

CITOWAVE/CITOPULS automation

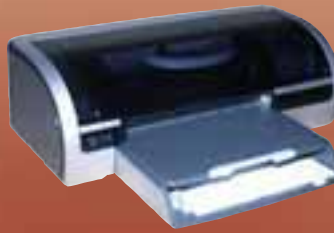
Expertise in automatic and robotic welding.



Automation CITOWAVE and CITOPULS

CITOPULS and CITOWAVE machines are designed as the perfect solutions to the most demanding automatic or robotic applications. The three different levels of automation A1, A2 and A3 allow these machines to communicate with a simple automatic machine, a more sophisticated machine or robots equipped with wire or bus communication devices. Complementary options enables saving of data onto USB keys and laptop PCs, networking of machines, control of additional peripheral equipment or retrofitting onto machines or robots.

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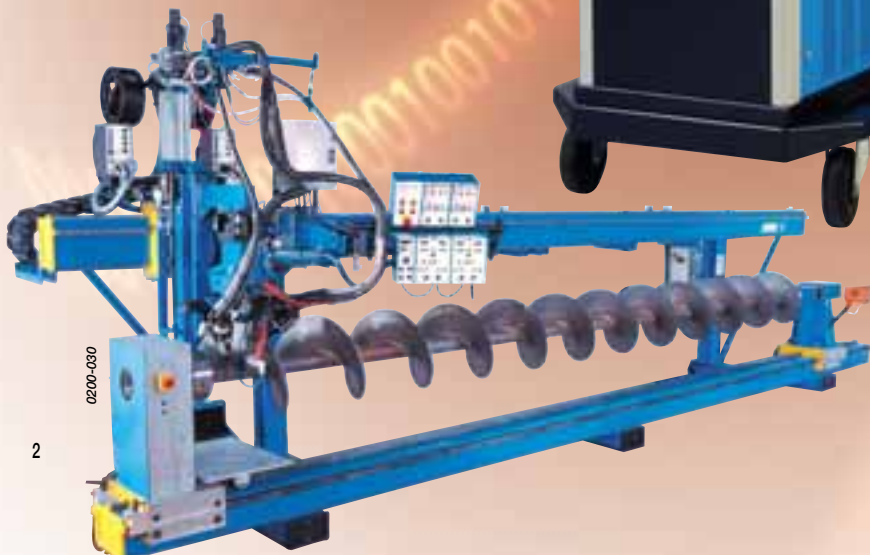
2001-064



1509-008



2006-113



0200-080



2006-127

A1 automation

A1 automation level is standard on both CITOPULS and CITOWAVE machines. It allows direct communication to a machine or a robot. Specific wire feeders for automatic applications are recommended but a manual wire feeder can also be used. This automation level does not require an optional automation card.

CITOPULS machines MX 320(W) - MXW 420



CITOJOB



DV-R 400
automatic wire
feeder

A1 automation level allows the operation of the CITOPULS with either a machine or a robot. The machine interface can control wire speed or voltage input or call on and chain one of the 10 programs in the CITOPULS memory. In this case it is mandatory to use the remote control and power source plug to allow the storing of 10 process programs.

DMY 4000 standard manual wire feeder can be used on a machine but the automatic DV-R 400 wire feeder is recommended especially for robots.

* Programs only with CITOJOB.

Features AUTO A1

- Easy interfacing
- Control of welding parameters by 0-10V input signal
- "Chain" program facility*



Auto A1
with DMY 4000 manual feeder
onto an automatic machine

CITOWAVE machines MXW 400 - MXW 500



DV-R 500 automatic
wire feeder

A1 automation level allows the operation of the CITOWAVE with either a machine or a robot. In this configuration all the welding expertise of the CITOWAVE can be fully exploited and parameter adjustment or program selection requires the operator to intervene on the machine front panel. DMX 5000 standard manual wire feeder can be used on a machine but the automatic DV-R 400 wire feeder is recommended especially for robots. This configuration is recommended when welding large series of parts with no change in welding parameters.



