NEW! SANDBLASTER® FORCE™ POWER DIRECT-VENT

SDV100-400

Non-Condensing Up To 85% Thermal Efficiency

Commercial Gas Water Heater

The Sandblaster® Force™ delivers the money-saving performance of State Industries original Sandblaster commercial water heater, plus a solution to negative air pressure, a problem found in many commercial applications.

For example, in restaurant kitchens, commercial range hoods and exhaust fans draw large amounts of air out of the room. This creates negative air pressure in the room, which can deprive an ordinary commercial gas water heater of sufficient make-up air required for safe, efficient, proper operation.

In negative air pressure situations, downdrafts can occur inside an ordinary water heater, compressing the burner flame, resulting in impaired water heating performance and recovery efficiency. Negative air pressure can also generate Carbon Monoxide buildup, and other potential safety hazards.

Sandblaster® Force™ is the solution, because it doesn't share the inside air! It is equipped with a factory-installed blower and two-pipe system for intake of make-up air and separate exhaust venting. This unique air delivery system (patent pending) insures that Sandblaster® Force™ is immune to negative air pressure. Sandblaster® Force™ also helps reduce space heating or air conditioning costs, because it does not consume heated or cooled air from inside the building.

Long Vent Runs Mean Installation Flexibility

The Force™ installs just about anywhere, thanks to intake and exhaust vent runs of up to 135 feet horizontally or vertically on models SDV80-140, SDV100-199 and SDV100-260. The SDV75-70 vent run is 50 feet horizontally or vertically. The SDV100-400 has a maximum vent run of 110 feet using 6 inch pipe. (Note: The first 10 feet of exhaust run for the SDV100-400 must be CPVC Schedule 40 pipe minimum.) See the vent run chart or the owners manual for specific venting information.

- **3-Year or 5-Year Tank Warranty.**
- **ASME Construction** available on SDV100 260 and SDV100-400.
- **Turbo-Force Ring Self-Cleaning Feature** – Patented design automatically reduces harmful sediment buildup inside the tank. Sandblaster® Force™ stays energy-efficient, so it saves money throughout its life. Turbo-Force dip tube in model SDV75 70.
- **Labor Replacement Allowance (LRA)** for installing contractor if heater needs replacement during basic 3-year warranty: $250 LRA on 75-70 model; $500 LRA on 80-140 and 100-199 models; $1000 LRA on 100-260 and 100-400 models.
- **Non-Condensing Design** helps prevent corrosion. No condensate pump or drain needed.
- **Installs with 3˝, 4˝ or 6˝ ** Schedule 40 PVC pipe,** depending on the model and vent run.
- **Two 45° 3˝ or 4˝ (depending on model) Schedule 40 Elbows, with screen, supplied** for use as vent caps. Schedule 80 Elbows on 100-400.
- **Integral Automatic Blower** – With 110/120 Volt electrical system. Maximum electrical draw: 2 Amps on SDV75 70, 12 AMPS on all other models.
- **Intermittent electronic ignition.**
- **Reinforced tank design for longer life** – The Sandblaster® Force™ glasslined tank is reinforced with extra steel in all the most critical areas, to insure long tank life.
- **Removable lanced-port steel burner**, with multiple tubular construction, for even heat distribution, maximum efficiency, quiet operation. SDV75 70 has a formed aluminized steel burner.
- **Foam insulation** – Reduces heat loss over 2½ times more effectively than standard fiberglass.
- **Factory-installed Temperature & Pressure safety valve (T&P Valve).**
- **Factory-installed Energy Cut-Off ("ECO") safety switch.**
- **Multiple Magnesium Anode Rods** – for extra protection against electrolytic tank corrosion. SDV75 70 has a single large diameter magnesium anode.
- **Tank Inspection Port** for easy access to tank interior on all models except SDV75 70.
- **Maximum Hydrostatic Working Pressure: 150 psi. (ASME 160 psi.)**

* Check owners manual and local codes for specific venting requirements. Each 90° elbow reduces maximum run by 5 feet.

