



Designation: F 900 – 03

## Standard Specification for Industrial and Commercial Swing Gates<sup>1</sup>

This standard is issued under the fixed designation F 900; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reappraisal. A superscript epsilon ( $\epsilon$ ) indicates an editorial change since the last revision or reappraisal.

### 1. Scope

1.1 This specification covers detailed requirements for chain link fence gates, gate posts and accessories for both single and double swing-type gates for industrial and commercial application.

### 2. Referenced Documents

#### 2.1 ASTM Standards:

A 780 Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings<sup>2</sup>

F 1043 Specification for Strength and Protective Coatings on Metal Industrial Chain Link Fence Framework<sup>2</sup>

F 1083 Specification for Pipe, Steel, Hot-Dipped Zinc-Coated (Galvanized) Welded, for Fence Structures<sup>2</sup>

### 3. Terminology

#### 3.1 Definitions of Terms Specific to This Standard:

3.1.1 *polymer*—in this specification, polymer is used to describe all types of vinyl, poly(vinyl-chloride) (PVC) or similar types of coatings other than zinc or aluminum.

### 4. Materials and Manufacture

4.1 *Materials*—The base materials of the gate frame shall be round or rectangular tubular members, welded at all corners or assembled with corner fittings. Gates assembled with corner fittings shall have adjustable truss rods  $\frac{5}{16}$  in. [7.9 mm] minimum diameter on panels 5 ft [1.5 m] wide or wider. Truss rods shall be the same base metal and finish as the gate frames.

4.1.1 The interior bracing, when needed, shall be the same metal and shape tubular material and finish as the gate frame, but need not be the same size.

4.2 *Manufacture*—Gate frames shall be fabricated and coated where necessary, as described in 4.2.1 through 4.2.3.

4.2.1 *Zinc-Coated Steel Frames* shall be in accordance with Specifications F 1043 or F 1083, or a combination thereof, and shall match that selected for any adjoining fence framework. Welded joints shall be coated in accordance with Practice A 780, employing a zinc-rich paint conforming to 4.2.2 of

Practice A 780 and following only the procedures outlined in A2.1.3 and A2.1.4 of Practice A 780.

4.2.2 *Aluminum Alloy Gate Frames* shall be in accordance with Specification F 1043.

4.2.3 *Polymer-Coated Steel or Polymer-Coated Aluminum Frames* shall be in accordance with Specification F 1043 and shall match that selected for any adjoining fence framework. Welded joints on steel gate frames shall be coated in accordance with Practice A 780, employing a zinc-rich paint conforming to 4.2.2 of Practice A 780 and following only the procedures outlined in A2.1.3 and A2.1.4 of Practice A 780. The painted areas shall then be top-coated to match the frame color.

4.2.4 *Chain Link Gate Fabric*—The fabric shall be as specified for the fence.

4.2.5 *Barbed Wire Top*—When specified, shall have the end members of the gate frame extended in height to accommodate three strands of barbed wire uniformly spaced and positioned so that the top strand is approximately 1 ft [300 mm] above the top horizontal member of the gate frame. Barbed wire shall be attached by suitable means to prevent wire from moving out of position and shall be supported by a gate frame member at maximum intervals of 8 ft.

### 5. Dimensions, Mass, and Permissible Variations

5.1 Size of the gate opening shall be measured from the inside face to inside face of gate posts.

5.2 Dimensions and weights of gate frame members shall be in accordance with Table 1.

5.2.1 Gate frame shall be designed for the width built so that the outer member shall not sag in excess of the lesser of 1 % of the gate leaf width or 2 in. [50.8 mm].

5.2.2 For dimensions and weight of gate posts, see Table 2.

### 6. Gate Accessories

6.1 All gate hardware shall be of sufficient strength and durability to support the gate and repeated open-close cycles.

6.2 *Gate Hinges*—Hinges shall be structurally capable of supporting the gate leaf and allow the gate to open and close without binding. The hinges shall be so designed to permit the gate to swing a full 180°. The user shall specify, one of the following directions of swing:

6.2.1 180° outward,

6.2.2 180° inward,

<sup>1</sup> This specification is under the jurisdiction of ASTM Committee F14 on Fences and is the direct responsibility of Subcommittee F14.40 on Chain Link Fence and Wire Accessories.

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<sup>2</sup> *Annual Book of ASTM Standards*, Vol 01.06.