LOCKERBASKETS®

Installation Instructions Please read before installing or using system



FAILURE TO READ AND COMPLY WITH THESE INSTRUCTIONS OR ANY ONE OF THE LIMITATIONS NOTED HEREIN CAN RESULT IN SERIOUS BODILY INJURY OR DEATH, AND/OR PROPERTY DAMAGE.

IT IS THE RESPONSIBILITY OF THE OWNER AND PLANT OPERATOR, AND THEIR DESIGN PROFESSIONALS, that the installation of the LOCKERBASKET system and all of its components is in accordance with The Moore Company instructions and warnings regarding the system and with all applicable laws, safety rules and standards, including all safety rules and regulations of the Occupational Safety & Health Administration (OSHA) (<u>http://www.osha.gov</u>) and Mining Safety & Health Administration (MSHA) (<u>http://www.msha.gov</u>), all State and Local safety rules, regulations and building codes, and applicable ANSI/ASME Standards. It is also the responsibility of the owner and plant operator, and their design professionals, to be certain that the structure of the building to which the LOCKERBASKET® System will be attached is appropriate for and will safely and reliably hold the LOCKERBASKET® overhead clothes storage system.

ONLY QUALIFIED INSTALLERS SHOULD BE PERMITTED TO INSTALL THE SYSTEM.

FAILURE TO PROPERLY INSTALL THE LOCKERBASKET® SYSTEM CAN RESULT IN SERIOUS BODILY INJURY OR DEATH AND/OR PROPERTY DAMAGE. Refer to installation and service instructions for further assistance or contact The Moore Company. The Moore Company shall have no responsibility for any installation of the LOCKERBASKET® system not in compliance with, and/or not maintained in compliance with, The Moore Company installation instructions and applicable Regulations and Standards.

THE LOCKERBASKET® SYSTEM SHOULD BE USED ONLY AS DESIGNED AND ONLY WITH MOORE COMPANY COMPONENTS AND PARTS.

The Moore Company, Inc. shall have no responsibility for any alteration or modification of the LOCKERBASKET® system, or the use of non-Moore Company components or products used with or incorporated into the LOCKERBASKET® SYTEM.

IT IS THE RESPONSIBILITY OF THE OWNER AND OPERATOR, AND THEIR DESIGN PROFESSIONALS, to be certain that the LOCKERBASKET® System is properly maintained and serviced at all times in compliance with The Moore Company installation and maintenance instructions and warnings and with all applicable laws, safety rules and standards, including all applicable safety rules and regulations of OSHA and MSHA, all State and Local safety rules, regulations and building codes, and applicable ANSI/ASME Standards.

FAILURE TO PROPERLY MAINTAIN AND SERVICE THE LOCKERBASKET® SYSTEM CAN RESULT IN SERIOUS BODILY INJURY OR DEATH AND/OR PROPERTY DAMAGE. Refer to installation and service instructions for further assistance or contact The Moore Company. The Moore Company shall have no responsibility for any failure to maintain or service the LOCKERBASKET® System in compliance with The Moore Company instructions and warnings and applicable Regulations and Standards.

IT IS THE RESPONSIBILITY OF THE OWNER AND OPERATOR, AND THEIR OFFICERS, MANAGERS AND SUPERVISORS, to be certain that all employees and other users of the LOCKERBASKET® System are fully and properly educated and trained by qualified personnel in the proper and safe use of the LOCKERBASKET® System, including without limitation complete familiarity with and understanding of The Moore Company instructions and warnings and all applicable Regulations and Standards and that such employees and other users do in fact at all times operate the LOCKERBASKET® System safely and ONLY in compliance with The Moore Company instructions and warnings and Standards.

FAILURE TO OPERATE THE LOCKERBASKET® SYSTEM SAFELY AND IN COMPLIANCE WITH THE MOORE COMPANY INSTRUCTIONS AND WARNINGS AND WITH APPLICABLE REGULATIONS AND STANDARDS, AND/OR PERMITTING EMPLOYEES OR OTHER USERS NOT PROPERLY TRAINED IN THE SAFE AND PROPER USE OF THE SYSTEM, CAN RESULT IN SERIOUS BODILY INJURY OR DEATH AND/OR PROPERTY DAMAGE. Refer to installation and service instructions for further assistance or contact The Moore Company, Inc. The Moore Company shall have no responsibility for any failure to use or operate the LOCKERBASKET® System in compliance with The Moore Company instructions and warnings and all applicable Regulations and Standards.

