

شركة المصنع العالمي لأنظمة المباني المحدودة
International Building Systems Factory Co. Ltd.

**International Building
Systems Factory Co. Ltd.**



IBSF Metal Deck Systems



About US

International Building Systems Factory Co. Ltd (IBSF) has evolved from a steel fabricator into a leading regional EPC organization. As a cornerstone of Astra Industries, we provide integrated, end-to-end solutions - from innovative design and engineering to fabrication, procurement, and construction management.

Our expertise is built on a legacy of executing landmark projects across 36 countries, supported by our state-of-the-art facilities in Saudi Arabia. We are a Class-A contractor, certified to international standards including ISO and AISC, committed to safety, quality, and timely delivery.

Within our comprehensive portfolio, we are specialists in Metal Deck\Systems, offering expert solutions and manufacturing key profiles IBSF 50/300 and IBSF 70/300.

The IBSF Metal Deck System is a cold-formed galvanized steel decking designed for use in composite floor slabs and roofing applications. The trapezoidal profile provides an optimal balance between structural performance, span capability, and material efficiency, ensuring reliable performance in commercial, industrial, and infrastructure projects.

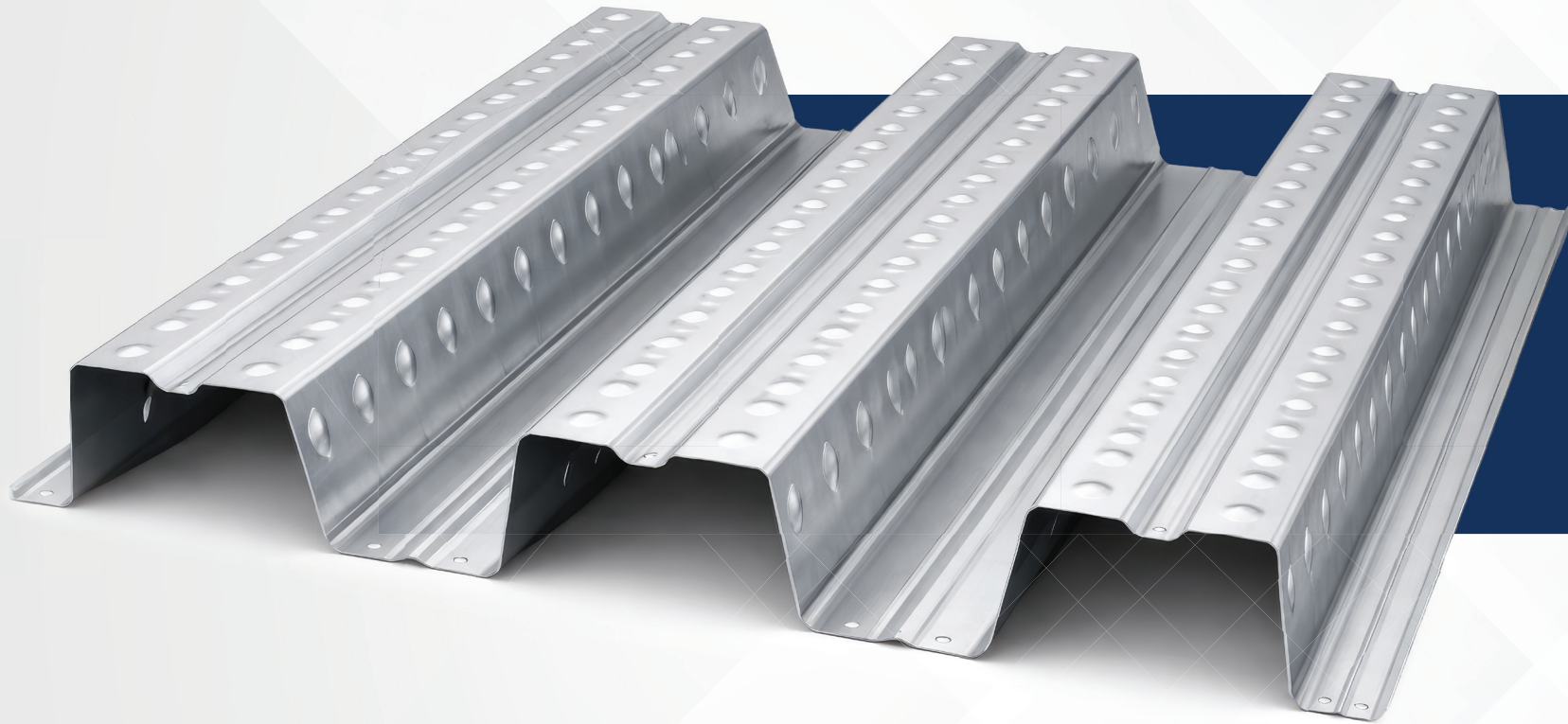
IBSF Metal Deck Systems



IBSF 50/300

IBSF 70/300

The IBSF 50/300 Metal Deck



50mm Deep | 300mm Pitch | Composite Floor & Roof Decking

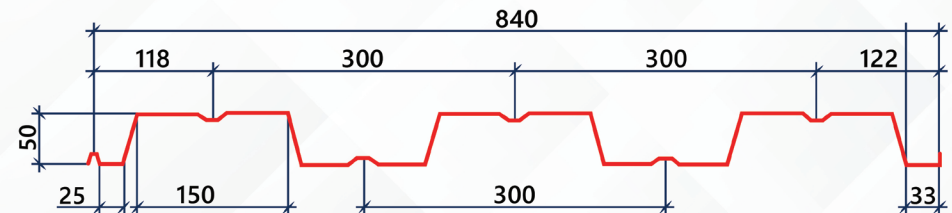
IBSF 50/300

Profile Depth: 50mm
Coverage Width: 300mm

IBSF 50/300

Thk	Area of Panel	Wt	Ixx	Top in compression			Bottom in compression		
				Ixe	Sx(T)	Sx(B)	Ixe	Sx(T)	Sx(B)
mm	mm ²	kg/m ²	cm ⁴	cm ⁴	cm ³	cm ³	cm ⁴	cm ³	cm ³
0.60	672.17	6.29	31.52	21.61	7.25	10.15	24.58	12.89	7.67
0.70	784.04	7.32	36.77	26.70	9.30	12.15	30.21	15.39	9.72
0.80	895.88	8.37	42.02	32.09	11.47	14.05	36.04	17.74	11.82
0.90	1007.70	9.42	47.26	37.70	13.82	15.95	41.83	20.08	13.91
1.00	1119.40	10.46	52.50	43.49	16.32	17.86	47.73	22.41	16.07
1.20	1342.80	12.55	62.97	54.17	20.79	21.54	58.99	26.95	20.12

Area	(width) * (Thk). mm ²
Wt	Member weight. kg/m ²
Ixx	Moment of inertia about the xx axis. cm ⁴
Ixe	Effective moment of inertia about the X axis cm ⁴
Sx(T)	Effective section modulus about the X axis for the extreme top fiber cm ³
Sx(B)	Effective section modulus about the X axis for the extreme bottom fiber cm ³



