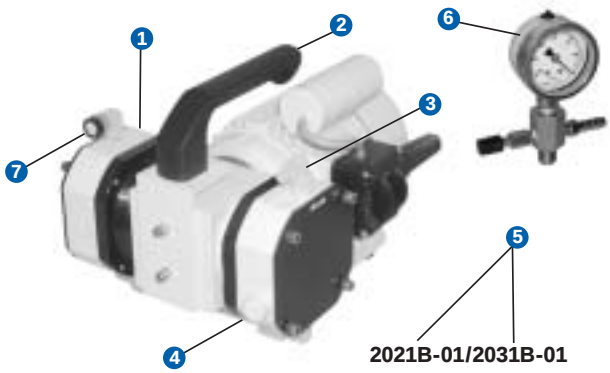
New Oil Free Pumps

2 Torr PTFE Pumps For Tight Spaces & Budgets



1. **Corrosion resistant PTFE diaphragm pump**
2. **Small footprint and compact**
3. **Steady reliable vacuum**
4. **Gas ballast inhibits gas vapor condensation**
5. **Models available in 22 or 32 L/min @ 60Hz**
6. **Optional vacuum regulator available (cat. no. 1421D)**
7. **Quiet**

DRYFAST ULTRA® PTFE Vacuum Pumps

Introducing two standalone oil-free chemical duty PTFE pumps with features and performance to rapidly strip high boiling point solvents and have a price to fit your budget. With pumping capacities of 22 L/min and 32 L/min respectively, and ultimate pressure of 2 Torr (2.7 mbar), these pumps generate the flow and vacuum level needed to handle high boiling point solvents (<160°C) such as DMF, toluene, and xylene.

Models 2021 and 2031 handle aggressive acidic, basic and solvent vapors by utilizing corrosion-resistant PTFE (fluorinated plastics) on all wetted surfaces. No cold traps are needed to operate. These standalone diaphragm vacuum pumps need very little maintenance leading to low cost of ownership and improved productivity. The method of simply pumping room air through the vacuum pump at the end of a distilling or concentrating run does purge the pump head of any condensed vapors resulting in a cleaned pump.

Both models incorporate a gas ballast valve. The valve, located on the front of the pump, is important for inhibiting vapor condensation in the pump when pumping low boiling point solvents. The valve also directs air through exhaust valves to quickly return the pump to maximum vacuum performance when switching from low boiling point to high boiling point solvents (<160°C). See pages 16 and 17 for our complete line of chemical-duty PTFE dry vacuum pumps.

Cat. No.	Description[1]
2021B-01	115V, 60Hz, with N. American plug, gas ballast, 22 L/min, 2 Torr.
2021C-02	Same as 2021B-01, but with IEC connection & detachable Schuko line cord, 18 L/min, 2.7 mbar, CE.
2031B-01	115V, 60Hz, with N. American plug, gas ballast, 32 L/min, 2 Torr.
2031C-02	Same as 2031B-01, but with IEC connection & detachable Schuko line cord, 27 L/min, 2.7 mbar, CE.

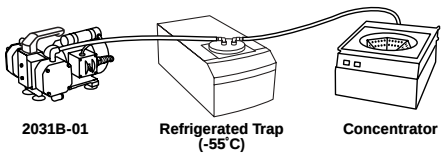
Note: 1. See page 16 for more details.

Oil-Free Concentration of Aqueous Solutions

Water removal and drying concentration applications routinely employ a vacuum system made up of an oil-sealed rotary vane pump, acid neutralization trap and -55°C refrigerated cold trap. Rotary vane pumps have been traditionally selected because of the deep vacuum they obtain to allow rapid drying and their low initial cost.

