Hartrol Plus

Function List of Hartrol plus

Program Management
- › Machining Programming Analysis
- › Machining Time Estimation
- › Machining Path Simulation
- › Files Transfer

Operation Assistant
- › M Code list
- › Machining Condition Computing
- › Calculator
- › Message Board
- › Five Faces Work Piece Calibration
- › Auto Positioning
- › Remote Desktop Connection

Machining Monitoring
- › CCD Monitor
- › Spindle Loading Monitor
- › Automatic Feed Control
- › Tool Magazine Display
- › Integrated Information Monitor Screen

Utilization Rate
- › Machines Daily Utilization Statistics
- › Machines Monthly Utilization Statistics
- › Operators & Different Shift System Performance
- › Machining Countdown
- › Work Piece Counting
- › Work Sheet Management

Maintenance & Support
- › Access Authority Management
- › Tool Magazine List
- › Online e-books
- › Periodical Maintenance
- › PLC Bit Setting
- › Account Management
- › Abnormal Activities Recording Function
- › Hartford Userconnect

Hartford has sold more than 50,000 machines to all over the world, accumulated more than 37,000 customers, who absolutely affirm Hartford's manufacturing experience and ingenious machine manufacture technology. We insist on providing customers with the best quality machining centers. We will devote more carefully, in order to continuously enhance the technical level of manufacture and applications.

Facebook

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Hartford

Hartrol · Smartcenter · Robocell

協鴻工業 · 只製造智慧機器

Hartrol Plus

First Step For Intelligent Factory

What is **Hartrol** Plus?

Hartrol plus is a brand new intelligent controller Hartrol , Hartnet and Hartford electrical function together which developed and made by Hartford.

HMI and operation is user friendly, it can achieve :

1. Internet connection, collect and analyze data, monitoring by portable device

2. Intelligent control: Auto revise human error and operating basis

3. Real time update new APPs

The difference between **Hartrol Plus** and others

Function	Hartrol Plus P1	Others
Screen Size	19" Multi-touch Panel	10.4" (OPT:15")
Look Ahead Block	2700 (G5P20000)	400 (1000 Max.)
Hard Drive	32GB SSD	NO
Smoothing Interpolation	SSS 4G	Option
Industry 4.0	Hartford UserConnect	NO

