

Longitudinal seam welding machine

LINEARWELD EXTL

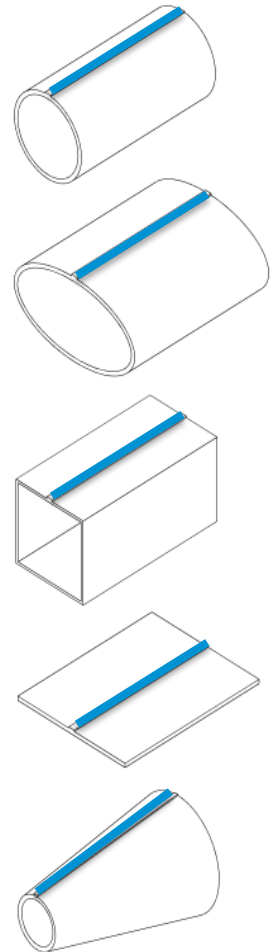


Figure 1 LINEARWELD EXTL 3100

The new machine series LINEARWELD is the current pinnacle in the development of longitudinal seam welding machines at Schnelldorfer Maschinenbau. These are the result of over 25 years of experience in high class welding.

Equipped with high-quality and state-of-the-art technology, it is the platform for all welding requirements. Available in different welding lengths from 2100 mm to 6200 mm, the highly modular machine system including many custom features allows the configuration of a machine that suites your specific production demands.

HIGHLIGHTS



Figure 2: Pneumatically mandrel latch



Figure 3: Clamping system with adjustable fingers



Figure 4: Operator interface movable



Figure 5: Easily accessible pneumatic valve terminal

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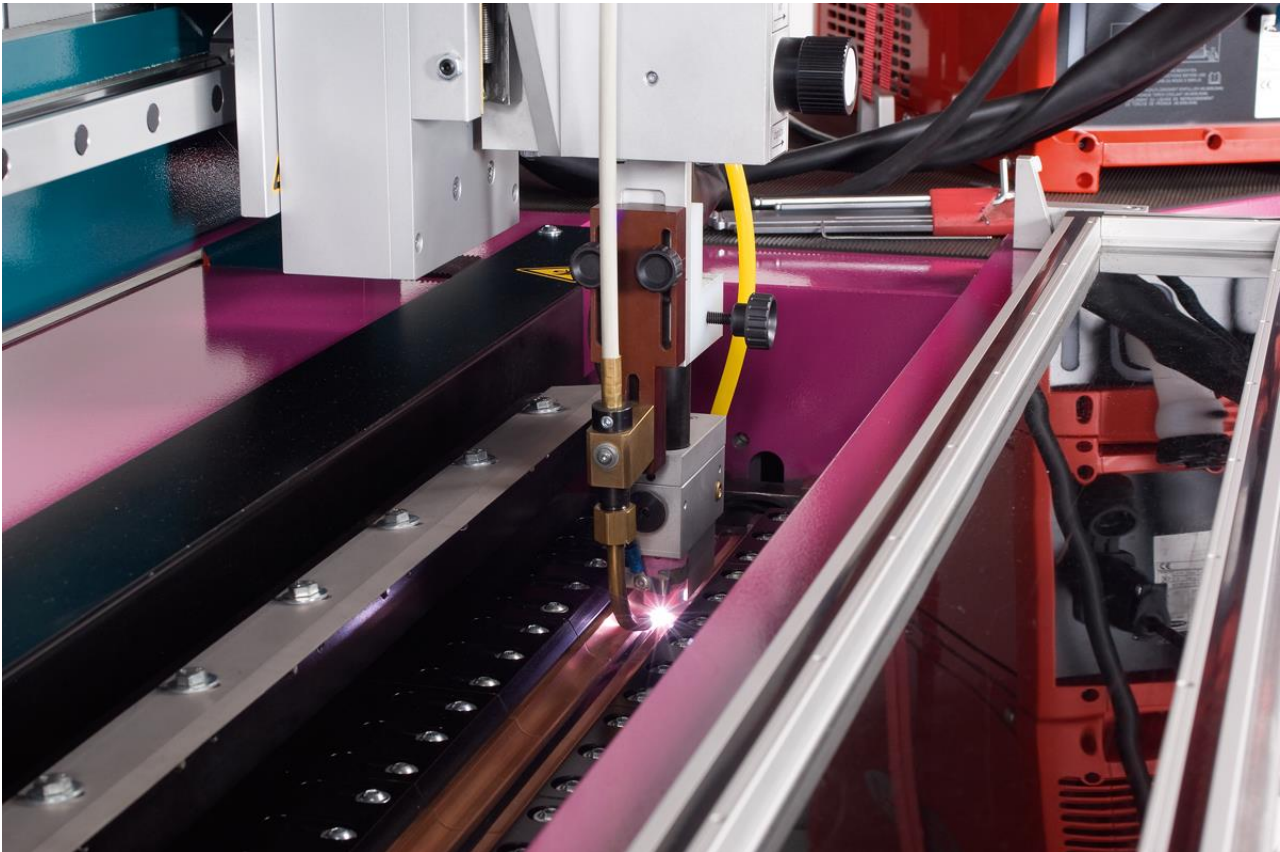


