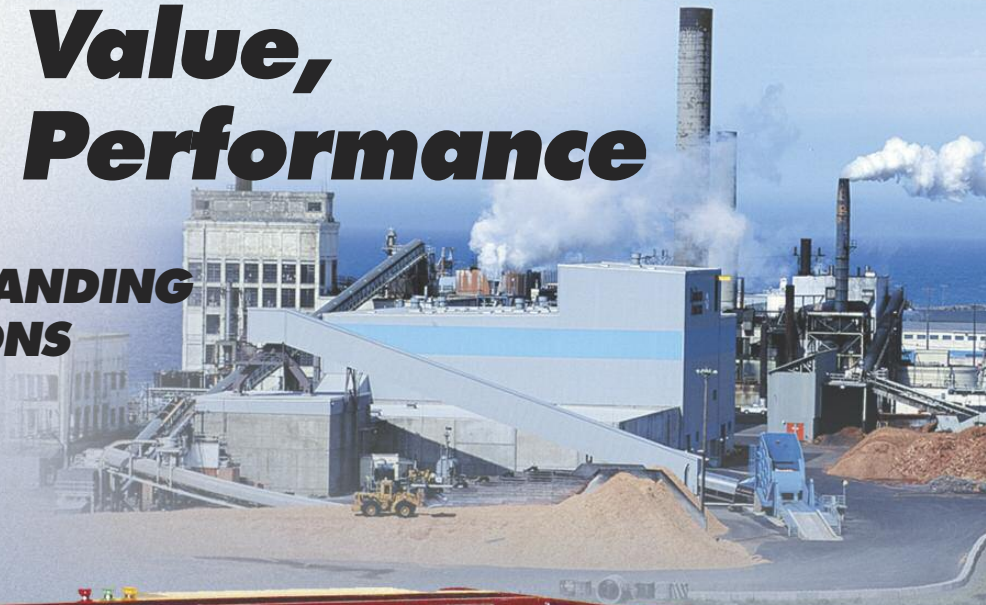
Reliability, Value, Safety and Performance

RUGGED, EFFICIENT EQUIPMENT FOR DEMANDING CLEANING APPLICATIONS

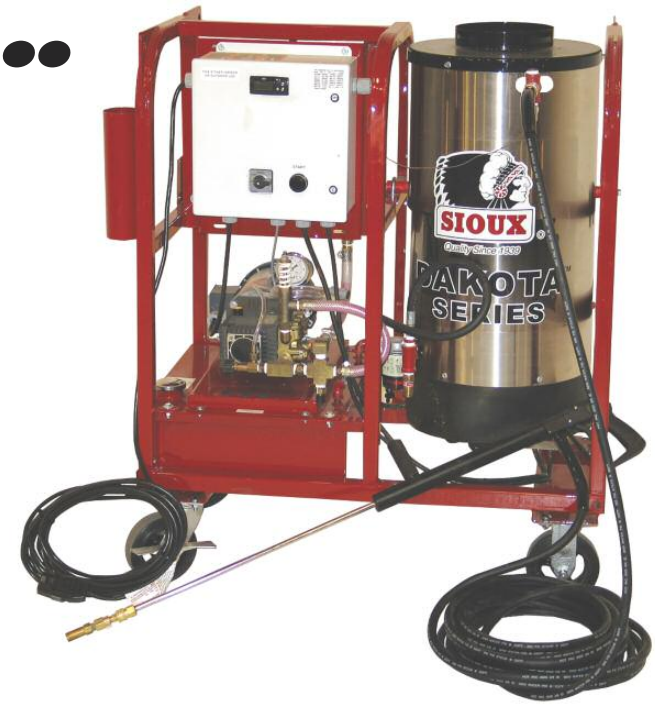


SIOUX
Reliability Since 1939
DAKOTA II SERIES®

Model H4D2750
High Pressure Hot Water Washer
7.5 HP, 4 GPM, 2750 PSI, Oil-Fired

WHY SIOUX...

