

PAPER 3 TEST

Your Name _____

SWIMMING FILTRATION AND OTHER EQUIPMENT POOL EQUIPMENT

MANUAL CLEANING DEVICES

What does the pool builder normally supply when handing over the pool? See Fig. 4.1.

1. _____
2. _____
3. _____
4. _____
5. _____

POOL VACUUM

What is the general procedure when setting up to vacuum a swimming pool?

AUTOMATIC CLEANING DEVICES

Describe the types of Automatic Pool cleaning devices generally available

Describe how the various type operate?

TIME SWITCHES

Describe this device and the part it plays in the filtration system:

POOL COVERS

What are the three main reasons for installing a pool cover?

1. _____
2. _____
3. _____

AUTO RETRACTING POOL COVERS

Describe what these are?

Are Automatic Retracting Pool Covers considered a “Safety Cover” by Legislation?

_____ YES _____ NO

Why/Why not?

SPAS AND HOT TUBS

Describe what these are, and any benefits they may produced for the users?

What main important issues must be kept in mind with the use of these products?

What sanitisation methods are preferred for Spas & Hot Tubs?

What type of Filtration is preferred for Spa Pools & Hot Tubs, and why?

LADDERS, GRAB RAILS AND HAND RAILS

Ladders and Handrails play an important part towards ensuring pool safety in some pools. Describe these uses and describe the products which are used?

1. _____

2. _____

What quality of stainless steel should NOT BE be used in swimming pools?

What is the relevant New Zealand Standard applicable to pool Ladders & Handrails?

NZS _____

UNDERWATER POOL LIGHTING

What relevant NZ Standard governs the use of incandescent Pool Lights in pools?

NZS _____

What voltage requirements are allowed?

_____ Volts _____ Watts or _____ amps

What is the required ratio of voltage transformers to incandescent pool lights?

Is there a different requirement for L.E.D. pool lights?

If YES – what are the different requirements?

VALVES

What are the most common types of valves used in residential pool plumbing?

MULTI-PORT FILTER VALVES (MPV)

What do the following Valve Positions do?

CLOSED

RECIRCULATE

FILTER

BACKWASH

RINSE

THREE-WAY VALVES

What do these do?

NON-RETURN OR CHECK VALVES

Describe what these do?

How do they work?

POOL AND SPA HEATING

Describe the three main types of residential **swimming pool** heating

1.

2.

3.

What is the **ideal temperature** for the following pool types?

Spa pools _____

Competition swimming _____

Home Leisure Swimming _____

Learner Pools _____

What are the maximum recommended temperatures for the following pools?

Residential swimming pool _____

Spa pool _____

Competition Training pool _____

Where is the preferred location of the heater the filtration system?

Which of the following statements are true for high-capacity GAS heaters:

1. Heat the pool up the day you need it _____
2. Heat the pool the day before you need it _____
3. Keep the heater on for the whole season _____

Which of the following statements are true for HEAT PUMP heaters:

1. Heat the pool up the day you need it _____
2. Heat the pool the day before you need it _____
3. Keep the heater on for the whole season _____

What is the most important **primary protection** needed for all heating devices?

What type of heater is most commonly used in a Spa pool?

How do you calculate the cost of running a heat pump set at 27.5°C?

_____ total hours/season x _____ c cost per Kw Hour = \$_____ total seasonal cost

Briefly describe the use and popularity of the following pool heaters:

DIESEL OIL HEATING

GAS HEATING

ELECTRIC ELEMENT HEATING

MINIMUM REQUIREMENTS FOR OIL, GAS OR ELECTRIC POOL HEATING SYSTEMS

1. Automatic chemical dosing equipment must be installed:

UPSTREAM DOWNSTREAM (Circle one)

of the heater in the filtration system

2. All heating equipment must be fitted with a high temperature limit control to prevent the water temperature exceeding:

30°C 40°C 50°C 60°C.

3. Heaters must be fitted with a _____ device to ensure that the heater will not operate without water flow.

4. Heaters must not be installed in enclosed areas where they may be subjected to:

5. Pool heaters should be located:

AS CLOSE AS POSSIBLE IT DOES NOT MATTER

6. The use of _____ on the pipeline will reduce heat loss.

SOLAR HEATING

What is the break-even time for the cost of a Solar system compared to other heating options?

_____ Years

What percentage of Solar Panels (Generalising, so a specific brand or type) should there be compared to the area of swimming pool surface?

20% 50% 75% 100% 125% 150%

When does a Solar System most effectively transfer Sun Heat to Pool Water Heat?

SPRING SUMMER AUTUMN WINTER

A Thermal pool blanket should always be used at night to decrease heat loss?

