



Solar thermal flat plate collectors

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Flat-plate collectors are the most common type of non-concentrating collectors for water and space heating in buildings and are used when temperatures lower than 200°F are sufficient.

How Does A Flat Plate Collector Work? Components of Flat Plate Collector Sizing of A Flat Plate Collector Flat Plate Collectors Without Cover Advantages of A Flat Plate Collector Conclusion FAQs

The working of a flat plate collector (FPC) involves the transfer of heat or thermal energy. The operating medium exchanges heat from the sun's rays. The heat-absorbing plate of the collector is exposed to sunlight. As the sun rays hit the flat plate surface, a portion of their energy is transformed into heat. This leads to a rise in the temperatur... See more on solar square body >

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.saml-product-card-hoverable-overlay .line-clamp-expanded
.cmuipcm-content-cntr__title{-webkit-line-clamp:5!important;max-height:110px!important}.b_hide{display:none!important}.saml-container{margin:0
-20px;padding-bottom:var(--smtc-gap-between-content-medium)}#b_results>li.b_top.b_ans.b_topborder
.saml-container{padding-bottom:0}.saml-container
.acf-title-text{margin-right:4px}.acf-header-title,.acf-filters-container{margin-left:20px}.saml-products-wrapp
er{position:relative;min-height:200px}.saml-product-card-container,.saml-product-card-container
.saml-product-card-normal,.saml-product-card-container .saml-product-card-normal
merce-ui-product-card-medium__target-link{height:100%}.saml-products-wrapper-slide{position:relative;min
-height:200px;margin-bottom:16px}.saml-products-wrapper-slide
.slide{box-shadow:none!important;margin-right:16px!important;height:100%}.b_dark
.saml-products-wrapper-slide .slide{background-color:transparent!important}.saml-products-wrapper-slide
.b_overlay
.btn.rounded{width:36px;height:48px;border-radius:12px;display:flex;justify-content:center;align-items:cente
r;transition:opacity .5s;margin-top:unset;top:136px}.saml-products-wrapper-slide .b_overlay .btn.rounded
.bg{position:absolute;width:100%;height:100%;background:#fff;opacity:1;box-shadow:0 6px 12px 0
rgba(27,53,86,.08);border-radius:12px}.saml-products-wrapper-slide .b_overlay .btn.rounded
.vcac{position:relative;width:6.5px;height:12px;top:unset;background:url(data:image/svg+xml,%3Csvg%20x
mlns%3D%22http%3A%2F%2F%2F2000%2Fsvg%22%20fill%3D%22none%22%20viewBox%3D%220%2
00%207%2012%22%3E%3Cpath%20fill%3D%22%23242424%22%20d%3D%22M.6458.147A.5.5%200%2

```

```

00%201%201.353.145915.4845%205.465a.55.55%200%200%201%200%20.7792L1.353%2011.855a.5.5%20
0%200%201-.7058-.7084I5.1646-5.1462L.647.8542A.5.5%200%200%201%20.6458.147Z%22%2F%3E%3C
%2Fsvg%3E) center center no-repeat}.saml-products-wrapper-slide .b_overlay .btn.rounded .vcac
div{display:none}.saml-products-wrapper-slide .b_overlay
.btn.rounded.next{right:calc(-18px)}.saml-products-wrapper-slide .b_overlay
.btn.rounded.prev{left:calc(-18px)}.saml-products-wrapper-slide .b_overlay .btn.rounded.prev
.vcac{transform:rotate(180deg)}.saml-products-wrapper-slide .b_overlay
.btn.rounded.disabled{opacity:0}.saml-products-wrapper-slide .b_overlay .btn.rounded:hover
.bg{background:#eff4fa;opacity:1}.b_dark .saml-products-wrapper-slide .b_overlay .btn.rounded
.bg{background:#292827;box-shadow:0 6px 12px 0 rgba(0,0,0,.24)}.b_dark .saml-products-wrapper-slide
.b_overlay .btn.rounded
.vcac{background:url(data:image/svg+xml,%3Csvg%20xmlns%3D%22http%3A%2F%2F%2F2000%2Fsvg%
22%20fill%3D%22none%22%20viewBox%3D%220%200%207%2012%22%3E%3Cpath%20fill%3D%22
23ffffff%22%20d%3D%22M.6458.147A.5.5%200%200%201%201.353.145915.4845%205.465a.55.55%200
%200%201%200%20.7792L1.353%2011.855a.5.5%200%200%201-.7058-.7084I5.1646-5.1462L.647.8542A.
5.5%200%200%201%20.6458.147Z%22%2F%3E%3C%2Fsvg%3E) 0 0 no-repeat}.b_dark
.saml-products-wrapper-slide .b_overlay .btn.rounded:hover
.bg{background:#2d3135;opacity:1}.saml-products-grid{display:grid;grid-template-columns:repeat(auto-fill,
minmax(200px,1fr));gap:24px}.saml-product-card-container{position:relative;display:block}.saml-product-ca
rd-container.saml-revealed-card{animation:fadeInExpand .3s ease-out
forwards}.saml-products-wrapper.saml-expanded .saml-products-grid{height:auto}@keyframes
fadeInExpand{from{opacity:0;transform:translateY(-10px)}to{opacity:1;transform:translateY(0)}}.saml-prod
uct-card-hoverable-template{display:none}.saml-footer{position:relative;height:36px;display:flex;justify-cont
ent:center;align-items:center;margin-top:16px}.saml-footer
.saml-see-all-link.acf-button{z-index:1}.saml-footer
.saml-footer-divider{width:100%;height:1px;background-color:#ddd;transform:translateY(-50%)}.b_dark
.saml-footer .saml-footer-divider{background-color:#545250}.saml-footer
.footer-divider-container{position:absolute;height:36px;width:100%;display:flex;align-items:center}.saml-foo
ter .acf-button{position:relative}body>
-saml-product-card-hoverable-overlay{position:absolute;z-index:4;pointer-events:auto;opacity:0;overflow:visi
ble;transition:opacity .15s ease-in-out}body>
-saml-product-card-hoverable-overlay.saml-hoverable-visible{opacity:1}body>
-saml-product-card-hoverable-overlay
merce-ui-product-card-medium__target-link{min-height:100%}.saml-products-wrapper .saml-products-grid {
grid-template-columns: repeat(auto-fill, minmax(144px, 1fr));
}.acf-header-container{margin-bottom:16px}.acf-header-title{display:flex}.acf-header-title:visited,.acf-header
-title:hover{color:var(--acf-fore-neutral-primary)!important}.acf-title-text{overflow:hidden;text-overflow:ellip
sis;white-space:nowrap;font-size:20px;font-weight:700;line-height:26px;text-align:left;margin-right:3px;color
:var(--acf-fore-neutral-primary)!important}.acf-header-title.acf_title_blue:visited,.acf-header-title.acf_title_blu
e:hover,.acf_title_blue .acf-title-text{color:var(--smtc-ctrl-link-foreground-brand-rest)!important}body
#b_content #b_pole .pa_carousel_mlo .pa_carousel_ml
.acf-filters-container{padding-left:var(--polepadl)}#b_content

```

