

Catalogue

Weld Overlay Solutions

2017 Polysoude - Updated on January 2019

Original edition: Polysoude S.A.S. Nantes France.

The photos, diagrams and drawings are given to promote understanding and are therefore not contractual.

All copyrights reserved. This product catalogue shall not be copied, either in part or whole, in any form or by any means whatsoever, whether electronic or mechanical, including photocopying, recording or the use of computer medium, without the publisher's written permission.

Printed in France.
Published by Polysoude, Nantes, France.
www.polysoude.com - info@polysoude.com.



### CONTENTS

Processes	5
GTAW/TIG & TIG <sup>er</sup>	5
Workpieces and application examples	6
Vertical weld overlay solutions	7
PolyClad Easy	7
PolyClad 3C - Compact Cladding Center	11
PolyClad C&B - Column & boom and flatbed turntable	15
PolyClad SPX - SPX endless rotation head	19
Horizontal pipe weld overlay solutions	23
PolyClad TWIN-TIG <sup>er</sup> C - TWIN-TIG <sup>er</sup> 6m or 12m: 360° full length I.D. weld overlay	23
PolyClad TWIN-TIG <sup>er</sup> L - TIG <sup>er</sup> rig: Longitudinal internal weld overlay	27
Elbow weld overlay solutions	31
PolyClad Elbow L - TIG <sup>er</sup> 8" to 30" (1.5D)	31
Technical appendix	35
Workpiece geometries	35
Torches and lances	37
Video monitoring	40
Administrative, packing and logistics costs	43
Sales conditions	45



#### Icons & Legends



TIG Hot Wire technology

πσ<sup>6</sup> TIG<sup>er</sup> technology

CNC Computer Numerical Controller (CNC)

Conventional Controller

Programmable motion (motorised)

→ Non-programmable motion (manual or motorised)

### **Processes**



#### **GTAW/TIG & TIGer**

The main advantages of TIG CW/HW compared to other processes: all position use, excellent surface quality, clean without spatter... Zero defects.

The TIG<sup>er</sup> technology is a Polysoude innovation based on the TIG (GTAW) process. It is designed to guarantee quality, to increase significantly the deposition rate and to reduce dilution.



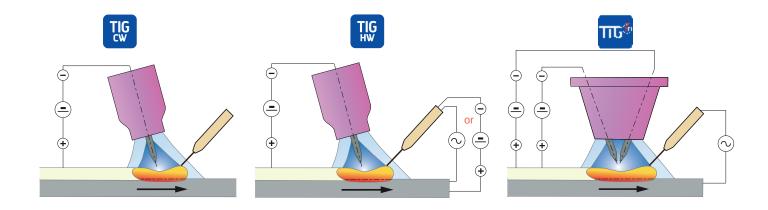




Electrode	1	1	2
Wire	CW	HW - DC or AC	HW - AC
Arc type	Single arc	Single arc	Two arcs in one
Deposition rate			
Single torch (*)	up to 1 kg/h	up to 2.5 kg/h	up to 6kg/h
Twin torch (#)	-	up to 4kg/h	up to 9kg/h
Minimum I.D. before weld overlay considering 2 layers	28 mm	34 mm	100 mm

<sup>(\*)</sup> Maximum deposition rate given for reference, produced under optimal conditions (welding position, application type, base material, surface and filler wire)

<sup>(#)</sup> The deposition rate in "Twin" configuration is a balance between the optimal characteristics for the first layer (the lowest possible thickness and therefore dilution) and the weld overlay speed for the simultaneous execution of the first and second layer.



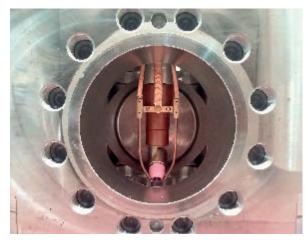


### **Workpieces and application examples**





















Courtesy of CFHI, Newtesol, NVO, AMPO, Paipu, RocMaster and Subsea Services

### Vertical weld overlay solutions



### **PolyClad Easy**





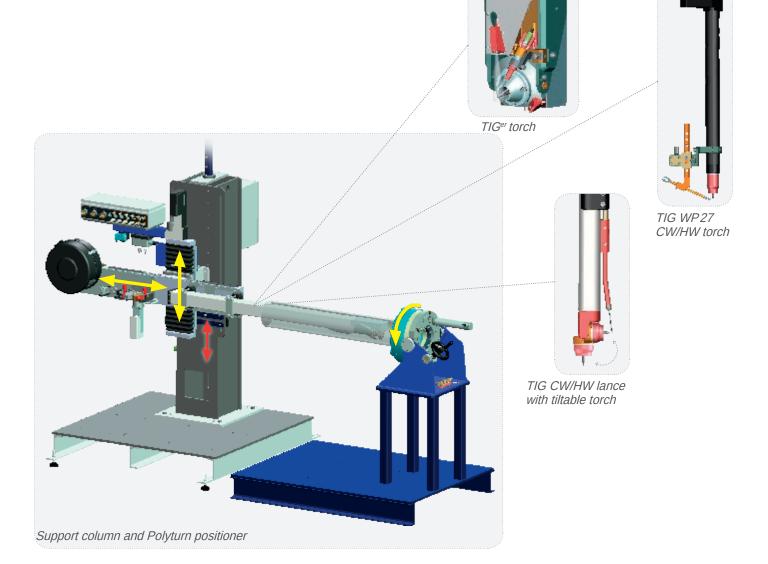
### Advantages

- Ease of setup
- Extra compact
- Versatility: vertical and horizontal overlay positions
- Delivered with a library of typical weld overlay programmes
- Flexibility: wide range of lances and torches
- Multiprocesses: TIG











### **▶** Programming software

Solution with conventional controller:

**POW**in

# 99









#### **Main items**

- Support column
- Cross slides (AVC/Step-over)
- Wire feeder
- Lance/torch
- Titable positioner Polyturn
- Multiprocess power source

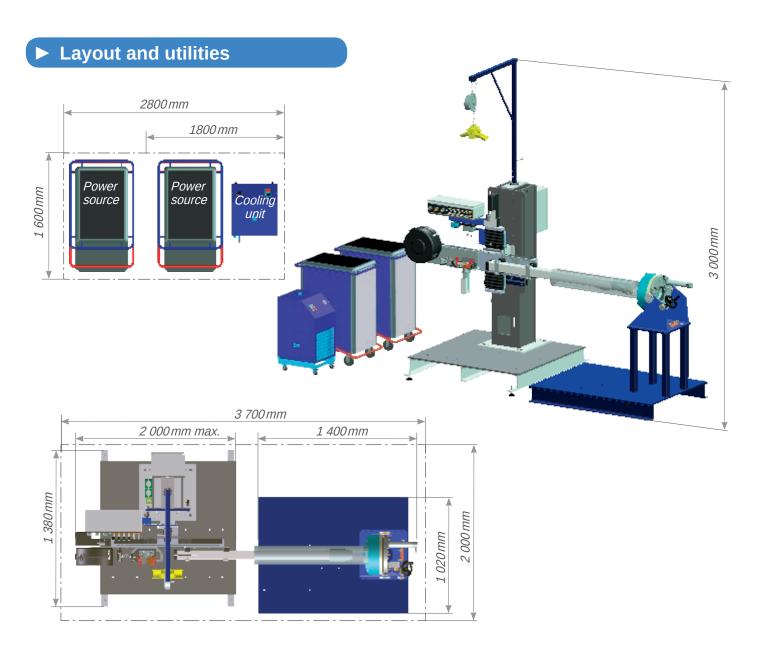
### ► Variants/options-accessories

- High resolution video monitoring
- TIG HW or TIG<sup>er</sup>
- DAQbox tool for productivity management and data acquisition

### ► Technical data

Cross slides stroke	0.60 m x 0.3 m
Wire feeder	0.5 to 14m/min
Compatible with wire spool	Ø300 mm - 15 kg
Capacity of the positioner	
Maximum load	100 kg (at 50 mm from the face of the plate)
Workpiece diameter	Ø 20 to Ø 350 mm
Maximum length of weld overlay lance	1 m





