

AQUATECH[®]

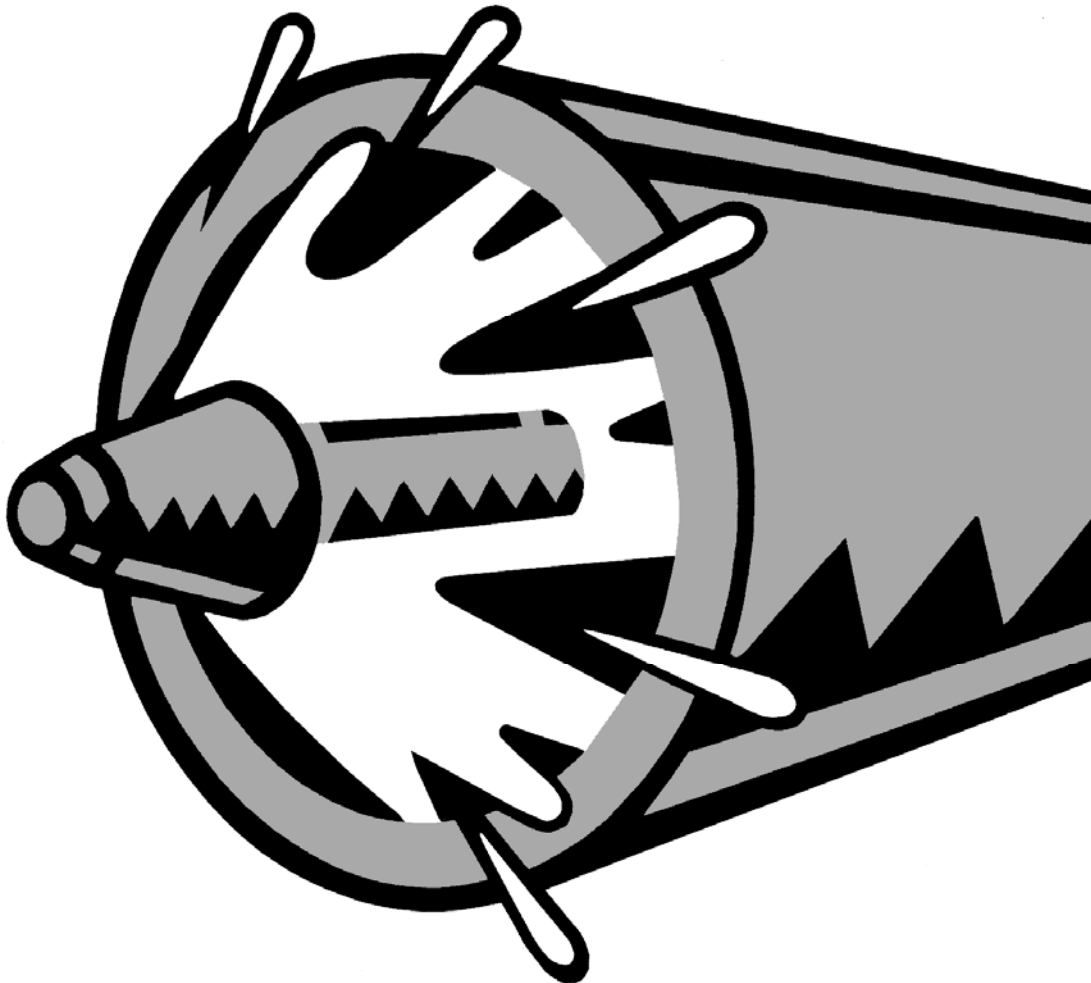
Combination Jet/Vac System

A PRODUCT OF HI-VAC[®] CORPORATION

O'BRIEN[®]

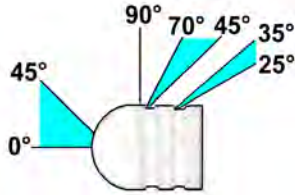
Hydro-Jetting Sewer and Vacuum Systems

A PRODUCT OF HI-VAC[®] CORPORATION



JETTING ACCESSORIES

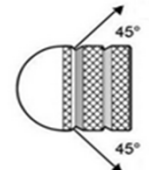
BUTTON NOSE NOZZLES



Button Nose nozzles can be custom drilled to meet your specifications. The dual groove design permits a wide range of spray angles that can be utilized. The rear groove allows for high thrust angles from 25° to 35°. The forward groove accommodates flushing angles from 45° to 70°. The nose area permits angles of 0° (straight forward) to 45°. Made of Heat Treated 416 Stainless Steel. See caution note below.



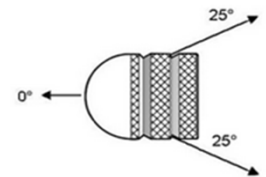
A word of caution on custom drilled nozzles: Make sure all the information is correct when ordering as these nozzles will be drilled to order and are not returnable.



BUTTON NOSE FLUSHERS

Good general purpose cleaning nozzle. Also for follow up after cleaning out blockages to remove left over debris. For runs up to 100 ft. Button nose nozzles are made of heat treated 416 Stainless Steel.

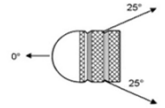
| Part No. | Prop. Angle | Rear Jets | Fwd. Jets | GPM | PSI | NPT Size |
|--------------|-------------|-----------|-----------|-----|------|----------|
| 140215FL | 45° | 6 | 0 | 1.7 | 1500 | 1/4" |
| 380215FL | 45° | 6 | 0 | 2.2 | 1500 | 3/8" |
| 380430BNFL | 45° | 6 | 0 | 4 | 3000 | 3/8" |
| 380437BNFL35 | 35° | 6 | 0 | 4 | 3750 | 3/8" |
| 380437BNFL | 45° | 6 | 0 | 4 | 3750 | 3/8" |
| 380442BNFL | 45° | 6 | 0 | 4 | 4200 | 3/8" |
| 380525FL | 45° | 6 | 0 | 5 | 2500 | 3/8" |
| 380530FL | 45° | 6 | 0 | 4.8 | 3000 | 3/8" |
| 380830FL | 45° | 6 | 0 | 8 | 3000 | 3/8" |
| 381025FL | 45° | 3 | 0 | 10 | 2500 | 3/8" |
| 381536FL | 45° | 6 | 0 | 15 | 3600 | 3/8" |
| 121025BNFL | 45° | 6 | 0 | 10 | 2500 | 1/2" |
| 121317FL | 45° | 6 | 0 | 13 | 1700 | 1/2" |
| 121536BNFL | 45° | 6 | 0 | 15 | 3600 | 1/2" |
| 121840BNFL | 45° | 6 | 0 | 18 | 4000 | 1/2" |



BUTTON NOSE PENETRATORS

Button Nose nozzles with a forward jet to bore through plugged lines. Made of heat treated 416 Stainless Steel.

| Part No. | Prop. Angle | Rear Jets | Fwd. Jets | GPM | PSI | NPT Size |
|------------|-------------|-----------|-----------|-----|------|----------|
| 180215PE | 25° | 3 | 1 | 1.7 | 1500 | 1/8" |
| 180430PE | 25° | 3 | 1 | 4 | 3000 | 1/8" |
| 180440PE | 25° | 3 | 1 | 4 | 4000 | 1/8" |
| 140215PE | 25° | 3 | 1 | 1.7 | 1500 | 1/4" |
| 140224BNPE | 35° | 3 | 1 | 2.2 | 2400 | 1/4" |



BUTTON NOSE PENETRATORS (CONTINUED)

| Part No. | Prop. Angle | Rear Jets | Fwd. Jets | GPM | PSI | NPT Size |
|------------|-------------|-----------|-----------|-----|------|----------|
| 380215PE | 25° | 3 | 1 | 2.2 | 1500 | 3/8" |
| 380430BNPE | 25° | 4 | 1 | 4 | 3000 | 3/8" |
| 380437BNPE | 25° | 3 | 1 | 4 | 3750 | 3/8" |
| 380440BNPE | 25° | 4 | 1 | 4 | 4000 | 3/8" |
| 380442BNPE | 25° | 3 | 1 | 4 | 4200 | 3/8" |
| 380530PE | 25° | 3 | 1 | 4.8 | 3000 | 3/8" |
| 380830PE | 25° | 3 | 1 | 8 | 3000 | 3/8" |
| 381025PE | 25° | 3 | 1 | 10 | 2500 | 3/8" |
| 381536PE | 25° | 3 | 1 | 15 | 3600 | 3/8" |
| 121025BNTH | 25° | 3 | 1 | 10 | 2500 | 1/2" |
| 121025BNPE | 35° | 4 | 1 | 10 | 2500 | 1/2" |
| 121430BNTH | 25° | 3 | 1 | 14 | 3000 | 1/2" |
| 121525BNPE | 35° | 6 | 1 | 15 | 2500 | 1/2" |
| 121536BNTH | 25° | 3 | 1 | 15 | 3600 | 1/2" |
| 121840BNTH | 25° | 3 | 1 | 18 | 4000 | 1/2" |
| 121840BNPE | 35° | 3 | 1 | 18 | 4000 | 1/2" |

BUTTON NOSE VORTEX (AKA MONSTER) PENETRATORS

Dual angle, great for breaking up ice.

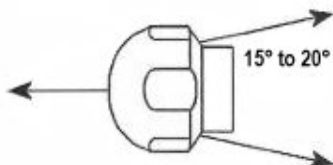
| Part No. | Prop. Angle | Rear Jets | Fwd. Jets | GPM | PSI | NPT Size |
|----------|-------------|-----------|-----------|-----|------|----------|
| 380525MO | 25°/45° | 6 | 1 | 5 | 2500 | 3/8" |



ROUND HEAD SUPER THRUSTERS

The wider head design of this nozzle allows for steeper jet angles which results in more puller power. Ideal for long runs. (HT416SS)

| Part No. | Prop. Angle | Rear Jets | Fwd. Jets | GPM | PSI | NPT Size |
|------------|-------------|-----------|-----------|-----|------|----------|
| 180430PE | 15° | 3 | 1 | 4 | 3000 | 1/8" |
| 140430PE | 15° | 3 | 1 | 4 | 3000 | 1/4" |
| 380430RHTH | 15° | 3 | 1 | 4 | 3000 | 3/8" |
| 380530RHTH | 15° | 3 | 1 | 4.8 | 3000 | 3/8" |
| 121025RHTH | 15° | 3 | 1 | 10 | 2500 | 1/2" |
| 121317PE | 15° | 6 | 1 | 13 | 1700 | 1/2" |
| 121536RHTH | 15° | 6 | 1 | 15 | 3600 | 1/2" |



Round Head Super Thruster nozzles can be custom drilled to meet your specifications. The 15° to 20° angle range allows for maximum pulling power with one forward jet to penetrate blockages. Pattern: 3 to 6 rear jets with one forward jet. Made of heat treated 416 SS. See caution note on page 1.

