

HIGH VACUUM PUMPS FOR  
AIR CONDITIONING AND REFRIGERATION

**WELCH**  
by Gardner Denver

# The Vacuum Pumps of Choice

## For Large Chiller Service

- HFO & HFC Systems • Ammonia Chillers • Refrigeration System and Component Manufacturing
- Lithium Bromide Absorption • Commercial/Industrial Chillers • Cold Storage • Rooftops/RTU's



### HOF Chiller Dehydration Pump

Cat No. 3161-02, 12.8 cfm

#### CRVpro Direct-Drive

- High flow in small footprint
- Lightweight models for rooftop jobs
- Deep vacuum for fast evacuation and dehydration
- Chemical duty (protective coating)
- Forced oil lubrication
- Gas ballast for high vapor loads



### Lithium Bromide Absorption Service Pump

Cat. No. 1402B-46, 5.6 cfm

#### DuoSeal® Belt-Drive

- Proven performer, pump of choice for years
- Low pump RPM insures long service life
- Large oil reservoir dilutes contaminants
- Deep vacuum for fast evacuation and dehydration
- Precision machined steel rotor, cast iron intake, exhaust ring, metal vanes
- Gas ballast for high vapor loads

APPLIED VACUUM TECHNOLOGY. ASK THE EXPERTS!  
[www.welchvacuum.com/crvpro](http://www.welchvacuum.com/crvpro)

# WELCH HAS THE PUMP TO MEET YOUR NEEDS

## COLD STORAGE



### PUMP REQUIREMENT

- Handles long pump down time effectively
- Handles high water vapor loads
- Draws a very deep vacuum

TONNAGE	WELCH CAT. NO.
10-50	1402B-46, 3081-02
50-500	1402B-46, 1376B-46, 3161-02
500-1000	1397B-46, 3161-02, 3241-01, 3301-01

## INDUSTRIAL/COMMERCIAL CHILLERS



### PUMP REQUIREMENT

- Draws a very deep vacuum
- Handles high water vapor loads
- Heavy duty for continuous industrial use

TONNAGE	WELCH CAT. NO.
10-50	1402B-46 <sup>1</sup> , 3081-02
50-500	1402B-46 <sup>1</sup> , 1376B-46 <sup>1</sup> , 3161-02
500-1500	1397B-46 <sup>1</sup> , 3161-02, 3241-01, 3301-01

Note 1: Pump seals and gaskets will handle Ammonia refrigerant.

## ROOFTOPS/RTU'S



### PUMP REQUIREMENT

- Portable and powerful
- Draws a very deep vacuum
- Large oil reservoir to dilute contaminants

TONNAGE	WELCH CAT. NO.
1-50	3081-02
50-100	3161-02

## LITHIUM BROMIDE ABSORPTION CHILLER



### PUMP REQUIREMENT

- Handles harsh salt-laden water vapor
- Withstands accidental ingestion of salt solution
- Recirculates clean fraction of vacuum pump oil

TONNAGE	WELCH CAT. NO.
100-500	1402B-46
500-1000	1402B-46, 1376B-46
1000-1500	1397B-46, 1397B-46

# ROBUST FOR CONTINUOUS INDUSTRIAL USE

## CRVpro TWO-STAGE DIRECT-DRIVEN ROTARY VANE VACUUM PUMPS



3081-02



3161-02



3241-01/3301-01

CAT. NO.	FREE AIR DISPLACEMENT, CFM	ULTIMATE VACUUM, MICRONS	MOTOR, HP	PUMP RPM	INTAKE CONNECTION	OIL CAPACITY, QTS	WT LBS.	DIMENSIONS, LxWxH, IN.	ELECTRICAL
3081-02	5.6	1.5	1/2	1750	3/4" flare	1.1	49.6	18.2x6.1x9.1	115V, 60Hz, 1Ph
3161-02	12.8	2	1	1750	3/4" flare	2.5	81.6	22.4x8.1x11.4	115V, 60Hz, 1Ph
3241-01	18.3	2	1.5	1750	NW25 <sup>1</sup>	2.2	84.9	22.4x8.1x11.4	115V, 60Hz, 1Ph
3301-01	22.1	2	1.5	1750	NW25 <sup>1</sup>	2.2	87	22.4x8.1x11.4	115V, 60Hz, 1Ph

Note 1: Order cat. no. 1393E, NW25 to 3/4" male flare, to properly connect your service hoses. If using something else, call your Welch Rep.

## DuoSEAL® TWO-STAGE BELT-DRIVEN ROTARY VANE VACUUM PUMPS



1402B-46



1376B-46



1397B-46

CAT. NO.	FREE AIR DISPLACEMENT, CFM	ULTIMATE VACUUM, MICRONS	MOTOR, HP	PUMP RPM	INTAKE CONNECTION	OIL CAPACITY, QTS	WT LBS.	DIMENSIONS, LxWxH, IN.	ELECTRICAL
1402B-46	5.6	1	1/2	525	3/4" flare	2.25	112	20x12x15	115V, 60Hz, 1Ph
1376B-46	10.6	1	1	525	3/4" flare	2.5	156	20x14.1x15.4	115V, 60Hz, 1Ph
1397B-46	17.7	1	1	400	Female, 1-1/2 in. NPT	1.25	205	26x13.7x18.8	115V, 60Hz, 1Ph

# WELCH® VACUUM PUMP OILS AND EXHAUST FILTERS

## CRVpro PREMIUM DIRECT-DRIVE VACUUM PUMP OIL



8995P-11

- Low vapor pressure
- Designed for high RPM direct-drive vacuum pumps
- No additives or inhibitors
- Recommended for CRVpro direct-drive vacuum pumps

### ORDERING INFORMATION

Size	Liter	Gallon	5 Gallon
CAT. No.	8995P-11	8995P-15	8995P-20

## DuoSeal BELT-DRIVE VACUUM PUMP OIL



1407K-11

- Low vapor pressure
- Ideal viscosity for belt-drive vacuum pumps
- High consistency
- Recommended for DuoSeal belt-drive vacuum pumps

### ORDERING INFORMATION

Size	Quart	Gallon	5 Gallon
CAT. No.	1407K-11	1407K-11	1407K-20

## EXHAUST FILTER WITH COALESCED OIL DRAINBACK FEATURE



1417E / 1417F



1417A / 1417B

- Coalesced oil drains back into pump oil case reduces oil consumption
- Filters to 0.3 micron particle size
- Reduces Pump Noise

### ORDERING INFORMATION

Use with pump cat. no.	Filter Element w/Housing	Replacement Filter Element
3081-02	1417E	1417R
3161-02, 3241-01, 3301-01	1417F	1417H-01
1402B-46, 1376B-46	1417A	1417G
1397B-46	1417B	1417H

Gardner Denver Thomas Inc.  
1601 Feehanville Drive  
Suite 550  
Mt. Prospect, IL 60056

Tel: +847-676-8800  
Fax: +847-677-8606  
welch.na@gardnerdenver.com

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by Gardner Denver