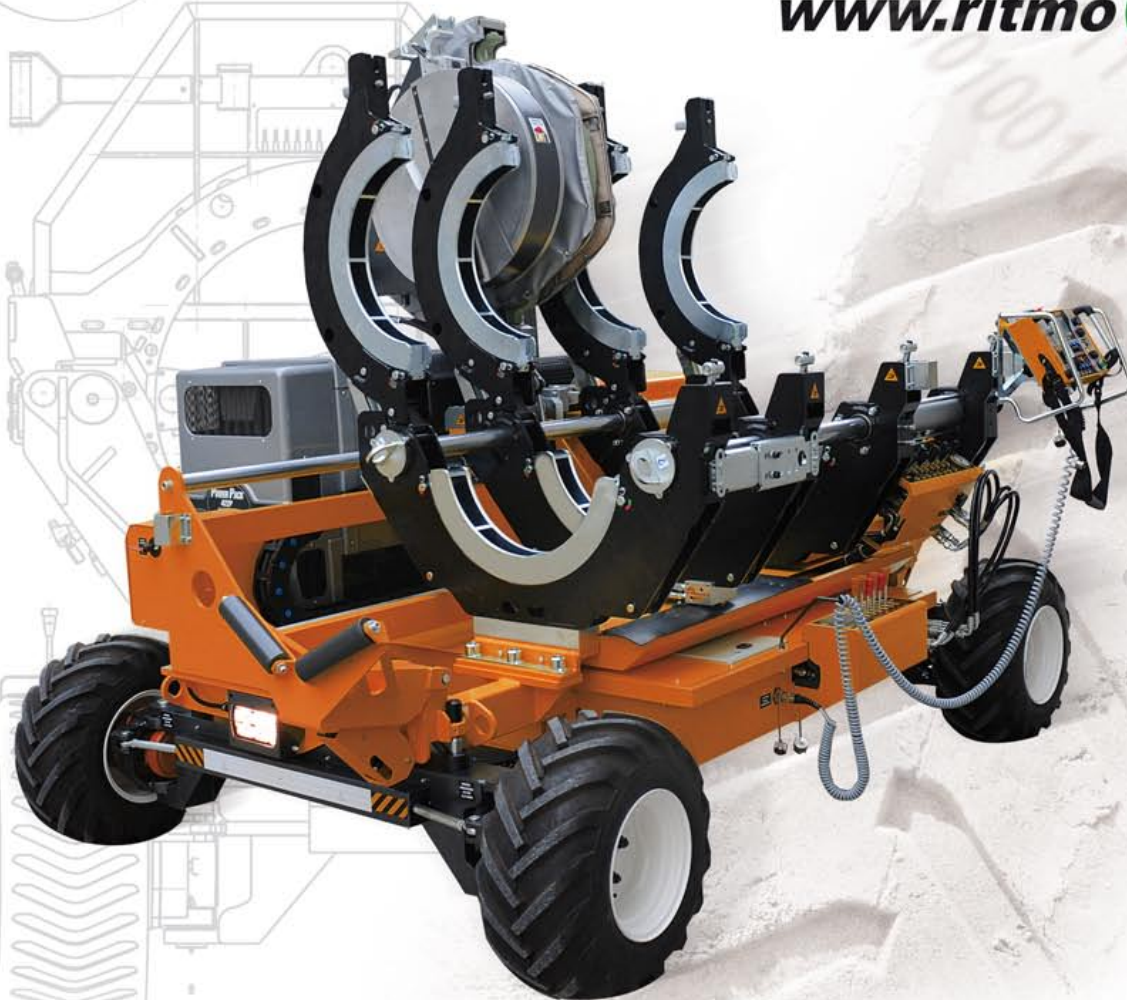




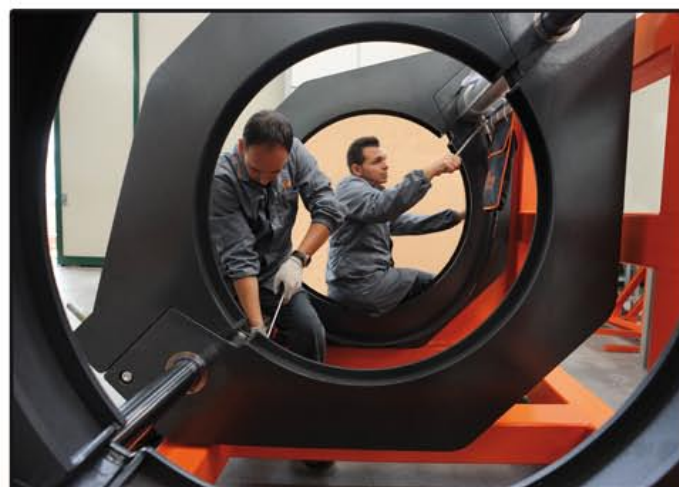
**www.ritmo.it**







RITMO S.P.A. is a 30 year experienced company and leader in manufacturing of plastic welding equipment. All products are designed and built according to International standards and directives (UNI, ISO, CEE). Since the very beginning, quality and technology innovation are RITMO's milestones, and time after time, this philosophy is always more recognized by the global market. RITMO strong points are its ideas to design and produce accurate, fast, versatile, modular and easy-to-use welding machines. Products range includes butt fusion, electrofusion and extrusion equipment. Ritmo is also providing a complete line of accessories and useful instruments for pipe cutting and weld preparation such as the band saws. RITMO's regards towards the client has brought to the new-born "RITMO FUSION OPERATOR SCHOOL", which is a welding school with the goal of building qualified personnel and spread the knowledge about the technical potentiality of RITMO's equipment: TECHNOLOGY MADE IN ITALY.



**ISO 9001**  
**Quality System**

... the result of  
our joint  
efforts





DELTA 250B ISO 11414 (05-96) PE-HD				<div>0° </div>								
D [mm]	s [mm]	SDR = D/s	T [°C]	1		2		3	4	5		6
				*P1 [bar]		P2 [bar]	t2 [sec]	t3 max [sec]	t4 [sec]	*P5 [bar]	(1) t5 [min] t5 ≥ 10	t6 [min]
75	1,9	41	210	1	2,0	0	68	4	4	1	10	3
75	2,3	33	210	2	2,0	0	68	4	4	2	10	3
75	2,9	26	210	2	2,0	0	68	4	4	2	10	4
75	3,6	21	210	2	2,0	0	68	4	4	3	10	5
75	4,3	17,6	210	3	2,0	0	68	4	4	3	10	6
75	4,3	17,6	210	3	2,0	1	68	4	4	4	10	7
75	4,3	17,6	210	3	2,0	1	68	4	4	4	10	8



for more details: [info@ritmo.it](mailto:info@ritmo.it)





**RITMO GROUP**

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[www.ritmo.cn](http://www.ritmo.cn)





Ritmo S.p.A., as you know it nowadays, it's the natural evolution of a passionate idea I had in the long gone 1979 with a group of trustworthy collaborators.

The results, even the smallest ones, have always been for us the pulsating engine that gave power to our projects and dreams. This is why we look back proudly to our origins and the many overcome difficulties; and it's with this spirit that I face every day as President.

All our welding machines are built according to the International Standards and, thing that are making us even more proud of, they're sold and appreciated all over the world. This is possible also thanks to a net of Affiliates and Distributors who strongly believe in Ritmo, and us!

Today the challenges of the market require continuous flexibility and innovations, high quality, maximum customer-service coverage but, above all, the capacity for anticipating the requests of the final customers. That is why we constantly propose new welders and accessories, and together with all my staff we research every day into the best way to ease the work of the Ritmo products in the job site and workshop, taking good care of the operator's safety.

*Renzo Bortoli*  
President

## RITMO GROUP





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WHERE THERE'S PLASTIC TO WELD



CONTACT RITMO!



# BUTT FUSION MACHINES



MODEL	WORKING RANGE Ø mm															
	40	50	56	63	75	90	110	125	140	160	180	200	225	250	280	315
DELTA 160 M	•	•	•	•	•	•	•	•	•	•						
DELTA DRAGON 160	•	•	•	•	•	•	•	•	•	•						
BASIC 160	•	•	•	•	•	•	•	•	•	•						
BASIC 160 EASY LIFE	•	•	•	•	•	•	•	•	•	•						
BASIC 200				•	•	•	•	•	•	•	•	•	•	•	•	•
BASIC 200 EASY LIFE				•	•	•	•	•	•	•	•	•	•	•	•	•
DELTA TRAILER 250					•	•	•	•	•	•	•	•	•	•	•	•
DELTA DRAGON 250 CNC					•	•	•	•	•	•	•	•	•	•	•	•
DELTA DRAGON 250 B					•	•	•	•	•	•	•	•	•	•	•	•
BASIC 250					•	•	•	•	•	•	•	•	•	•	•	•
BASIC 250 EASY LIFE					•	•	•	•	•	•	•	•	•	•	•	•
DELTA DRAGON 315 CNC						•	•	•	•	•	•	•	•	•	•	•
DELTA DRAGON 315 B						•	•	•	•	•	•	•	•	•	•	•
BASIC 315						•	•	•	•	•	•	•	•	•	•	•
BASIC 315 EASY LIFE						•	•	•	•	•	•	•	•	•	•	•
DELTA 355 ALL TERRAIN							•	•	•	•	•	•	•	•	•	•
DELTA 355 TRAILER							•	•	•	•	•	•	•	•	•	•
DELTA DRAGON 355 B							•	•	•	•	•	•	•	•	•	•
BASIC 355							•	•	•	•	•	•	•	•	•	•
BASIC 355 EASY LIFE							•	•	•	•	•	•	•	•	•	•
DELTA 500								•	•	•	•	•	•	•	•	•
DELTA 630 ALL TERRAIN									•	•	•	•	•	•	•	•
DELTA 630									•	•	•	•	•	•	•	•
DELTA 800										•	•	•	•	•	•	•
DELTA 1000											•	•	•	•	•	•
DELTA 1200												•	•	•	•	•
DELTA 1600													•	•	•	•
	40	50	56	63	75	90	110	125	140	160	180	200	225	250	280	315



# DELTA 160 M



**DELTA 160 M** is a manual butt fusion welder for pipes up to Ø 160 mm. Leading particulars are the restricted weight, minimum overall dimensions and versatility. Featuring: a machine body, two clamps, an extractable electric milling cutter provided with a safety micro-switch, an extractable heating plate (with an independent thermometer to see the real working temperature and an electronic thermo regulator "Digital Dragon" with display), a locking device that helps the operator to apply the necessary welding force and two lateral supports on request.

The Digital Dragon is an high precision electronic thermoregulator ( $\pm 1^\circ \text{C}$  accuracy) which comes in a protective waterproof rubber casing with digital display and regulating buttons. This new system includes Led indicators to check if the machine is working normally (live tension and working temperature), contingent probe's failures and/or temperature anomalies.

## STANDARD COMPOSITION:

- Machine body;
- Heating plate with digital electronic; temperature control;
- Milling cutter;
- Milling cutter/Heating plate support.

## ON REQUEST (ACCESSORIES)

- Clamps' inserts from Ø 40 to 140 mm;
- Lateral support;
- Trolley for machine transportation and support.

## TECHNICAL FEATURES

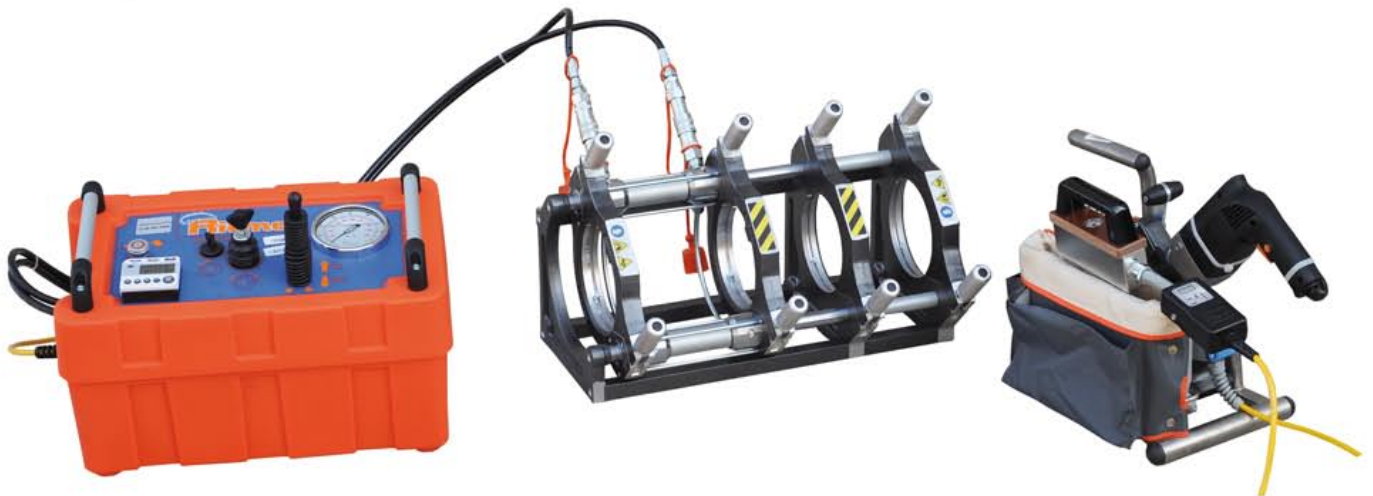
Working range	40 ÷ 160 mm	
Power supply	110 V	230 V
	Single phase - 50/60 Hz	
Total absorbed power	1850 W	1700 W
Working temperature	180 ÷ 280°C	
Ambient temperature	-5 ÷ +40°C	
Materials	HDPE, PP	
	* For other materials contact RITMO spa	

<b>DIMENSIONS (W x D x H)</b>	
Machine body	450 x 384 x 830 mm
<b>WEIGHT</b>	
Total (Delta 160 M only)	35,10 Kg





# DELTA DRAGON 160



Self-aligning hydraulic butt fusion machine, suitable for welding under-pressure pipes for water, gas and other fluids up to Ø160 mm. Built according to the national and international standards (UNI 10565, ISO 12176-1), **DELTA DRAGON 160** includes:

- **A machine body** built with a supporting frame, four clamps and two hydraulic cylinders with fast non-drip coupling connections.
- **A Teflon-coated (PTFE) heating plate** with a built-in independent thermometer, to check the working temperature, and an high-precision electronic thermoregulator "Digital Dragon" ( $\pm 1^{\circ}\text{C}$ ) which comes in a protective waterproof rubber casing with digital display and regulating buttons. This new system includes Led indicators to check if the machine is working normally (live tension and working temperature), contingent probe's failures and/or temperature anomalies.
- **An extractable electric milling cutter** to face the heads of the pipes and/or fittings. It includes a safety micro-switch and a thermal circuit breaker.
- **An electro-hydraulic gearcase** protected from crashes and atmospheric corrosion by a plastic box. It includes a control lever, to open and close the clamps, maximum pressure and discharge valves (useful also for the "Dual Pressure" welding process), hydraulic connection hoses with non-drip fast couplings and timer (to check the warming and welding time). The machine is preset for the connection of the electronic controller **INSPECTOR**.
- **A milling cutter/ heating plate support** which comes with a high-temperature-proof bag, which also protect the heating element from being scratched.

**DELTA DRAGON 160** is able to weld fittings like elbows, tees, Y-branches and flanges necks.  
Available in the 110 V and 230 V versions.

## STANDARD COMPOSITION:

- Machine body with bag and service keys;
- Heating plate TP DELTA 160 TE;
- Milling cutter;
- Electrohydraulic gearcase;
- Milling cutter/Heating plate support.





## TECHNICAL FEATURES

Working range	40 ÷ 160 mm	
Power supply	110 V	230 V
	Single phase - 50/60 Hz	
<b>Total absorbed power</b>	<b>1820 W</b>	<b>1930 W</b>
Working temperature	180 ÷ 280 ° C	
Outside temperature range	-5 ÷ +40°C	
Time to reach welding temperature	< 20 min.	
Materials	HDPE, PP, PB, PVDF For other materials contact RITMO S.P.A.	

<b>DIMENSION (W x D x H)</b>	
Machine body	600 x 400 x 410 mm

<b>WEIGHT</b>	
Machine body	27,00 Kg
<b>Standard composition</b>	<b>67,60 Kg</b>

### ON REQUEST (ACCESSORIES)

- Clamps' inserts from Ø 40 to 140 mm (8 pcs/ Ø);
- DELTA 160 special transportation box (only off-the-shelf product);
- Machine body trolley
- Clamps' wooden transportation box;
- INSPECTOR controller/data-logging.



Heater with Digital Dragon



Milling cutter



Electrohydraulic gearcase



Roller





# DELTA DRAGON 250 B



Self-aligning hydraulic butt fusion machine, suitable for welding under-pressure pipes for water, gas and other fluids up to Ø 250 mm. Built according to the national standards (UNI 10565, ISO 12176-1), **DELTA DRAGON 250 B** presents very interesting innovations. It includes:

- **A machine body** able to assume two working position: inclined or horizontal. The rotation of the machine body INCLINED/HORIZONTAL is very fast, by adjusting only 4 screws on the machine frame is possible to choose the best configuration for the working conditions. It comes with the fast-locking-adapters **system SMARTLock**, which speeds up the welding preparation time without using any additional equipment. It features a device (applicable on every welding configuration: between the 2nd and 3rd clamps or 3rd and 4th clamps) which allows the automatic detach of the heating plate from the pipes/fittings. Two rollers can be lodged very quickly on the sides of the machine body. These accessories allow lifting up the welded pipes to make them roll and quickly prepare a new weld.
- **A Teflon-coated** (PTFE) heating plate with a built-in independent thermometer, to check the working temperature, and a high-precision electronic thermoregulator "Digital Dragon" ( $\pm 1^\circ\text{C}$ ) which comes in a protective waterproof casing with digital display and regulating buttons. This new system includes Led indicators to check if the machine is working normally (live tension and working temperature), contingent probe's failures and/or temperature anomalies.
- **A milling cutter** that is equipped with a safety micro-switch to prevent from accidental starts, a thermal circuit breaker to protect the engine and also features an ergonomic docking system and on/off switches.
- **An electro-hydraulic gearcase** protected from crashes and atmospheric corrosion by a plastic box. It includes a control lever, to open and close the clamps, maximum pressure and discharge valves (useful also for the "Dual Pressure" welding process), hydraulic connection hoses with non-drip fast couplings and timer (to check the warming and welding time). The machine is preset for the connection of the electronic controller **INSPECTOR**.
- A milling cutter/ heating plate **support** which comes with a high- temperature-proof bag, which also protect the heating element from being scratched.

**DELTA DRAGON 250 B** is able to weld fittings like elbows, tees, Y-branches and flanges necks. Available in the 110 V and 230 V versions.

## STANDARD COMPOSITION:

- Machine body with bag and service keys;
- Heating plate TP DELTA 250 TE;
- Milling cutter;
- Gearbox;
- Milling cutter/Heating plate support.

**ASK FOR A QUOTATION**





## TECHNICAL FEATURES

Working range	75 ÷ 250 mm	
Power supply	110 V	230 V
	Single phase - 50/60 Hz	
<b>Total absorbed power</b>	<b>3470 W</b>	<b>3470 W</b>
Working temperature	180 ÷ 280°C	
Ambient temperature	-5 ÷ +40°C	
Time to reach welding temperature	< 20 min.	
Materials	HDPE, PP, PB, PVDF <small>For other materials contact RITMO S.P.A.</small>	

<b>DIMENSIONS (W x D x H)</b>	
Machine body	1000 x 543 x 418 mm

<b>WEIGHT</b>	
Machine body	58 Kg
<b>Standard composition</b>	<b>118 Kg</b>

### ON REQUEST (ACCESSORIES)

- Clamps' inserts from Ø 75 to 225 mm;
- Tool to weld flange necks/stub-end holder;
- Roller kit with lever applicable on the machine body' sides;
- Clamps' wooden transportation box;
- Transportation trolley for milling cutter, heating element and gearbox;
- INSPECTOR Data-logging.



Roller kit



Heater with Digital Dragon



SMARTLock system



Detach device for heater





# DELTA DRAGON 315 B



Self-aligning hydraulic butt fusion machine, suitable for welding under-pressure pipes for water, gas and other fluids up to Ø 315 mm. Built according to the national and international standards (UNI 10565, ISO 12176-1), **DELTA DRAGON 315 B** presents very interesting innovations. It includes:

- **A machine body** able to assume two working position: inclined or horizontal. The rotation of the machine body INCLINED/HORIZONTAL is very fast, by adjusting only 4 screws on the machine frame is possible to choose the best configuration for the working conditions. It comes with the fast-locking-adapters system SMARTLock (white master adapters), which speed up the welding preparation time without using any additional equipment. It features a device (applicable on every welding configuration: between the 2nd and 3rd clamps or 3rd and 4th clamps) which allows the automatic detach of the heating plate from the pipes/fittings. Two rollers can be lodged very quickly on the sides of the machine body. These accessories allow lifting up the welded pipes to make them roll and quickly prepare a new weld.
- **A Teflon-coated (PTFE) heating plate** with a built-in independent thermometer, to check the working temperature, and an high-precision electronic thermoregulator "Digital Dragon" ( $\pm 1^\circ\text{C}$ ) which comes in a protective waterproof casing with digital display and regulating buttons. This new system includes Led indicators to check if the machine is working normally (live tension and working temperature), contingent probe's failures and/or temperature anomalies.
- **A milling cutter** that is equipped with a safety micro-switch to prevent from accidental starts, a thermal circuit breaker to protect the engine and also features an ergonomic docking system and on/off switches.
- **An electro-hydraulic gearcase** protected from crashes and atmospheric corrosion by a plastic box. It includes a control lever to open and close the clamps, maximum pressure and discharge valves (useful also for the "Dual Pressure" welding process), hydraulic connection hoses with non-drip fast couplings and timer (to check the warming and welding time).
- **A milling cutter/heating plate support** which comes with a high-temperature-proof bag, which also avoid the heating element from being scratched.

**DELTA DRAGON 315 B**, thanks to the machine body configurations, is able to weld fittings like elbows, tees, Y-branches and flanges necks. Available in the 110 V and 230 V versions.

## STANDARD COMPOSITION:

- Machine body with bag and service keys;
- Heating plate TP DELTA 315 TE;
- Milling cutter;
- Gearbox;
- Milling cutter/Heating plate support.



## TECHNICAL FEATURES

Working range	90 ÷ 315 mm	
Power supply	110 V	230 V
	Single phase - 50/60 Hz	
<b>Total absorbed power</b>	<b>3900 W</b>	<b>4500 W</b>
Working temperature	180 ÷ 280°C	
Outside temperature range	-5 ÷ +40°C	
Time to reach welding temperature	< 20 min.	
Materials	HDPE, PP, PB, PVDF For other materials contact RITMO spa	

<b>DIMENSIONS (W x D x H)</b>	
Machine body	1150 x 530 x 531 mm
<b>WEIGHT</b>	
Machine body	86 Kg
<b>Standard composition</b>	<b>160 Kg</b>

## ON REQUEST (ACCESSORIES)

- Clamps' inserts from Ø 90 to 280 mm with 250 mm Master adapters;
- Tool to weld flange necks/stub-end holder;
- Roller kit with lever applicable on the sides of the machine body;
- Clamps' wooden transportation box;
- Transportation trolley for milling cutter, heating element and gearbox;
- INSPECTOR Data-logging.



