Further developed next generation CNC power supply unit
New CNC power supply unit for linear-motor driven Wire-EDM
LP series has been released

Sodick had developed the next generation CNC power supply unit, \textit{LQ series} in 2003. The power supply unit had been designed to directly import 3-D solid model. With the release of the LQ series, Sodick suggested the use of 3-D solid model for the first time in the machine tool industry.

By developing more practical 3-D processing functions to solve the problems in manufacturing site, the LQ series has been developed into LP power supply.

With the LP series, an operator can use 3-D CAD data without know-how to perform precision machining, unmanned machining, and etc. with great ease.

To meet the demand of quick delivery of the products, it has become essential to shorten entire lead time as much as possible in die and mold making. By making good use of 3-D solid data, entire manufacturing process can flow smoothly.

The LP power supply is equipped with \textit{“Intelligent Q$^3$vic EDW”}, which can directly import 3-D solid data to enable high precision machining with great ease. By installing the software application of \textit{“Q$^3$vic Simulation EDW”} on the customer’s PC, the customer can manipulate 3-D solid model on his/her machine. This software will provide the further support for the use of 3-D data to operators.

Various other functions have become standard to meet customers’ demand.

\begin{itemize}
  \item \textbf{Features of LP power supply}
  \item 1 ) Improved operability with the introduction of new control panel and controller.
  \item 2 ) \textit{Intelligent Q$^3$vic EDW} is a standard equipment, which enables to import 3D solid model.
  \item 3 ) By the use of \textit{Q$^3$vic Simulation EDW}, it is possible to perform machining simulation on external PC.
  \item 4 ) LAN and external memory port has become standard.
  \item 5 ) Reliable HDD-less system.
  \item 6 ) Super high speed AWT device, Super Jet AWT is a standard equipment.
  \item 7 ) Operation support system for novice operator, \textit{The KANTAN}, is standard.
  \item 8 ) Cutting edge wire-EDM power supply, \textit{“WS series”}, comes as standard.
\end{itemize}
1) **Improved operability with the introduction of new control panel and controller.**
The LP series is equipped with ergonomically designed LP control panel to ensure stress free operation by both novice and experienced operators. Control panel and LC monitor are placed on the eye level of the operator. It is also possible to adjust the angle of the monitor so that an operator can work comfortably. Newly designed keyboard features improved operability, such as key layout with high visibility coloration, convex keys of frequent use, etc. Newly developed remote controller has every button necessary for set up process to make it possible for an operator to complete the process without looking at the monitor.

2) **Intelligent Q3vic EDW is a standard equipment, which enables to import 3D solid model.**
Sodick has been suggesting “Visualized manufacturing,” in which 3D-solid model created by design room is imported directly into CNC controller by the use of Q3vic-Solution, taking good advantage of 3D-solid model at manufacturing floor.
With the release of the LP series, Sodick wire-EDMs are equipped with “Intelligent Q3vic EDW”, which was developed from applications of Q3vic-Solution. Intelligent Q3vic EDW automatically recognizes and extracts every machining path of wire-EDM from 3D-Solid model. From even complicated shape, machining contour can be extracted with a single command, achieving great reduction of workload.

3) **By the use of Q3Vic Simulation EDW, it is possible to perform machining simulation on external PC.**
LP power supply comes with the “Q3vic Simulation” application, with which 3D solid model can be manipulated on the user’s PC connected to the machine tool through LAN. By installing this software, machining simulation can be performed on the user’s PC before actual machining.

4) **LAN and external memory port has become a standard equipment.**
In current manufacturing scene, designing with 3-D CAD is essential and the volume of data keeps becoming larger. LP power supply is equipped with LAN and external memory port to enable swift transfer of large volume data to the CNC of the machine tool.

5) **Reliable HDD-less system.**
In LP power supply, high capacity main memory system replaced HDD (Hard Disc Drive). Compared with HDD, this new system can enable higher speed transfer of data and reduce the risk of being damaged during delivery. Thus, higher reliability can be expected.
6) High speed automatic wire threading system “Super Jet AWT”

The new wire threading system, Super Jet AWT, which was developed from Pipe Jet AWT, features annealing function. This new threading system provides various threading modes in accordance with the needs of customers. Newly equipped narrow pitch clearance dice improves machining accuracy of entire wire-EDMing application.

7) Operation support system for novice operator, The KANTAN, is a standard equipment.

The LP series is equipped with operation support system “The KANTAN” to enable even novice operator to operate the machine without know-how. “The KANTAN” contains database of frequently used machining conditions so that optimum machining conditions can be easily output by simply entering wire-diameter, maximum workpiece thickness, and surface roughness.

8) Cutting edge wire-EDM power supply, WS series is standard.

The latest power supply WS series features improvement of overall machining accuracy, such as shape modification in finishing process, corner machining accuracy, machining of hard to cut material such as PCD or workpiece with stepped height. Machining speed is also improved. WS series is designed with higher priority on user friendliness. It is equipped with functions to change machining conditions by simply shifting the slide-bar on menu screen and visualize the list of machining conditions on the monitor for operator to choose optimum one.
AQ 327 L Premium equipped with LP power supply unit

Intelligent Qvic E DW