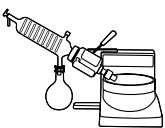
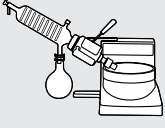


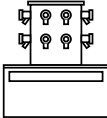
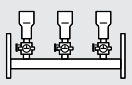



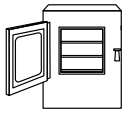





Pump Quick Selection Chart | For Common Lab Applications

APPLICATION	WELCH VACUUM PUMPS & SYSTEMS	FLOW RATE X VACUUM	UNIT PHOTO	MODEL	PAGE
Rotovap Volatiles, Low B.P. B.P. <100°C Samples 0-5 Liter 	Self Cleaning System with regulator, gauge, condensate jars	35 l/min. 9 torr (12mbar)		202501	6 - 8
	DRYFAST PTFE Pump	25 l/min. 9 torr (12mbar)		2034B-01	
Rotovap DMF, Toluene, other non-volatiles Samples 0-5 Liter 	Self Cleaning System programmable w/condensate catchpots	35 l/min. 2 torr (2.7mbar)		202701	6 - 8
	DRYFAST ULTRA PTFE Pump	35 l/min. 2 torr (2.7mbar)		2042B-01	
Concentrator DNA Pelleting SpeedVac® & CentriVap® 	DRYFAST PTFE Pump	35 l/min. 9 torr (12mbar)		2044B-01	15
	DRYFAST ULTRA PTFE Pump	35 l/min. 2 torr (2.7mbar)		2042B-01	
	Welch High Capacity PTFE Pump	100 l/min. 6 torr (8.0mbar)		2054B-01	
Vacuum Manifold Schlenk Line 	DuoSEAL® & CHEMSTAR® Pumps	25 l/min. <1 millitorr (1.3x10 ³ mbar)		1400B-01 or 1400N-01	10 - 11
	GEM® System	31 l/min. 100 millitorr (0.13mbar)		8890A-70	
Freeze Dryer 	CRVpro, Your Robust Vacuum Pump	158 l/min.		3081-01	16 - 17
	CHEMSTAR Low RPM Pump	160 l/min.		1402N-01	
	Direct drive pump with integral oil filtration system	173 l/min.		8917A-80	
Filtration 	Welch Light Chemical Duty Pump	37 l/min.		2019B-01	18 - 19
	DRYFAST - Chemical Duty Pump	35 l/min.		2014B-01	
	WOB-L - Standard Duty Pump	45 l/min.		2546B-01	
Aspiration/Automation Cell Harvester Plate Washer 	WOB-L - Standard Duty Pump	100 l/min. 27.6 in. Hg (80mbar)		2567B-50	12 - 13
	DRYFAST - Chemical Duty Pump	70 l/min. 28.5 in. Hg (47mbar)		2047B-01	
Cell Culture Aspiration 	Welch Aspiration Station With gauge, regulator, 1200 ml autoclavable trap with liquid blockade system	34 l/min. 27.2 in. Hg (93mbar)		2515B-75	12 - 13
Vacuum Oven Drying Degassing 	WOB-L - Standard Duty Pump	100 l/min.		2581B-50	22 - 23
	DRYFAST - Chemical Duty Pump	35 l/min.		2042B-01	
	Welch High Capacity PTFE Pump	100 l/min.		2054B-01	
	CRVpro Pump	160 l/min.		3061-01	
Gel Dryer 	DRYFAST - Chemical Duty Pump	35 l/min.		2014B-01	14

Model Selectors

Look for the Model Selector Charts in each Application Section for further pump selection guidance.



Model
MPC 090 E



Model
2522



Model
2014

Specifications &
Ordering - p. 28, 30, 44

- Flow rates available meet number of filter holders
- Range of built-in accessories and head/diaphragm materials
- Models for pressure filtration
- Type to meet your application and budget needs

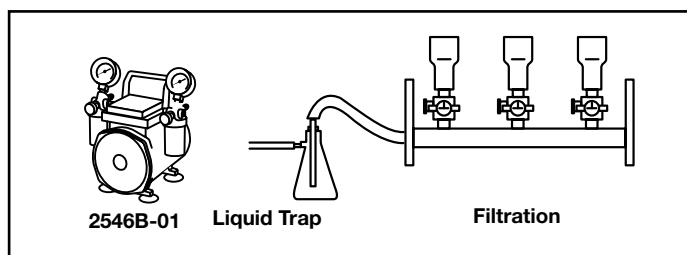
The Wob-I® oil-free vacuum pumps employ an aluminum piston with PTFE seal and are loaded with powerful features for vacuum or pressure filtration. The diaphragm pumps are available in different head/diaphragm materials to handle a range of chemical vapors evolved during filtrations. With these two pump mechanisms and range of materials available, Welch can offer a pump to fit your specific application and budget needs. A modest vacuum of 40 torr (53 mbar) to 200 torr (266 mbar) is normally sufficient (26 in. Hg to 29.6 in. Hg) for most vacuum filtration applications. Free air displacement requirement for vacuum filtration is dependent on the filter size, leak rate, condition of the filter cake, and number of filter holders. Pressure filtration normally requires from 2 to 6 bar (30 PSIG to 88 PSIG).

