

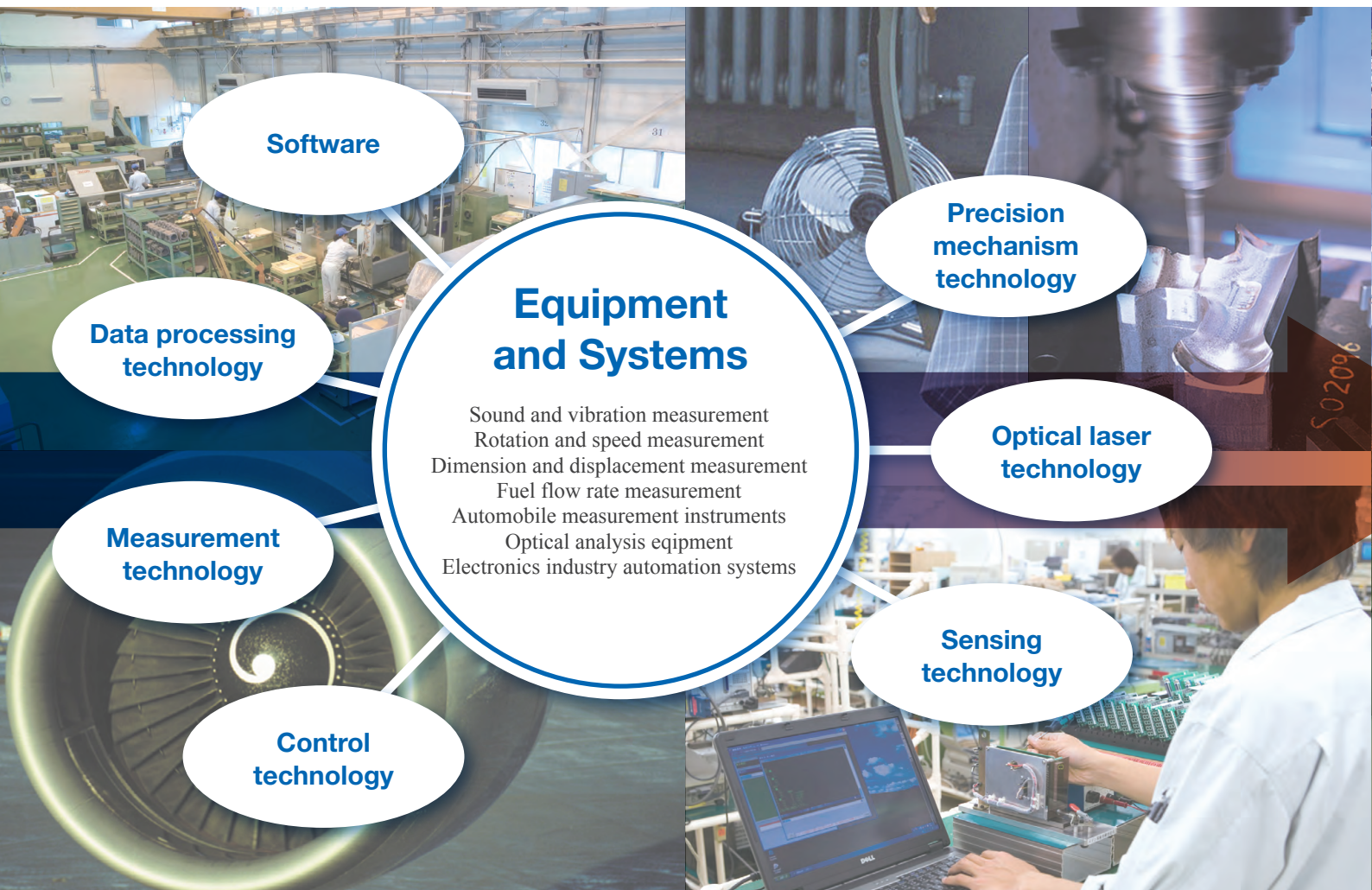


ONOSOKKI-OVERSEAS COMPANY PROFILE

Ono Sokki has been manufacturing digital instruments since the word "digital" was not popular at all. "Do what others do not do" is the words describing Ono Sokki spirit very well. The measurement technology has been contributing technological evolution of modern industries, and now it is also a key element to realize comfortable environment for human being. Ono Sokki is one step ahead providing tools and solutions to create better quality of both industry and human life.