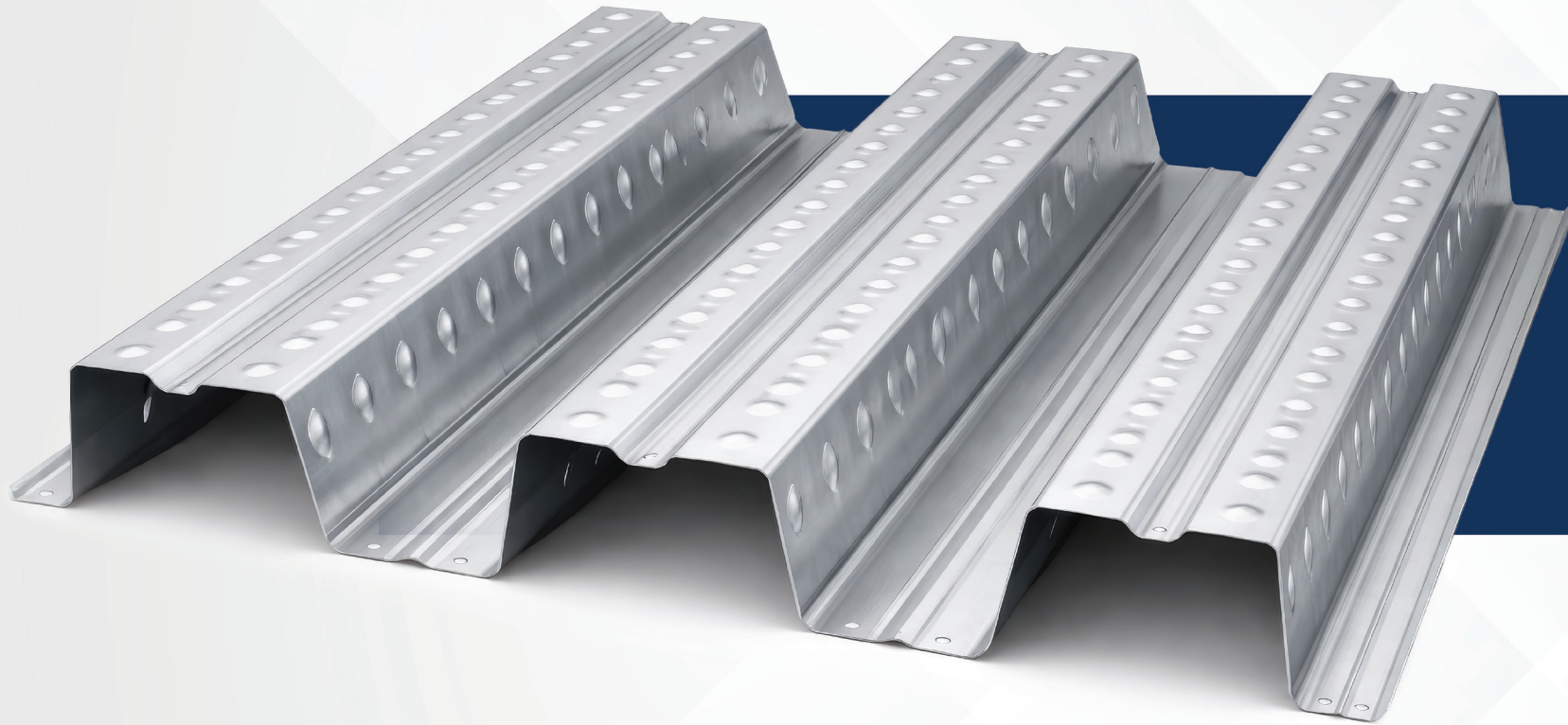
IBSF 50/300

Thickness (mm)	Weight (kg/m ²)	Span Type	Allowable Gravity Loads (kN/m ²)									
			Center To Center Span (mm)									
				1000	1250	1500	1750	2000	2250	2500	2750	3000
0.60	5.28	Single	w	11.95	7.65	5.35	3.95	3.00	*	*	*	*
			D	24.60	12.60	7.26	4.56	3.06	*	*	*	*
		Double	w	12.67	8.11	5.62	4.13	3.15	2.50	*	*	*
			D	58.92	30.60	17.52	11.04	7.83	5.16	*	*	*
		Triple or more	w	15.80	10.13	7.04	5.15	3.95	3.12	2.52	*	*
			D	46.02	23.76	13.80	8.70	5.82	4.08	2.94	*	*
0.70	6.15	Single	w	15.30	9.75	6.80	5.00	3.80	3.03	*	*	*
			D	29.16	14.70	8.52	5.28	3.60	2.52	*	*	*
		Double	w	16.00	10.25	7.13	5.24	4.01	3.17	2.55	*	*
			D	69.42	42.24	20.52	12.88	8.58	6.06	4.38	*	*
		Triple or more	w	20.03	12.80	8.85	6.55	5.01	3.95	3.20	2.63	*
			D	53.82	27.78	16.02	10.08	6.78	4.80	3.46	2.58	*
0.80	7.03	Single	w	18.90	12.10	8.40	6.15	4.70	3.73	3.05	*	*
			D	32.40	16.80	9.72	6.12	4.08	2.88	2.10	*	*
		Double	w	19.50	12.48	8.66	6.36	4.87	3.85	3.12	2.57	*
			D	78.12	40.00	23.14	14.58	9.72	6.86	4.99	3.76	*
		Triple or more	w	24.35	15.58	10.82	7.95	6.08	4.81	3.89	3.20	2.70