```

#filtersContainer.acf-filters-container{ position:relative;margin-bottom:16px }#b_content
#filtersContainer.acf-filters-container
.slide{ width:unset;height:38px;max-width:180px;box-shadow:none!important;border:1px solid
rgba(0,0,0,.1);border-radius:38px;padding:0 16px 0 4px;margin-right:8px!important}#b_content
#filtersContainer.acf-filters-container .slide
.acf-item-header{ display:flex;height:100%;justify-content:center;align-items:center;gap:8px}#b_content
#filtersContainer.acf-filters-container .slide .acf-item-header
.acf-item-title{ overflow:hidden;color:#202020;text-overflow:ellipsis;white-space:nowrap;font-size:13px;font-
weight:700;line-height:20px}#b_content #filtersContainer.acf-filters-container .slide
.acf-item-header>img{ border-radius:50% }#b_content #filtersContainer.acf-filters-container .slide
.acf-item-header .acf-item-title-no-image{ margin-left:12px}#b_content #filtersContainer.acf-filters-container
.slide .acf-item-header:hover{ text-decoration:none}.b_dark #b_content #filtersContainer.acf-filters-container
.slide,.b_drk #b_content #filtersContainer.acf-filters-container
.slide{ background-color:transparent;border-color:rgba(255,255,255,.1)}.b_dark #b_content
#filtersContainer.acf-filters-container .slide .acf-item-title,.b_drk #b_content
#filtersContainer.acf-filters-container .slide .acf-item-title{ color:#d7d7d7}#b_content
#filtersContainer.acf-filters-container
.slide:hover{ background-color:var(--smtc-background-card-on-primary-default-hover)}#b_content
#filtersContainer.acf-filters-container
.slide:active{ background-color:var(--smtc-background-card-on-primary-default-pressed)}#b_content
#filtersContainer.acf-filters-container .slide:focus::after{ box-shadow:unset}#b_content
#filtersContainer.acf-filters-container .b_acf_card{ width:100%;height:auto}#b_content
#filtersContainer.acf-filters-container .b_acf_card .btn
.bg{ width:48px;height:48px;background:linear-gradient(180deg,var(--bing-smtc-background-ctrl-fade-on-pri-
mary-stop-0) 0%,var(--smtc-background-card-on-primary-default-rest) 60%);filter:blur(2px)}#b_content
#filtersContainer.acf-filters-container .b_acf_card .btn.next{ right:-18px!important}#b_content
#filtersContainer.acf-filters-container .b_acf_card .btn.prev{ left:-18px!important}#b_content
#filtersContainer.acf-filters-container .b_acf_card .vcac>div{ margin-top:-21px}#b_content
#filtersContainer.acf-filters-container .b_acf_card .vcac
.cr{ width:20px;height:14px;top:5px;padding:var(--smtc-padding-ctrl-lg-text-top)
var(--smtc-padding-ctrl-sm-horizontal-default)}.b_dark .acf-filters-container .acfdefaultchev
.cr:hover{ background:#2d3135}.b_acf_crsl .slide.b_crslitm>*:last-child,.b_acf_crsl .b_slideexp,#b_topw
.b_wpt_container .b_slidesContainer:has(.b_acf_crsl) .b_slidesContainer{ margin-bottom:unset}#b_topw
.b_wpt_container:has(.b_acf_crsl) .b_viewport{ padding:unset}#b_topw .b_wpt_container
.b_wpt_bl:has(.b_acf_crsl){ overflow:visible}.b_acf_crsl .b_slidesContainer
.slide.b_crslitm{ overflow:unset}.b_acf_crsl .btn.next .bg,.b_acf_crsl .btn.prev
.bg{ background:unset}.b_acf_crsl.hovexp.hovexpfix .b_viewport,.b_acf_crsl.hovexp.hovexpfix
.b_slidebar,#b_pole #tob_container .b_acf_crsl.hovexp.hovexpfix
.b_viewport{ height:unset!important}#b_topw .b_wpt_container .b_acf_crsl .btn.bld.next,#b_topw
.b_wpt_container .b_acf_crsl .btn.bld.prev,.b_acf_crsl .btn.next,.b_acf_crsl
.btn.prev{ z-index:5}.b_acf_crsl.b_fadebg .btn.next
.bg{ background:linear-gradient(90deg,var(--bing-smtc-background-ctrl-fade-on-primary-stop-0)

```

```

0%,var(--smtc-background-card-on-primary-default-rest) 60%)).b_acf_crsl.b_fadebg .btn.prev
.bg{background:linear-gradient(270deg,var(--bing-smtc-background-ctrl-fade-on-primary-stop-0)
0%,var(--smtc-background-card-on-primary-default-rest) 60%)).b_dark .b_acf_crsl .b_slidebar
.slide{background-color:unset}[dir="rtl"] .b_acf_crsl.b_fadebg .btn.next
.bg{background:linear-gradient(270deg,var(--bing-smtc-background-ctrl-fade-on-primary-stop-0)
0%,var(--smtc-background-card-on-primary-default-rest) 60%))[dir="rtl"] .b_acf_crsl.b_fadebg .btn.prev
.bg{background:linear-gradient(90deg,var(--bing-smtc-background-ctrl-fade-on-primary-stop-0)
0%,var(--smtc-background-card-on-primary-default-rest) 60%)).b_acf_crsl.hovexp .leftmost .b_overlay
.b_viewport,.b_acf_crsl.hovexp .leftrightmost .b_overlay .b_viewport,.b_acf_crsl.hovexp .b_overlay
.b_viewport{padding-left:var(--smtc-gap-between-content-x-large)!important;margin-left:calc(var(--smtc-gap-
between-content-x-large)*-1)!important}.b_acf_crsl.hovexp .middle .b_overlay
.b_viewport,.b_acf_crsl.hovexp .rightmost .b_overlay
.b_viewport{padding-left:unset!important;margin-left:unset!important}.b_colg_4xs
.slide{margin-inline-end:var(--smtc-padding-ctrl-text-side)!important}.b_rowg_4xs
.slide>{*margin-bottom:var(--smtc-padding-ctrl-text-side)!important}.b_colg_3xs
.slide{margin-inline-end:var(--smtc-padding-ctrl-sm-text-top)!important}.b_rowg_3xs
.slide>{*margin-bottom:var(--smtc-padding-ctrl-sm-text-top)!important}.b_colg_2xs
.slide{margin-inline-end:var(--smtc-gap-between-content-xx-small)!important}.b_rowg_2xs
.slide>{*margin-bottom:var(--smtc-gap-between-content-xx-small)!important}.b_colg_xs
.slide{margin-inline-end:var(--smtc-gap-between-content-x-small)!important}.b_rowg_xs
.slide>{*margin-bottom:var(--smtc-gap-between-content-x-small)!important}.b_colg_s
.slide{margin-inline-end:var(--smtc-gap-between-content-small)!important}.b_rowg_s
.slide>{*margin-bottom:var(--smtc-gap-between-content-small)!important}.b_colg_m
.slide{margin-inline-end:var(--smtc-gap-between-content-medium)!important}.b_rowg_m
.slide>{*margin-bottom:var(--smtc-gap-between-content-medium)!important}.b_colg_l
.slide{margin-inline-end:var(--mai-smtc-padding-card-default)!important}.b_rowg_l
.slide>{*margin-bottom:var(--mai-smtc-padding-card-default)!important}.b_colg_xl
.slide{margin-inline-end:var(--smtc-gap-between-content-x-large)!important}.b_rowg_xl
.slide>{*margin-bottom:var(--smtc-gap-between-content-x-large)!important}.b_colg_2xl
.slide{margin-inline-end:var(--smtc-gap-between-content-xx-large)!important}.b_rowg_2xl
.slide>{*margin-bottom:var(--smtc-gap-between-content-xx-large)!important}.b_colg_3xl
.slide{margin-inline-end:var(--smtc-padding-content-xx-large)!important}.b_rowg_3xl
.slide>{*margin-bottom:var(--smtc-padding-content-xx-large)!important}.b_colg_4xl
.slide{margin-inline-end:var(--smtc-padding-content-xxx-large)!important}.b_rowg_4xl
.slide>{*margin-bottom:var(--smtc-padding-content-xxx-large)!important}.b_acf_card{box-sizing:border-box
;border-radius:var(--mai-smtc-corner-card-default);-webkit-user-select:none;user-select:none;position:relative;
width:100%;height:100%}.b_acf_card.b_acf_bckgnd{background:var(--bing-smtc-background-card-on-primar
y-alt-rest)}.b_acf_card_link{border-radius:var(--mai-smtc-corner-card-default);outline-offset:-1px;position:a
bsolute;width:100%;height:100%}.b_acf_card_link:hover{text-decoration:unset}.acf_col1_4{width:140px}.a
cf_col1_6{width:160px}@media(forced-colors:active){.b_acf_card_link{background-color:unset}.b_acf_car
d[link]
.acf_t_c_title{color:LinkText!important}}.acf_col1{width:88px}.acf_col2{width:200px}.acf_col3{width:312

```

