

Diaphragm Vacuum Pumps | DRYFAST® Chemical Duty Pumps



See specific Cat no. for specific listing.

Model 2019

Model 2014 DryFast

Models 2034 / 2044 / 2037 / 2047 DRYFAST

Specifications	Ultimate Vacuum Pressure 9 torr to 40 torr					
Model	2019	2014	2034	2044	2037	2047
Free Air Displacement						
cfm(l/min.) @60Hz	1.3 (37)	1.2 (35)	0.9 (25)	1.2 (35)	1.8 (50)	2.5 (70)
m ³ /hr(l/min.) @50Hz	1.9 (31)	1.75 (29)	1.25 (21)	1.75 (29)	2.5 (42)	3.5 (58)
Ult. Vac. Pressure, torr(mbar)	150 (200)	40 (53)	9 (12)	9 (12)	35 (47)	35 (47)
Maximum Vacuum, in. Hg	24	28.3	29.6	29.6	28.5	28.5
Motor Horsepower - HP(watts)	1/15	1/5 (150)	1/5 (150)	1/5 (150)	1/5 (150)	1/5 (150)
Adjustable Vac./Gas Ballast	No	Yes	Yes	Yes	Yes	Yes
Tubing Needed, I.D. in.(mm)	1/4 (7)	1/4 (7)	1/4 (7)	1/4 (7)	1/4 (7)	1/4 (7)
Intake(Exhaust) Thread NPT	1/4 NPT	M14 (1/8)	M14 (1/8)	M14 (1/8)	M14 (1/8)	M14 (1/8)
Weight lbs.(kg)	10.2 (4.6)	15.0 (6.8)	21.25 (9.6)	21.25 (9.6)	21.25 (9.6)	21.25 (9.6)
Overall Dimensions LxWxH in.(cm)	8.8x5.0x8.8 (22x13x22)	12x7.0x8.3 (31x 18x2)	13.8x6.8x8.8 (35x17x22)	13.8x6.8x8.8 (35x17x22)	13.8x6.8x8.8 (35x17x22)	13.8x6.8x8.8 (35x17x22)
Ship Weight, lbs.(kg)	10.2 (4.6)	19 (8.6)	25 (11.3)	25 (11.3)	25 (11.3)	25 (11.3)
Shipping Carton Dimensions LxWxH in.(cm)	16x12x12.8 (41x30x33)	21x14x15 (52x35x37)	21x14x15 (52x35x37)	21x14x15 (52x35x37)	21x14x15 (52x35x37)	21x14x15 (52x35x37)
Ordering Information						
Wired for 115V, 60Hz, 1 Ph with N. Amer. 115V Plug	2019B-01 UL	2014B-01 CSA	2034B-01 CSA	2044B-01 CSA	2037B-01 CSA	2047B-01 CSA
Wired for 230V, 50/60Hz, 1Ph, w/UK and Schuko cord sets included ¹	2019C-02 CE	2014C-02 CE	2034C-02 CE	2044C-02 CE	2037C-02 CE	2047C-02 CE
Wired for 100V, 50/60Hz for Japan	----	2014C-05	2034C-05	2044C-05	---	---

Notes: 1. 230V in US also requires Cord 61-8707 2. For 8 mm Hose Barb, Order 710798

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DryFast Diaphragm Vacuum Pumps

- Chemical Resistant
- Oil Free

Tuneable Vacuum

Model 2019 PTFE coated head for filtration of moderate solvents

DRYFAST models 2014, 2034, 2044, 2037, 2047 & DryFast Ultra models 2032, 2042. All major parts in contact with vapor are constructed of corrosion resistant PTFE and perfluoro plastic materials. Models comes standard with tuneable vacuum control.

Model 2163 Coated heads for moderate solvent vapors

Models 2052, 2054, 2062, 2064 & 2067 Wetted parts are made of PTFE and other fluorinated plastics. High flow models are commonly used for scale-up operations.



