

**WELCH**  
by Gardner Denver

# CRVpro

*Your Robust Vacuum Pump*

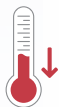
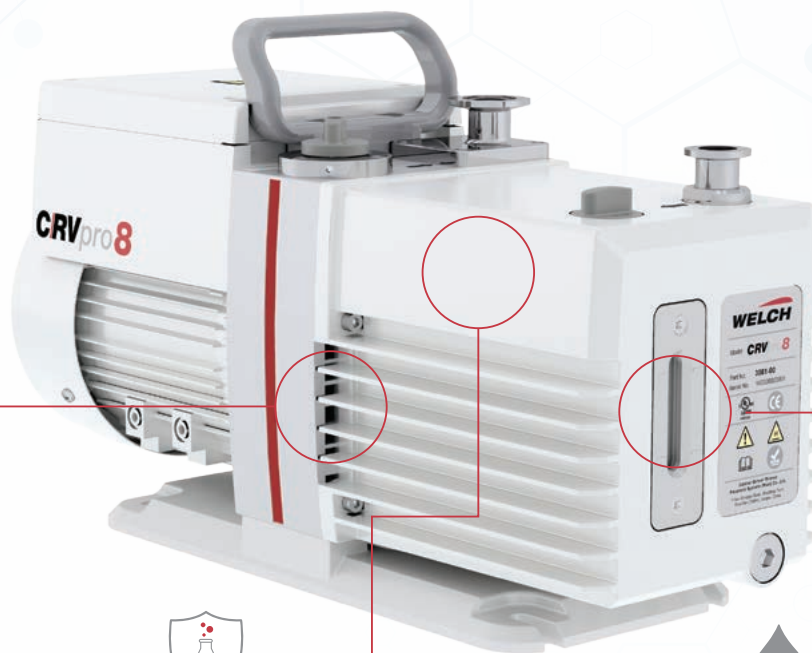


APPLIED VACUUM TECHNOLOGY  
VACUUM PUMPS & SYSTEMS  
[www.welchvacuum.com/crvpro](http://www.welchvacuum.com/crvpro)

# CRVpro

*Your Robust Vacuum Pump*

Discover the evolution of two-stage rotary vane vacuum pumps. Built to last. Born to perform. And designed to simplify your work. Meet the robust vacuum pump series - CRVpro.



## COOL RUNNING

Enhanced air flow allows the pump to run 10°C cooler than standard rotary vane pumps. The lower temperature leads to reduced chemical activity within the pump and slows down rates of oil consumption.



## INTERNAL SURFACE PROTECTION

Inside surface of the oil case has a PTFE coating and the outer surface of the pumping module has a black oxide coating. Both coatings act to slow metal corrosion and, when coupled with foreline traps, extend service interval.



## LARGE OIL CAPACITY

Larger the oil capacity the more the dilution of chemical vapors that sublime from foreline cold trap into the pump oil. This minimizes the rates of oil breakdown and reduce chemical attacks within the pump.