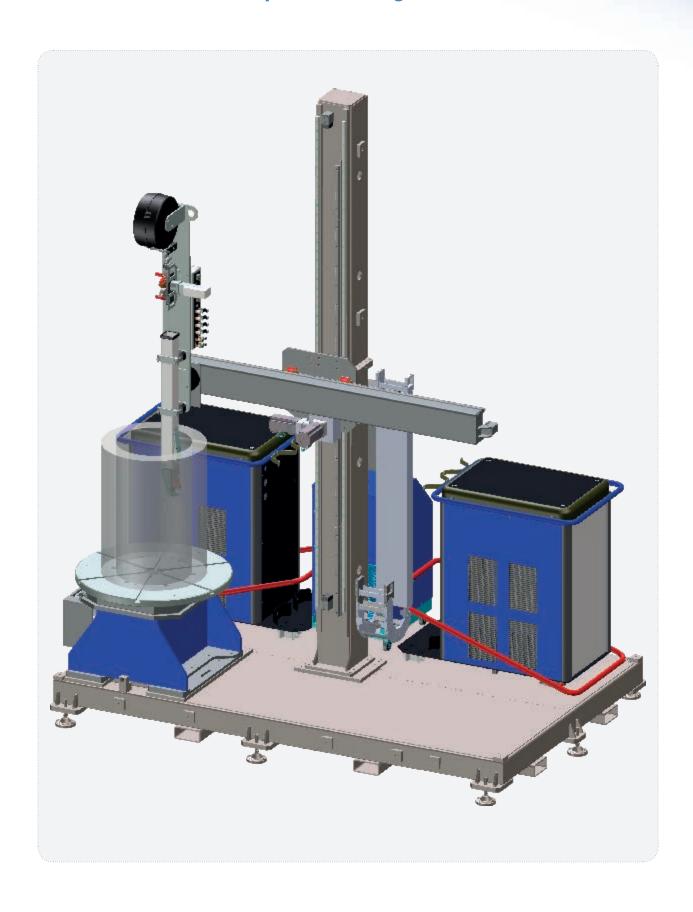
Utilities		
Power sources - TIG CW/HW	400 V - three-phase - 33 kVA	
Power sources - TIGer	400 V - three-phase - 1x33 kVA + 1x28 kVA	
Video control panel	230 V - single phase - 6 kVA	
Cooling unit	230 V - single phase - 4 kVA	

### **▶** Product items numbers

	TIG POWI-	TTG <sup>©</sup> POWA
PolyClad Easy - weld overlay installation (including support column, cross slides, wire feeder, power sources and cooling unit)	0034860001	0034860002
Tiltable positioner:		
Polyturn positioner with chuck O.D. 350 mm (hollow shaft Ø 115 mm)	003384	11703
P0 64 motor drive (ratio 1:64)	003384	13001
Digital display for torch position and step-over	001866	66605
DAQbox - Data acquisition system	003324	19101
Torches and lances	See chapter Technical Torches ar	

### Vertical weld overlay solutions

### PolyClad 3C Compact Cladding Center





### Advantages

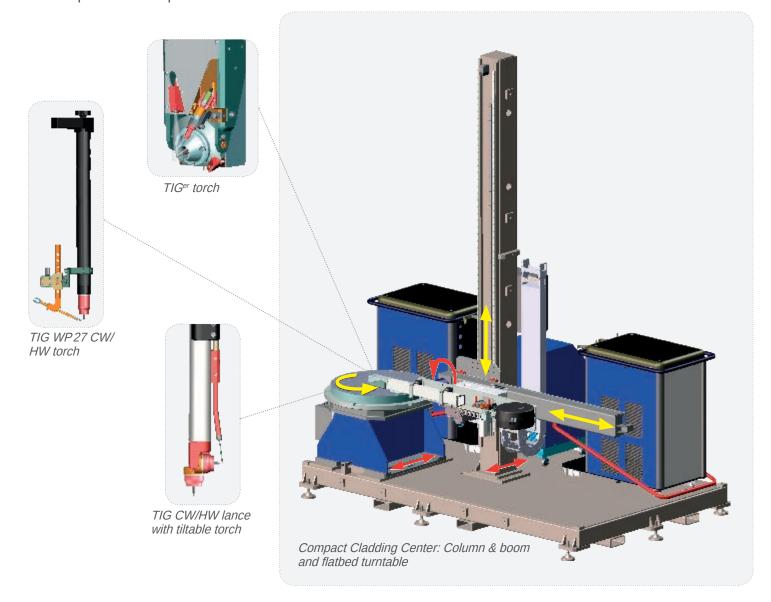
- Ready to use
- Wide range of use for both simple and complex workpieces
- Compact and transportable

- Prewired on platform
- Flexibility
- Multiprocesses: TIG TIG











### **▶** Programming software

Two solutions depending on the workpieces complexity to be cladded:













### **Main items**

- High accuracy column & boom
- Flatbed turntable
- Lance/torch
- Multiprocess power source





### ► Variants/options-accessories

- High resolution video monitoring
- TIG HW or TIGer
- DAQbox tool for productivity management and data acquisition



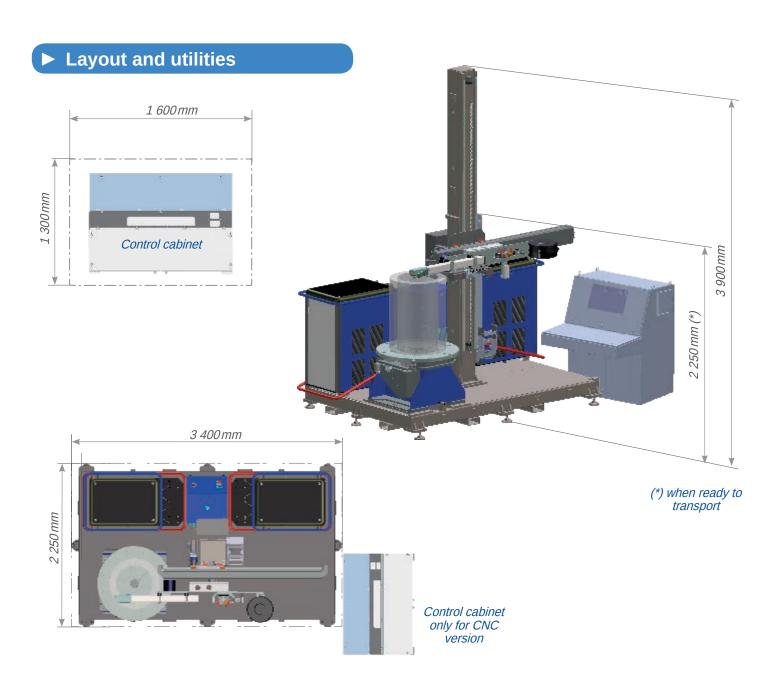


#### **Technical data**

Column & boom	
Maximum height under boom	3 m
Vertical stroke (max.)	2.5 m
Horizontal stroke (max.)	1.5 m
Maximum load on boom end	70 kg
Wire feeder	0.5 to 14 m/min
Compatible with wire spool	Ø 300 mm - 15 kg
Capacity of the flatbed turntable	2.5t - Ø1m
Maximum length of weld overlay lance	1 m
Workpiece length	Up to 1.5 m

Other sizes of C&B and flatbed turntable are available on request.





