

TWIN-S

Integrated unit for PE jointing by electrofusion and butt fusion





INFORMATION

> Models

TWIN-S 225 E:

Completely electrical unit.

TWIN-S 315 H:

Hydraulic unit with automatic controller.



> Specifications

Universal:

Butt fusion and electrofusion in one single unit. Reduction of the number of units.

Total controlled process:

Avoids human error. Optimisation of user time.

Easy to use:

The user does not need specific training.

Total traceability:

Easy on-screen retrieval of data on any joint by connection to printer or PC.

Graphic display:

For the control and monitoring of fusion processes.

Reading system:

Optic pen or scanner. Minimisation of errors.

Reading capacity:

1,000 welds with memory overflow option.

Maximum guarantee and safety:

Manufactured in compliance with European machine safety standards (CE).

> Applications

Pipes :

Capable of jointing any type of thermoplastic pipe (polyethylene, polypropylene, etc.).

Range of application :

Butt fusion

TWIN 225 E - Butt fusion of pipes and fittings from 63 mm to 225 mm.

TWIN 315 H - Butt fusion of pipes and fittings from 90 mm to 315 mm.

Electrofusion

Electrofusion of all standard electrofusion fittings on the market.

Working pressures :

No limitations to the pressures of the pipes to be jointed.



TECHNICAL SPECIFICATIONS

CONTROL MODULE

General specifications

| | |
|-----------------------------|---|
| 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 applicable for 110 Vac. |
| Protection fuse (interior): | 20 A at 230 Vac; 32 A at 110 Vac. |
| Protection type: | IP54 |
| Working temperature: | -10 to 50 EC(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. |



Specifications for electrofusion (TWIN-S):

| | |
|---------------------------------|--|
| 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 available to order) |
| Optic pen / scanner connection: | Series RS-232 special. |
| Numbering of fusions: | Automatic and incremental. |
| Memory card capacity: | 1600 fusions. |



Specifications for butt fusion (TWIN-S):

| | |
|------------------------|---|
| 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. |





TECHNICAL SPECIFICATIONS

| | 225 E | 315 H |
|---------------------------------|--|---|
| | Base framework | |
| Operation | Electric | Hydraulic |
| Range of diameters | 63 to 225 mm | 90 to 315 mm |
| Clamp fastening | 26 mm socket wrench | 30 mm socket wrench |
| Supplements | for 63, 75, 90, 110, 125, 140, 160, 180 and 200 ¹ | for 90, 110, 125, 140, 160, 180, 200, 225, 250, 280 and 315 |
| Operation | 24 V DC linear actuator | Two dual effect hydraulic cylinders |
| Maximum applicable force | 4000 N | 100 bar |
| Displacement speed | 20 mm/s | 35 mm/s |
| | Trimmer | |
| Operation | 24 V motor | 230 V motor |
| Mains voltage | 24 Vdc nominal | nominal 230 Vac |
| Electric motor power | 465 W nominal | 720 W nominal |
| Operation | through 2 pushbuttons | 1 pushbutton |
| Rotation speed | 112 rpm | 60 rpm |
| Speed regulation | Electronics | - |
| Blade adjustment | Shims | Shims |
| Transmission | Poly V belt | Chain with tightening |
| | Heating plate | |
| Surface temperature | Programmable up to 250 C° | |
| Temperature regulation | PID type by Triac | |
| Independent temperature control | Analogical thermometer | |
| Heating plate coating | Replaceable PTFE cloth | |
| Mains voltage | nominal 230 Vac | |
| Heating Plate power | 2000 W | 2300 W |
| | | Hydraulic unit |
| Mains voltage | - | nominal 230 Vac |
| Maximum working pressure | - | 100 bar |
| Safety valve adjustment | - | 110 bar |
| Oil tank capacity | - | 5 L |
| Oil filter | - | 25 µm |
| Oil type | - | HM-46, according to ISO 6743/4-HM |

