SECTION 05 51 36

PREFABRICATED MODULAR ALUMINUM STAIRS AND PLATFORMS

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\*\* NOTE TO SPECIFIER \*\* Kattsafe; safe access and fall protection.
This section is based on the products of Kattsafe, which is located at:3921 Perry Blvd.Whitestown, IN 46075Toll Free Tel: 888-637-7872Tel: 317-769-7710Fax: 317-229 6451Email: [request info (sales@kattsafe.com)](https://arcat.com/rfi?action=email&company=Kattsafe&message=RE%253A%2520Spec%2520Question%2520(05535fix)%253A%2520&coid=48709&spec=05535fix&rep=&fax=317-229%25206451)
Web: <https://www.kattsafe.com>
 [ [Click Here](https://arcat.com/company/kattsafe-48709) ] for additional information.
FIXFAST began trading as a family-owned business in 1975 in the United Kingdom. We started an office in the USA in 2008 and have seen rapid and positive growth since.
Our extensive range of safe access products and fall protection systems are primarily designed for rooftop applications. The roof environment is dangerous, and workers are exposed to multiple fall hazards. The rooftop is often considered as out of sight, out of mind. We aim to reverse this theory through education and simplicity. Our goal is to ensure that any worker subjected to working on roofs has maximum safety with minimum fuss.
Our Vision: To ensure those working at heights return home safely.
We back up our comprehensive product range with first class customer service. As a company, we have always gone that extra mile to ensure absolute customer satisfaction. Every member of our technical customer service team has been extensively trained, to ensure that you receive the best possible advice, care and completely up to date product information.

1. GENERAL
	1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project.

* + 1. Prefabricated modular stairs.
		2. Prefabricated modular stairs and platforms.
		3. Prefabricated modular stair bridges.
	1. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 32 14 23 - Asphalt Unit Paving.
		2. Section 03 30 00 - Cast-in-Place Concrete.
		3. Section 05 50 00 - Metal Fabrications.
		4. Section 05 51 33 - Metal Ladders.
		5. Section 05 52 13 - Pipe and Tube Railings.
		6. Section 06 10 00 - Rough Carpentry.
	1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* + 1. OSHA 1910.23: Ladders
		2. OSHA 1910.25: Stairways
		3. OSHA 1910.28: Duty to have fall protection and falling object protection
		4. OSHA 1910.29: Fall protection Systems and falling object protection - criteria and practices
		5. ANSI A1264.1: Safety requirements for Workplace Walking/Working Surfaces and Their Access
		6. ANSI A14.3: Fixed Ladders
	1. SUBMITTALS
		1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
		2. Product Data:
			1. Manufacturer's data sheets on each product to be used.
			2. Preparation instructions and recommendations.
			3. Storage and handling requirements and recommendations.
			4. Typical installation methods.

\*\* NOTE TO SPECIFIER \*\* Delete if not applicable to product type.

* + 1. Verification Samples: Two representative units of each type, size, pattern and color.
		2. Shop Drawings: Include details of materials, construction and finish. Include relationship with adjacent construction.
	1. QUALITY ASSURANCE
		1. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with a minimum five years documented experience.
		2. Installer Qualifications: Company specializing in performing Work of this section with minimum two years documented experience with projects of similar scope and complexity.
		3. Source Limitations: Provide each type of product from a single manufacturing source to ensure uniformity.

\*\* NOTE TO SPECIFIER \*\* Include mock-up if the project size or quality warrant the expense. The following is one example of how a mock-up on might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.

