

 **BSRM Xtrong**



## **GRADE SG 345 ANGLE (UNEQUAL LEG)** **Manufactured for the first time in Bangladesh**

BSRM unequal leg angles meet the rigorous demands of modern construction and industrial applications. The angles, with legs of varying lengths, provide unique structural benefits by ensuring reliability and strength. They are perfect for construction frameworks, support structures, trusses and any other hybrid structures.

Unequal Angles, manufactured from prime quality billet, are available in various sizes and thicknesses to fit the specific needs.

## APPLICATIONS

- **Construction:** Essential for building frameworks, bridges, and load-bearing structures.
- **Engineering:** Used in machinery supports, equipment frames, and structural components.
- **Industrial:** Commonly used in factories, warehouses, and manufacturing facilities.
- **Transport:** Integral to the automotive industry.
- **Marine:** Used in the shipbuilding industry for support structures.

## TECHNICAL SPECIFICATION

**Standards:** Conforms to BDS ISO 657-2; 2008 (Dimension) and BDS ISO 630-3: 2013 (Material Properties)

### MECHANICAL PROPERTIES OF UNEQUAL LEG ANGLES AS PER ISO 630 – 3:2012 (E)

Grade	Yield	Tensile	Eln%	Eln%	Eln%
	MPa	MPa	5D	2"	8"
SG 345	345	450–620	17	19	17

Elongation% values can be reported in either one of the 3 approved gauge lengths. The yield strength is minimum and the tensile strength has a minimum and maximum range

## ADVANTAGES

- **Efficient Design:** Unequal leg angles offer optimal material usage.
- **Cost-Effective:** Reduces material quantity and subsequent project costs.
- **Ease of Fabrication:** Perfect design ensures hassle-free fabrication and project requirements.

## ANGLE (UNEQUAL LEG) SIZE CHART

- 50x30x5mm
- 75x50x6mm

## ANGLES OF UNEQUAL LEG VS EQUAL LEG

Angle Type	Size	Mass (Kg/m)	Sectional Area (cm <sup>2</sup> )	Moment of Inertia (I <sub>x</sub> ) (cm <sup>4</sup> )	Radius of Gyration (r <sub>x</sub> ) (cm)	Plastic Section Modulus (Z <sub>x</sub> ) (cm <sup>3</sup> )
Angle (Equal Leg)	50x50x5mm	3.77	4.80	11.00	1.51	3.05
Angle (Unequal Leg)	50x30x5mm	2.96	3.78	9.36	1.57	2.86
The above shows that angles with unequal legs save mass (kg/m) by 21%						
Angle Type	Size	Mass (Kg/m)	Sectional Area (cm <sup>2</sup> )	Moment of Inertia (I <sub>x</sub> ) (cm <sup>4</sup> )	Radius of Gyration (r <sub>x</sub> ) (cm)	Plastic Section Modulus (Z <sub>x</sub> ) (cm <sup>3</sup> )
Angle (Equal Leg)	75x75x6mm	6.85	8.73	45.80	2.29	8.41
Angle (Unequal Leg)	75x50x6mm	5.65	7.19	40.50	2.37	8.01
The above shows that angles with unequal legs save mass (kg/m) by 18%						

Note: Customized/other sizes are available upon request.