

300 DriveSure ADC/En/Pn

300 series panel mount pumps

Key Features

- DriveSure panel mount pump for 313D/D2 and 314D/D2 pumpheads
- 0.1 rpm to 410 rpm speed range at 0.1 rpm increments
- Watson-Marlow closed-loop control technology delivers consistent, cool and quiet performance
- EtherNet/IP™ and PROFINET® versions for digital network integration, control and monitoring
- ADC version with 4–20 mA, 0–10 V, 2–2000 Hz and fixed speed control options
- Sealed mounting plate for easy installation and IP66 capability
- Integrated cover-open sensor and prime-switch input
- Downloadable PC software (WM Connect) to evaluate, optimise and diagnose via USB connection



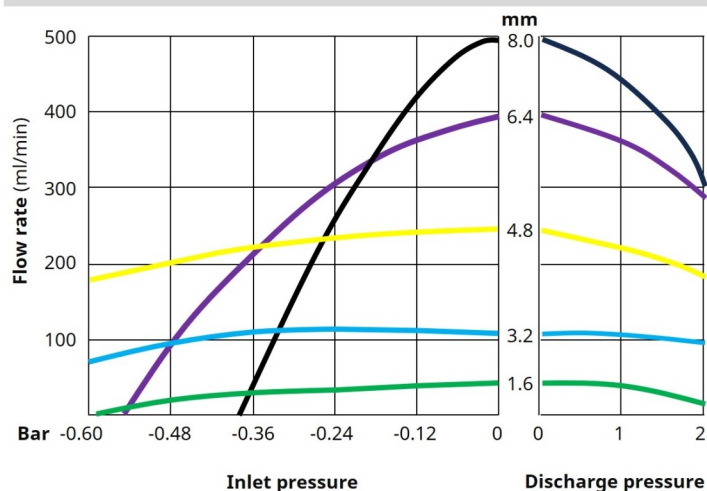
300 DriveSure ADC/En/Pn performance

Flow Rate (mL/min) by tube bore based on 0.1 rpm (Min) to 410 rpm (Max)														
Pumphead	0.5 mm		0.8 mm		1.6 mm		3.2 mm		4.8 mm		6.4 mm		8.0 mm	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
313D	0.003	12.2	0.007	29.1	0.027	112.5	0.100	410	0.221	904	0.368	1507	0.500	2050
314D	0.003	12.1	0.006	24.1	0.025	102.5	0.086	352	0.191	784	0.300	1230	0.400	1640
313D2	0.003	12.1	0.007	29.1	0.027	112.5	0.100	410	0.221	904	0.368	1507		
314D2	0.003	12.1	0.006	24.1	0.025	102.5	0.086	352	0.191	784	0.300	1230		

Performance data is based on a 48 V DC power supply, pumping water, with 0 bar inlet and discharge pressure. Actual performance is dependent on power supply voltage (DriveSure range 12 V to 48 V DC). For further information contact your local Watson-Marlow representative.

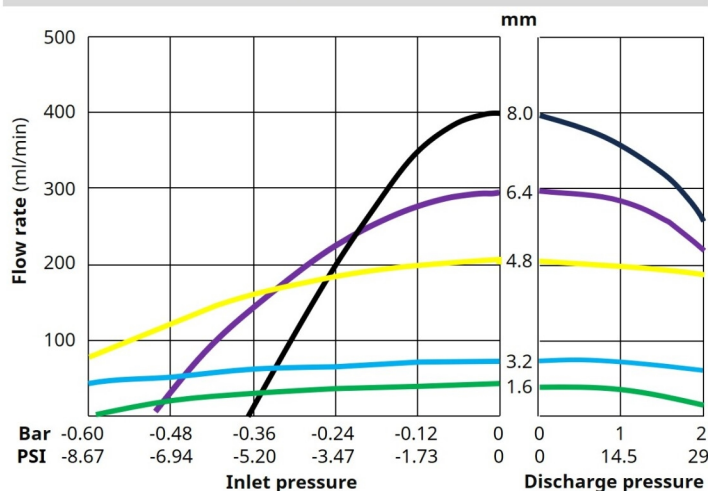
313D Pumphead

Marprene, water, 100 rpm, counter-clockwise



314D Pumphead

Marprene, water, 100 rpm, counter-clockwise



Technical specifications

	300 DriveSure ADC/En/Pn
Motor types	NEMA 24 stepper motor
Pumphead options	313D, 313D2, 314D, 314D2
Min. flow rate	0.003 ml/min
Max. flow rate	2050 ml/min
Min. operating speed	0.1 rpm
Max. operating speed	410 rpm
Speed Resolution	0.1 rpm
Supply voltage	12 to 48 VDC
Operating temperature range	5 °C to 40 °C
Operating temperature range	41 °F to 104 °F
Rated Power	75 W
Control options	0–10 V, 2–2000 Hz, 4–20 mA, EtherNet/IP™, Fixed speed, Prime speed, PROFINET®
Alarms	Cover-open, Hardware fault, Over current, Over temperature, Software fault, Speed, Stall, Under/over voltage
Outputs	Fault, Tacho
External Inputs	Prime switch
Weight	1.7 - 2.4 kg
Weight	3.748 - 5.291 lbs
Location	Indoor, Enclosure
Ingress Protection	IP66 capable panel sealing
Humidity	80 % up to 31 °C (88 °F), decreasing linearly to 50 % at 40 °C (104 °F)
Noise	<60 dB(A)
Max. altitude	2000 m
Max. altitude	6561 ft
Standards	BS EN 55011-2016+A2-2021, BS EN IEC 61326-1-2021, CC 47CFR (Part 15), CSA C22.2 No. 61010-1-12/AMD1:2018, EN 61010-1:2010/A1:2019, IEC 61010-1:2010/AMD1:2016, UL 61010-1:2012/R:2019-07
Certification	CB Certificate, EMC, NRTL certification
Compatible tubing bore size	0.5, 0.8, 1.6, 3.2, 4.8, 6.4, 8 mm
Compatible tubing wall thickness	1.6, 2.4 mm

