

Acknowledged Sheet Metal Scope of Work



**Toronto Sheet Metal Contractors
Association**



MCAT

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Al Prowse, MCAT President

TSMCA

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Neil Bell, TSMCA President

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SECTION 1 – WORK AND EQUIPMENT SUPPLIED AND INSTALLED

Sheet Metal and Air Handling Contractors shall include in their bid all work as defined by these Technical Rules and contained in the mechanical sections of the specifications, in the mechanical drawings and in such other drawings specifically referred to in the mechanical drawings and/or in the mechanical specifications.

Where equipment other than specified is supplied and causes extra cost to the Sheet Metal and Air Handling Contractor, then this shall be an extra to the bid.

Alternates, other than specified, see Item 3.3.

- 1.1 **Access Doors** – In ducts and plenums that provide access to equipment installed in air stream.
- 1.2 **Access Doors** – Other than in ductwork – access doors in walls, partitions, ceilings, etc. are the responsibility of the Contractor that supplies the equipment to be serviced.
- 1.3 **Acoustic Insulation** – See Internal Insulation, Item 1.31.
- 1.4 **Air Handling Units** – Not containing coils, including fan heads separated by a flexible joint. Including dismantling and/or alterations to existing air handling units, not containing coils. See Air Handling Units, Item 3.2.
- 1.5 **Air Filters and Wash Tanks** – **ALL** throwaway, cleanable, replaceable media, mechanical oil, electrostatic and activated carbon type filters which are free standing. Filter wash tanks as specified, for all filters, regardless of who supplies the filters. See Filter Gauges, Item 1.23. See Air Filters and Filter Gauges, Item 3.1.
- 1.6 **Air to Air Heat Recovery Equipment** – All packaged equipment not requiring external piping.
- 1.7 **Air Volume Control Boxes** –**ALL** – Complete with coils and actuators or operators specified to be supplied by the box manufacturer.
- 1.8 **Boiler Breechings** – All boiler breechings, lined or unlined, smoke or vent stacks for boilers and/or heaters, to a maximum thickness of ¼” steel plate. Setting of I.D. Fans – See Item 2.2, Other exclusions – See Item 3.26.
- 1.9 **Cash Allowance** – When specified as an allowance in lieu of work included in Section 1. See Cash Allowances, Item 3.5.
- 1.10 **Casings** – Shop fabricated and field assembled casings and plenums for built up units when fabricated in sheet metal.
- 1.11 **Cladding Metal** – When applied to external insulation of work and equipment in Section 1. See Cladding Metal, Item 3.6. See External Insulation, Item 3.20.
- 1.12 **Clean Up** – Clean up trade generated debris in a timely manner with a written notice to be given prior to the mechanical contractor performing a clean-up that will generate a charge back, Item 3.11.

- 1.13 **Composite Fume Pipes** –Whether above or below ground level, including sonoair duct, pre-cast concrete, plastic, careyduct, cast iron, asbestos, transite, tile and flex duct when carrying air.
Note: This does not include poured concrete ducts or masonry ducts carrying air. See Composite Fume Pipes, Item 3.9. See Gas Pipe Venting Enclosure, Item 3.27.
- 1.14 **Concrete Bases and/or Curbs** – For Plenums, composite fume pipes, ducts and equipment included in this Section. See Concrete Bases and/or Curbs, Item 3.10.
- 1.15 **Drip and Splash Pans** – Where material and method of fabrication is specified.
- 1.16 **Drawings** – “As built” for ductwork air handling equipment and mechanical items in the air stream and sheet metal only interference drawings when required by mechanical drawing note or mechanical specifications See Drawings, Item 3.15.
- 1.17 **Ducted Collection Systems and/or Equipment** – Including machine hoods, ductwork, gates, dampers, sweeps, collectors, stands, collector boxes, fans and motors. See Collection systems, Item 3.8.
- 1.18 **Ducts** – All ductwork fabricated in metal, plastic or any other composition when used for carrying air, including rigid and flexible duct, but excluding “compressed” air piping. Including dismantling and/or alterations to existing ductwork, where visible by site inspection or when shown on the mechanical drawings.
- 1.19 **Electric Coils** – Installed in the ductwork complete with specified controls. See Electric Coils – Control, Item 3.18.
- 1.20 **Excavation and Backfill** – Only as required to complete the ductwork and/or composite fume pipe installation for Section 1.
- 1.21 **Fans** – All free standing complete with back draft shutters, guards, belt and pulleys, including dismantling and/or alterations to existing fans. See Air Handling Units. Item 3.2.
- 1.22 **Fan and/or Equipment Supports** – All rod hangers, metal or wood platforms or supports where specified for equipment supplied and installed in Section 1. See Fan and/or Equipment Supports, Item 3.21.
- 1.23 **Filter Gauges** – For filters supplied under Section 1.
- 1.24 **Fire Related Dampers** – **All fire, fire/smoke, smoke dampers for design built and I/O projects. All other projects - where** clearly shown on the mechanical drawings including fireproofing means from grille or diffuser to fire damper. See Fire Dampers, Item 3.22. See Fireproofing, Item 3.23.
- 1.25 **Flexible Connections** – For all equipment supplied in Section 1 and for all connections to ductwork.
- 1.26 **Furnaces, Ventilators and Unit Heaters** – See Warm Air Furnaces, Unit Ventilators and Unit Heaters, Item 1.43.
- 1.27 **Grilles, Registers and Diffusers** – Whether for supply or exhaust air, air circulating or relief air and including grilles, registers or diffusers attached to ductwork or installed in partitions, walls, ceilings or doors and for non-ducted systems if shown on the mechanical drawings. See Grilles for Non-ducted Systems, Item 3.28.

