



**ACUSTER  
GLOBAL**

**CATALOGUE**

**PLASTIC  
WELDING  
TECHNOLOGY  
2015**



ACUSTER GLOBAL  
c/Juan de la Cierva 1  
Políg. Ind. Del Sud-Oest  
08960 Sant Just Desvern  
Barcelona  
Spain

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## INTRODUCTION

Acuster Global is the only Spanish company that develops and manufactures welding technology for plastic pipes (electrofusion welding and butt welding) and is internationally recognized in this field. Being a member of Grupo Acuster, Acuster Global is perfectly able to meet the final user's needs.

### ***Current STP Acuster Group structure :***

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## FACTORIES

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ACUSTER GLOBAL, S.L.

Design, manufacturing, sales, hire and service of products for distribution piping systems.



ESMET Fabricados Metálicos, S.L.

Production of stamped brass and other metal products.  
Design and manufacture of manifolds, valves and related items to the water meter.



Sociedad de Transformados Plásticos, S.A.

Design and manufacture of plastic pipes fittings.



TRACON International B.V.

In-house production of standard and tailor-made repair clamps.

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## SUBSIDIARIES

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**ACUSTER**

**BAHISA**

ACUSTER BAHISA, S.L.

Sales, hire and service of products for distribution piping systems.  
Marketing of manifolds, valves and related items to the water meter.

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ACUSELCONTROL

ACUSEL CONTROL, S.L.

Development of technology for remote monitoring and control of supply networks.

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**AGRUACUSTER**

AGRU tecnología en plástico Sudamérica Ltda.

Export, import and sales of plastic products. Sales, hire and service of equipment and products for distribution piping systems.

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I.W.M.C. n.v.

Leading Flemish company in gas butt-fusion machinery market.

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STP Fittings, SIA

Marketing of plastic pipes fittings and fusion equipment.

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STP Fittings South Africa

Marketing of plastic pipes fittings and fusion equipment.

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STP Fittings, S.R.O.

Marketing of plastic pipes fittings and fusion equipment.





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# CATALOGUE

## 1. LITTLE BEAT

*Universal electrofusion control box for small fittings*



Automatic control of the voltage and current supplied to the fittings, make the Little Beat reliable and ensures that fusions made are executed within the required parameters.

The Little Beat also provides information and optional control of the cooling time as well as real-time monitoring of all parameters of each joint on the unit screen.

This electrofusion unit has been designed to carry out electrofusion joints using fittings with a working voltage from 10V up to 42V.

The Little Beat is a unit with both data manual input (voltage and time provided by the fitting manufacturer) and bar-code recognition system by a scanner.

It can be used for fittings with a diameter up to 160 mm.

The Little Beat is compact, with small dimensions, light (13 kg only) easy to handle thanks to its transport metal casing and so simple in use.



### **WORKING MODES:**

- Manual input of fusion parameters using the keyboard
- Automatic input of fusion parameters by reading barcode with an scanner (optional)

### **OTHER MODES:**

- Input of the 24-digit bar-code via the keyboard
- Validation of the last parameters used to make a new fusion

