



EQUIPMENTS FOR THE WELDING OF UPPER CUP OF GAS CYLINDER





1. PREAMBULE :

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The photographs are only for information and explanation and cannot be contractual.

2. SCOPE OF THIS OFFER :

This offer is made on information supplied to us as follows:

Job: Continuous circular welding of neck on the upper half on domestic gas bottle

Process: Submerged Arc process

Preparation: Under customer responsibilities

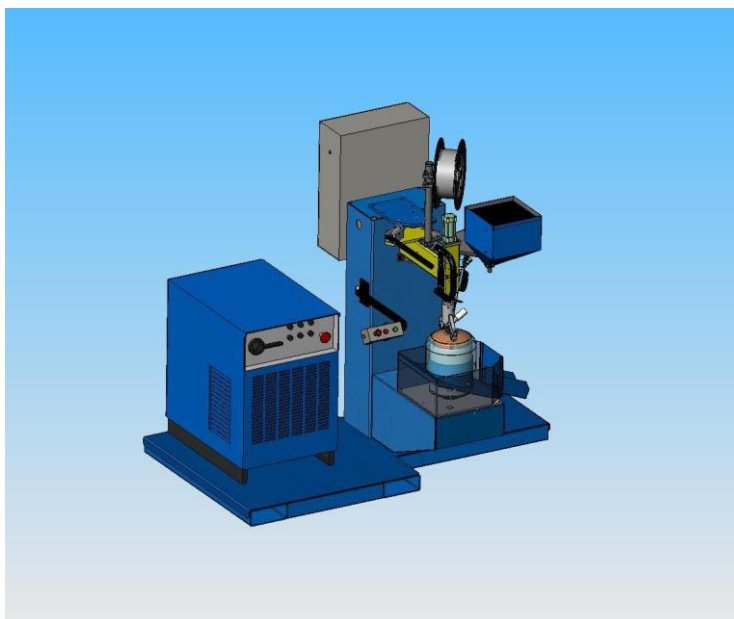
Welding result: No engagement and no responsibilities for the welded final results and final product homologation. It's under customer responsibilities.

Upper half bottle: Diameter = 300 mm
Length = 266,5 mm
Thickness = 3,3 mm

Based on it, our proposal is based on the supply of a complete welding machine comprising of:

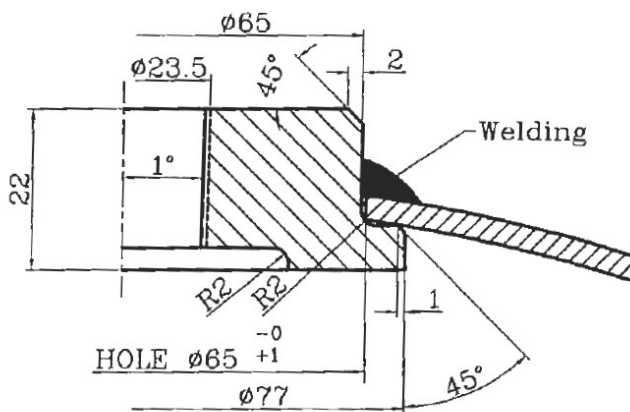
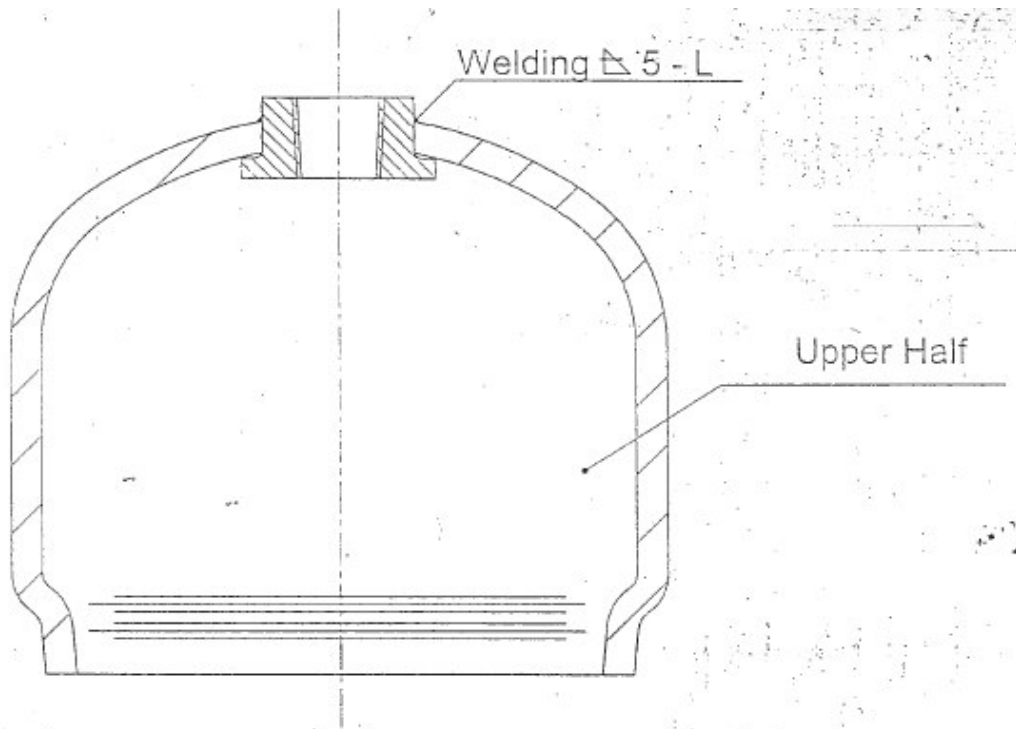
- ✓ A standard machine with platform and components,
- ✓ A work piece tooling device,
- ✓ A Subarc 5 SAW welding system.

This offer includes the commissioning in our factory, a technical and electrical technical files (3 copies in English languages)

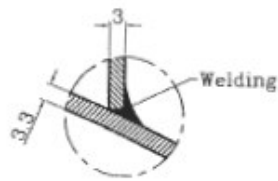




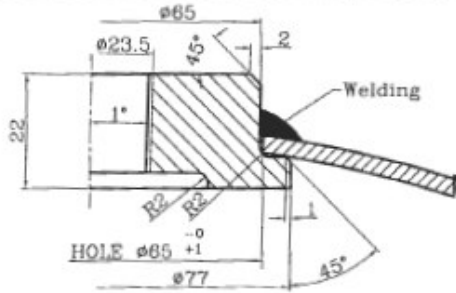
3. PREPARATION AND PART TO WELD :



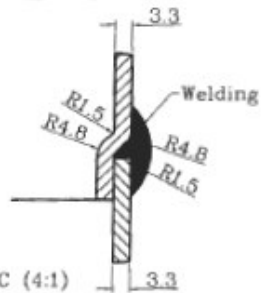
DETAIL B (4:1)



DETAIL A (4:1)



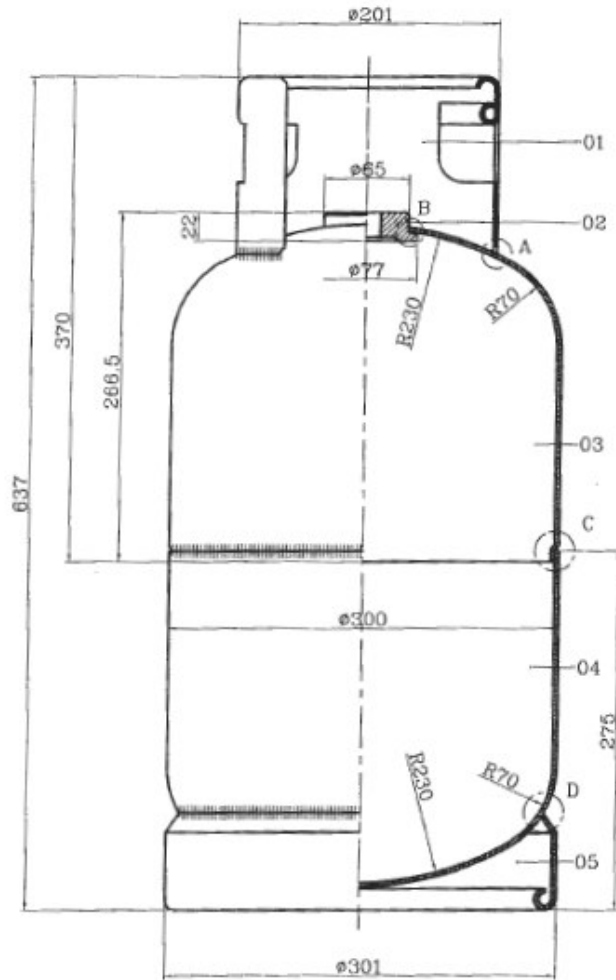
DETAIL B (4:1)



DETAIL C (4:1)



DETAIL D (4:1)



NOTES :
 Cylinder for L.P.G. 00 KG
 Nominal Volume LT. 30
 Real Volume LT. 30 -0 +1%
 Diameter 300 mm
 Net Weight 00 KG.