```

px}.acf_col4{width:424px}.acf_col5{width:536px}.acf_col6{width:648px}.acf_col7{width:760px}.acf_col8
{width:872px}.acf_col9{width:984px}.acf_col10{width:1096px}.acf_col11{width:1208px}.acf_col12{width:
1320px}.acf_row1{height:88px}.acf_row2{height:200px}.acf_row3{height:312px}.acf_row4{height:424px}.
acf_row5{height:536px}.acf_row6{height:648px}.acf_row7{height:760px}.acf_row8{height:872px}.acf_row
9{height:984px}.acf_row10{height:1096px}.acf_row11{height:1208px}.acf_row12{height:1320px}.b_overla
y
.btn{height:100%;position:absolute;width:20px;cursor:pointer;z-index:1;-moz-user-select:none;-khtml-user-se
lect:none;-webkit-user-select:none;-o-user-select:none;-ms-user-select:none;user-select:none}.b_overlay .btn
*{transition:opacity .3s linear}.b_overlay .btn
.bg{position:absolute;width:100%;height:100%;background-color:#444;opacity:.3;filter:alpha(opacity=30)}.b
_overlay .btn.nobg .bg{background-color:transparent}.b_overlay .btn:hover
.bg{opacity:.7;filter:alpha(opacity=70)}.b_overlay .btn.nohover:hover
.bg{opacity:.3;filter:alpha(opacity=30)}.b_overlay .btn.disabled .bg,.b_overlay .btn.nohover.disabled
.bg{opacity:.01;filter:alpha(opacity=1)}.b_overlay .btn.hidden .bg,.b_overlay .btn.nohover.hidden
.bg{opacity:.01;filter:alpha(opacity=1)}.b_overlay .btn.disabled,.b_overlay
.btn.hidden{cursor:default}.b_overlay .btn .cr{text-align:center;line-height:0}.b_overlay
.btn.bld.polecarchev.hidden .cr,.b_overlay .btn.bld.polecarchev.disabled .cr,.b_overlay
.btn.bld.rounded.hidden .cr,.b_overlay .btn.bld.rounded.disabled .cr,.b_overlay .btn.bld.bigrounded.hidden
.cr,.b_overlay .btn.bld.bigrounded.disabled .cr{opacity:.01;visibility:unset}.b_overlay .btn.hidden
.cr,.b_overlay .btn.disabled .cr{visibility:hidden}.b_overlay .btn.prev.ltr .cr,.b_overlay .btn.next.rtl
.cr{transform:scaleX(-1)}.b_overlay .btn.next{right:0}.b_overlay .btn .cr>div{background-size:40px
200px;background-repeat:no-repeat;width:20px;height:40px;background-position:-10px 0}.b_overlay .btn
.cr>div{background-image:url(/rp/S9lIHAMBy7JxaR5m1KRvMwDswyw.png)}.b_overlay
.acfdefaultchev.btn.next{right:0!important}.b_overlay .acfdefaultchev.btn.prev{left:0!important}.b_overlay
.acfdefaultchev.btn:hover .bg{opacity:unset;filter:unset}.b_overlay .acfdefaultchev.btn.disabled,.b_overlay
.acfdefaultchev.btn.hidden{display:none}.b_overlay .acfdefaultchev.btn{width:48px}.b_overlay
.acfdefaultchev.btn .bg{opacity:unset}.b_overlay .acfdefaultchev.btn.prev .cr{left:0}.b_overlay
.acfdefaultchev.btn.next .cr{right:0}.acfdefaultchev
.cr{display:flex;justify-content:center;align-items:center;flex:1 0
0;align-self:stretch;width:36px;height:48px;position:absolute;margin:unset;opacity:unset;transition:unset;bord
er-radius:var(--smtc-corner-ctrl-lg-rest);background:var(--bing-smtc-background-container);box-shadow:var(-
-smtc-shadows-floating-action-button-rest);fill:var(--smtc-foreground-content-neutral-secondary)}.acfdefaultc
hev .cr:hover{background:var(--smtc-ctrl-fab-background-hover)}.acfdefaultchev
.cr:active{background:var(--smtc-ctrl-fab-background-pressed)}.b_ofchev .acfdefaultchev.btn.prev
.cr{left:-18px}.b_ofchev .acfdefaultchev.btn.next
.cr{right:-18px}@media(forced-colors:active){.acfdefaultchev .cr{background:ButtonFace}.acfdefaultchev
.cr>svg{fill:ButtonText}.acfdefaultchev .cr:hover,.acfdefaultchev
.cr:has(:focus-visible){background:Highlight}}.b_overlay .btn.bld.prev{left:-20px}.b_overlay
.btn.bld.next{right:-20px}.slide.b_crslitm.b_sldfitcont{width:fit-content}[background="alpha-white"]{backgr
ound-color:rgba(255,255,255,.8)}[background="rest-blue"]{background-color:#eff4fa}.b_dark
[background="alpha-white"]{background-color:rgba(38,38,38,.8)}.b_dark
[background="rest-blue"]{background-color:#292c33}

```