	Utilities
Column & Boom	400 V - three-phase - 3 kVA
Power sources - TIG CW/HW	400 V - three-phase - 33 kVA
Power sources - TIGer	400 V - three-phase - 1 x 33 kVA + 1 x 28 kVA
Control panel	230 V - single phase - 6 kVA
Cooling unit	230 V - single phase - 4 kVA
Flat turntable	400 V - three-phase - 3 kVA

### **▶** Product item numbers

	TIG POW	TTG <sup>®</sup> POW	TIG CNC	TTG® CNC
PolyClad 3C - Compact Cladding Center (including C&B, HD cross slides, welding head, power source, flatbed turntable and cooling unit)	On request	On request	0034870001	0034870002
DAQbox - Data acquisition system (Accessory)	0033249101		Inclu	ded
Torches and lances	see chapter Technical appendix, paragraph Torches and lances		ches and lances	

### Vertical weld overlay solutions

# PolyClad C&B Column & boom and flatbed turntable



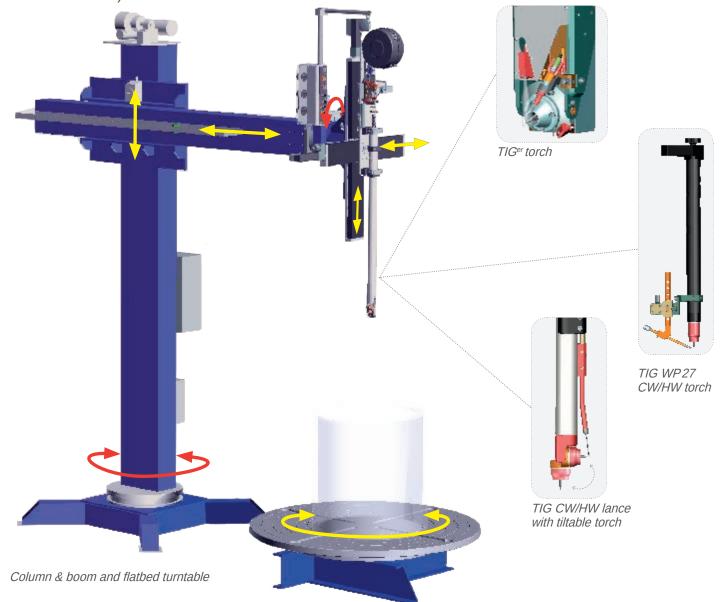


### Advantages

- Ease of setup
- Compact, modular standard design
- Versatility: vertical and all other weld overlay positions
- Two possibilities of cross slide mounting (front or side mounted)
- Delivered with a library of typical weld overlay programmes
- Flexibility: wide range of lances and torches
- Multiprocesses: TIG









### **▶** Programming software

### Main items Two solutions depending on the workpieces complexity to be cladded:

- Column and boom
- Cross slides
- Wire feeder
- Lance/torch
- Flatbed turntable
- Multiprocess power source

# POWin Conventional controller



















### ➤ Variants/options-accessories

- High resolution video monitoring
- Tiltable positioner
- TIG HW or TIG<sup>er</sup>
- Manual swivel bracket ±90° (cross slide tilting)
- High temperature bellows
- DAQbox tool for productivity management and data acquisition





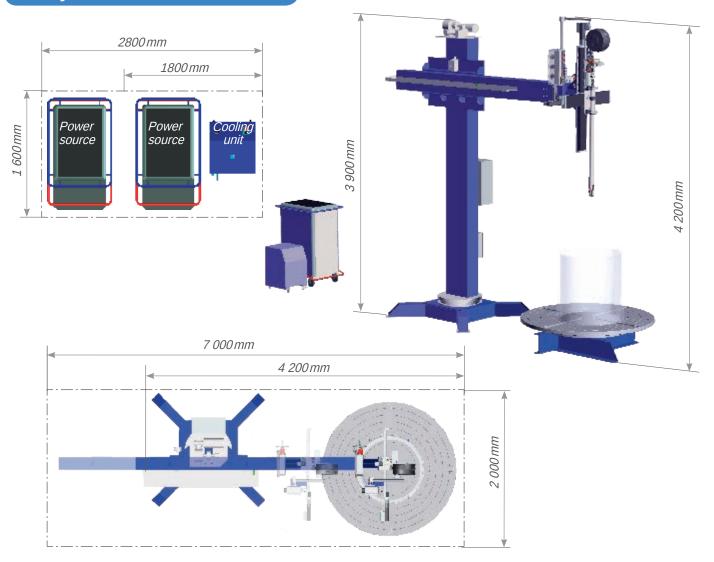
### ► Technical data

Column & boom	3 m x 2 m
Maximum height under boom	3 m
Vertical stroke (max.)	2 m
Horizontal stroke (max.)	2 m
Maximum load on boom end	150 kg
Cross slides stroke	1 m x 0.6 m
Wire feeder	0.5 to 14m/min
Compatible with wire spool	Ø300 mm - 15 kg
Capacity of the flatbed turntable	3t - Ø1.5 m
Capacity of the positioner	2t-Ø1m
Maximum length of weld overlay lance	1m

Other sizes of C&B, flatbed turntable and positioner are available on request



### ► Layout and utilities



Utilities		
C&B with flatbed turntable/positioner	400 V - three-phase - 24 kVA	
Power sources - TIG CW/HW	400 V - three-phase - 33 kVA	
Power sources - TIGer	400 V - three-phase - 1x33 kVA + 1x28 kVA	
Video control panel	230 V - single phase - 6 kVA	
Cooling unit	230 V - single phase - 4 kVA	

### **▶** Product item numbers

	TIG POW	TTG® POW	TIG CNC	TTG® CNC
PolyClad C&B - Standard vertical weld overlay installation (including C&B, cross slides, wire feeder, power sources and cooling unit)	0033260002	0033260003	On request	On request
Flatbed turntable 3t	003800	02002		
Tiltable positioner 2t	003800	01506		
Manual swivel bracket ±90° for cross slides	003326	60101		
Digital display set for torch position and step-over (including digital display, torch slide encoder, position counter and cable)	003384	12401		
DAQbox - Data acquisition system	003324	49101		
High temperature bellows for cross slides	003338	80580		
Torches and lances	See chapter 7	echnical appendi	x, paragraph Tord	ches and lances



### Vertical weld overlay solutions



# **PolyClad SPX**SPX endless rotation head





### Advantages

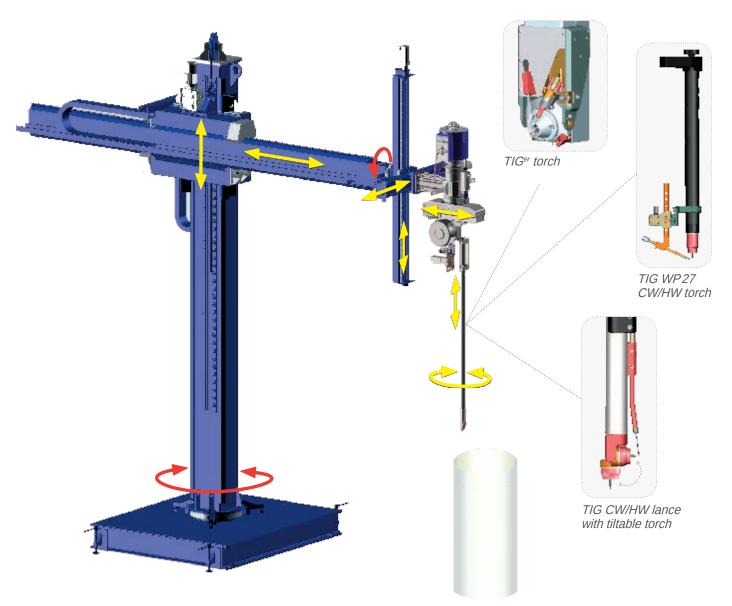
- Ease of setup
- Wide range of use for both simple and complex workpieces
- Increased productivity due to endless rotating head
- Flexibility
- Multiprocesses: TIG TIG







Autocentring programme for the lance



Column & boom with SPX endless rotation head





Tiltable cross slides with SPX head (manual swivel bracket ±90°)



Column & Boom with platform



### **▶** Programming software

Two solutions depending on the workpieces

complexity to be cladded:











### Variants/options-accessories

SPX endless rotation head equipped with wire feeder and AVC cross

High resolution video monitoring

Multiprocess power source

Flatbed turntable

**Main items** 

Column & boom

slides

Lance/torch

Heavy Duty cross slides

- C&B platform (power source, control cabinet...)
- Manual swivel bracket ±90° (SPX head tilting)
- Extension bracket for large workpiece diametres
- DAQbox tool for productivity management and data acquisition







### **Technical data**

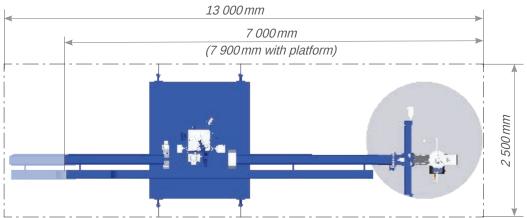
Column & boom	4m x 4m - Heavy Duty
Maximum height under boom	4 m
Vertical stroke (max.)	3 m
Horizontal stroke (max.)	4 m
Maximum load on boom end	400 kg
SPX head - workpiece diameter (max.)	600 mm 1200 mm with optional extension bracket
SPX head - AVC slide stroke	300 mm
HD cross slide strokes	2 m x 1 m
Wire feeder	0.5 to 14 m/min
Compatible with wire spool	Ø 300 mm - 15 kg
Capacity of the flatbed turntable (option)	15t - Ø 2.4m
Maximum length of weld overlay lance	2 m

Other sizes of C&B and flatbed turntable are available on request.



