PADDOCK

POOL EQUIPMENT COMPANY

Movable HDPE Bulkhead
Operations and Maintenance Manual

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Rev. 06/2021

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INTRODUCTION

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Your pool has been equipped with a custom HDPE movable bulkhead, fabricated by Paddock Pool Equipment Company, Inc. It has been designed for strength and safety. The surface area is a combination of non-skid and reinforced, slip resistant grating.

To ensure longevity of your bulkhead, it is necessary for you to adhere to the instructions and warnings stated in this manual.

SAFETY INFORMATION

Failure to properly maintain this equipment will result in equipment failure, improper performance and/or equipment damage which can cause injury to swimmers or staff. Such negligence will void manufacturer's warranty and will fall on responsibility of owner and staff administration.

Failure to inspect grating for tightness and damage can result in possible injuries for swimmer. Damage can also occur due to negligence of not completing visual checks of the bulkhead daily.

Failure to suspend operation of bulkhead immediately due to damage and/or lack of maintenance can result in bodily harm to swimmers.

BULKHEAD USAGE

The Paddock movable dividing bulkhead is the simplest and most cost-effective way to maximize the efficient use of any aquatic facility. It allows for ultimate flexibility in programming by creating separate areas for competition, instruction or recreation in the same pool to be conducted concurrently, if desired. So, a swim coach can hold practice while a fitness instructor teaches water aerobics class, or while an aquatics director conducts a lifesaving course, or while kids are playing. Because the bulkhead is movable, competition courses can be easily changed from 25 yards to 25 meters or 50 meters. Deep and shallow areas can be segregated, minimized, or expanded depending on scheduled activity. For large pools, two or more bulkheads can create even more options. And by adding a bulkhead to the design, an owner essentially gets two or more pools for the price of one. Capital and operational costs can be dramatically reduced by using a bulkhead in one pool instead of building two separate pools for various uses.

SPECIAL INSTRUCTIONS

SOME STANDARD RULES

1. **No diving off bulkhead**. Only exception is during competition or training under professional supervision.
2. **No swimming under bulkhead**.
3. **No one is allowed to run, jump or play on bulkhead**.
4. **No one or anything is allowed on bulkhead when it is being moved or when bulkhead is not locked in place with proper anchors.**
5. **Never use bulkhead as a support or staging for equipment**.
6. **Do not allow unauthorized or unqualified parties to move bulkhead**.
7. **Over torquing racing lane lines may cause damage. Contact manufacturer of racing line for proper guidance.**

Hazards:

Failure to properly maintain this equipment will result in equipment failure, improper performance and/or equipment damage which can cause injury to swimmers or staff. Such negligence will void manufacturer's warranty and will fall on responsibility of owner and staff administration.

Failure to inspect grating for tightness and damage can result in possible injuries for swimmer. Damage can also occur due to negligence of not completing visual checks of the bulkhead daily. **(Refer to Maintenance & Care see Sec. 3)**

Failure to suspend operation of bulkhead immediately due to damage and/or lack of maintenance can result in bodily harm to swimmers.

MAINTENANCE & CARE

Care & Maintenance Guide for equipment used on/with the bulkhead

Appearance of rust is caused by deposits on the surface of stainless steel. Low carbon stainless steel typically does not rust however, if stains should occur, they can be removed easily by using a "soft paste" such as Zud liquid or Bon Ami. **Thorough rinsing with clean water, not pool water, is also recommended on a regular basis. This includes all anchors, starting platforms, guard rails, water polo equipment and stanchions if applicable.**

To increase longevity of your stainless steel equipment that is used with the bulkhead, frequently follow the step:

1. Establish a proper grounding of all equipment being installed at aquatic facilities. Make it a point that dissimilar metals are not in direct contact of one another. Taking this precaution will minimize risk of forming an electrolytic cell between equipment, pool water and atmosphere at the facility.
2. Once all equipment has been installed, apply a coat of paste wax and buff equipment with soft cloth to assist in extended corrosion protection. Redo this process with waxing after using cleaners or at six-month intervals on stainless steel equipment. This wax will form a protective barrier between stainless steel and environmental elements left behind by evaporating pool water on equipment. Marine grade wax or Sheila Shine is recommended.
3. As stated previously rinse all equipment frequently with fresh water and dry with soft clean cloth. This should wash away any accumulated halogen salts such as chlorine or bromine. **DO NOT** use pool water, salt water, high PH or iron in water to clean your stainless steel products.
4. Pool equipment should be inspected regularly. Look for any tarnish, discoloration and stubborn stains, grease build up, blemishes or water spotting of stainless equipment. If apparent, then take appropriate steps to remove corrosive elements with a non-chlorinated stainless steel cleaner and water rinse.

NEVER use steel wool, wire brush, sandpaper, hydrochloric acid, muriatic acid, mineral acids or harsh abrasive cleaners on stainless steel equipment. Wire brush or steel wool will add to corrosion due to dissimilar metal materials coming into contact with equipment. Discoloration should be removed at first sign with a cleaner or polisher recommended for stainless steel equipment, such as Sheila Shine.

Note: Avoid adding chlorine in close proximity to stainless steel equipment. Dilute chlorine in 5-gallon bucket and pour as far from stainless equipment as possible. Also avoid cleaning masonry and pool decks with strong acid solutions that come in contact with stainless steel products. Do not pour straight muriatic acid directly into pool for PH control. This method increases corrosion to stainless steel around application area.

GRATING
HIGH DENSITY POLYETHYLENE (HDPE)

Care and Maintenance

- Paddock's HDPE grating is marine-grade polymer sheeting which is resistant to most chemicals and requires little maintenance to keep it looking new.
- Keep harsh solvents, acids, wood stains and wood preservatives away from Paddock HDPE finish. They may cause permanent staining and damage.
- Staining from rust is very difficult to remove so keep uncoated non stainless metals away from HDPE material.
- Shoes with marking soles can leave scuff marks that can be difficult to remove.

Hazards:
Failure to inspect grating for tightness and damage can result in possible injuries for swimmer. Damage can also occur due to negligence of not completing visual checks of the bulkhead daily. **(Refer to Screw Location for Targets see Sec. 3 page 6).**

Failure to suspend operation of bulkhead immediately due to damage and/or lack of maintenance can result in bodily harm to swimmers.

