

ASSEMBLY REFERENCE

Rotor Assemblies

Define the magnetic function, mechanical interface and verification plan together. Final requirements belong on the project drawing and agreed specification.



Product illustration. Geometry and configuration are project-specific.

Define the application.

Motor duty

Share speed, torque, power, duty cycle, temperature at the rotor and the electrical operating point. Include overspeed and fault cases.

Mechanical interface

Provide shaft datum, bearing arrangement, rotor OD, stack length, runout, fit, key or spline details and assembly sequence.

Magnetic target

Provide pole count, magnetizing direction, air gap, flux or back-EMF target, harmonic limits and grade preference if known.

Retention concept

State sleeve, band, adhesive, pocket, bridge or overmold concept, plus burst-speed, shock, balance and service-life requirements.

VALIDATION PLANNING

Agree what success means.

Dynamic balance

Define balance grade, correction plane, speed, fixture and residual unbalance limits. Report the condition of the final assembly.

Overspeed and retention

Validate the agreed overspeed and thermal condition, with inspection for movement, cracks, adhesive failure or sleeve damage.

Flux and waveform

Map air-gap flux and, where applicable, verify back-EMF waveform, pole position and harmonic content against the motor target.

Runout and concentricity

Measure critical diameters, shaft runout, magnet-to-shaft concentricity and bearing datum relationships on the released assembly.

Runout and balance are project-specific.

State the measured feature, datum axis, fixture, measurement direction and allowable indicator range. For balance, specify the applicable method, assembly state, correction planes, speed and residual-unbalance acceptance. This reference assigns no generic TIR tolerance or balance grade.

Define the next step.

Share your drawing, application conditions and target quantity for a material or assembly review.

Empire Magnets | rfq@china-empire.com | +86 574 8791 5261

Contact: Ningbo Empire Advanced Material Co., Ltd.

No. 2432 East Baizhang Road, Ningbo 315040, Zhejiang, China

ABOUT THIS EDITION

New editorial reference edition 2026.09-R1, compiled 2026-09-27. Catalogue data and selection questions are reorganized for clarity. This edition does not record an engineering approval or certify a measured production result.

Source: Empire Magnets existing product catalogue and technical-library archive. For a project-controlled specification, request an engineering review.