Australian Standard™

Pneumatic fluid power—General requirements for systems (ISO 4414:1998, MOD)

Standards Australia

This Australian Standard was prepared by Committee ME-035, Fluid Power Systems and Components. It was approved on behalf of the Council of Standards Australia on 31 July 2002 and published on 5 August 2002.

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Pneumatic fluid power—General requirements for systems (ISO 4414:1998, MOD)

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PREFACE

This Standard was prepared by the Standards Australia Committee ME-035, Fluid Power Systems and Components to supersede AS 2788—1985, *Fluid power—Pneumatic systems and components.*

The objective of this Standard is to provide designers and operators of fluid power systems with the general requirements relating to the safety, reliability and maintainability for pneumatic fluid power systems.

This Standard is adopted with Australian modifications and has been reproduced from ISO 4414:1998, *Pneumatic fluid power—General rules relating to systems.*

The Australian modifications are listed in Appendix ZZ and are indicated by margin bars in the text of the Standard.

The terms 'normative' and 'informative' have been used in this Standard to define the application of the annex or appendix to which they apply. A normative annex or appendix is an integral part of a Standard, whereas an 'informative' annex or appendix is only for information and guidance.

As this Standard is reproduced from an International Standard, the following applies:

(a) Its number appears on the cover and title page while the International Standard number appears only on the cover.

(b) In the source text, 'this International Standard' should read this 'Australian Standard'.

(c) A full point substitutes for a comma when referring to a decimal marker.

References to International Standards should be replaced by Australian Standards as follows:

Reference to International Standard		*Australian Standard*	
ISO		AS	
65	Carbon steel tubes suitable for screwing in accordance with ISO 7-1		
1219	Fluid power systems and components—Graphic symbols and circuit diagrams	1101	Graphic symbols for general engineering
1219-1	Part 1: Graphic symbols	1101.1	Part 1: Hydraulic and pneumatic systems
1219-2	Part 2: Circuit diagrams	—	
5598	Fluid power systems and components—Vocabulary	4061	Fluid power systems and components—Vocabulary
5782	Pneumatic fluid power—Compressed air filters		
5782-1	Part 1: Main characteristics to be included in suppliers' literature and product marking requirements	—	
6301	Pneumatic fluid power—Compressed air lubricators		
6301-1	Part 1: Main characteristics to be included in suppliers, literature and product marking requirements	—	

ISO		AS	
6953	Pneumatic fluid power—Air line pressure regulators		
6953-1	Part 1: Main characteristics to be included in commercial literature and specific requirements	—	
8778	Pneumatic fluid power—Standard reference atmosphere	—	
IEC			
204	Electrical equipment of industrial machines	—	
204-1	Part 1: General requirements		
529	Degrees of protection provided by enclosures (IP code)	1939	Degrees of protection provided by enclosures for electrical equipment (IP code)

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INTRODUCTION

In pneumatic fluid power systems, power is transmitted and controlled through air or a neutral gas under pressure within a circuit.

The application of pneumatic fluid power systems requires a thorough understanding and precise communication between the supplier and purchaser. This International Standard was prepared to assist that understanding and communication and to document many of the good practices learned from experience with pneumatic systems.

Use of this International Standard assists:

a) the identification and specification of the requirements for pneumatic systems and components;

b) the identification of the respective areas of responsibility;

c) the design of systems and their components to comply with specific requirements;

d) understanding of the safety requirements of a pneumatic system.

General rules given in this International Standard have no legal status except those paragraphs that are included in contractual agreements between purchasers and suppliers. Deviation from those parts of this International Standard included in contractual agreements shall also be agreed to in writing by the purchaser and supplier. Attention shall be drawn by the purchaser and/or the supplier to applicable national and local codes or laws.

General rules which contain the verb "shall" are counsels of good engineering practice, universally applicable with rare exceptions. Use of the word "should" in the document is not an indication of choice but an indication that the desirable engineering practices described may have to be modified due to the peculiarities of certain processes, environmental conditions, or equipment size.

Titles or parts of the text which are marked with an asterisk (*) indicate subclauses that discussion is needed between the supplier and purchaser to define the requirements and/or responsibilities. These are also listed in annex A.

NOTES

AUSTRALIAN STANDARD

Pneumatic fluid power—General requirements for systems (ISO 4414:1998, MOD)

1 Scope

This International Standard provides general rules relating to pneumatic systems used in industrial manufacturing processes. It is intended as a guide for both suppliers and purchasers, with a view to ensuring:

a) safety;

b) uninterrupted system operation;

c) ease and economy of maintenance;

d) long life of the system.

This International Standard does not apply to air compressors and the systems associated with air distribution as typically installed in a factory.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 65:1981, *Carbon steel tubes suitable for screwing in accordance with ISO 7-1.*

ISO 1219-1:1991, *Fluid power systems and components — Graphic symbols and circuit diagrams — Part 1: Graphic symbols.*

ISO 1219-2:1995, *Fluid power systems and components — Graphic symbols and circuit diagrams — Part 2: Circuit diagrams.*

ISO 5598:1985, *Fluid power systems and components — Vocabulary.*