530 Drive with 520R **Pumphead**



500 series cased pump

Features and benefits

- Color display and intuitive menu structures provide visual status indication and minimal key presses
- Flow rates from 0.0006 GPH (0.004 ml/min) to 55.48 GPH (3.5 L/min)
- 520R, 520R2, 520REL, 520REM, 520REH, 520RET and 505L pumpheads available as standard, others available on request
- 2,200:1 speed control range from 0.1 rpm to 220 rpm in 0.1 rpm increments
- Keypad incorporates 3-level security PIN lock
- NEMA 2 (IP31) and NEMA 4X (IP66) cased pumps
- Dual voltage, 115 V/230 V 50/60 Hz
- Remote Analogue/Digital, RS232, RS485, PROFIBUS®, PROFINET®, SCADA and EtherNet/IP™ control options









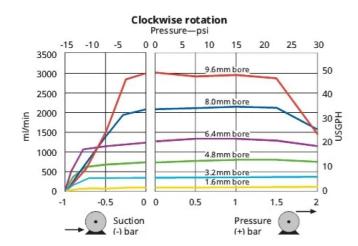


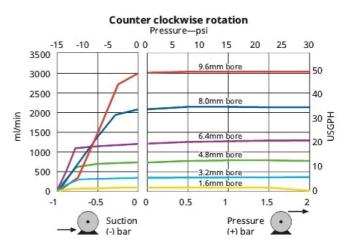




530 Drive with 520R Pumphead performance

520R twin sprung roller pumpheads for continuous 1.6 mm wall thickness tubing— Tube bore and flow rates — ml/min (USGPH)												
Tube material Speed 0.5mm 1.6mm 3.2mm 4.8mm 6.4mm 8.0mm												
Pumpsil®, GORE® STA-PURE® Pump Tubing – Series PCS, GORE® STA- PURE® Pump Tubing – Series PFL	0.1– 220rpm	0.004-9.5 (0- 0.15)	0.04-97 (0- 1.54)	0.18-390 (0- 6.18)	0.40-870 (0.01- 13.8)		1.10-2400 (0.02- 38)	NA				
Marprene®, Bioprene®, PureWeld XL®	0.1– 220rpm	0.004-9.0 (0- 0.14)	0.04-92 (0- 1.46)	0.17-370 (0- 5.86)	0.38-830 (0– 13.2)		1.10-2300 (0.02- 36.5)	NA				





Technical specifications

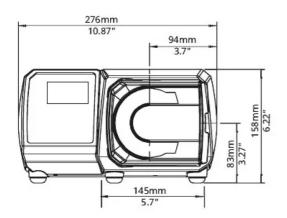
	530 Drive with 520R Pumphead
Pumphead number of rollers	2
Pumphead number of channels	1
Max. flow rate	2400 ml/min
Min. flow rate	0.004 ml/min
Max. flow rate	38.4 USGPH
Min. flow rate	0.0006 USGPH
Drive speed control ratio	2200:1
Drive speed	0.1 - 220 rpm
Operating temperature range	5 to 40 °C
Operating temperature range	40 to 104 °F
Weight	10.6 - 11.5 kg
Weight	23.4 - 25.4 lbs
Drive weight	9.82, 10.7 kg
Drive weight	21.6, 23.6 lbs
NEMA module weight	0.9 kg
NEMA module weight	2 lbs
Control types	EtherNet/IP™, PROFIBUS®, PROFINET®, Remote Analogue/Digital, RS232, RS485, SCADA
Drive control options	Bp, BpN, Du, DuN, DuS, En, EnN, Pn, PnN, S, SN, U, UN, US
Drive standards	CE, cETLus, C-Tick, IRAM, NSF/ANSI 61 (for Marprene tubing and loadsure elements), RoHS
Drive ingress protection	IP31, IP66, NEMA 2, NEMA 4X
Drive humidity	(Non-condensing) 80% up to 31°C (88°F), decreasing linearly to 50% at 40C (104F)
Drive noise	<70dBA at 1m
Max. altitude	2000 m
Drive power supply	115/230 V 1ph 50/60 Hz 135 VA
Compatible tubing bore size	0.5, 1.6, 3.2, 4.8, 6.4, 8 mm

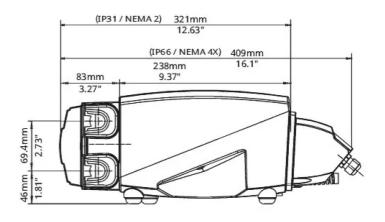
Materials of construction

	530 Drive with 520R Pumphead
Bearings	Stainless steel
Driveshaft	Electroless nickel plated carbon steel
Drain port assembly	Hytrel, PP (polypropylene)
Drive casework	Pressure die-cast aluminum LM24
Drive casework coating	Alocrom pre-treatment, Exterior grade polyester powder coat
Guide roller assembly	MoS2 filled Nylon 6 (Nylatron)
Drive keypad/HMI	Polyester
Drive rear blanking plate	Stainless steel 304
Pumphead body assembly	Acetal, Aluminum, Aluminum alloy, Brass, Polycarbonate (PC), Polyphenylene sulphide (PPS)
Pumphead guard	Polycarbonate (PC)
Pumphead roller assembly	MoS2 filled Nylon 6 (Nylatron), Polyphenylene sulphide (PPS), Stainless steel 316
Pumphead rotor assembly	Polyphenylene sulphide (PPS), Stainless steel 316
Pumphead track	Polyphenylene sulphide (PPS)
Seals	Neoprene, PTFE
Pumphead seals	Neoprene, PTFE
Switch-plate	Glass filled ABS plastic