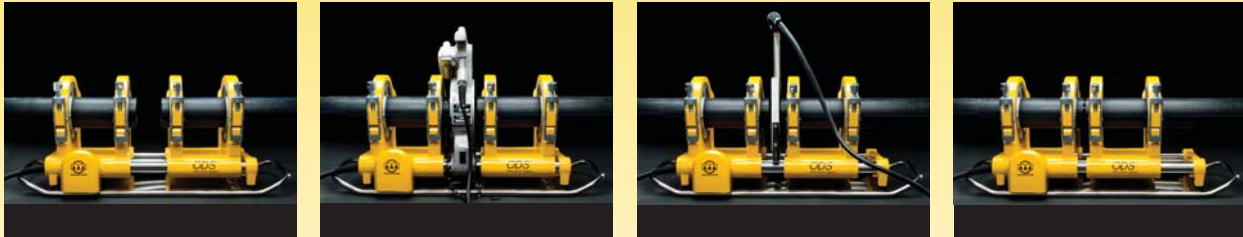


ASSEMBLY

For the correct use of the TWIN model fusion machine, the User Manual code MU 78-04E is available with each unit.



Butt fusion

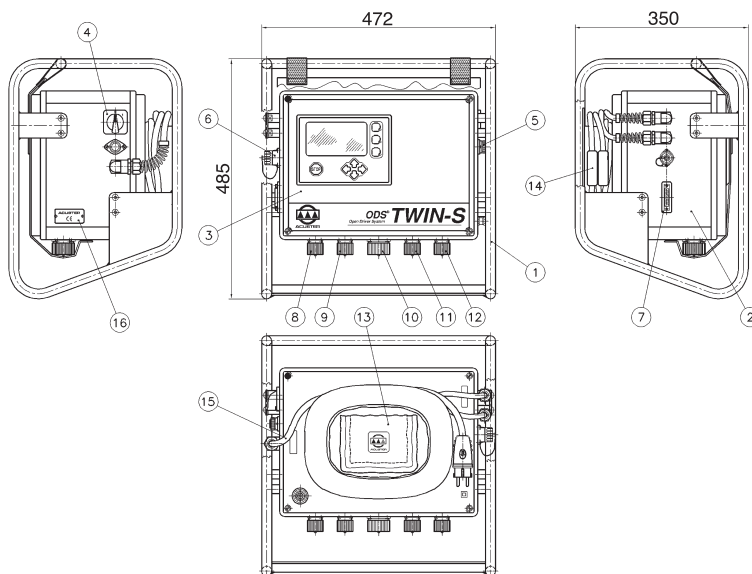


Electrofusion



DIMENSIONS

CONTROL MODULE

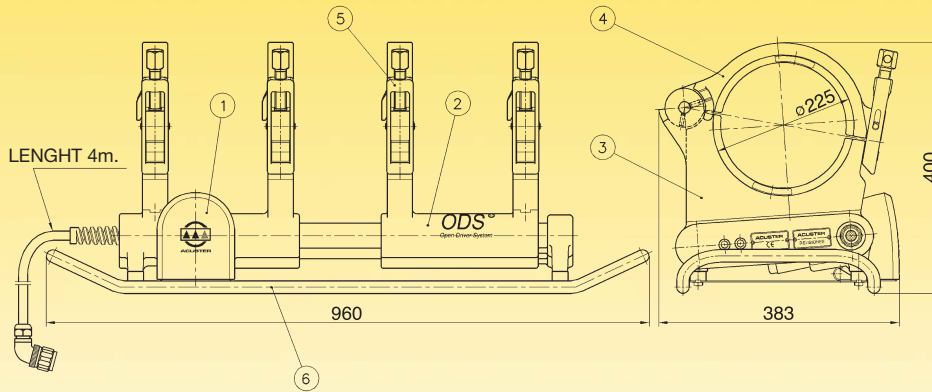


| Item | Description |
|------|---|
| 1 | Frame |
| 2 | ABS casing |
| 3 | Membrane button |
| 4 | Master switch |
| 5 | Fuse-holder |
| 6 | Female connector |
| 7 | Printer connector |
| 8 | 24 V trimmer connector |
| 9 | E base framework connector |
| 10 | H base framework connector |
| 11 | 230 V trimmer connector |
| 12 | Heating plate connector |
| 13 | Bag E-99. Contents: Serial connection cable Password card 1 Password card 2 4,7 mm electrofusion adapter (2 pieces) 4 mm electrofusion adapter (2 pieces) Optic pen |
| 14 | Compleat electrofusion cable L=4 m. |
| 15 | Kit Cable L=4 m. |
| 16 | CE identification plate |



