

GV SERIES DRY VACUUM PUMPS

 **EDWARDS**



EDWARDS THE PARTNER OF CHOICE

Edwards is a world leader in the design, technology and manufacture of vacuum pumps for industrial applications with over 100 years' history.

We believe in delivering results that bring value to our customers by using our breadth of industry experience to identify and apply solutions. Using the most innovative and up-to-date modelling techniques, we can optimise the pumping configuration for customers to provide a system design giving the maximum performance in the most reliable and cost-effective way.

THE EDWARDS DRY ADVANTAGE FOR RELIABILITY, AND PERFORMANCE

With the world's largest installed base of dry vacuum pumps, Edwards has set the benchmark for industrial vacuum performance for decades. Our dry claw technology has earned its reputation as the industry's true workhorse; dependable, efficient, and engineered to run in the toughest environments. Building on this proven legacy, Edwards offers the GV80 and the next-generation GV110 dry claw vacuum pumps.

The GV series are engineered to deliver stable, long-term operation with minimal intervention. Designed for applications where uptime is non-negotiable, these pumps offer a powerful combination of durability, efficiency, and cost savings.



Built for harsh duty

Designed for continuous operation and can handle high loads and large volumes of condensable vapours. Their solid mechanical architecture ensures stable performance even in challenging environments.



Reliable in real industrial conditions

High tolerance for process dust and particles keeps the pump running making it ideal for industries where contaminants are part of the process.



Consistent output

Edwards' precision-engineered claw mechanism delivers predictable and repeatable pumping performance, ensuring your process runs smoothly with no performance drift.



Low cost of ownership

Quiet operation, clean pumping, and minimal service interruptions result in reduced operating costs over the pump's lifetime delivering maximum value with minimal downtime.



Environmentally responsible

Oil-free pumping eliminates the need for frequent oil changes, reduces waste disposal requirements, and provides a cleaner, more sustainable operation.



Proven technology

The GV series has been trusted by industries worldwide for decades. With the next-generation GV110, customers can now benefit from enhanced performance, improved efficiency, and the same rugged reliability that defines Edwards.

NEXT GENERATION GV110 DRY CLAW VACUUM PUMP

The GV110 is the next generation dry claw vacuum pump, designed to take the proven performance of the GV80 to the next level. Building on a time-tested platform, the GV110 introduces advanced features that deliver greater efficiency, quieter operation, and improved pumping performance all while maintaining the reliability and low cost of ownership Edwards is known for.

Engineered for demanding industrial environments, the GV110 delivers consistent pumping performance with minimal service intervention, ensuring maximum uptime across a wide range of applications.



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Variable Speed Drive technology

Integrated variable speed drive intelligently adapts pump performance to actual process demand, reducing energy consumption and optimizing operational efficiency.
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Maximum uptime, minimal maintenance

Stainless steel claws and coated chambers are standard, ensuring excellent compatibility with condensable and chemically aggressive vapours.
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Optimized cooling water circulation

Improved cooling design enhances thermal stability, enabling reliable continuous operation even at high pressure levels.
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Consistent and repeatable performance

Precision-engineered dry claw technology ensures stable and repeatable pumping performance, even in the most demanding industrial processes.
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Modern acoustic enclosure

The redesigned enclosure significantly reduces noise levels, creating a quieter and more operator-friendly working environment.
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Clean, oil-free operation

No oil in the pumping chamber means no contaminated waste or oil disposal, supporting cleaner operation and improved environmental performance.

DRYSTAR® GV80 AND EH500 BOOSTER CONFIGURED PACKAGES

Pre-configured performance for demanding industrial applications



Standard configured packages are available based on the proven GV80 platform, delivering the added convenience and performance of the Drystar® GV80. These pre-engineered solutions are designed to simplify installation, commissioning, and day-to-day operation.

Packages can be supplied as a pump-only solution or combined with the EH500 hydrokinetic drive mechanical booster. The EH500 provides a nominal pumping speed of 500 m³/h and is ideal for applications requiring increased pumping speed and/or improved performance at lower vacuum levels.

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Pre-configured pumping systems

Designed for fast, straightforward installation and reliable operation.
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Wide application coverage

Packages and pumping systems suitable for a broad range of industrial applications and operating environments.
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Flexible package options

Pump-only or pump-and-booster configurations to match specific process requirements.
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Lubrication options included

Available with hydrocarbon or PFPE lubrication, supplied as part of the package.
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Enhanced process capability

Ideal for applications demanding higher pumping speeds or lower ultimate pressure.

