

# Care and Maintenance

## Care & Maintenance of NOVAS Stainless Steel Accessories

### Introduction

Stainless steels are selected in applications where their inherent corrosion resistance, strength and aesthetic appeal are required. However, dependent on the service conditions, stainless steels will stain and discolour due to surface deposits and so cannot be assumed to be completely maintenance free. In order to achieve maximum corrosion resistance and aesthetic appeal, the surface of the stainless steel must be kept clean. Provided the grade of stainless steel and the surface finish are correctly selected, and cleaning schedules carried out on a regular basis, good performance and long service life will result.

### Factors Affecting Maintenance

Surface contamination and the formation of deposits must be prevented. These deposits may be minute particles of iron or rust from other sources used on the building of new premises and not removed until after the stainless steel items have been fixed. Industrial and even naturally occurring atmospheric conditions can produce deposits, which can be equally corrosive, e.g. salt deposits from marine conditions.

Working environments can also provide aggressive conditions such as heat and humidity, in swimming pool buildings. These conditions can result in surface discoloration of stainless steels and so maintenance on a more frequent basis may be required.

Modern processes use many cleaners, sterilizers and bleaches for hygienic purposes. Proprietary solutions, when used in accordance with makers' instructions, should be safe but if used incorrectly (e.g. warm or concentrated), may cause discolouration or corrosion on stainless steels. Strong acid solutions are sometimes used to clean masonry and tiling of buildings. These acids should never be used where contact with metals, including stainless steel is possible, but if this happens, the acid solution must be removed immediately, followed by dilution and rinsing with clean water.

### Maintenance Programme

With care taken during fabrication and installation, cleaning before "hand-over" should not present any problems. More attention may be required if the installation period has been prolonged or hand-over delayed. Where surface contamination is suspected, immediate cleaning after site fixing should avoid problems later. Food handling, pharmaceutical, aerospace and certain nuclear applications required extremely high levels of cleanliness applicable to each industry.

The frequency of cleaning is dependent on the application; a simple rule is; "Clean the metal when it is dirty in order to restore its original appearance". This may vary from once to four times a year for external applications, but may be daily for items in "hygienic" applications. Recommendations on cleaning frequencies in architectural applications are shown in Table 2.

### Cleaning Methods

Stainless steel is easy to clean. Washing with soap or mild detergent and warm water followed by a clear water rinse is usually quite adequate for domestic and architectural equipment.