

Series 70

STAINLESS STEEL FLAP VALVES
SQUARE AND RECTANGULAR
FLAP VALVES

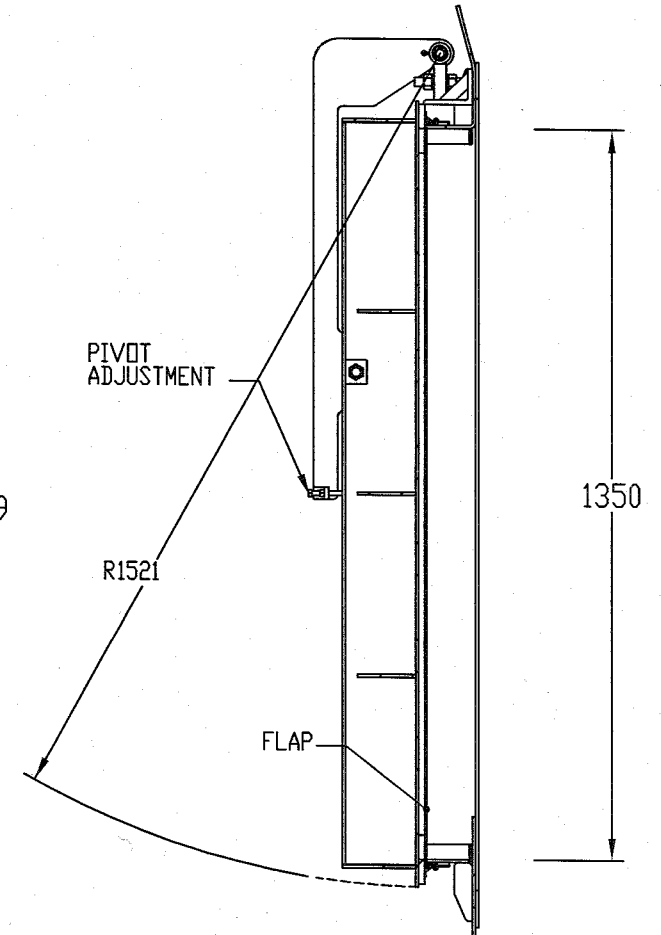
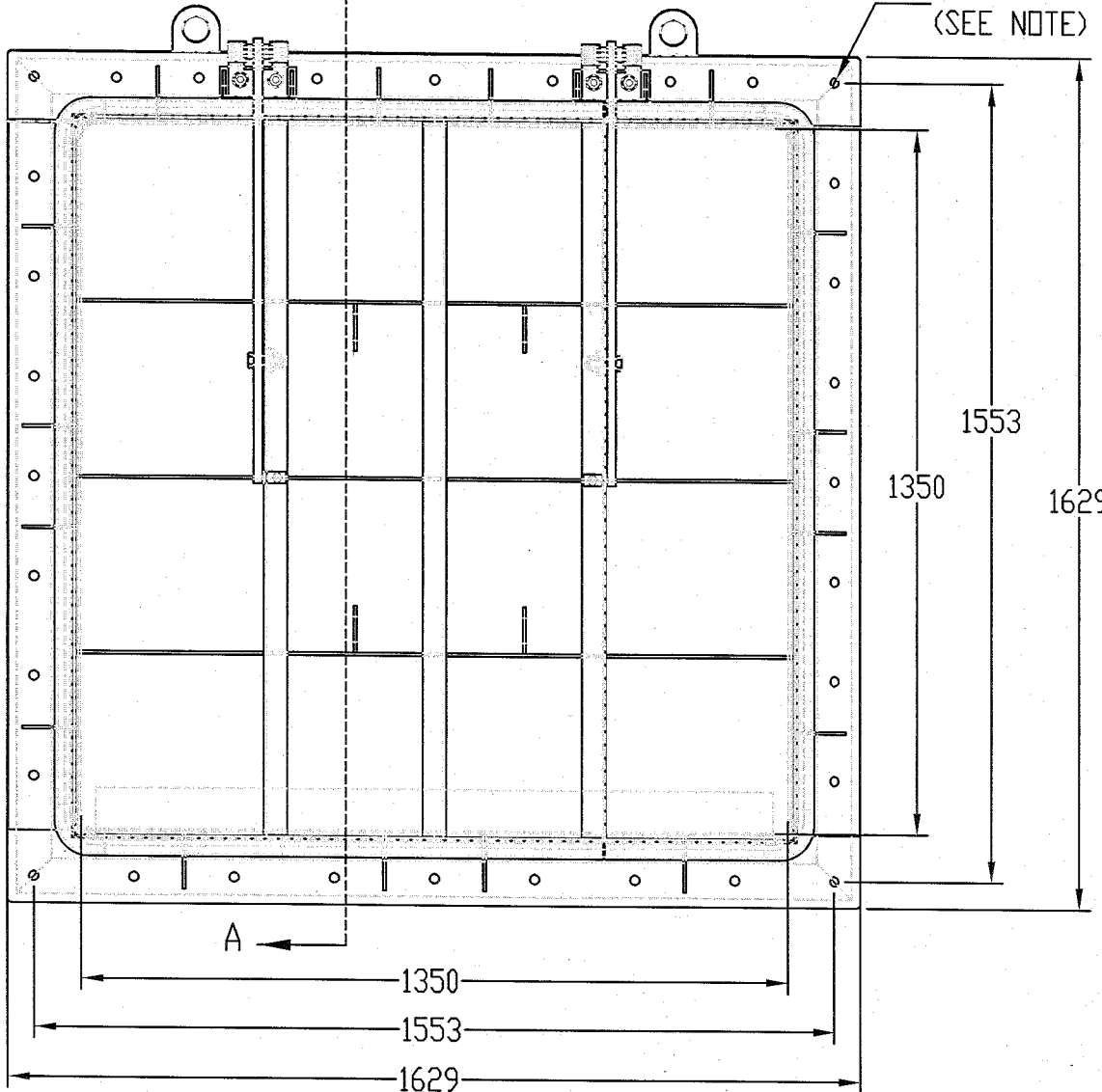


