



Town of Simsbury

933 HOPMEADOW STREET

SIMSBURY, CONNECTICUT 06070

Engineering Department

DATE: September 26, 2022

RE: BID NO. 22-03
Repairs and Improvements to Orkil Pond Dam
Simsbury, Connecticut

This **Addendum No. 2** includes clarifications to the Bid Solicitation issued September 2, 2022, for the above-referenced project.

1. Power is available to the Contractor at the pumphouse adjacent to the project site. The Town shall coordinate with the selected contractor to provide 110v or 220v receptacle for the contractor's use.
2. Tee markers will be relocated on Hole 3 to prevent inadvertent golf balls to be hit into construction.
3. Existing carp in Okril Pond will be relocated by Town staff. Relocation efforts will occur prior to project start and may overlap with drawdown of the pond by the Contractor. The carp will be returned to the pond by Town staff following completion of the project.
4. Included in this addendum is the Operation and Maintenance (O&M) Manual for the Slide Gate. This O&M manual includes information in regard to the installation.
5. The attendance record is included in this addendum from the pre-bid meeting on 9/21/2022 at 11:00am.
6. An aerial view is included in this addendum which identifies the access point to the site, three alternative areas for stockpiling material and storing machinery, and the area of the work.

THIS ENDS ADDENDUM NO. 2



OPERATION & MAINTENANCE INSTRUCTIONS

STAINLESS STEEL SLIDE GATES

Simsbury Farms Golf Course
Simsbury, CT

Your P.O.#: 22005877
Whipps Inc. Ref: # 32097

REPRESENTATIVE:
Atlantic Fluid Technology
235 West Main Street, Unit 240
Northborough, MA 01532
www.aftinc.com
(508) 755-0440

MANUFACTURER:
Whipps Inc.
P.O. Box 1058
370 South Athol Road
Athol, MA 01331
(978) 249-7924 (978) 249-3072 Fax

TAG NUMBERS – Whipps 32097

<u>Drawing #</u>	<u>Gate Type</u>	<u>Size</u>	<u>Location</u>	<u>Tag Numbers</u>
BC-924-2717	924 Slide Gates	12" x 12"	Pond Dam	N/A

Table of Contents

SECTION A	Installation, Operation & Maintenance Manual Stainless Steel Slide Gates
SECTION B	Stainless Steel Slide Gates Material and Engineering Standards
SECTION C	Stainless Steel Slide Gates Installation Drawings
SECTION D	Trouble Shooting Guide Lubrication Chart Whipps, Inc. Warranty Preventative Maintenance Whipps Gate Parts Ordering

Whipps, inc.

Installation Instructions

Fabricated Sluice Gate, Slide Gate and Weir Gate

Table of Contents

	Page
Introduction	2
Handling and Storage	2
Installation	3
Prior to Operating	10
Operating Instructions	10
Installation Inspection Check List	10
Maintenance Instructions	11
Installation Drawings	12
Spare Parts	12
Gate Shipment Policy	13
Field Service Policy	14
In an Emergency Situation	14

This manual should be read carefully before installation, operation, and maintenance of Whipps, Inc. equipment

Introduction

This manual describes the recommended methods of installation, initial operation and maintenance for Whipps, Inc. fabricated sluice gates, slide gates, weir gates, operating mechanisms and related components. This manual should be used in conjunction with the approved installation drawings provided by Whipps, Inc. No special tools are required.

Whipps, Inc. gates are custom built to meet the requirements of each specific application. The gates provided have low leakage characteristics. However, care must be taken in the handling, storage and installation of the equipment to ensure that it will function as intended and restrict leakage within the specified parameters.

The information in this manual is intended only as a recommendation for the proper and satisfactory installation of our equipment. Whipps, Inc. assumes no liability, expressed or implied, for the interpretation of the recommendations or faulty installation of the gates. Whipps, Inc.'s responsibility is limited to defects in manufacturing.

Handling and Storage

To prevent personal injury or equipment damage, follow standard safety procedures when handling equipment and be sure rigging equipment is properly set and in safe working condition.

When unloading the equipment from the box trailer or flat bed truck, use care during removal and storage. If the equipment has been shipped mounted to a wooden skid, lift the skidded material from the bottom.

If damage has occurred in transit, file the necessary report with the freight carrier. Please take photos of the damage if possible and contact Whipps, Inc. immediately.

Thoroughly review the packing list and compare the items on the list to the equipment received.

Although Whipps Inc. gates are durable and heavily constructed, care is necessary during storage, handling and installation. Stem threads and hoists have precision surfaces that should be protected from damage.

Equipment should be stored on planks or timbers on a flat surface to keep them off the ground and to prevent distortion. Equipment should be covered with tarps to protect the equipment from foreign matter while stored. Where there are several medium or small gates and where storage space is limited, it may be necessary to stack the gates with heavy timber blocking placed between the gates to prevent damage. When stacking equipment, take care to avoid damaging operator pinion shafts or other components that may extend upward or outward.

If electric actuators or hydraulic cylinders are provided, extra care is required to protect this precision equipment. This equipment should be stored indoors in accordance with the original manufacturer's instructions. For electric actuators, this may include the energizing of heaters upon receipt of units to prevent corrosion of controls. For hydraulic cylinders, this includes storing cylinders vertically to prevent damage to seals.

To prevent bending when handling and storing, stems should be supported over their full length. They should be stored on a flat surface and the threaded portion should be covered and protected from damage. Couplings and thrust nuts (when applicable) may be shipped on the stems and may require removal prior to installation. Stop collars and anchor bolt hardware is normally shipped in a bag or box. Operating mechanisms should be handled and treated as precision machinery and protected accordingly. See actuator O&M manual for storage instructions.

Installation

Installation - General

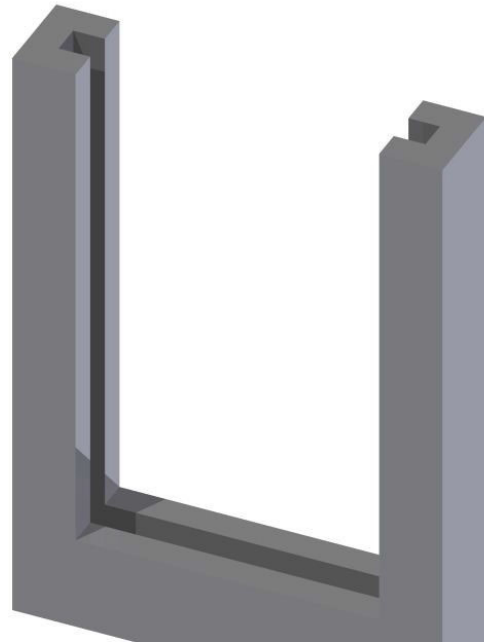
The most important aspects of a gate installation are listed in this section. If these recommendations are followed, a proper gate installation is assured.

Carefully review the installation drawing for each gate prior to installation to confirm proper setting and component location. If the installation drawings are not available, please contact Whipps Inc. at 978-249-7924 or www.whipps.com.

If up stop bolts (upward opening gates) or down stop bolts (downward opening gates) have been removed from the side frames to facilitate installation, they must be re-installed.

