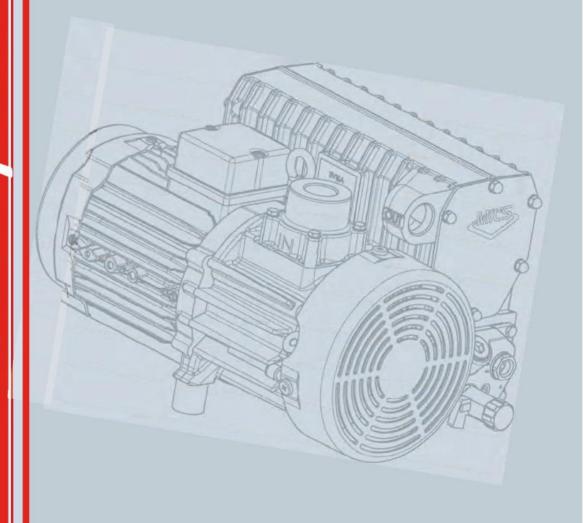
ndustry & healthcare

MIL'S

Vacuum pumps





Since 1926



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Designer and manufacturer for industry and healthcare application

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FRENCH FAB



PACKAGING

- Evacuation
- · Filling and closing machines
- · Labelling, vacuum packaging
- · Pneumatic conveying



ENVIRONMENTAL ENGINEERING

- · Automative fluid pumping
- Filtering
- · Sewage pumping
- Solvent recovery
- · Vacuum priming



FOOD AND BEVERAGE INDUSTRY

- · Cutter, filling or tumbler machines
- · Freeze drying
- Lyophilisation
- Poultry processing
- · Vacuum packaging, mixing



CHEMICAL AND PHARMACEUTICAL INDUSTRIES

- Degasing
- Distillation
- · Drying and freeze drying
- Packaging



WOOD INDUSTRY

- · Coating, bonding
- · Holding and lifting
- Impregnation

MIL'S: made in

MIL'S is designing, developping and producing vacuum pumps and blowers.

Our vacuum systems have already been installed in hundreds of sites all over the world for industrial applications as well as in the Healthcare sector.

Our technologies (lubricated rotary vane pumps, oilless vacuum pumps, blowers, roots) allow us to answer to any requirement of vacuum solutions for Industry or Healthcare.

| n mbar |
|-----------|
| mbar |
| |
| tori |
| |
| |
| |
| |
| n |
| mbar |
| torr |
| |
| |
| |
| |
| |

| Evisa 25.2 | Evisa 25.R | Evisa 40.2 | Evisa 40.R | Evisa 65.R |
|---|---|---|---------------------------------------|---|
| 30 - 17.7 | 28 - 16.4 | 47.7 - 28.1 | 44 - 25.9 | 68 - 40 |
| ≤ 5.10 ⁻¹ ≤ 3,8.10 ⁻¹ | $\leq 6.10^{-2}$ $4,5.10^{-2}$ | ≤ 5.10 ⁻¹ ≤ 3,8.10 ⁻¹ | $\leq 6.10^{-2}$ $4,5.10^{-2}$ | ≤ 6.10 ⁻² 4,5.10 ⁻² |
| 0.75 kW | 0.75 kW | 1.10 kW | 1.10 kW | N.A |
| 0.75 kW | 0.75 kW | 1.10 kW | 1.10 kW | 1.5 kW |
| N.A | N.A | N.A | N.A | ATEX |
| OXYGEN | OXYGEN | OXYGEN | OXYGEN | OXYGEN |
| Evisa 25.2 | Evisa 25.R | Evisa 40.2 | Evisa 40.R | Evisa 65.R |
| 35.3 - 20.8 | 33 - 19.4 | 57.2 - 33.7 | 53 - 31.2 | 81.6 - 48 |
| ≤ 5.10 ⁻¹ ≤ 3,8.10 ⁻¹ | ≤ 8.10 ⁻² 6.10 ⁻² | ≤ 5.10 ⁻¹ ≤ 3,8.10 ⁻¹ | $\leq 6.10^{-2}$ $4,5 \times 10^{-2}$ | $\leq 6.10^{-2}$ $4,5 \times 10^{-2}$ |
| 0.9 kW | 0.9 kW | 1.30 kW | N.A | N.A |
| 0.9 kW | 0.9 kW | 1.30 kW | 1.32 kW | 1.8 kW |
| N.A | N.A | N.A | N.A | ATEX |
| OXYGEN | OXYGEN | OXYGEN | OXYGEN | OXYGEN |

France since 1926.

100 persons are employed on two production sites in the region of LYON and in a sales office in the region of Paris. MIL'S operates over 15000 sq.m of manufacturing floor space.

MIL'S is ISO 9001, ISO 14001 and ISO 13485 certified and answers to all quality criterias of a modern producer.

PLASTIC AND COMPOSITE INDUSTRIES

- Degasing
- Pneumatic conveying
- Resin transfer
- · Vacuum bagging

GLASS INDUSTRY

- Coating
- Forming

SOLAR AND ENERGY INDUSTRIES

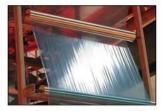
- Coating
- Handling
- Lamination
- · Oil degasing
- · Power engineering

HEALTHCARE

- Surgery
- Obstetrics
- · Anesthesia, resuscitation

GENERAL PURPOSE

- · Central vacuum supply
- Leak detection
- Packaging
- · Picking and handling
- · Pneumatic conveying











Selection tool EVISA

| Evisa 100.R | Evisa 150.R | Evisa 200.R | Evisa 300.R | Evisa 350.R | Evisa 400.R | Evisa 500.R | Evisa 600.R |
|---------------------------------------|---|---|---|---|--|---|--|
| 100 - 58.8 | 132 - 77.7 | 200 - 117.7 | 300 - 176.5 | 360 - 211.9 | 426 - 250.7 | 513 - 302 | 635 - 373.7 |
| $\leq 6.10^{-2}$ 4.5×10^{-2} | ≤ 8.10 ⁻² 6.10 ⁻² | ≤ 6.10 ⁻² 4,5.10 ⁻² | ≤ 6.10 ⁻² 4,5.10 ⁻² | ≤ 1.10 ⁻¹ 8.10 ⁻² | ≤ 1.10 ⁻¹ 8.10 ⁻² | ≤ 1.10 ⁻¹ 8.10 ⁻² | ≤ 1.10 ⁻¹ 8.10 ⁻² |
| N.A | N.A | N.A | N.A | N.A | N.A | N.A | N.A |
| 2.2 kW | 3 kW | 4 kW | 5.5 kW | 7.5 kW | 9 kW | 11 kW | 13 kW |
| ATEX | N.A | ATEX | ATEX | N.A | N.A | N.A | N.A |
| OXYGEN | OXYGEN | OXYGEN | OXYGEN | OXYGEN | OXYGEN | OXYGEN | OXYGEN |
| Evisa 100.R | Evisa 150.R | Evisa 200.R | Evisa 300.R | Evisa 350.R | Evisa 400.R | Evisa 500.R | Evisa 600.R |
| 120 - 70.6 | 156 - 91.8 | 240 - 141.3 | 360 - 211.8 | 432 - 254.3 | 511 - 300.8 | 616 - 362.6 | 769 - 452.8 |
| $\leq 6.10^{-2}$ $4,5 \times 10^{-2}$ | ≤ 8.10 ⁻² 6.10 ⁻² | $\leq 6.10^{-2}$ $4,5 \times 10^{-2}$ | $\leq 6.10^{-2}$ 4.5×10^{-2} | ≤ 1.10 ⁻¹ 8.10 ⁻² | ≤ 1.10 ⁻¹ 8.10 ⁻² | ≤ 1.10 ⁻¹ 8.10 ⁻² | ≤ 1.10 ⁻¹ 8.10 ⁻² |
| N.A | N.A | N.A | N.A | N.A | N.A | N.A | N.A |
| 2.64 kW | 3.6 kW | 4.8 kW | 6.6 kW | 9 kW | 10.8 kW | 13.2 kW | 15.6 kW |
| ATEX | N.A | ATEX | ATEX | N.A | N.A | N.A | N.A |
| OXYGEN | OXYGEN | OXYGEN | OXYGEN | OXYGEN | OXYGEN | OXYGEN | OXYGEN |

High performance oil-flooded vacuum pumps



New generation of vacuum pumps with fast pumping speed due to 6.10⁻² mbar absolute end vacuum

High flow rate at 1 mbar

Internal design providing a low noise level for an easy integration into industrial machines

Installation near operators





Delivery with MV99S 100% synthetic oil for long life time and heavy duty operating conditions

Lubricated rotary vane vacuum pumps



Oil filter standard on each size of vacuum pump with dual recycling oil circuit

Accessible & adjustable gas ballast following customer process with high capacities of water pumping





Possible customisation of the protection cover

Options:

- Oil level switch
- PT100 temperature sensor
- Many other options available





EVISA E25.2 HV

The lubricated rotary vane pumps EVISA are designed to be used in a wide range of industrial and healthcare applications.

They can run continuously from atmospheric pressure to ultimate vacuum.

They are silent and extremely robust.

- Single stage vacuum pump
- Continuous operation from atmospheric pressure to end vacuum: 5.10⁻¹ mbar
- · High pumping speed even at low pressure
- · Integrated oil mist filter on the exhaust

Technical characteristics

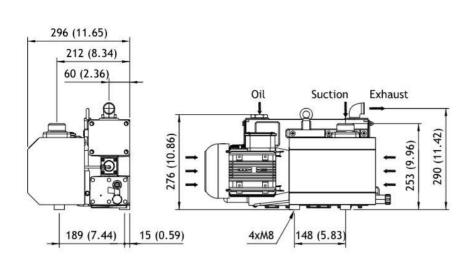
| | | | 50 Hz | 60 Hz |
|-------------|--|--|---|---|
| | Nominal flow rate | m³.h·¹ - cfm | 30 - 17,7 | 35,3 - 20,8 |
| | PNEUROP pumping speed (1) m ³ .h ⁻¹ - cfm | | 28 - 16,5 | 33,6 - 19,8 |
| E25.2 HV | Pumping speed at 1 mbar inlet pressure (1) m ³ .h ⁻¹ - cfm | | 9,8 - 5,8 | 11,7 - 6,9 |
| | Without gas ballast End vacuum mbar - torr | | ≤ 5.10 ⁻¹ - ≤ 3,8.10 ⁻¹ | ≤ 5.10 ⁻¹ - ≤ 3,8.10 ⁻¹ |
| | Fully opened gas | End vacuum mbar - torr | ≤ 2 - 1,5 | ≤ 2 - 1,5 |
| | | Water vapor permitted maximum pressure mbar - torr | 16,9 - 12 | 18,7 - 13,5 |
| | ballast | Water vapor capacity kg.h ⁻¹ | 0.27 | 0.36 |
| | 100 % synthetic oi | | MV99S | MV99S |
| | Oil capacity - qt | | 1,5 - 1,58 | 1,5 - 1,58 |
| | Noise level dB(A) | | 60 | 62 |

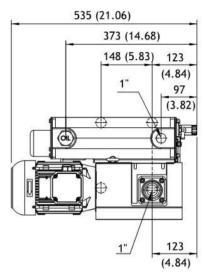
⁽¹⁾ Measurements according to PNEUROP 6602 specifications - 20°C

| GE | OGRAPHIC ZONE | EUF | ROPE | ASIA MIDDLE-EAST | SOUTH AMERICA | USA |
|---------------------|----------------------------------|---------|-----------|---------------------|------------------|-------------|
| | Number of phases | 1 | 3 | 3 | 3 | 3 |
| | Voltage V | 230 | 230 / 400 | 220/380 | 190 / 380 | 208-230/460 |
| Electrical motor | Period Hz | 50 | 50 | 60 | 50 | 60 |
| | Motor power | 0,75 kW | 0,75 kW | 0,9 kW | 0,75 kW | 1,50 HP |
| | Rotation speed min ⁻¹ | 1500 | 1500 | 1800 | 1500 | 1800 |
| Inlet conne | ection | 1" BSP | 1" BSP | 1" BSP | 1" NPT | 1" NPT |
| Outlet con | nection | 1" BSP | 1" BSP | 1" BSP | 1" NPT | 1" NPT |
| Weight wit | h oil kg - /b | 39 - 86 | 39 - 86 | 44 - 97 | 44 - 97 | 44 - 97 |

Lubricated rotary vane vacuum pumps

Dimensions mm (inch)





References

| | E25.2 HV | | |
|---|-----------------------|---------------------|--|
| 2 | WITH GAS BALLAST | WITHOUT GAS BALLAST | |
| EUROPE 1ph, 230V-50Hz | 821148 + 770800 | 821148 | |
| EUROPE 3ph, 230/400V-50Hz | 821151 + 770800 | 821151 | |
| ASIA / MIDDLE EAST 3ph,220/380V-60Hz | 823858 + 770800 | 823858 | |
| SOUTH AMERICA / USA 3ph, 190/380V-50Hz, 208-230/460V-60Hz | 824055 + 770800 | 824055 | |



Maintenance kits

| 3 000 hour usual maintenance with silicone o'ring for oil mist filter | 720341 |
|---|--------|
| 3 000 hour usual maintenance with viton o'ring for oil mist filter | 718374 |
| 12 000 hour preventive maintenance | 615484 |



3 000 hour usual maintenance

12 000 hour preventive maintenance





EVISA E25.2 HV

Accessories and Options

| Oil Level Safety | (OLS) with float | 616111 |
|---|--|--------|
| Timer box for oil le | evel safety (base mounting) | 670810 |
| | d temperature indicator stat NC opening at 120°C - Max 24V | 623315 |
| Oil Level Safety an | d PT100 temperature sensor | 623975 |
| PT100 temperatur | e sensor | 623980 |
| | Paper cartridge | 715347 |
| 3/4" BSP suction Type 76 | Polyester cartridge | 715348 |
| 1,000 | Carbon cartridge | 715349 |
| /acuum gauge fitt | ed on filter cover | 617536 |
| 3/4" BSP paper/pa | per double filtration 76PA + 76PA | 670613 |
| 3/4" BSP polyester | /carbon double filtration 76PO + 76CH | 670616 |
| | Aluminium head / plexiglass cylinder / without mechanical float | 724793 |
| | Aluminium head / plexiglass cylinder / with mechanical float | 724794 |
| | Aluminium head / Pyrex cylinder / without mechanical float | 724807 |
| Liquid trap 100 | Aluminium head / Pyrex cylinder / with mechanical float | 724808 |
| 48 m³.h-1 | Stainless steel head / Pyrex cylinder / without mechanical float | 724795 |
| 1" BSP | Stainless steel head / Pyrex cylinder / with mechanical float | 724796 |
| | Pyrex bottle 250 ml under trap assembly | 615441 |
| | Pyrex bottle 500 ml under trap assembly | 615442 |
| | Pyrex bottle 1000 ml under trap assembly | 615443 |
| lectro-pneumatic | automatic drain with control board | 816002 |
| lectrical automat | 816003 | |
| Adjusting valve fit | ted on T-square | 713840 |
| /acuum hose (0,6 | 606086 | |
| Vacuum hose (1 m | 604422 | |
| Vacuum hose (1,5 | m) FF 3/4" BSP | 618264 |
| /acuum hose (2 m |) FF 3/4" BSP | 616085 |
| /acuum hose (3 m |) FF 3/4" BSP | 670010 |
| /acuum hose (4 m |) FF 3/4" BSP | 618131 |
| Suction hose with | non-return valve (1 m) | 770151 |
| xhaust double ell | pow mounting | 624163 |
| Base frame assem | bly height 150 mm | 670804 |
| Elevated base fr | For 1 pump | 617610 |
| (H=525 mm) | For 2 pumps | 619543 |
| . • act 2000 act 2000 act | For 3 pumps | 619546 |
| | Without regulation contact 3-ph 400V + E | 770495 |
| irect starter | Without regulation contact 3-ph 230V + E | 770496 |
| vall mounting) | Without regulation contact 1-ph 230V + E | 770503 |
| | With regulation contact LG7 3-ph 400V | 710422 |
| | With regulation contact LG7 3-ph 230V | 710430 |
| | With regulation contact LG7 1-ph 230V | 710428 |
| Control board with for warm up and d | n FLEXO solenoid valve 3-ph, 400V+ N egasing cycle | 770811 |
| Control board with | n FLEXO solenoid valve 3-ph, 400V + N | 770818 |







Liquid trap 100 with mechanical stop and optional bottle

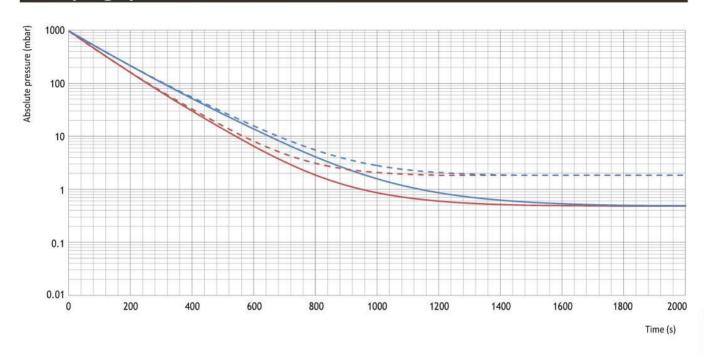


Elevated base frame for 2 pumps

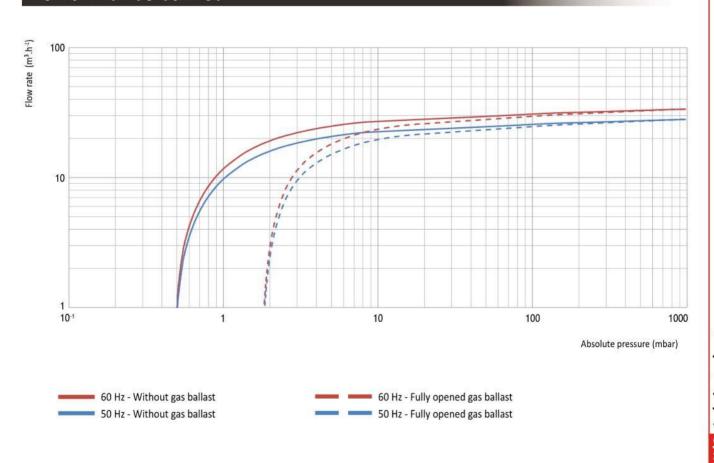
363052

Electrical cable (3m) with ON/OFF switch -1-ph 230V + E

Pumping speed on 1000 I vessel



Performance curves









The lubricated rotary vane pumps EVISA are designed to be used in a wide range of industrial and healthcare applications.

They can run continuously from atmospheric pressure to ultimate vacuum.

They are silent and extremely robust.

- Single stage vacuum pump with the end vacuum of 6.10⁻² mbar
- Compactness and noise level optimized for an easy integration in machines
- High water vapor pumping capacity with finely adjustable gas ballast
- Designed for light onsite maintenance without piping disconnection
- · Integrated oil mist filter on the exhaust

Technical characteristics

| | | | 50 Hz | 60 Hz |
|-------|------------------------------------|---|---|---|
| | Nominal flow rate | m³.h-¹ - <i>cfm</i> | 28 - 16,4 | 33 - 19,4 |
| | PNEUROP pumping | speed (1) m ³ .h ⁻¹ - cfm | 26 - 15,3 | 31 - 18,2 |
| | Pumping speed at 2 | L mbar inlet pressure (1) m ³ .h ⁻¹ - cfm | 18,6 - 10,9 | 20,8 - 12,2 |
| | Without gas ballast | End vacuum mbar - torr | ≤ 6.10 ⁻² - 4,5.10 ⁻² | ≤ 8.10 ⁻² - 6.10 ⁻² |
| E25.R | | End vacuum mbar - torr | ≤ 6.10 ⁻¹ - 4,5.10 ⁻¹ | ≤ 6.10 ⁻¹ - 4,5.10 ⁻¹ |
| | Opened gas ballast 1,5 rotation | Water vapor permitted maximum pressure mbar - torr | 7,3 - 5,5 | 13 - 9,8 |
| | | Water vapor capacity kg.h ⁻¹ | 0,11 | 0,24 |
| HV | Fully opened gas ballast | End vacuum mbar - torr | ≤ 6 - 4,5 | ≤ 6.0 - 4,5 |
| | | Water vapor permitted maximum pressure mbar - torr | 130 - 97 | 180 - 135 |
| | | Water vapor capacity kg.h ⁻¹ | 2,1 | 3,6 |
| | Without gas ballast | End vacuum mbar - torr | ≤ 2 - 1,5 | ≤ 2 - 1,5 |
| -a b | D 100 | End vacuum mbar - torr | ≤ 3- 2,2 | ≤3-2,2 |
| E25.R | Fully opened gas ballast | Water vapor permitted maximum pressure mbar - torr | 88 - 66 | 114 - 85 |
| | Dallast | Water vapor capacity kg.h ⁻¹ | 1,4 | 2,2 |
| | 100 % synthetic oil | | MV99S | MV99S |
| | Oil capacity I - qt | | 1 - 1,1 | 1- 1,1 |
| | Noise level dB(A) | | 59 | 63 |

⁽¹⁾ Measurements according to PNEUROP 6602 specifications - 20°C

| GE | OGRAPHIC ZONE | EUF | OPE | ASIA MIDDLE-EAST | SOUTH AMERICA | USA | JAPAN |
|------------------|----------------------------------|-----------|-----------|---------------------|------------------|-------------|----------------|
| | Number of phases | 1 | 3 | 3 | 3 | 3 | 3 |
| 10000 OF BE DE | Voltage V | 230 | 230 / 400 | 220 / 380 | 190 / 380 | 208-230/460 | 200 / 380 |
| Electrical motor | Period Hz | 50 | 50 | 50 / 60 | 50 | 60 | 50/60 |
| motor | Motor power | 0,75 kW | 0,75 kW | 0,75 / 0,90 kW | 0,75 kW | 1,50 HP | 0,75 / 0,90 kW |
| | Rotation speed min ⁻¹ | 1500 | 1500 | 1500/1800 | 1500 | 1800 | 1500/1800 |
| Inlet conne | ection (2) | 1" BSP | 1" BSP | 1" BSP | 1" NPT | 1" NPT | 1" BSP |
| Outlet con | nection (3) | 1" BSP | 1" BSP | 1" BSP | 1" NPT | 1" NPT | 1" BSP |
| Weight wit | h oil kg - lb | 31,3 - 69 | 30 - 66,2 | 30 - 66,2 | 30,8 - 67,9 | 30,8 - 67,9 | 30,8 - 67,9 |

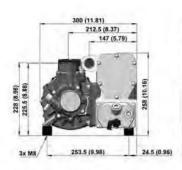
⁽²⁾ DN 25 ISO-KF adaptation flange can be supplied, see accessories

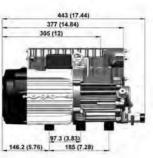
⁽³⁾ DN 25 ISO-KF connector can be supplied, see accessories

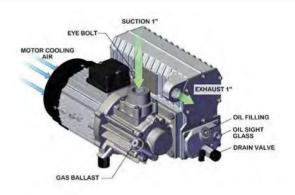
11

Lubricated rotary vane vacuum pumps

Dimensions mm (inch)







References

| | E25.R HV | | E25.R | |
|---|------------------|---------------------|------------------|---------------------|
| | WITH GAS BALLAST | WITHOUT GAS BALLAST | WITH GAS BALLAST | WITHOUT GAS BALLAST |
| EUROPE 1ph, 230V-50Hz | 824179 | 824181 | 824183 | 824185 |
| EUROPE / ASIA 3ph, 230/400V-50Hz, 220/380V-50/60Hz | 824091 | 824187 | 824090 | 824189 |
| SOUTH AMERICA / USA 3ph, 190/380V-50Hz, 208-230/460V-60Hz | 824094 | 824191 | 824193 | 824195 |
| JAPAN 3ph, 200/380V-50/60Hz | 824096 | 824197 | 824199 | 824201 |
| Oxygen version available - Contact us | | | <u> </u> | - M25 |

HV accessories - KF connection



DN25KF -Type 100

| Suction flange DN25KF | | 625029 |
|--|---------------------|--------|
| | Paper cartridge | 625030 |
| Suction filter DN25KF - Type 100 | Polyester cartridge | 625031 |
| | Carbon cartridge | 625032 |
| Aluminium clamping ring DN25KF | | 361638 |
| Stainless steel / Viton DN25KF centering | 361641 | |
| Stainless steel DN25KF hose - 0,5 m | 361644 | |
| Stainless steel DN25KF hose - 1 m | 361645 | |
| Elbow DN25KF | | 333827 |
| Equal T-square DN25KF | | 333828 |
| Manual ball valve DN25KF | | 333829 |
| Solenoid valve DN25KF | 333830 | |
| Exhaust adapter 1" BSP - DN25KF | | 625019 |

Maintenance kits

| 3 000 hour usual maintenance with silicone o'ring for oil mist filter | 724572 |
|---|--------|
| 3 000 hour usual maintenance with viton o'ring for oil mist filter | 724573 |
| 12 000 hour preventive maintenance | 724583 |

3 000 hour usual maintenance



Oxygen version maintenance available - Contact us



EVISA E25.R

Accessories and Options

| Additional rubber f | oot | 625169 | | |
|-----------------------|--|--------|--|--|
| 1 Oil Level Safety (| 625020 | | | |
| PT100 temperature | 625021 | | | |
| NC bimetal temper | 625022 | | | |
| • | 714975 | | | |
| 1" BSP suction fil | ter Paper cartridge Polyester cartridge | 714976 | | |
| Type 100 | Carbon cartridge | | | |
| Ø63 vacuum gauge | fitted on filter | 617536 | | |
| | arbon double filtration 100PO + 100CH | 625023 | | |
| Adjusting valve fitte | ed on T-square MF 1" BSP | 714979 | | |
| | Aluminium head / plexiglass cylinder / without mechanical float | 724793 | | |
| 155 | Aluminium head / plexiglass cylinder / with mechanical float | 724794 | | |
| 100 | Aluminium head / Pyrex cylinder / without mechanical float | 724807 | | |
| 100 | Aluminium head / Pyrex cylinder / with mechanical float | 724808 | | |
| Elquid trap 100 | Stainless steel head / Pyrex cylinder / without mechanical float | 724795 | | |
| 411 DCD | Stainless steel head / Pyrex cylinder / with mechanical float | 724796 | | |
| 0 | Pyrex bottle 250 ml under trap assembly | 615441 | | |
| | Pyrex bottle 500 ml under trap assembly | 615442 | | |
| 0.0 | Pyrex bottle 1000 ml under trap assembly | 615443 | | |
| Total Avenue | automatic drain with control board | 816002 | | |
| Electrical automatic | drain with control board | 816003 | | |
| Vacuum hose (0,6 r | n) MF 1" BSP | 618265 | | |
| Vacuum hose (1 m) | MF 1" BSP | 617372 | | |
| Vacuum hose (1,5 r | n) MF 1" BSP | 618266 | | |
| Vacuum hose (2 m) | | 616179 | | |
| | MM 1" with no return valve | 714980 | | |
| No return valve MF | 1" BSP | 618457 | | |
| Base frame assemb | ly (H=150 mm) | 625012 | | |
| 1907 | For 1 pump | 625013 | | |
| Elevated base fra | For 2 pumps | 625014 | | |
| (H=525 mm) | For 3 pumps | 625015 | | |
| | Without regulation contact 3-ph 400V + E | 770495 | | |
| | Without regulation contact 1-ph 230V + E | 770503 | | |
| Direct starter | With regulation contact LG7 3-ph 400V + N + E | 710422 | | |
| (wall mounting) | With regulation contact LG7 1-ph 230V + E | 710428 | | |
| | With regulation contact LG7 + OLS Timer 3-ph 400V + N + E | 724576 | | |
| | With regulation contact LG7 + OLS Timer 1-ph 230V + E | 724577 | | |
| | regulation contact LG7 and Flexo valve egasing system - 3-ph 400V + N + E | 724578 | | |
| | regulation contact LG7 and Flexo valve egasing system - 1-ph 230V + E | 724579 | | |
| Electrical cable (3m |) with ON/OFF switch -1-ph 230V + E | 625016 | | |
| Direct starter suppo | ort for base fixation | 625017 | | |





suction filter type 100

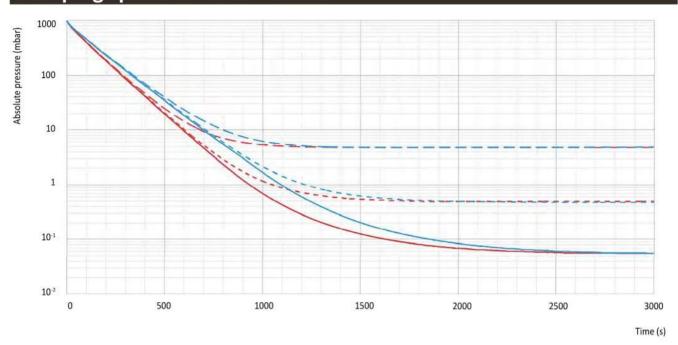


Liquid trap 100 with mechanical stop and optional bottle

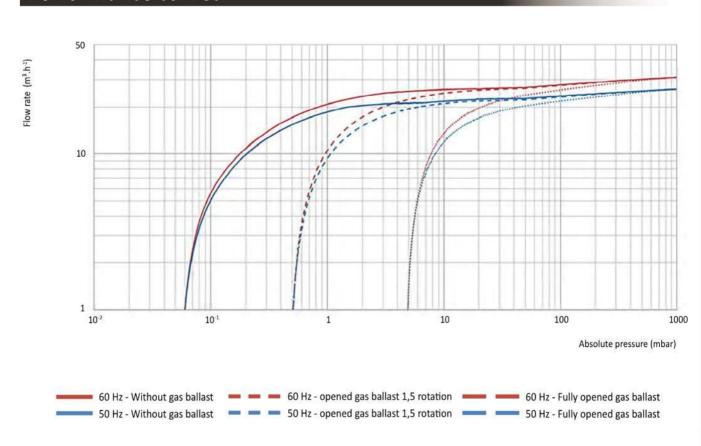


Elevated base frame for 2 pumps

Pumping speed on 1000 I vessel



Performance curves







EVISA E40.2 HV

The lubricated rotary vane pumps EVISA are designed to be used in a wide range of industrial and healthcare applications.

