



GRÜNTECHNOLOGY

**WATER
COMPRESSED AIR
GAS SOLUTION**

gruntechnology.com

- PUMPS**
- INSTRUMENTS**
- GAS GENERATORS**
- PIPING AND ACCESSORIES**
- COMPRESSED AIR AND GAS TREATMENT**
- INDUSTRIAL AUTOMATION AND CONTROLS**

OUR COMPANY

GRÜNTECHNOLOGY CORPORATION (Grün Means Green : Green Technology)

Gruntechnology corporation is an employee owned company focus on providing solutions for water, compressed air and gas.

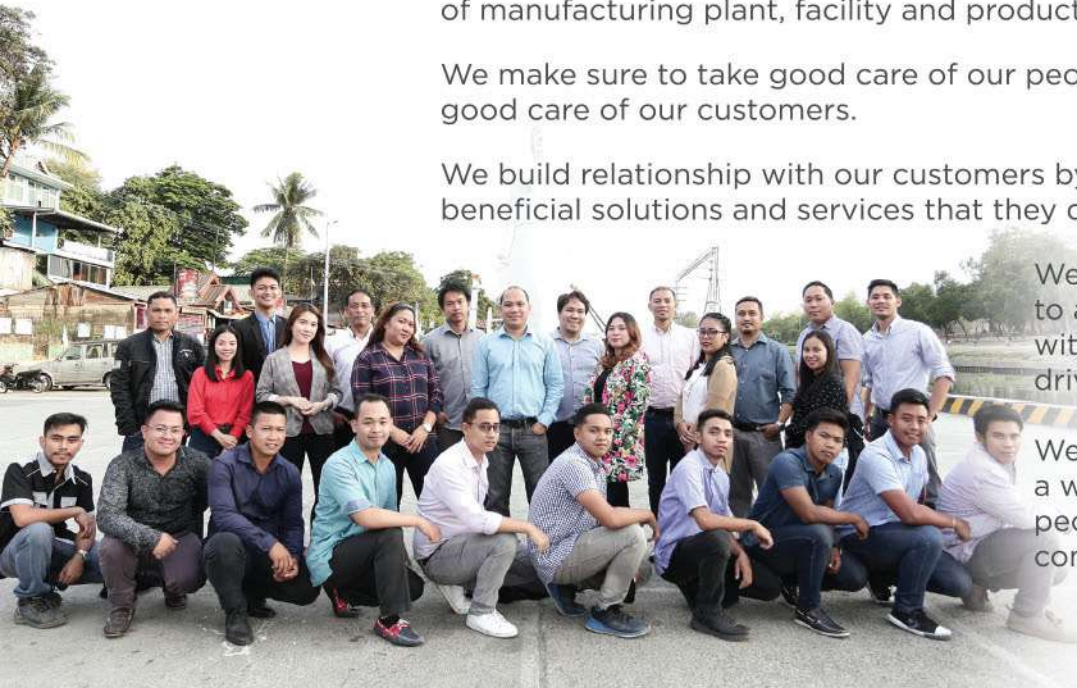
We are a solution based provider committed to enhance the efficiency of manufacturing plant, facility and production equipment.

We make sure to take good care of our people so that they can take good care of our customers.

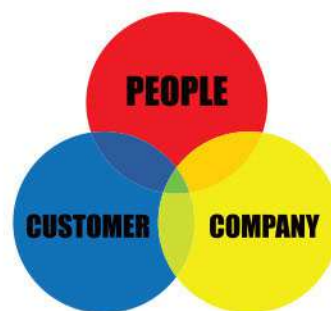
We build relationship with our customers by giving them the most beneficial solutions and services that they deserve.

We are continuously evolving to adapt on the changing time with our company culture as driving force.

We work hard and look for a win-win solution for our people, customers and company.

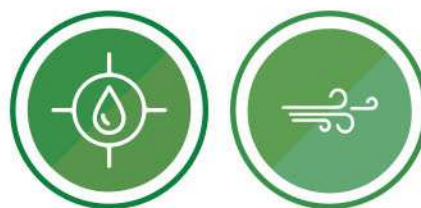


We suffice our **People,**
Customer and
Company.



OUR MISSION

To be a leading solution provider for
Water,
Compressed Air
and **Gas.**



OUR VISION



MADISKARTE

"Without passion any rational person would give up" -Steve Jobs

We should find ways to accomplish any given task. We have to exert all our efforts and resources to solve every problem and attain our goals.



MATAPAT

"By giving people the power to share, we are making the world more transparent"-Mark Zuckerberg

We are transparent, open and honest every time. Being honest and transparent builds integrity. This will empower us to do more and it opens door for a fruitful collaboration.



MAPAGKAKATIWALAAN

"Trust is earned when actions meet words" -Chris Butler

We strive to earn the trust of our customers, partners and co-employees.



MASIYAHIN

"Life is full of challenges, being happy should not be one of them"

We do our work with a smile. We choose to be a positive people. We see the bright side of everything. We work hard and play hard.



KAPATIRAN

"The strength of the Wolf is the pack and the strength of the pack is the wolf" -Rudyard Kipling

We support each other in any challenges that we face. We find solution together as team. We treat each other as brothers and sisters. We extend our KAPATIRAN hand to anyone.

