



# **GROUND-OPERATED BULK TANK MANWAY SYSTEM**

## **SYSTEM DESCRIPTION**

- THE PIVOTAL EDGE IS AN AUTOMATED MANWAY SYSTEM THAT ALLOWS A DRIVER TO OPERATE A TANK COVER FROM THE SAFETY OF THE GROUND
- ENTIRELY PNEUMATIC, NO ELECTRONICS OR HYDRAULICS TO FAIL
- EASILY INSTALLED WITH MINIMAL TOOLS AND TRAINING
- FAST AND FRIENDLY CUSTOMER SERVICE
- MADE IN THE USA

## **OPERATIONAL SPECIFICATIONS**

- MOUNTING..... STANDARD 20" (508 mm) OPENING (HARDWARE PROVIDED)
- OPERATIONAL BULK TANK PRESSURE.. 0-36 psi.....(0-2.5 bar)
- PNEUMATIC SUPPLY PRESSURE..... 80-120 psi.....(5.5-8.3 bar)
- PNEUMATIC CYLINDER..... PIVOTAL EDGE (3" (76.2mm) BORE, 6" (152.4 mm) STROKE CARBON FIBER)
- SEALING TECHNOLOGY..... CUSTOM MOLDED INFLATABLE SEAL
- SEAL PRESSURE..... 60 psi (4.13 bar)
- SEAL VACUUM ON OPEN/CLOSE..... 12 IN Hg (295 mm Hg)
- MULTIPLE COVER CONTROLS..... CONTROL 1-4 COVERS WITH 1 CONTROL BOX
- AUXILIARY REQUIREMENTS..... MOUNT CONTROL BOX, SUPPLY AIR IN, PLUMBING TO COVERS

## **MATERIAL SPECIFICATIONS**

- COVER AND FLANGE..... MACHINED 6061 T6 ALUMINUM
- PIVOT PIN AND CASTLE NUT..... 6061 T6 ANODIZED ALUMINUM
- CLEVIS NUTS, CROSSPINS..... STAINLESS STEEL AND GALVANIZED STEEL
- BOLTS..... ZINC PLATED STEEL (GRADE 5)
- INFLATABLE SEAL..... PE P/N 102419
- CONTACT SURFACE SLIDERS..... CUSTOM MOLDED HDPE
- THRUST WASHERS..... BRONZE
- BUSHINGS..... CUSTOM MOLDED NYLON



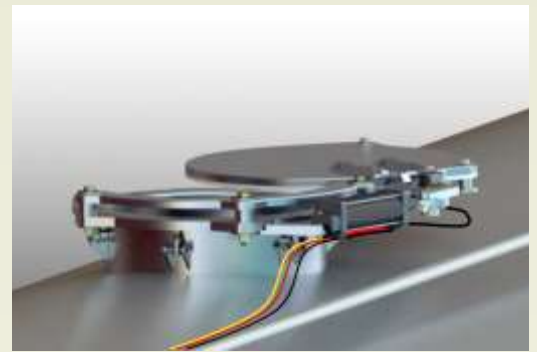
## INTRODUCTION

THE PIVOTAL EDGE IS A GROUND-OPERATED MANHOLE COVER FOR THE BULK TRANSPORTATION INDUSTRY. THE COVER IS COMPRISED OF A FLANGE THAT IS MOUNTED TO THE VESSEL'S EXISTING 20" (508 MM) RING UTILIZING THE FACTORY ATTACH POINTS.

