



# • • • EDSTROM Industries, Inc.

is recognized worldwide as a leader in the design and manufacture of automated drinking water systems for animals. For more than 35 years we have served the agriculture industry, small animal breeders, and pharmaceutical, government, and academic research institutions.



## **Automated Watering Systems** for Swine

Features and Benefits of the EDSTROM Nipple Waterer



## How It Works – Providing a Gentle Flow of Clean Water

EDSTROM Nipple Waterer Filter/Pressure Regulator

Trainer Valves



### **EDSTROM Swine Nipple Waterers**

Stainless Steel Nipples

**Mounting Instructions** 



# **EDSTROM Swine Nipples Save Water**



**5 Year Warranty** 



**Parts List** 

### **AUTOMATED WATERING SYSTEMS FOR SWINE**

Water is the very foundation of successful pork production. Water is a nutrient just like calcium or lysine and is absolutely essential to maximize growth rate in pigs of all ages. Research shows that if a pig drinks proper amounts of water, it eats more, grows more, and converts feed to gain better. The result is a healthy, profitable pig!

Unrestricted access to water is critical to the health of your livestock. Restricted waterers are the villain in many cases of poorly lactating sows and poorly gaining pigs. We have designed a waterer that is superior to other nipples on the market because it does not leak or become plugged. Our nipple delivers clean, fresh water to your hogs without the use of screens, springs or orifices. If the EDSTROM waterer should become restricted (and it rarely does), the diaphragm and o-ring are simple to flush or change out.

The patented EDSTROM Nipple Waterer is made from durable 303 stainless steel. This simple, rugged, reliable design provides many years of trouble-free service and is backed by a **5 YEAR WARRANTY** (see details on page 9). The waterers are designed to deliver all the water your hogs need without the waste.

We have nipples for ALL PHASES of hog production – from gestation to finishing. The EDSTROM Nipple has proved its reliability in thousands of installations over the years. The simple design and the precise manufacturing, assembling and testing procedures eliminate the most common causes of leakage. Major producers invest in EDSTROM Nipples because they are made to last.

# Extremely Reliable

Our unique design, high quality materials and manufacturing techniques ensure many years of trouble-free operation. EDSTROM Nipples are made to withstand harsh treatment from hogs and remain leak-free, saving you water and money.

EDSTROM Nipple Waterer

> Reduces Water Waste

Saves water over competitive nipples and trough watering methods.

#### **Swine Water Consumption Guide**

| Animal Size            | Weight          | Daily Consumption     | Rate of Intake   |
|------------------------|-----------------|-----------------------|------------------|
| Nursery                | 15 to 50 lbs.   | 0.8 to 2.4 quarts/day | 0.4 quarts/min.  |
| Growing/Finishing      | 50 to 130 lbs.  | 2.4 to 4.6 quarts/day | 0.5 quarts/min.  |
| Growing/Finishing      | 130 to 250 lbs. | 4.6 to 8 quarts/day   | 0.67 quarts/min. |
| Pregnant Sows & Gilts  |                 | 14.4 to 18 quarts/day | 1.0 quart/min.   |
| Lactating Sows & Gilts |                 | 19.2 to 24 quarts/day | 1.0 quart/min.   |
| Boars                  |                 | 14.4 to 18 quarts/day | 1.0 quart/min.   |

NOTE: The quantities shown in the table are averages. The actual water consumption will vary depending on temperature, season, etc.

### **Easy Installation**

Operates on pressure systems up to 50 psi. All waterers have 1/2 in. MPT connection, which comes pre-wrapped with Teflon tape for quick installation in brackets.

(also works on gravity systems for small applications)

# Unique Design

Simple, rugged design operates without the use of troublesome springs, orifices, or screens.

### Drip Adjustment Screw

(on trainer version of nipples only)

Nipple can be partially activated to provide a slow or fast drip of water for training purposes.

# Variable Flow Feature

Flow rate of water discharged from the nipple can be varied by adjusting the tightness of the Retainer Screw. This eliminates the need for orifices and their protecting screens which easily plug and stop the flow of water.

