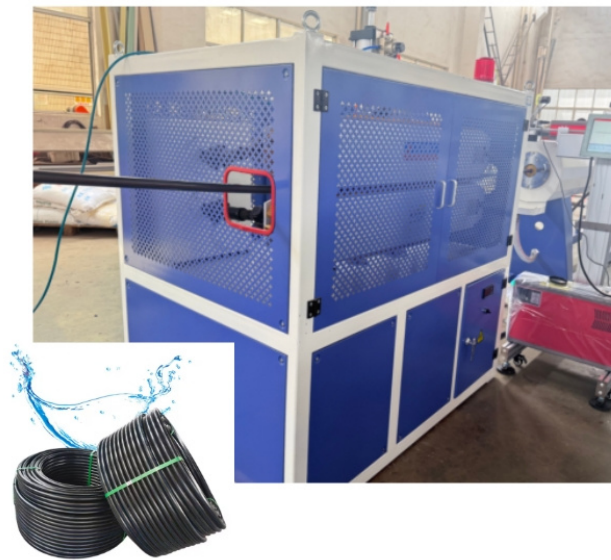


HDPE Irrigation-Pipe Extrusion Line

Complete Turnkey Business Proposal



Made-in-China supplier reference: real hdpe irrigation-pipe extrusion line equipment.

16-63 mm launch diameter range	70-120 kg/h screened output	PE80/PE100 virgin compound 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 plastic-extrusion line producing 16-63 mm black HDPE pressure-irrigation pipe and coils from certified virgin PE80 or PE100 compound through lot release, vacuum loading, controlled dosing and colour-stripe coextrusion, single-screw melting, spiral-die forming, vacuum calibration, staged spray cooling, synchronized haul-off, inline marking, coil winding or cutting, dimensional inspection and hydrostatic pressure testing.

Why this project fits Afghanistan

- Efficient irrigation is central to Afghan agriculture and water conservation.
- Small-diameter coils serve orchards, farms and distribution networks.
- One pressure class and diameter family simplifies dies and laboratory control.
- Pipe lifetime depends on certified compound, wall control, fusion quality and pressure testing.

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 16-63 mm coiled irrigation pipe at 70-120 kg/h using certified virgin PE80/PE100 pressure-pipe compound. Screen an SJ65/33-class extruder with stripe coextruder, contracted dies/sleeves, vacuum tank, cooling tank, dual-belt haul-off, printer and controlled coiler. Include density, melt-flow, carbon-black dispersion/content, dimensions and long-duration hydrostatic test capability. Recycled HDPE is not accepted for pressure pipe unless the exact standard and third-party validation permit it.

Manufacturing Process & Product Portfolio

Integrated process flow



Target products

Product	Typical specification	Primary market
HDPE pressure-irrigation coil	OD, SDR/PN, PE80/PE100 designation, wall tolerance, colour stripe, coil length and joining method	Farms, orchards and irrigation contractors
HDPE lateral or distribution pipe	Buyer-defined pressure class and diameter with matching approved fittings	Agricultural networks after hydraulic design

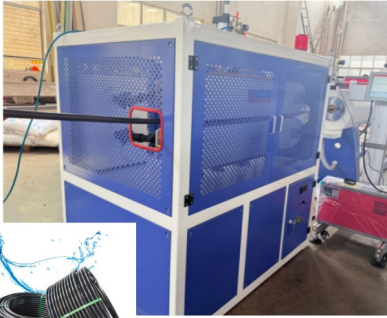
HDPE irrigation pressure pipe is not interchangeable with thin drip tape, non-pressure recycled hose or gas pipe. The contract must name the applicable pipe standard and raw-material designation. Supplier acceptance runs all launch diameters at stable speed and checks mass/metre, OD, wall map, ovality, surface, marking, coil geometry and hydrostatic performance. Fittings and butt/electrofusion equipment need separate qualification.

Core Equipment Schedule

Step	Equipment	Function	Indicative parameter
1	Vacuum loader and controlled dosing	Feeds traceable compound and stripe masterbatch	No uncontrolled regrind
2	SJ65/33-class single-screw extruder	Melts pressure-pipe compound uniformly	70-120 kg/h
3	Stripe coextruder, die and calibrators	Forms 16-63 mm pipe family	Contracted SDRs
4	Vacuum and spray-cooling tanks	Controls OD, roundness and cooling	Closed water loop
5	Haul-off, printer and coiler	Controls line speed, marking and coils	Synchronized drive
6	HDPE pipe laboratory	Releases compound, dimensions and pressure life	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 hdpe irrigation-pipe extrusion line equipment.



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Made-in-China supplier reference: second real machine configuration for hdpe irrigation-pipe extrusion line.

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

Plant, Raw Materials & Utility Requirements

Raw materials

- Certified virgin PE80 or PE100 pressure-pipe compound by lot
- Approved colour-stripe masterbatch compatible with base compound
- Only documented clean start-up recycle within the approved quality plan
- Caps, coil straps, labels and fusion/test consumables

Utilities & infrastructure

- Stable three-phase electricity and verified transformer/motor-starting capacity
- Closed-loop clean cooling-water system with chiller or cooling tower
- Dry covered resin store and finished-pipe storage racks
- Compressed air, ventilation, fire protection and calibrated laboratory power

Quality, safety and environmental controls

- Verify compound certificate, density and melt-flow rate
- Test carbon-black content/dispersion where applicable
- Continuously control OD, wall, ovality and mass per metre
- Inspect surface, stripe and permanent marking
- Check coil diameter, length and absence of kinks
- Run short- and long-duration hydrostatic pressure tests to the named standard

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

A quoted extruder alone is not a pressure-pipe plant. The lowest credible project includes calibration/cooling, controlled coiling and a real pressure-pipe laboratory; uncertified recycled resin must not be used to force the price lower.

Component	Indicative range	Notes
Extruder, coextruder, die and controls	US\$42k-88k	16-63 mm family
Vacuum/cooling, haul-off, printer and coiler	US\$32k-72k	Balanced 70-120 kg/h
Laboratory and water/utilities system	US\$18k-45k	Pressure-pipe release
Freight, installation, dies and spares	US\$18k-45k	All launch diameters
Indicative installed low-entry total	US\$110k-250k	Building, resin stock and fittings 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

- <https://qsplasticmachine.en.made-in-china.com/product/rUmYXzMCYEhB/China-16-63mm-PE-Irrigation-Pipe-Extrusion-Machine-HDPE-Pipe-Production-Line.html>

- <https://weiermachine.en.made-in-china.com/product/WSpmnOTcvJYM/China-16-63mm-HDPE-Pipe-Making-Plant.html>