

Take the best!



*Steel Beam Assembling
technology by*

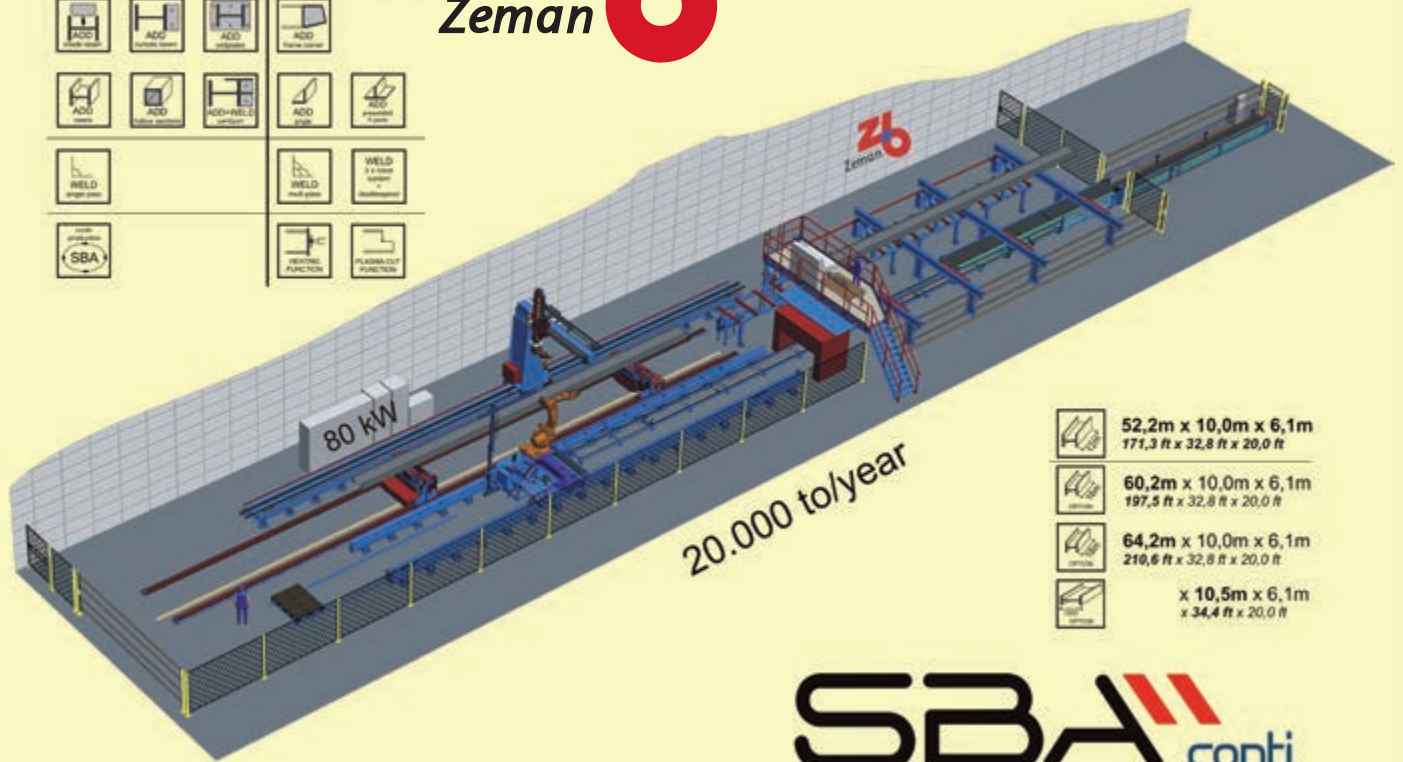
Zeman



Basic



Option



	52,2m x 10,0m x 6,1m 171,3 ft x 32,8 ft x 20,0 ft
	60,2m x 10,0m x 6,1m 197,5 ft x 32,8 ft x 20,0 ft
	64,2m x 10,0m x 6,1m 210,6 ft x 32,8 ft x 20,0 ft
	x 10,5m x 6,1m x 34,4 ft x 20,0 ft



SBA conti design is chosen by fabricators running a facility with continuous material flow, allowing for easy integration in existing beam handling system and special preference for "assembling only" working mode. This steel beam assembly robot welding machine can achieve up to 20.000 tons/year to assemble, tack and finish weld cleats to beams. SBA conti design consists of 1 robot for assemble, tack weld and finish weld. Cross and longitudinal conveyors enable continuous beam loading without manual intervention (crane handling).

Machine composition	Auto INLET system (length-, cross conveyor)	✓
	Conveyor for ADD parts (auto system)	✓
	Beam turning tables (turn-over system)	✓
	Handlingsrobot IRB6640	✓
	Magnetgripper Type 1, 2, 3	✓
	Auto turning station for ADD parts	✓
	Pre-heating system	optional
	Welding Robot system 1	✓
	Welding Robot system 2	optional
	Application for angle profiles as ADD part	optional
	Plasma cutting application	optional
	Auto OUTLET area	✓
	Camera system for remote support	optional
Safety fences and devices	✓	

Included services	Packing and loading of equipment	✓
	Installation at customer sites	✓
	Start-up and Tests at customer sites	✓
	Operators training	✓

Included functions and ability of equipment	Auto inlet of beam into the line	✓
	Auto feed-in of ADD parts into the line	✓
	Auto scan of ADD parts	✓
	Auto turning of ADD parts if mispositioned	✓
	Auto assembly and tack welding	✓
	Auto part2part assembly and welding	✓
	Auto gap detection and compensation	✓
	Auto beam check (for correct assembly)	✓
	Auto pos. detection for welding seams	✓
	Auto weld-out (single layer)	✓
	Auto weld-out (multi layer)	optional
	Auto pre-heating (for multi layer)	optional
	Auto plasma cuts at the main profile	optional
	Auto outlet of finished beam from the line	✓

