

Sioux EN-Series

**All-Electric
Extra Heavy Duty
Industrial Steam Cleaners
and Pressure Washers**



Model EN-270-H4-3000-XP



When Performance and Reliability are Top Priorities... Sioux equipment is the answer.

Clean Air Assurance

Sioux's All-Electric steam cleaners, pressure washers and combination cleaners are ideal for indoor/outdoor use, and in potentially hazardous environments. Unlike fuel-fired washers, Sioux's All-Electric line produces ZERO EMISSIONS, meaning no fumes, no exhaust, and no open flames. This makes our cleaners well-suited for indoor applications and enclosed spaces where air quality is a concern.

Powerful, Non-Stop Cleaning Capability

You can operate Sioux All-Electric cleaners continuously without a decrease in discharge water temperature. Sioux uses an immersion heater design in which water is heated as it passes through a heating vessel. No preheating or recovery time is required which means hot water is available within a few minutes (no time is wasted waiting for a large storage reservoir of heat transfer fluid to heat). The Sioux design assures a constant discharge water temperature so cleaning effectiveness is not compromised.

Easy to Install and Operate

Our All-Electric cleaners are designed with a minimal number of controls and moving parts, making them simple to operate and easy to service. Our All-Electric line makes set-up easy, requiring only an electrical hookup and a water supply. Our conservative design ensures that components do not operate into their service factor, and we use over-sized components that operate below full capacity, resulting in longer, trouble-free operation. Sioux maintains a full-service Parts Department and a Technical Service staff to provide support.

All-Electric Steam Cleaners

Are ideal for melting grease and oil, as well as sterilizing, disinfecting, degreasing and degasing. Low pressure saturated steam is great for degreasing and preparing surfaces before painting or other treatments. Steam also flushes away chemicals and poisons, dissolves resins, paraffin and tars, de-ices, and kills algae and mildew.

All-Electric Hot Pressure Washers

Produce high pressure hot water to blast away grime, encrusted dirt and oily films. High pressure hot water greatly increases the cleaning power of detergents and chemicals. Cold pressure wash is available for rinsing by switching off the heating element.

Explosion-Proof Cleaners Specially Designed for Hazardous Locations

Sioux's Explosion-Proof cleaners are rugged, durable cleaners designed for use in hazardous environments, where safety is critical. These cleaners feature explosion-proof components, and a heavy-duty sealed cast aluminum enclosure with galvanized steel conduit. Explosion-Proof construction is available on Sioux's entire line of All-Electric steam cleaners, hot/cold pressure washers and combination cleaners.

All models with the explosion-proof option meet Class I, Division 1 and 2, Group D.

Safety

All standard EN-Series (240, 380, and 480 volt) All-Electric machines meet the following recognized standards for safety and performance:

- OSHA regulation 1910.399 requiring electrical equipment be third-party certified for safety by a Nationally Recognized Testing Laboratory
- Underwriters Laboratory Standard for Safety for High-Pressure Cleaning Machines, UL 1776
- Canadian Standards Association Standard for Safety for Commercial/Industrial Pressure Washers and Steam Cleaners, CAN/CSA C22.2 #68-92
- National Electric Code (NEC) and Canadian Electric Code (CEC)
- Cleaning Equipment Trade Association (CETA) Performance Certified



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Additional standards for explosion-proof models:

- Underwriters Laboratory Standard for Safety for High-Pressure Cleaning Machines, UL 1203
- Canadian Standards Association Standard for Safety for Commercial/Industrial Pressure Washers and Steam Cleaners, CAN/CSA C22.2 #30-92
- Sioux regularly designs and builds custom equipment to a wide range of additional worldwide codes and standards. Call for further details.



