



PRODUCT CATALOGUE · 2026

A.N. INDUSTRIES (PVT) LTD.

Manufacturers of MS and GI pipes, hollow section and scaffolding tube —
Ferozewala, Shahdara, Lahore.

ISO 9001:2008 · ASTM A53 · BS EN 10255 · ANINDUSTRIES.PK

A.N. Industries (Pvt.) Limited is a professional and leading manufacturer of steel pipes and tubes in Pakistan. The company has been incorporated with the Securities and Exchange Commission of Pakistan since 1991, and its quality management system is certified to ISO 9001.

Production lines are equipped with modern technology that enables the plant to produce consistent quality. The company specialises in the manufacture, export and supply of MS pipes, GI pipes, rectangular and square hollow section, high, medium and low pressure boiler tubes, and other tubular products.

Our products are used across a wide range of applications: mining, sugar, chemical, fertilizer and cement industries, boiler tubes at all pressure ratings, power generation, industrial infrastructure, gas and petroleum line pipe and water supply networks. Everything is made to ASTM, JIS, DIN, EN, BS, ISO and PS specifications.

Mild steel pipes are available from 1/2" to 16" in wall thicknesses to 12 mm and are known for their tensile strength. We manufacture hot rolled and cold rolled ERW rectangular and square hollow steel tubes and conduits, widely used in furniture, buildings, steel houses and construction. The high-grade prime, soft mild steel coil these are made from is imported from established suppliers, which is what allows us to export against national and international standards.

Hot dipped galvanized iron pipe is manufactured in accordance with BS and ASTM standards. We concentrate attention on each stage of manufacturing, galvanizing and finishing, with quality control and inspection maintaining the standard of the product throughout.

In pursuit of a long term vision, A.N. Industries has been actively pursuing new opportunities for organic and inorganic growth. The company dedicates itself to quality products and efficient service, and has maintained long-term, close business relationships with customers both in Pakistan and abroad.

CERTIFICATION

- ISO 9001:2008
- ASTM A53
- BS EN 10255

NO.	PRODUCT	STANDARDS	SIZE RANGE
01	MS Pipe (Mild Steel Black Pipe) Schedule 10, 20, 40 and 80 to ASTM A53, Grade A and Grade B	ASTM A53, ASME B36.10M, JIS	1/2" to 16" dia, wall to 12 mm
02	Square & Rectangular MS Pipe Square and rectangular ERW pipe in 0.6 mm to 4.0 mm wall	BS EN 10305-5, EN 10219, ASTM A500	Square 10 × 10 to 100 × 100 mm; Rect 10 × 20 to 60 × 120 mm; wall 0.6 mm to 4.0 mm
03	Steel Conduit Pipe BS 4568 Class 3 and IS 9537 Part 2 conduit, plus trade weight chart	BS 4568-1 Class 3, IS 9537 (Part 2), BS EN 61386	16 mm to 50 mm (1/2" to 2-7/8" trade round); 23 G to 16 G wall
04	L, T, Z and D Profiles L, T, Z and D sections for doors, windows, gates and railings	ISO 9001, ISO 14001, ISO 45001	L, T, Z, D sections; 0.70 mm to 1.20 mm wall
05	Scaffolding Tubes Type 3 and Type 4 to BS EN 39:2001 — safety first	BS EN 39:2001	48.3 mm OD (1 1/2" nominal), 3.0 mm to 4.0 mm wall
06	Galvanized Iron (GI) Pipe Hot-dipped galvanized to BS EN 10255:2004 in Grades L, M and H	BS EN 10255:2004, BS EN 10226:2004, ASTM A53	15 mm to 150 mm (1/2" to 6")
07	API 5L Line Pipe PSL 1 and PSL 2, Grade B through X60, for oil, gas and water transmission	API 5L, ISO 3183, ASTM A53	Certified range per licence scope — confirm with sales
08	High, Medium & Low Pressure Boiler Tubes Tube for steam, heat transfer and pressure duty	ASTM A178 Gr. A, ASTM A214, BS 3059 Pt 1 & 2	Sizes and wall thicknesses to enquiry
09	Cold Rolled Precision Tubing Round, oval and elliptical precision tube in 0.6 mm to 3.2 mm wall	BS 1717, BS EN 10305-3, ASTM A513	9.0 mm to 76.2 mm OD; 0.60 mm to 3.20 mm wall
10	Sheet Profiles — MS, GI & PPGI Plain, galvanized and colour-coated sheet, flat or roll-formed	ASTM A1011 / A1008, ASTM A653/A653M, EN 10346	0.12 mm to 20 mm, widths to 1500 mm
11	Cold Drawn Wire Cold drawn mild steel wire, 2 to 24 SWG, hard drawn or annealed	ASTM A510/A510M, ISO 16120, BS 1052	2 SWG to 24 SWG (7.01 mm – 0.56 mm), 23 gauges
12	Highway Guard Rails W-beam and thrie-beam crash barrier to AASHTO M180	AASHTO M180, ASTM A123, ISO 9001	W-beam and thrie-beam, 2.67 mm and 3.43 mm

01 MS PIPE (MILD STEEL BLACK PIPE)

Schedule 10, 20, 40 and 80 to ASTM A53, Grade A and Grade B

Our mild steel pipe is produced on fully automatic imported plant from high-grade prime steel coil, and is drawn on for everything from fire-fighting mains to high-pressure steam lines. Every length is hydro-tested before it leaves the mill.

The range runs from 1/2" through 16" nominal bore in Schedule 10, 20, 40 and 80, and is available in both Grade A and Grade B to ASTM A53 and ASME B36.10M. Wall thickness runs to 12 mm, which is the ceiling the mill rolls to; heavier sections are supplied against order. Straightness, wall thickness, weight and length are all held to the standard, and mill test certificates are issued with every consignment.

Where a project calls for a specification other than ASTM — JIS, DIN, EN, BS, ISO or PS — we manufacture against it on enquiry.

APPLICATIONS

- Fire fighting
- Water distribution lines
- High pressure lines
- Steam lines
- Hot and chilled water lines
- Chemical liquid lines
- Gas and oil projects



SIZE RANGE

1/2" to 16" dia, wall to 12 mm

GRADES

Grade A, Grade B

STANDARDS

ASTM A53, ASME B36.10M, JIS, DIN, BS
EN, ISO, PS

SALIENT FEATURES

- Hydro-tested as standard
- Schedule 10, 20, 40 and 80
- Grade A and Grade B to ASTM A53
- Manufactured on fully automatic imported plant
- Mill test certificate with every consignment

SUPPLY AND PACKING

- Plain end, bevelled or threaded
- Black or varnished finish
- Single random 6 m; double random to order
- Hexagonal bundles, steel strapped and tagged
- Bundle sizes to suit container or truck

NOMINAL SIZE IN	OUTSIDE DIAMETER		WALL THICKNESS		WEIGHT	
	IN	MM	IN	MM	LB/FT	KG/M
1/2	0.840	21.3	0.109	2.77	0.85	1.27
3/4	1.050	26.7	0.113	2.87	1.13	1.69
1	1.315	33.4	0.133	3.38	1.68	2.50
1 1/4	1.660	42.2	0.140	3.56	2.27	3.39
1 1/2	1.900	48.3	0.145	3.68	2.72	4.05
2	2.375	60.3	0.154	3.91	3.65	5.44
2 1/2	2.875	73.0	0.203	5.16	5.79	8.63
3	3.500	88.9	0.216	5.49	7.58	11.29
3 1/2	4.000	101.6	0.226	5.74	9.11	13.57
4	4.500	114.3	0.237	6.02	10.79	16.07
5	5.563	141.3	0.258	6.55	14.62	21.77
6	6.625	168.3	0.280	7.11	18.97	28.26
8	8.625	219.1	0.322	8.18	28.55	42.55
10	10.750	273.0	0.365	9.27	40.48	60.31
12	12.750	323.8	0.406	10.31	53.52	79.73
14	14	355.6	0.437	11.13	63.44	94.55
16	16	406.4	0.500	12.70	+ 82.77	123.30

Grade A and Grade B. Wall thickness runs to 12 mm, the ceiling the mill rolls to — sizes marked + exceed it and are supplied against order.
Schedule 10, 20 and 80 are on the next page.