DIAPHRAGM METERING PUMPS

A dosing pump is a small, positive displacement pump. It is designed to pump a very precise flow rate of a chemical or substance into either a water. A dosing pump will deliver this precise flow rate of chemical or other product by a number of different methods but it generally involves drawing a measured amount into a chamber and then injecting this volume of chemical into the pipe or tank being dosed. A dosing pump is generally quite small and is powered by either a small electric motor or air actuator. They are controlled either by an external control system or more commonly an internal pump controller that can alter the flow rate, the on/off function and also things like alarms and warnings for run dry, degassing and low product levels.



SOFT STARTER

Soft Starter is a controller with thyristors used for torque-controlled soft starting and stopping of three-phase squirrel cage asynchronous motors. It offers soft starting and deceleration functions along with machine and motor protection functions, as well as functions for communicating with control systems. These functions are designed for use in the most common applications for centrifugal pumps, fan, compressors and conveyors, which is primarily to be found in construction, food and beverage and chemical industries.



LEVEL SENSOR

Level sensors detect the level of water or liquids that exhibit an upper free surface. Substances that flow become essentially horizontal in their containers because of gravity. The substance to be measured can be inside a container or can be in its natural form. The level measurement can be either continuous or point values. Continuous level sensors measure level within a specified range and determine the exact amount of substance in a certain place, while point-level sensors only indicate whether the substance is above or below the sensing point. Generally the latter detect levels that are excessively high or low.



GRUNTECH CONTROLLER

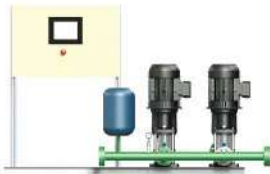
Gruntech Controller is a complete set of electrical device that allow the user to save energy to any electric motor driven equipment by adjusting its power consumption based on the actual demand.

- Plug and play operation based on customer application
- Manual or automatic operation with % energy savings display
- Complete with electrical safety devices and switches



BOOSTER PUMP SYSTEMS

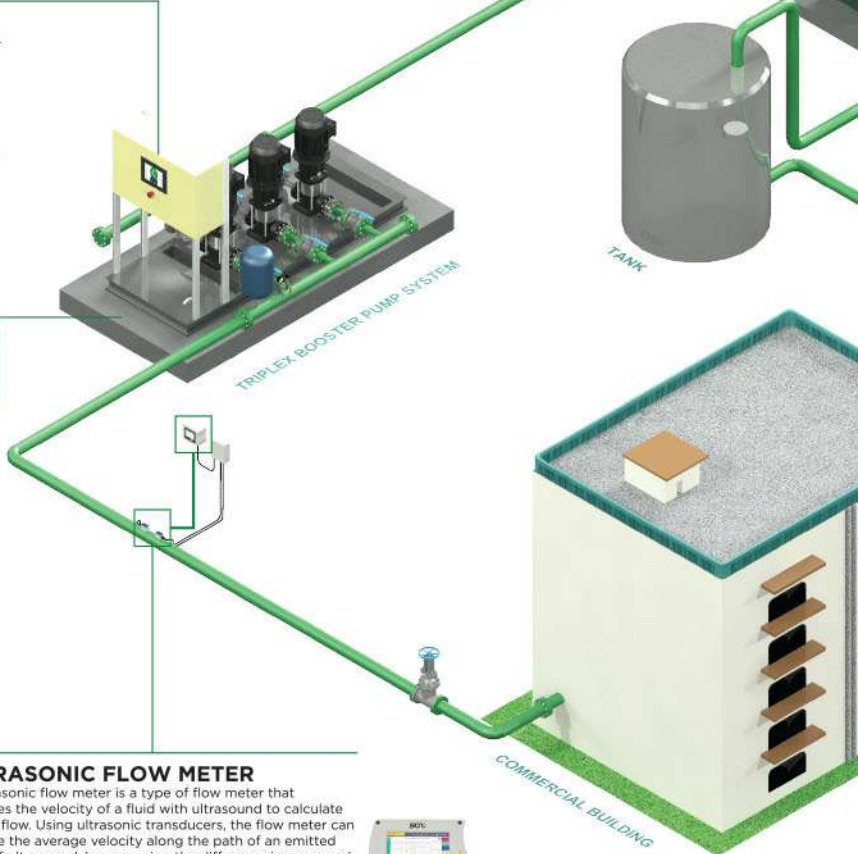
Booster pump systems are fully assembled, tested and ready for installation pressure dependent pump with common base and controller. It maintains and adapts to the pressure needed by the process or machine. It has 1 running and 1 stand-by pumps and can also be running simultaneously dependent on actual demand. Pumps, inlet/outlet pipe, bladder tank, controller and related accessories are mounted on common frame for easy transport and installation.



ULTRASONIC FLOW METER

An ultrasonic flow meter is a type of flow meter that measures the velocity of a fluid with ultrasound to calculate volume flow. Using ultrasonic transducers, the flow meter can measure the average velocity along the path of an emitted beam of ultrasound, by averaging the difference in measured transit time between the pulses of ultrasound propagating into and against the direction of the flow.

The ultrasonic flow meter uses the proven clamp-on transit-time correlation technique. The ultrasonic transducers are simply clamped onto the outside of the pipe and never come in contact with the fluid.



