



Puzer Protect Pneumatic Refuse Conveying System For offices & commercial buildings



Document shredder for general and common usage



Waste paper collection point



Personal document shredder



Bulky items and large data shredder



Bin centre with waste paper and other waste stored separately

For more information,
please visit our websites:

www.pvsin.com.sg

www.puzer.com.cn

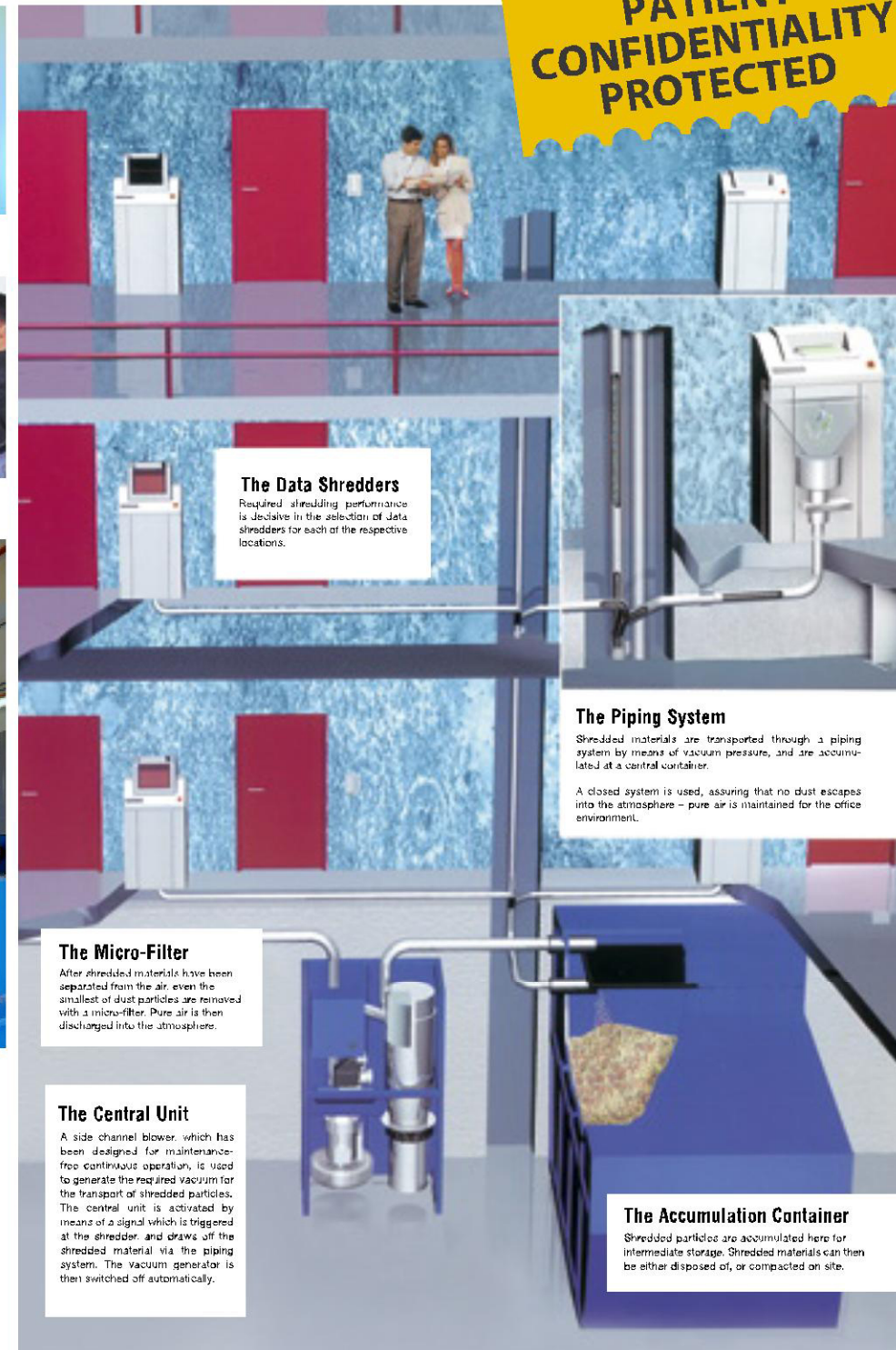


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**PATIENT
CONFIDENTIALITY
PROTECTED**

The Data Shredders

Required shredding performance is decisive in the selection of data shredders for each of the respective locations.

