VMC Machining Services

Balbird's vertical machining capability includes **BFW BMV 50 TC24**, **BFW Chakra BMV 60+** and a **BFW VMC with 4th axis**, with a standard envelope of **1200 × 600 × 600 mm**. Larger components, up to **9000 × 3500 × 1700 mm**, are available subject to feasibility confirmation. Send a drawing to start a feasibility review.

1200 × 600 × 600 mm Standard envelope	**4th axis** BFW VMC with 4th axis	**9000 × 3500 × 1700 mm** Extended, subject to feasibility

Built for design engineers and purchase managers who need precision plates, fixtures and industrial components, as well as large machined parts that are feasibility-checked before quotation.

Buyer problems we help solve

- Precision plates and fixtures that need controlled flatness and hole positions.
- Large components that exceed standard VMC travels.
- Parts needing a 4th axis to reduce setups.
- Supplier consolidation for machining plus fabrication or finishing.
- Prototype-to-production needs for machined parts.

Technical capability

Parameter	Capability
Machines	BFW BMV 50 TC24; BFW Chakra BMV 60+; BFW VMC with 4th axis.
Standard envelope	1200 × 600 × 600 mm.
Extended capability	Up to 9000 × 3500 × 1700 mm, subject to feasibility confirmation. The machine or partner used for each envelope is stated at quotation.
Axis, table, taper, travel	Axis count, table size, spindle taper, travels, workholding and weight limits are confirmed per machine at RFQ.
Materials	Mild steel, aluminium and brass are typical; other materials confirmed per RFQ.
Tolerance and finish	Depend on geometry, material, tooling and setup. Verified ranges are shared per part rather than as a universal claim.
Planning	Datum strategy, setup count and inspection plan are reviewed before quotation, especially for large or complex parts.

Machine names and envelopes are as shown on the Balbird website. Confirm configurations at RFQ.

Components and applications

Typical parts include:

- Precision plates and industrial support components
- Structural systems and framework parts, including medical frameworks
- Jigs, fixtures and tooling
- Automation and machine components

Materials and design inputs

- **Required inputs:** 3D model (STEP) and 2D drawing with revision, material and grade, tolerances, datums, quantity.
- **Raw material:** supplied by you or sourced; options are confirmed at quotation.
- **Feasibility check:** large and complex components are checked for machine fit, workholding and setup count before a quotation.
- **Design-for-manufacturing:** we suggest changes that cut setups or cost where possible.

Quality and documentation

- Dimensional inspection against the drawing; the inspection plan is agreed at quotation.
- Inspection reports and material test certificates can be discussed at RFQ stage.

- First-piece approval for new or complex parts where required.
- Share any certification or customer-specific requirements with your RFQ.

How an order is executed

1. Enquiry	You send a drawing or requirement through the capability enquiry page or by email.
2. Feasibility review	We check drawing, material, tolerances and quantity, and clarify open points with you.
3. Quotation	You receive a quotation with scope, assumptions and lead-time basis.
4. Facility confirmation	We confirm the manufacturing route and whether work runs in-house or through the partner network.
5. Sample / approval	Where required, a sample or first piece is approved before the batch is released.
6. Production & inspection	Work is made and checked against the agreed drawing and inspection scope.
7. Dispatch & support	Parts are packed and dispatched; any issue is raised and resolved with our team.

Commercial and logistics

- Lead time depends on part size, setups, material and workload.
- Fixture and tooling charges are stated in the quotation.
- Packaging for large or heavy parts and delivery coordination are agreed with the quotation.

Frequently asked questions

What is the standard machining envelope?
1200 × 600 × 600 mm.

Can you machine very large components?
Extended capability up to 9000 × 3500 × 1700 mm is available subject to feasibility confirmation.

Do you offer 4th-axis machining?
Yes, through the BFW VMC with 4th axis.

What tolerances can you hold?
It depends on geometry, material and setup. We confirm achievable tolerances for your part before quoting.

Can you machine fixtures and tooling?
Yes, jigs, fixtures and tooling are typical parts.

How do I get a quote?
Send a 3D model and 2D drawing through the enquiry page below.

To receive an accurate quotation, please share:

- Drawing (2D) and/or 3D model, with revision number
- Material specification and grade; certificate needs, if any
- Critical dimensions, tolerances, surface finish, inspection needs
- 3D model, datum scheme and size or weight of the largest part
- Quantity, batch size, annual demand and repeat frequency
- Target delivery date and delivery location
- Finishing, coating, assembly, packaging or export requirements
- Quality standards or customer-specific requirements
- Contact person and preferred communication method

Have a drawing or production requirement?

Send your drawing, material specification, quantity and delivery target to Balbird for a feasibility review. Our team will clarify the requirement and confirm the appropriate manufacturing route, capability and quotation process.

Enquiry page: [add website]/capabilities/vmc-machining/enquiry
Email: [add enquiry email]
Website: [add website]

Limits shown are indicative and depend on material, geometry, tooling, machine and supplier availability. Network or subject-to-feasibility services are confirmed per RFQ before quotation.