Meets CSA, UL, NEC, CEC, OSHA

DEFINITION OF HAZARDOUS AREA CLASSIFICATIONS:

Class I Flammable Gases or Vapors
Division 1 Concentrations of Gases or Vapors exist under normal operating conditions
Division 2 Concentration of Gases or Vapors are normally prevented
Group C Atmospheres such as Cyclopropane, Ethyl Ether, Ethylene, or gases or vapors equivalent in hazard.
Group D Atmospheres such as Acetone, Alcohol, Ammonia, Benzene, Benzol, Butane, Gasoline, Hexane, Lacquer solvents, Naphtha, Natural Gas, Propane, or gases or vapors equivalent in hazard.

Class II Explosive Dusts
Division 1 Explosive dusts exist under normal operating conditions.
Division 2 Explosive dusts are normally prevented.
Group E Atmospheres containing metal dust and other combustible dusts including aluminum, magnesium, and their commercial alloys, and other metals of similarly hazardous characteristics.
Note: Not appropriate for atmospheres containing Uranium, Thorium, or Zirconium dust.
Group F Carbon black, charcoal, coal, or coke and similar materials.

Consider these Benefits...

Electrical system includes water-tight NEMA 4 enclosures, internal branch circuit fusing and components that meet NEC standards. Motor starters have thermal protection, and switches and indicator lights are water-tight.

Heating element is constructed of Incoloy® sheathed element rods, enclosed in a hydrostatically-tested housing. The **flanged heating element** is used on all H4 cleaners. H8 cleaners are equipped with the patented **encapsulated heating element** to reduce weight and offer better stability.

Patented SCR advanced temperature control system (optional) allows users to select an exact temperature for optimum cleaning efficiency. This system maintains the discharge temperature to within 1°F regardless of incoming water temperature increases due to seasonality, daily fluctuations, solar heat gain on water supply tank, ambient temperature changes, etc. System includes a digital readout display module with up and down arrow keys for easily adjusting the operating temperature.

Cleaning nozzles on steam cleaners include one brass round steam nozzle and one stainless steel fan nozzle. Hot/cold pressure washers include three stainless steel wash tips. Combination cleaners include one brass round steam nozzle, one stainless steel fan nozzle and three stainless steel wash tips.

Hose reel (optional) provides convenient hose storage. Reel attaches to standard bracket furnished on all cleaners.

Powder coat paint provides a durable, long lasting finish.

Detergent delivery system includes detergent injector or a detergent metering valve.



Model EN-240-H8-3000

Frame design allows convenient access to internal components for fast and easy maintenance, and superior cooling of components during operation.

- Frames are the most rugged in the industry. Heavy-duty welded steel construction offers years of trouble-free service.
- Components are protected within the frame.
- Lifting bar has dual lifting eyes to provide balanced hoisting for increased user safety.
- Heavy-duty gun, hose and power cord racks provide safe, convenient storage; protect these components from damage, and eliminate a tripping hazard.
- Mounting options include casters, skid or stationary, depending on your application.



320°F steam option is available on all H8 cleaners to provide the benefits of pressure washing and steam cleaning in one unit.

Stainless steel inlet water float tank is standard on all steam cleaners and H8 cleaners to minimize rust, and includes a valve to prevent overflow.

Machine disconnect switch (optional) allows users to shut off power at the machine for safer servicing.

Electric motor is totally enclosed, fan cooled with thermal overload protection.

Shut-off gun stops water or steam discharge when the trigger is released. This feature increases operator safety and reduces energy and water usage. Shut-off guns are standard on pressure washers and combination units. An optional shut-off gun is available for steam cleaners.

Water pumps are a ceramic multi-plunger type with forged bronze heads, positive displacement, and are oil-bath lubricated with stainless steel valves. Pump is V-belt driven.

Water system features an anti-siphoning valve to prevent detergent from getting into the water supply. System includes fine mesh strainers, and replaceable detergent and water lines for easy servicing.

Additional Standard Features

- High temperature limit switch, pressure relief valve, and water flow switch provided for operator safety.
- 50' discharge hose
- Glycerin-filled pressure and temperature gauges provide stable readings.