HIGHEST RELIABILITY

LONG PRODUCT LIFESPAN

LESS MAINTENANCE

EXTENDS SERVICE INTERVAL

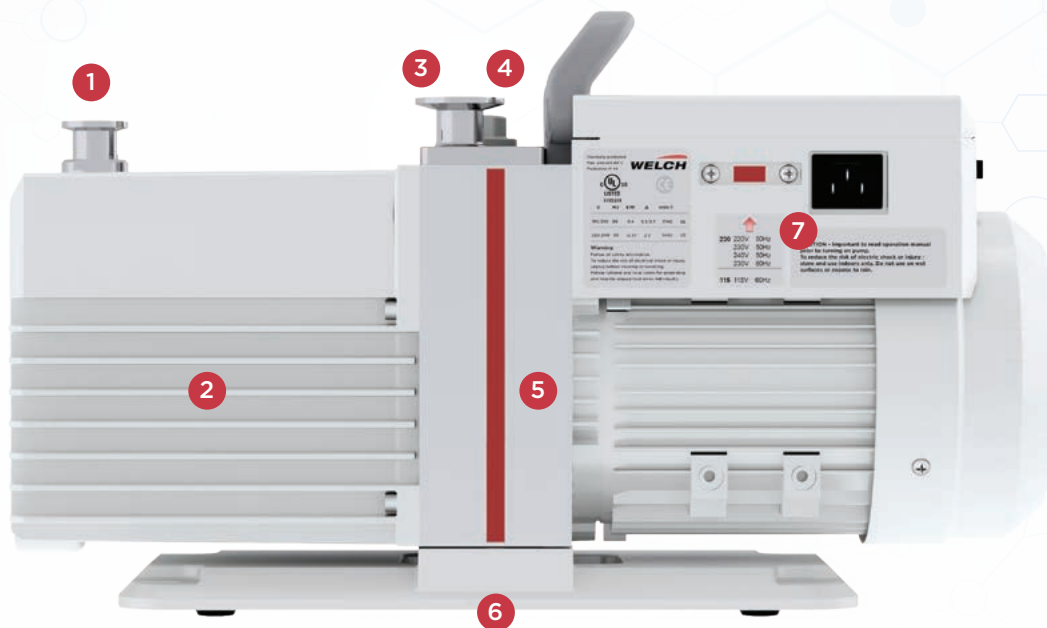
## YOUR BENEFITS

### Highest reliability for stable operation and long product lifespan

- ✓ Reduced risk of chemical attacks and oil breakdown by diluting chemical vapors with a larger oil chamber
- ✓ Slowing down corrosion by cool running operation
- ✓ Provides a measure of protection from sublimed chemical vapors with coating on pump module and oil case

### Extended oil change intervals for less maintenance costs

- ✓ Less oil consumption by cool running operation
- ✓ Extended usability of oil due to high dilution effect by a larger oil chamber



#### 1 LOW NOISE LEVEL

Exceptionally quiet for undisturbed work.

#### 2 FORCED OIL LUBRICATION

Ensures moving parts are bathed in fresh oil. Equilibrates temperature, minimizes oil breakdown, and prolongs mechanical life.

#### 3 ANTI-SUCK BACK VALVE

Prevents oil from being sucked into application in the event of a power failure.

#### 4 GAS BALLAST

Minimizes entrained chemicals in pump oil. Protects pump from condensable liquids from application such as water, acetyl nitrile, etc.

#### 5 cUL and CE CERTIFICATION

Compliance with local regulations and safety directives for safety operation.

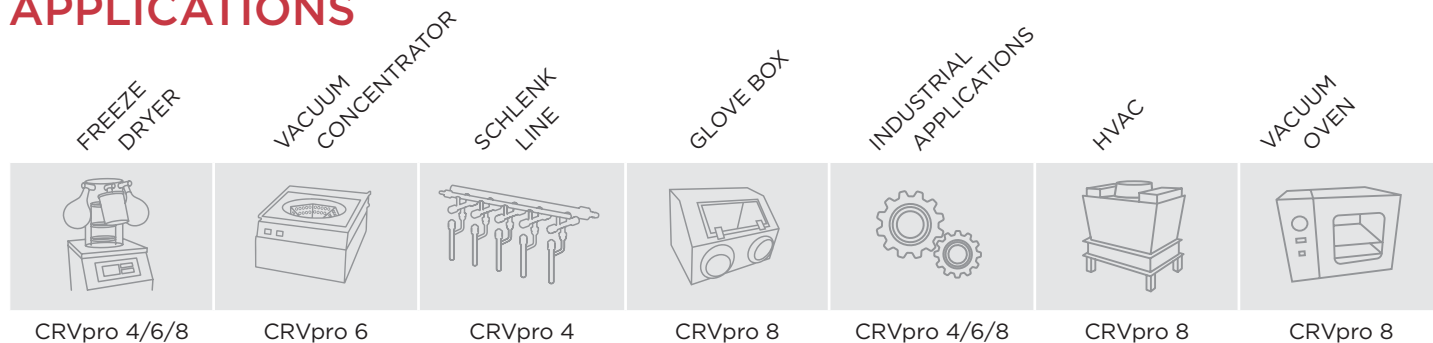
#### 6 SIZED TO FIT YOUR APPLICATION

Modern and compact design to fit different applications and performance requirements.

#### 7 DUAL VOLTAGE MOTOR

IP44 Motors are switchable from 115V to 240V for global use. Each pump includes power cord suitable for country of use.

