

Steel Manufacturing and Trade

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Bchamoun main road Zeenni Complex



EQUAL ANGLES

MERCHANT BARS AND PROFILES are billet-derived structures that come in different shapes and sizes. Angles, channels, flats, rounds, squares, and strips

Typical Uses

- Engineering Construction
- Manufacturing
- Mining Infrastructure
- Non-Residential Construction
- Residential Construction
- Transport & Storage

Features

- Available in a wide variety of sizes
- Exceeds the minimum requirements of AS/NZS 3679.1 300
- Up to 20% stronger for improved strength to weight ratios
- · Requires no special pre-heating for welding

Relevant Standards

AS/NZS 3679.1:2010

ST-52/S355 Grade is available upon request Unequal angles are available upon request



	Dimensions								
a	e	r	Weight	Area					
(mm)	(mm)	(mm)	kg/m	(cm2)					
20	3	4	0.88	1.13					
25	3	4	1.12	1.43					
30	3	5	1.36	1.74					
30	4	5	1.78	2.27					
35	3	5	1.60	2.04					
35	3.5	3.5	1.85	2.35					
35	4	5	2.10	2.67					
40	4	6	2.42	3.08					
40	5	6	2.97	3.79					
45	4.5	7	3.04	3.90					
45	5	7	3.38	4.30					
50	5	7	3.77	4.80					
50	6	7	4.47	5.69					
50	7	7	5.15	6.56					
60	6	8	5.42	6.91					
60	8	8	7.09	9.03					
70	7	9	7.38	9.40					
80	8	10	9.66	12.30					
90	9	11	12.20	15.50					
100	10	12	15.10	19.20					
100	12	12	17.80	22.70					
120	12	13	21.60	27.50					
120	15	13	26.60	33.90					
150	15	16	33.80	43.00					
150	18	16	40.10	51.00					
180	18	18	48.60	61.90					
200	20	18	60.00	76.35					



SQUARE BAR

Square Bar is available in a wide variety of sizes.

Typical Uses

- •Engineering Construction
- •Residential Construction
- •Non-Residential Construction
- •Mining Infrastructure
- •Transport and Storage
- Manufacturing

Features

- •Available in a wide variety of sizes
- •Exceeds the minimum requirements of AS/NZS 3679.1 300
- •Up to 20% stronger for improved strength to weight ratios
- •Requires no special pre-heating for welding
- •Additional grades available on request

Relevant Standards

•AS/NZS 3679.1 •AS 1442 •AS 1444 •AS 1447



W	TH	Weight/m		
10	10	0.785		
12	12	1.1304		
14	14	1.5386		
16	16	2.0096		
20	20	3.14		
25	25	4.906		
30	30	7.065		
40	40	12.56		
50	50	19.625		
60	60	28.26		



ROUND BAR

Round Bar is available in a wide variety of sizes.

Typical Uses

- •Engineering Construction
- •Residential Construction
- •Non-Residential Construction
- •Mining Infrastructure
- •Transport and Storage
- Manufacturing

Features

- •Available in a wide variety of sizes
- •Exceeds the minimum requirements of AS/NZS 3679.1 300
- •Up to 20% stronger for improved strength to weight ratios
- •Requires no special pre-heating for welding
- •Additional grades available on request

Relevant Standards

- •AS/NZS 3679.1 •AS 1442 •AS 1444
- •AS 1447



OD	Weight/m
6	0.222
8	0.395
10	0.617
12	0.888
14	1.208
16	1.578
18	1.998
20	2.466
22	2.984
25	3.853
30	5.549
40	9.865
50	15.413
60	22.195



FLAT BAR

Flat Bar is available in a wide variety of sizes.

Typical Uses

- •Engineering Construction
- Manufacturing
- •Mining Infrastructure
- •Non-Residential Construction
- •Residential Construction
- •Transport & Storage

Features

- •Available in a wide variety of sizes
- •Exceeds the minimum requirements of AS/NZS 3679.1 300
- •Up to 20% stronger for improved strength to weight ratios
- •Requires no special pre-heating for welding
- •Additional grades available on request

