

qdos30

Metering Pumps

Join the no-valve
metering revolution



**WATSON
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Watson-Marlow Pumps Group



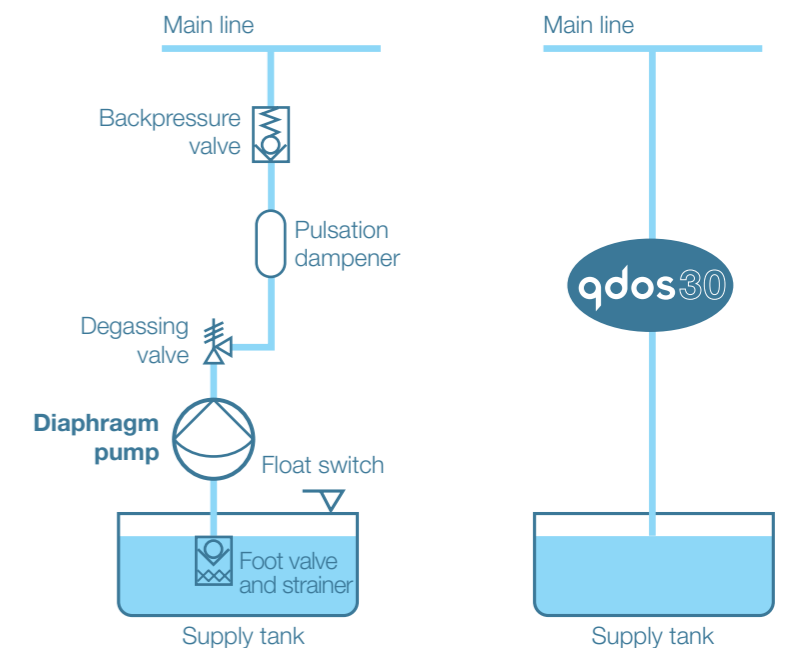
Qdos 30 the no-valve metering pump

- Accurate, linear and repeatable flow under varying process conditions
- Flow rates 0.1 to 500 ml/min (0.001 to 8 US gph) at 7 bar (100 psi)
- ReNu pumphead: single, sealed component for **no-tools maintenance**
- No valves: lowering installation and maintenance costs

Eliminate ancillary equipment

A diaphragm metering pump often requires a range of high maintenance ancillary items to function. The no-valve Qdos 30 eliminates ancillary equipment while ensuring accurate, linear and repeatable metering across all process conditions.

- No backpressure valves
- No pulsation dampener
- No degassing valves
- No foot valves and strainers
- No float switches



Typical installation comparing a diaphragm metering pump with the Qdos metering pump

Cost of ownership is less than a diaphragm pump

Qdos 30 delivers flow rates that remain constant right up to 7 bar (100 psi) giving users a unique advantage over diaphragm metering pumps. Designed as a drop in replacement to diaphragm

metering pumps, the Qdos 30 pump offers long maintenance intervals, reducing the impact of process downtime and lowering the overall cost of ownership.



ReNu Revolutionary pumphead technology

The unique design of the patented ReNu™ pumphead enables accurate and repeatable flow for fluids of wide ranging viscosities.

No-tools maintenance means quick, safe and easy pumphead replacement with no specialist training or maintenance technicians.

The sealed pumphead design eliminates fluid leakage and, combined with the fluid recovery functionality, reduces chemical wastage.



Rugged IP66 pump drive, designed for industrial environments

Easy access high-visibility interface

Keypad and 3.5" TFT colour display provide easy access and high-visibility status indication. Configurable in 9 languages

Eliminate chemical wastage

Accurate, linear and repeatable flow, with varying process conditions. Keeps pumping even when gassing-off occurs or when the chemical contains solids. No need to over-meter chemicals



Safe maintenance

The sealed ReNu pumphead with fluid recovery functionality eliminates operator exposure to chemicals. No chemicals on the floor, no parts to clean and rebuild



Replace your pump in seconds

Process uptime is maximised with **no-tools maintenance** quick and easy pumphead replacement

Low maintenance

No valves or seals to clog, leak or corrode, giving minimal maintenance. Drop-in replacement for diaphragm metering pumps



Disinfection – drinking water

Sodium hypochlorite creates gas locking and crystallisation in diaphragm pumps.

Flow rates and pressure changes fluctuate impacting metering accuracy. Diaphragm pumps are often set to 'over-dose' to ensure water quality is maintained. This increases chemical usage and secondary treatment to compensate.