MS PIPE – SCHEDULE 10, 20 AND 80 WALL AND WEIGHT **ASTM A53** • **ASME B36.10M**

NOMINAL SIZE IN	OD MM	SCHEDULE 10		SCHEDULE 20		SCHEDULE 80	
		WALL MM	KG/M	WALL MM	KG/M	WALL MM	KG/M
1/2	21.3	2.11	1.00	—	—	3.73	1.62
3/4	26.7	2.11	1.28	—	—	3.91	2.20
1	33.4	2.77	2.09	—	—	4.55	3.24
1 1/4	42.2	2.77	2.69	—	—	4.85	4.47
1 1/2	48.3	2.77	3.11	—	—	5.08	5.41
2	60.3	2.77	3.93	—	—	5.54	7.48
2 1/2	73.0	3.05	5.26	—	—	7.01	11.41
3	88.9	3.05	6.46	—	—	7.62	15.27
3 1/2	101.6	3.05	7.41	—	—	8.08	18.64
4	114.3	3.05	8.37	—	—	8.56	22.32
5	141.3	3.40	11.56	—	—	9.53	30.97
6	168.3	3.40	13.83	—	—	10.97	42.56
8	219.1	3.76	19.97	6.35	33.32	+ 12.70	64.64
10	273.0	4.19	27.78	6.35	41.76	+ 15.09	95.98
12	323.8	4.57	35.98	6.35	49.71	+ 17.48	132.05
14	355.6	6.35	54.69	7.92	67.91	+ 19.05	158.11
16	406.4	6.35	62.65	7.92	77.83	+ 21.44	203.54

Wall thicknesses follow ASME B36.10M; Schedule 10 below 14" takes the B36.19M 10S walls, and Schedule 20 is defined from 8" upward.
Walls marked + exceed the 12 mm mill ceiling and are supplied against order. Weights are plain-end, calculated at 7.85 g/cm³.

SQUARE & RECTANGULAR MS PIPE

Square and rectangular ERW pipe in 0.6 mm to 4.0 mm wall

We manufacture hot rolled and cold rolled ERW rectangular and square mild steel pipe, used widely in structural framing, furniture, pre-engineered buildings and construction.

The properties come from the input: we use high-grade prime, soft mild steel coil, imported from established suppliers. That is what lets us guarantee shape — tight dimensional tolerances and sharp square corners — and what makes the material behave predictably when bent or fabricated.

The two previous size charts are merged into one unified table per shape, with wall thicknesses spanning 0.6 mm to 4.0 mm across 11 standard gauges. The range conforms to BS EN 10305-5, EN 10219, ASTM A500 and IS 4923. Bundles are counted and strapped for dispatch.

APPLICATIONS

- Structural steel framing
- Furniture manufacture
- Steel houses and prefabricated buildings
- Grilles, gates and railings
- Conduit & cable containment
- General fabrication & machinery frames



SIZE RANGE

Square 10 × 10 to 100 × 100 mm; Rect 10 × 20 to 60 × 120 mm; wall 0.6 mm to 4.0 mm

GRADES

ASTM A500 Gr. A/B, EN 10219 S235JRH, S275J0H

STANDARDS

BS EN 10305-5, EN 10219, ASTM A500, IS 4923, ISO 9001

SALIENT FEATURES

- Unified wall thickness range from 0.6 mm to 4.0 mm
- True square corner geometry with radius 1.5t
- Guaranteed bundle piece counts
- Cold formed from prime soft mild steel coil
- Ideal for bending, welding and drawing

SUPPLY AND PACKING

- Plain end, cut square to length
- Standard 6 m; other lengths to order
- Oiled or bare finish
- Square bundles, steel strapped and tagged

SQUARE MS PIPE – MASS IN KG/M BS EN 10305-5 · EN 10219 · ASTM A500 · IS 4923

SIZE MM	PER BUNDLE	WALL THICKNESS (MM) – MASS IN KG/M										
		0.6	0.7	0.8	0.9	1.0	1.2	1.6	2.0	2.5	3.0	4.0
10 × 10	225	0.172	0.198	0.222	0.246	0.269	—	—	—	—	—	—
12 × 12	225	0.210	0.242	0.273	0.303	0.332	0.388	0.488	—	—	—	—
15 × 15	225	0.266	0.308	0.348	0.388	0.426	0.501	0.639	—	—	—	—
20 × 20	225	0.361	0.418	0.474	0.529	0.583	0.689	0.890	1.076	1.290	—	—
25 × 25	144	—	0.528	0.599	0.670	0.740	0.877	1.141	1.390	1.682	1.951	—
30 × 30	100	—	0.637	0.725	0.811	0.897	1.066	1.392	1.704	2.075	2.422	—
38 × 38	100	—	—	0.926	1.038	1.148	1.367	1.794	2.207	2.703	3.176	4.055
40 × 40	—	—	—	—	—	—	1.443	1.895	2.332	2.860	3.364	4.306
50 × 50	100	—	—	1.227	1.377	—	1.819	2.397	2.960	3.645	4.306	5.562
60 × 60	—	—	—	—	—	—	2.196	2.900	3.588	4.430	5.248	6.818
75 × 75	—	—	—	—	—	—	2.761	3.653	4.530	5.607	6.661	8.702
80 × 80	—	—	—	—	—	—	2.950	3.904	4.844	6.000	7.132	9.330
100 × 100	—	—	—	—	—	—	3.703	4.909	6.100	7.570	9.016	11.842

Mass calculated with an outer corner radius of 1.5 × wall at 7.85 g/cm³. A dash means that wall is not rolled in that size. Bundle counts not shown are confirmed at order. Inch trade sizes sold by gauge are in the trade weight chart, section 03.

