

Australian Standard™

**Low pressure regulators for use in
industrial compressed gas reticulation
systems**



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This Australian Standard was prepared by Committee ME-002, Gas Cylinders. It was approved on behalf of the Council of Standards Australia on 29 September 2000 and published on 31 January 2001.

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AS 4840—2001

Low pressure regulators for use in industrial compressed gas reticulation systems

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NOTES

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee ME/2, Gas Cylinders to standardize the requirements of low pressure regulators for use with industrial gas reticulation systems that are operating at pressures up to 2100 kPa.

This Standard is the result of a consensus among representatives on the Joint Committee to produce it as an Australian Standard.

This Standard intends to eliminate the dangers of cross connection that may occur when high and low pressure regulators are used. AS 4267, *Pressure regulators for use with industrial compressed gas cylinders* caters for high pressure regulators, however, there is the danger that, because low pressure inlet connection sizes have not been covered by this Standard, these low pressure regulators may be inadvertently put into a high pressure reticulation system. This Standard, by specifying low pressure inlet connection details, will eliminate this problem for the compressed gas industry.

The term 'normative' has been used in this Standard to define the application of the appendix to which it applies. A 'normative' appendix is an integral part of a Standard.

Acknowledgment is given to the Compressed Gas Association (CGA) of the United States of America in using their details in Figures 1 and 2 from the CGA E-1 series of connections.

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STANDARDS AUSTRALIA

Australian Standard

Low pressure regulators for use in industrial compressed gas
reticulation systems**1 SCOPE**

This Standard specifies the requirements of low pressure regulators for use with industrial gas pipelines up to 2100 kPa. Pressure regulators for use with medical gas pipelines, together with fixed delivery pressure LPG regulators for domestic and recreational purposes, are not covered by this Standard. Recommendations for regulators for use in beverage dispensing pipelines have been included for users in that industry.

2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS

- 1349 Bourdon tube pressure and vacuum gauges
- 2473 Valves for compressed gas cylinders (threaded outlet)
- 2700 Colour standards for general purposes
- 4267 Pressure regulators for use with industrial compressed gas cylinders
- 4289 Oxygen and acetylene gas reticulation systems
- 4484 Industrial, medical and refrigerant compressed gas cylinder identification

CGA

- E-1 Standard connections for regulator outlets, torches and fitted hose for welding and cutting equipment
- G-4.1 Cleaning equipment for oxygen service

3 DEFINITIONS

For the purpose of this Standard, the definitions given in AS 4267 and those below apply.

3.1 Compressed gas pipeline regulator

A regulator intended for connection only to regulated pressure pipelines, fitted with inlet connections as specified in this Standard and used for reducing a nearly constant relatively low inlet pressure to an outlet pressure (to be as constant as possible) in connection with the flow rate which may be changed.

3.2 Maximum working pressure (MWP)

The maximum pressure at which a regulator is allowed to operate continuously and for which it has been designed. See AS 4289 for oxygen and acetylene pipeline pressures.

3.3 Pressure regulator

A device used for reducing the pressure of a gas from a variable inlet pressure to an outlet pressure that relates to the rate of flow of that gas.

3.4 Rated inlet pressure (p_1)

The maximum pipeline pressure specified for the intended gas.