Please Note: These specifications may or may not include all available options including features, dimensions, etc. To customize and modify these specifications for your specific application, please contact Dave Bradford at 847-344-8989 or dave@bradfordsystems.com

**METAL LOCKERS**

* 1. RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

* 1. SUMMARY

A. This Section includes the following: Day Use lockers in single and multi-tier configurations.

* 1. REFERENCES
1. American National Standards Institute (ANSI) Standards: Applicable standards for fasteners used for assembly.
2. American Society for Testing and Materials (ASTM) Standards: Applicable standards for steel sheet materials used for fabrication

Applicable standards for the testing of electrostatically applied Powder Coat Paint

1. American Institute Of Steel Construction (AISC) Standards: Applicable standards for steel materials used for fabrication.
	1. DESCRIPTION
2. General: Metal Lockers with locks for assigned or unassigned use. Available in single door or multi-tier configurations.
3. Finishes:

Fabricated Metal Components and Assemblies: All components to be painted with an electro- statically applied Powder Coat paint that can meet or exceed test requirements set out by ASTM standard D3451-06 Standard Guide for Testing Coating Powders and Powder Coatings.

1. Sizes:

Day Use Lockers: nominal frame heights of [24] inches to [96] inches, nominal widths of [11] inches to [24] inches, and nominal depths of [12] inches to [24] inches all in 1 inch increments. Single door and 2,3,4, or 5 tier configurations available.

* 1. PERFORMANCE REQUIREMENTS
1. Design Requirements:

Limit overall width not to exceed specified nominal width; locker width designed for zero growth.

1. Seismic Performance: Provide Metal Lockers capable of withstanding the effects of earthquake movement when required by applicable building codes.
	1. SUBMITTALS
2. Product Data: Submit manufacturer's product literature and installation instructions for each type of metal locker required. Include data substantiating that products to be furnished comply with requirements of the contract documents.
3. Shop Drawings: Show fabrication, assembly, and installation details, including descriptions of procedures and diagrams. Show complete locker installation layout, including quantities, locations and types of accessory units required. Include notations and descriptions of all installation items and components.

Show installation details at non-standard conditions, if any.

Provide layout, dimensions, and identification of each unit, corresponding to sequence of installation procedures.

Provide installation schedule and procedures to ensure proper installation.

1. Samples: Provide minimum [3] inches or [76] millimeters square example of each color and texture on actual substrate for each component to remain exposed after installation.
2. Selection Samples: For initial selection of colors and textures, submit manufacturer's color charts, consisting of actual product pieces, showing full range of colors and textures available.
3. Warranty: Submit draft copy of proposed warranty for review by the [Architect] [Architect/Engineer] [Engineer] [Designer].
4. Maintenance Data: Provide written documentation of the manufacturer’s statement, claiming the maintenance free nature of the product.
5. Reference List: Provide a list of recently installed metal lockers to be visited by owner, architect, and contractor. Intent of list is to aid in verifying the suitability of manufacturer's products and comparison with materials and product specified in this section. Include contact name, address, and phone numbers.
	1. QUALITY ASSURANCE
6. Manufacturer Qualifications: Engage an experienced manufacturer who is ISO 9001:2008 certified for the design, production, installation and service of metal lockers. Furnish certification attesting ISO 9001:2008 quality system registration.
7. Installer Qualifications: Engage an experienced installer who is the manufacturer's authorized representative for the specified products for installing metal lockers.

Minimum Qualifications: 1-year experience installing metal lockers of comparable size and complexity to specified project requirements.