PROGRESSIVE

As a company specializing in measurement, control and information-handling technologies, Ono Sokki plays an active role in the global development of both basic and leading-edge industries, such as the automobile, shipbuilding, aeronautical, machinery and electronics industries. Ono Sokki also offers technologies and products that serve as key solutions for various needs relating to environmental issues and energy conservation. We at Ono Sokki are dedicated to meeting the needs of users from not just these, but a variety of industry sectors, by developing total system solutions which make use of our sensing, metering, data-processing and precision-machining technologies. This strategy of continually adding value to our products is what keeps Ono Sokki progressive and one step ahead of the competition.



Head Office



Acoustic Laboratory



Automotive Testing Laboratory



Technical Center

Utsunomiya Factory



Automotive Testing Laboratory
Utsunomiya



LEADING PRODUCTS OF

ONOSOKKI

Revolution and Torque Measurements

DIGITAL TORQUE DETECTOR (TH series)

The TH series is easy to use high precision torque detector, having a high durability and long service life. Accurate measurement has been enabled by the new magnetic phase difference method, and AC power supply and switching of the rotation direction (CW/CCW) are no longer required. The high-speed rotation type can measure up to 25,000 r/min of a rotating body.



TORQUE STATION (TS-7700)

Uses Windows-based software for operational easiness. Supports both DC and AC motors. Up to 16 input signals can be simultaneously measured and be presented in graphs.



DIGITAL TACHOMETER (TM series)

Compact and light weight. Conforms to DIN standard size (96 × 48 mm). Can be connected with various detectors, meeting requirements for various measurements.



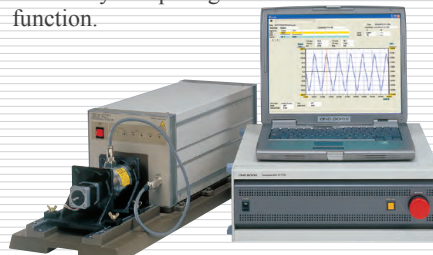
DIGITAL TORQUE METER

Assured high accuracy, stability and durability against overtorque. Various types of detectors cover entire range from microscopic to gigantic torque.



STEPPING MOTOR STATION (PV-7700)

Comes with easy to operate Windows-based software. Measures 7 characteristics concerned with torque and angle with high accuracy. Efficiency computing function.



DIGITAL HANDHELD TACHOMETER (HT series)

Both contact and non-contact types are available. Each type is small size and light weight. Very handy for speed measurements.



ELEVATOR SPEEDOMETER (EC-2100)

Designed for maintenance, adjustment and inspection of elevators. Wide measurement range up to 2,000 m/min, saving calculation time with 10 ms. Useful for a high speed elevator. The distance measurement function (option) can measure actual moving distance of an escalator after emergency stop operation.



ADVANCED TACHOMETER (FT series)

FFT computing type, small size and light weight. Measures rpm of a rotating shaft without any marker attached on it, or even if the shaft itself is not come out.



ROTATIONAL DETECTOR (MP series / LG series)

There is a wide range of selection. External or internal toothed wheel type sensors. MP-981 can measure rotation down to zero r/min.

Compact and all-in-one type optical detector. The non-contact detection method eliminates any effects on objects under measurement.



Automotive Related

MULTI INJECTION MEASURING SYSTEM (FJ series)

Measures multi and main injection for each stroke on fuel injection systems. Realizes precision measurement over a wide range using the on-line calibration technique. Results are shown in tables and graphs, and it gives analog output for ROI.



