

## Enhanced Classic Line (ECL) Mixers

PORTABLE/FIXED MOUNT MIXERS



A World Leader in Industrial Mixing since 1923, Lightnin has 90 years of unrivaled experience in industrial mixing technology, process knowledge, and technological innovation. Lightnin enjoys a global reputation for durable, long-lasting mixers, agitators, aerators, and flocculators for fluid process systems. We offer a full spectrum of impeller designs for diverse applications. In addition, we offer a worldwide service network, mixer repair, gearbox repair, and replacement parts programs. Look to Lightnin for knowledge, technology, and service excellence.

SPX FLOW, Inc. (NYSE:FLOW) is a leading manufacturer of innovative flow technologies, many of which help define the industry standard in the market segments they serve. From its headquarters in Charlotte, North Carolina, it operates a sales and support network, centers of manufacturing excellence, and advanced engineering facilities, throughout the world. Its cutting-edge flow components and process equipment portfolio includes a wide range of pumps, valves, heat exchangers, mixers, homogenizers, separators, filters, UHT, and drying technology that meet many application needs. Its expert engineering capability also makes it a premium supplier of customized solutions and complete, turn-key packages to meet the most exacting of installation demands. Incorporating many leading brands, SPX FLOW has a long history of serving the food and beverage, power and energy, and industrial market sectors. Its designs and engineered solutions help customers drive efficiency and productivity, increase quality and reliability, and meet the latest regulatory demands. In-depth understanding of applications and processes, state-of-the-art Innovation Centers, and advanced pilot/testing technology further assist in optimizing processes and reducing timescales to reliably meet production targets. To learn more about SPX FLOW capabilities, its latest technology innovations and complete service offerings, please visit [www.spxflow.com](http://www.spxflow.com).

## The highest performance, quality range of portable mixers

The Lightnin Classic mixers have consistently evolved and improved through the years. These upgrades have provided our customers with improved mixer performance and enhanced process results.

Now the Enhanced Classic Line (ECL) portable mixers give our customers an even stronger and more flexible product. Never before has there been a range of portable mixers offering so much quality and value. The ECL product range is designed to meet OSHA, CE, and ATEX standards.

### MAINTENANCE FREE OPERATION

All shaft bearings are sealed for life. Gears are synthetic grease lubricated for continuous lifetime service.

### ECL MOTOR OPTIONS:

- **Electric Motors:** A variety of enclosures, single or three phase, multiple voltage, and severe duty options are also available
- **Air Motors:** Variable speed air motors are safe for explosive environments. They are supplied with a built-in speed adjustment, air control valve and an option for non-lubricated vanes. Options include air filters, lubricators, and pressure regulators



### IMPELLER OPTIONS:

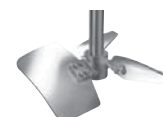
Lightnin is the world leader of impeller development. Using the latest computerized technology, Lightnin has produced a unique range of impellers dedicated to improving your specific process performance. Although the A310 is standard on ECL portables, there are many other impellers to satisfy your mixing requirements. Your Lightnin Sales Engineer will review your application and recommend the proper impeller.



**A100**



**A310-A510**



**A320**



**A200**



**R100**



**Folding Impeller**



**R500**



**Clean-Edge**

## THEORY OF OPERATION:

Maintenance free operation. All shaft bearings are sealed for life. Gears are synthetic grease lubricated for continuous lifetime service.

A mixer duty motor with standard mounting allows for many speed and enclosure variations.

Aluminum housing designed for high strength and low weight.

Unique motor coupling protects the gearing from shock torque loads and increases motor bearing life.

Two interchangeable planetary gear ratios provide more output speeds and increased process flexibility. Direct drive also available.

Large output shaft bearings for longer allowable shaft lengths and long life.