General Tol. DIN 7168				<input checked="" type="checkbox"/> = \sim <input checked="" type="checkbox"/> = ∇ <input checked="" type="checkbox"/> = $\nabla\nabla$ <input checked="" type="checkbox"/> = $\nabla\nabla$ <input checked="" type="checkbox"/> = $\nabla\nabla\nabla$		Weight xx Kg.	
Dim.	$0-30$	$30-120$	$120-500$	$500-1000$	Product Code: _____		
Linear Dim.	± 0.15	± 0.25	± 0.35	± 0.50	Designation: Cylinder for L.P.G. 30 LT.		
Radial Chamf.	± 1	± 2	± 4	± 6	Material: STEEL		
Angular	$\pm 1^\circ$	$\pm 2^\circ$	$\pm 4^\circ$	$\pm 6^\circ$	Quantity: 1	Drawing No.: ...	Scale: A4
Date: _____ Design: _____ Aprob: _____					Rev. No.: 00		
Zone: _____ Update: _____ Date: _____ Name: _____					Raw Material: _____ Original Code: _____		

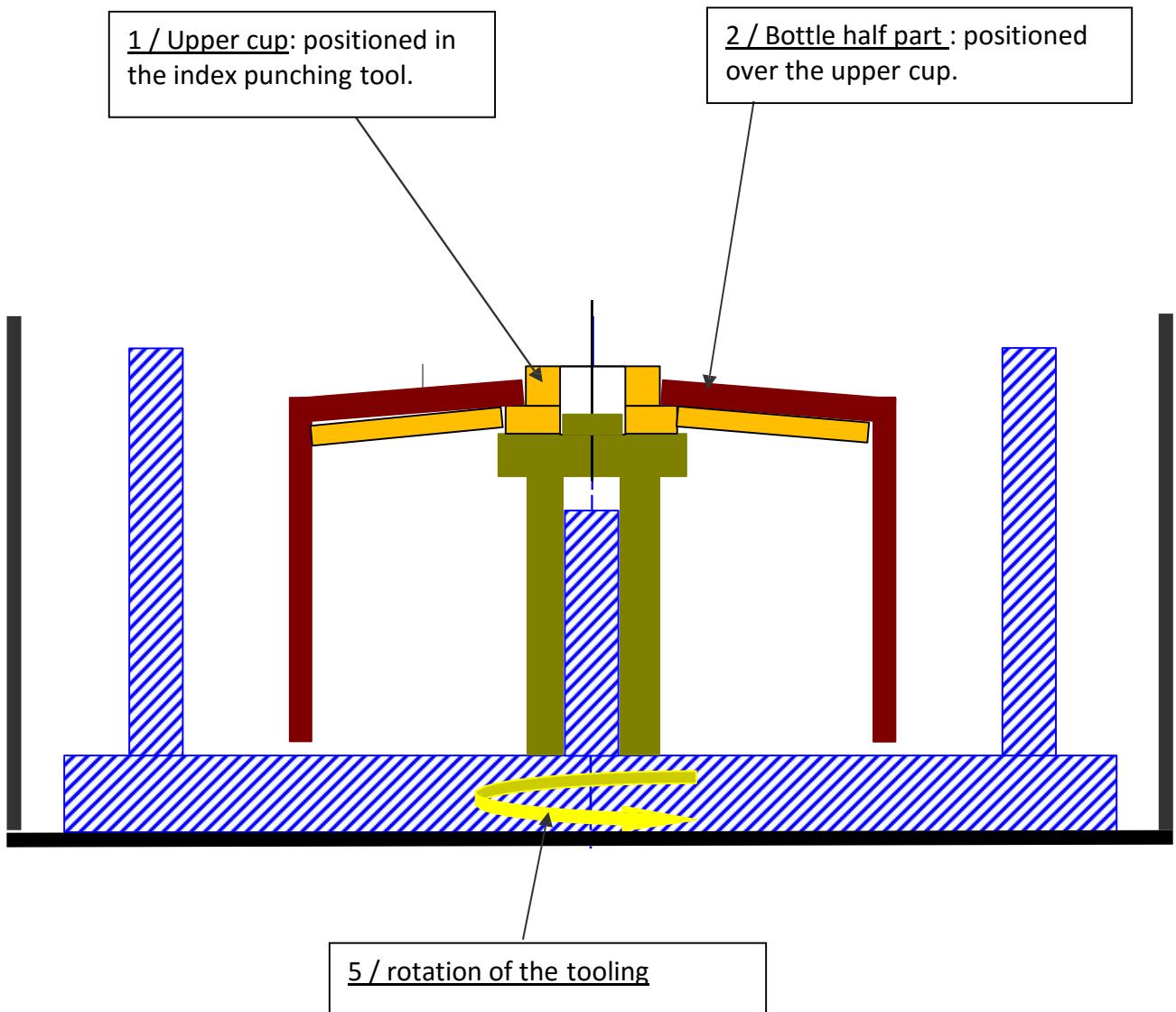
4. WELDING CYCLE:

1. Manual loading of the work pieces by operator,
2. Manual positioning of the articulated support,
3. Action on pushbutton :clamping of work pieces,
4. Manual preparation of the torch position and welding conditions (wire cut, flux...),
5. Action on welding start pushbutton (ON) :
 - arc striking,
 - work pieces rotation: 360° rotation + overlap,
6. Automatic stopping of welding and work piece movement in case of normal cycle [or manual action on welding stop pushbutton (OFF)],
7. Action on pushbutton : unclamping of work pieces,
8. Manual evacuation of the articulated support,
9. Manual unloading of work piece by operator.

The above cycle operations are provided for information only and may vary according to:

- cleanliness of work piece,
- quality of preparation,
- position of torch,
- consumables : wire and flux used,
- ...

Details of loading and positioning of work pieces:

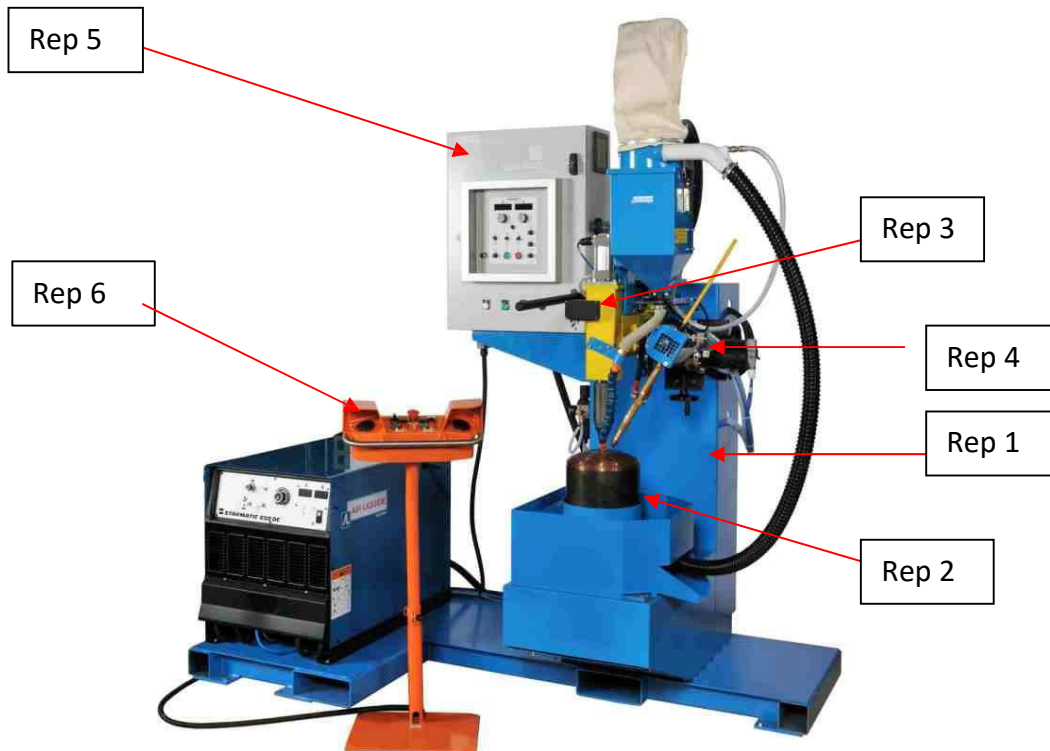




5. EQUIPMENTS DESCRIPTION:

We propose a configuration of standard equipments specifically assembled for your application and consisting of the principal elements describe in the following pages.

