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# ***Butt welding field machines***

*PT and WHA series*



## PT Series

**Hydraulic operated butt welding machines suitable for PE, PP, PVDF and other thermoplastic pipes and fittings. The self aligning frame and the compact dimensions make the machines highly suitable for working in road construction, ditches, aqueducts, gas ducts, sewers and irrigation systems. All PT-machines are equipped with SPG-connections.**



The basic machine is equipped with four main clamps. The third clamp can be axially moved and adjusted for the welding of fittings. The basic machine includes as well an automatic detaching device especially designed to break off the melted pipe ends from the heating plate at the end of heating time.



Removable PTFE-coated heating plate with an electronic temperature control.

Removable electric cutter with a reduction gear and reversible double cutting edge blades. Safety microswitch enables to start the cutter only when it is locked in working position. A mechanical lock excludes the disengagement of the cutter during the operation.



Heater plate and cutter are supplied with solid storage and transport holder. Hydraulic unit provides the welding machine with the compressing power. The unit controls makes possible the exact pressure regulating. The accumulator ensures the exact holding of the pressure. Light weight reduction inserts incl. 8 inserts: 6 wide inserts for pipes and 2 narrow inserts for fittings. The new system of reducing inserts, called "clic-clac", is patented and shortens assembling time of the machines extremely. Stub end holder for pipe-to-flange connections



## LDU and CNC Models

The LDU-protocolling units are developed and designed to get a full-function protocolling system for existing machine-systems. I.E. The LDU is suitable for all hydraulically working butt fusion machines available on the market. The complete welding cycle is recorded.

So all possibilities for traceability according to ISO-Norm TC 138 is given. The easy menu-guiding supports the welder one by one during the welding steps.



Semi-automatic WHA butt fusion machines for jointing of PE and PP pipes.

This machine is developed and designed to reach extremely short change over times. Its hydraulically movable clamps ensure an easy handling of large diameter pipes. The machine is equipped with an automatic insertion device for the heater plate and and a special light weight pipe end trimmer. The welding cycle is automatic with acknowledgement of the bead formation.



The development of the CNC is based on the concept of the LDU data loggers. These have demonstrated their suitability in daily use and their quality hundredfold.

The cutting procedure is running automatically after the cutting device is put in by hand. After the preparation procedure (incl. cutting, alignment control, cleaning, bead formation control, removal of heater plate) the automatic welding cycle starts. Now the welder is permanently informed about the progress of the welding procedure by the comfortable and modern graphic display, showing an active pressure- "time diagram".

**PT 125** 230 V 50 Hz (standard) - 1,5 kW

<b>Machines Composition</b>	<b>sizes (mm)</b>	<b>weight (kg)</b>
Welding range	OD 40 - 125	
Basic machine	OD 125	15
PTFE-coated heating mirror with electronic thermostat.		4
Electric facing tool with safety micro switch		5
Support for facing tool and mirror		4
Hydraulic unit		24
Reducing inserts for pipes and fittings.	OD 40, 50, 63, 75, 90, 110	9
Transport box		15
<b>Total weight</b>		<b>76</b>



PT 125

**PT 160** 230 V 50 Hz (standard) - 2,1 kW

<b>Machines Composition</b>	<b>sizes (mm)</b>	<b>weight (kg)</b>
Welding range	OD 40 - 160	
Basic machine	OD 160	35
PTFE-coated heating mirror with electronic thermostat.		5
Electric facing tool with safety micro switch		11
Support for facing tool and mirror		7
Hydraulic unit		24
Reducing inserts for pipes and fittings.	OD 40, 50, 63, 75, 90, 110, 125, 140	17
Stub device	OD 40 - 160	4
Transport box	100 x 95 x 75	27
<b>Total weight</b>		<b>130</b>



PT 160

**PT 200** 230 V 50 Hz (standard) - 2,7 kW

<b>Machines Composition</b>	<b>sizes (mm)</b>	<b>weight (kg)</b>
Welding range	OD 63 - 200	
Basic machine	OD 200	46
PTFE-coated heating mirror with electronic thermostat.		7
Electric facing tool with safety micro switch		13
Support for facing tool and mirror		8
Hydraulic unit		24
Reducing inserts for pipes and fittings.	OD 63, 75, 90, 110, 125, 140, 160, 180	29
Stub device	OD 63 - 200	9
Transport box	100 x 95 x 75	31
<b>Total weight</b>		<b>167</b>



