

AMR *HYDROMATT*

SOLAR POOL HEATING

DO - IT - YOURSELF

ALL THE INFORMATION IN THIS MANUAL HAS BEEN COMPILED TO MAKE INSTALLATION FOR THE HOME HANDYPERSON AS EASY AS POSSIBLE

TOOLS REQUIRED

HACKSAW , ELECTRIC DRILL , SCISSORS , HAMMER , SCREWDRIVER , GLUE APPLICATOR GUN

An unshaded roof area as close as possible to your pool filter. Flat, north or west roof with an area equal to or 80% of your pool surfact area. AMR *HYDROMATT* collector will fit any type roof.

COMPONENTS FOR SOLAR POOL HEATER

- ★ AMR *HYDROMATT*. COLLECTOR
- ★ AMR *HYDROMATT* 10 IN 1 MANIFOLDS
- ★ AMR ROOF STRAP FOR METAL ROOF
- ★ PVC 40mm PRESSURE PIPE FOR PLUMBING
- ★ PVC FITTINGS
- ★ PVC SOLVENT CEMENT
- ★ VACUUM BREAK VALVE
- ★ HAND VALVE FOR MANUAL SYSTEM
- ★ SOLAR COMPUTER MANUAL OR DIGITAL (OPTIONAL)
- ★ SEPARATE BOOSTER PUMP (OPTIONAL)
- ★ 14mm BLUNTED DRILL BIT (AVAIL. FROM AMR)
- ★ ROOF GLUE 1 TUBE PER 4 SQ. MT.
- ★ HAIR & LINT POT (OPTIONAL)



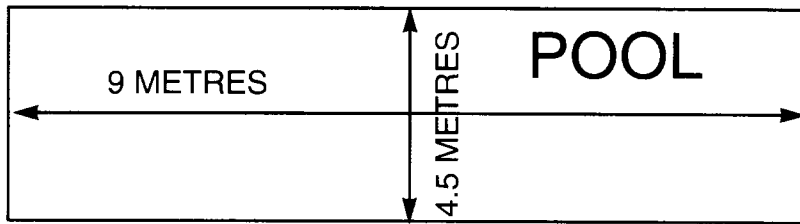
MANUFACTURED BY

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DESIGN AND SIZING

STEP 1 MEASURE AREA OF SWIMMING POOL



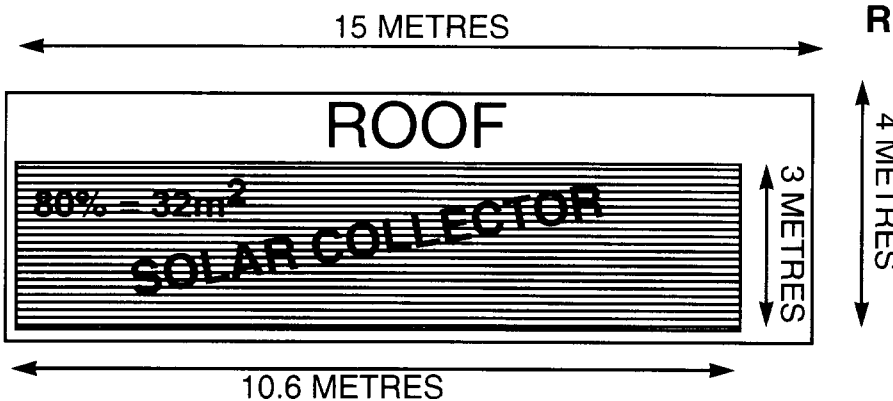
EG.
POOL SIZE 9 X 4.5 = 40 m²
80% = 32m²
100% = 40m²

Size of solar collector minimum 80% of pool surface area.
 Larger solar collector gives faster heat up time.
 For a pool 9 x 4.5 mt = 40 sq. mt. approx
 80% = 32 sq. mt. 100% = 40 sq. mt.

