



**Standards
Association of
Australia**



Australian Standard[®] 1219—1988

POWER PRESSES— SAFETY REQUIREMENTS



This Australian Standard was prepared by Committee SF/8, Guarding of Power Presses. It was approved on behalf of the Council of the Standards Association of Australia on 23 February 1988 and published on 9 May 1988.

The following interests are represented on Committee SF/8:

Confederation of Australian Industry
Department of Industrial Relations and Employment, N.S.W.
Department of Labour, S.A.
Department of Labour, Vic.
Department of Occupational Health, Safety, and Welfare, W.A.
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This Standard was issued in draft form for comment as DR86142.

AUSTRALIAN STANDARD

POWER PRESSES— SAFETY REQUIREMENTS

AS 1219—1988

First published as AS CZ8—1959.
Revised and redesignated AS 1219—1972.
Second edition 1988.

**PUBLISHED BY THE STANDARDS ASSOCIATION OF AUSTRALIA
STANDARDS HOUSE, 80 ARTHUR ST, NORTH SYDNEY, N.S.W.**

ISBN 0 7262 4954 8

PREFACE

This Standard was prepared by the Association's Committee on Guarding of Power Presses to supersede AS 1219—1972, *SAA Safety Code for Metalworking Power Presses*.

The Standard contains the safety measures to be implemented for the safe guarding and operation of power presses, and sets out the necessary personal protective measures against hazards experienced by operators of such presses.

This edition also incorporates recommended editorial and technical changes, received in response to a request for the review of AS 1219—1972, and includes specific requirements applicable to equipment incorporating the technological improvements to date.

Some of these changes relate to the general and specific requirements for safe guarding included in the design and installation of power presses, in particular those relevant to photoelectric and other types of non-contacting guards.

The inclusion of specified hand speeds for the calculation of safe distances in the handling of small and large components (see Clause 4.12.10) followed findings reported by a number of national and international organizations responsible for occupational safety and health. However, results of further studies (when available) may necessitate future revision of the requirements.

Although the implementation of automatic cycle initiation of press operation is currently not readily accepted in this country, it has been considered by the committee for its inclusion in a future revision of the Standard. Submissions on the subject may be forwarded to the office of this Association and should be addressed to the responsible committee for consideration.

During the preparation of the Standard, reference was made to BS 5304, *Code of practice—Safeguarding of machinery*. Acknowledgement is made of the assistance received therefrom.

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STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard
POWER PRESSES—SAFETY REQUIREMENTS

SECTION 1. SCOPE AND GENERAL

1.1 SCOPE. This Standard sets out the safety requirements for the design, installation, and operation of power presses.

It incorporates the details for safeguarding, die design and die setting, and provides appropriate recommendations for operation, inspection, and maintenance of presses, and training and supervision of operators.

This Standard does not cover hot-metal presses, guillotines, shearing machines, forge hammers or forge presses, bulldozers, upsetters, injection moulding or die-casting equipment.

1.2 PURPOSE. The purpose of this Standard is to establish a uniform approach to the safeguarding of power presses and to provide minimum safety features for operating and maintaining the equipment.

1.3 REFERENCED DOCUMENTS. The documents below are referred to in this Standard.

AS

1135 SAA Non-ferrous Pressure Piping Code

1200 SAA Boiler Code

1210 SAA Unfired Pressure Vessels Code

1269 Hearing conservation

1470 Health and safety at work—Principles and practices

1543 Electrical equipment of industrial machines

1579 Arc welded steel pipes for water and gas

1680 Code of practice for interior lighting and the visual environment

1939 Classification of degrees of protection provided by enclosures for electrical equipment

2019 Fluid power—Hydraulic and pneumatic cylinders—Bore and rod dimensions

2671 Fluid power—Hydraulic systems and components

3000 SAA Wiring Rules

CB18 SAA Pressure Piping Code
Part 1: Ferrous piping (AS CB18.1)

BS

5304 Code of practice—Safeguarding of machinery

1.4 DEFINITIONS. For the purpose of this Standard, the definitions below apply.

1.4.1 Accompanying documents—documents accompanying the equipment and containing all important information for the user, in particular that relevant to safety.

1.4.2 Ancillary equipment—equipment essential to the loading and unloading of presses.

1.4.3 Arrestor brake—arrangement intended to arrest the moving system by the absorption of energy during a small proportion of the slide movement.

1.4.4 Die safety block—prop that prevents the ram from falling when inserted between the upper and lower dies or between the die bed and the face of the ram.

1.4.5 Extractor—device on a positive drive clutch which removes the key, or its equivalent, from its driving position and until released retains it in the non-operating position.

1.4.6 Guards.

1.4.6.1 Curtain of light—photoelectric device which, in addition to complying with the photoelectric requirements, is capable of detecting and responding to the intrusion of an object and which provides an intangible barrier across the point of operation of presses.

1.4.6.2 Fixed guard—guard which prevents any part of the body from entering the hazardous area.

1.4.6.3 Interlocked guard—guard interlocked with devices controlling the motion of the ram so as to prevent initiation of the stroke of the press with the guard open.

1.4.6.4 Non-contacting guard—device to detect intrusion into the hazardous area, e.g. at or near the point of operation.

1.4.6.5 Penetration distance—greatest distance a hand can penetrate through or over the light beams of a photoelectric device before being detected and a stop signal initiated.

1.4.6.6 Perimeter guard—guard preventing entry to hazardous areas around power presses.

1.4.6.7 Rising-screen guard and push-away guard—guards actuated by the ram, the crankshaft, or the connecting rod of the press which allows access to the hazardous area between strokes of the press and which during the working stroke causes hands and other parts of the body to be physically removed from the hazardous area before injury can occur.

1.4.6.8 Response time—maximum time between the insertion of the test piece into the defined area and the output of a signal from the final switching device.

1.4.7 Hazardous area—area wherein it would be possible for hands or other parts of the body to be trapped between the ram or any attachment to the ram, and other parts of the press when the ram is in motion.