- **Reliability** – Sioux doesn't just promise reliable products. We put it in writing with our 6 point Reliability Guarantee that addresses equipment parts, frames, performance and support.
- **Value** – Sioux won't make you guess if you are getting the best value. We provide the tools so you can see the value for yourself with our online cost calculator and free report.
- **Return on Investment** – Sioux equipment is guaranteed reliable. That means your capital investment is safe and secure for years to come. Sioux equipment pays for itself before you will ever replace it.
- **Safety** – Sioux implements stringent safety standards. Sioux equipment is ETL Listed, CETA Performance Certified, meets all OSHA regulations and is third-party certified.
- **Customer-Driven** – Sioux works hard to provide exceptional customer service and to ensure customers get the best value for their investment. Our success is measured in satisfied customers.



Model S1.5D250 Steam Cleaner
0.75 HP, 1.5 GPM, 250 PSI, Oil Fired

PRODUCT FEATURES & BENEFITS

- Certified to UL1776 and CAN/CSA-B140.11-M89. Complies with OSHA 1910.399 regulations. Third-party certified by a Nationally Recognized Testing Laboratory. **Protect your employees, your company, and yourself. Certified equipment helps protect against OSHA fines and possible litigation.**
- Approved for indoor and outdoor use. **Gives greater flexibility for all your applications.**
- Improved coil design. **High efficiency, lower fuel usage, saves you money.**
- Easy-access NEMA 4 electrical enclosure. **Quick, easy troubleshooting, and maintenance.**
- Strong structural steel frame. **Built to last. Protects your investment.**
- GFCI on single-phase machines. **Reduces the chance of electrical shock.**
- Low CO emissions, significantly below the present UL-1776 allowable CO emission levels. Efficient coil design. **Improves air quality, less fuel usage, less smoke, and lower emissions.**
- Wide range of options and accessories. Customize machines to your specific needs and application requirements. **You get the exact machine your specific application requires.**
- 320°F (160°C) pressurized water temperature before exiting nozzle (steam cleaners, and steam option on hot water pressure washers) compared to other brands at only 250°F (121°C) or 290°F (143°C). **Produces 58% to 338% more cleaning impact. Faster, more efficient cleaning.**
- Steam option with detergent capability. **Ability to use detergent in all operating modes.**
- Sioux Corporation has been in business since 1939. Our designs are based on many years of experience. **We will be here to support you today, tomorrow and into the future. If you need a custom machine, we probably have already designed it.**
- Our Technical Services Department is only a toll-free phone call away. 90% of parts orders are shipped within 24 hours. **Sioux helps keep your machines up and running.**

OTHER STANDARD FEATURES

- Stainless steel coil wrap
- Ceramic, multi-plunger water pump with forged bronze heads
- Quick connects on hose, gun, and wash tips
- Adjustable detergent system
- Totally enclosed fan cooled (TEFC) motor
- Solid molded-rubber casters
- Dual or quad lift eyes
- Shut-off gun and 50' (15.2m) hose

WHEN SAFETY IS IMPORTANT...
SIOUX'S DAKOTA II SERIES®
is the Answer

OSHA regulation 1910.399 requires that electrical equipment be third-party certified for safety by a Nationally Recognized Testing Laboratory such as ETL*.

Dakota II Series® machines are third-party certified by a Nationally Recognized Testing Laboratory, ETL, and meet OSHA regulations.

All Dakota II Series® units meet the following nationally recognized standards:

- Underwriters Laboratory Standard for Safety for High-Pressure Cleaning Machines, UL 1776
- Canadian Standards Association Standard for Safety for Oil/Gas Commercial/Industrial Pressure Washers and Steam Cleaners, CAN/CSA-B140.11-M89.

In addition, these machines meet the following:

- National Electric Code (NEC),
- Canadian Electric Code (CEC), and
- For gas fired Dakota II Series® machines, the requirements of the American Gas Association, and the Canadian Gas Association, which are now specified in CAN/CSA-B140.11-M89.

Third-party certification is an important benefit and protection for you and your company. Buying only third-party certified equipment should be an important part of your purchasing decision.