### ► Layout and utilities





	Utilities
Column & Boom	400 V - three-phase - 16 kVA
Power sources - TIG CW/HW	400 V - three-phase - 33 kVA
Power sources - TIGer	400 V - three-phase - 1x33 kVA + 1x28 kVA
Video control panel	230 V - single phase - 6 kVA
Cooling unit	230 V - single phase - 4 kVA
Flat turntable (optional)	400 V - three-phase - 6 kVA

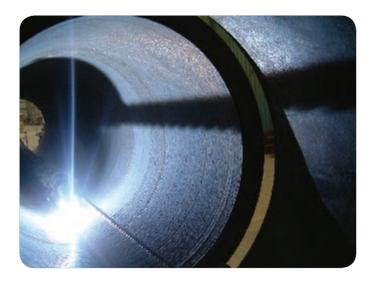
► Product item numbers	TIG POW	TTG® POW	TIG CNC	TTG <sup>®</sup> CNC
Daly Clad CDV Charadayd waytisal wold awaylay CDV				
PolyClad SPX - Standard vertical weld overlay SPX installation (including C&B, HD cross slides, SPX head, power source, cooling unit)	0033690001	On request	0033690003	0033690004
Flatbed turntable 15t - Ø2.4 m	0038002003		003800	02003
C&B platform	0038001007		003800	01007
Manual swivel bracket ±90° for SPX cross slides	0038001006		003800	01006
Extension bracket for SPX large diameter	0032800201		003280	00201
DAQbox - Data acquisition system	0033249101		On request	
High temperature bellows for SPX cross slides	0033380581		0033380581	
Torches and lances	see chapter Technical appendix, paragraph Torches and lances			

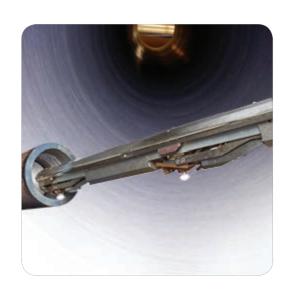
### Horizontal pipe weld overlay solutions



PolyClad TWIN-TIG<sup>er</sup> C
TWIN-TIG<sup>er</sup> 6m or 12m: 360° full length I.D. weld overlay







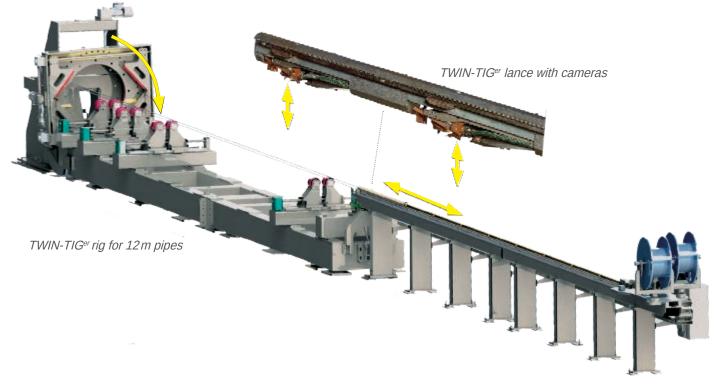


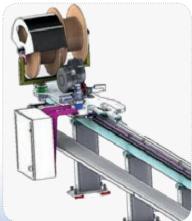
### **▶** Advantages

- Ease of setup
- Two simultaneous layers
- AVC control (independent for each torch)
- Video for continuous monitoring and relocation
- High deposition rate & high productivity

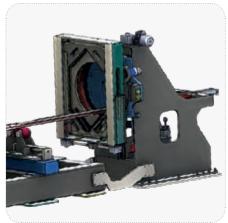


Set of PC 600-3 power sources - 2 masters and 2 slaves





Carriage with 2x250 kg or 2x15 kg wire spools



Rotator with special clamping chuck



### **▶** Control cabinet

#### Main items

- Horizontal guiding beam travel carriage - wire feeder units
- Weld overlay lance with two TIG<sup>er</sup> torches "TWIN-TIG<sup>er</sup>"
- Head stock rotator
- Special clamping chuck
- Pipe supports
- Rope tensioning system
- Set of PC 600-3 power sources (2 masters & 2 slaves)

Delivered with the machine

Weld overlay programming software (weld overlay parameters)



Operator touchscreen

### Variants/options-accessories

- Extra travel carriage for preheating/cooling devices
- DAQbox tool for productivity management and data acquisition



Video 1



Video 2



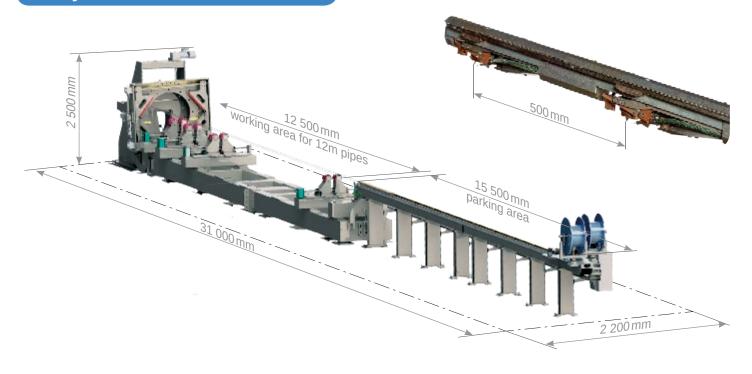
#### Technical data

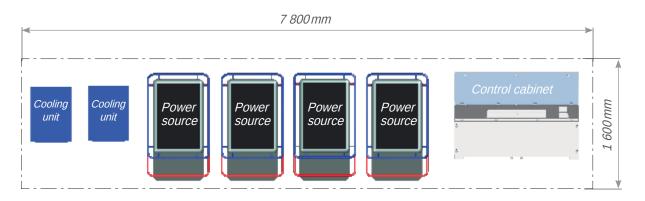
Pipe	
I.D. min. (pipe length 6 m)*	135 mm (5 5/16")
I.D. min. (pipe length 12 m)*	150 mm (5 29/32")
Special clamping chuck	O.D.36" (other diameters on demand)
Distance between torches 1 & 2	500 mm
AVC stroke (independant for each torch)	40 mm
Wire feeder (x2)	0.5 to 14 m/min
Compatible with wire spool	Ø760 mm - 250 kg or Ø300 mm - 15 kg
Video	1 camera per torch

<sup>\*</sup> Before weld overlay considering 2 layers



### ► Layout and utilities





Utilities		
Power sources - TIGer	400V - three-phase - $2x33kVA$ + $2x28kVA$	
Hollow shaft and carriage	400 V - three-phase - 16 kVA	
Control panel	230 V - single phase - 6 kVA	
Cooling unit	230 V - single phase - 2x7kVA	

### ► Product item numbers

	6 m	12 m
PolyClad TWIN-TIG <sup>er</sup> C - Standard horizontal weld overlay installation (including horizontal guiding beam, head stock rotator, weld overlay lance with one camera per torch, set of power sources, cooling units, control cabinet)	0033730001	0033730002
Extra travel carriage for preheating/cooling devices	00380	009005
DAQbox - Data acquisition system	00332	249101