CHASSIS DYNAMOMETER FOR MOTORCYCLES

For a wide range of motorcycle tests on driving performance, endurance and exhaust gas emission.



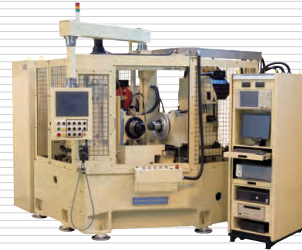
GRAVITY FLOW METER (FM & FX series)

A precision differential pressure gauge is employed to detect variations in liquid level inside a highly accurate stainless steel and aluminum burette.



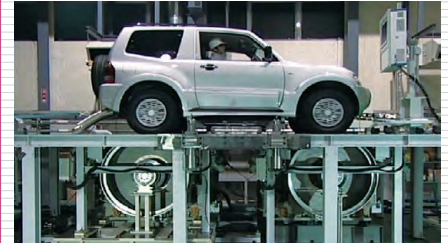
GEAR TEST SYSTEM

Gear mesh noise is proved to be a major noise source in quieter vehicle interior. It analyzes gear mesh harmonics in the range of actual operation rpm or under various torque conditions.



CHASSIS DYNAMOMETER FOR CARS

Simulating actual road load conditions of the vehicle under test, the chassis dynamometer system measures various parameters on driving performance, exhaust gas emission, etc. indoors.



VOLUMETRIC FLOW METER (DF/FM & FP series)

A complete series of volumetric flow meters, used for measuring and controlling fuel consumption of various types of engines. It is highly accurate and covers a wide range of flow rate. Convenient for measuring on board.



ENGINE TEST SYSTEM (KY series)

This Windows-based engine test system is used to perform various experiments on engines. The base system includes manual and automatic operation control with measurement of various parameters and display. High speed data processing functions are available, too.



ENGINE TACHOMETER

Wide selection of tachometers for gasoline engines, diesel engines and motors. Easy to use for checking engine speeds accurately in combination with engine rotational detectors.



MASS FLOW METER (FM & FZ series)

Capable of continuous measurement by the principle of the Coriolis force without being affected by temperature or pressure. It is also available to measure density.



UNIVERSAL ENGINE TACHOMETER

Used with a variety of sensors, it can measure rotational speed for virtually all types of engines. Its speed comparison function can be used to give the alarm of abnormal engine speeds.



GPS SPEEDOMETER (LC-8100 / 8200)

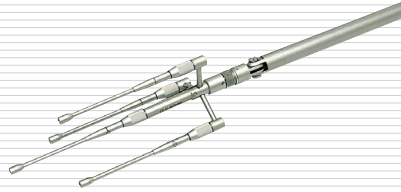
Standard GPS and IMU make highly precise and stable measurement. The IMU enables measurement of high and gradient as well as tri-axial acceleration, tri-axial angle and tri-axial velocity. Over 30 items including forward speed, lateral speed, sideslip angle can be measured by the LC-8200.



Acoustic and Vibration Data Processing

SOUND INTENSITY ANALYSIS SYSTEM

By combining the MI series single axis or 3-dimensional sound intensity probe with the DS series multi-channel data station, highly sophisticated sound analysis is possible in real time.



MICROPHONE (MI series)

A series of microphones, including high sensitivity type and wide-band type for a variety of applications. The microphones exhibit good environmental stability with regard to temperature and humidity. A selection of preamplifiers meet various applications.



SOUND LEVEL METER (Basic type)

- Simultaneous measurement of L_p , L_{eq} , L_E , L_N , L_{max} , L_{min} and L_{pk} .
- Wide linearity range: 100 dB
- Simple and easy data processing via RS-232C or USB.
- Comparator output function (option)



SOUND LEVEL METER (High functional type)

- Simultaneous measurement of L_p , L_{eq} , L_E , L_N , L_{max} , L_{min} and L_{pk} .
- Wide linearity range: 110 dB.
- Possible to measure and record while listening via headphones.
- Performs more than the sound level meter by adding options; analyzer, reorder, comparator.



