



*JGC* JAPAN GAUGE CO.,LTD.



*We accurately measure the potential of the day.*

*Amidst today's highly developed information-oriented society, we specialize in high-precision, high-technology industry. By meeting clients' sophisticated requirements for technology and innovation in manufacturing production lines, our products contribute to production automation and labor-saving.*

*Stonehenge, a World Heritage megalithic structure of a prehistoric ring of standing stones, may have been used for archaeological observation or worship of the sun for thousands of years. It symbolizes the desire for a solid platform of stone and the eternity of human beings. Those desires are even stronger today.*

*Technology and clients' needs are continuously changing and diversifying. Likewise, our technical development is guided by both clients' needs and our research work, resulting in cutting-edge products and services for clients. We aim to serve clients with the fruits of our technical development and products.*

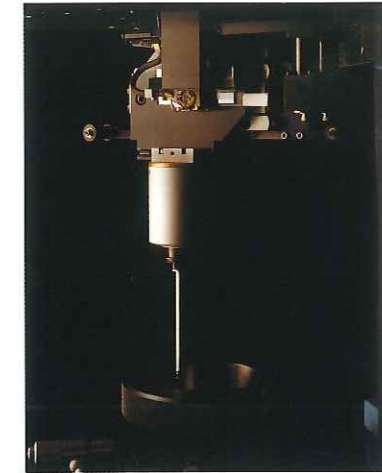
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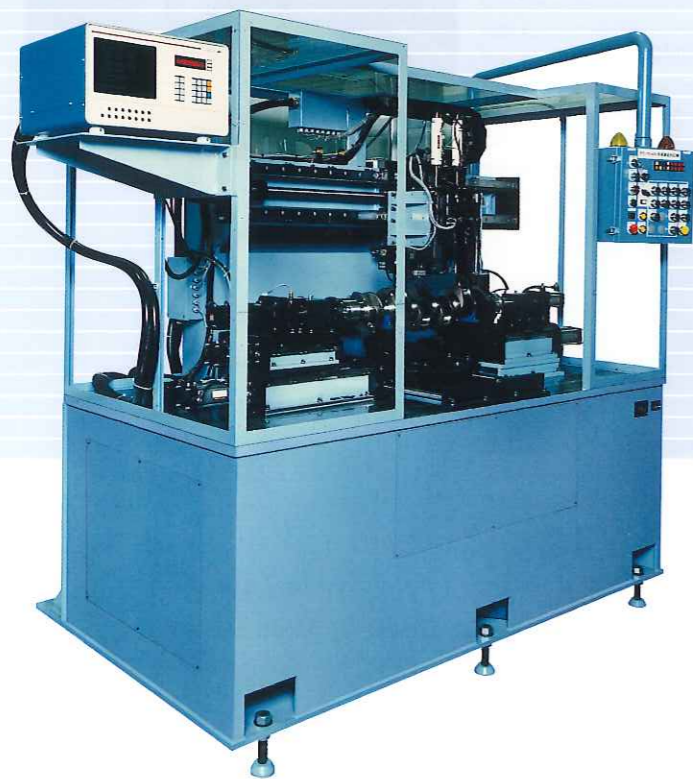
# Items of business

- Automatic Measuring Instruments
- Gear Checker
- CNC Bore Measuring Machine
- Cam Profile Measuring Machine
- Shaft Straightening Machine
- Balancing Machine
- Measuring Applied Device
- Others

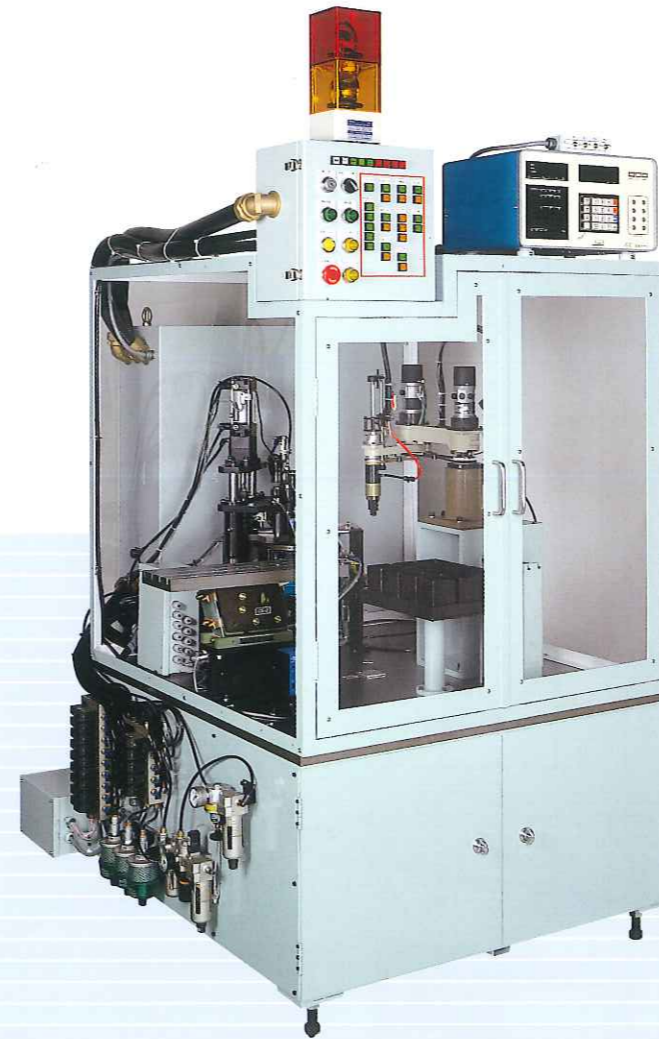


# Automatic Measuring Instruments

Crank shaft measuring and marking machine



Automatic inspection machine for runout of rotor



Measuring machine for inner diameter of valve body seat

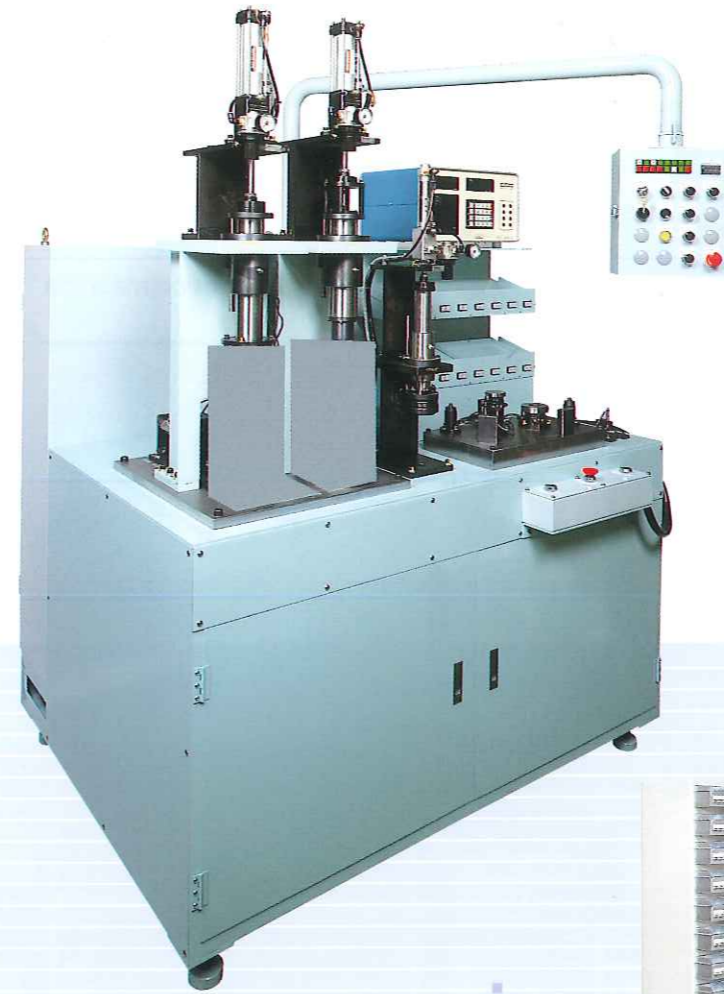
Automatic measuring machine of valve body inner diameter





