Model
MP 065 E

Model
MP 055 Z

Model
2534

Model
CRVpro 4

Specifications &
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- **Drying moist samples**
- **Fast pump-down of desiccator**
- **Oil-free options**

Vacuum desiccators are used frequently in laboratories for the removal of moisture in a sample, storing moisture/oxygen-sensitive samples under a vacuum or inert atmosphere, vacuum testing, and degassing/de-foaming samples. As a result of this wide range of uses, vacuum pump selection depends on desiccator volume, vapors removed from samples and vacuum level needed to protect sample.

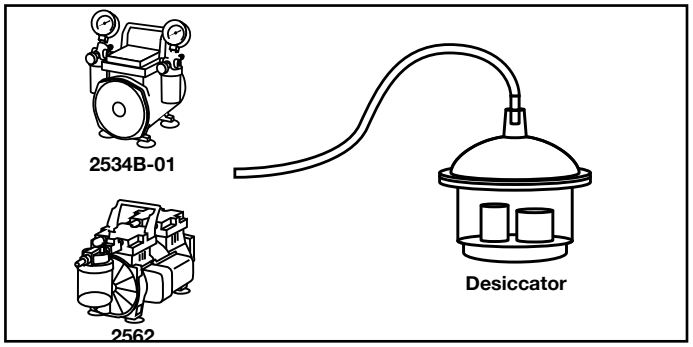
The volume of the desiccator needs to match the free air displacement of the pump to ensure a satisfactory pump down. Economical Wob-l® pump can be used for drying moist samples. Chemical duty diaphragm pumps are used for removing organic solvents and/or acid/bases from samples. CRVpro pumps are used for high vacuum applications where the desiccator is used for long term storage.

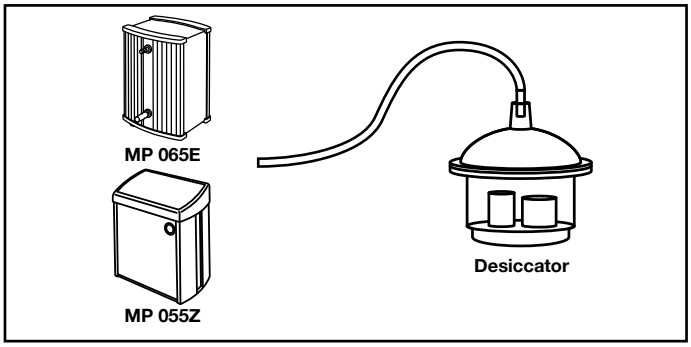
The common plastic and glass desiccators found in most laboratories will hold a maximum vacuum to 29 in Hg (31 mbar) for 24 hours. Some specialty manufacturers of glass and metal desiccators will rate their desiccators for long term high vacuum storage to $1x10^{-3}$ torr (1.3×10^{-3} mbar) and are capable of holding a vacuum at 27 in. Hg (100 mbar) for 5 years. Check with desiccator manufacturer on the vacuum rating to aid in using Welch's selector table.

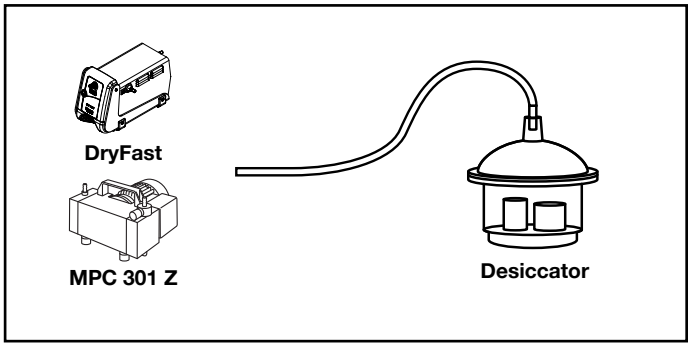
Models MP 065 E, MP 055 Z These standard duty diaphragm pump models are high performance and easy-to-use solution for small benchtop desiccators. These space saving pump models have small footprints and are also portable. Ultimate vacuum pressure on MP 065 E is 100 mbar (75 torr) and MP 055 Z is <5 mbar (3.8 torr). Optional regulators and gauge assemblies are available, see page 75.