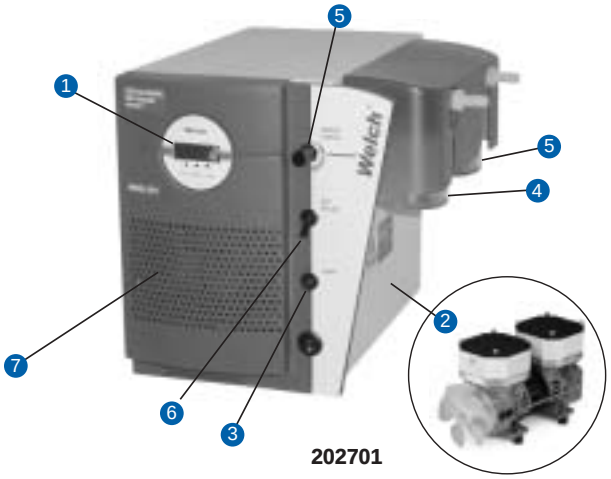
DRYFAST ULTRA 2 Torr PTFE vacuum pumps make possible an economical oil-free solution that is ideal for low volume evaporation of strong acids, bases and harsh organic solvents. Vacuum pump model 2031B-01 (32L/min, 2 Torr) has the ultimate pressure and pumping speed when coupled with a -55°C refrigerated cold trap to efficiently remove aqueous solutions and the chemical resistance to handle aggressive chemicals such as TFA, HCl, formic acid and acetic acid.

Compatible with SpeedVac® and CentriVap® centrifugal concentrators.



New Oil Free Systems

2 Torr Self-Cleaning Systems For Maintenance Free Use



202701

1. Digital absolute pressure read-out
2. Corrosion resistant PTFE diaphragm pump
3. Self-Cleaning feature activates on shut-down
4. Inlet separator traps liquids before being ingested
5. Outlet separator collects ejected condensed vapors
6. Gas ballast inhibits vapor condensation
7. Quiet

DryFast Ultra® Self-Cleaning Vacuum Systems

Introducing two models of oil-free 2 Torr vacuum systems designed for rotary evaporator and concentrator applications involving solvents with boiling points <160°C. With 2 Torr (2.7 mbar) vacuum and high pumping speed efficiency, one observes rapid transfer of high boiling point solvents like DMF, toluene and xylene. Model 2027 comes with a digital absolute vacuum read-out in units of Torr, mbar or pascal. Model 2026 has identical vacuum and flow, but comes with dial vacuum read-out where knowing absolute pressure in the apparatus is not critical for your application, and the budget is tight.

The system's patent-pending two-stage, flexible deep vacuum diaphragm pump resists chemical vapors thanks to fluorinated plastics used on all wetted surfaces – including the diaphragm itself. An adjustable bleed valve mounted directly on the system's control panel lets you regulate the vacuum level. The Self-Cleaning feature automatically runs room air through the pump for two minutes at shutdown to rid the pump of residue – ensuring quicker pump-down to ultimate vacuum and longer membrane service life.

Critical to quick pump-down on high boiling point compounds following the stripping of volatile solvents is the gas ballast valve. The gas ballast leaks air into the 2-stage of the internal pump. The gas pathway is designed to quickly purge out liquefied solvents that are resting on the internal valves. This results in speedier pump-down to ultimate pressure. In addition, the gas ballast (vent switch) will also minimize condensation when pumping heavy vapor loads.

Cat. No.	Description[2]
202701	115V, 60Hz, with N. American plug, digital absolute vacuum read-out, 32 L/min, 2 Torr.
202703	Same as 202701 except wired for 230V, 50Hz, with IEC connection & detachable Schuko line cord. 27 L/min, 2.7 mbar, CE.
202601	115V, 60Hz, with N. American plug, dial vacuum gauge, 32 L/min, 2 Torr.

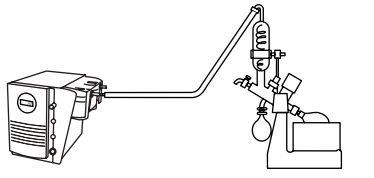
Note: See page 17 for more details.

Oil-Free Distillation of DMF & Other High Boilers (<160°C)

DMF removal from a sample in a rotary evaporator routinely employs a vacuum system made up of an oil-sealed rotary vane pump and a dry ice slurry cold trap. Rotary vane pumps have traditionally been selected because of the deep vacuum. A cold trap is employed to minimize the ingestion of DMF and other solvents into the pump and to aid in extending the service interval.

DryFast Ultra 2 Torr Vacuum systems make possible a trap-free and oil-free solution that goes light on your limited research budget. Vacuum System model 202701 (32L/min, 2 Torr) has the ultimate pressure and pumping speed to remove DMF efficiently. These specifications coupled with fluorinated plastic (PTFE) construction and the self-cleaning feature creates a virtually maintenance-free solution.

Compatible with Buchi®, Heidolph, and Labconco® rotary evaporators.



202701 Rotary Evaporator