# APPLICATIONS



# TECHNICAL DATA

PARAMETER	UNIT	CRVpro 4	CRVpro 6	CRVpro 8
<b>Free Air Displacement</b>				
- @ 50Hz	m <sup>3</sup> /h (L/min)	4 (67)	6 (100)	8 (133)
- @ 60Hz	CFM (L/min)	2.8 (78)	4.2 (118)	5.6 (158)
<b>Pumping speed</b>				
- @ 50Hz	m <sup>3</sup> /h (L/min)	3.8 (63)	5.1 (85)	7.3 (122)
- @ 60Hz	CFM (L/min)	2.7 (77)	3.7 (105)	5.1 (143)
<b>Ultimate pressure</b>				
- Without gas ballast partial	mbar (Torr)	5x10 <sup>-4</sup> (4x10 <sup>-4</sup> )		
- Without gas ballast total	mbar (Torr)	2x10 <sup>-3</sup> (1.5x10 <sup>-3</sup> )		
- With gas ballast total	mbar (Torr)	7x10 <sup>-2</sup> (5x10 <sup>-2</sup> )		
Connection flanges	DN	16 KF		
Hose Connection, inlet	ID Tubing	5/8" - 3/4" (16-19mm)		
Ambient temperature	°C	10-40		
Noise level (50Hz)	dB (A)	50 dB		
Oil capacity	ml	1150		1000
Motor speed	rpm 50/60Hz	1450/1740		
Motor power	kW 50/60Hz	0.37/0.4		
Weight	kg (lbs.)	21 (46.3)	22 (48.5)	22.5 (49.6)
Dimensions, L x W x H	mm (inch)	463/157/230 (18.2/6.1/9.1)*		