OUR PARTNERS :

ELECTROMAGNETIC FLOW METER

Electromagnetic flow meter (mag flow meter) is a volumetric flow meter which does not have any moving parts and is ideal for water or wastewater applications or any dirty liquid which is conductive or water based. This instrument measures fluid flow by the voltage induced across the liquid by its flow through a magnetic field. A magnetic field is applied to the metering tube, which results in a potential difference proportional to the flow velocity perpendicular to the flux lines. The physical principle at work is electromagnetic induction.

Electromagnetic flow meters are ideal for applications where low-pressure drop and low maintenance are required.



END SUCTION CENTRIFUGAL PUMP

Centrifugal pumps are used to transport fluids by the conversion of rotational kinetic energy to the hydrodynamic energy of the fluid flow. The rotational energy typically comes from an engine or electric motor. The fluid enters the pump impeller along or near to the rotating axis and is accelerated by the impeller, flowing radially outward into a diffuser or volute chamber (casing), from which it exits.

End suction centrifugal pumps should be designed in accordance to DS EN 1733 / DIN 24255 standard. This pumps have great advantages in interchangeable parts, high quality and low cost.



VARIABLE FREQUENCY DRIVE (VFD)

Variable Frequency Drive used in electro-mechanical drive systems to control AC motor speed and torque by varying motor input frequency and voltage.

VFDs are used in applications ranging from small appliances to large compressors and pumps. Most of the industrial plants electrical energy is consumed by electric motors which can be more efficient when using VFDs.

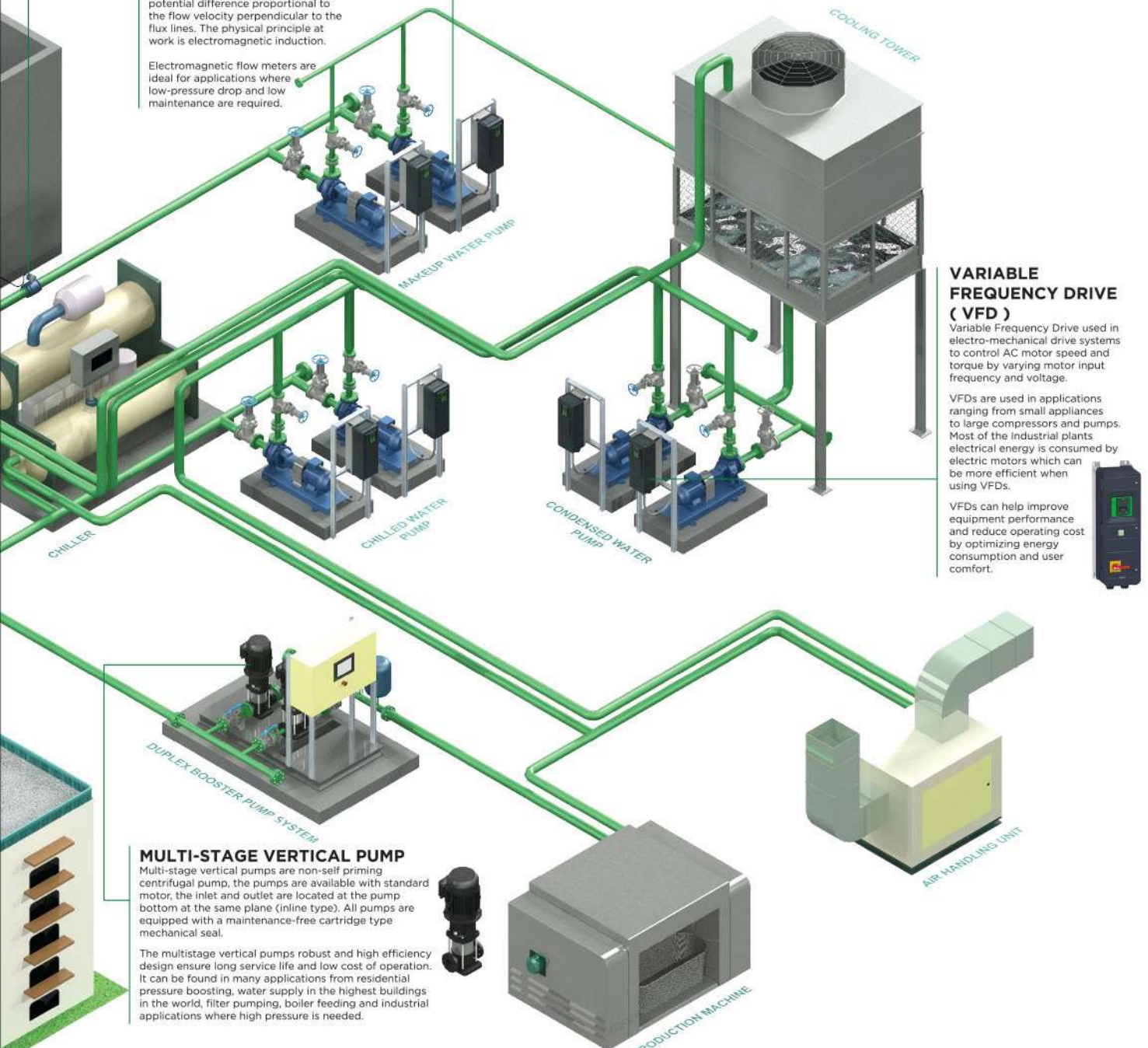
VFDs can help improve equipment performance and reduce operating cost by optimizing energy consumption and user comfort.



