

Compatible models	YMC 430 VerII	YMC 430 VerII +RT10	YBM 640V VerIII YBM 950V VerIII YBM 9150V	YBM Vi40	YBM 1218V	YBM 7T YBM 8T YBM 10T YBM 15T	YBM 7Ti YBM 8T-63TT YBM 10T-100TT YBM 10T-TH	H30i H40i	PX30i
3 BIG Dyna-Vision	●	●	●	●					
4 BIG Dyna-Line	●	●	●	●					
5 BLUM NT-H	●	●	●	●	●	●	●	●	●
6 EZ-Me	●	●	●	●					●
7 EZ-Me PRO	●	●	●	●				●	●
9 i-GAUGE	●	●	●	●	●	●	●	●	●
10 One-Touch Calculation	●	●	●	●	●	●	●	●	●
11 i-PIX	●	●							
12 EZ-CAL	●	●	●	●	●	●	●	●	●
13 i-CAL		●		●			●	●	●
14 One-Touch Calibration Function	●	●	●	●				●	●
15 Flat checker	●	●	●	●	●	●	●	●	●
16 Machining Support Screen	●	●	●	●	●	●	●	●	●
17 Automatic setting function of workpiece coordinates		●		●		●	●	●	●
18 Support Function for Workpiece Setting Error Compensation		●		●			●	●	●
19 Run Time Screen	●	●	●	●	●	●	●	●	●
20 Spindle Run Time Screen	●	●	●	●	●	●	●	●	●
21 Pallet State Screen			●		●	●	●	●	●
22 Robot Schedule Function	●	●	●	●					
23 THERMO-viz	●	●	●	●	●	●	●	●	●
24 Energy Saving Mode	●	●	●	●	●	●	●	●	●
26 Tool Management Function	●	●	●	●	●	●	●	●	●
27 Production Management Screen	●	●	●	●	●	●	●	●	●
28 Stored Tooling Content Confirmation Function	●	●	●	●	●	●	●	●	●
29 EZtune SP	●	●	●	●					
30 Battery Maintenance Screen	●	●	●	●	●	●	●	●	●

● : Standard ● : Those provided for other functions (For details, refer to the function introduction page.) ● : Option

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Solutions to connect the machine & human

YASDA CNC APPLICATION SOFTWARES

# Support Ware



**Software technology to improve accuracy and productivity**

YASDA Support Ware is total support for all of the Measurement, High-precision machining, Management and Maintenance.

# YASDA



# YASDA's support ware series supporting further improvement of accuracy and efficiency

Providing optimum solutions for the machining needs of a new era

## Best Machine & Best Solution

Consistently providing customers with the best machines and the best machine tool solutions.



### YASDA Support Ware

#### Measurement

- Tool Measurement
- Workpiece Measurement Centering
- 3 BIG Dyna-Vision
- 4 BIG Dyna-Line
- 5 BLUM NT-H
- 6 EZ-Me
- 7 EZ-Me PRO
- 9 i-GAUGE
- 10 One-Touch Calculation
- 11 i-PIX



Equipped with various measurement functions. Operator's burden is reduced and product accuracy is maintained.

P3~P11

#### High-precision machining

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- Machining
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- 14 One-Touch Calibration Function
- 15 Flat checker
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- 17 Automatic setting function of workpiece coordinates
- 18 Support Function for Workpiece Setting Error Compensation




Measurement functions are upgraded to fully support high accuracy machining.

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- 20 Spindle Run Time Screen
- 21 Pallet State Screen
- 22 Robot Schedule Function
- 23 THERMO-viz
- 24 Energy Saving Mode
- OpeNe EX
- 25 OpeNe EX
- 26 Tool Management Function
- 27 Production Management Screen
- 28 Stored Tooling Content Confirmation Function

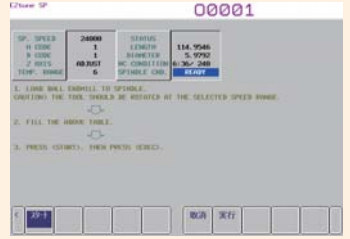


Operation/machining time, spindle rotation time, and machine ambient temperature are visually displayed. Tool management function such as tool number, tool life, stored tools, etc, production management function by machining schedule, and energy saving mode function are available.

P19~P28

#### Maintenance

- 29 EZtune SP
- 30 Battery Maintenance Screen



Spindle position displacement due to aging is compensated and optimized. Battery replacement timing is automatically indicated.

P29-30



# BIG Dyna-Vision

Applicable machine model Vertical machine except YBM1218V and PX30i

## Noncontact type tool measurement machine using image processing measurement system

Dyna-Vision adopts a **CCD camera with high-magnification/ultra-high-speed shutter**, and highly accurately measures the length/diameter of a tool even if it is rotating at a high speed. It can also highly accurately measure tools with a micro diameter and special shapes, so it is ideal for **accurate machining of molds and dies with fine shapes**. In addition, the tool surface can be observed on the machine by adding a monitor.

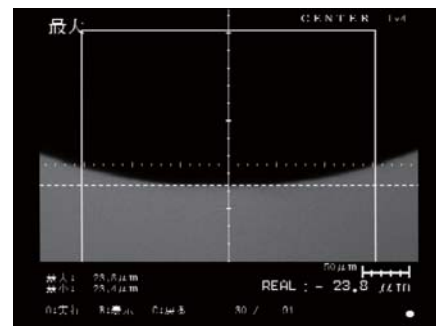


### DVP-600(BIG DAISHOWA SEIKI)

Measurement system	Image processing system (CCD camera)
Min. tool diameter	φ0.01mm
Max. tool diameter	φ32.0mm
Tool max. rotation speed	1500m/min
Repeatability	0.13 μm (2σ) (Result of radius end mill)

### Monitoring screen during measurement

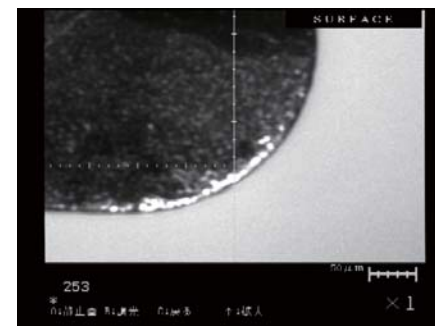
Tool tip condition can be checked in real time on the monitor during measurement, so measurement errors due to chips and dirt can be reduced.



※The monitor is optional.

### Tool tip surface observation

Tool wear, condition, and chipping can be checked by observing the surface with optical zoom magnification of 600X.



# BIG Dyna-Line

Applicable machine model Vertical machine except YBM1218V and PX30i

## Noncontact type tool measurement machine using line sensor measurement system

Dyna-Line can **highly accurately measure the profile of a ball/radius tool**. It realizes highly accurate machining by reflecting it to the finishing program. In after-machining breakage detection, **wear amount and chipping of entire profile can be monitored**, which is suitable for machining process avoiding machining at the tool tip such as 5-axis operation. **The tool runout measurement/runout automatic adjustment** functions are also provided to achieve machining with high surface quality.

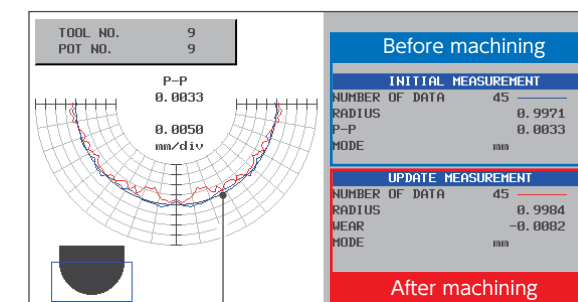


### DLX3-ZX45(BIG DAISHOWA SEIKI)

Measurement system	Line sensor system
Min. tool diameter	φ0.05mm
Max. tool diameter	φ45.0mm Up to R16 mm for profile measurement
Tool max. peripheral speed	400m/min
Repeatability	Tool diameter measurement 0.27 μm (2σ) (Result of square end mill) Tool length measurement 0.28 μm (2σ) (Result of square end mill)



### Profile measurement



Wear monitoring of entire profile, maximum wear 0.0059 mm

Measurement results before and after machining can be managed for each tool.

### Tool runout automatic adjustment function

Runout is measured at several tool phase positions, and the position with minimum runout is automatically selected.

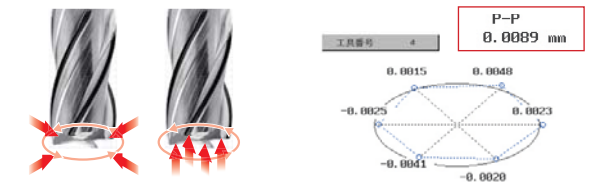
※This function is dedicated for HSK-E25/HSK-E32 spindle.



### Tool runout measurement

Runout in radial direction/thrust direction is measured and the result is displayed on the screen. The measurement result is managed for each tool.

※Tools with variable lead or variable pitch cannot be measured.



# BLUM NT-H

Standard Provided for other functions Option

Applicable machine model All machine models

## Tool measurement machine of hybrid measurement system with touch sensor and laser sensor

The laser system adopted by BLUM NT-H measures tool length and diameter during spindle rotation, so it is optimum for **highly accurate mold and die machining**. Various tools can be measured by the touch sensor and the laser sensor.

### Laser sensor



### BLUM NT-H

Measurement system	Laser system
Min. tool diameter	φ0.03mm
Max. tool diameter	φ80.0mm
Feature	Measurement by contact system is also possible.



# EZ-Me – Manual measurement –

Standard Provided for other functions Option

Applicable machine model Vertical machine except YBM1218V

※This function is provided as standard when automatic measurement device is selected.

## Automatically starts measurement after bringing touch probe in contact with target by handle operation

It is not necessary to create measurement programs for centering work before machining and for simplified on-machine measurement after machining. **It reduces the operator's burden of creating programs** and enables easy measurement using the touch probe.