**Exhaust vent run on SDV100-400 must be CPVC Schedule 40 minimum for the first 10 feet of the run.

state WATER HEATERS 500 Lindahl Parkway, Ashland City, TN 37015

The Expert's Choice™

SANDBLASTER®

FORCE™

POWER DIRECT-VENT

Commercial Gas Water Heater

Sandblaster® Force™ gas water heaters are design certified by the CSA International as Automatic Circulating and Automatic storage water heaters. When used singly or in manifolded multiples with additional heaters or storage tanks, they can provide an independent hot water system. When installed with a mixing valve, they can provide both 140°F general use hot water and 180°F sanitizing hot water simultaneously.

SDV80 140, SDV100 199, SDV100 260 and SDV100 400 models meet or exceed Federal Efficiency Requirements prescribed by the Energy Policy and Conservation Act of 1992 (EPACT) for commercial water heaters. They also meet or exceed ASHRAE 90.1b-1992.

SDV75 70 meets or exceeds Federal Energy Efficiency Standards effective January 1, 1990, according to the National Appliance Energy Conservation Act (NAECA) of 1987.

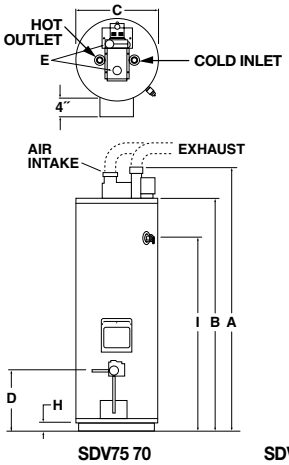
Manufactured under one or more of the following U.S. Patent Numbers: 4,157,077; 4,263,879; 4,447,377; 4,527,543 and other patents pending. Canadian Patent Numbers 1,151,480; 1,215,276 and other Canadian patents pending.

In keeping with our policy of continuous product improvement, specifications are subject to change without prior notice.

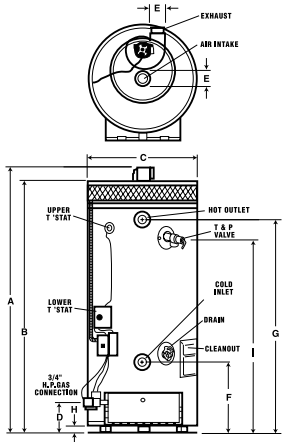
Model Number	Gal. Cap.	BTU Input Per Hour Natural	BTU Input Per Hour Propane	First Hour Delivery 100° Rise	Recovery 80°	Recovery 100°	Recovery 140°	A	B	C	D	E	F	G	H	I	Gas Conn.	Approx. Shipping Weight (lbs.)
SDV75 70NE	75	70,000	–	117	81	64	46	69⅝	61⅜	26	16⅝	3	–	–	2	54	½″	352
SDV75 70PE	75	–	65,000	112	74	59	42	69⅝	61⅜	26	16⅝	3	–	–	2	54	½″	352
SDV80 140NE•	80	140,000	140,000	200	180	144	103	76¼	71⅞	28	8¾	3	20¼	61⅝	2¼	56⅝	¾″	645
SDV100 199NE*†•	100	199,000	–	276	258	206	147	74⅛	70½	30¼	8¾	3	20¼	60⅛	2¼	55⅛	¾″	825
SDV100 199PE*†•	100	–	190,000	266	245	196	140	74⅛	70½	30¼	8¾	3	20¼	60⅛	2¼	55⅛	¾″	825
SDV100 260NE•	100	260,000	260,000	338	335	268	191	79½	77½	30¼	8¾	4	19¾	61½	2¼	56	¾″	900
SDV100 260NE ASME•	100	260,000	260,000	338	335	268	191	79½	77½	30¼	8¾	4	19¾	61½	2¼	56	¾″	1010
SDV100 400NE	95	390,000	390,000	461	493	395	282	82¼	80¼	30¼	8¾	4 or 6+	21¾	63½	2¼	58	1″**	900
SDV100 400NE ASME	95	390,000	390,000	461	493	395	282	82¼	80¼	30¼	8¾	4 or 6+	21¾	63½	2¼	58	1″**	1100

First-Hour Delivery and Recoveries are rounded to nearest gallon.
Model SDV75 70 has ¾-inch water connections; all others have 1½-inch.
Dimensions are rounded to nearest ¼-inch.
When ordering propane, change "N" to "P" in model number (SDV80 140PE).
All models available in Canada. When ordering, add "CGA" to model number (SDV75 70NE CGA).

