

# SERVICE SOLUTIONS



## ULTRAGRADE™ PERFORMANCE FLUIDS & LUBRICATION

[edwardsvacuum.com/service](http://edwardsvacuum.com/service)

### World leading solutions in vacuum pump lubrication

Finding the best oil for vacuum applications can be extremely challenging. Our Ultragrade™ Performance range takes things back to basics in order to deliver some of the most exceptional performance possible from a vacuum pump oil. Ultragrade™ Performance base oils are refined without the uses of solvents for extreme purity. Next, they are combined with selected additives to provide a formulation resilient to the stresses of mechanical pumping. Finally we blend oils to achieve a selection of viscosities so that they can be matched precisely to your pump and application.

We work with chemists in each technological field to challenge convention and deliver innovation. All of our lubricants are tested under laboratory conditions and are validated over thousands of hours of operation. As a result we are able to offer oils that we are confident will enhance performance, extend life and save energy.

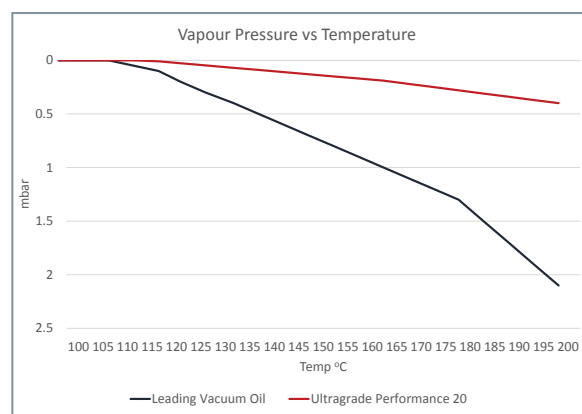
### The best oil for vacuum

Colourless and odourless, Ultragrade™ Performance has been designed to be better, delivering exceptional benefits when used as a lubricant in oil sealed vacuum pumps. The specific formulation helps to inhibit corrosion and wear without loss of vacuum performance, enabling lubrication that is specifically designed to work at, and achieve higher vacuum. The choice of blends available mean that Ultragrade™ Performance is equally well suited to high vacuum or high pumping loads.

### Choose a vacuum oil that will enhance performance, extend life and save energy



Chemistry that drives innovation



Ultragrade™ Performance vs Leading generic vacuum oil

## A better solution is closer than you think

Edwards Ultragrade™ Performance oils are designed for oil sealed vacuum pumps. Ultragrade™ oils are proven to succeed where other fail - this is the reason that many users who rely on vacuum exclusively recommend Ultragrade™. Regardless of what make and model of vacuum pump you operate, you can benefit from selecting Ultragrade™ as your oil of choice.

## The Ultragrade™ Performance range

	Ultragrade™ 15	Ultragrade™ 19	Ultragrade™ 20	Ultragrade™ 70
	Low viscosity general purpose lubricant. Suitable for small pumps or cold start applications	Most popular oil for rotary vane pumps. Excellent lubrication and vapour pressure characteristics.	Higher viscosity oil with good vapour pressure. Good alternative to general purpose vacuum oil.	Medium/high viscosity oil. Stable performance at higher stresses and temperatures
<b>Vapour Pressure</b>	5.8 x 10 <sup>-6</sup> mbar @ 20°C	1 x 10 <sup>-8</sup> mbar @ 20°C	2.1 x 10 <sup>-7</sup> mbar @ 20°C	2.1 x 10 <sup>-7</sup> mbar @ 20°C
<b>Uses</b>	Small rotary vane pumps (0.5-5 m <sup>3</sup> /hr) where cold start capability or low starting torque is needed	Small and medium size two stage rotary vane pumps where high ultimate vacuum and good lubrication are required	Gearboxes and drive trains under vacuum or partial pressure. Large single stage rotary vane pumps requiring a heavier grade oil to create a vacuum seal	Large capacity two stage rotary vane pumps especially when used under high load or fast duty cycles
<b>Edwards Pumps</b>	E2M0.7, E2M1.5	E2M18, E2M28 RV3, RV5, RV8, RV12	EH Boosters	E2M40, E2M80 E2M175, E2M275
<b>Other Pump Types</b>	Busch Zebra Rietschle V-CGA/VGC Leybold S Pfeiffer Uno Line	Alcatel Adixen C1 Busch R5 <40m <sup>3</sup> /hr Rietschle V Series <40m <sup>3</sup> /hr Leybold Trivac Pfeiffer DUO Line Kinney KVA12-40	Busch Panda/Puma Busch R5 >100m <sup>3</sup> /hr Rietschle R Series Boosters Leybold RUVAC Series Pfeiffer Okta Line Kinney KMBD Boosters	Busch R5 <40m <sup>3</sup> /hr Rietschle V Series RV pumps Leybold Sogevac <40m <sup>3</sup> /hr Pfeiffer Hena Line Kinney KVA 63-630

Never mix oils. Where examples of other pump types are shown this is for reference and comparison only. Always consult an expert before changing the oil type used in your vacuum pump.

Publication Number: 3604 0101 01

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