

# SHX – SF<sub>6</sub> recovery series



Sulphur Hexafluoride (SF<sub>6</sub>) is a compound that has a unique combination of properties: -

- Chemical Inertness
- Thermal Stability
- Non-toxicity
- Excellent Heat Transfer
- Non-flammability
- High dielectric strength
- Non-corrosive
- Ability to regenerate

that have seen it applied in a wide variety of industries, amongst others: -

- Magnesium Casting
- Aluminum Degassing
- Leak Detection
- Electrical Components
- Particle Accelerators

In the electrical industry, the gas is used primarily in circuit breakers, puffer breakers (where SF<sub>6</sub> used in place of air, oil or vacuum), switches and gas insulated transmission lines. SF<sub>6</sub> does have several disadvantages that are becoming more and more critical to an environmentally-aware population.

Sulphur Hexafluoride is a fully fluorinated compound (FFC). Since FFC's have atmospheric lifetimes of up to 50,000 years, these potent greenhouse gases could contribute significantly and, essentially, permanently to global warming if emissions continue to grow. If CO<sub>2</sub> has a global warming potential of 1, then SF<sub>6</sub> has a global warming potential some 25,000 higher. Additionally, the gas does breakdown under certain conditions, the products of which can be hazardous. Finally, the cost of buying the gas is high.



The SHX-series of SF<sub>6</sub> recovery units is designed to minimise the impact of these by means of the following: -

- **Greenhouse gas reduction** – through transfer of the SF<sub>6</sub> from its current housing to onboard or external storage cylinders the gas does not need to be vented into the atmosphere.
- **By-product removal** – by use of suitably designed filters and scrubbers it is possible to remove hazardous contaminants from the SF<sub>6</sub> gas.
- **Cost reduction** – by efficiently recycling the gas through the SHX recovery unit it

is possible to reuse the existing SF<sub>6</sub> gas minimising the requirement of purchasing new gas.

## Typical specification

- Water removal down to 10 PPM or less
- Particulate removal to less than 0.1µ
- Equipment vacuum to below 1 Torr
- Recovery to better than 99.8%



## Features

- Oil-less or oil-free compressors
- Onboard or external storage of liquefied SF<sub>6</sub>
- Mobile, static or hand-cart
- Wide range of accessories
- Comprehensive test equipment option

Designation	Code	Description
Series	SHX	
Storage capacity	40	40-lb cylinder
	100	100-lb cylinder
	200	2 x 100-lb cylinders
	300	3 x 100-lb cylinders
	1000	1000-lb tank
Type	2000	2000-lb tank
	M	Mobile, casters
	T	Mobile, trailer
	S	Static, skid-mount
	H	Hand-cart

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Voltage	120	120V, 60Hz, 1-phase
	220	220V, 50Hz, 1-phase
	380	380V, 50Hz, 3-phase
	460	460V, 60Hz, 3-phase

Not all options are available on all models.

Example: SHX-40-H-220 is a hand-cart version with one 40-lb storage cylinder operating on 220V single-phase supply.

## Accessories and test equipment

Systems can be supplied with hoses, power cables, inline hygrometer and weighing scales. Gauging can be digital or analogue. Operating voltage can be 220V (50/60 Hz), 380V (50 Hz), 415V (50 Hz), 460V (60 Hz) or 575V (60 Hz)

Optional accessories include

- Contamination detection
- Leak detectors
- Electronic moisture measurement
- External scrubbing systems for heavily contaminated gas

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