*Rear plumbing.
**Gas connection on Propane models is ¾-inch.
†ASME construction not available.
•NSF construction available, add 5″ to height and add NSK to model number (SDV80 140NE NSK).
+Vent diameter depends on length of run. 4″ diameter up to 40 equivalent feet each run.



SDV75 70



SDV80 140, SDV100 199, SDV100 260 & SDV100 400

Venting System Requirements

1. The water heater requires its own (separate) venting system.
2. Venting cannot be connected to existing vent piping or chimney.
3. Venting may terminate vertically or horizontally to the outdoors.
4. Vertical and horizontal vent runs must be secured at 3½′ intervals.
5. Vent piping cannot under any circumstances be run downhill.
6. Horizontal runs require a minimum ¼″ rise per foot.
7. Vent pipes must be installed so that they can be visually inspected.

SDV Series Models	Maximum Equivalent Feet of Pipe With One 90° Elbow 3" Schedule 40 PVC	4" Schedule 40 PVC*	6" Schedule 40 PVC*
SDV75-70	50'	N/A	N/A
SDV80-140	135'	N/A	N/A
SDV100-199	135'	N/A	N/A
SDV100-260	N/A	135'	N/A
SDV100-400*	N/A	45'*	110'*

*The first 10 feet of exhaust vent run connected to this model must be run in CPVC or equivalent. The intake air may be all PVC.

NOTE: Each 90° elbow is equivalent to 5 feet of pipe. Two 45° elbows are equivalent to 5 feet of pipe.

Sandblaster® Force™ Sample Specifications

Gas water heater(s) shall be a State Industries, Inc. Sandblaster Force, Model Number, _____, with a _____ gallon storage capacity, an input rate of _____ Btu/Hour _____ gas, and a recovery rate of _____ gallons per hour at a _____ degree Fahrenheit temperature rise.

Unit(s) shall be direct-vent design, with an automatic blower-powered, two pipe air intake and exhaust system communicating directly with the outside of the building;. The blower shall have a safety device that will not allow the operation of the pilot and main burners unless the blower is in operation. Unit(s) shall have a combustion air passage that is internal to the outer jacket of the water heater other than the intake and exhaust connections at the top of the water heater. The units shall be equipped with an Intermittent Electronic Ignition control requiring an external 120 Volt power supply with a rating of 12 amps or less. The control system shall shut off the gas supply to the unit within 4 seconds if the gas supply or pilot flame are interrupted. The tank shall be additionally protected against premature failure in the following ways:

1. A _____ -year limited warranty against failure due to corrosion, metal fatigue or overheating caused by the buildup of scale, film or other sediment.

2. Against electrolytic corrosion by multiple, factory-installed magnesium anodes.

3. Against failure due to overheating caused by the buildup of scale, film and other sediment by a construction which incorporates an annular ring, which fits inside the tank at the base. The ring shall be equipped with a group of calibrated jets, properly positioned so that they will direct the flow of inlet water in such a way that microscopic particles of precipitated solids shall be kept in suspension and exhausted from the water heater on that or successive hot water draws.

The burner(s) shall have an individual orifice for each burner tube and be constructed of tubular aluminized or stainless steel mounted in an easily removable tray.

Water heater(s) shall have the CSA International seal of certification, a working pressure of 150 psi, a factory-installed ASME rated temperature and pressure relief valve, and a 4″ x 5″ tank inspection port.

state WATER HEATERS
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