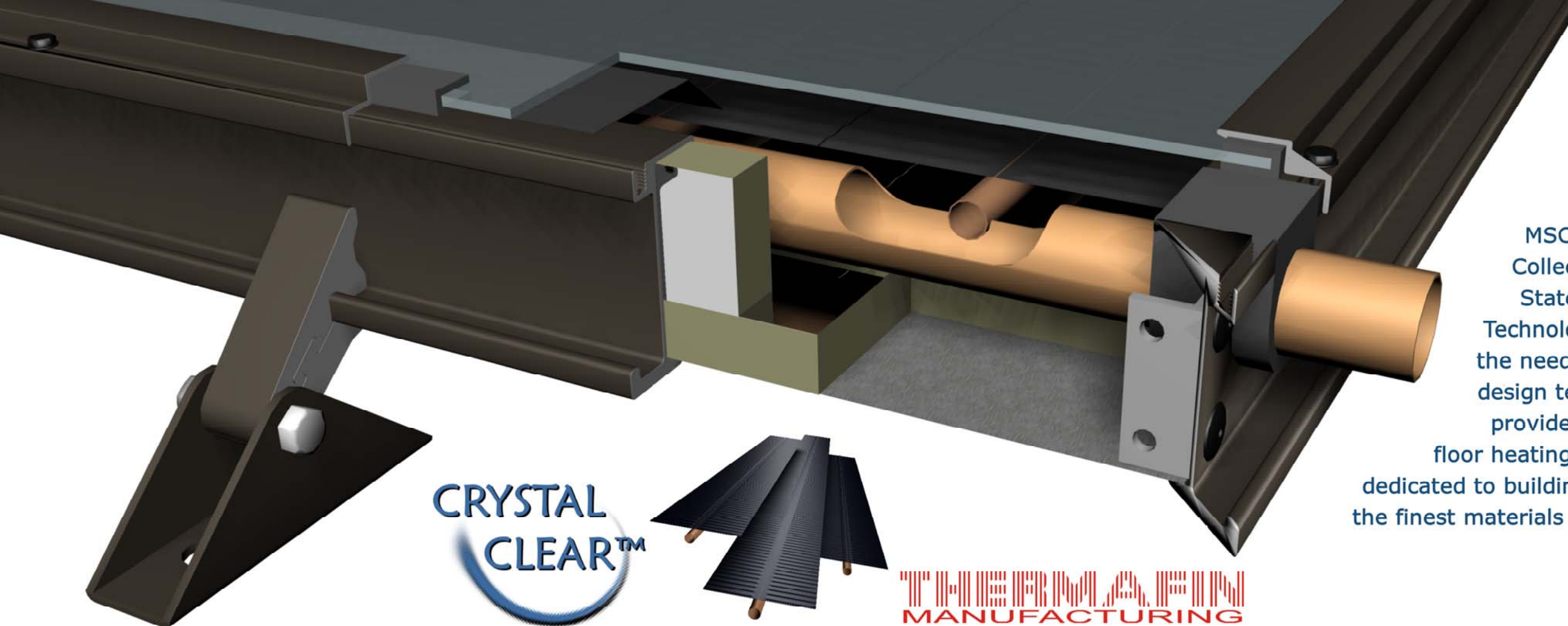




MSC-SERIES COLLECTORS

With over 30,000 installations, and 30 years of experience, MSC Collectors are the natural choice for solar thermal applications.



MSC-Series "Flat Plate" Solar Thermal Collectors, manufactured in The United States of America by Alternate Energy Technologies (AET), are designed to meet the needs of any solar system. Our expert design team will assist in sizing any job to provide hot water, space heating, radiant floor heating or industrial process heat. AET is dedicated to building our MSC-Series Collectors from the finest materials and with the highest standards of craftsmanship.