Auto A1
with DV-R 400 automatic
wire feeder in a robotic cell

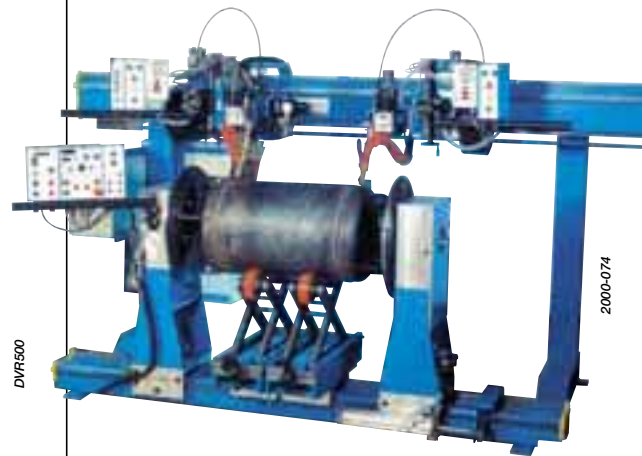
A2 automation

A2 automation level enables a CITOWAVE with AUTO-CARD option to be interfaced to a robot or an automatic machine. The welding process is then controlled by input signals or by call on and chaining of any of the 100 programs. This configuration requires an automatic DV-R 500 wire feeder for most uses or DV-R 600 HD for heavy duty applications. The PC-TOOL option allows data downloading or saving on USB keys or directly onto a laptop PC, and the data can then be managed with WELDSOFT software.

CITOWAVE machines MXW 400 - MXW 500



DV-R 500 automatic wire feeder



Auto A2 and automatic DV-R 500 wire feeder on an automatic machine

With the AUTO-CARD option, CITOWAVE can be connected to any machine or robot. The welding process is then controlled by input signals or by call on and chaining of any of the 100 programs memorised in CITOWAVE. A specific synchronisation mode allows complete control of the entire welding cycle. An automatic DV-R 500 wire feeder for most uses or DV-R 600 HD for heavy duty applications is mandatory to operate CITOWAVE in this configuration.

Features AUTO A2

- 100 programs and storing on USB key or laptop *
- Process control mode
- Options easily connectable

* Saving on USB key / PC with PC-TOOL

PC-TOOL and WELDSOFT options



With the PC-TOOL option, which is available only with both A2 and A3 automation levels, the operator can save the welding data or programs on a USB key and on a laptop PC, or print them on any printer.



WELDSOFT software will enable the management of all data transferred to a laptop PC (welding parameters, welding programs, process control or maintenance).



Auto A2 and DV-R 500 automatic heavy duty wire feeder in a robotic cell

A3 automation

A3 Automation level operates with both AUTO-CARD and AUTO-BUS options. It allows a CITOWAVE to be connected to a robot equipped with a bus connection. With AUTO-BUS, the level of control on the process by the robot may be selected, locked or open, which will satisfy most requirements. An automatic DV-R 500 wire feeder is used for the majority of applications or a DV-R 600 HD for heavy duty applications is mandatory to operate CITOWAVE in this configuration. Using more than one CITOWAVE, networking is possible with the WELDSOFT and PC-TOOL options.

CITOWAVE machines MXW 400 - MXW 500



**DV-R 600 HD
automatic heavy duty
wire feeder**



**Auto A3 and DVR 600 wire feeder
with bus communication**

With options AUTO-CARD and AUTO-BUS, CITOWAVE can be connected to any robot equipped with a bus. This type of link will allow optimized communications between CITOWAVE and your robot. Beyond the simplicity of wiring, bus communications standardise information flows between various installations in conformance with the most recent industrial norms. An automatic DV-R 500 wire feeder can be used for most applications and the DV-R 600 HD for heavy duty applications is mandatory for the operation of CITOWAVE in this configuration.

Advantages AUTO A3

- Bus communication with advanced protocol
- Heavy duty automatic DV-R 600 HD wire feeder
- Multiplexing unit to manage additional specific peripheral equipment

JOBMATIC and MUXAL options



The remote control JOBMATIC is especially designed to develop programs on automatic or robotic welding cells.



The MUXAL box option is available for both A2 and A3 automation levels and is used to manage additional peripheral equipment. With specific functions such as contact tip control changes, torch cleaning devices, etc... it also allows retrofit to an older installation using CITOWAVE

Network option with PC-TOOL

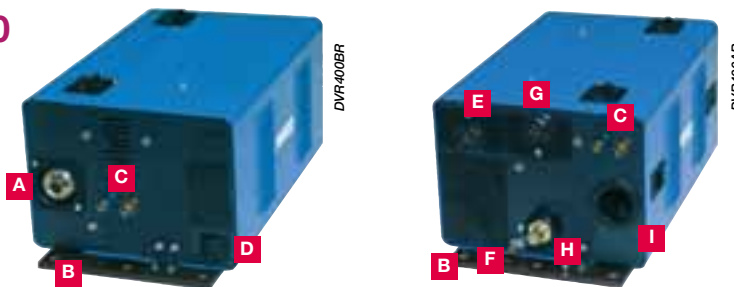


Networking of CITOWAVE machines allows downloading or storing of welding programs onto a server.

