



MARVEL ENGINEERING COMPANY



SALES
IS
MISSION

INNOVATIVE
IS
PASSION

SERVICE
IN
ACTION



Marvel at the Technology.....

ABOUT US

MARVEL ENGINEERING COMPANY founded in 1974 by professionally trained technocrats, has been serving the Indian Industry, with the primary objective of providing World-Class Instrumentation Systems and Associated Equipment for varying applications and the best matching Technical Know-How and guidance to facilitate Customers to derive the maximum benefit.

These high-techs, State-Of-The-Art Devices provided by Marvel Engineering Company have been intended to enable Indian Customers to share the progress elsewhere, for stepping up productivity, eliminating downtime and mitigating pollution hazards, thus contributing to increased availability of products and ensuring a congenial, eco-friendly environment.

With new allied lines added on over the years, Marvel Engineering Company, has grown in stature, and is considered as a reliable provider of Multi-Faceted Instrumentation Devices and accompanying Support Services, for demanding applications in different industries segments.

MARVEL ENGINEERING COMPANY is engaged in the Supply & Service of Instrumentation Systems to Government, Public & Private Sectors throughout India, over the last three decades.

Recently, rated by DUN & BRADSTREET Global Database.

Many Pieces of Unique & Instrumentation Systems have gone into

- * Large Thermal, Combined Cycle Power Projects / Stations.
- * Space & General Research Labs.
- * Defence & Atomic Energy Establishments.
- * Chemical & Pharmaceuticals Units.
- * Steel, Cement, Pulp & Paper Plants.
- * Automobile & Ancillary Industries.

Our Fully Staffed & Equipped, Back-Up Support Team takes care of Installation, Commissioning and other Support activities, stays with the customers, facilitates them to get the best out of the products acquired.

In-House facilities for Servicing & Re-Calibration of Instruments including component level trouble-shooting, to ensure long-term maintenance costs are minimized. Critical spares such as components, subsystems, PCB assemblies, sensors, etc are held in stock to provide quick turnaround of repair and servicing. Engineers are Factory & Site trained.

Compliance Opacity and Dust Monitor

4500 MK III

The 4500 MkIII has reset the industry standard on compliance opacity and dust concentration measurement. Combining the unique features of three patented technologies, it achieves the highest available specification for the principal performance parameters, as defined by the internationally recognized ASTM Standard D 6216, USEPA, MCERTS & TUV Standards.



HOT SALE

Dust Emissions Monitor (For Small Process)

4200

The Model 4200 is a compact smoke, dust and particulate monitor for measuring dust emission concentrations on industrial processes and non-compliance applications. This dust monitor is ideally suited to multiprocess plants with common exhaust stacks.



CO Monitor

9100

Model 9100 is across stack infrared, in-situ carbon monoxide monitor providing high accuracy and reliability, coupled with straight forward installation and setup is suitable for a wide range of industrial combustion efficiency monitoring applications. This is designed to provide the operator with a fast response measurement, of any boiler system.



Range of Stack Gas Emissions Analysers

FGA 900

The FGA 900 range of analysers use dual sensor technology to measure the levels of Nitrogen Oxides, Carbon Monoxide and Oxygen in flue gas. Land's measurement technique ensures stable long-term operation with high accuracy and very low drift.



Sulphuric Acid Dewpoint Temperature Monitor

LANCOM 200

The Lancom 200 is designed specifically for plant requiring only periodic monitoring of the sulphuric acid dewpoint temperature for boiler efficiency checks, corrosion protection and evaluation of the effectiveness of corrective measures such as fuel additives and changes in the combustion conditions.



Portable Flue Gas Analyser

LANCOM 4

The Lancom 4 is a compact, portable combustion and emissions analyser for checking or testing a boiler system or pollutant process. Building on the success of the Lancom III, the Lancom 4 is represents the next generation of portable gas analyser technology. It has the capability to monitor up to 9 different gases simultaneously.



HOT SALE

Insight Data Acquisition & Analysis Software(For Lancom 4)

Insight is a Windows™ based data acquisition software program, used for logging stack emissions measurement data directly from a LANCOM portable gas analyzer.



Lancom Portable Gas Analyser Sample Probes

The Lancom range of Portable Flue Gas Analysers features gas sample probes for varying applications. In applications where a standard probe is not suitable, or there is a special measurement requirement - select one of these alternative probes.



Mill / Silo Fire Detector

Advance warning of the onset of coal mill and silo fires through the early detection of the build-up of carbon monoxide in the mill.
Advanced fire detection system.
Tailored to each application/plant.
Standard analog and discreet contact outputs.
Specially designed for fire detection on coal mills and silos



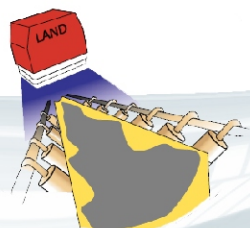
Railcar Fire Detector

The transportation of coal by rail brings with it the potential risk of fire. Coal stored and moved in rail cars can provide the environment necessary for coal to smolder, which if undetected leads to fire.



