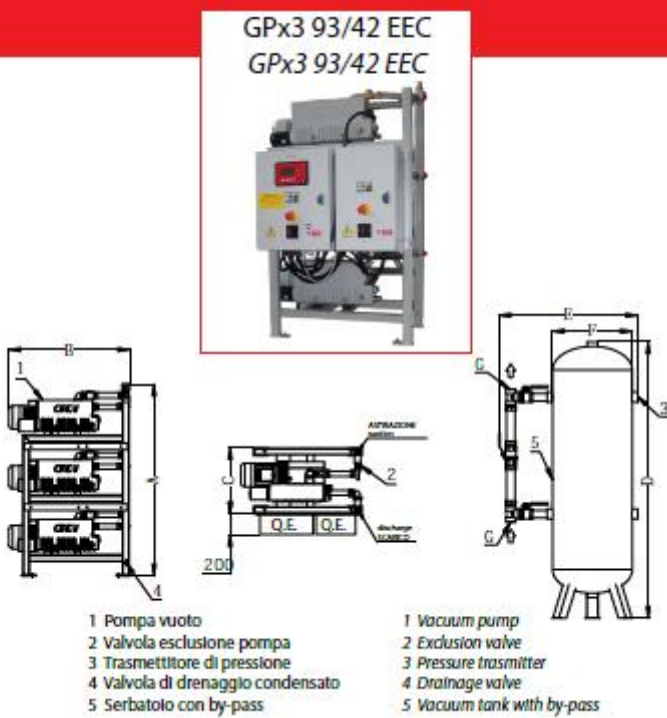


## 1. GPx3 93/42 EEC MEDICAL VACUUM SYSTEM



GPx3 is a medical vacuum system in compliance with EN 73/96 or 93/42 EEC European Standards. It is composed of three or more oil-sealed rotary vanes vacuum pumps, single stage, type GP, a vacuum tank and a double antibacterial filter group. Each medical vacuum system has been calculated and manufactured in the way that one vacuum pump is enough for the normal vacuum pumping necessary.

A second pump, installed in stand by, will start-up whenever the vacuum level won't be keep with just one pump in working. Two vacuum switches will give the start and the stop to each

pump in relation to the vacuum level adjusted on the instruments. However, a standard vacuum group is verify to work between -66,66 kPa (550 mmHg) and -93,33 kPa (700 mmHg) vacuum. An electric selector is assembled to the electric panel board to select which pump use as working and stand by. The electric panel board will be supplied with time-automatically pumps inversion.

A third pump GP, with the same data, is installed as emergency vacuum pump and it will be in working whenever the first two pumps won't get the normal conditions of vacuum or if the pumps are failed. Emergency pump start up manually or automatically thru a third vacuum switch.

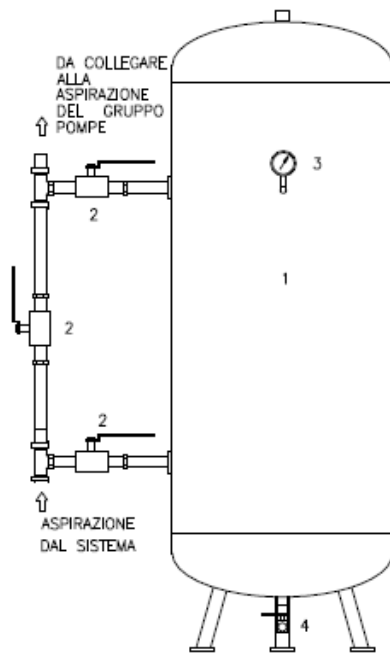
GEV install as standard two electric panel boards(PLC), one for pumps in working and in stand by, the second electric panel board for the emergency pump.

GEV can install also only one electric panel board for the three pumps, with automatic changing and delay devices.

Each vacuum pump has protected by a thermal relay or an over-current device installed on the electric panel board. Each vacuum pump has got a poor quantity oil level-switch. On the electric panel board there are oil level alarm, low vacuum alarm in the process (before the antibacterial filters) for each pump.

The medical system can be vertical or horizontal depending on your request.

## Vacuum Tank



Vacuum tank can be offered in different sizes.

Vacuum tank will be supplied with drainage valve, by-pass system.

1. vertical vacuum tank is in compliance with 87/404 CEE – 97/23 CE standards

2. manual valves of insulation and by-pass

3. Vacuum meter in compliance with EN 837-1 standards, precision  $\leq 4\%$ .

4. drainage Valve

## Antibacterial filters

Antibacterial filter group FMMV/2 is composed of no.2 antibacterial filters, one in working and one in stand by.