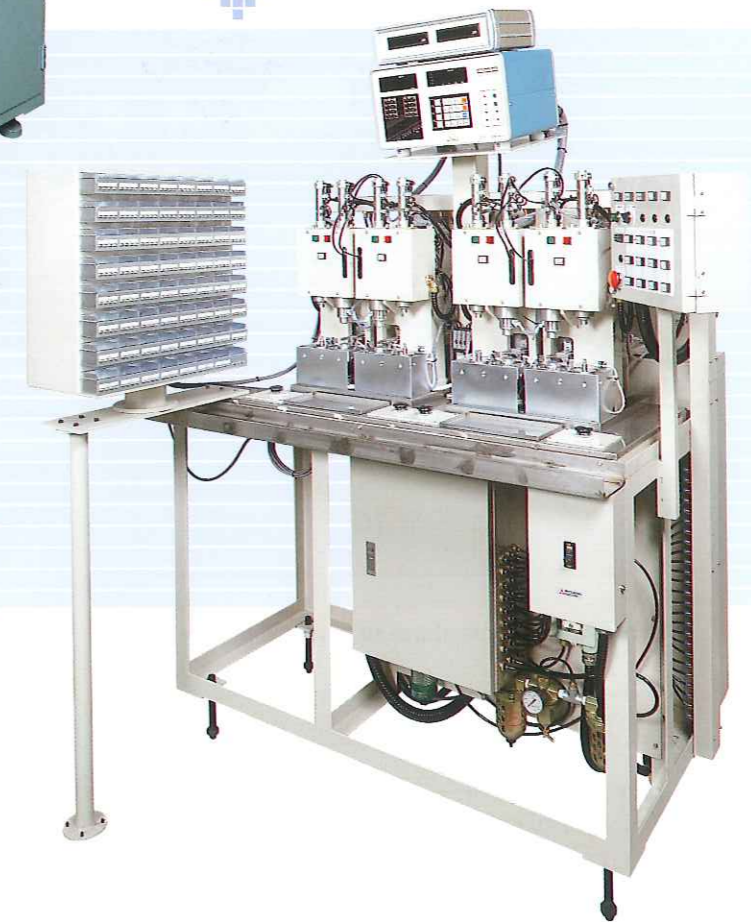
Press & assembly machine

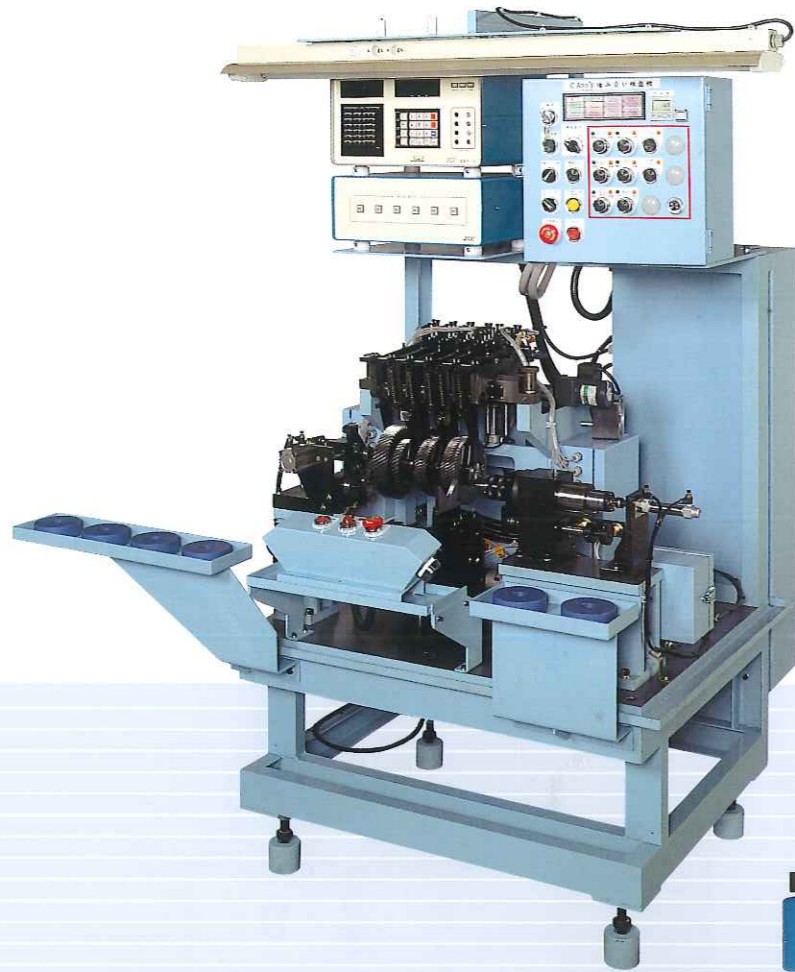
Spring displacement measuring machine



Measuring machine for circumferential length of belt

Shim selection unit





Engagement inspection machine

Stratification machine of outer diameter

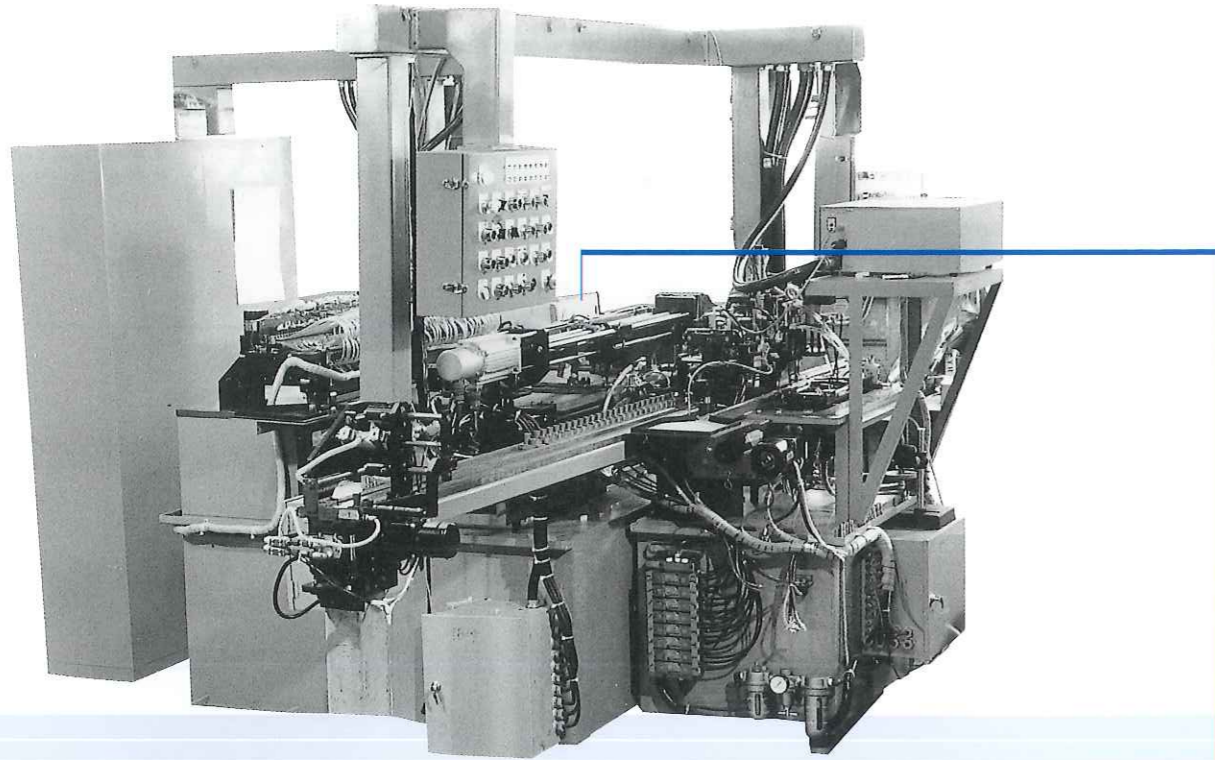


Measuring machine of shaft outer diameter and longitudinal dimensions

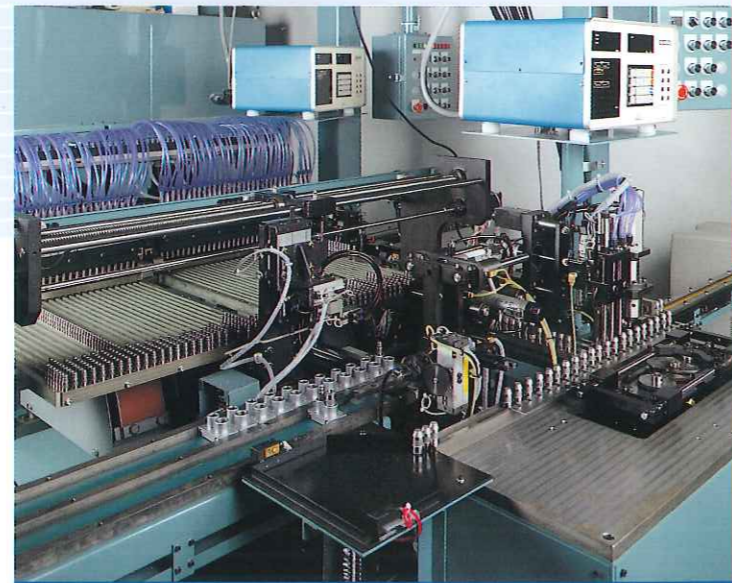


Sorting/correcting machine for ovalness in oil pump





Valve adjustment automatic matching unit



Stratification machine of body inner diameter

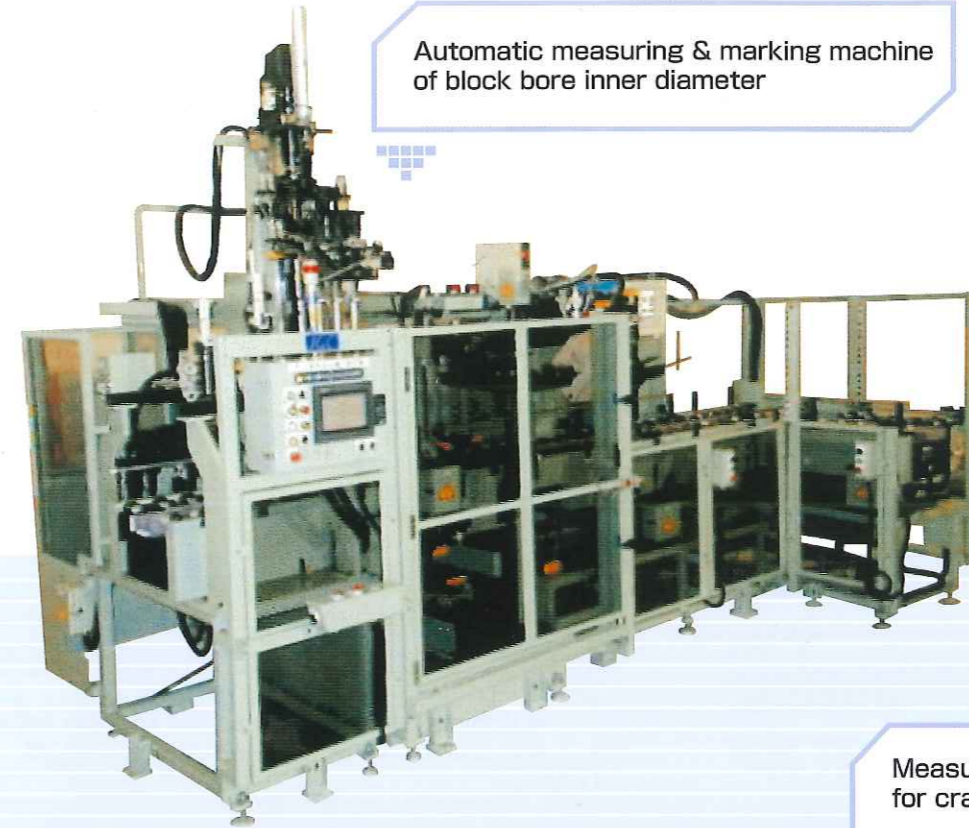
Stratification machine of plunger outer diameter



Measuring and marking machine for shaft bore of transmission case



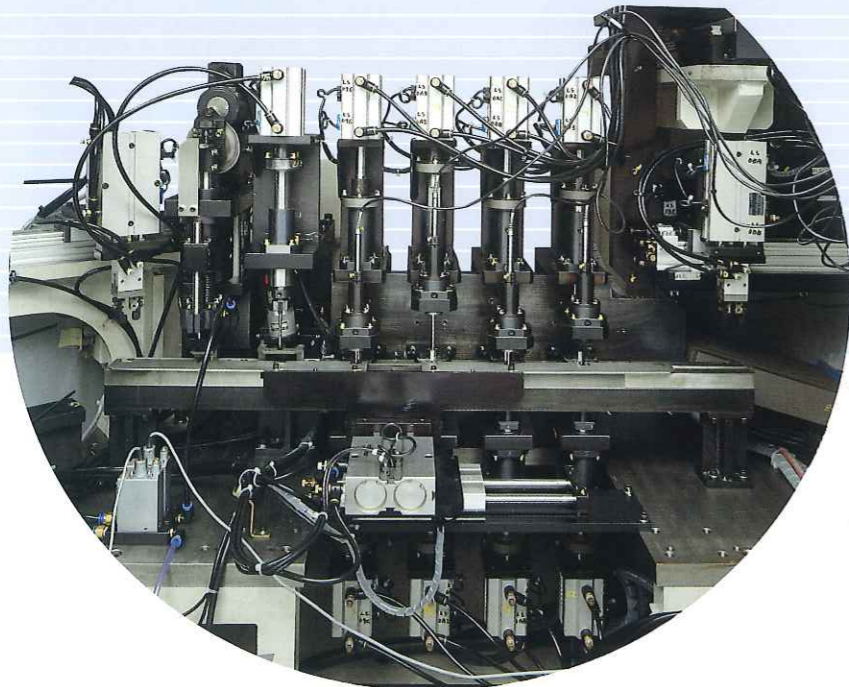
Automatic measuring & marking machine of block bore inner diameter



