



Disc Spring RFQ Checklist

A procurement-ready checklist for Belleville washers, DIN 2093 disc springs, custom disc springs and elastic preload components.

Draft review version | English source copy

Use this form to prepare a cleaner RFQ package before engineering review.

1. Buyer and Project Information

| | |
|--------------------------|--|
| Company / contact | Name, company, email, phone, country |
| Project stage | New design / replacement / maintenance shutdown / prototype / repeat order |
| Target timing | Sample date, production date, shutdown window or urgent repair date |
| Quantity | Prototype quantity, first order quantity, annual demand |

2. Spring Geometry

| | |
|----------------------------------|---|
| OD / ID / thickness | Outside diameter, inside diameter and material thickness. Drawing or sample photo is helpful. |
| Free height / cone height | Free height, cone height h_0 , or installed height if known. |
| Support condition | Flat seating, guided on bolt/shaft, support faces, contact flats, edge condition. |
| Standard reference | DIN 2093 / DIN 6796 / customer drawing / custom geometry / unknown. |

3. Load, Deflection and Stack

| | |
|---------------------------|---|
| Target load | Required force at working deflection, preload target or load range. |
| Deflection | Working deflection per washer, total movement, settlement reserve or travel limit. |
| Stack arrangement | Single washer, parallel stack, series stack or mixed stack. Include count and orientation if known. |
| Installation space | Available stack height, guide diameter, bolt size, pocket depth and maximum OD. |

4. Service Environment

| Temperature | Minimum, normal and maximum operating temperature |
|---------------------|--|
| Media / corrosion | Water, steam, seawater, acid, chloride, sour gas, solvent, outdoor exposure |
| Duty | Static preload, cyclic duty, vibration, thermal cycling, impact or shock |
| Failure consequence | Leakage, shutdown, safety risk, retightening cost, warranty claim, equipment damage |
| Documentation | Material certificate, dimensional report, load test report, coating report, PPAP/FAI if required |

5. Material Direction

- Spring steel: cost-effective for controlled indoor or protected environments.
- Stainless and precipitation-hardening stainless: useful when corrosion resistance and spring performance must be balanced.
- H13 / SKD61 / 8407-type hot-work steels: considered for elevated-temperature load retention where nickel alloy is not necessary.
- Inconel, Hastelloy, Nimonic and titanium alloys: reviewed for heat, corrosion, weight, HPHT, chemical or severe-service risk.

Engineering review note: Catalog dimensions do not replace final engineering verification. Fatigue life, K4 geometry source, friction and support face conditions must be reviewed by qualified engineers, together with coating influence, temperature derating and real installation conditions, before final approval.

6. Recommended Attachments

| Drawing or sketch | Confirms geometry, tolerances, contact faces and available space. |
|-----------------------|---|
| Photo of current part | Useful for replacement, failure analysis and identifying stack orientation. |
| Assembly photo | Shows guidance, support condition, bolt/flange/valve context and practical installation limits. |
| Load or test data | Helps compare current behavior with target force, deflection and acceptance criteria. |