Relevant Standards

- •AS/NZS 3679.1:2010
- •AS 1442:2007
- •AS 1444:2007
- •AS 1447:2007



J. W	3.0	5.0	6.0	8.0	10.0	12.0	15.0	20.0	25.0	30.0	40.0
12	0.28	0.47	0.57	-	-	-	-	-	-	-	-
14	0.33	0.55	0.66	-	-	-	-	-	-	-	-
16	0.38	0.63	0.75	1.01	1.26	-	-	-	-		
20	0.47	0.79	0.94	1.26	1.57	-	-	-	-	-	-
25	0.59	0.98	1.18	1.57	1.96	-	-				-
30	0.71	1.18	1.41	1.88	2.36	2.83	3.53	4.71	-	-	-
40	0.94	1.57	1.88	2.51	3.14	3.77	4.71	6.28	-	-	-
50	1.18	1.96	2.36	3.14	3.93	4.71	5.89	7.85	9.81	11.8	
60	-	2.36	2.83	3.77	4.71	5.65	7.07	9.42	11.8	14.1	
70	-	2.75	3.3	4.4	5.5	6.59	8.24	11	13.7	16.5	
80	-	3.14	3.77	5.02	6.28	7.54	9.42	12.6	15.7	18.8	25.1
100	-	3.93	4.71	6.28	7.85	9.42	11.8	15.7	19.6	23.6	31.4
120	-	4.71	5.65	7.54	9.42	11.3	14.1	18.8	23.6	28.3	37.7
150	-	5.89	7.07	9.42	11.8	14.1	17.7	23.6	29.4	35.3	47.1
200	-	-	9.42	12.6	15.7	18.8	23.6	31.4	39.3	47.1	
250	-	-	11.8	15.7	19.6	23.6	29.4	39.3	49.1	58.9	-
300	-	-	-	18.8	23.6	28.3	35.3	47.1	58.9	-	



EQUAL TEE BAR

Tee bars are beams or bars shaped much like the letter "T".

Typical Uses

- •Recreational Skiing
- •Fitness Industry
- •Industrial Machinery
- Decoration Window



Features

- •Available in a wide variety of sizes
- •Up to 20% stronger for improved strength to weight ratios

	Dimensions								
b (mm)	h (mm)	e (mm)	e (mm)	r1 (mm)	r2 (mm)	<u>r3</u> (mm)	Weight kg/m	Area (cm²)	
20	20	3	3	3	1.5	1	0.88	1.12	
25	25	3.5	3.5	3.5	2	1	1.29	1.64	
30	30	4	4	4	2	1	1.77	2.26	
35	35	4.5	4.5	4.5	2.5	1	2.33	2.97	
40	40	5	5	5	2.5	1	2.96	3.77	
45	45	5.5	5.5	5.5	3	1.5	3.67	4.67	
50	50	6	6	6	3	1.5	4.44	5.66	
60	60	7	7	7	3.5	2	6.23	7.94	
80	80	9	9	9	4.5	2	10.73	13.64	



H BEAM

Hot rolled structural steel sections type HEA

Typical Uses

•In construction and general engineering



Relevant Standards

- •Dimensions according to EN 53-56
- •Tolerances in dimensions and shapes according to EN 10034:2001.
- •Control documents EN 10204/3

Dimensions								
Profiles	h (mm)	<u>b</u> (mm)	<u>a</u> (mm)	<u>e</u> (mm)	<u>r</u> (mm)	h1 (mm)	Weight kg/m	Area (cm ²)
100	96	100	5	8	12	56	16.7	21.2
120	114	120	5	8	12	74	19.9	25.3
140	133	140	5.5	8.5	12	92	24.7	31.4
160	152	160	6	9	15	104	30.4	38.8
180	171	180	6	9.5	15	122	35.5	45.3
200	190	200	6.5	10	18	134	42.3	53.8
220	210	220	7	11	18	152	50.5	64.3
240	230	240	7.5	12	21	164	60.3	76.8
260	250	260	7.5	12.5	24	177	68.2	86.8
280	270	280	8	13	24	196	76.4	97.3
300	290	300	8.5	14	27	208	88.3	112.5
320	310	300	9	15.5	27	225	97.6	124.4
340	330	300	9.5	16.5	27	243	105	133.5
360	350	300	10	17.5	27	261	112	142.8
400	390	300	11	19	27	298	125	159
450	440	300	11.5	21	27	344	140	178
500	490	300	12	23	27	390	155	197.5
550	540	300	12.5	24	27	438	166	211.8
600	590	300	13	25	27	486	178	226.5
650	640	300	13.5	26	27	534	190	241.6

HEA



	Dimensions									
Profiles	<u>h</u> (mm)	<u>b</u> (mm)	<u>a</u> (mm)	<u>e</u> (mm)	<u>r</u> (mm)	<u>h1</u> (mm)	Weight kg/m	Area (cm²)		
100	100	100	6	10	12	56	20.4	26		
120	120	120	6.5	11	12	74	26.7	34		
140	140	140	7	12	12	92	33.7	43		
160	160	160	8	13	15	104	42.6	54.3		
180	180	180	8.5	14	15	122	51.2	65.3		
200	200	200	9	15	18	134	61.3	78.1		
220	220	220	9.5	16	18	152	71.5	91		
240	240	240	10	17	21	164	83.2	106		
260	260	260	10	17.5	24	177	93	118.4		
280	280	280	10.5	18	24	196	103	131.4		
300	300	300	11	19	27	208	117	149.1		
320	320	300	11.5	20.5	27	225	127	161.3		
340	340	300	12	21.5	27	243	135	170.9		
360	360	300	12.5	22.5	27	261	142	180.6		
400	400	300	13.5	24	27	298	155	197.8		
450	450	300	14	26	27	344	171	218		
500	500	300	14.5	28	27	390	187	238.6		
550	550	300	15	29	27	438	199	254.1		
600	600	300	15.5	30	27	486	212	270		
650	650	300	16	31	27	534	225	286.3		