## TECHNICAL SPECIFICATIONS:

MODEL	LITTLE BEAT	
Classification acc to ISO 12176-2	P <sup>2</sup> 2US1VKAX	
Configuration options	Language > Multilingual (request available languages)	
	Display > backlight and contrast	
Input voltage	Nominal voltage: 230 Vac ±10%	Nominal voltage: 110 Vac +20/-10%
Input frequency	Nominal frequency: 50 Hz ±10%	Nominal frequency: 50-60 Hz
Electrofusion voltage	10 to 42 Vac galvanically separated	
Power consumption	2500 W maximum (the fitting resistance must not be lower than 0.7 ohms (230V) or 0.8 ohms (110V))	
Generator output performance	3.0 kVA unipolar operation; electronic regulation	
Protection type	Doble isolation IP55	
Duty factor	40 to 90% (depending on the fitting size) Electronic temperature monitoring of the unit	
Working temperature	-5 to 40°C (blocking at -6°C)	
Display	LCD, 2 lines x 16 characters backlight	
Acoustic warning	Piezoelectric buzzer	
Enter fusion data Manual	Voltage: Multivoltage (steps of 0.1 V)	
	Time: 1 to 5,000 seconds	
	Cooling time: 1 to 99 minutes	
Enter fusion data Automatic	Barcode acc. to ISO/TR 13950	
Front and keys	Green/grey silkscreen plastic membrane with tactile push buttons	
Power cable	@ 230V: 2x1 mm <sup>2</sup> (Schuko + French type plug) 2.5 m long @ 110V: 3x1.5 mm <sup>2</sup> (NEMA 5-15P type plug) 2.5 long	
Electrofusion cables	1x10 mm <sup>2</sup> , 3 m long (threaded terminals for adaptors)	
Scanner	Laser scanner optional	
Connection of scanner	9-pins RS-232	
Accessories	Set of 4 and 4.7 mm electrofusion adaptors	
Weight and dimensions	Height: 390 mm; Width: 240 mm; Length: 160 mm; Nett weight: 13 kg	

## 2. BEAT TR

### *Universal electrofusion for PE units*

Electrofusion machine with traceability is the top of the BEAT range model. It is an automatic machine including the option for traceability, i.e. maintaining the identification of the operator, job, components, fusion records and complementary data in the internal memory, as well as the option for exporting the saved data to a PC and printer. This specification is required on markets as demanding as the gas market.



As with the rest of the range, it is very easy to use, heavy duty, small, lightweight and, therefore, easily transported. Despite its small size, its performance level is very high.



#### **APPLICATIONS:**

- ✓ Pipes: On PE pipes, it allows the jointing of all kinds of polyethylene fittings by electrofusion.
- ✓ Range of application: Voltages between 8 and 48 V with no limitations to diameters
- ✓ electrofusi on pins of 4 and 4.7 mm.
- ✓ Working pressures: as determined by the fittings.

#### **SPARES:**

- ✓ 4 mm and 4.7 mm electrofusion adapters.
- ✓ Laser scanner
- ✓ Serial cable RS 232 (Beat Tr), not included.

The units in the Beat range are fitted with all the elements for electrofusing any fitting on the market. Consequently, the 4 mm and 4.7 mm connection adapters are supplied with the unit.

## TECHNICAL SPECIFICATIONS:

MODEL	BEAT - TR
Classification acc to ISO 12176-2	P <sub>2</sub> 4US <sub>i</sub> VKADX
Languages	Multilingual (consult available languages)
Date/Time	Manual
Operator	Manual + barcode according to ISO 12176-3
Job	Manual + barcode according to ISO 12176-4
Auxiliary data	Manual + Barcode
Traceability	Manual + barcode according to ISO 12176-4
Mains voltage	195 Vac a 265 Vac. Nominal voltage: 230 Vac
Mains frequency	45 Hz a 65 Hz. Nominal frequency: 50 Hz
Electrofusion voltage	8 a 48 Vac with galvanic isolation
Power consumption	3500 W maximum
Recommended generator	Power: 4,5 kVA single phase; electronic regulation
Protection fuse	Exterior from 20 A a 230 Vac
Protection type	Double isolation IP54 / AR series: Double isolation IP43
Duty factor	20 to 100% (according to fitting diameter); Serie AR: 40 a 100% Electronic unit temperature control
Temperature of use	Information, with no limits (recommended according to ISO 12176-2 de -10 a 40°C)
Display	LCD, 2 lines x 20 characters, backlit
Buzzer	Piezoelectric buzzer
Manual input of fusion data	Voltage: Multi voltage / Time: Up to 5.940 seconds (99 minutes)
Automatic input of fusion data	Barcode according to ISO/TR 13950
Internal memory capacity	~ 1000 fusions
Front, keyboard and frame	Distinctive green front with tactile sensation membrane pushbuttons, tubular frame angled at 20°
Other specifications	Smooth start-up and warning in case of voltage failure on start-up
Mains cable	3 x 2,5 mm <sup>2</sup> (Schuko plug) 4 m length
Electrofusion cables	1x10 mm <sup>2</sup> with a length of 4 m (4 mm diameter terminals)
Optic pen/Scanner	Optional laser scanner
Connection for optic pen, scanner, PC and serial printer	TTL / special RS-232 combined
Accessories	Rear bag for electrofusion adapters of 4 and 4,7 mm Scanner
Optional	ODS transmission cable (PC and printer connection) / Serial printer
Dimensions and weight	Height: 425 mm; width: 370 mm; depth: 230 mm / Net weight: 17 kg

