



Flexible Plant Design and Fabrication for Variable Feedstocks and Feed Systems

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ABOUT ME

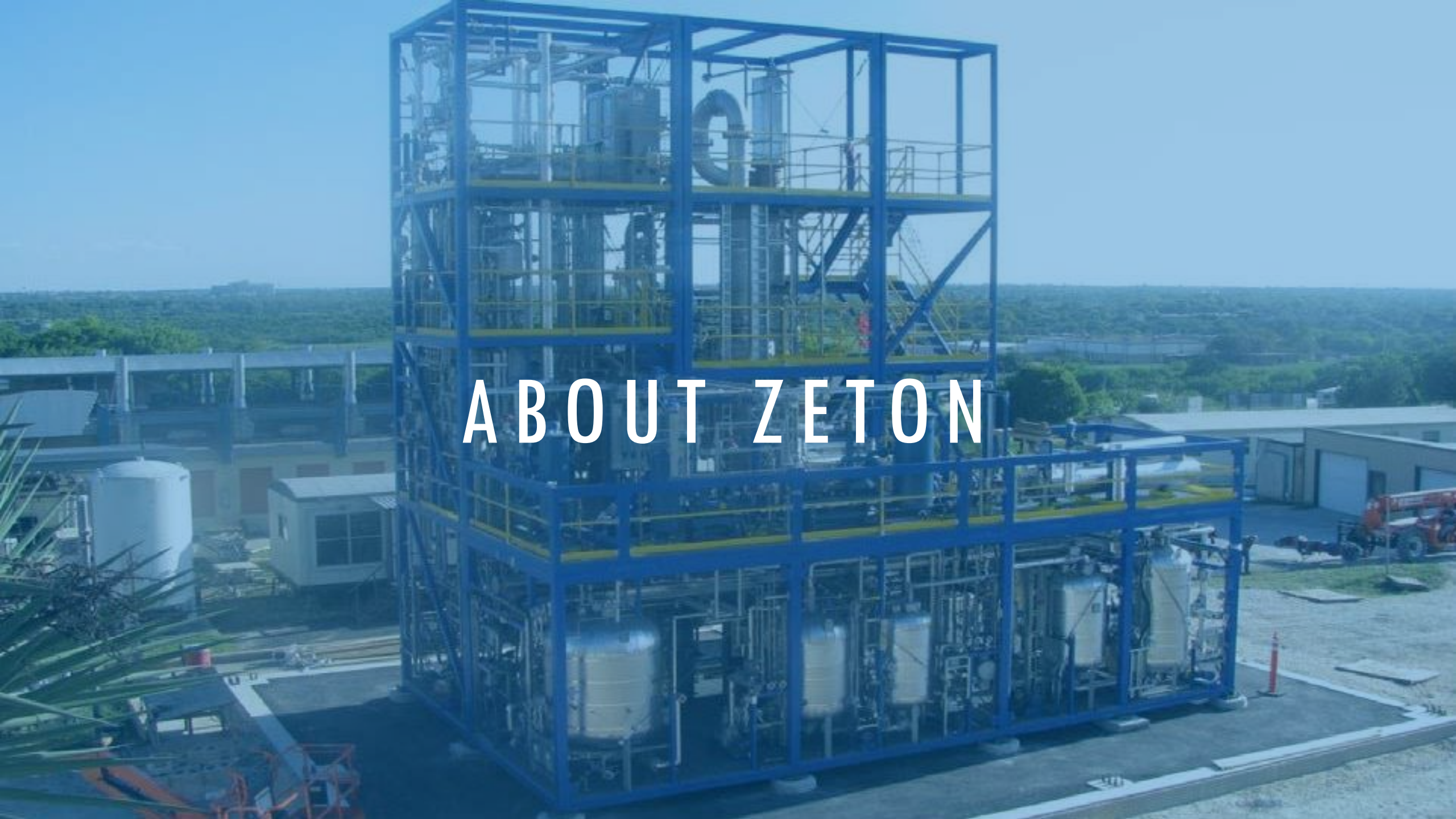
Chemical Engineering degree from the
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ABOUT ZETON



THE FEEDSTOCK DIVERSITY CHALLENGE

Agricultural residues, woody biomass, algae, and municipal solid waste vary widely in particle size, density, and viscosity, creating inconsistent feeding behavior, operational instability, and limited experimental comparability across conversion systems.