Measuring and marking machine for crank bore of cylinder block

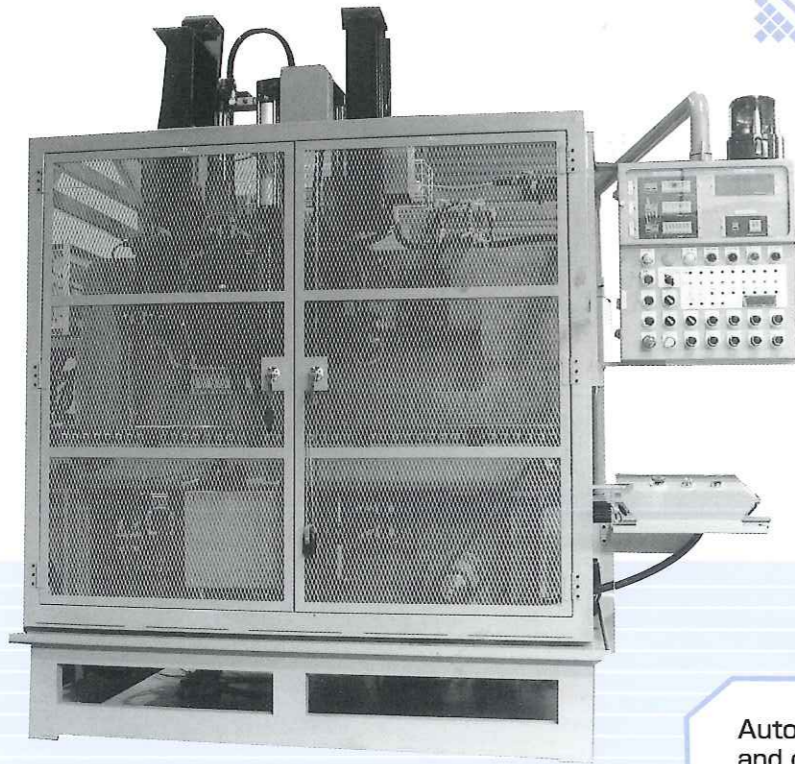


Cleaning and measuring machine after forming shaft end

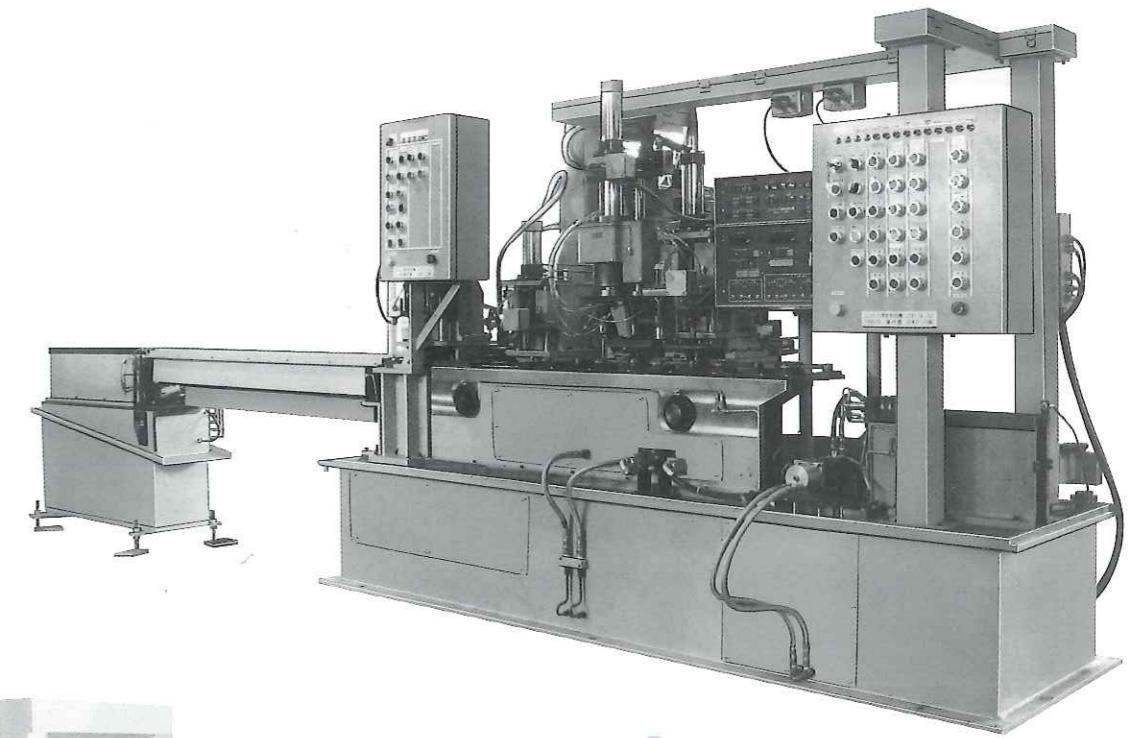
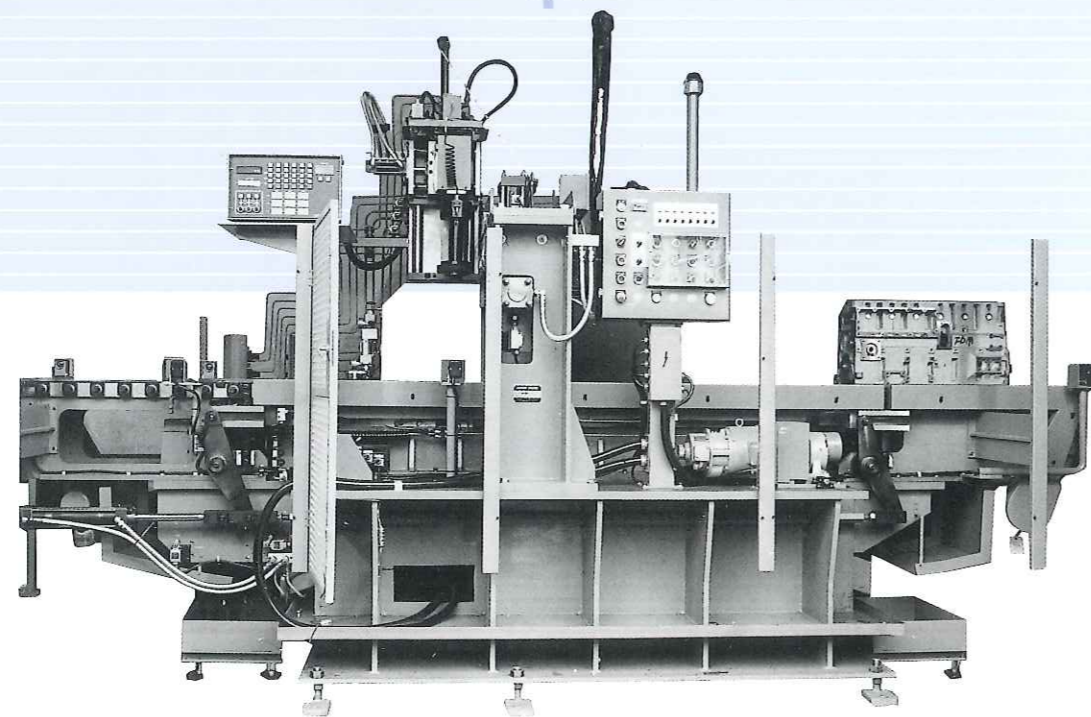




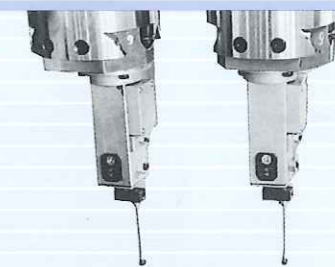
Measuring machine for guide hole and seat hole of head valve



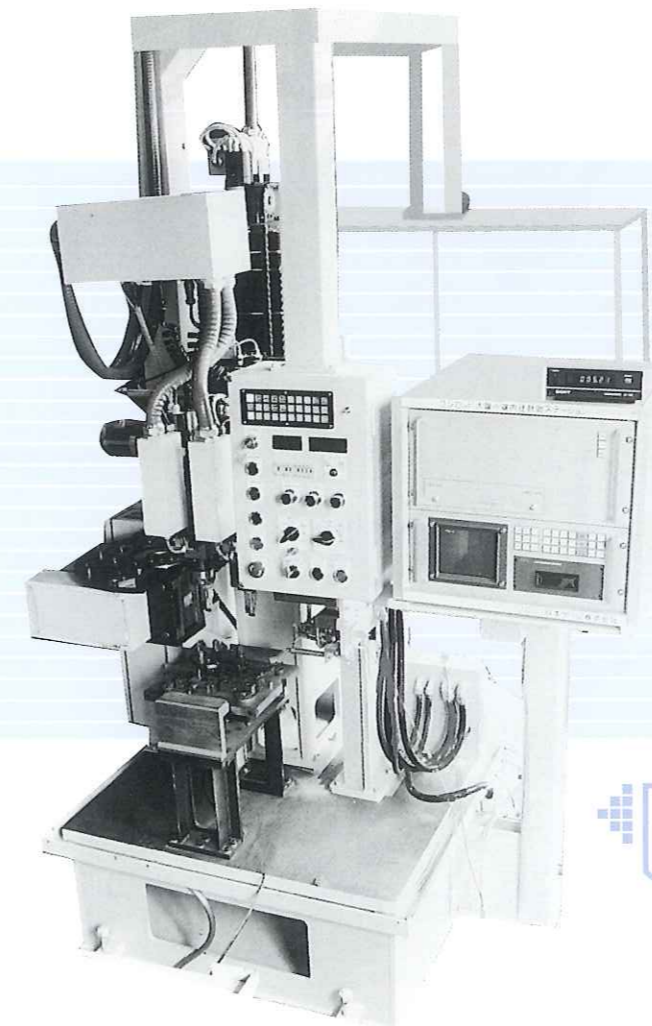
Automatic measuring machine for cam bore and crank bore of cylinder block



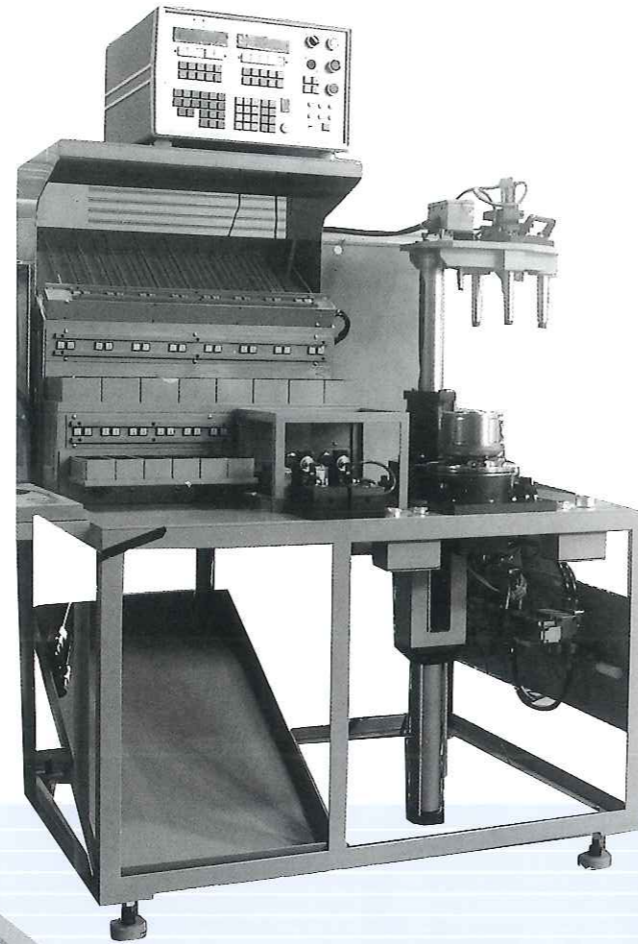
Connecting rod measuring and marking machine



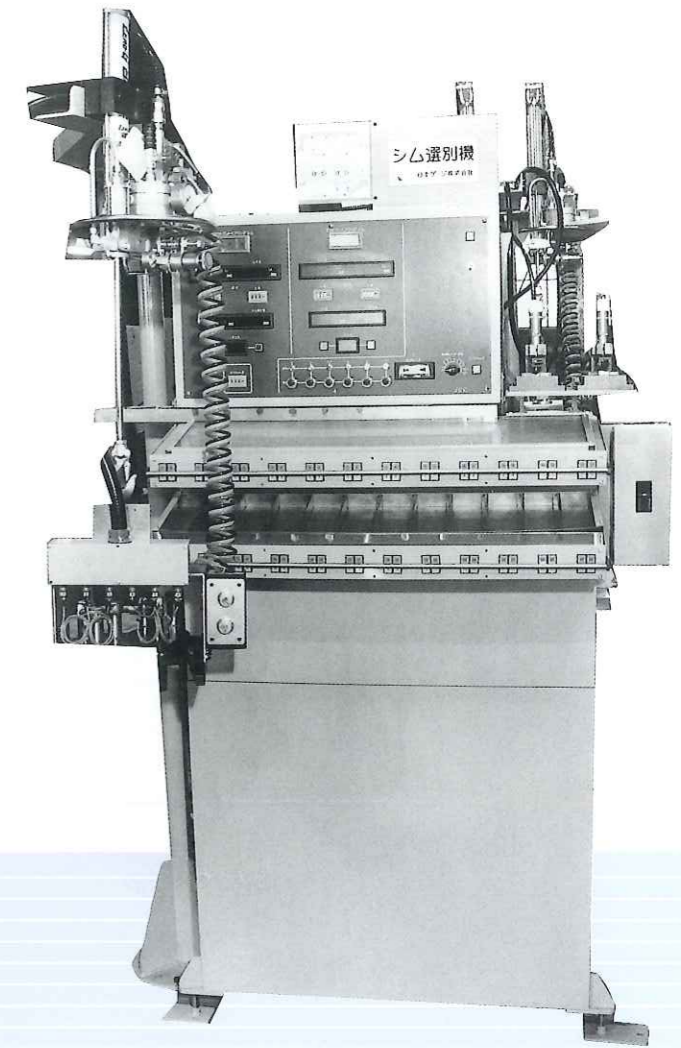
Measuring station for inner diameter of large end and small end of connecting rod