Installation - Embedded Frames

1. On gates with embedded side frames and/or an embedded invert member, box-outs or recesses are required in the channel walls and/or the channel floor during the concrete pour. The box-outs shall be of sufficient size to accommodate the gate. See installation drawings for dimensional information.
2. The frame must be well supported prior to the addition of grout to prevent distortion. Distortion of the frame will cause excessive operating effort and / or excessive leakage.
3. Care should be taken to keep the seals and slide free from grout.
4. Follow grout or concrete manufacturer requirements while filling and curing box-outs. Protect curing product from freezing as directed by manufacturer, and ensure products are mixed thoroughly and in correct proportion/ condition.



Installation – Gate and/or Components Mounted with Anchor Bolts

When anchor bolts are furnished for mounting the gate or components such as pedestals, stem guides and/or wall brackets, the location and projection of the anchor bolts will be shown on the installation drawing. In most cases, epoxy or wedge type anchor bolts will be utilized.

When hook type anchor bolts are utilized, the anchor bolts should be placed in the holes drilled in the forms at locations indicated on the drawings. The hook ends of the anchor bolts should then be wired to the opposite form or to reinforcing rods to hold the bolts firmly in place.

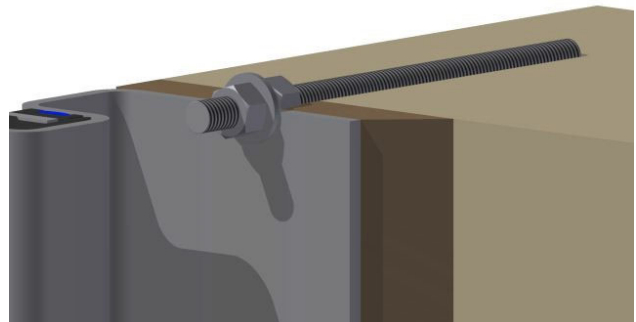
Where gates are mounted with anchor bolts it is necessary that a uniform grout pad (non-shrink grout) or a resilient gasket be placed between the flange of the gate and the concrete wall. This grout or gasket is necessary to serve as a seal between the gate and wall and the type will be indicated on the installation drawings. The projection of the anchor bolts, shown on the installation drawings, includes provisions for the grout or gasket. Grout pads might also be required for pedestals, stem guides or wall brackets.

When a gasket is utilized to seal between the gate and the wall, the wall will need to be straight and plumb. If the wall is not straight and plumb, leakage can occur between the gate and the wall. Removal of the gate, modifications to the wall and re-installation of the gate may be required to rectify this situation.

Gates should not be mounted directly to a wall without grout or a gasket as this will result in leakage between the gate and wall.

1. All anchor bolts should be checked prior to installation to ensure that the threads are undamaged. Anchor bolts should be installed as recommended by the anchor bolt manufacturer.

2. **Do not install the gates without mounting the jacking nuts on the anchor bolts as shown on the installation drawing.** If the jacking nuts are not installed and the outside nuts are over tightened, frame distortion can occur and this can lead to excessive leakage. Frame distortion can pull the seal away from the slide thus creating a path for leakage.



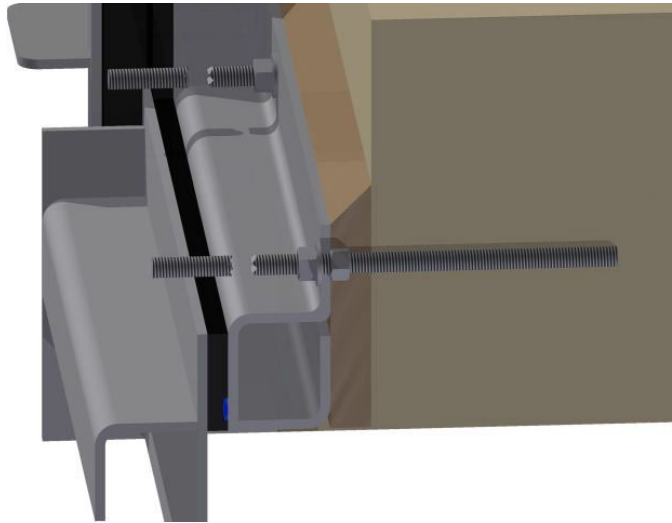
3. Two nuts will be provided for each anchor bolt that requires a jacking nut. Refer to the installation drawings for details. The jacking nut should be installed on the anchor bolt prior to mounting the gate, leaving approximately 1 inch for the insertion of grout. The jacking nut needs to be positioned to ensure that the gate will be mounted true and plumb, even if the concrete wall is not straight.
4. After anchor bolt and jacking nut installation in the wall, the anchor should be lifted and carefully set in place in such a way as to not damage the threads on the bolts. After the gate is mounted on the anchor bolts, attach the other nuts to the anchor bolts. The use of the double nut arrangement helps to ensure that the gate will be mounted straight and plumb and can be firmly tightened into position without distortion.

5. Horizontal Invert and Top Seals – Special Care:

Wall mounted gates that have a horizontal invert seal, or horizontal top seal: extra care will be required to insure the correct seal compress against the slide plate to insure minimum amount of leakage. This may require the gate frame with horizontal seals to be jacked away from the concrete wall to apply more force on the seal that is in contact with the slide plate. This is accomplished by using the jacking nut that was installed with the anchor studs behind the horizontal seal. When properly adjusted, one should not be able to slide a 0.004" feeler gauge between the seal and the gate disc. **This is one of the most important procedures on installing gates with a horizontal seal member.**

6. With the gate flange located approximately 1 inch from the wall, forms should be mounted around the flange and a non-shrink grout should be placed between the flange and the concrete wall. The grout needs to be completely applied around the perimeter of the gate as shown on the installation drawings. All voids should be filled with grout to ensure leakage cannot occur between the gate and wall. Dry packing grout will not produce a proper water seal and should not be considered.
7. Care should be taken to avoid getting grout on the seals or the slide. Extra care should be taken on gates with top seals. All grout that adheres to the seals or the slide should be removed before operating the gate. This could cause extensive seal damage.

8. **Closely review the installation drawings, as it might be necessary to grind or cut off a portion of the anchor studs to provide clearance for unimpeded vertical travel of the slide.** Check the projection of the anchor bolt across the top of the opening on upward opening gates with top seals and check the projection across the bottom of the opening on downward opening gates. Where shown, the anchor bolt should be cut down to the nut.

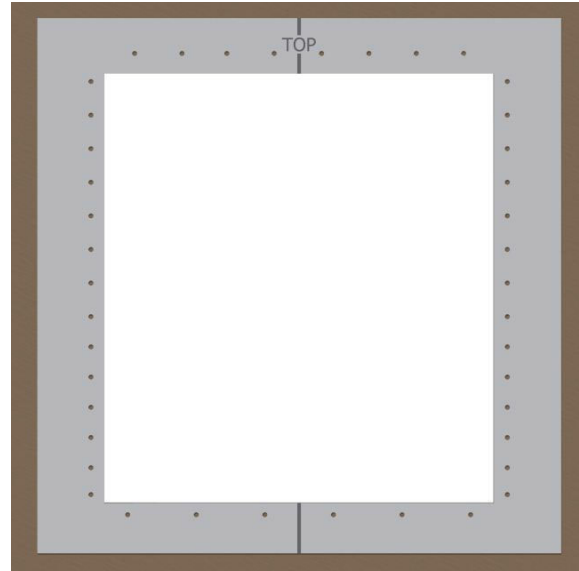


9. If any upstop bolts (upward opening gates) or downstop bolts (downward opening gates) were removed from the side frames to facilitate installation, re-installed them now.

