

WELCH
by Gardner Denver

C/RVpro

Your Robust Vacuum Pump



C/RVpro **4,6,8,16,24,30**

APPLIED VACUUM TECHNOLOGY. ASK THE EXPERTS!
www.welchvacuum.com/crvpro

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.

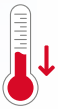
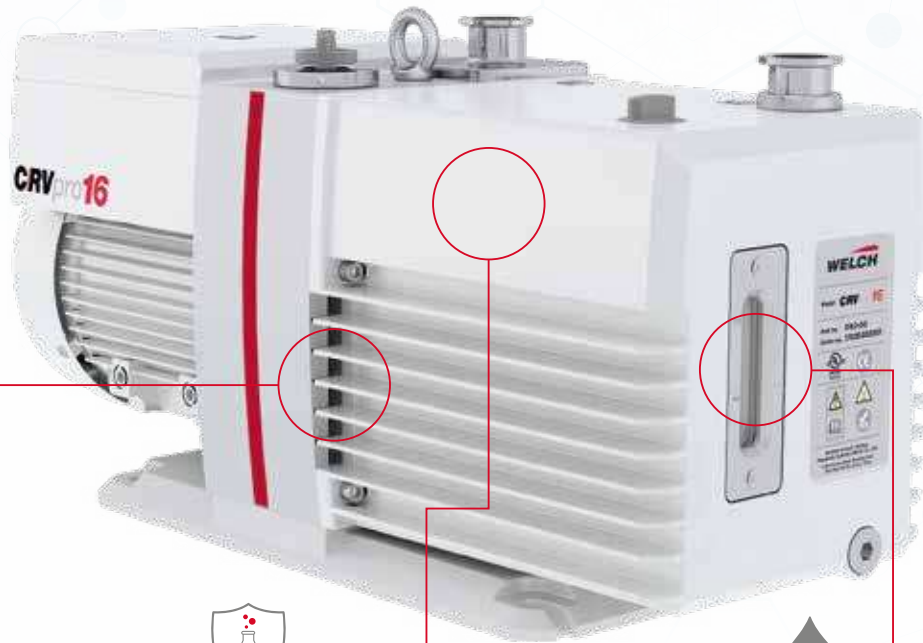
7 DUAL VOLTAGE MOTOR

Dual voltage motors meet IP44 standard. Motors of CRVpro 4,6,8 are switchable from 115V to 240V for global use excluding 100V and 200V pump versions. Each pump includes power cord suitable for country use.

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

Chemical vapors that sublime from the foreline cold trap into the pump oil are more diluted due to the larger oil capacity. This minimizes the rates of oil breakdown and reduce chemical attacks within the pump.

