

R 5 Series Vacuum Pump Oil Options

Busch R 5 Series rotary vane vacuum pumps can be operated on the following oil types:

Description	Type	ISO Rating	Average Change Interval*
Busch R 530	Mineral Oil	ISO 100	750 - 1,000 hours
Busch R 590	Semi-synthetic	ISO 100	Based on oil sampling
Busch R 570	Synthetic	ISO 100	Based on oil sampling
Busch R 580	Synthetic	ISO 46	Based on oil sampling
Busch R 605	Synthetic Food Grade	ISO 100	Based on oil sampling

Oil Requirements

The oil that is used in Busch R 5 series vacuum pumps must provide:

- Lubrication of the bearings & sliding surfaces
- Tightening of the gaps to attain guaranteed end pressure
- Protection against corrosion
- Heat transfer

Oil Descriptions

Busch R 530 – Recommended for use in all R 5 series vacuum pumps up to model 0630 (except 0021), R 530 is a high grade mineral oil, free of additives. It provides the following advantages:

- Low cost.
- Excellent water separation properties.
- Very low odor from light fractions.

Busch R 590 – Recommended for model 1000 & 1600, optional for all other R 5 series pumps, R 590 is semi-synthetic, hydrocracked, dewaxed paraffinic oil. R 590 offers the following advantages over R 530:

- Extended oil change intervals
- Resists breakdown due to high temperature, high water vapor loads, and the presence of acids.

Busch R 570/R 580 – Recommended for R 5 series vacuum pumps where synthetic oil is required, R 570/R 580 eliminates oxidation, resists carbonization & viscosity breakdown. R 570/R 580 offers the following advantages over R590:

- Extended oil change intervals

Busch R 605 – Recommended for all R 5 series vacuum pumps (except 0021) where food grade, H1, synthetic oil is required. R 605 offers the following advantages over R 590:

- Extended oil change intervals

Note: H1 food grade synthetic oils typically have a lower drain interval compared to non-food grade synthetic oils.

*Notes:

1. Oil change intervals vary depending on the pump size, type of oil, ambient temperature and operating conditions.
2. Regarding oil temperature, it is generally accepted that for every 18° F rise above 180° F, oil drain life is cut by up to 50%.
3. SAE motor oil(s) are not acceptable for use in Busch R 5 series vacuum pumps.

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