They can run continuously from atmospheric pressure to ultimate vacuum.

They are silent and extremely robust.

- Single stage vacuum pump
- Continuous operation from atmospheric pressure to end vacuum: 5.10⁻¹ mbar
- · High pumping speed even at low pressure
- · Integrated oil mist filter on the exhaust

Technical characteristics

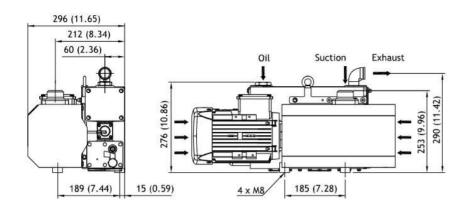
| | | | 50 Hz | 60 Hz |
|-------|-----------------------------|---|---|---|
| | Nominal flow rate | m³.h·¹- cfm | 47,7 - 28,1 | 57,2 - <i>33,7</i> |
| | PNEUROP pumpin | g speed (1) m ³ .h ⁻¹ - cfm | 41,5 - 24,4 | 49,8- 29,3 |
| | Pumping speed at | 1 mbar inlet pressure (1) m ³ .h ⁻¹ - cfm | 14,4 - 8,47 | 11,7 - 6,9 |
| | Without gas ballas | t End vacuum mbar - torr | ≤ 5.10 ⁻¹ - ≤ 3,8.10 ⁻¹ | ≤ 5.10 ⁻¹ - ≤ 3,8.10 ⁻¹ |
| E40.2 | 50x5x4xxxxx30xxxx0x | End vacuum mbar - torr | ≤ 1,5 - 1,13 | ≤ 1,5 - 1,13 |
| HV | Fully opened gas ballast | Water vapor permitted maximum pressure mbar - torr | 14,8 - 10,5 | 16,6 - 12 |
| | ballast | Water vapor capacity kg.h ⁻¹ | 0,37 | 0,49 |
| | 100 % synthetic oi | | MV99S | MV99S |
| | Oil capacity I - qt | | 1,5 - 1,58 | 1,5 - 1,58 |
| | Noise level dB(A) | | 62 | 64 |

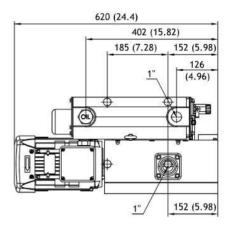
⁽¹⁾ Measurements according to PNEUROP 6602 specifications - 20°C

| GEO | OGRAPHIC ZONE | EUROPE | EUROPE | ASIA MIDDLE-EAST | SOUTH AMERICA | USA |
|---------------------|----------------------------------|------------------------|-----------|------------------------|------------------|-------------|
| | Number of phases | 1 | 3 | 3 | 3 | 3 |
| | Voltage V | 230 | 230 / 400 | 265/460 | 190 / 380 | 208-230/460 |
| Electrical motor | Period Hz | 50 | 50 | 60 | 50 | 60 |
| motor | Motor power | 1,1 kW | 1,1 kW | 1,3 kW | 1,10 kW | 2 HP |
| | Rotation speed min ⁻¹ | 1500 | 1500 | 1800 | 1500 | 1800 |
| Inlet conne | ection | 1" BSP | 1" BSP | 1" BSP | 1" NPT | 1" NPT |
| Outlet con | nection | 1" BSP | 1" BSP | 1" BSP | 1" NPT | 1" NPT |
| Weight wit | h oil kg - /b | 52 - <i>115</i> | 52 - 115 | 52 - <i>115</i> | 35 - 77,2 | 35 - 77,2 |

Lubricated rotary vane vacuum pumps

Dimensions mm (inch)





References

| | E40.2 HV | |
|---|-----------------------|---------------------|
| | WITH GAS BALLAST | WITHOUT GAS BALLAST |
| EUROPE 1ph, 230V-50Hz | 821149 + 770826 | 821149 |
| EUROPE 3ph, 230/400V-50Hz | 821152 + 770826 | 821152 |
| ASIA / MIDDLE EAST 3ph,220/380V-60Hz | 823859 + 770826 | 823859 |
| SOUTH AMERICA / USA 3ph, 190/380V-50Hz, 208-230/460V-60Hz | 824056 + 770826 | 824056 |



Maintenance kits

| 3 000 hour usual maintenance with silicone o'ring for oil mist filter | 720341 |
|--|--------|
| 3 000 hour usual maintenance with viton o'ring for oil mist filter | 718374 |
| 12 000 hour preventive maintenance | 615485 |



3 000 hour usual maintenance

12 000 hour preventive maintenance





EVISA E40.2 HV

Accessories and Options

| Oil Level Safety | (OLS) with floa | t | 616111 | 200 |
|--|--|---|--------|------------|
| Timer box for oil le | evel safety (bas | e mounting) | 670810 | |
| Oil level safety and with bimetal thermo | [전 전 경기 전 기구 경기 전 경기 경기 경기 경기 경기 | | 623315 | |
| Oil Level Safety an | The second secon | | 623975 | |
| PT100 temperatur | PT100 temperature sensor | | | 70 |
| | | cartridge | 714975 | |
| 2 1" BSP suction fi | ilter Polye: | ster cartridge | 714976 | |
| Type 100 | Carbo | on cartridge | 714977 | |
| Vacuum gauge fitte | ed on filter | | 617536 | |
| 1" BSP polyester/p | oolyester doubl | e filtration 100PO + 100PO | 622167 | |
| | Aluminium he | ad / plexiglass cylinder / without mechanical float | 724793 | |
| | Aluminium he | ad / plexiglass cylinder / with mechanical float | 724794 | _ |
| | Aluminium he | ad / Pyrex cylinder / without mechanical float | 724807 | _ |
| Liquid trap 100 | Aluminium he | ad / Pyrex cylinder / with mechanical float | 724808 | 777 -25 |
| 48 m ³ .h ⁻¹ | | head / Pyrex cylinder / without mechanical float | 724795 | 7 |
| 1" BSP | | head / Pyrex cylinder / with mechanical float | 724796 | - |
| | Pyrex bottle 25 | 50 ml under trap assembly | 615441 | |
| | Pyrex bottle 50 | 00 ml under trap assembly | 615442 | |
| | | 000 ml under trap assembly | 615443 | _ |
| Electro-pneumatic | automatic dra | in with control board | 816002 | |
| Electrical automat | ic drain with co | ontrol board | 816003 | - |
| Adjusting valve fit | ted on T-squar | e | 714979 | |
| Vacuum hose (0,6 | | | 618265 | - |
| Vacuum hose (1 m |) FF 1" BSP | | 617372 | |
| Vacuum hose (1,5 | *************************************** | 20 | 618266 | _ |
| ALU adapter M1" | / DN25 KF | | 117133 | |
| ALU clamping colla | W. S. | | 361638 | - |
| Centering ring INO | X/VITON | | 361641 | |
| Stainless steel hos | e (0,5 m) DN25 | KF | 361644 | - |
| Stainless steel hos | e (1 m) DN25 K | (F | 361645 | |
| Base frame assem | bly height 150 | mm | 670804 | |
| Y | | For 1 pump | 617610 | |
| Elevated base fr | ame | For 2 pumps | 619543 | |
| (H=525 mm) | | For 3 pumps | 619546 | Ī |
| | Without regul | ation contact 3-ph 400V + E | 770496 | _ |
| | Without regul | ation contact 3-ph 230V + E | 770497 | |
| Direct starter | Without regul | ation contact 1-ph 230V + E | 770504 | = |
| (wall mounting) | With regulation | on contact LG7 3-ph 400V | 710423 | - |
| | With regulation contact LG7 3-ph 230V | | 710431 | - |
| | With regulation | on contact LG7 1-ph 230V | 710435 | |
| Control board with for warm up and d | | id valve 3-ph, 400V+ N | 770812 | |
| Control board with for degasing cycle | n FLEXO soleno | id valve 3-ph, 400V + N | 770819 | = = |
| Electrical cable (3n | n) with ON/OF | F switch -1-ph 230V + E | 363052 | |
| | | | | |





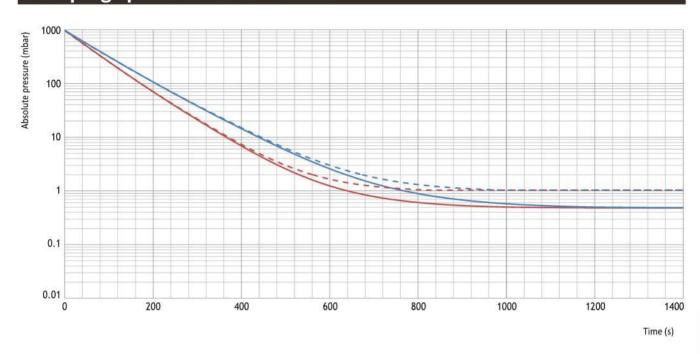


Liquid trap 100 with mechanical stop and optional bottle

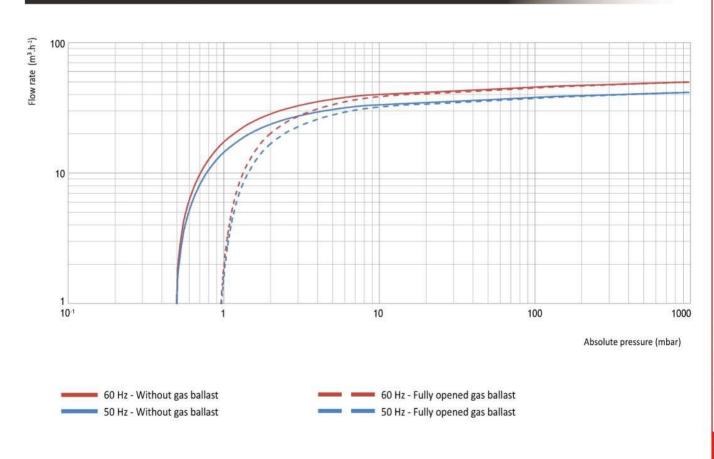


Elevated base frame for 2 pumps

Pumping speed on 1000 I vessel



Performance curves









The lubricated rotary vane pumps EVISA are designed to be used in a wide range of industrial and healthcare applications.

They can run continuously from atmospheric pressure to ultimate vacuum.

They are silent and extremely robust.

- Single stage vacuum pump with the end vacuum of 6.10⁻² mbar
- Compactness and noise level optimized for an easy integration in machines
- High water vapor pumping capacity with finely adjustable gas hallast
- Designed for light onsite maintenance without piping disconnection
- · Integrated oil mist filter on the exhaust

Technical characteristics

| | | | 50 Hz | 60 Hz |
|--------------------|---------------------------------|---|---|---|
| | Nominal flow rate n | n³.h ⁻¹ - <i>cfm</i> | 44 - 25,9 | 53 - 31,2 |
| | PNEUROP pumping | speed (1) m ³ .h ⁻¹ - cfm | 42 - 24,7 | 50 - 29,4 |
| | Pumping speed at 1 | mbar inlet pressure (1) m ³ .h ⁻¹ - cfm | 30 - 17,6 | 34 - 20 |
| | Without gas ballast | End vacuum mbar - torr | ≤ 6.10 ⁻² - 4,5.10 ⁻² | ≤ 6.10 ⁻² - 4,5.10 ⁻² |
| | | End vacuum mbar - torr | ≤ 6.10 ⁻¹ - 4.5.10 ⁻¹ | ≤ 6.10 ⁻¹ - 4,5.10 ⁻¹ |
| E40.R 1,5 rotation | Opened gas ballast | Water vapor permitted maximum pressure mbar - torr | 13,6 - 10,2 | 18,4 - 13,8 |
| | 1,5 rotation | Water vapor capacity kg.h ⁻¹ | 0,34 | 0,53 |
| HV | No. Mark Control of the Control | End vacuum mbar - torr | ≤ 6 - 4,5 | ≤ 6 - 4,5 |
| Fully opened gas | Fully opened gas ballast | Water vapor permitted maximum pressure mbar - torr | 143 - 107 | 326 - 244 |
| | Dallast | Water vapor capacity kg.h ⁻¹ | 3,7 | 10,6 |
| Î | Without gas ballast | End vacuum mbar - torr | ≤ 2 - 1,5 | ≤ 2 - 1,5 |
| | | End vacuum mbar - torr | ≤3-2,2 | ≤3-2,2 |
| 40.R | Fully opened gas ballast | Water vapor permitted maximum pressure mbar - torr | 107 - 80 | 233 - 174 |
| Dallast | Dallast | Water vapor capacity kg.h ⁻¹ | 2,7 | 7,5 |
| | 100 % synthetic oil | | MV99S | MV99S |
| | Oil capacity I - qt | | 1- 1,1 | 1- 1,1 |
| | Noise level dB(A) | 74-0-1 | 58 | 60 |

⁽¹⁾ Measurements according to PNEUROP 6602 specifications - 20°C

| GEOGRAPHIC | | EUROPE | | ASIA MIDDLE-EAST | SOUTH AMERICA | USA | JAPAN |
|---------------------|----------------------------------|---------------------------|-------------|---------------------|------------------|-------------|----------------|
| | Number of phases | 1 | 3 | 3 | 3 | 3 | 3 |
| | Voltage V | 230 | 230 / 400 | 220 / 380 | 190 / 380 | 208-230/460 | 200 / 380 |
| Electrical motor | Period Hz | 50 | 50 | 50 / 60 | 50 | 60 | 50/60 |
| | Motor power | 1,10 kW | 1,10 kW | 1,10 / 1,32 kW | 1,10 kW | 2 HP | 1,10 / 1,32 kW |
| | Rotation speed min ⁻¹ | 1500 | 1500 | 1500/1800 | 1500 | 1800 | 1500/1800 |
| Inlet conne | ection (2) | 1" BSP | 1" BSP | 1" BSP | 1" NPT | 1" NPT | 1" BSP |
| Outlet con | nection (3) | 1" BSP | 1" BSP | 1" BSP | 1" NPT | 1" NPT | 1" BSP |
| Weight wit | h oil kg - lb | 35,5 - <i>78,3</i> | 34,3 - 75,6 | 34,3 - 75,6 | 35 - 77,2 | 35 - 77,2 | 35 - 77,2 |

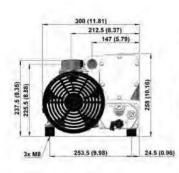
⁽²⁾ DN 40 ISO-KF adaptation flange can be supplied, see accessories

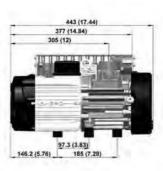
⁽³⁾ DN 25 ISO-KF connector can be supplied, see accessories

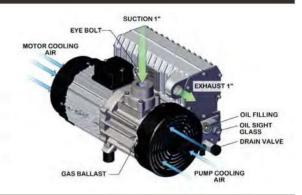
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Lubricated rotary vane vacuum pumps

Dimensions mm (inch)







References

| | E40.R HV | | E40.R | |
|---|------------------|---------------------|------------------|---------------------|
| | WITH GAS BALLAST | WITHOUT GAS BALLAST | WITH GAS BALLAST | WITHOUT GAS BALLAST |
| EUROPE 1ph, 230V-50Hz | 824180 | 824182 | 824184 | 824186 |
| EUROPE / ASIA 3ph, 230/400V-50Hz, 220/380V-50/60Hz | 824093 | 824188 | 824092 | 824190 |
| SOUTH AMERICA / USA 3ph, 190/380V-50Hz, 208-230/460V-60Hz | 824095 | 824192 | 824194 | 824196 |
| JAPAN 3ph, 200/380V-50/60Hz | 824097 | 824198 | 824200 | 824202 |
| | | 100 | 7 | 48 |

Oxygen version available - Contact us

HV Accessories - KF connection



| Suction flange DN40KF | | 625018 |
|---|---------------------|--------|
| | Paper cartridge | 625009 |
| Suction filter DN40KF - Type 100 | Polyester cartridge | 625010 |
| | Carbon cartridge | 625011 |
| Aluminium clamping ring DN40KF | | 361639 |
| Stainless steel / Viton DN40KF centerin | ng ring | 361642 |
| Stainless steel DN40KF hose - 0,5 m | | 361646 |
| Stainless steel DN40KF hose - 1 m | | 361647 |
| Elbow DN40KF | | 333818 |
| Equal T-square DN40KF | | 333819 |
| Manual ball valve DN40KF | | 333820 |
| Solenoid valve DN40KF | | 333821 |
| Exhaust adapter 1" BSP - DN25KF | | 625019 |
| | ·- | 1999 |

Maintenance kits

| 3 000 hour usual maintenance with silicone o'ring for oil mist filter | 724572 |
|--|--------|
| 3 000 hour usual maintenance with viton o'ring for oil mist filter | 724573 |
| 12 000 hour preventive maintenance | 724574 |

3 000 hour usual maintenance

12 000 hour preventive maintenance





EVISA E40.R

Accessories and Options

| Additional rubber f | oot | 625169 |
|----------------------------------|--|--------|
| Oil Level Safety (| OLS) with float | 625020 |
| PT100 temperature | sensor | 625021 |
| NC bimetal temper | ature safety - opening at 120°C - Max 24V | 625022 |
| | Paper cartridge | 714975 |
| 2 1" BSP suction fil Type 100 | Polyester cartridge | 714976 |
| 1ype 100 | Carbon cartridge | 714977 |
| Ø63 vacuum gauge | fitted on filter | 617536 |
| 1" BSP polyester/ca | arbon double filtration 100PO + 100CH | 625023 |
| Adjusting valve fitte | ed on T-square MF 1" BSP | 714979 |
| | Aluminium head / plexiglass cylinder / without mechanical float | 724793 |
| | Aluminium head / plexiglass cylinder / with mechanical float | 724794 |
| | Aluminium head / Pyrex cylinder / without mechanical float | 724807 |
| Ilquid trap 100 | Aluminium head / Pyrex cylinder / with mechanical float | 724808 |
| 48 m³.h ⁻¹ | Stainless steel head / Pyrex cylinder / without mechanical float | 724795 |
| 1"BSP | Stainless steel head / Pyrex cylinder / with mechanical float | 724796 |
| | Pyrex bottle 250 ml under trap assembly | 615441 |
| | Pyrex bottle 500 ml under trap assembly | 615442 |
| | Pyrex bottle 1000 ml under trap assembly | 615443 |
| Electro-pneumatic | 816002 | |
| Electrical automatic | drain with control board | 816003 |
| Vacuum hose (0,6 n | n) MF 1" BSP | 618265 |
| Vacuum hose (1 m) | MF 1" BSP | 617372 |
| Vacuum hose (1,5 n | n) MF 1" BSP | 618266 |
| Vacuum hose (2 m) | MF 1" BSP | 616179 |
| Suction hose (1m) I | MM 1" with no return valve | 714980 |
| No return valve MF | 1" BSP | 618457 |
| Base frame assemb | ly height 150 mm | 625012 |
| | For 1 pump | 625013 |
| Elevated base fra (H=525 mm) | For 2 pumps | 625014 |
| (i. 525 iiiii) | For 3 pumps | 625015 |
| | Without regulation contact 3-ph 400V + E | 770496 |
| | Without regulation contact 1-ph 230V + E | 770504 |
| Direct starter (wall mounting) | With regulation contact LG7 3-ph 400V + N + E | 710423 |
| (wall mounting) | With regulation contact LG7 1-ph 230V + E | 710435 |
| | With regulation contact LG7 + OLS Timer 3-ph 400V + N + E | 724570 |
| | 724571 | |
| | regulation contact LG7 and Flexo valve egasing system - 3-ph 400V + N + E | 724580 |
| | regulation contact LG7 and Flexo valve egasing system - 1-ph 230V + E | 724581 |
| Electrical cable (3m |) with ON/OFF switch -1-ph 230V + E | 625016 |
| Direct starter suppo | ort for base fixation | 625017 |





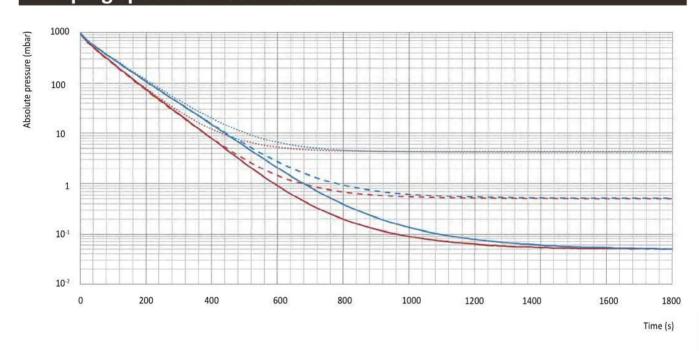


Liquid trap 100 with mechanical stop and optional bottle

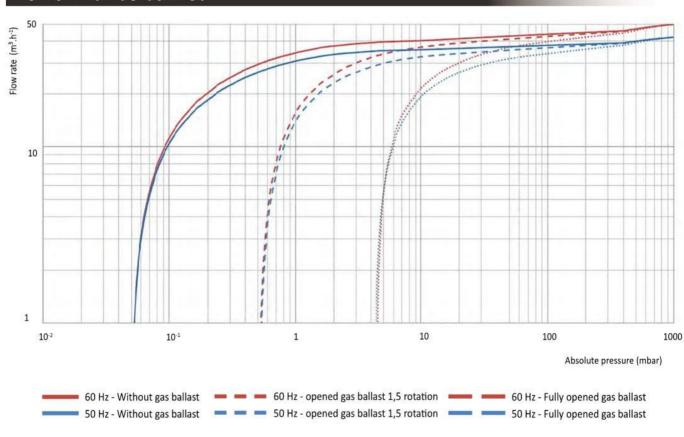


Elevated base frame for 2 pumps

Pumping speed on 1000 I vessel



Performance curves









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They can run continuously from atmospheric pressure to ultimate vacuum.

They are silent and extremely robust.

- Single stage vacuum pump with the end vacuum of 6.10⁻² mbar
- Compactness and noise level optimized for an easy integration in machines
- High water vapor pumping capacity with finely adjustable gas ballast
- Designed for light onsite maintenance without piping disconnection
- · Integrated oil mist filter on the exhaust
- IE3 motor

Technical characteristics

| | | | 50 Hz | 60 Hz |
|---------|---|---|---|---|
| | Nominal flow rate n | n³.h ⁻¹ - <i>cfm</i> | 68 - 40 | 81,6 - 48 |
| | PNEUROP pumping | speed (1) m ³ .h ⁻¹ - cfm | 65 - 38,2 | 78 - <i>45,9</i> |
| | Pumping speed at 1 | mbar inlet pressure (1) m ³ .h ⁻¹ - cfm | 40 - 23.5 | 48 - 28,2 |
| | Without gas ballast | End vacuum mbar - torr | ≤ 6.10 ⁻² - 4,5.10 ⁻² | ≤ 6.10 ⁻² - 4,5.10 ⁻² |
| | | End vacuum mbar - torr | ≤ 5.10 ⁻¹ - 3,8.10 ⁻¹ | ≤ 5.10 ⁻¹ - 3,8.10 ⁻¹ |
| E65.R | Opened gas ballast 3 rotations | Water vapor permitted maximum pressure mbar - torr | 50 - 37,5 | 42 - 31,5 |
| HV | 3 Totations | Water vapor capacity kg.h ⁻¹ | 2 | 1,9 |
| nv | 00 M29 28 | End vacuum mbar - torr | ≤3-2,3 | ≤ 3- 2,3 |
| | Fully opened gas ballast | Water vapor permitted maximum pressure mbar - torr | 80 - 60 | 67 - 50 |
| | Dallast | Water vapor capacity kg.h ⁻¹ | 3 | 3 |
| | Without gas ballast | End vacuum mbar - torr | ≤ 3 - 2,3 | ≤3-2,3 |
| | | End vacuum mbar - torr | ≤5-3,8 | ≤ 5 - 3,8 |
| E65.R | Fully opened gas ballast | Water vapor permitted maximum pressure mbar - torr | 49 - 36,7 | 43 - 32,2 |
| Dallast | Water vapor capacity kg.h ⁻¹ | 1,7 | 1,7 | |
| | 100 % synthetic oil | | MV99S | MV99S |
| | Oil capacity I - qt | | 3 - 3,2 | 3 - 3,2 |
| | Noise level dB(A) | | 67 | 72 |

⁽¹⁾ Measurements according to PNEUROP 6602 specifications - 20°C

| GEO | OGRAPHIC ZONE | EUROPE | ASIA MIDDLE-EAST | SOUTH AMERICA | USA | JAPAN |
|---------------------|----------------------------------|--------------|---------------------|------------------|----------------------------|----------------|
| | Number of phases | 3 | 3 | 3 | 3 | 3 |
| | Voltage V | 230 / 400 | 220 / 380 | 190 / 380 | 208-230 / 460 | 200 / 380 |
| Electrical motor | Period Hz | 50 | 60 | 50 | 60 | 50/60 |
| motor | Motor power | 1,50 kW | 1,80 kW | 1,50 kW | 3 HP | 1,50 / 1,80 kW |
| | Rotation speed min ⁻¹ | 1500 | 1800 | 1500 | 1800 | 1500/1800 |
| Inlet conne | ection (2) | 1"1/4 BSP | 1"1/4 BSP | 1"1/4 NPT | 1"1/4 NPT | 1"1/4 BSP |
| Outlet con | nection (3) | 1" 1/4 BSP | 1" 1/4 BSP | 1" 1/4 NPT | 1" 1/4 NPT | 1"1/4 BSP |
| Weight wit | h oil kg - lb | 63,4 - 139,8 | 71,6 - 157,9 | 78,5 - 173,1 | 78,5 - <i>173,1</i> | 63,4 - 139,8 |

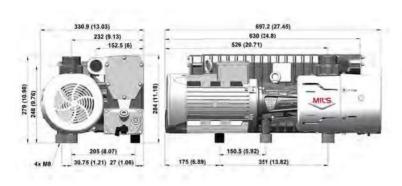
⁽²⁾ DN 40 ISO-KF adaptation flange can be supplied, see accessories

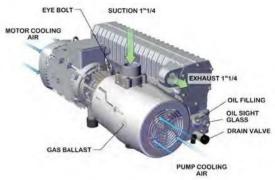
⁽³⁾ DN 40 ISO-KF connector can be supplied, see accessories

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Lubricated rotary vane vacuum pumps

Dimensions mm (inch)