Basic data	Min. beam sizes	160 x 3000 mm
	Max. beam sizes	1100 x 12000 mm
	Max. beam width up to 1500 mm	optional
	Max. beam length up to 16000 mm	optional
	Max. beam length up to 18000 mm	optional
	Max. beam weight	8 tons
	Annual production capacity	up to 20.000t/year
	Line dimensions (12m version)	52200 x 10500 x 6200
	Line dimensions (16m version)	60200 x 10500 x 6200
Line dimensions (18m version)	64200 x 10500 x 6200	

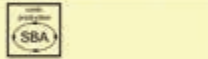
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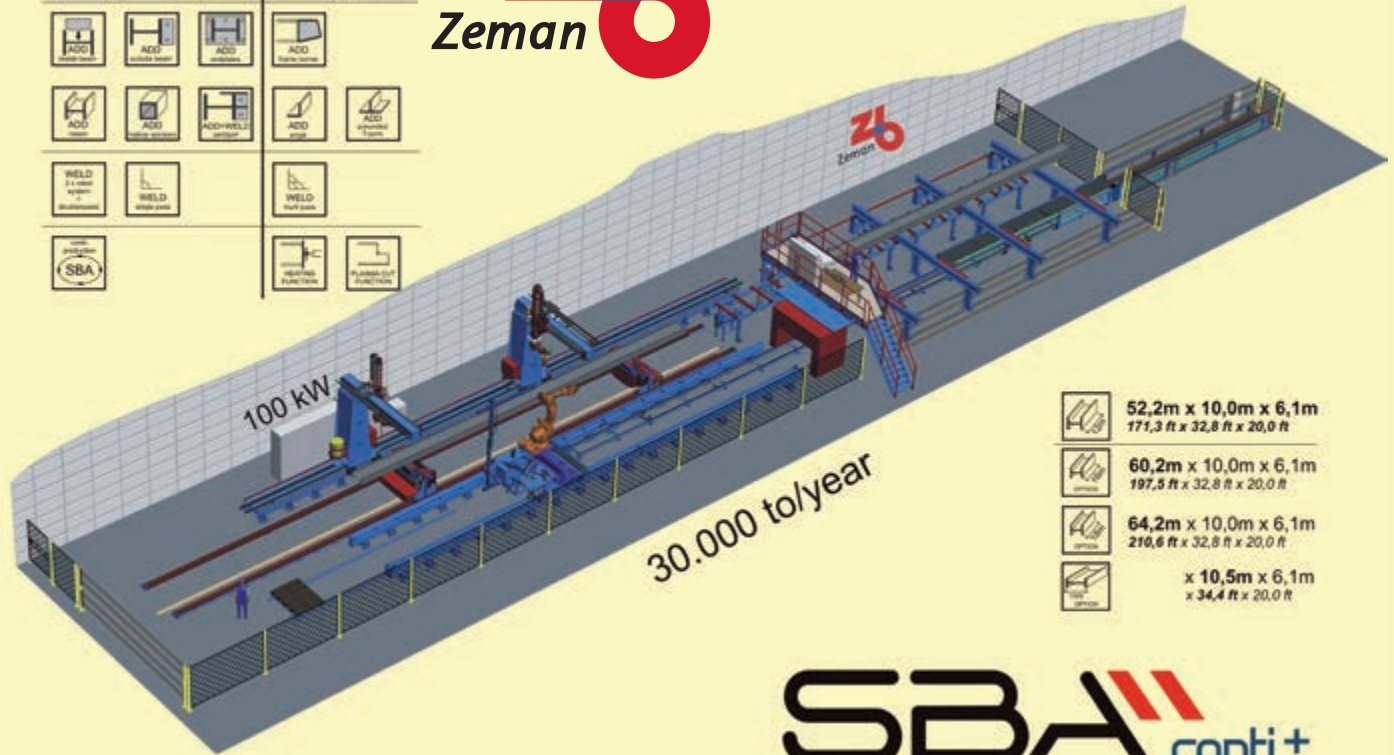
request the price
and delivery date

20.000t/year,
1 welding robot,
auto inlet
system

Basic



Option



	52,2m x 10,0m x 6,1m 171,3 ft x 32,8 ft x 20,0 ft
	60,2m x 10,0m x 6,1m 197,5 ft x 32,8 ft x 20,0 ft
	64,2m x 10,0m x 6,1m 210,6 ft x 32,8 ft x 20,0 ft
	x 10,5m x 6,1m x 34,4 ft x 20,0 ft

SBA **conti+**

SBA conti+ design is chosen by fabricators running a plant with continuous material flow, allowing for easy integration in existing beam handling and demand for high output in finish welded structural steel. SBA conti+ design consists of 2 robots for assemble, tack weld and finish weld. Cross and longitudinal conveyors enable continuous beam loading without manual intervention (crane handling). This steel beam assembly robot welding machine can achieve up to 30.000tons/year to assemble, tack and finish weld cleats to beams.

