

Republic Storage Systems Co.

## LOCKER FEATURES & ACCESSORIES DISCUSSION AND SPECIFICATION ADDITIONS AND DELETIONS

### GENERAL:

\* Where features or accessories are specified, but are not used in or with all lockers on a project, it is important to specify "where used".

\* Specifications for locker feature variations (gauges, perforations, etc.) should be located within the appropriate subsection of Part 2 - Products.

- The specification for various trim, accessories and associated items such as benches, basket racks, etc., should be located as in Section 2.3.X Other - see specifications for various types of lockers.

1. GALVANNEALED STEEL: To enhance corrosion resistance, locker components and trim may be manufactured from zinc-coated (galvannealed) steel according to the standard specification ASTM A 653/A 653M – 99a.

SPECIFICATION- Specified locker components and trim shall be manufactured from galvannealed steel and finished by manufacturer's standard process.

2. LEGS: Lockers may be furnished with 6" legs for installations without a base. The front legs are extensions of the locker side frames. The rear legs used with zee or closed bases are adjustable angles attached to the body parts and are normally installed at extreme ends and every third immediate upright.

SPECIFICATION- Lockers shall be provided with 6" legs by extending vertical 16 gauge side frame members with provision for floor anchoring.

2A. LEGS FOR ALL WELDED VENTILATED LOCKERS: All Welded Ventilated Lockers may be furnished with 4" or 6" high gusset type legs that are field drilled and riveted to the bottom of the lockers in the four corners of each model provided.

SPECIFICATION: Lockers shall be provided with 4" gusset type legs for all four corners of each All Welded Ventilated model or group.

3. STANDARD LOUVERS: Standard louvers are supplied in various patterns dependent upon locker door size as follows:

- \* Six louvers top and bottom for single-tier, double-tier, duplex and two-person lower doors
- \* Two groups of three louvers in triple-tier and 3-high box lockers
- \* One group of six louvers in four-tier
- \* Two louvers top and bottom in 4, 5 and 6-high box lockers

**SPECIFICATION-** All locker doors shall have the manufacturer's standard louver arrangement.

**NOTE:** Louvers should not be specified for lockers with sound dampening panels.

**4. FULL LOUVERS:** Full louvers are provided when maximum ventilation without visibility of locker content is desired. Full louvering consists of forming as many standard louver patterns as is practical in any given door.

**SPECIFICATION-** All locker doors (as specified) shall be louvered with manufacturer's standard full louver pattern.

**5. MINI - LOUVERS:** All locker doors may be provided with mini louvers to provide generous ventilation while concealing locker contents.

**SPECIFICATION-** All locker doors (as specified) shall be louvered with manufacturer's standard mini-louver pattern.

**6. VERTI-VENTS:** Verti-Vents consist of a series of obround perforations through the top and bottom horizontal return flanges of the locker door leaves. They are provided in flush doors (without louvers) to increase available ventilation.

**SPECIFICATION-** All tiered-type locker doors shall have the Republic Verti-Vent door ventilation system.

**7. VISUAL PERFORATIONS - DOOR:** Visual perforations are patterns of 5/8" W x 1-1/8" H slots spaced 1/4" apart giving a rectangular mesh appearance to provide visibility and air flow. They are available on most 16 or 18 gauge locker doors.

**SPECIFICATION-** All locker doors shall be provided with visual perforations.

**8. ROUND PERFORATIONS - DOOR:** Round perforations consist of 1/2" diameter holes arranged in a 42-hole pattern, 6-holes wide and 7-holes high (9" wide lockers have a smaller pattern). Groups of 42-holes are used to accomplish the total perforation pattern of the part. They are available on most locker doors 16 gauge or lighter.

**SPECIFICATION-** All locker doors shall be punched with round perforations. Specify full perforations (maximum number of holes) or standard perforations (one group top and bottom in single-tier; one group each compartment in double-tier or box).

**9. DIAMOND PERFORATIONS - DOOR:** Large punched 3/4" W x 1-1/2" H or small 7/16"W x 15/16"H diamond perforations provide unrestricted ventilation and are ultimately stronger than expanded metal. Small perforations are typically used for narrow or short box locker doors.

**SPECIFICATION-** Tiered locker doors shall be perforated with small diamond perforations.

**NOTE-** Diamond perforations only available on 16 gauge or 14 gauge parts.

**10. FIRE EXTINGUISHER DOOR:** Locker doors (normally double-tier upper doors) may be provided with a 5" W x 20-1/2" H opening and glazed with 1/8" DSA glass to provide visibility of a portable fire extinguisher. The minimum usable door size is 12" W x 30" H with the standard handle and 15" W x 30" H with the recessed handle.

