ABBERFIELD
INDUSTRIES
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COIN SHOWERS

showers

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PRINCIPLE OF OPERATION

Coin or token operated timers can control hot water, allowing free cold water showers.

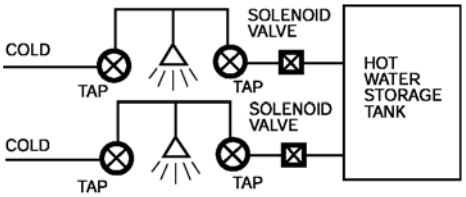
However, where limited tank or dam water dictates the need to limit cold as well as hot water, other forms of control are possible.

Specific applications also dictate different methods of installation, i.e. Caravan Parks, Swimming pools.

NORMAL INSTALLATION

A coin timer is used to operate a solenoid valve (electric tap) fitted to the hot water pipe of each shower.

Figure 1

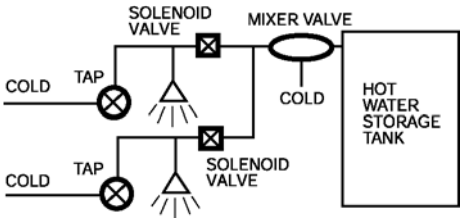


The solenoid valve should be in the service room or in the amenities block roof area, but access should be available for service.

SAFEST METHOD

One advantage of this method is that the warm water connection can be made directly to the shower rose. This can permit conversions to existing showers without disturbing the tiling. Exposed chrome plumbing carrying warm water can often run neatly across or down the wall.

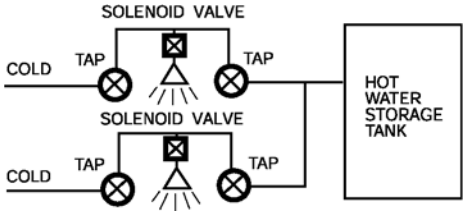
Figure 2



SIMPLE METHOD

The simplest method is to use one Solenoid Valve to turn off hot and cold together by removing the shower rose, fitting a Solenoid Valve, and re-installing the shower rose. However this is only safe (and legal) if operated on low voltage. This method is used where cold water is limited or for coin controlling an existing shower installation in the simplest way.

Figure 3



The disadvantage is that irate customers will result if shower stops and soap cannot be removed. Still using this same plumbing arrangement some improvement can be gained by pre-warning of power disconnection. Load interrupt pre-warning turns of the shower for 1 second, 1 minute before the water is cut off.

ALTERNATE METHOD

Where cold water must be controlled as well as hot, the best system is to turn off the hot first and then the cold. This not only gives warning of pending disconnection but the use of cold water only gives encouragement to complete showering. Two solenoid valves are needed, one for hot and one for cold supply.

Hot water disconnection is possible, 30 seconds, 1, 2, or 4 minutes before cold disconnection(specify), regardless of the time set for the showers or the number of coins inserted. This system is referred to as P.O.C. (pre off circuit)

SWIMMING POOL SHOWERS

The main need is to rinse chlorine or freshen up. Therefore the operating time of the hot shower is usually less than in other applications, usually between 2.5- 5 minutes.

The major differences between swimming pools and other amenities is the public nature of showering. All ages of swimmers will use the showers and children will usually not be supervised. Pool operators are most conscious of the need to protect themselves from court actions claiming negligence. Prevention of scalding is therefore important and is obtained by fitting a hot / cold water mixer valve to the normally hot plumbing. Used in this way no scalding accidents can occur.

Further protection is gained by operating the electronic coin timers and solenoid valve on low voltage (see choice of timer) so that electrocution is not possible, even if wiring becomes exposed. Plumbing is usually arranged so that free cold water is available, and that by inserting a coin, without operation of any hot taps, warm water flows. (see figure 2)

One advantage of this system is that the warm water connection can be made directly to the shower rose. This can permit shower conversions to existing showers without disturbing the tiling. Exposed chrome plumbing carrying warm water can often run neatly across or down the wall.

CARAVAN PARKS

Unlike pool showers, caravan parks need to offer full showering facilities. Hotter water and longer time is usually needed. Mixer valves are not common although their installation is increasing. The normal method of control is to leave the cold water tap in use and fit the solenoid valve in the hot water pipe. (see figure 1)

Caravan parks occasionally use dam water or have other reasons to limit even cold water wastage.

SPORTING AMENITIES

Squash court, tennis court and sports playing ground amenities often use coin hot showers. The application is halfway between swimming pool and caravan park showers and both of the recommended methods of control are used.

