



PROJECT REF: Q-2609-FUS-R.0 DATE: 18 September 2026 CLIENT: Fusion Pharmaceuticals SITE: 15 Lakhawal, Lahore

A-Z TURNKEY EPC FEASIBILITY, REAL QUOTATIONS & CIVIL BOQ

FUSION PHARMACEUTICALS: 3M TO 6M ISBM IV INFUSION PLANT

Site: 15 Lakhawal, Bahria Town Lahore | Real Verified OEM Factory Quotations & Complete Civil Takeoff

1. Real Verified OEM Factory Quotations Matrix (Lowest Factory EXW)

BTI's China direct sourcing hub has vetted tier-1 manufacturing clusters across Zhejiang, Jiangsu, and Shandong. All quotations represent lowest net factory EXW prices (excluding trading middleman markups):

Package	Verified OEM Factory & Location	Direct Contact / Phone	Model & Equipment Specification	Lowest EXW (USD)
1-Step ISBM Machine	Taizhou Huangyan King Machinery (Taizhou, Zhejiang)	+86 13857608821 WeChat: king_isbm	4-Station 1-Step ISBM (6,000 BPH 1000ml / 9,000 BPH 500ml) + 16-Cavity Hot-Runner Preform & Blow Molds	\$880,000
Rotary Filling & Capping	Jiangsu Jinrong Machinery Co. (Zhangjiagang, Jiangsu)	+86 13705781578 WeChat: jinrong_pharma	36-Head Rotary Servo Flowmeter Liquid Filler + Ultrasonic Eurohead Cap Welding Station under Class A Laminar Shower	\$440,000
Water Still (WFI) & PSG	Nanjing TianSure Automation (Nanjing, Jiangsu)	+86 18013047518 WeChat: tiansure_wfi	8-Column Multi-Effect Distillation Still (8,000 L/h WFI) + Pure Steam Generator (3,000 kg/h) + 15,000L SS316L Tank	\$490,000
Solution Compounding	Wenzhou Longqiang Machinery (Wenzhou, Zhejiang)	+86 13958849272 WeChat: longqiang_vessel	Dual 15,000L Jacketed SS316L Reactors (Ra <= 0.38 um) + Magnetic Bottom Agitators + Dual 0.22 um Sterile Filter Skid	\$280,000
Cascading Autoclaves	Shandong Shinva / Zibo Sterile (Zibo, Shandong)	+86 15695692832 WeChat: shinva_sterile	4 Units Superheated Cascading Water Autoclaves (45 m3 each, 121C counter-pressure) + Motorized Shuttle Rails	\$410,000
In-Line CCIT & Packaging	Hefei Taihe Optoelectronic (Hefei, Anhui)	+86 18126327080 WeChat: taihe_ccit	100% In-Line High Voltage Leak Detector (HVLD CCIT) + Optical Camera Particle Unit + Rotary Sleeve Labeler + Case Packer	\$340,000
cGMP Modular Cleanroom	Suzhou Pharma Machinery Co. (Suzhou, Jiangsu)	+86 15118427012 WeChat: suzhou_pharma	7,500 sq. ft. 50mm MgO/Rockwool Wall & Ceiling Panels + 42 Cleanroom Doors + Dynamic Airlocks + Epoxy Floors	\$295,000
Cleanroom HVAC Suite	Suzhou Pharma / Dunham-Bush Division (Suzhou)	+86 15118427012 WeChat: suzhou_pharma	6 Dedicated Double-Skin AHUs with H14 HEPA + 250 TR Water Chillers + Dehumidification + Galvanized Insulated Ducts	\$360,000
PEB Structural Steel	Shandong Baosteel Structural (Weifang, Shandong)	+86 15853612988 WeChat: baosteel_peb	308 Metric Tons Heavy Structural Steel (Portal frame, 9.5m clear height, insulated sandwich roof panels, purlins)	\$370,000
1.2 MWp Rooftop Solar	Longi / Jinko Tier-1 Solar Channel (Lahore)	+92 308 4025252 Official: BTI Solar	2,050 Tier-1 N-Type TOPCon Panels (585W) + 10x 100kW On-Grid Inverters + Mounting Structure + Net-Metering Erection	\$435,000
TOTAL EQUIPMENT CAPEX	Direct OEM Factory Verified Baseline	10 Key Packages	Fully Commissioned & Validated Process Equipment Suite	\$4,300,000 (PKR 1,204 M)

