



# Harrier™ Controllers

Electronic Chemical Injection Rate Controllers



PROVEN QUALITY. LEADING TECHNOLOGY.

# Harrier™ + Chemical Injection Controllers

## Electronic Chemical Injection Rate Controllers with Remote Monitoring

The Harrier+ unlocks features and capabilities that allow you to optimize your chemical usage saving you time and money!

### How does it work?

The Harrier+ controller the injection rate via timing, cycle count or flow control. The controller:

- Uses patent pending, adaptive injection rate controls that provide accuracy of +/- 1%
  - The controllers use sensors along with Graco software to adjust to changes in the application such as well pressure or battery voltage
- Controls and monitors your system remotely with a cellular connection and web app
- Available as a standalone controller or in the power box & control panel kits



Harrier+ Controller



Monitor your Harrier+ controller right from your cell phone!

### Office or Remote Access

The Harrier+ controller includes remote connectivity, allowing you to monitor, control and calibrate your system away from your injection site via cellular or SCADA connection. You don't have to be on site – monitor your system from your cell phone!

- Operates remotely
- Receives maintenance notifications and alarms
- Generates chemical usage reports easily



Harrier+ Two Battery Control Box

## Return on Investment

### Calculate Your Savings

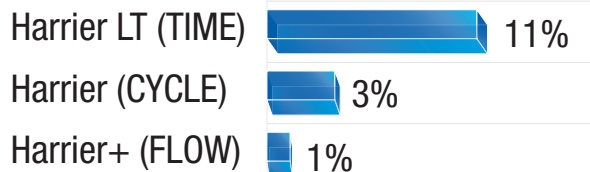
See how much you can save when you use Graco's Harrier+ Controller.

EXISTING SYSTEM		HARRIER+ SYSTEM	
Chemical Usage (GPD)	10	Chemical Usage (GPD)	10
Waste Percentage	10%	Waste Percentage	1%
Waste Per Day (gallons)	1	Waste Per Day (gallons)	0.1
Cost Per Gallon	\$20	Cost Per Gallon	\$20
Waste Per Year Cost	<b>\$7,300</b>	Waste Per Year Cost	<b>\$730</b>

**SAVINGS OVER ONE YEAR!! \$6,570**

The Pump Accuracy chart below shows how your dosing precision improves as you move up the Harrier controller product line.

### PUMP ACCURACY



# Harrier™ AC Controller

## Electronic Chemical Injection Rate Controllers

Closely control and monitor your chemical injection rate via timer and/or cycle control to help optimize your system. It's easy, efficient and productive – saving you time and money.

### Features

- Used with AC operated pumps
- Pump-mount and wall-mount option
- ETL listed for electrical safety to UL 508 and CSA 22.2 No. 14
- NEMA 4X enclosure
- Auxiliary input port
- Simple setup and control

## Technical Specifications

Input Contact	
Power Source AC	100-240 VAC - 50/60 Hz
Power Consumption	720 Watts
Cycle Input (optional)	24 VDC cycle switch
Auxiliary Input (optional)	Normally open switch
Outputs	
Pump Control Voltage	Pump Control Voltage = Power Source
Max Switching Voltage	240 VAC
Max Switching Current	5A (120 VAC) / 3A (240 VAC)
Min Switching Current	100 mA
Material and Environmental	
Protection Grade	UL/NEMA 4X
Enclosure Material	ABS + Polycarbonate
Membrane Material	Polyester
Maximum Humidity	90% Relative Humidity (non-condensing)
Operating Temperature Range	-40°F to 131°F (-40°C to 55°C)
Storage Temperature	-40°F to 176°F (-40°C to 80°C)



AC operated Harrier mounted on a Wolverine



Harrier AC Controller

## Ordering Information

### Harrier AC Models and Replacement Kits

Part No.	Description
B32691	Harrier AC Controller - Remote Mount*
B32692	Harrier AC Controller - Pump Mount*
B32695	Auxiliary Harness Kit
B32696	Harrier AC Controller Mount Kit
B32697	Harrier AC 5A Fuse Kit for 120 VAC
B32698	Harrier AC 3A Fuse Kit for 240 VAC
B32480	Cycle Count Accessory Kit for All VAC Motors**

