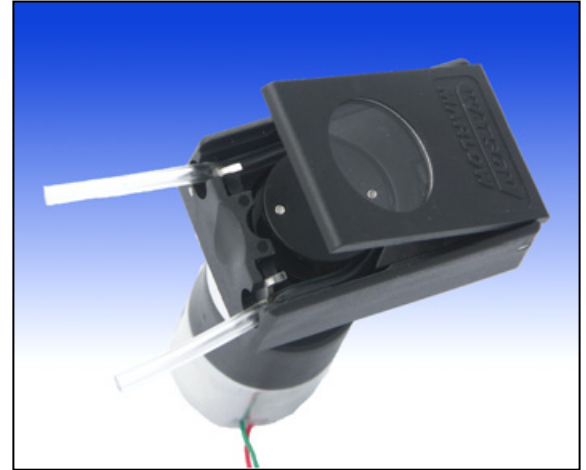


tier 1

400F/A single channel precision pump

Technical information and features

- Instrument quality in previously unseen size 31 x 48 mm (1.2"x 1.9")
- Flow rates from 30 µl/min to 30 ml/min
- Precision dispenses down to one microliter
- Combines easy tube loading with safe closed design
- Spring loaded track for precision and extended tube life
- Connects to virtually any motor
- For 0.85 mm tube wall thickness
- Tube holder for continuous tubing or for use with tube elements



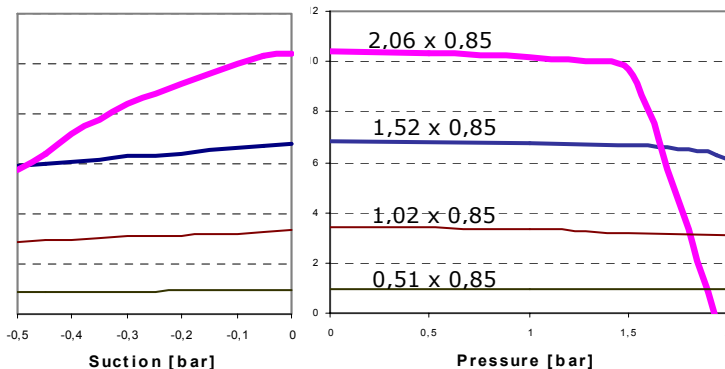
400F/A The smallest peristaltic pump!

Flow Rates (ml/min) Santoprene, 0.85mm wall, zero pressure and no suction height

Tube bore [mm]	(ml/rev)	Speed [rpm]							
		13	26	35	47	74	155	290	
0,25	0,0025	0,03	0,07	0,09	0,12	0,19	0,39	0,73	
0,51	0,0097	0,13	0,25	0,34	0,46	0,72	1,5	2,8	
0,76	0,020	0,26	0,52	0,70	0,94	1,5	3,1	5,8	
1,02	0,034	0,44	0,88	1,2	1,6	2,5	5,3	9,9	
1,22	0,046	0,60	1,2	1,6	2,2	3,4	7,1	13	
1,52	0,068	0,88	1,8	2,4	3,2	5,0	11	20	
2,06	0,104	1,4	2,7	3,6	4,9	7,7	16	30	

20 tube sizes between 0.25 and 2.06 are suitable and available.
All flow figures are nominal and may vary about ±10% due to tube tolerances

Pressure Chart Santoprene tubing @100 rpm



400F/A

Materials of Construction

Pump house	Acetal (black)
Rotor	Acetal (black)
Window	PET
Rollers (4 ea)	Acetal (black)
Track	Acetal (black)
Shafts	Stainless steel
Springs	Stainless steel

