



Manual de instrucciones y Mantenimiento
Operating & Maintenance instruction manual





INSTALLATION AND OPERATING INSTRUCTIONS FOR OIL-FREE COMPRESSORS



ENGLISH

INSTALLATION AND OPERATING INSTRUCTIONS FOR MGF COMPRESSORS

S and M versions – Prime and Genesi – Silenced MINI BOX, CS and SKY versions

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For further information contact your dealer or MGF :
technical service at the address tech@mgfcompressors.it. We also inform you that it is at MGF customers disposal a huge technical documentation about MGF compressors visiting our web pages at the address www.mgfcompressors.it

1. Introduction

This instruction manual has been written to simplify use and maintenance of the compressor. Strict attention should be paid to the contents of this manual to ensure a correct and economical operation of the compressor and the maximum safety for the operator. We strongly recommend the use of original spare parts which will guarantee the efficiency and service life of the compressor.

MGF S.r.l. reserves the right to make technical modifications without prior notifications.

2. CE directives conformity

Electric oil free air compressors described in this manual are manufactured in conformity with the following EC directives (see enclosed copy of the document):

| | |
|-------------|---|
| 2006/42 CE | CEE for Machines |
| 2006/95 CE | CEE for Machines |
| 2004/108 CE | CEE Electromagnetic Compatibility |
| 2009/105 CE | CEE for air receivers |
| 93/42 CE | CEE for medical devices (where applied) |

3. Warning information and symbols

In the instructions for assembly and use, as well as the packaging and the product itself, use is made of the following terms or symbols to denote data or information of special importance:

| | |
|---|--|
|  | Information, instructions and warnings for the prevention of damage to health or materialise |
|  | Caution! Dangerous electric voltage! |
|  | Caution! Hot surface |
|  | Caution! Compressor can automatically start |
|  | CE mark of compliance |
|  | Handling mark on package: fragile, handle with care |
|  | Handling mark on package: protect against moisture |
|  | Mark on package: recyclable material |

4. Transport and storage

The compressor is shipped in cardboard that protects the product from damage during transport.



Caution! Always use the original packaging to secure the compressor in the upright position.



Protect the compressor from humidity and extreme temperatures during transport and storage. A compressor in its original packaging can be stored in a warm, dry and dust free area. Max humidity: 70%. Min. Temperature -10°C, Max. Temperature: +40°C.

5. General Check

Remove compressor from the package and check that there are no evident signs or damage and immediately notify to the carrier.

6. Warranty

MGF S.r.l. makes on every compressor standard tests before selling and give warranty for a period of 12 month (starting from delivery note – warranty for 24 months for dental compressors). During the warranty period MGF S.r.l. reserve to replace or repair at its option parts damaged by faulty material or bad workmanship free of charge, this only at condition that installation and successive employ of the machine were made in respect of instructions included in the present manual. Labor is always excluded from warranty and will be debited. Moreover spares subjected to wear, assistance costs and transport costs for those parts that shows anomalies not due to manufacturing lack are excluded from warranty. Warranty will be valid only in case of presence of the MGF installation form properly filled during the installation.

7. Technical datasheet and dimensions

For technical datasheet, dimensions and weight information please check the Appendix A placed in the end of this manual.

8. Products drawings and parts list

For the detailed drawing and part list of the required model, contact your authorized dealer. Documentation is available in the MGF Technical Handbook.

9. Product information

9.1 Use for the Intended Purpose

The compressor is intended to be used for generating compressed air required for operating dental units of, for similar dental applications and other applications where oil-free compressed air is required.

Installation in medical care facilities:

In designing and constructing the compressor, allowance has been made for the requirements of medical products where applicable. Accordingly, the unit can be used for installation in medical care facilities. If the unit is installed in medical care facilities, the requirements stipulated in Directive 93/42 EEC IEC 601-1 as well as the relevant norms must be observed as applied to installation and assembly.

9.2 Use other than that for the Intended Purpose

The compressed air produced by the compressor is unsuitable for operating breathing equipment or similar facilities without additional filters required for the operating area.

- The compressors are designed to be operated in dry, ventilated rooms, ambient temperature +5 to +40 °C.
- The compressors are designed to operate with a non continuous cycle: the ratio between the ON cycle and the ON + OFF one (duty cycle) is 50% for GENESI range and 70% for PRIME range.
- Do not expose the compressor to rain. The machine must not be operated in a damp or wet environment.

Use is also prohibited in proximity to gases or combustible liquids.

- Prior to installing the compressor in medical facilities, it must be ensured that the available medium complies with the requirements stipulated for the relevant purpose in each individual case. Observe the particulars given in Appendix A "Compressors dimensions and technical datasheet".

When installing, classification and conformity rating must be carried out by the manufacturer of the ultimate product.

- When installed in medical care facilities, the electrical equipment needs special precautions regarding EMC and needs to be installed according to EMC information
- The compressor should not be used adjacent to or stacked with other equipment and if adjacent or stacked use is necessary, the compressor should be observed to verify normal operations in the configuration in which it will be used
- Please consider that mobile RF communications equipment can effect the compressor electrical equipment
- Any other use or use beyond what is specified is deemed to be not for the intended purpose. The manufacturer accepts no liability for damage resulting there from. All risk is borne solely by the operator/user.

9.3 Product Description

The compressor generates an oil-free, dry (versions with air dryers only) and filtered compressed air required for operating units or dental equipment.

10. Where to install the compressor

Room where compressor has to be installed should be large, well ventilated and protected from dust and intense cold; a dusty environment will cause damages and difficulties in operation.



If dust goes inside, it may reach the air filter, causing rapid clogging and part will be deposited over the components thereby preventing heat exchange. It is therefore evident that the cleanliness of the installation location is extremely important for the proper operation of the machine, as this will avoid excessive operation and maintenance costs.

To facilitate maintenance operations and create favorable air circulation compressor must have a good amount of free space surrounding it (Min. 30 cm). The room should be equipped with openings towards the outside placed in proximity of the floor and the ceiling, which will allow the natural circulation of the air. If this is not possible, fans or extractors must be installed

It is not necessary to provide for special foundations or bases. The machine may be simply placed on a level floor. Compressors fitted on fixed standing tanks should not be secured to the ground. MGF S.r.l. recommends installing 4 vibration-damping supports.



Climatic operating conditions:

- Temperature: from +5°C to +40°C
- Air relative humidity: max 70%

Note: The reduction of air density in relation with altitude H is directly proportional to the reduction of Outlet Air efficiency of the compressor.

Calculating formula for loss of efficiency (l/min) in relation with altitude:

$$\rho_H = \rho_0 \left(1 - \left(\frac{6,5}{288} \right) \cdot H \right)^{4,255}$$

Consider $\rho_0 = 1,226 \text{ Kg/m}^3$

H [Km]= Operating altitude of the compressor

ρ_H [Kg/m³]= Air density at altitude H

ρ_0 [Kg/m³]= Air density at sea level

11. Pressure gauges installation

For safety reasons some models are provided with pressure gauges not installed. To correctly fix them on the pressure regulator and the pressure switch, always use teflon material to avoid any air leak risk.

12. Electrical connection

The electrical supply line must stand the load indicated on the motor rating. Earthing must always be used for installer safety.



Earth connection is necessary. Before connecting the compressor to the control panel, a high sensitivity switch should be installed on the wall. Never connect the earthing wire to the neutral pole.

Electric drawing of MGF compressors are in Appendix B at the end of the manual



If any electric cable or air hose is damaged it must be immediately replaced. Electric cable may not contact hot parts of the compressor, insulation could be damaged!

13. Compressor running

Connect the electric line by plug and the compressor to the air line connecting it to the outlet placed on the filter (position number 19 - see exploded view).



Power cable with IEC connector



Direct power cable

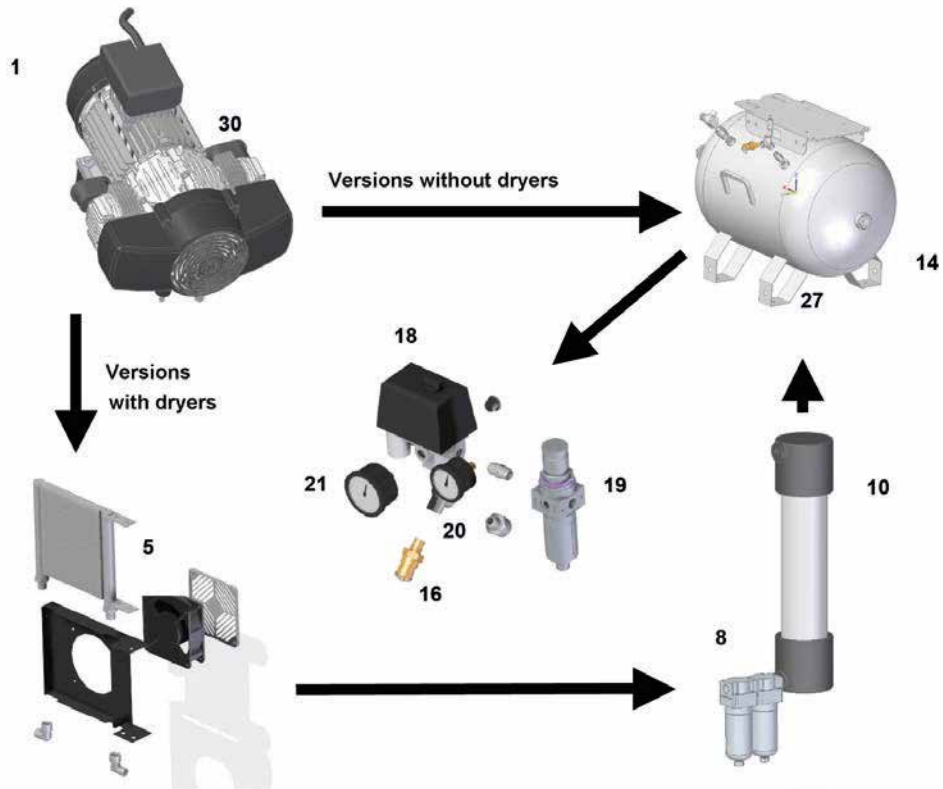


General switch

In case of soundproof cabinets versions (CS, MINI BOX) the compressor power cable (with IEC connector or direct) is the cabinet one, and the general switch is positioned on the cabinet front panel. This switch feeds both the cabinet ventilation system (permanent on MINI BOX and thermostatically controlled on CS) and the pressure switch.

Turn the switch of the pressure switch (18) in position “1”. Running of the compressor is fully automatic and controlled by the pressure switch, which stops it when pressure in the tank (14) reaches a maximum value (approximately 7 bar), allowing compressor to start again when it descends under a fixed pressure value (~5 bar). Read the receiver pressure value on pressure gauge (21). When compressor receiver is under pressure, operator may regulate operating pressure acting on the pressure regulator situated on the filter (19 – if present): to fix pressure required is necessary to rotate the hand-grip regulator in clockwise direction to increase pressure, in counter clockwise direction to reduce it and read the value on its pressure gauge (20). When delivery air pressure required is reached, push on the handgrip in order to block it.

In case you have purchased an “X” version please proceed reading till the end this manual and then refer to the appropriate D Appendix D (page 114).



M versions are equipped with membrane air dryers. The system is composed by a cooler with forced ventilation, a double 5 micron and 0,01 micron filtration system to guarantee the best air purity and a fully automatic membrane dryer.

The correct use of the compressor and the periodical maintenance of the filters (annual cartridges replacement) will guarantee to the membrane dryer a free of maintenance operating. For further details please check the Technical Handbook.

On request, it is possible to equip the compressor with a tank (2 liters capacity), with its support and connections, where convey the drain collected by the water separator.



In case of emergency , disconnect the compressor from the main supply



Compressors have hot surfaces, contact may cause burns or fire



Automatic start: compressors automatically start when minimum pressure is reached and stop when maximum pressure is reached



If during pressure regulation the handgrip doesn't move, do not force it! It's enough to pull it upside

MAINTENANCE

14. Maintenance scheduling

| Operation | Chapter | Periodicity | Performed by |
|--|--------------------|--|----------------------|
| Switch off the compressor at the end of the use | | Daily | User |
| Check that the compressor running does not exceed the max allowed duty cycle | 9.2 | Daily | User |
| Release condensate (versions without dryer or automatic drain) | 15.1 | Weekly | User |
| Suction filter replacement check/replacement | 15.2 | Yearly / Check every 500 hours | User |
| Safety valve check | 15.3 | Yearly | User |
| Periodical ordinary maintenance. Air filter cartridge replacement (if present, versions without air dryer) | 15.4 | Yearly / 1000 hours | User |
| Check the cleanliness (dust, paper or leaves) and the room air exchange for a compressor correct ventilation | | Weekly | User |
| Check the correct fans functioning | | Weekly | User |
| Check tightness of joints, overall device examination. An increased noise reports an incorrect functioning, operating in time can avoid a more serious failure | Technical Handbook | Yearly | Qualified technician |
| Cleaning/check or replacement of the non return valve pad | 15.5 | Every 2 years/ check every year | Qualified technician |
| Check that capacitor capacitance corresponds to the nominal value ($\pm 5\%$) | Technical Handbook | Every 2 years | Qualified technician |
| Periodical ordinary maintenance. Dryer air filters cartridges replacement (versions with air dryer) | 15.4 | Every 2 years/ 1.500 hours Yearly / 1000 hours for PRIME 1M and GENESI M | Qualified technician |
| Periodical extra-ordinary maintenance. Piston rings replacement - GENESI | Technical Handbook | Every 2 years/ 1.500 hours | Qualified technician |
| Periodical extra-ordinary maintenance. Piston rings replacement - PRIME | Technical Handbook | Every 4.000 hours or 4 years | Qualified technician |

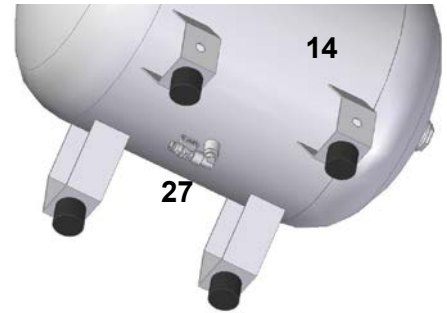
15. Ordinary maintenance periodical checks



Before performing any maintenance on the compressor make sure that the power supply is switched off. disconnect the plug after having turned in “0” position the switch of the pressure switch (pos. 18 in the exploded view). Make also sure that the air tank (14) is released of any pressure check the pressure gauge (21).

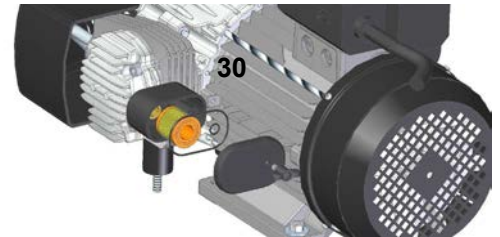
15.1 Condensate draining

Control condensate in the air tank (14). Release it at least once a week, switching off the compressor and reducing line pressure till 1 bar. Place a container under the air receiver or close to the drain system, open the drain valve (27) till the complete condensate draining.



