



Magnesium Extrusions Summary

Luxfer MEL Technologies extrusions: A summary

Luxfer MEL Technologies is a world leader in the development and supply of high quality extruded products. These lightweight alloys are used as forging feedstock, as base material from which to machine components or as custom shapes to integrate directly into a component. Luxfer MEL Technologies operates two dedicated presses to supply a full range of extruded magnesium alloys and we continue to develop new alloys for future applications.

Products

- Round bar
- Square/rectangular sections
- Hollow tubes/sections/custom profiles
- Multi-hollow sections/custom profiles

Applications

- Forging feedstock
- Machining feedstock
- Solid, hollow or multi-hollow custom
- Profile shapes
- Near net shapes

Alloys

Where appropriate, alloys are also available heat treated.

- Elektron® 43, Elektron® 675
- Elektron® 21, Elektron® WE43, Elektron® WE54
- ZK60A, ZW3
- AZ80A, AZ61A, AZM, AZ31B
- M1A, ZM21
- Pure Mg
- Custom alloys

Specifications

- ASTM B107-13
- ASTM B91
- AMS 4352H
- AMS 4350M
- AMS 4485
- Customer defined specifications

Ultrasonic Inspection to AMS 2154 Class B, A, AA and AAA.

Luxfer MEL Technologies has state of the art, custom built immersion ultrasonic testing equipment.

Sizes

Lengths

25 mm to 6 m
1 inch to 20 ft

Square/rectangular sections

Thickness: 10 mm to 280 mm
3/8 inch to 11 inches
Width: 10 mm to 280 mm
3/8 inch to 11 inches

Thickness and width are inter-dependant. Please see Figure 1.

Round bar diameters

1.6 mm to 200 mm
1/16 inch to 8 inches

Custom profiles

Luxfer MEL Technologies manufactures complex solid and hollow profiles using the latest extrusion die technology within the scope of our size capability. Why not get in touch with us to discuss your exact requirements?

Properties

The minimum expected properties of common magnesium extrusion alloys are shown in the table below.

Table 1. ASTM B107-13 specification minimums for common magnesium extrusion alloys – solid extrusions.

	UTS MPa	UTS ksi	Yield MPa	Yield ksi	Elongation %
Elektron 43-T5	340	49	225	33	12
Elektron 675 -T5a	350	51	230	33	5
ZK60A-T5	310	45	250	36	4
AZ80A-T5	310	45	205	30	2
AZ61A-F	275	40	150	22	7
AZ31B-F	220	32	140	20	7

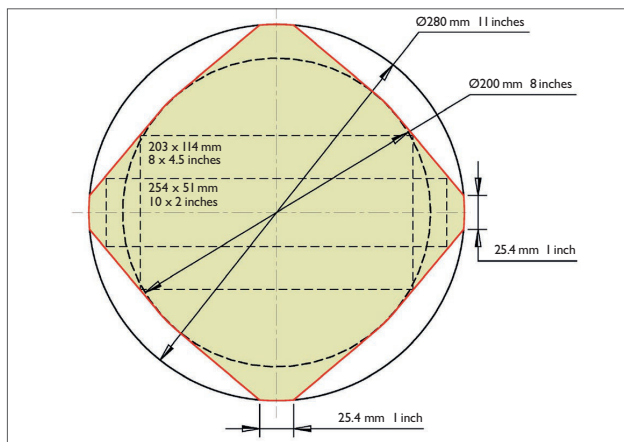


Figure 1. Extrusion press size capability.

Discover more at www.luxfermeltechnologies.com

 @LuxferMELTech

† The information contained within is meant as a guideline only

Copyright © Luxfer MEL Technologies 2018. The information provided within this document is aimed to assist manufacturers and other interested parties in the use of magnesium alloys. Luxfer MEL Technologies accepts no liability in whole or in part from use and interpretation of the data herein. All information is given in good faith but without warranty. Freedom from patent rights must not be assumed. Health and Safety information is available for all Luxfer MEL Technologies products. **DS-1015-1118**



Certificate No. FM12677

Luxfer MEL Technologies
Elektron Technology Centre
Lumns Lane, Manchester, M27 8LN, UK
T +44 (0) 161 911 1000

Luxfer MEL Technologies
500 Barbertown Point Breeze Road
Flemington, NJ 08822, USA
T +1 908 782 5800

Luxfer MEL Technologies
4601 Westown Parkway Suite 130
West Des Moines, IA 50266
T +1 515 421 4100