

Oil Rotary Vacuum Pump Selection Guide

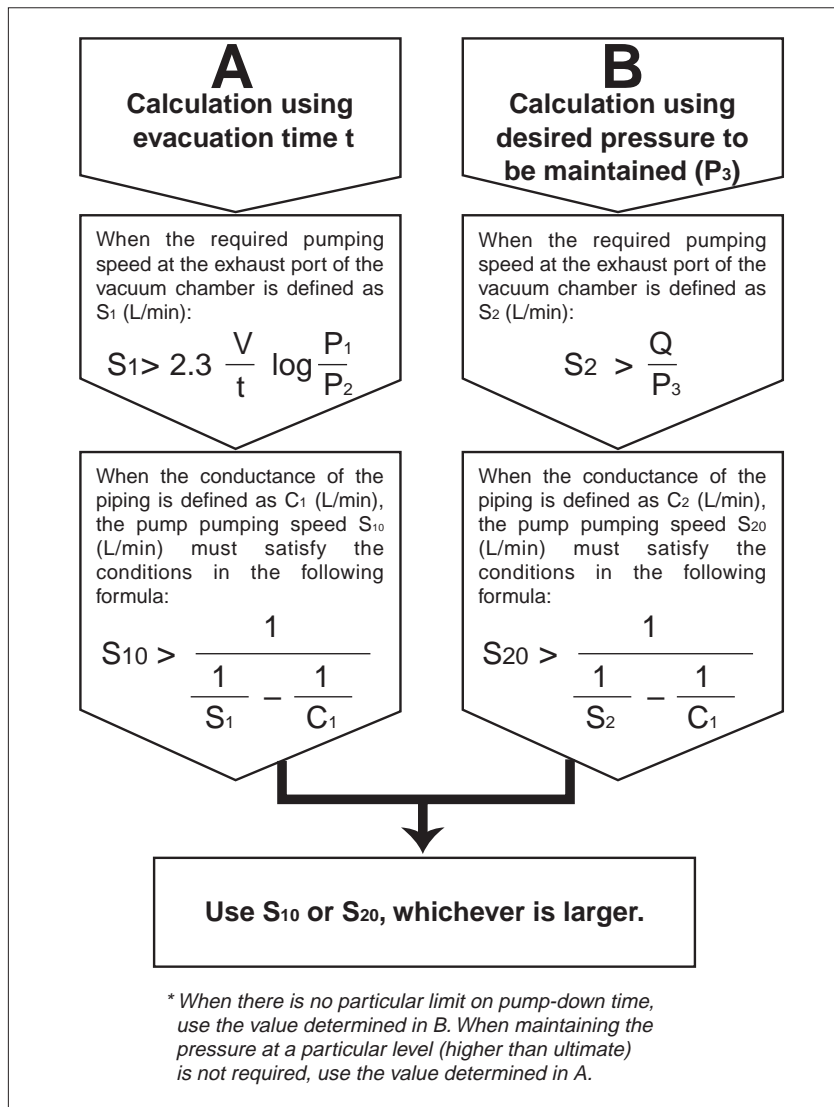
When selecting a vacuum pump, it is important to first estimate the required pumping speed. Then select a pump from the category best suited for the particular application.

STEP 1

Find the pumping speed that satisfies the required parameters

Step 1 Basic method for determining pumping speed

(Example) A vacuum chamber with volume V (in liters) will be evacuated to reduce the pressure from P₁ (Pa) to P₂ (Pa) in time t (min). Next, gas will be introduced from outside at a flow rate of Q (Pa·L/min) and the pressure will be maintained at P₃ (Pa).



Tables by applications

Evaporation, sputtering, ion plating, diffusion furnace
CVD, etching, ashing, ion implantation
Vacuum furnace
Brazing, melting furnace
Vacuum packing
Vacuum cooling
Vacuum drying
Vacuum insulation
Tube evacuation
Space chamber, particle accelerator, electron beam welding
Analytical instrumentation
Molding, outgassing
Backfilling
Leak test
Gas recovery, lasers

STEP 2

Select a pump from the most suitable application category that also satisfies the pumping speed requirement determined in step 1.

Step 2 Suitability table by application

Use the table below as a guide for selecting the pump most suited to the desired application. Within the same application, when only a stable gas will be evacuated, such as with load lock chambers, pumps without marks can also be used.

Note: ○ : Optimal, ● : Suitable

	D-DK Series	VD Series	EC Series	PVD Series	D-K Series	VS Series	PKS Series
	●	●	○			●	●
	●	●	○			●	●
	○	○	○	●	○	○	○
	●	●	○		●	○	○
	●	●	●	●	●	○	○
	○	○	○	○	○	○	○
	○	○	○	○	○	○	○
	○	○	○	○	○	○	○
	○	○	○	○	○	○	○
	●	●	○		●	○	○
	○	○	○	●	●	○	●
	●	●	○	●	●	●	○
	○	○	○	●	○	○	○
	●	●	○	●	●	○	○
	●	●	○	●	●	○	○