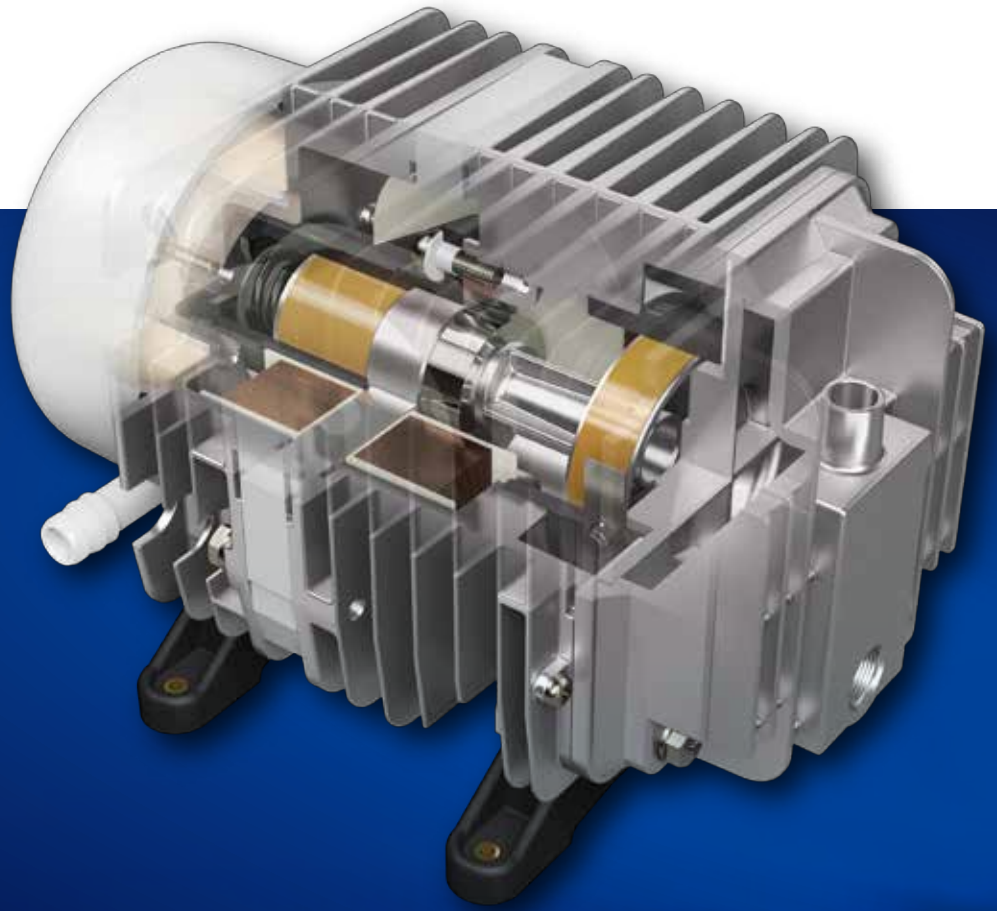
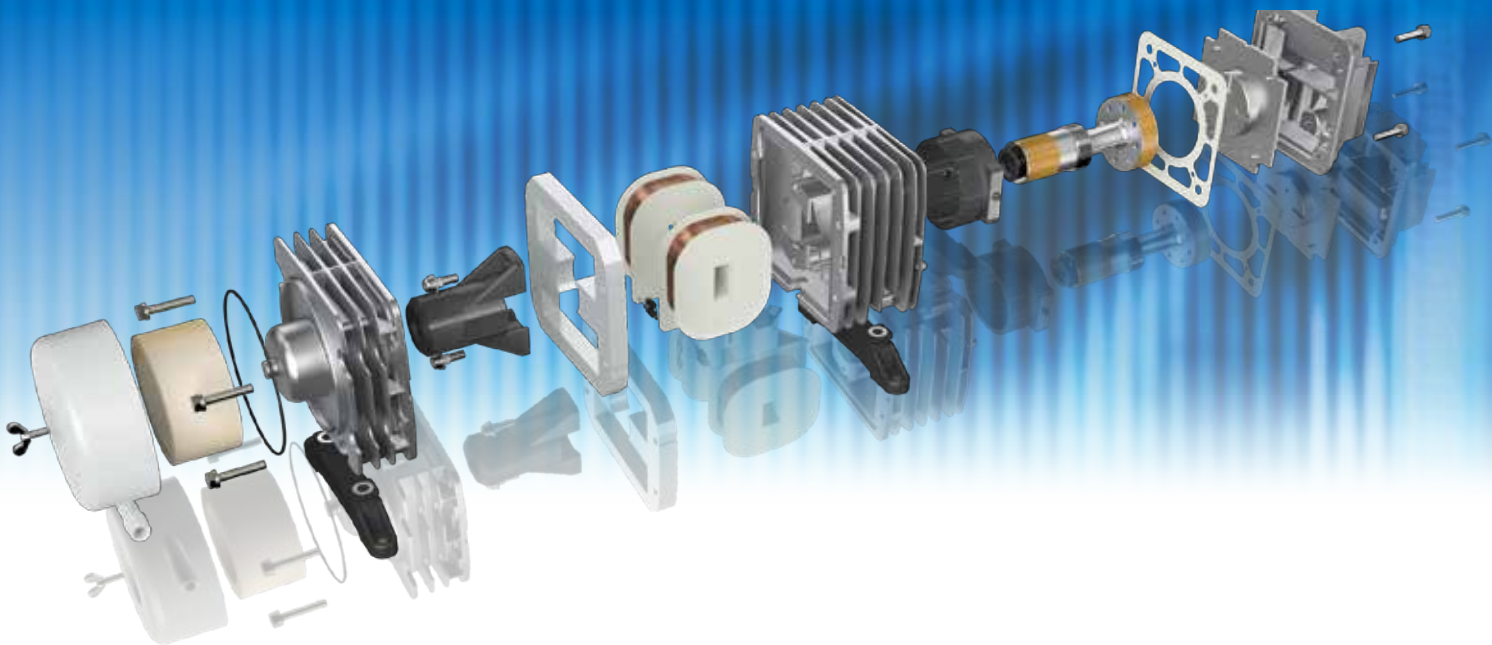


