

**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            Product**

### **.1                Support Channels**

- .1        U shape, size 41 x 41 mm, 2.5 mm thick, surface mounted, suspended or set in poured concrete walls and ceilings as indicated.
- .2        Threaded rod hangers must be galvanized.
- .3        Plastic anchors are NOT permitted.
- .4        Tie wraps used for supporting are not acceptable.
- .5        Acceptable channel manufacturers: Tuffstrut-Pilgrim or equivalent.

### **.2                Fasteners**

- .1        Acceptable fasteners:
  - .1        Alex-Drill Plug - size #12, code - 15/00/1238.
  - .2        Hilti-HKD.
  - .3        Hilti-Kwik-Bolts.
  - .4        Beam clamps.
- .2        Self-drilling (Tek type) or drywall screws will not be accepted for fastening of electrical products.

### **.3                High Voltage Cable Support**

- .1        Acceptable clamps: Koz Cable Cleat, 107 mm x 61 mm.

## **Part 3            Execution**

### **.1                Installation**

- .1        Coordinate fastening to block and concrete with the U of S

- .2 Concrete inserts and toggle bolts will not be acceptable.
- .3 Secure surface mounted equipment with twist clip fasteners to inverted T-bar ceilings. Ensure that T-bars are adequately supported to carry weight of equipment specified before specification.
- .4 Support equipment, conduit or cables using clips, spring loaded bolts, cable clamps designed as accessories to basic channel members.
- .5 Fasten exposed conduit or cables to building construction or support system using straps.
  - .1 One-hole galvanized steel straps to secure surface conduits and cables 50 mm and smaller.
  - .2 Two-hole galvanized steel straps for conduits and cables larger than 50 mm.
  - .3 Beam clamps to secure conduit to exposed steel work.
- .6 Suspended support systems.
- .7 Support individual cable or conduit runs with 6 mm diameter threaded rods and spring clips.
- .8 Support 2 or more cables or conduits and cable tray on channels supported by minimum 10 mm diameter threaded rod hangers where direct fastening to building construction is impractical. Install trapeze hangers minimum 3 metres on centre and at elbows.
- .9 For surface mounting of two or more conduits use channels at spacing as required by C22.1.
- .10 Provide metal brackets, frames, hangers, clamps and related types of support structures where indicated or as required to support conduit and cable runs.
- .11 Ensure adequate support for raceways and cables dropped vertically to equipment where there is no wall support.
- .12 Do not use wire lashing or perforated strap to support or secure raceways or cables.
- .13 Do not use supports or equipment installed for other trades for conduit or cable support except with permission of other trade and approval of Consultant.
- .14 Install fastenings and supports as required for each type of equipment cables and conduits, and in accordance with manufacturer's installation recommendations.
- .15 Use double nuts and lock washers on threaded rods and where subject to loosening from vibration.

END OF SECTION