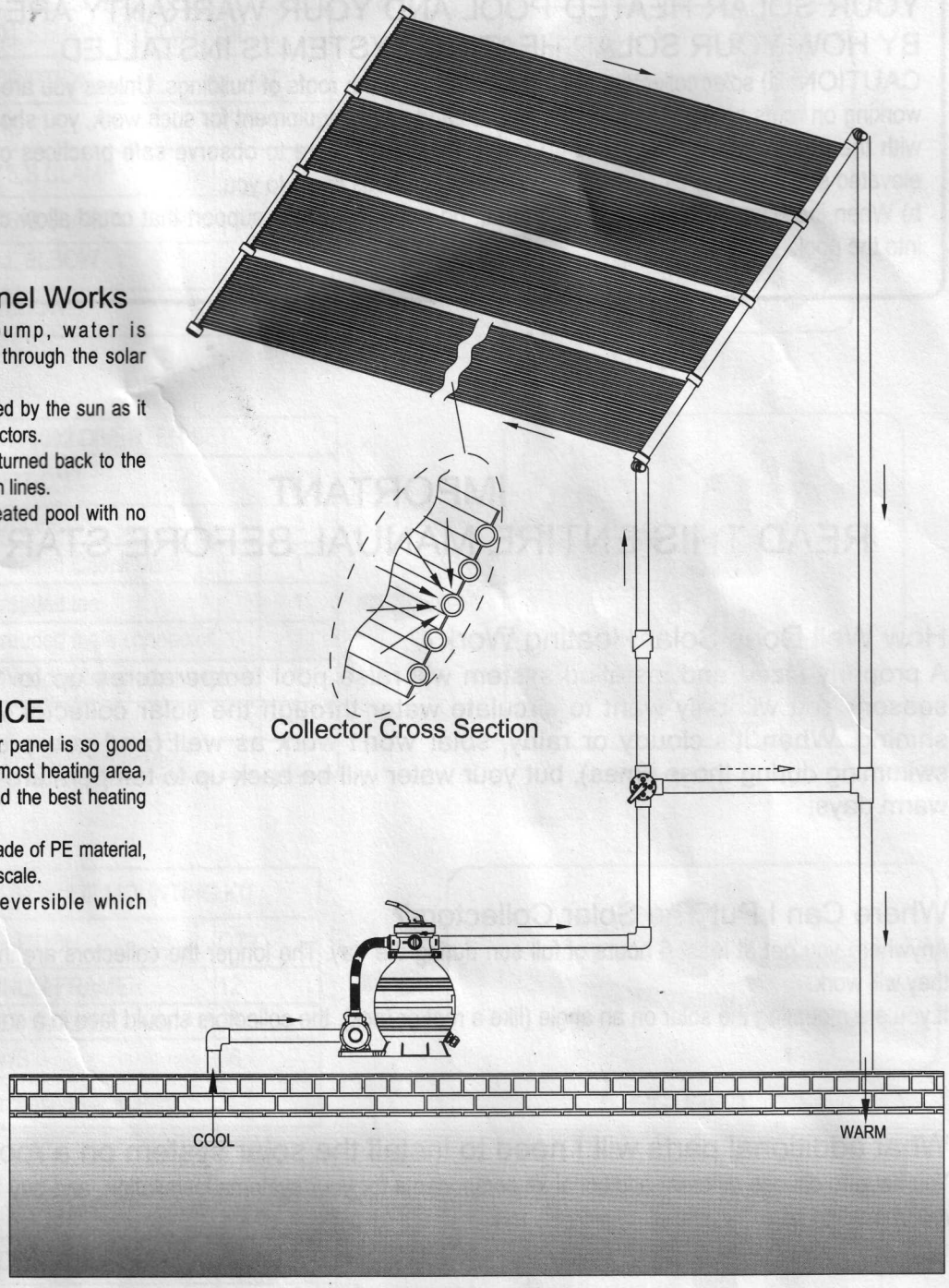
INSTALLATION AND OPERATION MANUAL

How Solar Panel Works

Using your pool pump, water is automatically pumped through the solar collectors.
The water is then heated by the sun as it moves through the collectors.
The heated water is returned back to the pool, through your return lines.
You enjoy your own heated pool with no fuel costs.



