

Construction material - Floor deck panel application and making

Construction material - Floor deck panel

Formed steel plate supporting the floor concrete is called a profiled steel plate floor deck, which is also called a floor plate or floor decking panel.

What kind of building using floor deck board?

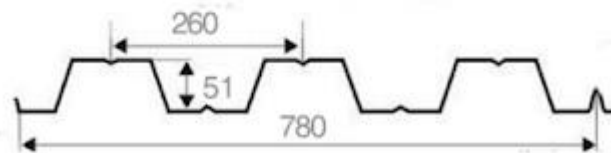
Floor deck steel panel are widely used in power plants, power equipment companies, automobile exhibition halls, steel structure workshops, cement warehouses, steel structure offices, airport terminals, railway stations, stadiums, concert halls, grand theaters, large supermarkets, logistics centers, Olympic venues. Steel structures such as venues.

Adapting to the requirements of rapid construction of the main steel structure, it can provide a firm working platform in a short time, and can be used to lay the profiled steel plate on multiple floors, and the flow water construction of the layered concrete slab.

Floor deck panel is divided into three styles: open floor decking board, shrinking floor decking board and closed floor building board.

The first generation of open floor decking, only used as a permanent formwork for slabs, can not interact with concrete, and the force analysis is complicated, so this kind of floor slab is only used as a permanent template in construction, after the concrete reaches 75% strength.

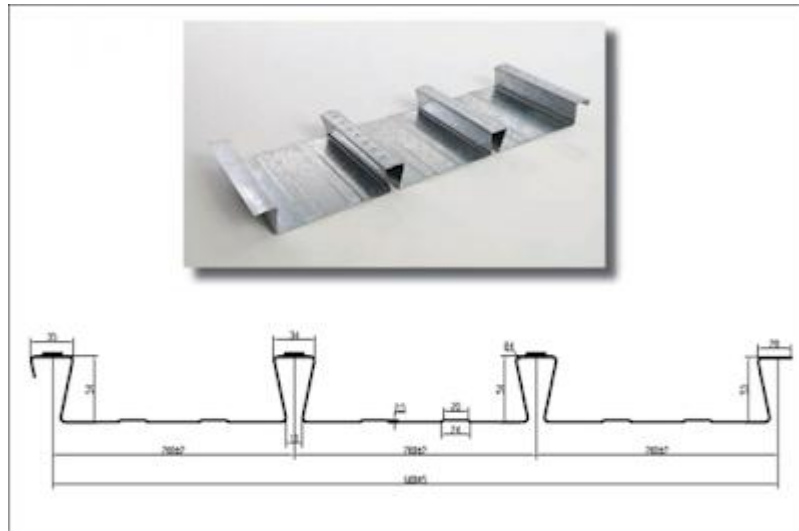
Including YX76-305-915, YX51-305-915, YX75-200-600, YX50-250-750, YX35-125-750;



型号: YX51-260-780

Second-generation shrinkage floor deck, for improved the plate shape and narrowed the opening of the plate, that is, the shrink plate, also known as the dovetail plate.

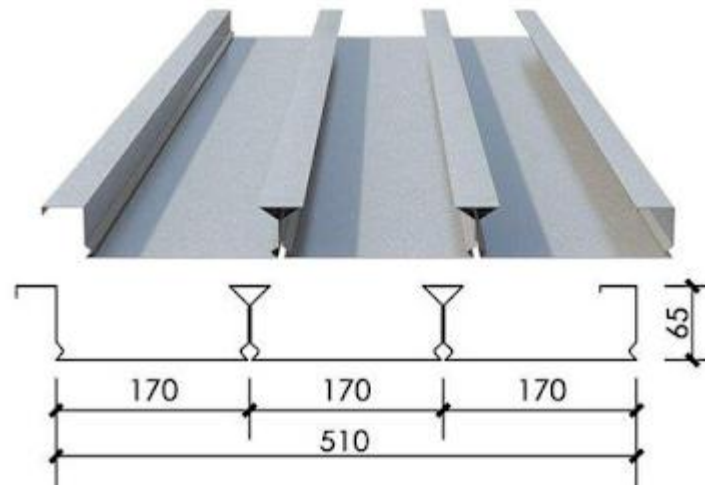
The decking type can not only work together with the concrete but also reduce it. The heightened area of the concrete has a great improvement on the fireproofing and corrosion protection of the board, and the rigidity of the floor is also higher than that of the open composite board. Including YX51-200-600;



Closed floor decking board, some designers add shear grooves on the original floor slab surface, so that the two can work together by the concrete wrapping effect, increasing the strength of the floor slab, not only can the floor slab As a whole with the concrete, it can also save part of the tensile reinforcement. As a result, the project cost is greatly reduced. After the improvement of the designer, the second-generation closed-end and shrink-up floor slabs gradually replaced the first-generation open

floor slab. Including YX65-185-555, YX66-240-720,
YX65-170-510, YX46-200-600, YX40-185-740.

Above contents refer baike.