### Operation screen in OpNe

ABSOLUTE		MACHINE		DISTANCE TO GO		WORK COORDINATE	
	G54						G54
X	81.1979	X	104.6700	X	0.0000	X	23.4721
Y	-1.9436	Y	-1.4000	Y	0.0000	Y	0.5436
Z	-183.1029	Z	-183.1029	Z	0.0000	Z	0.0000

EZ-Me PROBE	MEAS. MODE	OFFSET	WORK COORD. OFFSET VALUE	RESULT		
OFF	FACE	OFF	G54	1	2	3
			0.0000	X	X	X
				Y	Y	Y
				Z	Z	Z

LOAD TOUCH PROBE TO SPINDLE

EZ-Me

ON OFF RESULT INITIALIZE EDIT



**Contact by handle operation**  
End face, ID/OD, and width can be measured. Operations such as mode selection are performed with screen soft keys.





# EZ-Me PRO – Manual measurement –

Standard Provided for other functions Option

**Applicable machine model** Vertical machine except YBM1218V, H series

※OMP400, OMP600, or RMP600 must be selected.

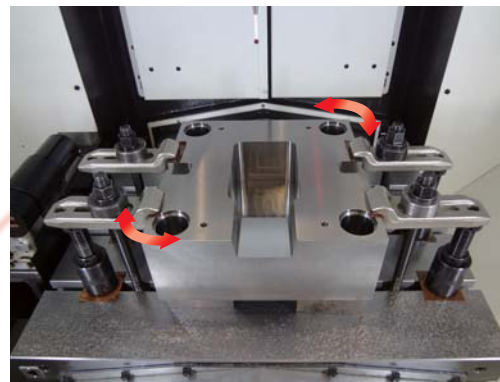
## Realizing further various measurements by extending EZ-Me function

In addition to the EZ-Me function, EZ-Me PRO enables **measurement of workpiece inclination angle, intersection calculation/angle measurement of two end faces, and plane measurement easily by handle operation.** Workpiece setup time is reduced and quality check after machining is facilitated thanks to the increased measurement variation.

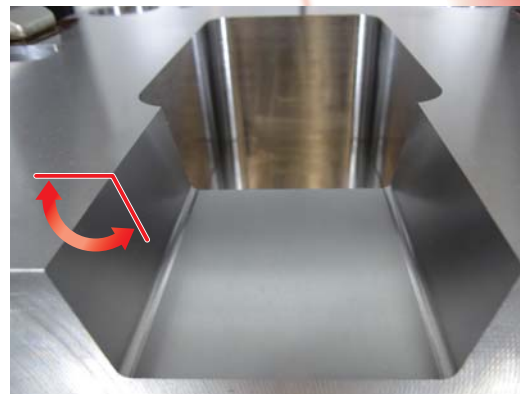


Workpiece automatic measurement (EZ-Me)

Workpiece inclination angle

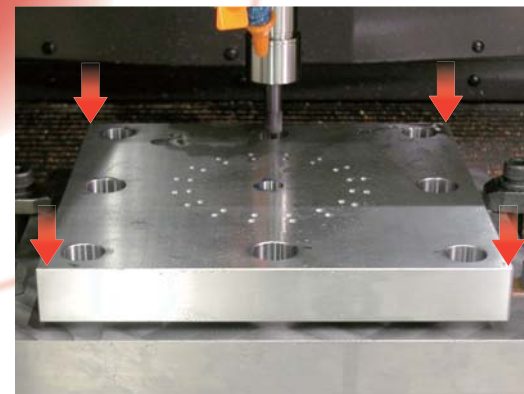


Intersection/ angle measurement of two end faces



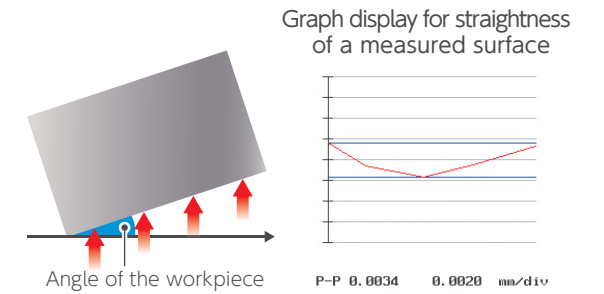
# PRO

Plane measurement



## ■ Angle measurement

The workpiece inclination angle against the machine axis is obtained by measuring an end face of the workpiece at multiple points (up to 10 points) and calculating the approximate straight line from the data. (The measurement result is also input to macro variables.) It is effective when performing machining using the coordinate rotation function.

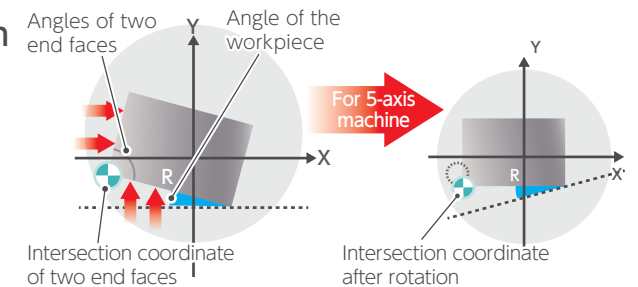


### For 5-axis machine

The remaining movement amount of the rotation axis until the measured surface becomes parallel is displayed. In addition, the workpiece coordinate system can be updated.

## ■ Measurement of angle and intersection

The workpiece inclination angle and intersection coordinates of two end faces are obtained by measuring the two end faces of the workpiece at multiple points (up to 10 points) (The measurement result is also input to macro variables). It is effective when machining using the coordinate rotation function.

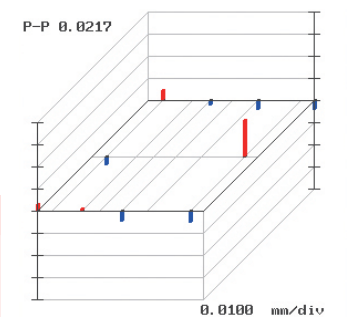


### For 5-axis machine

The remaining movement amount of the rotation axis until the measured surface becomes parallel and the intersection coordinate after rotation are displayed. In addition, the workpiece coordinate system can be updated.

## ■ Plane measurement

Up to 10 points on the Z end face of the workpiece are measured and the approximate plane is calculated to obtain the inclination of the workpiece top face. Also, the flatness of the measured surface can be displayed graphically.

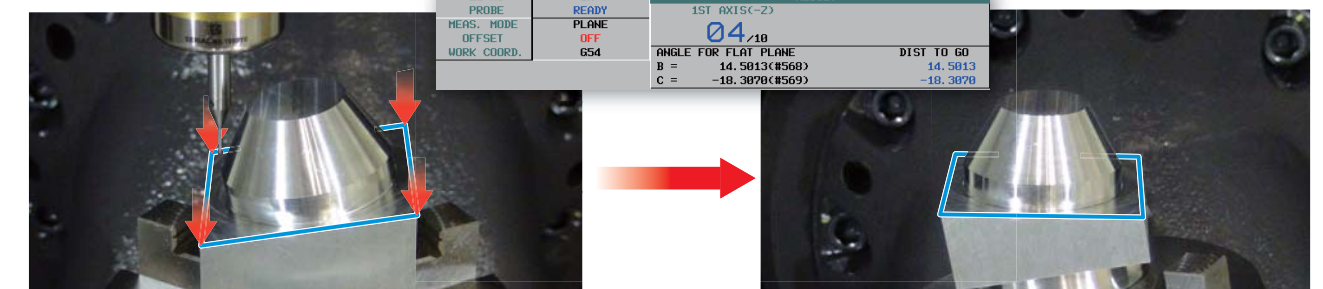


Graph display for flatness of a measured surface

### For 5-axis machine

The rotation angle of the BC- (A-) axis and the remaining movement amount until the measured plane becomes parallel to the XY plane are displayed. The workpiece coordinate system of the BC- (A-) axis can also be updated.

## 5-axis machine



# i-GAUGE

Standard Provided for other functions Option

**Applicable machine model** All machine models

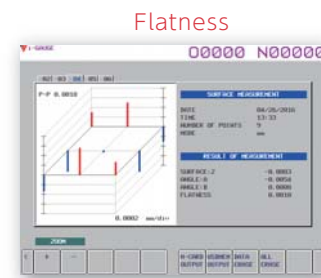
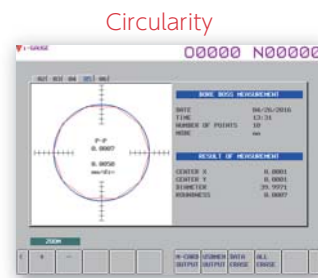
※OMP400, OMP600, or RMP600 must be selected for automatic measurement device.

## Measuring workpiece inclination angle, roundness, straightness, and flatness using touch probe

i-GAUGE measures the zero point and the angle of a workpiece set in an inclined state using macro programs, supporting automation such as unmanned workpiece measurement/compensation using the automatic work changer.

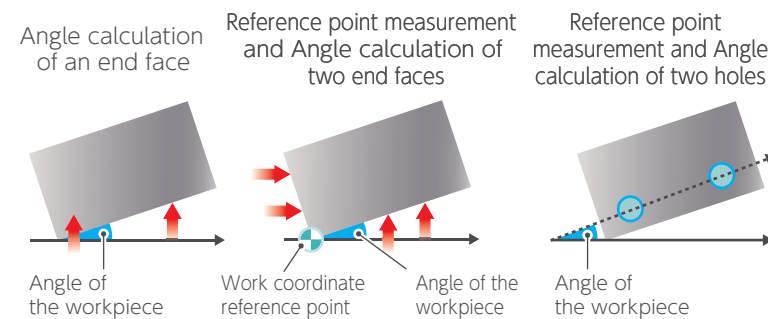
### Checking detailed shape data on machine

When measuring roundness, straightness, and flatness, up to 90 points are measured on the measurement target part to obtain the shape data. The measurement result can be checked on the graph.



### Supporting automation with abundant measurement patterns

The various angle calculation functions measure and calculate the workpiece rotation angle necessary for the FANUC coordinate rotation command and rotary table index using the touch probe.



For plane measurement on 5-axis machines, the BC- (A-) axis can be indexed and compensated so that the workpiece top surface becomes parallel to the machine.