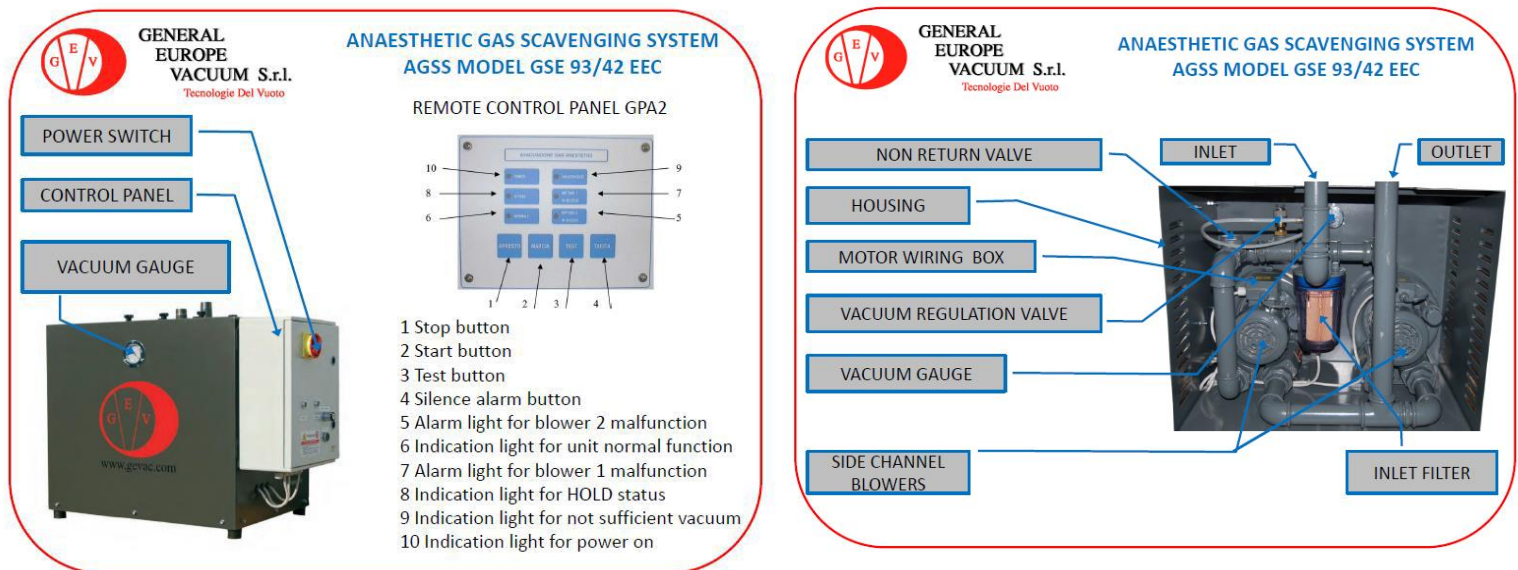
GEV can offer two versions:

- on a metal support structure
- to wall fixing model

### Components list:

1. vacuum meter fitting and vacuum alarm connection
2. by-pass Valves
3. Pre-filters
4. antibacterial filters with cartridge choking meter
5. Drainage valve and ampolla for liquids

## 1. ANAESTHETIC GAS EVACUATION SYSTEMS



The anaesthetic gas evacuation system GSE consists of 2 side channel blowers ( 1 running , 1 in stand-by) Nominal displacement from 40m<sup>3</sup> / h each to 216 m<sup>3</sup>/h - Max. depression 150 mbarAbs

Each pump has an electric single phase motor .Pumps starts up automatically from stand-by to emergency phase in the event of low depression and/or failure of those running.

GSE evacuation package is connected to a remote control switch (alarm panel board ).

The devices housed on panel board control all the operations.

The automatic start up is possible only if GSE is connected to a remote control switch

GPA2, and the depression grade is kept as stated on lable.

Displacement has been set so that a pump could meet customer need according to an experimental contemporaneity coefficient referred to the displacement calculation of system. In case of a pump damage, the second one immediately start up automatically normalizing

the proper running conditions sending an alarm to the connected panel board.

### Medical Devices Directive 93/42

Directive 93/42/EEC of the European Union (EU) (also known as the Medical Devices Directive - MDD) details the Essential Requirements manufacturers and importers must meet to apply the CE mark and legally market or sell their devices in the EU. Because of the many types of devices covered by the MDD, the specific requirements depend on the classification and intended use of the device. However, in most cases, the use of an EU Notified Body is

required to assess compliance with the Directive before the CE mark can be applied to a device.