HEB





Dimensions									
Profiles	h (mm)	<u>b</u> (mm)	<u>a</u> (mm)	e (mm)	۲ (mm)	<u>r1</u> (mm)	<u>h1</u> (mm)	Weight kg/m	Area (cm²)
80	80	45	6	8	8	4	46	8.64	11
100	100	50	6	8.5	8.5	4.5	64	10.6	13.5
120	120	55	7	9	9	4.5	82	13.4	17
140	140	60	7	10	10	5	98	16	20.4
160	160	65	7.5	10.5	10.5	5.5	115	18.8	24
180	180	70	8	11	11	5.5	133	22	28
200	220	75	8.5	11.5	11.5	6	151	25.3	32.2
220	220	80	9	12.5	12.5	6.5	167	29.4	37.4
240	240	85	9.5	13	13	6.5	184	33.2	42.3
260	260	90	10	14	14	7	200	37.9	48.3
280	280	95	10	15	15	7.5	215	41.8	53.5
300	300	100	10	16	16	8	232	46.2	58.8
320	320	100	14	17.5	17.5	8.75	246	59.5	75.8
350	350	100	14	16	16	8	282	60.6	77.3
380	380	102	13.5	16	16	8	312	62.6	8.4
400	400	110	14	18	18	9	324	71.8	91.5

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IPN

Tapered Flange Channels are available in a variety of sizes.

Typical Uses

- •Engineering Construction
- •Residential Construction
- •Non-Residential Construction
- •Mining Infrastructure
- Transport and Storage
- Manufacturing

Features

- •Available in a wide variety of sizes
- •Exceeds the minimum requirements of AS/NZS 3679.1 300
- $\bullet Up$ to 20% stronger for improved strength to weight ratios
- •Requires no special pre-heating for welding

Relevant Standards

•AS/NZS 3679.1

Dimensions									
Profiles	<u>h</u> (mm)	<u>b</u> (mm)	<u>a</u> (mm)	<u>e</u> (mm)	<u>r</u> (mm)	<u>r1</u> (mm)	<u>h1</u> (mm)	Weight kg/m	Area (cm²)
80	80	42	3.9	5.9	3.9	2.3	59	5.95	7.58
100	100	50	4.5	6.8	4.5	2.7	75	8.32	10.6
120	120	58	5.1	7.7	5.1	3.1	92	11.2	14.2
140	140	66	5.7	8.6	5.7	3.4	109	14.4	18.3
160	160	74	6.3	9.5	6.3	3.8	125	17.9	22.8
180	180	82	6.9	10.4	6.9	4.1	142	21.9	27.9
200	200	90	7.5	11.3	7.5	4.5	159	26.3	33.5
220	220	98	8.1	12.2	8.1	4.9	175	31.1	39.6
240	240	106	8.7	13.1	8.7	5.2	192	36.2	46.1
260	260	113	9.4	14.1	9.4	5.6	209	41.9	53.4
280	280	119	10.1	15.2	10.1	6.1	225	48	61.1
300	300	125	10.8	16.2	10.8	6.5	241	54.2	69.1
320	320	131	11.5	17.3	11.5	6.9	258	61.1	77.8
340	340	137	12.2	18.3	12.2	7.3	274	68.1	86.8
360	360	143	13	19.5	13	7.8	290	76.2	97.1
380	380	149	13.7	20.5	13.7	8.2	306	84	107
400	400	155	14.4	21.6	14.4	8.6	323	92.6	118
450	450	170	16.2	24.3	16.2	9.7	363	115	147
500	500	185	18	27	18	10.8	404	141	180
550	550	200	19	30	19	11.9	444	167	213





	Dimensions									
Profiles	<u>h</u> (mm)	b (mm)	<u>a</u> (mm)	e (mm)	<u>r</u> (mm)	<u>h1</u> (mm)	Weight kg/m	Area (cm²)		
80	80	46	3.8	5.2	5	60	6	7.64		
100	100	55	4.1	5.7	7	75	8.1	10.3		
120	120	64	4.4	6.3	7	93	10.4	13.2		
140	140	73	4.7	6.9	7	112	12.9	16.4		
160	160	82	5.0	7.4	9	127	15.8	20.1		
180	180	91	5.3	8.0	9	146	18.8	23.9		
200	200	100	5.6	8.5	12	159	22.4	28.5		
220	220	110	5.9	9.2	12	178	26.2	33.4		
240	240	120	6.2	9.8	15	190	30.7	39.1		
270	270	135	6.6	10.2	15	220	36.1	45.9		
300	300	150	7.1	10.7	15	249	42.2	53.8		
330	330	160	7.5	11.5	18	271	49.1	62.6		
360	360	170	8.0	12.7	18	299	57.1	72.7		
400	400	180	8.6	13.5	21	331	66.3	84.5		
450	450	190	9.4	14.6	21	379	77.6	98.8		
500	500	200	10.2	16.0	21	426	90.7	116		
550	550	210	11.1	17.2	24	468	106	134		
600	600	220	12	19.0	24	514	122	156		