References

| | E65 | .R HV | E6 | 55.R |
|--|------------------|---------------------|------------------|---------------------|
| | WITH GAS BALLAST | WITHOUT GAS BALLAST | WITH GAS BALLAST | WITHOUT GAS BALLAST |
| EUROPE 3ph, 230/400V-50Hz | 824247 | 824248 | 824245 | 824246 |
| SOUTH AMERICA/ USA 3ph, 190/380V-50Hz, 208-230/460V-60Hz | 824255 | 824256 | 824253 | 824254 |
| ASIA / MIDDLE-EAST 3ph, 220/380V-60Hz | 824263 | 824264 | 824261 | 824262 |

JAPAN version - Contact us Oxygen version available - Contact us

HV Accessories - KF connection



| | 625018 |
|---------------------|---------------------------------------|
| Paper cartridge | 625009 |
| Polyester cartridge | 625010 |
| Carbon cartridge | 625011 |
| | 361639 |
| ng ring | 361642 |
| | 361646 |
| | 361647 |
| | 333818 |
| | 333819 |
| | 333820 |
| | 333821 |
| | 625109 |
| | Polyester cartridge Carbon cartridge |

Maintenance kits

3 000 hour usual maintenance
with silicone o'ring for oil mist filter

3 000 hour usual maintenance
with viton o'ring for oil mist filter

12 000 hour preventive maintenance
724603

3 000 hour usual maintenance

12 000 hour preventive maintenance





EVISA E65.R

Accessories and Options

| 1 Oil Level Safety | (OLS) wi | th float | 625369 | |
|--|------------|---|------------------------|---------|
| PT100 temperatur | e sensor | | 625021 | 1 |
| NC bimetal tempe | rature sa | fety - opening at 120°C - Max 24V | 625022 | |
| _ | | Paper cartridge | 706192 | |
| 1"1/4 BSP suction Type 126 | n filter | Polyester cartridge | 709398 | Oil L |
| 1990 120 | | Carbon cartridge | 710521 | |
| Ø126 vacuum gau | ge fitted | on filter | 617536 | |
| 1"1/4 BSP polyest | er/carbo | n double filtration 126PO + 126CH | 670617 | |
| Adjusting valve fit | ed on T- | square | 713841 | |
| | Alumini | um head / plexiglass cylinder / without mechanica | al float 724797 | |
| | Alumini | um head / plexiglass cylinder / with mechanical flo | oat 724798 | |
| | Alumini | um head / Pyrex cylinder / without mechanical flo | at 724811 | (9) |
| 120 m ³ .h ⁻¹ St | Alumini | um head / Pyrex cylinder / with mechanical float | 724812 | |
| | Stainles | s steel head / Pyrex cylinder / without mechanical | float 724799 | |
| | Stainles | s steel head / Pyrex cylinder / with mechanical flo | at 724800 | |
| | Pyrex bo | ottle 250 ml under trap assembly | 615441 | 2 su |
| P | Pyrex bo | ottle 500 ml under trap assembly | 615442 | |
| Pyrex bottle 1000 ml under trap assembly | | 615443 | | |
| Electro-pneumatic | automa | tic drain with control board | 816002 | |
| Electrical automat | ic drain v | vith control board | 816003 | |
| Vacuum hose (0,6 | m) MF 1 | "1/4 BSP | 670650 | |
| Vacuum hose (1 m |) MF 1"1 | /4 BSP | 607058 | 1 |
| Vacuum hose (1,5 | m) MF 1 | '1/4 BSP | 610457 | |
| Suction hose (1m) | MM 1"1 | /4 with no return valve | 770152 | |
| Exhaust double ell | ow mou | inting | 625480 | No. |
| Base frame assem | bly heigh | t 150 mm | 625209 | 7 |
| | | For 1 pump | 624611 | - A |
| Elevated base fr (H=525 mm) | ame | For 2 pumps | 619544 | 101 |
| (11-323 11111) | | For 3 pumps | 617614 | 3 Liqu |
| | Withou | ıt regulation contact 3-ph 400V | 770496 | with i |
| Direct starter | Withou | ut regulation contact 3-ph 230V | 770498 | A MARIA |
| (wall mounting) | With r | egulation contact LG7 3-ph 400V | 710423 | opti |
| | With r | egulation contact LG7 3-ph 230V | 710432 | |
| Control board with for warm up and d | | colenoid valve 3-ph ,400V + N cycle | 770813 | |
| Control board with for degasing cycle | FLEXO S | olenoid valve 3-ph ,400V + N | 770820 | |





suction filter type 126

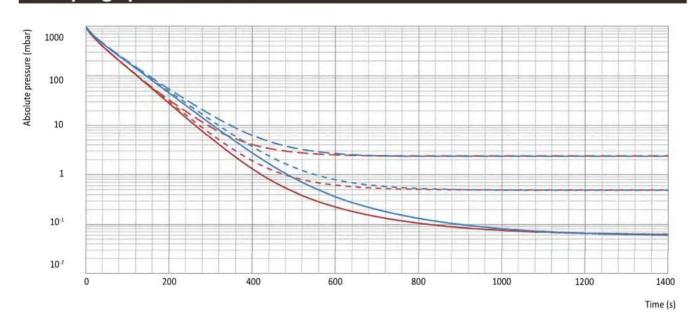


uid trap 125 n mechanical stop and tional bottle

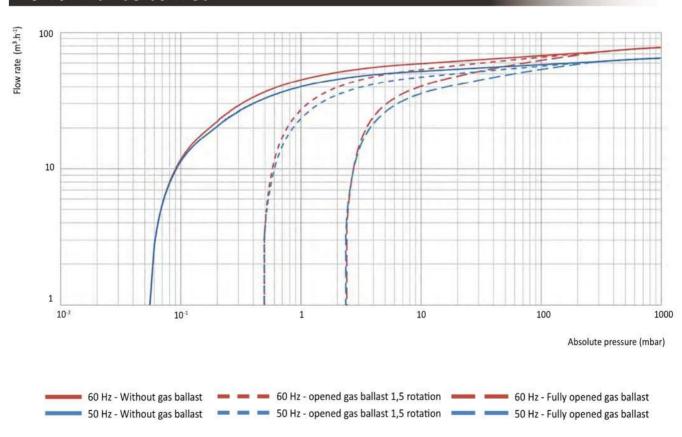


Elevated base frame for 2 pumps

Pumping speed on 1000 I vessel



Performance curves







EVISA E100.R

The lubricated rotary vane pumps EVISA are designed to be used in a wide range of industrial and healthcare applications.

They can run continuously from atmospheric pressure to ultimate vacuum.

They are silent and extremely robust.

- Single stage vacuum pump with the end vacuum of 6.10⁻² mbar
- Compactness and noise level optimized for an easy integration in machines
- High water vapor pumping capacity with finely adjustable gas ballast
- Designed for light onsite maintenance without piping disconnection
- · Integrated oil mist filter on the exhaust
- · IE3 motor

Technical characteristics

| | | | 50 Hz | 60 Hz |
|--------|-----------------------------------|--|---|---|
| | Nominal flow rate n | n³.h ⁻¹ - <i>cfm</i> | 100 - 58,8 | 120 - 70,6 |
| | PNEUROP pumping | speed (1) m ³ .h ⁻¹ - cfm | 96 - 56,5 | 115 - 67,7 |
| | Pumping speed at 1 | mbar inlet pressure (1) m³.h-1 - cfm | 52 - 30,6 | 62 - <i>36,5</i> |
| | Without gas ballast | End vacuum mbar - torr | ≤ 6.10 ⁻² - 4,5.10 ⁻² | ≤ 6.10 ⁻² - 4,5.10 ⁻² |
| | | End vacuum mbar - torr | ≤ 5.10 ⁻¹ - 3,8.10 ⁻¹ | ≤ 5.10 ⁻¹ - 3,8.10 ⁻¹ |
| E100.R | Opened gas ballast 3 rotations | Water vapor permitted maximum pressure mbar - torr | 59 - 44,2 | 49 - 36,7 |
| HV | | Water vapor capacity kg.h ⁻¹ | 3,4 | 3,2 |
| | | End vacuum mbar - torr | ≤ 2 - 1,5 | ≤ 2 - 1,5 |
| | Fully opened gas ballast | Water vapor permitted maximum pressure mbar - torr | 95 - 71,2 | 79 - <i>59,2</i> |
| | Dallast | Water vapor capacity kg.h ⁻¹ | 5,5 | 5,2 |
| | Without gas ballast | End vacuum mbar - torr | ≤3-2,3 | ≤3-2,3 |
| 7100 D | | End vacuum mbar - torr | ≤5-3,8 | ≤5-3,8 |
| E100.R | Fully opened gas ballast | Water vapor permitted maximum pressure mbar - torr | 69 - 51,7 | 60 - 45 |
| | Dallast | Water vapor capacity kg.h ⁻¹ | 3,8 | 3,8 |
| | 100 % synthetic oil | | MV99S | MV99S |
| | Oil capacity I - qt | | 3 - 3,2 | 3 - 3,2 |
| | Noise level dB(A) | | 67 | 69 |

⁽¹⁾ Measurements according to PNEUROP 6602 specifications - 20°C

| GEO | OGRAPHIC ZONE | EUROPE | ASIA MIDDLE-EAST | SOUTH AMERICA | USA | JAPAN |
|------------------|----------------------------------|--------------|---------------------|------------------|---------------|----------------|
| | Number of phases | 3 | 3 | 3 | 3 | 3 |
| | Voltage V | 230 / 400 | 220 / 380 | 190 / 380 | 208-230 / 460 | 200 / 380 |
| Electrical motor | Period Hz | 50 | 60 | 50 | 60 | 50 / 60 |
| motor | Motor power | 2,20 kW | 2,64 kW | 2,20 kW | 5 HP | 2,20 / 2,64 kW |
| | Rotation speed min ⁻¹ | 1500 | 1800 | 1500 | 1800 | 1500/1800 |
| Inlet conne | ection (2) | 1"1/4 BSP | 1"1/4 BSP | 1"1/4 NPT | 1"1/4 NPT | 1"1/4 BSP |
| Outlet con | nection (3) | 1" 1/4 BSP | 1" 1/4 BSP | 1" 1/4 NPT | 1" 1/4 NPT | 1''1/4 BSP |
| Weight wit | h oil kg - /b | 67,2 - 148,2 | 67,2 - 148,2 | 85,5 - 188,5 | 85,5 - 188,5 | 67,2 - 148,2 |

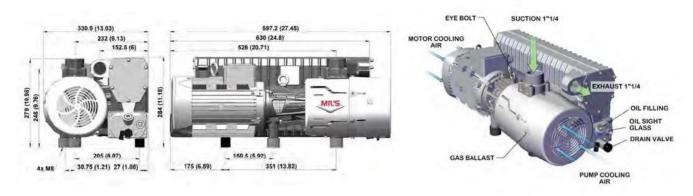
⁽²⁾ DN 40 ISO-KF adaptation flange can be supplied, see accessories

⁽³⁾ DN 40 ISO-KF connector can be supplied, see accessories

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Lubricated rotary vane vacuum pumps

Dimensions mm (inch)



References

| | E100.R HV | | E100.R | |
|--|------------------|---------------------|------------------|---------------------|
| | WITH GAS BALLAST | WITHOUT GAS BALLAST | WITH GAS BALLAST | WITHOUT GAS BALLAST |
| EUROPE 3ph, 230/400V-50Hz | 824251 | 824252 | 824249 | 824250 |
| SOUTH AMERICA/ USA 3ph, 190/380V-50Hz, 208-230/460V-60Hz | 824259 | 824260 | 824257 | 824258 |
| ASIA / MIDDLE-EAST 3ph, 220/380V-60Hz | 824267 | 824268 | 824265 | 824266 |

JAPAN version - Contact us Oxygen version available - Contact us

HV Accessories - KF connection



| Suction flange DN40KF | | 625018 |
|--|---------------------|--------|
| | Paper cartridge | 625009 |
| Suction filter DN40KF - Type 100 | Polyester cartridge | 625010 |
| | Carbon cartridge | 625011 |
| Aluminium clamping ring DN40KF | | 361639 |
| Stainless steel / Viton DN40KF centering | ng ring | 361642 |
| Stainless steel DN40KF hose - 0,5 m | | 361646 |
| Stainless steel DN40KF hose - 1 m | | 361647 |
| Elbow DN40KF | | 333818 |
| Equal T-square DN40KF | | 333819 |
| Manual ball valve DN40KF | | 333820 |
| Solenoid valve DN40KF | | 333821 |
| Exhaust adapter 1"1/4 BSP - DN40KF | | 625109 |

Maintenance kits

| 3 000 hour usual maintenance with silicone o'ring for oil mist filter | 724601 |
|---|--------|
| 3 000 hour usual maintenance with viton o'ring for oil mist filter | 724602 |
| 12 000 hour preventive maintenance | 724604 |

3 000 hour usual maintenance

12 000 hour preventive maintenance





EVISA E100.R

Accessories and Options

| Oil Level Safety (| OLS) wi | th float | 625369 |
|--|--------------------------------------|--|--------|
| PT100 temperature | sensor | | 625021 |
| NC bimetal temper | ature sa | fety - opening at 120°C - Max 24V | 625022 |
| 6.70 | 200 | Paper cartridge | 706192 |
| 2 1"1/4 BSP suction Type 126 | n filter | Polyester cartridge | 709398 |
| Type 120 | | Carbon cartridge | 710521 |
| Ø126 vacuum gaug | e fitted | on filter | 617536 |
| 1"1/4 BSP polyeste | r/carbo | n double filtration 126PO + 126CH | 670617 |
| Adjusting valve fitte | ed on T- | square | 713841 |
| | Alumini | um head / plexiglass cylinder / without mechanical float | 724797 |
| | Alumini | um head / plexiglass cylinder / with mechanical float | 724798 |
| | Alumini | um head / Pyrex cylinder / without mechanical float | 724811 |
| Il Liquid trap 125 | Alumini | um head / Pyrex cylinder / with mechanical float | 724812 |
| 120 m³.h-1 | Stainles | s steel head / Pyrex cylinder / without mechanical float | 724799 |
| 1"1/4 BSP | Stainles | s steel head / Pyrex cylinder / with mechanical float | 724800 |
| | Pyrex b | ottle 250 ml under trap assembly | 615441 |
| | Pyrex b | ottle 500 ml under trap assembly | 615442 |
| | Pyrex b | ottle 1000 ml under trap assembly | 615443 |
| Electro-pneumatic | automa | tic drain with control board | 816002 |
| Electrical automatic | c drain v | with control board | 816003 |
| Vacuum hose (0,6 r | n) MF 1 | "1/4 BSP | 670650 |
| Vacuum hose (1 m) | MF 1"1 | /4 BSP | 607058 |
| Vacuum hose (1,5 r | n) MF 1 | "1/4 BSP | 610457 |
| Suction hose (1m) I | MM 1"1 | /4 with no return valve | 770152 |
| Exhaust double elb | ow mou | inting | 625480 |
| Base frame assemb | ly heigh | at 150 mm | 625209 |
| | | For 1 pump | 624611 |
| Elevated base fra (H=525 mm) | ime | For 2 pumps | 619544 |
| (11 525 11111) | | For 3 pumps | 617614 |
| | Witho | out regulation contact 3-ph 400V | 770497 |
| Direct starter (wall mounting) | Without regulation contact 3-ph 230V | | 770498 |
| (wall mounting) | With | regulation contact LG7 3-ph 400V | 710424 |
| | With | regulation contact LG7 3-ph 230V | 710432 |
| Control board with for warm up and de | | solenoid valve 3-ph, 400V + N cycle | 770814 |
| Control board with for degasing cycle | FLEXO 9 | solenoid valve 3-ph, 400V + N | 770821 |





type 126

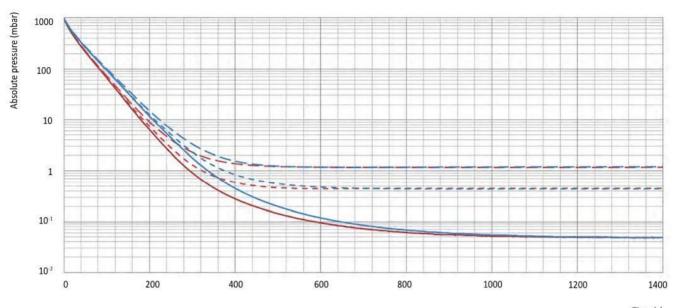


Liquid trap 125 with mechanical stop and optional bottle



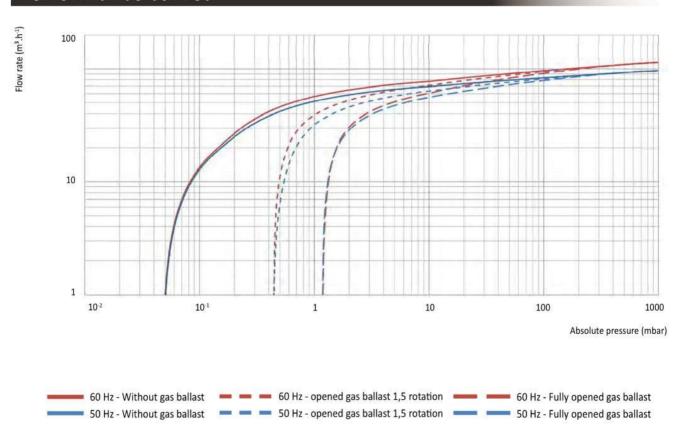
Elevated base frame for 2 pumps

Pumping speed on 1000 I vessel



Time (s)

Performance curves





EVISA E150. R



The lubricated rotary vane pumps EVISA are designed to be used in a wide range of industrial and healthcare applications.

They can run continuously from atmospheric pressure to ultimate vacuum.

They are silent and extremely robust.

- · Single stage vacuum pump
- Continuous operation from atmospheric pressure to end vacuum: 8.10⁻² mbar
- · High pumping speed even at low pressure
- · Integrated oil mist filter on the exhaust
- IE3 motor

Technical characteristics

| | | | 50 Hz | 60 Hz |
|-------|---|---|---|---|
| | Nominal flow rate n | n³.h ⁻¹ - <i>cfm</i> | 132 - 77,7 | 156 - 91,8 |
| | PNEUROP pumping | speed (1) m³.h-1 - cfm | 125 - 73,6 | 150 - 88,3 |
| | Pumping speed at 1 | mbar inlet pressure (1) m ³ .h ⁻¹ - cfm | 95 - 55,9 | 114 - 67,1 |
| | Without gas ballast | End vacuum mbar - torr | ≤ 8.10 ⁻² - 6.10 ⁻² | ≤ 8.10 ⁻² - 6.10 ⁻² |
| 150.R | Fully opened gas ballast | End vacuum mbar - torr | ≤ 2 - 1,5 | ≤ 2 - 1,5 |
| HV | | Water vapor permitted maximum pressure mbar - torr | 58,8 - 44,1 | 70,3 - 52,8 |
| | | Water vapor capacity kg.h ⁻¹ | 4,2 | 6,2 |
| | Without gas ballast | End vacuum mbar - torr | ≤3-2,3 | ≤ 3 - 2,3 |
| 150 B | 7 (A) 4 (A) | End vacuum mbar - torr | ≤5-3,8 | ≤5-3,8 |
| 150.R | Fully opened gas ballast | Water vapor permitted maximum pressure mbar - torr | 41 - 30,7 | 49 - 36,7 |
| | Dallast | Water vapor capacity kg.h ⁻¹ | 2,9 | 4,3 |
| | 100 % synthetic oil | | MV99S | MV99S |
| | Oil capacity I - qt | | 5 - 5,3 | 5 - <i>5,3</i> |
| | Noise level dB(A) | | 69 | 72 |

 $^{^{} ext{(1)}}$ Measurements according to PNEUROP 6602 specifications - 20°C

| GEO | OGRAPHIC ZONE | EUROPE | SOUTH AMERICA | USA |
|------------------------------------|----------------------|-----------|------------------|---------------|
| | Number of phases | 3 | 3 | 3 |
| 520 2 0 70 20 11 2 0 | Voltage V | 230 / 400 | 190 / 380 | 208-230 / 460 |
| Electrical motor | Period Hz | 50 | 50 | 60 |
| motor | Motor power | 3 kW | 3 kW | 5 HP |
| | Rotation speed min-1 | 1000 | 1000 | 1200 |
| Inlet conne | ection (2) | 2" BSP | 2" NPT | 2" NPT |
| Outlet con | nection (2) | 2" BSP | 2" NPT | 2" NPT |
| Weight wit | h oil kg - /b | 154 - 340 | 174 - 384 | 174 - 384 |

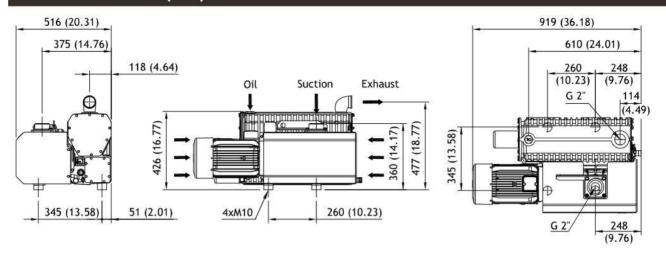
⁽²⁾ DN 50 ISO-KF connector can be supplied, see accessories

^{(2) 260/460}V 60 Hz only

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Lubricated rotary vane vacuum pumps

Dimensions mm (inch)



References

| | E150.R HV | | E150.R | |
|---|-----------------------|---------------------|-----------------------|---------------------|
| | WITH GAS BALLAST | WITHOUT GAS BALLAST | WITH GAS BALLAST | WITHOUT GAS BALLAST |
| EUROPE 3ph, 230/400V-50Hz | 823857 + 624229 | 823857 | 823856 + 624229 | 823856 |
| SOUTH AMERICA / USA 3ph, 190/380V-50Hz, 208-230/460V-60Hz | 824059 + 624229 | 824059 | Contact us | Contact us |

For booster direct mounting: contact us

Special versions

| | E150.R HV | | E150.R | |
|--|-----------------------|---------------------|-----------------------|---------------------|
| | WITH GAS BALLAST | WITHOUT GAS BALLAST | WITH GAS BALLAST | WITHOUT GAS BALLAST |
| OXYGEN with Fomblin oil 3ph, 230/400V-50Hz | 823871 + 624229 | 823871 | 823870 + 624229 | 823870 |
| EVISA H₂O 3ph, 230/400V-50Hz | Contact us | Contact us | 823869 + 624229 | 823869 |

Maintenance kits

| 3 000 hour usual maintenance with silicone o'ring for oil mist filter | 724054 |
|--|--------|
| 3 000 hour usual maintenance with viton o'ring for oil mist filter | 724055 |
| 12 000 hour preventive maintenance | 724052 |
| Gasket set | 624230 |
| 3 000 hour usual maintenance for OXYGEN version | 724089 |
| 12 000 hour preventive maintenance for OXYGEN version | 724087 |



3 000 hour usual maintenance

12 000 hour preventive maintenance





EVISA E150.R

Accessories and Options

| Oil Level Safety (OL | S) with float | 624245 |
|---|---|--------|
| Timer box for oil leve | 670810 | |
| NC bimetal temperate | 624246 | |
| Oil Level Safety and P | T100 temperature sensor | 624247 |
| PT100 temperature se | ensor | 624248 |
| | Paper cartridge | 715350 |
| 2" BSP suction filte Type 201 | Polyester cartridge | 715351 |
| Type 201 | Carbon cartridge | 715352 |
| Vacuum gauge fitted | on filter | 617536 |
| 2" BSP paper/paper d | louble filtration 201PA + 201PA | 670615 |
| 2" BSP polyester/cark | oon double filtration 201PO + 201CH | 670618 |
| | Aluminium head / polycarbonate cylinder / without float | 724801 |
| | Aluminium head / polycarbonate cylinder / with float | 724802 |
| | Stainless steel head/ Pyrex cylinder / without float | 724803 |
| Liquid trap 200 | Stainless steel head / Pyrex cylinder / with float | 724804 |
| 340 m³.h¹ 2" BSP | Pyrex bottle 250 ml under trap assembly | 615441 |
| 2 00, | Pyrex bottle 500 ml under trap assembly | 615442 |
| | Pyrex bottle 1000 ml under trap assembly | 615443 |
| | Bracket for wall fixing | 619907 |
| Electro-pneumatic au | tomatic drain with control board | 816002 |
| Electrical automatic d | Irain with control board | 816003 |
| Adjusting valve fitted | 713842 | |
| Vacuum hose (0,6 m) | 618149 | |
| Vacuum hose (1 m) FF | F 2" BSP | 606099 |
| Vacuum hose (1,5 m) | FF 2" BSP | 607592 |
| Suction hose with no | n-return valve (1 m) | 770154 |
| Exhaust double elbow | v mounting | 622788 |
| Base frame assembly | height 150 mm | 670806 |
| Elevated base fram | | 617612 |
| (H=525 mm) | For 2 pumps | 619545 |
| | Without regulation contact 3-ph 400V | 770499 |
| Direct starter | Without regulation contact 3-ph 230V | 770500 |
| (wall mounting) | With regulation contact LG7 3-ph 400V | 710426 |
| | With regulation contact LG7 3-ph 230V | 710434 |
| Control board with FL for warm up and dega | .EXO solenoid valve 3-ph, 400V + N using cycle | 770815 |
| Control board with FL for degasing cycle | EXO solenoid valve 3-ph, 400V + N | 770822 |
| Aluminium adapter M | 12" / DN50 KF | 117132 |
| Aluminium clamping | 40.0 (CV) (CV) (40.0 (CV) (CV) | 361640 |
| Centering ring stainle | ss steel / VITON | 361643 |
| Stainless steel hose (0 | | 361648 |
| Stainless steel hose (1 | 361649 | |





suction filter type 201



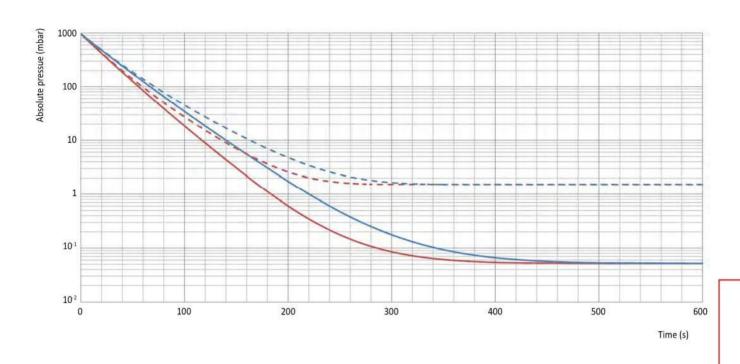
Liquid trap 200 with mechanical stop and optional bottle



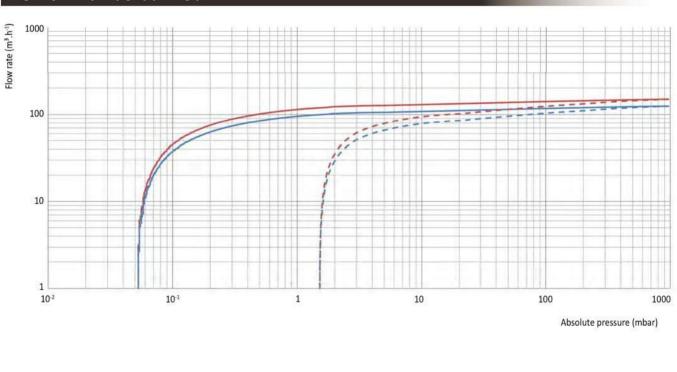
Elevated base frame for 2 pumps

₩ MIL'S Lubricated rotary vane vacuum pumps

Pumping speed on 1000 l vessel



Performance curves



60 Hz - without gas ballast 50 Hz - without gas ballast

60 Hz - with opened gas ballast 50 Hz - with opened gas ballast



EVISA E200.R



The lubricated rotary vane pumps EVISA are designed to be used in a wide range of industrial and healthcare applications.

They can run continuously from atmospheric pressure to ultimate vacuum.

They are silent and extremely robust.