\* Without handle

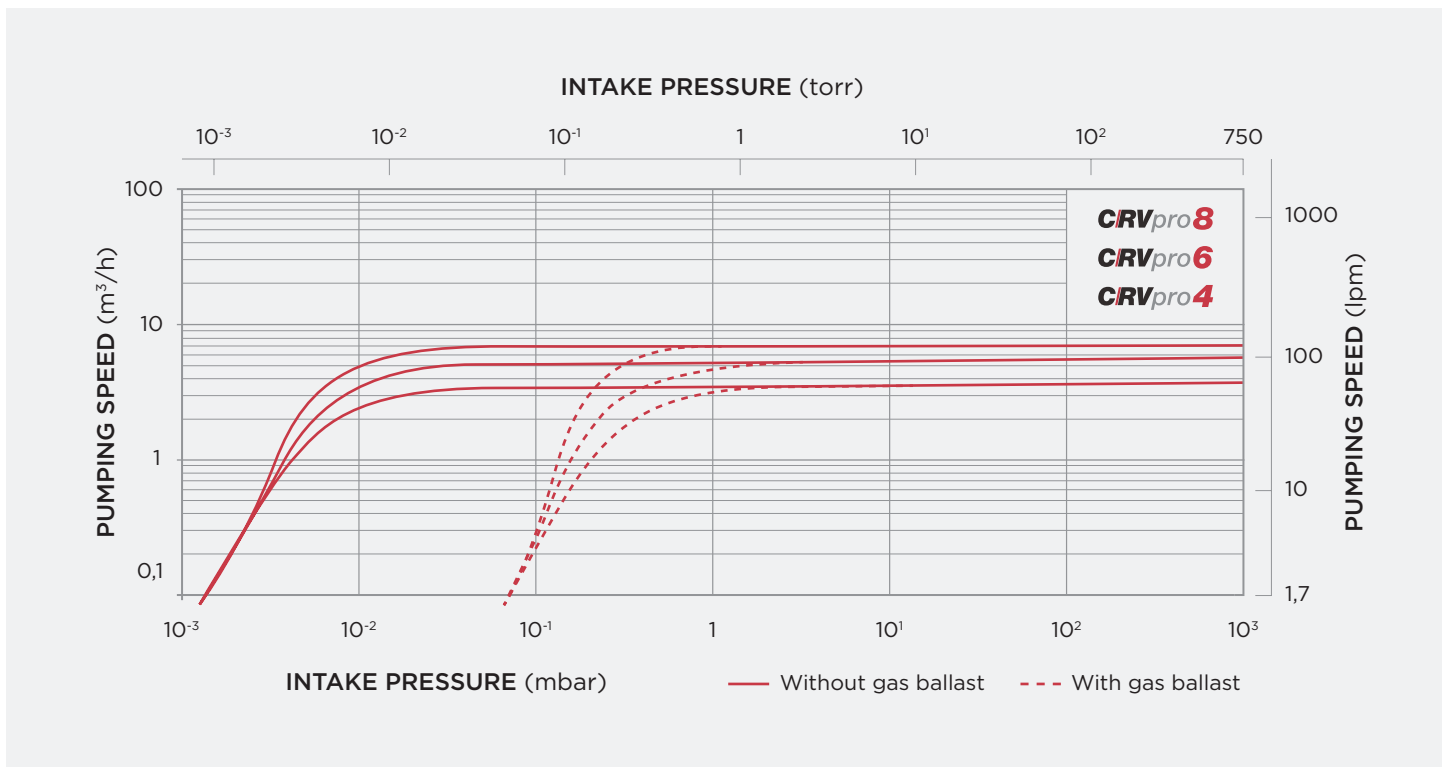
# ORDERING INFORMATION



DESCRIPTION	CRVpro 4	CRVpro 6	CRVpro 8
115V / 60Hz; 1 phase motor with line cord US-plug (Nema-5)	3041-00	3061-00	3081-00
115V / 60Hz; 1 phase motor with line cord US-plug (Nema-5), hose barb adapter (NW 5/8"-3/4" ID Gum Rubber Hose)	3041-01	3061-01	3081-01
220-240V / 50Hz; 230V / 60Hz; 1 phase motor with line cord EU-plug (CEE 7/4), line cord UK-plug (B1363), line cord US-plug (Nema-5)	3042-00	3062-00	3082-00
220-240V / 50Hz; 230V / 60Hz; 1 phase motor, line cord CN-plug (AS/NZS 3112)	3043-00	3063-00	3083-00
100V / 50Hz; 1 phase motor with line cord US-plug (Nema-5)	3044-00	3064-00	3084-00
200V / 50Hz; 1 phase motor with line cord US-plug (Nema-5)	3045-00	3065-00	3085-00
Service Kit	S3077-99	S3078-99	S3079-99
Seal Kit	S3080-99		

Every pump is supplied complete with Welch vacuum pump oil, centering rings (qty 2), clamps (qty 2) and motor overload protection. Ready for use after oil filling.

# PERFORMANCE



# ACCESSORIES

ACCESSORIES	DESCRIPTION	ORDER NO.
Oil	Directorr™ Premium vacuum oil, 1 Quart	8995P-11
	Directorr™ Premium vacuum oil, 1 Liter (EMEA)	800995-01
On Inlet	Inlet Condenser AKS 16	320016
	Replacement Condenser for 320016 and oil mist filter 700010	800160
	Cold Trap, Requires 7/16" ID gum rubber hose	1420H-14
	Cold Trap, welded DN 25 KF (Adapter 701401 needed)	705121
	Fine Vacuum Adsorption Trap, SOF 16	705179
On Outlet	Oil Mist Separator AKD 16	320015
	Oil Mist Filter OME 10/16	700010
Connections and Fittings	Hinge Clamp - DN16KF	302201
		701011 (EMEA)
	NW16 Centering Ring	303101
		701071 (EMEA)
Hose	7/16" ID Red Gum Rubber Hose, 5'	331040-5
	7/16" ID Red Gum Rubber Hose, 10'	331040-10
	Flexible Vacuum Hose, PVC Cord-Reinforced, DN 16, 16mm ID, 23mm length	710058
	Chemical resistant metal hose, DN 16, 1,5m	710755
Application Kits and Adapter	Adapter to use KF 25 for intake or exhaust - DN16/25	701401
	Freeze Dryer Adapter Kit with ball valve	330031
	Vacuum Concentrator Adapter Kit	330044
	Schlenkline Adapter Kit	710213
Ball valve	Ball valve; DN 16	700047

# GLOBAL CONTACT



Contact us for  
consultancy

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[www.welchvacuum.com](http://www.welchvacuum.com)  
[www.welchvacuum.de](http://www.welchvacuum.de)

## COMING SOON

MAY 2017



**CRVpro16**

16m<sup>3</sup>/h

**CRVpro24**

24m<sup>3</sup>/h

**CRVpro30**

30m<sup>3</sup>/h

PARAMETER	CRVpro 16	CRVpro 24	CRVpro 30
Free Air Displacement (m <sup>3</sup> /h) at 50Hz	16	24	30
Free Air Displacement (cfm) at 60Hz	11.3	17	21
Ultimate pressure without gas ballast total (mbar)	4x10 <sup>-4</sup>	4x10 <sup>-4</sup>	4x10 <sup>-4</sup>
Ultimate pressure without gas ballast total (torr)	3x10 <sup>-4</sup>	3x10 <sup>-4</sup>	3x10 <sup>-4</sup>

Available in different voltage range versions. Specifications subject to change without notification.