Figure 6: TIG welding process with additional cold wire (optional)



Figure 7: LINEARWELD EXTL 3100 with operator



Figure 8: Plasma keyhole torch

TECHNICAL DATA

Machine Type	LINEARWELD EXTL 2100	LINEARWELD EXTL 2600	LINEARWELD EXTL 3100	LINEARWELD EXTL 4100
Welding length	2100 mm	2600 mm	3100 mm	4100 mm
Tube-Ø min.*	230 mm	260 mm	300 mm	380 mm
Material thickness	0,5 - 15,0 mm	0,5 - 15,0 mm	0,5 - 15,0 mm	0,5 - 15,0 mm
Material	Stainless Steel, Mild Steel, Galvanized Steel, Aluminum, Copper, Brass, Titanium			
Welding process	TIG / GTAW, Plasma, Plasma keyhole, MIG/MAG, InFocus			
Forming gas	Welding gas, Backing gas, Trailing gas			
Torch travel speed	10 cm/min – 770 cm/min			
Mandrel latch	Pneumatically, Position control			
Backing bar	CuCrZr or Stainless Steel			
Clamping fingers	CuCrZr or Stainless Steel			
Clamping system	Pneumatically with pre-clamp feature			
Arc length	Consistently over the entire welding length			
Cooling circuit	Backing bar (mandrel), Torch			
Control unit	Siemens S7 ET200S			
Operator interface	Siemens Comfort Panel 7"			
Motor	Siemens Simodrive			
Interface current source	Profibus			
Standard	CE-Mark			
Electrical supply	400/230 Volt / 3 / N / PE 50 Hz			
Pneumatic supply	6 bar, dry, filtered			
Ambient temperature	+ 10°C to + 35°C			
Colour	On customer request			

* With mandrel made of round material, smaller diameters can be realized (optional)

