

# OPERATING INSTRUCTIONS - COLT BASIC, REMOTE & TURBO

Please read these instructions fully before operating your smoke machine.

## GENERAL INFORMATION

1. Colt smoke machines are designed for use only with the appropriate CONCEPT COLT aerosols. **DAMAGE WILL OCCUR IF ANY OTHER AEROSOL IS USED.**
2. **DO NOT COVER OR OBSTRUCT LOUVRES IN ANY WAY.** Use machine only in well ventilated areas.
3. When smoke is required to be hosed away from the machine, a Ducting Adaptor (available from Concept) must be used. This acts as an Adaptor for 75 mm bore flexible hose and also serves to remove any large droplets of fluid from the smoke that would otherwise collect in the hose. At regular intervals the Ducting Adaptor must be detached from the machine and emptied of fluid.
4. Normal precautions should be observed regarding the storage and use of aerosols ie: Protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn even after use. Do not spray on a naked flame or any incandescent material. Store aerosols with valve downwards.

## PREPARATION

1. Fit suitable fused plug to mains lead (5 amp fuse for 240v, 10 amp fuse for 110v). 10A(230v) or 20A (110v) for 2200w "TURBO" units)
2. Check that aerosol contains fluid. Clean top of aerosol if necessary.

## OPERATION

1. Check *Power Switch* on machine is in the OFF (0) position. Connect mains lead to machine.
2. Plug mains lead into supply.
3. Switch *Power Switch* on machine to the ON (1) position. The built in *Red Indicator Light* will illuminate. After approximately 5 minutes the *Green Temperature Neon* will come on, indicating that the correct working temperature has been reached and that smoke can be produced. For optimum performance, it is recommended that the machine is left for an additional 10 minutes before smoke is produced. **NOTE: Do not attempt to generate smoke until the Green Temperature Neon has come on for the first time, otherwise damage may be caused to the machine.**
4. Below hole in the top of the machine can be seen a threaded *Aerosol Insert*. This should be checked and cleared of any foreign materials. Also check that the 'O' Ring Seal is in position and in good condition. Carefully align valve on aerosol with this insert and fix into position by turning clockwise. The aerosol should be tightly screwed into position to create an effective seal.
5. To make smoke with the Colt Basic - Press *Smoke Button*. Adjust smoke output by the *Output Rate Control* (where fitted). On the Remote model, put the *Smoke Switch* into the ON position. Alternatively, leave the smoke switch in the OFF position and connect the *Remote Switch* to the machine. Smoke output is adjustable by the *Output Rate Control* (where fitted).
6. When smoke is no longer required, release the *Smoke Button* (Basic) or put the *Smoke Switch* (Remote) to the OFF (0) position.
7. SHUT DOWN - when machine is no longer required, unscrew and remove aerosol. Turn the *Power Switch* on machine to the OFF (0) position, removing plug from mains supply. Allow machine to cool before storing it in warm dry conditions.

## COLT BASIC - CONTINUOUS OPERATION

Continuous smoke may be produced whilst the machine is left unattended by placing a deep coin in the smoke button recess, depressing the coin (and hence the smoke button) and then sliding the coin forward. This has the effect of holding the smoke button down, and therefore the COLT will generate smoke continuously. Depressing the coin, sliding it back and releasing the pressure will stop the production of smoke.

## OFF POWER FACILITY

Once the COLT has reached working temperature for the first time (ie the *Green Temperature Neon* has come on), the generator can be disconnected from the power supply and used to produce a large volume of dry smoke whilst being carried around by the operator.

The amount of dry smoke that can be produced off power depends upon where the COLT is in its temperature cycle when it is disconnected. For best results, one should allow the *Green Temperature Neon* to come on 3 times, and disconnect the machine immediately after the *Green Temperature Neon* has come on for the third time. This will have allowed the machine's heat exchanger time to stabilise, and will mean that the COLT can still generate smoke up to 30 minutes after disconnection.

When using the COLT off power, the quality of the smoke must be carefully observed. As soon as the smoke from the COLT starts to thin and become slightly blue in colour, stop producing smoke and reconnect the COLT to the power supply until working temperature is achieved once more (ie until the *Green Temperature Neon* comes on). The COLT may then be disconnected and used in its Off power mode again.

## NOTE

This reheating cycle is important. If it is not observed, and the COLT is not reconnected to the power supply when the smoke is seen to become thin and blue, the smoke will become wet, and damage will be caused to the machine.

## COLT REMOTE CONTROL

It is important to note that the Colt Remote cannot be used 'Off Power'. As soon as power to the Remote is disconnected, the solenoid valve within the machine is de-energised and automatically closes, stopping smoke production. The Colt Turbo Remote will make smoke in bursts as the heaters within the unit cycle.