YES MAYBE NOT IMPORTANT

There are two systems of solar pool heating in popular use today.
Describe them

1. _____
2. _____

MINIMUM REQUIREMENTS FOR SOLAR POOL HEATING SYSTEMS

1. The roof must be facing _____
2. The system must be equipped with a _____ device to expel air and stop the water from boiling in the system when not operating.
3. Use of a separate self-priming pump and separate suction lines for rooftop Solar Panels is:

GOOD PRACTICE NOT NEEDED A WASTE OF MONEY

- end -

For information and interest only: Can you see anything wrong with this setup? (Not part of the Test)

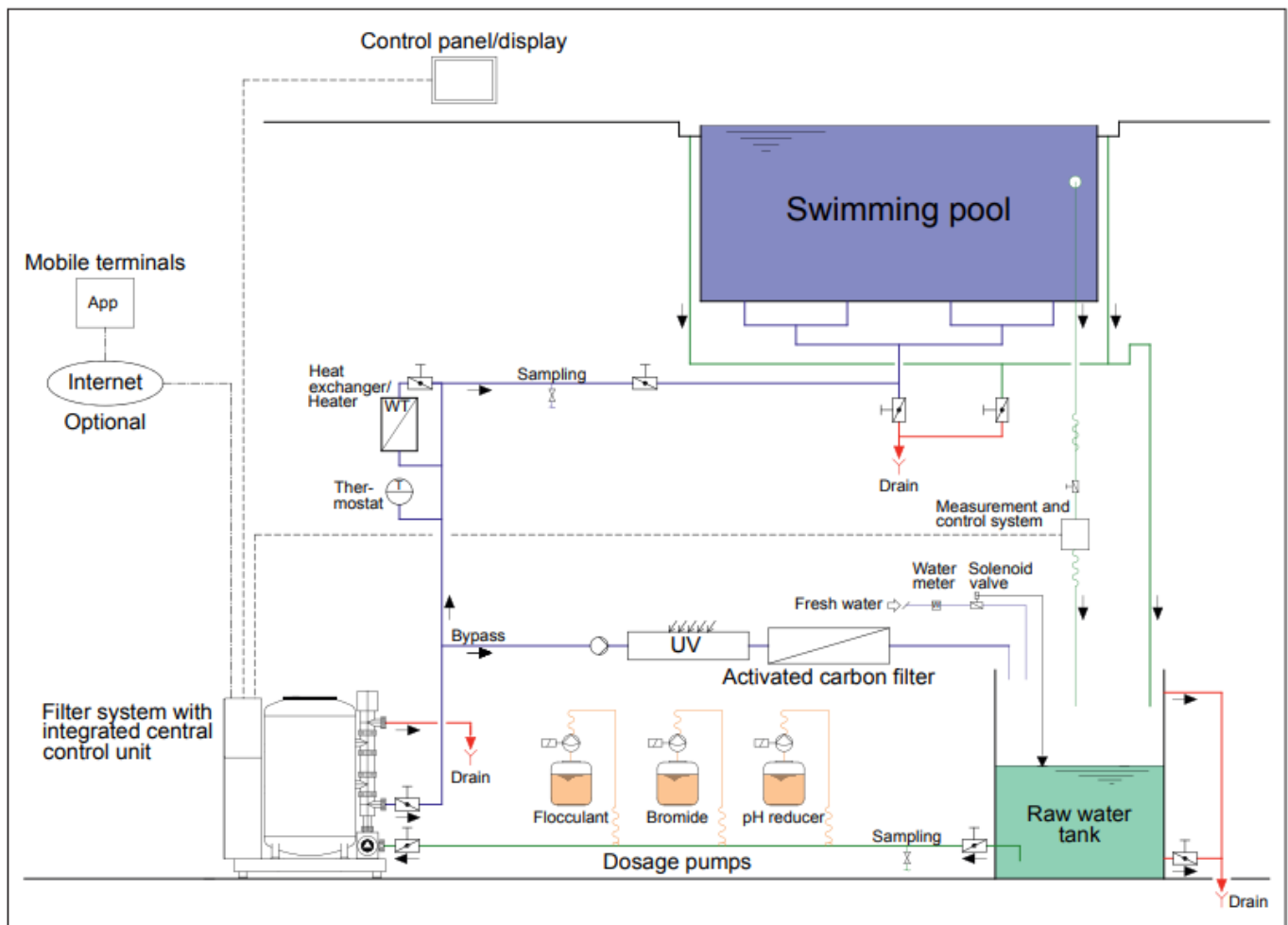


Diagram Treatment cycle when using HYDROZON®-Kompaktanlagen compact systems.

Comment:

-end-