PT 200

**PT 250** 230 V 50 Hz (standard) - 3,3 kW

<b>Machines Composition</b>	<b>sizes (mm)</b>	<b>weight (kg)</b>
Welding range	OD 63 - 250	
Basic machine	OD 250	48
PTFE-coated heating mirror with electronic thermostat.		21
Electric facing tool with safety micro switch		16
Support for facing tool and mirror		8
Hydraulic unit		24
Reducing inserts for pipes and fittings.	OD 63, 75, 90, 110, 125, 140, 160, 180, 200, 225	54
Stub device	OD63 - 250	11
Transport box	105 x 100 x 76	34
<b>Total weight</b>		<b>216</b>



PT 250

**PT 315** 230 V 50 Hz (standard) - 4,8 kW

<b>Machines Composition</b>	<b>sizes (mm)</b>	<b>weight (kg)</b>
Welding range	OD 90 - 315	
Basic machine	OD 315	79
PTFE-coated heating mirror with electronic thermostat.		19
Electric facing tool with safety micro switch		27
Support for facing tool and mirror		14
Hydraulic unit		28
Reducing inserts for pipes and fittings.	OD 90, 110, 125, 140, 160, 180, 200, 225, 250, 280	100
Stub device	OD 90 - 315	14
Transport box	126 x 114 x 85	48
<b>Total weight</b>		<b>329</b>



PT 315

**PT 355** 230 V 50 Hz (standard) - 4,8 kW

<b>Machines Composition</b>	<b>sizes (mm)</b>	<b>weight (kg)</b>
Welding range	OD 90 - 355	
Basic machine	OD 355	96
PTFE-coated heating mirror with electronic thermostat.		19
Electric facing tool with safety micro switch		29
Support for facing tool and mirror		15
Hydraulic unit		28
Reducing inserts for pipes and fittings.	OD 90, 110, 125, 140, 160, 180, 200, 225, 250, 280, 315	118
Stub device	OD 90 - 355	16
Transport box	126 x 120 x 85	55
<b>Total weight</b>		<b>376</b>



PT 355

**PT 500** 230 V 50 Hz (standard) - 8,4 kW

<b>Machines Composition</b>	<b>sizes (mm)</b>	<b>weight (kg)</b>
Welding range	OD 200 - 500	
Basic machine	OD 500	171
PTFE-coated heating mirror with electronic thermostat.		27
Electric facing tool with safety micro switch		61
Support for facing tool and mirror		30
Hydraulic unit		28
Reducing inserts for pipes and fittings.	OD 200, 225, 250, 280, 315, 355, 400, 450	133
Stub device	OD 200 - 500	33
Transport box	162 x 150 x 126	130
<b>Total weight</b>		<b>613</b>



PT 500

**PT 630** 400 V 50 Hz (standard) - 11,5 kW

<b>Machines Composition</b>	<b>sizes (mm)</b>	<b>weight (kg)</b>
Welding range	OD 315 - 630	
Basic machine	OD 630	229
PTFE-coated heating mirror with electronic thermostat.		43
Electric facing tool with safety micro switch		107
Support for facing tool and mirror		45
Hydraulic unit		28
Reducing inserts for pipes and fittings.	OD 315, 355, 400, 450, 500, 560	210
Stub device	OD 315 - 630	41
Crane with electrical hoist		50
Transport box	177 x 157 x 131	150
<b>Total weight</b>		<b>903</b>



PT 630

**PT 800** 400 V 50 Hz (standard) - 13,9 kW

<b>Machines Composition</b>	<b>sizes (mm)</b>	<b>weight (kg)</b>
Welding range	OD 450 - 800	
Basic machine	OD 800	565
PTFE-coated heating mirror with electronic thermostat.		59
Electric facing tool with safety micro switch		160
Support for facing tool and mirror		62
Hydraulic unit		38
Reducing inserts for pipes and fittings.	OD 450, 500, 560, 630, 710	280
Stub device	OD 450 - 800	42
Crane with electrical hoist		
Packing		80
<b>Total weight (without crane)</b>		<b>1286</b>