- 1.28 **Hoods and Canopies** – Fume exhaust canopies including washdowns contained therein complete with filters and lights. Fabricated in metal or plastic or any other composition, not including external piping and drains. See Washdown Systems, Item 3.43
- 1.29 **Induction Units** – Not requiring coils in their operation, including enclosures and supporting frames.
- 1.30 **Isolation** – All isolation for equipment supplied and installed in Section 1. See Floating floors, Item 3.25.
- 1.31 **Internal Insulation** – All internal insulation in the air stream for any plenum casing, air shaft or duct regardless of composition.
- 1.32 **Louvres and Cowls** – Storm louvers and cowls where type, size and method of construction are specified and/or shown in mechanical drawings. Storm louvers and cowls shown but not specified by type or model will be provided to the bidder's specification.
- 1.33 **Marine Lights** – Where specified or shown in ducts or built up casings supplied and installed in Section 1. See Marine Lights, Item 3.33.
- 1.34 **Painting and Identification Labels** – Only pertaining to work and equipment in Section 1.
- 1.35 **Permits** – As required for material handling. See Permits, Item 3.35.
- 1.36 **Chimney/Pressure "A" Vent for Diesel Generators.**
- 1.37 **Roof Ventilators** – All roof hoods and ventilators.
- 1.38 **Service Platforms, Catwalks, Gratings and Ladders** – if the equipment supplied by this section requires service platforms and the service platforms are specified to be provided by the mechanical division, Item 3.38
- 1.39 **Silencers** – All custom or factory built silencer units other than factory built Air Handling Units of Item 3.2.
- 1.40 **Solar Heating and Cooling** – All air to air solar heating equipment complete with specified controls and ensure they coordinated with the building's system. See Solar Heating and Cooling Appurtenances, Item 3.36.
- 1.41 **Starters and Disconnects** – Individually mounted starters and disconnects for equipment in Section 1. See Starters and Wiring, Item 3.39.
- 1.42 **Variable/Frequency Drives** – only if they are specified for equipment supplied in this section and to be *provided by the equipment manufacturer*, Item 3.41
- 1.43 **Warm Air Furnaces, Unit Ventilators and Unit Heaters** – Where ductwork is connected to warm air furnaces or warm air heaters, the furnaces or heaters complete with Appurtenances. See Warm Air Furnaces, HVAC Units, Item 3.42

SECTION 2 – SERVICES SUPPLIED

Sheet Metal and Air Handling Contractors shall include in their bid all services as defined by these Technical Rules and contained in the mechanical sections of the specifications, in the mechanical drawings and in such other drawings specifically referred to in the mechanical drawings and/or in the mechanical specifications.

- 2.1 **Balancing** – Of air quantities and submitting test data.
- 2.2 **Barometric Dampers and Induced Draft Fans** – Forming part of a boiler breeching will be set.
- 2.3 **Booster Coils** – Installation where a booster coil is inserted in the duct and not supported separately.
- 2.4 **Cash Allowances** – When specified as an allowance in lieu of services included in Section 2.
- 2.5 **Cutting and Patching, Schedule of Openings For** – A schedule shall be provided at time of bidding indicating number, type and size of floor, wall or ceiling openings required. Any opening required but not included in the schedule will be provided by the bidder at his expense. See Cutting and Patching, Item 3.13.
- 2.6 **Motorized Dampers** – Offload, handle and install. See Motorized Dampers, Item 3.34.
- 2.7 **Removal and/or Dismantling of Items** – All items covered in Section 1.

