

New: H180t HighEnd. Enough power for electrodes up to 4 mm.
Even better TIG welding due to no-contact HF ignition.

Everything the H180c is capable of, plus no-contact HF and contact TIG ignition. Optimum TIG ignition. The tungsten needle makes no contact with the workpiece. Simply pressing a button ionises the arc channel and initiates the arc. Seams free of tungsten inclusions. Long service life of tungsten needles. Performance pure - 150 A electrode - and 180 A TIG current. Super duty cycle of 40% at 150 A (electrode) and 30 % at 180 A (TIG). Automatic parameter system for simple operation: The microprocessor controls the settings on the basis of the welding current and process status. Operator prompting using illuminated symbols. Convenient TIG sequence: Automatic gas pre/post flow protects the tungsten needle and welding seam from oxidation. 2 and 4 stroke logic for quick tacking and convenient seam welding. Automatic down-slope prevents quality impairing "end craters" at the end of the seam. Fast down-slope using 2nd torch key prevents fall-through of the seam in case of workpiece overheating. Automatic adaptive hot start for perfect ignition. Durable assembly design, insensitive to knocks, safety due to protection class of IP 23. High mains voltage tolerance, troublefree with long extension leads and good generators. Bears the S label denoting suitability for use in confined spaces in atmospheres subject to higher electrical risk. The standby system reduces fan noise, soiling and energy consumption. Remote control facility. **H 180t**, with mains cable, shock-proof plug, transportation belt, order no. 105.0185.0



Method	Electrode welding	TIG welding with HF ignition
Electrode diameter	1.5-4.0 mm	1.0-2.4 mm
Weldable material	Steel, stainless steel	Steel, stainless steel/copper
Recommended material thickness	up to 10 mm	1-6 mm / copper 1-3 mm
Welding range	5 – 150 A	5 – 180 A
Duty cycle at max. current (40°)	40 % / 150 A	30 % / 180 A
Current at 60 % DC (40°)	135 A	150 A
Mains voltage		230 V
Weight		6.5 kg

H 180t TIG assembly pack

With everything you need for TIG and electrode welding stowed away neatly. The H 180t, mains cable with fitted shock-proof plug, operating manual. Additionally with 3 m electrode and ground cable 25 mm², slag hammer, wire brush, protection shield EN 166, welding glasses DIN 4646-47, plus TIG set, comprising: TIG torch WLT 17K, 4m; tungsten electrode, pressure reducer with volume and content manometer, plug-in gas hose. Complete in a sturdy case with handy compartments. Order no. 105.0187.2



Empty case for all H models. Sturdy case with H compartments and space for set of welding equipment. Order no. 610.0806.0,



TIG wearing parts



H 150 TIG lift arc set WLV 17,

TIG valve torch WLV17, 4 m
 Tungsten electrode, pressure reducer
 Order no. 104.9002.0 (PG12)

H 180c and H 180t TIG equipment WLT17

TIG torch WLT17 K, 4 m
 Tungsten electrode, pressure reducer, gas hose, ground cable 25 mm², 4 m.
 Order no. 105.9001.0 (PG12)



TIG supplement H 180c and 180t

as above, but without ground cable
 Order no. 105.9002.0 (PG12)

TIG torch WLT 17 DD K, 4 m

Order no. 507.1462.4 (PG2)

TIG torch WLT 17 DD K, 8 m

Order no. 507.1462.8 (PG2)



Foot remote control FR 35 with 5 m lead, switches welding current on and off, controls welding current intensity and down-slope. Order no. 570.1135.0 (PG14)