OPERATOR INTERFACE

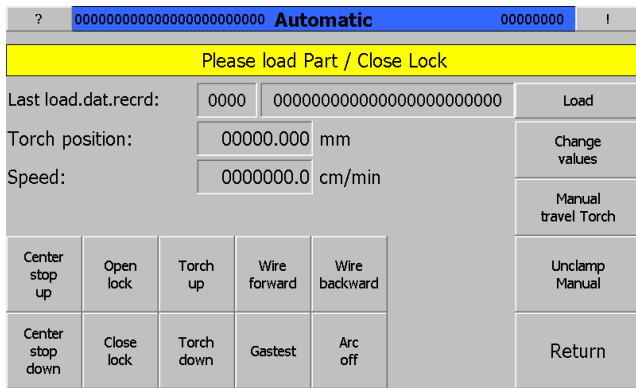


Figure 9: Automatic

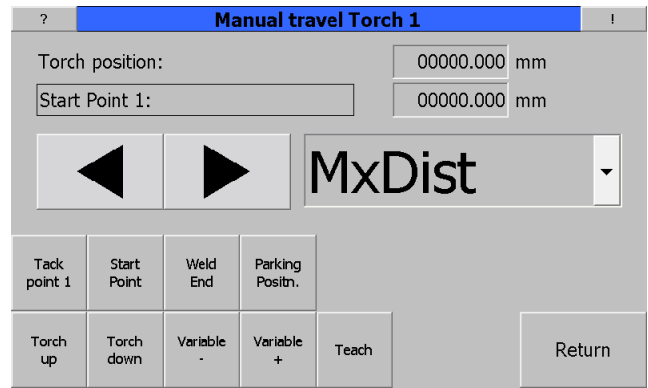


Figure 10: Manual drive menu

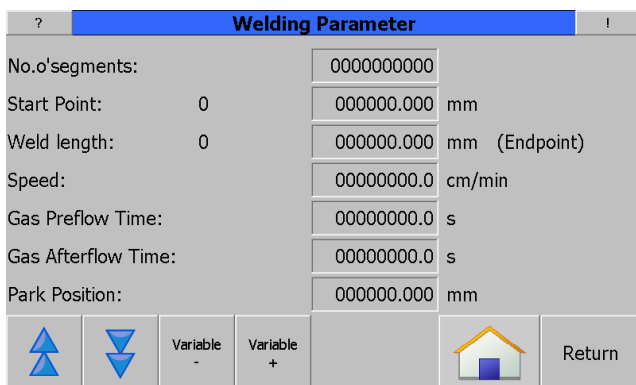


Figure 11: Movement setting menu

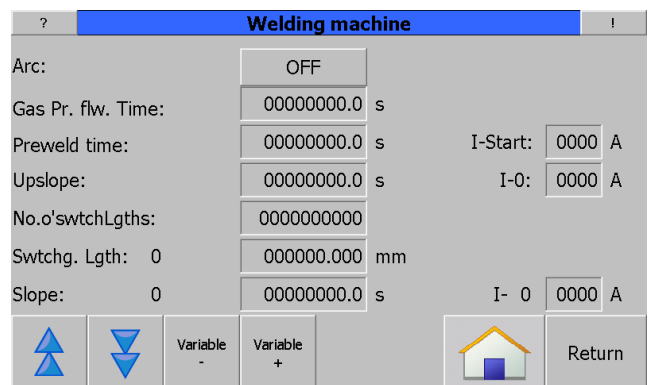


Figure 12: Welding parameter setting menu

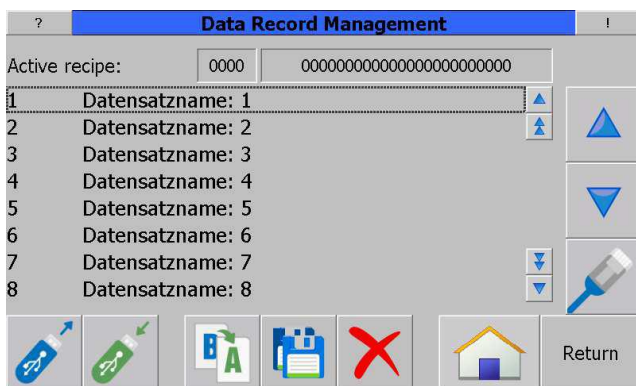


Figure 13: Data storage management for welding procedures, password protected (optional)

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EQUIPMENT (OPTION)



Figure 14: Stepped mandrel



Figure 15: Mandrel with special geometry

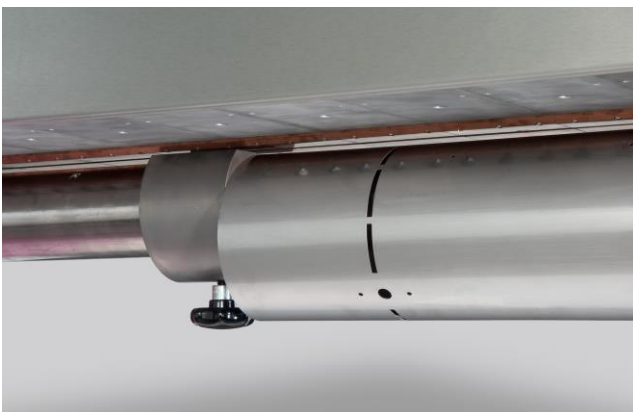


Figure 16: Adjustable part stop, for round mandrel only



Figure 17: InFocus-Torch



Figure 18: Coldwire unit with wire guidance

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Figure 19: Centre mark with laser pointer