COMMON FEEDING FAILURE MODES

Bridging

Inconsistent Mass Flow

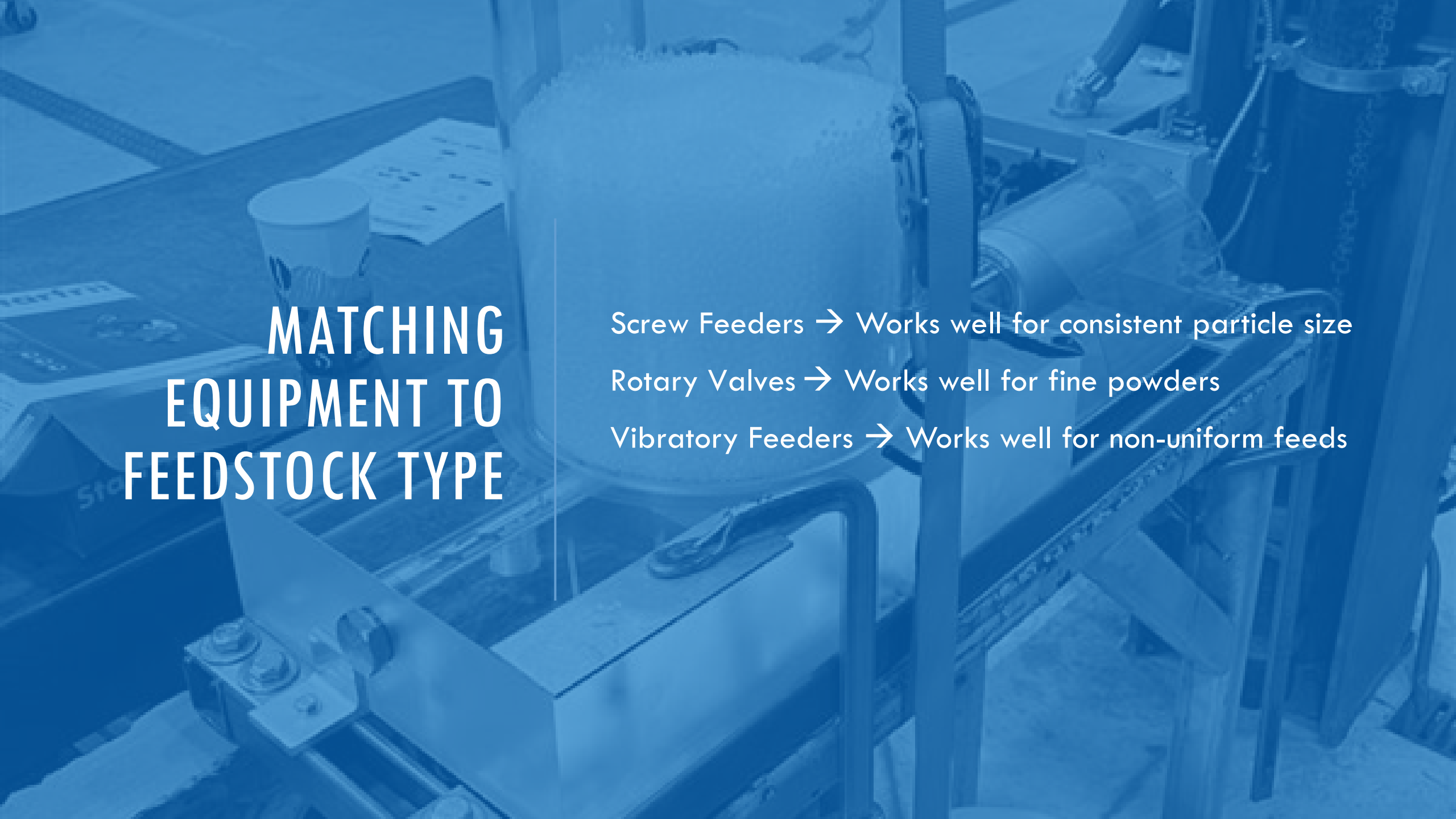
Air Leakage





ENGINEERING FLEXIBILITY FROM THE START

Adjustable Geometry
Variable Speed Drives
Maintainability

The background image shows industrial machinery, likely a conveyor system or a sorting machine, with a large cylindrical component in the center. The entire image is covered with a semi-transparent blue overlay. The text is overlaid on the left side of the image.

