JEK MANUFACTURING AND SUPPLY

PRODUCT BROCHURE
LFC LINE · 8 TPH

LOST FOAM CASTING · TURNKEY LINES

From foam bead to finished casting.

Pattern shop, moulding and pouring, sand return and dust extraction — one complete lost foam foundry, designed, built and commissioned by JEK in Ahmedabad.



MADE IN INDIA
Built at Bakrol, Ahmedabad

8 TPH
Dry sand handling capacity

3 pour stations
Under vacuum, with fume hoods

30 mg/Nm³
Designed stack emission

19 machines
One supplier, one panel

WHITE AREA · BLACK AREA · SAND SYSTEM · CONTROLS

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HOW IT WORKS

One line. **Every casting.**

A flexible, crane-served lost foam line rated for about 8 TPH of dry sand. Turnover, moulding and pouring are operator-run — so you save floor space and capital against a fully mechanised loop, and still handle mixed flask sizes and casting types.



WHITE AREA

Pattern making

1. Bead pre-expansion
2. Bead ageing
3. Pattern moulding
4. Cutting and gluing
5. Refractory coating
6. Pattern drying

BLACK AREA

Moulding & pouring

1. Bottom sand filling
2. Pattern placement
3. Rain-filling, 3-D vibration
4. Vacuum connection
5. Pouring under vacuum
6. Cooling and turnover

SAND SYSTEM

Return & cooling

1. Shakeout grid
2. Pneumatic slide gate
3. Bucket elevator
4. Sand temperature regulator
5. Storage hopper
6. Back to moulding

WHY JEK'S LINE

Flexible line Crane-handled flasks take mixed sizes and casting types.	**Clean turnover** Integrated with the dust hood; sand and castings drop fully.	**Screw-feeder filling** Fill from any direction with controlled flow.	**Balanced extraction** Individual dampers keep the fan size economical.
Interlocked cylinders Reed sensors on every cylinder, wired into the PLC.	**Stress-relieved table** Annealed top, machined seat, VFD recipe vibration.	**Leak-free flasks** Continuous bevelled welds; deflection under 10 mm.	**1** supplier for design, build, panels and commissioning.

PATTERN SHOP · 7 MACHINES

Pattern shop. **Precise by design.**

Raw EPS or STMMA beads in; dried, refractory-coated foam patterns out — ready for the black area.



JEK-LFC-HM1512

Hydraulic pattern moulding machine

Fills, steam-fuses, water-cools and air-ejects patterns. Encoder-set clamp — over 3× faster than screw-jack machines.

1500×1200	90–180	190
Platen, mm	Cycle, s	Platen, mm/s



JEK-LFC-PF100

Pulse bead-filling tank

Blows beads into thin, complex sections. 6 filling guns, 0.1 m³ tank.



JEK-LFC-CT1212

Hot-wire cutting table

Blocks, cylinders, cones and spheres on a 1200 × 1200 mm bed.



JEK-LFC-CM100

Refractory coating mixer

Uniform slurry for dipping. 100 kg batch, 1.5 kW VFD drive.

JEK-LFC-PE100

Batch pre-expander

Electric-cum-steam, PLC recipes. 30 kg/h, bead density 15–50 g/L ±2 %.

JEK-LFC-AB3

Bead ageing bin

2 × 1.5 m³, SS 304 mesh. Equalises cell pressure; pneumatic loading.

JEK-LFC-DH9

Electric drying heater

Finned elements, axial fans, humidity-controlled exhaust.

MOULDING & POURING

Dry sand. Full vacuum. **Sound castings.**



JEK-LFC-VT1515

Fixed 3-D vibration table

Compacts dry sand around the pattern in X, Y and Z. VFD-set force with a stored recipe for every casting; 1500 × 1500 mm table on rubber or air springs.



JEK-LFC-VP37

Vacuum system

Holds the sand rigid and draws off pattern gases. 37 kW water-ring pump, –0.08 MPa, 25 m³/min.



JEK-LFC-VD3

Distributor & pouring hoods

3 stations, each with valve, gauge and drain to stop collapse and blow-back. Fume hood per station.

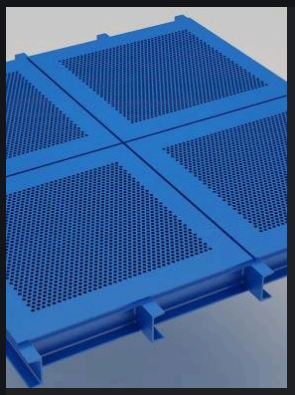
JEK-LFC-1512

LFC vacuum flask

Vacuum chambers on the bottom and all four walls for an even field. Double-sided air-tight welds, SS 304 screen, wheels true within ±1 mm.

