The 7 types · side-by-side

Distributor-facing reading. Each row gives best-for, key trade-off, capacity, price band, and how many of SPC's tier slots carry an option at that product type.

PRODUCT TYPE	BEST FOR	KEY TRADE-OFF	TYPICAL CAPACITY	PRICE BAND	BRANDS SPC CARRIES
FRL Combination Unit ALL THREE STAGES, ONE BODY · THE DEFAULT MACHINE DROP	**The standard machine drop.** Any new machine inlet that needs a fixed, standard air-prep configuration and isn't going to change. Automotive assembly tool drops, plastics equipment, packaging lines, general industrial automation. Lowest install labor of any FRL build because it's one part, one set of ports, one mount.	ONE BODY, ONE UNIT OF CHANGE If a single stage needs a different filter grade, a second regulated pressure, or independent service, the whole unit is the unit of change. The F+R+L full build is the wrong default on modern non-lubricated equipment: pick F+R (no L) or omit the L stage whenever the equipment nameplate doesn't explicitly call for lubricated air.	1/8" – 1" NPT/BSPP · 0–125 PSI regulated F+R+L · F+R · polycarbonate / metal / stainless bowl	$ – $$	3 / 5 · SMC + AIGNEP + MIDWEST CONTROLS
Standalone Filter PARTICULATE · COALESCING · CARBON · SOLD BY ELEMENT GRADE	**Modular trains and element-grade swaps.** First stage in any custom modular FRL train, sized and specced independently of the regulator and lubricator. Also the right answer when one machine needs better filtration than the plant default: paint booths, lab instruments, semiconductor cells, medical-device assembly, without re-engineering the central system.	ELEMENT GRADE IS THE SALE The housing is a commodity; the element grade is the spec that matters. A 5-micron particulate on equipment that needed 0.01-micron coalescing is an underspec waiting to fail a sensor or ruin a paint finish. Coalescing elements run 3-6 months versus 6-12 for particulate: the recurring reorder cadence is different.	1/8" – 1" NPT/BSPP · 150–250 PSI inlet 5 µm · 0.01 µm coalescing · activated carbon	$	3 / 5 · SMC + AIGNEP + ARROW PNEUMATICS

Standalone Regulator HAND-SET PRESSURE · RELIEVING · NON-RELIEVING · PRECISION · PILOT-OPERATED	**Sub-circuits and energy retrofits.** A second regulated branch at a different setpoint on the same drop (a clamp at 45 PSI hanging off a 90 PSI main). The R-only stage of a modular F+R+L train, sold to replace a failed regulator without ripping out the F and L. And the workhorse of every compressed-air energy retrofit: set every machine drop to the actual minimum spec under load, lock the knob.	NEEDS FILTRATION UPSTREAM No internal filter. Install downstream of a particulate or coalescing filter; particulate kills the regulator diaphragm within months when this step is skipped. Variant choice: standard relieving vs. non-relieving vs. precision vs. pilot-operated: is driven by the application, not the brand.	1/8" – 1" NPT/BSPP · 0–125 PSI regulated relieving · non-relieving · precision · pilot	$	3 / 5 · SMC + AIGNEP + MIDWEST CONTROLS
Lubricator STANDARD (FOG) OR MICRO-FOG · ADDED ONLY WHEN THE EQUIPMENT REQUIRES IT	**Legacy lubricated equipment.** The narrowing list of equipment that still requires lubricated air: old-style impact tools (impact wrenches, jackhammers, sand rammers, chipping hammers), heavy-duty legacy cylinders on older seal materials, lubricated paint guns, and anything whose nameplate or spec sheet explicitly calls for it. Standard fog within ~15 ft of the equipment; micro-fog for long runs.	WRONG ON MODERN NON-LUBE EQUIPMENT Most pneumatic automation built since ~2010 is non-lubricated with self-lubricating internal materials. A lubricator on that equipment fouls sensors, contaminates product on food lines, gums up high-frequency valves, and turns the customer's first PM call into a sensor-cleaning job. When in doubt, the equipment documentation decides: never default to L.	1/8" – 1" NPT/BSPP · ISO VG 32 air-line oil standard fog · micro-fog · NSF H1 food-grade	$	2 / 5 · SMC + AIGNEP
Proportional Regulator PLC-COMMANDED PRESSURE · 4-20 MA / 0-10 V / FIELDBUS	**PLC-commanded pressure under recipe or tension control.** Force and tension control under recipe automation: a press that compacts product A at 60 PSI and product B at 90 PSI without an operator at the machine. Web and wire tension that has to track line speed. Test stands that need to ramp, hold, dwell, and step under program control. Anywhere the pressure itself is part of the automation, not a knob the operator sets once.	5-10× A MANUAL REGULATOR · SOLD TO THE INTEGRATOR Hardware premium of 5-10× a standard mechanical regulator, plus power and PLC signal complexity. Quoted to a controls engineer or OEM integrator, not a maintenance buyer. Specifying one where a hand-set R would do is overspending; specifying a hand-set R where a proportional was needed forces the customer to rebuild the machine.	Model-dependent · roughly 0–130 PSI typical analog · digital · vacuum-regulator variants	$$ – $$$	1 / 5 · SMC ONLY