A platform concept integrates all the necessary elements. This design facilitates fast and easy installation on site and the easy relocation at a later date if required.



- A **robust mechanical structure (rep 1)** supports all the equipments as the welding head...
- A **tooling unit (rep 2)** with a rotating plate and a special tooling device.
The tooling device include the necessary for positioning and centring the two parts (neck and upper half bottle) and to guarantee a high production rate.
The motorised unit is integrated into the mechanical welded structure, protected from impacts and dust.
- An **articulated support (rep 3)** supporting the welding head and pivoting to clear space for the loading and unloading of the work piece.

Axis pivot: for manual pivoting



- A mono **SAW** welding head (rep 4), including mainly:
 - A single torch,
 - Wire feeding unit,
 - Flux distribution,
 - Two manual slides (travel = 60mm) for the vertical and transversal adjustment of the torch in the joint.



- **A control and electrical panel (rep 5)** regroups the electrical and pneumatic components; these are in a protected and ventilated box, protected from the shocks and dust.
- **A control panel (Rep5)** including our Gyromatic modular systeme



- **A welding remote control (rep 6)** with emergency stop and for start and stop the welding cycle.



6. WELDING EQUIPMENTS: SUBARC 5

Welding control unit box



- arc voltage display and welding current display
- arc voltage and wire feed adjustment with single turn potentiometer
- controls of the welding cycle
- pre-setting and pre-selection of the welding current and voltage parameters

Devimatic DX7 wire feed unit

- A tachometer driven by the wire feed motor guarantees very accurate welding control.
- A simple and rugged mechanical assembly that is easy to configure to suit your application.
- Fine adjustments for all degrees of freedom in rotation allow easy adjustment of the point at which the wire impinges on the work piece.
- Base equipment: linear speed of wire feed between 0,17 to 4,2 m/min,
- Single wire configuration for wire size = 2,4 mm (other wire diameter are available)



Flux recovery equipment with hopper (10 l) and manual flux supply valve

This is a compact, self-contained unit that ensures the recovery and supply of the welding protection flux. Considerably reduces manual flux tank refilling operations. This is fitted with a powerful "VENTURI" with compressed air supply tap and a cloth sleeve breather in the tank cover.

It receives compressed air at the network pressure.



Power source: ~~1003-DC~~ => **650DC**

- Rugged, reliable, proof against aggressive industrial environments,
- Fan cooled, fitted with thermal cut-out, easy to move using crane or forklift,
- Electronic protection against overload
- Quick connection to the core of the installation by simple and accessible connectors
- Remote controlled.



- 1000 A / 44V duty cycle at 100 %
- 400/ 440V - 50/60 Hz - 3 phases
- Technology: Thyristors
- Primary current at 100% duty cycle: 95 A
- Maximum power consumption : 65,8 Kva
- Temperature range : 0-40°C
- Protection index : IP23
- Insulation class : H

7. ENVIRONNEMENT CONDITIONS

Standards and Regulations

Our machines are studied and manufactured in accordance with the European standards and regulations. As these equipments will integrate with other equipments, ALWF provide only a declaration of incorporation EC. The customer is responsible for the CE certification.

Operation conditions for the electric cabinet (control panel)

- Ambient temperature range: 15 ~ 50°C max.
- Ambient humidity range: 20 ~ 80 % HR max.
- No condensation
- No dust

Electrical supply

The electrical connections of any nature outside the machine and the main power to the machine are not our supplying.

The characteristics of the main power to supply are:

- Voltage: 3 phases 300 V + ground connection
- Frequency: 50 Hz
- Estimate power supply: *≈ to be confirm latter*

Fluid supply

The fluid connections of any nature outside the machine and the supplying with pressure reducing stations to the machine are not our supplying.

4 OTHER COMMERCIAL CONDITIONS

Delivery time

4/6 Months ex works France or Italy from receipt of down payment and valid purchasing order .Exact delivery will be confirmed on receipt of order



EQUIPMENTS FOR THE SAW CIRCULAR WELDING OF GAS CYLINDER BOTTLE





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2. SCOPE OF THIS OFFER :

This offer is made on information supplied to us as follows:

Job: Continuous circular welding of the half and the bottom parts on domestic gas bottle

Process: Submerged Arc process

Preparation: Under customer responsibilities

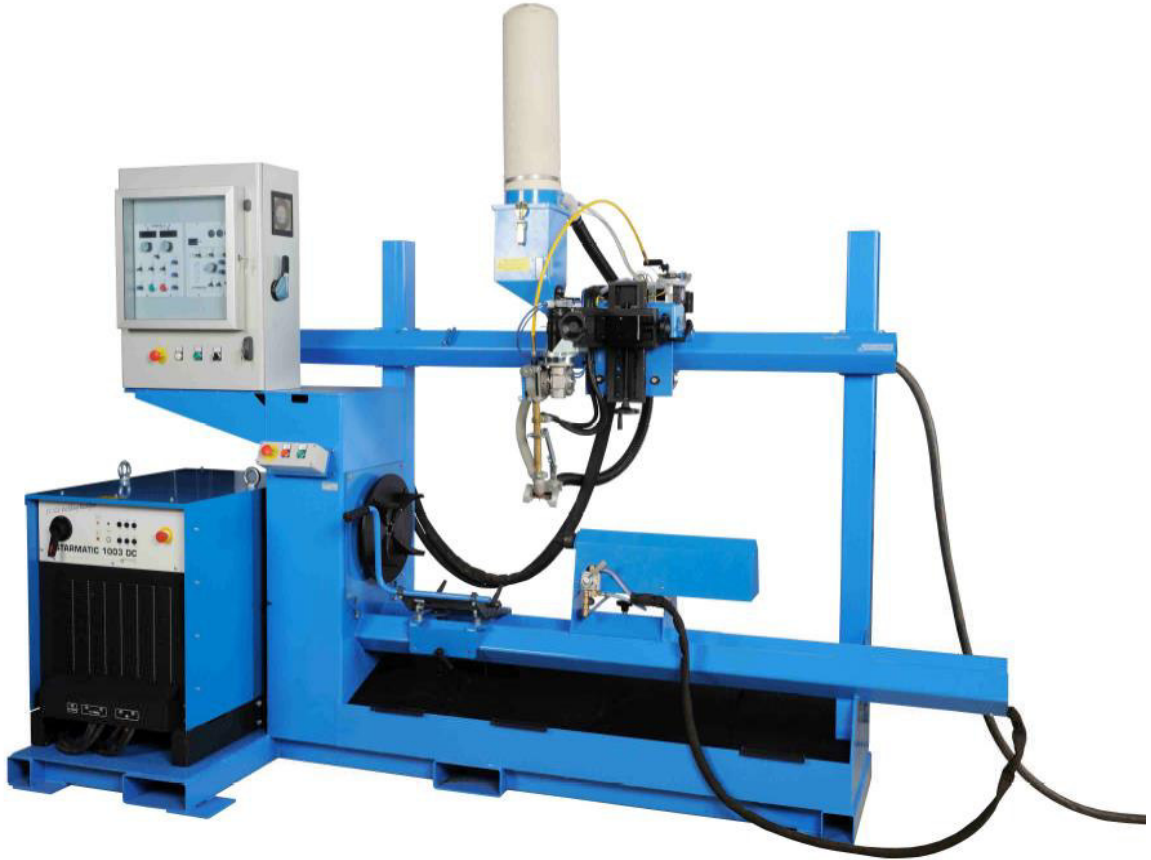
Welding result: No engagement and no responsibilities for the welded final results and final product homologation. It's under customer responsibilities.