PT 800, PT 1000

**PT 1000** 400 V 50 Hz (standard) - 17,4 kW

<b>Machines Composition</b>	<b>sizes (mm)</b>	<b>weight (kg)</b>
Welding range	OD 630 - 1000	
Basic machine	OD 1000	1100
PTFE-coated heating mirror with electronic thermostat.		90
Electric facing tool with safety micro switch		284
Support for facing tool and mirror		200
Hydraulic unit		45
Reducing inserts for pipes and fittings.	OD 630, 710, 800, 900	730
Stub device	OD 630 - 1000	45
Crane with electrical hoist		
Packing		120
<b>Total weight (without crane)</b>		<b>2614</b>

**PT 1200** 400 V 50 Hz (standard) - 21,7 kW

<b>Machines Composition</b>	<b>sizes (mm)</b>	<b>weight (kg)</b>
Welding range	OD 630 - 1200	
Basic machine	OD 1200	1300
PTFE-coated heating mirror with electronic thermostat.		140
Electric facing tool with safety micro switch		315
Support for facing tool and mirror		240
Hydraulic unit		45
Reducing inserts for pipes and fittings.	OD 630, 710, 800, 900, 1000	920
Stub device	OD 630 - 1200	150
Crane with electrical hoist		
Packing		150
<b>Total weight (without crane)</b>		<b>3260</b>



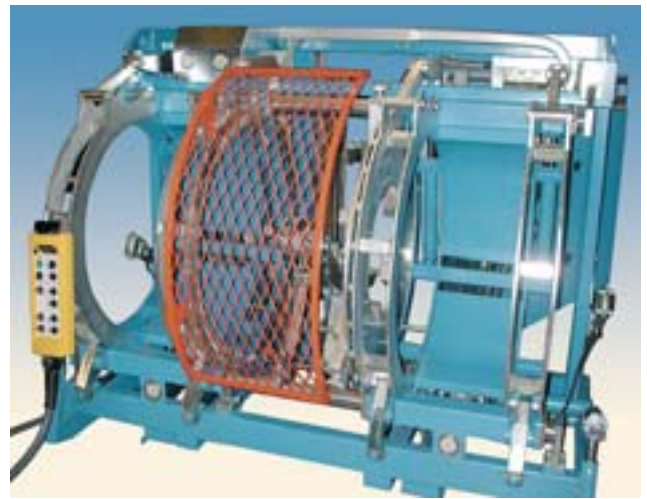
PT 1200, PT 1600

**PT 1600** 400 V 50 Hz (standard) - 54 kW

<b>Machines Composition</b>	<b>sizes (mm)</b>	<b>weight (kg)</b>
Welding range	OD 1000 - 1600	
Basic machine	OD 1600	2560
PTFE-coated heating mirror with electronic thermostat.		260
Electric facing tool with safety micro switch		858
Support for facing tool and mirror		460
Hydraulic unit		45
Reducing inserts for pipes and fittings.	OD 1000, 1200, 1400	1460
Stub device	OD 1000 - 1600	350
Crane with electrical hoist		
Packing		200
<b>Total weight (without crane)</b>		<b>6193</b>

**WHA 800 (fully hydraulic)** 400 V 50 Hz - 25 kW

<b>Machines Composition</b>	<b>sizes (mm)</b>	<b>weight (kg)</b>
Welding range	OD 450 - 800	
Basic machine with hydraulically moving clamps	OD 800	
Heating element with 8 control points mounted to the machine frame.		
Patented pipe end trimmer		
Integrated hydraulic system		
Reducing inserts for pipes and fittings.	OD 450, 500, 560, 630, 710	
Stub device	OD 450 - 710	
Packing		
<b>Total weight</b>		<b>1350</b>



