AQUASHIELD SYSTEM®
SERIES AQS-900

TUFSTEEL® GALVANIZED STEEL FRAMING
Installation Instructions

FORM NO: 4F-AQS-3/19
PART NO: T31636

Do not install this product unless you read and understand the Warnings and Installation Instructions contained in this manual. Failure to do so could result in serious injury or death.
INTRODUCTION

Welcome and thank you for choosing a dock seal/shelter from KELLEY®.

This Installation Manual contains information that you need to safely install, operate and maintain the dock seal/shelter. Please keep and read this Installation Manual before installing and using your new dock seal/shelter.

SAFETY SIGNAL WORDS

You may find safety signal words such as DANGER, WARNING, CAUTION, or NOTICE throughout this Installation Manual. Their use is explained below:

⚠️ This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible death or injury.

⚠️ DANGER Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠️ WARNING Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠️ CAUTION Indicates a potentially hazardous situation which, if not avoided may result in minor or moderate injury.

NOTICE Notice is used to address practices not related to personal injury.
SAFETY PRACTICES

⚠️ WARNING ⚠️

Read these safety practices before installing, operating or servicing the AQS-900®. Failure to follow these safety practices could result in death or serious injury.

READ AND FOLLOW THE OPERATING INSTRUCTIONS IN THIS MANUAL BEFORE OPERATING THE AQS-900®. If you do not understand the instructions, ask your supervisor to assist you or contact the factory.

Be certain to follow the instructions in this manual.

 NOTICE

KELLEY AQS-900 series are custom built for each application. Installation procedures are the same for all AQS-900 Series, regardless of size. Installation requires two people and a forklift truck or similar device to lift and position the frame.

Improper installation of anchoring devices or installation into aged or unsound concrete or other faulty or inadequate building wall construction could result in serious injury or death, as well as premature product wear, product failure, or property damage.

Inadequate lifting equipment or unsafe practices can cause a load to fall unexpectedly. Make sure lifting devices are in good condition and have a rated capacity of at least 500 lbs. at the lifting angle that they are being used. Never allow anyone to stand on or near the dock seal/shelter component when it is lifted or placed. Failure to follow this warning can allow the dock seal to fall, tip or swing into people causing serious injury or death. Safety standards as described in this installation manual must be followed at all times. If you have any questions, contact your supervisor or your local Kelley distributor for assistance.

Assembly of components should be performed in such a way so as to maintain cleanliness of equipment before final installation. Lifting equipment to be determined by installer (man lift and forklift or boom lift are typical). Wear safety glasses, gloves, hard hats, safety shoes and all necessary protective clothing.

PREPARATION

Remove all of the contents from the containers and check for damage. If any of the contents show signs of damage, contact your local sales representative.
# STANDARD PARTS LIST PER UNIT

**1) WIPER PAD HEAD FRAME**

- **STOP PLATE**

**2) FOAM WIPER PAD** *(STANDARD WIDTH: 10'-0'')*

## HEAD FRAME SUPPORT BRACKET

<table>
<thead>
<tr>
<th>(1) LEFT SIDE</th>
<th>(1) RIGHT SIDE</th>
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<tbody>
<tr>
<td>P/N: T31302-XX</td>
<td>P/N: T31302-XX</td>
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</table>

## INVERTED HEAD FRAME SUPPORT BRACKET

<table>
<thead>
<tr>
<th>(1) LEFT SIDE</th>
<th>(1) RIGHT SIDE</th>
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</thead>
<tbody>
<tr>
<td>P/N: T31464-XX</td>
<td>P/N: T31705-XX</td>
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</table>

## TEK SCREWS

<table>
<thead>
<tr>
<th>(24)</th>
<th>(15) TEK SCREW W/ WASHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>P/N: T31163</td>
<td>P/N: T31224</td>
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</tbody>
</table>

## 10.5 FT VINYL TRIM

<table>
<thead>
<tr>
<th>(1) 10.5 FT VINYL TRIM</th>
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<tbody>
<tr>
<td>P/N: T31298</td>
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## WASHER

<table>
<thead>
<tr>
<th>(15) WASHER</th>
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<tbody>
<tr>
<td>P/N: T73001</td>
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</table>

### SUPPLIED BY OTHERS

<table>
<thead>
<tr>
<th>CAULK GUN</th>
<th>SILICONE CAULK</th>
<th>WALL ANCHOR</th>
<th>BACK-UP PLATE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STEEL</strong></td>
<td><strong>WOOD</strong></td>
<td></td>
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</table>

### SUGGESTED MOUNTING METHODS:

1) **CONCRETE, BRICK, & PRECAST:** USE 1/2" OR 3/8" x 3" EXPANSION ANCHORS ON SIDE PAD BRACKETS. USE THROUGH-BOLT FASTENING IF ANCHORS WILL NOT HOLD, 3/8" THREADED ROD IS RECOMMENDED.