Model 2534, 2562 These Wob-l piston pumps are standard duty pumps that pack a lot of performance in small size for use with small benchtop desiccators to cabinets. Model 2534 features vacuum and pressure regulators with gauges, liquid trap at inlet and a muffler and has ultimate vacuum pressure of 27.2 in. Hg (93 mbar). Model 2562 is a two stage pump with ultimate pressure vacuum of 29.6 in. Hg (10 mbar).

Model CRVpro 4 The two-stage direct-drive rotary vane pump are suitable for long term storage applications because it is capable of reaching ultimate vacuum pressure of 29.9+ in. Hg ($5x10^{-4}$ mbar/$4x10^{-4}$ torr). This robust vacuum pump is oil-lubricated to allow it to achieve this high vacuum.







Model 2019

Model 2034

Model MPC 302 Z

Model 2070/2071 Chemstar® Dry

Specifications & Ordering - p. 28, 31, 48

- **Drying samples containing solvents, acids, bases**
- **Fast pump-down of desiccator**
- **Oil-free options**

Oil-free chemical duty diaphragm vacuum pumps are commonly used with samples where organic solvent, base or acid vapors are evolved from sample during drying and/or degassing. Chemical duty diaphragm pumps use PTFE and other chemical duty materials for protection against damage from these vapors. Where a high vacuum is required, oil-free CHEMSTAR DRY or CRVpro direct drive pumps with in-line cold traps are recommended.

Model 2019 Economical, oil-less, light weight, durable diaphragm vacuum pump with PTFE coated aluminum, PTFE liner for the diaphragm and fluorinated plastic inlet fitting. Maximum vacuum of 24 in. Hg (200 mbar). Includes exhaust muffler.

Models MPC 090 E, 095 Z, 301 E, 301 Z, 302 Z and 601 E These oil-less chemical duty diaphragm vacuum pump are rugged, low maintenance oil-free pump PTFE heads, PEEK valves, and fluoroplastic wetted surfaces for handling the most aggressive chemical vapors. One-stage pump models MPC 090 E, 301 E and 601 E can reach ultimate vacuum pressure to 75 mbar (56 torr or 27.7 in Hg). Two-stage pump models 301 Z and 302 Z can reach ultimate vacuum pressure to <5 mbar (3.8 torr or 29.8 in Hg). Available with optional vacuum regulators and catchpots. See page 69 for details.

Model 2034 DRYFAST Chemical duty diaphragm pump will handle aggressive vapors since they are corrosion resistant with all PTFE head construction with all wetted surfaces made of fluoroplastic wetted. Built-in vacuum regulation using a bleed valve mounted on front panel. Ultimate vacuum pressure to 29.6 in. Hg (12 mbar/9 torr).

Models 2070, 2071 CHEMSTAR DRY ChemStar Dry vacuum system integrates a proprietary vacuum blower backed with a patented PTFE diaphragm pump. Software optimizes proprietary vacuum blower/PTFE diaphragm operation to allow plug and play operation. Vacuum to 0.050 torr (0.07 mbar) depending on model.

Model CRVpro 4 This two-stage direct-drive rotary vane pump is suitable for long term storage applications because it is capable of reaching ultimate vacuum pressure of 29.9+ in Hg ($5x10^{-4}$ mbar/$4x10^{-4}$ torr). In-line cold trap is recommended when pumping chemical vapors (see pages 69).

Model Selector | Desiccator

	Desiccator Type	Application	Ultimate Vacuum Pressure torr(mbar)	Model
Aqueous vapors	Benchtop	Process	70(93)	WOB-L 2534
		Storage	7.5(10)	WOB-L 2562
	Cabinet	Process	70(93)	WOB-L 2534
		Storage	7.5(10)	WOB-L 2562
	Benchtop to Cabinet	Storage	4x10-4(5x10-4)	CRVpro 4
Chemical vapors	Benchtop	Process	150(200)	2019
		Storage	9(12)	2034
	Cabinet	Process	150(200)	2019
		Storage	9(12)	2034
	Benchtop to Cabinet	Storage	4x10-4(5x10-4)	CRVpro 4
			0.095(0.13)	2071