LINEAR PRODUCTS OVERVIEW



*NITTO KOHKI'S
ORIGINAL FREE PISTON PUMP*



AC LINEAR

Free Piston Compressor

AC Linear Piston Compressor Low pressure series



AC0102



AC0201A



AC0301A / AC0401A



AC0602



AC0901 / AC0902

Specifications

| Model | AC0102 | AC0201A |
|---------------------|---|--|
| Rated Pressure | 20 kPa 0.2 bar 2.9 psig | 10 kPa 0.1 bar 1.45 psig |
| Rated Airflow | 5 L/min 0.177 cfm | 20 L/min 0.71 cfm |
| Maximum Pressure | 40 kPa(0.4 kgf/cm ²) 0.4 bar 5.8 psig | 20 kPa(0.2 kgf/cm ²) 0.2 bar 2.9 psig |
| Rated Voltage | 115 V AC or 230 V AC | 115 V AC or 230 V AC |
| Weight | 0.7 kg 1.54 Lbs | 1.5 kg 3.3 Lbs |
| Mounting Dimensions | 48 mm(L) × 62 mm(W) 1 ^{-57/64} "(L) × 2 ^{-7/16} "(W) | 73 mm(L) × 88 mm(W) 2 ^{-7/8} "(L) × 3 ^{-15/32} "(W) |

| Model | AC0301A | AC0401A |
|---------------------|---|---|
| Rated Pressure | 10 kPa 0.1 bar 1.45 psig | 10 kPa 0.1 bar 1.45 psig |
| Rated Airflow | 28 L/min 0.99 cfm | 35 L/min 1.24 cfm |
| Maximum Pressure | 30 kPa(0.3 kgf/cm ²) 0.3 bar 4.35 psig | 35 kPa(0.35 kgf/cm ²) 0.35 bar 5.07 psig |
| Rated Voltage | 115 V AC or 230 V AC | 120 V AC or 230 V AC |
| Weight | 1.9 kg 4.2 Lbs | 1.9 kg 4.2 Lbs |
| Mounting Dimensions | 68 mm(L) × 84 mm(W) 2 ^{-43/64} "(L) × 3 ^{-5/16} "(W) | 68 mm(L) × 84 mm(W) 2 ^{-43/64} "(L) × 3 ^{-5/16} "(W) |

| Model | AC0602 | AC0901 |
|---------------------|---|---|
| Rated Pressure | 15 kPa 0.15 bar 2.17 psig | 10 kPa 0.1 bar 1.45 psig |
| Rated Airflow | 40 L/min 1.41 cfm | 80 L/min 2.83 cfm |
| Maximum Pressure | 35 kPa(0.35 kgf/cm ²) 0.35 bar 5.07 psig | 40 kPa(0.4 kgf/cm ²) 0.4 bar 5.8 psig |
| Rated Voltage | 115 V AC or 230 V AC | 120 V AC or 230 V AC |
| Weight | 3 kg 6.6 Lbs | 4.9 kg 10.8 Lbs |
| Mounting Dimensions | 68 mm(L) × 84 mm(W) 2 ^{-43/64} "(L) × 3 ^{-5/16} "(W) | 102 mm(L) × 130 mm(W) 4 ^{-1/64} "(L) × 5 ^{-1/8} "(W) |

| Model | AC0902 |
|---------------------|---|
| Rated Pressure | 20 kPa 0.2 bar 2.9 psig |
| Rated Airflow | 55 L/min 1.94 cfm |
| Maximum Pressure | 45 kPa(0.45 kgf/cm ²) 0.45 bar 6.52 psig |
| Rated Voltage | 115 V AC or 230 V AC |
| Weight | 4.9 kg 10.8 Lbs |
| Mounting Dimensions | 102 mm(L) × 130 mm(W) 4 ^{-1/64} "(L) × 5 ^{-1/8} "(W) |

AC LINEAR

Free Piston Compressor

AC Linear Piston Compressor Intermediate Pressure Series



AC0105

AC0110



AC0207



AC0410A



AC0610 / AC0610A



AC0910 / AC0920

Specifications

| Model | AC0105 | AC0110 |
|----------------------------|---|---|
| Rated Pressure | 50 kPa 0.5 bar 7.25 psig | 100 kPa 1.0 bar 14.5 psig |
| Rated Airflow | 2.5 L/min 0.088 cfm | 0.8 L/min 0.028 cfm |
| Maximum Pressure | 80 kPa(0.8 kgf/cm ²) 0.8 bar 11.6 psig | 120 kPa(1.2 kgf/cm ²) 1.2 bar 17.4 psig |
| Rated Voltage | 115 V AC or 230 V AC | 115 V AC or 230 V AC |
| Weight | 0.7 kg 1.54 Lbs | 0.7 kg 1.54 Lbs |
| Mounting Dimensions | 48 mm(L) × 62 mm(W) 1 ⁻⁵⁷ / ₆₄ "(L) × 2 ⁻⁷ / ₁₆ "(W) | 48 mm(L) × 62 mm(W) 1 ⁻⁵⁷ / ₆₄ "(L) × 2 ⁻⁷ / ₁₆ "(W) |

| Model | AC0207 | AC0410A |
|----------------------------|--|--|
| Rated Pressure | 70 kPa 0.7 bar 10.15 psig | 100 kPa 1.0 bar 14.5 psig |
| Rated Airflow | 3.5 L/min 0.124 cfm | 5 L/min 0.177 cfm |
| Maximum Pressure | 100 kPa(1.0 kgf/cm ²) 1.0 bar 14.5 psig | 130 kPa(1.3 kgf/cm ²) 1.3 bar 18.8 psig |
| Rated Voltage | 115 V AC or 230 V AC | 115 V AC or 230 V AC |
| Weight | 1.7 kg 3.7 Lbs | 2.1 kg 4.6 Lbs |
| Mounting Dimensions | 75 mm(L) × 88 mm(W) 2 ⁻⁶¹ / ₆₄ "(L) × 3 ⁻¹⁵ / ₃₂ "(W) | 68 mm(L) × 98 mm(W) 2 ⁻⁴³ / ₆₄ "(L) × 3 ⁻⁵⁵ / ₆₄ "(W) |