### 3. BEAT HF

*High performance electrofusion unit with traceability to join PE and PP pipes and fittings*

The electrofusion units BEAT HF are designed to carry out polyethylene (PE) and polypropylene (PP) pipe/fittings joints through electrofusion fittings with a range of 8 V to 48 V electrofusion voltage. Specially designed for ongoing large size electrofusion fittings in continued way, BEAT HF allows getting a high level of productivity.



Another important feature is the traceability, keeping in the internal memory all the relevant data of operator, job, components involved, fusion parameters and result. All this registered information could be easily transferred, via USB-A, to a memory stick, or directly exported to a personal computer via USB-B or serial connection. Data stored also could be directly printed or showed on unit's display. Like the rest of the range BEAT is very simple to use, robust, small, lightweight and therefore easy to handle and transport.

BEAT HF is able to capture the electrofusion fitting data by means of automatic recognition of bar-code system (optic pen or laser scanner). Also allows the manual input option by entering the fusion data (voltage and time) supplied by the fitting manufacturer.

The BEAT HF design has been focalised to increase the life time of the unit, improving the components resistance and allowing the possibility that owner can carry out small maintenance operations such as some parts replacement.

- ✓ A larger section of electrofusion cables together with a higher flexibility improve their performance.
- ✓ New alloy on adaptors improves connexion and long term life.
- ✓ Protection of the display with anti-shock 3mm polycarbonate.
- ✓ Location place for optic pen during electrofusion.
- ✓ Users are able to replace the mains and electrofusion cables by themselves.
- ✓ "Soft Start" feature at the beginning of the electrofusion.

## TECHNICAL SPECIFICATIONS:

MODEL	BEAT - HF						
Classification acc to ISO 12176-2							
Setup features	Language	Date/Hour	Operator	Job	Additional data	Traceability	Manual
	-	-	ON/OFF	ON/OFF	ON/OFF	ON/OFF	ON/OFF
Manual input	According to ISO12176-3		According to ISO12176-3	According to ISO12176-4	Max 16 characters	According to ISO12176-4	With password
Input voltage	180 Vac to 270 Vac. Nominal voltage: 230 Vac						
Input frequency	40 Hz to 70 Hz. Nominal frequency: 50 Hz						
Electrofusion voltage	8 to 48 Volt galvanically separated						
Output power	Nominal: 3500 W (max. 4500 W)						
Recommended generator	5.5 kVA unipolar operation with electrical regulation						
Protection class	IP54						
Duty factor	100% with electronic temperature monitoring						
Working temperatures	Without any restrictions (recommended: -10°C to 40°C according ISO 12176-2)						
Display	Graphic LCD (64x128 pixels) with Unicode capabilities						
Acoustic warning	Piezoelectric buzzer						
Enter fusion data on Manual mode	Voltage: 8 to 48 Volt on 0.5 Volt steps Time: up to 5940 seconds (99 minutes)						
Enter fusion data on Automatic mode	Barcodes according to ISO/TR 13950						
Internal memory	About 900 fusion records						
Other features	Soft start, resistance validation and message display in case of initial voltage failure						
Power cable	3x2.5 mm <sup>2</sup> – 4 m long						
Electrofusion cables	1x16mm <sup>2</sup> – 3 m long						
Scanner	optional: laser scanner						
Connections	USB-A (Memory stick), USB-B (PC) and TTL+Serial (Barcode/PC/Printer/Scanner)						
Included accessories	Bag Set of 4.0 and 4.7 mm electrofusion adaptors Angle adjustable framework Aluminium transport box						
Optional accessories	Laser scanner / Serial printer / USB cable / Memory stick / ODS transmission cable (for PC and printer) / SD card / GPRS modem / Fan kit						
Dimensions and weight	Height 370 mm; Width 300 mm; Length 220 mm; 14 Kg (including cables and accessories)						