# One-Touch Calculation

Standard Provided for other functions Option

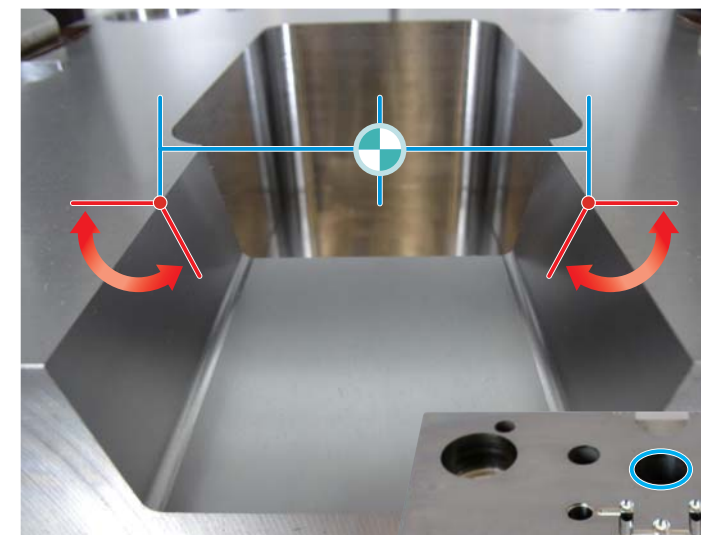
**Applicable machine model** One-touch computation is provided as standard when EZ-Me PRO or i-GAUGE is selected.

## Obtaining distance, angle, and coordinate by using measurement result

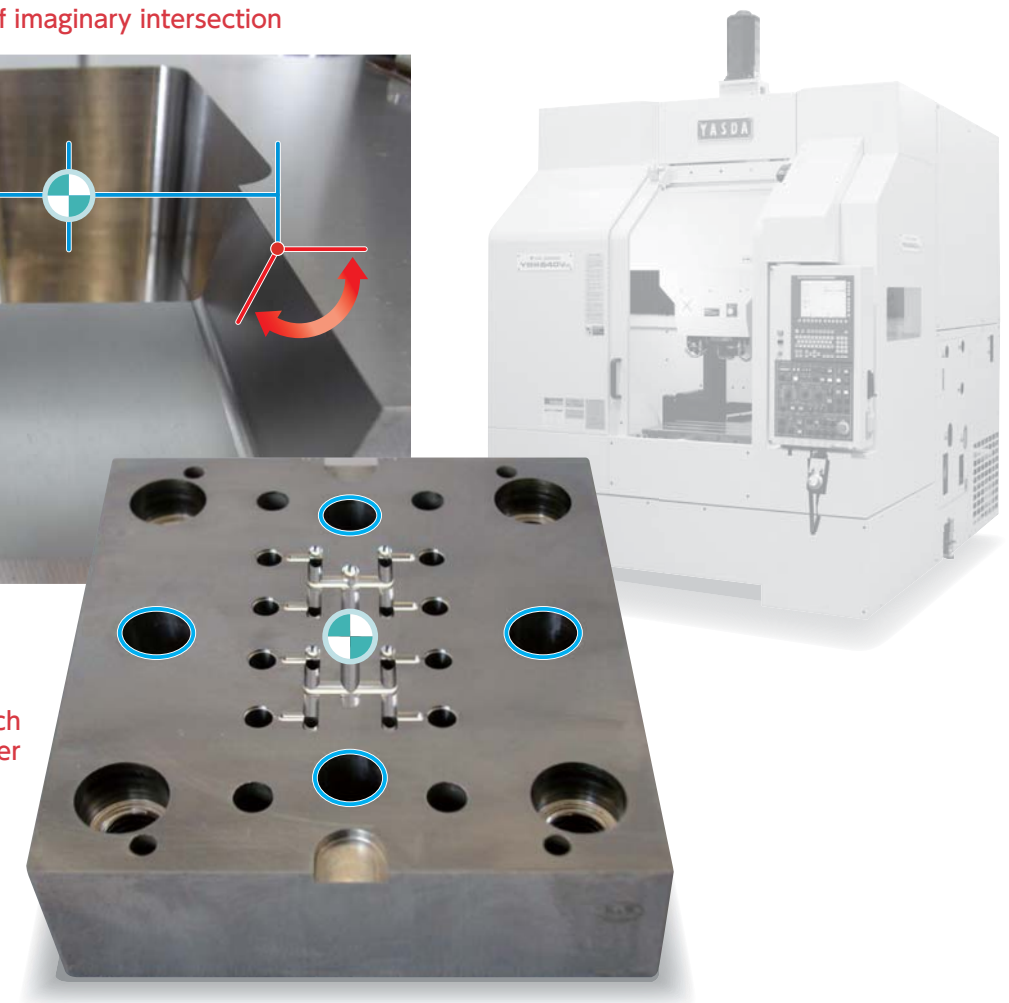
In one-touch calculation, the distance, angle, center coordinate between measurement points and the center coordinate of the pitch circle of several measurement points can be obtained using measurement results by EZ-Me, EZ-Me PRO, and i-GAUGE.

It can be used effectively for the calculation of imaginary intersection and measurement of pitch of holes at diagonal positions.

### Calculation of imaginary intersection



### Measurement of pitch circle center





## i-PIX image measurement function

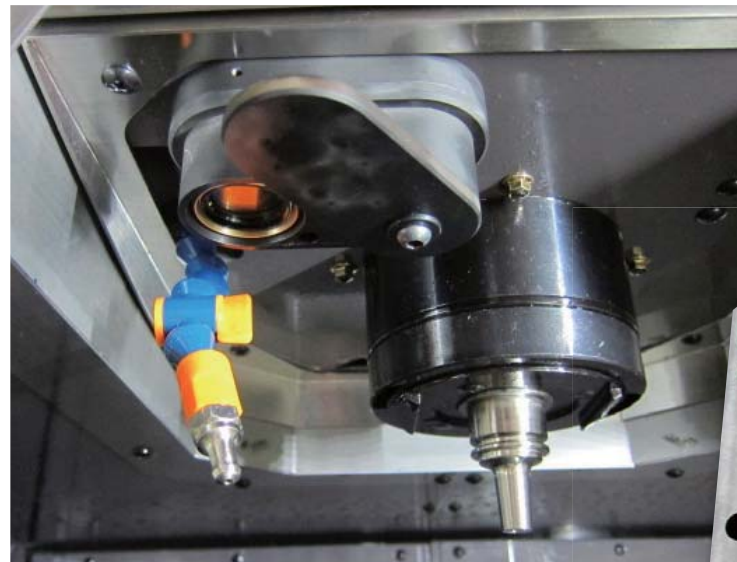
Standard Provided for other functions Option

Applicable machine model YMC430

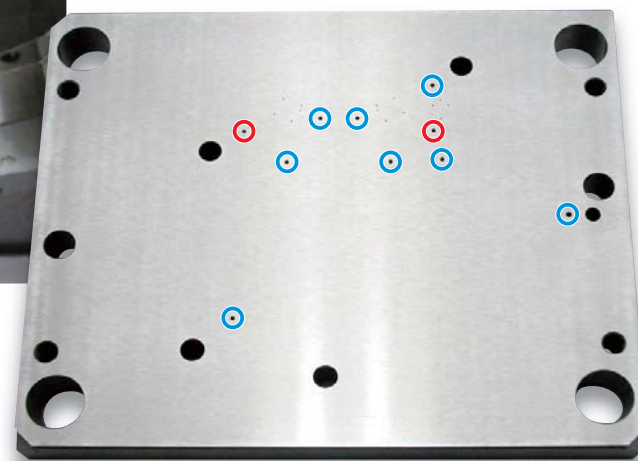
A camera beside the spindle is able to measure small diameter holes and groove widths that are incapable of being measured by the touch probe

In i-PIX, small diameter holes and groove widths incapable of being measured by the conventional contact type measurement device are measured using the camera mounted beside the spindle. It is suitable when performing machining using a small diameter hole ( $\Phi 1.5$  or less) incapable of being measured by the touch probe as a reference.

Camera beside spindle



Small diameter hole incapable of being measured by touch probe ( $\Phi 1.5$  or less)



■: Small diameter hole as reference  
■: Small diameter hole machined from reference hole

### i-PIX

Measurement resolution	0.616 $\mu$ m
View	0.296mm $\times$ 0.395mm
Lens magnification	$\times 12$
Work distance	112mm
Depth of field	0.11mm ※

※Calculation when permissible diameter of circle of confusion is  $\phi 0.04$  mm

## EZ-CAL

Standard Provided for other functions Option

Applicable machine model All machine models

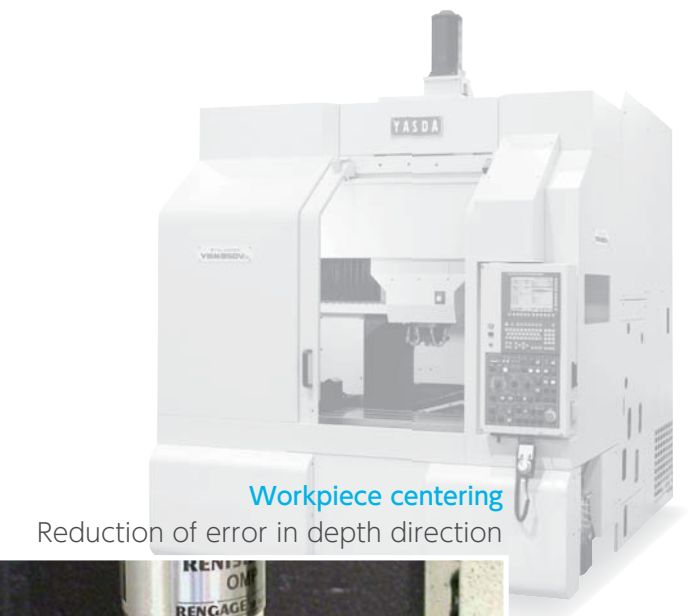
※This function is provided as standard when automatic measurement and noncontact tool length compensation device are selected.

Ensures setting accuracy of Z-axis workpiece coordinate system by using measured touch probe length

This function facilitates calibration of spindle end face displacement (Z-axis direction) caused by the change in room temperature by measuring the length of the touch probe using the noncontact type tool length measurement device.

