

Corner Seam Welding Machine

CORNERWELD NIMBLESAFE

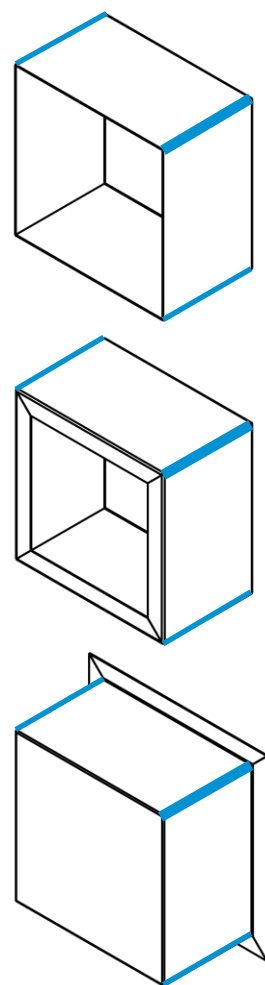
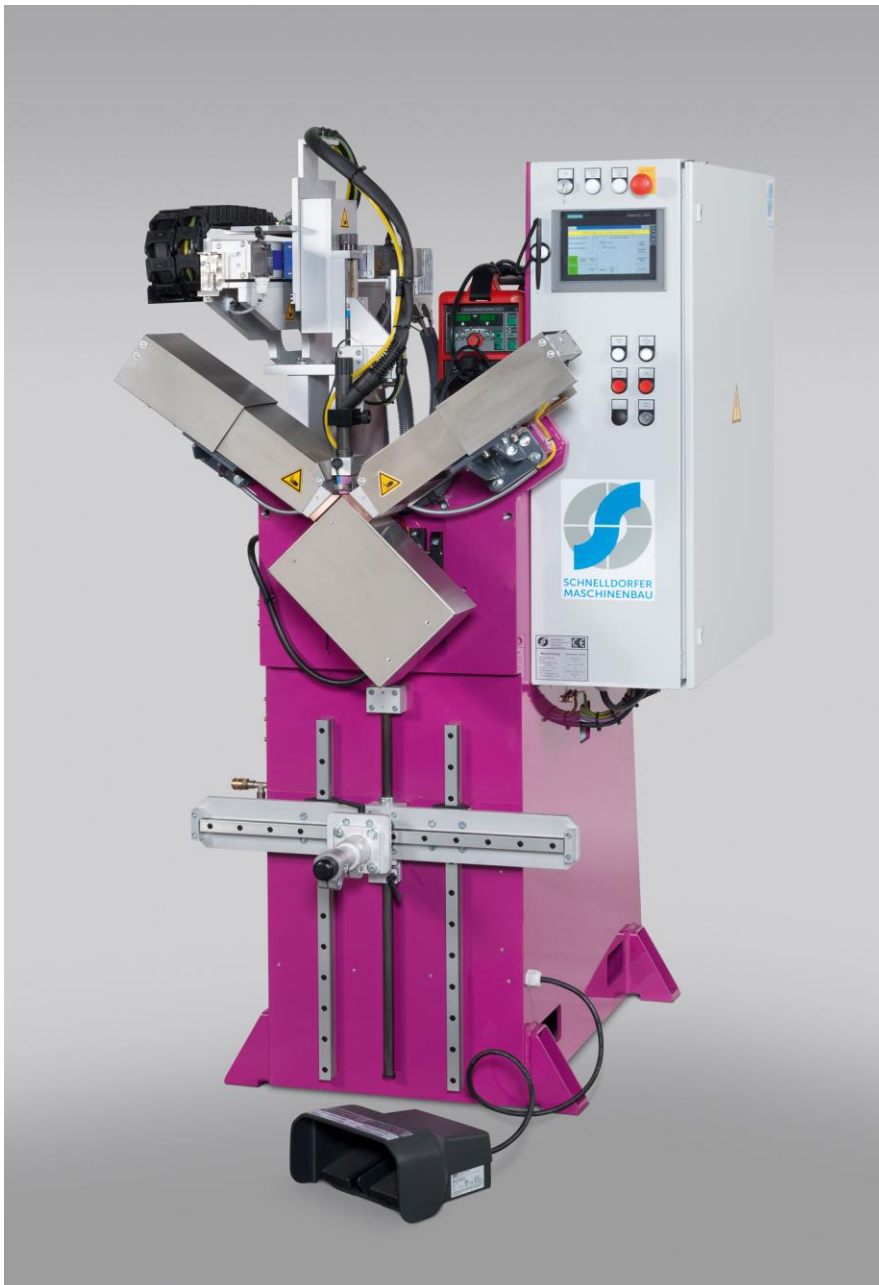


Figure 1: Cornerweld NimbleSafe 100-42

Schnelldorfer is proud to present its latest Cornerweld system, the NimbleSafe 100 - 42, which is capable of welding perfect corner seams in just 30 seconds, with no need for post weld grinding and polishing. These machines are helping to revolutionise the manufacture of corner seams typically associated with, catering kitchens, control cabinets, hygienic and laboratory furniture. The unique component clamping system presents an open aspect to the operator, making the machine quick, easy and safe to use.



