

CRVpro COMPLETE PUMP PACKAGES

BRZA ISPORUKA
2 - 4 NEDELJE
od poručivanja

- CRVpro - All in one kit

Promocija
-10%
Do kraja godine



CRVpro Pump Model	CRVpro Starter Package CRVpro + AKD 16 + VAV 16 + SW DN 10/8	CRVpro Premium Package CRVpro + VMpro2 + T-Stück + AKD 16 + VAV 16 + SW DN 10/8	CRVpro Schlenk line package CRVpro + KFG16 + AKD 16 + VAV 16 + SW DN 10/8
CRVpro 2*	330070	330077	
CRVpro 4*	330071	330078	330080
CRVpro 6*	330072	330079	330081
CRVpro 8*	330073		

Every pump is supplied complete with Directorr™ Premium vacuum pump oil, centering rings, clamping rings and motor overload protection. Ready for use after oil filling



KEFO[®]



WELCH

by Gardner Denver

CRVpro Series

Two-stage rotary vane vacuum pumps

Promocija

-10%

Do kraja godine

BRZA ISPORUKA

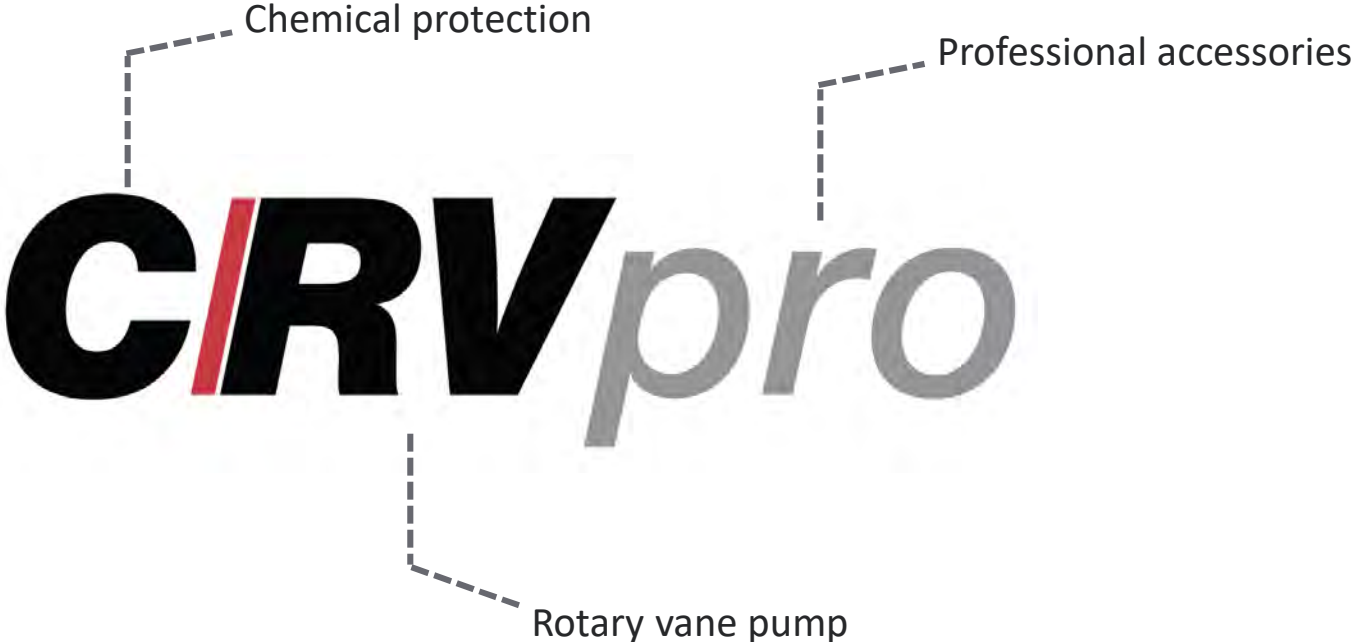
2 - 4 NEDELJE

od poručivanja

- 1 Introduction
- 2 Product Innovations
- 3 Product Features
- 4 Packaging
- 5 NEW version: CRVpro 8 CHEM

