

ChemStar[®] Dry

Revolutionary oil-free vacuum system

- Deep vacuum
- Chemical resistant
- Plug & Play

Announcing New Model!



ChemStar® Dry

Revolutionary oil-free vacuum system

Welch's ChemStar® Dry vacuum system integrates a proprietary vacuum blower with patented PTFE diaphragm technology. The result? The first chemical resistant dry pump alternative to oil-seal pumps - the technology of choice for deep vacuum chemical applications.

Benefits at a glance:

Time-saving

Increase productivity

- > No oil-related maintenance work is required
- > Maintenance intervals are extended by integrated self-cleaning function
- > Gas ballast automatically handles high vapor loads

Friendly to process and environment

Eliminate impacts associated with oil

- > Avoid oil disposal and handling mess
- > Stop oil contamination of samples
- > End oil misting and odors in lab

Outstanding reliability

Durable pump, repeatable vacuum performance

- > Robust, chemical resistant pumping mechanism
- > Proprietary vapor-load compensation automatically protects blower mechanism
- > The diaphragm lasts longer due to integrated self-cleaning function (removes volatile contaminants)

Space-saving

Have more room to move in your lab

- > Compact design enables flexible installation options
- > Beveled control panel enables convenient under-counter installation and operation



Chemical Resistant

- > Pumps corrosive vapor/gasses
- > PTFE and proprietary coatings



Oil-Free

- > No oil back-streaming
- > No oil maintenance/disposal
- > Cleaner workplace environment
- > Contaminant free samples



Plug and Play

- > Patented software control
- > Auto speed control from atmospheric pressure to 0.05 torr
- > Self-cleaning maintains performance
- > Protection from pressure surges

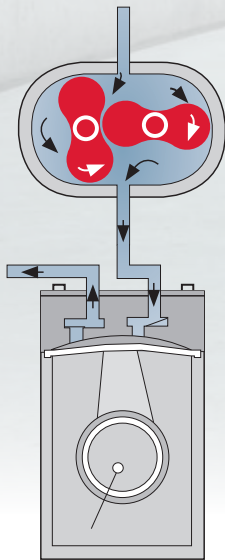
Applications

- Schlenk Line
- Freeze Dryer
- Vacuum Oven
- Glove Boxes
- Concentrator





| Pump design
ChemStar Dry



| Roots blower

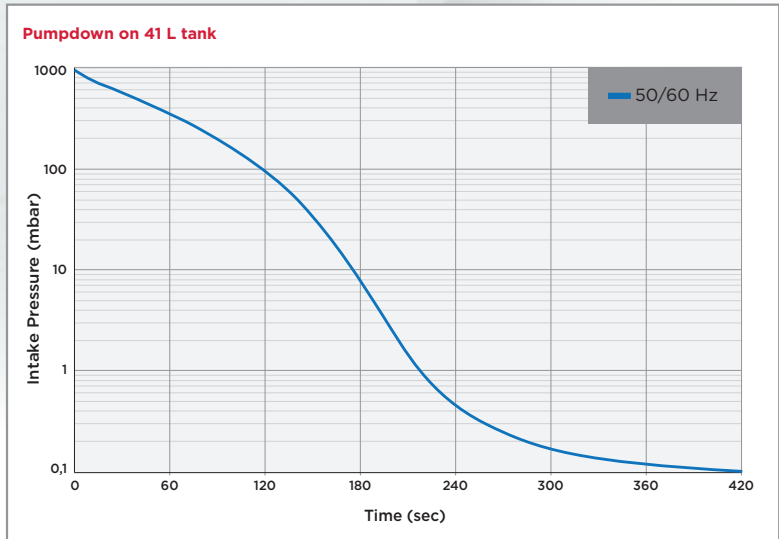
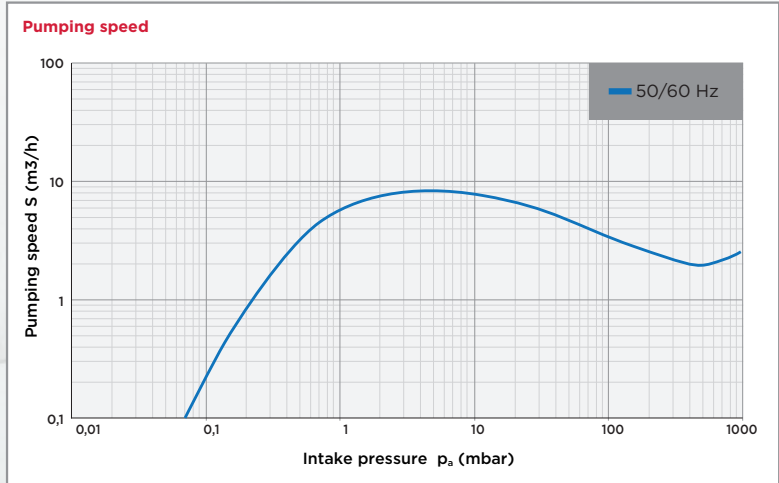
| Operation principle
ChemStar Dry