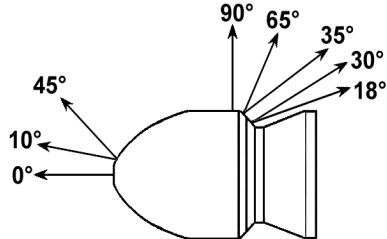
RADIAL NOZZLES



Typical O'Brien Styles



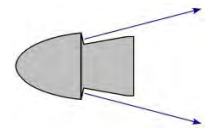
Typical Aquatech Style



Custom drilled Radial Nose (RN) nozzles are available to meet your specifications. They are designed to accommodate a range of spray angles from 18° for high trusting power up 65° for flushing action. Side wall jets of 90° are possible, as well as forward jets from 0° to 45°. 6 to 12 rear jets, 0 to 3 forward. Made of heat treated 416 Stainless Steel. See caution note on page 1.

RADIAL THRUST NOZZLES

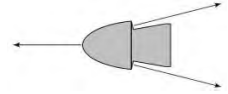
Designed to for fast acceleration and long runs in small and medium sized pipes.



| Part No. | Prop. Angle | Rear Jets | Fwd. Jets | GPM | PSI | NPT Size |
|--------------|-------------|-----------|-----------|-----|------|----------|
| 121025RNTH | 20° | 6 | 0 | 10 | 2500 | 1/2" |
| A136425 | 15° | 6 | 0 | 15 | 3000 | 3/4" |
| A136015 | 15° | 6 | 0 | 35 | 2000 | 3/4" |
| A136048 | 15° | 6 | 0 | 35 | 2500 | 3/4" |
| A136046 | 15° | 6 | 0 | 44 | 3000 | 3/4" |
| A136051 | 15° | 6 | 0 | 45 | 2000 | 3/4" |
| A136041 | 15° | 6 | 0 | 50 | 2000 | 3/4" |
| A136041-3000 | 15° | 6 | 0 | 50 | 3000 | 3/4" |
| A249109 | 15° | 6 | 0 | 45 | 2500 | 3/4" |
| A136421 | 15° | 6 | 0 | 65 | 2000 | 3/4" |
| A136430 | 15° | 6 | 0 | 45 | 2500 | 1" |
| A136096 | 15° | 6 | 0 | 50 | 2500 | 1" |
| A136001 | 15° | 6 | 0 | 60 | 2000 | 1" |
| A136000 | 15° | 6 | 0 | 65 | 2000 | 1" |
| A136423 | 15° | 6 | 0 | 65 | 2500 | 1" |
| A249085 | 15° | 6 | 0 | 65 | 2500 | 1" |
| A136002 | 15° | 6 | 0 | 80 | 2000 | 1" |
| A136023 | 15° | 6 | 0 | 80 | 2500 | 1" |
| A249096 | 15° | 6 | 0 | 85 | 2000 | 1" |
| 019025RNTH | 18° | 6 | 0 | 90 | 2500 | 1" |
| A136007-1 | 15° | 6 | 0 | 100 | 2000 | 1" |
| A136063 | 15° | 6 | 0 | 80 | 2000 | 1-1/4" |
| A136003 | 15° | 6 | 0 | 100 | 2000 | 1-1/4" |
| A100190 | 15° | 6 | 0 | 125 | 2000 | 1-1/4" |

PENETRATING RADIAL THRUST NOZZLES

Radial Nozzles with a forward jet to break up blockages ahead of the nozzle.



| Part No. | Prop. Angle | Rear Jets | Fwd. Jets | GPM | PSI | NPT Size |
|------------|-------------|-----------|-----------|-----|------|----------|
| 121025PE | 25° | 6 | 1 | 10 | 2500 | 1/2" |
| 121230PE | 25° | 6 | 1 | 12 | 3000 | 1/2" |
| 121536PE | 25° | 6 | 1 | 15 | 3600 | 1/2" |
| 121840PE | 25° | 6 | 1 | 18 | 4000 | 1/2" |
| 123030PE | 25° | 6 | 1 | 30 | 3000 | 1/2" |
| 341840PE | 25° | 6 | 1 | 18 | 4000 | 3/4" |
| 343020PE | 25° | 6 | 1 | 30 | 2000 | 3/4" |
| 343030PE | 25° | 6 | 1 | 30 | 3000 | 3/4" |
| 344020RNTH | 18° | 6 | 1 | 40 | 2000 | 3/4" |
| 344020PE | 25° | 6 | 1 | 40 | 2000 | 3/4" |
| 344030PE | 25° | 6 | 1 | 40 | 3000 | 3/4" |
| J-1147 | 18° | 6 | 1 | 65 | 2000 | 1" |
| 018020PE | 25° | 6 | 1 | 80 | 2000 | 1" |
| A136023-F | 15° | 6 | 1 | 80 | 2500 | 1" |
| 0110025PE | 18° | 6 | 1 | 100 | 2500 | 1" |

RADIAL FLUSHER NOZZLES

Designed for general cleaning applications in small and medium sized pipes.



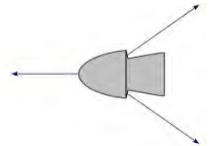
| Part No. | Prop. Angle | Rear Jets | Fwd. Jets | GPM | PSI | NPT Size |
|--------------|-------------|-----------|-----------|-----|------|----------|
| 121025FL | 35° | 6 | 0 | 10 | 2500 | 1/2" |
| A381255 * | 35° | 6 | 0 | 15 | 3000 | 1/2" |
| 121230FL | 35° | 6 | 0 | 12 | 3000 | 1/2" |
| 121536FL | 35° | 6 | 0 | 15 | 3600 | 1/2" |
| 121830FL | 35° | 6 | 0 | 18 | 3000 | 1/2" |
| 121840FL | 35° | 6 | 0 | 18 | 4000 | 1/2" |
| 123030FL | 35° | 6 | 0 | 30 | 3000 | 1/2" |
| A136426 | 35° | 6 | 0 | 15 | 3000 | 3/4" |
| 341840FL | 35° | 6 | 0 | 18 | 4000 | 3/4" |
| 343020FL | 35° | 6 | 0 | 30 | 2000 | 3/4" |
| 343030FL | 35° | 6 | 0 | 30 | 3000 | 3/4" |
| A136020 | 35° | 6 | 0 | 35 | 2000 | 3/4" |
| A136049 | 35° | 6 | 0 | 35 | 2500 | 3/4" |
| 344020FL | 35° | 6 | 0 | 40 | 2000 | 3/4" |
| 344030FL | 35° | 6 | 0 | 40 | 3000 | 3/4" |
| A136047 | 35° | 6 | 0 | 44 | 3000 | 3/4" |
| A136052 | 35° | 6 | 0 | 45 | 2000 | 3/4" |
| A249108 | 35° | 6 | 0 | 45 | 2500 | 3/4" |
| A136042 | 35° | 6 | 0 | 50 | 2000 | 3/4" |
| A136042-3000 | 35° | 6 | 0 | 50 | 3000 | 3/4" |
| A136422 | 35° | 6 | 0 | 65 | 2000 | 3/4" |

RADIAL FLUSHER NOZZLES (CONTINUED)

| Part No. | Prop. Angle | Rear Jets | Fwd. Jets | GPM | PSI | NPT Size |
|-----------|-------------|-----------|-----------|-----|------|----------|
| A136431 | 35° | 6 | 0 | 45 | 2500 | 1" |
| A136005 | 35° | 6 | 0 | 65 | 2000 | 1" |
| A136424 | 35° | 6 | 0 | 65 | 2500 | 1" |
| A249086 | 35° | 6 | 0 | 65 | 2500 | 1" |
| A136007 | 35° | 6 | 0 | 80 | 2000 | 1" |
| A136024 | 35° | 6 | 0 | 80 | 2500 | 1" |
| A249097 | 35° | 6 | 0 | 85 | 2000 | 1" |
| 0110025FL | 35° | 6 | 0 | 100 | 2500 | 1" |
| A136059 | 35° | 6 | 0 | 80 | 2000 | 1-1/4" |
| A100191 | 35° | 6 | 0 | 125 | 2000 | 1-1/4" |

PENETRATING RADIAL FLUSHER NOZZLES

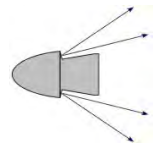
Radial Nozzles with a forward jet to break up blockages ahead of the nozzle.



| Part No. | Prop. Angle | Rear Jets | Fwd. Jets | GPM | PSI | NPT Size |
|------------|-------------|-----------|-----------|-----|------|----------|
| 121525FL | 30° | 6 | 1 | 15 | 2500 | 1/2" |
| A136385 | 30° | 6 | 1 | 25 | 4000 | 1/2" |
| 343520PE | 30° | 6 | 1 | 35 | 2000 | 3/4" |
| 344020RNFL | 30° | 6 | 1 | 40 | 2000 | 3/4" |
| 015030RNPE | 35° | 6 | 1 | 50 | 3000 | 1" |
| J-1141 | 30° | 6 | 1 | 65 | 2000 | 1" |

RADIAL VORTEX (AKA MONSTER) NOZZLES

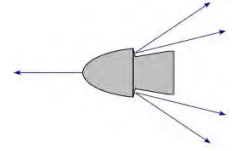
Vortex dual degree design incorporates powerful thrust and wide angle cleaning into one nozzle. For general cleaning applications in small and medium sized pipes.



| Part No. | Prop. Angle | Rear Jets | Fwd. Jets | GPM | PSI | NPT Size |
|------------|-------------|-----------|-----------|-----------|-------------|----------|
| 121840RNMO | 25°/45° | 8 | 0 | 18 | 4000 | 1/2" |
| A136025 | 15°/35° | 6 | 0 | 35 - 40 | 1800 - 2200 | 3/4" |
| 343030RNMO | 25°/45° | 8 | 0 | 30 | 3000 | 3/4" |
| 344020RNMO | 25°/45° | 8 | 0 | 40 | 2000 | 3/4" |
| A136010 | 15°/35° | 6 | 0 | 55 - 65 | 1800 - 2200 | 1" |
| A136054 | 15°/45° | 12 | 0 | 65 | 2000 | 1" |
| A136011 | 15°/35° | 6 | 0 | 80 - 90 | 1800 - 2200 | 1" |
| A136012 | 15°/35° | 6 | 0 | 100 - 120 | 1800 - 2200 | 1-1/4" |

PENETRATING RADIAL VORTEX NOZZLE

Dual degree design with forward firing jet.