**WHA 1200 (semi-automatic)** 400 V 50 Hz - 54 kW

<b>Machines Composition</b>	<b>sizes (mm)</b>	<b>weight (kg)</b>
Welding range	OD 710 - 1200	
Basic machine with hydraulically moving clamps. Automatic welding cycle with acknowledgement of the bead. Controlled by the LDU-Module.	OD 1200	
Heating element with 8 control points mounted to the machine frame.		
Patented pipe end trimmer		
Integrated hydraulic system.		
Hydraulic pressure controlled by PLC (Programmed Logic Control)		
Reducing inserts for pipes and fittings.	OD 710, 800, 900, 1000	
Stub device	OD 710 - 1000	
Packing		
<b>Total weight</b>		<b>4800</b>



**WHA 1600 (semi-automatic)** 400 V 50 Hz - 65 kW

<b>Machines Composition</b>	<b>sizes (mm)</b>	<b>weight (kg)</b>
Welding range	OD 1400 - 1600	
Basic machine with hydraulically moving clamps. Automatic welding cycle with acknowledgement of the bead. Controlled by the LDU-Module.	OD 1600	
Heating element with 8 control points mounted to the machine frame.		
Patented pipe end trimmer		
Integrated hydraulic system.		
Hydraulic pressure controlled by PLC (Programmed Logic Control)		
Reducing inserts for pipes and fittings.	OD 1400	
Stub device	OD 1400 - 1600	
Packing		
<b>Total weight</b>		<b>5500</b>



## LDU 2006

### Technical Data:

Power	230 ± 20% V
Frequency	50/60 ± 10% Hz
Consumption	30 W IP41
Weight	7 Kg
Dimensions	340x180x180
Maximum working pressure	160 bar
Operating temperature range	-20 ... +70°C
Stocking temperature range	-40 ... +85°C
Humidity (without condensation)	95%

### Features:

- integrated micro printer
- modern and simple menu guiding for operator
- all known welding standards available
- modification of welding parameters with supervisor code
- Multiple-Language-Display (all-in-one)
- Printing languages same as display version
- number of reports 1000
- modern graphic display with active pressure-time diagram
- print menu "Black Box"
  - >single protocols can be printed directly on-site by the new sort-out function
- easy data transfer via serial port to PC, no need for additional software

### LDU 2008 features:

- data transfer via USB cable
- data transfer via USB stick
- databank software for PC/Notebook
- notebook
- welder identification based on ISO 12176 but with I-Button (easy access)
- EPP Emergency Power Pack
- number of reports 2000



## CNC and -nero

Power	230 ± 20% V	Max 7,7 KW 32 A
Frequency	50/60 ± 10% Hz	
Consumption		
PT500 CNC	7,7 KW	32 A
PT355 CNC	5,1 KW	23 A
PT315 CNC	5,1 KW	23 A
PT250 CNC	3,7 KW	16 A
PT200 CNC	2,8 KW	12 A
PT160 CNC	2,4 KW	10 A
Weight	52 Kg	
Dimensions	630 x 310 x 435	
Maximum working pressure	130 bar	
Pump's Capacity	3,4 l/min	2800 rpm
Oil Tank	1 l	
Hydraulic Oil	ISO 46	
Operating temperature range	-20 ... +60°C	
Storage temperature range	-40 ... +85°C	
Humidity (without condensation)	95%	
PT 630 - 1600 (400 V)	data on request	

### CNC 2006 features:

- integrated micro printer
- modern and simple menu guiding for operator
- all known welding standards available
- modification of welding parameters with supervisor code
- Multiple-Language-Display (all-in-one)
- Printing languages same as display version
- number of reports 1000
- modern graphic display with active pressure-time diagram
- print menu iBlack Boxi
  - >single protocols can be printed directly on-site by the new sort-out function
- easy data transfer via serial port to PC, no need for additional software



### CNC-nero features:

- path measurement with welding bead recognition by encoder-system
- EPP (emergency power pack)

### CNC and CNC-nero 2008 features:

- data transfer via USB cable
- data transfer via USB stick
- databank software for PC/Notebook
- notebook
- welder identification based on ISO 12176 but with I-Button (easy access)
- EPP (emergency power pack)
- number of reports 2000

### CNC-kit

Kit for retrofitting of hydraulic field welding machines. The basis is the CNC system. Machine comes with a universal assembling kit suitable for all PT-machines.

# Butt welding field machines



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