The HT Series - Now available with 180 or 220 Amp. DC or AC/DC



Technical Data

Model	HT 180 DC	HT 180 AC/DC	HT 220 DC	HT 220 AC/DC
Method	TIG/Electrode DC welding	TIG/Electrode AC and DC Welding	TIG/Electrode DC welding	TIG/Electrode AC and DC Welding
Weldable material	Steel, stainless steel, copper and their alloys	Steel, stainless steel, copper, aluminium and their alloys	Steel, stainless steel, copper and their alloys	Steel, stainless steel, copper, aluminium and their alloys
Order No.	250.0180.0	250.0181.1	250.0220.0	250.0221.1
Welding				
Power adjustment	infinitely variable	infinitely variable	infinitely variable	infinitely variable
Electrode diameter TIG	1,0 - 3,2	1,0 - 3,2	1,0 - 3,2	1,0 - 3,2
Electrode diameter Electrode	1,5 - 4,0	1,5 - 4,0	1,5 - 4,0	1,5 - 4,0
Off-load-voltage	< 113	< 113	< 113	< 113
Characteristic trait	down slope	down slope	down slope	down slope
Basic values				
Welding range min. - max.	TIG A / V	3 - 180 / 10,1 - 17,2	3 - 180 / 10,1 - 17,2	3 - 220 / 10,1 - 18,8
Welding range min. - max.	Electrode A / V	10 - 150 / 20,4 - 26,0	10 - 150 / 20,4 - 26,0	10 - 170 / 20,4 - 26,8
Duty cycle at max. power (40°)	%ED	35	35	40
Welding current at 100% duty cycle	TIG A	130	130	160
Welding current at 100% duty cycle	Electrode A	90	90	120
Welding current at 60% duty cycle	TIG A	150	150	180
Welding current at 60% duty cycle	Electrode A	120	120	140
Mains				
Mains voltage	V	230 / 1 -	230 / 1 -	230 / 1 -
Mains frequency	Hz	50 - 60	50 - 60	50 - 60
Mains connecting cable	mm ²	3 x 2,5	3 x 2,5	3 x 2,5
Mains plug		grounded plug	grounded plug	grounded plug
Mains fusing slow	A	16	16	16
Measurements and Weights				
Measurements power source	(LWH)	mm	430 x 185 x 326	483 x 185 x 326
Weight power source		kg	12,0	13,3
Unit				
Power factor	IP		23	23
Insulation class			F	F
Cooling method			F	F
Noise emission	db(A)		<70	<70
Standard			EN 60974	EN 60974
Identification			CE, S	CE, S

Gas cooled torch:

TIG SET WLT	26DD 4 m	TIG-double-push-button torch	4-m, ground cable, pressure reducer, 1,8-m-gas hose	Order no
TIG SET WLT	26DD 8 m	TIG-double-push-button torch	8-m, ground cable, pressure reducer, 1,8-m-gas hose	569.2611.8
TIG SET WLT	26UD 4 m	TIG-up-down remote controlled torch	4-m, ground cable, pressure reducer, 1,8-m-gas hose	569.2621.4
TIG SET WLT	26UD 8 m	TIG-up-down remote controlled torch	8-m, ground cable, pressure reducer, 1,8-m-gas hose	569.2621.8

Water cooled torch:

TIG SET WWT	20DD 4 m	TIG-double-push-button torch	4-m, ground cable, pressure reducer, 1,8-m-gas hose	569.2011.4
TIG SET WWT	20DD 8 m	TIG-double-push-button torch	8-m, ground cable, pressure reducer, 1,8-m-gas hose	569.2011.8
TIG SET WWT	20UD 4 m	TIG-up-down remote controlled torch	4-m, ground cable, pressure reducer, 1,8-m-gas hose	569.2021.4
TIG SET WWT	20UD 8 m	TIG-up-down remote controlled torch	8-m, ground cable, pressure reducer, 1,8-m-gas hose	569.2021.8



Trolley-Construction-Case
Order no. 610.0808.0



Carriage-Maxi-Trolley
Order no. 570.3036.0



Watercooling-Unit
WUK 6, for HT 220
Order no. 570.9320.0



The new V Series TIG Welding Machines

The V is available as V24, 27, 30, 40, 50. Add on a 0 at the end and you have the amps as result. All options you can imagine, that some others are hiding very deep in their price list, are built in. Each V is fully equipped. You just choose the ampere, DC or AC/DC. If you wish it is also possible to obtain the water cooling on the V 24 and V 27. That would be it.

