

# FLUORESCENT LEAK DETECTION PRODUCTS AND SYSTEM ADDITIVES FOR HVAC/R SYSTEMS



TRUSTED BY THESE INDUSTRY LEADERS:



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**THE INVENTORS OF FLUORESCENT LEAK DETECTION**

Spectronics Corporation invented fluorescent leak detection in 1955 and remains the world's leader in ultraviolet technology. The company manufactures and distributes over 1,000 different products for the HVAC/R, industrial, laboratory, automotive, biotechnology and many other markets.



**ALL SPECTROLINE® AR-GLO® FLUORESCENT DYES CAN REMAIN SAFELY IN THE SYSTEM.**

This makes it fast and easy to pinpoint leaks, confirm repairs and perform future preventive maintenance checks. **AR-GLO®** AC&R dyes are the only dyes that give you *all* these benefits:

**FLUORESCENT LEAK DETECTION: HOW IT WORKS**

**STEP 1**  
 Add dye to system and let it circulate...  
 (The dye/oil mixture escapes with the refrigerant and collects at all leak sites)

**STEP 2**  
 Scan system with a Spectrolite® leak detection lamp and see *all* leaks glow brilliantly!



**SCAN QR CODE TO VIEW VIDEO**



**UNIVERSAL (POE)**

Dyes are compatible with *all* refrigerants and lubricants



**OEM-APPROVED**

By major compressor, refrigerant, lubricant and AC&R equipment manufacturers



**CO-SOLVENT FREE**

Dyes will not impair lubricant properties, which could lead to excessive wear or damage to system components



**NSF CERTIFIED**

Registered to meet food-grade processing requirements for category codes HTX-2 and HX-2\*  
 \*Universal/POE dyes only

**SMALL-MEDIUM SIZED AC&R SYSTEMS**

- ▶ ICE MACHINES
- ▶ WINDOW UNITS
- ▶ REFRIGERATORS
- ▶ RESIDENTIAL
- ▶ COMMERCIAL

**MEDIUM-LARGE SIZED AC&R SYSTEMS**

- ▶ SUPERMARKETS
- ▶ REFRIGERATED WAREHOUSES
- ▶ FOOD & DAIRY PLANTS
- ▶ INDUSTRIAL FACILITIES



**Nervous about voiding your equipment's warranty?**

Some dyes are approved by manufacturers, and can remain safely in systems for their lifetime. It's about choosing the right dye for you. Check the dye manufacturer's specifications for an OEM approval indication.





## ALL OUR CORDLESS LEAK DETECTION LAMPS FEATURE:

a compact design for getting into tight spaces, a heavy-duty, durable lamp body and a powerful, high-intensity LED with 100,000 hour service life.



**ECONOMICAL**

25' Range  
(8 m)



3  
AAA  
BATTERIES

VIOLET  
LED

### OPX-400CS OPTIMAX™ 400

Economical, Violet Light Leak Detection Flashlight

- ▶ Provides optimal fluorescent dye response and contrast
- ▶ Power comparable to high-intensity 150-watt lamps
- ▶ 5 hours of continuous inspection time
- ▶ Works with universal/POE dyes only

Includes lanyard, belt holster and fluorescence-enhancing glasses.



**RECHARGEABLE**

25' Range  
(8 m)



Li-  
ION  
RECHARGEABLE

VIOLET  
LED

### OLX-400 OPTI-LUX™ 400

Rechargeable, Violet Light Leak Detection Flashlight

- ▶ Provides optimal fluorescent dye response and contrast
- ▶ Power comparable to high-intensity 150-watt lamps
- ▶ 4 hours of continuous inspection time between charges
- ▶ Works with universal/POE dyes only

Includes smart charging cradle with AC and DC cord sets, lanyard and fluorescence-enhancing glasses.



**TELESCOPIC**

6" Range  
(15 cm)



3  
1.5V  
BATTERIES

VIOLET  
LED

### VMP-400CS VioMAX Plus™

Telescopic, Violet Light Leak Detection Penlight Lamp

- ▶ Provides optimal fluorescent dye response and contrast
- ▶ Large, 1 inch (3 cm) pivoting mirror provides ideal viewing at any angle!
- ▶ Automatic on/off function
- ▶ Extends to a full 29 inches (74 cm) to get deep into hard-to-reach areas
- ▶ Works with universal/POE dyes only

Powered by three 1.5 volt (AG3/LR41) batteries (included).