MULTI-STAGE VERTICAL PUMP

Multi-stage vertical pumps are non-self priming centrifugal pump, the pumps are available with standard motor, the inlet and outlet are located at the pump bottom at the same plane (inline type). All pumps are equipped with a maintenance-free cartridge type mechanical seal.

The multistage vertical pumps robust and high efficiency design ensure long service life and low cost of operation. It can be found in many applications from residential pressure boosting, water supply in the highest buildings in the world, filter pumping, boiler feeding and industrial applications where high pressure is needed.



GRUNTECH WATER SOLUTION

Water is a vital part of the manufacturing process. Gruntech has the complete solution for your needs. From design, audit, installation, servicing, system improvement and training. We can supply and support your requirements of pumps, instruments, demand base controllers, soft starters, variable frequency drives (VFD) and up to the sophisticated centralized control and monitoring systems of your water line.

COMPRESSED AIR ANALYZER

Compressed air analyzer consist of power meter, flow meter and data logger which enable the user to data log and analyze the compressed air usage and behavior.

Using sophisticated software we can determine the performance statistics of compressors (efficiency, air delivery, load/unload cycles), leakage analysis, report generation and more.

This is the ideal instruments for energy analysis (ISO 50001) and air audits (ISO 11011).



COMPRESSED AIR FLOW METER

Compressed air flow meter uses thermal mass or pitot tube sensor to know the compressed air flow and consumption.

This will help the user improve system efficiency, while helping reduce compressed air usage and operating costs.

If connected on data logger or monitoring systems flow data can help to analyze the compressed air usage and generate action based on actual data extracted and recorder by the instruments.



WATER AND OIL SEPARATOR

Water oil separators have been specifically developed to separate lubricant oil from condensate from compressed air systems.

Condensate treated with water and oil separators can be drained into public sewers. It separate any type of oil and works with any type of condensate drain.

It usually installed in a compressed air system to comply with environment management system.



COMPRESSED AIR FILTER

Compressed air filter has been specifically developed for high efficient removal of solid particles, water, oil aerosols, hydrocarbons, odour and vapours from compressed air systems. To meet the required compressed air quality appropriate filter element must be installed into filter housing.

It can be use on automotive, electronics, food and beverage, chemical and general industrial application that need the removal of compressed air contaminants.



AUTOMATIC CONDENSATE DRAIN

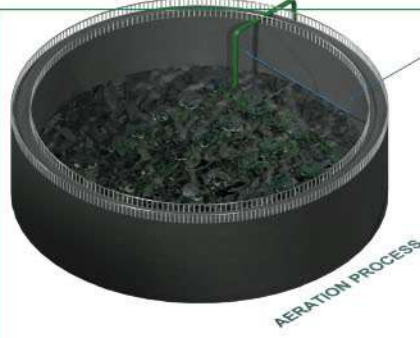
Automatic condensate drain is an electronic level sensing discharging units for operation in compressed air system. Condensate accumulates in the collecting reservoir and when the level is high enough condensate is being discharged from the system without any air losses. Fluid level is detected by precise level sensor. Special self-cleaning direct acting valve assures reliable operating. Condensate drain usually equipped with operation alarm, led indicator, test button and internal strainer.

It can be use in condensate discharge of compressor refrigerated dryer, condensate separator, filter and receiver.



COMPRESSED AIR CENTRALIZED MONITORING SYSTEM

Compressed air centralized monitoring system designed to monitor factory or building systems of all scales. For compressed air system it records and analyzes air consumption, system pressure, dew point, oil vapor contents, compressor status, particles basically everything required for a safe operation. Alarm monitoring with indications on screen, relay outputs and e-mail puts the user in control of the system. Monitoring system uses Modbus or industrial protocol for communication to the instruments. All data can be recorded and analyze for systems improvement.



HEAT REGENERATIVE ADSORPTION DRYERS

Heat regenerative adsorption dryers are designed for continuous separation of water vapour from compressed air thus lowering the dew point. It has two columns that operate alternately. Adsorption takes place under pressure in the first column while the second column regenerates using heated ambient air for desorption and expanded dry compressed air purge for cooling. Heat regenerative adsorption dryer consists of two columns, filled with desiccant beads, a blower, heater, controller with display, valves, manometers, and a support construction.



OXYGEN GENERATOR

The oxygen generators extract the available oxygen in the ambient air from the other gases by applying the Pressure Swing Adsorption (PSA) technology. During the PSA process compressed, cleaned ambient air is led to a molecular sieve bed, which allows the oxygen to pass through as a product gas, but adsorbs other gases. The sieve releases the adsorbed gases to the atmosphere, when the outlet valve is closed and the bed pressure returns to ambient pressure. Subsequently the bed will be purged with oxygen before fresh compressed air will enter for a new production cycle. In order to guarantee a constant product flow, oxygen generators use modules of two molecular sieve beds, which alternatively switch between the adsorption and the regeneration phase.