RECTANGULAR MS PIPE – MASS IN KG/M BS EN 10305-5 · EN 10219 · ASTM A500 · IS 4923

SIZE MM	PER BUNDLE	WALL THICKNESS (MM) – MASS IN KG/M										
		0.6	0.7	0.8	0.9	1.0	1.2	1.6	2.0	2.5	3.0	4.0
10 × 20	294	—	0.308	0.348	0.388	0.426	0.501	—	—	—	—	—
12 × 38	200	—	0.528	0.599	0.670	0.740	0.877	—	—	—	—	—
15 × 30	150	—	—	—	0.599	—	0.783	—	—	—	—	—
20 × 40	150	—	0.637	0.725	0.811	0.897	1.066	1.392	1.704	2.075	—	—
25 × 40	150	—	—	—	—	—	1.160	1.518	—	—	—	—
25 × 50	96	—	—	0.913	1.023	1.133	1.348	1.769	2.175	2.663	3.129	—
30 × 50	96	—	—	—	1.094	—	—	—	—	—	—	—
30 × 60	117	—	—	1.102	1.235	1.368	1.631	2.146	2.646	3.252	3.835	—
38 × 76	—	—	—	—	—	—	2.083	2.749	3.400	4.194	4.966	6.441
40 × 80	70	—	—	1.478	1.659	1.839	2.196	2.900	3.588	4.430	5.248	6.818
50 × 100	—	—	—	—	—	—	2.761	3.653	4.530	5.607	6.661	8.702
60 × 120	—	—	—	—	—	—	3.327	4.407	5.472	6.785	8.074	10.586

Same basis as the square chart. Sizes are quoted depth × width; other combinations are rolled to order. A dash means that wall is not rolled in that size.

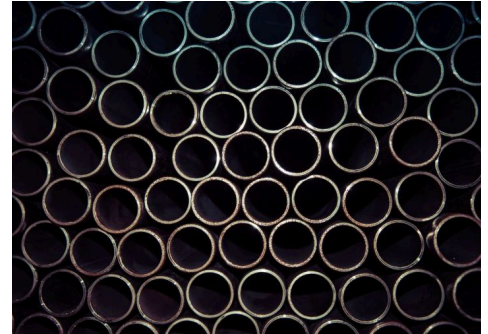
Conduit runs off our ERW lines from prime soft mild steel coil. What separates it is the finish and the tolerance on the bore, because conduit is pulled through rather than built into.

It is used for electrical cable and wiring runs, light structural duty, furniture frames and architectural fittings. Sizes range from 16 mm to 50 mm outside diameter to BS 4568 Class 3 and IS 9537 Part 2, supplied in standard 3.75 m lengths threaded at both ends with couplers fitted on enquiry.

The section is also widely traded by gauge across round, square, rectangular and special profiles rolled from the same strip width — the complete trade weight chart for 20 ft (6 m) lengths is given below.

APPLICATIONS

- Electrical wiring and cable containment
- Light structural and framing work
- Furniture and display frames
- Commercial and industrial wiring runs
- Architectural and interior fittings



SIZE RANGE

16 mm to 50 mm (1/2" to 2-7/8" trade round); 23 G to 16 G wall

GRADES

Class 3 (Pre-galvanized), Class 4 (Hot-dip galvanized)

STANDARDS

BS 4568-1 Class 3, IS 9537 (Part 2), BS EN 61386, ISO 9001

SALIENT FEATURES

- Manufactured to BS 4568 Class 3 and IS 9537 Pt 2
- Threaded both ends with protection caps
- Complete trade weight chart for 20 ft lengths
- Consistent bore for easy wire pulling
- Available in black, pre-galvanized and hot-dip finishes

SUPPLY AND PACKING

- Threaded both ends with coupler and cap
- Standard 3.75 m lengths; 6 m to order
- Pre-galvanized or black finish
- Bundled, steel strapped and tagged

STEEL CONDUIT – SIZES AND WALL THICKNESS **BS 4568-1 Class 3 and IS 9537 (Part 2)**

NOMINAL SIZE MM	OUTSIDE DIA MM	WALL THICKNESS (MM)		KG/M
		BS 4568 CL. 3	IS 9537 PT 2	
16	16.0	1.40	—	0.504
20	20.0	1.60	1.40 – 1.60	0.726
25	25.0	1.60	1.40 – 1.80	0.923
32	32.0	1.60	1.40 – 1.80	1.200
40	40.0	—	1.60 – 2.20	1.515
50	50.0	—	1.60 – 2.20	1.910

Outside diameter is the nominal size; BS 4568 holds it to ±0.3 mm and IS 9537 applies a minus-only tolerance. BS 4568 conduit is supplied in 3.75 m lengths threaded to ISO metric form at both ends. Class 4 is the same size range hot-dip galvanized rather than pre-galvanized. Weights are nominal, at 7.85 g/cm³.

CONDUIT & EQUIVALENT SECTIONS – WEIGHT PER 20 FT / 6 M LENGTH **Trade gauges 23 G – 16 G**

ROUND IN	SQUARE / RECTANGULAR / PROFILE	GAUGE – WEIGHT PER 20 FT / 6 M LENGTH (KG)						
		23 G 0.6 MM	22 G 0.7 MM	21 G 0.8 MM	20 G 0.9 MM	19 G 1.0 MM	18 G 1.2 MM	16 G 1.6 MM
1/2	3/8 × 3/8	1.00– 1.10	1.20– 1.30	1.35– 1.45	1.55– 1.65	1.70–1.80	2.00–2.10	2.60–2.70
5/8	1/2 × 1/2	1.30– 1.40	1.50– 1.60	1.70– 1.80	1.90– 2.00	2.10–2.20	2.50–2.60	3.30–3.40
3/4	5/8 × 5/8 · 3/4 × 3/8	1.50– 1.60	1.80– 1.90	2.00– 2.10	2.35– 2.45	2.55–2.65	3.00–3.10	4.00–4.10
1	3/4 × 3/4 · 1 × 1/2	2.05– 2.20	2.50– 2.65	2.75– 2.90	3.00– 3.15	3.50–3.65	4.20–4.35	5.50–5.65
1-1/4	1 × 1 · 1/2 × 1-1/2 · 19 × 42 mm elliptical	2.70– 2.90	3.05– 3.25	3.50– 3.70	4.00– 4.20	4.50–4.70	5.30–5.50	7.00–7.20
1-1/2	1-1/4 × 1-1/4 · 3/4 × 1-1/2	3.10– 3.30	3.80– 4.00	4.30– 4.50	4.80– 5.00	5.40–5.60	6.45–6.65	8.60–8.80
1-5/8	1 × 1-1/2 · L (Small) 1/2 × 2	3.40– 3.60	4.00– 4.20	4.65– 4.85	5.30– 5.50	5.80–6.00	7.00–7.20	9.35–9.55
1-7/8	1-1/2 × 1-1/2 · 1 × 2 · 1-1/4 × 1-3/4 · D Sada · L-T-Z	4.00– 4.25	4.80– 5.05	5.40– 5.65	6.10– 6.35	6.80–7.05	8.10–8.35	10.75– 11.00
2-1/4	2 × 2 · 2 × 1-1/2 · 1-1/4 × 2-1/2 · 1 × 3 · T (Big) · D-M	4.75– 5.00	5.50– 5.75	6.50– 6.75	7.40– 7.65	8.25–8.50	9.80– 10.05	13.00– 13.25
2-7/8	1-1/2 × 3 · D-Jumbo	6.20– 6.50	7.20– 7.50	8.20– 8.50	9.40– 9.70	10.50– 10.80	12.60– 12.90	16.75– 17.05

Weight band in kilograms for one 20 ft (6 m) length. The square, rectangular and profile sizes on each line are rolled from the same strip as the round conduit and fall in the same band. Sizes are in inches except 19 × 42, which is the elliptical section in millimetres. Profile market names are shown in red.

Our LTZD profiles are precision cold roll-formed sections designed specifically for fabricating steel doors, windows, grilles, gates and railings. Developed for durable, low-cost building fabrication, steel framing replaces traditional timber — eliminating warping and reducing site fabrication time.