Crystal Clear™ Selective Coating

The Crystal Clear™ Solar Selective coating is technically a quartz encapsulated bimetallic alloy. Thousands of nanocrystalline growth projections dramatically increase the surface area of the absorber plate for maximum solar radiation absorption and performance. Crystal Clear™ has been tested for over 1450 hours at 617°F continuously with minimal visible or physical degradation of its thermal characteristics. Furthermore, Crystal Clear™ by itself enhances the thermal performance of the absorbers by an additional 3%. The finished coating hosts an Absorptivity of > 0.96 & Emissivity of < 0.08.

THERMAFIN™ Absorbers

AET introduced THERMAFIN™ absorbers into the MSC-Series collectors in 1996. Through extensive research and development, we have employed the best heat transfer method in the world today. THERMAFIN's high-frequency, forge weld process molecularly bonds the fin to the tube providing long-lasting performance and durability while allowing the highest heat conduction. The high-frequency welded joints will not weaken, expand, or pull apart and are backed by a written 30 year guarantee.

Anodized I-Beam Construction

Our MSC-Series collector frames are fabricated in our state-of-the-art manufacturing plant located in Jacksonville, Florida. Crafted using extruded aluminum, anodized architectural beam, and securely fastened with aircraft grade pin grip rivets, MSC-Series Collectors are built to withstand harsh saltwater environments.

All MSC-Series Collectors Feature:

- Wind load tested to 175 MPH
- Crystal Clear™ selective coatings
- Extruded aluminum frame and battens
- Thermax™ polyisocyanurate foam insulation
- Aircraft aluminum pin grip rivets
- 30+ year design life
- 10 year warranty
- Proudly made in the U.S.A.
- THERMAFIN™ absorber plates
- Quick-lock mounting hardware

COLLECTOR	MSC-21	MSC-24	MSC-26	MSC-28	MSC-32	MSC-40
Length (in)	86.125	98.125	78.125	86.125	98.125	122.125
Width (in)	35.875	35.875	47.875	47.875	47.875	47.875
Height (in)	3.125	3.125	3.125	3.125	3.125	3.125
Gross Area (ft ²)	21.4	24.4	25.9	28.6	32.6	40.6
Transparent Area (ft ²)	18.9	21.6	23.3	25.8	29.5	36.9
Dry Weight (lbs)	76	87	91	102	116	151



Why choose AET and MSC-Series Solar Collectors?

- AET and its predecessors are based in the United States and have been manufacturing solar thermal collectors since 1975.
- AET has managers, engineers and installation experts with over 100 years of combined experience in the solar industry.
- All MSC-Series collectors feature an attractive low profile skylight design.
- AET's new energy efficient Thermoatool solid-state weld head has reduced the carbon footprint of manufacturing solar collectors by 25%.
- AET is proud to provide collectors that are designed for 30+ years of dependable service and carry a full 10 year warranty.
- The MSC-Series collector's quick-lock mounting hardware is integrated into the frame wall for easy collector installation and to add to its already attractive design.
- MSC collectors are built with quality components to ensure durability and performance.
- Our Crystal Clear™ selective coating is non-toxic and a more efficient electroplating than other coating methods used in the solar industry.

Made in the USA



MSC-Series Solar Collectors have been constructed to meet the major applicable national and international codes, including the following:

Miami Testing Laboratory
Wind Load Test (ASTM E 330)
File No. 83-854

Florida Solar Energy Center • Test Methods
and Minimum Standards for Solar Collectors
(ASHRAE Std 93-1986)

Solar Rating and Certification Corporation
SRCC Standard 100-Tested Methods and
Minimum Standards for Certifying Solar
Collectors (ASHRAE Std 93-1986)

International Association of Plumbing
Mechanical Official (IAPMO)
Uniform Solar Energy Code (USEC)
File No. S-5038

City and County of Honolulu
Approval No. MM 83-18(1)



MSC-Series Collectors

with exclusive - selective "Crystal Clear" inside

Absorber Plate:

Manufactured by Thermafin™ Mfg., a 100% copper absorber plate, the fin and riser tube are molecularly bonded by high-frequency forge welding.