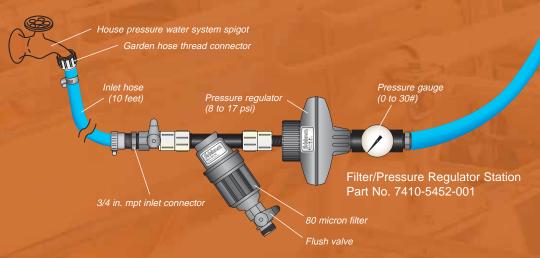
# **Provides Plenty** of Drinking Water

Designed to satisfy the water requirements of every hog, each EDSTROM Nipple Waterer is factory calibrated with proper flow rate.



### **HOW IT WORKS - PROVIDING A GENTLE FLOW OF CLEAN WATER**

Water coming into the system travels first through a filter and then through the pressure regulator to reduce pressure to approximately 15 psi. Water then goes through the distribution piping and down to the nipple waterer for access by the hogs.



### Filter/Pressure Regulator

To assure trouble-free operation of any automatic watering system, the water supply must be clean and at a constant reduced pressure (15 to 20 psi). A Pressure Regulator on the supply line will reduce and maintain the water pressure at the desired level. A filter should be used to remove any particulate contamination in the water such as sand, flakes of rust, etc. (Note: A filter will not remedy a hard water or high iron condition. These conditions can be reduced with other water treatment methods. Please contact EDSTROM.)

The Filter/Pressure Regulator Station, Part No. 7410-5452-001, is a preassembled, high capacity unit which includes a flushable 200 mesh filter, a reliable pressure regulator, pressure gauge, shut-off valve, hook-up and mounting hardware (see figure above).

If the water supply to the nipple waterers contains even a small amount of sand, it is probable that the nipple waterers will eventually begin to leak. This is due to the collection of sand particles on or under the o-ring. To prevent this problem, a filter must be used to remove the sand. Install either the Filter/Pressure Regulator, Part No. 7410-5452-001, or the Flushable Filter, Part No. 2100-4969-200, in the water supply line. By simply opening the valve at the bottom of the filter, the debris is flushed off the screen to the drain, eliminating the need for costly replacement filter cartridges. In areas with high sediment content, it may be necessary to prefilter the water prior to it entering the Flushable Filter.

### **Operating Range**

All EDSTROM Nipple Waterers will operate with supply pressures up to 50 psi. However, it is recommended that an operating pressure of 15 to 20 psi be maintained to help extend the life of all automatic watering apparatus and to reduce wastage by the animals.

1/2 in. ID Blue Tubing Part No. 1600-3304-100

The Filter/Pressure Regulator Station has a capacity of 10 gpm and can supply up to 100 hog nipples or 200 piglet nipples.

### **EDSTROM Nipple Waterer**

The sealing force in EDSTROM Nipple Waterers comes from a silicone rubber diaphragm, which provides the pressure necessary to hold the stem closed. This prevents water from flowing under the stem head and out of the nipple. Water is released only when the pig moves the stem by biting on it. This causes one side of the stem head to lift off the o-ring, allowing water to flow under it and out to the animal. When the animal releases the end of the stem, the elasticity of the silicone rubber diaphragm pushes the stem head back to the closed position, stopping the flow of water.



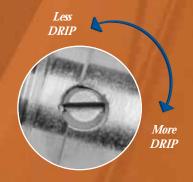
### **Variable Flow Feature**

The flow rate of water discharged from EDSTROM Nipples can be varied by adjusting the tightness of the Retainer Screw. By tightening the Retainer Screw the water flow is reduced; by loosening the Retainer Screw flow is increased. This variable flow feature eliminates the need for orifices and their protecting screens which easily plug and stop the flow of water.



# **Drip Adjustment Screw for Training**

An optional feature on all models of the EDSTROM Waterer is a Drip Adjustment Screw. By turning in the Drip Adjustment Screw, the nipple can be partially activated to produce a slow or fast drip of water from the nipple. By setting the Drip Adjustment Screw to drip steadily, pigs can be easily trained to locate and use the nipple waterer. It is also helpful for re-training sows in the farrowing crate who have forgotten how to use a nipple waterer. Once the animals have learned to use the waterer, the Drip Adjustment Screw should be turned out to stop the drip of water and function as normal. (Note: Trainer Nipples with Drip Adjustment Screw MUST be operated at reduced pressure of 15 to 20 psi.)



### **EDSTROM SWINE NIPPLE WATERERS**

EDSTROM offers eight models of Swine Nipple Waterers, all made from 303 grade stainless steel. Every EDSTROM nipple is factory calibrated with proper flow rate.