| Model | AC0610 | AC0610A |
|----------------------------|---|--|
| Rated Pressure | 100 kPa 1.0 bar 14.5 psig | 100 kPa 1.0 bar 14.5 psig |
| Rated Airflow | 8 L/min 0.283 cfm | 8 L/min 0.283 cfm |
| Maximum Pressure | 150 kPa(1.5 kgf/cm ²) 1.5 bar 21.7 psig | 150 kPa(1.5 kgf/cm ²) 1.5 bar 21.7 psig |
| Rated Voltage | 115 V AC or 230 V AC | 115 V AC or 230 V AC |
| Weight | 3.2 kg 7.1 Lbs | 3.2 kg 7.1 Lbs |
| Mounting Dimensions | 68 mm(L) × 84 mm(W) 2 ⁻⁴³ / ₆₄ "(L) × 3 ⁻⁵ / ₁₆ "(W) | 68 mm(L) × 84 mm(W) 2 ⁻⁴³ / ₆₄ "(L) × 3 ⁻⁵⁵ / ₆₄ "(W) |

| Model | AC0910 | AC0920 |
|----------------------------|---|---|
| Rated Pressure | 100 kPa 1.0 bar 14.5 psig | 200 kPa 2.0 bar 14.5 psig |
| Rated Airflow | 16 L/min 0.57 cfm | 8 L/min 0.283 cfm |
| Maximum Pressure | 150 kPa(1.5 kgf/cm ²) 1.5 bar 21.7 psig | 300 kPa(3.0 kgf/cm ²) 3.0 bar 43.5 psig |
| Rated Voltage | 115 V AC or 230 V AC | 115 V AC or 230 V AC |
| Weight | 4.9 kg 10.8 Lbs | 5 kg 11 Lbs |
| Mounting Dimensions | 102 mm(L) × 130 mm(W) 4 ⁻¹ / ₆₄ "(L) × 5 ⁻¹ / ₈ "(W) | 102 mm(L) × 130 mm(W) 4 ⁻¹ / ₆₄ "(L) × 5 ⁻¹ / ₈ "(W) |

AC LINEAR

Free Piston Vacuum Pump

AC Linear Piston Vacuum Pump



VP0125 / VP0140



VP0435A



VP0450



VP0625



VP0660



VP0925A

Specifications

| Model | VP0125 | VP0140 |
|------------------------------|--|--|
| Attainable Vacuum | -33.3 kPa -250 mmHg -333 mbar -9.84 in.Hg | -53.3 kPa -400 mmHg -533 mbar -15.7 in.Hg |
| Free Air Displacement | 7 L/min 0.247 cfm | 3 L/min 0.106 cfm |
| Rated Voltage | 115 V AC or 230 V AC | 115 V AC or 230 V AC |
| Weight | 0.7 kg 1.54 Lbs | 0.7 kg 1.54 Lbs |
| Mounting Dimensions | 48 mm(L) × 62 mm(W) 1.57/64"(L) × 2.7/16"(W) | 48 mm(L) × 62 mm(W) 1.57/64"(L) × 2.7/16"(W) |

| Model | VP0435A | VP0450 |
|------------------------------|--|--|
| Attainable Vacuum | -46.7 kPa -350 mmHg -467 mbar -13.8 in.Hg | -66.7 kPa -500 mmHg -667 mbar -19.7 in.Hg |
| Free Air Displacement | 25 L/min 0.88 cfm | 18 L/min 0.64 cfm |
| Rated Voltage | 115 V AC or 230 V AC | 120 V AC or 230 V AC |
| Weight | 2.3 kg 5.1 Lbs | 2.2 kg 4.9 Lbs |
| Mounting Dimensions | 68 mm(L) × 84 mm(W) 2.43/64"(L) × 3.5/16"(W) | 85 mm(L) × 88 mm(W) 3.11/32"(L) × 3.15/32"(W) |

| Model | VP0625 | VP0660 |
|------------------------------|--|--|
| Attainable Vacuum | -33.3 kPa -250 mmHg -333 mbar -9.84 in.Hg | -80 kPa -600 mmHg -800 mbar -23.6 in.Hg |
| Free Air Displacement | 40 L/min 1.41 cfm | 25 L/min 0.88 cfm |
| Rated Voltage | 115 V AC or 230 V AC | 115 V AC or 230 V AC |
| Weight | 3 kg 6.6 Lbs | 5 kg 11 Lbs |
| Mounting Dimensions | 68 mm(L) × 84mm(W) 2.43/64"(L) × 3.5/16"(W) | 102 mm(L) × 130 mm(W) 4.1/64"(L) × 5.1/8"(W) |

| Model | VP0925A |
|------------------------------|--|
| Attainable Vacuum | -33.3 kPa -250 mmHg -333 mbar -9.84 in.Hg |
| Free Air Displacement | 80 L/min 2.83 cfm |
| Rated Voltage | 115 V AC or 230 V AC |
| Weight | 4.5 kg 9.9 Lbs |
| Mounting Dimensions | 102 mm(L) × 130 mm(W) 4.1/64"(L) × 5.1/8"(W) |

AC LINEAR

Free Piston Vacuum Pump

AC Linear Piston Vacuum Pump



VP0940



VP0940T



VP0645



VP0945



VP0660x2

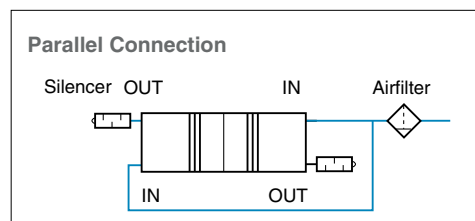
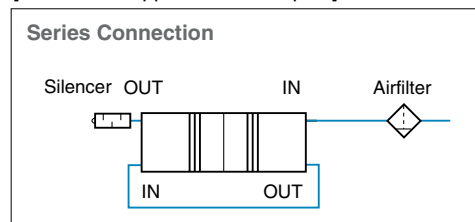
Specifications