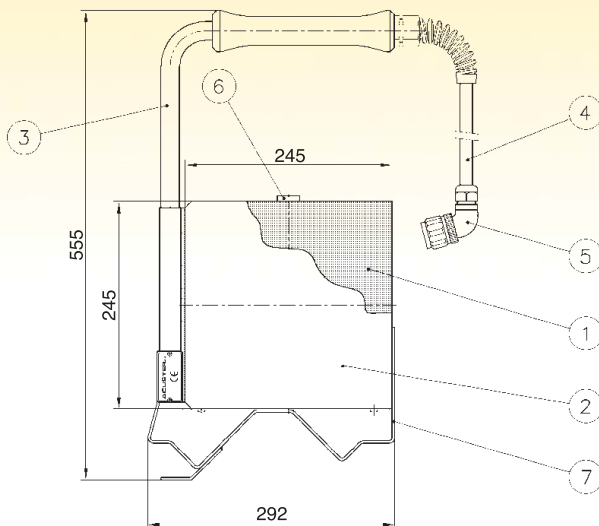
DIMENSIONS

225 E BASE FRAMEWORK



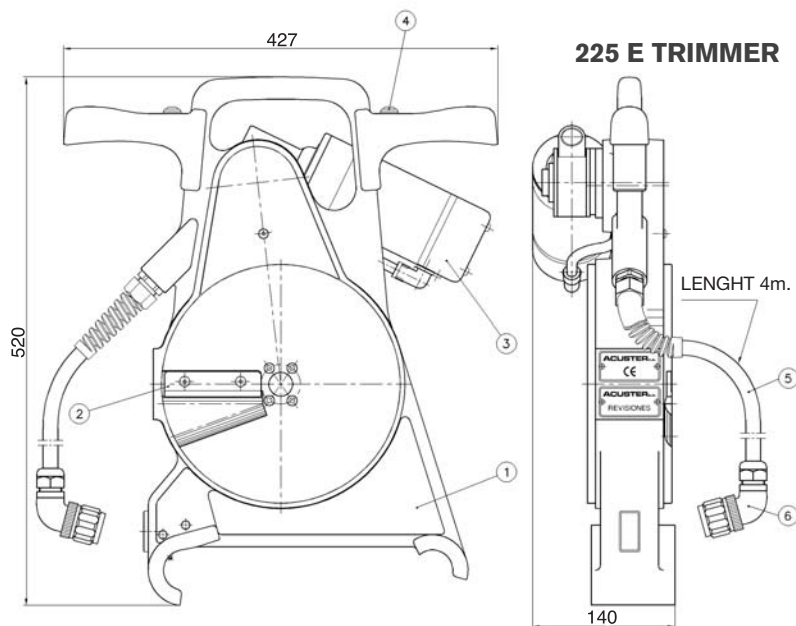
| Item | Description |
|------|-------------------------------|
| 1 | Moveable clamps |
| 2 | Fixed clamps |
| 3 | Lower clamp |
| 4 | Upper clamp |
| 5 | 200/225 clamps locking device |
| 6 | Tubular frame |

225 E HEATING PLATE



| Item | Description |
|------|----------------------------------|
| 1 | TVT Normal E-24 |
| 2 | Heating plate without handle |
| 3 | Heating plate handle |
| 4 | Multipolar cable L=4 m. |
| 5 | Angle-piece circular connector |
| 6 | Analogical thermometer |
| 7 | Heating plate supporting profile |