Figure 2: With Operator

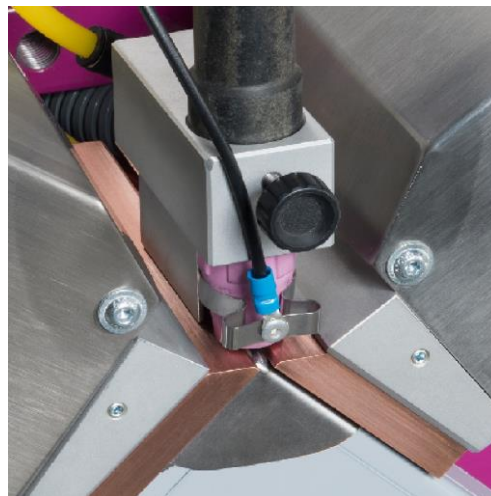


Figure 3: Clamped



Figure 4: Welded

Cornerweld NimbleSafe 100-42 is equipped with a pneumatic safety system which allows quick component clamping even with inward and / or outward return flanges.

The machine is designed for welding short corners, typically found in catering kitchens, control cabinets, hygienic and laboratory furniture.

The welding length is 100 mm. Inward return flanges up to 42 mm can be accommodated. Optionally outward return flanges up to a maximum of 55 mm can be accommodated.

TECHNICAL DATA

CORNERWELD NimbleSafe	100 - 42
Welding length up to	100 mm
Component dimensions min.	see Table 1 (page 5)
Component dimensions max.	see Diagram 1 (page 6)
Clamping height above ground	app. 1220 mm
Material Type	Stainless Steel, Mild Steel, Galvanised Steel, Aluminium
Material Thickness	0.5 mm – 2.5 mm
Inward return flange max.	42 mm
Outward return flange max.	55 mm (Optional)
Internal clamping tool	Hard Wearing Copper (CuCrZr)
Clamping finger	Hard Wearing Copper (CuCrZr)
Clamping System	Pneumatic, Pre-clamp feature
Arc Length	Constant (over whole welding length)
Welding process	TIG
Welding direction	free selectable
Gas	Torch Gas, Backing Gas, Trailing Gas
Cooling Circuit	Mandrel (Internal clamping tool), Torch
Control	Siemens S7-ET 200S
Operator Panel	Siemens Comfort-Panel 7.0" TFT colour display, touch operation
Motor	Siemens Simodrive Posmo
Welding Interface	Roboterinterface
Standard	CE-Mark or UL-Standard (Option)
Electric Supply	400/230 Volt / 3 / N / PE; 50/60 Hz; TN-grid
Air Supply	6 bar, dry, filtered
Ambient Temperature range	+ 10°C bis + 35°C
Colour	RAL 4006 / 7015 or to customer requirements
Dimensions (W x L x H)	800 mm x 1400 mm x 1800 mm
Weight	660 kg



CONTROL SYSTEM DISPLAY (EXAMPLES)