Diaphragm Vacuum Pumps | DRYFAST® Chemical Duty Pumps



**Models
2032 / 2042
DRYFAST Ultra**



**Models
2052 / 2054**



**Models
2163 / 2062 / 2064 /
2067**

Coated Heads	Flow Rate > 100 L/min				Ultimate Vacuum Pressure ≤ 2 torr			
2163	2054	2064	2067	2032	2042	2052	2062	
6.1 (173)	3.4 (100)	6.1 (173)	7.8 (221)	0.9 (25)	1.2 (35)	2.3 (65)	4.2 (119)	
----	----	----	----	1.25 (21)	1.75 (29)	----	----	
6 (8)	6 (8)	6 (8)	56 (75)	2 (2.7)	2 (2.7)	1.5 (2)	1.5 (2)	
29.7	29.7	29.7	27.72	29.85	29.85	29.9	29.9	
0.5/0.6 (370/440)	1/2 (370)	0.5/0.6 (370/440)	0.5/0.6 (370/440)	1/5 (150)	1/5 (150)	0.53 (390)	0.53 (370)	
No	No	No	No	Yes	Yes	No	No	
hose connector available	1/4 (8)	hose connector available	hose connector available	1/4 (7)	1/4 (7)	1/4 (8)	1/4 (8)	
NW 16 - 1/4" NPT ²	NW 16 - 1/4" NPT ²	NW 16 - 1/4" NPT ²	NW 16 - 1/4" NPT ²	M14(1/8)	M14(1/8)	NW 16 - 1/4" NPT	NW 16 - 1/4" NPT	
72.3 (32.8)	40.3 (18.3)	72.3 (32.8)	72.3 (32.8)	21.25 (9.6)	21.25 (9.6)	40.3 (18.3)	72.3 (32.8)	
21x11x12 (53x28x31)	9x15x7 (23x38x18)	21x11x12 (53x28x31)	21x11x12 (53x28x31)	13.8x6.8x8.8 (35x17x22)	13.8x6.8x8.8 (35.2x17x22)	9x15x7 (23x38x18)	21x11x12 (53x28x31)	
88.2 (40.1)	48.5 (22)	88.2 (40.1)	88.2 (40.1)	25 (11.3)	25 (11.3)	49.8 (22.6)	40.3 (18.3)	
23.6x15.8x16.1 (60x40x41)	18.9x12.6x11.8 (48x32x30)	23.6x15.8x16.1 (60x40x41)	23.6x15.8x16.1 (60x40x41)	21x14x15 (52x35x37)	21x14x15 (52x35x37)	10.2x16.6x7.5 (26x42x19)	9.1x15x6.7 (23x38x16.9)	
2163B-01 CE	2054B-01 CE	2064B-01 CE	2067B-01 CE	2032B-01 CSA	2042B-01 CSA	2052B-01 CE	2062B-01 CE	
2163C-02 CE	2054C-02 CE	2064C-02 CE	2067C-02 CE	2032C-02 CE	2042C-02 CE	2052C-02 CE	2062C-02 CE	
----	----	----	----	2032C-05	2042C-05	----	----	

For a Complete System

Inlet/Exhaust Separator Jars
230 ml glass jar assembly attaches to pump intake or exhaust to capture ingested liquids. See page 79 for replacement Jars.



1423B

Pump Model	CAT. No.
All DryFast models	1423B

Digital Vacuum Regulator

- Rack mountable
- Variable vacuum control

The Digital Vacuum Regulator works with Welch DryFast™ pumps or any brand dry pump with flow up to 35 l/min torr vacuum ranging from 1 torr(1.3 mbar) to atmosphere. See p. 76 for more information.



Pump Model	CAT. No.
2014, 2034, 2032, 2044, 2042	1640A-01



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Diaphragm Vacuum Pumps | MPC Chemical Duty



Model
MPC 090 E



Models
MPC 095 Z / MPC 110 E
MPC 105 T



Model
MPC 101 Z

CE All product listings on this page CE listed.