NOTE: For most applications, our 400 Series lamps do not require fluorescence-enhancing glasses.





# EZ-Ject™ DYE INJECTION SYSTEM

Versatile, multi-dose cartridges. Injector easily overcomes system pressure. Add fluorescent dye with system off or running. Works in all AC&R systems, including high-pressure R-410a systems.

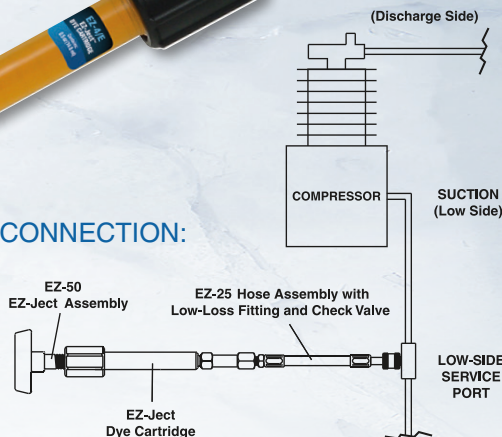


**EACH EZ-Ject™ CARTRIDGE TREATS UP TO:**

- Lubricant:** 2 gallons (8 L)
- Refrigerant:** 25 lbs (11 kg)
- Cooling:** 12 tons



## CONNECTION:



## LEAK DETECTION KIT

**ECONOMICAL**



## OPK-40EZ/E Complete EZ-Ject™ Kit

Features the **OPX-400 OPTIMAX™ 400**, economical, cordless, battery operated, violet light leak detection flashlight.

- ▶ **EZ-50** EZ-Ject™ dye injector assembly
- ▶ **EZ-25** hose/coupler with check valve, low-loss and purge fittings
- ▶ (2) **EZ-4/E** 0.5 oz (15 ml) universal/POE dye cartridges



## EZ-Ject™ DYE INJECTION KIT & CARTRIDGE



### EZ-100/ECS EZ-Ject™ Universal/POE Dye Injection Kit

Compatible with mineral oil, POE, PVE, and alkyl benzene lubricant systems.

- ▶ **EZ-50** EZ-Ject™ dye injector assembly
- ▶ **EZ-25** hose/coupler with check valve, low-loss and purge fittings
- ▶ (2) **EZ-4/E** 0.5 oz (15 ml) universal/POE dye cartridges
- ▶ **128186** R-410a adapter
- ▶ Service labels



### EZ-4/ECS EZ-Ject™ Universal/POE Dye Cartridge

0.5 oz (15 ml)

Each cartridge treats up to:

- ▶ Lubricant: 2 gallons (8 L)
- ▶ Refrigerant: 25 lbs (11 kg)
- ▶ Cooling: 12 tons



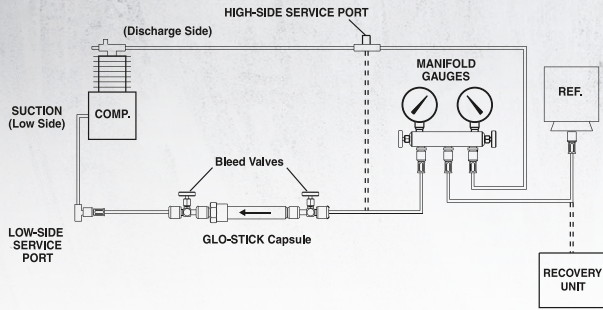


# GLO-STICK® DYE CAPSULE SYSTEM

Convenient, mess-free, single-dose capsules. Add refrigerant and fluorescent dye in one simple step. Works in all AC&R systems, including high-pressure R-410a systems.



## CONNECTION:



## AVAILABLE IN 4 SIZES/ CONCENTRATIONS.

See system capacities on back page for exact dosages.

## LEAK DETECTION KIT



### SINGLE-DOSE

## OPK-40GS/E

### Complete GLO-STICK® Kit

Features the **OPX-400 OPTIMAX™ 400**, economical, cordless, battery operated, violet light leak detection flashlight.