			D	61.86	31.67	18.32	11.54	7.73	5.42	3.96	2.98	2.28
0.90	7.91	Single	w	22.80	14.61	10.15	7.40	5.70	4.50	3.65	*	*
			D	37.02	18.84	10.92	6.90	4.61	3.24	2.34	*	*
		Double	w	22.95	14.69	10.20	7.49	5.73	4.53	3.67	3.03	*
			D	88.38	45.25	26.18	16.49	11.04	7.75	5.65	4.25	*
		Triple or more	w	28.71	18.37	12.76	9.37	7.17	5.67	4.59	3.79	3.19
			D	69.78	35.72	20.66	13.02	8.72	6.12	4.46	3.35	2.58
1.00	8.97	Single	w	26.95	17.25	11.94	8.80	6.75	5.30	4.30	*	*
			D	40.86	20.96	12.18	7.62	5.16	3.60	6.30	*	*
		Double	w	26.95	17.25	11.94	8.80	6.75	5.30	5.28	3.56	*
			D	98.40	50.38	29.15	18.36	12.30	8.64	4.96	4.73	*
		Triple or more	w	33.00	21.12	14.67	10.77	8.25	6.52	5.45	4.36	3.67
			D	77.46	39.66	22.94	14.45	9.68	6.80	3.14	3.72	2.87
1.20	10.54	Single	w	34.20	21.80	15.25	11.20	8.55	6.75	5.45	*	*
			D	48.12	25.14	14.52	9.18	6.18	4.32	3.14	*	*
		Double	w	34.20	21.80	15.25	11.20	8.55	6.75	5.45	4.52	3.80
			D	118.08	60.46	34.98	22.03	14.76	10.01	7.56	5.68	4.37
		Triple or more	w	41.45	26.53	18.42	13.53	10.36	8.18	6.63	5.43	4.61
			D	92.88	47.56	27.52	17.33	11.62	8.15	5.94	4.46	3.44

