

# The Medical Center Company Mechanical System Installation Requirements Engineering Coordination Form 1

*Instructions: This form is to be downloaded and initiated by Customer, completing as much information as possible in Section 1 prior to initial submission to MCCo. MCCo will review and complete Section 2 information based upon this initial Customer information and return the form to the Customer. Customer will then complete remaining items in Section 1 and send to MCCo for final review and adjustment of and/or completion of MCCo items. Upon final review and signature by MCCo's authorized representative, a copy of the form will be retained by MCCo and a copy will be returned to Customer and will become a record of the mechanical system coordination unless modified in writing by both parties. Customers should not proceed with work required to be coordinated with MCCo before completing the Customer input section of this form in sufficient time to allow coordination to take place, submitting the form to MCCo and receiving a completed and signed response from MCCo. Thank you in advance for your cooperation in documenting this important information. For a copy of this form in Microsoft Word format, please contact MCCo.*

*Please submit this form to:*

*The Medical Center Company  
2250 Circle Drive  
Cleveland, OH 44106-2664*

*Attention: Ed Christiansen  
Phone: (216) 368-4256 x 16  
E-mail: edc@mcco.org*

## **SECTION I - TO BE COMPLETED BY CUSTOMER:**

*Note: Complete as many items as possible prior to initial submission to MCCo for completion of Section 2. Final submission to MCCo should include completion of all items.*

Customer: \_\_\_\_\_

Project title: \_\_\_\_\_

Project location: \_\_\_\_\_

Approximate building square footage: \_\_\_\_\_

Number of floors total: \_\_\_\_\_

Estimated building height above grade: \_\_\_\_\_

Estimated height above grade to top of highest CHW using device: \_\_\_\_\_

Approximate date MCCO utilities will be required: \_\_\_\_\_

Customer contact information:

Name & Title: \_\_\_\_\_

Phone: \_\_\_\_\_

E-mail: \_\_\_\_\_

Customer's Design Engineer Information:

Firm Name: \_\_\_\_\_

Firm Address: \_\_\_\_\_  
\_\_\_\_\_

Contact Name: \_\_\_\_\_

Phone: \_\_\_\_\_

E-mail: \_\_\_\_\_

CUSTOMER STEAM & STEAM CONDENSATE COORDINATION INFORMATION:

Peak steam load to be provided by MCCo: \_\_\_\_\_ lb/hr

Estimated annual steam consumption: \_\_\_\_\_ lb/yr

Steam pressure to be used in building (after Customer reducing station): \_\_\_\_\_ psig

Note: See MSIR for piping and valving rating requirements.

Normal condensate return peak gpm returned \_\_\_\_\_ gpm

Note: Per MSIR, normal condensate peak gpm returned to MCCo should not exceed 200% of system peak steam flow rate.  $200\% \text{ peak flow rate} = (2.0 \times \text{system peak lb/hr} \times 1 \text{ hr}/60 \text{ min}) / 8.346 \text{ lb/gal} = \text{gpm}$ . Total should include only condensate pumps pumping back into MCCo return system. For duplex pump units where both pumps can operate indicate normal peak flow for only one pump operating.

Maximum condensate return peak gpm returned \_\_\_\_\_ gpm

Note: Maximum condensate peak gpm returned to MCCo is with both pumps in duplex sets running if both will be allowed to run simultaneously in controls.

Selected condensate return pump discharge pressure \_\_\_\_\_ psig

Note: Select pressure only after reviewing with MCCo. See also MSIR Installation Requirements for required throttling valves, check valves, gauges, etc. at condensate return pumps.

CUSTOMER CHILLED WATER COORDINATION INFORMATION:

Peak chilled water load to be accommodated by MCCo: \_\_\_\_\_ tons

Customer secondary system design entering CHWS temperature: \_\_\_\_\_ °F

Note: 45°F minimum, 46°F recommended

Customer secondary system design leaving CHWR temperature: \_\_\_\_\_ °F

Note: 61°F minimum

Customer secondary pump information:

Number of pumps: \_\_\_\_\_

% of system capacity each: \_\_\_\_\_%

Flow rate each: \_\_\_\_\_gpm

Feet of head each: \_\_\_\_\_ft hd

Flow control: \_\_\_\_\_

(e.g. VFD, constant speed - ride curve, constant speed - constant volume, etc.)