The workpiece Z-axis coordinate system linking with the tool length compensation device can be set correctly by performing EZ-CAL before measuring the machining zero point using the touch probe.

In-process calibration by EZ-CAL



Workpiece centering  
Reduction of error in depth direction



5Axis

**i-CAL** Standard Provided for other functions Option

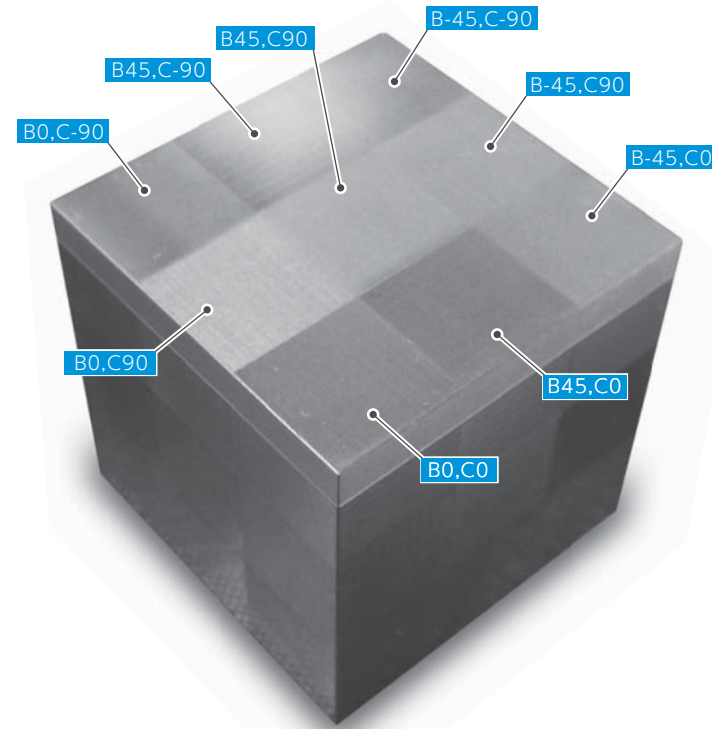
**Applicable machine model** YASDA standard 5-axis specification machine

※This function is provided as standard to YASDA standard 5-axis specification machines with the automatic measurement device.  
 ※Option selection is possible for NRT, RS20, and machine models with additional axis manufactured by another company.

Accurate automatic setting of center coordinate of tilting axis/rotation axis to realize highly accurate 5-axis machining

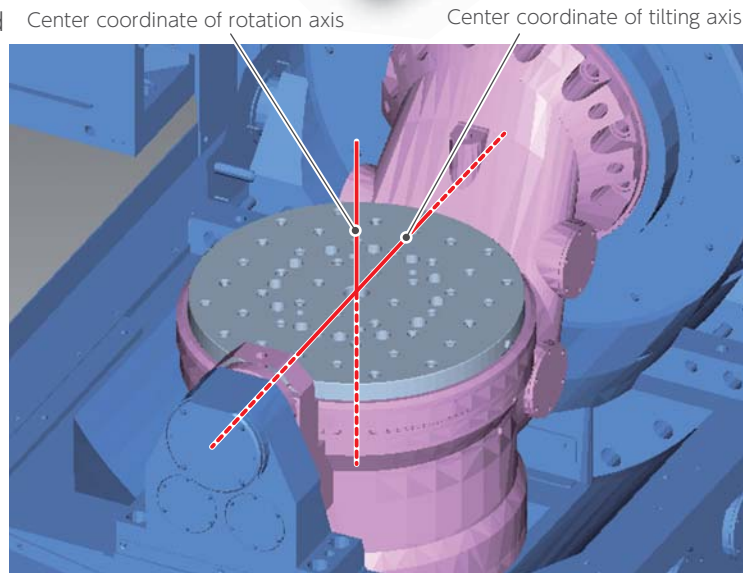
i-CAL automatically sets the center coordinate of the tilting axis/rotation axis with the macro program using the touch probe and the reference gauge.

i-CAL can realize highly accurate 5-axis machining by preventing error of the rotating center which significantly affects the machining accuracy in 5-axis machining.



The parameters set by i-CAL are effective when using tool center point control, a tilted working plane command, etc.

EZ-Me PRI	
19698	TILT ANGLE RA 0.0000
19699	TILT ANGLE RB 0.0000
19700	ROTARY TABLE POS X -0.0036
19701	ROTARY TABLE POS Y 0.0005
19702	ROTARY TABLE POS Z -549.9976
19703	TABLE 1/2 OFFSET X 0.0017
19704	TABLE 1/2 OFFSET Y 0.0000
19705	TABLE 1/2 OFFSET Z 0.0000
19706	0.0000



**One-Touch Calibration Function** Standard Provided for other functions Option

**Applicable machine model** Vertical machine except YBM1218V

※This function is provided as standard when automatic measurement and noncontact tool length compensation device are selected.  
 ※For the H series, it is provided as standard when EZ-Me PRO is selected.

Easy calibration of measurement device on OpeNe screen  
Improving efficiency by reducing calibrating time

The measurement devices for highly accurate machining can be calibrated easily by operating the soft keys on the OpeNe screen. It reduces the operator's burden by eliminating the necessity of programming for calibration.

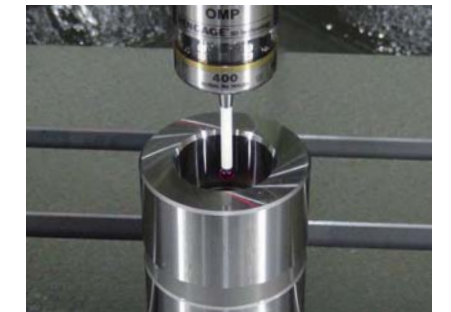
Tool length measurement device



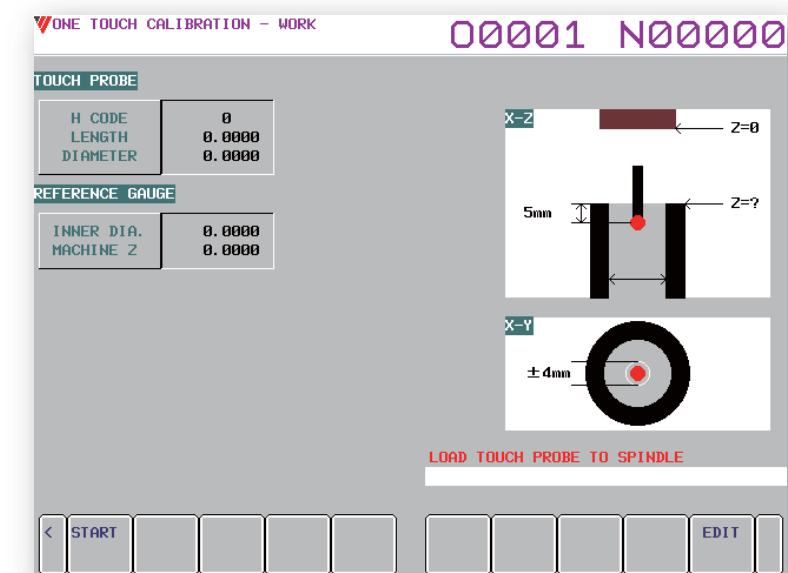
EZ-CAL



Touch probe



One-touch calibration screen





# Flat checker

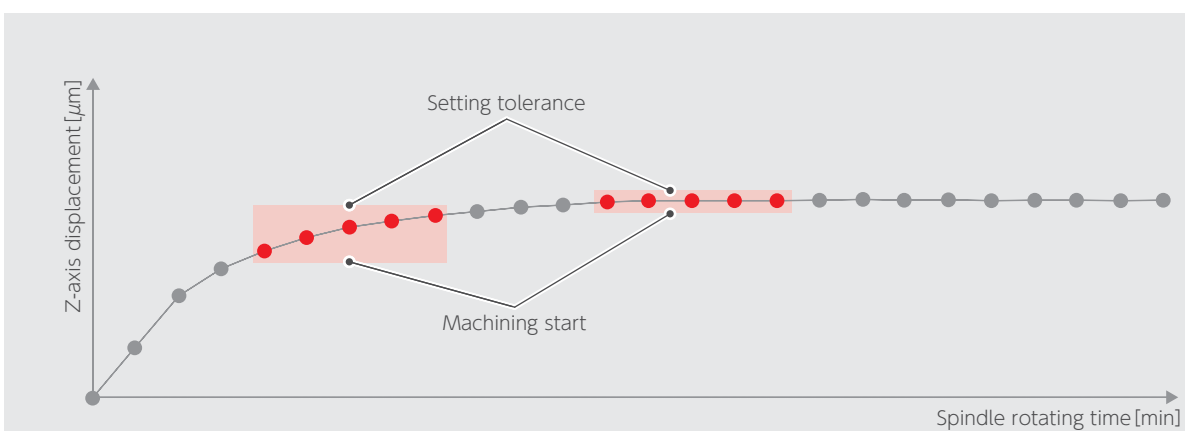
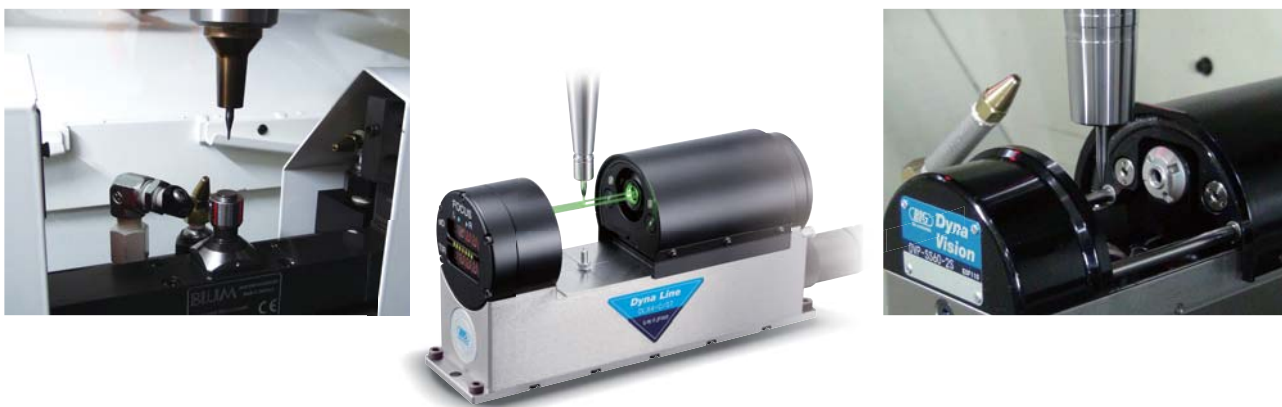
Standard Provided for other functions Option

**Applicable machine model** Vertical machine except YBM1218V

※This function is provided as standard when noncontact tool length compensation device is selected.  
※Option selection is possible for other machine models.