Cleaning

- For daily cleaning of everyday dirt and stains, use a non-abrasive cleaner such as "Zud" or "Soft Scrub" and a nylon brush to scrub lightly. Excessively hard scrubbing can mar the finish.
- Use Orenda Technologies CV-Tile for salt and calcium build up.
- Hard to remove stains will usually go away if you soak the area with bleach. When using this method, you must remove the grating from the stainless steel so it will not cause corrosion. Do not use 100% granular or tablet chlorine as a bleach alternate.
- Pressure washing can mar the finish.
- Petroleum based stains can be difficult to remove, soak the area with WD-40®. Then use acetone or toluene with a white nylon scrub pad (color-based pads can transfer dye color to finish when combined with acetone)
- Do not use MEK, turpentine or naphtha solvent.
- Do not use polishes such as Armor-All ® to nonskid areas, this will reduce the slip coefficient and cause a fall/slip hazard.

SECURING BULKHEAD IN AN EMPTY POOL

To support your bulkhead properly when pool is drained you will need to use timbers and bottle jacks. This is a temporary method to support bulkhead when pool is drained. (**Refer to Bulkhead Support Locations and Support Types after Draining Pool see Sec. 3 page 4**).

Note: These supports are to be installed and in place while draining pool.

Once these supports are in place, then all variable buoyancy chamber valves need to be opened to allow bulkhead weight to settle onto these supports. Jacks are used to evenly raise bulkhead. About an inch of clearance between gutter surface and bearing pads at each end of bulkhead is required.

A distribution plate under bottle jack is used to spread load across pool bottom to avoid damage or cracking.

Once cribbing is installed, leveled and shimmed close against bottom of bulkhead, jacks are released so bulkhead is resting on the cribbing.

When work is complete and pool is ready to be filled, jacks are then used again to raise bulkhead slightly so cribbing can be removed.

Hazards:
Failure to properly maintain this equipment will result in equipment failure, improper performance and/or equipment damage which can cause injury to swimmers or staff. Such negligence will void manufacturer's warranty and will fall on responsibility of owner and staff administration.

Failure to inspect grating for tightness and damage can result in possible injuries for swimmer. Damage can also occur due to negligence of not completing visual checks of the bulkhead daily. **(Refer to Screw Location for Targets see Sec. 3 page 6)**

Failure to suspend operation of bulkhead immediately due to damage and/or lack of maintenance can result in bodily harm to swimmers.

AIR COMPRESSOR

Refer to manufacture's operations & maintenance manual provided at start-up.
SpeedAire Portable Electric, Oil-Free Air Compressor, Model 45PL19, 0.75 HP, 115VAC, 3 gal., 60Hz, 12 Amps

For Repair Parts, Call 1-800-323-0620 | 24 hours a day – 365 days a year

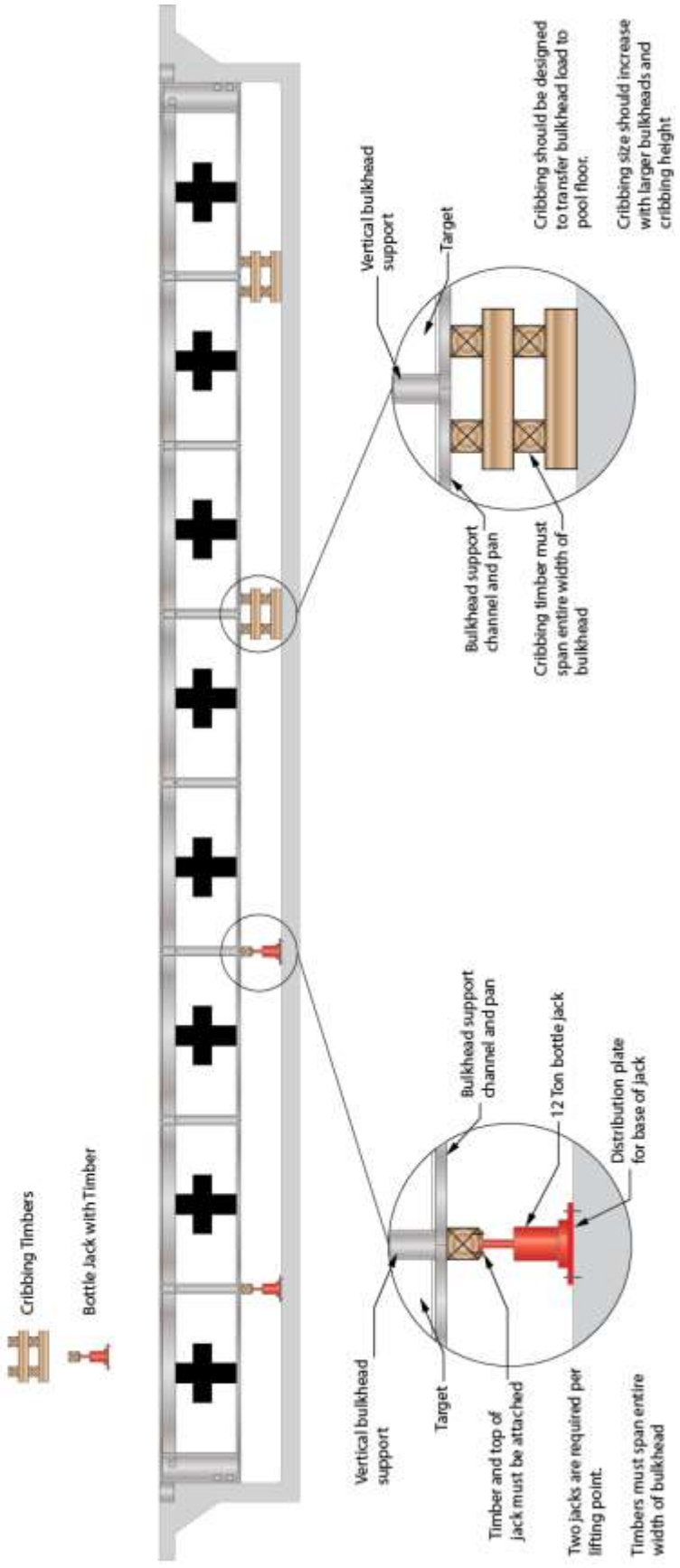
Grainger, www.grainger.com | Customer Care (toll free) 1-888-361-8649