15.2 Cleaning/replacement suction filter

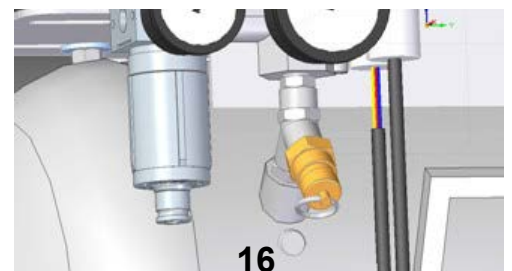
Cleaning the intake air filters (30) placed on the proper filter holder on the top of cylinders, removing the holder cover with its seals (unscrew the butterfly screw). Clean them every month with compressed air or water, replace it if necessary



In case of soundproofed versions (CS, MINI BOX or SKY) it's important to grant a regular compressor cleaning inside the cabinet or the soundproofing shel

15.3 Safety valve check

Check the proper safety valve (16) operating at the first compressor running. Pull the ring placed at the top of the safety valve, verifying the correct air exit



Warning! Safety valve must not be used to relief air from the air receiver! Always protect eyes from compressed air using eye glasses

15.4 Air line and air dryer filter cartridge replacement.

Dryer pre-filtration and line filters cartridges (if present) must be replaced according to the maintenance scheduling (Par. 14). Follow the present instructions:

- I. Disconnect the compressor from the main supply
- II. Open the air drain cock or the condensate relief from the air receiver and relief residual pressure contained in the air receiver
- III. Manually unscrew the filter receiver
- IV. Unscrew the cartridge as shown in the picture above and replace it with the new cartridge
- V. Fix again the filter receiver



Carefully place the o-ring on the lip of the filter receiver, replace the o-ring if necessary



Models with air dryer are equipped with a pressure safety valve placed before dryer filters, when it operates filters cartridges replacement is required



15.5 Replacement of the non return valve pad

Remove the valve closing nut with o'ring, spring and pad using a 22mm wrench. Check that the rubber pad is clean; if there are small metal parts or dust, remove them all and clean the flat work surface or replace the pad and secure it carefully to the spring. When finished, tighten the nut to the valve body.



16. Troubles shooting

ENGLISH

| PROBLEM | PROBABLE CAUSE | REMEDY |
|---|--|--|
| Compressor does not start, or stops and does not start again. | Bad connections. Blown fuse. Overload cut-out switch has tripped. | Check connections, verify standard line tension |
| | No tension or tension too low | Check connections, verify standard line tension |
| | Air receiver charged | Open drain valve to expel air. Compressor should start again when pressure reduces to 5 or 6 BAR (72 or 86 psi). |
| | Solenoid valve does not empty the delivery pipe | Control the solenoid valve, clean or replace it. |
| | Electric motor capacitor damaged or not properly fitted | Check the tension at the capacitor, in case replace it |
| Compressor does not reach set pressure and overheats easily. | Inlet air filter is blocked. NOTE: It is also possible that more air is being required than compressor is capable of delivering | Replace aspiration filters |
| Air leaking from pressure switch valve when compressor is not running | Faulty non-return valve | Drain the compressor from the residual pressure. Clean or replace the non return valve |
| Air leaking from pressure switch valve when compressor is not running (versions without solenoid valve) | Faulty non-return valve | Drain the compressor from the residual pressure. Clean or replace the non return valve |
| Air leaking from solenoid valve when compressor is not running (versions with solenoid valve) | Faulty non-return valve | Drain the compressor from the residual pressure. Clean or replace the non return valve |
| Air leaking from pressure switch valve when compressor is running (compressors without solenoid valve only) | Faulty pressure switch valve | Clean or replace the pressure switch valve |
| Air pressure from regulator does not adjust | Diaphragm inside regulator body is broken | Replace regulator |
| Compressor operating, but no air from outlet | Inlet air filter blocked. Pressure regulator closed. Drain valve open | Replace oil filler/air filter plug. Turn regulator clockwise to set required pressure. Close drain valve |



INSTALACIÓN E INSTRUCCIONES OPERTIVAS PARA COMPRESORES SIN ACEITE



ESPAÑOL

ESPAÑOL

INSTALACIÓN E INSTRUCCIONES OPERATIVAS PARA COMPRESORES MGF

Versiones S y M / Prime y Genesi / Silenciadas Series CS, MINI BOX y SKY

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Para más informaciones contactar con su representante o servicio técnico MGF en la dirección tech@mgfcompressors.it. También le informamos que se encuentra a disposición de los clientes de MGF una gran documentación técnica relativa a compresores MGF visitando nuestras páginas web en la dirección www.mgfcompressors.it.

1. Introducción

Este manual de instrucciones ha sido escrito para simplificar el uso y el mantenimiento del compresor. Se debe prestar suma atención a los contenidos de este manual para asegurar una operación correcta y económica del compresor y la máxima seguridad para el operador.

Recomendamos con énfasis el uso de piezas de repuesto originales lo cual va a garantizar la eficiencia y la vida útil del compresor.

MGF S.r.l. se reserva el derecho de introducir modificaciones técnicas sin notificaciones previas.




2. Conformidad con las directivas CE

Los compresores eléctricos sin aceite descritos en este manual se fabrican en conformidad con las siguientes directivas CE (ver copia incluida del documento):

| | |
|-------------|---|
| 2006/42 CE | CEE para máquinas |
| 2006/95 CE | CEE baja tensión |
| 2004/108 CE | CEE compatibilidad electromagnética |
| 2009/105 CE | CEE para receptores de aire |
| 93/42 CE | CEE para dispositivos médicos donde sea de aplicación |

3. Informaciones y símbolos de advertencia

En las instrucciones para montaje y uso, así como para empaque y sobre el mismo producto, se usan los siguientes términos o símbolos para denotar datos o información de especial importancia.

| | |
|---|--|
|  | Información, instrucciones y advertencias para la prevención de daños a la salud o a los materiales. |
|  | ¡ATENCIÓN! ¡Voltaje eléctrico peligroso! |
|  | ¡ATENCIÓN! Superficie caliente |
|  | ATENCIÓN! El compresor puede arrancar automáticamente |
|  | Marca CE de conformidad |
|  | Marca de manejo sobre el embalaje: frágil, manejar con cuidado |
|  | Marca de manejo sobre el embalaje: proteger contra humedad |
|  | Marca sobre el embalaje: material reciclable |

4. Transporte y almacenaje

El compresor es enviado en cartón que protege el producto de daños durante el transporte.



¡ATENCIÓN! Usar siempre embalaje original para asegurar el compresor en la posición vertical.



Proteger el compresor de la humedad y temperaturas extremas durante el transporte y almacenaje. Un compresor en su embalaje original puede almacenarse en un área templada, seca y sin polvo. Humedad máxima: 70%. Temperatura mínima -10oC Temperatura máxima>: +40°C.

5. Control General

Quitar el compresor del embalaje y controlar que no presente señales evidentes de daños y notificar de inmediato al transportista.

6. Garantía

MGF S.r.l. realiza sobre cada compresor pruebas estándar antes de vender y otorgarle una garantía por un período de 12 meses (comenzando desde la nota de envío - garantía por 24 meses para compresores dentales). Durante el período de garantía MGF S.r.l. se reserva el derecho de reemplazar o reparar según su criterio partes dañadas por material defectuoso o con mala elaboración sin cargo esto solo bajo la condición de que la instalación y el empleo sucesivo de la máquina se realice obedeciendo las instrucciones incluidas en el presente manual. La mano de obra se excluye siempre de la garantía y va a ser adeudada. Además, las piezas sujetas a desgaste, costos de asistencia y de transporte para aquellas piezas que muestran anomalías no debidas a fabricación defectuosa quedan excluidas de la garantía. La garantía será válida solamente en el caso de la presencia del formulario de instalación MGF correctamente llenado durante la instalación.

7. Ficha de datos técnicos y dimensiones

Para la ficha de datos técnicos, y la información sobre dimensiones y pesos, por favor controlar el Apéndice A situado al final de este manual.

8. Diseños de productos y listado de piezas

Para el diseño detallado y listado de piezas del modelo requerido, contactar con su vendedor autorizado. La documentación puede obtenerse en el Manual Técnico MGF.

9. Información del producto

Para obtener el diseño detallado y la lista de piezas del modelo requerido, póngase en contacto con su distribuidor autorizado. La documentación está disponible en el manual técnico del MGF.

9.1 Uso para los fines previstos

El compresor está destinado a ser utilizado para generar el aire comprimido requerido para operar unidades dentales, aplicaciones dentales similares y otras aplicaciones que precisan de aire comprimido libre de aceite.

Instalación en equipos de atención médica:

Al diseñar y construir el compresor, se han tenido en cuenta los requisitos de los productos médicos donde pueda aplicarse. En consecuencia, la unidad puede emplearse en equipos de atención médica. Si la unidad se instala en equipamientos médicos, deben cumplirse los requisitos establecidos en la Directiva 93/42 CEE CEI 601-1, así como las normas pertinentes respecto de su instalación y montaje.

9.2 Usos diferentes de los previstos

El aire comprimido producido por el compresor no es adecuado para el funcionamiento de equipos de respiración o equipos similares sin los filtros adicionales necesarios para el área de operación.

- Los compresores están diseñados para funcionar en ambientes secos y ventilados, a una temperatura ambiente de +5 a +40 ° C.
- Los compresores han sido diseñados para funcionar en un ciclo no continuo: la relación entre el ciclo ON y el ciclo ON + OFF (ciclo de trabajo) es del 50% para la gama GENESI y del 70% para la gama PRIME
- No exponga el compresor a la lluvia. La máquina no debe utilizarse en ambientes húmedos o mojados. Su uso también está prohibido cerca de gases o líquidos combustibles.
- Antes de instalar el compresor en equipamientos médicos, debe asegurarse que el medio disponible cumpla con los requisitos estipulados para el propósito principal de cada caso concreto. Observe las indicaciones que figuran en el Apéndice A, "Dimensiones de los compresores y ficha técnica". Cuando se efectúe la instalación, el fabricante del producto final debe evaluar su clasificación y conformidad.
- Cuando se instale en equipamientos médicos, el equipo eléctrico necesita que se tomen precauciones especiales respecto a la compatibilidad electromagnética, por lo que debe instalarse de acuerdo con la información relativa a la misma.
- El compresor no debe usarse de modo adyacente o apilado con otro equipo. En caso de que sea necesario usarlo de este modo, debe observarse el compresor para comprobar las operaciones normales en la configuración en que será utilizado.
- Tenga en cuenta que los equipos de comunicaciones móviles por radiofrecuencia pueden afectar al equipamiento eléctrico del compresor.
- Cualquier otro uso o un uso que sobrepase lo especificado se consideran ajenos a la funcionalidad prevista del aparato. El fabricante no acepta ninguna responsabilidad por los daños resultantes de los mismos. Todo riesgo en este sentido correrá a cargo exclusivamente del operador/usuario.

9.3 Descripción del producto

El compresor genera aire comprimido libre de aceite, seco (solo en versiones con secadores de aire) y filtrado, necesario para unidades operativas o equipos dentales.

10. Donde instalar el compresor

El espacio donde debe ser instalado el compresor debe ser grande bien ventilado y protegido de polvo y frío intenso un ambiente polvoriento va a causar daños y dificultades en la operación.



Si el polvo penetra en el compresor, puede alcanzar el filtro de aire, causando un taponado rápido y una parte va a depositarse sobre los componentes impidiendo de esta forma el intercambio de calor.

Por esta razón es evidente que la limpieza de la ubicación es sumamente importante para la operación adecuada de la máquina, ya que ello va a evitar costos excesivos de operación y mantenimiento.

Para facilitar las operaciones de mantenimiento y crear una favorable circulación de aire el compresor debe tener una buena cantidad de espacio libre a su alrededor (mín. 30 cm)

La habitación debe estar provista de aberturas hacia el externo colocadas cerca del piso y del cielorraso, lo cual va a facilitar la circulación natural del aire. Si ello no fuera posible, se deben instalar ventiladores o extractores.

No es necesario proveer fundamentos o bases especiales. La máquina puede colocarse sencillamente sobre el piso nivelado. Los compresores instalados sobre tanques fijos, no deben estar asegurados al piso. MGF S.r.l. recomienda la instalación de 4 soportes de amortiguación anti vibraciones.



Condiciones operativas climáticas:

- Temperaturas desde +5°C hasta +40°C
- Humedad relativa del aire: máxima 70%

Nota: La reducción de la densidad del aire en relación con la altura H es directamente proporcional a la reducción de la eficiencia de Salida de aire del compresor.

Fórmula de cálculo de la pérdida de eficiencia (l/min) en relación con la altura:

$$\rho_H = \rho_0 \left(1 - \left(\frac{6,5}{288} \right) \cdot H \right)^{4,255}$$

Considerando $\rho_0 = 1,226 \text{ Kg/m}^3$

H [Km]= Altura de funcionamiento del compresor

ρ_H [Kg/m³] = Densidad del aire a la altura H

ρ_0 [Kg/m³] = Densidad del aire a nivel del mar

11. Instalación de manómetros

Por razones de seguridad algunos modelos están equipados con manómetros no instalados. Para montarlos correctamente en el regulador de presión y en el interruptor de presión usar siempre material de teflón para evitar riesgos de fugas.

12. Conexión eléctrica

La línea de alimentación eléctrica debe resistir la carga indicada en el valor nominal del motor. Para seguridad del instalador deberá usarse siempre la conexión a tierra.



La conexión a tierra es necesaria. Antes de conectar el compresor al panel de control, se debe instalar un interruptor de alta sensibilidad en la pared. Nunca conectar el alambre de tierra al polo neutro.

El diagrama eléctrico de los compresores MGF se encuentra en el apéndice B al final del manual.



Si cualquier cable eléctrico o manguera de aire tuviera daños, deberá ser reemplazada de inmediato ¡El cable eléctrico no puede hacer contacto con partes calientes del compresor el aislamiento podría resultar dañado!

13. Operación del compresor

Conectar la línea eléctrica por medio del enchufe y el compresor a la línea de aire conectándolo a la salida colocada en el filtro (Posición número 19 - ver vista expandida).



Cable de alimentación con conector IEC



Cable de alimentación directa

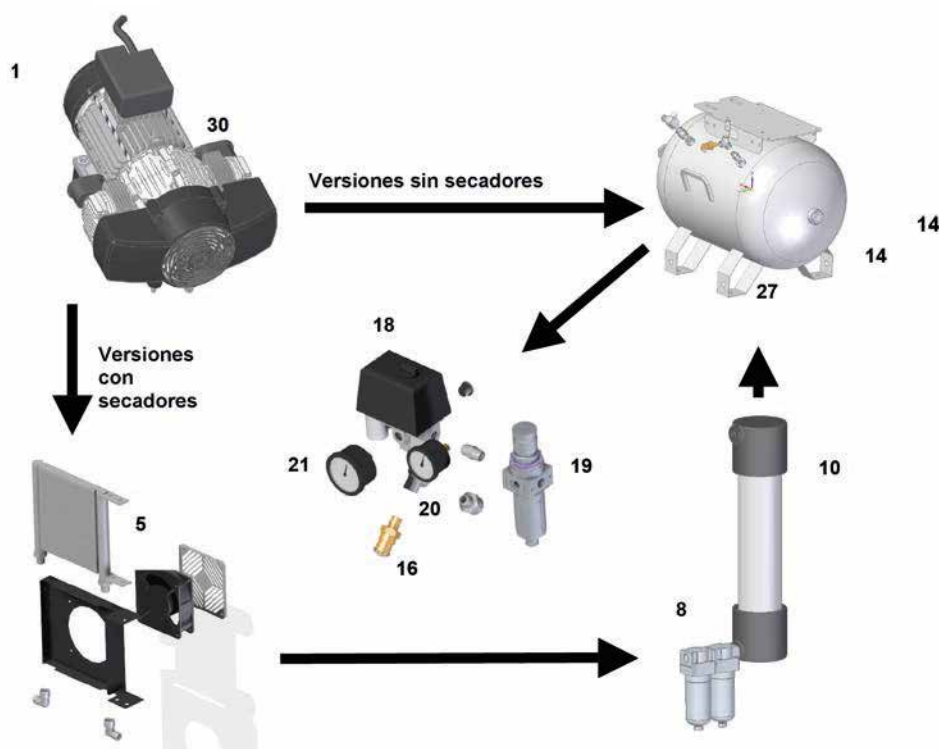


Interruptor general

En el caso de las versiones con armarios insonorizados (CS, MINI BOX), el cable de alimentación del compresor (con conector IEC o directo) es el mismo armario, y el interruptor general está situado en el panel frontal del armario. Este interruptor alimenta el sistema de ventilación del armario (permanente en MINI BOX y con control mediante termostato en CS) y el interruptor de presión.

