

# Flat Plate Solar Thermal Collectors

series NAS100



## Function

Solar thermal collectors are used to capture energy from the sun and efficiently transfer solar energy to heat the solar fluid in the primary circuits of solar heating systems. This heated solar fluid is circulated through a heat exchanger, thus heating domestic water, which is stored in suitable tank. This heated water is then delivered to a conventional water heater for final heating, if required, or direct use.



## Product range

Code NAS10406 Solar Flat Plate Solar Collector, 4' x 6.5' frame, SRCC rating Category C \_\_\_\_\_ 7.5 kWh (25,000 Btu)  
 Code NAS10408 Solar Flat Plate Solar Collector, 4' x 8' frame, SRCC rating Category C \_\_\_\_\_ 9.2 kWh (32,000 Btu)  
 Code NAS10410 Solar Flat Plate Solar Collector, 4' x 10' frame, SRCC rating Category C \_\_\_\_\_ 11.7 kWh (40,000 Btu)

## Technical specifications

Materials: - absorber plate: 1/2" tube to fin copper  
 - absorber coating: selective crystal coating  
 - absorptivity / emissivity 0.96 / 0.08  
 - header manifold: 1" copper  
 - glazing: low iron tempered glass  
 - glazing seal: extruded "U" channel EPDM  
 - insulation: R-10 poly-isocyanurate foam board  
 - frame & battens: type 6063-T6 extruded aluminum  
 - backing sheet: type 3105-H14 embossed aluminum

Medium: water, glycol solutions  
 Max. percentage of glycol: 60%

Working temperature range: -40 to 350°F (-40 to 177°C)

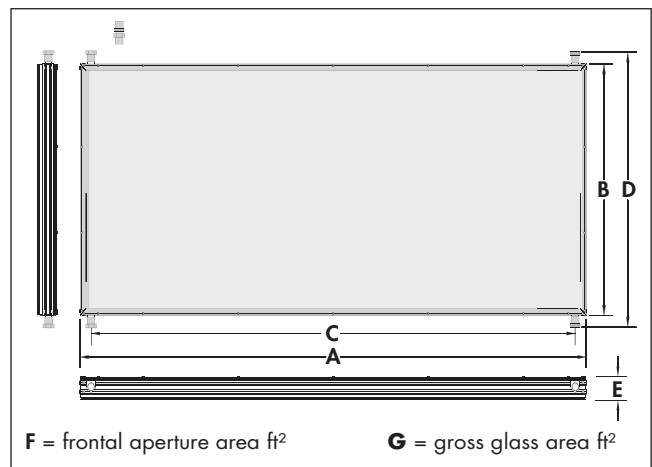
Max. pressure: 150 psi (10 bar)  
 Working pressure: 90 psi (6 bar)

Typical transfer flow rate: 0.5–1.8 gpm (1.8 – 7 lpm)

Connections: 1" union thread (4' x 6.6')  
 1-1/4" union thread (4' x 8' & 4' x 10')

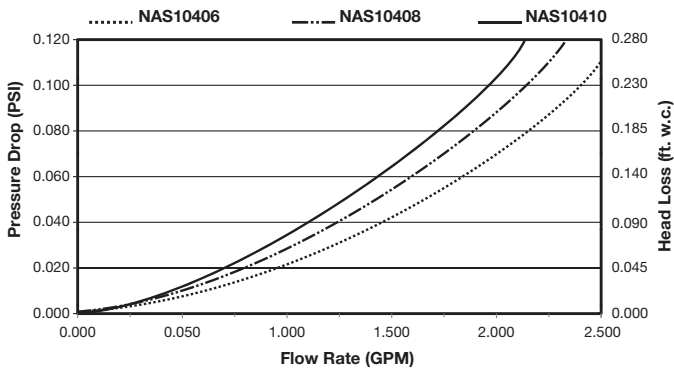
Wind load rating: 181mph / 291kph

## Dimensions

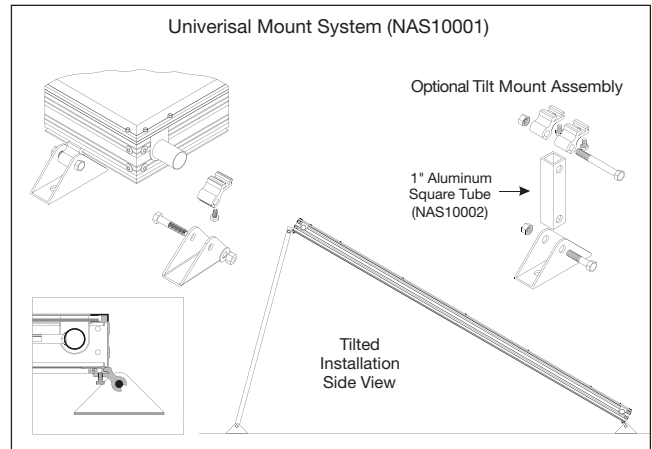


Code	A	B	C	D	E	F	G	Wt (lb)	Cap (gal)
10406	77 3/16"	47 3/16"	74 5/8"	50 1/2"	3 1/8"	23.6	25.35	90	0.79
10408	97 3/16"	47 3/16"	94 5/8"	50 1/2"	3 1/8"	29.9	31.91	113	0.88
10410	121 3/16"	47 3/16"	118 5/8"	50 1/2"	3 1/8"	37.4	39.79	160	1.05

## Hydraulic characteristics

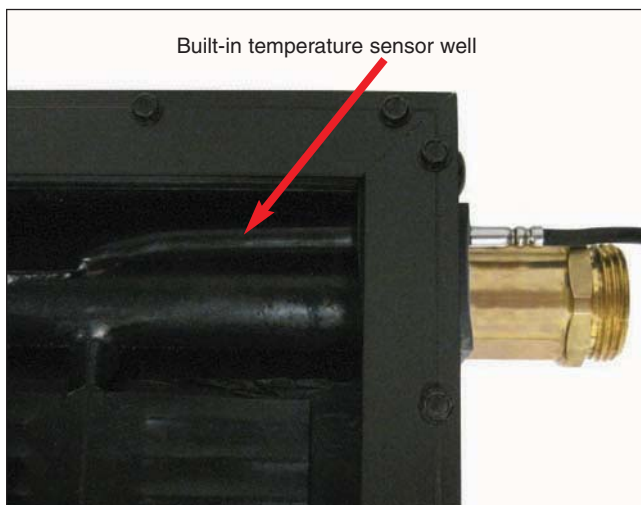


## Universal mount system



Caleffi's exclusive universal mounting systems allow for virtually any collector orientation and mounting. Collectors can be mounted to any roof, vertical wall, fascia boards, pre-constructed racks or ground mount systems. The frame wall and mount have been certified to withstand 180 mph winds. The frame wall will accept the mounts anywhere around the collector without drilling or tapping so the integrity of the framewall is not violated. The rear struts can be cut to any length allowing proper elevation and orientation.

## Construction details



Item	Code	Description
	NAS10001	Universal foot mounts for solar collectors, flush or tilt mount (4 each with hardware)
	NAS10002	6' extension square brace to tilt collectors

## Collector cross section