Installation Instructions

WARNING: Read all warnings and instructions before installing or using system.

Customers are directed to review our website www.moorecompany.com

for all important safety and technical updates and the latest version of the instructions.

Personnel and Equipment Requirements

Project Installation Time Estimating Guide

Use the formula below as a guide only to estimate time for the installation of your LOCKERBASKET project. Labor force and building conditions, as well as other factors unknown to The Moore Company, Inc. may affect installation time. The contractor is responsible for interpreting actual project conditions and determining a reasonable estimate of installation time.

(# LOCKERBASKET units) * 1.333 MH/unit) (8 hours/day * (# people in crew)

The Moore Company estimates that it takes a crew of three, 1.333 manhours per unit to install a complete system, including the bench supports and ALUMIBENCH. The contractor should modify this suggested installation rate as necessary.

Example: Estimate the time required for three workers to install a complete 100 LOCKERBASKET system.

Solution:

<u>(100 units) * (1.33MH/unit)</u> = 5.5 days (8 hours/day * (3 MH/hour)

Partial Materials List (by other suppliers)

The Moore Company, Inc. recommends for concrete slabs greater than 3-1/2" that the following anchors be used. For other materials, floor construction or conditions, consult your design professional.

• 3/8"x 2 3/4" long Hilti Kwik Bolt expansion anchors (or equal) - 2 bolts for each pedestal (MCO-33 or 34) NOTE: If floor slab is less than 3 1/2" thick, seek advice on appropriate anchor bolt length.

Depending on project conditions, the following material must be purchased separately to complete the LOCKERBASKET system. *Set Connecting Details on page 5 for illustrations of each condition.*

If welding MOORFRAME support rail to steel overhead structure or steel plates in concrete overhead structure, include:

• 1/8" (3 mm) E70 series welding electrodes (or equivalent) for welding MOORFRAME support rail to steel overhead structure or steel plates in concrete overhead structure.

If bolting MOORFRAME support rail to steel or wood overhead structure, include:

- 3/8" diameter (10 mm) structural grade hexagonal headed steel bolts with washers and nuts. Choose a length of bolt that allows at least 2 threads to be exposed after nut is snug-tight.
- Clip angles (wood structure only)

If suspending MOORFRAME support rail to concrete overhead structure, also include:

• 3/8" Hilti Kwik Bolt stud anchors (or equivalent) of appropriate length for project conditions.

THE MOORE COMPANY, INC

If suspending MOORFRAME overhead framing from overhead structure as illustrated on page 6, also include:

- 2" x 2" x 1/4" clip angles (50 mm x 50 mm x 6 mm) one at each end of each support rail (MCO-28)
- 3/8" Hilti Kwik Bolt stud anchors of appropriate length for project conditions or 1/8" E70 series welding electrodes.
- 1" x 1"x 1/8" bridging angle (25 mm x 25 mm x 3 mm). NOTE: Bridging terminus must be secured to structure with clip angles or weld.
- 3/8" diameter threaded hanger rods with washers and nuts.

If splicing MOORFRAME members, also include:

 1/8" E70 series welding electrodes. NOTE: Also order extra section of MOORFRAME. Additional 18 inch lengths are required at each splice. (see drawing on page 4)

If bolting MOORFRAME support rail to steel or wood overhead structure, also include:

• 7/16" drill bit—appropriate grade

Partial Tool List (by other suppliers)

The LOCKERBASKET system can be installed using the following tools:

- Crimping Tool (MCO-26) supplied by The Moore Company, Inc.
- Cable Cutter (MCO-27) supplied by The Moore Company, Inc.
- Scaffolding (high enough for workers to attach MOORFRAME to overhead structure)
- Industrial strength glue
- Electric drill and the following bits:
 - 1/4" (6 mm) metal grade
 - 9/16" (14 mm) metal grade
 - 7/16" (11 mm) masonry grade
- Hack saw or electric band saw—metal grade blades
- Wide-mouth vice grips (approx. 3 sets)
- 1/2", 9/16", 3/4" wrenches and sockets:
- Hand tools, including a hammer, pliers, screw drivers measuring tape, level, plumb bob, chalk line boxes
- Electric welding machine and power extension cords

Special Cable Instructions for Formation of Cable Loop

Slide Cable through the small hole in the top of the Vinyl Sleeve Guard. Insert the Cable into one side of the Serving Sleeve and wrap the Cable around the Thimble and back through the Serving Sleeve. All strands of wire must go through the Serving Sleeve. If any distortion occurs in the Cable end, recut the Cable. Slide the Serving Sleeve up on the Cable until the loop is tight around the Thimble. The end of the Cable should extend 1/8 inch beyond the face of the Serving Sleeve. Compress the center of the Serving Sleeve first and then at each end, for a total of three (3) crimps. Slide the Vinyl Guard over the compressed Serving Sleeve.



