

CENTRAL MEDICAL VACUUM SYSTEMS



ADVANTAGES OF CENTRAL VACUUM SYSTEMS :

- CONTINUOUS “ON DEMAND” PACKAGED SYSTEM
- NON -PULSATING VACUUM
- CUSTOM DESIGN -SIZED TO SUIT MOST APPLICATIONS
- CHOICE OF DRY/WET VACUUM PUMPS
- NO NOISE



MEDICAL CENTRAL VACUUM SYSTEMS

We at PumpAir Solutions have combined the local market knowledge and experience with technical expertise of world renowned manufacturers. We have developed a Modular design that enables us to quickly modify any unit to meet your exact specifications.

The necessity to keep all the noise sources away from point of use has urged us to develop a complete range of vacuum units mounted on vessels/Base Frames to satisfy all needs. The pumps work together or with lead-lag controller according to vacuum requirements and ensuring that supply is maintained uninterrupted.

Our sales and engineering team goes to site to critically examine the application and then can specify a system to ideally meet your requirements. This combination of experience, expertise and pre- design means you get what you need – faster.

ADVANTAGES OF CENTRAL VACUUM

Silent Service - The system is installed away from point of use. Moreover our CV systems are quieter and vibration free as compared to many available on the market.

Economy of scale - One central system for each building. Reticulated pipe work is more economical than multiple, individual vacuum pumps.

Reduced Maintenance - One system to check means less labour and less chance of forgotten service avoiding breakdown.

Fail Safe- Dual vacuum pump system offers fail safe operation not possible on individual room units.

Increased service Life- Central vacuum system pumps switch off automatically when there is no demand.

Package systems- Installation requires only connection of power and vacuum line on small package systems and on larger systems all components are supplied so that sub assemblies can be easily put together.

You choose the pump- Rotary vane pumps for general use, high vacuum oil sealed for laboratories, oil free for dry applications, water sealed liquid ring type for wet/dirty applications.

Automatic Operation- vacuum switches monitor vacuum levels and automatically operate pumps to keep vacuum at desired level.



A TYPICAL CENTRAL MEDICAL VACUUM SYSTEMFULLY COMPLIANT TO AS 2896-1998 COMPRISES OF:

VACUUM PUMPS

A choice of Elmo Rietschle/Busch **Oil Sealed rotary vane/ Dry vane vacuum pumps**. Generally Oil sealed pumps are supplied to the following specification: —

- Long Life Aluminium/Phenolic blades
- Fitted with Gas ballast valve
- Nominal pumping capacity 4 m³/hr to 1300 m³/hr
- Ultimate vacuum 0.5mbar
- Supplied with direct drive single/3 phase 415 volt motors
- Fitted with fine mesh filter and discharge oil mist separator
- Separate forced air high capacity aluminium pump cooling fan
- Steel protection cover
- In-built vacuum non return valve
- Low oil level switches

VACUUM RECEIVERS

Choice of Horizontal or vertical vacuum receivers (100 to 4000 Litres) to the following specification: Mounting base on horizontal receiver for 1/2/3 pumps.

- One receiver comprises:
- Vacuum reservoir manufactured to AS1210 pressure vessel code
- Pipeline connection
- Inspection port
- Vacuum gauge
- Isolation valve
- Drain valve.

VACUUM PUMP CONTROL SYSTEM

Custom built vacuum pump control system consisting of the following;

- PLC based system
- DOL or Star Delta Starters with overloads (one per pump)
- Digital low vacuum switches for each pump
- Digital vacuum switch for low vacuum alarm
- Manual / Off / Auto selector switches for each pump
- Hour run meters (one Per Pump)
- Service due alarms for each pump
- Pump Status Indicating Lights-Green-Run, Red- Fault
- Start / Reset push button
- Emergency stop push button
- Low voltage control circuit
- System reset button
- Vacuum System fault alarm light
- Low oil Alarm with respective pump shutdown
- BMCS fault feedback signal



SYSTEM ASSEMBLY

The vacuum pumps are logically arranged on a base frame assembly / Receiver connected to the reticulated vacuum line via a common branch connection with the following inclusions per pump:

- Isolation valve
- Check valve.
- Flexible pipe section for vibration isolation

WESTMEAD MILLENIUM INSTITUTE



WOMEN'S & CHILDRENS HOSPITAL



OPTIONAL BACTERIAL FILTERS

One set comprising:

- Two (2) Manual Change Over Bacterial Filters manufactured to National Health Service Model Engineering Specification - HTM 2022, with pipeline connections, sterilisable glass drain flask, and manual drain valve
- Each filter will be fitted with a Differential Pressure gauge
- Four-(4) isolation valves
- Interconnecting pipework between filters
- Connection ports

Filters will be supplied fully assembled, tested and mounted on a frame to be mounted next to the pump.