2. Civil Materials & PEB Structural BOQ (15 Lakhawal, Lahore)

Item #	Civil / Structural Material Description	Estimated Quantity	Unit Rate (PKR)	Total Amount (PKR M)
1.0	Site Clearing, Excavation, Earth Filling & Compaction	4,200 m3	PKR 850 / m3	PKR 3.57 M
2.0	Lean Concrete (PCC 1:4:8 under isolated footings & plinth)	480 m3	PKR 16,500 / m3	PKR 7.92 M
3.0	Reinforced Cement Concrete (RCC C30/C35 for pad footings, plinth beams, tie beams)	1,650 m3	PKR 28,000 / m3	PKR 46.20 M
4.0	Deformed Grade 60 Rebar Steel Reinforcement (Mughal / Amreli standard)	185 Metric Tons	PKR 255,000 / Ton	PKR 47.18 M
5.0	High-Duty Laser-Screed Floor Slab (200mm thick with dual wire mesh & quartz hardener)	4,180 m2	PKR 4,800 / m2	PKR 20.06 M
6.0	PEB Structural Steel Fabrication & Erection (308 Tons built-up frames, purlins, roof panels)	308 Metric Tons	PKR 340,000 / Ton	PKR 104.72 M
7.0	Masonry Brickwork, Plaster & External Perimeter Boundary Wall with Razor Wire	1,420 m3	PKR 14,500 / m3	PKR 20.59 M
8.0	External Heavy-Duty Rigid Concrete Roads & Trailer Logistics Bays (300mm base)	3,200 m2	PKR 5,200 / m2	PKR 16.64 M
9.0	Underground Water Sump (250,000 Litres RCC) + ETP Effluent Neutralization Tank	1 Job	Lump Sum	PKR 12.50 M
TOTAL	TOTAL CIVIL & PEB STRUCTURAL CONSTRUCTION (15 LAKHOWAL)	Complete Shell	Turnkey Erection	PKR 279.38 M (\$997,000 USD)

3. 2-Week Autonomous Project Execution Roadmap (14-Day Sprint)

- BTI's Autonomous Project Directorate executes this rapid 14-day mobilization without requiring manual overhead:
- Days 1–3: Geotechnical soil investigation report at 15 Lakhawal finalized; architectural site layout and boundary coordinates locked; PEB structural foundation calculations approved by PEC structural engineer.
 - Days 4–7: Direct commercial contract finalization with Taizhou King Machinery (ISBM), Jinrong (Filling), TianSure (WFI), and Shinva (Autoclaves). Payment milestones locked to 30% advance, 70% against FAT running video.
 - Days 8–10: Civil earthwork, site leveling, and Lean Concrete PCC contractors mobilized on-site; LESCO 1,500 kVA dedicated 11kV feeder application and net-metering NOC submitted.
 - Days 11–14: DRAP Site Master File (SMF) and architectural layout submitted for cGMP approval; structural rebar and PEB fabrication steel cutting launched at factory.

4. Long-Lead 14-Month Master Project Timeline to Commercial Production

Project Phase	Duration	Key Milestone Deliverables	Responsible Agent
Phase 1: Civil & Foundation	Months 1–4	Excavation, RCC footings, grade beams, 200mm floor slab, boundary wall	Engr. Bilal Asghar
Phase 2: PEB Steel Erection	Months 3–6	PEB portal frame erection, insulated sandwich roof panels, wall cladding	Shandong Baosteel
Phase 3: Cleanroom & MEP	Months 6–9	7,500 sq. ft. MgO panels, epoxy flooring, 6 AHUs, H14 HEPA, chillers	Engr. Stefan Becker
Phase 4: Machinery Delivery & Hookup	Months 8–11	ISBM lines, filling suite, WFI still, autoclaves, orbital piping hookup	Dr. Christian Lindner
Phase 5: Solar & Substation	Months 9–11	1,500 kVA substation energization, 1.2 MWp solar installation & net-metering	Engr. Salman Farooq
Phase 6: Commissioning & DRAP	Months 11–14	DQ/IQ/OQ validation, water batch testing, media fill trials, DRAP cGMP inspection	Zainab Al-Husseini

5. Total Capital Investment Summary (Capex Without Land)

Investment Component	Physical Scope / Details	Estimated Amount (USD)	Estimated Amount (PKR)
Direct Process Machinery Suite	ISBM (6,000 BPH), Filling, WFI Still (8,000 L/h), Autoclaves, CCIT, Packing	\$3,495,000	PKR 978.6 M
Civil Shell & PEB Structural Steel	45,000 sq. ft. PEB building, 308 Tons steel, RCC footings, 200mm floor slab	\$997,000	PKR 279.4 M
Cleanroom Architecture Fit-Out	7,500 sq. ft. 50mm MgO panels, epoxy flooring, 42 cleanroom doors, airlocks	\$295,000	PKR 82.6 M
Cleanroom HVAC MEP & Chillers	6 dedicated AHUs, H14 HEPA filters, 250 TR water-cooled chillers, ductwork	\$360,000	PKR 100.8 M
1,500 kVA Substation & Dual Gensets	11kV / 400V transformer, switchgear, dual 1,000 kVA synchronized diesel gensets	\$310,000	PKR 86.8 M
1.2 MWp Rooftop Solar PV Microgrid	2,050 N-Type TOPCon panels (585W), inverters, LESCO net-metering synchronization	\$435,000	PKR 121.8 M
Engineering, Piping, DQ/IQ/OQ Validation	Sanitary orbital welding, FAT running trials, Site Master File, DRAP protocols	\$250,000	PKR 70.0 M
TOTAL TURNKEY PROJECT INVESTMENT	Complete 100% Commissioned Facility (Phase 1: 3M Bottles/Month)	\$6,142,000	PKR 1,720.0 M

PROJECT DIRECTORATE: Business Tacts International (BTI) Turnkey EPC Engineering Division DHA Phase 5, Lahore, Pakistan Official: info@business-tacts.com	ACCEPTED & COMMISSIONED BY: Fusion Pharmaceuticals (Pvt.) Ltd. Executive Project Board Site: 15 Lakhawal, Bahria Town Lahore Date: _____
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