

# Complete MES Solutions

## Comprehensive Enterprise Coverage

### From Start to Finish

One system for all needs



**e-Factory**  
Partner Product

COMPRE-  
HENSIVE



Solutions from machine monitoring to HR functions

INTEGRATED



High degree of compatibility with enterprise IT applications

VERSATILE



Open, modular design allows complete implementation flexibility

TRANS-  
PARENT



Delivers visibility into even the most complex production operations

# Everything in one place



A comprehensive MES solution

## An integrated approach

Transparency is a key concern for all manufacturing businesses today. With increasingly severe constraints being imposed by governments, standards organizations, customers and shareholders, it is vital for company management to always know what is going on in its own operations. But as a side benefit, this need for transparency also delivers the potential for process improvements. Hence companies should see this environment as an opportunity to improve their competitive position, rather than another burden.

The MPDV Hydra MES concept brings all critical functions of a manufacturing enterprise together into a single system in order to provide complete transparency across all operations. Not only manufacturing, it also covers the areas of quality assurance and human resources.

MPDV has joined the e-F@ctory Alliance to further support the goal of extending Mitsubishi Electric's own solutions by combining them with complementary best in class solutions from third parties. MPDV's Hydra MES is the enterprise IT complement to Mitsubishi Electric's MES Interface IT. This module for the iQ Platform provides a simple and quickly deployed information channel directly from the shop floor to IT systems such as Hydra. No intermediate PCs are required, meaning the solution

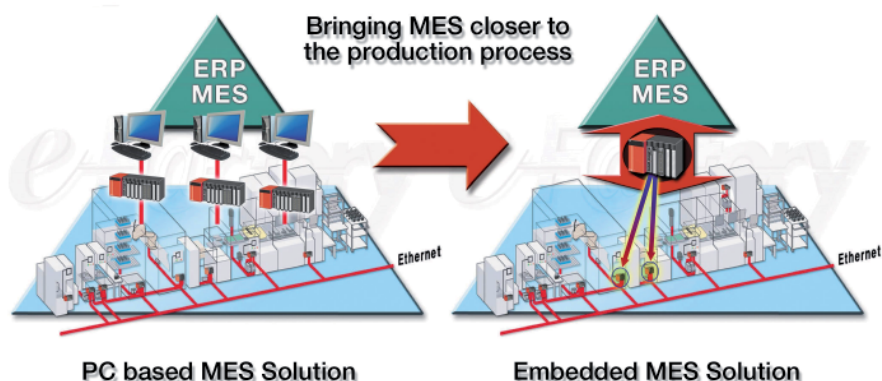
is robust and free of the maintenance and security issues that typically affect PCs.

## Third party recognition

The value of the Hydra MES solution has been embraced by the industrial community in general, with dozens of well known companies implementing it in their factories. Further recognition of Hydra's success was obtained when the well known research organization Frost & Sullivan presented MPDV with their 2010 Product Excellence award for Hydra.



Frost & Sullivan 2010 Product Excellence award for Hydra MES-System



Direct shop floor to enterprise IT links

## Transparent production

For the collection and management of production data from the shop floor, Hydra provides a comprehensive solution. The raw data is provided by the MES Interface IT, and then processed to provide extensive visibility of a wide range of critical production information. This covers all data related to machines, tooling, orders, materials, products, processes, batches and charges. This results in shop floor, production and top management all being given the key information required to understand what is happening now. Hence the agility of the organization is improved and reactions to modified production requirements or out of tolerance machine and workplace conditions happen quickly.

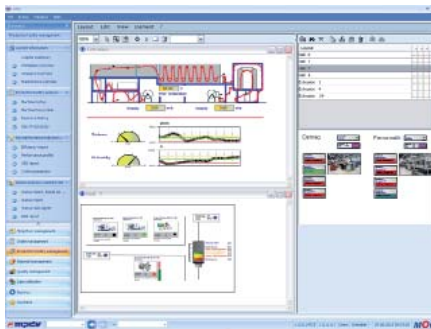


See critical production information in clear graphical terms

## Drill down to precise detail

Hydra provides specialized modules for monitoring of individual machines for the maximum ability to “drill down” into the production process. This allows the productivity of each part of the process to be seen in detail, along with unplanned shutdowns, to allow Overall Equipment Effectiveness (OEE) to be determined. Hence armed with this information, production management can view the overall production picture from any level and take the necessary steps to insure optimized processes. Finally, Hydra also provides connectivity to maintenance systems, allowing planned maintenance to be scheduled and carried out as required.

