

FUNCTION LIST

Function	Press machine	Press brake	Twister	Gatling press center	Laser cutting machine
Current production board			●		
Graphical display of operation			●		
Alarm indication function			●		
Private machine registration			●		
Operation monitoring			●		
Graph of production status		• Graph (power-on, production hours, idle, preparation and fault) • Minimum unit: 1 minute			
Graph of production times		• 1/6 of production times per every 6 minute is shown as SPM.			
Periodic operation status			●		
Periodic sum display			●		
Graphical display of operation		• Graph (production hours and fault) • Operation rate • Numerical value (production hours, production times and power-on hours)			
Part number control	●	●	●	●	●
Production control table per each part number	(with SIT4 only)	(with NET specification machines only)	(with PC-mounting type only)	—	(with PC-mounting type only)
Consumables control	—	—	● (with PC-mounting type only)	—	● (with PC-mounting type only)
Energy consumption control					
Gas consumption graph	—	—	—	—	●
Power consumption graph					(with KFL series only)
Maintenance control			●		
Specified hours/times	Specify from among: operation hours, operation times, clock time or extended maintenance signal (either in hours or times)				
Maintenance record			●		
Alarm/error control	● (with SIT4 only)	● (with NET specification machines only)	● (with PC-mounting type only)	—	● (with PC-mounting type only)
Daily report 1			●		
Recording/storing job contents			●		
Production control table per each part number	● (with SIT4 only)	● (with NET specification machines only)	● (with PC-mounting type only)	—	● (with PC-mounting type only)
Daily report 2			●		
Production bar graph per each part number	● (with SIT4 only)	● (with NET specification machines only)	● (with PC-mounting type only)	—	● (with PC-mounting type only)
Graph of stoppage cause			—		

MAIN DATA AGGREGATED BY KOMTRAX

Item	Press machine	Press brake	Twister	Gatling press center	Laser cutting machine
Machine operation data					
Power ON hours	Control power ON hours				
Operation hours	Clutch ON hours (※1)	Cycle operation hours	Automatic operation hours		
Operation Count	Stroke (from cam signal)	Presserizing	Piercing	Punching	Beam ON
Production mode	Any of the automatic operation modes (CONTINUOUS, AUTO SINGLE etc.) can be selected.	Program operation mode			
Production hours	Clutch ON hours while selecting a production mode, (※1) (the smallest unit: 1 minute)	Cycle operation hours while selecting production mode	Automatic operation hours while selecting production mode		
Production times	Stroking in production mode	Pressurizing in production mode	Piercing in production mode	Punching in production mode	Beam ON in production mode
Idling hours	Idling hours while selecting production mode				
Preparation hours	Hours of selecting other than production mode				
Cumulative Power ON hours	Cumulative Power ON hours (after installing KOMTRAX)				
Cumulative operating hours	Cumulative operating hours (after installing KOMTRAX)				
Cumulative operation count	Cumulative operation count (after installing KOMTRAX)				
Maintenance information					
Date of previous replacement	Date when consumable and maintenance parts were replaced				
Remaining hours	Operation hours before the next replacement of consumable and maintenance parts				
Remaining number of times	Operation count before replacing consumable and maintenance parts				
Clock time	Hours before replacing consumable and maintenance parts				
Signal for maintenance (additional)	—				High pressure ON signal Assist gas ON signal Piercing gas ON signal
Warning/alarm	Time occurred	Time occurred	Time occurred	Time occurred	Time occurred
	Alarm description (with SIT4 only)	Alarm description (with NET specification machines only)	Alarm description (with PC-mounting type only)	Alarm description	Alarm description (with PC-mounting type only)

※1 With a servo press, signal ON hours during positioning

• The specifications described here are subject to change for improvement without a prior notice. • Please prepare a PC and its Internet environment at your side.
• For using the KOMTRAX service, you are requested to read carefully and agree to the "AGREEMENT ON USE OF KOMTRAX"

KOMATSU

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KOMATSU

KOMTRAX

Operation Monitoring System of "KOMTRAX"

YOU CAN SEE YOUR GLOBAL "GEMBA"

Status of the machine working all over the world is integrated and grasped via the Internet.