Roller kit



Heater with Digital Dragon



Master Insert



Detach device for heater





# DELTA DRAGON 355 B



Self-aligning hydraulic butt fusion machine, suitable for welding under-pressure pipes for water, gas and other fluids up to Ø 355 mm. Built according to the national and international standards (UNI 10565, ISO 12176-1), **DELTA DRAGON 355 B** presents very interesting innovations. It includes:

- **A machine body** able to assume two working position: inclined or horizontal. The rotation of the machine body INCLINED/HORIZONTAL is very fast, by adjusting only 4 screws on the machine frame is possible to choose the best configuration for the working conditions. It comes with the fast-locking-adapters system SMARTLock (with master adapters), which speed up the welding preparation time without using any additional equipment. It features a device (applicable on every welding configuration: between the 2nd and 3rd clamps or 3rd and 4th clamps) which allows the automatic detach of the heating plate from the pipes/fittings. Two rollers can be lodged very quickly on the sides of the machine body. These accessories allow lifting up the welded pipes to make them roll and quickly prepare a new weld.
- **A Teflon-coated (PTFE) heating plate** with a built-in independent thermometer, to check the working temperature, and an high-precision electronic thermoregulator "Digital Dragon" ( $\pm 1^\circ\text{C}$ ) which comes in a protective waterproof casing with digital display and regulating buttons. This new system includes Led indicators to check if the machine is working normally (live tension and working temperature), contingent probe's failures and/or temperature anomalies.
- **A milling cutter** that is equipped with a safety micro-switch to prevent from accidental starts, a thermal circuit breaker to protect the engine and also features an ergonomic docking system and on/off switches.
- **An electro-hydraulic gearcase** protected from crashes and atmospheric corrosion by a plastic box. It includes a control lever to open and close the clamps, maximum pressure and discharge valves (useful also for the "Dual Pressure" welding process), hydraulic connection hoses with non-drip fast couplings and timer (to check the warming and welding time).
- **A milling cutter/ heating plate support** which comes with a high-temperature-proof bag, which also avoid the heating element from being scratched.

**DELTA DRAGON 355 B**, thanks to the machine body configurations, is able to weld fittings like elbows, tees, Y-branches and flanges necks.

## STANDARD COMPOSITION:

- Machine body with bag and service keys;
- Heating plate TP DELTA 355 TE;
- Milling cutter;
- Gearbox;
- Milling cutter/Heating plate support.

**ASK FOR A QUOTATION**





## TECHNICAL FEATURES

Working range	125 ÷ 355 mm
Power supply	230 V
	Single phase - 50/60 Hz
<b>Total absorbed power</b>	<b>5800 W</b>
Working temperature	180 ÷ 280 ° C
Outside temperature range	-5 ÷ +40°C
Time to reach welding temperature	< 20 min.
Materials	HDPE, PP, PB, PVDF <small>For other materials contact RITMO S.P.A.</small>
<b>DIMENSION (W x D x H)</b>	
Machine body	1208 x 725 x 584 mm
<b>WEIGHT</b>	
Machine body	157 Kg
<b>Standard composition</b>	<b>269 Kg</b>

### ON REQUEST (ACCESSORIES)

- Clamps' inserts from Ø 125 to 315 mm with 250 mm Master adapters;
- Tool to weld flange necks/stub-end holder;
- Roller kit with lever applicable on the sides of the machine body;
- Clamps' wooden transportation box;
- Transportation trolley for milling cutter, heating element and gearbox;
- INSPECTOR Data-logging.



Heater with Digital Dragon



Master Insert



Detach device for heater





# DELTA 500



This is a self-aligning machine, suitable for welding ducts for the transport of water, gas and other fluids under pressure, up to Ø 500 mm. The **DELTA 500** was designed in accordance to the Italian and international correspondent standards (UNI 10565, ISO 12176-1), and consists of:

- **A machine body** with a bearing frame, four clamps and two hydraulic thrust cylinders with non-drip quick couplings.
- **An extractable heating plate** with separate thermometer for reading the working temperature.
- **An extractable electric milling cutter** for levelling the ends of the pipe and/or fitting, with a safety microswitch and overload cutout.
- **An electro-hydraulic gearcase** with a clamp opening and closing lever, maximum pressure and discharge valves (useful also during the "Dual Pressure" welding), hydraulic hoses with non-drip quick couplings, a timer (for the heating and welding phases), an extractable electrical panel with power outlet for the heating plate, an electronic thermoregulator for the control of the working temperature, a differential circuit breaker, and a special connection for the electronic data-logger **INSPECTOR**.
- **A milling cutter/heating plate support.**

The **DELTA 500** can weld fittings without the need for any additional equipment: bends, tees, branches and flange necks can be welded by simply taking the fourth clamp off the machine body's frame. Necks with a highly reduced tang can be welded with the help of a special tool (on request), applied to the clamps.

Available in 230 V and 400 V.

## STANDARD COMPOSITION

- Machine body with a tool kit;
- TP DELTA 500 TE plate;
- Milling cutter;
- Electrohydraulic gearcase;
- Milling cutter/heating plate support.





## TECHNICAL FEATURES

Working range	200 ÷ 500 mm	
Power supply	230 V	400 V
	Single phase 50/60 Hz	Three phase 50/60 Hz
<b>Total absorbed power</b>	<b>7950 W</b>	<b>7200 W</b>
Working temperature	180 ÷ 280 ° C	
Outside temperature range	-5 ÷ +40°C	
Time to reach welding temperature	< 20 min.	
Materials	HDPE, PP, PVDF <small>For other materials contact RITMO S.P.A.</small>	
<b>DIMENSION (W x D x H)</b>		
Machine body	1265 x 790 x 780 mm	
<b>WEIGHT</b>		
Machine body	230 Kg	
<b>Standard composition</b>	<b>408 Kg</b>	



Tool for flange necks

### ON REQUEST (ACCESSORIES)

- EASY LIFE gearbox;
- Clamps' inserts from Ø 200 to 450 mm;
- Tool for flange necks;
- Special transport wooden case (DELTA 500 only);
- Special transport wooden case (machine body with trolley);
- Wooden case for inserts;
- Machine body trolley;
- INSPECTOR data-logger



Machine body trolley (on request)





# DELTA 630



This is a self-aligning machine, suitable for welding ducts for the transport of water, gas and other fluids under pressure, up to Ø 630 mm. The **DELTA 630** was designed in accordance to the Italian and international correspondent standards (UNI 10565, ISO 12176-1), and consists of:

- **A machine body** with a steel bearing frame, four steel clamps and two hydraulic thrust cylinders with non-drip quick couplings.
- **Steel inserts** featuring the patented "Smart Lock" fast locking/unlocking system which allows an incredibly quick assembly of the inserts without the use of tools, helping reducing set up time before welding.
- **Self detaching device:** helps removing the heating plate during welding procedure.
- **An extractable heating plate** with separate thermometer for reading the working temperature.
- **An extractable electric milling cutter** for leveling the ends of the pipe and/or fitting, with a safety microswitch and overload cutout. Milling cutter's plastic control box is protected by a metal frame, and equipped with a fast removing system to speed up the extraction from machine body.
- **An electrohydraulic gearcase** with a clamps opening and closing lever, maximum pressure and release valves (also useful when welding with the "Dual Pressure" procedure), hydraulic hoses with non-drip quick couplings, a timer (for the heating and welding phases).
- **Digital electric connections** box with the high precision ( $\pm 1^{\circ}\text{C}$ ) "Digital Dragon" temperature controller protected by a special container and equipped with a reading display and keys for temperature adjustment.
- **A milling cutter/heating plate support.**

With **DELTA 630** it is possible to weld fittings such as Bends, Tees, Wyes and Stub Ends. This is possible because the 3rd clamp can be anchored to the 1st and 2nd (movable) and slide along with the pipe. The fitting have to be locked in the 4th clamp. Short neck stub ends can be welded with the help of a special tool (on request).

## STANDARD COMPOSITION

- Machine body with a tool kit;
- TP DELTA 630 TE plate;
- Milling cutter;
- Digital electric box
- Electrohydraulic gearcase;
- Milling cutter/heating plate support.





## TECHNICAL FEATURES

Working range	280 ÷ 630 mm
Power supply	230 - 400 V 3F+N+PE 50/60 Hz
<b>Max. absorbed power</b>	<b>12350 W</b>
Working temperature	180 ÷ 280 ° C
Outside temperature range	-5 ÷ +40°C
Time to reach welding temperature	< 35 min.
Materials	HDPE, PP, PB, PVDF <small>For other materials contact RITMO S.p.A.</small>
<b>DIMENSION (W x D x H)</b>	
Machine body	1550 x 1010 x 1000 mm
<b>WEIGHT</b>	
Machine body	415 Kg
<b>Standard composition</b>	708 Kg



"Digital Dragon" temperature controller



Fast removing system

## ON REQUEST (ACCESSORIES)

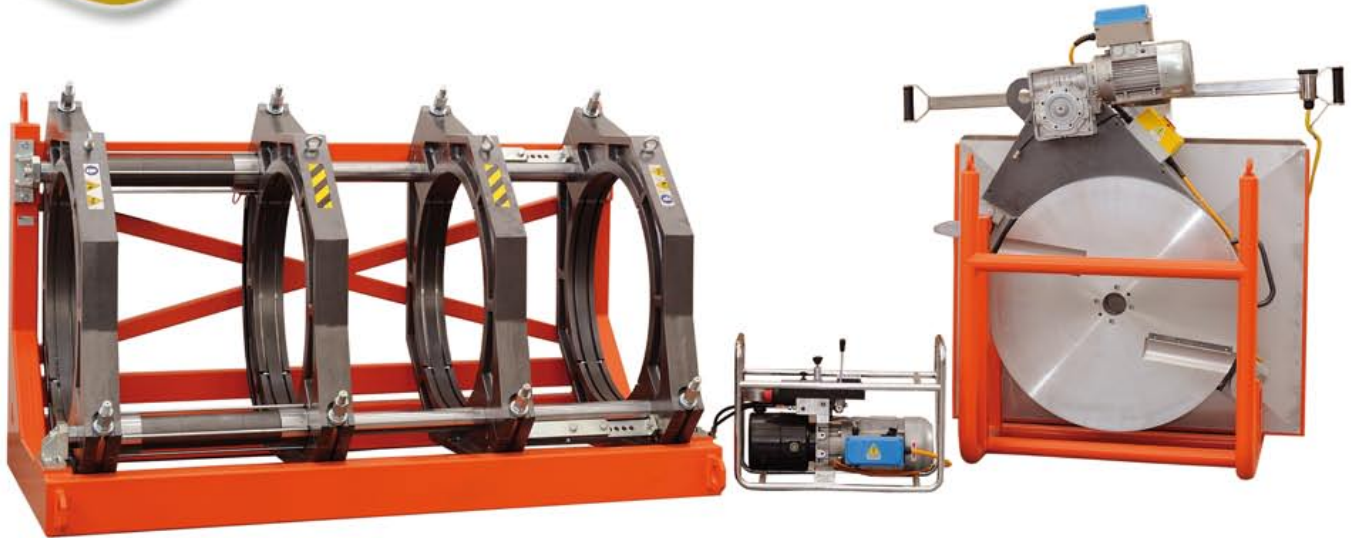
- Clamps inserts from Ø 280 to 560 mm;
- Tool for flange necks;
- Special transport wooden case (DELTA 630 only);
- Special transport wooden case (machine body with trolley);
- Wooden case for inserts;
- Machine body trolley;
- Electrical crane;
- INSPECTOR data-logger.







# DELTA 800



This is a self-aligning machine, suitable for welding ducts for the transport of water, gas and other fluids under pressure, up to Ø 800 mm. The **DELTA 800** was designed in accordance to the Italian and international correspondent standards (UNI 10565, ISO 12176-1), and consists of:

- **A machine body** with a bearing frame, four clamps and two hydraulic thrust cylinders with non-drip quick couplings.
- **An extractable heating plate** with separate thermometer for reading the working temperature.
- **An extractable** electrically controlled **milling cutter** for levelling the ends of the pipe and/or fitting, with a safety microswitch and overload cutout.
- **An electrohydraulic gearcase** with a clamp opening and closing lever, maximum pressure and discharge valves (useful also during the "Dual Pressure" welding), hydraulic hoses with non-drip quick couplings, a timer (for the heating and welding phases), an extractable electrical panel with power outlet for the heating plate, an electronic thermoregulator for the control of the working temperature, a differential circuit breaker, and a special connection for the electronic data-logger **INSPECTOR**.
- **A milling cutter/heating plate support.**

The **DELTA 800** can weld fittings such as bends, tees, branches and flange necks. This is possible because the 3rd clamp can be anchored to the 1st and 2nd (movable) and slide along with the pipe. The fitting must be locked in the 4th clamp. Necks with a highly reduced tang can be welded with the help of a special tool (on request), applied to the clamps.

## STANDARD COMPOSITION

- Machine body with a tool kit;
- TP DELTA 800 TE plate;
- Milling cutter;
- Electrohydraulic gearcase;
- Milling cutter/heating plate support.





## TECHNICAL FEATURES

Working range	500 ÷ 800 mm
Power supply	400 V - 3F+N+PE 50/60 Hz
<b>Total absorbed power</b>	<b>16500 W</b>
Working temperature	180 ÷ 280 ° C
Outside temperature range	-5 ÷ +40°C
Time to reach welding temperature	< 45 min.
Materials	HDPE, PP, PVDF <small>For other materials contact RITMO S.P.A.</small>
<b>DIMENSION (W x D x H)</b>	
Machine body	2100 x 1350 x 1300 mm
<b>WEIGHT</b>	
Machine body	762 Kg
<b>Standard composition</b>	<b>1200 Kg</b>



Tool for flange necks

### ON REQUEST (ACCESSORIES)

- Clamps' inserts from Ø 500 to 710 mm;
- Tool for flange necks;
- Special transport wooden case;
- Plate support, and electrohydraulic gearcase);
- Wooden case for inserts;
- Machine body trolley;
- Electrical crane;
- INSPECTOR data-logger.



Machine body trolley (on request)







# DELTA 1000



This is a self-aligning machine, suitable for welding ducts for the transport of water and other fluids under pressure, up to Ø 1000 mm. The **DELTA 1000** was designed in accordance to the Italian and international correspondent standards (UNI 10565, ISO 12176-1), and consists of:

- **A machine body** with a bearing frame, four clamps and two hydraulic thrust cylinders with non-drip quick couplings.
- **An extractable heating plate** with separate thermometer for reading the working temperature.
- **An extractable** electrically controlled **milling cutter** for levelling the ends of the pipe and/or fitting, with a safety microswitch and overload cutout.
- **An electrohydraulic gearcase** with clamp opening and closing lever, maximum pressure and discharge valves (useful also during the "Dual Pressure" welding), hydraulic hoses with non-drip quick couplings, an electrical panel with power outlet for the heating plate and crane, an electronic thermoregulator for the control of the working temperature, a differential circuit breaker, and a special connection for the electronic data-logger **INSPECTOR**.
- **A milling cutter/heating plate support.**

The **DELTA 1000** can weld fittings such as bends, tees, branches and flange necks. This is possible because the 3rd clamp can be anchored to the 1st and 2nd (movable) and slide along with the pipe. The fitting must be locked in the 4th clamp. Necks with a highly reduced tang can be welded with the help of a special tool (on request), applied to the clamps.

## STANDARD COMPOSITION

- Machine body with a tool kit;
- TP DELTA 1000 TE plate;
- Milling cutter;
- Electrohydraulic gearcase;
- Milling cutter/heating plate support.

**ASK FOR A QUOTATION**





## TECHNICAL FEATURES

Working range	630 ÷ 1000 mm
Power supply	400 V - 3F+N+PE 50/60 Hz
<b>Total absorbed power</b>	<b>18700 W</b>
Working temperature	180 ÷ 280 ° C
Outside temperature range	-5 ÷ +40°C
Time to reach welding temperature	< 45 min.
Materials	HDPE, PP, PVDF <small>For other materials contact RITMO S.P.A.</small>

<b>DIMENSION (W x D x H)</b>	
Machine body	2463 x 1780 x 1700 mm

<b>WEIGHT</b>	
Machine body	2500 Kg
<b>Standard composition</b>	<b>3315 Kg</b>



Tool for flange necks

## ON REQUEST (ACCESSORIES)

- Clamps' inserts from Ø 630 to 900 mm (8 pieces/Ø);
- Tool for flange necks;
- Machine body trolley;
- Electrical crane;
- INSPECTOR data-logger.



Machine body trolley (on request)







# DELTA 1200

## DELTA 1600 NEW WELDING MACHINE \*



DELTA 1200

This is a self-aligning welding machine, suitable for welding drain pipes and ducts for the transport of water and other fluids under pressure, up to Ø 1200/1400 mm. The **DELTA 1200** was designed in accordance to the Italian and international correspondent standards (UNI 10565, ISO 12176-1), and consists of:

- **Machine body** with a bearing frame, four clamps and two hydraulic thrust cylinders with non-drip quick couplings.
- **Extractable heating plate** with separate thermometer for reading the working temperature.
- **Extractable electrically controlled milling cutter** for levelling the ends of the pipe and/or fitting, with a safety microswitch, overload cutout, and emergency push button.
- **Electrohydraulic gearcase** with a clamp opening and closing lever, maximum pressure and discharge valves (useful also during the "Dual Pressure" welding), hydraulic hoses with non-drip quick couplings, a timer (for the heating and welding phases) and an electrical panel with a differential circuit breaker.
- **Milling cutter/heating plate support** with an electrical panel with power outlets for the heating plate, milling cutter and electrohydraulic gearcase, an electronic thermoregulator for the control of the working temperature, a turn on/off push button for the milling cutter, and differential circuit breakers.

The **DELTA 1200** can weld fittings such as elbows, tees, branches and flange necks. This is possible because the 3rd clamp can be anchored to the 1st and 2nd (movable) and slide along with the pipe. The fitting must be locked in the 4th clamp. Necks with a highly reduced tang can be welded with the help of a special tool (on request), applied to the clamps.

### STANDARD COMPOSITION

- Machine body with a tool kit;
- TP DELTA 1200 TE plate;
- Milling cutter;
- Electrohydraulic gearcase;
- Milling cutter/heating plate support.

**ASK FOR A QUOTATION**



DELTA 1200



## DELTA 1200

Working range	710 ÷ 1200 mm
Power supply	400 V - 3F+N +PE 50/60 Hz
<b>Total absorbed power</b>	<b>28196 W</b>
Power absorbed by the electrical crane	750 W
Working temperature	180 ÷ 280°C
Outside temperature range	-5 ÷ +40°C
Time to reach welding temperature	< 45 min.
Materials	HDPE, PP, PVDF For other materials contact RITMO spa

<b>DIMENSIONS (W x D x H)</b>	
Machine body	4500 x 2130 x 2330 mm

<b>WEIGHT</b>	
Machine body	3800,00 Kg
<b>Standard composition</b>	<b>5320,00 Kg</b>



Tool for flange necks

## DELTA 1600

Working range	800 ÷ 1600 mm
Power supply	400 V - 3F+N +PE 50/60 Hz
<b>Total absorbed power</b>	<b>45000 W</b>
Working temperature	180 ÷ 280°C
Outside temperature range	-5 ÷ +40°C
Materials	HDPE, PP, PVDF For other materials contact RITMO spa

<b>DIMENSIONS (W x D x H)</b>	
Machine body	3550 x 2400 x 2550 mm

<b>WEIGHT</b>	
Machine body	4070 Kg
<b>Standard composition</b>	<b>5420 Kg</b>



Machine body trolley and Electrical crane (on request)

### ON REQUEST (ACCESSORIES)

- Tool for flange necks;
- Machine body trolley;
- Electrical crane;
- INSPECTOR data-logger.

**\* for details contact RITMO S.P.A.**







## BASIC LINE

RITMO S.P.A. presents **BASIC**, the new Line of butt welding machines for pipes and joints in HDPE, PP, PB, PVDF with diameters ranging from 40 to 355 mm. BASIC was designed by thirty years of experience in manufacturing, producing reliable and versatile welding machines, adapt for all environments, even the harshest such as deserts and mines.

The New BASIC Line is distinguished by the excellent quality – price ratio, while maintaining reliability, precision and ease of use, along with RITMO's standards.

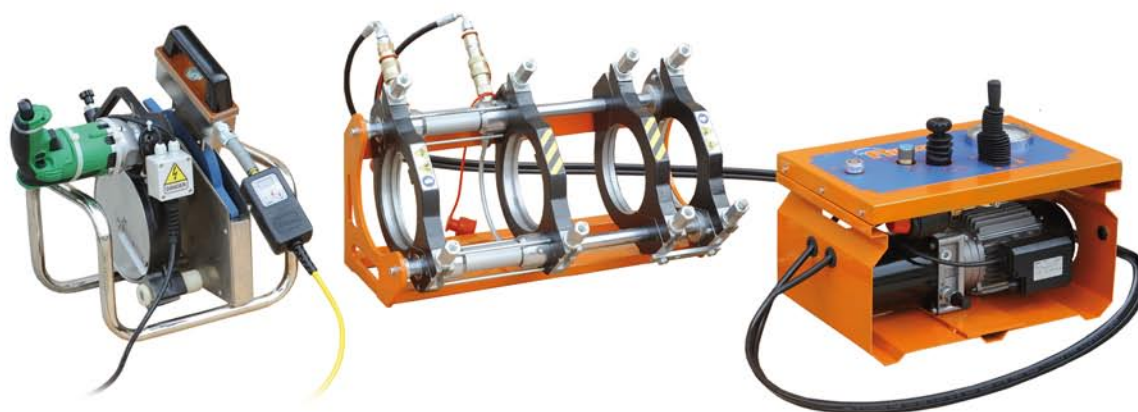
With the New BASIC Line, RITMO makes its machines and work philosophy available to everyone!

**ASK FOR A QUOTATION**





# BASIC 160 - BASIC 200



**BASIC 160/200** is able to weld fittings such as elbows, tees, Y-branches and flange necks without any additional equipment by simply fixing the clamps' drag bar.

BASIC 160/200 includes:

- **A machine body** with 4 clamps and 2 hydraulic cylinders with fast non-drip couplings.
- **An extractable heating plate** with DIGITAL DRAGON, high - precision electronic thermo-regulator.
- **An extractable milling cutter**, with safety micro-switch.
- **An electro-hydraulic gearcase**, with a clamp opening and closing lever.
- **A hydraulic hoses** with non – drip quick couplings.

## STANDARD COMPOSITION

- BASIC 160 adapters, from Ø 40 to 140 mm.
- BASIC 200 adapters, from Ø 63 to 180 mm.

## ON REQUEST (ACCESSORIES)

- Tool for flange necks (only BASIC 200);
- Trolley;
- EASY LIFE gearbox.

### BASIC 160

Materials	HDPE - PB - PP - PVDF	
Working range	40 ÷ 160 mm	
Power supply	110 V	230 V
Single phase	50/60 Hz	
Total absorbed power	1850 W	1900 W
Working temperature	180 ÷ 280°C	
Pressure working range	0 ÷ 150 bar	
Weight only body machines	30 Kg	

### BASIC 200

Materials	HDPE - PB - PP - PVDF	
Working range	63 ÷ 200 mm	
Power supply	230 VAC	
Single phase	50/60 Hz	
Total absorbed power	3000 W	
Working temperature	180 ÷ 280°C	
Pressure working range	0 ÷ 150 bar	
Weight only body machines	35 Kg	







# BASIC 250



**BASIC 250** is able to weld fittings such as elbows, tees, Y-branches and flange necks without any additional equipment by simply fixing the clamps' drag bar.

BASIC 250 includes:

- **A machine body** with 4 clamps and 2 hydraulic cylinders with fast non-drip couplings;
- **An extractable heating plate** with DIGITAL DRAGON, high - precision electronic thermo-regulator;
- **An extractable milling cutter**, with safety micro-switch;
- **An electro-hydraulic gearcase**, with a clamp opening and closing lever;
- **A hydraulic hoses** with non – drip quick couplings.

## STANDARD COMPOSITION

- Adapters, from Ø 75 to 225 mm.