* + 1. Mock-Up: Construct a mock-up with actual materials in sufficient time for Architect's review and to not delay construction progress. Locate mock-up as acceptable to Architect and provide temporary foundations and support.
			1. Intent of mock-up is to demonstrate quality of workmanship and visual appearance.
			2. If mock-up is not acceptable, rebuild mock-up until satisfactory results are achieved.
			3. Retain mock-up during construction as a standard for comparison with completed work.
			4. Do not alter or remove mock-up until work is completed or removal is authorized.
	1. PRE-INSTALLATION CONFERENCE
		1. Convene a conference approximately two weeks before scheduled commencement of the Work. Attendees shall include Architect, Contractor and trades involved. Agenda shall include schedule, responsibilities, critical path items and approvals.
	2. DELIVERY, STORAGE, AND HANDLING
		1. Store and handle in strict compliance with manufacturer's written instructions and recommendations.
		2. Protect from damage due to weather, excessive temperature, and construction operations.
	3. PROJECT CONDITIONS
		1. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.
	4. WARRANTY
		1. Manufacturer's standard limited warranty unless indicated otherwise.
1. PRODUCTS
	1. MANUFACTURERS
		* 1. Acceptable Manufacturer: Kattsafe, which is located at:3921 Perry Blvd.Whitestown, IN 46075Toll Free Tel: 888-637-7872Tel: 317-769-7710Fax: 317-229 6451Email: [request info (sales@kattsafe.com)](https://arcat.com/rfi?action=email&company=Kattsafe&message=RE%253A%2520Spec%2520Question%2520(05535fix)%253A%2520&coid=48709&spec=05535fix&rep=&fax=317-229%25206451);Web: <https://www.kattsafe.com>

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
		2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.
		3. OSHA 1910.25

\*\* NOTE TO SPECIFIER \*\* KOMBI® Aluminum Ship Ladders provide safe and easy access to varying height applications including service platforms, expansion joints, machinery, pipes, roof decks and other maintenance areas where frequent access is required by personnel. These ship ladders are manufactured at a 65 degree angle as standard and the width is 24 inches.

* + 1. KOMBI Aluminum Ship Ladders incorporate handrails and knee rails for added protection and stability. KOMBI® Systems are typically supplied in modules and therefore can simply be connected in field with ease. Delete article not required.
	1. PREFABRICATED MODULAR ALUMINUM SHIP LADDERS
		1. Basis of Design: KOMBI Prefabricated Modular Ship Ladders as supplied by FIXFAST.
			1. An engineered, no weld, modular system. Easily customized with re-usable components. Made for on-site assembly. Sturdy, heavy duty, aluminum construction.
			2. Capacity: Unit shall support a 1000 lbs (453.6 kg) total load without failure.
			3. Standards Requirements: Unit shall be designed and manufactured to meet or exceed OSHA 1910.25.
			4. Degree of incline: Between 50 and 70 degrees. Standard is 65 degrees.
			5. Components:
				1. Stair Stringer: KOMBI No. 180. 7-1/8 x 1-1/4 inch (180 x 32 mm) 6005-T5 extruded aluminum. Cut to length per ship ladder length required.

End caps

* + - * 1. Standard Ship Ladder Width: 2 ft (610 mm).
				2. Step Tread: 24 x 6 x 1-5/8 inch (610 x 152 x 41 mm), 6005-T5 aluminum. Mounts to Stair Stringer with four 3/8 inch (9.5 mm) stainless steel T-Bolts. Step tread features multiple pre-drilled holes to provide drainage and grip performance.
				3. Ship Ladder Mounting Brackets:

Floor Brackets: Stainless brackets.

Top Brackets for Platform: Stainless Brackets to mount Ship Ladder to KOMBI Platform.

Top Brackets for Wall Mount: Stainless Angle Bracket to mount Ship Ladder to wall at top of ladder.