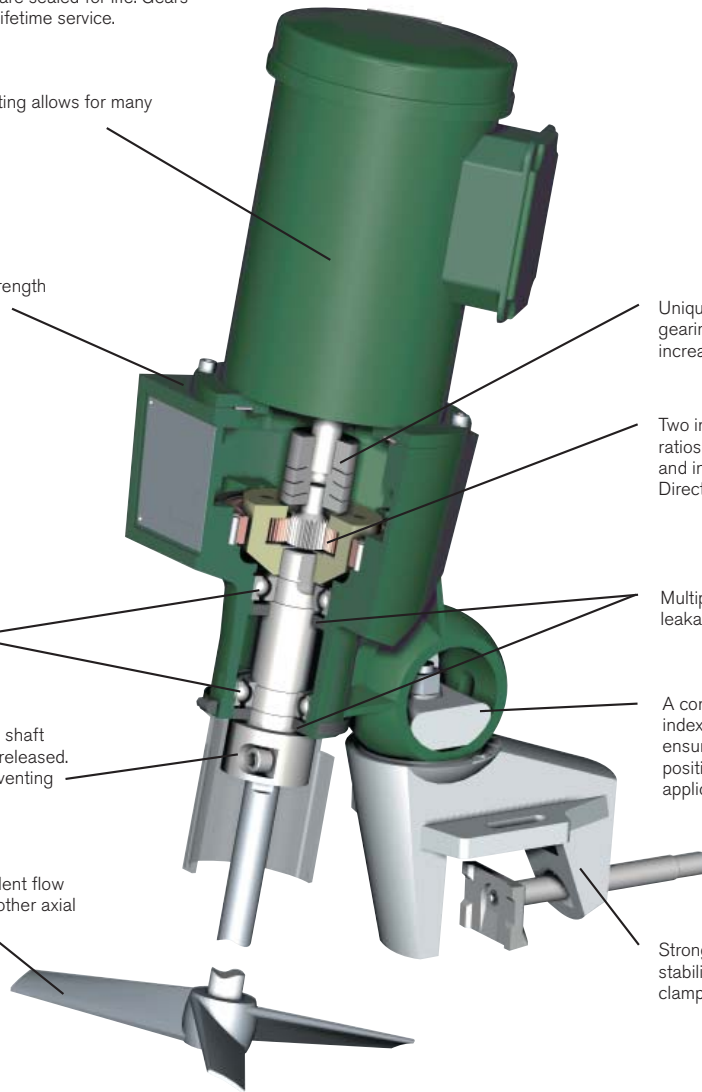
Multiple bearing seals prevent leakage of lubricant.

Safe positive chuck design prevents the shaft from disconnecting unless intentionally released. All hardware is captive to the chuck preventing loss.

A convenient clamp indexing and locking system ensures precise, repeatable positioning for your unique application.

The A310 is designed to produce excellent flow and process results at less power than other axial flow impellers.

Strong, rugged clamp with slotted stabilizing wings and four point clamping for secure hold to the tank.



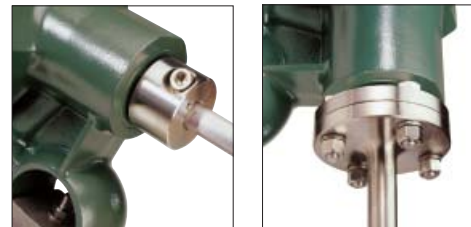
## ECL PORTABLE MOUNTING OPTIONS:

- A Finite Element Analysis designed heavy-duty clamp assembly provides maximum strength
- The cup plate option offers a more permanent mounting
- Clear index allows repeatable position
- Four point clamp action for secure hold on tank



## ECL PORTABLE OPTIONS:

- Stainless steel housing for clean applications on portable mounts
- Rigid coupling shaft attachment with male/female pilot to ensure shaft concentricity and minimize shaft run out
- Tachometer can be mounted remotely and provide a display of mixer output speed. A 4 to 20mA output signal is available for process control
- Variable speed control - VFD