Fontaine

MODEL: 70-1350x1350-B-CW A
MATERIAL: 304L S.S.
QTY: 1

IDENTIFICATION:

HOLES $\phi 19$
(SEE NOTE)



SECTION A-A

NOTE: DRAWING FOR REFERENCE ONLY.
DO NOT USE FOR CONSTRUCTION.
DIMENSIONS SUBJECT TO CHANGE.

NOTE: 304 S.S. MECHANICAL ANCHOR BOLTS (5/8" X 6 LG.) ARE INCLUDED.

Drawing is not to scale.
All dimensions are in millimeters.

Tolerances $\pm 3\text{mm}$

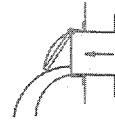
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Series 70

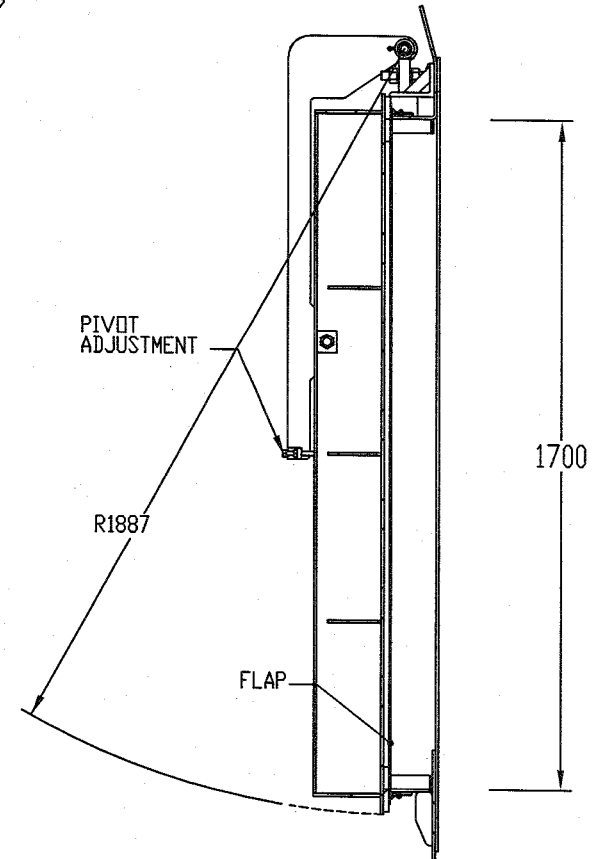
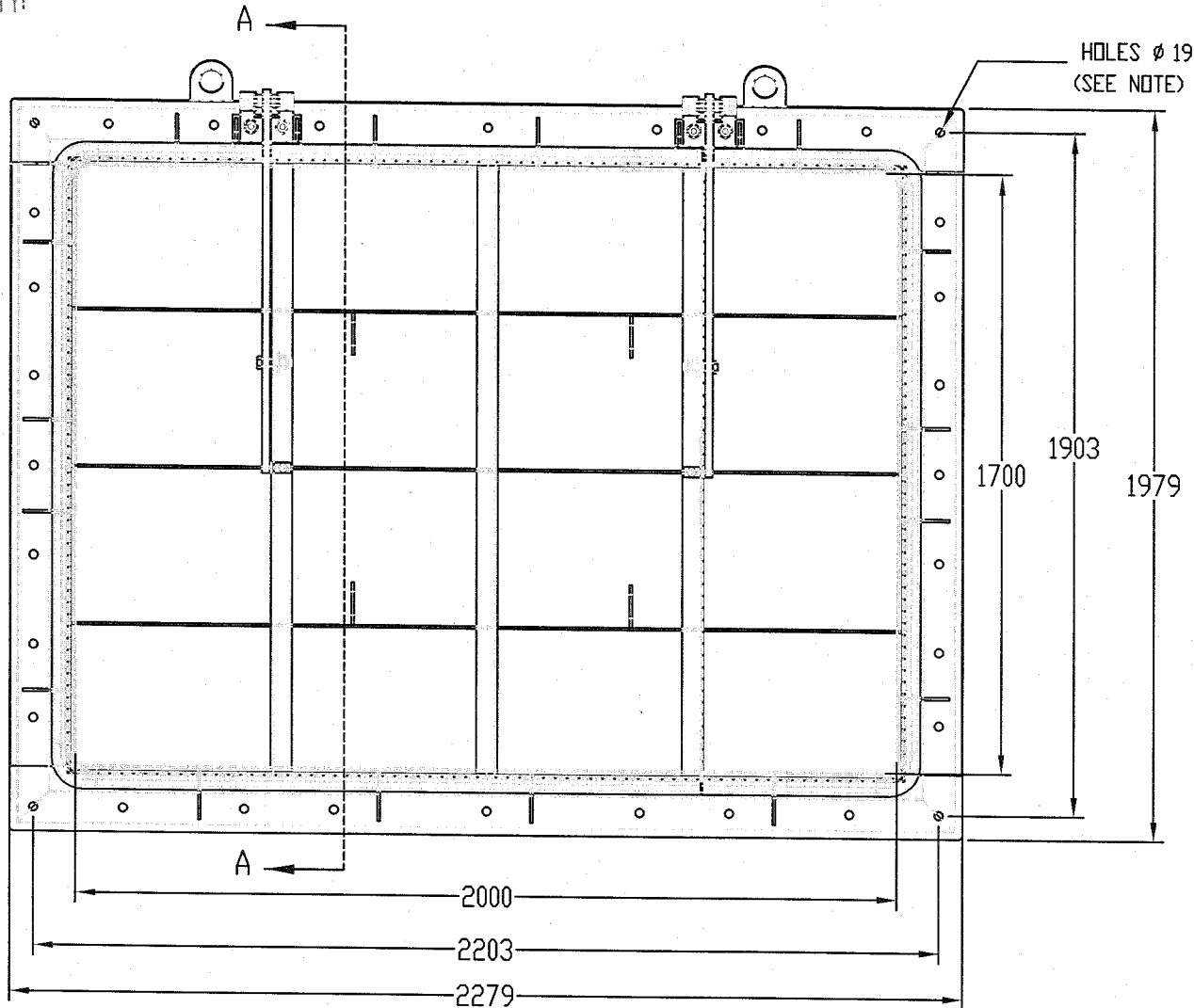
STAINLESS STEEL FLAP VALVES
SQUARE AND RECTANGULAR
FLAP VALVES



