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Australian Standard®

Fluid power systems and components—Vocabulary

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Bureau of Steel Manufacturers of Australia

Department of Defence

Department of Mineral Resources, N.S.W.

Fluid Power Society of Victoria

Metal Trades Industry Association of Australia

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PREFACE

This Standard was prepared by the Standards Australia Committee on fluid power systems to supersede AS B20—1965, *Terms for fluid power transmission and control systems.* It is identical with and has been reproduced from ISO 5598—1985, *Fluid power systems and components—Vocabulary.*

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For the purposes of this Australian Standard, the ISO text should be modified as follows:

(i) *References* Replace references to other publications by references to Australian Standards as follows:

References to International Standard		*Australian Standard*	
ISO		AS	
1219	Fluid power systems and components	1101	Graphical symbols for general engineering
		1101.1	Part 1: Hydraulic and pneumatic systems
2382	Data processing—Vocabulary	1189	Data Processing—Vocabulary
2382-1	Part 1: Fundamental terms	1189.1	Part 1: Fundamental terms

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0 Introduction

The purpose of this vocabulary is to provide in two languages (French and English) a comprehensive list of terms and definitions embracing devices and expressions used in the fluid power industry.

The "Vocabulary" is completed by two indexes, arranged alphabetically in English and in French, respectively.

The index relates each term to its number in the vocabulary and should be of help for reference purposes. Thus the reader is encouraged to refer back to the main vocabulary and its definitions, making sure he fully grasps the meaning of the term which may run counter to any superficial similarity.

Terms printed in italics are defined elsewhere in this International Standard.

1 Scope and field of application

This International Standard establishes the vocabulary for all fluid power systems and components excluding aerospace applications.

2 Fundamentals

2.0 General

2.0.0 fluid power : Means whereby energy is transmitted, controlled and distributed using a pressurized fluid as the medium.

2.0.1 hydraulics : Science and technology which deals with the laws governing liquid flow and pressure.

2.0.2 hydrodynamics : Science and technology which deals with the laws governing movement of liquids and forces which impose this movement.

2.0.3 hydropneumatic : Functioning by means of a liquid and compressed gas.

2.0.4 hydrostatics : Science and technology which deals with the laws governing the equilibrium condition of liquids and the resulting pressure distribution.

2.0.5 pneumatics : Science and technologywhich deals with the laws governing compressed air flow.

2.1 Conditions of utilization

2.1.1 operating conditions : Operating conditions are indicated by the numerical values of the various factors relating to any given specific application of a unit. These factors may vary during the course of operations.

2.1.2 rated conditions; standard conditions : *Steady-state conditions* for which a component or system is recommended as a result of specified tests. The "rated characteristics" are, in general, shown in catalogues and are indicated q_n, p_n, etc.

2.1.3 continuous working conditions : Conditions indicated by the values of the various factors which permit the unit to operate continuously. Continuous working conditions are indicated q_c, p_c, etc. Often equals *rated (standard) conditions.*

2.1.4 limiting conditions : Conditions indicated by the minimum or maximum values of various factors which permit the unit to operate in extreme cases. The other effective factors and the duration of load being precisely defined. Limiting conditions are indicated q_{min}, q_{max}, etc.

2.1.5 steady-state conditions : Conditions in which relevant variable parameters do not change appreciably after a period of stabilization.

2.1.6 instantaneous conditions : Conditions which exist at a specified point in time.

2.1.7 actual conditions : Conditions observed during operation.

2.1.8 specified conditions : Conditions required to be met in service.

2.1.9 cyclic stabilizedconditions : Conditions in which the relevant parameters vary in a repetitive manner, similar conditions repeating at regular intervals.

2.1.10 discontinuous conditions : Conditions in which the relevant parameters do not attain stabilization as defined in 2.1.5 or 2.1.9.

2.1.11 intermittent conditions : Conditions in which periods of use are separated by periods of rest (either stopped or idling).

2.1.12 acceptableconditions : Conditionswhich permit a tolerable standard of performance and life.