

8 inputs determine the right air treatment.

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

01 Does the existing compressor have an integrated aftercooler at all?

Most modern packaged rotary screws do — older reciprocating compressors frequently don't. **Look for a visible cooling fan and a condensate drain at the discharge port.** If the answer is "I don't know" and the customer is complaining about wet tools, this is the first place to check. A surprising number of older recip installs never had one.

02 What's the climate and the season — humid, dry, summer peak, winter low?

A 100 SCFM compressor in 80% RH Gulf Coast summer dumps 5-15 gallons of liquid water per day into the separator; the same compressor in Phoenix dumps a fraction of that. **Humid-climate installs need both aftercooler AND water separator;** dry-climate installs can sometimes get away with aftercooler alone.

03 What's the compressor room ambient temperature — especially under summer load?

Air-cooled aftercoolers degrade hard above 100°F ambient. If the compressor room runs hot, either improve ventilation, switch to a water-cooled aftercooler, or accept that the dryer downstream will need extra headroom. **Measure it — don't guess.**

04 Is the dryer downstream sized close to its rated capacity?

Refrigerated dryers degrade fast when fed more liquid water than their refrigeration circuit can handle. A dryer at 80%+ of rated CFM with no water separator upstream **will trip on saturated outlet** in the first humid week of summer. The separator gives the dryer headroom.

05 What's the current condensate drain situation at the aftercooler and the wet receiver?

Aftercoolers are the system's largest single condensate source (70-80% of total). Manual drains get forgotten; plain float drains foul on oily condensate. **Electronic-timer drain is standard install practice** at both the aftercooler and the receiver, routed to an oil-water separator before sewer.

06 Is the air going somewhere with an ISO 8573-1 cleanliness spec?

Pharma, food contact, paint, electronics — these jobs come with an ISO class for particulates, water, and oil. The Treatment stage is the upstream protection that lets the dryer + filtration train downstream actually hit those numbers. **Document the class on the quote** so the install matches what the audit expects.

07 Is the install indoor with reliable utilities, or outdoor / under-roof / mobile?

Outdoor installs see higher humidity loads and additional in-line condensation as the piping cools further. **Outdoor → upsize the separator and add freeze protection on the drain.** Mobile / contractor packages often skip the separator entirely and pay for it in dryer failures.

08 Coalescing filter elements upstream of the dryer plugging up every 3 months instead of 12?

Classic symptom of missing upstream treatment. The coalescing sumps are being overrun by bulk liquid water that should have been knocked out at the aftercooler and separator. **Adding the water separator drops coalescing sump volume dramatically** and extends element life back to spec.

