

Gardner Denver Installation Consultation and Training

We avoid mistakes done by user in the run-up: This is our device for saving of costs and operational readyness. The comprehensive consultation and a competent training of user have ever been the strength of Gardner Denver Wittig.



Gardner Denver Service

Promptness, reliability and advisory skills become to elements of quality connotation.
Human components like engagement, the willingness for service and sympathy form the service quality.



Gardner Denver Original Service Parts

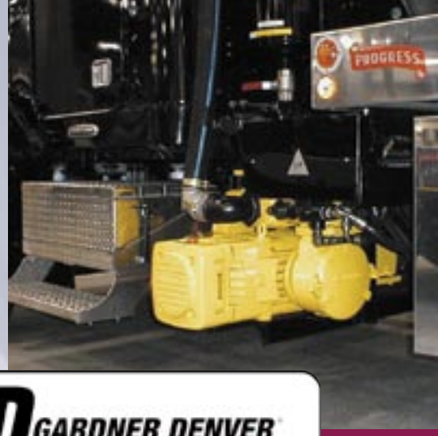
The compressor earns his money in operable – not in inoperable. This presupposes, that, in case of a failure, everything will be repaired immediately. Service by 24 hours a day, a wide stock for spare parts and applicable accessories for every single machine are the premise for this.

Contact Gardner Denver Wittig

Consultation by Gardner Denver Wittig

Gardner Denver

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Wittig RFL.

Rotary vane compressor / vacuum pumps for vacuum tankers.

Rotary vane compressor / vacuum pumps.

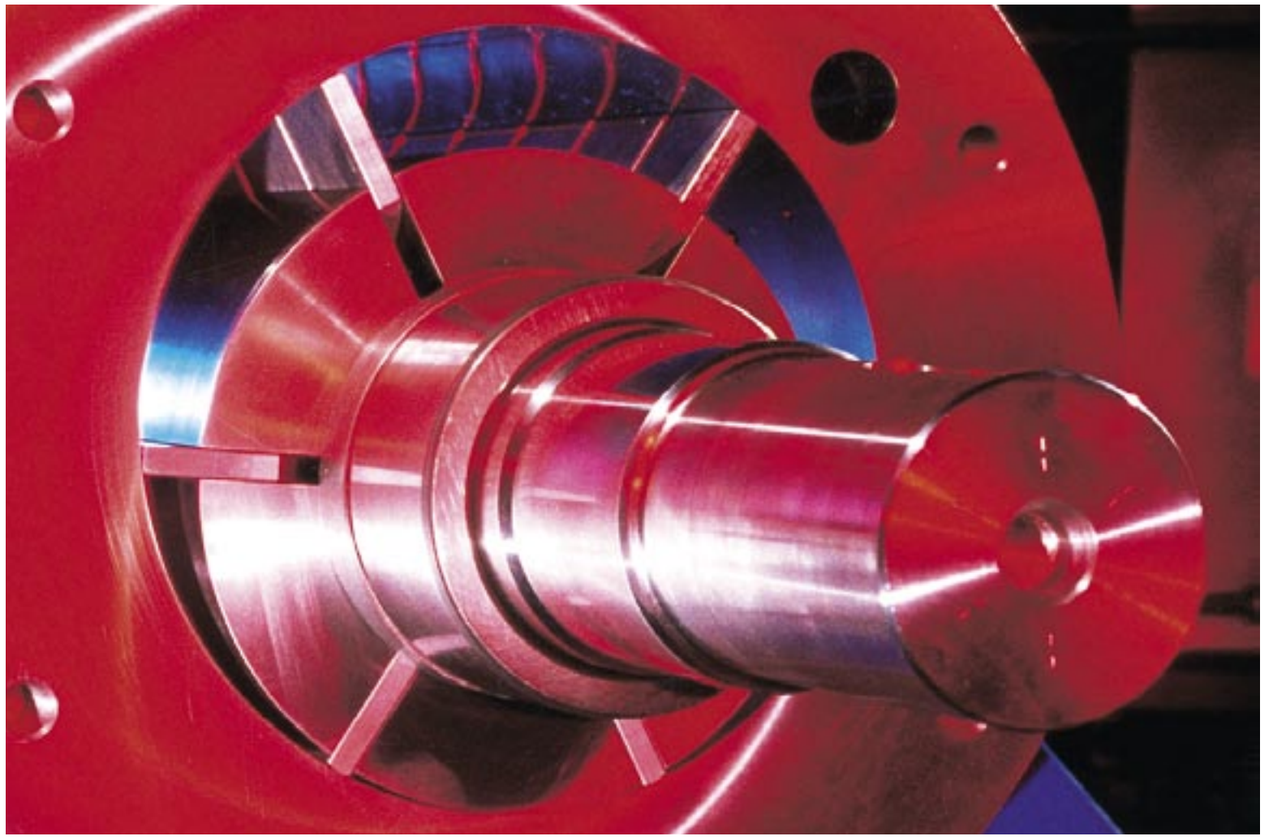
The Principle.

