

Make a solar water pump





Overview

What is a DIY solar water pump?

A DIY solar water pump involves a simple build that combines solar panels, a controller, and a DC water pump in a stand-alone system. In short, the solar array generates DC electricity to power the water pump. With this system, you can also add a backup battery for continuous use throughout the night or on a cloudy day.

How to install a solar pump system?

Connect the Water output of the pump to a long pipe and ensure that it is secured properly. Lower the pump into the water source and switch it on.³ The Solar Pump System controller is the brain of the entire project. It basically regulates the current supplied to the pump from the solar panels.

How does a solar water pump work?

In short, the solar array generates DC electricity to power the water pump. With this system, you can also add a backup battery for continuous use throughout the night or on a cloudy day. Working principle of a DIY solar water pump.

How do I choose a solar water pump?

When embarking on a DIY solar water pump project, selecting the correct solar panel and pump size is crucial for ensuring optimal performance. The two primary components of your system are the solar panel, which converts sunlight into electrical energy, and the pump, which moves the water.



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Making a DIY Solar-Powered Water Pump

While commercially available solar pumps exist, building your own offers a deeper understanding of the system, potential cost savings, and the satisfaction of self-sufficiency. This article ...

How To Make A DIY Solar Water Pump

What Is A Diy Solar Water Pump?Material Needed For A Diy Solar Water PumpHow to Make A Diy Solar Water PumpHow Much Do Diy Solar Water Pumps Cost?Final ThoughtsBuilding a DIY solar water pump is not a complex task. However, we advise you to focus on the preliminary sizing steps; they are the most important. We've divided this build into the following 8 steps: 1. Know Your Water Needs You'll need to know your water needs to select and design the correct solar water pumping system. Do this by asking yourself See more on climatebiz #b_results .b_vidAns{border-radius:6px;box-shadow:0 0 0 1px rgba(0,0,0,.05);padding:16px 20px;gap:10px;background:#fff}@charset "UTF-8";#b_results .b_ans.b_vidAns{box-shadow:none!important;padding:var(--smtc-gap-between-content-medium) 0!important;background:var(--bing-smtc-background-ctrl-fade-on-image-stop-0)}#b_results .b_ans.b_vidAns #serpvidans.vsacf .mc_vtvc,#b_results .b_ans.b_vidAns #serpvidans.vsacf .mc_vtvc_th,#b_results .b_ans.b_vidAns #serpvidans.vsacf .cico,#b_results .b_ans.b_vidAns #serpvidans.vsacf .mc_vtvc_htb,#b_results .b_ans.b_vidAns #serpvidans.vsacf .vrhc,#b_results .b_ans.b_vidAns #serpvidans.vsacf .vrhcp,#b_results .b_ans.b_vidAns #serpvidans.vsacf .vrhtc,#b_results .b_ans.b_vidAns #serpvidans.vsacf .vrhtpc{border-radius:var(--mai-smtc-corner-list-card-nested-default)}#b_results .b_ans.b_vidAns #serpvidans.vsacf .mmlist .mc_vtvc,#b_results .b_ans.b_vidAns #serpvidans.vsacf .mmlist .mc_vtvc .mc_vtvc_meta{margin:0}#b_results .b_ans.b_vidAns #serpvidans.vsacf .mmlist .mc_vtvc .mc_vtvc_meta .mc_vtvc_meta_channel,#b_results .b_ans.b_vidAns #serpvidans.vsacf .mmlist .mc_vtvc .mc_vtvc_meta .mc_vtvc_meta_row_channel{color:var(--smtc-foreground-content-neutral-primary)}#serpvidans.vsacf,#serpvidans.vsacf .expctn .expbody,#serpvidans.vsacf .mmlist{display:flex;flex-direction:column;gap:var(--smtc-gap-between-content-medium)}#serpvidans.vsacf .cico{height:auto}#serpvidans.vsacf .mc_vtvc_ban_lo{top:0;right:auto}#serpvidans.vsacf .mc_cwvc .mc_vtvc .mc_vtvc_meta,#serpvidans.vsacf .mmlist .mc_vtvc .mc_vtvc_meta{height:auto;padding:var(--smtc-gap-between-content-xx-small) 0 var(--smtc-gap-between-content-xx-small) var(--smtc-gap-between-content-medium);display:flex;flex-direction:column;justify-content:space-between}#serpvidans.vsacf .mc_cwvc .mc_vtvc .mc_vtvc_meta .mc_vtvc_title,#serpvidans.vsacf .mmlist .mc_vtvc .mc_vtvc_meta .mc_vtvc_title{color:var(--smtc-ctrl-link-foreground-brand-rest);font:var(--bing-smtc-text-global-body2);height:auto;display:-webkit-box;-webkit-line-clamp:2;-webkit-box-orient:vertical}#serpvidans.vsacf .mc_cwvc .mc_vtvc .mc_vtvc_meta .mc_vtvc_meta_block_area,#serpvidans.vsacf .mc_cwvc .mc_vtvc .mc_vtvc_meta .mc_vtvc_meta_block,#serpvidans.vsacf .mmlist .mc_vtvc .mc_vtvc_meta .mc_vtvc_meta_block_area,#serpvidans.vsacf .mmlist .mc_vtvc .mc_vtvc_meta .mc_vtvc_meta_block_area,#serpvidans.vsacf .mmlist .mc_vtvc .mc_vtvc_meta .mc_vtvc_meta_block_area{display:flex;flex-direction:column;gap:var(--smtc-padding-ctrl-text-side)}#serpvidans.vsacf .mc_cwvc .mc_vtvc .mc_vtvc_meta .mc_vtvc_meta_block_area .mc_vtvc_meta_row,#serpvidans.vsacf .mc_cwvc .mc_vtvc .mc_vtvc_meta .mc_vtvc_meta_block .mc_vtvc_meta_row,#serpvidans.vsacf .mmlist .mc_vtvc .mc_vtvc_meta .mc_vtvc_meta_block_area .mc_vtvc_meta_row,#serpvidans.vsacf .mmlist .mc_vtvc .mc_vtvc_meta .mc_vtvc_meta_block .mc_vtvc_meta_row{color:var(--smtc-foreground-content-neutral-primary);height:var(--mai-smtc-padding-card-default);font:var(--bing-smtc-text-global-caption1)}#serpvidans.vsacf .mc_cwvc