* + - 1. Guardrail and Hand Railings:
				1. Top Rail: KATTGUARD 2 inch (51 mm) round 6005-T5 aluminum top rail. Both sides of platforms. TEK screw to handrail post.
				2. Hand Rail: KATTGUARD 1-1/2 inch (38 mm) round 6005-T5 aluminum handrail mounted to handrail posts with stainless steel TEK screws.
				3. Mid Rail: KATTGUARD 1-5/8 inch (41 mm) 6005-T5 round aluminum mid rail. Both sides of platforms. TEK screw to handrail posts.
	1. PREFABRICATED MODULAR ALUMINUM STAIRS AND PLATFORMS
		1. Basis of Design: KOMBI Prefabricated Modular Stairs and Platforms as supplied by FIXFAST.
			1. An engineered, no weld, modular system. Easily customized with re-usable components. Made for on-site assembly. Sturdy, Heavy Duty, Aluminum Construction. Suited for free-standing construction where required.
			2. Capacity: Support 1000 lbs (453.6 kg) total load without failure.
			3. Standards Requirements: Unit shall be designed and manufactured to meet or exceed OSHA 1910.25.
			4. Degree of Incline: Between 25 and 45 degrees. Standard is 40 degrees.
			5. Components:
				1. Stairs Treads: 10 x 1-1/2 inch (254 x 38 mm) 6106-T6aluminumtread with serration for grip.Standard lengths available:

\*\* NOTE TO SPECIFIER \*\* Delete width options not required. Custom widths are available.

Width: 2 ft (610 mm).

Width: 3 ft (914 mm).

Width: 4 ft (1219 mm).

Width: \_\_\_\_\_\_\_\_.

* + - * 1. Stair Tread Mounting Brackets: Stainless steel brackets to mount stair tread to the stair stringer.

Mounting Tread to Stringer: Two, 3/8 inch (9.5 mm) stainless steel T-Bolts.

Mount Bracket to Stair Tread: Two, 3/8 inch (9.5 mm) stainless steel T-Bolts.

* + - * 1. Stair Stringer: KOMBI No. 180. 7-1/8 x 1-1/4 inch (180 x 32 mm) 6005-T5 extruded aluminum. Cut to length per stair length required.

End caps.

* + - * 1. Stair System Mounting Brackets:

Floor Brackets: Stainless brackets. Mount to stringer with 3/8 inch (9.5 mm) S/S KOMBI T-Bolts.

Top Brackets for Platform: Stainless Brackets to mount Stair System to KOMBI Platform.

Wall Mount: Stainless Angle Bracket to mount Stair Systems to wall

* + - * 1. Platform:

Surface: Aluminum walkway grating. 1/2 inch (13 mm) thick mesh, aluminum 6063-T4.

Side Rails:

KOMBI 180 Aluminum Extrusion 6005-T5. 7-1/8 x 1-1/4 inch (180 x 32 mm). For increased length platforms.

KOMBI 80 Aluminum Extrusion 6005-T5. 3-1/8 x 1-1/2 inch (80 x 38 mm).

Platform Connections:

KOMBI 180 Angle Brackets. Stainless steel. 3/16 inches (5 mm) thick.

KOMBI 80 Angle Brackets. Stainless steel. 3/16 inches (5 mm) thick.

Platform Horizontal Support Sections:

KOMBI 60 aluminum extrusion with welded post base on each end for quick connection to KOMBI 80 or KOMBI 180 platform side rails. Standard widths of horizontal support sections.

\*\* NOTE TO SPECIFIER \*\* Delete width options not required. Custom widths are available.

Width: 2 ft (610 mm).

Width: 3 ft (914 mm).

Width: 4 ft (1219 mm).

Width: \_\_\_\_\_\_\_\_.

Post Support Modules:

KOMBI Post Supports for platform mounting. Standard widths of post support modules.

\*\* NOTE TO SPECIFIER \*\* Delete width options not required. Custom widths are available.

Width: 2 ft (610 mm).

Width: 3 ft (914 mm).

Width: 4 ft (1219 mm).

Width: \_\_\_\_\_\_\_\_.

Support Post Base Brackets.

Floor Brackets: Stainless brackets. Mount to vertical support post modules with 3/8 inch (9.5 mm) S/S KOMBI T-Bolts.