Girar el interruptor de la presión (18) en la posición "1". La operación del compresor es totalmente automática y controlada por el interruptor de presión, que lo detiene cuando la presión en el tanque (14) alcanza un valor máximo (aproximadamente 7 bar), permitiendo que el compresor arranque nuevamente cuando desciende por debajo de un valor prefijado (~5 bar). Leer el valor de la presión del receptor en el manómetro (21).

Cuando el receptor del compresor está bajo presión, el operador puede regular la presión operativa actuando sobre el regulador de presión situado en el filtro (19 – si está presente): para fijar la presión requerida es necesario girar el regulador de manivela en el sentido horario para aumentar la presión y en el sentido anti horario para reducirla y leer el valor en su manómetro (20). Cuando se alcanza la presión requerida del aire de alimentación, apretar sobre la manivela para bloquearla. Si ha comprado una versión "X" le rogamos leer el manual hasta el final y tomar como referencia el Anexo D (página 114).



Las versiones M están equipadas con secadores de aire de membrana. El sistema está compuesto por un enfriador con ventilación forzada, un sistema de filtración doble de 5 micrones y 0,01 micrones para garantizar la mejor pureza del aire y un secador de membrana totalmente automático.

El uso correcto del compresor y el mantenimiento periódico de los filtros (substitución anual de los cartuchos) garantiza que el secador de membrana opere sin necesidad de mantenimiento. Para ulteriores detalles, por favor, controlar el Manual Técnico.

A pedido, es posible equipar el compresor con un depósito (2 litros de capacidad), con sus soportes y conexiones, donde transportar el drenaje recolectado por el separador de agua.



En caso de emergencia, desconectar el compresor de la alimentación general.



Los compresores tienen superficies calientes el contacto con las mismas puede causar quemaduras o fuego.



Arranque automático: los compresores arrancan automáticamente cuando se alcanza la presión mínima y paran cuando se alcanza la presión máxima.



¡Si durante la regulación de la presión la manija no se moviera no forzarla! Es suficiente empujarla hacia arriba.

MANTENIMIENTO

14. Programa de mantenimiento

| Operación | Capítulo | Periodicidad | Realizado por |
|--|----------------|---|---------------------|
| Desconectar el compresor al final del uso. | | Diariamente | Usuario |
| Controlar que el funcionamiento del compresor no supere el ciclo de trabajo máximo permitido | 9.2 | Diario | Usuario |
| Liberar el condensado (versiones sin secador o drenaje automático) | 15.1 | Semanalmente | Usuario |
| Reemplazo del filtro de succión. control/cambio | 15.2 | Anualmente / Control cada 500 horas | Usuario |
| Controlar la válvula de seguridad | 15.3 | Anualmente | Usuario |
| Mantenimiento ordinario periódico. Substitución del cartucho del filtro de aire (si está presente versiones sin secador de aire) | 15.4 | Anualmente / 1000 horas | Usuario |
| Controlar la limpieza (polvo, papel u hojas) y el intercambio de aire en el ambiente para una correcta ventilación del compresor | | Semanal | Usuario |
| Controlar el correcto funcionamiento de los ventiladores | | Semanal | Usuario |
| Controlar la hermeticidad de las uniones. Examen general del dispositivo. Un aumento del ruido indica un funcionamiento incorrecto, actuando a tiempo se puede impedir un fallo más grave. | Manual técnico | Anualmente | Técnico cualificado |
| Limpieza/control o reemplazo de la almohadilla% válvula de retención | 15.5 | Cada 2 años/controlar cada año | Técnico cualificado |
| Controlar que la capacidad del condensador corresponda al valor nominal ($\pm 5\%$) | Manual técnico | Cada 2 años | Técnico cualificado |
| Mantenimiento ordinario periódico. Substitución de cartuchos de filtros de aire del secador (versiones con secador de aire) | 15.4 | Cada 2 años/1,500 horas Anualmente/ 1000 horas para PRIME 1M y GENESI M | Técnico cualificado |
| Mantenimiento extraordinario periódico. Substitución de los anillos del pistón - GENESI | Manual técnico | Cada 1.500 horas o 2 años | Técnico cualificado |
| Mantenimiento extraordinario periódico. Substitución de los anillos de los pistones - PRIME | Manual técnico | Cada 4,000 horas o cada 4 años | Técnico cualificado |

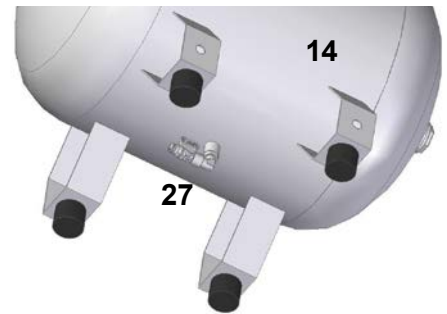
15. Controles periódicos de mantenimiento normal



Prima di accingersi a qualsiasi controllo per manutenzione assicurarsi che il compressore sia spento: disconnettere la spina dopo avere portato l'interruttore del pressostato sulla posizione "0" (18). Assicurarsi inoltre che il serbatoio (14) non sia in pressione controllando l'indicatore di pressione (21).

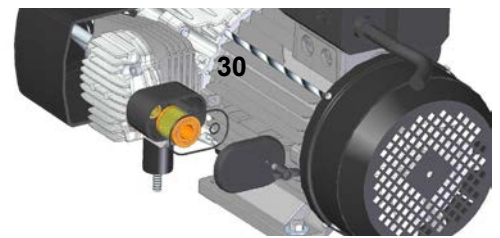
15.1 Drenaje del condensado

Controlar el condensado en el tanque del aire (14). Liberarlo por lo menos una vez por semana, desconectando el compresor y reduciendo la presión de la línea hasta 1 bar. Colocar un recipiente debajo del receptor del aire o cerrar el sistema de drenaje, abrir la válvula de drenaje (27) hasta el completo drenaje del condensado.



15.2 Limpieza/Substitución del filtro de succión

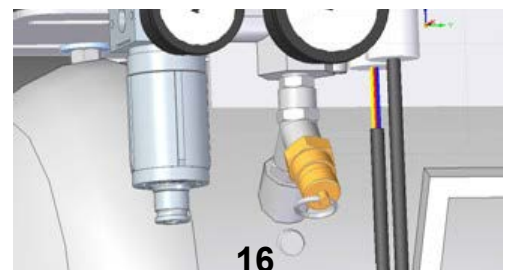
Limpiar los filtros de toma de aire (30) colocados en el soporte del filtro correspondiente en el tope de los cilindros, quitando la cubierta del soporte con sus sellos (desenrosque el tornillo de mariposa). Limpiarlos cada mes con aire comprimido o agua, reemplazarlos si fuera necesario.



En los casos de versiones insonorizadas (CS, MINI BOX o SKY) es importante garantizar la limpieza periódica del compresor en el interior de la cabina o de la carcasa insonorizante.

15.3 Control de la válvula de seguridad

Controlar la válvula de seguridad (16) de forma apropiada operando en la primera operación del compresor. Estirar el anillo colocado en el tope de la válvula de seguridad, verificando la salida correcta del aire.



¡Advertencia! La válvula de seguridad no debe usarse para el alivio del aire del receptor de aire! Proteger siempre los ojos del aire con gafas de protección.

15.4 Substitución del cartucho del filtro de la línea de aire y del secador de aire.

Los cartuchos de pre-filtrado y de línea del secador (si está presente) deben cambiarse según la ficha de mantenimiento (Pár. 14). Seguir las presentes instrucciones:

- I. Desconectar el compresor de la alimentación principal.
- II. Abrir la canilla de drenaje o el alivio del condensado desde el receptor de aire y aliviar la presión residual contenida en el receptor de aire.
- III. Destornillar manualmente el receptor de aire.
- IV. Destornillar el cartucho tal como se muestra en la foto de más arriba y reemplazarlo con un cartucho nuevo.
- V. Fijar nuevamente el receptor del filtro.



Colocar con cuidado el O-ring en el reborde del receptor del filtro, substituir el O-Ring si fuera



Los modelos con secador de aire están equipados co una válvula de seguridad de presión colocada antes de los filtros secadores, cuando la misma opera, es necesario reemplazar los cartuchos del filtro.



15.5 Sustitución de la almohadilla válvula de retención

Quitar la válvula cerrando la tuerca con junta tórica, muelle y almohadilla usando una llave de 22 mm. Controlar que la almohadilla de caucho esté limpia; si hay pequeñas partes metálicas o polvo, quitarlos y limpiar la superficie de trabajo plana o reemplazar la almohadilla y asegurarla cuidadosamente al muelle.

Al finalizar, ajustar la tuerca al cuerpo de la válvula.



16. DETECCIÓN Y ELIMINACIÓN DE FALLAS

| PROBLEMA | CAUSA PROBABLE | SOLUCIÓN |
|---|--|---|
| El compresor no arranca o para y no vuelve a arrancar. | Conexiones con defectos. Fusible quemado. El interruptor de interrupción por sobrecarga se ha desconectado | Controlar todas las conexiones eléctricas Limpiar y apretar donde fuere necesario |
| | No hay tensión o la tensión es demasiado baja | Controlar las conexiones, verificar la tensión de la línea estándar |
| | Receptor de aire cargado | Abrir la válvula de drenaje para expulsar el aire. El compresor debe partir nuevamente cuando la presión se reduce a 5 o 6 BAR (72 o 86 psi). |
| | La válvula de solenoide no vacía el tubo de envío | Controlar la válvula de solenoide, limpiarla, o reemplazarla. |
| El compresor no logra comprimir o lo hace con un rendimiento muy bajo | Capacitor del motor eléctrico dañado o no instalado correctamente. | Controlar la tensión en el capacitor, si fuera el caso, reemplazarlo. |
| | Válvula del compresor con falla | Substituir todo el bloque de válvulas incluyendo las juntas. |

| PROBLEMA | CAUSA PROBABLE | SOLUCIÓN |
|--|---|---|
| El compresor no logra comprimir o lo hace con un rendimiento muy bajo | Anillo del pistón del compresor gastado | Verificar el rendimiento del compresor y substituir los anillos del pistón |
| Fuga de aire de la válvula del interruptor de presión cuando el compresor no está operando. | Válvula de no retorno con falla | Primeramente drenar por completo todo el aire del receptor Limpiar o substituir la válvula de no retorno |
| Pérdida de aire desde la válvula del interruptor de presión cuando el compresor está operando (solamente en compresores sin válvula de solenoide). | Falla de la válvula de interrupción de la presión. | Limpiar o reemplazar la válvula de interrupción de presión |
| Pérdida de aire de la válvula solenoide cuando el compresor no está funcionando. | Fallo en la válvula de retención | Drenar el compresor de la presión residual. Limpiar o reemplazar la válvula de retención |
| Pérdida de aire de la válvula solenoide cuando el compresor no está funcionando (versiones con válvula solenoide). | Fallo en la válvula de retención | Drenar el compresor de la presión residual. Limpiar o reemplazar la válvula de retención |
| Pérdida de aire de la válvula solenoide cuando el compresor no está funcionando (versiones con válvula solenoide). | Fallo en la válvula de retención | Drenar el compresor de la presión residual. Limpiar o reemplazar la válvula de retención |
| La presión del aire desde el regulador no se ajusta. | El diafragma dentro del cuerpo del regulador está roto. | Reemplazar el regulador. |
| El compresor opera, pero no sale aire de la salida. | El filtro del aire de entrada está bloqueado. El regulador de presión está cerrado. La válvula de drenaje está abierta. | Reemplazar el cargador de aceite/tapón del filtro de aire. Girar el regulador en el sentido horario para configurar la presión exigida. Cerrar la válvula de drenaje. |
| La válvula de seguridad colocada antes de los filtros del secador está activa | Los filtros están bloqueados y existe una condición de sobre presión en el tubo de envío. | Reemplazar los cartuchos de los filtros del secador. |
| El motor eléctrico se corta durante la operación normal. | La sonda de temperatura del motor eléctrico desconecta el compresor para proteger el motor. | Temperatura demasiado alta: verificar las condiciones generales. |
| El interruptor térmico para el compresor bajo condiciones estándar | - El interruptor térmico está dañado - Problema con los anillos del pistón - Motor eléctrico dañado | - Sustituir el interruptor térmico - Controlar las condiciones de los anillos - Controlar si el arranque del compresor es regular, reemplazar el motor. |

Para más detalles sobre problemas, por favor, tomar nota detallada de si las instrucciones operativas están disponibles pregunte por las misas o descargarlas del sitio web de MGF

www.mgfcompressors.com.

En caso de necesidad, contactar con el fabricante.