Collector Cross Section

PERFORMANCE

The design of the solar panel is so good that it could reach the most heating area, longest heating time and the best heating affection.
As the solar panel is made of PE material, it won't rust, corrode or scale.
Plus, the panel is reversible which increases its using life.

CAUTION

WHEN YOU CHOOSE YOUR SOLAR PANEL, YOU HAVE TO KNOW YOUR POOL AND FILTRATION SYSTEMS WELL. WHEN YOU USE PUMP GREATER THAN 0.5HP, YOU HAVE TO USE DIVERTER KIT (REFER TO PAGE 3 FIGURE 2) TO SHUNT FLOW, OR IT WILL AFFECT THE PRODUCT LIFE.

PLEASE READ THIS MANUAL CAREFULLY. YOUR ENJOYMENT OF YOUR SOLAR HEATED POOL AND YOUR WARRANTY ARE AFFECTED BY HOW YOUR SOLAR HEATING SYSTEM IS INSTALLED

CAUTION: a) solar collectors are often installed on the roofs of buildings. Unless you are very familiar with working on roofs and have the proper ladders and safety equipment for such work, you should hire someone with the necessary experience to do the installation. Failure to observe safe practices on a roof or other elevated structure may result in falling, leading to serious injury to you.

b) When installing collectors on the ground, do not build a rack support that could allow children to access into the pool.

IMPORTANT
READ THIS ENTIRE MANUAL BEFORE STARTING

How Well Does Solar Heating Work?

A properly sized and installed system will raise pool temperatures up to 100F during the season. You will only want to circulate water through the solar collector when the sun is shining. When it's cloudy or rainy, solar won't work as well (and you probably won't be swimming during those times), but your water will be back up to temperature after one or two warm days.

Where Can I Put The Solar Collectors?

Anywhere you get at least 6 hours of full sun during the day. The longer the collectors are in full sun, the better they will work.

If you are mounting the solar on an angle (like a roof or rack), the collectors should face in a southerly direction.

What additional parts will I need to install the solar system on a roof?

You have to choose different additional kit components for your systems installation, and buy the Diverter Kit and roof mounting kit

WARNING!

IF MOUNTING ON A RACK PLACED ON THE GROUND, POSITION THE RACK SO THAT IT DOES NOT PROVIDE ACCESS TO THE POOL FOR CHILDREN.

KIT COMPONENT

647060171001 STANDARD COMPONENT		
ITEM NO	DESCRIPTION	QTY
1	O RING	3
2	1-1/2"S.S CLAMP	2
3	1-3/4"S.S CLAMP	2
4	SMALL ELBOW	1
5	BIG ELBOW	1

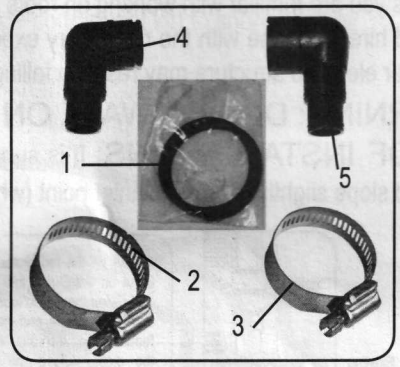


FIGURE 1

647060171002 DIVERTER SET		
ITEM NO	DESCRIPTION	QTY
1	3 WAY VALVE	1
2	1 ½" Threaded Check Valve	1
3	1 ½" Threaded tee	1
4	1 ½" Threaded male connector	1
5	1 1/2" Threaded female connector	1
6	O RING	3
purchased separately		