- ▶ **BV-50** bleed valve for attaching GLO-STICK® capsule to service hose
- ▶ **PC-0249** purge capsule
- ▶ **EZ-25** hose/coupler with check valve, low-loss and purge fittings
- ▶ (1) **GS-1/E** universal/POE GLO-STICK® dye capsule
- ▶ (2) **GS-2/E** universal/POE GLO-STICK® dye capsules
- ▶ (1) **GS-3/E** universal/POE GLO-STICK® dye capsule



## GLO-STICK® DYE CAPSULES



### GS-101/ECS

Universal/POE Dye Capsule

Treats up to 15 oz (445 ml) of lubricant or 3 lbs (1 kg) of refrigerant

### GS-1/ECS

Universal/POE Dye Capsule

Treats up to 2 qt (1.5 L) of lubricant or 5 lbs (2 kg) of refrigerant



### GS-2/ECS

Universal/POE Dye Capsule

Treats 2-3 qt (2-3 L) of lubricant or 5-10 lbs (2-5 kg) of refrigerant

### GS-3/ECS

Universal/POE Dye Capsule

Treats 3 qt-2 gal (3-8 L) of lubricant or 10-25 lbs (5-11 kg) of refrigerant

### ALSO AVAILABLE:

FOR SYSTEMS USING: Poly Vinyl Ether (PVE) lubricant

- ▶ GS-101/PVE
- ▶ GS-1/PVE
- ▶ GS-2/PVE
- ▶ GS-3/PVE





# BigEZ™ DYE INJECTION SYSTEM

Versatile, multi-dose dye cartridges. Injector easily overcomes system pressure. Add fluorescent dye with system off or running. Works in all AC&R systems, including high-pressure R-410a systems.

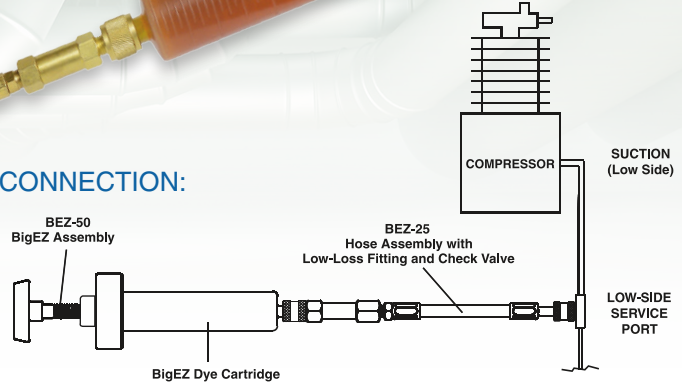


## BEZ-4/E\* CARTRIDGE TREATS UP TO:

- Lubricant: 16 gallons (61 L)
- Refrigerant: 400 lbs (181 kg)
- Cooling: 150 tons

\*For BEZ-8/E cartridge, double the amounts indicated above

### CONNECTION:



## LEAK DETECTION KITS



BATTERY OPERATED



RECHARGEABLE

### OPK-400BEZ/E Complete BigEZ™ Kit

Features the **OPX-400 OPTIMAX™ 400**, economical, cordless, battery operated, violet light leak detection flashlight.

- ▶ **BEZ-50** BigEZ™ dye injector assembly
- ▶ **BEZ-25** hose/coupler with check valve, low-loss and purge fittings
- ▶ (1) **BEZ-4/E** 4 oz (118 ml) universal/POE dye cartridge

### OLK-400BEZ/E Complete BigEZ™ Kit

Features the **OLX-400 OPTI-LUX™ 400**, rechargeable, cordless, violet light leak detection flashlight.

- ▶ **BEZ-50** BigEZ™ dye injector assembly
- ▶ **BEZ-25** hose/coupler with check valve, low-loss and purge fittings
- ▶ (1) **BEZ-4/E** 4 oz (118 ml) universal/POE dye cartridge

Features & included items (for above kits)



Fluorescence-Enhancing Glasses



Smart Charging Cradle



Cord Sets



GLO-AWAY™ Dye Cleaner



Drip Plugs (3x)



Service Labels

## BigEZ™ DYE CARTRIDGES



**BEZ-4/ECS**  
BigEZ™  
Universal/POE  
Dye Cartridge  
4 oz (118 ml)



**BEZ-8/E**  
BigEZ™  
Universal/POE  
Dye Cartridge  
8 oz (237 ml)



**BEZ-4/OL**  
BigEZ™ Oil-Less  
Dye Cartridge  
4 oz (118 ml)

## NO POURING, NO REFRIGERANT, NO SPILLS —

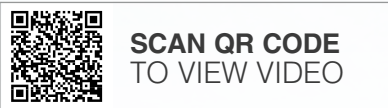
Prefilled BigEZ™ cartridges are clearly labeled with 32 or 64 calibrations so you'll introduce exactly the right amount of dye every time! When the cartridge is empty, just throw it away. A new one connects in seconds.



