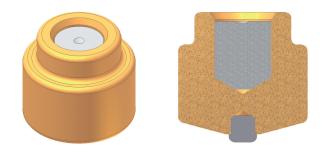
# Welding instructions BETEK TungStuds<sup>®</sup>



# The process:

In drawn arc stud welding, an arc is drawn between a TungStud and the working surface, melting some of the metal on both parts. At the end of the welding time the TungStud is plunged into the weld pool, the welding current is switched off and the weld pool solidifies.

# State of the welding surface:

| appropriate    | inappropriate         |  |
|----------------|-----------------------|--|
| bright metal * | hot-dip galvanised    |  |
| rolling skin   | loose layers of scale |  |
| welding primer | protective coating    |  |
| surface rust   | heavy corrosion       |  |

\*For best welding results we recommend bright metal surfaces.

#### Characteristics of a good welded joint:

closed welding bead

shiny blue-grey bead

consistent "welding star" around the TungStud

no welding splash

no porous bead surface

#### **Current source:**

400V 63A three-phase current

## Settings of the arc welding machine as a function of the diameter:

| protrusion [mm]                | TungStud ø<br>[mm]                                    |
|--------------------------------|---|
| start<br>welding process       | 16<br>19  |
| lift [mm]                      | 22  |
| plunge <=<br>protrusion + lift | Recommend<br>0 0 0 0<br>0 0 0 0<br>0 0 0 0<br>0 0 0 0 |

finished welding

| TungStud ø<br>[mm] | current<br>[A] | welding time<br>[s] | lift<br>[mm] | protrusion<br>[mm] |
|--------------------|----------------|---------------------|--------------|--------------------|
| 16                 | 1200           | 0,6                 | 3            | 4                  |
| 19                 | 1300           | 0,7                 | 3            | 4                  |
| 22                 | 1400           | 0,8                 | 3            | 4                  |

## Recommended welding pattern:





<u>Caution!</u> The welding machine should be operated only by qualified staff. We recommend the use of adequate security working clothes. Please adhere strictly to the operating instructions supplied by the welding machine manufacturer.

