STEEL PURLINS • STEEL PURLINS • STEEL PURLINS • STEEL PURLINS

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(logo used for promotional purposes; trademark registration in progress)

LRQA CERTIFIED ISO 9001 | UKAS MANAGEMENT SYSTEMS 0001

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STRUCTURA

STEEL PU

C-SECTIONS | Z-

UNITED G.I. PRODUCTS SDN. BHD.

STEEL PURLINS

C-SECTIONS | Z-SECTIONS | U-SECTIONS

UGI Purlins are manufactured from high-tensile G450 steel in accordance with Australian Standard AS/NZS 4600 and Malaysian Standard MS 2657:2020. Our cold-formed purlins, made from high-tensile galvanised steel coils, serve as primary roof supports and secondary framing members in building structures. They are available in a range of shapes, sections, and thicknesses, and can be cut to specified lengths with options for either punched or unpunched configurations to suit diverse structural and design requirements. The latest generation features a magnesium-enhanced metallic coating, offering superior corrosion resistance, greater durability, and long-term structural reliability. These sections are engineered to support roof and wall cladding applications for industrial, residential, and commercial buildings, in both acidic and alkaline environments.

The process begins by feeding the coil continuously into a roll-forming line. As the coil passes through successive roller stations, it is progressively shaped into the required section (C, Z, or U) at ambient temperature. Inline punching operations create bolt holes or slots at precise locations for structural connections. Finally, the sections are cut to specified lengths using flying shears, maintaining continuous line speed and ensuring consistent dimensional accuracy.

The result is a lightweight yet high-strength structural member, designed for fast installation and reliable performance in roofing, walling, and other structural applications. Each purlin is manufactured under strict quality control, adhering to precise dimensional tolerances and protective coating standards to ensure long-lasting durability, consistency, and versatility for modern construction needs.

TOLERANCE

All sections are produced within the following tolerances:

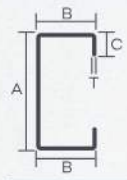
- Section length: ± 5mm
- Section web: ± 3mm
- Section flange: ± 3mm
- Lips: ± 3mm
- Hole centres: ± 2mm
- Thickness: ± 0.05mm

NOTE

Weight stated in these tables is theoretical nominal weight.

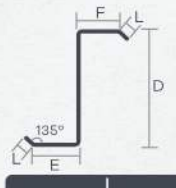
SIZE & DIMENSIONS

The sections are generally designated by a code number indicating the section shape, nominal dimensions, and thickness, as shown below. For special or large-scale projects beyond the standard range, customised solutions are available. Please contact our technical support team for assistance.



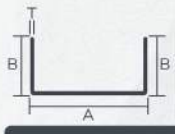
C-SECTIONS
DIMENSION SPECIFICATION

CODE	MM				WEIGHT (KG/M)*
	THICKNESS (T)	WEB (A)	FLANGE (B)	LIP (C)	
C30030	3.0	300	96	27	13.35
C30024	2.4	300	96	27	10.67
C25024	2.4	250	71	20	8.13
C25019	1.9	250	71	20	6.45
C20024	2.4	200	75	18	7.24
C20019	1.9	200	75	18	5.75
C20015	1.5	200	75	18	4.49
C15024	2.4	150	65	15	5.62
C15019	1.9	150	65	15	4.48
C15015	1.5	150	65	15	3.51
C12519	1.9	125	50	15	3.68
C12515	1.5	125	50	15	3.02
C10019	1.9	100	50	12	3.33
C10015	1.5	100	50	12	2.55



Z-SECTIONS
DIMENSION SPECIFICATION

PRODUCT CODE	MM					MASS (KG/M)*
	THICKNESS (T)	WEB (D)	BOTTOM FLANGE (E)	TOP FLANGE (F)	LIP (L)	
Z25024	2.4	250	69	63	18	8.29
Z25019	1.9	250	69	63	18	6.72
Z20024	2.4	200	74	68	18	7.12
Z20019	1.9	200	74	68	18	5.81
Z20015	1.5	200	74	68	18	4.65



U-SECTIONS
DIMENSION SPECIFICATION

PRODUCT CODE	MM		
	WEB (A)	FLANGE (B)	THICKNESS (T)
U30019	300	57	1.9
U25015	250	62	1.5
U20015	200	47	1.5

MATERIAL

All purlins are coated with MAXITRA™ ZM180 (180 metallic alloy in accordance with Malaysian Sta MS2657:2020. The coating consists of approximately 94% 5% aluminium, and 0.2–1.0% magnesium (Mg). The addit magnesium enhances corrosion resistance by strength the protective aluminium oxide layer, while zinc pro sacrificial (cathodic) protection—when the coatin scratched, nearby zinc corrodes first, shielding the exp steel. This combination improves overall hard formability, and durability in aggressive environments.

The superior corrosion resistance of MAXITRA™-coated comes from its magnesium-enriched alloy layer, which a stable and self-healing protective film at cut edges scratches. From our field experience, MAXITRA™ purlins consistently demonstrated better long-term perform than conventional galvanised iron (GI), offering up to twic outdoor durability of zinc coatings of equivalent mo addition, MAXITRA™ provides proven protection against rust, ensuring a longer service life across di environmental conditions.

For non-corrosive environments, we recommend ZM18 marine or severe industrial applications, heavier co masses such as ZM275 or ZM350 are advised for exte protection.

Note: Other non-standard sizes and materials are available request subject to minimum quantity order.

HOW TO SPECIFY?

E.g. Purlins shall be UGI Purlin C20024, manufactured G450 high-tensile steel with a minimum yield strength o MPa. They shall be coated with MAXITRA™ ZM180 (180 metallic alloy in accordance with Malaysian Sta MS2657:2020.

QUALITY CONTROL

All purlin materials undergo a raw material inve inspection to ensure compliance with the supplier's certificate. The slitting of purlin strips and the roll fo process are subject to strict quality control measures production facility is certified under the MS ISO 900 Quality Management System by Lloyd's Register.

BOLTS

High-tensile bolts and nuts are used at all times to e safety, durability, and reliable structural performance bolts are fitted for 22×14 mm holes, while M16 bolts are us 22×18 mm holes. These precision-matched fasteners pr tight, secure joints, minimising movement and ens long-term stability of the structure.

For other bolt sizes or specifications, please contact our tec support team.

SAG RODS & BRIDGING

Sag rods are galvanised steel tension members (min. Ø12 installed between purlins to prevent lateral movemen sagging. Bridging systems provide restraint, distribute and enhance stability. Together, they keep purlins str aligned, and resistant to buckling—ensuring long-l structural performance.

For detailed bridging design, please contact our technical suppor