



Ritmo

PLASTIC WELDING TECHNOLOGY



BUTT FUSION MACHINES

AUTOMATIC BUTT FUSION MACHINES



CNC for DELTA DRAGON:

This is an electronic device that can be used with some of the DELTA welding machines.

The CNC allows a simple control of the entire welding cycle by means of a control panel, very easy to use. With this electronic device, welding can be defined as:

- *assisted*, once the operator has only to interface with a software that shows on the display all the steps to do for welding;
- *automatic*, once the same software controls automatically and in a repetitive way the welding cycle (pressure/time parameters). Thanks to a memory it is possible to obtain a traceability of all the performed works.

EASY LIFE:

This is an electronic device that can be used with some of the DELTA welding machines.

The EASY LIFE allows a simple control of the entire welding cycle by means of a light touch control panel, very easy to use.

With this electronic device, welding can be defined as:

- assisted, once the operator has only to press the push buttons to start each phase of the cycle;
- semiautomatic, once there's a software that automatically controls the pressure/time parameters, and the repeatability of the welding, thanks to a memory (which data can be changed at any time).

INSPECTOR data-logger:

This is an electronic device that can be used with the DELTA electrohydraulic welders.

It keeps the pressure and real time parameters under control during the entire welding cycle, by means of a group of sensors, independent from the welding machine it self. The INSPECTOR is supplied with a software that helps to process the parameters set in by the operator (ex: diameter, SDR, etc.), in accordance to preset standards.

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CNC for DELTA DRAGON

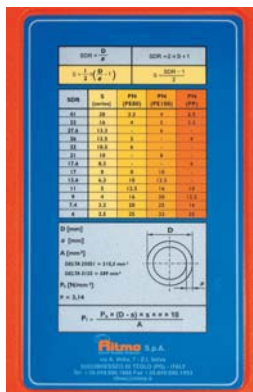
Butt fusion welding can be managed automatically by using the **Delta Dragon CNC** gearcase; this would eliminate any risk of error due to the operator. It is available in two versions: SA, Semi-Automatic and FA, Fully Automatic.



CNC gearcase



Control panel



Auxiliary panel

The CNC gearcase is available for the **Delta Dragon 250 B and 315 B models**. It is equipped with a compact and innovative plastic casing, which can resist to the most extreme job site working conditions; particular attention was paid to the connections as well, by applying military type plugs.

An easy to use software and control panel allow to view the most widely used welding standards (UNI – Italian, ISO – International, DVS – German, WIS – British). By selecting any one of the standard and pipe diameter/SDR, all the welding parameters (pressure, time, temperature) would be automatically calculated according to the standard itself. If the chosen welding cycle is not included in the standards listed above, it is possible to manually input the welding parameters (diameter, SDR, type of material, welding time and pressure...) by simply entering the “out of standard” mode. In both cases, the machine is able to automatically manage all the phases of the welding cycle, including milling and heating control. At the end of the welding cycle, all data are stored in the in-built memory, up to 600 records. Serial ports enable the operator to connect the gearcase to a portable serial printer (to obtain an immediate report) or to a PC. Using Ritmo data management software, the operator can create a database for the records of the whole welding history of each machine.

CNC hydraulic gearcase is usually provided as a component of Delta Dragon 250 B and Delta Dragon 315 B.

The complete configuration includes:

- a **linear transducer applied to the machine body**
- a manually extractable **heating element (SA)** or an automatically extractable heating element (FA)
- a **milling cutter**
- hydraulic hoses with non-drip quick couplings for connecting the gearcase to the machine body
- a **transducer cable** for connecting the gearcase to the machine body
- a **milling cutter/heating plate support**
- a **PC data transfer/management software**

