



Architectural Ironmongery

This is one of a series of design guides provided to assist in the specification and manufacture of key touch surface components for use in healthcare and other environments where hygiene is important. Copper alloys reduce contamination by destroying harmful bacteria, fungi and viruses, thus reducing the risk of transmission of infection.

1. Lever handle or turn handle

- ◆ If replacing existing door hardware consider matching the dimensions or discuss upgrading the design with staff.
- ◆ The type and strength of internal springing should be appropriate to existing latch equipment or defined by the client if newly installed.
- ◆ If round, the **handle diameter** should provide sufficient strength and be comfortable to the hand; 19 mm is a reasonable minimum.
- ◆ The **finger gap** - between the door and handle – should be no less than approximately 45 mm to allow the fingers to close around the handle.
- ◆ **Length** should be a minimum of 95 mm with the end of the lever turned towards the door to minimise the risk of catching clothing.
- ◆ The **ergonomics** of the design should be smooth in order to facilitate cleaning.
- ◆ Material chosen is likely to be in the form of either:
 - extruded bar or tube, depending upon fabrication capabilities
 - die cast or hot stamped to near net shape.



If a rose, back plate or escutcheon is required, this should be cast, stamped or machined from a colour matched alloy.

- ◆ The **colour** should have sufficient contrast with the door material and be highly visible. Colours of readily available alloys are indicated below. The following is not an exhaustive list of antimicrobial alloys and others are under development; take advice from CDA or your supplier.

| | Pink or Red | | Brown | | Yellow | | | | Silver | |
|-------------|-------------|---------------|-----------------|-----------------|--------|--------|-------------|-----------|---------------|---------------|
| Name | Copper | Gilding Metal | Phosphor Bronze | Phosphor Bronze | Brass | Brass | Brass | Brass | Nickel Silver | Copper Nickel |
| Type | W | W | W | C | W | W | C | H | W | W |
| BS | C106 | CZ101 | PB104 | PB1 | CZ106 | CZ108 | CZ121 | CZ122 | NS106 | CN102 |
| ISO | CuDHP | CuZn10 | CuSn8 | CuSn11P | CuZn30 | CuZn37 | CuZn39Pb1-C | CuZn40Pb2 | CuNi18Zn20 | CuNi10Fe1Mn |
| EN | CW024A | CW501L | CW453K | CC481K | CW505L | CW508L | CC754S | CW617N | CW409J | CW352H |
| UNS | C12200 | C22000 | C52100 | C90700* | C26000 | C27200 | C85700 | C37700 | C79200 | C70600 |

C = casting alloy H = hot stamping alloy W = wrought alloy * = close equivalent

- ◆ **Hardness**, which indicates ductility or formability, should be suitable for your fabrication requirements; contact CDA or your supplier and see our separate guide.
- ◆ **Finishing** by polishing is recommended; brushing or bead blasting may be considered. **DO NOT** use any oil, lacquer or wax treatment as this will counter the inherent antimicrobial characteristics of the metal. **DO NOT** plate or electroplate with metal other than copper.
- ◆ **Legislation:** always verify your design meets local disability access, building or engineering standards e.g. HTM 59 or EN 1906.