Product Codes

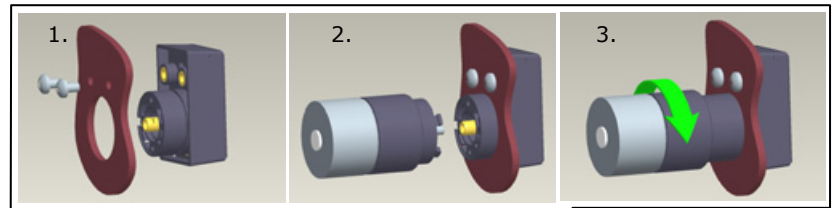
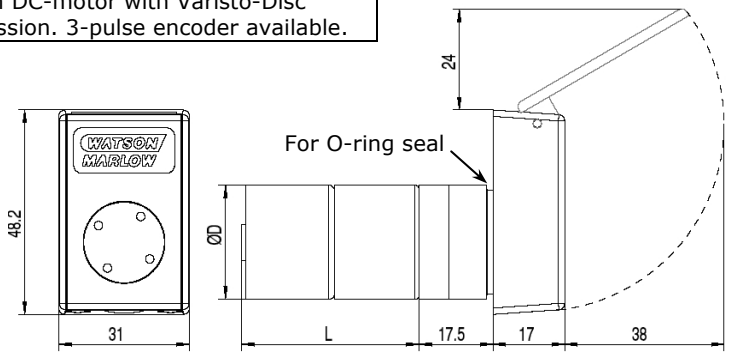
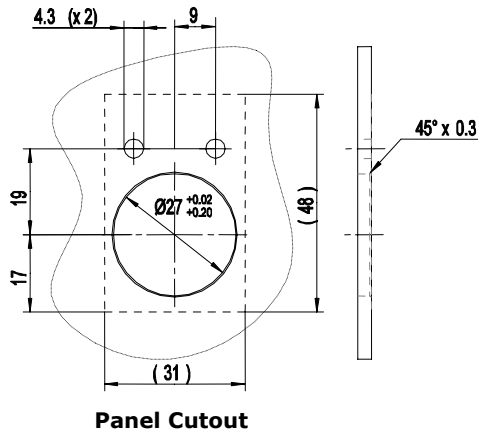
400FD/A1 Brush DC motor 12V					
Motor type	Speed nominal [rpm]	Current nominal [mA]	Track	Pumps for Continuous tubing	Pumps for Tube elements
L	13	<30	standard	040.K91A.B1C	040.K91A.T1C
			+pressure	040.K91A.B15	040.K91A.T15
L	26	~35	standard	040.KC1A.B1C	040.KC1A.T1C
			+pressure	040.KC1A.B15	040.KC1A.T15
L	47	~55	standard	040.KK1A.B1C	040.KK1A.T1C
			+pressure	040.KK1A.B15	040.KK1A.T15
HL	74	~120	standard	040.KN1A.B1C	040.KN1A.T1C
			+pressure	040.KN1A.B15	040.KN1A.T15
HV	155	~180	standard	040.QR1A.B1C	040.QR1A.T1C
			+pressure	040.QR1A.B15	040.QR1A.T15
HV	290	~250	standard	040.QT1A.B1C	040.QT1A.T1C
			+pressure	040.QT1A.B15	040.QT1A.T15

400FD/A1 Brush DC motor 24V					
Motor type	Speed nominal [rpm]	Current nominal [mA]	Track	Pumps for Continuous tubing	Pumps for Tube elements
HL	35	<50	standard	040.PG1A.B1C	040.PG1A.T1C
			+pressure	040.PG1A.B15	040.PG1A.T15
HL	74	~60	standard	040.PN1A.B1C	040.PN1A.T1C
			+pressure	040.PN1A.B15	040.PN1A.T15
HV	155	~90	standard	040.PR1A.B1C	040.PR1A.T1C
			+pressure	040.PR1A.B15	040.PR1A.T15
HV	290	~125	standard	040.PT1A.B1C	040.PT1A.T1C
			+pressure	040.PT1A.B15	040.PT1A.T15

+pressure track recommended with PVC-tubing and with >Ø1,5mm Santoprene and Silicone tubing.
Some tubing-speed combinations may not be suitable for the continuous tubing models.

Motors

Motor	ØD	L	Description
L	27	13rpm: 47mm	Small metal brush DC-motor with Varistor-Disc noise suppression.
		26, 47rpm: 42mm	
HL	30	35, 74rpm: 71mm	Carbon brush DC-motor with Varistor-Disc noise suppression. 3-pulse encoder available.
HV	30	155rpm: 71mm	Carbon brush DC-motor with Varisto-Disc noise suppression. 3-pulse encoder available.
		290rpm: 66mm	



Assembly made easy with bayonet motor adaptor

Customised Solutions

If you don't find exactly what you are looking for in this data sheet a customised product could be the solution.

These pumps could be supplied without a drive or with alternative drives and gear ratios, for alternative tube sizes, in alternative colours or materials, fitted on a customised mounting panel and more.

Belgium
Telephone +32 (0) 2 481 60 57
Fax: +32 (0) 2 481 60 58
info@watson-marlow.be

France
Telephone +33 (0) 2 37 38 92 03
Fax: +33 (0) 2 37 38 92 04
info@watson-marlow.fr

Germany
Telephone +49 (0) 2183 42040
Fax: +49 (0) 2183 82592
info@watson-marlow.de

Italy
Telephone +39 030 6871184
Fax: +39 030 6871352
info@watson-marlow.it

Netherlands
Telephone +31 (0) 10 462 1688
Fax: +31 (0) 10 462 3486
info@watson-marlow.nl

South Africa
Telephone +27 11 794 1921
Fax: +27 11 794 1250
info@wmbpumps.co.za

United Kingdom
Telephone +44 (0) 1326 370370
Fax: +44 (0) 1326 376009
support@watson-marlow.co.uk

United States of America
Telephone 800 282 8823
Fax: 978 658 0041
support@wmbpumps.com



W-M Alitea AB

Sweden
Telephone +46 8 556 556 00
Fax: +46 8 556 556 25
info@alitea.se

See www.alitea.se for more information about our products.
W-M Alitea reserves the right to alter specifications without notice