## INSTALLATION

INSTALLATION IS SIMPLE REQUIRING A FEW BASIC TOOLS. THE PROCEDURE IS BROKEN DOWN INTO THREE MAIN STEPS:

1. RETRO FITTING THE EXISTING MANWAY AND POSITIONING THE COVER
2. MOUNTING OF THE CONTROL BOX
3. ROUTING OF THE AIR SUPPLY LINES

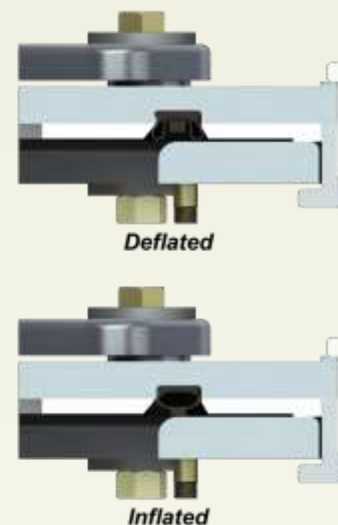
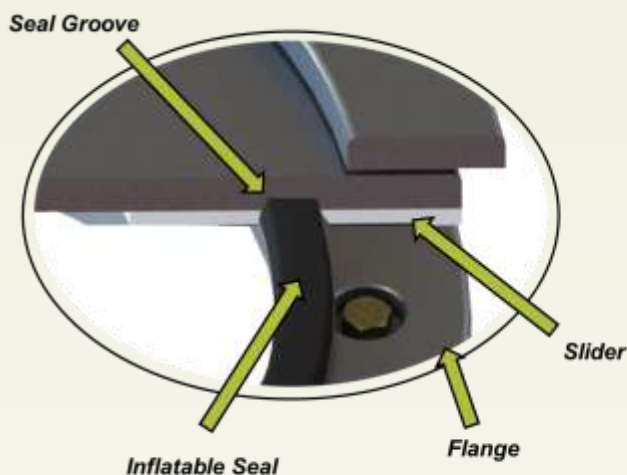


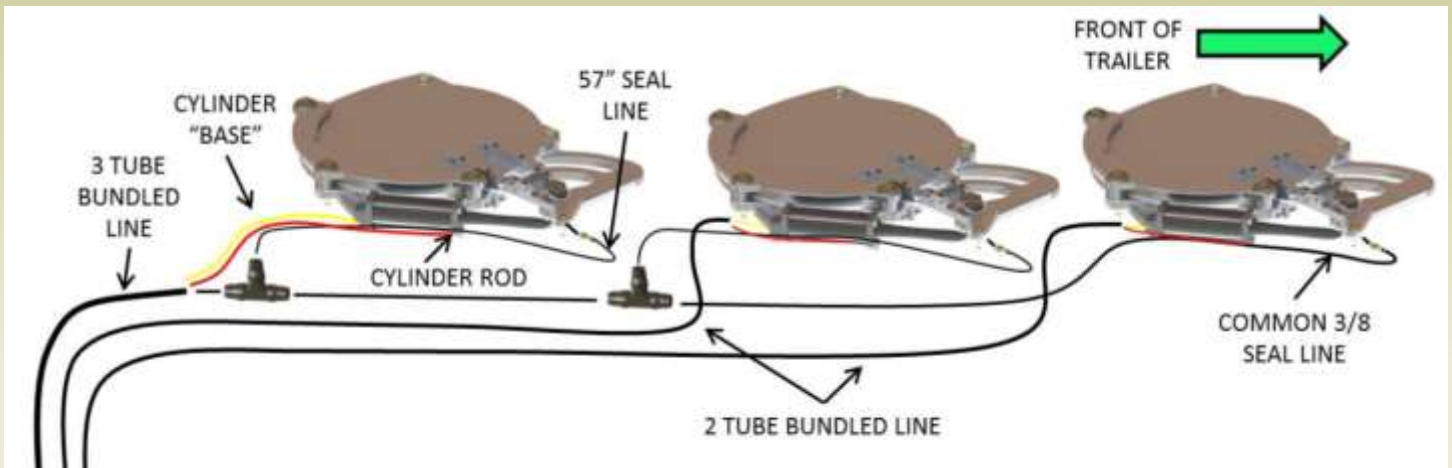
## OPERATION

THE PIVOTAL EDGE SYSTEM IS CAPABLE OF CONTROLLING BETWEEN 1-4 MANHOLE COVERS INDEPENDENTLY WITH A COMMON SEAL LINE. ONE VALVE CONTROLS THE PRESSURIZING/DE-PRESSURIZING OF THE SYSTEM, WHILE EACH COVER IS OPENED AND CLOSED BY ITS OWN DEDICATED CONTROL VALVE. **NO ELECTRONICS OR HYDRAULICS ARE NECESSARY TO OPERATE THE SYSTEM.** THE TRAILER'S SUPPLY AIR IS USED WITH A REGULATED MIN. 80 PSI (552 KPA).