* + - 1. Guardrail and Hand Railings:
				1. Top Rail: KATTGUARD 2in round 6005-T5 aluminum top rail. Both sides of platforms. TEK screw to handrail post.
				2. Hand Rail: KATTGUARD 1-1/2 in (38 mm) round 6005-T5 Aluminum handrail mounted to handrail posts with stainless steel TEK screws.
				3. Mid Rail: KATTGUARD 1-5/8 inch (41 mm) 6005-T5 round aluminum mid rail. Both sides of platforms. TEK screw to handrail posts.
				4. Posts: KATTGUARD Side Mount Posts, Aluminum Rectangular hollow extrusion with welded mounting plates. Finished height to be 42 inches (1067 mm).

\*\* NOTE TO SPECIFIER \*\* KOMBI® Aluminum Stair Bridges provide safe and easy access to varying height applications including service platforms, roof decks and other maintenance areas where frequent access is required by personnel. These crossover stair systems are manufactured at a 40 degree angle and standard widths are 2 ft (610 mm), 3 ft (914 mm), and 4 ft (1219 mm). Various platform lengths are available to suit your application.

* + - * 1. KOMBI Aluminum Stair Bridges incorporate handrails and knee rails for added protection and stability. These crossover stair systems are supplied in modules to allow for easy on-site assembly. Delete article if not required.
	1. PREFABRICATED MODULAR ALUMINUM STAIR BRIDGES
		1. Basis of Design: KS100 Series KOMBI Prefabricated Modular Stair Bridges as supplied by FIXFAST.
			1. An engineered, no weld, modular system. Easily customized with re-usable components. Made for on-site assembly.
			2. Can be mounted on metal, membrane, and built-up roof system with clamps, rivets, KATTPOINT's or non-penetrating bases.
			3. OSHA compliant when installed correctly and away from fall hazards.
			4. Capacity: Unit shall support a 1000 lbs (453.6 kg) total load without failure.
			5. Standards Requirements: Unit shall be designed and manufactured to meet or exceed OSHA 1910.25.
			6. Degree of incline: Between 25 and 45 degrees. Standard is 40 degrees.
			7. Standard Stair Bridge Widths:

\*\* NOTE TO SPECIFIER \*\* Delete width options not required.

* + - * 1. Width: 2 ft (610 mm).
				2. Width: 3 ft (914 mm).
				3. Width: 4 ft (1219 mm).
			1. Standard First Stair Bridge Heights:

\*\* NOTE TO SPECIFIER \*\* Delete first stairway height options not required.

* + - * 1. First Stairway Height: 25 inches (635 mm).
				2. First Stairway Height: 33 inches (889 mm).
				3. First Stairway Height: 41 inches (1041 mm).
				4. First Stairway Height: 49 inches (1245 mm).
				5. First Stairway Height: 57 inches (1448 mm).
				6. First Stairway Height: 65 inches (1651 mm).
				7. First Stairway Height: 73 inches (1854 mm).
			1. Standard Platform Lengths:

\*\* NOTE TO SPECIFIER \*\* Delete platform length options not required.

* + - * 1. Platform Length: 27 inches (686 mm).
				2. Platform Length: 35 inches (889 mm).
				3. Platform Length: 43 inches (1092 mm).
				4. Platform Length: 51 inches (1295 mm).
				5. Platform Length: 59 inches (1499 mm).
				6. Platform Length: 67 inches (1702 mm).
				7. Platform Length: 75 inches (1905 mm).
			1. Standard Second Stair Bridge Heights:

\*\* NOTE TO SPECIFIER \*\* Delete second stairway height options not required.

* + - * 1. Second Stairway Height: 25 inches (635 mm).
				2. Second Stairway Height: 33 inches (889 mm).
				3. Second Stairway Height: 41 inches (1041 mm).
				4. Second Stairway Height: 49 inches (1245 mm).
				5. Second Stairway Height: 57 inches (1448 mm).
				6. Second Stairway Height: 65 inches (1651 mm).
				7. Second Stairway Height: 73 inches (1854 mm).
			1. Components:
				1. Stair Tread Mounting Brackets: Stainless steel brackets to mount stair tread to the stair stringer.