## 4. ELECTRIC BUTT FUSION EQUIPMENT

### 4.1 TWIN-S 225 E

#### *Integrated electrical unit for PE jointing by electrofusion and butt fusion*

The universal TWIN-S machine reduces the number of units needed by offering both butt fusion and electrofusion in one single unit. Its totally controlled process minimizes the risk for human mistakes and optimizes user time. Each unit can be outfitted with an optic pen or scanner, further eliminating the possibility of human error (Reading capacity: 1000 welds + memory overflow option). The user friendly controls do not require any specific training. The TWIN-S has a graphic display for the controlling and monitoring of the fusion processes. Besides this, there is also a possibility to connect with a printer or a PC, allowing easy on-screen retrieval of data on any joint. Manufactured in compliance with European machine safety standards (CE), the TWIN-S offers maximum guarantee and safety.



#### **APPLICATIONS**

- Pipes : Capable of jointing any type of thermoplastic pipe (polyethylene, polypropylene, etc.).
- Range of application :
  - Butt fusion: pipes and fittings from 63 mm to 225 mm.
  - Electrofusion: all standard electrofusion fittings on the market.
- Working pressures : No limitations to the pressures of the pipes to be jointed.
- Sets of pipe adapters for jointing all possible diameters
  - 225 x 200 (included with unit)
  - 200 x 180
  - 200 x 160
  - 200 x 140
  - 200 x 125
  - 200 x 110
  - 200 x 90
  - 110 x 75
  - 110 x 63



## TECHNICAL SPECIFICATIONS:

<b>MODEL</b>	<b>TWIN-S</b>
Mains voltage	180 Vac to 264 Vac. Nominal voltage: 230 Vac. 95 Vac to 140 Vac. Nominal voltage: 110 Vac.
Mains frequency	45Hz to 65 Hz. Nominal frequency: 50 Hz
Power consumption	3500 W maximum
Generator output power	4,5 kVA single phase, recommended Electronic regulation, preferable
Input fuse (exterior)	16 A at 230 Vac; not aplicable for 110 Vac.
Protection fuse (interior)	20 A a 230 Vac; 32 A at 110 Vac
Protection type	IP54
Working temperature	-10 to 50 °C(modifiable to order)
Display	Graphic LCD with a resolution of 240x128 dots
Sizes	123x68 mm; 16 lines
Keyboard	8 tactile sensation membrane pushbuttons
Connection to computer	Series RS-232 special
Connection to printer	Parallel Centronics
<b>Specifications for electrofusion</b>	
Mains voltage	8-48 Vac with galvanic isolation (at 230 Vac/110 Vac nominal voltage)
Electrofusion time	Up to 5940 seconds (99 minutes)
Duty factor	20 a 100% (according to diameter of fitting). Electronic unit temperature control
Optic pen	Unintelligent infrareds (Scanner avaiable to order)
pen / scanner connection	Series RS-232 special
Numbering of fusions	Automatic and incremental
Memory card capacity	1600 fusions
<b>Specifications for butt fusion</b>	
Electrical connection	5 circular connectors. Electrical base framework: 20x13 Hydraulic base framework: 30x19 24 Vdc trimmer: 20x3 230 Vac trimmer: 20x5 Heating plate: 20x6
Numbering of fusions	Automatic and incremental
Memory card capacity	2100 fusions

## 4.2 DYNAMIC 225 E

*PE butt fusion machine with traceability; Completely electrical unit.*

The DYNAMIC 225 E is designed for the butt welding of HDPE pressure pipes and fittings by means of electrically controlled basic frame.



