



Specifically Developed for Vacuum







Why the Right Oil Matters

The right vacuum pump oil is essential for boosting your production efficiency, extending your pump lifetime, and achieving a lower total cost of ownership.

We offer an extensive portfolio of vacuum pump oil and technical fluids specifically designed and qualified for diverse vacuum applications. We work with leading chemists in each technological field to challenge convention and deliver innovation.

Oil-Colour Scale: A guide for changing mineral oil

As mineral oil undergoes thermal aging, its colour begins to change. Tracking this colour shift in your vacuum pump is essential for evaluating performance and ensuring consistent, reliable operation.

-  **1.** Good oil quality.
-  **2.**
-  **3.** Continue to monitor.
-  **4.** Oil should be changed and replaced.
-  **5.** Pump will require a clean and overhaul, or full service.
-  **6.**



UltraGrade® Performance

	15	19
Oil Type	Mineral Oil	Mineral Oil
Vapour Pressure	5.8×10^{-6} mbar @ 20°C	1.0×10^{-6} mbar @ 20°C
Viscosity	38.1 cSt @ 40°C	48.6 cSt @ 40°C
Application Examples	Small rotary vane pumps (0.5-5m ³ /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.
Edwards Pumps	E2M0.7 and E2M1.5	RV, E2M18 and E2M28
Packaging Sizes	1L / 4L / 205L	1L / 4L / 205L
Food Grade (NSF H2)	Pure 15	Pure 19


	20	70
Oil Type	Mineral Oil	Mineral Oil
Vapour Pressure	2.1×10^{-7} mbar @ 20°C	2.1×10^{-6} mbar @ 20°C
Viscosity	103 cSt @ 40°C	70 cSt @ 40°C
Application Examples	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.
Edwards Pumps	EH Boosters	E1/2M40 – E1/2M275 and E2S
Packaging Sizes	1L / 4L / 205L	5L / 209L
Food Grade (NSF H2)	Pure 20	N/A

UltraGrade® Endurance


	EXTEND 110
Oil Type	Di-ester Oil
Vapour Pressure	5×10^{-5} mbar @ 20°C
Viscosity	98 cSt @ 40°C
Application Examples	Large and small capacity rotary vane pumps working in high temperature applications.
Edwards Pumps	nES and E2S
Packaging Sizes	1L / 5L



Ultragrade® Kinetic

	46 	150	220
Oil Type	PAO Synthetic	PAO Synthetic	PAO Synthetic
Vapour Pressure	1.39×10^{-6} mbar @ 20°C	3×10^{-3} mbar @ 20°C	3×10^{-3} mbar @ 20°C
Viscosity	44 cSt @ 40°C	150 cSt @ 40°C	223 cSt @ 40°C
Application Examples	Oil sealed screw pumps, pumping of air, chemically inert gases and water vapor.	Used in various industrial boosters, blowers and dry pumps.	Used in high capacity vacuum boosters and pressure blowers.
Edwards Pumps	EOSi	GMB	HV30000 and HV40000
Packaging Sizes	20L	1L / 4L	4L / 205L

Edwards Diffusion Fluid

	L9	UHV Fluid	Fluid 201 / Fluid 201 US 
Oil Type	Diffusion Synthetic	Diffusion Silicon	Diffusion Mineral
Vapour Pressure	7.8×10^{-10} mbar @ 20°C	1.3×10^{-10} mbar @ 25°C	3.33×10^{-6} mbar / 4.0×10^{-6} mbar @ 25°C
Viscosity	71.3 cSt @ 20°C	38 cSt @ 20°C	18 cSt @ 40°C / 23 cSt @ 25°C
Application Examples	Chemically stable and resistant to acids, alkalis, halogens and oxides of nitrogen. Ideal in applications where silicones cannot be tolerated.	Low vapour pressure, high-viscosity and highly resistant to oxidation, chemicals and radiation. For diffusion pumps in high vacuum or ultra high vacuum applications.	Fluid has low viscosity which permits easy filling and draining. Intended for high vacuum industrial applications where silicones cannot be tolerated.
Edwards Pumps	Diffstak, nHT and HT	Diffstak, nHT and HT	Vapour Boosters
Packaging Sizes	1L	5L	20L