- · Single stage vacuum pump
- Continuous operation from atmospheric pressure to end vacuum: 6.10⁻² mbar
- · High pumping speed even at low pressure
- · Integrated oil mist filter on the exhaust
- IE3 motor

Technical characteristics

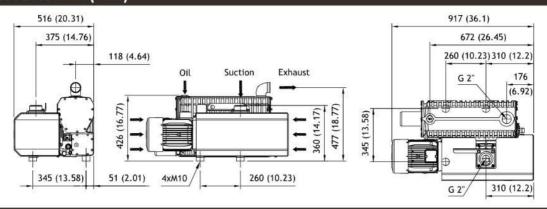
| | | | 50 Hz | 60 Hz |
|--------------|--|---|---|---|
| | Nominal flow rate | m³.h ⁻¹ - cfm | 200 - 117,7 | 240 - 141,3 |
| | PNEUROP pumpin | g speed ⁽¹⁾ m ³ .h ⁻¹ - cfm | 190 - 111,8 | 228 - 134,2 |
| | Pumping speed at | 1 mbar inlet pressure (1) m ³ .h ⁻¹ - cfm | 134 - 78,9 | 161 - 94,8 |
| E200.R HV | Without gas ballast End vacuum mbar - torr | | ≤ 6.10 ⁻² - 4,5.10 ⁻² | ≤ 6.10 ⁻² - 4,5.10 ⁻² |
| | Fully opened gas ballast | End vacuum mbar - torr | ≤1-0,75 | ≤ 1 - 0,75 |
| | | Water vapor permitted maximum pressure mbar - torr | 20,2 - 15,1 | 21,3 - 15,9 |
| | | Water vapor capacity kg.h ⁻¹ | 2,2 | 2,8 |
| E200.R | Without gas ballast End vacuum mbar - torr | | ≤3-2,3 | ≤3-2,3 |
| | Fully opened gas ballast | End vacuum mbar - torr | ≤5-3,8 | ≤5-3,8 |
| | | Water vapor permitted maximum pressure mbar - torr | 14 - 10,5 | 15 - 11,2 |
| | | Water vapor capacity kg.h ⁻¹ | 1,5 | 2 |
| | 100 % synthetic oi | | MV99S | MV99S |
| | Oil capacity - qt | | 5 - 5,3 | 5 - 5,3 |
| | Noise level dB(A) | | 71 | 77 |

⁽¹⁾ Measurements according to PNEUROP 6602 specifications - 20°C

| GEOGRAPHIC ZONE | | EUROPE | ASIA MIDDLE-EAST | SOUTH AMERICA | USA | JAPAN |
|-------------------------|----------------------------------|-----------|---------------------|------------------|---------------|-------------|
| | Number of phases | 3 | 3 | 3 | 3 | 3 |
| Electrical motor | Voltage V | 230 / 400 | 220 / 380 | 190 / 380 | 208-230 / 460 | 220 / 380 |
| | Period Hz | 50 | 60 | 50 | 60 | 50 / 60 |
| | Motor power | 4 kW | 4,8 kW | 4 kW | 7,5 HP | 4 / 4,8 kW |
| | Rotation speed min ⁻¹ | 1500 | 1800 | 1500 | 1800 | 1500 / 1800 |
| Inlet connection (2) | | 2" BSP | 2" BSP | 2" NPT | 2" NPT | 2" BSP |
| Outlet connection (2) | | 2" BSP | 2" BSP | 2" NPT | 2" NPT | 2" BSP |
| Weight with oil kg - /b | | 143 - 316 | 158 - 349 | 174 - 384 | 174 - 384 | 160 - 353 |

⁽²⁾ DN 50 ISO-KF connector can be supplied, see accessories

Dimensions mm (inch)



References

| E200.R HV | | E200.R | |
|-----------------------|--|---|--|
| WITH GAS BALLAST | WITHOUT GAS BALLAST | WITH GAS BALLAST | WITHOUT GAS BALLAST |
| 823766 + 624229 | 823766 | 823830 + 624229 | 823830 |
| 824060 + 624229 | 824060 | Contact us | Contact us |
| 823835 + 624229 | 823835 | 823833 + 624229 | 823833 |
| | WITH GAS BALLAST 823766 + 624229 824060 + 624229 823835 + | WITH GAS BALLAST 823766 + 823766 624229 824060 + 824060 624229 823835 + 823835 | WITH GAS BALLAST WITHOUT GAS BALLAST WITH GAS BALLAST 823766 + 624229 823766 + 624229 823830 + 624229 824060 + 624229 Contact us 823835 + 823835 + 823835 + |

Special versions

| | E200.R HV | | E200.R | |
|---|-----------------------|---------------------|-----------------------|--------------------|
| | WITH GAS BALLAST | WITHOUT GAS BALLAST | WITH GAS BALLAST | WITHOUT GAS BALLAS |
| CONDENSABLE VAPOUR PUMPING (small propeller) 3ph, 230/400V-50Hz | 823864 + 624229 | 823864 | 823837 + 624229 | 823837 |
| OXYGEN with Fomblin oil 3ph, 230/400V-50Hz | 823873 + 624229 | 823873 | 823872 + 624229 | 823872 |
| EVISA H₂O 3ph, 230/400V-50Hz | Contact us | Contact us | 823845 + 624229 | 823845 |

For booster direct mounting: contact us

Maintenance kits

| 3 000 hour usual maintenance with silicone o'ring for oil mist filter | 724054 |
|---|--------|
| 3 000 hour usual maintenance with viton o'ring for oil mist filter | 724055 |
| 12 000 hour preventive maintenance | 724052 |
| Gasket set | 624230 |
| 3 000 hour usual maintenance for OXYGEN version | 724089 |
| 12 000 hour preventive maintenance for OXYGEN version | 724087 |
| | |



3 000 hour usual maintenance

12 000 hour preventive maintenance





EVISA E200. R

Accessories and Options

| Oil Level Safety (OL | S) with float | 624245 |
|--|---|--------|
| Timer box for oil level | safety (base mounting) | 670810 |
| NC bimetal temperatu | re safety - opening at 120°C + SNH - Max 24V | 624246 |
| Oil Level Safety and P | T100 temperature sensor | 624247 |
| PT100 temperature se | ensor | 624248 |
| | Paper cartridge | 715350 |
| 2" BSP suction filter Type 201 | Polyester cartridge | 715351 |
| 1,460.201 | Carbon cartridge | 715352 |
| Vacuum gauge fitted o | on filter | 617536 |
| 2" BSP paper/paper d | ouble filtration 201PA + 201PA | 670615 |
| 2" BSP polyester/carb | on double filtration 201PO + 201CH | 670618 |
| | Aluminium head / polycarbonate cylinder / without float | 724801 |
| | Aluminium head / polycarbonate cylinder / with float | 724802 |
| | Stainless steel head/ Pyrex cylinder / without float | 724803 |
| Liquid trap 200 340 m ³ .h ⁻¹ | Stainless steel head / Pyrex cylinder / with float | 724804 |
| | Pyrex bottle 250 ml under trap assembly | 615441 |
| | Pyrex bottle 500 ml under trap assembly | 615442 |
| (| Pyrex bottle 1000 ml under trap assembly | 615443 |
| | Bracket for wall fixing | 619907 |
| Electro-pneumatic aut | 816002 | |
| Electrical automatic d | rain with control board | 816003 |
| Adjusting valve fitted | 713842 | |
| /acuum hose (0,6 m) l | 618149 | |
| Vacuum hose (1 m) FF | 606099 | |
| Vacuum hose (1,5 m) I | FF 2" BSP | 607592 |
| Suction hose with non | n-return valve (1 m) | 770154 |
| Exhaust double elbow | mounting | 622788 |
| Base frame assembly | height 150 mm | 670806 |
| Elevated base frame | For 1 pump | 617612 |
| (H=525 mm) | For 2 pumps | 619545 |
| | Without regulation contact 3-ph 400V | 770499 |
| Direct starter | Without regulation contact 3-ph 230V | 770500 |
| (wall mounting) | With regulation contact LG7 3-ph 400V | 710426 |
| | With regulation contact LG7 3-ph 230V | 710434 |
| Control board with FLI for warm up and degas | EXO solenoid valve 3-ph, 400V + N sing cycle | 770815 |
| Control board with FLI for degasing cycle | EXO solenoid valve 3-ph, 400V + N | 770822 |
| Aluminium adapter M | 12" / DN50 KF | 117132 |
| Aluminium clamping o | collar DN50 KF | 361640 |
| Centering ring stainles | ss steel / VITON | 361643 |
| Stainless steel hose (0 | | 361648 |
| Stainless steel hose (1 | 361649 | |





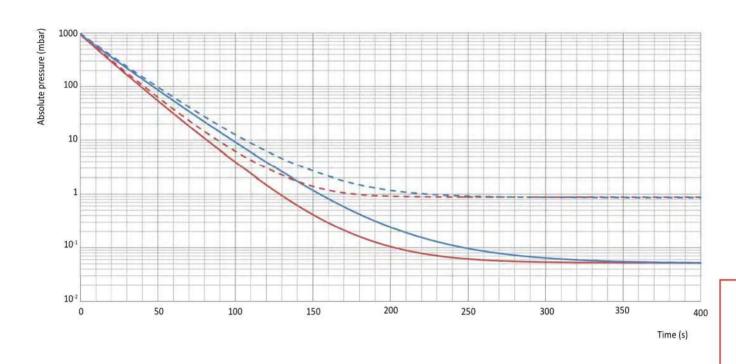
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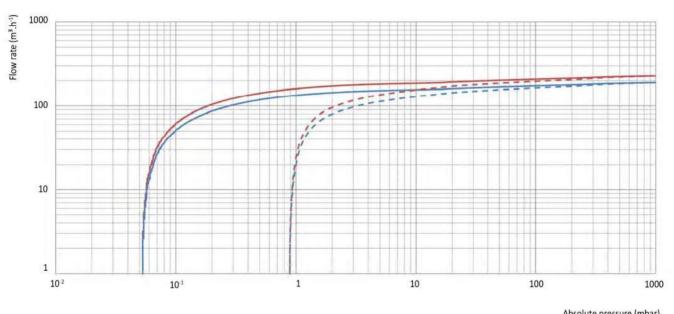
Liquid trap 200 with mechanical stop and optional bottle



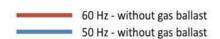
Elevated base frame for 2 pumps

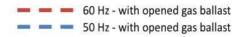


Performance curves



Absolute pressure (mbar)







EVISA E300.R



The lubricated rotary vane pumps EVISA are designed to be used in a wide range of industrial and healthcare applications.

They can run continuously from atmospheric pressure to ultimate vacuum.

They are silent and extremely robust.

- · Single stage vacuum pump
- Continuous operation from atmospheric pressure to end vacuum: 6.10⁻² mbar
- · High pumping speed even at low pressure
- · Integrated oil mist filter on the exhaust
- IE3 motor

Technical characteristics

| | | | 50 Hz | 60 Hz |
|--------|--|---|---|---|
| | Nominal flow rate | m³.h ⁻¹ - cfm | 300 - 176,5 | 360 - 211,8 |
| | PNEUROP pumpin | g speed ⁽¹⁾ m ³ .h ⁻¹ - <i>cfm</i> | 280 - 165 | 336 - 198 |
| | Pumping speed at | 1 mbar inlet pressure (1) m ³ .h ⁻¹ - cfm | 171 - 101 | 205 - 121 |
| | Without gas ballas | t End vacuum mbar - torr | ≤ 6.10 ⁻² - 4,5.10 ⁻² | ≤ 6.10 ⁻² - 4,5.10 ⁻² |
| 300.R | Fully opened gas ballast | End vacuum mbar - torr | ≤ 2 - 1,5 | ≤ 2 - 1,5 |
| HV | | Water vapor permitted maximum pressure mbar - torr | 18,6 - 13,9 | 20 - 15 |
| | | Water vapor capacity kg.h ⁻¹ | 2,3 | 3 |
| | Without gas ballast End vacuum mbar - torr | | ≤3-2,3 | ≤3-2,3 |
| 300.R | | End vacuum mbar - torr | ≤5-3,8 | ≤5-3,8 |
| 300.11 | Fully opened gas ballast | Water vapor permitted maximum pressure mbar - torr | 13 - 9,7 | 14 - 10,5 |
| | Water vapor capacity kg.h ⁻¹ | | 1,6 | 2 |
| | 100 % synthetic oi | 100 % synthetic oil | | MV99S |
| | Oil capacity - qt | | 5 - 5,3 | 5 - 5,3 |
| | Noise level dB(A) | | 72 | 76 |

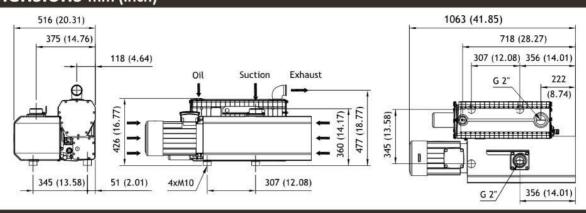
⁽¹⁾ Measurements according to PNEUROP 6602 specifications - 20°C

Versions

| GEO | OGRAPHIC ZONE | EUROPE | ASIA MIDDLE-EAST | SOUTH AMERICA | USA | JAPAN |
|---------------------|------------------------|-----------|---------------------|------------------|---------------|-------------------------|
| | Number of phases | 3 | 3 | 3 | 3 | 3 |
| 20 0 00 | Voltage V | 230 / 400 | 220 / 380 | 190 / 380 | 208-230 / 460 | 220 / 380 |
| Electrical motor | Period Hz | 50 | 60 | 50 | 60 | 50 / 60 |
| motor | Motor power | 5,5 kW | 6,6 kW | 5,5 kW | 10 HP | 5,5 / 6,6 kW |
| | Rotation speed min-1 | 1500 | 1800 | 1500 | 1800 | 1500 / 1800 |
| Inlet conne | ection (2) | 2" BSP | 2" BSP | 2" NPT | 2" NPT | 2" BSP |
| Outlet con | nection ⁽²⁾ | 2" BSP | 2" BSP | 2" NPT | 2" NPT | 2" BSP |
| Weight wit | h oil kg - /b | 172 - 380 | 182 - 402 | 198 - 437 | 198 - 437 | 179 - <i>395</i> |

⁽²⁾ DN 50 ISO-KF connector can be supplied, see accessories

Dimensions mm (inch)



References

| E300.R HV | | E300.R | |
|-----------------------|--|---|---|
| WITH GAS BALLAST | WITHOUT GAS BALLAST | WITH GAS BALLAST | WITHOUT GAS BALLAST |
| 823767 + 624229 | 823767 | 823831 + 624229 | 823831 |
| 824061 + 624229 | 824061 | Contact us | Contact us |
| 823836 + 624229 | 823836 | 823834 + 624229 | 823834 |
| | WITH GAS BALLAST 823767 + 624229 824061 + 624229 823836 + | WITH GAS BALLAST 823767 + 823767 624229 824061 + 824061 624229 823836 + 823836 | WITH GAS BALLAST WITHOUT GAS BALLAST WITH GAS BALLAST 823767 |

Special versions

| | E300.R HV | | E300.R | |
|---|-----------------------|---------------------|-----------------------|--------------------|
| | WITH GAS BALLAST | WITHOUT GAS BALLAST | WITH GAS BALLAST | WITHOUT GAS BALLAS |
| CONDENSABLE VAPOUR PUMPING (small propeller) 3ph, 230/400V-50Hz | 824287 + 624229 | 824287 | 823838 + 624229 | 823838 |
| OXYGEN with Fomblin oil 3ph, 230/400V-50Hz | 823875 + 624229 | 823875 | 823874 + 624229 | 823874 |
| EVISA H₂O 3ph, 230/400V-50Hz | Contact us | Contact us | 823846 + 624229 | 823846 |

For booster direct mounting: contact us

Maintenance kits

| 3 000 hour usual maintenance with silicone o'ring for oil mist filter | 724079 |
|--|--------|
| 3 000 hour usual maintenance with viton o'ring for oil mist filter | 724080 |
| 12 000 hour preventive maintenance | 724053 |
| Gasket set | 624231 |
| 3 000 hour usual maintenance for OXYGEN version | 724090 |
| 12 000 hour preventive maintenance for OXYGEN version | 724088 |



3 000 hour usual maintenance

12 000 hour preventive maintenance





EVISA E300. R

Accessories and Options

| Oil Level Safety (OLS | 624245 | |
|---|---|--------|
| Timer box for oil level | 670810 | |
| NC bimetal temperatur | 624246 | |
| Oil Level Safety and PT | 624247 | |
| PT100 temperature ser | 624248 | |
| | Paper cartridge | 715350 |
| 2" BSP suction filter Type 201 | Polyester cartridge | 715351 |
| 1902 201 | Carbon cartridge | 715352 |
| Vacuum gauge fitted or | n filter | 617536 |
| 2" BSP paper/paper do | puble filtration 201PA + 201PA | 670615 |
| 2" BSP polyester/carbo | on double filtration 201PO + 201CH | 670618 |
| | Aluminium head / polycarbonate cylinder / without float | 724801 |
| | Aluminium head / polycarbonate cylinder / with float | 724802 |
| 1 | Stainless steel head/ Pyrex cylinder / without float | 724803 |
| Liquid trap 200 | Stainless steel head / Pyrex cylinder / with float | 724804 |
| 340 m³.h ⁻¹ - 2" BSP | Pyrex bottle 250 ml under trap assembly | 615441 |
| 2 637 | Pyrex bottle 500 ml under trap assembly | 615442 |
| | Pyrex bottle 1000 ml under trap assembly | 615443 |
| | Bracket for wall fixing | 619907 |
| Electro-pneumatic auto | 816002 | |
| Electrical automatic dra | ain with control board | 816003 |
| Adjusting valve fitted o | 713842 | |
| Vacuum hose (0,6 m) F | 618149 | |
| Vacuum hose (1 m) FF | 606099 | |
| Vacuum hose (1,5 m) F | 607592 | |
| Suction hose with non- | | 770154 |
| Exhaust double elbow | | 622788 |
| Base frame assembly h | eight 150 mm | 616595 |
| Elevated base frame | | 617612 |
| (H=525 mm) | For 2 pumps | 619545 |
| 341 341 | Without regulation contact 3-ph 400V | 770499 |
| Direct starter | Without regulation contact 3-ph 230V | 770500 |
| (wall mounting) | With regulation contact LG7 3-ph 400V | 710426 |
| | With regulation contact LG7 3-ph 230V | 710434 |
| Control board with FLE for warm up and degasi | XO solenoid valve 3-ph, 400 + N ing cycle | 770815 |
| Control board with FLE for degasing cycle | XO solenoid valve 3-ph, 400 + N | 770822 |
| Aluminium adapter M2 | 2" / DN50 KF | 117132 |
| Aluminium clamping co | ollar DN50 KF | 361640 |
| Centering ring stainless | s steel / VITON | 361643 |
| Stainless steel hose (0, | | 361648 |
| Stainless steel hose (1) | 361649 | |





suction filter type 201

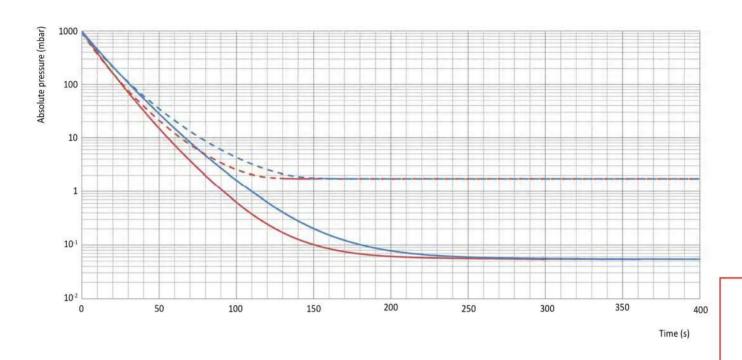


Liquid trap 200 with mechanical stop and optional bottle

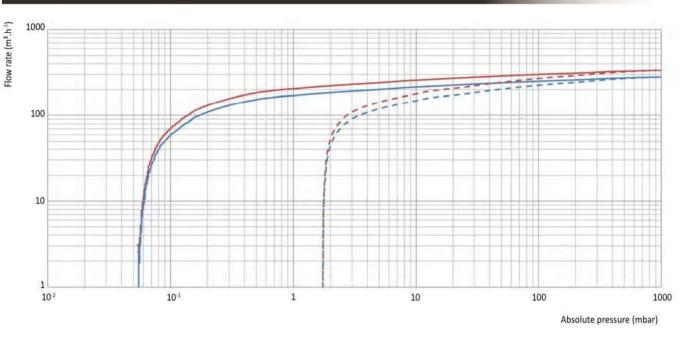


Elevated base frame for 2 pumps

Pumping speed on 1000 l vessel



Performance curves







EVISA E350.R



The lubricated rotary vane pumps EVISA are designed to be used in a wide range of industrial and healthcare applications.

They can run continuously from atmospheric pressure to ultimate vacuum.

They are silent and extremely robust.

- · Single stage vacuum pump
- Continuous operation from atmospheric pressure to end vacuum: 1.10⁻¹ mbar
- · High pumping speed even at low pressure
- · Integrated oil mist filter on the exhaust
- IE3 motor

Technical characteristics

| | | | 50 Hz | 60 Hz |
|--------------|--|---|---|---|
| | Nominal flow rate | m³.h·¹ - cfm | 360 - 211,9 | 432 - 254,3 |
| | PNEUROP pumpin | g speed ⁽¹⁾ m ³ .h ⁻¹ - cfm | 341 - 200,7 | 409 - 240,7 |
| | Pumping speed at | 1 mbar inlet pressure (1) m ³ .h ⁻¹ - cfm | 179 - 105,3 | 215 - <i>126,5</i> |
| | Without gas ballas | st End vacuum mbar - torr | ≤ 1.10 ⁻¹ - 8.10 ⁻² | ≤ 1.10 ⁻¹ - 8.10 ⁻² |
| E350.R HV | Fully opened gas ballast | End vacuum mbar - torr | ≤ 1 - 0,75 | ≤ 1 - 0,75 |
| | | Water vapor permitted maximum pressure mbar - torr | 12,5 - 9,9 | 13,5 - 10,1 |
| | | Water vapor capacity kg.h ⁻¹ | 2 | 2,6 |
| | Without gas ballast End vacuum mbar - torr | | ≤3-2,3 | ≤3-2,3 |
| 250.0 | Fully opened gas | End vacuum mbar - torr | ≤5-3,8 | ≤ 5 - 3,8 |
| 350.R | | Water vapor permitted maximum pressure mbar - torr | 8,7 - 6,5 | 9,4 - 7 |
| | Dallast | Water vapor capacity kg.h ⁻¹ | 1,4 | 1,8 |
| | 100 % synthetic oi | l | MV99S | MV99S |
| | Oil capacity - qt | | 14 - 14,8 | 14 - 14,8 |
| | Noise level dB(A) | | 72 | 76 |

⁽¹⁾ Measurements according to PNEUROP 6602 specifications - 20°C

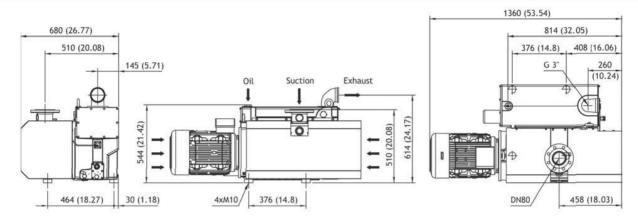
Versions

| GEO | OGRAPHIC ZONE | EUROPE | ASIA MIDDLE-EAST |
|-----------------------|----------------------------------|---------------|---------------------|
| | Number of phases | 3 | 3 |
| Electrical motor | Voltage V | 400 / 690 | 380 |
| | Period Hz | 50 | 60 |
| motor | Motor power | 7,5 kW | 9 kW |
| | Rotation speed min ⁻¹ | 1000 | 1200 |
| Inlet connection (2) | | DN80 / 3" BSP | DN80 / 3" BSP |
| Outlet connection (2) | | 3" BSP | 3" BSP |
| Weight wit | h oil kg - /b | 363 - 801 | 788 - 834 |

⁽²⁾ DN 80 ISO-K connector can be supplied, see accessories

^{(2) 460}V - 60 Hz 3-ph only

Dimensions mm (inch)



References

| | E350.R HV | | E3 | 50.R |
|--------------------------------------|-----------------------------------|----------------------------|-----------------------------------|---------------------|
| EUROPE 3ph, 400/690V-50Hz | WITH GAS BALLAST 823923 + 724214 | WITHOUT GAS BALLAST 823923 | WITH GAS BALLAST 823922 + 724214 | WITHOUT GAS BALLAST |
| ASIA / MIDDLE-EAST 3ph, 380V-60Hz | contact us | contact us | contact us | contact us |

EVISA H,O version: contact us

Maintenance kits

| 724184 |
|--------|
| 724200 |
| 624486 |
| |



3 000 hour usual maintenance

12 000 hour preventive maintenance





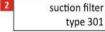
EVISA E350.R

Accessories and Options

| Oil Level Safety (OLS) v | with float | 624398 |
|---|--|------------|
| Additional filter for gas b | pallast | 617710 |
| Timer box for oil level sa | fety (base mounting) | 670810 |
| | safety - opening at 120°C - Max 24V | 624389 |
| Oil Level Safety and PT10 | | 624405 |
| PT100 temperature sense | or | 624388 |
| 100 May 100 - 200 May 100 May | Paper cartridge | 717369 |
| 3" BSP suction filter | Polyester cartridge | 717370 |
| Type 301 | Carbon cartridge | 717371 |
| Vacuum gauge fitted on f | filter | 617536 |
| Vacuum-tight suction filt | er Paper cartridge | 361627 |
| ST301 straight-through | Polyester cartridge | 620166 |
| Deflector for filters CT 30 | 01 and ST 301 | 215696 |
| Bracket for mural fixing f | for filters CT, ST & Liquid trap | 617512 |
| Flanges DN 80 for filters | | 617513 |
| - | Aluminium head/ polycarbonate cylinder / without float | 724809 |
| Liquid trap 300 | Aluminium head / polycarbonate cylinder / with float | 724810 |
| 696 m ³ .h ⁻¹ | Pyrex bottle 250 ml under trap assembly | 615441 |
| 3" BSP | Pyrex bottle 500 ml under trap assembly | 615442 |
| | Pyrex bottle 1000 ml under trap assembly | 615443 |
| Electro-pneumatic auton | natic drain with control board | 816002 |
| Electrical automatic drain | MAR 201 (F) 1883 (O | 816003 |
| Vacuum hose (0,6 m) DN | 80 | 618269 |
| Vacuum hose (1 m) DN80 | | 617833 |
| Vacuum hose (1,5 m) MM | M 3" BSP | 719925 |
| Vacuum hose (4 m) M 3" | BSP - DN80 | 618573 |
| Base frame assembly hei | ght 200 mm | 618251 |
| Elevated base frame (H=525 mm) | For 1 pump | 617613 |
| Direct starter | Without regulation contact 3-ph 400V | 770500 |
| (wall mounting) | With regulation contact LG7 3-ph 400V | 713746 |
| Star / Delta starter 400V | + N + E (without pressure valve) | 718389 |
| - Electrical unloadir | ng valve (230V-50Hz) | 617496 |
| - Pneumatic unload | ling valve (6 bar) | 618257 |
| Exhaust double elbow m | ounting | 623534 |
| Double acting electric bu with electric actuator 5/2 | tterfly cast iron valve DN80 2 NF 230V-50Hz | 617522 |
| Double acting pneumatic with electric actuator 5/2 | butterfly cast iron valve DN80 2 NF 230V-50Hz | 617523 |
| Aluminium adapter M3" | / DN80 ISO K | 117130 |
| Aluminium adapter DN8 | O ISO K | 117129 |
| Aluminium clamping coll | ar DN63/250 ISO K | 4 X 361653 |
| Centering ring Aluminium | n / PERBUNAN | 361650 |
| Stainless steel hose (0,5 | m) DN80 ISO K | 361651 |
| Stainless steel hose (1 m |) DN80 ISO K | 361652 |







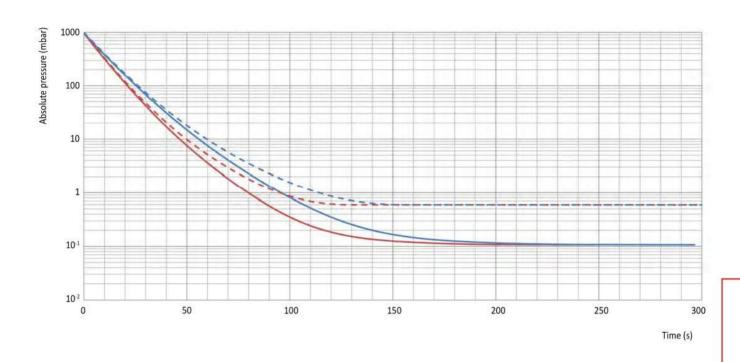


Liquid trap 300 with mechanical stop and optional bottle

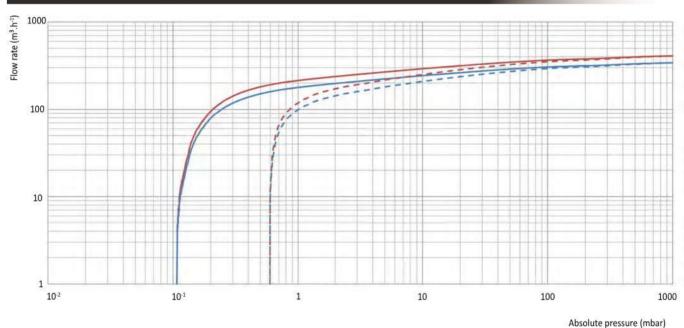


for 1 pump

Pumping speed on 1000 l vessel



Performance curves



60 Hz - without gas ballast 50 Hz - without gas ballast

60 Hz - with opened gas ballast = 50 Hz - with opened gas ballast



EVISA E400.R



The lubricated rotary vane pumps EVISA are designed to be used in a wide range of industrial and healthcare applications.