The Moore Company, Inc. P.O. Box 3570 Charleston, WV 25337 Phone: 304-344-8024 Fax: 304-344-8025 info@moorecompany.com

www.moorecompany.com

PAGE 2

Overhead Clothes Storage Systems





RECOMMENDED SEQUENCE FOR STANDARD LOCKERBASKET INSTALLATION



Assembly of Overhead MOORFRAME Collector and Support Rails

Crew to break out MOORFRAME, measure and cut all collector and support rails. Lay out on floor according to overhead position (keep floor clear for scaffolding). See Technical Data on pages 4, 5 & 6.



3

4

Welding or Bolting of MOORFRAME to the Structural Frame

(for concrete and wood structures, see table on page 4)

- 1. Beginning at an end bay and using layout drawings, place a chalk mark where the center line of each collector and support rail is to be connected to the bottom cord of joist or purlin and continue until all connection points have been correctly marked.
- Weld or bolt all collector and support rails to joist or purlins, per MOORFRAME connection details on page 5.

Assemble Locking Rail Bench Support Units

- Bolt the Locking Rail Support Tube to one pedestal for a Single Bench Support or two pedestals for a Double Bench Support, per details on page
 Remember to install a bench support every 6'-0" (1830 mm) or less, on each row of bench.
- 2. Beginning at an end wall, locate the MOORFRAME collector rail end and drop a plumb line from the center line of the Collector Rail to the floor.
- 3. Strike line on floor marking the center line of each Locking Rail Support Tube as shown on page 2, step 3C.
- 4. Position the assembled single or double locking rail support units so the support tubes are centered on the center line, then anchor to the floor.
 - A. With the pedestal in position, drill 3/8" diameter holes in the floor using holes in pedestal base as a template.
 - B. Install expansion anchors in floor. Manufacturer recommends using the Hilti Kwik bolt 3/8" x 2 3/4" long (or equivalent)
 - C. Bolt support units in place. Use shims for leveling benches.
- 5. Install the Locking Rail to the bench support units.
 - A. Set MOORFRAME locking rail on top of support tubes and drill 9/16" holes into the top of the MOORFRAME locking rail on required spacing of 6'-0" (1830 mm) centers, or less, to align with Support Tube pre-drilled holes.
 - B. Insert and tighten 1/2" diameter machine bolt through the top of the MOORFRAME locking rail and into the Support Tube's cap plate.
 - C. Locking Rail splices must be made over a Support Tube cap plate.
 - D. Place an End Cap on all exposed ends of the Locking Rail and hold in place with industrial glue.
- 6. Install ALUMIBENCH planking to Locking Rail Support Units per sketch on page 2 Step 3F.
 - A. Set aluminum benches on pedestals.
 - B. Cut benches to required length, splicing on center line of pedestal. End of bench should have a 1-1/2" (40 mm) minimum to 1'-0" (305 mm) maximum overhang. File all saw cuts smooth.
 - C. Attach benches to pedestals with hold down clip assembly.

Assembly of LOCKERBASKETS and Standard Operating Equipment

- 1. Slide the hanger over the wire basket and into the grooves in the basket rim. The rim of the basket should rest on the hanger notch.
- 2. Insert guide bolts over the hanger hook shaft and through the holes in the basket strap. Secure in place with a 1/4" nut.
- 3. Place one vinyl hook guard on each garment hook and twist downward into place.
- 4. Place boot hanger under the basket and evenly between the hanger bails. Slide the wire connectors through the bottom of the basket and over the basket wires so the boot hanger hangs from the bottom of the wire basket. Using pliers, crimp wire connections securely around basket wires.



Connection of chain hoist assembly to locking rail

1. Determine the ceiling height from the bottom cord of the joist where the collector rail will be attached to the floor. The chain is precut to 9'-0" lengths for ceiling heights of 16'-0" or greater. If the ceiling height is lower, shorten the chain as follows:

Length Adjustment	Chai	
No Cutting Necessary	9'-0"	
Remove 1' 0" of chain	8'-0"	
Remove 2'-0" of chain	7'-0"	

 in length
 Ceiling height

 2740 mm
 16'-0" 4880 mm or higher

 2440 mm
 15'-0" 4570 mm

 2130 mm
 14'-0" 4270 mm

 Fully open one MCO-13 Quick Link and insert the threaded end of the Quick Link through the end link at one end of the MCO-100 chain.
 Insert the threaded end of the MCO-13 Quick Link into the swivel end of the MCO -20 Locking Swivel.