Bulkhead Support Locations and Support Types for Draining Pool

Supports must be placed on vertical support channels located between targets

Do not leave bulkhead unsupervised while supported with bottle jacks

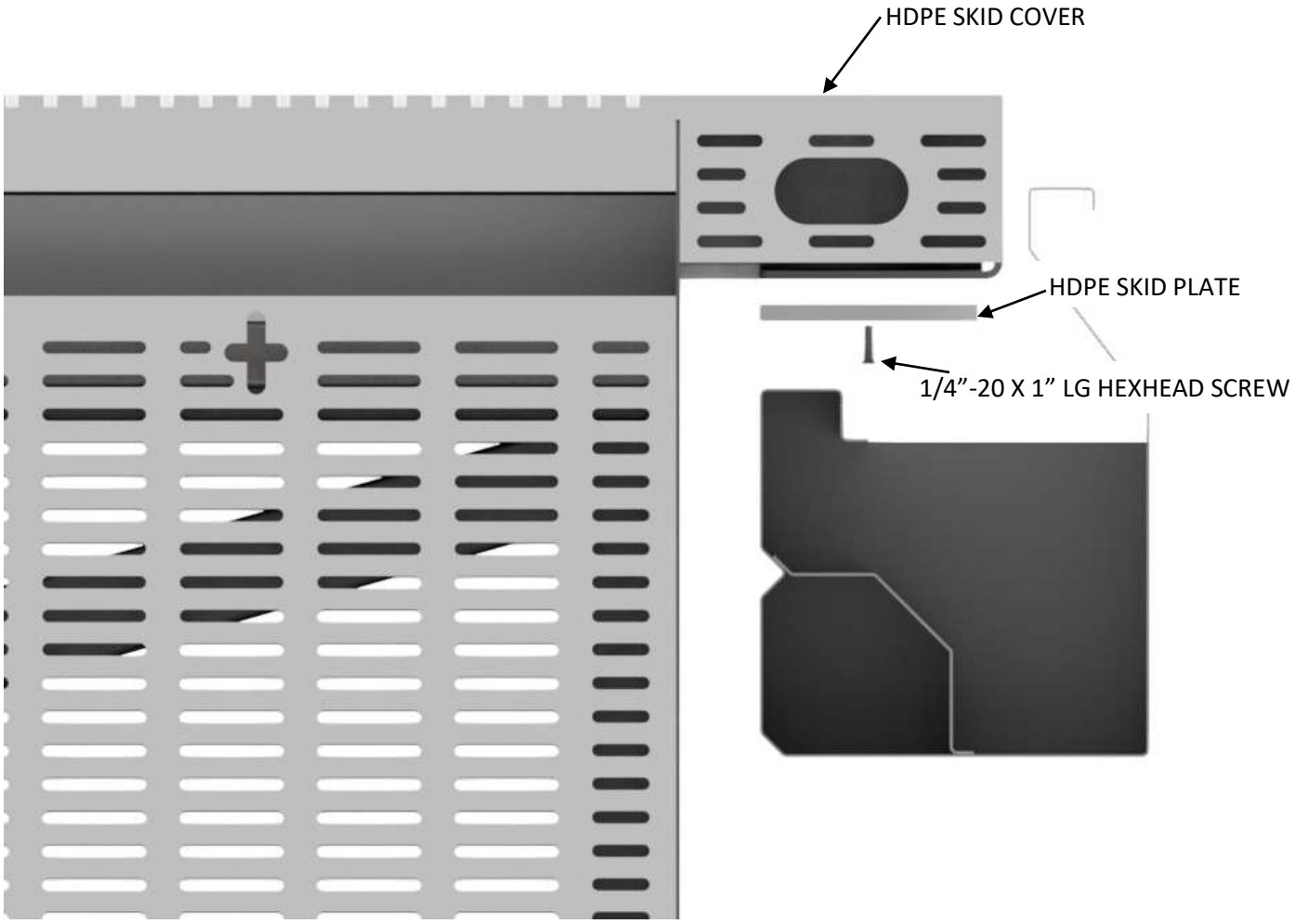
Do not use bulkhead while pool is drained for foot traffic