Machine composition	Auto INLET system (length-, cross conveyor)	✓
	Conveyor for ADD parts (auto system)	✓
	Beam turning tables (turn-over system)	✓
	Handlingsrobot IRB6640	✓
	Magnetgripper Type 1, 2, 3	✓
	Auto turning station for ADD parts	✓
	Pre-heating system	optional
	Welding Robot system 1	✓
	Welding Robot system 2	✓
	Application for angle profiles as ADD part	optional
	Plasma cutting application	optional
	Auto OUTLET area	✓
	Camera system for remote support	optional
	Safety fences and devices	✓

Included services	Packing and loading of equipment	✓
	Installation at customer sites	✓
	Start-up and Tests at customer sites	✓
	Operators training	✓

Included functions and ability of equipment	Auto inlet of beam into the line	✓
	Auto feed-in of ADD parts into the line	✓
	Auto scan of ADD parts	✓
	Auto turning of ADD parts if mispositioned	✓
	Auto assembly and tack welding	✓
	Auto part2part assembly and welding	✓
	Auto gap detection and compensation	✓
	Auto beam check (for correct assembly)	✓
	Auto pos. detection for welding seams	✓
	Auto weld-out (single layer)	✓
	Auto weld-out (multi layer)	optional
	Auto pre-heating (for multi layer)	optional
	Auto plasma cuts at the main profile	optional
	Auto outlet of finished beam from the line	✓

Basic data	Min. beam sizes	160 x 3000 mm
	Max. beam sizes	1100 x 12000 mm
	Max. beam width up to 1500 mm	optional
	Max. beam length up to 16000 mm	optional
	Max. beam length up to 18000 mm	optional
	Max. beam weight	8 tons
	Annual production capacity	up to 30.000t/year
	Line dimensions (12m version)	52200 x 10500 x 6200
	Line dimensions (16m version)	60200 x 10500 x 6200
	Line dimensions (18m version)	64200 x 10500 x 6200

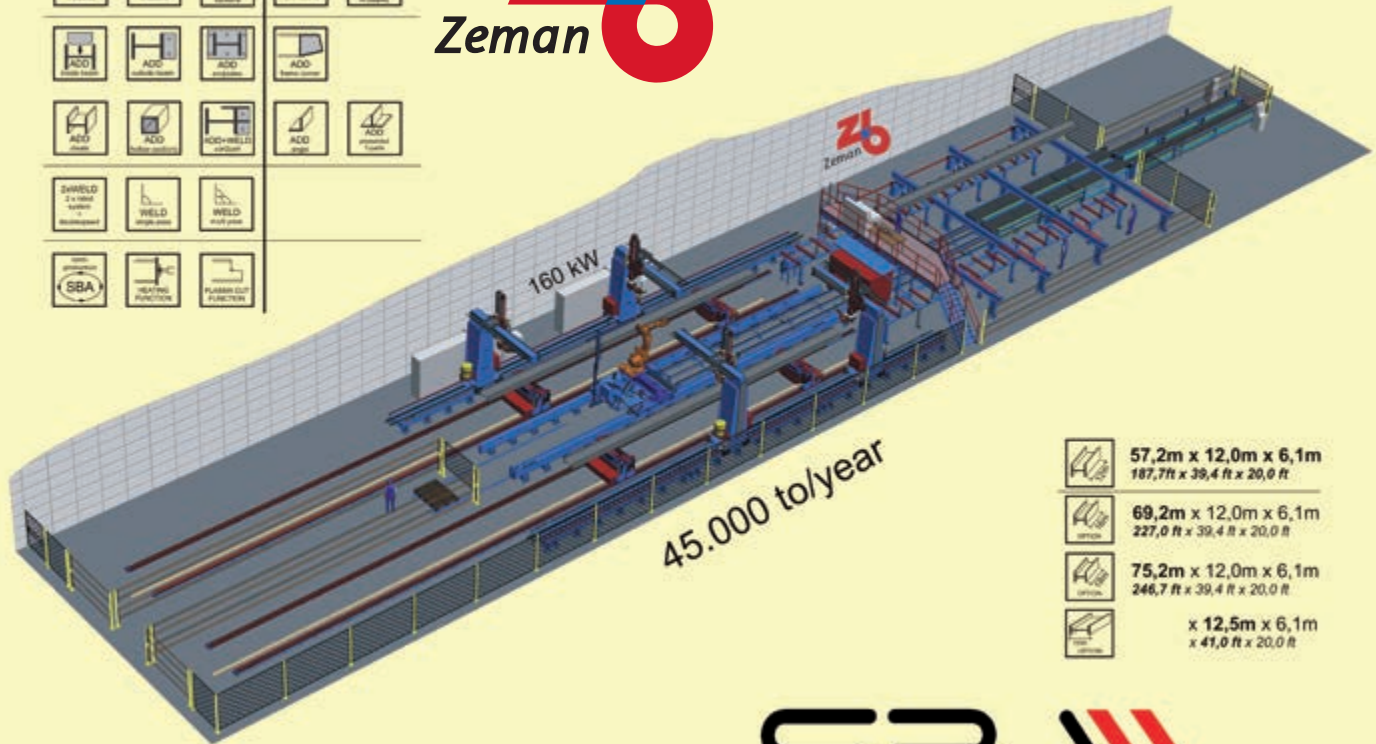
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Basic



Option



	57,2m x 12,0m x 6,1m 187,7ft x 39,4 ft x 20,0 ft
	69,2m x 12,0m x 6,1m 227,0 ft x 39,4 ft x 20,0 ft
	75,2m x 12,0m x 6,1m 246,7 ft x 39,4 ft x 20,0 ft
	x 12,5m x 6,1m x 41,0 ft x 20,0 ft



The flagship of Zeman's SBA family.

SBA2 conti+ is a double sided line, consists of 4 robots for assemble, tack weld and finish weld robots. The final configuration of this line can be achieved step by step by applying ZEMAN's modular installation concept. Fabricators dedicated to highest output, sufficient space availability and cautious investment planning will strive for SBA2 conti+, but start with SBA conti and gradually expand the system.