Introduction

CRVpro - Series

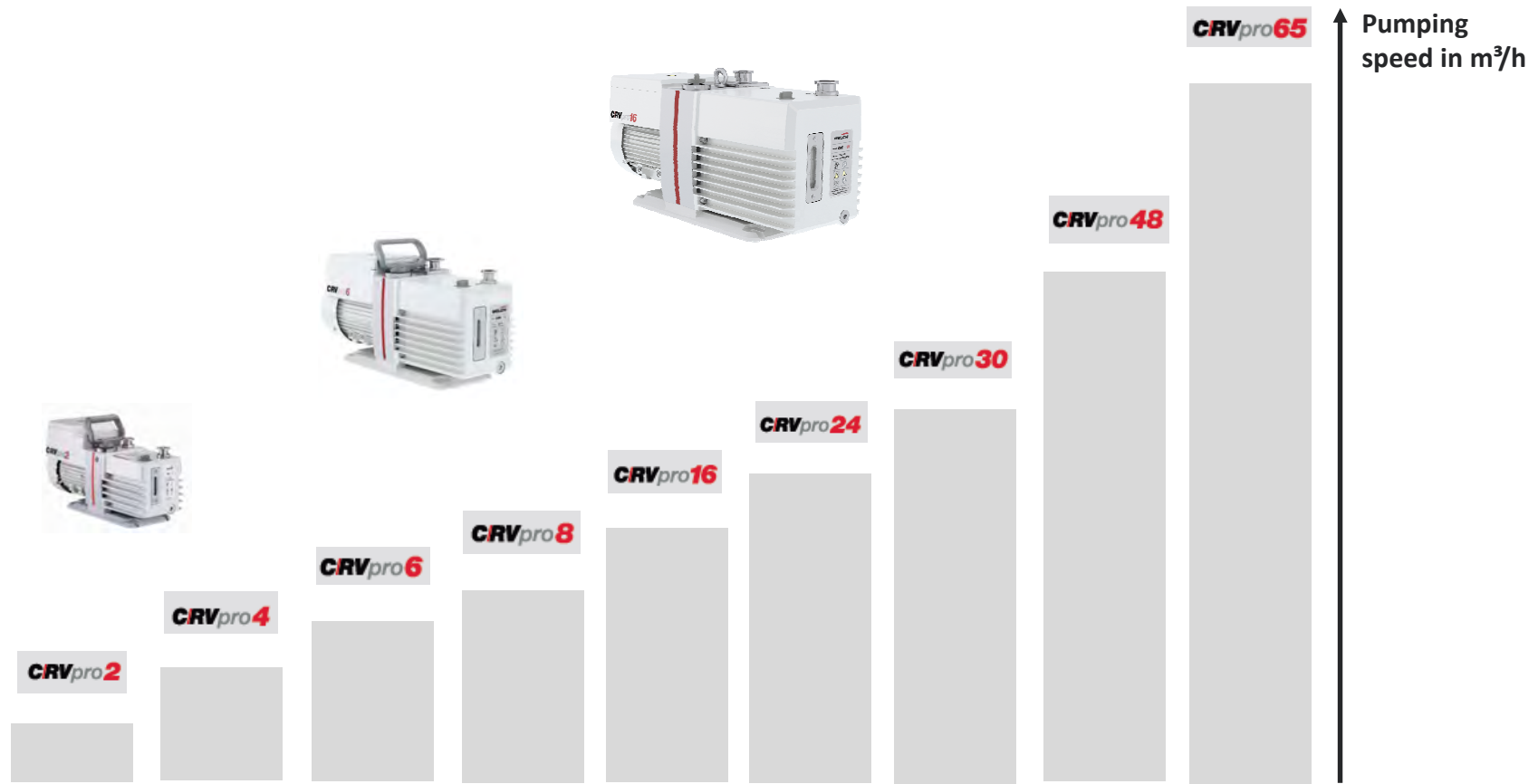


- CRVpro2** **CRVpro4** **CRVpro6** **CRVpro8** **CRVpro16** **CRVpro24** **CRVpro30** **CRVpro48** **CRVpro65**