■ D: Service distributed gravity load for deflection Limit.

■ W: Service distributed gravity load for strength capacity

The IBSF 70/300 Metal Deck



70mm Deep | 300mm Pitch | Composite Floor & Roof Decking

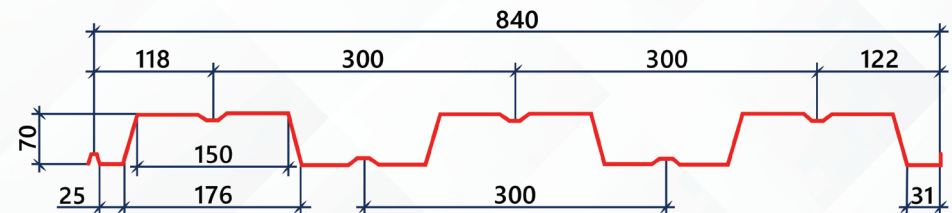
IBSF 70/300

Profile Depth: 70mm
Coverage Width: 300mm

IBSF 70/300

Thk	Area of Panel	Wt	Ixx	Top in compression			Bottom in compression		
				Ixe	Sx(T)	Sx(B)	Ixe	Sx(T)	Sx(B)
mm	mm ²	kg/m ²	cm ⁴	cm ⁴	cm ³	cm ³	cm ⁴	cm ³	cm ³
0.60	743.57	6.94	65.88	44.83	10.79	15.24	49.67	19.40	11.04
0.70	867.33	8.10	76.85	56.67	14.29	18.25	63.17	22.77	14.70
0.80	991.05	9.25	87.80	67.32	17.53	21.13	76.09	26.25	18.20
0.90	1114.70	10.41	98.75	79.44	21.00	24.02	88.39	29.74	21.46
1.00	1238.30	11.56	109.70	91.44	24.69	26.93	100.96	33.24	24.85
1.20	1485.40	13.87	131.58	115.39	32.15	32.68	125.05	40.10	31.25

Area	(width) * (Thk). mm ²
Wt	Member weight. kg/m ²
Ixx	Moment of inertia about the xx axis. cm ⁴
Ixe	Effective moment of inertia about the X axis cm ⁴
Sx(T)	Effective section modulus about the X axis for the extreme top fiber cm ³
Sx(B)	Effective section modulus about the X axis for the extreme bottom fiber cm ³