NITROGEN GENERATOR

The nitrogen generators extract the available nitrogen in the ambient air from the other gases by applying the Pressure Swing Adsorption (PSA) technology. During the PSA process compressed, cleaned ambient air is led to a molecular sieve bed, which allows the nitrogen to pass through as a product gas, but adsorbs other gases. The sieve releases the adsorbed gases to the atmosphere, when the outlet valve is closed and the bed pressure returns to ambient pressure. Subsequently the bed will be purged with nitrogen before fresh compressed air will enter for a new production cycle. In order to guarantee a constant product flow nitrogen generators use two molecular sieve beds, which alternatively switch between the adsorption and the regeneration phase.

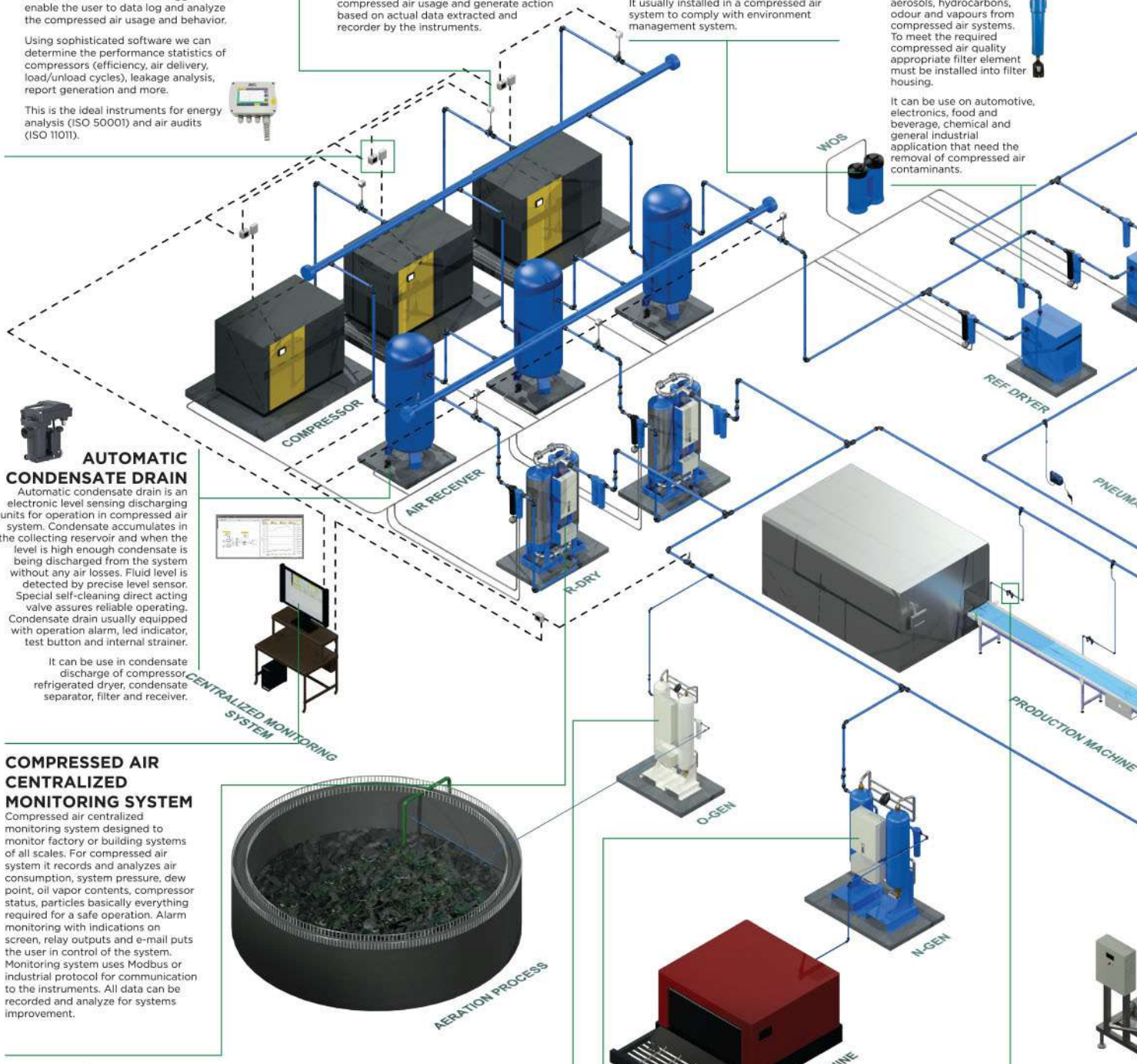


FILTER, REGULATOR AND LUBRICATOR UNIT

Filters eliminate contaminants from compressed air (particles, water and oil) by filtration and bleeding. They ensure 95% separation of water, oil and solid particles greater than or equal to the selected filtration threshold.

Regulators adjust pressure to the values required by each application.

Oil mist lubricators preserve your pneumatic tools by injecting precisely metered quantities of lubricant into the filtered air.



REFRIGERATED AIR DRYER

Refrigerated dryer has been designed to lower the dew point in compressed air system by cooling the inlet air. By this water vapour retention of air drops significantly. The excess water condenses and is drained out of the system.

Refrigerated dryer can lower the dew point of compressed air system up to 30C.