Introduction

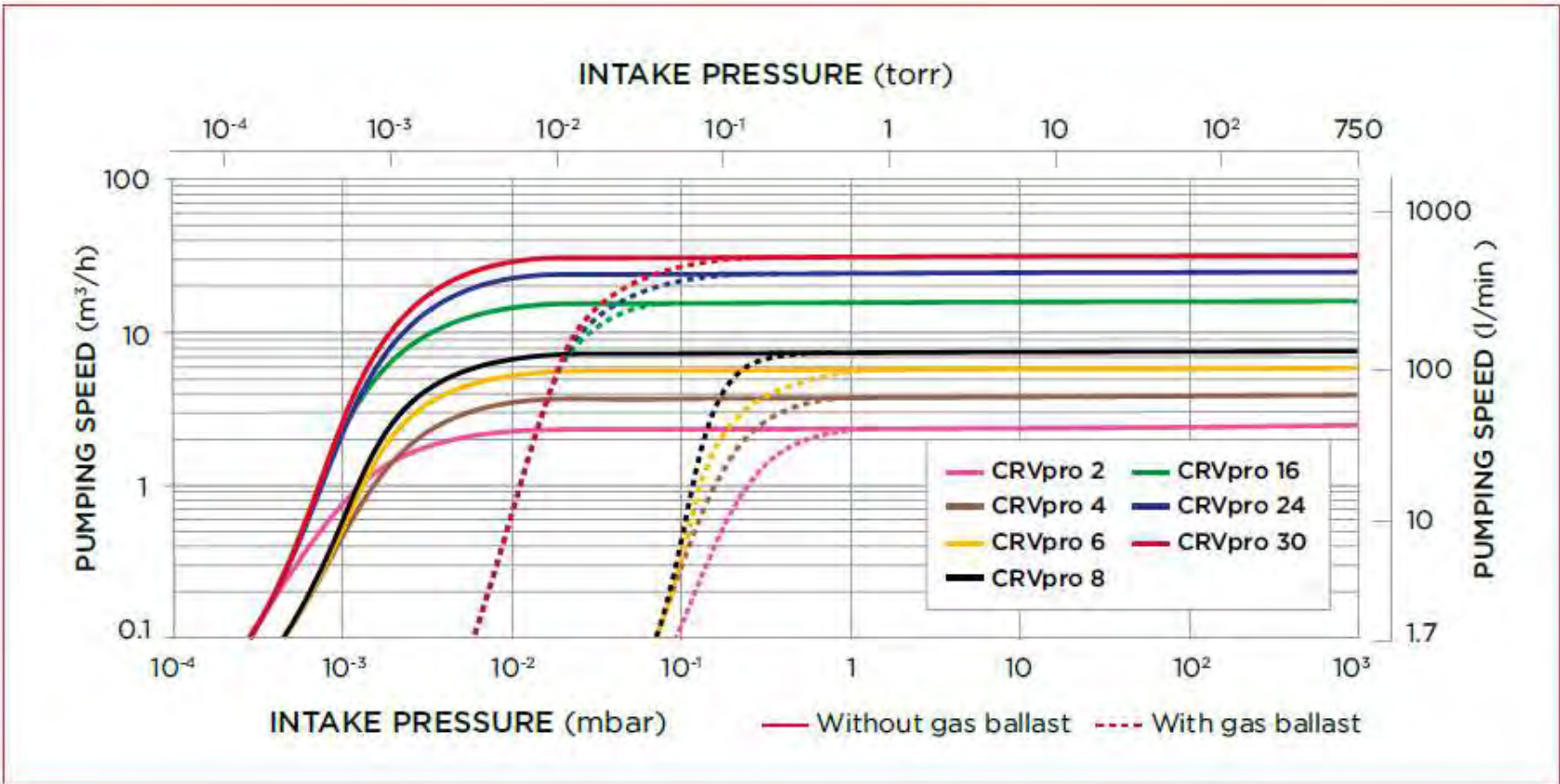


Different pumping classes for different needs



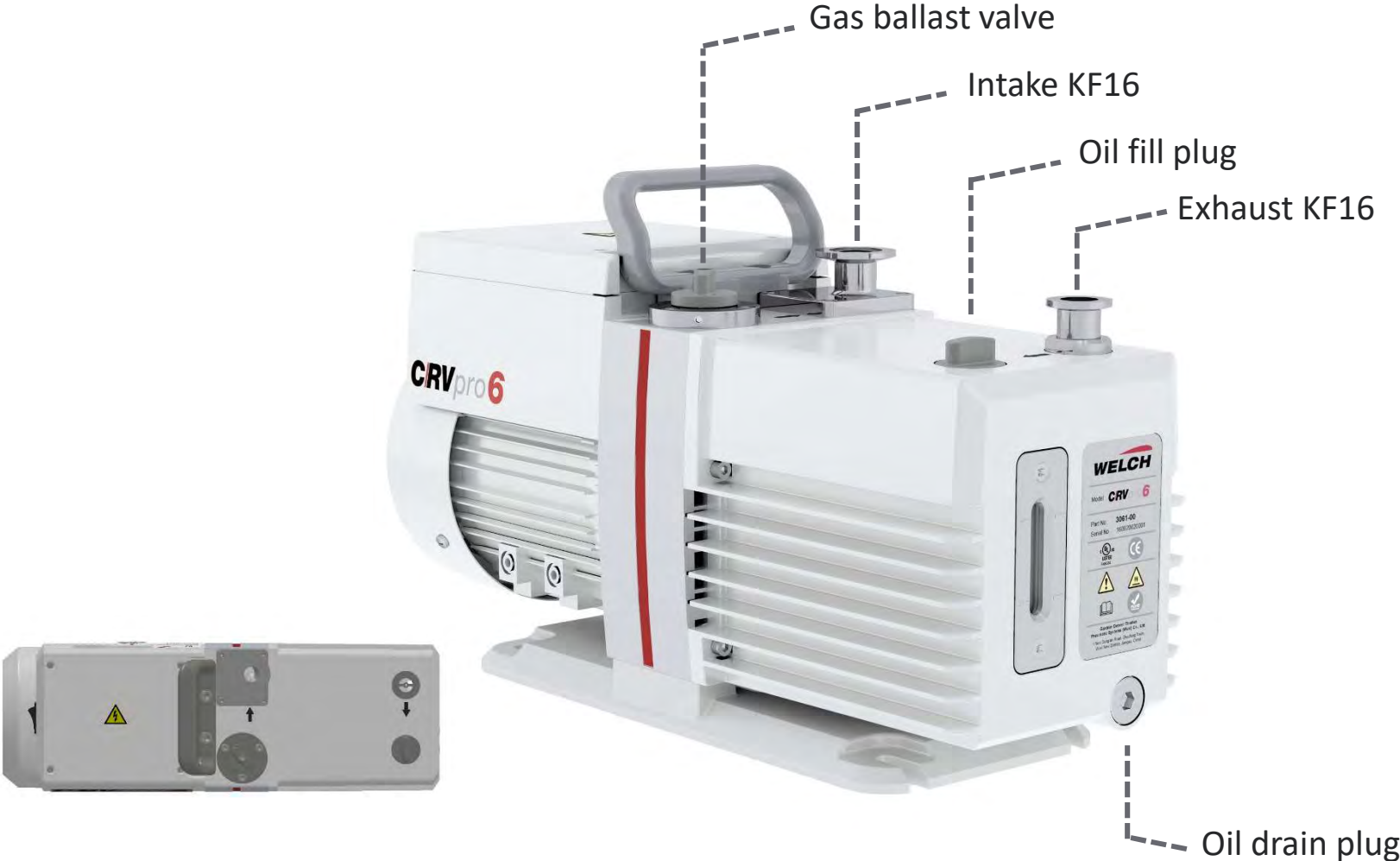
Introduction

Pumping Speed



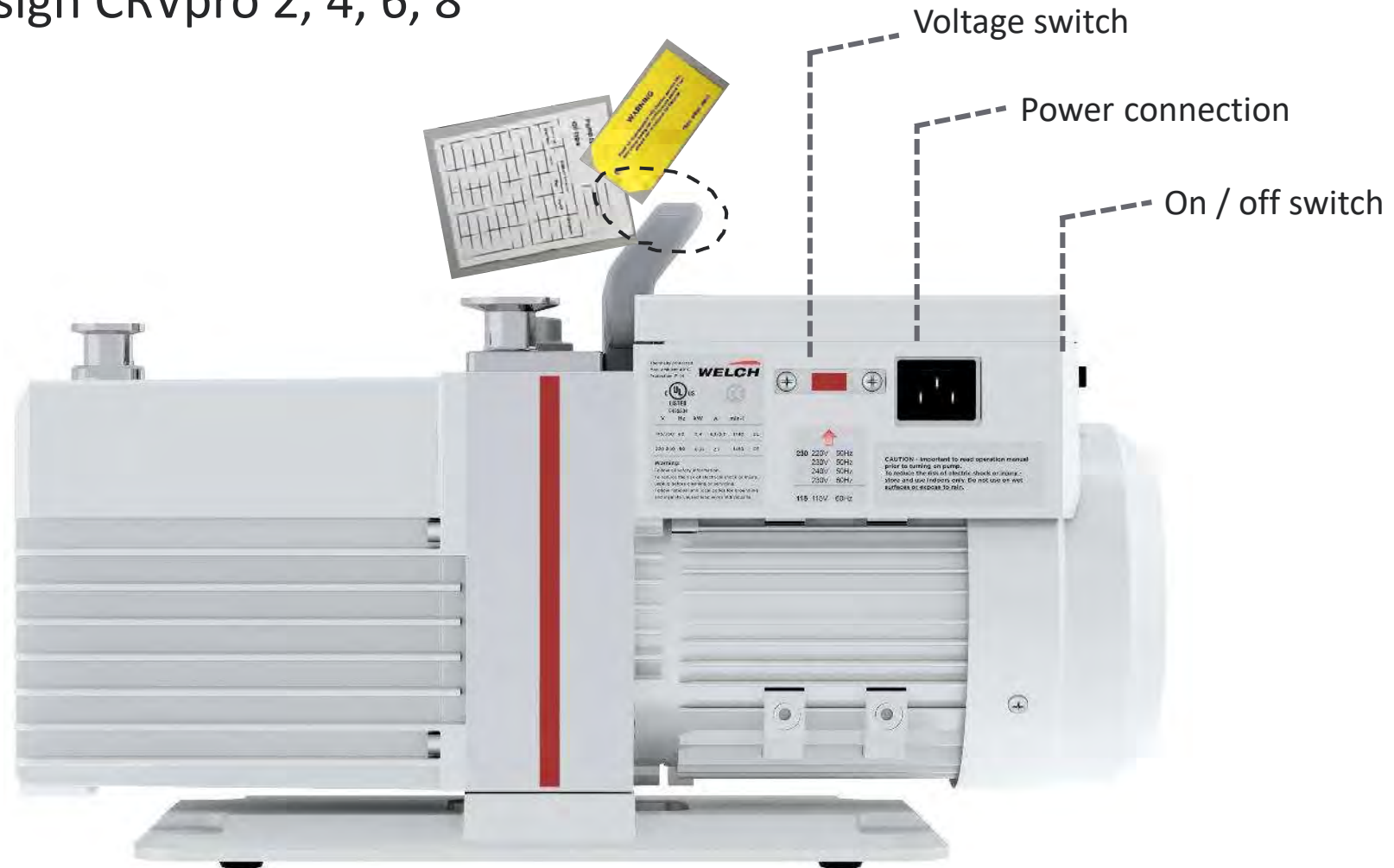
Introduction

Design CRVpro 2, 4, 6, 8



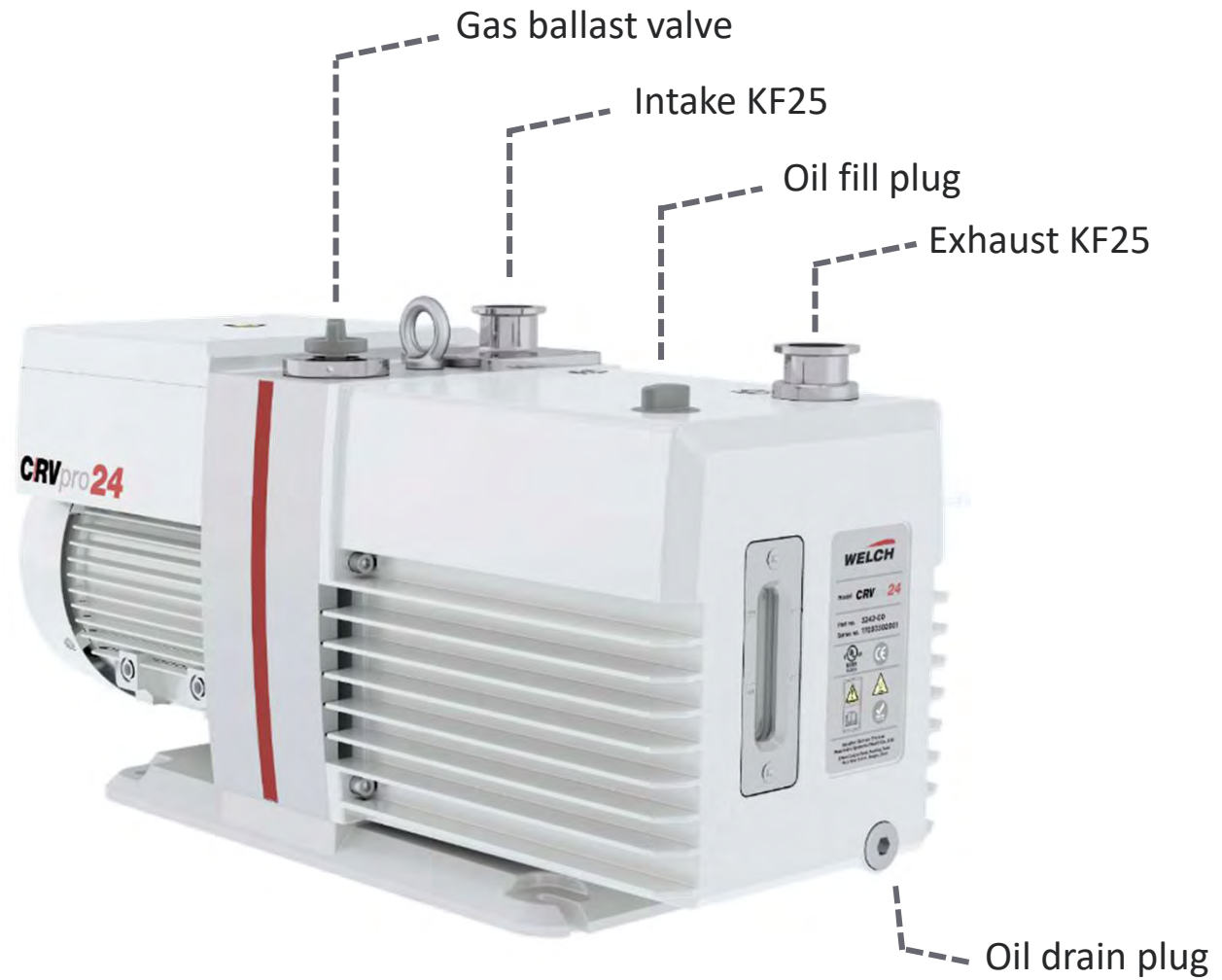
Introduction

Design CRVpro 2, 4, 6, 8



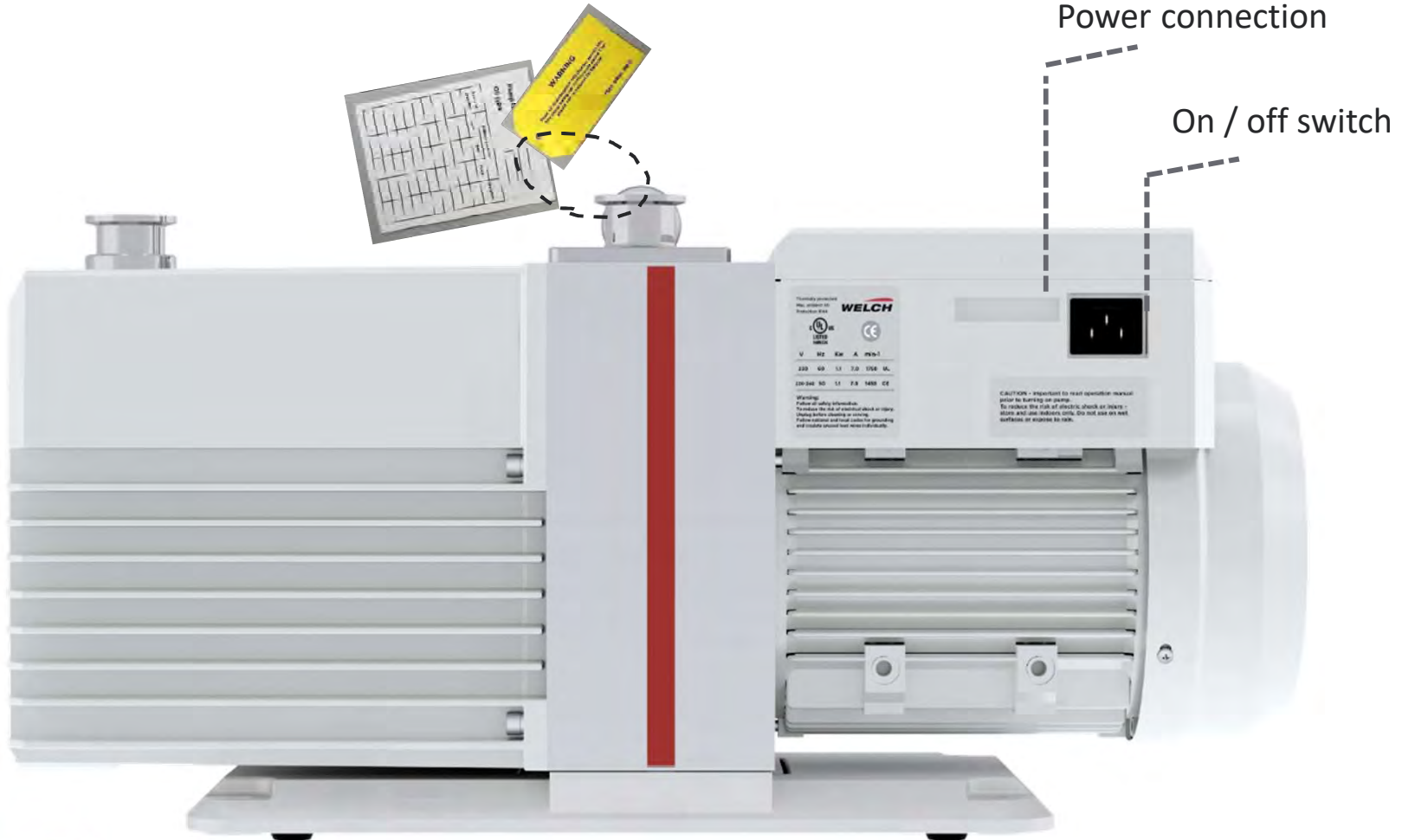
Introduction

Design CRVpro 16, 24, 30



Introduction