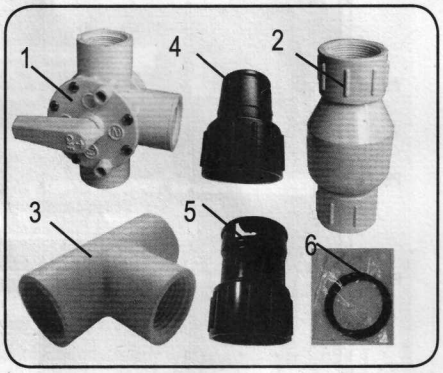


FIGURE 2

647060171003 ROOF MOUNTING KIT		
ITEM NO	DESCRIPTION	QTY
1	ALUMINUM FRAMER	12
2	RUBBER GASKET	36
3	SCREWS	36
purchased separately		

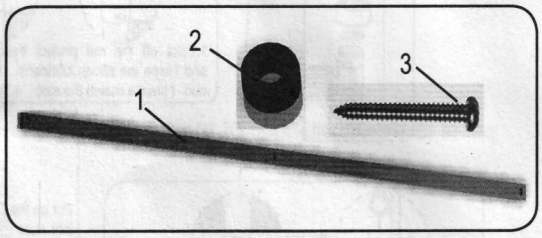


FIGURE 3

647060171004 STANDARD COMPONENT		
ITEM NO	DESCRIPTION	QTY
1	O RING	3
2	1-1/2"S.S CLAMP	2
3	1-3/4"S.S CLAMP	2
4	SMALL ELBOW	1
5	BIG ELBOW	1
6	REGULATION FILM	2