For machine tool lines, Hydra also offers modules that cover management of tooling and control programs, allowing efficient administration of tool stock, wear monitoring and history. Centralized control of machine operating programs is also available, insuring that the right programs are available at the right machines in the right version.



View the manufacturing process down to individual machine level detail

## Stay out of trouble

Of course, it’s not enough to know there is a problem. Ideally, the MES system should be able to predict it, so corrective action can occur before scrap is produced. Hydra’s process data collection module provides this ability. Key features include management of key test parameters and logging of the data, evaluation of process disturbances, intervention monitoring and assignment of test parameters to machines, parts and tools. Hence corrective action can be taken at once before defective parts are produced.



See potential problems before they get out of hand

## High level functions

As well as being focused on shop floor operations, Hydra also offers a wealth of enterprise management capabilities, covering material and production logistics, production scheduling and more. Hence material flows can be monitored, storage times can be controlled and traceability enabled. Further, capacity utilization can be visualized, meaning production resources can be operated at the maximum capability. Interfaces are also provided to other ERP and production planning systems that may be available.

MPDV offers full support for SAP installations, with certified connectivity to a range of SAP modules. Their commitment to SAP support has led to MPDV having a broad range of certifications for a variety of SAP technologies and products, including some which were among the first in the industry. Hence current SAP users can specify a Hydra based MES solution with confidence.

For quality management, Hydra also offers modules that cover all aspects of this vital discipline. Hence the complete flow of production from supplier evaluation to goods receipt to complaint management is all covered.

Finally, since people are usually a company’s most valuable resources, Hydra also includes support for monitoring time and attendance, personnel scheduling and access control to ensure staff are working as well as the machines they run.

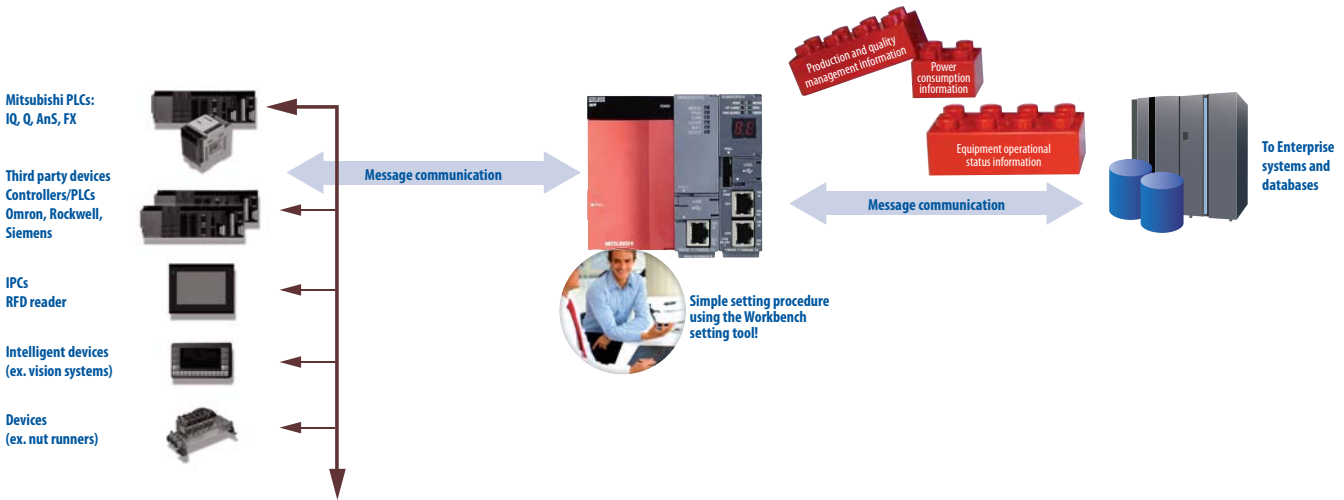
**SAP® Certified**  
Integration with SAP Applications

Certified compatibility with SAP applications

## Shop Floor

## MES Interface IT

## Hydra MES



Direct connection to information systems

## Overview of MPDV

Founded in 1977, MPDV has become a leader in capturing and processing data from production, human resources and quality assurance. MPDV's international structure includes offices in Germany, France, Singapore, Switzerland and the USA. Its customers range from small and medium size enterprises through to multi-national companies in the following industries: plastics, rubber, metals, automotive, food and beverage, plant and mechanical engineering, furniture and timber, printing and packaging, precision mechanics and optics as well as electrical engineering and electronics.



MPDV headquarters

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