### Hog Nipple Part No. 1000-0743

Designed for use with pigs 50 lbs. and up. **Flow rate:** 1.5 quarts per minute at 40 psi

**Operating Range:** 0 to 50 psi **Connection:** 1/2 in. MPT

### Hog Trainer Nipple Part No. 1000-4763

The Hog Trainer Nipple is a special version of the Edstrom Hog Nipple. It features a Drip Adjustment Screw used for training hogs to locate waterer.

**Flow rate:** 1.5 pints per minute at 15 psi

Must be operated on reduced pressure of 20 psi maximum

**Connection:** 1/2 in. MPT

### Sow Nipple Part No. 1000-0741

High capacity nipple designed especially for use by breeding stock.

Flow rate: 2.5 quarts per minute at 40 psi

**Operating Range:** 0 to 50 psi **Connection:** 1/2 in. MPT

### Sow Trainer Nipple Part No. 1000-4646

The Sow Trainer Nipple is a special version of the Edstrom Sow Nipple. It features a Drip Adjustment Screw used for training sows to locate waterer.

**Flow rate:** 1.6 quarts per minute at 15 psi

Must be operated on reduced pressure of 20 psi maximum

**Connection:** 1/2 in. MPT

### **Mounting Instructions**

We recommend providing one nipple waterer for every ten to fifteen pigs in confinement facilities. For nursery pigs, one nipple waterer for every eight pigs is advised. Tests run at the University of Nebraska compared the performance of weanling pigs housed sixteen pigs per pen with one and with two nipple waterers per pen. After thirty-five days, pigs in pens with two nipple waterers averaged two pounds per pig heavier and had less weight variation than those in pens with only one nipple waterer.

EDSTROM recommends that all nipple waterers for swine be mounted in the horizontal position. Ideally, nipples mounted in

fixed or swinging brackets should be mounted at the shoulder height of the animal or slightly higher so it will have to reach its head up to drink. Mounting the nipple at shoulder height prevents the animals from rubbing or scratching themselves on the nipples. It also helps to discourage the animals from playing with the nipple and wasting water.

The EDSTROM Nipple can be mounted angled downward with no change in performance. However, when the nipple is mounted this way, it is very critical that it be adjusted to the proper height for the animal using it. (The tip of the nipple should be at shoulder height.)











### Piglet Nipple Part No. 1000-0744

Designed for use by baby pigs through 50 lbs. **Flow rate:** 1.5 pints per minute at 40 psi

**Operating Range:** 0 to 50 psi **Connection:** 1/2 in. MPT

### Piglet Trainer Nipple Part No. 1000-0764

The Piglet Trainer Nipple is a special version of the Edstrom Piglet Nipple. It features a Drip Adjustment Screw used for training baby pigs to locate waterer.

Flow rate: 1 pint per minute at 15 psi

Must be operated on reduced pressure of 20 psi maximum

**Connection:** 1/2 in. MPT

### Wet Feeder Valve Part No. 1000-4034-303

High capacity valve for use in wet feeders or cup waterers.

Flow rate: 3 quarts per minute at 40 psi

**Operating Range:** 0 to 50 psi **Connection:** 1/2 in. MPT

#### Wet Feeder Trainer Valve Part No. 1000-4034-002

The Edstrom Wet Feeder Trainer Valve is a special version of the standard Wet Feeder Valve. It features a Drip Adjustment Screw for training pigs to locate waterer.

Flow rate: 1 pint per minute at 15 psi

Must be operated on reduced pressure of 20 psi maximum

**Connection:** 1/2 in. MPT

#### **Nipple Waterer Selection Guide**

| Animals per Nipple | Animal Size                        | Average Nipple Mounting Heights (using fixed or swinging brackets) | Nipple Waterer Model No. |
|--------------------|------------------------------------|--|--------------------------|
| 1 per litter       | Pre-Nursery Piglets (0 to 4 weeks) | 3 inches   | 1000-0744 and 1000-0764  |
| 8                  | Nursery Piglets (4 to 8 weeks)     | 6 inches   | 1000-0744 and 1000-0764  |
| 10 to 15           | Feeder Pigs (50 to 130 lbs.)       | 18 to 23 inches  | 1000-0743                |
| 10 to 15           | Finishing Pigs (130 to 250 lbs.)   | 22 to 30 inches  | 1000-0743                |
| 8 to 10            | Breeding Stock                     | 30 to 36 inches  | 1000-0741                |