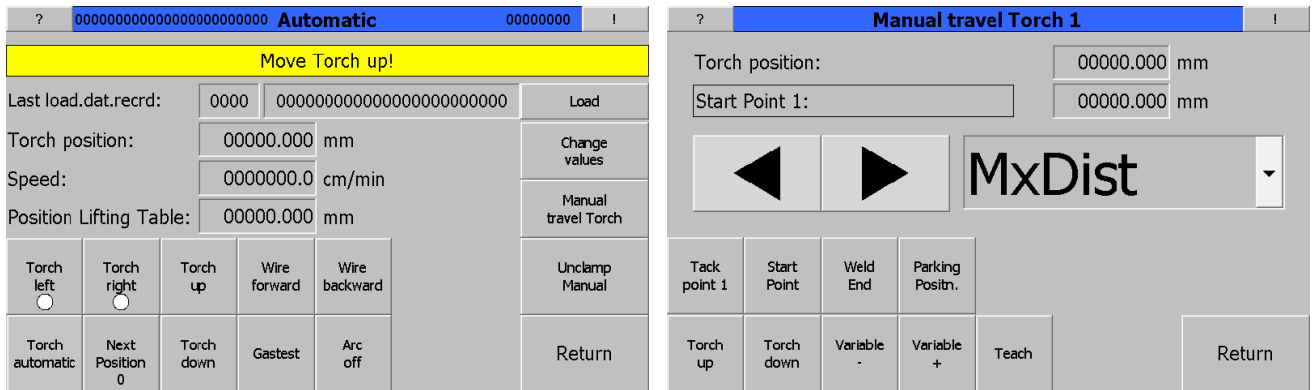


Figure 5: Automatic and manual torch movement menus

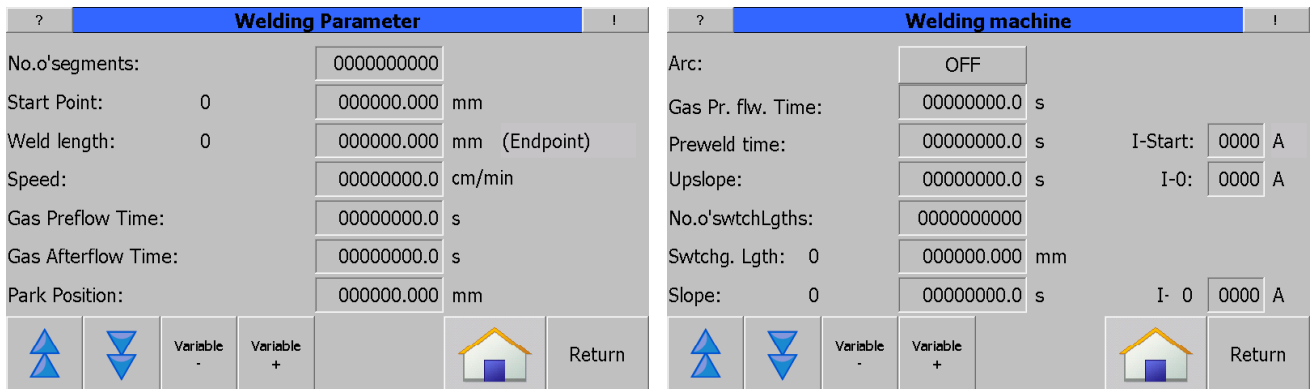


Figure 6: Menu for welding parameter setting (welding current controlled via Profibus)

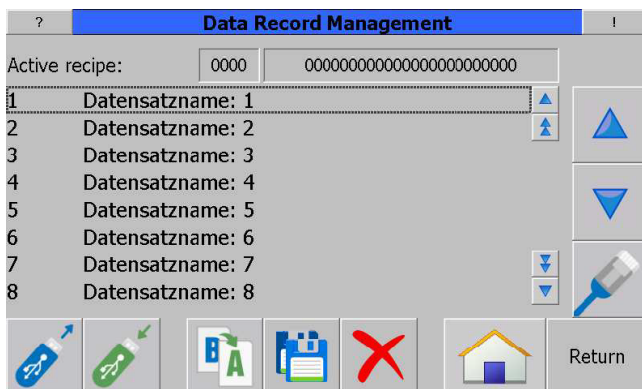


Figure 7: Data storage management for welding procedures with password protection

INTERNAL QUICK CHANGE TOOLING (STANDARD)

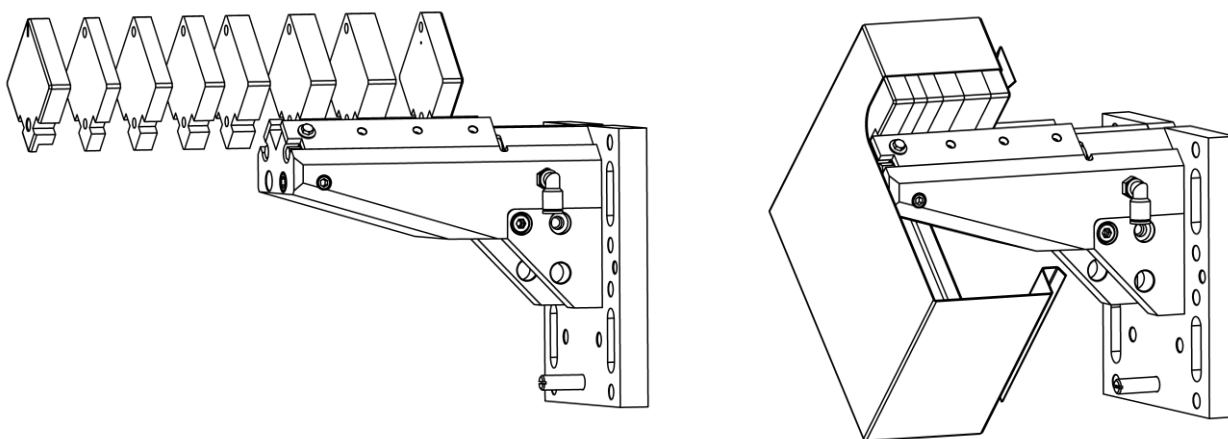


Figure 8: Modular clamping tool set

COMPONENT DIMENSIONS MINIMUM (STANDARD)

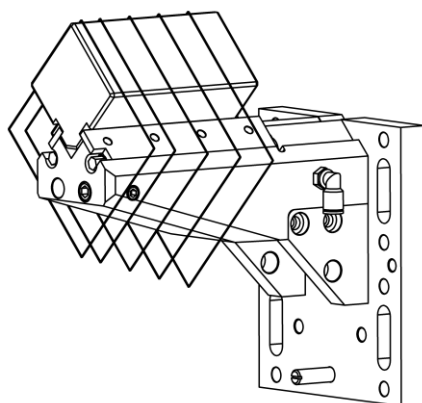


Figure 9: Component dimensions regarding different welding length

CORNERWELD Nimble Safe	□ Minimum Component Opening
Weld length up to 10 mm	115 mm
Weld length up to 25 mm	118 mm
Weld length up to 50 mm	123 mm
Weld length up to 75 mm	128 mm
Weld length up to 100 mm	133 mm

Table 1: Minimum component dimensions

COMPONENT DIMENSIONS MAXIMUM (STANDARD)