Installation - Wall Thimbles

1. The front face of the rectangular, square or circular wall thimbles are marked with vertical centerlines and with "TOP" stamped on the top of the wall thimble. **Wall thimbles should be set in place with the "TOP" mark up and top and bottom centerline marks plumb.**

2. After being set at the proper elevation, the wall thimble must be internally braced to carry the weight of the concrete. Care should be used in placement of the braces so as not to distort the wall thimble. Gate attachment hardware will be misaligned if the wall thimble is distorted.
3. The wall thimble should be firmly supported on the form. Forms should be supported and stiffened against movement. If forms move, they will distort the wall thimble mounting flange and the gate may leak.
4. The tapped holes in the face of the wall thimble must be plugged or capped to prevent concrete from entering the holes.
5. After the concrete has hardened and the forms removed, the front surface of the wall thimble should be thoroughly cleaned. Make sure to remove all concrete that has flowed onto the surface from the edges. All tapped holes should be inspected and cleaned of concrete if necessary.



Installation - Gate Mounted to New Wall Thimble

1. The face of the wall thimble should be thoroughly cleaned and all wall thimble studs in place. Care should be taken to prevent damage to the studs during installation.
2. A gasket material is required between the surface of the wall thimble and the mounting flange of the gate. Mastic is normally used for this purpose and should be applied in accordance with the label directions.
3. If a gasket material other than mastic is used, it should be installed over the studs to provide a smooth mounting surface for the gate. If the gasket is other than one piece, the gasket joints should be aligned in accordance with the match markings and cemented with a liquid-type gasket material. When applying gasket materials, care should be taken to ensure that excessive amounts of lumpy, dried materials are not present when the gate is drawn tightly and evenly to the wall thimble.
4. The mounting flange of the gate should be thoroughly cleaned.
5. The gate can then be lifted and set over the studs and the nuts put in place and tightened. Care should be taken during this process to help ensure that the threads on the studs are not damaged. The sequence of tightening should be done in multiple passes by applying

progressively larger force each pass. Equal torque should be applied to all nuts so that the gate is firmly and evenly tightened to the mounting flange without distortion.

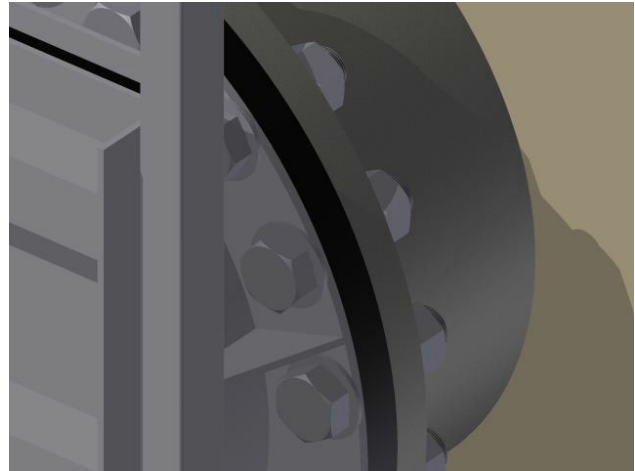
Installation - Gate Mounted to an Existing Wall Thimble

See instructions for “Installation - Gate Mounted to a New Wall Thimble” after a close inspection of the existing wall thimble once the front flange is accessible. If the mounting flange of the existing wall thimble is damaged, contact the factory prior to installation.

Installation – Gate Mounted to a Pipe Flange

Where gates are mounted on pipe flanges, the procedure is the same as when the gate is mounted on a wall thimble. The type of attachment hardware shall be as shown on the installation drawings.

Consult the factory for assistance if the flange on which the gate is to be installed is damaged or unusable for any reason.



Nut Tightening Torque

Proper tightening of the nuts on anchor bolts holding the gate to the wall or studs holding the gate to the wall thimble may prevent serious problems in operation or performance of the gate. Tabulated below are recommended torque values for common fastener sizes. Coat all anchor bolts with approved anti-gall compound (fastorq faslube AG or approved equivalent.)

DIAMETER (in.)	TORQUE (ft.-lb.)
1/2	35
5/8	75
3/4	100
7/8	150
1	200

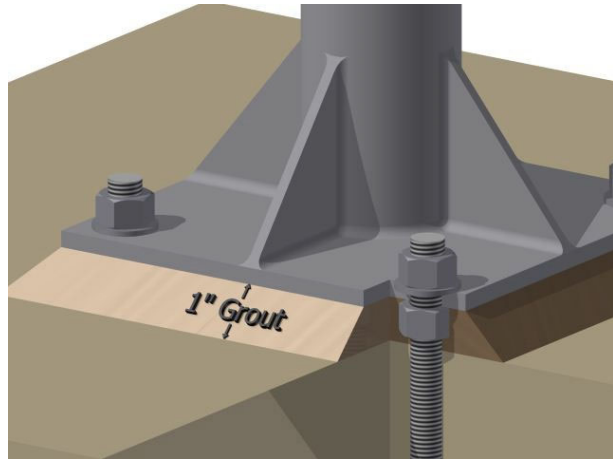
Installation – Assembly

On non-self contained gates, some field assembly is required. Refer to the installation drawings for the location and position of all components.

When assembling gates that have dual stems. Be sure that the stems are installed straight and plumb. When the operators are installed, it is important that both stems be in proper time and the top of the slide be level.

All pedestals are identified by the installation drawing and/or drawing number and should be used with the proper gate and stem.

1. After the stem has been completely assembled and positioned in place, the operator can be lowered onto the stem and turned into position by operation of the handwheel or crank.
2. Jacking nuts should be placed on the anchor bolts between the operating floor and the base of the pedestal so that it is plumb and the base is approximately 1" above the operating floor.
3. Approximately 1" of grout should then be placed between the pedestal base and the operating floor.
4. After the grout has hardened, the outside anchor nuts should be tightened firmly in place.
5. For manual operators, after the operator has been installed, tension should be applied to the stem by the handle or crank in a direction that would normally open the gate. However, the gate should not be opened. The intent is merely to apply tension that will result in a straight stem.
6. For electric actuators, the gate should be opened with the manual handwheel at least 3 inches before using the electric controls. In this manner, the proper phasing and direction of rotation of the motor can be determined without damaging the gate assembly. Once the unit has been installed, the manufacturer's directions should be followed closely in setting the closing and opening limit switches. The torque switches have been properly set at the factory and should not need adjustment. Follow the manufacturer's instructions if it appears that adjustment is necessary.
7. The stem guide, when applicable, should be anchor bolted to the wall in accordance with the installation drawings with uniform clearance possible between the stem and the stem guide bushing.
8. The stem should be thoroughly cleaned and lubricated with high pressure type industrial grease, such as Mobil Centaur Moly or equal. See lubrication chart.
9. The gates should be placed in the fully closed position. On upward opening gates, the slide should be lowered so that there is minimum compression of the slide onto the invert seal. On downward opening gates, the slide should be positioned as shown on the installation drawing.