Absorber Coating:

Exclusively by Thermafin™ Mfg., a Selective "Crystal Clear" Coating.
 $\alpha = 0.96$ $\epsilon = 0.08$

Gasket Grommets:

A UV durable EPDM, U-channel gasket with molded corners which prohibits water penetration and assures long life. Extruded Silicone Grommet with 1-1/8" Bore.

Corner Bracket:

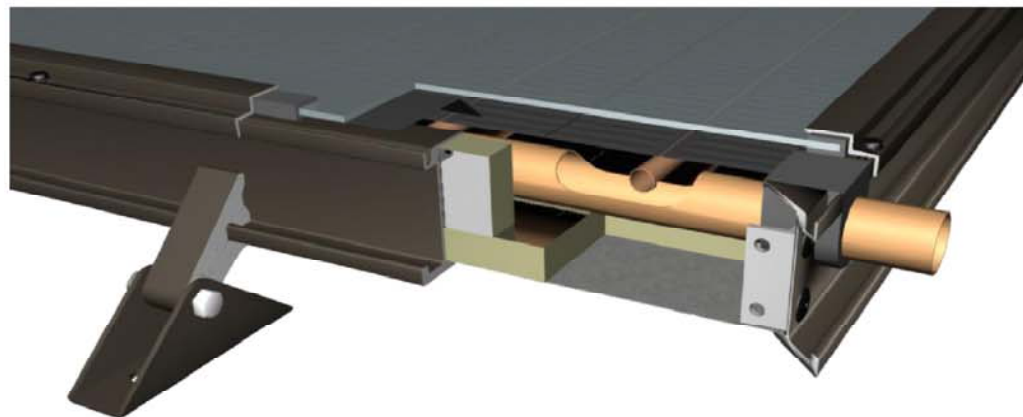
Architectural aluminum angles inside with aircraft-grade pin grip rivets to ensure high stability.

Fasteners:

5056 Aluminum rivets secure the backsheet. Batten screws are 18-8 SS, 10-24 x 3/8", hex head screws, and black oxide coated.

Backsheet:

Type 3105-H14, 0.019" stucco embossed aluminum sheet (bronze) pop-riveted to aluminum frame.



	SPECIFICATIONS					
Collector	MSC-21	MSC-24	MSC-26	MSC-28	MSC-32	MSC-40
Length (in)	86.0	98.0	78.0	86.0	98.0	122.0
Width (in)	36.0	36.0	48.0	48.0	48.0	48.0
Height (in)	3.125	3.125	3.125	3.125	3.125	3.125
Gross Area (ft ²)	21.5	24.5	26.0	28.5	32.7	40.7
Transparent Area (ft ²)	18.9	21.6	23.3	25.8	29.5	36.9
Dry Weight (lb)	76	87	91	102	116	151

Glazing:

Low-Iron tempered glass, exclusively using our "High-T" tempered glass, with a total solar energy transmission of 90%.

Collector Frame and Battens:

Type 6063-T6 extruded aluminum frame and battens with architecture anodized bronze finish that facilitates long life and strength.

Insulation:

Polyisocyanurate foam board insulation. Foil-faced, glass fiber-reinforced, rigid board Thermax sheathing (1-1/4" in the bed / 3/4" in the sidewalls).

Mounting Hardware:

The variable "Quick Lock" mounting hardware reduces mounting time and makes it simple for anyone to install. The Quick Lock System allows the highest flexibility in mounting and is tested to wind load conditions of 175 mph. Mounting possibilities include: Pitched roof, Flat roof, Ground, Balcony, and Facade mounting.

Design Life: 30 Years

Warranty: 10 Years

Working Pressure: 165 PSI

Flow Rate: 0.5 to 1.8 GPM
(recommended)

CODE APPROVALS

MSC-Series Collectors have been designed and constructed to meet major applicable nationwide codes, including the following:

Miami Testing Laboratory

Wind Load Test (ASTM E 330)
File No. 83-854

Florida Solar Energy Center - Test

Methods and Minimum Standards
for Solar Collectors
(ASHRAE Std 93-1986)

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MSC-Series Collectors

Mounting Hardware