Free Communication Fee,
Free Service Charge



Komatsu Industries Corp.

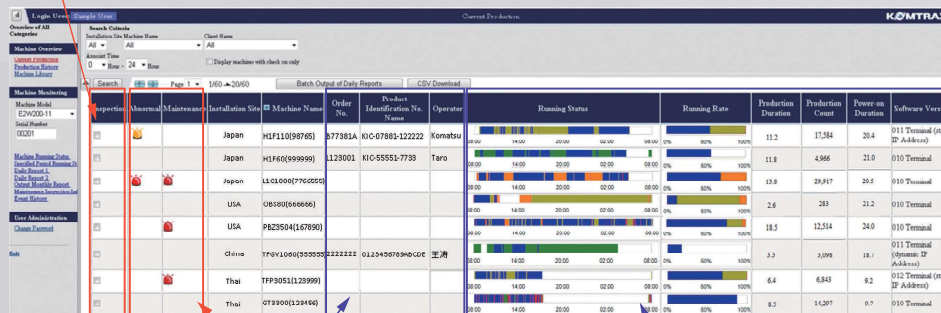


CURRENT PRODUCTION BOARD

Listed operation status of your machine is displayed.
You can see the operation status of your nearby and remote machine just sitting at your office.

Priority machine check

Only data of checked "priority machine" is displayed if checked here.



Indicator

Fault and maintenance status is indicated. (automatically updated every 5 minutes)

Current Production Information

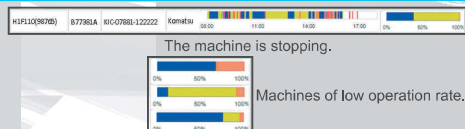
Part number and operator of current production are displayed. (automatically updated every 5 minutes)

Operation status

It is displayed in both graphs and numbers. (automatically updated every one hour)

Wasteful operation hours could be reduced.

You can find real-time status of the machine operating all over the world.
You can find inefficient or idle machine easily from a globally coherent standpoint of view.



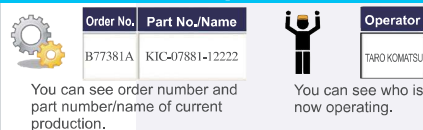
Man-hours for control can be reduced

You can grasp the operation status of machine statistically, which makes your job control and record calculation more efficient.
The system is especially useful to control the overseas plants that require high travelling costs.



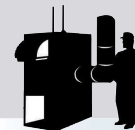
You can see part number and operator of current production

Since current "product number" and "operator name" are displayed, you can see not only operation status of the machines but also attendance of workers.



You can see alarms on the machine

Interruption and maintenance status of the machine are indicated on the operation bulletin.
Since information is updated every 5 minutes, you can always check the latest status.



MAINTENANCE CONTROL

Replacement of maintenance parts and information on inspection are controlled.



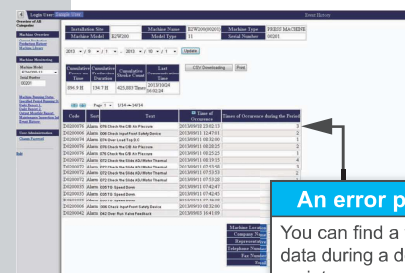
Correct acknowledgment of maintenance status of each machine

Previous maintenance date and approximate next dates are listed.
You can also check maintenance records item by item.