Conveyor Fire Detector

The transportation of coal on any form of conveyor system has the potential to ignite, with the ultimate outcome being a fire. Coal (even in small amounts) is a very good insulator, so fire which is burning beneath the surface may not be immediately obvious.



Coal Pile Hotspot Detection

High resolution radiometric thermal image, giving detailed temperature information transmitted via a high speed digital connection.
Designed for harsh industrial environments, ensuring ultimate measurement reliability and availability



Calorimeter
5E-AC/PL

5E-AC/PL calorimeter is used to determine the calorific value of solid and liquid combustibles such as oil, coal, coke, foodstuffs and biomass products, which is widely applied in power plant, coal mine, metallurgy, chemical industry, commercial inspection, scientific research, etc


Automatic Calorimeter
5E-C5500

5E-C5500 Automatic calorimeter issued to determine the calorific value of solid and liquid combustibles including oil, coal, coke, foodstuffs and biomass products. The calorific value is a crucial characteristic for each substance, also the key point to calculate the price of coal, so it will directly affect the economic benefits of the customers.


Fully Automatic Calorimeter
5E-C5508

5E-C5508 Fully Automatic calorimeter (Isoperibol Oxygen Bomb Calorimeter) is used to determine the calorific value of solid and liquid combustibles including oil, coal, coke, foodstuffs and biomass products. This technique is widely applied in power plants, coal mines, metallurgy, chemical industry, commercial inspection, scientific research, etc.


C,H,N Elemental Analyzer
5E - CHN2200

5E Series C/H/N Elemental Analyzer is used to determine carbon, hydrogen, nitrogen content in coal, coke, oil, petroleum and other liquid material, biomass, fertilizer, plastic, food, hydrocarbons and plant tissue, leaves and tobacco, used in power plants, coal mines, metallurgy, chemical industry, commercial inspection, scientific research, food industry, education etc.


Automatic Chlorine Analyzer
5E-CLT2310

5E-CLT2310 Automatic Chlorine Analyzer is used to determine the chlorine in coal or other combustibles by hydrolysis method & potentiometric titration method, which is widely applied in coal-fired plant, coal mine, steel plant, petrochemical industry, etc.


Automatic Fluorine Analyzer
5E-FT2300

5E-FT2300 Automatic Fluorine Analyzer is used to determine the fluorine in coal or other combustibles by hydrolysis method & ion selective electrode method, which is widely applied in coal-fired plant, coal mine, steel plant, petrochemical industry, etc.


Automatic Mercury Analyzer
5E-AM750

5E-AM750 Automatic Mercury Analyzer is used to determine the mercury in coal, coal fly ash, soil, sludge, sedimen. Single sample analysis within 5 minutes. Applicable to solid and liquid samples. Login permission management and information recording function of analysis process


Fully Automatic Infrared Sulfur Analyzer
5E-IRS3000

5E-IRS3000 The Fully Automatic Infrared Sulfur Analyzer is used to determine the total sulfur content in coal, coke and dark petroleum products such as heavy lubricating oil, paraffin etc by infrared absorption, Strength in testing of 48 samples per batch automatically. It provides perfect solutions for a large quantity of samples.


Automatic Infrared Sulfur Analyzer
5E-IRSH

The 5E-IR SH Infrared Sulfur Analyzer is used to determine the total sulfur content in coal and coke and dark petroleum products such as heavy lubricating oil, crude oil, paraffin etc.. It applies the method of Infrared absorption, is widely applied in power plants, coal mines, metallurgy, chemical industry, commercial inspection, scientific research, etc.


Automatic Coulomb Sulfur Analyzer
5E-AS3200B

5E-AS3200B Automatic Coulomb Sulfur Analyzer is used to determine the total sulfur content in coal and liquid fuel. Intelligent Rotary Tray and 20 samples per batch. Determination without oxygen and repeatable usage of moisture absorbent. Sulfur range up to 30%. Easy Operation.


Coulomb Sulfur Analyzer
5E-S3200

5E-S3200 Coulomb Sulfur Analyzer is used to determine the total sulfur content in coal and liquid fuel. The gases evolved go to a electrolytic cell containing platinum indicating electrodes and platinum electrolysis electrodes. A small current is produced as the sulfur reacts with electrodes; the current is balanced and equivalent to the amount of sulfur present in coal.


Automatic Proximate Analyzer
5E-MAG6700

5E-MAG6700 Automatic Proximate Analyzer (also called thermogravimetric analyzer, TGA) is used to determine the moisture, ash, volatile matter and calculate fixed carbon in coal, coke, biomass, limestone and iron ore by thermogravimetric method. It can also determine residual ash and slag combustibles in accordance with ASTM.



APPLICATIONS: Coal Mines, Power Plants, Inspection Company, Cement Plant, Steel Plant, Metallurgical Plant, Etc.

Automatic Proximate Analyzer

5E-MAC IV

5E-MACIV Automatic Proximate Analyzer (TGA) is used to determine the moisture, ash, volatile matter and fixed carbon in coal and coke. It can also determine residual ash and slag combustibles in accordance with ASTM, which is widely applied in power plant, coal mine, metallurgy, chemical industry, commercial inspection, scientific research, education, etc.