Fontaine

MODEL: 70-2000X1700-B-CW
MATERIAL: 304L SS
QTY:

IDENTIFICATION:



SECTION A-A

NOTE: DRAWING FOR REFERENCE ONLY.
DO NOT USE FOR CONSTRUCTION.
DIMENSIONS SUBJECT TO CHANGE.

NOTE: 304 S.S. MECHANICAL ANCHOR BOLTS (16 ϕ X 150 LG.) ARE INCLUDED.

Drawing is not to scale.
All dimensions are in millimeters.

Tolerances \pm 3mm

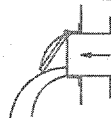
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Series 70

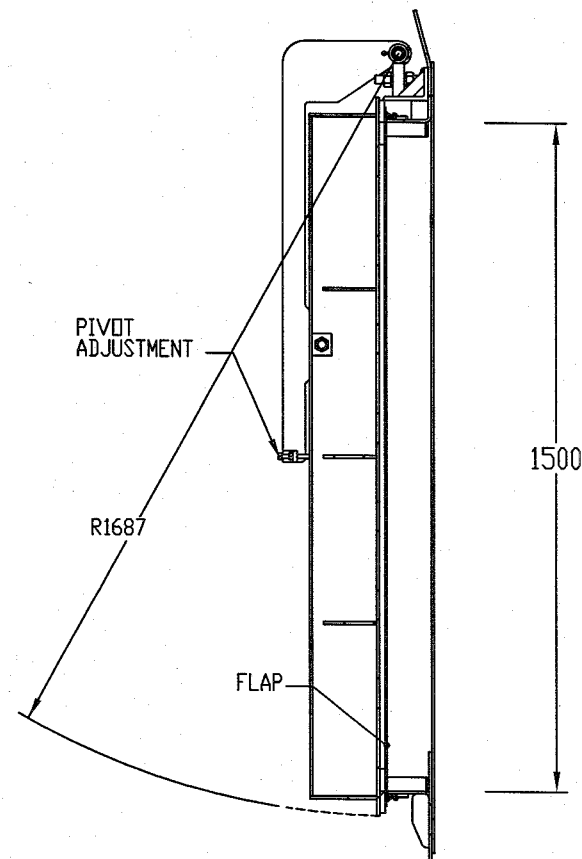
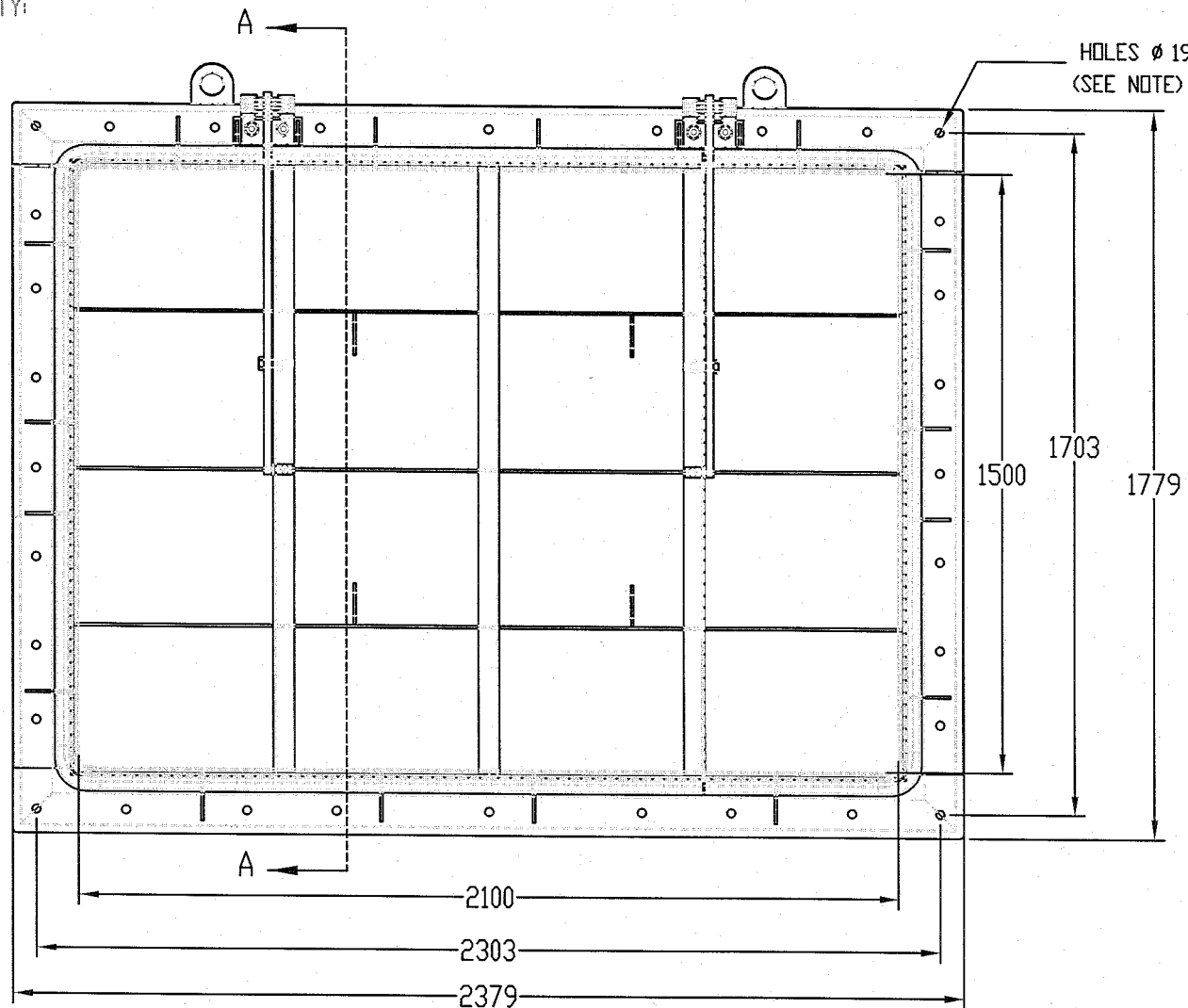
STAINLESS STEEL FLAP VALVES
SQUARE AND RECTANGULAR
FLAP VALVES



Fontaine

MODEL: 70-2100X1500-B-CW
MATERIAL: 304L SS
QTY:

IDENTIFICATION:



SECTION A-A

NOTE: DRAWING FOR REFERENCE ONLY.
DO NOT USE FOR CONSTRUCTION.
DIMENSIONS SUBJECT TO CHANGE.

NOTE: 304 S.S. MECHANICAL ANCHOR BOLTS (16 Ø X 150 LG.) ARE INCLUDED.

Drawing is not to scale.
All dimensions are in millimeters.

Tolerances: ± 3mm

DRAWING No:
14376-01

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Fontaine

INSTALLATION & MAINTENANCE MANUAL

SERIES 70

STAINLESS STEEL RECTANGULAR FLAP GATES

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INTRODUCTION

The purpose of this manual is to provide the contractor with all the information concerning the installation of the flap gate.

