Graco Reactor Proportioners — E-30, H-50, XP Selection

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Choosing and running Graco Reactor plural-component proportioners for spray foam and polyurea: what the model grammar means (E, H and A drives; 30/50 output classes; XP pressure classes; Reactor 2 against Reactor 3; Elite packages), how foam and coatings duties push the choice differently, heater and hose sizing against real site conditions, the spare parts and consumables that keep a rig earning, and what a complete RFQ for a machine or a rebuild looks like.

The short version

A Reactor is the heart of a plural-component rig: it meters A (ISO) and B (resin) at 1:1, heats both to spray temperature, and pushes them down a heated hose to an impingement-mix gun. Model grammar: E = electric drive, H = hydraulic, A = air-driven; the number is the output class (an E-30 class machine delivers roughly up to ~13.5 kg/min); XP variants run higher pressure (3500 psi class) for polyurea and coatings, standard versions the ~2000 psi class foam duty. Reactor 2 is the proven generation; Reactor 3 adds the connected platform and refined controls. Elite packages bundle premium hose (Xtreme-Wrap class) and options.

Foam vs coatings decides the machine: insulation foam wants flow and thermal headroom (E-30/H-40/H-50 class); polyurea and fast coatings want pressure (XP class) and tight temperature control. The crossover buyer should size for the heavier duty, not the average day.

The heater and the hose are the real sizing constraints: machine output is only usable if the primary heaters (10 / 15 kW classes on E-30 packages — compare the 15 kW and 10 kW Elite packages) and the heated hose length match the site: cold-climate work and long hose runs eat kilowatts before the gun sees them.

High-ticket, high-uptime economics: a Reactor package is a significant capital item, and its downtime costs a crew-day at a time. The spares list at the bottom — mix chambers, gun rebuild kits, transducers, hose sections, TSL — is not an accessory list; it is what keeps the capital earning.

Buy as a package, not a part number: proportioner + heated hose (+ whip) + gun + feed pumps/agitator + generator sizing checked. A mismatch anywhere starves the gun and the first site day finds it.

1. The model grammar

Element | Meaning | Working consequence |

E / H / A prefix | Electric, hydraulic or air drive | E = site-friendly, generator-driven work (e.g. Reactor 2 E-30 package); H = highest duty cycles and outputs (e.g. Reactor 3 H-50 Elite); A = entry/touch-up class |

Output number (30 / 40 / 50…) | Output class — the E-30 family sits near ~13.5 kg/min max | Match to gun chamber size and crew pace; chronic max-output running means the machine is undersized |

XP suffix | High-pressure class (~3500 psi) for polyurea/coatings | Different pumps and ratings — an H-XP2/H-XP3 is a coatings machine first |

Reactor 2 vs Reactor 3 | Generation: controls, data, platform | Reactor 3 brings the connected ecosystem and refined diagnostics; Reactor 2 packages (e.g. E-30 ES2011) remain fully supported workhorses |

Elite tier | Premium package content (Xtreme-Wrap hose class, options) | Buys hose durability and convenience — worth it for daily-spray contractors |

Package voltage (230/400 V) and heater kW | Electrical configuration | Must match the generator or shore supply — the 15 kW heater package needs the amps to feed it |

2. Foam duty or coatings duty — the decision table

Duty | Pressure class | Machine family | Why |

SPF insulation (open/closed cell), roofs, walls, tanks | ~2000 psi class | E-30 class electric; H-40/H-50 for high-volume crews | Flow and heater capacity govern yield and ambient-window; closed-cell winter work is the heater stress test |

Polyurea waterproofing, truck beds, secondary containment | ~3500 psi class (XP) | E-XP2 class; H-XP2/XP3 for production rates | Fast-gel chemistry needs pressure for clean atomisation at temperature |

Mixed contractor (foam + occasional polyurea) | Size for the coatings days | XP-class machine run gentler on foam days | Downgrading pressure is easy; the reverse is a new machine |

Marine/industrial maintenance (pipe coating, tank lining) | Per system datasheet | Often XP class + specific gun chambers | Coating systems specify pressure/temperature windows — the machine serves the chemistry, not vice versa |

Generator sizing belongs in this table's margins: the proportioner, both primary heaters, hose heat and the air compressor all draw together at spray start. The package's own electrical data decides — reading it before the site day is cheaper than discovering voltage sag as cold joints and off-ratio events.

3. Heat and hose — where output actually gets made

Spray chemistry works in a narrow temperature window at the gun. Three heat stages get it there: primary heaters (A and B), the heated hose holding temperature over distance, and the whip hose at the gun. Practical sizing rules: pick the heater kW for the climate and material (winter closed-cell at high flow is the governing case — the 15 kW class package earns its price

the first cold morning); pick hose length for the real site geometry, remembering every section adds thermal load and pressure drop; and treat the fluid-temperature sensor and transducers as consumables of the control loop — a Reactor holding ratio but drifting temperature makes bad foam with a green status light. Daily discipline that protects yield: recirculate to temperature before the first pull, TSL in the ISO lube cup (crystallised ISO is the single most common pump killer), drum temperatures managed (agitator/band heaters in the cold), and desiccant on the ISO drum vent because A-side plus moisture equals crystals in the pump and filters.