2) **METAL SKIN BUILDING:** THROUGH-BOLT FASTENING REQUIRED. USE STEEL OR WOOD BACK-UP PLATE TO SUPPORT BOLTS, OR ANCHOR THROUGH EXISTING BUILDING HORIZONTAL & VERTICAL STRUCTURAL MEMBERS.
1. DETERMINE AND MARK CENTERLINE LOCATION ABOVE EITHER EXISTING DOCK SEAL HEAD MEMBER OR DOOR OPENING.

NOTICE
SEE STICKER ON FRONT OF HEAD FRAME FOR INSTALLATION HEIGHT OFF FINISHED GRADE

2. TAKE \( \frac{1}{2} \) OF THE HEAD FRAME WIDTH AND MARK THIS DISTANCE ON EITHER SIDE OF THE ESTABLISHED CENTERLINE AT PREDETERMINED MOUNTING HEIGHT OFF GRADE.
DETERMINE IF HEAD FRAME IS SUPPLIED WITH STANDARD HEAD FRAME BRACKETS OR INVERTED HEAD FRAME BRACKETS SHOWN BELOW (SIZE MAY VARY).

<table>
<thead>
<tr>
<th>STANDARD HEAD FRAME BRACKET</th>
<th>INVERTED HEAD FRAME BRACKET</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEE STEP 3A, PAGE 6</td>
<td>SEE STEP 3B, PAGE 7</td>
</tr>
</tbody>
</table>

**HARDWARE NEEDED IN THIS STEP**

<table>
<thead>
<tr>
<th>Bolts</th>
<th>x 12</th>
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</table>

**NOTICE**

HEAD FRAME POSITIONED ON BACK SIDE WITH STOP PLATE FACING UP.

**PRE DRILL ANCHOR HOLE 12" FROM END OF FRAME, TYP.**

**PRE DRILL ANCHOR HOLE AT CENTER OF HEAD FRAME**

3A. POSITION THE LEFT AND RIGHT HEAD FRAME SUPPORT BRACKETS UNDER HEAD FRAME SIDE COVERS AND ATTACH BRACKETS TO THE ENDS OF HEAD FRAME WITH TEK SCREWS.
3B. POSITION THE LEFT AND RIGHT INVERTED HEAD FRAME SUPPORT BRACKETS UNDER HEAD FRAME SIDE COVERS AND ATTACH BRACKETS TO THE ENDS OF HEAD FRAME WITH TEK SCREWS.
4. INSERT TEMPORARY SPACER (2x4) AT THE BOTTOM OF STOP PLATE ON THE HEAD FRAME. THE TEMPORARILY SPACER (2x4) WILL ASSIST IN CREATING FORWARD BIAS.

5. LOCATE GRAY REFERENCE LINE AT TOP OF WIPER PAD FLAP
6. PLACE THE WIPER PAD ON TOP OF THE HEAD FRAME AND STOP PLATE. ALIGN THE GRAY LINE WITH TOP OF STOP PLATE.

**NOTICE**

RECOMMENDED: ONE INDIVIDUAL TO HOLD AND SUPPORT THE CENTER OF THE WIPER PAD TO SUSTAIN FORWARD BIAS, AND THE SECOND INDIVIDUAL TO FASTEN THE WIPER PAD TO THE STOP PLATE AND HEAD FRAME.

7. CLAMP DOWN THE STEEL STRIP (LOCATED IN THE FLAP) TO THE STOP PLATE.
8A. CONFIRM THE LINE ON THE WIPER PAD REMAINS AT TOP OF STOP PLATE. SCREW THROUGH THE GALVANIZED STEEL STRIP AND STOP PLATE. FASTEN WITH TEK SCREWS 12" ON CENTER & 6" AWAY FROM ENDS.

8B. REMOVE TEMPORARY SPACER/2x4. INSTALL THE VINYL TRIM, REMOVE C-CLAMPS (IF USED). WRAP THE FABRIC OVER THE TOP OF THE STOP PLATE AND CAP WITH THE VINYL TRIM. USE A RUBBER MALLET OR SIMILAR TO SECURE THE VINYL TRIM TO THE TOP OF THE STOP PLATE. CUT OFF ANY ADDITIONAL VINYL TRIM.
9. MOUNT WIPER PAD ASSEMBLY TO BUILDING WALL.

Using the center line established in Step One, determine the bottom of the head frame height off finished grade. See sticker on front of the head frame for dimension. It is necessary to anchor head frame to building in three (3) locations. One on center and two approx. 12" from each end.

For mounting on metal building walls, an additional factory installed rear brace on head frame is required. Three (3) anchors for this style of head frame are recommended (two anchors 12" from ends is acceptable).