APPLICATIONS

- Backing pump for high vacuum applications
 - Flat panel display
 - Gas cylinder evacuation
 - Heat treatment
 - Pharmaceutical freeze drying
 - Research and development
 - Refrigeration and air conditioning
- System evacuation
 - Drying, and backfilling
 - Surface treatment
 - Thin film coating technologies
 - Vacuum drying and distillation
 - Vacuum metallurgy processes

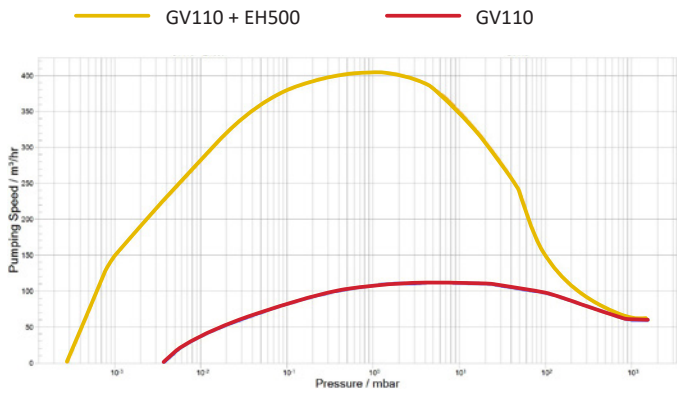
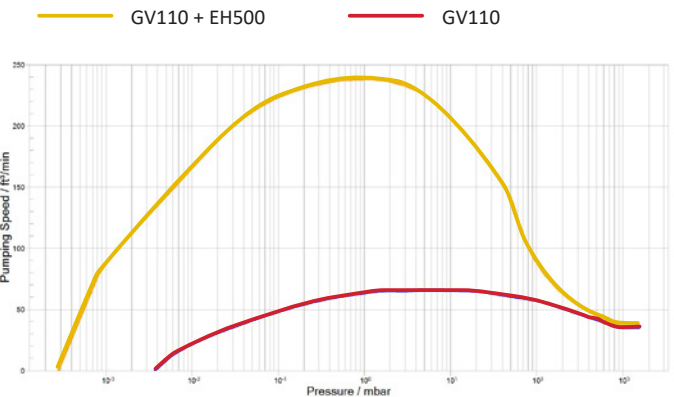


TECHNICAL SPECIFICATIONS

		Unit	GV110
Peak pumping speed @ 68 Hz		m³/h (cfm)	110 (64.7)
Ultimate pressure		mbar (torr)	6 x 10 ⁻³ (4.5 x 10 ⁻³)
Electrical	Supply options		3ph 200V 50/60 Hz 3ph 400V 50/60 Hz 3ph 460V 50/60 Hz
Vacuum couplings	Inlet		ISO40
	Exhaust		NW40
Cooling			Water
Cooling water	Nominal Flow	l/min (gal/min)	5 (1.32)
	Supply pressure (MAX)	bar.a (psig)	8 (116)
	DP across pump (MIN)	bar.a (psig)	2.1 (30)
	Temperature	°C (°F)	5-35 (41-95)
	Connection	In	1/2" Quick connect coupling (mating half provided)
Purge gas (N2 or CDA)		Out	1/2" Quick connect plug (mating half provided)
	Pressure	bar.a (psig)	0.5 (6-8)
	Light duty	sl/min	15 (typically)
Dimensions	Connection		1/4" Quick connect coupling (mating half provided)
	L x W x H	mm (in)	1060 x 502 x 316 (42 x 20 x 12.5)
	Footprint	m² (ft²)	0.532 m2 (5.73)
Weight		Kg (lbs)	210 kg (463)
Noise level with exhaust silencer		dB(A)	<75 dBA
Exhaust Back Pressure (MAX)		bar.a (psig)	1.3 (0.4)
Lubrication	Volume	l (gal)	0.4 (0.1)
	Type	Hydrocarbon	SHC 629
Pump Electrical motor rating		kW/HP	380-480V 5.5/6.2 200V 4.0/4.5
Typical pump rotation speed - 50/60 Hz electrical supply		rev.min-1	4100
Protection grade		IP	42
Warm-up time to pump operating temperature		min	15
Ambient operating temperature range		°C (°F)	0 to 40 (32 to 104)
Maximum ambient operating humidity		RH	80%