1500 × 1200 × 1300 mm

inside



JEK-LFC-SG

Shakeout grid

Flask turns over onto the grid: sand falls through, castings stay on top. 20 mm plate, Ø16 mm holes, cone hopper below.

37 kW
Vacuum pump

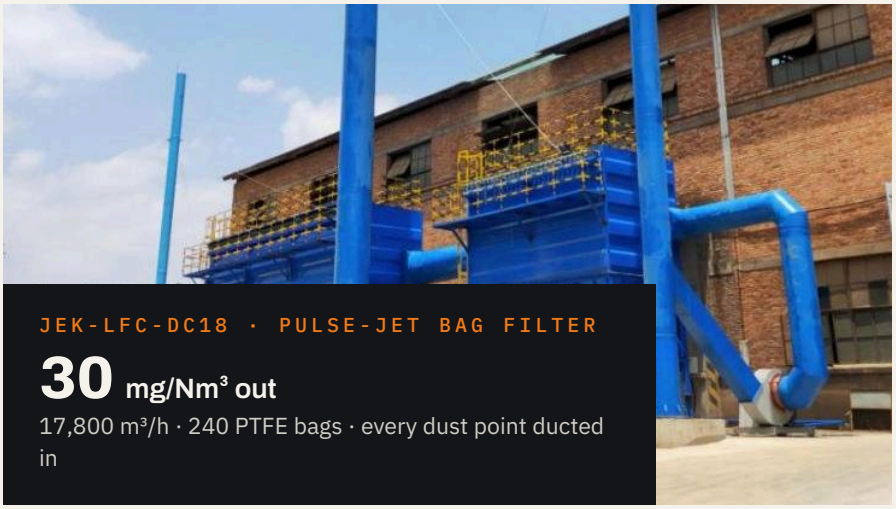
–0.08 MPa
Ultimate vacuum

3 axes
Table vibration

600 °C
Pouring hood rating

SAND RETURN · COOLING · DUST EXTRACTION

Enclosed. Interlocked. **Clean.**



JEK-LFC-DC18 · PULSE-JET BAG FILTER

30 mg/Nm³ out

17,800 m³/h · 240 PTFE bags · every dust point ducted in



JEK-LFC-STR

Sand temperature regulator

No motor, no vibration. Releases sand only at set temperature.



JEK-LFC-SH

Storage hopper

Feeds the rain or sock filler; high/low level switches stop and restart the line.



JEK-LFC-PSG

Pneumatic slide gate

Non-jamming blade; sand flow adjustable up to 8 TPH.

Bucket elevator

Heat-resistant round-link chain, backstop, zero-speed alarm. ≥ 8 TPH.

Screw feeder

Variable pitch, slews 360°, no foundation needed.

Closed-circuit cooling tower

50 m³/h through a sealed SS coil — clean, scale-free water.

ELECTRICAL & CONTROL

Automatic. **From one panel.**

- PLC with English HMI (Hindi / Gujarati optional) and live mimic of every drive
- Sequential interlocks: an upstream trip stops downstream, with alarm
- E-stops at every station; auto cycle resumes from the same step
- Maintenance, Manual and one-touch Auto recipe modes
- Fault display, alarm log, maintenance reminders, SCADA port
- Panels to IS/IEC 61439, IP54 on the shop floor



SCOPE & COMMISSIONING

From drawing **to first pour.**

01
Design & build
Design, manufacture, painting, supply, erection supervision and operator training.

02
Witnessed trials
Stage and final inspection at our works; you witness no-load trials before dispatch.

03
Full documents
GA, foundation and electrical drawings, PLC I/O list, O&M manual, spares list.

04
Warranty
12 months from commissioning or 18 from dispatch; wear parts excluded.

INDIAN MAKES · SPARES A PHONE CALL AWAY

Bonfiglioli India · Elecon · Crompton Greaves · ABB India · Siemens India · SKF India · Mitsubishi · Delta · Danfoss · L&T · Schneider · Janatics · Festo India · Yuken India · PPI Pumps · Kirloskar · Polycab · Havells — or equivalent.

JEK MANUFACTURING AND SUPPLY

Let's build your next **lost foam line.**

Lost foam · no-bake · sand reclamation systems

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