

**USask Master Specification Directions:** The master specifications are intended to be incorporated into the Consultant's final, project specific specification package. The project specific specifications are expected to include any and all sections or portions of sections (Part 1, Part 2, Part 3) that are required to create a fully executable project specification. USask Master Specs only provide information that USask **requires** be a part of the final specification package. Components or sections not included in the Master USask Specifications may still be required for a complete, well-designed project. **It is the consultant's responsibility to ensure all specifications match USask requirements. Any deviations or revisions to any section included in the master specifications requires written consent from the USask Engineering department. The consultant is liable for any omissions, errors, or incorrect equipment or components supplied to site.**

The Master Specifications shall be used in conjunction with USask's Design Guidelines. Any conflicts shall be brought to the attention of USask Engineering staff for clarification.

## **Part 1            GENERAL**

## **Part 2            PRODUCTS**

### **.1                Transformers**

- .1    Use transformers of one manufacturer throughout project.
- .2    Design
  - .1    Type: ANN.
  - .2    Windings: copper, three coils.
  - .3    3 phase, Kva, Volts, Input and output as per drawings, 60 Hz.
  - .4    Voltage taps: 4— 2.5%, 2 above, 2 below, standard.
  - .5    Insulation: Class 220, 80C temperature rise.
  - .6    Basic Impulse Level (BIL): standard.
  - .7    Hipot: standard.
  - .8    Sound level: 50 dB, standard. The transformer shall be isolated from the enclosure to reduce noise and vibration by means of anti-vibration pads.
  - .9    Impedance at 170°C: standard or as specified.
  - .10   Enclosure: EEMAC 2, drip-proof and sprinkler proof removable metal front panel.
  - .11   Mounting: floor or wall as noted on drawings.
  - .12   Transformers to be High Efficiency.

### **.2                Equipment Identification**

- .1    Provide equipment identification in accordance with Section 26 03 09 – General Electrical Provisions.
- .2    Lamicoid label size: 7.
- .3    Indicate equipment number. Where nameplate is not readily visible at floor level indicate capacity, primary and secondary voltages.

**.3 Accessories**

- .1 Isolation pads: Cooper B-Line #NNP-16/4x4 or Vibron #VSV 4"x4".

**Part 3 Execution**

**.1 Mounting**

- .1 Store in a clean, dry space. Maintain factory wrapping or provide an additional heavy canvas or plastic cover to protect units from dirt, water, construction debris and traffic.
- .2 Remove shipping supports only after transformer is installed and just before putting into service.
- .3 Mount dry type transformers up to 75 kVA as indicated. If unit is mounted on the wall or hung from the ceiling support with rod hangers and isolate with rubber washers.
- .4 Mount dry type transformers above 75 kVA on floor complete with anti-vibration pads.
- .5 Provide two stacked pads at each corner of the transformer. Loosen isolation pad bolts until no compression is visible.

**.2 Connections**

- .1 Make primary and secondary connections indicated on wiring diagram with flexible connections of liquid tight flexible conduit or Teck cable.
- .2 Use two-hole compression connectors for all connections
- .3 Energize transformers immediately after installation is completed where practicable.

**.3 Arc Flash Labeling**

- .1 Provide arc flash labels as specified on drawings.

END OF SECTION