Automatic Volatile Matter Analyzer

5E-MVC6700

5E-MVC6700 Automatic Volatile Matter Analyzer (thermo gravimetric analyzer, short for TGA) is used to determine volatile matter in coal and coke. It can also determine residual ash and slag combustibles in accordance with ASTM, which is widely applied in power plant, coal mine, metallurgy, chemical industry, commercial inspection, scientific research, education, etc.



Automatic Moisture Analyzer

5E-MW6510

5E-MW6510 Automatic Moisture Analyzer is used to determine the total moisture and air dry basis moisture in coal, coke, biomass and other solid substance, which is widely applied in thermal power plants, coal industry, metallurgical, petrochemical, cement plants, research institutes and inspection company.



Automatic Moisture Analyzer (Pre-sale)

5E-MW6513

5E-MW6513 Automatic Total Moisture Analyzer is used to determine the total moisture for coal or coke samples, which is widely applied in thermal power plants, coal industry, metallurgical, petrochemical, cement plants, research institutes and inspection company.



Muffle Furnace

5E-MF6100K

5E-MF6100K Muffle Furnace is used to determine the ash, volatile matter in coal, coke, biomass and other organic material. Over-temp alarm and SCM/PC temperature control. One PC connects more than one muffle furnace. Available to record and transmit analysis data for each set, including sample number, sample mass, heating time, results.



Mini Moisture Oven

5E-MIN6150

5E-MIN6150 Mini Moisture Oven is used to determine the moisture in coal, coke, heavy oil, biomass and other liquid and solid substance, which is widely applied in power plants, coal industry, metallurgical, petrochemical, cement plants, research institutes and inspection company.



5E Series Drying Oven

5E-DHG6095 / 5E-MHG6090

5E series Drying Oven is used for drying, baking and sterilizing of samples in the laboratory. These drying ovens are suitable for use in industry, colleges, research institutes, inspection company, hospital laboratories and coal mines.



Ash Fusion Determinator

5E-AF4000

5E-AF4000 Ash Fusion Determinator is used to determine ash cone deformation temperatures in coal ash, coke ash, biomass ash and mold powders automatically, which are critical to the boiler functioning properly and to avoid slagging and fouling.



Automatic Plastometric Indices Determinator

5E-PL300B

5E-PL300B Automatic Plastometric Indices Determinator (also called Spozhnikov Plastometer) is used to determine the plastometric indices of bituminous coal and describe technical characteristics of coke, which helps to guide coking and coal blending. It is widely applied in coal mining, metallurgy, chemical industry and verification institution of coal quality.



Automatic Coal Cup Cleaner

5E-PL360

5E-PL360 Automatic Coal Cup Cleaner is specially used to clean the coke breeze inside of coal cup after the plastometric indices testing.
1.Free adjustment of impeller rotating speed and cleaning times.
2.Clean coal cup back and forth continuously to ensure full cleaning.
4.Equipped with position detection and resetting when switched on.



Hardgrove Grindability Index Tester

5E-HA60×50

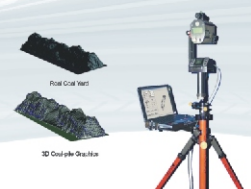
5E-HA60×50 Hardgrove Grindability Index Tester is designed to measuring the grindability of bitumite and anthracite , which is widely applied in coal industry, power plant ,metallurgy and chemical industry.



Portable Stockpile Inventory Instrument

5E-PMIII

5E-PMIII Portable Stockpile Inventory Instrument is used to measure and quantify dry bulk inventory stockpiles (coal and petroleum coke, minerals, fertilizer, and agriculture products) by providing the volume or weight information. It's capable to obtain the feature points of piles, and finally works out the volume and 3D graphics of piles by software.



SAMPLE PREPARATION EQUIPMENTS

Intelligent Dust-Removing System

5E-SDCSII

5E-SDCSII Intelligent Dust-Removing System is new coal dust-removing system that aims at "Safety, Simplesness, Grace, Cleaning" and comprehensively treats dust caused from traditional sample preparation room, improving the heavy dust environment to reach emission standard, which will not affect sample preparation or change its precision and representativeness.



Automatic Sample Preparation System (Pre-sale)

5E-APS

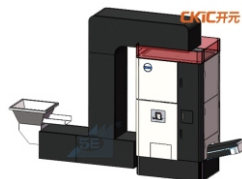
5E-APS Automatic Sample Preparation System is designed to produce specified coal samples automatically with unattended operation, which applies to coal sample preparation in power plants, coal mines, chemical industry, metallurgy, construction material, geography, environmental protection, scientific research, etc.



Sample Preparation Combined Apparatus (Pre-sale)

5E-PHB100

5E-PHB100 Sample Preparation Combined Apparatus is used to crush and divide coal, include two grades crushing, two grades dividing. It is widely applied in power plants, coal mines, chemical industry, metallurgy.



Sample Preparation Combined Apparatus

5E-PA2x2

5E-PA2x2 Sample Preparation Combined Apparatus is used to crush and divide the graininess material such as coal, mineral etc. Not only crushing work is available, it also provides the dividing function. It is widely used in power plant, coal mine, chemical industry, metallurgy, building material industry and geology.