CHOICE OF COIN TIMER

(Refer back page for technical details) There are two types of coin timers, motor driven and electronically controlled. Motor driven are 240 Volt operated and electronic units can be either 240 Volt or low voltage, normally 12 Volt.

Although motor driven are suitable for coin showers they lack flexibility in time adjustment and electronic control should be used unless cost restraints dictate otherwise.

For shower control low voltage is recommended due to the inherent safety of this method. Vandalism, faulty wiring or other unforeseen circumstances can never cause a fatality.

It is recommended that an electrician install the coin timer. However, if low voltage is used any handyman may legally do this work.

Low voltage power supplies housed in a weather proof housing, inclusive of line filtering devices,are available from Abberfield Technology. The power supplies have two output voltages, 12 Volts or 15 Volts and on installations where the wiring runs for some distance the 15 Volt outlet is used.

These power supplies plug directly into a standard power point but can be permanently wired if required. Each power supply can run up to 8 coin controlled showers.

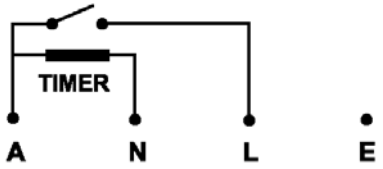
INSTALLATION

Instructions are permanently attached inside the coin timer's cover. PLEASE READ THEM. Ensure that the coin timers are securely attached with loxins or dynabolts as the high security of the cover will be lost if the coin timer can be pried off the wall. Failure to observe these instructions is common and owners should insist that the manufacturer's specification be observed.

Coin timers should be positioned so that showers will not splash them. It is recommended that they be positioned outside the shower cubicle. This way they are left relatively dry and the opportunity for vandalism is minimised.

ELECTRICAL

Motor driven and micro processor based interior modules are interchangeable and the wiring arrangements are identical. Low voltage electronic units should be wired with normal building wire (2.5 mm wire size) to minimise voltage drop in the wiring.



A – ACTIVE
N – NEUTRAL
L – LOAD
E – EARTH

INSTALLATION OF COMPLETE SYSTEMS

Abberfield Technology not only supply the coin timers, solenoid valves, water mixer valves and low voltage power supplies, but will undertake installation of all electrical and plumbing work to the highest standard.

PUSH BUTTON CONTROLS

For applications wanting control of hot water without charging by coin.

The push button control systems operate in a similar manner to that described in this brochure. Separate brochure available.

SERIES 10 COIN TIMER

MODEL CT10-F

Electronically controlled Coin Operated time Switch designed to energise an electrical circuit on insertion of coin. It is self contained including a coin validation, and coin storage section.

FEATURES

- Simple to install and operate.
- Accumulation of 1 to 99 coins in memory.
- Operating time easily reset.
- Coin validator scans coins to reject operation by washers and coins hung on a string.
- No moving parts except the output relay.
- Over filling of coin tray cannot cause damage.
- The moulded components give double installation.
- Pre warning of power disconnection is available.
- Microprocessor technology gives performance & reliability.
- Optional time remaining display.

TIMING

In the lower right hand of corner of the internal mechanism are three ten position thumb wheel switches. These are used to set the operating time for each coin.

SECURITY

To ensure maximum security. the cover of the timer is completely seam welded from heavy gauge steel. The cover surrounds the entire body of the timer with the edges flush to the wall. making it virtually impossible to gain unauthorised entry. The lock is fitted on the side of the timer, making it more tamper proof than if fitted on the front.The unit should be fastened securely and the recommended procedure is printed on a drilling template supplied with each unit.

MECHANICAL

The cover has a sloping top, incorporating the coin entry slot. This permits easier reading of the instruction label and prevents objects being placed on top of the timer. A durable electrostatically sprayed finish is applied to the outer casing. The standard colours is AMOTET BRONZE. Special colours are available on request. Dimensions are 245mm high x 90mm deep. Weight is 2.5kg.

ELECTRICAL

Supply voltage 240 Volts 50 cycles. Electronic units are also available in 12 Volt operation.

ACCESORIES

TOKEN OPERATION

Equipment is normally coin operated but units can be token operated. The label on the timer then reads ‘FOR OPERATION INSERT TOKEN’. Stock tokens can be supplied and special tokens with customers embossing can be produced.

COIN COUNTER

A counter can be fitted to record the number of coins inserted.

SECURITY PACKAGE

For problem sites a security package is available. This includes heavier gauge steel cover with the lock mounted in a reinforced surround and a metal backing plate. Also supplied are mounting loxins with 1/4” bolts and washers.

STAINLESS COVER

Ideal for particularly wet environments.

Model CT10F
Electronic Interior