

SPECIFICATIONS	COMPLY	
	Yes	No
GENERAL		
1. Specifications for combination machine for high-pressure water cleaning of sanitary sewer or storm sewer drain lines, with air conveying vacuum system for the simultaneous removal of debris from the manhole.		
2. The machine will be used for removing stones, bottles, cans, grease sludge, and other debris from sanitary sewer and/or storm drain lines by the flushing action of high-pressure water. The machine will be equipped with a self contained, non-corrosive, non-metallic water tank supply as the water source for the high-pressure pump.		
3. The high-pressure cleaner shall operate <u>independent of the vacuum system</u> . The machine shall include an air conveying vacuum system to provide for the simultaneous removal of the debris flushed to the manhole by the high-pressure water system or for the removal of debris from sumps, catch-basins, digesters, wet wells, bar screens, etc.		
4. The machine shall be capable of being operated by one man, with all operating controls for high-pressure water, hose reel, and vacuum located at the front of the machine for operator safety.		
BODY		
5. Debris storage body shall have a minimum useable liquid capacity of 3.5 cubic yards.		
6. The body shall be round for maximum strength and constructed of 3/16" <u>Corten</u> steel for corrosion resistance. (No exceptions)		
7. The rear door shall be full opening, hinged at the top, with a minimum 5" diameter liquid drain; for removing excess liquids. The drain to have a butterfly type control valve installed at the opening. Drain will have 10' of lay flat hose.		
8. The rear door shall have externally mounted "door grabbers" that <u>latch</u> hydraulically with a minimum of 5 latches. One manual T bolt will be installed for safety or hydraulic failure. Hydraulic latches shall be controlled by one hydraulic cylinder externally mounted for ease of servicing. Each latch shall have a camacentric control to provide adjustment if necessary.		
9. A double-acting, power-up, power-down, dump mechanism will be provided to raise body to a minimum <u>60 degrees angle</u> . To prevent the possibility of hydraulic oil contamination, body hoist mechanism shall be mounted on the outside of the debris tank. Vacuum hose and boom must not dump with debris body.		
10. Automatic Vacuum Breaker system shall be provided to prevent body overflowing.		
11. Dump controls shall be located on the curbside of the unit, well forward of the dumping area for safety.		
12. <u>The debris body shall have a five-year warranty.</u> If pro-rated - so state.		
WATER SUPPLY		
13. The water tank shall have a minimum useable capacity of 500 gallons.		
14. The water tank shall be constructed of non-corrosive, non-metallic, <u>durable cross-linked polyethylene</u> to eliminate rust, corrosion and stress cracking.		
15. The water tank shall have a five-year replacement warranty for any rust or cracking. If pro-rated - so state.		
16. A 2-1/2" diameter, 25' long hydrant hose with anti-syphon device will be installed on unit.		

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17. A minimum of 4 each quick removal hatches shall be provided for access to the water tank, for flush out, or to be used to fill tanks or add chemicals to water tank.	_____	_____
18. A sight gauge to indicate water level will be located within sight of the operator station.	_____	_____
CENTRIFUGAL COMPRESSOR		
19. Two stage turbo blower shall be provided, capable of 0-135" negative water pressure and delivering 0-8000 CFM of air movement.	_____	_____
20. The blower shall operate independent of the high-pressure water system and be powered by means of a direct drive hydrostatic pump off a transfer case via the truck chassis engine.	_____	_____
21. System shall include a centrifugal separator with clean out located between the body and compressor (fan) intake, enabling unit to vacuum both dry and wet materials. A clean out shall be provided.	_____	_____
22. Control of the blower regarding start, stop and the rate of vacuum suction shall be performed from the front of the truck.	_____	_____
23. The fans outer housings shall be spun from one piece of 3/16" steel for strength and provide proper airflow in operation.	_____	_____
24. The blower shall be mounted on a frame independent of the water tank.	_____	_____
25. The Centrifugal Compressor shall have a five year replacement warranty on the unit. If pro-rated - so state.	_____	_____
VACUUM SYSTEM PICK UP HOSE		
26. Shall be front loading, attached at the front of the machine in order to provide ease of positioning the machine over the manhole, as well as afford maximum safety for the operator.	_____	_____
27. The 6" dial. hose will be mounted on a boom which will provide a minimum of 14' vertical lift utilizing <u>dual</u> hydraulic cylinders and 230 degree of boom rotation powered hydraulically by a worm gear. Boom to have a lift capacity of 250 lbs. at the front bumper.	_____	_____
28. The boom will be powered hydraulically: up/down, by dual lift cylinders. The right/left movements will be accomplished by a hydraulic gear rotation.	_____	_____
29. Control of the boom shall be by means of a "joy-stick" control at the operator's station, requiring no cables at operator's feet for boom operation. A 6-way remote pendant station will also be supplied.	_____	_____
30. Pipe extensions to clean to 20' will be carried on the truck as follows: a. 1-6.5' aluminum catch basin nozzle b. 1-6' aluminum pipe extension c. 1-5' aluminum pipe extension d. 1-3' aluminum pipe extension	_____	_____
31. Suction hose shall be transported on the front bumper.	_____	_____
32. A 5' x 6" hydraulically extendable boom shall be supplied that will extend a minimum 5' straightforward from fully retracted position to provide greater work area in front of the vehicle.	_____	_____
HIGH-PRESSURE WATER PUMP		
33. A high-pressure, continuous smooth flow triplex type water pump will be direct driven hydrostatically via chassis engine and will operate independent of vacuum system.	_____	_____
34. Water pump shall be rated at 3000 psi at 30 GPM with continuous smooth pressure.	_____	_____
35. Controls for starting, stopping the pump will be at the front operator's station on the hose reel.	_____	_____