## ON REQUEST (ACCESSORIES)

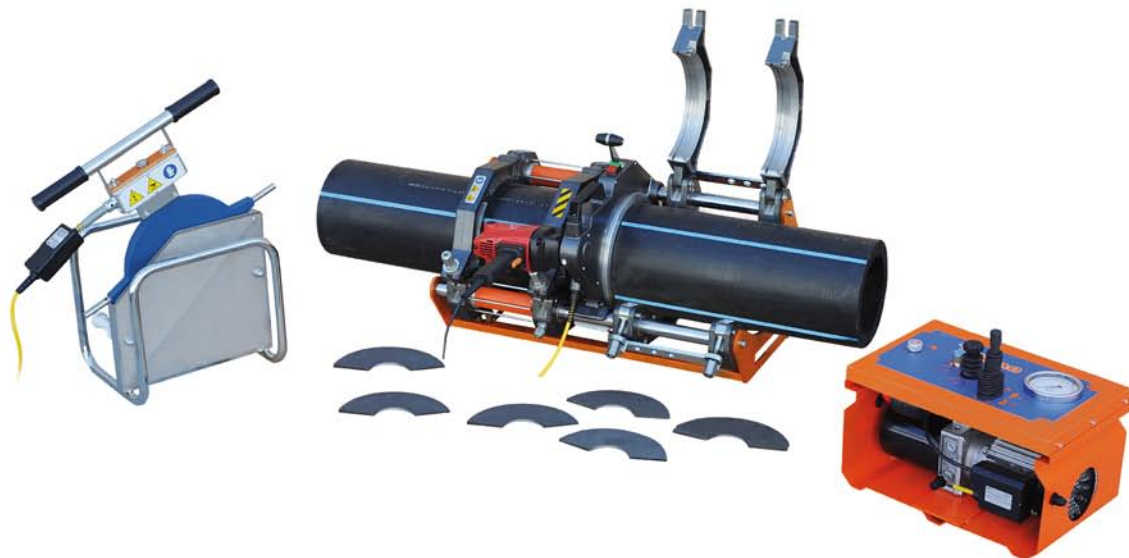
- Tool for flange necks;
- Trolley;
- EASY LIFE gearbox

Materials	HDPE - PB - PP - PVDF
Working range	75 ÷ 250 mm
Power supply	230 VAC
Single phase	50/60 Hz
Total absorbed power	3500 W
Working temperature	180 ÷ 280°C
Pressure working range	0 ÷ 150 bar
Weight only body machines	54 Kg





# BASIC 315



**BASIC 315** is able to weld fittings such as elbows, tees, Y-branches and flange necks without any additional equipment by simply fixing the clamps' drag bar.

BASIC 315 includes:

- A machine body with 4 clamps and 2 hydraulic cylinders with fast non-drip couplings.
- An extractable heating plate with DIGITAL DRAGON, high - precision electronic thermo-regulator.
- An electro-hydraulic gearcase, with a clamp opening and closing lever.
- A hydraulic hoses with non – drip quick couplings.

## STANDARD COMPOSITION

- Inserts from Ø 90 to 280 mm;
- Master adapters Ø 250 mm.

## ON REQUEST (ACCESSORIES)

- Tool for flange necks;
- Trolley;
- EASY LIFE gearbox.

Materials	HDPE - PB - PP - PVDF
Working range	90 ÷ 315 mm
Power supply	230 VAC
Single phase	50/60 Hz
Total absorbed power	4500 W
Working temperature	180 ÷ 280°C
Pressure working range	0 ÷ 150 bar
Weight only body machines	86 Kg







# BASIC 355



**BASIC 355** is able to weld fittings such as elbows, tees, Y-branches and flange necks without any additional equipment by simply fixing the clamps' drag bar.

BASIC 355 includes:

- **A machine body** with 4 clamps and 2 hydraulic cylinders with fast non-drip couplings.
- **An extractable heating plate** with DIGITAL DRAGON, high - precision electronic thermo-regulator.
- **An extractable milling cutter**, with safety micro-switch.
- **An electro-hydraulic gearcase**, with a clamp opening and closing lever.
- **A hydraulic hoses** with non – drip quick couplings.

## STANDARD COMPOSITION

- Inserts from Ø 125 to 315 mm;
- Master adapters Ø 250 mm

## ON REQUEST (ACCESSORIES)

- Tool for flange necks;
- Trolley;
- EASY LIFE gearbox.

Materials	HDPE - PB - PP - PVDF
Working range	125 ÷ 355 mm
Power supply	230 VAC
Single phase	50/60 Hz
Total absorbed power	5800 W
Working temperature	180 ÷ 280°C
Pressure working range	0 ÷ 150 bar
Weight only body machines	150 Kg





# BASIC EASY LIFE



**BASIC EASY LIFE** is the new evolution of the BASIC range.

Thanks to the special gearcase, the EASY LIFE system, can manage the welding process on a semi automatic way. The electronic system guarantees the continuous repeating of the welding cycles and automatically controls the preset parameters. The use of the EASY LIFE incorporates a data logging that guarantees certified welds comparable to those performed with a CNC automatic machine. Also the "Dual Pressure" welding method is made easy and reliable thanks to the Easy Life gearcase. The EASY LIFE system can store up to 400 joint reports. It is possible to transfer the welding data to a PC through a serial port (USB adaptor connector available) and data-management software. A printer can be connected to the serial port, to obtain a welding report at the end of each welding cycle.

The EASY LIFE system is available for the complete BASIC range.

The EASY LIFE gearcase consists 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 outlet, connection for the electronic data-logger Inspector, hydraulic hoses with non-drip fast couplings.

**BASIC**

**EVOLUTION**

**BASIC 160 EASY LIFE**

**BASIC 200 EASY LIFE**

**BASIC 250 EASY LIFE**

**BASIC 315 EASY LIFE**

**BASIC 355 EASY LIFE**



ON REQUEST:

- Transfer kit for transferring welding data from the welding machine/serial printer.

## TECHNICAL FEATURES

Dimensions (W x D x H)	585 x 384 x 463 mm
Weight	37 Kg
Power supply	230 V single phase 50/60 Hz
Total adsorbed power	1100 W



# BASIC LINE

Professional

# DELTA DRAGON

Professional **HIGH TECH**

## Differences

### Electro-Hydraulic Case



Rugged plastic case to protect the hydraulic system against accidental drops, hits, dust and humidity



Timer mounted on case panel

### Adapters



Wider gripping areas on pipes and fittings



# BASIC LINE

Professional

# DELTA DRAGON

Professional **HIGH TECH**

## Differences

### Heater



Heater protection against high temperature and scratches

### Facer



Improved facer design and components

### Upgrades and Add-ons

- CNC Automation
- Inspector



# DELTA 250 TRAILER



Self-aligning hydraulic butt fusion machine, suitable for welding underpressure pipes for water, gas and other fluids up to Ø 250 mm. Built according to the national and international standards (UNI 10565, ISO 12176-1), **DELTA 250 TRAILER** includes:

- **A trailer-mounted machine body**, easily removable from the trolley in order to perform also into the ditch, adapting to the conditions of the job site. The body is also able to tilt, allowing the operator to work with the clamps in a horizontal or inclined position. It comes with the fast-locking adapters system SMARTLock, thanks to which is possible to change adapters in few seconds.
- **An on-board electric milling cutter** that is equipped with a safety microswitch to prevent from accidental starts, a thermal circuit breaker to protect the engine and also features an ergonomic docking system and on/off switches. To allow the weld in ditches, the milling cutter is easily removable from the trolley/machine body in order to reduce the overall dimensions of the machine and ease the load/unload process.
- **An extractable heating plate** Teflon-coated (PTFE) equipped with an independent thermometer to check the working temperature.
- **An EASY LIFE control panel** which is also removable from the machine body to be able to check the welding phases outside from the ditches. It allows the operator to program and pilot all the welding duty cycle in an easy, fast and very intuitive way. It also controls the temperature of the heating plate, always visible on the display. It includes a data-logging system to store the welding data, connectable to a PC or a laptop by serial port/USB for the data download. The EASY LIFE system can store up to 400 joint reports.
- **A heating plate support** which comes with a high-temperature-proof bag, which also avoid the heating element from being scratched.

**DELTA 250 TRAILER** is able to weld fittings like elbows, tees, Y-branches and flanges necks. Available in the 110 V and 230 V versions.

## STANDARD COMPOSITION

- Machine body group complete with: trolley, hydraulic gearcase,
- EASY LIFE control panel, milling cutter, bag and keys;
- Heating plate TP DELTA 250 TE with support;
- Lateral rollers.



## TECHNICAL FEATURES

Working range	75 ÷ 250 mm	
Power supply	110 V	230 V
	Single phase 50/ 60 Hz	
<b>Total absorbed power</b>	<b>4400 W</b>	<b>4200 W</b>
Working temperature	180 ÷ 280 ° C	
Outside temperature range	-5 ÷ +40°C	
Time to reach welding temperature	< 20 min.	
Materials	HDPE, PP, PB, PVDF <small>For other materials contact RITMO S.P.A.</small>	

<b>DIMENSION (W x D x H)</b>	
Machine body	1080 x 1380 x 1330 mm

<b>WEIGHT</b>	
Machine body	85 Kg
<b>Standard composition</b>	220 Kg

## ON REQUEST (ACCESSORIES)

- Clamps' inserts from Ø 75 to 225 mm (8 pcs/Ø);
- Tool to weld flanges' necks/ Stub-end holder;
- Software for data download (data-logging) with serial/USB cable.



EASY LIFE control panel



SMARTLock system







# DELTA 355 ALL TERRAIN

## DELTA 355 TRAILER



DELTA 355 ALL TERRAIN

**DELTA 355 ALL TERRAIN** is the butt fusion machine that will change your concept of working in job site.

**ALL TERRAIN** is a patented system studied to simplify the movements of the machine in all-terrain conditions, including the loading/unloading of the machine itself from the transportation van/truck.

**DELTA 355 ALL TERRAIN** is powered by a low-vibration gasolina or diesel engine, is equipped with front steering wheels and rear traction. The machine body follows the concepts of the new DELTA line like: the new fast-locking-adapters system **SMARTLock**, thanks to which is possible to change adapters in few seconds without using any additional tools. The milling cutter and the **EASY LIFE** control panel are mounted on-board. The **EASY LIFE** system allows the operator to program and control, in a very easy way, all the welding cycle and it also incorporates a Data-logging to record all the working process. The **EASY LIFE** system can store up to 400 joint reports. It also features a **GPS system** that allows the localization of the working place, and the possibility to connect a portable serial printer.

The **heating element** can be docked in a comfortable on-board support. The machine body, with the four clamps, can be easily removed from the trolley in order to work in ditches. Also the control panel can be removed to allow the operator to control the welding process out from the ditch.

The machine is supplied with two rollers that allow the fast shift of the pipes; the one on the rear of the machine is hydraulic-controlled while the other, in front, is manual.

**DELTA 355 ALL TERRAIN** is suitable for welding under-pressure pipes (HDPE, PP, PVDF, PB) for the transportation of water, gas and other fluids. It can weld pipes and fittings of diameters between 125 mm and 355 mm.

### STANDARD COMPOSITION

Machine body group, complete with:

- Trolley with hydraulic gearcase;
- Generator (gasolina or diesel);
- **EASY LIFE** control panel;
- Milling cutter;
- Heating plate;
- Heating plate support.





### DELTA 355 ALL TERRAIN

Working range	125 ÷ 355 mm
Power supply	Self contained/independent gasolina engine 9.5 kW diesel engine 8,6 kW
Working temperature	180 ÷ 280 ° C
Outside temperature range	- 5 ÷ + 40°C
Materials	HDPE, PP, PB, PVDF <small>For other materials contact RITMO S.P.A.</small>
<b>DIMENSION (W x D x H)</b>	
Machine body	2112 x 1180 x 1317 mm
<b>WEIGHT</b>	
Machine body	195 Kg
Standard composition	580 Kg

### DELTA 355 TRAILER

Working range	125 ÷ 355 mm
Power supply	230 V Single phase - 50/60 Hz
Total absorbed power	6450 W
Working temperature	180° ÷ 280° C
Outside temperature range	- 5 ÷ + 40°C
Time to reach welding temperature	< 20 min.
Materials	HDPE, PP, PB, PVDF <small>For other materials contact RITMO S.P.A.</small>
<b>DIMENSION (W x D x H)</b>	
Machine body	2112 x 1180 x 1317 mm
<b>WEIGHT</b>	
Standard composition	485 Kg

#### ON REQUEST (ACCESSORIES)

- Clamps' inserts from Ø 125 to 315 mm (8 pcs/Ø);
- Tool for flange necks/stub-end holder;
- Inserts' transportation box;
- Data-logging software and cable.



DELTA 355 TRAILER

#### Differences between the 2 fusion welders are the following:

- **DELTA 355 ALL TERRAIN** is a self contained, self propelled and all terrain fusion unit powered by an on board generator (diesel or petrol).
- **DELTA 355 TRAILER** does not have an on board generator and needs external power supply.

The Automated **EASY LIFE** fusion system is the same for both units, guides the operator through a step by step procedure for fusing pipe and has a built-in datalogging feature that keeps a record of each fusion joint, which allows you to verify joint integrity.





# DELTA 630 ALL TERRAIN



Suitable for  
**HIGH PRESSURE  
WELDING STANDARD**

**ASK FOR A QUOTATION**



The **DELTA 630 ALL TERRAIN** is the Pipe and Fittings **FUSION** Machine designed to face the toughest working conditions. The machine is equipped with a 2200 cc diesel **ENGINE** which powers the 4-wheels **DRIVE** traction and the generator, assuring a totally independent and autonomous Fusion Machine. Its detachable control panel allows an intuitive **CONTROL** of the 4 steering wheels; besides making **DELTA 630 ALL TERRAIN** movements a lot easier, it also grants a fast and perfect alignment of the pipes. Machine's hydraulic operations significantly reduce time and operational costs. **DELTA 630 ALL TERRAIN** is also trench-friendly: **CHASSIS** can be **REMOVED** from the trolley and top-load the Heating Plate and Facer. Machine includes Ritmo's most successful "**Easy Life**" Fusion System which helps the operator to program and manage the fusion in a simple and precise manner. The Easy Life system can store up to 400 joint reports. A **GPS System**, a Large Display and Data-Logging complete the features of this exceptional Fusion Machine.

**DELTA 630 ALL TERRAIN** wants to mark a turning point to the world of Field Fusion. It stands out for being extremely easy to set up and work with. Take the heating plate and facer disconnecting system for example; the positioning / removal of the pipes is made without obstacles, giving the operator more time for what really matters. Italian design, known for paying particular attention to details, gives **DELTA 630 ALL TERRAIN** many technical innovations that are indeed practical. Take the clamps hydraulic system, for instance - not only an aesthetical maneuver, but a protection against collisions while positioning the machine inside the trench. Take the low fuel consumption and soundproofing gear – protects the environment, your health and saves you money!

DELTA 630 ALL TERRAIN is available in 2 models:  
**DELTA 630 ALL TERRAIN CNC** (*automatic welding control system*)  
**DELTA 630 ALL TERRAIN M** (*manual welding control system*)





## TECHNICAL FEATURES

Working range	225* ÷ 630 mm
Engine	2200 cc - 22,7 Kw
Fuel type	Diesel
Fuel tank capacity	40 Liters
Operational tank capacity	12 Hours
Hydraulics reservoir capacity	80 Liters
Materials	HDPE, PP <small>For other materials contact RITMO spa</small>
<b>DIMENSIONS (W x D x H)</b>	
Machine body	2200 x 2000 x 3100 mm
<b>WEIGHT</b>	
Machine body	800 Kg
Composition standard	3000 Kg



heating plate/facer disconnecting system

**\* 225 mm from SDR 26 to SDR 7**

### ON REQUEST (ACCESSORIES)

- Flange joints tool;
- Serial printer kit for welding certification (report);
- Additional rollers.

- *4 steering wheels drive*
- *Diesel-engine*
- *Self-contained with on-board generator*
- *Sliding 3rd CLAMP for fittings welding*
- *Automatic welding System "Easy Life"*
- *Detachable Control Panel*
- *Remotely wire-controlled up to 12 m*
- *Trench-Friendly*
- *Adjustable Speed maximum 5 Km/h*
- *Climbs rough terrain up to 30%*







# DELTA DRAGON CNC

**ASK FOR A QUOTATION**

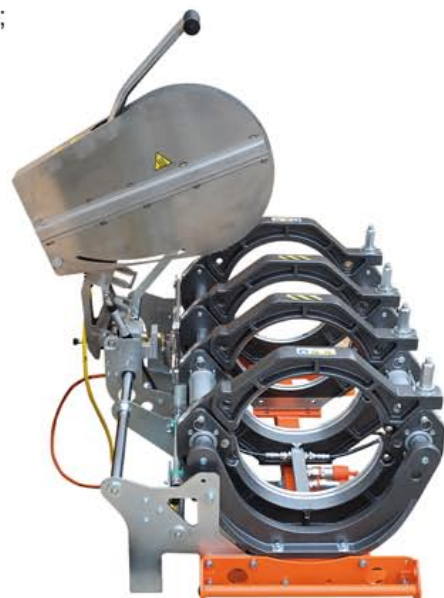


Butt fusion welding can be managed automatically by using the **Delta Dragon CNC** system; this would eliminate any risk of error due to the operator. It is available in two versions: SA, Semi-Automatic and FA, Fully Automatic.

**The CNC system is available for the Delta Dragon 250 B and 315 B models.** The gearcase 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. 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.

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);
- hydraulic hoses with non-drip quick couplings for connecting the gearcase to the machine body;
- a milling cutter;
- 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

### DELTA DRAGON CNC 250 B

### DELTA DRAGON CNC 315 B

Working range	75 - 250 mm	90 - 315 mm
Materials	HDPE - PP - PB - PVDF	HDPE - PP - PB - PVDF
Dimensions (machine body)	1010 x 810 x 810 mm	1150 x 750 x 810 mm
Dimensions (gearcase)	585 x 384 x 463 mm	585 x 384 x 463 mm
Weight (machine body)	90 Kg	125 Kg
Weight (gearcase)	39 kg	39 kg
Power supply	110 Vac - 50/60 Hz or 230 Vac - 50/60 Hz	110 Vac - 50/60 Hz or 230 Vac - 50/60 Hz
Nominal absorbed power	3800 W	5150 W
Pressure's working range	0 - 150 bar	0 - 150 bar
Welding cycle	Semi - Automatic and Fully - Automatic	Semi - Automatic and Fully - Automatic
Memory capacity	600 welding cycles	600 welding cycles
Protection degree	IP 54	IP 54



## CNC TRANSFER

Data Transfer software

Is the new download software for the records of the whole welding history of each machine.

The software was entirely designed and developed by Ritmo's engineers and assures an easy and intuitive download of the fusion cycles data into any PC. This is a must for the companies being asked to certificate their jobs.





# EASY LIFE



Delta 500 Easy Life

This is a completely new way of conceiving the butt welding process. 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 EASY LIFE system can store up to **400 joint reports**. It is possible to transfer the welding data to a PC through a serial port (USB adaptor connector available) and data-management software. A printer can be connected to the serial port, to obtain a welding report at the end of each welding cycle. 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.

The **EASY LIFE** gearcase for the **Delta 500 (400V)** and **BASIC LINE** welding machines; the DELTA 250 TRAILER, DELTA 355 ALL TERRAIN and DELTA 630 ALL TERRAIN already incorporates the EASY LIFE system.

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

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 outlet;
- connection for the electronic data-logger Inspector;
- hydraulic hoses with non-drip fast couplings.

ON REQUEST:

- Transfer kit for transferring welding data from the welding machine/serial printer.

## TECHNICAL FEATURES

Dimensions (W x D x H)	585 x 384 x 463 mm
Weight	37 Kg
Power supply ( <b>DELTA 160 - 250 B - 315 B</b> )	230 V - Single phase -50/60 Hz
Power supply ( <b>DELTA 500</b> )	400 V - three-phase -50/60 Hz
Maximum absorbed power	1100 W





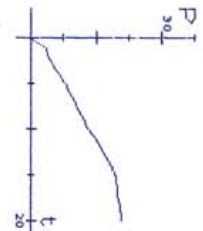
# INSPECTOR



Ritmo SPA

```

*****
DATE:          21-11-10
TIME:          18:50:09
ROOM TEMPE.:   21 C
*****
WELD.NUMB.:    3
USER CODE :    000000
JOB CODE :     000000
S.SITE COD:    000000
PIPE SUPPL:    000000
*****
WELDER:        ALFA 630-1
ANGLE:         45 G.
FITTING:       UVE PHASE 1
STAN.:DVS 2207 8/95
MATERIAL:      PE 100
DIAMETER:      225 mm
W.THICKNESS:   20.5 mm
SDR:           11.0
*****
ALIGN.LIGHT    1.0 mm
DRAG PRESSURE  1 b
*****
BEAD HEIGHT    3.0 mm
REDD BEAD FOR.P 15 b
MIN BEAD FOR.P. 20 b
MAX BEAD FOR.P. 23 b
ACTL BEAD FOR.T 12 s
*****
REDD HEAT.PRES. 2 b
MIN HEAT.PRESS. 2 b
MAX HEAT.PRESS. 5 b
REDD HEAT. T.   370 s
ACTL HEATING T. 372 s
*****
REDD CHANG. T.  16 s
ACTL CHANGIN.T. 2 s
*****
REDD PR.RAIS.T. 19 s
ACT.PRE.RAIS.T. 17 s
    
```



```

*****
REDD WELD.PRES. 15 b
MIN WELD.PRESS. 20 b
MAX WELD.PRESS. 23 b
REDD WELD. T.   45 m
ACTL WELDING T. 45 m
*****
REDD MIN TEMP.: 191 C
ACTL MIN TEMP.: 201 C
REDD MAX TEMP.: 211 C
ACTL MAX TEMP.: 201 C
*****
    
```

WELDING WAS O.K.

\*\*\*\*\*

The **INSPECTOR** is an interactive data-logger that records the welding process. It can be used with all **DELTA** welding machines. Besides controlling the welding cycle in real time, based on the memorised standards (Italian UNI 10520 and German DVS 2207), the INSPECTOR signals and stops the process in case of a malfunction or of an operator's mistake (Attention: it does not physically stop the welding, which is always controlled by the operator). This data-logger can be used with the "Dual Pressure" welding system (for HDPE100).

The welding data can be set in very easily. There are only two backlighted push buttons to control the welding phases, separated from those used for programming. In addition, the INSPECTOR features a built-in printer, controlled by specific printing functions. Among these, there's the option to print the configuration report with the welding parameters that have been calculated by the datalogger (in accordance to the data set in), in order to have them as a reference when using the machine.

The **INSPECTOR** can be connected to a PC, and with the help of a specific software (supplied with the data-logger), it's also possible to keep and manage in a data-base all welding cycles made. Available in different languages (French, English, Italian, Portuguese, Spanish, Russian, Romanian, Danish and others).

**Power absorbed 11 W; weight 5 Kg; protection degree IP 44.**

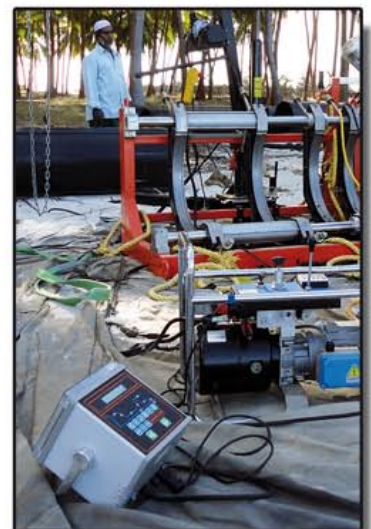
## STANDARD COMPOSITION

- INSPECTOR data-logger;
- Software for the historical management of the welding on the PC;
- INSPECTOR-PC connection cable.

## ON REQUEST (ACCESSORIES)

- Transducer connection cables (\*)

(\*) The cable and the transducer may vary according to the welder model (see price list for the correspondent codes).