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.mc_vtvc_meta_row_channel::before,#serpvidans.vsacf .mc_cwvc .mc_vtvc .mc_vtvc_meta
.mc_vtvc_meta_block .mc_vtvc_meta_row .mc_vtvc_meta_row_channel::before,#serpvidans.vsacf
.mmlist .mc_vtvc .mc_vtvc_meta .mc_vtvc_meta_block_area .mc_vtvc_meta_row
.mc_vtvc_meta_row_channel::before,#serpvidans.vsacf .mmlist .mc_vtvc .mc_vtvc_meta
.mc_vtvc_meta_block .mc_vtvc_meta_row .mc_vtvc_meta_row_channel::before{content:" .
"}#serpvidans.vsacf .mc_cwvc .mc_vtvc .mc_vtvc_meta .mc_vtvc_meta_block_area
.mc_vtvc_meta_pubdate,#serpvidans.vsacf .mc_cwvc .mc_vtvc .mc_vtvc_meta
.mc_vtvc_meta_block .mc_vtvc_meta_pubdate,#serpvidans.vsacf .mmlist .mc_vtvc .mc_vtvc_meta
.mc_vtvc_meta_block_area .mc_vtvc_meta_pubdate,#serpvidans.vsacf .mmlist .mc_vtvc
.mc_vtvc_meta .mc_vtvc_meta_block .mc_vtvc_meta_pubdate{color:var(--bing-smtc-foreground-
content-neutral-tertiary);padding-bottom:0}.vsacf .mc_cwvc .mc_vtvc_con_rc,.vsacf .mmlist
.mc_vtvc_con_rc{display:flex}.vsacf .mc_cwvc .mc_vtvc_con_rc .mc_vtvc_meta_w,.vsacf .mmlist
.mc_vtvc_con_rc .mc_vtvc_meta_w{height:auto}.vsacf .b_title{padding-left:var(--mai-smtc-padding-
card-default)}.vsacf .b_title .mmtitle{font:var(--bing-smtc-text-global-subtitle1-strong);margin-
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content-neutral-primary);background-size:7px 7px;width:7px;height:7px;transform:rotate(45deg);di
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bottom:0}#serpvidans.vsacf .b_title .mmtitle a{color:var(--smtc-foreground-content-neutral-
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.mc_vtvc_th{height:auto}#serpvidans.vsacf .vsb_tr_c.va_tt{margin:0}#serpvidans.vsacf .vtbc
.mv_vtvc_play,#serpvidans.vsacf .vtbc .mv_vtvc_play_ext{position:static}#serpvidans.vsacf .va_tt
.mc_vtvc_ban_lo{display:block}#serpvidans.vsacf .mc_bc{width:auto;border-radius:var(--smtc-ctrl-
badge-sm-corner);padding:var(--smtc-padding-ctrl-text-side) var(--smtc-gap-between-content-xx-
small)}#serpvidans.vsacf .rmts .mc_bc ems{display:none}#serpvidans.vsacf
a.vsb_tr_t{color:var(--smtc-foreground-content-neutral-primary)}.vsacf .va_tt .vsb_tr_chd
.mc_vtvc_th_dock.rmoverlay{height:36px}.vsacf .va_tt .vsb_tr_chd .mc_vtvc_th_dock{height:92px;
background:linear-gradient(180deg,var(--bing-smtc-background-ctrl-fade-on-image-stop-0)
0%,var(--mai-smtc-background-ctrl-on-image-rest) 100%)}.vsacf .va_tt a.vsb_tr_t{padding:0
20px;font:var(--acf-font-title-2-strong)}.vsacf .va_tt .vsb_tr_chd .mc_vtvc .mc_vtvc_meta,.vsacf
.va_tt .vsb_tr_chd .mc_vtvc .mc_vtvc_title{color:var(--mai-smtc-foreground-ctrl-on-image-
rest)}.vsacf span.vcmt_ctt{font:var(--bing-smtc-text-global-caption2);margin:var(--smtc-gap-
between-content-xx-small) 0 0;height:16px}#serpvidans.vsacf .vsb_tr_chd .mc_vtvc_tot
.mc_vtvc_title strong{font-size:14px;line-height:20px;display:unset}#serpvidans.vsacf .va_tt
.b_slldr .slide:not(:first-child){margin-left:var(--smtc-gap-between-content-
small)}#serpvidans.vsacf .va_tt .vsb_tr_chd .mc_vtvc .mc_vtvc_title{white-space:normal;display:-w
ebkit-box;-webkit-line-clamp:2;-webkit-box-orient:vertical}#serpvidans.vsacf
.b_module_expansion_control .b_btnContainer .b_CompactExpansion{background-color:var(--bing-s
mtc-background-ctrl-neutral-rest);display:flex;justify-content:center;align-
items:center;gap:4px;width:fit-content;height:auto;padding:8px 12px}#serpvidans.vsacf
.b_module_expansion_control .b_btnContainer .b_CompactExpansion .b_CompactExpansionBtnText
{font:var(--bing-smtc-text-global-caption1-strong);color:var(--bing-smtc-foreground-content-brand-
rest)}#serpvidans.vsacf .b_module_expansion_control .b_btnContainer .b_CompactExpansion
.b_arrow{display:flex;margin:0;height:auto}#serpvidans.vsacf .b_module_expansion_control
.b_btnContainer .b_CompactExpansion .b_arrow path#Shape{fill:var(--bing-smtc-foreground-
content-brand-rest)}#serpvidans.vsacf .b_module_expansion_control .b_btnContainer::after{conten
t:"";position:absolute;width:100%;bottom:20px;left:0;height:1px;border-
radius:1px;background:var(--smtc-stroke-ctrl-on-neutral-rest)}#b_results .b_ans.b_vidAns{box-
shadow:none;padding:12px 20px 0}#b_results .b_ans.b_vidAns
.vasac{padding:unset;margin:0}#b_results .b_ans.b_vidAns .vsa .b_attribution{padding-
bottom:0}#b_results .b_ans.b_vidAns .cardless .salink{margin:0}#b_results .b_ans.b_vidAns
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.mmlist .mc_vtvc{margin-top:10px}#b_results .b_ans.b_vidAns .mmlist .mc_vtvc