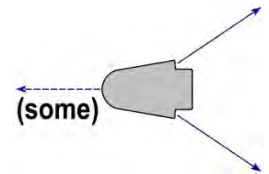
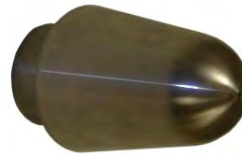
| Part No. | Prop. Angle | Rear Jets | Fwd. Jets | GPM | PSI | NPT Size |
|------------|-------------|-----------|-----------|-----|------|----------|
| 121025RNMV | 18°/25° | 6 | 1 | 10 | 2500 | 1/2" |
| J-1132 | 18°/24° | 6 | 1 | 35 | 2000 | 3/4" |

PENETRATING RADIAL VORTEX NOZZLE CONTINUED

| Part No. | Prop. Angle | Rear Jets | Fwd. Jets | GPM | PSI | NPT Size |
|------------|-------------|-----------|-----------|-----|------|----------|
| J-1149 | 18°/24° | 6 | 1 | 55 | 2000 | 1" |
| 016520RNMV | 18°/25° | 6 | 1 | 65 | 2000 | 1" |

MUSHROOM FLUSHER NOZZLES

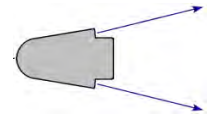
Designed for flushing material back to the trap.



| Part No. | Prop. Angle | Rear Jets | Fwd. Jets | GPM | PSI | NPT Size |
|----------|-------------|-----------|-----------|-----|------|----------|
| J-1015 | 30° | 6 | 0 | 65 | 2000 | 1" |
| J-1021 | 30° | 6 | 1 | 65 | 2000 | 1" |

MUSHROOM THRUST NOZZLES

Designed to for fast acceleration and long runs in small and medium sized pipes.



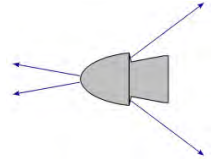
| Part No. | Prop. Angle | Rear Jets | Fwd. Jets | GPM | PSI | NPT Size |
|----------|-------------|-----------|-----------|-----|------|----------|
| A130050 | 15° | 6 | 0 | 35 | 1850 | 3/4" |



GREASE REMOVER NOZZLES

More rear jets for removing grease and detergent from the pipe wall.

| Part No. | Prop. Angle | Rear Jets | Fwd. Jets | GPM | PSI | NPT Size |
|----------|-------------|-----------|-----------|-----|------|----------|
| A130197 | 35° | 10 | 0 | 25 | 4000 | 1/2" |
| A130196 | 35° | 12 | 0 | 25 | 4000 | 3/4" |
| A130195 | 35° | 12 | 0 | 65 | 2000 | 1" |
| A130198 | 35° | 12 | 0 | 80 | 2000 | 1" |



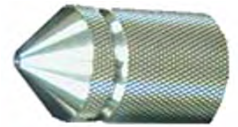
RADIAL DEGREASER/DEICER NOZZLE

Same purpose as the above but for larger hoses. See information on page 3 for custom drilled radial nozzles.

| Part No. | Prop. Angle | Rear Jets | Fwd. Jets | GPM | PSI | NPT Size |
|----------|-------------|-----------|-----------|-----|------|----------|
| 344020DE | 35° | 6 | 3 @ 10° | 40 | 2000 | 3/4" |
| 016520DE | 35° | 6 | 3 @ 10° | 65 | 2000 | 1" |



OLD STYLE

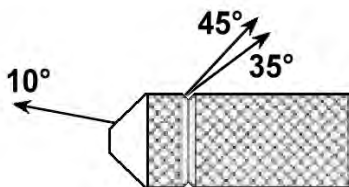


NEW STYLE

JUMPER DEGREASER/DEICER NOZZLES

Designed to penetrate heavy grease, soap, and ice filled lines. A great all-around nozzle! New style made of heat treated 416 SS. Note: Old style degreaser/deicer nozzles are being phased out as existing inventories are depleted.

| Part No. | Prop. Angle | Rear Jets | Fwd. Jets | GPM | PSI | NPT Size |
|----------|-------------|-----------|-----------|-----|------|----------|
| 180430DE | 45° | 6 | 3 @ 10° | 4 | 3000 | 1/8" |
| 140430DE | 45° | 6 | 3 @ 10° | 4 | 3000 | 1/4" |
| 380437DE | 45° | 6 | 3 @ 10° | 4 | 3750 | 3/8" |
| 380442DE | 45° | 6 | 3 @ 10° | 4 | 4200 | 3/8" |
| 380438DE | 35° | 6 | 3 @ 10° | 4 | 3800 | 3/8" |
| 380530DE | 45° | 6 | 3 @ 10° | 4.8 | 3000 | 3/8" |
| 381025DE | 30° | 6 | 4 | 10 | 2500 | 3/8" |
| 121025DE | 45° | 6 | 3 @ 10° | 10 | 2500 | 1/2" |
| 121536DE | 45° | 6 | 3 @ 10° | 15 | 3600 | 1/2" |
| 121840DE | 45° | 6 | 3 @ 10° | 18 | 4000 | 1/2" |



Custom drilled Degreaser/Deicer nozzles are available to meet your machines specifications. Made of heat treated 416 stainless steel, they all feature three 10° forward jets and 6 to 8 rear jets at a choice of 35° or 45° angles. If higher thrust is desired, order a 25° button nose nozzle with three 10° forward jets (see Button Nose nozzles). See caution note on page 1.



TRIAD PENETRATOR

Triangular shape allows for excellent penetration. Features three front faces with 15° orifices and a penetrating front tip orifice. Made of stainless steel. Used for cleaning calcium, dirt, grease, soap build up. Also very effective for ice penetration. Orifices are replaceable. Imported

| Part No. | Prop. Angle | Rear Jets | Fwd. Jets | GPM | PSI | NPT Size |
|----------|-------------|-----------|-----------|-----|------|----------|
| A135990 | 25° | 6 | 4 | 5 | 4000 | 1/4" |
| A135994 | 25° | 6 | 4 | 12 | 2000 | 1/2" |
| A135991 | 25° | 6 | 4 | 20 | 2000 | 1/2" |
| A135992 | 25° | 6 | 4 | 35 | 2000 | 3/4" |
| A135996 | 25° | 6 | 4 | 40 | 2000 | 3/4" |
| A135993 | 25° | 6 | 4 | 65 | 2000 | 1" |
| A135995 | 25° | 6 | 4 | 80 | 2000 | 1" |



ELLIPSE NOZZLES

This is the best long lasting nozzle made. Wear- Resistant high carbon steel construction. This smooth service nozzle will penetrate through blockages and is capable of being retrieved without binding on offset joints, broken pipes or tight bends. Orifices are replaceable.

| Part No. | Prop. Angle | Rear Jets | Fwd. Jets | GPM | PSI | NPT Size |
|----------|-------------|-----------|-----------|-----|------|----------|
| A136160 | 15° | 6 | 1 | 20 | 2000 | 1/2" |
| A136155 | 15° | 6 | 1 | 35 | 2000 | 3/4" |
| A136158 | 15° | 6 | 1 | 40 | 2000 | 3/4" |
| A136150 | 15° | 6 | 1 | 65 | 2000 | 1" |
| A136165 | 15° | 6 | 1 | 65 | 2500 | 1" |
| A136151 | 15° | 6 | 1 | 80 | 2000 | 1" |



SAND NOZZLES

Specially designed to lift and float sand that's otherwise difficult to move. For 4" to 18" pipes

| Part No. | Prop. Angle | Rear Jets | Fwd. Jets | GPM | PSI | NPT Size |
|----------|-------------|-----------|-----------|-----|------|----------|
| 016020SN | 15° | 6 | 2 @ 90° | 60 | 2000 | 1" |
| 016520SN | 15° | 6 | 2 @ 90° | 65 | 2000 | 1" |
| 018020SN | 15° | 6 | 2 @ 90° | 80 | 2000 | 1" |



PENETRATOR NOZZLES

The Penetrating Nozzle is effective when a line is plugged and break up the stoppage fast.

| Part No. | Prop. Angle | Rear Jets | Fwd. Jets | GPM | PSI | NPT Size |
|-----------|-------------|-----------|-----------|-----|------|----------|
| J-1102 | 30° | 5 | 0 | 35 | 2000 | 3/4" |
| J-1104-80 | 30° | 5 | 0 | 80 | 2000 | 1" |



SPEAR POINT NOZZLES

These nozzles feature rear jet angles for extremely quick acceleration up the line.

