

WE WELCOME YOU TO VISIT OUR FACILITY AT ANY CONVENIENT TIME

Technical-Commercial Quotation

*We offer for your consideration this quotation on Metal Roof Tile Production Line «Banga» 18 mill stands.
All equipment is designed and manufactured by Ruscana Engineering Group.*

Metal Roof Tile Production Line «Banga» ***(18 mill stands)***

Metal roof tile production line «Banga», hereinafter referred to as Equipment, is intended for manufacturing metal roof tile «Banga» with materials below.

Depending on the technical requirements and equipment configuration 2 options are available: **Standard** and **Premium**.



Fig.1 Photo of the line

Raw material requirements:

- Zinc coating to range 100...275 g/m²;
- Yield strength 280...320 N/mm²;
- Coil width – 1250 mm±5mm;
- Sheet thickness – 0,45...0,6 mm

Technical characteristics:

№	Description	UOM	«Standard»	«Premium»
1	Line operating mode		Manual / automatic	Manual / automatic
2	Installed power capacity, no more than	kW	23	23
3	Production speed (with end product 6 m)	m/min	6 – 7	8 – 9
4	*Supply voltage at frequency of 50 Hz ± 0,4 Hz	V	380	380
5	Dimensions (LxWxH) (with receiving table platform rolled out forward)	mm	26500x3500x1850	26500x3500x1850
	(with receiving table platform rolled out sideways)		22500x6300x1850	22500x6300x1850
6	Weight, no more than	kg	11 000	11 200
7	Required operating personnel	persons	1 – 2	1 – 2

* **Electrical supply network for countries of North America:** Supply voltage at frequency of 60 Hz, 230V 3 phase

Technical specifications:

1	Decoiler	UOM	«Standard»	«Premium»
1.1	Type		Cantilevered	Cantilevered
1.2	Feeding speed, no more than (automatically controlled)	m/min	25	25
1.3	Operating mode		Manual/automatic	Manual/automatic
1.4	Installed power capacity (electric motor with motor)	kW	5,5	5,5
1.5	Lifting capacity	Kg	7500	7500
1.6	Dimensions (LxWxH), no more than	mm	1250x2500x1600	1250x2500x1600
1.7	Coil width	mm	1250	1250
1.8	Mandrel expansion range With coil ID	mm	480...620	480...620
			500 / 600	500 / 600
1.9	Mandrel expansion/ clamping mechanism		mechanical (by handle)	mechanical (by handle)
1.10	Weight, no more than		1200	1200
2	Roll forming section	UOM	«Standard»	«Premium»
2.1	Version		In channel bar	In channel bar
2.1	Upper row of roll forming shafts		version in stations, on the bearings UCT 207 base (with central adjusting screw, with movement bearings frame along the guides of the station).	version in stations, on the bearings UCT 207 base (with central adjusting screw, with movement bearings frame along the guides of the station).
2.2	Low row of roll forming shafts		In channel bar (on the bearings UCFL 207 base)	In channel bar (on the bearings UCFL 207 base)
2.3	Dimensions (LxWxH), no more than	mm	10000x2000x1350	10000x2000x1350
2.4	Installed power capacity	kw	4 + 4	4,4