| Diaphragm vacuum pump

How it works:

ChemStar Dry pumps quickly down to the working pressures for most evaporative operations (10 to 0.8 torr). It is in this range that ChemStar Dry creates maximum flow for high performance evaporation – clean, fast, and thorough. There is no oil, and the system automatically maintains and protects itself for repeatable robust performance.

Technical Features



Specification

Cat. No. 2070B-01

Pumping speed, 60 Hz at 2 torr	150 L/min (9 m³/h)
Ultimate vacuum pressure	5x10 ⁻² torr (7x10 ⁻² mbar)
Inlet-/Outlet Connection	NW 25
Overall Dimensions (L/W/H)	18 x 8 x18"
Weight	50 lbs

ORDER INFORMATION

ChemStar Dry Model Numbers			Max Flow Rate		Ultimate Vacuum	
115V, 60 Hz	230V, 60 Hz	230V, 60/50 Hz	60 Hz	50 Hz	60 Hz	50 Hz
2070B-01	—	2070C-02*	150 l/min	150 l/min	0.05 torr (0.7 mbar)	0.07 torr (0.09 mbar)
2071B-01	2071C-01	—	150 l/min	—	0.095 torr (0.13 mbar)	—
2080B-01	2080C-01	—	300 l/min	—	0.05 torr (0.7 mbar)	—

*Has CE Mark

ACCESSORIES

DIAGNOSTIC VACUUM GAUGE

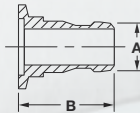
- Handheld, thermocouple sensor
- Battery operated (4 AA)



Cat. No.	Range, Torr	Functions
1526K-10	10^{-3} to 6	Digital Readout Graph vs. Time System Status

RUBBER HOSE ADAPTERS

- ISO NW to Rubber Vacuum hose
- Aluminum



ISO	Hose I.D.	Diameter	Length	CAT. No.
NW 25	7/16"	0.545"	1.65"	501264
NW 25	3/4"	0.750"	1.65"	501263
NW 25	13/16"	0.875"	1.73"	501262

Red Vacuum Hose

Welch discourages the use of PVC or silicone hose because they can chemically degrade and reduce pump performance. Welch recommends red rubber vacuum hose.

- Very thick Walls prevent collapse
- 5 foot or 10 foot lengths



I.D.	Wall Width	O.D.	5-Ft. Cat. No.	10-Ft. Cat. No.
7/16"	5/16"	1 1/16"	331040-5	331040-10
3/4"	1/2"	1 3/4"	331060-5	331060-10

Protect ChemStar® Dry with dry ice cold trap.

Extend the service interval of your Chemstar Dry by using a cold trap. Welch recommends using a cold trap with high vapor load applications including: Flash Evaporation (vacuum ovens), concentrators, processing of natural plant extracted oils or any other "sticky" substance.

Cat. No.	Connection	Capacity
1420H-14	1/2" Outer Diameter Tube Stub	1.5 L condensate

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