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			Din	nensi	ons			
Profiles	h (mm)	b (mm)	<u>a</u> (mm)	e (mm)	(mm)	h1 (mm)	Weight kg/m	Area (cm ²)
80	78	46	3.3	4.2	5.0	59.6	5.0	6.38
100	98	55	3.6	4.7	7.0	74.6	6.9	8.8
120	117.6	64	3.8	5.1	7.0	93.4	8.7	11.0
140	137.4	73	3.8	5.6	7.0	112.2	10.5	13.4
160	157	82	4.0	5.9	9.0	127.2	12.7	16.2
180	177	91	4.3	6.5	9.0	146.0	15.4	19.6
200	197	100	4.5	7.0	12.0	159.0	18.4	23.5
220	217	110	5.0	7.7	12.0	177.6	22.2	28.3
240	237	120	5.2	8.3	15.0	190.4	26.2	33.3
270	267	135	5.5	8.7	15.0	219.6	30.7	39.2
300	297	150	6.1	9.2	15.0	248.6	36.5	46.5
330	327	160	5.5	10.0	18.0	271.0	43.0	54.7
360	357.6	170	6.6	11.5	18.0	298.6	50.2	64.0
400	397	180	7.0	12.0	21.0	331.0	57.4	73.1
450	447	190	7.6	13.1	21.0	378.8	67.2	85.6
500	497	200	8.4	14.5	21.0	426.0	79.4	101.0
550	547	210	9.0	15.7	24.0	467.6	92.1	117.0
600	597	220	9.8	17.5	24.0	514.0	108.0	137.0

UPN

Parallel Flange Channels are available in a variety of sizes.

Typical Uses

- •Engineering Construction
- •Residential Construction
- •Non-Residential Construction
- •Mining Infrastructure
- •Transport and Storage
- Manufacturing



Features

- •Available in a wide variety of sizes
- •Exceeds the minimum requirements of AS/NZS 3679.1 300
- •Up to 20% stronger for improved strength to weight ratios
- •Requires no special pre-heating for welding

Relevant Standards

•AS/NZS 3679.1

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DECK PANEL

Composite floor systems combine the beneficial features of steel and concrete. Steel is an excellent material for working under tension and concrete is an excellent material for working under compressive stress.



Typical Uses

Residential Construction

Features

- Excellent spanning capacities for greater strength
- · Saves on concrete and reinforcing costs
- Fast and easy to install
- Less manual handling required

Relevant Standards

• EN 10346, ASTM A653





Concrete							Spa	n (m)	ĺ						
(mm)	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25	4.50
0.13	2676	2101	1718	1285	949	712	544	420	325	250	191	143	104	71	
0.14	2668	2250	1838	1433	1054	793	607	468	362	279	213	160	116	80	
0.15	3056	2396	1956	1580	1162	874	669	516	399	308	235	177	128	89	54
0.16	3180	2544	2073	1727	1268	955	732	564	436	337	257	194	140	98	59
0.17	3370	2692	2192	1874	1375	1036	7 9 4	612	473	366	279	211	152	107	64
0.18	3560	2839	2310	2021	1482	1117	857	660	510	395	301	228	164	116	69
0.19	3750	2987	2429	2168	1588	1198	919	708	547	424	323	245	176	125	74
0.2	3941	3134	2547	2315	1695	1279	981	756	584	453	345	262	188	134	79

Maximum Variable Load in Kg/m2 when Sheet Thickness is 0.8

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Concrete							Spa	n (m)							
(mm)	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25	4.50
0.13	2677	2059	1683	1206	885	664	506	388	298	228	172	126	89	58	
0.14	2873	2208	1803	1345	987	740	564	430	332	254	191	141	99	65	
0.15	3069	2355	1923	1483	1089	816	622	472	366	280	210	156	109	72	
0.16	3265	2503	2043	1621	1191	892	680	514	400	306	229	171	119	79	
0.17	3461	2651	2163	1759	1293	968	738	556	434	332	248	186	129	86	
0.18	3656	2799	2283	1897	1396	1044	796	598	468	358	267	201	139	93	51
0.19	3852	2947	2403	2035	1498	1120	854	640	502	384	286	216	149	100	55
0.2	3903	3096	2523	2173	1600	1196	912	682	536	410	305	231	159	107	59

Maximum Variable Load in Kg/m2 when Sheet Thickness is 0.7

TRAPEZOIDAL



Trapezoidal sheets made from high-strength, galvanized thin steel sheet which form the foundation of self-supporting roof and wall cladding systems of hall buildings. Commonly called "corrugated" or "fluted" sheet.