| Model | VP0940 | VP0940T |
|------------------------------|--|--|
| Attainable Vacuum | -53.3 kPa -400 mmHg -533 mbar -15.7 in.Hg | -53.3 kPa -400 mmHg -533 mbar -15.7 in.Hg |
| Free Air Displacement | 60 L/min 2.12 cfm | 120 L/min 4.24 cfm |
| Rated Voltage | 115 V AC or 230 V AC | 115 V AC or 230 V AC |
| Weight | 4.55 kg 10 Lbs | 10 kg 22 Lbs |
| Mounting Dimensions | 102 mm(L) × 130 mm(W) 4-1/64"(L) × 5-1/8"(W) | 172 mm(L) × 211 mm(W) 6-49/64"(L) × 8-5/16"(W) |

| Model | VP0645 | VP0945 |
|------------------------------|--|--|
| Attainable Vacuum | -60 kPa -450 mmHg -600 mbar -17.7 in.Hg | -60 kPa -450 mmHg -600 mbar -17.7 in.Hg |
| Free Air Displacement | 10 L/min 0.35 cfm | 12 L/min 0.42 cfm |
| Rated Voltage | 115 V AC or 230 V AC | 115 V AC or 230 V AC |
| Weight | 3.2 kg 7.1 Lbs | 4.9 kg 10.8 Lbs |
| Mounting Dimensions | 68 mm(L) × 84mm(W) 2-43/64"(L) × 3-5/16"(W) | 102 mm(L) × 130 mm(W) 4-1/64"(L) × 5-1/8"(W) |

| Model | VP0660x2 (Series Connection) | VP0660x2 (Parallel Connection) |
|------------------------------|--|--|
| Attainable Vacuum | -93.3 kPa -700 mmHg -933 mbar -27.6 in.Hg | -80 kPa -600 mmHg -800 mbar -23.6 in.Hg |
| Free Air Displacement | 25 L/min 0.88 cfm | 50 L/min 1.77 cfm |
| Rated Voltage | 115 V AC | 230 V AC |
| Weight | 10 kg 22 Lbs | 10 kg 22 Lbs |
| Mounting Dimensions | 280 mm(L) × 130 mm(W) 11-1/32"(L) × 5-1/8"(W) | 280 mm(L) × 130 mm(W) 11-1/32"(L) × 5-1/8"(W) |

[VP0660x2 Application Examples]



* Air line connection is required by the user.

DC LINEAR

Free Piston Compressor

DC Linear Piston Compressor

● DAH102



● DAH105



● DAH110



DC Linear Piston Vacuum Pump

● DVH130



● DVH145



Specifications

| Model | DAH102-X1 | DAH102-Y1 |
|---------------------|---|-----------|
| Rated Pressure | 20 kPa | |
| | 0.2 bar | |
| | 2.9 psig | |
| Rated Airflow | 5 L/min | |
| | 0.177 cfm | |
| Maximum Pressure | 50 kPa(0.5 kgf/cm ²) | |
| | 0.5 bar | |
| | 7.25 psig | |
| Rated Voltage | 12 V DC | 24 V DC |
| Weight | 0.91 kg | |
| | 2.01 Lbs | |
| Mounting Dimensions | 76 mm(L) x 70 mm(W) | |
| | 2 ^{-63/64} "(L) x 2 ^{-3/4} "(W) | |

| Model | DAH105-X1 | DAH105-Y1 |
|---------------------|---|-----------|
| Rated Pressure | 50 kPa | |
| | 0.5 bar | |
| | 7.25 psig | |
| Rated Airflow | 2.5 L/min | |
| | 0.088 cfm | |
| Maximum Pressure | 80 kPa(0.8 kgf/cm ²) | |
| | 0.8 bar | |
| | 11.6 psig | |
| Rated Voltage | 12 V DC | 24 V DC |
| Weight | 0.91 kg | |
| | 2.01 Lbs. | |
| Mounting Dimensions | 76 mm(L) x 70 mm(W) | |
| | 2 ^{-63/64} "(L) x 2 ^{-3/4} "(W) | |

| Model | DAH110-X1 | DAH110-Y1 |
|---------------------|---|-----------|
| Rated Pressure | 100 kPa | |
| | 1.0 bar | |
| | 14.5 psig | |
| Rated Airflow | 1.0 L/min | |
| | 0.035 cfm | |
| Maximum Pressure | 120 kPa(1.2 kgf/cm ²) | |
| | 1.2 bar | |
| | 17.4 psig | |
| Rated Voltage | 12 V DC | 24 V DC |
| Weight | 0.91 kg | |
| | 2.01 Lbs. | |
| Mounting Dimensions | 76 mm(L) x 70 mm(W) | |
| | 2 ^{-63/64} "(L) x 2 ^{-3/4} "(W) | |

| Model | DVH130-X1/-Y1 | DVH145-X1/-Y1 |
|-----------------------|---|--------------------|
| Attainable Vacuum | -40 kPa | -60 kPa |
| | -300 mmHg | -450 mmHg |
| | -400 mbar | -600 mbar |
| | -11.8 in.Hg | -17.7 in.Hg |
| Free Air Displacement | 7 L/min | 3 L/min |
| | 0.247 cfm | 0.106 cfm |
| Rated Voltage | 12 V DC or 24 V DC | 12 V DC or 24 V DC |
| Weight | 0.91 kg | |
| | 2.01 Lbs. | |
| Mounting Dimensions | 76 mm(L) x 70 mm(W) | |
| | 2 ^{-63/64} "(L) x 2 ^{-3/4} "(W) | |

AC LINEAR

Diaphragm Pump

AC Linear Diaphragm Pump



VC0100

Specifications

★ Compressor ☆ Vacuum Pump

| Model | VC0100 ★☆ | VC0100 ★ |
|-------------------------------|---|---|
| Rated Pressure | 4 kPa 0.04 bar 0.58 psig | 4 kPa 0.04 bar 0.58 psig |
| Rated Airflow | 6 L/min 0.21 cfm | 6 L/min 0.21 cfm |
| Maximum Pressure | 16 kPa(0.16 kgf/cm ²) 0.16 bar 2.32 psig | 16 kPa(0.16 kgf/cm ²) 0.16 bar 2.32 psig |
| Working Pressure Range | -14.7 to 16 kPa -110 mmHg to 0.16 kgf/cm ² -147 mbar to 0.16 bar -4.33 in.Hg to 2.28 psig | 0 to 16 kPa 0 to 0.16 kgf/cm ² 0 to 0.16 bar 0 to 2.28 psig |
| Rated Voltage | 120 V AC or 230 V AC | 120 V AC or 230 V AC |
| Weight | 0.45 kg 0.99 Lbs | 0.45 kg 0.99 Lbs |
| Mounting Dimensions | 70 mm(L) × 72 mm(W) 2-3/4"(L) × 2-53/64"(W) | 70 mm(L) × 72 mm(W) 2-3/4"(L) × 2-53/64"(W) |



