

PVC Electrical-Conduit Extrusion Line

Complete Turnkey Business Proposal



Made-in-China supplier reference: real pvc electrical-conduit extrusion line equipment.

16-50 mm launch range	80-150 kg/h screened output	2 cavities entry die basis	8-13 entry workforce
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Prepared for investment planning in Afghanistan and regional export markets. Final specifications, pricing, civil works, and utility loads require supplier quotation and site survey.

Executive Summary

A medium rigid-conduit line producing 16-50 mm PVC electrical wiring conduit through controlled dry blending of certified suspension PVC resin, stabilizer, filler and impact/process additives, hot/cold mixing, metered feeding, conical twin-screw extrusion, dual-cavity die forming, vacuum calibration, cooling, synchronized haul-off, permanent marking, dust-contained cutting, socketing where specified and electrical-conduit inspection.

Why this project fits Afghanistan

- Building wiring creates repeat demand for safe conduit.
- Dual cavities improve small-diameter output without a high-speed four-cavity launch.
- A controlled local dry blend can reduce formulation cost.
- Flame, impact, compression and bend performance-not colour-determine conduit suitability.

Sanaatchi delivery scope

- Factory setup planning, supplier pre-qualification, and technical comparison
- Complete production-line and individual equipment supply
- Factory layout, utilities, civil-work coordination, installation, and commissioning
- Raw-material sourcing, trial-batch qualification, and repeat supply planning
- International logistics, customs documentation, operator training, spare parts, and after-sales support

Recommended configuration

Launch a dual-cavity 16-50 mm rigid electrical-conduit family at 80-150 kg/h with one verified lead-free formulation. Contract hot/cold mixer, SJSZ51/105-class conical twin-screw extruder, dual dies/calibrators, vacuum tank, haul-off, printer, cutter and test laboratory. Water-pressure pipe, flexible conduit and cable trunking are separate products and tooling.

Manufacturing Process & Product Portfolio

Integrated process flow



Target products

Product	Typical specification	Primary market
Rigid PVC electrical conduit	OD, wall, stiffness class, impact, compression, bend, flame, marking and socket	Building contractors and electrical wholesalers
Matched conduit length and socket	One compatible joint system with pull-wire interface where specified	Approved building wiring systems

Do not copy water-pipe pressure claims onto conduit. Supplier acceptance runs every launch diameter and checks formula identity, OD/wall/ovality, length, socket fit, compression, impact at stated temperature, bend/collapse and flame propagation to the named conduit standard. Filler savings must never defeat mechanical or flame performance.

Core Equipment Schedule

Step	Equipment	Function	Indicative parameter
1	Hot/cold mixer and feeder	Produces repeatable dry blend	Lead-free formula
2	Conical twin-screw extruder	Plasticizes filled rigid PVC	SJSZ51/105 class
3	Dual dies and vacuum tank	Forms two 16-50 mm conduits	Contracted sizes
4	Haul-off, printer and cutter	Controls dimensions and lengths	Dust extraction
5	Optional socket former	Forms compatible joints	Approved profile
6	Conduit laboratory	Tests mechanical and flame performance	Named standard

Equipment models are indicative and will be matched to the selected capacity, local raw-material tests, available utilities, and preferred automation level.

Reference Equipment Gallery



Made-in-China supplier reference: real pvc electrical-conduit extrusion line equipment.



Made-in-China supplier reference: second real machine configuration for pvc electrical-conduit extrusion line.

Images are supplier references for configuration discussion; final equipment appearance and model may differ.

Plant, Raw Materials & Utility Requirements

Raw materials

- Suspension PVC resin with certificate
- Approved lead-free stabilizer, impact aid, processing aid and controlled filler
- Pigment/masterbatch and printer consumables
- Packing and clean documented start-up recycle only

Utilities & infrastructure

- Stable three-phase electricity with verified connected load
- Closed-loop cooling water with chiller or cooling tower
- Dry covered resin/additive storage and segregated finished goods
- Ventilation, fire protection, safe lifting and guarded machinery

Quality, safety and environmental controls

- Approve and lock the dry-blend recipe
- Check bulk density, fusion and thermal stability
- Control OD, wall, ovality, length and marking
- Test socket/joint fit
- Test impact, compression and bend/collapse
- Verify flame propagation and electrical-conduit compliance

A final factory layout must reserve safe forklift routes, maintenance clearances, raw-material segregation, finished-goods storage, fire protection, ventilation, and future expansion space.

Indicative Investment & Implementation Plan

LOW-ENTRY CONFIGURATION

The lowest credible route is a dual-cavity rigid-conduit line, not a high-output four-cavity system. It still requires controlled compounding and conduit-specific impact, compression and flame tests.

Component	Indicative range	Notes
Mixer, feeder and twin-screw extruder	US\$38k-82k	Lead-free dual-cavity basis
Dies, vacuum, haul-off, cutter and printer	US\$28k-65k	16-50 mm launch set
Laboratory, dust and utilities	US\$15k-38k	Conduit-specific tests
Freight, installation and spares	US\$17k-42k	Formula trials included
Indicative installed low-entry total	US\$98k-227k	Building and resin stock excluded

Implementation sequence

Phase 1	2-5 weeks	Confirm product specification, representative raw material, buyer, capacity, site and utilities
Phase 2	3-7 weeks	Run supplier trials with the buyer material and freeze the balanced machine, tooling and utility scope
Phase 3	8-22 weeks	Manufacture or refurbish, inspect, document and ship the contracted equipment
Phase 4	3-12 weeks	Install, commission, train operators and pass material-specific acceptance tests

Ranges are planning targets for a low-cost entry configuration, exclude land, and remain subject to confirmed capacity, supplier quotation, freight, duties, exchange rates and site conditions.

Next Steps & Contact Information

Recommended next steps

- Confirm target products, hourly output, and packaging formats
- Test representative raw materials and document quality requirements
- Complete site survey covering electricity, water, fuel, drainage, roads, and warehouse space
- Request comparable technical and commercial quotations from shortlisted suppliers
- Finalize financing, logistics, installation, training, and spare-parts plan

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Research and image references

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- <https://accmachine.en.made-in-china.com/product/sxdRJLKAvTcT/China-16-50mm-PVC-Conduit-Pipe-Manufacturing-Machine.html>