The range includes L-section (L-40, L-48, L-55), T-section (T-48, T-60), Z-section (Z-48, Z-60) and D-section (D-60) profiles in thicknesses from 0.70 mm to 1.20 mm. The shape code carries the nominal size, and A, B, C and D dimensions in the table below show the exact profile dimensions fabricators jig against.

Every thickness is listed on its own line below with running weight, bundle count and bundle weight. Every bundle is tagged with a guaranteed section count.

APPLICATIONS

- Door and window frames
- Steel gates and railings
- Low-cost and prefabricated housing
- Security grilles and screens
- Architectural glazing frames
- General metal fabrication



SIZE RANGE

L, T, Z, D sections; 0.70 mm to 1.20 mm wall

GRADES

Prime commercial quality mild steel

STANDARDS

ISO 9001, ISO 14001, ISO 45001, CE

SALIENT FEATURES

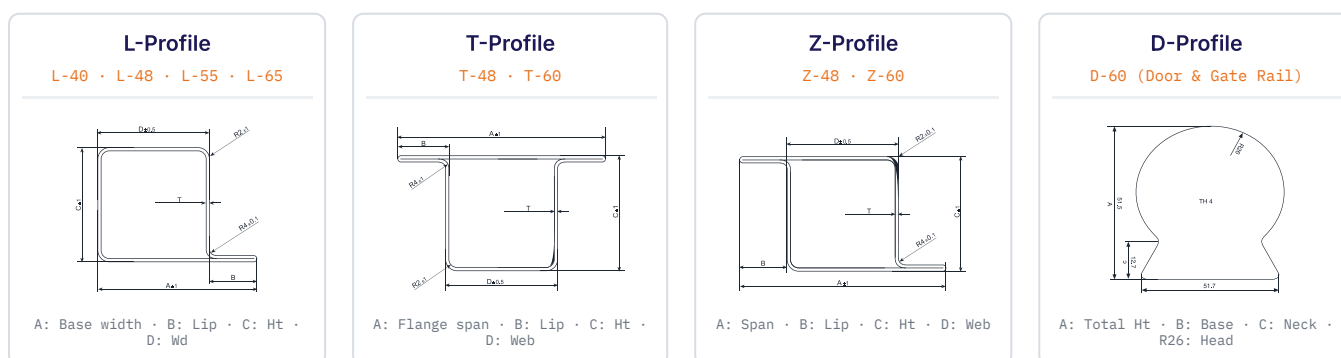
- Precision roll-formed L, T, Z and D profiles
- Tight dimensional tolerances for jig assembly
- Guaranteed section count per bundle
- Smooth surface for powder coating or painting
- Certified to ISO 9001, 14001, 45001 and CE marked

SUPPLY AND PACKING

- Cut to standard 6 m length
- Special lengths to order
- Bare, oiled or painted finish
- Bundled to guaranteed section count
- Steel strapped and tagged

CROSS-SECTION PROFILE SCHEMATICS

Engineering cross-sections and dimension callouts (A, B, C, D) corresponding to the specification figures below.



SHAPE	THICKNESS MM	PER BUNDLE	WEIGHT		DIMENSIONS (MM)			
			KG/M	KG/BUNDLE	A	B	C	D
L-40	0.7	210	0.678	794	38	13	26.5	25
L-40	0.8	210	0.773	906	38	13	26.5	25
L-40	0.9	210	0.868	1017	38	13	26.5	25
L-48	0.7	143	0.818	653	48.5	13	26.5	35.5
L-48	0.8	143	0.933	745	48.5	13	26.5	35.5
L-48	0.9	143	1.048	837	48.5	13	26.5	35.5
L-55	0.7	100	0.937	523	52	15	34	37
L-55	0.8	100	1.069	597	52	15	34	37
L-55	0.9	100	1.201	670	52	15	34	37
L-65	0.8	100	1.069	597	52	15	34	37
L-65	0.9	100	1.201	670	52	16	34	37
T-48	0.7	150	0.818	685	50	13	26	24
T-48	0.8	150	0.933	781	50	13	26	24
T-48	0.9	150	1.048	877	50	13	26	24
T-60	0.7	100	1.029	574	61	15	34	31
T-60	0.8	100	1.174	655	61	15	34	31
T-60	0.9	100	1.318	735	61	15	34	31
D-60	0.7	60	1.029	356	51.5	51.7	51.7	12.7
D-60	0.9	60	1.318	456	51.5	51.7	51.7	12.7
D-60	1.2	60	1.749	604	51.5	51.7	51.7	12.7
Z-48	0.7	150	0.818	685	50	13	26.5	24
Z-48	0.8	150	0.933	781	50	13	26.5	24
Z-48	0.9	150	1.048	877	50	13	26.5	24
Z-60	0.7	100	1.029	574	61	15	34	31
Z-60	0.8	100	1.174	655	61	15	34	31
Z-60	0.9	100	1.318	735	61	15	34	31

One line per thickness, as published — a shape is not one product but one per gauge, and the bundle weight moves with it. A, B, C and D are section dimensions in mm.

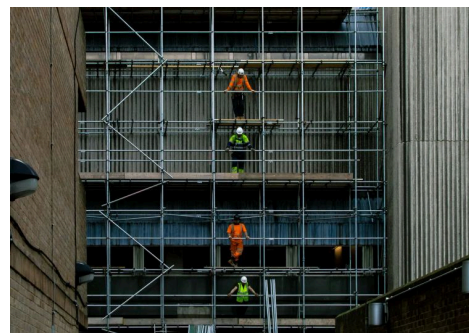
Steel scaffolding tube has completely replaced timber and bamboo on site, for the obvious reasons: load carrying capacity and strength. Ours are used for supporting workers, materials, tools and tackle through construction, alteration, demolition and maintenance work.

Because it is workers standing on this material, we manufacture it only from prime quality high-strength steel and certify it to BS EN 39:2001. BS EN 39 specifies Type 3 (3.2 mm wall, 3.56 kg/m) and Type 4 (4.0 mm wall, 4.37 kg/m). We also roll a 3.0 mm light wall tube (3.33 kg/m) to client specification.

Lengths are cut to a client's requirement on request, and the tube pairs with standard drop-forged and pressed couplers.

APPLICATIONS

- Construction site access scaffolds
- Industrial repair and maintenance
- Petrochemical plant shutdowns
- Infrastructure projects
- Support platforms and formwork
- Demolition works



SIZE RANGE

48.3 mm OD (1 1/2" nominal), 3.0 mm to 4.0 mm wall

GRADES

Type 3 — 3.2 mm wall, Type 4 — 4.0 mm wall, Light (to order) — 3.0 mm wall

STANDARDS

BS EN 39:2001

SALIENT FEATURES

- Type 3 (3.2 mm) and Type 4 (4.0 mm) to BS EN 39
- Light 3.0 mm tube rolled to order
- High strength prime steel
- Can hold heavy loads with long life span
- Black or hot-dip galvanized finish
- Certified to international standard

SUPPLY AND PACKING

- Plain end, cut square
- Standard 6 m; other lengths to order
- Black or hot-dip galvanized
- Bundled, steel strapped and tagged

SCAFFOLDING TUBES – TYPE 3 AND TYPE 4 BS EN 39:2001

TYPE	NOMINAL DIA IN	OUTSIDE DIAMETER		WALL THICKNESS MM	BLACK PIPE WEIGHT KG/M
		MAX MM	MIN MM		
Type 3	1 1/2"	48.3	47.8	3.2	3.56
Type 4	1 1/2"	48.3	47.8	4.0	4.37
Light (to order)	1 1/2"	48.3	47.8	3.0	3.33

BS EN 39 designates Type 3 (3.2 mm wall) and Type 4 (4.0 mm wall). The 3.0 mm light tube is not an EN 39 type and is supplied to the client's specification. Available in various lengths, subject to enquiry.