What is not igniting should go to the gallows.

Everybody is promising it. Deep oaths but – 80 % of the tig machines which are in use are not igniting perfectly. So the result is tungsten inclusion which is the k.o. Of the seam – have fun pro! Holding against that the new V: With a complete new technology of high-frequency ignition. A master processor and not the usual signal arc voltage asking for high-frequency pulse. Just ignite the new V, then a few things are from yesterday but the electrode is still from today.

How to find friends with an AC inverter.

Daily trouble. A cnc machine "feels" to be disturbed by your work, the radios around you are transmitting the cracking sound of the machine. The people around you are waiting for you to finally stop working. Over and forgotten. A genial AC Converter without any interfering HF- support leads the arc to a quiet, perfect result.

The discovery of silence.

Silence rules the arc. Ignited at 3 ampere continuously up to the power-limit. The primary-frequency of 100 khz generates a very low-wave current, so a calm arc and stability is conducting your work. As add on too, a significant AC reduction due to the new developed current-shape "db down". The laboratory says: the V is 40 % quieter.

Lead it up to the top.

Just give the V the information about your diameter of the electrode and the shape-automatic is adjusting via AC balance the electrode to the ideal shape. If you like it more pointed then just make a short adjustment. The seam root will be more exact and the geometry is optimized.

This square arc is the hit!

Honestly louder as the sine current – but very rigid and stable for the highest velocity. Ideal for the use in tank construction and for thicker material. You won't want to be without it.

Pulse, fast – pulse and press store.

Everywhere else means this: additional charge. At the V you specify at pulsing your parameters up to 2 khz. Due to less heat input you are able to control much better the root, the melt zone and out-of-position work. Additionally the tiptronic. With a key press you are able to save all adjustments of a work which is worth to be stored. Whether at the torch or at the machine. Up to 100 jobs are ready to be selected.



The new
UP/DOWN TIG torch.
Unforgettable.



Description/standard equipment/function of the new V-series

System: Primary controlled power source, IGBT converter for AC current (at AC units), full digital process control, CAN Bus System, digital HF ignition module with processor controlled ignition process. Database of parameters for automatic mode, control panel with full display user guide and language selection. Graphic process display with status and parameter information. Illuminated multi funktion display.

Data based programmed welding parameters individually adjustable: Pre gas time 0,1-10 sec, time of starting current at 2 stroke, up slope, up slope angle, welding current 3-max.A, second current 3-max.A, down slope time, down slope angle, end crater current, end crater time, post gas time 0,1-30 sec, arc dynamic at electrode welding. Additional parameters at AC units: AC frequency 30-200 HZ, AC balance 10-90 %.

Functions: Automatic mode for processor controlled adjustment of the parameters: 2 stroke, 4 stroke, spot welding with adjustable spot time, digital display welding current and welding voltage, HF ignition on/off, slope function on/off and fast pulsing up to 3 kHz, electrode welding, tiptronic to store and retrieve 100 jobs, job selection via standard equipped UD torch, included remote control at the UD torch, automatic gas test function, automatic forced switch off. Remote control connection with automatic display, 3 digit security code (complete machine, adjustment, setup). Temperature controlled cooling system with standby.

Additional functions at AC units: AC welding without HF, selectable HF, selectable AC current shape "dB down" or "square arc", automatic arc shape, switchable polarity +/- at electrode welding.

Additional functions at units with water cooling: "Demand-controlled" cooling circuit with standby, flow control for maximum torch-protection.