FASTEN TOP (3) TEK SCREWS THROUGH SIDE COVER FABRIC, MOUNTING BRACKET AND INTO ENDS OF HEAD FRAME.

FASTEN (1) TEK SCREW THROUGH SIDE COVER FABRIC INTO TAB ON BOTTOM LEG OF HEAD FRAME BRACKET.

10. CAULK BETWEEN HEAD FRAME AND WALL AROUND THE OUTSIDE EDGE WITH SILICONE CAULK.
WIPER PAD SYSTEM
SIDE VIEW
THE EXPLODED VIEW BELOW DISPLAYS A STANDARD WIPER SEAL UNIT. YOUR UNIT MAY CONTAIN OPTIONS WHICH ARE NOT DISPLAYED BELOW.

1. GALVANIZED STEEL HEAD FRAME WITH SIDE COVERS
2. LEFT HEAD FRAME SUPPORT BRACKET
3. RIGHT HEAD FRAME SUPPORT BRACKET
4. WIPER PAD
5. VINYL TRIM
ATTENTION & MAINTENANCE

NOTICE

Periodic inspections of all dock Seal/Shelter is recommend. Inspect for damage and contact your local distributor if parts are needed to be replaced.

PERIODIC MAINTENANCE CHECKLIST

☐ Rips/tears in wiper pad fabric/cover
☐ Water leaks due to insufficient caulk
☐ Ensure steel head frame is plumb to building wall
☐ Ensure all fasteners are in position
☐ Ensure vinyl trim is secured to stop plate
☐ *
☐ *
☐ *

POST INSTALLATION CHECK LIST

☐ Head Frame is perpendicular to building wall
☐ Ensure all anchors & fasteners are secured correctly
☐ Confirm the head frame is caulked at building adequately
☐ Bottom of head frame is installed at correct dimension off finished grade
☐ Confirm caulk is applied to the back side of the stop plate
☐ Side cover is attached to tab on head frame bracket
☐ Confirm vinyl trim is secured to stop plate
☐ Ensure wiper pad is straight and does not bend

NOTES

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LIMITED WARRANTY INFORMATION

THIS LIMITED WARRANTY IS KELLEY’S SOLE AND EXCLUSIVE WARRANTY WITH RESPECT TO THE DOCK SEAL/SHELTER AND IS IN LIEU OF ANY OTHER GUARANTEES OR WARRANTIES, EXPRESS OR IMPLIED.

Kelley® warrants that this DOCK SEAL/SHELTER will be free from flaws in material and workmanship under normal use for a period of (1) year from the earlier of 1) 60 days after the date of initial shipment by Kelley®, or 2) the date of installation of the DOCK SEAL/SHELTER by the original purchaser, provided that the owner maintains and operates the DOCK SEAL/SHELTER in accordance with this User’s Manual.

In the event that this DOCK SEAL/SHELTER proved deficient in material or workmanship within the applicable Limited Warranty period, owner shall so notify Kelley® and Kelley® will, at its option:

1. Replace the DOCK SEAL/SHELTER, or the deficient portion(s) thereof, without charge to the owner (excluding any cost of removal or reinstallation which shall be the sole responsibility of the owner); or

2. Alter or repair the DOCK SEAL/SHELTER, on site or elsewhere, without change to the owner.

This Limited Warranty does not cover any failure caused by improper installation, abuse, improper operation, negligence, or failure to maintain and adjust the DOCK SEAL/SHELTER properly. Parts requiring replacement due to damage resulting from vehicle impact, abuse, or improper operation and not covered by the warranty. Kelley® DISCLAIMS ANY RESPONSIBILITY OR LIABILITY FOR ANY LOSS OR DAMAGE OF ANY KIND (INCLUDING WITHOUT LIMITATION, DIRECT, INDIRECT, CONSEQUENTIAL OR PUNITIVE DAMAGES, OR LOST PROFITS OR LOST PRODUCTION) arising out of or related to the use, installation or maintenance of the DOCK SEAL/SHELTER (including premature product wear, product failure, property damage or bodily injury resulting from use of unauthorized replacement parts or modification of the DOCK SEAL/SHELTER). Kelley®’s sole obligation with regard to a DOCK SEAL/SHELTER that is claimed to be deficient in material or workmanship shall be as set forth in this Limited Warranty. This Limited Warranty will be null and void if the original purchaser does not notify Kelley®’s warranty department within ninety (90) days after the product deficiency is discovered.

THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF, INCLUDING, BUT NOT LIMITED TO, A WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, ALL OF WHICH KELLEY® HEREBY DISCLAIMS.
Please direct questions about your DOCK SEAL/SHELTER to your local distributor.

Your local KELLEY® distributor is:

4Front Entrematic
W183 S8253 Racine Avenue
Muskego, WI 53150
Tel: (262) 679-6200
Email: Seals.Shelters@entrematic.com