* 1. DELIVERY, STORAGE AND HANDLING

A. Follow manufacturer’s instructions and recommendations for delivery, storage and handling requirements.

* 1. PROJECT CONDITIONS
1. Field Measurements: Verify quantities of metal locker units before fabrication. Indicate verified measurements on shop drawings. Coordinate fabrication and delivery to ensure no delay in progress of the work.
2. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating metal lockers units without field measurements. Coordinate construction to ensure actual dimensions correspond to established dimensions.
	1. [SEQUENCING AND SCHEDULING]
3. Sequence metal lockers [with other work] to minimize possibility of damage and soiling, during remainder of construction period.
4. Schedule installation of specified metal lockers after finishing operations, including painting, have been completed.
5. Provide components, which must be built in at a time, which causes no delays in the general progress of the work.
6. Pre-installation Conference: Schedule and conduct conference on project site to review methods and procedures for installing Metal Lockers including, but not limited to, the following:

Recommended attendees include:

* 1. Owner's Representative.
	2. Prime Contractor or representative.
	3. The [Architect] [Architect/Engineer] [Engineer/Architect] [Engineer] [Designer].
	4. Manufacturer's representative.
	5. Subcontractors or installers whose work may affect, or be affected by, the work of this section.
	6. WARRANTY
1. Provide a written warranty, executed by Contractor, Installer, and Manufacturer, agreeing to repair or replace units, which fail in materials or workmanship within the established warranty period. This warranty shall be in addition to, and not a limitation of, other rights the Owner may have under General Condition’s provisions of the Contract Documents.
2. Limited Lifetime Warranty: Subject to the terms in the written warranty, warrant the original purchaser exclusively that the locker frames manufactured by it will be free from defects in materials and workmanship for the lifetime of the locker.

PART 2 - PRODUCTS

* 1. MANUFACTURER**:**

Spacesaver Corporation, 1450 Janesville Avenue, Fort Atkinson, WI 53538. Spacesaver or equal as determined by owner/architect. For pricing, contact David Bradford at 847-344-8989 or dave@bradfordsystems.com

BASIC MATERIALS

A. General: Provide materials and quality of workmanship, which meets or exceeds established industry standards for products specified. Use furniture grade sheet metal and fasteners for component fabrication unless indicated otherwise. Material thicknesses/gauges are manufacturer’s option unless indicated otherwise.

* 1. LOCKER TYPES

A. Day Use Locker. Provide metal storage lockers in single door and multi-tier configurations by Spacesaver Corporation. Provide lockers equipped with accessories as requested