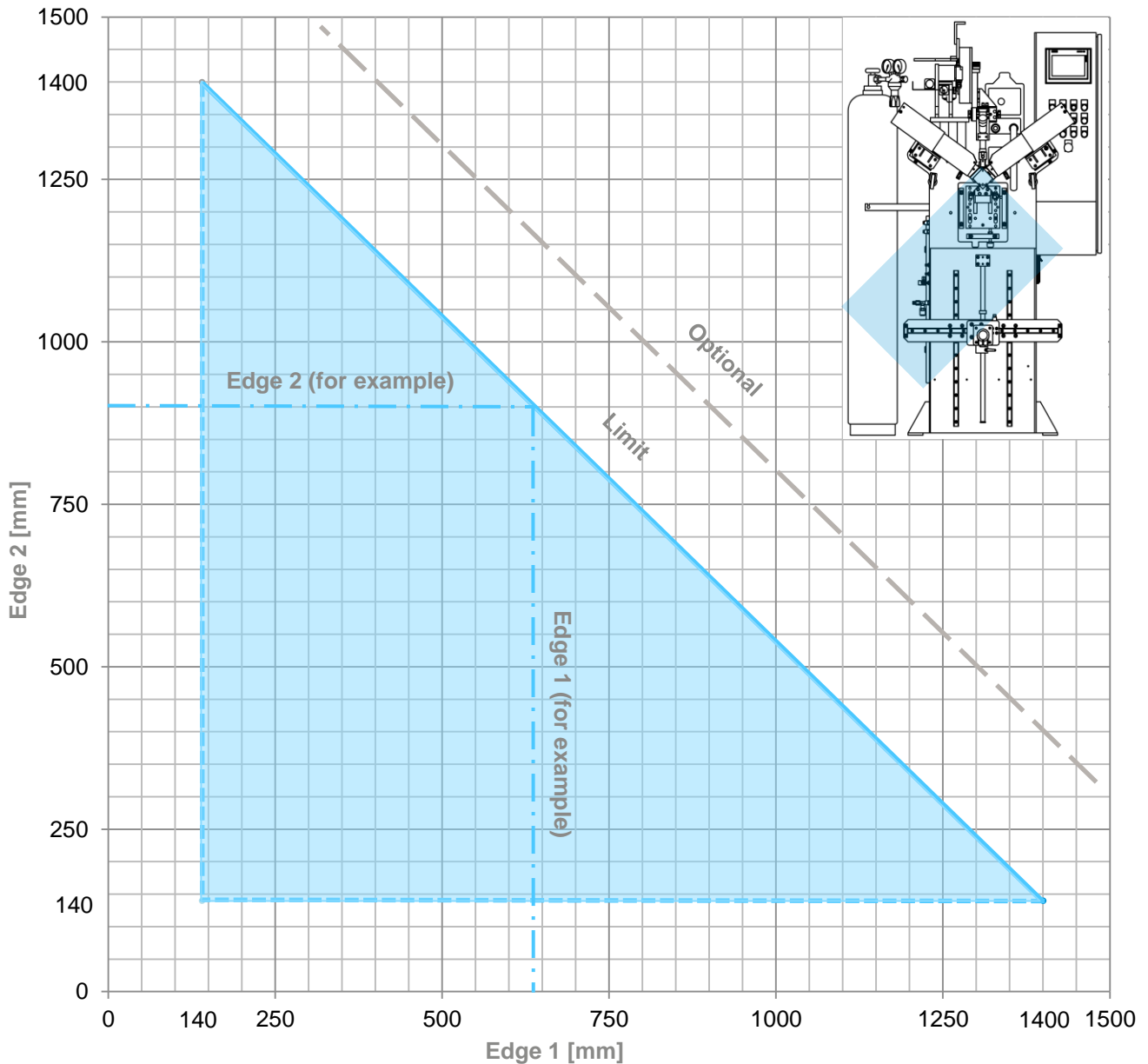


Diagram 1: Component dimensions maximum, mandrel height standard machine

COMPONENT PREPARATION (RECOMMENDATION EDGE OVERLAP)

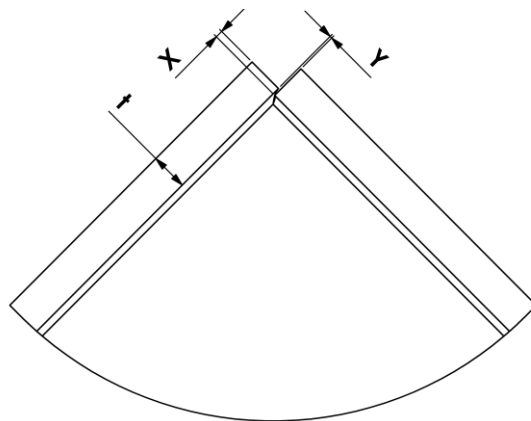


Figure 10: Edge overlap and maximum gap

Recommended component preparation for stainless steel (like 304, 316 L and similar)

Material Thickness t [mm]	Edge overlap X [mm]	Max. Gap Y [mm]	Max. Opening bending eye [mm]
0.5 – 0.6	0.6 – 0.7	0.05	0.1
0.7 – 0.8	0.6 – 0.7	0.06	0.2
1.0 – 1.3	0.6 – 0.8	0.1	0.3
1.5 – 2.0	0.6 – 0.8	0.2	0.3
2.2 – 3.0	0.6 – 0.8	0.2	0.5