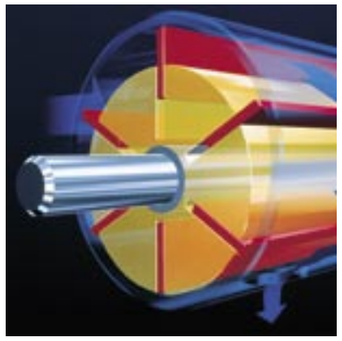
Based on the multi-vane principle invented by Wittig, our rotary compressors and vacuum pumps installed on bulk powder and liquid tankers have given reliable service for decades.

Wittig was the first to apply the multi-cell principle industrially. A rotor with longitudinal slots is mounted eccentrically in a cylindrical housing, so that a crescent shaped working chamber is formed. Sliding rotor vanes, fitted within the slots, divide the crescent-shaped chamber into cells of different size and reducing volume. When the rotor turns, the vanes make contact with the bore of the machine under centrifugal force. Air or gas is taken in, compressed and delivered via the discharge port.

We have developed comprehensive design and production 'know how' and are contributing to making rotary vane machines the optimal solution in ever more challenging and varied applications.

This compression system has led to the strong reputation of „Wittig machines" in a number of sales markets – an economic method of generating compressed air or vacuum on a wide variety of applications.





The Advantages.

Reliable and Cost Effective

Of ingeniously simple design, made of wear resistant materials and to the greatest precision. Assembled and tested with great care, our rotary vane compressor/vacuum pumps are renowned for their reliability, safety in operation, long life and cost effecti-veness. They have few rotating parts, ensuring that maintenance requirements are minimal.

Practically pulsation–free compressed Air

A typical feature of our rotary vane compressor/ vacuum pumps is the supply of a nearly pulsation-free and constant gas flow. This is a significant advantage on many applications where compressed air or vacuum is required.



Compact design delivered ready for connection/installation

Compact design is a typical characteristic of our machines.
For ease of mounting and quick start-up, we ship all machines ready for installation and connection.

Exemplary

Gardner Denver Wittig has expertise in both vacuum applications for loading liquids or sludge on to waste tankers and compressor applications for unloading bulk road tankers. We did the pioneering work on rotary vane compressor/vacuum pumps and have maintained a program of development and improvement ever since.

Our comprehensive range of machines and experience with all types of waste liquids is your guarantee of highly capable and objective advice in the selection of the most suitable systems.

Wittig RFL.
As compressor/vacuum pump.

Cooling
An ideal air cooling system powered by two fans, ensures the best cooling effect, even on extended run times.

Oil tank
A generously proportioned oil tank allows extended run periods.

Lubrication
Integrated oil pump for continuous and reliable oil supply.

Oil level indication
Sight glasses on both sides of the machine for ease of oil level checks.



Drive
Central mounting point for the easy fitting of a hydraulic drive motor if required.

Dimensions at shaft ends suitable for alternative V-belt drive.

Mounting
Mounting feet attached to top or underneath of the machine allows a standing or suspended installation.

Wittig RFL.
Compressor / vacuum pump.

