

EV Charging Station Cable Organizer Spring Unit

Engineering Review Sheet / 新能源汽车充电桩束线器弹簧单元工程评审资料

Purpose: This document helps customers and XSD Precision align the application boundary, RFQ inputs, sample route and validation expectations before quotation. It is an engineering review guide, not a fixed product specification.

1. Product Position / 产品定位

The EV Charging Station Cable Organizer Spring Unit is an application-specific spring-assisted cable management structure. Its role is to help support cable routing, reduce uncontrolled cable droop, improve return behavior and lower repeated dragging, tangling, sharp-bend and pressure-damage risk.

新能源汽车充电桩束线器弹簧单元属于应用定制型弹簧辅助线缆管理结构。它的作用是辅助线缆导向和支撑，减少无序下垂，改善回位表现，并降低线缆拖地、缠绕、急弯和重压破损风险。

2. Information Needed Before Review / 评审前需要的信息

Input	Why It Matters	Typical Evidence
Cable and charging-gun weight	Defines support load, return behavior and fatigue direction.	Specification, measurement record, sample
Mounting space and interface	Defines whether a vertical spring unit can be packaged safely.	Drawing, 3D model, installation photo
Working travel and path	Defines movement range, end position and interference risk.	Travel target, use-path photo or video
Bend-radius limit	Protects cable jacket and internal structure from local stress.	Cable datasheet or customer requirement
Environment and cycle target	Guides material, surface protection and validation depth.	Temperature, rain, salt, dust, cycle target

3. Engineering Review Path / 工程评审路径

- 01 Define the problem: Confirm dragging, tangling, jacket wear, poor return, sharp bending or heavy-pressure exposure.
- 02 Confirm boundaries: Review cable data, charger structure, installation space, working travel and end-interface limitations.
- 03 Select the concept: Review spring layout, end form, material direction, surface protection and assembly route.
- 04 Build and validate samples: Check dimension, load, travel, return behavior, assembly fit, fatigue direction and environment needs.
- 05 Control production: Lock BOM, process controls, inspection records, packaging and lot traceability.

4. Validation Items / 验证项目

Validation Item	Review Focus	Output Evidence
Dimensional inspection	Interface, free length, end form, installation fit	Inspection record

Validation Item	Review Focus	Output Evidence
Load and travel test	Specified position load and working travel	Load-travel record
Return behavior check	Cable support, storage position and operating path	Functional record or video
Fatigue review	Cycle target and failure-risk direction	Test plan or test record
Environmental review	Temperature, moisture, salt, dust and surface protection	Requirement matrix or report
Packaging review	Transport protection and deformation prevention	Packing method and inspection

5. Controlled Boundary / 受控边界

Public materials can explain the review method, but they do not define final specifications. Final wire diameter, spring geometry, material, load, travel, fatigue target, surface protection and acceptance criteria must be confirmed against the customer drawing, sample, application and agreed validation route.

公开资料只说明评审方法，不代表固定规格承诺。最终线径、弹簧结构、材料、载荷、行程、疲劳目标、表面防护和验收标准，必须结合客户图纸、样品、应用边界和双方确认的验证路线确定。

6. Recommended Customer Submission / 建议客户提交资料

- Drawing, 3D file, sample or clear installation photos
- Cable weight, charging-gun weight, cable outer diameter and exposed length
- Available mounting height, width, interface and movement clearance
- Required working travel, bend-radius limit and user operating path
- Temperature, rain, salt, dust, corrosion and service environment
- Cycle-life target, acceptance criteria, sample quantity and annual volume

7. Next Step / 下一步

Fill the companion RFQ intake workbook and send it together with drawings, photos or samples. XSD Precision will use the information to review feasibility, risk, sample route, validation scope and quotation assumptions.

请填写配套RFQ信息表，并与图纸、照片或样品一起提交。XSD Precision将根据此评审可行性、风险、样件路线、验证范围和报价假设。