APPENDICE A

Appendix A

- **Dimensioni e caratteristiche tecniche - Dimensions and technical datasheet**

Professional line: dimensions – weight – air receiver - noise level

| Modello - Model | L (mm) | D (mm) | H (mm) | W (Kg) | Air receiver (L –Gal) | NOISE (db/1m) |
|------------------------------|---------------|---------------|---------------|---------------|------------------------------|----------------------|
| JOKER 5/10 GENESI S | 550 | 300 | 390 | 20-23 | 5-1.3 | 65 |
| MOBILE 25/5 – 10 GENESI S | 510 | 600 | 830 | 33-36 | 25-6.5 | 65 |
| PRO 25/5 - 10 GENESI CAR S | 580 | 320 | 600 | 31-33 | 25-6.5 | 65 |
| PRO 50/10 GENESI CAR S | 940 | 400 | 600 | 41 | 25-6.5 | 65 |
| SKY PRO 25/5-10 GENESI CAR S | 600 | 450 | 750 | 34-37 | 50-13.21 | 55 |
| SKY PRO 50/10 GENESI CAR S | 950 | 450 | 830 | 55 | 50-13.21 | 55 |
| MOBILE 25/7 PRIME S | 510 | 600 | 830 | 36 | 25-6.5 | 65 |
| MOBILE 25/15 PRIME S | 510 | 600 | 830 | 42 | 25-6.5 | 66 |
| MOBILE 25/25 PRIME S | 510 | 600 | 830 | 49 | 25-6.5 | 66 |
| PRO 25/7 PRIME CAR S | 580 | 320 | 600 | 34 | 25-6.5 | 65 |
| PRO 50/15 PRIME CAR S | 950 | 400 | 600 | 45 | 50-13.21 | 66 |
| PRO 50/25 PRIME CAR S | 950 | 400 | 600 | 60 | 50-13.21 | 66 |
| PRO 100/25 PRIME CAR S | 1200 | 500 | 750 | 80 | 100-26.42 | 66 |
| SKY PRO 25/7 PRIME S | 600 | 450 | 750 | 36 | 25-6.5 | 55 |
| SKY PRO 50/15 PRIME CAR S | 950 | 450 | 830 | 49 | 50-13.21 | 56 |

Medical line: dimensions – weight – air receiver - noise level

| Modello - Model | L (mm) | D (mm) | H (mm) | W (Kg) | Air receiver (L –Gal) | NOISE (db/1m) |
|------------------------|---------------|---------------|---------------|---------------|------------------------------|----------------------|
| 24/5 - 24/10 GENESI S | 430 | 400 | 600 | 29 | 24-6.34 | 65 |
| 30/5 - 30/10 GENESI S | 390 | 570 | 620 | 34 | 30-7.92 | 65 |
| 50/10 GENESI S | 380 | 400 | 890 | 48 | 50-13.21 | 65 |
| 30/5 - 30/10 GENESI M | 430 | 570 | 630 | 36 | 30-7.92 | 65 |
| 50/10 GENESI M | 520 | 680 | 900 | 50 | 50-13.21 | 65 |
| 30/7 PRIME S | 430 | 400 | 600 | 29 | 24-6.34 | 65 |
| 50/15 PRIME S | 600 | 410 | 770 | 46 | 40-10.57 | 66 |
| 50/25 PRIME S | 600 | 410 | 810 | 54 | 40-10.57 | 66 |
| 100/30 TANDEM PRIME S | 1100 | 600 | 810 | 97 | 90-23.77 | 69 |
| 100/50 TANDEM PRIME S | 1100 | 600 | 820 | 113 | 90-23.77 | 69 |
| 30/7 PRIME M | 500 | 470 | 600 | 39 | 24-6.34 | 65 |

| | | | | | | |
|------------------------|------|------|------|-----|-----------|----|
| 50/15 PRIME M | 710 | 410 | 770 | 50 | 40-10.57 | 66 |
| 50/25 PRIME M | 710 | 410 | 810 | 58 | 40-10.57 | 66 |
| 100/30 TANDEM PRIME M | 1100 | 600 | 810 | 102 | 90-23.77 | 69 |
| 100/50 TANDEM PRIME M | 1100 | 600 | 820 | 118 | 90-23.77 | 69 |
| 200/75 PRIME S | 1100 | 600 | 910 | 173 | 200-52.83 | 72 |
| 200/75 PRIME M | 1450 | 820 | 900 | 183 | 200-52.83 | 72 |
| 270/100 TANDEM PRIME S | 1560 | 1000 | 1030 | 220 | 270-71.3 | 75 |
| 270/100 TANDEM PRIME M | 1560 | 1000 | 1030 | 240 | 270-71.3 | 75 |
| 500/150 PRIME S | 1980 | 780 | 1050 | 330 | 500-132 | 78 |

Medical line – Silenced SKY: dimensions – weight – air receiver - noise level

| Modello – Model | L (mm) | D (mm) | H (mm) | W (Kg-IB) | Air receiver (L –Gal) | NOISE (db/1m) |
|---------------------------|---------------|---------------|---------------|------------------|------------------------------|----------------------|
| SKY 50/10 GENESI S | 600 | 460 | 890 | 42-93 | 40-10.5 | 55 |
| SKY 50/15 PRIME S | 600 | 460 | 890 | 50-111 | 40-10.5 | 56 |
| SKY 100/30 TANDEM PRIME S | 1100 | 750 | 910 | 105-232 | 90-23.77 | 62 |
| SKY 50/10 GENESI M | 710 | 460 | 890 | 46-102 | 40-10.5 | 55 |
| SKY 50/15 PRIME M | 710 | 460 | 890 | 54-119 | 40-10.5 | 56 |
| SKY 100/30 TANDEM PRIME M | 1100 | 750 | 910 | 110-243 | 90-23.77 | 62 |






Medical line – Silenced CS: dimensions – weight – air receiver - noise level

| Modello - Model | L (mm) | D (mm) | H (mm) | W (Kg-IB) | Air receiver (L –Gal) | NOISE (db/1m) |
|-------------------------------------|---------------|---------------|---------------|------------------|------------------------------|----------------------|
| MINI BOX 24/5 GENESI S | 530 | 500 | 800 | 65-143 | 24-6.34 | 50 |
| MINI BOX 24/10 GENESI S | 530 | 500 | 800 | 65-143 | 24-6.34 | 50 |
| MINI BOX 24/10 GENESI M | 530 | 500 | 800 | 67-147 | 24-6.34 | 50 |
| MINI BOX 24/7 PRIME S | 530 | 500 | 800 | 65-143 | 24-6.34 | 50 |
| MINI BOX 24/7 PRIME M | 530 | 500 | 800 | 67-148 | 24-6.34 | 50 |
| CS 30/15 PRIME S – CS 30/15 PRIME M | 490 | 720 | 890 | 94/98-207/216 | 40-10.57 | 53 |
| CS 50/25 PRIME S – CS 50/25 PRIME M | 490 | 720 | 890 | 102/106-225/233 | 40-10.57 | 53 |
| CS 100/30 TANDEM PRIME S | 1245 | 725 | 1020 | 210-462 | 90-23.77 | 56 |
| CS 100/50 TANDEM PRIME S | 1245 | 725 | 1020 | 220-485 | 90-23.77 | 56 |
| CS 100/30 TANDEM PRIME M | 1245 | 725 | 1020 | 215-473 | 90-23.77 | 56 |
| CS 100/50 TANDEM PRIME M | 1245 | 725 | 1020 | 225-495 | 90-23.77 | 56 |

Medical line, ASPIR-COMP VERSIONS: dimensions – weight – air receiver - noise level






| Modello - Model | L (mm) | D (mm) | H (mm) | W (Kg-LB) | Air receiver (L –Gal) | NOISE (db/1m) |
|----------------------------|--------|--------|--------|-----------|-----------------------|---------------|
| ASPIR-COMP 24/10 GENESI S | 530 | 500 | 1300 | 110-242 | 24-6,43 | 52 |
| ASPIR-COMP 24/10 GENESI M | 530 | 500 | 1300 | 112-247 | 24-6,43 | 52 |
| ASPIR-COMP 24/10 GENESI SC | 530 | 500 | 1300 | 110-242 | 24-6,43 | 52 |
| ASPIR-COMP 24/10 GENESI MC | 530 | 500 | 1300 | 112-247 | 24-6,43 | 52 |
| ASPIR-COMP 30/15 PRIME S | 490 | 750 | 1550 | 120-264 | 40-10.4 | 55 |
| ASPIR-COMP 30/15 PRIME M | 490 | 750 | 1550 | 122-268 | 40-10.4 | 55 |
| ASPIR-COMP 30/15 PRIME SC | 490 | 750 | 1550 | 130-286 | 40-10.4 | 55 |
| ASPIR-COMP 30/15 PRIME MC | 490 | 750 | 1550 | 132-291 | 40-10.4 | 55 |
| ASPIR-COMP 30/25 PRIME S | 490 | 750 | 1550 | 125-275 | 40-10.4 | 55 |
| ASPIR-COMP 30/25 PRIME M | 490 | 750 | 1550 | 127-279 | 40-10.4 | 55 |
| ASPIR-COMP 30/25 PRIME SC | 490 | 750 | 1550 | 135-297 | 40-10.4 | 55 |
| ASPIR-COMP 30/25 PRIME MC | 490 | 750 | 1550 | 137-302 | 40-10.4 | 55 |

Professional line: technical characteristics






| Modello Model |  LT/MIN (CFM) |  LT/MIN (CFM) |  BAR PSI |  kW Hp |  VOLT/HZ | Max Current absorption (A) | Electric supply Main switch Curve D (A) | RPM |
|---------------|--|--|---|---|---|----------------------------|---|-----|
|---------------|--|--|---|---|---|----------------------------|---|-----|

| | | | | | | | | |
|--|-------------------------------------|--|----------|--------------|-------------------------------|-------------------|-----------------|----------------------|
| JOKER 5/5, MOBILE 25/5, GENESI S | 77 (2,7) 85 (3,0) | 130 (4,59) 156 (5,50) | 8 116 | 0,55 0,75 | 230/50 220/60 | 3,8 4,5 | 6 6 | 1380 1700 |
| JOKER 5/10, MOBILE 25/10, 50/10 GENESI S CAR | 135 (4,8) 145 (5,1) | 182 (6,4) 218 (7,7) | 8 116 | 1,1 1,5 | 230/50 220/60 | 6,2 6,8 | 8 8 | 1370 1700 |
| MOBILE 25/7, PRO 25/7 CAR PRIME S | 85 (3,0) 95 (3,3) | 120 (4,2) 140 (4,9) | 8 116 | 0,75 1 | 230/50 220/60 | 6,0 8,5 | 8 10 | 1400 1760 |
| MOBILE 25/15, PRO 50/15 CAR PRIME S | 170 (6,0) 185 (6,5) 170 (6,0) | 240 (8,5) 280 (9,8) 240 (8,5) | 8 116 | 1,5 2 | 230/50 220/60 400/50 3P | 10,2 12 4,3 | 10 14 6 | 1360 1760 1470 |
| MOBILE 25/25, PRO 50/25 CAR PRO 100/25 CAR PRIME S | 250 (8,8) 270 (9,5) 250 (8,8) | 360 (12,8) 420 (14,8) 360 (12,8) | 8 116 | 2,2 3 | 230/50 220/60 400/50 3P | 14,3 16 6 | 14 16 6,3 | 1350 1800 1470 |
| PRO 200/50 PRIME S | 450 (15,8) | 720 (25,6) | 8 116 | 5,5 7,3 | 400/50 3P | 11,9 | 14 | 1450 |
| PRO 270/100 TANDEM PRIME S | 900 (31,6) | 1440 (51,2) | 8 116 | 11 14,6 | 400/50 3P | 23,8 | 28 | 1450 |
| PRO 500/150 PRIME S | 1350 (47,4) | 2160 (76,8) | 8 116 | 16,5 21,9 | 400/50 3P | 35,7 | 40 | 1450 |

Medical line: technical characteristics

| Modello Model |  LT/MIN (CFM) |  LT/MIN (CFM) |  BAR PSI |  kW Hp |  VOLT/HZ | Max Current absorption (A) | Electric supply Main switch Curve D (A) | RPM |
|----------------------------------|---|---|--|--|---|-------------------------------------|---|----------------------|
| 24/5, 30/5, GENESI S | 77 (2,7) 85 (3,0) | 130 (4,59) 156 (5,50) | 7 101 | 0,55 0,75 | 230/50 220/60 | 3,8 4,5 | 6 6 | 1380 1700 |
| 24/7 PRIME S | 85 (3,0) 95 (3,3) | 120 (4,2) 140 (4,9) | 7 101 | 0,75 1 | 230/50 220/60 | 6 8,5 | 8 10 | 1320 1760 |
| 24/10, 30/10, 50/10 GENESI S | 135 (4,8) 145 (5,1) | 182 (6,4) 218 (7,7) | 7 101 | 1,1 1,5 | 230/50 220/60 | 6,2 6,8 | 8 8 | 1370 1700 |
| 30/7 PRIME S | 85 (3,0) 95 (3,3) | 120 (4,2) 140 (4,9) | 7 101 | 0,75 1 | 230/50 220/60 | 6 8,5 | 8 10 | 1320 1760 |
| 50/15 PRIME S | 170 (6,0) 185 (6,5) 170 (6,0) | 240 (8,5) 280 (9,8) 240 (8,5) | 7 101 | 1,5 2 | 230/50 220/60 400/50 3P | 10,2 12 4,3 | 10 14 6 | 1360 1760 1470 |
| 50/25 PRIME S | 250 (8,8) 270 (9,5) 250 (8,8) | 360 (12,8) 420 (14,8) 360 (12,8) | 7 101 | 2,2 3 | 230/50 220/60 400/50 3P | 14,3 16,0 6 | 14 16 6,3 | 1350 1800 1470 |
| 100/30 TANDEM PRIME S | 340 (12,0) 370 (13,0) 340 (12,0) | 480 (17,0) 560 (19,6) 480 (17,0) | 7 101 | 3 4 | 230/50 220/60 400/50 3P | 20,4 24 8,6 | 22 26 10 | 1360 1760 1470 |
| 100/30 TANDEM PRIME S WITH DT | 340 (12,0) 370 (13,0) 340 (12,0) | 480 (17,0) 560 (19,6) 480 (17,0) | 7 101 | 3 4 | 230/50 220/60 400/50 3P | 20,4 24 8,6 | 22 26 10 | 1360 1760 1470 |
| 100/50 TANDEM PRIME S | 500 (17,6) 540 (19,0) 500 (17,6) | 720 (25,6) 840 (29,6) 720 (25,6) | 7 101 | 4,4 6 | 230/50 220/60 400/50 3P | 28,6 32 12 | 32 32 14 | 1350 1800 1470 |
| 200/75 PRIME S | 750 (26,4) | 1080 (38,5) | 7 101 | 6,6 9 | 400/50 3P | 18 | 32 | 1470 |
| 24/7 PRIME M | 78 (2,7) 87 (3,0) | 120 (4,2) 140 (4,9) | 7 101 | 0,75 1 | 230/50 220/60 | 6,1 8,6 | 8 10 | 1320 1760 |
| 24/10, 50/10 GENESI M | 120 (3,8) 129 (4,5) | 182 (6,4) 218 (7,7) | 7 101 | 1,1 1,5 | 230/50 220/60 | 6,3 6,9 | 8 8 | 1370 1700 |
| 30/7 PRIME M | 78 (2,7) 87 (3,0) | 120 (4,2) 140 (4,9) | 7 101 | 0,75 1 | 230/50 220/60 | 6,1 8,6 | 8 10 | 1320 1760 |
| 30/15, 40/15, 50/15 PRIME M | 152 (5,3) 165 (5,8) 152 (5,3) | 240 (8,5) 280 (9,8) 240 (8,5) | 7 101 | 1,5 2 | 230/50 220/60 400/50 3P | 10,3 12,1 4,4 | 10 14 6 | 1360 1760 1470 |
| 50/25 PRIME M | 225 (7,9) 243 (8,6) 225 (7,9) | 360 (12,8) 420 (14,8) 360 (12,8) | 7 101 | 2,2 3 | 230/50 220/60 400/50 3P | 14,4 16,1 6,1 | 14 16 6,3 | 1350 1800 1470 |
| 100/30 TANDEM PRIME M | 304 (10,7) 330 (11,6) 304 (10,7) | 480 (17,0) 560 (19,6) 480 (17,0) | 7 101 | 3 4 | 230/50 220/60 400/50 3P | 20,6 24,2 8,8 | 22 26 10 | 1360 1760 1470 |
| 100/30 TANDEM PRIME M WITH DT | 304 (10,7) 330 (11,6) 304 (10,7) | 480 (17,0) 560 (19,6) 480 (17,0) | 7 101 | 3 4 | 230/50 220/60 400/50 3P | 20,6 24,2 8,8 | 22 26 10 | 1360 1760 1470 |
| 100/50 TANDEM PRIME M | 450 (15,9) 486 (17,1) 450 (15,9) | 720 (25,6) 840 (29,6) 720 (25,6) | 7 101 | 4,4 6 | 230/50 220/60 400/50 3P | 28,8 32,2 12,2 | 32 32 14 | 1350 1800 1470 |
| 200/75 PRIME M | 660 (30,2) | 1080 (38,5) | 7 101 | 6,6 9 | 400/50 3P | 18,3 | 20 | 1470 |
| 270/100 TANDEM PRIME S | 900 (31,6) | 1440 (51,2) | 7 101 | 10 13,6 | 400/50 3P | 20 | 25 | 1450 |
| 270/100 TANDEM PRIME M | 780 (27,5) | 1440 (51,2) | 7 101 | 10 13,6 | 400/50 3P | 20,4 | 25 | 1450 |