ACCELEROMETER (NP series)

NP series accelerometers are piezoelectric sensors. Both charge output type and built-in amplifier type are available. Used with PS series amplifiers or other ONO SOKKI instruments, it measures complex vibrations of objects with high accuracy.



LASER DOPPLER VIBROMETER (LV series)

This is a non-contact laser vibrometer using a laser Doppler technique. Vibration of microscopic, high frequency objects can be detected with no load.



PORTABLE DATA RECORDER FOR ACOUSTICS & VIBRATION (DR-7100)

The DR-7100 portable data recorder can record sound and vibration data simultaneously with ease and high speed. It enables evaluation of sound and vibration according to changing rotation speed.



VIBRATION COMPARATOR (VC series)

Different type band-pass filter can be set for the same signal (option, VC-3100: 3-bands). The levels are compared to preset amounts for alarm or judgement output. The measured vibration values can be transferred via RS-232C interface. It incorporates analog output, too.



SOUND & VIBRATION REAL-TIME ANALYSIS SYSTEM (DS-3000 series)

Flexible building of multi-channel measurement system up to 64 channels by "FRAME LINK". Backup data can be recorded automatically while performing real-time analysis. Various software of sound and vibration analysis are available such as FFT, real-time octave, tracking and sound intensity.



PORTABLE FFT ANALYZER (CF-3650/3850)

Extensive functions packed in a compact and light weight body. Weighing at approx. 10/11.5 kg all-in-one box with a 15-inch color touch panel. 4/8-channel input, providing a wide range of analysis tools. On-site recording can be performed up to 8ch with 24 bit A/D simultaneously. Easy with the use of secondary processing software.



HIGH-SPEED RESPONSE F/V CONVERTER (FV series)

Converts input frequency into voltage or current signals in several microseconds, being ideal for transient speed fluctuation analysis such as measurements of elevator speed fluctuation, electric motor startup characteristics, etc.



DUAL CHANNEL FFT ANALYZER (CF-7200A)

Compact and light weight at approx. 3.8 kg for easy portability with a 10.4 inch color touch panel. 2-channel input with data recording function, equipped with CCLD & TEDS. Provides multiple analysis and calculation functions. Smooth operation with a CF card and USB mass-storage function.



FFT COMPARATOR (CF-4500)

Accurate OK/NG judgment and quality inspection by analyzing the frequency signal of sound or vibration on production lines. OK/NG judgment functions allow precise inspection of various products. Measurement data and judgment result can be managed in a PC by means of copying those data in USB memory.



TIME-SERIES DATA ANALYSIS SOFTWARE (OS-2000 series)

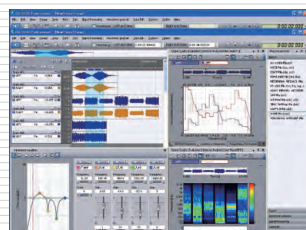
It enables import of large volumes of data from multi-channel at once. Designed for off-line analysis of sound and vibration such as 1/N octave analysis, wavelet analysis, etc.



Dimension and Displacement Measurement

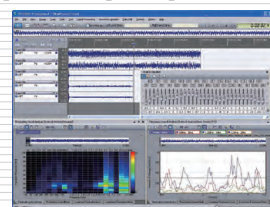
SOUND QUALITY EVALUATION SOFTWARE (OS-2740)

This software quantifies sound by using six parameters of psychoacoustic evaluation such as loudness, sharpness and so on. Achieves sound quality improvement, reducing cost of test, speed-up of development period etc.