Upper half bottle: Diameter = 300 mm
 Length = 637 mm
 Thickness = 3,3 mm

Based on it, our proposal is based on the supply of a complete welding machine comprising of:

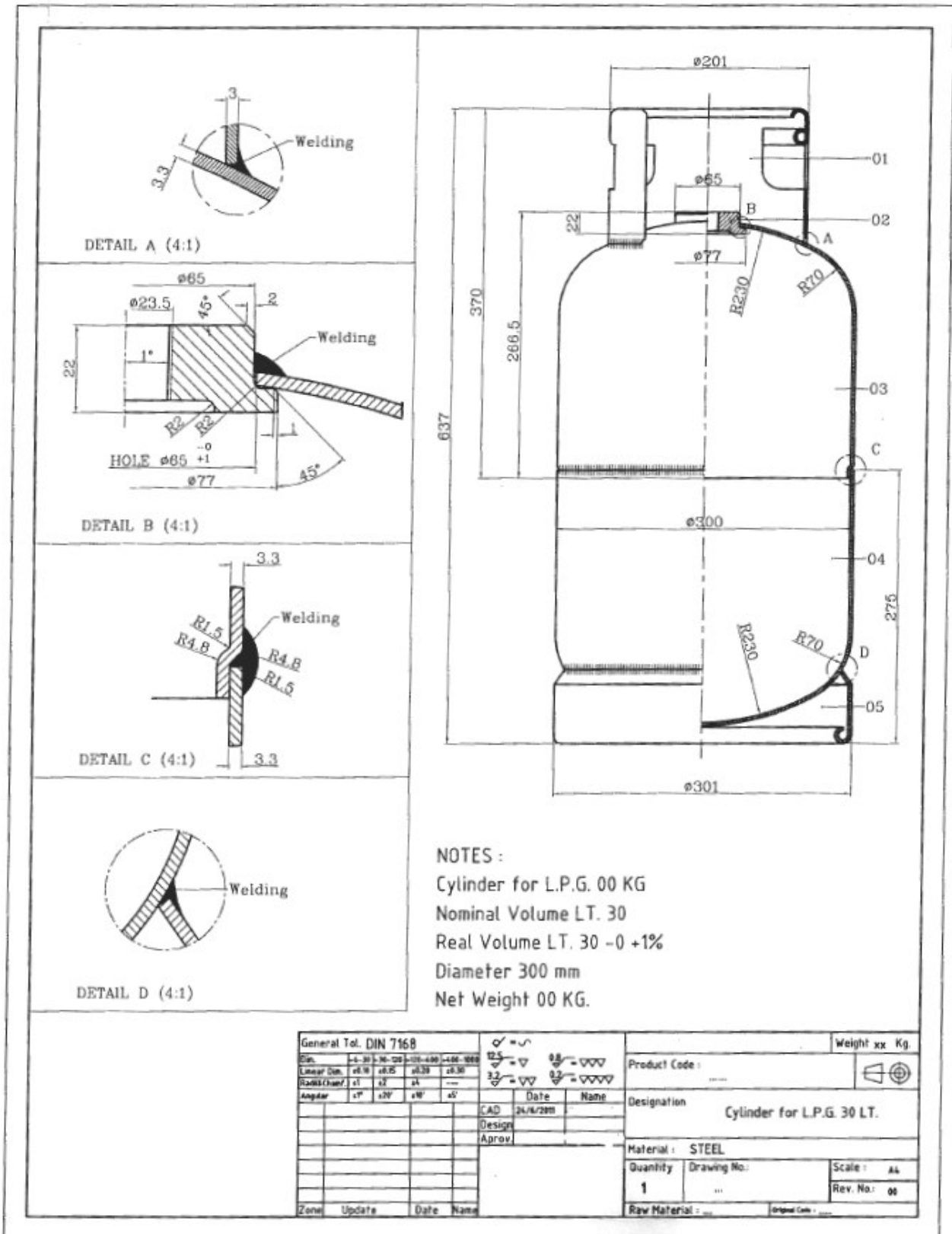
- ✓ A standard machine with platform and components,
- ✓ A work piece tooling device,
- ✓ Two Subarc 5 SAW welding systems.

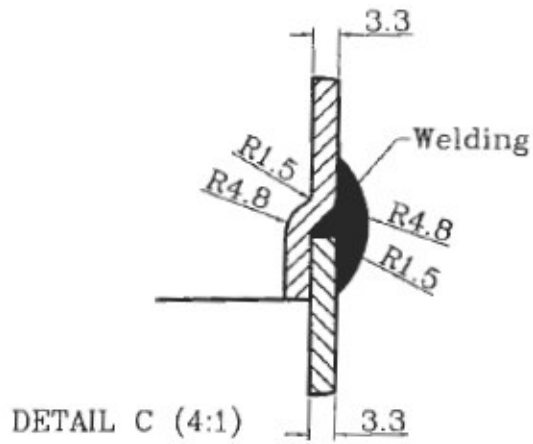
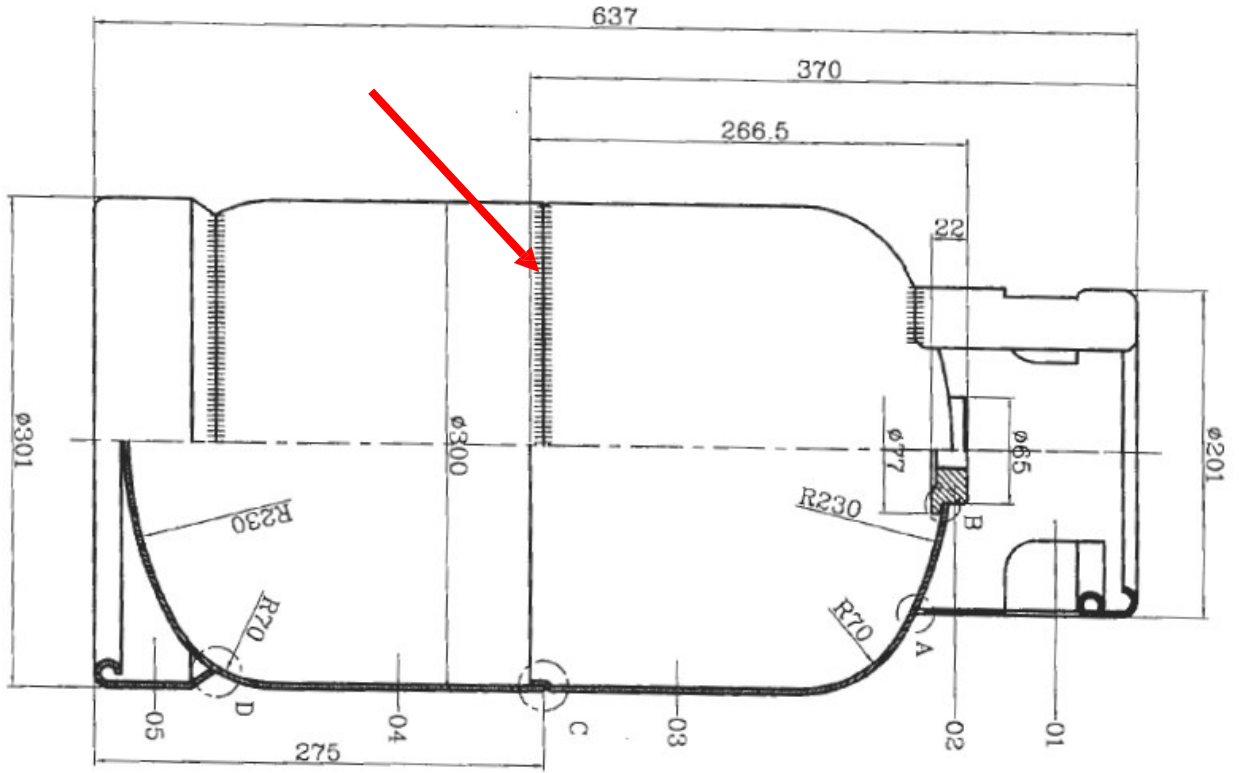
This offer includes the commissioning in our factory, a technical and electrical technical file (3 copies in English language)