```

merce-ui-product-card-medium{ display:flex;flex-direction:column;width:100%;max-width:360px;border-radi
us:var(--mai-smtc-corner-card-default)}
merce-ui-product-card-medium__target-link{ display:flex;flex-direction:column;color:inherit;text-decoration:n
one}
merce-ui-product-card-medium__target-link:focus{ text-decoration:none}
merce-ui-product-card-medium--hoverable{ position:relative;padding:8px}
merce-ui-product-card-medium--hoverable::before{ content:"";position:absolute;top:0;left:0;right:0;bottom:0;b
ackground-color:transparent;transform:scale(.93) translateZ(0);transform-origin:center;transition:transform
.16s cubic-bezier(.4,0,.2,1),background-color 0s cubic-bezier(.4,0,.2,1)
.16s;z-index:0;border-radius:var(--mai-smtc-corner-card-default);will-change:transform,background-color;bac
kface-visibility:hidden}
merce-ui-product-card-medium--hoverable:active::before{ transform:scale(1)
translateZ(0);background-color:var(--bing-smtc-background-card-on-primary-alt-hover);box-shadow:0 4px
12px 1px rgba(0,0,0,.14);transition:transform .16s cubic-bezier(.4,0,.2,1),background-color 0s
cubic-bezier(.4,0,.2,1)}
merce-ui-product-card-medium--hoverable:active::before{ background-color:var(--bing-smtc-background-card
-on-primary-alt-pressed)}
merce-ui-product-card-medium--hoverable>div{ position:relative;z-index:1}
merce-ui-product-card-medium--hoverable
.cmuipcm-content-cntr__title{ transform:translateZ(0);backface-visibility:hidden;transition-property:max-heig
ht;transition-duration:.16s;transition-timing-function:cubic-bezier(.4,0,.2,1);will-change:max-height;overflow:
hidden;-webkit-font-smoothing:antialiased;-moz-osx-font-smoothing:grayscale}
merce-ui-product-card-medium--hoverable
.cmuipcm-content-cntr__hashtags{ transform:translateZ(0);backface-visibility:hidden;transition-property:max-
height,opacity;transition-duration:.16s;transition-timing-function:cubic-bezier(.4,0,.2,1);will-change:max-heig
ht,opacity;overflow:hidden}
merce-ui-product-card-medium--hoverable
.cmuipcm-image-cntr,
merce-ui-product-card-medium--hoverable
merce-ui-image-wrapper,
merce-ui-product-card-medium--hoverable
merce-ui-image-wrapper__image-container
.cico{ transform:translateZ(0);backface-visibility:hidden;transition-property:border-radius;transition-duration:.
16s;transition-timing-function:cubic-bezier(.4,0,.2,1);will-change:border-radius;overflow:hidden;-webkit-font-
smoothing:antialiased;-moz-osx-font-smoothing:grayscale}
merce-ui-product-card-medium--hoverable
.cmuipcm-meta-data{ transform:translateZ(0);transition-property:max-height,opacity;transition-duration:.16s;tr
ansition-timing-function:cubic-bezier(.4,0,.2,1);opacity:0;will-change:max-height,opacity;overflow:hidden}
merce-ui-product-card-medium--hoverable:active
.cmuipcm-image-cntr--zoom
.cico{ transform:scale(1.1)}
merce-ui-product-card-medium--hoverable:active
.cmuipcm-image-cntr,
merce-ui-product-card-medium--hoverable:active
merce-ui-image-wrapper,
merce-ui-product-card-medium--hoverable:active
merce-ui-image-wrapper__image-container
.cico{ border-radius:var(--smtc-corner-ctrl-hover)}
merce-ui-product-card-medium--hoverable.line-clamp-expanded
.cmuipcm-content-cntr__hashtags{ max-height:24px;opacity:1;margin-top:0}
merce-ui-product-card-medium--hoverable.line-clamp-expanded
.cmuipcm-content-cntr__title{ max-height:66px;transform:translateZ(0)}
merce-ui-product-card-medium--hoverable.line-clamp-expanded
.cmuipcm-content-cntr__row-wrapper
.cmuipcm-meta-data.cmuipcm-meta-data--one~.cmuipcm-meta-data.cmuipcm-meta-data--one,

```

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merce-ui-product-card-medium--hoverable.line-clamp-expanded .cmuipcm-content-cntr__row-wrapper
.cmuipcm-meta-data.cmuipcm-meta-data--hoverable,
merce-ui-product-card-medium--hoverable.line-clamp-expanded .cmuipcm-content-cntr__row-wrapper
.cmuipcm-meta-data.cmuipcm-meta-data--one,
merce-ui-product-card-medium--hoverable.line-clamp-expanded .cmuipcm-content-cntr__row-wrapper
.cmuipcm-meta-data{max-height:20px;opacity:1;margin-top:0}
merce-ui-product-card-medium--hoverable:not(.line-clamp-expanded)
.cmuipcm-content-cntr__title{max-height:44px}
merce-ui-product-card-medium--hoverable:not(.line-clamp-expanded)
.cmuipcm-content-cntr__title[data-rows="1"]{-webkit-line-clamp:1;max-height:22px}
merce-ui-product-card-medium--hoverable:not(.line-clamp-expanded)
.cmuipcm-content-cntr__title[data-rows="2"]{-webkit-line-clamp:2}
merce-ui-product-card-medium--hoverable:not(.line-clamp-expanded)
.cmuipcm-content-cntr__title[data-rows="3"]{-webkit-line-clamp:3;max-height:66px}
merce-ui-product-card-medium--hoverable:not(.line-clamp-expanded)
.cmuipcm-meta-data.cmuipcm-meta-data--hoverable{max-height:0;opacity:0;margin-top:-2px}
merce-ui-product-card-medium--hoverable:not(.line-clamp-expanded)
.cmuipcm-meta-data.cmuipcm-meta-data--one{max-height:20px;opacity:1;margin-top:0}
merce-ui-product-card-medium--hoverable:not(.line-clamp-expanded)
.cmuipcm-meta-data.cmuipcm-meta-data--one~.cmuipcm-meta-data.cmuipcm-meta-data--one{max-height:0;opacity:0;margin-top:-2px}.cmuipcm-image-cntr{display:flex;position:relative;overflow:hidden;border-radius:var(--mai-smtc-corner-card-default)}.cmuipcm-image-cntr
merce-ui-image-wrapper{height:100%;width:100%;border-radius:var(--mai-smtc-corner-card-default)}.cmuipcm-image-cntr
merce-ui-image-wrapper__image-container
.cico{background:#fafafa;border-radius:var(--mai-smtc-corner-card-default);transition:transform .16s ease}.cmuipcm-image-cntr
merce-ui-image-wrapper__image-container .cico
img{mix-blend-mode:multiply}@media(forced-colors:active){.cmuipcm-image-cntr
merce-ui-image-wrapper__image-container .cico
img{mix-blend-mode:normal}}.cmuipcm-badge{display:inline-block;background-color:#eff4fa;border-radius:6px;padding:var(--smtc-gap-between-content-xxx-small)var(--smtc-gap-between-content-x-small);font-family:"Segoe Sans",-apple-system,BlinkMacSystemFont,"Segoe UI",Roboto,sans-serif;font-size:14px;line-height:20px;font-weight:400;color:#1e2024;align-self:flex-start;white-space:nowrap;text-overflow:ellipsis;overflow:hidden;max-width:calc(100% - 12px)}.cmuipcm-rating-badge{position:absolute;top:8px;left:8px;background:var(--smtc-background-card-on-primary-default-hover);border-radius:var(--smtc-ctrl-badge-corner);padding:var(--smtc-gap-between-content-xxx-small)var(--smtc-gap-between-content-x-small);display:flex;align-items:center;z-index:1}.cmuipcm-rating-badge
.ratingv2.snrnt.small-rts{gap:var(--smtc-gap-between-content-xxx-small);font-size:13px;line-height:20px}.cmuipcm-rating-badge
.ratingv2.snrnt.small-rts
.rating-num{font-size:13px;font-weight:400;line-height:20px;color:var(--smtc-foreground-content-neutral-primary);margin-left:2px}.cmuipcm-content-cntr{display:flex;flex-direction:column;flex:1;padding-top:var(--sm