4. Close the MCO-13 Quick Link opening and securely tighten the MCO-13 Quick Link.

INSURE THE NUT IS TIGHTENED SUCH THAT QUICK LINK WILL NOT OPEN.

5. Insert the MCO-15 Locking Bolt through the last link of the MCO-100 Chain at the end <u>without</u> the MCO-20 Locking Swivel and then through the bottom hole of the desired MCO-16 Number Plate. Then insert the MCO-15 Locking

Bolt through the proper holes in the MOORFRAME Locking Rail. See spacing table on page 4 for proper hole sequencing.

INSERT A LOCKING BOLT THROUGH 2 SPACER TUBES EVERY 2 FEET (2' 0") INSIDE THE MOORFRAME TO PROVIDE ADDITIONAL RIDGITY. (See diagram to the right.)



2 SPACER TUBES



WARNING: INSURE THE LOCKING BOLT IS PROPERLY ALIGNED WITH THE EYE PARALLEL TO THE FLOOR AND THE LOCKING BOLT TIGHT. Improper installation could cause severe injury.

6. Place a Retainer Disc on threaded end of the MCO-15 Locking Bolt. Push the retainer disc onto the shank flush with the MOORFRAME® Locking Rail. Install hex nut and tighten while insuring Number Plate and Locking Bolt are properly aligned.



7

Install pulleys into overhead framing

- 1. Attach pulleys to MOORFRAME collector rail as called for in the pulley and locking bolt spacing table on page 4 to ensure proper hole sequencing. Insert curved end of MCO-8 "U" bolt through proper hole in MOORFRAME. Slip top link of pulley on to the "U" Bolt and insert the straight end of the "U" Bolt into the other end of the MOORFRAME. Secure with locking nut. Ensure all bolts protrude below the MOORFRAME flanges.
- Attach support pulleys to the MOORFRAME support rails every 2'-0" (610 mm) on center, per instructions in # 6-1 above.
- 3. Inspect pulley to insure the sheave spins freely and the cotter pin is properly secured with its ends bent back.

Connect Cable to Basket and Hoisting Assembly

- 1. Beginning from the LOCKERBASKET end, thread the Polycore cable through the two pulleys (support and then collector pulley) and down to the locking plate for that specific LOCKERBASKET. Attach the cable to the swivel-locking plate as outlined on page 1.
- 2. Pull the polycore cable to extend the cable to its full length and cut the polycore cable 6'-0" (1829 mm) from the floor.
- 3. Form a cable eye as previously described. It is important to crimp the Aluminum Duplex serving sleeve three (3) times to prevent failure of the loop.

RECOMMENDED SEQUENCE FOR STANDARD LOCKERBASKET INSTALLATION - CONTINUED



8

Attach cable to Basket with cushion spring

 Push cable eye through the hole in the spring cover, then place one spring link through the cable eye. Squeeze the ends of the Spring link together and slip through the spring until the loops engage the top of the spring. Slide the second spring link through top of LOCK-ERBASKET hanger and then through the cushion spring. Slide the vinyl cover over the top of the spring.

Inspect and test assembly

- The LOCKERBASKET, when lowered, should hang approximately 5'-0" (1520 mm) above the floor.
- 2. Inspect all nuts, bolts and mechanical connections to insure unit is in safe and proper working order. Insure that there are three (3) crimps on each of the sleeves used to form the cable loops.
- Test the LOCKERBASKET by raising and lowering it, checking for ease of operation and that the parts are properly located in the assembly. Should you have any questions, contact The Moore Co.
- 4. Give padlocks to Owner, if part of order.

NOTE: Ensure the Use and Maintenance Instructions are prominently displayed per Owner's Safety Officer's directions.

MOORFRAME TECHNICAL DATA MOORFRAME AS COLLECTOR RAIL SPAN TABLE

Roof structure must be designed by a design professional to withstand a 10 PSF (4.54 kg per 0.0929 meter²) uniform load caused by loaded LOCKERASKETS in addition to roof loads determined ,from appropriate building codes and local conditions. The design professional must also separately consider the point loads caused by the reaction of the collector rail. Each LOCKERBASKET load should be limited to 30 pounds.

