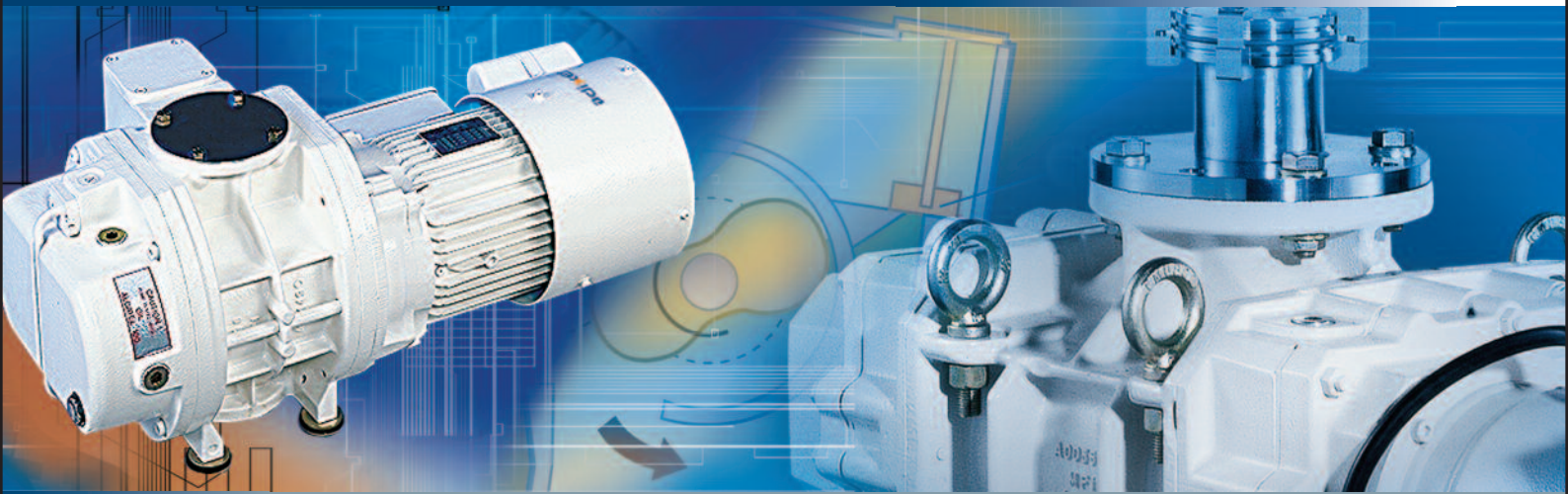


adixen



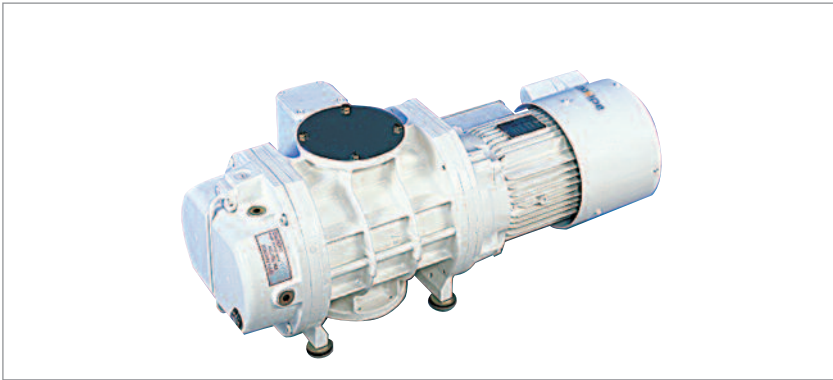
ROOTS VACUUM PUMPS RSV SERIES



Roots Vacuum Pumps

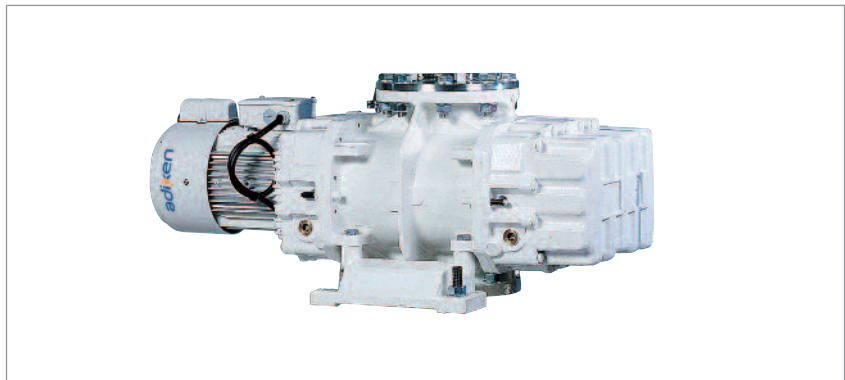
300 - 600 m³/h Series (175-350 cfm)

Pumps with a hermetic canned motor,
with by-pass.