Design CRVpro 16, 24, 30



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Product Innovations



Cool running operation

Cool running due to Integrated ducted air system, fin design and large oil bath.

- Lower oil temperature slows chemical activity on pump module, thicker oil leads to less exhaust oil loss, and extends pump oil life.



Internal surface protection

Black oxide coated of pump module and PTFE coated oil case.

- Improves the chemical resistance of outer surface of module that is sitting in oil bath.



Large oil capacity

Up to 64% larger oil capacity than leading direct drive rotary vane pumps.

- Large oil capacity dilutes ingested chemical vapor contaminants to extend oil life.

Highest Reliability

Long Product Lifespan

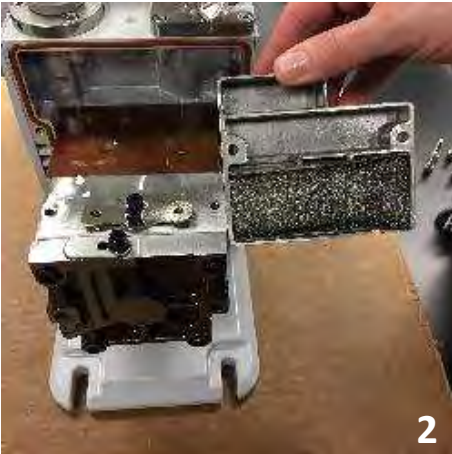
Less Maintenance

Product Innovations

Less Oil Loss



- Superior labyrinth baffling to prevent oil loss and reduce noise during pump down