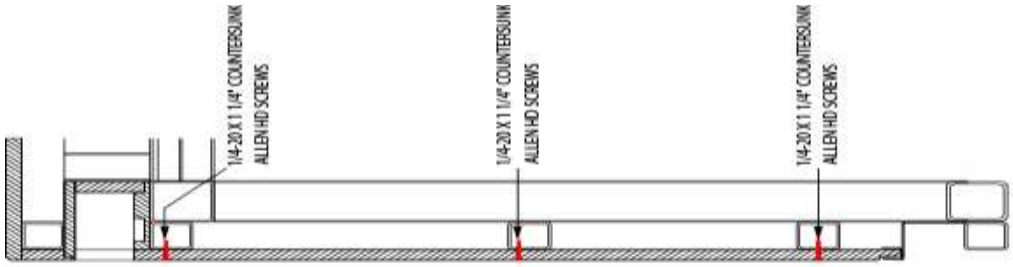
HDPE SKID PLATES

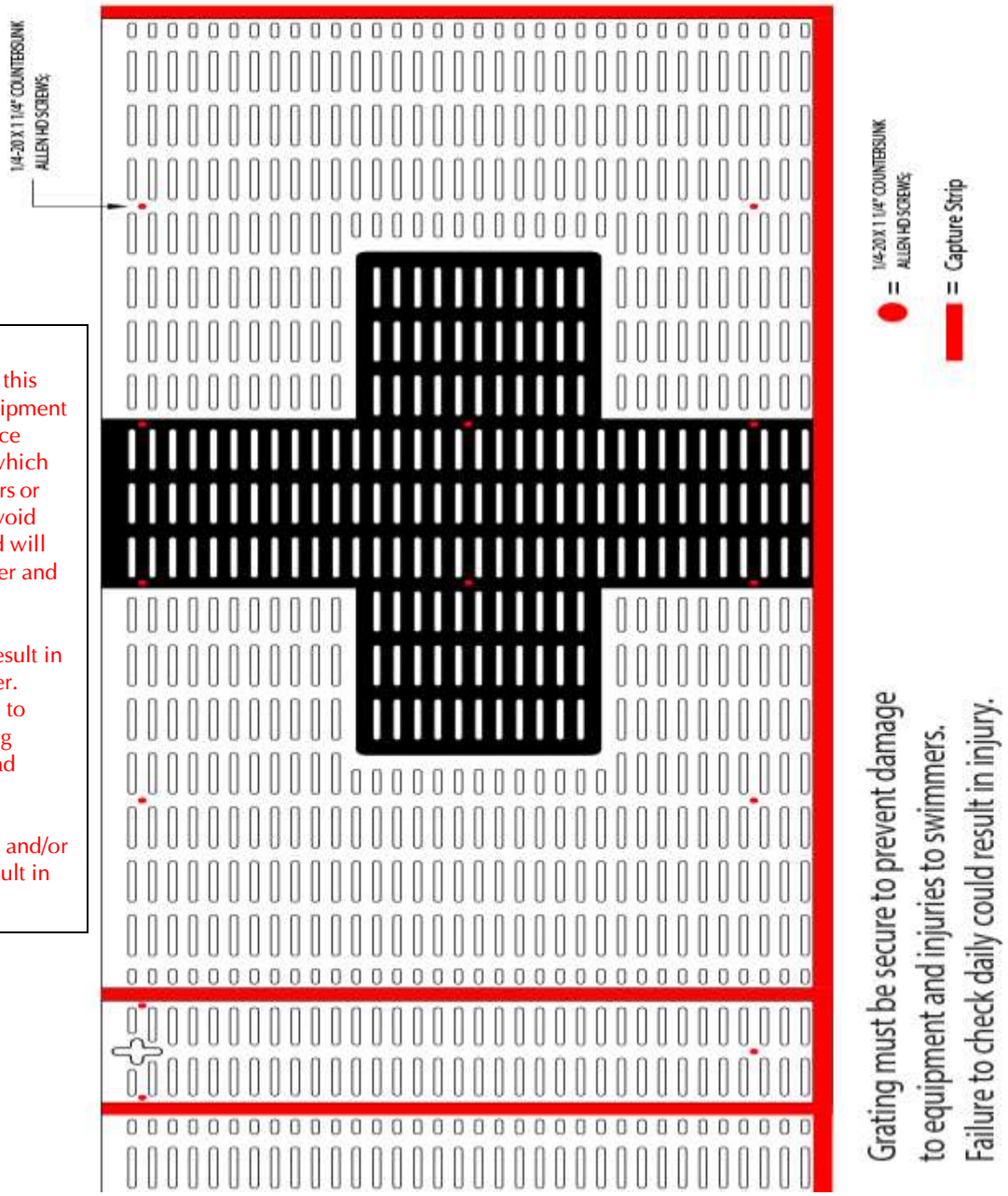
Bulkhead must be inflated to remove pressure on HDPE Skid Plates and remove HDPE Skid Cover with pin access prior to making any repairs and / or replacement of parts.

1. Remove the HDPE Skid Cover to access the threaded anchor pin.
2. The Skid Plates are underneath the Skid Beam on each side of the bulkhead and at both ends. See diagram below.
3. See chart below for part(s) list.



HDPE SKID PART(s)	
1.	HDPE SKID PLATE
2.	1/4” X 20 X 1” LG, FLAT HEXHEAD SCREW





Hazards:

- Failure to properly maintain this equipment will result in equipment failure, improper performance and/or equipment damage which can cause injury to swimmers or staff. Such negligence will void manufacturer's warranty and will fall on responsibility of owner and staff administration.
- Failure to inspect grating for tightness and damage can result in possible injuries for swimmer. Damage can also occur due to negligence of not completing visual checks of the bulkhead daily. Failure to suspend operation of bulkhead immediately due to damage and/or lack of maintenance can result in bodily harm to swimmers.

OPERATING INSTRUCTIONS

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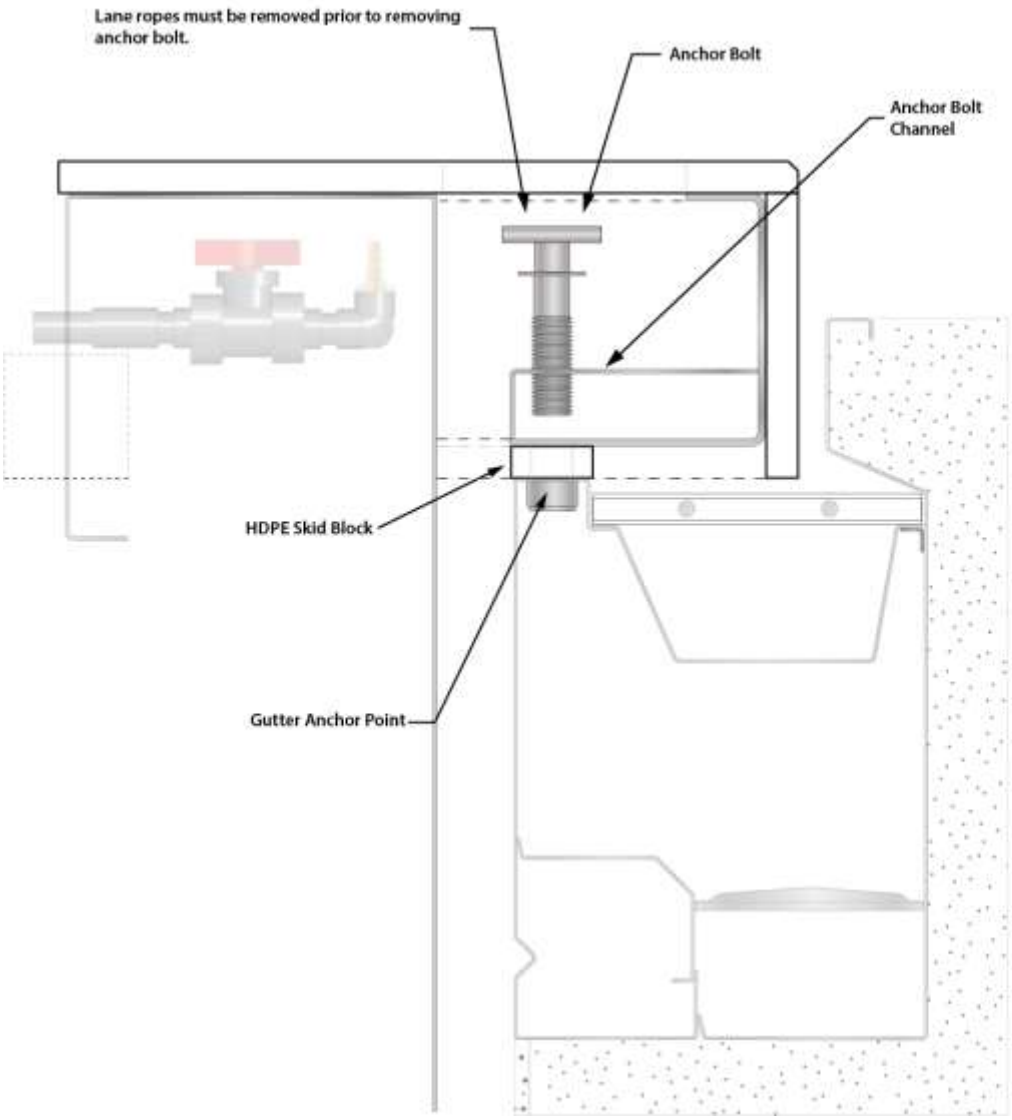
Email: info@paddockindustries.com

