Dry Roots Booster Vacuum Pumps

DRB 250-2000 Series

Sustainable Productivity

Atlas Copco

Overview

Booster vacuum pumps, also known as Roots vacuum pumps are generally used to increase the pumping speed of a system or with the goal of reaching a lower ultimate vacuum level. Booster pumps are used in a wide range of applications, most commonly used in the rough vacuum range, especially when high pumping speeds and low pressures are required, from atmosphere to $1x10^{-3}$ mbar. Due to the non-contact rotational design of these pumps, they are able to run at higher speeds, offering increased pumping speeds for the backing pumps. An added advantage is the lower energy consumption as compared to a single backing pump with the same pumping speed.

A multitude of applications

The most frequent use of the DRB roots vacuum pumps is as an enabler for smaller primary vacuum pumps. They are designed to boost the most demanding requirements for modern vacuum-based production processes. This allows for the compression of large volume flows of gases in the fine vacuum range. Common applications include those where rapid evacuations need to be achieved in the shortest possible cycle times.

High Speed Packaging

Skin packaging for food preservation, inert environment in Pharmaceutical Industry and protection of sterile medical devices.

Drying & Freeze Drying

For product dehydration in food industry, Pharmaceutical, Dye and Chemical industry.

Vacuum Cooling

Rapid cooling with vacuum to enhance freshness and shelf life of your specific product like vegetables, fruit, flowers.

Industrial Vacuum

Multiple processes including altitude simulation, gas charging, catalytic convertors, leak testing, heat treatments.

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Simple and smart design for industry

- Integrated by-pass
- Shorter pumping down time for cyclic operation
- Protection against thermal overloading
- Able to switch on at atmospheric pressure with backing pump

Robust Technology

- Robust pump design
- Long service intervals and simple on-site maintenance

Energy efficiency & high performances

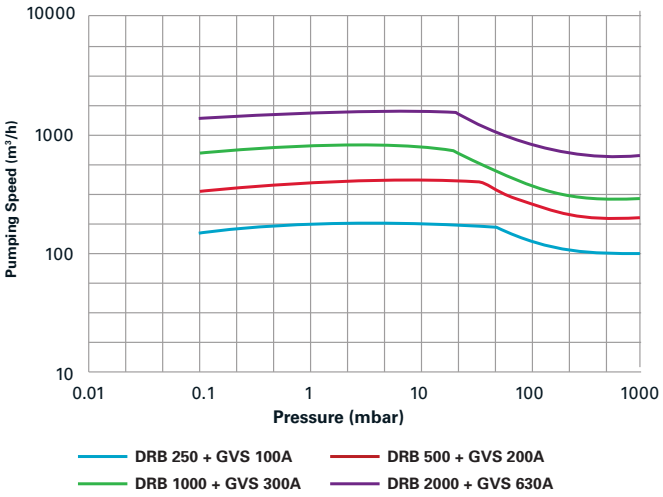
- High pumping speed – range 250-2000 m^3/h
- High performances IE3 three-phase motor
- Low power consumption and carbon emissions
- Low noise level

Easy and flexible installation

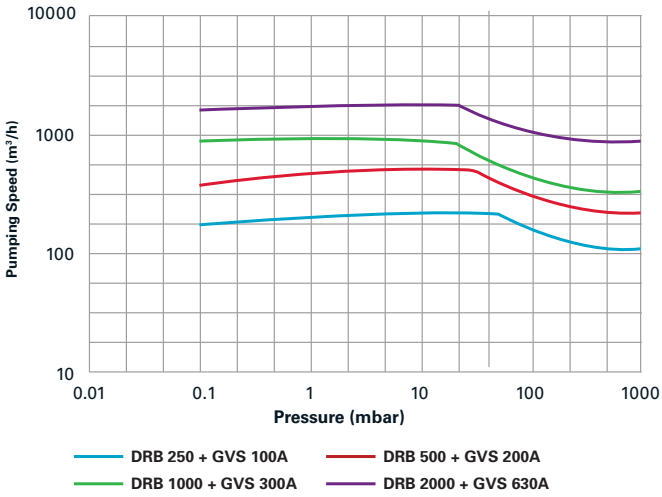
- Air cooled, no utility
- Compact design, easy to integrate into systems
- Easy to implement conversion from vertical to horizontal flow