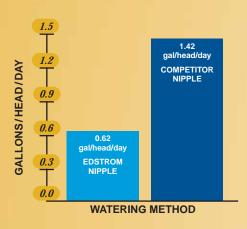
#### NOTES:

- Heights shown are based on mounting the nipple at the shoulder height of the animals. If mounted higher, some animals may be discouraged from drinking.
- By installing the nipple in a horizontal position, it can be mounted well below the shoulder height and still permit easy use by the animal.
- Good management practices dictate that you select a mounting height that permits easy access by your animals.

### **EDSTROM HOG NIPPLES SAVE WATER**

The following tests were conducted in Nurseries, Gestation Buildings and Finishing Floors to demonstrate the water savings EDSTROM Nipples provide.

Water cost (\$2.75 per 1,000 gallons) is based upon an independent study involving electrical costs of operating pumps to deliver water to hogs and pump waste from the lagoon.



### **Nursery**

In three different tests we found the EDSTROM Nipple saved water over the competition.

EDSTROM Nipples SAVED 292,000 Gallons of Water Per Year! This is an \$803.00 annual savings for a 1,000 pig nursery.

1000 pigs x 0.8 gal/hd/day SAVED = 800 gallons/day

x 365 days

**292,000 gallons/year** x \$2.75/1000 gallons

\$803.00 savings/year



#### Gestation

We tested the Sow Nipple in two different gestation buildings.

EDSTROM Nipples SAVED 529,250 Gallons of water per year, resulting in a \$1,455.44 annual savings for a 500 sow gestation building!

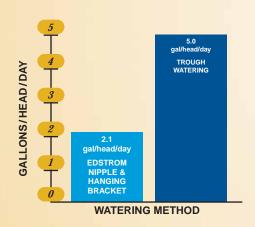
500 sows x 2.9 gal/hd/day SAVED = 1450 gallons per day

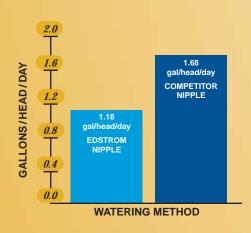
x 365 days

**529,250 gallons/year** x \$2.75/1000 gallons

\$1,455.44 savings/year







### **Finishing**

Tests in several finishing floors have shown an average water savings of 0.5 gallons per head per day over competitive nipples.

EDSTROM Nipples SAVED 182,500 Gallons of water per year, with a \$501.88 annual savings for a 1000 hog finishing floor!

1000 hogs x 0.5 gal/hd/day SAVED = 500 gallons/day

x 365 days

**182,500 gallons/year** x \$2.75/1000 gallons

\$501.88 savings/year





#### The Right Solution for your Facility

EDSTROM is synonymous with animal watering systems. Our company is founded on the principles of providing high quality products to our customers. Quality and innovation is built into every product and system we offer. When it is time to build, add on, or renovate, call EDSTROM Industries for assistance in designing your animal watering system.

Our nipple waterers are precisely engineered to operate effortlessly and reduce water waste. The simple, rugged, reliable design of an EDSTROM Nipple means you will not have to contend with plugged screens or breaking springs. We believe in the motto, "Buy it Once" because our nipples are engineered to last. By investing in an EDSTROM Nipple, you can feel confident that you will save money in the long run.

#### **Contact EDSTROM:**

If you have any questions regarding the application of the components in your facility or need assistance in the design of your system, please call our Sales Consultants, or contact us to find a dealer near you.

Call 800 558 5913 or 262 534 5181

EDSTROM Industries, Inc. 819 Bakke Ave • Waterford WI 53185

Email service@agselect.com Visit www.agselect.com

# Every EDSTROM Nipple is Backed by a 5 Year Warranty

EDSTROM Industries warrants its nipple waterers against defects in material and workmanship for five (5) years from date of purchase as follows:

If a defect is found during the first year from date of purchase, return it prepaid, and the nipple waterer will be repaired or replaced at no cost to you. EDSTROM will replace defective nipple waterer parts, at no cost to you, the second, third, fourth and fifth year after date of purchase.