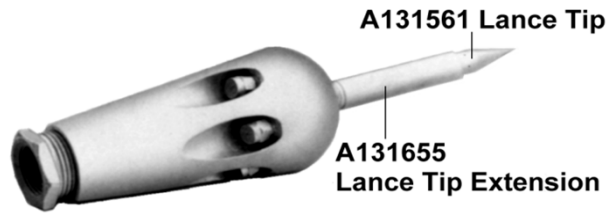
| Part No. | Prop. Angle | Rear Jets | Fwd. Jets | GPM | PSI | NPT Size |
|----------|-------------|-----------|------------|-----|------|----------|
| J-1134 | 12° | 6 | 1 | 35 | 2000 | 3/4" |
| J-1139 | 16° | 6 | 1 (4 side) | 35 | 2000 | 3/4" |
| J-1148 | 16° | 6 | 0 | 65 | 2000 | 1" |
| J-1135 | 16° | 6 | 1 | 65 | 2000 | 1" |
| J-1150 | 12° | 6 | 1 (4 side) | 65 | 2000 | 1" |



RADIAL WITH LANCE TIP NOZZLES

For cleaning totally blocked lines. 90° spray from lance tip opens a hole in blockage allowing the nozzle to jump forward.

| Part No. | Prop. Angle | Rear Jets | Lance Jets | GPM | PSI | NPT Size |
|----------|-------------|-----------|------------|-----|------|----------|
| A136125 | 15° | 6 | 6 | 35 | 2000 | 3/4" |
| A136018 | 15° | 6 | 6 | 65 | 2000 | 1" |
| A136019 | 35° | 6 | 6 | 65 | 2000 | 1" |



11° BAYONET NOZZLES

For penetrating grease and complete stoppage in lines up to 18". Six 90° cleaning orifices in the lance tip breaks up material and enlarges the hole. Cast Aluminum Body. Orifices are replaceable.

| Part No. | Prop. Angle | Rear Jets | Lance Jets | GPM | PSI | NPT Size |
|----------|-------------|-----------|------------|-----|------|----------|
| A130140 | 11° | 6 | 6 | 35 | 2000 | 3/4" |
| A130145 | 11° | 6 | 6 | 40 | 2000 | 3/4" |
| A130350 | 11° | 6 | 6 | 65 | 2000 | 1" |
| A130360 | 11° | 6 | 6 | 80 | 2000 | 1" |



11° THRUST NOZZLES

Lightweight, fast forward traveling nozzle. Used to thread lines for TV camera and breaking through tough blockages. Also ideal for use in deteriorating concrete pipe because the 11° jet stream is directed rearward instead of against the pipe wall. Cast Aluminum body. Orifices are replaceable. An 1/4" pipe plug can be removed and substituted with an optional front orifice (p/n A131520) to create a penetrator nozzle.

| Part No. | Prop. Angle | Rear Jets | Fwd. Jet | GPM | PSI | NPT Size |
|----------|-------------|-----------|----------|-----|------|----------|
| A130130 | 11° | 6 | Optional | 35 | 2000 | 3/4" |
| A130340 | 11° | 6 | Optional | 65 | 2000 | 1" |
| A130341 | 11° | 6 | Optional | 80 | 2000 | 1" |



ALUMINUM RAM NOZZLES

Ideal for quick penetration of grease and detergent build up. Orifices are replaceable.

| Part No. | Prop. Angle | Rear Jets | Fwd. Jets | GPM | PSI | NPT Size |
|----------|-------------|-----------|-----------|-----|------|----------|
| J-1303 | 30° | 6 | 0 | 40 | 2000 | 3/4" |
| J-1305 | 30° | 6 | 0 | 65 | 2000 | 1" |

PENETRATING ALUMINUM RAM NOZZLES

Aluminum ram nozzles with a forward jet for eroding complete blockages. Orifices are replaceable.

| Part No. | Prop. Angle | Rear Jets | Fwd. Jet | GPM | PSI | NPT Size |
|----------|-------------|-----------|----------|-----|------|----------|
| J-1302 | 15° | 6 | 1 | 20 | 2000 | 3/4" |
| J-1301 | 30° | 6 | 1 | 35 | 2000 | 3/4" |
| J-1309 | 30° | 6 | 1 | 65 | 2000 | 1" |



AQUATECH™ STORM NOZZLES

25% more cleaning surface. Large diameter places water closer to the pipe wall. Most efficient for grease, detergent, and removal of large volumes of sand in sanitary sewers and drains. Cast aluminum body. For pipes 8" to 36" in diameter. Orifices are replaceable. An 1/8" pipe plug can be removed and substituted with an optional front orifice (p/n A131543) to create a penetrator nozzle.

| Part No. | Prop. Angle | Rear Jets | Fwd. Jet | GPM | PSI | NPT Size |
|----------|-------------|-----------|----------|-----|------|----------|
| A130150 | 35° | 8 | Optional | 35 | 2000 | 3/4" |
| A130380 | 35° | 8 | Optional | 65 | 2000 | 1" |
| A130382 | 35° | 8 | Optional | 80 | 2000 | 1" |
| A130386 | 35° | 8 | Optional | 80 | 2000 | 1-1/4" |
| A130383 | 35° | 8 | Optional | 100 | 2000 | 1-1/4" |

STORM VORTEX NOZZLES

Combines good forward propulsion while affording wide angle cleaning. Optional A131543 front orifice can be added.

| Part No. | Prop. Angle | Rear Jets | Opt. Fwd. Jet | GPM | PSI | NPT Size |
|----------|-------------|-----------|---------------|-----|------|----------|
| A130160 | 15°/35° | 8 | Optional | 35 | 2000 | 3/4" |
| A130400 | 15°/35° | 8 | Optional | 65 | 2000 | 1" |
| A130390 | 15°/35° | 8 | Optional | 80 | 2000 | 1" |
| A130403 | 15°/35° | 8 | Optional | 80 | 2500 | 1" |



DOUBLE STORM NOZZLES

The water from the leading set of orifices dislodges debris accumulations while the trailing set flushes the debris back to the manhole. Ideal for the rapid cleaning of medium and large pipes. Orifices are replaceable. An 1/8" pipe plug can be removed and substituted with an optional front orifice (p/m A131543) to create a penetrator nozzle.

| Part No. | Prop. Angle | Rear Jets | Fwd. Jet | GPM | PSI | NPT Size |
|----------|-------------|-----------|----------|-----|------|----------|
| A130420 | 35° | 16 | Optional | 65 | 2000 | 1" |
| A130422 | 35° | 16 | Optional | 80 | 2000 | 1" |
| A130421 | 35° | 16 | Optional | 100 | 2000 | 1-1/4" |



O'BRIEN™ GANG NOZZLES

For general cleaning in larger pipes. Aluminum body with replaceable orifices.

| Part No. | Prop. Angle | Rear Jets | Front Jets | GPM | PSI | NPT Size |
|----------|-------------|-----------|------------|-----|------|----------|
| J-1201 | 30° | 8 | 0 | 35 | 2000 | 3/4" |
| J-1211 | 30° | 8 | 0 | 65 | 2000 | 1" |

PENETRATING GANG NOZZLES

| Part No. | Prop. Angle | Rear Jets | Front Jets | GPM | PSI | NPT Size |
|----------|-------------|-----------|------------|-----|------|----------|
| J-1203 | 30° | 8 | 1 | 35 | 2000 | 3/4" |
| J-1209 | 30° | 8 | 1 | 65 | 2000 | 1" |

PENETRATING GANG VORTEX NOZZLES

| Part No. | Prop. Angle | Rear Jets | Front Jets | GPM | PSI | NPT Size |
|----------|-------------|-----------|------------|-----|------|----------|
| J-1401 | 15°/30° | 16 | 1 | 40 | 2000 | 3/4" |
| J-1403 | 15°/30° | 16 | 1 | 65 | 2000 | 1" |



TANDEM GANG NOZZLES

These O'Brien tandem nozzles work on the same principle as the Aquatech Double Storm nozzles. Orifices are replaceable.

| Part No. | Prop. Angle | Rear Jets | Front Jets | GPM | PSI | NPT Size |
|----------|-------------|-----------|------------|-----|------|----------|
| J-1205 | 30° | 16 | 0 | 35 | 2000 | 3/4" |

PENETRATING TANDEM GANG NOZZLES

| Part No. | Prop. Angle | Rear Jets | Front Jets | GPM | PSI | NPT Size |
|----------|-------------|-----------|------------|-----|------|----------|
| J-1207 | 30° | 16 | 1 | 40 | 2000 | 3/4" |
| J-1215 | 30° | 16 | 1 | 65 | 2000 | 1" |



ROCKET NOZZLE

Aerodynamic design and three low degree orifices provides full thrust. Designed to remove sand, gravel, dirt, soap clogs and grease from lines. Ideal for 6 to 18" pipes. 14-1/4"L x 3-3/4"Dia. Approx. 15lbs.

| Part No. | Prop. Angle | Rear Jets | Fwd. Jets | GPM | PSI | NPT Size |
|----------|-------------|-----------|-----------|-----|------|----------|
| A136183 | 12° | 3 | 1 | 40 | 2000 | 3/4" |
| A130438 | 12° | 3 | 1 | 60 | 2000 | 1" |
| A136184 | 12° | 3 | 1 | 65 | 2000 | 1" |
| A136182 | 12° | 3 | 1 | 80 | 2000 | 1" |
| A136188 | 12° | 3 | 1 | 80 | 2500 | 1" |



TADPOLE NOZZLES

Our best all around cleaning nozzle for 8" to 24" pipes. Highly effective for removing grease from the pipe wall. Removes standing water. The stainless steel orifices are replaceable.

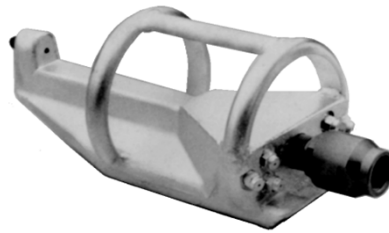
| Part No. | Prop. Angle | Rear Jets | Front Jets | GPM | PSI | NPT Size |
|----------|-------------|-----------|------------|-----|------|----------|
| A136298 | 8°/16° | 12 | Optional | 40 | 2000 | 3/4" |
| A136300 | 17°/24° | 12 | Optional | 65 | 2000 | 1" |
| A136299 | 17°/24° | 12 | Optional | 80 | 2000 | 1" |
| A136297 | 8°/16° | 12 | Optional | 80 | 2500 | 1" |



AQUATECH™ TORPEDO NOZZLES

This bottom cleaning nozzle features, a towing eye, replaceable orifices, 360° rotating swivel to prevent hose from turning the nozzle, and a smooth hardened surface to allow the nozzle to glide over sand and debris. 4" diameter, 24 lbs. approx. Imported

| Part No. | Prop. Angle | Rear Jets | Front Jets | GPM | PSI | NPT Size |
|----------|-------------|-----------|------------|-----|------|----------|
| A136185 | 35° | 4 | 0 | 35 | 2000 | 3/4" |
| A136180 | 35° | 4 | 0 | 65 | 2000 | 1" |
| A136187 | 35° | 4 | 0 | 80 | 2000 | 1" |
| A136195 | 35° | 4 | 0 | 100 | 2000 | 1-1/4" |



STINGRAY NOZZLES

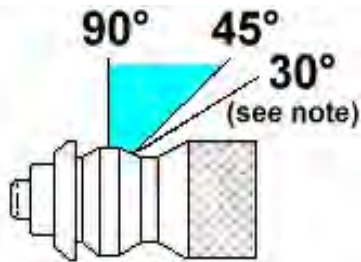
Simply the best. Most efficient nozzle ever developed for cleaning 18" and larger diameter pipe. Weighted and balanced to ride evenly in the bottom of the pipe. Hose swivel and rollover bar virtually eliminate flip over. The body measures 14"L x 7"W x 6.5"H. Orifices are replaceable. Note: 2000psi max

| Part No. | Prop. Angle | Rear Jets | Front Jets | GPM | PSI | NPT Size |
|----------|-------------|-----------|------------|-----|------|----------|
| A136215 | 11°/18°/45° | 6 | 1 | 35 | 2000 | 3/4" |
| A136210 | 11°/18°/45° | 6 | 1 | 65 | 2000 | 1" |
| A136220 | 11°/18°/45° | 6 | 1 | 80 | 2000 | 1" |

ROTATING NOZZLES



ROTOR-JET POLISHER NOZZLES



Custom drilled Rotor-Jet nozzles are available to meet your specifications. All Rotor-Jet can accommodate spray angles between 45° to 90°. NOTE: 1/2"NPT Rotor-Jets can accommodate a higher thrusting angle of 30°.