.mc_vtvc_meta{display:flex;flex-direction:column;justify-content:space-between;margin:0 10px 4px
12px}#b_results .b_ans.b_vidAns .mmlist .mc_vtvc .mc_vtvc_meta
.mc_vtvc_meta_channel{color:#111}#b_results .b_ans.b_vidAns .mmlist .mc_vtvc .mc_vtvc_meta
.mc_vtvc_meta_row_channel,#b_results .b_ans.b_vidAns .mmlist .mc_vtvc .mc_vtvc_meta
.mc_vtvc_meta_block_area{color:#666}#b_results .b_ans.b_vidAns .mmlist .mc_vtvc
.mc_vtvc_meta .mc_vtvc_meta_block_area{bottom:0;height:unset}.b_dark .vsa.cardless .mc_vtvc{b
ackground-color:unset}.mmtitle>a{display:block}.mc_fh{height:100%;border-
radius:6px}.mc_tc_bs{overflow:hidden}.mmlist .mc_vtvc .mc_vtvc_meta { padding: 12px 16px
16px 16px; } .mmlist .mc_vtvc .mc_vtvc_meta_w { height: 112px; margin-top: -0px; } .mmlist
.mc_vtvc .mc_vtvc_title { height: 44px; line-height: 22px; margin-bottom: 0px; margin-top: 0px; }
.mmlist .mc_vtvc .mc_vtvc_meta_block_area { height: 40px; } .mmlist .mc_vtvc .vtmu, .mmlist
.mc_vtvc .vtpl { bottom: 120px; } .mmlist .mc_vtvc_th_dock { height: 112px; } .mmlist .mc_vtvc_th
.cico { height: 131px; } .mc_vtvc{background-color:#fff;box-shadow:0 0 1px rgba(0,0,0,.05);line-
height:0;margin:0;position:relative;border-radius:6px;overflow:hidden}.mc_vtvc.noshadow{box-sha
dow:none}.mc_vtvc_con_rc{border-radius:6px;overflow:hidden;position:relative}.mc_vtvc>a{color:
#71777d;display:block;text-decoration:none;width:100%}.mc_vtvc>a:focus::after{outline:2px solid
#00a89d;width:100%;height:100%;content:"";outline-offset:-2px;position:absolute;top:0;left:0}.mc_
vtvc_th{background-color:#d5d5d5;position:relative}.mc_vtvc_th .cico{border-radius:0}.mc_vtvc_b
an_lo,.mc_vtvc_ban_up{position:absolute;vertical-align:middle}.mc_vtvc_ban_lo{bottom:0}.mc_vtvc
c_ban_up{top:0}.mc_vtvc_title{font-weight:normal;margin-
bottom:11px;overflow:hidden;color:#111;height:54px;line-height:18px}.mc_vtvc_title
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o{float:left;margin-right:4px}.mc_vtvc_act{height:16px;margin-top:-40px;padding:12px 8px;z-inde
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index:1}.mc_vtvc_act_sep{border-top:1px solid #d5d5d5;height:40px;margin:0 8px}.mc_vtvc_fh
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m:8px}.mc_vtvc_htc{width:100%;height:100%;position:absolute;top:0;bottom:0;left:0;right:0}.mc_
vtvc_htb{width:100%;height:100%;background:rgba(0,0,0,.7);position:absolute;top:0;bottom:0;left:
0;right:0}.mc_vtvc_ht{width:100%;padding:0 16px;line-height:16px;color:#fff;text-decoration:unde
rline;word-break:break-word;box-sizing:border-box;vertical-align:middle;text-align:center}.mc-
vtvc_th_live_b{background-color:#c80000;color:#fff;display:inline-block;padding:2px
8px;font:11px/14px Arial;border-radius:2px;text-
transform:uppercase;height:15px;width:26px;position:absolute;left:8px;top:110px}.isvctrl .isv
.mc_vtvc_ban_up{left:0;right:initial}.mc_vtvc_ban_lo,.mc_vtvc_ban_up{right:0}.vt_text.b_IRight
.b_ILeft{margin:0 0 0 1px;height:14px;line-height:14px;padding:2px 8px;background:rgba(0,0,0,.75
);border-radius:2px;font-weight:bold}.mc_vthtb{width:100%;height:100%;background:rgba(0,0,0,.7
);position:absolute;top:0;bottom:0;left:0;right:0;display:table}.mc_vtht{width:100%;padding:0 16px
;line-height:16px;color:#fff;text-decoration:underline;word-break:break-word;box-sizing:border-
box;vertical-align:middle;text-align:center;display:table-cell}.vt_text.b_IRight .b_ILeft{margin:0 0 0
1px;height:14px;line-height:14px;padding:2px 8px;background:rgba(0,0,0,.75);border-radius:2px;fo
nt-weight:bold}.emptyStyleForDebuggingPurpose{top:0}.emptyStyleForDebuggingPurpose{top:0}.
mc_vtvc_center_play{width:32px;height:32px;background-size:contain;position:absolute;margin:au
to;bottom:0;top:0;left:0;right:0;box-shadow:none;border-radius:0}.mc_vtvc_center_play.rmvbg{wid
th:32px;height:32px;background-image:none}.mc_vtvc_htb,.mc_vtvc_ht{display:none}.vt_onhv
.mc_vtvc_htb{display:table}.vt_onhv .mc_vtvc_ht{display:table-
cell}.mc_vtvc_center_play{display:inline-block}.vt_onhv
.mc_vtvc_center_play{display:none}.mc_vtvc .vtmu,.mc_vtvc .vtpl{bottom:163px}.vsarf .mc_vtvc
.vtmu,.vsarf .mc_vtvc .vtpl{bottom:122px}.svarh #mmcar .mc_vtvc .vtmu,.svarh #mmcar .mc_vtvc
.vtpl{bottom:137px}.svarht #mmcar .mc_vtvc .vtmu,.svarht #mmcar .mc_vtvc .vtpl{top:8px;left:8
px}.mc_vtvc_center_play{background-image:url(data:image/svg+xml,%3Csvg%20width%3D%2232
%22%20height%3D%2232%22%20viewBox%3D%220%200%2032%2032%22%20fill%3D%22none
```