The Piping System

Shredded materials are transported through a piping system by means of vacuum pressure, and are accumulated at a central container.

A closed system is used, assuring that no dust escapes into the atmosphere - pure air is maintained for the office environment.

The Micro-Filter

After shredded materials have been separated from the air, even the smallest of dust particles are removed with a micro-filter. Pure air is then discharged into the atmosphere.

The Central Unit

A side channel blower, which has been designed for maintenance-free continuous operation, is used to generate the required vacuum for the transport of shredded particles. The central unit is activated by means of a signal which is triggered at the shredder, and draws off the shredded material via the piping system. The vacuum generator is then switched off automatically.

The Accumulation Container

Shredded particles are accumulated here for intermediate storage. Shredded materials can then be either disposed of, or compacted on site.



Central Vacuum Cleaning System were introduced as early as 1905 in area where stringent cleanliness requirement and contamination control is a must.

Today, it have become a standard feature in all high-tech clean room facility such as wafer fab, solar plants, etc. where stringent cleanliness and contamination control has to be achieved in the most convenient and efficient way.

Central Vacuum Cleaning System is most needed and frequently used in:

- Operating Rooms
- Intensive Care Units
- Physical Therapy Facilities
- Emergency Wards
- Patients Wards/Rooms
- Autopsy Facilities
- Laboratories
- Isolation Rooms
- Examination Rooms
- Nurseries



Many Hospitals - where the need for aseptic environments and communicable disease control are critical - depend on Puzer Central Vacuum Cleaning systems.

Hard Floor



Positive Sanitation of Central Vacuum cleaning System for large, hard surface areas with the use of vacuum slots (floor or wall mounted) with the speed and convenience of dry-mopping. Dirt pushed to the Vacuum Slot is drawn into the system and conveyed away immediately.

Where efficient, effective sanitizing is a must:

The system makes it easy to dispense the detergent-disinfectant solution in controlled amounts over all areas to be cleaned and disinfected, including recesses that cannot be reached with mops, sponges and brushes.

The spent disinfectant never mingles with the fresh supply. The first soaking application of solution loosens germ containing dirt and grime, while a strong spray-rinse flushes the softened dirt away.

The only residue which may be left behind is cleaned disinfectant, which is easily removed with a Central Vacuum Cleaning System with wet pick up capacity.