1000-2000 m³/h Series (600-1200 cfm)

Pumps with a hermetic canned motor,
without by-pass.
Horizontal or Vertical Pumping axis
depending on models.



Applications

The Adixen Roots Pumps are suited to a wide range of vacuum applications. In combination with primary vane pumps, or dry pumps, they achieve low pressures with high pumping speeds.



Adixen quality and reliability

Without any mechanical contact, and proven in industrial and chemical applications, the Adixen Roots pumps achieve high reliability.

Canned motor concept

The motor armature and drive shaft are enclosed in a vacuum tight "can", this design eliminates external shaft seals and potential leaks.

Resistant to process gases and condensables

The careful choice of quality components makes Adixen Roots well adapted to aggressive environments.

Aggressive environments require vertical flow Roots, to prevent condensate from accumulating inside the pumping chamber.

Simplified maintenance

"On-site" repair and maintenance capability.

Low noise

Compact design, quiet operation, low vibration level.

Air cooled

Vacuum integrity

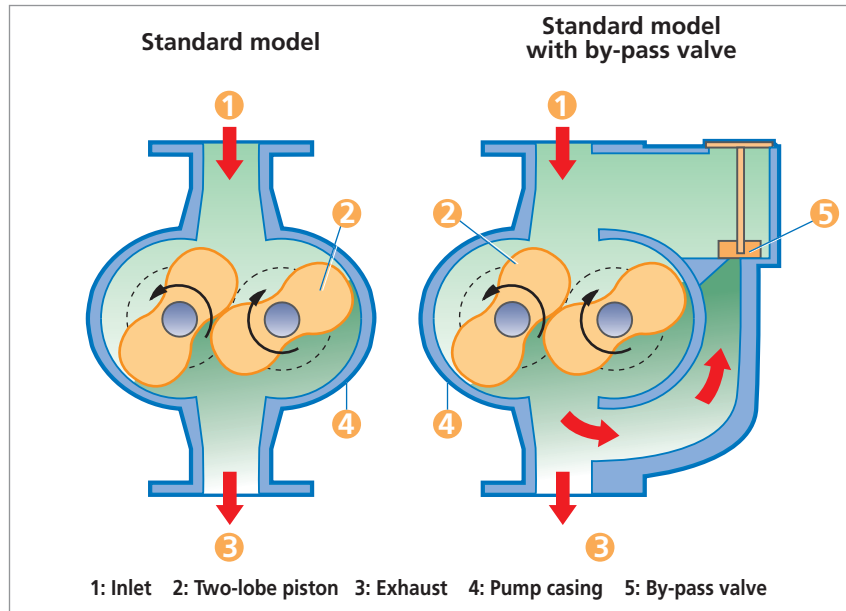
The RSV Series is helium leak tested to $< 1.10^{-7}$ mbar l/s and is ideally suited for hazardous or precious gas transfer.

Integrated by-pass principle

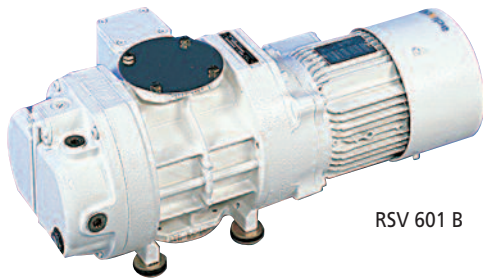
The RSV "B" models have a by-pass valve and manifold integrated into the Roots stator.

The concept allows extended operation at a high inlet pressure or pumpdown from atmospheric pressure simultaneously with a mechanical roughing pump. The by-pass action is activated by high differential pressure inside the Roots vacuum chamber which opens the by-pass valve.

The "excess" gas is metered to the mechanical pump with a portion recycled into the Roots to assist in cooling the lobes during high pressure operation. The by-pass reduces the demand of the drive motor, reducing energy consumption and the need for an external pressure switch.