Automatic wire feeders

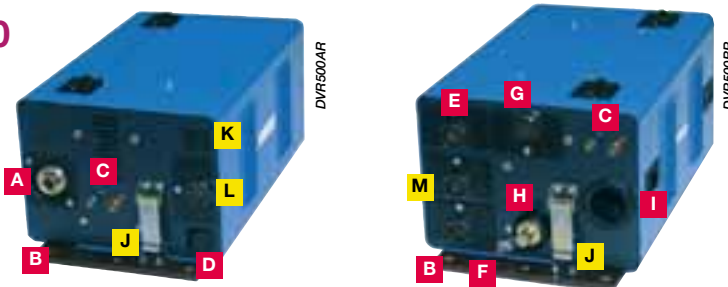
A specific range of automatic wire feeders range has been developed for both CITOPULS and CITOWAVE welding machines. These wire feeders represents the perfect solution for any requirement, either for a simple automatic machine or for a heavy duty robotic welding environment.

DV-R 400



This wire feeder is to be used only with CITOPULS machines. Compact, it can be fitted on automatic machines or robots. Opening the side panel allows easy access to the wire feed mechanism. The assembly is fitted on an isolating bakelite support.

DV-R 500



The automatic DV-R 500 wire feeder is used exclusively on a CITOWAVE machine. As compact as the DV-R 400 model, it is also equipped with a quick connection device for easy removal and maintenance. Opening the side panel allows easy access to the wire feed mechanism and the reversing mounting feature increases configuration flexibility. The DV-R 500 is equipped with additional plugs to simplify connections and pre-configuration to receive both wire retract and push-pull options.

- A** Torch connection
- B** Bakelite isolating support
- C** Cooling fluid connection
- D** Wire advance
- E** Input signals
- F** Gas connector
- G** Harness connector
- H** Power plug
- I** Welding wire in
- J** Quick connector
- K** Welding wire backward
- L** Plug for options
- M** Peripheral equipment plugs

Specific functionalities:
DV-R 500 and DV-R 600 HD

DV-R 600 HD

The high level torque motor, and roller bearings, mean that the automatic heavy duty DV-R 600 HD wire feeder will accommodate the most intensive welding applications. It has all the functionality of the DV-R 500 model.