ADVANCED COMPRESSED AIR PIPING

A compressed air network entails linking a source of compressed air, from compressor to the distribution points. The advanced compressed air piping is made of aluminum pipes, loop together and connects pipes with a smaller diameter, known as drops feed off. These constitute compressed air distribution points, to which various equipment such as safety fittings, filters, flexible hoses are attached.

The Advanced compressed air piping network range comprises compact, lightweight and resistant pipes and fittings made entirely from aluminum. They are quick and easy to install and can be pressurized immediately.



TUBINGS AND CONNECTORS

Tubing and connectors keeps the pneumatic component connected and intact to perform task need by the machine.

Pneumatic push-in fittings, polyurethane tubing, coil hose, blow guns and other connectors are some of the components needed to ensure that the compressed air is delivered to the pneumatic component.

Tubing and connectors should better compact and durable to eliminate all risk of leaking while connecting the tool or pneumatic component to the compressed air piping system.



POINT OF USE ADSORPTION DRYER

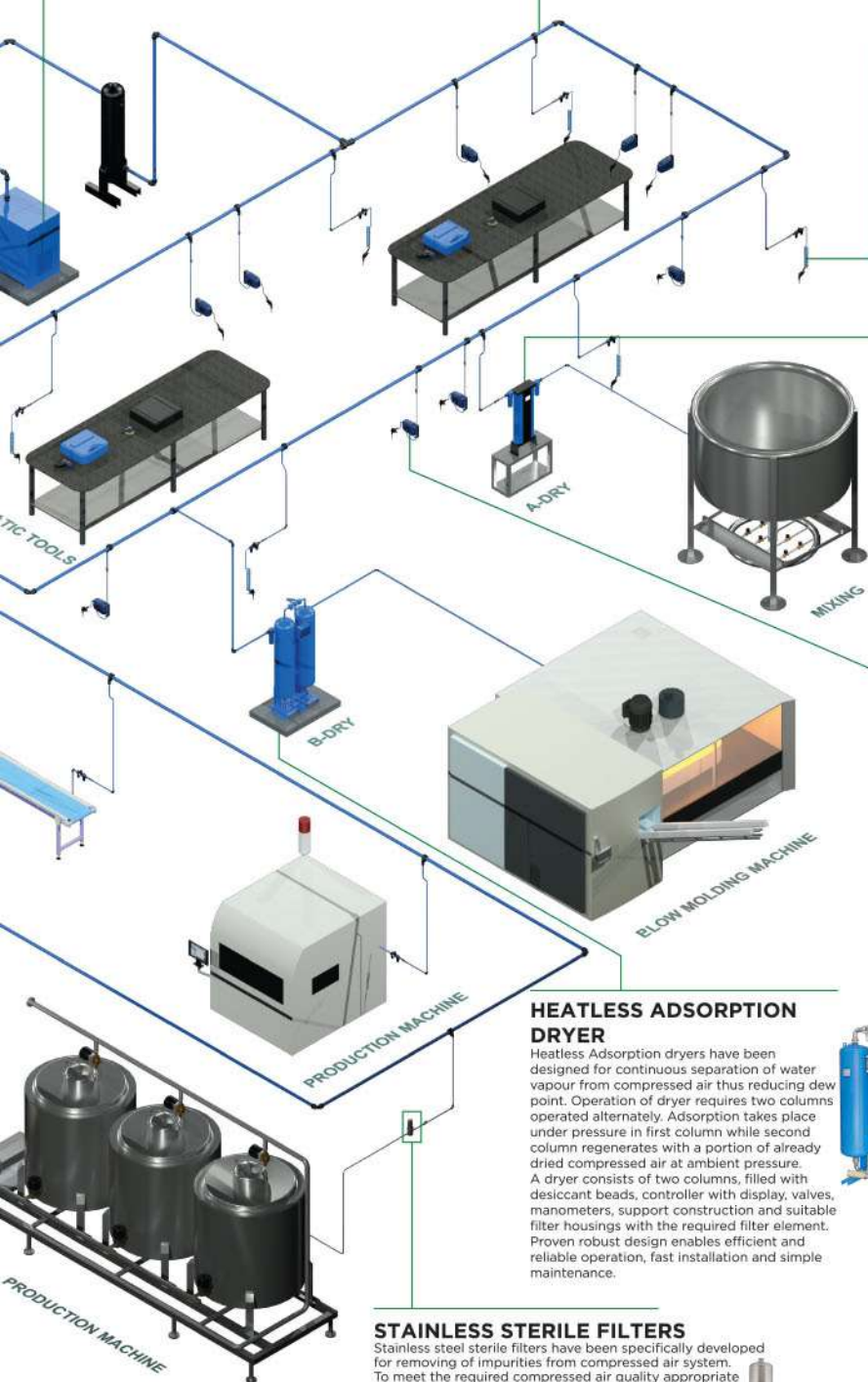
Point of use adsorption dryers have been designed for continuous separation of water vapour from compressed air of the point of use machine. Operation of the dryer requires two columns operated alternately. Adsorption takes place under pressure in the first column while the second column regenerates with a portion of already dried compressed air at ambient pressure. Dryers consists from upper and lower control block, controller with display and two columns filled with desiccant. Springs in the columns make sure that the desiccant beads will not move during operation. Proven robust design enables efficient and reliable operation, fast installation and simple maintenance.



AUTOMATIC HOSE REEL

Automatic hose reels are essential equipment for an efficient workshop. They save time and enable flexible distribution hoses to be used in total safety and comfort.

The technology and the quality of the materials ensure that the reels are robust and effective. Compressed air hose reels include quick safety couplings, offering hose whip protection and enabling single press depressurisation and disconnection of pneumatic tools in total safety.



HEATLESS ADSORPTION DRYER

Heatless Adsorption dryers have been designed for continuous separation of water vapour from compressed air thus reducing dew point. Operation of dryer requires two columns operated alternately. Adsorption takes place under pressure in first column while second column regenerates with a portion of already dried compressed air at ambient pressure. A dryer consists of two columns, filled with desiccant beads, controller with display, valves, manometers, support construction and suitable filter housings with the required filter element. Proven robust design enables efficient and reliable operation, fast installation and simple maintenance.



STAINLESS STERILE FILTERS

Stainless steel sterile filters have been specifically developed for removing of impurities from compressed air system. To meet the required compressed air quality appropriate filter element must be installed into filter housing. Sterile filter housing is also designed for sterilization.

Stainless steel sterile filters are widely used in food and beverage application like packing, biotechnology, breweries, dairies and fermentation.



GRUNTECH COMPRESSED AIR AND GAS SOLUTION

Compressed air and gas are vital parts of manufacturing process. Gruntech can supply and support you with compressors, air receivers, compressed air and gas treatment equipments, gas generators, instruments, pipings, tubings, connectors as well as custom built system based on your needs.

OUR PARTNERS :



OUR PARTNERS

SLOVENIA
Compressed Air Treatment and Gas Generator



COMPRESSED AIR FILTERS, ELEMENTS AND DRAINS

Omega compressed air and gas filters and elements removes airborne particles, water vapour, microbes, and chemical gases enter compressors. Clean and dry air protects the compressed air system, reduces maintenance costs and increases finished product quality.

PRODUCTS: Industrial filters, Condensate separator, High pressure filters, Sterile filters, Filters for special application and alternative filter element for most of the majority filter manufacturers.



COMPRESSED AIR DRYERS

Dry air is important. In almost every process, clean and dry compressed air will result in lower operating costs. Impurities such as solid particles, water and oil, which are in the air will be deposited on the inner surfaces of pipes fittings and inner components, causing an increase in pressure drop. The result is undesired loss of performance efficiency.

PRODUCTS: Point of used dryers, Heatless regeneration adsorption dryers, Vacuum regeneration adsorption dryers, Heat regenerative adsorption dryers, Refrigerated dryers, High inlet temperature refrigerated dryers, Membrane dryers



GAS GENERATORS

Omega gas generators use the ambient air to generate oxygen or nitrogen for used in different application such as blanketing, inerting, laser cutting, food processes, aquaculture, glass blowing and others.

PRODUCTS: Pressure swing adsorption (PSA) oxygen generator, Pressure swing adsorption (PSA) nitrogen generator, skid mounted nitrogen and oxygen generator



GERMANY **SUTO**
Compressed Air and Water Measurement

FLOW CONSUMPTION MEASUREMENT

Suto-itec flowmeters enable the user to know, measure and analyze their flow consumption for compressed air, gas and water.

PRODUCTS: Insertion type thermal mass flowmeter, inline type flow meter, pitot tube flow meter, heavy duty flowmeter and ultrasonic liquid flow meter



COMPRESSED AIR QUALITY MEASUREMENT

Compressed air quality measurement in compliance with ISO 8573 purity standard for compressed air systems. Suto offers the air quality instruments for measurement of dew point, particle and oil vapour.

PRODUCTS: Dew point sensor, portable dew point sensor, laser particle counter and oil vapor sensor



DISPLAY, DATA LOGGER AND SOFTWARE

Suto universal display and data logger can measure, display and record all relevant parameters such as Flow, consumption, dew point, pressure, temperature, power consumption, compressor status in a compressed air and water system.

PRODUCTS: Basic display, Touch screen display and data logger, Compressed air analyzer software and logger, Smart compressed air monitoring system and software, Compressed air consumption report software





FRANCE

Compressed Air Piping and Accessories

COMPRESSED AIR AND GAS PIPING

The Prevost piping system for compressed air and gas is compact and lightweight pipes and fittings made entirely from aluminium. They are quick and easy to install and can be pressurized immediately. It ensures clean and good-quality air supply, leak tight network, and an optimized flow rate. Workstations are well supplied, accessible and ergonomically designed.

PRODUCTS: Compressed air and vacuum piping from 16mm to 80mm diameter, main pipe connectors, drop point connector and isolation valves



CONNECTORS AND ACCESORIES

Complete range of hose reel, coupling, push-in fitting and tubing for connection of process or machine to the main line compressed air supply.

PRODUCTS: Hose Reel, Polyurethane and polyamide tubing, Coil hose, Quick connect coupling and compression fittings



FRL, BLOW GUNS AND PNEUMATIC TOOLS

Prevost offers a high efficiency, durable and excellent design point of use accessories for process and machine.

