

BUILT FOR THE DIRTY END.

Rotary piston machines. Six frame sizes for pressure to +1000 mbar or vacuum to -500 mbar, and four pumps with ejector reaching 10 mbar.

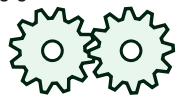
**GREEN AIR
COMPRESSOR**



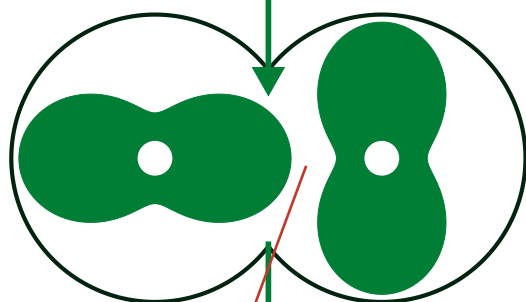
WHY NOTHING TOUCHES

The frame range on page 4 uses two shaped rotors with operating clearances between them and the casing. Timing gears outside the chamber keep them apart, with lubricant in the gear end rather than the gas path. Non-contact operation does not make dust or liquid slugs harmless: filtration, separation and protection must suit the gas. This illustration applies to the frames, not the complete pumps on page 6.

timing gears, outside the gas



inlet



outlet

operating clearance — no contact

pressure duty



up to +1000 mbar — it pushes

vacuum duty



down to -500 mbar — it pulls

The frame range serves pressure and vacuum duties; available combinations are listed on page 4. The duty point determines the motor, drive and protection.



No oil in the gas path

On the frame range, lubricant stays in the gear end. Confirm sealing and inlet treatment against the gas-quality requirements of the process.



Protection for the actual gas

Dust and liquid carry-over can damage the machine. Specify inlet filtration, liquid separation and protective controls for the duty.



Slow, heavy and long-lived

Heavy castings and non-contact rotors suit sustained service within the specified duty. Bearings, seals, clearances and protection still need planned maintenance.

WHICH DUTY IS YOURS

Pressure duty is the commoner one. Conveying powder along a pipe, aerating a tank, feeding a kiln or a treatment basin. The machine takes air at atmosphere and pushes it out against the resistance of whatever it is feeding, and the figure that matters is how hard it will push.

Vacuum duty draws gas from below atmosphere. Lifting, holding, drying, de-aerating, or pulling a process down before something else takes over. The machine is selected for the inlet pressure, flow and gas; the listed service limit is not an ultimate vacuum.

	Pressure duty	Vacuum duty
What the figure means	How hard it pushes against the far end	How far below atmosphere it pulls
In this brochure	+800 and +1000 mbar	-500 mbar
Frames offered	0100, 0150, 0390, 0600, 0730	0150, 0280, 0390, 0600, 0730
Motor needed	Selected for flow and pressure duty	Selected for flow and vacuum duty
Typical duties	Pneumatic conveying, tank aeration, water treatment, kilns	Vacuum lifting and holding, drying, de-aerating, process evacuation

The same frame can need a different motor.

GAC-RP 0600 is listed at 30 to 90 kW for pressure duty and 18.5 to 55 kW for vacuum duty, with the same flow span. These are the supplied ranges; motor demand depends on the actual pressure difference, inlet conditions and duty point, not on pushing or pulling alone.

Not every frame is offered both ways.

GAC-RP 0100 is listed for pressure only and GAC-RP 0280 for vacuum only. If you want one of those the other way round, ask — we would rather check than have you assume it is not possible.

Two weights, and why

Where published, the weights describe the bare machine and its usual supplied arrangement. Confirm the final package, lifting weight and lifting points before planning the lift.



FRAMES, PRESSURE AND VACUUM DUTY

What this table is. Ten duty entries across six frame sizes. Each frame covers a span of motors and flows; the machine is built to the duty from within that span rather than picked off the page.

How to read a row. Take the flow you need, find the frame that covers it, and the motor comes from the duty — how hard you are pushing, or how far you are pulling. We do that arithmetic; the table is here so you can see where you sit before you ask.

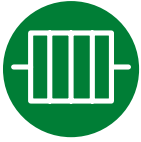
The two weights. The supplied figures describe the bare machine and its usual drive arrangement; confirm the final package weight with the quotation. GAC-RP 0600 has neither published yet and we are getting them from the factory.

Model	Duty	Motor		Capacity		Weight		Dimensions
		kW	hp	m³/h	cfm	kg	lb	L × W × H mm
GAC-RP 0100	+1000 mbar	0.7 – 22.4	1 – 30	152 – 535	89 – 315	180 / 295	397 / 650	1082 × 800 × 1157
GAC-RP 0150	+1000 mbar	1.1 – 37.3	2 – 50	480 – 808	283 – 476	197 / 312	434 / 688	1082 × 800 × 1157
GAC-RP 0150	-500 mbar	1.1 – 37.3	2 – 50	480 – 822	283 – 484	197 / 312	434 / 688	1082 × 800 × 1157
GAC-RP 0280	-500 mbar	1.5 – 55.9	2 – 75	698 – 1330	411 – 783	346 / 535	763 / 1179	1302 × 1050 × 1269
GAC-RP 0390	+1000 mbar	2.2 – 74.6	3 – 100	1258 – 1793	740 – 1055	372 / 561	820 / 1237	1302 × 1050 × 1269
GAC-RP 0390	-500 mbar	2.2 – 74.6	3 – 100	1258 – 1907	740 – 1122	372 / 561	820 / 1237	1302 × 1050 × 1269
GAC-RP 0600	+800 mbar	30 – 90	40 – 121	900 – 3100	530 – 1825	—	—	1732 × 1900 × 1570
GAC-RP 0600	-500 mbar	18.5 – 55	25 – 74	900 – 3100	530 – 1825	—	—	1732 × 1900 × 1570
GAC-RP 0730	+1000 mbar	5.6 – 111.9	8 – 150	2650 – 3972	1560 – 2338	750 / 1053	1653 / 2321	1732 × 1450 × 1760
GAC-RP 0730	-500 mbar	5.6 – 111.9	8 – 150	2650 – 3992	1560 – 2350	750 / 1053	1653 / 2321	1732 × 1450 × 1760

