



**Completely Dry and Fluid
Tight Vacuum Pumps**

COMPLETELY DRY AND FLUID TIGHT VACUUM PUMPS

World Patents

Overview

Our scroll pumps are **perfectly clean**, dry, rotary, ejection-type mechanical vacuum pumps. No sealant or lubricant is exposed to the vacuum environment. These pumps are sealed by a nutating bellow, thereby eliminating the need for a rotary shaft seal as employed in conventional mechanical pumps. Because of the simplicity of the design, low rotational speed, **elimination of rubbing contact** in the pump mechanism (thanks to the maintaining of a constant and small operational clearance between the scrolls, in spite of mechanical loads and differential expansion resulting from the thermodynamic effects of pumping), and construction with corrosion-resistant materials, these pumps are very reliable (in even the most severe applications).

Operating principal

The pumping device is made up of 2 overlapped scrolls ; one of them is fixed and the other one described an orbital motion inside the previous one (see drawing below). The movement is provided by 3 crankshafts (one is driving) with the same eccentricity. Due to the orbiting movement, the gas volume is taken at the periphery of the scrolls and then is progressively, continuously pushed with compression towards the centre of the scrolls where it is evacuated through the discharge port of the pump.

Applications

Our vacuum pumps are used all over the world to pump or to circulate all kind of gases which can be aggressive, inert, toxic or radioactive (the only materials exposed to the vacuum environment are stainless steel or nickel plated steel).

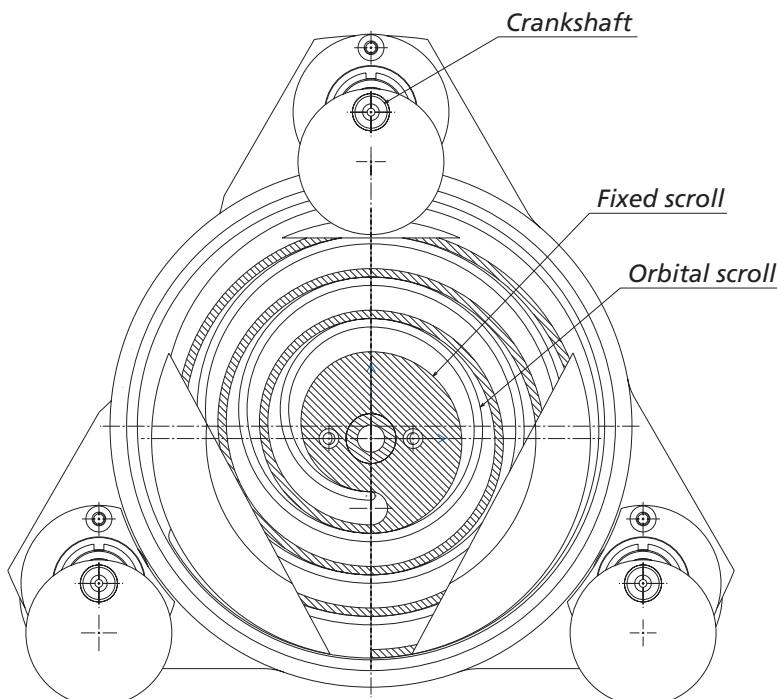


DIAGRAM OF THE MECHANISM

Benefits

- Completely dry and fluid tight vacuum pumps
- Safety, reliability
- Low running and maintenance cost (no liquid nitrogen, no oil, long service life)
- Low noise and vibration level



MODEL 600 m³/h (350 cfm)

Scroll pump with thermal regulation system.
Ultimate vacuum < 8×10^{-2} mbar
Height: 2900 mm (9.51 ft)
Weight: 4800 kg (10600 lb)



MODEL 150 m³/h (90 cfm)

Scroll pump with thermal regulation system.
Ultimate vacuum < 5×10^{-1} mbar
Height: 1800 mm (5.91 ft)
Weight: 1250 kg (2750 lb)

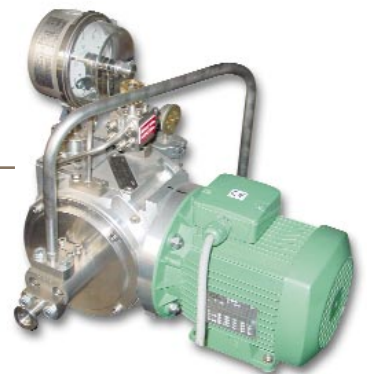


MODEL 15 m³/h (9 cfm)

Scroll pump.
Air cooling (built-in fan)
Ultimate vacuum: about 5×10^{-3} mbar
with diaphragm backing pump.
Height: 350 mm (13.78 in)
Weight: 67 kg (148 lb)

MODEL 7 l/min (0.247 cfm)

Metal diaphragm pump.
Ultimate vacuum < 45 mbar
Height: 370 mm (14.57 in)
Weight: 25 kg (55.1 lb)



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