Qdos 30 delivers predictable, accurate metering at variable pressure up to 7 bar (100 psi), even with fluctuating process conditions. Gas locking and crystallisation issues are eliminated.

pH adjustment – drinking and industrial process water

Water pH influences the effectiveness of disinfection.

Metering alkalis such as Calcium Hydroxide creates issues with clogging and damage. Metering acids carries safety implications and can corrode pipework and equipment.

Qdos 30 metering pumps minimise pH 'overshoot'. Suspended solids are handled with no risk of clogging, and the innovative ReNu pumphead ensures safe operation with built-in fluid recovery.



Industrial cooling – water preparation

Chemicals used in cooling water treatment to prevent corrosion and scale formation affect cooling efficiency and impact operating costs.

A metering skid may contain five pumps, each with its own configuration and operating requirements. Qdos 30 delivers accurate flow, even at very low flow rates combined with high discharge pressure.

There are no valves in the flow path to wear, and the ReNu sealed pumphead ensures quick and safe pumphead replacement with no risk of leakage, giving you savings on skid ownership costs.



Flocculation

Flocculants can cause clogging in diaphragm pumps, increasing maintenance and process down-time.

Environmental conditions such as temperature affect fluid viscosity also affect diaphragm pump performance.

Qdos 30 delivers accurate metering even with fluctuating viscosity. There are no seals or valves in the flow path to clog or wear, meaning pump performance is never compromised.

Mineral processing – Reagent dosing

Accurate pH control is critical to ensure maximum yield.

However the toxicity of reagents such as sulphuric acid and cyanides are hazardous and can damage pumps.

ReNu pumphead technology ensures the safe metering of toxic chemicals. Fluid recovery and **no-tools maintenance** means an operator can quickly and safely change the pumphead. The process can be back up and running in minutes.

Qdos 30 pump range

Simplicity in installation, operation and maintenance were key considerations when designing the Qdos range of pumps.

An intuitive menu offers advanced control features including:

- Fluid level monitoring
- Fluid recovery
- Line priming
- Flow calibration

The 3.5" TFT colour display provides instant pump status, and can be configured to display in 9 different languages.

Qdos 30 can be ordered with the ReNu pumphead mounted on the left or right of the pump. The keypad, display and input/output connections are readily accessible for easy operation and maintenance. All models are IP66 rated for use in washdown environments.

Pump range overview



Universal+	Universal	Manual
Flexibility for automatic and manual control together with configurable 4-20mA input	Flexibility for automatic and manual control	Manual speed control



Remote	PROFIBUS
Remote control for absolute process security	Manual and PROFIBUS control

Features overview

Functionality	Universal +	Universal	Manual	Remote	PROFIBUS
Operational modes					
Manual	•	•	•		•
Contact	•	•			
4-20mA	•	•		•	
Fluid recovery	•	•	•	•	•
Fault reporting	•	•	•	•	•
PROFIBUS control and diagnostics					•
Manual control					
Numerical flow display	•	•	•		•
Numerical speed display	•	•	•		•
Numerical percentage of max speed display	•	•	•		•
Fluid level monitor	•	•	•		•
Max (prime)	•	•	•		•
Auto restart	•	•	•		•
Pumphead failure alarm	•	•	•		•
Remote control					
4-20mA input	•	•		•	
4-20mA input two point calibration	•				
4-20mA output	•			•	
Contact input (pulse/batch)	•	•			
Run stop input	•	•		•	
Run status output	•	•		•	
Alarm output	•	•		•	
Remote fluid recovery	•	•		•	
Optional 110V industrial logic	•	•			
LED status icons					
Pump status				•	
4-20mA status				•	
Fault				•	
Security					
Keypad lock	•	•	•		•
PIN lock	•	•	•		•



Performance data

Typical flow rates (metric up to 7 bar)

	Speed (rpm)	Flow (ml/min)*				
		Manual	Remote	Universal	Universal+	PROFIBUS
ReNu pumphead	0.025-125	0.1 to 500		0.1 to 500	0.1 to 500	0.1 to 500
	0.078-125		0.3 to 500			