RECEIVING AND STORAGE

Although caution has been taken during assembling, crating and loading, damages may have been caused during transportation or storage. We recommend the following procedure when you receive the material:

- 1) Visually check for possible damage caused during transportation. Also note the condition of the packing. Clues like:
 - Broken skid
 - Broken box
 - Warped parts
 - Warped tubes

can indicate rough handling that may have caused more serious damage.

NOTE ANY DAMAGE TO EQUIPMENT OR CRATING ON THE WAYBILL OTHERWISE YOUR CLAIM WILL NOT BE ACCEPTED.

- 2) Check the packing list to make sure all the equipment has been received (stem, stem guide, gearbox, gates, etc.). Also verify all the equipment numbers. This should be done within three days of delivery. **No claim for missing parts will be accepted afterwards.**
- 3) Cover and protect all equipment that is not to be installed immediately:
 - Leave gates strapped to skid.
 - Cover with proper linen.
 - Store on an even surface in a clean, dry area.
 - Do not stack the gates.
 - Support stem evenly and keep off the ground.
 - Put all remaining parts in a secure area.

INSTALLATION ON A CONCRETE WALL

- 1) Never disassemble the flap gate without the manufacturer's authorization.
- 2) The wall should be even and smooth (see Fig. 1). All imperfections should be removed by grinding or filled with grout to yield a longer gate service life.
- 3) Thoroughly clean the back of the flap gate with paint thinner or a grease-cutting agent. Then, glue the neoprene seal on the gate with contact cement according to the instruction of the container.
- 4) Once the seal is solidly attached, line up the flap gate on the opening. Using the flange as a pattern, drill the first anchor hole. Insert the anchor, then partially tighten it.
- 5) Use a bob to plumb the gate, then drill the second hole directly opposite the first. Insert the anchor, then partially tighten it.
- 6) Recheck for plumb, then remaining holes, still using the flange as pattern. Tighten all the bolts, then clean the frame and seal. Install the remaining anchors, then torque according to Table 1. To facilitate installation and prevent seizing, the threads should be lubricated.
- 7) Manually check flap gate operation. Check seating by holding a light behind the closed flap. Any light visible around the edge of the seal indicates improper seating, which can probably be corrected by tightening or loosening some of the bolts.
- 8) Clean the flap gate. To give the stainless a better durability, thoroughly clean all traces of contaminants from the gate: concrete dust, sand, mud, or other residues. They can also damage the neoprene seal.

SURFACE CHECK FOR A CONCRETE WALL

Check the surface with a straight edge. The maximum permissible surface unevenness is 1/8" (3 mm).