Pattern: 2 jets (one angle) or 4 jets (two angles) within available range. Made of Heat Treated 416 Stainless Steel. See caution note on page 1.

Revolving nozzle creates a sheet of water with 360 degrees of coverage for maximized wall cleaning. Typically used as a finishing tool to remove debris which might have been missed because of the spaces between jets on a fixed orifice nozzle.

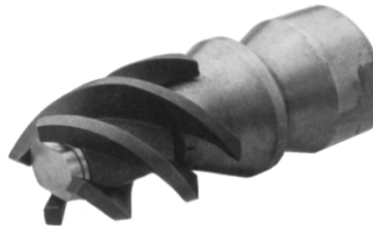
| Part No. | Prop. Angle | Rear Jets | Side Jets | GPM | PSI | NPT Size |
|----------|-------------|-----------|-----------|-----|------|----------|
| 180430PO | 45° | 2 | 2 @ 90° | 4 | 3000 | 1/8" |
| 140430PO | 45° | 2 | 2 @ 90° | 4 | 3000 | 1/4" |
| 380442PO | 45° | 2 | 2 @ 90° | 4 | 4200 | 3/8" |
| 380530PO | 45° | 2 | 2 @ 90° | 4 | 3800 | 3/8" |
| | | | | 5 | 3000 | |
| 121025PO | 30° | 2 | 2 @ 90° | 10 | 2500 | 1/2" |
| 121536PO | 35° | 2 | 2 @ 90° | 15 | 3600 | 1/2" |
| 121840PO | 30° | 2 | 2 @ 90° | 18 | 4000 | 1/2" |
| 344020PO | 30° | 2 | 2 @ 90° | 40 | 2000 | 3/4" |



SPIN CLEAN NOZZLES

This stainless steel rotating nozzle scours the pipe wall loosening hard debris. Ideal for pipes with limestone and other mineral deposits. Also effective for removing grease build-up. Centering skids are recommended to achieve the best cleaning action. Imported

| Part No. | Prop. Angle | Rear Jets | Side Jets | GPM | PSI | NPT Size |
|----------|-------------|-----------|-----------|-----|------|----------|
| A136075 | 30° | 6 | 4 @ 90° | 8 | 4000 | 3/8" |
| A136070 | 30° | 6 | 4 @ 90° | 25 | 4000 | 1/2" |
| A136065 | 30° | 6 | 4 @ 90° | 35 | 2000 | 3/4" |
| A136060 | 30° | 6 | 4 @ 90° | 65 | 2000 | 1" |
| A136062 | 30° | 6 | 4 @ 90° | 80 | 2000 | 1" |



CONICAL DRILL NOZZLES

Designed to cut, drill and penetrate difficult obstructions in 3" and larger pipes. Centering skids are recommended. 60° carbide flutes can be re-sharpened. Imported

| Part No. | Prop. Angle | Rear Jets | Rotor Jets | GPM | PSI | NPT Size |
|----------|-------------|-----------|------------|-----|------|----------|
| A136345 | 25° | 6 | 6 | 35 | 2000 | 3/4" |
| A136135 | 25° | 6 | 8 | 65 | 2000 | 1" |



PROPELLER NOZZLES

Designed to cut through solid blockages and roots. Centering skids are recommended. Imported.

| Part No. | Prop. Angle | Rear Jets | Rotor Jets | GPM | PSI | NPT Size |
|----------|-------------|-----------|------------|-----|------|----------|
| A136105 | 25° | 6 * | 5 | 35 | 2000 | 3/4" |
| A136100 | 25° | 6 * | 5 | 60 | 2000 | 1" |
| A136102 | 25° | 6 * | 5 | 80 | 2000 | 1" |

* Replaceable

A NOTE ABOUT ALL OF OUR ROTATING NOZZLES: In order to extend the life of these nozzles, we recommend submerging them in lubricating oil after each use.



ROTATING CHAIN NOZZLES

Chains rotate at a high speed removing hard deposits, such as slag, calcium and limestone. Also good for paint, epoxy, and other accidental spills. Will open blockages caused by grease, sand and roots. Square profile chain made of high quality steel. Centering skirts are recommended. Orifices are replaceable. Imported.

| Part No. | Prop. Angle | Rear Jets | Rotor Jets | GPM | PSI | NPT Size |
|----------|-------------|-----------|------------|-----|------|----------|
| A383045 | 20° | 4 | 4 | 10 | 2500 | 1/2" |
| A136243 | 20° | 4 | 4 | 18 | 4000 | 1/2" |
| A136325 | 20° | 4 | 4 | 25 | 2000 | 1/2" |
| A136240 | 20° | 4 | 4 | 35 | 2000 | 3/4" |
| A136245 | 20° | 6 | 6 | 65 | 2000 | 1" |
| A136244 | 20° | 6 | 6 | 80 | 2000 | 1" |
| A136250 | 20° | 6 | 6 | 65 | 2000 | 1-1/4" |



WARNING: In order to avoid possible property damage and personal injuries when handling these tools, we recommend that the nozzle be exposed to gradual system pressure only after it has been set and secured inside the pipe, away from the operator. Hi-Vac Corporation is not responsible for situations resulting from the improper use of this tool and for different operation from that it has been designed and intended for.

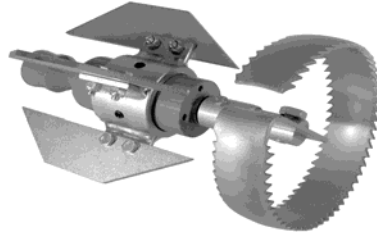
REPLACEMENT CHAIN FOR ROTATING CHAIN NOZZLES

Three required per nozzle (except for bulk replacement chain)

| Length | For 1/2" & 3/4" Nozzles | | For 1" & 1-1/4" Nozzles | |
|------------------|-------------------------|--------------------------|-------------------------|--------------------------|
| | Part Number | Approx. Working Diameter | Part Number | Approx. Working Diameter |
| 6" Long (150mm) | A136241 * | 4" to 6" | N/A | |
| 8" Long (200mm) | A136248 | 6" to 8" | A136242 * | 6" to 10" |
| 12" Long (300mm) | A136251 | 8" to 12" | A136249 | 10" to 14" |
| 16" Long (400mm) | N/A | | A136246 | 14" to 18" |
| 20" Long (500mm) | | | TBA | 18" to 22" |
| 36" Long (900mm) | A136241-6 | Bulk Replacement Chain | A136242-6 | Bulk Replacement Chain |

* standard length supplied with nozzle

A NOTE ABOUT ALL OF OUR ROTATING NOZZLES: In order to extend the life of these nozzles, we recommend submerging them in lubricating oil after each use.

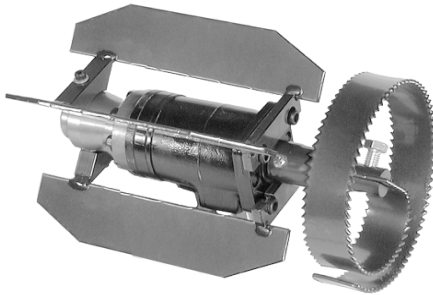


O'BRIEN™ MINI ROOT CUTTER KIT

Powered by the jetter's water pressure, these fierce root cutters spin at extremely high torque. Kits include tool box and all necessary hardware. 5/8" output shaft

| Part No. | GPM | PSI | NPT Size | Saws & Skids Included |
|-----------|----------|------------|----------|---|
| OBJ-1468 | 10 - 15 | 800 - 2500 | 1/2" | 4", 6" (std. saws) & 8" (concave saw) |
| OBJ-1467 | up to 18 | 800 - 4000 | 1/2" | 4", 6" (std. saws) & 8" (concave saw) |
| J-1469-34 | 35 - 50 | 900-1400* | 3/4" | 4", 6", 8" & 10" (concave saws) |
| J-1470-34 | 35 - 50 | 900-1400* | 3/4" | 4", 6", 8" & 10" (flat saws) |
| J-1469 | 50 - 80 | 900-1400* | 1" | 4", 6", 8" & 10" (concave saws) |
| J-1470 | 50 - 80 | 900-1400* | 1" | 4", 6", 8" & 10" (flat saws) |
| J-3201 | 65 | 2000 | 1" | 6", 8" & 10" (concave saws) |
| J-3201-XB | 65 | 2000 | 1" | 6", 8" & 10" (expandable cutter blades) |
| J-3203 | 65 | 2000 | 1" | 6", 8", 10" & 12" (concave saws) |
| J-3200 | 65 | 2000 | 1" | 6", 8", 10", 12" & 15" (concave saws) |

* Provides the best cutting performance between 900 and 1400 PSI (700 RPM @ 575 in. lbs. torque).