Models 2522, 2534, 2546 These single headed, Wob-I vacuum pumps are standard duty dry pumps and are effective for filtering aqueous or buffer solutions that are not strongly acidic or basic. Flow ranges from 16 lpm to 45 lpm@60Hz and vacuum from 26 in. Hg (133 mbar) to 27.6 in. Hg (80 mbar). Features on these models include vacuum and pressure regulators with gauges, liquid trap at inlet with ball valve to prevent accidental ingestion of solution into pump, and a silencer on outlet for noise reduction.

Model 2567 A twin head Wob-I vacuum is a standard duty pump with a flow of 100 lpm@60Hz and vacuum to 27.6 in. Hg (80mbar). Configured with an inlet catch-pot, vacuum regulator/gauge and exhaust silencer, this pump can handle up to a 6 filter holder manifold.

Model MPC 090 E Diaphragm pump configured for filtering weak acid/base solutions. Pump comes with inlet regulator and catchpot. Flow of 16.7 lpm and ultimate vacuum of 27 in. Hg(100 mbar). Option available with power adapter to connect with a vehicle to permit use in field.

Models 2050, 2060 These Gemini diaphragm pumps are configured for lab or field usage to do sampling or filtration. Gemini pumps have polyaryamide heads and viton diaphragms, tubing and valves making them ideal with water, light organic solvents and weak acids/bases. Flow of 13 lpm and vacuum to 22 in. Hg (266 mbar). Model 2050 is pump only. Model 2060 comes with vacuum gauge/regulator assembly. Includes automobile power adapter for field use (12V DC to AC).



Application Note | Protecting vacuum pump from filtrate

The most common reason filtration pumps fail is because of accidental liquid ingestion into the pump. The filtrate collected in filtering flask overfills and filtrate is suctioned into the vacuum pump. Alternately, the funnel end located in the filtering flask is too close to the flask exit port. Welch recommends a catchpot or flask be located between the pump and the filtering flask to act as a liquid trap.

Standard Duty Dry Vacuum Pumps | WOB-L Piston



Model
2511

Models
2522 / 2534

Model
2546

Models
2567 / 2561

Specifications

Vacuum/Pressure Pumps

Model	2511	2522	2534	2546	2561
Free Air Displacement cfm (l/min.)@60Hz	0.39 (11)	0.76 (22)	1.2 (34)	1.6 (45)	2.3 (65)
m ³ /hr (l/min.)@50Hz	0.55 (9.2)	1.1 (18)	1.7 (28)	2.3 (38)	3.4 (57)
Ult. Vac. Pressure, torr(mbar)	219 (292)	100 (133)	70 (93)	60 (80)	5 (6.7)
Max Pressure PSIG (pascal)	33 (3.3 x 10 ⁵)	100 (106)	50 (5 x 10 ⁵)	100 (106)	---
Maximum Vacuum, in. Hg	21.3	26	27.2	27.6	29.8
Motor Horsepower (watts)	1/30 (25)	1/8 (93)	1/8 (93)	1/4 (190)	1/3 (250)
Tubing Needed, I.D. in. (mm)	3/16 (5)	3/16 (5)	3/16 (5)	3/16 (5)	1/4 (7)
Intake/Exhaust Thread NPT	3/16 in. Hose	1/4	1/4	1/4	1/4
Weight lbs.(kg)	5 (2.3)	11.7 (5.3)	11.7 (5.3)	13.8 (6.3)	16.5 (7.5)
Overall Dimensions L x W x H in. (cm)	7.6x4.5x7.5 (19x11x19)	8.1x8.8x10 (21x22x25)	8.1x8.8x10 (21x22x25)	10x7.5x9 (25x19x8)	17.3x6.5x10.5 (44x17x27)
Ship Weight, lbs. (kg)	6 (2.7)	17 (7.7)	17 (7.7)	17 (7.7)	24 (10.9)
Shipping Carton Dimensions L x W x H in. (cm)	11x7x8.3 (28x18x21)	15.3x12.3x12.7 (39x31x32)	15.3x12.3x12.7 (39x31x32)	15.3x12.3x12.7 (39x31x32)	21x12x15 (53x30x38)

