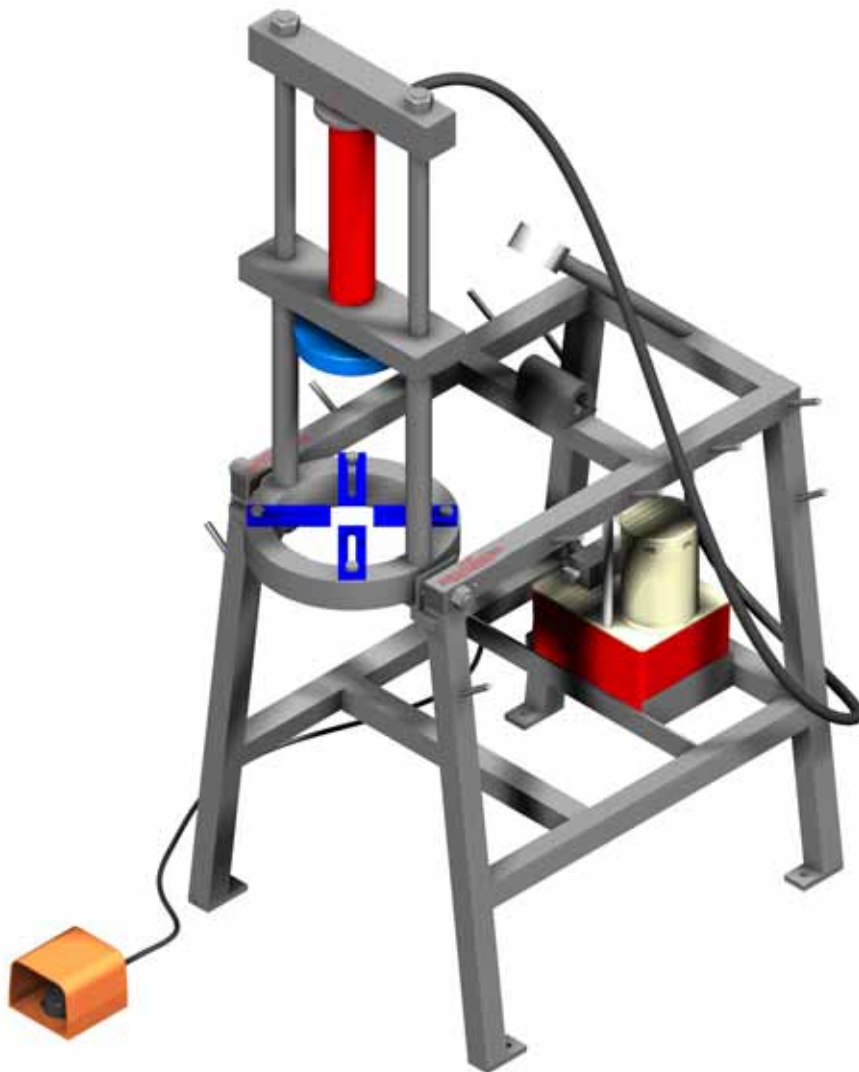




25 Ton Ram Instruction Manual



Dixon Valve & Coupling Company
800 High Street • Chestertown, MD 21620
ph: 800•355•1991 fax: 800•283•4966
www.dixonvalve.com

Holedall Fittings

25 Ton Ram Operating Instructions –
External Swaging

25 Ton Ram Operating Instructions –
External Swaging of
RSTxxxNOS Stems

25 Ton Ram Operating Instructions –
External Swaging of
Cam & Groove Fittings

25 Ton Ram Operating Instructions –
Converting from Swaging
to Internal Expansion

25 Ton Ram Operating Instructions –
Internal Expansion of
Steel and Stainless Steel Stems

25 Ton Ram Operating Instructions –
Internal Expansion of
Holedall H-520 Series Couplings

Product Updates / Notes

Sample Forms

Parts Lists and Warranties



The Right Connection™

Holedall Equipment and Products

Holedall Coupling Machines

Rams securely attach Holedall couplings to hose. Five machines meet every hose service requirement.

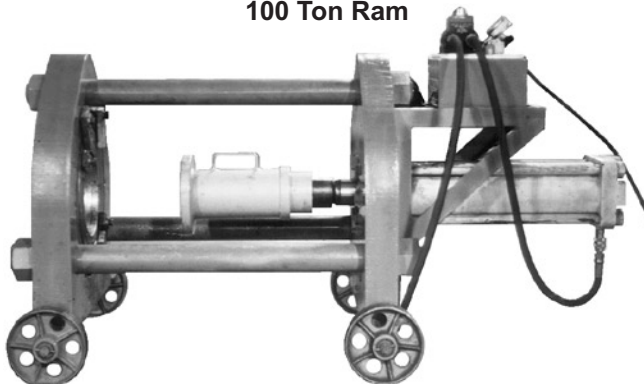
Rams, are powerful finely engineered machines designed specifically to swage and internally expand Holedall couplings by hydraulic pressure. Since each ram generates all the hydraulic pressure required to attach the Holedall coupling, one person can easily operate the equipment.

15 Ton Ram



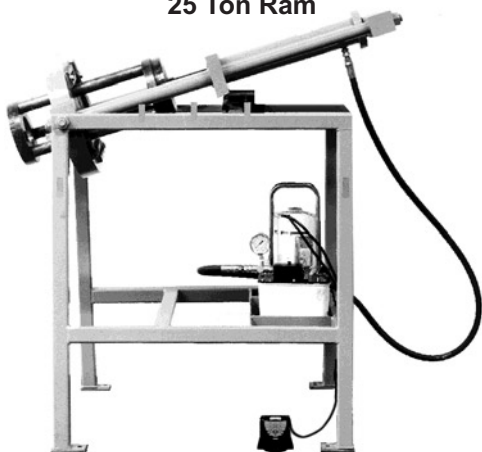
Specially designed ram for internally expanded couplings only. Bench mounted model (optional stand available), producing up to 10,000 PSI, for up to 15 tons of ram force. Capable of expanding 1" through 3" steel fittings and 3/4" through 4" brass Holedall Petroleum fittings. The motor is 1/2 h.p., 115 volt 60 cycle, single phase with foot pedal.

100 Ton Ram



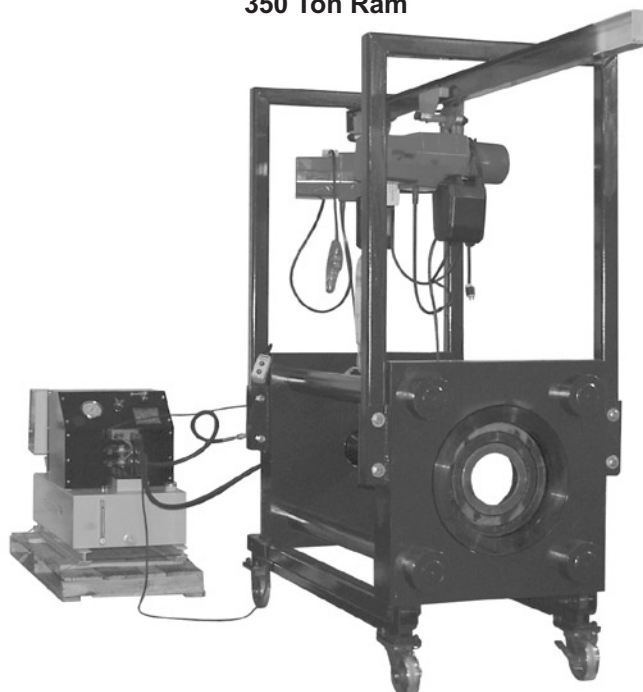
Used for swaging Holedall fittings to hose from 1 1/4" through 10" ID. With optional accessories, this ram may be used for internally expanded couplings on hose from 1 1/4" through 6". This machine is capable of producing up to 100 tons of ram force. A 1-1/8 h.p., 115 volt, 60 cycle, single phase motor is standard with remote, (220/440 volt motors are available).

25 Ton Ram



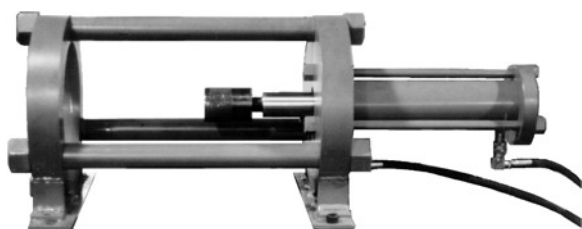
Free standing model producing up to 10,000 PSI of line pressure for up to 25 tons of ram force. Capable of external swaging 1/4" through 4" ID hose and internal expanding 5/8" through 4" ID hose, with proper equipment. The motor is 1/2 h.p., 115 volt 60 cycle, single phase with foot pedal. High speed pump kit option is available.

350 Ton Ram



Used for swaging Holedall and Rotary fittings. This ram is capable of producing up to 354 tons of ram force for swaging. A 14" 150 lb. flange will fit through the bed plate. This ram has 36" of stroke. A 12.5 h.p., 230 volt, 60Hz, 3 phase motor is standard with remote.

50 Ton Ram



Bench mounted model (optional stand available), producing up to 10,000 PSI, for up to 50 tons of ram force. Capable of external swaging 1 1/4" through 6" ID hose and internal expanding 5/8" through 6" ID hose, with proper equipment. A 1-1/8 h.p., 115 volt, 60 cycle, single phase motor is standard with remote, (220/440 volt motors are available).

All Rams require dies of the proper size to reduce the ferrule to the proper diameter for a good grip on the hose. Pushers of the proper size must be used on the end of the Ram to push the Holedall fitting through the die. Die and pusher selection depends on the sizes and types of hoses being coupled. Ferrule recommendations and a Die Chart binder are available upon request. Consult your Dixon representative for specific details.

Holedall Crimp Machine

CM400

Equipment

- Master die I.D. (standard): 145 mm
- Crimping force: 265 tons
- Maximum hose diameter: 4" I.D.
- Maximum die travel: 2.36"
- Maximum die opening without dies: 7.16"
 - Length: 29"
 - Width: 20"
 - Height: 32"
 - Weight: 579 lbs.
- Electrical power (standard): 230V 3Ph
- Optional:
 - Electrical power: 440V 3 Ph
 - Electrical power: 220V 1 Ph
 - Pump HP: 7.5 HP
- Manual / fully automatic crimping
- Inch / metric settings
- Approximate crimps per hour: 1415

Complete Crimp System Contains:

- 1 - Crimp 400 machine
 - 1 - Digital control panel
 - 1 - Mechanical stop
 - 1 - Stand with foot pedal and die holder panel
 - 11 - Small die sets from 1.02" - 3.07"
 - 8 - Large die sets from 3.31" - 4.96"
- Note: large dies are not stored on the stand
- Quick change die tool



Recommended Working Pressures

Holedall couplings, regardless of coupling style, are never to be used for steam service at any pressure. Holedall fittings listed below are not to be used with cable reinforced high-pressure hose, 4 or 6 braid wire hydraulic hose or any other service not listed in recommendations. Consult factory for recommendations on usage.

Holedall couplings, to perform satisfactorily, must be applied properly in accordance with Dixon's assembly procedures, using correct die and ferrule for that particular hose end OD. Dixon's Die and Ferrule Recommendation Guide is to be used to select correct dies and ferrules. If you do not have the updated Die and Ferrule Recommendation Guide, consult the factory.

K Note: Hose service working pressure (including surges and spikes) is never to exceed the maximum recommended working pressure for the fitting (reference chart below)*. King safety cables are recommended. Media being transported through the hose should be compatible with the stem material and ferrule material. Consult Compatibility Chart on pages 548-553 or the factory for material compatibility. For applications other than the ones listed, please consult Dixon factory.

Holedall

| Size | Externally Swaged * | | | | | Internally Expanded * | | |
|--------|---------------------|---------------------|---------------------|---------------------------------|----------------------|-----------------------|---------------------|--------------------------------------|
| | Standard Fittings | Long Style Fittings | Light Duty Fittings | | Holedall II Fittings | Cam and Groove | Internally Expanded | Flow Chief / Crimp Sanitary Fittings |
| | | | NO Notched Fittings | NOS Notched Short Fittings | | | | |
| | TM, TP, TG | TML, TPL, TGL | TM, TP, TG, RN***NO | RST***NOS, STC***NOS, GAS***NOS | FW | | IXM, IXV, IXH | IXSE, IXFS, IXMS, CSSR |
| 3/4" | --- | --- | --- | --- | --- | --- | --- | --- |
| 1" | --- | --- | --- | --- | --- | 250 | --- | --- |
| 1-1/4" | 600 | 1,000 | 350 | --- | --- | --- | 800 | --- |
| 1-3/8" | --- | --- | --- | --- | --- | --- | --- | --- |
| 1-1/2" | 600 | 1,000 | 350 | 250 | 300 | 250 | 800 | 250 |
| 2" | 600 | 1,000 | 350 | 250 | 300 | 250 | 800 | 250 |
| 2-1/2" | 600 | 1,000 | 250 | --- | 250 | 150 | 600 | 250 |
| 3" | 600 | 1,000 | 250 | 250 | 200 | 125 | 600 ** | 250 |
| 4" | 500 | 850 | 250 | *** | 200 | 100 | 500 ** | 200 |
| 5" | 450 | 750 | --- | --- | --- | --- | --- | --- |
| 6" | 400 | 700 | --- | --- | --- | --- | 400 | --- |
| 8" | 350 | 600 | --- | --- | --- | --- | --- | --- |
| 10" | 300 | 550 | --- | --- | --- | --- | --- | --- |

- maximum recommended working pressures, in PSI, at **70°F** ambient temperature
- for applications other than the ones listed, please consult Dixon factory

* The assembly's (hose + coupling) maximum working pressure is the lesser of:

- 1) The hose rated working pressure, or
- 2) The coupling rated working pressure

** For hoses which use IXF48-3 to IXF48-5 and IXF64-2 to IXF64-5, consult the factory for working pressures. See notes below for specific recommendations.

Standard Fittings

Recommended for use on most one and two wire braid reinforced hoses, fiber braided and helical wire reinforced hose, such as: oil suction and discharge hose, barge and dock loading and unloading hose, L.P. gas hose (consult Dixon for NFPA56 compliant products), anhydrous ammonia hose, aircraft fueling hose and acid chemical hose.

Long Style Fittings

Recommended for use on hose as listed under standard fittings where additional retention is required due to higher working pressures or end pull. Consult maximum working pressure chart or call factory.

Holedall II Fittings

Recommended for Royalflex P1193 and P1196 hose or hoses with similar construction, having helical wire for a given O.D. range.

Light Duty Fittings

Recommended for use in the same applications as standard fittings above except that hose rated working pressure is never to exceed the maximum recommended working pressure listed in chart above.

Holedall External Swage Coupling System

The Holedall coupling system provides outstanding strength, durability and safety.

The Holedall system is a method of attaching couplings to hose utilizing a progressive swage. The patented Holedall couplings include a Holedall stem and a specially engineered ferrule. The hydraulic swaging of the coupling to the hose is accomplished by pushing the ferrule through a die which reduces the ferrule OD. The ferrule penetrates the hose wall, providing a 360° uninterrupted compression band around the hose.

A hydraulic ram is the only piece of machinery necessary to accomplish the coupling. Available in five different sizes - 15, 25, 50, 100 and 350 ton - these rams will accommodate dies and pushers of various sizes so that hoses up to 10" in diameter may be coupled.

This multi-purpose, high pressure coupling system requires no bolts and results in a clean coupling with no protrusions. The swaging operation is fast and hose of various lengths and different styles can be coupled. Ease of operation, flexibility and economy make the Holedall method an unequalled assembly system.

The Holedall coupling - the most adaptable coupling available.

For almost half a century, Holedall couplings have provided long-lasting efficiency and safety unmatched by any other industrial hose fitting.

K

Holedall

Couplings are available in stainless steel and carbon steel.

Couplings are furnished with pipe thread, plain end, victaulic grooved or flanged ends.

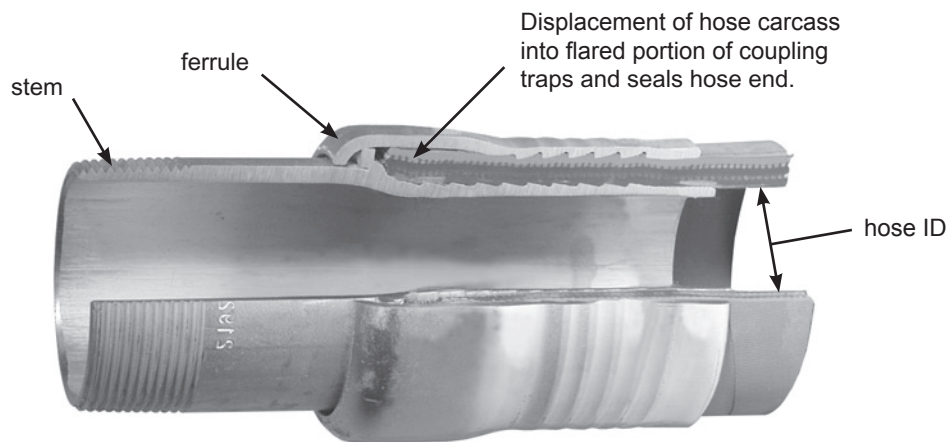
Dixon Holedall stems and ferrules are specifically designed to be used together as a coupling system.

SAFETY
ALERT

Due to differences in dimensions and tolerances, for safety reasons, do not use other manufacturer's stems or ferrules with Dixon Holedall products.

SAFETY
ALERT

Streamlined, lightweight coupling consisting of ferrule and stem.
No protrusions to snag on equipment.



Cross-section of holedall externally swaged assembly

Unless specified
consult the Dixon Swage/Crimp Recommendation Guide

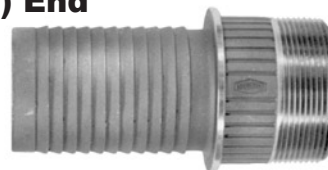
External Swage Stems

- designed and machined for hydraulic suction line applications using SAE100R4 hydraulic hose
- Barbs provide easy assembly and maximum gripping action.
- for higher working pressure applications use long style stems and ferrules

Male Pipe Threaded (NPT) End



tubular type



investment cast design

| Hose ID | Carbon Steel Part # | Long Style Carbon Steel Part # | Stainless Steel Part # |
|---------|------------------------|--------------------------------------|---------------------------|
| 1¼" | TM20 | TML20 | TMR20 |
| 1½" | TM24 | TML24 | TMR24 |
| 2" | TM32 | TML32 | TMR32 |
| 2½" | TM40 | TML40 | TMR40 |
| 3" | TM48 | TML48 | TMR48 |
| 4" | TM64 | TML64 | TMR64 |
| 5" | TM80 | TML80 | --- |
| 6" | TM96 | TML96 | TMR96 |
| 8" | TM128 | TML128 | --- |
| 10" | TM160 | TML160 | --- |

| Hose ID | Stainless Steel Part # |
|---------|---------------------------|
| 1½" | TMR24C |
| 2" | TMR32C |
| 3" | TMR48C |

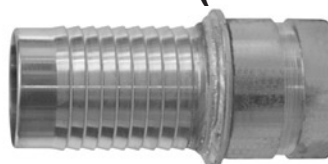
Beveled End for Welding



tubular type

| Hose ID | Carbon Steel Part # | Long Style Carbon Steel Part # | Stainless Steel Part # |
|---------|------------------------|--------------------------------------|---------------------------|
| 1¼" | TP20 | TPL20 | --- |
| 1½" | TP24 | TPL24 | --- |
| 2" | TP32 | TPL32 | TPR32 |
| 2½" | TP40 | TPL40 | --- |
| 3" | TP48 | TPL48 | TPR48 |
| 4" | TP64 | TPL64 | TPR64 |
| 5" | TP80 | TPL80 | --- |
| 6" | TP96 | TPL96 | --- |
| 8" | TP128 | TPL128 | --- |
| 10" | TP160 | TPL160 | --- |

Grooved End (Victaulic)



tubular type

| Hose ID | Carbon Steel Part # | Long Style Carbon Steel Part # |
|---------|------------------------|--------------------------------------|
| 1¼" | TG20 | TGL20 |
| 1½" | TG24 | TGL24 |
| 2" | TG32 | TGL32 |
| 2½" | TG40 | TGL40 |
| 3" | TG48 | TGL48 |
| 4" | TG64 | TGL64 |
| 5" | TG80 | TGL80 |
| 6" | TG96 | TGL96 |
| 8" | TG128 | TGL128 |
| 10" | TG160 | TGL160 |

Female End

stem & ferrule - two piece design
1" sizesstem & ferrule - one piece design
1¼" - 2" sizes

tubular type

| Hose ID | Hose OD from to | | Carbon Steel Part # |
|---------|--------------------|----------|--------------------------------|
| 1" | 1-30/64" | 1-34/64" | TF16WF1-80 |
| | 1-34/64" | 1-38/64" | TF16WF2-80 |
| | 1-35/64" | 1-42/64" | TF16WF3-80 |
| 1¼" | 1-44/64" | 1-48/64" | TF20WF1-80 ¹ |
| | 1-49/64" | 1-56/64" | TF20WF2-80 ¹ |
| | 1-57/64" | 2" | TF20WF3-80 ¹ |
| 2" | 2-36/64" | 2-40/64" | TF32WF1-80 ¹ |
| | 2-41/64" | 2-48/64" | TF32WF2-80 ¹ |
| | 2-49/64" | 2-56/64" | TF32WF3-80 ¹ |

¹ Special pushers required for 1¼" and 2" sizes:

1¼" **25PUSH125-MOD**

2" **25PUSH200-MOD**

External Swage Ferrules

The selection of ferrules is very important to achieve the proper coupling-to-hose assembly.

- ferrules are plated carbon steel
- style F ferrules are used with all standard length male stems
- style FL ferrules are extra long and are used with all long style stems



K

Holedall

6-hole design

| Hose ID | Hose OD | | Plated Carbon Steel | Long Style Plated Carbon Stl. |
|---------|----------|----------|---------------------------|-------------------------------|
| | from | to | Part # | Part # |
| 1¼" | 1-44/64" | 1-48/64" | F20-1 | FL20-1 |
| | 1-49/64" | 1-56/64" | F20-2 | FL20-2 |
| | 1-57/64" | 2" | F20-3 | FL20-3 |
| | 2-1/64" | 2-8/64" | F20-4 | FL20-4 |
| 1½" | 1-58/64" | 2" | F24-1 | FL24-1 |
| | 2-1/64" | 2-8/64" | F24-2 | FL24-2 |
| | 2-9/64" | 2-16/64" | F24-3 | FL24-3 |
| | 2-17/64" | 2-24/64" | F24-4 | FL24-4 |
| | 2-25/64" | 2-32/64" | F24-5 | FL24-5 |
| 2" | 2-28/64" | 2-40/64" | F32-1 | FL32-1 |
| | 2-41/64" | 2-48/64" | F32-2 | FL32-2 |
| | 2-49/64" | 2-56/64" | F32-3 | FL32-3 |
| | 2-57/64" | 3-2/64" | F32-4 | FL32-4 |
| 2½" | 2-62/64" | 3-8/64" | F40-1 | FL40-1 |
| | 3-9/64" | 3-16/64" | F40-2 | FL40-2 |
| | 3-17/64" | 3-24/64" | F40-3 | FL40-3 |
| | 3-25/64" | 3-32/64" | F40-4 | FL40-4 |
| | 3-33/64" | 3-40/64" | F40-5 | FL40-5 |
| 3" | 3-30/64" | 3-40/64" | F48-1 | FL48-1 |
| | 3-41/64" | 3-48/64" | F48-2 | FL48-2 |
| | 3-49/64" | 3-56/64" | F48-3 | FL48-3 |
| | 3-57/64" | 4" | F48-4 | FL48-4 |
| | 4-1/64" | 4-8/64" | F48-5 | FL48-5 |
| 4" | 4-30/64" | 4-39/64" | F64-Z ¹ | FL64-Z ² |
| | 4-40/64" | 4-44/64" | F64-1 | FL64-1 |
| | 4-45/64" | 4-52/64" | F64-2 | FL64-2 |
| | 4-53/64" | 4-60/64" | F64-3 | FL64-3 |
| | 4-61/64" | 5-4/64" | F64-4 | FL64-4 |
| | 5-5/64" | 5-12/64" | F64-5 | FL64-5 |
| | 5-13/64" | 5-20/64" | F64-6 | FL64-6 |
| | 5-21/64" | 5-28/64" | F64-7 | FL64-7 |
| 5" | 5-29/64" | 5-36/64" | F64-8 | FL64-8 |
| | 5-56/64" | 5-60/64" | F80-1 | FL80-1 |
| | 5-61/64" | 6-4/64" | F80-2 | FL80-2 |
| | 6-5/64" | 6-12/64" | F80-3 | FL80-3 |
| | 6-13/64" | 6-20/64" | F80-4 | FL80-4 |
| | 6-21/64" | 6-28/64" | F80-5 | FL80-5 |
| | 6-29/64" | 6-38/64" | F80-6 | FL80-6 |
| | 6-37/64" | 6-44/64" | F80-7 | FL80-7 |

2-hole design

| Hose ID | Hose OD | | Plated Carbon Steel | Long Style Plated Carbon Stl. |
|---------|-----------|-----------|---------------------|-------------------------------|
| | from | to | Part # | Part # |
| 6" | 6-44/64" | 6-63/64" | F96-Z | FL96-Z |
| | 7" | 7-4/64" | F96-1 | FL96-1 |
| | 7-5/64" | 7-12/64" | F96-2 | FL96-2 |
| | 7-13/64" | 7-20/64" | F96-3 | FL96-3 |
| | 7-21/64" | 7-28/64" | F96-4 | FL96-4 |
| | 7-29/64" | 7-36/64" | F96-5 | FL96-5 |
| | 7-37/64" | 7-44/64" | F96-6 | FL96-6 |
| | 7-45/64" | 7-52/64" | F96-7 | FL96-7 |
| | 7-53/64" | 7-60/64" | F96-8 | FL96-8 |
| 8" | 7-61/64" | 8" | F96-9 | FL96-9 |
| | 9" | 9-9/64" | F128-Y | FL128-Y |
| | 9-20/64" | 9-24/64" | F128-1 | FL128-1 |
| | 9-25/64" | 9-32/64" | F128-2 | FL128-2 |
| | 9-33/64" | 9-40/64" | F128-3 | FL128-3 |
| | 9-41/64" | 9-48/64" | F128-4 | FL128-4 |
| | 9-49/64" | 9-56/64" | F128-5 | FL128-5 |
| | 9-57/64" | 10" | F128-6 | FL128-6 |
| | 10-1/64" | 10-4/64" | F128-7 | FL128-7 |
| 10" | 11-32/64" | 11-44/64" | F160-1 | FL160-1 |
| | 11-45/64" | 11-60/64" | F160-2 | FL160-2 |
| | 11-61/64" | 12-12/64" | F160-3 | FL160-3 |
| | 12-13/64" | 12-28/64" | F160-4 | FL160-4 |
| | 12-29/64" | 12-44/64" | F160-5 | FL160-5 |
| | 12-45/64" | 12-60/64" | F160-6 | FL160-6 |

For applications with hose OD ranges not listed, call the factory.

¹ requires special stem: **TM64-42**

² requires special stem: **TML64-42**

Holedall II External Swage Ferrules

For use with Royal-Flex™ thin wall hose. These specially designed carbon steel ferrules have serrations on the outside and should be used with stem styles TM, TP and TG stems on page 6.



| Hose ID | Hose OD | | Carbon Steel |
|---------|----------|----------|-------------------------|
| | from | to | Part # |
| 1½" | 1-58/64" | 2-2/64" | FW24 |
| 2" | 2-28/64" | 2-34/64" | FW32 |
| 3" | 3-30/64" | 3-38/64" | FW48 |
| 4" | 4-30/64" | 4-42/64" | FW64¹ |

¹ 4" takes special stem; **TM64-42**

Stainless External Swage Ferrules

Light duty 304 stainless ferrules for use with standard length stems such as the TMR series. Consult Dixon for die recommendations. Refer to the Dixon Pressure Slide Chart for specific pressure recommendations.



| Hose ID | Hose OD | | 304 Stainless Steel |
|---------|----------|----------|---------------------|
| | from | to | Part # |
| 1½" | 1-60/64" | 2-12/64" | GAS2334TO |
| | 2-4/64" | 2-22/64" | GAS2370TO |
| 2" | 2-30/64" | 2-44/64" | GAS2709TO |
| | 2-42/64" | 2-54/64" | GAS2885TO |
| 3" | 3-30/64" | 3-46/64" | GAS3760TO |
| | 3-47/64" | 3-54/64" | GAS3885TO |
| 4" | 4-40/64" | 4-47/64" | GAS5010TO |

External Swage Notched NOS Stems and Ferrules

- The largest advantage of the notched design is that the coupling can be removed from a damaged hose by cutting away the ferrule, without necessarily damaging the fitting. *After inspection of the fitting to determine its suitability for reuse, it can be reinstalled into another hose by using a new ferrule.*
- The notched system allows you to better manage your inventories. You can stock one stem and two ferrules, and cover the same hose range with less inventory. *You must purchase a stem and the matching ferrule to create an assembly.*

SAFETY
ALERT

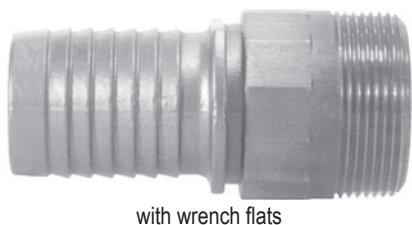
SAFETY
ALERT

- For hose outside diameters of 2-4/64" and below, *the couplings are crimp only.*
- For hose outside diameters of 2-5/64" and above, the couplings can be crimped or swaged.
- See page 22 for cam and groove style notched NOS fittings.