2.5	Drive type		reducer with asynchronous electromotor	servo motor
2.6	Transverse mechanical cutter		mechanical	mechanical
2.7	Quantity of mill stands	pcs	18	18
2.8	Rollers material		Instrument steel with heat treatment	Instrument steel with heat treatment
2.9	Drive mechanism		distributed	distributed
2.10	Roller shafts drive chain tension mechanism		Automatic	Automatic
2.11	Protective shutters		yes	yes
2.12	Emergency stop cable around the perimeter of the roll forming section		option	option
2.13	Weight	kg	9050	9250
3	Guillotine with press	UOM	«Standard»	«Premium»
3.1	Drive type		hydraulic	Hydraulic with hydraulic accumulator
3.2	Automatic spray system in stamp zone - nozzles	kw	1	1
The technology of production metal tile profile involves the mandatory emulsion injection into stamp zone, which makes it possible to obtain a stable quality and increase the service life of the tools				
3.3	Guillotine			
3.4	Type		active*	active*
3.5	Drive type		hydraulic	hydraulic
3.6	Dimensions (LxWxH), no more than	mm	1900x850x1800	1900x850x1800
3.7	Weight	kg	2800	2800
3.8	Scraper GHK 311	pcs	7	7
3.9	Guide ring AGI 30/S1	pcs	14	14
3.10	Ring according to 044-050-36-2-4 ГОСТ 9833-73/ГОСТ 18829-73	pcs	7	7
3.11	Rod packing TTI 1569	pcs	7	7
*The active type guillotine provides two positions of the lower knife: working and base. In working position, the lower guillotine knife rises before the cutting of the finished profile and returns to its base position during the work of the roll forming section. This makes it possible to exclude the forbidden lengths of the finished profile and produce a metal tile with a wave length of 350 and 400 mm				
4	Hydraulic system	UOM	«Standard»	«Premium»
4.1	Main drive power capacity	kw	11	11
4.2	Cooling system power capacity	kw	1,5	1,5
4.3	Tank volume	L	300	300
4.4	Operating system pressure	MPa	12	12
4.5	Dimensions (LxWxH), no more than		1300x900x620	1300x900x620
4.6	Weight, no more than		350	350
5	Receiving table	UOM	«Standard»	«Премиум»
5.1	Type		Receiving table (Stacker)	Receiving table (Stacker)

5.2	Dimensions (LxWxH), no more than	mm	6000x1630x1300	6000x1630x1300
5.3	Length of end product	mm	1000...6000	1000...6000
5.4	Installed power capacity	kw	1,5	1,5
5.5	Platform lifting capacity	kg / rm	500	500
5.6	Roll out platform direction		Forward / sidewas option	Forward / sidewas option
5.7	Length of guide rails (forward/sideways)	mm	12000 / 3500	12000 / 3500
5.8	Weight		650	650
6	Automatic control system	UOM	«Standard»	«Премнум»
6.1	Hardware base Omron (Japan)		+	+
6.2	Controlled parameters: - Roll forming speed; - quantity / length of end product; - adjustment of the pauses of the technological cycle; - production task; - program for selecting the length of the "steps".		+	+
6.3	Interface: English, User-friendly		+	+
6.4	Indicators: General settings, error and emergency alarms		+	+