MY POOL IS



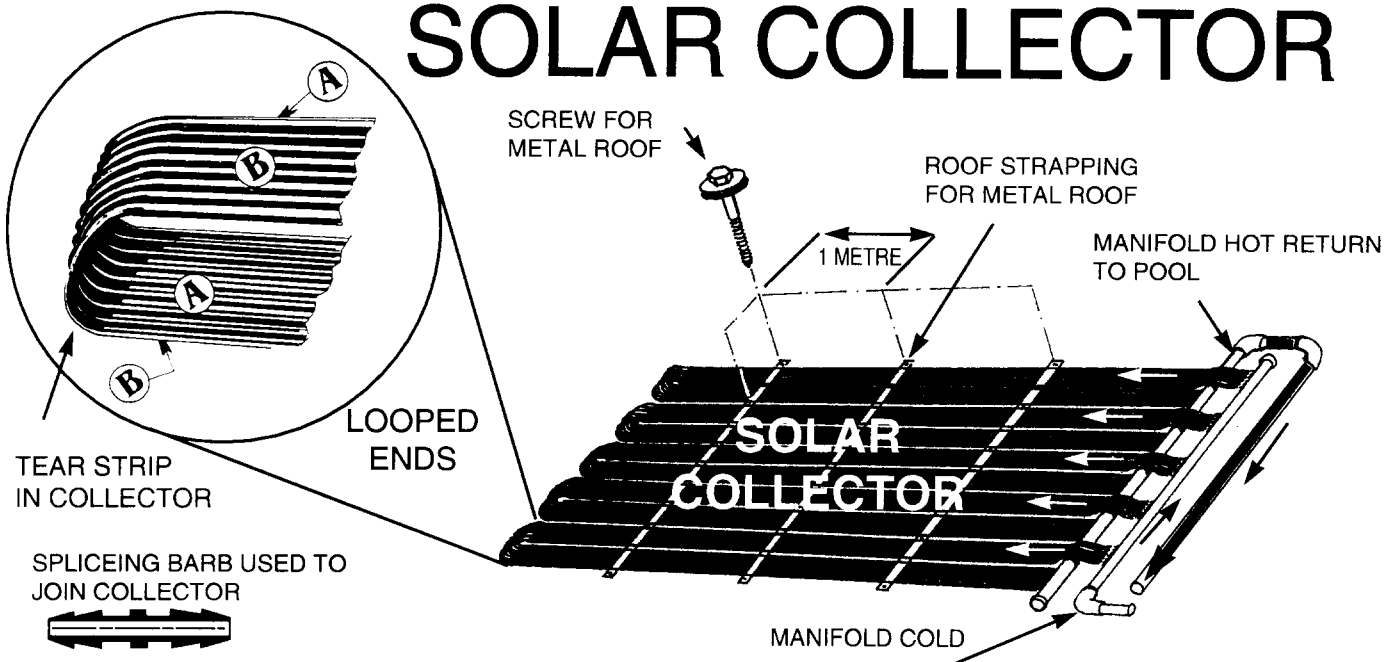
STEP 2 MEASURE AREA OF ROOF



ROOF SIZE 15 X 4 = 60m²

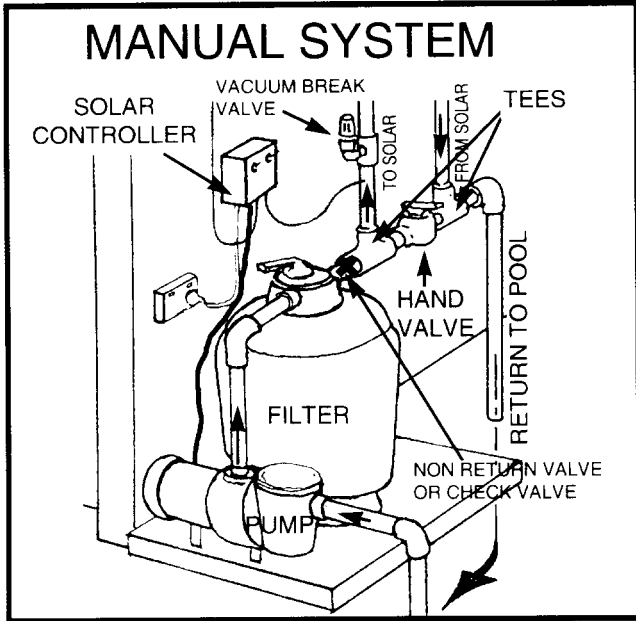
COLLECTOR SIZE
10.6 X 3 = 32

SOLAR COLLECTOR

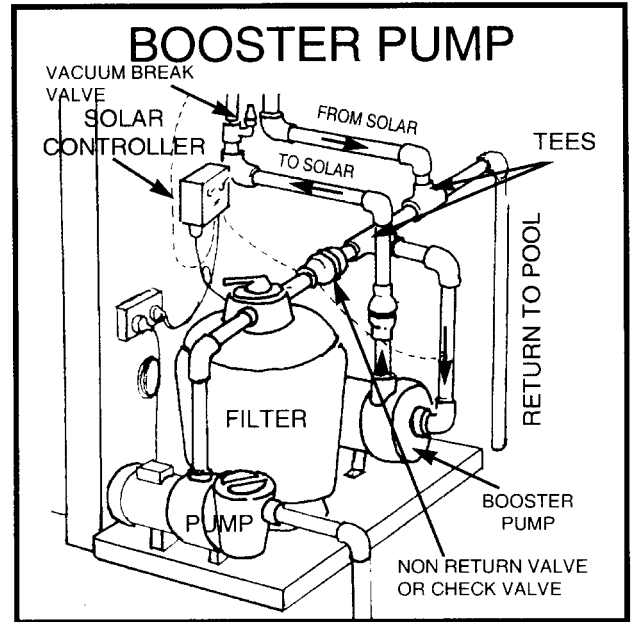


The above diagram shows how collector is made up. Water flows down one (1) strip, turns over at end and runs back on the other side. Loops can be stripped back along tear strip between tubes in collector. Strip back 500mm - this will allow the loop to sit flat on the roof.

PLUMBING DESIGN



MANUAL system is operated by closing hand valve which diverts water to solar collector - this system must be cut in before any other pool equipment eg: gas heater, chlorinate. This system should be used on single story as it puts extra load on pump and filter (solar controller or time clock can be used to switch on and off.

