
Compressors for Ventilators, Stationary and Portable Oxygen Concentrators

PUMP FEATURES & BENEFITS

- ✓ COMPACT, LIGHTWEIGHT DESIGN
- ✓ EFFICIENT, LOW POWER CONSUMPTION
- ✓ LOW SOUND LEVEL
- ✓ PROVIDES A CLEAN AIR STREAM

Respirators / Ventilators

- P3 **2660 Series**
- P5 **2668 Series**
- P7 **2680 World Wide Voltage Series**
- P9 **2505 Series**

FEATURES

- > Custom configured part options
- > Oil-less operation
- > Permanently lubricated bearings
- > Stainless steel valves
- > Die-cast aluminum components
- > Dynamically balanced
- > Proven WOB-L technology
- > Monolithic head
- > Field service capability
- > Thermally protected motor
- > Designed and tested per Agency standards
- > RoHS compliant

Declaration documentation available upon request

TYPICAL APPLICATIONS

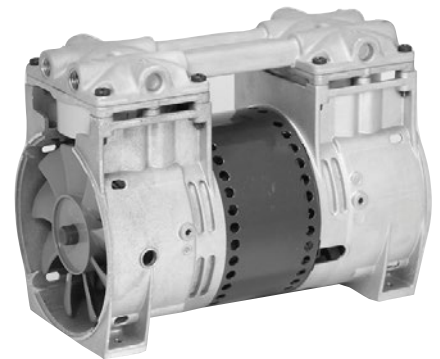
- > O₂ Concentrator
- > Blood & Laboratory Analyzers
- > Aspirators/Respirators
- > Dental & Optical Equipment
- > Industrial/Manufacturing Equipment
- > Business Equipment/Food & Beverage Equipment

BASE MODELS

2660E48XNTLSXX
(115/60/1)

2660N48XNTLSXX
(220-240/50/60/1)

2660S48XNTLSXX
(100/50/60/1)



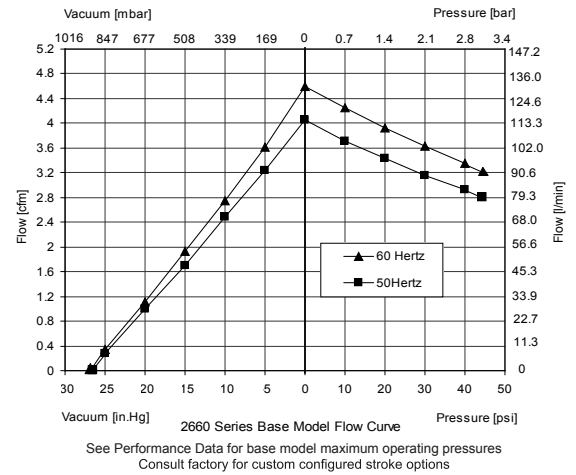
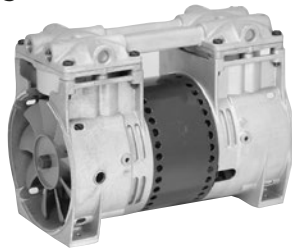
WOB-L

2660 Series

| | |
|----------------------|------------------------------|
| Flow | 4.6 cfm (130.3 l/min) |
| Max. pressure | 45 psi (3.1 bar) |
| Max. vacuum | 92% local barometer |

CONFIGURED OPTIONS

- > Stroke
- > Pump restart
- > Head port thread
- > Foot tap thread
- > Electrical cord
- > Fan guard
- > Protective coating



NOTE: All test values are nominal and for reference only. They are not guaranteed maximum or minimum limits, nor do they imply mean or median.

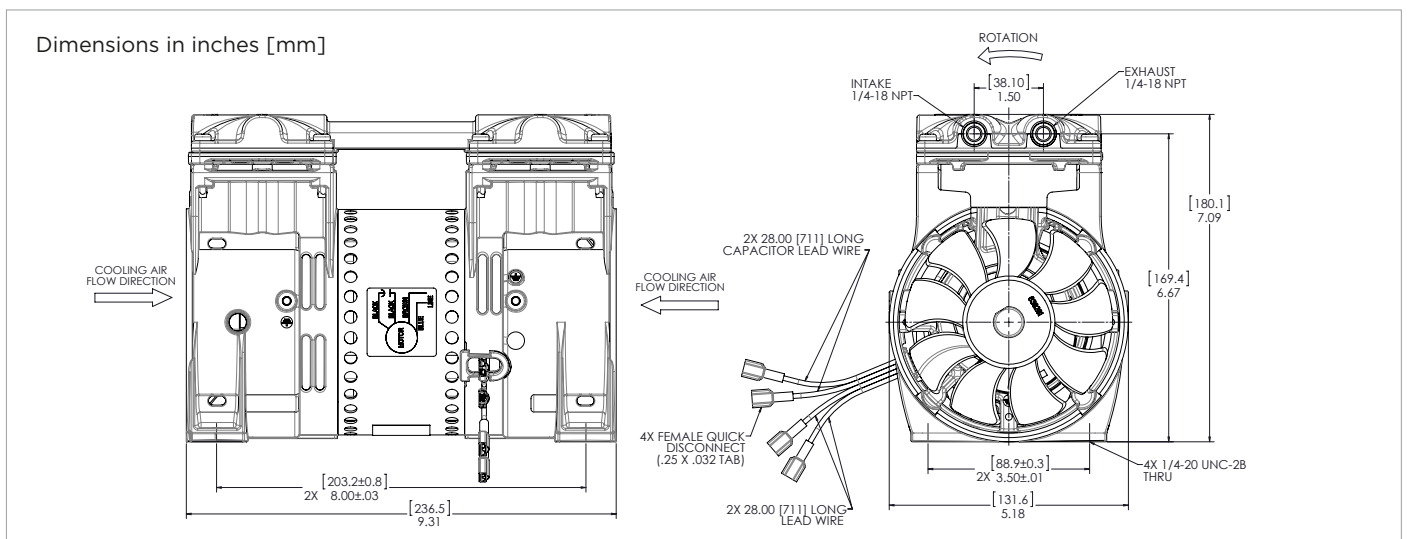
| PERFORMANCE DATA | T10-0151 | T10-0153 | | T10-0152 | |
|---------------------------|-------------------------------|-------------------------------|-----------------------|-------------------------------|-----------------------|
| Model Number | 2660E48XNTLSXX | 2660N48XNTLSXX | | 2660S48XNTLSXX | |
| Head Configuration | Pressure/vacuum parallel flow | Pressure/vacuum parallel flow | | Pressure/vacuum parallel flow | |
| Stroke | 0.48 in. (12.2 mm) | 0.48 in. (12.2 mm) | | 0.48 in. (12.2 mm) | |
| Nominal voltage input | 115/60/1 | 230/50/1 | 230/60/1 | 100/50/1 | 100/60/1 |
| Max. open air flow | 4.6 cfm (130.3 l/min) | 4.0 cfm (113.3 l/min) | 4.6 cfm (130.3 l/min) | 4.0 cfm (113.3 l/min) | 4.6 cfm (130.3 l/min) |
| Max. rated pressure | 40 psi (2.8 bar) | 45 psi (3.1 bar) | 40 psi (2.8 bar) | 25 psi (1.7 bar) | 20 psi (1.4 bar) |
| Current at rated pressure | 5.3A | 2.5A | 2.7A | 4.5A | 4.4A |
| Power at rated pressure | 608W | 523W | 604W | 421W | 432W |
| Speed at rated pressure | 1675 rpm | 1409 rpm | 1682 rpm | 1436 rpm | 1695 rpm |
| Max. pressure restart | Consult factory | Consult factory | | Consult factory | |
| Max. vacuum | 92% local barometer | 92% local barometer | | 92% local barometer | |
| Max. vacuum restart | Consult factory | Consult factory | | Consult factory | |

| ELECTRICAL DATA | P.S.C. [25 µF] | | P.S.C. [15 µF] | | P.S.C. [25 µF] | |
|-----------------------------------|-----------------------------------|--|-----------------------------------|------|-----------------------------------|-------|
| Motor type (Capacitance) | P.S.C. [25 µF] | | P.S.C. [15 µF] | | P.S.C. [25 µF] | |
| Motor locked rotor current | 18.0A | | 9.3A | 8.3A | 15.0A | 14.5A |
| Motor insulation class | B | | B | | B | |
| Thermal switch (Open temperature) | Yes [293°F (145°C)] | | Yes [248°F (120°C)] | | Yes [293°F (145°C)] | |
| Lead wire color, gauge | Brown(hot), blue(neutral), 18 AWG | | Brown(hot), blue(neutral), 18 AWG | | Brown(hot), blue(neutral), 18 AWG | |
| Capacitor lead wire color, gauge | Black, black, 18 AWG | | Red, red, 18 AWG | | Black, black, 18 AWG | |

| GENERAL DATA | 50° to 104°F (10°C TO 40°C)* | | 50° to 104°F (10°C TO 40°C)* | | 50° to 104°F (10°C TO 40°C)* | |
|-------------------------------|------------------------------|--|------------------------------|--|------------------------------|--|
| Operating ambient temperature | 50° to 104°F (10°C TO 40°C)* | | 50° to 104°F (10°C TO 40°C)* | | 50° to 104°F (10°C TO 40°C)* | |
| Safety Certification | cRUus | | TUV | | None | |
| Net weight | 17.6 lbs (8.0 kg) | | 17.1 lbs (7.8 kg) | | 17.6 lbs (8.0 kg) | |

*Broader ambient operating ranges may be possible depending on your specific application. Please consult factory regarding your particular system needs.

PRODUCT DIMENSIONS



FEATURES

- > Custom configured part options
- > Oil-less operation
- > Permanently lubricated bearings
- > Stainless steel valves
- > Die-cast aluminum components
- > Dynamically balanced
- > Proven WOB-L technology
- > Monolithic head
- > Field service capability
- > Thermally protected motor
- > Designed and tested per Agency standards
- > RoHS compliant

Declaration documentation available upon request

TYPICAL APPLICATIONS

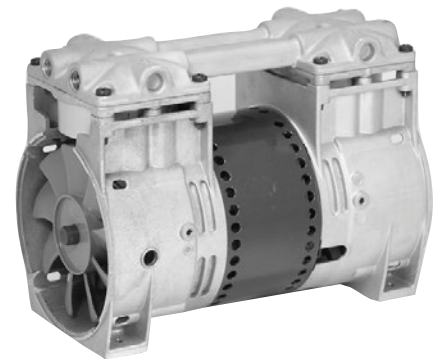
- > O₂ Concentrator
- > Blood & Laboratory Analyzers
- > Aspirators/Respirators
- > Dental & Optical Equipment
- > Industrial/Manufacturing Equipment
- > Business Equipment/Food & Beverage Equipment

BASE MODELS

2668E44XNTLSXX
(115/60/1)

2668N44XNTLSXX
(220-240/50/60/1)

2668S44XNTLSXX
(100/50/60/1)



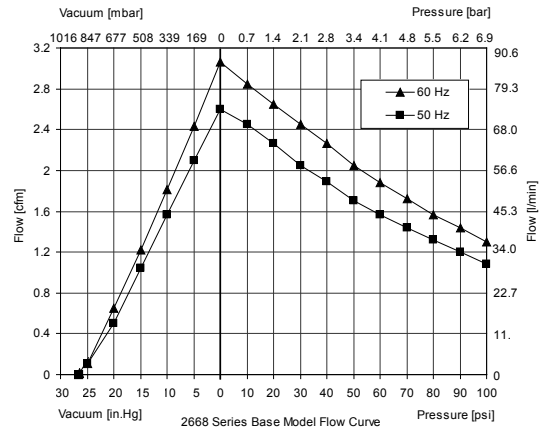
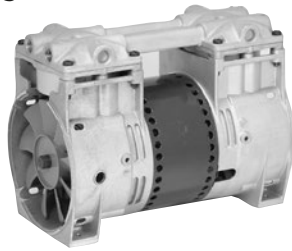
WOB-L

2668 Series

| | |
|----------------------|-----------------------------|
| Flow | 3.1 cfm (87.8 l/min) |
| Max. pressure | 100 psi (6.9 bar) |
| Max. vacuum | 93% local barometer |

CONFIGURED OPTIONS

- > Stroke
- > Pump restart
- > Head port thread
- > Foot tap thread
- > Electrical cord
- > Fan guard
- > Protective coating



See Performance Data for base model maximum operating pressures
Consult factory for custom configured stroke options

NOTE: All test values are nominal and for reference only. They are not guaranteed maximum or minimum limits, nor do they imply mean or median values.

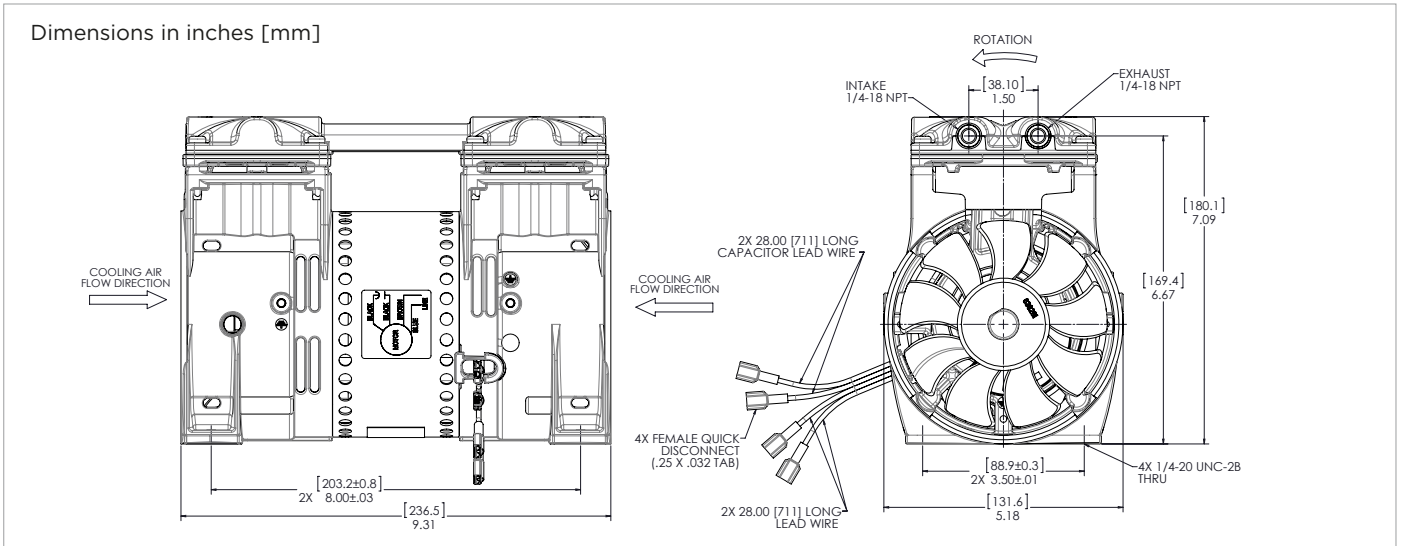
| PERFORMANCE DATA | T10-0138 | | T10-0142 | | T10-0140 | |
|---------------------------|-------------------------------|--|-------------------------------|----------------------|-------------------------------|----------------------|
| Model Number | 2668E44XNTLSXX | | 2668N44XNTLSXX | | 2668S44XNTLSXX | |
| Head Configuration | Pressure/vacuum parallel flow | | Pressure/vacuum parallel flow | | Pressure/vacuum parallel flow | |
| Stroke | 0.44 in. (11.2 mm) | | 0.44 in. (11.2 mm) | | 0.44 in. (11.2 mm) | |
| Nominal voltage input | 115/60/1 | | 230/50/1 | 230/60/1 | 100/50/1 | 100/60/1 |
| Max. open air flow | 3.1 cfm (87.8 l/min) | | 2.6 cfm (73.6 l/min) | 3.1 cfm (87.8 l/min) | 2.6 cfm (73.6 l/min) | 3.1 cfm (87.8 l/min) |
| Max. rated pressure | 100 psi (6.9 bar) | | 100 psi (6.9 bar) | 100 psi (6.9 bar) | 100 psi (6.9 bar) | 40 psi (2.8 bar) |
| Current at rated pressure | 4.5A | | 1.8A | 2.1A | 4.6A | 4.3A |
| Power at rated pressure | 489W | | 408W | 449W | 430W | 432W |
| Speed at rated pressure | 1699 rpm | | 1406 rpm | 1676 rpm | 1400 rpm | 1689 rpm |
| Max. pressure restart | Consult factory | | Consult factory | | Consult factory | |
| Max. vacuum | 93% local barometer | | 93% local barometer | | 93% local barometer | |
| Max. vacuum restart | Consult factory | | Consult factory | | Consult factory | |

| ELECTRICAL DATA | P.S.C. [15 µF] | | P.S.C. [15 µF] | | P.S.C. [20 µF] | |
|-----------------------------------|-----------------------------------|--|-----------------------------------|------|-----------------------------------|-------|
| Motor type (Capacitance) | P.S.C. [15 µF] | | P.S.C. [15 µF] | | P.S.C. [20 µF] | |
| Motor locked rotor current | 16.2A | | 5.9A | 5.6A | 10.9A | 10.5A |
| Motor insulation class | B | | B | | B | |
| Thermal switch (Open temperature) | Yes [293°F (145°C)] | | Yes [275°F (135°C)] | | Yes [293°F (145°C)] | |
| Lead wire color, gauge | Brown(hot), blue(neutral), 18 AWG | | Brown(hot), blue(neutral), 18 AWG | | Brown(hot), blue(neutral), 18 AWG | |
| Capacitor lead wire color, gauge | Black, black, 18 AWG | | Red, red, 18 AWG | | Black, black, 18 AWG | |

| GENERAL DATA | 50° to 104°F (10°C TO 40°C)* | | 50° to 104°F (10°C TO 40°C)* | | 50° to 104°F (10°C TO 40°C)* | |
|-------------------------------|------------------------------|--|------------------------------|--|------------------------------|--|
| Operating ambient temperature | 50° to 104°F (10°C TO 40°C)* | | 50° to 104°F (10°C TO 40°C)* | | 50° to 104°F (10°C TO 40°C)* | |
| Safety Certification | cRUus | | TUV | | None | |
| Net weight | 16.3 lbs (7.4 kg) | | 16.3 lbs (7.4 kg) | | 16.3 lbs (7.4 kg) | |

*Broader ambient operating ranges may be possible depending on your specific application. Please consult factory regarding your particular system needs.

PRODUCT DIMENSIONS



FEATURES

- > World wide voltage/frequency operation
- > Oil-less operation
- > Stainless steel valving components
- > Epoxy coated wetted parts
- > Aluminum die-cast components
- > Proven WOB-L technology
- > High performance tapered piston seals
- > Thermally protected motor
- > Lightweight, impact resistant fan guards
- > Internal 9 blade cooling air flow fans
- > Designed and tested per Agency standards
- > RoHS & REACH compliant
- > Field serviceable

Declaration documentation available upon request

TYPICAL APPLICATIONS

- > Blood & Laboratory Analyzers
- > Respirators/Respiratory Therapy
- > Medical/Dental/Optical Equipment
- > Industrial/Manufacturing Equipment
- > Business Equipment/Food & Beverage Equipment

BASE MODEL

2680CWW40
(100-127/50/60/1 & 200-240/50/60/1)



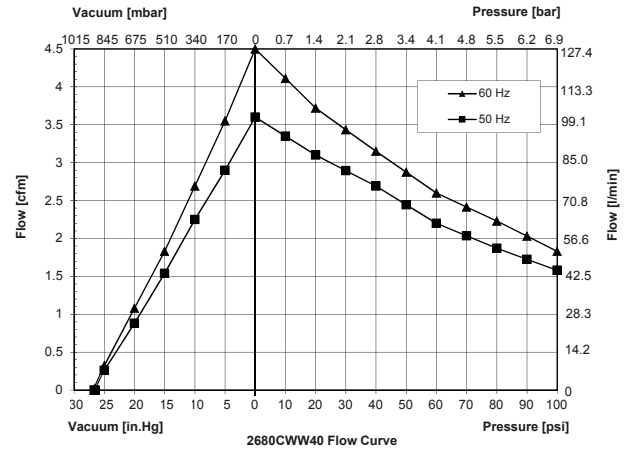
WOB-L

2680 World Wide Voltage Series

| | |
|----------------------|----------------------------|
| Flow | 4.5 cfm (127 l/min) |
| Max. pressure | 100 psi (6.9 bar) |
| Max. vacuum | 92% local barometer |



Oil-less



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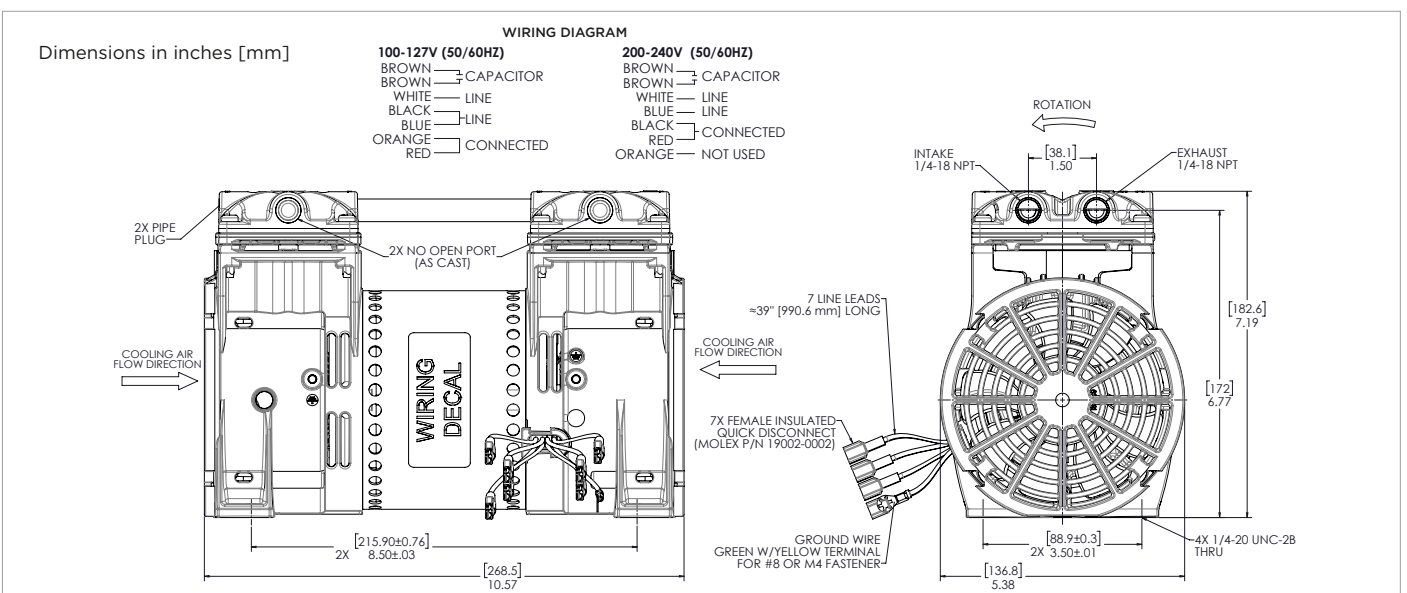
| PERFORMANCE DATA | | T17-0418 | | | |
|-----------------------------|----------------------------------|---------------------|---------------------|---------------------|--|
| Model Number | 2680CWW40 | | | | |
| Head configuration | Pressure or vacuum parallel flow | | | | |
| Stroke | 0.40 in. (10.16 mm) | | | | |
| Nominal voltage input range | 100 - 127V 50Hz | 100 - 127V 60Hz | 200 - 240V 50Hz | 200 - 240V 60Hz | |
| Max. open air flow | 3.6 cfm (102 l/min) | 4.5 cfm (127 l/min) | 3.6 cfm (102 l/min) | 4.5 cfm (127 l/min) | |
| Max. rated pressure | 100 psi (6.9 bar) | 100 psi (6.9 bar) | 100 psi (6.9 bar) | 100 psi (6.9 bar) | |
| Current at rated pressure | 5.0A - 4.9A | 6.2A - 5.2A | 2.6A - 2.4A | 3.3A - 2.9A | |
| Power at rated pressure | 490W - 560W | 615W - 650W | 507W - 543W | 646W - 679W | |
| Speed at rated pressure | 1395 rpm - 1440 rpm | 1647 rpm - 1725 rpm | 1394 rpm - 1432 rpm | 1634 rpm - 1707 rpm | |
| Maximum rated vacuum | 92% local barometer | 92% local barometer | 92% local barometer | 92% local barometer | |
| Maximum pressure restart | Consult factory | | | | |
| Maximum vacuum restart | Consult factory | | | | |

| ELECTRICAL DATA | |
|-----------------------------------|---|
| Motor type (Capacitance) | P.S.C. [35 µF] |
| Motor locked rotor current | 17.0 - 21.2A 15.2 - 20.4A 8.4 - 10.1A 7.8 - 9.5A |
| Motor insulation class | B |
| Thermal switch (Open temperature) | Yes [266°F (130°C)] |
| Lead wire color, gauge | Lead wire connection dependant on voltage requirement, consult wiring diagram below, 18 AWG |
| Capacitor lead wire color, gauge | Brown, brown 18 AWG |

| GENERAL DATA | |
|-------------------------------|---|
| Operating ambient temperature | 50° to 104°F (10°C TO 40°C)* |
| Safety Certification | Declaration of Incorporation documentation available upon request |
| Net weight | 20.9 lbs (9.5 kg) |

*Broader ambient operating ranges may be possible depending on your specific application. Please consult factory regarding your particular system needs.

PRODUCT DIMENSIONS



FEATURES

- > Oil-less operation
- > Permanently lubricated bearings
- > Stainless steel valves
- > Die-cast aluminum components
- > Dynamically balanced
- > Proven WOB-L technology
- > Monolithic head
- > Field service capability
- > Thermally protected motor
- > Designed and tested per Agency standards
- > RoHS compliant

Declaration documentation available upon request

TYPICAL APPLICATIONS

- > O₂ Concentrator
- > Blood & Laboratory Analyzers
- > Dental & Optical Equipment
- > Medical Trauma Carts
- > Laboratory Air Dryers
- > Aspirators/Respirators
- > Industrial/Manufacturing Equipment

BASE MODELS

2505CE38

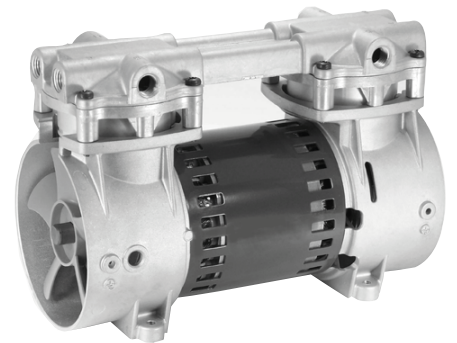
(115/60/1)

2505CG38

(230/60/1)

2505CHI45

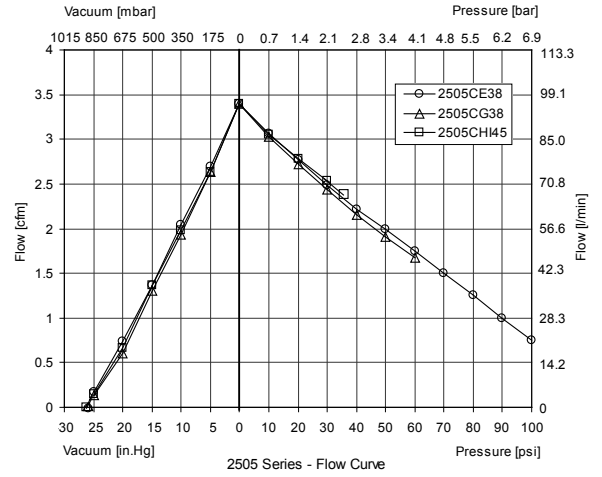
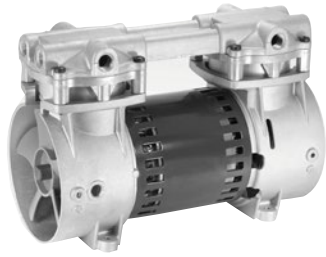
(220-240/50/1)



WOB-L

2505 Series

| | |
|----------------------|-----------------------------|
| Flow | 3.4 cfm (96.3 l/min) |
| Max. pressure | 100 psi (6.9 bar) |
| Max. vacuum | 90% local barometer |