The tube ends are clamped into the basic frame using separate clamps for each diameter. The trimmer will make both pipe ends straight using two steel blades. When the trimmed surfaces are completely parallel with respect to each other, the operator places the heating plate in between the two pipe ends. Once the pipe ends are melted they will be pressed into each other and a beat will be formed. This butt fusion beat will provide a high-quality connection of the pipes. The welding data will be stored in the internal memory.



The graphic display and the test and information menu system make the unit very easy to use for the operator. Electric operation eliminates hoses and hydraulic components. Additionally this also creates a drastic reduction in maintenance and cleaning. The machine has a safety voltage of 24 V. Microprocessor control delivers great performance and automatically controls the complete butt fusion cycle. In the case of error, it automatically stops the process. All fusion data is traceable as it is registered in the operative database.

## **APPLICATIONS**

- Pipes : Capable of jointing any type of thermoplastic pipe (polyethylene, polypropylene, etc.).
- Range of application :
  - Butt fusion: pipes and fittings from 63 mm to 225 mm.
- Working pressures : No limitations to the pressures of the pipes to be jointed.
- Sets of pipe adapters for jointing all possible diameters (see 4.1 TWIN-S for available adapter diameters)

## **TECHNICAL SPECIFICATIONS**

<b>MODEL</b>	<b>DYNAMIC</b>
Mains voltage	180 Vac to 264 Vac. Nominal voltage: 230 Vac. Optional: 95 Vac to 140 Vac. Nominal voltage: 110 Vac.
Mains frequency	45Hz to 65 Hz. Nominal frequency: 50 Hz
Power consumption	3500 W maximum
Generator output power	4,5 kVA single phase, recommended
Protection type	Double isolation IP54
Working temperature	-10 to + 45 °C (modifiable to order)
Connection to computer	Series RS-232 (DB9)
Connection to printer	Parallel Centronics (DB25)
Fusion data reading	Magnetic card
Ambient temperature control	Analogical sensor
TOTAL WEIGHT	95 kg
TOTAL APROX. VOLUME	0.4 m <sup>3</sup>
<b>Heating plate</b>	
Surface temperature	Programmable up to 250°C according to material to be jointed
Sensor type	PT-100
Visual temperature control	Analogical thermometer
Plate coating	PTFE (Teflon®)
<b>Base framework</b>	
Range of diamters	Up to 225 MM
Operation	24 Vdc linear actuator
Maximum applicable force	4000 N
<b>Trimmer</b>	
Mains Voltage	24 Vdc
Operation	2 simultaneous pushbuttons with safety switch

## 5. TRACK RANGE

### *Butt fusion machine manually operated for polyethylene jointing*

Butt fusion machines, electro-hydraulically operated, for the jointing of PE pipes and fittings along other plastic materials such as PP, PB, PVDF, in a range from 50 up to 1200 mm.

Due to its simple and ergonomic construction, the TRACK range combines its high use features with its excellent handling because the low weight of its components. Instead of using casted aluminum we produce them with "water jet cutting" technology.



The current models that compose the TRACK range are:

<b>MODEL</b>	<b>RANGE OF SIZE</b>
TRACK 160	50 to 160 mm
TRACK 250	75 to 250 mm
TRACK 315	90 to 315 mm
TRACK 400	160 to 400 mm
TRACK 500	200 to 500 mm
TRACK 630	355 to 630 mm
TRACK 800	630 to 800 mm
TRACK 1200	710 to 1200 mm

## The machine is made up of the following components:

### BASE FRAMEWORK

It consists of a metal frame provided with two transport handles where the four lower clamps are anchored. Four removable upper clamps are mounted on the top. The lower and upper clamps are made of aluminium providing a very low weight. The upper clamps are kept on position by means of hand-locking devices (no tools required).