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JET RODDER HOSE REEL ASSEMBLY		
36. The hose reel assembly shall be mounted on the front of the vehicle.	_____	_____
37. The hose reel shall be a minimum of 15" inside diameter with a capacity of 500' x 3/4" hose.	_____	_____
38. The hose reel will manually rotate 180 degrees in 3" increments, allowing greater flexibility in vehicle placement to the manhole and greater operator safety.	_____	_____
39. The hydraulic motor, chain and sprockets will have a protective cover or be mounted on the radiator side of the hose reel, to prevent operator injury.	_____	_____
40. All controls for operating the high-pressure water system will be mounted on this reel assembly frame.	_____	_____
MANHOLE CLEANING WATER SYSTEM (Hand Gun)		
41. The high-pressure (jet rodder) pump and independent water tank assembly furnished for the rodding system will be used.	_____	_____
42. A minimum of 25 GPM and a maximum of 600 psi, for safety, will be provided.	_____	_____
43. One full functioning handgun with on/off handle, replaceable nozzle tip, one foot extension and 50' of 1/2" high-pressure hose with retractable reel will be supplied.	_____	_____
44. The handgun should attach to the system via quick couple type connection, at curbside of the unit to avoid hose being coiled at operator's feet, for safety.	_____	_____
JET HOSE		
45. 500' x 3/4" rodder hose, rated for 3000 psi working pressure and 7500 psi burst will be provided on the unit.	_____	_____
46. A heavy-duty hose guide will be provided.	_____	_____
47. A hose level wind guide will be provided.	_____	_____
48. Nozzles will be provided as follows: a. 1-15 degree sand type penetrator b. 1- 30 degree round head sanitary	_____	_____
HYDROSTATIC SYSTEM		
49. The system will be a closed loop system consisting of (1) filter (10 micron), (2) hydrostatic pumps & motors and an air to oil heat exchanger. The heat exchanger shall be capable of flow from 4-80 gpm and be equipped with a 25-psi full flow check valve for cold weather start up. The heat exchanger will keep oil at 110° - 160° F operating range at 90°F ambient temperature.	_____	_____
MISC. ITEMS		
50. Guarantee on all cleaning equipment for one year.	_____	_____
51. 1) 12" x 16" x 36" sealed and locking tool and accessory box behind cab will be provided on the driver's side of the unit.	_____	_____
52. Nozzle pipe extension.	_____	_____
53. 12 Volt DC outlet located on hose reel.	_____	_____
54. A debris body flush out system shall be provided.	_____	_____
55. Winter recirculating system,	_____	_____
56. Air purge system	_____	_____
57. Electronic back up alarm	_____	_____
58. Hose footage counter	_____	_____
59. Nozzle rack	_____	_____

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60. 10' leader hose	_____	_____
PAINTING		
Unit to be painted with DuPont Imron 5000 polyurethane reflective side stripes, and chevrons. with	_____	_____
61. Cab to be painted manufacturers standard white.	_____	_____
LIGHTS		
62. Clearance lights and reflectors shall be furnished in accordance with D.O.T. requirements.	_____	_____
63. 2) Mirror mounted strobe lights	_____	_____
64. Rear mounted strobe light	_____	_____
65. Arrowboard	_____	_____
66. Boom mounted flood lights	_____	_____
67. Hand held spot light	_____	_____
68. Rear mounted flood lights	_____	_____
MOUNTING AND DELIVERY		
69. The machine described shall be mounted on a truck chassis of approved size, at the factory of the body manufacturer. Transportation charges shall be included. Sewer cleaner shall remain the property of the manufacturer until delivered to and accepted by authorized personnel.	_____	_____
OPERATOR TRAINING		
70. Operator training is to be conducted by a factory representative, or a factory-trained representative, for a minimum of 1 day at the time of delivery, with follow-up training of up to three additional days, to be included. One copy of the operating and maintenance manuals shall be provided upon unit delivery.	_____	_____
ATTENTION TO BIDDERS:		
71. Bidder to check "YES" box if each specification section exactly <u>meets</u> specification. Check "NO" if bidder does not meet specifications exactly. Bidder must explain in the "EXPLAIN DEVIATIONS" column how they don't meet specification. "Exceeds Specification" is not an acceptable answer - bidder must state how they exceed or deviate from specification in detail. Failure to comply with this will be cause for rejection of bid.	_____	_____
AWARDING OF THE BID		
72. The owner will award the bid on the basis of price, quality of equipment, with this set of specifications, and date of delivery. The owner reserves the right to reject any or all bids and to waive all informalities.	_____	_____
73. Any items not specifically described, but required for operation, or provided as standard equipment by the manufacturer, are to be provided.	_____	_____

Insert Chassis Specifications Here