# COOLSEAL™ A/C LEAK SEALER

Seals pesky leaks in condensers, evaporators, O-rings and hoses. Can add years to older, out-of-warranty AC&R systems that leak small amounts of refrigerant. Works with all popular refrigerants and oils.

- ▶ Non-polymer, oil-soluble formula safe for system components and recovery equipment
- ▶ Remains safely in system to help protect against future leaks
- ▶ Can be injected with system off or running
- ▶ Available in three convenient delivery methods



## CS-100CS Cool Seal™ EZ-Ject™ Injector Kit

- ▶ **EZ-50** EZ-Ject™ injector assembly
- ▶ **CS-25** hose/coupler with check valve, low-loss and purge fittings
- ▶ (2) **CS-1** 0.5 oz (15 ml) EZ-Ject™ cartridges prefilled with Cool Seal™ A/C leak sealer



## CS-2CS Cool Seal™ BigEZ™ Cartridge

- ▶ 2 oz (60 ml) works with BigEZ™ injector
- ▶ Can also be used with EZ-Ject™ injector using **CS-50** adapter and **CS-35** hose/coupler
- ▶ Cartridge treats up to 8 tons of cooling



## CS-1CS Cool Seal™ EZ-Ject™ Replacement Cartridge

- ▶ 0.5 oz (15 ml)
- ▶ Cartridge treats up to 2 tons of cooling

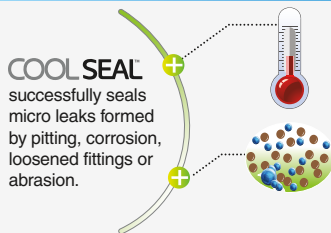


## CS-3CS Cool Seal™ Stick Capsule

- ▶ 0.5 oz (15 ml)
- ▶ Requires (2) **BV-50** bleed valves
- ▶ Capsule treats up to 2 tons of cooling

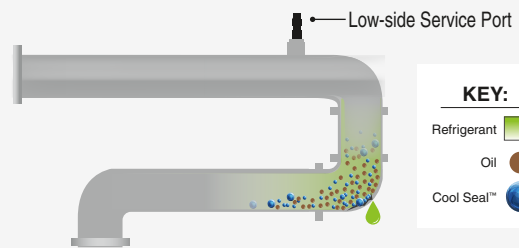
## HOW IT WORKS

Spectroline's Cool Seal is a proprietary blend of lubricants and additives.



When the sealant is exposed to an environment where there is a dramatic drop in pressure and temperature, a scab-like seal will begin to form over a leak.

Then Cool Seal continues to collect around the outer perimeter of the leak site until it is fully sealed.



# ACID-BUSTER™ ACID SCAVENGING SOLUTION

— prevents compressor burnout.

- ▶ Twice as concentrated as competitive solutions
- ▶ Works with all refrigerants and lubricants (mineral oil, polyol ester and alkyl benzene)
- ▶ Compatible with semi-hermetic, hermetic and scroll compressors
- ▶ Direct, reusable injector eliminates the need for an oil pump



## AB-100CS ACID-BUSTER™ Injection Kit Acid Scavenging Solution

- ▶ **EZ-50** EZ-Ject™ injector assembly
- ▶ **EZ-25** hose/coupler with check valve, low-loss and purge fittings
- ▶ (2) **AB-5** 0.5 oz (15 ml) EZ-Ject™ cartridges prefilled with ACID-BUSTER acid scavenging solution



## AB-5CS ACID-BUSTER™ Replacement Cartridge

0.5 oz (15 ml)



## TES-31 Tamper-Evident Straps

Protect AC&R systems against refrigerant cross-contamination and unqualified repairs. Warranty your work and ensure return business.