TECHNICAL FEATURES

	CNC HYDRAULIC UNIT
Dimensions (W x D x H)	585 x 384 x 463 mm
Weight	39 Kg
Power supply	110 VAC - 50/60 Hz 230 VAC - 50/60 Hz
Nominal absorbed power	1100 W
Pressure's working range	0 ÷ 150 bar
Welding cycle	AUTOMATIC & SEMIAUTOMATIC
HEATING PLATE positioning / extraction	AUTOMATIC for type FA
HEATING PLATE positioning / extraction	MANUAL for type SA
Memory capacity	600 welding cycles
Type of welding	According to an existing Standard or out of Standard (by manual input of welding parameters)
Welding parameters	Standards (italian UNI, german DVS, english WIS, international ISO); Material (PE80 - PE100 - PP); Diameter (it's possible to set Ø out of Standards); SDR (or thickness if it is out of Standards)
Available traceability data	Operator (name or code) Job (name or code) Building yard (name or code) Work (name or code) Pipe manufacturer (name or code)
Display	Alpha-numeric - LCD
User interface	User friendly control panel. Through 6 keys (▲▶▼◀"ENTER"-"C") is possible a quick and simple management of all the welding sequences and to pass through the set menu.
Main menu	Start welding (goes to the welding section directly) Welding setup (sets all welding parameters) CNC setup (sets the welding machine parameters) Welding info (sets the traceability data) Other operations (manages the free machine movements, printing, etc)
Heating plate temperature	Managed by the CNC electronic board
Pre-setting for connection to:	
Yard serial printer	Prints a report with all the welding data
PC	Transfers the welding data to the PC and manages them through a software
Scanner	The bar-code read by the scanner is automatically memorised for traceability of: - operator data (badge - ref. ISO 12176-3 Standard) - welding data (manufacturer, kind of material, diameter, SDR, etc - ref. ISO/WD 12176-4 Standard).
Diagnostic	Automatic system to check the right working of sensors and probes
Temperature probes	- external: takes the ambient T° - internal: monitors the CNC internal T°
System to relieve the welding bead	Through a linear trasducer applied to the machine body
Safety	emergency-stop button to cut off the pressure [isolation class I]
Protection degree	IP 54



CNC connections



Transducer + connection cable

CNC CONFIGURATION

```
Facing pressure: 10 bar
Heater offset: 0 des.
Bead setup: 4
Memory occupied: 3 / 600
```

WELDING REPORTS

```
Operator: RITMO!
Job: RITMO!
Workyard: RITMO!
Work: RITMO!
Pipe manufact.: RITMO!
Pipe material: PE80
Machine model: Delta 315 589mm
Next revision: 01/01
Welder serial numb.: 0
Welding numb.: 3
Workyard weld. numb.: 3
Resolution: ISO 14414 (06/96)
Diameter: 180 mm
Sdr: 7.4
Thickness: 24.6 mm
Nominal pressure: 0.18 N/mm²
Nominal bead: 2.0 mm
Allignment: 0.3 mm
Pressure losses: 3 bar
--- WELDING RECORDING ---
P1 (bar) Nom: 40 Min: 40 Max: 40
P2 (bar) Nom: 6 Min: 0 Max: 0
T2 (s) Nom: 120 Real: 120
T3 (s) Max: 5 Real: 4
T4 (s) Nom: 5 Real: 6
P5 (bar) Nom: 40 Min: 39 Max: 41
T5 (s) Nom: 600 Real: 598
P6 (bar) Nom: 0 Min: 0 Max: 0
T6 (s) Nom: 0 Real: 0
HP (C) Nom: 210 Min: 203 Max: 203
Welding date: 05/05/05
Begin time: 08:51
End time: 09:05
Ambient t.: 19 C
WELDING CORRECT
NO FAULT
```

Welding report



EASY LIFE



Control panel

EASY LIFE

This is a completely new way of conceiving the butt welding process.

The **EASY LIFE** manages the welding cycle in a semi-automatic way. It can be applied to DELTA DRAGON 160, DELTA DRAGON 250 B, DELTA DRAGON 315 B and DELTA 500 (DELTA 250 TRAILER and DELTA 355 ALL TERRAIN already incorporates the Easy Life system).

The unit features a light-touch control panel that replaces entirely the traditional gearcase.

The Easy Life enables a simple and quick selection of pressure, time and temperature data, which can be modified whenever necessary. The welding process buttons are logically displayed, therefore making its use easily understandable. The electronic of the machine allows also the continuous repeating of the welding cycles, and automatically controls the parameters. The use of this unit with the Inspector data-logger guarantees the operator with welded joints compliant with the preset welding standards.

The Easy Life system is very flexible, and can adapt to other welding methods, such as "dual pressure"(*), with the same ease of use and certification.

(*) this method is used when welding PE 100 (UNI Italian standard) and PE 80-PE 100 (WIS British standard).

The **Easy Life** gearcase for the **Delta 160 - 250 B - 315 B (230 V) and Delta 500 (400V)** welding machines consist of:

- an *extractable box* in plastic featuring:
- a *control panel* with push buttons for managing "programming and process", welding pressure/time
- an *electric panel* with a safety circuit breaker and overload cutout
- *power outlets* for the heating plate and milling cutter, with connection for the electronic data-logger Inspector
- bearing frame and stainless steel box containing the *hydraulic unit*
- *hydraulic hoses* with non-drip fast couplings

TECHNICAL FEATURES

Used with:	DELTA 160 B - 250 B - 315 B (230 V)
Dimensions (W x D x H)	596 x 438 x 573 mm
Weight	48,00 Kg
Power supply (DELTA 160 - 250 B - 315 B)	230 V - Single phase -50/60 Hz
Power supply (DELTA 500)	400 V - three-phase -50/60 Hz
Maximum absorbed power	1100 W
Pressure's working range	0 ÷ 150 bar