225 E TRIMMER

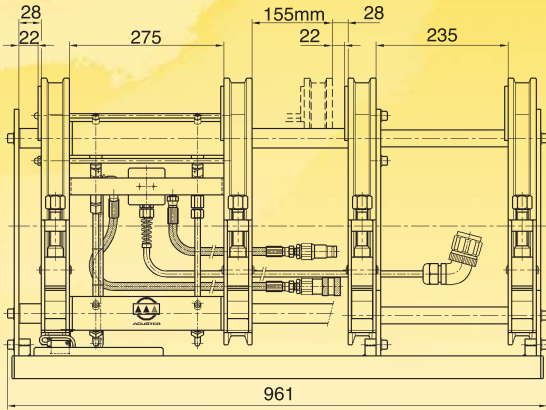


| Item | Description |
|------|-------------------------------------|
| 1 | ODS 225 TRIMMER casing |
| 2 | Blade assembly |
| 3 | Parvalux gear motor |
| 4 | Pushbutton |
| 5 | Multipolar cable L=4 m. |
| 6 | Male angle-piece circular connector |

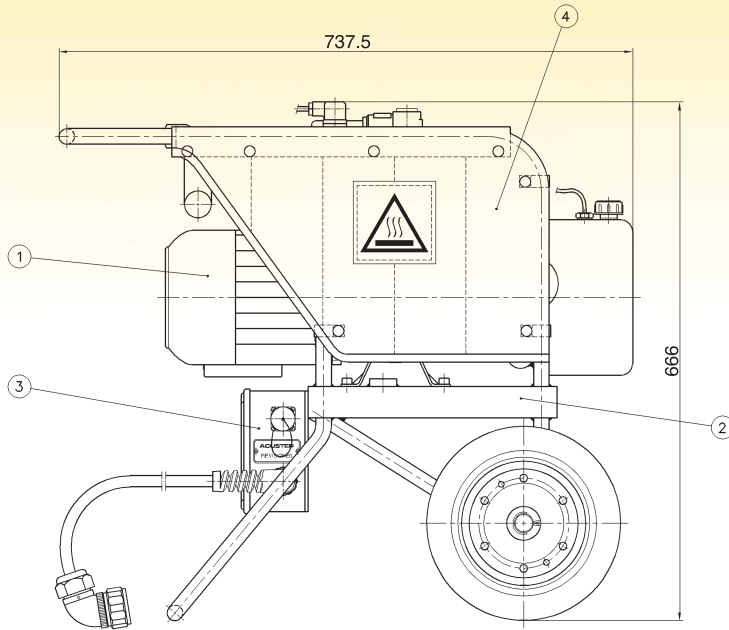
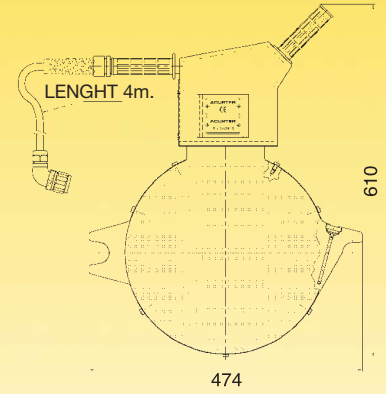
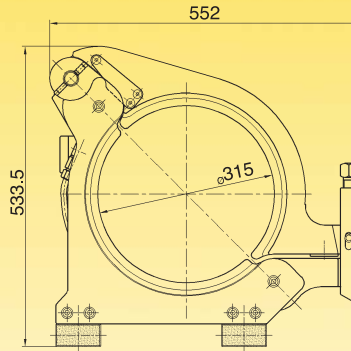