3. PREPARATION AND PART TO WELD :







4. WELDING CYCLE:

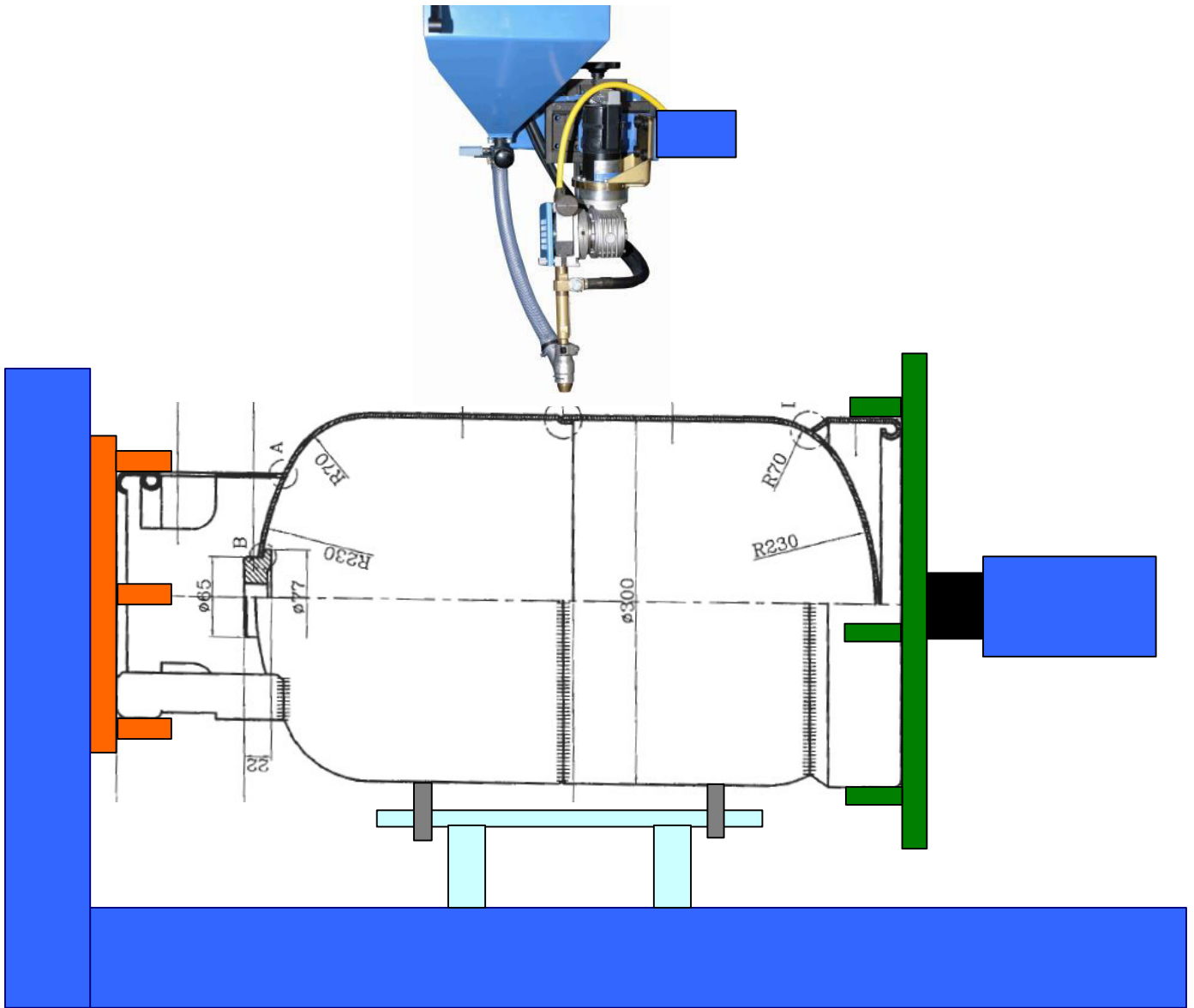
1. Manual loading of the work pieces by operator,
2. Action on pushbutton : clamping of work pieces,
3. Manual preparation of the torches positions and welding conditions (wire cut, flux...),
4. Action on welding start pushbutton (ON) :
 - 4.1. arc striking,
 - 4.2. work pieces rotation: 360° rotation + overlap,
 - 4.3. the torch n°2 (for the bottom piece) stops,
 - 4.4. work pieces rotation: a second 360° rotation + overlap, (for the 2nd passes)
5. Automatic stopping of welding and work piece movement in case of normal cycle [or manual action on welding stop pushbutton (OFF)],
6. Action on pushbutton : unclamping of work pieces,
7. Manual unloading of work piece by operator.

The above cycle operations are provided for information only and may vary according to:

- cleanliness of work piece,
- quality of preparation,
- position of torch,
- consumables : wire and flux used,
- ...



Details of loading and positioning of work pieces:

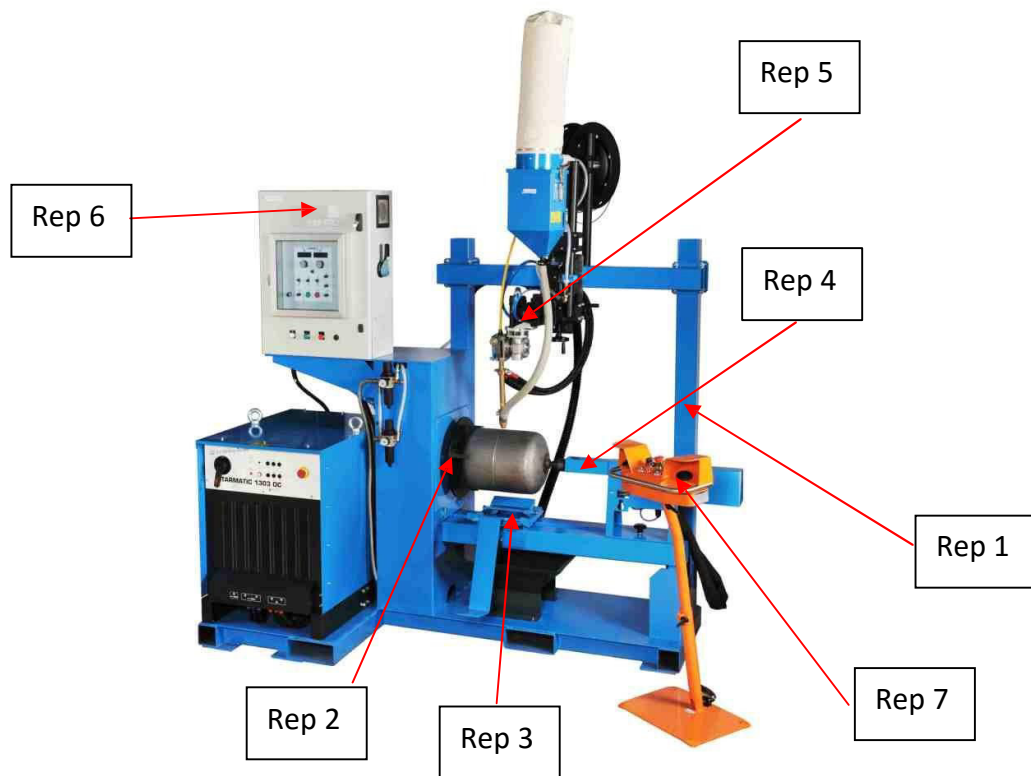




5. EQUIPMENTS DESCRIPTION:

We propose a configuration of standard equipments specifically assembled for your application and consisting of the principal elements describe in the following pages.

A platform concept integrates all the necessary elements. This design facilitates fast and easy installation on site and the easy relocation at a later date if required.

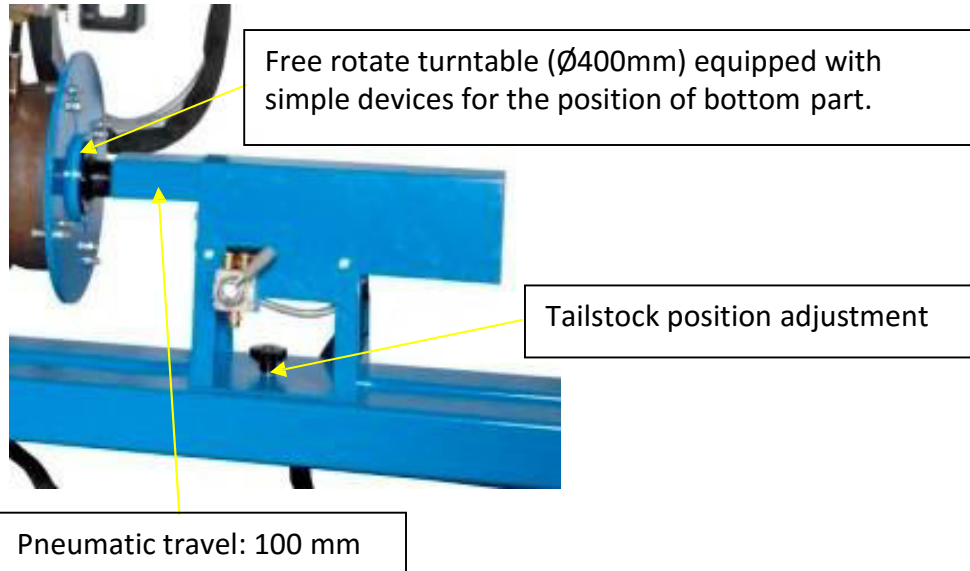


- A **robust mechanical structure (rep 1)** supports all the equipments as the welding head...
- A **motorised rotation unit (rep 2)** with a rotating plate ($\varnothing 400\text{mm}$) equipped with devices for positioning and centring the handle.
The motorised unit is integrated into the mechanical welded structure, protected from impacts and dust (ie: rotating speed: 0.3 to 8.5 rpm).
- A **manual mechanical support (rep 3)** to support the work pieces for the loading and unloading.





- **A pneumatic tailstock (rep 4)** with dead centre equipped with a flow limiter enabling adjustment of the forward or reverse speed translation and a stop cylinder safety device blocking the dead centre in the position which it occupies in case of accidental cut off the compressed air supply.