RSV 301 B



RSV 601 B

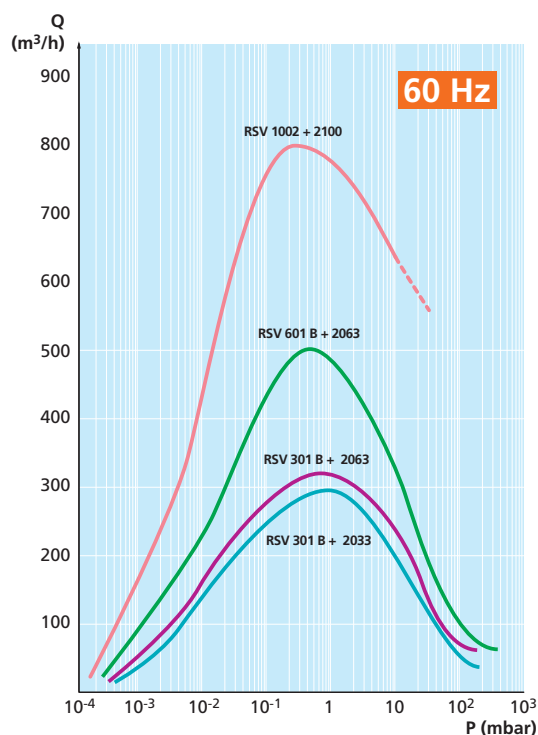
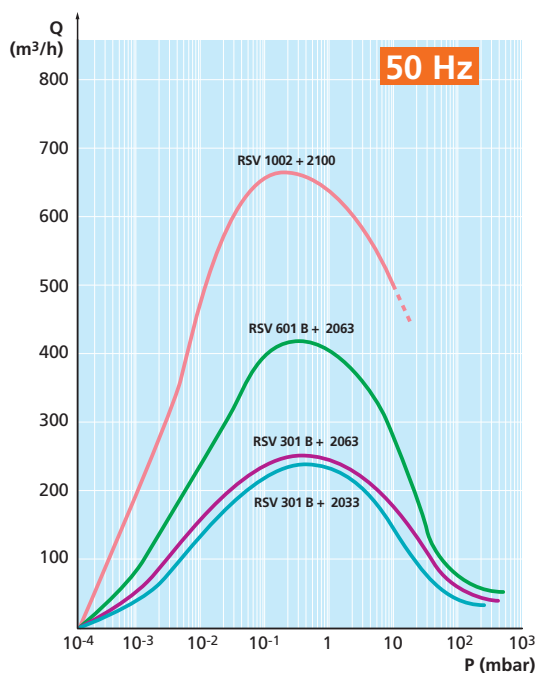
Pumping unit integrated in an industrial Leak Detection System



RSV 2000

Pumping characteristics (with appropriate mechanical pumps)

