

# VibrAlign Laser Alignment Tips

## INSTALLATION of IN-FLOOR REFERENCE MONUMENTS

Monuments are utilized for establishing a reference line or datum. The monuments are sometimes referred to as plugs and the datum may be called a plug-line. The monuments are typically installed in the concrete floor of the facility with the need for a datum. A datum is a line that is used as a reference. The datum is a straight line between two monuments that are precisely marked. The datum is utilized with laser alignment systems to measure deviations relative to this fixed, straight reference line.

VibrAlign, Inc. utilizes two-inch diameter brass monuments to establish a datum. A datum is typically established as a machinery centerline, an offset centerline or as reference line that is perpendicular to the centerline.

Installation of the brass monuments is a relatively simple process. Tools necessary for the installation include a Hammer-Drill with three masonry drill bits and a chisel bit, a vacuum or blower, and high strength (3000 psi) grout or epoxy. The three masonry bits needed are as a ¼" bit, a 1" bit and a 2¼" core drill bit.

The procedure for installation is as follows:

1. Drill a ¼ " hole approximately three inches deep at the pre-marked monument location. This will serve as a pilot hole for the additional drilling.
2. Utilizing the ¼ " hole as the pilot, core dill with the 2¼" bit to a depth of approximately one-half of an inch.
3. Again utilizing the ¼" hole as a pilot, Use the 1" bit and drill to a depth of approximately three inches.
4. The 2¼ " core drill may not completely displace. If it does not, use the chisel bit to clean this area as necessary to accept the head of the monument below the existing floor level.



5. Vacuum or blow away all residues.
6. Mix grout or epoxy as per manufacturer guidelines.
7. Fill the cavity such that the mixture fills the 2¼" portion slightly.
8. Install the monument to the desired level below the existing floor level.
9. As the grout or epoxy solidifies, smooth the edge around the monument to make a nice transition between the outer edge of the monument and the existing floor.

Note: Epoxy and grout have both been successfully utilized to install monuments. It is recommended that the manufacturer specified cure time be adhered to before scribing, punching, walking on or otherwise potentially displacing the monuments.