5E-HC Series Hammer Crusher

5E-HC

5E-HC Series Hammer Crusher is used for sample preparation of graininess material such as coal, limestone, mineral waste residue, oil shale etc. Hermetic structure improving the operation environment and reducing sample contamination. Equipped with three kinds of sieve plate. Patent for quick sieve plate replacement.



Humid Coal Hammer Crusher

5E-HCA400x260

5E-HCA400x260 Humid Coal Hammer Crusher is especially designed to crush humid coal. Design of vibrating sieve plate structure leads to high moisture adaptability and less moisture loss to avoid blocking. Hermetic structure improving the operation environment and easy for cleaning. Equipped with 13mm and 6mm sieve plate, the discharge size is even and good.



Series Jaw Crusher

5E-JCA

5E-JCA Series Jaw Crusher is designed for primary crushing of medium-hard, brittle and tough materials. Typical sample material includes coal, coke, limestone and so on. Jaw plates with BTMcr20 material are reversible for extended life. Access to the chamber through the front door makes it convenient to clean.



Double Roller Crusher

5E-DCA250x150

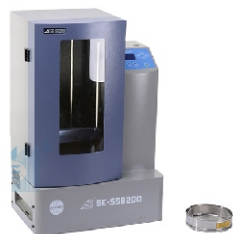
5E-DCA250x150 Double Roller Crusher is used to crush medium hard material, which is widely used for the sample preparation in coal mines, power plants, metallurgy, geology, chemical industry and scientific research. Easy to operate, available to adjust discharge size by single-hand wheel. Durable material for roller to decrease the maintenance costs.



Sieving Shaker

5E-SSB200

5E-SSB200 Sieving Shaker is used for grade sieving of particulate materials, which is widely applied in power plants, coal mines, chemical industry, metallurgy, foodstuff and geology. Effectively reduce dust leakage with dust cover. Combined sieving function of horizontal shaking and vertical vibration. Available to store three modes.



Pulverizer

5E-PCM Series

5E-PCM Series Pulverizer is used to pulverize the sample after crushing in power plants, coal mines, chemical industry, metallurgy, building material and geology, in which an analysis sample of particulate material is prepared. Easy operation with pneumatic bowl clamping and pneumatic lid operation. Good safety with power-off switch when open the lid.



Sample Divider

5E-MR1/8

5E-MR1/8 Sample Divider is the updated motive division apparatus after simulating manual division. It is suitable for sample division in coal mine, iron ore, metallurgical coke and chemical industry. Dust free due to complete sealed design. Easy to clean and no sample mixing. Patent technology, easy to adjust the division ratio.



Rotary Sample Divider


5E-MRA1/8


5E-MRA1/8 Rotary Sample Divider is the updated motive division apparatus after simulating manual division. It is suitable for sample division in coal mine, iron ore, metallurgical coke and chemical industry. Vibrating feeder to ensure the feed material even. Rotary speed & feed location is adjustable. Compact structure and easy to install and uninstall of the receiving hopper.





APPLICATIONS: Coal Mines, Power Plants, Inspection Company, Cement Plant, Steel Plant, Metallurgical Plant, Etc.


