

Plastic Pipe-Fitting Injection-Mould Workshop

Complete Turnkey Business Proposal



Made-in-China supplier reference: real plastic pipe-fitting injection-mould workshop equipment.

target machine compatibility	released drawing design gate	trial sample acceptance	tool record traceability
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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

Designs and manufactures injection moulds for PP-R, PVC, PE and similar pipe fittings such as elbows, tees, couplers and valves through resin and standard review, core/cavity machining, slider and unscrewing design where needed, cooling/ejection fitting, injection trials, pressure-fit samples and cycle validation.

Why this project fits Afghanistan

- Tooling must be designed around the target production machine and released buyer drawing.
- First-off samples, measured dimensions and repeat-cycle evidence must be accepted before production release.
- Start with one high-demand product family and retain tool drawings, settings and maintenance records.

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

Start with two or three standard fittings for one resin and one machine platform. Confirm pipe standard, outside diameter, wall thickness, thread or socket detail, shrinkage, cavity count, clamp force, shot size, cooling, ejection and leak/fit acceptance before cutting steel.

Manufacturing Process & Product Portfolio

Integrated process flow



Target products

Product	Typical specification	Primary market
Pipe-fitting injection moulds	Named injection machine, resin and pipe standard; fitting size, socket/thread detail, cavity count, cooling/ejection, dimensional and pressure-fit requirements	Pipe and fitting factories, plumbing distributors, building-material suppliers and repair-tool buyers

Supplier scope, dimensions, material grade, target-machine compatibility, sample acceptance, utilities and delivery must be confirmed before purchase.

Core Equipment Schedule

Step	Equipment	Function	Indicative parameter
1	Fitting DFM/CAD station	Matches fitting, resin and machine	Standard and shrinkage
2	CNC/EDM core-cavity cell	Machines socket/thread geometry	Dimensional tolerance
3	Slider/unscrewing assembly bench	Fits moving components	Thread and release
4	Cooling/ejection station	Completes functional circuits	Cycle and demoulding
5	Injection and fit trial	Checks moulded fitting	Socket/thread/leak fit

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 plastic pipe-fitting injection-mould workshop equipment.


SHEN ZHOU



Made-in-China supplier reference: second real machine configuration for plastic pipe-fitting injection-mould workshop.

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

Plant, Raw Materials & Utility Requirements

Raw materials

- P20/718/H13 steel as specified, mould bases, sliders, ejectors, cooling fittings, guides, springs, polishing consumables, gauges and target resin

Utilities & infrastructure

- Stable three-phase power, guarded machining, calibrated measuring tools, covered material/tool storage and safe lifting/handling
- Documented maintenance, critical wear spares, approved coolants/lubricants and product-specific safety controls

Quality, safety and environmental controls

- Approve the exact pipe standard, resin shrinkage and target machine before machining
- Control socket depth, thread profile, core alignment, cooling, ejection, flash and moulded fitting dimensions
- Trial with target resin and pipe; verify fit, leakage/pressure requirement, warp, cycle time and repeatable release

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

Pipe-fitting moulds sell compatibility, not just a shape. The approved pipe standard, resin, socket/thread geometry and target machine must all match.

Component	Indicative range	Notes
CAD/CAM, CNC/EDM and mould-base tooling	US\$55k-200k	One fitting family
Sliders, cooling, assembly and gauges	US\$25k-100k	Size and cavity dependent
Injection trials and first wear spares	US\$15k-65k	Standard/resin validation
Indicative entry total	US\$95k-365k	Injection presses and pipe test laboratory 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://www.made-in-china.com/products-search/hot-china-products/Mold_Edm_Machine.html