They can run continuously from atmospheric pressure to ultimate vacuum.

They are silent and extremely robust.

- · Single stage vacuum pump
- Continuous operation from atmospheric pressure to end vacuum: 1.10⁻¹ mbar
- High pumping speed even at low pressure
- · Integrated oil mist filter on the exhaust
- IE3 motor

Technical characteristics

| | | | 50 Hz | 60 Hz |
|--------|--|--|---|---|
| | Nominal flow rate | m³.h-¹- cfm | 426 - 250,7 | 511 - 300,8 |
| | PNEUROP pumpin | g speed ⁽¹⁾ m ³ .h ⁻¹ - cfm | 410 - 241,3 | 492 - 289,6 |
| | Pumping speed at | 1 mbar inlet pressure (1) m³.h-1 - cfm | 215 - 126,5 | 258 - 151,8 |
| | Without gas ballas | st End vacuum mbar - torr | ≤ 1.10 ⁻¹ - 8.10 ⁻² | ≤ 1.10 ⁻¹ - 8.10 ⁻² |
| 400.R | TO CORNEL STORY OF THE PROPERTY AT SHOOT CO. | End vacuum mbar - torr | ≤1-0,75 | ≤ 1 - 0,75 |
| HV | Fully opened gas ballast | Water vapor permitted maximum pressure mbar - torr | 11,9 - 8,9 | 12,9 - 9,6 |
| | Dallast | Water vapor capacity kg.h ⁻¹ | 2,3 | 3 |
| | Without gas ballas | st End vacuum mbar - torr | ≤3-2,3 | ≤3-2,3 |
| 400 B | 100 0 | End vacuum mbar - torr | ≤5-3,8 | ≤5-3,8 |
| E400.R | Fully opened gas ballast | Water vapor permitted maximum pressure mbar - torr | 8,3 - 6,2 | 9 - 6,7 |
| | ballast | Water vapor capacity kg.h ⁻¹ | 1.6 | 2 |
| | 100 % synthetic oi | I | MV99S | MV99S |
| | Oil capacity I - qt | | 14 - 14,8 | 14 - 14,8 |
| | Noise level dB(A) | | 72 | 76 |

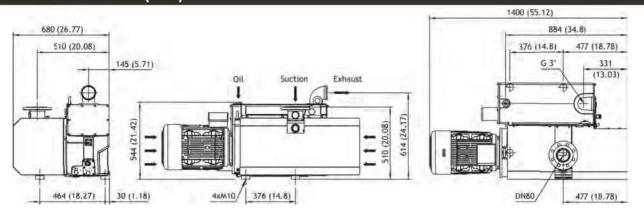
⁽¹⁾ Measurements according to PNEUROP 6602 specifications - 20°C

Versions

| GE | OGRAPHIC ZONE | EUROPE | ASIA MIDDLE-EAST |
|---------------------|----------------------|---------------|---------------------|
| | Number of phases | 3 | 3 |
| | Voltage V | 400 / 690 | 380 |
| Electrical motor | Period Hz | 50 | 60 |
| motor | Motor power | 9 kW | 10,8 kW |
| | Rotation speed min-1 | 1000 | 1200 |
| Inlet conne | ection (2) | DN80 / 3" BSP | DN80 / 3" BSP |
| Outlet con | nection (2) | 3" BSP | 3" BSP |
| Weight wit | h oil kg - /b | 408 - 900 | 433 - 955 |
| | | | |

⁽²⁾ DN 80 ISO-K connector can be supplied, see accessories

Dimensions mm (inch)



References

| | E400.R HV | | E4 | 00.R |
|--------------------------------------|-----------------------|---------------------|-----------------------|---------------------|
| | WITH GAS BALLAST | WITHOUT GAS BALLAST | WITH GAS BALLAST | WITHOUT GAS BALLAST |
| EUROPE 3ph, 400/690V-50Hz | 823919 + 724214 | 823919 | 823918 + 724214 | 823918 |
| ASIA / MIDDLE-EAST 3ph, 380V-60Hz | Contact us | Contact us | Contact us | Contact us |

EVISA H₂O version : contact us

Maintenance kits

| 724184 |
|--------|
| 724195 |
| 624479 |
| |



3 000 hour usual maintenance

12 000 hour preventive maintenance





EVISA E400.R

Accessories and Options

| Oil Level Safety (OLS) wi | th float | 624398 |
|---|--|------------|
| Additional filter for gas bal | 617710 | |
| Timer box for oil level safe | 670810 | |
| NC bimetal temperature sa | NC bimetal temperature safety - opening at 120°C - Max 24V | |
| Oil Level Safety and PT100 | temperature sensor | 624405 |
| PT100 temperature sensor | | 624388 |
| all page (1) | Paper cartridge | 717369 |
| 2 3" BSP suction filter Type 301 | Polyester cartridge | 717370 |
| .,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | Carbon cartridge | 717371 |
| Vacuum gauge fitted on filter | | 617536 |
| Vacuum-tight suction filter | Paper cartridge | 361627 |
| ST301 straight-through | Polyester cartridge | 620166 |
| Deflector for filters CT 301 | and ST 301 | 215696 |
| Bracket for mural fixing for | r filters CT, ST & Liquid trap | 617512 |
| Flanges DN 80 for filters CT | r, ST & Liquid trap | 617513 |
| | Aluminium head/ polycarbonate cylinder / without float | 724809 |
| Liquid trap 300 | Aluminium head / polycarbonate cylinder / with float | 724810 |
| 696 m³.h ⁻¹ | Pyrex bottle 250 ml under trap assembly | 615441 |
| 3" BSP | Pyrex bottle 500 ml under trap assembly | 615442 |
| | Pyrex bottle 1000 ml under trap assembly | 615443 |
| Electro-pneumatic automa | tic drain with control board | 816002 |
| Electrical automatic drain | with control board | 816003 |
| Vacuum hose (0,6 m) DN80 | | 618269 |
| Vacuum hose (1 m) DN80 | | 617833 |
| Vacuum hose (1,5 m) MM | 3" BSP | 719925 |
| Vacuum hose (4 m) M 3" B | SP - DN80 | 618573 |
| Base frame assembly heigh | nt 200 mm | 618251 |
| 4 Elevated base frame (H=525 mm) | For 1 pump | 617613 |
| Direct starter W | fithout regulation contact 3-ph 400V | 770500 |
| (wall mounting) W | ith regulation contact LG7 3-ph 400V | 713746 |
| Star / Delta starter 400V + | N + E (without pressure valve) | 718389 |
| - Electrical unloading | valve (230V-50Hz) | 617496 |
| - Pneumatic unloadin | g valve (6 bar) | 618257 |
| Exhaust double elbow mou | unting | 623534 |
| Double acting electric butt with electric actuator 5/2 I | [10] : 2 (1) : [10] : | 617522 |
| Double acting pneumatic b with electric actuator 5/2 I | outterfly cast iron valve DN80 NF 230V-50Hz | 617523 |
| Aluminium adapter M3" / | DN80 ISO K | 117130 |
| Aluminium adapter DN80 I | SO K | 117129 |
| Aluminium clamping collar | DN63/250 ISO K | 4 X 361653 |
| Centering ring Aluminium | / PERBUNAN | 361650 |
| Stainless steel hose (0,5 m | DN80 ISO K | 361651 |
| Stainless steel hose (1 m) [| DN80 ISO K | 361652 |
| | | |





type 301

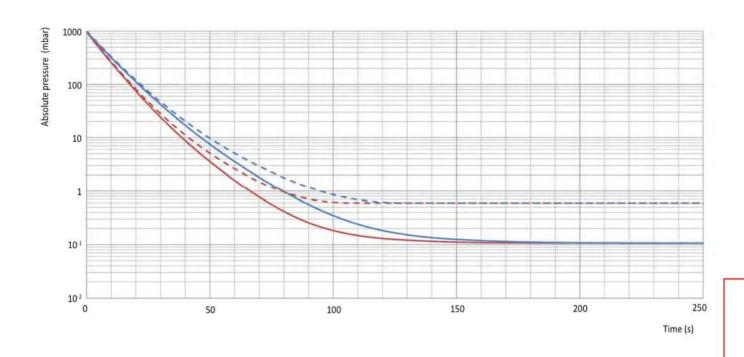


Liquid trap 300 with mechanical stop and optional bottle



Elevated base frame for 1 pump

Pumping speed on 1000 l vessel



Performance curves











The lubricated rotary vane pumps EVISA are designed to be used in a wide range of industrial and healthcare applications.

They can run continuously from atmospheric pressure to ultimate vacuum.

They are silent and extremely robust.

- Single stage vacuum pump
- Continuous operation from atmospheric pressure to end vacuum: 1.10⁻¹ mbar
- High pumping speed even at low pressure
- · Integrated oil mist filter on the exhaust
- IE3 motor

Technical characteristics

| | | | 50 Hz | 60 Hz |
|--------|-----------------------------|---|---|---|
| | Nominal flow rate | m³.h·¹- <i>cfm</i> | 513 - <i>302</i> | 616 - 362,6 |
| | PNEUROP pumpin | g speed ⁽¹⁾ m ³ .h ⁻¹ - <i>cfm</i> | 496 - 291,6 | 595 - 350,2 |
| | Pumping speed at | 1 mbar inlet pressure (1) m³.h·1- cfm | 266 - 156,6 | 320 - 188,3 |
| | Without gas ballas | t End vacuum mbar - torr | ≤ 1.10 ⁻¹ - 8.10 ⁻² | ≤ 1.10 ⁻¹ - 8.10 ⁻² |
| 500.R | 95 5 | End vacuum mbar - torr | ≤1-0,75 | ≤ 1 - 0,75 |
| HV | Fully opened gas ballast | Water vapor permitted maximum pressure mbar - torr | 11,3 - 8,4 | 12,2 - 9,1 |
| | Dallast | Water vapor capacity kg.h ⁻¹ | 2,7 | 3,5 |
| | Without gas ballas | t End vacuum mbar - torr | ≤3-2,3 | ≤3-2,3 |
| E00 B | -15 Jan 748 | End vacuum mbar - torr | ≤5-3,8 | ≤ 5 - 3,8 |
| E500.R | Fully opened gas ballast | Water vapor permitted maximum pressure mbar - torr | 7,9 - 5,9 | 8,5 - 6,4 |
| | Dallast | Water vapor capacity kg.h ⁻¹ | 1,9 | 2,4 |
| | 100 % synthetic oi | | MV99S | MV99S |
| | Oil capacity I - qt | | 14 - 14,8 | 14 - 14,8 |
| | Noise level dB(A) | | 73 | 77 |

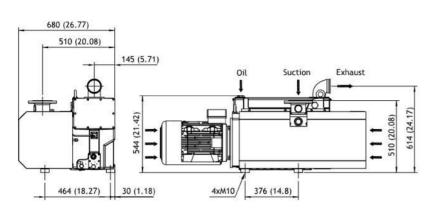
⁽¹⁾ Measurements according to PNEUROP 6602 specifications - 20°C

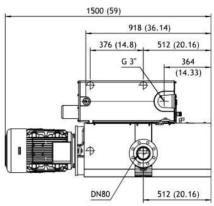
Versions

| GEO | OGRAPHIC ZONE | EUROPE | ASIA MIDDLE-EAST |
|---------------------|----------------------------------|---------------|---------------------|
| | Number of phases | 3 | 3 |
| | Voltage V | 400 / 690 | 380 |
| Electrical motor | Period Hz | 50 | 60 |
| motor | Motor power | 11 kW | 13,2 kW |
| | Rotation speed min ⁻¹ | 1000 | 1200 |
| Inlet conne | ection (2) | DN80 / 3" BSP | DN80 / 3" BSP |
| Outlet con | nection (2) | 3" BSP | 3" BSP |
| Weight wit | h oil kg - /b | 462 - 1019 | 497 - 1096 |

⁽²⁾ DN 80 ISO-K connector can be supplied, see accessories

Dimensions mm (inch)





References

| | E500.R HV | | E5 | 00.R |
|--------------------------------------|-----------------------|---------------------|-----------------------|--------------------|
| | WITH GAS BALLAST | WITHOUT GAS BALLAST | WITH GAS BALLAST | WITHOUT GAS BALLAS |
| EUROPE 3ph, 400/690V-50Hz | 823913 + 723973 | 823913 | 823912 + 723973 | 823912 |
| ASIA / MIDDLE-EAST 3ph, 380V-60Hz | Contact us | Contact us | Contact us | Contact us |

EVISA H₂O version : contact us

Maintenance kits

| 724191 |
|--------|
| 624479 |
| |



3 000 hour usual maintenance

12 000 hour preventive maintenance





EVISA E500.R

Accessories and Options

| Accessories a | na options | |
|--|--|------------|
| Oil Level Safety (OLS) wi | th float | 624398 |
| Additional filter for gas ba | 617710 | |
| Timer box for oil level safe | 670810 | |
| NC bimetal temperature sa | afety - opening at 120°C - Max 24V | 624389 |
| Oil Level Safety and PT100 | 624405 | |
| PT100 temperature sensor | 624388 | |
| | Paper cartridge | 717369 |
| 3" BSP suction filter Type 301 | Polyester cartridge | 717370 |
| 1990 301 | Carbon cartridge | 717371 |
| Vacuum gauge fitted on fil | 617536 | |
| Vacuum-tight suction filter | Paper cartridge | 361627 |
| ST301 straight-through | Polyester cartridge | 620166 |
| Deflector for filters CT 301 | and ST 301 | 215696 |
| Bracket for mural fixing fo | r filters CT, ST & Liquid trap | 617512 |
| Flanges DN 80 for filters C | T, ST & Liquid trap | 617513 |
| | Aluminium head/ polycarbonate cylinder / without float | 724809 |
| Liquid trap 300 | Aluminium head / polycarbonate cylinder / with float | 724810 |
| 696 m³.h ⁻¹ | Pyrex bottle 250 ml under trap assembly | 615441 |
| 3" BSP | Pyrex bottle 500 ml under trap assembly | 615442 |
| | 615443 | |
| Electro-pneumatic automa | 816002 | |
| Electrical automatic drain | 816003 | |
| Vacuum hose (0,6 m) DN80 | 618269 | |
| Vacuum hose (1 m) DN80 | 617833 | |
| Vacuum hose (1,5 m) MM | 719925 | |
| Vacuum hose (4 m) M 3" B | SP - DN80 | 618573 |
| Base frame assembly heigh | ht 200 mm | 624328 |
| Elevated base frame (H=525 mm) | For 1 pump | 624329 |
| Direct starter W | /ithout regulation contact 3-ph 400V | 719238 |
| (wall mounting) W | /ith regulation contact LG7 3-ph 400V | 719239 |
| Star / Delta starter 400V + | N + E (without pressure valve) | 718391 |
| - Electrical unloading | valve (230V-50Hz) | 617496 |
| - Pneumatic unloadin | ng valve (6 bar) | 618257 |
| Exhaust double elbow mo | unting | 623534 |
| Double acting electric butt with electric actuator 5/2 | 617522 | |
| Double acting pneumatic be with electric actuator 5/2 | 617523 | |
| Aluminium adapter M3" / | DN80 ISO K | 117130 |
| Aluminium adapter DN80 | ISO K | 117129 |
| Aluminium clamping colla | r DN63/250 ISO K | 4 X 361653 |
| Centering ring Aluminium | / PERBUNAN | 361650 |
| Stainless steel hose (0,5 m |) DN80 ISO K | 361651 |
| Stainless steel hose (1 m) [| 361652 | |





suction filter type 301

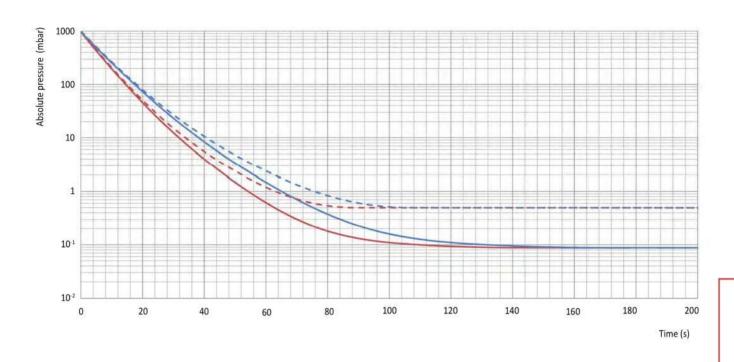


Liquid trap 300 with mechanical stop and optional bottle

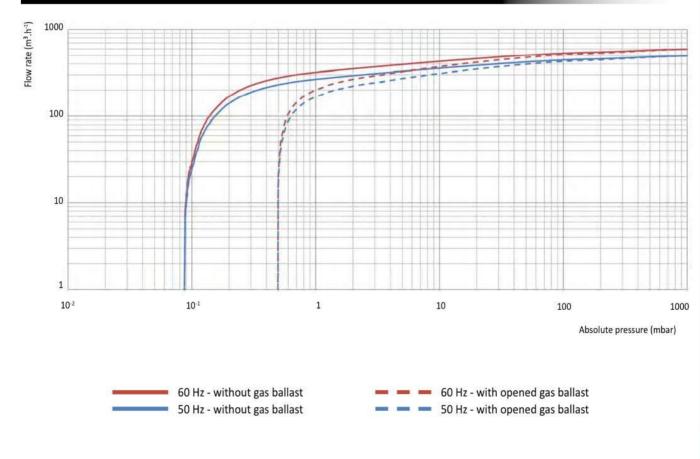


Elevated base frame for 1 pump

Pumping speed on 1000 l vessel



Performance curves





EVISA E600.R



The lubricated rotary vane pumps EVISA are designed to be used in a wide range of industrial and healthcare applications.

They can run continuously from atmospheric pressure to ultimate vacuum.

They are silent and extremely robust.

- · Single stage vacuum pump
- Continuous operation from atmospheric pressure to end vacuum: 1.10⁻¹ mbar
- · High pumping speed even at low pressure
- · Integrated oil mist filter on the exhaust
- IE3 motor

Technical characteristics

| | | | 50 Hz | 60 Hz |
|--------|-----------------------------|--|---|---|
| | Nominal flow rate | m³.h-¹ - <i>cfm</i> | 634.9 - 373,7 | 769,2 - 452,8 |
| | PNEUROP pumpin | g speed (1) m ³ .h ⁻¹ - cfm | 581 - 342 | 696 - 409,7 |
| | Pumping speed at | 1 mbar inlet pressure ⁽¹⁾ m ³ .h ⁻¹ - cfm | 308 - 181,3 | 370 - 217,8 |
| | Without gas ballas | t End vacuum mbar - torr | ≤ 1.10 ⁻¹ - 8.10 ⁻² | ≤ 1.10 ⁻¹ - 8.10 ⁻² |
| HV | Fully opened gas ballast | End vacuum mbar - torr | ≤1-0,75 | ≤ 1 - 0,75 |
| | | Water vapor permitted maximum pressure mbar - torr | 18,8 - 14,1 | 22 - 16,5 |
| | | Water vapor capacity kg.h ⁻¹ | 5,6 | 8,1 |
| | Without gas ballas | t End vacuum mbar - torr | ≤ 3- 2,3 | ≤ 3- 2,3 |
| E600.R | | End vacuum mbar - torr | ≤5-3,8 | ≤ 5 - <i>3,8</i> |
| LUUU.K | Fully opened gas ballast | Water vapor permitted maximum pressure mbar - torr | 13,1 - 9,8 | 15,4 - <i>11,5</i> |
| | Dallast | Water vapor capacity kg.h ⁻¹ | 3,9 | 5,6 |
| | 100 % synthetic oi | | MV99S | MV99S |
| | Oil capacity - qt | | 14 - 14,8 | 14 - 14,8 |
| | Noise level dB(A) | | 74 | 78 |

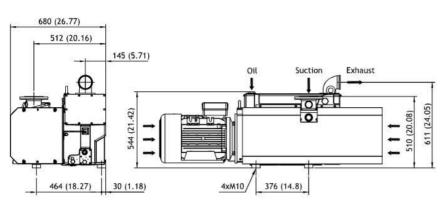
⁽¹⁾ Measurements according to PNEUROP 6602 specifications - 20°C

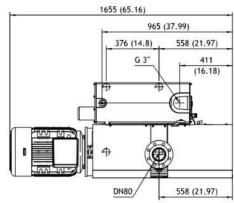
Versions

| GEO | OGRAPHIC ZONE | EUROPE | ASIA MIDDLE-EAST |
|-------------------------|----------------------------------|---------------|---------------------|
| | Number of phases | 3 | 3 |
| 107 17 127 | Voltage V | 400 / 690 | 380 |
| Electrical motor | Period Hz | 50 | 60 |
| motor | Motor power | 13 kW | 15,6 kW |
| | Rotation speed min ⁻¹ | 1000 | 1200 |
| Inlet connection (2) | | DN80 / 3" BSP | DN80 / 3" BSP |
| Outlet connection (2) | | 3" BSP | 3" BSP |
| Weight with oil kg - lb | | 531 - 1171 | 531 - 1171 |

⁽²⁾ DN 80 ISO-K connector can be supplied, see accessories

Dimensions mm (inch)





References

| | E600 | D.R HV | E6 | 00.R |
|--------------------------------------|-----------------------|---------------------|-----------------------|---------------------|
| | WITH GAS BALLAST | WITHOUT GAS BALLAST | WITH GAS BALLAST | WITHOUT GAS BALLAST |
| EUROPE 3ph, 400/690V-50Hz | 823880 + 723956 | 823880 | 823885 + 723956 | 823885 |
| ASIA / MIDDLE-EAST 3ph, 380V-60Hz | Contact us | Contact us | Contact us | Contact us |

EVISA H,O version : contact us

Maintenance kits

| 3 000 hour usual maintenance with viton o'rings for oil mist filters | 724139 |
|--|--------|
| 12 000 hour preventive maintenance HV pump | 624394 |
| 12 000 hour preventive maintenance | 624393 |
| Gasket set | 624395 |



3 000 hour usual maintenance

12 000 hour preventive maintenance





EVISA E600. R

Accessories and Options

| Oil Level Safety (OLS) wi | at | 624398 | | |
|--|--|---|------------|--|
| Additional filter for gas ba | llast | | 617710 | |
| Timer box for oil level safe | ty (ba | se mounting) | 670810 | |
| NC bimetal temperature s | afety - | opening at 120°C - Max 24V | 624389 | |
| Oil Level Safety and PT100 | temp | erature sensor | 624405 | |
| PT100 temperature sensor | | | 624388 | |
| | | Paper cartridge | 717369 | |
| 2 3" BSP / DN80 suction fi Type 301 | iter | Polyester cartridge | 717370 | |
| .,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | | Carbon cartridge | 717371 | |
| Vacuum gauge fitted on fil | ter | | 617536 | |
| Vacuum-tight suction filte | Pap | per cartridge | 361627 | |
| ST301 straight-through | Pol | yester cartridge | 620166 | |
| Deflector for filters CT 301 | and S | T 301 | 215696 | |
| Bracket for mural fixing fo | r filter | rs CT, ST & Liquid trap | 617512 | |
| Flanges DN 80 for filters C | T, ST 8 | Liquid trap | 617513 | |
| | Alum | ninium head/ polycarbonate cylinder / without float | 724809 | |
| Liquid trap 300 | Alum | ninium head / polycarbonate cylinder / with float | 720810 | |
| 696 m³.h ⁻¹ | Pyrex | k bottle 250 ml under trap assembly | 615441 | |
| 3" BSP | Pyrex | k bottle 500 ml under trap assembly | 615442 | |
| | Pyrex bottle 1000 ml under trap assembly | | | |
| Electro-pneumatic automa | 816002 | | | |
| Electrical automatic drain | 816003 | | | |
| Vacuum hose (0,6 m) DN80 | | | 618269 | |
| Vacuum hose (1 m) DN80 | 617833 | | | |
| Vacuum hose (1,5 m) MM | 719925 | | | |
| Vacuum hose (4 m) M 3" E | SP - D | N80 | 618573 | |
| Base frame assembly heig | ht 200 | mm | 618251 | |
| 4 Elevated base frame (H=525 mm) | | For 1 pump | 624329 | |
| Direct starter V | /ithou | t regulation contact 3-ph 400V | 719237 | |
| (wall mounting) | /ith re | gulation contact LG7 3-ph 400V | 719239 | |
| Star / Delta starter 400V + | N + E | (without pressure valve) | 718392 | |
| - Electrical unloading | valve | (230V-50Hz) | 617496 | |
| - Pneumatic unloadir | ng valv | re (6 bar) | 618257 | |
| Exhaust double elbow mo | unting | | 623534 | |
| Double acting electric butt with electric actuator 5/2 | 617522 | | | |
| Double acting pneumatic l with electric actuator 5/2 | | 7) | 617523 | |
| Aluminium adapter M3" / | 117130 | | | |
| Aluminium adapter DN80 | ISO K | | 117129 | |
| Aluminium clamping colla | r DN63 | 3/250 ISO K | 4 X 361653 | |
| Centering ring Aluminium | / PERI | BUNAN | 361650 | |
| Stainless steel hose (0,5 m |) DN8 | 0 ISO K | 361651 | |
| Stainless steel hose (1 m) | ON80 | ISO K | 361652 | |
| | | | | |





suction filter type 301

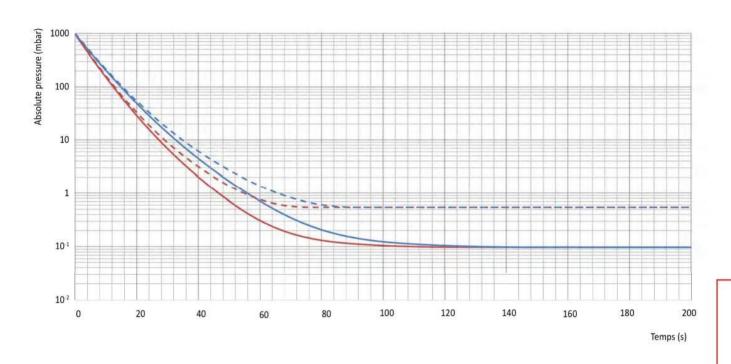


Liquid trap 300 with mechanical stop and optional bottle

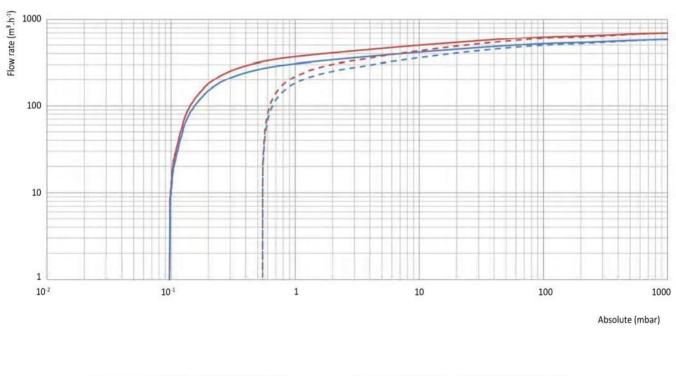


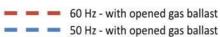
Elevated base frame for 1 pump

Pumping speed on 1000 l vessel



Performance curves







EVISA ATEX

| Use | ATEX | Category | Level of protection | If ATEX present |
|-----------------------|------|-----------------------------------|---------------------|----------------------------|
| Gas-prone | | M1 Maximum mine gas content | Very high | Powered |
| mines | | M2 Outside a certain value | High | Powered Powered |
| | | 1G | Very high | |
| | | 2G | High | |
| Surface industries | - | 3G | Normal | Powered down Powered down |
| | 11 | 1D | Very high | |
| | | 2D | High | |
| | | 3D | Normal | |

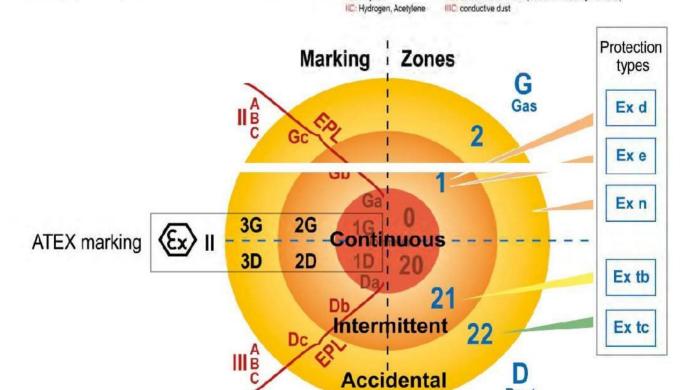
| | Zones | | | | | |
|----------------------------------|-----------------|---------------------------------|---------------------|-----------------|----------|--|
| Use | Equipment group | EPL | Level of protection | If ATEX present | 60079-10 | |
| Gas-prone | | Maximum (nine gas conlen) | Very high | Powered up | | |
| mines | | Mb Ouside a certain value | High | Powered down | | |
| Explosive | | Ga | Very high | | 0 | |
| gas | II B | Gb | High | | 1 | |
| atmospheres | 1 | Bo | Reinforced | Powered | 2 | |
| Explosive dust atmospheres | 1 A | Da | Very high | up | 20 IP6X | |
| | III B | Dh- | High | | 21 IP6X | |
| | 1 | De | Reinforced | | 22 IP5X | |

IIIA: combustible particles in suspension

IIIB; non-conductive dust (electrical resistivity >103Ω.m)

Dust

EPL: Equipment protection level



): Methane

IIA: Propane

IIB: Ethylene

The zoning and field of application of equipment (its protection type) is determined by the site manager where the equipment is installed.

| Temperature class | T1 | T2 | Т3 | T4 | T5 | T6 |
|--|---------|---------|---------|---------|---------|--------|
| Ignition temperature | > 450°C | > 300°C | > 200°C | > 135°C | > 100°C | > 85°C |
| Max. permissible surface temperature for the equipment | 450°C | 300°C | 200°C | 135°C | 100°C | 85°C |

Selection tool EVISA ATEX

High performance ATEX oil-flooded vacuum pumps



Gas & dust certified electrical motor

PT100 temperature sensor as standard equipment Optional oil level sensor Fixation on reinforced metallic flange





Oil mist filters designed for ATEX areas

| 50 Hz | Evisa 65.R HV Atex | Evisa 100.R HV Atex | Evisa 200.R HV Atex | Evisa 300.R HV Atex |
|--|---|---|---|---|
| Nominal air flow rate m³.h-¹- cfm | 68 - 40 | 100 - 58,8 | 200 - 117,7 | 300 - 176,5 |
| End vacuum mbar - torr - Gast ballast closed | ≤ 6.10 ⁻² - 4,5.10 ⁻² |
| End vacuum mbar - torr - Gast ballast opened | ≤ 5.10 ⁻¹ - 3,8.10 ⁻¹ | ≤ 5.10 ⁻¹ - 3,8.10 ⁻¹ | ≤1-0,75 | ≤ 2 - 1,5 |
| Motor power | 1,5 kW | 2,2 kW | 4 kW | 5.5 kW |

EVISA E65.R ATEX



II 2/2 D c,k,b IIIC T135°C Db/Db



EVISA ATEX lubricated vane pumps are designed for a wide range of applications in potentially explosive atmospheres. Depending on the model, they can be installed in gas or dust zone.