### Horizontal weld overlay pipe solutions



# **PolyClad TWIN-TIG**<sup>er</sup> L TIG<sup>er</sup> rig: Longitudinal internal weld overlay





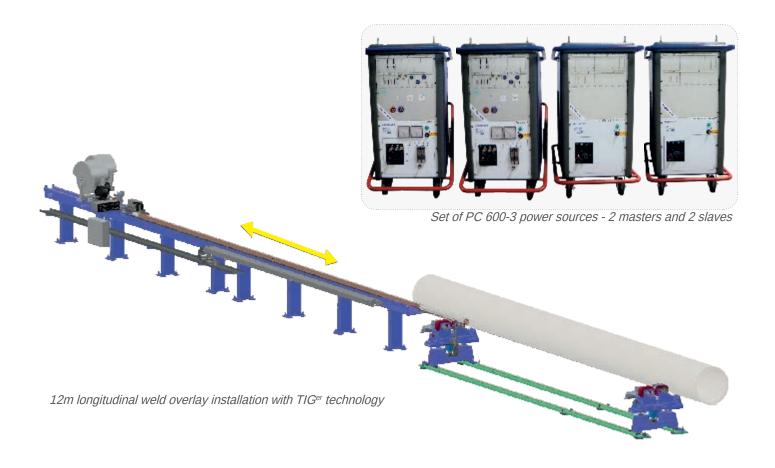




#### **Advantages**

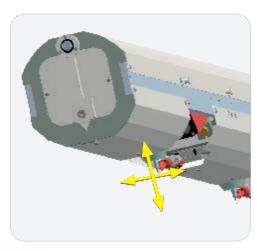
- A unique solution for the longitudinal seam weld overlay of metallurgically bonded pipes from the inside (after welding from outside and remachined root (1))
- Perfectly smooth quality of the cladded surface
- Integrated compensation management of the welded joint twist
- Reduced deformation
- Full-length weld overlay
- TIGer high deposition rate & high productivity
- Very low dilution rate
- Process: TTG



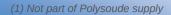




Travel carriage, wire feeding assembly and connection plate



AVC/OSC slides for each torch



### **►** Equipment includes

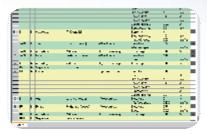
- Installation main frame
- 12m TWIN-TIG<sup>er</sup> lance
- Travel carriage
- Pipe orientation roller assembly
- Set of PC 600-3 power sources (2 masters & 2 slaves)
- Control cabinet



Video system: Wide dynamic video for real time monitoring

### ► Control cabinet

Delivered with the installation



Weld overlay programming software (weld overlay parameters)



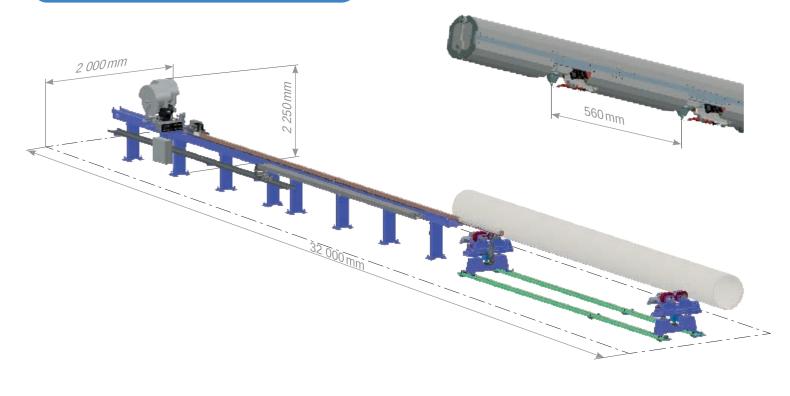
#### Technical data

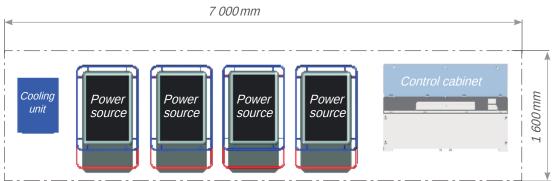
Tube	
O.D. max.	580 mm (24")
I.D. min.*	160 mm (6 1/2")
Length	12 m
Width of the seam to be cladded	10 to 25 mm
Distance between torches 1 & 2	560 mm
AVC stroke (independant for each torch)	15 mm
OSC stroke (independant for each torch)	40 mm (± 20 mm)
Wire feeder	0.4 to 14 m/min
Compatible with wire spool	Ø 760 mm - 250 kg or Ø 300 mm - 15 kg
Video	2 cameras per torch

<sup>\*</sup> Before weld overlay considering 2 layers



### ► Layout and utilities





Utilities		
400 V - three-phase - 2x33 kVA + 2x28 kVA		
400 V - three-phase - 16 kVA		
230 V - single phase - 6 kVA		
230 V - single phase - 7 kVA		

### Product item numbers

12 m

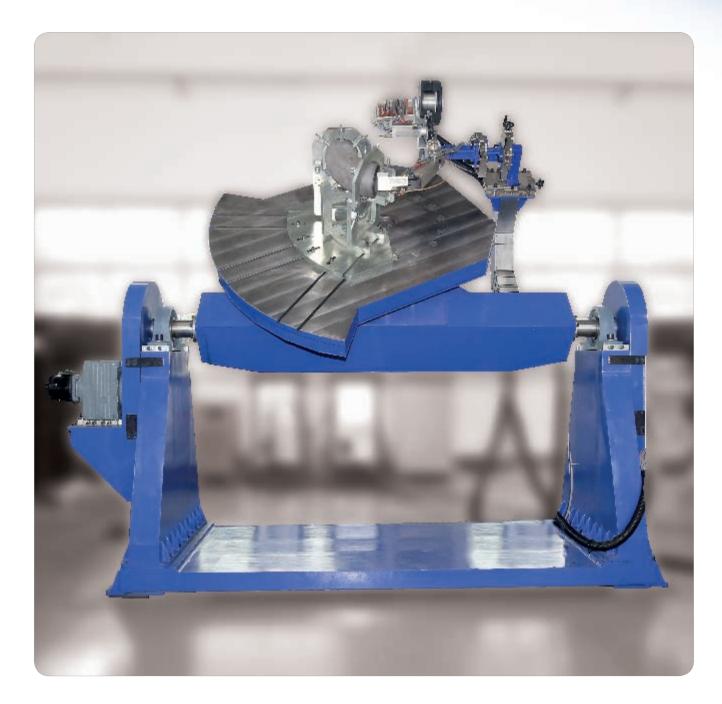
PolyClad TWIN-TIG<sup>er</sup> L - Longitudinal TIG<sup>er</sup> weld overlay installation (including TIG<sup>er</sup> weld overlay lance, pipe orientation roller assembly, sets of power sources, cooling unit, control cabinet)

0033950001

### Elbow weld overlay solutions



### PolyClad Elbow L TIG<sup>er</sup> 8" to 30" (1.5D)







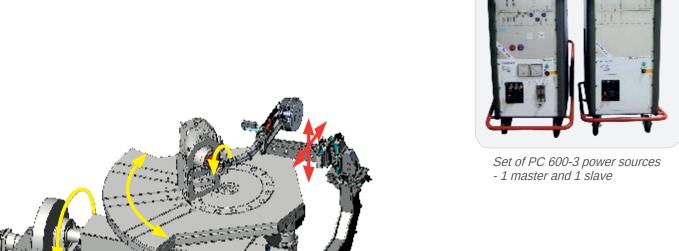


### Advantages

- Quick installation of the elbow
- Consistent smooth surface after weld overlay in longitudinal direction
- Reduced deformation
- No start-stop points inside the elbow

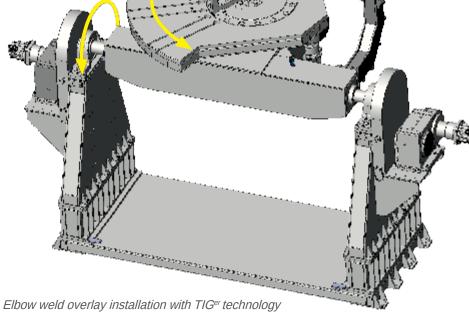
- TIGer high deposition rate/high productivity
- Automated cladding sequence
- Process: TTG\*

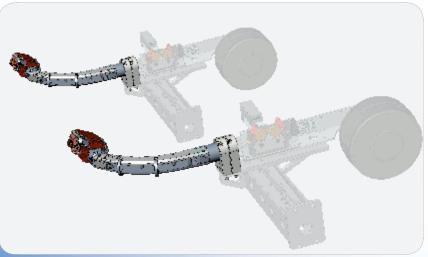






Clamping unit





Weld overlay lances with wire feeder



Weld overlay head interface



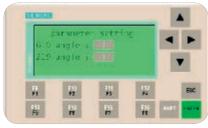
### ► Control cabinet

#### Main items

- Tilting positioner for longitudinal weld overlay
   8" to 30"
- Welding head interface with cross slides & wire feeder
- Set of PC 600-3 power sources (1 master & 1 slave)
- CN control cabinet