Recommended component preparation for Mild Steel, Galvanised Steel

Material Thickness t [mm]	Edge overlap X [mm]	Max. Gap Y [mm]	Max. Opening bending eye [mm]
0.5 – 0.6	0.6 – 0.7	0.05	0.1
0.7 – 0.8	0.6 – 0.7	0.06	0.2
1.0 – 1.3	0.6 – 0.8	0.1	0.3
1.5 – 2.0	0.6 – 0.8	0.2	0.3
2.2 – 3.0	0.6 – 0.8	0.2	0.5

Recommended component preparation for Aluminium und Aluminium alloys

Material Thickness t [mm]	Edge overlap X [mm]	Max. Gap Y [mm]	Max. Opening bending eye [mm]
0.7 – 0.8	0.7 – 0.8	0.06	0.2
1.0 – 1.3	0.8 – 1.0	0.1	0.3
1.5 – 2.0	1.2 – 1.5	0.2	0.3
2.2 – 3.0	1.5 – 1.8	0.3	0.5

COMPONENT PREPARATION (RECOMMENDATION OPENING BENDING EYE)



Figure 11: Bending eye 304 t = 1.0 mm



Figure 12: Bending eye 304 t = 1.0 mm

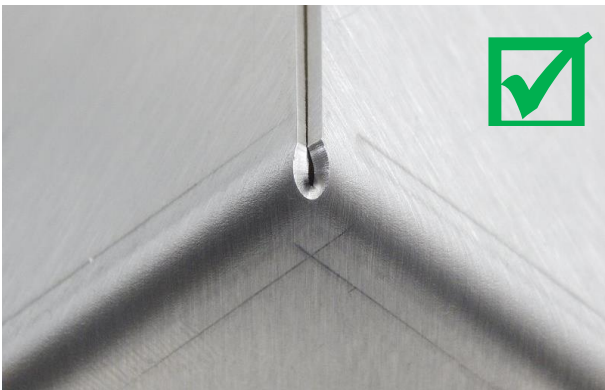


Figure 13: Bending eye 304 t = 1.5 mm



Figure 14: Bending eye 304 t = 2.5 mm

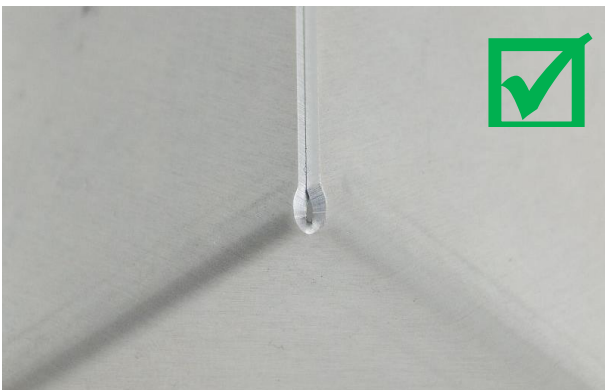


Figure 15: Bending eye Aluminium t = 1.5 mm

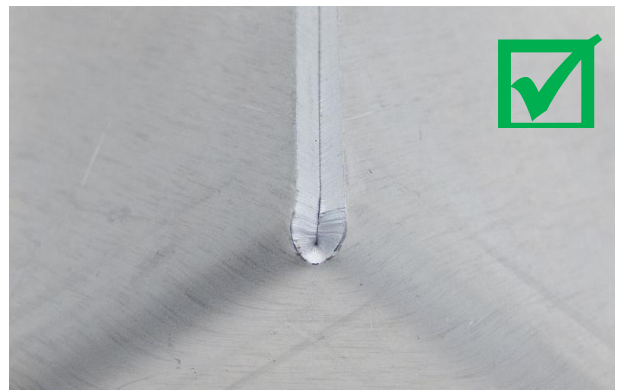


Figure 16: Bending eye Aluminium t = 2.5 mm

OUTER PROTECTION TOOL (OPTION)

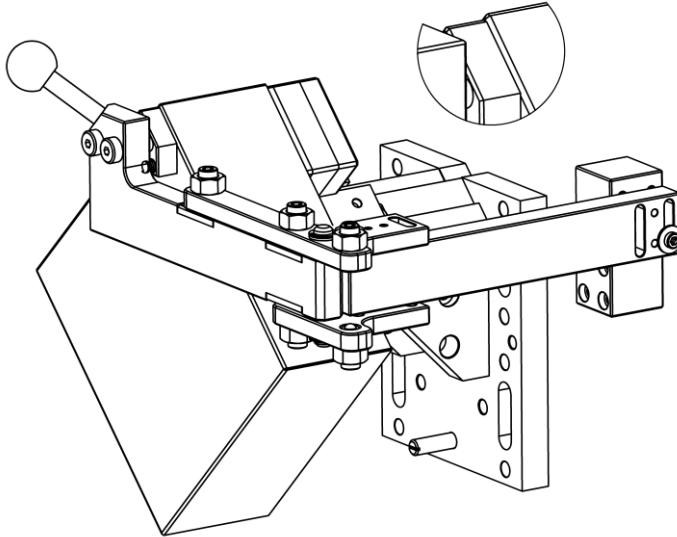


Figure 17: Outer protection tool for front surface, Item: 1042302

CLAMPING FINGERS FOR OUTWARD RETURN FLANGE (OPTION)