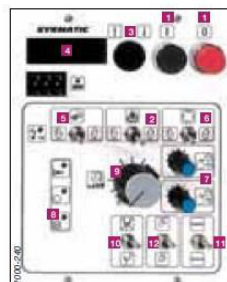


- **Two mono SAW welding head (rep 5)**, including mainly:
 - A single torch,
 - Wire feeding unit,
 - Flux distribution,
 - Two manual slides (travel = 60mm) for the vertical and transversal adjustment of the torch in the joint.



- **A control and electrical panel (rep 6)** including our Gyromatic modular system:

- 1 Automatic cycle start/stop.
- 2 Manual control to start up part rotation with direction selector.
- 3 Raise/lower torch (option).
- 4 Display of rotation speed (option).
- 5 Selection of part rotation direction in foot pedal control mode.
- 6 Selection of workpiece rotation direction in automatic mode.



- 7 Time-delays controlling overlap area and stop time before reset.
- 8 LED display of current cycle status.
- 9 Adjustment of workpiece rotation speed by potentiometer to guarantee constant, regular movement.
- 10 Selection of automatic cycle mode: with or without welding.
- 11 Selection of welding mode: continuous or intermittent.
- 12 Selection of one or two lathes.

- **A welding remote control (rep 7)** with emergency stop and for start and stop the welding cycle.

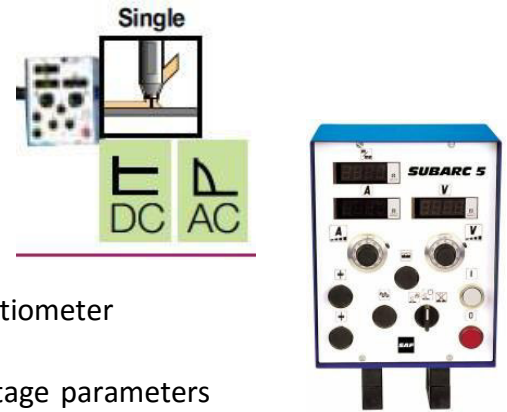




6. WELDING EQUIPMENTS: 2 x Subarc 5 system

Welding control unit box

- arc voltage display and welding current display
- arc voltage and wire feed adjustment with single turn potentiometer
- controls of the welding cycle
- pre-setting and pre-selection of the welding current and voltage parameters



Devimatic DX7 wire feed unit

- A tachometer driven by the wire feed motor guarantees very accurate welding control.
- A simple and rugged mechanical assembly that is easy to configure to suit your application.
- Fine adjustments for all degrees of freedom in rotation allow easy adjustment of the point at which the wire impinges on the work piece.
- Base equipment: linear speed of wire feed between 0,17 to 4,2 m/min,
- Single wire configuration for wire size = 2,4 mm



Flux recovery equipment with hopper (10 l) and manual flux supply valve

This is a compact, self-contained unit that ensures the recovery and supply of the welding protection flux. Considerably reduces manual flux tank refilling operations. This is fitted with a powerful "VENTURI" with compressed air supply tap and a cloth sleeve breather in the tank cover.

It receives compressed air at the network pressure.



Power source: ~~1003-DC~~ => 650DC

- Rugged, reliable, proof against aggressive industrial environments,
- Fan cooled, fitted with thermal cut-out, easy to move using crane or forklift,
- Electronic protection against overload
- Quick connection to the core of the installation by simple and accessible connectors
- Remote controlled.



- 1000 A / 44V duty cycle at 100 %
- 400/ 440V - 50/60 Hz - 3 phases
- Technology: Thyristors
- Primary current at 100% duty cycle: 95 A
- Maximum power consumption : 65,8 kVA
- Temperature range : 0-40°C.
- Protection index : IP23
- Insulation class : H



7. ENVIRONNEMENT CONDITIONS

Standards and Regulations

Our machines are studied and manufactured in accordance with the European standards and regulations. As these equipments will integrate with other equipments, ALWF provide only a declaration of incorporation EC. The customer is responsible for the CE certification.

Operation conditions for the electric cabinet (control panel)

- Ambient temperature range: 15 ~ 50°C max.
- Ambient humidity range: 20 ~ 80 % HR max.
- No condensation
- No dust

Electrical supply

The electrical connections of any nature outside the machine and the main power to the machine are not our supplying.

The characteristics of the main power to supply are:

- Voltage: 3 phases 380 V + ground connection
- Frequency: 50 Hz
- Estimate power supply: *≈ to be confirm latter*

Fluid supply

The fluid connections of any nature outside the machine and the supplying with pressure reducing stations to the machine are not our supplying.



EQUIPMENTS FOR HANDLE MIG WELDING OF GAS CYLINDER BOTTLE





1. PREAMBULE

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2. SCOPE OF THIS OFFER

This offer is made on information supplied to us as follows:

Job: Discontinuous circular welding of the handle on the upper half gas bottle

Process: MIG process

Preparation: under customer responsibilities

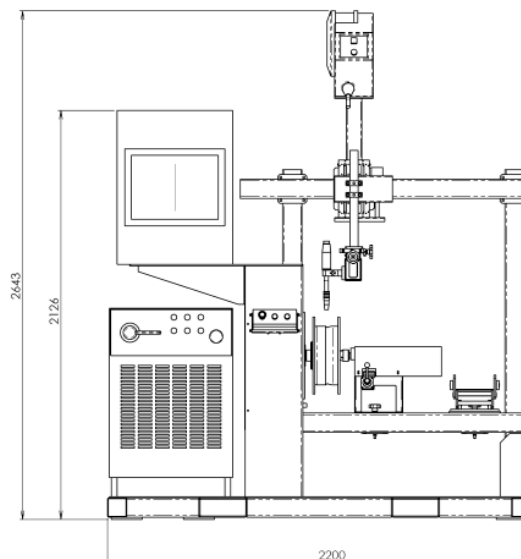
Welding result: No engagement and no responsibilities for the welded final results and final product homologation. It's under customer responsibilities.

Upper half bottle : Diameter = 300 mm
 Length = 370 mm
 Thickness = 3,3 mm

Based on it, our proposal is based on the supply of a complete welding machine comprising of:

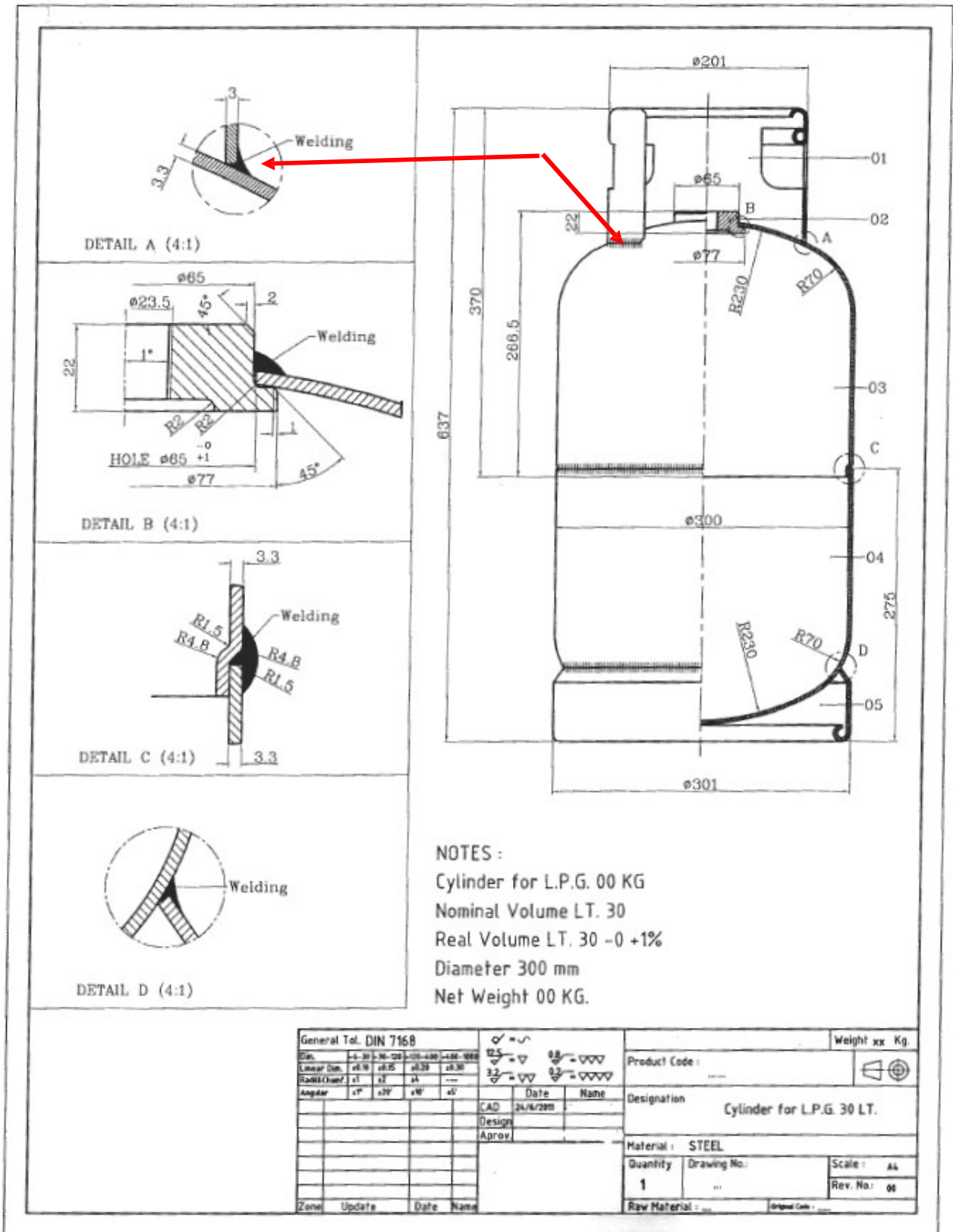
- ✓ A standard machine with platform and components,
- ✓ A work piece tooling device,
- ✓ A MIG welding systems.

