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Australian Standard[®]

**Fluid power systems and
components—Vocabulary**

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Department of Defence
Department of Mineral Resources, N.S.W.
Fluid Power Society of Victoria
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components—Vocabulary**

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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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CONTENTS

	<i>Page</i>
0 Introduction	6
1 Scope and field of application	6
2 Fundamentals	6
2.0 General	6
2.1 Conditions of utilization	6
2.2 Performance characteristics	7
2.3 Graphical representation	9
2.4 Miscellaneous terms	10
3 Energy conversion	11
3.0 General	11
3.1 Hydraulic pumps	11
3.2 Motors	13
3.2.1 Air motors	13
3.2.2 Hydraulic motors	13
3.3 Hydraulic pump-motor	14
3.4 Variable speed drive units (integral transmissions)	15
3.5 Cylinder	15
3.6 Pressure intensifier	17
3.7 Pneumatic-hydraulic actuator	18
3.8 Dashpot	18
4 Energy control and regulation	18
4.0 Valve	18
4.1 Directional control valve	19
4.2 Check valves; non-return valves	20
4.3 Pressure control valve	20
4.4 Flow control valves	21
4.5 Shut-off [isolating] valve	21
4.6 Fluid logic and fluid analogue devices	22
4.7 Servo-valve	24
5 Energy transfer and conditioning equipment	27
5.0 General	27

	<i>Page</i>
5.1 Energy sources	27
5.2 Flowlines, ports and connections	27
5.3 Reservoir; receiver	29
5.4 Accumulator	29
5.5 Conditioning of compressed air	29
5.6 Heat exchangers	30
5.7 Silencer	30
5.8 Hydraulic filter	30
5.9 Sealing device	32
6 Control mechanisms	33
6.0 Automatic control	33
6.1 Mechanical components	33
6.2 Manual control	33
6.3 Mechanical control	33
6.4 Pressure control	34
6.5 Electrical control	34
6.6 Combined control	34
6.7 Servo control	34
6.8 Auxiliary control	34
7 Additional apparatus	34
7.1 Measuring instruments	34
7.2 Indicators	35
7.3 Switches	35
7.4 Other apparatus	35
8 Assemblies	36
8.0 General	36
8.1 Driven assemblies	36
8.2 Motor assemblies	36
8.3 Control and regulation assemblies	36
8.4 Air conditioner unit	36
8.5 Fluid power circuit	36
9 Complete installations — Assemblies	37

	<i>Page</i>
9.0 General	37
9.1 Installation	37
9.2 Commissioning and maintenance	38
10 Hydraulic fluids	39
10.0 General	39
10.1 Classification of fluids	39
10.2 Fluid types	39
10.3 Characteristics of fluids	39
10.4 Contamination	41
Alphabetical index	42

Fluid power systems and components—Vocabulary

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 oppose 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 technology which 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 testing. 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 stabilized conditions : 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 acceptable conditions : Conditions which permit a tolerable standard of performance and life.