```
}.emptyStyleForDebuggingPurpose{top:0}.emptyStyleForDebuggingPurpose{top:0}.vtbc
.mv_vtvc_play{display:inline-
block;position:absolute;bottom:8px;left:9px;height:8px;width:7px}.vtbc
.mv_vtvc_play_ext{background:url(/rp/Lp38sn_04jegSK0IHxZVxyp-yKQ.png) -172px
-31px;display:inline-block;height:8px;width:12px;position:absolute;bottom:8px;left:6px}.vtbc
.pivot{height:20px;width:8px;min-width:8px}.vtbc .mv_vtvc_play{background:url(
//////////9/gMdvAAACnRSTIMAETNEVWAlmbvuo4D1oAAAAB9JREFUCB1jmMoABKuaQcSqQhCxKgFG
gLhNlQkpQAwA8zkLyQAI6F0AAAAASUVORK5CYII=)}.mc_bc_w{height:18px;padding:8px;text-
align:right}.mc_bc{background-color:rgba(0,0,0,.75);padding:2px 8px;line-height:14px;color:#fff;di
splay:inline-block;vertical-align:middle;border-radius:2px;font-weight:bold}.mc_bc_w .pivot{text-
align:center;margin-right:1px;height:14px}.vsarr .mmgrid .mc_bc_w .mc_bc{background-color:rgba
(0,0,0,.75);opacity:1}.mmsi{height:16px;width:16px;position:relative;top:5px;padding-right:var(--s
mtc-gap-between-content-xx-small)}.mmsi-microsoftnews,.mmsi-msn{top:3px}.vrhdata{display:no
ne}.mmgrid>div{width:197px;display:inline-block;margin-right:8px;margin-bottom:8px;box-
shadow:0 0 1px rgba(0,0,0,.05);position:relative;vertical-align:top;overflow:hidden;white-
space:normal;border-radius:6px}.vsarr .mmgrid>div,.vsarr1stbig .mmgrid>div{margin-
right:8px;margin-bottom:8px}#serpvidansrr .mc_vtvc .mc_vtvc_meta{height:auto}#serpvidansrr
.mc_vtvc .mc_vtvc_title{display:-webkit-box;-webkit-line-clamp:2;-webkit-box-
orient:vertical}.mmgrid .mc_tc{border:0}.vsa .mmgrid>div:nth-child(3n){margin-right:0}.vsa
.b_moreLink{padding-top:4px}#serpvidansrr .mc_vtvc_meta_row{line-height:18px;font-
size:100%;height:17px}.vsarr .mmgrid>div:nth-child(2n){margin-right:0}#serpvidansrr .mc_vtvc
.vtmu,#serpvidansrr .mc_vtvc .vtpl{bottom:128px}.vsarr1stbig .mmgrid>div:nth-child(2){margin-
right:0}#serpvidansrr.uipolish .mc_vtvc_meta_pubdate,#serpvidansrr.uipolish
.mc_vtvc_meta_channel,#serpvidansrr.uipolish #vidans2 .b_videocard .video_metadata
.video_source{color:#767676}#serpvidansrr #vidans2 .b_videocard
.video_metadata_container,#serpvidansrr #vidans2 .b_videocard .video_metadata_container
.video_metadata>h3{width:100%}@media(max-width:1362.9px){#serpvidansrr
.mmgrid>div{width:168px;height:206px}#serpvidansrr .mmgrid>div .cico,#serpvidansrr
.mmgrid>div .cico .rms_img{width:168px;height:100px}#serpvidansrr .mc_vtvc
.mc_vtvc_meta{padding:12px}#serpvidansrr .mc_vtvc .mc_vtvc_title{height:32px;line-
height:16px;margin-bottom:16px}#serpvidansrr .mc_vtvc
.mc_vtvc_meta_block_area{height:34px}#serpvidansrr .mc_vtvc_meta_row{line-height:15px;font-
size:13px;height:15px}#serpvidansrr .mc_vtvc_meta_pubdate{padding-bottom:4px}#serpvidansrr
.mc_vtvc .vtmu,#serpvidansrr .mc_vtvc .vtpl{bottom:114px}#serpvidansrr #vidans2 .b_videocard
.videoPlayer,#serpvidansrr #vidans2 .b_videocard .videoPlayer .cico,#serpvidansrr #vidans2
.b_videocard .videoPlayer .cico .rms_img{width:343px!important;height:194px!important;margin-
right:0} @media(max-width:1274.9px){#serpvidansrr
.mmgrid>div{width:124px;height:164px}#serpvidansrr .mmgrid>div .cico,#serpvidansrr
.mmgrid>div .cico .rms_img{width:124px;height:76px}#serpvidansrr .mc_vtvc
.mc_vtvc_meta{padding:8px}#serpvidansrr .mc_vtvc .mc_vtvc_title{height:32px;line-
height:16px;margin-bottom:12px}#serpvidansrr .mc_vtvc
.mc_vtvc_meta_block_area{height:28px}#serpvidansrr .mc_vtvc_meta_row{line-height:13px;font-
size:11px;height:13px}#serpvidansrr .mc_vtvc_meta_pubdate{padding-bottom:2px}#serpvidansrr
.mc_vtvc .vtmu,#serpvidansrr .mc_vtvc .vtpl{bottom:96px}#serpvidansrr #vidans2 .b_videocard
.videoPlayer,#serpvidansrr #vidans2 .b_videocard .videoPlayer .cico,#serpvidansrr #vidans2
.b_videocard .videoPlayer .cico .rms_img{width:256px!important;height:144px!important;margin-
right:0}#serpvidansrr .maskthumb .mc_bc_w{padding:8px 4px 4px
8px}#serpvidansrr.withsplitline .mmgrid>div:nth-last-child(1),#serpvidansrr.withsplitline
.mmgrid>div:nth-last-child(2){margin-bottom:24px}#serpvidansrr.withsplitline .mmgrid{border-
bottom:1px solid #ecec; margin-bottom:16px}#serpvidansrr #vidans2 .b_videocard
.video_metadata{max-width:auto;padding:12px 16px}#serpvidansrr #vidans2
```



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.b_videocard{margin-bottom:12px;box-shadow:0 0 1px rgba(0,0,0,.05),0 2px 3px
