
NAVFAC IGS-10153 (JUNE 2003)

Supersedes IGS-10153 (05/02)
Preparing Activity: LANTNAVFACENGCOM Based on UFGS-10153

ITALIAN GUIDE SPECIFICATIONS

Use for ITALIAN projects only

SECTION 10153

TOILET PARTITIONS
06/03

NOTE: This guide specification is issued by the Atlantic Division, Naval Facilities Engineering Command for regional use in Italy.

NOTE: This guide specification covers the requirements for toilet partitions. Toilet partitions are not widely used in Europe. There are fewer manufacturers as compared with the United States. It is more common to provide full height masonry partitions with ceramic tile with a door and privacy lockset. When used, the designer must provide adequate drawings to describe the panel configuration, panel joints, attachment methods, and methods of support.

NOTE: Comments and suggestion on this specification are welcome and should be directed to the technical proponent of the specification. A listing of the technical proponents, including their organization designation and telephone number, is on the Internet.

Use of electronic communication is encouraged.

Brackets are used in the text to indicate designer choices or locations where text must be supplied by the designer.

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the

extent referenced. The publications are referred to in the text by the basic designation only.

EUROPEAN COMMITTEE FOR STANDARDIZATION (EN)

- EN 312-3 (1996) Particleboard - Specifications - Part 3: Requirements for boards for interior figments (including furniture) for use in dry conditions
- EN 10088-1 (1995) Stainless Steels, Part 1 List of Stainless Steels
- EN 10088-2 (1995) Stainless Steels, Part 2 Technical Delivery Conditions for Sheet/Plate and Strip for General Purposes

INTERNATIONAL ORGANISATION FOR STANDARDIZATION (ISO)

- ISO 4586-1 (1997) High Pressure Decorative Laminates - Sheets Made From Thermosetting Resins - Part 1, Classification and Specifications
- ISO 4586-2 (1997) High Pressure Decorative Laminates - Sheets Made From Thermosetting Resins - Part 2, Determination of Properties

1.2 SUBMITTALS

NOTE:

Submittals must be limited to those necessary for adequate quality control. The importance of an item in the project should be one of the primary factors in determining if a submittal for the item is required.

A "G" following a submittal item indicates that the submittal requires Government approval. Some submittals are already marked with a "G". Only delete an existing "G" if the submittal item is not complex and can be reviewed through the Contractor's Quality Control system. Only add a "G" if the submittal is sufficiently important or complex in context of the project.

For submittals requiring Government approval on Army projects, a code of up to three characters within the submittal tags may be used following the "G" designation to indicate the approving authority. Recommended codes for Army projects are "RE" for Resident Engineer approval, "ED" for Engineering approval, and "AE" for Architect-Engineer approval. Codes following the "G" typically are not used for

Navy projects.
Submittal items not designated with a "G" are considered as being for information only for Army projects and for Contractor Quality Control approval for Navy projects.

Submit the following in accordance with Section entitled "Submittal Procedures."

SD-02 Drawings

Toilet partitions; G

Submit shop drawings indicating elevations of partitions, full-scale sections, thicknesses and gauges of metal, fastenings, proposed method of anchoring, the size and spacing of anchors, details of construction, hardware, fittings, mountings, and other related items and installation details.

SD-03 Product Data

NOTE: Select this paragraph and delete paragraph entitled "Samples" when a small number of items is required. Select the paragraph entitled "Samples" and delete this paragraph when a large quantity of items is required.

Hardware

Fittings

Toilet partitions, panels G

Submit literature for each item and each type of panel, complete with descriptions of materials, finishes, fastening and anchoring devices, and appurtenances.

SD-04 Samples

NOTE: Select this paragraph and delete paragraph entitled "Manufacturer's Catalog Data" when a large quantity of items is required. Select the paragraph entitled "Manufacturer's Catalog Data" and delete this paragraph when a small number of items is required.

Hardware

Fittings

Toilet partitions, panels

Submit one for each item. The panel sample shall be cross sections not less than 150 by 150 mm 6 by 6 inches in size and shall show finish on base metal and core of the panel. Approved samples of hardware, fittings, and fastenings in good condition may be used in the finished work, provided each sample is labeled for identification and its location recorded.

Toilet partition finishes color; G

Submit, for each color, for verification that products match the colors indicated. Where colors are not indicated, submit the manufacturer's standard color samples for selection by the Contracting Officer.

SD-07 Certificate

Finish materials

Submit a certificate from a recognized testing laboratory that the Finish materials meets the requirements of the specifications.

1.3 DELIVERY, STORAGE, AND HANDLING

Deliver materials to the site in original sealed containers or packages, bearing the manufacturer's name, brand designation, specification number, type, style, and finish as applicable. Store and handle materials in a manner to protect them from damage.

1.4 DEFINITIONS

1.4.1 Description

Toilet partitions shall be flush metal, solid plastic, or plastic laminated construction. The partitions shall be furnished with all fastenings, fittings, and hardware necessary for complete installation.