Machine composition	Auto INLET system (length-, cross conveyor)	✓
	Conveyor for ADD parts (auto system)	✓
	Beam turning tables (turn-over system)	✓
	Handlingsrobot IRB6640	✓
	Magnetgripper Type 1, 2, 3	✓
	Auto turning station for ADD parts	✓
	Pre-heating system	optional
	Welding Robot system 1	✓
	Welding Robot system 2	✓
	Application for angle profiles as ADD part	optional
	Plasma cutting application	optional
	Auto OUTLET area	✓
	Camera system for remote support	optional
Safety fences and devices	✓	

Included services	Packing and loading of equipment	✓
	Installation at customer sites	✓
	Start-up and Tests at customer sites	✓
	Operators training	✓

Included functions and ability of equipment	Auto inlet of beam into the line	✓
	Auto feed-in of ADD parts into the line	✓
	Auto scan of ADD parts	✓
	Auto turning of ADD parts if mispositioned	✓
	Auto assembly and tack welding	✓
	Auto part2part assembly and welding	✓
	Auto gap detection and compensation	✓
	Auto beam check (for correct assembly)	✓
	Auto pos. detection for welding seams	✓
	Auto weld-out (single layer)	✓
	Auto weld-out (multi layer)	optional
	Auto pre-heating (for multi layer)	optional
	Auto plasma cuts at the main profile	optional
	Auto outlet of finished beam from the line	✓

Basic data	Min. beam sizes	160 x 3000 mm
	Max. beam sizes	1100 x 12000 mm
	Max. beam width up to 1500 mm	optional
	Max. beam length up to 16000 mm	optional
	Max. beam length up to 18000 mm	optional
	Max. beam weight	8 tons
	Annual production capacity	up to 45.000t/year
	Line dimensions (12m version)	57200 x 14200 x 5750
	Line dimensions (16m version)	67200 x 14200 x 5750
Line dimensions (18m version)	75200 x 14200 x 5750	

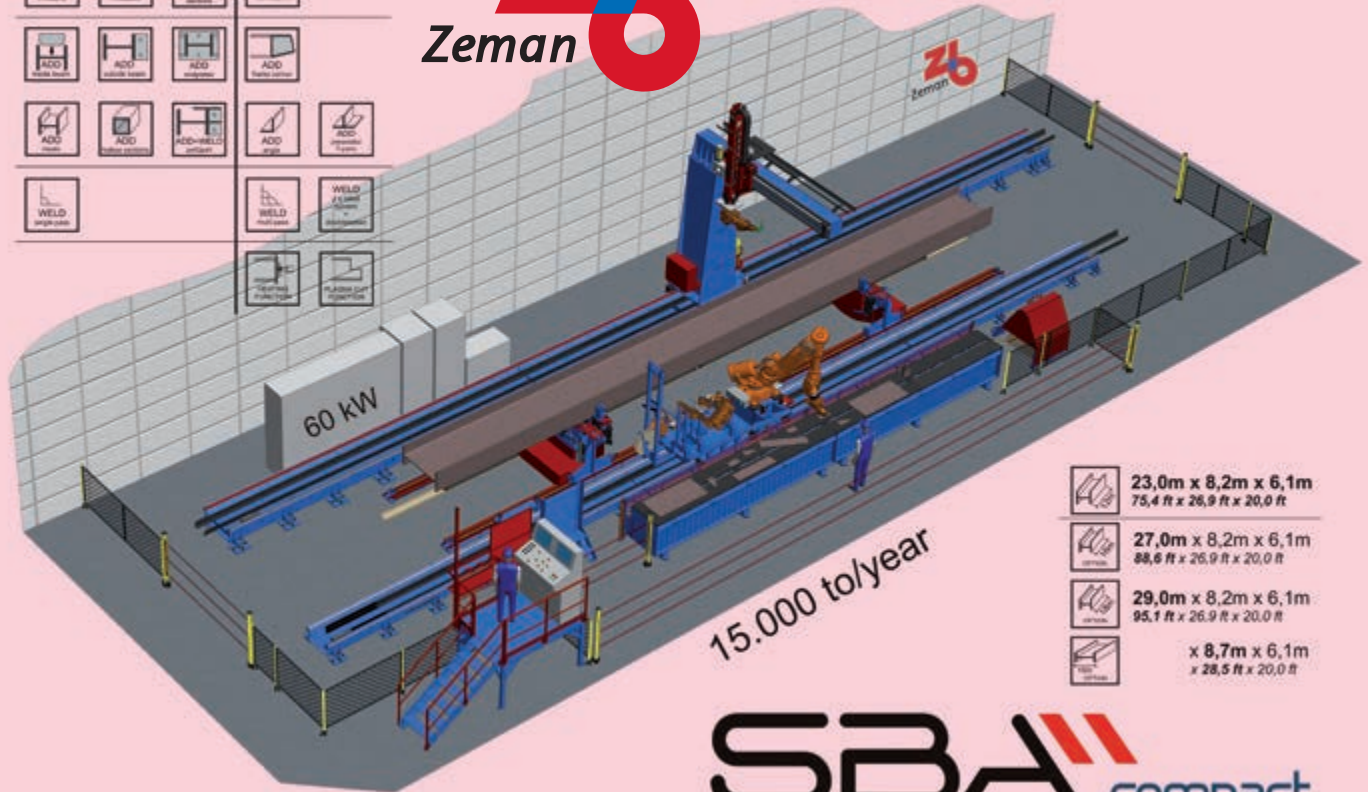
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Basic



Option



	23,0m x 8,2m x 6,1m 75,4 ft x 26,9 ft x 20,0 ft
	27,0m x 8,2m x 6,1m 88,6 ft x 26,9 ft x 20,0 ft
	29,0m x 8,2m x 6,1m 95,1 ft x 26,9 ft x 20,0 ft
	x 8,7m x 6,1m x 28,5 ft x 20,0 ft



SBA compact design consists of 1 robot for assemble, tack weld and finish weld. This system is best utilized for "assembling only" working mode. This steel beam assembly robot welding machine can achieve up to 15.000tons/year to tack and assemble cleats to beams. If welding is required, the SBA compact design achieves up to 8.000 tons / year of fully assembled and welded structural steel beams. Loading and unloading of beams is done by crane. The space requirement is limited to only 23m in length.

