Bulk Pro — Product Specification & 3D STEP Model Package

Anhui Feirun Intelligent Technology (Bulk Pro) | Lithium & Sodium-Ion Battery Material Handling Systems

Overview

This technical package covers Bulk Pro's core equipment families for cathode, anode and next-generation battery material lines: glove-box bag unloaders (OEB-4/5 contained), dense-phase pneumatic conveying, loss-in-weight dosing/weighing, industrial mixing, automatic packaging and pulse-jet dust collection. All units are engineered for ±0.1% dosing accuracy, dust-free operation and ATEX / inert-gas protection where required. Values below are indicative typical ranges; final parameters are confirmed during engineering proposal.

Raw Material Unpacking	Containment / throughput	OEB-4/5, –40 to –50 Pa; 200–2,000 kg/h; 5–25 kg bags + FIBC 500–1,500 kg
Pneumatic Conveying	Capacity / distance	1–12 t/h; up to 300 m; 1.5–4.0 bar dense-phase; pipe Ø 50–150 mm; 3–8 m/s
Weighing & Dosing	Accuracy / feed rate	±0.1–0.2% gravimetric; 0.5–10,000 kg/h; hopper 30–500 L
Industrial Mixing	Batch / homogeneity	100–6,000 L; 3–12 min; CV ≤ 5%; chopper up to 3,000 rpm
Automatic Packaging	Bag / FIBC	5–25 kg ±20 g (to 600/h); FIBC 500–1,000 kg; 100% checkweigh
Dust Collection	Filtration / emission	1,000–80,000 m³/h; PTFE membrane; < 5–10 mg/m³

Spotlight — Loss-in-Weight Feeder

Dosing accuracy	±0.1% high-accuracy gravimetric (material-validated)
Feed rate	0.5 – 10,000 kg/h (feeder-size dependent)
Hopper capacity	30 – 500 L (custom silos with anti-bridging discharge)
Material contact	316L SS; PTFE / ceramic linings; high-gauss magnetic trap
Control / comms	Native DCS/MES; Modbus / Profinet / Ethernet-IP / 4–20 mA
Ingress / power	IP65 cabinet; 0.75 – 15 kW drive
Options	ATEX, inert-gas purge, CIP, degassing refill, Ex actuators

Deliverables in this package

- Full datasheets (PDF) for each equipment family
- 3D STEP / IGES models for layout & interface design
- P&ID and utility requirement outline
- Reference FAT (Factory Acceptance Test) checklist