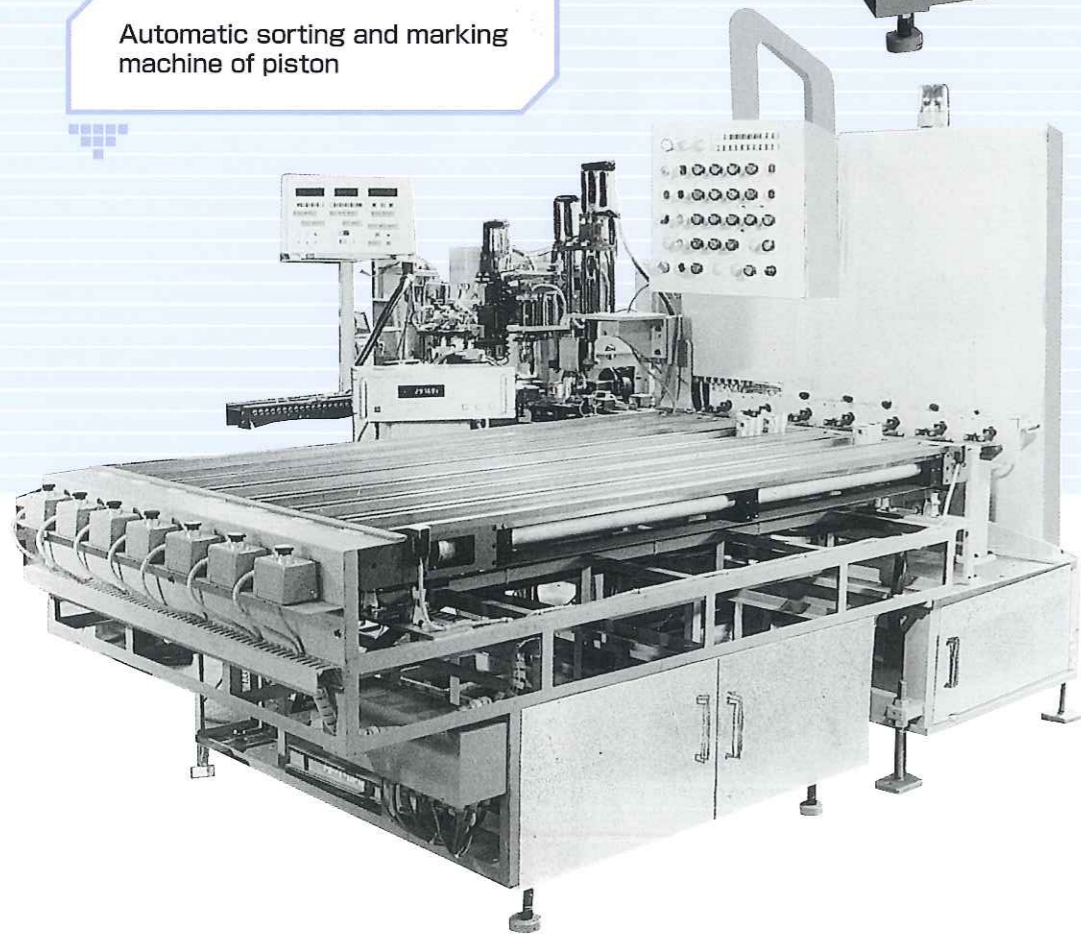
Washer face sorting unit



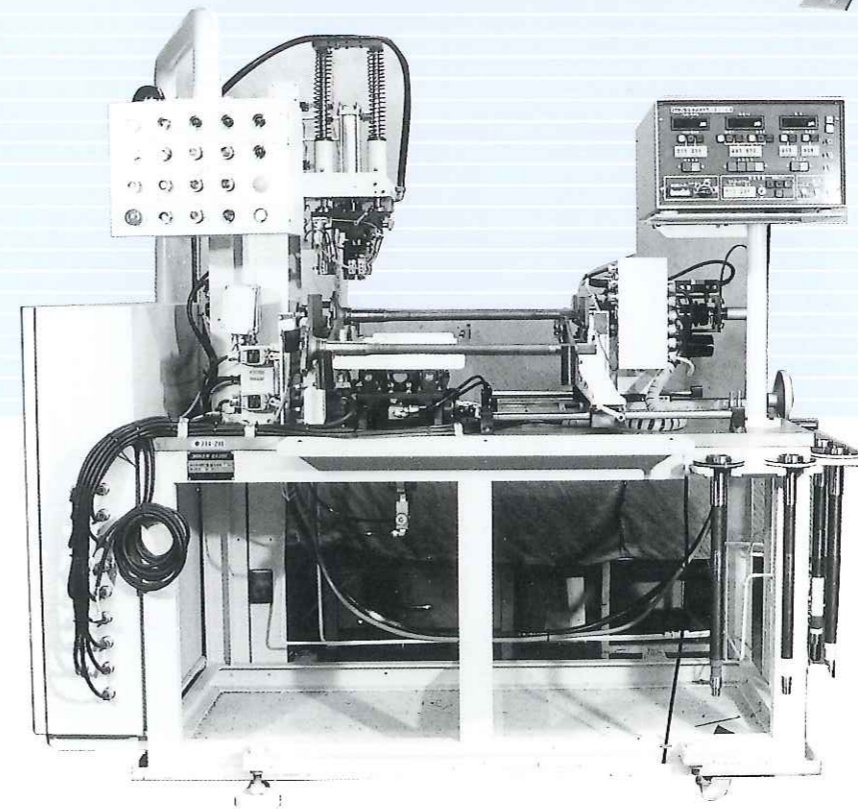
Shim sorting machine

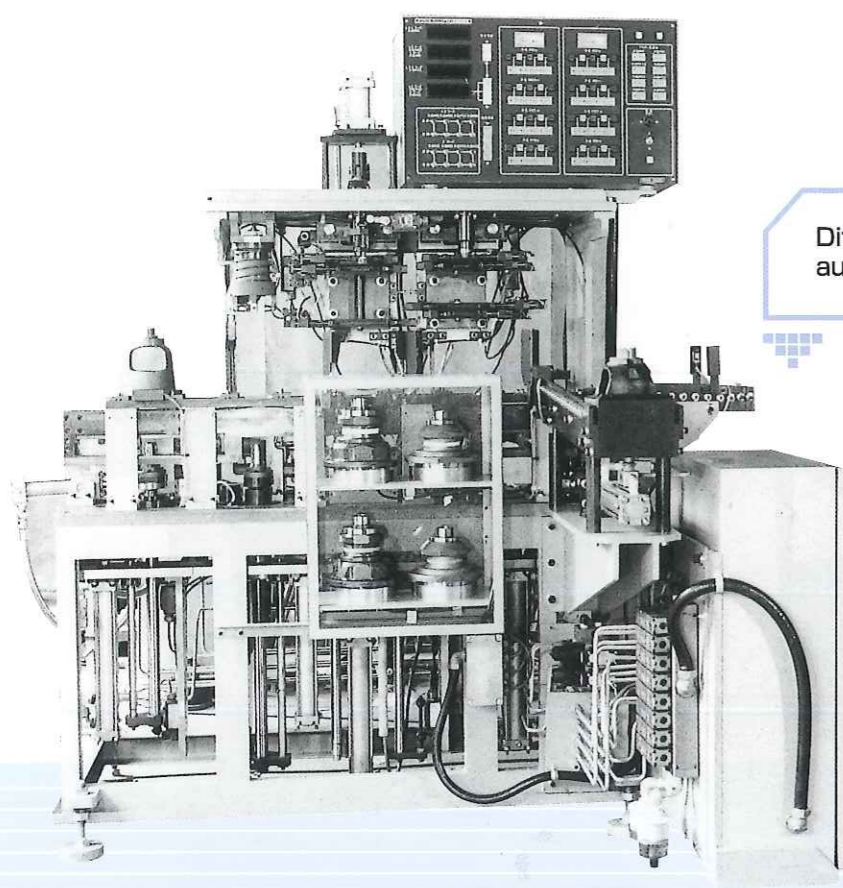


Automatic sorting and marking machine of piston

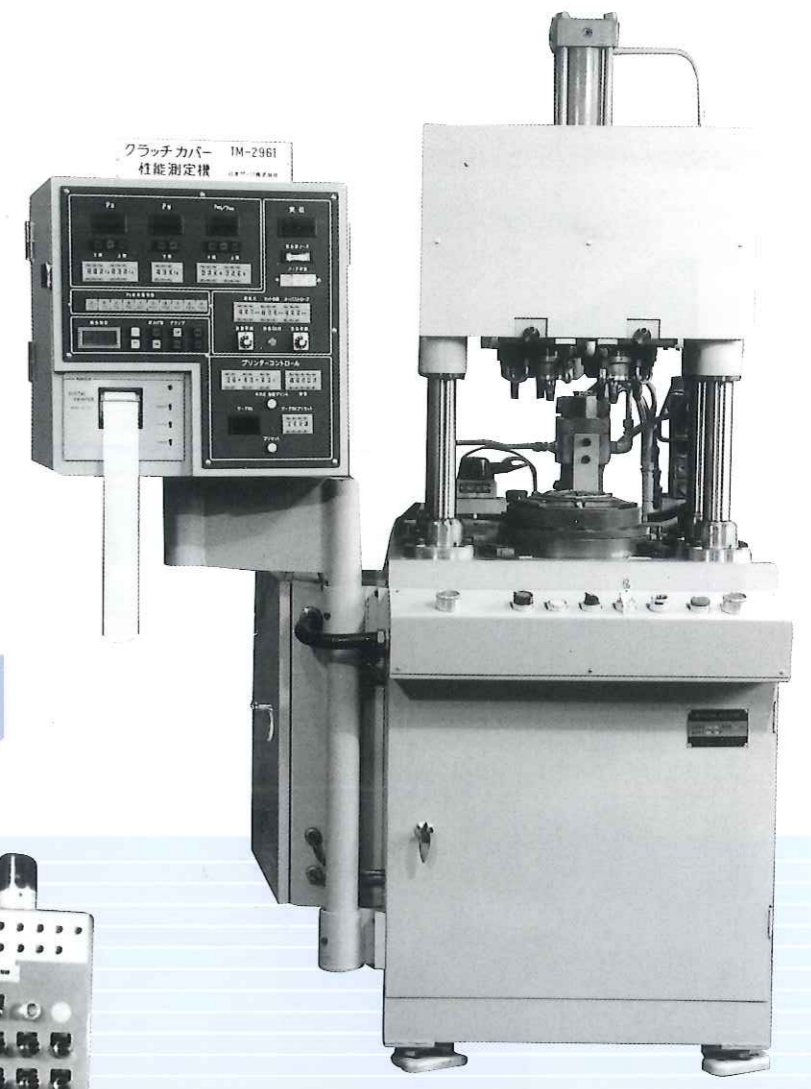


Outer diameter measuring machine for rear axle shaft



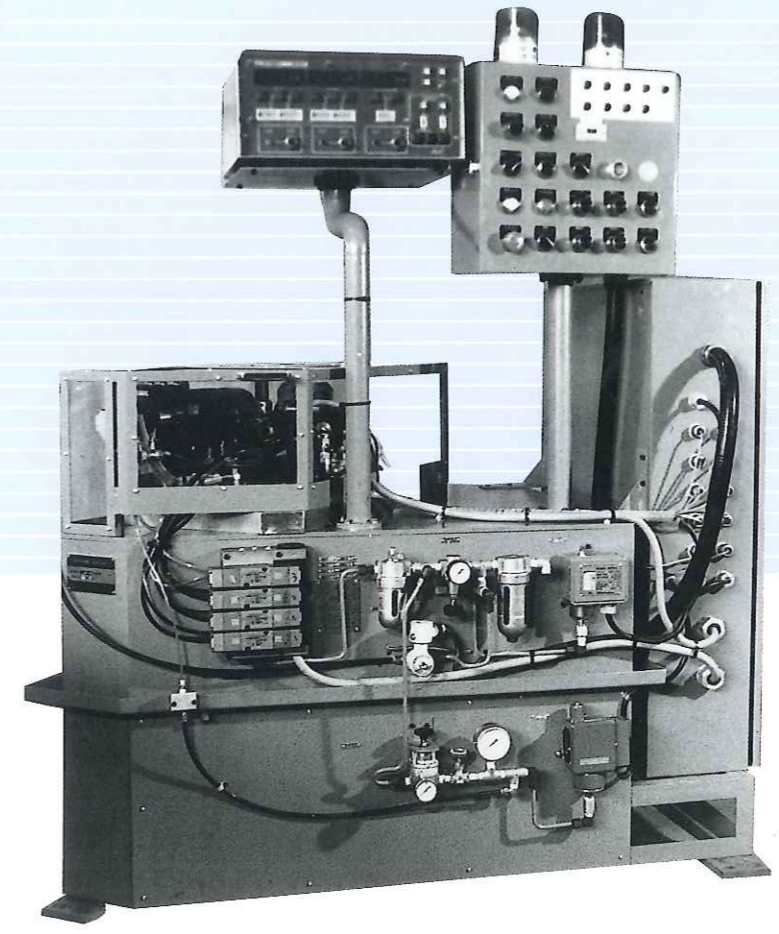


Differential case turning automatic measuring machine



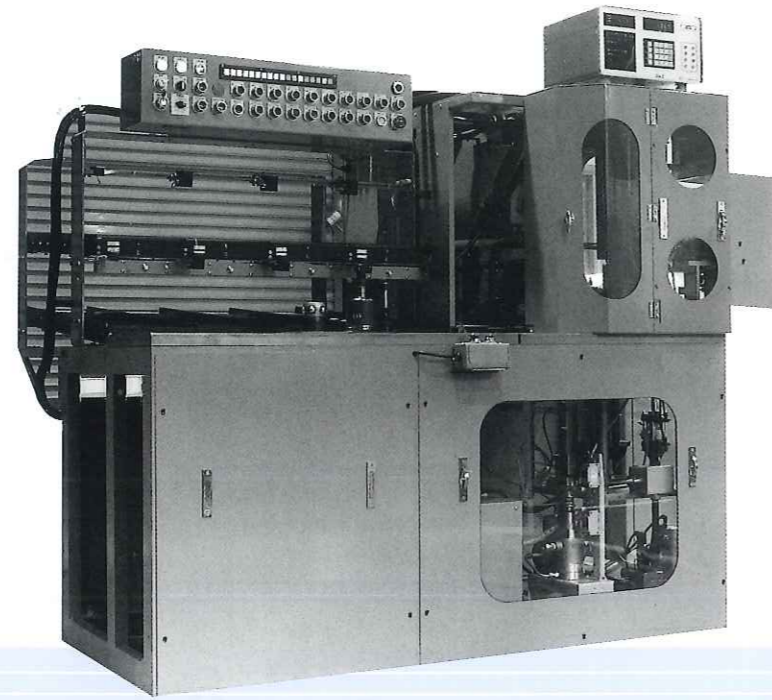
Equal velocity joint measuring machine

Machine for detecting mold cavities of a cylinder by whirlpool of an electrical current