```

```
tc-padding-ctrl-text-top}),.cmuipcm-content-cntr__base-info{display:flex;flex-direction:column;gap:var(--smtc-gap-between-content-xxx-small);padding:0
var(--smtc-gap-between-content-xx-small);min-height:74px}.cmuipcm-content-cntr__title{margin-bottom:var(--smtc-gap-between-content-xxx-small);font:var(--bing-smtc-text-global-body3);color:var(--smtc-foreground-content-neutral-primary);overflow:hidden;display:-webkit-box;-webkit-box-orient:vertical;-webkit-line-clamp:2;max-height:44px}.cmuipcm-content-cntr__title[data-rows="1"]{-webkit-line-clamp:1;max-height:22px}.cmuipcm-content-cntr__title[data-rows="2"]{-webkit-line-clamp:2}.cmuipcm-content-cntr__title[data-rows="3"]{-webkit-line-clamp:3;max-height:66px}.cmuipcm-content-cntr__hashtags{display:flex;flex-wrap:wrap;gap:var(--smtc-gap-between-content-xx-small);margin-bottom:var(--smtc-gap-between-content-xx-small);overflow:hidden;max-height:0;opacity:0;margin-top:-4px}.cmuipcm-content-cntr__hashtags-item{background-color:var(--smtc-status-informative-tint-background);color:var(--smtc-foreground-content-neutral-secondary);border-radius:var(--smtc-ctrl-badge-corner);font:var(--bing-smtc-text-global-caption1);padding:var(--smtc-gap-between-content-xxx-small)
var(--smtc-gap-between-content-x-small);white-space:nowrap;text-overflow:ellipsis;overflow:hidden;max-width:100%}.cmuipcm-content-cntr
.cmuipc-seller{display:flex;flex-direction:row;align-items:center;gap:var(--smtc-gap-between-content-xx-small)}.cmuipcm-content-cntr
.cmuipc-seller
.fb-prvdr{width:16px;height:16px;border-radius:3px}.cmuipcm-content-cntr
.cmuipc-seller__name{font:var(--bing-smtc-text-global-caption1);color:var(--bing-smtc-foreground-content-neutral-secondary-alt);white-space:nowrap;text-overflow:ellipsis;overflow:hidden}.cmuipcm-content-cntr__row-wrapper{display:flex;flex-direction:column;align-items:flex-start;gap:var(--smtc-gap-between-content-xxx-small);flex-wrap:wrap}.cmuipcm-content-cntr__row-wrapper
.cmuipcm-meta-data.cmuipcm-meta-data--hoverable{max-height:0;opacity:0;margin-top:-2px}.cmuipcm-content-cntr__row-wrapper
.cmuipcm-meta-data.cmuipcm-meta-data--one,.cmuipcm-content-cntr__row-wrapper
.cmuipcm-meta-data:not(.cmuipcm-meta-data--hoverable){max-height:20px;opacity:1;margin-top:0}.cmuipcm-content-cntr__row-wrapper
.cmuipcm-meta-data.cmuipcm-meta-data--one~.cmuipcm-meta-data.cmuipcm-meta-data--one{max-height:0;opacity:0;margin-top:-2px}.cmuipcm-content-cntr__row-wrapper
.cmuipcm-meta-data{display:flex;flex-direction:row;align-items:center}.cmuipcm-content-cntr__row-wrapper
.cmuipcm-meta-data__icon{margin-right:4px}.cmuipcm-content-cntr__row-wrapper
.cmuipcm-meta-data__description{font:var(--bing-smtc-text-global-caption1);color:var(--bing-smtc-foreground-content-neutral-secondary-alt)}.cmuipcm-content-cntr__row-wrapper
.cmuipcm-price-row__range,.cmuipcm-content-cntr__row-wrapper
.cmuipcm-price-row__range
.price-container[size="small"]{font:var(--bing-smtc-text-global-caption1-strong)}
merce-ui-product-card-medium-tp
.cmuipcm-content-cntr__title{margin-bottom:unset}.cmuipcm-price-row{display:flex;flex-direction:row;align-items:center;gap:var(--smtc-gap-between-content-xx-small)}.cmuipcm-price-row.cmuipcm-price-row--installment{align-items:flex-start;flex-direction:column;gap:var(--smtc-gap-between-content-xxx-small)}.cmuipcm-price-row.cmuipcm-price-row--installment
.cmuipcm-price-row__og-price
.price-container[size="small"]{font:var(--bing-smtc-text-global-caption1);color:var(--bing-smtc-foreground-content-neutral-tertiary)}.cmuipcm-price-row
.price-container[size="small"]{font:var(--bing-smtc-text-global-caption1-strong)}.cmuipcm-price-row__range
```

```
{display:flex;flex-direction:row;align-items:center;gap:var(--smtc-gap-between-content-xx-small)}.cmuipcm-price-row__cur-price
.price-container[color="neutral"]{font:var(--bing-smtc-text-global-caption1-strong);color:var(--smtc-foreground-content-neutral-primary)}.cmuipcm-price-row:not(.cmuipcm-price-row--installment)
.cmuipcm-price-row__lw-price
.price-container[color="neutral"]{font:var(--bing-smtc-text-global-caption1-strong);color:var(--smtc-status-success-tint-foreground)}.cmuipcm-price-row__og-price
.price-container[color="neutral"]{font:var(--bing-smtc-text-global-caption2);line-height:20px;text-decoration:line-through;color:var(--bing-smtc-foreground-content-neutral-tertiary)}.cmuipcm-free-shipping{font-size:12px;line-height:16px;color:#0f7b0f}
merce-ui-image-wrapper{display:inline-block;position:relative;overflow:hidden}
merce-ui-image-wrapper__slideshow-container:hover .b_overlay .btn.rounded.next,
merce-ui-image-wrapper__slideshow-container:hover .b_overlay .btn.rounded.prev{display:block}
merce-ui-image-wrapper__slideshow-container .b_overlay .btn.rounded.next{right:0;display:none}
merce-ui-image-wrapper__slideshow-container .b_overlay .btn.rounded.prev{left:0;display:none}
merce-ui-image-wrapper__slideshow-container .b_pager_overlay .b_pager{line-height:8px;margin-top:8px}
merce-ui-image-wrapper__slideshow-container .b_pager_overlay .b_pager .teraction>ul
li{width:4px;height:4px;color:#e0e0e0;background-color:#e0e0e0;border:unset;margin:0 2px 2px}
merce-ui-image-wrapper__slideshow-container .b_pager_overlay .b_pager .teraction>ul
li.active{width:10px;border-radius:99px;background-color:#707070;color:#707070}
merce-ui-image-wrapper__slideshow-container .b_pager_overlay .b_pager .teraction>ul