**ASK FOR A QUOTATION**

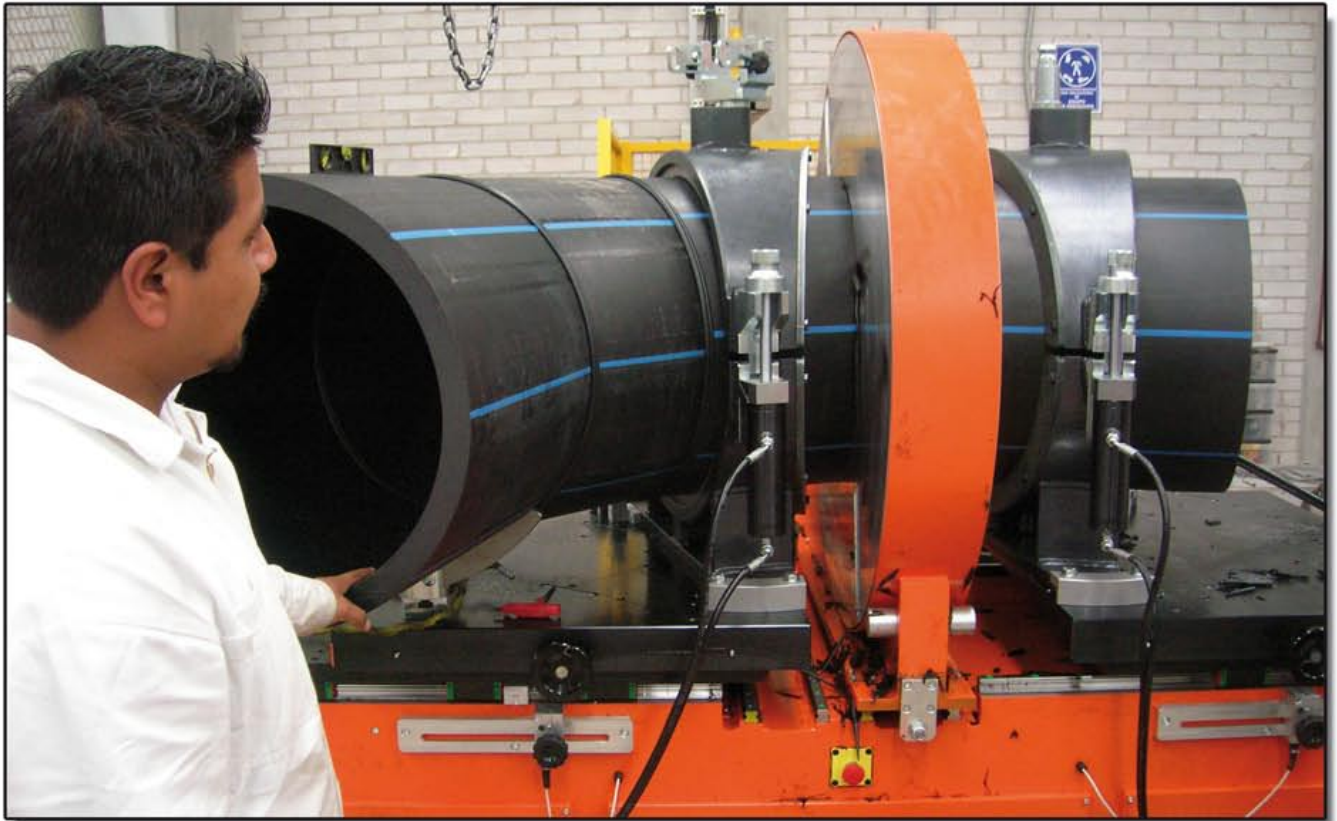


# FITTINGS FABRICATION MACHINES



WORKING RANGE Ø mm																															
MODEL	40	50	56	63	75	90	110	125	140	160	180	200	225	250	280	315	355	400	450	500	560	630	710	800	900	1000	1200	1400	1600		
ALFA 200 CTB																															
elbows	•	•	•	•	•	•	•	•	•	•	•	•																			
Y - T - X				•	•	•	•	•	•	•																					
ALFA 315																															
elbows						•	•	•	•	•	•	•	•	•	•	•															
Y - T - X						•	•	•	•	•	•	•	•	•	•	•															
ALFA 400 M																															
elbows							•	•	•	•	•	•	•	•	•	•	•	•													
Y - T - X							•	•	•	•	•	•	•	•	•	•															
ALFA 400 CTB																															
elbows							•	•	•	•	•	•	•	•	•	•	•	•													
Y - T - X							•	•	•	•	•	•	•	•	•	•															
ALFA 630 T																															
elbows													•	•	•	•	•	•	•	•	•	•	•								
Y - T - X													•	•	•	•	•	•	•	•	•	•	•								
ALFA 800																															
elbows																•	•	•	•	•	•	•	•	•	•						
Y - T - X																•	•	•	•	•	•	•	•	•	•	•					
ALFA 1000																															
elbows																		•	•	•	•	•	•	•	•	•	•				
Y - T - X																		•	•	•	•	•	•	•	•	•	•				
ALFA 1200																															
elbows																							•	•	•	•	•				
Y - T - X																							•	•	•	•	•				
ALFA 1600																															
elbows																															
Y - T - X																															
	40	50	56	63	75	90	110	125	140	160	180	200	225	250	280	315	355	400	450	500	560	630	710	800	900	1000	1200	1400	1600		









# ALFA 200 CTB



This is a workshop welding machine designed to fabricate fittings like elbows (up to Ø 200 mm), **tees**, **crosses** and **wyes** (Y) (up to Ø 160 mm) by joining pipe segments, with the help of special jaws.

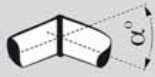


The **ALFA 200 CTB** can also weld special and moulded fittings such as elbows, tees and flange necks, thanks to a different type of special jaws. Composed of:

- **A machine body** with two carriages, one of which driven by a hydraulic system, and two lateral supports with inserts.
- **A control panel** that features the Easy Life system, thanks to which it is possible to carry out a whole welding cycle in a simple, intuitive and repeatable way, so that the operator's interference would be reduced to the minimum.
- **A heating plate** with lifting sliding arm.
- **An electrically controlled milling cutter** for levelling the ends of the pipes and/or fittings with built-in overload cutout and safety microswitch.
- **An upper cylinder**, to be positioned on the jaws, for welding extra thick pipes and/or whenever it's necessary to use high pressures.

## STANDARD COMPOSITION

- Welding machine complete with control panel, lateral supports Ø 200 mm with inserts from Ø 40 to Ø 180 mm, heating plate, milling cutter, upper cylinder, and tool kit.

## TECHNICAL FEATURES

Working range:	
ELBOWS	 40 ÷ 200 mm 0° ÷ 45°
WYES (Y)	 63 ÷ 160 mm 45° ÷ 60°
TEES-CROSSES	 63 ÷ 160 mm
Power supply	230 V-Single phase-50/60 Hz
<b>Total absorbed power</b>	<b>3150 W</b>
Working temperature	0 ÷ 300°C
Room temperature range	-5 ÷ +40°C
Materials	HDPE, PP for other plastic materials contact RITMOspa
<b>DIMENSIONS (W x D x H)</b>	
Machine body	1060 x 1210 x 1580 mm
<b>WEIGHT</b>	
Machine body	248 Kg

## ON REQUEST (ACCESSORIES)

- Elbows jaws complete with inserts from Ø 40 to Ø180 mm;
- Tees/crosses jaws complete with inserts from Ø 63 to Ø140 mm;
- Wyes jaws complete with inserts from Ø 63 to Ø140 mm;
- Right or left special jaws complete with inserts from Ø 40 to Ø 180 mm;
- Tool for flange necks.







# ALFA 315



Workshop welding machine designed to fabricate fittings like elbows, tees, crosses and wyes up to Ø 315 mm, by joining pipe segments, with the help of special jaws. The **ALFA 315** welding plastic materials such as: HDPE, PP.\*

## STANDARD COMPOSITION:

- **A machine body** with two carriages, one of which driven by a hydraulic system.
- **A manual control panel** for the welding cycle.
- **A milling cutter** with hydraulic movement (in/out).
- **A Teflon-coated heating plate** with hydraulic movement (in/out).

ELBOWS		90 + 315 mm 0 + 60°
WYES (Y)		90 + 315 mm 45° + 60°
TEES		90 + 315 mm
CROSSES		90 + 315 mm
Materials	HDPE, PP <small>*for other plastic materials contact RITMO spa</small>	







# ALFA 400 M



This is a workshop welding machine designed to fabricate fittings like **elbows** (up to Ø 400 mm), **wyes** (Y), **tees** and **crosses** (up to Ø 315 mm) by joining pipe segments, with the help of special jaws.

The **ALFA 400 M** can also weld special and moulded fittings such as elbows, tees and flange necks, thanks to a different type of special jaws (controlled hydraulically). Composed of:

**A machine body** with two hydraulically controlled carriages; a **control panel** that features the **Easy Life system**, thanks to which it is possible to carry out a whole welding cycle in a simple, intuitive and repeatable way, so that the operator's interference would be reduced to the minimum. An built-in memory allows the machine to store 400 welding cycles (including the set diameters and SDR). It is possible to transfer the welding data to a PC through a serial port (USB adaptor connector available) and data-management software. A printer can be connected to the serial port, to get a welding report at the end of each welding cycle. **A heating plate** featuring a new horizontal sliding system, automatically operated, which enables a fast side-sliding of the plate during the exchange period. The whole process is carried out with no need of disconnecting the upper cylinder, whenever it is in use. **A milling cutter** for levelling the ends of pipes and/or fittings that slides on recirculating ball slideways, with an electronic device for a soft start. **An upper cylinder**, to be positioned on the jaws, for welding extra thick pipes and/or whenever it's necessary to use high pressures. Available in 230 V and 400 V.





## STANDARD COMPOSITION

Welding machine complete with:

- control panel;
- heating plate;
- milling cutter;
- upper cylinder and tool kit.

## ON REQUEST (ACCESSORIES)

- Elbows jaws Ø 400mm; inserts from Ø 110 to Ø 355mm;
- Wyes jaws Ø 315mm; inserts from Ø 110 to Ø 280mm;
- Tees/crosses jaws Ø 315mm; inserts from Ø 110 to 280mm;
- Right or left special jaw Ø 400mm with Ø 315mm inserts;
- Right or left special jaw inserts from Ø 110 to Ø 355mm ;
- Tool for flange necks.

ELBOWS		110 ÷ 400 mm 0 ÷ 60°
WYES (Y)		110 ÷ 315 mm 45° ÷ 60°
TEES		110 ÷ 315 mm
CROSSES		110 ÷ 315 mm
Materials	HDPE, PP for other plastic materials contact RITMO spa	

Power supply	230 W Single phase	400W 3F + N +PE
Total absorbed power	7360 W	7360 W
Working temperature	180 ÷ 280°C	
Room temperature range	-5 ÷ +40°C	
DIMENSIONS (W x D x H)		
Machine body	1490 x 2020 x 1700 mm	
WEIGHT		
Machine body	647 Kg	



# ALFA 400 CTB



This is a workshop welding machine designed to fabricate fittings like elbows (up to Ø 400 mm), wyes (Y), tees and crosses (up to Ø 355 mm) by joining pipe segments, with the help of special jaws. Elbows and wyes (Y) jaws opening/closing and locking movements are controlled hydraulically, while tees/crosses jaws opening/closing movements are manual.

The **ALFA 400 CTB** can also weld special and moulded fittings such as elbows, tees and flange necks, thanks to a different type of special jaws (controlled hydraulically). Composed of:

A **machine body** with two hydraulically controlled carriages; a **control panel** that features the Easy Life system, thanks to which it is possible to carry out a whole welding cycle in a simple, intuitive and repeatable way, so that the operator's interference would be reduced to the minimum. An built-in memory allows the machine to store 400 welding cycles (including the set diameters and SDR). It is possible to transfer the welding data to a PC through a serial port (USB adaptor connector available) and data-management software. A printer can be connected to the serial port, to get a welding report at the end of each welding cycle; a Teflon-coated **heating plate** with hydraulic movement (in / out) on spherical bearings guides; a **milling cutter** with hydraulic movement (in/out) on spherical bearings guides, operated by an electrical engine, provided with eight steel blades; an upper cylinder, to be positioned on the jaws, for welding extra thick pipes and/or whenever it's necessary to use high pressures.





## STANDARD COMPOSITION

Welding machine complete with:

- control panel;
- heating plate, milling cutter;
- lateral supports Ø 400 mm (2 pcs.);
- with inserts from Ø 110 to Ø 355 mm;
- upper cylinder and tool kit.

## ON REQUEST (ACCESSORIES)

- Elbows jaws Ø 400 mm with inserts from Ø 110 to Ø 355 mm;
- Wyes jaws Ø 355 mm with inserts from Ø 110 to Ø 315 mm;
- Tees/crosses jaws complete with inserts from Ø 110 to 315 mm;
- Right or left special jaw inserts from Ø 110 to Ø 355 mm;
- Tool for flange necks;
- Special milling cutter plates and blades for PVC.

ELBOWS		110 ÷ 400 mm 0 ÷ 60°
WYES (Y)		110 ÷ 355 mm 45° ÷ 60°
TEES		110 ÷ 355 mm
CROSSES		110 ÷ 355 mm
Materials	HDPE, PP for other plastic materials contact RITMO spa	

Power supply	400 V-Three-phase+N-50/60 Hz
Total absorbed power	16000 W
Working temperature	180 ÷ 280°C
Room temperature range	-5 ÷ +40°C
<b>DIMENSIONS (W x D x H)</b>	
Machine body	2560 x 1725 x 1450 mm
<b>WEIGHT</b>	
Machine body	1200 Kg





# ALFA 630 T



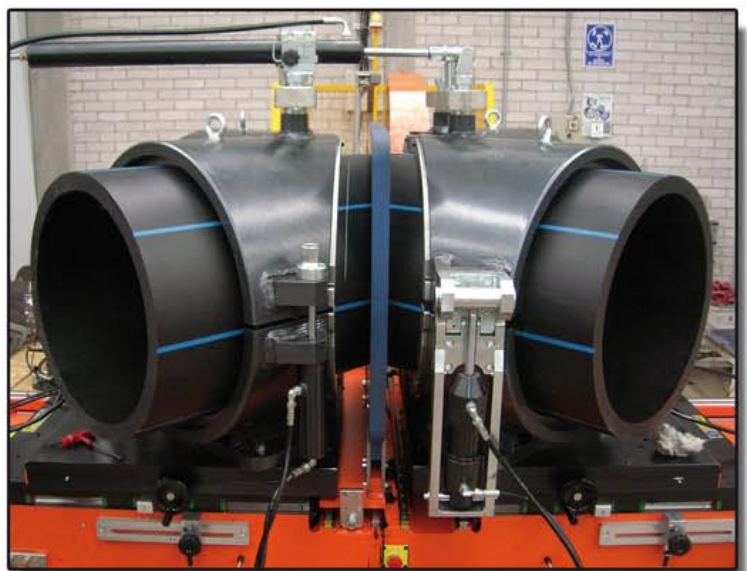
Workshop welding machine designed to fabricate fittings like elbows, wyes, tees and crosses (up to Ø 630 mm). All jaws movements are electro-hydraulically operated, both the open/close movement and the blocking mechanism.

Composed of:

- **A machine body** with two hydraulically controlled carriages.
- **A control panel** featuring the **Easy Life system**, thanks to which it is possible to carry out a whole welding cycle in a simple, intuitive and repeatable way, so that the operator's interference would be reduced to the minimum. An built-in memory allows the machine to store 400 welding cycles (including the set diameters and SDR). It is possible to transfer the welding data to a PC through a serial port (USB adaptor connector available) and data-management software. A printer can be connected to the serial port, to obtain a welding report at the end of each welding cycle.
- **A Teflon-coated heating plate** with hydraulic movement (in/out) on spherical bearings guides.
- **A milling cutter** with hydraulic movement (in/out) on spherical bearings guides, operated by an electrical engine.
- **An upper cylinder**, to be positioned on the jaws, for welding extra thick pipes and/or whenever it is necessary to apply high pressures.

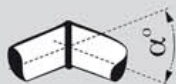


## STANDARD COMPOSITION

- Welding machine complete with control panel;
- Heating plate, milling cutter;
- Upper cylinder and tool kit.





## TECHNICAL FEATURES

Working range:	
ELBOWS	 $225 \div 630 \text{ mm } 0^\circ \div 60^\circ$
WYES (Y)	 $225 \div 630 \text{ mm } 45^\circ \div 60^\circ$
TEES – CROSSES	 $225 \div 630 \text{ mm}$
Angle reading sensitivity	$\pm 1^\circ$
Power supply	400 V-Three-phase-50/60 Hz
<b>Total absorbed power</b>	<b>30000 W</b>
Working temperature	$180 \div 280^\circ\text{C}$
Room temperature range	$-5 \div +40^\circ\text{C}$
Materials	HDPE, PP For other materials contact RITMO spa



Elbows jaws



Wyes (Y) jaws

DIMENSIONS (W x D x H)	
Machine body	2940 x 4000 x 2000 mm

WEIGHT	
Machine body	3224 Kg

### ON REQUEST (ACCESSORIES)

- Elbows jaws complete with inserts from  $\varnothing 225$  to  $\varnothing 630$  mm;
- Wyes jaws complete with inserts from  $\varnothing 225$  to  $\varnothing 630$  mm;
- Tees/crosses jaws complete with inserts from  $\varnothing 225$  to  $\varnothing 630$  mm;
- Special milling cutter plates and blades for PVC.



Tees/Crosses jaws



Tees/Crosses jaws

**ASK FOR A QUOTATION**











# ALFA 800



Workshop welding machine designed to fabricate fittings like elbows, wyes, tees and crosses up to Ø 800 mm. The **ALFA 800** welding plastic materials such as: HDPE, PP.\*

## STANDARD COMPOSITION:

- A **machine body** with two hydraulically controlled carriages.
- A **control panel** that features the **Easy Life system**, thanks to which it is possible to carry out a whole welding cycle in a simple, intuitive and repeatable way, so that the operator's interference would be reduced to the minimum. The Easy Life system can store up to 400 joint reports. It is possible to transfer the welding data to a PC.
- A **milling cutter** with hydraulic movement (in/out).
- A **Teflon-coated heating plate** with hydraulic movement (in/out).

ELBOWS		315 ÷ 800 mm 0 ÷ 60°
WYES (Y)		315 ÷ 630 mm 45° ÷ 60°
TEES		315 ÷ 630 mm
CROSSES		315 ÷ 630 mm
Materials	HDPE, PP <small>*for other plastic materials contact RITMO spa</small>	





# ALFA 1000







Workshop welding machine designed to fabricate fittings like elbows, wyes, tees and crosses up to Ø 1000 mm. The **ALFA 1000** welding plastic materials such as: HDPE, PP.\*

## STANDARD COMPOSITION:

- A **machine body** with two hydraulically controlled carriages.
- A **control panel** that features the **Easy Life system**, thanks to which it is possible to carry out a whole welding cycle in a simple, intuitive and repeatable way, so that the operator's interference would be reduced to the minimum. The Easy Life system can store up to 400 joint reports. It is possible to transfer the welding data to a PC.
- A **milling cutter** with hydraulic movement (in/out).
- A **Teflon-coated heating plate** with hydraulic movement (in/out).



ELBOWS		400 ÷ 1000 mm 0 ÷ 60°
WYES (Y)		400 ÷ 800 mm 45° ÷ 60°
TEES		400 ÷ 800 mm
CROSSES		400 ÷ 800 mm
Materials	HDPE, PP <small>*for other plastic materials contact RITMO spa</small>	







## ALFA 1200







**ASK FOR A QUOTATION**



Workshop welding machine designed to fabricate fittings like elbows, wyes, tees and crosses up to Ø 1200 mm. The **ALFA 1200** welding plastic materials such as: HDPE, PP.\*

### STANDARD COMPOSITION:

- A **machine body** with two hydraulically controlled carriages.
- A **control panel** that features the **Easy Life system**, thanks to which it is possible to carry out a whole welding cycle in a simple, intuitive and repeatable way, so that the operator's interference would be reduced to the minimum. The Easy Life system can store up to 400 joint reports. It is possible to transfer the welding data to a PC.
- A **milling cutter** with hydraulic movement (in/out).
- A **Teflon-coated heating plate** with hydraulic movement (in/out).

ELBOWS		630 ÷ 1200 mm 0 ÷ 60°
WYES (Y)		630 ÷ 1000 mm 45° ÷ 60°
TEES		630 ÷ 1000 mm
CROSSES		630 ÷ 1000 mm
Materials	HDPE, PP <small>*for other plastic materials contact RITMO spa</small>	

WORKING RANGE: Ø 800 - 1600 mm

## ALFA 1600







**ASK FOR A QUOTATION**



Workshop welding machine designed to fabricate fittings like elbows, wyes, tees and crosses up to Ø 1600 mm. The **ALFA 1600** welding plastic materials such as: HDPE, PP.\*

### STANDARD COMPOSITION:


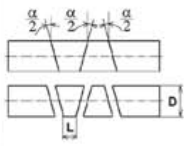
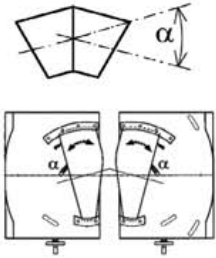
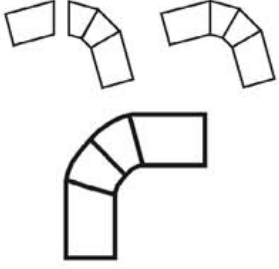
- A **machine body** with two hydraulically controlled carriages.
- A **control panel** that features the **Easy Life system**, thanks to which it is possible to carry out a whole welding cycle in a simple, intuitive and repeatable way, so that the operator's interference would be reduced to the minimum. The Easy Life system can store up to 400 joint reports. It is possible to transfer the welding data to a PC.
- A **milling cutter** with hydraulic movement (in/out).
- A **Teflon-coated heating plate** with hydraulic movement (in/out).

ELBOWS		800 ÷ 1600 mm 0 ÷ 60°
WYES (Y)		800 ÷ 1200 mm 45° ÷ 60°
TEES		800 ÷ 1200 mm
CROSSES		800 ÷ 1200 mm
Materials	HDPE, PP <small>*for other plastic materials contact RITMO spa</small>	


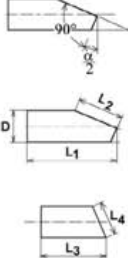
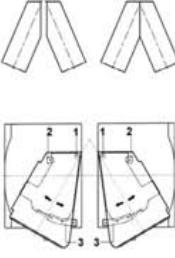
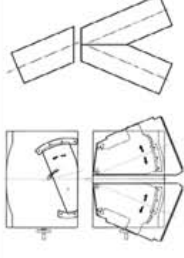



# HOW TO FABRICATE A SPECIAL FITTING


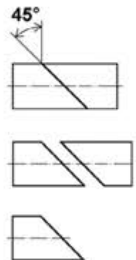
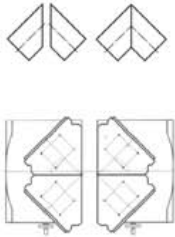
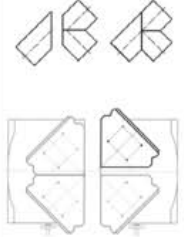

## ELBOWS

	Cut	Welding	
			


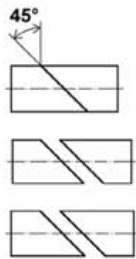
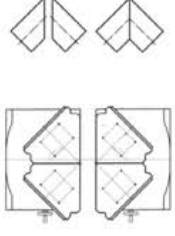
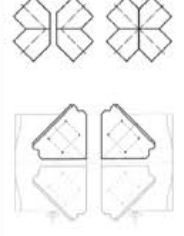

## WYES (Y)

	Cut	Welding - 1 <sup>st</sup> stage	Welding - 2 <sup>st</sup> stage	
 <p>for Wyes left for elbows</p>				

## TEES

	Cut	Welding - 1 <sup>st</sup> stage	Welding - 2 <sup>st</sup> stage	
				

## CROSSES

	Cut	Welding - 1 <sup>st</sup> stage	Welding - 2 <sup>st</sup> stage	
				





# ALFA TEL - 800



ALFA TEL - 800 is a workshop machine designed to weld pre-insulated district HDPE pipes and valves for both heating and cooling lines.

ALFA TEL - 800 produces pre-insulated HDPE elbows within 400 - 800 mm diameter range and jackets for valves within 400-710mm diameter range.

ALFA TEL - 800 has a machine body with facer and interchangeable heating elements. The fitting segments are loaded onto the machine carriages and tightened by clamps. The hydraulic movements of carriages, heating element, facer and clamps are driven by an handy control panel.

Each heating element is made by 2 jaws and it can be easily replaced to fit the joint geometry requirements. Both carriages can move along orthogonal directions to ensure the optimal match of the surfaces to be welded. The rotating clamps allow to manufacture elbows from segments with different angles and their design decreases the lead time to load, unload and align the fittings.