VC0101

| Model | VC0101(120 V) ★☆ | VC0101(230 V) ★☆ | VC0101 ★ |
|-------------------------------|---|--|---|
| Rated Pressure | 10 kPa 0.1 bar 1.45 psig | 10 kPa 0.1 bar 1.45 psig | 10 kPa 0.1 bar 1.45 psig |
| Rated Airflow | 10 L/min 0.35 cfm | 10 L/min 0.35 cfm | 10 L/min 0.35 cfm |
| Maximum Pressure | 18 kPa(0.18 kgf/cm ²) 0.18 bar 2.61 psig | 15 kPa(0.15 kgf/cm ²) 0.15 bar 2.17 psig | 20 kPa(0.2 kgf/cm ²) 0.2 bar 2.9 psig |
| Working Pressure Range | -18.7 to 18 kPa -140 mmHg to 0.18 kgf/cm ² -187 mbar to 0.18 bar -5.51 in.Hg to 2.56 psig | -10 to 15 kPa -76 mmHg to 0.15 kgf/cm ² -100 mbar to 0.15 bar -2.95 in.Hg to 2.13 psig | 0 to 20 kPa 0 to 0.2 kgf/cm ² 0 to 0.2 bar 0 to 2.84 psig |
| Rated Voltage | 120 V AC | 230 V AC | 230 V AC |
| Weight | 0.82 kg 1.81 Lbs | 0.82 kg 1.81 Lbs | 0.82 kg 1.81 Lbs |
| Mounting Dimensions | 66 mm(L) × 100 mm(W) 2-19/32"(L) × 2-15/16"(W) | 66 mm(L) × 100 mm(W) 2-19/32"(L) × 2-15/16"(W) | 66 mm(L) × 100 mm(W) 2-19/32"(L) × 3-15/16"(W) |



VC0101E

| Model | VC0101E ★☆ | VC0101E ★ |
|-------------------------------|---|---|
| Rated Pressure | 10 kPa 0.1 bar 1.45 psig | 10 kPa 0.1 bar 1.45 psig |
| Rated Airflow | 15 L/min 0.53 cfm | 15 L/min 0.53 cfm |
| Maximum Pressure | 20 kPa(0.2 kgf/cm ²) 0.2 bar 2.9 psig | 20 kPa(0.2 kgf/cm ²) 0.2 bar 2.9 psig |
| Working Pressure Range | -18.7 to 20 kPa -140 mmHg to 0.2 kgf/cm ² -187 mbar to 0.2 bar -5.51 in.Hg to 2.84 psig | 0 to 20 kPa 0 to 0.2 kgf/cm ² 0 to 0.2 bar 0 to 2.84 psig |
| Rated Voltage | 120 V AC or 230 V AC | 120 V AC or 230 V AC |
| Weight | 0.82 kg 1.81 Lbs | 0.82 kg 1.81 Lbs |
| Mounting Dimensions | 66 mm(L) × 100 mm(W) 2-19/32"(L) × 3-15/16"(W) | 66 mm(L) × 100 mm(W) 2-19/32"(L) × 3-15/16"(W) |

AC LINEAR

Diaphragm Pump

AC Linear Diaphragm Pump



VC0101S



VC0201B/VC0301B



VCK0120

★ Compressor ☆ Vacuum Pump

Specifications

| Model | VC0101S ★☆ | VC0101S ★ |
|-------------------------------|---|---|
| Rated Pressure | 5 kPa 0.05 bar 0.72 psig | 5 kPa 0.05 bar 0.72 psig |
| Rated Airflow | 15 L/min 0.53 cfm | 15 L/min 0.53 cfm |
| Maximum Pressure | 26 kPa(0.26 kgf/cm ²) 0.26 bar 3.77 psig | 26 kPa(0.26 kgf/cm ²) 0.26 bar 3.77 psig |
| Working Pressure Range | -24 to 26 kPa -180 mmHg to 0.26 kgf/cm ² -240 mbar to 0.26 bar -7.09 in.Hg to 3.70 psig | 0 to 26 kPa 0 to 0.26 kgf/cm ² 0 to 0.26 bar 0 to 3.70 psig |
| Rated Voltage | 120 V AC or 230 V AC | 120 V AC or 230 V AC |
| Weight | 0.82 kg 1.81 Lbs | 0.83 kg 1.83 Lbs |
| Mounting Dimensions | 66 mm(L) × 100 mm(W) 2-19/32"(L) × 3-15/16"(W) | 66 mm(L) × 100 mm(W) 2-19/32"(L) × 3-15/16"(W) |

| Model | VC0201B ★☆ | VC0201B ★ |
|-------------------------------|---|---|
| Rated Pressure | 10 kPa 0.1 bar 1.45 psig | 10 kPa 0.1 bar 1.45 psig |
| Rated Airflow | 20 L/min 0.71 cfm | 20 L/min 0.71 cfm |
| Maximum Pressure | 18 kPa(0.18 kgf/cm ²) 0.18 bar 2.61 psig | 18 kPa(0.18 kgf/cm ²) 0.18 bar 2.61 psig |
| Working Pressure Range | -18.7 to 18 kPa -140 mmHg to 0.18 kgf/cm ² -187 mbar to 0.18 bar -5.51 in.Hg to 2.56 psig | 0 to 18 kPa 0 to 0.18 kgf/cm ² 0 to 0.18 bar 0 to 2.56 psig |
| Rated Voltage | 120 V AC or 230 V AC | 120 V AC or 230 V AC |
| Weight | 1.7 kg 3.7 Lbs | 1.7 kg 3.7 Lbs |
| Mounting Dimensions | 125 mm(L) × 56 mm(W) 4-59/64"(L) × 2-13/64"(W) | 125 mm(L) × 56 mm(W) 4-59/64"(L) × 2-13/64"(W) |