## CLOSED TANK UNIT

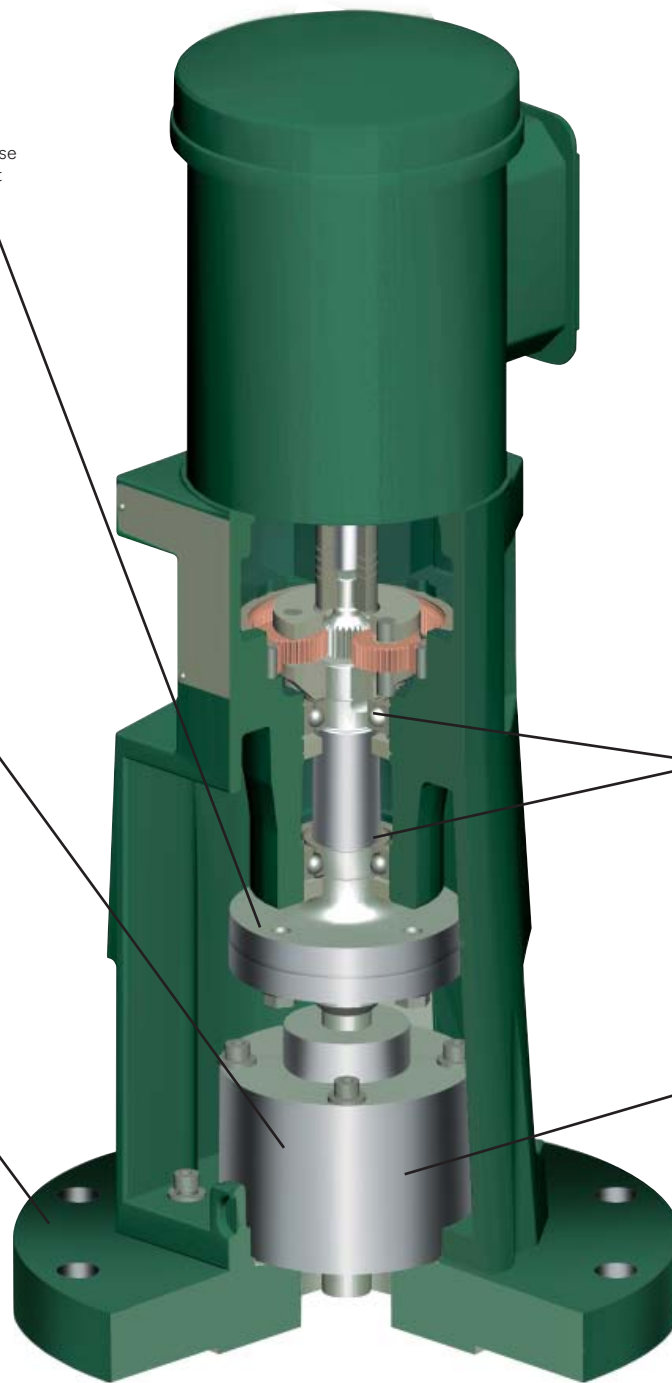
Rigid-removable coupling above seal for ease of maintenance. Piloted fit to minimize shaft run out.

Mechanical seal, stuffing box and lip seal options available.

Solid 316 stainless steel ANSI and DIN flanges as standard. Other materials available upon request.

Separate bearing support minimizes shaft deflection at seal for longer life.

All sealing devices are completely interchangeable, allowing easy field retrofit and reducing inventory.



### ECL SEALING OPTIONS:

- **Packing:** Lubricated, non-lubricated or food grade
- **Single Seal:** Dry running, lubricated or sanitary
- **Double Seal:** Dry running, lubricated or gas lift-off
- **Seal Lubricators:** Provide proper lubrication of seal faces
- **Lip Seal:** Multiple material options available



## OPEN TANK UNIT

Maintenance free operation. All shaft bearings are sealed for life. Gears are synthetic grease lubricated for continuous lifetime service.

