



# Data Sheet (EN)

Translation of the german original

**WELCH**  
by Gardner Denver

Photo	Designation	Order no.
	<b>Rotary Vane Pump two stage</b>  Model: <b>CRVpro 2</b>	<b>3022-00</b>

Technical Data		
Parameter	Data	Unit
<b>Pumping speed 50/60 Hz</b> DIN 28426 part 1 (pneurop)	2.3 / 1.6	m <sup>3</sup> / · h <sup>-1</sup>
<b>Ultimate pressure</b> DIN 28426 (pneurop) with rated speed 1450/min (50 Hz)		
- without gas ballast partial	3 x 10 <sup>-4</sup>	mbar
- without gas ballast total	3 x 10 <sup>-3</sup>	
- with gas ballast total	9 x 10 <sup>-2</sup>	
<b>Max. inlet pressure</b>	1	bar
<b>Max. outlet pressure</b>	1.35	
<b>Intake port - IN -</b>	Small flange DN 16 KF	-
<b>Exhaust port - EX -</b>	Small flange DN 16 KF	
<b>Ambient temperature</b>	+ 10 to + 40	°C
<b>Noise level</b> DIN EN ISO 2151	≤ 50	dB (A)
<b>Oil filling</b>	450	ml
<b>Voltage</b>	220-240 or 115 / 230 (switchable)	V
<b>Frequency</b>	50/60	Hz
<b>Motor power</b>	0.29 / 0.4/0.3	kW
<b>Motor speed 50/60Hz</b>	1440 / 1720	rpm
<b>Type of protection</b> DIN EN 60529	IP 54	-
<b>Dimensions (W/D/H)</b>	380 / 138 / 235	mm
<b>Shipping Carton Dimensions (W/D/H)</b>	500 / 320 / 330	
<b>Weight</b>	15	kg
<b>Shipping Weight</b>	18	

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Intake pressure-/Pumping speed - Diagram	Application
<p>The diagram is a log-log plot. The x-axis represents intake pressure in torr (top scale, 10<sup>-3</sup> to 750) and mbar (bottom scale, 10<sup>-2</sup> to 10<sup>3</sup>). The left y-axis represents pumping speed in m<sup>3</sup>/h (0.1 to 100), and the right y-axis represents pumping speed in l/min (1.7 to 1000). Two curves are shown: a solid red line for 'without gas ballast' and a dashed red line for 'with gas ballast'. Both curves show a sharp increase in pumping speed as pressure decreases, reaching a plateau of approximately 40 m<sup>3</sup>/h (2400 l/min) at pressures below 10<sup>-1</sup> torr (10 mbar).</p>	<ul style="list-style-type: none"> <li>➤ For evacuation of recipients or vacuum systems down to the fine vacuum range</li> <li>➤ For pumping biological and toxic gases and vapors</li> <li>➤ In chemical laboratories and in industry</li> <li>➤ For Freeze dryers, Schlenk lines, Industrial applications</li> <li>➤ As single or backing pump for turbomolecular and diffusion pumps</li> </ul>

Description / Scope of delivery
<p><b>Description</b></p> <p>The two-stage rotary vane pump CRVpro 2 provides highest reliability for stable operation, long product lifespan and extends service interval.</p> <ul style="list-style-type: none"> <li>➤ Customers benefit from a reduced risk of chemical attacks and oil breakdown by diluting aggressive chemicals with a larger oil chamber.</li> <li>➤ It's cool running characteristic also slows down any corrosion process.</li> <li>➤ 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 fore line traps, extend service interval.</li> <li>➤ Furthermore, the CRVpro also enables extended oil change intervals for less maintenance costs.</li> <li>➤ Less oil consumption is a result of the cool running operation and the extended usability of oil based on a high dilution effect because of a larger oil chamber.</li> <li>➤ Moreover, the low weight, flexible handle and compact design of the pump makes the rotary vane pump a portable and flexible partner in laboratories and industrial applications.</li> </ul> <p><b>Scope of delivery</b></p> <p>Pump is supplied complete with Welch Directorr premium vacuum pump oil, centering rings, clamps and motor overload protection. Ready for use after oil filling.</p>

Accessories		
Photo	Model / Description	Order no.
	<p><b>Separator AKS 16</b> (intake side) separates substances in liquid and solid state on the pump and the connected recipient.</p>	<p><b>320016</b></p>
	<p><b>Separator AKD 16</b> (exhaust side) separates oil vapor from the exhaust air from the pump.</p>	<p><b>320015</b></p>
	<p><b>Cold Trap, DN10, (intake side)</b> provides pre-pump protection by condensing vapors and reduce the chemical loading.</p>	<p><b>1420H-14</b></p>
	<p><b>Oil mist filter (exhaust side) OME 10/16</b> for minimized of the output of oil mist.</p>	<p><b>700010</b></p>