## Measuring tool length compensation data upon convergence of spindle rotation displacement

Spindle displacement caused by rotation is monitored when measuring tool length, and machining starts upon convergence of the displacement. It is effective in highly accurate die machining.



The parameters to judge convergence of the displacement can be freely set and used flexibly according to the intended purpose such as placing importance on accuracy or time, etc.

MAXIMUM TIME (20 - 60 min)	20
NUMBER OF JUDGEMENT (5 -10)	5
TOLERANCE (mm)	0.0020
ALARM SETTING	OFF

# Machining Support Screen

Standard Provided for other functions Option

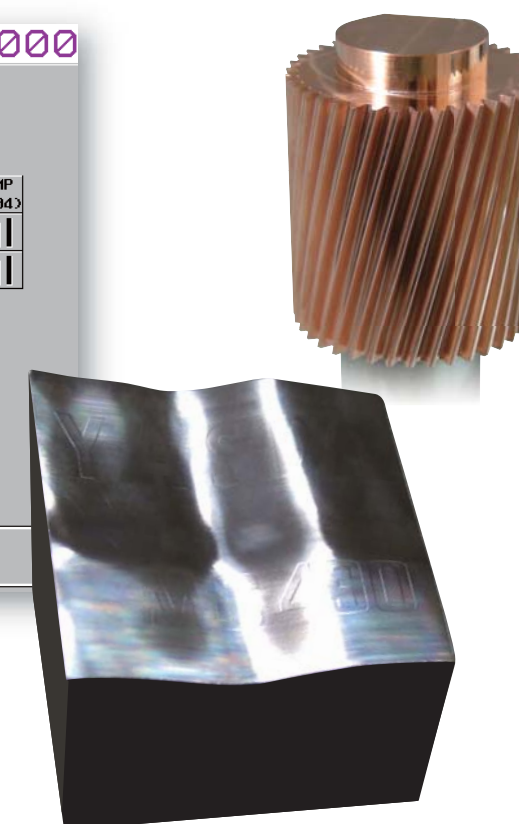
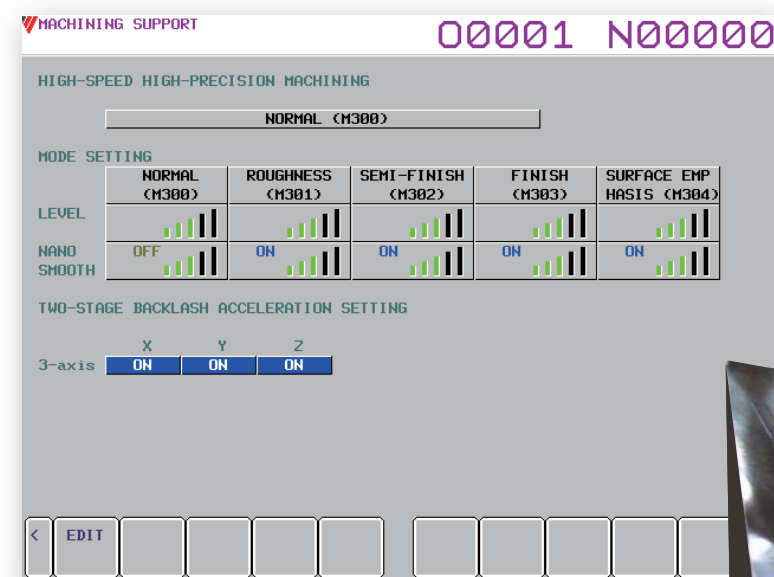
**Applicable machine model** All machine models

※This function is provided as standard when the high speed machining function is selected.

## Supporting machining with five modes Realizing more highly accurate machining with high surface quality by fine adjustment

The high accurate machining function HAS-3, which is essential to mold and die machining, has five basic modes (M300 -M304) including rough machining mode and finishing mode. Machining time can be reduced and machining accuracy/machining surface quality can be improved by changing the parameters with regard to acceleration/deceleration and tolerance according to the machining application.

In the machining support function, these parameters can be finely adjusted for each machining mode, allowing more highly accurate machining with high surface quality in three-dimensional shape mold and die machining and 5-axis machining.



5Axis

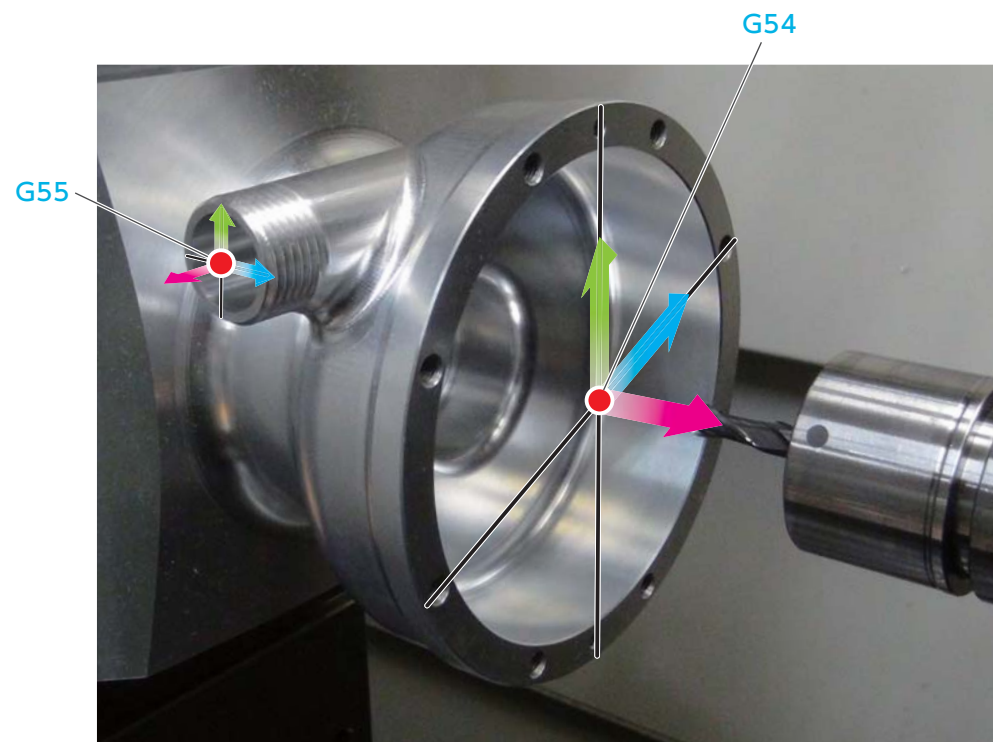
# Automatic setting function of workpiece coordinates

Standard Provided for other functions Option

**Applicable machine model** Provided as standard for vertical 5-axis machine (with Vi40/PX30i/RT10) ※Option selection is possible for other machine models.

Calculating workpiece zero point after rotation with macro program using workpiece zero point before rotation as reference, and registering it to the coordinate system

Workpiece zero point can be set even in a state where centering is impossible after rotation. Also, it is effective in reducing the time to set the coordinate system because centering from each direction is not necessary when machining is performed from several directions.



- [1]. G54 is set.
- [2]. Workpiece zero point after rotation is calculated and the coordinate system is set to G55.  
G65 P9890 X\_ Y\_ Z\_ B\_ C\_ W55.

5Axis

# Support Function for Workpiece Setting Error Compensation

Standard Provided for other functions Option

**Applicable machine model** 5-axis machine

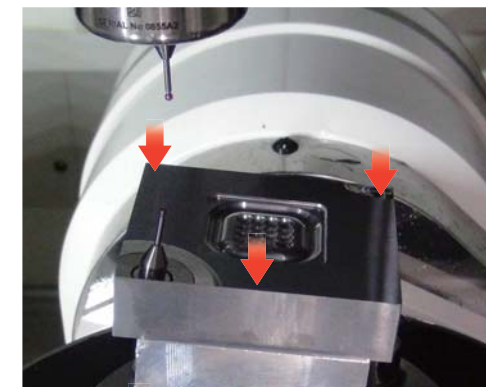
Recognizing workpiece setting error and setting it to offset screen automatically

To support FANUC's "Workpiece setting error compensation" function, this function measures and calculates workpiece setting error using the touch probe and automatically sets the error to the offset screen.

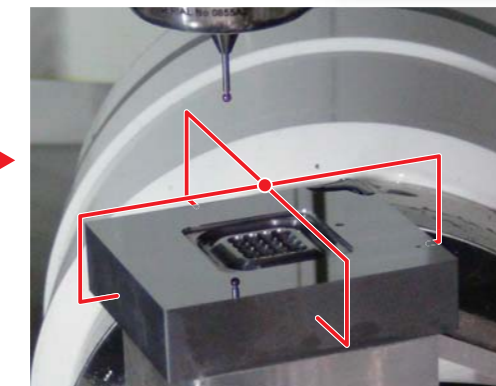
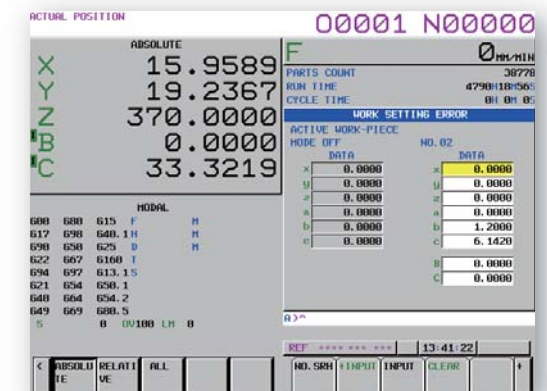
In 5-axis machining using the tool center point control/tilted working plane command, the workpiece reference surface must be parallel or perpendicular to the table surface. Use of workpiece setting error compensation allows 5-axis machining by the tool center point control/tilted working plane command without setting the workpiece ideally.