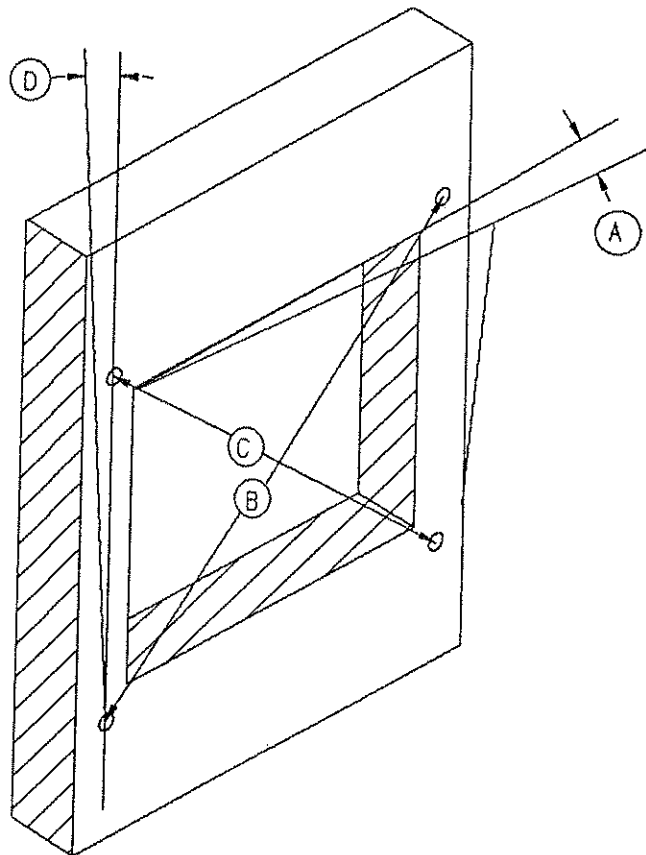


FIGURE 1

ACCEPTABLE TOLERANCES

- A Maximum allowable warping of 1/8" (3 mm) along the total length of each side.
- B-C Comparison of diagonals - Maximum difference of 1/8" (3 mm)
- D Maximum vertical alignment of 1/8" (3 mm) on the total length of side

INSTALLATION ON A WALL THIMBLE

1. Never disassemble the flap gate without the manufacturer's authorization.
2. The wall thimble should be even (see Fig. 2). The concrete around wall thimble should be even and have a smooth surface.
3. Check to see if the anchor holes on the flap gate match those on the thimble.
4. Clean the front and back of the flap gate with paint thinner. Use contact cement to attach the neoprene seal to the back of the flap gate, according to the instruction on the container.
5. Lubricate the bolts, then bolt the flap gate to the frame. Tighten the bolts, alternating sides. The bolts should be tightened evenly and torqued according to Table 1 to ensure that the seal is uniformly compressed.
6. Manually check flap gate operation. Check seating by holding a light behind the closed flap. Any light visible around the edge of the seal indicates improper seating, which can probably be corrected by tightening or loosening some of the bolts.
7. Clean the flap gate. To give the stainless steel a better durability, thoroughly clean all traces of contaminants from the gate: concrete dust, sand, mud, or other residues. They can also damage the neoprene seal.

SURFACE CHECK FOR A WALL THIMBLE

Check the surface with a straight edge. The maximum permissible surface unevenness is 1/8" (3 mm).

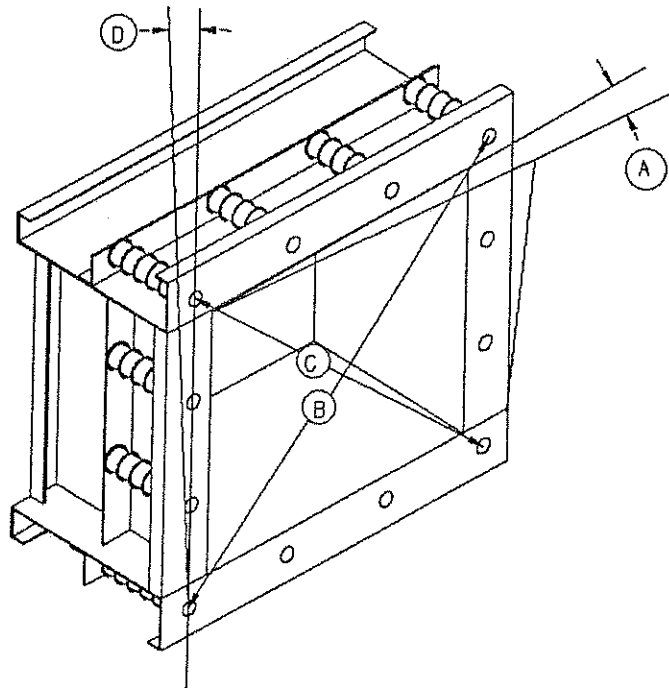


FIGURE 2

ACCEPTABLES TOLERANCES

- A Maximum allowable warping is 1/8" (3 mm) along the total length of each side.
- B-C Maximum difference between diagonals is 1/8" (3 mm).
- D Maximum vertical alignment is 1/8" (3 mm) along the length of each side.

INSTALLATION ON A ROUND MANHOLE

Follow the procedure above to install the gate on a round manhole. Ensure that the anchors are parallel to one another as much as possible to facilitate gate removal, if ever necessary.

TABLE 1

STUD DIAMETER (PO)	TORQUE (PI-LB)
1/2	35
5/8	75
3/4	100
7/8	150
1	200

TROUBLESHOOTING

Never force the operator to close the flap gate, since permanent seal damage may occur.