| Model | VCK0120 ☆ |
|------------------------------|---|
| Attainable Vacuum | -26.7 kPa(-200 mmHg) -267 mbar -7.87 in.Hg |
| Free Air Displacement | 18 L/min 0.64 cfm |
| Rated Voltage | 120 V AC or 230 V AC |
| Weight | 1.9 kg 4.2 Lbs |
| Mounting Dimensions | 152 mm(L) × 128 mm(W) 5-63/64"(L) × 5-3/64"(W) |

| Model | VC0301B ★☆ | VC0301B ★ |
|-------------------------------|--|---|
| Rated Pressure | 10 kPa 0.1 bar 1.45 psig | 10 kPa 0.1 bar 1.45 psig |
| Rated Airflow | 25 L/min 0.88 cfm | 25 L/min 0.88 cfm |
| Maximum Pressure | 20 kPa(0.2 kgf/cm ²) 0.2 bar 2.9 psig | 20 kPa(0.2 kgf/cm ²) 0.2 bar 2.9 psig |
| Working Pressure Range | -21.3 to 20 kPa -160 mmHg to 0.2 kgf/cm ² -213 mbar to 0.2 bar -6.3 in.Hg to 2.84 psig | 0 to 20 kPa 0 to 0.2 kgf/cm ² 0 to 0.2 bar 0 to 2.84 psig |
| Rated Voltage | 120 V AC or 230 V AC | 120 V AC or 230 V AC |
| Weight | 1.7 kg 3.7 Lbs | 1.7 kg 3.7 Lbs |
| Mounting Dimensions | 125 mm(L) × 56 mm(W) 4-59/64"(L) × 2-13/64"(W) | 125 mm(L) × 56 mm(W) 4-59/64"(L) × 2-13/64"(W) |

DC MOTOR DRIVEN

Diaphragm Pump / Piston Pump

Compressor and Vacuum Pump



DP0125 / DP0140

DP0110-X1 / -Y1 / -X3

Brushless Motor



DP0102 / DP0102S

DP0102H-X1 / -X2

Brushless Motor

Brushless Motor



DP0105

DPA0105

Brushless Motor

★ Compressor ☆ Vacuum Pump

| Specifications | | | |
|-----------------------|---|---|--|
| Model | DP0125 ★☆ | DP0140 ★☆ | |
| Attainable Vacuum | -33.3 kPa(-250 mmHg) -333 mbar -9.84 in.Hg | -53.3 kPa(-400 mmHg) -533 mbar -15.7 in.Hg | |
| Free Air Displacement | 2.5 L/min 0.088 cfm | 4.0 L/min 0.141 cfm | |
| Maximum Pressure | 30 kPa(0.3 kgf/cm ²) 0.3 bar 4.35 psig | 50 kPa(0.5 kgf/cm ²) 0.5 bar 7.25 psig | |
| Rated Voltage | 12 V DC | 12 V DC | |
| Weight | 0.08 kg 0.18 Lbs | 0.19 kg 0.42 Lbs | |
| Mounting Dimensions | 32 mm(L) x 32.5 mm(W) 1 ^{-17/64} "(L) x 1 ^{-9/32} "(W) | 52 mm(L) x 36 mm(W) 2 ^{-3/64} "(L) x 1 ^{-27/64} "(W) | |

| Model | DP0110-X1/-X3 ★☆ | DP0110-Y1 ★☆ | |
|-----------------------|---|--------------|--|
| Attainable Vacuum | -66.7 kPa(-500 mmHg) -667 mbar -19.7 in.Hg | | |
| Free Air Displacement | 7.5 L/min 0.265 cfm | | |
| Maximum Pressure | 150 kPa(1.5 kgf/cm ²) 1.5 bar 21.7 psig | | |
| Rated Voltage | 12 V DC | 24 V DC | |
| Weight | 0.30 kg 0.66 Lbs | | |
| Mounting Dimensions | 50 mm(L) x 30 mm(W) 1 ^{-31/32} "(L) x 1 ^{-3/16} "(W) | | |

| Model | DP0102 ★☆ | DP0102S ★☆ | DP0102H-X1 ★☆ | DP0102H-X2 ★ |
|------------------------|---|---|---|---|
| Attainable Vacuum | -26.7 kPa(-200 mmHg) -267 mbar -7.87 in.Hg | -26.7 kPa(-200 mmHg) -267 mbar -7.87 in.Hg | — | — |
| Free Air Displacement | 5.0 L/min 0.177 cfm | 7.0 L/min 0.247 cfm | 4.0 L/min 0.141 cfm | 4.0 L/min 0.141 cfm |
| Maximum Pressure | 45 kPa(0.45 kgf/cm ²) 0.45 bar 6.52 psig | 45 kPa(0.45 kgf/cm ²) 0.45 bar 6.52 psig | 80 kPa(0.8 kgf/cm ²) 0.8 bar 11.6 psig | 80 kPa(0.8 kgf/cm ²) 0.8 bar 11.6 psig |
| Working Pressure Range | -26.7 to 45 kPa -200 mmHg to 0.45 kgf/cm ² -267 mbar to 0.45 bar -7.87 in.Hg to 6.52 psig | -26.7 to 45 kPa -200 mmHg to 0.45 kgf/cm ² -267 mbar to 0.45 bar -7.87 in.Hg to 6.52 psig | -50.7 to 80 kPa -380 mmHg to 0.8 kgf/cm ² -507 mbar to 0.8 bar -15 in.Hg to 11.6 psig | 0 to 80 kPa 0 to 0.8 kgf/cm ² 0 to 0.8 bar 0 to 11.6 psig |
| Rated Voltage | 12 V DC | 24 V DC | 12 V DC | 12 V DC |
| Weight | 0.25 kg 0.55 Lbs | 0.25 kg 0.55 Lbs | 0.25 kg 0.55 Lbs | 0.25 kg 0.55 Lbs |
| Mounting Dimensions | 50 mm(L) x 30 mm(W) 1 ^{-31/32} "(L) x 1 ^{-3/16} "(W) | 50 mm(L) x 30 mm(W) 1 ^{-31/32} "(L) x 1 ^{-3/16} "(W) | 50 mm(L) x 30 mm(W) 1 ^{-31/32} "(L) x 1 ^{-3/16} "(W) | 50 mm(L) x 30 mm(W) 1 ^{-31/32} "(L) x 1 ^{-3/16} "(W) |