Hot-dipped galvanized to BS EN 10255:2004 in Grades L, M and H

Hot-dipped galvanized iron pipe manufactured in accordance with BS and ASTM standards. We hold attention on each stage of the process — manufacturing, galvanizing and finishing — with quality control and inspection at every step.

The range covers Grade L, Grade M and Grade H to BS EN 10255:2004 (formerly BS 1387:1985) — Grade L from 15 to 100 mm, Grade M from 15 to 150 mm and Grade H from 40 to 150 mm nominal bore. Threading is cut to BS EN 10226:2004.

GI pipe is our most-specified product for potable water: the zinc coating carries it well past the service life of black pipe in the same duty, and it will hold hydro pressure up to 50 bar.

APPLICATIONS

- Drinking water supply networks
- Domestic plumbing risers and mains
- Irrigation and tube-well lines
- Fire-fighting reticulation
- Low-pressure gas distribution
- Structural and fencing work



SIZE RANGE

15 mm to 150 mm (1/2" to 6")

GRADES

Grade L, Grade M, Grade H

STANDARDS

BS EN 10255:2004, BS EN 10226:2004, ASTM A53, ISO 9001

SALIENT FEATURES

- Ideal for drinking water
- Bears hydro pressure up to 50 bar
- Certified to ISO 9001
- Environment friendly
- Durable and corrosion resistant

SUPPLY AND PACKING

- Plain end or screwed and socketed
- Socket and plastic cap fitted where ordered
- Standard length 6 m
- Hexagonal bundles, steel strapped and tagged
- Threads protected in transit

GI PIPE – GRADE "L" BS EN 10255:2004 (formerly "L" of BS 1387:1985)

NOMINAL DIA		OUTSIDE DIAMETER		WALL THICKNESS MM	BLACK PIPE WEIGHT KG/M
MM	IN	MAX MM	MIN MM		
15	1/2"	21.40	21.00	2.00	0.95
20	3/4"	26.90	26.40	2.30	1.38
25	1"	33.80	33.20	2.60	1.98
32	1 1/4"	42.50	41.90	2.60	2.54
40	1 1/2"	48.50	47.80	2.90	3.23
50	2"	60.20	59.60	2.90	4.08
65	2 1/2"	76.00	75.20	3.20	5.71
80	3"	88.70	87.90	3.20	6.72
100	4"	113.90	113.00	3.60	9.75

GI PIPE – GRADE "M" BS EN 10255:2004 (formerly "M" of BS 1387:1985)

NOMINAL DIA		OUTSIDE DIAMETER		WALL THICKNESS MM	BLACK PIPE WEIGHT KG/M
MM	IN	MAX MM	MIN MM		
15	1/2"	21.80	21.00	2.60	1.21
20	3/4"	27.30	26.50	2.60	1.56
25	1"	34.20	33.30	3.20	2.41
32	1 1/4"	42.90	42.00	3.20	3.10
40	1 1/2"	48.80	47.90	3.20	3.56
50	2"	60.80	59.70	3.60	5.03
65	2 1/2"	76.60	75.30	3.60	6.42
80	3"	89.50	88.00	4.00	8.36
100	4"	115.00	113.10	4.50	12.16
125	5"	140.80	138.50	5.00	16.60
150	6"	166.50	163.90	5.00	19.75

GI PIPE – GRADE "H" BS EN 10255:2004 (formerly "H" of BS 1387:1985)

NOMINAL DIA		OUTSIDE DIAMETER		WALL THICKNESS MM	BLACK PIPE WEIGHT KG/M
MM	IN	MAX MM	MIN MM		
40	1 1/2"	48.80	47.90	4.0	4.37
50	2"	60.80	59.70	4.5	6.19
65	2 1/2"	76.60	75.30	4.5	7.93
80	3"	89.50	88.00	5.0	10.30
100	4"	115.00	113.10	5.4	14.50
125	5"	140.80	138.50	5.4	17.88
150	6"	166.50	163.90	5.4	21.27

Galvanized iron pipe to ASTM A-53 Sch 40 also available, subject to enquiry.

Line pipe is held to a different standard from general pipe because of what it carries and the pressure it carries it at. API 5L governs the chemistry, the mechanical properties, the weld and the test regime, and the monogram may only be applied by a mill licensed by the American Petroleum Institute to do so.

We manufacture in both product specification levels. PSL 1 is the standard level for water and general transmission duty. PSL 2 carries the same strength floors but adds tighter chemistry limits, guaranteed impact toughness, mandatory non-destructive inspection and stricter documentation — it is what most oil and gas projects specify.

Grades run from Grade B up to X60. The X-number is the specified minimum yield strength in ksi, so X60 pipe is guaranteed to 60,200 psi minimum yield. The full strength table is below.

The certified size range is set by the licence scope rather than by the mill alone, so confirm the sizes and wall thicknesses on your project against our current certificate before specifying.

APPLICATIONS

- Oil and gas transmission
- Gas distribution networks
- Water transmission mains
- Petroleum product lines
- Refinery and terminal piping
- Casing and general pressure duty



SIZE RANGE

**Certified range per licence scope —
confirm with sales**

GRADES

**PSL 1, PSL 2, Gr. B, X42, X46, X52, X56,
X60**

STANDARDS

**API 5L, ISO 3183, ASTM A53, BS EN, ISO
9001**

SALIENT FEATURES

- Manufactured under API 5L licence
- PSL 1 and PSL 2
- Grade B through X60
- High frequency ERW weld
- Hydrostatically tested on every length
- Mill test certificate per heat

SUPPLY AND PACKING

- Plain end, bevelled or threaded
- Bare, varnished or coated to order
- Single random 6 m; double random to order
- Bevel protectors and end caps where ordered
- Bundled, steel strapped and heat-numbered

API 5L GRADES — SPECIFIED MINIMUM STRENGTH API 5L / ISO 3183, PSL 1 and PSL 2

GRADE	MIN YIELD STRENGTH		MIN TENSILE STRENGTH	
	MPA	PSI	MPA	PSI
Gr. B	245	35,500	415	60,200
X42	290	42,100	415	60,200
X46	320	46,400	435	63,100
X52	360	52,200	460	66,700
X56	390	56,600	490	71,100
X60	415	60,200	520	75,400

Grade designations are the specified minimum yield strength in ksi. PSL 2 carries the same strength floors as PSL 1 plus tighter chemistry limits, guaranteed impact toughness and mandatory non-destructive inspection — specify which level the project requires.

Boiler tube carries steam and hot water under pressure, so the two things that matter are wall consistency and what the weld does when the tube is cycled hot and cold. Both are set on the mill, not corrected afterwards.

The tube is produced across high, medium and low pressure duties. Which duty applies is a function of working pressure and temperature at the installation, so the grade and wall are agreed at order rather than picked from a shelf.

The catalogue does not publish a size chart for this line. Sizes, wall thicknesses and the governing grade are confirmed by the sales office against your specification, and mill certificates are issued on request.