Capillary electrophoresis system CAPEL 105M <p>Capel-105M is a capillary electrophoresis system for fast and effective solutions in food industry, environmental applications, pharmaceutical and chemical industries, biochemistry and forensic science.</p>	
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Mercury analyzer RA-915M <p>Mercury Analyzer is a portable multifunctional atomic absorption spectrometer with Zeeman background correction, which eliminates the effect of interfering impurities. It is the only high sensitivity and selectivity instrument that does not require gold amalgam pre-concentration and subsequent regeneration steps.</p>	
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Versatile Zeeman Mercury Analyzer Ra-915m With Pyrolyzer Pyro-915+ <p>RA-915M Mercury Analyzer with pyrolyzer PYRO-915+ (with large optical length of analytical cell and heated windows of the analytical cell is developed for unique direct mercury determination (no pretreatment procedures required) in complex organic samples at the level of few µg/kg.</p>	
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Compact Mercury Analyzer LIGHT-915 <p>Light-915 is a compact instrument designed to address the problems of mercury pollution in a workplace environment and sanitary control. As with all the other Lumex mercury analyzers, the principle of measurement is based on atomic absorption spectrometry with Zeeman background correction, which eliminates the effect of interfering impurities.</p>	
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Liquid Mercury Analyzer RA-915M/RP92 <p>RA-915M mercury analyzer with RP-92 attachment is used for determination of mercury concentration in liquid samples (water, blood, urine). RP-92 attachment is intended to transfer bound Hg from ion to atomic form using "cold vapor" technique.</p>	
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Atomic Absorption Spectrometer MGA-915MD <p>The atomic absorption MGA-915MD spectrometers are intended for measuring the content of chemical elements in liquid samples, as well as in other species after their mineralization (soil, bottom sediments and sewage sludge, foodstuffs, fodder and raw stuff for its production, biological tissues, and petrochemicals).</p>	
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Real-time Pcr Analyzer Ariadna <p>Polymerase chain reaction (PCR) is now often indispensable technique used in medical and biological research labs for a variety of applications. PCR analysis time (45 cycles) - 20 minutes, Microchips with ready-to-use immobilized PCR reagents, CFR 21 Part 11 complaint, Export results in industry standard data formats.</p>	
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Ftir Spectrometer PSM1735 <p>InfraLUM® FT-08: Our new FT mid-IR spectrometer InfraLUM FT-08 has been designed basing on our extensive R&D and expertise in the IR spectroscopy. InfraLUM® FT-12: Rapid analysis of grain quality parameters (determination of protein, moisture, gluten content, vitreousness and other parameters of wheat).</p>	
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Panorama Spectrofluorometer FLUORAT®-02 <p>FLUORAT-02-PANORAMA spectrofluorometer is the most sophisticated instrument among the FLUORAT-02 family. It is intended for scientific research, chromatographic analysis, and for operation as part of multi module automatic measuring facilities. The spectral regions in the excitation and detection channels are set by built-in fast monochromators.</p>	
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Fluorescence Analyzer FLUORAT-02-4M/ FLUORAT-02-5M <p>FLUORAT-02 is the fluorescence analyzer, which is intended for a large number of fluorometric, photometric, and chemoluminometric techniques for analysis of water, air, foodstuff, etc. Such versatility allows an analyst to choose the optimal method for assaying each component being determined.</p>	
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Mercury Monitor RA-915AM <p>Background mercury monitoring of ambient air, technological control. The monitors are designed for fully automated continuous measurement of the mercury concentration in ambient and indoor air, hydrocarbon and industrial gases. Atomic absorption with Zeeman background correction.</p>	
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Automatic Water Flow Analyzer AKMC-1, CKAT-1, CRAB, FLUORAT AE-2 <p>AKMC-1: It is used to monitoring the total content of calcium and magnesium salts in water. CKAT-1: It is used monitoring the content of suspended particles and petroleum products in water samples and monitoring the water color. CRAB: Optical sensing of water surface with IR radiation. Fluorat® AE-2: It is used to automatic monitoring the content of petroleum hydrocarbons in potable, natural, and waste water.</p>	
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TORQUE & ROTARY TORQUE MEASURING EQUIPMENTS
Torque Sensors
RWT410/420 Series

TorqSense RWT410/420 torque sensors replace the RWT310/320 series and feature all new electronics that have produced significant performance gains in resolution, frequency response, reduced sensor current consumption and faster digital data throughput. Transducer overload has also been increased to 300%


Torque Sensors
RWT430/440 Series

The digital TorqSense RWT430 and RWT440 Series use the latest and same non-contact TorqSense technology as used in the RWT410/420 Series in three different body sizes for torque ranges from 1Nm to 13000Nm, with above 13000Nm on request. The only difference for this Series is that it may be more appropriate for some applications to have the sensor unit separate from the electronics unit due to space and/or environmental limitations.


Pulley/Sprocket Transducers
RWT450/460 Series

TorqSense Digital RWT450 & 460 series pulley/sprocket transducers are suitable for torque monitoring and process control on any belt / chain driven machinery. They offer separate electronics and sensor either with fixed outputs (RWT450 Series) or user selectable outputs (RWT460 Series). USB and RS232 outputs are also available for direct PC interface.


Optical Rotary Torque Sensors
E200

The E200 ORT (Optical Rotary Torque) transducers provide an ideal means for precise dynamic measurement of rotary and static torque of less than 500Nm at high speed and high bandwidth. Low inertia - High Speed capability because electronics are not fixed on to shaft. Non contact measurement - use of photovoltaic cells and lightweight gratings. High bandwidth (up to 50kHz).


Transducer Display Interface
E201/E202

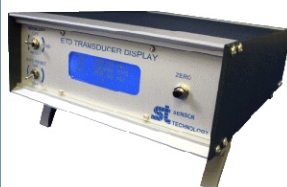
A Transducer Display Interface is required with the E200 ORT Series (Optical Rotary Torque) Transducer. Operates independently or under control from remote PC. Operates with TorqView to give advanced display modes. Two external analog input channels (Option only). Peak readings can be displayed and reset manually or automatically.


Strain Gauge Torque Sensors
SIT 105/110/120 Series

The SIT 105/110/120 strain gauge reaction transducers are designed for operation in any industrial environment. Models are available in sizes ranging from 50Nm to 5000Nm, offering outputs from mV/V outputs, to ratiometric voltage outputs, to digital data connection via RS232 or USB. An option of a bench mount housing is available for torque wrench test and calibration.


Transducer Display ETD

The Transducer Display ETD is a readout suitable for all RWT transducers. Although it is primarily used to display torque and peak torque, it can also display speed and power, provide access to the analog outputs from the transducer and connect the transducer to a PC for use with TorqView and the Transducer Control Program.


TorqView Advanced Torque Monitoring Software

TorqView is an easy to use advanced torque monitoring software application available to operate in conjunction with the RWT420 and RWT440 Series Transducers and any of the E102, E202 and E302 series Transducer Display Interfaces to provide a flexible display, real time plotting and data recording facility.