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

Dimensions





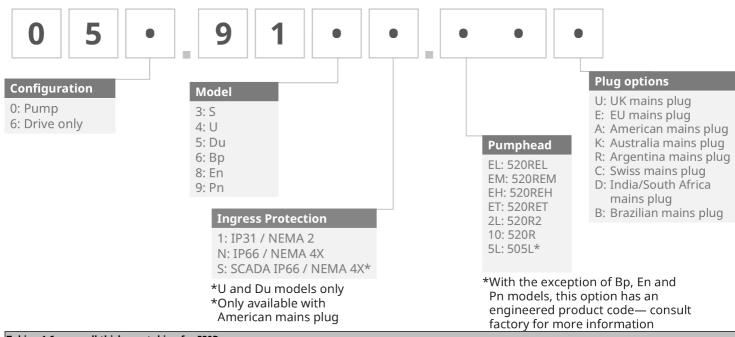
Control options	
	4/6

Key to p	oump drive	models																					
530S	530SN	530U	530U	N 5	30Du	530	DuN	5	30Bp	530B	pN	530	us	530D	uS	53	0En	530En	N.	530F	'n	5301	PnN
Standard	Standard IP66 / NEMA 4X	Universa	Unive IP66 / 4X	NEVAV C	Digital Univers		tal versal I MA 4X	P66 /	us Pum Profibu		us IP66	/ SCA	versal NDA / IP66 MA 4X	Digita Unive SCAD	rsal A / IP66	/ Eth	nerNet/IF		let/IP / NEMA 4)	PROF	-INET®	91	FINET® / / NEMA 4>
Manual	control																						
Pump d				!	530S	530SN	530	U 53	0UN	530Du	530D	uN	530Bp	530Bp	N 53	0US	530Du	S 530	En 53	0EnN	530	Pn !	530PnN
	keypad and co				✓	✓	✓	-	✓	✓	→		✓	✓		✓	✓		/	✓	_	/	✓
	flowrate or s				✓	✓	√	-	✓	v	→		✓	✓		✓	✓	_	/	✓		/	✓
	ration with ch	oice of flo	w units		√	√	\ \ \	-	√	√			✓	✓		√	√		/	✓	ļ ·	/	✓
	se function				✓ ✓	✓	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	_	<u> </u>	V	-			٠,	_	√	V	_	,		-	,	
Leak dete	art facility				_	✓ ✓	\ \ \	-	✓ ✓	✓ ✓			✓ ✓	\ \ \ \ \	_	✓ ✓	✓	_	/	✓ ✓	_	/	✓ ✓
	ng (Network (ontrol)				_	+ *	+	· ·	-	-		-	+ •	_	•	-	_	,	<u></u>	_	,	
	control	201111 017						_			_			_			_			Ť			•
Pump d								5309	5305	N 53011	530LIN	1 530	Du 5300	DUN 530	nBn 53	0RnN	1 530119	530Di	IS 530E	n 530	EnN	530Pr	530PnN
_	able Start/Sto	n leak de	tector a	nd press	ure sw	itch inni	ıt via	330.	3303						35p 33	оврі	33003	33000					
	losure or 5 V									'	✓	1	′	'					✓	'	'	✓	/
Configura	able Start/Sto	p, leak de	tector a	nd press	ure sw	itch inpu	ıt via										_	_					
	ustrial logic							_	1									_ <u> </u>		\perp			
	change and a		ual togg	gle input	via cor	tact clo	sure or			V	v	,	, ,	,									
	r 24 V industr change and a		ual todo	ale innut	via 110) V indu	trial	+	+	+		+		+	+		+	+	+	+	\dashv		1
logic	criarige and a	auto/man	uai togg	gie iriput	via i i c	v iiiuus	uiai										✓	✓					
	peration of N	/lemoDose	e (foot/h	nand-sw	itch or	logic inp	out)	T		1	V	7	,	,									1
Four con	figurable digi	tal status	outputs	through	24 V, 3	0 W rela	ıys		1	1	√	\top		,			1			\top			
Four conf	figurable digit	tal status	outputs	through	110 V	relays											V	✓					
Menu co	nfigurable log	ic outputs	5							✓		✓	,										
Remote p	ressure/flow	sensors																	✓		/	✓	✓
Analog	ue speed co	ontrol																					
Pump d	lrives						!	530S	530SN	530U 5	30UN	530D	น <mark>530Dเ</mark>	uN 530	Bp 530	BpN	530US	530Du	530E	n 530I	EnN 5	30Pn	530PnN
	figurable inpu			mA						v	✓	✓	✓				✓	✓					
	outputs; 0-1									V	√	✓	✓				✓	✓					
	nalogue inpu		•	ment of	diaphra	agm pur	nps)					✓						✓			_		
	quency outpu		1Z				_			/	✓	√	✓		_				+ ,	_			
	r inputs 4-20 r	nA*																	 			✓	✓
Security			F30C	FOOCN	 E 24	011 F		- I-24	· · · ·	F20D	ı En	0D:=	F20D-	AL F		F205	c	-205	F205.	- N I	F30D.	. le	20D N
Pump d	curity PIN loc		530S	530SN	530		BOUN	530	Du	530DuN	N 53	0Bp	530Bp		BOUS	5300		530En	530Er		530Pı	1 5.	30PnN
				✓		√	_		<u> </u>	✓		<u>√</u>		_	_		√	√		<u> </u>		_	√
	k commun		-205	FOOCNI					.						0116		c. -	205	E205.				200 11
Pump d			30S	530SN	530	U 53	DUN	530	Du :	530DuN	530	вр	530Bp	N 53	0US	530D		30En	530Er	IN	530Pr	1 5.	30PnN
	twork control					_		+	,	✓	+		+			<u> </u>	/					+	
	pump com		Drofib	c / E+k	a crNio	+/ID)			<u> </u>														
Pump d		ilialius (PIUID	us / Eti	ierive	L/IP)	EDOC	E206	N E20	11 52011	INI E20	D E	200N	EZOPo	EZOR	NI E	OUIC E	פחחייכ	EZOEn	EZOE	ani E	20Dn	530PnN
	S® DP V0						3303	3303	14 330	3300	111 230	Du 3	SUDUN	230Bh)IN 3.	5003 3	oupus	SSUEII	330EI	IIV 3	SUPII	SSUPTIN
	T® (CC-B & N	etload Cla	ess III)						-			\dashv		-	Ť	+	-				\dashv	√	
EtherNet		ctioud cio	133 111)									_							✓	_		•	l ·
	ication speed	ls from 9.6	kbits/s	up to 12	000 kb	its/s								V	_								
	speed: 10/100					-						\dashv				\top			√	1	\neg		
	speed: 100 M																					✓	V
Auto-det	ect bus speed													√	✓								
Speed set point													✓	✓	Ţ			✓	✓	_	✓	✓	
Speed feedback													✓	1	\perp			✓	✓		✓	√	
Flow calibration function									\perp		\perp		✓	✓	\perp			✓	✓	_	✓	✓	
Hours run								+		\perp	_		√	√	\perp			√	✓	-	√	√	
Revolution counter								-	+	_	\dashv		✓	✓	+			√	√	-	<u> </u>	V	
Leak dete								-	+	-	-	+		✓	✓	+			√	√	-	√	√
	level alarm								-	+	-	\dashv		✓	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	+			√	✓	_	√	√
Flow Tota	ic feedback						-		_	+-	-	\dashv		✓	✓	+			✓ ✓	✓ ✓	-	✓ ✓	✓ ✓
Sensor so									-	+	_	\dashv				+			✓ ✓	\ \ \ \ \	-	<u>√</u>	V
	g (Network Co	ontrol)**							+	+	+	\dashv				+			\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	7	-	-	V
perioni	5 (•	<u> </u>