19" Multi-Touch Panel

Electrical Functions

Hartnet

Hartrol

Standard

Hartrol Plus

Traditional
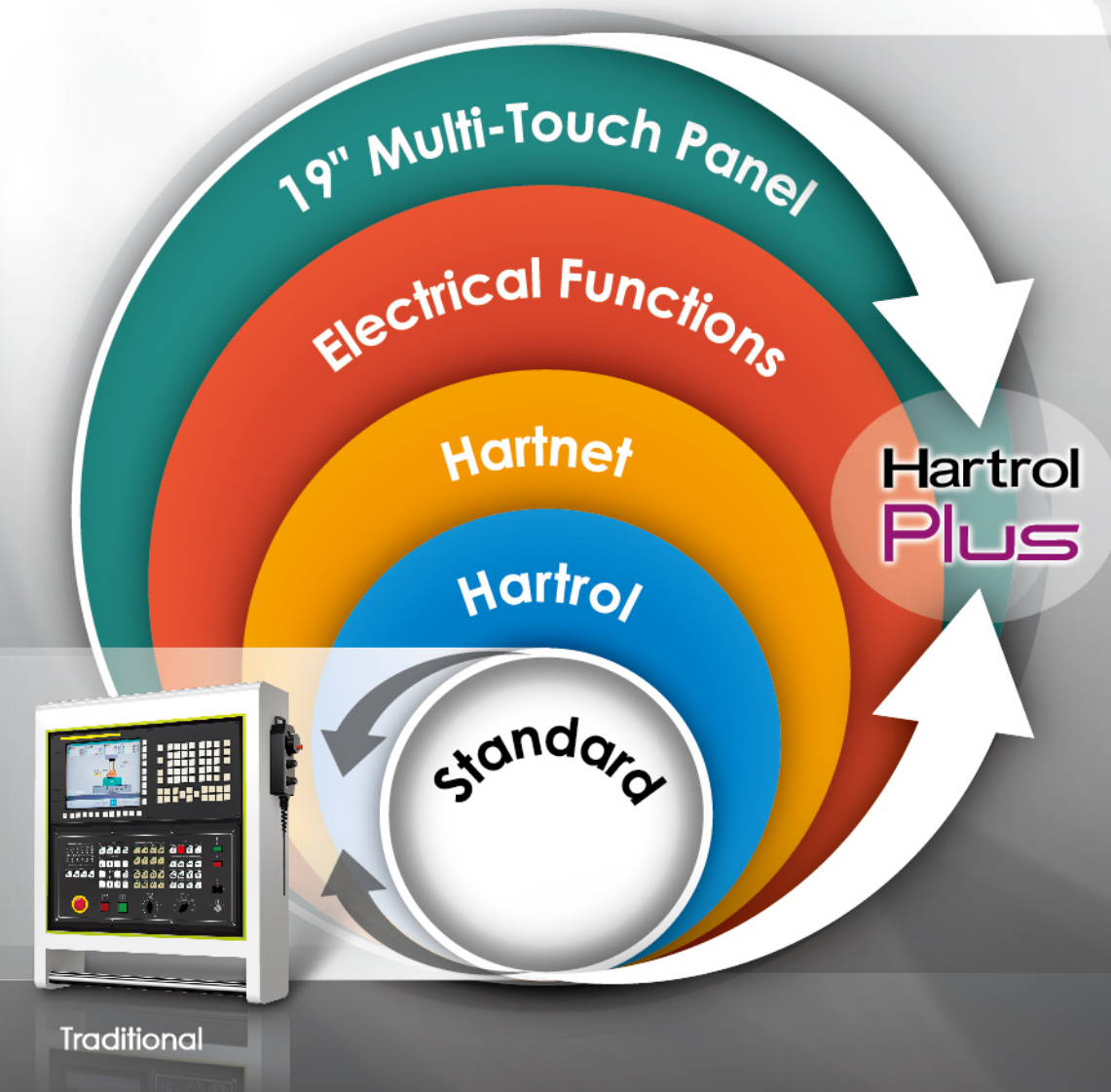
Thin, Light & Powerful Controller

Hartrol Plus1

High accuracy die & mold
Max. workpiece coordinate system : 54 sets opt.300
SSS control (Super smooth surface) : 270KBPM
Max. blocks in pre-read buffer : 2700
Recommend industry : Die & mold

Hartrol Plus2

Die & Mold
Max. workpiece coordinate system : 54 sets
SSS control (Super smooth surface) : 135KBPM
Max. blocks in pre-read buffer : 1350
Recommend industry : Die & mold / parts machining

Hartrol Plus3

Parts Machining
Max. workpiece coordinate system : 54 sets
SSS control (Super smooth surface) : 135KBPM
Max. blocks in pre-read buffer : 1350
Recommend industry : Parts machining

Hartrol Plus1
- Hartrol Plus App
- Hartnet(Single-licence)
- Electrical Funcationcs
- 19" Multi-Touch Panel

Hartrol Plus2
- Hartrol Plus App
- Hartnet(Single-licence)
- Electrical Funcationcs
- 19" Multi-Touch Panel

Hartrol Plus3
- Hartrol Plus App
- Hartnet(Single-licence)
- Electrical Funcationcs
- 15" Multi-Touch Panel

The Intelligent Controller You Should Have

With three major solutions, Hartrol Plus takes your machining to the next level.

Highly optimized and intelligent controls bring even more capabilities and productivity to your metal cutting processes.

With ease of use, advanced automation, and smart data collection, Hartrol Plus is essential tool for enhancing performance on your production floor.

Intelligent Support

Cost down to 20%

Multi Touch Screen
CCD remote management
E-book
Remote Management
Cutting Condition Calculator
Stand-by Mode
Hartford Userconnect

Intelligent Functions

Productivity increased 23%

HartCAM
AFC=Automatic Feedtrate Control.
SSS-4G
Machining Time Countdown for Single Block
Optimized Machining Program
Automatic measurement

Intelligent Design

Efficiency increased 20%

MES(Manufacturing Execution System)
Machine Utilization Management
Operator Performance Management
24 Hours a Day Management
Remote Management

Hartford UserConnect

Hartford User Connect

- Alert Notification
- Remote Diagnoses
- Remote Value Enhancement
- Remote Monitoring & Management

Save time and cost. Cost down to 20%

Fast, flexible and user friendly.
Make instant changes to your part programs easily and efficiently.