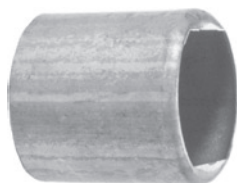
SAFETY
ALERT

Only use the NOS shank with the NOS ferrules.
Due to differences in dimensions and tolerances for safety reasons, do not use other manufacturer's stems or ferrules with Dixon Holedall products.

SAFETY
ALERT



with wrench flats



male NPT stems

| Hose ID | 316 Stainless Steel | |
|---------|---------------------|--|
| | Part # | |
| 1½" | RST150NOS | |
| 2" | RST200NOS | |
| 3" | RST300NOS | |
| 4" | RST400NOS | |

ferrules

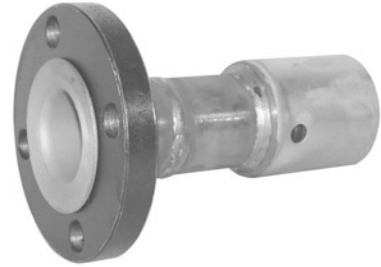
| Hose ID | Hose OD | | 304 Stainless Steel |
|---------|----------|----------|---------------------|
| | from | to | Part # |
| 1½" | 1-60/64" | 2-12/64" | GAS2334NOS |
| | 2-4/64" | 2-22/64" | GAS2370NOS |
| 2" | 2-30/64" | 2-44/64" | GAS2709NOS |
| | 2-42/64" | 2-54/64" | GAS2885NOS |
| 3" | 3-30/64" | 3-46/64" | GAS3760NOS |
| | 3-47/64" | 3-54/64" | GAS3885NOS |
| 4" | 4-40/64" | 4-47/64" | GAS5010NOS |

External Swage Flanged Assemblies

- 150# ASA flange drilling available with carbon steel stem, ferrule and flange, or 316 stainless steel stem, flange and carbon steel ferrule
- available in other sizes, consult the factory for pricing



fixed flange



floating flange

| Hose ID | Hose OD | | Carbon Steel | Stainless Steel | Carbon Steel | Stainless Steel |
|---------|----------|----------|------------------|-------------------|------------------|-------------------|
| | from | to | Part # | Part # | Part # | Part # |
| 2" | 2-36/64" | 2-40/64" | 32P1SO15 | R32P1SOR15 | 32P1LJ15 | R32P1LJR15 |
| | 2-41/64" | 2-48/64" | 32P2SO15 | R32P2SOR15 | 32P2LJ15 | R32P2LJR15 |
| | 2-49/64" | 2-56/64" | 32P3SO15 | R32P3SOR15 | 32P3LJ15 | R32P3LJR15 |
| 3" | 3-36/64" | 3-40/64" | 48P1SO15 | R48P1SOR15 | 48P1LJ15 | R48P1LJR15 |
| | 3-41/64" | 3-48/64" | 48P2SO15 | R48P2SOR15 | 48P2LJ15 | R48P2LJR15 |
| | 3-49/64" | 3-56/64" | 48P3SO15 | R48P3SOR15 | 48P3LJ15 | R48P3LJR15 |
| 4" | 4-40/64" | 4-44/64" | 64P1SO15 | R64P1SOR15 | 64P1LJ15 | R64P1LJR15 |
| | 4-45/64" | 4-52/64" | 64P2SO15 | R64P2SOR15 | 64P2LJ15 | R64P2LJR15 |
| | 4-53/64" | 4-60/64" | 64P3SO15 | R64P3SOR15 | 64P3LJ15 | R64P3LJR15 |
| 6" | 7" | 7-4/64" | 96P1SO15 | R96P1SOR15 | 96P1LJ15 | R96P1LJR15 |
| | 7-5/64" | 7-12/64" | 96P2SO15 | R96P2SOR15 | 96P2LJ15 | R96P2LJR15 |
| | 7-13/64" | 7-20/64" | 96P3SO15 | R96P3SOR15 | 96P3LJ15 | R96P3LJR15 |
| 8" | 9-20/64" | 9-24/64" | 128P1SO15 | --- | 128P1LJ15 | --- |
| | 9-25/64" | 9-32/64" | 128P2SO15 | --- | 128P2LJ15 | --- |
| | 9-33/64" | 9-40/64" | 128P3SO15 | --- | 128P3LJ15 | --- |

External Swage Uni-Range Male Couplings

Designed for smaller hose systems, these couplings may be used for hose ID's of 1/4" - 1" and come complete with factory assembled stem and ferrule combination.

- can be swaged or crimped
- other hose OD's available, consult the factory
- stainless steel stems are investment cast



- plated carbon steel stem and ferrule

| Hose ID | Hose OD | | Plated Carbon Steel |
|---------|----------|----------|---------------------|
| | from | to | Part # |
| 1/4" | 34/64" | 38/64" | 4P1 |
| | 38/64" | 42/64" | 4P2 |
| | 42/64" | 46/64" | 4P3 |
| 3/8" | 46/64" | 50/64" | 6P1 |
| | 50/64" | 54/64" | 6P2 |
| | 54/64" | 58/64" | 6P3 |
| 1/2" | 54/64" | 58/64" | 8P1 |
| | 58/64" | 62/64" | 8P2 |
| | 62/64" | 1-2/64" | 8P3 |
| 3/4" | 1-10/64" | 1-14/64" | 12P1 |
| | 1-14/64" | 1-18/64" | 12P2 |
| | 1-18/64" | 1-22/64" | 12P3 |
| 1" | 1-30/64" | 1-34/64" | 16P1 |
| | 1-34/64" | 1-38/64" | 16P2 |
| | 1-38/64" | 1-42/64" | 16P3 |
| | 1-42/64" | 1-46/64" | 16P4 |

- 316 stainless steel stem, plated carbon steel ferrule

| Hose ID | Hose OD | | Stainless/Carbon Steel |
|---------|----------|----------|------------------------|
| | from | to | Part # |
| 3/4" | 1-10/64" | 1-14/64" | R12P1 |
| | 1-14/64" | 1-18/64" | R12P2 |
| | 1-18/64" | 1-22/64" | R12P3 |
| 1" | 1-30/64" | 1-34/64" | R16P1 |
| | 1-34/64" | 1-38/64" | R16P2 |
| | 1-38/64" | 1-42/64" | R16P3 |
| | 1-42/64" | 1-46/64" | R16P4 |

- 316 stainless steel stem, 304 stainless steel ferrule

| Hose ID | Hose OD | | Stainless Steel |
|---------|----------|----------|-----------------|
| | from | to | Part # |
| 1/2" | 58/64" | 58/64" | R8P2SS |
| 3/4" | 1-6/64" | 1-6/64" | R12P1250 |
| | 1-13/64" | 1-13/64" | R12P1370 |
| 1" | 1-30/64" | 1-30/64" | R16P1620 |
| | 1-38/64" | 1-38/64" | R16P1770 |

External Swage High Pressure Couplings

These couplings are for services requiring a fitting which will withstand extremely high pressures (up to **3,000 PSI**) and severe operating conditions, such as on small and medium size drilling rigs, used for slim hole, core drill, workover, seismograph, water well, blast or shot holes, etc. These long, rugged fittings are machined from seamless pipe and tubing with specially designed serrations. The mating ferrules are machined from heavy wall material incorporating matching serrations. These couplings are shipped with matching ferrules. Please provide hose OD when ordering for properly sized ferrule. Make sure both ends of the hose are measured for OD. Must be swaged with 50 Ton or 100 Ton Ram.

* An accurate hose OD must be provided to complete the part # and to ensure proper retention.

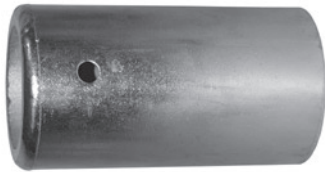
- The LM fittings are sold as a complete coupling, including stem and ferrule.
- API and NPT sizes are interchangeable

Stem and Ferrule Complete Assemblies

NPT Male Threaded Couplings



| Hose ID | NPT Size | Zinc Plated Steel Part # |
|---------|----------|--------------------------|
| 2" | 2" | LM32-* |
| 2½" | 2½" | LM40-* |
| 3" | 3" | LM48-* |



API Male Threaded Couplings

| Hose ID | API Size | Zinc Plated Steel Part # |
|---------|----------|--------------------------|
| 2" | 2½" | LM3240-* |
| 2½" | 3" | LM4048-* |
| 3" | 4" | LM4864-* |

Holedall Internal Expansion Couplings

The Dixon Internally Expanded Couplings are essential when maximum flow is important. Only one expansion tool is needed for each hose ID. Some recommended applications of these fittings are: concrete pump hose, plaster and grout hose, oil suction and discharge hose, multi-purpose heavy duty air hose, jetting hose, barge loading hose and bottom loading hose.

Benefits of Internal Expansion Fittings:

- maximum flow of media
- reduction of turbulence through hose
- excellent sealing and retention characteristics
- outperforms band clamps
- easy and consistent installation

End Configurations Available:

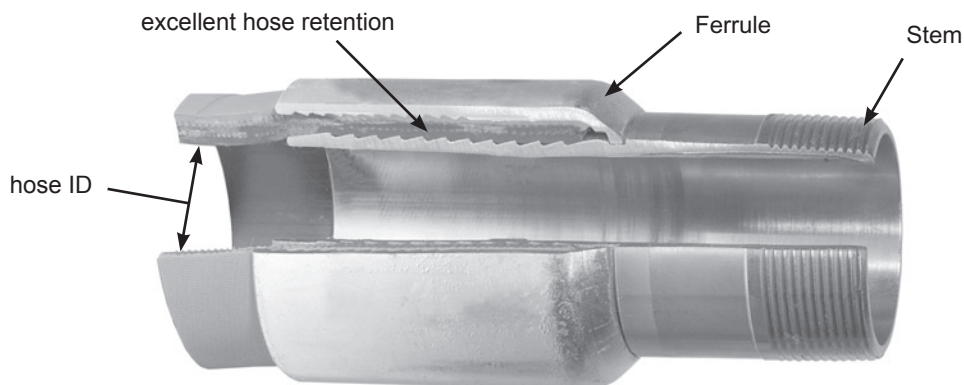
- male NPT
- raised California
- victaulic
- others available on request

Dixon Holedall stems and ferrules are specifically designed to be used together as a coupling system.

SAFETY
ALERT

Due to differences in dimensions and tolerances, for safety reasons, do not use other manufacturer's stems or ferrules with Dixon Holedall products.

SAFETY
ALERT



Cross-section of Holedall internally expanded assembly

Internal Expansion Stems



male pipe end

| Size | Carbon Steel Part # |
|------|------------------------|
| 1" | IXM16 |
| 1¼" | IXM20 |
| 1½" | IXM24 |
| 2" | IXM32 |
| 2½" | IXM40 |
| 3" | IXM48 |
| 4" | IXM64 |
| 6" | IXM96 |



heavy duty raised end

| Size | Carbon Steel Part # |
|------|------------------------|
| 1½" | IXH24 |
| 2" | IXH32 |
| 2½" | IXH40 |
| 3" | IXH48 |
| 4" | IXH64 |



grooved end

| Size | Carbon Steel Part # |
|------|------------------------|
| 1¼" | IXV20 |
| 1½" | IXV24 |
| 2" | IXV32 |
| 2½" | IXV40 |
| 3" | IXV48 |
| 4" | IXV64 |

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Holedall

Butt Weld x Heavy Duty Raised End (California Style)

Beveled design for welding to Schedule 40 pipe allows connection to a heavy duty raised end (California style) hose fitting or similar style end.

California style end

| Size | Length | Carbon Steel Part # |
|------|--------|------------------------|
| 1½" | 1½" | HDE24 |
| 2" | 1½" | HDE32 |
| 2½" | 1½" | HDE40 |
| 3" | 1½" | HDE48 |
| 4" | 1½" | HDE64 |
| 5" | 1½" | HDE80 |



Clamps for IXH Raised End (California Style) Stems

Drop-forged steel clamps for fast assembly when connecting heavy-duty raised end fittings used for concrete. These clamps can be used to connect the ends of pipes or hoses which use the Raised End or California style fittings listed above. Shipped with double lipped gasket and safety pin. 1½" through 3" are galvanized; 4" and 5" are painted green. Clamp should only be used with safety pin in place.

| Hose ID | Forged Steel Clamps Part # | Buna-N Gaskets Part # |
|---------|-------------------------------|--------------------------|
| 1½" | IXHC150 | IXHCG150 |
| 2" | IXHC200 | IXHCG200 |
| 2½" | IXHC250 | IXHCG250 |
| 3" | IXHC300 | IXHCG300 |
| 4" | IXHC400 | IXHCG400 |
| 5" | IXHC500 | IXHCG500 |



Internal Expansion Ferrules



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Holedall

| Hose ID | Hose OD from to | | Ferrule Size | Plated Carbon Steel Part # |
|---------|--------------------|----------|--------------|----------------------------|
| 1" | 1-24/64" | 1-28/64" | 1-7/16" | IXF16-1 |
| | 1-28/64" | 1-32/64" | 1-1/2" | IXF16-2 |
| | 1-32/64" | 1-36/64" | 1-9/16" | IXF16-3 |
| 1 1/4" | 1-40/64" | 1-44/64" | 1-11/16" | IXF20-Z |
| | 1-44/64" | 1-48/64" | 1-3/4" | IXF20-1 |
| | 1-48/64" | 1-52/64" | 1-13/16" | IXF20-2 |
| | 1-52/64" | 1-56/64" | 1-7/8" | IXF20-3 |
| | 1-56/64" | 1-60/64" | 1-15/16" | IXF20-4 |
| | 1-60/64" | 2" | 2" | IXF20-5 |
| | 2" | 2-4/64" | 2-1/16" | IXF20-6 |
| 1 1/2" | 1-56/64" | 1-60/64" | 1-15/16" | IXF24-Z |
| | 1-60/64" | 2" | 2" | IXF24-1 |
| | 2" | 2-4/64" | 2-1/16" | IXF24-2 |
| | 2-4/64" | 2-8/64" | 2-1/8" | IXF24-3 |
| | 2-8/64" | 2-12/64" | 2-3/16" | IXF24-4 |
| | 2-12/64" | 2-16/64" | 2-1/4" | IXF24-5 |
| | 2-16/64" | 2-20/64" | 2-5/16" | IXF24-6 |
| 2" | 2-20/64" | 2-24/64" | 2-3/8" | IXF24-7 |
| | 2-32/64" | 2-36/64" | 2-9/16" | IXF32-Y |
| | 2-36/64" | 2-40/64" | 2-5/8" | IXF32-Z |
| | 2-40/64" | 2-44/64" | 2-11/16" | IXF32-1 |
| | 2-44/64" | 2-48/64" | 2-3/4" | IXF32-2 |
| | 2-48/64" | 2-52/64" | 2-13/16" | IXF32-3 |
| | 2-52/64" | 2-56/64" | 2-7/8" | IXF32-4 |
| 2 1/2" | 2-56/64" | 2-60/64" | 2-15/16" | IXF32-5 |
| | 2-60/64" | 3" | 3" | IXF32-6 |
| | 3" | 3-4/64" | 3-1/16" | IXF32-7 |
| | 3" | 3-4/64" | 3-1/16" | IXF40-1 |
| | 3-4/64" | 3-8/64" | 3-1/8" | IXF40-2 |
| | 3-8/64" | 3-12/64" | 3-3/16" | IXF40-3 |
| | 3-12/64" | 3-16/64" | 3-1/4" | IXF40-4 |
| 2 1/2" | 3-16/64" | 3-20/64" | 3-5/16" | IXF40-5 |
| | 3-20/64" | 3-24/64" | 3-3/8" | IXF40-6 |
| | 3-24/64" | 3-28/64" | 3-7/16" | IXF40-7 |
| | 3-28/64" | 3-32/64" | 3-1/2" | IXF40-8 |

| Hose ID | Hose OD from to | | Ferrule Size | Plated Carbon Steel Part # |
|---------|--------------------|----------|--------------|-----------------------------|
| 3" | 3-32/64" | 3-36/64" | 3-9/16" | IXF48-T |
| | 3-36/64" | 3-40/64" | 3-5/8" | IXF48-U |
| | 3-40/64" | 3-44/64" | 3-11/16" | IXF48-V |
| | 3-44/64" | 3-48/64" | 3-3/4" | IXF48-W |
| | 3-48/64" | 3-52/64" | 3-13/16" | IXF48-X |
| | 3-52/64" | 3-56/64" | 3-7/8" | IXF48-Y |
| | 3-56/64" | 3-60/64" | 3-15/16" | IXF48-Z |
| | 3-60/64" | 4" | 4" | IXF48-1 |
| | 4" | 4-4/64" | 4-1/16" | IXF48-2 |
| | 4-4/64" | 4-8/64" | 4-1/8" | IXF48-3 ¹ |
| 4" | 4-8/64" | 4-12/64" | 4-3/16" | IXF48-4 ¹ |
| | 4-12/64" | 4-16/64" | 4-1/4" | IXF48-5 ¹ |
| | 4-36/64" | 4-40/64" | 4-5/8" | IXF64-T |
| | 4-40/64" | 4-44/64" | 4-11/16" | IXF64-U |
| | 4-44/64" | 4-48/64" | 4-3/4" | IXF64-V |
| | 4-48/64" | 4-52/64" | 4-13/16" | IXF64-W |
| | 4-52/64" | 4-56/64" | 4-7/8" | IXF64-X |
| | 4-56/64" | 4-60/64" | 4-15/16" | IXF64-Y |
| | 4-60/64" | 5" | 5" | IXF64-Z |
| | 5" | 5-4/64" | 5-1/16" | IXF64-1 |
| 6" | 5-4/64" | 5-8/64" | 5-1/8" | IXF64-2 ¹ |
| | 5-8/64" | 5-12/64" | 5-3/16" | IXF64-3 ¹ |
| | 5-12/64" | 5-16/64" | 5-1/4" | IXF64-4 ¹ |
| | 5-16/64" | 5-20/64" | 5-5/16" | IXF64-5 ¹ |
| | 6-40/64" | 6-44/64" | 6-11/16" | IXF96-1 |
| | 6-44/64" | 6-48/64" | 6-3/4" | IXF96-2 |
| | 6-48/64" | 6-52/64" | 6-13/16" | IXF96-3 |
| | 6-52/64" | 6-56/64" | 6-7/8" | IXF96-4 |
| | 6-56/64" | 6-60/64" | 6-15/16" | IXF96-5 |
| | 6-60/64" | 7" | 7" | IXF96-6 |
| 6" | 7" | 7-4/64" | 7-1/16" | IXF96-7 |
| | 7-4/64" | 7-8/64" | 7-1/8" | IXF96-8 |
| | 7-8/64" | 7-12/64" | 7-1/4" | IXF96-9 |
| | 7-12/64" | 7-16/64" | 7-5/16" | IXF96-10 |
| | 7-16/64" | 7-20/64" | 7-3/8" | IXF96-11 |
| | 7-20/64" | 7-24/64" | 7-7/8" | IXF96-12 |
| | 7-24/64" | 7-28/64" | 7-15/16" | IXF96-13 |
| | 7-28/64" | 7-32/64" | 7-15/16" | IXF96-14 |

¹ For hoses using ferrule sizes IXF48-3 thru IXF48-5 and IXF64-2 thru IXF64-5, consult the factory for working pressures.

Internally Expanded Permanent Couplings - Scovill Style



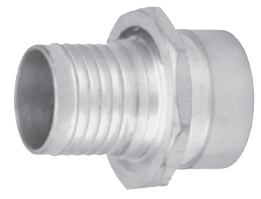
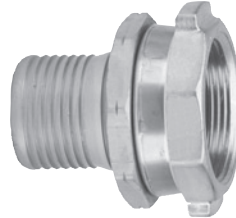
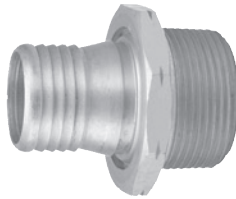
Do not interchange with other manufacturer's fittings.



Brass internally expanded permanent coupling are recommended for discharge and suction service. Commonly used in the transfer of fuel in industry to homes, airplanes, ships, etc. The working pressure of the 520-H fitting varies with the size of the fitting, the size and construction of the hose and the media being conveyed. Consult the factory for recommendations. Dixon Holedall stems and ferrules are specifically designed to be used together as a coupling system.

Both the male and female have octagonal facets for tightening with a wrench. The female in 1½" and larger sizes has special lugs for tightening. The stem is expanded to nominal ID of hose for a rigid, uniform, full-flow area.

- Male and female stems are machined from bar stock or solid brass forgings; ferrules are available in brass and stainless steel.
- Couplings are compact, light and streamlined to eliminate catching on curbs and shrubs.
- The H520 fittings are designed for internal expansion only.
- Couplings are pre-lubricated for assembly.
- Hand and electrically operated installation equipment is available. Consult factory for pricing and availability.



| | male NPT | male NST | female NPSH | female NST | victaulic groove |
|---------|---------------------------|------------------------------|------------------------------|------------------------------|------------------|
| Hose ID | Brass Part # | Brass Part # | Brass Part # | Brass Part # | Brass Part # |
| 3/4" | H5192 | --- | H5191-BU | --- | --- |
| 1" | H5212-A | H5212NST | H5211-A-BU | H5211NST | G5212 |
| 1-1/4" | H5222-A | --- | H5221-A-BU | --- | --- |
| 1-3/8" | H5272 ¹ | --- | H5271-BU ¹ | --- | --- |
| 1-1/2" | H5232-A | H5232NST ² | H5231-A-BU | H5231NST ² | G5232 |
| 2" | H5242 | --- | H5241-BU | --- | G5242 |
| 2-1/2" | H5252 | --- | H5251 ³ | --- | --- |
| 3" | H5262 | --- | H5261 ³ | --- | --- |

¹ 1-3/8" stem has 1½" thread

² 1½" NST requires special adapter, part # H5231NSTADT

³ 2½" and 3" female parts have NPSM thread

Note: The fittings on this page are intended for fuel delivery service. See page 12 for information on API 1529 certification.

520-H Ferrules

A wide range of 520-H ferrules permits a perfect assembly of a coupling to a corresponding size of hose within commercial tolerances regardless of wall thickness. Eliminates need for large stock of coupling bodies. Consult Dixon for other hose OD's.

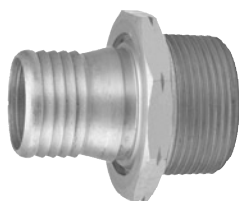


| Hose ID | Hose OD from | Hose OD to | Brass Part # | Hose ID | Hose OD from | Hose OD to | Brass Part # | Hose ID | Hose OD from | Hose OD to | Brass Part # |
|---------|--------------|------------|------------------|---------|--------------|------------|------------------|---------|--------------|------------|---------------|
| ¾" | 1-8/64" | 1-11/64" | R75AAS | 1-3/8" | 1-47/64" | 1-50/64" | R1375BS | 2" | 2-27/64" | 2-30/64" | R2AAS |
| | 1-12/64" | 1-14/64" | R75AS | | 1-51/64" | 1-54/64" | R1375CS | | 2-31/64" | 2-34/64" | R2AS |
| | 1-15/64" | 1-17/64" | R75BS | | 1-55/64" | 1-58/64" | R1375DS | | 2-35/64" | 2-38/64" | R2BS |
| | 1-18/64" | 1-20/64" | R75CS | | 1-59/64" | 1-62/64" | R1375ES | | 2-39/64" | 2-42/64" | R2CS |
| | 1-24/64" | 1-26/64" | R1AAAS-A | | 1-54/64" | 1-57/64" | R15AAAS-A | | 2-43/64" | 2-46/64" | R2DS |
| 1" | 1-27/64" | 1-29/64" | R1AAS-A | 1½" | 1-58/64" | 1-62/64" | R15AAS-A | 2½" | 2-47/64" | 2-50/64" | R2ES |
| | 1-30/64" | 1-32/64" | R1AS-A | | 1-63/64" | 2-2/64" | R15AS-A | | 2-51/64" | 2-54/64" | R2FS |
| | 1-33/64" | 1-35/64" | R1BS-A | | 2-3/64" | 2-6/64" | R15BS-A | | 2-62/64" | 3-1/64" | R25AS |
| | 1-36/64" | 1-38/64" | R1CS-A | | 2-7/64" | 2-11/64" | R15CS-A | | 3-2/64" | 3-6/64" | R25BS |
| | 1-39/64" | 1-41/64" | R1DS-A | | 2-12/64" | 2-14/64" | R15DS-A | | 3-7/64" | 3-11/64" | R25CS |
| | 1-42/64" | 1-44/64" | R1ES-A | | 2-15/64" | 2-19/64" | R15ES-A | | 3-12/64" | 3-16/64" | R25DS |
| | 1-39/64" | 1-42/64" | R125AAS-A | | 2-20/64" | 2-24/64" | R15FS | | 3-17/64" | 3-21/64" | R25ES |
| 1¼" | 1-43/64" | 1-46/64" | R125AS-A | 2" | 2-25/64" | 2-28/64" | R15GS | 3" | 3-22/64" | 3-26/64" | R25FS |
| | 1-47/64" | 1-50/64" | R125BS-A | | 3-30/64" | 3-34/64" | | | 3-30/64" | 3-34/64" | R3AAAS |
| | 1-51/64" | 1-54/64" | R125CS-A | | 3-35/64" | 3-39/64" | | | 3-35/64" | 3-39/64" | R3AAS |
| | 1-55/64" | 1-58/64" | R125DS-A | | 3-40/64" | 3-45/64" | | | 3-40/64" | 3-45/64" | R3AS |
| | 1-59/64" | 1-62/64" | R125ES | | 3-46/64" | 3-50/64" | | | 3-46/64" | 3-50/64" | R3BS |
| | | | | | | | | | 3-51/64" | 3-54/64" | R3CS |

¹ 1", 1¼" and 1½" ferrules will be replaced by API ferrules on page 14 as inventory is depleted.

API Certified Permanently Attached Petroleum Couplings

The following fittings have been tested and are compliant with API 1529 6th edition. Coupling procedures, ferrule recommendations and API test data are available upon request, please contact the factory.



520-H series male thread



520-H series female thread

| Hose Size | Thread Type | Brass Part # | Aluminum Part # |
|-----------|-------------|-----------------|------------------------------|
| 1" | NPT | H5212-A | --- |
| 1¼" | NPT | H5222-A | --- |
| 1½" | NPT | H5232-A | --- |
| 2" | NPT | H5242L-A | A5242L-A ¹ |
| 2½" | NPT | H5252L-A | A5252L-A ¹ |
| 3" | NPT | H5262L-A | A5262L-A ¹ |
| 4" | NPT | H5282L-A | --- |

| Hose Size | Thread Type | Brass Part # |
|-----------|-------------|--------------------|
| 1" | NPSH | H5211-A-BU |
| 1¼" | NPSH | H5221-A-BU |
| 1½" | NPSH | H5231-A-BU |
| 2" | NPSH | H5241L-A-BU |
| 2½" | NPSM | H5251L-A-BU |
| 3" | NPSM | H5261L-A-BU |
| 4" | NPSM | H5281L-A-BU |

¹ requires a special thrust plate

2" **25000HTL24**

2½" **25000HTL25**

3" **25000HTL26**

API 520-H Series Ferrules



| Hose ID | Hose OD from | Hose OD to | Brass Part # |
|---------|--------------|------------|------------------|
| 1" | 1-24/64" | 1-26/64" | R1AAAS-A |
| | 1-27/64" | 1-29/64" | R1AAS-A |
| | 1-30/64" | 1-32/64" | R1AS-A |
| | 1-33/64" | 1-35/64" | R1BS-A |
| | 1-36/64" | 1-38/64" | R1CS-A |
| | 1-39/64" | 1-41/64" | R1DS-A |
| | 1-42/64" | 1-44/64" | R1ES-A |
| 1¼" | 1-39/64" | 1-42/64" | R125AAS-A |
| | 1-43/64" | 1-46/64" | R125AS-A |
| | 1-47/64" | 1-50/64" | R125BS-A |
| | 1-51/64" | 1-54/64" | R125CS-A |
| | 1-55/64" | 1-58/64" | R125DS-A |
| | 1-59/64" | 1-62/64" | R125ES-A |
| 1½" | 1-54/64" | 1-57/64" | R15AAAS-A |
| | 1-58/64" | 1-62/64" | R15AAS-A |
| | 1-63/64" | 2-2/64" | R15AS-A |
| | 2-3/64" | 2-6/64" | R15BS-A |
| | 2-7/64" | 2-11/64" | R15CS-A |
| | 2-12/64" | 2-14/64" | R15DS-A |
| | 2-15/64" | 2-19/64" | R15ES-A |

| Hose ID | Hose OD from | Hose OD to | 304 Stainless Steel Part # | Aluminum Part # |
|---------|--------------|------------|----------------------------|-----------------|
| 2" | 2-31/64" | 2-34/64" | R2ASS-A | R2AAL-A |
| | 2-35/64" | 2-38/64" | R2BSS-A | R2BAL-A |
| | 2-39/64" | 2-42/64" | R2CSS-A | R2CAL-A |
| | 2-43/64" | 2-46/64" | R2DSS-A | R2DAL-A |
| | 2-47/64" | 2-50/64" | R2ESS-A | R2EAL-A |
| | 2-62/64" | 3-1/64" | R25ASS-A | R25AAL-A |
| 2½" | 3-2/64" | 3-6/64" | R25BSS-A | R25BAL-A |
| | 3-7/64" | 3-11/64" | R25CSS-A | R25CAL-A |
| | 3-12/64" | 3-16/64" | R25DSS-A | R25DAL-A |
| | 3-17/64" | 3-21/64" | R25ESS-A | R25EAL-A |
| 3" | 3-35/64" | 3-39/64" | R3AASS-A | R3AAAL-A |
| | 3-40/64" | 3-45/64" | R3ASS-A | R3AAL-A |
| | 3-46/64" | 3-50/64" | R3BSS-A | R3BAL-A |
| | 3-51/64" | 3-54/64" | R3CSS-A | R3CAL-A |
| | 3-55/64" | 3-59/64" | R3DSS-A | R3DAL-A |
| 4" | 4-46/64" | 4-48/64" | R4ESS-A | --- |
| | 4-49/64" | 4-51/64" | R4FSS-A | --- |
| | 4-52/64" | 4-54/64" | R4GSS-A | --- |
| | 4-55/64" | 4-57/64" | R4HSS-A | --- |
| | 4-58/64" | 4-59/64" | R4KSS-A | --- |
| | 4-60/64" | 4-62/64" | R4LSS-A | --- |
| | 4-63/64" | 5" | R4MSS-A | --- |

CIP Internal Expansion (IX) Sanitary Style Hose Couplings

- **Clean-In-Place (CIP)** compliant
- Flow Chief internal expansion (IX) fittings are only to be used with Flow Chief stainless steel ferrules.
- Flow Chief Sanitary fittings are used in the food, dairy and beverage industries.