#	Maintenance Items	Specify Interval	Current Value	Last Maintenance Date	Remaining Interval
1	Annual Check	8,760 H	25.4 H	2014/10/16	8,734.6 H (Reset) (History)
2	Change Recorder	26,280 H	25.4 H	2014/10/16	26,254.6 H (Reset) (History)
3	Change KOMTRAX Battery	26,280 H	25.4 H	2014/10/16	26,254.6 H (Reset) (History)
4	Change Lateral Slide	26,280 H	25.4 H	2014/10/16	26,254.6 H (Reset) (History)
5	Change Lubricating Oil	8,760 H	25.4 H	2014/10/16	8,734.6 H (Reset) (History)
6	Change QDC Task Oil	8,760 H	25.4 H	2014/10/16	8,734.6 H (Reset) (History)
7	Change Servo Power PDSA				



ALARM/ERROR CONTROL



Contents of every failure and alarm on each machine are memorized.
Komatsu's service representative can also check them remotely to support clients over the telephone easily.

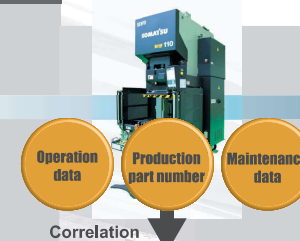
An error propensity can be analyzed

You can find a tendency of frequent error by error data during a designated period and plan preventive maintenance.



DAILY REPORT

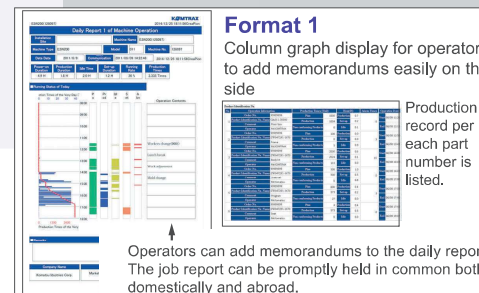
The KOMTRAX reports daily production results.
It can output daily reports aggregating correct operation and production information of each machine.



Two types of format are prepared depending on the purpose

Format 1

Column graph display for operators to add memorandums easily on the side

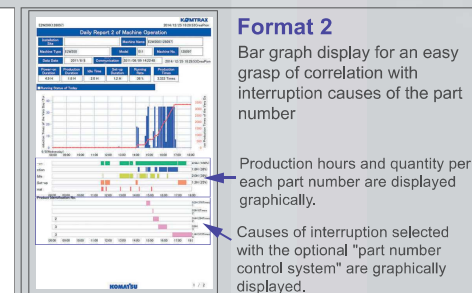


Production record per each part number is listed.

Operators can add memorandums to the daily report. The job report can be promptly held in common both domestically and abroad.

Format 2

Bar graph display for an easy grasp of correlation with interruption causes of the part number



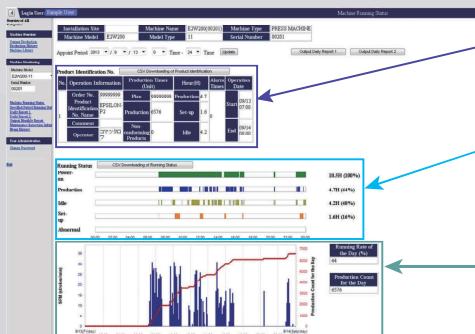
Production hours and quantity per each part number are displayed graphically.

Causes of interruption selected with the optional "part number control system" are graphically displayed.



OPERATION MONITORING

Operation status of a machine is automatically classified into the conditions of power-on, production, idle, preparation and fault to calculate operation rates. Since the operation data are acquired and stored every one minute, the production status can be checked tracing the transition of operation.



Production control table per each part number

Operation information is displayed summing per each part number.

Graph of production status

Operation status of a machine is displayed dividing into conditions of "power-on," "production," "idle," "preparation" and "fault."

Graph of production times

Actual production numbers are displayed both in number of times per one minute and summed number of times.

You can see progress of production

Progress of production can be grasped by tracing the summed number of times of production.



