

PUMPS & COUNTER CURRENT 02/14

# SAFETY VACUUM RELEASE SYSTEM



## ✓ Technical features

A safety vacuum release system (SVRS) is a system or a device that disables a pool pump's suction ability so that a body or object trapped against the suction outlet is freed. It does this by inducting air to the pump and/or powering down the pump motor when it senses a sudden vacuum increase.

An SVRS can be easily installed in any pool, spa or water feature. These devices are built in the pump motor, installed as a controller, mounted onto the suction pipe, or are as easy as a replacement of a pump pot drain plug. The SVRS must be installed in conjunction with an approved VGB drain cover per ASME/ANSI A112.19.17. Most SVRS's and ANSI/APSP-7.

Vacless Electrical Breathers provide immediate vacuum relief upon entrapment by allowing atmospheric air to rapidly fill the pump pot while simultaneously turning off the pump. Electrical units include a three-minute time delay restart and audible alert. We are introducing the 14 versions of SVRS systems identified as Breather I, Breather II, and Breather III

### Breather 1 Features

#### Sequence of Events – Breather 1 Automatic Reset

The pump starts and runs the normal filtration cycle using 110VAC, 220VAC or 3 PH power supply. Upon entrapment, the vacuum level inside the pot is elevated creating a differential pressure across the seal. Atmospheric air pushes the seal compressing a spring until the O-Ring crosses grooves that allow atmospheric air to rapidly fill the pot making the pump loose prime quickly freeing the entrapment. The entire travel of the seal occurs within milliseconds and after the entrapment is freed the seal automatically springs back to normal operating position for re-priming.

### Breather 2 Features

#### Sequence of Events – Breather 2 Manual Reset

The pump starts and runs the normal filtration cycle using 110VAC, 220VAC or 3 PH power supply. Upon entrapment, the vacuum level inside the pot is elevated creating a differential pressure across the seal. Atmospheric air pushes the seal compressing a

spring until the O-Ring crosses grooves that allow atmospheric air to rapidly fill the pot making the pump loose prime quickly freeing the entrapment. The entire travel of the seal occurs within milliseconds and after the entrapment is freed the seal will remain in a locked open position until it is manually pulled back to normal operating position for re-priming. Unit may allow water to be released through air channels from gravity fed water pressure when locked in the open position. Unit should be manually reset upon release of an entrapment.

### Breather 3 Features

#### Sequence of Events – Breather 3 Electrical Automatic or Manual reset

The pump starts and runs the normal filtration cycle using 110VAC, 220VAC or 3 PH power supply. After 15 seconds, utilizing a delay relay, a 5-10V DC circuit becomes energized. Upon entrapment, the vacuum level inside the pot is elevated creating a differential pressure across the seal. Atmospheric air pushes the seal compressing a spring until the O-Ring crosses grooves that allow atmospheric air to rapidly fill the pot making the pump loose prime quickly freeing the entrapment. The entire travel of seal occurs within milliseconds causing the shoulder to strike a pin plunger of a snap acting normally closed electrical switch to the open position. The plunger will spring back momentarily to normal operating condition. As the plunger is depressed, the 28V DC control circuit becomes open and causes a normally closed switch to open and turn the pump off. To prevent false shutdown of the pump during start-up surges the 5-10V DC control circuit is equipped with a delay relay. This relay is responsible for postponing the energizing of the 5-10V DC transformer and precludes switching off the pump even if the plunger is depressed.

MODEL	TYPE	PORT POSITION	PACKING	WEIGHT kg	VOLUME m <sup>3</sup>
<b>Breather 1 - Automatic reset</b>					
SVRS 10	Standard	Centre port	1	-	-
SVRS 11	Standard	Offset port	1	-	-
SVRS 10ADJ	Adjustable	Centre port	1	-	-
SVRS 11ADJ	Adjustable	Offset port	1	-	-
<b>Breather 2 - Manual reset</b>					
SVRS 20	Standard	Centre port	1	-	-
SVRS 21	Standard	Offset port	1	-	-
SVRS 20ADJ	Adjustable	Centre port	1	-	-
SVRS 21ADJ	Adjustable	Offset port	1	-	-
<b>Breather 3 - Electrical Pump Shut-off, Automatic</b>					
SVRS 30	Standard	Centre port	1	-	-
SVRS 30-A	Standard	Centre port with alarm	1	-	-
SVRS 31	Standard	Offset port	1	-	-
SVRS 30ADJ	Adjustable	Centre port	1	-	-
SVRS 30ADJ-A	Adjustable	Centre port with alarm	1	-	-
SVRS 31ADJ	Adjustable	Offset port	1	-	-
<b>ACCESSORIES</b>					
VAC 55		Maintenance Kit	1	-	-
VG 15		Vacuum Gauge	1	-	-
FIT 10		Elbow	1	-	-
FIT 20		Swivel Extension	1	-	-



SVRS-10



SVRS-30



SVRS-20ADJ



SVRS-20



SVRS-10ADJ



SVRS-30ADJ



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