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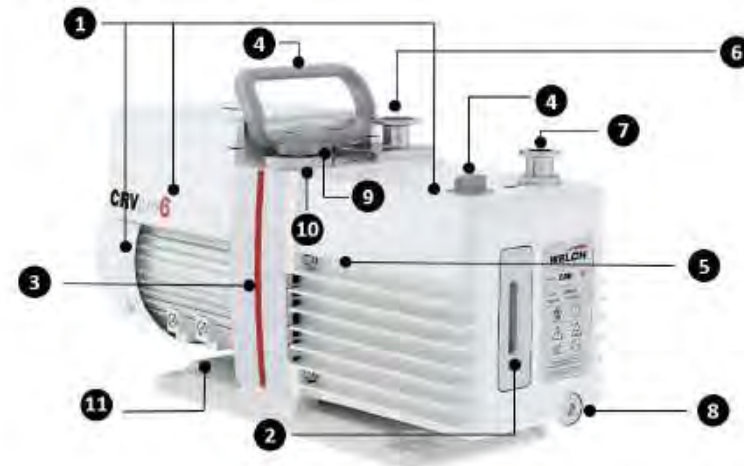
Product Features

Materials

Robust Design for stable continuous operation

- CRVpro series pumps are free of non-ferrous metals
- The rotors are made of tempered special steel
- Blades are made of chemically resistant plastics
- Valve springs and sliding springs are made of special alloy steel
- Elastomer seals are made of FKM.