Sanitary Clamp End Stems

- see the current Dixon Price List for sanitary style gaskets
- see the current Dixon Price List for sanitary style clamps
- special plug is required to expand CIP compliant fittings
- special adapter plate is required to expand 1½" CIP compliant fittings
- 3A compliant when assembled by 3A authorized hose shop

| Size | 304 Stainless Steel Part # |
|------|-------------------------------|
| 1½" | IXSE24-3A |
| 2" | IXSE32-3A |
| 3" | IXSE48-3A |



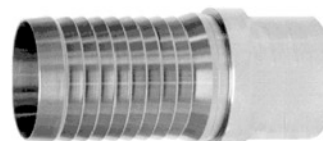
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Holedall

Tube Weld End Stem

- special plug is required to expand CIP compliant fittings

| Size | 304 Stainless Steel Part # |
|------|-------------------------------|
| 2" | IXPE32-3A |



Special Expansion Plug for CIP Compliant IX Fittings

| Hose Size | Part # |
|-----------|-------------------|
| 1½" | IXFDPLG137 |
| 2" | IXFDPLG187 |
| 3" | IXFDPLG287 |



Flow Chief Ferrules

- the ferrule ID's are designed in increments of 1/16"

| Hose ID | Hose OD | | 304 stainless steel Part # |
|------------------|----------|----------|--------------------------------|
| | from | to | |
| 1½" ¹ | 1-56/64" | 1-59/64" | 24PFX1.937 |
| | 1-60/64" | 1-63/64" | 24PFX2.000 |
| | 2" | 2-3/64" | 24PFX2.062 |
| | 2-4/64" | 2-7/64" | 24PFX2.125 |
| | 2-8/64" | 2-11/64" | 24PFX2.187 |
| | 2-12/64" | 2-15/64" | 24PFX2.250 |
| 2" ¹ | 2-16/64" | 2-19/64" | 24PFX2.312 ² |
| | 2-28/64" | 2-31/64" | 32PFX2.500 |
| | 2-32/64" | 2-35/64" | 32PFX2.562 |
| | 2-36/64" | 2-39/64" | 32PFX2.625 |
| | 2-40/64" | 2-43/64" | 32PFX2.687 |
| | 2-44/64" | 2-47/64" | 32PFX2.750 |
| | 2-48/64" | 2-51/64" | 32PFX2.812 |
| | 2-52/64" | 2-55/64" | 32PFX2.875 |
| | 2-56/64" | 2-59/64" | 32PFX2.937 |
| | 3" | 3-3/64" | 40PFX3.062 |
| 2½" | 3-4/64" | 3-7/64" | 40PFX3.125 |
| | 3-8/64" | 3-11/64" | 40PFX3.187 |
| | 3-12/64" | 3-15/64" | 40PFX3.250 |
| | 3-16/64" | 3-19/64" | 40PFX3.312 |
| | 3-20/64" | 3-23/64" | 40PFX3.375 |
| | 3-28/64" | 3-31/64" | 40PFX3.500 |

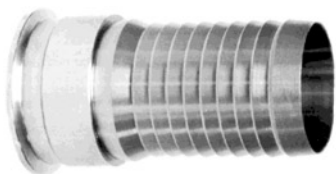


| Hose ID | Hose OD | | 304 stainless steel Part # |
|---------|----------|----------|-------------------------------|
| | from | to | |
| 3" | 3-32/64" | 3-35/64" | 48PFX3.562 |
| | 3-36/64" | 3-39/64" | 48PFX3.625 |
| | 3-40/64" | 3-43/64" | 48PFX3.687 |
| | 3-44/64" | 3-47/64" | 48PFX3.750 |
| | 3-48/64" | 3-51/64" | 48PFX3.812 |
| | 3-52/64" | 3-55/64" | 48PFX3.875 |
| | 3-56/64" | 3-59/64" | 48PFX3.937 |
| | 3-60/64" | 3-63/64" | 48PFX4.000 |
| | 4" | 4-3/64" | 48PFX4.062 |
| | 4-4/64" | 4-7/64" | 48PFX4.125 |
| 4" | 4-36/64" | 4-39/64" | 64PFX4.625 |
| | 4-40/64" | 4-43/64" | 64PFX4.687 |
| | 4-44/64" | 4-47/64" | 64PFX4.750 |
| | 4-48/64" | 4-51/64" | 64PFX4.812 |
| | 4-52/64" | 4-55/64" | 64PFX4.875 |
| | 4-56/64" | 4-59/64" | 64PFX4.937 |

¹ 1½" and 2" ferrules are not serrated

² consult the factory for working pressure

Internal Expansion (IX) Sanitary Style Hose Couplings



- sanitary style end
- Flow Chief internal expansion (IX) fittings are only to be used with Flow Chief stainless steel ferrules, see page 15
- see the current Dixon Price List for sanitary style gaskets
- see the current Dixon Price List for sanitary style clamps

| Size | 304 Stainless Steel Part # |
|------|-------------------------------|
| 1½" | IXSE24 |
| 2" | IXSE32 |
| 2½" | IXSE40 |
| 3" | IXSE48 |
| 4" | IXSE64 |

Internal Expansion (IX) Male NPT Stems



- Flow Chief internal expansion (IX) fittings are only to be used with Flow Chief stainless steel ferrules, see page 15

| Size | 304 Stainless Steel Part # |
|------|-------------------------------|
| 1½" | IXMS24 |
| 2" | IXMS32 |
| 2½" | IXMS40 |
| 3" | IXMS48 |
| 4" | IXMS64 |

Internal Expansion (IX) Bevel Seat Hose Couplings

- Flow Chief internal expansion (IX) fittings are only to be used with Flow Chief stainless steel ferrules, see page 15
- see the current Dixon Price List for bevel seat gaskets

Female Shank



- only use with the IXAN nuts shown below

| Size | 304 Stainless Steel Part # |
|------|-------------------------------|
| 1½" | IXFS24 |
| 2" | IXFS32 |
| 2½" | IXFS40 |
| 3" | IXFS48 |
| 4" | IXFS64 |

Threaded Hex Nuts



| series 13H (modified) | |
|-----------------------|-------------------------------|
| Size | 304 Stainless Steel Part # |
| 1½" | IXAN24 |
| 2" | IXAN32 |
| 2½" | IXAN40 |
| 3" | IXAN48 |
| 4" | IXAN64 |

Dixon Sanitary Style Crimp Stems Sanitary End x Hose Shank

- sanitary style end
- Dixon sanitary crimp stems are only to be used with Dixon stainless steel crimp ferrules
- reference pages 18-19 for crimp recommendations

| Size | 316 Stainless Steel Part # |
|------|-------------------------------|
| 1" | CSSR100 |
| 1½" | CSSR150 |
| 2" | CSSR200 |
| 3" | CSSR300 |
| 4" | CSSR400 |



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Female Bevel Seat End x Hose Shank

| Size | 316 Stainless Steel Part # |
|------|-------------------------------|
| 1" | CBSR100 ¹ |
| 1½" | CBSR150 ¹ |
| 2" | CBSR200 ¹ |
| 3" | CBSR300 ² |
| 4" | CBSR400 ¹ |

¹ only use with IXAN nut on page 14

² only use with IXAN300 nut



Female I-Line End x Hose Shank

| Size | 316 Stainless Steel Part # |
|------|-------------------------------|
| 1½" | CILR150 |
| 2" | CILR200 |
| 3" | CILR300 |
| 4" | CILR400 |



Tube Weld End x Hose Shank

| Size | 316 Stainless Steel Part # |
|------|-------------------------------|
| 1½" | CTER150 |
| 2" | CTER200 |
| 3" | CTER300 |
| 4" | CTER400 |



Dixon Sanitary Crimp Ferrules

- manufactured in AISI 304 stainless steel
- ferrules have a surface finish of 63 or better



| Hose ID | Hose OD from | Hose OD to | 304 stainless steel Part # |
|---------|-----------------|---------------|-------------------------------|
| 1" | 1-26/64" | 1-28/64" | F16G-1453 |
| | 1-29/64" | 1-31/64" | F16G-1500 |
| | 1-32/64" | 1-34/64" | F16G-1547 |
| | 1-35/64" | 1-37/64" | F16G-1594 |
| | 1-38/64" | 1-40/64" | F16G-1641 |
| 1½" | 1-58/64" | 1-61/64" | F24G-1969 |
| | 1-62/64" | 2-1/64" | F24G-2031 |
| | 2-2/64" | 2-5/64" | F24G-2094 |
| | 2-6/64" | 2-9/64" | F24G-2156 |
| 2" | 2-30/64" | 2-33/64" | F32G-2531 |
| | 2-34/64" | 2-37/64" | F32G-2594 |
| | 2-38/64" | 2-41/64" | F32G-2656 |
| | 2-42/64" | 2-45/64" | F32G-2719 |

| Hose ID | Hose OD from | Hose OD to | 304 stainless steel Part # |
|---------|-----------------|---------------|-------------------------------|
| 3" | 3-39/64" | 3-42/64" | F48G-3625 |
| | 3-40/64" | 3-43/64" | F48G-3688 |
| | 3-44/64" | 3-47/64" | F48G-3750 |
| | 3-48/64" | 3-51/64" | F48G-3813 |
| | 3-52/64" | 3-55/64" | F48G-3875 |
| | 3-56/64" | 3-59/64" | F48G-3938 |
| 4" | 4-40/64" | 4-43/64" | F64G-4688 |
| | 4-44/64" | 4-47/64" | F64G-4750 |
| | 4-48/64" | 4-51/64" | F64G-4813 |
| | 4-52/64" | 4-55/64" | F64G-4875 |
| | 4-56/64" | 4-59/64" | F64G-4938 |

Crimped Sanitary Recommendation Guide

See page 17 for Crimp Sanitary products.

1", 1½" and 2" Crimped Sanitary Fittings

| Hose ID | Stem Part # | Ferrule Part # | Hose OD | | Crimp Diameter (±0.005) | % Reduction |
|---------|--|------------------|------------|---------|----------------------------|-------------|
| | | | Fractional | Decimal | | |
| 1" | CSSR100 CBSR100 | F16G-1453 | 1 26/64 | 1.406 | 1.565 | 23% |
| | | | 1 27/64 | 1.422 | 1.577 | 23% |
| | | | 1 28/64 | 1.438 | 1.589 | 23% |
| | | F16G-1500 | 1 29/64 | 1.453 | 1.601 | 23% |
| | | | 1 30/64 | 1.469 | 1.613 | 23% |
| | | | 1 31/64 | 1.484 | 1.625 | 23% |
| | | F16G-1547 | 1 32/64 | 1.500 | 1.637 | 23% |
| | | | 1 33/64 | 1.516 | 1.649 | 23% |
| | | | 1 34/64 | 1.531 | 1.661 | 23% |
| | | F16G-1594 | 1 35/64 | 1.547 | 1.673 | 23% |
| | | | 1 36/64 | 1.563 | 1.685 | 23% |
| | | | 1 37/64 | 1.578 | 1.697 | 23% |
| | | F16G-1641 | 1 38/64 | 1.594 | 1.709 | 23% |
| | | | 1 39/64 | 1.609 | 1.721 | 23% |
| | | | 1 40/64 | 1.625 | 1.733 | 23% |
| 1½" | CSSR150 CBSR150 CILR150 CTER150 | F24G-1969 | 1 58/64 | 1.906 | 2.063 | 23% |
| | | | 1 59/64 | 1.922 | 2.075 | 23% |
| | | | 1 60/64 | 1.938 | 2.087 | 23% |
| | | | 1 61/64 | 1.953 | 2.099 | 23% |
| | | F24G-2031 | 1 62/64 | 1.969 | 2.111 | 23% |
| | | | 1 63/64 | 1.984 | 2.123 | 23% |
| | | | 2 | 2.000 | 2.135 | 23% |
| | | | 2 1/64 | 2.016 | 2.147 | 23% |
| | | F24G-2094 | 2 2/64 | 2.031 | 2.159 | 23% |
| | | | 2 3/64 | 2.047 | 2.171 | 23% |
| | | | 2 4/64 | 2.063 | 2.183 | 23% |
| | | | 2 5/64 | 2.078 | 2.195 | 23% |
| | | F24G-2156 | 2 6/64 | 2.094 | 2.207 | 23% |
| | | | 2 7/64 | 2.109 | 2.219 | 23% |
| | | | 2 8/64 | 2.125 | 2.231 | 23% |
| | | | 2 9/64 | 2.141 | 2.243 | 23% |
| 2" | CSSR200 CBSR200 CILR200 CTER200 | F32G-2531 | 2 30/64 | 2.469 | 2.611 | 23% |
| | | | 2 31/64 | 2.484 | 2.623 | 23% |
| | | | 2 32/64 | 2.500 | 2.635 | 23% |
| | | | 2 33/64 | 2.516 | 2.647 | 23% |
| | | F32G-2594 | 2 34/64 | 2.531 | 2.659 | 23% |
| | | | 2 35/64 | 2.547 | 2.671 | 23% |
| | | | 2 36/64 | 2.563 | 2.683 | 23% |
| | | | 2 37/64 | 2.578 | 2.695 | 23% |
| | | F32G-2656 | 2 38/64 | 2.594 | 2.707 | 23% |
| | | | 2 39/64 | 2.609 | 2.719 | 23% |
| | | | 2 40/64 | 2.625 | 2.731 | 23% |
| | | | 2 41/64 | 2.641 | 2.743 | 23% |
| | | F32G-2719 | 2 42/64 | 2.656 | 2.755 | 23% |
| | | | 2 43/64 | 2.672 | 2.767 | 23% |
| | | | 2 44/64 | 2.688 | 2.779 | 23% |
| | | | 2 45/64 | 2.703 | 2.791 | 23% |

Crimped Sanitary Recommendation Guide

See page 17 for Crimp Sanitary products.

3" and 4" Crimped Sanitary Fittings

| Hose ID | Stem Part # | Ferrule Part # | Hose OD | | Crimp Diameter (±0.005) | % Reduction |
|---------|--|------------------|------------|---------|----------------------------|-------------|
| | | | Fractional | Decimal | | |
| 3" | CSSR300 CBSR300 CILR300 CTER300 | F24G-1969 | 3 36/64 | 3.563 | 3.683 | 23% |
| | | | 3 37/64 | 3.578 | 3.695 | 23% |
| | | | 3 38/64 | 3.594 | 3.707 | 23% |
| | | | 3 39/64 | 3.609 | 3.719 | 23% |
| | | | 3 40/64 | 3.625 | 3.731 | 23% |
| | | F48G-3688 | 3 41/64 | 3.641 | 3.743 | 23% |
| | | | 3 42/64 | 3.656 | 3.755 | 23% |
| | | | 3 43/64 | 3.672 | 3.767 | 23% |
| | | | 3 44/64 | 3.688 | 3.779 | 23% |
| | | | 3 45/64 | 3.703 | 3.791 | 23% |
| | | F48G-3750 | 3 46/64 | 3.719 | 3.803 | 23% |
| | | | 3 47/64 | 3.734 | 3.815 | 23% |
| | | | 3 48/64 | 3.750 | 3.828 | 23% |
| | | | 3 49/64 | 3.766 | 3.840 | 23% |
| | | | 3 50/64 | 3.781 | 3.852 | 23% |
| | | F48G-3813 | 3 51/64 | 3.797 | 3.864 | 23% |
| | | | 3 52/64 | 3.813 | 3.876 | 23% |
| | | | 3 53/64 | 3.828 | 3.888 | 23% |
| | | | 3 54/64 | 3.844 | 3.900 | 23% |
| | | | 3 55/64 | 3.859 | 3.912 | 23% |
| | | F48G-3875 | 3 56/64 | 3.875 | 3.924 | 23% |
| | | | 3 57/64 | 3.891 | 3.936 | 23% |
| | | | 3 58/64 | 3.906 | 3.948 | 23% |
| | | | 3 59/64 | 3.922 | 3.960 | 23% |
| | | | 4 40/64 | 4.625 | 4.857 | 23% |
| 4" | CSSR400 CBSR400 CILR400 CTER400 | F64G-4688 | 4 41/64 | 4.641 | 4.869 | 23% |
| | | | 4 42/64 | 4.656 | 4.881 | 23% |
| | | | 4 43/64 | 4.672 | 4.893 | 23% |
| | | F64G-4750 | 4 44/64 | 4.688 | 4.905 | 23% |
| | | | 4 45/64 | 4.703 | 4.917 | 23% |
| | | | 4 46/64 | 4.719 | 4.929 | 23% |
| | | | 4 47/64 | 4.734 | 4.941 | 23% |
| | | F64G-4813 | 4 48/64 | 4.750 | 4.954 | 23% |
| | | | 4 49/64 | 4.766 | 4.966 | 23% |
| | | | 4 50/64 | 4.781 | 4.978 | 23% |
| | | | 4 51/64 | 4.797 | 4.990 | 23% |
| | | F64G-4875 | 4 52/64 | 4.813 | 5.002 | 23% |
| | | | 4 53/64 | 4.828 | 5.014 | 23% |
| | | | 4 54/64 | 4.844 | 5.026 | 23% |
| | | | 4 55/64 | 4.859 | 5.038 | 23% |
| | | F64G-4938 | 4 56/64 | 4.875 | 5.050 | 23% |
| | | | 4 57/64 | 4.891 | 5.062 | 23% |
| | | | 4 58/64 | 4.906 | 5.074 | 23% |
| | | | 4 59/64 | 4.922 | 5.086 | 23% |

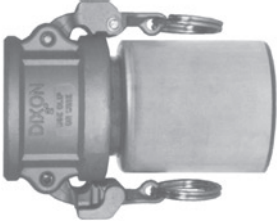
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Holedall

Swaged Cam and Groove

- Developed specifically for chemical transport hoses having Crosslinked Polyethylene (XLPE) or Ultra High Molecular Weight Polyethylene (UHMW) tubes. Swaged Boss-Lock provides you with a permanently attached Cam and Groove fitting when superior coupling retention is required.
- In testing tank transport hoses from a wide variety of manufacturers, the swaged Boss-Lock fitting proved itself to be the clear winner in overall performance.
- Fittings are also available on special order for other sizes or hose OD's. Consult the factory for pricing and availability.
- Consult the factory for pricing and availability of the *special equipment required for installation* or refer to pages 2-3.

SAFETY
ALERT

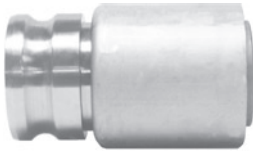


coupler x hose shank with ferrule

EZ Boss-Lock type C Coupler with Ferrule

| Size | Hose OD | | 316 Stainless Steel |
|------|----------|----------|---------------------|
| | from | to | Part # |
| 3/4" | 1-6/64" | 1-22/64" | RC075EZ-70 |
| 1" | 1-29/64" | 1-35/64" | RC100EZ-20 |
| 1" | 1-36/64" | 1-44/64" | RC100EZ-70 |

A



adapter x hose shank with ferrule

Boss-Lock type E Adapter with Ferrule

| Size | Hose OD | | 316 Stainless Steel |
|------|----------|----------|---------------------|
| | from | to | Part # |
| 3/4" | 1-6/64" | 1-22/64" | RE075-1370 |
| 1" | 1-29/64" | 1-35/64" | RE100-1620 |
| 1" | 1-36/64" | 1-44/64" | RE100-1770 |

Cam &
Groove

Crimp Sleeves

- The hose OD ranges for the crimp sleeves are the same as for Dixon's standard cam and groove notched ferrules.
- The crimp sleeve is not designed to be used in applications where the assembly is exposed to high temperatures.
- Carbon steel is also available. Contact the factory for pricing and availability.



| Size | Hose OD | | 304 Stainless Steel |
|------|----------|----------|---------------------|
| | from | to | Part # |
| 2" | 2-30/64" | 2-44/64" | GCS2709 |
| 3" | 3-30/64" | 3-46/64" | GCS3760 |

SAFETY
ALERT

Dixon stems and ferrules are specifically designed to be used together as a coupling system. Due to differences in dimensions and tolerances for safety reasons, do not use other manufacturer's stems or ferrules with Dixon Holedall products.

Notched Ferrules



| Size | Hose OD | | 304 Stainless Steel |
|--------|----------|----------|---------------------|
| | from | to | Part # |
| 1 1/2" | 1-60/64" | 2-12/64" | GAS2334NO |
| 1 1/2" | 2-4/64" | 2-22/64" | GAS2370NO |
| 2" | 2-30/64" | 2-44/64" | GAS2709NO |
| 2" | 2-42/64" | 2-54/64" | GAS2885NO |
| 3" | 3-30/64" | 3-46/64" | GAS3760NO |
| 3" | 3-47/64" | 3-54/64" | GAS3885NO |
| 4" | 4-40/64" | 4-47/64" | GAS5010NO |

SAFETY
ALERT

Dixon stems and ferrules are specifically designed to be used together as a coupling system. Due to differences in dimensions and tolerances for safety reasons, do not use other manufacturer's stems or ferrules with Dixon Holedall products.

Notched Cam and Groove

- The largest advantage of the notched EZ Boss-Lock design is that the coupling can be removed from a damaged hose by cutting away the ferrule, without necessarily damaging the fitting. After inspection to of the fitting determine its suitability for reuse, it can be reinstalled into another hose by using a *new ferrule*.
- The notched EZ Boss-Lock system allows you to better manage your inventories. You can stock one coupling and two ferrules, and cover the same hose range with less inventory. *You must purchase a fitting and the matching ferrule to create an assembly.*

SAFETY
ALERT

Dixon stems and ferrules are specifically designed to be used together as a coupling system. Due to differences in dimensions and tolerances for safety reasons, do not use other manufacturer's stems or ferrules with Dixon Holedall products.

SAFETY
ALERT

Couplers

EZ Boss-Lock type C

| Size | 316 Stainless Steel Part # |
|------|-------------------------------|
| 1½" | RC150EZNO |
| 2" | RC200EZNO |
| 3" | RC300EZNO |
| 4" | RC400EZNO |

Boss-Lock type C

| Size | 316 Stainless Steel Part # |
|------|-------------------------------|
| 1½" | RC150BLNO |
| 2" | RC200BLNO |
| 3" | RC300BLNO |
| 4" | RC400BLNO |



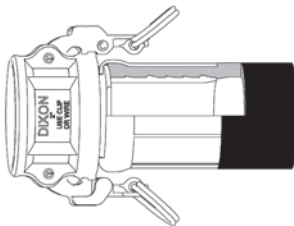
female coupler x
notched hose shank



female coupler x
notched hose shank

A

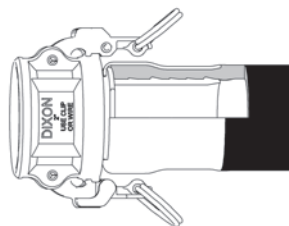
Cam & Groove



crimped assembly

SAFETY
ALERT

Contact the factory for swage
and crimp recommendations.



swaged assembly

Adapters

Boss-Lock type E

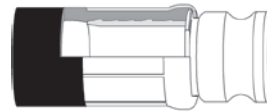
| Size | 316 Stainless Steel Part # |
|------|-------------------------------|
| 1½" | RE150NO |
| 2" | RE200NO |
| 3" | RE300NO |
| 4" | RE400NO |



swaged assembly

SAFETY
ALERT

Contact the factory for swage
and crimp recommendations.



crimped assembly



male adapter x
notched hose shank

Dixon Notched NOS Shank Cam and Groove

- For hose outside diameters of 2-4/64" and below, *the couplings are crimp only*.
- For hose outside diameters of 2-5/64" and above, the couplings can be crimped or swaged.
- See page 34 for male NPT notched NOS fittings.

SAFETY
ALERT

SAFETY
ALERT

Only use the NOS shank with the NOS ferrules.
Due to differences in dimensions and tolerances for safety reasons, do not use other manufacturer's stems or ferrules with Dixon Holedall products.

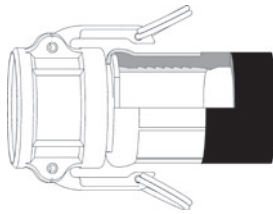
Couplers

Dixon type C

| Size | 316 Stainless Steel |
|------|---------------------|
| | Part # |
| 1½" | 150CNOSSS |
| 2" | 200CNOSSS |
| 3" | 300CNOSSS |



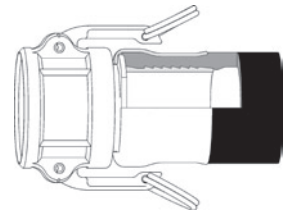
female coupler x
notched NOS hose shank



crimped assembly

SAFETY
ALERT

Contact the factory for swage
and crimp recommendations.



swaged assembly

Adapters

type E

| Size | 316 Stainless Steel |
|------|---------------------|
| | Part # |
| 1½" | 150ENOSSS |
| 2" | 200ENOSSS |
| 3" | 300ENOSSS |



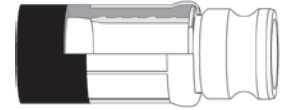
male adapter x
notched NOS hose shank



swaged assembly

SAFETY
ALERT

Contact the factory for swage
and crimp recommendations.



crimped assembly

Notched NOS Ferrules



| Size | Hose OD | | 304 Stainless Steel |
|------|----------|----------|---------------------|
| | from | to | Part # |
| 1½" | 1-60/64" | 2-12/64" | GAS2334NOS |
| 1½" | 2-4/64" | 2-22/64" | GAS2370NOS |
| 2" | 2-30/64" | 2-44/64" | GAS2709NOS |
| 2" | 2-42/64" | 2-54/64" | GAS2885NOS |
| 3" | 3-30/64" | 3-46/64" | GAS3760NOS |
| 3" | 3-47/64" | 3-54/64" | GAS3885NOS |

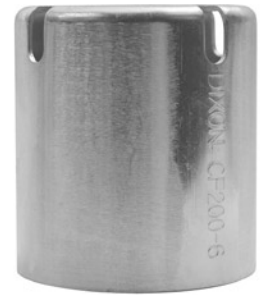
Interlocking Style External Crimp Ferrules

Dixon's External Crimp Ferrules are designed for use with Dixon's Type C and E hose shanks. This design offers 360° interlocking with approved Dixon hose shanks and can be installed with any Dixon crimper system. For crimp specifications please refer to pages 24-26.

