9 inputs determine the right air receiver.

A distributor-facing pre-quote checklist. If the customer answers most of these at the first call, the second call is the quote.

01

What's the compressor's CFM at full load, and is it fixed-speed or VFD?

Sizes the tank. Fixed-speed wants **4-6 gallons of receiver per CFM**: lower end for steady-demand applications, upper end for surge-heavy ones (paint, blast, intermittent presses). VFD tolerates **1-2 gallons per CFM** because the compressor itself can ramp. Wrong sizing in the customer's favor (undersize) means a destroyed air-end in 18 months and a parallel-tank retrofit anyway.

02

Where is the tank going to physically sit, fixed pad, mezzanine, skid package, or mobile?

Drives the type decision. Fixed compressor room with normal headroom → vertical. Low ceiling, mezzanine, basement, or OEM skid-mounted package → horizontal. Work site, service truck, or rental fleet → portable. **If the answer is "we'll figure it out when it arrives,"** the conversation isn't ready for a quote: walk the install location with the customer first.

03

What's the system operating pressure, and what's the compressor's cut-out setting?

Sets the MAWP requirement. Standard catalog tanks are **165 or 200 PSI MAWP**; ratings above standard move to a high-pressure specialty vessel and Division 2 fabrication. The ASME safety relief valve gets sized to the tank's MAWP, not to the system's desired operating pressure: bigger valve on a low-MAWP tank doesn't raise the rating.

04

Is the tank in wet service (before the dryer) or dry service (after)?

Changes the coating recommendation and the drain spec. **Wet-tank service** catches 60-80% of total system condensate before the dryer ever sees it: galvanized or epoxy-lined interior, plus a zero-air-loss electronic drain on the bottom port. Dry-tank service tolerates bare interior; drain is still required but condensate volume is much lower.

05

What's the available floor footprint and ceiling clearance at the install location?

Walk the install before ordering. A 1,060-gallon vertical needs **11-12 feet of clearance to steel** for the tank plus safety valve riser; the same gallons horizontal need 20+ feet of floor length. Access route matters too: doorways, hallways, turning radius, elevator clearance if going to a mezzanine. A tall vertical doesn't fit through every doorway upright.

06

Is the floor (or the mezzanine slab) rated for the wet weight of the tank?

A 1,060-gallon vertical full of air at 150 PSI is over 2,000 pounds dry, more with condensate. Second-floor or mezzanine installs may need engineered slab reinforcement; verify the load capacity in writing with the customer before delivery. Anchor the legs (vertical) or saddles (horizontal) to the pad: never weld.

07

Is this a new install or a replacement / capacity expansion?

Compressor upgrade is the right time to upsize storage: old systems were built around tanks matched to the old compressor's CFM, and the new (higher-output) machine needs a bigger reservoir. **Adding a second tank in parallel** to the existing receiver is often cleaner than replacement, and gives redundancy: one tank can be isolated for service while the other carries the system.

08 **Does the customer's state require pressure-vessel registration, and is the existing tank current?**

Most states require state registration on top of ASME documentation, with annual or biennial inspection by a National Board commissioned inspector: and **facility insurance is conditioned on current registration**. Inspection-failure replacements (missing nameplate, expired relief valve, lapsed registration, corrosion below code thickness) are recurring SPC business. Tanks past 20-25 years on wet-tank service are usually past replacement, not repair.

09 **Does the application need anything the standard catalog can't deliver, exotic material, high pressure, custom geometry, full U-1A documentation?**

Flips the spec to specialty/custom. Stainless for food or pharma, Hastelloy for corrosive process, jacketed for temperature control, Division 2 fabrication for above-300-PSIG service, dimensions matched to a tight retrofit footprint, or the **full U-1A Manufacturer's Data Report package** for aerospace, defense, or FDA-regulated work. Get the spec sheet from the customer's engineering team before quoting: specialty quoted without a spec is mis-quoted by a factor of two.