Specifications

Model	MPC 090 E	MPC 095 Z	MPC 110 E	MPC 101 Z	MPC 105 T
Number of heads / stages	2 / 1	2 / 2	2 / 1	2 / 2	4 / 3
Free Air Displacement m ³ /h(L/min)@50Hz	1(15)	0.5(8)	0.9(15)	1.0(16.7)	1.2(20)
cfm(L/min)@60Hz	0.5(15)	0.3(9.1)	0.6(16.6)	0.6(18)	0.7(20)
Ultimate pressure, mbar(torr)	100(75)	5(3.8)	60(45)	8(6)	2(1.5)
Maximum Vacuum, in. Hg	27	29.8	28.2	29.7	29.9
Max. overpressure, bar	----	----	----	----	----
IN / EX hose connector	DN 6 / silencer	DN 8	DN 8	DN 8	DN 8
Tubing Needed, I.D. mm(in.)	6(0.24)	8(0.32)	8(0.32)	8(0.32)	8(0.32)
Intake(Exhaust) Thread NPT	-(-)	-(1/8)	1/8(1/8)	1/4(1/4)	-(-)
Sound level, dB(A)	<45	44	44	45	44
Motor Power, watts(HP)	20(0.03)	68(0.09)	68(0.09)	60(0.08)	68(0.09)
Type of motor protection, IP	20	42	42	54	42
Weight, lbs.(kg)	5.1(2.3)	13.8(6.3)	13.8(6.3)	14.3(6.5)	16.5(7.5)
Overall Dimensions LxWxH in.(cm)	4.5x6.5x 5.7 (12x 17x 15)	9.3x5.5x 10.9 (24x14x 28)	9.3x5.5x 10.9 (24x14x 28)	7.7x9.3x 5.7 (20x 24x 15)	9.3x5.5x12.9 (24x14x33)
Ship Weight, lbs.(kg)	6.6(3)	17.6(8)	17.6(8)	19.8(9)	22.1(10)
Shipping Carton Dimensions LxWxHin. (cm)	15.7x11.8x6.7 (40x30x17)	11.8x11.8x15.7 (30x30x40)	11.8x11.8x15.7 (30x30x40)	16.1x10.2x9.8 (41x26x25)	11.8x11.8x15.7 (30x30x40)

Ordering Information

230V, 50/60Hz, 1 Ph ¹	----	----	----	412522	----
115V, 50/60Hz, 1 Ph ²	----	----	----	412522-01	----
115/230V, 50/60Hz , 1 Ph ³	----	----	----	----	----
90-260V, 50/60Hz ⁴	412021	412422-02	412421-02	----	412443-02
230/400V, 50/60Hz , 3 Ph ⁶	----	----	----	----	----

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MPC Diaphragm Vacuum Pumps

- Chemical Resistant
- Oil Free

MPC models use PTFE and other fluorinated plastics for the wetted parts to allow aggressive acids and vapors to be pumped. All two-stage and three-stage MPC pumps come standard with gas a ballast valve.

Model MPC 302 Z uses a patented pump head design to significantly improve performance. Optimized construction of the pump heads allows the MPC 302 Z to achieve a 17% higher pumping speed in the application critical vacuum range compared to similar products. Besides the pumping speed the ultimate vacuum pressure is improved as well to 5 mbar(3.8 torr).