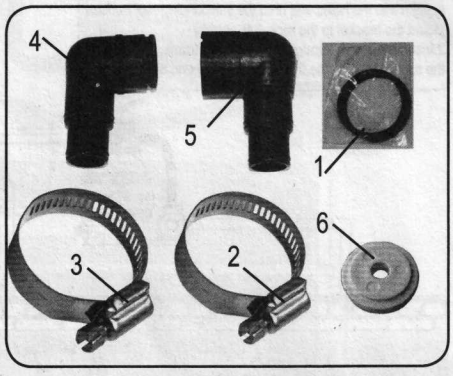


FIGURE 4

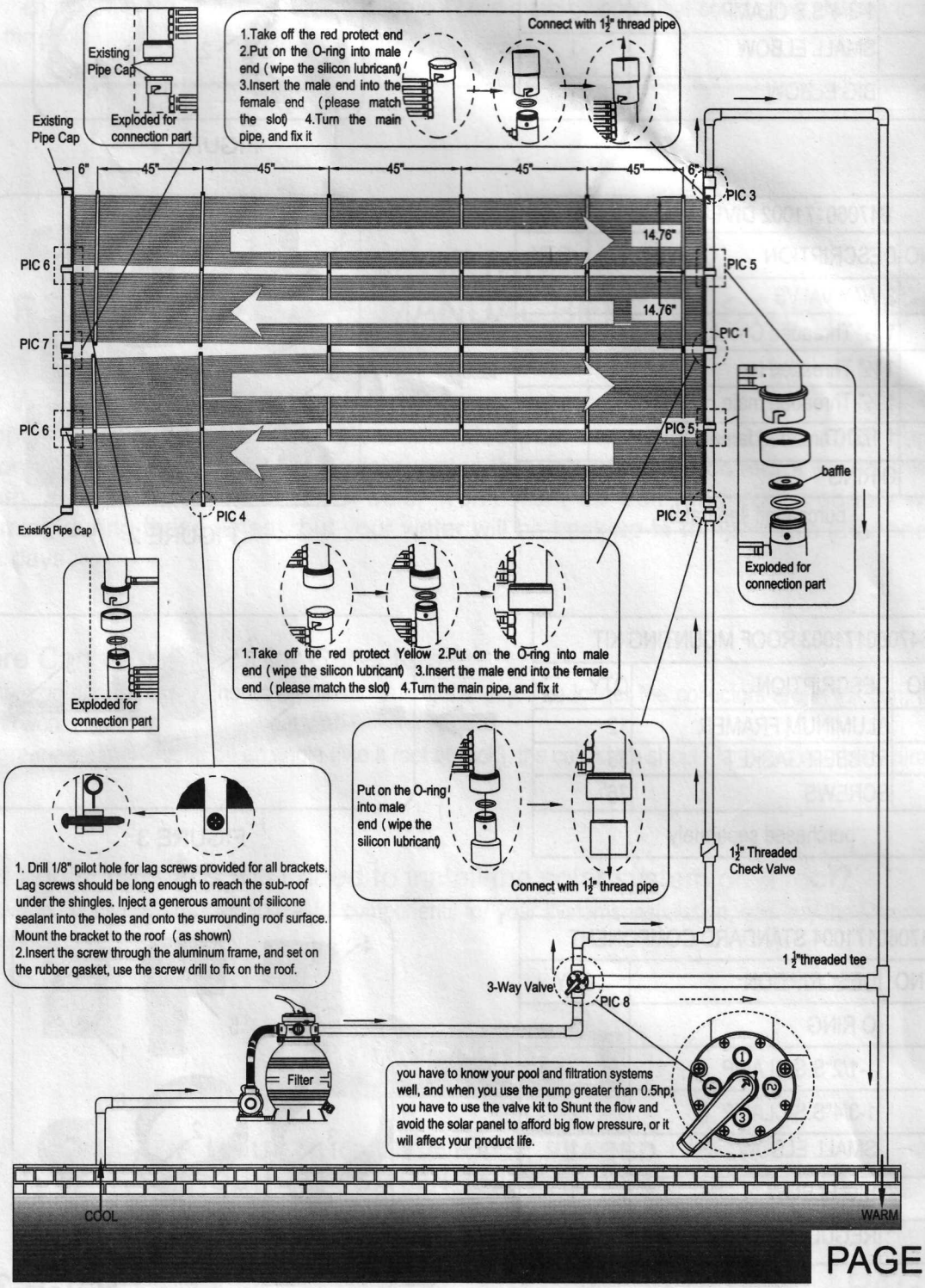
SYSTEM LAYOUT

CAUTION:

Unless you are familiar with working on roofs and have the proper ladders and safety equipment for such work, you should hire someone with the necessary experience to do the installation. Failure to observe safe practices on a roof or other elevated structure may result in falling, leading to serious injury to you.

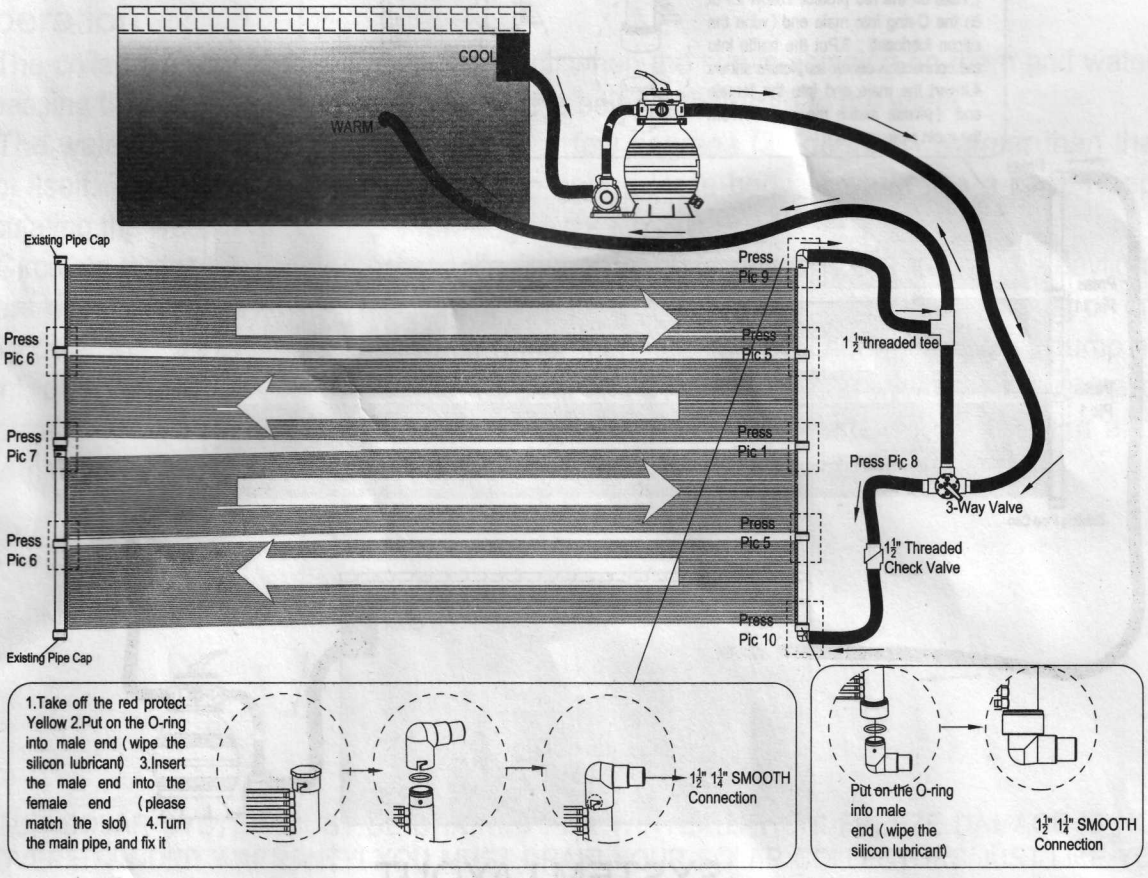
WARNING: DO NOT WALK ON THE SOLAR COLLECTORS

