INTERNATIONAL STANDARD 4393

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Fluid power systems and components — Cylinders — Basic series of piston strokes

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FOREWORD

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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 4393 was developed by Technical Committee ISO/TC 131, *Fluid power systems and components*, and was circulated to the member bodies in March 1977.

It has been approved by the member bodies of the following countries :

Australia	Germany	Poland
Austria	Hungary	Romania
Belgium	India	South Africa, Rep. of
Brazil	Iran	Spain
Chile	Italy	Sweden
Czechoslovakia	Japan	Switzerland
Egypt, Arab Rep. of	Korea, Rep. of	Turkey
Finland	Mexico	United Kingdom
France	Netherlands	U.S.A.

No member body expressed disapproval of the document.

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0 INTRODUCTION

In fluid power systems, power is transmitted and controlled through a fluid (liquid or gas) under pressure within a circuit. One component of such systems is the fluid power cylinder. This is a device which converts power into linear mechanical force and motion. It consists of a movable element, i.e. a piston and piston rod, operating within a cylindrical bore.

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies the preferred series of piston strokes for application to single-acting and double-acting, hydraulic and pneumatic fluid power cylinders.

2 REFERENCE

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

3 DEFINITIONS

3.1 cylinder : A device which converts fluid power into linear mechanical force and motion.

3.2 cylinder, single acting : A cylinder in which the fluid force can be applied to the movable element in only one direction.

3.3 cylinder, double acting : A cylinder in which fluid force can be applied to the movable element in either direction.

4 DIMENSIONS

Refer to the figure for identification of the piston strokes.

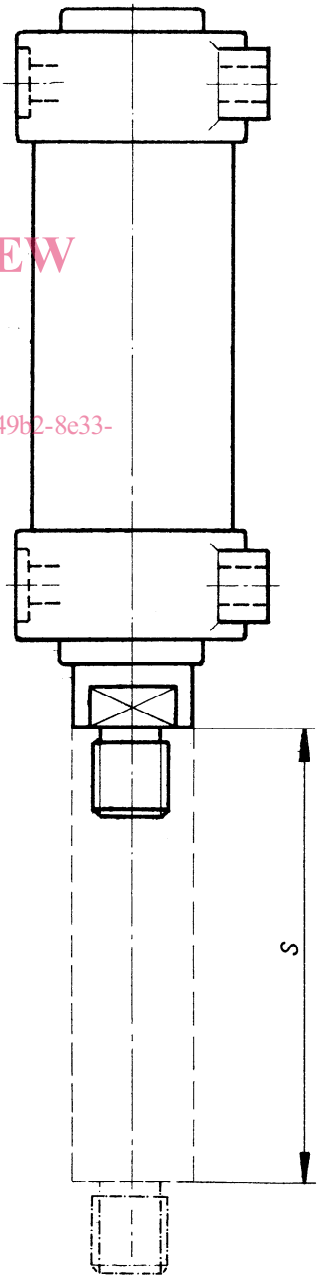

FIGURE — Identification of piston strokes

Select the preferred series of piston strokes from the dimensions in the table.

TABLE – **Piston strokes**

Dimensions in millimetres

S	25	50	80	100	125	160	200	250	320	400	500

NOTE – If an extension of the series shown above is required, use the rounded-off R 10 series of values as shown in ISO 497.

5 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 :

"Preferred series of piston strokes selected in accordance with ISO 4393, *Fluid power systems and components – Cylinders – Basic series of piston strokes.*"