Carpeted Floor

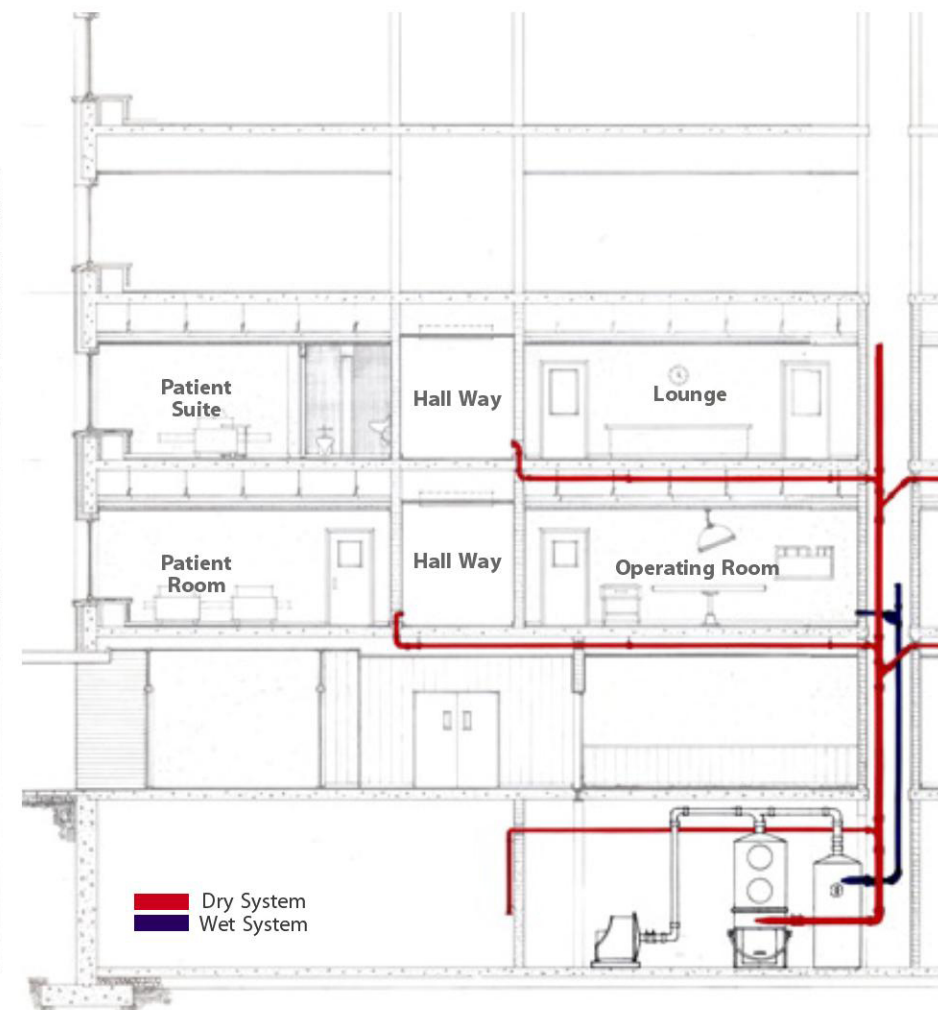
Central Vacuum Cleaning System does not stir up micro-dust during the cleaning process. Ordinary Portable Vacuum Cleaners stir up micro-dust and not only causes users and occupants to breathe in polluted air during the cleaning process, but also long after it, as the un-removed micro-dust that has been stirred up takes many hours to settle down again.

In a Central Vacuum Cleaning System, dust and dirty air pick up through the Vacuum Cleaning Hose, is removed from the surrounding, filter at a remote location & discharged after that.

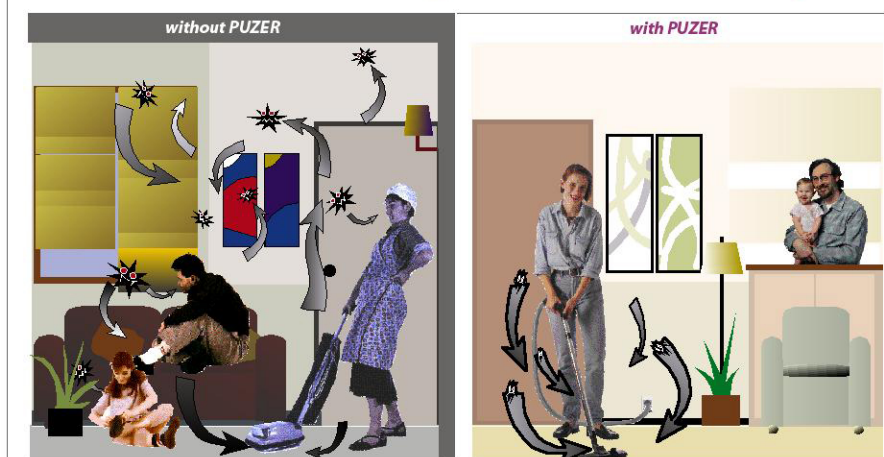
Hence, all dust, bacteria, virus, etc. that has been picked up from one room or area will not be carried to other rooms or area.

Vacuum Technologies for Hospitals

Contamination Control Patient Protection



In the air that we breathe, we do not breathe only air.



With your portable vacuum cleaner, dirt and dust are recycled and left floating in the room.

What is in the air you breathe?
Viruses. Dust. Dustmites. Bacteria. Pollen. Fibres. Even Fleas.
Conventional cleaning systems clears some of this, misses others - and just circulates the rest in your living room.

Puzer central vacuum systems suck and trap the dirt and dust in the central unit.

From the floor, through the vacuum hose, hidden pipe line, all the way to the central canister in a remote location. Dust and all micro-particles are sucked out of your living areas, leaving you with fresh and clean air.

