



SOLENOID INCLUDES 6 PANCAKE COILS 17 x 2 = 34 TURNS (CONNECTED IN SERIES ELECTRICALLY AND IN PARALLEL ON WATER)

SOLENOID PEAK FIELD - 0.587 T  
CURRENT - 272 A  
VOLTAGE - 23.2 V  
CONDUCTOR: 6.5 mm x 6.5 mm x φ3 mm HOLE  
COPPER CROSS SECTION - 34.3 sq.mm  
HOLE CROSS SECTION - 7 sq.mm  
LENGTH OF TURN (AVERAGE) - 28"  
COIL LENGTH (EACH) = 28" x 34 = 952" = 79.3 FT = 24.2 m  
COIL RESISTANCE (EACH COIL) - 0.0138 Ohms  
TOTAL SOLENOID RESISTANCE - .083 Ohms  
POWER LOSS (EACH COIL) - 1.05 kW  
TOTAL POWER LOSS - 6.3 kW  
WATER VELOCITY IN THE CONDUCTOR AT 60 PSI PRESSURE DROP - 1.18 m/s  
WATER FLOW (EACH COIL) - 0.0083 l/s = 0.132 GPM  
WATER FLOW TOTAL - .80 GPM  
WATER TEMPERATURE RISE (AT 60 PSI PRESSURE DROP) - 30°C  
SOLENOID SHALL BE VACUUM IMPREGNATED WITH EPOXY.

DIPOLE PACKAGE INCLUDES VERTICAL AND HORIZONTAL DIPOLES.

EACH DIPOLE ASSEMBLED FROM 2 SHELL-TYPE COILS WOUND FROM #12 SQUARE HEAVY ML COATED COPPER MAGNET WIRE. VERTICAL DIPOLE COILS (INNER LAYER) HAVE 21 TURNS (EACH), HORIZONTAL DIPOLE COILS (OUTER LAYER) - 24 TURNS (EACH). 1/8" THICK SPACER BETWEEN COILS PROVIDES SPACE FOR THE LEADS.

THE LEADS OF VERTICAL AND HORIZONTAL DIPOLES SHALL BE CONNECTED TO TERMINAL BLOCKS INSTALLED ON OPPOSITE SIDES OF SOLENOID, AS SHOWN.

DIPOLE PACKAGE MUST BE INSTALLED INTO SOLENOID WITH A GOOD THERMAL CONDUCTIVITY (SOLENOID WATER WILL HELP TO DISSIPATE THE DIPOLE POWER LOSSES).

TOTAL SOLENOID WEIGHT ~ 135 KG (300 LBS).