Pumping speed vs inlet pressure



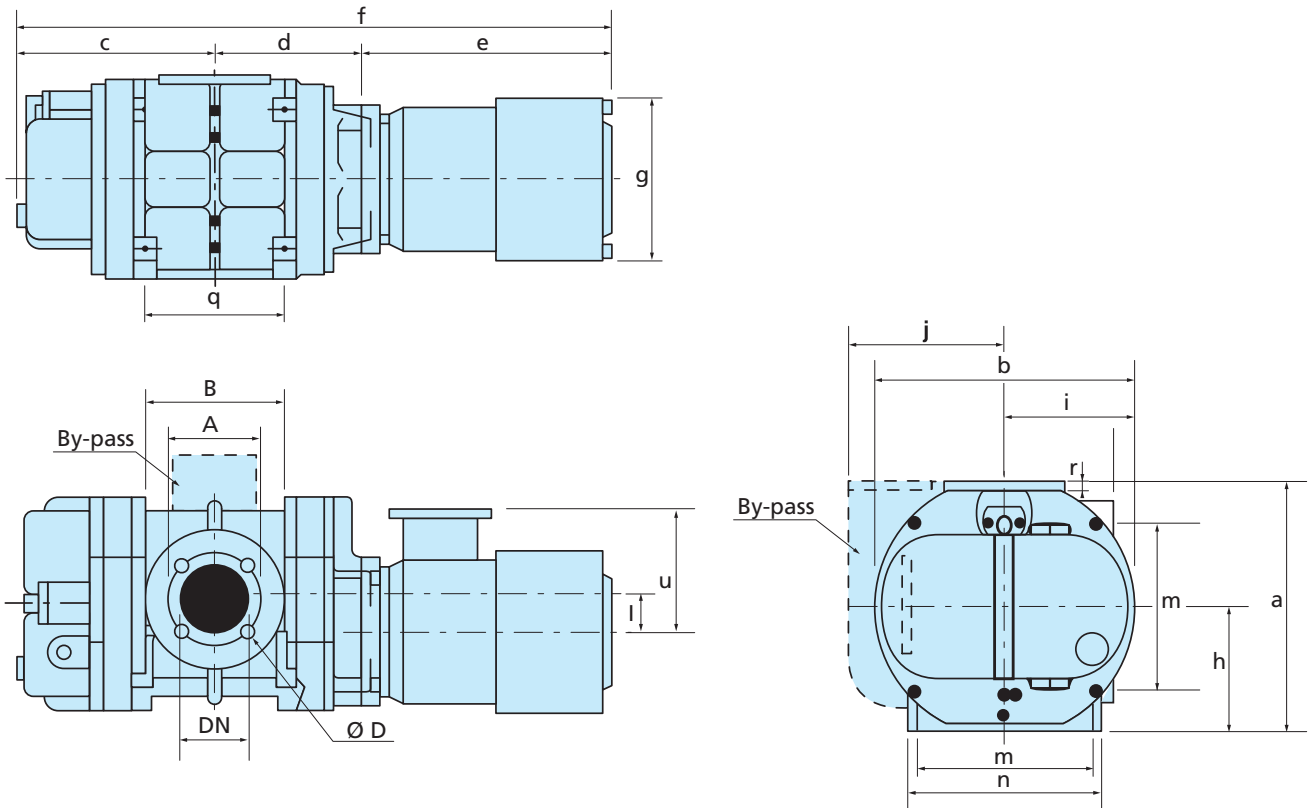
Technical data

Characteristics		Units	RSV 301B	RSV 601B	RSV 1002	RSV 2000	
Nominal pumping speed (swept volume)	50/60 Hz	m ³ /h	300/360	600/720	1090/1310	2040/2450	
		cfm	177/212	354/424	640/770	1200/1442	
Pneurop pumping speed at 1 mbar (type of backing pump)	50/60 Hz	m ³ /h	260/330	430/510	630/750	Contact us	
		cfm	153/195 (2063)	254/300 (2063)	370/440 (2100)		
Ultimate total pressure with 2 stage backing pump		mbar	2 x 10 ⁻⁴	2 x 10 ⁻⁴	2 x 10 ⁻⁴	Contact us	
Ultimate partial pressure with 2 stage backing pump		mbar	5 x 10 ⁻⁵	5 x 10 ⁻⁵	5 x 10 ⁻⁵	Contact us	
Max. continuous inlet pressure		mbar	1000	1000	14	5	
Max. continuous differential pressure		mbar	-	-	50	40	
Leak rate		mbar.l/s	< 10 ⁻⁷	< 10 ⁻⁷	< 10 ⁻⁷	< 10 ⁻⁷	
Inlet/outlet flange		ISO-DN	63	100	100 *	160 *	
Motor power		50/60 Hz	KW	1.1	1.5	3.5/4	4.35
Voltage		50/60 Hz	Volt	3 phase 200/240 - 380/415 (50 Hz) 3 phase 200/240 - 380/480 (60 Hz)		3 phase 220/380 (50 Hz) 220/460 (60 Hz)	
Oil capacity		Liter	0.7	0.7	2	3.1	
Weight		kg/lbs	88/194	107/236	235/518	365/805	

* **Nota** : the flanges of Roots RSV 1002/2000 are conformable to ISO 2084 (PN - Petroleum standard). For connection with ISO 1609 fittings (Pneurop standard) flanges are available. See accessories page 8.