The date code is stamped on the bottom side of the nipple body on the surface between the wrench pads. The two digits in the date code indicate the year of manufacture. Unless additional proof of date of purchase is provided, the warranty coverage will be computed using the date code on the nipple waterer.

For example: If the date code on the nipple reads 'B05', the year of manufacture is 2005. The first year of warranty ends with 2006. The fifth year of warranty ends with 2010.

Our warranty is valid regardless of original point of purchase (dealer or factory direct). All inquiries or warranty claims should be filed through our Tele-Service Department.



#### **ABBREVIATIONS**

MPT Male Pipe Thread
FPT Female Pipe Thread
MGHT Male Garden Hose Thread
FGHT Female Garden Hose Thread
IN Inch

**ID** Inside Diameter

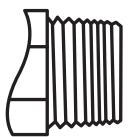
**OD** Outside Diameter

SS Stainless Steel

PSI Pounds per Square Inch

LG Long

#### **ACTUAL SIZES OF FITTINGS AND TUBING**



3/4 in. MPT



1/2 in. MPT



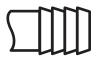
1/4 in. MPT



1/2 in. ID Drop Line Hose 1600-2846



1/2 in. ID Blue Tubing 1600-3304-100



1/2 in. Barb

#### STAINLESS STEEL NIPPLE WATERERS



#### Hog Nipple [1000-0743]

For feeder pigs through breeding stock 1/2 in. MPT, 0 to 50 psi



#### Hog Trainer Nipple [1000-4763]

Identical to #0743 with a Drip Adjustment Screw 1/2 in. MPT, 0 to 20 psi



#### Sow Nipple [1000-0741]

High capacity nipple for breeding stock 1/2 in. MPT, 0 to 50 psi



#### Sow Trainer Nipple [1000-4646]

Identical to #0741 with a Drip Adjustment Screw 1/2 in. MPT, 0 to 20 psi



#### Piglet Nipple [1000-0744]

For baby pigs through feeder pigs 1/2 in. MPT, 0 to 50 psi



#### Piglet Trainer Nipple [1000-0764]

Identical to #0744 with a Drip Adjustment Screw 1/2 in. MPT, 0 to 20 psi



#### Wet Feeder Valve [1000-4034-303]

High capacity valve for wet feeder or cup waterers 1/2 in. MPT, 0 to 50 psi



#### Wet Feeder Trainer Valve [1000-4034-002]

Identical to #303 with a Drip Adjustment Screw and lower capacity diaphragm 1/2 in. MPT, 0 to 20 psi

#### **NIPPLE WATERER PARTS**



#### Flat Bottom O-Ring [3100-0999-011]

For all nipple waterers



#### Diaphragm

#### [1010-0018-050] Standard

For Piglet/Hog Nipples



#### [1010-1918-050] High capacity

For Sow/Wet Feeder Nipples



#### Stem, SS

#### [1010-0016]

For all nipple waterers



#### [1010-0016-166]

For all Wet Feeder Valves (shorter than the standard stem)



#### Retainer Screw [1010-0015-100]

For all nipple waterers

#### FILTER/REGULATORS



#### Filter/Pressure Regulator Station [7410-5452-001]

This station comes completely assembled, consisting of a 200 mesh, flushable filter, a high capacity pressure regulator and gauge, a shut-off valve, and mounting hardware. Connections are 3/4 in. FPT or 1/2 in. barb. Using this station to supply a Flex-Tube System eliminates the need for hose clamps on the barbed connections.



#### Pressure Regulator [2100-PR-200HP]

High capacity, rugged plastic construction. 8 to 17 psi outlet range, 10 gpm. Inlet: 1/2 in. MPT. Outlet: 3/4 in. MPT.



#### Filter (80 micron), 200 mesh [2100-4969-200]

High capacity unit with flushing valve to remove sediment collected. 3/4 in. MPT connections.

