

# Program Enhancements – 2013

(TRANS – Version 11.0)

## **TRANS – INPUT**

1. Mini Manual is embedded with input questions - see status bar.
2. Ops Data base file option is modified for easy selections.
3. Number of different frequencies are expanded from 7 to 26.
4. Protection statement to calculate the total current based on entered value of % current for each harmonics is added if calculated value is over 100%.
5. “Spacer Shape” entries (“Square Wave” and “Sine Wave”, both Full and End) have been added for internal ducts Primary and Secondary Windings, Page 2.
6. “Spacer Shape” entries (“Square Wave” and “Sine Wave”, both Full and End) have been added for External ducts, Cooling Duct, Page 2.
7. Internal Duct Effectiveness entry for Corrugated Ducts has been added in addition to duct effectiveness for dog bones.
8. Additional duct size of “.3125” was added for Primary and Secondary windings.
9. Uni-core 45 and 30 degree angle is added.
10. For “Strip” and “Cruciform” mitered designs, questions have been rearranged for easier selection.
11. For mitered designs, “Select Default” option for destruction factor has been added.
12. Option to allow different stacking factor to be applied to core weight has been added.
13. A “Help” button has been added for the “Toroid” core-type, providing assistance in entering core dimensions.
14. Specifications for PowerCore H 085-23 / 23JGSD085 (.003 in) core material added to Evans/DG, Uni-core, Strip and Cruciform core types.
15. End strip width removed option for round core is added.
16. Parallel and series connection for primary section winding is added.
17. Duct width fanned out 14 degree or 7 degree option ID added-Construction Page 1.
18. A “Help” button has been added for the “Shields” option, providing further details on the composition of and purpose for the shield option – Construction, Page 1.
19. A “Help” button has been added for “Ducted vs. Unducted” designs and oil rise calculation – Construction, Page 2.
20. “CEC Efficiency” option has been added for Extended Analysis (at 10%, 20%, 30%, 50%, 75% and 100%).
21. 2016 - DOE /Nema-Tp1 table of efficiency has been added to Extended Analysis.
22. New insulation property for Alconex Gold has been added.
23. NECRT option is added – NEC (Neutral Earthing Compensator) is combined with a resistor and an auxiliary transformer the NEC allows the customer to have a return path for fault current in a system. The resistor in circuit is to reduce the fault current to a manageable level for protection
24. Dual voltage option is added

25. Specification button to allow user to select template excel file to be merged with design master file.
26. Warning: Coil Ducting Is Recommended For KVA > Approx. 3/Phase

#### **TRANS-OUTPUT**

27. Impedance calculation (for core - type design only) has been modified for Series versus Parallel
28. Impedance calculation in OHMS has been added (Extended Analysis).
29. Zero Sequence – Resistance printout added (from Extended Analysis).
30. The weight of yoke weight is now separately calculated from the core weight.
31. Calculating and printing total % build including bulge factor
32. Calculating and printing space left in window
33. Permanent printout on output print for Doe/Nema-tp1 Efficiency
34. Electrical length and actual length is printed as part of the output print for assurances of selecting proper value for margin
35. Largest wire wrap thickness is used to calculate turn/layer.
36. M193PL8 was modified up to 12 different core sizes, use to be 3.