

# Zebra

## Two-Stage Rotary Vane Vacuum Pumps RH 0003–0021 B



- › **Efficient**
- › **Reliable:**  
robust construction, proven technology, reliable operation
- › **High Performance:**  
stable pumping speed even in low pressure range
- › **Quiet Operation**
- › **Easy Servicing**

Zebra two-stage rotary vane vacuum pumps have been designed to suit the requirements of a wide range of applications, from research labs to production lines.

Robustness and reliability of operation are the outstanding qualities of Zebra rotary vane vacuum pumps. These are just some of the reasons why proven Busch rotary vane technology has long established itself as the industry standard. Millions of Busch rotary vane vacuum pumps are in operation world-wide in industry every day. With the Zebra series, Busch also offers two-stage rotary vane vacuum pumps for applications in the medium vacuum range.

The constant vacuum level in continuous operation is ensured by forced oil lubrication, perfectly coordinated materials as well as state-of-the-art precision manufacturing. Its

quiet operation makes the Zebra vacuum pump series perfectly suited for use in research labs, where a low-noise working environment is essential. The advanced design ensures that only minimal maintenance is required.

### Applications

- Laboratory
- Distillation/Extraction
- Filtration/Solvent recovery
- Analytical instruments – GCMS
- Backing pump for turbomolecular and diffusion vacuum pumps
- Electron microscopes
- Leak detectors
- Vacuum drying, freeze-drying (lyophilization)
- Refrigeration and air conditioning
- Load locks and transfer chambers
- Coating equipment

**Zebra – reliable medium vacuum for demanding applications in industry and research.**

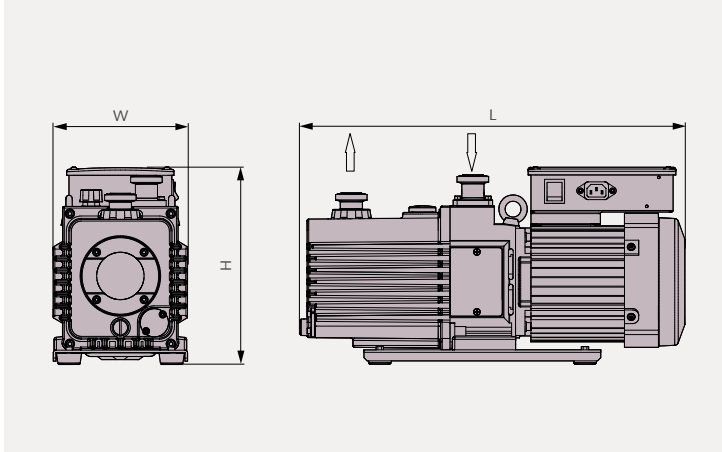


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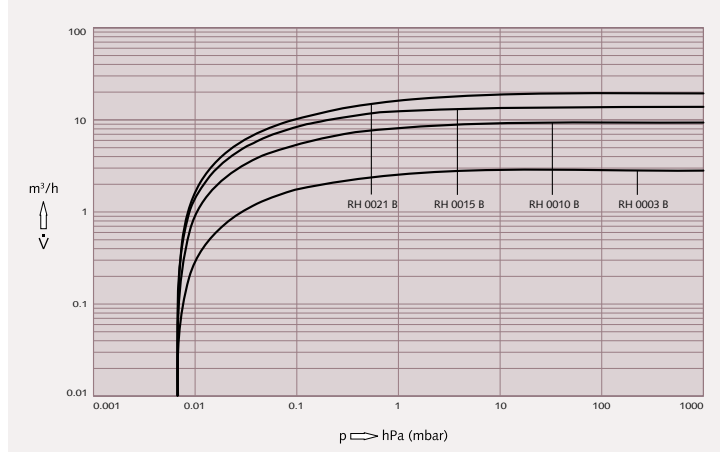
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Pumping speed Air at 70 °F. Tolerance: ± 10%



