

# HIGH FREQUENCY SYNCHRONOUS CONDENSOR

Programmable/Non-programmable

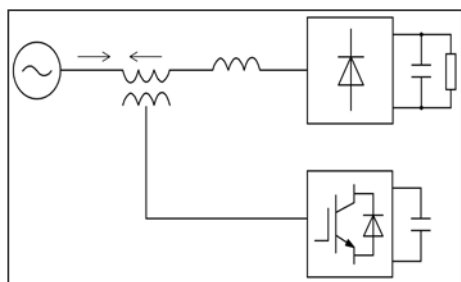
MHFSC-Series

## Introduction:

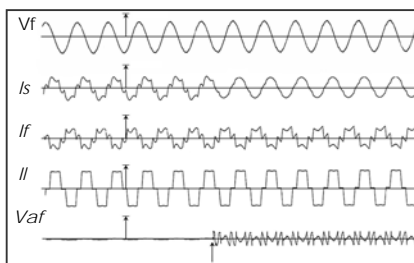
MHFSC series of synchronous condensers are available upto LT/HT/EHT(10.0 to 100,000 KVAR), in more than 50 different models working in constant voltage/reactive power mode virtually offering solutions to poor power factor on account of harmonic distortion, principal harmonic current lag due to non-linear loads/devices like arc furnace, rectifiers, inductive load, electrostatic precipitators, thyristor load, and many other heavy electromechanical loads. Updated design topology ensures better controllability and efficiency with additional integrated reactive power/voltage and frequency control/protection. These condensers may operate in parallel to make it more redundant. Company offers tailor made solution to custom requirement.

## Operating Principle:

Active filter inject the compatible high frequency reactive power at polluted supply point using A.C. /A.C. matrix converters working in feedback cascade mode. Set voltage/reactive immediately settles to set point with consistent regulation over wide load reactive/harmonic range with fail proof protection against over/under voltage. These power condensers may be operated in parallel along with facility of parallel port/serial port to enable it to interface with computer to achieve any real time Voltage /current profile.



schematic of active filter



Active filter performance (Vf-filter voltage, Is-supply voltage, If-Filter current, Il-load current, Vaf-series active filter voltage)



MHFSC-100100

Model	KVAR	Volts K.V.	Current Ampere. max	Switching frequency K.Hz	cooling	Model	KVAR	Volts K.V.	Current Ampere. max	Switching frequency	cooling
MHFSC-00010I	000010.0	0.44	00028.0	10.0	Air/oil	MHFSC-02000H	002000.0	11.0	00180.0	10.0	Air/oil
MHFSC-00020I	000020.0	0.44	00056.0	10.0	Air/oil	MHFSC-05000H	005000.0	11.0/66.0	0450.0/075.0	10.0	Air/oil
MHFSC-00040L	000040.0	0.44	00112.0	10.0	Air/oil	MHFSC-10000H	010000.0	11.0/66.0	0900.0/150	10.0	Air/oil
MHFSC-00100L	000100.0	0.44	00280.0	10.0	Air/oil	MHFSC-20000H	20,000.0	66.0/220.0	0600.0/132.0	10.0	Air/oil
MHFSC-00200L	000200.0	0.44	00560.0	10.0	Air/oil	MHFSC-30000H	30,000.0	220.0	0160.0	10.0	OIL
MHFSC-00500L	000500.0	0.44	01400.0	10.0	Air/oil	MHFSC-50000H	50,000.0	220.0	0330.0	10.0	OIL

Voltage/reactive specs of above synchronous are of regular production, however company is regularly manufacturing synchronous condenser of higher voltage/current options.

## High frequency synchronous condenser Specification:

Operating voltage 440 volt/11.0kv/66.0kv/220.0kv  
 Output current as in data sheet  
 Reactive power/link voltage control accuracy : above 98.0 of set point  
 Resolution 0.1 kvar/0.1 volts A.C..  
 Repeatability 100 percent  
 Response time 0.5 -1.1 mill-seconds  
 Interface Signal 0.0-12.0 volts D.C. proportional to KVAR/LINK VOLTAGE  
 Voltage control ranges 0.0-220 K.V.  
 Step down ratio 0-100%  
 Control options 1.cascade feedback control with soft start 2.Ratio control (option)  
 2. Contant voltage/proportional kva r with external adjustment.  
 Display Voltage/current/kilowatt/KVAR in 3½ red glow LED display  
 Protection over voltage/short ckt.

## High frequency synchronous condenser Specification:

MHFSC-002005	08X06X06	MHFSC-005050	14X12X12
MHFSC-005005	10X06X06	MHFSC-010050	16X14X14
MHFSC-002010	12X08X08	MHFSC-020050	18X16X16
MHFSC-005010	12X10X10	MHFSC-050050	20X18X18
MHFSC-010010	12X10X10	MHFSC-010100	20X18X18
MHFSC-020010	12X10X10	MHFSC-020100	20X18X18

Three numerals after MHFSC indicates KVAR x100 of power supply and last alphabet L indicate 440 volt/H indicate 66.0/220.0 kv. 2.All dimensions are in inches.  
 Above models are in current range of production, however company Undertake any tailor made specification power synchronous condenser.



MHFSC-02000H

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