Wireless Load Sensor
WLS - LS

The wireless Load Sensor is a strain gauge based stainless steel tension type sensor. It has the capability of wirelessly transmitting its data to one of our compatible readouts and displays or recording its data locally. Its inbuilt 32Mbit memory can hold up to 280 hours of data which can then be downloaded to a PC via its USB cable.


Handheld Receiver
WLS - HR

The wireless receiver is used in conjunction with the wireless Load Sensor. It provides the user with an easy way to receive and output data from the Load Sensor. Enclosed in a hardwearing aluminium box the receiver is suitable to be installed into environments where it may be subjected to harsh conditions. An SMA connector allows the use of an external antenna.


Load Sensor Cabin Display
WLS - CD

The LoadSense Cabin Display is a small, lightweight, cabin / window mounted unit which is used in conjunction with our LoadSense Wireless Load Sensors to display the reading from the load sensor. Our range of Load Sensors up to 25 tonnes are shown in datasheet WLS3625R. The display can be operated and charged from a 28V supply.













Receiver Interface
WLS - RI

The wireless receiver is used in conjunction with the wireless Load Sensor. It provides the user with an easy way to receive and O/P data from the Load Sensor. Enclosed in a hardwearing aluminium box the receiver is suitable to be installed into environments where it may be subjected to harsh conditions. The receiver is easy to install as it only requires DC power to be supplied to the unit.



APPLICATIONS: Production Industries, Research Development Programs, Academic Laboratories, Etc.

ISOKINETIC SAMPLING, SOURCE TESTING

Automatic Isokinetic Sampler Automatic isokinetic sampler which provides high reliability, accuracy and sampling quality (QA/QC). In accordance with UNI EN 13284, EN 10169 and USEPA M5, M17. The Isostack G4 is available in two versions: all in one (G4-one) and split (G4-two), both available with a 4 or 8 m3/h pump to meet different types of use.	Isostack G4 	Flow Meter Flowtest St is a flow meter which allows the operator to calculate the sampling point and define the sampling time for each point. Compatible with the majority of pitot tubes and thermocouples on the market, Flowtest St performs the measurement and records velocity, temperature and pressure point-by-point. In accordance with UNI EN 13284, ISO 9096, UNI 10169, USEPA M2.	Flowtest St 
Pitot Tubes Constructed in Inox Steel AISI 316, equipped with thermocouple type K. Different lengths available.		EG Peltier cooling system This cooling and condensing device is equipped with a Peltier system that ensures ideal temperature maintenance during sampling. The main advantages of the EG Peltier system are its light weight and small size. The glass kit is located in 3 cooled cylindrical containers. To use the system, it is not necessary to add water and/or ice.	
Igloo Stainless inox cooling and condensing device, equipped with an independent refrigerating system. The IGLOO is equipped with an independent refrigerating system, which allows the unit to operate for long periods without ice or water at low temperatures. The Igloo is also available in the following versions: IGLOO P, IGLOO HP.	E201/E202 	Water-cooled portable chiller Water-cooled portable chiller produced in a compact and robust stainless steel case. Isofrost 2 allows temperature control and liquid recirculation. It is recommended for micropollutant condensing or temperature-controlled cooling baths.	SIT 105/110/120 Series 
Isokinetic probes Sampling probes for different kinds of samplings. Tecora offers a wide range of isokinetic probes, integrated and dividable, plus a wide range of accessories to perform different kinds of samplings (manual, isokinetic, micropollutants, acids, etc), in accordance with EN and USEPA norms.		DDS The DDS system assembles in a single rack the sampler and the dilution unit, supplied by an internal rechargeable battery with 7-hour autonomy. DDS is equipped with a membrane pump, a precision flow meter and a dry gas meter. The two streams are regulated independently, so the dilution ratio should be changed to satisfy different stack conditions.	
Easy Gas The sampler allows sampling with a flow rate from 0.2 to 1.2 l/min; it is supplied with a rechargeable battery with 10-hour autonomy and is equipped with a volumetric counter for low flow with a thermometer for temperature measurement. EASY GAS is equipped with a large silica gel trap and a protective filter.		DDS/EG Sampling probe The DDS/EG sampling probe can be used for sampling gaseous compounds with or without use of the dynamic dilution system. The DDS/EG probe is equipped with a heated filter holder and a heated dilution chamber. Only stainless steel parts are in contact with gas. Sampling tubes are available in different shapes and lengths, according to standard sampling methods.	
Bravo Series Portable constant flow samplers with a wide range of flow rate, manually adjusted. Available in Basic and Plus versions, equipped with, membrane or rotary vane pump. Bravo Basic is the economic portable constant flow rate sampler suitable for dust and gas sampling either in stack or in ambient. Bravo Plus includes a controller module with microprocessor. Its electronic system allows you to program each sampling for a real date and hour.		Flowcal Air Flowcal Air is a reference calibrator that measures: flow, absolute pressure, differential pressure, temperature (with optional probe). Flowcal Air allows you to test the accuracy of an instrument and to follow a quality system procedure. Flowcal Air allows you to perform all the necessary controls to verify the calibration of certain parameters which are normally measured by a sampler, like flowrate, pressure and temperature.	

