
NAVFAC IGS-09100 (MAY 2002)

Preparing Activity: LANTNAVFACENGCOM Based on UFGS-09100N

ITALIAN GUIDE SPECIFICATIONS

Use for ITALIAN projects only

SECTION 09100

METAL SUPPORT ASSEMBLIES

05/02

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

NOTE: This guide specification covers nonload-bearing cold-formed metal framing, furring, and ceiling suspension systems for the attachment of lath, plaster, stucco, and wallboard. Load-bearing cold-formed steel framing is included in Section 05400, "Cold-Formed Metal Framing." Metal suspension systems for acoustical ceilings are included in Section 09510, "Acoustical Ceilings."

NOTE: On the drawings, show:

1. Locations of each type of metal framing, furring, or suspension system.
2. Spacing and gage of members.
3. Seismic restraint for projects located in seismic zone 2, 3, or 4, in accordance with NAVFAC P-355, "Seismic Design for Buildings."
4. Many of the requirements of ASTM C 645, C 841 and C 754 are incorporated in the text of this guide specification. Those standards also contain details that must be incorporated into the drawings by the designer.

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 designers.

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.

NOTE: There are few (if any) European standards for the design and installation of metal support assemblies for gypsum board and plaster. Many of the requirements of ASTM C 645, C 841 and C 754 are incorporated in the text of this guide specification. Those standards also contain details that must be incorporated into the drawings by the designer.

EUROPEAN COMMITTEE FOR STANDARDIZATION (EN)

EN 10142	(1990) Continuously Hot Dip Zinc Coated Low Carbon Steel Sheet and Strip for Cold Forming - Technical Delivery Conditions, Including Amendment 1 (1995)
EN 10218/1	(1994) Steel Wire and Wire Products - General - Part 1, Test Methods
EN 10218/2	(1996) Steel Wire and Wire Products - General - Part 2, Wire Dimensions and Tolerances

ENTE NAZIONALE ITALIANO DI UNIFICAZIONE (UNI)

UNI 7344	Cold-Formed Profiles
UNI 9154	(1988) Building - Internal Partition and Related Finishing Execution Criteria of Partition Made by Plasterboard on Metallic Structure

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 Shop Drawings

NOTE: Require drawings only for projects where complexity or quantity make it feasible.

Metal support systems; G

Submit for the erection of metal [framing,] [furring,] [and] [ceiling suspension systems]. Indicate materials, sizes, thicknesses, and fastenings.

1.3 DELIVERY, STORAGE, AND HANDLING

Deliver materials to the job site and store in ventilated dry locations.

Storage area shall permit easy access for inspection and handling. If materials are stored outdoors, stack materials off the ground, supported on a level platform, and fully protected from the weather. Handle materials carefully to prevent damage. Remove damaged items and provide new items.

PART 2 PRODUCTS

2.1 MATERIALS

Provide steel materials for metal support systems with galvanized coating complying with UNI 7344 and EN 10142.

2.1.1 Materials for Attachment of Lath

2.1.1.1 Suspended and Furred Ceiling Systems and Wall Furring

- a. Hanger Wire EN 10218/1 and EN 10218/2..
- b. Main Runners EN 10142.
- c. Tie wire EN 10218/1, EN 10218/2, 1.6 mm diameter.

2.1.1.2 Nonload-Bearing Wall Framing

EN 10142.

2.1.2 Materials for Attachment of Gypsum Wallboard

EN 10142

2.1.2.1 Suspended and Furred Ceiling Systems

- a. Hanger Wire EN 10218/1 and EN 10218/2.
- b. Main Runners EN 10142.
- c. Tie Wire EN 10218/1 and EN 10218/2, 1.6 mm diameter.

2.1.2.2 Nonload-Bearing Wall Framing and Furring

NOTE: Minimum thickness of 0.45 mm 0.0179 inch (25 gage) is standard for interior nonload-bearing studs without supporting attached loads. Choose the second option of 0.85 mm0.0329 inch (20 gage) thickness for medical, dental or other building types requiring large quantities of wall supported cabinet work and equipment throughout the facility.

- a. Studs: [[0.45] mm minimum thickness, 100 mm (or as indicated) x 40 mm], [0.85 mm minimum thickness in the sizes indicated.]
- b. Runners: Width compatible with studs, 0.70 mm thick with 40 mm

flange.

2.1.2.3 Furring Structural Steel Columns

UNI 9154. Steel (furring) clips and support angles listed in any independent accepted European approval service may be provided in lieu of steel studs for erection of gypsum wallboard around structural steel columns.

2.1.2.4 Z-Furring Channels with Wall Insulation

NOTE: The depth specified for Z-furring channels should be coordinated with the R-value specified for wall insulation thickness.

Not lighter than 0.5 mm thick 26-gage galvanized steel, Z-shaped, with 32 mm and 19 mm 1 1/4-inch and 3/4-inch flanges and [[25] [38] [50] [75]-mm [1] [1 1/2] [2] [3]-inch furring depth] [depth as required by the insulation thickness provided].

2.2 AVAILABLE PRODUCTS

Products meeting the requirements of this specification are manufactured by the following. Not all companies manufacturer all products referred to in the specification.

NOTE: Refer to manufacturer's catalog data to determine which companies manufacture the products intended for use.