rgba(0,0,0,.1);border-radius:6px}#serpvidansrr .b_rich{padding-top:0}#serpvidansrr #vidans2
.videoPlayer{border-radius:6px 6px 0 0;overflow:hidden}#serpvidansrr #vidans2 .b_videocard .vid
eo_metadata>h3{white-space:nowrap;overflow:hidden;text-overflow:ellipsis;-webkit-line-clamp:1;li
ne-height:15px;height:15px;font-size:13px;color:#000;margin-bottom:20px;font-
family:Arial,Helvetica,Sans-Serif;font-style:normal;display:block}#serpvidansrr.vsarr1stbig
#vidans2 .b_videocard .video_metadata .actionmenu{display:none}#serpvidansrr #vidans2
.b_videocard .video_summary,#serpvidansrr #vidans2 .b_videocard .video_source{line-
height:15px}#serpvidansrr #vidans2 .b_videocard .videoPlayer .vtbc{right:0}.vrhc line.nhvpv
.pffvi,.vrhc line.nhvpv[data-tps="S"] .pffvt,.vrhc line.nhvpv[data-tps="M"] .pffvt,.vrhc
line.nhvpv[data-tps="L"] .pffvt{display:inline-flex}.vrhc line.nhvpv .vrhctc.pffv
.vrhol{display:none}.vrhc line.nhvpv .vrhctc.pffv .player_ol{background:var(--mai-smtc-background-
ctrl-on-image-hover);transition:background-color .5s;display:flex;align-items:center;justify-content:c
enter;padding:var(--smtc-gap-between-content-x-small);gap:var(--smtc-gap-between-content-x-
small);box-sizing:border-box}.mc_vtvc_th img{transition:all .3s ease-out}.nhvpv+.mc_vtvc_th img{
transform:scale(1.1)}.smtplayerhtml5{height:100%;width:100%;overflow:hidden}.smtplayerhtml5
video{min-height:100%;min-width:100%}.smtplayerhtml5 .videoplaying{background-color:#000}.s
mtplayerhtml5.hide{display:none}.pffvt{display:none;color:var(--mai-smtc-foreground-ctrl-on-imag
e-rest);font:var(--bing-smtc-text-global-
subtitle2-strong)}.pffvi{mask:url(/rp/ui07wU6K7FR_inzG7DRbP1i8fGo.svg) center no-repeat;mask-si
ze:12px;background:var(--bing-smtc-background-card-on-image-
default);width:20px;height:20px;flex-shrink:0;align-self:flex-start}[data-tps="L"]
.pffvt{font:var(--bing-smtc-text-global-subtitle2-strong)}[data-tps="L"]
.pffvi{width:22px;height:22px;mask-size:16px}[data-tps="S"] .pffvt{font-size:0}[data-tps="S"]
.pffvi{width:24px;height:24px;mask-size:24px;align-self:center}.hvpv.h5s .pffvt{display:inline-
flex}.hvpv.h5s .vrhctc.pffv .vrhol{display:none}.hvpv.h5s .vrhctc.pffv
.player_ol{background:var(--mai-smtc-background-ctrl-on-image-hover);transition:background-color
.5s;display:flex;align-items:center;justify-content:center;padding:var(--smtc-gap-between-content-x-
small);gap:var(--smtc-gap-between-content-x-small);box-sizing:border-box}.pffvt{text-
decoration:underline}.vrhctc .vrhol{position:absolute;width:100%;height:35px;max-
height:35px;bottom:0;left:0;padding:0;background:none;display:block;z-index:9}.vrhctc
.vrhol.hide,.vrhctc .vrhol .hide{display:none}.vrhot{white-space:nowrap;text-overflow:ellipsis;overfl
ow:hidden;display:inline-block;position:absolute;max-width:240px;height:18px;line-
height:14px;margin-left:8px;top:10px;left:0;right:0;border-radius:2px;padding-right:8px}.vrhot
div{display:inline-block}.vrhot nt{color:#fff;font-size:11px;font-weight:bold;background-
color:rgba(0,0,0,.75);padding:2px 8px;margin-left:0;top:0;box-sizing:border-
box;position:relative}.vrhc .ricons{position:absolute;right:8px;top:10px;left:auto;bottom:auto;heigh
t:18px;display:inline-block;cursor:pointer}.vrhol.icons_1 .vrhot{margin-right:27px}.vrhol.icons_2
.vrhot{margin-right:49px}.vrhol.icons_3 .vrhot{margin-right:79px}.vrhol .vrhot nt,.vsb_tr_chd
.vrhol.icons_1 .vrhot{margin-
right:0}.vpb{position:absolute;display:block;bottom:0;left:0;height:4px}.vpb
div{position:absolute}.vpb nt{width:0;background:#fff}.vpb
nt.test{display:none}.vpb.back{background-color:#999}.vrhctc .vrhol.npb{height:36px;max-
height:36px}.vrhol .vadda{width:22px;height:18px;padding:0;margin-right:0;margin-left:2px;botto
m:0;position:relative;display:inline-block;z-index:1;background:rgba(0,0,0,.75);border-
radius:2px;overflow:hidden}.vrhol .vadda.hide{display:none}.vrhol .vadda .mc_vfaa{margin:3px
5px}.ricons .vol{float:left}.ricons .adultFlag{float:right}.vol{width:22px;height:18px;bottom:0;mar
gin-left:1px;margin-right:1px;position:relative;display:inline-block}.vol.hide,.vol
.hide{display:none}.vol .bg{background:rgba(0,0,0,.75);border-radius:2px}.vol.bg,.vol
nt{position:absolute;bottom:0}.vol .vol.bg.volnb{border-radius:0 0 2px 2px}.vol
.volsliderHandle.bg{border-radius:2px 2px 0 0}.vol nt .volsliderHandle{height:70px;display:none;wi
dth:22px;float:left;bottom:18px;position:absolute;display:block}.vol nt
```