Two 3/8 inch (9.5 mm) stainless steel T-Bolts to mount tread to stringer.

Two 3/8 inch (9.5 mm) stainless steel T-Bolts to mount bracket to stair tread.

* + - * 1. Stair stringer: KOMBI No. 180. 7-1/8 x 1-1/4 inch (180 x 32 mm) 6005-T5 extruded aluminum. Cut to length per stair length required.

End caps,

* + - * 1. Stair System Mounting Brackets:

Floor Brackets: Stainless brackets. Mount to stringer with 3/8 inch (9.5 mm) stainless steel KOMBI T-Bolts. Can be mounted to:

KATTPOINT Anchor Points for roof attachment.

Non-penetrating plastic coated steel base plates.

Top Brackets for Platform: Stainless Brackets to mount Stair System to KOMBI Platform.

* + - * 1. Platform:

Surface: Aluminum walkway grating. 1/2 inch (13 mm) thick mesh, aluminum 6063-T4.

Side Rails:

KOMBI 180 Aluminum Extrusion 6005-T5. 7-1/8 x 1-1/4 inch (180 x 32 mm). For increased length platforms.

Platform Connections.

KOMBI 80 Angle Brackets. Stainless steel. 3/16 inches (5 mm) thick.

Platform horizontal support sections.

KOMBI 60 aluminum extrusion with welded post base on each end for quick connection to KOMBI 80 or KOMBI 180 platform side rails. Standard widths of horizontal support sections.

\*\* NOTE TO SPECIFIER \*\* Delete width options not required. Custom widths are available.

Width: 2 ft (610 mm).

Width: 3 ft (914 mm).

Width: 4 ft (1219 mm).

Width: \_\_\_\_\_\_\_\_.

Support Post Base brackets.

Floor Brackets: Stainless brackets. Mount to vertical support post modules with 3/8 inch (9.;5 mm) stainless steel KOMBI T-Bolts.

* + - 1. Guardrail and Hand Railings:
				1. Top Rail: KATTGUARD 2 inch (51 mm) round 6005-T5 aluminum top rail. Both sides of platforms. TEK screw to handrail post.
				2. Mid Rail: KATTGUARD 1-5/8 inch (41 mm) 6005-T5 round aluminum mid rail. Both sides of platforms. TEK screw to handrail posts.
				3. Posts: KATTGUARD Side Mount Posts, Aluminum Rectangular hollow extrusion with welded mounting plates. Finished height to be 42 inches (1067 mm).
		1. Basis of Design: KC103 Series KOMBI Prefabricated Crossover Stair System as supplied by FIXFAST. Two pre-configured stair modules, platform, Top rail, mid rail, and post kits.
			1. An engineered, no weld, modular system. Easily customized with re-usable components. Made for on-site assembly.
			2. Can be mounted on metal, membrane, and built-up roof system with clamps, rivets, KATTPOINT's, non-penetrating KOMBI No. 180 stringer bases, or non-penetrating weighted bases.
			3. OSHA compliant when installed correctly and away from fall hazards.
			4. Capacity: Unit shall support a 1000 lbs (453.6 kg) total load without failure.
				1. Design live load 60 psf as standard.
			5. Standards Requirements: Unit shall be designed and manufactured to meet or exceed OSHA 1910 and 1926.
			6. Degree of incline: Between 30 and 50 degrees. Standard is 40 degrees.
			7. Stair and Bridge Width: 3 ft (914 mm).
			8. Platform Length: 3 ft (914 mm).

\*\* NOTE TO SPECIFIER \*\* Delete stairway clearance height options not required.

