



Tunable Vacuum



Collegiate
2014



Research
2034 / 2044



Ultra
2032 / 2042

[Specifications & Ordering - p. 28, 29](#)

- Built-in tuneable vacuum to control evaporation rate
- Three vacuum levels to meet your needs
- Rugged chemical duty construction to resist harsh vapors

DryFast PTFE dry vacuum pumps for rotary evaporators include essential features to ensure efficient rotary evaporation. The DRYFAST tunable vacuum adjustment allows the user to optimize the vacuum for the solvent being evaporated - see Application Note below. The tunable vacuum adjustment can also be used to stop accidental bumping/foaming.

Use 9 torr (12 mbar) DRYFAST models for common solvent evaporations. DryFast Ultra models offer 2 torr (2.7 mbar) ultimate vacuum to strip DMF fast along with other high boiling point and low boiling point solvents.

The rugged low maintenance oil free pumps have PTFE heads, perfluoroelastomer valves, and fluorinated plastic wetted surfaces, making DRYFAST a durable choice for solvent, acidic and basic vapors.

Model 2014 Collegiate Single stage PTFE diaphragm pump with excellent flow for evaporations of solvents with atmospheric boiling points to 80 °C. Maximum vacuum is 40 torr(53 mbar), 35 l/min. Strip ethanol at 35 °C

Models 2034 / 2044 Research Two stage PTFE diaphragm pumps provide tunable vacuum to 9 torr(12 mbar) - perfect for evaporation of solvents with atmospheric boiling points to 110 °C. Select Model 2044 (35 l/min) for evaporations up to 10 L flask. Strip DMF at 55 °C, toluene at 35 °C.

Models 2032 / 2042 DryFast Ultra Two stage PTFE pumps are excellent for all common evaporations, drawing a deep vacuum down to 2 torr(2.7 mbar) for solvents with atmospheric boiling points to 160 °C. Distills DMF rapidly at 35 °C. Select Model 2042 (35 l/min) for evaporations up to 10 L flask. Strip DMF at 35 °C, DMSO at 55 °C.

GREEN By Design

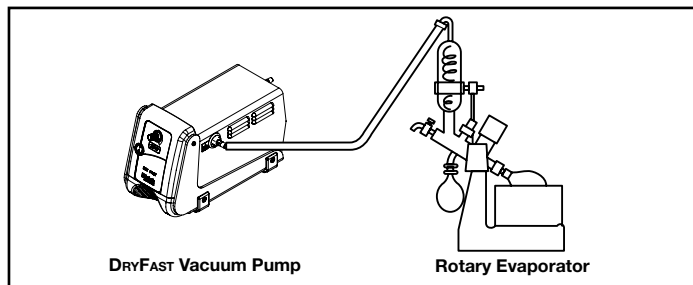
CAPTURE™ vapor emissions from rotary evaporators with an integrated solvent recovery system - see p. 71.



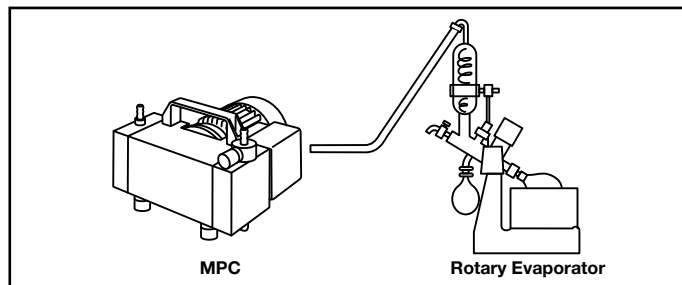
Application Note | DRYFAST®

Use tunable vacuum adjustment to increase vacuum until bubbles form in the evaporation flask - then back off slightly. Decrease vacuum using tunable adjustment to eliminate bumping in the evaporation flask.

Recommended Configuration For DryFast



Recommended Configuration for MPC





Model
MPC 110 E



Model
MPC 301 Z / MPC 302 Z



Model
MPC 601 T

Specifications &
Ordering - p. 30 - 33

- Wide vacuum and flow range to meet your needs
- Compact, user friendly design to fit in fume hood or on benchtop
- Rugged chemical duty construction to resist harsh vapors

MPC PTFE dry vacuum pumps include essential features to ensure efficient rotary evaporation. With ultimate vacuum levels from 75 mbar(56 torr) to 1 mbar(0.75 torr), flow rates up to 138 l/min there is a pump for all rotary evaporator applications and sizes. All MPC models come with a gas ballast valve to handle high vapor loads and can be used to stop accidental bumping/foaming.

Use 8 mbar(6 torr) MPC two stage models for common solvent evaporations. MPC three stage models offer 2 mbar(1.5 torr)

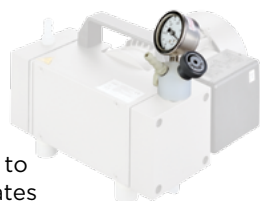
ultimate vacuum to strip DMF fast along with other high boiling point and low boiling point solvents. Corrosion-resistant wetted parts have PTFE heads, PEEK valves, and fluorinated plastic wetted surfaces, making MPC a durable choice for solvent, acidic and basic vapors.

Model MPC 110 E is a 2-headed, single stage PTFE diaphragm pump with excellent flow for evaporation of solvents with atmospheric boiling points to 80°C. Maximum vacuum is 50 mbar(38 torr), 16.7 lpm@50Hz. Strip ethanol at 35°C

Models MPC 101 Z, 301 Z and 302 Z are 2-headed, two stage PTFE diaphragm pumps with excellent flow and vacuum for evaporation of solvents with atmospheric boiling points to 110°C up to 20 liter flasks. Model 302 Z uses a patented pump head design to provide excellent ultimate vacuum to <5 mbar, with a extra high flow rate in the application critical range. Strip DMF at 55°C, toluene at 35°C.

Models MPC 105 T, 105 T iQ-P, 201 T and 601 T are 4-headed, three stage PTFE pumps that are excellent for all common evaporations, drawing a deep vacuum down to 2 mbar(1.5 torr) for solvents with atmospheric boiling points to 160°C. Distills DMF rapidly at 35°C. Select Model MPC601T for evaporations up to 20 L flask.

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Vacuum regulators for mounting to the inlet of the MPC pump regulates the vacuum level and catchpots protect from ingestion of liquids/particles- see p. 69, 75

Application Note | MPC 302Z

Optimized construction of the pump heads allows the MPC 302 Z to reach higher pumping speeds in critical vacuum range leading to faster distillation compared to 8 mbar pumps.

Model Selector | Rotary Evaporators

| Boiling Point, Atmospheric Pressure | 80 °C | | 110 °C | | 160 °C | | 195 °C | |
|-------------------------------------|--|---------------|---|------------------|---|------------------|------------------|---------------|
| Example Solvents | Methylene chloride Acetone Chloroform Ethanol | | Trichloroethylene n-Propyl alcohol Heptane Water Toluene Acetic Acid | | 1,1,2,2-Tetrachloroethane DMF Pentachloroethane | | DMSO Polymers | |
| RotoVap Flask Volume | Pump Models | System Models | Pump Models | System Models | Pump Models | System Models | Pump Models | System Models |
| 1 L | ↑ | ↑ | ↑ | ↑ | ↑ | ↑ | ↑ | ↑ |
| 2 L | | | 2034 | ↑ | 2032 | ↑ | | |
| 10 L | | | 2044 | 2025 | 2042 | ↑ | 1400 | 8890A-70 |
| 20 L | 2014 | 2025 | 2042 | 2026, 2027, 2028 | 2052, 2062 | 2026, 2027, 2028 | 1402 | 1402 |