They can run continuously from atmospheric pressure to ultimate vacuum.

They are silent and extremely robust.

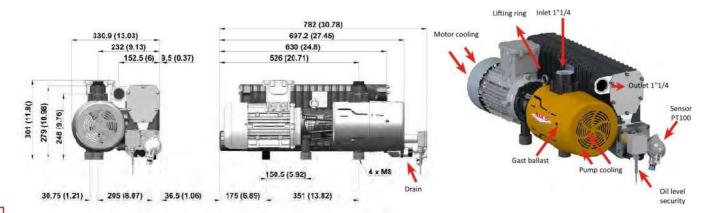
- Single stage vacuum pump with an end vacuum of 6.10⁻² mbar
- Compactness and noise level optimized for an easy integration in machines
- High water vapor pumping capacity with finely adjustable gas ballast
- · Integrated oil mist filter on the exhaust
- Standard temperature safety control by intrinsically safe PT100

Technical characteristics

| | | | 50 Hz |
|-------|-----------------------------------|---|---|
| | Nominal flow rate m | 68 - 40 | |
| | PNEUROP pumping | speed (1) m ³ .h ⁻¹ - <i>cfm</i> | 65 - <i>38,2</i> |
| | Pumping speed at 1 | mbar inlet pressure (1) m ³ .h ⁻¹ - cfm | 40 - 23,5 |
| | Closed gas ballast | End vacuum mbar - torr | ≤ 6.10 ⁻² - 4,5.10 ⁻² |
| | 3023 AUR DEN 6EA 60 | End vacuum mbar - torr | ≤ 5.10 ⁻¹ - 3,8.10 ⁻¹ |
| | Opened gas ballast 3 rotations | Water vapor permitted maximum pressure mbar - torr | 50 - 37,5 |
| | 3 lotations | Water vapor capacity kg.h ⁻¹ | 2 |
| E65.R | Fully opened gas | End vacuum mbar - torr | ≤3-2,3 |
| | | Water vapor permitted maximum pressure mbar - torr | 80 - 60 |
| TEX | ballast | Water vapor capacity kg.h ⁻¹ | 3 |
| ΗV | 100 % synthetic oil | | MV99S |
| | Oil capacity I - qt | | 3 - 3,2 |
| | Noise level dB(A) | | 67 |
| | | Voltage | 3ph - 230 / 400 V 50 Hz |
| | Electrical motor | Motor power | 1,50 kW |
| | | Rotation speed min ⁻¹ | 1500 |
| | Inlet connection | 1"1/4 BSP | |
| | Outlet connection | | 1"1/4 BSP |
| | Weight with oil kg - | 63,4 - 139,8 | |

⁽¹⁾ Measurements according to PNEUROP 6602 specifications - 20°C

Dimensions mm (inch)



References

| E65.R ATEX HV | WITH GAS BALLAST |
|---|------------------|
| DUST ZONE II2D c,k,b IIIC T135°C Db/Db | 824384 |
| GAS ZONE II2/2G c,k,b IIB T4 Gb/Gb | 824388 |
| DUST AND GAS ZONE II2/2G c,k,b IIB T4 Gb/Gb - II2D c,k,b IIIC T135°C Db/Db | 824392 |

Accessories and options

| Oil level security | | 333172 |
|---|---------------------------|--------|
| | Paper cartridge 126PA | 625470 |
| Suction filter Zone ATEX ZONE IIGD c IIIC T4 X | Carbon cartridge 126CH | 625471 |
| | Polyester cartridge 126PO | 619884 |
| Stainless steel inlet or outlet hose - 0,5 m KF | | 619886 |
| Elevated base frame H = 150 mm | | 625209 |
| Flame arrester DN50 | | 625417 |
| PT100 intrinsically safe power supply (assembly out of atex zone) - Output 0-10V | | 362640 |

Maintenance kits

3 000 hours usual maintenance 724608



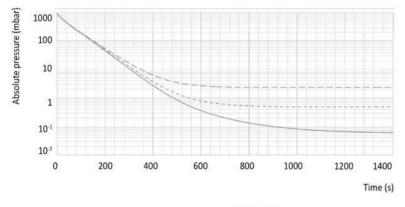
3 000 hours usual maintenance

12 000 hours preventive maintenance 724609

12 000 hours preventive maintenance



Pumping speed on 1000

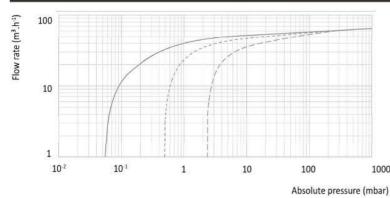


50 Hz - Closed gas ballast

50 Hz - Opened gas ballast 3 rotations

50 Hz - Fully opened gas ballast

Performance curve



50 Hz - Closed gas ballast

50 Hz - Opened gas ballast 3 rotations

50 Hz - Fully opened gas ballast



II 2/2 G c,k,b IIB T4 Gb/Gb EVISA E100. R ATEX





II 2/2 D c,k,b IIIC T135°C Db/Db



EVISA ATEX lubricated vane pumps are designed for a wide range of applications in potentially explosive atmospheres. Depending on the model, they can be installed in gas or dust zone.

They can run continuously from atmospheric pressure to ultimate vacuum.

They are silent and extremely robust.

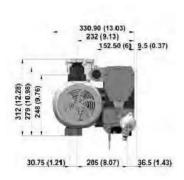
- Single stage vacuum pump with an end vacuum of 6.10⁻² mbar
- Compactness and noise level optimized for an easy integration in machines
- High water vapor pumping capacity with finely adjustable gas ballast
- · Integrated oil mist filter on the exhaust
- Standard temperature safety control by intrinsically safe PT100

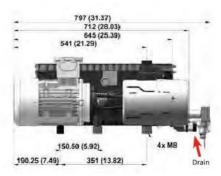
Technical characteristics

| | | | | 50 Hz |
|------|---|--|----------------------------------|---|
| | Nominal flow rate m ³ .h ⁻¹ - cfm | | | 100 - 58,8 |
| | PNEUROP pumping | peed ⁽¹⁾ m ³ .h ⁻¹ - <i>cfm</i> | | 96 - 56,5 |
| | Pumping speed at 1 | mbar inlet pressure (1) m ³ .h ⁻¹ - cfm | | 52 - <i>30,6</i> |
| | Closed gas ballast | End vacuum mbar - torr | | ≤ 6.10 ⁻² - 4,5.10 ⁻² |
| | | End vacuum mbar - torr | | ≤ 5.10 ⁻¹ - 3,8.10 ⁻¹ |
| | Opened gas ballast 3 rotations Water vapor permitted maximum pressure mbar - torr | | 59 - 44,2 | |
| | 3 Totations | Water vapor capacity kg.h ⁻¹ | | 3,4 |
| | Fully opened gas ballast | End vacuum mbar - torr | | ≤ 2 - 1,5 |
| 00.R | | Water vapor permitted maximum pressure mbar - torr | | 95 - 71,2 |
| TEX | Dallast | Water vapor capacity kg.h ⁻¹ | | 5,5 |
| ١V | 100 % synthetic oil | | MV99S | |
| 4.00 | Oil capacity I - qt | | 3 - 3,2 | |
| | Noise level dB(A) | | 67 | |
| | | Voltage | Voltage | |
| | Electrical motor | Motor power | | 2,20 kW |
| | | Rotation sp | Rotation speed min ⁻¹ | |
| | Inlet connection | | 1"1/4 BSP | |
| | Outlet connection | | 1"1/4 BSP | |
| | Weight with oil kg - | b | | 67,2 - 148,2 |

⁽¹⁾ Measurements according to PNEUROP 6602 specifications - 20°C

Dimensions mm (inch)







References

| E100.R ATEX HV | WITH GAS BALLAST |
|--|------------------|
| DUST ZONE II2D c,k,b IIIC T135°C Db/Db | 824385 |
| GAS ZONE II2/2G c,k,b IIB T4 Gb/Gb | 824389 |
| DUST AND GAS ZONE 112/2G c.k.b IIB T4 Gb/GB - 112D c.k.b IIIC T135°C Db/Db | 824393 |

Accessories and options

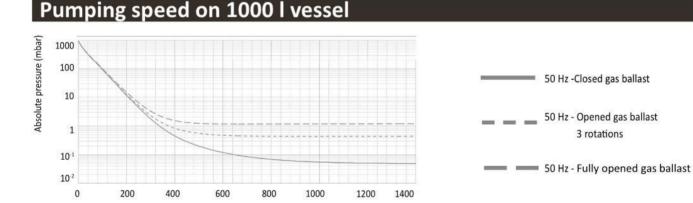
| Oil level security | | 333172 |
|---|---------------------------|------------------|
| Suration files. | Paper cartridge 126PA | 625470 625471 |
| Suction filter Zone ATEX ZONE IIGD c IIIC T4 X | Carbon cartridge 126CH | |
| | Polyester cartridge 126PO | 619884 |
| Stainless steel inlet or outlet hose - | 0,5 m KF | 619886 |
| Elevated base frame H = 150 mm | | 625209 |
| Flame arrester DN50 | Flame arrester DN50 | |
| PT100 intrinsically safe power supp (assembly out of atex zone) - Output | | 362640 |

Maintenance kits

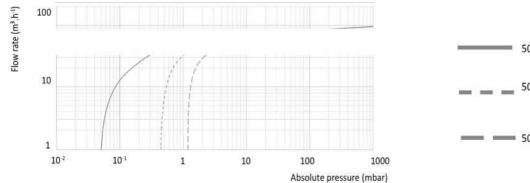
3 000 hours usual maintenance 724608 12 000 hours preventive maintenance 724610

3 000 hours usual maintenance

12 000 hours preventive maintenance



Time (s)



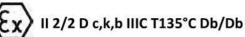
50 Hz - Closed gas ballast

50 Hz - Opened gas ballast 3 rotations

50 Hz - Fully opened gas ballast



II 2/2 G c,k,b IIB T4 Gb/Gb EVISA E200. R ATEX





EVISA ATEX lubricated vane pumps are designed for a wide range of applications in potentially explosive atmospheres. Depending on the model, they can be installed in gas or dust zone.

They can run continuously from atmospheric pressure to ultimate vacuum.

They are very silent and extremely robust.

- Single stage vacuum pump with an end vacuum of 6.10⁻² mbar
- · High pumping speed even at low pressure
- · Integrated oil mist filter on the exhaust
- Standard temperature safety control by intrinsically safe PT100

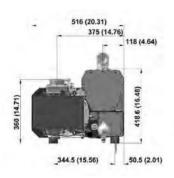
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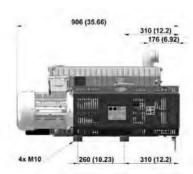
Technical characteristics

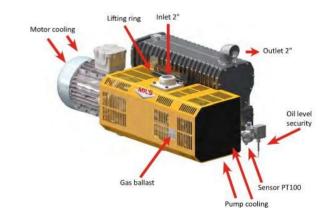
| | | | 50 Hz | |
|------|---|--|---|--|
| | Nominal flow rate | 200 - 117,7 | | |
| | PNEUROP pumping | 190 - 111,8 | | |
| | Pumping speed at 1 | 134 - 78,9 | | |
| | Closed gas ballast End vacuum mbar - torr | | ≤ 6.10 ⁻² - 4,5.10 ⁻² | |
| | | End vacuum mbar - torr | ≤ 1 - 0,75 | |
| | Fully opened gas ballast | Water vapor permitted maximum pressure mbar - torr | 20,2 - 15,1 | |
| | Dallast | Water vapor capacity kg.h ⁻¹ | 2,2 | |
| 00.R | 100 % synthetic oil | | MV99S | |
| TEX | Oil capacity I - qt | | 5 - <i>5,3</i> | |
| HV | Noise level dB(A) | | 71 | |
| | | Voltage | 3ph - 230 / 400 V 50 Hz | |
| | Electrical motor | Motor power | 4 kW | |
| | | Rotation speed min ⁻¹ | 1500 | |
| | Inlet connection | | 2" BSP | |
| | Outlet connection | | 2" BSP | |
| | Weight with oil kg - /b | | 143 - 316 | |

⁽¹⁾ Measurements according to PNEUROP 6602 specifications - 20°C

Dimensions mm (inch)







References

| E200.R ATEX HV | WITH GAS BALLAST |
|---|------------------|
| DUST ZONE II2D c,k,b IIIC T135°C Db/Db | 824386 |
| GAS ZONE II2/2G c,k,b IIB T4 Gb/Gb | 824390 |
| DUST AND GAS ZONE II2/2G c,k,b IIB T4 Gb/Gb - II2D c,k,b IIIC T135°C Db/Db | 824394 |

Accessories and options

| Oil level security | | 333172 |
|---|---------------------------|------------------|
| C | Paper cartridge 201PA | 625472 625473 |
| Suction filter Zone ATEX ZONE IIGD c IIIC T4 X | Carbon cartridge 201CH | |
| | Polyester cartridge 201PO | 619885 |
| Stainless steel inlet or outlet hose - 0,5 m KF | | 619887 |
| Elevated base frame H = 150 mm | | 670806 |
| Flame arrester DN80 | Flame arrester DN80 | |
| PT100 intrinsically safe power supp (assembly out of atex zone) - Output | | 362640 |

Maintenance kits

3 000 hours usual maintenance 724885 12 000 hours preventive maintenance 724887

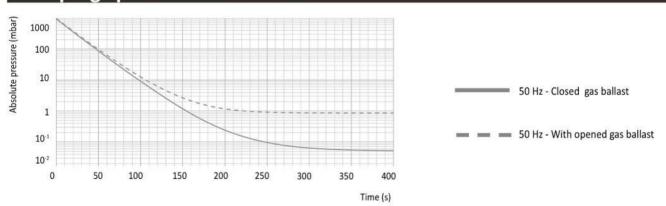


3 000 hours usual maintenance

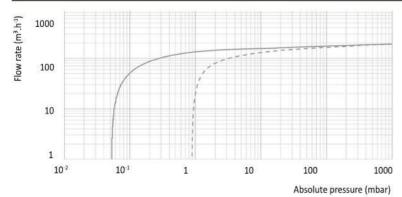
12 000 hours preventive maintenance



Pumping speed on 1000



Performance



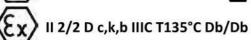
50 Hz - Closed gas ballast

50 Hz - With opened gas ballast

Specifications are subject to be changed without notice.



II 2/2 G c,k,b IIB T4 Gb/Gb EVISA E300.R ATEX





N° INERIS-EQEN: 033438/17

EVISA ATEX lubricated vane pumps are designed for a wide range of applications in potentially explosive atmospheres. Depending on the model, they can be installed in gas or dust zone.

They can run continuously from atmospheric pressure to ultimate vacuum.

They are silent and extremely robust.

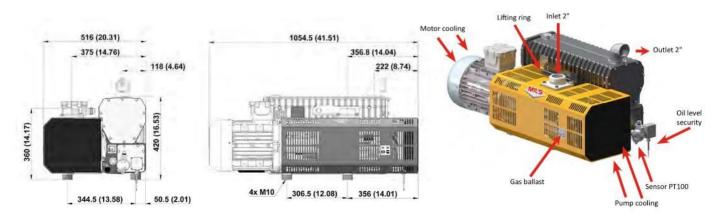
- Single stage vacuum pump with an end vacuum of 6.10⁻² mbar
- · High pumping speed even at low pressure
- · Integrated oil mist filter on the exhaust
- Standard temperature safety control by intrinsically safe PT100

Technical characteristics

| | | | 50 Hz |
|-------|---|--|---|
| | Nominal flow rate m³.h·¹- cfm | | 300 - 176,5 |
| | PNEUROP pumping speed (1) m ³ .h ⁻¹ - cfm | | 280 - 165 |
| | Pumping speed at 1 | 171 - <i>101</i> | |
| | Without gas ballast | End vacuum mbar - torr | ≤ 6.10 ⁻² - 4,5.10 ⁻² |
| ĺ | End vacuum mbar - torr | | ≤ 2 - 1,5 |
| | Fully opened gas ballast | Water vapor permitted maximum pressure mbar - torr | 18,6 - 13,9 |
| | Dallast | Water vapor capacity kg.h ⁻¹ | 2,3 |
| 300.R | 100 % synthetic oil | | MV99S |
| ATEX | Oil capacity I - qt | | 5 - 5,3 |
| HV | Noise level dB(A) | | 72 |
| *** | Electrical motor | Voltage | 3ph - 230 / 400 V ⁽²⁾ ou 3ph - 400/690V ⁽³⁾ 50 Hz |
| | Liectrical motor | Motor power | 5,5 kW |
| | | Rotation speed min ⁻¹ | 1500 |
| | Inlet connection | | 2" BSP |
| | Outlet connection | | 2" BSP |
| | Weight with oil kg - /b | | 172 - 380 |

⁽¹⁾ Measurements according to PNEUROP 6602 specifications - 20°C

Dimensions mm (inch)



⁽²⁾ Dust or gas zone model

⁽³⁾ Dust and gas zone model

References

| E300.R ATEX HV | WITH GAS BALLAST |
|---|------------------|
| DUST ZONE II2D c,k,b IIIC T135°C Db/DBb | 824387 |
| GAS ZONE II2/2G c,k,b IIB T4 Gb/Gb | 824391 |
| DUST AND GAS ZONE II2/2G c,k,b IIB T4 Gb/Gb - II2D c,k,b IIIC T135°C Db/Db | 824395 |

Accessories and options

| Oil level security | | 333172 |
|---|---------------------------|--------|
| C | Paper cartridge 201PA | 625472 |
| Suction filter | Carbon cartridge 201CH | 625473 |
| Zone ATEX ZONE IIGD c IIIC T4 X | Polyester cartridge 201PO | 619885 |
| Stainless steel inlet or outlet hose - 0,5 m KF | | 619887 |
| Elevated base frame H = 150 mm | | 616595 |
| Flame arrester DN80 | Flame arrester DN80 | |
| PT100 intrinsically safe power supp (assembly out of atex zone) - Output | | 362640 |

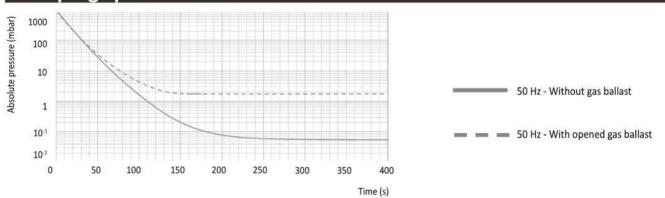
Maintenance kits

| 3 000 hours usual maintenance | 724886 |
|-------------------------------------|--------|
| 12 000 hours preventive maintenance | 724888 |

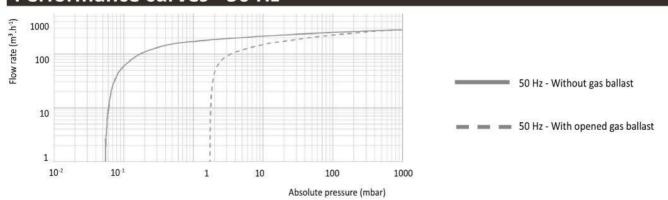


3 000 hours usual maintenance

12 000 hours preventive maintenance



Performance curves











Single stage oil sealed rotary vane pump with an end vacuum of 2 mbar and high and stable pumping speed.

- · Compactness and noise level optimized for an easy integration in machines
- · Available with 1-ph and 3-ph motor
- · Standard built-in oil mist filter and gas ballast
- · Delivered with 100% synthetic oil for heavy duty applications and long term operation
- · Designed for light onsite maintenance



Technical characteristics

| | | К04 | | К08 | | K12 | |
|------------------------|---|-----------|-------|-------|-------|-------|-------|
| | | 50 Hz | 60 Hz | 50 Hz | 60 Hz | 50 Hz | 60 Hz |
| Nominal flow rate r | n³.h-¹ * | 4 | 4,8 | 8 | 9 | 12 | 14 |
| With gas ballast Water | End vacuum mbar | | 2 | 2 | | 2 | |
| | Water vapor permitted maximum pressure mbar | N.A | | N.A | | 35 | |
| | Water vapor capacity kg.h ⁻¹ | N.A | | N.A | | 0.3 | |
| 100 % synthetic oil | | M | /99S | MV | 998 | MV | 995 |
| Oil capacity | | 0,065 0,2 | | 0 | ,4 | | |
| Noise level dB(A) | | 48 | 52 | 58 | 60 | 62 | 64 |

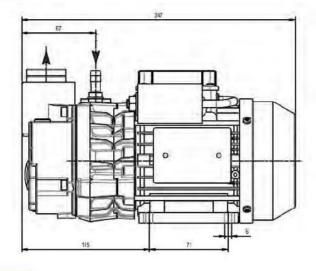
^{*} Measurements according to PNEUROP 6002 specifications - 20 °C

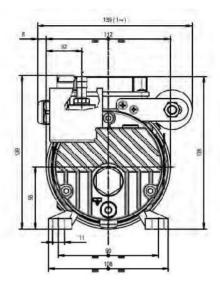
Versions

| ROTOMIL'S | | К04 | | К08 | | К12 | |
|---------------------|----------------------------------|-------------|-------------|------------|------------|-------------|-------------|
| | Number of phases | 1 | 3 | 1 | 3 | 1 | 3 |
| Electrical motor | Voltage V | 230 | 230 / 400 | 230 | 230 / 400 | 230 | 230 / 400 |
| | Period Hz | 50 (60) | 50 (60) | 50 (60) | 50 (60) | 50 (60) | 50 (60) |
| | Motor power kW | 0,12 (0,15) | 0,12 (0,15) | 0,25 (0,3) | 0,25 (0,3) | 0.45 (0,55) | 0,37 (0,45) |
| | Rotation speed min ⁻¹ | 2800 | 3300 | 2800 | 3300 | 2800 | 3300 |
| Inlet connection | | G 1/8" | G 1/8" | G 3/8" | G 3/8" | G 1/2" | G 1/2" |
| Outlet connection | | G 1/8" | G 1/8" | G 3/8" | G 3/8" | G 1/2" | G 1/2" |
| Weight with oil kg | | 5,4 | 5,4 | 10 | 9 | 14 | 12,5 |

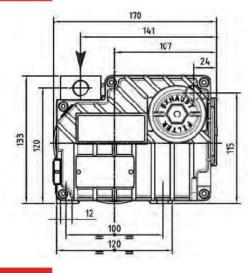
^{*} Measurements according to EN ISO 2151 - K specifications - 20 °C

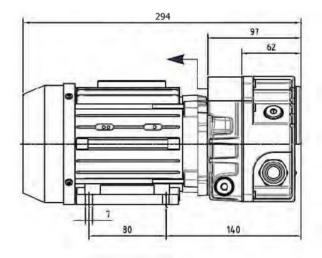
K04



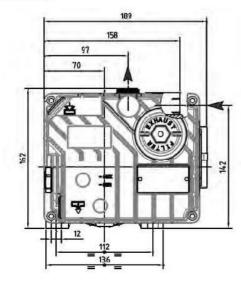


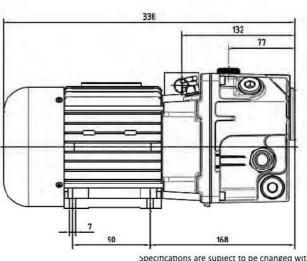
K08





K12







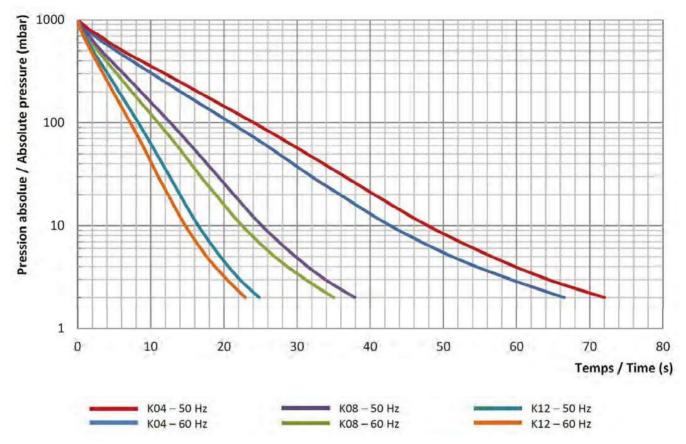
References

| | | K04 | К08 | K12 |
|-------------------|----------|--------|--------|--------|
| 1-ph - 230V | 50/60 Hz | 824224 | 824226 | 824288 |
| 3-ph - 230 / 400V | 50/60 Hz | 824225 | 824227 | 824289 |

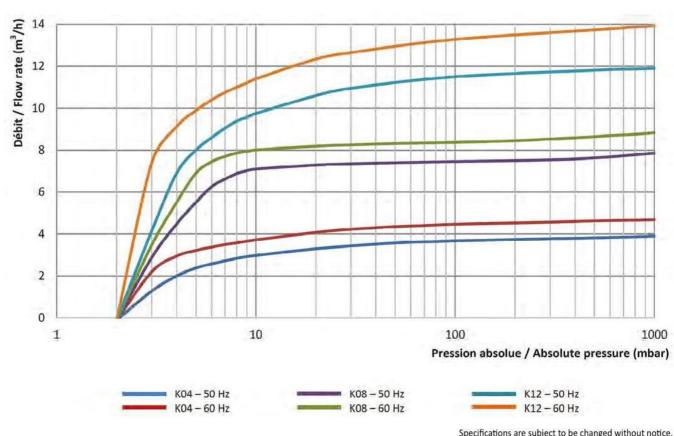
Accessories

| | | | К04 | К08 | K12 |
|--|-----------------------------|------------|--------|--------|--------|
| Inlet filter not mounted (Paper cartridge) 39PA - G3/8" Inlet hose MF 1/4" (I.1000 mm) | | | 333512 | 333512 | 333512 |
| | | | 670177 | 670177 | 670177 |
| Inlet hose MF 1/2" (I.1000 mm) | | | 712931 | 712931 | 712931 |
| Inlet hose MF 3/8" (I.1000 mm) | | | 618981 | 618981 | 618981 |
| | without regulation | 1-ph, 230V | 770502 | 770502 | 770503 |
| | U | 3-ph, 400V | 770573 | 770573 | 770573 |
| Direct starter | with regulation contact LG7 | 1-ph, 230V | 710427 | 710427 | 710428 |
| | - | 3-ph, 400V | 710421 | 710421 | 710421 |
| Safety valve + vacuum gauge mounted | | | 670069 | 670069 | 670069 |
| Base frame assembly | | | 670019 | 670019 | 670019 |
| Electrical cable (3m) with plug - 1ph - 230V | | | 363052 | 363052 | 363052 |

Pumping speed on 1000 I vessel



Performance curves





High performance oil-less vacuum pumps





INNOVATION 1

SIRELLA.R oil less claw vacuum pump is a contactless technology designed to insure a very low noise level.