10. Stop collars are provided on manually operated gates. The stop collar should be threaded onto the top of the stem only after the operator has been installed and the gate is in the fully closed position. Set the stop collar so there is approximately 1/16" of clearance between the bottom of the stop collar and the top of the operator nut. Set screws should then be tightened to hold the stop collar in place.
11. Stem covers should be attached immediately after gates are installed. See electric actuator O&M for factory recommendations on mounting and sealing threaded stem cover adaptors. Seal connection between stem cover and stem cover adapter using silicone following stem cover installation. Preventing water from intruding the actuator and debris build up on the threaded stem. Mylar indicating strips, positioned to indicate the location of the gate in both the fully open and closed positions.
12. The crank or handwheel should turn easily. If there is any binding or noise during operation, check to be sure that the stem guides, pedestal and stem are properly aligned and the stem threads are lubricated. No more than 40-foot pounds of force should be applied while turning.

Hydraulic Cylinder Operators

Hydraulic cylinders should be stored in the vertical position and filled with hydraulic fluid. If it is necessary to store them horizontally for a short period, they should be rotated every two weeks to help prevent damage to the seals.

1. Hydraulic cylinders should be mounted on the anchor bolts in such a way that the piston rod and stem are in proper alignment and there is sufficient clearance for piping, fitting, etc.
2. The coupling between the piston rod and the stem should be screwed into place and locked.
3. With the gate in the closed position, the piston should be lowered so that it is in contact with the bottom head of the cylinder.
4. With the piston in this position, the thrust nut should be adjusted on the stem so that it is in contact with the bottom of the thrust nut pocket. Set screws should be tightened to lock it in place. In most cases, the top area of the piston is larger than the underside. Therefore, if pressure applied to both surfaces is the same, more force will be applied in the closing direction than in the opening direction. For that reason, pressure-reducing valves should be provided in the line to the top of the cylinder to lower the pressure to that required to properly close the gate. In this way, full operating pressure can be applied to the bottom of the piston resulting in more opening than closing force. All piping should be thoroughly flushed and cleaned prior to making connection to the hydraulic cylinder.
5. Operate the hydraulic motor by moving lever valve either up or down for desired direction. Lever should be in the CLOCKWISE position to raise the gate and COUNTER CLOCKWISE to lower the gate.

Prior to Operating

1. Clean both sides of the slide, the guides, seals and stem of all grout, sand, paint and other debris.
2. Check to make sure that stem guides are positioned correctly and are securely fastened.
3. Clean and lubricate the stem threads. See lubrication chart.
4. Adjust stop collars and/or limit switches.
5. Install stem covers. Seal connection between stem cover and stem cover adapter using silicone following stem cover installation.

Operating Instructions

Whipps, Inc. fabricated gates are constructed to operate satisfactorily under the specified operating conditions. These gates should be operated with care so as not to exceed the specified conditions. If, in the operation of the gate, an obstruction is met, either in the opening or closing direction, the obstruction should be removed before continuing in the operation. When the gate is fully opened or closed, excessive force should not be placed on the handwheel, crank or gate stem by personnel in an effort to move the gate further. There should never be a need for a pipe extension or other additional leverage applied to the handwheel or crank. If excessive force is required, a thorough visual inspection of the gate assembly and stem is strongly recommended.

If a problem arises in the operation of the gate, such as an unusual head condition or evidence of excessive corrosion, the factory should be consulted before the gate is used or operated.

Installation Inspection Check List

Manually Operated Gates

1. Check hoist, stem guide, and gate attaching bolts for proper tightness.
2. Apply tension to stem and check stem guides for proper alignment. There must be a uniform clearance between the operating stem and stem guides.
3. Visually inspect gate seals, including the invert seal, and both sides of the slide. Thoroughly clean off foreign matter. Whipps recommends exercising the gates every month during routine inspection and maintenance.
4. Visually inspect the threaded portion of the stem. It must be clean and free of foreign matter, including dirt or sand, and lubricated with suitable industrial grease. If a wire brush is used to clean the stem, use only a stainless steel type. Do not use a carbon steel brush!
5. Adjust stem stop collar to within 1/16" of the top of the hoist operating nut and lock in place.

6. Stem covers should be attached immediately after gates are installed. See electric actuator O&M for factory recommendations on mounting and sealing threaded stem cover adaptors. Preventing water from intruding the actuator and debris build up on the threaded stem. Seal connection between stem cover and stem cover adapter using silicone following stem cover installation. Mylar indicating strips, positioned to indicate the location of the gate in both the fully open and closed positions.

Maintenance Instructions

Gates

Gates should be visually inspected at regular intervals (at least every six months) for signs of misalignment, damage or corrosive attack. Corrosion, when it occurs, is most prominent at the water line.

Please note gates with non-rising stems typically require additional maintenance. If the water level rises to the threaded portion of the stem, the threads may become coated with grit or debris. If the threads become grit laden, the following procedure is recommended to prolong the useful service life of the operating nut (mounted on the slide):

1. The threaded portion of stem should be cleaned and re-greased. The stem must remain free of grit and be sufficiently lubricated to prevent accelerated wear to the operating nut (mounted on the slide).
2. Whipps does require gates have occasional operation during the course of a year. If allowable the gates should be exercised at least once every 3 months, keeping the guides clean and free of debris.

Manual Operators

At least once a year, grease fittings (if applicable) should be lubricated with a small amount of heavy duty grease which will not harden in cold weather nor become liquid in warm weather. See Lubrication Chart. Some manual operators may be permanently sealed, and these units will not have lubrication fittings. Whipps recommends exercising the gates every month during routine inspection and maintenance

Electric and Hydraulic Operators

Periodic maintenance schedules should be set-up in accordance with the original manufacturer's operation and maintenance manual. Do not operate with portable an electric or hydraulic operator until all stop collars have been placed in the proper position and set into place.

1. Stem covers should be attached immediately after gates are installed. See electric actuator O&M for factory recommendations on mounting and sealing threaded stem cover adaptors. Seal connection between stem cover and stem cover adapter using silicone following stem cover installation. Preventing water from intruding the actuator and debris build up on the threaded stem. Mylar indicating strips, positioned to indicate the location of the gate in both the fully open and closed positions.

Modulating Electric Operators

These operators can cause accelerated wear in the operating nut since the stem and gates are operated more frequently and at times continuously.

1. The threaded portion of the stem must be clean and greased always.
2. The operating nuts should be removed and inspected for wear after the first six months of operation and every year thereafter.
3. Replace bronze operating nut as soon as noticeable wear is evident.

Operating Stems

It is important that operating stems be periodically cleaned and greased. Even though some environmental conditions are more severe than others and the use of pipe covers will protect stems, they still need to be cleaned and greased at least once every six months, more often if the grease becomes dirty. This is especially important on large gates and/or frequently operated gates such as gates with modulating electric actuators. See Lubrication Chart.

Installation Drawings

The drawings submitted by Whipps, Inc. for approval and/or field use, are planned so that the installation drawing is the master reference.

The drawings depict as much as possible of the structure surrounding the supplied equipment. The location of embedded material such as anchor bolts and wall thimbles are shown. The identification of fasteners and components (studs, anchor bolts, gate assemblies, hoists, stems, stem guides, stem couplings, adaptor plates, wall thimbles, thrust nuts, stop collars and other equipment) is done by calling out physical sizes and/or assembly or detail drawing numbers. More information is available on the detail drawings, which have been included with the installation drawing.

Spare Parts

Whipps, Inc. does not typically recommend stocking spare parts by customers or owners since the equipment is designed for a very long service life when recommended maintenance procedures are followed.