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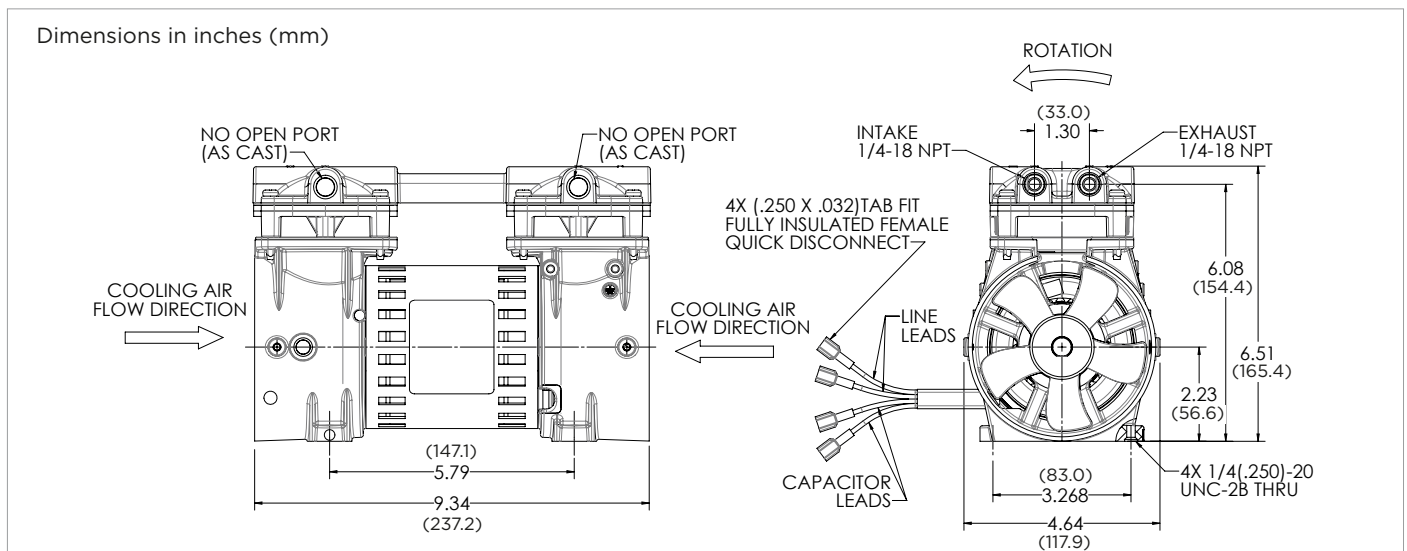
| PERFORMANCE DATA | T15-0120 | T14-0320 | T14-0320 |
|---------------------------|-------------------------------|-------------------------------|-------------------------------|
| Model Number | 2505CE38 | 2505CG38 | 2505CHI45 |
| Head Configuration | Pressure/vacuum parallel flow | Pressure/vacuum parallel flow | Pressure/vacuum parallel flow |
| Stroke | 0.38 in. (9.6 mm) | 0.38 in. (9.6 mm) | 0.45 in. (11.4 mm) |
| Nominal voltage input | 115/60/1 | 230/60/1 | 220-240/50/1 |
| Max. open air flow | 3.4 cfm (96.3 l/min) | 3.4 cfm (96.3 l/min) | 3.4 cfm (96.3 l/min) |
| Max. rated pressure | 100 psi (6.9 bar) | 60 psi (4.1 bar) | 35 psi (2.4 bar) |
| Current at rated pressure | 3.6A | 1.9A | 1.7A |
| Power at rated pressure | 380W | 415W | 385W |
| Speed at rated pressure | 1700 rpm | 1670 rpm | 1400 rpm |
| Max. pressure restart | Consult factory | Consult factory | Consult factory |
| Max. vacuum | 90% local barometer | 90% local barometer | 90% local barometer |
| Max. vacuum restart | Consult factory | Consult factory | Consult factory |

| ELECTRICAL DATA | | | |
|---|-----------------------------------|-----------------------------------|-----------------------------------|
| Motor type (Capacitance) | P.S.C. [22 µF] | P.S.C. [12.5 µF] | P.S.C. [12.5 µF] |
| Motor locked rotor current | 11.8A | 4.0A | 4.5A |
| Motor insulation class | B | B | B |
| Thermal switch (Nominal Open temperature) | Yes [275°F (135°C)] | Yes [275°F (135°C)] | Yes [275°F (135°C)] |
| Lead wire color, gauge | Brown(hot), blue(neutral), 18 AWG | Brown(hot), blue(neutral), 18 AWG | Brown(hot), blue(neutral), 18 AWG |
| Capacitor lead wire color, gauge | Black, black, 18 AWG | Red, red, 18 AWG | Red, red, 18 AWG |

| GENERAL DATA | | | |
|-------------------------------|------------------------------|------------------------------|------------------------------|
| Operating ambient temperature | 50° to 104°F (10°C TO 40°C)* | 50° to 104°F (10°C TO 40°C)* | 50° to 104°F (10°C TO 40°C)* |
| Safety Certification | cRUus | TUV | TUV |
| Net weight | 14.0 lbs (6.4 kg) | 14.0 lbs (6.4 kg) | 14.0 lbs (6.4 kg) |

*Broader ambient operating ranges may be possible depending on your specific application. Please consult factory regarding your particular system needs.

PRODUCT DIMENSIONS



Stationary O₂ Concentrators

P12 **2320Z Series**

P14 **2380 Series**

P18 **2450 Series**

P20 **2660 Series**

P22 **2668 Series**

FEATURES

- > Efficient brushless DC motor
- > 100-115V 50/60Hz AC voltage input
- > Variable speed output
- > Pressure or vacuum capability
- > Proven WOB-L piston technology
- > Versatility and ease of plumbing unit
- > Durable die-cast aluminium components
- > Small, compact size and lightweight
- > Wetted parts treated for corrosion resistance
- > Designed and tested per Agency standards
- > Field serviceable
- > RoHS/REACH compliant

TYPICAL APPLICATIONS

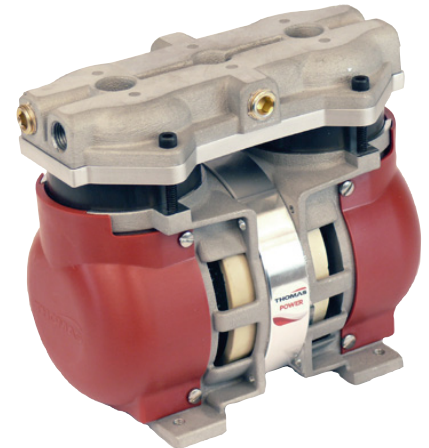
- > Oxygen Concentrator
- > Blood Analyzer
- > Respiratory Therapy
- > Medical Equipment
- > Dental Equipment

CUSTOMER REQUIREMENTS

- > Supplemental cooling air flow to compressor to be integrated into thermal management system to ensure that proper installation and operating environment is maintained in keeping with the product specifications
- > BLDC motor requires a motor controller - SKCNTLRAC Thomas controller available in sample quantities
- > Motor protection to be integrated into system controller

BASE MODEL

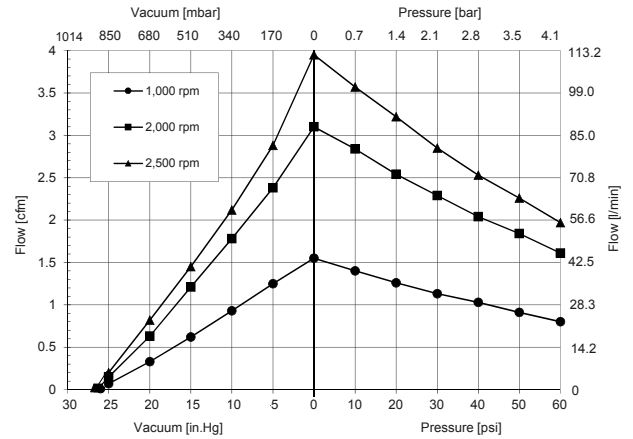
2320ZC36



WOB-L

2320Z Series

| | |
|----------------------|-------------------------------|
| Flow | 3.95 cfm (111.9 l/min) |
| Max. pressure | 60 psi (4.1 bar) |
| Max. vacuum | 90% local barometer |



2320ZC36 Vacuum/Pressure Flow Curve
(at 115V AC input into Thomas SKCNTLRAC controller)

Note: BLDC motor designed for 140V DC nominal. Recommended AC input range: 100-115V 50/60Hz. Consult factory for more information.

PERFORMANCE DATA T17-0377

| | | | |
|---------------------------|---|-----------------------|------------------------|
| Model number | 2320ZC36 | | |
| Head configuration | Pressure/Vacuum | | |
| Stroke | 0.36 in. (9.14 mm) | | |
| Nominal voltage input | 115V 60Hz AC input into optional Thomas controller (Note: Performance will vary with controller design) | | |
| Variable output speed | 1,000 rpm | 2,000 rpm | 2,500 rpm |
| Max. open air flow | 1.55 cfm (43.9 l/min) | 3.10 cfm (87.8 l/min) | 3.95 cfm (111.9 l/min) |
| Max. rated pressure | 60 psi (4.1 bar) | 60 psi (4.1 bar) | 60 psi (4.1 bar) |
| Current at rated pressure | 3.2A | 5.2A | 6.3A |
| Power at rated pressure | 180W | 310W | 385W |
| Max. pressure restart | 30 psi (2.1 bar) | 30 psi (2.1 bar) | 30 psi (2.1 bar) |
| Max. vacuum | 90% local barometer | 90% local barometer | 90% local barometer |
| Max. vacuum restart | 90% local barometer | 90% local barometer | 90% local barometer |

ELECTRICAL DATA

| | |
|------------------------------------|---|
| Motor type | 8 pole brushless DC, 3 phase |
| Motor insulation class | F |
| Motor protection | Not included - Customer to integrate into system controller |
| | Optional SKCNTLRAC Thomas controller disables motor for over current protection and stall |
| Power lead wire color, gauge | Black, red, green, (Phase leads) 18 AWG |
| Hall sensor (HS) wire color, gauge | Yellow (+VDC), blue (HS), brown (HS), orange (HS), gray (ground), 22 AWG |

GENERAL DATA

| | |
|-------------------------------|-------------------------------|
| Operating ambient temperature | 50° TO 104° F (10° to 40° C)* |
| Safety certification | Consult factory |
| Net weight | 7.5 lbs (3.4 kg) |

*Broader ambient operating ranges may be possible depending on your specific application. Please consult factory regarding your particular system needs.

PRODUCT DIMENSIONS

2320ZC36
Dimensions in inches [mm]

Labels and Dimensions:

- 4X PIPE PLUG (1/4-18 NPT)
- HALL SENSOR LEAD: AMP 3-640440-5 WHITE W/RED STRIPE OR RED CONNECTOR [558.8±25.4] LEAD LENGTH: 22.0±1.0
- POWER LEAD: AMP 3-640426-3 ORANGE CONNECTOR [558.8±25.4] LEAD LENGTH: 22.0±1.0
- 4X 1/4-20 UNC - 2B
- INTAKE 1/4-18 NPT
- EXHAUST 1/4-18 NPT
- UNIT REQUIRES SUPPLEMENTAL COOLING AIR FLOW.
- BRUSHLESS DC TECHNOLOGY REQUIRES MOTOR CONTROLLER TO OPERATE. CONSULT FACTORY FOR TIMING DIAGRAM.
- LEAD CONFIGURATION NOTE:
 - POWER LEAD WIRES: POSITION 1 - BLACK, POSITION 2 - RED, POSITION 3 - GREEN
 - HALL SENSOR WIRES: POSITION 1 - GRAY (GROUND), POSITION 2 - ORANGE (H1), POSITION 3 - BROWN (H2), POSITION 4 - BLUE (H3), POSITION 5 - YELLOW (+VDC)
- MOTOR PROTECTION TO BE INTEGRATED INTO SYSTEM CONTROLLER

Dimensions: [173.7] 6.84, [153.2] 6.03, [6.3] 0.25, [25.4] 1.00, [143] 5.63, [97.5±0.8] 3.84±0.03, [122] 4.80, [81.3±0.3] 3.20±0.01, [94.2] 3.71

FEATURES

- > Lightweight, compact design
- > cRUus or TUV approved (115/60/1 or 230/50/1)
- > RoHS and REACH compliant
- > Operate per EN 80601 standard (.38", .44" stroke)
- > Internal 9 blade cooling air flow fans
- > Conventional foot mount design
- > Extremely low vibration
- > Monolithic head
- > Wetted parts treated for corrosion resistance
- > Oil-less operation
- > Proven WOB-L technology
- > Easily serviced

Declaration documentation available upon request

TYPICAL APPLICATIONS

- > O₂ Concentrator
- > Blood or Laboratory Analyzers
- > Respiratory Therapy Equipment
- > ENT Equipment
- > Dental Equipment
- > Packaging/Printing Equipment
- > Air Dryers

BASE MODELS

2380CE32

(115/60/1)

2380CUU32

(230/50/1)

2380CS32

(100/50/60/1)

2380CE38

(115/60/1)

2380CUU38

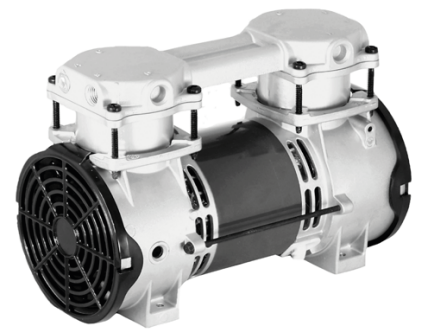
(230/50/1)

2380CE44

(115/60/1)

2380CUU44

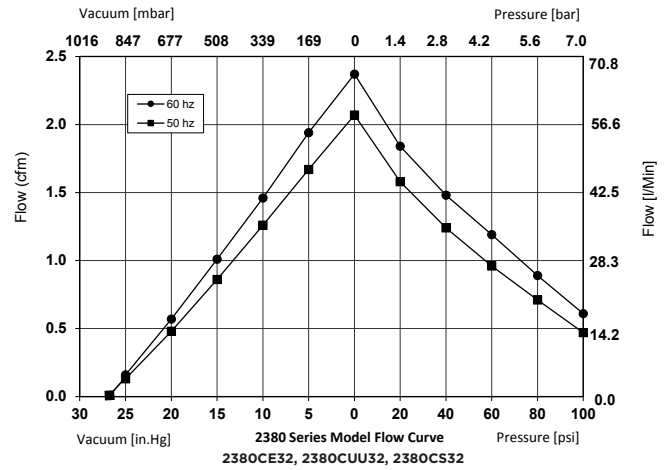
(230/50/1)



WOB-L

2380 Series

| | |
|----------------------|----------------------------|
| Flow | 2.3 cfm (65 l/min) |
| Max. pressure | 100 psi (6.9 bar) |
| Max. vacuum | 90% local barometer |



NOTE: All test values are nominal and for reference only. They are not guaranteed maximum or minimum limits, nor do they imply mean or median.

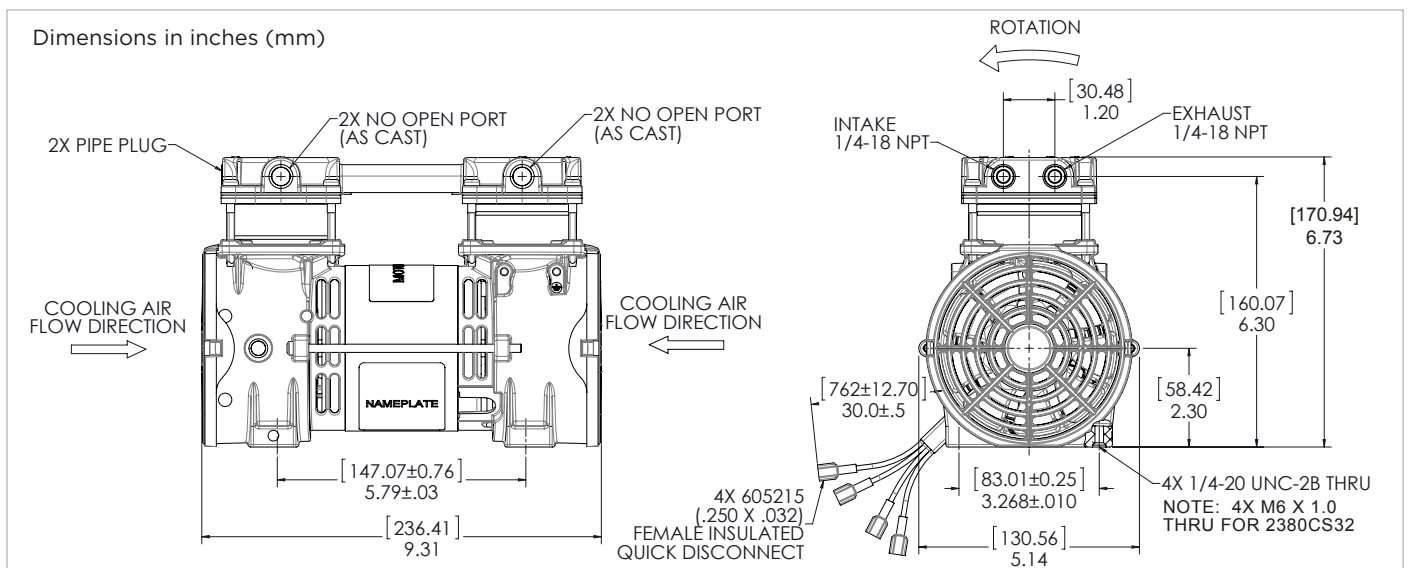
| PERFORMANCE DATA | T16-0224 | T16-0182 | T16-0246 |
|---------------------------|-------------------------------|-------------------------------|---|
| Model Number | 2380CE32 | 2380CU32 | 2380CS32 |
| Head Configuration | Pressure/vacuum parallel flow | Pressure/vacuum parallel flow | Pressure/vacuum parallel flow |
| Stroke | 0.32 in. (8.1 mm) | 0.32 in. (8.1 mm) | 0.32 in. (8.1 mm) |
| Nominal voltage input | 115/60/1 | 230/50/1 | 100/50/60/1 |
| Max. open air flow | 2.3 cfm (65.1 l/min) | 2.0 cfm (56.6 l/min) | 2.0 cfm (56.6 l/min)/2.3 cfm (65.1 l/min) |
| Max. rated pressure | 100 psi (6.9 bar) | 100 psi (6.9 bar) | 100 psi (6.9 bar) |
| Current at rated pressure | 3.0A | 1.3A | 2.9A/3.4A |
| Power at rated pressure | 338W | 290W | 279W/336W |
| Speed at rated pressure | 1666 rpm | 1371 rpm | 1377 rpm/1626 rpm |
| Max. pressure restart | Consult factory | Consult factory | Consult factory |
| Max. vacuum | 90% local barometer | 90% local barometer | 90% local barometer |
| Max. vacuum restart | Consult factory | Consult factory | Consult factory |