IBSF 70/300

Thickness (mm)	Weight (kg/m ²)	Span Type	Allowable Gravity Loads (kN/m ²)									
			Center To Center Span (mm)									
				1000	1250	1500	1750	2000	2250	2500	2750	3000
0.60	6.94	Single	w	17.80	11.39	7.91	5.81	4.45	3.51	2.85	*	*
			D	51.55	26.39	15.27	9.61	6.44	4.52	3.30	*	*
		Double	w	18.20	11.65	8.09	5.94	4.55	3.60	2.91	*	*
			D	123.00	62.97	36.44	22.95	15.37	10.79	7.87	*	*
		Triple or more	w	22.80	14.59	10.13	7.45	5.70	4.50	3.65	3.01	*
			D	97.30	49.82	28.83	18.15	12.16	8.54	6.22	4.68	*
0.70	8.10	Single	w	23.60	15.10	10.48	7.71	5.90	4.66	3.77	3.12	*
			D	60.00	30.72	17.77	11.20	7.50	5.26	3.84	2.88	*
		Double	w	24.25	15.52	10.77	7.92	6.06	4.79	3.88	3.20	*
			D	144.00	73.73	42.67	26.87	18.00	12.64	9.22	6.92	*
		Triple or more	w	30.35	19.42	13.49	9.91	7.59	5.99	4.85	4.01	3.37
			D	133.50	58.11	33.63	21.18	14.19	9.96	7.26	5.46	4.20
0.80	9.25	Single	w	28.90	18.50	12.84	9.44	7.23	5.71	4.62	3.82	3.21
			D	68.50	35.07	20.30	12.78	8.56	6.01	4.38	3.29	2.53
		Double	w	30.05	19.23	13.35	9.81	7.51	5.94	4.81	3.97	3.34
			D	164.95	84.45	48.87	30.77	20.62	14.48	10.55	7.93	6.11
		Triple or more	w	37.50	24.00	16.67	12.24	9.38	7.41	6.00	4.96	4.16
			D	129.50	66.30	38.37	24.16	16.19	11.37	8.29	6.22	4.80
0.90	10.41	Single	w	34.65	22.18	15.40	11.31	8.66	6.84	5.54	4.58	3.85
			D	77.00	39.42	22.81	14.37	9.63	6.76	4.93	3.70	2.85
		Double	w	35.45	22.05	15.31	11.25	8.61	6.81	5.51	4.55	3.83
			D	185.25	94.45	54.89	34.56	23.15	16.26	11.86	8.91	6.86
		Triple or more	w	44.30	28.35	19.69	14.46	11.108	8.75	7.09	5.88	4.92
			D	145.75	74.62	43.19	27.20	18.22	12.80	9.33	7.00	5.40
1.00	11.56	Single	w	40.75	26.08	18.11	13.31	10.19	8.05	6.52	5.39	4.53
			D	85.65	43.85	25.37	15.98	10.70	7.52	5.48	4.12	3.17
		Double	w	41.05	26.27	18.24	13.40	10.26	8.12	6.57	5.43	4.56
			D	205.80	105.37	60.98	38.40	25.73	18.07	13.17	9.90	7.62
		Triple or more	w	51.25	32.80	22.78	16.73	12.81	10.12	8.20	6.77	5.69
			D	161.85	82.87	47.95	30.20	20.23	14.21	10.36	7.78	6.00
1.20	13.87	Single	w	53.05	33.95	23.58	17.32	13.26	10.48	8.49	7.01	5.89
			D	102.75	52.61	30.44	19.17	12.84	9.02	6.58	4.94	3.81
		Double	w	53.05	33.95	23.58	17.32	13.26	10.48	8.49	7.01	5.89
			D	247.10	126.52	73.21	46.11	30.89	21.69	15.81	11.88	9.15
		Triple or more	w	64.45	41.25	28.64	21.05	16.11	12.73	10.31	8.52	7.16
			D	194.40	99.53	57.60	36.27	24.30	17.07	12.44	9.35	7.20

■ D: Service distributed gravity load for deflection Limit.

■ W: Service distributed gravity load for strength capacity

Design and Material:

- **IBSF-70-300**

perimeter = 1240 mm
thickness = 0.6 to 1.2 mm

- **IBSF-50-300**

perimeter = 1121 mm
thickness = 0.6 to 1.2 mm

- Minimum yield strength $F_y = 345\text{Mpa}$.
- IBSF's loads value are applicable for Flat Floor.
- Deflection values are based on Limit $L/200$, and for Limit $L/240$ divide the value on 1.20.
- Strength values are based on bending capacity.

- **Material Grade**

ASTM A653 / A653M

Grade :

Grade 50 ($F_y \approx 345\text{ MPa}$)

- **Coating:**

Z275 (G90) – Most Common.

