

501DF with RL2A (ATEX) pumphead

500 series close-coupled pumps

Features and benefits

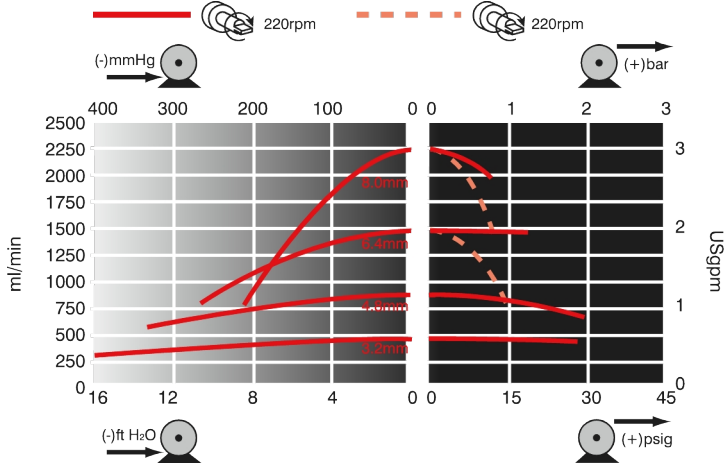
- Flow rates up to 2800 ml/min and peak pressure up to 2 bar
- Heavy-duty pumphead construction with impact-proof safeguard
- Sprung rotor gently compresses tubing using large low friction rollers with sealed bearings, guaranteeing long tube life and accurate metering
- Fast and simple pumphead set-up using a clutched rotor



501DF with RL2A (ATEX) pumphead performance

Tube bore and flow rates (ml/min)	0.5mm	0.8mm	1.6mm	3.2mm	4.8mm	6.4mm	8.0mm
Speed range (rpm)							
62	2.6	7.6	26	120	250	390	620
223	9.3	27	95	410	900	1400	2200
281	12	34	120	520	1100	1800	2800
6 to 62*	0.25-2.6	0.74-7.6	2.6-26	11-120	24-250	38-390	60-620
22 to 223*	0.92-9.3	2.7-27	9.4-95	41-410	89-900	140-1400	220-2200
28 to 281*	1.2-12	3.4-34	12-120	52-520	110-1100	180-1800	280-2800

*10:1 speed reduction available using a variable frequency inverter located in a safe area



Maximum duty pressure with 6.4mm and 8.0mm bore tube is 1bar. Maximum duty pressure with other tube bore sizes is 2bar.

Technical specifications

	501DF with RL2A (ATEX) pumphead
Flow rate range	2.6 ml/min to 2800 ml/min
Max. operating pressure ranges	2 bar (30 psi)
Fluid temperature ranges	-20 °C to 65 °C (-4 °F to 149 °F)
Motor types	AC electric motor
Operating speed range	223 rpm to 281 rpm
Standards	ATEX 2014/34/EU, ATEX II 2G Ex h IIB T4 Gb X, CE
Ingress Protection	IP55
Noise	<70dB(A) at 1m
Weight ranges	15 - 20 kg (33 - 44 lbs)
Power supply	400 V 50 Hz 3 ph
Compatible tubing bore size	1.6, 3.2, 4.8, 6.4, 8 mm
Compatible tubing wall thickness	2.4 mm

Table lists details for fixed speed pumps. For more detail on drive, AC motor and inverter options please contact your local Watson-Marlow Fluid Technology Solutions representative.

Materials of construction

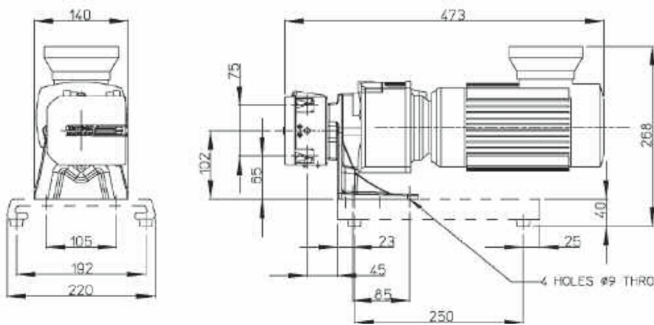
	501DF with RL2A (ATEX) pumphead
Gearbox	Cast iron
Guide roller assembly	Acetal copolymer (Kematal)
Motor	Cast aluminium alloy
Pumphead guard	Carbon painted polycarbonate
Pumphead rotor assembly	Chromium plated zinc alloy, Stainless steel 303S31, Stainless steel DIN 17224
Pumphead track	Powder coated zinc alloy
Tube clamp assembly	Acetal copolymer (Kematal), Chromium plated zinc alloy, Stainless steel 301S21

Information listed covers the complete range of fixed speed pumps.

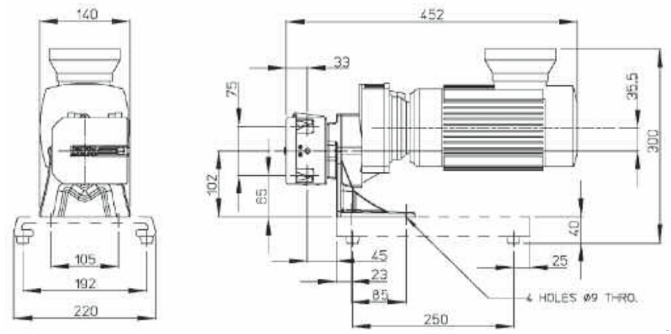
For detailed specifications of individual models/components and other drive/pumphead options, refer to user manual or contact your local Watson-Marlow Fluid Technology Solutions representative.

501DF with RL2A (ATEX) pumphead dimensions

62rpm model



223rpm model and 281rpm models



Measurements shown in millimetres (mm)

Product codes

ATEX pump	Speed (rpm)	Motor	Product code
501DF/RL2A ATEX pump c/w PTC's plated for inverter use	62	400V 50Hz 3ph 0.18kW	050.8622.L20
	223	400V 50Hz 3ph 0.18kW	050.8652.L20
	281	400V 50Hz 3ph 0.18kW	050.8672.L20

10:1 speed reduction available using variable frequency inverter, located in a safe area

ATEX pumphead	Description	Product code
501RL2A	Close coupled pumphead for 2.4mm wall thickness tubing	053.0002.A20
501RL2GA	Close coupled pumphead for 2.4mm wall thickness STA-PURE tubing	053.0022.A2G

Disclaimer: All flow rates shown were obtained pumping water at 20 °C (68 °F) with zero suction and delivery heads. Watson-Marlow, Pumpsil, PureWeld XL, Bioprene and Marprene are trademarks of Watson-Marlow Limited. 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. GORE and STA-PURE are trademarks of W. L. Gore & Associates. Please state the product code when ordering pumps and tubing.



wmfts.com/global
13 October 2025