SPAN		SIMPLE OR DOUBLE SPANS		CONTINUOUS SPANS	
IMPERIAL (Feet)	METRIC (mm)	Total number of rows of Baskets served by collector rail	Max. number of rows of Baskets on one side of collector rail.	Total number of rows of Baskets served by collector rail	Max. number of rows of Baskets on one side of collector rail.
UP TO	UP TO				
8'-0"	2440	6	4	6	5
8'-6"	2590	6	3	7	4
9'-0"	2740	5	3	5	4
9'-6"	2900	4	3	6	3
10'-0"	3050	4	2	5	3

ALL SPANS OVER 10'-0" (3050 mm) CONSULT THE MOORE COMPANY, INC.

NOTE: When MOORFRAME is used as a support rail, maximum clear span is 10'-0" (3050 mm)

When MOORFRAME is used as a collector rail, maximum clear span is 6'-0" (1828 mm)

MOORFRAME BRIDGING DIAGRAM

No bridging is required for clear spans under 8'-0" (2440 mm). Spans over 10'-0" (3050 mm), consult The Moore Company, Inc. Ends of bridging lines must be firmly anchored to walls or attached to structural member.

SPLICING MOORFRAME

All splicing should be done at a framing support point. Butt sections and weld as shown. Use sufficient amount of 1/8" (3 mm) E70 series welding rods or equal. All welded or bolted splices should be made at quarter points between supports.



LOCKING BOLT HOLE SPACING ON LOCKING RAIL AND PULLEY HOLE SPACING ON COLLECTOR RAIL



MOORFRAME CONNECTING DETAILS

WELDING MOOFRAME TO STRUCTURE BY:

Welding to structural steel



MOORFRAME (as collector rail OR Support rail)

Welding to steel plate embedded in concrete structure



BOLTING MOORFRAME TO STRUCTURE BY:

Bolting to steel structure



3/8" Bolt with washer and Nut (typical) by others. Drill 7/16" holes in steel and MOORFRAME.

Bolting to concrete structure



3/8" Hilti Kwik expansion anchor (B/O). Drill 7/16" Holes in concrete and MOORFRAME.

- 1. Clip may be fabricated from 1/8" plate or angle by others.
- 2. Hole in wood must be over half the depth from the bottom to prevent splits.
- 3. It is the owner's sole responsibility to determine the structural characteristics of the wood joist used and that the location of the connection points for the actual design load of the wood joists are capable of supporting the MOORFRAME members and LOCKERBASKET system.
- 4. All bolts are 3/8" machine bolts with washers and nuts by others.



Bolting to wood structure



STANDARD ATTACHMENT FOR OVERHEAD FRAMING

MCO-28 MOORFRAME as overhead support rails. Framing welded or bolted to purlins on 2'-0" (610 mm) centers. MCO-28 MOORFRAME as Collector Rail Adjust cable length to insure baskets hang at MCO-28 MOORFRAME as Locking Rail



the same level.

MCO-28





COMBINATION FLOOR LOCKER AND LOCKERBASKET SYSTEM

Details of common floor locker and LOCKERBASKET System layouts are provided in subsequent pages of this installation pamphlet. The installation of a combination floor locker and LOCKERBASKET system generally follows the preceding instructions. Installation instructions for the assembly of wall lockers should adhere to that manufacturer's installation instructions with accommodations being made for the placement of the floor lockers.

It is important to insure the architect's layout for the LOCKERBASKET System does not conflict with existing overhead ducts, structural framing or obstructions. The Moore Company recommends that the installer begin with the installation of the LOCKERBASKET System before installing the floor lockers. This will provide the installer with maximum flexibility in adjusting for varying field conditions that may already exist. It is also important for the installer to pair the floor lockers and LOCKERBASKETS closely enough for the assigned employee to conveniently change clothes.

SUSPENDED OVERHEAD FRAMNG SYSTEM **ATTACHMENT DETAILS**

NOTE: If hanger rod is not at a joist panel point, add web member in field.

NOTE: Cold rolled purlins must be bridged at hanger rods to prevent rotation.



TERMINATION OF MOORFRAME / BRIDGING AT WALL



CROSS SECTION SHOWING SUSPENDED FRAMING





THE MOORE COMPANY, INC. 2008

MS-10 STANDARD LOCKERBASKET LAYOUT WITH STAND ALONE LOCKERS



MS-80 LOCKER OPERATED SYSTEM-PEDESTAL MOUNTED



MS-80 LOCKER OPERATED SYSTEM WITH FREE STANDING PEDESTAL BENCH SUPPORTS