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.volsliderHandle.hide{display:none}.volsliderHandle .vsb{height:54px;width:4px;background-color:#999;margin:9px auto 8px;position:relative;display:block;border-radius:2px}.volsliderHandle .vsh{height:6px;width:14px;padding:9px 7px 9px 7px;margin:0 -12px;display:block;position:absolute;top:30px}.volsliderHandle .vsh.hide{display:none}.volsliderHandle .vshi{height:4px;width:14px;background-color:#fff;border-radius:2px}.volMuteCon{width:16px;height:14px;margin:2px 4px;float:left}.volMuteHandle{width:22px;height:18px}.vo{background:url(/rp/ffZxBXEIP9WYOO0jhTaElyLhEVU.svg) no-repeat}.vm{background:url(/rp/fsX-ZVd03wB2TL0vmQJxSp4U9vs.svg) no-repeat}.vl{background:url(/rp/YXYMPC1Rry_XJGc7Yg8lR4B2eEs.svg) no-repeat}.vf{background:url(/rp/NosrIR4amKTs1zYxWy3laZN3HRk.svg) no-repeat}@media(forced-colors:active){.vol{forced-color-adjust:none}.vrhc line .vt_vp,.vrhc.popout .vt_vp,.vrhc.mousefollow .vt_vp{position:absolute;bottom:0;border:hidden;padding:0;top:0;left:0;z-index:3}.vrhrc .hide{display:none}.vrh_clc .vt_vp,.vrh_clc .vrhrc .vrhi,.vrh_clc .player_ol{cursor:pointer}.vrh_clc .cico{border-radius:0}.vrhrc{border:hidden;top:0;left:0;padding:0}.vrhc.mousefollow .vrhrc,.vrhc.popout .vrhrc{background-color:#999}.vrhrc.load .player_ol{background:url(/rp/_o2maogFDeUOsovPjL-ofEuxJ4.gif) center center no-repeat}.vrhc line .vrhrc .vrhi,.vrhc.popout .vrhrc .vrhi,.vrhc.mousefollow .vrhrc .vrhi{position:absolute!important;border:hidden;z-index:2;padding:0;left:0;top:0}.player_ol{position:absolute;width:100%;height:100%;bottom:0;border:hidden;z-index:7}.vrhc.popout,.vrhc line,.vrhc.mousefollow{border-radius:6px;overflow:hidden;display:table-row-group;background:none}.vrhc.popout,.vrhc.mousefollow{z-index:4;box-shadow:0 4px 4px rgba(0,0,0,.1),0 2px 80px rgba(0,0,0,.2)}.vrhc line{z-index:1;margin:0}.vrhc.popout,.vrhc line{position:absolute;top:0}.vrhc.popout{border:1px solid #fff}.vrhc.mousefollow{position:fixed}.vrhrcp{position:relative;top:0;left:0;display:table-row}.vrhrcp .vrhrc{position:relative;overflow:hidden}.vrhc.hide{display:none}@keyframes vh_fadein{from{opacity:0}to{opacity:1}}.vrhc.not(.hide){animation:vh_fadein 250ms}.vrhc line img{color:transparent}.vrhc line.fullsize{height:100%}.vrhc,.vrhc: hover,.vrhc: link,.vrhc: active,.vrhc: visited{color:#000;text-decoration:none}.vrhc.vrh_clc{cursor:pointer}a.hover-anchor{display:block;height:100%;width:100%;text-decoration:none}.vrhstat{height:0;overflow:hidden}Videos of Make a Solar Water PumpWatch video on MSN3:48How to Build a Mini Water Tank & Electric Solar PumpMSNMake ToysAug 29, 2024Watch video on mechanicalboost What is a Solar Water Pump? , How does a Solar Pump work?mechanicalboost May 2, 2021Watch video on solarfeeds Solar Water Pumping System Basics: the Cost & How It Works?solarfeeds Jun 28, 2023Watch full video.rcimgcol .cico { background: #f5f5f5; } .b_drk .rcimgcol .cico, .b_dark .rcimgcol .cico { background: unset; } .b_imgSet .b_hList li.square_m,.b_imgSet .b_hList li.tall_m{width:75px}.b_imgSet .b_hList li.tall_mlb{width:113px}.b_imgSet .b_hList li.tall_mln{width:96px}.b_imgSet .b_hList li.wide_m{width:128px}.b_imgSet.b_Card .b_hList li{padding-left:1px;padding-right:9px}.b_imgSet.b_Card .b_hList li.tall_wfn{width:80px;padding-right:6px}.b_imgSet.b_Card .b_hList li:last-child{padding-right:1px}.b_imgSet.b_Card .b_imgSetData{padding:0 8px 8px;height:40px}.b_imgSet.b_Card .b_imgSetItem{box-shadow:0 0 1px rgba(0,0,0,.05),0 2px 3px 0 rgba(0,0,0,.1);border-radius:6px;overflow:hidden}.b_imgSet .b_imgSetData p a{color:#444;outline-offset:0}.b_subModule .b_clearfix.b_mhdr .b_floatR .b_moreLink,.b_subModule .b_clearfix.b_mhdr .b_floatR .b_moreLink:visited,.b_subModule>.b_moreLink,.b_subModule>.b_moreLink:visited{color:#767676}.b_imgSet .cico.b_placeholder{display:flex;justify-content:center;background-color:#f5f5f5;background-clip:content-box}.b_imgSet .cico.b_placeholder a{display:flex}.b_imgSet .cico.b_placeholder a img{width:48px;height:48px;margin:auto}@media(max-width:1362.9px){#b_context .b_entityTP .b_imgSet li:nth-child(5){display:none}.b_imgSet .b_hList li.wide_m:nth-child(3){display:none}}@media(max-width:1274.9px){#b_context .b_entityTP .b_imgSet li:nth-child(4){display:none}.b_imgSet .b_hList li.wide_m:nth-child(2){display:none}}.rcimgcol .b_imgSet{content-visibility:auto;contain-intrinsic-size:1px 124px}.rcimgcol{height:108px;padding-top:var(--smtc-gap-between-content-x-small);padding-bottom:var(--smtc-gap-between-content-x-
