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JB/T 9117-2025

Replaces JB/T 9117-2013

Lithographic printing press for metal sheet

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Foreword

This document is drafted in accordance with the provisions of GB/T 1.1-2020, Guidelines for Standardization Work - Part 1: Structure and Drafting Rules for Standardization Documents.

This document replaces JB/T 9117-2013, Metal Sheet Lithographic Printing Press. Compared with JB/T 9117-2013, the main technical changes are as follows, excluding structural adjustments and editorial modifications:

a) Added "Terms and Definitions" (see Chapter 3);

b) Revised "Structural Composition" (see 4.2, 3.1.1 of the 2013 edition);

c) Revised "Basic Parameters" (see 4.3, 3.2 of the 2013 edition);

d) Revised the requirements for "Feeding Performance" (see 5.2, 4.3 of the 2013 edition);

e) Revised the requirements for "Printing Performance" (see 5.3, 4.6 of the 2013 edition);

f) Added the requirements for "Drying (Curing) Performance" (see 5.4);

g) Added the requirements for "Receiving Performance" (see 5.5);

h) Revised the requirements for "Electrical Quality" (see 5.8, 4.5 of the 2013 edition);

i) Revised the test conditions and test materials (see 6.1, 6.2, 5.7.1 of the 2013 edition);

j) Added the requirements for "Measuring Instruments" (see 6.3);

k) Revised the "Printing Performance Test" (see 6.6, 5.7.2 of the 2013 edition);

l) Added the "Drying (Curing) Performance Test" (see 6.7);

m) Added the requirements for the "Receiving Performance Test" (see 6.8).

This document is proposed by China Machinery Industry Federation.

This document is under the jurisdiction of National Technical Committee for Printing Machinery Standardization (SAC/TC 192).

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This document was first issued in 1989, revised for the first time in 1999, revised for the second time in 2013, and this is the third revision.

Lithographic printing press for metal sheet

1 Scope

This document specifies the equipment types, structural composition, basic parameters, nomenclature, model designation and technical requirements of metal sheet lithographic printing presses, describes the corresponding test methods, and stipulates the inspection rules, marking, packaging, transportation and storage.

This document is applicable to the manufacture of lithographic printing presses for which metal sheets are used as the printing substrate.

2 Normative References

The contents of the following documents constitute essential clauses of this document through normative reference herein. For the referenced documents with a dated edition, only the edition corresponding to that date applies to this document; for the referenced documents without a dated edition, the latest edition (including all amendments) applies to this document.

GB/T 191 Packaging and Transport Pictorial Marks

GB/T 2894 Safety Signs and Their Guidelines for Use

GB/T 4879 Antirust Packaging

GB/T 5226.1—2019 Machinery Electrical Safety – Machinery Electrical Equipment – Part 1: General Technical Conditions

GB/T 6388 Transportation Packaging Marks for Receipt and Shipment

GB/T 9969 General Rules for Industrial Product Instruction Manuals

GB/T 13306 Nameplates

GB/T 13384 General Technical Conditions for Packaging of Mechanical and Electrical Products

JB/T 6530 Nomenclature and Model Designation for Printing Press Products

JB/T 10455—2004 Offset Press Test Form

HG/T 2694 Positive-working PS Plates

QB/T 2025—2013 Offset Lithographic Iron Printing Ink

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 registration deviation

The maximum deviation between the corresponding positions of images of any two colors in multi-color printing.

[Source: GB/T 34053.1-2017, 2.3.2]

3.2 impression uniformity

The degree of consistency of printing pressure applied to the paper within the maximum printing format during printing by the printing press.

[Source: GB/T 3264—2013, 3.3]

3.3 impression stability

The degree of consistency of printing pressure applied to the same part of different sheets during continuous printing by the printing press.

[Source: GB/T 3264—2013, 3.4]

3.4 jamming rate

The ratio of the number of conveying failures to the total number of conveyances during the conveying process of metal sheets.

3.5 single-edge misplacement

The maximum relative displacement between metal sheets on a single side during stacking of received materials.

4 Construction, Equipment Types, Basic Parameters, Nomenclature and Model Designation

4.1 Construction

A metal sheet lithographic printing press (hereinafter referred to as the "printing press") consists of a feeding unit, a printing unit, a drying (curing) device, a receiving device and a control system.

4.2 Equipment Types

Divided by the number of printing colors:

— Monochrome printing press;

— Multi-color printing press.

4.3 Basic Parameters

The printing press shall comply with the provisions of Table 1.

Table 1 Basic Parameters

Item	40-Type Printing Press	45-Type Printing Press	48-Type Printing Press
Maximum metal sheet size (mm)	1016×860	1145×950	1200×1000
Minimum metal sheet size (mm)	712×508	712×508	712×508
Metal sheet thickness (mm)	0.12 – 0.50		
Maximum printing size (mm)	1000×845	1135×945	1190×990
Maximum printing speed (sheets/hour)	5500		

4.4 Nomenclature and Model Designation

The nomenclature and model designation of the printing press shall comply with the provisions of JB/T 6530.

5 Technical Requirements

5.1 Mechanical Properties

5.1.1 The transmission system shall operate normally, with stable operation and speed regulation. All components and parts shall move in a coordinated and accurate manner, without abnormal transmission noise, spontaneous mechanical movement or jamming.

5.1.2 The lubrication system shall feature unobstructed oil passages to ensure oil supply. The oil pressure device shall have reliable sealing without oil leakage.

5.1.3 The operating temperature rise of the bearing housing shall not exceed 35 K.

5.2 Feeding Performance

5.2.1 Feeding, printing and receiving operations shall be completed automatically and continuously.

5.2.2 The jamming rate of feeding failures such as interruptions, material jams and sheet misalignment shall not be higher than 0.3%.

5.2.3 Abnormal feeding conditions shall be automatically detected and prompt signals shall be issued.

5.3 Printing Performance

5.3.1 Graphics and texts shall be clear, without obvious ghosting or ink streaks.

5.3.2 The registration deviation shall not be greater than 0.07 mm.

5.3.3 The solid density values of each color in the test strip area shall comply with the provisions of Table 2.