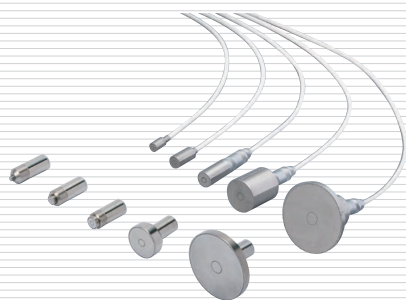
FLUCTUATION SOUND ANALYSIS SOFTWARE (OS-2750)

This software is designed to add the new concept of [Time fluctuation] which had been difficult to measure, making sound features more clear based on the two axes of frequency and fluctuating frequency. Achieves sound quality improvement, cost reduction of test, speed-up of development period etc.



GAP DETECTOR (Sensor, Capacitance Type)

Non-contact measurement of displacement for small displacement or surface vibration of conductive and semi-conductive object.



NON-CONTACT THICKNESS METER

Applicable for conductor and semiconductor materials. CL series measure thickness as well as gap between sensor and object with a resolution of down to 0.02 μm (optional).



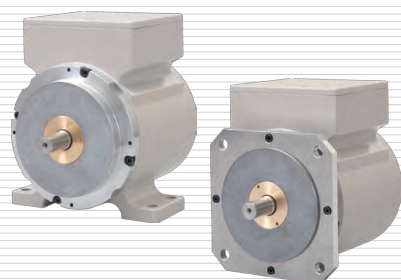
DIGITAL GAUGE (High-resolution Type)

Ball spline bearing and development of new optical system achieve both of high resolution and environment resistance (IP66G). Detected signal can be obtained as square wave to connect PLC directly. The exclusive counter provides various calculation functions.



ROTARY ENCODER (RP series)

The series ranges from general purpose industrial type to ultra-compact type. There is a selection of pulse rates and maximum rotations.



DIGITAL GAUGE (Sensor) (BS/GS series)

Measurement range: Max. 100 mm*1
Resolution: 0.1*2 μm to 10 μm
Various types of gauge sensors.
Available to use with the DG series gauge counter.



DIGITAL GAUGE (Counter) (DG series)

Combined with the BS/GS series gauge sensor. DIN 72 standard models which are easily mounted on a variety of panels.



History

- 1954: Ono Sokki Co., Ltd. was established in Yokohama.
Manufactured the first tachometer in Japan for use with jet engines.
- 1955: Started manufacture of a wide variety of digital instrumentation.
- 1961: For the first time in Japan, Ono Sokki manufactured transistorized digital instrumentation.
- 1963: Developed digital torque measurement instruments which were widely acclaimed throughout Japan and the world.
- 1963: Completed and delivered computer on-line data management device for use in engine development.
- 1968: Introduction of IC technology into all products.
- 1973: Development of CF-type statistical analysis system using a built-in minicomputer.
- 1977: Development of ultra-rugged high-reliability linear gauge.
- 1979: Developed the first portable dual channel FFT analyzer with 64-K byte mass-storage memory, model CF-500 and put on mass-production line.
- 1986: Listed on the First Section of the Tokyo Stock Exchange.
- 1986: Ono Sokki Technology Inc. was established.
- 1989: New Technical Center was established in Yokohama.
- 1990: Acoustics Lab. was established in Technical Center.
- 1992: Ono Sokki Beijing Office was established.
- 1996: Conformance to ISO 9001 was certified.
- 1997: Conformance to ISO 14001 was certified.
- 2004: Automotive Testing Lab. was established in Technical Center.
- 2006: Ono Sokki (Thailand) Co., Ltd. was established.
- 2007: Automotive Testing Lab. Utsunomiya was established in Utsunomiya factory.
- 2009: New office building is established in Shin-Yokohana. Relocation of head quarter and Software Development Center to the new building in Shin-Yokohama.
- 2012: Ono Sokki India Private Ltd. was established.
Ono Sokki Shanghai Technology Co., Ltd. was established.

Overseas Subsidiaries and Offices

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