Technical data



Unit type		V24 DC	V24 AC/DC	V27 DC V27 AC/DC	V30 DC V30 AC/DC	V40 DC V40 AC/DC	V50 DC V50 AC/DC
Welding							
Welding range TIG	A	3-240	3-240	3-270	3-300	3-400	3-500
Welding range electrode	A	20-200	20-200	20-220	20-250	20-300	20-400
No load voltage	V/DC	10-60	10-60	10-60	10-60	10-60	10-60
Characteristics							
constant current							
Duty cycle TIG							
Welding current at							
100% DC (25°/40°C)	A	240/220	240/210	270/250	300/250	400/360	480/380
60 % DC (10 min 25°/40°C)	A	240/240	240/230	270/270	300/300	400/400	500/500
DC at max. current (10 min 25°/40°C) %		100/60	100/50	100/60	100/60	100/60	80/60
Mains							
Mains voltage							
(50/60 Hz) +/- 15%	V	3-400	3-400	3-400	3-400	3-400	3-400
Power consumption S (at I _{lmax} WIG)		9,7	10,4	11,8	13,9	19,1	24,2
Max. current consumption I _l	A	14	15	17	20	27,5	35
Power factor	cos phi	0,99	0,99	0,99	0,99	0,99	0,99
Mains fusing	A	16	16	16	32	32	32
Mains lead	mm ²	4x1,5	4x1,5	4x1,5	4x4	4x4	4x4
Mains plug		CEE 16	CEE 16	CEE 16	CEE 32	CEE 32	CEE 32
Unit							
Dimensions and weights							
Dimensions power source (LxBxH)		1130x450x815 mm		1130x450x815 mm		1130x450x860 mm	
Weight DC units							
(without/with watercooling)	kg	84,6/99,3	-	85,1/99,8	86,4/101,1	107,6/122,3	108,7/123,2
Weight AC units							
(without/with watercooling)	kg	-	90,6/105,3	92,3/107	93,6/108,3	122,3/136,2	123,4/137,9
Protective system EN 60529 IP 23, insulation class F, cooling type F, noise emission < 70 dB(A), CE-conform, [S]-sign							
Standard equipment							
Torch 4 m long	Gas WLT	26 UD	26 UD	26 UD	26 UD	26 UD	26 UD
	Water WWT	20 UD	20 UD	DC: 20 UD AC: 18 SC UD	18 SC UD	18 SC UD	18 SC UD
Ground cable length 4 m		35 mm ²	35 mm ²	50 mm ²	50 mm ²	70 mm ²	70 mm ²
Accessories: Pressure reducer with volume and contents manometer, mains lead with CEE plug, fitted gas hose, operating manual.							

Whoever sees his future in his work should make no compromises by the choice of his MIG-MAG pulsing unit. In this case: the SAPROM S. The reasons are visible. Expect a lot.

PowerMaster-torch. With a remote control performance for power, wire speed and Tiptronic. Returning to the controls at the unit is no longer necessary.

Digitally memorised: knowledge of the best pulse welders of the world. Perfect parameters for steel, stainless steel, aluminium and MIG-soldering. Most logical and ergonomic operation. No questions, no puzzles. Values appear in the display. And 1 button has only 1 function. **TwinPulse®** serial standard. We have invented this procedure.

The casing. Usefulness in design. Lowered gasbottle holder, torch bracket, this specific construction is designed for tough resistance over many years.

Process control, digital. Controls in real time, precise bit by bit. Utmost reproducibility of the results. Warming, ageing and current tolerances – have no influence.

Data transfer and data back-up. Characteristics, individual settings and TipTronic are secured in the memory of the Saprom-S. By using a CAN-plug this data can quickly be transferred to a PC or any other Saprom-S. We neither want chipcard readers nor disk drives in the power unit. Dirt disturbs secured functions.

Water-Cooling Unit 1,1kW power. Measures the amount of water, not the waterpressure. Only this way really signals the unit about the cooling of the torch. These little things cut down on a few broken torches per annum.

Standby-control. Cooling will start only if really necessary. Less energy consumption, noise and dirt in the unit.

