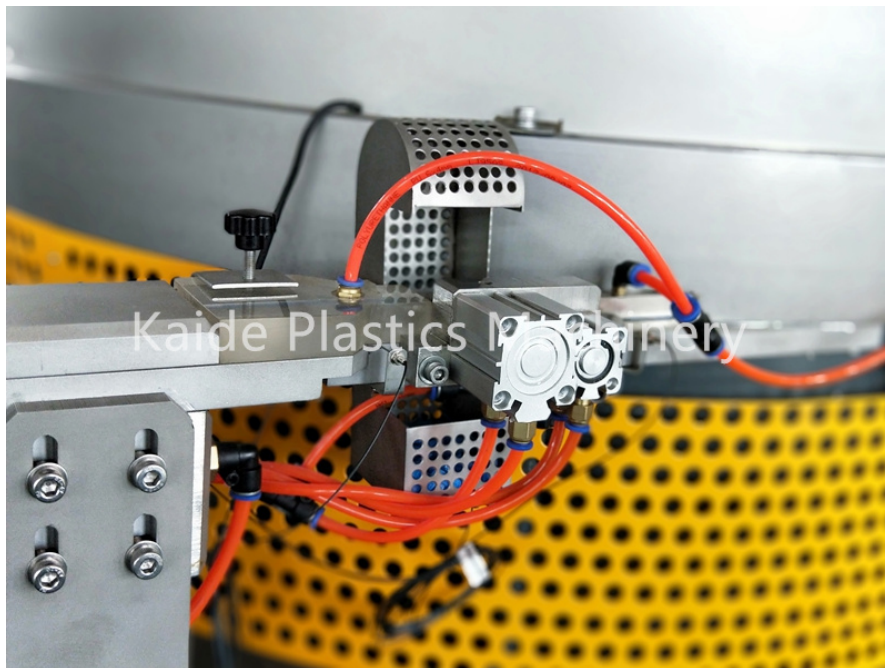


Drip-Irrigation Tape Production Line

Complete Turnkey Business Proposal



Made-in-China supplier reference: real drip-irrigation tape production line equipment.

16 mm launch diameter	80 m/min entry line speed	1 spacing launch emitter pitch	7-11 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 precision line producing 16-22 mm flat emitter drip tape from qualified virgin LLDPE/LDPE blend through controlled dosing, single-screw extrusion, high-speed emitter sorting and servo insertion, cross-die forming and bonding, vacuum calibration and cooling, camera-tracked outlet perforation, synchronized haul-off, leak/flow inspection, tension-controlled winding and hydraulic performance testing.

Why this project fits Afghanistan

- Drip irrigation can improve water productivity in Afghan horticulture.
- A single spacing and wall class controls emitter inventory and field expectations.
- Local coils reduce bulky import logistics.
- Emitter flow uniformity and filtration compatibility determine field performance.

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 one 16 mm tape with one emitter spacing and wall class on an 80 m/min line. Include certified emitters, servo sorting/insertion, camera-registered perforation, automatic winding and a bench measuring discharge, coefficient of variation, burst and pressure-loss over representative roll length. Thin seasonal tape and thicker multi-season dripline are not the same product.

Manufacturing Process & Product Portfolio

Integrated process flow



Target products

Product	Typical specification	Primary market
Inline-emitter drip tape	Diameter, wall, emitter spacing, nominal flow, operating pressure, CV, roll length and filtration	Orchards, vegetables and irrigation projects
Seasonal thin-wall tape	Explicit life/handling class and compatible connector system	One-season crops after field validation

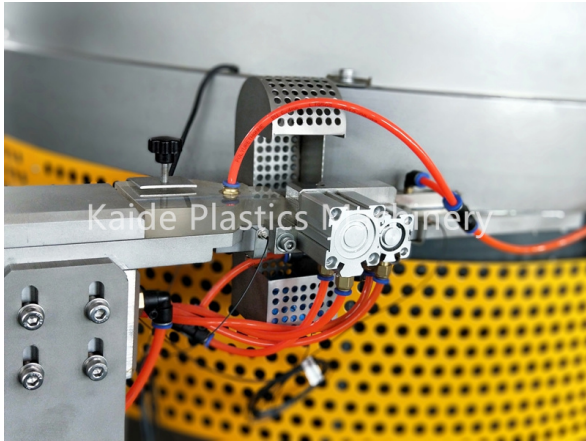
Drip tape is not ordinary PE hose. The line must synchronize emitter insertion, bonding and perforation at production speed. Acceptance checks thickness map, diameter, emitter pitch, perforation alignment, bond/leak, roll length/tension, discharge versus pressure, emitter coefficient of variation, burst and clogging/filtration compatibility using representative water.

Core Equipment Schedule

Step	Equipment	Function	Indicative parameter
1	Resin dosing and single-screw extruder	Produces stable tape melt	One blend
2	Emitter sorter and servo inserter	Positions flat emitters	One pitch family
3	Cross die and calibration tanks	Forms and bonds 16 mm tape	80 m/min entry
4	Vision perforator and haul-off	Registers outlet to emitter	Camera verified
5	Tension-controlled winder	Builds undamaged sale rolls	Length counter
6	Drip hydraulic laboratory	Measures flow uniformity and strength	Representative roll

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 drip-irrigation tape production line equipment.



Made-in-China supplier reference: second real machine configuration for drip-irrigation tape production line.

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

Plant, Raw Materials & Utility Requirements

Raw materials

- Qualified virgin LLDPE/LDPE formulation
- Approved flat emitters by flow path and nominal discharge
- Compatible masterbatch and processing aid
- Cores, labels, connectors and test filters

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

- Verify resin and emitter lots
- Control wall thickness, diameter and pitch
- Camera-check outlet alignment
- Test emitter bond and leakage
- Measure discharge-pressure curve and CV
- Test burst, roll length, winding and field connector fit

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 line uses one 16 mm tape and one emitter pitch at moderate speed. A cheap generic hose extruder cannot insert, bond, perforate and validate emitters.

Component	Indicative range	Notes
Extrusion, die and calibration route	US\$55k-110k	16 mm / 80 m/min
Emitter insertion, vision perforation and winding	US\$48k-105k	Precision synchronized scope
Hydraulic laboratory and utilities	US\$18k-42k	Flow-uniformity release
Freight, installation and spares	US\$22k-55k	Emitter trials included
Indicative installed low-entry total	US\$143k-312k	Building, resin and emitters 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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