# 

Weld overlay programming software (weld overlay parameters)



Operator touchscreen

### ► Variants/options-accessories

- TIG<sup>er</sup> weld overlay lance with torch rotation and fixtures according to the elbow size
- Elbow clamping unit
- DAQbox tool for productivity management and data acquisition



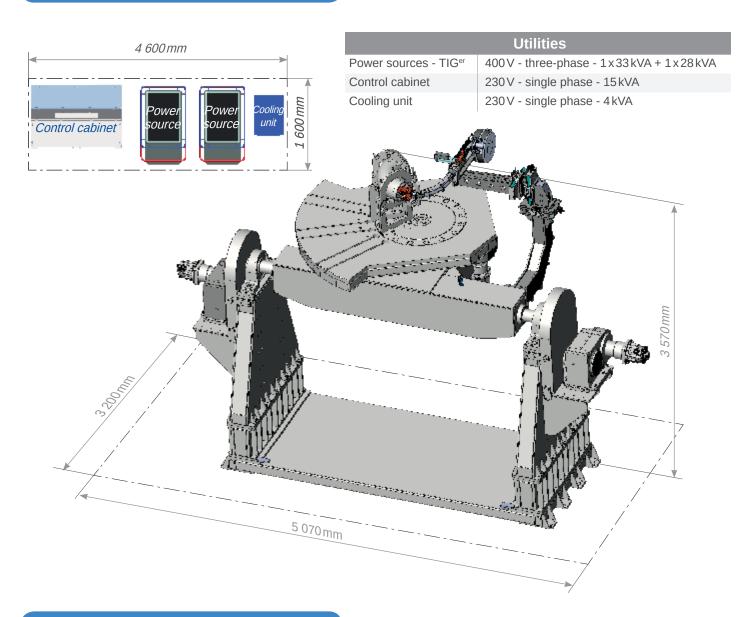
#### ▶ Technical data

Elbow	
O.D. max.	762 mm (30")
I.D. min.*	189 mm (7 7/16")
Elbow radius	1.5 D
AVC stroke	25 mm
Wire feeder	0.5 to 14 m/min
Compatible with wire spool	Ø300 - 15 kg

<sup>\*</sup> Before weld overlay considering 2 layers



### ► Layout and utilities



### ► Product item numbers

	8" ≤ I.D. ≤ 30"
PolyClad Elbow L - Standard elbow weld overlay installation (including positioner, cladding lance interface, set of power sources, cooling unit, control cabinet)	0033960001
DAQbox - Data acquisition system	0033249101
TIG <sup>er</sup> lance for elbow 90° diameter 8"	0033960101
Fixture for elbow 90° diameter 8"	0033960201
TIG <sup>er</sup> lance for elbow 90° diameter 16"	0033960301
Fixture for elbow 90° diameter 16"	0033960401
TIGer lance for elbow 90° diameter 20"	0033960501
Fixture for elbow 90° diameter 20"	0033960601
TIG <sup>er</sup> lance for elbow 90° diameter 24"	0033960701
Fixture for elbow 90° diameter 24"	0033960801
TIG <sup>er</sup> lance for elbow 90° diameter 30"	0033960901
Fixture for elbow 90° diameter 30"	0033961001



### Technical appendix



#### Workpiece geometries

#### Weld overlay machines with conventional or CN Controller?

The choice of equipment and software depends on the shape complexity of the workpieces. Therefore, each surface to be cladded must be identified as cylinder, flat base, cap, truncated cones or an intersection of cylinders.



Circular disc and caps



Groove on cylindrical flanges



Ellipse on external sphere



Cross bore or bore-to-bore intersections of external cylinders



Internal and external cylinders



Groove of flanges with oblong profile



Ellipse on internal sphere



Internal elbows



Internal and external cones



Face of flanges with oblong profile



Ellipse on a slope plane



Sphere

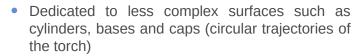


Internal and external oblong profiles



Horse saddle shape

## POWin Conventional controller



- Sequential programme
- Each programming step controls the movement along one of the axes (X, Y or Z, no interpolation)
- Programming, archiving and transfer of on-line and off-line programmes



#### CN Controller

- Dedicated to circular and non-circular or interrupted surfaces such as sealing surfaces, intersection of cylinders and spheres (complex trajectories of the torch)
- Programmed to manage the movement of the torch along several axes, with interpolation
- A simulator allows the previewing of predefined trajectories and the evaluation of associated cycle times and deposition rates
- Unique user-friendly GUI (graphical user interface)
- Programming, archiving and transfer of on-line and off-line programs
- Data monitoring system with alarm functions



### **Torches and lances**

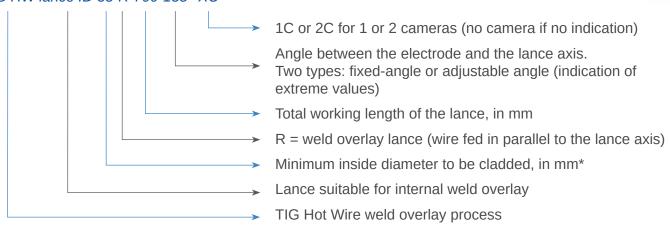


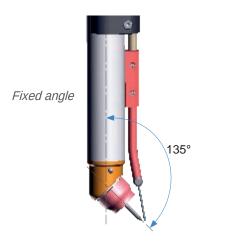
## **Torches and lances**

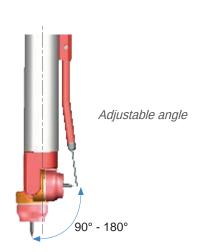
## Lance designations

TIG HW Lance designations

### TIG HW lance ID 35-R-700-135°-XC

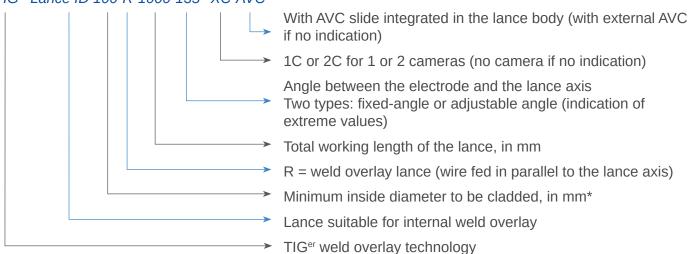






TIG<sup>er</sup> lance designations

### TIGer Lance ID 100-R-1000-135°-XC-AVC



<sup>\*</sup> Before weld overlay considering 2 layers

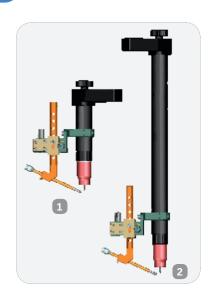


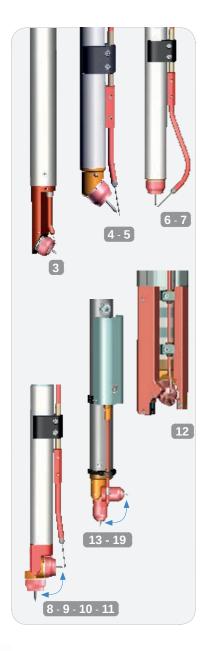
# ► Torches and lances for PolyClad Easy, 3C, C&B

			Duty cycle	
N°	TIG Torches		Average current - 100%	Max peak current - 60%
1	WP 27 A	0033263310	500A	500A
2	WP 27 B	0033263410	500A	500A

	TIG HW Lances		Duty cycle	
N°			Average current - 100%	Max peak current - 60%
3	ID 34-R-1000-120°	0030740013	300A	350A
4	ID 35-R-700-135°	0030740007	170A	200A
5	ID 35-R-1000-135°	0030740006	170A	200A
6	ID 35-R-700-180°	0030740009	170A	200A
7	ID 35-R-1000-180°	0030740008	170A	200A
8	ID 38-R-700-90/180°	0030740005	170A	200A
9	ID 38-R-1000-90/180°	0030740004	170A	200A
10	ID 45-R-700-90/180°	0030740003	200A	250A
11	ID 45-R-1000-90/180°	0030740001	200A	250A
12	ID 85-R-1000-120°-1C	0032010201	350A	400A
13	ID 100-R-1000-90/180°	0030740020	300A	350A