li:hover:not(.active){width:4px;height:4px;background-color:#707070;color:#707070;margin:0 2px 2px}.price-container{display:-webkit-box;display:-webkit-flex;display:-moz-flex;display:-ms-flexbox;display:flex;-webkit-box-direction:normal;-webkit-box-orient:horizontal;flex-direction:row;color:#242424;font-size:20px;line-height:22.4px;font-weight:600}.price-container[size="xx-small"]{font-size:12px;line-height:18px;font-weight:200}.price-container[size="x-small"]{font-size:14px;line-height:14px;font-weight:200}.price-container[size="small"]{font-size:16px;line-height:18px;font-weight:600}.price-container[size="medium"]{font-size:20px;line-height:22.4px;font-weight:600}.price-container[size="large"]{font-size:24px;line-height:27.2px;font-weight:600}.price-container[size="x-large"]{font-size:28px;line-height:27.3px;font-weight:600}.price-container[color="neutral"],.price-container[discount-label-color="neutral"]
.price-container__discount-label{color:#242424}.price-container[color="accent-primary"],.price-container[discount-label-color="accent-primary"]
.price-container__discount-label{color:#128052}.price-container[color="accent-secondary"],.price-container[discount-label-color="accent-secondary"]
.price-container__discount-label{color:#d63600}.price-container[color="subtle"],.price-container[discount-label-color="subtle"]
.price-container__discount-label{color:#707070}.price-container[color="inverted"],.price-container[discount-label-color="inverted"]
.price-container__discount-label{color:#fff}.price-container[color="accent-brand"],.price-container[discount-label-color="accent-brand"]
.price-container__discount-label{color:#2169eb}.price-container[strikethrough]
.price-container__currency,.price-container[strikethrough]
.price-container__integer,.price-container[strikethrough]
```

```
.price-container__cents,.price-container[strikethrough]
.price-container__decimal{text-decoration:line-through}.price-container[show-raised-cents]
.price-container__currency,.price-container[show-raised-cents]
.price-container__cents{vertical-align:top}.price-container[show-raised-cents]
.price-container__currency{margin-right:.1em;font-size:60%;line-height:1;transform:translate(0,10%)}.price-
container[show-raised-cents]
.price-container__cents{margin-left:.05em;font-size:60%;line-height:1;transform:translate(0,8%)}.price-conta
iner
.price-container__per-item-container{display:-webkit-box;display:-webkit-flex;display:-moz-flex;display:-ms-
flexbox;display:flex;-webkit-box-direction:normal;-webkit-box-orient:horizontal;flex-direction:row;-webkit-b
ox-align:end;-ms-flex-align:end;align-items:flex-end;color:#707070;padding-left:2px;column-gap:2px;font-w
eight:200}.price-container__discount-label{margin-left:.2em}.price-container[discount-label-position="top"]
:not([size="small"]):not([size="x-small"]):not([size="xx-small"])
.price-container__discount-label{vertical-align:top;font-size:60%;line-height:1;transform:translate(0,.1em)}.pr
ice-container[discount-label-position="bottom"]
.price-container__discount-label{margin-left:.2em;font-size:100% }
merce-ui-price{display:block}.acf-button-container{display:flex;flex-direction:row;gap:8px;flex-wrap:nowrap
;overflow-x:auto;padding-bottom:4px;-ms-overflow-style:none;scrollbar-width:none}.acf-button-container::-
webkit-scrollbar{display:none}.acf-button,.acf-button__button,.acf-button__link{display:inline-flex;align-ite
ms:center;justify-content:center;border-radius:8px;font-size:13px;font-weight:700;white-space:nowrap;cursor
:pointer;transition:all .1s ease-in-out;padding:6px 16px;line-height:20px;gap:4px;background-color:var(--bing-smtc-background-card-on-primary-alt-rest);color:
var(--bing-smtc-foreground-content-brand-rest)!important}.acf-button:hover:not(.acf-button--disabled),.acf-bu
tton__button:hover:not(.acf-button--disabled),.acf-button__link:hover:not(.acf-button--disabled){background-
color:var(--bing-smtc-background-card-on-primary-alt-hover);color:var(--smtc-foreground-ctrl-neutral-primar
y-hover)!important}.acf-button:active:not(.acf-button--disabled),.acf-button__button:active:not(.acf-button--di
sabled),.acf-button__link:active:not(.acf-button--disabled){background-color:var(--bing-smtc-background-car
d-on-primary-alt-pressed);color:var(--smtc-foreground-ctrl-neutral-primary-pressed)!important}.acf-button.acf
-button--selected,.acf-button__button.acf-button--selected,.acf-button__link.acf-button--selected{background-
color:var(--bing-smtc-background-ctrl-brand-rest);color:var(--smtc-foreground-ctrl-on-brand-rest)!important}.
acf-button.acf-button--selected:hover:not(.acf-button--disabled),.acf-button__button.acf-button--selected:hove
r:not(.acf-button--disabled),.acf-button__link.acf-button--selected:hover:not(.acf-button--disabled){backgroun
d-color:var(--smtc-background-ctrl-brand-hover);color:var(--smtc-foreground-ctrl-on-brand-hover)!important
}.acf-button.acf-button--selected:active:not(.acf-button--disabled),.acf-button__button.acf-button--selected:act
ive:not(.acf-button--disabled),.acf-button__link.acf-button--selected:active:not(.acf-button--disabled){backgro
und-color:var(--smtc-background-ctrl-brand-pressed);color:var(--smtc-foreground-ctrl-on-brand-pressed)!imp
ortant}.acf-button.acf-button--disabled,.acf-button__button.acf-button--disabled,.acf-button__link.acf-button--
disabled{opacity:.3;cursor:not-allowed}.acf-button:focus-visible,.acf-button__button:focus-visible,.acf-button
__link:focus-visible{outline:2px solid #323130;outline-offset:2px}.acf-button__button{border:0}.acf-button__link:link,.acf-button__link:visited,.acf
-button__link:hover,.acf-button__link:active{text-decoration:none!important}.acf-button__text{display:inline-
flex}.acf-button__icon{display:inline-flex;align-items:center;justify-content:center}.acf-button__icon
```