The movable clamps are operated by two double-effect hydraulic cylinders connected to high pressure flexible hoses.



### HEATING PLATE



It is made of aluminium coated with PTFE. The surface temperature is electronically controlled.

### TRIMMER

It is operated by means of an electric actuator through chain transmission. It is provided with a safety switch to avoid injuries of the operator.



### ELECTRO HYDRAULIC STATION



It is composed of: electric motor, pump, distributor, pressure regulator (provided with pressure limiter), joystick lever for Open-Neutral-Close selection, drain valve, quick plugs, oil tank with view finder.



Remark: according to the machine model selected from the TRACK range, the features described above as per the electric motor power and pump flow can be different.

## TECHNICAL SPECIFICATIONS:

BASE FRAMEWORK	TRACK 160	TRACK 250	TRACK 315	TRACK 400	TRACK 500	TRACK 630	TRACK 800	TRACK 1200
Range of sizes	50-160	75-250	90-315	160-400	250-500	355-630	630-800	710-1200
Exterior dimensions (cm)	79x39x41	79x44x47	79x55x54	120x75x67	121x66x70	127x96x92	202x124x122	289x196x172
Weight without pipe adapters (kg)	32,5	41	44,5	71	107	250	765	3285
Transport case dimensions (cm)	54x36x12	64x35x17	64x35x17	81x46x24	76x44x36	110x70x45	Euro pallet	Euro pallet
Weight of pipe adapters (with case) (kg)	10	24	18,5	55	68	260	200	1370

HEATING PLATE	TRACK 160	TRACK 250	TRACK 315	TRACK 400	TRACK 500	TRACK 630	TRACK 800	TRACK 1200
Voltage (Vac)	230					400		
Power (W)	1000	1900	2100	3100	3800	6800	8000	16000
Temperature regulation	Adjustable electronically from 180 to 280°C							
Coating	PTFE							
Exterior dimensions (cm)	27x6,5x50	36x12x58	47x11x70	68x8x53	64x8x110	93x9x83	112x9x105	170x10x160
Weight (kg)	3,35	5,5	7,2	14	17,5	30	44	120

TRIMMER	TRACK 160	TRACK 250	TRACK 315	TRACK 400	TRACK 500	TRACK 630	TRACK 800	TRACK 1200
Voltage (Vac)	230					400		
Power (W)	500	1010	1010	1010	750	1100	1100	2200
Cutting blades	Double edge, adjustable							
Exterior dimensions (cm)	36x26x45	41x36x42	46x47x55	80x18x75	62x23x98	108x20x73	120x25x95	168x27x128
Weight (kg)	8,3	15,3	21,8	31	58	70	120	360

HEATING PLATE AND TRIMMER HOLDER	TRACK 160	TRACK 250	TRACK 315	TRACK 400	TRACK 500	TRACK 630	TRACK 800	TRACK 1200
Exterior dimensions (cm)	32x25,5x34	36x33x34	40x37x42	53x50x42	60x60x70	92x75x60	102x95x85	140x128x96
Weight (kg)	4,22	6,5	8	13,5	22,5	44	70	270

ELECTRO-HYDRAULIC STATION	TRACK 160	TRACK 250	TRACK 315	TRACK 400	TRACK 500	TRACK 630	TRACK 800	TRACK 1200
Voltage (Vac)	230 Mono-phasic					400 Three-phasic		
Power (W)	0,37		0,55		0,75		0,75	1,1
Maximum pressure (bar)	55		95		150		150	150
Pressure gauge (bar)	0-60		0-100		0-160		0-160	0-160
Exterior dimensions (cm)	51x31x41,5		51x31x41,5		51x31x41,5	59x50x39		74x62x39
Weight (kg)	26,5		29,6		31,5	50		63