	TIG <sup>er</sup> Lances		Duty cycle		
N°			Average current - 100%	Max peak current - 60%	
14	ID 100-R-1000-105°	0032281001	2x250A	2x350A	
15	ID 100-R-1000-105°-1C	0032281002	2x250A	2x350A	
16	ID 150-R-800-105°	0031260101	2x300A	2x300A	
17	ID 150-R-800-105°-1C	0031030220	2x300A	2x300A	
18	ID 200-R-1000-165°	0032281003	2x250A	2x350A	



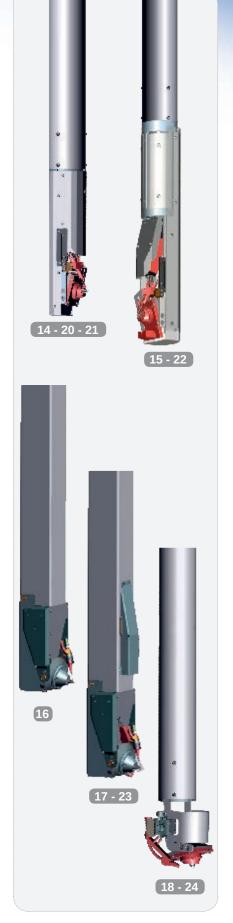


# ► Torches and lances for PolyClad SPX

	TIG Torches		Duty cycle	
N°			Average current - 100%	Max peak current - 60%
1	WP 27 A	0033263310	350A	350A
2	WP 27 B	0033263410	350A	350A

	TIG HW Lances		Duty	cycle
N°			Average current - 100%	Max peak current - 60%
3	ID 34-R-1000-120°	0030740013	300A	350A
4	ID 35-R-700-135°	0030740007	170A	200A
5	ID 35-R-1000-135°	0030740006	170A	200A
6	ID 35-R-700-180°	0030740009	170A	200A
7	ID 35-R-1000-180°	0030740008	170A	200A
8	ID 38-R-700-90/180°	0030740005	170A	200A
9	ID 38-R-1000-90/180°	0030740004	170A	200A
10	ID 45-R-700-90/180°	0030740003	200A	250A
11	ID 45-R-1000-90/180°	0030740001	200A	250A
12	ID 85-R-1000-120°-1C	0032010201	350A	400A
13	ID 100-R-1000-90/180°	0030740020	300A	350A
19	ID 100-R-1500-90/180°	0030740021	300A	350A

	TIG <sup>er</sup> Lances		Duty cycle	
N°			Average current - 100%	Max peak current - 60%
14	ID 100-R-1000-105°	0032281001	2x250A	2x350A
20	ID 100-R-1500-105°	0032281501	2x250A	2x350A
21	ID 100-R-2000-105°	0032282001	2x250A	2x350A
15	ID 100-R-1000-105°-1C	0032281002	2x250A	2x350A
22	ID 100-R-1500-105°-1C	0032281502	2x250A	2x350A
16	ID 150-R-800-105°	0031260101	2x300A	2x300A
17	ID 150-R-800-105°-1C	0031030220	2x300A	2x300A
23	ID 150-R-1200-105°-1C	0031440301	2x300A	2x300A
18	ID 200-R-1000-165°	0032281003	2x250A	2x350A
24	ID 200-R-1500-165°	0032281503	2x250A	2x350A





# **Video monitoring**

# **▶** Advantages

- The operator can easily monitor and follow the process remotely
- Resistant to high temperature
- Prooven reliability

- Repositionning and/or inspection
- Outstanding image quality
- Viewing/recording in real time
- Perfect picture with and without arc



Real time monitoring

# **▶** Complementary information

To monitor the weld overlay process, the operator can be assisted by a video system.

This supplementary feature consists of cameras mounted near the torches (or integrated in more complex cases), umbilicals and a rack or container with the instrumentation and control functions (lighting and filter control, focal distance adjustment and viewing monitors).

A single camera per torch viewing the melting of the wire is usually sufficient for weld overlay or buttering.

Depending on the level of integration, the camera may be external with their own cooling circuit or replaced by a micro-camera installed in the body of the torch adapted to the application.

For cameras, it is usual to be faced with severe heat conditions combined with space constraints. That is why the equipment is water-cooled.



TIG WP 27 torch with external camera and light



TIG lance with integrated camera and light



TIGer lance with integrated camera

# Administrative, packing and logistics costs

# **▶** Order processing & administrative fees

Order processing & administrative fees for France, E.U. countries, Switzerland, Norway	100088347
Order processing & administrative fees for Algeria, Azerbaijan , Libya, Russia, Ukraine, Belorussia	100088348
Order processing & administrative fees for Japan, Canada, US, China	100088349
Order processing & administrative fees for Korea, Taiwan, Singapore, Malaysia, Vietnam, Morocco, Tunisia, Turkey	100088350
Order processing & administrative fees for South America (except Brazil), Argentina, Chile, Mexico, Venezuela	100088351
Order processing & administrative fees for South America, Pakistan, Indonesia, the Philippines, Africa (except South Africa, Morocco, Tunisia)	100088352
Order processing & administrative fees for The Middle East (Saudi Arabia, Egypt, UAE, Qatar, Oman, Kuwait, Jordania, Israel, Iran, etc.)	100088353
Order processing & administrative fees for India	100088354
Order processing & administrative fees for Other countries	Contact us

# **▶** Additional costs

Additional costs for letter of credit treatment	100062317
Certificates on documents	100062318
Certificates of conformity - VERITAS type	100083958

# ► Specific loading costs for trucks, containers & oversized cargo

Loading cost for partial loading - over 5 standard equipment	100062319
Loading cost for full truck	100062327
Loading cost for full container 20ft Dry or Open Top	100062329
Loading cost for full container 40ft Dry or Open Top	100062332
Additional charges for loading oversized cargo or Open Top container with heavy or bridge crane	100062334
Additional charges for wedging/lashing any package over 3 tons on truck or container	100062337



# **▶** Packing costs

Packing cost for PC power source (except AC/DC and MIG MAG)	100063024
Packing cost for PC AC/DC or MIG MAG power source)	100063025
Packing cost for RFC 30 type cooling unit	100063028



# Sales conditions

### Our prices are quoted

- In euros (€)
- · Per unit
- Ex-works Nantes (EXW Nantes INCOTERMS ICC 2010)
- Administrative, packing and logistics costs not included
- · Excluding French VAT

### Warranty

Twelve months from delivery date, against all construction defects (for second hand equipment, six months from delivery date). The warranty is limited to the exchange of parts acknowledged as defective.

### Extract from Polysoude general sales conditions:

Application of warranty terms

Vendor guarantees that all goods sold will be free from malfunctioning resulting from defects in material, workmanship or design for a period of twelve (12) months from delivery and where the product is used for the intended purpose. Warranty is void where malfunctioning results from unauthorised servicing to the product by the purchaser, normal wear and tear, carelessness or lack of maintenance, caused by a third party or force majeure occurrence.

Performance of warranty

Under the warranty, the vendor shall replace free of charge any components acknowledged as defective by its technical department. The warranty shall not include labour and costs resulting from the following operations: disassembly, reassembly, shipping to site, etc. Replacement of components shall not be construed as an extension of warranty period.

### Repairs, commissioning and training

These services will be invoiced as per lump-sum prices stipulated in the valid price list.

### **Technical documentation**

At the date of delivery, one free copy on USB stick is supplied to you. Additional copies will be supplied at additional costs.

### Minimum amount of invoice

For each order (for example spare parts) with a net total amount inferior to 150 € (exclusive of packing and transportation costs), we will invoice an additional fee of 30 € to cover the administrative costs for such small orders.