STEPS TO MOVING A BULKHEAD

1. Remove all racing lines.
2. Remove all starting platforms (only applies to 3′ wide or less). If not removed will cause bulkhead to lean toward one side or the other.
3. Remove all anchor pins (**Refer to Anchor Bolt Removal, see Sec 4 page 2**).
4. Close all 1/2″ ball valves; there are two at each end of bulkhead.
5. Connect air hose to air cock at either end of bulkhead.
6. Plug in air compressor.
7. Open one PVC ball valve. This will allow air to inflate one of the two chambers (**Refer to Bulkhead Inflation Valve Chart Orientation, see Sec. 4 page 3 for single or dual**).
    a. To inflate **single ballast,** remove anchor bolts, connect compressor, open valves, close vale on opposite side of bulkhead, turn on compressor and inflate ballast.
    b. To inflate **dual ballast**, remove anchor bolts, connect compressor, open valves on each side of bulkhead, turn on compressor and inflate ballast. Inflate ballast at equal rates to prevent imbalance from side to side, which could cause damage to bulkhead.
8. When bulkhead has been lightened to the desired amount, inflate until the HDPE skid plate/block is 1/2″ to 1″ above gutter lip or deck, close valve and disconnect air hose (**Refer to Bulkhead Ballast Levels, see Sec. 4 page 4**).
9. Insert rails on each end, using rails to push bulkhead into required location.
10. Two people are required to properly move bulkhead. Both people must pull at equal pace to prevent bulkhead from contacting wall (**Refer to Bulkhead Alignment and Pulling Hazards, see Sec. 4 page 5**).
11. When the new location has been reached, install the anchor pins and open all ball valves (**Refer to Anchor Bolt Placement, see Sec. 4 page 6**).

Anchor Bolt Removal



Bulkhead Inflation Valve Chart Orientation

Open Valve Orientation

NOTE: Paddock bulkheads have numerous types of ballast chambers from past to current production.

Single Ballast- Continuous chamber with inflation valves on each side of the bulkhead. One valve must be closed and other open to fill ballast.

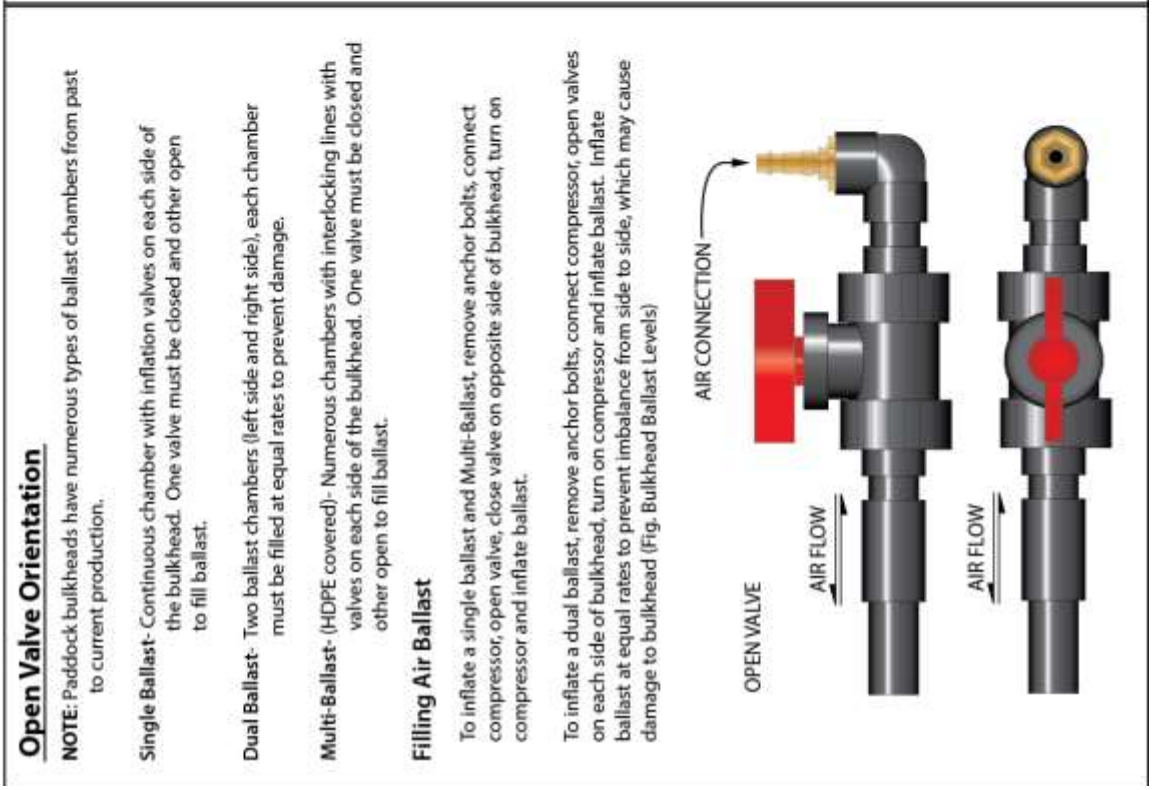
Dual Ballast- Two ballast chambers (left side and right side), each chamber must be filled at equal rates to prevent damage.

Multi-Ballast- (HDPE covered)- Numerous chambers with interlocking lines with valves on each side of the bulkhead. One valve must be closed and other open to fill ballast.