Words about the truth

Economic efficiency of a welding machine is calculated by 96% of all costs after purchase. Subsequent costs are decisive – the purchase price amounts to approx. 4%. Welding quality, rework, labour time, material loss, longevity – economic factors for the constitutive years. Please trust these here printed information. Lorch – our Company is situated in Auenwald, which means “meadow woods”. Auenwaldpeople (meadow wood people) do not tell lies. Each single product, which leaves our Company, is linked to our conscience. And all of us should keep a good conscience in mind.

Saprom-S. A system which results to demands

1. How much power do you require?



Every Saprom-S comes with the PowerMaster torch, pressure reducer and ground cable.



Technical data of SAPROM S

Type	S 3 mobile	S3	S5	S8
welding range I2 A	25 - 320	25 - 320	25 - 400	25 - 500
welding voltage U2 V	15,2 - 30	15,2 - 30	15,2 - 34	15,2 - 39
idling voltage max. U0 V	81	81	81	81
voltage adjustment	continuous	continuous	continuous	continuous
duty cycle 100% (25°/40°)	280/250	280/250	350/320	500/400
duty cycle 60% (25°/40°)	320/280	320/280	400/350	500/500
duty cycle at max. power (25°/40°)	75/40	75/40	75/50	100/60
weldable wires steel Ø mm	0,6-1,2	0,6-1,2	0,6-1,2	0,6-1,6
weldable wires aluminium Ø mm	1,0-1,2	1,0-1,2	1,0-1,6	1,0-2,4
weldable electrodes Ø mm	1,0-6	1,0-6	1,0-8	1,0-8
mains voltage 3 ~ 50/60 Hz	400 ± 15%	400 ± 15%	400 ± 15%	400 ± 15%
output capacity by 100% duty cycle	10,7	10,7	14,3	19
output capacity max. kVA	15,1	15,1	19,4	26,1
main fuse delay A	16	16	32	50
power plug	CEE 16A	CEE 16A	CEE 32A	ohne
power factor cos j	0,99	0,99	0,99	0,99
wirefeed unit	4-rolls	4-rolls	4-rolls	4-rolls
speed m/min	0,1-25	0,1-25	0,1-25	0,1-25
ICE protection class (EN 60529)	IP 23	IP 23	IP 23	IP 23
noise emission dB(A)	<70	<70	<70	<70
measurements (LxWxH) mm				
power source (A-model) mm	745x340x498	1116x463x812	1116x463x812	1116x463x812
power source (B-model) mm		1116x445x855	1116x445x855	1116x445x855
workshop feeder case mm		639x281x498	639x281x498	639x281x498
construction feeder case mm		675x275x522	675x275x522	675x275x522
power source A-model gas-cooled kg	35	92,8	97,3	107,3
power source B-model gas-cooled kg		86,8	91,3	100,8
water-cooler kg		14,7	14,7	14,7
workshop feeder case kg		20,2	20,2	20,2
Montage-Koffer kg		15,8	15,8	15,8
gas-cooled				
water-cooled	MW 5300	MW 5300	MW 5800	MW 5800
	PowerMaster	PowerMaster	PowerMaster	PowerMaster

2-stroke, 4-stroke; zero-current wire inlet; gas- waterpump- and cooling fan-test; water-cooling and cooling-fan demand responsive in stand-by-modus; extensive stored amount of characteristics; TwinPulse®, Tiptronic and CAN-Bus are standard features

How and why MIG-MAG-pulsing?

1. No cold welds
2. Spatter-free ignition – pure processor experience.
3. Aluminum Welding with TwinPulse®
4. Perfect pulsing is software knowledge.
5. Arc-length control Seam-quality despite shakes.
6. No end craters due to completion pulsing- automatic



1. Power and wire speed can be controlled directly from the Power Master torch.



2. A welding piece with different seams has been produced umpteen times.



3. Just the word 'remote control' says it all. Each parameter can be operated and controlled in a distance of up to 25 metres from the power source.



4. Saprom-S is easily and simply connected to your automation system



5. The robot-interface realizes the communication of the Saprom-S with any robot. Analog or digital.



6. Saprom-S is fully digital, assured of a good future and easy to service.