DIMENSIONS

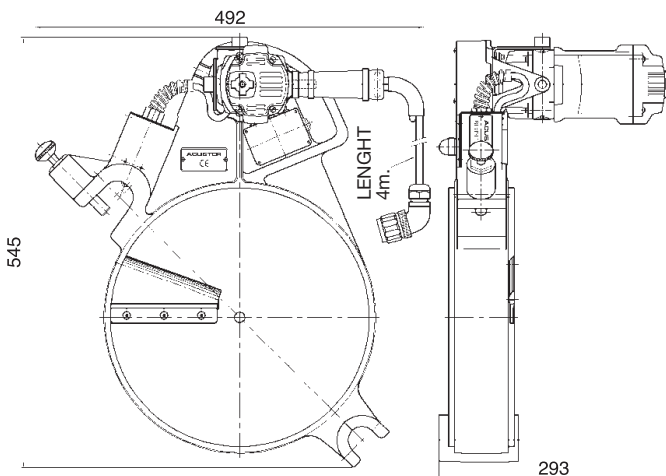
315 H BASE FRAME



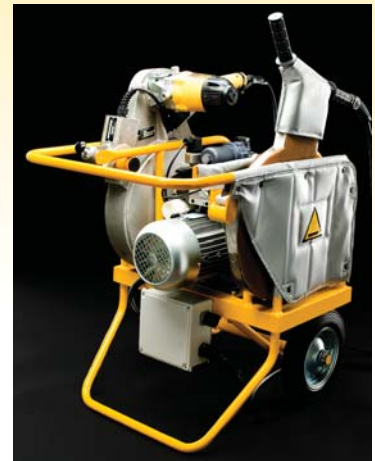
315 H HEAT PLATE



315 H SURFACING UNIT



HYDRAULIC UNIT



| Item | Description |
|------|--------------------------|
| 1 | Hydraulic unit |
| 2 | Transport trolley |
| 3 | Connecting box |
| 4 | Heating plate protection |

Weights of the different parts:

| | 225 | 315 |
|--|--------|------------------------------|
| Control module | 34 Kg | |
| Base framework (without pipe adapters) | 50 Kg | 100 Kg |
| Heating plate | 6 Kg | 10 Kg |
| Trimmer | 13 Kg | 21 Kg |
| Surfacing unit and plate support | 3 Kg | |
| Hydraulic unit | | 49 Kg (on transport trolley) |
| Total net weight TWIN-S | 106 Kg | 215 Kg |

TWIN-S

- Integrated unit for PE jointing by electrofusion and butt fusion



OPTIONS

Owing to its high performance features and to ensure the correct use and long service life for the machinery, we recommend the use of the HONDA EM4500EZ generator.



SPARES

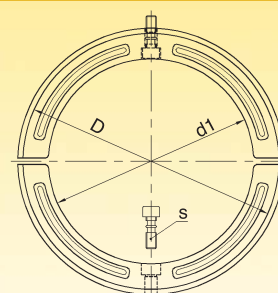
Sets of pipe adapters for jointing all possible diameters

BASIC 225 E

| D | d1 |
|-----------|----------------------|
| 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 | |

BASIC 315 H

| D | d1 |
|-----------|----|
| 315 x 250 | |
| 315 x 225 | |
| 315 x 200 | |
| 200 x 180 | |
| 200 x 160 | |



Clamp fastening:
Clamp fastening bolt(s):

26 mm socket wrench
6 mm Allen key



MAINTENANCE

As the manufacturer of the TWIN units, the Acuster group has an after sales department and offers all our clients our facilities, tooling and skilled staff for:

- > Maintenance work, overhauls and repairs as necessary for the correct operation of their equipment for many years, ensuring a lengthy service life.
- > Calibrations and certification of the calibrations in accordance with the technical machinery inspections required by the companies (e.g. Gas Natural).
- > The supply of spares.
- > Equipment hire service.
- > Technical consultancy service and training and recycling courses for welders.

• RELATED DATASHEETS •

PMH Machinery and tools programme :

BASIC-E MACHINE (butt fusion)
DYNAMIC MACHINE (butt fusion)
PE MANUAL SQUEEZER
HYDRAULIC SQUEEZER
TOOLS FOR PE

FC-78-PMH-03E
FC-78-PMH-05E
FC-71-PMH-08E
FC-71-PMH-09E
FC-71-PMH-10E