

ENGINEERING PROCUREMENT RESOURCE

Precision Shaft RFQ Checklist

A useful precision-shaft RFQ identifies the released drawing and revision, material and blank condition, heat-treatment requirements, functional datums, critical dimensions, inspection and reporting needs, annual demand, and delivery target. Providing these inputs helps engineering evaluate the complete route without assuming which journals, bores, splines, teeth, faces, or surface conditions control the part's function.

MINIMUM PACKAGE BEFORE QUOTATION

Released drawing and revision • Material and heat treatment • Estimated quantity and annual demand • Critical tolerances and inspection needs • Delivery target

01 Drawing and revision control

- Dimensioned PDF plus STEP when available.
- Drawing number, revision, units, release date and governing standard.
- Datum reference frame and geometric-tolerance callouts.
- Functional interfaces that affect fit or assembly.

02 Material and blank condition

- Material grade, specification and supply condition.
- Certification, cleanliness, hardenability or traceability needs.
- Bar, tube, forged, cold-formed, or customer-supplied blank.
- Any restriction on equivalent grades.

03 Heat treatment and surface condition

- Required process and final condition.
- Hardness locations, case-depth definition and verification method.
- Dimensions that apply before or after treatment.
- Coating, cleanliness or corrosion-protection requirements.

04 Functional shaft features

- Journals, seats, shoulders, seal diameters and faces.
- Bores, threads, tapers, grooves and cross holes.
- Internal or external splines and gear teeth.
- Required relationships between datums and features.

COMPLETE THE TECHNICAL AND COMMERCIAL INPUTS

Tolerance, inspection and program requirements

05 Tolerance and surface-finish inputs

- Nominal dimensions and total tolerance bands.
- Geometric tolerances with referenced datums.
- Surface-roughness parameter and evaluation rule.
- Measurement method, sampling and reporting format.

06 Gear and spline definition

- Governing standard and edition.
- Tooth data, modifications and accuracy grade.
- Required individual deviations or composite checks.
- Spline fit, class, gauge and analysis requirements.

07 Inspection and quality records

- Dimensional, material and heat-treatment records.
- Hardness, case-depth, surface or contour reports.
- Gear or spline analysis when specified.
- First article, PPAP, control plan or customer forms when required.

08 Volume, delivery and packaging

- Prototype, launch and serial-production quantities.
- Estimated annual demand and program life.
- Delivery date and receiving location.
- Packaging, rust prevention, labeling and traceability.

Make open requirements visible

If a material, treatment, tolerance, inspection method, or delivery condition is still provisional, label it clearly. This is more useful than leaving it unstated because the open item can be evaluated during drawing review.

DRAWING-BASED FEASIBILITY REVIEW

Before sending your RFQ

Use the final check below to reduce clarification cycles:

01	Drawing and revision are identified
02	Material and heat treatment are defined or marked provisional
03	Functional datums and critical characteristics are clear
04	Inspection and reporting requirements are stated
05	Prototype, annual demand and delivery target are included
06	Packaging, traceability and customer-specific forms are identified

Ready for a feasibility review?

Send your drawing, material specification and estimated quantity.

<https://jinhuamach.com/pages/contact>

This checklist is procurement guidance rather than a universal tolerance or process guarantee. Final feasibility is confirmed only after review of the released drawing, governing standards, material, heat treatment, geometry, datum structure, quantity and inspection plan.