Due to their advanced design and precision of construction, these machines make very economic use of the oil injected in the compression chamber for lubrication and sealing. They are fitted with an automatic lubrication system, which supplies oil to all contacting parts of the machine. The oil pump is mounted within the oil tank and is driven directly by the rotor shaft.



These compressor / vacuum pumps are often installed on vacuum tankers carrying contaminated sludge.

They are extremely robust, require little maintenance and are simple to operate. These are good reasons why Wittig RFL compressor / vacuum pumps are used all over the world. From the deserts to Alaska, Wittig RFL performs reliably in all climates under the heaviest loads.

Made to measure

Wittig RFL compressor / vacuum pumps can be mounted beneath or above the truck chassis.

Features and data

The air-cooled, oil-lubricated Wittig RFL range is cooled by two fans mounted at the shaft ends. These take in cooling air axially and blow it across the fins of the casing. The flow rate capability of the Wittig RFL compressor / vacuum pump range is between 390 and 640 m^3/h (230 and 376 cfm) at 60% vacuum.







Wittig RFL in service

Machines of the Wittig RFL range offer the vehicle builder and operator a wide range of installation options. Wittig RFL compressor / vacuum pumps can be mounted within, or to the side of the vehicle chassis.







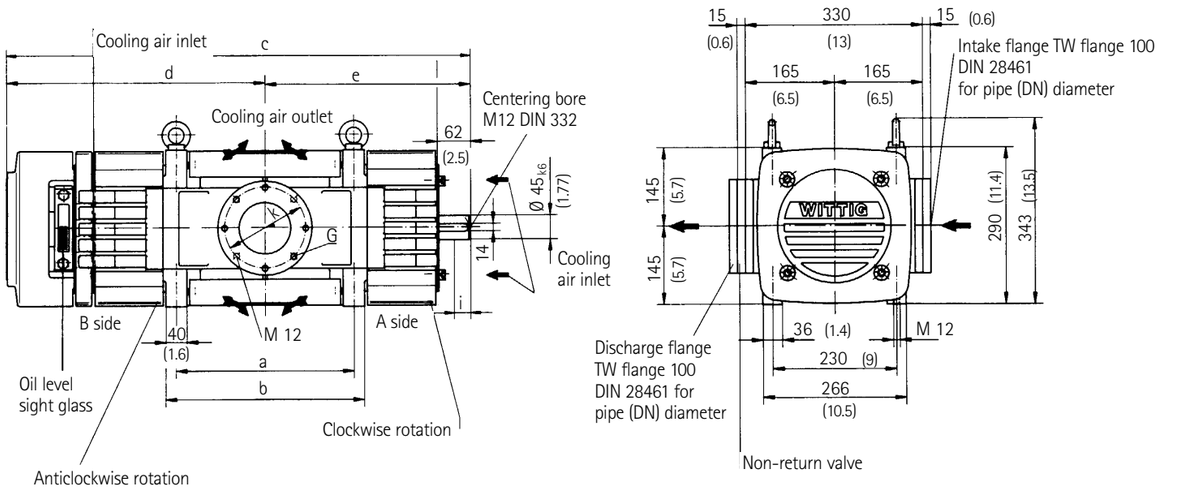




Facts. Figures. Data.

Compressor / vacuum pumps of the Wittig RFL-DV range.

Compressor / vacuum pump		RFL 60 DV	RFL 80 DV	RFL 100 DV
Free air flow	m^3/h (cfm)	400 (235)	570 (335)	700 (412)
Flow rate at 400 mbar residual pressure/60% vacuum	m^3/h (cfm)	390 (230)	525 (309)	640 (376)
Discharge pressure (gauge)	bar (psig)	0.5 (7.25)	0.5 (7.25)	0.5 (7.25)
Maximum discharge pressure (gauge)	bar (psig)	2 (29)	2 (29)	2 (29)
Shaft speed	rpm	1500	1500	1500
Shaft power requirement at 0.5 bar	kW (hp)	12.5 (16.8)	17 (22.8)	22 (29.5)
Oil consumption	l/h (gal US/h)	0.06 (4.2)	0.075 (5.1)	0.085 (5.1)
Mass moment of inertia	kgm^2 (lb.sq.ft.)	0.1871 (4.44)	0.2409 (5.71)	0.2409 (7)
Max. vacuum – continuous operation	mbar/% ("HG)	200/80 (24)	200/80 (24)	200/80 (24)
Noise level at 7 m distance at 400 mbar/0.5 bar(g)	dB(A)	76/78	78/80	80/82
Oil tank capacity	l (gal (US))	5 (1.3)	5 (1.3)	5 (1.3)
Weight, including non-return valve	kg (lb)	135 (298)	170 (375)	170 (375)