- designed to be used on aluminum Dixon grooved hose shanks (1½", 2", 3", 4")
- carbon steel for rugged applications
- 1½" – 2" features .063" wall thickness
- 3" – 4" features .125" wall thickness
- turnover edge is sliced for easy ferrule removal
- large offering of ID sizes to match your hose OD
- streamlined and safe final assembly
- *Do NOT interchange with other products.*

SAFETY
ALERT

| Size | Hose OD | | Carbon Steel Part # | Aluminum Adapter Part# | Aluminum Coupler Part# |
|------|----------|----------|------------------------|---------------------------|---------------------------|
| | from | to | | | |
| 1½" | 1-49/64" | 1-52/64" | CF150-1 | 150-E-AL | 150-C-AL |
| | 1-53/64" | 1-56/64" | CF150-2 | | |
| | 1-57/64" | 1-60/64" | CF150-3 | | |
| | 1-61/64" | 2" | CF150-4 | | |
| | 2-1/64" | 2-4/64" | CF150-5 | | |
| | 2-5/64" | 2-8/64" | CF150-6 | | |
| | 2-9/64" | 2-12/64" | CF150-7 | | |
| | 2-13/64" | 2-16/64" | CF150-8 | | |
| | 2-17/64" | 2-20/64" | CF150-9 | | |
| | 2-21/64" | 2-24/64" | CF150-10 | | |
| 2" | 2-21/64" | 2-24/64" | CF200-1 | 200-E-AL | 200-C-AL |
| | 2-25/64" | 2-28/64" | CF200-2 | | |
| | 2-29/64" | 2-32/64" | CF200-3 | | |
| | 2-33/64" | 2-36/64" | CF200-4 | | |
| | 2-37/64" | 2-40/64" | CF200-5 | | |
| | 2-41/64" | 2-44/64" | CF200-6 | | |
| | 2-45/64" | 2-48/64" | CF200-7 | | |
| | 2-49/64" | 2-52/64" | CF200-8 | | |
| | 2-53/64" | 2-56/64" | CF200-9 | | |
| | 2-57/64" | 2-60/64" | CF200-10 | | |
| 3" | 3-23/64" | 3-26/64" | CF300-1 | 300-E-AL | 300-C-AL |
| | 3-27/64" | 3-30/64" | CF300-2 | | |
| | 3-31/64" | 3-34/64" | CF300-3 | | |
| | 3-35/64" | 3-38/64" | CF300-4 | | |
| | 3-39/64" | 3-42/64" | CF300-5 | | |
| | 3-43/64" | 3-46/64" | CF300-6 | | |
| | 3-47/64" | 3-50/64" | CF300-7 | | |
| | 3-51/64" | 3-54/64" | CF300-8 | | |
| | 3-55/64" | 3-58/64" | CF300-9 | | |
| | 3-59/64" | 3-62/64" | CF300-10 | | |
| 4" | 4-23/64" | 4-26/64" | CF400-1 | 400-E-AL | 400-C-AL |
| | 4-27/64" | 4-30/64" | CF400-2 | | |
| | 4-31/64" | 4-34/64" | CF400-3 | | |
| | 4-35/64" | 4-38/64" | CF400-4 | | |
| | 4-39/64" | 4-42/64" | CF400-5 | | |
| | 4-43/64" | 4-46/64" | CF400-6 | | |
| | 4-47/64" | 4-50/64" | CF400-7 | | |
| | 4-51/64" | 4-54/64" | CF400-8 | | |
| | 4-55/64" | 4-58/64" | CF400-9 | | |
| | 4-59/64" | 4-62/64" | CF400-10 | | |



interlocking crimp ferrule

A

Cam &
Groove



type E Dixon cam & groove



type C Dixon cam & groove

Crimped Interlocking Cam & Groove Recommendation Guide

See page 23 for Interlocking Cam & Groove products.

1½" Interlocking Style Cam and Groove

| Hose ID | Ferrule Part # | Hose OD | | Crimp Diameter (±0.005) | % Reduction | Crimp Die # | Offset |
|---------|-----------------|------------|---------|----------------------------|-------------|-------------|--------|
| | | Fractional | Decimal | | | | |
| 1½" | CF150-1 | 1-49/64 | 1.766 | 1.845 | 20% | 45 | 0.072 |
| | | 1-50/64 | 1.781 | 1.857 | 20% | 45 | 0.085 |
| | | 1-51/64 | 1.797 | 1.870 | 20% | 45 | 0.097 |
| | | 1-52/64 | 1.813 | 1.882 | 20% | 45 | 0.110 |
| | CF150-2 | 1-53/64 | 1.828 | 1.895 | 20% | 45 | 0.123 |
| | | 1-54/64 | 1.844 | 1.907 | 20% | 45 | 0.135 |
| | | 1-55/64 | 1.859 | 1.920 | 20% | 45 | 0.148 |
| | | 1-56/64 | 1.875 | 1.932 | 20% | 45 | 0.160 |
| | CF150-3 | 1-57/64 | 1.891 | 1.945 | 20% | 45 | 0.173 |
| | | 1-58/64 | 1.906 | 1.957 | 20% | 45 | 0.185 |
| | | 1-59/64 | 1.922 | 1.970 | 20% | 45 | 0.198 |
| | | 1-60/64 | 1.938 | 1.982 | 20% | 45 | 0.210 |
| | CF150-4 | 1-61/64 | 1.953 | 1.995 | 20% | 45 | 0.223 |
| | | 1-62/64 | 1.969 | 2.007 | 20% | 45 | 0.235 |
| | | 1-63/64 | 1.984 | 2.020 | 20% | 51 | 0.011 |
| | | 2 | 2.000 | 2.032 | 20% | 51 | 0.024 |
| | CF150-5 | 2-1/64 | 2.016 | 2.045 | 20% | 51 | 0.036 |
| | | 2-2/64 | 2.031 | 2.057 | 20% | 51 | 0.049 |
| | | 2-3/64 | 2.047 | 2.070 | 20% | 51 | 0.061 |
| | | 2-4/64 | 2.063 | 2.082 | 20% | 51 | 0.074 |
| | CF150-6 | 2-5/64 | 2.078 | 2.095 | 20% | 51 | 0.087 |
| | | 2-6/64 | 2.094 | 2.107 | 20% | 51 | 0.099 |
| | | 2-7/64 | 2.109 | 2.120 | 20% | 51 | 0.112 |
| | | 2-8/64 | 2.125 | 2.132 | 20% | 51 | 0.124 |
| | CF150-7 | 2-9/64 | 2.141 | 2.145 | 20% | 51 | 0.137 |
| | | 2-10/64 | 2.156 | 2.157 | 20% | 51 | 0.149 |
| | | 2-11/64 | 2.172 | 2.170 | 20% | 51 | 0.162 |
| | | 2-12/64 | 2.188 | 2.182 | 20% | 51 | 0.174 |
| | CF150-8 | 2-13/64 | 2.203 | 2.195 | 20% | 51 | 0.187 |
| | | 2-14/64 | 2.219 | 2.207 | 20% | 51 | 0.199 |
| | | 2-15/64 | 2.234 | 2.220 | 20% | 51 | 0.212 |
| | | 2-16/64 | 2.250 | 2.232 | 20% | 51 | 0.224 |
| | CF150-9 | 2-17/64 | 2.266 | 2.245 | 20% | 57 | 0.000 |
| | | 2-18/64 | 2.281 | 2.257 | 20% | 57 | 0.013 |
| | | 2-19/64 | 2.297 | 2.270 | 20% | 57 | 0.025 |
| | | 2-20/64 | 2.313 | 2.282 | 20% | 57 | 0.038 |
| | CF150-10 | 2-21/64 | 2.328 | 2.295 | 20% | 57 | 0.050 |
| | | 2-22/64 | 2.344 | 2.307 | 20% | 57 | 0.063 |
| | | 2-23/64 | 2.359 | 2.320 | 20% | 57 | 0.075 |
| | | 2-24/64 | 2.375 | 2.332 | 20% | 57 | 0.088 |

2" Interlocking Style Cam and Groove

| Hose ID | Ferrule Part # | Hose OD | | Crimp Diameter (±0.005) | % Reduction | Crimp Die # | Offset |
|---------|----------------|------------|---------|----------------------------|-------------|-------------|--------|
| | | Fractional | Decimal | | | | |
| 2" | CF200-1 | 2-21/64 | 2.328 | 2.388 | 20% | 57 | 0.144 |
| | | 2-22/64 | 2.344 | 2.400 | 20% | 57 | 0.156 |
| | | 2-23/64 | 2.359 | 2.413 | 20% | 57 | 0.169 |
| | | 2-24/64 | 2.375 | 2.425 | 20% | 57 | 0.181 |
| | CF200-2 | 2-25/64 | 2.391 | 2.438 | 20% | 57 | 0.194 |
| | | 2-26/64 | 2.406 | 2.450 | 20% | 57 | 0.206 |
| | | 2-27/64 | 2.422 | 2.463 | 20% | 57 | 0.219 |
| | | 2-28/64 | 2.438 | 2.475 | 20% | 57 | 0.231 |
| | CF200-3 | 2-29/64 | 2.453 | 2.488 | 20% | 63 | 0.007 |
| | | 2-30/64 | 2.469 | 2.500 | 20% | 63 | 0.020 |
| | | 2-31/64 | 2.484 | 2.513 | 20% | 63 | 0.033 |
| | | 2-32/64 | 2.500 | 2.525 | 20% | 63 | 0.045 |
| | CF200-4 | 2-33/64 | 2.516 | 2.538 | 20% | 63 | 0.058 |
| | | 2-34/64 | 2.531 | 2.550 | 20% | 63 | 0.070 |
| | | 2-35/64 | 2.547 | 2.563 | 20% | 63 | 0.083 |
| | | 2-36/64 | 2.563 | 2.575 | 20% | 63 | 0.095 |
| | CF200-5 | 2-37/64 | 2.578 | 2.588 | 20% | 63 | 0.108 |
| | | 2-38/64 | 2.594 | 2.600 | 20% | 63 | 0.120 |
| | | 2-39/64 | 2.609 | 2.613 | 20% | 63 | 0.133 |
| | | 2-40/64 | 2.625 | 2.625 | 20% | 63 | 0.145 |

Crimped Interlocking Cam & Groove Recommendation Guide

See page 23 for Interlocking Cam & Groove products.

2" Interlocking Style Cam and Groove

| Hose ID | Ferrule Part # | Hose OD | | Crimp Diameter (±0.005) | % Reduction | Crimp Die # | Offset |
|---------|-----------------|------------|---------|----------------------------|-------------|-------------|--------|
| | | Fractional | Decimal | | | | |
| 2" | CF200-6 | 2-41/64 | 2.641 | 2.638 | 20% | 63 | 0.158 |
| | | 2-42/64 | 2.656 | 2.650 | 20% | 63 | 0.170 |
| | | 2-43/64 | 2.672 | 2.663 | 20% | 63 | 0.183 |
| | | 2-44/64 | 2.688 | 2.675 | 20% | 63 | 0.195 |
| | CF200-7 | 2-45/64 | 2.703 | 2.688 | 20% | 63 | 0.208 |
| | | 2-46/64 | 2.719 | 2.700 | 20% | 63 | 0.220 |
| | | 2-47/64 | 2.734 | 2.713 | 20% | 63 | 0.233 |
| | | 2-48/64 | 2.750 | 2.725 | 20% | 69 | 0.008 |
| | CF200-8 | 2-49/64 | 2.766 | 2.738 | 20% | 69 | 0.020 |
| | | 2-50/64 | 2.781 | 2.750 | 20% | 69 | 0.033 |
| | | 2-51/64 | 2.797 | 2.763 | 20% | 69 | 0.046 |
| | | 2-52/64 | 2.813 | 2.775 | 20% | 69 | 0.058 |
| | CF200-9 | 2-53/64 | 2.828 | 2.788 | 20% | 69 | 0.071 |
| | | 2-54/64 | 2.844 | 2.800 | 20% | 69 | 0.083 |
| | | 2-55/64 | 2.859 | 2.813 | 20% | 69 | 0.095 |
| | | 2-56/64 | 2.875 | 2.825 | 20% | 69 | 0.108 |
| | CF200-10 | 2-57/64 | 2.891 | 2.838 | 20% | 69 | 0.121 |
| | | 2-58/64 | 2.906 | 2.850 | 20% | 69 | 0.133 |
| | | 2-59/64 | 2.922 | 2.863 | 20% | 69 | 0.146 |
| | | 2-60/64 | 2.938 | 2.875 | 20% | 69 | 0.158 |

A

Cam &
Groove**3" Interlocking Style Cam and Groove**

| Hose ID | Ferrule Part # | Hose OD | | Crimp Diameter (±0.005) | % Reduction | Crimp Die # | Offset |
|---------|-----------------|------------|---------|----------------------------|-------------|-------------|--------|
| | | Fractional | Decimal | | | | |
| 3" | CF300-1 | 3-23/64 | 3.359 | 3.553 | 20% | 90 | 0.010 |
| | | 3-24/64 | 3.375 | 3.565 | 20% | 90 | 0.022 |
| | | 3-25/64 | 3.391 | 3.578 | 20% | 90 | 0.035 |
| | | 3-26/64 | 3.406 | 3.590 | 20% | 90 | 0.047 |
| | CF300-2 | 3-27/64 | 3.422 | 3.603 | 20% | 90 | 0.059 |
| | | 3-28/64 | 3.438 | 3.615 | 20% | 90 | 0.072 |
| | | 3-29/64 | 3.453 | 3.628 | 20% | 90 | 0.084 |
| | | 3-30/64 | 3.469 | 3.640 | 20% | 90 | 0.097 |
| | CF300-3 | 3-31/64 | 3.484 | 3.653 | 20% | 90 | 0.110 |
| | | 3-32/64 | 3.500 | 3.665 | 20% | 90 | 0.122 |
| | | 3-33/64 | 3.516 | 3.678 | 20% | 90 | 0.135 |
| | | 3-34/64 | 3.531 | 3.690 | 20% | 90 | 0.147 |
| | CF300-4 | 3-35/64 | 3.547 | 3.703 | 20% | 90 | 0.160 |
| | | 3-36/64 | 3.563 | 3.715 | 20% | 90 | 0.172 |
| | | 3-37/64 | 3.578 | 3.728 | 20% | 90 | 0.185 |
| | | 3-38/64 | 3.594 | 3.740 | 20% | 90 | 0.197 |
| | CF300-5 | 3-39/64 | 3.609 | 3.753 | 20% | 90 | 0.210 |
| | | 3-40/64 | 3.625 | 3.765 | 20% | 90 | 0.222 |
| | | 3-41/64 | 3.641 | 3.778 | 20% | 90 | 0.235 |
| | | 3-42/64 | 3.656 | 3.790 | 20% | 96 | 0.010 |
| | CF300-6 | 3-43/64 | 3.672 | 3.803 | 20% | 96 | 0.023 |
| | | 3-44/64 | 3.688 | 3.815 | 20% | 96 | 0.035 |
| | | 3-45/64 | 3.703 | 3.828 | 20% | 96 | 0.048 |
| | | 3-46/64 | 3.719 | 3.840 | 20% | 96 | 0.060 |
| | CF300-7 | 3-47/64 | 3.734 | 3.853 | 20% | 96 | 0.073 |
| | | 3-48/64 | 3.750 | 3.865 | 20% | 96 | 0.085 |
| | | 3-49/64 | 3.766 | 3.878 | 20% | 96 | 0.098 |
| | | 3-50/64 | 3.781 | 3.890 | 20% | 96 | 0.110 |
| | CF300-8 | 3-51/64 | 3.797 | 3.903 | 20% | 96 | 0.123 |
| | | 3-52/64 | 3.813 | 3.915 | 20% | 96 | 0.135 |
| | | 3-53/64 | 3.828 | 3.928 | 20% | 96 | 0.148 |
| | | 3-54/64 | 3.844 | 3.940 | 20% | 96 | 0.160 |
| | CF300-9 | 3-55/64 | 3.859 | 3.953 | 20% | 96 | 0.173 |
| | | 3-56/64 | 3.875 | 3.965 | 20% | 96 | 0.185 |
| | | 3-57/64 | 3.891 | 3.978 | 20% | 96 | 0.198 |
| | | 3-58/64 | 3.906 | 3.990 | 20% | 96 | 0.210 |
| | CF300-10 | 3-59/64 | 3.922 | 4.003 | 20% | 96 | 0.223 |
| | | 3-60/64 | 3.938 | 4.015 | 20% | 96 | 0.235 |
| | | 3-61/64 | 3.953 | 4.028 | 20% | 102 | 0.011 |
| | | 3-62/64 | 3.969 | 4.040 | 20% | 102 | 0.024 |

Crimped Interlocking Cam & Groove Recommendation Guide

See page 23 for Interlocking Cam & Groove products.

4" Interlocking Style Cam and Groove

| Hose ID | Ferrule Part # | Hose OD | | Crimp Diameter (±0.005) | % Reduction | Crimp Die # | Offset |
|---------|-----------------|------------|---------|----------------------------|-------------|-------------|--------|
| | | Fractional | Decimal | | | | |
| 4" | CF400-1 | 4-23/64 | 4.359 | 4.553 | 20% | 114 | 0.064 |
| | | 4-24/64 | 4.375 | 4.565 | 20% | 114 | 0.077 |
| | | 4-25/64 | 4.391 | 4.578 | 20% | 114 | 0.089 |
| | | 4-26/64 | 4.406 | 4.590 | 20% | 114 | 0.102 |
| | CF400-2 | 4-27/64 | 4.422 | 4.603 | 20% | 114 | 0.115 |
| | | 4-28/64 | 4.438 | 4.615 | 20% | 114 | 0.127 |
| | | 4-29/64 | 4.453 | 4.628 | 20% | 114 | 0.139 |
| | | 4-30/64 | 4.469 | 4.640 | 20% | 114 | 0.152 |
| | CF400-3 | 4-31/64 | 4.484 | 4.653 | 20% | 114 | 0.164 |
| | | 4-32/64 | 4.500 | 4.665 | 20% | 114 | 0.177 |
| | | 4-33/64 | 4.516 | 4.678 | 20% | 114 | 0.189 |
| | | 4-34/64 | 4.531 | 4.690 | 20% | 114 | 0.202 |
| | CF400-4 | 4-35/64 | 4.547 | 4.703 | 20% | 114 | 0.214 |
| | | 4-36/64 | 4.563 | 4.715 | 20% | 114 | 0.227 |
| | | 4-37/64 | 4.578 | 4.728 | 20% | 120 | 0.003 |
| | | 4-38/64 | 4.594 | 4.740 | 20% | 120 | 0.016 |
| | CF400-5 | 4-39/64 | 4.609 | 4.753 | 20% | 120 | 0.028 |
| | | 4-40/64 | 4.625 | 4.765 | 20% | 120 | 0.041 |
| | | 4-41/64 | 4.641 | 4.778 | 20% | 120 | 0.053 |
| | | 4-42/64 | 4.656 | 4.790 | 20% | 120 | 0.066 |
| | CF400-6 | 4-43/64 | 4.672 | 4.803 | 20% | 120 | 0.078 |
| | | 4-44/64 | 4.688 | 4.815 | 20% | 120 | 0.091 |
| | | 4-45/64 | 4.703 | 4.828 | 20% | 120 | 0.103 |
| | | 4-46/64 | 4.719 | 4.840 | 20% | 120 | 0.116 |
| | CF400-7 | 4-47/64 | 4.734 | 4.853 | 20% | 120 | 0.129 |
| | | 4-48/64 | 4.750 | 4.865 | 20% | 120 | 0.141 |
| | | 4-49/64 | 4.766 | 4.878 | 20% | 120 | 0.153 |
| | | 4-50/64 | 4.781 | 4.890 | 20% | 120 | 0.166 |
| | CF400-8 | 4-51/64 | 4.797 | 4.903 | 20% | 120 | 0.179 |
| | | 4-52/64 | 4.813 | 4.915 | 20% | 120 | 0.191 |
| | | 4-53/64 | 4.828 | 4.928 | 20% | 120 | 0.203 |
| | | 4-54/64 | 4.844 | 4.940 | 20% | 120 | 0.216 |
| | CF400-9 | 4-55/64 | 4.859 | 4.953 | 20% | 120 | 0.228 |
| | | 4-56/64 | 4.875 | 4.965 | 20% | 126 | 0.004 |
| | | 4-57/64 | 4.891 | 4.978 | 20% | 126 | 0.016 |
| | | 4-58/64 | 4.906 | 4.990 | 20% | 126 | 0.029 |
| | CF400-10 | 4-59/64 | 4.922 | 5.003 | 20% | 126 | 0.041 |
| | | 4-60/64 | 4.938 | 5.015 | 20% | 126 | 0.054 |
| | | 4-61/64 | 4.953 | 5.028 | 20% | 126 | 0.066 |
| | | 4-62/64 | 4.969 | 5.040 | 20% | 126 | 0.079 |

Note: The crimp die #'s and offset dimensions are for use with Dixon's Holedall Crimp System (CM400) **only**.

A

Cam &
Groove

Boss Holedall Fittings

Boss Holedall fittings are designed for air and liquid applications where a permanent, low profile clamping system is desired. Both fittings are supplied with carbon steel ferrules. Consult the factory for swage and/or crimp specifications. *Not for steam service.*

SAFETY
ALERT

| Size | Hose OD | | Iron | Stainless Steel |
|------|----------|----------|----------------|-----------------|
| | From: | To: | Part # | Part # |
| ¾" | 1-10/64" | 1-14/64" | GF26P1 | --- |
| | 1-15/64" | 1-18/64" | GF26P2 | --- |
| | 1-19/64" | 1-22/64" | GF26P3 | --- |
| 1" | 1-30/64" | 1-34/64" | GF36P1 | --- |
| | 1-35/64" | 1-38/64" | GF36P2 | --- |
| | 1-39/64" | 1-42/64" | GF36P3 | --- |
| 1½" | 1-15/16" | 2" | GF61P1 | RGF61P1 |
| | 2-1/64" | 2-1/8" | GF61P2 | RGF61P2 |
| | 2-9/64" | 2-1/4" | GF61P3 | --- |
| 2" | 2-9/16" | 2-5/8" | GF81P1 | RGF81P1 |
| | 2-41/64" | 2-3/4" | GF81P2 | RGF81P2 |
| | 2-49/64" | 2-7/8" | GF81P3 | --- |
| 3" | 3-9/16" | 3-5/8" | GF111P1 | --- |
| | 3-41/64" | 3-3/4" | GF111P2 | --- |
| | 3-49/64" | 3-7/8" | GF111P3 | --- |



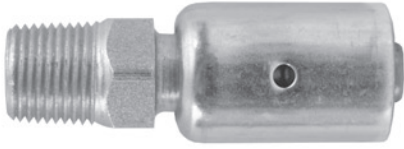
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Boss

Unless specified
consult the Dixon Swage/Crimp Recommendation Guide

3500 Steel Nipples with Ferrules

Exclusive interlocking ferrule can be crimped or swaged to achieve maximum coupling sealing and retention. The 3500 steel nipples with ferrules have a low profile, streamline appearance.



- Zinc plated steel 3500 nipples with carbon steel ferrules can be crimped or swaged-on.
- rated to **600 PSI** working pressure
- for air and water service only

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| Size | Hose OD | | Steel Part # |
|------|----------|----------|---------------|
| | From: | To: | |
| 1/2" | 54/64" | 58/64" | 3512WF |
| 3/4" | 1-10/64" | 1-14/64" | 3514WF |
| 1" | 1-30/64" | 1-34/64" | 3518WF |

The Importance of Whip Hose

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The constant vibration created by air tools, like air drills and pavement breakers, is destructive to air hose couplings, especially the quick-acting type. To provide protection against coupling breakage and related hazards, Dixon recommends the use of a whip hose. To construct a whip hose, connect one end of a short (3' to 10') air hose to the air tool using a 3500 type steel nipple. Connect the other end of the hose to the air supply using the standard quick-acting coupling. The heat-treated 3500 nipple will withstand vibration far better than the standard coupling and provide a safer connection. The whip hose should remain permanently connected to the tool.

Crimped 3500 Nipple Recommendation Guide

The crimp recommendation charts are only guides. It will not apply to every coupling situation. In some instances alternative dies and crimping dimensions must be employed to ensure safety. Experience has shown that variances in the construction of similar hoses and couplings may cause some assemblies to react differently when crimped. It is not uncommon to find hose with an outer diameter that fluctuates from one end to the other or from production lot to production lot. These inconsistencies coupled with the inherent differences between textile or wire braid, hard or soft wall, the presence or absence of an internal spiral wire and the differences in hose coverings make it difficult to establish hard and fast rules. Therefore, it's imperative that hose dimensions are accurately measured, assemblies are tested, and documentation is maintained.

| Hose ID | Part # | Hose OD | | Crimp Diameter (±0.005) | Crimp Length | % Reduction |
|---------|---------------|------------|---------|----------------------------|--------------|-------------|
| | | Fractional | Decimal | | | |
| 1/2" | 3512WF | 54/64 | 0.844 | 0.906 | 1-1/4 | 21.1 |
| | | 55/64 | 0.859 | 0.906 | 1-1/4 | 24.5 |
| | | 56/64 | 0.875 | 0.938 | 1-1/4 | 19.3 |
| | | 57/64 | 0.891 | 0.938 | 1-1/4 | 22.6 |
| | | 58/64 | 0.906 | 0.969 | 1-1/4 | 17.8 |
| | | | | | | |
| 3/4" | 3514WF | 1-10/64 | 1.156 | 1.218 | 1-7/16 | 17.8 |
| | | 1-11/64 | 1.171 | 1.218 | 1-7/16 | 20.7 |
| | | 1-12/64 | 1.187 | 1.218 | 1-7/16 | 23.6 |
| | | 1-13/64 | 1.203 | 1.250 | 1-7/16 | 19.4 |
| | | 1-14/64 | 1.218 | 1.250 | 1-7/16 | 22 |
| | | | | | | |
| 1" | 3518WF | 1-30/64 | 1.468 | 1.500 | 1-15/16 | 23 |
| | | 1-31/64 | 1.484 | 1.531 | 1-15/16 | 19 |
| | | 1-32/64 | 1.500 | 1.531 | 1-15/16 | 21.6 |
| | | 1-33/64 | 1.515 | 1.563 | 1-15/16 | 17.9 |
| | | 1-34/64 | 1.531 | 1.563 | 1-15/16 | 20.3 |
| | | | | | | |

Global Air King Universal Couplings Hose Ends

| Size | <i>Investment Cast Steel</i> Part # |
|------|--|
| 1/2" | GAM1 |
| 3/4" | GAM6 |
| 1" | GAM11 |



Air King Ferrules

| Size | Ferrule ID | <i>Investment Cast Steel</i> Part # |
|------|------------|--|
| 1/2" | 0.906 | CCF0906 |
| | 1.120 | CCF1120 |
| | 1.149 | CCF1149 |
| 3/4" | 1.190 | CCF1190 |
| | 1.218 | CCF1218 |
| | 1.246 | CCF1246 |
| | 1.438 | CCF1438 |
| 1" | 1.469 | CCF1469 |
| | 1.500 | CCF1500 |
| | 1.531 | CCF1531 |

Offers a low profile streamline appearance with maximum retention.

- lightweight
- can be crimped
- **ONLY** to be used with the global air king hose end, shown above

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Air King is for air and water service only *Warning: Never use any Air King coupling for steam service!*
None of Dixon's catalog information is to be interpreted to mean that this type of coupling is suitable for use on steam hose.

Crimped Air King Recommendation Guide

1/2" Global Air King

| Hose ID | Stem Part # | Ferrule Part # | Hose OD | | Crimp Diameter (±0.005) | % Reduction |
|---------|-------------|----------------|-------------------|----------------|----------------------------|-------------|
| | | | <i>Fractional</i> | <i>Decimal</i> | | |
| 1/2" | GAM1 | CCF0906 | 54/64 | 0.8438 | 0.840 | 15 |
| | | CCF0906 | 55/64 | 0.8594 | 0.853 | 15 |
| | | CCF0906 | 56/64 | 0.8750 | 0.867 | 15 |

3/4" Global Air King

| Hose ID | Stem Part # | Ferrule Part # | Hose OD | | Crimp Diameter (±0.005) | % Reduction |
|---------|-------------|----------------|-------------------|----------------|----------------------------|-------------|
| | | | <i>Fractional</i> | <i>Decimal</i> | | |
| 3/4" | GAM6 | CCF1120 | 1-5/64 | 1.0781 | 1.082 | 20 |
| | | CCF1120 | 1-6/64 | 1.0938 | 1.094 | 20 |
| | | CCF1149 | 1-7/64 | 1.1094 | 1.107 | 20 |
| | | CCF1149 | 1-8/64 | 1.1250 | 1.119 | 20 |
| | | CCF1190 | 1-9/64 | 1.1406 | 1.122 | 20 |
| | | CCF1190 | 1-10/64 | 1.1563 | 1.134 | 20 |
| | | CCF1218 | 1-11/64 | 1.1719 | 1.147 | 20 |
| | | CCF1218 | 1-12/64 | 1.1875 | 1.159 | 20 |
| | | CCF1246 | 1-13/64 | 1.2031 | 1.182 | 20 |
| | | CCF1246 | 1-14/64 | 1.2188 | 1.194 | 20 |

1" Global Air King

| Hose ID | Stem Part # | Ferrule Part # | Hose OD | | Crimp Diameter (±0.005) | % Reduction |
|---------|--------------|----------------|-------------------|----------------|----------------------------|-------------|
| | | | <i>Fractional</i> | <i>Decimal</i> | | |
| 1" | GAM11 | CCF1438 | 1-25/64 | 1.3906 | 1.388 | 20 |
| | | CCF1438 | 1-26/64 | 1.4063 | 1.400 | 20 |
| | | CCF1469 | 1-27/64 | 1.4219 | 1.413 | 20 |
| | | CCF1469 | 1-28/64 | 1.4375 | 1.425 | 20 |
| | | CCF1500 | 1-29/64 | 1.4531 | 1.438 | 20 |
| | | CCF1500 | 1-30/64 | 1.4688 | 1.450 | 20 |
| | | CCF1531 | 1-31/64 | 1.4844 | 1.463 | 20 |
| | | CCF1531 | 1-32/64 | 1.5000 | 1.475 | 20 |

Surelock Quick Acting Couplings with Ferrules

Universal design provides quick, easy and effective coupling of air hose. Exclusive interlocking ferrule can be crimped or swaged to achieve maximum coupling sealing and retention with a low profile streamline appearance.



- Dixon recommends that all hose assemblies be tested in accordance with RMA testing procedures.