- It is the law in the workplace (OSHA regulation 1910.399) that electrical equipment be third-party certified*. Failure to comply could result in penalties of $5,000 or more. **All standard models in the Dakota II Series® by Sioux are third-party certified.**
- Employees depend on their company to provide a safe working environment. Insisting on third-party-certified equipment is an important part of providing a safe working environment. **All standard models in the Dakota II Series® by Sioux are third-party certified.**
- Accidents due to unsafe equipment can lead to costly litigation. Minimize this possibility by purchasing only third-party certified equipment. **All standard models in the Dakota II Series® by Sioux are third-party certified.**

Protect your employees, your company, and yourself.
Insist on third-party certified equipment.

**Unless the equipment is custom designed, fabricated and intended for use by a particular customer, and the equipment complies with OSHA 1910.399 (iii).*

SIOUX DAKOTA II SERIES® Machines
ARE PERFORMANCE CERTIFIED

In 1998 the Cleaning Equipment Trade Association (CETA) implemented a new performance standard for the industry. This standard, developed by the Technical Standards Committee of CETA, in conjunction with engineering representatives from manufacturers and suppliers in the industry, specifies the performance criteria required for CETA certification. **All Dakota II Series® machines meet these requirements, and are CETA Performance Certified.** This certification assures the buyers of Dakota II Series® machines that the performance promised in the literature will be the performance delivered.

Which is Best...

A HIGH PRESSURE HOT WATER WASHER OR A STEAM CLEANER?

Myth: Steam cleaners are outdated.

Reality: There are **many** applications where a steam cleaner is better than a high pressure hot water washer.

At Sioux, we have been building both types of machines for 70 years. There are some advantages to using hot water washers and some advantages to using steam cleaners. Each cleans in a different way. Determining which machine is best depends on the application.

- With pressure washers, dirt and grime are blasted away, under pressure. Heat will improve the result if melting is required, and use of the proper detergent will enhance cleaning.
- Steam cleaners are used when the substance to be removed melts, softens, or dissolves with the application of heat. This is the case with grease, oil, tar, many petrochemicals, ice, wax, food products, and similar materials. The substance is melted or dissolved, rather than pushed around the surface. Use of proper detergent will enhance steam cleaning performance.

With a Dakota II Series® steam cleaner, when heated water at a temperature of 320°F (160°C) and a pressure of 250 PSI (17.2 BAR) flashes into vapor as it passes through the steam nozzle, there is tremendous expansion, **producing about the same impact as a 1,000 PSI (69 BAR) pressure washer, with 86% more heat transferred for cleaning**.

If heat is what is really needed for cleaning, a steam cleaner is the better choice. In addition, a steam cleaner (vs, a hot water washer) offers the following benefits:

- Steam Cleaners use less power, **reducing your electric bill**
- Requires a smaller electric circuit for installation, and therefore, **may be used in more locations in your facility**
- Uses less water during operation, **reducing your water and sewer bills, and reducing the volume of wastewater to be processed**
- Produces less splattering and splash-back, **protecting the operator and your facility**

Model H4D2750
High Pressure Hot Water Washer
7.5 HP, 4 GPM, 2750 PSI, Oil-Fired

All steam cleaners are not the same. At comparable flow rates, a 320°F (160°C) steam cleaner produces approximately **40% more steam** and will transfer approximately **13% more heat** to the surface than the 290°F (143°C) steam cleaner. The increased heat and steam also **significantly increase the cleaning impact**, as illustrated in the chart below:

Pressurized Water Temperature Before Exiting Nozzle as Steam	*% Increase in Cleaning Impact of 320°F vs. Lower Temperature*
320°F (160°C) vs. 300°F (149°C)	+34%
320°F (160°C) vs. 290°F (143°C)	+58%
320°F (160°C) vs. 280°F (138°C)	+118%
320°F (160°C) vs. 265°F (129°C)	+167%
320°F (160°C) vs. 250°F (121°C)	+338%

WHAT IS MORE IMPORTANT, PRESSURE OR FLOW?

For a given cleaning application there are many flow/pressure combinations from which to choose. Here are some criteria you can use to select the best flow and pressure combination for your application.

1. Consider the capacity of your water source. If you have a limited water supply, then you would choose high pressure vs. high flow.
2. Consider how important heat is in your cleaning application. If heat is critical to your cleaning application, then higher flow is better. The more hot water you can move across the surface, the faster you can heat it and clean it. If additional heat would help, a steam cleaner should be considered.
3. For a given horsepower there may be several flow and pressure combinations available. Higher flow and lower pressure for a given horsepower will result in more impact and more work. The example below compares two different 10 hp (7.5 kw) machines. You can see that the higher flow rate option results in 23% more work and 32% more cleaning force.