APPLICATIONS

- Steam lines
- Heat exchange tubes
- High pressure lines
- Hot and chill water lines
- Power generation



SIZE RANGE

Sizes and wall thicknesses to enquiry

GRADES

ERW-320 / CEW-320, ERW-360 / CEW-360

STANDARDS

ASTM A178 Gr. A, ASTM A214, BS 3059 Pt 1 & 2, JIS G3461 STB 35, ISO 9001

SALIENT FEATURES

- High, medium and low pressure duties
- Hydro tested before despatch
- Consistent wall thickness
- Made on fully automatic imported plant
- Mill certificates on request

SUPPLY AND PACKING

- Plain end, cut square and deburred
- Lengths to order
- End caps fitted where ordered
- Bundled, steel strapped and tagged

Round, oval and elliptical precision tube in 0.6 mm to 3.2 mm wall

Cold rolled precision tubing is engineered for tight-tolerance, clean-surfaced applications where the tube is formed, bent or plated downstream rather than simply installed.

The range covers cold-rolled light-wall round tube (0.60 mm to 2.00 mm), precision ERW round tube for heavier mechanical duty (0.80 mm to 3.20 mm), and specialized oval and elliptical profiles. The surface is finished to take chrome plating directly, and the steel chemistry is selected so it bends and draws without splitting at the weld.

Round tube complies with BS 1717:1983, BS EN 10305-3:2010, EN 10296-1:2003 and ASTM A513. Oval and elliptical sections are manufactured to the mill's own standard. The works is certified to ISO 9001, ISO 14001 and ISO 45001 and CE marked, and every bundle carries a guaranteed tube count.

APPLICATIONS

- Automotive and motorcycle components
- Bicycle frames and fittings
- Transformer manufacture
- Fans, furniture and tent frames
- Chrome-plated and formed parts



SIZE RANGE

9.0 mm to 76.2 mm OD; 0.60 mm to 3.20 mm wall

GRADES

Mild steel CR grade, STKM / JIS G3445, ASTM A513 Type 1/2

STANDARDS

BS 1717, BS EN 10305-3, ASTM A513, EN 10296-1, JIS G3445, ISO 9001, ISO 14001, ISO 45001, CE

SALIENT FEATURES

- Round, oval and elliptical section shapes
- Wall from 0.6 mm to 3.2 mm
- Surface finished for chrome plating
- Suited to bending and drawing
- Guaranteed tube count per bundle

SUPPLY AND PACKING

- Bundled with the count guaranteed
- Cut to length on order
- Plain or oiled
- Strapped and tagged per bundle

CR ROUND TUBE – WEIGHT BY WALL THICKNESS BS 1717:1983, BS EN 10305-3:2010 & EN 10296-1:2003 (formerly BS 6323-5:1982)

OD mm	PER BUNDLE	WALL THICKNESS (mm)						
		0.6	0.7	0.9	1.0	1.2	1.6	2.0
9.00	394	0.124	0.143	0.180	—	0.231	—	—
10.00	351	0.140	0.161	0.202	—	0.260	—	—
12.70	271	0.179	0.207	0.262	0.289	0.340	—	—
15.90	271	0.226	0.262	0.333	0.367	0.435	0.564	0.686
16.00	200	—	—	—	—	—	—	0.691
17.50	271	—	—	—	—	0.482	0.627	0.765
19.05	271	0.273	0.317	0.403	0.445	0.528	0.689	0.841
20.60	271	—	—	—	—	—	0.750	0.917
22.00	217	—	—	—	—	—	0.805	—
22.20	217	—	0.371	0.473	—	0.621	0.813	0.996
23.80	169	—	—	—	—	—	0.876	—
25.40	217	0.367	0.426	0.544	0.602	0.716	0.939	1.154
28.60	169	—	—	0.615	0.681	0.811	1.065	—
30.00	169	—	—	0.646	—	0.852	1.121	—
31.80	169	—	0.537	0.686	0.760	0.906	1.192	1.470
35.00	127	—	—	—	—	1.000	1.318	—
38.10	91	—	—	0.826	—	1.092	1.440	—
42.20	61	—	—	0.917	—	1.213	1.602	—
48.10	61	—	—	1.048	—	1.388	1.835	—
60.30	61	—	—	1.318	—	1.749	—	—
63.50	61	—	—	—	—	1.844	2.442	—
73.02	37	—	—	—	—	2.125	2.818	—
75.90	37	—	—	—	—	2.211	2.932	—

Outside diameter in mm, figures in kilograms per metre. A dash means that wall is not rolled in that diameter.

PRECISION ERW ROUND TUBE – MASS IN KG/M **BS 6323 Pt 1 & 5, BS 1717, ASTM A513, JIS G3445 STKM**

OUTSIDE DIA MM	WALL THICKNESS – MASS IN KG/M						
	0.8	1.0	1.2	1.6	2.0	2.6	3.2
12.70	0.235	0.289	0.340	—	—	—	—
15.90	0.298	0.367	0.435	—	—	—	—
19.05	0.360	0.445	0.528	0.689	—	—	—
22.20	0.422	0.523	0.621	0.813	0.996	—	—
25.40	0.485	0.602	0.716	0.939	1.154	—	—
31.80	0.612	0.760	0.906	1.192	1.470	1.872	—
38.10	0.736	0.915	1.092	1.440	1.780	2.276	2.754
44.50	0.862	1.073	1.281	1.693	2.096	2.686	3.259
50.80	0.986	1.228	1.468	1.941	2.407	3.090	3.756
63.50	1.237	1.541	1.844	2.442	3.033	3.905	4.758
76.20	1.487	1.854	2.219	2.943	3.660	4.719	5.761

Light-wall mechanical and general-engineering tube, quoted on outside diameter. Walls above 3.2 mm are quoted on enquiry.

CR OVAL TUBE – WEIGHT BY WALL THICKNESS **Made to the mill**

SIZE MM	PER BUNDLE	WALL THICKNESS (MM)			
		0.90	1.20	1.60	2.00
16 × 30	200	0.544	0.716	—	—
16 × 40	200	—	0.906	1.192	1.470
30 × 50	100	—	1.213	1.602	1.983

Section size in mm, figures in kilograms per metre.

CR ELLIPTICAL TUBE – WEIGHT BY WALL THICKNESS **Made to the mill**

SIZE MM	PER BUNDLE	WALL THICKNESS (MM)		
		0.90	1.20	1.60
13 × 23	200	0.403	0.528	0.689
19 × 42	200	0.686	0.906	—
24 × 56	100	—	1.213	—

Section size in mm, figures in kilograms per metre. The 19 × 42 elliptical is also sold in the trade by the 20 ft length — see section 03.

10 SHEET PROFILES — MS, GI & PPGI

Plain, galvanized and colour-coated sheet, flat or roll-formed

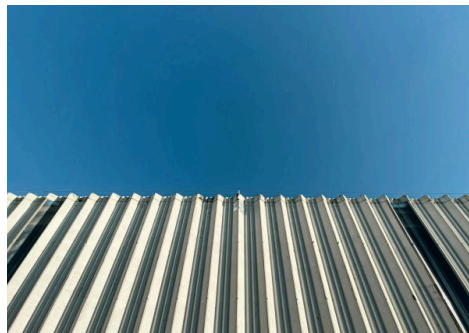
Three materials, one line. Plain mild steel sheet where the surface will be painted or hidden; hot-dip galvanized where it has to stand weather bare; and pre-painted galvanized — PPGI — where the finish is the finish, delivered in colour and needing nothing on site.