Figure 20: Pneumatic centre stop movable



Figure 21: Electrical height adjustment, middle position



Figure 22: Electrical height adjustment, top position



Figure 23: HKS Welding data monitoring system

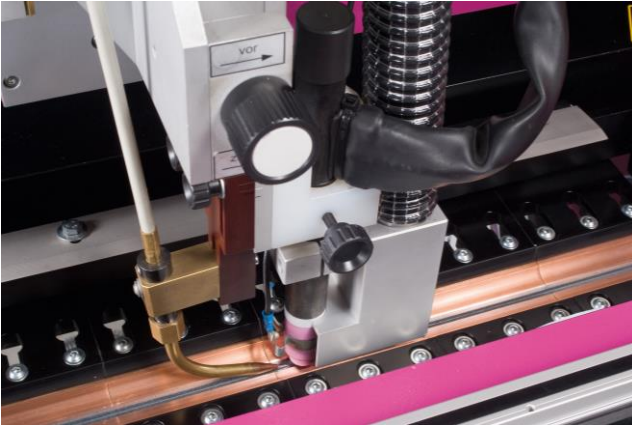


Figure 24: Welding fume extraction for e.g. galvanized steel, directly mounted at the torch

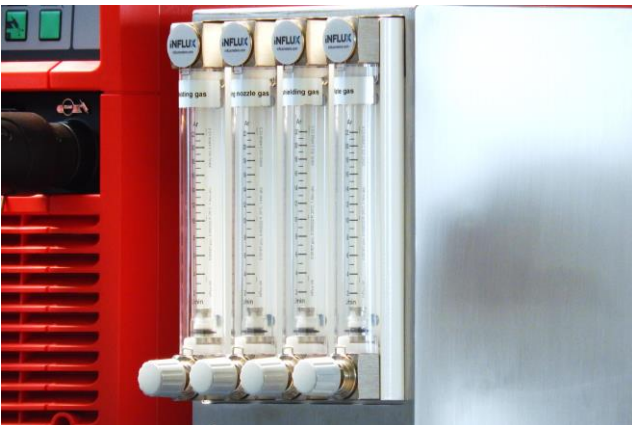


Figure 25: Calibrated flowmeter (rotameter) for exact gas adjustment, also pressure monitored possible

ITEM LIST STANDARD (SELECTION)

Item	Machine	Type	
1042975	LINEARWELD EXTL 2100		
1042976	LINEARWELD EXTL 2600		
1041982	LINEARWELD EXTL 3100		
1042977	LINEARWELD EXTL 4100		

Item	Options weld seam centering	Type	
Selection	Centre stop 2 pcs., movable	LINEARWELD EXTL 2100 - 4100	
1017481	Centre mark with Laser pointer, movable	LINEARWELD EXTL 2100 - 4100	

Item	Options mandrel design	Type	
Standard	H-Holm	LINEARWELD EXTL 2100 - 4100	
Selection	Mandrel, round	LINEARWELD EXTL 2100 - 4100	
Selection	Mandrel made of stainless steel, round	LINEARWELD EXTL 2100 - 4100	
Selection	Mandrel with special geometry	LINEARWELD EXTL 2100 - 4100	
Selection	Mandrel stepped for smaller diameter	LINEARWELD EXTL 2100 - 4100	

Item	Options machine control	Type	
1017089	Welding program memory	for up to 200 programs	
1017579	Barcode reader	for program memory	
1030073	Router for remote diagnosis	Industrial router MB-Connect-Line	
1017558	Air conditioning unit	for electrical cabinet	
1031288	Network connection	Including 2 media switch	
1027620	Control panel in national language	Touchscreen only	
1017217	Control panel in national language	Including operating manual and documentation	
1017093	Welding data monitoring system	Mikro Weld QAS	

Item	Options gas	Type	
1032953	Manual gas flow regulation unit	Rotameter	
1030793	Gas flow regulation, automatic	integrated in machine control	
1017206	Gas switchover, electrical	integrated in machine control	

