

TankJet® 9 Series Tank Cleaning Nozzles

USER GUIDE



GENERAL SAFETY INFORMATION

READ AND FOLLOWING INSTRUCTIONS:

WARNING: All safety related and operating instructions should be read before the nozzle is operated. Follow all operating instructions. Failure to do so could result in serious injury.

- **WARNING:** It is important to recognize proper safety precautions when using a pressurized spray system. Fluids under pressure can penetrate skin and cause severe injury.
- **WARNING:** When dealing with pressure applications, the system pressure should never exceed the lowest rated component. Always know your system and all component capabilities, maximum pressures and flow rates.
- **WARNING:** Before performing any maintenance, make sure all liquid supply lines to the machine are shut off and / or disconnected and chemical/fluid are drained.
- **WARNING:** The use of any chemicals requires careful control of all worker hygiene.
- **WARNING:** Spraying Systems Co. does not manufacture or supply any of the chemical components used in this equipment and is not responsible for their effects. Because of the large number of chemicals that could be used and their different chemical reactions, the buyer and user of this equipment should determine compatibility of the materials used and any of the potential hazards involved.
- **WARNING:** Spraying Systems Co. strongly recommends the use of appropriate safety equipment when working with potentially hazardous chemicals.
- **WARNING:** Before use be sure appropriate connections are secure and made to withstand weight and reaction forces of the operating unit.

This equipment includes but is not limited to:

- Protective hat
- Safety glasses or face shield
- Chemical-resistant gloves and apron
- Long sleeve shirt and long pants

NOTE: Always remember to carefully read the chemical manufacturer's label and follow all directions.

WARNING: DO NOT USE TO SPRAY FLAMMABLE LIQUIDS—SUCH USE COULD RESULT IN FIRE OR EXPLOSION CAUSING BODILY INJURY OR DEATH.

- **WARNING:** It is important to operate equipment within the temperature range of all components. Also insure that appropriate time lapses or proper safety equipment is used when handling components after they're exposed to high temperatures.
- **WARNING:** Never operate tank cleaning equipment in the open due to the potential of bodily injury.

- **WARNING:** Removed equipment from the tank before attempting any repairs.
- **WARNING:** If walking on top of a tank is deemed safe and is necessary, use proper safety precautions to protect individuals as well as the equipment.
- **WARNING:** Do not put any part of your body in the tank during operation of the tank cleaner. This is NOT a safe procedure for verification of operation.
- **WARNING:** Proper hoisting procedures should be used when installing and removing all equipment.
- **WARNING:** To insure the safety of the equipment as well the individuals using them, only use Spraying Systems Co. components.
- **WARNING:** When packaging and transporting use structurally sound boxes or crates that can handle the weight of the equipment.
- **WARNING:** Tank cleaners should be flushed out with clean water before they're stored or shipped to minimize health hazards or cross contamination.
- **WARNING:** Do not use any equipment outside the intended purposes of the product. Misuse can result in personal injury or product damage.

The container being cleaned should be sealed as best as possible while the TankJet 9 models is running its cycle. The combination of temperature, cleaning solution, spray impact and the potential toxic materials being cleaned can cause a hazard to anyone in the path of the spray.



TECHNICAL SPECIFICATIONS

Specifications	
Application:	Cleaning the inside of containers such as drums, barrels and tanks
Features:	The nozzles will fit through model: A: 1-1/16" (27 mm) diameter hole B: 1-3/8" (35 mm) diameter hole C: 1-5/8" (42 mm) diameter hole Reactionary force produced by the sprays rotates the spray head providing 360° coverage.
Temperature:	Max. operating temp is 190°F (88°C)
Pressure:	Max operating pressure is 100 psi (7 bar)
Flow:	A: 1.3-5 gpm (4.9-18.9 lpm) B: 5-17 gpm (18.9-64.3 lpm) C: 12-38 gpm (45.4-143.8 lpm)
Material:	316 SS, thermoplastic bearings
Weight:	A: 0.34 lbs. (0.15 kg.) B: 0.58 lbs. (0.26 kg.) C: 0.96 lbs. (0.44 kg.)



INSTALLATION

- The TJ9 can be installed in any orientation.
- Use teflon tape when installing the TJ9.
- Screw the TJ9 onto a (model A: 3/8" NPT, model B: 1/2" NPT, model C: 3/4" NPT) pipe to 150 in/lbs.