Corrosion resistant claws and chamber



INNOVATION 2

The SIRELLA.R has the best efficiency in the market which brings energy cost saving for the end users



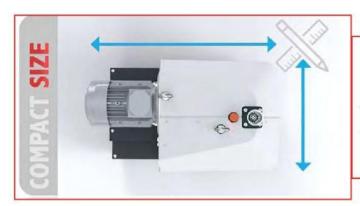
INNOVATION 3

The exhaust temperature is lower than other similar pumps

INNOVATION 4

Access to the claws is easy in order to clean them in case of pollution





INNOVATION 5

The SIRELLA.R has been studied to simplify the pump replacement due to its compact dimensions



SIRELLA.RS

Compatible with VFC variable frequency converter for electricity cost saving

Operation from 25 Hz to 70 Hz

Built-in or separate VFC into electrical board for central vacuum systems

SIRELLA SL100.R



- Contactless technology
- Low noise level
- High efficiency
- Low exhaust temperature
- Easy access and low maintenance
- Compact size
- PT100 temperature sensor included

Working principle



claws trap a volume of gas at the inlet



claws convey gas to the exhaust



gas is compressed (compression chamber)



Gas is discharged

Technical characteristics

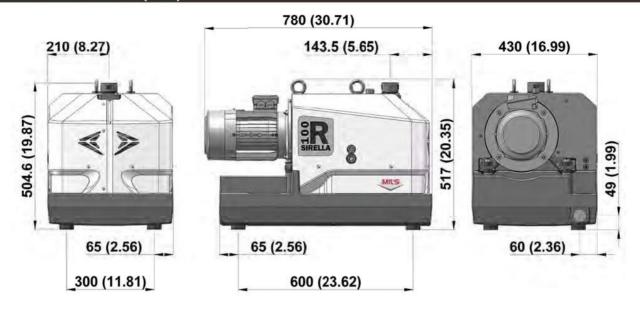
| Sirella SL100.R | 50 Hz | 60 Hz |
|---|------------|------------|
| Pneurop pumping speed (1) m³.h·1- cfm | 90 - 53 | 108 - 63,6 |
| End vacuum mbar - torr | 60 - 45 | 60 - 45 |
| Continuous end vacuum mbar - torr | 60 - 45 | 60 - 45 |
| Gear box oil capacity MB150S 100 % synthetic - qt | 0,7 - 0,74 | 0,7 - 0,74 |
| Noise level dB(A) | 69 | 71 |

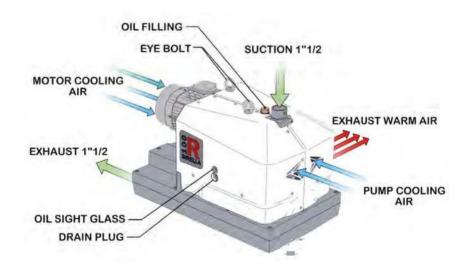
⁽¹⁾ Measurements according to PNEUROP 6602 specifications - 20°C

Versions

| GEOGRA | APHIC ZONE | EUROPE | ASIA MIDDLE-EAST | SOUTH AMERICA | USA | JAPAN |
|----------------------|----------------------------------|-------------------------|---------------------|------------------|---------------|----------------|
| | Number of phases | 3 | 3 | 3 | 3 | 3 |
| | Voltage V | 230 / 400 | 220 / 380 | 190 / 380 | 208-230 / 460 | 200 / 380 |
| Electrical motor | Period Hz | 50 | 60 | 50 | 60 | 50 / 60 |
| | Motor power | 2,20 kW | 2,64 kW | 2,20 kW | 3,5 HP | 2,20 / 2,64 kW |
| | Rotation speed min ⁻¹ | 3000 | 3600 | 3000 | 3600 | 3000/3600 |
| Inlet connection (2) | | 1"1/2 BSP | 1"1/2 BSP | 1"1/2 NPT | 1"1/2 NPT | 1"1/2 BSP |
| Outlet connection | (2) | 1" 1/2 BSP | 1''1/2 BSP | 1"1/2 NPT | 1"1/2 NPT | 1"1/2 BSP |
| Weight with oil kg | - Ib | 170 - <i>375</i> | 174 - 384 | 174 - 384 | 174 - 384 | 174 - 384 |

Dimensions mm (inch)





References

| | Sirella SL100.R |
|--|-----------------|
| EUROPE 3ph, 230/400V-50Hz | 824410 |
| ASIA / MIDDLE EAST 3ph, 220/380V-60Hz | 824427 |
| SOUTH AMERICA / USA 3ph, 208-230/460V-60Hz | 824418 |

Maintenance kits

| Gear box oil MB150S | 1 liter can |
|---------------------|-------------|
| Gear box oii MB1505 | 619626 |

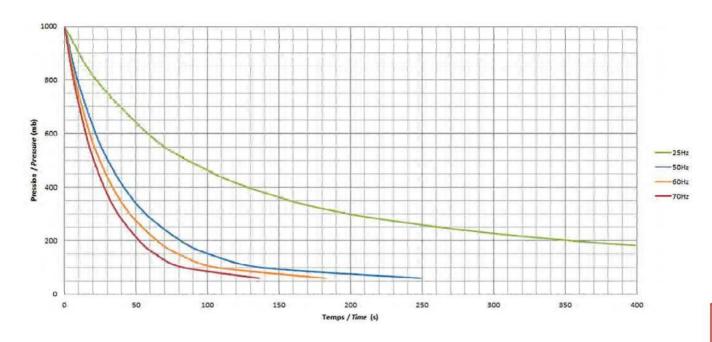
Accessories and Options

| | | | SL100.R |
|-------------------------------|-------------------------------------|---------------------|---------|
| onstant vacuum sol | enoid valve - electronic control of | the end vacuum | 625547 |
| Adjusting valve fitt | ed on T-square (without filter) | | 723341 |
| | | Paper cartridge | 625570 |
| Fitted suction filte type 126 | r | Polyester cartridge | |
| type 120 | | Carbon cartridge | 625572 |
| acuum gauge fitted | on filter | | 617536 |
| uction hose (I : 1500 | mm) | | 625573 |
| | NACAL TO A TO A LANGE TO A STATE OF | 3ph, 400V- 50HZ | 770497 |
| Direct starter wall mounting) | Without regulation contact | 3ph, 230V- 50HZ | 770498 |
| | W. 1 | 3ph, 400V- 50HZ | 710424 |
| | With regulation contact LG7 | 3ph, 230V- 50HZ | 710432 |

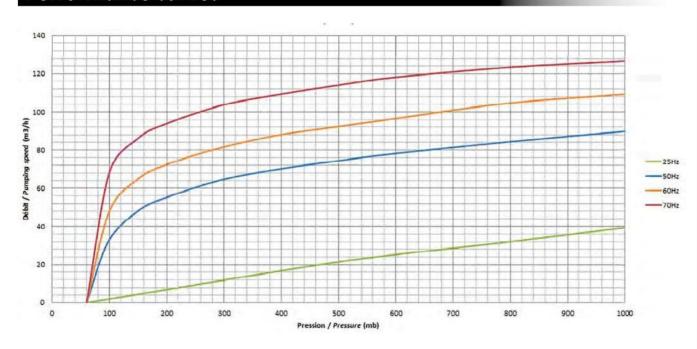




Pumping speed on 1000 l vessel



Performance curves



SIRELLA SL150.R



- Contactless technology
- Low noise level
- High efficiency
- Low exhaust temperature
- Easy access and low maintenance
- Compact size
- PT100 temperature sensor included

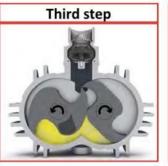
Working principle



claws trap a volume of gas at the inlet



claws convey gas to the exhaust



gas is compressed (compression chamber)



Gas is discharged

Technical characteristics

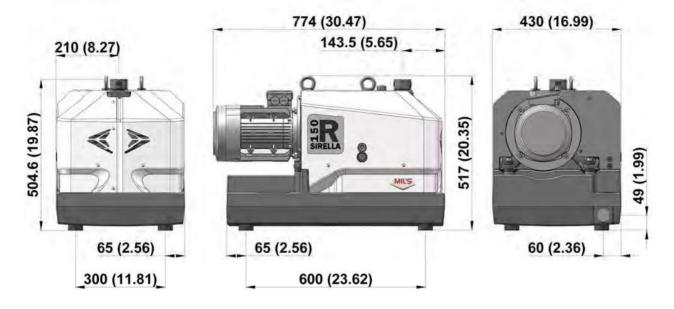
| Sirella SL150.R | 50 Hz | 60 Hz |
|---|-------------|-------------|
| Pneurop pumping speed (1) m³.h·¹- cfm | 140 - 82,4 | 164 - 96,5 |
| End vacuum mbar - torr | 50 - 37,5 | 50 - 37,5 |
| Continuous end vacuum mbar - torr | 150 - 112,5 | 150 - 112,5 |
| Gear box oil capacity MB150S 100 % synthetic - qt | 0,7 - 0,74 | 0,7 - 0,74 |
| Noise level dB(A) | 69 | 71 |

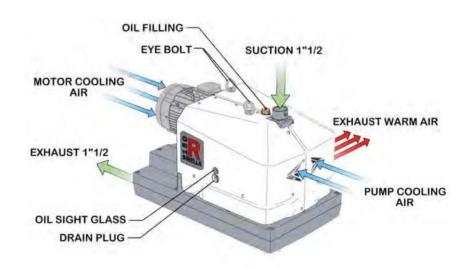
⁽¹⁾ Measurements according to PNEUROP 6602 specifications - 20°C

Versions

| GEOGR | APHIC ZONE | EUROPE | ASIA MIDDLE-EAST | SOUTH AMERICA | USA | JAPAN |
|-------------------------|----------------------------------|------------|---------------------|------------------|---------------|-------------|
| | Number of phases | 3 | 3 | 3 | 3 | 3 |
| | Voltage V | 230 / 400 | 220 / 380 | 190 / 380 | 208-230 / 460 | 200 / 380 |
| Electrical motor | Period Hz | 50 | 60 | 50 | 60 | 50 / 60 |
| | Motor power | 3 kW | 3,60 kW | 3 kW | 5 HP | 3 / 3,60 kW |
| | Rotation speed min ⁻¹ | 3000 | 3600 | 3000 | 3600 | 3000/3600 |
| Inlet connection | | 1"1/2 BSP | 1"1/2 BSP | 1"1/2 NPT | 1"1/2 NPT | 1"1/2 BSP |
| Outlet connection | | 1" 1/2 BSP | 1"1/2 BSP | 1"1/2 NPT | 1"1/2 NPT | 1"1/2 BSP |
| Weight with oil kg | - Ib | 180 - 397 | 190 - 419 | 190 - 419 | 190 - 419 | 190 - 419 |

Dimensions mm (inch)





References

| | Sirella SL150.R |
|---|-----------------|
| EUROPE 3ph, 230/400V-50Hz | 824411 |
| ASIA / MIDDLE EAST 3ph, 220/380V-60Hz | 824428 |
| SOUTH AMERICA / USA 3ph, 208-230/460V-60Hz | 824419 |

Maintenance kits

| Gear box oil MB150S | 1 liter can |
|---------------------|-------------|
| Gear box oii MB1505 | 619626 |

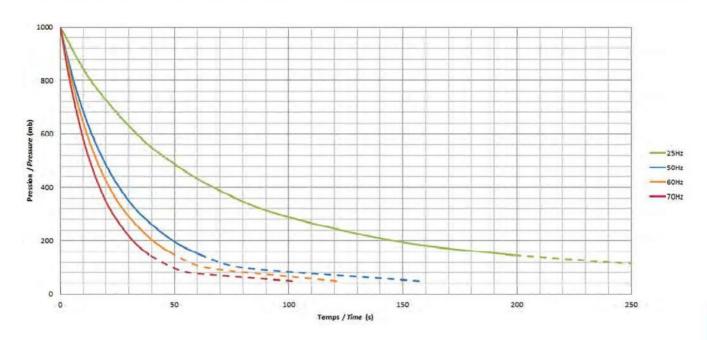
Accessories and Options

| | | 1 | |
|----------------------------------|-------------------------------------|------------------|---------|
| | | | SL150.R |
| onstant vacuum sole | enoid valve - electronic control of | the end vacuum | 625547 |
| Adjusting valve fitte | ed on T-square (without filter) | | 723341 |
| | | Paper cartridge | 619891 |
| Fitted suction filter type 201 | | | 619892 |
| .,,,, | | Carbon cartridge | 619893 |
| acuum gauge fitted | on filter | | 617536 |
| uction hose (I : 1500 | mm) | | 625574 |
| | Without regulation contact | 3ph, 400V- 50HZ | 770498 |
| Direct starter wall mounting) | Without regulation contact | 3ph, 230V- 50HZ | 770499 |
| | W:th | 3ph, 400V- 50HZ | 710425 |
| | With regulation contact LG7 | 3ph, 230V- 50HZ | 710433 |

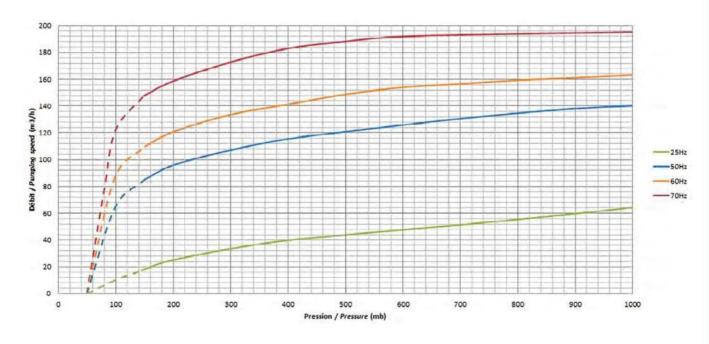




Pumping speed on 1000 l vessel



Performance curves



SIRELLA SL300.R



- Contactless technology
- Low noise level
- High efficiency
- Low exhaust temperature
- Easy access and low maintenance
- Compact size
- PT100 temperature sensor included

Working principle



claws trap a volume of gas at the inlet



claws convey gas to the exhaust



gas is compressed (compression chamber)



Gas is discharged

Technical characteristics

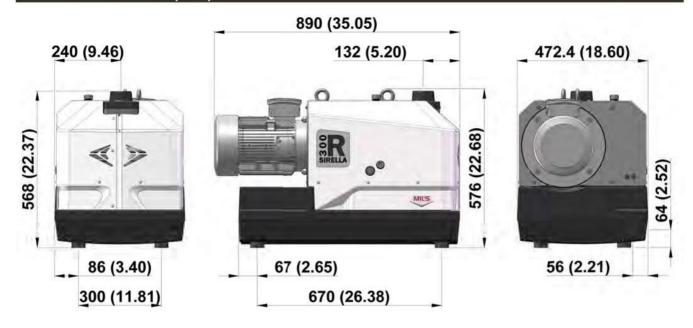
| Sirella SL300.R | 50 Hz | 60 Hz |
|---|-------------|-------------|
| Pneurop pumping speed (1) m³.h·1- cfm | 260 - 153 | 312 - 183.6 |
| End vacuum mbar - torr | 50 - 37,5 | 50 - 37,5 |
| Continuous end vacuum mbar - torr | 150 - 112,5 | 150 - 112,5 |
| Gear box oil capacity MB150S 100 % synthetic - qt | 1 - 1,06 | 1 - 1,06 |
| Noise level dB(A) | 70 | 72 |

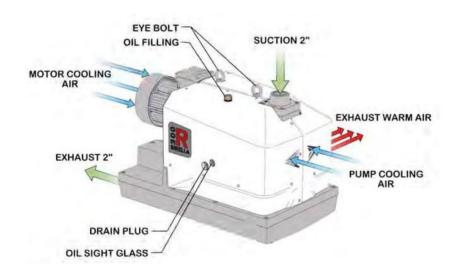
⁽¹⁾ Measurements according to PNEUROP 6602 specifications - 20°C

Versions

| GEOGR | APHIC ZONE | EUROPE | ASIA MIDDLE-EAST | SOUTH AMERICA | USA | JAPAN |
|--------------------|----------------------------------|-----------|---------------------|------------------|---------------|--------------|
| | Number of phases | 3 | 3 | 3 | 3 | 3 |
| | Voltage V | 230 / 400 | 220 / 380 | 190 / 380 | 208-230 / 460 | 200 / 380 |
| Electrical motor | Period Hz | 50 | 60 | 50 | 60 | 50 / 60 |
| | Motor power | 5,5 kW | 6,6 kW | 5,5 kW | 9 HP | 5,5 / 6,6 kW |
| | Rotation speed min ⁻¹ | 3000 | 3600 | 3000 | 3600 | 3000/3600 |
| Inlet connection | | 2" BSP | 2" BSP | 2" NPT | 2" NPT | 2" BSP |
| Outlet connection | | 2" BSP | 2" BSP | 2" NPT | 2" NPT | 2" BSP |
| Weight with oil kg | - 1b | 300 - 662 | 315 - <i>695</i> | 315 - 695 | 315 - 695 | 315 - 695 |

Dimensions mm (inch)





References

| | Sirella SL300.R |
|---|-----------------|
| EUROPE 3ph, 230/400V-50Hz | 824412 |
| ASIA / MIDDLE EAST 3ph, 220/380V-60Hz | 824429 |
| SOUTH AMERICA / USA 3ph, 208-230/460V-60Hz | 824420 |

Maintenance kits

| Gear box oil MB150S | 1 liter can |
|---------------------|-------------|
| Gear box oii MB1505 | 619626 |

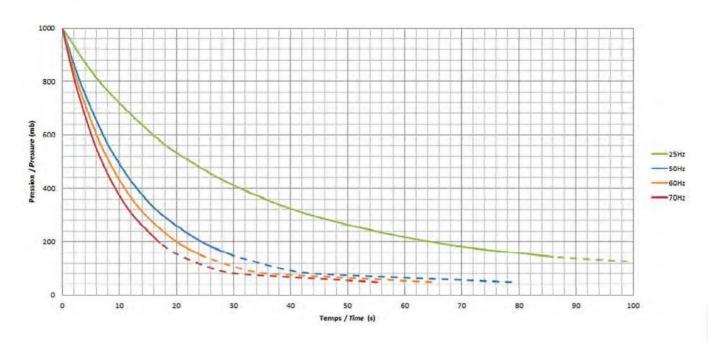
Accessories and Options

| | | | SL300.R | |
|-------------------------------|---|---------------------|---------|--|
| Constant vacuum so | Constant vacuum solenoid valve - electronic control of the end vacuum | | | |
| Adjusting valve fit | ted on T-square (without filter) | | 713842 | |
| | | Paper cartridge | 715350 | |
| Fitted suction filte type 201 | er | Polyester cartridge | 715351 | |
| | | Carbon cartridge | 715352 | |
| acuum gauge fitted | on filter | | 617536 | |
| ouction hose (I : 150 | 0 mm) | | 625575 | |
| | Without manufaction and at | 3ph, 400V- 50HZ | 770499 | |
| Witi Direct starter | Without regulation contact | 3ph, 230V- 50HZ | 770500 | |
| (wall mounting) | With Late 1 1 1 1 2 | 3ph, 400V- 50HZ | 710426 | |
| | With regulation contact LG7 | 3ph, 230V- 50HZ | 710434 | |

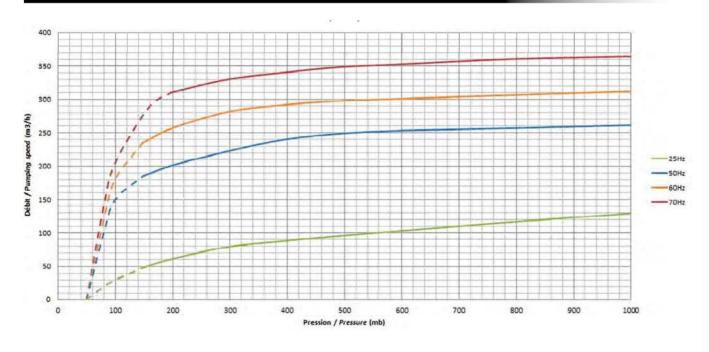




Pumping speed on 1000 l vessel



Performance curves







Compatible with VFC variable frequency converter for electricity cost saving
Operation from 25 Hz to 70 Hz
Built-in or separate VFC into electrical board for central vacuum systems

- Contactless technology
- Low noise level, compact size and high efficiency
- Low exhaust temperature
- Easy access and low maintenance
- PT100 temperature sensor





Technical characteristics

| Sirella RS | SL100.RS | SL150.RS | SL300.RS | |
|---|----------------------|-----------------------|------------------------|--|
| Pneurop pumping speed (1) m ³ .h ⁻¹ - cfm | 40 to 126 - 23 to 74 | 64 to 195 - 37 to 115 | 129 to 312 - 76 to 184 | |
| End vacuum mbar - torr | 60 - 45 | 50 - 37.5 | 50 - 37.5 | |
| Continuous end vacuum mbar - torr | 150 - 112,5 | 150 - 112,5 | 150 - 112,5 | |
| Gear oil capacity MB150S 100 % synthetic - qt | 0,7 - 0,74 | 0,7 - 0,74 | 0,7 - 0,74 | |
| Noise level dB(A) | 72 | 72 | 72 | |

⁽¹⁾ Measurements according to PNEUROP 6602 specifications - 20°C

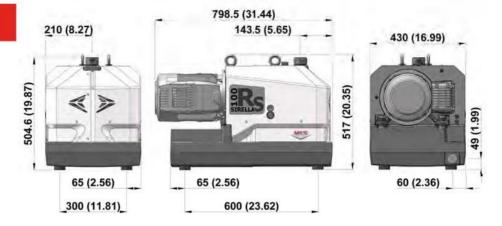
Versions

| SI | RELLA | SL100.RS | SL150.RS | SL300.RS |
|--------------------|----------------------------------|------------------|------------------|---------------|
| | Number of phases | 3 | 3 | 3 |
| | Voltage V | 380 to 480 | 380 to 480 | 380 to 480 |
| Electrical motor | Period Hz (*) | 45 to 66 | 45 to 66 | 45 to 66 |
| | Max motor power | 3.5 kW | 4.5 kW | 6.6 kW |
| | Rotation speed min ⁻¹ | 1500 to 4200 | 1500 to 4200 | 1500 to 3600 |
| Inlet connection | | 1"1/2 BSP or NPT | 1"1/2 BSP or NPT | 2" BSP or NPT |
| Outlet connection | | 1"1/2 BSP or NPT | 1"1/2 BSP or NPT | 2" BSP or NPT |
| Weight with oil kg | - Ib | 177 - 390 | 200 - 441 | 316 - 697 |

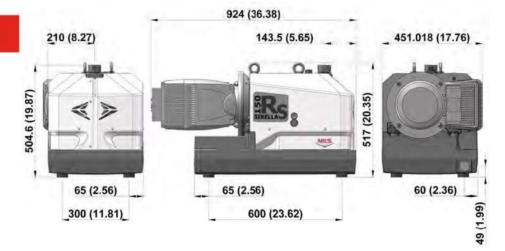
^(*) Admissible frequency for power sypply of the VFC

Dimensions mm (inch)

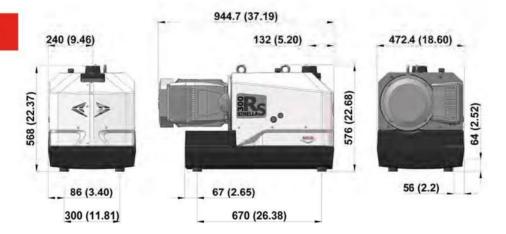




SL150.RS



SL300.RS



References

| | SL100.RS | SL150.RS | SL300.RS |
|-----------------|----------|----------|----------|
| BSP CONNECTIONS | 824413 | 824414 | 824415 |
| NPT CONNECTIONS | 824430 | 824431 | 824432 |

Liquid traps

- · Optimized protection of vacuum pumps
- High efficiency to drain liquids in vacuum pipeline
- Model with stainless steel mechanical float (cutting the flow in the event of excessively large liquid overflow) to protect the pumping group
- Plexiglas, polycarbonate or PYREX bowls
- 316L stainless steel version available for liquid traps type 100 / 125 / 200
- Wall fixation or head fitting on machine frame

Options

- Glass (pyrex) bottle fixed under the trap to drain condensates
- Fitting of an automatic liquid drain under the trap: allows to drain the system without stopping the process

Dimensions (mm)

| | Α | В | С | Tank |
|----------------------|-----|-----|-----|------|
| Liquid trap type 100 | 125 | 415 | 137 | 2 L |
| Liquid trap type 125 | 125 | 415 | 137 | 2 L |
| Liquid trap type 200 | 230 | 495 | 220 | 7 L |
| Liquid trap type 250 | 230 | 495 | 220 | 7 L |
| Liquid trap type 300 | 345 | 647 | 290 | 16 L |
| Liquid trap type 400 | 345 | 647 | 290 | 16L |

100 - 125 type drain trap

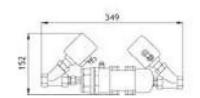


200 - 250 - 300 - 400 type drain trap



Automatic drain

Electrical box



References and characteristics

| Aluminium head Plexiglas cylinder | 100 | 125 |
|--------------------------------------|--------|--------|
| Flow rate m ³ /h | 48 | 120 |
| Inlet / Outlet BSPP | 1" | 1" 1/4 |
| Drain valve outlet | G 1/2" | G1/2" |
| Without mechanical float | 724793 | 724797 |
| With mechanical float | 724794 | 724798 |

| Aluminium head Pyrex cylinder | 100 | 125 |
|----------------------------------|--------|--------|
| Flow rate m ³ /h | 48 | 120 |
| Inlet / Outlet BSPP | 1" | 1" 1/4 |
| Drain valve outlet | G1/2" | G1/2" |
| Without mechanical float | 724807 | 724811 |
| With mechanical float | 724808 | 724812 |

| Aluminium head Polycarbonate cylinder | 200 | 250 | 300 | 400 |
|--|--------|--------|--------|--------|
| Flow rate m³/h | 340 | 408 | 696 | 835 |
| Inlet / Outlet BSPP | 2" | 2" 1/2 | 3" | 4" |
| Drain valve outlet | G1/2" | G1/2" | G1/2" | G1/2" |
| Without mechanical float | 724801 | 724805 | 724809 | 724813 |
| With mechanical float | 724802 | 724806 | 724810 | 724814 |

| 316L stainless steel head Pyrex cylinder | 100 | 125 | 200 |
|---|--------|--------|--------|
| Flow rate m³/h | 48 | 120 | 340 |
| Inlet / Outlet BSPP | 1" | 1" 1/4 | 2" |
| Drain valve outlet | G1/2" | G1/2" | G1/2" |
| Without mechanical float | 724795 | 724799 | 724803 |
| With mechanical float | 724796 | 724800 | 724804 |

| Options | 100 | 125 | 200 | 250 | 300 | 400 | |
|-------------------------|-------------------------------|---|-----|-----|--------|--------|--|
| 250 ml PYREX bottle | | 615441 | | | | | |
| 500 ml PYREX bottle | | 615442 | | | | | |
| 1000 ml PYREX bottle | | 615443 | | | | | |
| Bracket for wall fixing | Incl | Included 619907 | | | | 617512 | |
| Flanges DN80 | Z PAZ- | | | | 617513 | | |
| Flanges DN100 | ** | | | | | 617514 | |
| | Electro-p | Electro-pneumatic with control board 81 | | | | | |
| Automatic drain | Electro-p | Electro-pneumatic with control board (2I) | | | | 821664 | |
| | Electrical with control board | | | | | 816003 | |