**ASK FOR A QUOTATION**

## TECHNICAL FEATURES

Working range	Ø 400 - 800 mm
Materials	HDPE, PP
Power supply	400V 3F+N+PE 50/60Hz
Absorbed Power	15000 W
Dimensions (W x D x L)	4000 x 2100 x 2000 mm
Weight	2220 Kg





WORKING RANGE: Ø 400 - 250 mm  
Ø 630 - 250 mm

# OMEGA 400 - 250 OMEGA 630 - 250



OMEGA 400 - 250

FEASIBLE BRANCHES

Ø mm BRANCH PIPE	30	43	75	90	110	125	140	160	180	200	225	250
90	*	*	*	*	*	*	*	*	*	*	*	*
110	*	*	*	*	*	*	*	*	*	*	*	*
125	*	*	*	*	*	*	*	*	*	*	*	*
140	*	*	*	*	*	*	*	*	*	*	*	*
160	*	*	*	*	*	*	*	*	*	*	*	*
180	*	*	*	*	*	*	*	*	*	*	*	*
200	*	*	*	*	*	*	*	*	*	*	*	*
225	*	*	*	*	*	*	*	*	*	*	*	*
250	*	*	*	*	*	*	*	*	*	*	*	*
280	*	*	*	*	*	*	*	*	*	*	*	*
315	*	*	*	*	*	*	*	*	*	*	*	*
355	*	*	*	*	*	*	*	*	*	*	*	*
400	*	*	*	*	*	*	*	*	*	*	*	*

OMEGA 630 - 250

FEASIBLE BRANCHES

Ø mm BRANCH PIPE	30	43	75	90	110	125	140	160	180	200	225	250
90	*	*	*	*	*	*	*	*	*	*	*	*
110	*	*	*	*	*	*	*	*	*	*	*	*
125	*	*	*	*	*	*	*	*	*	*	*	*
140	*	*	*	*	*	*	*	*	*	*	*	*
160	*	*	*	*	*	*	*	*	*	*	*	*
180	*	*	*	*	*	*	*	*	*	*	*	*
200	*	*	*	*	*	*	*	*	*	*	*	*
225	*	*	*	*	*	*	*	*	*	*	*	*
250	*	*	*	*	*	*	*	*	*	*	*	*
280	*	*	*	*	*	*	*	*	*	*	*	*
315	*	*	*	*	*	*	*	*	*	*	*	*
355	*	*	*	*	*	*	*	*	*	*	*	*
400	*	*	*	*	*	*	*	*	*	*	*	*
500	*	*	*	*	*	*	*	*	*	*	*	*
630	*	*	*	*	*	*	*	*	*	*	*	*



OMEGA 400 – 250 and OMEGA 630 - 250 are a fusion welding machines for in shop use for the manufacturing of special parts, such as reducing branches (Tees, Crosses) for the transport of water, gas and other fluids under pressure.

## STANDARD COMPOSITION:

Machine body with manual carriage for socket centring;  
Hydraulic jaws for locking pipe & branches;  
Side support for branches;  
Quick release inserts;  
EASY LIFE control panel: allows a simple-easy-repeatable welding cycle, reducing the necessity of operator's intervention. A built-in memory records the welding cycles; the USB port and the software allow the transfer of data to a PC;  
Hydraulic movement of heating plate that can host male/female sockets with heating plate detaching device.



## INTEGRATIVE SYSTEMS

SIGMA 630 Pro with radial cutting kit.

## TECHNICAL FEATURES

Materials	HDPE, PP For other materials contact RITMO S.p.A.
Power supply	230Vac - 50/60Hz
Max. absorbed power	6500 W
Working temperature	180° + 280° C
Dimensions (W x D x H)	1955 x 2050 x 1650mm
Weight	735 Kg







# SIGMA 400 PRO

# SIGMA 630 PRO



**SIGMA 400 PRO** and **630 PRO** are electric workshop band saw machines, for plastic pipes (HDPE, PP, PVC) and plastic sheets.

The **SIGMA PRO** were specially designed to make angular cut, featuring a wide range of angles (from - 30° to + 67,5°). They're the ideal equipment to match Alfa fittings fabrication machines. Both the preparation and cutting phases are extremely simple and safe to perform. The machines is provided with special spherical bearings guides where the machine body can easily move sideward. The equipment includes a control panel, located at a safety distance from the cutting area, where the operator can control the automatic movement of the arch saw (IN/OUT) and also adjust and regulate the cutting speed. These band saw machines can also cut plastic sheets, using a suitable kit provided upon request. The kit consists of a plane supporting bench and an adjustable sheet guide square. It is possible to rotate the blade of 90° against the band saw arm and, by doing so, cut the sheet in all its length. Special auxiliary devices can relieve the stress on the blade and help reducing the ordinary technical maintenance

#### STANDARD COMPOSITION

- Auxiliary bench for cutting tees.

#### ON REQUEST (ACCESSORIES)

- Auxiliary bench for cutting sheets;
- Pipe supporting trolley;
- Radial cutting kit (SIGMA 630 PRO).



SIGMA 400 PRO



## TECHNICAL FEATURES

### SIGMA 400 PRO

Working range for pipes	Up to Ø 400 mm
Working range sheets	980 mm (*)
Materials	HDPE, PP, PVDF, PVC For other materials contact RITMO spa
Machine dimensions	2980 x 2650 x 2980 mm
Machine weight	330 Kg
Power supply	400 V – Three phase + N + PE 50/60Hz
Max. absorbed power	860 W

### SIGMA 630 PRO

Working range for pipes	Up to Ø 655 mm
Working range sheets	1350 mm (*)
Materials	HDPE, PP, PVDF, PVC For other materials contact RITMO spa
Machine dimensions	4340 x 3460 x 2650 mm
Machine weight	925 Kg
Power supply	400 V – Three phase + N + PE 50/60Hz
Max. absorbed power	2200 W

(\*) : distance between blade and machine arm. When the blade is rotated 90° against the band saw arm, it is possible to cut the sheet in all its length.



SIGMA 630 PRO



**ASK FOR A QUOTATION**

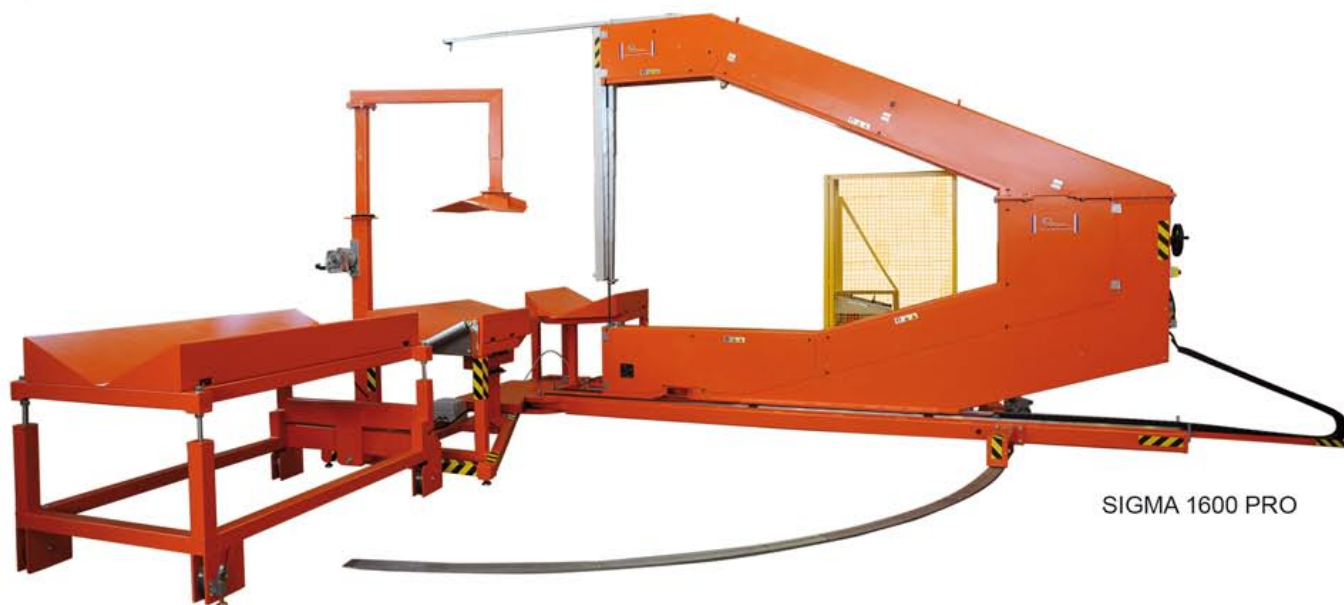






# SIGMA 1200 PRO

# SIGMA 1600 PRO



SIGMA 1600 PRO

**SIGMA 1200 PRO** and **SIGMA 1600 PRO** are electric workshop band saw machines, for plastic pipes up to 1200 and 1600 mm.

**SIGMA 1200** and **1600** were specially designed to perform easy cuts with a wide range of angles (from - 45° to + 67,5°). They're the ideal equipment to match Alfa fittings fabrication machines. Thanks to a PLC system, the operator can input the exact cutting angles with the highest precision. These data are displayed during the entire welding process, making it easier for the operator. Composed of:

- **Pipe housing bench**, a blade-housing arm (belt type), moving on a spherical bearings guide, performing settable advancing speed. It can rotate on an arc system, and perform a wide range of share angles.
- A continuous **control blade guide telescopic system**, to reduce to the minimum the blade vibration, regardless of the diameter and/or thickness of the pipe being cut. Provided with a laser-beam pointing system to localize the cutting area.
- A **safety pilot cabin**, where the control panel is located. It is protected by guards for greater operator's safety.
- An **easy-to-use control panel**, featuring a simplified graphics display, where the inclination degree of the cutting arc is displayed.

#### STANDARD COMPOSITION

- Band saw machine complete of an auxiliary bench to cut welded pipe sector (for Tees), and support kit for the pipe sectors (to prevent them from being damaged).

#### ON REQUEST (ACCESSORIES)

- Scraps suction device.



SIGMA 1200 PRO



## SIGMA 1200 PRO

Power supply	400 V – 3F+N - 50/60Hz
Power absorbed	3600 W
Working range	Up to Ø 1200 mm
Maximum cut inclination	from – 45° to + 67,5 °
Angle precision degree	± 0,1 °

DIMENSIONS (W x D x H)	
Maximum overall dimensions	7000 x 8700 x 4500 mm

MACHINE WEIGHT	4380 Kg
----------------	---------

## SIGMA 1600 PRO

Power supply	400 V – 3F+N - 50/60Hz
Power absorbed	4600 W
Working range	Up to Ø 1600 mm
Maximum cut inclination	from – 45° to + 67,5 °
Angle precision degree	± 0,1 °

DIMENSIONS (W x D x H)	
Maximum overall dimensions	8950 x 7650 x 3580 mm

MACHINE WEIGHT	5300 Kg
----------------	---------



Operator control cabin



**ASK FOR A QUOTATION**



# ELECTROFUSION MACHINES



WORKING RANGE Ø mm

MODEL	20	25	32	40	50	63	75	90	110	125	140	160	180	200	225	250	280	315	355	400	450	500	560	630	710	800	
HIGH PRESSURE																											
ELEKTRA LIGHT	•	•	•	•	•	•	•	•	•	•	•	•															
MULTIPLA	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•									
ELEKTRA 400	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•						
ELEKTRA 800	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
LOW PRESSURE																											
MUSTANG 160 V1			•	•	•	•	•	•	•	•	•	•															
MULTIPLA	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•								
UNIVERSAL				•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•								
	20	25	32	40	50	63	75	90	110	125	140	160	180	200	225	250	280	315	355	400	450	500	560	630	710	800	



# ELEKTRA LIGHT



**ELEKTRA LIGHT** is an universal electrofusion machine, suitable for welding pipe/fittings for the transport of gas, water and for welding fire sprinkler system (HDPE, PP, PP-R couplings from 8 to 48 V). The Elektra Light machine is made in compliance with Italian and international standards. This welding machine's structure is light weight, so it is extremely easy to carry around. It is available in two version: with or without optical pen. Composed of: machine body, an in built memory with 350 welding cycles, featuring the possibility of transferring data to a serial printer.

## STANDARD COMPOSITION

- Universal adapter Ø 4,0 - 4,7 mm, transport case, manual scraper.

## ON REQUEST ( ACCESSORIES)

- Transfer kit for transferring data from the welding machine to a portable serial printer (it includes serial printer and cable).

**ASK FOR A QUOTATION**



Working range	20 -125/160 mm (for other details contact RITMO S.p.A.)
Welding output voltage	8 ÷ 48 V
Single phase power supply	230 V 50/60 Hz
Max. absorbed power	2000 W
Max. output current	8 A
60% Duty Cycle output	23 A
Memory capacity	350 report
Protection degree	IP 54
Dimensions	200 X 250 X 210 mm
Weight	7 Kg





# ELEKTRA 400 ELEKTRA 800



**ELEKTRA** is an universal electrofusion machine, suitable for welding HDPE and PP couplings (from 8 to 48 V). It is available in two versions: **ELEKTRA 400**, **ELEKTRA 800**. The Elektra machine is made in compliance with Italian and international standards, and is composed of:

- **A versatile machine body**, capable of adapting to different operational needs, inside and outside the trench; the control panel can be turned upward or be positioned horizontally to the ground.
- **An optical scanner - barcode reading system** (or optical pen, upon request) that allows the automatic setting of the welding parameters. There are nonetheless two manual settings available: by setting the welding tension/time parameters, and by input the numerical code indicated under the bar code.
- **An in built memory with 4000 welding cycles**, featuring the possibility of transferring data to a PC, to an external USB storage device, or to a serial printer RS-232.
- **A large graphic display**.

## STANDARD COMPOSITION

- Universal adapter;
- Optical scanner;
- Manual scraper;
- Transport case.

**ASK FOR A QUOTATION**





## TECHNICAL FEATURES

	ELEKTRA 400		ELEKTRA 800
Working range	20 ÷ 400 mm		20 ÷ 800 mm
Welding output voltage	8 ÷ 48 v (**)		
Single phase power supply	110 V 50/60 Hz	230 V 50/60 Hz	230 V 50/60 Hz
Max. absorbed power	2500 W	2700 W	3500 W
Max. output current	100 A		120 A
60% Duty Cycle output	65 A	70 A	90 A
Operating mode	Barcode/Manual (numerical code or tension/time)		
Connections	USB for external memory and RS 232 serial printer		
Memory capacity	4000 reports		
Protection degree	IP 54		
External T° reading probe precision	± 1° C		
Outside T° range	- 10 ÷ + 50° C		
Display	128 x 64 graphic backlighted LCD		
Welding hose length	3 mt		
Dimensions	358 x 285 x 302 mm		
Weight	19,5 Kg	22,5 Kg	



USB storage device



RITMO Transfer

## ON REQUEST (ACCESSORIES)

- Transfer kit for transferring welding data from the welding machine/serial printer;
- RITMO Transfer (data transfer software);
- Optical pen, for reading barcodes.



(\*\*) Agru, Aquatechnik, Aquatherm, Banninger, Central Plastic, Coprax, Degaz, Durapipe, Geco System Nupi (Elofit, Niron, Polysistem), Girpi, Eurostandard, Firat, Friatec, Fusion, Georg Fischer, Innoge, Hydroblock, Manibs, Plasson, Plastitalia, Riesselman, S&L, Simona, Strengweld, Technima, Tega, Uponor, Wavin (Monoline).





# MULTIPLA



Multipla is a universal/manual electrofusion machine, built with inverter technology, which can weld any kind of electrofusion fitting available in the market, made of HDPE, PP, PPR, for low or high pressure pipes, up to Ø 315 mm in diameter.

Multipla is built in compliance with the current safety regulations, and it can guarantee the use also in case of instable tension, without risking damaging the machine. The electronics adopted allow the automatic identification of the necessary cables, designed for the different types of fittings. After connecting a specific cable, identified by a specific color, the next step is to press the key to start the fusion process. Manual setting of fusion parameters (tension and time) is necessary only for low tension fittings (8 to 48 V), normally marked with bar code.

It is provided with an in-built memory of 800 welding cycles, and the possibility of transferring them to a PC, or to a RS-232 printer. It is supplied with all necessary connecting cables, a manual scraper, and an aluminum transport case.

## STANDARD COMPOSITION

- Welding machine complete of 8 connecting cables;
- Universal connectors 4 - 4,7 mm;
- Aluminum transport case;
- Manual scraper.

## ON REQUEST

- Ritmo Transfer; data transfer software
- transfer data kit, for transferring data from the welding machine to the yard serial printer (it includes a printer and a connecting cable).

(\*) Any other brand not mentioned in this list but with the same design features, that is, a constant welding voltage (ranging between 8 and 48V), with or without a bar code, and with standard Ø 4,0 or Ø 4.7 mm connectors, can be welded with these machines.

## TECHNICAL FEATURES

Dimensions	205 X 350 X 400 mm
Weight	16 Kg
Power supply	230 V ± 10% 50-60 Hz
Max. absorbed power	3500 W
Welding output voltage	8 ÷ 48 V
Max. output current	75 A (peak at 100 A)
Protection degree	IP 65
Ambient temperature	- 10 ÷ 50° C

Constant tension: 20 ÷ 315 mm (HDPE, PP, PP-R)  
Any brand that uses a constant tension(\*)

Constant current:

- A00** 40 ÷ 160 mm (PE) Coes, Akatherm, Eurofusion, Geberit, Valsir, Wavin (Waviduo)
- A01** 200 ÷ 315mm (PE) Akatherm, Eurofusion, Valsir, Wavin
- A02** 200 ÷ 315mm (PE) Geberit
- A03** 40 ÷ 160mm (PE) Wavin (Wavisolo)
- A04** 200 ÷ 315mm (PE) Coes (Coestilen)
- A05** 20 ÷ 63mm (PP-R) Coes (Coestilen)
- A06** 20 ÷ 160mm (PE 80) Wavin (I)
- 20 ÷ 125mm (PE 100 - PP-R) Wavin (LI - Tigris Green)
- A07** 125 ÷ 315mm (PE 100) Wavin (LI)



## MUSTANG 160 V1

This electrofusion machine is suitable for welding electrofusion fittings in HDPE from Ø 32 to Ø 160 mm, for low-pressure conduits. The **MUSTANG 160 V1** automatically detects connection to the fitting to be welded and compensates current supplied according to ambient temperature. It is also capable of detecting any malfunction that could occur before or during welding procedures. MUSTANG 160 V1 is made in compliance with the current safety standards and Directives, and the structure is light weight which makes it extremely easy to carry around.

### SUPPLIED WITH

- Welding machine complete with cables with pins, transport case and manual scraper.



### TECHNICAL FEATURES

Working range	32 ÷ 160 mm
Electrical couplers brands (low pressure HDPE)	Akatherm-Euro, Geberit, Valsir, Coes, Waviduo
Power supply	230 V Single phase - 50/60 Hz
Maximum output current	4,9 A
Maximum absorbed power	900 W
Outside temperature range	-5 ÷ + 40°C
Ambient temperature probe	Electronic
Protection degree	IP 54
Dimensions machine (W x D x H)	75 x 180 x 230 mm
Dimensions carrying case (W x D x H)	220 X 450 X 180 mm
Weight machine	2,5 Kg
Weight with carrying case	5 Kg

## UNIVERSAL

This electrofusion machine is suitable for welding electrical couplers in HDPE from Ø 40 mm to Ø 315 mm, for low pressure conduits. The **UNIVERSAL** is made in compliance with the current safety standards and Directives. This welding machine's structure is light weight, so it is extremely easy to carry around. It is controlled by a microprocessor that allows the recognition of three different types of cable with pins, identified by a code (written on each one of them), which the operator can confirm by looking at the display. The different cables are necessary to adapt to the different kinds of electrical coupler available in the market. The main features include self-compensation of the current supplied (according to the ambient temperature) and self-diagnosis of any malfunction that could occur before or during welding. The machine features three cables with pins, a transport bag and a manual scraper, most useful to remove the layer of oxidation from the pipe (which could undermine the good result of the welding).

### SUPPLIED WITH

- Welding machine complete with three cables with pins, Trevira bag and manual scraper.



### TECHNICAL FEATURES

Working range	Ø 40 ÷ 160 mm
Electrical couplers brands (low pressure HDPE)	Valsir, Akatherm, Eurofusion, Geberit, Waviduo, Coes.
Working range	Ø 200 ÷ 315 mm
Electrical couplers brands (low pressure HDPE)	Valsir, Akatherm, Eurofusion, Geberit.
Power supply	230 V-Single phase-50/60 Hz
Maximum output current	10,7 A
Maximum absorbed power	2470 W
Outside temperature range	-5 ÷ +40°C
Temperature compensation	Automatic electronic
Dimensions (W x D x H)	280 x 260 x 200 mm
Weight	6,00 Kg



# PIPE SCRAPERS

## RTC 160 - RTC 315 - RTC 710



PIPE SCRAPERS



RTC 710



RTC 160



RTC 315



Manual scraper

These professional rotary scrapers, designed and patented by Ritmo, are essential to prepare the plastic pipes and fittings before electrofusion welding. Practical and handy, the pipe scrapers remove the oxidation layer caused by weather and ultraviolet rays. If not removed, the oxidation layer would severely compromise the quality of the joint.

Among the main construction features there is a device that makes it possible to maintain the thickness of the continuous chip constant, even if the pipe is misshaped, and to adjust the length of the surface to scrape according to the depth of the electrical coupler.

The **RTC 710** features an extendable arm to scrape the exact length of the electrical coupler, which is an advantage when having to perform maintenance/repair jobs in the building site. The main chuck has four extendable arms that clamps directly the inside diameter of the pipe.

### STANDARD COMPOSITION

- Pipe scraper;
- Adapters kit (except for RTC 710);
- Spare blade;
- Handwheel key (for RTC 315);
- Aluminum transport case;
- Screwdriver and small cutter.

### MANUAL SCRAPER

This manual tool is used with the same principle as the RTC pipe scrapers. The **MANUAL SCRAPER** features a practical plastic handle and a carbon steel blade, interchangeable with four cutting edges.

### STANDARD COMPOSITION

- Scraper complete with a four-cutting edges blade.

### TECHNICAL FEATURES

	RTC 160	RTC 315	RTC 710
Working range:			
EXTERNAL	Ø 50 ÷ 160 mm	Ø 75 ÷ 315 mm	Ø 355 ÷ 710 mm
INTERNAL	Ø 38 ÷ 154 mm	Ø 58 ÷ 300 mm	Ø 290 ÷ 675 mm
Scraping length	70 mm	137 mm	530 mm
DIMENSIONS			
Max. dimensions	380x120x250 mm	510x310x410 mm	595x272x190 mm
Transport case	390x210x135 mm	230x500x270 mm	800x580x350 mm
WEIGHT			
Pipe scraper	2,50 Kg	4,50 Kg	16,00 Kg
Standard composition	5,65 Kg	9,20 Kg	26,60 Kg

### MANUAL SCRAPER

Recommended working range	Max Ø 63 mm
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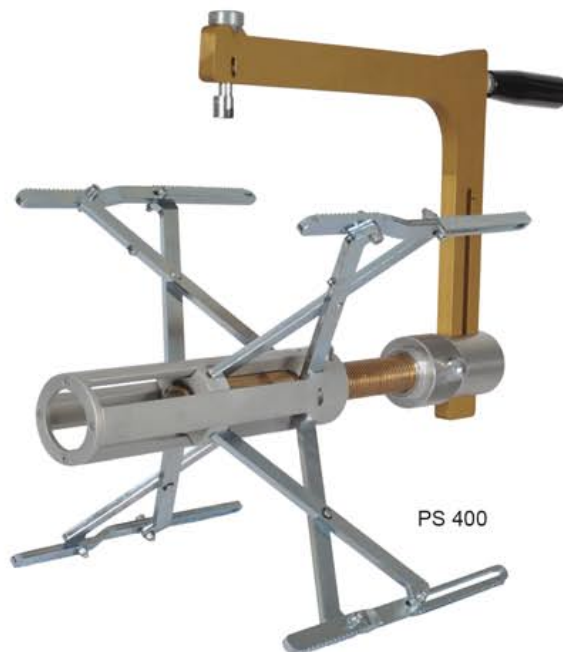
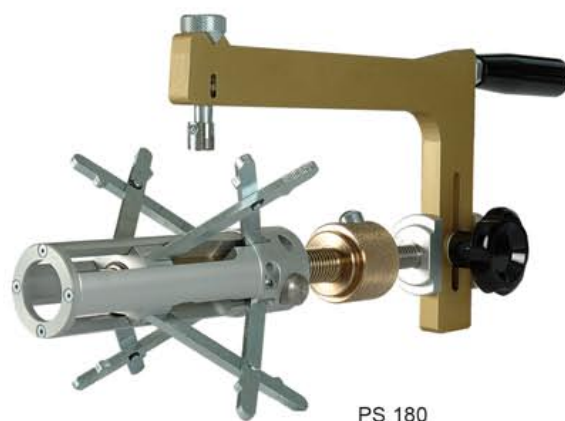
# PIPE SCRAPERS

## PS 180 - PS 400

Professional rotary scrapers, essential to prepare the plastic pipes and fittings before electrofusion welding. The tools has an adjustable chuck covering all the Ø of the working range, and a blade holder orbital arm. The PS series guarantees a constant and regular removal of the shaving. The scrapers blade holder permits the scraping of the entire electrical sleeve's lenght, most useful when doing on site repairs.

