10 inputs determine the right system safety valve.

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 vessel's MAWP (Maximum Allowable Working Pressure)?**

Read from the ASME nameplate on the receiver or aftercooler. **The relief valve set pressure must be at or below MAWP**: never above, never at "what the customer is used to running." A relief valve set above MAWP is not a safety device; it's a sticker on a bomb.

02 **What's the upstream compressor's maximum SCFM at the relief set pressure?**

The relief valve's relieving capacity must equal or exceed this. **An undersized valve opens on schedule but can't vent fast enough to stop the pressure rise**: the tank still over-pressures while the valve sits open and useless. This is the most common spec error on receiver relief quotes.

03 **What's the local Authority Having Jurisdiction's recertification cycle?**

National Board inspection programs typically run on a 3–5 year cycle, but state and municipal AHJs vary. **Confirm before quoting whether this is a new install, a recertification, or a failed-test replacement**: the documentation requirements differ, and the customer needs the certificate of conformance from the right authority.

04 **For check valves, what's the compressor type and discharge temperature?**

Reciprocating compressors run 300–400°F discharge air and require a hot-discharge-rated valve (Conrader piloted to 400°F, in-line / in-tank to 450°F). Rotary-screw runs 180–210°F and tolerates general-service valves to 225°F. A general-service valve on a reciprocating discharge degrades thermally within months.

05 **For check valves, what's the discharge port connection size?**

Must match the compressor discharge or receiver inlet exactly. NPT, BSPT, compression-tube, and SAE 45° flare connections are all common depending on the compressor or vessel. **Capture the size and thread standard from the existing fitting or the OEM service manual** before quoting.

06 **Standalone check valve or combination unloader-check unit?**

Many packaged rotary-screw compressors integrate the discharge check, minimum-pressure valve, and unloader into a single piloted unit; **replacement requires the matched combination unit, not a standalone check valve**. Pull the OEM service manual or photograph the existing assembly: combination units are visually distinct (multi-port body with pilot line attached).

07 **ASME UV stamp + National Board number, confirmed?**

Every relief valve quoted for a code vessel needs both. **A non-ASME "lookalike" valve fails inspection, voids insurance, and is a five-figure-per-violation OSHA citation** under 29 CFR 1910.169. Verify on the valve nameplate, not the spec sheet. Import-tier compressor packages sometimes ship with non-compliant valves: replace at install.

08

New install or replacement, and is this a failed lift-test?

Replacements match the existing set pressure and connection; new installs are sized fresh to vessel MAWP and compressor SCFM. **A failed lift-test (valve won't seat, weeping under normal operating pressure, or won't open at the test point) is an immediate replacement : the valve is no longer code-certified** regardless of how recently it was installed.

09

Body material, brass standard or stainless for the environment?

Brass is the air-service default and the right call on 90%+ of quotes. **Stainless steel is required for wash-down, food-zone, or corrosive environments**: bakery, dairy, pharma, marine, outdoor coastal installs. Stainless adds 30–60% to the line; spec it where the environment demands it, not as a default upgrade.

10

Is the annual lift-test service attached?

For customers with a service-route relationship, the manual lift test is a 30-second job on the same PM visit as the separator change and oil change. **Attaching it converts replacement from "discovered failed at next inspection" to calendar-driven proactive replacement**: and it's the entry point for the recertification revenue line every 3–5 years.