Accessories Available to Customize Your Cleaner

The following accessories can be ordered on any Sioux All-Electric cleaner, unless otherwise specified.

Optional Accessories

Walters™ Heavy-Duty Steam Gun — Rated to 1500 PSI (103 BAR) and 450°F (232°C). Toughest gun in the industry, designed to withstand the most severe conditions. See *Walter's SteamGun* flyer for complete details.

Alternate Electricals — Units are engineered to operate on voltage and frequency other than listed standards. Consult factory. Factory installation.

Shutdown Timer — Stops unit to prevent damage to pump after a set time if left in bypass mode, to ensure long equipment life and to prevent overheating. Factory installed.

Hour Meter — Records operating time. Electrically operated. Factory installation.

Wheels — 4"x16" with semi-pneumatic tires. Factory installation.

Machine Disconnect Switch — Factory installation.

Internal Circuit Breakers (in place of standard fuses) — Factory installation.

Stainless Steel Fan Nozzle — For all steam cleaners and combination units, available in 2" or 3" fan pattern.

Hose Reel — Manual crank rewind.

Steam Cleaner, Hot/Cold Pressure Washer Ratings

60 Hz - Steam Cleaner Ratings (480 volt models are standard)

Model	Flow		Temperature		Pressure		Heat Input		Operating Current* (Amps)
	GPM	LPM	°F	°C	PSI	BAR	BTU/HR	KW	
EN-55-S	0.9	3.4	320	160	100	6.9	130,000	38	49
EN-90-S	1.5	5.7	320	160	100	6.9	200,000	60	85
EN-115-S	1.9	7.2	320	160	100	6.9	260,000	76	95
EN-170-S	2.8	10.6	320	160	100	6.9	390,000	114	139
EN-230-S	3.8	14.4	320	160	100	6.9	520,000	152	188

*Based on 480/3/60 electricals. Contact factory for other electricals.

60 Hz - Hot/Cold Pressure Washer Ratings (480 volt models are standard)

Model	Flow		Temperature		Pressure		Heat Input		Operating Current* (Amps)
	GPM	LPM	°F	°C	PSI	BAR	BTU/HR	KW	
EN-140-H4-1200	2.5	9.5	142	61	1200	82.8	100,000	30	40
EN-175-H4-1200	3.5	13.2	134	57	1200	82.8	130,000	38	51
EN-270-H4-1200	6.0	22.7	128	53	1200	82.8	200,000	60	81
EN-345-H4-1200	8.0	30.3	125	52	1200	82.8	260,000	76	103
EN-140-H4-1800	2.5	9.5	142	61	1800	124.0	100,000	30	42
EN-175-H4-1800	3.5	13.2	134	57	1800	124.0	130,000	38	54
EN-270-H4-1800	6.0	22.7	128	53	1800	124.0	200,000	60	84
EN-345-H4-1800	8.0	30.3	125	52	1800	124.0	260,000	76	103
EN-140-H4-3000	2.5	9.5	142	61	3000	206.8	100,000	30	44
EN-175-H4-3000	3.5	13.2	134	57	3000	206.8	130,000	38	57
EN-270-H4-3000	5.0	18.9	142	61	3000	206.8	200,000	60	87
EN-345-H4-3000	7.0	26.5	134	57	3000	206.8	260,000	76	112
EN-120-H8-1200	2.0	7.6	190	88	1200	82.8	130,000	38	50
EN-240-H8-1200	3.6	13.6	204	96	1200	82.8	260,000	76	98
EN-120-H8-1800	2.0	7.6	190	88	1800	124.0	130,000	38	51
EN-240-H8-1800	4.0	15.1	190	88	1800	124.0	260,000	76	101
EN-120-H8-3000	2.0	7.6	190	88	3000	206.8	130,000	38	54
EN-240-H8-3000	4.0	15.1	190	88	3000	206.8	260,000	76	107

*Based on 480/3/60 electricals. Contact factory for other electricals.