| ELECTRICAL DATA | | | |
|---|-----------------------------------|-----------------------------------|-----------------------------------|
| Motor type (Capacitance) | P.S.C. [25 µF] | P.S.C. [10 µF] | P.S.C. [30 µF] |
| Motor locked rotor current | 8.4A | 3.8A | 7.7A 50Hz/7.3A 60W |
| Motor insulation class | B | B | B |
| Thermal switch (Nominal Open temperature) | Yes [293°F (145°C)] | Yes [293°F (145°C)] | Yes [293°F (145°C)] |
| Lead wire color, gauge | Brown(hot), blue(neutral), 18 AWG | Brown(hot), blue(neutral), 18 AWG | Brown(hot), blue(neutral), 18 AWG |
| Capacitor lead wire color, gauge | Black, black, 18 AWG | Red, red, 18 AWG | Black, black, 18 AWG |

| GENERAL DATA | | | |
|-------------------------------|------------------------------|------------------------------|------------------------------|
| Operating ambient temperature | 50° to 104°F (10°C TO 40°C)* | 50° to 104°F (10°C TO 40°C)* | 50° to 104°F (10°C TO 40°C)* |
| Safety Certification | cRUus | TUV | None |
| Net weight | 12 lbs (5.44 kg) | 12 lbs (5.44 kg) | 12 lbs (5.44 kg) |

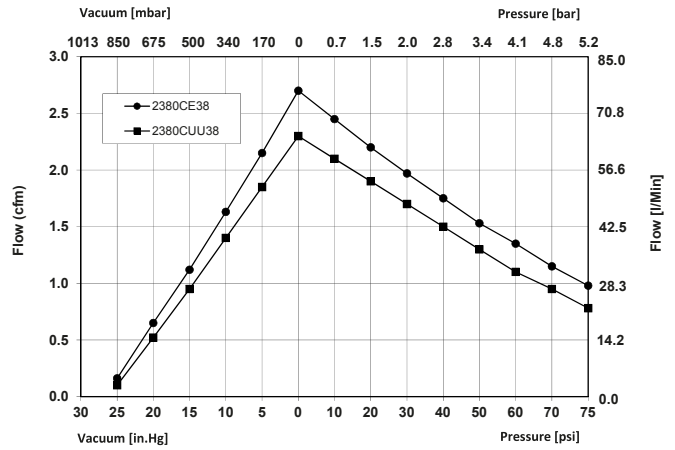
*Broader ambient operating ranges may be possible depending on your specific application. Please consult factory regarding your particular system needs.

PRODUCT DIMENSIONS



2380 Series

| | |
|----------------------|-----------------------------|
| Flow | 2.7 cfm (76.5 l/min) |
| Max. pressure | 75 psi (5.2 bar) |
| Max. vacuum | 91% local barometer |



2380 Series Flow at Pressure/Vacuum Curve

NOTE: All test values are nominal and for reference only. They are not guaranteed maximum or minimum limits, nor do they imply mean or median.

| PERFORMANCE DATA | T17-0120 | T17-0113, T16-0185 |
|---------------------------|-------------------------------|-------------------------------|
| Model Number | 2380CE38 | 2380CUU38 |
| Head Configuration | Pressure/vacuum parallel flow | Pressure/vacuum parallel flow |
| Stroke | 0.38 in. (9.7 mm) | 0.38 in. (9.7 mm) |
| Nominal voltage input | 115/60/1 | 230/50/1 |
| Max. open air flow | 2.7 cfm (76.5 l/min) | 2.3 cfm (65.1 l/min) |
| Max. rated pressure* | 75 psi (5.2 bar)* | 75 psi (5.2 bar)* |
| Current at rated pressure | 3.2A | 1.4A |
| Power at rated pressure | 370W | 325W |
| Speed at rated pressure | 1635 rpm | 1335 rpm |
| Max. pressure restart | Consult factory | Consult factory |
| Max. vacuum | 91% local barometer | 91% local barometer |
| Max. vacuum restart | Consult factory | Consult factory |

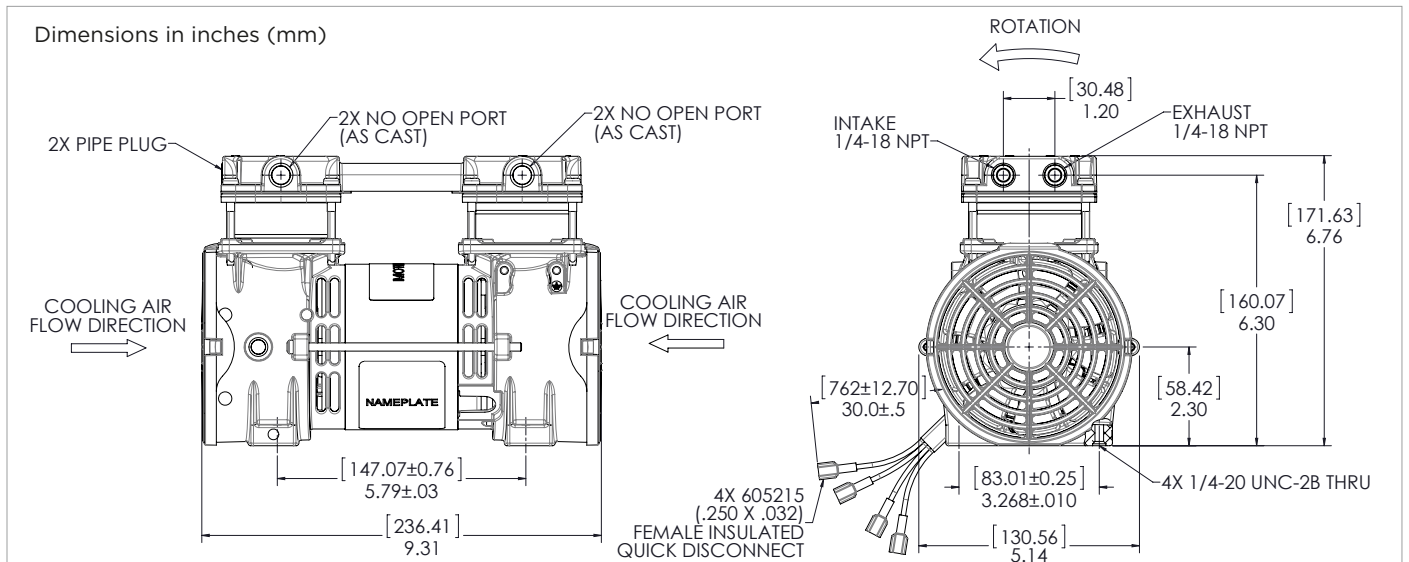
*Max rated pressure note: For O₂ concentrator applications that operate per EN 80601 (-15%/+10% nominal voltage), the maximum rated pressure is 40 psi (2.8 bar).

| ELECTRICAL DATA | | |
|---|-----------------------------------|-----------------------------------|
| Motor type (Capacitance) | P.S.C. [25 µF] | P.S.C. [12.5 µF] |
| Motor locked rotor current | 8.4A | 3.6A |
| Motor insulation class | B | B |
| Thermal switch (Nominal Open temperature) | Yes [293°F (145°C)] | Yes [293°F (145°C)] |
| Lead wire color, gauge | Brown(hot), blue(neutral), 18 AWG | Brown(hot), blue(neutral), 18 AWG |
| Capacitor lead wire color, gauge | Black, black, 18 AWG | Red, red, 18 AWG |

| GENERAL DATA | | |
|-------------------------------|------------------------------|------------------------------|
| Operating ambient temperature | 50° to 104°F (10°C TO 40°C)* | 50° to 104°F (10°C TO 40°C)* |
| Safety Certification | cRUus | TUV |
| Net weight | 12 lbs (5.44 kg) | 12 lbs (5.44 kg) |

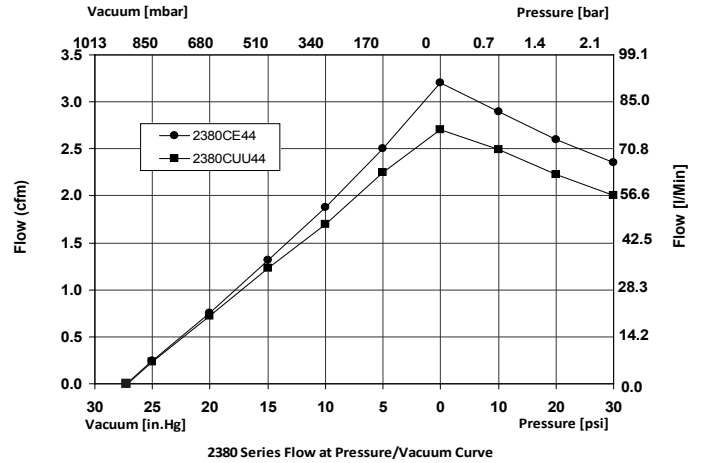
*Broader ambient operating ranges may be possible depending on your specific application. Please consult factory regarding your particular system needs.

PRODUCT DIMENSIONS



2380 Series

| | |
|----------------------|-----------------------------|
| Flow | 3.2 cfm (90.6 l/min) |
| Max. pressure | 30 psi (2.0 bar) |
| Max. vacuum | 92% local barometer |



NOTE: All test values are nominal and for reference only. They are not guaranteed maximum or minimum limits, nor do they imply mean or median.

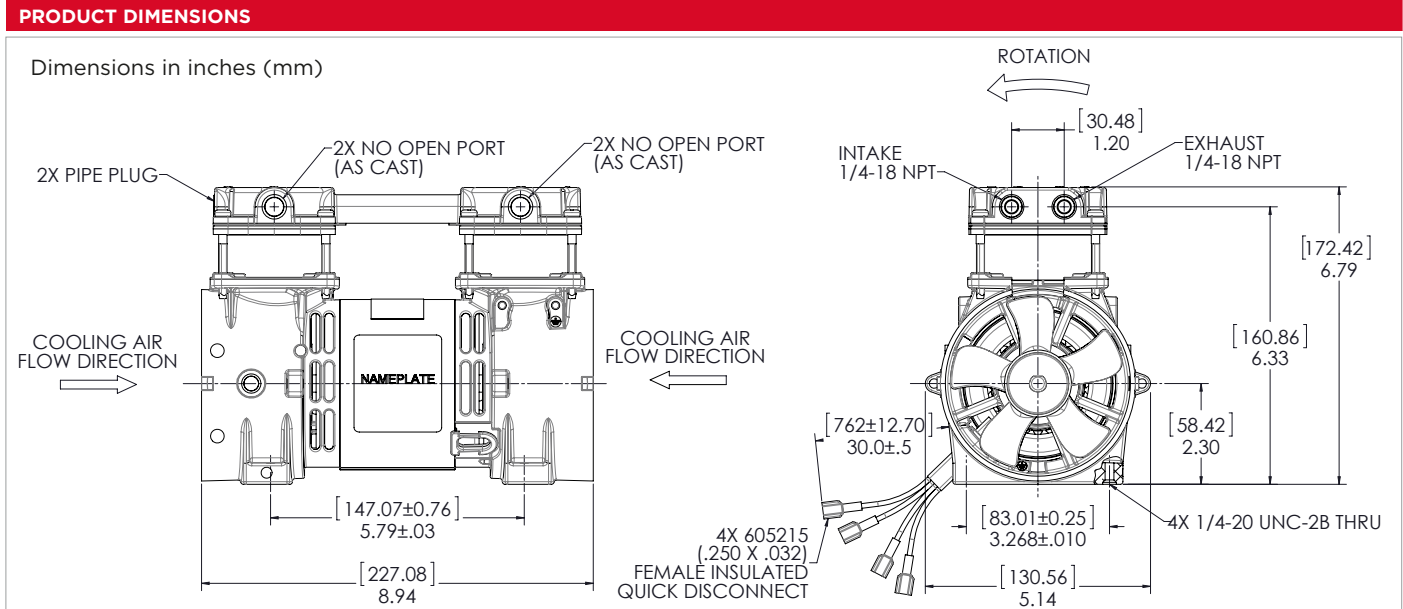
| PERFORMANCE DATA | T16-0364 | T16-0453 |
|---------------------------|-------------------------------|-------------------------------|
| Model Number | 2380CE44 | 2380CUU44 |
| Head Configuration | Pressure/vacuum parallel flow | Pressure/vacuum parallel flow |
| Stroke | 0.44 in. (11.2 mm) | 0.44 in. (11.2 mm) |
| Nominal voltage input | 115/60/1 | 230/50/1 |
| Max. open air flow | 3.2 cfm (90.6 l/min) | 2.7 cfm (76.5 l/min) |
| Max. rated pressure* | 30 psi (2.0 bar)* | 30 psi (2.0 bar)* |
| Current at rated pressure | 3.4A | 1.5A |
| Power at rated pressure | 389W | 340W |
| Speed at rated pressure | 1644 rpm | 1342 rpm |
| Max. pressure restart | Consult factory | Consult factory |
| Max. vacuum | 92% local barometer | 92% local barometer |
| Max. vacuum restart | Consult factory | Consult factory |

*Max rated pressure note: 30 psi (2.0 bar) is per EN 80601 operation (-15%/+10% nominal voltage). Applications that require 310% nominal voltage may operate up to 40 psi (2.75 bar).

| ELECTRICAL DATA | | |
|---|-----------------------------------|-----------------------------------|
| Motor type (Capacitance) | P.S.C. [25 µF] | P.S.C. [15 µF] |
| Motor locked rotor current | 8.4A | 3.6A |
| Motor insulation class | B | B |
| Thermal switch (Nominal Open temperature) | Yes [293°F (145°C)] | Yes [293°F (145°C)] |
| Lead wire color, gauge | Brown(hot), blue(neutral), 18 AWG | Brown(hot), blue(neutral), 18 AWG |
| Capacitor lead wire color, gauge | Black, black, 18 AWG | Red, red, 18 AWG |

| GENERAL DATA | | |
|-------------------------------|------------------------------|------------------------------|
| Operating ambient temperature | 50° to 104°F (10°C TO 40°C)* | 50° to 104°F (10°C TO 40°C)* |
| Safety Certification | cRUus | TUV |
| Net weight | 12 lbs (5.44 kg) | 12 lbs (5.44 kg) |

*Broader ambient operating ranges may be possible depending on your specific application. Please consult factory regarding your particular system needs.