Remote managemen — CCD

Do you want to check machine status when machining ?

- **High safety** — You can check machining status without open door.
- **High efficiency** — No need to check machining quality until it is finished, you can adjust parameter by watching

Alarm Video Recording

Video provides information to do analysis. Accident before 30 sec and after 30 sec
Before 30 sec：knowing how it happens? After 30 sec：knowing what next comes

19"Multi Touch Screen

The controllers advanced multi-touch capabilities allow you to simplify your machining process through even faster and smoother operarion. With advantage of smart multi-touch functions the mechanic can now create or edit programs faster and but easier yet still remain the accuracy, multi-function and control that is required for today's most advanced operations.

E-book

E-book contain knowledges which offer operator to get access through it easily and accurately. To be mentioned, the data base is customized and personalized. Pile of printed paper will no longer be needed.

Select the desired document and view it directly displayed on the screen to save time and paper cost.

Save time and cost. Cost down to 20%

Remote Management

Eliminate time-wasting between CAD/CAM workstations and CNC machines.

Instant access to your workstation is now available on the shop floor.

One-touch and you can take full control of you office workstation. Create, edit, and save your data.

Cutting Condition Calculator

This function will save you time and money by allowing you to rapidly visualize and improve machining setup and process. Check all the cutting conditions before machining to increase your efficiency without wasting material or breaking tools.

Calibration Calculator

Backlash Calculator
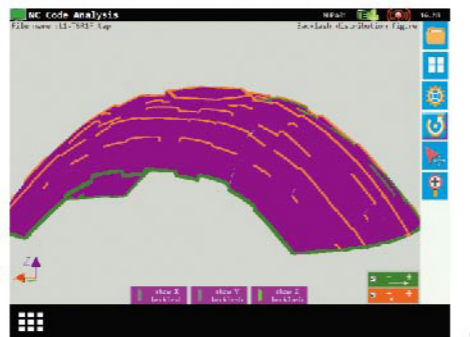
Hartford ZDT

The Early Warning system before breakdown, remind you the malfunction before it get worse.

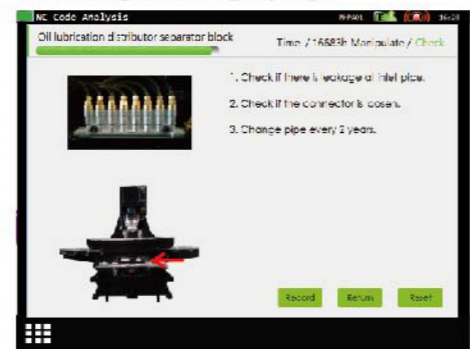Preventing the production lost of machine breakdown and time waste.

ZDT function provide you:

1. 24/7 machine status monitoring / 2. Production process display
3. Bar chart maintenance reminder / 4. System status display

Management page
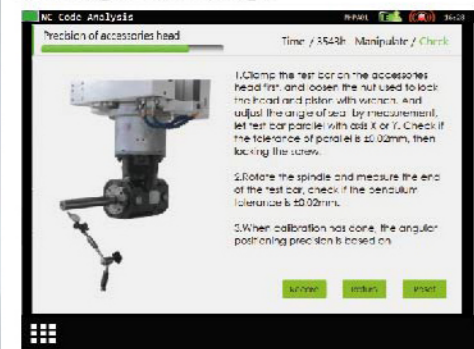
CIS Integral Design page

Increases your productivity up to 23%

HartCAM

Use HartCAM, Save **80%** of your time
With HartCAM, you can easily operate by graphic index without G-coding knowledge.

- DXF convert to NC code
- CAD function
- 3D simulation

Smart Machining

Use HartCAM to do editing & graphic dialogue.
You can easily operate by graphic index without G-coding knowledge.