- rated to **500 PSI** working pressure
- for air and water service only

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| Head | Size | Hose OD | | Iron Part # |
|--------|--------|----------|----------|----------------|
| | | From: | To: | |
| small | 1/2" | 54/64" | 1-2/64" | SL050CR |
| | 3/4" | 1-4/64" | 1-22/64" | SL075CR |
| | 1" | 1-30/64" | 1-46/64" | SL100CR |
| medium | 1-1/2" | 2-1/64" | 2-8/64" | SL150CR |
| | 2" | 2-41/64" | 2-48/64" | SL200CR |

Crimped Surelock Recommendation Guide

The crimp recommendation charts are only guides. It will not apply to every coupling situation. In some instances alternative dies and crimping dimensions must be employed to ensure safety. Experience has shown that variances in the construction of similar hoses and couplings may cause some assemblies to react differently when crimped. It is not uncommon to find hose with an outer diameter that fluctuates from one end to the other or from production lot to production lot. These inconsistencies coupled with the inherent differences between textile or wire braid, hard or soft wall, the presence or absence of an internal spiral wire and the differences in hose coverings make it difficult to establish hard and fast rules. Therefore, its imperative that hose dimensions are accurately measured, assemblies are tested, and documentation is maintained.

| Hose ID | Part # | Hose OD | | Crimp Diameter (±0.005) | Crimp Length | % Reduction |
|---------|----------------|------------|---------|-------------------------|--------------|-------------|
| | | Fractional | Decimal | | | |
| 1/2" | SL050CR | 54/64 | 0.843 | 0.969 | 1-1/4 | 16.6 |
| | | 55/64 | 0.859 | 0.969 | 1-1/4 | 20.2 |
| | | 56/64 | 0.875 | 0.969 | 1-1/4 | 23.5 |
| | | 57/64 | 0.890 | 1.000 | 1-1/4 | 18.6 |
| | | 58/64 | 0.906 | 1.000 | 1-1/4 | 21.7 |
| | | 59/64 | 0.921 | 1.031 | 1-1/4 | 17.2 |
| | | 60/64 | 0.937 | 1.031 | 1-1/4 | 20.2 |
| | | 61/64 | 0.953 | 1.032 | 1-1/4 | 23.0 |
| | | 62/64 | 0.968 | 1.063 | 1-1/4 | 18.8 |
| | | 63/64 | 0.984 | 1.063 | 1-1/4 | 21.5 |
| | | 1 | 1.000 | 1.094 | 1-1/4 | 17.7 |
| | | 1-1/64 | 1.015 | 1.094 | 1-1/4 | 20.2 |
| | | 1-2/64 | 1.031 | 1.094 | 1-1/4 | 22.5 |
| | | 1-4/64 | 1.062 | 1.156 | 1-1/4 | 18.8 |
| | | 1-5/64 | 1.078 | 1.156 | 1-1/4 | 22.7 |
| | | 1-6/64 | 1.093 | 1.188 | 1-1/4 | 17.1 |
| 3/4" | SL075CR | 1-7/64 | 1.109 | 1.188 | 1-1/4 | 20.7 |
| | | 1-8/64 | 1.125 | 1.188 | 1-1/4 | 24.0 |
| | | 1-9/64 | 1.140 | 1.219 | 1-1/4 | 19.0 |
| | | 1-10/64 | 1.156 | 1.219 | 1-1/4 | 22.2 |
| | | 1-11/64 | 1.171 | 1.250 | 1-1/4 | 17.6 |
| | | 1-12/64 | 1.187 | 1.250 | 1-1/4 | 20.6 |
| | | 1-13/64 | 1.203 | 1.250 | 1-1/4 | 23.3 |
| | | 1-14/64 | 1.218 | 1.281 | 1-1/4 | 19.2 |
| | | 1-15/64 | 1.234 | 1.281 | 1-1/4 | 21.8 |
| | | 1-16/64 | 1.250 | 1.313 | 1-1/4 | 18.0 |
| | | 1-17/64 | 1.265 | 1.313 | 1-1/4 | 20.5 |
| | | 1-18/64 | 1.281 | 1.313 | 1-1/4 | 22.8 |
| | | 1-19/64 | 1.296 | 1.344 | 1-1/4 | 19.3 |
| | | 1-20/64 | 1.312 | 1.344 | 1-1/4 | 21.6 |
| | | 1-21/64 | 1.328 | 1.375 | 1-1/4 | 18.3 |
| | | 1-22/64 | 1.343 | 1.375 | 1-1/4 | 20.4 |

| Hose ID | Part # | Hose OD | | Crimp Diameter (±0.005) | Crimp Length | % Reduction |
|---------|----------------|------------|---------|-------------------------|--------------|-------------|
| | | Fractional | Decimal | | | |
| 1" | SL100CR | 1-30/64 | 1.468 | 1.500 | 1-1/2 | 21.9 |
| | | 1-31/64 | 1.484 | 1.531 | 1-1/2 | 18.0 |
| | | 1-32/64 | 1.500 | 1.531 | 1-1/2 | 20.6 |
| | | 1-33/64 | 1.515 | 1.531 | 1-1/2 | 23.0 |
| | | 1-34/64 | 1.531 | 1.563 | 1-1/2 | 19.3 |
| | | 1-35/64 | 1.546 | 1.563 | 1-1/2 | 21.7 |
| | | 1-36/64 | 1.562 | 1.594 | 1-1/2 | 18.3 |
| | | 1-37/64 | 1.578 | 1.594 | 1-1/2 | 20.5 |
| | | 1-38/64 | 1.593 | 1.625 | 1-1/2 | 17.3 |
| | | 1-39/64 | 1.609 | 1.625 | 1-1/2 | 19.4 |
| | | 1-40/64 | 1.625 | 1.625 | 1-1/2 | 21.4 |
| | | 1-41/64 | 1.640 | 1.656 | 1-1/2 | 18.5 |
| | | 1-42/64 | 1.656 | 1.656 | 1-1/2 | 20.4 |
| | | 1-43/64 | 1.671 | 1.688 | 1-1/2 | 17.6 |
| | | 1-44/64 | 1.687 | 1.688 | 1-1/2 | 19.5 |
| | | 1-45/64 | 1.703 | 1.688 | 1-1/2 | 21.3 |
| 1 1/2" | SL150CR | 1-46/64 | 1.718 | 1.719 | 1-1/2 | 18.6 |
| | | 2-1/64 | 2.015 | 2.094 | 2-7/8 | 19.9 |
| | | 2-2/64 | 2.031 | 2.094 | 2-7/8 | 22.3 |
| | | 2-3/64 | 2.046 | 2.125 | 2-7/8 | 18.8 |
| | | 2-4/64 | 2.062 | 2.125 | 2-7/8 | 21.1 |
| | | 2-5/64 | 2.078 | 2.125 | 2-7/8 | 23.2 |
| | | 2-6/64 | 2.093 | 2.156 | 2-7/8 | 20.0 |
| | | 2-7/64 | 2.109 | 2.156 | 2-7/8 | 22.0 |
| 2" | SL200CR | 2-8/64 | 2.125 | 2.188 | 2-7/8 | 19.0 |
| | | 2-41/64 | 2.640 | 2.718 | 3 | 20.1 |
| | | 2-42/64 | 2.656 | 2.750 | 3 | 17.3 |
| | | 2-43/64 | 2.671 | 2.750 | 3 | 19.2 |
| | | 2-44/64 | 2.687 | 2.750 | 3 | 21.0 |
| | | 2-45/64 | 2.703 | 2.781 | 3 | 18.3 |
| | | 2-46/64 | 2.718 | 2.781 | 3 | 20.1 |
| | | 2-47/64 | 2.734 | 2.813 | 3 | 17.6 |
| | | 2-48/64 | 2.750 | 2.813 | 3 | 19.3 |

Air King with Ferrules

Universal design provides quick, easy and effective coupling of air hose. Exclusive interlocking ferrule can be crimped or swaged to achieve maximum coupling sealing and retention with a low profile streamline appearance.

- iron and stainless steel Air King with carbon steel ferrules can be crimped or swaged
- rated to **150 PSI** working pressure.
- for air and water service only

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| Size | Hose OD | | Iron | Stainless Steel |
|------|----------|----------|-----------------|-----------------|
| | From: | To: | Part # | Part # |
| 1/2" | 54/64" | 1-2/64" | AM1WF | --- |
| 3/4" | 1-4/64" | 1-22/64" | AM6WF | RAM6WF |
| 1" | 1-18/64" | 1-34/64" | AM11WF-1 | --- |
| 1" | 1-30/64" | 1-46/64" | AM11WF | --- |

Crimped Air King Recommendation Guide

The crimp recommendation charts are only guides. It will not apply to every coupling situation. In some instances alternative dies and crimping dimensions must be employed to ensure safety. Experience has shown that variances in the construction of similar hoses and couplings may cause some assemblies to react differently when crimped. It is not uncommon to find hose with an outer diameter that fluctuates from one end to the other or from production lot to production lot. These inconsistencies coupled with the inherent differences between textile or wire braid, hard or soft wall, the presence or absence of an internal spiral wire and the differences in hose coverings make it difficult to establish hard and fast rules. Therefore, it's imperative that hose dimensions are accurately measured, assemblies are tested, and documentation is maintained.

| Hose ID | Part # | Hose OD | | Crimp Diameter (±0.005) | Crimp Length | % Reduction |
|---------|-------------------------|------------|---------|-------------------------|--------------|-------------|
| | | Fractional | Decimal | | | |
| 1/2" | AM1WF | 54/64 | 0.843 | 0.906 | 1-1/4 | 18.3 |
| | | 55/64 | 0.859 | 0.937 | 1-1/4 | 13.2 |
| | | 56/64 | 0.875 | 0.937 | 1-1/4 | 16.9 |
| | | 57/64 | 0.890 | 0.968 | 1-1/4 | 12.1 |
| | | 58/64 | 0.906 | 0.968 | 1-1/4 | 15.5 |
| | | 59/64 | 0.921 | 1.000 | 1-1/4 | 11.1 |
| | | 60/64 | 0.937 | 1.000 | 1-1/4 | 14.4 |
| | | 61/64 | 0.953 | 1.000 | 1-1/4 | 17.2 |
| | | 62/64 | 0.968 | 1.031 | 1-1/4 | 13.4 |
| | | 63/64 | 0.984 | 1.031 | 1-1/4 | 16.1 |
| | | 1 | 1.000 | 1.062 | 1-1/4 | 12.7 |
| | | 1-1/64 | 1.015 | 1.062 | 1-1/4 | 15.3 |
| | | 1-2/64 | 1.031 | 1.093 | 1-1/4 | 12.0 |
| | | | | | | |
| 3/4" | AM6WF RAM6WF | 1-4/64 | 1.062 | 1.156 | 1-1/4 | 13.4 |
| | | 1-5/64 | 1.078 | 1.156 | 1-1/4 | 17.3 |
| | | 1-6/64 | 1.093 | 1.187 | 1-1/4 | 11.9 |
| | | 1-7/64 | 1.109 | 1.187 | 1-1/4 | 15.8 |
| | | 1-8/64 | 1.125 | 1.218 | 1-1/4 | 11.2 |
| | | 1-9/64 | 1.140 | 1.218 | 1-1/4 | 14.6 |
| | | 1-10/64 | 1.156 | 1.218 | 1-1/4 | 17.5 |
| | | 1-11/64 | 1.171 | 1.250 | 1-1/4 | 13.0 |
| | | 1-12/64 | 1.187 | 1.250 | 1-1/4 | 16.2 |
| | | 1-13/64 | 1.203 | 1.281 | 1-1/4 | 12.3 |
| | | 1-14/64 | 1.218 | 1.281 | 1-1/4 | 15.1 |
| | | 1-15/64 | 1.234 | 1.312 | 1-1/4 | 11.5 |
| | | 1-16/64 | 1.250 | 1.312 | 1-1/4 | 14.4 |
| | | 1-17/64 | 1.265 | 1.312 | 1-1/4 | 16.9 |
| | | 1-18/64 | 1.281 | 1.343 | 1-1/4 | 13.5 |
| | | 1-19/64 | 1.296 | 1.343 | 1-1/4 | 15.9 |
| | | 1-20/64 | 1.312 | 1.375 | 1-1/4 | 12.6 |
| | | 1-21/64 | 1.328 | 1.375 | 1-1/4 | 15.0 |
| | | 1-22/64 | 1.343 | 1.406 | 1-1/4 | 12.1 |


| Hose ID | Part # | Hose OD | | Crimp Diameter (±0.005) | Crimp Length | % Reduction |
|---------|----------------------------|------------|---------|-------------------------|--------------|-------------|
| | | Fractional | Decimal | | | |
| 1" | AM11WF-1 | 1-18/64 | 1.281 | 1.375 | 1-1/2 | 16.7 |
| | | 1-19/64 | 1.296 | 1.375 | 1-1/2 | 20.5 |
| | | 1-20/64 | 1.312 | 1.406 | 1-1/2 | 15.0 |
| | | 1-21/64 | 1.328 | 1.406 | 1-1/2 | 18.6 |
| | | 1-22/64 | 1.343 | 1.437 | 1-1/2 | 13.7 |
| | | 1-23/64 | 1.359 | 1.437 | 1-1/2 | 17.5 |
| | | 1-24/64 | 1.375 | 1.468 | 1-1/2 | 12.8 |
| | | 1-25/64 | 1.390 | 1.468 | 1-1/2 | 16.1 |
| | | 1-26/64 | 1.406 | 1.500 | 1-1/2 | 11.5 |
| | | 1-27/64 | 1.421 | 1.500 | 1-1/2 | 14.7 |
| | | 1-28/64 | 1.437 | 1.500 | 1-1/2 | 17.6 |
| | | 1-29/64 | 1.453 | 1.531 | 1-1/2 | 13.9 |
| | AM11WF-1 AM11WF | 1-30/64 | 1.468 | 1.531 | 1-1/2 | 16.8 |
| | | 1-31/64 | 1.484 | 1.562 | 1-1/2 | 12.8 |
| | | 1-32/64 | 1.500 | 1.562 | 1-1/2 | 15.4 |
| | | 1-33/64 | 1.515 | 1.593 | 1-1/2 | 12.0 |
| | | 1-34/64 | 1.531 | 1.593 | 1-1/2 | 14.7 |
| | AM11WF | 1-35/64 | 1.546 | 1.625 | 1-1/2 | 11.1 |
| | | 1-36/64 | 1.562 | 1.625 | 1-1/2 | 13.7 |
| | | 1-37/64 | 1.578 | 1.625 | 1-1/2 | 15.9 |
| | | 1-38/64 | 1.593 | 1.656 | 1-1/2 | 12.9 |
| | | 1-39/64 | 1.609 | 1.656 | 1-1/2 | 15.1 |
| | | 1-40/64 | 1.625 | 1.687 | 1-1/2 | 12.4 |
| | | 1-41/64 | 1.640 | 1.687 | 1-1/2 | 14.5 |
| | | 1-42/64 | 1.656 | 1.718 | 1-1/2 | 11.8 |
| | | 1-43/64 | 1.671 | 1.718 | 1-1/2 | 14.0 |
| | | 1-44/64 | 1.687 | 1.750 | 1-1/2 | 11.3 |
| | | 1-45/64 | 1.703 | 1.750 | 1-1/2 | 13.3 |
| | | 1-46/64 | 1.718 | 1.750 | 1-1/2 | 15.1 |


E

Air

Dix-Lock Quick-Acting Couplings with Ferrules

- rated to **300 PSI** working pressure
- also available in stainless steel, contact the factory for further information
- for crimp recommendations see next page

| Male Head | Body Size | Hose ID | Hose OD | | Material | Part # |
|---|-----------|---------|---------|----------|---------------------|--------------|
| | | | From: | To: | | |
|  | 1/2" | 1/2" | 27/32" | 1-1/32" | <i>plated steel</i> | QM3WF |
| | 1/2" | 3/4" | 1-5/32" | 1-11/32" | <i>plated steel</i> | QM4WF |
| | 1/2" | 1/2" | 27/32" | 1-1/32" | <i>brass</i> | QB3WF |
| | 1/2" | 3/4" | 1-5/32" | 1-11/32" | <i>brass</i> | QB4WF |

| Female Head | Body Size | Hose ID | Hose OD | | Material | Part # |
|---|-----------|---------|---------|----------|---------------------|---------------|
| | | | From: | To: | | |
|  | 1/2" | 1/2" | 27/32" | 1-1/32" | <i>plated steel</i> | QM22WF |
| | 1/2" | 3/4" | 1-5/32" | 1-11/32" | <i>plated steel</i> | QM23WF |
| | 1/2" | 1/2" | 27/32" | 1-1/32" | <i>brass</i> | QB22WF |
| | 1/2" | 3/4" | 1-5/32" | 1-11/32" | <i>brass</i> | QB23WF |

| Male Locking Head | Body Size | Hose ID | Hose OD | | Material | Part # |
|---|-----------|---------|---------|----------|---------------------|---------------|
| | | | From: | To: | | |
|  | 1/2" | 1/2" | 27/32" | 1-1/32" | <i>plated steel</i> | QM33WF |
| | 1/2" | 3/4" | 1-5/32" | 1-11/32" | <i>plated steel</i> | QM44WF |
| | 1/2" | 1/2" | 27/32" | 1-1/32" | <i>brass</i> | QB33WF |
| | 1/2" | 3/4" | 1-5/32" | 1-11/32" | <i>brass</i> | QB44WF |

Dual Lock Quick-Acting Couplings with Ferrule

- Dual Lock couplings with ferrules are rated to **300 PSI** working pressure.
- also available in brass and stainless steel
- yellow zinc coated coupling with plated steel ferrule
- for crimp recommendations see next page



| Body Size | Hose ID | Hose OD | | Part # |
|-----------|---------|----------|----------|----------------|
| | | From: | To: | |
| 1/2" | 1/2" | 54/64" | 1-2/64" | PHL8WF |
| 1/2" | 3/4" | 1-10/64" | 1-22/64" | PHL12WF |

Crimped Dix-Lock and Dual-Lock Recommendation Guide

The crimp recommendation charts are only guides. It will not apply to every coupling situation. In some instances alternative dies and crimping dimensions must be employed to ensure safety. Experience has shown that variances in the construction of similar hoses and couplings may cause some assemblies to react differently when crimped. It is not uncommon to find hose with an outer diameter that fluctuates from one end to the other or from production lot to production lot. These inconsistencies coupled with the inherent differences between textile or wire braid, hard or soft wall, the presence or absence of an internal spiral wire and the differences in hose coverings make it difficult to establish hard and fast rules. Therefore, it is imperative that hose dimensions are accurately measured, assemblies are tested, and documentation is maintained.

| Hose ID | Part # | Hose OD | | Crimp Diameter (±0.005) | Crimp Length | | % Reduction |
|---------|----------------|-------------------|----------------|----------------------------|---------------|------------|-------------|
| | | <i>Fractional</i> | <i>Decimal</i> | | <i>QMI/QB</i> | <i>PHL</i> | |
| 1/2" | QM3WF | 54/64 | 0.844 | 0.925 | 1-1/8 | 1-1/4 | 18.9 |
| | QB3WF | 55/64 | 0.859 | 0.940 | 1-1/8 | 1-1/4 | 18.1 |
| | QM22WF | 56/64 | 0.875 | 0.950 | 1-1/8 | 1-1/4 | 18.9 |
| | QB22WF | 57/64 | 0.891 | 0.965 | 1-1/8 | 1-1/4 | 18.4 |
| | QM33WF | 58/64 | 0.906 | 0.975 | 1-1/8 | 1-1/4 | 19.0 |
| | QB33WF | 59/64 | 0.922 | 0.990 | 1-1/8 | 1-1/4 | 18.5 |
| | | 60/64 | 0.938 | 1.005 | 1-1/8 | 1-1/4 | 18.0 |
| | PHL8WF | 61/64 | 0.953 | 1.015 | 1-1/8 | 1-1/4 | 18.5 |
| | | 62/64 | 0.969 | 1.030 | 1-1/8 | 1-1/4 | 18.1 |
| | | 63/64 | 0.984 | 1.040 | 1-1/8 | 1-1/4 | 18.6 |
| | | 1 | 1.000 | 1.055 | 1-1/8 | 1-1/4 | 18.2 |
| | | 1-1/64 | 1.016 | 1.065 | 1-1/8 | 1-1/4 | 18.8 |
| | | 1-2/64 | 1.031 | 1.080 | 1-1/8 | 1-1/4 | 18.3 |
| 3/4" | QM4WF | 1-10/64 | 1.156 | 1.220 | 1-1/4 | | 18.5 |
| | QB4WF | 1-11/64 | 1.171 | 1.235 | 1-1/4 | | 18.0 |
| | QM23WF | 1-12/64 | 1.187 | 1.244 | 1-1/4 | | 18.7 |
| | QB23WF | 1-13/64 | 1.203 | 1.260 | 1-1/4 | | 18.1 |
| | QM44WF | 1-14/64 | 1.218 | 1.270 | 1-1/4 | | 18.8 |
| | QB44WF | 1-15/64 | 1.234 | 1.285 | 1-1/4 | | 18.2 |
| | | 1-16/64 | 1.250 | 1.295 | 1-1/4 | | 18.8 |
| | PHL12WF | 1-17/64 | 1.265 | 1.310 | 1-1/4 | | 18.4 |
| | | 1-18/64 | 1.281 | 1.320 | 1-1/4 | | 18.8 |
| | | 1-19/64 | 1.296 | 1.335 | 1-1/4 | | 18.5 |
| | | 1-20/64 | 1.312 | 1.345 | 1-1/4 | | 19.0 |
| | | 1-21/64 | 1.328 | 1.360 | 1-1/4 | | 18.5 |
| | | 1-22/64 | 1.343 | 1.370 | 1-1/4 | | 19.0 |

External Swage Notched Stems and Ferrules



STC200NOS



RST150NOS

- When used with an appropriate notched ferrule, these fittings can be swaged or crimped onto hose, thereby providing improved shank retention.
For hose OD's of 2-4/64" and below, these couplings are to be crimped only.
For hose OD's of 2-5/64" and above, these couplings can be crimped or swaged.
- The stem can be removed from a damaged hose by cutting away the ferrule, without necessarily damaging the fitting. *After inspection to determine its suitability for reuse, it can be reinstalled into another hose by using a new ferrule.*
- Notched stems let you use the same ferrules used with the notched (NO) cam and groove and notched turned back nipples. This lets you *maximize your inventory usage and reduce costs.*

SAFETY
ALERT

Stems

| Size | PSI | Stainless Steel | Plated Carbon Steel |
|------|------------|--------------------|---------------------|
| | | Part # | Part # |
| 1½" | 250 | RST150NOS | STC150NOS |
| 2" | 250 | RST200NOS | STC200NOS |
| 3" | 250 | RST300NOS | STC300NOS |
| 4" | * | RST400NOS * | STC400NOS * |

* Contact factory for pressure information

Ferrules



| Size | Hose OD | | 304 Stainless Steel | Carbon Steel |
|------|----------|----------|---------------------|-------------------|
| | From: | To: | Part # | Part # |
| 1½" | 1-60/64" | 2-12/64" | GAS2334NOS | CAS2334NOS |
| 1½" | 2-4/64" | 2-22/64" | GAS2370NOS | CAS2370NOS |
| 2" | 2-30/64" | 2-44/64" | GAS2709NOS | CAS2709NOS |
| 2" | 2-42/64" | 2-54/64" | GAS2885NOS | CAS2885NOS |
| 3" | 3-30/64" | 3-46/64" | GAS3760NOS | CAS3760NOS |
| 3" | 3-47/64" | 3-54/64" | GAS3885NOS | CAS3885NOS |
| 4" | 4-40/64" | 4-47/64" | GAS5010NOS | CAS5010NOS |

Notched Turned Back Nipples

- When used with an appropriate notched ferrule, these fittings can be swaged or crimped onto hose, thereby providing improved shank retention.
- The stem can be removed from a damaged hose by cutting away the ferrule, without necessarily damaging the fitting. *After inspection to determine its suitability for reuse, it can be reinstalled into another hose by using a new ferrule.*
- When used with double bolt or band clamps, notched turned back nipples will provide shank retention similar to that of the King turned back nipples.
- Notched turned back nipples let you use the same ferrules used with the notched (NO) cam and groove. This lets you *maximize your inventory usage and reduce costs.*

SAFETY
ALERT



Stems

| Size | 316 Stainless Steel | Carbon Steel |
|------|---------------------|---------------|
| | Part # | Part # |
| 1½" | RN150NO | N150NO |
| 2" | RN200NO | N200NO |
| 3" | RN300NO | N300NO |
| 4" | RN400NO | N400NO |

Ferrules

| Size | Hose OD | | 304 Stainless Steel |
|------|----------|----------|---------------------|
| | From: | To: | Part # |
| 1½" | 1-60/64" | 2-12/64" | GAS2334NO |
| 1½" | 2-4/64" | 2-22/64" | GAS2370NO |
| 2" | 2-30/64" | 2-44/64" | GAS2709NO |
| 2" | 2-42/64" | 2-54/64" | GAS2885NO |
| 3" | 3-30/64" | 3-46/64" | GAS3760NO |
| 3" | 3-47/64" | 3-54/64" | GAS3885NO |
| 4" | 4-40/64" | 4-47/64" | GAS5010NO |



Note: Stems are for use with lap joint flanges, see current Dixon Price List.

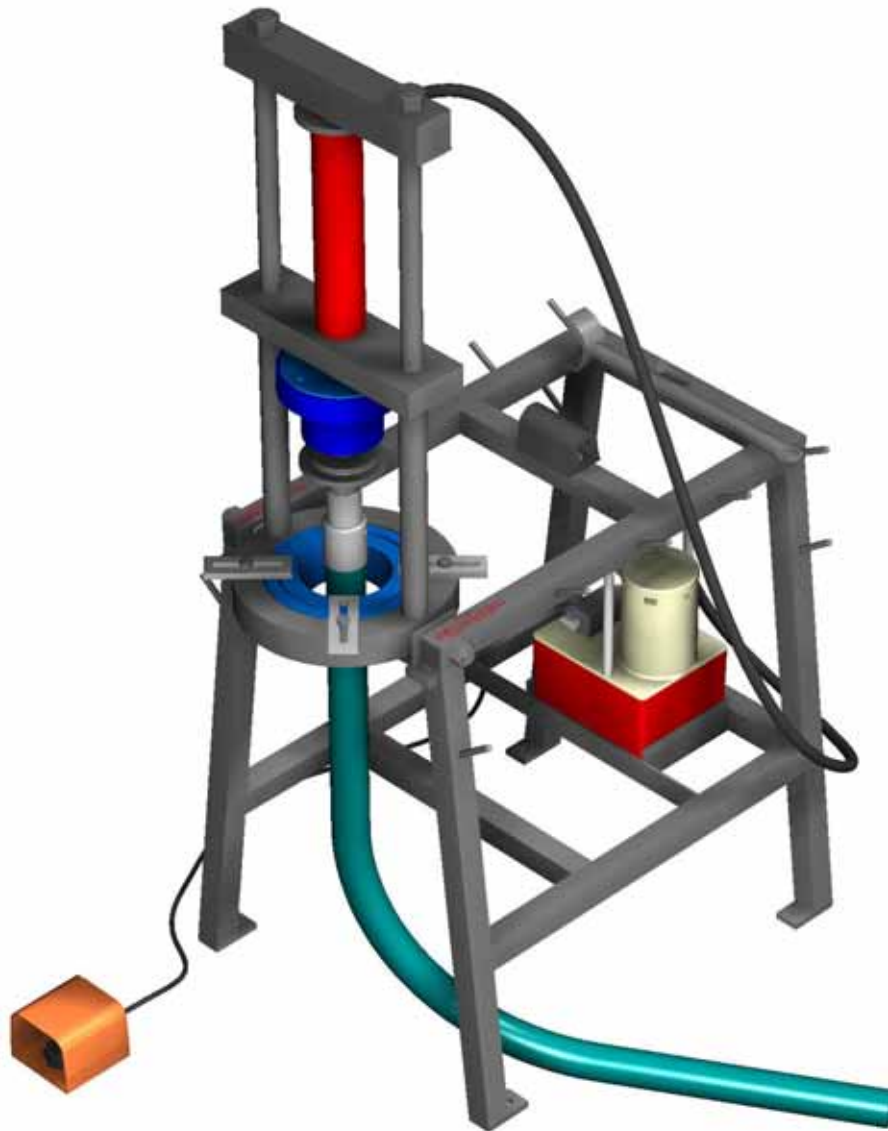
- * Special pushers required: 1½" stem - RN150NOPUSH
 2" stem - RN200NOPUSH
 3" stem - RN300NOPUSH
 4" stem - RN400NOPUSH



25 Ton Ram Operating Instructions

Section 2

External Swaging of Standard Holedall



Dixon Valve & Coupling Company
800 High Street • Chestertown, MD 21620
ph: 800•355•1991 fax: 800•283•4966
www.dixonvalve.com

1

Before you begin, make sure the ram is fully retracted. Install **25PUSH400** (also referred to as the pusher hat) onto the main pusher plate. This is required for all standard Holedall fittings. Make sure the bolt holes align with the 1/2" bolts and wing nuts supplied.



2

Insert Die Holders into the Die Bed Plate as follows:

- a) **DH9-004** - Master Die Holder to hold all of the other die holders.
 - b) **DH9-004-1** - Die Holder for 4" I.D. hoses only.
 - c) **DH6-003** - Die Holder for 1 1/4" - 3" I.D. hose dies (fits into DH9-004).
 - d) **DH3-001** - Die Holder for 1/4" - 1" I.D. hose dies (DH6-003 and DH9-004 also required).
- Secure the Die Holders with the tie down bars supplied.



3

Select the proper pusher for the I.D. of the hose. The pusher should be the same size as the stem. There are separate pushers required for 1 1/4" through 3" I.D. hose.