Vacuum Sanitation Systems



▲ Schematic layout of a vacuum sanitation system with connected sanitation units.

▼ Further connections in the basement, as well as vacuum station and discharge to the local sewer.



Flushing Nozzle of the hygienic and aesthetically designed vacuum toilet.



Stainless steel toilets for public areas.

Saving Water

Vacuum toilets require only one litre per flush, compared with conventional toilets that use between 3.5 to 10 litres to flush, vacuum toilets can save significant quantities of process waters.

Vacuum sanitation are therefore best used in buildings and at locations where huge savings in water use are either required or can be generated. Ideal developments are where there is a high density of sanitation units and when the frequency of usage is high, eg. in a hospitals, health-care facilities, office buildings, railway stations, airports etc.

In short, vacuum sanitation systems offer major advantages;

- A real water saving technology
- Absolute freedom in design
- High flexibility of pipe layout

Decaying plants for discharge of radioactive sewage

When thyroid disease are treated with radio iodine (131I) in the nuclear medical department of hospitals, a large quantity of radioactive isotopes is deposited. The radioactive waste water may not be discharged into the public sewer, but must be stored until the radioactivity has decayed below the legally defined value.



Sewage decay tanks

We offer decontamination plants which are individually designed according to the requirements of the respective hospital. The type of tanks – double wall steel tanks for installation underground or vessels installed in (cellar) rooms – may be specified by the hospital. A modern central process control system including process visualisation regulates the plant and guarantees a high safety standard.

Due to the long retention time of the waste water in the decay tank, an anaerobe process must be prevented to avoid biogas generation. And aerobic process takes place when the wastewater is periodically aerated. Consequently, the hospital can abandon the neutralisation that was formerly used in decay plants.

The size and number of decay plants is determined mainly by the daily water volume. Thanks to the use of vacuum toilets the daily water discharge into the recipient tanks is reduced by 50%. The total investment costs decrease consequently to 30%.

Our engineers and assemblers have some twenty years of experience in the design and construction of contaminated waste water collection and treatment systems.