Only **4-5** min to generate machining program

Smart Inputing

Simply input DXF file and convert to CNC coding.
Only 10 min to convert CNC code.

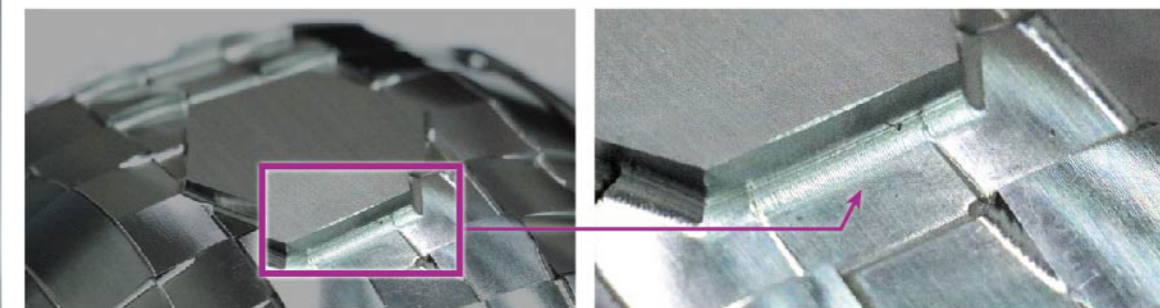Smart covert function, increase work efficiency

SSS-4G

High speed, high accuracy, high quality through Hartrol plus SSS-4G provides features that are effective in reducing machining time, including optimal acceleration / deceleration suited to each axis's characteristics.

With SSS-4G : Corner is smoothly
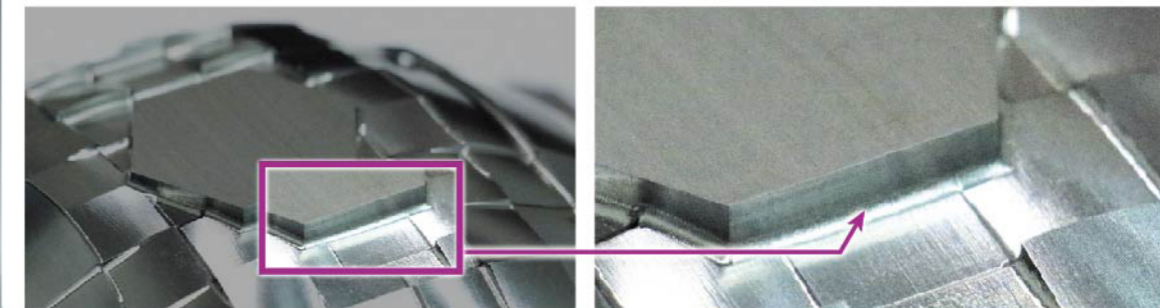
Without SSS-4G:Vibration mark at corner

Easy operation-increase your efficiency up to 20%

Manufacturing Execution System

Increase your efficiency with MES.

You can manage your machine utilization, personnel management with MES on PC.