Item	Options machine design	Type	
Selection	Insertion truck (scissor lift)	LINEARWELD EXTL 2100 - 4100	
1035403	Mandrel lift, electro motor driven	LINEARWELD EXTL 2100 - 4100	
Selection	Elevating unit for table top, electro motor driven	LINEARWELD EXTL 2100 - 4100	
Selection	Heightening element for increasing the machine height 500 mm – 1000 mm	LINEARWELD EXTL 2100 - 4100	
1044249	Special colour	1 colour	
1044250	Special colour	2 colours	
Selection	Part stop adjustable	With scale in mandrel incl.	
1030797	Lamp with high performance LED		
Selection	Stainless Steel clamping kit	Clamping jaw inserts and backing bar	
Selection	Backing bar made of high-alloy stainless steel	LINEARWELD EXTL 2100 - 4100	
Selection	Backing bar made of wear resistant copper alloy	LINEARWELD EXTL 2100 - 4100	
1017561	Clamping jaw insert, made of high alloy stainless steel	LINEARWELD EXTL 2100 - 4100	
1017139	Clamping jaw insert, made of wear resistant copper alloy	LINEARWELD EXTL 2100 - 4100	

Item	Welding equipment (WIG)	Control	Output
1040071	FRONIUS TT 2500 DC	ProfiBUS Interface	Max. 250 A
1040621	FRONIUS TT 3000 DC	ProfiBUS Interface	Max. 300 A
1017057	FRONIUS TT 4000 DC	ProfiBUS Interface	Max. 400 A
1027546	FRONIUS TT 5000 DC	ProfiBUS Interface	Max. 500 A
1044548	FRONIUS 2x TT5000 DC	ProfiBUS Interface	Max. 940 A
1031600	FRONIUS MW 2500 AC/DC	ProfiBUS Interface	Max. 250 A
1017058	FRONIUS MW 3000 AC/DC	ProfiBUS Interface	Max. 300 A
1017059	FRONIUS MW 4000 AC/DC	ProfiBUS Interface	Max. 400 A
1035581	FRONIUS MW 5000 AC/DC	ProfiBUS Interface	Max. 500 A
1027652	LORCH V30 mobil DC	ProfiBUS Interface	Max. 300 A
1017528	LORCH V30 mobil AC/DC	ProfiBUS Interface	Max. 300 A

* On request, other welding equipment can be integrated

Item	Cold wire feeder	Control	
1031641	FRONIUS KD 4000 D-11	ProfiBUS Interface	
1031643	LORCH Feed 1	ProfiBUS Interface	

Item	Welding equipment (Plasma)	Control	Output
1042846	FRONIUS TT 2500 DC + PlasmaModule 10	ProfiBUS Interface	Max. 250 A
1041167	FRONIUS TT 4000 DC + PlasmaModule 10	ProfiBUS Interface	Max. 400 A
1017085	MIG-O-MAT PlasmaJET 250 SPS	ProfiBUS Interface	Max. 250 A
1017086	MIG-O-MAT PlasmaJET 350 SPS	ProfiBUS Interface	Max. 350 A

* On request, other welding equipment can be integrated

Item	Welding equipment (MIG/MAG)	Control	Output
1017035	FRONIUS TPS 4000 MIG/MAG	ProfiBUS Interface	Max. 400 A
1017040	FRONIUS TPS 4000 CMT	ProfiBUS Interface	Max. 400 A
1017039	FRONIUS TPS 5000 MIG/MAG	ProfiBUS Interface	Max. 500 A
1041092	FRONIUS TPS 5000 CMT	ProfiBUS Interface	Max. 500 A
1044868	FRONIUS TPS 500i PULSE	ProfiBUS Interface	Max. 500 A

* On request, other welding equipment can be integrated

Item	Welding equipment (InFocus)	Control	Output
1044869	KJELLBERG InFocus 1000 Torch	TIG current source	
1044870	KJELLBERG InFocus 1000 A HP-WIG	ProfiBUS Interface	Max. 1000 A

Item	Cooling unit	Type	
1036824	HYFRA eCHILLY 1	Water chiller with refrigeration unit	
1036825	HYFRA eCHILLY 2	Water chiller with refrigeration unit	
1044560	HYFRA eCHILLY 3	Water chiller with refrigeration unit	

Item	Weld fume extraction	Type	
1017193	Weld fume extraction preparation		
1017041	Weld fume extraction TEKA		
1017044	Weld fume extraction FUMATOR		

