

Pump Systems (Only available for purchase in North and South America)

RBS - B/BCS Roots Pump Systems with Two-Stage TRIVAC Backing Pumps



RBS - B/BCS Roots pumping system, shown with optional AF exhaust filter

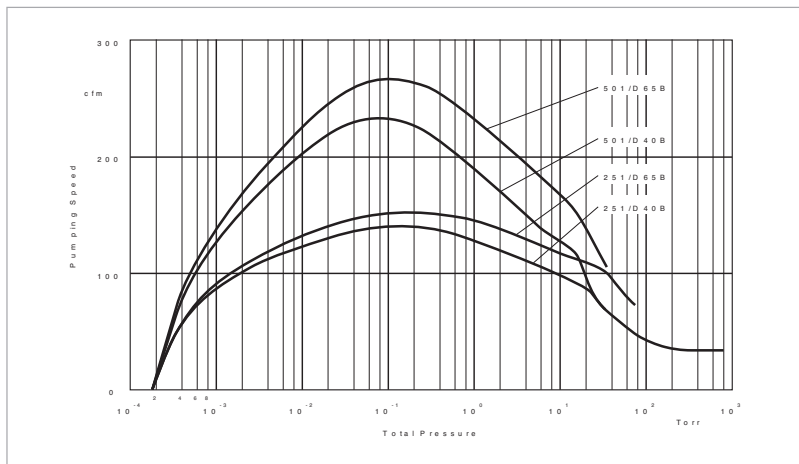


Standard Equipment

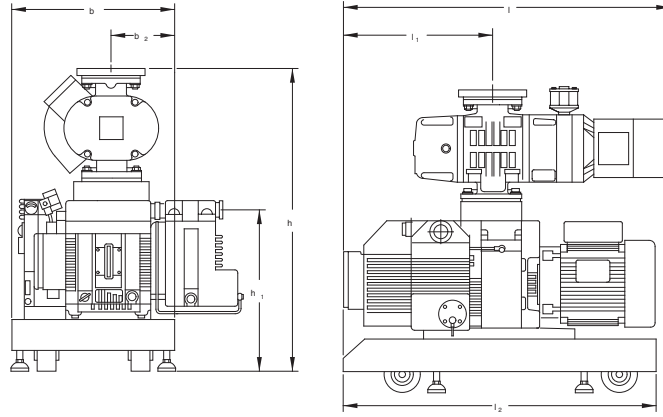
- System consists of TRIVAC dual-stage B or BCS direct drive vane pump and RUVAC blower
- Complete air-cooled system
- 18" wide frame base equipped with caster wheels and leveling pads
- Compact construction with quiet operation
- Manual operation of gas ballast
- Close-coupled RUVAC blower with ANSI inlet lange

Options

- All TRIVAC accessories, Exhaust filter, 24 V DC gas ballast valve, chemical oil filter, and electrical limit switch system
- Full frame drip pan
- Oil drain valves
- Special motor voltages and frequencies
- Special oil for unique applications
- Full electrical controls for control start/stop and monitoring of system



Pumping speed diagram for the RBS systems with WSU series Roots blowers at 60 Hz



System	b	b ₁	b ₂	h	h ₁	l	l ₁	l ₂
Close-coupled								
D 40 B/BCS								
WSU 251	18 (457)	8 (203)	7 (178)	33 3/16 (853)	17 15/16 (456)	32 3/4 (832)	14 (356)	34 (864)
WSU 501	18 (457)	8 (203)	7 (178)	34 3/4 (883)	17 15/16 (456)	33 13/16 (859)	14 (356)	34 (864)
D 65 B/BCS								
WS/WSU 251	18 (457)	8 (203)	7 (178)	33 3/16 (853)	17 15/16 (456)	34 3/4 (883)	16 (406)	34 (864)
WS/WSU 501	18 (457)	8 (203)	7 (178)	34 3/4 (883)	17 15/16 (456)	35 13/16 (910)	16 (406)	34 (864)

Dimensional drawing for the RBS - B/BCS Roots pumping systems 18" with TRIVAC D 40/65 B backing pumps, close-coupled package; dimensions in brackets () are in mm