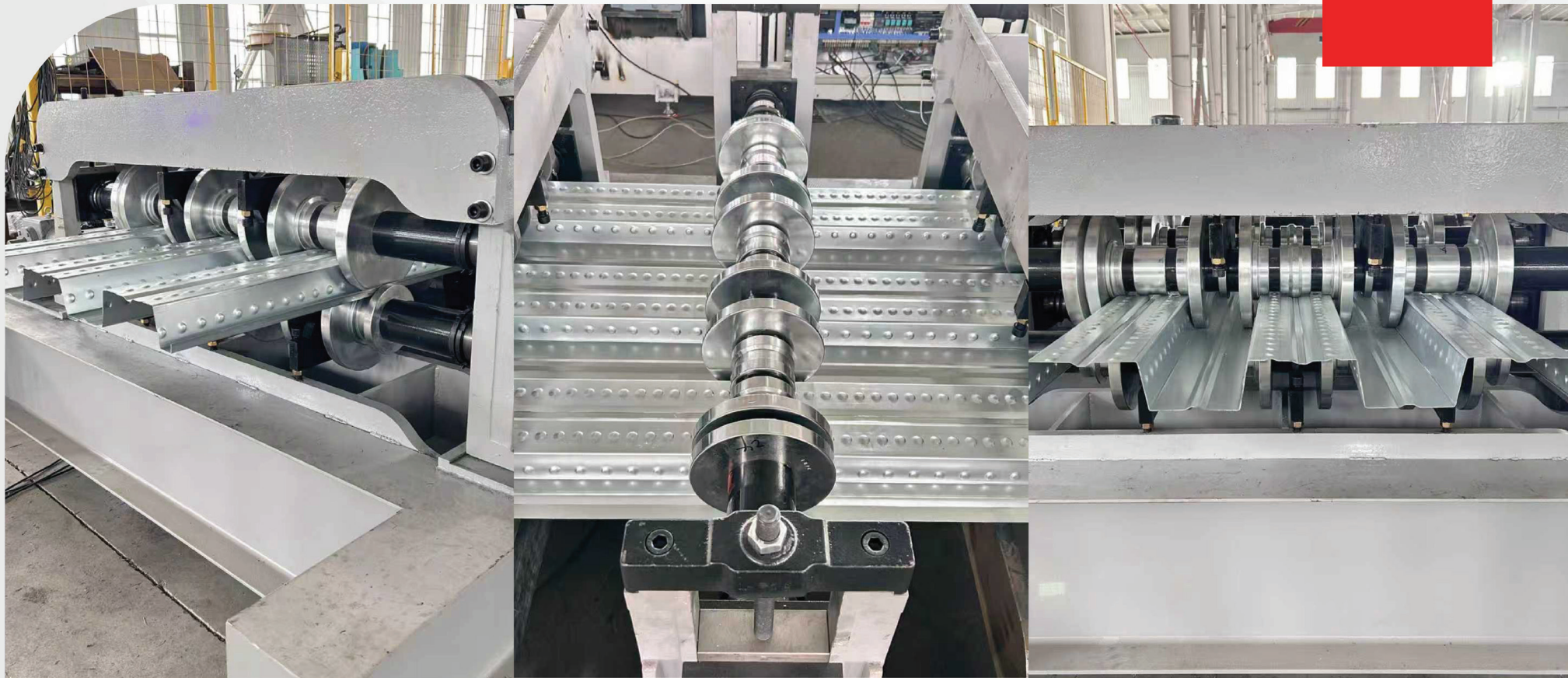
- **Quality & Compliance**

Manufactured under ISO 9001 certified quality system.

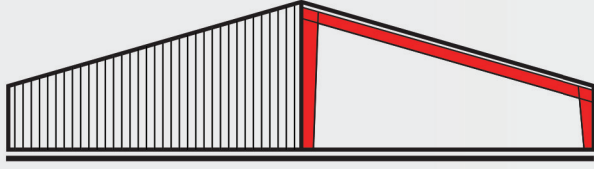
Dimensional tolerances in accordance with relevant standards.

Mill test certificates available upon request.





IBSF's Machine



شركة المصنع العالمي لأنظمة المباني المحدودة
International Building Systems Factory Co. Ltd.

أسترا الصناعية
astra industries



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