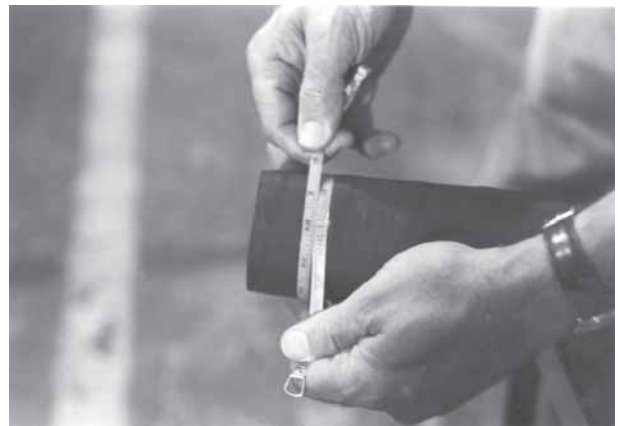
Insert the selected pusher into the **25PUSH400** and secure it with the set screws provided. For Unirange (1" and below) remove the **25PUSH400** and install the **25PUSH100** as well as the correct pusher for the size of Unirange coupling. There is a separate pusher for each unirange assembly size.



4

Accurately measure the hose O.D. with a diameter tape. Each end of the hose should be measured to guarantee the correct ferrule and die selection.

Select the correct ferrule and die based upon the hose free O.D. just measured from the die chart.



5

Assuring that the hose end is cut square, chamfer the I.D. of the hose 1/8" at a 45° angle (this is to relieve hose end flare of rubber tube hoses during stem insertion). If the hose is to be static grounded, follow hose manufacturers procedure for proper static grounding.



6

Lubricate the I.D. of the hose and the O.D. of the stem with Dixon lubricant or equivalent. Insert the stem all the way into the hose until the ring on the stem comes in contact with the end of the hose.



7

Slide the ferrule over the stem and over the O.D. of the hose until the turned over portion of the ferrule rests on the ring of the stem.



8a

Lubricate the outside of the ferrule with Crisco® (recommended) or a high viscosity oil or heavy duty grease.



8b

Lubricate the I.D. of the die halves with Crisco® (recommended) or a high viscosity oil or heavy duty grease.



9

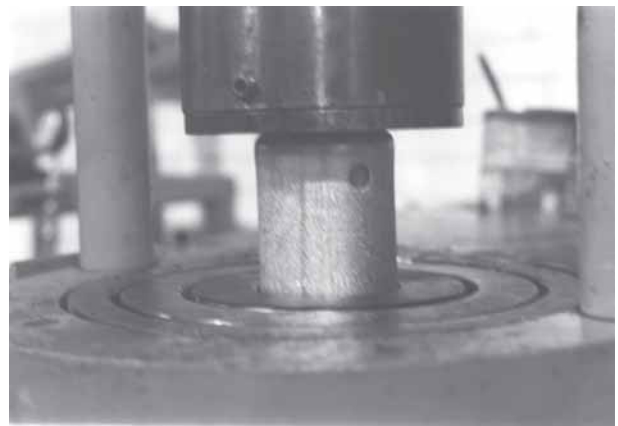
Insert the hose fitting assembly through the bottom of the ram (between the die holders) far enough to allow room to install the die halves into the die holder. After installing the die halves, push the hose up into the pusher until the ferrule comes in contact with the pusher.



10

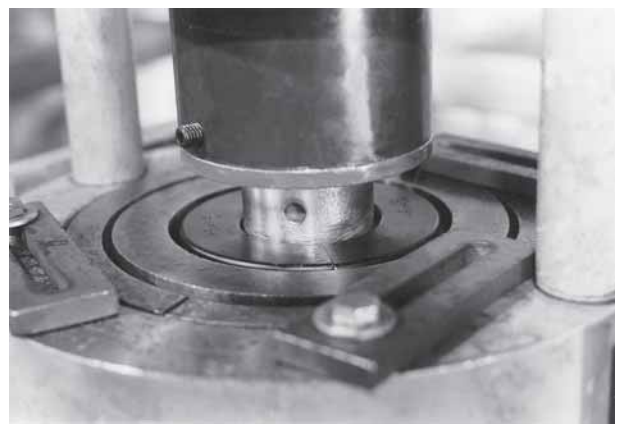
“Jog” the ram by quickly depressing and releasing the “on” button on the remote control switch, (or by depressing the foot pedal) until the ferrule enters the opening of the die. Let the ferrule enter the die slowly, making sure the end of the ferrule does not hit the top of the die.

Make sure that the stem and ferrule are held securely against the pusher until the swaging process has begun.



11a

To complete the swaging process, depress and hold the “on” switch of the remote control unit (or depress the foot pedal). Once the ferrule has entered the die and started to be reduced (approximately 1/3 of the way), it will no longer need the operator to keep it seated into the pusher. Continue the swage until the pusher meets the die, or until the gauge reads 10,000 PSI.



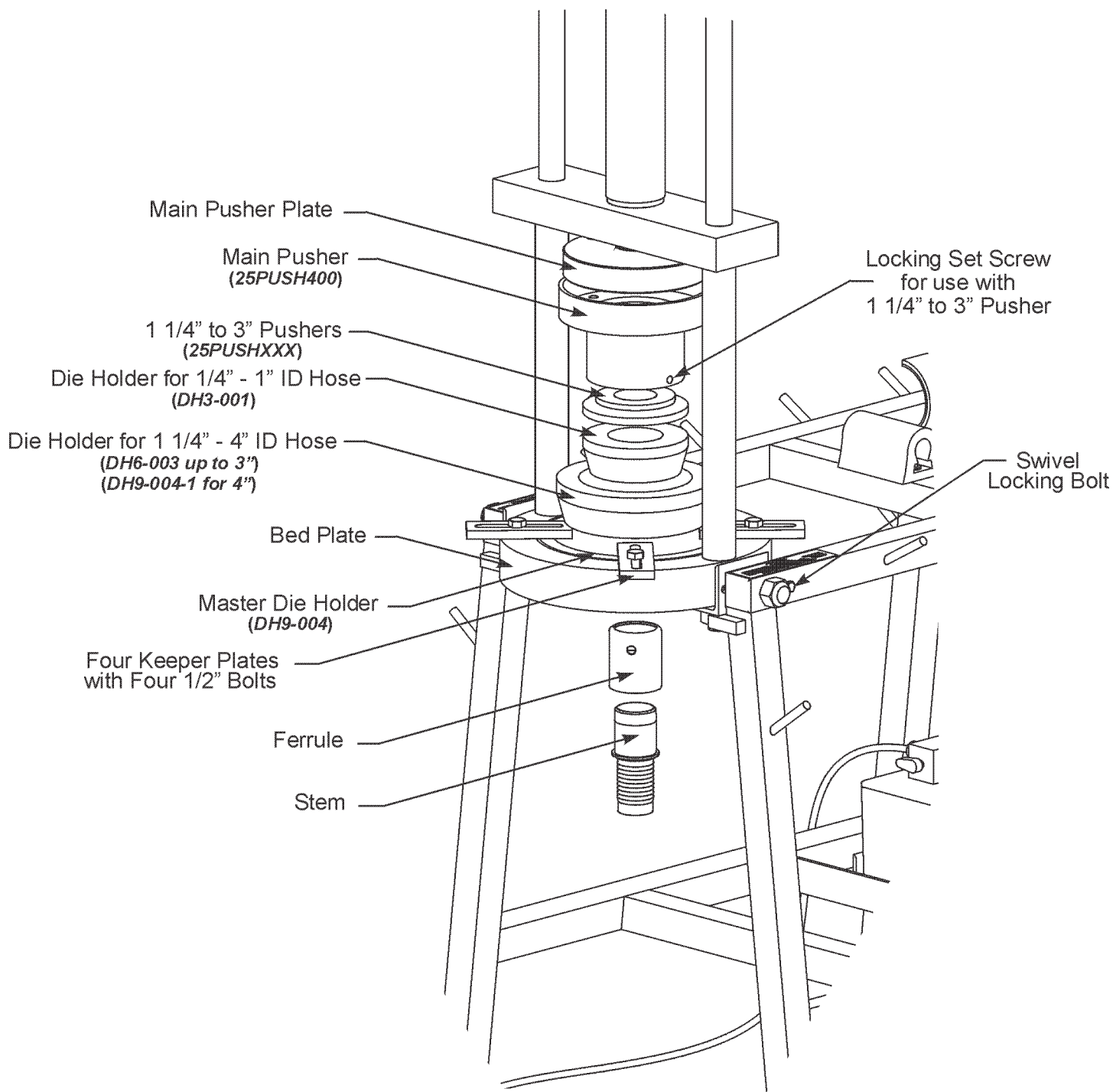
11b

Note: If the gauge reads 10,000 PSI before swaging is complete, stop. The ferrule or die used for that hose end may be incorrect. Contact Dixon for further assistance.



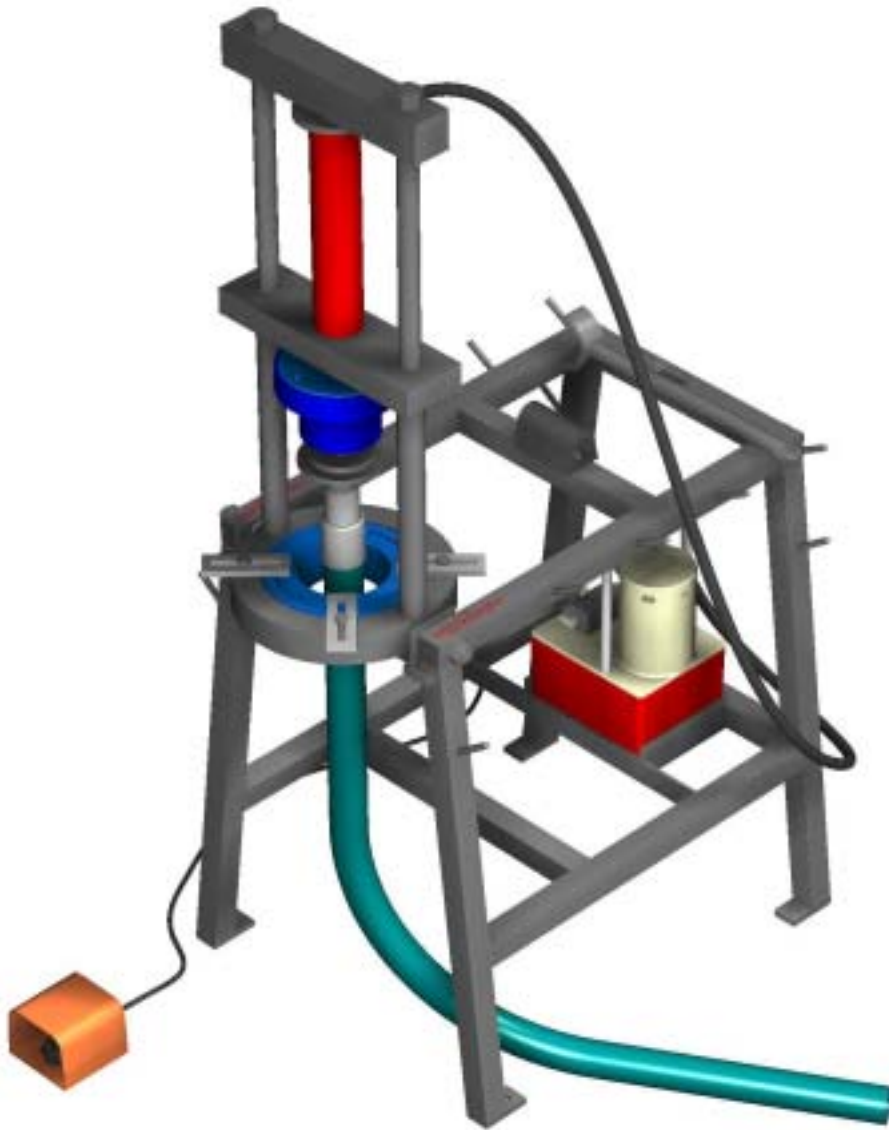
Dixon Valve and Coupling Company recommends that all hose assemblies be tested as recommended by the Rubber Manufacturers Association.

Typical Setup - 25 Ton Ram, External Swaging





25 Ton Ram
Operating Instructions
for
External Swaging of RSTxxxNOS Stems



Dixon Valve & Coupling Company

800 High Street • Chestertown, MD 21620

Phone: 800-355-1991 • Fax: 800-283-4966

1

Before you begin, make sure the ram is fully retracted. Install **25PUSH400** (also referred to as the pusher hat) onto the main pusher plate. Install the **MISCPUSH** into the **25PUSH400** and secure with set screw.



2

Insert Die Holders into the Die Bed Plate as follows:

- a) **DH9-004** - Die holder. This is necessary to hold all of the other die holders.
- b) **DH6-003** - Die holder for 1 1/4" - 3" I.D. hose dies.

Secure the die holders with the keeper plates supplied.



3

Accurately measure the hose O.D. with a diameter tape. Each end of the hose should be measured to guarantee the correct ferrule and die selection.

Select the correct ferrule and die based upon the hose free O.D. just measured, from the die chart.

Make sure the hose end is cut square. If the hose is to be static grounded, follow hose manufacturers procedure for proper static grounding.



4

Slide the ferrule onto the hose. Place a mark on the hose at the end of the ferrule. Move the ferrule 1/8" from the mark just made towards the end of the hose. Place a second mark on the hose at the end of the ferrule.



5

Lubricate the O.D. of the stem and the I.D. of the hose with Dixon lubricant or equivalent.

Insert the end of the fitting into hose. Assemble ferrule onto stem by sliding turned over portion of ferrule past notched section of the stem collar. Rotate the ferrule 90° (1/4 turn). With ferrule and stem engaged, continue installing stem until ferrule reaches the second mark made on the hose.



6a

Lubricate the outside of the ferrule with Crisco® (recommended) or a high viscosity oil or heavy duty grease.



6b

Lubricate the I.D. of die halves with Crisco® (recommended) or a high viscosity oil or heavy duty grease.



7

Insert the hose with fittings through the bottom of the ram (between the die holders) to allow enough room to install the die halves into the die holder.



8

Install spacer ring over threads of stem and rest on top of ferrule.



9

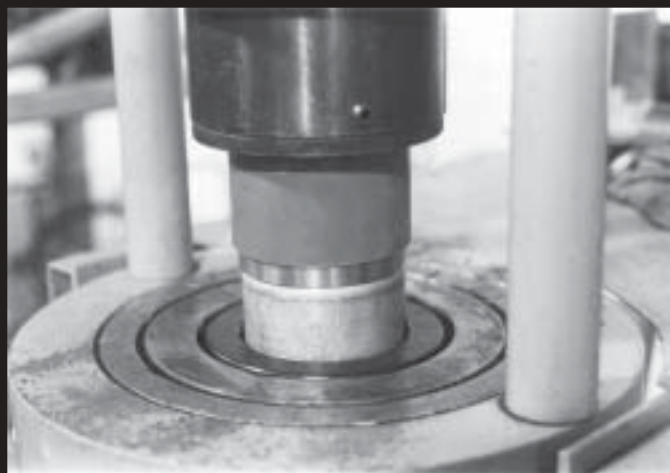
Install the proper pusher onto the stem. (reference the chart for proper pusher selection.)



10

“Jog” the ram by quickly depressing and releasing the “on” button on the remote control switch, (or by depressing the foot pedal) until the ferrule enters the opening of the die. Go slowly as the ferrule enters the die, making sure that the end of the ferrule does not contact the face of the die.

Make sure that the stem and ferrule are forced securely against the pusher until the swaging process has begun.



11

To complete the swaging process, depress and hold the “on” switch of the remote control unit (or depress the foot pedal). Once the ferrule has entered the die and starts to be reduced (approximately 1/3 of the way), it will no longer need the operator to keep it seated into the pusher. Continue the swage until the pusher meets the die.

Note: The spacer ring will enter the die.



Lift the hose assembly up and remove the pusher, spacer ring and die halves from the die bed. Remove excess lubricant.

Note: If gauge reads 10,000 PSI before swaging is complete, than the ferrule or die used for that hose end may be incorrect. Contact Dixon for further assistance.



Pushers for RSTxxxNOS Stems

| Size | Part Number |
|--------|------------------|
| 1 1/2" | <i>RE150PUSH</i> |
| 2" | <i>D011-018</i> |
| 3" | <i>RE300PUSH</i> |

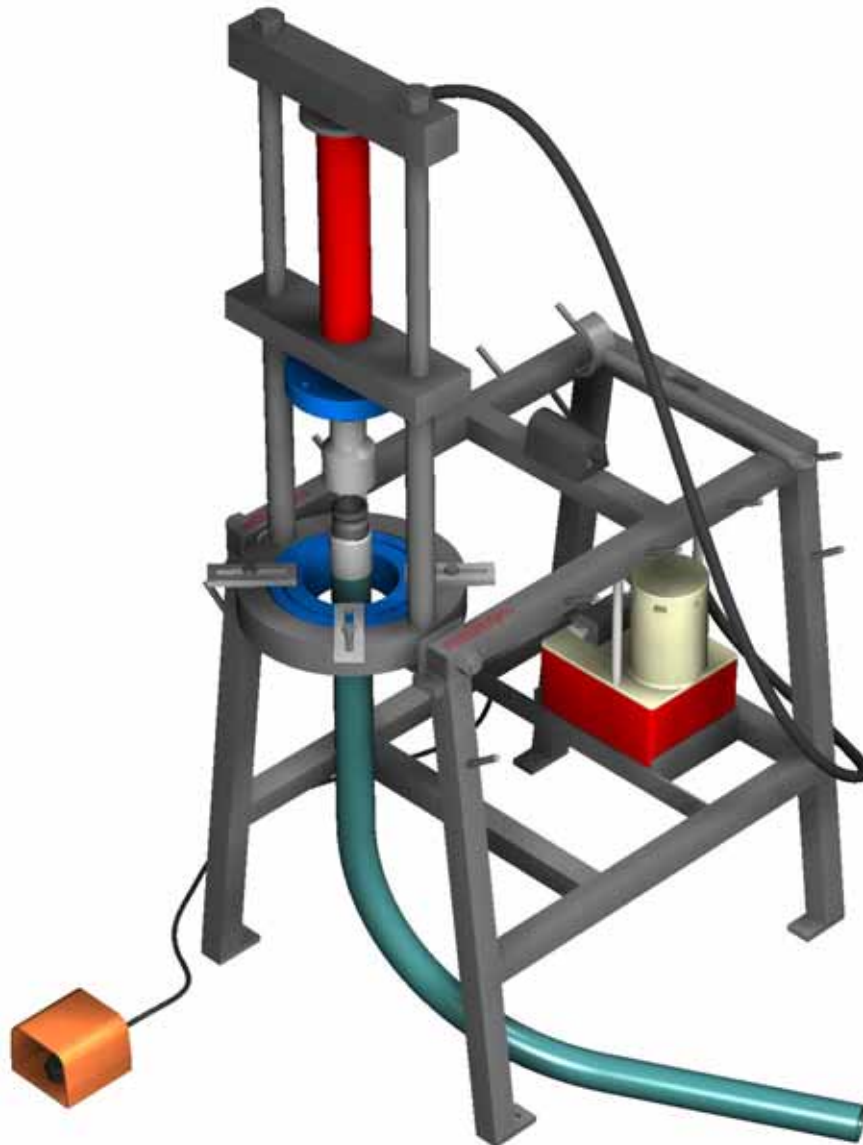
Dixon Valve and Coupling Company recommends that all hose assemblies be tested as recommended by the Rubber Manufacturers Association.



25 Ton Ram Operating Instructions

Section 4

External Swaging of Cam & Groove



Dixon Valve & Coupling Company
800 High Street • Chestertown, MD 21620
ph: 800•355•1991 fax: 800•283•4966
www.dixonvalve.com

1

Before you begin, make sure the ram is fully retracted, and remove the **25PUSH400** (also referred to as the pusher hat) from the main pusher plate, if installed on the ram.



2

Insert Die Holders into the Die Bed Plate as follows:

- a) **DH9-004** - Master Die Holder to hold all of the other die holders.
- b) **DH9-004-1** - Die Holder for 4" I.D. hoses only.
- c) **DH6-003** - Die Holder for 1 1/4" - 3" I.D. hose dies (fits into DH9-004).
- d) **DH3-001** - Die Holder for 1/4" - 1" I.D. hose dies (DH6-003 and DH9-004 also required).

Secure the Die Holders with the tie down bars supplied.



3

Accurately measure the hose O.D. with a diameter tape. Each end of the hose should be measured to guarantee the correct ferrule and die selection.

Select the proper ferrule and die based upon the hose free O.D. just measured, from the die chart.

Make sure the hose end is cut square. If the hose is to be static grounded, follow hose manufacturers procedure for proper static grounding.



4

Measure the collar thickness of the stem. Slide the ferrule onto the hose. Place a mark on the hose at the end of the ferrule. Move the ferrule from the mark just made towards the end of the hose the distance of the collar thickness just measured. Place a second mark on the hose at the end of the ferrule.



5a

Note : When using the Notched Stem and ferrule system these guidelines must be followed:

- A. Before stem insertion, assemble the ferrule onto the stem by sliding the turned over portion of the ferrule past the notched sections of the stem collar. Rotate the ferrule 90° (1/4 turn).
- B. Before starting the swaging process, make sure that the turned over portion of the ferrule and the collar are fully engaged.
- C. For “C” style couplings (requiring spacer rings), make sure that the two ring halves meet over the turned over portion of the ferrule which should be under the cam arms.



5b

Lubricate the Hose I.D. and the O.D. of the coupling shank with Dixon lubricant or equivalent. Insert the Cam and Groove fitting with ferrule onto the hose until the ferrule is even with the mark closest to the hose end. This is the second mark made on the hose.



6a

For “C” Style couplings requiring spacer rings:

- a. Lubricate the inside of the die halves with Crisco® (recommended) or a high viscosity oil or heavy duty grease.



6b

- b. Lubricate the outside of the ferrule with Crisco® (recommended) or a high viscosity oil or heavy duty grease.



6c

- c. Release the cam arms.



6d

- d. Remove the gasket from the coupler.

6e
6f

- e. Bring the hose and coupling assembly up through the base of the die bed.
Note: One or both cam arms may close going through the die bed. If this happens, release the cam arms.
- f. Put the selected die into the die bed.



6g

- g. Put the spacer rings between the ferrule and coupler head, making sure that the two ring halves meet over the turned over portion of the ferrule.
- * Note: Future "C" style couplings may not require spacer rings. In those instances, eliminate Step 6g.



6h

- h. Insert the proper pusher into the coupler (reference the chart at the end of this section for proper pusher selection).

6i
6j

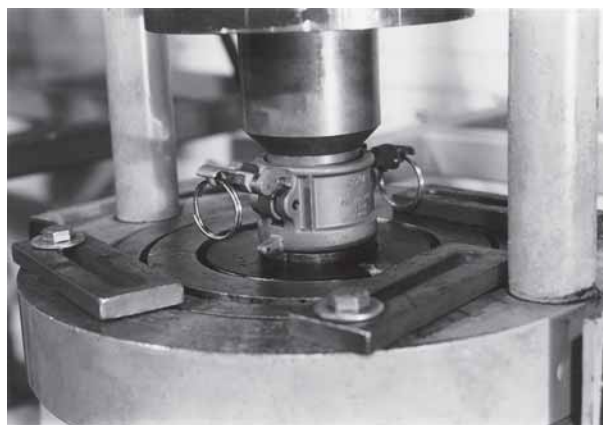
- i. Bring the assembly down into the opening of the die.
- j. Jog the ram cylinder down until it meets the pusher.

Note: Check spacer rings for proper positioning.



6k

- k. Hold the “on” button down (or depress the foot pedal) and continue the swage process until the spacer rings begin to enter the die. Release the “on” button (or foot pedal). Do not let the spacer rings enter the die!



6l-n

- l. Lift the hose assembly up and remove the pusher, spacer rings and the die halves from the die bed.
- m. Lower the hose through the die bed and wipe off the excess lubricant.
- n. Re-install the gasket.



6end

For “C” Style couplings **not** requiring spacer rings, perform Steps 6a through 6f *and* 6h through 6n.

Step 6k hold the “on” button down (or depress the foot pedal) and continue the swage process until the top of the ferrule has passed the top of the dies. Don’t let the locking ear on the coupler touch the die.



7a

For “E” Style couplings follow steps 1-5 then:

- a. Lubricate the inside of the die halves with Crisco® (recommended) or a high viscosity oil or heavy duty grease.



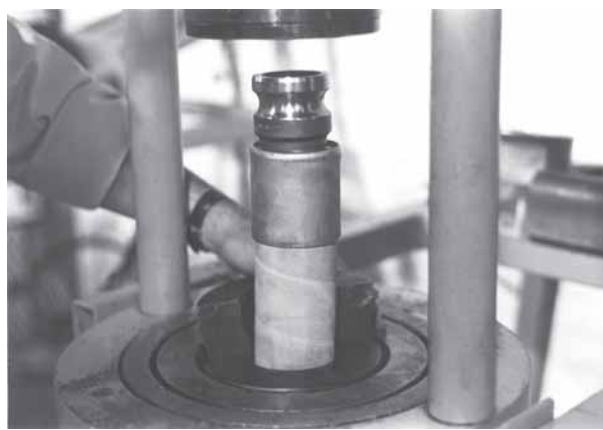
7b

- b. Lubricate the outside of the ferrule with Crisco® (recommended) or a high viscosity oil or heavy duty grease.



7c-d

- c. Bring the hose and coupling assembly up through the base of the die bed.
- d. Put the selected die into the die bed.



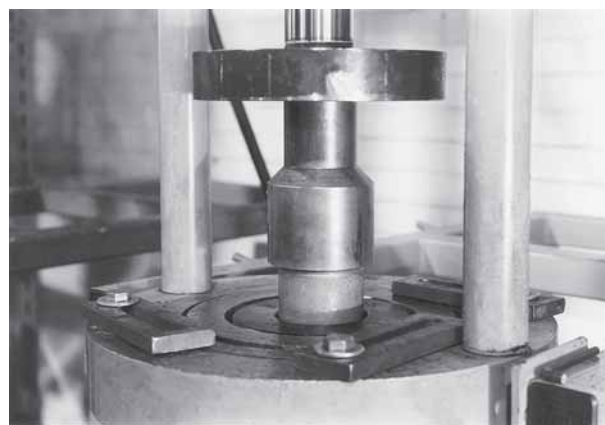
7e-f

- e. Install the proper pusher over the adapter (reference the chart at the end of this section for proper pusher selection).
- f. Bring the assembly down into the opening of the die.



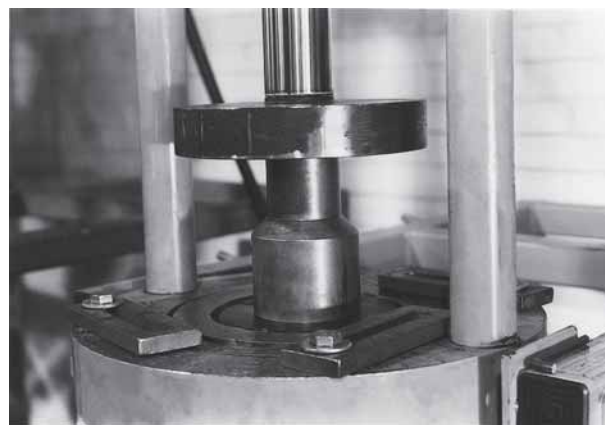
7g

- g. Jog the ram cylinder down until it meets the pusher. Make sure that the cylinder plate contacts the pusher flush.



7h

- h. Holding the hose and coupling up against the pusher hold the "on" button down (or depress the foot pedal) until the ferrule enters the opening of the die. Once the ferrule has entered the die and started to be reduced (approximately 1/3 of the way) it will no longer need the operator to keep it seated into the pusher. Continue the swage process until the pusher meets the die face. Release the "on" button (or foot pedal).



7i

- i. Lift the hose assembly up and remove the pusher, and die halves from the die bed.

Note: If the gauge reads 10,000 PSI before swaging is complete, stop. The ferrule or die used for that hose end may be incorrect. Contact Dixon for further assistance.



Pushers and Spacer Rings For Cam & Groove

| Size | Description | Part Number |
|--------|---|---|
| 1" | Type "E" Pusher Type "C" Pusher Spacer Ring | RE100PUSH RC100PUSH 100CGSPACE |
| 1 1/2" | Type "E" Pusher Type "C" Pusher Spacer Ring | RE150PUSH RC150PUSH (2 pieces) 150CGSPACE |
| 2" | Type "E" Pusher Type "C" Pusher Spacer Ring | D011-018 D011-018 200CGSPACE |
| 3" | Type "E" Pusher Type "C" Pusher Spacer Ring | 25PUSH300E D011-018 300CGSPACE |
| 4" | Type "E" Pusher Type "C" Pusher Spacer Ring | 25PUSH400E 25PUSH400C 400CGSPACE |

Note: Spacer Rings are to be used with Type "C" Couplings **ONLY**.
DO NOT use Spacer Rings with Type "E" Couplings, or
bodily injury may result.

