

FOR EVACUATION OF REFRIGERATION AND HVAC SYSTEMS



**Model
1402B-46**

**Model
1376B-46**

**Model
1397B-46**

**Model
CRVpro 8**

**Model
CRVpro 16**

**Specifications &
Ordering - p. 52, 55, 56**

- All common commercial refrigerants
- Lithium Bromide / Ammonia Chillers

Welch vacuum pumps are known worldwide for ruggedness and dependability. High capacity, two stage rotary vacuum pumps get you on and off the job fast.

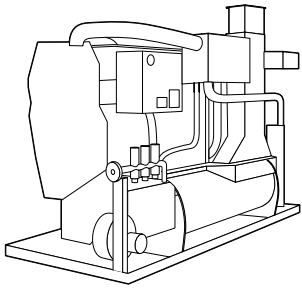
- Deep vacuum for fast evacuation and dehydration
- Precision machined from the most durable materials
- Gas ballast for high vapor loads

Select from DuoSeal® and ChemStar® belt-drive vacuum pump models for top performance & minimum maintenance or CRVpro models for portable vacuum. 3-Phase models also available for DuoSeal pumps. See opposite page for pump selection by refrigeration application or consult your Welch representative at www.welchvacuum.com.

| Specifications | | | | | | |
|---|---|---|---|---|---|--|
| Model | 1402 | 1376 | 1397 | CRVpro 8 | CRVpro 16 | |
| Free Air Displacement | | | | | | |
| cfm (l/min.)@60 Hz | 5.6(160) | 10.6(300) | 17.7(500) | 5.6(160) | 12.8(363) | |
| m ³ /hr (l/min.)@50 Hz | 9.5(160) | 18(300) | 30(500) | 8(133) | 18.3(305) | |
| Ultimate Pressure, torr(mbar) | 1 x 10 ⁻⁴ (1.3x10 ⁻⁴) | 1 x 10 ⁻⁴ (1.3x10 ⁻⁴) | 1 x 10 ⁻⁴ (1.3x10 ⁻⁴) | 4 x 10 ⁻⁴ (5x10 ⁻⁴) | 2 x 10 ⁻⁴ (3 x 10 ⁻⁴) | |
| Gas Ballast | Yes | Yes | Yes | Yes | Yes | |
| Pump RPM | 525 | 525 | 400 | 1725@60 Hz | 1725@60 Hz | |
| Motor Horsepower (watts) | 1/2 (370) | 1 (750) | 1 (750) | 1/2 (400) | 1 (850) | |
| Oil Capacity, qt.(liters) | 2.25 (2.1) | 2.5 (2.37) | 1.25 (1.2) | 1.06 (1) | 2.54 (2.4) | |
| Tubing Needed, I.D. in. (mm) | 13/16 (21) | 13/16 (21) | 1-5/8 (41) | 13/16 (21) | 13/16 (21) | |
| Inlet and Exhaust Connection | 1-20 ¹ | 1-20 ¹ | 1 3/4-20 ² | NW16 ¹ | NW25 ¹ | |
| Overall Dimensions LxWxH in.(cm) | 19.3x14.1x15.4 (49x35x39) | 19.3x12.3x15.6 (49x31x40) | 26x13.7x18.8 (66x35x48) | 18.2x6.1x9.1 (46x16x23) | 22.4x8.1x11.4 (57x21x29) | |
| Weight, lbs.(kg) | 112(51) | 156(71) | 205(93) | 49.6 (22.5) | 81.6 (37) | |
| Ship Weight, lbs.(kg) | 133(60.5) | 181(82.3) | 213(96.8) | 61.8 (28.1) | 94.8 (43.1) | |
| Shipping Carton Dimensions LxWxH in.(cm) | 22.5x15.5x19.5 (57x39x50) | 22x18x19 (60x45x48) | 27.3x18x22 (69x46x56) | 22.8x13x12.8 (58x33x33) | 24x15.8x14 (68x38x39) | |
| Ordering Information | | | | | | |
| Wired for 115V, 60Hz, 1 Ph w/N. American 115V Plug | 1402B-46 | 1376B-46 | 1397B-46 | 3081-02 | 3161-02 | |
| Wired for 220V, 50Hz, 1 Ph w/ Cont. Euro. (Schuko) Plug | 1402C-46 | 1376C-46 | 1397C-46 | — | — | |

Notes: 1. Includes 3/4 in. flare fitting 2. Includes female 1-1/2" NPT

LITHIUM BROMIDE ABSORPTION CHILLER



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

| Tonnage | Welch Model |
|-----------|--------------------|
| 100-500 | 1402B-46 |
| 500-1000 | 1402B-46, 1376B-46 |
| 1000-1500 | 1376B-46, 1397B-46 |

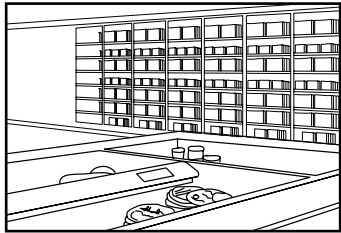
ROOFTOP/RTU'S



- Pump Requirements
- Portable and powerful
 - Draws a very deep vacuum

| Tonnage | Welch Model |
|---------|-------------|
| 1-50 | 3081-02 |
| 50-100 | 3161-02 |

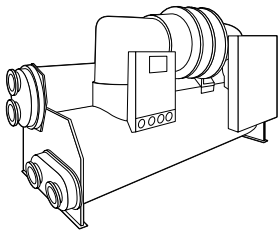
COLD STORAGE



- Pump Requirements
- Handles long pumpdown time effectively
 - Handles high water vapor loads
 - Draws a very deep vacuum

| Tonnage | Welch Model |
|----------|--------------------|
| 10-50 | 1402B-46 |
| 50-500 | 1402B-46, 1376B-46 |
| 500-1000 | 1397B-46 |

HCFC, CFC OR AMMONIA CHILLERS



- Pump Requirements
- Seals and gaskets won't break down in the presence of R-11, R-12, R-13, R-22, R-113, R-123, R-114, R-502, R-503 or ammonia
 - Draws a very deep vacuum
 - Order ChemStar pump for highly corrosive systems

| Tonnage | DuoSeal | ChemStar |
|----------|--------------------|----------|
| 10-50 | 1402B-46 | 1402N-01 |
| 50-500 | 1402B-46, 1376B-46 | 1376N-01 |
| 500-1000 | 1397B-46 | 1376N-01 |

| The ABC's of Vacuum Pump Selection | | | | | |
|------------------------------------|-----------|---|-----------------|---|-------------|
| | A | + | B | = | C |
| | Coil Size | | Desired Vacuum | | Flow Needed |
| Units | Ton | | micron Hg(mbar) | | L/min |
| Residential AC | 1.5 | | 50(0.07) | | 160 to 450 |
| Residential AC | 3 | | 50(0.07) | | 250 to 340 |
| Commercial Air Handling | 5-10 | | 500(0.7) | | 225 to 340 |
| Appliance | 0.5 | | 300(0.4) | | 165 to 310 |
| Leak Testing | 1.5 | | 500(0.7) | | 30 to 170 |