Machine composition	Auto INLET system (length-, cross conveyor)	optional
	Table for ADD parts (stationary)	✓
	Conveyor for ADD parts (auto system)	not available
	Beam turning tables (turn-over system)	✓
	Handlingsrobot IRB6640	✓
	Magnetgripper Type 1, 2, 3	✓
	Auto turning station for ADD parts	✓
	Pre-heating system	optional
	Welding Robot system 1	✓
	Welding Robot system 2	optional
	Application for angle profiles as ADD part	optional
	Plasma cutting application	optional
	Auto OUTLET system	not available
	Camera system for remote support	optional
Safety fences and devices	✓	

Included services	Packing and loading of equipment	✓
	Installation at customer sites	✓
	Start-up and Tests at customer sites	✓
	Operators training	✓

Included functions and ability of equipment	Auto inlet of beam into the line	not available
	Auto feed-in of ADD parts into the line	not available
	Auto scann of ADD parts	✓
	Auto turning of ADD parts if mispositioned	✓
	Auto assembly and tack welding	✓
	Auto part2part assembly and welding	✓
	Auto gap detection and compensation	✓
	Auto beam check (for correct assembly)	✓
	Auto pos. detection for welding seams	✓
	Auto weld-out (single layer)	✓
	Auto weld-out (multi layer)	optional
	Auto pre-heating (for multi layer)	optional
	Auto plasma cuts at the main profile	optional
	Auto outlet of finished beam from the line	not available

Basic data	Min. beam sizes	160 x 3000 mm
	Max. beam sizes	1100 x 12000 mm
	Max. beam width up to 1500 mm	optional
	Max. beam length up to 16000 mm	optional
	Max. beam length up to 18000 mm	optional
	Max. beam weight	8 tons
	Annual production capacity	up to 15.000 t/year
	Line dimensions (12m version)	23000 x 8200 x 6200
	Line dimensions (16m version)	27000 x 8200 x 6200
	Line dimensions (18m version)	29000 x 8200 x 6200

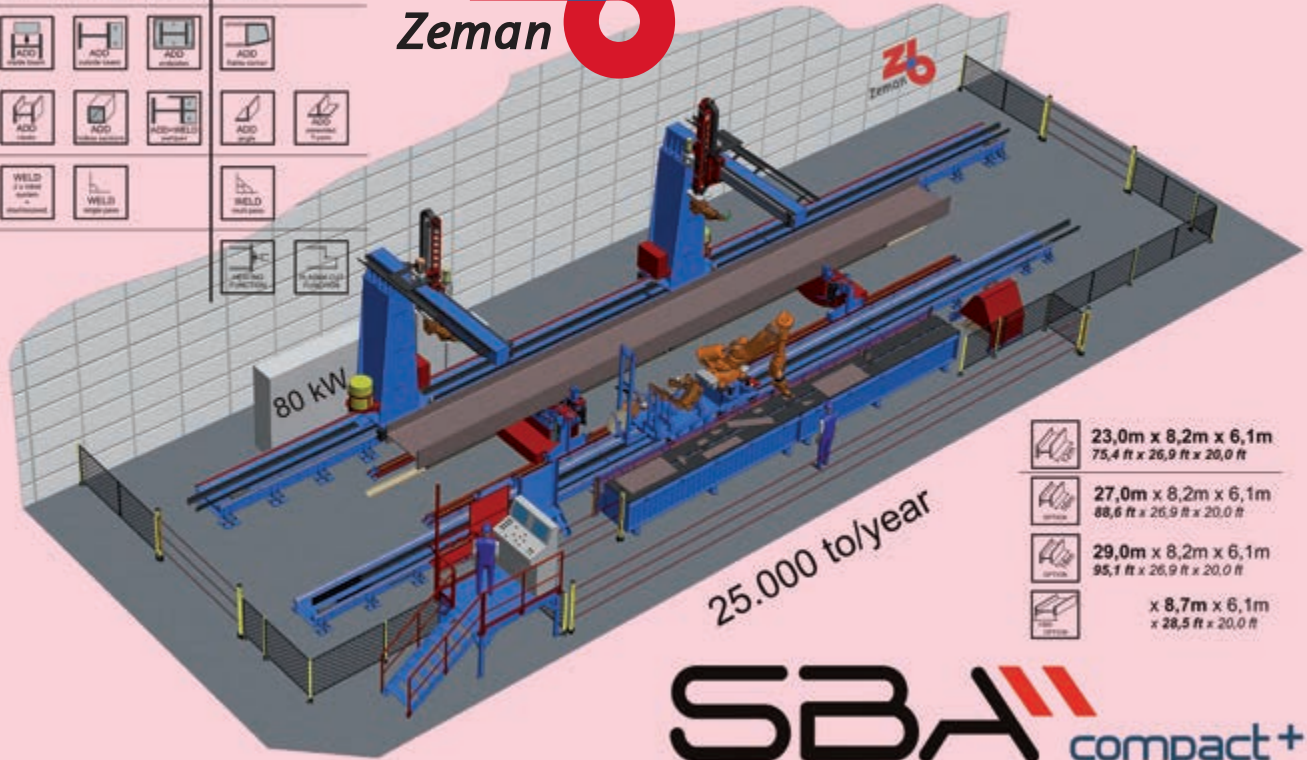
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Basic



Option



	23,0m x 8,2m x 6,1m 75,4 ft x 26,9 ft x 20,0 ft
	27,0m x 8,2m x 6,1m 88,6 ft x 26,9 ft x 20,0 ft
	29,0m x 8,2m x 6,1m 95,1 ft x 26,9 ft x 20,0 ft
	x 8,7m x 6,1m x 28,5 ft x 20,0 ft

SBA compact+

This specification meets most international fabricator's performance outcome requirements. The SBA compact+ design consists of 2 robots for assemble, tack weld and finish weld. This Steel Beam assembler can achieve up to 25.000tons/year to assemble and weld out cleats to beams. This machine is first choice for fabricators with limited factory space and high capacity demand.