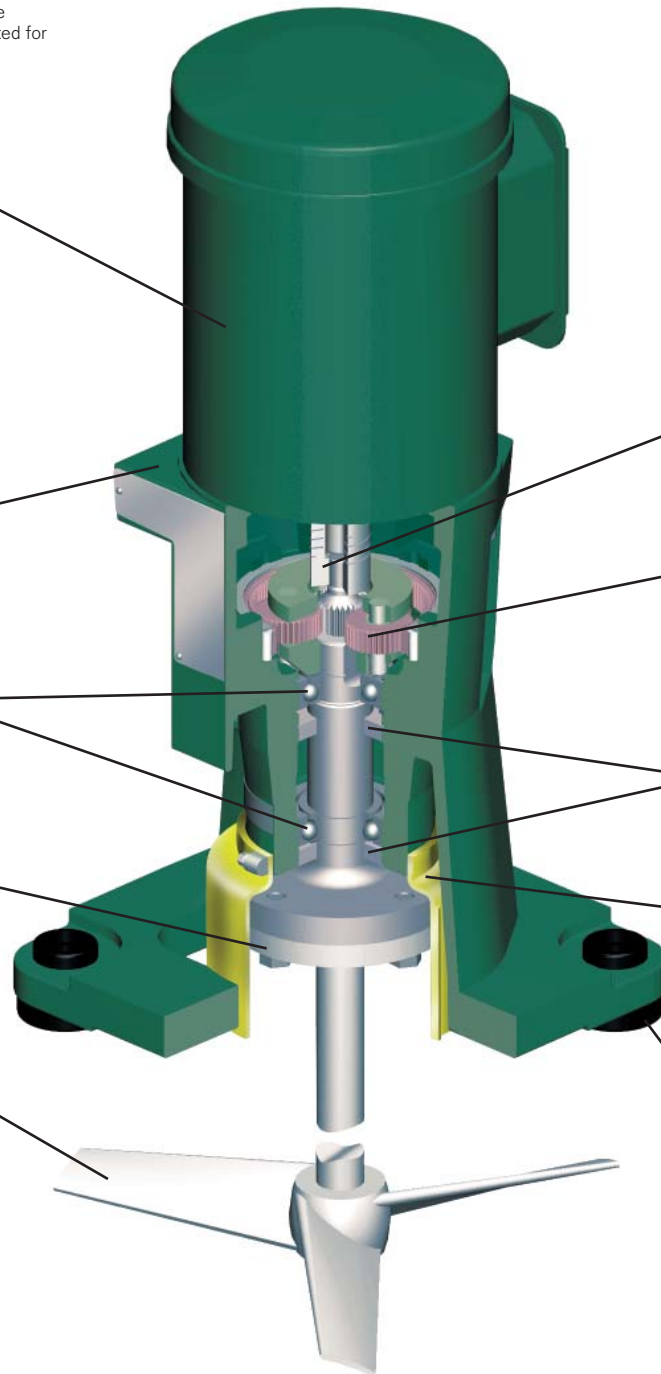
A mixer duty motor with standard mounting allows for many speed and enclosure variations.

Aluminum housing designed for high strength and low weight.

Large output shaft bearings for longer allowable shaft lengths and long life.

Rigid coupling shaft attachment with pilot fit to ensure shaft concentricity and minimize shaft run out.

The A310 is designed to produce excellent flow and process results at less power than other axial flow impellers. Other impeller types available.



Unique motor coupling protects the gearing from shock torque loads and increases motor bearing life.

Two interchangeable planetary gear ratios provide more output speeds and increased process flexibility. Direct drive also available.

Multiple bearing seals prevent leakage of lubricant.

OSHA and CE compliant coupling guard.

Isolation Mounts protect drive against high fluid forces.