* + - 1. Stairway Clearance Height: 25 inches (635 mm).
			2. Stairway Clearance Height: 33 inches (889 mm).
			3. Stairway Clearance Height: 41 inches (1041 mm).
			4. Stairway Clearance Height: 49 inches (1245 mm).
			5. Stairway Clearance Height: 57 inches (1448 mm).
			6. Stairway Clearance Height: 65 inches (1651 mm).
			7. Stairway Clearance Height: 73 inches (1854 mm).
			8. Components:
				1. Stair Treads: 10 x 1-1/2 inch (254 x 38 mm) 6005-T5 aluminum tread with serration for grip.
				2. Stair Tread Mounting Brackets: Aluminum 6106-T6 brackets to mount stair tread to the stair stringer.

Two 3/8 inch (9.5 mm) stainless steel T-Bolts to mount tread to stringer.

Two 3/8 inch (9.5 mm) stainless steel T-Bolts to mount bracket to stair tread.

* + - * 1. Stair stringer: KOMBI No. 180. 7-1/8 x 1-1/4 inch (180 x 32 mm) 6005-T5 extruded aluminum. Cut to length per stair length required.

End caps,

* + - * 1. Stair System Mounting Brackets:

Floor Brackets: Stainless brackets. Mount to stringer with 3/8 inch (9.5 mm) stainless steel KOMBI T-Bolts. Can be mounted to:

KATTPOINT Anchor Points for roof attachment.

Non-penetrating plastic coated steel base plates.

Top Brackets for Platform: Stainless Brackets to mount Stair System to KOMBI Platform.

* + - * 1. Platform:

Surface: Aluminum walkway grating. 1/2 inch (13 mm) thick mesh, aluminum 6063-T4.

Side Rails:

KOMBI 180 Aluminum Extrusion 6005-T5. 7-1/8 x 1-1/4 inch (180 x 32 mm). For increased length platforms.

Platform Connections.

KOMBI 80 Angle Brackets. Stainless steel. 3/16 inches (5 mm) thick.

Platform horizontal support sections.

KOMBI 60 aluminum extrusion with welded post base on each end for quick connection to KOMBI 80 or KOMBI 180 platform side rails. Standard widths of horizontal support sections.

Support Post Base brackets.

Floor Brackets: Stainless brackets. Mount to vertical support post modules with 3/8 inch (9.;5 mm) stainless steel KOMBI T-Bolts.

* + - 1. Guardrail and Hand Railings:
				1. Top Rail: KATTGUARD 2 inch (51 mm) round 6005-T5 aluminum top rail. Both sides of platforms. TEK screw to handrail post.
				2. Mid Rail: KATTGUARD 1-5/8 inch (41 mm) 6005-T5 round aluminum mid rail. Both sides of platforms. TEK screw to handrail posts.
				3. Posts: KATTGUARD Side Mount Posts, Aluminum Rectangular hollow extrusion with welded mounting plates. Finished height to be 42 inches (1067 mm).
1. EXECUTION
	1. EXAMINATION
		1. Do not begin installation until substrates have been properly constructed and prepared.
		2. If substrate preparation is the responsibility of another installer, notify Architect in writing of unsatisfactory preparation before proceeding.
	2. PREPARATION
		1. Clean surfaces thoroughly prior to installation.
		2. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
		3. Dissimilar Metals:
			1. Aluminum to Concrete: To be painted with a bitumen paint.
			2. Aluminum to Roof Deck: Shall be separated with EPDM tape.
			3. Aluminum to Stainless Steel: Brackets to be powder coated or EPDM separated.
	3. INSTALLATION
		1. Install in accordance with manufacturer's instructions, approved submittals, and in proper relationship with adjacent construction.
	4. FIELD QUALITY CONTROL
		1. Field Inspection: Coordinate field inspection in accordance with appropriate sections in Division 01.

\*\* NOTE TO SPECIFIER \*\* Include if manufacturer provides field quality control with onsite personnel for instruction or supervision of product installation, application, erection or construction. Delete if not required.

* + 1. Manufacturer's Services: Coordinate manufacturer's services in accordance with appropriate sections in Division 01.
	1. CLEANING AND PROTECTION
		1. Clean products in accordance with the manufacturers recommendations.
		2. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION