

# PULSE CAPACITOR CHARGING POWER SUPPLIES

Feedback controlled

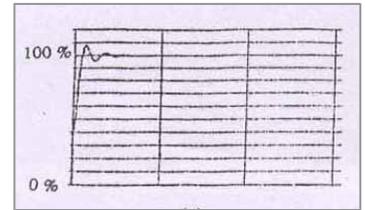
MPDCG-Series

## Introduction:

MPDCG series of high voltage/low current pulse dielectric charger are designed for achieving optimum results in following electro ceramic applications... 1. Capacitor charging and discharging 2. Ceramic stress relieving 3.Improving dielectric break-down-voltage of insulator and many other dielectric related applications. This pulse charger unit contains programmable kilo volt/meter -minute controller, space mark controller, and digital volt/ampere meter with RS-232 port which enable the user to online assess/monitor the process parameter and control the quality and quantity of dielectric alignment with high degree of repeatability, accuracy all the time. Only for this reason, our pulse dielectric charger is the first choice of any industrial/research application. This charger could be operated in parallel. Company offers tailor made solution to custom requirement.

## Operating Principle:

These pulse dielectric charger incorporate the compact high frequency AC/DC converter, which ensure low voltage/current ripple. Pulse dielectric charger is able to bring in uniform dielectric alignment with Improved grain structure exhibiting high level of dielectric charging/mechanical hardness at current delivered is in quantified manner which allows the restricted style growth of grain during every Pulse of current thus ensuring an improved uniform dense dielectric alignment that is further enhanced during Depolarize period when over/under dielectric alignment either grain spread wise or height wise are marginalized, thus bringing a highly dense, less porous and uniform dielectric alignment

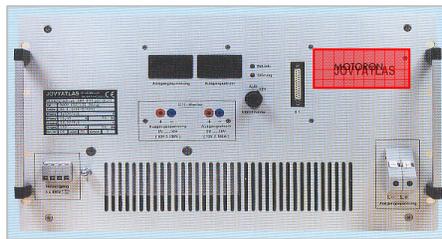


voltage vs time

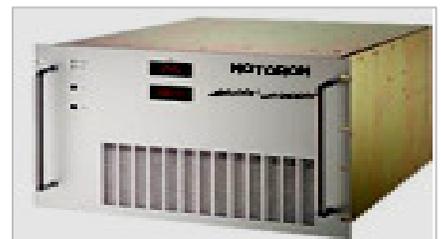
with better engineering,better electro-ceramic properties like surface porosity, break-down voltage, leakage resistance resistance, permittivity etc. This ability of pulse dielectric charger makes it possible to achieve much high dielectric alignment in narrow and multipolar applications. With conventional charger, non-uniform charging leads to uneven grain structures leading to development of differential stress zone. A portion of zone having less polarization or more hardness gains higher crack potential due course of time and will imitate a specific form of crack there by reducing the life of magnet even. Normally such phenomenon does not exist with pulse charger. On account of pulse mode periodic output of charger, it is possible to achieve multi polar compact charging with high dielectric alignment, mechanical strength and better /reliable operational life.



MPDCG-0800200



MPDCG-0800500

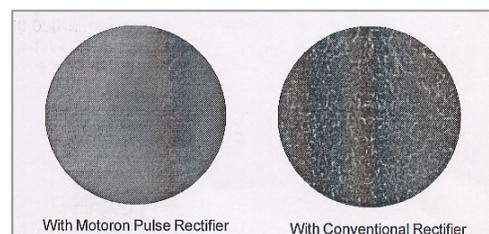


MPDCG-0800050

Model	Watts	Volts K.V.	Current m.m.	Switching frequency k.hz	cooling	Model	Watts	Volts K.V.	Current m.a.	Switching frequency k.hz	Cooling
MPDCG-0800015	1200	80	15.0	05-50	Air	MPDCG-0802000	16000	80	2000.0	05-50	Air
MPDCG-0800025	2000	80	25.0	05-50	Air	MPDCG-0804000	32000	80	4000.0	05-50	Air
MPDCG-0800050	4000	80	50.0	05-50	Air	MPDCG-0806000	48000	80	6000.0	05-50	Air
MPDCG-0800100	8000	80	100.0	05-50	Air	MPDCG-0808000	640000	80	8000.0	05-50	Air
MPDCG-0800200	16000	80	200.0	05-50	Air	MPDCG-0810000	800000	80	10000.0	05-50	Air
MPDCG-0800500	40000	80	500.0	05-50	Air	MPDCG-0815000	1200000	80	15000.0	05-50	Air
MPDCG-0801000	80000	80	1000.0	05-50	Air	MPDCG-0820000	1600000	80	20000.0	05-50	Air

## High Frequency pulse charger Specification:

Operating voltage 220 volts, 1/3 phase, 40-60 Hz  
 Output current/voltage 0-80 kilo Volts/20000 mill amps (max)  
 Voltage/current ripple 10 micro volts-noload/ 100 micro volt-full load  
 Operating frequency 5.0-200 K.Hz  
 Voltage/current control accuracy 99.9% of set point  
 Resolution 0.1 volts/amps D.C.  
 Repeatability 100 percent  
 Response time 0.5-1.1 mill-seconds  
 Interface Signal 0.0-12.0 volts D.C.[ proportional to dielectric field]  
 Voltage control range 0.0-8.0 kilo volts  
 SPACE-MARK RATIO 1:3 to 1:9  
 Control options 1.cascade feedback control with soft start  
 2. Constant voltage/current with external adjustment.  
 Display Voltage/current/gauss/space mark/gauss-second in 3½ red glow LED display  
 Protection over voltage/short ckt.

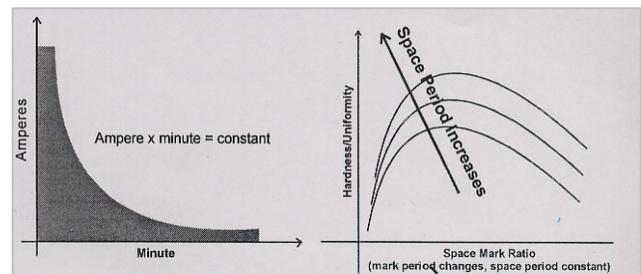


comparative dipole alignment

## Common Pulse Dipole Charger dimension:

MPDCG-0800015	08X06X06	MPDCG-0802000	14X12X12
MPDCG-0800050	10X06X06	MPDCG-0804000	16X14X24
MPDCG-0800200	12X08X08	MPDCG-0808000	18X16X36
MPDCG-0801000	12X10X10	MPDCG-0815000	20X18X48

Two numerals after MPDCG indicates voltage of pulse magnetizer and last five-digit Indicates current. All dimensions are in inches.



## MOTORON SEMICONDUCTORS CORPORATION

33, Shri nagar colony, Shakti nagar extension, DELHI-110052. Tel: 011-23644180/23655454

e.mail: [motoron@hotmail.com](mailto:motoron@hotmail.com)