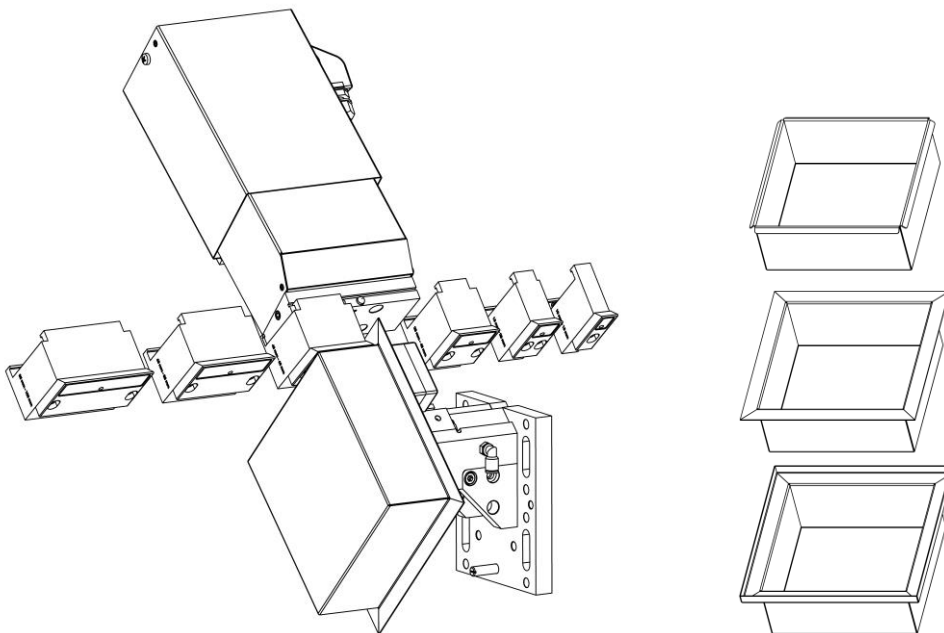


Figure 18: Clamping fingers extended height execution, Item: 1042832

TORCH SHIFT UNIT (OPTION)