Machine composition	Auto INLET system (length-, cross conveyor)	optional
	Table for ADD parts (stationary)	✓
	Conveyor for ADD parts (auto system)	not available
	Beam turning tables (turn-over system)	✓
	Handlingrobot IRB6640	✓
	Magnetgripper Type 1, 2, 3	✓
	Auto turning station for ADD parts	✓
	Pre-heating system	optional
	Welding Robot system 1	✓
	Welding Robot system 2	✓
	Application for angle profiles as ADD part	optional
	Plasma cutting application	optional
	Auto OUTLET system	not available
	Camera system for remote support	optional
Safety fences and devices	✓	

Included services	Packing and loading of equipment	✓
	Installation at customer sites	✓
	Start-up and Tests at customer sites	✓
	Operators training	✓

Included functions and ability of equipment	Auto inlet of beam into the line	not available
	Auto feed-in of ADD parts into the line	not available
	Auto scan of ADD parts	✓
	Auto turning of ADD parts if mispositioned	✓
	Auto assembly and tack welding	✓
	Auto part2part assembly and welding	✓
	Auto gap detection and compensation	✓
	Auto beam check (for correct assembly)	✓
	Auto pos. detection for welding seams	✓
	Auto weld-out (single layer)	✓
	Auto weld-out (multi layer)	optional
	Auto pre-heating (for multi layer)	optional
	Auto plasma cuts at the main profile	optional
	Auto outlet of finished beam from the line	not available

Basic data	Min. beam sizes	160 x 3000 mm
	Max. beam sizes	1100 x 12000 mm
	Max. beam width up to 1500 mm	optional
	Max. beam length up to 16000 mm	optional
	Max. beam length up to 18000 mm	optional
	Max. beam weight	8 tons
	Annual production capacity	up to 25.000 t/year
	Line dimensions (12m version)	23000 x 8200 x 6200
	Line dimensions (16m version)	27000 x 8200 x 6200
	Line dimensions (18m version)	29000 x 8200 x 6200

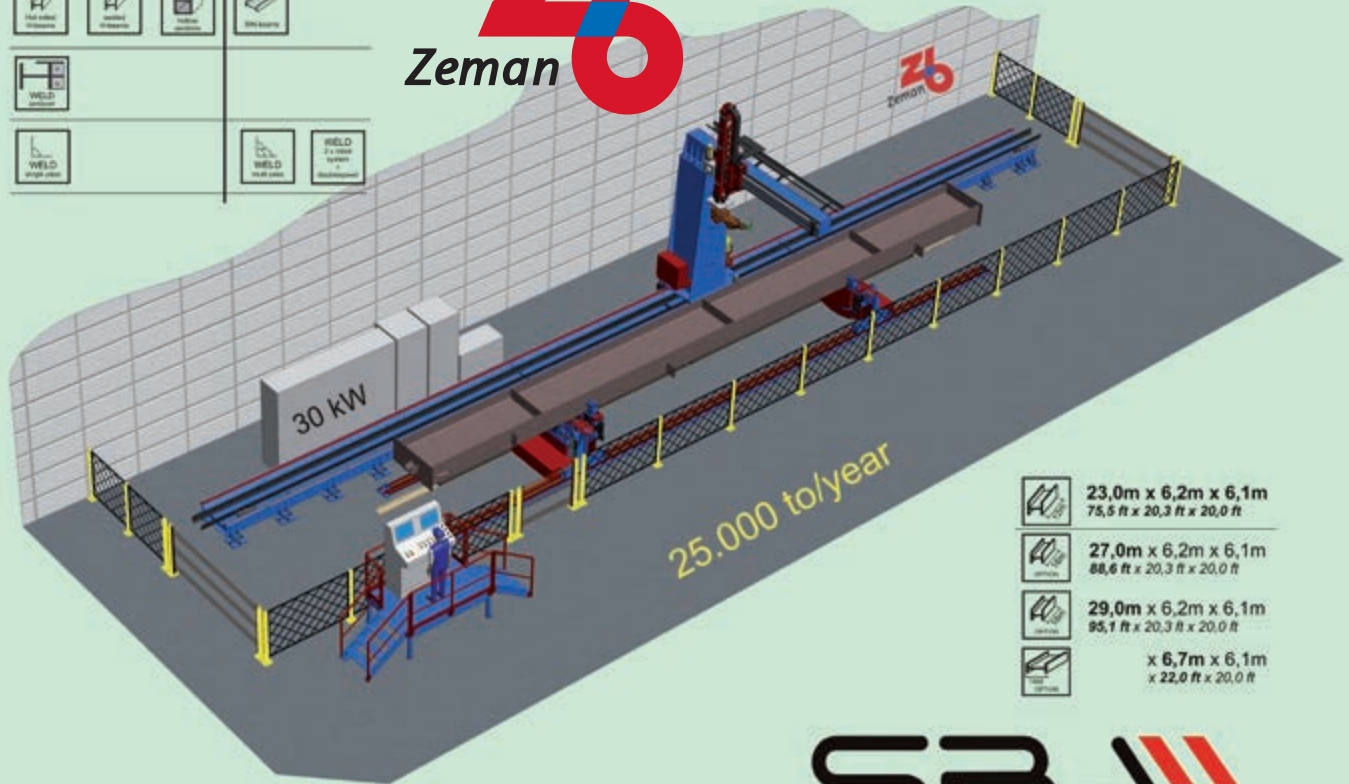
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Basic



Option



	23,0m x 6,2m x 6,1m 75,5 ft x 20,3 ft x 20,0 ft
	27,0m x 6,2m x 6,1m 88,6 ft x 20,3 ft x 20,0 ft
	29,0m x 6,2m x 6,1m 95,1 ft x 20,3 ft x 20,0 ft
	x 6,7m x 6,1m x 22,0 ft x 20,0 ft

SBA eco

The SBA eco steel beam robot welding cell will fabricate and fully weld out cleats to beams that have previously been manually tacked and assembled. This specification is cost effective and provides additional flexibility of the type of parts that can be fabricated in the robot welding cell. SBA eco consist of 1 welding robot and achieves up to 25.000 tons of finish welded beams per year.