Knauf
via Postioma, 59
31050 Villorba (TV), Italia
Tel: 04/22.60.8270
Fax: 04/22.60.8696

via Cinflenti, 18
00173 Roma Italia
Tel: 06/72.67.1623
Fax: 06/72.67.1575

Lafargessi, S.p.A.
via Cornelia, 498
00166 Roma, Italia
Tel: 06/61.52.8311
Fax: 06/61.52.1115

Luxon, s.r.l.
via Provinciale Pianura, 25
800078 Pozzuoli (NA)

Tel: 081/526.3485
Fax: 081/526.9038

via S. Barzilai, 82
00100 Roma, Italia
Tel: 06/723.1264
Fax: 06/723.1845

PART 3 EXECUTION

3.1 INSTALLATION

3.1.1 Systems for Attachment of Lath

Comply with manufacturer's printed installation instructions, not to exceed the following:

3.1.1.1 Suspended and Furred Ceiling Systems and Wall Furring

a. Hanger wire in sizes not less than the following:

	Maximum ceiling area supported (SM)	Wire size diameter (mm)
Suspended Ceilings	1.1	3.8
	1.5	4.1
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Main Runners	0.7	2.7
	1.1	3.4
	1.5	4.1
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Furring (no runner)	0.7	1.9

b. Metal lath and maximum spacing of supports:

	Minimum weight of metal base (kg/SM)	Maximum spacing of supports (mm)
Diamond mesh	Less than 0.11	300
	0.12 or greater	400
Flat Rib	Less than 0.09	300
	0.10 or greater	400
9.5 mm Rib	0.10 to 0.12	400
	0.14 or greater	600

c. Gypsum lath attachment by screws:

Width of lath	Thickness of lath	Spacing of supports	Number of attachments	Spacing of attachments
400	9.5	400	4	125

600	9.5	400	6	115
400	12.5	600	4	125
600	12.5	600	6	115
1220	9.5	400	8	115
1220	12.5	600	8	115

3.1.1.2 Nonload-Bearing Wall Framing

Except that framing members shall be 400 mm 16 inches o.c. unless indicated otherwise.

3.1.2 Systems for Attachment of Gypsum Wallboard

Comply with manufacturer's printed installation instructions, not to exceed the following:

3.1.2.1 Suspended and Furred Ceiling Systems

- a. Hanger wire in sizes not less than the following:

	Maximum Ceiling Area Supported (SM)	Wire Size Diameter (mm)
Suspended Ceilings	1.3	3.4
	1.5	3.8
	1.7	4.1
Main Runners	0.8	2.7
	1.3	3.4
	1.7	4.1
Furring (No Runner)	0.8	2.0

- b. Main runners in sizes not less than the following:

Depth, Weight (mm, kg/M)	Span between Hangars (mm)	Maximum spacing (mm)
40, 0.7	900	1500
40, 0.7	1070	1370
40, 0.7	1220	1220
50, 0.9	1070	1830
65, 1.0	1830	1220

- c. Tie main runner suspension wire as indicated.

- d. Tie furring channel to main runner as indicated.

3.1.2.2 Nonload-Bearing Framing and Furring

- a. Maximum framing and furring spacing: [400 mm] [600 mm].

- b. Maximum fastener spacing: 600 mm.

- c. Maximum stud height:

Spacing (mm)	Stud Width (mm)	Height (mm)
400	40	2010
400	65	2790
400	100	4040
600	40	1880
600	65	2440
600	100	3530

d. Locate studs at partition intersections as indicated.

e. Locate studs at partition corners as indicated.

3.1.2.3 Furring Structural Steel Columns

Install studs or galvanized steel clips and support angles for erection of the gypsum wallboard around structural columns in assemblies to match tested and certified (by a recognized independent laboratory in accordance with any) assemblies with a fire resistance rating of not less than REI 90 in accordance with Circolare 91, 14 September 1961, of the Minister of the Interior, Republic of Italy.

3.1.2.4 Z-Furring Channels with Wall Insulation

Install Z-furring channels vertically spaced not more than 600 mm 24 inches o.c. Locate Z-furring channels at interior and exterior corners in accordance with manufacturer's printed erection instructions. Fasten furring channels to [masonry] [and] [concrete] walls with powder-driven fasteners or hardened concrete steel nails through narrow flange of channel. Space fasteners not more than 600 mm 24 inches o.c.

3.2 ERECTION TOLERANCES

Framing members which will be covered by finish materials such as wallboard, plaster, or ceramic tile set in a mortar setting bed, shall be within the following limits:

- a. Layout of walls and partitions: 6 mm 1/4 inch from intended position;
- b. Plates and runners: 5 mm in 1.9 meters 1/4 inch in 8 feet from a straight line;
- c. Studs: 5 mm in 1.9 meters 1/4 inch in 8 feet out of plumb, not cumulative; and
- d. Face of framing members: 5 mm in 1.9 meters 1/4 inch in 8 feet from a true plane.

Framing members which will be covered by ceramic tile set in dry-set mortar, latex-portland cement mortar, or organic adhesive shall be within the following limits:

- a. Layout of walls and partitions: 6 mm 1/4 inch from intended position;
- b. Plates and runners: 5 mm in 3.8 meters 1/8 inch in 8 feet from a straight line;
- c. Studs: 5 mm in 3.8 meters 1/8 inch in 8 feet out of plumb, not cumulative; and
- d. Face of framing members: 5 mm in 3.8 meters 1/8 inch in 8 feet from a true plane.

-- End of Section --