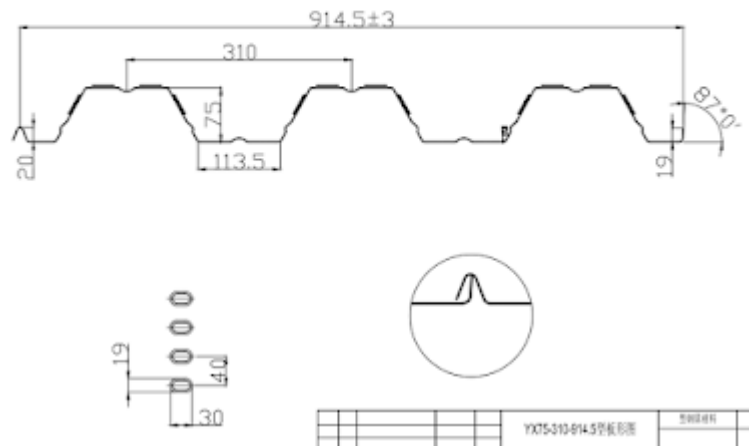
Floor deck making solution

Galvanized Steel Sheet [Floor Decking](#)

[Panel Roll Forming Machine](#)

Metal Forming machine for steel floor deck
technology detail

Construction material manufacturer design floor
decking drawing



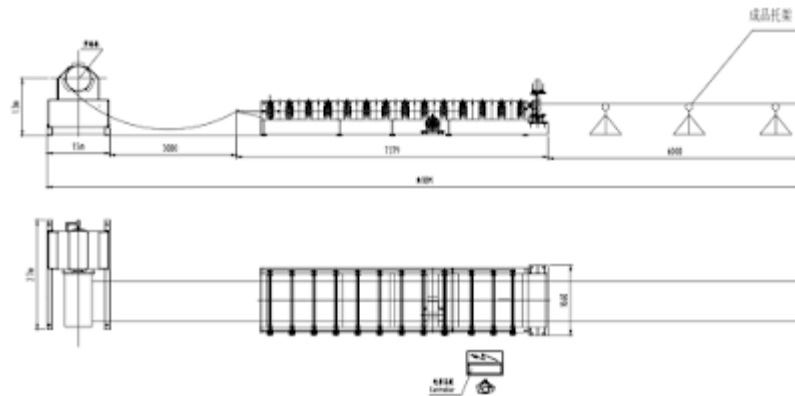
1, Shenzhen Superda Machine Co., Ltd Roll Forming Machine Technical Parameters
(Item: YX75-310-914.5)

No.	ITEM		PARAMETER	REMARK
1	MATERIAL	Type	Cold-rolled strip steel, galvanized sheet	
		T. (mm)	0.6-1.8mm	
		Yield Strength (Mpa)	Q235	

2	Forming product Width	310-914.5mm	
3	Forming speed (m/min)	8-16m	Including hole
4	(KW)	7.5 KW	FYR
5	Hydraulic power (KW)	7.5 KW	FYR
6	Collect Rack	6m	FYR
7	Voltage	AC380V, 50Hz, 3P	Customized

Floor Deck line process

Uncoiler → Guide device → roll forming machine
→ shear device (including knife) → finished product rack



[Roll forming machine](#) list

Uncoiler

1, Type Manual Expansion

2, Parameter

1) Passive discharge

2) Coil weight: < 5T

3) Coil inner D.: $\phi 450\text{mm}-\phi 530\text{mm}$

4) Max. Width. 1300mm

5) Thickness .0.4-1.8mm

Guide device

Main Forming machines

3.1 Forming Roller: 20 stations, and add Rub-roll, To make sure the surface profile no scratches.

- 3.2 Side Panel: T.18mm ,A3 steel Heavy duty 。
- 3.3 Rolling speeding: 2-8 m/min。
- 3.4 Roller material: GCr15, overall quenching, hardness HRC56-62 °C.
- 3.5 Motor power: 7.5KW。
- 3.6 Main Roller : dia. 75mm, 45 #。
- 3.7 Equipment base: 45 # H type using welded steel plate.
- 3.8 Transmission: chain drive.
- 3.9 Security: across the board with emergency stop buttons, easy to handle emergencies, to ensure that equipment and operator safety. And other gear in the chain and the staff could easily lead to injury transmission section covered with protective cover, to ensure the safety of workers.



Hydraulic shear for cutting floor deck

Collect Rack

Collect Rack can do automatic flat rack or manual rack

Below photo is automatic collect ra

Electrical control system

The entire line imported PLC control, LCD touch screen, man-machine interface. People interact with the PLC. Operator setting the program to run automatically (programmable control) and control

process monitoring, production line operator control and modify the control parameters, and real-time monitoring the equipment status & parameters and fault indication. Workpiece length digital setting, adjustable length can be adjustable as well.

Real-time monitoring of equipment operating status and fault indication. [Floor decking roll forming machine running overview.](#)

Operation manual / automatic two styles. With manual and automatic switching function: In the manual mode, can be stand-alone operation, easy maintenance; In automatic mode, carry out full production run, in order to start; across the board with emergency stop buttons, easy to handle emergencies, to ensure that equipment and operating personnel Safety.

Machinery main components of the brand

PLC control system: Siemens

Inverter: Taiwan Shilin

Encoder: Omron

Touch screen: Siemens

Some components are Schneider brand devices.

Devices completed [floor deck production line](#)

No.	Machine name	QTY	REMARK
1	Uncoiler straightener	1	
2	Guide device	1	
3	Forming machine	1	
4	Follow Shear	1	Including knife
5	Collect rack	1	
6	Control system	1	

Floor deck machine accessories brand

No.	Name	manufacturer
1	Motor & Reducer	Domestic brands
2	The main key bearing	Domestic brands
3	Inverter	Shilin
4	PLC Systems	Siemens
5	Low-voltage electrical	Schneider

6	Encoder	Omron
7	touch screen	Siemens
8	Hydraulic system	Domestic brands

Customized floor deck roll forming machine