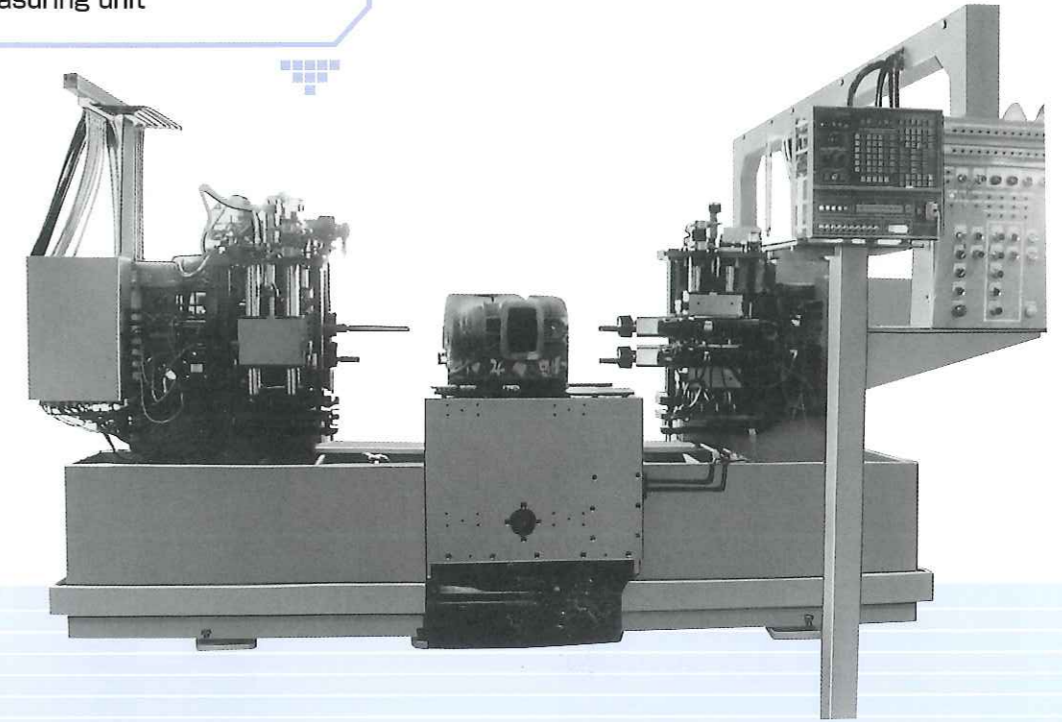


Clutch cover performance testing machine

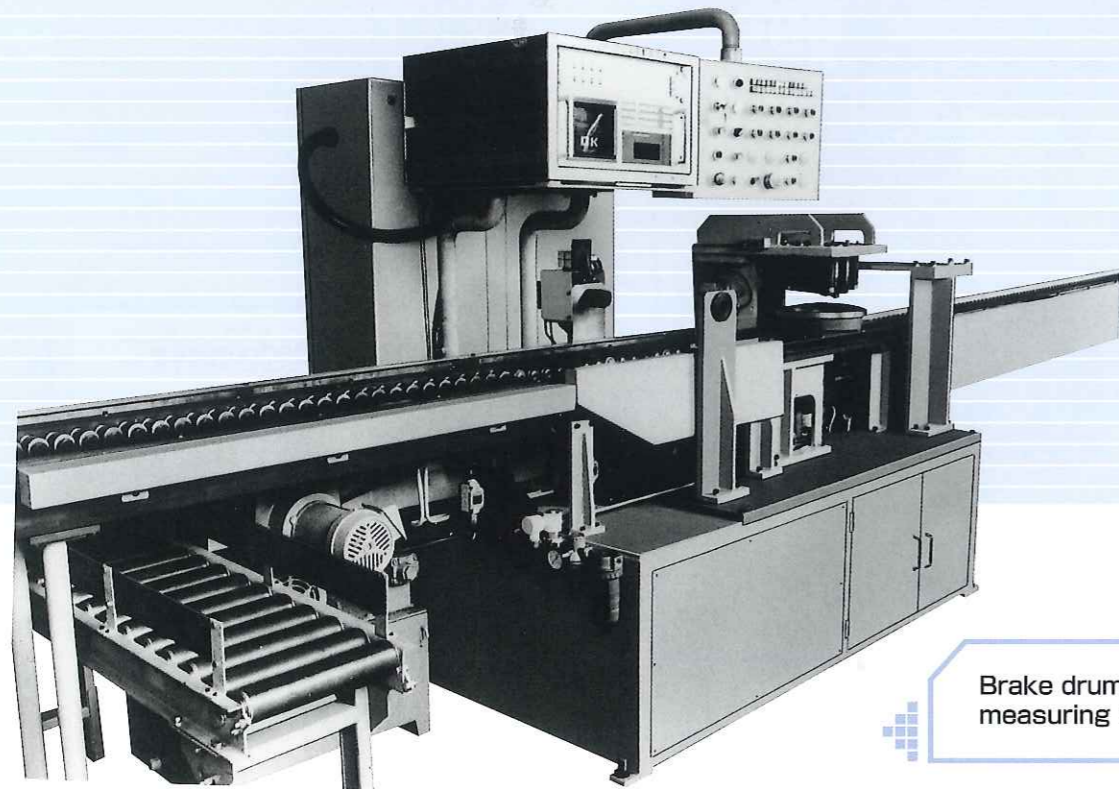
Outer ring groove measuring machine of equal velocity joint



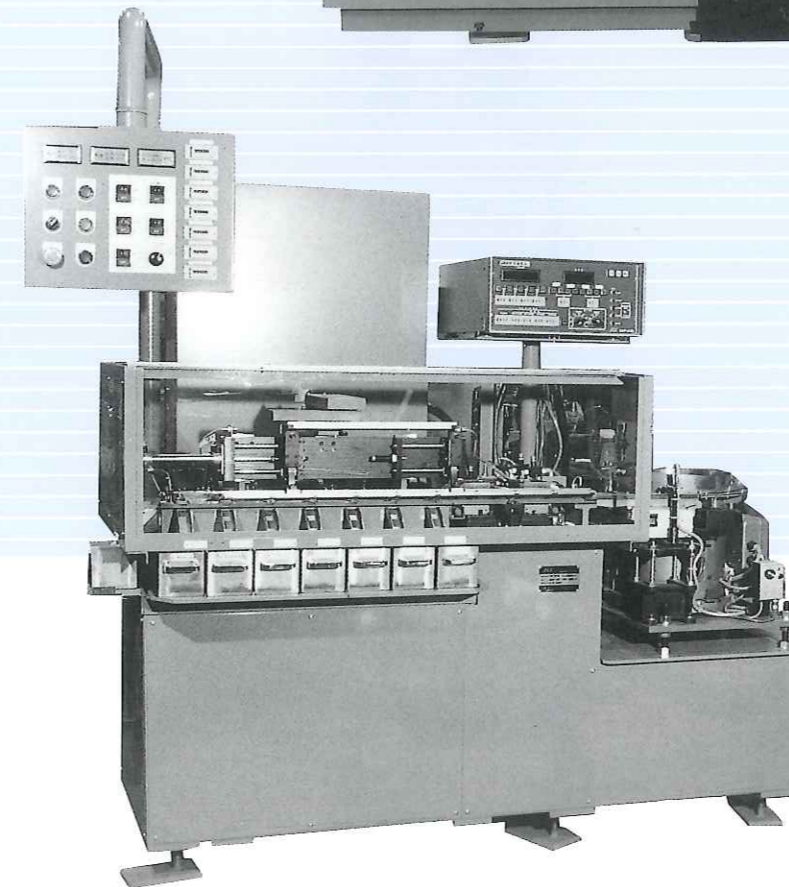
Transmission case automatic measuring unit

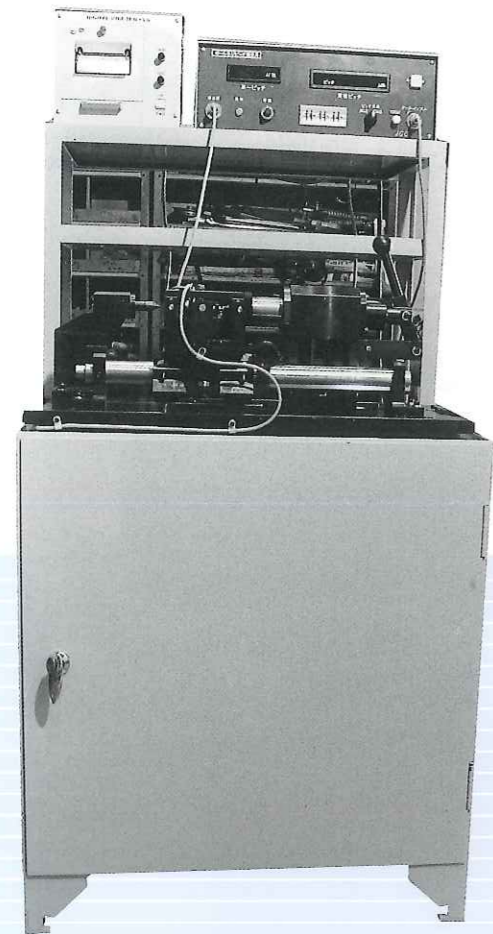


Brake drum fully-automatic measuring machine



Vane measuring and sorting machine





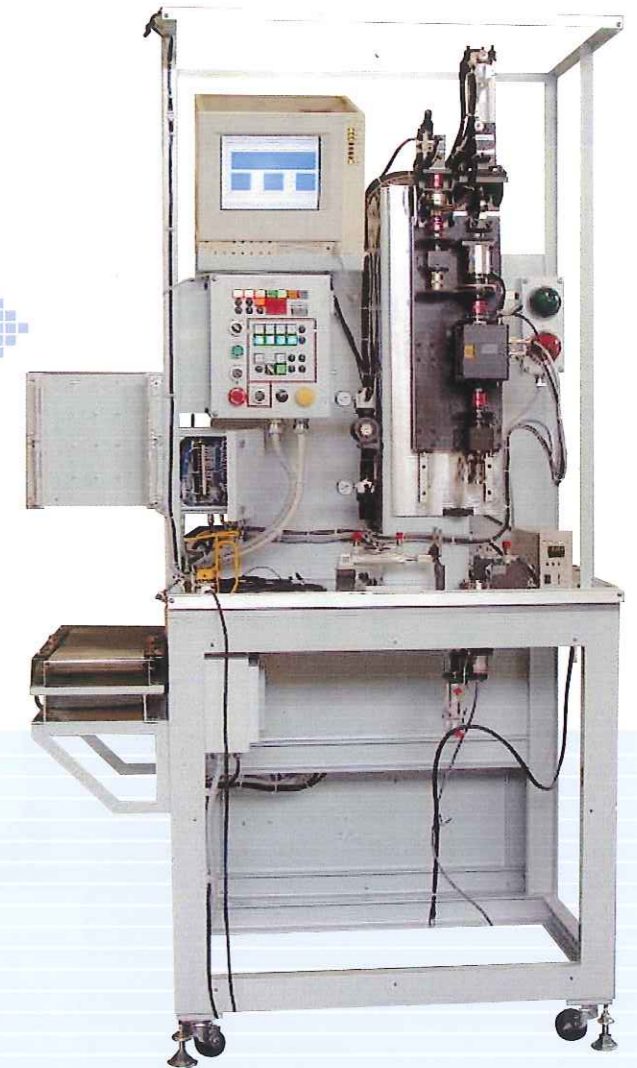
Ball screw pitch measuring machine



Over ball radius, OBR, measuring machine



Backlash measuring machine



Smoothing machine for worm wheel

# Gear Checker



Gear checker



Gear checker

Gear checker



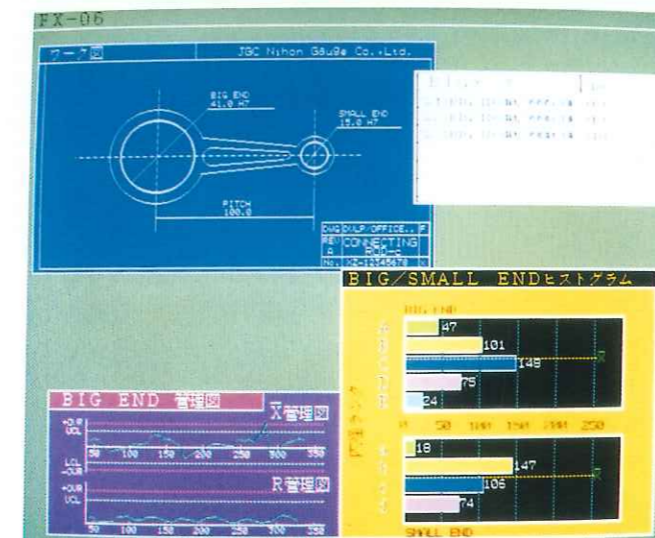
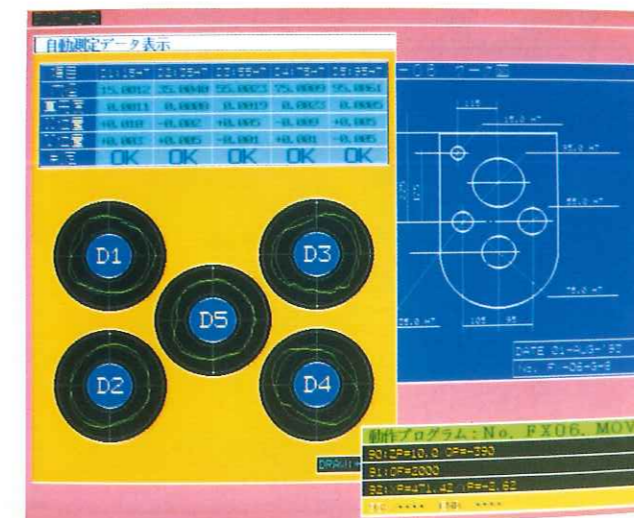
# CNC Bore Measuring Machine



