MediTrac®
Flexible Medical Gas Piping by OmegaFlex®

CASE STUDY
MediTrac® in Hospital Renovation

- Saves Time
- Saves Money
- Increases Installation Options

Product: **MediTrac®** Flexible Medical Gas Piping System

Location: Melrose Wakefield Hospital, Melrose, MA

Until the innovative new product, Corrugated Medical Tubing (CMT), was adopted into the Health Care Facilities Code NFPA 99 – 2018; installation, retrofits and repairs of medical gas piping systems were confined to the rigid installation practices of hard-drawn seamless copper pipe.

MediTrac, the world's first flexible medical gas piping system, bends to a facility's needs, resulting in shorter downtimes. MediTrac decreases installation time by greatly reducing the number of fittings, potential leak points and chance of contamination during installation.

Project Overview:

OmegaFlex® the makers of MediTrac® partnered with Acute Medical Gas Services from Goffstown, NH on the first US based BETA site installation at Melrose-Wakefield Hospital in Melrose, Massachusetts. The project included the relocation of an existing zone valve box from the patient care area to a designated area outside of the patient care area as required per NFPA 99.

Installation Overview

The new zone valve box, containing shutoffs for both a vacuum and oxygen line, was located on the other side of a corridor beyond the fire stop roughly 65 feet away. For comparison purposes the vacuum line was done in 1-1/4″ hard-drawn copper pipe and the oxygen lines were done in 1″ MediTrac CMT. All piping runs were done in parallel taking the same route between connection points. In total approximately 75′ of piping was used for each run (150′ total per system).

The piping run included a vertical rise out of the new zone valve box followed by a series of 90° and 45° bends to the 65′ straight run down the corridor. The piping then turned 90 degrees across the corridor and was tied into the existing supply and distribution lines. Both piping systems utilized the same existing hanger supports down the 65' corridor run.

New zone valve box, with Meditrac installed for oxygen.

Summary of Piping System Connections

Medical Vacuum Brazed Hard-drawn copper pipe details: 2 runs total

- 150′ of hard - drawn K copper pipe
- 28 fittings with a total of 56 brazed joints
  - 12 – 90° elbows
  - 4 – 45° elbows
  - 12 couplings

Medical Oxygen MediTrac® CMT details: 2 runs total

- 150′ of MediTrac® CMT
- 8 fittings total with 4 brazed joints
  - 4 MediTrac® CMT fittings
  - 2 couplings
  - 2 axial swaged hard-drawn copper pipe connections

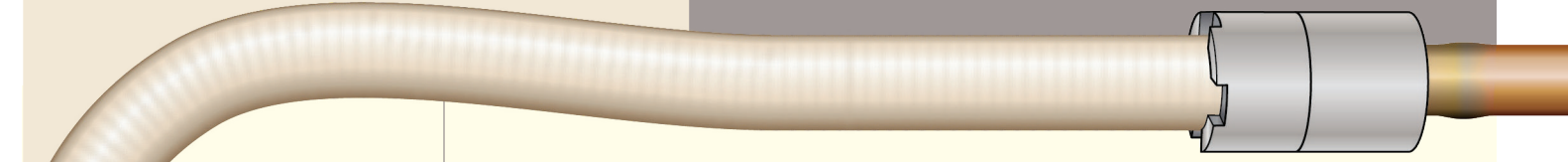
(continued on back)

OmegaFlex®
Omega Flex, Inc. • 451 Creamery Way • Exton, PA 19341
1-800-671-8622
ISO 9001 Registered Company
MTUS-510 09/18

MediTrac®
Flexible Medical Gas Piping by OmegaFlex®

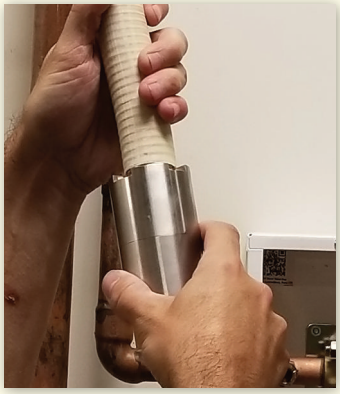
CASE STUDY

MediTrac® in Hospital Renovation



(continued from front)

MediTrac cuts the same as hard-drawn copper pipe but navigates confined spaces and corners without the hot-work.



Termination of MediTrac CMT piping is easy with the patent pending MediTrac fitting.

As with all rigid piping installations elbows are required when turning corners and changing direction to route around, above, or below obstacles. MediTrac CMT is able to bend around corners and flex to avoid potential obstacles. Resulting in no intermediate connections.

In this case two 1″ MediTrac CMT lines were pulled together, much like pulling wire or cabling through a hole in the fire wall down the entire length of the corridor in roughly 15 minutes. An additional 30 minutes later the piping rough in was complete and ready for fitting connections.

Labor Man Hours per System

Overview of man hours and comments received from Acute Medical Gas Services

Medical Vacuum Brazed Hard-drawn copper pipe details

- 64 total man hours to tie in the new valve box and prepare for the final tie in to existing line.

Medical Oxygen MediTrac® CMT details

- 12 total man hours to pull and connect,
  - Note: Prefab of a T for an alarm sensor and reducing couplings to make the final tie-in required. So, in theory, you could subtract several hours from this time.

Overall the use of MediTrac® resulted in a 79% reduction in joints for the piping system and a minimum of an 82% reduction in labor man hours. Additional benefits of the MediTrac® system as noted by Acute Medical include:

- Ease of transport to the job site
- Reduced cost in support items such as brazing rods and purge gas
- Contamination possibility is greatly reduced
- Lack of intermediate joints and the systems flexibility resolve fire prevention during difficult brazing situations unlike hard drawn copper systems (wire, ducts with dust inside, walls, gas piping, etc.)