## HEALTH AND SAFETY

The smoke produced by all Concept smoke generators has been rigorously tested to ensure that in normal circumstances it is non toxic. However, we recommend that persons who are asthmatic or who suffer from a respiratory complaint are not subjected to dense smoke concentrations. Numerous independent reports on the safety aspects of Concept smoke are available on request.

## MAINTENANCE

Very little routine maintenance is required for your smoke machine. If this maintenance is regularly carried out, unnecessary repair bills will be avoided.

NB - Remove plug from mains supply before undertaking any maintenance operations.

1. After each use follow instructions as in OPERATION (7)
2. After each 2 hours (approx) of smoke production, using the drill in the pin chuck supplied, carefully insert the drill into the nozzle of the heat exchanger and gently drill out by hand any deposit, to a maximum depth of 25 mm.
3. If leakage occurs - check 'O' Ring in aerosol insert for damage and replace if any sign of damage is present.
4. Periodically remove side panels and wipe away any excess smoke fluid.
5. THERMAL CUT OUT (if fitted). In the event of a fault causing overheating, the *Thermal Cut Out* trips before any further damage is done. When the *Thermal Cut Out* trips, all lights on the machine will go out. To check if the cut out has operated, leave mains supply connected and *Power Switch* in the ON (1) position. Remove left hand panel and press *Red Button* on *Cut Out*. If it clicks and the lights come ON, the cut out has operated - consult CONCEPT. If the cut out has not operated, check supply is live and that the plug is intact.
6. HOSING - When a *Ducting Adaptor* is used in conjunction with *Flexible Tubing*, it should be periodically emptied. For permanent installations, the adaptor may be fitted with a drain tap. Where possible, hose runs should have a slight fall back to the *Adaptor*. This ensures any deposits collecting in the Hose will run back and collect in the Adaptor. The length of hose runs which may be used depends on rise, bends and falls in the system. If smoke collects in the machine's area, the hose run is too long - consult CONCEPT for advice.

## FAULT FINDING

If smoke is poor or not produced at all:

- a) Check that the *Output Rate Control* is not fully closed (if fitted).
- b) Check that the mains supply is live and fuse is intact. If power is live but not shown at machine, check all wiring is intact on machine.
- c) Check aerosol pressure by removing can from machine. Check that *Aerosol Insert* is clear of any contamination and that pin and 'O' ring are in position and undamaged. Fit a new aerosol, and go through OPERATION procedure. If smoke is produced, discard the old aerosol.
- d) If no smoke is produced, check Heat Exchanger nozzle is clear of contamination by carefully drilling with drill provided to a depth of 25 mm.
- e) If smoke is still not produced. Remove right hand side panel. Disconnect *Transfer Tube* from *Heat Exchanger Block* and leave open and pointing into a container. Fit a new Aerosol to machine and depress *Smoke Button* (Basic) or *Smoke Switch* (Remote). (On Remote, the machine must be connected to the electrical supply and must have reached working temperature). If there is a flow of fluid from the *Transfer Tube*, this indicates a blockage in the *Heat Exchanger Block*. Consult CONCEPT.
- f) If there is no flow from the *Transfer Tube*, remove *Heat Exchanger Complete*, remove *Smoke Button Valve* and disconnect *Transfer Tube* from valve. Blow through both ways, with air or CO<sup>2</sup> to remove any contamination, refit valve. Refit *Transfer Tube*, leaving Heat Exchanger end disconnected. Screw in aerosol, operate smoke button. Check for flow of fluid from open end of Transfer Tube, and reconnect to Heat Exchanger if satisfactory.

**IF FLOW IS STILL NOT PRODUCED - CONSULT CONCEPT**

## INSTALLATION WARNING

Design and installation facilities are available to meet any special requirements, from advice about simple hosing of smoke to complete automatic systems. CONCEPT cannot accept responsibility for any damage or malfunction to or by CONCEPT smoke machines, or any consequential damage where ducting of smoke or electrical switching or any deviation from the standard machine as supplied, is carried out by anyone other than CONCEPT ENGINEERING LIMITED.

## SERVICE

We recommend that your smoke generator is returned to Concept or an authorised distributor (details available from Concept) on an annual basis for cleaning, servicing and testing to ensure that the equipment and its resulting smoke remains in optimum condition.

## CE MARKING

All Concept Colt smoke generators produced from 1<sup>st</sup> January 1996 comply with the EMC directive EN89/EEC, in that they meet the requirements of EN50081/1 and EN50081/2. (Electro Magnetic Compatibility)