Setup time can be greatly reduced by measuring and calculating the inclination of the workpiece using the touch probe and automatically setting the offset value.

Measuring the workpiece top face and calculating inclination



Automatically setting the measured value to offset



Indexing the inclination/rotation axis until the workpiece becomes parallel and measuring the workpiece zero point by the coordinate rotation command



# Run Time Screen

Standard Provided for other functions Option

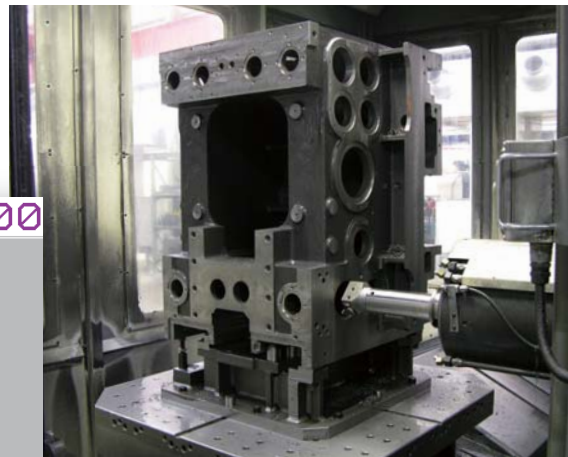
Applicable machine model Provided for all machine models as standard

## Determining detailed time for each item

Machine operation time can be determined for each item such as operation time and cutting time. Obtaining detailed operation time is helpful to improve productivity and operation rate.

### General-purpose accumulated time

Time for the points arbitrarily commanded in a machining program is accumulated.

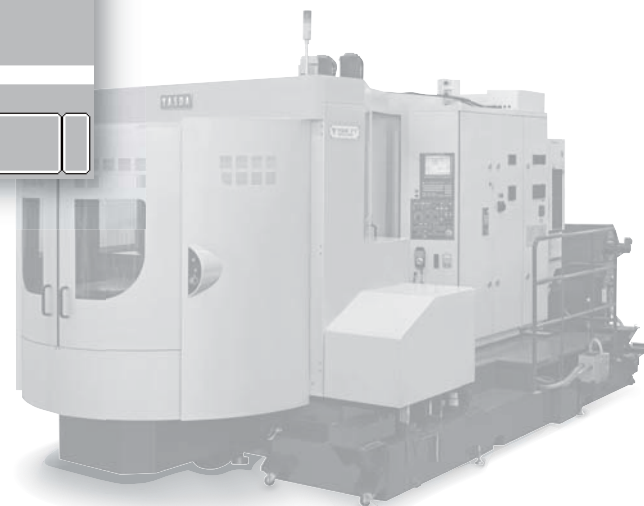


VRUN TIME 00001 N00000

	PARTIAL TIME	TOTAL TIME
POWER ON	477:03	478:16
RUN TIME	131:35:08	131:35:38
SPINDLE TIME	97:13:22	97:13:22
CUTTING TIME	27:22:49	27:22:53
FREE PURPOSE	0:00:06	0:00:06

PARTIAL TIME RESET

< POWER ON RUN TIME SPINDLE CUTTING FREE PURPOSE



# Spindle Run Time Screen

Standard Provided for other functions Option

Applicable machine model Provided for all machine models as standard

## Determining frequently-used spindle speed range

It is possible to determine the use frequency of each spindle speed range by accumulating spindle rotation time for each rotation speed range.

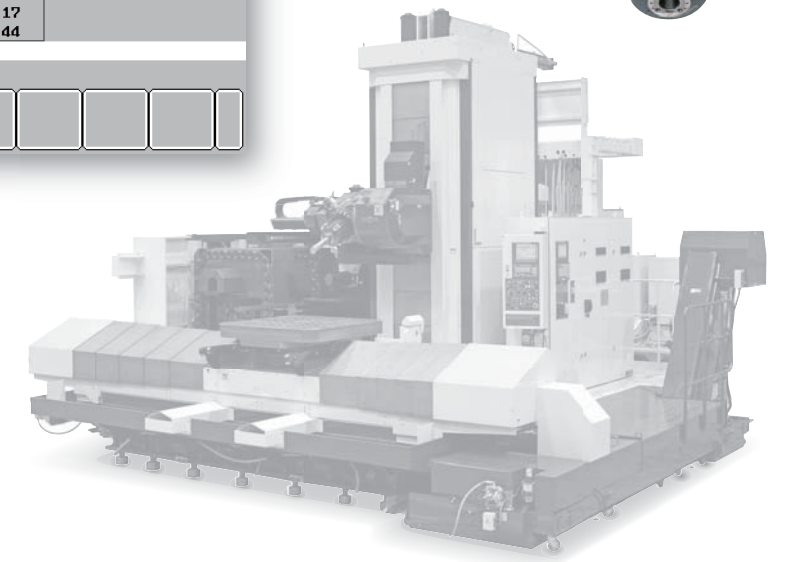


SPINDLE RUN TIME 00001 N00000

SPINDLE SPEED	PARTIAL TIME	TOTAL TIME
~ 2000	45:19:24	45:19:24
2001 ~ 4000	1:00:45	1:00:45
4001 ~ 6000	0:55:25	0:55:25
6001 ~ 8000	1:02:00	1:02:00
8001 ~ 10000	3:33:18	3:33:18
10001 ~ 12000	1:34:16	1:34:16
12001 ~ 14000	0:01:16	0:01:16
14001 ~ 16000	1:08:25	1:08:25
16001 ~ 18000	0:01:47	0:01:47
18001 ~ 20000	4:45:47	4:45:47
20001 ~ 22000	0:09:05	0:09:05
22001 ~ 24000	1:04:02	1:04:02
24001 ~ 26000	3:23:49	3:23:49
26001 ~ 28000	1:00:47	1:00:47
28001 ~ 30000	3:45:27	3:45:27
30001 ~ 32000	1:30:10	1:30:10
32001 ~ 34000	0:26:09	0:26:09
34001 ~ 36000	4:28:29	4:28:29
36001 ~ 38000	0:24:17	0:24:17
38001 ~ 40000	21:38:44	21:38:44

< PARTIAL RESET

← Displaying information for each spindle speed range



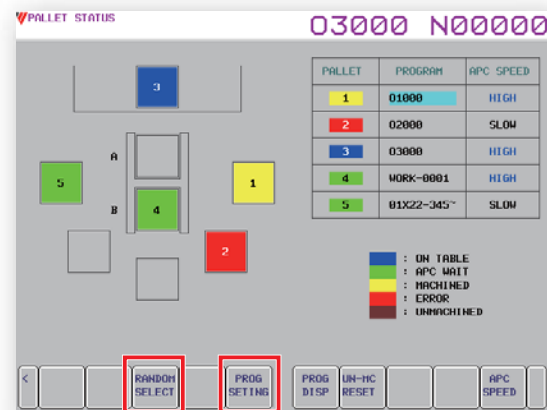
# Pallet State Screen

Standard Provided for other functions Option

Applicable machine model YASDA's APC type machine

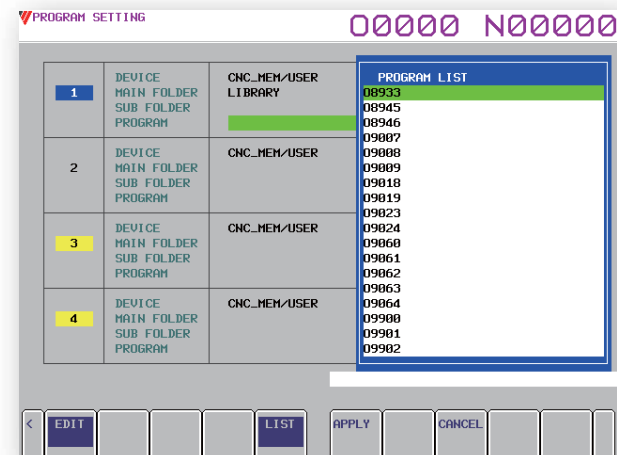
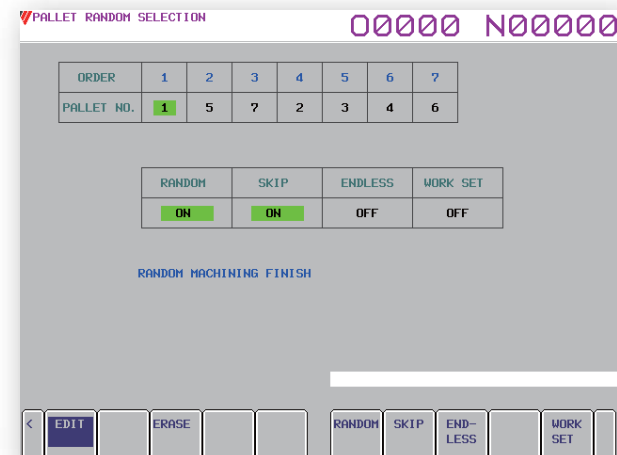
Visually and clearly displaying each pallet state  
Displaying/setting program No. for each pallet

A pallet in a setup completion state is automatically loaded and machining is performed with the program set to the pallet.  
Also, if a machining error occurs during automatic operation at night, the next pallet is automatically loaded and the next workpiece is machined.



The random selection function allows the user to freely decide machining order.

A program can be selected easily by operating the keys.