MAINLINE ROOT CUTTER KIT







Powered by the jetter's water pressure, these fierce root cutters spin at hardware. 1" output shaft.

|| necessary

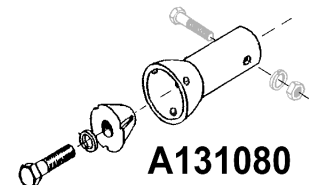
| Part No. | GPM | PSI | NPT Size | Saws & Skids Included |
|----------|----------|------------|----------|---------------------------------------|
| OBJ-1468 | 10 - 15 | 800 - 2500 | 1/2" | 4", 6" (std. saws) & 8" (concave saw) |
| OBJ-1467 | up to 18 | 800 - 4000 | 1/2" | 4", 6" (std. saws) & 8" (concave saw) |
| J-1603-P | 35 - 80 | 900-1500 | 1" | 6", 8", 10" & 12" (concave saws) |

A NOTE ABOUT ALL ROOT CUTTING NOZZLES: In order to extend the life of these nozzles, be sure to follow the instructions on lubricating the internal components after each use.

REPLACEMENT ROOT CUTTER ATTACHMENTS

| ROOT CUTTER ATTACHMENTS | BLADES | | | | SKIDS | |
|-------------------------|---|---|---|--|---|---|
| |  |  |  |  |  |  |
| | Flat Saws | Concave Saws | Tapered Saws | Cutter Blades * | Mini | Mainline |
| 3" pipe | M-1003 | -- | -- | -- | -- | -- |
| 4" pipe | M-1004 | M-2004 | M-3004 | -- | -- | -- |
| 6" pipe | M-1006 | M-2006 | M-3006 | A131010 | J-1469-6 | J-1603-6S |
| 8" pipe | M-1008 | M-2008 | M-3008 | A131020 | J-1469-8 | J-1603-8S |
| 10" pipe | M-1010 | M-2010 | M-3010 | A131030 | J-1469-10 | J-1603-10S |
| 12" pipe | M-1012 | M-2012 | M-3012 | A131040 | J-1469-12 | J-1603-12S |
| 15" pipe | M-1015 | M-2015 | M-3015 | A131050 | -- | J-1603-15S |
| 18" pipe | M-1018 | M-2018 | M-3018 | -- | -- | -- |

* Root cutters with 1" output shafts only, requires a chuck from below.



| Part No. | Description |
|-----------|--|
| J-1469-BH | Root cutter saw chuck for Lateral (5/8" output shaft) root cutters |
| J-1700-P | Root cutter saw chuck for Mainline (1" output shaft) root cutters |
| J-7000 | Cutter blade chuck for obsolete O'Brien™ (1" output shaft) root cutters |
| A131080 | Cutter blade chuck for obsolete Aquatech™ (1" output shaft) root cutters |

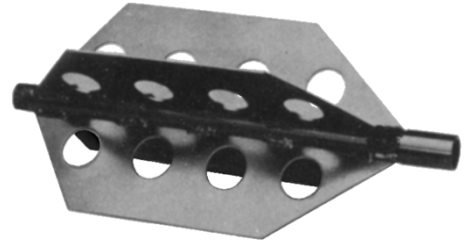
Note: Either of the above cutter blade chucks will fit the newer mainline root cutter if user wishes to use the cutter blades.



Style 1



Style 2



Style 3

Note: Styles may vary.

NOZZLE GUARDS (CENTERING SKIDS)

Centers nozzle in the pipe. Maximizes cleaning efficiency for any nozzle that sprays in a 360° (radial) pattern. Cuts nozzle wear by 50%. A must for all rotating nozzles. Female NPT on the inlet end for the hose and male NPT on the outlet end for the nozzle.

| Part No. | NPT Size | Skid Diameter | O.A. Length | Pipe Range | Style |
|----------|----------|---------------|-------------|------------|-------|
| J-40-4 | 3/8" | 3" | 7" | 4" to 6" | 2 |
| J-40-7 | 1/2" | 3.75" | 14" | 5" to 7" | 2 |
| J-40-5 | 3/4" | 4" | 14-1/2" | 5" to 7" | 2 |
| A130014 | 3/4" | 5.05" | | 6" to 8" | 3 |
| TBA | 3/4" | 6" | 17" | 8" to 10" | 2 |
| A130024 | 3/4" | 7.05" | | 10" to 12" | 3 |
| A130034 | 3/4" | 10.55" | | 15" to 21" | 3 |
| J-40-6 | 1" | 4.25" | 14-3/4" | 5" to 7" | 2 |
| A130010 | 1" | 5.315" | | 6" to 8" | 3 |
| TBA | 1" | 6.25" | 17-1/2" | 8" to 10" | 2 |
| A130020 | 1" | 7.75" | 17-3/8" | 10" to 12" | 3 |
| A130030 | 1" | 10.815" | | 15" to 21" | 3 |
| A130011 | 1-1/4" | 4.75" | 14-1/2" | 6" to 8" | 2 |
| A130021 | 1-1/4" | 6.34" | 17" | 8" to 10" | 2 |
| A130031 | 1-1/4" | 11.16" | | 15" to 21" | 3 |

NOZZLE EXTENSIONS

Prevents the sewer hose from reversing direction in larger pipes. Also prevents nozzle from entering a lateral pipe. Helps reduce wear on sewer hose.

| Part No. | Length | NPT Size |
|----------|--------|----------|
| J-40-3 | 12" | 1/2" |
| A130004 | 12" | 3/4" |
| A130005 | 10" | 1" |
| A130001 | 12" | 1" |
| A130002 | 12" | 1-1/4" |





PIRANHA SEWER CLEANING HOSES

Constructed from materials selected to provide rugged and reliable service under even the most severe and demanding conditions found in high pressure sewer cleaning. These sewer cleaning hoses are constructed with a polyolefin tube which provides maximum resistance to the hydrolysis commonly associated with other thermoplastic tube materials. Reinforcement with high tensile polyester fiber contributes to an exceptionally low volumetric expansion rate and eliminates loss of strength from moisture absorption. A polyether-urethane cover provides exceptional cut, abrasion and fungus resistance. And, lastly, all components are bonded together to maximize fitting retention and wear resistance, and to provide smaller minimum bend radii.

| SIZE | 3/16" | 1/4" | 3/8" | 1/2" | 3/4" | 1" | 1 1/4" |
|--------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|----------------------|------------------------------|
| Ends | 1/8" MNPT x 1/4" MNPT | 1/4" MNPT x 1/4" MNPT | 3/8" MNPT x 3/8" MNPT | 1/2" MNPT x 1/2" MNPT | 3/4" MNPT x 3/4" MNPT | 1" MNPT x 1" MNPT | 1-1/4" MNPT x 1-1/4" MNPT |
| Press. | 4000 PSI | 5000 PSI | 4000 PSI | 4000 PSI | 2500 PSI | 2500 PSI | 2500 PSI |
| Color | GREEN | RED | GREEN | GREEN | ORANGE | ORANGE | ORANGE |
| 50' | available | | | J-1942-50P | | | |
| 75' | 15009-075 | | | available | | | |
| 100' | 15009-100 | 20037-100 | 20032-100 | J-1942-100P | A175150-10 | A175211 | |
| 150' | 15009-150 | 20037-150 | 20032-150 | J-1942-150P | available | available | |
| 200' | 15009-200 | 20037-200 | 20032-200 | J-1942-200P | A175150-11 | A175213 | available |
| 250' | | available | 20032-250 | J-1942-250P | J-1940-250P | available | available |
| 300' | | available | 20032-300 | J-1942-300P | A175150-12 | A175221 | available |
| 400' | | available | 20032-400P | J-1942-400P | A175150-21 | A175231 | A175281 |
| 500' | | available | available | J-1942-500P | A175150-22 | A175241 | A175282 |
| 600' | | | available | J-1942-600P | A175150-23 | A175252 | A175283 |
| 700' | | | | J-1942-700P | A175150-24 | A175261 | available |
| 750' | | | | available | J-1940-750P | available | available |
| 800' | | | | J-1942-800P | A175150-25 | A175271 | available |
| 1000' | | | | J-1942-1000P | J-1940-1000P | J-1941-1000P | A381626 |

PIRANHA SEWER HOSE SWAGE FITTINGS

These swage fittings are specifically designed for the sewer hose we sell. Note: Manufacturer's swaging equipment required to install these ends. Use of other fittings and equipment is at users own risk. Due to the higher pressures involved with 3/8" and smaller hoses, the manufacturer does not supply replacement fittings for them.



| Hose Size | 1/2" | 3/4" | 1" | 1 1/4" | Required Tooling |
|-------------|-------------|-------------|-------------|---------|-------------------------|
| Working PSI | 3000 & 4000 | 2500 & 3000 | 2500 & 3000 | 2500 | |
| Male End | J-1942-1 | A170040 | A170020 | A381705 | Die set & male pusher |
| Female End | J-1942-2 | J-1940-4 | J-1941-4 | N/A | Die set & female pusher |
| Mender | J-1942-3 | A170035 | A170030 | A381706 | Two die sets |



COBRA SEWER CLEANING HOSES

Constructed from materials selected to provide rugged and reliable service under even the most severe and demanding conditions found in high pressure sewer cleaning. These sewer cleaning hoses are constructed with a polyolefin tube which provides maximum resistance to the hydrolysis commonly associated with other thermoplastic tube materials. Reinforcement with high tensile polyester fiber contributes to an exceptionally low volumetric expansion rate and eliminates loss of strength from moisture absorption. A polyether-urethane cover provides exceptional cut, abrasion and fungus resistance. And, lastly, all components are bonded together to maximize fitting retention and wear resistance, and to provide smaller minimum bend radii.