ROOF INSTALLATIONS: It is suggested that you use rigid PVC pipe for roof installations.The collectors should slope slightly toward the inlet point (where the water enters the collectors) to allow for drainage.



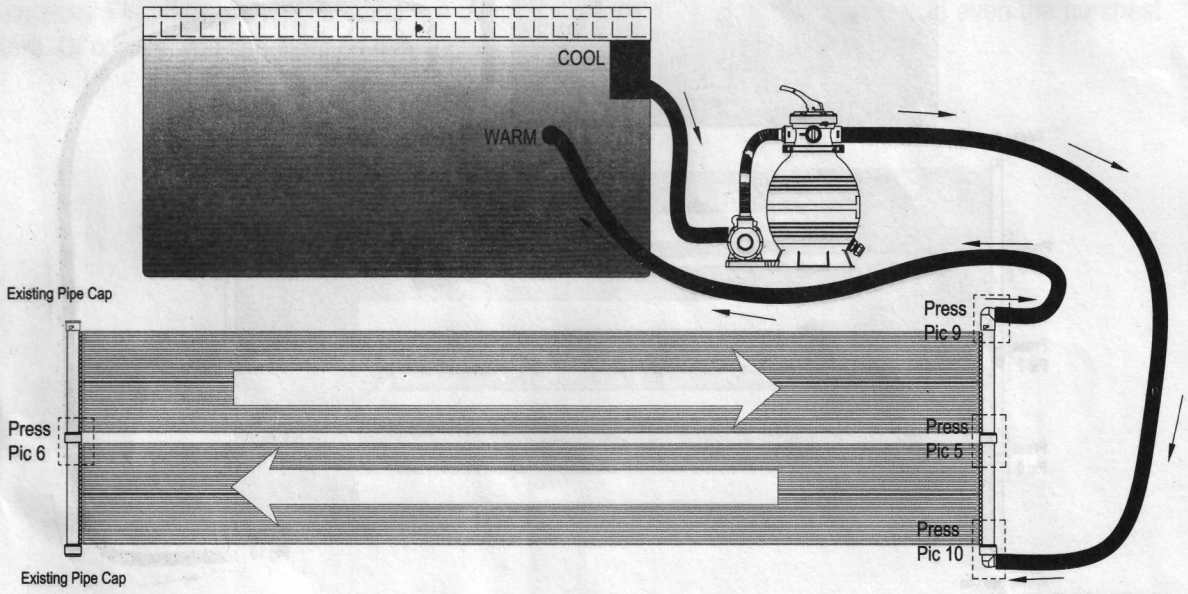
SYSTEM LAYOUT

If your pump is greater than 0.5HP, please use the diverter kit (see page component kit) to shunt the flow