All three start as coil and are cut to length or fed straight into the roll-former. Flat sheet leaves as 4×8 ft as standard, with 1250 × 2500 and 1500 × 3000 mm cut to order. Profiled sheet is rolled to any length the transport will take, which is what removes end laps from a long roof run.

Two things decide what a sheet actually costs you, and neither is the headline thickness. On galvanized, it is the zinc: ASTM A653 and EN 10346 both define the ordered thickness as INCLUDING the coating, so a 0.50 mm G90 sheet is carrying about 0.46 mm of steel. On profiled sheet, it is cover width rather than overall width — the difference is lap you pay for and do not cover with. Both are set out in the charts below.

APPLICATIONS

- Roofing sheets and wall cladding
- Door and window frames
- Heavy duty shelving and racking
- Machine guarding and frames
- Electrical cabinets and enclosures
- Storage tanks and bins
- Shipping container panels
- Industrial sheds and warehouses
- Ducting and ventilation
- Partitions, false ceilings and trunking
- Furniture and white goods pressings
- General fabrication and pressing



SIZE RANGE

0.12 mm to 20 mm, widths to 1500 mm

GRADES

MS — CS Type B, DC01, SPCC, S235JR, GI — DX51D+Z, SGCC, CS Type B, PPGI — CGCC, DX51D+Z, S220GD

STANDARDS

ASTM A1011 / A1008, ASTM A653/A653M, EN 10346, EN 10169, JIS G3302, JIS G3312, IS 277, ISO 9001

SALIENT FEATURES

- Plain, galvanized and colour-coated from one line
- Zinc from Z40 to Z275, quoted total both faces
- PPGI in polyester, SMP, HDP and PVDF to RAL colours
- Corrugated, trapezoidal, IBR and tile profiles
- Profiled sheet rolled to any length in one piece
- Coil or cut length, slit to width on order

SUPPLY AND PACKING

- Coil or cut length
- Profiled sheet rolled to any length in one piece
- Coil inside diameter 508 mm
- Interleaved and edge-protected
- Strapped on timber bearers

THICKNESS MM	GAUGE SWG	WEIGHT	
		KG/M ²	KG PER 4×8 FT SHEET
0.50	25	3.93	11.66
0.60	23	4.71	14.00
0.80	21	6.28	18.66
1.00	19	7.85	23.33
1.20	18	9.42	28.00
1.50	17	11.78	34.99
2.00	14	15.70	46.66
2.50	12	19.63	58.32
3.00	11	23.55	69.99
4.00	8	31.40	93.32
5.00	6	39.25	116.65
6.00	4	47.10	139.98
8.00		62.80	186.64
10.00		78.50	233.29
12.00		94.20	279.95
14.00		109.90	326.61
16.00		125.60	373.27
18.00		141.30	419.93
20.00		157.00	466.59

Thickness 0.50 mm to 20 mm: cold rolled 0.50 mm to 3.00 mm, hot rolled 1.5 mm and heavier. Weights are for plain uncoated steel. Sheet weight is for a 4×8 ft (1219 × 2438 mm) sheet — pro-rata for 1250 × 2500 mm or 1500 × 3000 mm.

GI SHEET – THICKNESS AND WEIGHT **ASTM A653/A653M, EN 10346, JIS G3302, IS 277**

THICKNESS MM	GAUGE SWG	WEIGHT	
		KG/M ²	KG PER 4×8 FT SHEET
0.12	40	0.94	2.80
0.16	38	1.26	3.73
0.20	36	1.57	4.67
0.25	33	1.96	5.83
0.30	31	2.36	7.00
0.40	27	3.14	9.33
0.50	25	3.93	11.66
0.60	23	4.71	14.00
0.80	21	6.28	18.66
1.00	19	7.85	23.33
1.20	18	9.42	28.00
1.50	17	11.78	34.99
2.00	14	15.70	46.66

Weights are BASE STEEL only. Note that ASTM A653 and EN 10346 both define the ordered thickness as INCLUDING the zinc — a 0.50 mm G90 sheet carries about 0.46 mm of steel. Order to ASTM A653 Supplementary Requirement S1 if you need the thickness to mean base metal. Zinc adds its own coating mass on top: Z275 = 275 g/m² = 0.275 kg/m² across both faces.

PPGI SHEET – THICKNESS AND WEIGHT **EN 10169, ASTM A755/A755M, JIS G3312, IS 14246**

THICKNESS MM	GAUGE SWG	WEIGHT	
		KG/M ²	KG PER 4×8 FT SHEET
0.12	40	0.94	2.80
0.16	38	1.26	3.73
0.20	36	1.57	4.67
0.25	33	1.96	5.83
0.30	31	2.36	7.00
0.35	29	2.75	8.17
0.40	27	3.14	9.33
0.45	26	3.53	10.50
0.50	25	3.93	11.66
0.60	23	4.71	14.00
0.80	21	6.28	18.66
1.00	19	7.85	23.33

Weights are base metal thickness (BMT), excluding zinc and paint. Total coated thickness (TCT) runs 0.04–0.09 mm above BMT once the zinc and the paint system are counted — always confirm which basis a quotation is written on.

ROLL-FORMED PROFILES – COVER AND RIB Profiles to the mill’s own die set

PROFILE	WIDTH		RIB DEPTH MM	RIB PITCH MM
	COVER MM	OVERALL MM		
Corrugated 76/18	762	914	18	76
Trapezoidal 25/210	840	900	25	210
Trapezoidal 30/200	1000	1060	30	200
IBR 37/171	686	762	37	171
Trapezoidal 45/250	1000	1070	45	250
Tile profile 28/200	1000	1090	28	200

Order on COVER width, never overall width. Cover is what one sheet actually covers once side-lapped; the difference is the lap you are paying for but not covering with. Corrugated cover assumes a two-corrugation side lap, which is what high-wind and monsoon exposure calls for — a one-corrugation lap gains about 76 mm of cover and loses weather resistance.

11 COLD DRAWN WIRE

Cold drawn mild steel wire, 2 to 24 SWG, hard drawn or annealed

Cold drawn mild steel wire, drawn down from rod and coil stock across the full commercial range: 7.01 mm at 2 SWG through to 0.56 mm at 24 SWG. Drawing is done in successive passes rather than one, which is what holds the diameter along the length of the coil instead of only at the ends.

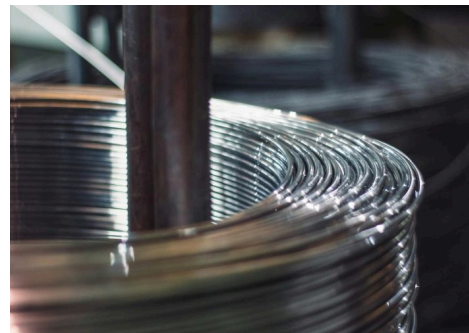
Three tempers come off the same line. Hard drawn wire keeps the strength the drawing puts into it and goes to welded mesh, nails, fasteners and light springs. Annealed wire is softened afterwards — this is the black binding wire that ties reinforcement on site, soft enough to twist by hand and hold. Galvanized wire is drawn then zinc coated, for fencing, tying and anything that lives outdoors.

