



**DUKE 35/DUKE 65  
OWNER'S MANUAL**

*Great Products Engineered for  
Safety and Reliability*

Duke Pro, Inc. is proud to produce and provide quality blasting equipment at highly competitive prices. We strive to produce safe and reliable products without forgetting to listen to the needs of our customers. Your comments are always welcome.

**INTRODUCTION**

Conratulations on your purchase of the DUKE 35 or DUKE 65. Your DUKE 35 or DUKE 65 is a safe, reliable, and durable blasting machine that was built to last.

**1. SAFETY INSTRUCTIONS**

**A.** Always check the power output of the machine to insure the output power meets your minimum requirements before connecting to the lead line. Consult your cap manufacturer for testing procedures.

**B.** Never connect more than 35 two ohm caps(for DUKE 35) or 65 two ohm caps (for DUKE 65) through a 5 ohm lead line . Refer to the specifications and instructions provided by the blasting cap manufacturer. Always use the blasting caps per manufacture's specifications above all other instructions in this manual .

**C.** Never use this machine after being submerged in water or if the machine is excessively dirty. Use the instructions in the repair section to clean the unit. If the machine was submerged return to the factory for repair and performance verification.

**D.** This machine is not a permissible machine. Use this machine for non-permissible applications only.

**E.** Keep this machine out of the reach of children and all other unqualified or untrained individuals.

**F.** Do not use this machine for anything other than blasting.

**G.** Always follow the supplied instructions.

**H.** Always use the recommended 9 volt alkaline battery. Duracell™ part number MN1604 is recommended by Duke Pro Inc. as the battery of choice. Never mix old and new batteries or connect any external power source to this machine.

**I.** Never connect the lead line to the machine until you are ready to fire the shot.

**J.** Operate this machine in accordance with local, state, and federal rules, laws, and regulations.

**DUKE 35 AND DUKE 65 OPERATION**

**2.1 TO SET UP THE MACHINE: (Note - units come with batteries installed when new)**

**A.** Remove the battery cover by removing the screws on the rear panel.

**B.** Install two new 9 volt alkaline batteries and place them in the battery holder.

**C.** The battery clips are polarized so reverse connection to the battery is prevented.

**D.** Replace the battery cover being careful to align the covers with the groves in the case. Never use force to replace the battery cover. Replace the screws but do not over tighten the screws. Over tightening the screws may severely damage the case.

**2.2 TO OPERATE THE MACHINE FOR BLASTING:**

**A.** Check lead lines for continuity with a blaster' s galvanometer or a blaster' s multimeter. The resistance 75 ohms for the DUKE 35 and 135 ohms for the DUKE 65 under dry conditions is the maximum resistance these machines were designed to fire in single series. This value includes the 5 ohm lead line resistance. Wet conditions can show a significantly lower resistance on a galvanometer reading due to parallel earth leakage paths.

**B. Remember:**  
**75 ohms maximum for the DUKE 35**  
**135 ohms maximum for the DUKE 65**  
**REMEMBER -- Derate for wet conditions!!**

**C. To charge** either machine depress the switch marked "CHARGE" until the ready lamp illuminates. With fresh battery this will take 4 to 6 seconds nominally. If the machine has not been used for several days the first charge cycle might take a second or so longer.

**WARNING !**

**THE READY LAMP INDICATES CORRECT VOLTAGE IS PRESENT - NOT POWER !  
CHECK UNIT FOR PROPER POWER OUTPUT BEFORE EACH SHOT!**

**D. To fire** press the switch marked "FIRE" while continuing to depress the charge switch to initiate the high voltage discharge through the black and red terminals. The ready lamp must be illuminated for a high voltage discharge to occur.

**WARNING !**

**THIS STEP WILL CAUSE A POTENTIALLY LETHAL HIGH VOLTAGE DISCHARGE THROUGH THE TERMINALS.**

E. After firing the shot disconnect the lead line from the red and black terminals.

### **3.0 DUKE 35 and DUKE 65 MAINTENANCE:**

#### **3.1 TO CLEAN THE OUTSIDE:**

A. Use a clean rag and cool water to remove dirt and grime from the outside of the case. **NEVER USE A FORCED STREAM FROM A FAUCET OR A HOSE TO CLEAN THE UNIT.** Dry outside of case with paper towel or clean soft rag.