4. The spares economy — what a working rig carries

Category | Items | Why on the van, not on order |

Gun service | Mix chambers (sized to output), side-seal kits, gaskets, drill bits for ports, gun rebuild kit | The gun is the wear point — a chamber and seals change-out is minutes if the kit is aboard, a lost day if not |

Pump and lube | TSL fluid, ISO-side lube cup parts, pump repair kits per side | ISO crystallisation does not wait for freight |

Sensing and control | Pressure transducers, fluid temperature sensor, hose thermocouple/FTS parts | Ratio and temperature assurance — the difference between product and liability |

Hose | One spare heated section + whip, connection O-rings, insulation wrap | Hose damage on site is routine; the spare section keeps the day alive |

Filtration and feed | Y-strainer screens (A/B), feed pump service parts, drum fittings | Dirty feed shows up as pressure imbalance alarms an hour into the job |

Troubleshooting shorthand that the spares list answers: pressure imbalance alarm → look at feed (strainers, drum pumps, empty drum) before blaming the machine; off-ratio or crossover → gun chamber/side seals worn or a check stuck — rebuild kit territory; temperature sag at the gun → heater element or hose zone, measured not guessed; ISO pump stiff after a weekend → TSL discipline failed, crystals in the wet cup. Every one of these is van-stock repairable.

5. Buying a Reactor — the RFQ that gets the right machine

A complete inquiry states: duty (foam class or polyurea/coating system, with the system datasheet if special), daily output target and crew pattern, site electrical reality (shore supply or generator, voltage/frequency — our packages run 230/400 V classes), hose length needed, climate (heater sizing), and whether the purchase is machine-only or turnkey (feed pumps, agitator, gun, spares kit). From our range: Reactor 2 E-30 package, 15 kW, heated hose, Xtreme-Wrap (EH2011) and its ES2011 sibling, the E-30 Elite 10 kW package, and Reactor 3 hydraulics — H-50 Elite, H-XP2 Elite polyurea, H-XP3 Elite. Pumps for transfer and supply live in the same programme — see the Graco Husky AODD selection guide.

How buying works at cballast. We quote machines, packages and the van-stock spares list in one quotation, sanity-check electrical and hose configuration against your site description, and support rebuilds with parts lists per serial. Accounts are vetted at onboarding; first order prepaid; established accounts on credit terms with repeat discounts; public bodies and utilities invoiced against purchase order from the first order. RFQs to sales@cballast.com.

Frequently asked questions

What is a Graco Reactor E-30 used for?It is an electric plural-component proportioner in the mid-output class (up to roughly 13.5 kg/min) — the standard machine for spray-foam insulation crews and general plural-component work, supplied as packages with primary heaters (10/15 kW classes), heated hose and gun options on 230/400 V supplies.
What is the difference between Reactor 2 and Reactor 3?Generation. Reactor 3 is the current platform with connected controls, refined diagnostics and data features; Reactor 2 is the proven predecessor, still fully supported and widely run. Chemistry and basic architecture are shared; crews choose on controls, fleet standardisation and budget.
What does XP mean on a Reactor?The high-pressure class (~3500 psi family) built for polyurea and fast coating systems, against the ~2000 psi class of standard foam machines. If polyurea is anywhere in your order book, buy the XP class — it sprays foam happily, while the reverse upgrade means a second machine.
E-30 or H-50 — electric or hydraulic?Electric (E) machines suit generator-driven mobile crews and moderate duty cycles; hydraulic (H) drives carry the highest outputs and the hardest daily duty with smoother pressure at the gun. High-volume roofing and industrial crews go H; most insulation contractors are perfectly served by the E-30 class.
Why does my Reactor show a pressure imbalance alarm?Nine times out of ten the problem is upstream: a clogged Y-strainer, a tired drum pump, an empty or cold drum on one side. Check feed before the machine. Persistent imbalance after clean feed points to pump packings or transducers — both van-stock items on a well-kept rig.
What spare parts should I keep for a Reactor rig?Gun mix chambers and seal kits, pump repair kits and TSL, pressure transducers and the fluid temperature sensor, one spare heated hose section with O-rings, and strainer screens. That short list covers the stoppages that otherwise cost site days.
Who supplies Graco Reactor machines and parts in Europe?cballast.com quotes Reactor 2 and Reactor 3 packages, guns, hose and the working spares list, configured against your voltage, climate and duty. Send the duty description to sales@cballast.com.

References and related guides

Standards and sources referenced: Graco Reactor 2 and Reactor 3 series technical documentation and package data (output, pressure and heater classes as published by the manufacturer); plural-component application practice per system suppliers' datasheets.

Graco Husky AODD pump selection

Industrial hose selection by medium

ISO 4406 cleanliness codes & particle counters

Thermal imaging camera selection

Questions on a package configuration or a rebuild list: write to sales@cballast.com. We answer whether or not you buy from us.

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