

INDUSTRIAL NOZZLE

BEST PRACTICES AND SAFETY INSTRUCTIONS

Operations with all nozzle equipment can be potentially dangerous if caution is not exercised prior to and during tool use. Please read and follow all these industry best practices and safety instructions. Only trained personnel should operate this equipment, wearing proper PPE (Personal Protective Equipment). Do not point any nozzles at yourself, people, animals, or surfaces not meant for the application. Serious injury or destruction can result from high-pressure water.

For more information on all nozzle sizes, flow rates, and warranties visit hydraflexinc.com.

INDUSTRIAL CLEANING NOZZLES

SAFETY WARNING!

1. All threaded connections must be tight and leak free.
2. Check nozzle orifices before use. If any are plugged, they must be cleaned or replaced.
3. Must be operated with an automatic shut-off (dead man's switch).
4. Beware of blowback debris created from cleaning.
5. Ensure all body parts are away from the spray direction of the nozzle when in operation.
6. These nozzles are not intended for chemical application. Running chemicals through the nozzles may reduce their life.
7. Follow all applicable national, state, and local safety regulations.



AQUA-ROCKET AND AQUA-ROCKET PRO

1. The Aqua-Rocket and Aqua-Rocket Pro retain water. Beware of stored hot water when changing out nozzles. Be cautious of falling debris when cleaning above surfaces.

SPECIFICATIONS

Minimum Inlet Pressure (Aqua-Rocket): 750 PSI (52 bar)
Maximum Inlet Pressure (Aqua-Rocket): 3,600 PSI (248 bar)
Minimum Inlet Pressure (Aqua-Rocket Pro): 1,500 PSI (100 bar)
Maximum Inlet Pressure (Aqua-Rocket Pro): 5,600 PSI (386 bar)
Maximum Water Temperature: 212°F (100°C)
Housing Material: Stainless Steel
Cover Material: Rubber
Nozzle Tip Material: Tungsten Carbide
Inlet Connection Thread: 1/4" FNPT
Front Spray Angle (Aqua-Rocket): 0-degree rotating stream to create 24-degree cone
Front Spray Angle (Aqua-Rocket Pro): 0-degree rotating stream to create 22-degree cone



MARKSMAN

1. The Marksman must be used with a 1/2" lance that is at least 6 feet in length and rated to a minimum of 2,500 PSI. The connection hose must be rated at a minimum of 2,500 PSI. Can be used on 1/2" hose with no adapter into the gun. It is recommended that two operators are present when using the Marksman; one at the truck and one at the lance.
2. Marksman must be used with a trigger gun rated at a higher GPM flow rate than the nozzle.

SPECIFICATIONS

Maximum Inlet Pressure: 2,500 PSI (172 bar)
Maximum Water Temperature: 180°F (82°C)
Housing Material: Stainless Steel
Nozzle Tip Material: Stainless Steel
Inlet Connection Thread: 1/2" FNPT
Front (Static) Spray Angle: 0-degree

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BEST PRACTICES AND SAFETY INSTRUCTIONS

SEWER JETTINGS NOZZLES

Reaper and Revolution

SAFETY WARNING!

1. All threaded connections must be tight and leak free.
2. Check nozzle outlets before use. If any are plugged, they must be cleaned or replaced.
3. A protective sleeve (Tiger Tail) should be used. The retaining clamp and rope should be attached to the end of the sleeve nearest the truck.
4. Never operate tools in a pipe or opening of a large enough diameter that would allow the tool to turn around.
5. Position the tool 3 feet or more into the line before increasing pressure to operating level.
6. Tape a flag or marker to the hose 3 feet from the nozzle. There should be only one marker on the hose. Do not rely on the reel counter to determine length of hose remaining in line.
7. Build pressure slowly to ensure tool is positioned and functioning properly.
8. Do not exceed maximum operating pressure specified for any component in a system (nozzle, fittings, hose).
9. Turn off and secure pump before removing tool from line.