#### **3.2 TO CLEAN THE INSIDE:**

Do not attempt to clean the inside of a Duke 35/65 machine. Doing so will void the warranty. Return to Duke Pro Inc. at the address listed in section 7.

#### **3.3 TO REPLACE THE BATTERIES:**

See SECTION 2.1 To Setup The Machine

### **4.0 DUKE 35 / DUKE 65 SPECIFICATIONS**

#### Specifications:

**Size:** 2 x 3.5 x 6 inches

**Weight:** 2.5 pounds

**Battery:** Two 9 volt alkaline batteries from Duracell™. (part number MN1604) .

**Battery life:** **DUKE 35** -550 SHOTS PER BATTERY SET. **DUKE 65**- 450 SHOTS PER BATTERY SET

**Firing Voltage:** **DUKE 35**- 250 volts +/- 5 volts **DUKE 65** - 330 volts +/- 5 volts

**Firing Capacitor:** 160 microfarad nominal

**Maximum load:** **DUKE 35**- 75 ohms single series (under dry conditions) **DUKE 65** - 135 ohms under dry conditions

**Safety:** The **undervoltage lockout** circuit provided prohibits the machine from firing until the unit is at the

proper

voltage. The unit can be fired into a direct short without damage.

**Energy:** **5.0 Joules (nominal) DUKE 35** and **8.0 joules (nominal) DUKE 65**

### **PROBLEMS AND REPAIR**

If the ready light will not illuminate or if the machine takes more than 12 seconds to illuminate the ready light, Replace the battery with a fresh Duracell™ battery as per instruction in section 2.1. Inspect to see if the battery was installed properly. Make sure the battery clips are securely fastened to the battery. If the machine fails to function after replacing the battery, remove the battery and mail the machine postage paid and insured for the original purchase cost to DUKE PRO, INC. at the address listed at the bottom.

#### **WARNING !**

**DO NOT ATTEMPT TO USE THIS MACHINE FOR BLASTING UNTIL THE CAUSE OF THE PROBLEM HAS BEEN IDENTIFIED AND CORRECTED !**

This machine is warranted to be free of defects in materials and workmanship for a period of 1 year after the purchase date of the machine. This warranty is offered to the original purchaser and is not transferable. Should the machine fail due to materials or workmanship return the machine prepaid to the address listed in the registration section. We will repair or replace the machine at our option. This warranty is limited to the cost of the machine only and in no way can it be guaranteed for particular suitability of purpose or your intended use. This warranty is exclusive and is in lieu of all other warranties, expressed or implied.

Duke Pro, Inc. can not anticipate all of the conditions under which this machine will be used either by itself or in combinations with other products. Duke Pro, Inc. will accept no responsibility for the suitability, for the results obtained, or for the safety of this machine when used by itself or with other products. The user must design and implement their own tests to determine the safety and suitability of this machine for the user's purposes.

Duke Pro, Inc. sells this machine without warranty other than the limited 1 year warranty expressed above. The buyers and users must assume responsibility and liability for all losses including anticipated gains, incidental or consequential damages arising from the use of this machine by itself or with other products. Use of this machine by unqualified or untrained personnel will cause the warranty to be null and void. Tampering, altering, or abuse of the machine will result in the warranty becoming null and void. The remedy offered by Duke Pro, Inc. will be limited to the repair or replacement of the machine at our option.

### **REGISTRATION/WARRANTY**

Send the included registration card to:  
**Duke Pro, Inc.**

**4060D Peachtree Rd. Suite 118  
Atlanta, Ga. 30319**

If the registration card is missing, write to the address given above or call the warranty service number and ask that a registration card be sent to you. The warranty service number is: (404)-ADD-DUKE or (404)-233-3853