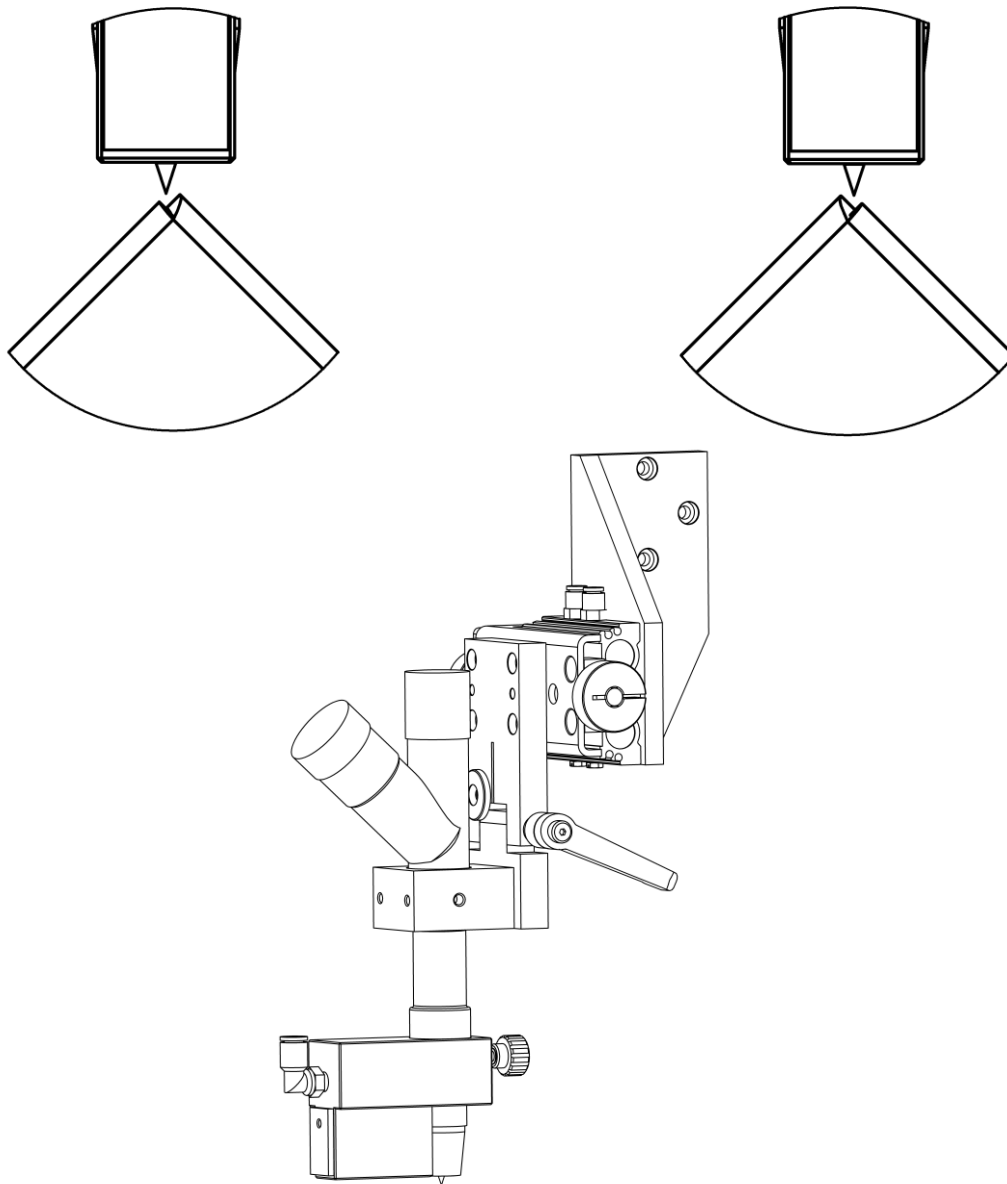


Figure 19: Torch shift unit for welding left and right Corners, Item: 1037432

ELEVATING UNIT FOR COMPLETE MACHINE (OPTION)

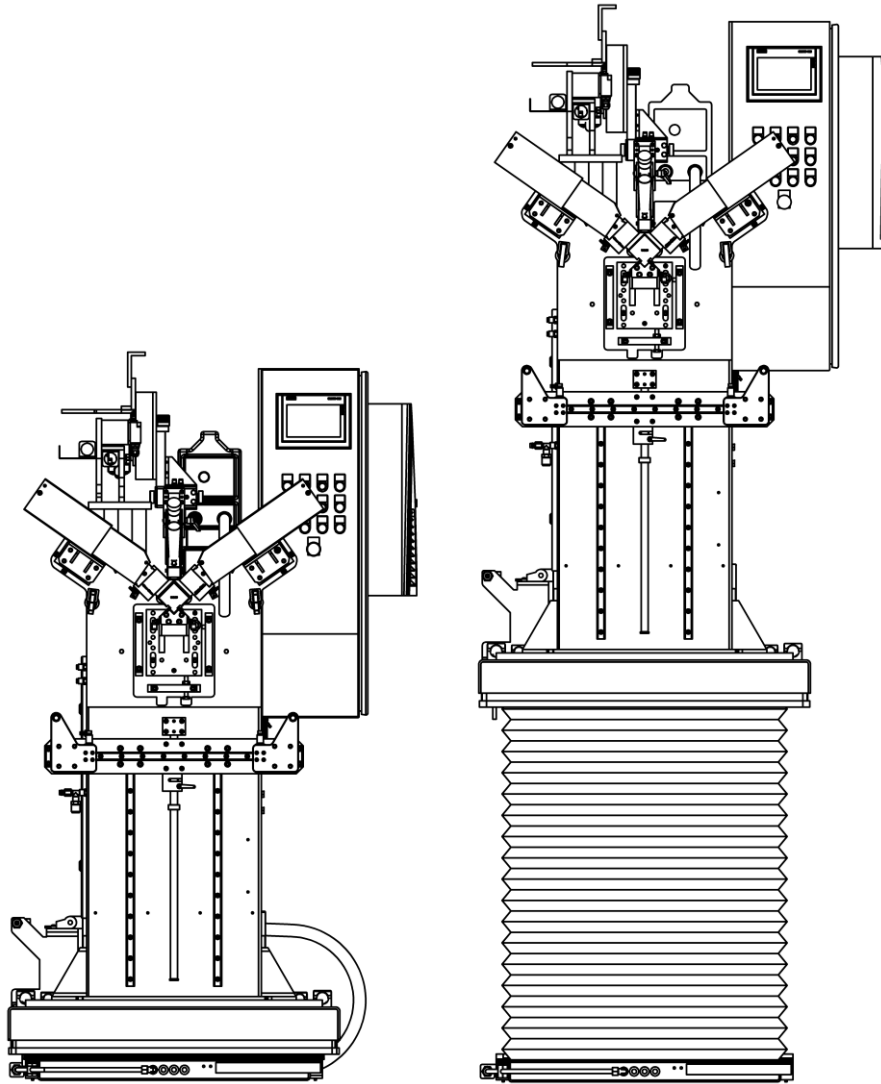


Figure 20: Elevating Unit for complete machine, Item: 1032781, mandrel height up to 2420 mm

SPECIAL VERSION (OPTION)