1.4.1.1 Toilet Enclosure

Toilet enclosures shall consist of doors, panels, and pilasters to form an enclosure around the toilet. Panels and doors shall be approximately 300 mm above the floor. Pilasters shall be 32 mm thick, if fabricated of metal over honeycomb paper core or plastic laminate over particle board or plywood. Pilasters shall be a minimum of 25 mm thick if fabricated of particle board with an 11 gage steel core. The minimum width of pilasters shall be 150 mm at intermediate locations and free-standing ends, and a minimum of 100 mm at adjoining walls. Inswinging doors shall be provided in the openings between pilasters. Doors shall be a minimum width of 600 mm for enclosures wide. When toilet compartments for handicapped persons are specified, they shall be 900 mm clear minimum width and shall swing out and provide 820 mm minimum clear width.

1.4.1.2 Floor Supported Toilet Enclosures

Floor supported toilet enclosures, shall be floor supported with pilasters extending from the floor to the top edge of the panels. Top edges of doors, panels, and pilasters shall be flush, and bottom edges of pilasters shall extend to the floor.

1.4.1.3 Ceiling Hung Toilet Enclosures

Ceiling hung toilet enclosures, shall have pilasters hung from overhead construction. Pilasters shall extend from the ceiling to the bottom edge of the panels. Top edges of wall posts shall be flush with top edges of doors. Bottom edges of doors, panels, pilasters, and wall posts shall be flush. The maximum length of pilaster shall be 2.4 meters.

1.4.1.4 Overhead Braced Toilet Enclosures

Overhead braced toilet enclosures, shall be overhead braced with pilasters extending from the floor to the headrail bracing. Wall posts shall extend from headrail bracing to bottom edge of doors. Pilasters adjacent to walls may be flush with bracing be approximately 30 mm above the tops of doors and panels.

1.4.1.5 Overhead Braced Alcove Type Toilet Enclosure

Overhead braced alcove toilet enclosures, shall be overhead braced with pilasters extending from the floor to the headrail bracing. Panel and stile shall be fixed to the adjoining walls and headrail bracing shall be approximately 300 mm above the top of the door, and panel.

1.4.2 Room Entrance Screens

Room entrance screens shall consist of panels and pilasters or posts as required for the style specified. Screen length and height shall be as specified. Bottom edge of panel shall be approximately 300 mm above the floor.

1.4.2.1 Floor Supported Entrance Screens

Floor supported room entrance screens, shall consist of a panel and pilaster as specified for floor supported toilet enclosures.

1.4.2.2 Ceiling Hung Entrance Screens

Ceiling hung room entrance screens shall consist of a panel and pilaster as described for ceiling hung toilet enclosures.

1.4.2.3 Overhead Braced Room Entrance Screen

Overhead braced room entrance screens shall consist of pilasters, panels, and headrail bracing. The panel shall be fixed to the wall and pilaster. Headrail bracing shall be approximately 300 mm from the top of the panel

with the pilaster extending from the floor to the headrail.

1.4.2.4 Floor-to-Ceiling Post Supported Room Entrance Screen

Floor-to-ceiling post supported room entrance screens, shall consist of a panel and supporting post which extends from the floor to the ceiling. Maximum length of floor to ceiling post shall be 3 meters.

1.4.3 Urinal Screens

Urinal screens shall consist of panels and pilasters or posts. Unless otherwise specified, urinal screens including floor braced screens shall be 900 mm wide by manufacturer's standard height except that wall hung screens shall be 600 mm wide, and 1070 mm high.

1.4.3.1 Floor Supported Urinal Screen

Floor supported urinal screens shall consist of panel and pilaster as described for floor support room entrance screens. Floor supported pilasters shall be designed for fastening to the structural slab through an integrally welded split channel or cross bar leveling device mounted on two stud bolts.

1.4.3.2 Ceiling Hung Urinal Screen

Ceiling supported urinal screens shall consist of a panel and pilaster as described for ceiling hung toilet enclosures. Ceiling hung pilasters shall be designed for bolting to the overhead structural support through an integrally welded split channel or cross bar leveling device mounted on two stud bolts.

1.4.3.3 Overhead Braced Urinal Screen

Overhead braced screens, shall consist of panels, posts, and headrail. Posts shall extend from floor to the top of the panels. Panels shall be fixed to the post and walls. Overhead braced pilasters shall be designed for fastening to the finished floor through an integrally welded split channel or cross bar leveling device mounted on two stud bolts.

1.4.3.4 Wall Hung Urinal Screen

Wall hung urinal screen shall consist of a panel designed to be supported by the wall. Wall hung urinal screens are supported on continuous flanged brackets that extend the full height of the screen and are supported on wall construction, capable of providing permanent anchorage for mounting bolts.

1.4.4 Interchangeability

All units of the same classification furnished with similar options under a specific contract shall be identical to the extent necessary to insure interchangeability of component parts, assemblies, accessories, and spare parts.