Solar thermal flat plate collectors

img,.acf-button__icon svg{width:16px;height:16px}#slideexp0_190470 .slide:last-child { margin-inline-end: 0; } #slideexp0_190470 .slide>*:last-child { margin-bottom: unset !important; } .b_acf_crsl #slideexp0_190470c .b_slidebar .slide { box-shadow: unset; -webkit-box-shadow: unset; } .b_acf_crsl.hovexp #slideexp0_190470c.b_slideexp .b_overlay .b_slidesContainer { overflow: visible !important; } .b_acf_crsl.hovexp #slideexp0_190470c.b_slideexp .b_overlay .b_viewport, .b_acf_crsl.hovexp #slideexp0_190470c.b_slideexp .b_viewport { padding-top: 12px !important; margin-top: -12px !important; padding-bottom: 12px !important; margin-bottom: -12px !important; } .b_acf_crsl.hovexp.hovexpfix #slideexp0_190470c.b_slideexp .b_overlay .b_viewport { padding-bottom: 24px !important; margin-bottom: -24px !important; }Shop Solar Thermal Flat Plate CollectorsFlat Plate ExchangerFlat Plate Solar Collector SystemFlat Plate Solar Collector AccessoriesFlat Plate Solar Water HeaterResidential Solar Thermal CollectorSolar Thermal Collector KitFlat Plate Hydronic Solar CollectorSolar Energy CollectorHigh Efficiency Flat Plate Collector2000x1000x80 mm New Type Flat Plate Solar Thermal CollectorAAlibaba \$80Free shipping2000x1000x80 mm New Type Flat Plate Solar Thermal CollectorAAlibaba \$80Free shippingHomemade Solar Thermal Collector Flat Plate Solar Thermal Collector Glass Solar CollectorAAlibaba \$3Free shippingHomemade Solar Thermal Collector Flat Plate Solar Thermal Collector Glass Solar CollectorAAlibaba \$3Free shipping15M2 Large-Scale Flat Plate Solar Collector For Solar Thermal PlantAAlibaba \$954Free shipping15M2 Large-Scale Flat Plate Solar Collector For Solar Thermal PlantAAlibaba \$954Free shippingFlat Plate Solar Panel Water Thermal Collector With High InsulationAAlibaba \$78Flat Plate Solar Panel Water Thermal Collector With High InsulationAAlibaba \$78Hot Sale High Efficiency Thermal Flat Plate Solar Collector Prices For Pool Water HeaterAAlibaba \$300Hot Sale High Efficiency Thermal Flat Plate Solar Collector Prices For Pool Water HeaterAAlibaba \$300Aluminum Solar Power Thermal Flat Plate Solar Charge Collectors Air Conditioner PriceAAlibaba \$130Aluminum Solar Power Thermal Flat Plate Solar Charge Collectors Air Conditioner PriceAAlibaba \$1302024 New Low Price Product Flat Plate Panel Solar Thermal CollectorAAlibaba \$115.14Free shipping2024 New Low Price Product Flat Plate Panel Solar Thermal CollectorAAlibaba \$115.14Free shippingSolar Thermal Panel Flat Plate Solar Collector Water Hot Water HeaterAAlibaba \$350Solar Thermal Panel Flat Plate Solar Collector Water Hot Water HeaterAAlibaba \$350Thermal Flat Plate Solar Collector Prices UNP-FP02AAlibaba \$57.16Thermal Flat Plate Solar Collector Prices UNP-FP02AAlibaba \$57.16High Quality Customized Stainless Steel 12 Tube Flat Plate Solar Thermal Collector For ExportAAlibaba \$160High Quality Customized Stainless Steel 12 Tube Flat Plate Solar Thermal Collector For ExportAAlibaba \$160High Efficiency Flat Plate Thermal Collector Solar Water Heater Panel For Large Size Solar Thermal ProjectsAAlibaba \$950High Efficiency Flat Plate Thermal Collector Solar Water Heater Panel For Large Size Solar Thermal ProjectsAAlibaba \$950High Selective Titanium Coating Flat Solar Collectors CE Flat Plate Solar Thermal Collector Flat Panel Solar Water HeaterAAlibaba \$398High Selective Titanium Coating Flat Solar Collectors CE Flat Plate Solar Thermal Collector Flat Panel Solar Water HeaterAAlibaba \$398High Efficiency Multifunctional Thermal Flat Plate Solar Collector Prices For Pool Water HeatersAAlibaba \$595Free shippingHigh Efficiency Multifunctional Thermal Flat Plate Solar Collector Prices For Pool Water HeatersAAlibaba \$595Free shippingFlat Plate Solar Thermal CollectorsAAlibaba \$86Flat Plate Solar Thermal CollectorsAAlibaba \$86Solar Thermal Collector Flat Plate Anodic Oxidation Black Flat Plate Solar Collector PricesAAlibaba \$100Solar Thermal Collector Flat Plate Anodic Oxidation Black Flat Plate Solar Collector PricesAAlibaba \$100Flat Plate Solar Collector Heating System Solar Pv Modules Thermal CollectorAAlibaba \$13.45Flat Plate Solar Collector Heating System Solar Pv Modules Thermal

