

Lab Vacuum Pump Quick Reference Guide

Find the right pump for an application based on simple questions listed below.

BRANDTECH offers a complete range of VACUUBRAND® vacuum solutions from oil-free and chemically resistant vacuum pumps to electronically controlled vacuum systems. See our full range of vacuum solutions at www.brandtech.com.

VACUUBRAND oil-free diaphragm pumps deliver exceptional performance in a reliable, whisper-quiet and low-maintenance design. Chemistry "C" version diaphragm pumps offer excellent chemical resistance against aggressive gases and vapors.

VACUU·PURE® dry screw pumps deliver vacuum down to the 10^{-3} mbar range while providing important benefits: 100% oil-free, no abrasion, and no wear parts. Chemically resistant VACUU·PURE 10C is designed for working with aggressive media.

VARIO® control vacuum pumps come preloaded with protocols for all common lab vacuum applications.

FILTRATION & SPE

What kind of media are you using?

- ▷ Aqueous media only
- ▷ Organic solvents and/or corrosives

What is the size of your filtration?

- ▷ Standard bench-top and/or up to 3-manifold process
- ▷ Large-scale and/or up to 6-manifold process



Conditions

Pump Options

Ultimate Vacuum

BRANDTECH Cat. No.

Aqueous media only, standard benchtop and/or up to 3-manifold process	ME 1	100 mbar, 14 lpm	20721003
Organic solvents and/or corrosives, standard benchtop and/or up to 3-manifold process	ME 1C	100 mbar, 14 lpm	20721103
Aqueous media only, large-scale and/or up to 6-manifold process	ME 4 NT	70 mbar, 73 lpm	20731003
Organic solvents and/or corrosives, large-scale and/or up to 6-manifold process	ME 4C NT	70 mbar, 72 lpm	20731203

FLUID ASPIRATION

Will you be using an existing vacuum source?

Do you work with aggressive disinfectants?*

Would you like electronic monitoring of the liquid level?



Conditions

System Options

BRANDTECH Cat. No.

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BRANDTECH Cat. No.

For use with an external vacuum source	BVC basic	20727000	BVC basic G	20727100
Includes an integrated vacuum pump	BVC control	20727203	BVC control G	20727303
Includes an integrated vacuum pump and liquid level sensor	BVC professional	20727403	BVC professional G	20727503

*Select version with glass collection bottle "G" for use with aggressive disinfectants such as chlorine bleach and peroxide compounds.

ROTARY EVAPORATION

What is the max size of evaporation flask?

- ▷ Up to 5 L
- ▷ Up to 20 L

What kind of solvents do you process?

- ▷ Low-boiling solvents only (boiling point < 100°C)
- ▷ High-boiling point solvents (boiling point > 100°C)

Are you interested in automated control and/or programming?

- ▷ Basic pump options listed below. Contact your BRANDTECH rep to discuss pumps with automated control and programming capabilities.



Conditions	Pump Options	Ultimate Vacuum	BRANDTECH Cat. No.
Up to 5 L flask, low-boiling solvents only	MZ 2C NT	7 mbar, 38 lpm	20732303
Up to 5 L flask, with high-boiling solvents	MD 1C	2 mbar, 25 lpm	20696603
Up to 20 L flask, with high-boiling solvents	MD 4C NT	1.5 mbar, 63 lpm	20736403

VACUUM DRYING OVENS

What type of process are you running in your oven?

- ▷ Primary drying only
- ▷ Primary and residual drying

What is the total chamber volume of your oven?

- ▷ Up to 30 L
- ▷ Up to 65 L
- ▷ Up to 120 L

*Large than 120 L contact your BRANDTECH rep for pump options

Are you interested in automated control and/or programming?

- ▷ Basic pump options listed below. Contact your BRANDTECH rep to discuss pumps with automated control and programming capabilities.



Conditions	Chamber Volume	Pump Options	Ultimate Vacuum	BRANDTECH Cat. No.
Primary drying	Up to 30 L	MZ 2C NT	7 mbar, 38 lpm	20732303
	Up to 65 L	MD 4C NT	1.5 mbar, 63 lpm	20736403
	Up to 120 L	MD 12C NT	2 mbar, 200 lpm	20743303
Primary and residual* drying	Up to 120 L	VACUU-PURE 10C	5x10 ⁻³ mbar, 150 lpm	20751003

*For processes requiring deeper vacuum levels for residual drying, VACUU-PURE 10C is recommended.

LYOPHILIZATION (FREEZE DRYING)

Do you require an oil-free vacuum pump?

Conditions	Requirement	Pump Options	Ultimate Vacuum	BRANDTECH Cat. No.
Ice condenser capacity up to 12 L	Oil-free pump	VACUU-PURE 10C	5x10 ⁻³ mbar, 150 lpm	20751003
	Oil-sealed HYBRID pump	RC 6	2x10 ⁻³ mbar, 115 lpm	20798563



SCHLENK LINE

Do you require an oil-free vacuum pump?

Requirement	Pump Options	Ultimate Vacuum	BRANDTECH Cat. No.
Oil-free pump	VACUU-PURE 10C	5x10 ⁻³ mbar, 150 lpm	20751003
Oil-sealed pump	RZ 6	2x10 ⁻³ mbar, 113 lpm	20698136