50 Hz - Steam Cleaner Ratings (380, 415 and 440 volt models are standard)

Model	Flow		Temperature		Pressure		Heat Input		Operating Current* (Amps)
	GPM	LPM	°F	°C	PSI	BAR	BTU/HR	KW	
EN-50-S	0.8	3.0	317	158	100	6.9	100,000	30	47
EN-100-S	1.6	6.1	317	158	100	6.9	200,000	60	94
EN-150-S	2.4	9.1	317	158	100	6.9	300,000	90	140
EN-200-S	3.2	12.1	317	158	100	6.9	400,000	120	185

*Based on 380/3/50 electricals. Contact factory for other electricals.

50 Hz - Hot/Cold Pressure Washer Ratings (380, 415 and 440 volt models are standard)

Model	Flow		Temperature		Pressure		Heat Input		Operating Current* (Amps)
	GPM	LPM	°F	°C	PSI	BAR	BTU/HR	KW	
EN-150-H4-1200	2.5	9.5	142	61	1200	82.8	100,000	30	53
EN-300-H4-1200	5.0	18.9	142	61	1200	82.8	200,000	60	109
EN-150-H4-1800	2.5	9.5	142	61	1800	124.0	100,000	30	55
EN-300-H4-1800	5.0	18.9	142	61	1800	124.0	200,000	60	113
EN-150-H4-3000	2.5	9.5	142	61	3000	206.8	100,000	30	58
EN-300-H4-3000	5.0	18.9	142	61	3000	206.8	200,000	60	117
EN-150-H8-1200	2.5	9.5	142	61	1200	82.8	100,000	30	53
EN-300-H8-1200	5.0	18.9	142	61	1200	82.8	200,000	60	109
EN-150-H8-1800	2.5	9.5	142	61	1800	124.0	100,000	30	55
EN-300-H8-1800	5.0	18.9	142	61	1800	124.0	200,000	60	113
EN-150-H8-3000	2.5	9.5	142	61	3000	206.8	100,000	30	58
EN-300-H8-3000	5.0	18.9	142	61	3000	206.8	200,000	60	117

*Based on 380/3/50 electricals. Alternate performance available for 415 and 440 volt standard models. Sioux can provide units for 50 or 60 Hz and any voltage; please contact the factory for more details.

Combination Hot Water Washer/Steam Cleaners

For combination hot water washer/steam cleaner units, a very popular option is available in which Sioux will provide a steam option to any H8 model pressure washer. This is available for a small cost adder on all H8 hot water washer models listed.

All EN-Series Units Available in Explosion-Proof Design

All units listed above are available in Sioux's explosion-proof design. This will be indicated with an "XP" following the model number.

Which All-Electric Series Cleaner Is Best For Your Application?

Sioux has the most experience in the industry at building high-quality all-electric hot water washers, steam cleaners, and combination units. Sioux's EN-Series All-Electric cleaners are extra-heavy-duty industrial units built to use in the most rugged environments. The EN-Series units can be built explosion-proof for use in hazardous locations. Typical applications for these units are in the rugged petroleum and mining industries.

The E-Series All-Electric cleaners have similar performance as the EN-Series but have a more compact, yet industrial-strength design. Typical applications for these units are in the food & beverage and manufacturing industries.

There are many other applications that either the E or EN-Series can be used; this is only a general guide. For a recommendation on exactly which model is best for you, please consult a Sioux representative to discuss your needs and your application.

Performance ratings are based on 60°F (15.5°C) inlet water temperature and 70°F (21.1°C) air temperature at sea level. Performance and continuous operating current may vary +/-5%. Sioux Corporation reserves the right to make such changes as deemed advisable, or which represent improvement of performance and/or reliability. For warranty specifications and limitations see form #847. The information contained in this brochure does not constitute a warranty. Copyright 2010 Sioux Corporation. No portion of this literature may be reproduced without express written permission of Sioux Corporation.

Sioux is the industry leader in All-Electric cleaners and custom designs.