| Model | DP0105-X1 ★☆ | DP0105-Y1 ★☆ | DPA0105-X1 ★ | DPA0105-Y1 ★ |
|------------------------|--|--|--|--|
| Attainable Vacuum | -66.7 kPa(-500 mmHg) -667 mbar -19.7 in.Hg | -66.7 kPa(-500 mmHg) -667 mbar -19.7 in.Hg | — | — |
| Free Air Displacement | 2.8 L/min 0.099 cfm | 2.8 L/min 0.099 cfm | 2.8 L/min 0.099 cfm | 2.8 L/min 0.099 cfm |
| Maximum Pressure | 250 kPa(2.5 kgf/cm ²) 2.5 bar 36.2 psig | 250 kPa(2.5 kgf/cm ²) 2.5 bar 36.2 psig | 220 kPa(2.2 kgf/cm ²) 2.2 bar 31.9 psig | 220 kPa(2.2 kgf/cm ²) 2.2 bar 31.9 psig |
| Working Pressure Range | -66.7 kPa to 100 kPa -500 mmHg to 1 kgf/cm ² -667 mbar to 1 bar -19.7 in.Hg to 14.5 psig | -66.7 kPa to 100 kPa -500 mmHg to 1 kgf/cm ² -667 mbar to 1 bar -19.7 in.Hg to 14.5 psig | 0 to 100 kPa 0 to 1 kgf/cm ² 0 to 1 bar 0 to 14.5 psig | 0 to 100 kPa 0 to 1 kgf/cm ² 0 to 1 bar 0 to 14.5 psig |
| Rated Voltage | 12 V DC | 24 V DC | 12 V DC | 24 V DC |
| Weight | 0.36 kg 0.79 Lbs | 0.36 kg 0.79 Lbs | 0.3 kg 0.66 Lbs | 0.3 kg 0.66 Lbs |
| Mounting Dimensions | 42 mm(L) x 24.5 mm(W) 1 ^{-21/32} "(L) x 1 ^{-31/32} "(W) | 42 mm(L) x 24.5 mm(W) 1 ^{-21/32} "(L) x 1 ^{-31/32} "(W) | 32 mm(L) x 27.5 mm(W) 1 ^{-9/32} "(L) x 1 ^{-5/64} "(W) | 32 mm(L) x 27.5 mm(W) 1 ^{-9/32} "(L) x 1 ^{-5/64} "(W) |

DC MOTOR DRIVEN

Diaphragm Pump / Piston Pump

Compressor and Vacuum Pump



DP0110T
Brushless Motor

DP0210T
Brushless Motor

★ Compressor ☆ Vacuum Pump

| Specifications | |
|-----------------------|---|
| Model | DP0110T-X1 ★☆ DP0110T-Y1 ★☆ |
| Attainable Vacuum | -60.0 kPa(-450 mmHg) -600 mbar -17.7 in.Hg |
| Free Air Displacement | 5.5 L/min 0.194 cfm |
| Maximum Pressure | 150 kPa(1.5 kgf/cm ²) 1.5 bar 21.7 psig |
| Rated Voltage | 12 V DC 24 V DC |
| Weight | 0.27 kg 0.60 Lbs |
| Mounting Dimensions | 36.5 mm(L) × 37.5 mm(W) 1-7/16" (L) × 1-15/32" (W) |

| Model | DP0210T-X1 ★☆ DP0210T-Y1 ★☆ | DP0410-X1 ☆ DP0410-Y1 ☆ |
|-----------------------|---|--|
| Attainable Vacuum | -60.0 kPa(-450 mmHg) -600 mbar -17.7 in.Hg | -77.3 kPa(-580 mmHg) -773 mbar -22.8 in.Hg |
| Free Air Displacement | 10 L/min 0.35 cfm | 18 L/min 0.64 cfm |
| Maximum Pressure | 150 kPa(1.5 kgf/cm ²) 1.5 bar 21.7 psig | ————— |
| Rated Voltage | 12 V DC 24 V DC | 12 V DC 24 V DC |
| Weight | 0.32 kg 0.71 Lbs | 1.1 kg 2.4 Lbs |
| Mounting Dimensions | 36.5 mm(L) × 37.5 mm(W) 1-7/16" (L) × 1-15/32" (W) | 70 mm(L) × 45 mm(W) 2-3/4" (L) × 1-49/64" (W) |



DP0410
Brushless Motor



DP0410T-Y1
Brushless Motor



DP0410T-Y2
Brushless Motor

| Model | DP0410-X2 ★ DP0410-Y2 ★ |
|------------------------|--|
| Free Air Displacement | 18 L/min 0.64 cfm |
| Maximum Pressure | 180 kPa(1.8 kgf/cm ²) 1.8 bar 25.6 psig |
| Working Pressure Range | 0 to 180 kPa 0 to 1.8 kgf/cm ² 0 to 1.8 bar 0 to 26.1 psig |
| Rated Voltage | 12 V DC 24 V DC |
| Weight | 1.1 kg 2.4 Lbs |
| Mounting Dimensions | 70 mm(L) × 45 mm(W) 2-3/4" (L) × 1-49/64" (W) |

| Model | DP0410T-Y1 ☆ DP0410T-Y2 ★ |
|-----------------------|--|
| Attainable Vacuum | -77.3 kPa(-580 mmHg) -773 mbar -22.8 in.Hg |
| Free Air Displacement | 34 L/min 1.2 cfm |
| Maximum Pressure | 150 kPa(1.5 kgf/cm ²) 1.5 bar 21.75 psig |
| Rated Voltage | 24 V DC 24 V DC |
| Weight | 1.6 kg 3.5 Lbs |
| Mounting Dimensions | 166 mm(L) × 84 mm(W) 6-17/32" (L) × 3-5/16" (W) |