# Robot Schedule Function

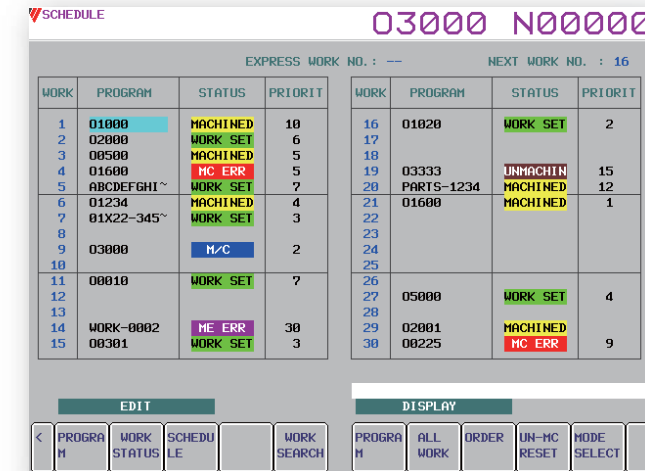
Standard Provided for other functions Option

Applicable machine model Machines equipped with external robot

Realizing same function as "Pallet state screen" on machines equipped with external robot

This function is used when an external robot loading unit, etc. are connected to the machine.

It is similar to the "Pallet state screen" and can be operated in the same way.





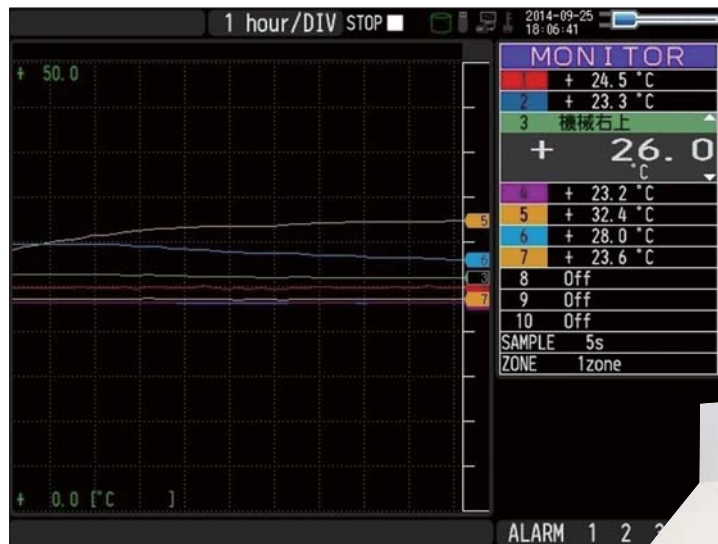
# THERMO-viz

Standard Provided for other functions Option

Applicable machine model All machine models

## Measuring and recording machine ambient temperature and coolant temperature

The THERMO-viz function measures and records machine ambient temperature and coolant temperature. The measurement results are helpful to control temperature in the plant and to track causes of machining errors.



### Temperature sensor installation position

- CH1 : Reference block
- CH2 : Coolant tank
- CH3 : Lower right of machine
- CH4 : Upper right of machine
- CH5 : Lower left of machine
- CH6 : Upper left of machine
- CH7 : Inside of machining chamber
- CH8 : Measurement trigger



# Energy Saving Mode

Standard Provided for other functions Option

Applicable machine model Provided for all machine models as standard

## Automatically switching to energy saving mode when machine is not operating and no operator tasks are being performed

Energy saving can be achieved by stopping motors and pumps after machine operation is finished at night.

	SETTING	DEFAULT
CHIP CONVEYOR STOP	ENABLE	ENABLE
COOLANT TANK PUMP MOTOR STOP	DISABLE	DISABLE
COOLANT TEMPERATURE CONTROL STOP	DISABLE	DISABLE
MIST COLLECTOR STOP	ENABLE	ENABLE
LIGHTING OFF	ENABLE	ENABLE
OPERATION PANEL LAMP OFF	DISABLE	DISABLE
NC SCREEN ERASE	ENABLE	ENABLE
CONTINUE AT TOOL MAGAZINE OPERATION	DISABLE	DISABLE

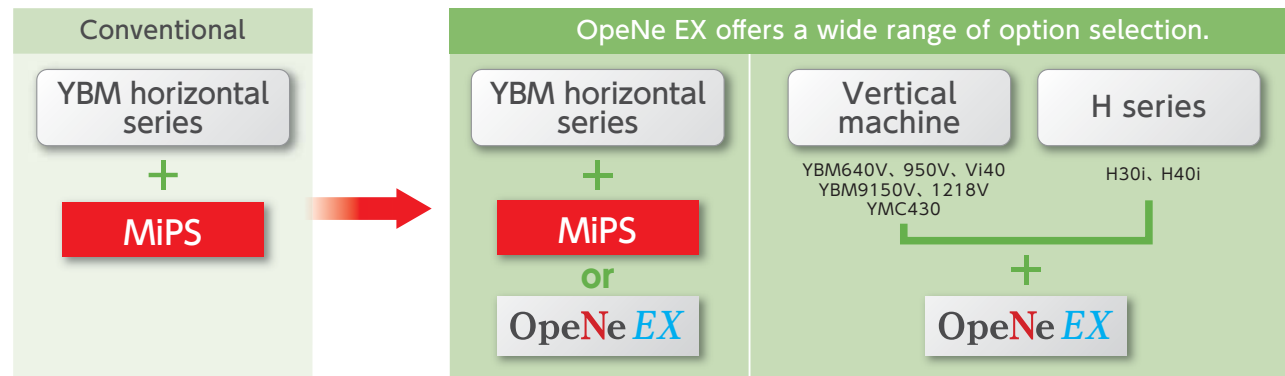
The devices to be stopped in the energy saving mode can be selected and customized.

# OpeNe EX

(extended version)

Standard Provided for other functions Option

Optional selection of following functions available even for machine models not equipped with MiPS



## OpeNe EX MiPS specification comparison table

Function	OpeNe EX	MiPS
Display unit	N/C display unit	Display unit dedicated to MiPS
Tool Management Function <span>P26</span>	○	○
Production Management Screen <span>P27</span>	○	○
Stored Tooling Content Confirmation Function <span>P28</span>	○ Number of registerable programs: 480 programs Number of registerable tools: 5,000 tools	☆ Number of registerable programs : 2,000 programs Number of registerable tools : 20,000 tools
Maintenance function	—	○
Alarm self-diagnosis function	—	○
Message display function	—	○
Function of registering data from memory card	—	○
Spindle torque monitoring function	—	☆

○: Provided ☆: Option —: Not provided

OpeNe EX (extended version)\*1

# Tool Management Function

Standard Provided for other functions Option

Applicable machine model All machine models

\*This is a package which includes Tool Management Function, Production Management Screen, Stored Tooling Content Confirmation Function (The tool management function can also be selected separately.)

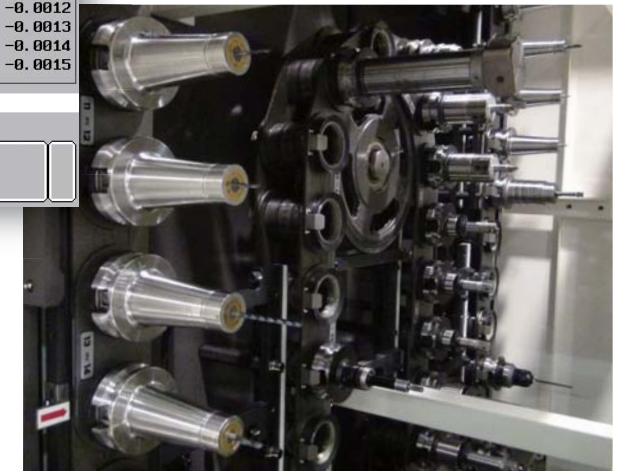
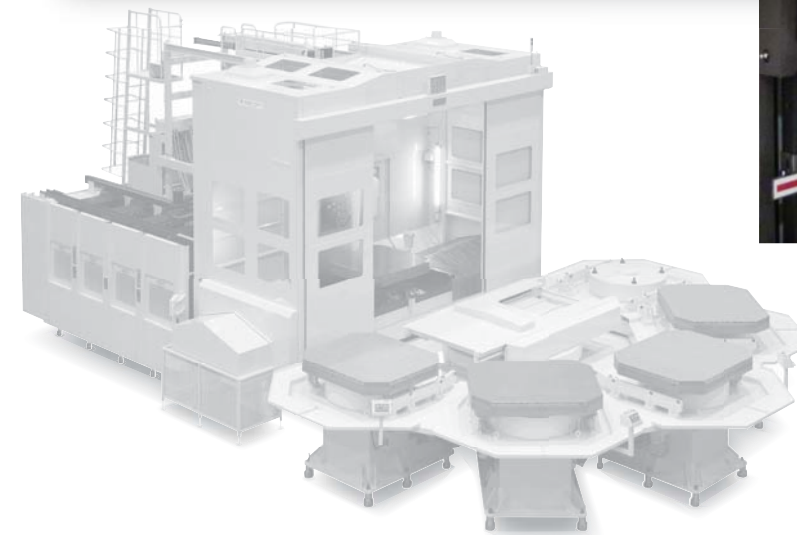
Setting tool No., tool life, spindle speed, and feedrate for each tool

The tool management function is a FANUC function to manage tool service life and spare tools. YASDA collectively manages this function on the OpeNe screen to improve understandability and operability.

TOOL INFORMATION 01000 N00000

MANA NO.	TOOL NO.	POT NO.	GROUP NO.	H	LENGTH GEOMETRY	LENGTH WEAR	D	RADIUS GEOMETRY	RADIUS WEAR
1	1001	1		1	110.0000	-0.0010	1	1.0000	-0.0001
2	1002	2		2	120.0000	-0.0020	2	2.0000	-0.0002
3	1003	3		3	130.0000	-0.0030	3	3.0000	-0.0003
4	1004	4		4	140.0000	-0.0040	4	4.0000	-0.0004
5	1005	5		5	150.0000	-0.0050	5	5.0000	-0.0005
6	1006	6	1	6	160.0000	-0.0060	6	6.0000	-0.0006
7	1007	7	1	7	170.0000	-0.0070	7	7.0000	-0.0007
8	1008	8	1	8	180.0000	-0.0080	8	8.0000	-0.0008
9	1009	9	1	9	190.0000	-0.0090	9	9.0000	-0.0009
10	1010	10	1	10	200.0000	-0.0100	10	10.0000	-0.0010
11	1011	11	2	11	210.0000	-0.0110	11	11.0000	-0.0011
12	1012	12	2	12	220.0000	-0.0120	12	12.0000	-0.0012
13	1013	13	2	13	230.0000	-0.0130	13	13.0000	-0.0013
14	1014	14	2	14	240.0000	-0.0140	14	14.0000	-0.0014
15	1015	15	2	15	250.0000	-0.0150	15	15.0000	-0.0015

EDIT SEARCH EACH DATA MAGAZINE





OpeNe EX (extended version)\*1

# Production Management Screen

Standard Provided for other functions Option

**Applicable machine model** All machine models

\*This is a package which includes Tool Management Function, Production Management Screen, Stored Tooling Content Confirmation Function (The production management function can also be selected separately.)