Customer air device chilled water control valve type: \_\_\_\_\_

(e.g. 2-way, 3-way, none) Note: See MSIR for minimum 2-way valve shut off differential.

Customer digital controls manufacturer: \_\_\_\_\_

Note: See MSIR for feedback signals required to be provided by Customer to MCCo control system.

SECTION I INFORMATION SUBMITTED BY:

\_\_\_\_\_  
Customer Contact's Signature Date of 1st Submission

\_\_\_\_\_  
Customer Contact's Signature Date of 2nd Submission

In completing this form, the Customer and the Customer's Mechanical Design Engineer represent they have read and understands the requirements of "The Medical Center Company Mechanical System Installation Requirements" (MSIR), version \_\_\_\_\_, available at <http://www.mcco.org/proceed.htm>.

**SECTION II - TO BE COMPLETED BY MCCo:**

*Note: Complete as many items as possible prior to return to Customer for completion of Section I.*

MCCo Contact Information:

Name & Title: \_\_\_\_\_

Phone: \_\_\_\_\_

E-mail: \_\_\_\_\_

Approximate Date MCCO Utilities can be Supplied: \_\_\_\_\_

**MCCo STEAM & STEAM CONDENSATE COORDINATION INFORMATION:**

High End of Steam Pressure Range anticipated available at site: \_\_\_\_\_ psig

Low End of Steam Pressure Range anticipated available at site: \_\_\_\_\_ psig

Condensate Return Pressure Required at return header connection point: \_\_\_\_\_ psig

Steam piping size being brought into building by MCCo: \_\_\_\_\_ in.

Steam pumped condensate piping size being brought into building by MCCo: \_\_\_\_\_ in.

Will gravity steam condensate be brought into building by MCCo? \_\_\_\_\_

If yes, what size? \_\_\_\_\_ in. and what pressure? \_\_\_\_\_ psig

Size drip trap outlet connection upstream of meter to be routed to flash tank by customer: \_\_\_\_\_ in.

Note: this drip trap assembly is provided by MCCo.

Planned steam metering orifice size: \_\_\_\_\_ in.

Dedicated 120 volt metering control circuit required by Customer? \_\_\_\_\_

**MCCo CHILLED WATER COORDINATION INFORMATION:**

Chilled Water piping size being brought into building by MCCo: \_\_\_\_\_ in.

Primary system peak flow rate by MCCo for Customer tons and  $\Delta T$ : \_\_\_\_\_ gpm

Note: Primary flow = (tons x 24)/primary  $\Delta T$ , where primary  $\Delta T$  = Customer return temperature - MCCo primary CHW supply temperature

Primary system building pressure drop anticipated by MCCo (from building entry point to building exit point on primary side only): \_\_\_\_\_ psig

Note: Normal allowance per MSIR is 5 psig.

Estimated control valve design shut-off differential pressure requirement: \_\_\_\_\_ psig

Note: This value should be used in the Customer's temperature control valve specification for the difference between the chilled water supply and return line pressures which the control valve actuator is anticipated to have to overcome to close completely.

Chilled water meter make, size and model: \_\_\_\_\_

Dedicated 120 volt metering control circuit required by Customer? \_\_\_\_\_

Date Section I Customer's information received by MCCo: \_\_\_\_\_

Date Section I Customer's resubmitted information received by MCCo: \_\_\_\_\_

SECTION II MCCo INFORMATION PREPARED BY:

\_\_\_\_\_  
MCCo Authorized Representative's Signature

\_\_\_\_\_  
Date of 1st Response

\_\_\_\_\_  
MCCo Authorized Representative's Signature

\_\_\_\_\_  
Date of Final Response

END OF MECHANICAL SYSTEM INSTALLATION REQUIREMENTS - ENGINEERING FORM 1