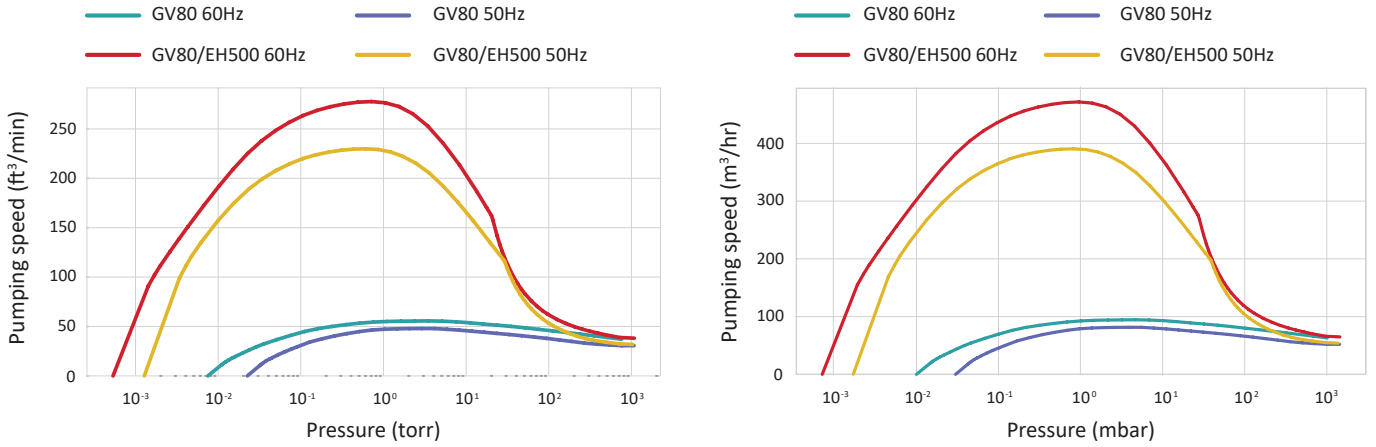
PERFORMANCE CURVES

GV1100



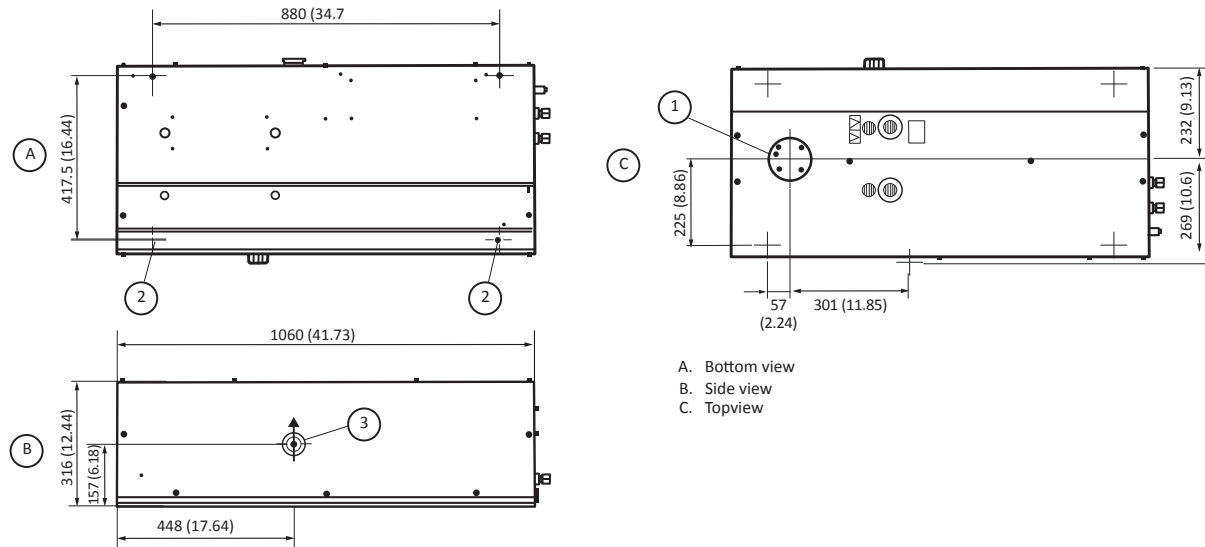
		Unit	GV80	Drystar® GV80/EH500
Peak pumping speed @ 50 Hz		m³/h (cfm)	82 (47)	390 (230)
Peak pumping speed @ 60 Hz		m³/h (cfm)	94 (54)	471 (277)
Ultimate pressure		mbar (Torr)	<3 x 10 ⁻² (<2 x 10 ⁻²)	<3 x 10 ⁻² (<2 x 10 ⁻²)
Full load power	@ ultimate pressure	kW/hp	3.6 (4.8)	4.3 (5.6)
	@ peak pumping load	kW/hp	5.8 (7.8)	6.7 (9.0)
Electrical	Supply options		200/380/400/415V 50Hz- 230/460V, 60Hz 200V, 50Hz - 200/380V, 60Hz <i>Note: See part number for specific voltage offerings.</i>	
Vacuum couplings	Inlet		ISO40	ISO100
	Exhaust		NW40	
Cooling			Water	Water/Air
Cooling water	Flow	l/min (gal/min)	1 (0.3)	
	Supply pressure (MAX)	bar.a (psig)	8 (116)	
	DP across pump (MIN)	bar.a (psig)	2.1 (30)	
	Temperature	°C (°F)	5-35 (41-95)	
	Connection	In	1/2" Quick connect coupling (mating half provided)	
Purge gas (N2 or CDA)		Out	1/2" Quick connect plug (mating half provided)	
