CAL5® Precision Face-Machined Cast Tooling Plates





metalweb are pleased to offer its brand new range of face-machined cast tooling plate for the first time in the UK market.

Manufactured exclusively for metalweb this 5000 series based alloy plate is machined to industry standard thickness and flatness tolerances. Using special machining equipment with heads designed to match our specifications, we are able to offer aluminium cast plates with a precision Ra 0.4 μ m finish. The plates have a thickness tolerance of ± 0.10 mm and very good flatness values.

Advantages of metalweb CAL5[®] plate:

- High tensile strength
- Good ductility
- Especially heat treated to obtain stress free condition, annealing after machining is not required
- Regular fine grain structure
- Excellent corrosion resistance
- Very good machinability
- Very good weldability
- Good anodizing (not decorative) and hardcoating properties

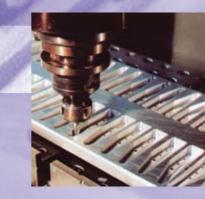
metalweb CAL5[®] plate has a range of applications including:

- Jigs and fixtures
- Precision parts
- Electronic mounting plates
- Modelling boards
- Pattern plates
- Plastic moulds

metalweb offer a range of "tooling plate" solutions including other specialist cast, rolled and mould plate products. For details and availability – or for advice on what to select for your chosen application – please enquire (contact details on back cover).







Sizes Available

metalweb CAL5[®] is available in a range of sizes.

| Thickness range: | 6.35mm (¹ / ₄ ") up to 50.8mm (2") |
|-----------------------------|---|
| Maximum standard length is: | 3670.3mm (144 ¹ / ₂ ") |
| Maximum standard width is: | 1841.5mm (72 ¹ / ₂ ") |

Non-standard dimensions are available at additional charges. In addition metalweb has a range of specialist processing equipment to cut plates to the exact size required.

Mechanical and Physical Properties

| | S.I. Units | Imperial Units |
|-------------------------------------|------------------------|-------------------------|
| Yield strength $R_{p0,2}$ | [MPa] | 125 |
| Ultimate tensile strength Rm | [MPa] | 275 |
| Elongation A_5 | [%] | 15 |
| Module of elasticity | [GPa] | 70 |
| Brinell hardness HBS | [2.5/62.5] | 75 |
| Density | [g/cm ³] | 2.66 |
| Coefficient of thermal expansion | [k ⁻¹] | 23.3 x 10 ⁻⁶ |
| Thermal conductivity | [W/m•K] | 110-130 |
| Electrical conductivity | [m/W•mm ²] | 16.2 |
| Specific heat (25°-100° C) | [J/kg•K] | 900 |

Chemical compound of CAL5[®]:

| Magnesium | 4-5% |
|-----------|------|
| Manganese | <1% |
| Other | 1.5% |
| Aluminium | Rest |

Dimensional Tolerances

| Thickness | Flatness* | Thickness tolerance |
|-----------|-----------|------------------------|
| (mm) | (mm) | (mm) |
| 6.35-12.7 | ≤ 0.40 | ± 0.10 |
| >12.7 | ≤ 0.13 | ± 0.10 |

* the surface flatness for whole plates is measured with a special digital flatness ruler with a measuring length of 1 metre.







metalweb's focus is on providing a high quality service to its customers. It does this by a process of continuous improvement, business vision and a total dedication to achieving excellent levels of service.

Our goal is to make a competitive difference for our customers by working with them, and often this means gaining a total understanding of their business, their thinking and their goals. As a result the majority of metalweb's business is built on long-term partnerships providing mutually beneficial outcomes for both parties.

In addition to long-term partnerships metalweb provide a 'spot service' for those customers looking to purchase their shortterm material requirements. metalweb locations in the UK:

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