If a repair part is required, contact the PARTS DEPARTMENT at Whipps, Inc. at 978-249-7924 or www.whipps.com with as much of the following information as possible:

1. Plant name and location.

2. Original (four or five digit) shop order number which is indicated on correspondence and installation drawings.
3. The installation drawing number, and a description of the part, with any other available drawing numbers or the size (width x height) and location of the gate in the plant.
4. Description of damage and cause. (Digital photos of damage are useful.)
5. Approximate delivery requirements.

Gate Shipment Policy

The equipment furnished on this order has been inspected prior to leaving the factory and has been accepted by the freight carrier. Please check the packing list accompanying the shipment for shortages and examine the equipment for damages prior to accepting the shipment. Before handling, storing or installing this equipment, read the installation manual that accompanies the shipment.

Missing Equipment

If there is missing equipment, report it to the Whipps, Inc. Service Department upon receiving the equipment. Claims for shortages of equipment shown on the packing list will not be accepted unless a claim is filed within (30) thirty days of the shipment of the equipment.

Damage in Transit

If the equipment has been damaged in transit, the purchaser is responsible for filing the claim with the transport company. Please contact Whipps, Inc. for assistance in filing the claim.

Installation, Inspection and Adjustment

Installation supervision, inspection of installed equipment, setting of limit switches and certification of satisfactory initial operation are not included unless specifically indicated on the customer's purchase order and accepted by the company. Otherwise, Whipps, Inc. will provide this service at the standard published charges.

Field Issues

If trouble develops either in the installation, operation or performance of the equipment, the installation manual and drawings should be checked to determine if the equipment has been installed properly. If proper performance or operation cannot be obtained and assistance from the factory is desired, please contact Whipps Inc or the local representative. Arrangements will

be made to send a service technician to the job site if required. The service technician will make a thorough examination of the problem and if the equipment is faulty in workmanship or material, the necessary repairs will be made by the factory at no cost to the purchaser if within the warranty period.

If, however, the problem is due to faulty installation or adjustment, the cost of the field service will be charged to the purchaser.

If repairs are made in the field by the purchaser or authorized by the purchaser, back charges for these repairs will not be accepted by Whipps, Inc. unless we have been notified prior to the incurring of these costs and has accepted the responsibility for these repairs.

Whipps, Inc. will not be liable for contingent costs or costs of delays due to the faculty equipment and the repairs thereof.

Field Service Policy

Field service charges begin the time of departure from the Whipps facility and accrue until the return of the service person; it includes a daily rate plus travel and subsistence expenses. Premium day and hour rates will be charge on Saturdays, Sundays, and Holidays and for time spent before 6 a.m. or after 5 p.m., or over eight hours per day. A schedule of Field Service charges is available from the Whipps, Inc. Field Service Department.

In an EMERGENCY SITUATION, check the following:

Check the operator where the operator and stem interface. Check the operating nut to ensure that the nut is intact. If the internal threads on the nut have been stripped, proceed with replacement of the nut. If a stripped nut has caused the slide to drop and the slide needs to be raised, a mechanical means of lifting the slide will be required. Once lifted, the slide should be secured in place.

If the operating nut is intact, check the connection between the lower portion of the stem and the slide. On gates with rising stems, this connection is typically a bolted connection. On gates with non-rising stems, there may be a bronze thrust nut. If a thrust nut is used, check the internal threading on the thrust nut to ensure it has not been stripped. If a stripped nut has caused the slide to drop and the slide needs to be raised, a mechanical means of lifting the slide will be required. The stem may need to be removed prior to raising the slide. Once lifted, the slide should be secured in place.

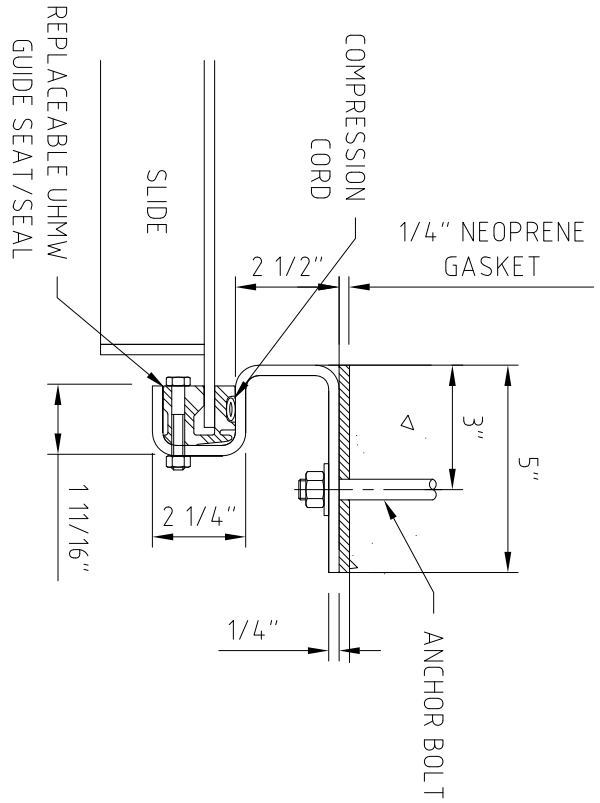
If the gate is outfitted with electric actuator and the actuator is not functioning, please consult the troubleshooting portion of the O&M manual.

If there are no apparent problems with the operating nut, thrust nut or actuator, visually inspect the gate to ensure there are no obstructions preventing operation.

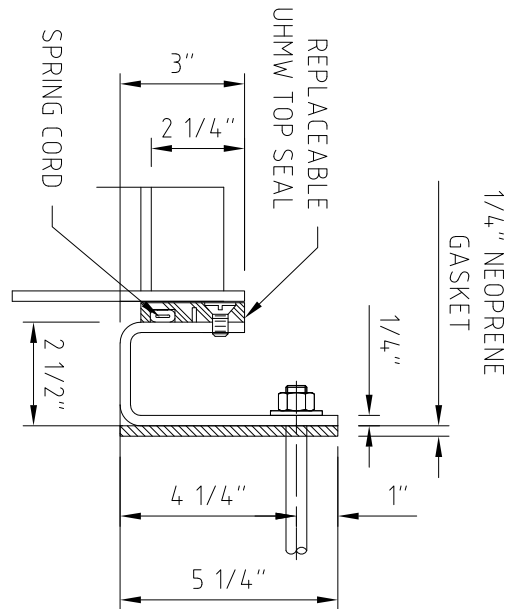
Further Questions?

Please contact Whipps, Inc. if unforeseen problems occur that are not covered in this manual.