The gauge decides the job. The heavy end, 2 to 8 SWG, is drawn for mesh, fencing and wire rope core; the middle, 10 to 16 SWG, for nails, fasteners and light mesh; the fine end, 18 to 24 SWG, for binding, tying and stitching wire. The table below lists the principal gauges, and intermediate gauges are quoted on enquiry.

Wire is ordered by gauge but made to a diameter, so the millimetre governs and the gauge is the shorthand. Coils are supplied to weight, and the running weight in the table converts between the two: at 18 SWG a kilogram is 109 metres, at 2 SWG it is barely three.

APPLICATIONS

- Binding wire for reinforcement
- Welded mesh and wire fencing
- Nail and fastener manufacture
- Chain link and chicken mesh
- Light springs and clips
- Wire rope core
- Baling, tying and stitching wire
- General fabrication



SIZE RANGE

**2 SWG to 24 SWG (7.01 mm – 0.56 mm),
23 gauges**

GRADES

**Hard drawn, Annealed (black binding),
Galvanized**

STANDARDS

**ASTM A510/A510M, ISO 16120, BS 1052,
ISO 9001**

SALIENT FEATURES

- Twenty-three gauges, 2 to 24 SWG
- Hard drawn, annealed or galvanized
- Drawn in successive passes for gauge consistency
- Consistent diameter along the coil
- Tensile agreed at order
- Coil weight to requirement

SUPPLY AND PACKING

- Coils to requirement, typically 50–500 kg
- Hard drawn, annealed or galvanized
- Plain, oiled or waxed
- Strapped and tagged per coil
- Mill certificate on request

COLD DRAWN WIRE – GAUGE, DIAMETER AND RUNNING WEIGHT **ASTM A510/A510M, ISO 16120, BS 1052**

GAUGE SWG	DIAMETER MM	RUNNING WEIGHT	
		KG PER 100 M	M PER KG
2	7.01	30.30	3.3
3	6.40	25.26	4.0
4	5.89	21.41	4.7
6	4.88	14.66	6.8
8	4.06	10.18	9.8
10	3.25	6.52	15.3
12	2.64	4.30	23.2
14	2.03	2.55	39.3
16	1.63	1.63	61.3
18	1.22	0.92	109.2
20	0.91	0.52	194.2
22	0.71	0.31	320.8
24	0.56	0.19	519.1

Gauge numbers are Standard Wire Gauge and are trade shorthand, not a tolerance — order on the millimetre. Running weights are nominal, calculated at 7.85 g/cm³; the coil is supplied to weight, so length per coil follows from the gauge.

12 HIGHWAY GUARD RAILS

W-beam and thrie-beam crash barrier to AASHTO M180

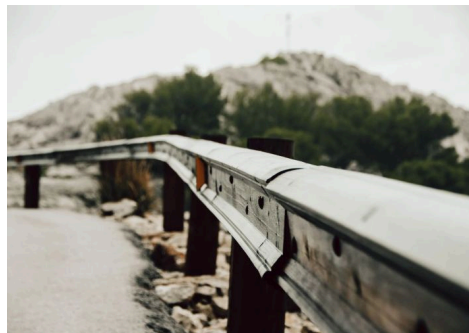
Guard rail is roll-formed from the same coil stock as the tube range and hot-dip galvanized after forming, so the cut edges and bolt slots are covered rather than left bare.

Both profiles are made: W-beam, the two-corrugation section that carries most highway runs, and thrie-beam, the three-corrugation section used where a higher containment level is specified or where the barrier fronts a bridge parapet. Each is rolled in 2.67 mm and 3.43 mm.

Panels lap one corrugation at every splice, so a 4.32 m panel covers 4.00 m of run — order on effective length, not on panel length, or a job comes up short. Posts, spacer blocks, bolts and end terminals are supplied with the beam so a run arrives complete.

APPLICATIONS

- Motorway and highway barriers
- Bridge approaches and parapets
- Median and verge protection
- Industrial site roads
- Car park and access road edges



SIZE RANGE

W-beam and thrie-beam, 2.67 mm and 3.43 mm

GRADES

Class A (550 g/m² zinc), Class B (1000 g/m² zinc)

STANDARDS

AASHTO M180, ASTM A123, ISO 9001

SALIENT FEATURES

- W-beam and thrie-beam sections
- Hot-dip galvanized after forming
- Class A and Class B zinc coating
- Posts, blocks and fixings supplied with the beam
- Punched to standard splice pattern

SUPPLY AND PACKING

- Panels 4.32 m and 3.81 m overall
- Sigma and C posts
- Spacer blocks, bolts and end terminals
- Stacked and strapped per lift

GUARD RAIL BEAM – SECTIONS AND RUNNING WEIGHT **AASHTO M180, hot-dip galvanized to ASTM A123**

SECTION	THICKNESS		SECTION (MM)		KG/M
	MM	GAUGE	DEPTH	EFFECTIVE WIDTH	
W-beam	2.67	12	83	312	10.12
W-beam	3.43	10	83	312	13.01
Thrie-beam	2.67	12	83	508	15.17
Thrie-beam	3.43	10	83	508	19.49

Class A carries 550 g/m² of zinc, Class B 1000 g/m², both measured over the two surfaces. Running weights are calculated from the developed width of the section.

ITEM	DIMENSIONS		NOTES
	SIZE	EFFECTIVE LENGTH (M)	
W-beam panel	4.32 m overall	4.00	Standard run panel, 8 bolt slots
W-beam panel	3.81 m overall	3.50	Short panel for tighter post spacing
Sigma post	130 × 65 mm	—	1.8 m to 2.2 m driven length
C post	120 × 55 mm	—	Alternative to sigma where specified
Spacer block	To post section	—	Sets the beam off the post face

Panels lap one corrugation at each splice, so the effective length is shorter than the panel itself. Post spacing is set by the containment level the road authority specifies.

IN-HOUSE TESTING

Every rig on site, so a consignment is proved and released in the same week it is rolled



HYDROSTATIC TEST

Every length is put under water pressure and held, to prove the weld and the body against leakage. The rig runs to 3000 psi, and pipe is tested to whatever pressure its specification calls for — BS EN, ASTM or API.



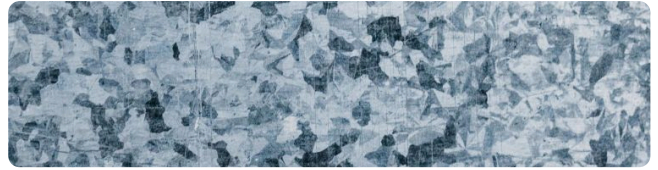
BEND TEST

Applied to tube up to DN 50 on our own bend rig, to BS EN and ASTM. Bending a tube through an angle is what shows whether the weld line will open under working stress.



NON-DESTRUCTIVE WELD INSPECTION

The weld seam of every length of ERW pipe NPS 2 and larger passes an online non-destructive electric test as it leaves the mill, so the seam is inspected on each length rather than on a sample from the batch.



GALVANIZING TEST

Zinc goes on by hot dip, and the coating is proved in house rather than taken on trust: copper sulphate for adherence and uniformity, and coating mass by weight, both to the BS EN and ASTM methods.



FLATTENING TEST

The counterpart above DN 50: the tube is flattened between platens on the flattening machine until the walls meet, and the weld either holds or it does not. Done to BS EN, ASTM and API.



DIMENSIONAL AND LUX

Diameter, wall and straightness are taken with calipers and micrometers through the run. A lux meter checks light levels at each inspection station — a dimensional check is only as good as the light it is made under.



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