PRODUCTS: FRL units, High performance and safety blow gun, Pneumatic tools such as Impact wrench, screw drivers, sander, grinders and drills



FRANCE

Industrial Automation and controls

VARIABLE FREQUENCY DRIVES AND SOFT STARTER

Schneider Electric range of products and systems is the next generation of variable speed drives and soft starter, designed to deliver IIoT benefits. A smart, connected device with built-in intelligence to gather data and share information to the enterprise level, Altivar Process drives and Altistart soft starter can improve operational efficiency, profitability and reduce total cost of ownership.

PRODUCTS: ATV 320 machine VFD, ATV 630 process VFD, ATV 650 IP55 VFD and Altistart Soft starter



PLC, HMI AND INDUSTRIAL COMMUNICATION

Schneider Electric extensive range of PLC, HMI and communication device for industrial machine and process stands for innovation, offering a full range of solutions to meet your automation needs. From small automated machines to advanced machine automation, our robust offer of trusted automation solutions enhances machines and processes across manufacturing industries.

PRODUCTS: Programmable logic controller (PLC), Human machine interface (HMI), Industrial communication, Motor starter, Control relays and power supply



INDUSTRIAL SOFTWARE FOR MONITORING AND CONTROLS

Real-time data on machine performance helps reduce maintenance costs and maximize system uptime. Remote monitoring of each equipment will help in diagnostic, troubleshooting and predictive analytics, or maintenance strategy recommendations and coordination of on-site interventions.

PRODUCTS: Wonderware InTouch, Eco Structure machine expert, Panel Software, SCADA systems



OUR PARTNERS

CHINA **LIGAO**
Rotary Lobe and metering pumps

METERING PUMPS

Ligao complete range of metering pumps enables precise dosing of chemical for small and large flow and pressure requirements. A newly designed control board and controller will indicates instant flow and accumulated flow for easy reading.

PRODUCTS: Diaphragm metering pumps, Plunger metering Pumps, Hydraulic metering pumps, package dosing pumps and accessories



ROTARY LOBE PUMPS

Ligao sanitary rotary lobe pumps are proven design to provide gentle product handling, ease of maintenance, complete cleaning ability and highly efficiency to transfer high viscous fluid.

PRODUCTS: Three-lobe pumps, Butterfly lobe pumps, Single lobe pumps and precise filling machine



AIR OPERATED PUMPS

Air operated or pneumatic diaphragm pumps are operated using compressed air. It can convey corrosive, volatile, flammable, poisonous liquid or fluid with particles and high viscosity liquid.

PRODUCTS: Plastic (PVDF) air operated pumps and Metal (Aluminum Alloy) air operated pumps



CHINA **eifel**
Centrifugal Pumps

VERTICAL PUMPS

Vertical pumps are non-self priming centrifugal pump, the pumps are available with standard motor, the inlet and outlet are located at the pump bottom at the same plane (inline type). Its vertical structure reduces the installation space, motor shaft is plugged into pump to ensure alignment of pump and motor.

PRODUCTS: Cast Iron Vertical Multi-stage Pumps, Stainless Steel Vertical Multi-stage Pumps and Inline single stage pump



END SUCTION AND SPLIT CASE PUMPS

End suction and split case pumps are designed in accordance to DS EN 1733 / DIN 24255 standard. This pumps have a great advantage in interchangeable parts, high quality and low cost. This kind of pumps are high flow rate, high efficiency, stable operation, low noise, long service life, easy to install and maintain.

PRODUCTS: Cast iron end suction pumps, Stainless steel end suction pumps, Ductile Iron Split case centrifugal pumps and close-coupled centrifugal pumps.



SELF PRIMING PUMPS

Self priming pumps are used for solid handling and resistant to abrasion application. These pumps can handle liquids up to a viscosity of about 50 cSt. Designed with advance device maintenance hole and wear plate for east cleaning and flushing.

PRODUCTS: Cast Iron self priming pumps and Stainless steel self priming pumps



OUR CAPABILITIES



PROJECT DESIGN AND CONSULTATION

Our experience and complete line of products will guide you on your project. We will propose the most efficient solution based on your needs.

SYSTEMS IMPROVEMENTS

We will continuously look for improvement on your systems and recommend for the most efficient and cost effective way in running your equipment. We will also train your staff on operation, maintenance and troubleshooting.

We are committed to listen and help you on your water, compressed air and gas needs.

COMPRESSED AIR AUDIT

Our compressed air audit tools will help you know your air quality. We can measure compressed air dew point, particle and oil vapour content. We will outline our recommendation and develop solutions based on ISO 8573 compressed air standard.

COMPREHENSIVE PUMP AUDIT

We have complete instruments to measure your pump efficiency. We can measure and record your pumps pressure, flow and power. This will help you analyze and guide you in running your pump in optimum performance. We can identify savings opportunities.

INSTALLATION AND COMMISSIONING

Our support will not end by supplying you your needed equipment. Our project support group has the experienced and ability to install and start-up your equipment at your given schedule and specifications.

SERVICING AND TROUBLE-SHOOTING

Our knowledgeable and experienced service engineers and staff will support your production at all times. We respond to your service call 24/7 and help you restore your operation at the shortest time possible. After market support at it's best.

Water | compressed air | gas solution



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Gruntechnology Corporation