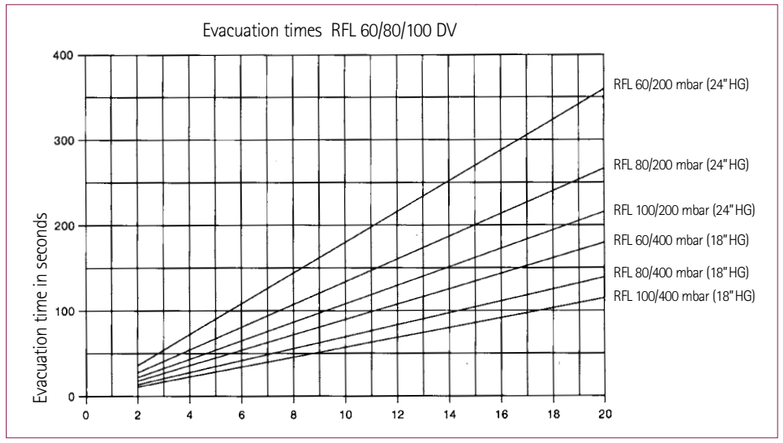


Compressor / vacuum pump		RFL 60 DV	RFL 80 DV	RFL 100 DV
Dimensions				
a	mm (inches)	230 (9.1)	330 (13)	330 (13)
b	mm (inches)	270 (10.6)	370 (14.6)	370 (14.6)
c	mm (inches)	764 (30)	864 (34.1)	864 (34.1)
d	mm (inches)	432 (17)	482 (19)	482 (19)
e	mm (inches)	332 (13)	382 (15)	382 (15)
Intake flange				
DN	mm (inches)	65/80 (2.6/3.1)	80/100 (3.1/3.9)	100 (3.9)
k	mm (inches)	150 (5.9)	150 (5.9)	150 (5.9)
G	mm (inches)	M 12	M 12	M 12
Discharge flange				
DN	mm (inches)	65 (2.56)	80 (3.15)	80 (3.15)
k	mm (inches)	150 (5.9)	150 (5.9)	150 (5.9)
G	mm (inches)	M 12	M 12	M 12
V-belt drive				
Belt pulley diameter, min.		200 mm (7.8)		
Profile/no. of belts		SPA/5		
Permitted radial load at distance "i"=25 mm (0.98)		4750 N		
Distance between belt pulley and fan cover		min.12 mm (0.5)		

All dimensions in mm (inch).

Evacuation times

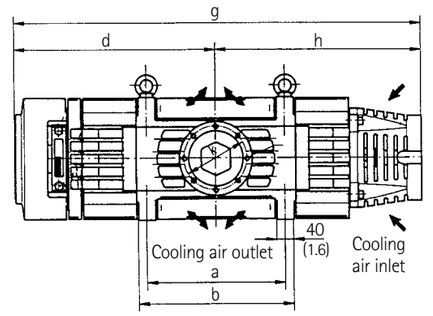
The evacuation times t_{ev} are represented as a function of the vacuum and of the vessel volume V. These times are intended for guidance only. The actual times are governed by the condition of the entire system.



RFL-DV compressor / vacuum pump fitted with a hydraulic motor adaptor flange (Sunfab, Parker)

Compressor / vacuum pump		RFL 60 DV	RFL 80 DV	RFL 100 DV
Dimensions				
a	mm (inches)	230 (9.1)	330 (13)	330 (13)
b	mm (inches)	270 (10.6)	370 (14.6)	370 (14.6)
g	mm (inches)	874 (34.1)	974 (38)	974 (38)
d	mm (inches)	432 (17)	482 (19)	482 (19)
h	mm (inches)	442 (17)	482 (19)	482 (19)
Weight	kg (lb)	143 (315)	178 (392)	178 (392)

Intermediate flange for hydraulic motor, incl. coupling: 13 kg (lb 28.6)



Accessories

The following accessories can be supplied as additional equipment. All components involved are of optimum design for use with our compressor/vacuum pump and have proved their efficiency under the most severe operating conditions.