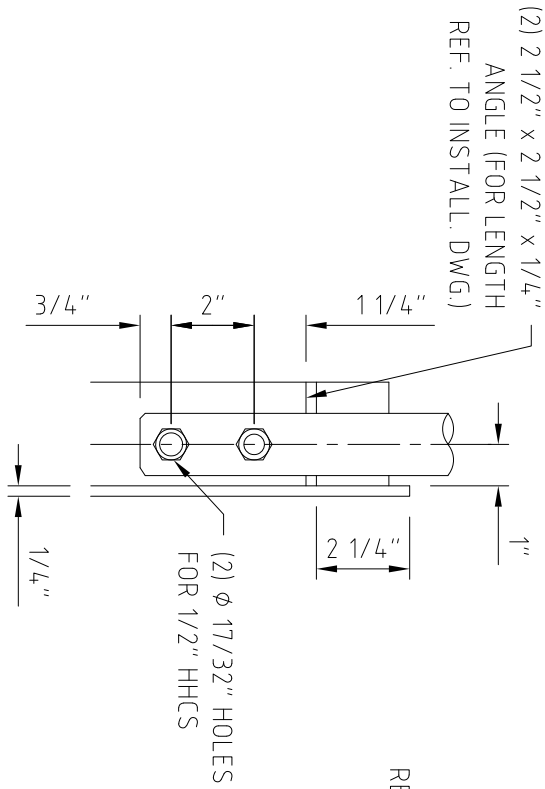
ENGINEERING STANDARDS	Whipps, inc. 370 South Athol Rd, Athol MA 01331	DATE 9/1/22	DRAWN BY MJ
STAINLESS STEEL SLIDE GATE		SS.O. NUMBER 32097	
		DRAWING NUMBER A-320-970	REV B
GATE DESIGN TO AWWA STANDARD C561-21 WELDING TO AWS D1.6			
SLIDE			
<ul style="list-style-type: none">• MIN THICKNESS 1/4" ALL PARTS• MAX BENDING STRESS 18,000 PSI• MAX BENDING DEFLECTION < 1/360 OF SPAN			
GATE FRAME			
<ul style="list-style-type: none">• MIN THICKNESS 1/4" ALL PARTS			
STEM			
<ul style="list-style-type: none">• MAX UNSUPPORTED STEM LENGTH <=200 L/r BASED ON PITCH DIAMETER			
HOIST			
<ul style="list-style-type: none">• MAX 40# PULL @ SPECIFIED OPERATING HEAD			
MATERIAL STANDARDS			
SLIDE PLATE	ASTM A240 STAINLESS STEEL TYPE 304L		
SLIDE STIFFENERS	ASTM A240 STAINLESS STEEL TYPE 304L		
SLIDE STEM CONNECTOR	ASTM A240 STAINLESS STEEL TYPE 304L		
FRAME GUIDE	ASTM A240 STAINLESS STEEL TYPE 304L		
FRAME INVERT	ASTM A240 STAINLESS STEEL TYPE 304L		
FRAME SEALS	ASTM D4020 UHMWPE		
INVERT SEAL	ASTM D2000 55-60 DUROMETER NEOPRENE		
STEM	ASTM A276 STAINLESS STEEL TYPE 304		
GATE FASTENERS	ASTM A276 STAINLESS STEEL TYPE 316		
GATE ANCHOR STUDS	ASTM A276 STAINLESS STEEL TYPE 316		
WHIPPS INC MANUFACTURES ALL STAINLESS STEEL FORMED SECTIONS FROM ASTM A240 PLATE. ASTM A276 RELATES TO STAINLESS STEEL BAR (OPERATING STEM) & TUBE SECTIONS ONLY			



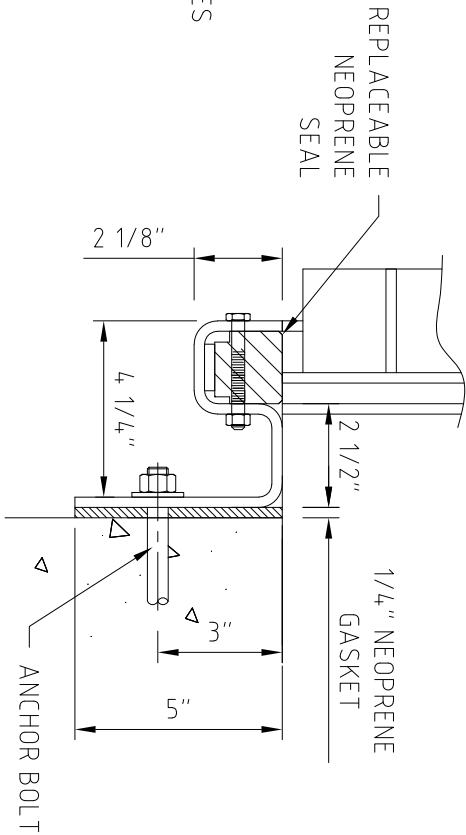
GUIDE SECTION



TOP SEAL SECTION



STEM CONNECTOR

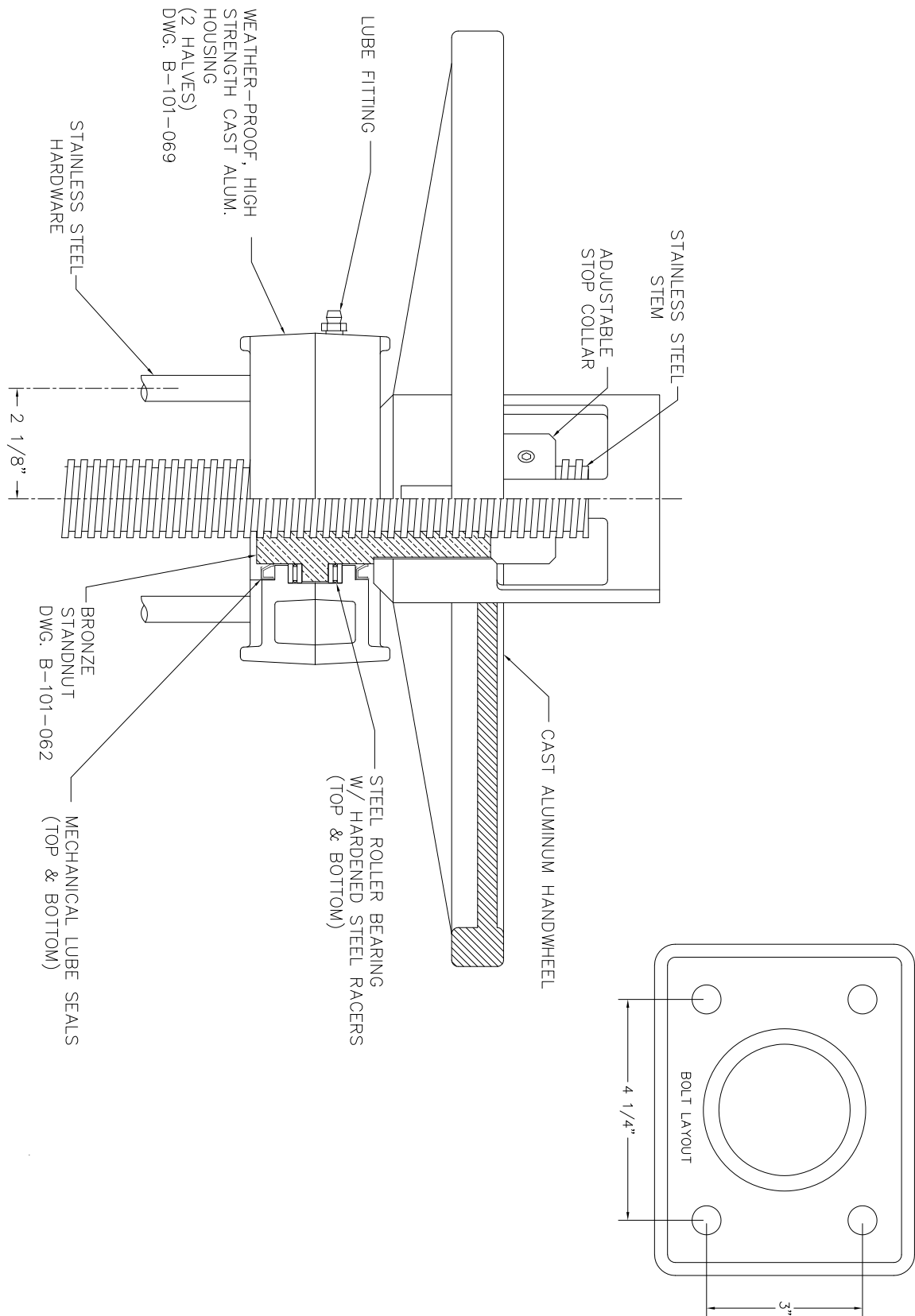


INVERT SECTION


Title		Material	
SERIES 924 SLIDE GATE SECTION DETAILS		STAINLESS STEEL 304L	
Drg. No.	BC-924-2717-S2	S.O. No.	32097