#	Part	Material
1	Motor, conduit box, Oil case	die-cast aluminum
2	Oil window	die-cast aluminum
3	Red stripe	plastic
4	Handle, Oil fill plug	plastic
5	Screws	stainless steel
6	Intake	stainless steel
7	Exhaust	stainless steel
8	Oil drain plug	Steel with dacromet coating
9	Gas ballast knob	Plastic
10	Gas ballast valve ring	Aluminum
11	Base	Aluminum



Performance

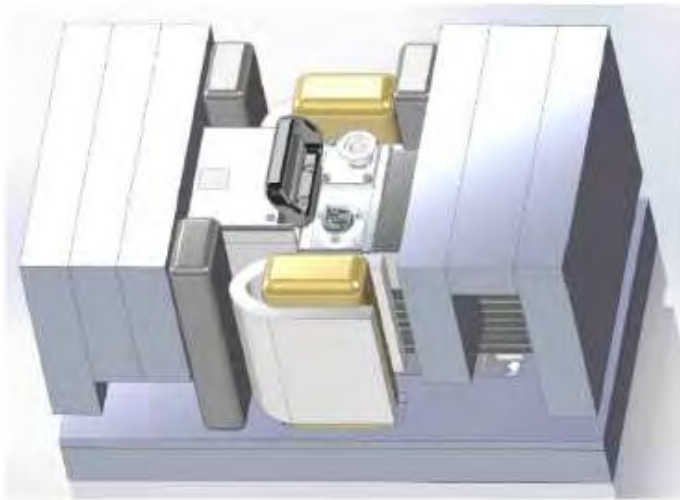
PARAMETER	UNIT	CRVpro 2	CRVpro 4	CRVpro 6	CRVpro 8	CRVpro 16	CRVpro 24	CRVpro 30
Free air displacement								
- @ 50 Hz	m ³ /h (l/min)	2.5 (42)	4 (67)	6 (100)	8 (133)	18.3 (305)	26.2 (436)	33.1 (551)
- @ 60 Hz	CFM (l/min)	1.8 (50)	2.8 (78)	4.2 (118)	5.6 (158)	12.8 (363)	18.3 (519)	22.1 (627)
Pumping speed								
- @ 50 Hz	m ³ /h (l/min)	2.3 (38)	3.8 (63)	5.1 (85)	7.3 (122)	16.8 (280)	24 (400)	29 (483)
- @ 60 Hz	CFM (l/min)	1.6 (47)	2.7 (77)	3.7 (105)	5.1 (143)	11.9 (336)	17 (480)	20.5 (580)
Ultimate pressure								
- Without gas ballast partial	mbar (Torr)	3x10 ⁻⁴ (2x10 ⁻⁴)	5x10 ⁻⁴ (4x10 ⁻⁴)			3x10 ⁻⁴ (2x10 ⁻⁴)		
- Without gas ballast total	mbar (Torr)	3x10 ⁻³ (2x10 ⁻³)	2x10 ⁻³ (1.5x10 ⁻³)			3x10 ⁻³ (2x10 ⁻³)		
- With gas ballast total	mbar (Torr)	9x10 ⁻² (7x10 ⁻²)	7x10 ⁻² (5x10 ⁻²)			6x10 ⁻² (5x10 ⁻²)		
Connection flanges	DN	16 KF				25 KF		
Ambient temperature	°C	10-40						
Noise level (50 Hz)	dB (A)	≤50				≤55		
Oil capacity	ml	450	1150	1000	2400	2200	2100	
Motor speed	rpm 50/60 Hz	1440/1720	1450/1740			1450/1750		
Motor power	kW 50/60 Hz	0.29/0.3	0.37/0.4			0.7/0.85		
Weight	kg	15	21	22	22.5	37	38.5	39.5
Dimensions L x W x H	mm	384/138/ 211*		463/157/230*			569/206/289	

* Without handle.