| SIZE | 3/8" | 1/2" | 3/4" | | 1" | |
|--------|-----------------------|-----------------------|-----------------------|--------------------|-------------------|--------------------|
| Ends | 3/8" MNPT x 3/8" MNPT | 1/2" MNPT x 1/2" MNPT | 3/4" MNPT x 3/4" MNPT | | 1" MNPT x 1" MNPT | |
| Press. | 4000 PSI | 4000 PSI | 2500 PSI | 3000 PSI | 2500 PSI | 3000 PSI |
| Color | GREEN | GREEN | ORANGE | BLUE | ORANGE | BLUE |
| 100' | available | J-1942-100-COBRA | available | available | available | available |
| 150' | 20032-150-COBRA | J-1942-150-COBRA | available | available | available | available |
| 200' | 20032-200-COBRA | J-1942-200-COBRA | available | available | available | available |
| 250' | available | available | available | available | available | available |
| 300' | available | J-1942-300-COBRA | available | available | available | available |
| 400' | available | J-1942-400-COBRA | A175150-21-COBRA | A175166-3000-COBRA | A175231-COBRA | A175233-3000-COBRA |
| 500' | available | J-1942-500-COBRA | A175150-27-COBRA | A175150-22-COBRA | A175241-COBRA | A175241-3000-COBRA |
| 600' | available | J-1942-600-COBRA | A175150-23-COBRA | A175167-3000-COBRA | A175252-COBRA | A175252-3000-COBRA |
| 700' | | J-1942-700-COBRA | A175150-24-COBRA | A175168-3000-COBRA | A175261-COBRA | A175261-3000-COBRA |
| 750' | | available | A175150-26-COBRA | available | available | available |
| 800' | | J-1942-800-COBRA | A175150-25-COBRA | A175169-3000-COBRA | available | available |
| 900' | | available | available | available | available | available |
| 1000' | | available | J-1940-1000P | available | A175269-COBRA | A175269-3000-COBRA |
| 1100' | | | | available | available | available |
| 1200' | | | | available | available | available |

COBRA SEWER HOSE SWAGE FITTINGS

These swage fittings are specifically designed for the sewer hose we sell. Note: Manufacturer's swaging equipment required to install these ends. Use of other fittings and equipment is at users own risk. Due to the higher pressures involved with 3/8" and smaller hoses, the manufacturer does not supply replacement fittings for them.



| Hose Size | 1/2" | 3/4" | 1" | Required Tooling |
|-------------|----------------|----------------|----------------|-------------------------|
| Working PSI | 3000 & 4000 | 2500 & 3000 | 2500 & 3000 | |
| Male End | J-1942-1-COBRA | A170040-COBRA | A170020-COBRA | Die set & male pusher |
| Female End | J-1942-2-COBRA | J-1940-4-COBRA | J-1941-4-COBRA | Die set & female pusher |
| Mender | J-1942-3-COBRA | A170035-COBRA | A170030-COBRA | Two die sets |



Hydraulic Swage Tool



Manual Swage Tool



PIRANHA SWAGE TOOLS

Dies & Pushers are not included, order them separately as needed. Will swage 1/2" to 1-1/4" Fittings

| Part No. | DESCRIPTION |
|------------|----------------------|
| A220240-TH | Hydraulic Swage Tool |
| A220250-TH | Manual Swage Tool |

NOTE: In 2013 Piranha introduced new swaging tools dubbed as "Top Hat" style due to the shape of the dies and pushers. If you are ordering a replacement swage tool but wish to continue using the older taper style dies and pushers, two A220220 adapters will have to be ordered as well.

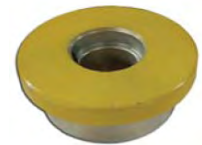


A220220

DIE SETS (New Top Hat Style)

A die set and pusher are required for swaging Piranha end fittings. Two die sets are required for swaging menders

| Part No. | Size |
|----------|----------------------|
| A220248 | 1/2" Top Hat Style |
| A220221 | 3/4" Top Hat Style |
| A220223 | 1" Top Hat Style |
| A220225 | 1-1/4" Top Hat Style |



PUSHERS (New Top Hat Style)

Required to swage Piranha end fittings. Pushers are different for male and female swage fittings. Not required for menders which use two dies sets.

| PN for Male | PN for Female | Size |
|-------------|---------------|---------------|
| A220249 | A220232 | 1/2" TH Style |
| A220222 | A220228 | 3/4" TH Style |
| A220224 | A220227 | 1" TH Style |
| A220226 | A220229 | 1-1/4" TH |



COBRA SWAGE TOOL

| Part No. | DESCRIPTION |
|----------|----------------------|
| A255078 | Hydraulic Swage Tool |

COBRA DIE SETS

For embossing the barrel end of swage fittings

| Part No. | Size |
|---------------|------|
| A255078-1/2-D | 1/2" |
| A255078-3/4-D | 3/4" |
| A255078-1-D | 1" |



COBRA PUSHERS

Protects threads on male swage end fittings

| PN for Male | PN for Female | Size |
|---------------|---------------|----------|
| A255078-1/2-P | TBA | 1/2"MNPT |
| A255078-3/4-P | TBA | 3/4"MNPT |
| A255078-1-P | A255078-1-FP | 1"MNPT |





LEADER HOSES

Most of the wear on a sewer cleaning hose occurs on the first several feet working through the sewer. By adding a leader hose one can extend the life of the main roll of hose. Female fitting on hose end to male fitting on nozzle end.

| Part No. | NPT Size | Length | Max Working | Cover Material | Stocking Status |
|---------------|----------|--------|-------------|----------------|------------------|
| J-1909 | 3/8" | 20' | 4000 psi | Thermoplastic | Normally Stocked |
| J-1910 | 1/2" | 20' | 4000 psi | Thermoplastic | Normally Stocked |
| J-1931 | 3/4" | 10' | 3000 psi | Thermoplastic | Special Order |
| A176105 | 3/4" | 10' | 2500 psi | Rubber | Special Order |
| J-1905 | 3/4" | 20' | 2500 psi | Rubber | Normally Stocked |
| A176106 | 3/4" | 20' | 3000 psi | Rubber | Normally Stocked |
| A249253 | 3/4" | 25' | 3000 psi | Rubber | Special Order |
| J-1933 | 1" | 10' | 2000 psi | Thermoplastic | Special Order |
| A176100 rev B | 1" | 10' | 3000 psi | Rubber | Normally Stocked |
| J-1924 | 1" | 15' | 3000 psi | Thermoplastic | Normally Stocked |
| A176110 | 1" | 20' | 2000 psi | Rubber | Normally Stocked |
| A176115 | 1" | 25' | 2000 psi | Rubber | Special Order |
| J-1934 | 1" | 25' | 2500 psi | Thermoplastic | Normally Stocked |
| A176101 | 1-1/4" | 10' | 2000 psi | Rubber | Special Order |

"LIVE" SWIVELS

Allows attachments to swivel freely without twisting the hose. Male pipe to female pipe

| Hose Size | 1/2" Hose | 3/4" Hose | 1" Hose |
|-------------|-----------|-----------|---------|
| Part Number | A130847 | A130848 | A130849 |



SWIVEL UNIONS

Female pipe to female pipe swivel unions for joining two sections of hoses together.

| Hose Size | 3/16" Hose | 1/4" Hose | 3/8" Hose | 1/2" Hose | 3/4" Hose | 1" Hose |
|-------------|------------|-----------|-----------|-----------|-----------|---------|
| Part Number | 9255X2X2 | 9255X4X4 | 9255X6X6 | A381980 | A338105 | A130690 |



STEP DOWN SWIVEL UNIONS

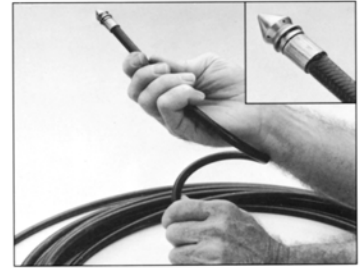
For joining a smaller size sewer hose to a larger size. For attaching lateral line kits, pressure wands, etc. Note: Be careful not to exceed the pressure rating of your unit.

| Hose Sizes | 1/4" to 3/16" | 3/8" to 1/4" | 1/2" to 3/8" | 3/4" to 1/2" | 1" to 3/4" |
|-------------|---------------|--------------|--------------|--------------|------------|
| Part Number | 9255X4X2 | 9255X6X4 | 9255X8X6 | 9255X8X12 | A249058 |

TRAP HOSE

For cleaning residential and industrial "S" traps and other small diameter lines.

| Part No. | Hose Size | Hose Length | NPT Hose Ends | Hose PSI |
|-----------|-----------|-------------|---------------|----------|
| 15030-025 | 1/8" | 25' | 1/8"M x 1/8"M | 3000 |
| 15031-50 | 1/8" | 50' | 1/8"M x 1/8"M | 4000 |
| 15031-100 | 1/8" | 100' | 1/8"M x 1/8"M | 4000 |



TRAP HOSE KITS

Trap hose with nozzle.

| Part No. | Hose Size | Hose Length | NPT Hose Ends | Hose PSI | Nozzle | NPT Adapter |
|-----------|-----------|-------------|----------------|----------|--------------|----------------|
| OBJ-1723K | 1/8" | 25' | 1/8"M x 1/8"M | 4000 | 1/8" 4gpm | 1/8"F to 1/4"F |
| OBJ-1722K | 3/16" | 75' | 1/4"M x 1/8"M | 4000 | 1/8" 4gpm | 3/8"F to 1/4"F |
| A136260 | 1/4" | 65' | 1/4"FS x 1/8"M | 5800 | 1/8" 3-20gpm | None |



LATERAL LINE KITS

| Part No. | Hose Size | Hose Length | Inlet Connection | Control | Nozzle(s) | Max PSI |
|----------|-----------|-------------|------------------|-----------|--------------------|----------------|
| A130541 | 1/2" | 100' RU | 3/4"FNPT | A130546 * | 1/2" 20gpm Ellipse | 2000 (control) |
| A130540 | 1/2" | 100' RU | 1"FNPT | A130545 * | 1/2" 20gpm Ellipse | 2000 (control) |
| A249485 | 1/2" | 150' RU | 1/2"FNPT | A249183 + | 1/2" 20gpm Ellipse | 4000 (hose) |

* Foot Lever Ball Valve

+ Foot Control - (see next page)

OBJ-1724K
OBJ-40027A
OBJ-40028A
OBJ-40028B



A249182



LATERAL LINE KITS WITH HOSE REEL & CART

| Part No. | Hose Size | Hose Length | Inlet Connection | Control | Nozzle(s) | Max PSI |
|---------------|-----------|-------------|------------------|--------------|--------------------|-------------|
| OBJ-1724K | 3/8" | 150' TP | 3/8"FNPTS | OBJ-20027B + | none | 3000 (reel) |
| OBJ-40027A | 3/8" | 150' TP | 1/2"FNPTS | OBJ-20027A + | two 3/8" 10gpm | 3000 (reel) |
| OBJ-40028A | 3/8" | 200' TP | 1/2"FNPTS | OBJ-20027A + | two 3/8" 5gpm | 3000 (reel) |
| OBJ-40028B | 3/8" | 300' TP | 1/2"FNPTS | OBJ-20027A + | two 3/8" 5gpm | 3000 (reel) |
| A249182 | 1/2" | 150' RU | 1/2"FNPT | A249183 + | 1/2" 20gpm Ellipse | 3000 (reel) |
| A249182-200TP | 1/2" | 200' TP | 1/2"FNPT | A249183 + | 1/2" 20gpm Ellipse | 3000 (reel) |