Standard Roots Pumps

RSV 301B to RSV 601B - Dimensions (mm)

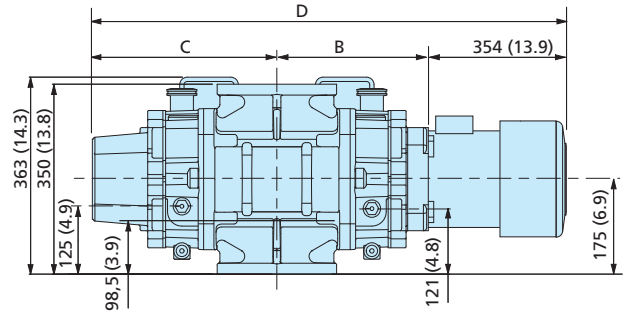
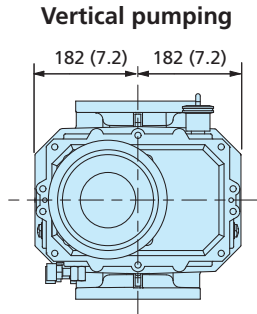


Model	Dimensions (mm)										
	a	b	c	d	e	f	g Ø	h	i	j	l
RSV 301B	280	331	193	140	310	643	211	140	148	183	42
RSV 601B	280	331	243	190	310	743	211	140	148	183	42

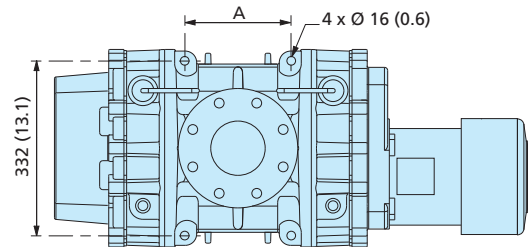
Model	Dimensions (mm)										
	m	n	q	r	u	DN	A	B	Nb ^D Ø		
RSV 301B	180	204	120	14	154	63	110	130	4 M 8		
RSV 601B	180	204	220	14	154	100	145	165	4 M 8		

High capacity Roots Pumps

RSV 1002 - Dimensions mm (inches)

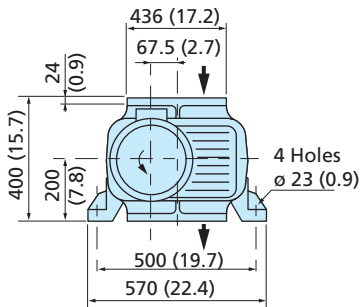


Model	Dimensions mm (inch)			
	A	B	C	D
RSV 1002	196 (8)	276 (11.3)	340 (13.9)	970 (39.6)

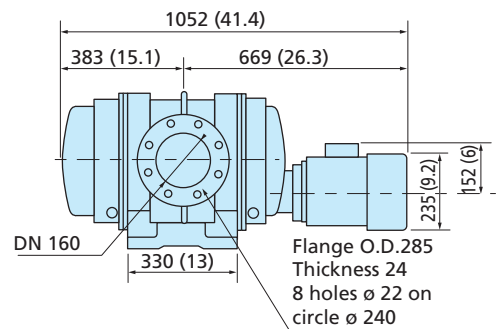
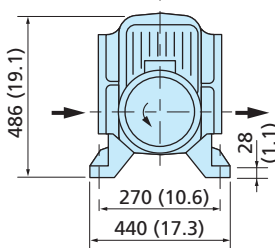


RSV 2000 - Dimensions mm (inches)

Vertical pumping



Horizontal pumping



Nota : the flanges of Roots RSV 1002/2000 are conformable to ISO 2084 (PN - Petroleum standard). For connection with ISO 1609 fittings (Pneurop standard) flanges are available. See accessories page C07.09.

Ordering information

P/N for order

Model	Pumping seed		PART NUMBER	
	50 Hz m ³ /h	60 Hz cfm	Prepared* With Synthetic Fluid	Prepared** With Mineral Oil
RSV 301B	300	212	793277	793276
RSV 601B	600	424	793281	793280
RSV 1002	1090	770	106968	106967
RSV 2000	2040	1442	On request	800249

* Roots prepared with synthetic fluid A 113 are drained prior to shipment. The fluid is not included in the price and must be ordered separately.

** Roots prepared with mineral oil A 119 or A 120 are delivered with an initial charge of oil.

Accessories

RSV1002	PART NUMBER
Adaptation flange PN/DN 100 ISO-K	106659

RSV2000	PART NUMBER
Adaptation flange PN/DN 160 ISO-K	102486



Maintenance parts

The maintenance kit includes the seals kit as well as the usual maintenance parts.

Model for RSV pump	PART NUMBER
RSV 301B	051992
RSV 601B	051992
RSV 1002	107341
RSV 2000	058788

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Alcatel Vacuum
Technology France
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Alcatel Hochvakuum
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