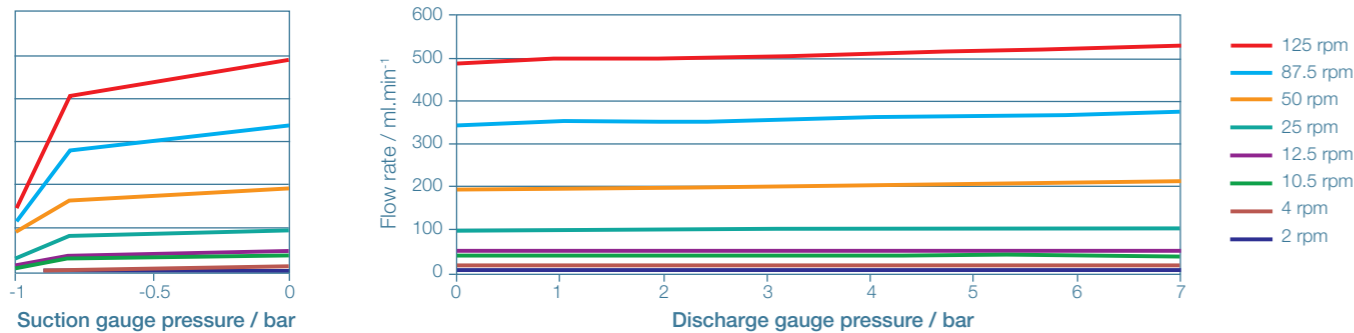
Typical flow rates (imperial up to 100 psi)

*Accuracy +/- 1%, repeatability +/- 0.5%

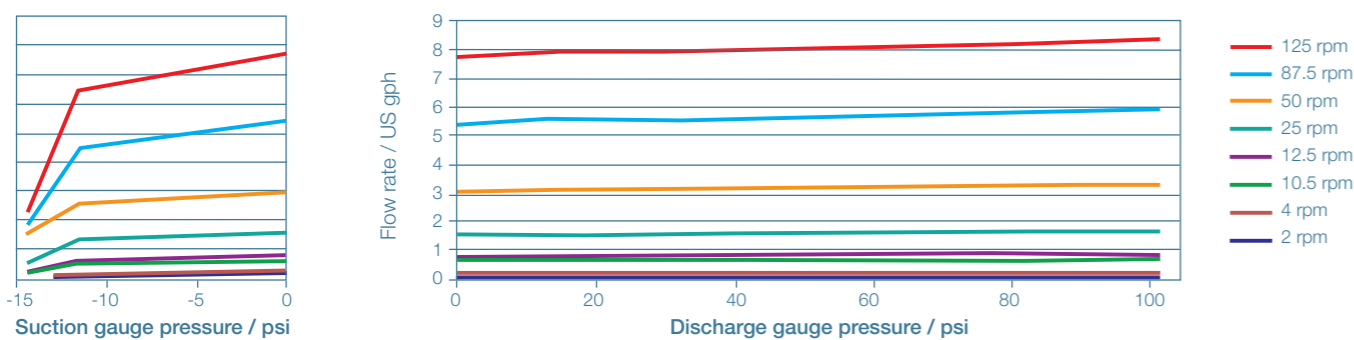
	Speed (rpm)	Flow (US gph)				
		Manual	Remote	Universal	Universal+	PROFIBUS
ReNu pumphead	0.016-125	0.001 to 7.93		0.001 to 7.93	0.001 to 7.93	0.001 to 7.93
	0.078-125		0.005-7.93			

Performance curves

Metric



Imperial



Important note - The ReNu pumphead contains lubricant. The lubricant components are Glycerol (C₃H₈O₃) 50-100% w/w, Glycol (C₂H₆O₂) 2.5-10% w/w, Water (H₂O). It is the users responsibility to ensure chemical compatibility with the duty fluid and the lubricant contained within the ReNu pumphead. Local health and safety regulations must be complied with. Contact your local Watson-Marlow representative for guidance.