The duty column is a service limit, not an ultimate vacuum — see page 6 for the machines that quote one. A model listed twice is the same frame offered for both duties; the flows differ slightly because the duty does. Motors are given as the source states them, in horsepower on most frames and kilowatts on GAC-RP 0600. Where the weight is an em dash the figure is not yet published; ask us before planning a lift. Imperial figures are converted and rounded.

IT IS NOT A PACKAGE

A frame is a machine, not an installation. These four things are specified with it, and leaving any of them out is how a good machine disappoints.



An inlet filter, sized for the dirt you have

Dust can damage rotor clearances as well as other components. Choose inlet filtration and any liquid separation for the contamination the site actually draws in.



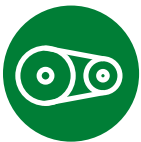
Relief, both ways

A positive displacement machine will keep going until something gives. It needs protection against over-pressure on a pressure duty and against over-vacuum on a vacuum one, and the two are not the same device.



Somewhere for the heat

Compression heat leaves with the gas and through the casing. Both matter: one decides what the downstream pipework must take, the other decides the room.



A drive that suits the speed

Belt or direct, and the choice sets the speed, which sets the flow. It is part of the specification rather than an installation detail.

Tell us the gas, not just the flow

What is in it decides the seals, the filter and sometimes the material. Dust, moisture, vapour or a process gas — the answer changes the quotation more than the flow does.



WHERE 10 MBAR IS NEEDED

A different number entirely. The four machines on this page quote 10 mbar, and that is an ultimate vacuum — how far down they will pull, in absolute terms. It is not the same quantity as the -500 mbar on page 4, which is a service limit measured from atmosphere. These are the deeper machines, not the weaker ones.

What the ejector does. An ejector uses a motive stream to entrain gas and works with the backing pump to reach a lower inlet pressure. The motive supply and arrangement for these packages are confirmed with the quotation. The listed ultimate pressure is 10 mbar absolute; operating performance depends on gas load and conditions.

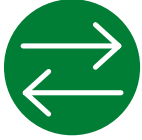
What they are for. Drying, impregnation, degassing, freeze drying and metallurgical duties may need vacuum systems of different depths. Confirm the required operating pressure, gas load and vapour handling before selecting one of these packages.

Model	Motor		Capacity		Ultimate	Weight		Dimensions
	kW	hp	m³/h	cfm	mbar abs	kg	lb	L × W × H mm
GAC-RP 0110 A	3	4	83	49	10 mbar	600	1323	1300 × 1300 × 1900
GAC-RP 0260 A	7.5	10	240	141	10 mbar	700	1543	1400 × 1300 × 2300
GAC-RP 0510 A	18.5	25	510	300	10 mbar	900	1984	1600 × 1400 × 2500
GAC-RP 0750 A	30	40	710	418	10 mbar	950	2094	1600 × 1400 × 2500

The ultimate figure is an absolute pressure, which is why a smaller number is a deeper vacuum. These are complete machines rather than frames, which is why each has one motor, one flow and one weight. Imperial figures are converted and rounded.

SIX THINGS WE WILL ASK

Rotary piston machines are specified against a duty and a gas. These six settle which one, and in what arrangement.



Pushing or pulling

State pressure or vacuum duty first. The motor is then selected for the flow, pressure difference and inlet conditions.



What is in the gas

Dust, moisture, vapour, or something that attacks a seal. This changes the build, not just the accessories.



How far

State the required operating pressure and whether it is absolute or relative to atmosphere. Page 6 lists ultimate vacuum; operating performance must be checked.



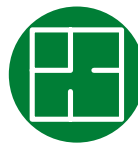
Continuous or intermittent

A machine that pulls down twice an hour and one that holds a vacuum all shift are different specifications at the same flow.



How much, at that condition

Flow at the duty point, not at free air. On a vacuum duty the two are very different numbers.



Where it stands

These are heavy. The larger frames pass a tonne as supplied, so access and floor loading are part of the choice.



GREEN AIR COMPRESSOR

TELL US THE DUTY POINT

A rotary piston machine is chosen at a duty point: a flow, at a pressure or a vacuum, with a known gas. Everything else — the frame, the motor, the drive, the filtration and the protection — follows from those three. Send them to us, with what the machine is actually doing and how many hours a day it does it, and you get back a written recommendation naming the frame, the motor for your duty, the accessories that belong with it and what the installation needs. Where a different kind of machine would serve you better, we will say so. It costs nothing and carries no obligation.

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Specifications are subject to change without notice. Figures are nominal and apply at the reference conditions stated. © Green Air Compressor.