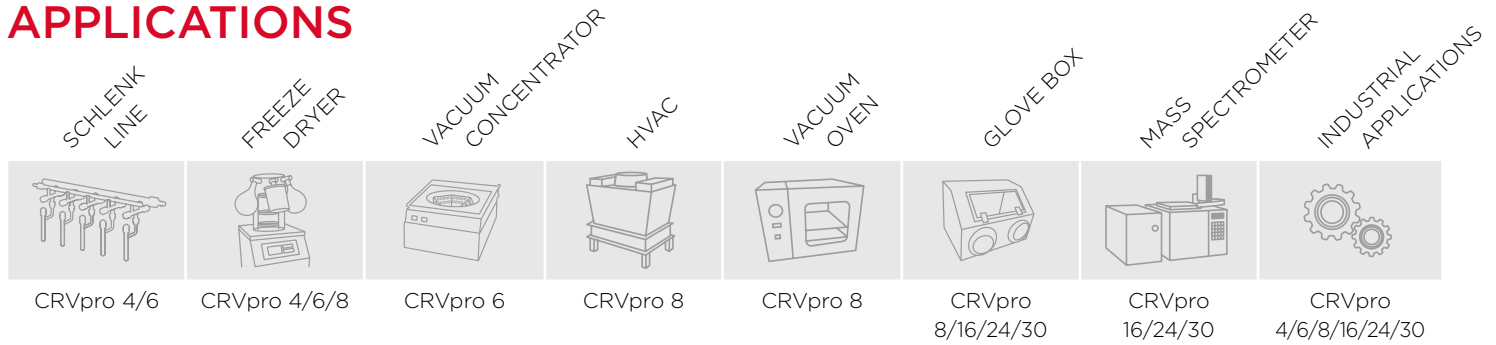
HIGHEST RELIABILITY

LONG PRODUCT LIFESPAN

LESS MAINTENANCE

EXTENDS SERVICE INTERVAL

APPLICATIONS



TECHNICAL DATA

PARAMETER	UNIT	CRVpro 4	CRVpro 6	CRVpro 8	CRVpro 16	CRVpro 24	CRVpro 30
Free air displacement							
- @ 50 Hz	m ³ /h (l/min)	4 (67)	6 (100)	8 (133)	18.3 (305)	26.2 (436)	33.1 (551)
- @ 60 Hz	CFM (l/min)	2.8 (78)	4.2 (118)	5.6 (158)	12.8 (363)	18.3 (519)	22.1 (627)
Ultimate pressure							
- Without gas ballast partial	mbar (Torr)	5x10 ⁻⁴ (4x10 ⁻⁴)			3x10 ⁻⁴ (2x10 ⁻⁴)		
- Without gas ballast total	mbar (Torr)	2x10 ⁻³ (1.5x10 ⁻³)			3x10 ⁻³ (2x10 ⁻³)		
- With gas ballast total	mbar (Torr)	7x10 ⁻² (5x10 ⁻²)			6x10 ⁻³ (5x10 ⁻³)		
Connection flanges	NW	16			25		
Hose connection, inlet*	ID Tubing	5/8" - 3/4" (16-19 mm)			3/4" (19 mm)		
Ambient temperature	°C	10-40					
Noise level (50 Hz)	dB (A)	50			55		
Oil capacity	ml	1150	1000	2400	2200	2100	
Motor speed	rpm 50/60 Hz	1450/1740			1450/1750		
Motor power	kW 50/60 Hz	0.37/0.4			0.7/0.85		
Weight	kg (lbs.)	21 (46.3)	22 (48.5)	22.5 (49.6)	37 (81.6)	38.5 (84.9)	39.5 (87)
Dimensions, L x W x H	mm (inch)	463/157/230 (18.2/6.1/9.1)**			569/206/289 (22.4/8.1/11.4)		

* Requires a hose barb adapter. Included in pump versions with suffix -01.

** Without handle.

ORDERING INFORMATION

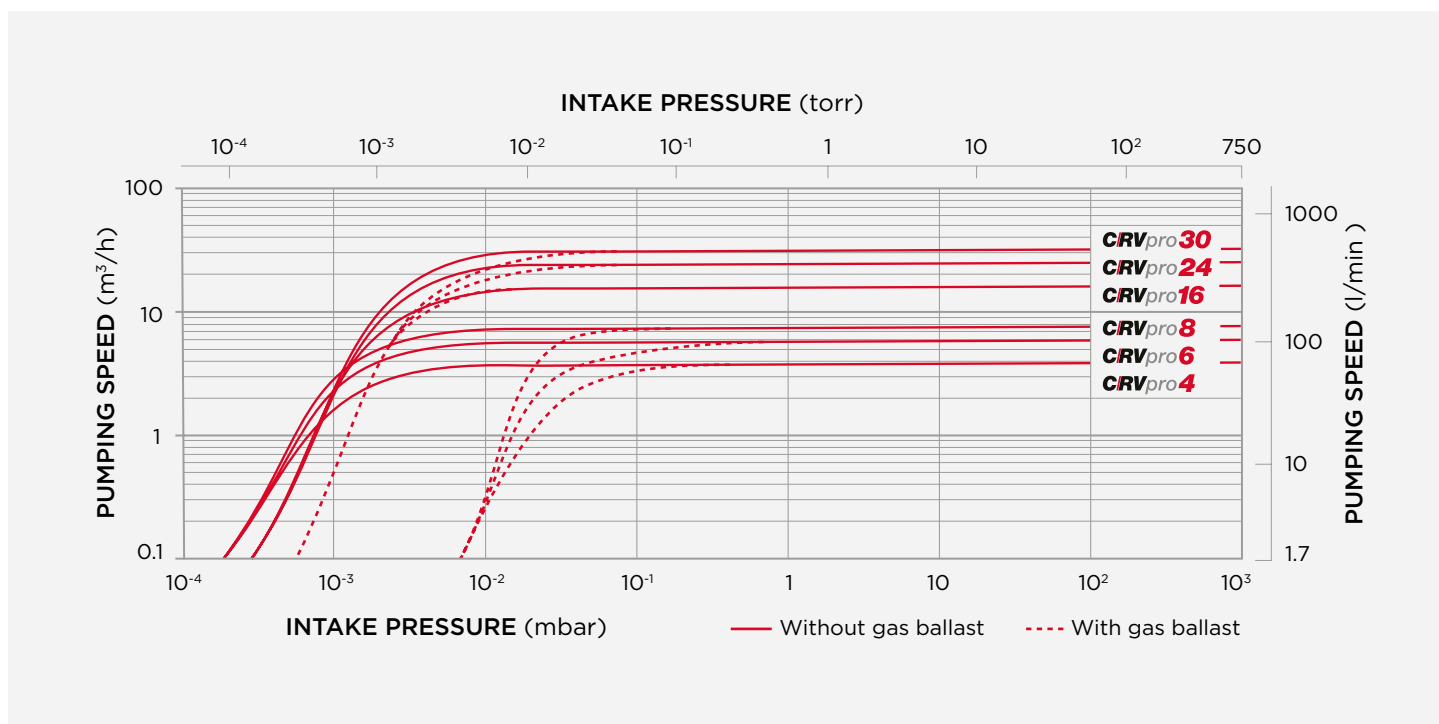
DESCRIPTION	CRVpro 4 ¹	CRVpro 6 ¹	CRVpro 8 ¹	CRVpro 16	CRVpro 24	CRVpro 30
115V / 60Hz; 1 phase motor with line cord US- plug (115V NEMA 5-15)	3041-00	3061-00	3081-00	3161-00	3241-00	3301-00
115V / 60Hz; 1 phase motor with line cord US- plug (115V NEMA 5-15), hose barb adapter (NW16 5/8"), flange adapter NW16 to NW25	3041-01	3061-01	3081-01	-	-	-
115V / 60Hz; 1 phase motor with line cord US- plug (115V NEMA 5-15); hose barb adapter (NW 25 3/4")	-	-	-	3161-01	3241-01	3301-01
220-240V / 50Hz; 230V / 60Hz; 1 phase motor with line cord EU- plug (CEE 7/4), line cord UK- plug (BS1363), line cord US- plug (115V NEMA 5-15)	3042-00	3062-00	3082-00	-	-	-
220-240V / 50Hz; 230V / 60Hz; 1 phase motor with line cord EU- plug (CEE 7/4), line cord US- plug (230V NEMA 6-15), hose barb adapter (NW25 3/4")	3042-01	3062-01	3082-01	3162-01	3242-01	3302-01
Pump with Explosion Proof Motor. 110-120V/208-240V, 60 Hz, 1 Phase.	3046E-01 ²	-	3068E-01 ²	-	-	-
Service kit	S3077-99	S3078-99	S3079-99	S3193-99	S3194-99	S3195-99
Seal kit	S3080-99			S3192-99		