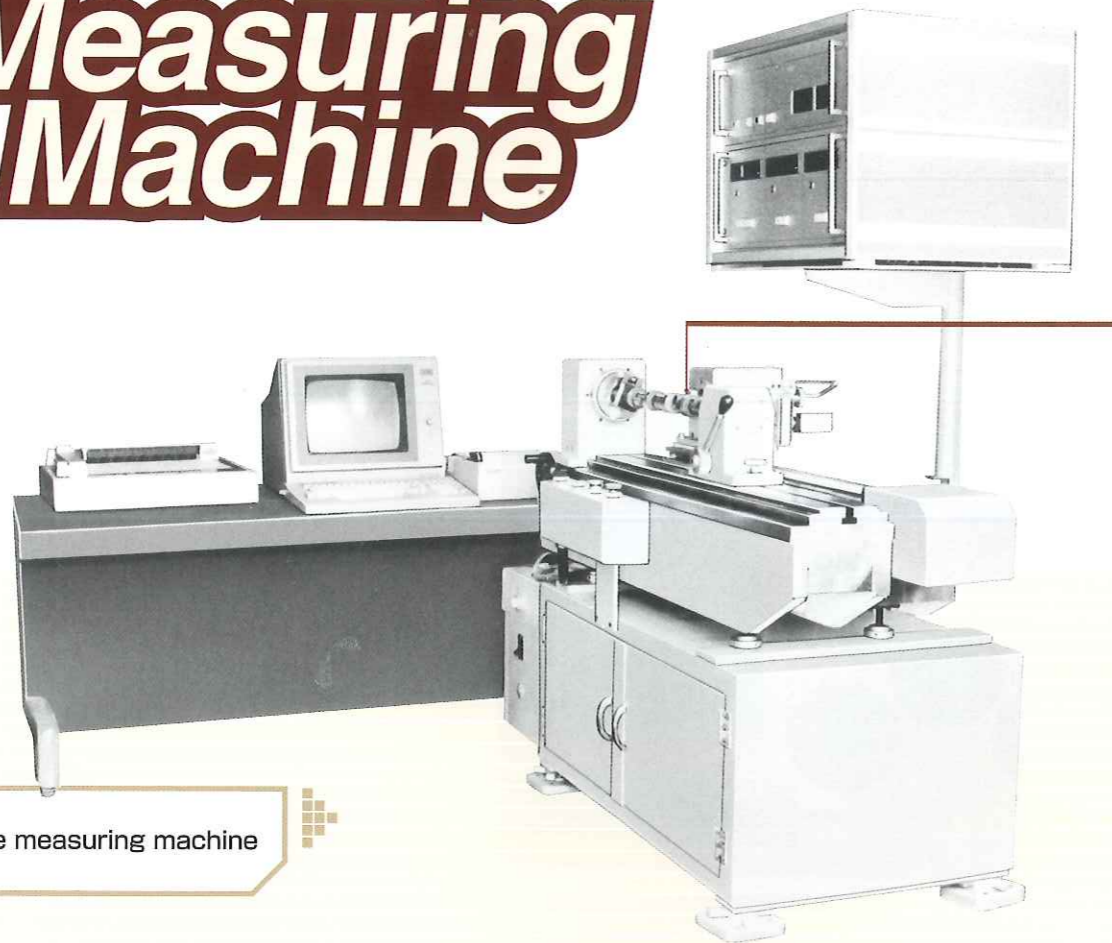
## Main specifications

Measuring range	•	100mm (diameter difference)
	∅	360°
	X	500mm
	Y	500mm
	Z	200mm
Measuring speed	∅	3sec/rev
	X, Y, Z	500mm/sec
Accuracy of measurement		Repeatability accuracy of hole diameter 1 μm

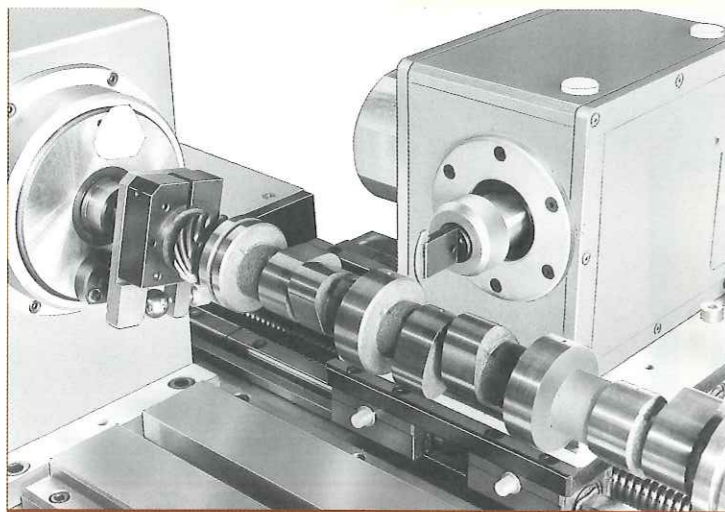
## Example of screen display



# Cam profile Measuring Machine



Cam profile measuring machine

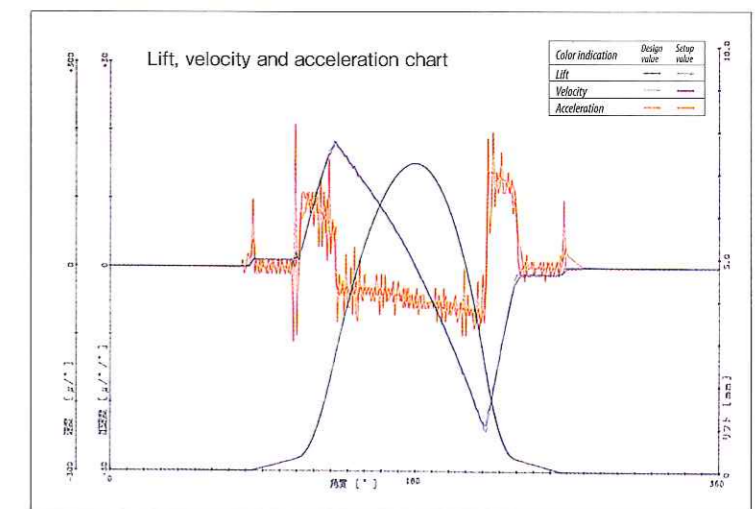
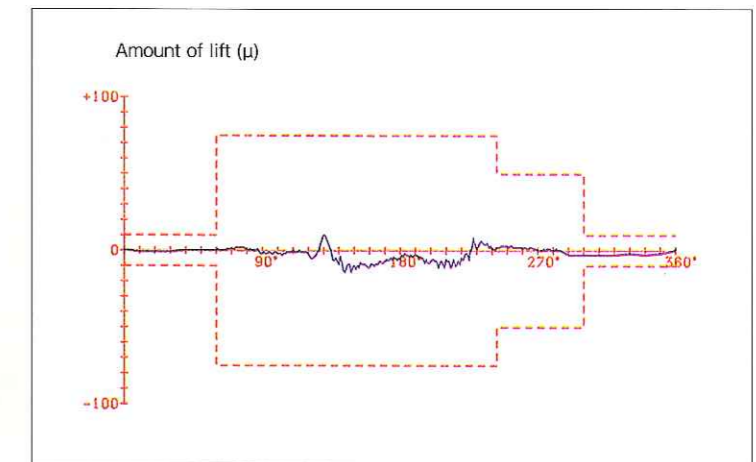
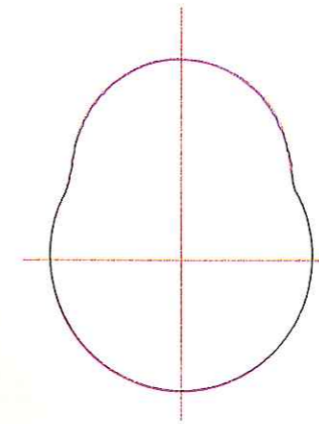


## Main specifications

Length of measuring object	Maximum 700mm
Measuring points	Maximum 12 points of cam, and 7 points of journal
Measuring diameter	10-50mm
Indication	Lift 0-19.999mm
Minimum display units	Lift: 1 $\mu$ m, Angle: 30 seconds
Measuring time	Standard mode: within 8 minutes for 8 cams
Dimensions	Main unit W1570mm D600mm H1700mm Data processing unit W1500mm D750mm H1000mm
Mass	Main unit: 500 kg

The standard specifications are shown above

## Example of cam profile drawing





# Shaft Straightening Machine



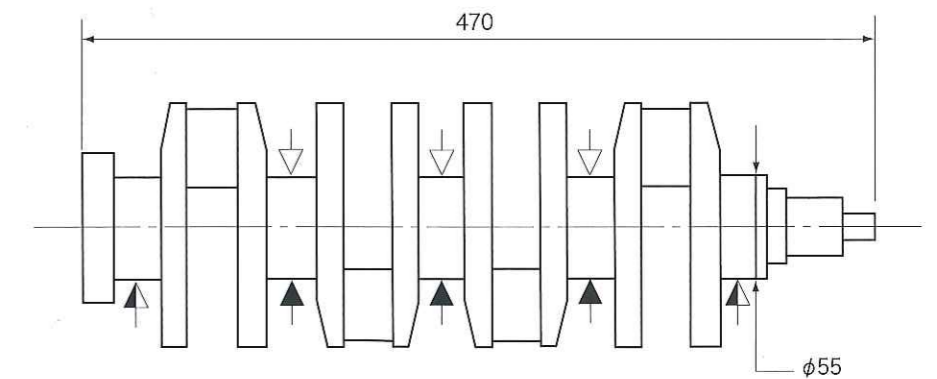
Shaft straightening machine

## Examples of straightening

Points to be straightened  
 Measurement reference points  
 Points to be measured

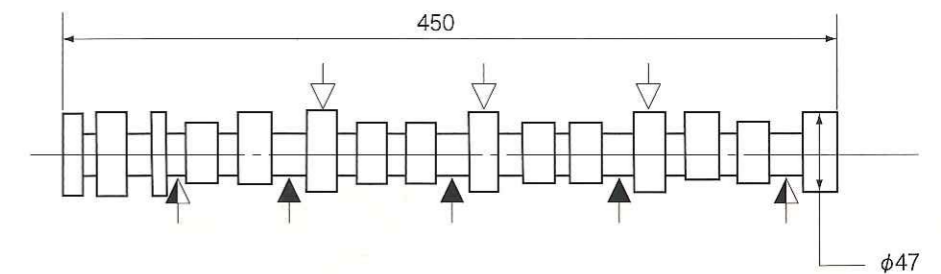
### Crankshaft

Initial run-out: 100 $\mu$ m  
 Straightening accuracy: 15 $\mu$ m  
 Processing capacity: 150 pieces/hour



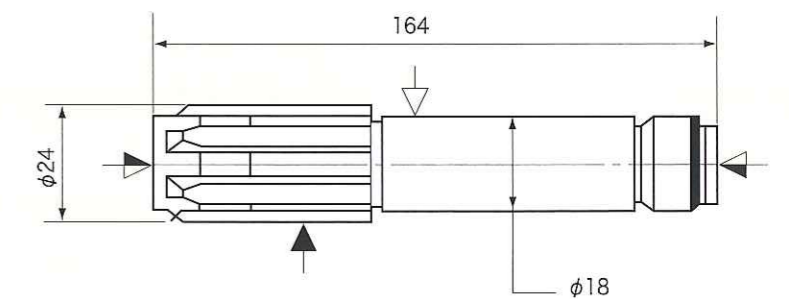
### Camshaft

Initial run-out: 1.2mm  
 Straightening accuracy: 0.1mm  
 Processing capacity: 200 pieces/hour