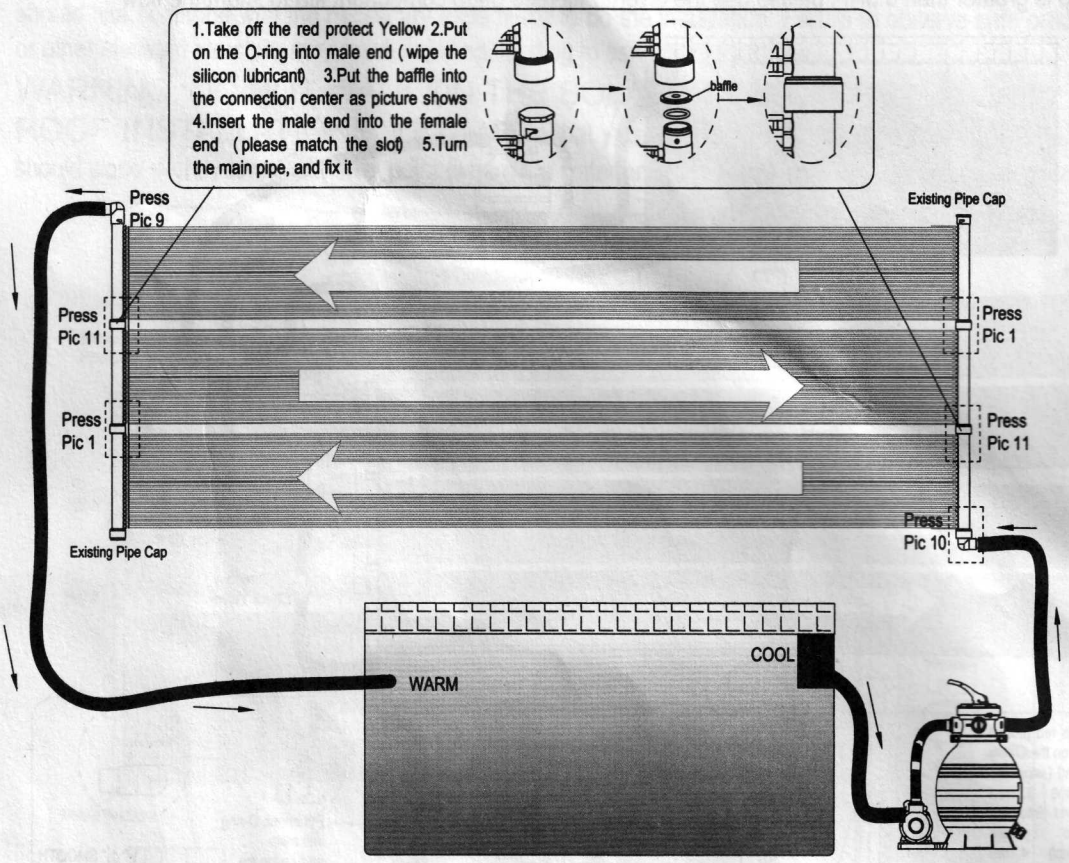
SYSTEM LAYOUT

If your systems use the pump less than 0.5HP, please refer to the following picture to connect the panel in the systems