Vacuum sealed suction filters



The suction filters prevent the entry of solid particles into the pump, ensuring its longevity

- One or two 1/4" differential taps for gauges (depending on model)
- Vacuum level: 1,3 x10⁻³ mbar (except filters 25 / 38 / 51)
- Running temperature (continous): -15 °C to +100 °C
- Low pressure drop

Different configurations are available with 3 types of cartridges:

- Polyester : for all uses, resists humidity (efficiency : 99% at 5 μ)
- Paper: for dry gases (efficiency: 99% at 2 μ)
- Carbon : to eliminate odors and absorb some contaminants (efficiency : 99% at 10 μ)

Characteristics and dimensions (mm)



| | 242322 | | Dime | nsions | (mm) | | Filter flow | Filter element flow | Weight kg |
|---------------------------|----------------|-----|------|--------|------|-----|-------------|---------------------|--------------|
| Right-angle filters | Inlet - Outlet | Α | В | С | D | E | m³.h-1 | m³.h ⁻¹ | |
| 39 PA / PO / CH | 3/8" - BSPP | 92 | 57 | 95 | 48 | 76 | 31 | 43 | 0,4 |
| 76 PA / PO / CH | 3/4" - BSPP | 111 | 76 | 149 | 64 | 83 | 43 | 94 | 1,4 |
| 100 PA / PO / CH | 1" - BSPP | 111 | 83 | 149 | 67 | 83 | 60 | 94 | 1,4 |
| 126 PA / PO / CH | 1" 1/4 - BSPP | 171 | 105 | 186 | 114 | 133 | 102 | 196 | 2,3 |
| 201 PA / PO / CH | 2" - BSPP | 260 | 116 | 222 | 127 | 235 | 298 | 493 | 6,8 |
| 251 PA / PO / CH | 2" 1/2 - BSPP | 267 | 130 | 222 | 140 | 235 | 357 | 493 | 6,8 |
| DN40KF - 100 PA / PO / CH | DN40 - KF | 183 | 117 | 187 | 127 | - | 136 | 195 | 2 |
| | Marie Carrier | | Dime | nsions | (mm) | | Filter flow | Filter element flow | Weight |
| ATEX filters | Inlet - Outlet | | _ | | | _ | 2.0 | | 1.0 |

| and the second second | | Dimensions (mm) | | | | | Filter flow | Filter element flow | Weight |
|--|----------------|-----------------|-----|-----|---|----|--------------------|---------------------|--------|
| ATEX filters | Inlet - Outlet | Α | В | С | D | E | m³.h ⁻¹ | m³.h ⁻¹ | kg |
| 126 PA / PO / CH ATEX ZONE IIGD c IIIC T4 X | 1"1/4 - BSPP | 169 | 114 | 122 | | _ | 102 | 196 | 2,3 |
| 201 PA / PO / CH ATEX ZONE IIGD c IIIC T4 X | 2" - BSPP | 285 | 127 | 222 | - | 7. | 298 | 493 | 6,8 |

| | | | Dime | nsions | (mm) | | Filter flow | Filter element flow | Weight |
|--------------------------|----------------|-----|------|--------|------|-----|--------------------|---------------------|--------|
| Straight-through filters | Inlet - Outlet | А | В | С | D | E | m³.h ⁻¹ | m³.h ⁻¹ | kg |
| 25 PA / PO | 1/4" | 86 | 16 | 64 | 16 | - | 7 | 14 | 0,23 |
| 38 PA / PO | 3/8" | 86 | 16 | 64 | 16 | - | 10 | 14 | 0,23 |
| 51 PA/ PO | 1/2" | 98 | 22 | 64 | 22 | | 10 | 14 | 0,23 |
| CT201 PA / PO | 2" - BSPP | 330 | 276 | 229 | 229 | 228 | 298 | 495 | 7,2 |
| CT251 PA / PO | 2"1/2 - BSPP | 330 | 276 | 229 | 229 | 228 | 357 | 495 | 6,8 |
| CT301 PA / PO | 3" - BSPP | 473 | 410 | 343 | 330 | 228 | 510 | 969 | 14 |
| CT401 PA / PO | 4" - BSPP | 473 | 410 | 343 | 330 | 228 | 884 | 969 | 12 |
| CT601 PA / PO | 6" - BSPP | 483 | 368 | 483 | 251 | 254 | 1870 | 1870 | 20 |
| ST201 PA / PO | 2"1 - BSPP | 413 | 362 | 229 | 318 | 228 | 298 | 495 | 7,2 |
| ST251 PA / PO | 2"1/2 - BSPP | 413 | 362 | 229 | 318 | 228 | 357 | 495 | 6,8 |
| ST301 PA / PO | 3" - BSPP | 502 | 432 | 343 | 356 | 228 | 510 | 969 | 13 |
| ST401 PA / PO | 4" - BSPP | 502 | 432 | 343 | 356 | 228 | 884 | 969 | 11 |

References

filter

| Right-angle filter | 'S | 76 | 100 | 126 | 201 | 251 | | | |
|---------------------------|---------------------|-----------------------|------------------------|------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| | Paper cartridge | 76PA 357893 | 100PA 360595 | 126PA 357894 | 201PA 357895 | 251PA 357896 | | | " |
| Right-angle filter | Polyester cartridge | 76PO 357910 | 100PO 362235 | 126PO 362236 | 201PO 362237 | 251PO 362238 | 6 | | |
| | Carbon cartridge | 76CH 610515 | 100CH 616194 | 126CH 610516 | 201CH 610517 | 251CH 610518 | | | |
| Straight-through cylinder | filters with steel | 25 | 38 | 51 | CT201 | CT251 | СТ301 | CT401 | CT601 |
| Straight-through | Paper cartridge | 25PA 358225 | 38PA 362243 | 51PA 357947 | CT201PA 362015 | CT251PA 362016 | CT301PA 357897 | CT401PA 361106 | CT601PA 361310 |

38PO

362244

51PO

357948

CT201PO CT251PO

362231

362232

| Straight-through polycarbonate cy | | ST201 | ST251 | ST301 | ST401 |
|-----------------------------------|---------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Straight-through filter | Paper cartridge | ST201PA 334453 | ST251PA 362246 | ST301PA 361627 | ST401PA 362277 |
| | Polyester cartridge | | ST251PO 332895 | ST301PO 620166 | ST401PO 362710 |

Polyester cartridge

25PO

362241

| Accessories for CT & ST straight-through filters | 201 | 251 | 301 | 401 | |
|--|-----|--------|---------------|-----|--|
| Bracket for mural fixing | 61 | 9907 | 617 | 512 | |
| Polycarbonate cylinder kit | 36 | 362248 | | 250 | |
| Flanges | | | 617513 617514 | | |
| Vacuum gauge fitted on filter | | 617 | 7536 | | |

| ATEX filters | | 126 | 201 |
|--------------------------------------|---------------------|------------------------|------------------------|
| ATEX filter ZONE IIGD c IIIC T4 X | Paper cartridge | 126PA 625470 | 201PA 625472 |
| | Polyester cartridge | 126PO 619884 | 201PO 619885 |
| | Carbon cartridge | 126CH 625471 | 201CH 625473 |





361310

CT601PO

361392

CT401PO

362234

CT301PO

362233

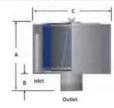
Silent suction filters

| | | Dime | nsions | (mm) | Filter flow | Weight | Complete filter with | Pap | er cartrigde |
|---------------|--------|------|--------|------|-------------|--------|---------------------------|------|-----------------|
| Silent filter | Outlet | Α | В | С | m³.h-1 | kg | paper cartrigde reference | 200 | ion & reference |
| FS25 | 1/4" | 70 | 16 | 64 | 7 | 0,11 | 358226 | 04 | 358227 |
| FS50 | 1/2" | 97 | 22 | 83 | 20 | 0,23 | 360390 | 06 | 357950 |
| FS75 | 3/4" | 102 | 38 | 152 | 43 | 0,9 | 357920 | 14 | 357924 |
| FS100 | 1" | 102 | 38 | 152 | 60 | 0,9 | 362638 | 18P | 357925 |
| FS125 | 1"1/4 | 168 | 41 | 152 | 119 | 1,5 | 357921 | 18P | 357925 |
| FS200 | 2" | 311 | 57 | 254 | 230 | 6,3 | 357922 | 230P | 357926 |
| FS250 | 2"1/2 | 318 | 64 | 254 | 332 | 6,5 | 357923 | 230P | 357926 |

FS25 and FS50 Silent filter



FS75 TO FS250 Silent filter



Dust separator with removable bag

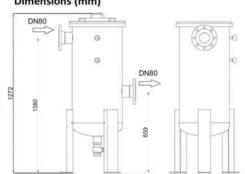
· High steel painted filter

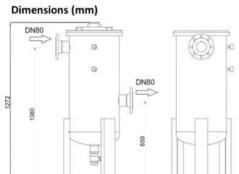
Dust separator

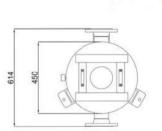
Replacement bag

Separator

- Movable polyamid bag, 80 μ mesh, capacity: 55 l
- · Quick easy fixing of the bag
- Movable cover with observation window
- Highly efficient protection for pumps running in very dusty environment







Liquid cyclonic separator

718548 361714

- · High steel painted tank or stainless steel tank with take-down upper part
- · Up and down sight glasses
- · Evacuation by manual ball valve

| Liquid cyclonic separato | r |
|---------------------------|--------|
| Carbon steel separator | 616113 |
| Stainless-steel separator | 619058 |



"SPIRACIER" special hoses, vacuum switches & vacuum gauges



Flexible transparent PVC hose with galvanized steel spiral

Special vacuum "SPIRACIER" hoses with 2 rotating nuts

| Crimped hose | 1/2 " Ø 14 | 3/4 " Ø 20 | 1 " Ø 25 | 1 " 1/4 Ø 30 | 1 " 1/2 Ø 35 | 2 " Ø 45 | 2 " 1/2 Ø 64 | DN80 | DN100 |
|--------------|---------------|---------------|-------------|-----------------|-----------------|-------------|-----------------|--------|--------|
| 600 mm | 670633 | 606086 | 618265 | 670650 | 618267 | 618149 | 618956 | 618269 | 618270 |
| 1 000 mm | 612919 | 604422 | 617372 | 607058 | 606455 | 606099 | 618957 | 617833 | 617834 |
| 1 500 mm | 616362 | 618264 | 618266 | 610457 | 618268 | 607592 | 618661 | - | |

Special vacuum "SPIRACIER" hoses with 2 rotating nuts

| Hose by the meter | 1/2 " Ø 14 | 3/4 " Ø 20 | 1 " Ø 25 | 1 " 1/4 Ø 30 | 1 " 1/2 Ø 35 | 2 " Ø 45 | 2 " 1/2 Ø 64 | DN80 | DN100 |
|-------------------|---------------|---------------|-------------|-----------------|-----------------|-------------|-----------------|--------|--------|
| Hose by the meter | 059656 | 056350 | 063088 | 056351 | 056352 | 056353 | 061707 | 063091 | 061412 |
| Fitting set * | 618271 | 618082 | 618083 | 618084 | 618085 | 618086 | 618958 | 618272 | 618273 |

^{* 2} bushings + clamps and 2 FF rotating nuts + gaskets

BRASS straight unions

| Straight unions | 1/4 " | 3/8 " | 1/2 " | 3/4 " | 1" | 1 "1/4 | 1 " 1/2 | 2" |
|-----------------|------------|-------------|------------|-----------|-----------|------------------|------------|--------|
| MM equal | 352610 | 350470 | 350473 | 350476 | 350477 | 350480 | 350482 | 350484 |
| | 3/8 - 1/4" | 1/4" - 1/2" | 1/2"- 3/4" | 3/4 "- 1" | 1"- 1"1/4 | 1"1/4 - 1"1/2 | 1"1/2 - 2" | |
| мм | 350468 | 350469 | 350474 | 353551 | 350478 | 350481 | 350483 | |

Check valve

| Check valve | 3/8 " | 1/2 " | 3/4" | 1" | 1 " 1/4 | 1 "1/2 |
|-------------------|--------|--------|--------|--------|---------|--------|
| Brass check valve | 654225 | 654226 | 654227 | 654903 | 654904 | 654905 |

Mechanical vacuum switches

- Adjustable threshold
- · Adjustable hysteresis

| Mechanical vacuum switches | | |
|----------------------------|--------------------------|--------|
| Vacuum switch | Hysteresis mini 130 mbar | 352997 |
| Vacuum switch | Hysteresis mini 30 mbar | 357549 |

Vacuum gauges

- Working pressure :
- -1/0 bar

| Vacuum gauges | |
|------------------------------|--------|
| Ø50 vertical connection 1/4" | 363032 |
| Ø63 vertical connection 1/4" | 357037 |

Vacuum solenoid valves

| References | | | | | | | | |
|--|----------------------|--|---|--------------------------------------|---------------------------|-----------------------|--|-----------------|
| | Size | G1/2 " | G3/4 | " G1 | " G1 | 1 " 1/4 | G1 "1/2 | (|
| Vacuum solenoid valve | Referen | AD-15 360023 | AD-20 36002 | | 제품 없i | D-35 5 0025 | AD-40 360026 | A 36 |
| | Tir | me - | 11 s. | 11 | s. : | 12 s. | 26 s. | 2 |
| Ball valve with electric | ER Plus Bra | ass - | 36076 | 1 3613 | 302 36 | 51337 | 361335 | 36 |
| actuator 230V - 50 Hz supply | Tir | me - | 12 s. | 12 | s. 2 | 26 s. | 26 s. | : |
| • | ER Plus Stainless st | eel - | 36116 | 4 3612 | 250 36 | 51165 | 361338 | 36 |
| La 1. 11 12.1 | Referen | nce 360873 | 360874 3608 | | 375 35 | 59528 | 360876 | 36 |
| 2-ways ball valve with pneumatic actuator | Pi | ilot electric a | electric actuator 5/2 - 230V - 50Hz | | iOHz | 359959 | | |
| immediate opening | Flow reduc | cer flow red | | | | | | |
| | Size | DN65 (2"1/2) | DN80 | DN1 | 0.000000 | N125 (5") | DN150 (6") | |
| Double acting butterfly valve | Referen | nce 360878 | 35911 | 4 3606 | 526 36 | 50627 | 360628 | |
| with pneumatic actuator | | ilot electric a | ctuator 5/ | 2 - 230V - 5 | 0Hz | 3599 | 959 | |
| immediate opening | Flow reduc | cer flow red | ucer (openi | ing / closin | g speed) | 2 x 36 | 0758 | |
| Butterfly valve with electric | Tir | me - | 12 s. | 12 | s. | - | 4 | |
| actuator 230V - 50 Hz supply | ER P | lus - | 33415 | 4 3616 | 513 | - | - | |
| Angle-seat valve, pneumatic control, immediate opening | | NC 359322 NC 359321 Banjo solenoid | 359390 359352 valve 3/2 NF - 23 359928 | 359391 359387 30V - 50 Hz 1/8" | 359354 359388 Banjo | | 359392 359389 3/2 NF - 230V - 50 9929 | 3 3 Hz 1, |
| | Size | G3/8 " | G1/2 " | G3/4 " | G1 " | G1 " 1/4 | G1 "1/2 | |
| Manual ball valve | | 350945 | 350946 | 350947 | 350948 | 350949 | 350950 | 3 |
| | Size | DN50 | DN80 | DN100 | DN125 | DN150 | | |
| Manual butterfly valve | | 361304 | 360467 | 361351 | 361347 | 361348 | | |
| | 2 | | 3 | | | | 4 | |
| | 6 | | 7 | | | | 8 | |

Home made vertical vacuum receivers



1 inlet and 1 outlet for painted version, or 2 inlets and 2 outlets in galvanized version.

Equipment included:

- 1 vacuum gauge 0 1013 mbar
- 1 manual drain valve
- 1 manual network valve

Also available in horizontal version (on request)

Dimensions (mm) and references



| Vertical vacuum receiver | Network | Dimensions (mm) | | | | | Weight | |
|------------------------------|---------|-----------------|------|-----|-----|------|--------|--|
| vertical vacuum receiver | valve | Α | В | С | D | ø | kg | |
| Painted receiver - 500 l | 1"1/4 | 1815 | 1455 | 872 | 200 | 650 | 120 | |
| Painted receiver - 1000 l | 1"1/2 | 1800 | 1450 | 850 | 170 | 850 | 210 | |
| Painted receiver - 2000 l | 2" | 2100 | 1600 | 850 | 170 | 1200 | 340 | |
| Galvanized receiver - 500 l | 1"1/4 | 2055 | 1665 | 785 | 155 | 600 | 125 | |
| Galvanized receiver - 1000 l | 1"1/2 | 2350 | 1520 | 770 | 145 | 800 | 220 | |
| Galvanized receiver - 2000 l | 2" | 2490 | 1755 | 770 | 200 | 1100 | 400 | |

| Receiver with equipment Steel painted receiver Galvanized receiver | | | 2000 l 722341 | |
|--|------------------|--------------------------------|---|--------------|
| | | | | |
| | | | Electropneumatic | . |
| Electric | | | | |
| | Electropneumatic | 710486 710613 Electropneumatic | 710486 710488 710613 710615 Electropneumatic 816002 | |

General conditions of sale and guarantee

Sales contract

GENERAL POINTS

The orders noted and the commitments taken by the Representatives or Agents, are only binding on Company MIL'S after WRITTEN ACCEPTANCE.

The orders only become final after forwarding of an acknowledgment of receipt. They imply the acceptance of the present general conditions of sale notwithstanding any contrary clauses of our customers that have not been expressly accepted

in writing.
The role of our company consists in manufacturing the equipment. It is not for it to appreciate the appropriateness of the choice of any equipment as regards its final destination or the use to which

Any information that we may be led to provide is only given in the framework of our productions and for information, and does not consist of indications regarding the choice of the equipment or the final use for which it is destined. In no case can our liability be incurred if there is no sale of equipment.

Our activity consists in manufacturing products ordered by our customers and it is not for us to appreciate the appropriateness of an order for the use to which it is destined by the purchaser

The present general conditions and the special conditions insofar as the latter are not contrary to the present general conditions and still comply with general contract law and competition law can be completed by Company MIL'S general conditions of purchase expressly accepted by the Supplier. It is the responsability of the Customer to ensure compliance with local regulatory requirements

Any derogation to the present general conditions is subject to our express and written acceptance

TRANSFER OF OWNERSHIP - RESERVATION OF OWNERSHIP

The merchandise shall remain our property up until the full payment of its price in principal and interest. Failing the payment of the price on the agreed due date, we shall be able to take back the merchandise, the sale being declared void if this seems proper to us, and the deposits already paid shall remain acquired by us in return for the enjoyment of the merchandise from which the Customer will have benefited.

The Customer becomes responsible for the merchandise as soon as it is collected from our factory, the transfer of possession leading to the transfer of risks. The Purchaser undertakes, consequently to take out, as at present, an insurance contract covering the risks of loss, theft or destruction of the merchandise

INTELLECTUAL PROPERTY AND KNOW-HOW FOR DOCUMENTS AND PRODUCTS

All intellectual property rights as well as know-how incorporated into forwarded documents, delivered products and provided services shall remain the exclusive property of Company Mil's.

STUDIES AND PROJECTS

The studies and documents of any nature passed on or sent remain entirely our property. They cannot lead to communication or to execution by a third party.

CANCELLATION OF A CONFIRMED ORDER

The cancellation or termination of an order, instigated by the customer, in the course of execution for a cause outside our control, including force majeure, shall render the customer the debtor in respect to Company Mil's of compensation that, in no case, shall be less than 20% of the amount of the order and also less than the amounts of purchases and time already spent and this, whatever be the state of play, and furthermore any deposit already paid shall be kept as cover

No merchandise can be returned to Company Mil's without the agreement of the latter

DELIVERY AND PRICE

THE DELIVERY IS DEEMED MADE IN OUR FACTORIES OR STORES. It is made by the direct handing-over to the Customer, by simple notice of availability, or by handing-over to a shipper or to a carrier appointed by the Customer or, failing such appointment, chosen

In accordance with agreement between the Parties at the time order.

The delivery times are given for information and are not guaranteed. Delivery delays do not give the Customer the right to cancel the sale or to refuse the merchandise. They cannot give rise to retention, compensation, penalty or damages.

THE PRICES ARE UNDERSTOOD TO EXCLUDE TAX FOR THE EQUIPMENT NOT PACKED TAKEN IN OUR FACTORIES OR STORES, THOSE PRICES ARE IN EUROS.

CONDITIONS OF USE

All equipment is delivered accompanied by technical instructions that we recommend should be followed. If these instructions are not attached, they will be immediately forwarded on simple

Company MIL'S may on no account be held responsible in case of installation by third party, improper or not compliant with Company MIL'S recommendations in the technical notice, neither in case of improper use of the material regarding instruction given in this technical notice.

Company MIL'S reserves the right to modify technical specifications at any time and without notice of its manufactured materials.

PAYMENT CONDITION

In case of no negotiation before ordering, the payment term is by swift transfer, within eight days, at reception of invoice, with minimum of 60 € net. (Payments are made in euros unless otherwise stipulated in the agreement).

It is expressly agreed and failing timely request for postponement and granted by us, the failure to pay our invoices after the deadline indicated on the said invoices, shall lead to:

- the immediate payability on the amounts remaining due, 2. the interests calculated at a rate equal to 15% per year and
- any legal costs.
- in accordance to the law n° 2012-387 dated 22/03/2012 and to the modification of L 441-3 article of Commerce Code: "for any payment effected after the deadline, a penalty charge will be legally due, for recovery costs, to the creditor. The amount of this charge is stated at 40 € by the Decree dated 02/10/2012.

We do not grant discount for early payment, unless it has been negotiated at the time of the order

Notification of the Customer situation:

In case the deterioration of the Customer situation is noticed by any means and/or certified by a significant delay in payment or when the financial situation is appreciably different from the available data, the delivery will be made only in compensation for an immediate payment.

TRANSPORT

All transport operations, insurance, customs, handling carried out ARE PAYABLE BY AND AT THE RISKS OF THE CUSTOMER who is responsible for checking the shipments on arrival and for taking action, if appropriate, against the carriers,

In the case of dispatch ensured by us, this shall be made carriage due, full responsibility resting with the Customer.

GUARANTEE OF THE EQUIPMENT

Except the cases of legal guarantee that one cannot be interfered with, OUR MERCHANDISE IS GUARANTEED ONE YEAR, as from the date IT IS MADE AVAILABLE, against any construction defect or any

In all cases, if the equipment is used by several teams, the period of the guarantee is necessarily reduced by half. For the compo that are not of our manufacture, we are not substituted in the conditions of guarantee of the supplier constructor.

The guarantee does not apply to replacements or to repairs that could result from normal wear of the instruments, deterioration or accidents due to a defect in surveillance or installation and improper use. Likewise are excluded from the field of application of the guarantee, deteriorations resulting from damage during transport, falls, or violent shocks.

The guarantee is limited to the free replacement, in our workshops, of the machine pieces or parts recognised as defective due to material fault or manufacturing defect, with the exclusion of labour.

The transport costs, the outward as the return journey, are to be paid by the Customer.

The guarantee ceases if the instruments are modified or repaired outside our workshops. The passage through our workshops does not lead to the extension of the period of initial guarantee of the machine. Replacement parts or remade pieces are guaranteed 6 months, as from the delivery date after our intervention. The guarantee shall not apply in the event of non-payment by the Customer and he cannot take advantage of it or postpone his payments.

LOAN OF EQUIPMENT

Company MIL'S may have to lend some material for a determined duration under conditions defined in a loan contract. At the end of the agreed period, the Customer shall notify if the material on loan will be returned or ordered.

In the absence of any notification within this period, the sale shall be deemed to be effective, as the Customer will be presumed to have accepted the delivered product.

ELIMINATION OF WASTE

"In accordance with article 18 of the decree N° 2005-829 of July 20th, 2005 relating to the composition of the electrical and electronic equipment, the Customer will be responsible for the financing and organisation of the elimination of waste from this equipment under the conditions defined in articles 21 and 22 of the said decree. In case of control, Company MIL'S may ask his Customer to send him the documents establishing he fulfils, as regard this equipment, all the obligations transferred with the sales contract.

If the Customer fails to forward these documents, he will be presumed to be liable for non-fulfilment of the obligations he is responsible for and Company MIL'S reserves the right to ask him compensation for any damage that she could suffer thereby'

INSURANCE COVERING OUR LIABILITY

Our company has taken out an insurance policy covering the pecuniary consequences of our legal liability and this in the

Civil Liability for Operations: € 10,000,000 per claim, all physical injury, and tangible and intangible losses inclusive, with:

€ 2,500,000 for "inexcusable conduct" per claim and per year of

€ 500,000 for physical injury and for tangible and intangible losses resulting from pollution, per claim and per year of insurance. € 5,000,000 for tangible and intangible losses other than from

- pollution, per claim and with the following sub-limits:

 € 300,000 for non-consecutive intangible losses per claim
 - \in 100,000 for tangible losses pertaining to property of others and consequential intangible losses, per claim.
 - € 30,000 for theft by a servant or agent per claim.

Civil Liability for Delivered Products/ Product recalls:

€ 3,000,000, all physical injury, tangible and intangible losses inclusive, per claim and per year of insurance, with: €500,000 for non-consecutive intangible losses including removal/

reinstallation expenses engaged by third parties, per claim and per year of insurance.

• 300,000 forrecall costs engaged by third parties and by the policy holder, per claim and per year of insurance.

Company MIL'S responsibility will not be engaged for amounts exceeding the guaranteed amounts, which is expressly agreed by the Customer. Company MIL'S may (if applicable) be lead to subscribe complementary guarantee, on Customer's specific request and Customer's sole expense: he will exclusively assume

In the case of disagreement relating to a delivery or its payment, the Lyon Commercial Court is the sole competent, whatever may be the sales conditions and the method of payment chosen, even in the case of proceedings against the guarantor or more than one defendant. The applicable law, regarding the seller and the buyer respective obligations, is the French law.

SPECIAL CONDITIONS

The special conditions and those that may be indicated in the documentations, quotes or prices forwarded only modify the sales conditions on the precise points to which they relate.

VIGILANCE system

The Customer must put forward, without any delay, to the vigilance system correspondent complete information about any incident, real or potential (further to decree 96/32 definition), involving a medical device provided by Company MIL'S. The Customer if necessary, will have to cooperate in the implementation of all warning measures.

TRACEABILITY

The Customer must ensure the maintenance of traceability of all the medical devices delivered by MIL'S, including devices by their own customers and dealers, in order that the information concerning the product can be obtain, at any time on Company MIL'S or any competent authorities' requirement. In accordance with 93/42/CEE directive, the records referring to traceability have to be kept, at least during the device life and anyway during five

MODIFICATION OF GENERAL CONDITIONS OF SALES AND GUARANTEE

The seller reserves the right to modify, at any time, the herein general conditions of sales and guarantee and, in such case, the modified conditions will apply to any order set after the modification date, this, even for complementary or supplementary orders referring to previous operations.

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YOUR REPRESENTATIVE :

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