### STANDARD COMPOSITION

- PS 180 supplied with transport bag and spare blade;
- PS 400 supplied with transport case and spare blade.



### TECHNICAL FEATURES

	PS 180	PS 400
Working range:		
EXTERNAL	Ø 75 ÷ 200 mm	Ø 137 ÷ 426 mm
INTERNAL	Ø 61 ÷ 172 mm	Ø 130 ÷ 391 mm
Max scraping length	129 mm	150 mm
DIMENSIONS		
Max. dimensions	595 x 272 x 190 mm	790 x 400 x 400 mm
Transport case	453 x 185 x 63 mm	550 x 350 x 90 mm
WEIGHT		
Standard composition	2,80 Kg	5,50 Kg





# TURBO 20 - 63



**TURBO** is the new pipe scraper patented by RITMO for pipes and fittings ranging from Ø 20 to 63 mm SDR 6 to 11. TURBO is simple and easy to use. This incredible pipe scraper can work in confined spaces substantially reducing working times, especially during repair operations. The rotating tool allows fast and precise scraping, without defects. Its blades also allow the perfect facing of the pipe ends which have been roughly cut due to a situation which makes the use of a pipe cutter difficult, like narrow spaces.

Six different sizes of the TURBO are available, according to the pipe size. TURBO has to be used with a cordless driver.

TURBO 20	Ø 20 mm	6 - 11	45 mm	0,37 Kg
TURBO 25	Ø 25 mm	6 - 11	45 mm	0,47 Kg
TURBO 32	Ø 32 mm	6 - 11	45 mm	0,64 Kg
TURBO 40	Ø 40 mm	6 - 11	55 mm	0,82 Kg
TURBO 50	Ø 50 mm	6 - 11	55 mm	1,02 Kg
TURBO 63	Ø 63 mm	6 - 11	55 mm	1,29 Kg





## UNIVERSAL ALIGNER 63



This professional tool is essential to hold pipes still and aligned during electrofusion. The **UNIVERSAL ALIGNER 63** is made almost entirely in a special Aluminium alloy and features a central joint for the fixed positions at 45° and 90°, four self-centring clamps that require no adapters. The possibility to remove one part of the axis that carries the clamps and one clamp it self, allows the use of tapping tees during the fusion.

### STANDARD COMPOSITION

- Aligner complete with four clamps, service spanner and transport bag.

### TECHNICAL FEATURES

Working range	Ø 20 ÷ 63 mm
DIMENSIONS (W x D x H)	
Aligner (max. overall dimensions)	straight: 600x160x116 mm
Transport bag	440 x 190 x 140 mm
WEIGHT	
Aligner	3,40 Kg
Transport bag	0,50 Kg
Standard composition	3,90 Kg



## UNIVERSAL ALIGNER 160 Light



This professional tool is essential to hold pipes still and aligned during electrofusion (from Ø 63 to Ø 160 mm). The **UNIVERSAL ALIGNER 160 Light** is made almost entirely in a special Aluminium alloy and features a central joint for the fixed positions at 45° and 90°, four self-centring clamps that require no adapters, and on request an additional axle complete with two clamps for welding the tees. Its special quick release clamps grants a rapid extraction of the pipe once it has been welded.

### STANDARD COMPOSITION

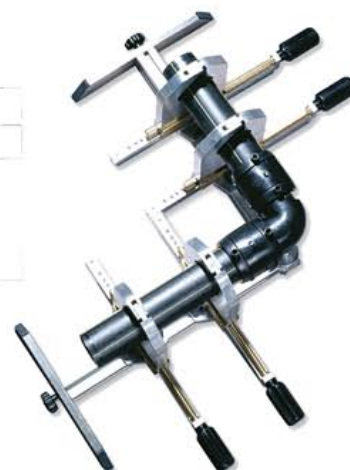
- Aligner complete with four clamps, transport bag or wooden transport case.

### ON REQUEST (ACCESSORIES)

- A 3rd axle complete with two clamps (for welding "Tees")

### TECHNICAL FEATURES

Working range	Ø 63 ÷ 160 mm
DIMENSIONS (W x D x H)	
Aligner (maximum overall dimensions)	straight: 980x430x260 mm
WEIGHT	
Aligner without 3rd axle	13,00 Kg
Wooden transport case	14,00 Kg







# ALIGNER 125 - 500



Configuration for T welding



Configuration for "in line" welding

**ALIGNER 125 – 500** is an essential and professional tool for the alignment and support of pipes during electrofusion from Ø 125 mm to 500 mm. The **ALIGNER** is entirely made of steel, featuring a central adjustable joint and pipe fastening clamps fixed on axes. The adjustable joint can be set on 4 different working positions to allow welding at preset angles such as 45°, 90°, "in line" and T welding. Axes have V-shaped clamps positioned on them, which are equipped with pipe fastening belts. The system, along with fixing the pipe to the clamp, serves also as a centering device. Each axis has 2 guides on which the clamps are able to slide. Practical side handles ensure an easy grip during movement and positioning, both during welding procedures, and preparation.

The aligner is available in **two configurations: 2 axes** and **3 axes** (to weld T fittings).



Configuration for 90° welding



Configuration for 45° welding

## TECHNICAL FEATURES

Working range	Ø 125 - 500 mm
Welding	45°; 90°; in line; T
Dimensions Max Overall Dimensions (W x D x H)	
2 axes version	1815 x 610 x 410
3 axes version	1815 x 1230 x 410
Weight	
2 axes version	38 Kg
3 axes version	52 Kg



# ROLLERS

This device is essential for supporting the pipes while they are being welded with the DELTA machines. The rollers minimise pipe friction and drag force no matter which is the construction site condition.

This series features three different models:

- **LIGHTWEIGHT ROLLER UNIT** which can sustain pipes up to Ø 315 mm. Its particular structure allows the operator to adjust the height, and makes it easier to put it/remove it from under the pipe.
- **560 ROLLER UNIT** which can sustain pipes up to Ø 560 mm. With the help of the hydraulic jacks, this roller can be adjusted in height, and since the structure is divided in two parts, its width can also be adjusted.
- **1600 ROLLER UNIT** with a working range up to Ø 1600 mm and a structure/features similar to the 560 version.

## STANDARD COMPOSITION

All models are supplied with:

- Base structure complete with roller(s).

## TECHNICAL FEATURES

	LIGHTWEIGHT ROLLER UNIT	560 ROLLER UNIT	1600 ROLLER UNIT
Working range	Max. Ø 315 mm	Max. Ø 560 mm	Max. Ø 1600 mm
Overall dimensions (W x D x H)	400x290x240 mm	900x690x450 mm	920x730x520 mm
Weight	6,00 Kg	65,00 Kg	76,00 Kg



Lightweight roller



560 & 1600 rollers

# SQUEEZER 63

The **SQUEEZER 63** is a manual tool. Easy and fast to apply, the SQUEEZER is useful in the worksite to stop the gas or water flow in the Polyethylene pipelines from Ø 16 to 63 mm / S5 – SDR 11. The squeezing action runs by a movable cylindric bar and by an opposite one.

The second bar can be removed to permit the pipe insertion. Two special stop templates with 4 positions (on the movable bar sides) assure a safe pipe squeeze on all working range diameters.

## TECHNICAL FEATURES

Working range	Ø 16 ÷ 63 mm S5/SDR11
Operation	Manual
Overall dimensions (W x D x H)	325 x 70 x 330 mm
Weight	5,3 Kg



Squeezzer 63





# PIPE CUTTERS



These are professional tools, essential for the manual cut of plastic pipes up to Ø 315 mm.

The **TC 108**, **T1**, **TU 75**, **TU 140**, **T3** and **T4** pipe cutters are made with the very best alloys, and are very manageable and practical to use. The pipe cutters can be fitted with various special blades with appropriate cutting heights and penetration capacities to cut pipes of different materials. The TC 108 and T1 pipe cutters (with special blades) can cut Copper (Cu) and multilayer (PEX/Al, PPR/Al, etc.) pipes.

## STANDARD COMPOSITION

- Pipe cutter with blade:

TC 108 + blade Ø 22 mm + blade Ø 18 mm

T 1 + blade Ø 25 mm

TU 75 + blade Ø 44 mm

TU 140 + blade Ø 53 mm

T 3 + blade Ø 44 mm

T 4 + blade Ø 44 mm

- Carrying case (for the T4 pipe cutter, only)

## ON REQUEST (ACCESSORIES)

- Blades of different diameters and heights.



T 4



T 3



TU 140



TU 75



T 1



TC 108

## TECHNICAL FEATURES

Model	Working range	Overall dimensions	Weight
TC 108	Ø 6 ÷ 50 mm	178 x 228 x 65 mm	0,38 Kg
T1	Ø 6 ÷ 64 mm	222 x 282 x 95 mm	0,60 Kg
TU 75	Ø 6 ÷ 76 mm	247 x 330 x 105 mm	0,68 Kg
TU140	Ø 50 ÷ 140 mm	351 x 483 x 155 mm	1,38 Kg
T3	Ø 100 ÷ 160 mm	372 x 465 x 200 mm	1,65 Kg
T4	Ø 180 ÷ 315 mm	670 x 880 x 360 mm	7 Kg



# SHEARS



These are professional tools, essential for the manual cut of plastic pipes, such as Polypropylene (PP) and Polypropylene Random (PP-R) up to PN 25, Polyethylene (HDPE), Polybutene /PB) and Polyvinylidifluoride (PVDF) up to Ø 75 mm. The **C2**, **C2 AC**, **CD** and **C3 AC** shears are entirely made in steel. The CD shears feature a special device called "Double Jack" so that non-rigid pipes can also be cut. The tool acts in such a way that the blade penetrates without the risk of springing back due to the elasticity of the pipe.

## SUPPLIED WITH

- Shear body with blade.



## TECHNICAL FEATURES

Materials		HDPE, PP, PP-R, PB, PVDF	
Model	Working range	Overall dimensions (W x D x H)	Weight
C2	Max Ø 42 mm	120 x 25 x 220 mm	0,35 Kg
C2 AC	Max Ø 43 mm	120 x 25 x 225 mm	0,51 Kg
CD	Max Ø 51 mm	95 x 25 x 230 mm	0,55 Kg
C3 AC	Max Ø 75 mm	170 x 35 x 520 mm	2,70 Kg





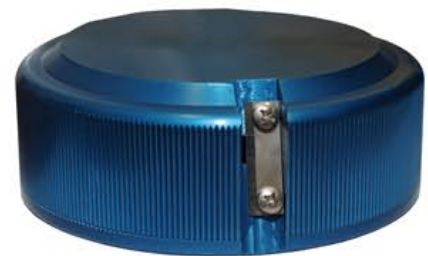
# CHAMFERING



**Chamfering** tools are designed to make a bevel on the outside edge of a pipe end for socket fusion / electrofusion. This Chamfer allows heater faces and socket fittings to be easily pushed onto the pipe end.

## TECHNICAL FEATURES

Model	Working range	Materials
Chamfering 20	Ø 20 mm	HDPE, PB, PP, PVDF PVC
Chamfering 25	Ø 25 mm	HDPE, PB, PP, PVDF PVC
Chamfering 32	Ø 32 mm	HDPE, PB, PP, PVDF PVC
Chamfering 40	Ø 40 mm	HDPE, PB, PP, PVDF PVC
Chamfering 50	Ø 50 mm	HDPE, PB, PP, PVDF PVC
Chamfering 63	Ø 63 mm	HDPE, PB, PP, PVDF PVC
Chamfering 75	Ø 75 mm	HDPE, PB, PP, PVDF PVC
Chamfering 90	Ø 90 mm	HDPE, PB, PP, PVDF PVC
Chamfering 110	Ø 110 mm	HDPE, PB, PP, PVDF PVC
Chamfering 125	Ø 125 mm	HDPE, PB, PP, PVDF PVC



# BEVELERS



These are professional tools for bevelling the ends of plastic pipes up to Ø 250 mm, that will be inserted into electrical couplers or plug-in joints. The **SME 1** and **SME 2** bevelers are made in a special Aluminium alloy. The special shape of the blades and the non-stick coating (PTFE) of the walls, allow a quick and easy bevel of the pipe.

## SUPPLIED WITH

- Beveler body with blade.

## TECHNICAL FEATURES

Model	Material	Material
SME 1	HDPE, PP, PB, PVDF, PVC	Max 10 mm
SME 2	HDPE, PP, PB, PVDF, PVC	Max 35 mm

Model	Working range	Overall dimensions	Weight
SME 1	Ø 25 ÷ 160 mm	76 x 107 x 240 mm	0,80 Kg
SME 2	Ø 40 ÷ 250 mm	195 x 140 x 330 mm	1,40 Kg





# SCANTEMP 410

## Infrared Thermometer



Infrared thermometer for contact-free measuring of surface temperature in 1 second. Display of current and highest temperature during the measurement.

Not recommended for use in measuring shiny or polished surface (stainless steel, aluminum etc).

### TECHNICAL FEATURES

Temperature range	- 33 + 500° C
Accuracy	± 2° C or ± 2% of reading (whichever is greater)
Operating environment	0 + 50° C
Response time	1"
Dimension	175 x 39 x 80 mm
Weight	180 gr





## ***PLASTIC FABRICATION***



### OUTPUT

MODEL	2 Kg/h	3 Kg/h	4 Kg/h	5 Kg/h	6 Kg/h
R-SB 20	•				
R-SB 30	•	•			
R-SB 40	•	•	•		
R-SB 50	•	•	•	•	
R-SB 60	•	•	•	•	•



## CUSTOMIZED PLASTIC FABRICATION USING THE STARGUN

RITMO presents **STARGUN**, the line of handy and easy to use extruder welders. All models distinguish for being light, compact and very smooth during the welding phase. The entire line is supported by a series of interchangeable Teflon<sup>®</sup> shoes which allow the STARGUN to adapt to every kind of welding situation: from plane sheets to oblique angles. Thanks to their versatility they are able to weld different types of fabrications like: containing tanks, fume treatment towers, scrubbers, chemical hoods, aspiration systems, and for joining linings and geo-textiles. All the models can be provided with different types of handle which allow to customize the extruder in order to give to the operator a high-performance instrument.

In the chart below find the main characteristics that make of the STARGUN a unique instrument.



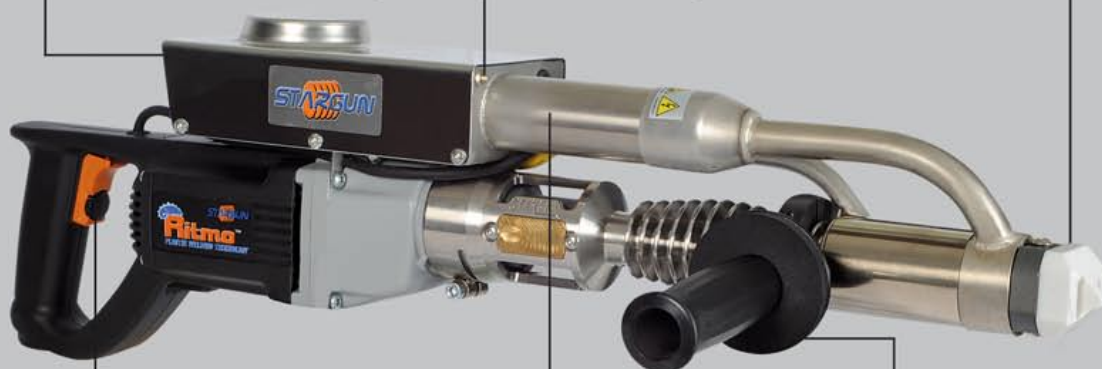
Multifunction display for double thermoregulator settings and hour counter



High-intensity LEDs illuminating the extrusion area in dark places



360° rotating Teflon<sup>®</sup> shoe



Motor trigger and welding speed adjustment



Built-in blower: reduce weight and overall dimensions of the extruder



360 ° rotating side-handle



Welding rod dispenser (on request)



Extruder support



Aluminium transport box (supplied with)



## R - SB 20



**R - SB 20** is a compact and ergonomic extruder. It's the smallest of the STARGUN series and it's perfect for working in narrow places thanks to the easy handling and the reduced overall dimensions.

**R - SB 20** is equipped with an extrusion output regulator and a safety system that allows the operator to work only after the right temperature has been reached. It is capable of up to 2 Kg extruded material for hour.

- Backlight display
- Welding - area spot light LEDs
- Output regulator
- Power regulation "motor stop" safety system
- Built - in blower
- Double T° controller blower/extrusion chamber
- Rotating side - handle
- Replaceable 360° rotating teflon shoe

### Supplied with:

welding shoes Neutral, Flat, 90° for inner angles; transport case and extruder support.

Materials	HDPE/PP/PVDF
Rod	Ø 3 - 4 mm
Output: up to	2 Kg/h
Dimensions	450 x 280 x 100 mm
Weight	5,5 Kg
Voltage	230 V
Absorption	3000 W
Frequency	50 Hz
Sheets	4 - 20 mm

## R - SB 30



Handle for liners and geo-textiles

**R - SB 30** is a compact and precise extruder which adds to the R - SB 20's characteristics a higher extrusion capacity: 3Kg/h of extruded material.

**R - SB 30** is equipped with an extrusion output regulator, a safety system that allows the operator to work only after the right temperature has been reached, display for temperature setting and spot light LEDs to illuminate the welding area.

- Backlight display
- Welding - area spot light LEDs
- Output regulator
- Power regulation "motor stop" safety system
- Built - in blower
- Double T° controller for blower/extrusion chamber
- Rotating side - handle
- Replaceable 360° rotating teflon shoe

### Supplied with:

welding shoes Neutral, Flat, 90° for inner angles; transport case and extruder support.

Materials	HDPE/PP/PVDF
Rod	Ø 3 - 4 - 5 mm
Output: up to	3 Kg/h
Dimensions	500 x 280 x 100 mm
Weight	6 Kg
Voltage	230 V
Absorption	3200 W
Frequency	50 Hz
Sheets	4 - 30 mm





## R - SB 40



**R - SB 40** is a powerful but compact extruder, available with several handle types to give the operator a more practical, efficient and versatile instrument.

**R - SB 40** is lighter if compared to our competitor's equivalent model; this characteristic makes of our extruder an indispensable and irreplaceable instrument when it goes about jobs in which high performances and handling are required. It is equipped with a safety system that allows the operator to work only after the right temperature has been reached and spot light LEDs to illuminate the welding area. R - SB 40 is capable of up to 4 Kg/h of extruded material.

- Backlight display
- Welding - area spot light LEDs
- Output regulator (for back handle and Pistol grip)
- Temperature control safety system cold start control
- Built - in blower
- Double T° controller for blower and extrusion chamber
- Rotary side - handle
- Replaceable 360° rotating teflon shoe

**Supplied with:**

welding shoes Neutral, Flat, 90° for inner angles; transport case and extruder support.

Materials	HDPE/PP
Rod	∅ 3 - 4 - 5 mm
Output: up to	4 Kg/h
Dimensions (back handle)	640 x 200 x 100 mm
Weight	7,5 Kg
Voltage	230 V
Absorption	3300 W
Frequency	50 Hz
Sheets	8 - 30 mm

## HANDLE



Back handle

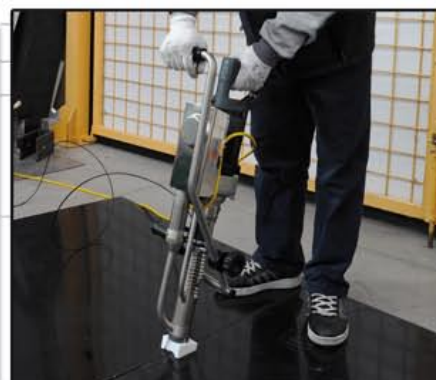
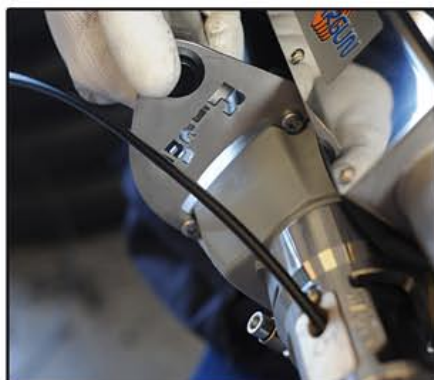


Pistol grip



Side handle

Handle for liners and geo-textiles





## R - SB 50



## HANDLE



Pistol grip

**R - SB 50** is a powerful extruder indispensable for jobs that require a high output of extruded material.

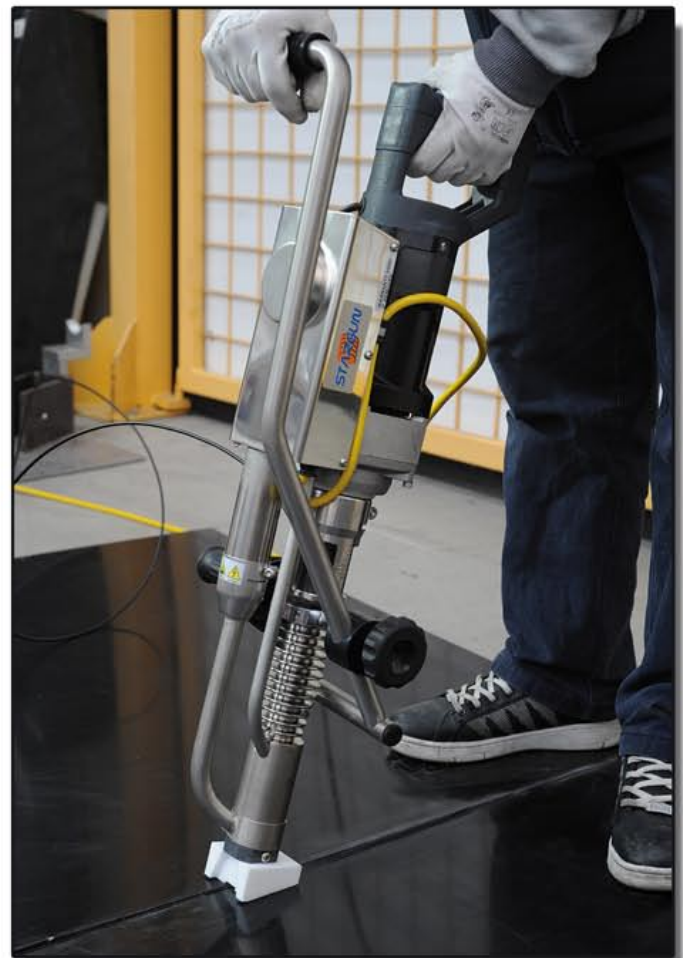
**R-SB 50** is suitable for joining linings and geo-textiles, sheets, thick pipes and for all those welds that are required to resist to continuous stress. During the welding phase the extruder is very smooth and handy. Like the other models, R - SB 50 is equipped with the safety system that allows the operator to work only after the right temperature has been reached; display for temperature setting and spot light LEDs to illuminate the welding area. It is capable of up to 5 Kg/h of extruded material.