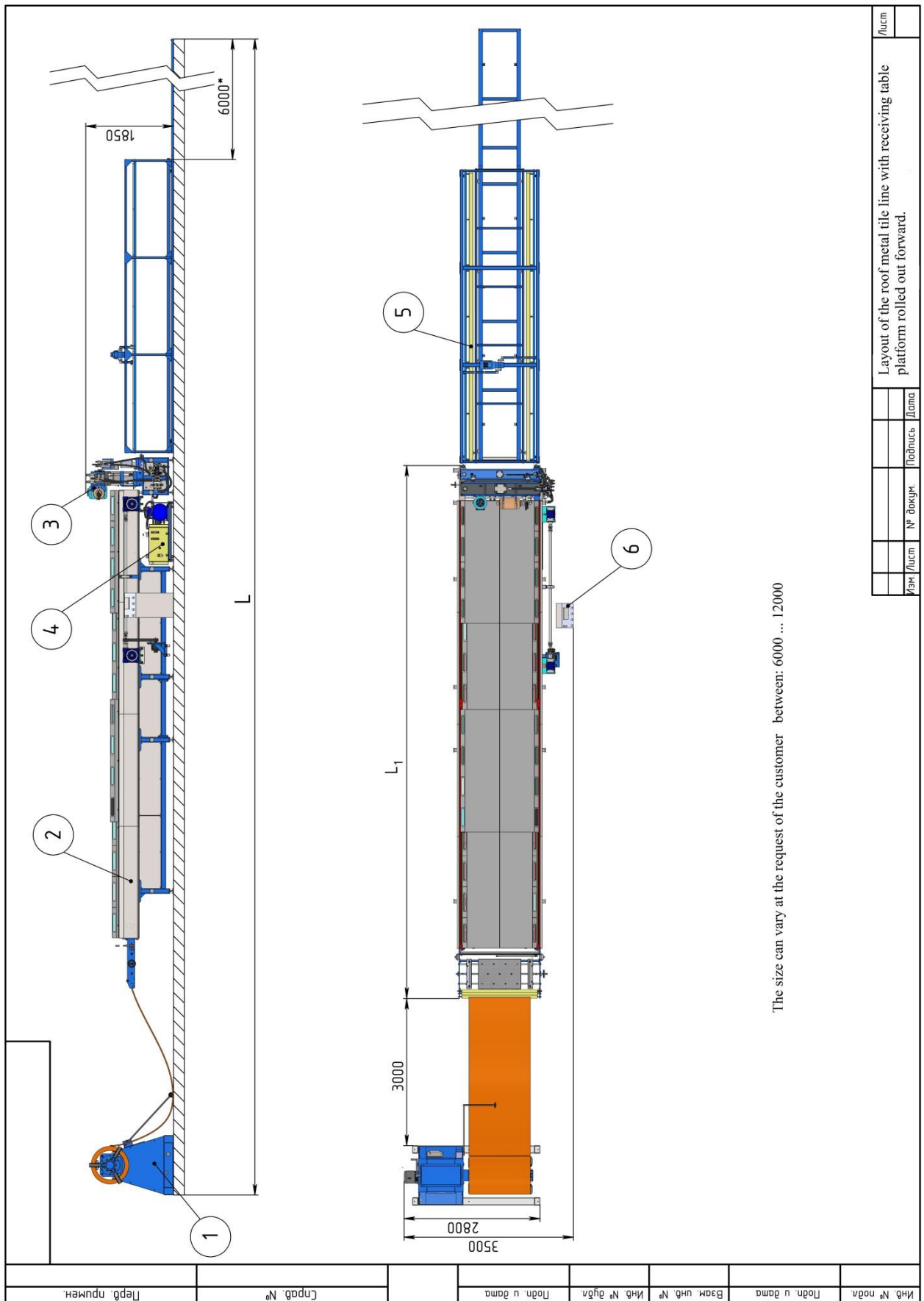