Typical Uses

Fence



Roofing



Features

- Design flexibility due to its range of profiles
- Multi colors available
- Corrosion protection due to its multilayer covering system
- Ideal aesthetic look
- Surface resistance





TOT 32 Profile height: 32 mm Covering width: 800 mm & 1000 mm Sheet thickness: 0.35 / 0.4 / 0.5 / 0.6 / 0.7/ 0.8 mm

TOT 45 Profile height: 45 mm Covering width: 1000 mm Sheet thickness: 0.3 / 0.4 / 0.5 mm

Relevant Standards

- AS 1445
- AS 1562.1

TOT Cap

Covering width : up to 1 m max. Number of bents : upon request

ROOFING

Metal roofs can be made from a variety of metals and alloys including Galvanized steel — hot-dip zinc galvanized G-90 and G-60 steel



Typical Uses

Residential Construction

Features

- Available in a range of profiles, allowing design flexibility
- Available in both Color bond and Zinc aluminum finishes



Relevant Standards

- AS 1445
- AS 1562.1

PURLINS

Zeenni source a variety of purlins, both C and Z, manufactured and available in a range of sizes. High strength zinc-coated steel Z & C purlins. The most important part for an efficient, lightweight and secure construction. Thus, purlins can be supplied plain or punched (round, eliptical, hexagonal or any other shape upon request).







Typical Uses

• Residential Construction

Features

• Available in a range of sections

Relevant Standards

• AS/NZS 4600



• C type metal purlins placed in pairs and stacked in rows of 3, 4, 5 or 6 pieces, while the height of the package may reach up to 20 rows, depending on the size of the purlin and order.



• Different packaging is used for Z purlins which are stacked into each other and the only restriction is the weight of the package that should not exceed 3-3.5 ton.







High Tensile C-Purlin

C-Purlin

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Z-Purlin
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	Thickness (mm)	Width (mm)	Flange (mm)	Lip (mm)
C-purlin	1.0 -3.5	80.0 - 300.0	40.0 - 100.0	10.0 -20.0
Z-purlin	1.0 - 3.5	120.0 - 300.0	40.0 - 100.0	10.0 -20.0

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Carbon steel sheet is material produced from coil and is most commonly found in thicknesses more than 0.3

It is used in many diverse applications, including:

- Architectural and construction framing, structural framing and ductwork
- Cabinets, enclosures and frames for machinery, medical devices, electronics and more.



A distinction needs to be made between sheet metal and plate metal. Sheet metal is 6 mm (1/4 inch) or less in thickness, while plate is over 6 mm (1/4 inch) in thickness. Thus, sheet and plate have different applications. Available in checkered sheets such as diamond and tear drop patterns.

SHEET

Sheet metal is used in the manufacturing of cars, trains, aircraft, farm equipment, office equipment, furniture, house appliances, computers and machine components to name a few.



Sound Proofing



Electric Panels



Farm Equipement



Manufacturing Warehouse Walls



Advertising billboard



Office Equipement



Platform



Shelving System

Truck Bed





Cranes



ASTM A653 / A653M: Standard Specification for Steel Sheet, Zinc-Coated (Galvanized)

ISO 4995:2014 applies to hot-rolled steel sheet of structural quality

ISO 14590:2016 applies to cold-reduced steel sheet of two types that are commercially available in the world.

ISO 14713-1:2017 provides guidelines and recommendations regarding the general principles of design which are appropriate for articles to be zinc coated for corrosion protection and the level of corrosion resistance provided by zinc coatings applied to iron or steel articles, exposed to a variety of environments.



SLITTING





Slitting is the action of cutting a parent coil into one or a number of narrower widths using rotary slitting knives. Each of the finished widths is known as a strand, and is recoiled to produce a finished width slit coil. The strands can be of varying widths.

	Star	rt Size	Pro	cess	Finished Size					
Width	Thic	kness	Weight	Max C	uts at	Width	I/D	O/D	Weight	
Max	Min	Max	Max	Min TH	Max TH	Min	Min	Max	Max	
2000	<mark>0.33</mark>	<mark>4.0</mark>	30 Tons	30	5	20	520	2200	30 Tons	

Manufactured according to:

EN 10143-2006 EN 10131-2006 EN 10051-2011



Tensile Strength : Max 42 kg/mm2 Yield Strength : Max 36 kg/mm2

APPLICATION

Zinc Strips Prevent Moss Growth on Roofs



Drainage systems



Supply all decoration material, manufacturing of galvanized steel profiles for gypsum board, ceiling, partition.



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The continuous bending of a long strip of sheet metal (typically coiled steel) into a desired cross-section. Steel has been used as a most durable product which will goes with the time hand by hand.



Steel pipes and tubes are used in different applications such as:



STRUCTURAL STEEL PIPES AND TUBES



STEEL SCAFFOLDING PIPES AND TUBES

Scaffolding is a temporary framework used to support people and material in the construction or repair of buildings and other large structures. It is usually a modular system of metal pipes and tubes although it can be made out of other materials. Mainly Steel Scaffolding is used in construction work where the worker have to stand on heights.





GALVANIZED PIPE

It is a steel pipe covered with a protective coating of zinc that greatly reduces its tendency to corrode and extends its life expectancy. It may be used in residential water supply lines, but not gas lines because natural gas causes the zinc to flake off and clog the system.







