Process Vessel Weighing Engineering Handbook

1. List all active supports and load cases

Record vessel tare, maximum contents, asymmetric fill, drive torque, nozzle loads and moving equipment. For a first capacity screen, divide the gross mass by active supports and multiply by 1.5. Example: 12,000 kg / 4 x 1.5 = 4,500 kg per support. Compare with peak reactions and the selected cell's capacity.

2. Resolve horizontal movement and uplift

Calculate free thermal travel from the fixed datum and check the actual piping and frame constraints. Record uplift and shear at each support for wind, seismic and operating cases. Confirm mount, anchor and foundation ratings against the same load combinations.

3. Finalize the installation and cleaning plan

Review transit locks, temporary support loads, welding current return, live-cell installation and service access. Specify cleaning temperature, pressure, chemicals, material and enclosure ratings. Request configuration-specific certifications where required.

4. Commission and record the build

Check clearances, load distribution, cable protection, zero return and corner matching using the approved site plan. Keep mount drawings, cell serial numbers, calibration records and the as-built support map with the vessel file.