```



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small)).b_algo:has(.b_agh) .rcimgcol{padding-top:var(--smtc-gap-between-content-xx-small)}.rcimgcol .b_imgSet{overflow:hidden}.rcimgcol .b_imgSet ul{overflow-x:auto;overflow-y:hidden;white-space:nowrap;padding-left:var(--mai-smtc-padding-card-default)}.rcimgcol .b_imgSet ul::-webkit-scrollbar{-webkit-appearance:none}.rcimgcol .b_imgSet .b_hList>li{padding-right:var(--smtc-padding-ctrl-text-side)}.rcimgcol .b_imgSet .cico{border-radius:unset}.rcimgcol .b_imgSet .b_hList>li:first-child .cico,.rcimgcol .b_imgSet .b_hList>li:first-child .cico a{border-radius:unset;border-top-left-radius:var(--smtc-corner-card-rest);border-bottom-left-radius:var(--smtc-corner-card-rest);overflow:hidden}.rcimgcol .b_imgSet .b_hList>li:last-child .cico,.rcimgcol .b_imgSet .b_hList>li:last-child .cico a{border-radius:unset;border-top-right-radius:var(--smtc-corner-card-rest);border-bottom-right-radius:var(--smtc-corner-card-rest);overflow:hidden}.rcimgcol .rcimgcol .b_sideBleed{margin-left:unset;margin-right:unset}.rcimgcol .b_imgclgovr{cursor:pointer}.rcimgcol .b_imgclgovr .cico img: hover{transform:scale(1.05);transition:transform .5s ease}#b_content #b_results>.b_algo .b_caption:has(.rcimgcol){padding-right:var(--mai-smtc-padding-card-default);margin-right:calc(-1*var(--mai-smtc-padding-card-default));margin-left:calc(-1*var(--mai-smtc-padding-card-default));padding-left:var(--mai-smtc-padding-card-default)}.rcimgcol .b_imgSet .b_hList .cico a{display:flex;outline-offset:-2px} sightsOverlay,#OverlayIFrame.b_mcOverlay sightsOverlay{position:fixed;top:5%;left:5%;bottom:5%;right:5%;width:90%;height:90%;border:0;border-radius:15px;margin:0;padding:0;overflow:hidden;z-index:9;display:none}#OverlayMask,#OverlayMask.b_mcOverlay{z-index:8;background-color:#000;opacity:.6;position:fixed;top:0;left:0;width:100%;height:100%}.b_algoTextCarousel{margin-left:calc(-1*var(--mai-smtc-padding-card-default));margin-right:calc(-1*var(--mai-smtc-padding-card-default));padding-bottom:var(--smtc-gap-between-content-x-small)}.b_algoTextCarousel .b_insideSlide{padding:var(--mai-smtc-padding-card-default);height:200px;width:200px;display:flex;flex-direction:column;border-radius:var(--smtc-corner-card-rest);border:1px solid var(--smtc-stroke-ctrl-on-neutral-rest);box-sizing:border-box;background:var(--smtc-background-card-on-primary-default-rest)}.b_algoTextCarousel .b_insideSlide: hover{background:var(--smtc-background-card-on-primary-default-hover)}.b_algoTextCarousel .b_insideSlide: active{background:var(--smtc-background-card-on-primary-default-pressed)}.b_algoTextCarousel .b_slidebar .slide{border-radius:var(--smtc-corner-card-rest)}.b_algoTextCarousel .b_slidebar .slide a: hover{text-decoration:none}.b_algoTextCarousel .b_slidebar .slide .b_text{color:var(--smtc-foreground-content-neutral-secondary);font:var(--bing-smtc-text-global-body3);display:-webkit-box;-webkit-box-orient:vertical;-webkit-line-clamp:7;overflow:hidden;text-overflow:ellipsis;word-wrap:break-word}.b_algoTextCarousel .b_textcarouselfooter{margin-top:auto}.b_algoTextCarousel .b_textcarouselfooter .b_upvote .rms_img{height:12px;width:12px;padding-right:var(--smtc-gap-between-content-xx-small);vertical-align:middle;margin-top:-2px}.b_algoTextCarousel .b_textcarouselfooter .b_upvote{font:var(--bing-smtc-text-global-caption2);color:var(--bing-smtc-foreground-content-neutral-secondary-alt)}.b_algoTextCarousel .b_slidebar .slide:has(.b_textcarouselfooter) .b_text{-webkit-line-clamp:6}.b_algoTextCarousel.b_algoTtxtCalSml .b_insideSlide{padding:var(--smtc-gap-between-content-small) var(--mai-smtc-padding-card-default);height:88px}.b_algoTextCarousel.b_algoTtxtCalSml .b_slidebar .slide .b_text{-webkit-line-clamp:3}.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_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
```