**SPECIFICATION-** Lockers designated on drawings shall be equipped for fire extinguisher visibility.

**11. WASTE BIN DOOR:** A gravity-actuated top hinge waste bin door is normally provided in the lower compartment of a double-tier locker which has its upper door prepared for fire extinguisher visibility. The waste bin door preparation consists of an opening 4" W x 8" H in the upper part of the locker door. An optional metal waste bin may also be specified.

**SPECIFICATION-** Lockers designated on drawings shall be equipped with an opening for access to a contained waste bin.

**12. SOUND DAMPENING PANELS:** Panels for tiered locker doors are designed to stiffen the door surface and reduce sound levels when doors are slammed. They are die formed to 3/16" depth and have a 1/2" full perimeter flange spot welded flush to the door surface. Louvers are not used when sound dampening panels are provided. Sound dampening panels are not provided on box locker doors or tow person locker book compartment doors.

**SPECIFICATION-** All locker doors shall have sound dampening panels welded to the inner surface of each door.

**13. BOLTED HINGES:**

**SPECIFICATION-** All lockers shall have hinges bolted to the inside of doors using two (2) low round head, slotless machine screws and Keps security nuts.

**14. CONTINUOUS HINGES:** Continuous "piano" style hinges may be used on single, double or triple tier doors.

**SPECIFICATION-** Tiered locker doors shall have a full height, 16 gauge staked pin continuous hinge, with full curl 1/2" knuckles and a flush .120 diameter pin on a standard flat assembly. Hinge shall be securely welded to the side frame and riveted to the side flange of the door.

15. LATCH GUARD SILENCERS: The latch guard silencer is used as a method to fill the space between the back of a locker door and the frame hook/door strike area. The purpose is to inhibit access to the spring latches that hold the door closed on tiered lockers and reduce the opportunity for unauthorized entry. The latch guard is standard on any fully perforated (diamond, visual, round) Republic tiered type locker door.

SPECIFICATION- A large welded latch guard to be provided on each frame hook. A soft rubber silencer shall be provided and securely installed on each frame hook.

16. STAINLESS STEEL PADLOCK STRIKE: Heavy Duty Ventilated and All Welded Ventilated Box Locker doors are pre-punched for an optional 20 gauge 1-1/2"W x 2-1/4"H stainless steel padlock strike plate attached with two (2) slotless head machine screws or two (2) rivets. Other locker types have handles or pulls that serve as padlock strikes.

SPECIFICATION- Heavy Duty Ventilated and All Welded Ventilation box locker doors shall be equipped with a stainless steel padlock strike.

17. VISUAL PERFORATIONS - BODY: Visual perforations are patterns of 5/8" W x 1-1/8" H slots spaced 1/4" apart giving a rectangular mesh appearance to provide visibility and air flow. They are available on any 16 or 18 gauge body part.

SPECIFICATION- All uprights shall be 16 gauge with visual perforations.

18. ROUND PERFORATIONS - BODY: Round perforations consist of 1/2" diameter holes arranged in a 42-hole pattern, 6-holes W and 7-holes H. Groups of 42-holes are used to accomplish the total perforation pattern of the part. They may be punched in any part 16 gauge or lighter.

SPECIFICATION- All uprights (or backs, tops, bottoms, shelves, etc.) are to be punched with round perforations. Specify full perforations (maximum number of holes) or standard perforations (one group of 42-holes near the top and bottom of a single tier back or upright; one group of 42-holes in each top, and/or bottom, and/or shelf; one group in each compartment in double-tier or box).

19. DIAMOND PERFORATIONS - BODY: 3/4" W x 1-1/2" H diamond perforations are provided in the uprights of Heavy Duty Ventilated and All Welded Ventilated Athletic Lockers. Available variations include a reduction in the size of perforation patterns or smaller diamonds (7/16" W x 15/16" H) in the uprights. Diamond perforations are only available on 16 gauge.

SPECIFICATION- All uprights shall be 16 gauge with diamond perforations in quantity and pattern to provide maximum ventilation.

20. **NON-STANDARD GAUGES:** Heavier than standard gauge locker body parts such as tops, bottoms, uprights or compartment dividers are often preferred for lockers subject to heavy usage. The heavier parts may be required to add a special feature such as visual perforations.

**SPECIFICATION-** Tops shall be 20 gauge steel on all lockers with exposed flat tops. (Specify item and gauge).

21. **STAINLESS STEEL BOTTOMS:** Stainless steel bottoms may be used in areas where lockers may be exposed to excessive moisture or corrosive elements.