Ordering Information

Wired for 115V, 60Hz, 1 Ph with N. American 115V Plug	2511B-01 ³	2522B-01 ⁴	2534B-01 ⁴	2546B-01 ⁴	2561B-50
Wired for 230V, 60Hz, 1 Ph with N. American 230V Plug	---	---	2534C-01 ^{4,7}	2546C-01 ^{4,7}	---
Wired for 230V, 50Hz, 1 Ph2. with Cont. Euro.(Schuko) Plug	2511C-02 ³	2522C-02 ^{4,6}	2534C-02 ^{4,6,7}	2546C-02 ^{4,6,7}	2561C-50 ^{6,7,8}
Wired for 100V, 50/60Hz, 1 Ph with a plug	2511C-05 ^{3,5}	2522C-05 ^{4,5}	---	---	---

Applications

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6. Glove Box	26

Vacuum/Pressure Standard Duty Dry Vacuum Pumps

- Ultimate to <5 torr (6.7 mbar)
- Lightweight, compact pump
- Inlet liquid trap with vacuum regulator

Oil-free operation for reduced maintenance. These WOB-L piston pumps have a high water vapor tolerance. Pumps come with inlet liquid trap, mounted vacuum gauge and vacuum regulator (except 2511 and 2562).

Note: Standard Duty Dry Pumps are not recommended for pumping organic, acidic or basic vapors.



Model
2585B-50

Standard Duty Dry Vacuum Pumps | WOB-L Piston



Model
2562B-01



Models
2585 / 2581



Model
2511B-75



Model
2515B-75

Standard Duty Vacuum Pumps				Aspiration/Filtration Systems	
2562	2567	2581	2585	2511	2515
2.3 (65)	3.5 (100)	3.5 (100)	7.1 (201)	0.39 (11)	1.2 (34)
3.4 (57)	4.9 (83)	4.9 (83)	10 (168)	0.55 (9.2)	1.7 (28)
7.5 (10)	60 (80)	5 (6.7)	60 (80)	219 (292)	70 (93)
---	---	---	---	33 (3.3 x 105)	---
29.6	27.6	29.8	27.6	21.3	27.2
1/3 (250)	1/3 (250)	1/3 (250)	1/3 (250)	1/30 (25)	1/8 (93)
3/8 (10)	1/4 (7)	1/4 (7)	1/4 (7)	3/16 (5)	3/16 (5)
1/4	1/4	3/8	3/8	3/16 in. Hose	1/4
16.5 (7.5)	16.5 (7.5)	24.5 (11.1)	24.5 (11.1)	5.7 (2.6)	13.2 (6.0)
17.0x7.5x12 (43x19x31)	15.0x10x10 (38x25x25)	17x7.5x12 (43x42x19)	17x7.5x12 (43x42x19)	11.0x8.3x10.0 (28x21x25)	14.8x8.3x10.0 (37.5x21x25.5)
24 (10.9)	24 (10.9)	32 (14.5)	32 (14.5)	11.0 (5)	14.8 (6.7)
21.5x12.5x16 (55x32x31)	21x12x15 (53x30x38)	21x12x15 (53x30x38)	21x12x15 (53x30x38)	15.3x12.3x12.7 (39x31x32)	21x12x15 (53x30x38)
2562B-01	2567B-50	2581B-50	2585B-50	2511B-75	2515B-75
---	---	---	---	---	---
---	2567C-50 ^{6, 7, 8}	2581C-50 ^{6, 7, 8}	2585C-50 ^{6, 7, 8}	2511C-75 ^{6, 7, 8}	2515C-75 ^{6, 7}
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Notes:

- All models are recommended for pumping vapors of aqueous solutions including buffers, but not for acidic, basic or organic vapors or gases.
- Units supplied with CE marking.
- Model 2511 can deliver 33 PSIG (3.3 x 10⁵ pascal).
- Models 2522, 2534 and 2546 come with vacuum (and pressure) regulator, vacuum (and pressure) gauge, silencer and water trap. Models 2522 and 2546 can deliver 100 PSIG (10⁶ pascal). Model 2534 can deliver 50 PSIG (5 x 10⁵ pascal).
- Comes with PSE mark.
- Included is UK and Schuko cord sets.
- Motor can operate at 230V, 50/60Hz, 1Ph.
- For 230V in US, order cord 61-8707.

Aspiration / Filtration Systems

Systems collect waste into 1.2 Liter autoclavable reservoir. Both models enable vacuum measurement and regulation. Reservoirs are protected from overflow by float valve; inlet line hydrophobic filter further protects pump. Includes 6 ft. tubing and 2 filters. See p. 10 for more information. For accessories, like pipettor system and foot switches, see page 78.



Model
2511B-75



Model
2515B-75

For a Complete System

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