Item	Accessories		
1030791	Gauge for clamping fingertip distance		
1039081	Tool set, small		
1019042	Three-phase transformer	3 x 480 V, 50-60 Hz, 16 KVA	
1019058	Electrode grinding tool TEG 4.0		
1017522	Electrode grinding machine KAINDL WIG 4	Complete set	

Item	Packaging and transport		
Selection	Wooden pallet for transport by truck	LINEARWELD EXTL 2100 - 4100	
Selection	Packing in wooden box, land or air transport	LINEARWELD EXTL 2100 - 4100	
Selection	Packing in wooden box, sea worthy	LINEARWELD EXTL 2100 - 4100	

GENERAL

Upon request, a wide range of other options are available. LINEARWELD longitudinal seam welding machines can be executed suiting specific customer requirements.

REFERENCES



LINEARWELD Longitudinal seam welding machine



NOTES

WELDED COMPONENTS



Figure 26: Stainless steel pipe $t = 2,0$ mm, TIG

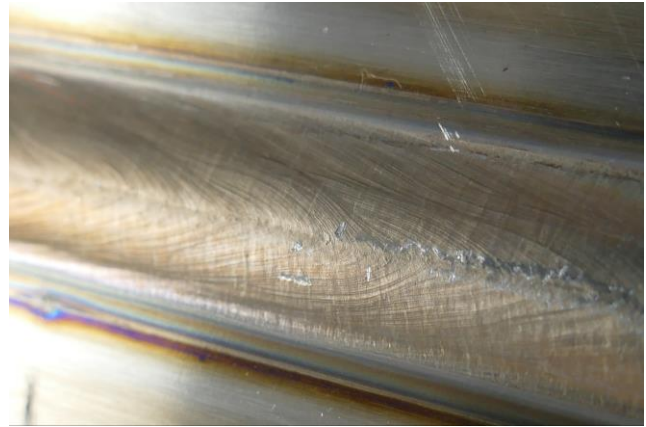


Figure 27: Stainless steel sheet $t = 10$ mm,
InFocus

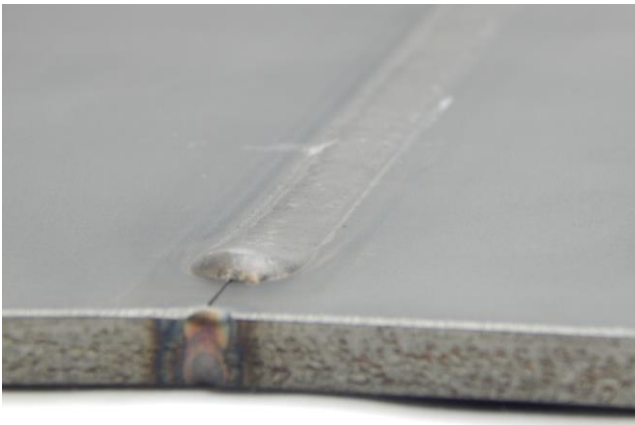


Figure 28: Plasma-Keyhole welded sheet,
 $t = 8$ mm

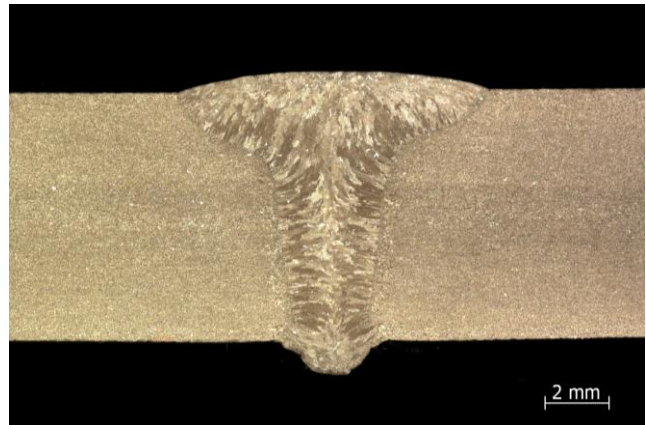


Figure 29: Plasma-Keyhole steel sheet, $t = 8$ mm



Figure 30: MAG welded steel sheet with TIG root, $t = 10$ mm