SOLAR PANEL FRAME





RECTANGULAR HOLLOW SECTIONS PRODUCTION TABLE

SQUARE HOLLOW SECTIONS PRODUCTION TABLE ,

SIZ	E (n	nm)										W	ALL T	HIC	(NES	S (m	m)									
Α	х	Α	0.6	0.8	1.0	1.2	1.5	1.8	2.0	2.2	2.4	2.5	2.7	2.8	3.0	3.4	3.6	3.8	4.0	4.2	4.6	4.8	5.0	5.2	5.8	6.0
15	х	15																								
20	х	20																								
25	х	25																								
30	х	30																								
40	х	40																								
50	х	50																								
60	х	60																								
80	х	80																								
100	х	100																								
120	х	120																								
150	х	150																								
200	X	200																								
250	X	250																								
300	X	300																								

Production Standards:

EN 10305-5 DIN 59411 BS 6363 NFA 49-145 EN 10219-1 ASTM A-500

Finishing Operations:

Square cut Mill Test Certification: According to EN 10204 2.1, 2.2, 3.1, 3.2 Length: 4m - 8 m Standard Length 6m



INDUSTRIAL PIPES PRODUCTION TABLE

Imported

Zeenni's Production

:Production Standards

EN 10305-3 DIN 2394-1/2 – 2458-1615 EN 10219-1 BS 6363 NFA 49- 145 ASTM A-500 SI 1458

Finishing Operations:

Square cut Mill Test Certification: According to EN 10204 2.1, 2.2, 3.1, 3.2 Length: 4m - 8 m Standard Length 6m

DECORATIVE TUBES



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TUBES WITH SPECIAL SELECTION

Designation	Size	Mall Thicknoss
Designation	A X B X C mm	
30 L	30 X 34 X 45	1.5 - 1.8
30 T	30 X 34 X 60	1.5 - 1.8
30 Z	34 X 45 X 60	1.5 - 1.8

Z-SECTION









T-SECTION





L-SECTION



Production Standards: EN 10305-5 EN 10219

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Welded Mesh Wire

Welded wire mesh is an electric fusion welded prefabricated joined grid consisting of a series of parallel longitudinal wires with accurate spacing welded to cross wires at the required spacing. Thus, it is produced on machines that gets mesh with precise dimensional control



	Weld	ed Wi	re M	esh
--	------	-------	------	-----

Mesh Panel	Min	1.25	1.25	49"	49"
Widths	Max	2.5	3	98"	118"
Mesh Panel Lengths		3 m ÷ (Up to 12 m	- 6 m on request)	10' ÷ 1 (Up to 12 m c	20' on request)
Line Wire Pitch	Min	100 (50 ÷ 75 mm	mm on request)	4" (50 ÷ 75 mm e	on request)
Cross Wire Pitch	Min	20 1	nm	6/8'	1
Line Wire Diameter (Ø)			3 mm -	12 mm	
Cross Wire Diameter (Ø)			3 mm -	12 mm	



A393 MESH

Welded wire mesh, also known as welded wire fabric and "weld mesh" (the term weld mesh is given to the kind of barrier fencing which is manufactured like a square or rectangle in a grid pattern), is a really strong electric fusion welded prefabricated joined grid, which consists of many parallel longitudinal wires, which are evenly spaced and welded to cross wires at regular intervals. In basic terms, it's steel gridded mesh on a bigger scale. This mesh is produced by machines for an extremely precise dimensional control and the mesh results in great savings for time, labor, and capital

This reinforcing mesh is a metal wire screen, consisting of low carbon steel wire or stainless reinforcing steel wire. You can get it in a wide variety of shapes and sizes, like A393 Mesh. It is quite popular in the agricultural industry as well as industrial, transportation, horticultural, and food procuring sectors. However, it can also be used quite well in mines, gardening, machine protection, and other industries where reinforcing steel is needed

There are so many different types of welded wire mesh, and they are all categorized by their structure, how they can be used, and the characteristics they possess. One of the very popular welded wire meshes is A393 Mesh, also known as A393 Reinforcing Mesh, with the following measurements

The Main Wires are 10mm The Cross Wires are 10mm The Mesh Size is 200mm x 200mm The Weight is 6.16 Kg / M2

STANDA	STANDARD MESH FABRIC FOR CONCRETE REINFORCEMENT							
No	Tymor	Wire S	Spacing	Wire Diameter				
INO.	Types	Main mm	Cross mm	Main mm	Cross mm			
1	A98	200	200	5	5			
2	A142	200	200	6	6			
3	A193	200	200	7	7			
4	A252	200	200	8	8			
5	A393	200	200	10	10			
6	B503	100	200	8	8			
7	B785	100	200	10	8			
8	B98*	200	200	5	5			
9	A142*	200	200	8	6			
10	A252*	200	200	8	8			
11	A393*	200	200	10	10			
12	Q92	150	150	4.2	4.2			
13	Q131	150	150	5	5			
14	Q188	150	150	6	6			
15	Q257	150	150	7.5	7			
16	R92	150	250	4.2	4.2			

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ANON

Our nails are engineered to exacting specifications and we've earned industry wide confidence by placing the highest value on quality and service.



Base material

Plain round soft steel wire, grade NF FM9/SAE 1008 or equivalent.