Example	Rating	% Additional Work	% Additional Cleaning Force
High Pressure	5 GPM @ 3000 PSI (19 LPM @ 207 BAR)	—	—
High Flow	6 GPM @ 2500 PSI (23 LPM @ 172 BAR)	23%	32%

4. It is commonly believed that lower flow and higher pressure will produce less runoff, and less wastewater to process. This may be true in some applications. But if a higher flow machine can perform the same job faster, then the total amount of water used may be less. Temperature should also be considered to reduce water consumption. It may be better to use a higher temperature rather than increase flow or pressure in order to minimize your wastewater.

BELT DRIVE vs. DIRECT DRIVE vs. FLEXIBLE-COUPLED DRIVE

One important factor to consider in comparing belt vs. direct or flexible-coupled drive is the motor and pump speed. It is commonly thought in the industry that belt drive will last longer than direct drive. This is not necessarily correct, as explained below.

Our line uses all 1750 RPM motors, and all of our pumps run between 1400 RPM and 1750 RPM. In this RPM range there is not much difference in life expectancy of pumps when comparing belt drive to direct or flex-coupled drive. There is a huge difference in pump life between a direct driven pump running at 3400 RPM and a belt driven pump at 1000 RPM. Some pump designs work better for direct drive and others work better for belt drive. Where we are offering a direct or flex-coupled design as our standard, we are using a pump that has been designed and tested and matched for this use.

It is also untrue to make the generalization that one is always better than the other. For example, if properly maintained and running at the same RPM, a belt drive system may have a longer life. However, if the belt drive system is not maintained properly and the motor and pump become misaligned, the belt tension changes, or belt(s) wear, the direct or flex- coupled system may last longer.

The general rule for Sioux designs is that small models have a direct drive while medium models are flex-coupled, and large models have a belt drive. Sioux can customize drive systems, so contact the factory for specific applications.

DAKOTA II SERIES®

Steam Cleaners and Pressure Washers

Steam Cleaner Ratings - 60 Hz

• 320°F (160°C) pressurized water temperature before discharge

Model	Standard Electricals Volt/Phase/Hz	Operating Current AMPS	Recommended Circuit Rating AMPS	GPM (LPM)	PSI (BAR)	HP (KW)	BTU/Hr (KW)
S1.5*250	115/1/60	14	15	1.5 (5.7)	250 (17.2)	0.75 (0.56)	250,000 (73)
S2*250	115/1/60	14	15	2 (7.6)	250 (17.2)	0.75 (0.56)	340,000 (100)
S4*250	115/1/60	19	20	4 (15.1)	250 (17.2)	1 (0.75)	640,000 (188)
S6*250	230/1/60	17	20	6 (22.7)	250 (17.2)	1.5 (1.12)	898,000 (263)
S8*250	230/1/60	18	20	8 (30.3)	250 (17.2)	1.5 (1.12)	1,200,000 (352)

**L for LP Gas N for Natural Gas D for Fuel Oil (Diesel)*

Specifications listed are for diesel models and may vary slightly, depending on fuel type.

• Standard with float tank and upstream detergent metering

Steam Cleaner Ratings - 50 Hz

• 320°F (160°C) pressurized water temperature before discharge

Model	Standard Electricals Volt/Phase/Hz	Operating Current AMPS	Recommended Circuit Rating AMPS	GPM (LPM)	PSI (BAR)	HP (KW)	BTU/Hr (KW)
S1.2*250	220/1/50	9	15	1.2 (4.5)	250 (17.2)	0.5 (0.37)	200,000 (59)
S1.7*250	220/1/50	9	15	1.7 (6.4)	250 (17.2)	0.5 (0.37)	280,000 (82)
S3.3*250	220/1/50	13	15	3.3 (12.5)	250 (17.2)	0.75 (0.56)	524,000 (154)
S5*250	220/1/50	15	20	5 (18.9)	250 (17.2)	1 (0.75)	750,000 (220)

**L for LP Gas N for Natural Gas D for Fuel Oil (Diesel)*

Specifications listed are for diesel models and may vary slightly, depending on fuel type.