Technical Data

RBS - B/BCS Roots Pump Systems

		251/D40B	251/D65B	501/D40B	501/D65B
RUVAC (WA/WAU/WS/WSU possible)		251	251	501	501
TRIVAC backing pump		D 40 B/BCS	D 65 B/BCS	D 40 B/BCS	D 65 B/BCS
Pumping speed @ 0.1 Torr	cfm (m ³ x h ⁻¹)	140 (237)	150 (254)	232 (394)	267 (453)
Ultimate total pressure	Torr (mbar)	2 x 10 ⁻⁴ (< 4 x 10 ⁻⁴)	2 x 10 ⁻⁴ (< 4 x 10 ⁻⁴)	2 x 10 ⁻⁴ (< 4 x 10 ⁻⁴)	2 x 10 ⁻⁴ (< 4 x 10 ⁻⁴)
Connecting flanges					
Inlet port					
WSU	DN	3" ANSI	3" ANSI	3" ANSI	3" ANSI
Outlet port	DN	40 ISO-KF	40 ISO-KF	40 ISO-KF	40 ISO-KF
Operating voltage	V	208/230/460	208/230/460	208/230/460	208/230/460
Phase / Frequency ¹⁾	- / Hz	3 / 60	3 / 60	3 / 60	3 / 60
Full load amps ²⁾					
RUVAC WSU		5.5/5.5/3.2	5.5/5.5/3.2	9.0/9.0/5.2	9.0/9.0/5.2
TRIVAC		9.0/8.8/4.5	9.0/8.8/4.5	9.0/8.8/4.5	9.0/8.8/4.5
Displacement					
RUVAC	cfm (m ³ x h ⁻¹)	179 (304)	179 (304)	357 (606)	357 (606)
TRIVAC	cfm (m ³ x h ⁻¹)	32 (54)	53 (90)	32 (54)	53 (90)
Maximum differential pressure	Torr (mbar)	60 (80)	60 (80)	60 (80)	60 (80)
Normal starting pressure ³⁾	Torr (mbar)	20 (27)	30 (40)	12 (16)	16 (21)
Oil capacity					
RUVAC WSU	qt (l)	0.75 (0.7)	0.75 (0.7)	1.10 (1.0)	1.10 (1.0)
TRIVAC	qt (l)	2.70 (2.6)	3.40 (3.2)	2.70 (2.6)	3.40 (3.2)
Nominal rotation speed					
RUVAC	rpm (min ⁻¹)	3600 (3600)	3600 (3600)	3600 (3600)	3600 (3600)
TRIVAC	rpm (min ⁻¹)	1800 (1800)	1800 (1800)	1800 (1800)	1800 (1800)
Motor power					
RUVAC WSU	hp (kW)	1.9 (1.4)	1.9 (1.4)	3.3 (2.4)	3.3 (2.4)
TRIVAC	hp (kW)	3.0 (2.2)	3.0 (2.2)	3.0 (2.2)	3.0 (2.2)

Ordering Information

RBS - B/BCS Roots Pump Systems

	251/D40B	251/D65B	501/D40B	501/D65B
	Part. No.			
RBS - B/BCS Roots pump system (supplied with hydrocarbon oil)	Ordering Information see right page			

¹⁾ For 50 Hz systems, consult the factory

²⁾ Determined by operating voltage

³⁾ WSU pumps permit start-up at atmospheric pressure (760 Torr)

Ordering Information

Blower / TRIVAC pump
 WSU 251 / D 40 B
 WSU 251 / D 40 BCS-LVO 400
 WSU 251 / D 65 B
 WSU 251 / D 65 B-LVO 400
 WSU 501 / D 40 B
 WSU 501 / D 40 BCS-LVO 400
 WSU 501 / D 65 B
 WSU 501 / D 65 BCS-LVO 400

Reserved

Electrical Control Panel

None
 208 V
 230 V
 460 V

Part No. 180037V-

0

24

35

26

37

54

65

56

67

0

0

1

2

3

Vacuum Pump
 Systems