

Use a rotary hammer drill in the percussion mode with the correct size carbide drill bit meeting the requirements of ANSI Standard B212-15 to drill the hole perpendicular to the concrete surface and to the required depth.


Use a hand pump, compressed air or vacuum to remove debris and dust from the drilling operation.


If installation is through a fixture, position the fixture over the hole and install the anchor through the hole in the fixture. Using a hammer, drive the anchor into the hole insuring that it is installed to the minimum required embedment depth, hnom.


Install the washer and nut on the projecting thread and tighten the nut to the required installation torque value, Tinst, using a torque wrench.


| INSTALLATION SPECIFICATIONS | SYMBOL | UNITS | Nominal Anchor Diameter, in. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 1/4" | 3/8' | 1/2" |
| Anchor diameter | $\mathrm{d} a\left(\mathrm{~d}_{0}\right)$ | in. | 1/4" | 3/8" | 1/2" |
| Minimal diameter of fixture hole clearance | $\mathrm{d} h$ | in. | 5/16" | 7/16" | 9/16" |
| Nominal drill bit diameter | dbit | in. | 1/4" | $3 / 8^{\prime \prime}$ | 1/2" |
| Minimum nominal embedment depth | hnom | in. | 1-3/4" | 2-1/2" | 2-1/2" |
| Minimum effective embedment depth | hef | in. | 1-1/2" | 2-1/4" | 2-1/4" |
| Minimum hole depth | ho | in. | $2^{\prime \prime}$ | 2-3/4" | 2-3/4" |
| Installation torque | Tinst | $\mathrm{ft}-\mathrm{lb}$ | 8 | 25 | 35 |
| Minimum concrete thickness | $\mathrm{h}_{\text {min }}$ | in. | $4 \prime$ | 4 " | 6 " |

## Length Code Identification System

| Length ID marking on <br> threaded stud head | A | B | C | D | E | F | G | $\mathbf{H}$ | I |  |
| :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Overall <br> anchor <br> length, <br> lanch, <br> (inches) | Up to but <br> not <br> including | $2^{\prime \prime}$ | $2-1 / 2^{\prime \prime}$ | $3^{\prime \prime}$ | $3-1 / 2^{\prime \prime}$ | $4^{\prime \prime}$ | $4-1 / 2^{\prime \prime}$ | $5^{\prime \prime}$ | $5-1 / 2^{\prime \prime}$ | $6^{\prime \prime}$ |