FEATURES

- > Oil-less operation
- > Permanently lubricated bearings
- > Stainless steel valves
- > High performance piston seal
- > Die-cast aluminum components
- > Thin wall, hard coated aluminum cylinder
- > Wetted parts treated for corrosion resistance
- > Dynamically balanced
- > Designed and tested per Agency standards
- > RoHS compliant

Declaration documentation available upon request

CUSTOMER REQUIREMENTS

- > 100 cfm minimum supplemental cooling air flow for compressor to be integrated into thermal management system to ensure that proper installation and operating environment is maintained in keeping with the product specifications.

TYPICAL APPLICATIONS

- > O₂ Concentrator
- > Other Medical Applications

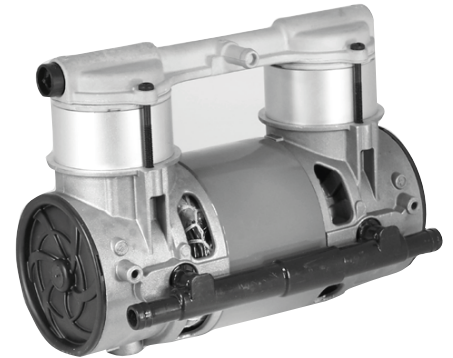
BASE MODELS

2450AE44

(115/60/1)

2450AUU44

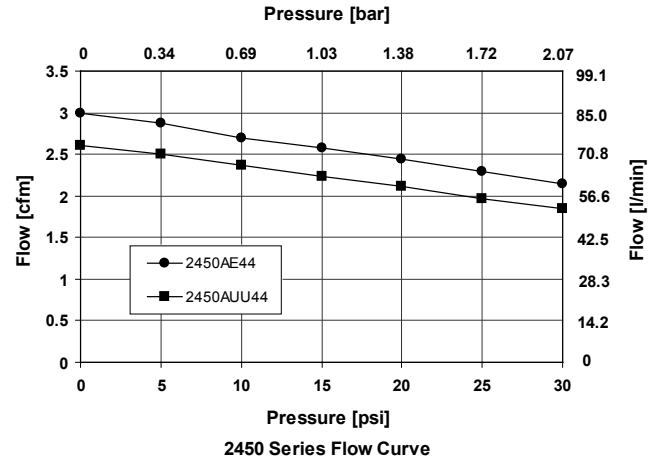
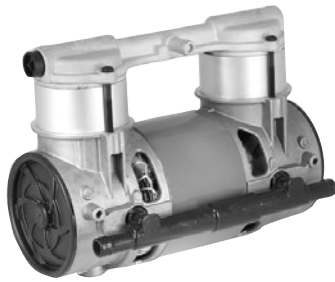
(230/50/1)



WOB-L

2450 Series

| | |
|----------------------|---------------------------|
| Flow | 3.0 cfm (85 l/min) |
| Max. pressure | 30 psi (2.1 bar) |
| Max. vacuum | N/A |



NOTE: All test values are nominal and for reference only. They are not guaranteed maximum or minimum limits, nor do they imply mean or median values.

PERFORMANCE DATA

| | 2450AE44 | 2450AUU44 |
|---------------------------|------------------------|------------------------|
| Model Number | 2450AE44 | 2450AUU44 |
| Head Configuration | Pressure parallel flow | Pressure parallel flow |
| Stroke | 0.44 in. (11.2 mm) | 0.44 in. (11.2 mm) |
| Nominal voltage input | 115/60/1 | 230/50/1 |
| Max. open air flow | 3.0 cfm (85.0 l/min) | 2.6 cfm (73.6 l/min) |
| Max. rated pressure | 30 psi (2.1 bar) | 30 psi (2.1 bar) |
| Current at rated pressure | 3.5A | 1.6A |
| Power at rated pressure | 388W | 350W |
| Speed at rated pressure | 1650 rpm | 1330 rpm |
| Max. pressure restart | N/A | N/A |
| Max. vacuum | N/A | N/A |
| Max. vacuum restart | N/A | N/A |

ELECTRICAL DATA

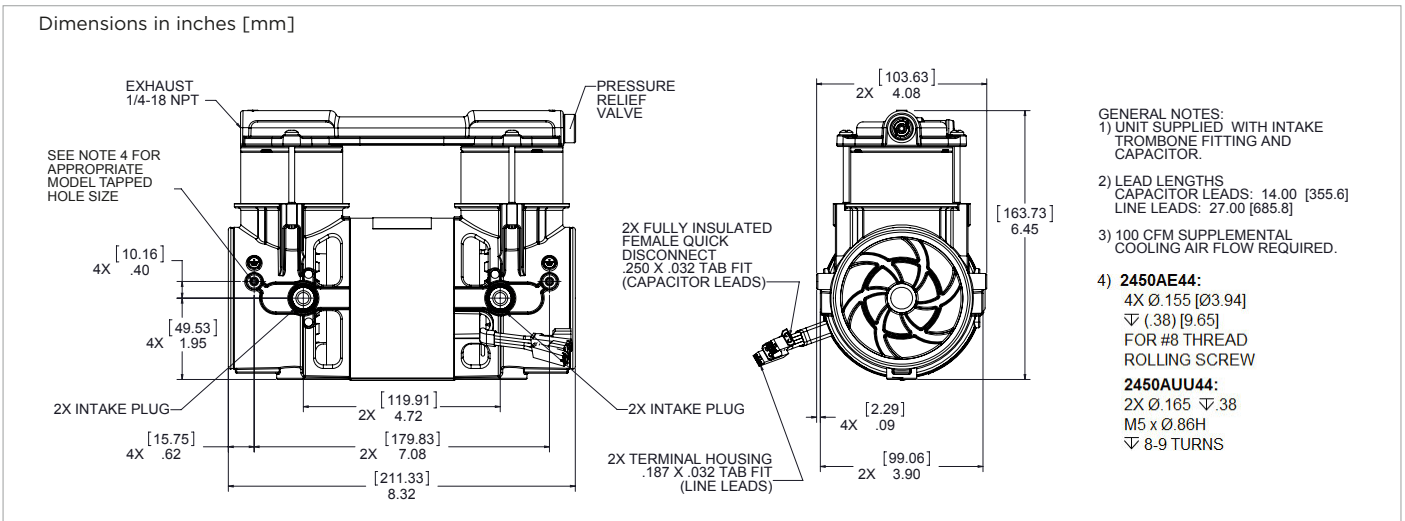
| | P.S.C. [20 µF] | P.S.C. [10 µF] |
|---|-----------------------------------|-----------------------------------|
| Motor type (Capacitance) | P.S.C. [20 µF] | P.S.C. [10 µF] |
| Motor locked rotor current | 8.7A | 3.5A |
| Motor insulation class | B | B |
| Thermal switch (Nominal Open temperature) | Yes [293°F (145°C)] | Yes [293°F (145°C)] |
| Lead wire color, gauge | Brown(hot), blue(neutral), 18 AWG | Brown(hot), blue(neutral), 18 AWG |
| Capacitor lead wire color, gauge | Black, black, 18 AWG | Red, red, 18 AWG |

GENERAL DATA

| | 50° to 104°F (10°C TO 40°C)* | 50° to 104°F (10°C TO 40°C)* |
|-------------------------------|------------------------------|------------------------------|
| Operating ambient temperature | 50° to 104°F (10°C TO 40°C)* | 50° to 104°F (10°C TO 40°C)* |
| Safety Certification | cRUus, CSA | TUV |
| Net weight | 9.50 lbs (4.3 kg) | 9.50 lbs (4.3 kg) |

*Broader ambient operating ranges may be possible depending on your specific application. Please consult factory regarding your particular system needs.

PRODUCT DIMENSIONS



FEATURES

- > Custom configured part options
- > Oil-less operation
- > Permanently lubricated bearings
- > Stainless steel valves
- > Die-cast aluminum components
- > Dynamically balanced
- > Proven WOB-L technology
- > Monolithic head
- > Field service capability
- > Thermally protected motor
- > Designed and tested per Agency standards
- > RoHS compliant

Declaration documentation available upon request

TYPICAL APPLICATIONS

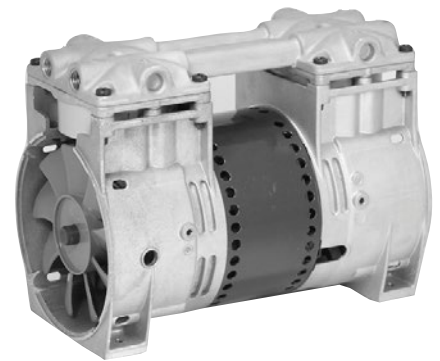
- > O₂ Concentrator
- > Blood & Laboratory Analyzers
- > Aspirators/Respirators
- > Dental & Optical Equipment
- > Industrial/Manufacturing Equipment
- > Business Equipment/Food & Beverage Equipment

BASE MODELS

2660E48XNTLSXX
(115/60/1)

2660N48XNTLSXX
(220-240/50/60/1)

2660S48XNTLSXX
(100/50/60/1)



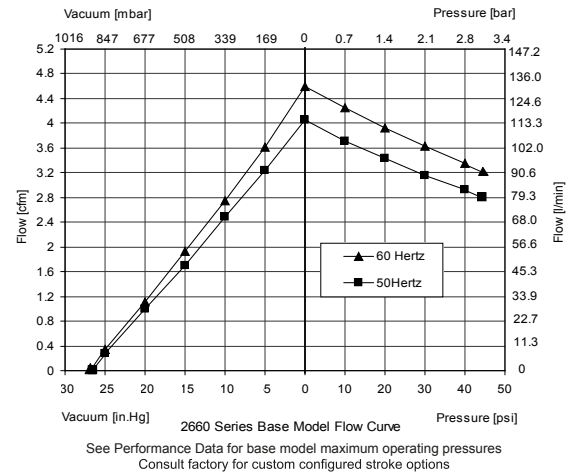
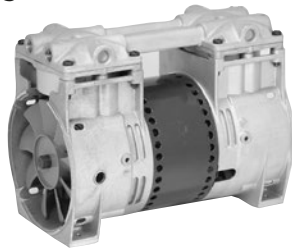
WOB-L

2660 Series

| | |
|----------------------|------------------------------|
| Flow | 4.6 cfm (130.3 l/min) |
| Max. pressure | 45 psi (3.1 bar) |
| Max. vacuum | 92% local barometer |

CONFIGURED OPTIONS

- > Stroke
- > Pump restart
- > Head port thread
- > Foot tap thread
- > Electrical cord
- > Fan guard
- > Protective coating



NOTE: All test values are nominal and for reference only. They are not guaranteed maximum or minimum limits, nor do they imply mean or median.

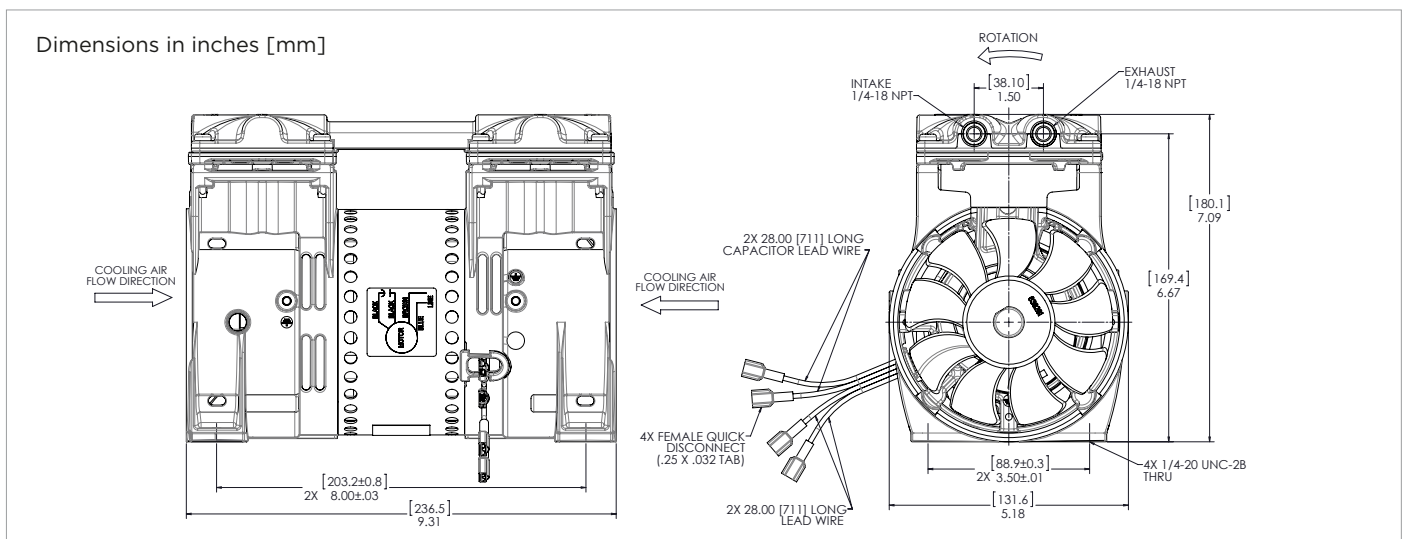
| PERFORMANCE DATA | T10-0151 | T10-0153 | | T10-0152 | |
|---------------------------|-------------------------------|-------------------------------|-----------------------|-------------------------------|-----------------------|
| Model Number | 2660E48XNTLSXX | 2660N48XNTLSXX | | 2660S48XNTLSXX | |
| Head Configuration | Pressure/vacuum parallel flow | Pressure/vacuum parallel flow | | Pressure/vacuum parallel flow | |
| Stroke | 0.48 in. (12.2 mm) | 0.48 in. (12.2 mm) | | 0.48 in. (12.2 mm) | |
| Nominal voltage input | 115/60/1 | 230/50/1 | 230/60/1 | 100/50/1 | 100/60/1 |
| Max. open air flow | 4.6 cfm (130.3 l/min) | 4.0 cfm (113.3 l/min) | 4.6 cfm (130.3 l/min) | 4.0 cfm (113.3 l/min) | 4.6 cfm (130.3 l/min) |
| Max. rated pressure | 40 psi (2.8 bar) | 45 psi (3.1 bar) | 40 psi (2.8 bar) | 25 psi (1.7 bar) | 20 psi (1.4 bar) |
| Current at rated pressure | 5.3A | 2.5A | 2.7A | 4.5A | 4.4A |
| Power at rated pressure | 608W | 523W | 604W | 421W | 432W |
| Speed at rated pressure | 1675 rpm | 1409 rpm | 1682 rpm | 1436 rpm | 1695 rpm |
| Max. pressure restart | Consult factory | Consult factory | | Consult factory | |
| Max. vacuum | 92% local barometer | 92% local barometer | | 92% local barometer | |
| Max. vacuum restart | Consult factory | Consult factory | | Consult factory | |

| ELECTRICAL DATA | P.S.C. [25 µF] | | P.S.C. [15 µF] | | P.S.C. [25 µF] | |
|-----------------------------------|-----------------------------------|--|-----------------------------------|------|-----------------------------------|-------|
| Motor type (Capacitance) | P.S.C. [25 µF] | | P.S.C. [15 µF] | | P.S.C. [25 µF] | |
| Motor locked rotor current | 18.0A | | 9.3A | 8.3A | 15.0A | 14.5A |
| Motor insulation class | B | | B | | B | |
| Thermal switch (Open temperature) | Yes [293°F (145°C)] | | Yes [248°F (120°C)] | | Yes [293°F (145°C)] | |
| Lead wire color, gauge | Brown(hot), blue(neutral), 18 AWG | | Brown(hot), blue(neutral), 18 AWG | | Brown(hot), blue(neutral), 18 AWG | |
| Capacitor lead wire color, gauge | Black, black, 18 AWG | | Red, red, 18 AWG | | Black, black, 18 AWG | |

| GENERAL DATA | 50° to 104°F (10°C TO 40°C)* | | 50° to 104°F (10°C TO 40°C)* | | 50° to 104°F (10°C TO 40°C)* | |
|-------------------------------|------------------------------|--|------------------------------|--|------------------------------|--|
| Operating ambient temperature | 50° to 104°F (10°C TO 40°C)* | | 50° to 104°F (10°C TO 40°C)* | | 50° to 104°F (10°C TO 40°C)* | |
| Safety Certification | cRUus | | TUV | | None | |
| Net weight | 17.6 lbs (8.0 kg) | | 17.1 lbs (7.8 kg) | | 17.6 lbs (8.0 kg) | |

*Broader ambient operating ranges may be possible depending on your specific application. Please consult factory regarding your particular system needs.