**SPECIFICATION-** All locker room lockers shall have 24 gauge, unpainted, stainless steel bottoms.

22. **CENTER PARTITIONS:** Partitions divide a locker into two vertical compartments below a shelf or compartment divider. They are used in applications such as two students per locker or for separation of work or athletic clothing from street clothing.

**SPECIFICATION-** All lockers shall have 24 gauge, full depth, vertical partitions between bottom and shelf.

23. **EXTRA SHELVES:** Extra shelves are often used in lockers for two students in order to supply extra horizontal storage or, in the lower portion of a locker, to separate shoe storage. Extra shelves may be specified in almost any location and may be used in conjunction with center partitions.

**SPECIFICATION-** Provide two (2) shelves in each single-tier locker located at 9" and 18" below the top (indicate specific location).

24. **ADDED HOOKS OR COAT RODS:** Standard hook and/or coat rod arrangement may be modified to add additional hanging locations.

**SPECIFICATION-** All lockers 18" or greater in depth shall be provided with a coat rod, two (2) single-prong wall hooks and one (1) double-prong back hook.

25. **KEPS NUTS ASSEMBLY FASTENERS:** Loose fasteners and lost bolt problems may be minimized when a locking type assembly fastener is used. It can be installed or removed with ordinary hand tools. Keps nuts fasteners are standard on Heavy Duty Corridor and Single Point Lockers.

**SPECIFICATION-** All assembly fasteners shall consist of plated, low profile, slotless head machine screws and Keps nuts.

26. **RIVETED ASSEMBLY:** Lockers may be assembled with rivets and back-up washers to ensure tamperproof security, tight fastening and the elimination of loose or lost bolt

problems. Removal of parts for rearrangement or replacement purposes can be accomplished by drilling out rivets.

**SPECIFICATION-** All locker assembly fasteners shall be "pop" type rivets with aluminum bodies and steel mandrels.

**27. TURN TYPE HANDLE:** Heavy Duty 14 gauge tiered locker doors may be equipped with a turn type handle mounted on the face of the door in lieu of the standard recessed handle. The turn handle is chrome plated, made of 7 gauge steel by 1" wide by 5" long with a 90 degree bend for a built-in padlock eye. Locking is achieved with a three-point system consisting of two 3/8" diameter cold drawn steel rods that project into the top and bottom frames and a 10 gauge center cam which engages the locker side frame.

**SPECIFICATION-** All tiered athletic doors to have a three-point latching system with a chrome plated turn handle.

**28. RECESS TRIM:** Recess trim is used to cover the open space between lockers and walls or soffits when lockers are recessed into a wall. Trim shall be formed from 18 gauge sheet steel and have 3" face dimension. Splices in horizontal trim shall be accomplished with concealed splice fingers resulting in a hairline joint.

**SPECIFICATION-** 3" face recess trim shall be provided around all lockers recessed into walls. Trim shall be furnished in lengths as long as practical and attached to lockers with concealed clips. Corner caps shall be integral with jamb trim. Cover plates at splices and corners and/or exposed fasteners will not be accepted. Trim shall be finished to match lockers.

**29. CLOSED BASES:** 20 gauge closed bases are used on lockers with legs to close off the area beneath lockers and create a finished appearance.

**SPECIFICATION-** Provide closed metal front and end bases on all lockers having legs. Front bases shall be installed between legs without overlap or exposed fasteners. Bases shall be finished to match lockers.

**30. ZEE BASES:** Zee bases provide an alternative to concrete, masonry or wood bases. They are easily installed, provide a more level support surface and are finished to match lockers. The bases are available in 3", 4" and 6" heights and flanged outward at top for support of lockers and inward at the bottom for anchoring to the floor and to provide a toe space in front and concealed flange for floor anchoring at the rear.

**SPECIFICATION-** Provide 4" height, continuous metal Zee base. Flanged. Lengths shall be as long as practical with reinforced hairline joints. Bases shall be finished to match lockers.

**31. FRONT FILLERS:** Obstructions such as piping, duct work or columns often create gaps between groups of lockers which must be trimmed and filled. Use of angle and slip

joint fillers to cover openings up to 18" wide is the common solution. This method provides concealed fasteners and is adjustable to suit job conditions. Fillers for openings between lockers shall be fabricated from 18 gauge sheet steel and formed in an unequal leg angle shape.\* Slip joint angles shall be 20 gauge sheet steel formed in an angle shape with a double bend on one leg to form a pocket which provides adjustable mating with the angle filler. Attachment to lockers shall be by means of concealed fasteners.