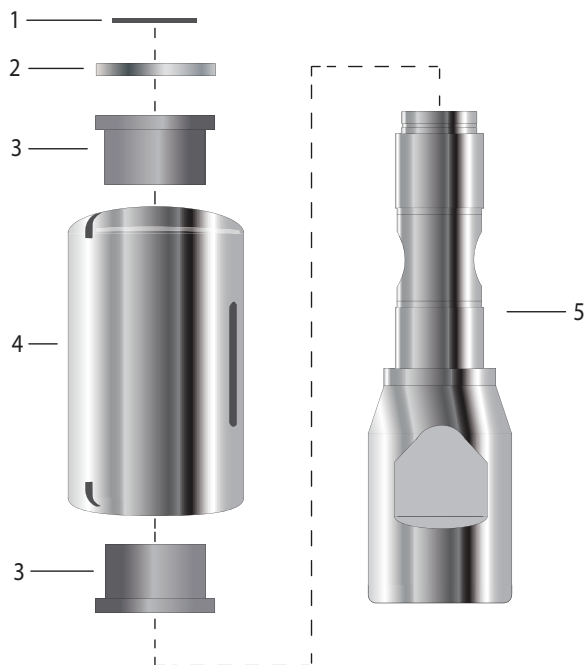
TJ 9 PART LIST

Item No.	Description	TJ9_-_ TankJet Qty.	Repl.
1	Snap Ring	1	•
2	Washer	1	•
3	Bearing	2	•
4	Barrel	1	
5	Stem	1	

For ABCKTJ9 - A repair kit (includes all items marked with (•)).

For ABCKTJ9 - B repair kit (includes all items marked with (•)).

For ABCKTJ9 - C repair kit (includes all items marked with (•)).



TROUBLE SHOOTING

Due to the simplicity of the unit, few problems should occur. If any trouble should arise, the following steps may be taken: Refer to the Parts List.

Problem: Unit will not turn or turns slowly...

Solution: 1. Check for barrel end play (See Assembly Step #7)

2. Disassemble unit and check for debris or obstructions.

SERVICING

DISASSEMBLY:

1. Remove (1) spiral retaining ring with a scribe or small screwdriver.
2. Turn unit over to remove(2) washer.
3. To remove upper (3) and (4) barrel, grasp barrel and exposed portion of (5) and pull apart. Upper (3) bearing and (4) barrel will separate from lower (3) bearing and (5) stem.
4. Slide lower (3) bearing off the (5) stem.
5. When disassembled, there will be six parts.

NOTE: There is no difference between "upper" and "lower" (3) bearings. Parts are interchangeable...

ASSEMBLY:

1. Place (5) stem on even surface...
2. Slide lower (3) bearing down onto (5) stem. Bearing flange must seat down on stem face.
3. Place (4) barrel down over (5) stem and lower (3) bearing. It will make no difference in performance which way the barrel spins. Therefore, the barrel can go on over the stem either way. Make sure barrel spins freely.
4. Push upper (3) bearing down over stem until the flange seat into top of (4) barrel. Snap ring groove should be visible.
5. Push upper (2) washer on top of (3) bearing and (5) stem. Snap ring groove should be visible. If not, push down on washer until seated.
6. Using a scribe or small screwdriver, assemble (1) spiral retaining ring into groove on top of stem.

Very Important: To set barrel end play, grasp barrel and exposed portion of stem and pull apart. A click will indicate end play adjustment. Spin barrel by hand to check for end play and free spin of barrel. Repeat if necessary.

WARRANTY

For newly purchased units the warranty is 18 months from the date of shipment or 12 months from the date of installation, whichever occurs first. This warranty includes manufacturing defects but does not cover the wear parts that include the bushings. This warranty will be void if parts other than those supplied by Spraying System Co. are used.



EC DECLARATION OF CONFORMITY

We, **Spraying Systems Co.**[®]

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in accordance with the following directive(s):

2006/42/EC The machinery directive

hereby declare that:

Equipment Tank Cleaning Devices, Fluid driven

Model number TankJet[®]19, TankJet[®]16, TankJet[®]14, TankJet[®]9

is in conformity with the applicable requirements of the following documents:

<u>Ref. no.</u>	<u>Title</u>	<u>Edition/ Date</u>
EN ISO 4413	Hydraulic fluid power — General rules and safety requirements for systems and their components	2010
EN 12100	Safety of machinery – General principles for design. Risk assessment and risk reduction	2010
BS EN ISO 14121-1	Safety of machinery – Risk assessment Part 1: Principles	2007
ASME- B31.1	ASME Code for Pressure Piping	2020

I hereby declare that the equipment named above has been designed to comply with the relevant sections of the above referenced specifications. The unit complies with all applicable Essential Requirements of the Directives.

Signed by:



Robert J. Adams, P.E.

Director of Engineering-Industrial Division

Spraying Systems Co.



Spraying Systems Co.[®]

Experts in Spray Technology

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