Manufactured according to DIN 1151, STAS 2111-90 & EN 10230-1



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DEBARS

CONCRETE REINFORCING DEFORMED STEEL BARS

Technical Specifications

•According to EN10080:2003 & DIN 488:2010

Control Documents

•EN 10204/3.1

Description

•Weld able reinforcing steel, hot-rolled and heat treated with a circular cross-section, plain or profiled surface available in bars and in coils.

Application

•The steel is designed for reinforcement of concrete structures

Nominal Thickness (mm)	Bars	Coils	Grade	Weight (kg/m)
8	6 m	1400-1800 kg	SAE 1008	0.395
10	3 – 12 m	ø	A500 ; 8500 706	0.617
12	3 – 12 m	ø	A500 ; B500 706	0.888
14	3 – 12 m	ø	A500 ; B500 706	1.208
16	3 – 12 m	ø	A500 ; B500 706	1.578
20	3 – 12 m	ø	A500 ; B500 706	2.446
25	3 – 12 m	ø	A500 ; B500 706	3.853
32	3 – 12 m	ø	A500 ; B500 706	6.313

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CONCRETE REINFORCING STEEL - WIRE ROD

- Technical specifications according to EN 10080:2003, ASTM510M-06
- Control documents EN 10204/2.1.

Nominal Thickness (mm)	Bars	Coils	Grade	Weight (kg/m)
			SAE 1006	
6	5 m	1400-1800 kg	SAE 1008	0.222
			SAE 1010	
8	5 m	1400-1800 kg	SAE 1006	0.395
			SAE 1008	
			SAE 1010	



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DRAWN WIRE

Wire drawing line can produce low and high carbon steel with diameters that range from 1.9 up to 7.4 mm. Thus, it may be coiled up to the weight you request

Manufactured according to EN 10218-2, DIN 177-88 & STAS 889-89



Tolerance Table

Wire Diamter (mm)	Tolerance (mm)		
1.5 - 2.0	± 0.03		
Over 2.0 up to 3.2	± 0.04		
Over 3.2 & up to 6.0	± 0.05		
Over 6.0	± 0.06		





Tensile Strength Table Drawn by ZS:

Diameter of wire from - to	Tensile strength		
Mm	N /mm ²		
0,6-2,5	690-1080		
2,5-3,8	590-980		
3,8-5,0	490-880		
5,0-8,0	440-780		

Application: Nails, wire fabrics, furniture & general purposes



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Zeenni Steel has one of the largest steel service centers in Lebanon providing assistance to clients in the following domains:

CUTTING

Hydraulic Shears with thickness up to 10 mm and widths up to 4 meters.





BENDING

Hydraulic Press Brake with thickness up to 12 mm and width up to 6 m.





ROLLING SHEETS

Rolling Sheets with thickness up to 30 mm and width up to 3 meters. In addition to conical bending.









PROFILE ROLL BENDING

Profile roll bending for all types of profiles: IPE, IPN, UPN, HEA, HEB, flat bars, square bars, round bars and hollow tubes and pipes.





CNC CUTTING

CNC Plasma of thickness up to 260 mm





DRILLING & SEWING

Drilling and Sewing for all types of profiles: IPE, IPN, UPN, HEA, HEB, angles, hollow tubes and pipes.











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Nano Zinc[®] The harshest environments need the toughest skin protection

Nano Zinc[®] is an exceptional, new metallic steel coating providing surface protection in a variety of applications against long-term wear and tear.

This unique coating offers a combination of attributes. Nano Zinc[®] provides:

- The best corrosion resistance performance; up to 10 times better than galvanised steel
- > The best suited to withstand harsh environments
- The most cost-effective alternative to the post-galvanised process

The chemical composition of Nano Zinc[®] has been optimised to provide the best corrosion-resistance results.

Nano Zinc[®] is produced on a classic industrial hot dip galvanising line, but dipped in a molten bath with a unique metallic chemical composition of zinc with 3.5% aluminium and 3% magnesium. The 3% magnesium is crucial as it creates a stable and durable layer across the entire surface and gives a far more effective corrosion protection than coatings with a lower magnesium content. As such, Zeenni Steel's Nano Zinc[®] offers significantly superior performance than alternative European products.



10 µm of coating submitted for an alternating cycle of 8 hours: fog cycle (5% NaCl)/dry cycle/humidity cycle Source: Zeenni Steel R&D

Nano Zinc[®] has a natural dark grey, spangle-free smooth aesthetic aspect. Nano Zinc[®] is available with a standard environmentally friendly E-Passivation[®] (translucent CrVI-free temporary protection) or can be oiled on request.

Nano Zinc®

An innovative metallic coating that offers protection in the harshest environments



Superior corrosion resistance in chloride and ammonia environments An alternative to the post-galvanising process and to aluminium or stainless

Nano Zinc® Key benefits

Superior corrosion resistance

Nothing offers better protection than Nano Zinc[®] in chloride or ammonia environments. Due to its unique chemical composition, Nano Zinc[®] provides superior corrosion resistance than standard hot dip galvanised steel.