• Standard with float tank and upstream detergent metering

High Pressure Hot Water Washer Ratings - 60 Hz

• 200°F (93.3°C) water temperature

Model	Standard Electricals Volt/Phase/Hz	Operating Current AMPS	Recommended Circuit Rating AMPS	GPM (LPM)	PSI (BAR)	HP (KW)	BTU/Hr (KW)
H2.1*1000†	115/1/60	18	20	2.1 (7.9)	1,000 (68.9)	1.5 (1.12)	180,000 (53)
H3*750†	115/1/60	18	20	3 (11.4)	750 (51.7)	1.5 (1.12)	250,000 (73)
H3*1500	230/1/60	17	20	3 (11.4)	1,500 (103.4)	3 (2.24)	250,000 (73)
H3.8*2000	230/1/60	26	30	3.8 (14.4)	2,000 (137.9)	5 (3.73)	320,000 (94)
H3.8*2000	230/3/60	15	20	3.8 (14.4)	2,000 (137.9)	5 (3.73)	320,000 (94)
H4*2750	230/3/60	26	30	4 (15.1)	2,750 (189.6)	7.5 (5.60)	340,000 (100)
H5*3000	230/3/60	34	40	5 (18.9)	3,000 (206.8)	10 (7.46)	408,000 (120)
H6*2500	230/3/60	34	40	6 (22.7)	2,500 (172.4)	10 (7.46)	490,000 (144)
H8*2750	460/3/60	25	30	8 (30.3)	2,750 (189.6)	15 (11.19)	650,000 (192)
H10*2000	460/3/60	27	30	10 (37.9)	2,000 (137.9)	15 (11.19)	810,000 (237)
H10*3000	460/3/60	34	40	10 (37.9)	3,000 (206.8)	20 (14.92)	810,000 (237)

**L for LP Gas N for Natural Gas D for Fuel Oil (Diesel)*

Specifications listed are for diesel models and may vary slightly, depending on fuel type.

• Standard with downstream detergent injection system and float tank unless otherwise noted.

† Standard upstream detergent metering value and float tank.

DAKOTA II SERIES®

Steam Cleaners and Pressure Washers

High Pressure Hot Water Washer Ratings - 50 Hz

• 200°F (93.3°C) water temperature

Model	Standard Electricals Volt/Phase/Hz	Operating Current AMPS	Recommended Circuit Rating AMPS	GPM (LPM)	PSI (BAR)	HP (KW)	BTU/Hr (KW)
H1.8*800†	220/1/50	10	15	1.8 (6.8)	800 (55.2)	1 (0.75)	152,000 (45)
H2.5*600†	220/1/50	10	15	2.5 (9.5)	600 (41.34)	1 (0.75)	210,000 (62)
H2.5*1200	220/1/50	18	20	2.5 (9.5)	1,200 (82.7)	2 (1.49)	210,000 (62)
H3.2*1400	220/1/50	21	30	3.2 (12.1)	1,600 (110.3)	3 (2.24)	270,000 (79)
H3.3*2200	380/3/50	12	20	3.3 (12.5)	2,200 (151.7)	5 (3.73)	280,000 (82)
H4.2*2600	380/3/50	19	30	4.2 (15.9)	2,600 (179.3)	7.5 (5.60)	346,000 (101)
H5*2000	380/3/50	19	30	5 (18.9)	2,000 (137.9)	7.5 (5.60)	408,000 (120)
H6.7*2200	380/3/50	22	30	6.7 (25.4)	2,200 (151.7)	10 (7.46)	545,000 (160)
H8.3*1750	380/3/50	24	30	8.3 (31.4)	1,600 (110.3)	10 (7.46)	672,000 (197)
H8.3*2400	380/3/50	32	40	8.3 (31.4)	2,600 (179.3)	15 (11.19)	672,000 (197)

**L for LP Gas N for Natural Gas D for Fuel Oil (Diesel)*

Specifications listed are for diesel models and may vary slightly, depending on fuel type.

• Standard with downstream detergent injection system and float tank unless otherwise noted.

† Standard upstream detergent metering value and float tank.