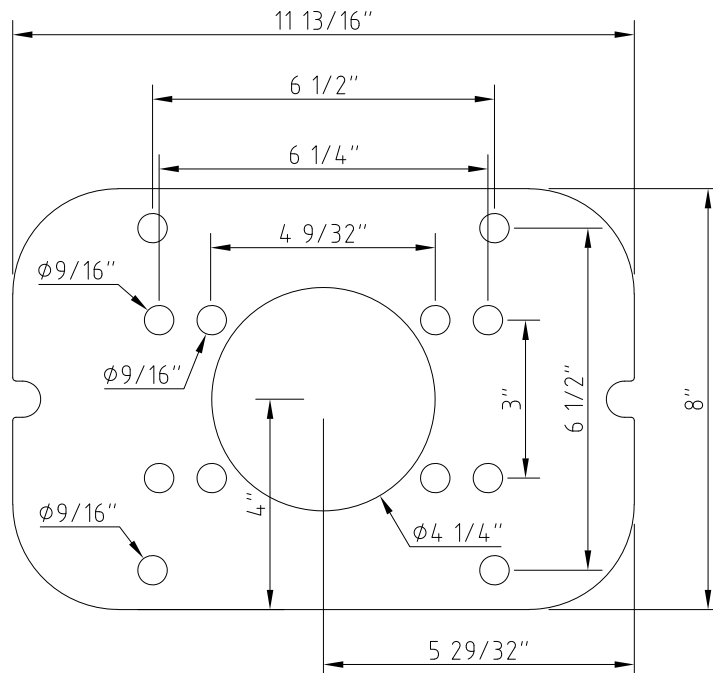
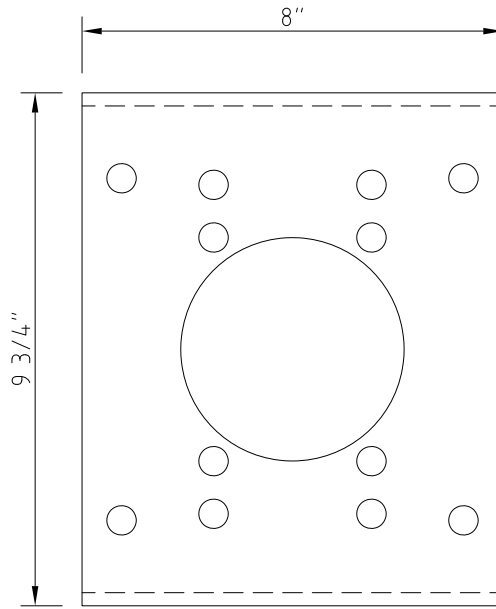
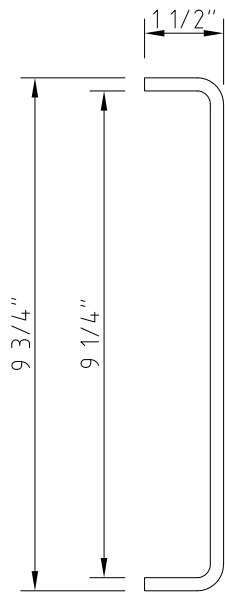
DO NOT SCALE THIS DRAWING Work to Dimensions Linear Dimensions are Inches	
Scale: 1:5	
THIRD ANGLE PROJECTION	

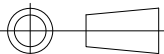

A	Original Issue	9/1/22	MJ		
Rev.	Rev. Record	Date	Eng.	Chk.	
Whipps, inc.		370 SOUTH ATHOL RD. ATHOL, MA 01331			



TITLE TYPE 101 OPERATOR GEAR RATIO 1:1				TOLERANCES		12-94	E	REVISED NOTES		VC
						6-90	D	ADDED 2 1/8" DIM.		GC
						6-90	C	ADDED STEM COVER NOTE		GC
						6-90	B	REVISED H'WL & THD'D DIR		GC
DATE 6/28/90	SCALE NTS	DWN BY GC	APPR BY			10-89	A	ADDED ROLLER BRGS.		VC
DRAWING NO. BC-101-063			S.O. NO.	MATERIAL:		DATE	SYM	REVISION RECORD	AUTH	DR
						Whipps, Inc. 38 SOUTH MAIN STREET ATHOL, MA 01331				

Title 900 GATE STYLE STEM GUIDE DETAIL (Ø2" MAX.)		DO NOT SCALE THIS DRAWING						
		Work to Dimensions Linear Dimensions are Inches						
		Scale: FD		B	Rev. Fastener Note	01/14/15	RAR	
				A	Original Issue	5/4/12	KS	
				Rev.	Rev. Record	Date	Eng.	Chk.
Drg. No. ST-100-050		S.D. No.		THIRD ANGLE PROJECTION 		Whipps, Inc. 370 SOUTH ATHOL RD. ATHOL, MA 01331		



Title Yoke Adapter Plate Type-101/102		DO NOT SCALE THIS DRAWING Work to Dimensions Linear Dimensions are Inches				
				C	Added Grease Fitting Cope (101)	3/9/16 J.M
Material Refer To Engineering Sheet		Scale: FD		B	Enlarged Clearance Hole to 4 1/4"	1/22/16 J.M
				A	Original Issue	11/16/15 J.M
Drg. No. ST-100-071		S.O. No.		Rev.	Rev. Record	Date Eng. Chk.
THIRD ANGLE PROJECTION 		 370 South Athol Rd. ATHOL, MA 01331				



P.O. Box 1058 • 370 South Athol Rd.
Athol, Massachusetts 01331
Phone: (978) 249-7924
Fax: (978) 249-3072

TROUBLE SHOOTING GUIDE


As outlined in the beginning of this manual, the installation is the single most important aspect and consideration of a properly functioning gate.

Symptom	Cause	Remedy
Excessive Leakage (through gate)	Concrete, grout or debris on the slide, seats and/or seals.	<i>Remove foreign material.</i>
Excessive Leakage (through gate)	Distorted frame (i.e. anchor bolts tightened unevenly or insufficient bracing during embedment.	<i>Remove groove from wall and re-mount if undamaged. Consult factory if damaged.</i>
Excessive Leakage (through gate)	Damaged seals.	<i>Open gate and visually inspect seals for damage. Consult factory for replacement seals.</i>
Leakage (between gate & wall)	Non-uniform grout pad.	<i>Fill voids in grout pad or remount groove completely.</i>
Chatter or Squeal while gate is operating	Dry or grit-laden grease on stem.	<i>Clean stem with a stainless steel wire brush and lubricate.</i>
Excessive Effort to Operate Manual Actuators	Lack of grease on threaded part of stems, or dirt/debris on threads.	<i>Clean stem threads & grease with high quality E.P. grease.</i>
Excessive Effort to Operate Manual Actuators	Misaligned operating stem	<i>Loosen actuator attaching bolts, align and re-tighten.</i>
Excessive Effort to Operate Manual Actuators	Concrete or grout build-up between the guide and UHMW that pinches the slide.	<i>Remove foreign material.</i>

For problems not covered in this guide, please consult the Whipps, Inc. Service Department between 8:00am - 5:00pm EST at (978) 249-7924.