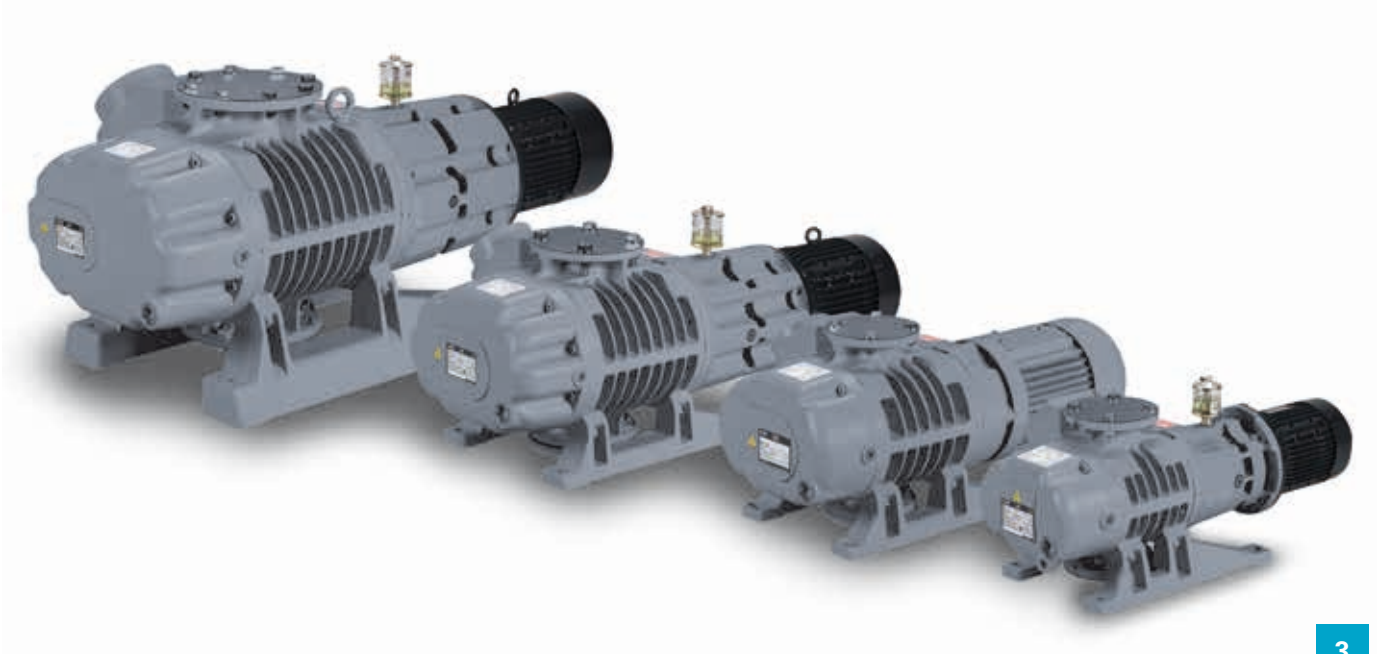
Performance Curves

50 Hz



60 Hz





Technical Data

		DRB250	DRB500	DRB1000	DRB2000
1. Pumping speed-50Hz	m³/hr (cfm)	253 (149)	505 (297)	1000 (589)	2050 (1208)
2. Pumping speed-60Hz	m³/hr (cfm)	304 (179)	606 (357)	1200 (707)	2460 (1449)
3. Max. permissible pressure differential across pump	mbar (Torr)	80 (60)			50 (38)
4. Inlet/outlet connection		EN 1092-2-PN6-DN63		EN 1092-2-PN6 -DN100	EN 1092-2-PN6 -DN160
5. Nominal motor power	kW (hp)	1.1 (1.5)	2.2 (3.0)	4.0 (5.4)	7.5 (10.0)
4. Dimensions					
- Length	mm (inch)	735 (28.9)	840 (33.1)	1059 (41.7)	1277 (50.3)
- Width	mm (inch)	305 (12.0)	390 (15.4)	494 (19.4)	638 (25.1)
- Height	mm (inch)	300 (11.8)	340 (13.4)	396 (15.6)	530 (20.9)
5. Weight Net mass	kg (lbs)	94 (207)	142 (313)	254 (560)	452 (997)

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