*\*For fillers greater than 3". For fillers 3" and less, use 20 gauge sheet steel.*

**SPECIFICATION-** Locker manufacturer to provide necessary filler (s) for a complete assembly. Fillers shall be finished to match lockers.

**32. BOXED END PANELS:** 1" thick, 16 gauge boxed end panels are used to enhance appearance, cover lighter gauge standard locker end uprights and cover all exposed fasteners. One piece, double-row boxed end panels shall also have a center zee reinforcing member.

**SPECIFICATION-** 16 gauge concealed fastener boxed end panels shall be installed on all exposed ends of lockers. Panels shall be finished to match lockers.

**33. END FINISHING PANELS:** End finishing panels are additional 24 gauge upright cover sheets with perimeter fastenings only and are placed directly over standard multiple-punched locker end uprights. The extra sheets increase the total metal thickness to an 18 gauge equivalent and cover all fasteners and unused holes in the standard end upright except perimeter fasteners.

**Specification:** End finishing panels to be installed over all exposed ends of lockers. Panels are 24 gauge sheet steel, fastened at perimeter only and finished to match lockers.

**34. CONTINUOUS SLOPING TOPS:** Continuous sloping tops are used to prevent accumulation of unwanted items on locker tops. They are furnished in 72" lengths with slip joint intermediate splices and end panels or hipped ends. Tops are installed over lockers with flat tops; they do not normally have a back panel since they are installed against a wall or have a ridge line in double row conditions.

**Specification:** Lockers shall be provided with continuous sloping tops formed from 20 gauge or 16 gauge sheet steel (select one) with a slope that has a rise equal to 1/3 the locker depth (approximately 18 degrees). Tops shall be provided in lengths as long as practical and provided with slip joints and concealed fasteners at splice locations. Necessary end panels (or hip ends) and mitered corners shall be provided. Tops shall be finished to match lockers.

**35. INDIVIDUAL SLOPING TOPS:** Individual sloping tops replace the flat top normally furnished with a locker. Tops are furnished in one piece with a sloping front and vertical back. Wedge-shaped dividers are also furnished to fill the opening between the top of the locker upright and the sloping top.

SPECIFICATION- Lockers shall be provided with 24 gauge sheet steel individual sloping tops. Tops shall be formed to a slope which rises 1/3 the locker depth (approximately 18 degrees) and shall have an integral back panel. Wedge-shaped dividers shall be provided at the top of each locker upright. Tops and exposed dividers shall be finished to match lockers.

### 36. BENCHES AND PEDESTALS:

SPECIFICATION- Locker benches shall be laminated maple, 1-1/4" full finished thickness. All corners are to be rounded and sanded. Top and edges have two coats of a clear finish with one coat on the bottom. Bench tops are to be 9-1/2" wide and furnished in lengths of 3' through 12' (whole foot increments). Tops to be mounted on pedestals consisting of 1-1/4" O.D. tubing with 10 gauge steel flanges welded to each end. The overall height of bench assembly shall be 17-1/2". Pedestals shall be finished to match lockers.

37. MOVEABLE BENCHES: The moveable bench has a trapezoidal shaped pedestal providing stability for the bench yet allowing it to be easily moved. The pedestal is 3" wide by 1/4" thick aluminum bar stock anodized in black color. The smooth bar stock is punched with two holes for floor mounting if desired.

SPECIFICATION- Moveable benches shall consist of laminated maple bench tops mounted on trapezoidal aluminum pedestals. Non-skid pads shall be provided for each pedestal. Overall height of the moveable bench shall be 17-1/2".

38. LOCKS: All Republic lockers are designed to accept built-in key locks or combination locks, padlocks and, in certain circumstances, electronic locks and coin-operated locks. Various lock bolt types must be used to accommodate the locker operating/locking system as follows:

-Spring Bolts: Standard Box Lockers

-Dead Bolts (retractable): Heavy Duty Ventilated Box Lockers, All Welded Ventilated Box Lockers, Lockers with turn handle and rod (cremone) operation

-Dead Bolts (vertically moveable): Tiered type lockers with lock bar and automatic pre-latching

-Padlocks (key or combination type): All locker types

-Electronic Locks (Contact Republic for information): All tiered lockers with lock bars, ADA compliant lockers

-Coin-Operated Lock (Contact Republic for information): Specific sizes of tiered and box lockers.

SPECIFICATIONS- (Specify lock brand, if desired, location and locker type if appropriate). All locks shall have bolt types appropriate to the mode of locker operation.