DVR600HD

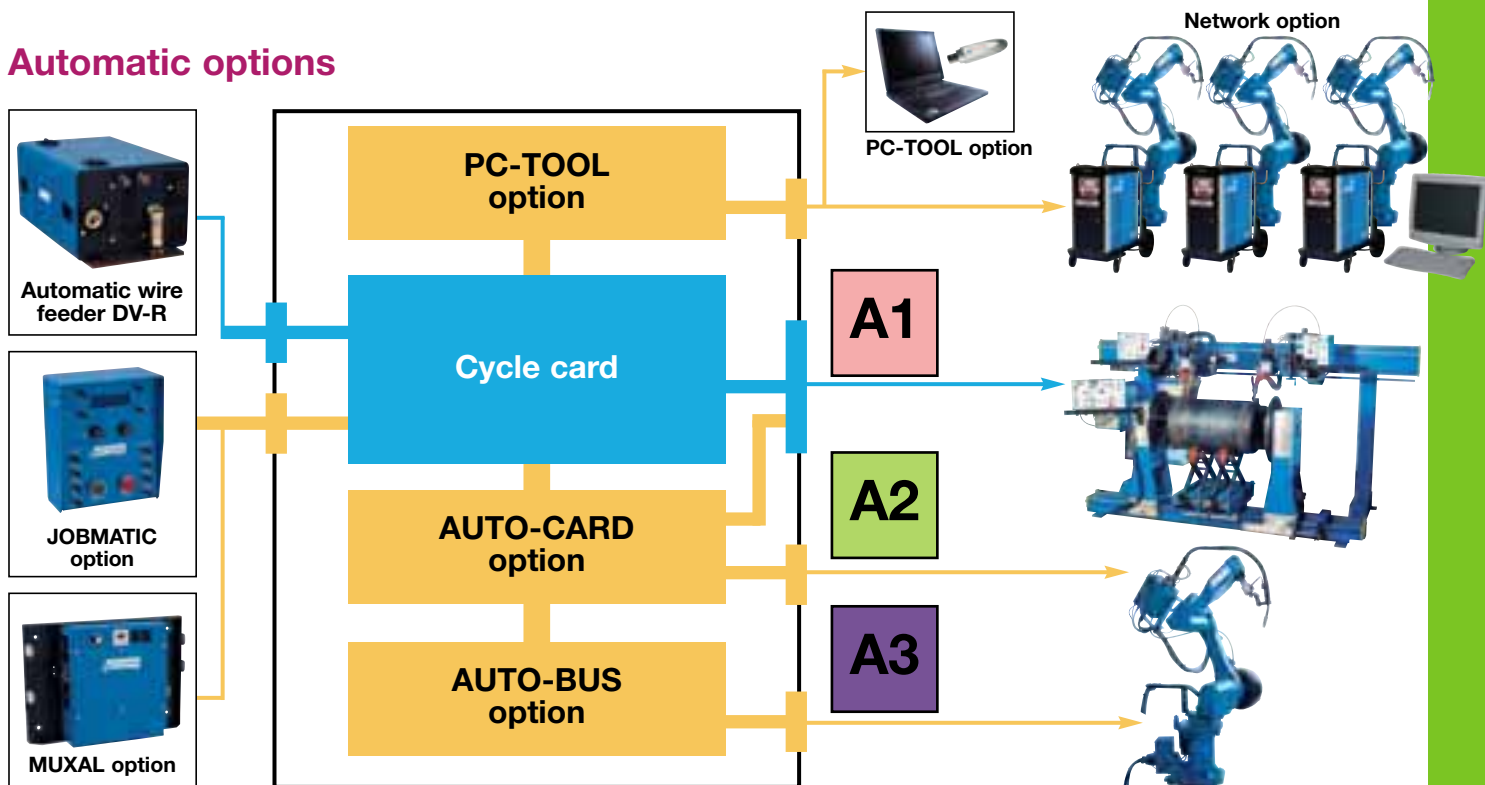
To order

Manual wire feeder DMY 4000	W 000 257 873
Automatic wire feeder DV-R 400	W 000 055 084
Manual wire feeder DMX 5000	W 000 257 782
Automatic wire feeder DV-R 500	W 000 055 087
Automatic wire feeder DV-R 600 HD	W 000 055 068
Manual remote control box CITOJOB	W 000 055 079
Automatic remote control box JOBMATIC	Consult us
Automatic card AUTO-CARD	W 000 055 024
Bus card AUTO-BUS	W 000 055 029
PC-TOOL option	W 000 055 041
PC WELDSOFT software	W 000 055 043
Multi-option box MUXAL	W 000 055 037
Card TOPMAG-CARD	W 000 055 033
Card CAD-PLUG	W 000 055 040
Automatic push-pull card PP-CARD	W 000 055 056

Automation process

CITOWAVE welding machine architecture has been conceived to allow the integration of all automatic features. None of the options is necessary to operate the machine with the A1 automation level, and A2 and A3 options will upgrade your machine with advanced communication and automation features when needed.

Automatic options



	CITOWAVE												CITOPULS				
	MX 280	MXW 400						MXW 500				MX(W) 320		MXW 420			
Automatic level	A1	A1	A1	A2	A2	A3	A3	A1	A1	A2	A2	A3	A3	A1	A1	A1	A1
Manual wire feeder DMY 4000															●		●
Automatic wire feeder DV-R 400														●		●	
Manual wire feeder DMX 5000			●						●								
Automatic wire feeder DV-R 500		●		●		●		●			●		●				
Automatic wire feeder DV-R 600 HD					●		●			●		●					
Auto. remote control box JOBMATIC	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Automatic card AUTO-CARD				●	●	●	●			●	●	●	●				
Bus card AUTO-BUS						●	●					●	●				
PC-TOOL option				■	■	■	■			■	■	■	■				
PC WELDSOFT software				■	■	■	■			■	■	■	■				

Recommended configuration

● Necessary equipment for installation

■ Optional equipment



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