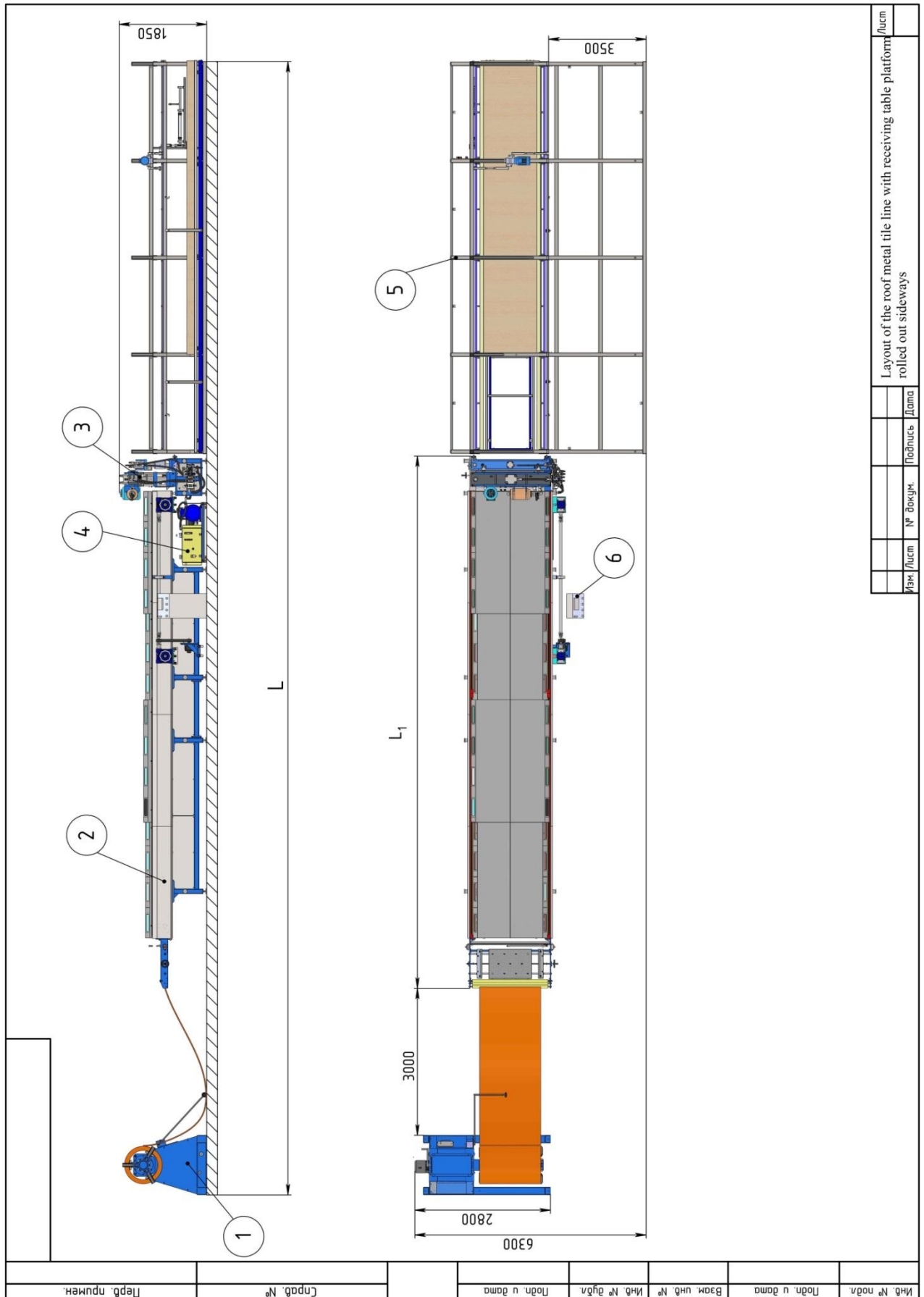