Medical line, ASPIR-COMP VERSIONS: technical characteristics

| Modello Model |  l/min (cfm) |  l/min cfm |  bar PSI |  kW Hp |  Volt/Hz | Max Current absorption (A) | Electric supply Main switch Curve D (A) | RPM |
|----------------------------------|--|--|---|--|--|--|--|--|
| ASPIR-COMP 24/10 GENESI S | 135 (4,8) 145 (5,1) | 182 (6,4) 218 (7,7) | 7 101 | 1,1 (C) + 0,85 (A) 1,5 (C) + 1 (A) | 230/50 220/60 | 6,8 (C) + 5 (A) 7 (C) + 5,8 (A) | 14 (C+A) 14 (C+A) | 1370 (C); 2780 (A) 1650 (C); 3330 (A) |
| ASPIR-COMP 24/10 GENESI M | 120 (3,8) 129 (4,5) | 182 (6,4) 218 (7,7) | 7 101 | 1,1 (C) + 0,85 (A) 1,5 (C) + 1 (A) | 230/50 220/60 | 6,8 (C) + 5 (A) 7 (C) + 5,8 (A) | 14 (C+A) 14 (C+A) | 1370 (C); 2780 (A) 1650 (C); 3330 (A) |
| ASPIR-COMP 24/10 GENESI SC | 135 (4,8) 145 (5,1) | 182 (6,4) 218 (7,7) | 7 101 | 1,1 (C) + 0,55 (A) 1,5 (C) + 0,75 (A) | 230/50 220/60 | 6,8 (C) + 3,5 (A) 7 (C) + 4,5 (A) | 14 (C+A) 14 (C+A) | 1370 (C); 2780 (A) 1650 (C); 3330 (A) |
| ASPIR-COMP 24/10 GENESI MC | 120 (3,8) 129 (4,5) | 182 (6,4) 218 (7,7) | 7 101 | 1,1 (C) + 0,55 (A) 1,5 (C) + 0,75 (A) | 230/50 220/60 | 6,8 (C) + 3,5 (A) 7 (C) + 4,5 (A) | 14 (C+A) 14 (C+A) | 1370 (C); 2780 (A) 1650 (C); 3330 (A) |
| ASPIR-COMP 30/15 PRIME S | 170 (6,0) 185 (6,5) 170 (6,0) | 240 (8,5) 280 (9,8) 240 (8,5) | 7 101 | 1,5 (C) + 1,3 (A) 2 (C) + 1,75 (A) | 230/50 220/60 400/50 3P | 10,5 (C) + 7,3 (A) 12,3 (C) + 7,8 (A) 4,6 (C) + 3,8 (A) | 18 (C+A) 20 (C+A) 10 (C+A) | 1360 (C); 2780 (A) 1760 (C); 3330 (A) 1470 (C); 2780 (A) |
| ASPIR-COMP 30/15 PRIME M | 152 (5,3) 165 (5,8) 152 (5,3) | 240 (8,5) 280 (9,8) 240 (8,5) | 7 101 | 1,5 (C) + 1,3 (A) 2 (C) + 1,75 (A) | 230/50 220/60 400/50 3P | 10,6 (C) + 7,3 (A) 12,4 (C) + 7,8 (A) 4,7 (C) + 3,8 (A) | 18 (C+A) 20 (C+A) 10 (C+A) | 1360 (C); 2780 (A) 1760 (C); 3330 (A) 1470 (C); 2780 (A) |
| ASPIR-COMP 30/15 PRIME SC | 170 (6,0) 185 (6,5) 170 (6,0) | 240 (8,5) 280 (9,8) 240 (8,5) | 7 101 | 1,5 (C) + 1,1 (A) 2 (C) + 1,5 (A) | 230/50 220/60 400/50 3P | 10,5 (C) + 5,2 (A) 12,3 (C) + 5,6 (A) 4,6 (C) + 2,5 (A)* | 20 (C+A) 22 (C+A) 10 (C+A*) | 1360 (C); 2780 (A) 1760 (C); 3330 (A) 1470 (C); 2780 (A) |
| ASPIR-COMP 30/15 PRIME MC | 152 (5,3) 165 (5,8) 152 (5,3) | 240 (8,5) 280 (9,8) 240 (8,5) | 7 101 | 1,5 (C) + 1,1 (A) 2 (C) + 1,5 (A) | 230/50 220/60 400/50 3P | 10,6 (C) + 5,2 (A) 12,4 (C) + 5,6 (A) 4,7 (C) + 2,5 (A)* | 20 (C+A) 22 (C+A) 10 (C+A*) | 1360 (C); 2780 (A) 1760 (C); 3330 (A) 1470 (C); 2780 (A) |
| ASPIR-COMP 30/25 PRIME S | 250 (8,8) 270 (9,5) 250 (8,8) | 360 (12,8) 420 (14,8) 360 (12,8) | 7 101 | 2,2 (C) + 1,5 (A) 3 (C) + 2 (A) | 230/50 220/60 400/50 3P | 14,6 (C) + 9 (A) 16,3 (C) + 9,5 (A) 6,3 (C) + 4,3 (A) | 24 (C+A) 26 (C+A) 13 (C+A) | 1350 (C); 2780 (A) 1350 (C); 3330 (A) 1470 (C); 2780 (A) |
| ASPIR-COMP 30/25 PRIME M | 225 (7,9) 243 (8,6) 225 (7,9) | 360 (12,8) 420 (14,8) 360 (12,8) | 7 101 | 2,2 (C) + 1,5 (A) 3 (C) + 2 (A) | 230/50 220/60 400/50 3P | 14,7 (C) + 9 (A) 16,4 (C) + 9,5 (A) 6,4 (C) + 4,3 (A) | 24 (C+A) 26 (C+A) 13 (C+A*) | 1350 (C); 2780 (A) 1350 (C); 3330 (A) 1470 (C); 2780 (A) |
| ASPIR-COMP 30/25 PRIME SC | 250 (8,8) 270 (9,5) 250 (8,8) | 360 (12,8) 420 (14,8) 360 (12,8) | 7 101 | 2,2 (C) + 1,5 (A) 3 (C) + 2 (A) | 230/50 220/60 400/50 3P | 14,6 (C) + 9 (A) 16,3 (C) + 10 (A) 6,3 (C) + 4,3 (A) | 29 (C+A) 31 (C+A) 16 (C+A) | 1350 (C); 2780 (A) 1350 (C); 3330 (A) 1470 (C); 2780 (A) |
| ASPIR-COMP 30/25 PRIME MC | 225 (7,9) 243 (8,6) 225 (7,9) | 360 (12,8) 420 (14,8) 360 (12,8) | 7 101 | 2,2 (C) + 1,5 (A) 3 (C) + 2 (A) | 230/50 220/60 400/50 3P | 14,7 (C) + 9 (A) 16,4 (C) + 10 (A) 6,3 (C) + 4,3 (A) | 29 (C+A) 31 (C+A) 16 (C+A) | 1350 (C); 2780 (A) 1350 (C); 3330 (A) 1470 (C); 2780 (A) |

Notes:

(C): COMP

(A): ASPIR

*Data related to EXCOM hybrid 2 3phase 400V (old style)

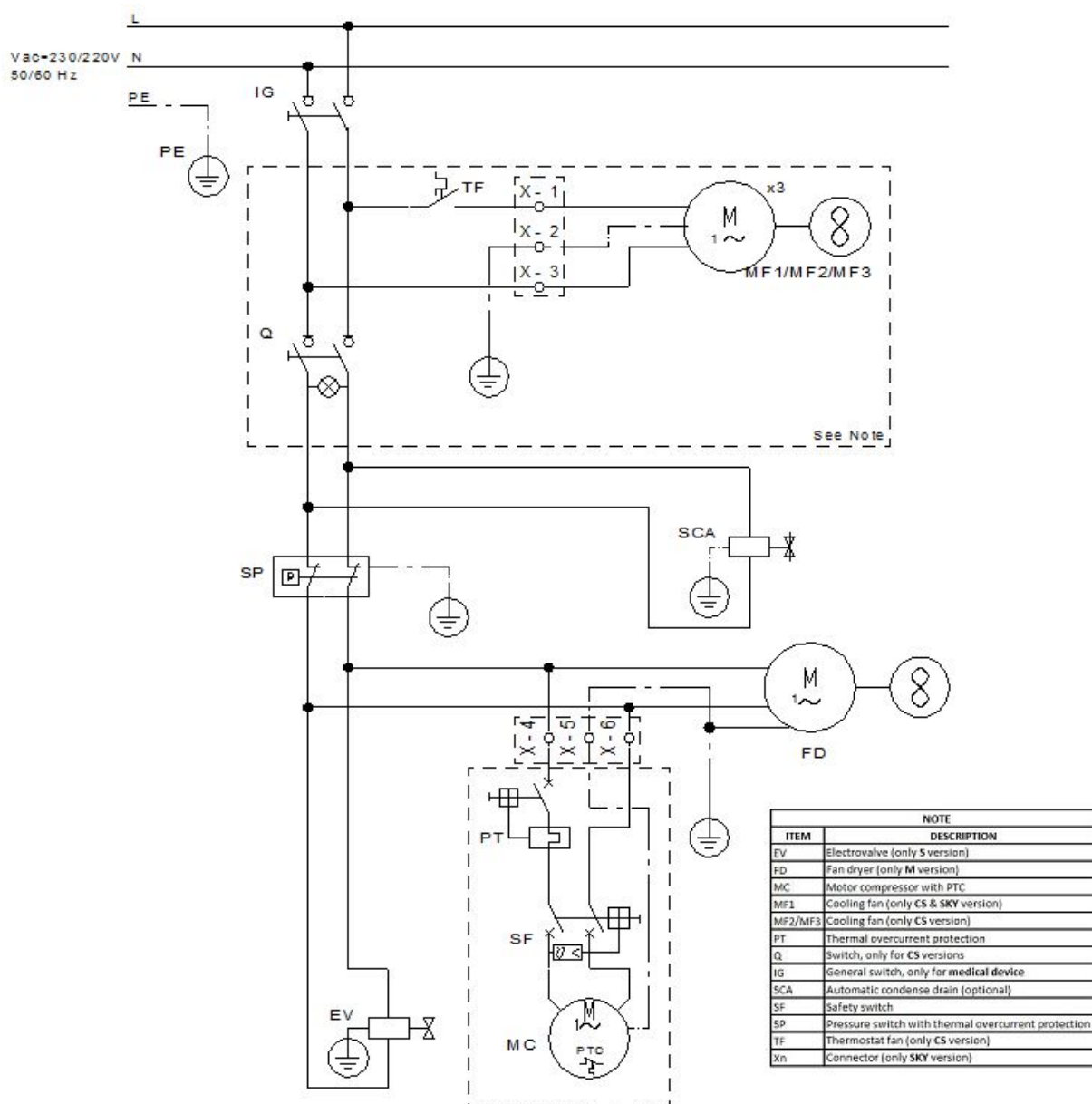
APPENDICE B

Appendix B

- Schemi elettrici - *Electrical diagrams*

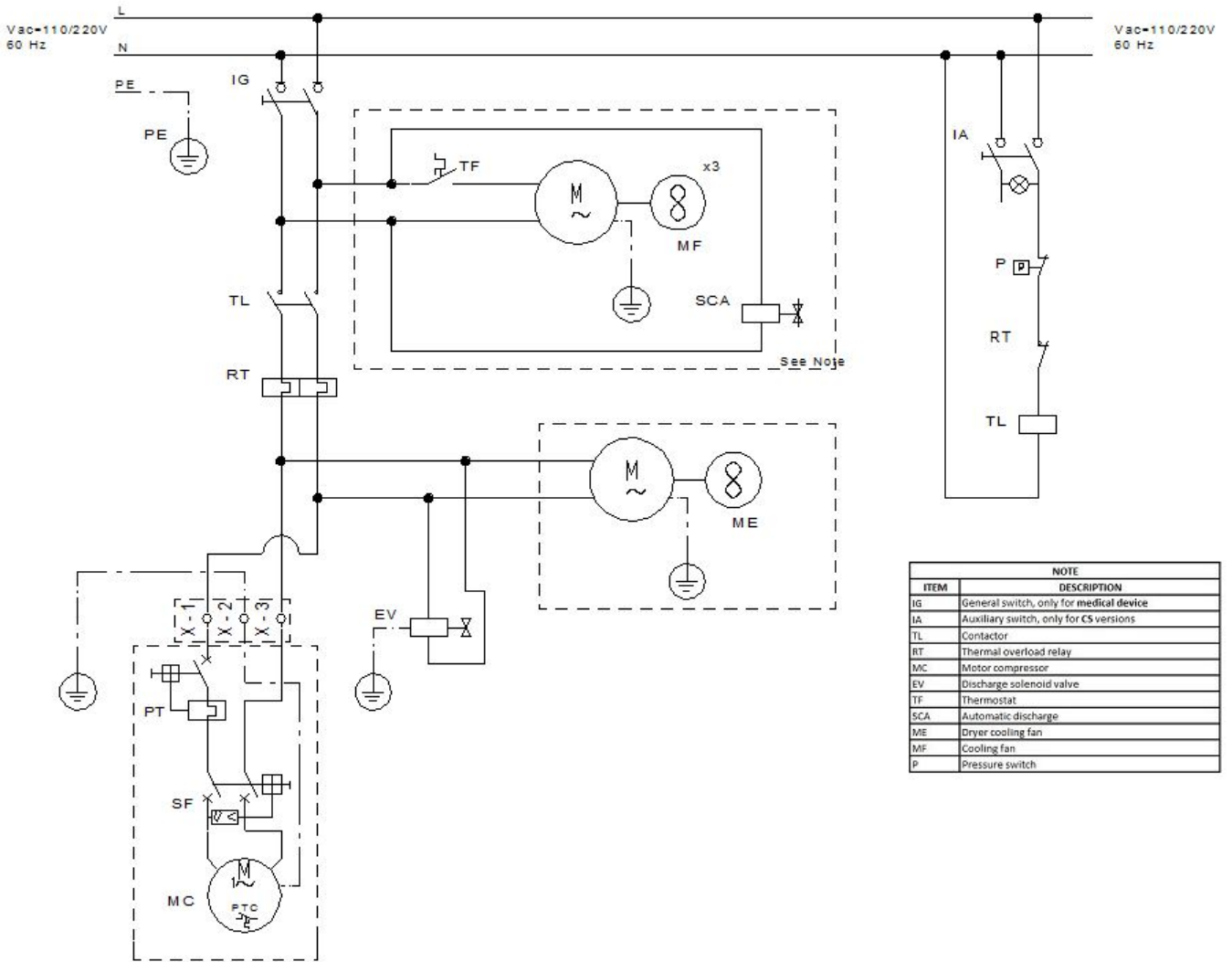
Single phase pressure switch MDR 1-2, models:

50/15 PRIME S 220V-60Hz
 50/15 PRIME M 220V-60Hz
 50/15 PRIME S 230V-50Hz
 50/15 PRIME M 230V-50Hz
 50/25 PRIME S 230V-50Hz
 50/25 PRIME M 230V-50Hz



Single phase pressure switch MDR 1-2, models:

- 50/15 PRIME S 110V-60Hz
- 50/15 PRIME M 110V-60Hz
- 50/25 PRIME S 110V-60Hz
- 50/25 PRIME M 110V-60Hz
- 50/25 PRIME S 220V-60Hz
- 50/25 PRIME M 220V-60Hz



| NOTE | |
|------|---|
| ITEM | DESCRIPTION |
| IG | General switch, only for medical device |
| IA | Auxiliary switch, only for CS versions |
| TL | Contactors |
| RT | Thermal overload relay |
| MC | Motor compressor |
| EV | Discharge solenoid valve |
| TF | Thermostat |
| SCA | Automatic discharge |
| ME | Dryer cooling fan |
| MF | Cooling fan |
| P | Pressure switch |

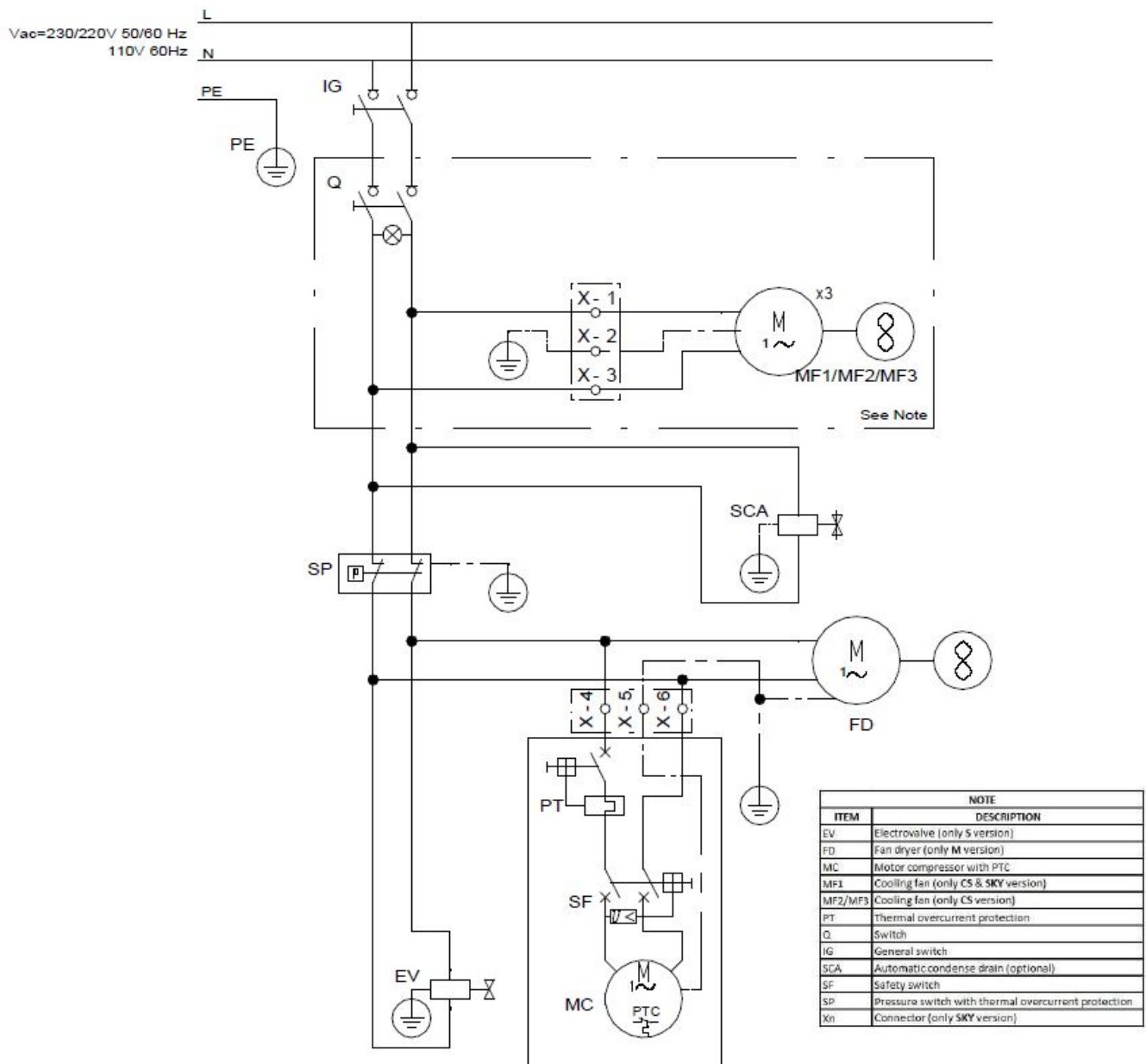
Single phase pressure switch MDR 1-2, models:

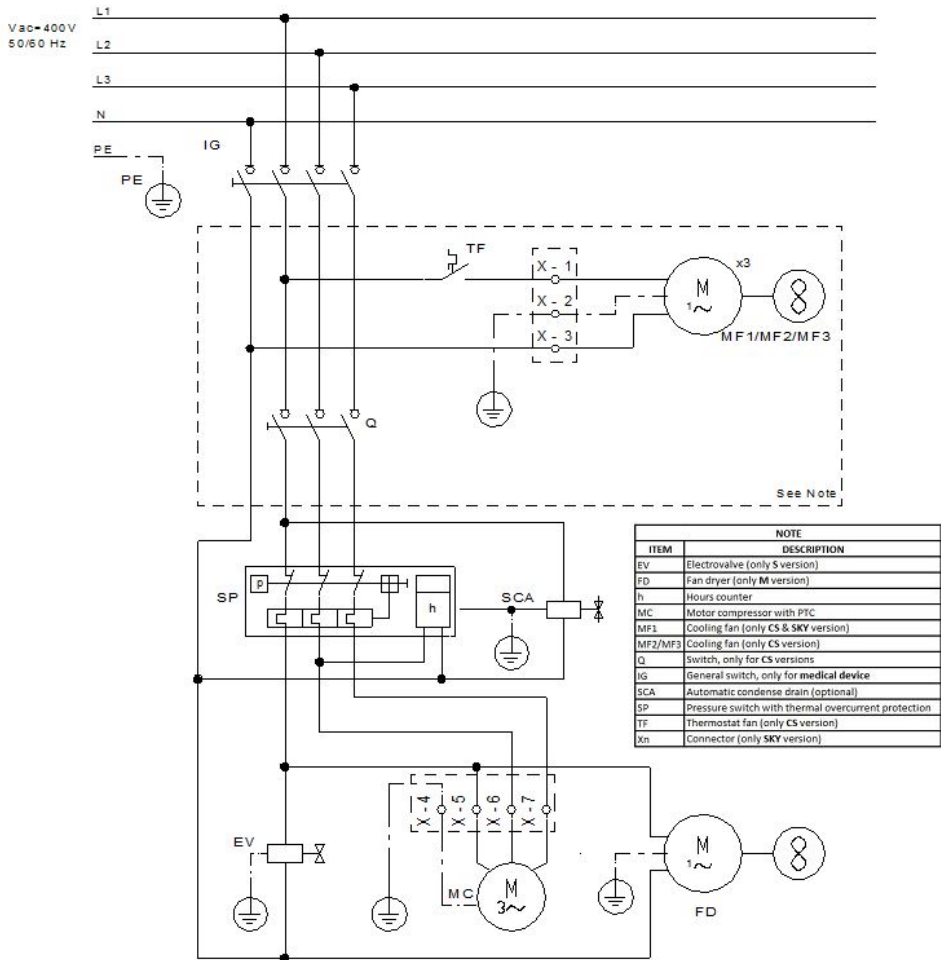
30/7 PRIME S 230V-50Hz – 220V-60Hz – 110V-60Hz

30/7 PRIME M 230V-50Hz – 220V-60Hz – 110V-60Hz

GENESI LINE

Equivalent MINIBOX VERSIONS





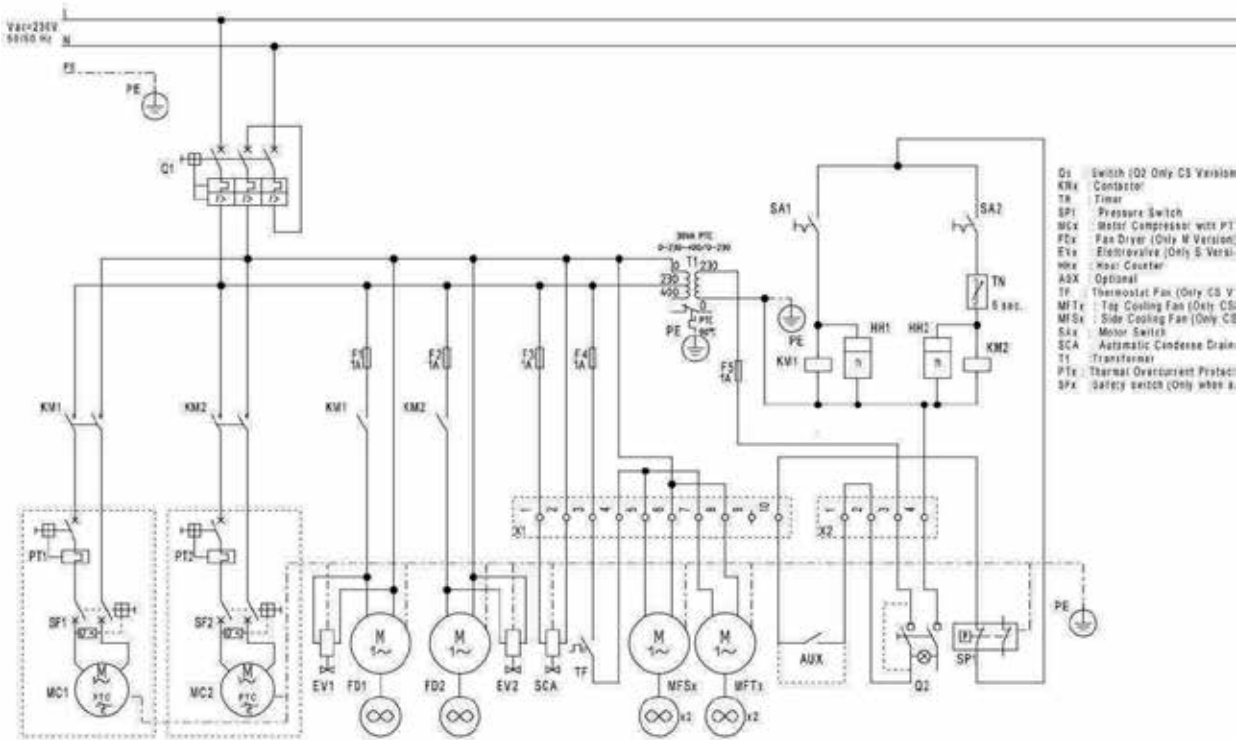
Three phase pressure switch MDR 3 (400V), models:

- 50/15 PRIME S
- 50/15 PRIME M
- 50/25 PRIME S
- 50/25 PRIME M
- Equivalent CS VERSIONS
- Equivalent SKY VERSIONS

Single phase TANDEM, models:

100/30 TANDEM PRIME S
 100/30 TANDEM PRIME M
 Equivalent CS VERSIONS

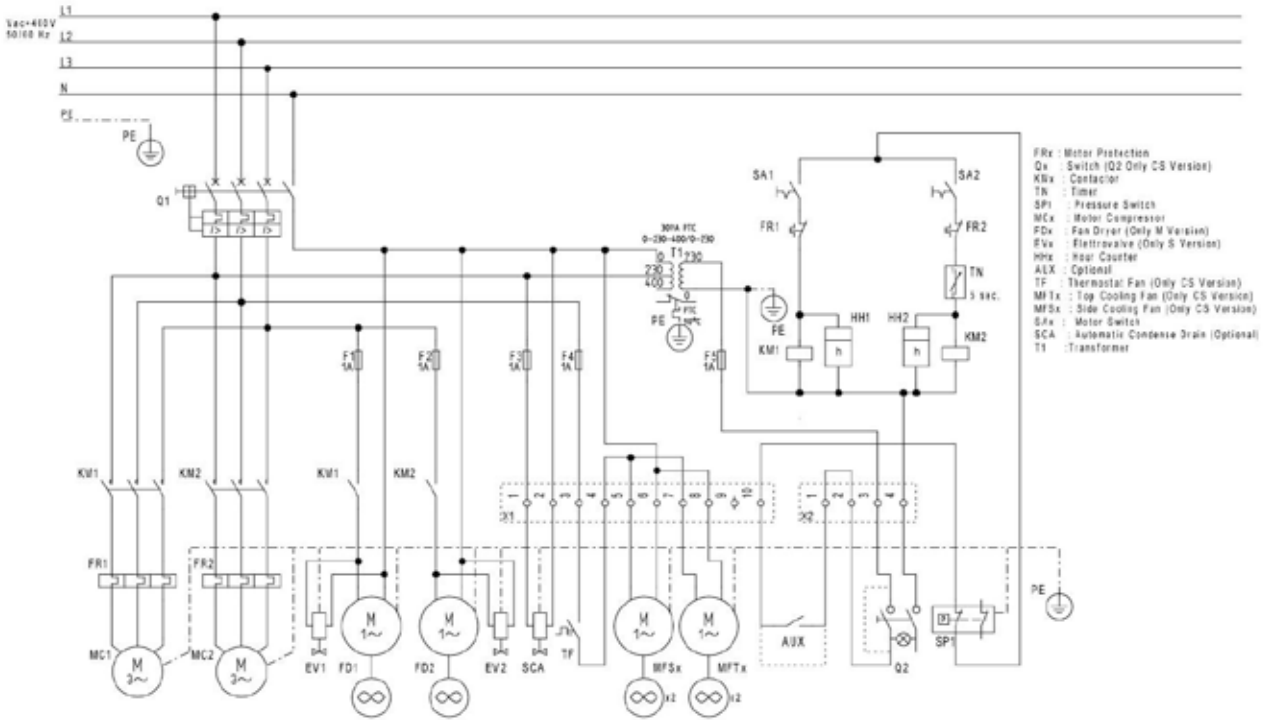
100/50 TANDEM PRIME S
 100/50 TANDEM PRIME M
 Equivalent SKY VERSIONS



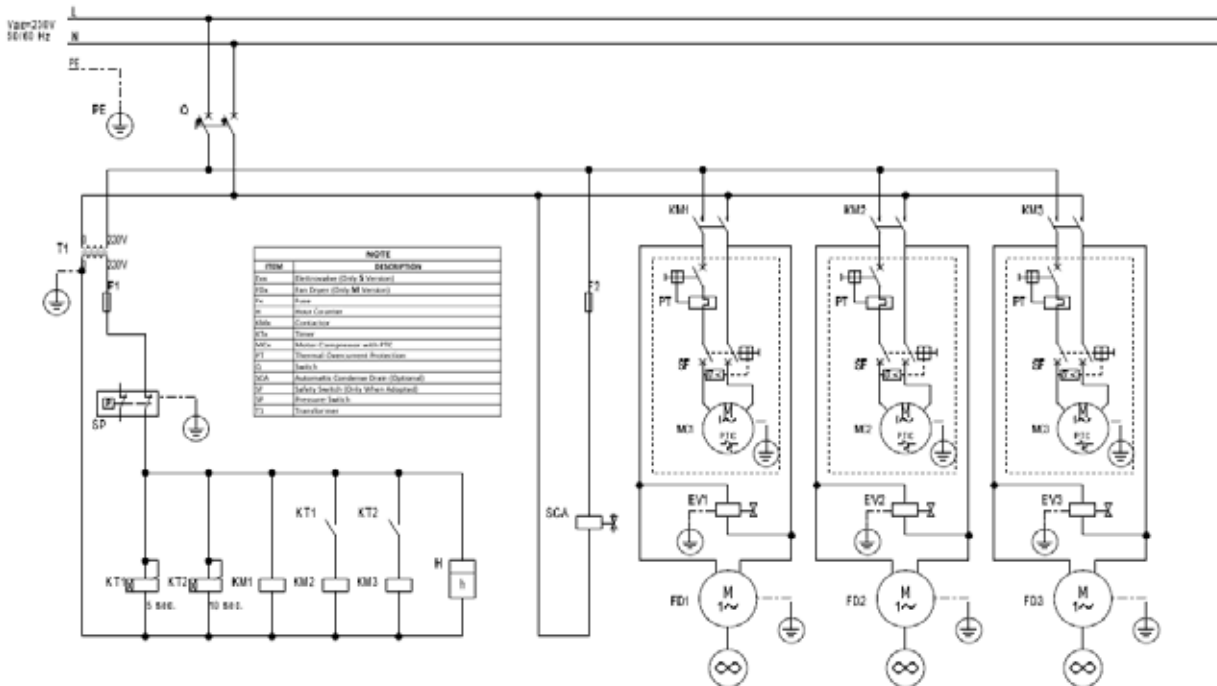
Three phase TANDEM, models (400V):