All models come standard with a manual, 50' (15.24m) hose and gun (Shut off gun is standard on combination and hot water units and steam cleaners S1.5, S2 and S4. Open Walters gun is standard for S6 and S8 models.) Pressure washers come standard with three pressure wash tips - 0, 15, 25 degree and quick coupler. Steam Cleaners come standard with steam nozzle.

Steam Option Available on all Hot Water Pressure Washers
Steam Option — Produces pressurized water temperature of 320°F (160°C) before exiting nozzle.
Other Electricals Available — Please Contact Factory. Options include 380V, 415V, 50 or 60 Hz, and nearly any standard voltage used worldwide.
Other Mountings Options — Pneumatic Casters, Skid or Stationary. (Solid molded-rubber casters are standard)

Accessories

AVAILABLE TO CUSTOMIZE YOUR DAKOTA II SERIES® STEAM CLEANER AND PRESSURE WASHER

Accessory	Description
Shutdown Timer	Shuts down machine after two minutes of unloading to protect pump from overheating.
Belt Drive	Converts machine from direct drive or flex coupled to belt drive.
Turbo Nozzles	Used with pressure washers. Not for steam cleaners or combination units in steam option.
Steam Option	320°F (160°C) Steam (includes float tank and upstream detergent metering).
Pneumatic Casters	8" (20cm) pneumatic casters.
Hose Reel	Holds 175' (53m) of 3/8" (1cm) or 150' (46m) of 1/2" (1.25cm) hose.
LP Gas Bottle Rack	Rack bolts onto machine frame and includes LP gas hose and two-stage regulator.
Dual LP Gas Bottle Rack	Rack bolts onto machine frame and includes LP gas hose and two-stage regulator.
One-Wire-Braid Hose	For steam cleaners and pressure washers with steam option up to and including 4 GPM (1.5 LPM) and up to and including 2,000 PSI (138 BAR). Available in 3/8" (1cm) in 50' (15.24m) or 100' (30.48m) or 1/2" (1.25cm) in 50' (15.24m or 100' (30.48m).
One-Wire-Braid Hose (without steam)	For pressure washers without steam option operating up to and including 2,000 PSI (138 BAR). Available in 3/8" (1cm) x 50' (15.24m).
Two-Wire-Braid Hose	For pressure washers with or without steam option operating up to and including 3,500 PSI (241 BAR). Available in 3/8" (1cm) x 50' (15.24m) or 100' (30.48m).
Quick Coupler - Brass	MPT or FPT brass body. Available in 3/8" (1cm) rated at 2,700 PSI (186 BAR) or 1/2" (1.25cm) rated at 2,200 PSI (151 BAR).
Quick Coupler - Brass	MPT or FPT brass nipple. Available in 3/8" (1cm) rated at 2,700 PSI (186 BAR) or 1/2" (1.25cm) rated at 2,200 PSI (151 BAR).
Quick Coupler - Steel	MPT or FPT steel body. Available in 3/8" (1cm) rated at 10,000 PSI (690 BAR).
Quick Coupler - Steel	MPT or FPT steel nipple. Available in 3/8" (1cm) rated at 10,000 PSI (690 BAR).
Sand Grit Injector	Must be sized to fit output of machine. Only for high pressure hot water not in steam option mode.

DAKOTA II SERIES®

Steam Cleaners and Pressure Washers

Designed for Reliability, Value, Safety and Performance

- Third-party certified to UL-1776 and CAN/CSA-B140.11-M89 by ETL
- Meets National Electric Code and Canadian Electric Code
- Gas fired machines meet requirements of American Gas Association and Canadian Gas Association
- Performance Certified to Cleaning Equipment Trade Association Performance Standards
- Designed for easy maintenance and operation
- Efficient coil design lowers fuel usage. Saves you money.

Sioux is the industry leader in application-specific designs.
Call us today to quote your specific application.

Performance ratings are based on 60°F (15.5°C) inlet water temperature and 70°F (20°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, which represent improvement of performance and/or reliability. This product is covered by one or more U.S. patents and/or U.S. patents pending. For warranty specifications and limitations of Sioux Corporation, see Limited Warranty. The information contained in this brochure does not constitute a warranty.

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