Machine composition	Auto INLET system (length-, cross conveyor)	not available
	Table for ADD parts (stationary)	not needed
	Conveyor for ADD parts (auto system)	not needed
	Beam turning tables (turn-over system)	✓
	Handlingsrobot IRB6640	not needed
	Magnetgripper Type 1, 2, 3	not needed
	Auto turning station for ADD parts	not needed
	Pre-heating system	optional
	Welding Robot system 1	✓
	Welding Robot system 2	optional
	Application for angle profiles as ADD part	not needed
	Plasma cutting application	not available
	Auto OUTLET system	not available
	Camera system for remote support	optional
Safety fences and devices	✓	

Included services	Packing and loading of equipment	✓
	Installation at customer sites	✓
	Start-up and Tests at customer sites	✓
	Operators training	✓

Included functions and ability of equipment	Auto inlet of beam into the line	not available
	Auto feed-in of ADD parts into the line	not needed
	Auto scan of ADD parts	not needed
	Auto turning of ADD parts if mispositioned	not needed
	Auto assembly and tack welding	not needed
	Auto part2part assembly and welding	✓
	Auto gap detection and compensation	✓
	Auto beam check (for correct assembly)	✓
	Auto pos. detection for welding seams	✓
	Auto weld-out (single layer)	✓
	Auto weld-out (multi layer)	optional
	Auto pre-heating (for multi layer)	optional
	Auto plasma cuts at the main profile	not available
	Auto outlet of finished beam from the line	not available

Basic data	Min. beam sizes	160 x 3000 mm
	Max. beam sizes	1100 x 12000 mm
	Max. beam width up to 1500 mm	optional
	Max. beam length up to 16000 mm	optional
	Max. beam length up to 18000 mm	optional
	Max. beam weight	8 tons
	Annual production capacity	up to 25.000 t/year
	Line dimensions (12m version)	25000 x 6500 x 5750
	Line dimensions (16m version)	29000 x 6500 x 5750
	Line dimensions (18m version)	31000 x 6500 x 5750

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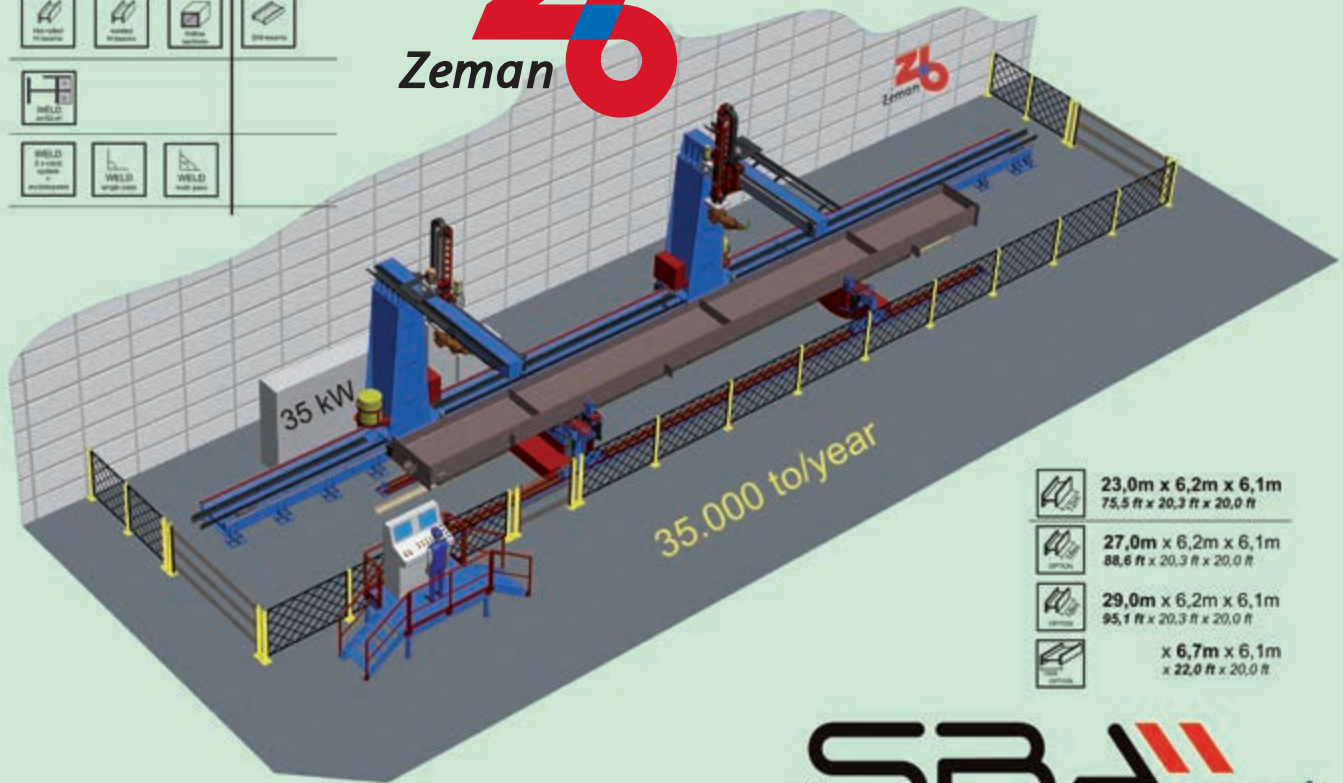
Basic