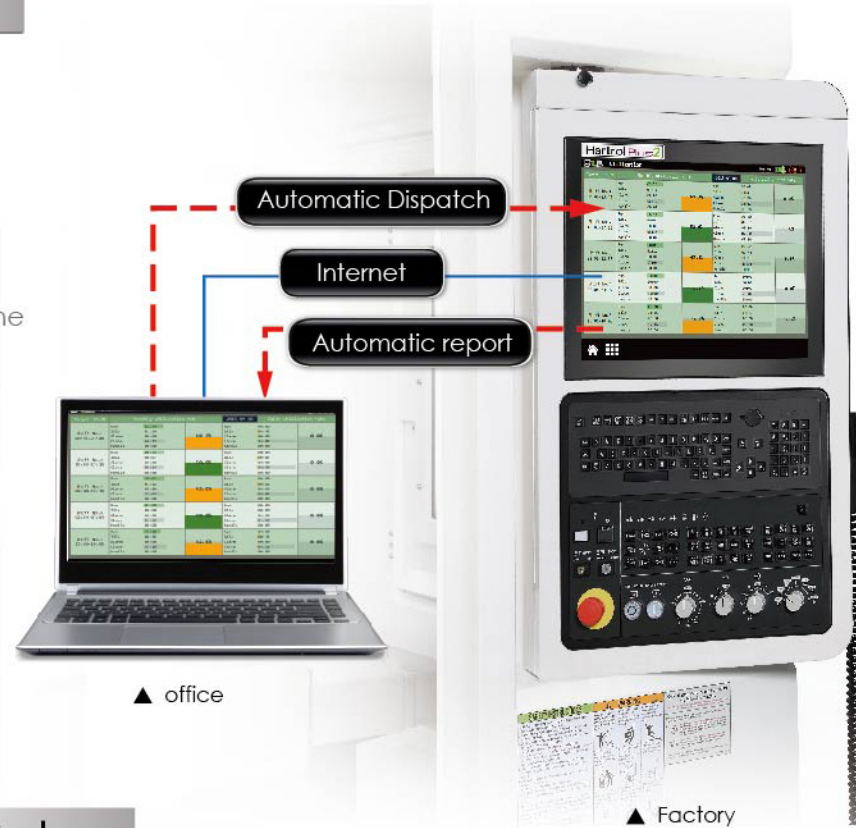### Intelligent management

Intelligent production management

Lower 50% manual work, increase 100% machine availability

- Manage your work order instantly.
- Production report generated in 1 sec.

Intelligent utilization management

Improve your performance by 20% more

- No human error
- Increase management efficiency up to 20%

Automatic Dispatch

Internet

Automatic report

▲ office

▲ Factory

Alarm & Completion Reporting System

You can know machine status anytime/ anywhere

Instant notification to multiple objects, manager/director/ technician could take actions with no time wasting.

- Manage factory with intelligent way.
- Increase machine utilization with intelligent management.
- Make your factory management smarter with convenient management system
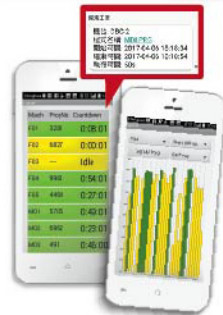
Machine Utilization Rate Management

Improve your factory machining productivity and efficiency by charts so that utilization rate can be analyzed easily.

Daily Status Display

Utilization Rate

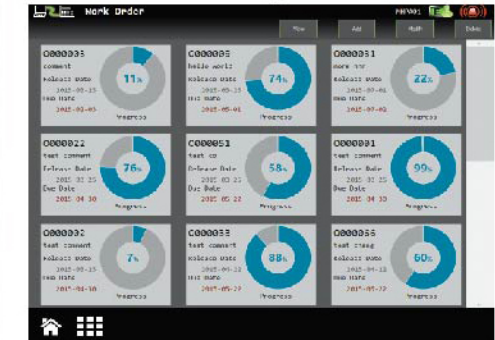## Operators' Performance Management

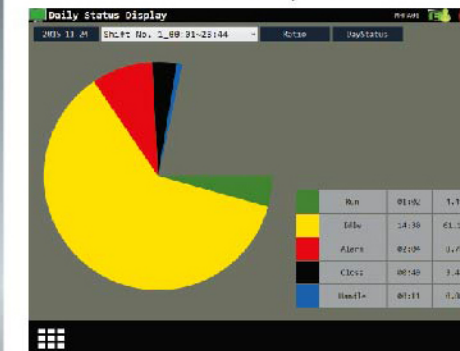By checking the chart, you can know the performance of operators very clearly.

Shift Management

Work Order Management

24 Hours Management

Machine 24 hours status can be visualized, you don't have to waste time on checjing machines individually.

Machine Status Report

Production Management

Hartrol plus is the First Step of Intelligent Factory and Industry 4.0

Hartrol plus is an intelligent controller combine with IOT, Big data and AI
Nowadays, only when you have intelligent controller can make your machines
become the intelligent machining center and only when you have intelligent
machining center can lead you move forward to the world of Industry 4.0.
The intelligent controller Hartrol plus is the controller which can lead you
toward the Industry 4.0.

Intelligent Controller
+
Intelligent Machining Center
+
Intelligent Factory
+
IOT

Industry 4.0

Completion Report

Machining Instruction

Office

Factory

Check machine status by mobile
or tablet anytime and anywhere