\*Controller mount kit (B32696) included

\*\*Required for cycle control

# Technical Specifications

## Harrier+ Chemical Injection Controllers

Input Contact	
Power Source (DC) - models B32627, B32629, B32631	9 - 26 VDC
Power Source (AC) - models B32628, B32630, B32632	100 VAC to 240 VAC - 50/60 Hz
Power consumption, max load (DC)	416 Watts
Power consumption, max load (120 VAC)	600 Watts
Power consumption, max load (240 VAC)	720 Watts
Cycle Control Pressure Input	Normally open cycle switch
Remote Disable (Auxiliary) Input	Configurable active high/low for normally open or normally closed switch
Outputs	
Pump Control	Pump Control Voltage = Power Source
Voltage	Power Source
Max Switching Voltage (DC)	26 VDC
Max Switching Voltage (AC)	240 VAC
Max Switching Current (DC)	25A (For Models B32627, B32629, B32631)
Max Switching Current (AC)	5A (120 VAC), 3A (240 VAC)
Minimum Switching Capacity	100 mA @ 5 VDC
Enclosure Material	Polycarbonate + PET
Membrane Material	Polyester
Environmental	
Protection Grade	Type 1
Operating Temperature Range	-40°F to 131°F (-40°C to 55°C)
Storage Temperature	-13°F to 131°F (-25°C to 55°C)
Approvals	
Certified to CAN/CSA C22.2 No. 14 conforms to UL 508	
UL approved for Class 1 Division 2 Hazardous Locations	
CE approved for applications outside of North America	



## Ordering Information

### DC Operated Harrier+ Controller

Kit No.	Description
B32627	Harrier+ Controller, DC Power, Cellular – USA only
B32629	Harrier+ Controller, DC Power, Cellular – Global (limited use in USA)
B32631	Harrier+ Controller, DC Power, SCADA via Modbus
B32643	Harrier+ Controller, DC Power, CDMA

### AC Operated Harrier+ Controller

Kit No.	Description
B32628	Harrier+ Controller, AC Power, Cellular – USA only
B32630	Harrier+ Controller, AC Power, Cellular – Global (limited use in USA)
B32632	Harrier+ Controller, AC Power, SCADA via Modbus
B32644	Harrier+ Controller, AC Power, CDMA

### Control Box Kits (DC Powered Harrier+ controllers only)

Kit No.	Description
B32916	Harrier+ Control Box, DC Power, Cellular – USA only
B32912	Harrier+ Control Box, DC Power, Cellular – Global (limited use in USA)
B32914	Harrier+ Control Box, DC Power SCADA via Modbus
B32910	Harrier+ Control Box, DC Power, CDMA

### Control Panel Kits

Kit No.	Description
B32701	Harrier+ Global Control Panel Kit – USA only
B32624	Harrier+ Global Control Panel Kit (limited use in USA)
B32626	Harrier+ SCADA Control Panel Kit
B32625	Harrier+ CDMA Control Panel Kit

### Accessories

Kit No.	Description
B32699	Harrier+ CDMA High Gain Antenna

# Harrier™ EZ and Harrier Chemical Injection Rate Controllers

Closely control and monitor chemical use and collect critical operating information for reducing costs and improving processes. It's easy, efficient and productive – saving you time and money.

## Harrier EZ and Harrier Controllers

- Used for DC Pumps
- Control injection rates via timer or cycle count
- ETL listed for electrical safety to UL 508 and CSA 22.2 No. 14
- Simple user interface for setup and control
- Multiple inputs for system controls allow you to only run when it's necessary

## Technical Specifications

### Harrier EZ and Harrier Chemical Injection Rate Controllers

Input Contact	
Power Source	DC 9 - 26 VDC
Power Consumption	1 Watt
Outputs	
Pump Control	Pump Control Voltage = Power Source
Voltage	Pump Control Voltage = Power Source
Max Switching Voltage	26 VDC
Max Switching Current	16A (DC)
Min Switching Current	100 mA (DC)
Protection Grade	IP54 for indoors
Enclosure Material	Polycarbonate + PET
Membrane Material	Polyester
Maximum Humidity	90% Relative Humidity (non-condensing)
Operating Temperature Range	-40°F to 131°F (-40°C to 55°C)
Storage Temperature	-40°F to 176°F (-40°C to 80°C)



Harrier+ One Battery Control Box

## Ordering Information

### Harrier EZ and Harrier Controllers

Kit No.	Description
B32001	Harrier Controller
B32110	Harrier EZ Controller
B32951	Harrier EZ Control Box (12A charge controller)



Harrier EZ and Harrier Controllers



## ABOUT GRACO

### PROVEN QUALITY. LEADING TECHNOLOGY.

Founded in 1926, Graco is a world leader in fluid handling systems and components. Graco products move, measure, control, dispense and apply a wide range of fluids and viscous materials used in vehicle lubrication, commercial and industrial settings.

The company's success is based on its unwavering commitment to technical excellence, world-class manufacturing and unparalleled customer service. Working closely with qualified distributors, Graco offers systems, products and technology that set the quality standard in a wide range of fluid handling solutions. Graco provides equipment for spray finishing, protective coating, paint circulation, lubrication, and dispensing sealants and adhesives, along with power application equipment for the contractor industry. Graco's ongoing investment in fluid management and control will continue to provide innovative solutions to a diverse global market.

## GRACO LOCATIONS

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## SALES/ DISTRIBUTION/ SERVICE

Call today for product information or to request a demonstration.

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Graco Inc. is registered to I.S. EN ISO 9001

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