



## SERIES PRO-D

Germany

The microprocessor controlled PRO-D stud welding units are designed for drawn arc and short cycle stud welding. Microprocessor control, continuous adjustment of welding current and time as well as constant current regulation ensure in connection with the high performance of the units optimum welding results and repeatability. The units are easily operated by a very robust rotary knob with a built-in push button, all functions and parameters are shown on a big display.

Pre-installed welding programmes facilitate the choice of the right adjustment values for different welding tasks. Additionally, user specific welding programmes can be stored. The modular design of the units allows the customer specific choice of the equipment features. All optional equipment features can be retrofitted.

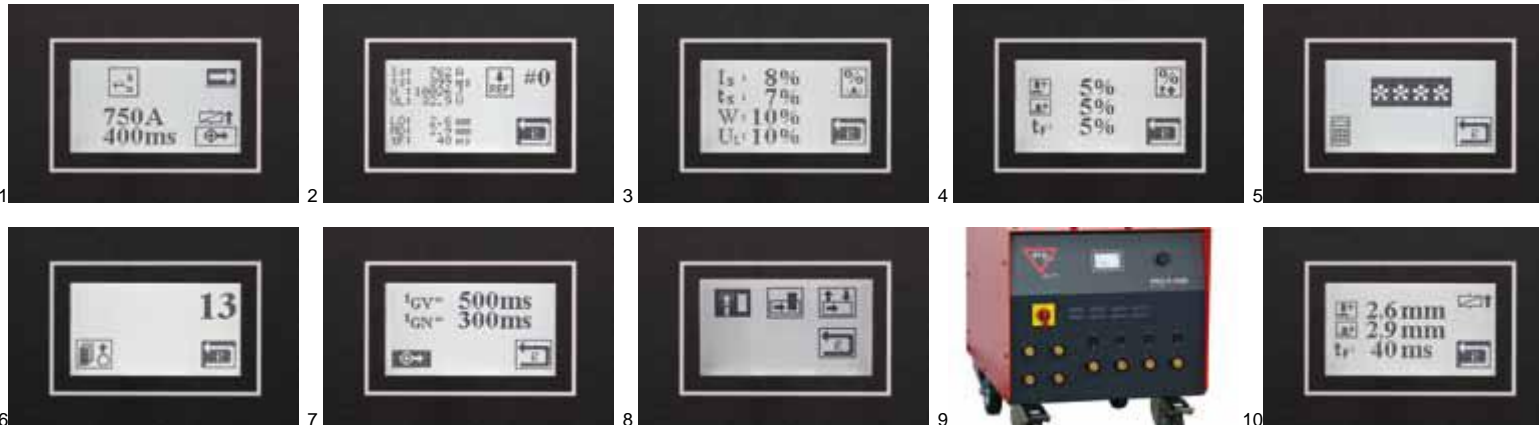
The integrated welding parameter monitoring enables the quality control of the conducted welds. By default, the parameter sets of the last ten welds are stored. The optional available welding parameter memory allows the storage of 24500 welds and has an RS232-interface for data transmission (welding parameter sets) to a PC.

Optionally, the units can be equipped with an inert gas module for welding with inert gas for weld pool backing and with an automatic module to control the automatic stud feeding system VBZ and an automatic welding gun.

The models PRO-D 1600, PRO-D 2200 and PRO-D 2800 can be supplied as multi-gun units for the operation of two or four stud welding guns with different adjustment values for welding current and welding time. The multi-gun units automatically detect which gun is used.




**PRO-D 1600**



### Details

- welding current continuously adjustable (fig. 1)
- welding time continuously adjustable (fig. 1)
- constant current regulation
- easy operation by a very robust rotary knob with a built-in push button
- all functions and parameters are shown on a big display (display contrast adjustable)
- standard welding programmes pre-installed (user-specific adaptable)
- 60 user-specific welding programmes can be stored
- welding parameter monitoring and documentation
  - recording of welding current, welding time, welding energy and arc voltage for each weld (fig. 2)
  - recording of stud travel (lift, piston runtime, immersion depth) for each weld (fig. 2) [only when a welding gun resp. an automatic welding head with travel monitoring system is used]
  - comparison of the recorded parameters to the parameters of a reference weld (tolerances adjustable (fig. 3 and 4)) element
    - in case of variances to the reference weld a warning is displayed or the unit is locked for further welds until the release by the operator (functionality can be switched off)
    - storage of the last ten welding parameter sets
    - optional (also retrofittable): welding parameter memory for the storage of 24500 welding parameter sets (storage with date and time) with RS232-interface for data transmission (welding parameter sets) to a PC
- device lock (with pin code query) to avoid unwanted parameter adjustments (fig. 5)
- weld counter (fig. 6)
- optional (also retrofittable): inert gas module for welding with inert gas for weld pool backing (fig. 7)
- inert gas pre-flow and post-flow time continuously adjustable (with option inert gas module) (fig. 7)
- optional (also retrofittable): automatic module to connect the automatic stud feeding system VBZ and an automatic welding gun (fig. 8)
- optional for PRO-D 1600/2200/2800 (also retrofittable): two or four gun connections (fig. 9)
  - different adjustments for welding current and welding time
  - automatic detection of used gun
  - weld counter for each gun connection
  - optional (also retrofittable): inert gas module for each gun connection
- available as accessory: adapter box PRO-SPLIT
  - enables the operation of up to four stud welding guns with different adjustment values for welding current and welding time on one unit
  - automatic detection of used gun
  - weld counter for each gun connection
- PRO-D 2200/PRO-D 2800: suitable for through deck welding
- functional test without welding current for lift adjustment for welding guns and heads (lift test) (fig. 10)
- repeat cycle lock to avoid welding on an already welded welding
- intelligent self-diagnosis system (display of an error code in case of an interference/failure)
- automatic function test after switch-on
- temperature control as protection against destruction caused by excess temperature
- automatic switch-off in case of excess temperature and phase failure
- protection of the unit in case of a fault on welding/control line cable and solenoid
- highest operational reliability and high power-on time through use of high-quality components
- all functions and parameters are controlled by a microprocessor
- robust, powder-coated metal housing
- interface for data exchange with higher ranked control systems (CNC)
- stable fixing of welding cable sockets at own plug holder, prevents damage on housing caused by pulling of cable

## Technical Data

	PRO-D 1200	PRO-D 1600	PRO-D 2200	PRO-D 2800
Welding range	Ø 2-12 mm	Ø 2-16 mm	Ø 2-22 mm	Ø 2-25 mm
Welding material	steel, stainless steel			
Welding methods (acc. to DIN EN ISO 14555)	drawn arc (ceramic ferrule), short cycle			
Welding current	200-900 A continuously adjustable	200-1400 A continuously adjustable	200-2100 A continuously adjustable	200-2600 A continuously adjustable
Welding time	10-1000 ms continuously adjustable		10-3000 ms continuously adjustable	
Power source	transformer/rectifier			
Mains plug	CEE 32 A	CEE 32 A	CEE 63 A	CEE 125 A
Mains supply	400 V, 32 A, 50/60 Hz (special voltages optional)	230/400/415/460 V, 32 A, 50/60 Hz	230/400/415/460 V, 63 A, 50/60 Hz	230/400/415/460 V, 100 A, 50/60 Hz
Mains fuse external	35 AT	35 AT	63 AT	125 AT
Protection	IP 23			
Dimensions (WxHxL)	275x260x470 mm		555x680x790 mm	
Weight	43,5 kg	169 kg	245 kg	316 kg
Suitable welding guns	PHM-10, PHM-12, PHM-160, PHM-161, GD 25			
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