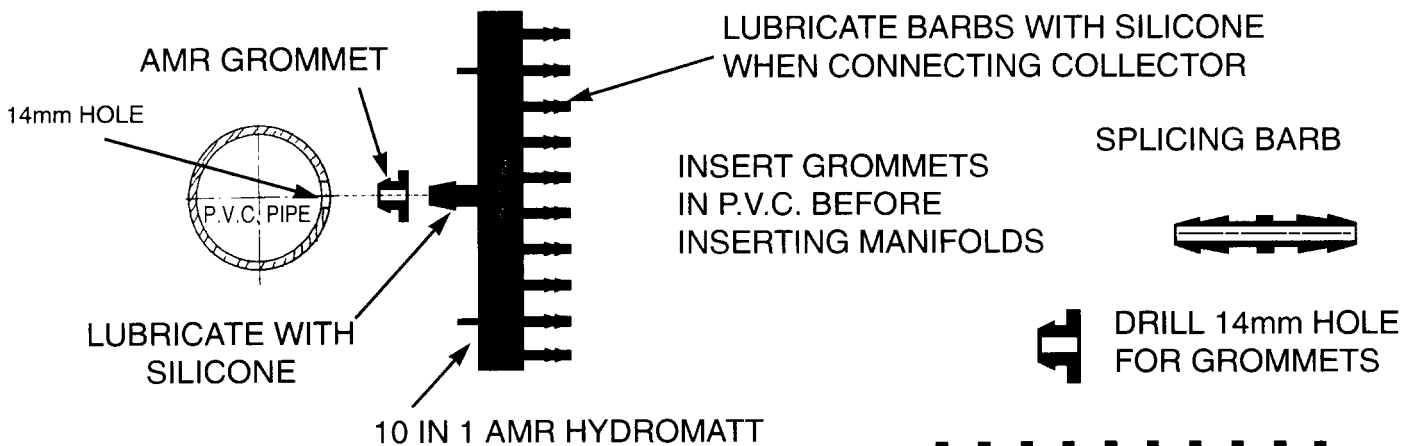


BOOSTER PUMP. This system removes load on pump and filter and can be made fully automatic by adding a solar controller - suitable for two story installation.

USE THESE DIAGRAMS TO DO PLUMBING

TIP - Working with PVC pipe is very easy. Make sure pipe is cut square. Apply solvent cement to both pipe and fittings, holding in place for one minute.

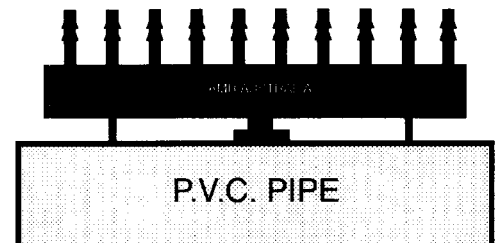
MAKING UP MANIFOLDS



Grommets are pushed into manifolds dry followed by barb lubricated with silicone or dishwashing detergent.

CAUTION

DO NOT USE OIL OR BLOCK TUBES WITH SILICONE



FIXING TO ROOF METAL

AMR roof strap is a rubber strap which goes over top of collector and is screwed to the roof every 2 strips of collector (do not stretch strap) placed not more than one (1) meter apart.

SOLAR CONTROLLERS

A solar controller has two sensors. One measures pool water temp. (short lead) This is installed by drilling hole in pipe before solar take off and inserting a grommet - push sensor into grommet. The sensor with the long lead goes to the roof. This is pushed into a scrap piece of the collector and glued to roof with glue. Wires are held in place with wire ties. The controller is plugged into a power point and pump plugs into controller.

INSTALLATION TIPS

1. Lay collector first - work plumbing back to filter.
2. Make sure roof is not shaded and is clean.
3. Collector runs across top of ridges of metal roof.
4. Collector runs across tiles.
5. Use saddles where needed to secure pipe to roof and walls.
6. Vacuum break valve must be installed to allow water to flow back to pool when switched off.
7. All off-cuts of collector can be spliced together using splicing barbs.
8. Install solar controller so pump lead reaches.
9. Make sure solar controller roof sensor is not shaded.
10. Wear sand shoes when working on roof.
11. Pre drill header pipe for tile or metal roof.
12. At start up, check all fittings and collector for leaks.
13. When turning solar on you will see air returning to pool - this is normal.

SOME ADDITIONAL POINTS FOR INSTALLATION

1. If running solar system independent of filter system, a lint pot is required to be fitted to solar pump.
2. When securing solar with rubber strapping, use self-tapping screws, drilled through high part of ridges and have strapping approx. 800mm apart.\
3. Vacuum break lets air into system when it is shut down to avoid pipes collapsing from vacuum pull of water going back to pool. Locate vacuum break at approximate height of eave of roof on flow line.
4. When using max seal, put line across underside of solar strip approx. 800mm apart, press down, but not too hard.
5. When solar system is plumbed through filter system as per diagram of auto system, filter pump must run in conjunction with solar pump.