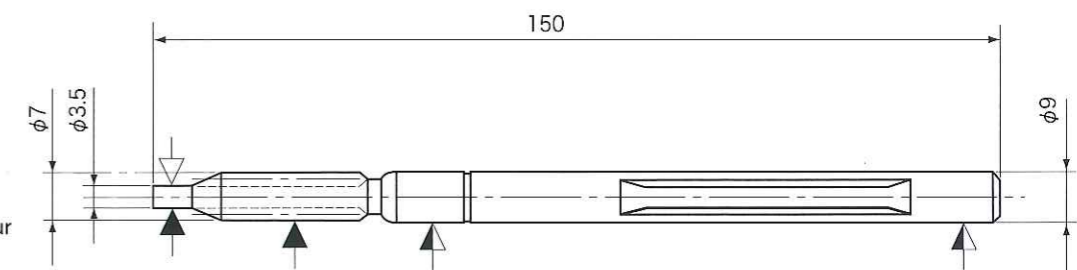
### Gear shaft

Initial run-out: 0.35mm  
 Straightening accuracy: 0.05mm  
 Processing capacity: 240 pieces/hour



### Motor shaft

Initial run-out: 0.2mm  
 Straightening accuracy: 0.07mm  
 Processing capacity: 600 pieces/hour



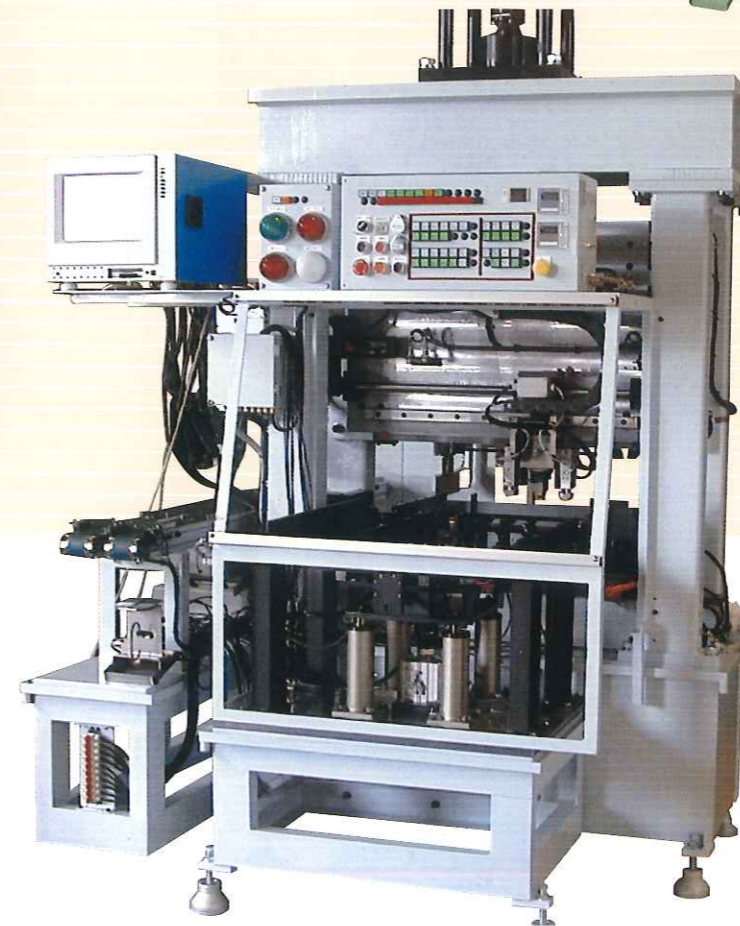
Straightening machine for crankshaft



Straightening machine for ring-gear



Straightening machine for cam shaft



Straightening machine for rack shaft

# Balancing Machine

## Features

- ✓ The 15-inch large screen enables the operator to browse the measurement results and data.
- ✓ The sampling waveform mode enables the operator to execute self-diagnosis of the equipment.
- ✓ Digital processing enables the operator to measure work pieces of various shapes.
- ✓ Various work pieces can be measured by simply changing the setup, based on our accumulated experience in specialized balancing machines.
- ✓ The control software supports both MS-DOS and Windows.
- ✓ Saved measurement results support the CSV format.

Horizontal type balance measuring machine



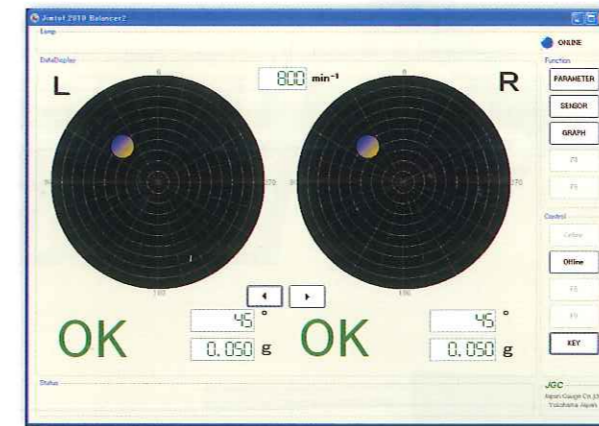
### Main specifications

Test rotation frequency	400-2000min <sup>-1</sup>
Drive system	Belt drive system
Work maximum size	30kg φ500
Minimum display units	0.1mg·cm

## Unbalance Measuring and Arithmetic Processing Machine: Jcom-V

"Jcom-V" provides an easy-to-understand and easy-to-operate screen for automatic measurement and straightening.

The screen layout of this machine is standardized, but can be customized to suit the client's needs on request.



[ Example of display screen ]

Vertical type balance correcting machine



### Main specifications

Test rotation frequency	400-2000min <sup>-1</sup>
Drive system	Belt drive system
Work maximum size	30kg φ500
Minimum display units	0.1mg·cm
Drill error correction	Hole diameter: φ5-13, Depth: 13mm

# Measuring Amplifier



Jcom-0  
Numeric display

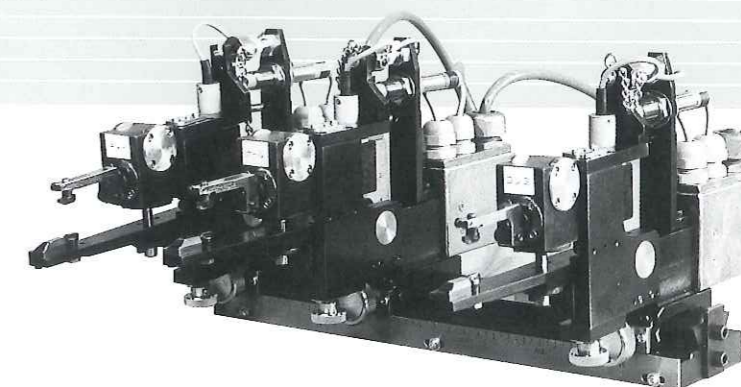
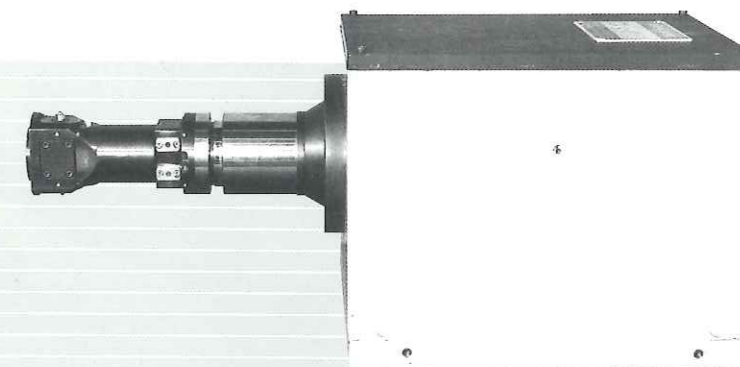
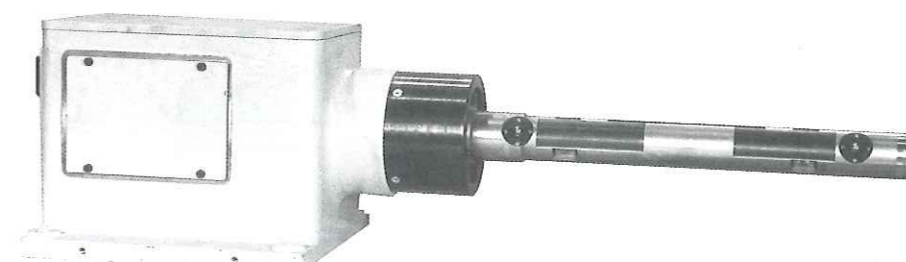
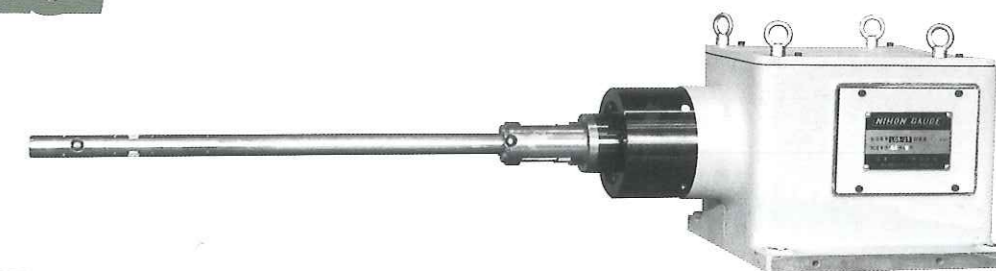


Jcom-1  
6.5 inch liquid crystal display



Jcom-II  
12.1 inch liquid crystal display

# Measuring Head



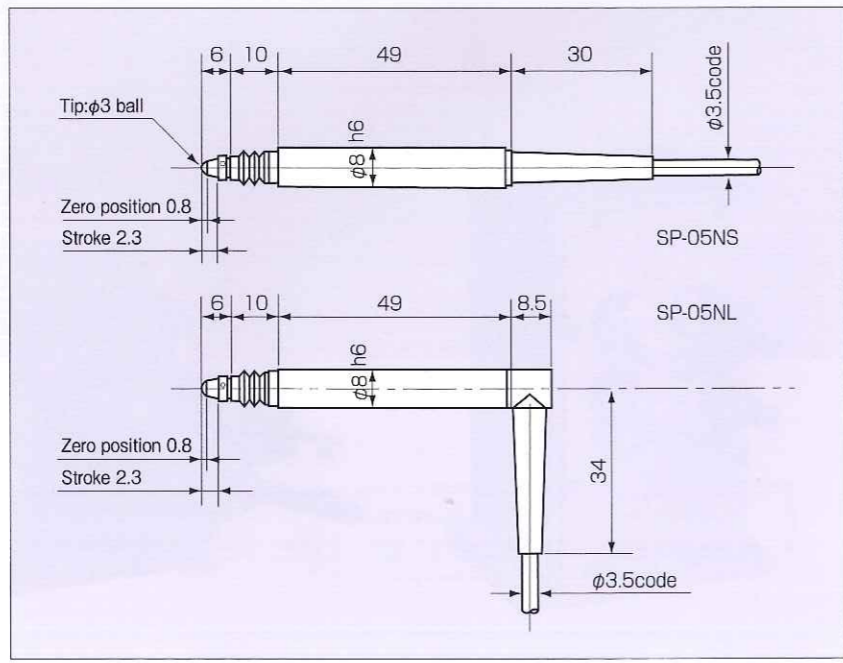
# Detector



Measuring range  $\pm 0.5\text{mm}$   
 Measuring force  $70\text{g}$   
 Cable length  $2\text{m}$