**ATEX is applicable for all machine types for this product line:**

- Portable
- Fixed Mount
- Open Tank

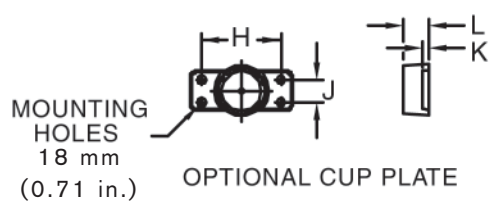
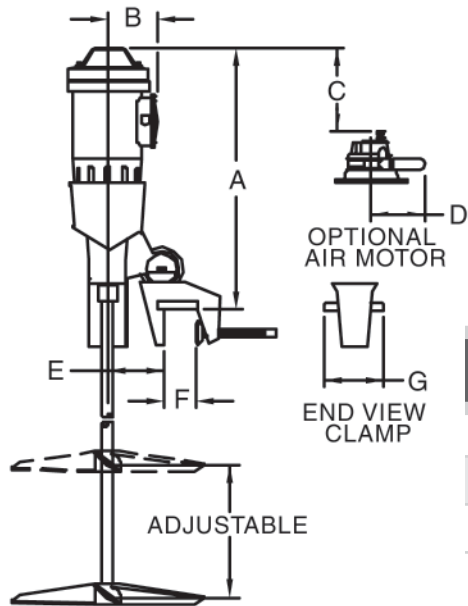
**ECL FIXED MOUNT OPTIONS:**

- Remote Tachometer provides a LCD display of mixer output speed. A 4 to 20 mA output signal is available for process control.
- Variable speed control - A variety of voltage, NEMA, and IP enclosure options are available.
- Angle riser available on open tank units for off-center positioning of mixer.
- Closed tank flange options - ANSI150lb. and DIN-PN10 solid stainless steel flange as standard. Oversized and sanitary available upon request.



With every agitator purchase, Lightnin customers receive a product that has the built-in value of years of mixing experience in almost every known fluid mixing application.

**PORTABLE ECL GEAR AND DIRECT DRIVE**



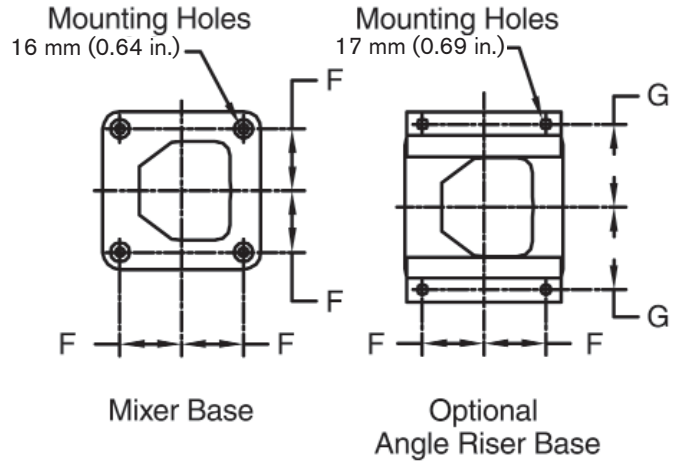
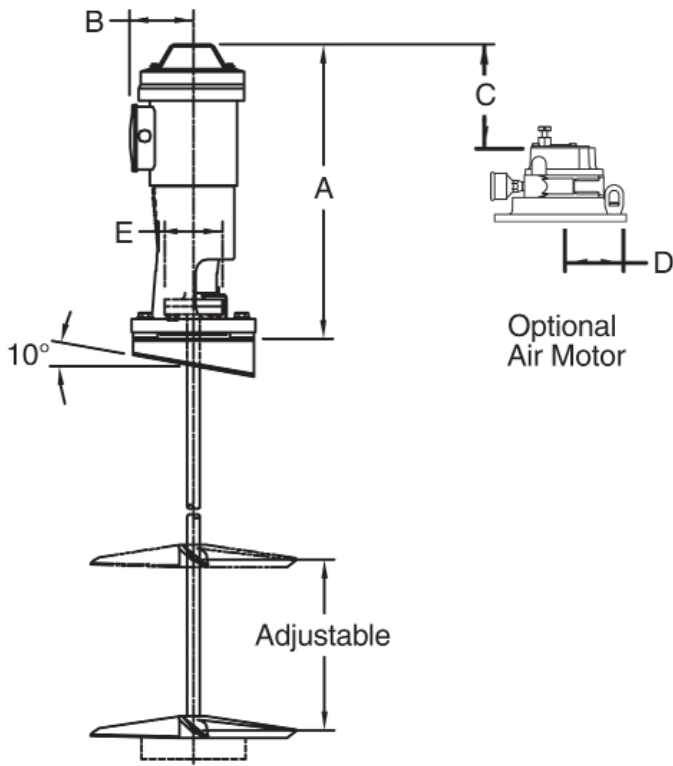
Dimensions are in inches