Edwards Speciality

	TW	45
Oil Type	Special Synthetic	Special Synthetic
Vapour Pressure	1.33×10^{-6} mbar @ 25°C	1.33×10^{-6} mbar @ 25°C
Viscosity	65 cSt @ 40°C	56 cSt @ 40°C
Application Examples	Heavily distilled with unsaturated and aromatic links removed and no additives. Long lasting. Developed for applications where rotary pump oils are likely to be exposed to reactive or corrosive substances.	Molecular structure offers chemical inertness, high temperature stability and low vapour pressure.
Edwards Pumps	E1/2M40 – E1/2M275	EH Boosters
Packaging Sizes	1L / 4L	1L / 4L

Xtragrade Advanced

NEW

	PFPE 276	PFPE 168
Oil Type	PFPE	PFPE
Vapour Pressure	1.33 x 10 ⁻⁷ mbar @ 25°C	1.2 x 10 ⁻⁷ mbar @ 25°C
Viscosity	305 cSt @ 20°C	168 cSt @ 20°C
Application Examples	Dry screw pumps, pumping in oxygen, ozone, nitrous oxides halogens, hydrogen, halides, UF6, F2, tritium.	Large capacity rotary vane pumps and mechanical boosters, pumping in oxygen, ozone, nitrous oxides halogens, hydrogen, halides, UF6, F2, tritium.
Edwards Pumps	GXS, EXS, CXS, EDX, GV80 iGX, iXH, iXM, iXL nXRi, nXLi	E2M175-275 EH250-4200 (i) QMB250-1200
Packaging Sizes	1L	1L

	PFPE 148	PFPE 64
Oil Type	PFPE	PFPE
Vapour Pressure	1.3 x 10 ⁻⁷ mbar @ 25°C	1.07 x 10 ⁻⁶ mbar @ 25°C
Viscosity	148 cSt @ 20°C	64 cSt @ 20°C
Application Examples	Mechanical boosters, pumping in oxygen, ozone, nitrous oxides halogens, hydrogen, halides, UF6, F2, tritium.	Small and medium capacity rotary vane pumps, puming in oxygen, ozone, nitrous oxides halogens, hydrogen, halides, UF6, F2, tritium.
Edwards Pumps	EH250-4200	RV E1M18 E2M18-28 E2M40-80
Packaging Sizes	1L	1L

STOKES
VACUUM

	V-Lube F	V-Lube G
Oil Type	Mineral Oil	Mineral Oil
Vapour Pressure	1.3 x 10 ⁻³ mbar @ 20°C	1.3 x 10 ⁻³ mbar @ 20°C
Viscosity	105.4 cSt @ 40°C	159.1 cSt @ 40°C
Application Examples	Oil piston pumps, working in standard application.	Oil piston pumps, working in high temperatures and high gas loads application.
Stokes Pumps	Stokes Microvac	Stokes Microvac
Packaging Sizes	5L / 205L 1 Gal / 5 Gal / 55 Gal	5 Gal / 55 Gal

	V-Lube H	V-Lube B
Oil Type	Mineral Oil	Mineral Oil
Vapour Pressure	5 x 10 ⁻³ mbar @ 20°C	5.0 x 10 ⁻⁶ mbar @ 20°C
Viscosity	203.4 cSt @ 40°C	94.3 cSt @ 40°C
Application Examples	Used for high capacity vacuum boosters and pressure blowers.	Single-stage rotary vane pumps requiring a heavier grade oil to create a vacuum seal.
Stokes Pumps	Stokes Boosters	Stokes Microvane 14-52
Packaging Sizes	1 Gal / 5 Gal / 55 Gal	5 Gal / 55 Gal



OIL FINDER
◀ FIND THE RIGHT OIL
FOR YOUR PUMP.

WEBSHOP ▶
EVERYTHING IN ONE PLACE.



Publication Number: 3604 1655 01

©Edwards Limited 2026. All rights reserved Edwards and the Edwards logo are trademarks of Edwards Limited.

Whilst we make every effort to ensure that we accurately describe our products and services, we give no guarantee as to the accuracy or completeness of any information provided in this datasheet.

Edwards Ltd, registered in England and Wales No. 6124750, registered office: Innovation Drive, Burgess Hill, West Sussex, RH15 9TW, UK.