Suction filter

This protects the compressor/vacuum pump against coarse and fine-grained impurities but not against liquids. The VFD 3 filter with an integrated fine filter is fitted directly to the suction flange. VFD 3 filters are particularly necessary on vehicles carrying dangerous goods on public roads. They are designed for 11 bar abs. (160 psig).

Discharge silencer

For reduction of air discharge noise during suction operations. This silencer is installed in the line which discharges to atmosphere.

Vacuum relief valve

The vacuum relief valve ensures that the permissible or desired operating vacuum is maintained at the correct level by allowing atmospheric air to flow in during suction operations. It is installed in the suction line.

Intermediate flange for hydraulic motor

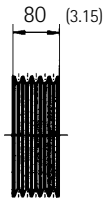
For direct mounting the hydraulic motor (gauge ring and 4 threaded holes in the casing cover) with flexible coupling. The intermediate flange also serves as a coupling guard.

All dimensions in mm (inch).

Accessories

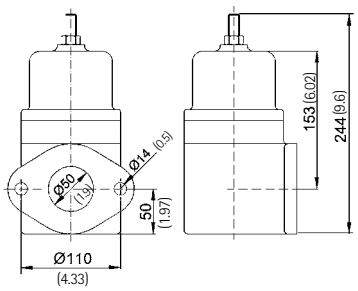
V-belt pulley

Weight: 12 kg
(26.5 lb)



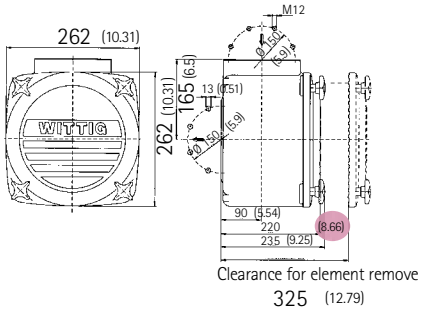
Vacuum relief valve

Weight: 6.2 kg (13.7 lb)



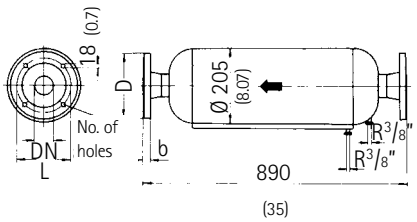
Suction filter VFD 3

Weight: 22 kg (48.5 lb)



Discharge silencer

Series	Flange measure					Weight
	DN	D	L	b	x	kg(lb)
RFL 60 DV	65 (2.56)	185 (7.28)	145 (5.71)	16 (0.63)	4	12 (26.5)
RFL 80/100 DV	80 (3.15)	200 (7.87)	160 (6.3)	18 (0.71)	8	15 (33.1)



Further accessories

- Low oil level warning
- Non-return valve
- Pressure/ Vacuum gauge
- Flexible drive coupling and guard

Application

- Installation on medium-sized vacuum tankers
- For vacuum systems
- For fixed installation sludge handling and waste disposal systems

Drive

- From the vehicle engine via an auxiliary drive.
- Via universal shaft.
- By V-belt – a belt pulley is fitted to the free shaft end
- By hydraulic motor
- Via flexible coupling
- By diesel engine or electric motor with 1500 rpm

Cooling

- Air cooling is provided by two fans fitted to the shaft ends. These fans take in cooling air axially and blow it across the fins of the casing.

Lubrication

- The automatic lubrication device supplies oil to all contacting parts of the machine. The oil pump is mounted within the oil tank and is driven directly by the rotor shaft.

Installation

- Mounting using securing points at the top or bottom of the main casting, combined with optional cw or ccw rotation, gives maximum installation flexibility.

All dimensions in mm (inch).