

### FIXED LADDER WITH SAFETY LINE

Ladders with a climbable height of more than 3m require additional safety such as, a safety cage or safety lines. After 10m the ladder requires a break platform at 6m.

A vertical safety line consists of a length of Safety line running parallel to the ladder strut. The user straps on to the safety line via a full body harness on to a Line Traveller. If the user slips or trips the line traveller locks and arrests the users fall.



#### TECHNICAL INFORMATION

SYSTEM TYPE	FIXED LADDER
FUNCTION	HEIGHT ACCESS
MAXIMUM WIDTH	480 MM
MAXIMUM HEIGHT	MAX 10M LENGTH SECTIONS
ANGLE RANGE	N/A
FIXING TYPE	PERMANENT
INSPECTION PERIOD	12 MONTHS
MATERIAL	ALUMINIUM OR GALVANISED STEEL
ADDITIONAL FEATURE(S)	SAFETY LINE

## MATERIAL SPECIFICATION - GALVANISED STEEL PROFILE

YIELD	275 N/MM <sup>2</sup> C 0.15–0.26; SI 0.35; MN 1.5; P 0.035; S 0.040; MO 0.4–0.6.
YOUNGS MODULUS OF ELASTICITY	200 X 103 MPA AT 20°C
DENSITY	7.87 G/CM <sup>3</sup> AT 20°C
COEFFICIENT OF THERMAL EXPANSION	LOW-CARBON/HSLAS: 12.4 μM/M/°C IN 20°C TO 100°C RANGE I-F STEEL: 12.9 MM/M/°C IN 20°C TO 100°C RANGE
THERMAL CONDUCTIVITY	LOW-CARBON/HSLAS: 89 W/M°C AT 20°C I-F STEEL: 93 W/M°C AT 20°C
SPECIFIC HEAT	481 J/KG/°C IN 50°C TO 100°C RANGE
ELECTRICAL RESISTIVITY	0.142 MΩ•M AT 20°C

## MATERIAL SPECIFICATION - ALUMINIUM PROFILE

ALUMINIUM EXTRUSION	0.50-0.75 Si, MAX 0.35, Fe 0.40-0.70 Mg
TENSILE STRENGTH	PSI 23,000
YIELD STRENGTH	PSI 15,000

## OPERATING AND DESIGN STANDARDS

- BS4211:2005+A1:2008
- BS EN 12020-1 AND 2 :2008 ALUMINIUM AND ALUMINIUM ALLOY EXTRUSIONS
- BS EN 755:2008 SERIES EXTRUDED PROFILES
- BS EN 754: 2008 SERIES TOLERANCES ON DIMENSIONS EXTRUDED PROFILES
- BS 1154:2003- PHYSICAL AND COMPOSITIONAL PROPERTIES FOR NATURAL BLACK RUBBER
- ISO 9001:2008
- ISO 14001:2004
- BS OHSAS 18001:2007
- WORK AT HEIGHT REGULATIONS 2005 (REF.7)

## TYPICAL CONNECTION LOADS

VERTICAL SHEAR	3.0Kn
TENSION	0.5Kn
UNIFORM LOAD 100MM <sup>2</sup>	150KG
MAXIMUM SWL	450KG