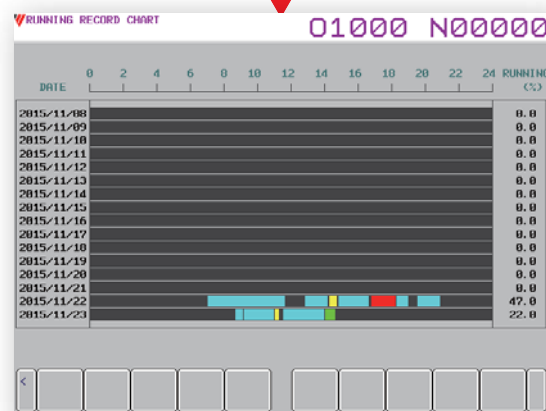
Automatically compiles the machining start time, finish time, automatic operation time, and machining result of each program using the production management function

The total result is also graphically displayed to facilitate understanding of the machine operation state. The total results of each program are displayed in the machining order.

RECORD OF MACHINING TIME 01000 N00000 2015/11/23 14:38:40

PROGRAM NO./NAME	PALLET	START DATE	START TIME	FINISH DATE	FINISH TIME	CYCLE TIME	RESULT
02000	2	2015/11/22	08:50	11/22	10:53	2:03:11	GOOD
03000	3	2015/11/22	10:55	11/22	11:34	0:39:47	GOOD
04000	4	2015/11/22	12:50	11/22	14:08	1:18:25	GOOD
05000	5	2015/11/22	14:15	11/22	14:41	0:26:58	CANCEL
01000	1	2015/11/22	14:50	11/22	16:35	1:45:50	GOOD
02000	2	2015/11/22	16:45	11/22	18:11	1:26:33	N.G.
03000	3	2015/11/22	18:15	11/22	18:54	0:39:47	GOOD
04000	4	2015/11/22	19:30	11/22	20:48	1:18:25	GOOD
05000	5	2015/11/23	08:40	11/23	09:06	0:26:58	GOOD
01000	1	2015/11/23	09:10	11/23	10:55	1:45:50	GOOD
02000	2	2015/11/23	11:00	11/23	11:14	0:14:09	CANCEL
03000	3	2015/11/23	11:30	11/23	12:09	0:39:47	GOOD
04000	4	2015/11/23	12:10	11/23	13:28	1:18:25	GOOD
00700	4	2015/11/23	12:15	11/23	12:48	0:33:41	GOOD
05000	5	2015/11/23	13:30	11/23	13:56	0:26:58	GOOD
01000	1	2015/11/23	14:00			0:35:20	MCHNG

Graphical display of operation result



When the pallet state function or robot schedule function is provided

SIMULATION 01000 N00000

PROGRAM	PALLET	TIME	START	END	TOOLING
1 02000	2	2:03	10:00	12:03	POSSIBLE
2 03000	3	0:39	12:03	12:42	POSSIBLE
3 04000	4	1:18	12:42	14:01	POSSIBLE
4 05000	5	0:33	14:01	14:35	IMPOSSIBLE
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					

TOTAL TIME 4:35

Simulating machining time and finish time of each workpiece in current schedule

OpeNe EX (extended version)\*1

# Stored Tooling Content Confirmation Function

Standard Provided for other functions Option

**Applicable machine model** All machine models

\*This is a package of Tool Management Function, Production Management Screen, Stored Tooling Content Confirmation Function

Checking service life of all tools stored for machining, and determining whether they can be used for machining

This new function was developed so as to enable operation for use on OpeNe by extending the "Pre-machining tool check function" which has been highly regarded as the YASDA's original control system. This function checks the conditions of the service life, breakage, and spare tools of the whole tool inventory to be used for machining, and determines whether they can be used. If the automatic work changer is provided, workpieces are machined preferentially from those being able to be machined. Therefore, this function is optimum to improve productivity.

```

01000 (FG-EDIT)
01000 (WORK1_MAIN PROGRAM) ;
;
(T1_R3._BALL_E.M) ;
T1 M6 ;
M198 P1001 ;
M01 ;
;
(T2_R1._BALL_E.M) ;
T2 M6 ;
M198 P1002 ;
M01 ;
;
(T3_R0.5_BALL_E.M) ;
T3 M6 ;
M198 P1003 ;
M01 ;
;
(T4_R0.2_BALL_E.M) ;
T4 M6 ;
M198 P1004 ;
M01 ;
;
(T5_D6._R0.3_RADIUS_E.M) ;
T5 M6 ;
M198 P1004 ;
M01 ;
;
M30 ;
%
    
```

Checking the breakage/service life condition of the tools to be used in a machining program before starting machining



TOOLING (TOOL LIST) 01000 N00000

TOOL NO.	POT NO.	LENGTH	LENGTH WEAR	RADIUS GEOM.	RADIUS WEAR	LIFE STATUS
1	1001	110.0000	-0.0010	1.0000	-0.0001	
2	1002	120.0000	-0.0020	2.0000	-0.0002	
3	1003	130.0000	-0.0030	3.0000	-0.0003	
4	1004	140.0000	-0.0040	4.0000	-0.0004	
5	1005	150.0000	-0.0050	5.0000	-0.0005	OVER
6	1006	160.0000	0.0000	6.0000	0.0000	
7	1007	170.0000	0.0000	7.0000	0.0000	
8	1008	180.0000	0.0000	8.0000	0.0000	
9	5000					NO_REG

# EZtune SP

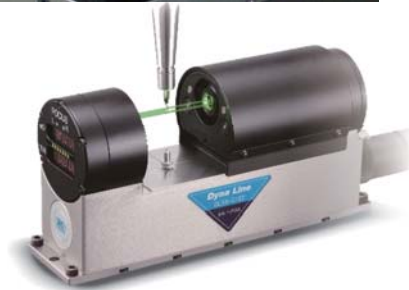
Standard Provided for other functions Option

Applicable machine model Vertical machine except YBM1218V and PX30i

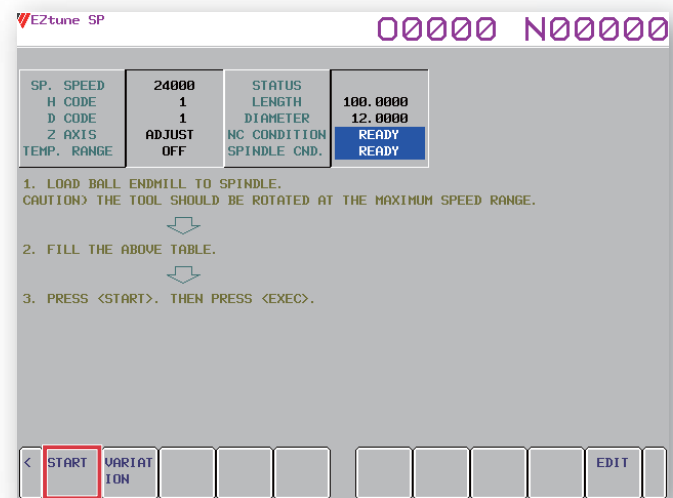
※This function is provided as standard when noncontact tool length compensation device is selected.

Measuring spindle displacement caused by rotation using tool length compensation device, and calibrating spindle compensation amount so as to minimize displacement

It is effective when a difference is caused between displacement and compensation due to the environment or aging.

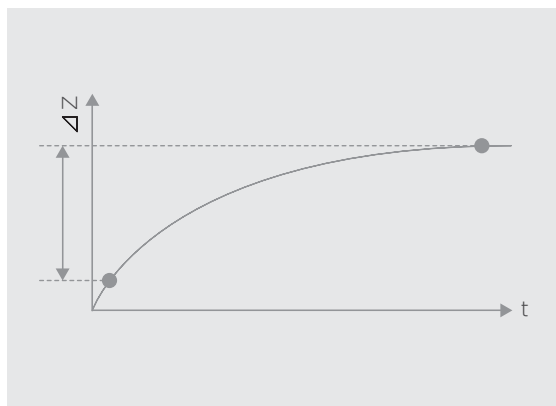


Spindle compensation screen

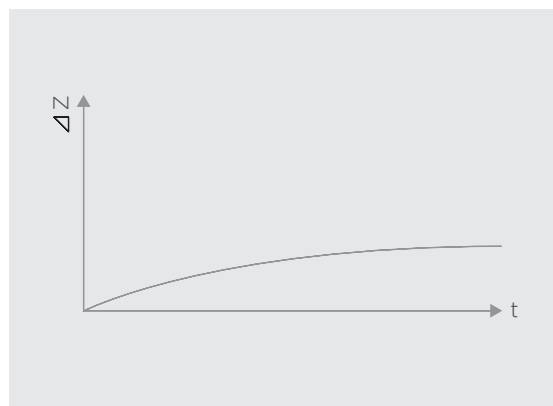


Start in single operation

Displacement before spindle rotation compensation



Displacement after compensation by EZtune SP



# Battery Maintenance Screen

Standard Provided for other functions Option

Applicable machine model Provided for all machine models as standard

Machine notifies replacement timing of batteries on machine

If the machine is continuously used with the battery voltage dropped, the system parameters and offset data will be lost and recovery work (chargeable) may be required.

This function displays the next replacement dates classified by color for one month and also notifies of any battery voltage drop.