PART 2 PRODUCTS

2.1 TOILET PARTITIONS

2.1.1 Toilet Enclosures

NOTE: Floor supported enclosures, or overhead braced enclosures should be used. Ceiling hung enclosures, should be used only when the additional cost is justified for reasons of sanitation or appearance. If ceiling hung enclosures are to be used details showing the structural steel channel support system should be shown on the drawings. This section should be coordinated with Section 10800, "Toilet and Bath Accessories," and the drawings regarding toilet enclosures which will have partition-mounted accessories attached to the panels.

NOTE: Configuration descriptions (ceiling hung, overhead braced, etc.) are undefined in European norms. Designer is required to indicate the desired configuration (elevations) and draw the details necessary for the structural support of the components. Coordinate with Section 05500, "Metal Fabrications." Not all manufacturers offer all configurations.

[Floor supported] [ceiling hung] [overhead braced] [overhead braced-alcove].

2.1.2 Room Entrance Screens

NOTE: Length and height of room entrance screens should be shown on the drawings, using standard size panels and pilasters to the maximum extent practicable.

[Floor supported] [ceiling hung] [overhead braced] [floor to ceiling post supported].

2.1.3 Urinal Screens

NOTE: Wall hung urinal screens should be used only where the wall construction is capable of providing adequate support. Where high use is expected choose the last bracketed sentence.

[Floor supported] [ceiling hung] [overhead braced] [wall hung.]

2.1.4 Operating Hardware and Fittings

[Chrome-plated steel] [or] [stainless steel] door latches that operate without either tight grasping or twisting at the wrist of the operator.

2.2 FINISHES

NOTE: In areas where a high degree of damage, corrosion, and frequent replacement has been experienced; or for reasons of sanitation or appearance; additional cost is justified, partition finishes should be selected on the basis of Life Cycle Cost Analysis (LCC). The LCC analysis should be performed for a period of not less than ten years. For any project requiring non-combustible partitions, panels, screens, or door finishes, exclude finish No. 5.

2.2.1 [Stainless Steel]

Hollow panels not less than 25 mm thick, welded construction. Finish surfaces of stainless steel, Grade B.5 per EN 10088-1. Finish shall be [1J or 2J, brushed or dull polished] [1K or 2K, satin polish], in accordance with EN 10088-2 Reinforced panel at location where accessories (toilet paper holders etc.) are to be partition mounted or thru the panels].

2.2.2 [Laminated Plastic]

High pressure plastic laminated to all sides of wood particle board not less than 25 mm thick. Finish shall be matte Type "S" meeting the requirements of ISO 4586-1 with the following characteristics as determined by ISO 4586-2.

Thickness: 1.2 mm
Abrasion Resistance: plus/minus 350 revolutions taber
Reaction to Impact: plus/minus 0.27 Joules
Reaction to Fire: Class 2]

2.2.3 [Solid Plastic]

Solid plastic fabricated of polymer resins formed under high pressure forming a single component section not less than 25 mm one inch thick as described in ISO 4586-1, Type "S" finish. Colors shall extend throughout the panel thickness. Exposed finish surfaces shall be smooth, waterproof, non-absorbent, and resistant to staining and marking with pens, pencils, or other writing devices. Solid plastic partitions shall not show any sign of deterioration when immersed in the following chemicals and maintained at a temperature of 27 degrees C 80 degrees F for a minimum of 30 days:]

Acetic Acid (80 percent)	Hydrochloric Acid (40 percent)
Acetone	Hydrogen Peroxide (30 percent)
Ammonia (liquid)	Isopropyl Alcohol
Ammonia Phosphate	Lactic Acid (25 percent)
Bleach (12 percent)	Lime Sulfur
Borax	Nicotine
Brine	Potassium Bromide
Caustic Soda	Soaps
Chlorine Water	Sodium Bicarbonate
Citric Acid	Trisodium Phosphate
Copper Chloride	Urea; Urine
Core Oils	Vinegar]

2.2.4 Acceptable Manufacturers

Subject to compliance with requirements, manufacturers offering products that may be incorporated into the work include, but are not limited to, the following:

- a. Feal, S.p.A., via Cristoforo Colombo, 436, 00147 Roma; Telex 611085 Fealsud.
- b. Franke-Bobrick, A.G., CH4663 Aarburg, Suisse; Telex 68444 represented in Italy by AMCO, S.p.A., Via S. Veniero 14, 20148 Milano; Tx 331231 AMCO.
- c. Smalto Design, Via IV November 33, 20012 Cuggiono (MI) Italy, Tel: 02/974577, Fax: 02/97240450.

2.3 Material

2.3.1 Particleboard

Particleboard cores shall conform to EN 312-3.

PART 3 EXECUTION

3.1 INSTALLATION

Secure the work to contiguous construction straight and plumb, with uniform clearance of 13 mm 1/2 inch between pilasters and panels; one inch between pilasters and walls, and panels and walls; and not more than 5 mm 3/16 inch between pilasters and doors. In the finished work, conceal evidence of drilling in floors and walls. Screws and bolts shall be stainless steel.

3.2 ADJUSTING

Adjust hardware for proper operation and set hinges to hold the doors ajar about 30 degrees when unlatched.

3.3 CLEANING

After installation, thoroughly clean exposed surfaces and restore damaged work to its original condition or replace with new work.

-- End of Section --