The destruction of coating that occurs in an ammonia environment is seven times less with Nano Zinc[®] than with a standard zinc coating. In addition, Nano Zinc[®] guarantees a longer-lasting, active coating protection over time.

Over an eight-month period, a range of metallic coated products were submitted to salt spray tests. The results clearly highlighted the superior corrosion resistance performance of Nano Zinc[®] over other metallic coatings. No red rust was observed on the Nano Zinc[®] sample.

Aluzinc[®] after 34 weeks

Nano Zince after 34 weeks Galfan after 28 weeks





Corrosion resistance by salt spray test (average): Nano Zinc[®]: > 200 h/µm - Aluzinc[®]: \pm 100 h/µm - Galfan: \pm 25 h/µm Hot dip galvanised (HDG): \pm 8-10 h/µm

> Salt spray test 20 µm coating per side

Hot dip galvanised

In highly alkaline environments (a pH between 10 and 13), Nano Zinc[®] demonstrates superior corrosion resistance compared to other metallic coatings.

Due to its chemical composition, the product has better quality characteristics in terms of barrier protection against corrosion in an ammonia environment.





Measurement of mass loss

pH: 11.7 - Solution with 5% NH₃ - T: 20°C - Test duration 24 h

Self-repairing protection on cut edges

In addition to being fortified by a cathodic protection equivalent to zinc coating, Nano Zinc[®] protects exposed cut edges with a thin zinc-based protective film with magnesium, which prevents corrosive reactions.

The nature of this film varies depending on the environment and the properties according to the aluminium and magnesium content.



6 months 30-40% red rust - 60% white rust



16 months 10% red rust - 70% white rust

Outdoor exposure over different time periods of Nano Zinc ZM250 with 2 mm thickness in Brest (France) Marine category C5-M (the most severe) French Corrosion Institute (independent laboratory)

An alternative to post-galvanising and other metals

Nano Zinc[®] offers a real advantage over postgalvanised products (with a ZM coating weight greater than 250 g/m²) and even over high value products such as stainless and aluminium.

Depending on the environment to which it is exposed, Nano Zinc[®] delivers a significant coating weight reduction of 2 to 4 times less than post-galvanised products, while still performing significantly better in terms of corrosion resistance and cost-effectiveness.



Salt spray test 2000 hours Post-galvanised 85 µm coating

Nano Zinc[®] ZM250/20 µm coating



Environmentally responsible

The application of Nano Zinc[®] ensures the preservation of natural resources since it uses less zinc than pure zinc coatings. Moreover, like Aluzinc[®], Nano Zinc[®] reduces considerably the zinc runoff* in soils.

***Runoff rate**: the rate of dissolution of a material from its surface into the external environment (in g/m²/year). In our case: the quantity of zinc washed from the surface by falling rain water.

Brest (France) Maritime category C3 (average)

French Corrosion Institute (independent laboratory)

Nano Zinc[®] Excellent workability

Thanks to its highly resistant, adherent metallic layer, Nano Zinc[®] can be formed in a variety of methods, including bending, drawing, profiling etc.

By decreasing the amount of metallic coating, while safeguarding corrosion resistance levels, spot welding is consequently improved. A protective oxide barrier covers the weld, preventing the development of red rust. Thinner coating facilitates processing and delivers substantial savings.

Nano Zinc[®] performs three times better than standard galvanised steel, reduces powdering effect and loses less coating weight in processing tools.



Oil fuchs 4107S in excess Comparison between Galvanised and Nano Zinc[®] steels

Powdering behaviour compariso



Lubrication: Fuchs 41075 in excess Powdering behaviour comparison between metallic substrates expressed in weight loss (g/m²)



Metallic coatings features comparison

Product features	HDG Zn				Nano Zinc®
Anti-corrosion properties					
In a chloride environment (marine site, swimming pool)	Reference		+	++	+++
In an ammonia environment (stable, farm, greenhouse)	Reference		+	=	++
In an SO ₂ environment (acid industrial environment)	Reference		+	++	+
Temporary protection (transport, storage)	Reference		+	+++	+++
Edge protection (heavy gauge, perforated sheet)	Reference		+	_	+++
Corrosion of a deformed part (bent or stamped)	Reference		+	_	++
Forming properties					
Bending & roll-forming	Reference		=	_	+
Drawing	Reference		+	_	+
Assembling properties					
Spot welding (equivalent thickness)	Reference		_		=
Aspect					
Visual appearance	Reference		-	+	=
Range				= Equivalen	t + Superior — Inferior
Nano Zinc [®] coating range	ZM90	ZM120	ZM175	ZM195	ZM250 ZM310
Coating thickness (µm/per side)	7	10	14	16	20 25
Steel grades	DX51D to DX57D +ZM HX260LAD to HX420LAD +ZM		S220GD to S390GD +ZM		H240D +ZM
Surface aspect	MA		MB		
Surface treatment	C (E-Passivation [®] CrVI-free)		O (oiled)		
Thickness range	From 0.45 m	From 0.45 mm to 2 mm			
Width range	Up to 1630 r	nm			

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