SLOVENSKI STANDARD
SIST ISO 8137:1998

01-december-1998

Fluidna tehnika - Hidravlika - Valji z enostransko batnico vrste 250 barov (25 MPa) - Mere priključ nih odprtin

Hydraulic fluid power -- Single rod cylinders, 250 bar (25 MPa) series -- Port dimensions

Transmissions hydrauliques -- Vérins 250 bar (25 MPa) à simple tige -- Dimensions des orifices

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Ta slovenski standard je istoveten z: **ISO 8137:1986**

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ICS:

23.100.20 Hidravliļ ni valji Cylinders

SIST ISO 8137:1998 **en**

2003-01.Slovenski inštitut za standardizacijo. Razmnoževanje celote ali delov tega standarda ni dovoljeno.

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International Standard 8137

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION•МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ•ORGANISATION INTERNATIONALE DE NORMALISATION

Hydraulic fluid power — Single rod cylinders, 250 bar (25 MPa) series — Port dimensions

Transmissions hydrauliques — Vérins 250 bar (25 MPa) *à simple tige — Dimensions des orifices*

First edition — 1986-12-01

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UDC 621.8.032 : 621.226 **Ref. No. ISO 8137-1986 (E)**

Descriptors : Hydraulic fluid power, hydraulic equipment, hydraulic cylinders, single rod cylinders, dimensions, interchangeability.

Price based on 2 pages

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established 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. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

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International Standard ISO 8137 was prepared by Technical Committee ISO/TC 131, *Fluid power systems*.

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Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

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Hydraulic fluid power — Single rod cylinders, 250 bar (25 MPa) series — Port dimensions

0 Introduction

In hydraulic fluid power systems, power is transmitted and controlled through a fluid (liquid or gas) under pressure within an enclosed 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 establishes port dimensions[1] for 250 bar[2] (25 MPa) series cylinders as required for interchangeability of commonly used hydraulic cylinders.

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NOTE — This International Standard allows manufacturers of hydraulic equipment freedom in design of metric cylinders; it does not restrict technical development but provides basic guidelines.

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2 References

ISO 3320, *Fluid power systems and components — Cylinder bore and piston rod diameter — Metric series.*

ISO 5598, *Fluid power systems and components — Vocabulary.*

ISO 6022, *Hydraulic fluid power — Single rod cylinders — Mounting dimensions —* 250 bar (25 000 kPa) *series.*

ISO 6149, *Fluid power systems and components — Metric ports — Dimensions and design.*

ISO 6162, *Hydraulic fluid power — Flange connections — Four-bolt split flanges rated for normal duty applications —* PN 35 *to* PN 415 (3,5 *to* 41,5 MPa) *— Dimensions.*[3]

ISO 6164, *Hydraulic fluid power — Flange connections — Four-bolt, one-piece square flanges rated for normal duty applications —* PN 250 *and* PN 400 (25 MPa *and* 40 MPa) *— Dimensions.*[3]

3 Definitions

For the purposes of this International Standard, the definitions given in ISO 5598 and the following definitions apply.

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

3.2 cylinder bore : The internal diameter of the cylinder.

3.3 port : An internal or external terminus of a passage in a component.

4 Dimensions

Port sizes and dimensions for cylinders manufactured in accordance with ISO 6022 shall be selected from the table.

5 Bore sizes

The following bore sizes[4] are included in this 250 bar (25 MPa) series :

50 — 63 — 80 — 100 — 125 — 160 — 200 — 250 — 320 — 400 — 500 mm

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 :

"Port dimensions selected in accordance with ISO 8137, *Hydraulic fluid power — Single rod cylinders,* 250 bar (25 MPa) *series — Port dimensions.*"

1) This International Standard permits all ISO approved ports that are appropriate to fluid power applications.

2) 1 bar = 0,1 MPa = 10^5 Pa; 1 Pa = 1 N/m^2

3) At present at the stage of draft.

4) Selected from ISO 3320.

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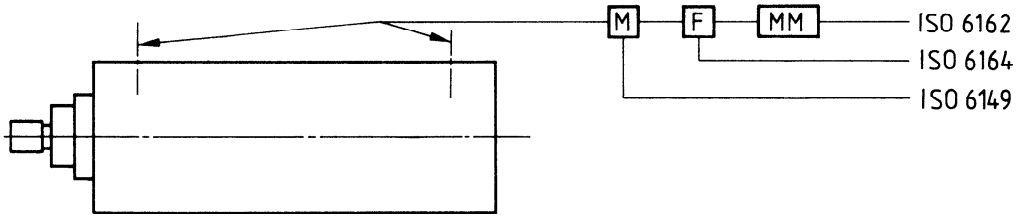
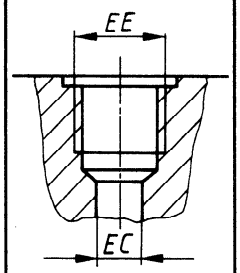
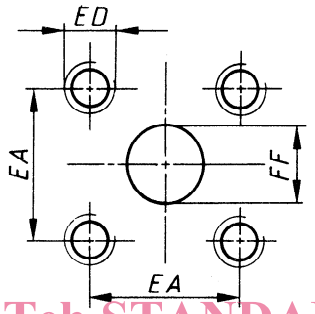
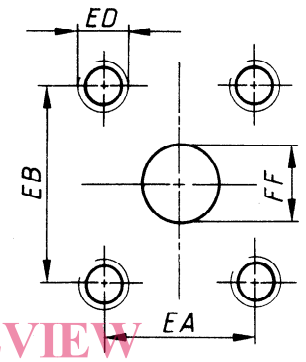
Table — Port and flange sizes

Dimensions in millimetres



Bore	ISO 6149 Port		ISO 6164 Square flange				ISO 6162 Rectangular flange				
											
	M		F				MM				
	EE	*EC* min.	Nominal flange size DN	*FF* $^{0}_{-1,5}$	*EA* ± 0,25	*ED*	Nominal flange size DN	*FF* $^{0}_{-1,5}$	*EA* ± 0,25	*EB* ± 0,25	*ED*
50	M22 × 1,5	12									
63 80	M27 × 2	16	13	15	29,7	M8 × 1,25	13	12,7	17,50	38,10	M8 × 1,25
100 125	M33 × 2	20	19	20	35,3	M8 × 1,25	19	19,1	22,25	47,65	M10 × 1,5
160 200	M42 × 2	25	25	25	43,8	M10 × 1,5	25	25,4	26,20	52,35	M10 × 1,5
250 320	M50 × 2	32	32	32	51,6	M12 × 1,75	32	31,8	30,20	58,70	M12 × 1,75
400 500	M60 × 2	38	38	38	60	M14 × 2	38	38,1	35,70	69,85	M14 × 2

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