	Pressure	bar.a (psig)	0.5 (6-8)	
	Light duty	sl/min	15 (typically)	
	Connection		1/4" Quick connect coupling (mating half provided)	
	L x W x H	mm (in)	860 x 607 x 344 (33.8 x 23.9 x 13.5)	932 x 607 x 624 (36.7 x 23.9 x 24.6)
Dimensions	Footprint	m² (ft²)	0.43 (4.63)	
Weight		Kg (lbs)	162 (357)	240 (529)
Noise level with exhaust silencer		dB(A)	<78	
Exhaust Back Pressure (MAX)		bar.a (psig)	1.3 (0.4)	
Lubrication	Volume	l (gal)	0.4 (0.1)	1.4 (0.4)
	Type	Hydrocarbon	SHC 629	SHC 629/Ultragrade 20
		PFPE	XTRAGRADE ADVANCED PFPE 276	XTRAGRADE ADVANCED PFPE 276\ XTRAGRADE ADVANCED PFPE 168
Pump Electrical motor rating		kW/HP	4/4.5	
Typical pump rotation speed - 50 Hz electrical supply		rev.min-1	3000	
Typical pump rotation speed - 60 Hz electrical supply			3600	
Protection grade		IP	55	
Warm-up time to pump operating temperature		min	15	
Ambient operating temperature range		°C (°F)	0 to 40 (32 to 104)	
Maximum ambient operating humidity		RH	100%	