#### **PIPE FITTINGS - PLASTIC**



### Adaptor, FPT x MGHT

[1640-3300-003]

1/2 in. FPT x MGHT

[1640-3300-004]

3/4 in. FPT x MGHT



#### Adaptor, MPT x MGHT

[1640-3318-001]

1/2 in. MPT x MGHT

[1640-3318-002]

3/4 in. MPT x MGHT



#### Adaptor, MPT x FGHT [1640-4508-001]



#### 3/4 in. MPT x FGHT with gasket

Adaptor, FPT x FGHT [1640-4292-001] 1/2 in. FPT x FGHT with gasket



## Bushing, MPT x FPT

[1640-4293-002]

1/2 in. MPT x 1/4 in. FPT

[1640-4293-004]

3/4 in. MPT x 1/4 in. FPT

[1640-4293-005]

3/4 in. MPT x 1/2 in. FPT



#### Cap, FGHT [1640-4509-002]

with Gasket



#### Coupling, FPT x FPT

[1640-4294-001]

1/2 in. FPT x 1/2 in. FPT

[1640-4294-002]

3/4 in. FPT x 3/4 in. FPT



#### Nipple, MPT x MPT

[1640-4291-002]

1/4 in. MPT x 1/4 in. MPT

[1640-4291-004]

1/2 in. MPT x 1/2 in. MPT

[1640-4291-005]

3/4 in. MPT x 3/4 in. MPT



#### Nipple Reducer, MPT x MPT

[1640-4291-054]

1/2 in. MPT x 1/4 in. MPT



#### Plug, MPT

[1640-1103]

1/8 in. MPT

[1640-1708-002]

1/4 in. MPT

[1640-1708-004]

1/2 in. MPT



#### Tee, FPT x FPT x FPT [1640-4486-002]

3/4 in. FPT x 3/4 in. FPT x 3/4 in. FPT

**LINE VALVES** 



### Ball Valve, Plastic (One-quarter turn handle)

[2000-4845] FGHT inlet x MGHT outlet

[2000-5441]

3/4 in. FPT inlet x 3/4 in. MPT outlet



#### Ball Valve, Swivel Assembly, Plastic

(One-quarter turn handle - commonly used on drop lines)

[2000-4846-002]

1/2 in. FPT inlet x 1/2 in. barb outlet

[2000-4846-003]

3/4 in. FPT inlet x 1/2 in. barb outlet

#### **BARBED FITTINGS - PLASTIC**



#### **Barbed Adaptor**

(Tubing Barb to Male thread)

#### [1610-0843]

1/2 in. barb x 1/4 in. MPT

#### [1610-4462]

1/2 in. barb x 3/8 in. MPT

#### [1610-1088]

1/2 in. barb x 1/2 in. MPT

#### [1610-4608-023]

1/2 in. barb x 3/4 in. MPT

#### [1610-4468-003]

1/2 in. barb x MGHT



#### Barbed Connector [1610-0845]

1/2 in. barb x 1/2 in. barb



#### Barbed Drain Plug [2020-4678-001]

1/2 in. barb



#### **Barbed Elbow Adaptor**

(Tubing Barb to Male Thread)

#### [1610-0844]

1/2 in. barb x 1/4 in. MPT



#### **Barbed Swivel Adaptor**

(Tubing Barb to Swivel Female Thread)

#### [1610-4469-001]

1/4 in. barb x 1/4 in. FPT

#### [1610-4469-003]

1/2 in. barb x 1/2 in. FPT

#### [1610-5978-003]

1/2 in. barb x 3/4 in. FPT with gasket

#### [1610-3299-003]

1/2 in. barb x FGHT with gasket



#### Barbed Tee [1610-0841]

1/2 in. barb x 1/2 in. barb x 1/2 in. barb



#### **Barbed Tee Adaptor**

(Two Tubing Barbs to Male Thread)

#### [1610-0842]

1/2 in. barbs x 1/4 in. MPT

#### [1610-2845-011]

1/2 in. barbs x 1/2 in. MPT

#### TUBING/HOSES



#### Hose Clamp, SS [1200-1906-002]

Diameter Range: 0.38 to 0.87 For use on Drop Line Hose [1600-2846] and Blue Tubing [1600-3304-100]



# EDSTROM Blue Tubing, 1/2 in. ID 100 ft. roll [1600-3304-100]

Rugged Poly Tubing, 1/2 in. inside diameter, for use on 1/2 in. barbed fitting. Maximum pressure – 50 psi; if over 20 psi, use hose clamp [1200-1906-002] on joints.



## Drop Line Hose, 1/2 in. ID per foot [1600-2846]

Flexible EPDM hose, reinforced with nylon braid. Has 1/2 in. inside diameter, for use on 1/2 in. barbed fittings.

Maximum pressure – 50 psi; if over 20 psi, use hose clamp [1200-1906-002] on joints.