PRODUCT DIMENSIONS



FEATURES

- > Custom configured part options
- > Oil-less operation
- > Permanently lubricated bearings
- > Stainless steel valves
- > Die-cast aluminum components
- > Dynamically balanced
- > Proven WOB-L technology
- > Monolithic head
- > Field service capability
- > Thermally protected motor
- > Designed and tested per Agency standards
- > RoHS compliant

Declaration documentation available upon request

TYPICAL APPLICATIONS

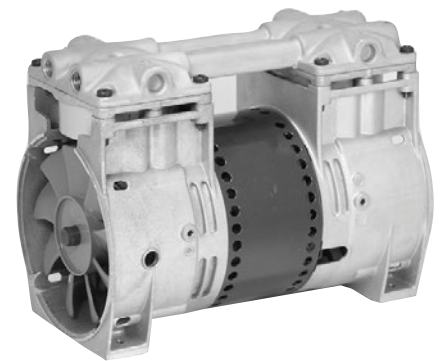
- > O₂ Concentrator
- > Blood & Laboratory Analyzers
- > Aspirators/Respirators
- > Dental & Optical Equipment
- > Industrial/Manufacturing Equipment
- > Business Equipment/Food & Beverage Equipment

BASE MODELS

2668E44XNTLSXX
(115/60/1)

2668N44XNTLSXX
(220-240/50/60/1)

2668S44XNTLSXX
(100/50/60/1)



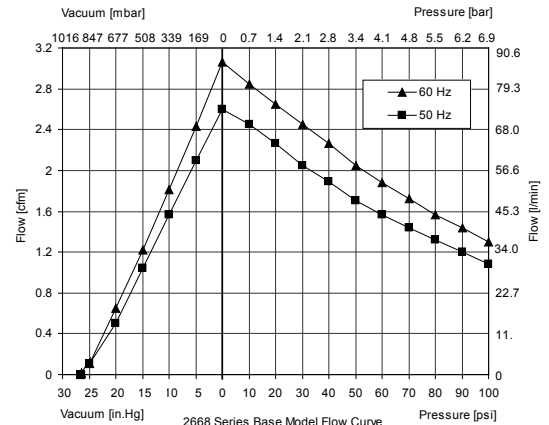
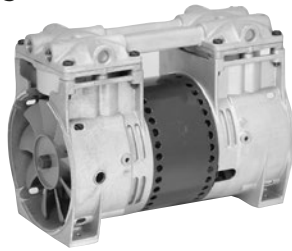
WOB-L

2668 Series

| | |
|----------------------|-----------------------------|
| Flow | 3.1 cfm (87.8 l/min) |
| Max. pressure | 100 psi (6.9 bar) |
| Max. vacuum | 93% local barometer |

CONFIGURED OPTIONS

- > Stroke
- > Pump restart
- > Head port thread
- > Foot tap thread
- > Electrical cord
- > Fan guard
- > Protective coating



See Performance Data for base model maximum operating pressures
Consult factory for custom configured stroke options

NOTE: All test values are nominal and for reference only. They are not guaranteed maximum or minimum limits, nor do they imply mean or median values.

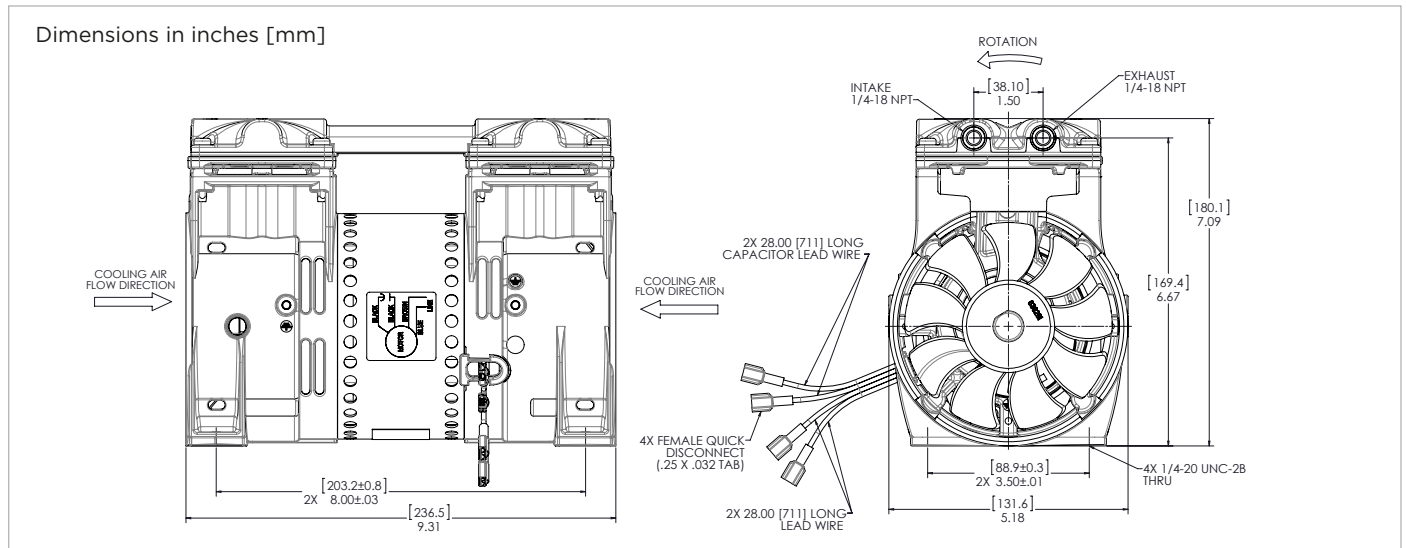
| PERFORMANCE DATA | T10-0138 | | T10-0142 | | T10-0140 | |
|---------------------------|-------------------------------|--|-------------------------------|----------------------|-------------------------------|----------------------|
| Model Number | 2668E44XNTLSXX | | 2668N44XNTLSXX | | 2668S44XNTLSXX | |
| Head Configuration | Pressure/vacuum parallel flow | | Pressure/vacuum parallel flow | | Pressure/vacuum parallel flow | |
| Stroke | 0.44 in. (11.2 mm) | | 0.44 in. (11.2 mm) | | 0.44 in. (11.2 mm) | |
| Nominal voltage input | 115/60/1 | | 230/50/1 | 230/60/1 | 100/50/1 | 100/60/1 |
| Max. open air flow | 3.1 cfm (87.8 l/min) | | 2.6 cfm (73.6 l/min) | 3.1 cfm (87.8 l/min) | 2.6 cfm (73.6 l/min) | 3.1 cfm (87.8 l/min) |
| Max. rated pressure | 100 psi (6.9 bar) | | 100 psi (6.9 bar) | 100 psi (6.9 bar) | 100 psi (6.9 bar) | 40 psi (2.8 bar) |
| Current at rated pressure | 4.5A | | 1.8A | 2.1A | 4.6A | 4.3A |
| Power at rated pressure | 489W | | 408W | 449W | 430W | 432W |
| Speed at rated pressure | 1699 rpm | | 1406 rpm | 1676 rpm | 1400 rpm | 1689 rpm |
| Max. pressure restart | Consult factory | | Consult factory | | Consult factory | |
| Max. vacuum | 93% local barometer | | 93% local barometer | | 93% local barometer | |
| Max. vacuum restart | Consult factory | | Consult factory | | Consult factory | |

| ELECTRICAL DATA | P.S.C. [15 µF] | | P.S.C. [15 µF] | | P.S.C. [20 µF] | |
|-----------------------------------|-----------------------------------|--|-----------------------------------|------|-----------------------------------|-------|
| Motor type (Capacitance) | P.S.C. [15 µF] | | P.S.C. [15 µF] | | P.S.C. [20 µF] | |
| Motor locked rotor current | 16.2A | | 5.9A | 5.6A | 10.9A | 10.5A |
| Motor insulation class | B | | B | | B | |
| Thermal switch (Open temperature) | Yes [293°F (145°C)] | | Yes [275°F (135°C)] | | Yes [293°F (145°C)] | |
| Lead wire color, gauge | Brown(hot), blue(neutral), 18 AWG | | Brown(hot), blue(neutral), 18 AWG | | Brown(hot), blue(neutral), 18 AWG | |
| Capacitor lead wire color, gauge | Black, black, 18 AWG | | Red, red, 18 AWG | | Black, black, 18 AWG | |

| GENERAL DATA | 50° to 104°F (10°C TO 40°C)* | | 50° to 104°F (10°C TO 40°C)* | | 50° to 104°F (10°C TO 40°C)* | |
|-------------------------------|------------------------------|--|------------------------------|--|------------------------------|--|
| Operating ambient temperature | 50° to 104°F (10°C TO 40°C)* | | 50° to 104°F (10°C TO 40°C)* | | 50° to 104°F (10°C TO 40°C)* | |
| Safety Certification | cRUus | | TUV | | None | |
| Net weight | 16.3 lbs (7.4 kg) | | 16.3 lbs (7.4 kg) | | 16.3 lbs (7.4 kg) | |

*Broader ambient operating ranges may be possible depending on your specific application. Please consult factory regarding your particular system needs.

PRODUCT DIMENSIONS



Portable O₂ Concentrators

- P25 **230Z Series**
- P27 **250Z Series**
- P29 **260Z Series**
- P31 **2110Z Series**
- P33 **2220Z Series**
- P35 **2250Z Series**

FEATURES

- > Oil-less non-lube piston and cylinder
- > Permanently lubricated bearings
- > Stainless steel valves
- > Cylinder hard coated for wear resistance
- > Lightweight die cast aluminum components
- > Balanced for smooth, low vibration operation
- > All wetted aluminum parts treated for corrosion resistance
- > Brushless DC motor for variable output, long life and low energy consumption
- > RoHS compliant

TYPICAL APPLICATIONS

- > Portable Oxygen Concentrator
- > Small Analytical Equipment
- > Instrumentation
- > Ambient Scenting
- > Lab Automation

CUSTOMER REQUIREMENTS

- > Supplemental cooling air flow to compressor to be integrated into thermal management system to ensure that proper installation and operating environment is maintained in keeping with the product specifications
- > BLDC motor requires motor controller - SKCNTLR optional Thomas controller available in sample quantities

BASE MODEL

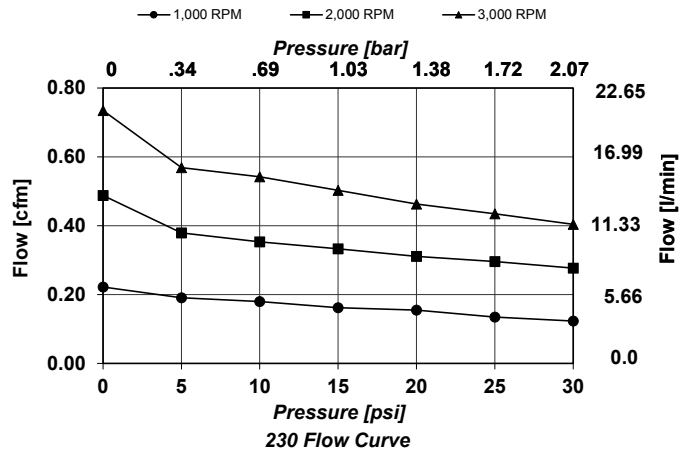
230ZA30/12



WOB-L

230Z Series

| | |
|----------------------|-----------------------------|
| Flow | .74 cfm (20.8 l/min) |
| Max. pressure | 30 psi (2.1 bar) |
| Max. vacuum | N/A Pressure Only |



PERFORMANCE DATA

| | | | |
|---------------------------|----------------------|-----------------------|-----------------------|
| Model Number | 230ZA30/12 | | |
| Head Configuration | Pressure only | | |
| Stroke | 0.30 in. (7.6 mm) | | |
| Nominal voltage input | 12V DC | 12V DC | 13V DC |
| Variable output speed | 1,000 rpm | 2,000 rpm | 3,000 rpm |
| Max. open air flow | 0.22 cfm (6.3 l/min) | 0.49 cfm (13.8 l/min) | 0.74 cfm (20.8 l/min) |
| Max. rated pressure | 30 psi (2.1 bar) | 30 psi (2.1 bar) | 30 psi (2.1 bar) |
| Current at rated pressure | 2.9A | 3.7A | 5.1A |
| Power at rated pressure | 34.3W | 44.7W | 65.8W |
| Max. pressure restart | 30 psi (2.1 bar) | 30 psi (2.1 bar) | 30 psi (2.1 bar) |
| Max. vacuum | Not available | Not available | Not available |
| Max. vacuum restart | Not available | Not available | Not available |

ELECTRICAL DATA

| | |
|-------------------------------|--|
| Motor Type | 10 pole brushless DC, 3 phase |
| Motor Insulation class | 155°C maximum winding temperature |
| Motor protection | Not included - Customer to integrate into system controller |
| | Optional SKCNTLR Thomas controller disables motor for stall, temperature, & amps |
| Power lead wire color, gauge | Green (phase A), black(phase B), red (phase C), 22 AWG |
| Hall sensor wire color, gauge | Yellow (+VDC), brown (HS1), orange (HS2), blue (HS3), gray (ground), 22 AWG |

GENERAL DATA

| | |
|-------------------------------|-----------------------------|
| Operating ambient temperature | 50° TO 104° F (10° to 40°C) |
| Safety Certification | Consult factory |
| Net weight | 1.2 lbs (0.4 kg) |

*Broader ambient operating ranges may be possible depending on your specific application. Please consult factory regarding your particular system needs.