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Carton packaging

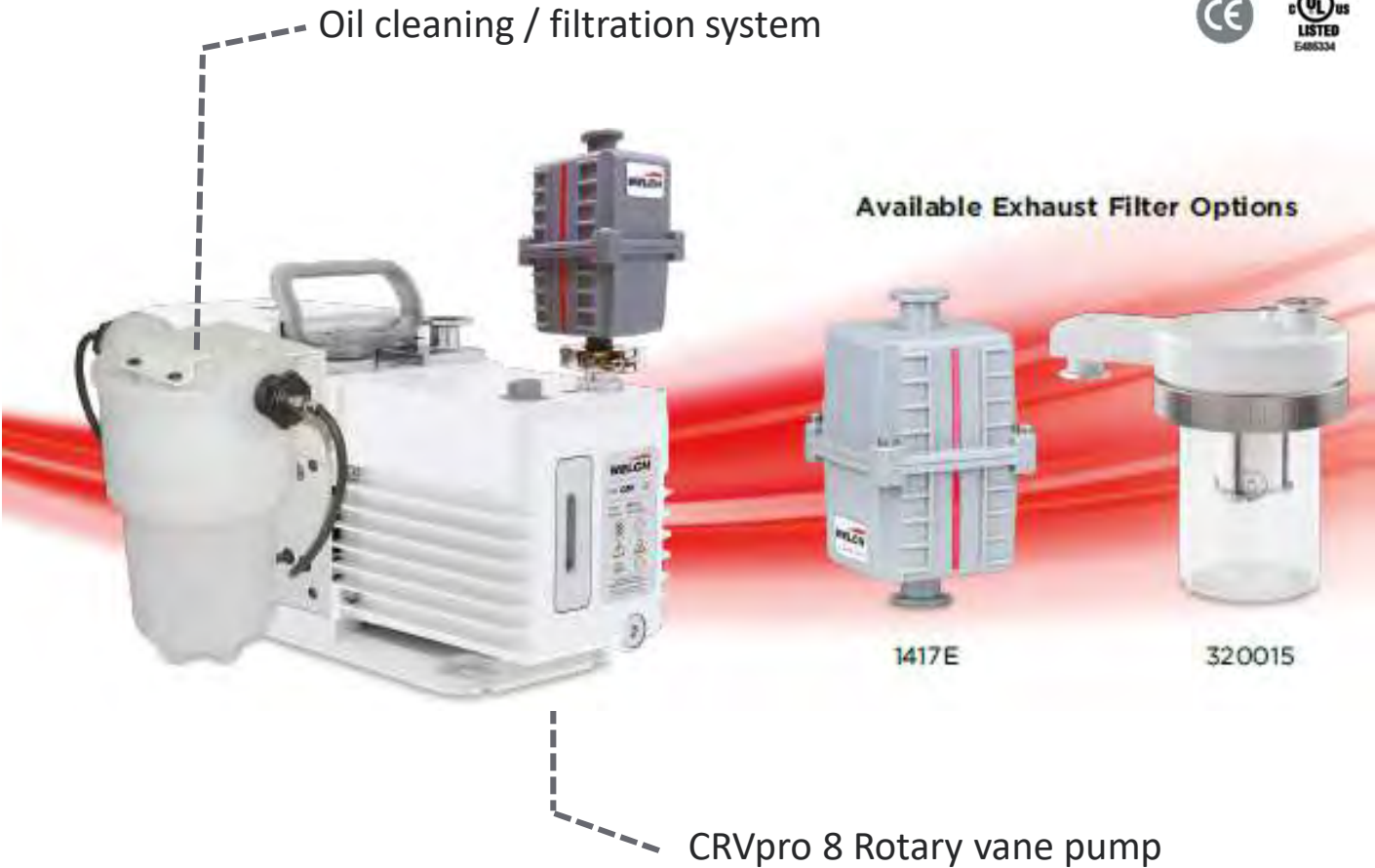
- 1 or 2 or 3 bottle (1L) of oil to charge pump on start-up (pump is drained of oil for shipment) depending on the pump model



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Welch CRVpro Freeze Dryer Pump

With integral oil filtration system



Introduction

How does it work

The **Welch freeze dryer vacuum system** is effective for freeze drying or concentrating by freeze dryer of samples including harsh chemicals such as **TFA, acetonitrile, HBr** and others. These chemicals quickly attack the vacuum pump oil of unprotected (standard) rotary vane vacuum pumps.

- The oil filtration system uses an alumina element that neutralizes acids and removes solid reaction products from the oil.
- System also has a large oil capacity of 1.0 liters that dilutes contaminants that mix with the pump oil during freeze drying runs.

The oil supplied for the pump is Welch Gold Vacuum Oil – a double distilled synthetic hydrocarbon oil designed for excellent chemical resistance. The synthetic base stock has no aromatic compounds or sulfur to accelerate varnishing, sludging and carbon build-up when pumps are used to pump corrosives.

Welch CRVpro Freeze Dryer Pump



User benefits

- ✓ HOLDS UP TO HARSH CHEMICALS USED IN PROTEOMICS AND COMBINATORIAL CHEMISTRY
- ✓ SYSTEM INCLUDES CONTINUOUS ACID NEUTRALIZATION AND OIL FILTRATION
- ✓ LOWER COST FOR INITIAL PURCHASE AND MAINTENANCE vs A TRADITIONAL HYBRID PUMP
- ✓ PROVEN DESIGN – RELIABLE & **LARGE INSTALLED BASE**

The combination of oil filtration, internal surface protection, and synthetic hydrocarbon oil act to slow metal corrosion to **extend pump's service interval & oil change cycle** compared standard rotary vane vacuum pumps