HP	A	B	C	D	E	F	G	H	J	K	L	APPROX. WEIGHT (lbs.)
0.25-0.5	23.2	5.0	7.4	5.8	5.0	2.9	5.3	7.0	2.0	0.5	2.2	81
0.75-1.5	24.2	5.0	6.1	6.4	5.1	3.8	5.7	8.5	2.0	0.7	2.4	122
2-3	25.2	5.0	5.9	7.0	5.7	3.8	6.9	8.5	2.5	0.7	3.0	185

Dimensions are in mm

kW	A	B	C	D	E	F	G	H	J	K	L	APPROX. WEIGHT (kg.)
0.25-0.37	550	101	151	85	127	67	134	178	51	12	87	34
0.75-1.5	650	145	185	104	130	89	143	216	51	18	102	55

**OPEN TANK ECL GEAR AND DIRECT DRIVE**



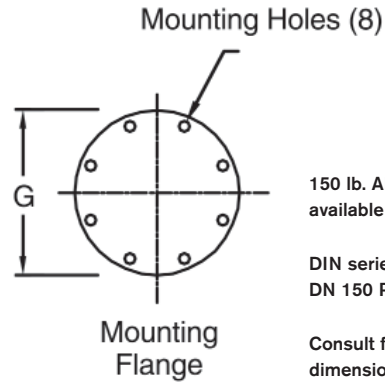
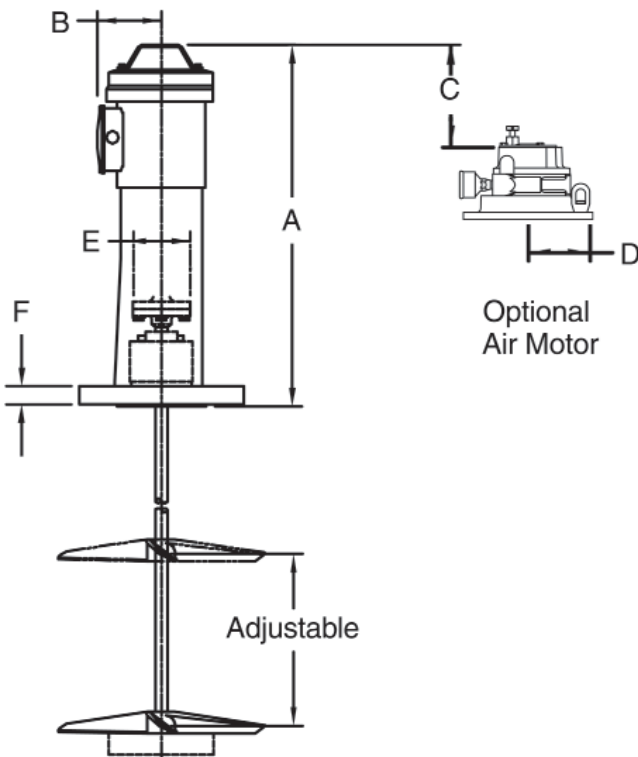
Dimensions are in inches