PRODUCT DIMENSIONS

230ZA30/12

EXHAUST (PULL PLUG) 1/8" NPT

Pipe Plug

(8.00 ±.50)

CONNECTOR ASSY (AMP PART NO.: 3-840446-8)

VIEW A-A

2X 3.63 MAX

3.80 MAX

(1.07)

(4X 6-32)

(4X .35)

(4X .65)

(.30)

INTAKE (PULL PLUG)

NAMEPLATE

LABEL LOCATION

NO OPEN PORT (AS CAST)

2.64"

| | | |
|------------|--------|---------|
| POSITION 1 | YELLOW | VDC + |
| POSITION 2 | BLUE | HALL 3 |
| POSITION 3 | ORANGE | HALL 2 |
| POSITION 4 | BROWN | HALL 1 |
| POSITION 5 | GRAY | GROUND |
| POSITION 6 | RED | PHASE C |
| POSITION 7 | BLACK | PHASE B |
| POSITION 8 | GREEN | PHASE A |

UNIT REQUIRES SUPPLEMENTAL COOLING AIR FLOW.

BRUSHLESS DC TECHNOLOGY REQUIRES MOTOR CONTROLLER TO OPERATE.

Dimensions in in.

FEATURES

- > Pressure or vacuum capability
- > Oil-less operation
- > Efficient brushless DC motor
- > Variable speed output
- > Proven WOB-L piston technology
- > High performance piston seal
- > Die-cast aluminium and Magnesium components
- > Thin wall, hard coated aluminum piston cylinder
- > Epoxy coated wetted parts
- > Designed and tested per Agency standards
- > RoHS and REACH compliant

TYPICAL APPLICATIONS

- > Portable Oxygen Concentrator
- > Small Analytical Equipment
- > Fuel Atomization
- > Ambient Scenting
- > Lab Automation

CUSTOMER REQUIREMENTS

- > Supplemental cooling air flow to compressor to be integrated into thermal management system to ensure that proper installation and operating environment is maintained in keeping with the product specifications
- > BLDC motor requires a motor controller - optional Thomas controller, SKCNTLR, available in sample quantities

BASE MODEL

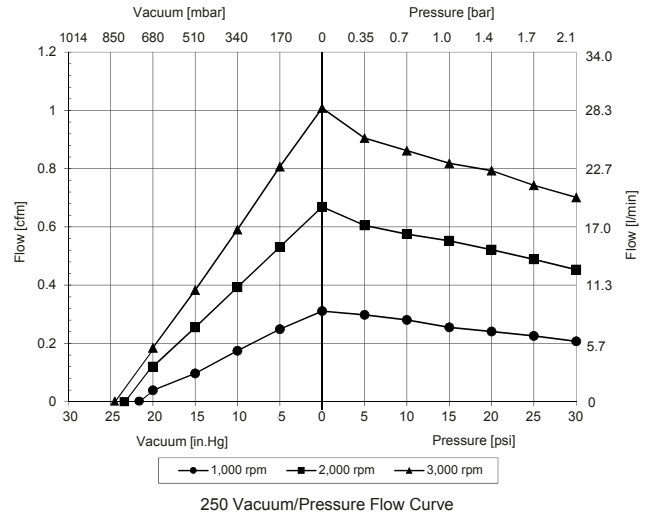
250ZC35/24



WOB-L

250Z Series

| | |
|----------------------|------------------------------|
| Flow | 1.00 cfm (28.3 l/min) |
| Max. pressure | 30 psi (2.1 bar) |
| Max. vacuum | 82% local barometer |



PERFORMANCE DATA T16-0381, T17-0200

| | | | |
|---------------------------|----------------------|-----------------------|-----------------------|
| Model number | 250ZC35/24 | | |
| Head configuration | Pressure/Vacuum | | |
| Stroke | 0.35 in. (8.9 mm) | | |
| Nominal voltage input | 24V DC | 24V DC | 24V DC |
| Variable output speed | 1,000 rpm | 2,000 rpm | 3,000 rpm |
| Max. open air flow | 0.31 cfm (8.7 l/min) | 0.67 cfm (19.0 l/min) | 1.00 cfm (28.3 l/min) |
| Max. rated pressure | 30 psi (2.1 bar) | 30 psi (2.1 bar) | 30 psi (2.1 bar) |
| Current at rated pressure | 1.3A | 2.3A | 3.5A |
| Power at rated pressure | 31W | 55W | 83W |
| Max. pressure restart | 30 psi (2.1 bar) | 30 psi (2.1 bar) | 30 psi (2.1 bar) |
| Max. vacuum | 73% local barometer | 80% local barometer | 82% local barometer |
| Max. vacuum restart | 73% local barometer | 80% local barometer | 82% local barometer |

ELECTRICAL DATA

| | |
|-------------------------------|---|
| Motor type | 10 pole brushless DC, 3 phase |
| Motor insulation class | F |
| Motor protection | Thermally protected via customer hook-up of thermistor leads Optional SKCNTLR Thomas controller disables motor for stall, amps |
| Power lead wire color, gauge | Green (phase A), black(phase B), red (phase C), 18 AWG |
| Hall sensor wire color, gauge | Yellow (Hall+), brown (HS1), orange (HS2), blue (HS3), gray (Hall -), 22 AWG |
| Thermistor wire color, gauge | Violet (Thermistor), 22 AWG |

GENERAL DATA

| | |
|-------------------------------|-------------------------------|
| Operating ambient temperature | 50° TO 104° F (10° to 40 °C)* |
| Safety certification | Consult factory |
| Net weight | 2.40 lbs (1.08 kg) |

*Broader ambient operating ranges may be possible depending on your specific application. Please consult factory regarding your particular system needs.

PRODUCT DIMENSIONS

250ZC35/24
Dimensions in inches [mm]

DETAIL B SCALE 2 : 1

UNIT REQUIRES SUPPLEMENTAL COOLING AIR FLOW.
BRUSHLESS DC TECHNOLOGY REQUIRES MOTOR CONTROLLER TO OPERATE.

LEAD CONFIGURATION:
LINE:
POSITION 1 - GREEN (PHASE A)
POSITION 2 - BLACK (PHASE B)
POSITION 3 - RED (PHASE C)

HALL SENSOR:
POSITION 1 - VIOLET (THERMISTOR)
POSITION 2 - YELLOW (HALL +)
POSITION 3 - BROWN (H1)
POSITION 4 - ORANGE (H2)
POSITION 5 - BLUE (H3)
POSITION 6 - GRAY (HALL -)
POSITION 7 - VIOLET (THERMISTOR)
POSITION 8 - EMPTY

FEATURES

- > Unique head/cylinder design
- > Oil-less operation
- > Permanently lubricated bearings
- > Stainless steel valves
- > Pressure or Vacuum Capability
- > High performance piston seal
- > Die-cast aluminum components
- > Thin wall, hard coated aluminum cylinder
- > Wetted parts treated for corrosion resistance
- > Dynamically balanced
- > Designed and tested per Agency standards
- > Brushless DC motor
- > RoHS compliant

TYPICAL APPLICATIONS

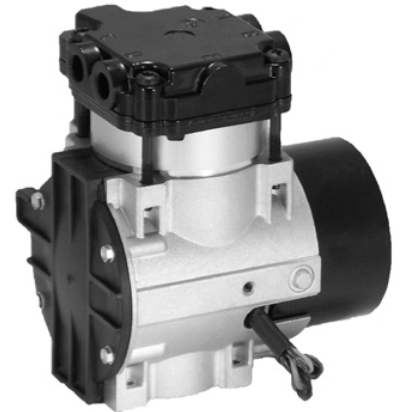
- > Portable Oxygen Concentrator
- > Small Analytical Equipment
- > Instrumentation
- > Ambient Scenting
- > Lab Automation

CUSTOMER REQUIREMENTS

- > Supplemental cooling air flow to compressor to be integrated into thermal management system to ensure that proper installation and operating environment is maintained in keeping with the product specifications
- > BLDC motor requires motor controller - SKCNTLR optional Thomas controller available in sample quantities

BASE MODEL

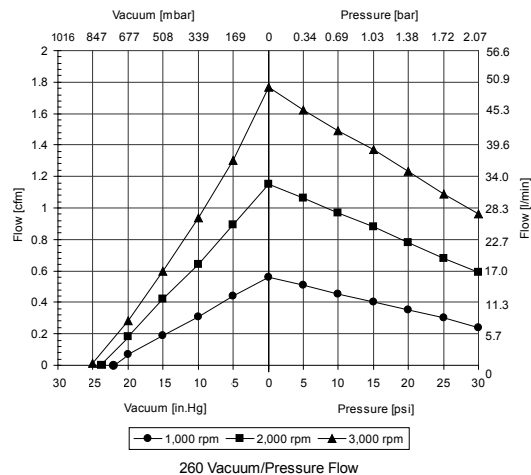
260ZC35/24



WOB-L

260Z Series

| | |
|----------------------|------------------------------|
| Flow | 1.77 cfm (50.1 l/min) |
| Max. pressure | 30 psi (2.1 bar) |
| Max. vacuum | 87% local barometer |



PERFORMANCE DATA

| | | | |
|---------------------------|-----------------------|-----------------------|-----------------------|
| Model Number | 260ZC35/24 | | |
| Head Configuration | Pressure/Vacuum | | |
| Stroke | 0.35 in. (8.9 mm) | | |
| Nominal voltage input | 24V DC | 24V DC | 24V DC |
| Variable output speed | 1,000 rpm | 2,000 rpm | 3,000 rpm |
| Max. open air flow | 0.56 cfm (15.9 l/min) | 1.15 cfm (32.6 l/min) | 1.77 cfm (50.1 l/min) |
| Max. rated pressure | 30 psi (2.1 bar) | 30 psi (2.1 bar) | 30 psi (2.1 bar) |
| Current at rated pressure | 3.3A | 4.8A | 6.0A |
| Power at rated pressure | 79W | 115W | 143W |
| Max. pressure restart | 30 psi (2.1 bar) | 30 psi (2.1 bar) | 30 psi (2.1 bar) |
| Max. vacuum | 23.8 in Hg (806 mbar) | 24.7 in Hg (836 mbar) | 25.5 in Hg (864 mbar) |
| Max. vacuum restart | 23.8 in Hg (806 mbar) | 24.7 in Hg (836 mbar) | 25.5 in Hg (864 mbar) |

ELECTRICAL DATA

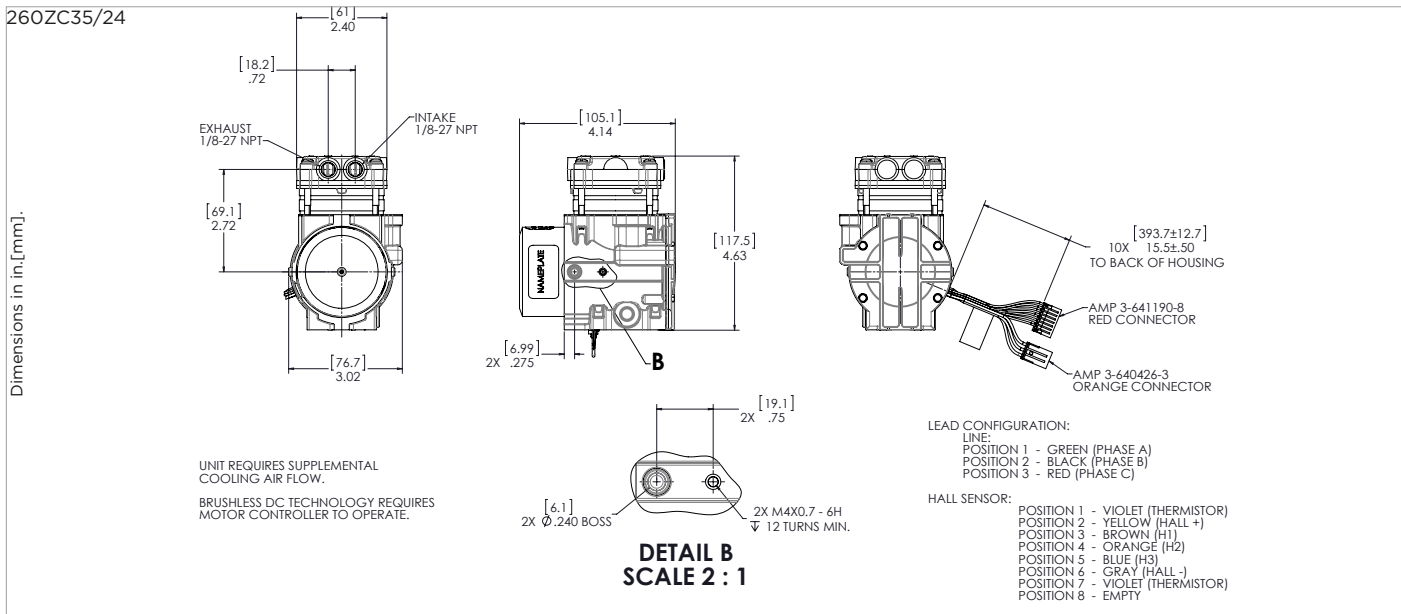
| | |
|-------------------------------|--|
| Motor Type | 10 Pole BLDC |
| Motor Insulation class | F |
| Motor protection | Thermally protected |
| | Optional SKCNTLR Thomas controller disables motor for stall, amps |
| Power lead wire color, gauge | Green (phase A), black(phase B), red (phase C), 18 AWG |
| Hall sensor wire color, gauge | Yellow (Hall+), brown (HS1), orange (HS2), blue (HS3), gray (Hall -), 22 AWG |
| Thermistor wire color, gauge | Violet (Thermistor), 22 AWG |

GENERAL DATA

| | |
|-------------------------------|------------------------------|
| Operating ambient temperature | 50° TO 104° F (10° to 40°C)* |
| Safety Certification | Consult factory |
| Net weight | 2.78 lbs (1.26 kg) |

*Broader ambient operating ranges may be possible depending on your specific application. Please consult factory regarding your particular system needs.