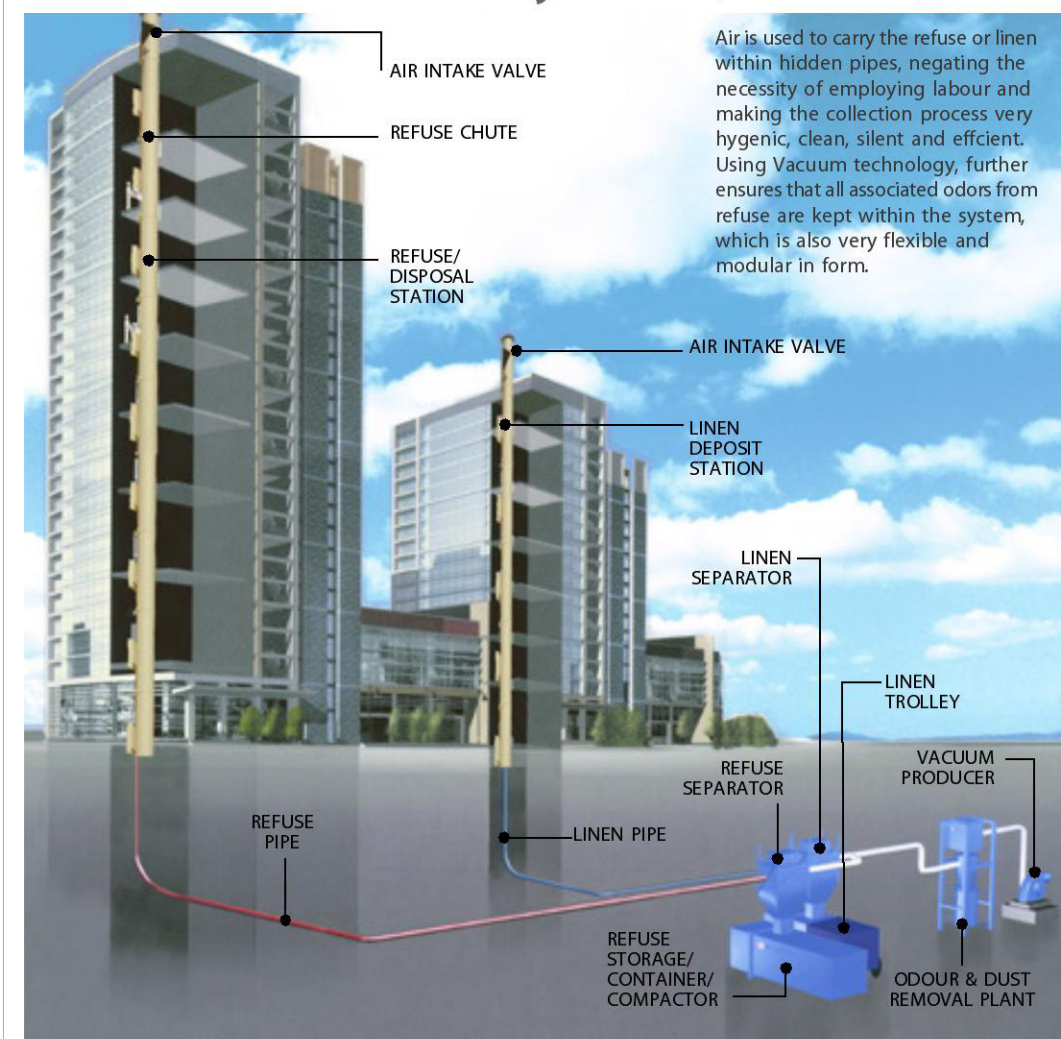


Exhaust air filter system for decay tanks

Puzer Pneumatic Refuse/Linen Collection System

Basic Puzer Pneumatic Refuse and Linen Conveying System serves refuse/linen chutes with refuse disposal station or linen collection station. It comprises a network of refuse/linen conveying pipes which connect each feeder station (refuse or linen) to the central station, which produces the suction power.

Air is used to carry the refuse or linen within hidden pipes, negating the necessity of employing labour and making the collection process very hygienic, clean, silent and efficient. Using Vacuum technology, further ensures that all associated odors from refuse are kept within the system, which is also very flexible and modular in form.



Central Vacuum Producing Plant



4 x 600 Actual m³/h Oil Lubricated Vacuum Pump Package



0.5kw Oil Lubricated Vacuum Pump Package for Dedicated Research Lab Usage



15kw oil lubricated Vacuum Pump Package for small scale Central Vacuum Source



Three Stage Oil Free Vacuum Pump Package For Life Science Research



Moisture Extracting System with PH Monitoring for Life Science Research Facility

Hydrophobic Filters

For health care and research facilities such as life science research hub, safety is an issue that should not be compromised. Hydrophobic filters are used to minimize the potential contamination of vacuum pumps. Stringent decontamination mechanism must be designed and be approved by the facility safety personnel.

Freedom of Choice

The aspects which have a decisive bearing in the correct selection and choice of a machine type, combination, etc. involve a detailed analysis of the particular application and a considerable knowledge of the types of equipment available, their particular advantages and disadvantages, economic reliability and mechanical / process feature.

Our familiarity with International Design and Manufacturing codes provides our clients with a choice of system optimised for different levels of reliability, safety or performance consideration or pure economic constraints.

Power of Adopting System Approach

This approach provides an array of more options for optimizing resources in any life cycle cost consideration, providing an opportunity to optimize either initial cost or running cost. It delivers a system with components that work in harmony with each other and provides the optimum conditions for other parts in the system to perform.

Here are a few types of Centralised Vacuum Systems used in Health Care Facilities:

Medical Surgical Vacuum Systems (Patient Vacuum Systems)

- Used in operating rooms, intensive care areas, medical & surgical suites and patient rooms
- It is also used to remove waste anesthesia gas and laboratory purposes.

High Vacuum Waste Anesthetic Gas Disposal

- Used to remove waste anesthetic gas expelled from patients within operating rooms and other anesthetising areas.

Laboratory Vacuum System

- Serves general, chemical, biological and physics laboratory purposes, principally drying, filtering, transferring fluid and evacuating air from apparatus.

Dental Vacuum System

- Provides suction for the removal of fluids and suspended residue from oral cavities during operative and other dental procedures.