SECTION 3 – DECLARATION OF WORK AND EQUIPMENT NOT SUPPLIED OR INSTALLED

Sheet Metal and Air Handling Contractors shall not include in their bid the following:

- 3.1 **Air Filters and Filter Gauges** – Part of a factory built air handling unit, not supplied under Section 1.
- 3.2 **Air Handling Units**
 - on a common factory fabricated base
 - containing coils
 - humidification units or apparatus, including tanks, eliminators, sprays, etc.
 - dehumidification units or apparatus, including tanks, eliminators, sprays, etc.
 - fan heads to air handling units containing coils
 - washer and appurtenances
 - Kathabar Units
 - Silencers
 - Casings shown or specified as part of a factory built unit containing coils or any of the above
 - Mixing boxes containing dampers and /or filters shown or specified as part of a factory built unit containing coils or any of the above
 - Dismantling and/or alterations to existing units, containing any of the above
- 3.3 **Alternates, Other Than Specified** – Where equipment other than specified is supplied and causes extra cost to the Sheet Metal and Air Handling Contractor, then this shall be extra to the bid.
- 3.4 **Beltguards, Belts and Pulleys, etc.** – For equipment of Section 3.
- 3.5 **Cash Allowances** – Not included for work and/or services outlined in Section 3. See Cash Allowances, Item 1.9 & 2.4
- 3.6 **Cladding Metal** – When applied to work and equipment in Section 3.
- 3.7 **Coils, stand-alone Other Than Electric Installed in Ductwork** – Supplying and/or setting, including supports or stands for same.
- 3.8 **Collection Systems** – Vacuum message conveying.
- 3.9 **Composite Fume Pipes** – Masonry and/or poured concrete.
- 3.10 **Concrete Bases and/or Curbs** – For equipment supplied or installed under Section 3. See Floating Floors, Item 3.25.

- 3.11 **Clean Up** – Unauthorized see 1.12
- 3.12 **CO₂ System**
- 3.13 **Cutting and Patching** – See Cutting and Patching, Schedule of Openings For, Item 2.4.
- 3.14 **Drain Piping** – From ducts, hoods, etc.
- 3.15 **Drawings** – Interference and/or redesign. See 1.16
- 3.16 **Duct Thermometers and/or Sensors.**
- 3.17 **Electric Heaters** – Not in air stream.
- 3.18 **Electric Coils - Control For** – Controls when specified by others. See Electric Coils, Item 1.19.
- 3.19 **Eliminators.**
- 3.20 **External Insulation** – See Cladding Metal, Item 1.11.
- 3.21 **Fan and/or Equipment Supports** – For items in Section 3.
- 3.22 **Fire Dampers** – Not clearly shown on mechanical drawings.
- 3.23 **Fireproofing** – When applied externally to ductwork or enclosures around ductwork except as defined in Item 1.24.
- 3.24 **Firestats.**
- 3.25 **Floating Floors.**
- 3.26 **Forced Draft Fans** –Or mechanical controls for boiler.
- 3.27 **Gas Pipe Venting Enclosure.**
- 3.28 **Grilles for Non-Ducted Systems** – Sill, wall and ceiling grilles or diffusers part of the air distribution from induction units, force flow units or unit heaters containing coils unless shown on the mechanical drawings. See Grilles, Registers and Diffusers, Item 1.27.
- 3.29 **Induction Units** – Containing coils including enclosures and supporting frames for same.
- 3.30 **Incinerator Breechings.**
- 3.31 **Isolators** – For equipment supplied and/or installed under Section 3.
- 3.32 **Loss or Damage to Equipment** – For equipment supplied under Section 3.
- 3.33 **Marine Lights** – For equipment in Section 3. Switching, controls and all wiring for Marine Lights of Sections 1 and 3.
- 3.34 **Motorized Dampers** – If manufactured incorrectly the handling and loading from their current site location. Setting of damper motors, brackets or linkages.

- 3.35 **Permits** – Except as required for material handling. See Permits, Item 1.35.
- 3.35 **Repairs or Replacement Parts** – Dismantling, handling, reconditioning, adjustment or alterations for any equipment under Section 3.
- 3.36 **Solar Heating and Cooling Appurtenances** – Solar panels containing coils requiring external piping. External piping system, pumps and wiring.
- 3.37 **Specified Equipment** – Where equipment other than specified is supplied and causes extra cost to the Sheet Metal and Air Handling Contractor (i.e. space limitations, performance of unit for balancing, etc.), then this shall be extra to the bid.
- 3.38 **Service Platforms, Catwalks, Gratings and Ladders** - See item 1.38
- 3.39 **Starters and Wiring** – Motor control centre and/or modular starter panel board components other than starters and panels which are supplied as part of equipment of Section 1. Power, light or control wiring of any kind. See Starters and Disconnects, Item 1.41.
- 3.40 **Unit Ventilators or Unit Heaters** – Without ductwork attached, supplying or setting; supports of stands for same.
- 3.41 **Variable/Frequency Drives** – Except as described in Item 1.42
- 3.42 **Warm Air Furnaces, HVAC Units** – Factory assembled, used for both heating and cooling which have direct expansion coils as an integral part or directly attached thereto. Furnaces or warm air heaters having “nozzles” only.
- 3.43 **Washdown Systems**
- Other than contained within a hood or canopy
 - External piping and drains for all systems
- 3.44 **Insulation** – Asbestos removal and re-insulation.

End of Sheet Metal and Air Handling Scope.