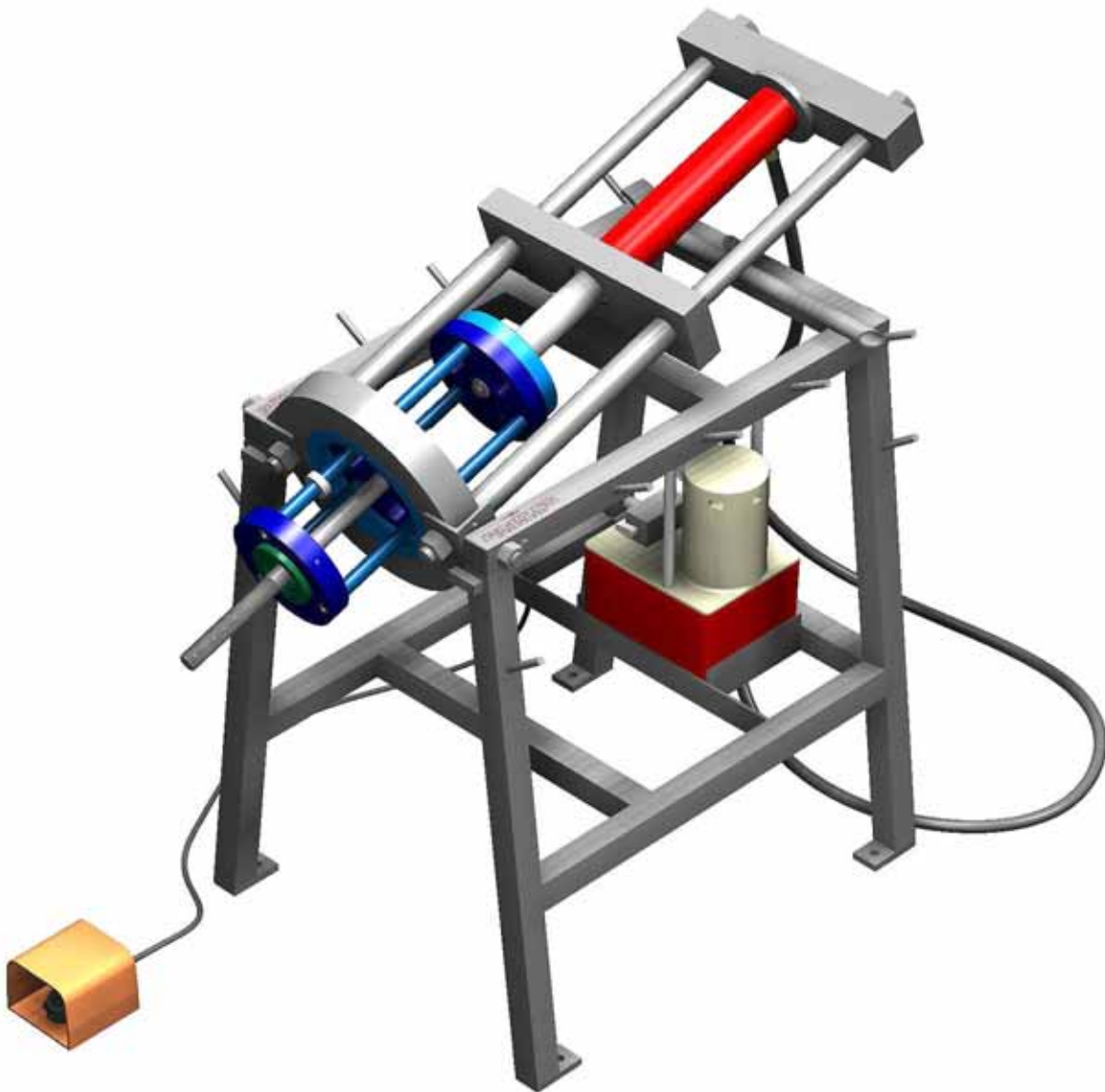
*Dixon Valve and Coupling Company recommends that all
hose assemblies be tested as recommended by the Rubber Manufacturers Association.*



25 Ton Ram Operating Instructions

Section 5

Converting from Swaging to Expansion



Dixon Valve & Coupling Company
800 High Street • Chestertown, MD 21620
ph: 800•355•1991 fax: 800•283•4966
www.dixonvalve.com

1

Before you begin make sure the Ram is fully retracted. Remove the **25PUSH400** (also referred to as the pusher hat) from the main pusher plate, if installed on the Ram.



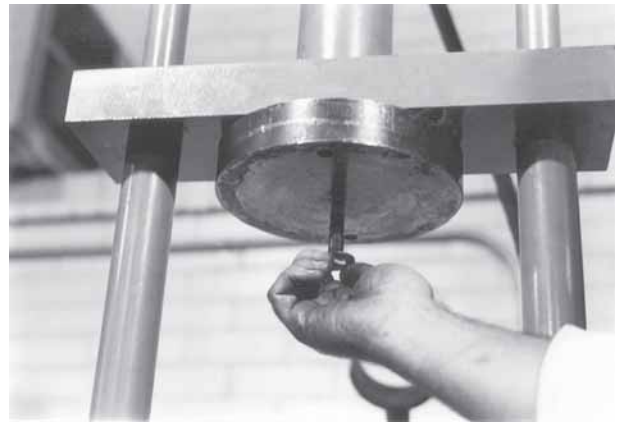
2

Loosen the keeper plate bolts, and remove all die holders.



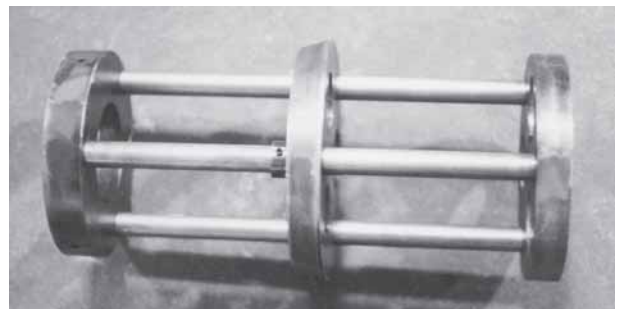
3

Install the retaining bolt with washer into hole of the main Ram pusher plate (**25T5**).



4

Laying the **25IXATTACH** on it's side, move the guide plate to the center. Slide the retaining collar up until it contacts the guide plate. Tighten the set screw in the retaining collar. Stand the **25IXATTACH** up so that the end with the slot is on top.



5

Install the **25IXATTACH** by aligning the large hole with the slotted guide to the retaining bolt and washer. When installed the **25IXATTACH** will hang freely.



6

While lifting up on the **25IXATTACH**, tighten the bolt by hand in the main Ram pusher plate until it is snug.

Note: To make this step easier, stand in front of the ram and place one foot on the cross bar closest to you. Place your knee under the **25IXATTACH** and lift up. Tighten the bolt by hand until it is snug.



7

Install Die Holder **DH9-004**.



8

Loosen the retaining collar and allow the guide plate to slide down and fit into the die holder. Secure die holder and guide plate with keeper plates. Tighten evenly or else the Ram will jam.



9

Remove the safety bolts behind the 1" nuts. Loosen the left 1" nut (when facing ram), then the right 1" nut (when facing ram). If this sequence is reversed (right, then left) the cylinder will rotate backwards on its own.



10a

There are two options for positioning the ram for internal expansion:

Install the 45° angle bracket.



10b

Lower the Ram carefully until it rests on the bracket. You are now ready to internally expand.

CAUTION! The ram is extremely heavy. It may be necessary to have 2 people (1 on each side) to lower the ram.

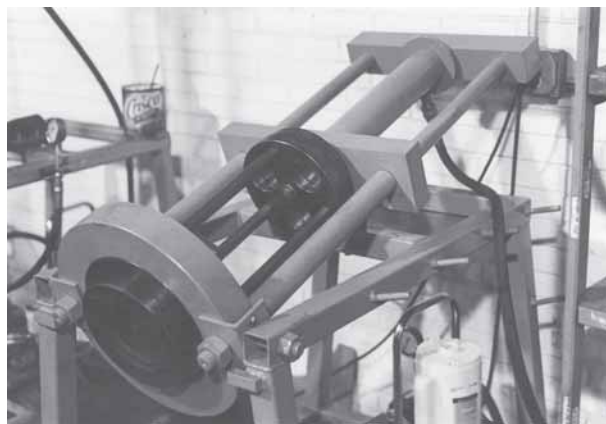


11

Option #2 - Do not install the 45° bracket.

Lower the Ram completely until it rests on the safety bumper. You are now ready to internally expand.

CAUTION! The ram is extremely heavy. It may be necessary to have 2 people (1 on each side) to lower the ram.

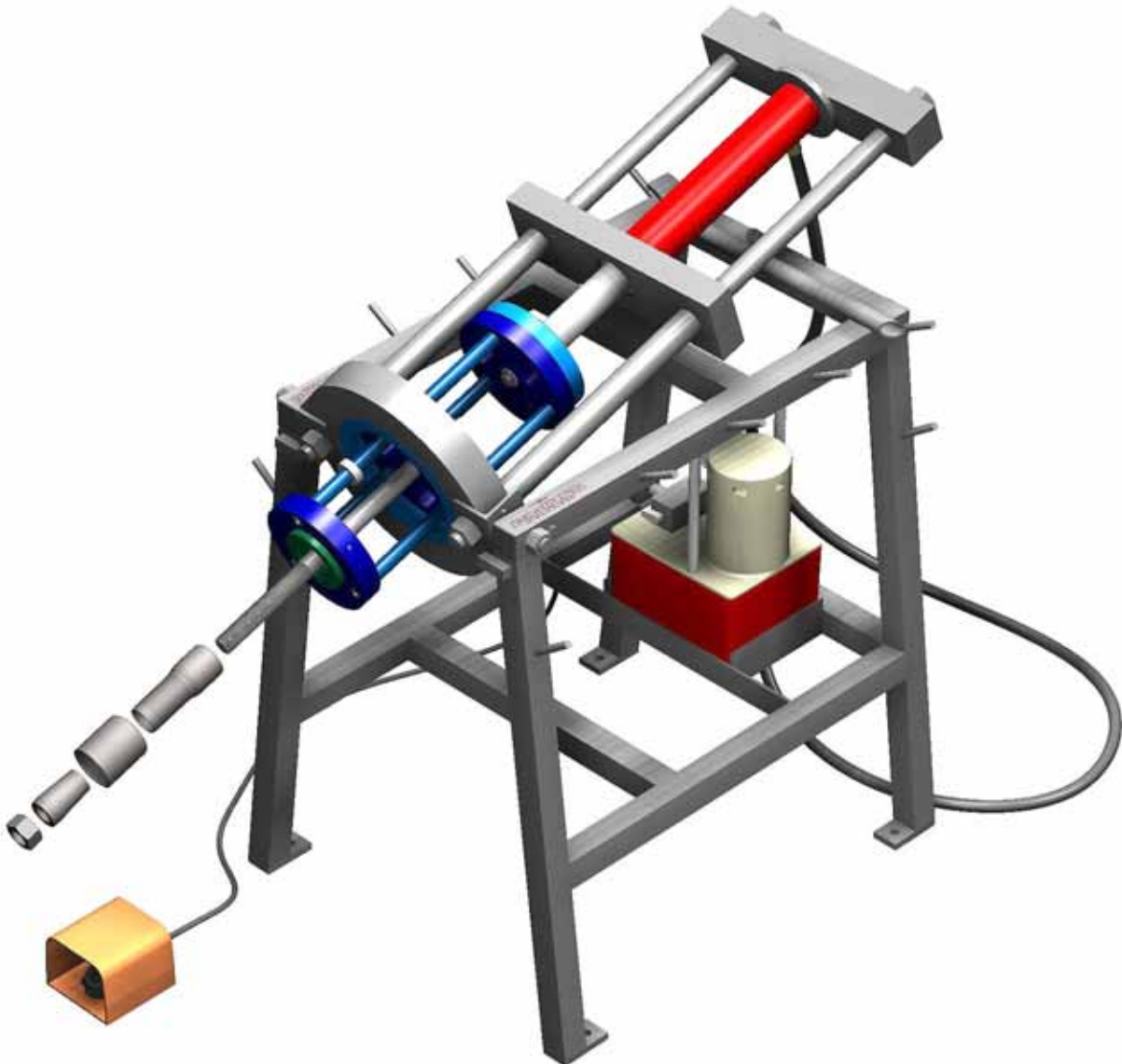




25 Ton Ram Operating Instructions

Section 6

Internal Expansion of Steel & Stainless Steel Stems



Dixon Valve & Coupling Company
800 High Street • Chestertown, MD 21620
ph: 800•355•1991 fax: 800•283•4966
www.dixonvalve.com

1

(refer to *Converting Swaging to Expansion* section). Before you begin make sure the ram is fully retracted. Select the proper Pull Rod.

- For 1" thru 1 1/2" use Part Number **25RODSMALL**
- For 2" thru 4" use Part Number **25RODLARGE** (note that picture is showing **25RODLARGE**)

Screw the short threaded end of the rod into the face plate of the **25IXATTACH**.



2

Select the corresponding Adapter Plate (s) for the size and type of fitting you are installing.

The 2" thru 4" adapters have two recesses. The small diameter recess is to be used with stems having NPT*, Victaulic or a plain end. The larger diameter recess is used for stems with the "Heavy Duty/California Style" end. * *See note on page 4.*



3

Assuring that the recesses are facing outward towards the operator, slide the adapter plate over the pull rod until it reaches the base of the **25IXATTACH**. Tighten the set screws to secure the adapter.



4a

Lubricate the I.D. of the stem with Crisco® (recommended) or a high viscosity oil or heavy duty grease.



4b

Lubricate the O.D. of the small half (tapered end) of the corresponding IX plug with Crisco® (recommended) or a high viscosity oil or heavy duty grease.



4c

Slide the stem over the pull rod and into the recess of the adapter plate with the connection side of the stem facing the ram. Screw on (or slide) the IX plug, small end first, onto the pull rod and into the shank of the stem. For 2" and above screw the retaining nut on until it contacts the plug. Note: **25RODLARGE** is shown. Move the stem slightly to allow for slack and hand tighten the plug or nut until it is snug. Lubricate the rest of the O.D. of the plug.

Hint: When doing more than 1 hose assembly of the same I.D. size take the time to screw the pull rod further into the face plate of the **25IXATTACH**. This will allow for a shorter cycle time.



5

Accurately measure the hose O.D. with a diameter tape. Select the correct IX ferrule from the DPL based upon the hose O.D. just measured.

Note: Always measure both hose ends for accurate ferrule selection.



6

Make sure the hose end is cut square. Slide the ferrule over the hose until the turned over end of the ferrule contacts the end of the hose. Place a mark on the hose at the junction of the ferrule and hose. Move the ferrule away from the hose end 1/4" and place another mark at the junction of the hose and ferrule. This will ensure that the proper rubber displacement or pocket is maintained during the expansion process.



7

Slide the hose with the ferrule on over the shank until the ferrule contacts the shoulder of the stem. Make sure you align the ferrule with the second mark from step 6. Make sure the pocket has been maintained. **Important!** If there is an insufficient pocket for the rubber to displace into, damage may occur to the stem, ferrule and/or hose.



8

While holding the hose and ferrule firmly against the stem shoulder, engage the Ram by stepping on the foot pedal (or depressing the "ON" button on the remote control.) The internal expansion operation is complete when the hose and stem assembly is pushed completely over the internal expansion plug. Release foot pedal or "ON" switch. Note: If the gauge reads 10,000 PSI before internal expansion is complete, stop. Contact Dixon for further assistance. During internal expansion never stand directly in front of the Ram. Visually inspect the coupling and clean excess lubricant from the stem I.D.



* ASSEMBLY PROCEDURE For 2 1/2" THREADED MALE STEMS:

In order to prevent possible thread collapse on 2 1/2" Male NPT Stems during installation, it is recommended that a female threaded adapter be installed prior to installation. The adapter part # is M011-384 for the 2 1/2" male stem. Following is the procedure for installation:

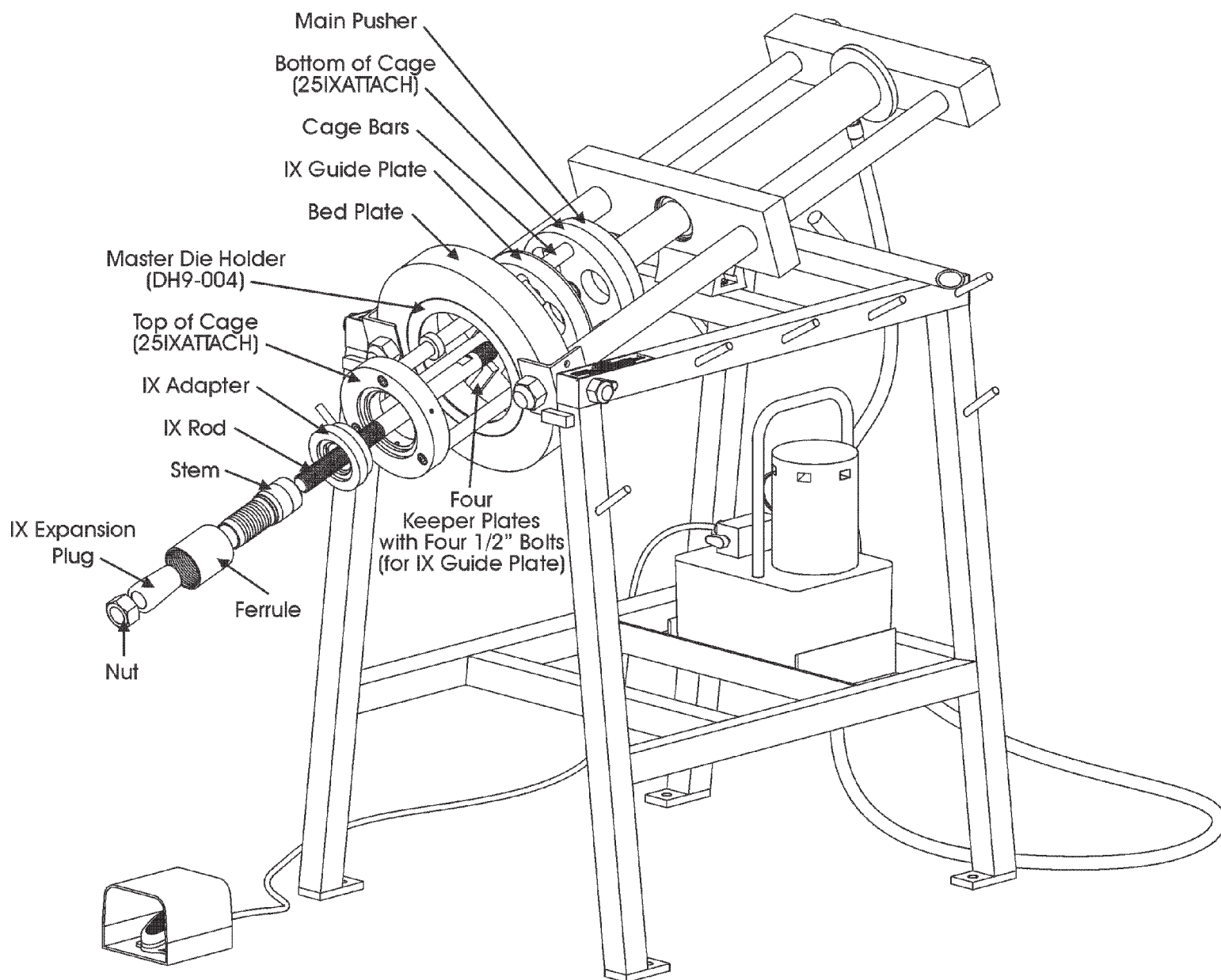
1. Lubricate stem ID and small end of expansion plug.
2. Thread M011-384 onto threads of the male stem hand tight ONLY!
3. Slide stem over pull rod thread adapter end first.
4. Seat M011-384 onto OUTER recess of the adapter.
5. Follow normal IX procedure.
6. When the assembly is removed from the pull rod, remove M011-384 and clean the stem ID of excess lubricant.

If you have any questions, please feel free to contact our Engineering Department.

Dixon Valve sells Steel Internal Expansion Fittings and Stainless Steel. Verify that the correct plug and adapter plates are being used when installing fittings. Also note that with food grade fittings a different lubricant may be needed. If you need assistance please contact your Dixon Representative or call any Dixon Branch.

Dixon Valve and Coupling Company recommends that all hose assemblies be tested as recommended by the Rubber Manufacturers Association.

Typical Setup - 25 Ton Ram, Internal Expansion

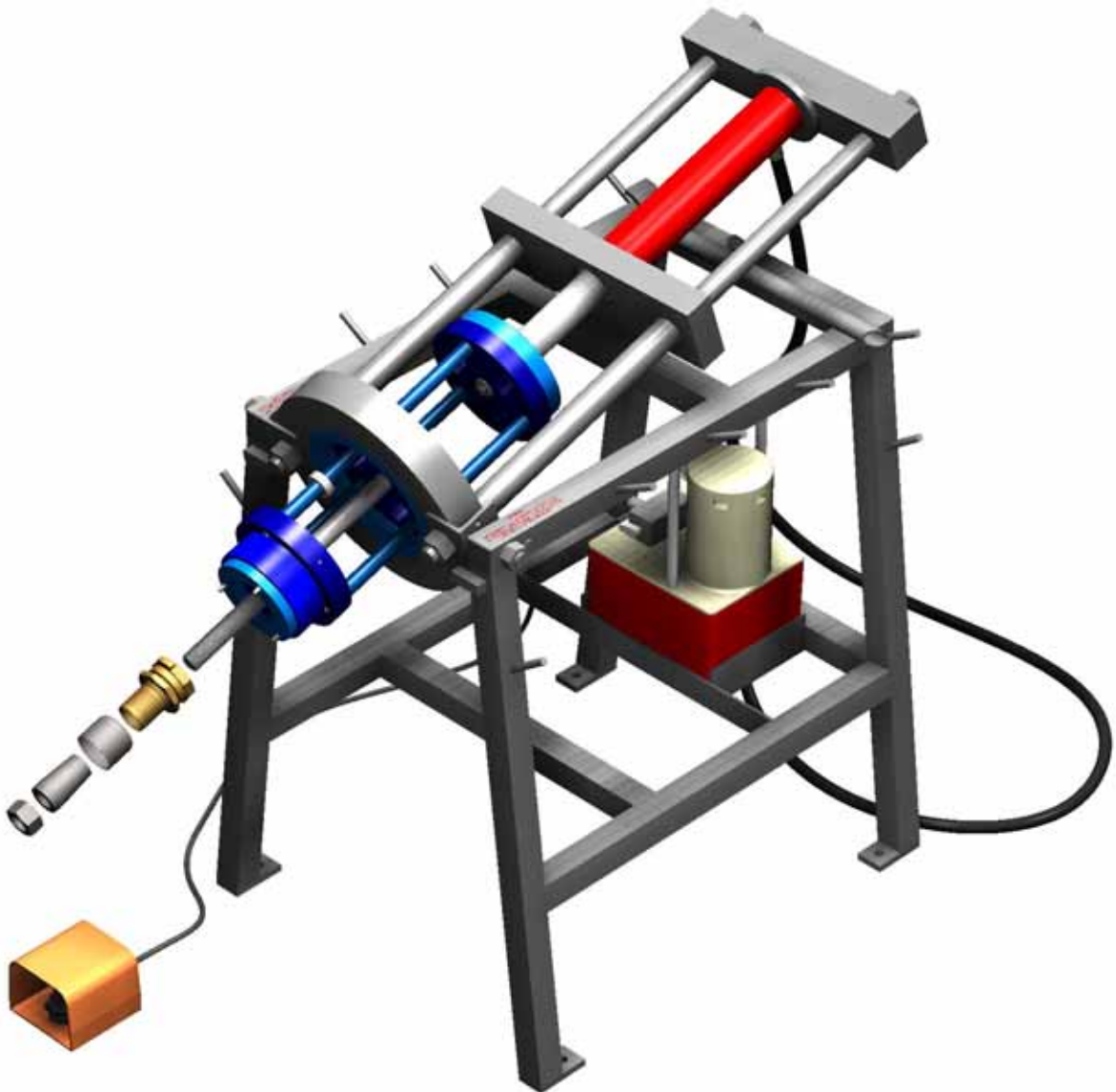




25 Ton Ram Operating Instructions

Section 7

Internal Expansion of Holedall H-520 Series Couplings



Dixon Valve & Coupling Company
800 High Street • Chestertown, MD 21620
ph: 800•355•1991 fax: 800•283•4966
www.dixonvalve.com

1

Before you begin, make sure the Ram is fully retracted. Install the Holedall Petroleum Thrust Plate Adapter (**25ROSTPA**) to the end of the **25IXATTACH** with set screws. Select the proper Pull Rod.

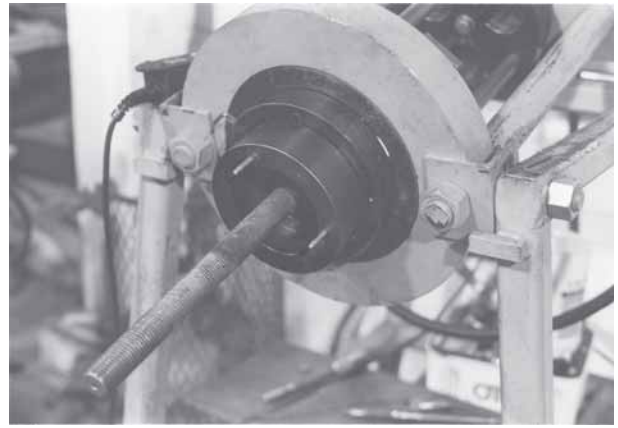
For 5/8" and 3/4" use **25ROSTROD** screwed together with **25ROSTADP**.

For 1" thru 1-1/2" use **25RODSMALL**.

For 2" thru 4" use **25RODLARGE**.

Screw the short threaded end of the rod into the face plate of the **25IXATTACH**.

*Note: Picture shows **25RODLARGE**.*



2

Select the corresponding Thrust Plate for the size fitting that you are installing. Assuring that the recess is facing outward towards the operator, slide the Thrust Plate over the Pull Rod until it reaches the **25ROSTPA**. Align the holes in the Thrust Plate over the pins. Tighten the wing nut to lock it in place.



3

Slide the stem over the Pull Rod and into the recess of the Thrust Plate with the connection side of the stem facing the ram. For male stems, insert the hex into the recess of the Thrust Plate. For female stems, insert the first hex into the Thrust Plate so that it goes all the way through, so that the second hex will fit into the recess of the Thrust Plate.

Note: There is no need to lubricate the plug or stem. The stems are pre-lubricated at the factory.



4

Screw (or slide) the IX plug, small end first, onto the Pull Rod and into the shank of the stem. For 2" and above screw the retaining nut on until it contacts the plug. Move the stem slightly to allow for slack and hand tighten the plug or nut until it is snug.

*Hint: When doing more than 1 hose assembly of the same ID size take the time to screw the Pull Rod further into the face plate of the **25IXATTACH**. This will allow for a shorter cycle time.*



5

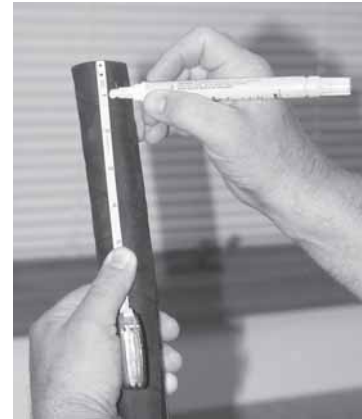
Accurately measure the hose O.D. with a diameter tape. Select the correct Holedall Petroleum Ferrule from the DPL based upon the hose O.D. just measured.

Note: Always measure both ends of the hose for accurate ferrule selection.



6

Make sure the hose end is cut square. Measure and mark the hose in accordance with the provided Insertion Dimension chart (see page 3). This will ensure that the proper rubber displacement “pocket” is maintained when proceeding to Step 7.



7

Ensuring that the end of the ferrule is aligned with the mark from Step 6, slide the hose with ferrule over the shank until the ferrule contacts the shoulder of the stem. Check to see if the proper pocket is maintained.

Important! If there is an insufficient pocket for the rubber to displace into, damage may occur to the stem, ferrule and/or hose.

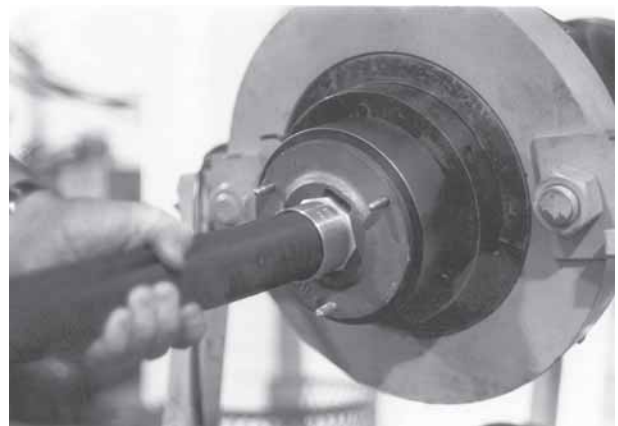


8

While holding the hose and the ferrule firmly against the stem shoulder, engage the Ram by stepping on the foot pedal, or depressing the “ON” button on the remote control. The internal expansion operation is complete when the hose and stem assembly is pushed completely over the internal expansion plug. Release the foot pedal or “ON” switch.

