Bitzer ECOLINE Reciprocating Compressors — Designations, Model Range and Replacement

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How to read a Bitzer ECOLINE designation (2JES-07Y, 4FES-3Y, 4NES-20Y …), which models the catalogue lists from 2-cylinder to the large 4- and 6-cylinder frames, and what to check — oil, refrigerant release, motor code — when replacing a semi-hermetic compressor.

Reading a Bitzer ECOLINE designation

Bitzer's ECOLINE semi-hermetic reciprocating family encodes its essentials in the type code. In 4FES-3Y-40S: the leading digit is the cylinder count (2, 4, 6, 8); the following letter group places the frame in the displacement ladder (within the catalogue's range, roughly from the small 2F/2E/2D frames upward through 4F/4D/4V/4T/4P/4N to the large 4J/4H/4G); ES marks the ECOLINE generation; the figure after the hyphen indicates the nominal motor power class; Y denotes the ester-oil motor/lubricant execution for HFC/HFO refrigerants; and the trailing group (e.g. -40S, -25P) is the motor variant/voltage code. Always transfer the complete code from the nameplate — two compressors sharing a frame can carry different motors.

ECOLINE models in the catalogue

Frame | Cylinders | Catalogue examples |

2J / 2F / 2D (small) | 2 | 2JES-07Y-40S, 2FES-2Y-40S, 2DES-2Y-40S |

4F / 4D / 4V / 4T (mid) | 4 | 4FES-3Y-40S, 4DES-5Y-40S, 4VES-6Y-25P, 4VES-10Y-40P, 4TES-9Y-25P |

4P / 4N (upper-mid) | 4 | 4PES-12Y-40P, 4PES-15Y-25P, 4NES-20Y-40P |

4J / 4H / 4G (large) | 4 | 4JE-22Y-25P, 4HE-18Y-40P, 4GE-30Y-25P |

The catalogue lists over a hundred Bitzer items; the full set is searchable under the Bitzer brand page. Capacity control (CRII), oil heaters, protection devices and adapter kits are quoted together with the compressor on request.

Replacement checklist

Full type code and motor code from the nameplate — not just the frame size.

Refrigerant and oil: Y-execution machines run ester oil for HFC/HFO blends; confirm the released refrigerant list for the specific code against the Bitzer datasheet for your charge (R134a, R404A, R407/448/449/513 classes).

Electrical: motor variant (-40S/-25P style code), supply voltage/frequency, and the starting method (DOL, part-winding, star-delta) the panel provides.

Accessories to carry over: crankcase heater, oil-differential or electronic protection module, capacity-control heads, vibration mounts, shut-off valves and adapters.

System hygiene: after a burn-out, fit suction and liquid-line driers and change them after the first days of running — see the burn-out clean-up guide.

A full type code in an email is enough to start: the matching model, any adapter parts and the freight options come back as one quotation, normally the same working day.

Frequently asked questions
Where can I buy Bitzer ECOLINE compressors?Bitzer ECOLINE compressors from the 2-cylinder frames to 4GE are listed on cballast.com — request a quotation on the model page or by email; fulfilment is from European supplier stock with worldwide dispatch.What does the Y mean in a Bitzer type code?The Y marks the ester-oil execution for HFC/HFO refrigerants — the standard modern variant; the released-refrigerant list for the exact code is confirmed against the Bitzer datasheet.What does the first digit of a Bitzer designation mean?The cylinder count: 2JES has two cylinders, 4NES four; larger frames follow the letter group that comes after it.Can I replace an older Octagon model with ECOLINE?Usually yes — ECOLINE is the successor generation and Bitzer publishes cross-overs per type; state the full old code in the enquiry and the matching ECOLINE model and any adapter parts are quoted.Is the motor code important when ordering?Essential — the trailing group (-40S, -25P …) sets motor size and winding; two otherwise identical frames do not interchange across different motor codes without checking the panel and protection settings.

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