- Backlight display
- Welding - area spot light LEDs
- Temperature control safety system cold start control
- Built - in blower
- Double T° controller for blower and extrusion chamber
- Rotating side - handle
- Replaceable 360° rotating teflon shoe
- Turnable side-handle
- Replaceable 360° rotating teflon shoe

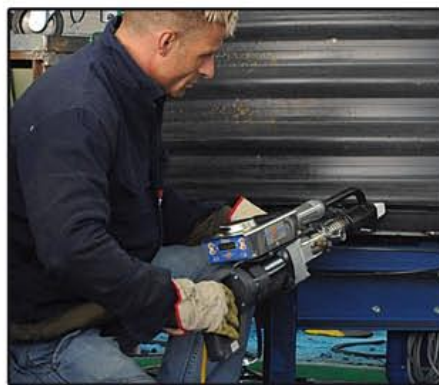
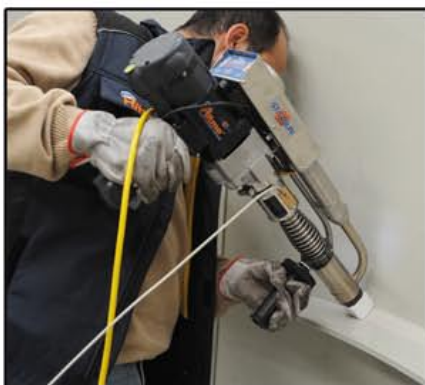
**Supplied with:**

welding shoes Liner, Neutral, Flat, 90° for inner angles; transport case and extruder support.

Materials	HDPE/PP
Rod	∅ 4 - 5 mm
Output: up to	5 Kg/h
Dimensions (Pistol-grip)	600 x 330 x 100 mm
Weight	9 Kg
Voltage	230 V
Absorption	4000 W
Frequency	50 Hz
Sheets	12 - 40 mm



Handle for liners and geo-textiles





## R - SB 60



**R - SB 60** is a powerful hydraulic extruder which allows performing welds with an extremely high output of extruded material, suitable for very thick pipe fittings and sheets which have to stand continuous stress.

**R - SB 60** is equipped with an extrusion output regulator, the safety system that allows the operator to work only after the right temperature has been reached, display for temperature setting, spot light LEDs to illuminate the welding area. It is capable of up to 6 Kg/h of extruded material. STARGUN R - SB 60 comes together with its own hydraulic pump complete with a power generator to make it fully independent\*.

- Hydraulic hoses: 10 m
- Backlight display
- Welding - area spot light LEDs
- Temperature control safety system cold start control
- Built - in blower
- Double T° controller for blower and extrusion chamber
- Rotary side - handle
- Replaceable 360° rotating teflon shoe

**Supplied with:**  
welding shoes Neutral, Flat, 90° for inner angles; transport case and extruder support.

Materials	HDPE/PP
Rod	ø 4 - 5 mm
Output: up to	6 Kg/h
Dimensions	450 x 330 x 100 mm
Weight	7 Kg
Voltage	230 V
Absorption	2500 W only extruder
Frequency	50 Hz
Sheets	12 - 40 mm

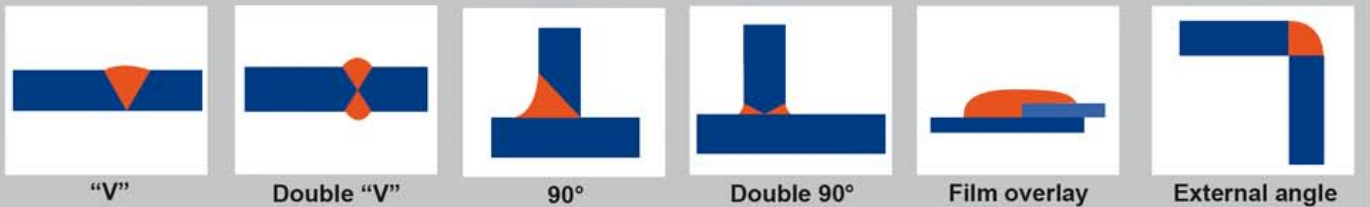


\*The hydraulic unit can be provided with three different types of generator: diesel, gas or electric.






## Possibilities of welding seams



## PRODUCTS OVERVIEW

					
Models	<b>R - SB 20</b>	<b>R - SB 30</b>	<b>R - SB 40</b>	<b>R - SB 50</b>	<b>R - SB 60</b>
Material	HDPE, PP, PVDF	HDPE, PP, PVDF	HDPE, PP	HDPE, PP	HDPE, PP
Output Kg/h	2 Kg/h	3 Kg/h	4 Kg/h	5 Kg/h	6 Kg/h
Rod	3 - 4	3 - 4 - 5	3 - 4 - 5	4 - 5	4 - 5
Weight	5,5 Kg	6 Kg	7,5 Kg	9 Kg	7 Kg
Dimensions (mm)	450x280x100	500x280x100	Pistol grip 540X290X100 Back handle 640X200X100 Side handle 540x150x160	Pistol grip 600X330X100 Back handle 700X170X100	450x330x100
Voltage	230	230	230	230	230
Maximum absorbed power	3000 W	3200 W	3300 W	4000 W	2500 W <small>only hand extruder</small>
Geo-textiles		✓	✓	✓	
Container construction	✓	✓	✓	✓	✓
Building of tanks and filters	✓	✓	✓	✓	✓
Building of fumes treatment towers	✓	✓	✓	✓	✓

## RELATED SERVICES

RITMO offers turnkey solutions to its customers: welding rods and rod dispensers are available.

Welding rods:  
 HDPE Ø 3 - 4 - 5 mm  
 PP Ø 3 - 4 mm  
 PVDF Ø 3 mm



## Available welding shoes (custom design on request)



Liner

Neutral

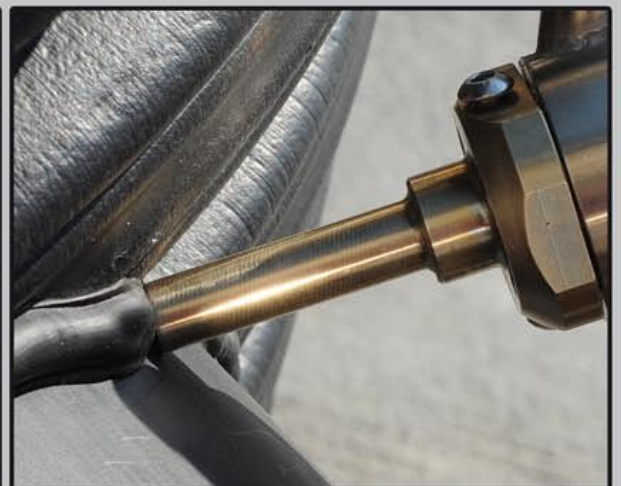
Flat

90 degrees

90 degrees  
for inner angles



Corrugate







## RHINOWELD

The **RHINOWELD** series are CNC automatic butt fusion machines, suitable for welding thermoplastic sheets made of HDPE, PP, PVC, PVDF. The machines are designed according to D.V.S. 2208, and can operate in compliance with the D.V.S. 2207.

The machine is equipped with a touch-screen control panel, which allows easily and safely setting and performance of the whole welding process from the command console. According to the user's needs, it is also possible to input the type of material and the dimension of the thermoplastic sheet, and therefore proceed to weld.

Each welding cycle is automatically memorized, and it's possible to save it both in digital and paper format.

These machines can be operated both horizontally and vertically, which allow to perform different types of weld (horizontal, circular and vertical joints).

### TECHNICAL FEATURES

Models	3.30 V	3.50 V	4.30 V	4.50 V
Weldable materials	Thermoplastic sheets (PVC, PP, PVDF, HDPE)			
Max.working width <sup>1</sup> (mm)	3048	3048	4000	4000
Min. weldable thickness (mm)	3	3	3	3
Max. weldable thickness <sup>1</sup> (mm)	37	50	37	50
Types of welding	Plane butt welding, circular welding, 90° welding			
Power supply	230 V, AC, Single phase, 50/60 Hz			
Max. absorbed power	~ 3500 VA		~ 4500 VA	
Compress air supply	10 BAR			
Dimensions (mm)	3880 x 1310 x 1360 (folded brackets)		4890 x 1310 x 1550 (folded brackets)	
	3880 x 2910 x 1360 (unfolded brackets)		4890 x 2910 x 1550 (unfolded brackets)	
Weight	~ 2100		~ 2600	

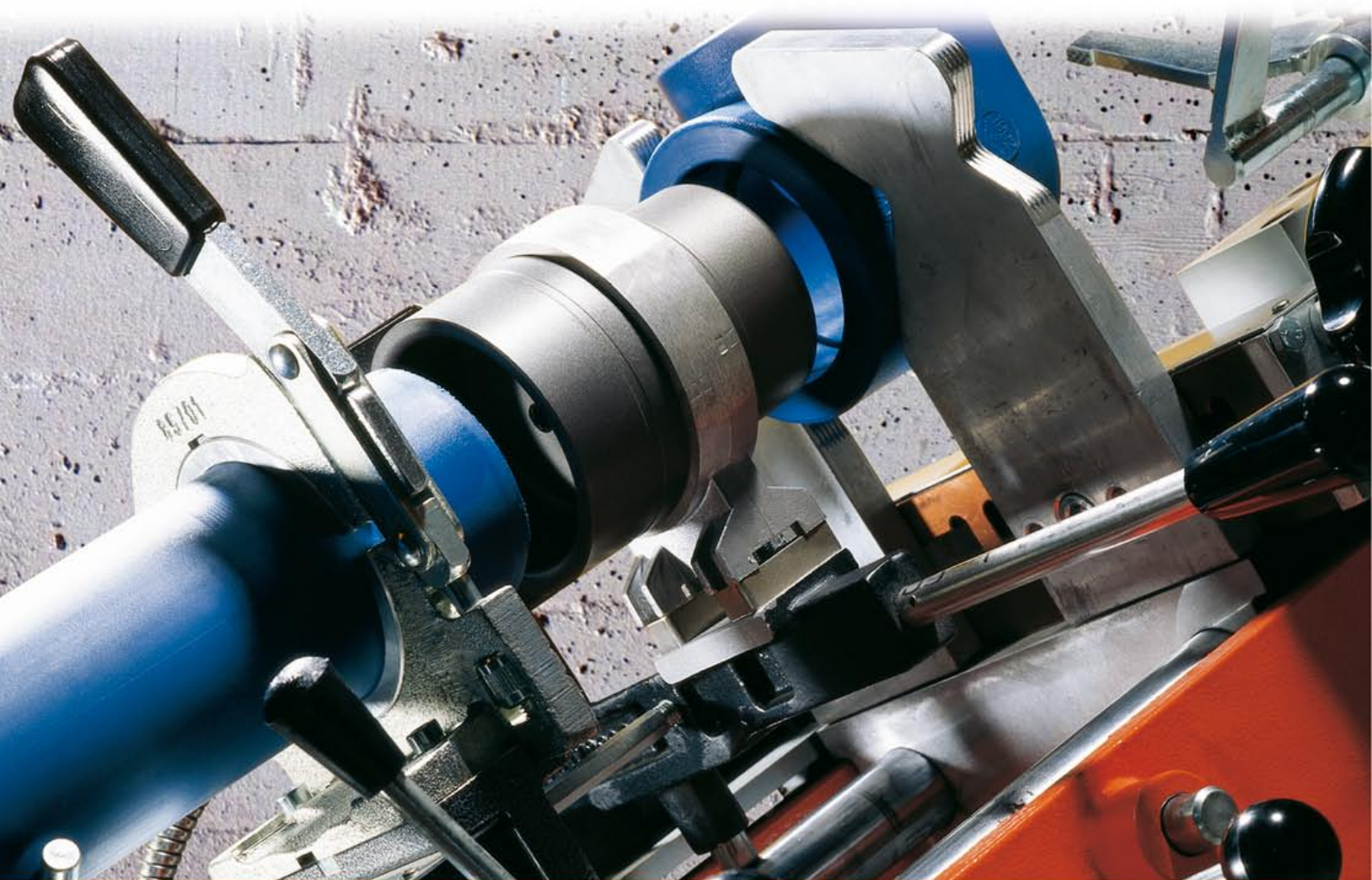
<sup>1</sup> The welding dimensions refer to PP/HDPE with welding pressure of 0.17 N / mm<sup>2</sup>



Types of welding



# SOCKET WELDERS



MODEL	WORKING RANGE Ø mm										
	16	20	25	32	40	50	63	75	90	110	125
PRISMA 90		•	•	•	•	•	•	•	•		
PRISMA 125			•	•	•	•	•	•	•	•	•
PRISMA 125 LIGHT						•	•	•	•	•	•
MANUAL EQUIPMENT											
R 25	•	•	•								
R 63	•	•	•	•	•	•	•				
R 125 Q	•	•	•	•	•	•	•	•	•	•	•

 On request



# PRISMA 125 LIGHT



Welding machine **PRISMA 125 LIGHT** is a field machine for socket welding method, for pipe and fittings in Polyethylene (HDPE), Polypropylene (PP), Polyvinyl fluoride (PVDF) e Polybutylene (PB) for diameters included between 63 - 125 mm. Leading particulars are the restricted weight, minimum overall dimensions and versatility. Featuring: a machine body, a self-centring clamp for locking the pipes, a self-centring clamp for locking the fittings, an extractable socket welder with an automatic electronic temperature, fitting holder and a special bench vice so the machine can be used on a work bench.

## STANDARD COMPOSITION

- Welding machine Prisma 125 Light;
- Socket fusion plate R 125 Q TFE;
- Socket and spigot 63 ÷ 125 mm with steel case;
- Carrying box.

## ON REQUEST

- Clamps for pipe Ø 50 ÷ 110 mm

## TECHNICAL FEATURES

Working range	63 ÷ 125 mm	
Power supply	110 V	230 V
	Single phase - 50/60 Hz	
Total absorbed power	1400 W	
Working temperature	260°C (±10°C) on sockets	
Room temperature range	-5 ÷ +40° C	
(A) Materials	HDPE, PP, PVDF, PB	
DIMENSIONS (W x D x H)		
Standard composition	620 x 670 x 610 mm	
WEIGHT		
Standard composition	27 Kg	





# PRISMA 90



This workshop/construction site welding machine is suitable for the socket fusion of pipes and fittings up to an O.D. of 90 mm, in accordance with the standards in force.

The **PRISMA 90** is composed of a machine body featuring a selector for the welding depths of the different diameters, an adjustable clamp for locking the pipes, a self-centring clamp for locking pipes and fittings (different brands), a selfcentering socket welder with electronic temperature control, a device for the maximum heating depth, three machine supporting legs, a tripod to support the pipe, a set of sockets and spigots for socket fusion from Ø 20 to Ø 90 mm with steel case, and a set of centering sockets and spigots in Aluminium, useful for realigning the pipe locking clamp with respect to the self-centring one, when necessary. The welding machine is available in two versions, depending on the type of sockets & spigots supplied: **PRISMA 90 type A** and **PRISMA 90 type B**.

## STANDARD COMPOSITION

- Machine body complete with an electronic socket welder, fittings support and a "V" shaped pipe support;
- Machine support (composed of 3 legs);
- Steel case complete with sockets & spigots from Ø 20 to Ø 90 mm, centering devices from Ø 20 to Ø 90 mm, clamp adapters from Ø 20 to Ø 75 mm, and tool kit;
- Pipe support tripod.

## TECHNICAL FEATURES

Working range	20 ÷ 90 mm	
Power supply	110 V	230 V
	Single phase - 50/60 Hz	
Total absorbed power	1000 W	
Working temperature	180 ÷ 280°C	
Room temperature range	-5 ÷ +40°C	
Time to reach welding temperature	~ 10 min.	
Materials	HDPE, PP, PP-R, PB, PVDF	

DIMENSIONS (W x D x H)	
Machine being used	590 x 595 x 630 mm
Transport wooden case	760 x 665 x 490 mm

WEIGHT	
TOTAL (Prisma 90 only)	54 Kg

RITMO also produces special sockets and spigots that are useful for the on-site repairs of pipes that have been accidentally perforated. They are called **hole repairing sockets**, available in three different types:

- Ø 7 mm hole repairing socket for Ø 7 mm holes;
- Ø 8 mm hole repairing socket for Ø 8 mm holes;
- Ø 11 mm conical hole repairing socket for Ø 11 mm holes.



# PRISMA 125



This workshop/construction site welding machine is suitable for the socket fusion of pipes and fittings up to an O. D. of 125 mm, in accordance with the standards in force.

The **PRISMA 125** is composed of a machine body featuring a selector for the welding depths of the different diameters, four self-centering steel clamps for locking pipes and fittings (different brands), a self-centring socket welder with electronic temperature control, a device for the maximum heating depth, a sliding trolley, a tripod to support the pipe, a set of sockets and spigots for socket fusion from Ø 25 to Ø 125 mm with steel case.

The welding machine is available in two versions, depending on the type of sockets & spigots supplied: **PRISMA 125 type A** and **PRISMA 125 type B**.

## STANDARD COMPOSITION

- Machine body complete with an electronic socket welder;
- Steel case complete with sockets and spigots from Ø 25 to Ø 125 mm and tool kit;
- Pipe support tripod;
- Sliding trolley.

## TECHNICAL FEATURES

Working range	25 ÷ 125 mm	
Power supply	110V	230 V
	Single phase - 50/60 Hz	
Total absorbed power	1400 W	1400 W
Working temperature	180 ÷ 280°C	
Room temperature range	-5 ÷ +40°C	
Time to reach welding temperature	~ 10 min.	
Materials	HDPE, PP, PP-R, PB, PVDF	
DIMENSIONS (W x D x H)		
Machine working	1080 x 840 x 580 mm	
Transport wooden case	1500 x 800 x 1300 mm	
WEIGHT		
TOTAL (Prisma 125 only)	100 Kg	



Steel clamps

RITMO also produces special sockets and spigots that are useful for the on-site repairs of pipes that have been accidentally perforated. They are called **hole repairing sockets**, available in three different types:

- Ø 7 mm hole repairing socket for Ø 7 mm holes;
- Ø 8 mm hole repairing socket for Ø 8 mm holes;
- Ø 11 mm conical hole repairing socket for Ø 11 mm holes.



# MANUAL EQUIPMENT



Manual **SOCKET** welders for joining pipes and fittings, in compliance with the standards in force. They feature an aluminum heating plate and a practical, heat-insulated plastic handle. They can weld HDPE, PP, PP-R, PVDF pipes and fittings, and they're characterized by different shapes and working ranges, suitable for different applications. They're available with an adjustable electronic thermoregulator (TE), or with a fixed electronic thermostat (TFE). This new TFE control system features a new self-diagnostic device, provided with an alarm, which would alert the operator in case of anomaly; at the same time, the heating element would switch off automatically. Thanks to an algorithm PID microcontroller, combined with a platinum sensor, the temperature control system can react faster to the external temperature fluctuations, and guarantee higher reliability and longer durability.

## STANDARD COMPOSITION

All models are composed of:

- Socket welder;
- Fork support;
- Bench vice (except R 25);
- Allen wrench;
- Pin for sockets & spigots.

## ON REQUEST (ACCESSORIES)

- Bench vice (for R 25);
- Carrying case in electro-painted steel;
- Sockets and spigots (male/female).



R 125 Q



R 63



R 25

## TECHNICAL FEATURES

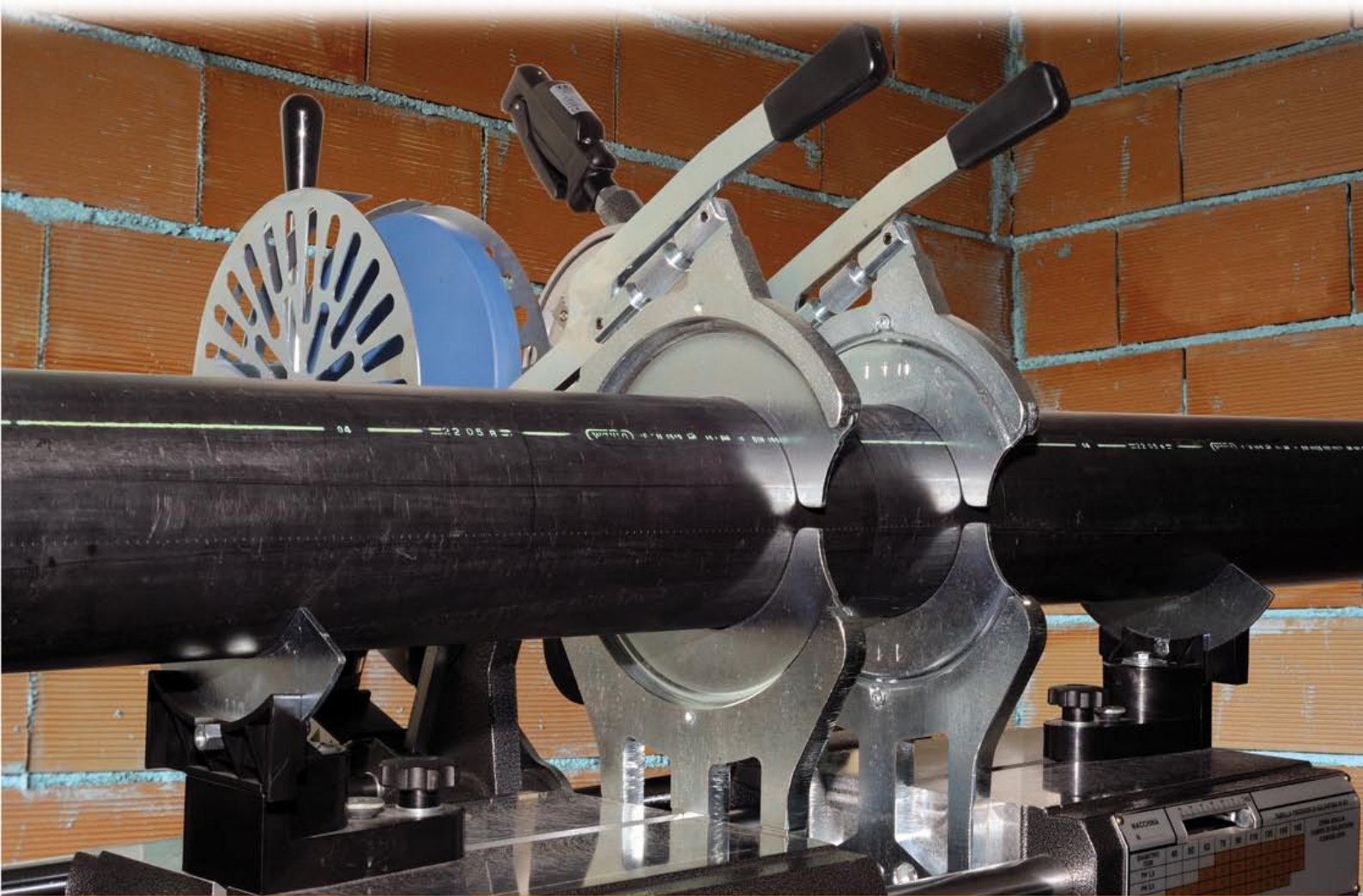
Power supply	230 V – Single phase 50/60 Hz (TE)	100 - 230 V Single phase 50/60 Hz (TFE)
Working temperature	TFE: 260°C (± 1°) TE: 180 ÷ 290°C	
Ambient temperature	-5 ÷ +40°C	
Materials	HDPE, PP, PP-R, PB, PVDF	

Model	Ø Max. diameter	Absorbed power	Dimensions (W x D x H)	Weight
R 25	25 mm	500 W	115 x 50 x 320 mm	1,44 Kg
R 63	63 mm	800 W	175 x 50 x 360 mm	1,82 Kg
R 125 Q	125 mm	1400 W	175 x 50 x 395 mm	3,16 Kg



# ***BUTT FUSION MACHINES***

## *Liquid drainage*



WORKING RANGE Ø mm

MODEL	25	32	40	50	56	63	75	90	110	125	140	160	180	200	225	250	280	315
GAMMA 110	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
MINI 160 JOYT			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
MINI 160 JOYT adjustable clamps			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
VR 160 JOYT			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
VR 250							•	•	•	•	•	•	•	•	•	•	•	•
MAXI 315								•	•	•	•	•	•	•	•	•	•	•





# HEATING PLATES SERIES FOR BUTT WELDING



TPA 200



TPA 240

Series of manual instruments equipped with an aluminum heating plate Teflon-coated (PTFE) and a practical heat-insulated plastic handle. Available in two versions: one with a fixed mechanical thermostat (TF) and one with an adjustable electronic thermoregulator (TE). The heating plates are available in different shapes and working ranges according to the operator's requirements.