 $^{{\}tt *Range\ of\ 3rd\ party\ pressure/flow\ sensors\ supported-see\ compatible\ sensor\ list\ on\ www.wmftg.com/literature}$

^{**}Dispensing (Network/Manual) - Store up to 100 recipes locally or via network control. Features include volume, flow rate, anti-drip, ramp and time delays. Run these as batches using local, network or manual keypad control.

Product codes



Tubing 1.6 mm wall thickness tubing for 520R												
Tube bore	Tube	Pumpsil®	PureWeld XL®	Bioprene®	STA-PURE® PCS	STA-PURE® PFL	Marprene®					
0.5mm (1/50in)	112	913.A005.016	941.0005.016	933.0005.016	NA	NA						
0.8mm (1/32in)	13	913.A008.016	941.0008.016	933.0008.016	INA INA	902.0008.016						
1.6mm (1/16in)	14	913.A016.016	941.0016.016	933.0016.016	961.0016.016	966.0016.016	902.0016.016					
3.2mm (1/8in)	16	913.A032.016	941.0032.016	933.0032.016	961.0032.016	966.0032.016	902.0032.016					
4.8mm (3/16in)	25	913.A048.016	941.0048.016	933.0048.016	961.0048.016	966.0048.016	902.0048.016					
6.4mm (1/4in)	17	913.A064.016	941.0064.016	933.0064.016	961.0064.016	966.0064.016	902.0064.016					
8.0mm (5/16in)	18	913.A080.016	941.0800.016	933.0080.016	961.0080.016	966.0080.016	902.0080.016					

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

wmfts.com/global



06 June 2024