Dimensions



Ordering information

Pumps*	Part number†					
	United Kingdom	USA, Canada, Brazil, Japan	Europe	Australia, New Zealand	Argentina	Switzerland
Qdos 30 Manual, pumphead left	0M0.223L.GLU	0M0.223L.GLA	0M0.223L.GLE	0M0.223L.GLK	0M0.223L.GLR	0M0.223L.GLC
Qdos 30 Manual, pumphead right	0M0.223L.GRU	0M0.223L.GRA	0M0.223L.GRE	0M0.223L.GRK	0M0.223L.GRR	0M0.223L.GRC
Qdos 30 Universal, pumphead left	0M0.224L.GLU	0M0.224L.GLA	0M0.224L.GLE	0M0.224L.GLK	0M0.224L.GLR	0M0.224L.GLC
Qdos 30 Universal, pumphead right	0M0.224L.GRU	0M0.224L.GRA	0M0.224L.GRE	0M0.224L.GRK	0M0.224L.GRR	0M0.224L.GRC
Qdos 30 Universal+ pumphead left	0M0.225L.GLU	0M0.225L.GLA	0M0.225L.GLE	0M0.225L.GLK	0M0.225L.GLR	0M0.225L.GLC
Qdos 30 Universal+ pumphead right	0M0.225L.GRU	0M0.225L.GRA	0M0.225L.GRE	0M0.225L.GRK	0M0.225L.GRR	0M0.225L.GRC
Qdos 30 Universal 110V Logic, pumphead left		0M0.224H.GLA				
Qdos 30 Universal 110V Logic, pumphead right		0M0.224H.GRA				
Qdos 30 Universal+ 110V Logic, pumphead left		0M0.225H.GLA				
Qdos 30 Universal+ 110V Logic, pumphead right		0M0.225H.GRA				
Qdos 30 Remote, pumphead left	0M0.221L.GLU	0M0.221L.GLA	0M0.221L.GLE	0M0.221L.GLK	0M0.221L.GLR	0M0.221L.GLC
Qdos 30 Remote, pumphead right	0M0.221L.GRU	0M0.221L.GRA	0M0.221L.GRE	0M0.221L.GRK	0M0.221L.GRR	0M0.221L.GRC
Qdos 30 PROFIBUS, pumphead left	0M0.227L.GLU	0M0.227L.GLA	0M0.227L.GLE	0M0.227L.GLK	0M0.227L.GLR	0M0.227L.GLC
Qdos 30 PROFIBUS, pumphead right	0M0.227L.GRU	0M0.227L.GRA	0M0.227L.GRE	0M0.227L.GRK	0M0.227L.GRR	0M0.227L.GRC
Pumphead	Part number					
ReNu pumphead	0M3.2200.GB0					
Interface tubing	Part number					
Interface tubing, pvc 6.3x11.5mm, 2m (6.5ft) length	0M9.2222.V6B					
Interface tubing, pvc 10x16mm, 2m (6.5ft) length	0M9.2222.VAD					
Interface tubing, pvc 6.3x11.5mm, 5m (16ft) length	0M9.2225.V6B					
Interface tubing, pvc 10x16mm, 5m (16ft) length	0M9.2225.VAD					
Interface tubing, polythene, 9x12mm, 2m (6.5ft) length	0M9.2222.E9C					
Interface tubing, polyethylene 5x8mm, 2m (6.5ft) length	0M9.2222.E58					
Interface tubing, polyethylene 9x12mm, 5m (16ft) length	0M9.2225.E9C					
Interface tubing, polyethylene 5x8mm, 5m (16ft) length	0M9.2225.E58					

* 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 on page 8 is considered a pumphead located to the left.

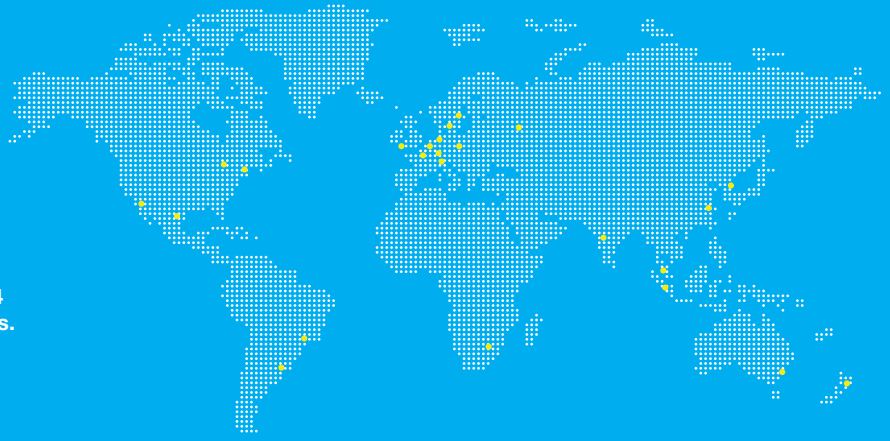
† Pumps are 85~264 VAC 1ph 47~63Hz and fitted with the mains power plug for the designated country.

Weights

Model	Drive		Drive with pumphead	
	kg	lb	kg	lb
Manual	4.1	9lb	5.05	11lb 2oz
Remote	4.0	8lb 13oz	4.95	10lb 15oz
Universal	4.1	9lb	5.05	11lb 2oz
Universal+	4.1	9lb	5.05	11lb 2oz
PROFIBUS	4.1	9lb	5.05	11lb 2oz

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Watson-Marlow online

Our engineers around the world can help you choose the perfect pump and tubing for your needs.

More information? Our brochures are on our website: www.wmpg.com

For more information on Qdos metering pumps visit: www.qdospumps.com



Watson-Marlow... Innovation in Full Flow

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