

NOTES

1. GENERAL

1.1 Hot-rolled sections and bars

The tables in this handbook cover the range of sections generally available in South Africa.

The different sections are manufactured in accordance with the following standards:

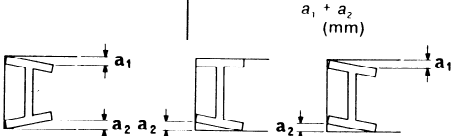
I and H-sections	BS4:Part 1: 1972
(with the exception of 102x64, 203x152, 254x152 and 305x152 (taper flange I-sections) which are in accordance with BS4:1932)	
Metric channels	DIN1026
Imperial channels	BS4:Part 1: 1972
Angles	ISO-R657
IPE sections	DIN1025

Tolerances on the mass and dimensions of hot-rolled sections and bars are as shown in the following tables:-

1.1.1. Tolerances on mass per unit length

Section or bar	Permissible variation under	Permissible variation over
I-sections H-sections Channels Flats	2,5%	2,5%
Channels except 178x54x15	2,5%	2,5%
	0	5 %
Rounds: diameter > 10 mm diameter ≤ 10 mm	2,5% 4 %	2,5% 4 %
Angles: t > 3,2 mm t ≤ 3,2 mm	2,5% 5 %	2,5% 5 %

1.1.2. Dimensional Tolerances

Section or bar	Dimension	Permissible variation (mm)
I and H-sections (parallel flange)	Depth h Flange width b Web off-centre: $b \leq 178$ mm $b > 178$ mm	-3,2 to + 3,2 -4,8 to + 6,4 3,2 4,0
I-sections (taper flange)	Depth h : $h \leq 178$ mm $178 < h \leq 305$ mm $305 < h \leq 406$ mm Flange width b : $b < 76$ mm $76 \leq b \leq 178$ mm $b = 203$ mm	-1,6 to + 2,4 -1,6 to + 3,2 -1,6 to + 4,0 -1,6 to + 1,6 -3,2 to + 3,2 -4,0 to + 4,0
I and H-sections (all)		$\frac{0,8b}{25}$
Channels	Depth h : $80 \leq h \leq 178$ mm $178 < h \leq 200$ mm $h > 200$ mm Width b : $b < 75$ mm $b \geq 75$ mm $a_1 + a_2$ (mm)	-2,0 to + 2,0 -2,8 to + 2,8 -3,0 to + 3,0 -1,6 to + 1,6 -3,2 to + 3,2 $\frac{0,8b}{25}$
	