PRODUCT DIMENSIONS



FEATURES

- > Oil-less operation
- > Permanently lubricated bearings
- > Stainless steel valves
- > High performance piston seal
- > Magnesium or Aluminum die-cast components
- > Corrosion resistant wetted parts
- > Dynamically balanced
- > Brushless DC motor
- > RoHS/Reach compliant

TYPICAL APPLICATIONS

- > Portable Oxygen Concentrator
- > Small Analytical Equipment
- > Instrumentation
- > Ambient Scenting
- > Lab Automation

CUSTOMER REQUIREMENTS

- > Supplemental cooling air flow to compressor to be integrated into thermal management system to ensure that proper installation and operating environment is maintained in keeping with the product specifications
- > BLDC motor requires motor controller - SKCNTLR optional Thomas controller available in sample quantities

BASE MODEL



2110ZA26/12M
2110ZA26/12



2110ZA26/12M
Magnesium Die Cast Components



2110ZA26/12
Aluminum Die Cast Components



WOB-L

2110Z Series

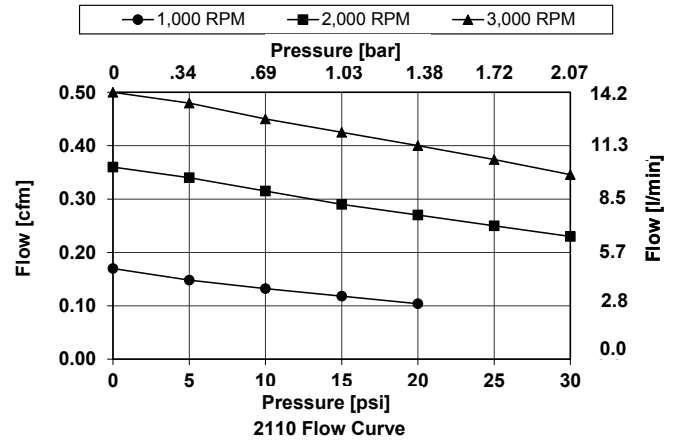
| | |
|----------------------|------------------------------|
| Flow | 0.50 cfm (14.1 l/min) |
| Max. pressure | 30 psig (2.1 bar) |
| Max. vacuum | N/A Pressure Only |



2110ZA26/12M
Magnesium Die Cast
Components



2110ZA26/12
Aluminum Die Cast
Components



Contact us for custom stroke options

PERFORMANCE DATA

| | | | |
|---------------------------|---|----------------------|-----------------------|
| Model Number | 2110ZA26/12M (Mg Version) OR 2110ZA26/12 (Al Version) | | |
| Head Configuration | Pressure parallel flow | | |
| Stroke | 0.26 in. (6.6 mm) | | |
| Nominal voltage input | 12V DC | 12V DC | 12V DC |
| Variable output speed | 1,000 rpm | 2,000 rpm | 3,000 rpm |
| Max. open air flow | 0.17 cfm (4.8 l/min) | 0.34 cfm (9.6 l/min) | 0.50 cfm (14.1 l/min) |
| Max. rated pressure | 20 psi (1.4 bar) | 30 psi (2.1 bar) | 30 psi (2.1 bar) |
| Current at rated pressure | 2.6A | 3.9A | 4.8A |
| Power at rated pressure | 32W | 47W | 58W |
| Max. pressure restart | 20 psig (1.4 bar) | 30 psig (2.1 bar) | 30 psig (2.1 bar) |
| Max. vacuum | Not available | Not available | Not available |
| Max. vacuum restart | Not available | Not available | Not available |

ELECTRICAL DATA

| | |
|-------------------------------|--|
| Motor type | 8 pole brushless DC, 3 phase |
| Motor insulation class | 155°C maximum winding temperature |
| Motor protection | Not included - Customer to integrate into system controller |
| | Optional SKCNTLR Thomas controller disables motor for stall, temperature, & amps |
| Power lead wire color, gauge | Green (phase A), black (phase B), red (phase C), 22 AWG |
| Hall sensor wire color, gauge | Yellow (+VDC), brown (HS1), orange (HS2), blue (HS3), gray (ground), 22 AWG |

GENERAL DATA

| | |
|-------------------------------|---|
| Operating ambient temperature | 50° TO 104° F (10° to 40°C)* |
| Safety Certification | Consult factory |
| Net weight | 2110ZA26/12M (Mg version) = 0.72 lbs (325g) OR 2110ZA26/12 (Al version) = 0.85 lbs (387g) |

*Broader ambient operating ranges may be possible depending on your specific application. Please consult factory regarding your particular system needs.

PRODUCT DIMENSIONS

2110ZA26/12

NOTE:

EXHAUST T-TUBE IS COMPRISED OF FLEXIBLE SILICONE RUBBER AND HAS THE ABILITY TO SWIVEL ABOUT HEAD BARBED FITTINGS.

UNIT REQUIRES SUPPLEMENTAL COOLING AIR FLOW.

BRUSHLESS DC TECHNOLOGY REQUIRES MOTOR CONTROLLER TO OPERATE.

LEAD CONFIGURATION:
HALL SENSOR: 11.50 ±0.50
POSITION 1 - YELLOW
POSITION 2 - BROWN
POSITION 3 - ORANGE
POSITION 4 - BLUE
POSITION 5 - GRAY

LINE: 11.50 ±0.50
POSITION 1 - GREEN
POSITION 2 - BLACK
POSITION 3 - RED

FEATURES

- > Oil-less operation
- > Permanently lubricated bearings
- > Stainless steel valves
- > High performance piston seal
- > Die-cast aluminum components
- > Thin wall, hard coated aluminum cylinder
- > Wetted parts treated for corrosion resistance
- > Dynamically balanced
- > Brushless DC motor
- > RoHS compliant

TYPICAL APPLICATIONS

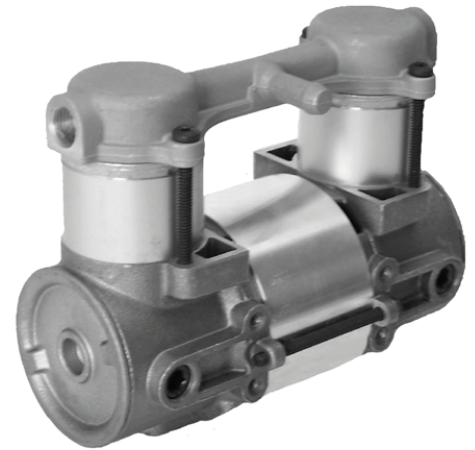
- > Portable Oxygen Concentrator
- > Small Analytical Equipment
- > Instrumentation
- > Ambient Scenting
- > Lab Automation

CUSTOMER REQUIREMENTS

- > Supplemental cooling air flow to compressor to be integrated into thermal management system to ensure that proper installation and operating environment is maintained in keeping with the product specifications
- > BLDC motor requires motor controller - SKCNTLR optional Thomas controller available in sample quantities

BASE MODEL

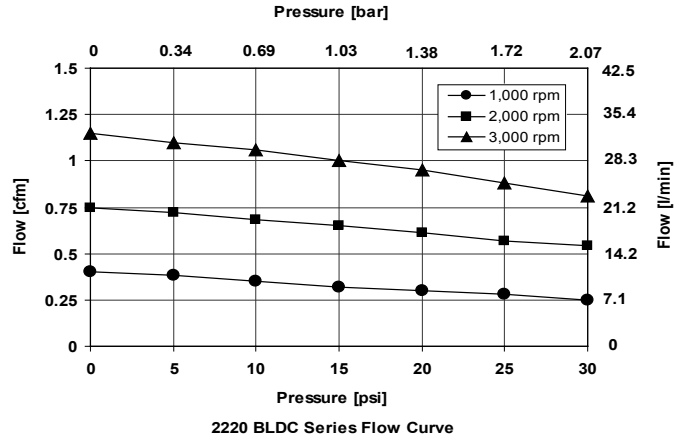
2220ZA30/12



WOB-L

2220Z Series

| | |
|----------------------|------------------------------|
| Flow | 1.14 cfm (32.3 l/min) |
| Max. pressure | 30 psi (2.1 bar) |
| Max. vacuum | N/A Pressure Only |



PERFORMANCE DATA

| | | | |
|---------------------------|------------------------|-----------------------|-----------------------|
| Model Number | 2220ZA30/12 | | |
| Head Configuration | Pressure parallel flow | | |
| Stroke | 0.30 in. (7.6 mm) | | |
| Nominal voltage input | 12V DC | 12V DC | 13.V DC |
| Variable output speed | 1,000 rpm | 2,000 rpm | 3,000 rpm |
| Max. open air flow | 0.40 cfm (11.3 l/min) | 0.78 cfm (22.1 l/min) | 1.14 cfm (32.3 l/min) |
| Max. rated pressure | 30 psi (2.1 bar) | 30 psi (2.1 bar) | 30 psi (2.1 bar) |
| Current at rated pressure | 7.0A | 7.1A | 8.1A |
| Power at rated pressure | 84W | 85W | 105W |
| Max. pressure restart | 30 psi (2.1 bar) | 30 psi (2.1 bar) | 30 psi (2.1 bar) |
| Max. vacuum | Not available | Not available | Not available |
| Max. vacuum restart | Not available | Not available | Not available |

ELECTRICAL DATA

| | |
|-------------------------------|---|
| Motor type | 8 pole brushless DC, 3 phase |
| Motor insulation class | 155°C maximum winding temperature |
| Motor protection | Not included - Customer to integrate into system controller Optional SKCNTLR Thomas controller disables motor for stall, temperature, & amps |
| Power lead wire color, gauge | Green (phase A), black (phase B), red (phase C), 22 AWG |
| Hall sensor wire color, gauge | Yellow (+VDC), brown (HS1), orange (HS2), blue (HS3), gray (ground), 22 AWG |

GENERAL DATA

| | |
|-------------------------------|------------------------------|
| Operating ambient temperature | 50° TO 104° F (10° to 40°C)* |
| Safety Certification | Consult factory |
| Net weight | 1.48 lbs (0.7 kg) |

*Broader ambient operating ranges may be possible depending on your specific application. Please consult factory regarding your particular system needs.

2220ZA30/12

Dimensions in in.

UNIT REQUIRES SUPPLEMENTAL COOLING AIR FLOW.

BRUSHLESS DC TECHNOLOGY REQUIRES MOTOR CONTROLLER TO OPERATE.

LEAD CONFIGURATION:
HALL SENSOR: 8.00' ±.50"
POSITION 1 - YELLOW
POSITION 2 - BROWN
POSITION 3 - ORANGE
POSITION 4 - BLUE
POSITION 5 - GRAY

LINE: 8.00' ±.50"
POSITION 1 - GREEN
POSITION 2 - BLACK
POSITION 3 - RED

CONNECTOR (AMP PART NO.: 3-644371-3)

CONNECTOR (AMP PART NO.: 3-640440-5)

FEATURES

- > Unique head/cylinder design
- > Oil-less operation
- > Permanently lubricated bearings
- > Stainless steel valves
- > High performance piston seal
- > Die-cast aluminum & magnesium alloy components
- > Thin wall, hard coated aluminum cylinder
- > Wetted parts treated for corrosion resistance
- > Dynamically balanced
- > Designed and tested per Agency standards
- > Brushless DC motor
- > RoHS/REACH compliant

TYPICAL APPLICATIONS

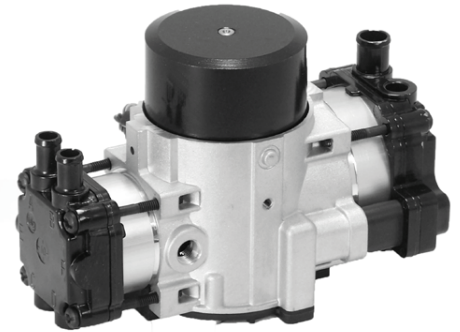
- > Portable Oxygen Concentrator
- > Small Analytical Equipment
- > Instrumentation
- > Ambient Scenting
- > Lab Automation
- > Air Sampling

CUSTOMER REQUIREMENTS

- > Supplemental cooling air flow to compressor to be integrated into thermal management system to ensure that proper installation and operating environment is maintained in keeping with the product specifications
- > BLDC motor requires motor controller - SKCNTLR optional Thomas controller available in sample quantities

BASE MODEL

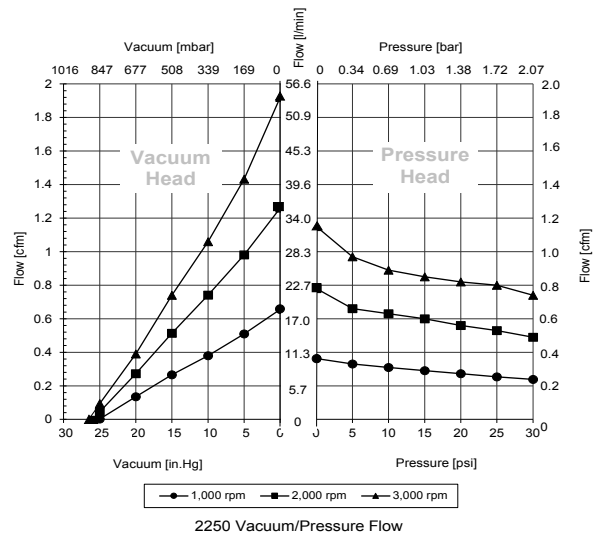
2250ZC35/24



WOB-L

2250Z Series

| | |
|----------------------|--|
| Flow | 1.15/1.92 cfm (32.6/54.4 l/min) |
| Max. pressure | 30 psi (2.1 bar) |
| Max. vacuum | 88% local barometer |



| PERFORMANCE DATA | | | |
|---------------------------|---------------------------------|----------------------------------|---------------------------------|
| Model Number | 2250ZC35/24 | | |
| Head Configuration | Pressure/Vacuum | | |
| Stroke | 0.35/035 in. (8.9/8.9 mm) | | |
| Nominal voltage input | 24V DC | 24V DC | 24VDC |
| Variable output speed | 1,000 rpm | 2,000 rpm | 3,000 rpm |
| Max. open air flow | 0.36/0.66 cfm (10.2/18.7 l/min) | 0.78/1.26 cfm (22.1 /35.7 l/min) | 1.15/1.92 cfm (32.6/54.4 l/min) |
| Max. rated pressure | 30 psi (2.1 bar) | 30 psi (2.1 bar) | 30 psi (2.1 bar) |
| Current at rated pressure | 1.6A | 3.1A | 5.1A |
| Power at rated pressure | 38W | 75W | 123W |
| Max. pressure restart | 30 psi (2.1 bar) | 30 psi (2.1 bar) | 30 psi (2.1 bar) |
| Max. vacuum | 25.3 in.Hg (857 mbar) | 25.8 in.Hg (867 mbar) | 25.9 in.Hg (870 mbar) |
| Max. vacuum restart | 25.3 in.Hg (857 mbar) | 25.8 in.Hg (867 mbar) | 25.9 in.Hg (870 mbar) |

| ELECTRICAL DATA | |
|-------------------------------|---|
| Motor type | 10 pole brushless DC, 3 phase |
| Motor insulation class | F |
| Motor protection | Thermally protected |
| | Optional SKCNTLR Thomas controller disables motor for stall, amps |
| Power lead wire color, gauge | Green (phase A), black (phase B), red (phase C), 18 AWG |
| Hall sensor wire color, gauge | Yellow (Hall +), brown (HS1), orange (HS2), blue (HS3), gray (Hall -), 22 AWG |
| Thermistor wire color, gauge | Violet (Thermistor), 22 AWG |

| GENERAL DATA | |
|-------------------------------|------------------------------|
| Operating ambient temperature | 50° TO 104° F (10° to 40°C)* |
| Safety Certification | Consult factory |
| Net weight | 2.8 lbs (1.27 kg) |

*Broader ambient operating ranges may be possible depending on your specific application. Please consult factory regarding your particular system needs.

| PRODUCT DIMENSIONS | |
|--|--|
| <p>2250ZC35/24</p> <p>VIEW A-A SCALE 2 : 1</p> | <p>UNIT REQUIRES SUPPLEMENTAL COOLING AIR FLOW. BRUSHLESS DC TECHNOLOGY REQUIRES MOTOR CONTROLLER TO OPERATE.</p> <p>LEAD CONFIGURATION: LINE: POSITION 1 - GREEN (PHASE A) POSITION 2 - BLACK (PHASE B) POSITION 3 - RED (PHASE C)</p> <p>HALL SENSOR: POSITION 1 - VIOLET (THERMISTOR) POSITION 2 - YELLOW (HALL +) POSITION 3 - BROWN (H1) POSITION 4 - ORANGE (H2) POSITION 5 - BLUE (H3) POSITION 6 - GRAY (HALL -) POSITION 7 - VIOLET (THERMISTOR) POSITION 8 - EMPTY</p> |

GENERAL CONTACT

EMEA

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ASIA PACIFIC

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