### **Payment terms**

Within the limits of agreed total running:

30% payable with the order placement - due immediately

65% once notified that the machine is ready for shipment; due 30 days from the date of notificationpayable before shipment

5% on commissioning or at the latest 2 months after being notified that the machine is ready for shipment (whichever occurs first)

### Reserve of ownership

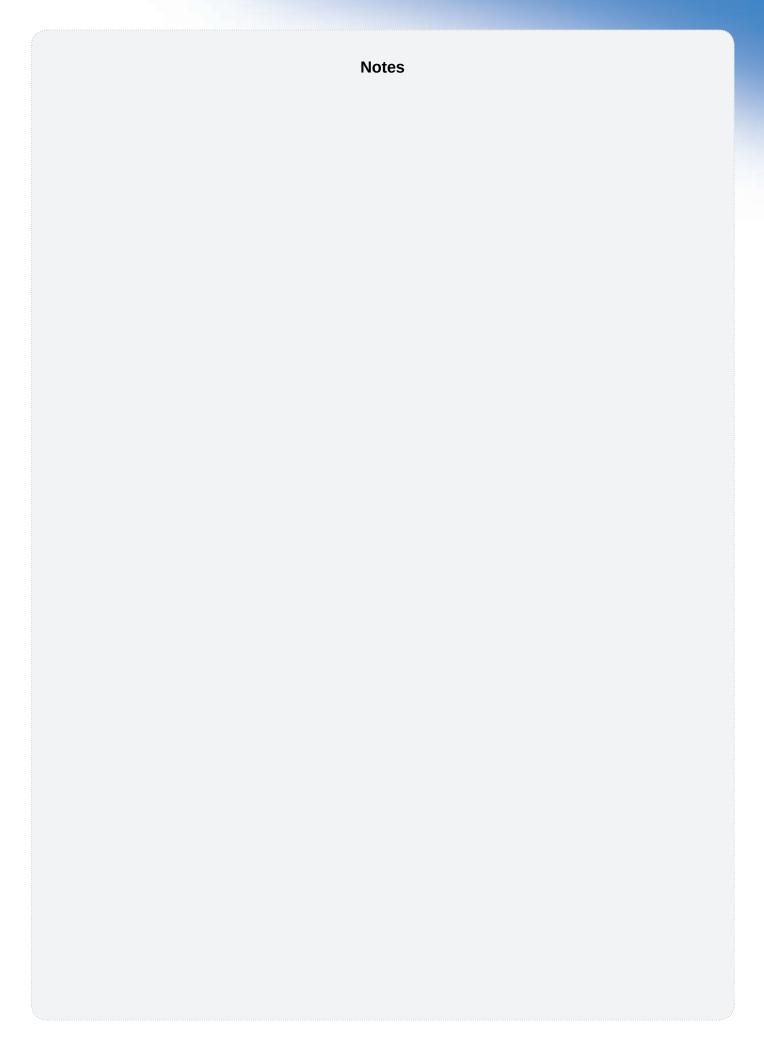
Polysoude retains the title of the goods until paid for in full. This close also applies if payment is subject to security or bank warranty.

Any modification of sales terms and conditions must in all cases be confirmed by Polysoude.



**Notes** 







# POLYSOUDE: Related services

### Guidance and technical support

A welding application specialist in your area will advise you on the

### Commissioning / Training

A complete training program will enable you to start using the equipment immediately and in the best way possible.



# Your partners worldwide

# ARGENTINA POLYSOUDE S.A.S. 2 +33 (0) 2 40 68 11 00 info@polysoude.com

**AUSTRALIA** 

# **POLYSOUDE S.A.S.**② +33 (0) 2 40 68 11 00 info@polysoude.com

POLYSOUDE AUSTRIA GmbH

### BELGIUM

POLYSOUDE BENELUX (a) +31 (0) 653 84 23 36 k.meurs@polysoude.com

# **POLYSOUDE BENELUX**

(SERVICE) ② +31 (0) 653 38 85 58 h.milder@polysoude.com

AJADE COMÉRCIO INSTALAÇÕES E SERVIÇOS Ltda. 2 +55 (0) 11 4524 3898 fernando@ajade.com.br

BULGARIA KARWELD EOOD 2) +359 (0) 29 73 3. Karweld@bg400.bg

MAG Tool – West

# MAG Tool - East TORONTO - ONTARIO ②+1 905 699 - 5016 ray@magtool.com

# POLYSOUDE SHANGHAI CO. Ltd

# EUROARC D.O.O. ② +385 (0) 1 2 40 60 77 euroarc@euroarc.hr

# **CZECH REPUBLIC**

POLYSOUDE CZ ② +420 602 60 28 55 m.matousek@polysoude.cz

# DENMARK

HALL & CO. INDUSTRI ② +45 (0) 39 56 06 76 p.lorenzen@polysoude.com

# **POLYSOUDE UK**② +44 (0) 1942 820 935 info@polysoude.com

POLYSOUDE S.A.S.

### FINI AND

SUOMEN TEKNOHAUS OY

POLYSOUDE S.A.S. 2 +33 (0) 2 40 68 11 00 info@polysoude.com

**GERMANY**POLYSOUDE DEUTSCHLAND GmbH

DUSSLINGEN

2 +49 (0) 7072 60076 0
info@polysoude.de

POLYSOUDE S.A.S.

GMT CO Ltd - KAWASAKI

# GMT CO Ltd - OSAKA

# **POLYSOUDE UK**② +44 (0) 1942 820 935 info@polysoude.com

KUWAIT SALWO TRADING Ltd.

**POLYSOUDE S.A.S.**(2) +33 (0) 2 40 68 11 00 info@polysoude.com

Maintenance / Repair

Rental service

Maintenance and repair operations can be carried out at the

SALWO TRADING Ltd.

is available for rental from our hire fleet.

### PAKISTAN

### **PHILIPPINES**

UNIDAWELD - BEDZIN

SUPRA ELCO ② +48 500 004 804 jacek.szulc@supraelco.waw.p

SINGAPORE
POLYSOUDE SINGAPORE OFFICE

465 0734 8452

**POLYSOUDE S.A.S.** ② +33 (0) 2 40 68 11 00 info@polysoude.com

### **SOUTH KOREA**

CHEMIKO CO Ltd 2 +82 (0) 2 567 5336 chemiko@chemiko.net

POLYSOUDE IBERIA OFFICE

1 + 34 609 154 692

### **SWEDEN**

HALL & CO. INDUSTRI

### SWITZERLAND

POLYSOUDE (SWITZERLAND) Inc. ② +41 (0) 43 243 50 80

### TAIWAN R O C

FIRST ELITE ENT. CO. Ltd

### THAILAND

**POLYSOUDE S.A.S.**② +33 (0) 2 40 68 11 00 info@polysoude.com

**EGE MAKINE**(2) +90 (0) 212 237 36 00
onurakin@egemakina.com.tr

**SALWO TRADING Ltd.** 20 +971 (0) 48 81 05 91 salwo@emirates.net.ae

**POLYSOUDE UK**② +44 (0) 1942 820 935
admin.uk@polysoude.com

# POLYSOUDE RUSSIA

ASTRO ARC POLYSOUDE Inc.

+1818 (859) 7600
sales@astroarc.com

## VENEZUELA

**ENRIVA C.A.**② +58 (0) 412 34 82 602 enriva@gmail.com

VIETNAM ANH DUONG IT Ltd 2 +84 22 159 532 an@anhduongco.com

# HUNGARY POLYWELD Kft. 2 +36 (0) 20 29 88 708 polyweld@polyweld.hu

# POLYSOUDE INDIA (2) +91 (0) 20 271 27 (

2) +91 (0) 20 271 27 678 ab.kulkarni@polysoude.in

POLYSOUDE SINGAPORE OFFICE ② +65 0734 8452

**STD CO**2 +98 21 88525206-7
najco\_ir@hotmail.com

**POLYSOUDE S.A.S.** ② +33 (0) 2 40 68 11 00 info@polysoude.com

POLYSOUDE ITALIA SRL ② +39 02 93 79 90 94 info@polysoude.it

POLYSOUDE S.A.S.

2 +33 (0) 2 40 68 11 00 info@polysoude.com

MALAYSIA
POLYSOUDE SINGAPORE OFFICE

# NETHERLANDS POLYSOUDE BENELUX

2+31 (0) 653 84 23 36 k.meurs@polysoude.com

### **POLYSOUDE BENELUX**

## **NEW ZEALAND**

POLYSOUDE S.A.S.

TEMA NORGE AS ②+47 (0) 51 69 25 00 tema@tema-norge.no

## PORTUGAL

POLYSOUDE IBERIA OFFICE

**SALWO TRADING Ltd.** ②+971 (0) 48 81 05 91 salwo@emirates.net.ae

## **REPUBLIC OF IRELAND**

## DEBISUD CONCEPT S.R.L.

RUSSIA + C.I.S.

# SAUDI ARABIA

# 📑 🛗 🐯 in 🗾 🧿











Find us on