THE COVER PIVOTS ON A HINGE PIN WITH THE INFLATABLE SEAL RECESSED INTO THE COVER. THIS SEAL CREATES A WEATHER-TIGHT SEAL WHEN NO SUPPLY AIR IS AVAILABLE AND A PRESSURIZED SEAL WHEN AIR IS SUPPLIED.

AN AIR PURGE CAN BE PERFORMED AFTER UNLOADING TO PREVENT MATERIAL BUILD-UP.



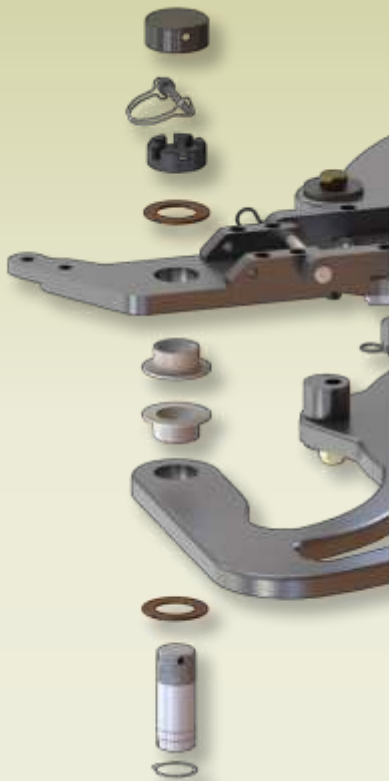


## ***SERVICE AND MAINTENANCE***

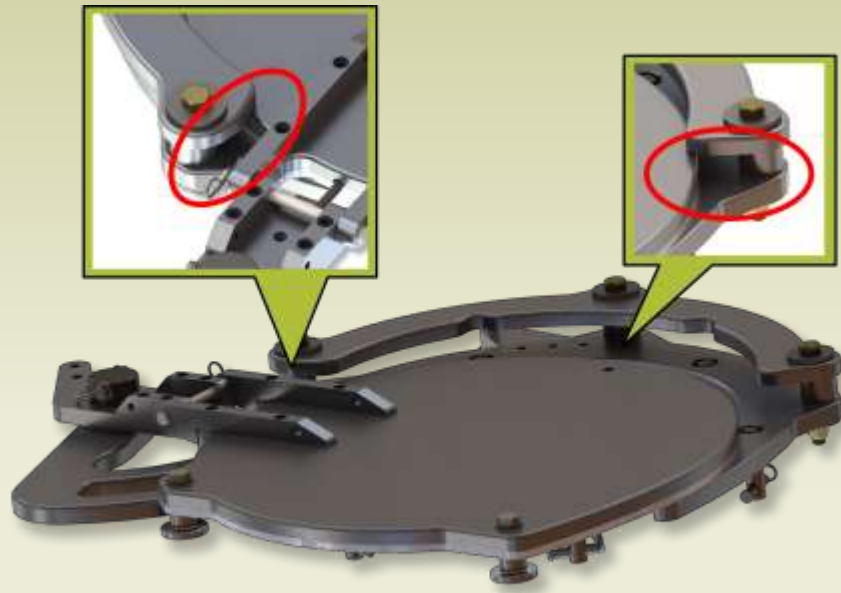
MAINTENANCE OF THE COVERS IS SIMPLE AND IS BASED ON VISUAL INSPECTION OF THE COVER. THE FREQUENCY OF INSPECTION IS DETERMINED BY THE ENVIRONMENT IN WHICH IT IS OPERATED. ROUTINE CLEANING IS PERFORMED AS NECESSARY TO PREVENT SEDIMENT BUILD-UP ON THE COVER.