**TPA 200** and **TPA 240** are manual heaters used to soften the outer layer of a pipe consisting of a double layer: metal - plastic. TPA 200 and TPA 240 are opened heaters in order to completely wrap the internal diameter of the pipe, the outside of the duct, plastic is then heated and softened. Both models are covered by a layer of nonstick material and equipped with adjustable electronic thermostat (TE).

## STANDARD COMPOSITION

All the models are supplied with:

- A basic heating plate;
- A fork support.

## ON REQUEST (ACCESSORIES)

- Bench vice support (the same for all models except TP 300)
- Transportation box in electro-painted steel.

## TECHNICAL FEATURES

### TPA 200

### TPA 240

Working range:	DN25 - DN32 - DN40 - DN50 - DN65 Ø 90 ÷ 160 mm	DN80 - DN100 Ø 160 ÷ 225 mm
Power supply	230 V - 50/60 Hz	230 V - 50/60 Hz
Max absorbed power	1300 W	1700 W
Materials	HDPE, PP, PB, PVDF	HDPE, PP, PB, PVDF
Weight	4,5 Kg	5 Kg

### TP series

Power supply (*)	230 V - Single phase - 50/60 Hz
Working temperature	TE: 180 ÷ 280°C (A)
Ambient temperature	-5 ÷ +40°C
Time to reach welding temperature	TE: ~ 10 min.
(A) Materials	HDPE, PP, PB, PVDF

Model	Pipe max Ø (O.D.)	Absorbed power	Dimensions (W x D x H)	Weight
TP 125	125 mm	700 W	140 x 50 x 410 mm	2,16 Kg
TP 125/45°	110 mm	500 W	140 x 130 x 370 mm	1,95 Kg
TP 200	180 mm	1200 W	200 x 50 x 440 mm	3,21 Kg
TP 300	280 mm	1300 W	300 x 50 x 550 mm	5,09 Kg



TP 125



TP 125/45°



TP 200



TP 300

(\*) Available in 110 V -Single-phase - 50/60 Hz  
for TP 125 TE -700 W, TP 200 TE -850 W and TP 300 TE -1300 W



# GAMMA 110



Portable welding machine for the **construction of segmented bends**. Thanks to a special clamp, this machine can also weld moulded fittings like **bends, tees, wyees (Y) and flange necks** up to Ø110 mm.

## STANDARD COMPOSITION

- **A machine body** with pressure regulating device, a support base and a bench vice for the heating plate.
- **An extractable heating plate** with an automatic electronic temperature control device.
- An electrically controlled **extractable milling cutter** for levelling the ends of the pipe and/or fitting.
- **A pair of special clamps** for making bends (useful also for straight welding).
- **A special right clamp** for welding fittings.
- **A three-leg** machine support.
- **A support** for the milling cutter and the heating plate.
- **Two tripod supports** to sustain the pipe.
- **A special bench vice** so the machine can be used on a work bench.
- **Bends clamps Ø 110 mm** with adapters from Ø 40 to 90 mm.
- **Steel case** with a right special clamp Ø 110 mm and lower clamp adapters Ø 40 ÷ 110 mm (56 mm Ø excluded).

## ON REQUEST (ACCESSORIES)

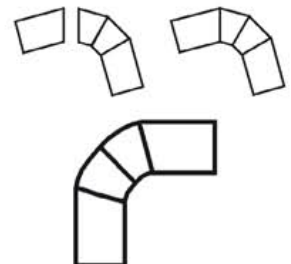
- Bends clamps adapters Ø 25 and 32 mm;
- Right special clamp adapters Ø 25, 32, 56 mm;
- Left special clamp Ø 110 mm (for fitting-fitting welding);
- Left special clamp adapters from Ø 25 to Ø 90 mm;
- Tool for flange necks;

## TECHNICAL FEATURES

Working range	25 ÷ 110 mm	
Power supply	110 V	230 V
	Single phase - 50/60 Hz	
Total absorbed power	1250 W	1450 W
Outside temperature range	-5 ÷ +40°C	
Time to reach welding temperature	~ 10 min.	
Materials	HDPE, PP, PVDF and other plastic materials	

DIMENSIONS (W x D x H)	
Machine body	540 x 180 x 110 mm
Machine working (with 3-leg machine support)	770 x 620 x 1070 mm

WEIGHT	
Machine body (without clamps)	8 Kg
Total (GAMMA 110 only)	55 Kg



# **MINI 160 JOYT - MINI 160 JOYT ELBOWS**



MINI 160 JOYT



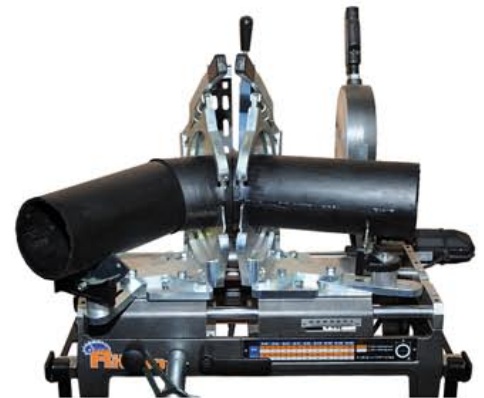
MINI 160 JOYT  
ELBOWS CLAMPS

**MINI 160 JOYT** and **MINI 160 JOYT ELBOWS** are portable butt fusion welders for drainage pipes up to Ø 160 mm. These machines are characterized by the extractable heating plate, the safety microswitches on the milling cutter to avoid accidental starting, the articulated lateral supports. The Mini 160 Joyt has a frame, most useful during working and transportation. **MINI 160 JOYT ELBOWS** features special jaws for manufacturing 30° elbows.

- **The machine body** includes a spring-loaded pressure-regulating device and the rack-feed movement of the carriage provided by a handwheel.
- **The rapid-lock clamps**, in order to be able to lock elbows (also with a very short neck), tees and Y-branches without the need of any additional device.
- **The protection housing** around the heating element.

## STANDARD COMPOSITION

- Machine body (with milling cutter, lateral supports and keys)
- Heating plate TP 200 TE
- Right clamp group Ø 160 JOYT
- Left clamp group Ø 160 JOYT
- Frame MINI 160 JOYT
- Case with set of clamps and lateral supports' adapters Ø 40 ÷ 140 mm



MINI 160 JOYT ELBOWS

## TECHNICAL FEATURES

MINI 160 JOYT - MINI 160 JOYT		ADJUSTABLE CLAMPS
Working range	40 ÷ 160 mm	
Power supply	110 V Single phase 50/60 Hz <b>2050 W</b>	
	230 V Single phase 50/60 Hz <b>2100 W</b>	
Working temperature	TE: 180 ÷ 280 ° C	
Ambient temperature	-5 ÷ +40°C	
Time to reach welding T°	TE: ~ 10 min.	
Materials	HDPE, PP, PVDF and other plastic materials	
<b>DIMENSION (W x D x H)</b>		
Standard composition	664 x 580 x 1235 mm	
<b>WEIGHT</b>		
Standard composition	50 Kg	





# VR 160 JOYT

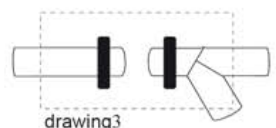
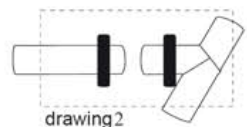
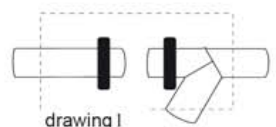


**VR 160 JOYT** is portable butt fusion welder for drainage pipes up to Ø 160 mm. This machine is characterized by the extractable heating plate, the safety microswitches on the milling cutter to avoid accidental starting, the articulated lateral supports. The VR 160 JOYT has steel box that can be used either as a work bench or as a protection for transportation.

- **The machine body** includes a spring-loaded pressure-regulating device and the rack-feed movement of the carriage provided by a handwheel.
- **The rapid-lock clamps**, in order to be able to lock elbows (also with a very short neck), tees and Y-branches without the need of any additional device.
- **The protection housing** around the heating element.

## STANDARD COMPOSITION

- Machine body (with milling cutter, lateral supports and keys)
- Heating plate TP 200 TE
- Right clamp group Ø 160 JOYT
- Left clamp group Ø 160 JOYT
- Frame MINI 160 JOYT
- Case with set of clamps and lateral supports' adapters Ø 40 ÷ 140 mm



## TECHNICAL FEATURES

Working range	40 ÷ 160 mm
Power supply	230 V - Single phase - 50/60Hz
Total absorbed power	<b>2100 W</b>
Working temperature	TE: 180 ÷ 280°C
Ambient temperature	-5 ÷ +40°C
Time to reach welding T°	TE: ~ 10 min.
Materials	HDPE, PP, PB, PVDF

DIMENSIONS (W x D x H)	
Standard composition	1055 x 925 x 1310 mm

WEIGHT	
Standard composition	95 Kg

The meaning of **JOYT**.  
This word identifies the type of clamps adopted on this machine. They have been specifically designed to be able to lock Y-branches in all the possible positions (drawings 1,2,3).



## VR 250



A professional welding machine ideal for medium sized pipes and sewers up to Ø 250 mm. It consists of a machine body with a pressure regulating device, a pair of clamps, two lateral supports, an electrically controlled milling cutter for levelling the ends of the pipe and/or fitting with a safety microswitch, an extractable heating plate with automatic device to control the temperature, a sliding support and a steel case that acts as a work bench and cover when transporting the machine. The **VR 250** can weld fittings such as **bends** and **tees**. Branches can also be welded thanks to the upper extractable jaws (on request) called **SUPRA**.

Available in 110 V and 230 V.

### STANDARD COMPOSITION

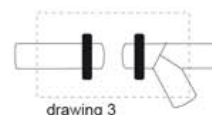
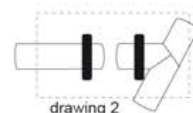
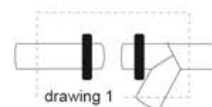
- Machine body with a milling cutter, lateral supports, clamps adapters and lateral supports adapters Ø 75 - Ø 250 mm, working/transport case steel, service spanners;
- TP VR 250 TE plate;
- Right and left clamp Ø 250 mm.

### ON REQUEST (ACCESSORIES)

- Clamps adapters Ø 140 and 180 mm;
- Lateral supports adapters Ø 140 and 180 mm;
- Sets of extractable upper jaws SUPRA from Ø 75 to 225 mm;
- Wooden case for SUPRA extractable upper jaws.

### TECHNICAL FEATURES

Working range	75 ÷ 250 mm	
Power supply	110 V	230 V
	Single phase - 50/60Hz	
Total absorbed power	2150 W	2200 W
Working temperature	180 ÷ 280°C	
Ambient temperature	-5 ÷ +40°C	
Time to reach welding temperature	~ 20 min.	
Materials	HDPE, PP, PB, PVDF	
DIMENSIONS (W x D x H)		
Machine being used	835 x 1240 x 1530 mm	
WEIGHT		
Standard Composition	123 Kg	



### The meaning of SUPRA

This word identifies the different type of clamps mounted on this welding machine. They have been specifically designed to be able to lock "branch" fittings: with extractable and interchangeable jaws, shaped according to the diameter to weld, it is possible to lock all branch points (drawings 1, 2, 3).



# MAXI 315



A professional welding machine ideal for medium sized pipes and sewers up to Ø 315 mm. It consists of a machine body with pressure regulating device, a pair of clamps, two lateral supports, an electrically controlled milling cutter for levelling the ends of the pipe and/or fitting with a safety microswitch, an extractable heating plate with automatic electronic device to control the temperature, a sliding support, a tip-up metal frame on wheels that acts as a work bench and protection when transporting the machine. The **MAXI 315** can weld fittings such as **bends** and **tees**. **Branches** can also be welded thanks to the single clamps (available on request) indicated for all diameters in the working range. Available in 110 V and 230 V.

## SUPPLIED WITH

- Machine body with a milling cutter and lateral supports;
- TP 315 TE plate;
- Right and Left clamp Ø 315;
- Steel frame on wheels (for transporting and for use as a work bench);
- Wooden case with clamps and lateral supports adapters Ø 200 and 250 mm (Ø 90 to 280 mm on request).

## ON REQUEST (ACCESSORIES)

- Clamp adapters Ø 90, 110, 125, 140, 160, 180, 225, 280 mm;
- Lateral supports adapters Ø 90, 110, 125, 140, 160, 180, 225, 280 mm;
- Wyes (Y) clamps from Ø 90, to 315 mm;

## TECHNICAL FEATURES

Working range	90 ÷ 315 mm	
Power supply	110 V	230 V
	Single phase - 50/60 Hz	
Total absorbed power	3850 W	3900 W
Working temperature	180 ÷ 280°C	
Ambient temperature	-5 ÷ + 40°C	
Time to reach welding temperature	~ 20 min.	
Materials	HDPE, PP, PB, PVDF	
DIMENSIONS (W x D x H)		
Machine being used	1420 x 1300 x 1570 mm	
WEIGHT		
Standard Composition	183 Kg	





## LINE STOPPING & BYPASS SYSTEM

- **MAXIMUM SAFETY**
- **NO INTERRUPTION in the pipeline supply**
- **FAST TO USE**

### MAIN COMPONENTS DESCRIPTION

- DRILLING MACHINE
- PLUGGING MACHINES AND FLAT VALVES
- PLUGGING PISTONS/BALLOONS
- PIPE FITTING

**DRILLING MACHINE** for steel, cast iron, HDPE  
Excellent results in total safety.

Steel construction with double zinc coating. For drilling gas and water pipe lines (from 1/2" to 6") at low and middle pressure (up to 16 BAR).

**DM 2** The pipe-drilling machine is made of steel with double zinc plating. It allows to make holes, in any place, on low and middle pressure gas and water pipe-lines from 1,1/2" to 2" up to 16 BAR. Automatic control of drilling pressure through an adjustable spring.

Working stroke: 160 mm - Total length: 450 mm

O-ring and pressure seal and machine body protected by a lip-seal inserted in the bush. Air-valve placed on the machine and safety stop. Unhooking of threaded bush to insert further attachments.



DRILLING MACHINE  
DM 2

**DM 6** The pipe-drilling machine is made of steel with double zinc plating and it allows to make hole, in any position, on low and middle pressure gas and water pipelines from 1" to 6" up to 16 BAR (on request up to 50 BAR **DM 6 PLUS**).

Automatic control of drilling pressure through an adjustable spring.

Working stroke: 240 mm increases with extensions up to 800 mm with a hole saw retrieve system inside the machine.

Roller bearing mounted on the connector-holder bush to make a coaxial drilling in any position.

O-ring, machine body and bearings are protected by a lip-seal inserted in the bush.

Air-valve placed on the machine and safety limit switch.

Unhooking of threaded bush to insert further extensions (shaft to insert plug).

Total length: 690 mm.



# LINE STOPPING & BYPASS SYSTEM

TECHNICAL EQUIPMENT  
FOR NATURAL GAS AND WATER PIPELINES



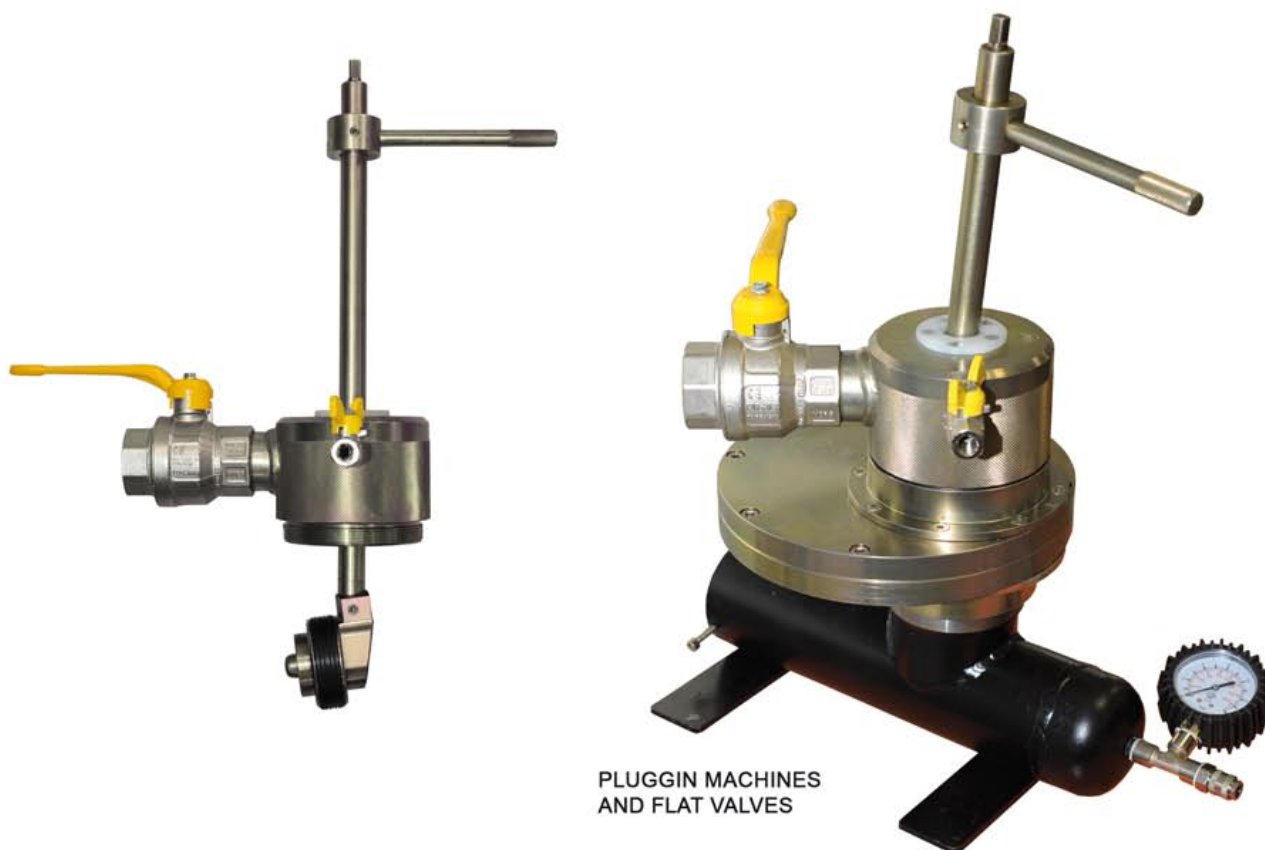
## PLUGGIN MACHINES AND FLAT VALVES

Plugging system consisting of a plugging machine with a flat valve and can be work on gas and water pipe lines at low and middle pressure. Ball valve fo by-pass.

The plugging system consist in a plugging machine associated with a rubber wedge made of double zinc-plated steel. The system has been designed and built in order to plug gas and water pipelines in condition of low and middle pressure (max 5 BAR for gas and 12 BAR for water ) from 2" to 12" diameter, assuring high quality results thanks to the following peculiar features:

- By reducing the dimensions in comparison with the flat valve system it is possible to get a better use for the operator as well as a smaller room of digging out area.
- It is also possible to avoid compensation of pressure during stages of drilling and plugging thanks to use of a rubber wedge PN16 with best results for safety of use and reduction of length of work.

Model	Working range	Supplied with
PM 2.3	2" - 2 ½" - 3"	flat valve with 3 lower reduction ring nuts and 1 upper reductions ring nut; expansion plugs 2" - 2½" - 3"
PM 4.5	4" - 5"	flat valve with 2 lower reduction ring nuts and 1 upper reductions ring nut; expansion plugs 4" - 5" with blowdown valve
PM 6	6"	flange flat valve with lower and upper reduction ring nut; expansion plugs 6" with blowdown valve for by-pass
PM 8	8"	1 bell valve system or flat valve; 1 expansion plug 8"
PM 10	10"	1 bell valve system or flat valve; 1 expansion plug 10"
PM 12	12"	1 bell valve system or flat valve; 1 expansion plug 12"



## PLUGGING PISTONS/BALOONS

Plugging pistons with one, two and three natural rubber rings.

Plugging balloons for low pressure mounted on flexible pipe, complete with a presure gauge and antistatic lining. (from 40 mm to 300 mm).

## PIPE FITTINGS

Saddle shaped pipe fitting with CAD/CAM design. Uniform profile and thickness to guarantee best welding. Tee fitting for low and middle pressure, available shaped.

# BUTT FUSION MACHINES REFERENCE

## IPS PIPE SIZE

MODEL	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"	26"	28"	30"	32"	34"	36"	42"	48"	52"	54"	63"
DELTA 160 M	•	•	•	•	•	•	•																					
DELTA DRAGON 160	•	•	•	•	•	•	•																					
BASIC 160	•	•	•	•	•	•	•																					
BASIC 160 EASY LIFE	•	•	•	•	•	•	•																					
BASIC 200			•	•	•	•	•	•																				
BASIC 200 EASY LIFE			•	•	•	•	•	•																				
DELTA TRAILER 250			•	•	•	•	•	•	•																			
DELTA DRAGON 250 CNC			•	•	•	•	•	•	•																			
DELTA DRAGON 250 B			•	•	•	•	•	•	•																			
BASIC 250			•	•	•	•	•	•	•																			
BASIC 250 EASY LIFE			•	•	•	•	•	•	•																			
DELTA DRAGON 315 CNC					•	•	•	•	•	•																		
DELTA DRAGON 315 B					•	•	•	•	•	•																		
BASIC 315					•	•	•	•	•	•																		
BASIC 315 EASY LIFE					•	•	•	•	•	•																		
DELTA 355 ALL TERRAIN					•	•	•	•	•	•	•																	
DELTA 355 TRAILER					•	•	•	•	•	•	•																	
DELTA DRAGON 355 B					•	•	•	•	•	•	•																	
BASIC 355					•	•	•	•	•	•	•																	
BASIC 355 EASY LIFE					•	•	•	•	•	•	•																	
DELTA 500								•	•	•	•	•	•															
DELTA 630 ALL TERRAIN								•	•	•	•	•	•	•														
DELTA 630								•	•	•	•	•	•	•	•													
DELTA 800															•	•	•	•	•	•	•	•						
DELTA 1000																•	•	•	•	•	•	•	•	•				
DELTA 1200																				•	•	•	•	•	•	•	•	•
DELTA 1600																				•	•	•	•	•	•	•	•	•



Optional, for more details contact RITMO

## DIPS PIPE SIZE

MODEL	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"	30"	36"	42"	48"	54"	60"
DELTA 160 M	•	•															
DELTA DRAGON 160	•	•															
BASIC 160	•	•															
BASIC 160 EASY LIFE	•	•															
BASIC 200	•	•	•														
BASIC 200 EASY LIFE	•	•	•														
DELTA TRAILER 250	•	•	•	•													
DELTA DRAGON 250 CNC	•	•	•	•													
DELTA DRAGON 250 B	•	•	•	•													
BASIC 250	•	•	•	•													
BASIC 250 EASY LIFE	•	•	•	•													
DELTA DRAGON 315 CNC	•	•	•	•	•												
DELTA DRAGON 315 B	•	•	•	•	•												
BASIC 315	•	•	•	•	•												
BASIC 315 EASY LIFE	•	•	•	•	•												
DELTA 355 ALL TERRAIN	•	•	•	•	•	•											
DELTA 355 TRAILER	•	•	•	•	•	•											
DELTA DRAGON 355 B	•	•	•	•	•	•											
BASIC 355	•	•	•	•	•	•											
BASIC 355 EASY LIFE	•	•	•	•	•	•											
DELTA 500				•	•	•	•	•	•								
DELTA 630 ALL TERRAIN				•	•	•	•	•	•	•							
DELTA 630				•	•	•	•	•	•	•							
DELTA 800									•	•	•	•					
DELTA 1000											•	•	•	•			
DELTA 1200												•	•	•	•	•	•
DELTA 1600												•	•	•	•	•	•



Optional, for more details contact RITMO



# **BASIC LINE**

## **BUTT FUSION MACHINES**







**RITMO S.p.A.**  
Via A. Volta, 7 - 35037  
Bressano di Teolo (PADOVA) ITALY

Ph. +39 049 9901888

Fax +39 049 9901993

info@ritmo.it  
www.ritmo.it