PERFORMANCE CURVES

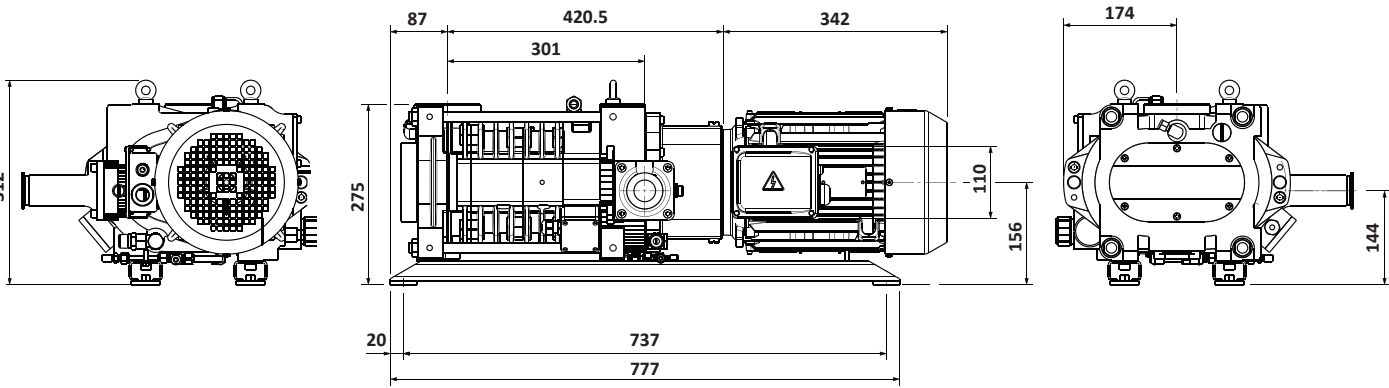


TECHNICAL SPECIFICATIONS

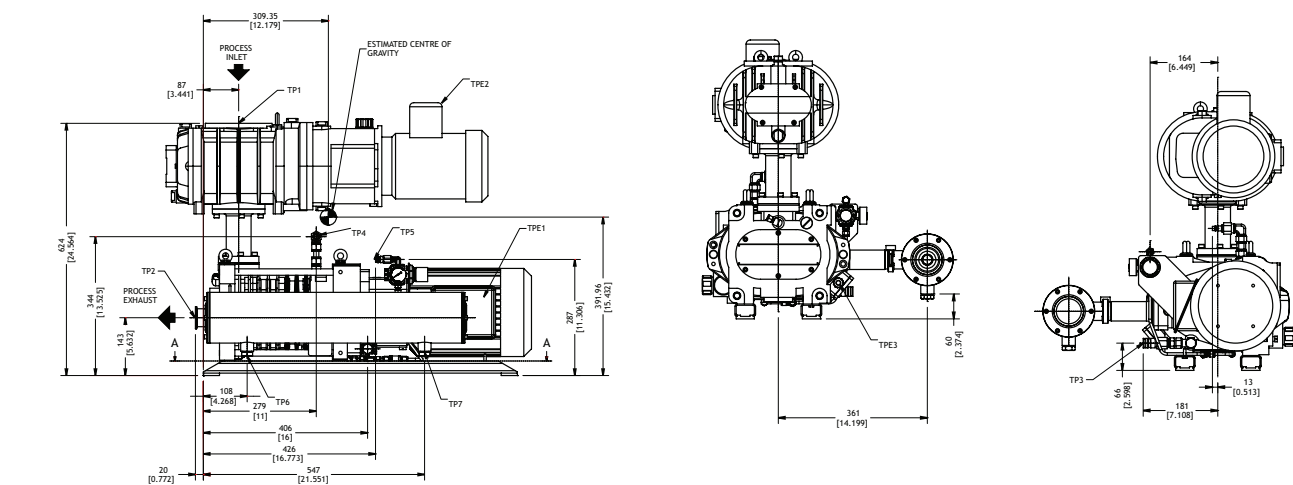
GV110



GV80



Drystar® GV80 & EH500 combination



ORDERING INFORMATION

GV110

Part number	Product description
NZA654000	GV110 400V PUMP ASSY
NZA661000	GV110 200V PUMP ASSY
NZA778000	GV110 460V PUMP ASSY

Existing GV80 accessories are compatible with the GV110

Part number	Product description
A50559000	GV80-EH250 Booster Connection Kit
A50560000	GV80-EH500A Booster Connection Kit
A50805030	GV80 Exhaust Silencer NW40, Vertical
A50805020	GV80 Silencer

Drystar® GV80

Part number	Product description
A70316934	GV80 IE4 200V, 50Hz & 200/380V, 60Hz
A70316940	GV80 IE4 380-415V, 50Hz & 230/460V, 60Hz
A70317934	GV80 FX IE4 200V, 50Hz & 200/380V, 60Hz
A70317940	GV80 FX IE4 380-415V, 50Hz & 230/460V, 60Hz
A70316935	GV80P IE4 380-415V, 50Hz & 230/460V, 60Hz
A70317935	GV80P FX IE4 380-415V, 50Hz & 230/460V, 60Hz
A70216985	GV80 Bare Shaft

SERVICE AND SUPPORT



To ensure your GV110 and GV80 pump and system maintains optimal performance and reliability, we offer a wide range of service solutions, tailored to meet your needs. From Field Service intervention to Managed Maintenance agreements, we will take care of your pump to ensure that it continues to deliver clean, consistent, efficient performance, with lower running cost and optimum total cost of ownership for it entire operating life.

Selecting original spare parts, maintenance kits and oil, means that every critical part performs as it was intended. Form, fit and function are guaranteed. Our services engineers only fit 100% genuine parts to ensure you receive the best result from each and every service.



Managed maintenance agreements

Regular scheduled maintenance can identify potential problems before they occur and plans can be structured around different levels of care. It enables cost management and will help you to avoid the risk and expense associated with unplanned downtime. Managed Maintenance let’s you focus on your business; we will take care of your maintenance.



Service at your convenience

Our highly trained service technicians carry out commissioning, vacuum health check, routine maintenance, troubleshooting and repair for many types of vacuum equipment. We invest in the tools, training and inventory to enable service in a timely, safe and consistent manner, utilising our best known methods.



Service and remanufacturing

No matter the condition of your pump our vacuum specialists can handle it. We are experts in vacuum pump maintenance and support pumps from virtually every type of application.



Publication Number: 3602 111 9 01
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