100/30 TANDEM PRIME S
 100/30 TANDEM PRIME M
 Equivalent CS VERSIONS

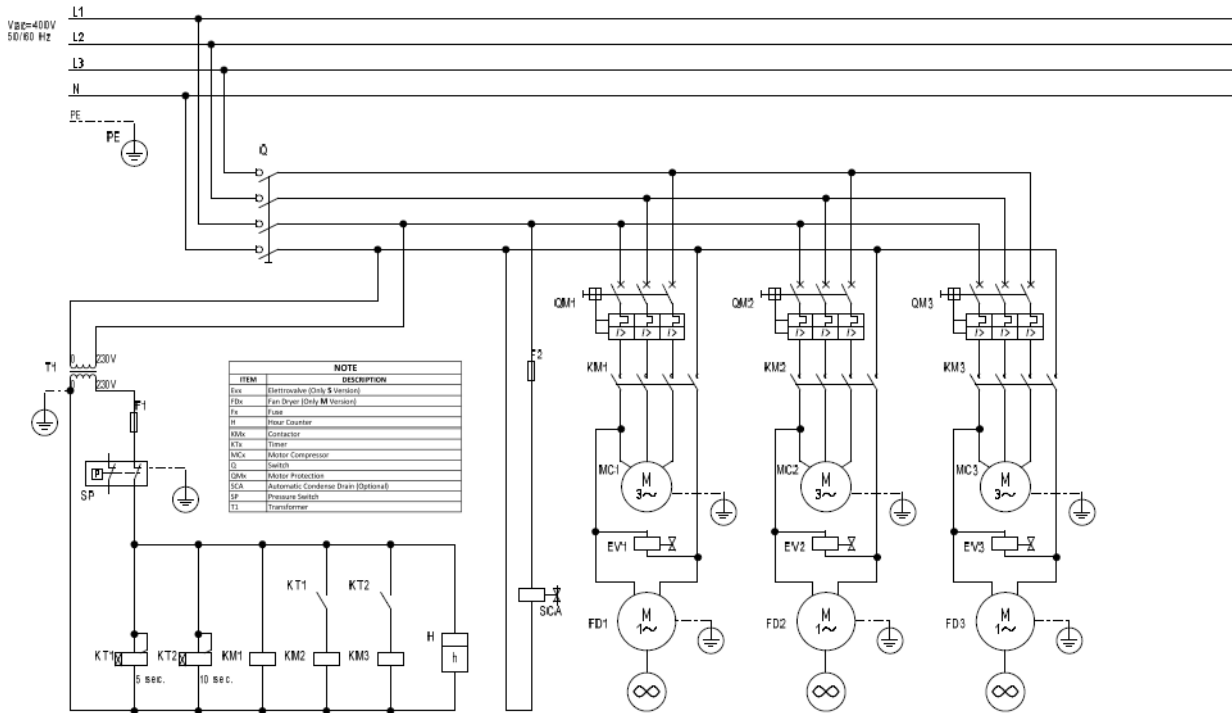
100/50 TANDEM PRIME S
 100/50 TANDEM PRIME M
 Equivalent SKY VERSIONS



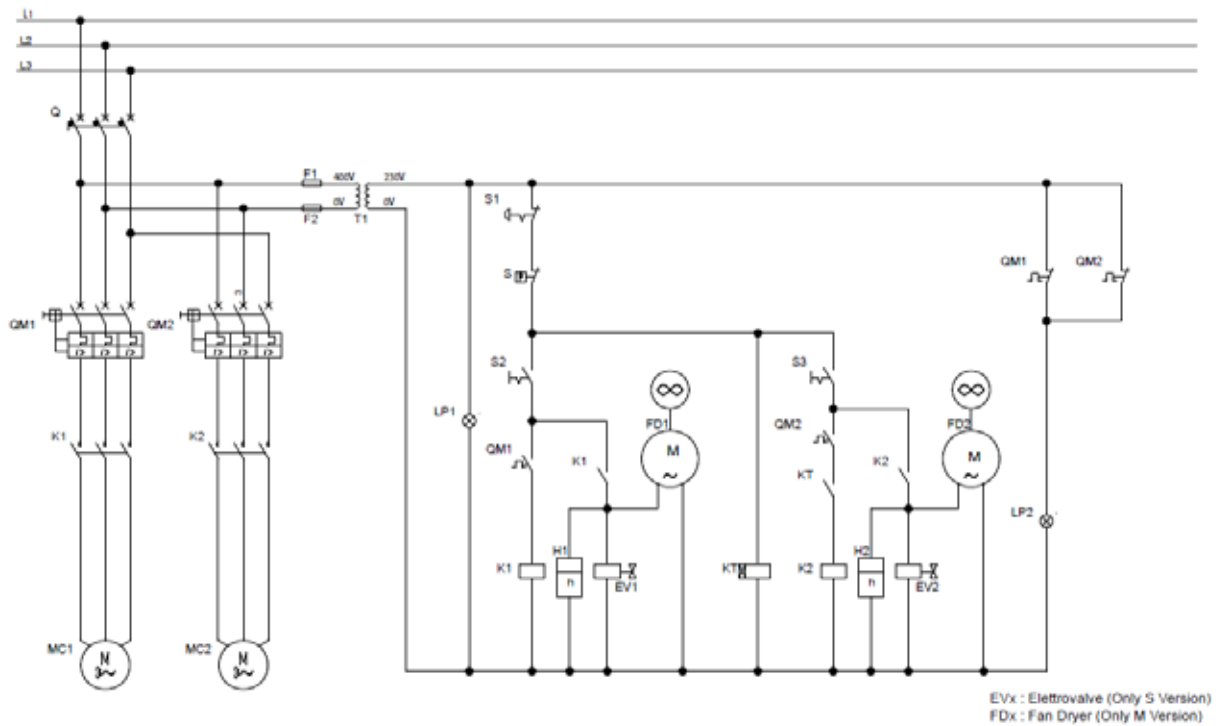
200/75 PRIME S, 200/75 PRIME M single phase



200/75 PRIME S, 200/75 PRIME M three phase

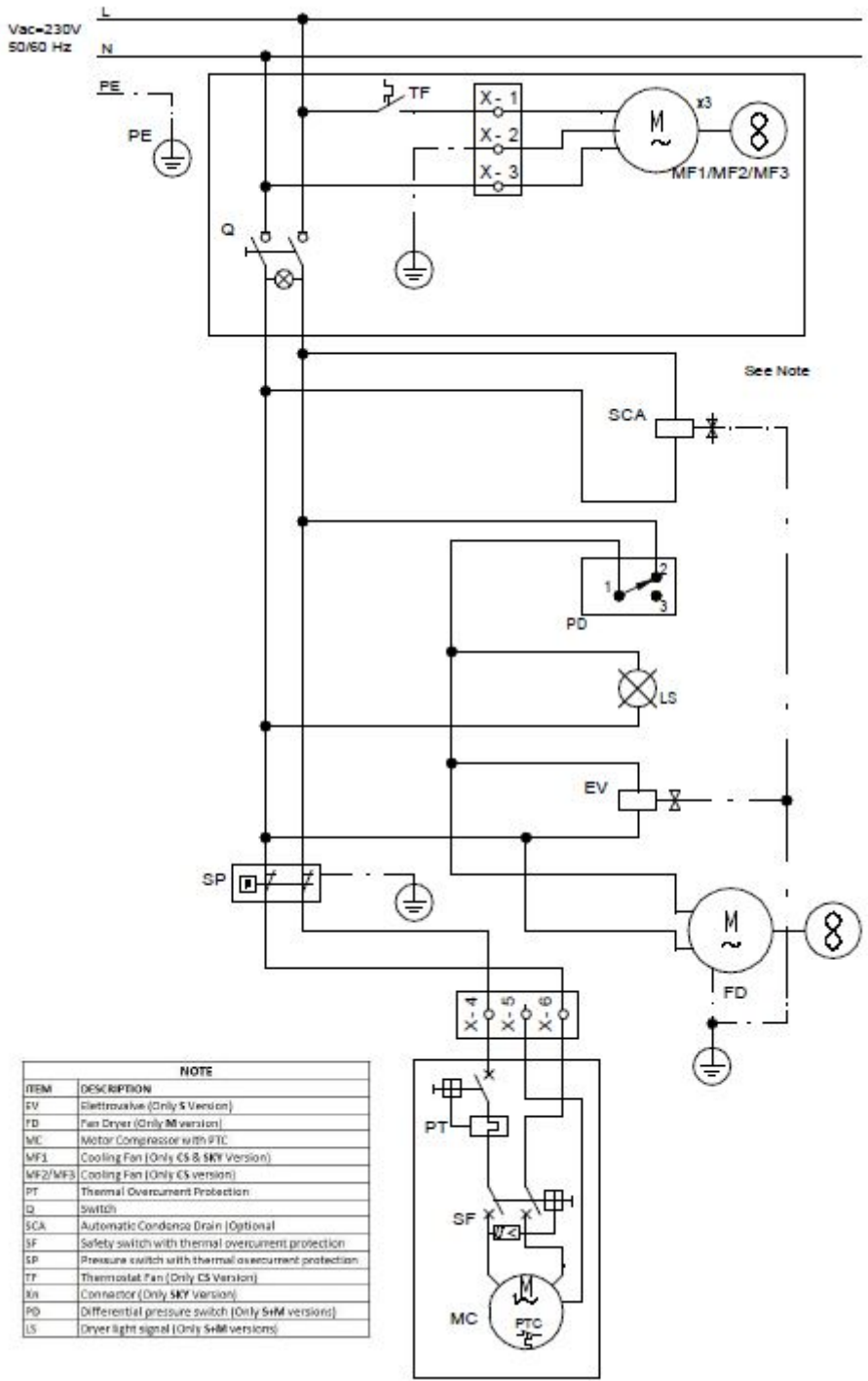


270/100 PRIME S, 270/100 PRIME M three phase



**Single phase pressure switch MDR 2,
models:**

CS 50/25 PRIME S+M 230V/50Hz



NOTES

The earth conductor PE was omitted

The schematics are subjected to change without notice

LEGEND

| | | |
|------|-------------------------------------|-----------------------------|
| TF | Termostato ventola | Thermostat Fan |
| MFx | Ventola di raffreddamento | Cooling Fan |
| Q | Interruttore generale | Main switch |
| SCA | Scarico Condensa automatico | Automatic Condensate Drain |
| SP | Pressostato | Pressure Switch |
| PT | Protezione Termica | Thermal Protection |
| MCx | Motore Compressore con PTC | Motor Compressor with PTC |
| FDx | Ventola Essiccatore | Fan Dryer |
| Evx | Elettrovalvola | Elettrovalve |
| Hx | Contaore | Hourmeter |
| F | Fusibile | Fuse |
| KTx | Temporizzatore | Timer |
| Kx | Contattore | Contactora |
| TH | Termostato alta Temperatura | Thermostat High Temperature |
| T | Trasformatore | Transformer |
| LPx | Lampada Spia | Indicator Light |
| SF | Interruttore di sicurezza | Safety switch |
| SAx | Interruttore motore | Motor switch |
| MFTx | Ventola di raffreddamento superiore | Top cooling fan |
| MFSx | Ventola di raffreddamento laterale | Side cooling fan |
| AUX | Optional | Optional |
| FRx | Protezione motore | Motor protection |
| X | Schuko | Schuko |

APPENDICE C

Appendix C

Scarico automatico di condensa – Automatic drain



Impostazione dei tempi per lo scarico della condensa – Drainage timing setting

OFF (A) – Minimo 10 minuti - Minimum 10 minutes

Per impostare la frequenza di scarico condensa (ogni quanto si vuole scaricare il serbatoio : impostabile da 5 a 40 minuti – per compressori a secco mai meno di 10 minuti)

To set drain frequency (how often air receiver drainage is required : setting from 5 to 40 mins – for oilless compressors never less than 10 minutes).

ON (B) – Massimo 5 secondi - Maximum 5 seconds

Per impostare la durata dello scarico condensa dal serbatoio (impostabile sa 2 a 20 secondi – per compressori a secco mai più di 5 secondi).

To set the lenght of the air receiver draining(setting from 2 to 20 seconds – for oilless compressors never more than 5 seconds).

I tempi vanno impostati in modo da rimuovere completamente la condensa. I tempi corretti dipendono dal consumo effettivo dell'aria e dell'umidità ambientale.

Autodrain setting must be done to remove all the water from the air receiver. Correct setting belongs to operating conditions and ambient humidity.