IN THE EVENT A SERVICE PART, SUCH AS A HINGE PIN OR SEAL, NEEDS TO BE REPLACED, THE COVER **DOES NOT** NEED TO BE REMOVED FROM THE TRAILER. ONLY COMMON HANDTOOLS ARE REQUIRED.





**HINGE PIN EXPLODED VIEW**



**BUILD-UP INSPECTION AREAS**

**OVERALL COVER DIMENSIONS:**

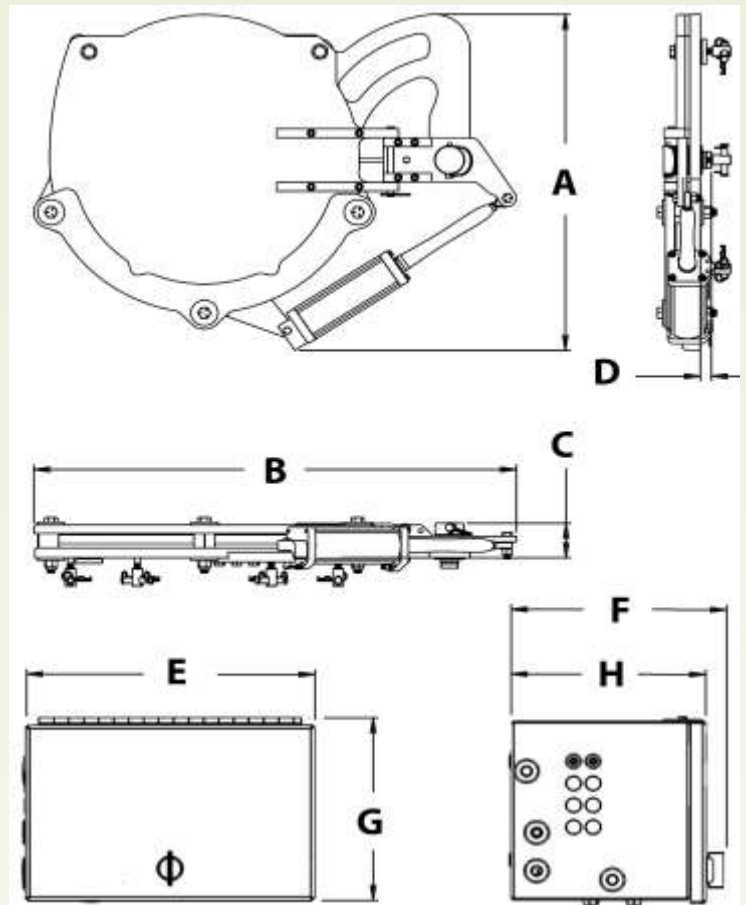
- A...29.8" (757.0 mm)
- B...40.1" (1,018.6 mm)
- C...3.1" (78.8 mm) TOP OF RING TO TOP OF COVER
- D...0.9" (22.9 mm) TOP OF RING TO BOTTOM NUT

**SYSTEM WEIGHT:**

- COVER AND FLANGE: 92 lbs. (41.8 kg)
- PNEUMATIC CYLINDER: 6 lbs. (2.7 kg)
- CONTROL BOX: 17 lbs. (7.7 kg)

**OVERALL CONTROL BOX DIMENSIONS:**

- E... 9.7" (246.4 mm)
- F...6.9" (175.3 mm)
- G...6.5" (165.1 mm)
- H...6.3" (160.0 mm)





## ***ADDITIONAL INFORMATION***

### **CONTACT INFORMATION**

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### **SUPPLEMENTAL INFORMATION**

**OPERATOR'S MANUAL  
(REQUIRES WEB ACCESS)**



**DOWNLOAD**