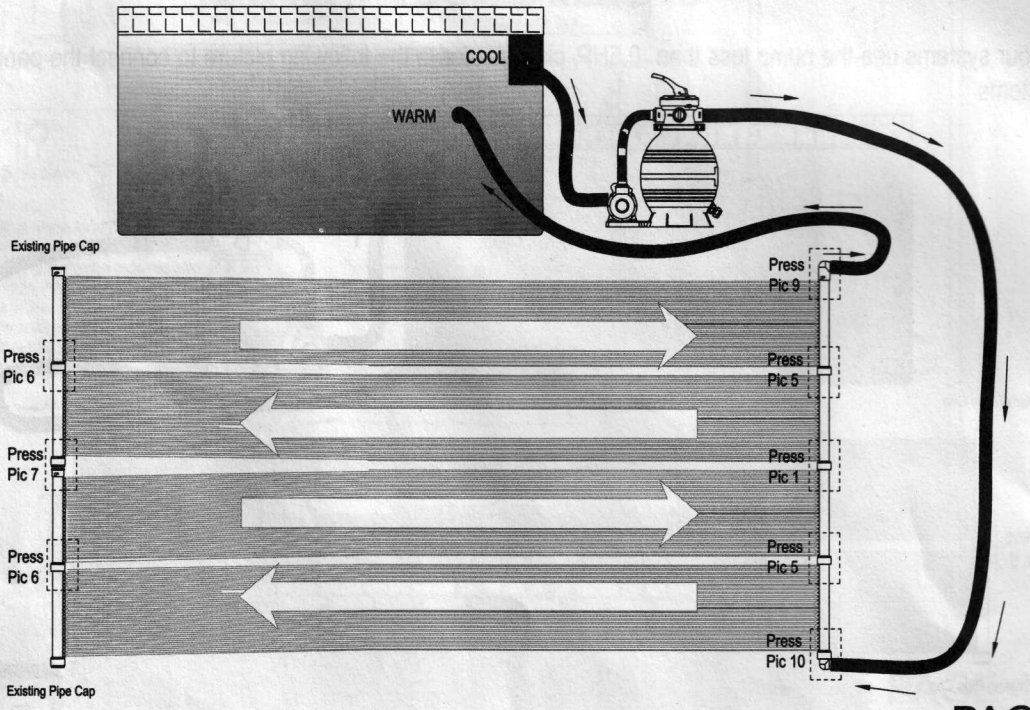
SYSTEM LAYOUT

Installation for 3pcs panel with pump 0.5HP or less than 0.5HP. Be applied to three-piece per set solar panel



SYSTEM LAYOUT

When you use the pump greater than 0.5HP, please refer the following connection way.



OPERATION & MAINTENANCE

Operation

1. The collectors should feel cool to the touch when the sun is shinning on them and water is passing through. This means that the heat is being transferred to the water.
2. The water returning to your pool will be a few degrees (3-5degrees) warmer than the pool itself. This is the most efficient way to heat a large body of water like a pool. Keep circulating the water, which adds a few degrees each pass.
3. Circulate water through the solar collectors at least 6 hours per day during the daylight hours on sunny days. If you circulate water through it at night, when it's overcast or on chilly days, you will cool your pool water rather than heat it. If you need to run your pump at night, divert the water directly back to the pool and bypass the solar system. An automatic controller will sense the water temperature and available radiation from the sun and automatically turn the 3-Way Valve to direct the flow of water accordingly.

WINTERIZATION

YOUR SOLAR SYSTEM MUST BE DRAINED FOR WINTERIZATION! FREEZE DAMAGE IS NOT COVERED UNDER WARRANTY! YOU MUST DRAIN YOUR SOLAR COLLECTORS JUST LIKE YOU DRAIN THE REST OF YOUR POOL EQUIPMENT!

Remove the vacuum relief valve at the top of the solar system. Remove the rubber end cap at the bottom and be sure ALL the water is drained out of the system. Replace end caps and blow pressurized air in the reverse direction of normal water flow. This is the most effective way to drain your system. You can leave the collectors in place (as long as they are completely drained) and they will withstand even the harshest winters. Of course, you can store your collectors inside in a warm dry place, if you like.

COLLECTOR REPAIR

IF A COLLECTOR DEVELOPS A LEAK

Your solar collectors are warranted against defects in materials and workmanship. If a leak develops for any other reason, you may use the repair method shown. The collectors are not warranted against freeze damage.

SOLAR COLLECTOR REPAIR

This method allows for an easy and permanent, on-site repair of a collector by isolating the leading riser tube. Referring to the figure at the right, locate the tube to be isolated. (End tube has been shown for clarity). Using a sharp utility knife, very carefully cut away approximately 1" of the tube at both headers. Drive a #10 sheet metal screw, preferably stainless, into the hole in the header. The screw must be between 1/2" and 3/4" long.

DO NOT OVERTIGHTEN! If the screw strips out, or if the repair leaks, use a #12 screw. This repair method will not void the collector warranty.
With proper care and winterization, you will enjoy your solar collectors for many years.