HP	A	B	C	D	E	F	G	APPROX. WEIGHT (lbs.)
0.25-0.5	24.4	5.3	7.4	5.8	4.8	4.0	5.5	131
0.75-1.5	25.3	5.3	6.1	6.4	4.8	4.5	5.9	182
2-5	26.2	5.3	5.9	7.0	4.8	5.5	7.6	266

Dimensions are in mm

kW	A	B	C	D	E	F	G	APPROX. WEIGHT (kg.)
0.25 - 0.37	650	101	213	85	121	102	136	63
0.75-1.5	700	145	225	104	121	114	149	86
1.1-4.0	800	196	302	104	121	140	194	124

**CLOSED TANK ECL GEAR AND DIRECT DRIVE**



Dimensions are in inches

HP	A	B	C	D	E	F	APPROX. WEIGHT (lbs.)
0.25-0.5	29.8	5.3	7.4	5.8	4.8	1.7	183
0.75-1.5	31.8	5.3	6.1	6.4	4.8	1.7	234
2-5	32.8	5.3	5.9	7.0	4.8	1.7	318

Dimensions are in mm

kW	A	B	C	D	E	F	APPROX. WEIGHT (kg.)
0.25-0.37	650	101	213	85	121	102	63
0.75-1.5	915	145	245	104	121	32	86
1.1-4.0	1000	196	305	104	121	32	144

# Enhanced Classic Line (ECL) Mixers

**PORTABLE/FIXED MOUNT  
MIXERS**

# SPXFLOW

## SPX FLOW, Inc. - Global locations

### AMERICAS

#### SPX FLOW, INC.

Rua João Daprat  
231 São Bernardo do Campo  
SP 09600-010, Brazil  
P: +55 11 2127 8278

#### SPX FLOW, INC. CHILE

SPX Chile Limitada  
Av. Ricardo Lyon 222 of. 503  
Providencia - Santiago  
Chile  
P: +56 2 8969 320

#### SPX FLOW, INC. MEXICO

APV Soluciones Integrales, SA de CV  
Amargura # 60 Primer Piso  
Col. Lomas de La Herradura  
52785 Huixquilucan  
Edo de Mexico  
P: +52 55 5293 9048

#### SPX FLOW, LLC - LIGHTNIN & PLENTY MIXERS

135 Mt. Read Blvd.  
Rochester, NY 14611  
P: (888) 649-2378 (MIX-BEST), (US and Canada) or +1 (585) 436-5550  
F: (585) 436-5589  
E: [lightnin@spxflow.com](mailto:lightnin@spxflow.com) ▪ [www.spxflow.com/lightnin](http://www.spxflow.com/lightnin)

### EMEA

#### SPX FLOW, INC.

Ocean House, Towers Business Park  
Didsbury, Manchester  
M20 2LY, UK  
P: +44 161 249 1170

#### SPX FLOW, INC. AFRICA

Unit 12B  
Growthpoint Office Park, Tonetti Street  
Midrand,  
South Africa  
P: +27 11 207 3700

#### SPX FLOW, INC.

**MIDDLE EAST FZE**  
PO Box 299745,  
Downtown Jebel Ali  
The Galleries 4  
Dubai, U.A.E.  
P: +971 4 8143400

### APAC

#### SPX FLOW, INC. PTY LTD

Suite 2.3, Quad 2  
8 Parkview Drive  
Homebush Bay NSW 2127, Australia  
P: +61 2 9763 4900

#### SPX FLOW, INC. CHINA

7F Nanfung Tower  
1568 Hua Shan Road  
Shanghai 200052 China  
P: +86 (21) 22085889

#### SPX FLOW, INC. SINGAPORE

25 International Business Park  
03-03/12 German Centre  
Singapore 609916  
P: +65 6264 4366

For other Sales locations, click  
[www.lightninmixers.com/contacts/where-to-buy/](http://www.lightninmixers.com/contacts/where-to-buy/)  
or use your SmartPhone and the QR Code.



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