This offer includes the commissioning in our factory, a technical and electrical technical file (3 copies in English language).





3. PREPARATION AND PART TO WELD



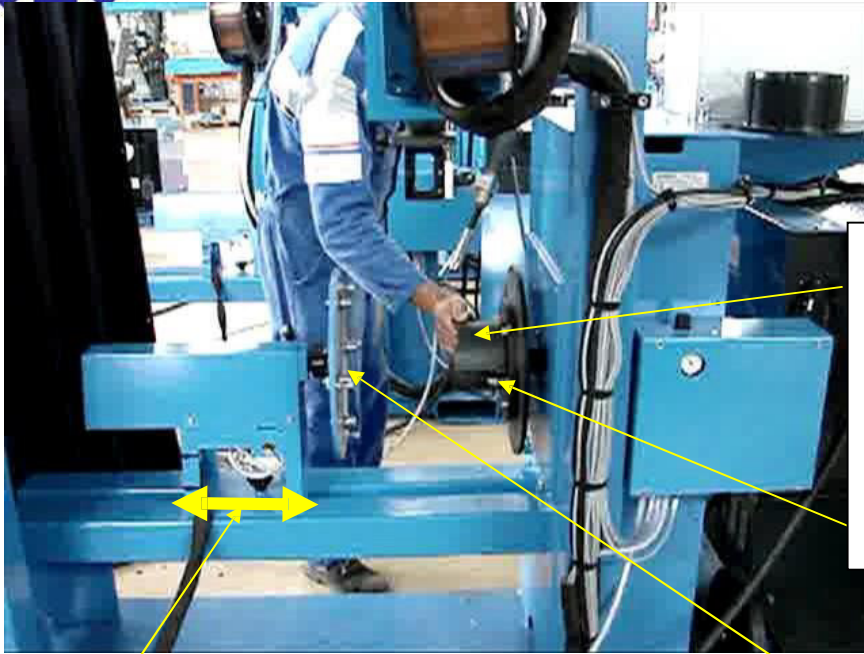


4. WELDING CYCLE

1. Manual loading of the work pieces by operator,
2. Action on pushbutton (located on the tailstock) : In contact positioning of piece through advance of pneumatic tailstock,
3. Action on “cycle start up” pushbutton :
 - Lowering of the torch,
 - Work piece circular movement start up,
 - Arc striking (temporisation after circular movement),
 - Welding of the programmed sequence (3 or 4 welds),
 - work pieces rotation: 360° rotation + overlap (adjustable)
 - automatic stopping of welding,
 - automatic stopping work piece movement when return to origin,
 - Raising of welding torch.
4. Action on unclamping pushbutton : unclamping of work piece by reversing of the pneumatic tailstock,
5. Manual unloading of work piece by operator

The above cycle operations are provided for information only and may vary according to:

- cleanliness of work piece,
- quality of preparation,
- position of torch,
- consumables : wire and flux used,
- ...



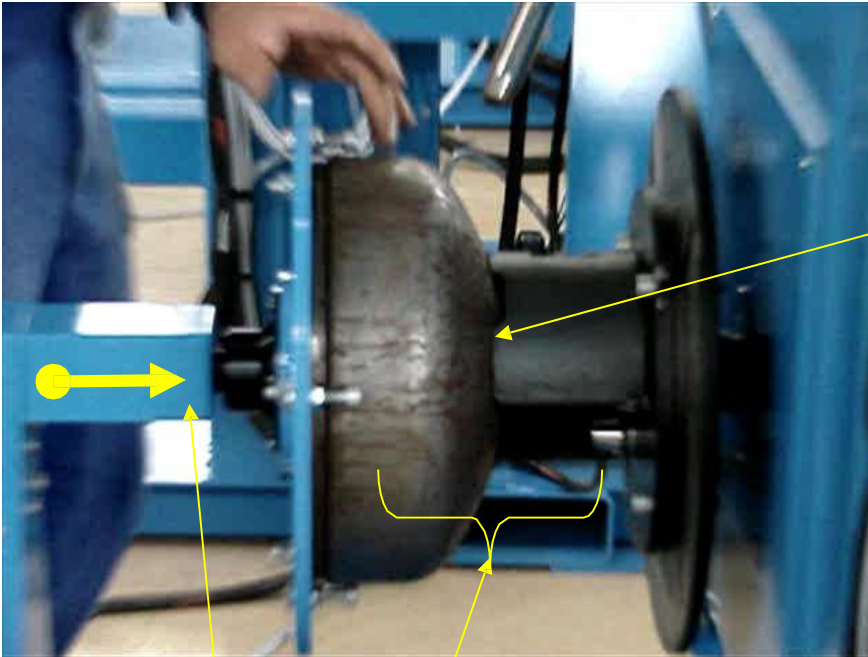
- Manual loading of the handle on a motorised turntable,
- The turntable is equipped with locating pins (the handle is always loaded in the same position).

The tailstock is adjustable manually on the beam for the two type of half bottle piece.

A second free rotation turntable is installed on a pneumatic tailstock for the half bottle piece.

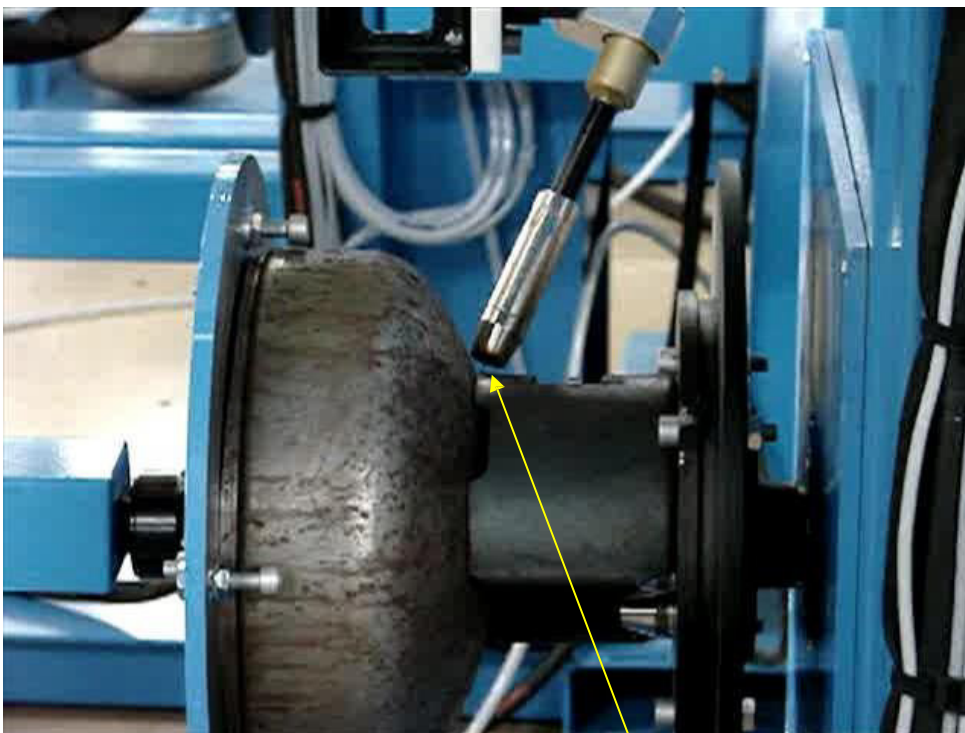


- Manual loading of the half bottle piece (simple positioning by screws).



