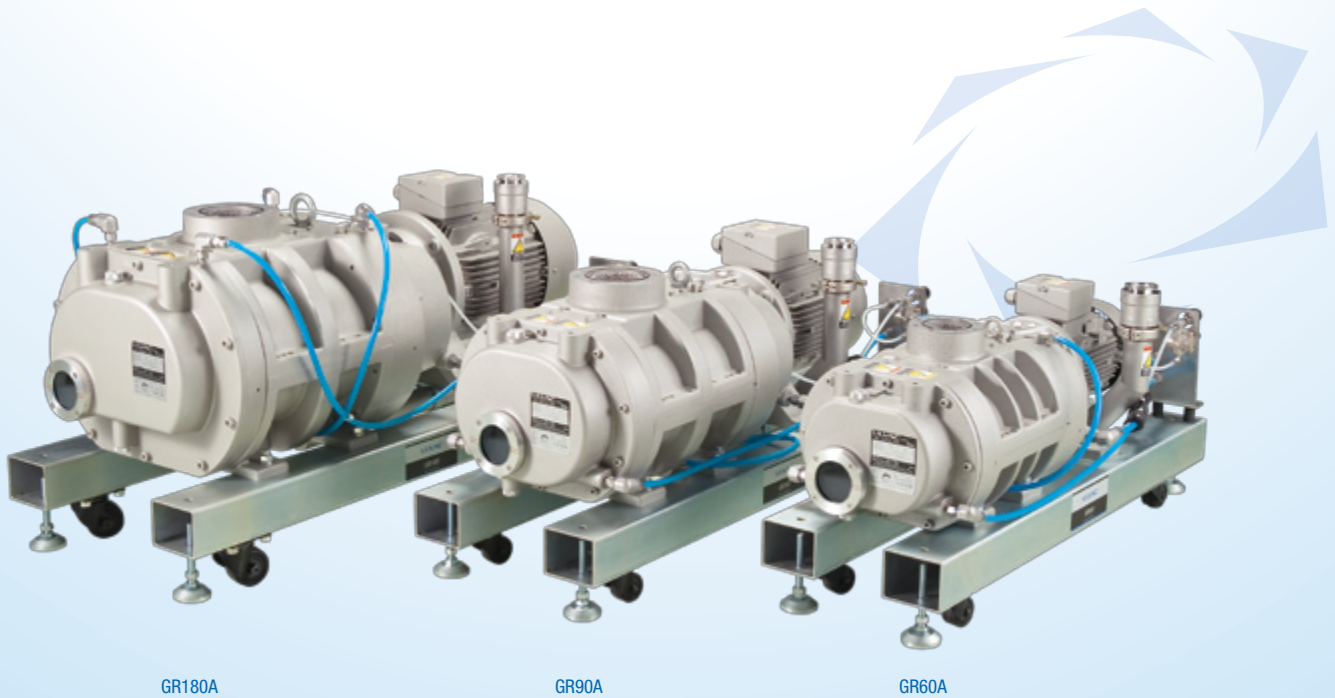


Dry Vacuum Pump [GR Series]

Based on many years of experience with the LR/HR series ULVAC has introduced the GR series dry vacuum pump with a simple and clean design for general industrial applications.



GR180A

GR90A

GR60A

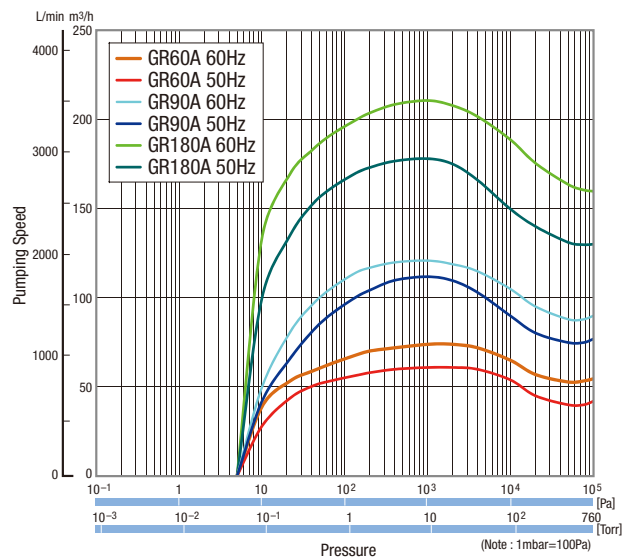
Features

- ▶ Particularly useful for high load applications such as repeated pump down between atmospheric pressure and vacuum and continuous running in the high pressure range.
- ▶ Useful for load/unload lock chambers which require high throughput.
- ▶ A universal induction motor is used. An explosion proof motor is available as an option.
- ▶ For motor power. Specify voltage required when ordering. Either 200 VAC class or Multiple voltage motors are available.

Applications

- ▶ Clean gas vacuum pumping such as air, inert gas
- ▶ Load/unload lock chambers of various types of deposition equipment
- ▶ General industrial applications such as vacuum dryer, vacuum gas exchange in vacuum heat insulation and gas charging, vacuum degassing, etc.

