INTERNATIONAL STANDARD ISO 3662

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Hydraulic fluid power — Pumps and motors — Geometric displacements

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FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up has the right to be represented on that Committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the Technical Committees are circulated to the Member Bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 3662 was drawn up by Technical Committee ISO/TC 131, *Fluid power systems and components*, and was circulated to the Member Bodies in February 1975.

It has been approved by the Member Bodies of the following countries :

Australia	Hungary	Spain
Austria	Italy	Sweden
Belgium	Japan	Switzerland
Brazil	Netherlands	Turkey
Czechoslovakia	Poland	U.S.A.
France	Romania	U.S.S.R.
Germany	South Africa, Rep. of	Yugoslavia

No Member Body expressed disapproval of the document.

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Hydraulic fluid power — Pumps and motors — Geometric displacements

0 INTRODUCTION

In hydraulic fluid power systems, power is transmitted and controlled through a liquid under pressure within an enclosed circuit. Pumps are components which convert rotary mechanical power into hydraulic power. Motors are components which convert hydraulic fluid power into rotary mechanical power.

1 SCOPE

This International Standard established the geometric displacements (V) of hydraulic fluid power pumps and motors having rotating or oscillating drives.

This International Standard is also applicable to variable displacement units; in such cases, the values refer to the maximum displacement.

2 FIELD OF APPLICATION

The geometric displacements specified by this International Standard may be used as guidelines for the design of positive displacement hydraulic fluid power pumps and motors. They may also be used to derive other basic design criteria and normal ratings.

3 REFERENCES

ISO 497, *Guide to the choice of series of preferred numbers and of series containing more rounded values of preferred numbers.*

ISO 5598, *Fluid power — Vocabulary.*[1)]

4 DEFINITIONS

4.1 geometric displacement : The calculated total of all changes in volume of pressure chambers originating from the movement of displacement elements during one revolution of the input (pumps) or output (motors) shaft, or one double stroke of an oscillating drive. Tolerances, clearances, distortions or deformations are not considered.

4.2 For definitions of other terms used, see ISO 5598.

1) In preparation.

5 GEOMETRIC DISPLACEMENTS

TABLE — **Nominal values for geometric displacements (V), in millilitres (cubic centimetres) per revolution**

0,1	1	10	100	1 000
		(11,2)	(112)	(1 120)
	1,25	12,5	125	1 250
		(14)	(140)	(1 400)
0,16	1,6	16	160	1 600
		(18)	(180)	(1 800)
	2	20	200	2 000
		(22,4)	(224)	(2 240)
0,25	2,5	25	250	2 500
		(28)	(280)	(2 800)
	3,15	31,5	315	3 150
		(35,5)	(355)	(3 550)
0,4	4	40	400	4 000
		(45)	(450)	(4 500)
	5	50	500	5 000
		(56)	(560)	(5 600)
0,63	6,3	63	630	6 300
		(71)	(710)	(7 100)
	8	80	800	8 000
		(90)	(900)	(9 000)

NOTES

1 The nominal geometric displacement is the displacement assigned to hydraulic fluid power pumps and motors for the purpose of convenient designation.

2 Specify values of displacements in excess of 9 000 ml/rev (cm^3/rev) with R 20 numbers. R 10 is the preferred series.

3 Values printed in parentheses are non-preferred values.

6 IDENTIFICATION STATEMENT (Reference to this International Standard)

Use the following statement in test reports, catalogues and sales literature when electing to comply with this International Standard :

"Geometric displacements conform to ISO 3662, *Hydraulic fluid power — Pumps and motors — Geometric displacements.*"