APPLICATIONS: Boilers, Power Plants, Cement Factories, Refineries, Glass Industries, Paper Mills, Pipelines.

The conventional method of detecting tube leaks such as monitoring make-up water, mass balancing or depending on the human ear to recognise a sound change, are not sufficiently sensitive or reliable on large boilers. By using these methods the leak is often large enough to have already caused serious consequential damage - sometimes to an entire boiler face - before anyone is aware of it.

Research on Acoustic Tube Leak Detection for power station boilers started during the 1970's and has since become the most advanced method of tube leak detection world-wide.

The INSPECTA FFT Acoustic Leak Detection System has been developed to detect steam tube leaks in power station boilers. Using Fast Fourier Transform (FFT) technology, the system continually monitors and analyses sounds in the combustion chamber, using up to 32, audio field sensors with head amplifiers placed around the boiler. A detected leak is then graphically displayed on the screen by Spectrum and Alarm Bar graphs providing an overview of the severity of the leak. The monitor displays are digitally averaged to allow for any spurious sounds which might otherwise distort the signals. 16 or 32 Channel



Audio Sensor

Bar Graph Alarm Display
Spectrum Signature
Auto Purge
Field Equipment
Mimic Display
Trend Display

FIELD CALIBRATION:

Full system calibration is required at initial commissioning and at half yearly intervals thereafter.

CONCLUSION:

The INSPECTA FFT system is used in many coal fired power stations around the world including, South Africa, India, Australia and Germany. It has been tested to meet world standards such as CE and is manufactured under the control of an ISO9001 system.



KANOMAX
The Ultimate Measurements

KANOMAX, USA

CLIMOMASTER, ANEMOMASTER, HANDHELD PARTICLE COUNTER, DIGITAL DUST MONITOR, SOUND LEVEL METER, VIBRATION METER

Climomaster

6501 series

The most accurate handheld hot-wire anemometer in its class.
Probe Compatibility feature allows you to have spare probes.
Detachable probe.
Automatic Flow Rate Calculation function.
USB connection to PC.
Large data storage, stores up to 20,000 measurements.



Anemomaster LITE

6006

Broad measurement range
Detachable probe for zero downtime calibration or replacement
Temperature compensation circuit for high accuracy
Display readings in both metric and imperial units.



Rotating Vane Anemometer

6812, 6813, 6815

High Accuracy: +/- 1.0 % of reading.
40 fpm of Air Velocity sensitivity.
Temp. Measurements from -22 to 212F.
Measure Relative Humidity from 5.0 to 95 %RH.
Analog voltage and PC Communication output option.
Rugged Metal Probe and Vane.
Protective Rubber Boot Option.



Anemomaster

6113 Series

High-Speed air velocity measurements - up to 9840 fpm (50 m/s).
Probe Compatibility feature allows utilization of a spare probe.
Simultaneously measures of air velocity, temperature, and pressure measurements.
Large, easy-to-read LCD.



Handheld Particle Counter

3887

NEW!! 3-year Service Packages are now available for calibration and repair services with purchase of new 3887s.
Available in Gold and Silver levels, both service packages offer substantial savings and are the perfect way to keep your 3887 functioning in top condition.
Simultaneously measures and displays 3 particle sizes. Stores up to 10,000 measurements.



Digital Dust Monitor

3443

The Kanomax Dust Monitor 3443 is a compact and high quality instrument ensures highly accurate dust measurements via a user-friendly & intuitive interface.
Applications include office, school, hospital, manufacturing, laboratory, and other applications where measurement of contaminants is required. It measures particle concentration of PM 10.



Sound Level Meter

4431

Lightweight and compact design.
A, C, and F weighting modes.
28 to 130 dB measurement range.
Measures Lp, Leq, Le, Lmax, Lmin and Lx.
Equipped with highly sensitive electret condenser microphone.
Large 4 digit display with 0.1 dB resolution with backlighting and analog bar graph.



Vibration Meter

4200

The new Kanomax vibration meter is designed to be compact, lightweight and easy to use. The magnetic accelerometer attaches easily to machinery for increased accuracy and precise operation. It's the perfect tool to diagnosis problematic vibrations with your industrial machinery or manufactured products.



Portable Aerosol Mobility Spectrometer

PAMS

PAMS is an electrical mobility size spectrometer designed for portable, mobile, or handheld aerosol sampling applications. It provides the number-weighted diameter distribution of aerosols over the entire submicrometer range (10 to 863nm) in one scan. The unit uses a nonradioactive bipolar aerosol charger to allow easy access to sampling sites with tight safety regulations.



Portable Particle Counter

3910 / 3905

The new 3910 & 3905 are the smallest 6-channel portable particle counters in the industry; with a 50 LPM and 1 CFM flow rate respectively and a 0.3 micron sensitivity. Both units feature a large color touch screen, streamlined, user-friendly interface and pre-programmed standards mode to guide you through the measuring and certification process it may also be the most helpful.