Outputs are for ADC version only. Alarms are for EtherNet/IP™ & PROFINET® versions only.

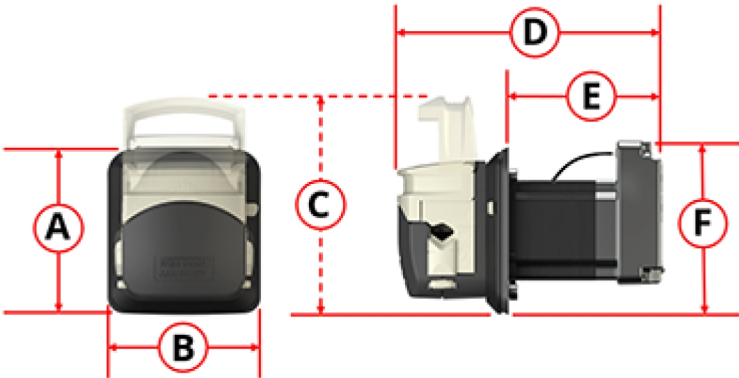
For detailed specifications of individual models refer to product reference manual or contact WMFTS representative.

Materials of construction

	300 DriveSure ADC/En/Pn
Pumphead body assembly	Glass filled polypropylene, Polyacrylamide—IXEF (PARA), Stainless steel
Pumphead rotor assembly	Electroless nickel plated hardened steel, Glass filled Nylon
Pumphead roller assembly	MoS2 filled Nylon 6 (Nylatron)
Motor	Aluminum, Plasma nitride coated stainless steel
Controller Housing	ABS/PC, Aluminum
Mounting plate assembly	Nitrile, Polyacrylamide (PARA)-halogen free, UL94 V-0 rated, Thermoplastic elastomer (TPE), Thermoplastic elastomer (TPE)

Information listed covers the complete range. For detailed specifications of individual models/components refer to product reference manual or contact WMFTS representative.

300 DriveSure ADC/En/Pn dimensions



Motor	A		B		C		D		E		F	
	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
Standard NEMA 24 stepper motor (most applications)	101	3.98	93	3.68	128	5.04	160	6.30	92	3.62	103	4.06
High torque NEMA 24 stepper motor (demanding applications)							190	7.48	123	4.82		

The 300 series has two drive options comprising a standard motor which covers most applications and a longer motor for applications requiring higher torque. Motor choice considerations include tube size, material, speed and pressure.

Specify motor type in product code or contact your local Watson-Marlow representative

Product codes



A	B	C	D	E	F	G	H
Product	Control	Cable length	Pumphead colour	Motor Type	Pumphead	Tube clamp	Tube wall thickness
0 = Complete pump	4 = ADC	1 = 1 m (3.28 ft) cable	0 = No pumphead	A = Standard NEMA 24 stepper motor	0 = No pumphead	0 = No pumphead	0 = No pumphead
6 = Drive only	8 = En (EtherNet/IP™)	3 = 3 m (9.84 ft) cable	1 = Standard colour	C = High torque NEMA 24 stepper motor	C = 313D/313D2	V = Variable	1 = 1.6 mm
	9 = Pn (PROFINET®)		2 = Black		D = 314D/314D2	C = Fixed 0.5 mm to 1.6 mm bore	2 = 2.4 mm
			3 = White			F = Fixed 3.2 mm bore	
						K = Fixed 4.8 mm bore	
						N = Fixed 6.4 mm to 8.0 mm bore	

Accessories and Spares	
Product	Product code
300 Series DriveSure Sealed Mounting Plate / Sensor	039.IPMP.DVS
DriveSure cable pack - 24 V power supply/USB-C - trials only *	009.24CP.DVS
DriveSure cable pack - 48 V power supply/USB-C - trials only *	009.48CP.DVS
1 m Power Cable DriveSure ADC/En/Pn	009.1PW.DVS
3 m Power Cable DriveSure ADC/En/Pn	009.3PW.DVS
1 m Control Cable DriveSure ADC	009.1CC.DVS
3 m Control Cable DriveSure ADC	059.9123.000
Ethernet Cable, RJ45 to RJ45, CAT 5e SHIELDED, 3m	059.9123.000
PROFINET® Cable, RJ45 to RJ45, CAT 5e SHIELDED, 3m	059.9128.000

*Cable packs do not include mains power lead. If required, order power leads suitable for your region.

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. The information contained in this docum

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