+ Foot Control - (see next page)

A Style



OBJ Style



FOOT CONTROLS

For auxiliary hose reels and lateral line kits. Note: "Dry Shut" foot controls will dead head the inlet when pedal is not depressed. The "Dump" style will continue supplying water through the hose, but at low pressure, while the dump port relieves the pressure by bypassing the water onto the ground or can be directed by a hose back to the tank or into a drain.

| Part No. | Style | Inlet Port NPT | Outlet Port NPT | Dump Port NPT | Outlet Hose | Max PSI |
|------------|----------|----------------|-----------------|---------------|-------------|---------|
| A249183 | Dump | 1/2" F | 1/2" F | 1/2" F | none | 10000 |
| A249183-DS | Dry Shut | 1/2" F | 1/2" F | none | none | 10000 |
| OBJ-20027 | Dry Shut | 1/4" F | 1/4" F | none | none | 5000 |
| OBJ-20027A | Dry Shut | 1/2" FS | 3/8" MS * | none | 3' | 5000 |
| OBJ-20027B | Dry Shut | 3/8" FS | 3/8" MS * | none | 3' | 5000 |

*3/8" to 1/2" pipe bushing included

F=Female FS=Female Swivel MS=Male Swivel



Note: The "Dump" style foot control does not completely shut the water off to the nozzle or hose reel. It just drops the pressure by opening the dump port.



AUXILIARY HOSE REELS

| Part No. | Hose Size | Adapter Req. * | Reel Capacity | Spool Width | Max PSI | Comment |
|----------------------------------|-----------|----------------|---------------|-------------|---------|--------------|
| 30027B | 3/8" | none | 150' | 6" | 3000 | Carry Handle |
| 30027-2 (black) A130560 (red) | 1/4" | A133640 | 200' | 6" | 3000 | |
| | 3/8" | A133650 | 150' | | | |
| | 1/2" | none | 100' | | | |
| 30018 A249184 | 1/4" | A133640 | 400' | 12" | 3000 | |
| | 3/8" | A133650 | 300' | | | |
| | 1/2" | none | 200' | | | |
| A130558-325 | 1/2" | A133690 | 325' | 18" | 3000 | |
| | 3/4" | none | 200' | | | |

* Reducers: A133640 - 1/2" x 1/4" A133650 - 1/2" x 3/8" A133690 - 3/4" x 1/2"

CART FOR AUXILLIARY HOSE REEL

| Part No. | DESCRIPTION |
|------------|-----------------------------|
| A130555 | Cart for 12" Wide Hose Reel |
| A130555-18 | Cart for 18" Wide Hose Reel |



30027-14
30027A
•
30027B
(no hose)



OB40027A
OB40028A



AUXILIARY HOSE REELS WITH HOSE

| Part No. | Hose Size | Hose | Spool Width | Reel Used | Max PSI | Comment |
|------------|-----------|---------|-------------|-----------|-------------|---------------|
| 30027-14 | 1/4" | 150' TP | 6" | 30027-2 | 2750 (hose) | Carry Handle |
| 30027A | 3/8" | 150' TP | 6" | 30027-2 | 3000 (reel) | Carry Handle |
| OB40027A | 3/8" | 150' TP | 6" | 30027-2 | 3000 (reel) | Hand Cart |
| 20032-200A | 3/8" | 200' TP | 12" | 30018 | 3000 (reel) | Reel & Hose * |
| OB40028A | 3/8" | 200' TP | 12" | A249184 | 3000 (reel) | Hand Cart |
| 20028A | 1/2" | 150' TP | 12" | 30018 | 3000 (reel) | Reel & Hose |

TP=Thermoplastic Outer Jacket

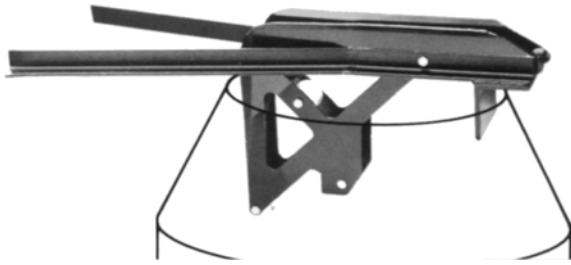
* Also includes ball valve

FLEXIBLE HOSE GUIDES (TIGER TAILS)

Protects the sewer cleaning hose from chafing against the edge of the pipe inside a manhole. Includes a rope for lower and securing the guide thus eliminating the need to enter the manhole.

| Without Rope | With Rope | I.D. | Length | Rope Length |
|--------------|-----------|------|--------|-------------|
| OBJ-263 | J-2204 | 2" | 36" | 25' |
| A234937 | A235006 | 3" | 42.5" | 20' |
| A234937 | J-2203 | 3" | 42.5" | 25' |
| J-2206R | J-2206 | 4" | 36" | 25' |





TOP MANHOLE ROLLERS

Used when manholes are not in line with the reel. Protects hose from scuffing and allows hose to glide over manhole edge.

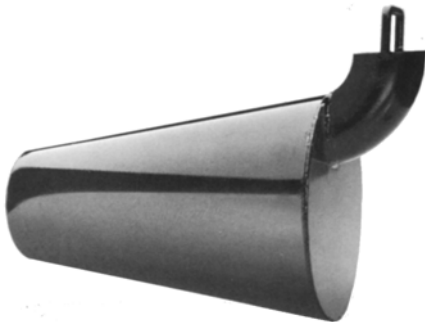
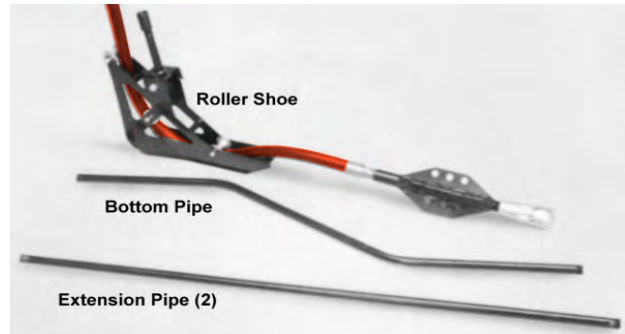
| Part No. | Width | Length |
|----------|-------|--------|
| A220120 | 16.5" | 34.5" |

| Part No. | Width | Length |
|----------|-------|--------|
| J-2401 | 12" | 38" |

BOTTOM MANHOLE ROLLER

Secures in place from the surface. Pipes are used to lower and to hold the roller shoe in place. NOTE: Nozzle, nozzle guard & jetter hose shown for illustration purposes only

| Part No. | DESCRIPTION |
|----------|-----------------------------------|
| A239183 | Roller shoe and pipes (15' reach) |
| A235259 | Roller shoe only |



MANHOLE TRAPS

Inserts into downstream side of pipe in manholes. Prevents solids and debris from entering pipe while allowing water to overflow downstream while jetting the opposite pipe. Loop provided to attach rope.

| Part No. | Description |
|----------|---------------------|
| A220010 | Small (6" to 8") |
| A220020 | Medium (10" to 12") |
| A220030 | Large (15" to 18") |



GRIT CATCHERS

With a grit catcher at the manhole opposite the hose entrance, you can remove cobble and other debris before it's carried further downstream by your flush water. 3/4"NPT pipe fitting on a swivel bracket for attaching pipe to lower grit catcher into place.

| Part No. | Description |
|----------|-----------------|
| OB00016A | 6" Grit Catcher |
| OB00018A | 8" Grit Catcher |



MANHOLE GRAPPLE TONG

Used to retrieve large objects in manholes and catch basins. Eliminates the need to enter the hole.

| Part No. | Length |
|----------|--------------------|
| A234585 | 98" Overall Length |



MANHOLE DEBRIS GRABBER

Three sections, each 5 feet long, easily collapsible. Equipped with 20' of rope. Made of rugged steel for long life

| Part No. | Length |
|----------|-----------------------|
| OBJ-299 | 5' to 15' Telescoping |



CATCH BASIN SPOON

| Part No. | Length |
|----------|-----------------------|
| A220081 | Spoon with 10' Handle |



CATCH BASIN CLEANER

For cleaning debris out of catch basins. Will pick up large objects like bricks, stones and wet leaves. The over-center lever mechanism locks the jaws during lifting to prevent dropping the load.

| Part No. | Handle Length |
|----------|---------------|
| A220040 | 6 foot |
| A220050 | 8 foot |
| A220060 | 10 foot |
| A220070 | 12 foot |
| A220080 | 15 foot |



CATCH BASIN SCRAPER

High-visibility yellow fiberglass handle.

| Part No. | Length |
|----------|---------|
| A220082 | 60" OAL |



MANHOLE HOOKS

| Part No. | DESCRIPTION |
|----------|------------------------------|
| A221800 | 29" w/Perpendicular T-Handle |



HYDRANT WRENCH

| Part No. | DESCRIPTION |
|----------|----------------|
| A220330 | Hydrant Wrench |



2.5"NST HYDRANT FILL HOSE

| Part No. | DESCRIPTION |
|----------|----------------|
| A176150 | 2-1/2"ID x 25' |
| A176154 | 2-1/2"ID x 50' |



FILL PIPE COUPLER

| Part No. | DESCRIPTION |
|----------|---------------------------------|
| A140090 | 2"FNPT steel flange adapter |
| A140080 | 2.5"NST brass swivel nut w/gskt |
| A190830 | Gasket only |



SAFETY CONES

| Part No. | Height | Color | Traffic Speed | Night Use | Comment |
|------------|--------|--------|---------------|-----------|---|
| A225004 | 18" | Orange | ≤ 40 mph | No | Plain (min. ht. for low speed traffic) |
| A225005 | 28" | Orange | ≥ 45 mph | No | Plain (min. ht. for high speed traffic) |
| A225005-36 | 36" | Orange | ≥ 45 mph | Yes | 2 Reflective Stripes |

NOTE: Usage specs are per Federal DOT regulations, Section 6F.63 as of Dec 2009.