Solar thermal flat plate collectors

\$13.45See

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all.b_wikiRichcard_noHeroSection{content-visibility:auto;contain-intrinsic-size:1px 218px}#b_results
.b_wikiRichcard p{display:inline}.b_wikiRichcard .b_promoteText{font-weight:bold}.b_wikiRichcard
.tab-head{margin-bottom:var(--smtc-gap-between-content-x-small)}#b_results>li .b_wikiRichcard
.wikiRichcard_heroSection{padding-bottom:var(--smtc-gap-between-content-small)}#b_results>li
.b_wikiRichcard .wikiRichcard_heroSection
p{color:var(--bing-smtc-foreground-content-neutral-secondary-alt)}#b_results>li .b_wikiRichcard .tab-content
p,#b_results>li .b_wikiRichcard .tab-content
a{color:var(--smtc-ctrl-rating-icon-foreground-filled)}#b_results>li .b_wikiRichcard .tab-container
a{border-bottom:1px dashed var(--smtc-stroke-ctrl-on-neutral-rest)}#b_results>li .b_wikiRichcard
a.b_mopexpref{border-bottom:0}#b_results>li .b_wikiRichcard
line>a: hover{background-color:transparent;text-decoration:none}#b_results>li .b_wikiRichcard
a[href*="wikipedia "],#b_results>li .b_wikiRichcard a[href*="wikipedia "]:hover,#b_results .b_wikiRichcard
.wiki_attr a,#b_results .b_wikiRichcard .wiki_attr a: hover{border-bottom:0}#b_results>li .b_wikiRichcard
a[href*="wikipedia "]:hover,#b_results .b_wikiRichcard .wiki_attr
a: hover{text-decoration:underline;background-color:var(--smtc-background-card-on-primary-default-rest)}#b
_results>li .b_wikiRichcard_noHeroSection .b_wikiRichcard
p{color:var(--bing-smtc-foreground-content-neutral-secondary-alt);display:-webkit-box;-webkit-line-clamp:5;
-webkit-box-orient:vertical;overflow:hidden;padding-bottom:0}.b_wikiRichcard_noHeroSection .b_imagePair
.b_wikiRichcard_image{float:right;margin-top:var(--smtc-padding-ctrl-text-side)}.b_wikiRichcard_noHeroSe
ction .b_wikiRichcard
.b_clearfix.b_overflow{line-height:var(--mai-smtc-padding-card-default)}.b_wikiRichcard_noHeroSection
.b_imagePair .b_wikiRichcard_image_caption{margin-right:110px}.b_wikiRichcard_noHeroSection
.b_imagePair .sml{display:none}#b_results li.b_algoBigWiki: hover h2
a{text-decoration:underline}.b_wikiRichcard_noHeroSection .b_floatR_img{padding:0 0
var(--smtc-gap-between-content-x-small)
var(--smtc-gap-between-content-x-small)}.b_wikiRichcard_noHeroSection{margin-top:var(--smtc-gap-betwe
en-content-x-small);margin-bottom:var(--smtc-gap-between-content-xx-small);box-sizing:border-box}#b_con
tent #b_results .b_algo .b_wikiRichcard .tab-head .tab-menu
li.tab-active{box-shadow:none;background:var(--bing-smtc-background-ctrl-subtle-rest);border-radius:var(--
mai-smtc-corner-list-card-default);color:var(--bing-smtc-foreground-content-brand-rest)}#b_content
#b_results .b_algo .b_wikiRichcard: not(:has(.tab-navr)) .tab-head .tab-menu
li: hover{background:var(--smtc-background-ctrl-neutral-hover);color:var(--bing-smtc-foreground-content-bra
nd-rest);border-radius:var(--mai-smtc-corner-list-card-default)}.b_wikiRichcard .tab-head .tab-menu
ul{gap:var(--smtc-gap-between-content-small)}#b_results .tab-menu li: hover{box-shadow:none}#b_content
#b_results .b_wikiRichcard .tab-active: focus-visible{outline:0}#b_results .b_wikiRichcard
.tab-menu,#b_results .b_wikiRichcard .tab-menu li,#b_results .b_wikiRichcard .tab-menu
ul{height:auto;line-height:var(--AC_LineHeight)}#b_results .b_wikiRichcard
.tab-head{display:flex;justify-content:center;align-items:center}#b_results .b_wikiRichcard
.tab-head: has(tab-navr){width:fit-content}#b_results .b_wikiRichcard .tab-head
li{padding-top:var(--smtc-gap-between-content-x-small);padding-bottom:var(--smtc-gap-between-content-x-s
mall)}#b_results .b_wikiRichcard .tab-container{padding-bottom:0}.b_wikiRichcard_noHeroSection

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Solar thermal flat plate collectors

span{color:var(--bing-smtc-foreground-content-neutral-secondary-alt)}#b_results .b_wikiRichcard,#b_results .b_wikiRichcard span{font:var(--bing-smtc-text-global-body3)}#b_content #b_results .b_algo .b_wikiRichcard .tab-head .tab-menu li .tab-active{color:var(--smtc-foreground-content-neutral-primary)}#b_content #b_results .b_algo .b_wikiRichcard .tab-head .tab-menu li:not(.tab-active){color:var(--bing-smtc-foreground-content-neutral-tertiary)}#b_content #b_results .b_algo .b_wikiRichcard:not(:has(.tab-navr)) .tab-head .tab-menu li:not(.tab-active):hover{color:var(--bing-smtc-foreground-content-brand-rest)}.b_wikiRichcard .b_vList>li{padding-bottom:var(--smtc-gap-between-content-xx-small)}#b_results>li .b_wikiRichcard a{color:var(--smtc-ctrl-link-foreground-brand-rest)}.mc_fh{height:100%;border-radius:6px}.mc_tc_bs{overflow:hidden}.pvc_title_with_frows{padding-bottom:10px}.paratitle .actionmenu{float:right;margin-top:-26px}.paratitle .actionmenu::after{float:none}.b_paractl,#b_results .b_paractl{line-height:1.5em;padding-bottom:10px}#tabcontrol_18_161707 .tab-head { height: 40px; } #tabcontrol_18_161707 .tab-menu { height: 40px; } #tabcontrol_18_161707_menu { height: 40px; } #tabcontrol_18_161707_menu>li { background-color: #ffffff; margin-right: 0px; height: 40px; line-height:40px; font-weight: 700; color: #767676; } #tabcontrol_18_161707_menu>li:hover { color: #111; position:relative; } #tabcontrol_18_161707_menu .tab-active { box-shadow: inset 0 -3px 0 0 #111; background-color: #ffffff; line-height: 40px; color: #111; } #tabcontrol_18_161707_menu .tab-active:hover { color: #111; } #tabcontrol_18_161707_navr, #tabcontrol_18_161707_navl { height: 40px; width: 32px; background-color: #ffffff; } #tabcontrol_18_161707_navr .sv_ch, #tabcontrol_18_161707_navl .sv_ch { fill: #444; } #tabcontrol_18_161707_navr:hover .sv_ch, #tabcontrol_18_161707_navl:hover .sv_ch { fill: #111; } #tabcontrol_18_161707_navr.tab-disable .sv_ch, #tabcontrol_18_161707_navl.tab-disable .sv_ch { fill: #444; opacity:.2; }WikipediaSolar thermal collector - WikipediaOverviewHeating waterHeating airGenerating electricityGeneral principles of operationStandardsSee alsoExternal linksFlat-plate and evacuated-tube solar collectors are mainly used to collect heat for space heating, domestic hot water, or cooling with an absorption chiller. In contrast to solar hot water panels, they use a circulating fluid to displace heat to a separated reservoir. The first solar thermal collector designed for building roofs was patented by William H. Goettl and called the "Solar heat collector and radiator for building roof

Collectors are the most visible components of solar thermal. In addition to vacuum tube collectors, Viessmann also offers flat-plate collectors for residential, commercial and local authority ...

The flat solar collector is a type of solar panel whose function is to transform solar energy into heat.

A solar flat plate collector typically consists of a large heat absorbing plate, usually a large sheet of copper or aluminium as they are ...

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Learn what a flat plate collector is, how it works, and its key components. Discover its types, working principle, advantages, and ...

Solar thermal flat plate collectors

The key considerations in flat plate collector design are maximizing absorption, minimizing reflection and radiation losses, and effective heat transfer from the collector plate to the fluids.

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