The quality of the joint to weld is done by the quality of fabrication of the pieces.

In contact positioning of the half bottle and handle by tailstock translation.



- Pieces in rotation,
- Torch in lowered position, ready to weld.



- Welded joints

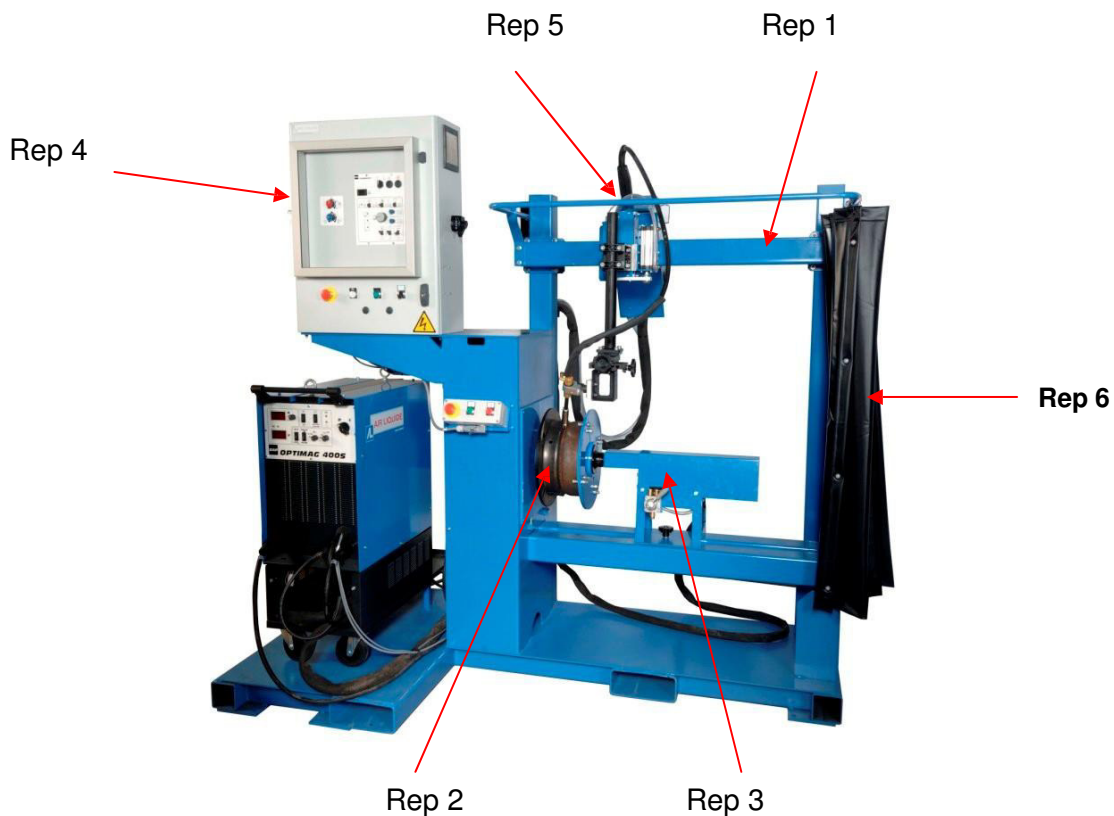
5. EQUIPMENTS

DESCRIPTION

(HORIZONTAL WELDING POSITION RECOMMENDED BY ALW)

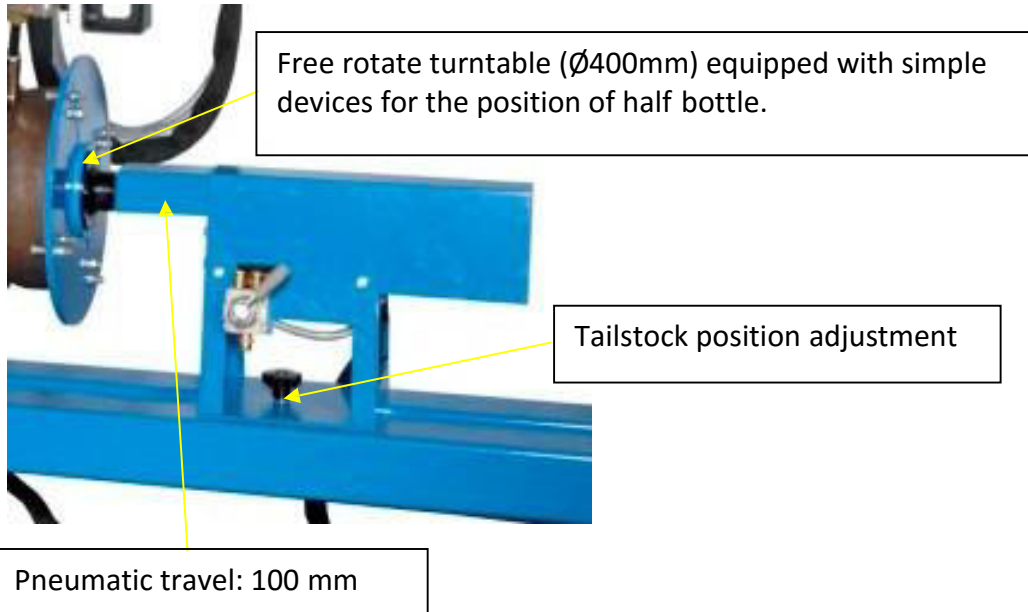
We propose a configuration of standard equipments specifically assembled for your application and consisting of the principal elements describe in the following pages.

A platform concept integrates all the necessary elements. This design facilitates fast and easy installation on site and the easy relocation at a later date if required.



PICTURE SHOWES MACHINE IN HORIZONTAL WELDING POSITION

- **A robust mechanical structure (rep 1)** supports all the equipments, as the welding head ...
- **A motorised rotation unit (rep 2)** with plate ($\varnothing 400\text{mm}$) and tooling allowing the centring of the handle work piece. The motorised unit is integrated into the mechanical structure, protected from impacts, dust and spatter (ie: rotating speed: 0.3 to 8.5 rpm).
- **A pneumatic tailstock (rep 3)** with dead centre equipped with a flow limiter enabling adjustment of the forward or reverse speed translation and a stop cylinder safety device blocking the dead centre in the position which it occupies in case of accidental cut off the compressed air supply.



- A control panel (Rep4) including our Gyrmatic modular system :

<ul style="list-style-type: none"> 1 Automatic cycle start/stop. 2 Manual control to start up part rotation with direction selector. 3 Raise/lower torch (option). 4 Display of rotation speed (option). 5 Selection of part rotation direction in foot pedal control mode. 6 Selection of workpiece rotation direction in automatic mode. 		<ul style="list-style-type: none"> 7 Time-delays controlling overlap area and stop time before reset. 8 LED display of current cycle status. 9 Adjustment of workpiece rotation speed by potentiometer to guarantee constant, regular movement. 10 Selection of automatic cycle mode: with or without welding. 11 Selection of welding mode: continuous or intermittent 12 Selection of one or two lathes.
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- A torch pneumatic slide (travel 100mm) (Rep 5) for the execution of the welding cycle and include also manual slides for the vertical and horizontal adjustment of the torch in the joint (travel 50mm).
- A protective screen (Rep 6) : to protect the operator from light radiations
- A welding control box with emergency stop and “start and stop pushbuttons “for the welding cycle.



6. WELDING EQUIPMENTS : MIG MAG PROCESS

TO BE DEFINE BETWEEN CITOMIG, CITOPULS AND CITOWAVE

The installation also includes :

The TR 600 Liquid cooled automatic welding torch with coaxial cable 1 M : 400A at 100%

2003-065



8. ENVIRONNEMENT CONDITIONS

Standards and Regulations

Our machines are studied and manufactured in accordance with the European standards and regulations. As these equipments will integrate with other equipments, ALWF provide only a declaration of incorporation EC. The customer is responsible for the CE certification.

Operation conditions for the electric cabinet (control panel)

- Ambient temperature range: **15 ~ 50°C max.**
- Ambient humidity range: 20 ~ 80 % HR max.
- No condensation
- No dust

Electrical supply

The electrical connections of any nature outside the machine and the main power to the machine are not our supplying.

The characteristics of the main power to supply are:

- Voltage: 3 phases 380 V + ground connection
- **Frequency: 50 Hz**
- Estimate power supply: *≈ to be confirm latter*

Fluid supply

The fluid connections of any nature outside the machine and the supplying with pressure reducing stations to the machine are not our supplying.

10 OTHER COMMERCIAL CONDITIONS

Delivery time

4/6 Months ex works France from receipt of down payment and valid purchasing order
Exact delivery will be confirmed on receipt of order