COMPLETE MACHINE	TRACK 160	TRACK 250	TRACK 315	TRACK 400	TRACK 500	TRACK 630	TRACK 800	TRACK 1200
Voltage (Vac)	230 Mono-phasic					400 Three-phasic		
Power (W)	1,87	3,28	3,66	4,86	6,75	8,65	10,2	18,6
Nett weight w/o pipe adapters (kg)	75	95	111	159	236,5	444	1050	4100
Nett weight w pipe adapters (kg)	87	119	137	214	304,5	704	1250	5470

GENERATOR SPECIFICATIONS	TRACK 160	TRACK 250	TRACK 315	TRACK 400	TRACK 500	TRACK 630	TRACK 800	TRACK 1200
Voltage (Vac)	230 Mono-phasic					400 Three-phasic		
Advisable minimum power (VA)	2500	4000	4500	6000	8500	10800	13000	24000



## 6. AUTOMATIC TRACK

### *Automatic fusion equipment with traceability*

The ODS-Track automatic fusion equipment consists of the TWIN-S and DYNAMIC-S control fusion units. The TWIN-S unit is able to carry out both electrofusion and butt fusion joints, whereas the DYNAMIC-S is for butt fusion only. On the butt fusion side, both models are used for the jointing of PE pipes and fittings and other plastic resins, in a range of diameters from 50 up to 500 mm. Models available:



TWIN-S/DYNAMIC-S T160: 50 to 160 mm  
 TWIN-S/DYNAMIC-S T250: 75 to 250 mm  
 TWIN-S/DYNAMIC-S T315: 90 to 315 mm  
 TWIN-S/DYNAMIC-S T400: 160 to 400 mm  
 TWIN-S/DYNAMIC-S T500: 250 to 500 mm

All above models have total traceability and are supplied fully equipped.

The ODS-Track machines fulfill the related CE Directives and the following ISO Specifications: 12176-1-3-4 for TWIN-S & DYNAMIC-S; 12176-2 and ISO/TR 13950 for TWIN-S.



## FUSION CONTROL BOX SPECIFICATIONS

MODEL	TW IN-S	DYNAMIC-S
Classification acc. To ISO 12176-2	2 1P 4UES VKADX	
Input voltage	180Vac to 264Vac. Nominal voltage: 230 Vac 45 Hz to 65 Hz. Nominal frequency: 50 Hz	
Output power	3500 W (maximum)	
Generator output (for electrofusion)	4.5 KVA monophasic (electronic regulation preferably)	
Input fuse (external)	16 A at 230 Vac	
Protection fuse (internal)	20 A at 230 Vac	
Protection class	IP54	
Operating temperatures	-20° to 50° C (can be modified on request)	
Temperature control	NTC (interior and exterior)	
Acoustic signal	Piezoelectric boozer	
Display	Graphic LCD of 240x128 points in resolution; 16 lines	
Keyboard	8 touch-sensitive membrane push-buttons	
Connection to a PC and printer	special RS-232 serial	
Optic pen/scanner	Non-intelligent infrared (Laser scanner optional)	
Connection to optic pen, scanner, PC, printer	Serial connector RS-232	
Internal memory capacity	-1000 fusion records	
Power cable	3x2.5 mm for 230Vac (Schuko + French type plug) 4 m long 2	
Electrofusion voltage	8 to 48 V galvanically separated	
Electrofusion time	Up to 5940 seconds (99 minutes)	
Enter fusion data	Automatic acc. to ISO/TR 13950 Manual according to setup	
Duty factor	20 to 100% (according to fitting's size) Electronic temperature control	
Electrofusion cable	1x16 mm 4 m long 2 (female terminals of diameter 4 mm)	
Included accessories	Front protection; Rear bag; Optic pen; ODS transmission cable Password 1 and 2 cards; AcusWin CD-Rom; Transport case	
	Set of 4 & 4.7 mm electrofusion adapters	
Optional accessories	Laser scanner; Serial printer	
Dimensions	Height: 460 mm; Width: 450 mm; Length: 470 mm	
Net weight	34 kg	20 kg