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.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(--smtc-corner-card-rest);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-primary-alt-rest)}
.b_acf_card_link{border-radius:var(--smtc-corner-card-rest);outline-offset:-1px;position:absolute;width:100%;height:100%}
.b_acf_card_link:hover{text-decoration:unset}
.acf_col1_4{width:140px}.acf_col1_6{width:160px}.acf_col1{width:88px}
.acf_col2{width:200px}.acf_col3{width:312px}.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_row9{height:984px}.acf_row10{height:1096px}.acf_row11{height:1208px}.acf_row12{height:1320px}
.b_slideexp{margin-bottom:20px;position:relative}
.b_ans>.b_slideexp>.slide:last-child,.b_ans>.b_slideexp:last-child,.b_vPanel .b_slideexp:last-child{margin-bottom:0;padding-bottom:0}
.b_slidebar .slide{display:inline-block;vertical-align:top}
.b_slidebar .slide,.b_slideexp .b_viewport{overflow:hidden}
.b_slideexp .b_viewport{margin:auto}
.b_slidebar{white-space:nowrap}
.b_slidebar .slide{white-space:normal;position:relative}
.b_cards .cico,.b_slidebar .slide .cico{border-radius:0}
.b_slidebar,.b_slidebar .slide{width:100%}
.b_slidebar.anim{transition:margin-left .35s cubic-bezier(.15,.85,.35,1)}
.slide>.spinner{position:absolute;left:50%}
.slide>.spinner>.ner{position:relative;left:-50%;width:40px;height:40px;background:url(/rp/OJWYLxkTdSOmE7-V53KpAdOj-xY.gif) no-repeat;margin:40px auto 30px;z-
```



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index:1000}.slide_mask.hideSlideMask{visibility:hidden}.b_slidebar.b_autoslidingfade
.slide.slide_fading{opacity:1}.slide_mask,.b_slidebar.b_autoslidingfade .slide{transition:opacity .3s
linear}.slide_mask.slide_fading,.b_slidebar.b_autoslidingfade .slide{opacity:0}.slide_mask{position:
absolute;width:100%;height:100%;opacity:.7;top:0}.carousel_seemore{text-
align:center}.carousel_seemore.dark a{color:#fff}.b_slidebar.enable_selecting
.slide.selected::after,.b_slidebar.enable_selecting .slide:hover::after{box-shadow:inset 0 0 0 2px
#fff}.b_slidebar .slide.selected::after,.b_slidebar .slide:focus::after{box-shadow:inset 0 0 0 2px
#0099bc;outline:0}.b_slidebar.enable_selecting .slide.selected::after,.b_slidebar.enable_selecting
.slide:hover::after,.b_slidebar .slide.selected::after,.b_slidebar
.slide:focus::after{content:"";height:100%;width:100%;position:absolute;left:0;top:0}.b_slideexp .b_
antiSideBleed{display:inline-block}.carousel_seemore>.b_moreLink.rndChev{vertical-
align:middle;height:92px;text-decoration-color:#444;display:inline-block}.carousel_seemore
.seeAll_txt{display:block;color:#444;line-height:17px}.carousel_seemore
.seeAll_chev{display:block;height:48px;padding-bottom:12px;margin-top:15px}html[dir="rtl"]
.carousel_seemore .seeAll_chev{transform:scaleX(-1)}.b_slideexp .b_viewport.scrollbar{overflow-
x:auto;-ms-overflow-style:none;scrollbar-width:none}.b_slideexp .b_viewport.scrollbar::-webkit-
scrollbar{display:none}.b_slideexp .b_viewport{-webkit-overflow-
scrolling:touch}.b_overlay{position:relative}.b_overlay .btn{height:100%;position:absolute;width:2
0px;cursor:pointer;z-index:1;-moz-user-select:none;-khtml-user-select: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%;backg
round-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/S9IIHAMBy7JxaR5m1KRvMwDswyw.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;op
acity:unset;transition:unset;border-radius:var(--smtc-corner-ctrl-lg-rest);background:var(--bing-smtc
-background-container);box-shadow:var(--acf-elevation-3);fill:var(--smtc-foreground-content-neutral-
secondary)}.acfdefaultchev .cr:hover{background:var(--smtc-background-card-on-primary-default-
hover)}.acfdefaultchev .cr:active{background:var(--smtc-background-card-on-primary-default-
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}.vcac{position:absolute;width:100%;t
```



op:50%}.vcac>div{position:relative;width:100%}.slide.b_crslitm.b_sldfitcont{width:fit-content}#slideexp0_FC367 .slide:last-child { margin-inline-end: 0; } #slideexp0_FC367 .slide>*:last-child { margin-bottom: unset !important; } .b_acf_crsl #slideexp0_FC367c .b_slidebar .slide { box-shadow: unset; -webkit-box-shadow: unset; } .b_acf_crsl.hovexp #slideexp0_FC367c.b_slideexp .b_overlay .b_slidesContainer { overflow: visible !important; } .b_acf_crsl.hovexp #slideexp0_FC367c.b_slideexp .b_overlay .b_viewport { padding-top: 12px !important; margin-top: -12px !important; padding-bottom: 12px !important; margin-bottom: -12px !important; }InstructablesSolar Water Pump : 15 Steps (with Pictures) - InstructablesSolar Water Pump: This Instructable will help you to setup a fully functional Solar Water Pumping System. The Solar Water Pump System can be used for residential water requirements and ...

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