Filling Air Ballast

To inflate a single ballast and Multi-Ballast, remove anchor bolts, connect compressor, open valve, close valve on opposite side of bulkhead, turn on compressor and inflate ballast.

To inflate a dual ballast, remove anchor bolts, connect compressor, open valves on each side of bulkhead, turn on compressor and inflate ballast. Inflate ballast at equal rates to prevent imbalance from side to side, which may cause damage to bulkhead (Fig. Bulkhead Ballast Levels)



Closed Valve Orientation

NOTE: Paddock bulkheads have numerous types of ballast chambers from past to current production.

Single Ballast- Continuous chamber with inflation valves on each side of the bulkhead. One or both valve(s) must be open to vent ballast.

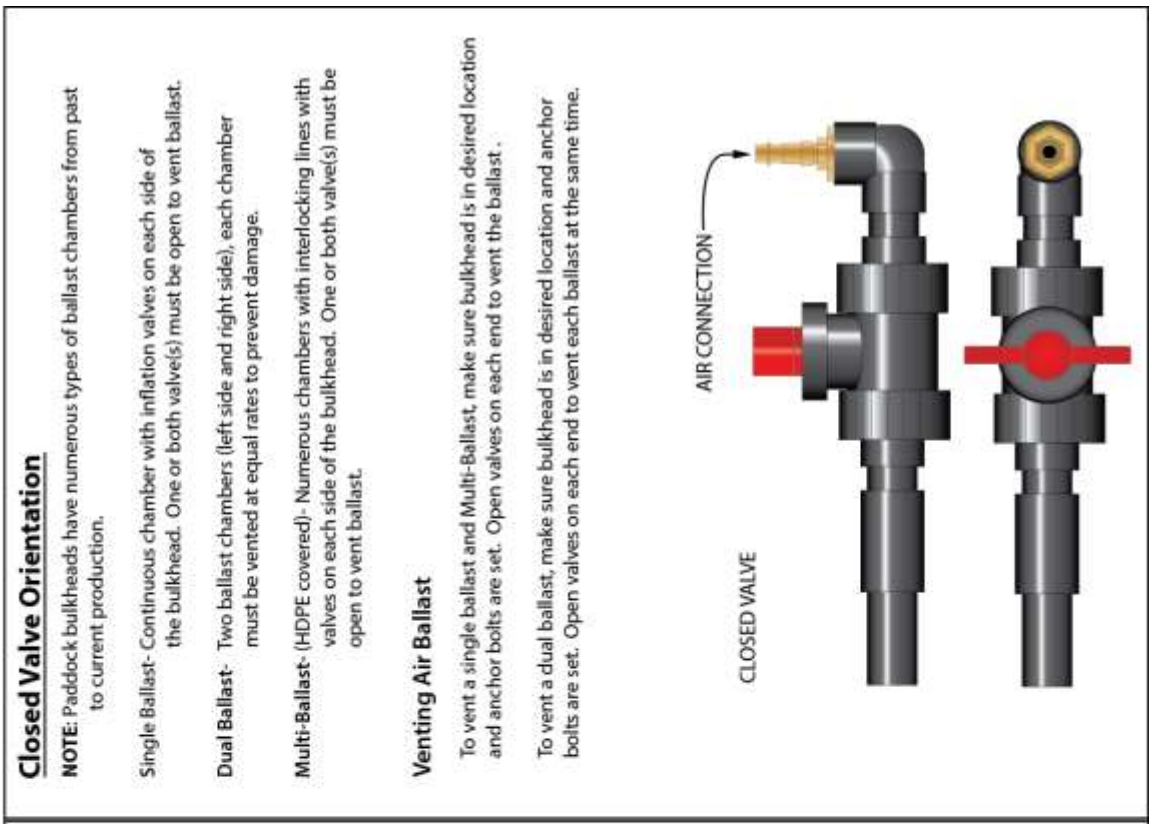
Dual Ballast- Two ballast chambers (left side and right side), each chamber must be vented at equal rates to prevent damage.

Multi-Ballast- (HDPE covered)- Numerous chambers with interlocking lines with valves on each side of the bulkhead. One or both valve(s) must be open to vent ballast.

Venting Air Ballast

To vent a single ballast and Multi-Ballast, make sure bulkhead is in desired location and anchor bolts are set. Open valves on each end to vent the ballast .

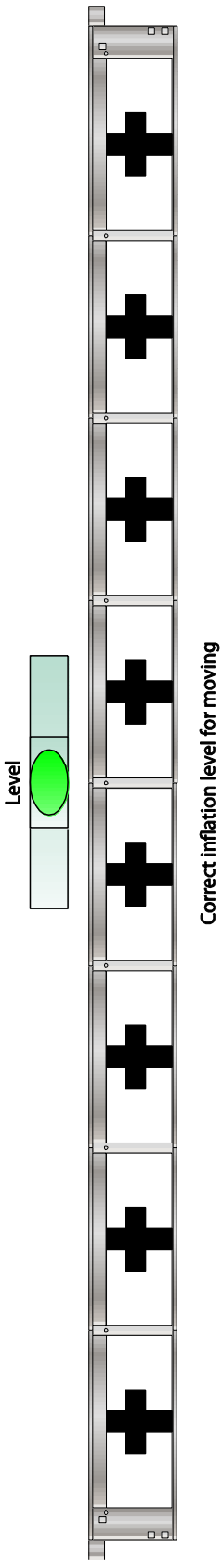
To vent a dual ballast, make sure bulkhead is in desired location and anchor bolts are set. Open valves on each end to vent each ballast at the same time.



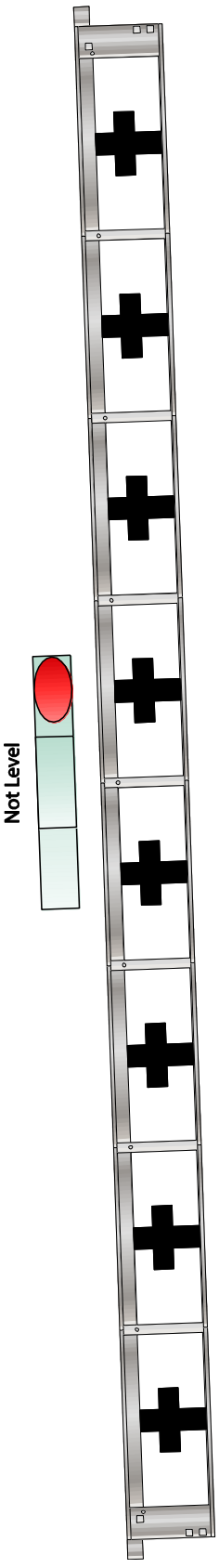
Bulkhead Ballast Levels

During inflation, venting and relocation make sure the bulkhead is level as depicted in the drawing below. Failure to maintain level can result in equipment damage and increases the effort required to move the bulkhead.