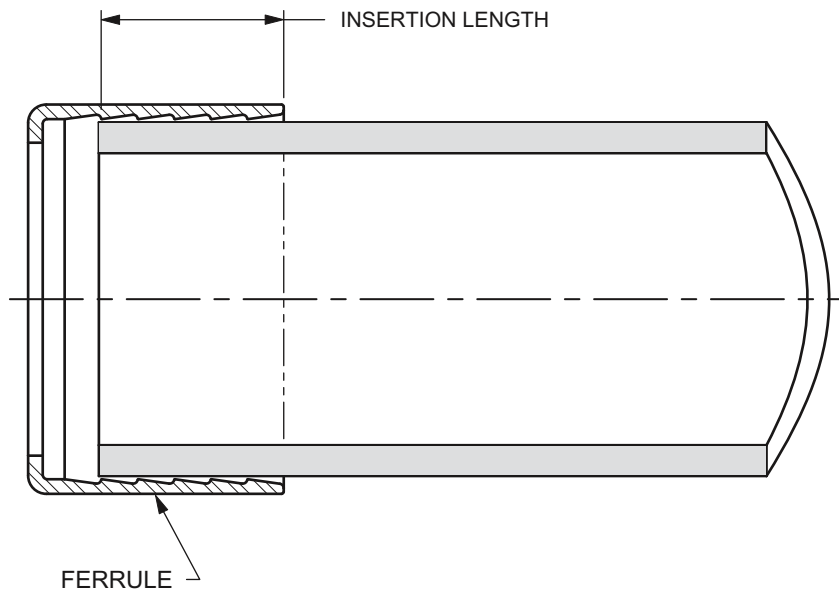
Note: If the gauge reads 10,000 PSI before internal expansion is complete, stop. Contact Dixon for further assistance.

During internal expansion never stand directly in front of the Ram. Visually inspect the coupling and clean excess lubricant from the stem ID. **Dixon Valve and Coupling Company recommends that all hose assemblies be tested as recommended by the Rubber Manufacturers Association.**



Insertion Dimensions for Rostra Fittings

| <u>Ferrule Sizes</u> | <u>Insertion Length</u> |
|----------------------|-------------------------|
| 1" | 25/32" |
| 1¼" | 25/32" |
| 1-3/8" | 25/32" |
| 1½" | 1-1/32" |
| 2" | 1-19/32" |
| 2½" | 2-1/4" |
| 3" | 2-3/4" |
| 4" | 3-7/32" |





25 Ton Ram Operating Instructions

Section 8

Product Updates & Notes

Dixon Valve & Coupling Company
800 High Street • Chestertown, MD 21620
ph: 800•355•1991 fax: 800•283•4966
www.dixonvalve.com



ENGINEERING BULLETIN

PRODUCT UPDATE

Date: October 28, 1997

Part Number: IXM40, 2 ½" Internal Expansion Male Stem

Update: Use M011-384 Thread Adapter for assembly

Reason: Possible thread collapse during expansion process

In order to prevent possible thread collapse on IXM40's during installation, it is recommended that a female threaded adapter be installed prior to installation. The adapter part # is M011-384. Following is the procedure for installation:

1. Lubricate stem ID and small end of expansion plug.
2. Thread M011-384 onto threads of IXM40 hand tight ONLY!
3. Slide stem over pull rod thread adapter end first.
4. Seat M011-384 onto OUTER recess of 25ADAPT250.
5. Follow normal IX procedure.
6. When the assembly is removed from the pull rod, remove M011-384 and clean the stem ID of excess lubricant.

If you have any questions, please feel free to contact Phil Kimble in our Engineering Department.



ENGINEERING BULLETIN

PRODUCT UPDATE

Date: October 6, 1998

To: All 25 Ton Ram Customers

From: Dixon Engineering

Part Number: 4" Swaging and 4" IX Stems

In an effort to keep you up to date on installation procedures for the 25 Ton Ram, please review the following information regarding Swaging of 4" hose and the Internal Expansion of 4" Male Threads.

Swaging:

Dixon recently received a report of a coupling retention situation using 4" Swaged Cam & Groove with Goodyear's Orange Flexwing Hose and 4" TM Holedall Stems on Boston Royalflex 1196 Hose. The fittings were installed using a 25 Ton Ram. Coupling movement occurred.

Both of the situations were corrected by using a die holder longer than the standard die holder (DH9-004). The new longer die holder is part number DH9-004-1.

It has been Dixon Valve's policy that when applications arise where an improvement to a system is warranted, it notifies its customer base. Therefore, it is our recommendation that when doing 4" Swaged Cam & Groove or Standard Holedall Stems, you use the new 4" Die Holder. This is our first experience with any 4" Swage type fittings assembled with the 25 Ton Ram not performing as intended. It is important to note that it is only on the 25 Ton Ram that this new Die Holder is required.

The new Die Holder is to be used in conjunction with the DH9-004 currently in use for 4" stems. The DH9-004 is still needed to do smaller ID hoses, as well as with the 25IXATTACH. The DH9-004-1 is only for 4" ID hose.

Internal Expansion:

Dixon recently received a report of a situation concerning the installation of 4" Internal Expansion Male Threaded Stems (IXCM64). The fittings were installed using a 25 Ton Ram with the 25IXATTACH. At the base of the 25IXATTACH is the 4" Adapter. Over time this adapter end can wear. This wear can cause the 4" IXM64 stem to collapse at the threads during the installation process. This happens because even pressure is not applied on the threads as the stem is being expanded.

The situation can be corrected by using an adapter designed for the 4" fittings. This new part number is M011-385. Unlike the adapter designed for the IXM40's, this adapter is recommended only if the 25IXATTACH has a worn plate. It is not a requirement that it be purchased to do 4" IX Stems.

If you have any questions, please feel free to contact Phil Kimble in our Engineering Department.



25 Ton Ram Operating Instructions

Section 9

Sample Forms

Dixon Valve & Coupling Company
800 High Street • Chestertown, MD 21620
ph: 800•355•1991 fax: 800•283•4966
www.dixonvalve.com

DIXON HOLEDALL TYPE PERMANENTLY ATTACHED COUPLING TEST

ENGINEERING REPORT No. _____

| | | |
|------------------------------|--|----------------|
| SUBJECT: | | |
| HOSE: | WORKING PRESSURE _____ TEST PRESSURE _____ BURST PRESSURE _____ | |
| | "A" END | "B" END |
| HOSE O.D. (free) | | |
| HOSE O.D. (over stem) | | |
| STEM | | |
| FERRULE | | |
| DIE | | |
| MULCORAM | | |
| PUSHER | | |
| FORCE (In PSI) | | |
| REDUCED LENGTH | | |
| HOSE WALL (free) | | |
| HOSE O.D. REDUCED | | |
| STEM – MEAN O.D. | | |
| HOSE WALL REDUCED | | |
| REDUCTION | | |
| <u>REMARKS:</u> | | |

COUPLED BY _____ **DATE** _____

APPROVED BY _____

COMPANY _____

HYDROSTATIC TEST REPORT

ENGINEERING REPORT No. _____

| SUBJECT: | | | |
|------------------------|--------------|----------|---------|
| PRESSURE PSIG | TIME MIN. | COMMENTS | |
| | | "A" END | "B" END |
| | | | |
| | | | |
| | | | |
| | | | |
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| | | | |
| | | | |
| <u>REMARKS:</u> | | | |

TEST CONDUCTED BY _____ DATE _____

APPROVED BY _____

COMPANY _____



25 Ton Ram Operating Instructions

Section 10

Parts List

Dixon Valve & Coupling Company
800 High Street • Chestertown, MD 21620
ph: 800•355•1991 fax: 800•283•4966
www.dixonvalve.com

25 Ton Ram

Equipment to Swage 1 1/4" to 4" ID Hose

25 TONRAM

"Mulcoram" includes pump, 10,000 PSI Hose, Gauge

External Swage Attachments

Please note that on some sizes, more than two attachments may be necessary. Read carefully through all descriptions to determine which attachments are needed for your applications. Please consult the Factory if you need more information.

| | |
|---------------|--|
| 25PUSH400 | 4" Pusher for External Swage (Pusher Hat) (Needed for all sizes) |
| 25PUSH300 | 3" Pusher for External Swaging |
| 25PUSH250 | 2-1/2" Pusher for External Swaging |
| 25PUSH200 | 2" Pusher for External Swaging |
| 25PUSH150 | 1 1/2" Pusher for External Swaging |
| 25PUSH125 | 1 1/4" Pusher for External Swaging |
| DH9-004-1 | Die Holder needed for 4" only (must use with DH9-004) |
| DH9-004 | Die Holder needed for all sizes |
| DH6-003 | Die Holder needed for 1-1/4" to 3" |
| RST300SPACE | 3" Spacer ring for NOS Ferrules (must use with 25PUSH300E) |
| RST200SPACE | 2" Spacer ring for NOS Ferrules (must use with D011-018) |
| RST150SPACE | 1 1/2" Spacer ring for NOS Ferrules (must use with RE150PUSH) |
| RN150NOPUSH | 1 1/2" Pusher for Notched Turned back Nipple |
| RN200NOPUSH | 2" Pusher for Notched Turned back Nipple |
| RN300NOPUSH | 3" Pusher for Notched Turned back Nipple |
| RN400NOPUSH | 4" Pusher for Notched Turned back Nipple |
| M011-331 | Pusher for Female Holedall (TF16WF1-80) |
| M011-332 | Pusher for Female Holedall (TF16WF2-80) |
| M011-333 | Pusher for Female Holedall (TF16WF3-80) |
| 25PUSH125-MOD | Pusher for 1 1/4" Female Holedall |
| 25PUSH200-MOD | Pusher for 2" Female Holedall |

Swage Dies Not Included

Unirange External Swage

Equipment to Install 1/4" to 1" Unirange Couplings

| | |
|-----------|--|
| DH9-004 | Die Holder needed for All Sizes |
| DH6-003 | Die Holder for All Sizes 3" and below |
| DH3-001 | Die Holder needed for All Sizes 1" and below |
| 25PUSH100 | Pusher Adapter (Needed for all sizes below) |
| M011-327 | Pusher for 16P1 |
| M011-328 | Pusher for 16P2, R16P1620 |
| M011-329 | Pusher for 16P3 |
| M011-330 | Pusher for 16P4, R16P1770 |
| M011-320 | Pusher for 12P1 |
| M011-321 | Pusher for 12P2 |
| M011-322 | Pusher for 12P3 |
| M011-313 | Pusher for 8P1 |
| M011-314 | Pusher for 8P2 |
| M011-315 | Pusher for 8P3 |
| M011-310 | Pusher for 6P1 |
| M011-311 | Pusher for 6P2 |
| M011-312 | Pusher for 6P3 |
| M011-306 | Pusher for 4P1 |
| M011-307 | Pusher for 4P2 |
| M011-308 | Pusher for 4P3 |
| AKPUSH | Pusher for Air King 1/2" - 1" |

Swage Dies Not Included

25 Ton Ram

Equipment to Swage 1" through 4" Cam & Groove

| | |
|--------------|---|
| DH9-004-1 | Die Holder needed for 4" Only (must be used with DH9-004) |
| DH9-004 | Die Holder needed for all sizes |
| DH6-003 | Die Holder needed for 3" and below |
| DH3-001 | Die Holder needed for 1" and below |
| 25PUSH400C | Pusher for 4" C |
| 25PUSH400E | Pusher for 4" E |
| 25PUSH300E | Pusher for 3" E |
| D011-018 | Pusher for 2" C, 2" E and 3" C |
| RC150PUSH | Pusher for 1 ½" C (two parts) |
| RE150PUSH | Pusher for 1 ½" E |
| RC100PUSH | Pusher for 1" C |
| RE100PUSH | Pusher for 1" E |
| 150CGSPACE * | Spacer rings for 1 ½" C |
| 100CGSPACE * | Spacer rings for 1" C |

Swage Dies Not Included

* Future designs may not require Spacer Rings. Contact the Factory for more information.

25 Ton Ram

Holedall Die Information

| Range | |
|-----------------|-------------------|
| Min | Max |
| 3/4 x 9/16 | 2 x 1-7/8 |
| 2-1/8 x 1-11/16 | 4-1/2 x 4-1/4 |
| 4-9/16 x 4-5/16 | 6-15/16 x 6-7/16 |
| 7 x 6-1/2 | 10 x 9-1/2 |
| 10 x 9-1/2 | 12-15/16 x 12-3/8 |
| 13 x 12-3/8 | 16 x 15-1/2 |

Dies above are for all swaging applications: 25, 50 and 100Ton Rams

25 Ton Ram

Equipment to Internally Expand Steel IX

| | |
|------------|---|
| 25IXATTACH | Internal Expanding Attachment for 25 Ton Ram includes 4" Internal Expanding Adapter (Needed for all sizes) |
| DH9-004 | Die Holder/ Adapter for 25IXATTACH (Needed for all sizes) |
| 25RODLARGE | IX Rod for 2" - 4" Hose |
| 25RDLG-A | Large Rod for only 25TONRAM |
| 25RDLG-B | Nut only for 15 & 25 TON RAMS |
| 25RODSMALL | IX Rod for 1 ¼" to 1 ½" Hose |
| 25RDSML-A | Small Pull Rod |
| 25RDSML-B | Small Pull Rod Adapter |
| 25RDSML-C | Nut for Small Rod |
| M011-385 | 4" IX Adapter (IXM64 Only) |
| 25ADAPT300 | 3" IX Adapter |
| 25ADAPT250 | 2 ½" IX Adapter |
| M011-384 | 2 ½" IXM40 Adapter (must be used with 25ADAPT250) |
| 25ADAPT200 | 2" IX Adapter |
| 25ADAPT150 | 1 ½" IX Adapter |
| 25ADAPT125 | 1 ¼" IX Adapter |
| 25ADAPT100 | 1" IX Adapter |
| IXPLUG400 | 4" IX Plug for steel & Holedall Petroleum Ftgs. |
| IXPLUG300 | 3" IX Plug for steel & Holedall Petroleum Ftgs. |
| IXPLUG250 | 2 ½" IX Plug for steel & Holedall Petroleum Ftgs. |
| IXPLUG200 | 2" IX Plug for steel & Holedall Petroleum Ftgs. |
| IXPLUG150 | 1 ½" Plug for steel & Holedall Petroleum Ftgs. |
| IXPLUG125 | 1 ¼" IX Plug for steel & Holedall Petroleum Ftgs. |
| IXPLUG100 | 1" IX Plug for steel & Holedall Petroleum Ftgs. |

25 Ton Ram

Equipment to Internally Expand “Flow Chief” Food Grade Fittings

| | |
|---------------|--|
| 25IXATTACH | Internal Expanding Attachment for 25 Ton Ram includes 4" Internal Expanding Adapter for Male NPT (Needed for all sizes) |
| DH9-004 | Die holder/Adapter for 25IXATTACH (Needed for all sizes) |
| 25RODLARGE | IX Rod for 2" - 4" Hose |
| 25RDLG-A | Large Rod for only 25TONRAM |
| 25RDLB-B | Nut only for 15 & 25 TON RAMS |
| 25RODSMALL | IX Rod for 1 ¼" - 1 ½" Hose |
| 25RDSML-A | Small Pull Rod |
| 25RDSML-B | Small Pull Rod Adapter |
| 25RDSML-C | Nut for small Rod |
| 25ADAPT300 | 3" IX Adapter for Male NPT |
| 25ADAPT250 | 2 ½" IX Adapter for Male NPT |
| 25ADAPT200 | 2" IX Adapter for Male NPT |
| 25ADAPT150 | 1 ½" IX Adapter for Male NPT |
| PFADAPT400 | 4" Sanitary End Adapter (Tri Clover Style) |
| PFADAPT300 | 3" Sanitary End Adapter (Tri Clover Style) |
| PFADAPT250 | 2 ½" Sanitary End Adapter (Tri Clover Style) |
| PFADAPT200 | 2" Sanitary End Adapter (Tri Clover Style) |
| PFADAPT150 | 1 ½" Sanitary End Adapter (Tri Clover Style) |
| PFADAPT150-3A | 1 ½" Sanitary End Adapter for 3A(Tri Clover Style) |
| CBADAPT300 | 3" Cherry Barrell Adapter |

25 Ton Ram

Equipment to Internally Expand “Flow Chief” Food Grade Fittings (cont.)

| | |
|------------|---|
| PFACNTA400 | 4" Bevel Seat Acme Nut Adapter (Must buy PFADAPT400 to use this part.) |
| PFACNTA300 | 3" Bevel Seat Acme Nut Adapter (Must buy PFADAPT300 to use this part.) |
| PFACNTA250 | 2 ½" Bevel Seat Acme Nut Adapter (Must buy PFADAPT250 to use this part.) |
| PFACNTA200 | 2" Bevel Seat Acme Nut Adapter (Must buy PFADAPT200 to use this part.) |
| PFACNTA150 | 1 ½" Bevel Seat Acme Nut Adapter (Must buy PFADAPT150 to use this part.) |
| IXFDPLG400 | 4" Food Plug (for stainless steel fittings only) |
| IXFDPLG300 | 3" Food Plug (for stainless steel fittings only) |
| IXFDPLG250 | 2 ½" Food Plug (for stainless steel fittings only) |
| IXFDPLG200 | 2" Food Plug (for stainless steel fittings only) |
| IXFDPLG150 | 1 ½" Food Plug (for stainless steel fittings only) |
| IXFDPLG287 | 3" 3A Food Plug (for stainless steel fittings only) |
| IXFDPLG187 | 2" 3A Food Plug (for stainless steel fittings only) |
| IXFDPLG137 | 1 ½" 3A Food Plug (for stainless steel fittings only) |

25 Ton Ram

Equipment to Internally Expand Holedall Petroleum Fittings

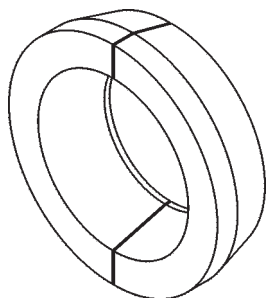
| | |
|-------------|--|
| 25IXATTACH | Internal Expanding AttachmentFor 25 Ton Ram, includes 4" Internal Expanding Adapter for Male NPT (Needed for all sizes) |
| DH9-004 | Die holder/Adapter for 25IXATTACH (Needed for all sizes) |
| 25ROSTPA | Adapter Plate to Hold Thrust Plates |
| 25ROSTROD | Pull Rod for 5/8", 3/4" and 1" - Consists of the following: |
| 25ROSTROD-A | Small Holedall Petroleum Pull Rod |
| 25DSML-B | Small Pull Rod Adapter |
| 25RDSML-C | Nut for Small Rod |
| 25RODLARGE | Pull Rod for 2" through 4" - Consists of the following: |
| 25RDLG-A | Large Rod for only 25TONRAM |
| 25RDLG-B | Nut only for 15 & 25 TON RAMS |
| 25RODSMALL | Pull rod for 1 1/4", 1-3/8" and 1 1/2" - Consists of the following: |
| 25RDSML-A | Small Pull Rod |
| 25RDSML-B | Small Pull Rod Adapter |
| 25RDSML-C | Nut for Small Rod |
| IXPLUG400 | 4" IX Plug for steel & Holedall Petroleum Ftgs. |
| IXPLUG300 | 3" IX Plug for steel & Holedall Petroleum Ftgs. |
| IXPLUG250 | 2 1/2" IX Plug for steel & Holedall Petroleum Ftgs. |
| IXPLUG200 | 2" IX Plug for steel & Holedall Petroleum Ftgs. |
| IXPLUG150 | 1 1/2" IX Plug for steel & Holedall Petroleum Ftgs. |
| IXPLUG138 | 1-3/8" IX Plug for steel & Holedall Petroleum Ftgs. |
| IXPLUG125 | 1 1/4" IX Plug for steel & Holedall Petroleum Ftgs. |
| IXPLUG100 | 1" IX Plug for steel & Holedall Petroleum Ftgs. |

25 Ton Ram

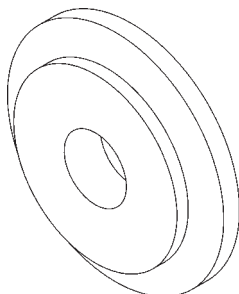
Equipment to Internally Expand Holedall Petroleum Fittings (cont.)

| | |
|-------------|---|
| 25000HTL03 | 1" IX Plug (must use 25ROSTROD) |
| 25000HTL02 | 3/4" IX Plug (must use 25ROSTROD) |
| 25000HTL01 | 5/8" IX Plug (must use 25ROSTROD) |
| 25000HTL26 | Thrust Plate for 3" Aluminum H-520 Style Fittings |
| 25000HTL25 | Thrust Plate for 2 1/2" Aluminum H-520 Style Fittings |
| 25000HTL24 | Thrust Plate for 2" Aluminum H-520 Style Fittings |
| 25000HTL23 | Thrust Plate for 4" H-520 Style Fittings |
| 25000HTL22 | Thrust Plate for 3" H-520 Style Fittings |
| 25000HTL21 | Thrust Plate for 2 1/2" H-520 Style Fittings |
| 25000HTL20 | Thrust Plate for 2" H-520 Style Fittings |
| 25000HTL19 | Thrust Plate for 1-3/8" & 1 1/2" H-520 Style Ftgs. |
| H5211NSTADT | Adapter for NST Female 1" H-520 Style Ftgs. |
| H5231NSTADT | Adapter for NST Female 1 1/2" H-520 Series Couplings |
| 25000HTL18 | Thrust Plate for 1 1/4" H-520 Style Fittings |
| 25000HTL17 | Thrust Plate for 1" H-520 Style Fittings |
| 25000HTL16 | Thrust Plate for 1" x 1 1/2" H570 Style Fittings |
| | Thrust Plate for 1" x 1 9/16" H-570 Style Ftgs. |
| 25000HTL15 | Thrust Plate for 1" x 1-25/64" H-570 Style Ftgs. |
| | Thrust Plate for 1" x 1-29/64" H-570 Style Ftgs. |
| 25000HTL14 | Thrust Plate for 3/4" H-520 Style Fittings |
| 25000HTL13 | Thrust Plate for 3/4" x 1-7/32" H-570/H580 Ftgs. |
| 25000HTL12 | Thrust Plate for 3/4" x 1-9/64" H-570/H580 Ftgs. |
| | Thrust Plate for 3/4" x 1-11/64" H-570/H580 Ftgs. |
| | Thrust Plate for 3/4" x 1-13/64" H-570/H580 Ftgs. |
| 25000HTL11 | Thrust Plate for 5/8" H-570 Fittings |

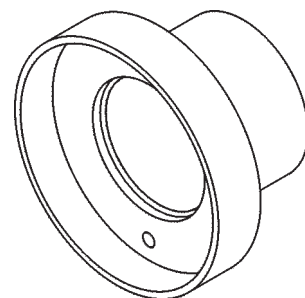
25 Ton Ram Parts *External Swaging*



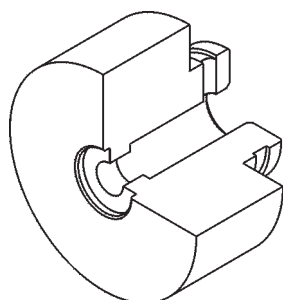
Die Holder



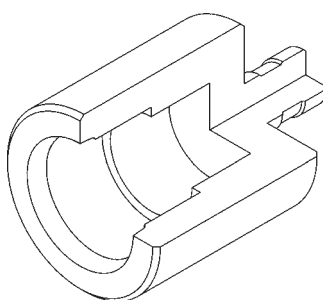
Pusher Plate



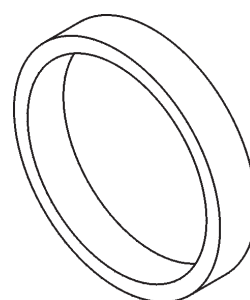
Pusher Hat (4")



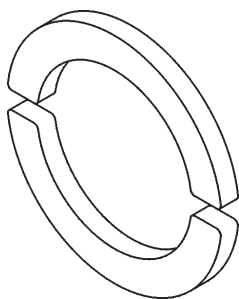
Pusher Adapter



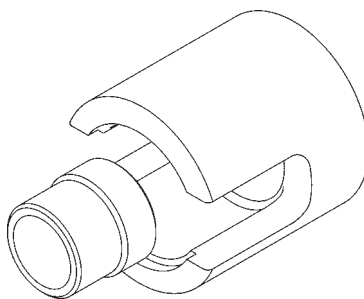
Unirange Pusher



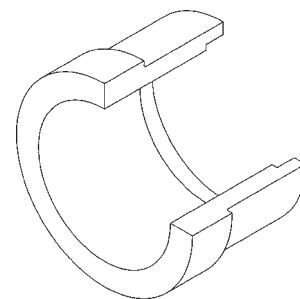
RSTXXX Spacer



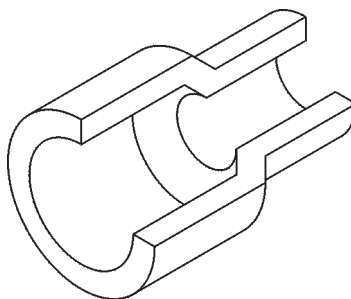
Cam & Groove Space Ring



1 1/2" Cam & Groove Pusher



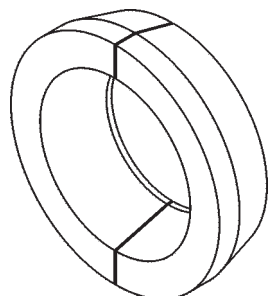
3" & 4" Cam & Groove Pusher



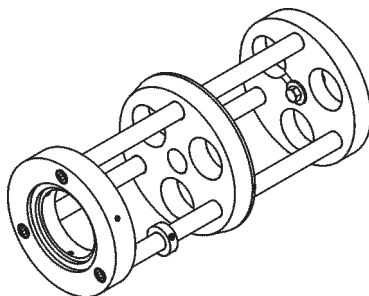
2" Type C & E Cam & Groove Pusher;
3" Type C Cam & Groove Pusher

These drawings represent the overall shape of the parts only. Please consult the complete Ram Attachments listing for specific descriptions regarding size, usage, etc.

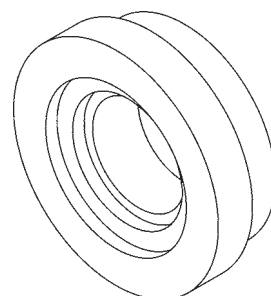
25 Ton Ram Parts -*Internal Expansion*



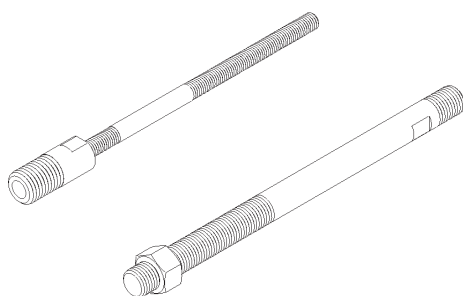
Die Holder



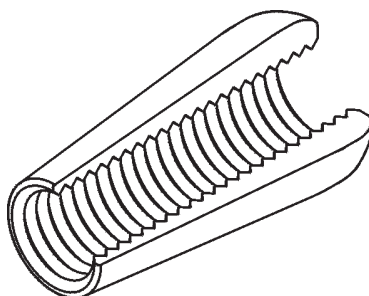
Internal Expanding Attachment



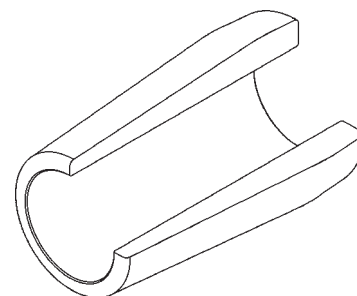
IX Adapter



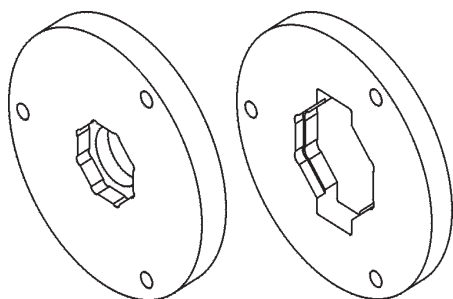
IX Pull Rods



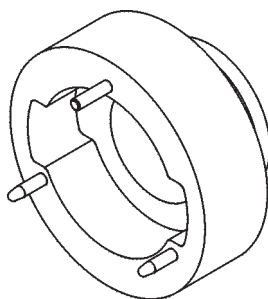
1 - 1 1/2" TX Plug



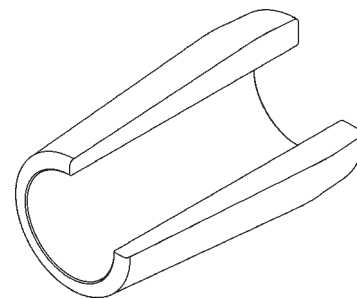
2" & larger IX Plug



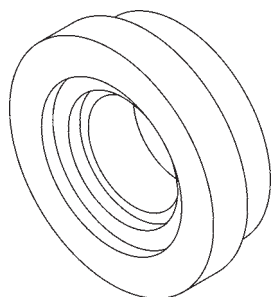
Thrust Plates



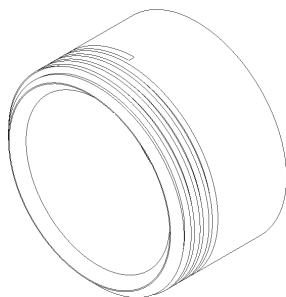
Adapter Plate for Thrust Plate



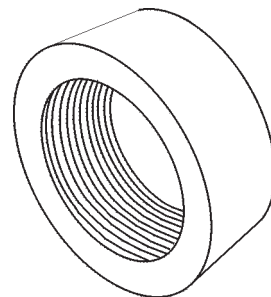
Food Plug



Sanitary End Adapter



Acme Nut Adapter



IX Male NPT Adapter

These drawings represent the overall shape of the parts only. Please consult the complete Ram Attachments listing for specific descriptions regarding size, usage, etc.

PUMP INSTALLATION

