9 inputs determine the right frl unit.

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 does the equipment nameplate call for, pressure, flow, and lubricated vs. non-lubricated?

Three answers from one place. **Required inlet pressure** must fall within the regulator's outlet range. **Peak SCFM** sets port size: most customers underestimate by 20-30% because they don't account for simultaneous actuator motion. **Lubricated vs. non-lubricated** decides whether the L stage belongs on the quote at all. Anything built 2010 or later is almost certainly non-lubricated; verify against the equipment documentation before defaulting to an L.

02

Combination FRL or modular standalones, which way is the air-prep being built?

Combination unit is the default for a standard, fixed configuration that isn't going to change: one body, lowest install labor. **Modular standalones** are the right answer when stages need different filter grades, different setpoints, or independent service. The decision is made once at the quote and locks in the service-kit cadence for the life of the equipment.

03

Is the pressure hand-set once, or is it changing under PLC command?

Hand-set = standard mechanical regulator at 1/10 the cost. **PLC-commanded** = proportional pressure regulator: recipe changes on a press, tension control on a web, test-stand profiles. Confirm the PLC card output type (4-20 mA / 0-10 V / fieldbus) and the pressure range before quoting; mismatched signal type is the most common cause of a non-functional proportional install.

04

What's the regulator setpoint, and is it set under load or at idle?

Set the regulator with the machine actually drawing air. Static setpoints droop 10-20 PSI under real cycle load. For energy retrofits, the answer is "the actual minimum the equipment tolerates under cycle load, locked against operator drift." Every 1 PSI dropped at the point of use saves roughly 0.5% on compressor energy.

05

Is anything downstream of the FRL lubrication-sensitive, sensors, high-frequency valves, food contact, finished product?

The answer disqualifies the lubricator. Modern sensor-rich automation, food-contact equipment, semiconductor cells, medical device assembly, paint booths: none should see an L. The combination FRL on these drops is F+R only (lubricator omitted). **If the customer's existing FRL has an L on this equipment, flag the swap opportunity**: they inherited a legacy configuration that shouldn't be carried forward.

06

What's the bowl material, and is there synthetic compressor oil in the system?

Polycarbonate bowls are the standard but are chemically attacked by synthetic compressor oils, PAO lubricants, and most solvents. **The first sign is hazing; the failure mode is a crack under pressure**: a real safety issue, not cosmetic. Metal bowl on any synthetic-oil system, stainless on NSF / washdown / food. A bowl-guard kit is the lower-cost option where the install only needs impact protection (overhead crane traffic, falling-tool risk).

07

How many FRLs are on the plant floor, and when was the last service-kit attach?

Most maintenance teams don't know the count until someone walks it. **A plant with 50 FRLs is consuming 50-100 service kits a year**: elements every 6-12 months, bowl gaskets every 2-3 years, drains every 3-5 years. Convert one-off element orders into a standing reorder against the customer's MRO calendar; that's the recurring half of every FRL sale.

08

Are operators going to drift the regulator setpoint, or does the spec need to be locked?

The standalone R or combination FRL was installed because someone needed a specific pressure. **The first operator who decides "more pressure = faster" drifts the setpoint** and the whole reason for the R is gone. Tamper-resistant knob cover on any unit operators can reach: mandatory on equipment where stable pressure is part of safety, quality, or regulatory certification.

09

When did the customer last replace the pressure gauge on this regulator?

Gauges are the single most common failure item on any regulator : Bourdon-tube fatigue, forklift hits, drift. **A regulator with an unreadable or wrong-reading gauge is a regulator set wrong.** Every FRL quote carries a spare gauge attach; the box-of-twelve MRO stock is the recurring play. Glycerin-filled on any vibration install; stainless case in washdown.