

# Martindale Growlers

## General Information

When an alternating current is passed through a Growler, it sets up a magnetic flux in the iron of the armature or stator spanned by the jaws of the Growler.

As this flux passes through any coil, it induces a potential. A current will flow if the coil is short-circuited. When current flows, it sets up a magnetic field around the shorted coil which can be detected with an iron feeler. (The increased load on the Growler sometimes changes the tone of the hum; hence the name "Growler".)

Open coils can also be found; see discussion below.

Model B-1 has Adjustable Jaws with Face Length of 2-1/2".



At Left:  
Type B-1 Adjustable Bench Growler

Type B-1 has adjustable jaws 2-1/2" long. Armature capacity: 1" to 18" diameter. There are no obstructions at the ends of the jaws, thus allowing small armatures with fans, bearings, etc., to fit properly.

Type U-2 Universal Adjustable Growler may be used as both an external Growler for armatures and an Internal Growler for stators.



Adjustable Jaws. Face Length 4".

Type U-2 Growler has adjustable jaws 4" long, and may be used on armatures over 1", and on stators over 5-3/4" inside diameter.

## Foot-Switch

A Foot-Switch with an 8 ft. line cord, and a female connection is available for use with any of the Growlers. Large armatures cannot be easily rotated without shutting off the Growler current. This is conveniently done with the Foot-Switch, while the hands are left free to turn the armature.



Type F and I-X Growler

Type F and Type I-X both have built-in feeler. Type F has fixed position feeler, Type I-X feeler is adjustable.

Types F and I-X are similar in appearance, with built-in feeler as pictured, except the feeler on Model I-X is adjustable, which gives it a wider range of applications. Both have fixed jaws 2" long, and a thumb-switch.

Both can be used in stators as small as 2-3/8" inside diameter, and on armatures from 2-1/2" diameter up. The built-in feeler makes testing a one-hand operation, and is especially desirable in small stators where there isn't room for a separate feeler. The adjustable feeler on the I-X is more satisfactory where a variety of large and small armatures and stators are involved.

## How Growlers Are Used

The most common way of using a Growler is the "feeler method" in which the Growler spans a slot containing a coil, and a "feeler" of iron, such as a hack-saw blade is held about 1/4" above the slot containing the other side of the same coil.



If the coil is shorted the feeler will be pulled down to the slot and will stick and vibrate. The action is very positive and is recognized instantly.

The feeler can also be used on the same side of the coil that is spanned by the Growler, either a separate feeler or the convenient built-in feeler of Types F and I-X.

## Open Circuits

Open circuits can be detected by shorting adjacent commutator bars with a screw driver, or any other piece of metal. Good coils will spark as the bars are shorted. No sparks indicate the coil is open. Test field coils by shorting lead wires. Another way is to use a continuity tester such as the ones shown in our catalog.

Grounds can also be detected with a continuity tester.

## Specifications

Type	Length Face	Range for Armatures, Diameter	Range for Stators Diameter	Weight — Lbs.		Catalog Number	
				Net	Ship	115 V. 50/60 Hz.	230 V. 50/60 Hz.
U-2	4"	1" & up	5-3/4" & up	18-3/4	20	GRLRU2A	GRLRU2B
B-1	2-1/2"	1" - 18"	—	11-1/4	12-1/2	GRLRB1A	GRLRB1B
F	2"	2-1/2"-12"	2-3/8"-12"	3-1/2	5-1/2	GRLRFA	GRLRFB
I-X	2"	2-1/2"-12"	2-3/8"-12"	3-1/2	5-1/2	GRLRIXA	GRLRIXB
Foot Switch	—	—	—	2-1/2	3-1/2	JGRLFSA	GRLR19



MARTINDALE • PO Box 430 • Cleveland, OH 44107

Phone (216) 521-8567 • Fax Local 521-9476 / USA & Canada (800) 344-9191

E-Mail: sales@martindaleco.com

Web Site: www.martindaleco.com