Handheld Particle Counter

3886

Measures 5 particle sizes; 0.3, 0.5, 1.0, 3.0 and 5.0 um in c for m3
Built-in flow sensor (0.1 CFM +/- 10%)
Optional Temp./RH and Air Velocity probes available
Capable of measuring up to 4 parameters in one instrument



Airflow Transducer

6332 / 6332D

The airflow transducer model 6332/D is designed for fixed installation. The units can be wired with local electric for power and can be connected to any device that can accept analog output. Transducers are a good choice if you need to simultaneously measure airflow at multiple fixed points that may not be in proximity to other points.



APPLICATIONS: The Semiconductor And HDD Industries, Automotive Industries, Etc.

TURBINE FLOW METERS, MAGNETIC PICKUPS, FLOW COMPUTERS, SIGNAL CONDITIONERS, BATCH CONTROLLERS

<p>Turbine Flow meters</p> <p>The Flowmetrics Tangential turbine flowmeter is a unique volumetric device. This uses a dual orifice design to direct a stream of fluid tangent to a low mass/balanced rotor and a precision bearing to provide maximum sensitivity. Exceptionally reliable digital outputs. Used for a variety of liquid and gas flow sensing applications.</p>	<p>AN/MS Flare Connection</p> 	<p>MAG/RF Pickups</p> <p>These pickups are suited for harsh environments and years of reliable service. They are hermetically sealed for resistance to moisture and other atmospheric contamination and can withstand repeated thermocycling in temperatures ranging from -450°F to 450°F. These pickups are also being used in cryogenics for their ability to operate dependably at extremely low temperatures for long periods of time.</p>	<p>Premium Magnetic Pickups</p> 
<p>Flow Computers</p> <p>Instrument Verification Set (IVS) is a portable instrument verification and diagnostic measuring tool designed to verify flow, pressure and temperature of hydraulic systems and instruments. Flow rate is measured by turbine flow meter, an effective and reliable flow measuring technology. Temperature sensor is Microprocessor based with rugged, corrosion-resistant 316L stainless steel housing.</p>	<p>IVS P/N:101199-100</p> 	<p>Positive Displacement Flowmeters</p> <p>The force of the liquid moving through the flow meter drives the measuring gears. The liquid stream is divided into the fixed volume cavities between the gear teeth and metering body. The movement of gear is measured by means of a pick-up sensor located in the cover. When the measuring gears rotate by one tooth pitch, the sensor emits a signal/frequency, which corresponds to the geometrical tooth volume.</p>	
<p>Signal Conditioners & Converters</p> <p>The SC-FI is a two wire frequency to analog converter that converts a pulse rate input into a 4-20 mA output signal proportional to frequency or rate. The amplified frequency signal is then converted to an analog signal using a precision frequency to analog converter. The output stage derives its power from the output current loop.</p>	<p>SC-FI SERIES</p> 	<p>Batch Controllers</p> <p>5 digit scaling factor. Display rate, batch size, and batch or grand total. Second B relay programmable for output at prewarn or selected batch/grand total Pulse input - 10 kHz Max. Security lockout. RS422/RS232 serial communication. NEMA 4X / IP65 front panel.</p>	<p>914-MB2</p> 
<p>Variable Area Flow Meter</p> <p>The Flowmetrics 2000 Series Variable Area Flow Meter is a rugged industrial Flow Meter available in a wide range of liquid and gas flow rates. Horizontal end fitting rotateable in 90° increments. Triple o-ring seals. Heavy duty shields; front & rear. Stainless steel bezels.</p>	<p>Series 2000 Industrial</p> 	<p>Field Indicators</p> <p>Featuring 5 digits of rate and 8 digits of total, the 915-BATRT-M is a battery or loop powered indicator capable of accepting magnetic pickup, DC pulse and switch closure inputs from pulse producing flow meters. The unit can be ordered with an optional 4-20mA output. The 915-BATRT-M uses the 4-20mA loop to provide power when this output is used.</p>	<p>915-BATRT-M</p> 

APPLICATIONS: Aerospace And Aviation, Chemical/petrochemical Industries, General Industries, Etc.



CUSTOMER SUPPORT SERVICES

MARVEL ENGINEERING has been engaged in extending timely and dedicated service to all its customers both in the Public and Private Sectors. **MARVEL** has been making available equipment of the best kind manufactured by reputed and quality conscious Foreign Organisations that should be ideal for improving plant performance and Operation.

Through **MARVEL ENGINEERING**, many pieces of unique and top-of-the line instrumentation have gone into Large Thermal, Captive, Combined Cycle Power Projects / Stations; Space Research Centres; Defence Establishments; Pharmaceutical Units; Fertilizer Factories; Heavy Engineering Units; Chemical Plants; Cement Plants; Steel Plants: Technological, Engineering and Research Institutions.

Products marketed by us are contributing to uninterrupted Power Generation, Optimum Boiler Performance, Energy Conservation, Pollution Abatement, Extended Plant Availability, Personnel Safety and such other tangible benefits, besides considerable savings in investment and maintenance costs. **MARVEL's** backup support, in an extraordinary fashion takes care of installation, commissioning and other activities and Marvel stays with the customers, facilitating them to get the best out of the products acquired through them.

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PARTIAL CUSTOMER LISTING



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