Technical data			RH 0003 B	RH 0010 B	RH 0015 B	RH 0021 B
Pumping speed		m³/h	2.9	9.7	14.4	20.2
Pumping speed		l/min	48	162	240	336
Ultimate partial pressure	Gas-ballast valve closed	hPa (mbar)	$6.7 \cdot 10^{-4}$	$6.7 \cdot 10^{-4}$	$6.7 \cdot 10^{-4}$	$6.7 \cdot 10^{-4}$
Ultimate total pressure	Gas-ballast valve closed	hPa (mbar)	$6.7 \cdot 10^{-3}$	$6.7 \cdot 10^{-3}$	$6.7 \cdot 10^{-3}$	$6.7 \cdot 10^{-3}$
Ultimate total pressure	Gas-ballast valve open	hPa (mbar)	$6.7 \cdot 10^{-2}$	$6.7 \cdot 10^{-2}$	$6.7 \cdot 10^{-2}$	$6.7 \cdot 10^{-2}$
Max. continuous inlet pressure		hPa (mbar)	100	100	100	100
Max. back pressure (gauge)		hPa (mbar)	300	300	300	300
Water vapor capacity	Gas-ballast valve open	g/h	5	38	40	73

Motor data single-phase version						
Nominal motor rating		kW	0.2	0.4	0.55	0.75 – 0.9
Operating voltage		V	100–120 / 200–240	100–120 / 200–240	100–120 / 200–240	115 / 200–240

Motor data three-phase version						
Nominal motor rating		kW		0.4	0.55	0.7
Operating voltage		V		200–240 / 380–460	200–240 / 380–460	200–240 / 380–460

Physical data						
Ambient temperature		°F	45–104	45–104	45–104	45–104
Oil			VSD 026	VMA 055	VMA 055	VMA 055
Oil capacity		l	0.8	1	1.1	1.1
Sound level (ISO 2151)	Single-phase Three-phase	dB(A)	< 53 -	< 54 < 52	< 56 < 55	< 61 < 63
Approximate weight	Single-phase Three-phase	kg	16 -	29 26	31 29	42 34.5
Dimensions (L x W x H)	Single-phase Three-phase	mm	427 x 150 x 228 -	488 x 170 x 250 486 x 170 x 240	516 x 170 x 250 514 x 170 x 240	585 x 182 x 271 536 x 181 x 269
Gas inlet / outlet			ISO-KF 25 / ISO-KF 25	ISO-KF 25 / ISO-KF 25	ISO-KF 25 / ISO-KF 25	ISO-KF 25 / ISO-KF 25

Applicable standards						
Marking			cTUVus	cTUVus	cTUVus	cTUVus

All performance data is based on ambient conditions of 14.7 PSIA and 70 °F, and has a tolerance of ± 10%.

### Busch LLC

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Article Numbers, Genuine Accessories and Spare Parts	RH 0003 B	RH 0010 B	RH 0015 B	RH 0021 B
<b>With single-phase motor</b>				
100–120 / 200–240 (50/60 Hz)	1141168791	1141168792	1141168795	-
115 / 200–240 (50/60 Hz)	-	-	-	1141168797
<b>With three-phase motor</b>				
200-240 / 380-460, 50/60 Hz	-	1141168793	1141168796	1141168798
<b>Inlet accessories<sup>1</sup></b>				
Inlet filter FIL 0040	0530168811			
Spare polyester filter element for FIL 0040	0532121861			
Special purpose filter element for FIL 0040	on request			
<b>Outlet accessories<sup>2</sup></b>				
Oil mist separator OMS 0003	0960168804	-	-	-
Spare filter element for OMS 0003	0532169042	-	-	-
Oil mist separator OMS 0021	-	0960168805		
Spare filter element for OMS 0021	-	0532169043		
<b>Other accessories</b>				
Gas-ballast valve	included			
<b>Oil</b>				
VSD 026, 1L	0831169419	-	-	-
VMA 055, 1L	-	0831169415		
VMA 055, 5L	-	0831169416		
<b>Maintenance kits</b>				
Minor maintenance kit	0992168912	0992168944	0992168946	0992168948
Major maintenance kit	0993168943	0993168945	0993168947	0993168949
<b>Single-phase cord sets</b>				
North America NEMA 5/15, 2 metres	-	0659930583		
North America NEMA 6/15, 2 metres	-	0659930582		
Other cord sets	-	on request		

<sup>1</sup> All filters include housing, polyester filter element and mounting hardware  
<sup>2</sup> All oil mist separators include housing, filter element and mounting hardware

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