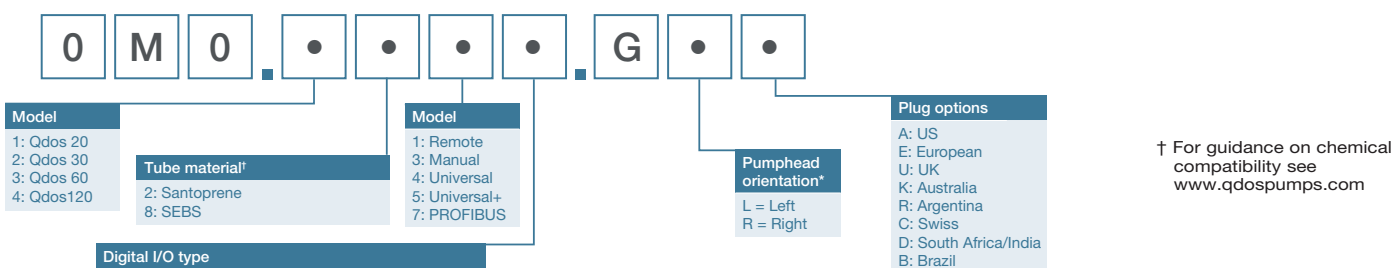
*Control options - Universal and Universal+ models	
<b>Variant</b>	<b>Standard pump (L)</b>
Input	5-24V DC
Output	Open collector
<b>Variant</b>	<b>Relay Module (H)</b>
Input	110V AC
Output	Contact rating 110V AC, 5A 30V DC, 5A
<b>Variant</b>	<b>Relay Module (R)</b>
Input	5-24V DC
Output	Contact rating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

## DIMENSIONS



Model	A	B	C	D	E—Optional relay modules (H or R)	F	G	H	I
qdos 20	234mm (9.2")	214mm (8.4")	118mm (4.6")	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")	82.5mm (3.2")	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")	118mm (4.6")	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")	118mm (4.6")	266mm (10.5")	43mm (1.7")	173mm (6.8")	40mm (1.6")	140mm (5.5")	10mm (0.4")

## ORDER INFORMATION



† For guidance on chemical compatibility see [www.qdospumps.com](http://www.qdospumps.com)

Pumphead product codes	
Description	Partcode
ReNu 20 pumphead SEBS / PFPE 7 bar (100psi)	0M3.1800.PFP
ReNu 30 pumphead Santoprene / PFPE 7 bar (100 psi)	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.  
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**WATSON  
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Pumps**

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