* 1. MANUFACTURED COMPONENTS
1. Welded Frame:
	1. The welded frame must consist of top, bottom, back, and sides constructed of a minimum of 18-gauge or [1.214] millimeters steel. All frame components shall be joined using resistance welding.
	2. Multi-tier lockers shall include a fixed position shelf or shelves to separate the tiers. Shelf shall be constructed of a minimum of 18-gauge or [1.214] millimeters steel. Shelf shall be mechanically fastened to interior locker sides using a locking lance feature.
		1. Width:
			1. Frame: [11] to [48] inches or [279.4] to [1219.2] millimeters. In [1] inch increments.
			2. Individual Openings [11] to [24] inches or [279.4] to [609.6] millimeters. In [1] inch increments.
		2. Height:
			1. Frame: [12] to [90] inches or [304.8] to [2286] millimeters. In [1] inch increments.
			2. Individual Openings: [10] to [72] inches or [254] to [1828.8] millimeters. In [1] inch increments.
		3. Depth:
			1. [10] to [30] inches or [254] to [762] millimeters. In [1] inch increments.
2. Metal Doors
	1. Shall be formed from two (2) pieces of minimum 20-gauge [0.91] millimeter cold rolled steel box formed and riveted together. Door with inner and outer door panels shall have a combined steel thickness of no less than [0.075] inches or [1.9] millimeters thick. (2) panel door design optimizes structural integrity of locker door system over and above any single frame door design.
	2. Exterior door panel shall be constructed with formed flanges and return flanges to add stiffness.
	3. Doors shall be full overlay style.
	4. Hinge:
		1. Full overlay [1] inch hinge
		2. Soft close style
		3. One-piece wraparound hinge
		4. Steel, nickel-plated
		5. Minimum of 2 hinges per door.
			1. Door heights up to 27” require 2 hinges
			2. Door heights >= [28] inches and < [56] inches require 3 hinges
			3. Door heights >= [56] inches require 4 hinges
		6. Opens 110 degrees
	5. Locks
		1. Locks shall be centered vertically in door.
		2. Locks shall be available in assigned or unassigned usage to be specified at time of order.
		3. Provide multiple locking options
			1. Electronic Keypad
			2. Mechanical Combination Lock
			3. Hasp lock
			4. Keyed Lock
		4. Keypad, Combination, and keyed locks shall have master override.
	6. Doors to remain closed when in unlocked mode.
3. High Pressure Laminate Doors
	1. Shall be ¾” thick MDF with HPL on both faces
	2. Shall have matching 3mm thick edge banding
	3. Doors shall be full overlay style.
	4. Hinge:
		1. Full overlay [1] inch hinge
		2. Soft close style
		3. One-piece wraparound hinge
		4. Steel, nickel-plated
		5. Opens 110 degrees
		6. Minimum of 2 hinges per door.
			1. Door heights up to 27” require 2 hinges
			2. Door heights >= [28] inches and < [56] inches require 3 hinges
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			1. Electronic Keypad
			2. Mechanical Combination Lock
			3. Hasp lock
			4. Keyed Lock
		4. Keypad, Combination, and keyed locks shall have master override.
	6. Doors to remain closed when in unlocked mode.
4. Optional Interior/Accessory components (Architect/Owner to specify):
	1. All interior components must be specified at time of order.
		1. Shelf
		2. Single Coat Hook
		3. Shelf with Coat Rod
		4. Venting on
5. ACCESSORIES:
	1. [Optional] Welded Base: Provide manufacturer’s standard.
	2. [Optional] Trim and Fillers: Provide manufacturer’s standard.
	3. [Optional] Continuous Sloped Top. Provide manufacturers standard.
	4. [Optional] Locker Tag Numbers. Per customer requirement
	5. FABRICATION

A. General: Coordinate fabrication and delivery to ensure no delay in progress of the work.

* 1. FINISHES
1. Colors: [Selected from manufacturer’s standard available colors.] [Provide in custom colors as selected by [Architect] [Architect/Engineer] [Engineer.]
2. Paint Finish: Textured (Standard) – Provide factory applied electrostatic powder coat paint. Meet or exceed specifications of the American Society for Testing and Materials (ASTM) Standards:

PART 3 - EXECUTION

* 1. EXAMINATION
1. Examine Lockers scheduled to receive accessories [with Installer present] for compliance with requirements for installation tolerances and other conditions affecting performance of specified accessory items.
2. Proceed with accessory installation only after unsatisfactory conditions have been corrected.
	1. INSTALLATION

A. General: Follow manufacturer’s written instructions for installation of each type of accessory item specified.

* 1. FIELD QUALITY CONTROL
1. Verify accessory unit alignment and plumb after installation. Correct if required, following manufacturer’s instructions.
2. Remove components that are chipped, scratched, or otherwise damaged and which do not match adjoining work. Replace with new matching units, installed as specified and in manner to eliminate evidence of replacement.
	1. ADJUSTING

A. Adjust all accessories to provide smoothly operating, visually acceptable installation.

* 1. CLEANING

A. Immediately upon completion of installation, clean components and surfaces. Remove surplus materials, rubbish and debris, resulting from installation, upon completion of work and leave areas of installation in neat, clean condition.

* 1. DEMONSTRATION/TRAINING
1. Schedule and conduct demonstration of installed accessory items and features with Owner's personnel.
2. Schedule and conduct maintenance training with Owner's maintenance personnel. Training session should include lecture and demonstration of all maintenance and repair procedures that end-user personnel would normally perform.
	1. PROTECTION

A. Protect system against damage during remainder of construction period. Advise owner of additional protection needed to ensure that system will be without damage or deterioration at time of substantial completion.

END OF SECTION