MANUTENZIONE - MAINTENANCE

Pulire periodicamente il filtro all'interno del rubinetto come segue :

1. Chiudere completamente il rubinetto (C) per isolare l'aria compressa del serbatoio
2. Premere ripetutamente il pulsante TEST (D) per scaricare l'eventuale pressione residua
3. Svitare il tappo del rubinetto (E)
4. Togliere il filtro in maglia e pulirlo con aria compressa
5. Rimontare filtro e tappo (E) avvitandoli saldamente
6. Riaprire il rubinetto (C) lentamente verificando che non ci siano perdite
7. Premere il pulsante TEST (D) per verificare il corretto funzionamento del dispositivo

Periodically clean the internal filter as follows :

1. Close the drain cock (C) to avoid compressed air exit from the air receiver
2. Repeatedly push the TEST (D) button to discharge residual pressure
3. Unscrew the drain cock tap (E)
4. Remove the filter inside the body of the valve and clean it with compressed air
5. Place the filter in the original position, hardly screw again the tap (E)
6. Slowly open again the drain cock (C) and check that there are no air leaks
7. Push the TEST (D) button to check the correct functioning of the device

Per ulteriori informazioni si prega di contattare il produttore all'indirizzo tech@mgfcompressors.it For further information please contact the manufacturer at the address tech@mgfcompressors.it

APPENDICE D

Appendix D

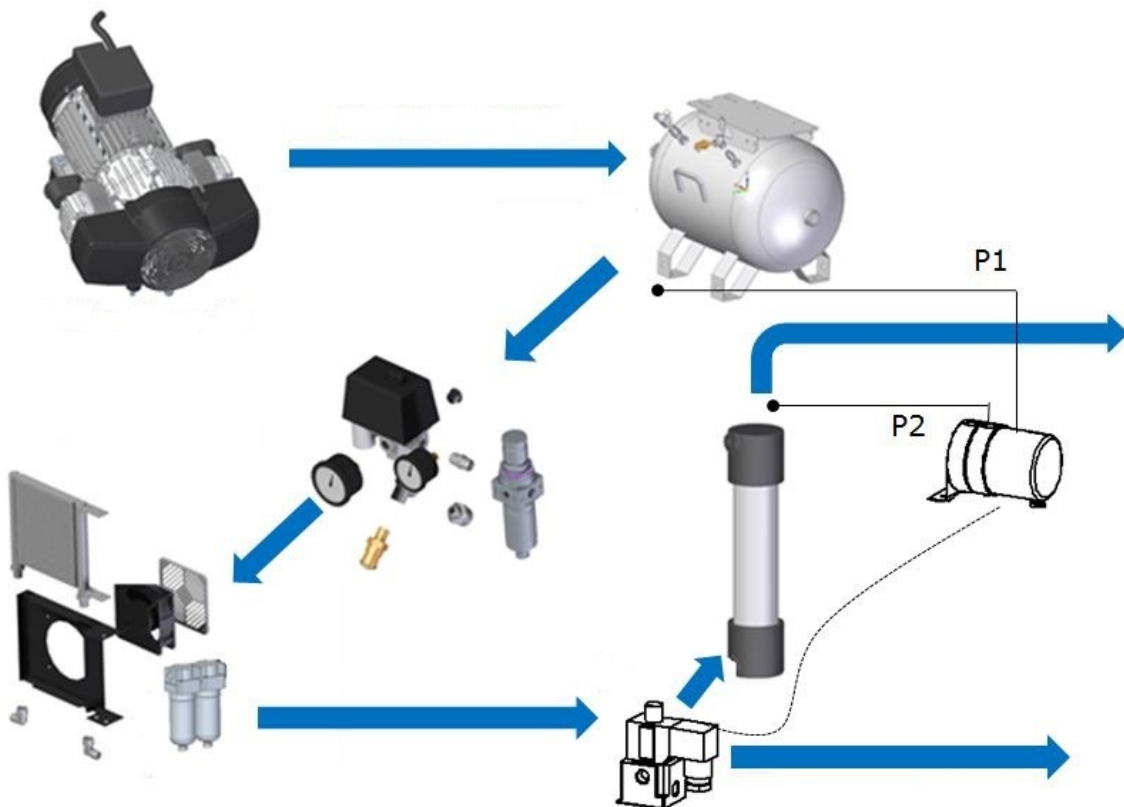
Versioni S+M – S+M Versions

Nel caso di versione con cabina insonorizzata (CS) l'interruttore generale è posizionato sul pannello frontale della cabina. Questo interruttore alimenta sia il sistema di raffreddamento della cabina (controllato da un termostato) sia il pressostato. L'interruttore è affiancato dalla spia luminosa di funzionamento dell'essiccatore (essiccatore attivo = spia ACCESA; essiccatore non attivo = spia SPENTA).

In case of soundproofed cabinet versions (CS) general switch is placed on the front of the cabinet. This switch feeds both the cabinet ventilation system (thermostatic controlled) and the pressure switch. The power switch is flanked by the dryer functionality light indicator (dryer activated = light ON; dryer not activated = light OFF)



Interruttore generale e spia luminosa
General switch and dryer light

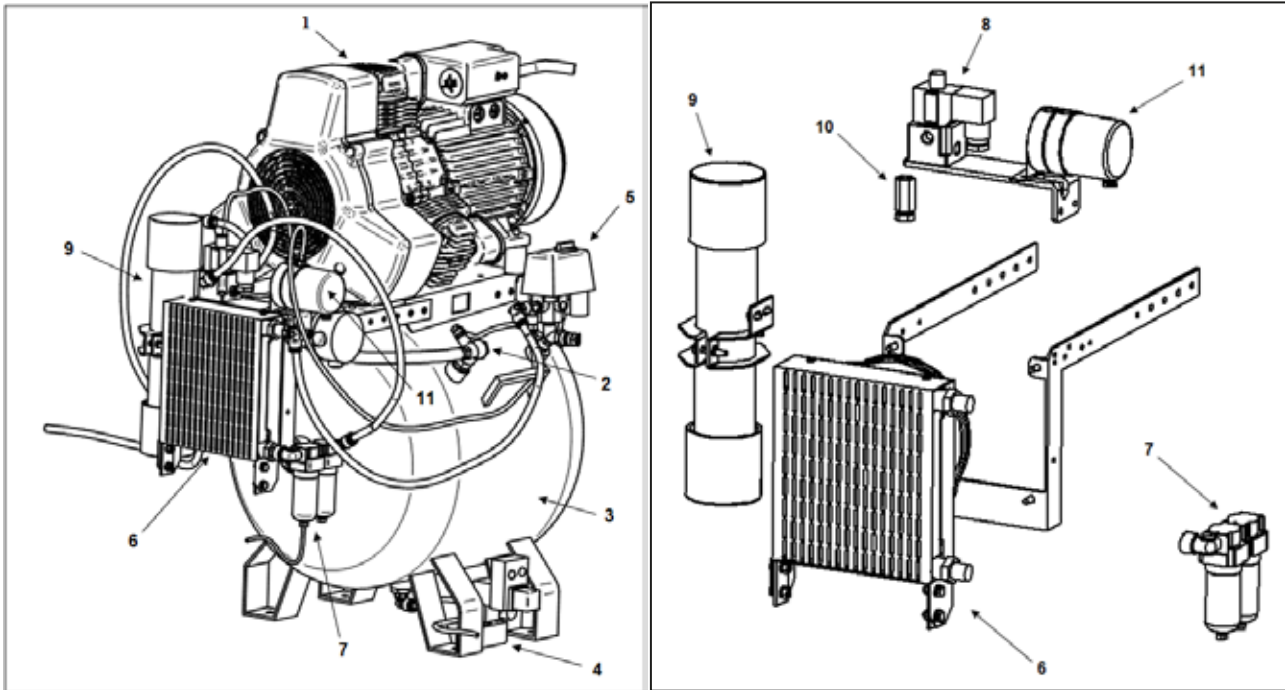


Le versioni S+M sono equipaggiate con un sistema composto da un radiatore con ventilazione forzata, un doppio sistema di filtrazione a 5 micron e 0,01 micron che garantisce la miglior purezza dell'aria e che alimenta un essiccatore a membrana completamente automatico; la purga dell'aria operata dall'essiccatore è controllata automaticamente da un pressostato differenziale (P1 = pressione a monte dell'essiccatore; P2 = pressione a valle dell'essiccatore) che apre/chiude la purga dell'aria attraverso un'elettrovalvola. Il corretto uso del compressore e la manutenzione periodica dei filtri (sostituzione annuale delle cartucce) garantirà un funzionamento privo di manutenzione dell'essiccatore. Per ulteriori dettagli visionare il manuale tecnico.

S+M versions are equipped with a system composed by a cooler with forced ventilation, a double 5

micron and 0,01 micron filtration system to guarantee the best air purity and feed a fully automatic membrane dryer; the dryer air purge is controlled fully automatically by a differential pressure switch (P1 = upstream pressure, P2 = downstream pressure) which open/close the air purge through a solenoid valve. A correct use of the compressor and the periodical maintenance of the filters (annual cartridges replacement) will guarantee to the membrane dryer a free of maintenance operating. For further details please check the Technical Handbook.

• **Componenti principali – Main components**



- 1. Compressore/Pumping unit
- 2. Valvola di non ritorno/Non-return valve
- 3. Serbatoio/Tank
- 4. Scarico automatic/Automatic drain
- 5. Pressostato/Pressure switch
- 6. Sistema di raffreddamento/Cooling system

- 7. Batteria di filtrazione/Filtration battery
- 8. Elettrovalvola/Electrovalve
- 9. Essiccatore a membrana/Membrane dryer
- 10. Valvola unidirezionale/Unidirectional valve
- 11. Pressostato differenziale/Differential pressure switch

APPENDICE E


Appendix E

| IEC 60601-1-2 Table 1 Guidance and manufacturer's declaration - electromagnetic emissions | | |
|---|------------|--|
| The equipment is intended for use in the electromagnetic environment specified below. The customer or the end user should assure that it is used in such an environment | | |
| Emission test | Compliance | Electromagnetic environment - guidance |
| RF emission - CISPR 11 | Group 1 | The device uses RF energy only for its internal function. Therefore its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment |
| RF emission - CISPR 11 | Class B | The device is suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes |
| Harmonic emission IEC 61000-3-2 | Class A | |
| Voltage fluctuation/flicker emission IEC 61000-3-3 | Complies | |

| IEC 60601-1-2 Table 2 Guidance and manufacturer's declaration - electromagnetic immunity | | | |
|---|---|--|---|
| The equipment is intended for use in the electromagnetic environment specified below. The customer or the end user should assure that it is used in such an environment | | | |
| Immunity test | IEC 60601 Test level | Compliance level | Electromagnetic environment - guidance |
| Electrostatic discharge (ESD) IEC 61000-4-2 | ±6 kV contact ±8 kV air | ±6 kV contact ±8 kV air | Floor should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30% |
| Electrical Fast Transient/Burst IEC 61000-4-4 | ±2 kV for power supply lines ±1 kV for I/O lines | ±2 kV for power supply lines Not applicable | Mains power quality should be that of a typical commercial or hospital environment |
| Surge IEC 61000-4-5 | ±1 kV line to line ±2 kV lines to earth | ±1 kV line to line ±2 kV lines to earth | Mains power quality should be that of a typical commercial or hospital environment |
| Voltage Dips, Short interruptions and voltage variations on power supply input lines IEC 61000-4-11 | < 5% Ut (>95% dip in Ut) for 0.5 cycle 40% Ut (60% dip in Ut) for 5 cycles 70% Ut (30% dip in Ut) for 5 cycles ◆5% Ut (>95% dip in Ut) for 5 s | ◆5% Ut (>95% dip in Ut) for 0.5 cycle 40% Ut (60% dip in Ut) for 5 cycles 70% Ut (30% dip in Ut) for 5 cycles ◆5% Ut (>95% dip in Ut) for 5 s | Mains power quality should be that of a typical commercial or hospital environment. If the user of the device requires continued operation during power mains interruptions, it is recommended that the device be powered from an Uninterruptible Power Supply or Battery |
| Power frequency (50/60Hz) magnetic field IEC 61000-4-8 | 3 A/m | 3 A/m | Power frequency magnetic fields should be at levels characteristics of a typical location in a typical commercial or hospital environment |

**IEC 60601-1-2 Table 4
Guidance and manufacturer's declaration - electromagnetic immunity**

The equipment is intended for use in the electromagnetic environment specified below. The customer or the end user should assure that it is used in such an environment

| Immunity test | IEC 60601 Test level | Compliance level | Electromagnetic environment - guidance |
|-------------------------------|---------------------------|------------------|---|
| Conducted RF IEC 61000-4-6 | 3 Vrms 150KHz to 80MHz | 3 Vrms | Portable and mobile RF communication equipment should be used no closer to any part of the device, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance. $d=1,167*\sqrt{P}$ $d=1,167*\sqrt{P}$ 80 MHz to 800 MHz $d=2,333*\sqrt{P}$ 800 MHz to 2,5 GHz |
| Radiated RF IEC 61000-4-3 | 3 V/m 80MHz to 2,5GHz | 3 V/m | Where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in meters (m) Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey ^a , should be less than the compliance level in each frequency range ^b . Interference may occur in the vicinity of equipment marked with the following symbol:  |

Note 1: at 80 MHz and 800 MHz, the higher frequency range applies

Note 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

a) Field strength from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the device is used exceeds the applicable RF compliance level above, the device should be observed to verify normal operation.

If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the device.

b) Over the frequency range 150 KHz to 80 MHz, field strength should be less than 3 V/m.

**IEC 60601-1-2 Table 6
Recommended distances between portable and mobile RF communication equipment and the device**

The equipment is intended for use in the electromagnetic environment in which radiated RF disturbance are controlled. The customer of the user of the device can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the device as recommended below, according to the maximum power of communications equipment.

| Rated maximum output power of transmitter W | Separation distance according to frequency of transmitter | | |
|--|---|---|--|
| | 150 KHz to 80 MHz $d=1,17*\sqrt{P}$ m | 80 MHz to 800 MHz $d=1,17*\sqrt{P}$ m | 800 MHz to 2,5 GHz $d=2,33*\sqrt{P}$ m |

| IEC 60601-1-2 Table 6 Recommended distances between portable and mobile RF communication equipment and the device | | | |
|---|-------|-------|-------|
| 0,01 | 0,117 | 0,117 | 0,233 |
| 0,1 | 0,370 | 0,370 | 0,740 |
| 1 | 1,17 | 1,17 | 2,33 |
| 10 | 3,70 | 3,70 | 7,40 |
| 100 | 11,7 | 11,7 | 23,3 |
| | | | |
| <p>For transmitters rated at maximum output power not listed above, the recommended separation distance d in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer</p> <p>Note 1: at 80 MHz and 800 MHz, the higher frequency range applies</p> <p>Note 2: these guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people</p> | | | |



**DICHIARAZIONE DI CONFORMITÀ
CON LE DIRETTIVE CEE**

**EC DECLARATION OF CONFORMITY
WITH EC DIRECTIVES**



2006-42-CE
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MGF srl
Via Pascoli, 15 - 20081 ABBIATEGRASSO (MI) ITALIA

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SEGUENTI DIRETTIVE CEE

TO WHICH THIS DECLARATION RELATES, ARE IN CONFORMITY WITH
FOLLOWING DIRECTIVES CEE

The machine directive 2006/42/EC
The Low Voltage Device directive 2006/95/EC
The EMC directive 2004/108/EC
The simple pressure vessels directive 2009/105/EC

The following harmonized standard was applied:

EN 1012-1:2010
EN 60204-1/2006
EN ISO 12100:2010

For the following products:

Brand name: MGF
Model type: GENESI, PRIME COMPRESSORS

Referente per il dossier tecnico/ Contact for technical dossier:
ING. DAVIDE FIANI – Via Pascoli 15, 20081 Abbiategrasso ITALY

Date: 28/06/2014

GABRIELE FIANI
Managing Director
G. Fiani



**DICHIARAZIONE DI CONFORMITÀ
CON LE DIRETTIVE CEE**

**EC DECLARATION OF CONFORMITY
WITH EC DIRECTIVES**



93-42 CEE (in base all'All. VII del D.Lgs. 46/97)

NOI - WE

MGF srl

Via Pascoli, 15 - 20081 ABBIATEGRASSO (MI) ITALIA

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SURGICAL SUCTION SYSTEMS**

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A CUI LA PRESENTE DICHIARAZIONE SI RIFERISCE, SONO CONFORMI ALLE SEGUENTI DIRETTIVE
CEE

*TO WHICH THIS DECLARATION RELATES, ARE IN CONFORMITY WITH FOLLOWING DIRECTIVES
CEE*

93/42/CEE

Classificazione di rischio del prodotto secondo la 93/42/CEE - Product risk classification according to 93/42 CEE:

Classe I, non sterile, senza funzione di misura - Class I, non sterile, without measure

Norme armonizzate applicate/Harmonized Standard applied:

EN 60601-1:2011

EN 60601-1-2:2007 (Third Edition)

EN ISO 14971:2012

Valida dalla matricola/Valid from serial number: 10153700

Responsabile del fascicolo tecnico: Ing. Davide Fiani

EMESSO AD ABBIATEGRASSO 01/11/2015
ISSUED IN ABBIATEGRASSO AT THE 01/11/2015

Ing. Davide Fiani
Managing Director

REV. 00/18



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