Detector SP-05NS, SP-05NL

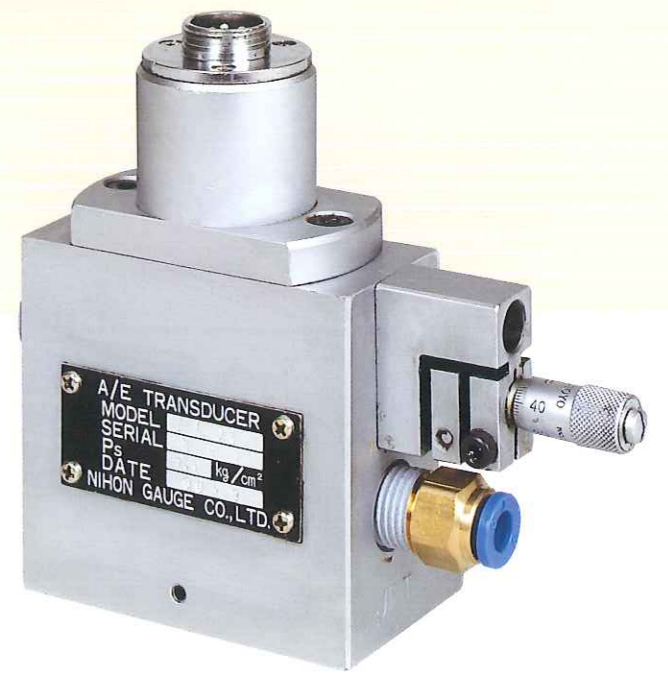
### Dimensions



# AE Transducer



Air-Electric transducer, AE-10



Large size AE transducer, MAL-20

# Air Jet



# Peripheral Device

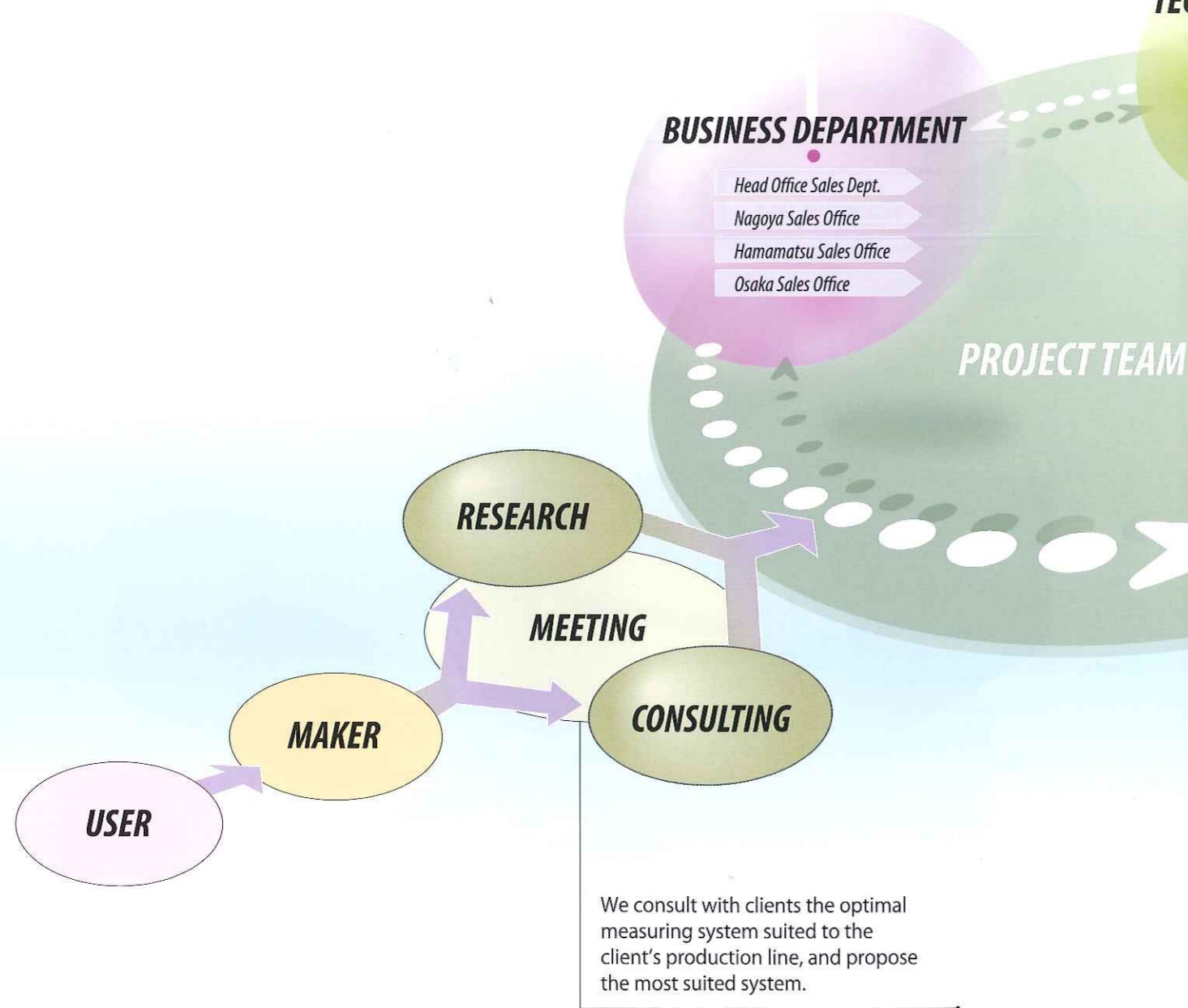
16channel expansion unit



PC card writer

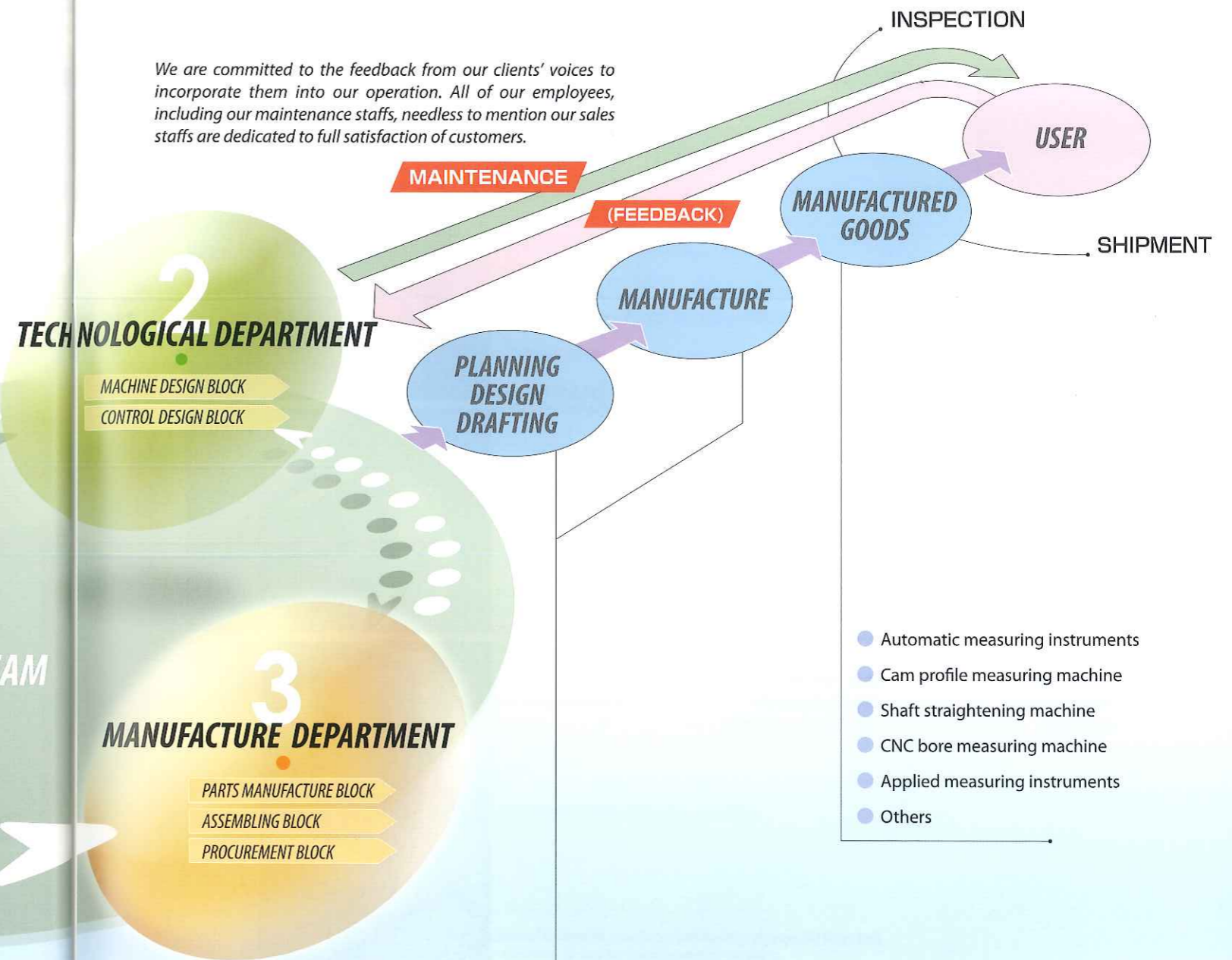
# Marketing system

JGC JAPAN GAUGE CO., LTD. is valued by many clients in the field of automatic measurement systems. Our marketing policy is to build relationships of mutual trust with clients in supplying them with our high-quality products. The feedback we receive guides all our staff, particularly the feedback from clients' production sites, which is used by our Maintenance Department, Marketing Department, and all other Departments with the spirit of maintenance engineers.



We consult with clients the optimal measuring system suited to the client's production line, and propose the most suited system.

We are committed to the feedback from our clients' voices to incorporate them into our operation. All of our employees, including our maintenance staffs, needless to mention our sales staffs are dedicated to full satisfaction of customers.



The entire organization of JGC is integrated from the Design Department to Manufacturing and other Departments in order to meet clients' demands.

## Major machines installed

Name	Manufacturer and specifications	Number of units
Jig boring machines	Mitsui-seiki No. 3B, 4B	2
Milling machines	Ookumahouwa-kikai FRM40 and others	5
External cylindrical grinding machines	Tschudin HTG410 and others	4
Internal cylindrical grinding machines	Yamada Koki YIG-15M	1
Surface grinding machines	Okamoto Machine Tool Works PSG-500 and other	8
Lathes	Okuma, Washino-kiki and others	6
Boor-bank drilling machines	Ogawa Iron Works HDR-1500 and others	6

## Major inspection and test machines installed

Name	Manufacturer and specifications	Number of units
Constant temperature and humidity testing room	Okuno Technical Research Institute	1
Coordinate measuring machine	TOKYO SEIMITSU SP600A	1
Roundness measuring instrument	Kosaka Laboratory EC1550	1
Length measuring machine	Mahr Metrology ULM OPAL300	1
Hardness meters	Akashi Seisakusho and others	3
Electric micrometers	Mahr Metrology and others	5
Oscilloscopes	Sony, Hitachi, Iwasaki and other	9



## Corporate profile

<b>Corporate name</b>	JAPAN GAUGE CO., LTD.
<b>Headquarters</b>	2-3-14, Shitte, Turumi-ku, Yokohama City, Kanagawa Prefecture, Japan, Postal code: 230-0003 Phone: +81-45-581-3762 Fax: +81-45-583-2333
<b>Hamamatsu Sales Office</b>	Shijimizuka Bldg. 3F, 3-74-23, Kamoe, Hamamatsu Naka-ku, Shizuoka Prefecture, Japan, Postal code: 432-8023 Phone: +81-53-458-7808 Fax: +81-53-458-7807
<b>Nagoya Sales Office</b>	Century Court Midori 206, 1-36-8, Midoricho, Anjo City, Aichi Prefecture, Japan, Postal code: 446-0055 Phone: +81-566-72-2122 Fax: +81-566-72-3122
<b>Osaka Sales Office</b>	Grace Garden Toyonaka 307, 3-10-2, Kozushima, Toyonaka City, Osaka, Japan, Postal code: 561-0843 Phone: +81-6-6866-3762 Fax: +81-6-6866-3761
<b>JGC(THAILAND)CO.,LTD.</b>	9/35 Moo 5 Phaholyotin Road Tambol klong Nuang Amphur Klongluang Patumthani 12120, Thailand. Phone: +66-2-516-3060-1 Fax: +66-2-516-5023
<b>Foundation</b>	September 5, 1955
<b>Capital</b>	20 million yen
<b>Sales</b>	1,600 million yen
<b>Corporate officers</b>	CEO and President: Makoto Asada Executive Managing Director: Mitsuo Asada [in charge of Control System Design] Director: Teruo Sakai [in charge of Machinery Design] Director: Takuro Asada [in charge of Overseas Sales] Director: Masahiro Yamashita [in charge of CS and Process] Auditor: Michiko Wada [Non-permanent auditor] Auditor: Ayako Mori [Non-permanent auditor]
<b>Main Banks</b>	Mizuho Bank, Tsurumi branch, The Bank of Yokohama, Kawasaki branch
<b>Employees</b>	70 (8 women among them)
<b>Plant sites</b>	1,000 square meters 1,200square meters: One three-story building and one two-story building



## Corporate History

- 1955** With the scope of business of development, manufacture and marketing of gauges and fixture tools, a new company was established. Mr. Masahiro Asada assumed the presidency.
- 1957** The company was organized as a company limited with capital of 2 million yen
- 1965** Electric micrometer and pneumatic micrometer were developed. Development of automatic measuring instrument using the newly developed electric micrometer and pneumatic micrometer was started.
- 1968** Development of automatic measuring instrument for automobile industry was started. Production and marketing of these products was started.
- 1970** Industrial robot (Magnifique) was developed.
- 1976** Straightening machine for shaft (Rectus) was developed. Production and marketing of these products was started.
- 1979** Development of the computer application system was started this year.
- 1984** General-purpose measuring computer "Jcom" series was developed.
- 1985** Cam profile measuring machine was developed.
- 1986** Headquarters building was newly constructed to enable the expanding business.
- 1988** CNC Bore measuring machine (Tribor) was developed and exhibited at the show of the year.
- 1992** Hamamatsu Sales Office was opened.
- 1997** Nagoya Sales Office was opened.
- 2004** Osaka Sales Office was opened.
- 2006** Purchased the adjacent land and constructed new building for production expansion.
- 2010** Environmental management system ISO 14001 was acquired.
- 2011** JGC (THAILAND) CO., LTD., was established.
- 2012** Quality Management System ISO 9001 was acquired.



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