If possible, please have the five-digit Shop Order Number and/or the Whipps drawing number of the equipment when calling.

LUBRICATION CHART

<u>Equipment</u>	<u>Method</u>	<u>Recommended Types</u>	<u>Frequency</u>
Type 101 Manual Actuator	Grease Gun	Mobil - Mobilux EP2 Chevron Ultra Duty EP-2 Sunoco Tacky Red LC #2 Or Equal	10-12 pumps every 6 months
 <p>Grease Fittings</p>			
Type 102 Manual Actuator	Grease Gun	Mobil - Mobilux EP2 Chevron Ultra Duty EP-2 Sunoco Tacky Red LC #2 Or Equal	10-12 pumps every 6 months

Fill while turning, estimated, 2 squirts of a grease gun or until it comes out of top seal.

Grease Fittings



Exeeco Manual Actuator	Grease Gun	Chevron Ultra Duty EP-2 Sunoco Tacky Red LC #2 Or Equal	<i>Every 6 months if supplied with grease fittings</i>
Operating Stems	Clean with a dedicated stainless steel brush to prevent cross contamination, apply grease.	Phillips66- Megaplex XD3 Mobil - Centaur Moly Or Equal	<i>Every 6 months, or 3 months whenever exposed to severe dust or heavy particles.</i>
Operating Stems in High Temp areas	Clean with a dedicated stainless steel brush to prevent cross contamination, apply grease.	SI-123 or Equal	<i>Every 6 months, or 3 months when exposed to severe dust or heat.</i>
Gate Seals	N/A	N/A	N/A
Stop Gates	No Lubrication Needed	_____	_____

Whipps, Inc. Warranty

1 Year Warranty

To the Owner of this equipment:

Thank you for purchasing our equipment. Below are the terms under which our equipment is warrantied.

- 1.) The seller guarantees this equipment to be free of defects in material and workmanship for one (1) year from date of delivery to Buyer's destination. Seller agrees to repair or replace all defective parts during the stated warranty period. It is the responsibility of the Buyer to provide Whipps, Inc. notice of such defects immediately. The Seller shall determine whether or not the equipment shows unmistakable evidence of defective material and workmanship. The cost to the Seller shall not exceed the cost of part repair and replacement and in no case shall the Seller be liable for any consequential losses or damage. The Seller's liability will cease and terminate entirely at the end of the warranty year.
- 2.) The above terms are valid if the equipment is used as directed. If the equipment has been modified in anyway without the prior written consent of Whipps, Inc., all terms of this warranty are void.

Whipps, Inc.
370 South Athol Road
Athol, MA 01331
(978) 249-7924
whipps.com

Preventative Maintenance

Stem - Where stem guides are used they should be aligned on the channel to provide uniform clearance between the stem and the stem guide halves. Visually inspect the threaded portion of the stem. It must be clean and free of foreign matter, including dirt or sand, and lubricated with suitable industrial grease. Clean with a dedicated stainless steel brush to prevent cross contamination, apply grease. Do not use a carbons steel brush! The stem should be thoroughly cleaned and lubricated, with a heavy-duty grease at start-up and every six months. We suggest every 3 months whenever exposed to severe dust or heavy particles. The stem must remain free of grit and be sufficiently lubricated to prevent accelerated wear to the operating nut (mounted on the slide).

Seals- Open gate and visually inspect seals for damage. Consult factory for replacement seals.

Manual Operators - Manual operators are lubricated at the factory and do not require further lubrication before initial operation. The stop collar should be threaded on to the stem only after the operator has been installed and the gate is in the fully closed position. There should be approximately 1/16" of clearance between the bottom of the stop collar and the top of the operating nut. The set screw should then be tightened to hold the stop collar in place. The crank or handwheel should turn easily. If there is any binding in operation, check to be sure that the stem guides and stem are properly aligned. At least once a year, all grease fittings should be lubricated with a small amount of Mobil Grease Special or equal, which will not harden in cold weather or become liquid in warm weather.

Electric Operators - The instruction manual furnished with electric motor-driven floor stands should be read carefully before the unit is installed. The gate must be manually opened about 3" before initial electric operation is attempted. Check motor rotation by activating the "open" circuit making certain the gate travels in the "open" direction. Revise motor leads to obtain proper rotation if necessary. The gate should not be operated electrically through its full travel until both "closed" and "open" geared limit switches have been properly set. Adjust the "open" switch so that the opening cycle does not allow the end of the thread of the operating stem to enter the floor stand nut. Geared limit switches cannot be factory set and must be set by the contractor at the jobsite. The torque switches have been properly set at the factory and should not need adjustment.

Whipps Gate Parts Ordering

It should be noted that each Whipps gate installation is a custom fabrication, designed to suit the specific structures and environmental conditions specific to individual projects. As such, Whipps does not maintain a parts list for gate components that would be typical to the many various sizes and models of project-specific installations.

All Whipps gate components are designed for long service life, with materials selected for durability in a wide variety of adverse environments. There are no specific components that would be considered "wear-items", or parts that might have a pre-determined shorter service life than other components.

In the event that a replacement part is needed, an exact duplicate *may* be readily obtained by contacting the Whipps Parts Department. The following procedure *may* be followed to ensure that the needed part is correctly identified and accurately reproduced:

1. Each Whipps gate installation is provided with an Identification Tag (shown at right) that includes the pertinent identifying gate information. This tag will be located on the top of the yoke channel on self-contained gates, and on the pedestals of non-self-contained installations.

	SALES ORDER.#
	TAG#
	GATE# BC-
	ATHOL, MA WWW.WHIPPS.COM (978) 249-7924

2. Contact Whipps Parts:
Casey Aucoin, Parts Sales
(978) 249-7924, Ext. 335
caseya@whipps.com

3. Provide Whipps 5-digit S.O. number and the gate-specific drawing number, beginning with prefix "BC" as shown in graphic, above.

4. Each Whipps gate installation drawing is included with your project-specific Operation and Maintenance manual. Locate the installation drawing that corresponds to the drawing number shown on the Whipps gate tag. Specific gate components such as frames, slides, operators, stems, etc. are shown on the installation with sections and detail drawings also referenced. The part requiring replacement will be identifiable on either the installation drawing or referenced gate sections or detail drawings.

5. With the pertinent information provided, Whipps Parts personnel will aid in and/or confirm identification of the part required and begin production of an exact duplicate. Lead times *may* vary depending on the part required, with some parts available for same-day shipping and overnight delivery.

Rev #2 4/27/21

Document Title: Spare Parts Ordering
Document Owner: Technical Document Control Coordinator

Document No.: 030-25
Date Created: 1/22/20

PRE-BID MEETING (Non-mandatory)

11:00 A.M.

[illegible]

Town of Simsbury, CT

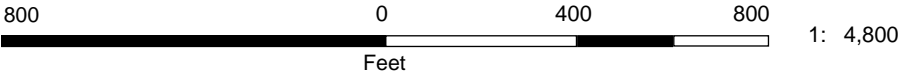


Legend

- Parcels
- Street Labels
- Town Border



Notes



This product is for informational purposes and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.