-Built-In Flat Key Locks: All lockers shall be equipped with built-in flat key type locks. All locks shall be master keyed to the same series. Provide two (2) keys for each lock and two (2) master keys for the system.

-Built-In Grooved Key Locks (Pin Tumbler): All lockers shall be equipped with built-in grooved key type locks. All locks shall be master keyed to the same series. Provide two (2) keys for each lock and two (2) master keys for the system.

-Built-in Combination Locks: All lockers shall be equipped with built-in combination locks. Locks shall have three-number combination dialing and be capable of at least five different combination changes. Master key, combination change key, if required, and combination control charts shall be provided to the owner.

-Padlock-Combination Type: Master keyed combination type padlocks shall be provided for all locker doors. Locks shall have three number combination dialing. Master key and combination chart shall be provided to the owner.

### 39. WIRE BASKETS/BASKET RACKS:

#### SPECIFICATION-

\* Shelving: Shelving units shall consist of 1" x 1" x 13 gauge angle posts punched for bolted attachment of basket shelves. Sway braces of 3/4" x 16 gauge steel shall be provided for the back of the unit. Sides shall be braced by the down turned flange of the shelves. Shelves shall be of 20 gauge steel formed with 2-5/16" down turned flanges at the back and both ends. Shelf fronts shall have a 1-3/16" face.

\* Dividers: Dividers shall be 22 gauge, 3" H with an attaching flange formed at right angles. Dividers are bolted to shelves.

\* Padlock Attachment: A padlock attachment shall be provided at the front edge of each shelf located to match the locking loop formed in the basket rim.

\* Casters (option): Mobility casters shall be 2" double-wheel, swivel-type bolted to each corner post.

\* Number Plates: Numbering shall consist of a Republic standard aluminum number plate bolted to the shelf face at each basket opening. Basket manufacturer's standard number plate to be attached to the front of each basket.

\* Baskets: Baskets shall be (select size) 12" x 13" x 8" or 9" x 13" x 8" (select type). Types include all wire, wire mesh or perforated steel front type. Wire mesh shall be 14 gauge steel arranged in a 3/4" or 1" square pattern on all wire baskets. Mesh on optional steel front baskets shall be in 3/4" x 1" square pattern. Steel fronts and backs shall be 26 gauge steel perforated with 5/16" round embossed holes. Top rim of all baskets shall be 6 gauge steel wire.

\* Pilfer Guards (option): Provide a sheet steel pilfer guard designed for field attachment to the top of the basket to cover the first 3" of depth.

\* Finish: Finish on basket and pilfer guard consists of electroplating with bright zinc chromate. Basket shelving posts and shelves shall be finished in a selection from Republic's 25 standard spray finish colors. Sway braces and dividers will be finished in #83 Decorator Tan.

40. ADA ACCESSIBLE LOCKERS: Most Republic lockers can be customized to conform to ADA guidelines. While the ADA does not mention lockers specifically, it does refer to features that are found on or in lockers. The three major areas that require definition are the handle, the shelf and bottom location, and the placement of the locker within a room.

-Handle: ADA states that door hardware "...shall have a shape that is easy to grasp with one hand and does not required tight grasping, tight pinching or twisting of the wrist to operate." Republic's recessed handle fulfills the requirement and must be specified for any single, double, or triple-tier lockers. The turn handle and single point latch handle may also meet ADA requirements.

-Shelf and bottom location: If the accessible locker is to have a shelf (as in a single-tier locker) it must be located no higher than 54" above the finished floor to conform to the side reach requirements or 48" above the floor to conform to the forward reach limit. In addition to the upper shelf requirement, the bottom of the locker must have a shelf at a minimum 9" off the finished floor for side reach or 15" off the finished floor for forward reach so that any item placed or dropped on the bottom is accessible.

-Location of the locker within the locker room layout: The locker must be in an unobstructed position that is at least 24" away from a wall or other obstacle. The space around the locker must be clear within a 60" diameter turning circle to allow easy access and egress by the parallel or frontal approach.

SPECIFICAION- Side Reach - Accessible lockers shall be 12" x 12" x 72" single-tier with recessed handle, located in the locker room as indicated on the floor plan. Interior equipment shall consist of a book shelf and coat hooks located 54" off of the finished floor.\* One additional shelf shall be placed near the bottom of the locker so that it is no lower than 9" above the finished floor.\*\* A decal with the international symbol of accessibility shall be applied to the face of the locker door.

*\*48" for forward reach. \*\*15" for forward reach.*