Option



ZI
Zeman



	23,0m x 6,2m x 6,1m 75,5 ft x 20,3 ft x 20,0 ft
	27,0m x 6,2m x 6,1m 88,6 ft x 20,3 ft x 20,0 ft
	29,0m x 6,2m x 6,1m 95,1 ft x 20,3 ft x 20,0 ft
	x 6,7m x 6,1m x 22,0 ft x 20,0 ft

SBA eco+

SBA eco+ consist of 2 welding robots, offers best efficiency in finish welding for pre-assembled beams and achieves up to 35.000 tons of finish welded beams per year. The SBA eco steel beam robot welding cell will fabricate and fully weld out cleats to beams that have previously been manually tacked and assembled. This specification is cost effective and provides additional flexibility of the type of parts that can be fabricated in the robot welding cell.

Machine composition	Auto INLET system (length-, cross conveyor)	not available
	Table for ADD parts (stationary)	not needed
	Conveyor for ADD parts (auto system)	not needed
	Beam turning tables (turn-over system)	✓
	Handlingsrobot IRB6640	not needed
	Magnetgripper Type 1, 2, 3	not needed
	Auto turning station for ADD parts	not needed
	Pre-heating system	optional
	Welding Robot system 1	✓
	Welding Robot system 2	✓
	Application for angle profiles as ADD part	not needed
	Plasma cutting application	not available
	Auto OUTLET system	not available
	Camera system for remote support	optional
Safety fences and devices	✓	

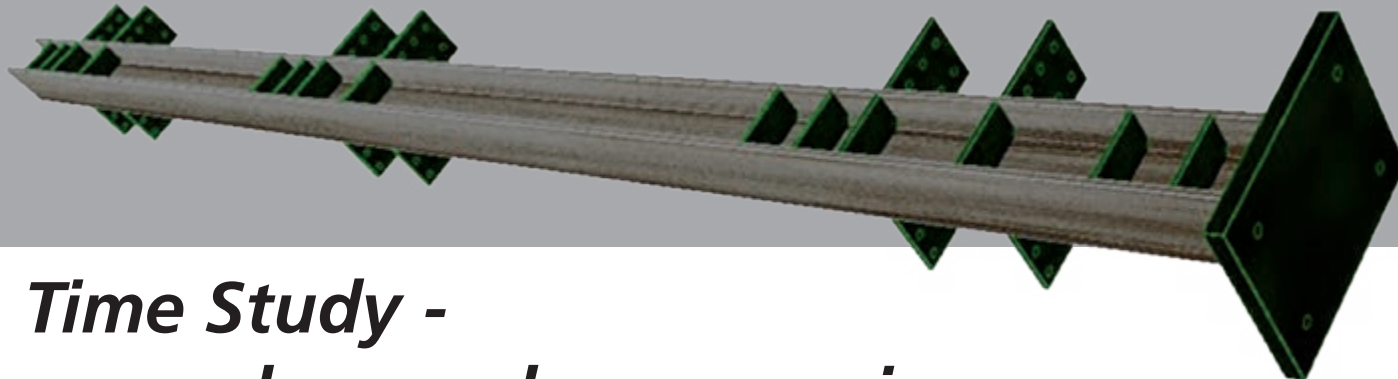
Included services	Packing and loading of equipment	✓
	Installation at customer sites	✓
	Start-up and Tests at customer sites	✓
	Operators training	✓

Included functions and ability of equipment	Auto inlet of beam into the line	not available
	Auto feed-in of ADD parts into the line	not needed
	Auto scan of ADD parts	not needed
	Auto turning of ADD parts if mispositioned	not needed
	Auto assembly and tack welding	not needed
	Auto part2part assembly and welding	✓
	Auto gap detection and compensation	✓
	Auto beam check (for correct assembly)	✓
	Auto pos. detection for welding seams	✓
	Auto weld-out (single layer)	✓
	Auto weld-out (multi layer)	optional
	Auto pre-heating (for multi layer)	optional
	Auto plasma cuts at the main profile	not available
	Auto outlet of finished beam from the line	not available

Basic data	Min. beam sizes	160 x 3000 mm
	Max. beam sizes	1100 x 12000 mm
	Max. beam width up to 1500 mm	optional
	Max. beam length up to 16000 mm	optional
	Max. beam length up to 18000 mm	optional
	Max. beam weight	8 tons
	Annual production capacity	up to 35.000 t/year
	Line dimensions (12m version)	25000 x 6500 x 5750
	Line dimensions (16m version)	29000 x 6500 x 5750
	Line dimensions (18m version)	31000 x 6500 x 5750

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the options and
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Time Study - we make sure by comparing

Sample Beam: **HEB 220**

Weight total: 717 kg

Number of ADD parts: 29

	Assembling Time	Welding Time	Total Time	Assembling	Welding	Total	Assembling	Welding	Total
	min			h/to			SAVE %		
manually	200	170	370	4,65	3,95	8,60			
SBA Conti	33	125	158	0,77	2,90	3,66	84	27	57
SBA Conti+	33	87	120	0,77	2,01	2,78	84	49	68
SBA2 Conti+	31	45	76	0,72	1,05	1,77	85	73	79
SBA Compact	40	125	164	0,93	2,90	3,82	80	27	56
SBA Compact+	40	89	129	0,93	2,07	2,99	80	48	65
SBA Eco		130	130		3,01	3,01		24	65
SBA Eco+		94	94		2,19	2,19		45	75

Send your drawings to:

Zeman Bauelemente

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