<u>SYMPTOM</u>	<u>CAUSE</u>	<u>REMEDY</u>
LEAKAGE	Wood, concrete, or other foreign matter on seat facing.	Carefully remove the foreign matter. Check for permanent seal damage.
	Loose anchoring studs.	Tighten loose nuts according to table 1.

For problems that cannot be solved with the troubleshooting procedure, call H. Fontaine Ltd, Magog, Quebec, at (819) 843-3068, and ask for the Service Department. If a leak is involved, try to locate it before calling.

SPARE PARTS

H. Fontaine Ltd does not recommend that customers stock replacement parts, since the equipment has an excellent durability when properly maintained.

If a replacement part is necessary, contact our customer service department with the following information:

- Gate serial number
- Part description
- Description of damages and causes
- Approximate delivery requirements

This information will enable us to serve you in a quicker and better manner.

INSPECTION AND MAINTENANCE

Series 70 flap gate by Fontaine are designed and built to minimize maintenance. The following instruction should ensure that your flap gate provides many years of trouble free service it was designed for.

CLEANING

Flap gate should be hosed down regularly with clear water to remove deposits. Regular cleaning will help ensure the stainless steel doesn't corrode. Keep carbon steel and cast iron away from stainless steel components since prolonged contact can oxidize the surface. If scrubbing is necessary, use a stainless steel brush. Let the cleaned surface air for several hours to promote the formation of chrome oxide.

PERFORMANCE

Regularly ensure that the flap gate working properly. Open the flap gate and inspect the neoprene seat. The flap gate should seat perfectly on the neoprene. Remove any debris or obstacles preventing proper operation.

HINGES

Hinges should be inspected regularly to detect premature wear of the UHMW polyethylene bearing.

FASTENERS

Regular ensure that the fastener are properly tightened. Retighten if necessary.

CHECKING GATE SEAT

The seat should be checked periodically for defects that could impair proper seating or water tightness.

LIMITED WARRANTY

H. Fontaine Ltd. warrants that the Equipment manufactured by it and delivered hereunder will be free of defects in material and workmanship for a period of twelve months from the date of placing the Equipment in operation or eighteen months from the date of shipment, whichever shall first occur. The Purchaser shall be obligated to promptly report any failure to conform to this warranty, in writing to H. Fontaine Ltd. within said period, whereupon H. Fontaine Ltd. shall, at its option correct such nonconformity, by suitable repair to such Equipment or, furnish a replacement part F.O.B. point of shipment, provided the Purchaser has stored, installed, maintained and operated such Equipment in accordance with good industry practices and has complied with specific recommendations of H. Fontaine Ltd. Accessories or equipment furnished by H. Fontaine Ltd., but manufactured by others, shall carry whatever warranty the manufacturers have conveyed to H. Fontaine Ltd. and which can be passed on to the Purchaser. H. Fontaine Ltd. shall not be liable for any repairs, replacements, or adjustments to the Equipment or any costs of labor performed by the Purchaser or others without H. Fontaine Ltd. prior written approval. The effects of corrosion, erosion and normal wear and tear are specifically excluded. Performance warranties are limited to those specifically stated within H. Fontaine Ltd. proposal.

H. FONTAINE LTD MAKES NO OTHER WARRANTY OR REPRESENTATION OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED, EXCEPT THAT OF TITLE, AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY DISCLAIMED.

Correction by H. Fontaine Ltd. of nonconformity's whether patent or latent, in the manner and for the period of time provided above, shall constitute fulfillment of all liabilities of H. Fontaine Ltd. for such nonconformity's, whether based on contract, warranty, negligence, indemnity, strict liability or otherwise with respect to or arising out of such Equipment. The Purchaser shall not operate Equipment which is considered to be defective, without first obtaining H. Fontaine Ltd. written consent to do so. Any such use of Equipment will be at the Purchaser's sole risk and liability.