LIQUID PUMP

DC Diaphragm Liquid Pump

DPE series - DC Liquid Pump



DPE-100



DPE-400



DPE-400BL
Brushless Motor



DPE-800

Specifications

| Model | DPE-100 | DPE-400 |
|-------------------------------------|--|--|
| Flow Rate ^{*1} | 100 mL/min 0.0035 cfm | 400 mL/min 0.0141 cfm |
| Working Pressure Range | 0 to 100 kPa 0 to 1.0 kgf/cm ² 0 to 1.0 bar 0 to 14.5 psig | 0 to 100 kPa 0 to 1.0 kgf/cm ² 0 to 1.0 bar 0 to 14.5 psig |
| Maximum Pressure ^{*2} | 300 kPa(3.0 kgf/cm ²) 3.0 bar 43.5 psig | 300 kPa(3.0 kgf/cm ²) 3.0 bar 43.5 psig |
| Self-priming Pressure ^{*1} | 20 kPa 0.2 bar 2.9 psig | 40 kPa 0.4 bar 5.8 psig |
| Maximum Current | 100 mA | 345 mA |
| Rated Voltage | 24 V DC | 24 V DC |
| Weight | 67 g 0.148 Lbs | 187 g 0.412 Lbs |
| Mounting Dimensions | 9.5 mm(L) x 17 mm(W) ³ / ₈ "(L) x 1- ⁴³ / ₆₄ "(W) | 19 mm(L) x 26 mm(W) ³ / ₄ "(L) x 1- ¹ / ₃₂ "(W) |

| Model | DPE-400BL | DPE-800 |
|-------------------------------------|--|--|
| Flow Rate ^{*1} | 400 mL/min 0.0141 cfm | 800 mL/min 0.0283 cfm |
| Working Pressure Range | 0 to 100 kPa 0 to 1.0 kgf/cm ² 0 to 1.0 bar 0 to 14.5 psig | 0 to 100 kPa 0 to 1.0 kgf/cm ² 0 to 1.0 bar 0 to 14.5 psig |
| Maximum Pressure ^{*2} | 300 kPa(3.0 kgf/cm ²) 3.0 bar 43.5 psig | 300 kPa(3.0 kgf/cm ²) 3.0 bar 43.5 psig |
| Self-priming Pressure ^{*1} | 40 kPa 0.4 bar 5.8 psig | 40 kPa 0.4 bar 5.8 psig |
| Maximum Current | 450 mA | 600 mA |
| Rated Voltage | 24 V DC | 24 V DC |
| Weight | 230 g 0.507 Lbs | 350 g 0.771 Lbs |
| Mounting Dimensions | 41 mm(W) 1- ³⁹ / ₆₄ "(W) | 74.5 mm(L) x 41 mm(W) 2- ¹⁵ / ₁₆ "(L) x 1- ³⁹ / ₆₄ "(W) |

*1. When the check valve is hardened due to low liquid temperature, self-priming performance and flow rate will go down.

*2. Restarting pumps with flow passage closed is impossible.

Build materials

| Model | Cylinder Head | Head Cover | Diaphragm | Valve | O-ring | |
|-----------|---------------|------------|-----------|-------|--------|------|
| DPE-○○-2E | PA | | PTFE | | EPDM | |
| DPE-○○-2G | | | | | FKM | |
| DPE-○○-7G | PPS | | | | | FFKM |
| DPE-○○-7P | | | | | | FFKM |

LIQUID PUMP

Piezoelectric Pump

Bimor Pump - Piezoelectric Pump



Specifications

| Voltage(AC) — 120 V 60Hz | | | | | Voltage(AC) — 230 V 50Hz | | | | | Liquid Surface Materials | | | Weight (g) |
|--------------------------|--------------|----------------------------|-------------------|--------------------------|--------------------------|--------------|----------------------------|-------------------|--------------------------|--------------------------|----------------------|--------------|------------|
| Model | Current (mA) | Self-priming Pressure(kPa) | FlowRate (mL/min) | Discharge Pressure (kPa) | Model | Current (mA) | Self-priming Pressure(kPa) | FlowRate (mL/min) | Discharge Pressure (kPa) | Housing | Liquid Contact Sheet | Valve/O-ring | |
| BPS-215i | 3 | 3 | 30 | 15 | BPS-215i | 4 | 0.4 | 10 | 10 | PP | PP | IIR | 40 |
| BPH-214E | 15 | 8 | 350 | 18 | BPH-214E | 15 | 7 | 220 | 18 | PP | PP | EPDM | 140 |
| BPH-214G | | 7 | | 17 | BPH-214G | | | | 17 | | PTFE | FKM | |
| BPH-414E | 30 | 12 | 500 | 35 | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | BPH-274G | 15 | 7 | 250 | 35 | PPS | PTFE | FKM | 170 |
| — | — | — | — | BPH-274P | FFKM | | | | | | | FEP | |

Test conditions: Water at 25 degrees C, Electrical frequency 60 Hz

| Voltage(AC) — 100 V 60Hz | | | | | Liquid Surface Materials | | | | Weight (g) |
|--------------------------|--------------|----------------------------|-------------------|--------------------------|--------------------------|----------------------|-------|--------|------------|
| Model | Current (mA) | Self-priming Pressure(kPa) | FlowRate (mL/min) | Discharge Pressure (kPa) | Housing | Liquid Contact Sheet | Valve | O-ring | |
| BPHS-414i | 30 | 12 | 700 | 35 | PP | PP | IIR | 150 | |
| BPHS-414E | | | | | | | EPDM | | |
| BPHS-414G | | | | | | | FKM | | |
| BPHS-474G | 10 | 500 | 500 | 35 | PPS | PTFE | FKM | 180 | |
| BPHS-474P | | | | | | | FFKM | | FFKM FEP |

Test conditions: Water at 25 degrees C, Electrical frequency 60 Hz

Material Description

EPDM ... Ethylene Propylene Rubber
 FEP Fluoroethylene Propylene
 FFKM Fluorine Rubber (Perfluoro)
 FKM Fluorine Rubber
 IIR Butyl Rubber
 PP Polypropylene
 PTFE Tetrafluororesin (Polytetrafluoroethylene)



● BPS type



● BPH type



● BPHS type

NITTO KOHKI CO., LTD.

Head Office

9-4, Nakaikegami 2-chome, Ohta-ku, Tokyo 146-8555, Japan

Tel : +81-3-3755-1111 Fax : +81-3-3753-8791

E-mail : overseas@nitto-kohki.co.jp

Web www.nitto-kohki.co.jp/e

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