Summed number of times of production

Effect of improvement can be known by comparing with the past



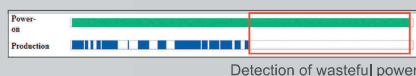
Periodical operation status screen

On the periodical operation status screen, you can compare the current operation status with the preceding days. Effect of improvement can be known from transition of the operation rate.

Improvement factors can be grasped through the "trace" of operation

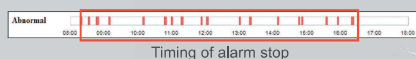
[Example]

Wasteful idling time while stopping
→ Unnecessary power can be eliminated.



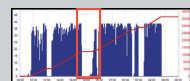
Detection of wasteful power

Detection of machine stop
→ The timing when a machine makes an alarm stop can be known.



Timing of alarm stop

Detection of reduced production
→ Time zone of the reduced production can be known.



Reduced production



ENERGY CONSUMPTION CONTROL

You can control gas (O2 and N2) and power consumption of the laser cutting machines.

Gas consumption graph and power consumption graph

You can see hourly amount of gas and power consumption.



PART NUMBER CONTROL

Actual outputs per each part number can be totaled with the types that comply with the part number control.

PRODUCTION320 PUSH RESET PB
DIE No. 011
NAME
T. COUNT. 0OFF
L. COUNT. 0OFF

SIT4 controller

By selecting the screen, "start / finish time" of the part number are recorded on the KOMTRAX.

OPER. CODE 0000
ORDER CODE 00000000
PLAN. NUM. 0
DEFE. NUM. 0

Production part number

KOMTRAX

Production control table per each part number

Production records and operation status per each part number are displayed.

No.	Operation Information	Production Times (Unit)	Hour(H)	Alarm Times	Operation Date
1	Order No. 99999999 Product Identification No. Name GA011-30500 Comment Floor box Operator M/KOMTRAX	Plan 1000 Production 1004	Production 0.7 Set-up 0.2	0	Start 06/08 11:20 End 06/08 12:15
2	Order No. 99999999 Product Identification No. Name SW047291-1670 Comment Frame Operator M/KOMTRAX	Plan 100 Production 0	Production 0.0 Set-up 0.0	5	Start 06/08 13:50 End 06/08 13:45
3	Order No. 99999999 Product Identification No. Name SW047291-1670 Comment Body kit Operator M/KOMTRAX	Plan 2000 Production 115	Production 0.6 Set-up 0.1	15	Start 06/08 14:00 End 06/08 14:43
4	Order No. 99999999 Product Identification No. Name SW047291-1670 Comment Slide rail Operator M/KOMTRAX	Plan 300 Production 300	Production 1.0 Set-up 0.5	0	Start 06/08 14:43 End 06/08 17:00
5	Order No. 99999999 Product Identification No. Name SW047291-1670 Comment Seal Operator M/KOMTRAX	Plan 600 Production 373	Production 0.4 Set-up 0.2	3	Start 06/08 17:05 End 06/08 17:40
6	Order No. 99999999 Product Identification No. Name SW047291-1670 Comment Seal Operator M/KOMTRAX	Plan 4 Production 573	Production 0.4 Set-up 0.5	0	Start 06/08 17:45 End 06/08 19:07

Production graph per each part number

Production hours/numbers per each part number are graphically displayed.

Product Identification No.



Output amount can be calculated from the production number

Correct production numbers are aggregated based on the production data. You can easily calculate output amount by yourself acquiring the production numbers per each part number.

You can find production propensity per each part number

By treating the operation data with the working hours per each part number, preparation hours and idle hours per each part number are displayed. You can also find problems inherent to the die or the part number through alarm numbers and rejected products.



CSV DOWNLOAD

Such data as the production control table per each part number and the operation status of machine can easily be output as a CSV files. You can calculate aggregated global production results using the Excel etc. by yourself.

CSV Downloading of Product Identification

No.	Operation Information	Production Times (Unit)
1	Order No. 00000001 Product Identification No. Name	Plan Production