FRL Service Kit ELEMENT + BOWL GASKET + DRAIN ASSEMBLY · PER SERIES, BY THE BOX	**The recurring half of every FRL sale.** Every FRL on the plant floor needs the filter element changed every 6-12 months, the bowl gaskets and seals every 2-3 years, and the drain assembly every 3-5 years. A plant with 50 FRLs is consuming 50-100 service kits a year. Standing reorder against the customer's MRO calendar: one PO per year for elements, one every 3 years for gaskets, one every 5 years for drains.	MATCHES ONE SERIES, NOT ONE BRAND A kit is engineered for one manufacturer's FRL body and is not interchangeable across series: SMC AC and SMC AW take different kits. Read the FRL body label and cross-reference against the kit catalog before ordering. Off-brand elements often have wider-than-spec performance that allows downstream contamination; verify media specs alongside physical fit.	Sized per FRL series + component filter · regulator · lubricator · combo	$	2 / 5 · SMC + AIGNEP
Replacement Pressure Gauge DIAL · GLYCERIN-FILLED · THE UNIVERSAL ATTACH	**The single most common failure item on any regulator.** Every regulator, every receiver tap, every instrument port carries one. A plant of moderate size has 50-200 gauges installed across its system; they fail (Bourdon-tube fatigue), get knocked off (forklift, dropped tool), or drift over time. Ships by the box of twelve as MRO stock: one standard SKU (0-160 PSI, 2", 1/4" NPT, glycerin-filled) covers most plant installs.	SPEC DISCIPLINE MATTERS Gauge max ≈ 1.5× operating pressure or the needle pins and the Bourdon tube fatigues in 1-2 years. Glycerin-fill on any vibration install (compressor discharge, presses, hammers) or the dry gauge bounces unreadable and dies fast. Stainless case in washdown / food / pharma. Grade A (±1.5%) with NIST cert in regulated industries: standard industrial ±3% doesn't meet the audit.	1.5" – 4" dial · 0-15 to 0-600 PSI dry · glycerin · ABS · stainless · Grade A	$	0 / 5 · STOCKED ATTACH (AIGNEP + MIDWEST CONTROLS)

Reading the brand bench column: the bar shows how many of SPC's tier slots (Industry Leader · Emerging · Economical · adjacent) carry an option at that product type. A deep bench means a price-driven and a spec-driven option both close cleanly; a narrow bench means the available brands map closely to the technical requirements and the comparison stops being a tier choice. FRL is anchored on SMC + AIGNEP across every row: SMC for the OEM-spec-driven build, AIGNEP for the value-tier equivalent at the same modular interface, with Midwest Controls picking up the economy MRO drop-in slot on the combination unit and the standalone regulator. The proportional regulator narrows to SMC alone (the ITV series is the SPC-stocked answer); the gauge row is stocked as a universal attach rather than tracked as a brand-bench product.