- ▶ Fast and easy to use
- ▶ No special tools required
- ▶ Packaged in convenient zip-lock storage bag
- ▶ Comes complete with 10 tamper-proof tie straps with unique serial numbers and matching labels



## FI-2 Universal AC&R Dye and Oil Injector

2 oz (60 ml) refillable AC&R fluid injector with control valve, hose/coupler and purge fitting.





# DOSAGE CHARTS



## NSF CERTIFIED:

All universal/POE dye cartridges and capsules are NSF Certified and registered to meet food-grade processing requirements for category codes HTX-2 and HX-2.

### EZ-Ject™ Dye Cartridges

SYSTEM TYPE ①	Small systems, e.g., ice machines, window A/C units and refrigerators	Residential systems	Light commercial and large residential systems	Commercial and light industrial
Refrigeration Oil Charge	Up to 15 oz (445 ml)	15.1 oz to 1.6 qt (445 ml to 1.5 L)	1.7 to 3.2 qt (1.6 to 3.0 L)	3.3 qt to 2 gal (3.1 to 7.6 L)
Refrigerant Charge	Up to 2.9 lb (1.3 kg)	3 to 4.9 lb (1.4 to 2.2 kg)	5 to 9.9 lb (2.3 to 4.5 kg)	10 to 25 lb (4.6 to 11.3 kg)
Tons of Cooling	Up to 1 ton	1.1 to 2 tons	2.1 to 6 tons	6.1 to 12 tons
Horsepower	Up to 1 Hp	1.1 to 4 Hp	4.1 to 10 Hp	10.1 to 25 Hp
No. Graduations on Cartridge	1	2	6	8-14

① Always use the refrigeration oil charge when it is known. Refrigerant charge, tonnage and horsepower are approximations.

### GLO-STICK® Dye Capsules

GLO-STICK® dye capsules require the use of two BV-50 bleed valves (for use on 1/4 inch flare hose fittings)

SYSTEM TYPE ①	Small systems, e.g., ice machines, window A/C units and refrigerators	Residential systems	Light commercial and large residential systems	Commercial and light industrial
Refrigeration Oil Charge	Up to 15 oz (445 ml)	15.1 oz to 1.6 qt (445 ml to 1.5 L)	1.7 to 3.2 qt (1.6 to 3.0 L)	3.3 qt to 2 gal (3.1 to 7.6 L)
Refrigerant Charge	Up to 2.9 lb (1.3 kg)	3 to 4.9 lb (1.4 to 2.2 kg)	5 to 9.9 lb (2.3 to 4.5 kg)	10 to 25 lb (4.6 to 11.3 kg)
Tons of Cooling	Up to 1 ton	1.1 to 2 tons	2.1 to 6 tons	6.1 to 12 tons
Horsepower	Up to 1 Hp	1.1 to 4 Hp	4.1 to 10 Hp	10.1 to 25 Hp

#### LUBRICANT TYPE

Universal/POE	GS-101/ECS	GS-1/ECS	GS-2/ECS	GS-3/ECS
Mineral Oil	GS-101CS	GS-1CS	GS-2CS	GS-3CS
PVE	GS-101/PVE	GS-1/PVE	GS-2/PVE	GS-3/PVE

① Always use the refrigeration oil charge when it is known. Refrigerant charge, tonnage and horsepower are approximations.

### BigEZ™ Dye Cartridges

BEZ-4 and BEZ-8 Series ①	System Size
1 line, 1/8 oz (3.8 ml)	1/2 gal (1.9 L) of lubricant, 12.5 lb (5.7 kg) of refrigerant or 5 tons of cooling

① For oil-less systems, use 1 oz (30 ml) BEZ-4/OL per 155 lb (71 kg) of refrigerant

### Cool Seal™ A/C Leak Sealer

Product Number	Delivery Method	Dosage
CS-1CS	EZ-Ject™	One cartridge treats up to 2 tons of cooling
CS-2CS	EZ-Ject™ or BigEZ™	One cartridge treats up to 8 tons of cooling
CS-3CS	GLO-STICK®	One capsule treats up to 2 tons of cooling

### ACID-BUSTER™ Acid Scavenging Solution

Product Number	Injector	Cartridge Size	Dosage ①
AB-5CS	EZ-Ject™	0.5 oz (15 ml)	4 lines, 1/8 oz (4 ml) per 8 oz (237 ml) of refrigerant oil. One cartridge treats up to 1 qt (946 ml) of oil.

① On severely acidic systems, double the dosage shown