## COMPLETE MACHINE DATA FOR BUTT FUSION

MODEL	T-160	T-250	T-315	T-400	T-500
Voltage (Vac)	230 (Mono-phasic)				
Machine total power (kW )	2.25	3.66	3.86	4.86**	5.65**
Generator advisable minimum power (VA)	3000	4500	5000	6000	7500
Net weight w/o pipe adapters (kg)*	75	95	111	177.6	236.5
Net weight w. pipe adapters (kg)*	87	119	137	212.6	304.5

\* without Fusion box

\*\* to avoid that the high consumption of the heating plate and the trimmer goes through the fusion box, these two models are provided with a Switch Box that is used to supply a direct voltage of 230Vac to both components. For further information refer to the *User Manual*.



## 7. BENCH WELDING MACHINE

*For sewer pipes and fittings in PP-PE and other thermoplastic materials*

Standard equipment includes: basic machine with pressure device, electric planing tool with locking device and microswitch of safety, steel work bench/transport box, extractable thermoplate, pair of steel jaws from Ø 40 to Ø 160 mm, steel reduction set for jaws Ø 40, 50, 63, 75, 90, 110, 125 and 160 mm. Ø 6 and Ø 140 mm steel reductions for jaws can be also supplied on request.



- Welding capacity: Ø 40 ÷ Ø 160 mm
- Pipe and/or fitting material: PP - PE and other thermoplastic materials
- Weight: 54,5 Kg
- Dimensions: 550x800x660 mm
- Carriage stroke: 130 mm

## 8. POLYWELDER KITS FOR SOCKET WELDING

*Kit for socket welding of pipes and fittings in PP - PE and other thermoplastic materials*



Polywelder supplied in painted steel box with bushes from Ø 16 to Ø 160 mm (DVS 2208), according to customers requirement.



- Also available: support and clamp for ground and bench



## 9. BENCH SOCKET WELDING

Bench polywelder equipped with movement slides on which prismatic clamps are placed to allow an automatic self-centering of any kinds of pipes and fittings. The polywelder can be easily extracted for hand using. Welding is made in a semi automatic way due to a spring loading device of the machine. The machine is supplied in steel box for easy movement of the polywelder and for using as work bench. Standard equipment includes: machine, extractable polywelder, steel transport box/work bench, pipe support tripod, set of bushes from Ø 50 to Ø 110 mm (DVS 2208).



Technical sheet	BENCH SOCKET WELDING EQUIPMENT
Maximum absorbed power	1,4 kW / 230 Volt / 50/60Hz
Total weight of complete machine (incl. reductions + steel work bench/transport box)	80 kg
Welding capacity	Ø 32 ÷ Ø 125 mm
Pipe and/or fitting material	PP-PE and other thermoplastic Materials
Weight	49,5 kg
Dimensions	520 x 720 x 360 mm
Presettet to weld	PP
Total dimensions of complete machine with reductions	1 transport box 600 x 800 x 850 mm

## CONTACT DETAILS



**ACUSTER  
GLOBAL**

Juan de la Cierva, 1  
08960 SANT JUST DESVERN  
Barcelona – Spain

[info@acusterglobal.com](mailto:info@acusterglobal.com)

Tel: +34 93 470 30 72  
Fax: +34 93 473 00 77

**Margaluz Román**

Managing Director

[margaluz.roman@acusterglobal.com](mailto:margaluz.roman@acusterglobal.com)

Mobile: +34 647 373 531

**Tom Dierens**

Product Manager

[tom.dierens@grupoacuster.com](mailto:tom.dierens@grupoacuster.com)

Mobile: +32 476 570 355

**Joan Conesa Suàrez**

Purchasing Department

[joan.conesa@acusterglobal.com](mailto:joan.conesa@acusterglobal.com)

Tel: +34 93 470 30 72