SPECIFICATIONS

Minimum Inlet Pressure (1/4", 3/8", 1/2", 3/4" and 1"):
1,500 PSI (103 bar)

Maximum Inlet Pressure

1/4": 5,000 PSI (344 bar)

3/8" and 1/2": 4,000 PSI (276 bar)

3/4" and 1": 3,000 PSI (207 bar)

Maximum Water Temperature: 180°F (82°C)

Housing Material: Stainless Steel

Nozzle Tip Material: Tungsten Carbide

Inlet Connection Thread: 1/4", 3/8", 1/2", 3/4", 1" FNPT or BSPP

Front (Rotating) Spray Angle (3/8"):

3/8": 0-degree rotating stream to create 24-degree cone

1/4", 1/2", 3/4", and 1": 0-degree rotating stream
to create 30-degree cone

Rear Jet (Static) Spray Angle (1/4", 3/8", 1/2", 3/4", and 1"):
20-degree



SPECIFICATIONS

Minimum Inlet Pressure: 1,000 PSI (69 bar)

Maximum Inlet Pressure: 2,500 PSI (172 bar)

Maximum Water Temperature: 180°F (82°C)

Housing Material: Stainless Steel

Nozzle Tip Material: Tungsten Carbide

Inlet Connection Thread: 1" FNPT or BSPP

Front (Rotating) Spray Angle (3/8"): 0-degree rotating
stream to create 30-degree cone

Center (Rotating) Spray Angle: 57-degree

Rear Jet (Static) Spray Angle (1/4", 3/8", 1/2", and 1"):
10-degree

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HYDRO-EXCAVATION NOZZLES

SAFETY WARNING!

1. All threaded connections must be tight and leak free.
2. Check nozzle orifices before use. If any are plugged, they must be cleaned or replaced.
3. Nozzles are recommended for use with a high-pressure spray wand with automatic shut-off (dead man's switch).
4. Always observe proper grounding procedures when performing hydro-excavation.
5. Non-conductive cover coating is designed for safety. Replace nozzle/cover when worn.
6. A distance of at least 8" must be maintained between the nozzle tip and the underground facility and/or subsoil. Never insert nozzle into the soil.
7. Always keep the wand/nozzle in motion during excavation. Avoid aiming directly at underground utilities at all time to prevent damage.
8. Static nozzles should not be used when operating in the presence of utilities. Reference our recommended maximum pressures for rotating and oscillating nozzles within 18" of utilities. Operators should lower the water inlet pressure from normal operating pressure and use the nozzle to "wash down" the utility, not to blast.



SPECIFICATIONS

Minimum Inlet Pressure: 1,000 PSI (69 bar)
Maximum Inlet Pressure: 3,200 PSI (220 bar)
Maximum Water Temperature: 180°F (82°C)
Housing Material: Stainless Steel

Coating Material: Hytrel
Nozzle Tip & Seat Material: Tungsten Carbide
Inlet Connection Thread: 1/2" FNPT
Front Spray Angle: 0-degree stream that rotates to create 18-degree cone



SPECIFICATIONS

Maximum Inlet Pressure: 3,200 PSI (220 bar)
Maximum Water Temperature: 180°F (82°C)
Housing Material: Stainless Steel

Coating Material: Hytrel
Nozzle Tip Material: Tungsten Carbide
Inlet Connection Thread: 1/2" FNPT
Front (static) Spray Angle: 0-degree



SPECIFICATIONS

Minimum Inlet Pressure: 1,000 PSI (69 bar)
Maximum Inlet Pressure: 3,200 PSI (220 bar)
Maximum Water Temperature: 180°F (82°C)
Housing Material: Stainless Steel

Coating Material: ST Nylon 1,000
Nozzle Tip & Seat Material: Tungsten Carbide
Inlet Connection Thread: 1/2" FNPT
Front Spray Angle: 0-degree stream that oscillates to create 15-degree wedge

!CAUTION: HIGH PRESSURE WATER NOZZLES MAY DAMAGE BURIED UTILITIES!

While Hydra-Flex rigorously tests its product to limit the likelihood of damage in the case of an accidental encounter with buried utilities, it is not possible to completely eliminate the possibility of damage. Using a smaller nozzle size (less flow) and lowering operating pressure when near underground utilities are critical to reducing the likelihood of any damage.

Buried utilities vary dramatically in their ability to resist damage. All utilities become less damage-resistant with age, soil conditions, and other factors. Hydra-Flex cannot assure this product will not cause damage to all buried utilities.

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