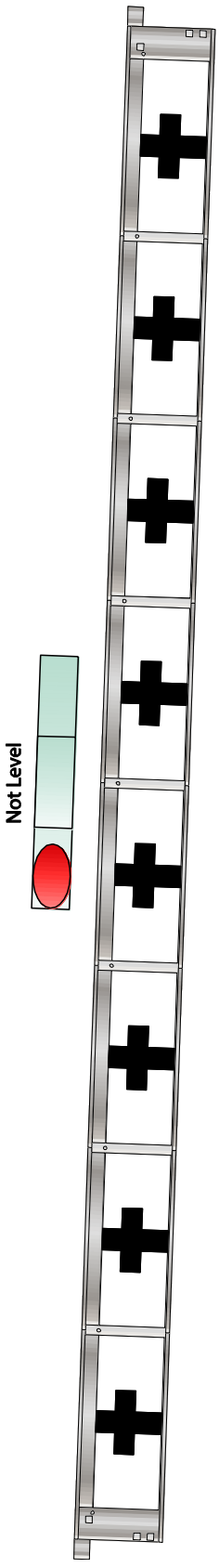
Prior to inflation of bulkead, be sure to remove lane lines, bulkhead anchor bolts, and starting block(s) (required on narrow bulkheads)



Correct inflation level for moving



Incorrect inflation level for moving. Do not move bulkhead in current orientation. May cause damage to bulkhead and other pool equipment,

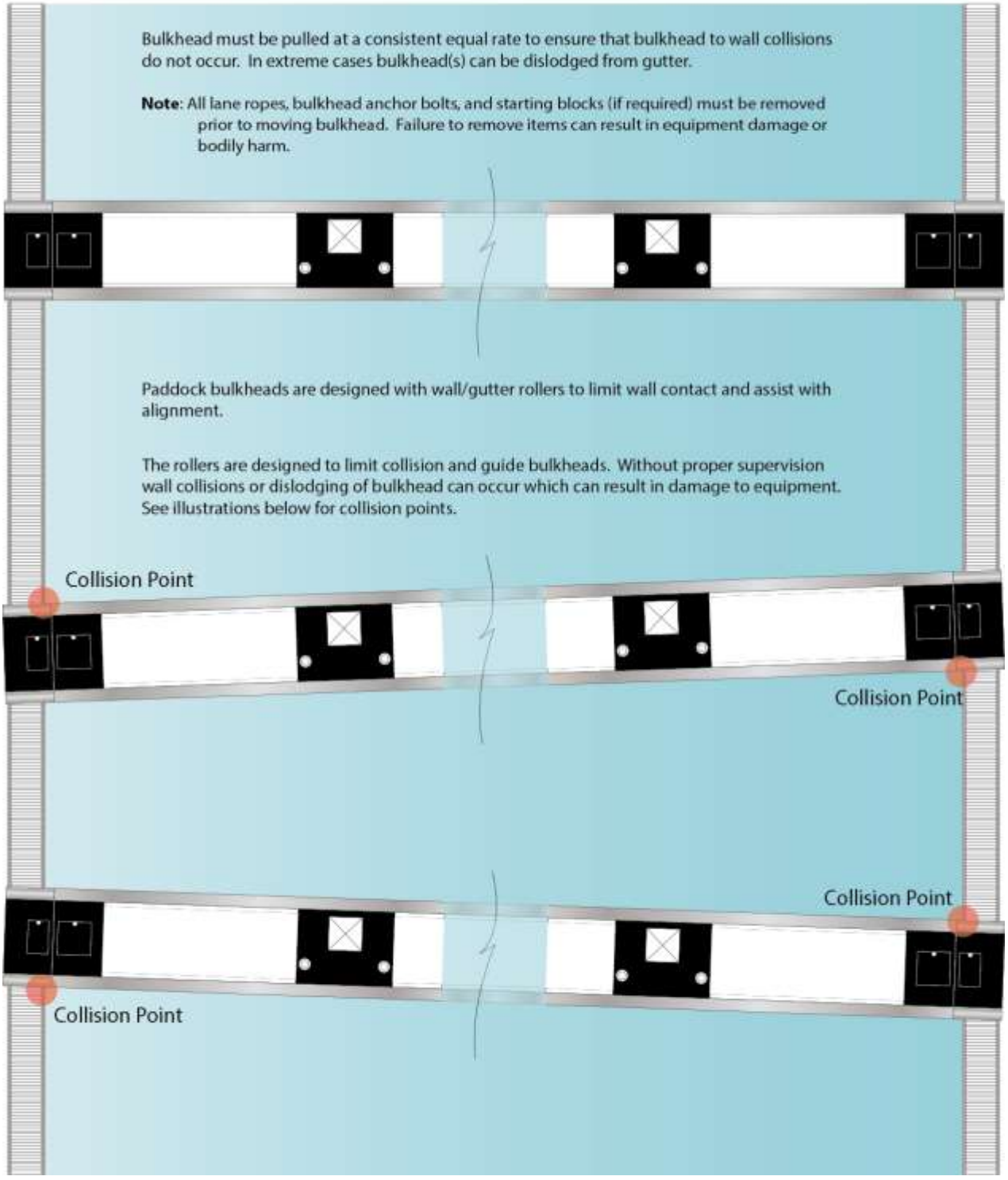


Incorrect inflation level for moving. Do not move bulkhead in current orientation. May cause damage to bulkhead and other pool equipment.

Bulkhead Alignment and Pulling Hazards

Bulkhead must be pulled at a consistent equal rate to ensure that bulkhead to wall collisions do not occur. In extreme cases bulkhead(s) can be dislodged from gutter.