Gas Ballast



Diaphragm Vacuum Pumps | MPC Chemical Duty



Model
MPC 201 T



Model
MPC 301 E



Models
MPC 301 Z / MPC 302 Z
MPC 601 E



Models
MPC 301 Z ef

MPC 201 T	MPC 301 E	MPC 301 Z	MPC 302 Z	MPC 301 Z ef Ecoflex	MPC 601 E
4 / 3	1 / 1	2 / 2	2 / 2	2 / 2	2 / 1
2.0(33)	2.3(38)	2.3(38)	2.6(43)	2.6(43)	3.8(63)
1.3(36)	1.5(41)	1.5(41)	1.8(52)	1.6(43)	2.5(70)
2(1.5)	75(56.3)	8(6)	<5(3.8)	8(6)	75(56.3)
29.9	27.7	29.7	29.8	29.7	27.7
----	----	----	----	----	----
DN 8	DN 8	DN 8	DN 8	DN 8	DN 8
8(0.32)	8(0.32)	8(0.32)	8(0.32)	8(0.32)	8(0.32)
1/4(1/4)	-(-)	-(-)	-(-)	-(-)	-(1/4)
45	45	45	45	44	45
90(0.12)	180(0.25)	180(0.25)	180(0.25)	200(0.27)	180(0.25)
54	54	54	54	54	54
22.7(10.3)	19.6(8.9)	24.7(11.2)	24.7(11.2)	34.2(15.5)	24.7(11.2)
7.9x 10.2x5.9 (20x26x15)	10.2x6.4x9.9 (26x16x25)	9.1x10.4x6.7 (23x27x17)	9.1x10.4x6.7 (23x27x17)	10.2x12.2x7.5 (26x31x19)	9.1x10.4x6.7 (23x27x17)
28.7(13)	26.5(12)	30.9(14)	30.9(14)	39.7(18)	30.9(14)
16x10x10 (41x26x25)	14x10x12 (35x25x30)	19x13x12 (48x32x30)	19x13x12 (48x32x30)	19x13x12 (48x32x30)	19x13x12 (48x32x30)
412543	412711	412722	414722	412922	412721
412543-01	412711-01	412722-01	414722-01	412922-01	412721-01
----	----	----	----	----	----
----	----	----	----	----	----
----	o.r. ⁸	412722-02 ⁷	414722-02 ⁷	----	412721-02 ⁷

For a Complete System

1. With Schuko and UK plug leads
2. With US plug lead
3. With Schuko, UK and US plug leads
4. With AC/DC adapter, Schuko, UK and US plug leads
5. With JP plug lead
6. Requires hard wiring to switched supply
7. With 3 phase 16A CEE plug lead

Note: Pumps can be adapted for OEM equipment integration or for all-in-one packages.

Vacuum Regulator with Dial Gauge

The regulator valve for intake allows the adjustment of the ultimate pressure. The dial vacuum gauge indicates the vacuum level. The air regulator valve will be mounted directly on the pump. See page 75.

For Pump Model	CAT. No.
MPC 095 Z, MPC 110 E, MPC 105 T	700459
MPC 101 Z, MPC 201 T, MPC 301 E, MPC 301 Z, MPC 601 E	700458



700459



700458

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Diaphragm Vacuum Pumps | MPC Chemical Duty



Models
MPC 601 T / MPC 901 Z
MPC 1201 E

Model
MPC 601 T ef

Models
MPC 1201 T / MPC 1801 Z
MPC 2401 E



Specifications

Model	MPC 601 T	MPC 601 T ef	MPC 901 Z	MPC 1201 E	MPC 1201 T
Number of heads / stages	4 / 3	4 / 3	4 / 2	4 / 1	8 / 3
Free Air Displacement					
m ³ /h(L/min)@50Hz	4.5(75)	4.9(81)	6.8(113)	8.3(138)	8.3(135)
cfm(L/min)@60Hz	2.9(81)	2.9(81)	4.4(125)	5.3(151)	5.3(151)
Ultimate pressure, mbar(torr)	2(1.5)	2(1.5)	8(6)	75(56.3)	2(1.5)
Maximum Vacuum, in. Hg	29.9	29.9	29.7	27.7	29.9
Max. overpressure, bar	---	---	---	---	---
IN / EX hose connector	DN 8	DN 8	DN 8	DN 8	DN 16 KF
Tubing Needed, I.D. mm(in.)	8(0.32)	8(0.32)	8(0.32)	8(0.32)	hose connector available
Intake(Exhaust) Thread NPT	- (1/4)	- (1/4)	- (-)	- (1/4)	1/4(1/4)
Sound level, dB(A)	45	44	45	45	48
Motor Power, watts(HP)	370(0.5)	390(0.53)	370(0.5)	370(0.5)	370/440(0.5/0.6)
Type of motor protection, IP	54	54	54	54	54
Weight, kg(lbs.)	18.3(40.3)	22.6(49.8)	18.3(40.3)	18.3(40.3)	32.8(72.3)
Overall Dimensions					
LxWxH in.(cm)	9.1x15x6.7 (23x38x17)	10.2x16.5x7.5 (26x42x 19)	9.1x15x6.7 (23x38x17)	9.1x15x6.7 (23x38x17)	21.3x11.8x9.4 (54x30x24)
Ship Weight, lbs.(kg)	48.5(22)	63.9(29)	48.5(22)	48.5(22)	88.2(40.1)
Shipping Carton Dimensions					
LxWxH in.(cm)	18.9x12.6x11.8 (48x32x30)	23.6x15.8x22.1 (60x40x56)	18.9x12.6x11.8 (48x32x30)	18.9x12.6x11.8 (48x32x30)	23.6x15.8x16.1 (60x40x41)