Fig.3 Layout of the roof metal tile line with receiving table platform rolled out **forward**

Dimensions of the line with receiving table platform rolled out forward	L	L1
	26500	10000



Layout of the roof metal tile line with receiving table platform rolled out sideways

Fig.4 Layout of the roof metal tile line with receiving table platform rolled out **sideways**

Dimensions of the line with receiving table platform rolled out sideways	L	L1
	22500	10000

Imported components details

Components kit	Manufacturer
- hydraulic pumps; - control units (distributors, consumption regulators, pressure control valves); - proportional technology; - safety valves; - sealing elements;	Hydro components "DUPLOMATIC" (Italy)
- Cylinders; - distributors; - service units (filters, moisture separators, lubricators, pressure regulators); - pneumatic hoses and connectors	Pneumatic components "DUPLOMATIC" (Italy)
- controllers; - frequency converters; - length encoders; - inductive proximity sensors - control panels - relay	Industrial automation components "OMRON" (Japan)
- Shaft bearing units	"ASKUBAL", (Germany)

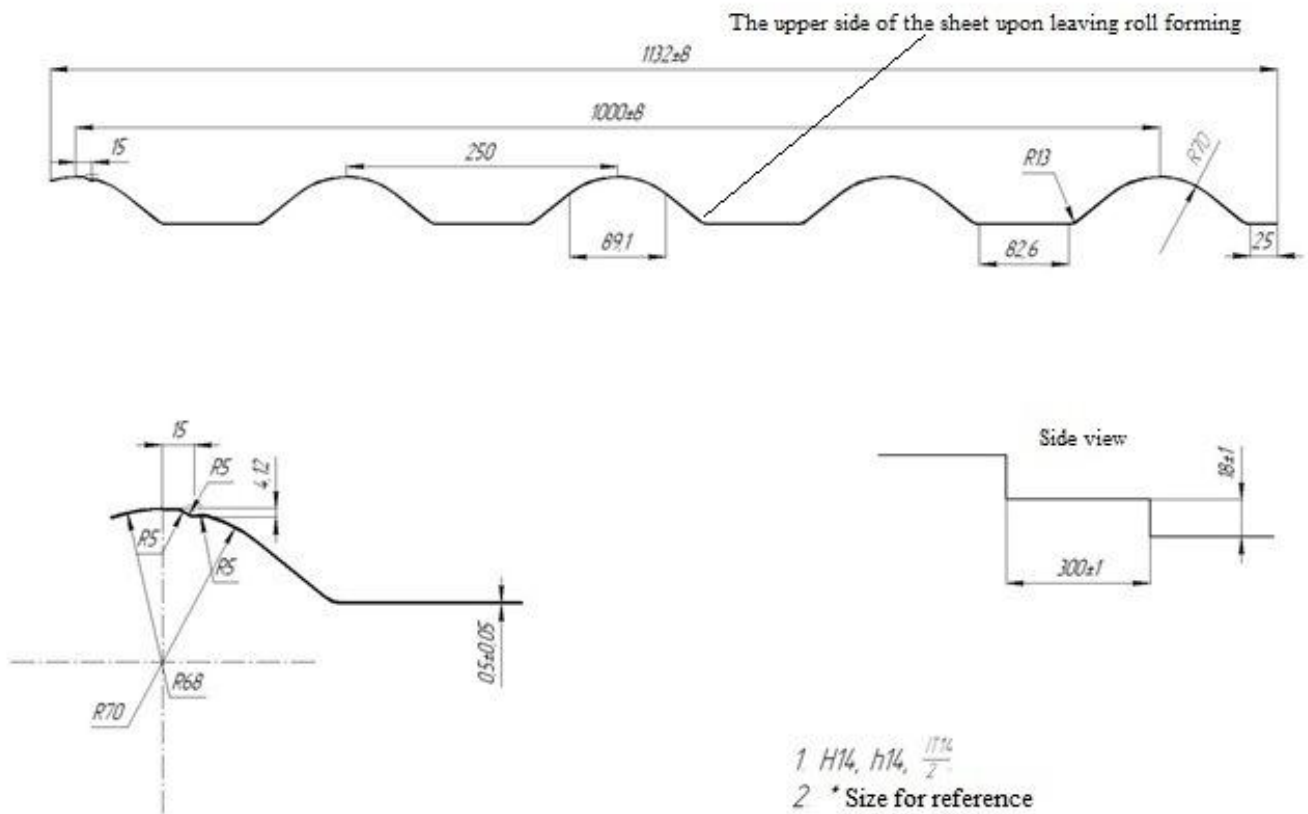


Fig.5 Roof Metal Tile Profile drawing

Variable parameters of the metal tile profile «Banga», depending on the configuration of the line with the guillotine of active type

№	Description / Configuration		«Standard»	«Premium»
1	Step height	mm	18	18
2	Pitch of wave	mm	300	300

Equipment specification

№	Description	UOM	«Standard»	«Premium»
			QTY	QTY
1	Metal roof tile production line «Banga», consist of:	Set		
1.1	Decoiler	pcs	1	1
1.2	Roll forming section	pcs	1	1
1.3	Heat treatment of profiling rollers	pcs	1	1
1.4	Protective shutters	pcs	1	1
1.5	Transverse mechanical cutter	pcs	1	1
1.6	Hydraulic system	pcs	1	1
1.7	Hydraulic press	pcs	1	1
1.8	Hydraulic guillotine	pcs	1	1
1.9	Receiving table (Stacker)	pcs	1	1
1.10	Automatic control system (ACS)	pcs	1	1
1.11	Supervised installation and commissioning	ea	1	1

Options:

1.	<i>For Decoiler</i>
1.1	<i>Hydraulic mandrel expansion</i>
1.2	<i>Coil car with motion drive</i>
1.3	<i>Motion set, rails from 4,5 m + 4 wheel supports</i>
2.	<i>Decoiler</i>
2.1	<i>An additional payment for Decoiler with lifting capacity 10 tons</i>
3.	<i>For active type guillotine</i>
3.1	<i>Additional payment for « Guillotine 3D cut »</i>
4	<i>Sheet pusher with pneumatic drive (integrated into receiving table)</i>
5	<i>Protective shutters</i>
6	<i>Emergency stop cable around the perimeter of the roll forming section</i>