Pumping speed Curves



Dry Vacuum Pump [GR Series]

Specifications

Model		GR60A	GR90A	GR180A	
Max. pumping speed	50Hz	m ³ /h	62	112	183
			60Hz	80	126
	50Hz	L/min	1030	1860	3100
			60Hz	1333	2100
	50Hz	CFM	36.4	65.7	109.5
			60Hz	47.1	74.2
Ultimate pressure *1	Pa	5.0			
	Torr	3.7×10 ⁻²			
	mbar	5.0×10 ⁻²			
Maximum inlet pressure	Atmospheric pressure				
Maximum exhaust pressure	Pa	1.0 to Atmospheric pressure			
	Torr	7.5×10 ⁻³ to Atmospheric pressure			
	mbar	1.0×10 ⁻² to Atmospheric pressure			
Inlet	VG50 or ISO63F		Equivalent to VG80 or ISO80F		
Outlet	NW40				
Surface treatment	Standard option				
Weight	kg	128	188	268	
Cooling water	Supply pressure	MPa	0.1 to 0.3		
		psi	14.5 to 43.5		
	In/Out difference pressure	MPa	>0.1		
		psi	>14.5		
	Temperature	°C	10 to 30 *2		
	°F	50 to 86			
Flow rate	L/min	>5.0			
N ₂	Primary side supply pressure	MPa	0.1 to 0.5		
		psi	14.5 to 72.5		
N ₂	Primary side supply pressure *3	MPa	0.05 to 0.1 (at running)		
		psi	7.3 to 14.5		
Shaft	SLM	5.0 *4			

*1 Ultimate pressure is a value when nitrogen gas (shaft seal gas) is 5.0SLM.

*2 Non condensing.

*3 Value in pressure gauge adjusted by regulator.

*4 Flow rate of nitrogen gas (shaft seal gas) is fixed 5.0SLM.

Motor Specify a motor from following table when ordering. (Common motor is used for the GR180)

Model	GR60A														
Selectable motor	200V class motor						Multiple voltage motor								
Frequency	Hz	50	60	50	60	50	60	50	60	50	60	50	60		
Voltage	V	200	200	220	220	240	208	220	240	380	400	415	380	440	460
Rated current	A	9.2	8.8	8.1	8.1	8.1	8.5	8.1	7.4	4.8	4.8	4.7	4.6	4.3	4.1
Wiring		Delta wiring				Delta wiring				Star wiring					

Model	GR90A														
Selectable motor	200V class motor						Multiple voltage motor								
Frequency	Hz	50	60	50	60	50	60	50	60	50	60	50	60		
Voltage	V	200	200	220	220	240	208	220	240	380	400	415	380	440	460
Rated current	A	14.2	14.1	12.8	12.8	12.7	13.4	12.8	11.8	7.5	7.4	7.3	7.3	7.0	6.3
Wiring		Delta wiring				Delta wiring				Star wiring					

Model	GR180A													
Selectable motor	Common multiple volt motor available for this pump													
Frequency	Hz	50			60			50			60			
Voltage	V	200	220	240	200	208	220	240	380	400	415	380	440	460
Rated current	A	26.1	25.1	25.7	26.3	24.9	23.9	22.5	14.5	14.7	14.9	13.9	13.3	12.5
Wiring		Delta wiring						Star wiring						

Silencer (Option)

Model	Material	Surface treatment	Weight	Flange
RS-01	Stainless steel 304	GBB treatment	4.1kg	NW40
RS-02	Stainless steel 304	GBB treatment	8.3kg	NW40

Selection table

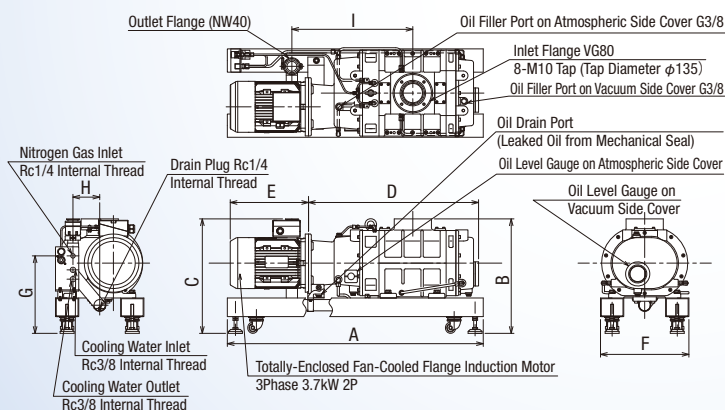
Type	Applicable model	Clamp	Outer ring	Connecting pipe	Stay
RS-01 Kit A	GR60A, GR90A	1	1	—	—
RS-02 Kit C	GR180A	2	2	1	1



RS-01, 02

Dimensions

Unit: mm



	A	B	C	D	E	F	G	H	I
GR60A	1000	439	439	670	289	320	333	85	480
GR90A	1100	492	492	731	336	380	333	115	520
GR180A	1300	579	579	789	422	470	353	160	599

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