Note 1: CRVpro 4,6,8 are switch selectable between 115V/60Hz and 230V 50/60Hz operation. CRVpro 16, 24, 30 models are not switch selectable; they are dedicated to either 115V 60 Hz, or 230V 50/60 Hz.

Note 2: Always use a certified electrician for proper installation of vacuum pump with explosion proof motor to meet your local municipal codes. Conduit wiring installation required. No cord, plug, or switch provided.

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. More motor versions (e.g. 3-phase) upon request.

PERFORMANCE



ACCESSORIES

ACCESSORIES	DESCRIPTION	ORDER NO.	
		CRVpro 4,6,8	CRVpro 16,24,30
Oil	Directorr™ premium vacuum oil, 1 quart	8995P-11	
On inlet	Inlet condenser	(AKS 16) 320016	(AKS 25) 320018
	Replacement condenser for 320016 and oil mist filter 700010	800160	
	Cold trap, requires 7/16" ID gum rubber hose	1420H-14	-
	Acid neutralization trap	-	1420H-20
	Cold trap, welded DN 25 KF (adapter 701401 needed for CRVpro 4,6,8)	705121	
	Fine vacuum adsorption trap	(SOF 16) 705179	(SOF 25) 705180
On outlet	AKD Oil Mist separator with Glass Bowl	(AKD 16) 320015	-
	OME Oil Mist filter. Plastic Construction	(10/16) 700010	-
	Breather Oil Mist Filter. Metal Construction	1417P-8	1417P-11
	Oil Mist Filter with Oil Drain. Metal Construction	1417C	1417D
Connections and fittings	Hinge clamp	(NW16) 302201	(NW25) 302202
	Centering ring	(NW16) 303101	(NW25) 304802
Hose	ID red gum rubber hose, 5ft.	(7/16") 331040-5	(3/4") 331060-5
	ID red gum rubber hose, 10ft.	(7/16") 331040-10	(3/4") 331060-10
	Chemical resistant metal hose, 1m	(NW16) 710764	(NW25) 710765
Application kits and adapter	Adapter to use KF 16/25 for intake or exhaust	701401	501262
	Freeze dryer adapter kit with ball valve	330031	-
	Vacuum concentrator adapter kit	330044	-
	Schlenkline adapter kit	710213	-
Ball valve	Ball valve	(NW16) 700047	(NW25) 700048

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