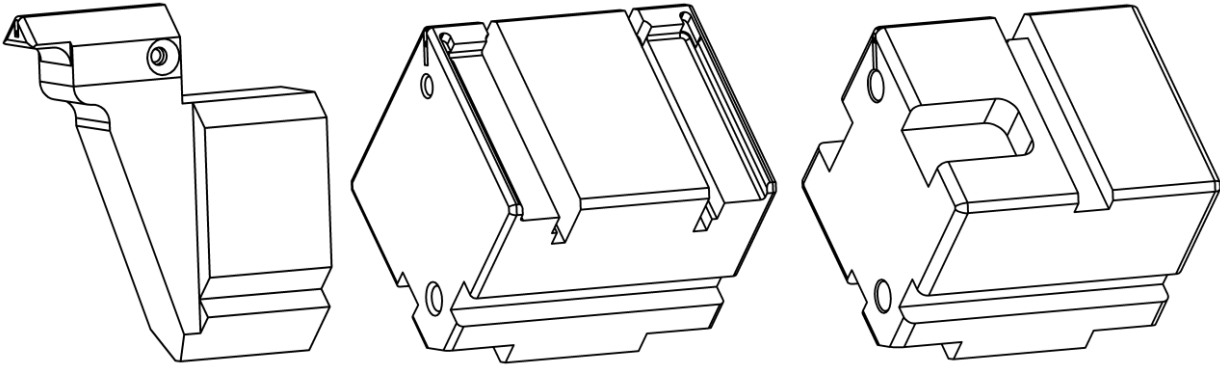


Figure 21: Special inside Clamping Tools customized, on request

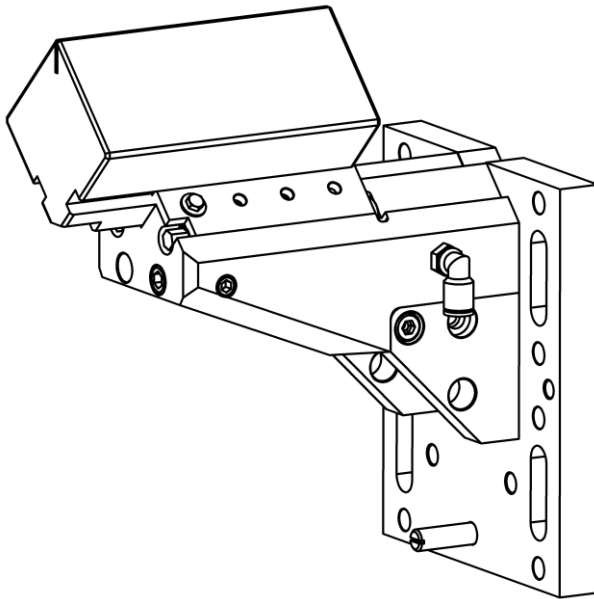


Figure 22: Special version mandrel shortened, for clamping of small parts, Item: 1044311

ITEM LIST

Item	Maschine		Weight
1035804	CORNERWELD NIMBLE SAFE 100-42	Cornerwelding machine	660 kg

Item	Options Machine design		Weight
1042832	Clamping fingers extended height execution	for Nimble Safe 100-42	
1042302	Outer protection tool for front surface	for Nimble Safe 100-42	
1037432	Torch shift unit (sidewise), pneumatically	for Cornerweld	
1044311	Mandrel shortened, for clamping of small parts	for Nimble Safe 100-42	
1031110	Internal clamping tool with special geometry	for Cornerweld	
1039899	Spare part package (new machine)	for Nimble Safe 100-42	
1017179	Machine body higher (250 mm)	Mandrel height up to 1470 mm	
1017180	Machine body higher (500 mm)	Mandrel height up to 1720 mm	
1017524	Machine body higher (1000 mm)	Mandrel height up to 2220 mm	
1032781	Elevating unit for complete machine, motorized	Scissor lifting table	
1019028	UL- Execution electrical system and pneumatic		
1019042	Three-phase transformer	for primary 3 x 480 V, 50-60 Hz	
1039081	Tool set, small	for Cornerweld	
1044249	Special colour	1 colour	
1044250	Special colour	2 colours	

Item	Options Machine Control		Weight
1017089	Welding program memory, up to 200 programs		
1017579	Barcode scanner for program memory		
1032670	Router for remote diagnosis via internet		
1017558	Air conditioning unit for the electrical cabinet		

Item	Welding and Cooling Units		Weight
1028169	FRONIUS TT 2200 Job DC, (without chiller)	Profi Bus Robot interface	18 kg
1028136	FRONIUS MW 2200 AC/DC, (without chiller)	Profi Bus Robot interface	22 kg
1031641	FRONIUS KD 4000 D-11 wire feed unit	Profi Bus Robot interface	20 kg
1040574	FRONIUS TT 2500 Job DC, MV UL	Profi Bus Robot interface	34 kg
1042838	FRONIUS MW 2500 Job AC/DC MV UL	Profi Bus Robot interface	38 kg
1042850	FRONIUS KD 4000 D-11 wire feed unit UL	Profi Bus Robot interface	20 kg
1036434	Ware part set for ABITIG MT 300 W, BINZEL		
1017193	Weld fume extraction - Preparation		
1017041	Weld fume extraction TEKA		28 kg
1017044	Weld fume extraction FUMATOR		36 kg
1019058	Electrode grinding machine TEG 4.0		6 kg
1017522	Electrode grinding machine KAINDL WIG 4	complete Set	23 kg
1036824	Water chiller HYFRA eChilly 1	CE Mark	49 kg
1040575	Water chiller PFANNENBERG	RACK 1100, UL Mark	25 kg

Item	Packing		Weight
1032660	Palette for transportation by truck or train	for Cornerweld	55 kg
1017076	Packing in wooden box	Sea worthy	155 kg

REFERENCES



NOTES

WELDED COMPONENTS