MATCHING EQUIPMENT TO FEEDSTOCK TYPE

Screw Feeders → Works well for consistent particle size

Rotary Valves → Works well for fine powders

Vibratory Feeders → Works well for non-uniform feeds

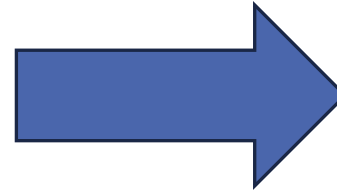
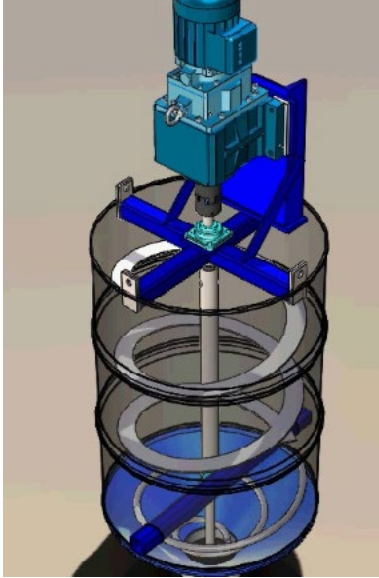


INSTRUMENTATION FOR HIGH RESOLUTION PROCESS DATA

Mass Flow → Accurate mass balance calcs

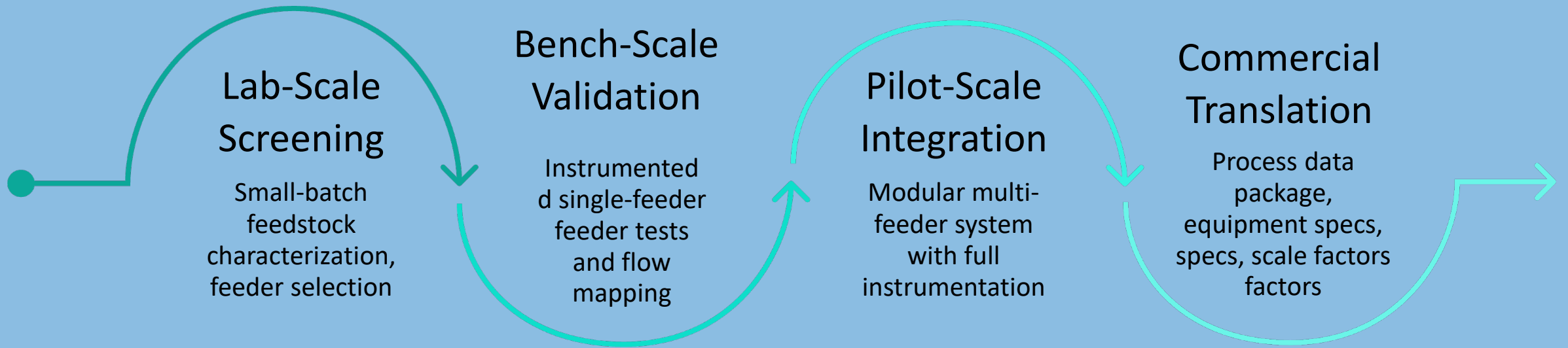
Pressure → Early detection of blockages,
leakage, etc.

Temperature → Monitor feedstock conditions



CASE STUDY — SOLIDS FEEDER FOR SAWDUST AND BAGASSE

- PELLETS AND MILLED PRODUCTS
- BAFFLE, CONE, CYCLONE, AND PNEUMATIC SYSTEM DESIGN
- FABRICATION WITH PRECISE TOLERANCES TO DELIVER 600 LB/HR AT 500 PSIG



**FROM LAB TO PILOT PLANT TO
COMMERCIAL**



THANK YOU!

Questions?