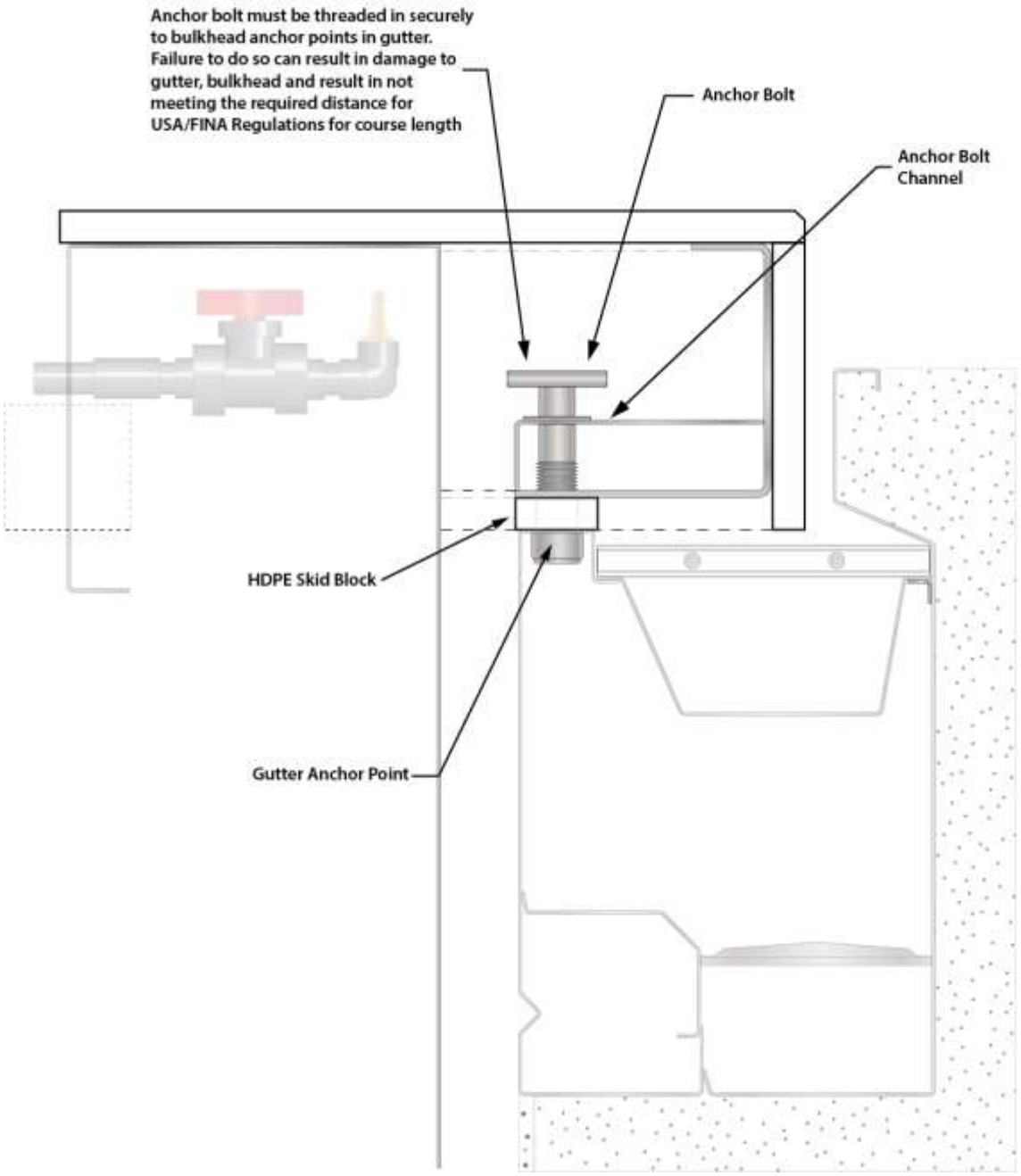
Note: All lane ropes, bulkhead anchor bolts, and starting blocks (if required) must be removed prior to moving bulkhead. Failure to remove items can result in equipment damage or bodily harm.



Paddock bulkheads are designed with wall/gutter rollers to limit wall contact and assist with alignment.

The rollers are designed to limit collision and guide bulkheads. Without proper supervision wall collisions or dislodging of bulkhead can occur which can result in damage to equipment. See illustrations below for collision points.

Anchor Bolt Placement



WARRANTY & DRAWING(S)

WARRANTY

MOVEABLE BULKHEAD (HDPE GRATING)

Paddock warrants that the Movable bulkhead to be free of defects in material and workmanship under normal use and service. HDPE components (grating) are warranted against failure due to defective materials or workmanship for a period of ten (10) years effective from in-service date. Fabricated stainless steel components (structural) are warranted against failure due to defective material or workmanship for a period of fifteen (15) years effective from in-service date.

Paddock's obligation under this warranty shall be limited to repair or replacement of any component manufactured by Paddock Pool Equipment Company, Inc. that proves defective after notification and examination by Paddock.
Paddock is not liable for any loss of time, inconvenience, labor or material charge incurred in connection with the removal, cartage, or replacement of equipment, for damages due to loss of use of the product or swimming pool, for utility or water cost required to make repairs or for any other incidental or consequential damages. This warranty is expressly in lieu of all other obligations or liabilities on Paddock's part. This warranty shall not apply to any damages caused by accidents, negligence, alteration, abuse or misuse. Warranty claims hereunder shall be considered timely, only if Paddock is notified in writing of such defects or claims within the warranty period.
We agree that if the product is operated in accordance with the written instructions and with the proper care and maintenance, it will perform in accordance with the specifications.

PADDOCK POOL EQUIPMENT COMPANY
Project:

_____

Location:

_____

Date: _____

SALES BULLETIN 84-4-R

SUBJECT: CHLORIDES NULLIFY WARRANTIES

The warranty expressed or implied for any filter tank, balance tank or other appurtenance supplied by Paddock Pool Equipment Co., Inc. is predicated on the owner maintaining the water within correct chemical parameter; in particular with respect to the chloride content of the water. Should the chloride content of the water exceed 100 milligrams per liter (100 ppm) as proven by an independent test using mercuric nitrate reagent, then such warranties on the filter tank(s), balance tank or other appurtenances are immediately null and void. Any damage caused by allowing chlorides to exceed this limit (even if such damage appears after water chemistry conditions have been corrected), will not be accepted as warranty items by Paddock Pool Equipment Company, Inc.

Furthermore, the use of salt based chlorine generators will immediately nullify and void warranty due to the potential corrosive environment created by such systems.