

# BA-SF6 PORTABLE SF6 GAS SYSTEMS

Baron USA SF6 gas units are designed for efficient removal, purification, storage and recharging of SF6 gas used in circuit breakers and other switchgear. SF6 gas is pumped using an **oil-less compressor** system to prevent oil contamination of the gas. Gas liquefaction is achieved by pressurization thereby **eliminating** the need for **refrigeration equipment**. Gas recovery over 99% is achievable. Baron SF6 gas systems utilize **replaceable filters** to remove particulate, moisture and decomposition products. Filter housings are easy to open, and the media is easy to change.

These systems employ **high quality vacuum** pumping systems for evacuation of air from the reclaimer and electrical apparatus. Automatic systems are controlled by a compact **programmable logic controller**. Equipment functions are controlled by the operator via simple pushbutton controls.

Functions can be performed through single button operation or each component can be controlled manually. **The graphic flow diagram** on the central control enclosure provides “at-a-glance” status and mode information of the reclaimer.



Arcturus Model with Optional Generator

## STANDARD FUNCTIONS:

- High vacuum pump evacuation of air from the electrical apparatus and the reclaimer
- SF6 gas removal from the electrical apparatus
- Venting of vacuum in the electrical apparatus through the reclaimer
- On-board SF6 storage
- On-board purification of SF6
- SF6 gas recharging of the electrical apparatus
- Transfer of SF6 to and from standard cylinders
- Pull SF6 out of filters for media change and pull vacuum on filters after media change
- Pump all SF6 from on-board storage to empty cart

## PROVIDED COMPONENTS:

- Vacuum Pump: 2-stage, air-cooled, rotary vane high vacuum pumps are standard; upgrade to dry screw vacuum pump is available
- Compressor: oil-less, dry running, hermetically sealed piston gas compressor
- Boost Compressor: dry running, scroll pump for up to 0.02 Torr ultimate vacuum on SF6 evacuation
- Filtration: to remove particulate, moisture and decomposition products
- Storage: DOT bulk on-board SF6 storage with SF6 weight scale
- Evaporator / re-heater
- Inline dewpoint monitor available



| <b>POLLUX Model</b>   | <b>BA - SF 6 - 4 . 9 - 3 3 - *</b>                              |
|---|---|
| Compressor m <sup>3</sup> h <sup>-1</sup> (ft <sup>3</sup> h <sup>-1</sup> / cfm)   | 6.9 (244 / 4.1); (2.2 kW / 3 HP)                                |
| Scroll/Boost m <sup>3</sup> h <sup>-1</sup> (ft <sup>3</sup> h <sup>-1</sup> / cfm) | 14.5 (512 / 8.5); (0.5 kW / 0.8 HP)                             |
| Vacuum Pump m <sup>3</sup> h <sup>-1</sup> (cfm)                                    | 55 (32.5); (2.2 kW / 3 HP)                                      |
| Storage (lbs.)  | 60-500 lbs.   |
| Minutes to recover 150 lbs. gas @ 130.5 psig (10 bar abs) with 5m (16') hose = 138  |   |
| <b>ARCTURUS Model</b>   | <b>BA - SF 6 - 1 0 . 1 2 - 5 3 - * (rental available)</b>       |
| Compressor m <sup>3</sup> h <sup>-1</sup> (ft <sup>3</sup> h <sup>-1</sup> / cfm)   | 16.1 (568 / 9.5); (4 kW / 5.5 HP)                               |
| Scroll/Boost m <sup>3</sup> h <sup>-1</sup> (ft <sup>3</sup> h <sup>-1</sup> / cfm) | 20 (708 / 11.8); (0.5 kW / 0.8 HP)                              |
| Vacuum Pump m <sup>3</sup> h <sup>-1</sup> (cfm)                                    | 90 (53)<br>Trivac (2.2 kW / 3 HP)                               |
| Storage (lbs.)  | 500 lbs.  |
| Minutes to recover 150 lbs. gas @ 130.5 psig (10 bar abs) with 5m (16') hose = 65   |   |
| <b>BETELGEUSE Model</b>   | <b>BA - SF 6 - 2 4 . 1 2 - 1 1 7 - *</b>                        |
| Compressor m <sup>3</sup> h <sup>-1</sup> (ft <sup>3</sup> h <sup>-1</sup> / cfm)   | 40.4 (1,426 / 23.8); (9 kW / 12 HP)                             |
| Scroll/Boost m <sup>3</sup> h <sup>-1</sup> (ft <sup>3</sup> h <sup>-1</sup> / cfm) | 20 (708 / 11.8); (0.5 kW / 0.8 HP) <i>(Upgradeable to dual)</i> |
| Vacuum Pump m <sup>3</sup> h <sup>-1</sup> (cfm)                                    | 200 (117); (4 kW / 5.5 HP)                                      |
| Storage (lbs.)  | 1,000 – 2,000 lbs.  |
| Minutes to recover 150 lbs. gas @ 130.5 psig (10 bar abs) with 5m (16') hose = 53   |   |
| <b>ANTARES Model</b>  | <b>BA - SF 6 - 4 0 . 2 4 - 1 1 7 - *</b>                        |
| Compressor m <sup>3</sup> h <sup>-1</sup> (ft <sup>3</sup> h <sup>-1</sup> / cfm)   | 67.3 (2,376 / 39.6); (18 Kw / 24 hp)                            |
| Scroll/Boost m <sup>3</sup> h <sup>-1</sup> (ft <sup>3</sup> h <sup>-1</sup> / cfm) | 20 (708 / 11.8); (0.5 kW / 0.8 HP) <i>(Upgradeable to dual)</i> |
| Vacuum Pump m <sup>3</sup> h <sup>-1</sup> (cfm)                                    | 200 (117); (4 kW / 5.5 HP)                                      |
| Storage (lbs.)  | ≥ 2,000 lbs.  |
| Minutes to recover 150 lbs. gas @ 130.5 psig (10 bar abs) with 5m (16') hose = 47   |   |

- 1) Compressors pumping speeds based on starting suction pressure of ≥ 30 psig (3 bar abs)
- 2) \* is storage tank size
  - a) DOT cylinders available for 115 lbs. storage and below
  - b) DOT bulk tanks available for 300, 500, 1,000, 1,200, 2,000 and 2,500 lbs. storage