Ordering Information

230V, 50/60Hz, 1 Ph ¹	412743	412943	412742	412741	412783
115V, 50/60Hz, 1 Ph ²	412743-01	412943-01	412742-01	412741-01	412783-01
230/400V, 50/60Hz, 3 Ph ⁶	412743-02	---	412742-02	412741-02	412783-02

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MPC Diaphragm Vacuum Pumps

- Chemical Resistant
- Oil Free

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Model MPC 302 Z uses a patented pump head design to significantly improve performance. Optimized construction of the pump heads allows the MPC 302 Z to achieve a 17% higher pumping speed in the application critical vacuum range compared to similar products. Besides the pumping speed the ultimate vacuum pressure is improved as well to 5 mbar(3.8 torr).

Gas Ballast



Diaphragm Vacuum Pumps | MPC Chemical Duty



Model
MPC 1201 T ef



Model
MPC 301 Zp Ex



Model
MPC 601 Tp Ex

MPC 1201 T ef	MPC 1801 Z	MPC 2401 E	MPC 301 Zp Ex	MPC 601 Tp Ex
8 / 3	8 / 2	8 / 1	ATEX 2 / 2	ATEX 4 / 3
8.3(138)	12(201)	15.5(258)	2.3(38)	4.5(75)
4.8(138)	7.8(222)	10(283)	1.3(38)	2.7(75)
2(1.5)	8(6)	75(56.3)	8(6)	2(1.5)
29.9	29.7	27.7	29.7	29.9
---	---	---	---	---
DN 16 KF	DN 16 KF	DN 16 KF	DN 8	DN 16 KF
hose connector available	hose connector available	hose connector available	8(0.32)	hose connector available
1/4(1/4)	1/4(1/4)	1/4(1/4)	---	---
47	48	48	45	45
370(0.5)	370/440(0.5/0.6)	370/440(0.5/0.6)	180(0.25)	370(0.5)
54	54	54	55	55
34(75)	32.8(72.3)	32.8(72.3)	22.9(50.5)	29.7(65.5)
21.3x11.8x12.6	21.3x11.8x9.4	21.3x11.8x9.4	9.4x11.8x10.2	9.4x16.7x10.7
(54x30x32)	(54x30x24)	(54x30x24)	(24x30x36)	(24x43x27)
91.3(41.5)	88.2(40.1)	88.2(40.1)	57.3(26)	72.8(33)
60x40x41 (24x16x16)	60x40x41 (24x16x16)	60x40x41 (24x16x16)	48x32x30 (19x13x12)	61x41x58 (24x16x23)
412983	412782	412781	---	---
412983-01	412782-01	412781-01	---	---
---	412782-02	412781-02	4000481-04	4000511-04

For a Complete System

1. With Schuko and UK plug leads
2. With US plug lead
3. With Schuko, UK and US plug leads
4. With AC/DC adapter, Schuko, UK and US plug leads
5. With JP plug lead
6. Requires hard wiring to switched supply
7. With 3 phase 16A CEE plug lead
8. These pumps can be delivered on request

Note: Pumps can be adapted for OEM equipment integration or for all-in-one packages.

Handheld General Range Vacuum Gauge - PIZA 101
Piezo resistive robust rough vacuum gauge with digital display. Alternative for mechanical vacuum gauges.

Features

- With Piezo resistive ceramic sensor
- Economical rough vacuum gauge for multiple uses in laboratories
- Portable unit connects quickly to any vacuum source
- 90-260V, 50/60Hz⁴



Type	Range mbar(torr)	CAT. No.
PIZA 101	1050 to 1(785 to 1)	600071

For more detailed information and other models, see p. 77.

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