

ALUMINIUM ALLOY - WROUGHT**6082: HEAT TREATABLE****DSM 2.1.9****Wrought: Heat Treatable:**

Initially cast as ingots then worked into the desired form

- **Rolling:** To produce Plate, Sheet or foil.
- **Extrusion:** To produce Tubes, Rods, Angle, Tee, Channel & Box
- **Forming:** More complex shapes from rolled or extruded stock.

The alloying elements that are added to this series respond to subsequent thermal heat treatment to optimise properties such as, strength & dimensional stability.

Definition:

6082: The **most common** general engineering alloy in extruded form, combining additional magnesium, manganese & silicon to produce the highest strength version of the 6000 series

Features:

Initially cast as ingots, then worked into form it is supplied fully heat treated & tempered.

The preferred DEK -ASM condition is **T4**.

This grade provides a good surface finish with good corrosive resistance, and is suitable for welding & coating.

DEK SPECIFIC APPLICATION:

Die No. **80116:** Belt Guide

These values are representative and should not be considered as definitive. For critical applications, refer to material data-sheet.

TYPICAL MECHANICAL PROPERTIES @25°C (T4)	
DENSITY:	2700 Kg/m³
YOUNGS MODULUS:	70 GPa
POISSONS RATIO:	0.33
YIELD STRENGTH	110 MPa
Max. TENSILE STRENGTH	205 MPa

Issue	01	02	03	04	05	06	07	08	09
DCR		7135	44721						



ALUMINIUM ALLOY - WROUGHT

6082: HEAT TREATABLE

DSM 2.1.9

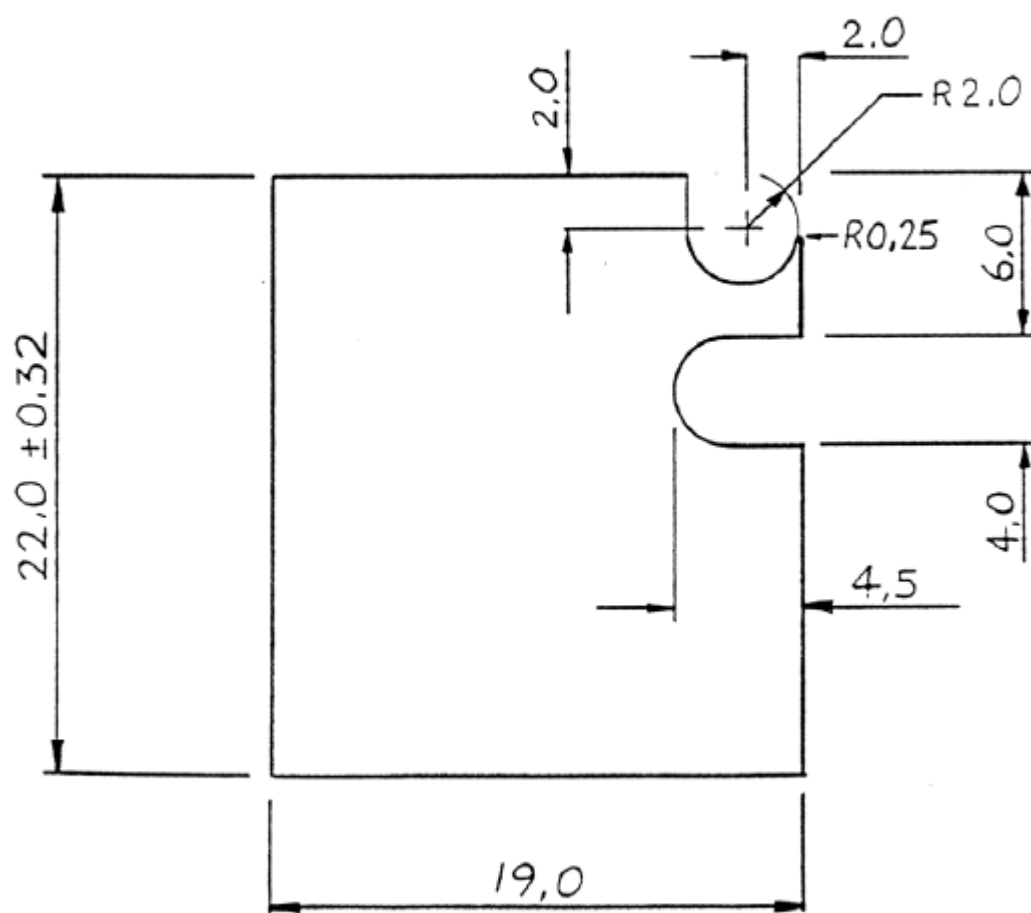
Aluminium Extrusion (Rail Section)

DESCRIPTION

A unique Aluminium H30 Extruded section used principally for the manufacture of DEK Belt Guides.

SPECIFICATION

Material 6082 (H30) to BS1474 : 1987 - Die No 80116



AVAILABLE

Blackburns Extrusions Ltd
Goodwood Road
EASTLEIGH Hants

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ALUMINIUM ALLOY - WROUGHT**6082: HEAT TREATABLE****DSM 2.1.9****Key Features:**

METHOD	RESULT
Machining	Good
Cold Forming	Good
Brazing & soldering	Good
Welding – (Mig & Tig)	Good
Welding – Resistance (spot)	Good
Coating applications (anodising)	Fair:
Corrosion Resistance (uncoated)	Atmosphere: Good Marine: Good

Temper Types:

T651 Solution heat treated & stress relieved by stretching then artificially aged.

T6 Solution heat treated then artificially aged.

T4 Solution heat treated & naturally aged to a substantially stable condition.

0 Soft, fully annealed

Note: The temper condition must be added to the drawing:-

DSM 2.1.9_T4

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CHEMICAL COMPOSITION					
Silicon (Si)	0.70 / 1.3 %	Chrome (Cr)	0.0 / 0.25 %	Alumin.(Al)	balance
Magn. (Mg)	0.60 / 1.2 %	Zinc (Zn)	0.0 / 0.20 %		
Mang. (Mn)	0.4 / 1.0 %	Titan. (Ti)	0.0 / 0.10 %		
Iron (Fe)	0.0 / 0.5 %	Copper (Cu)	0.0 / 0.10 %		

CURRENT INTERNATIONAL SPECIFICATION COMPARISON	
BRITISH: EN AW	6082
GERMAN: DIN	AlMgSi1
GERMAN: WNR	3.2315
EUROPEAN	EN AW6082
AMERICAN: AA	6082
JAPANESE GRADE	----
CHINESE GRADE	----

REPLACES

BS1474 1987	DESCRIPTION
H30	Wrought Alloy: Heat Treatable

Alternatives:

Alternative materials are allowed only with the express written permission of ASMPT. Please email details of your request to engineering_enquiries@asmpt.com

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