
INTERNATIONAL STANDARD



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

**Part-turn valve actuator attachment —
Part I : Flange dimensions**

*Raccordement des servomoteurs à fraction de tour aux
appareils de robinetterie —
Partie I : Dimensions des embases*

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Descriptors : industrial valves, servomotors, junctions, base plates, specifications, dimensions, designations.

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 5211/1 was developed by Technical Committee ISO/TC 153, *General purpose industrial valves*, and was circulated to the member bodies in November 1976.

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

Australia	Italy	South Africa, Rep. of
Austria	Korea, Rep. of	Spain
Belgium	Mexico	Sweden
Chile	Netherlands	Switzerland
Finland	Norway	United Kingdom
France	Philippines	U.S.A.
Germany	Poland	Yugoslavia
India	Romania	

The member body of the following country expressed disapproval of the document on technical grounds :

U.S.S.R.

Part-turn valve actuator attachment — Part I : Flange dimensions

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies those dimensions of the flanges of part-turn actuators which are necessary for their attachment to general purpose industrial valves. These dimensions also permit the attachment of actuators to gearboxes and of gearboxes to valves.

2 REFERENCES

ISO/R 273/I, *Clearance holes for metric bolts 1,6 up to and including 39 mm thread diameter.*

ISO/R 286, *ISO system for limits and fits — Part 1 : General, tolerances and deviations.*

3 DEFINITIONS

For the purpose of this International Standard the following definitions apply :

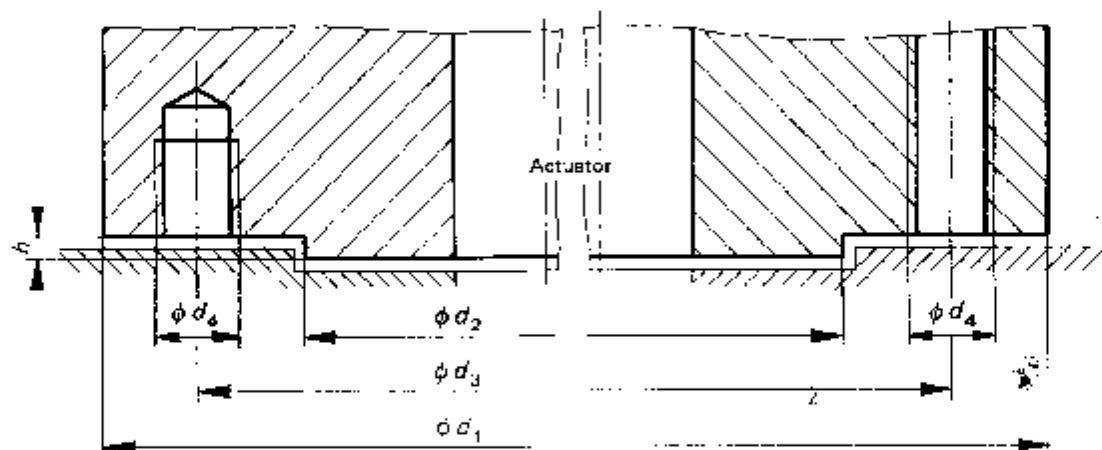
3.1 actuator : Any device designed for attachment to a general purpose industrial valve in order to provide for the operation of the valve.

The device is designed to operate using motive energy which can be electrical, pneumatic, hydraulic, etc., or a combination of these.

The movement is limited by either travel, torque or thrust.

3.2 part-turn actuator : An actuator which transmits to the valve a torque for a rotation of less than one revolution. It does not have to be capable of withstanding thrust.

2 FLANGE DIMENSIONS



Flange type	Dimensions, mm					Number of studs or bolts
	d_1	d_2 (ø)	d_3	d_4	h max.	
F05	65	35	50	M6	3	4
F07	90	55	70	M8	3	4
F10	125	70	102	M10	3	4
F12	150	85	125	M12	3	4
F14	175	100	140	M16	4	4
F16	210	130	155	M20	5	4
F25	300	200	254	M16	6	8
F30	350	230	298	M20	5	8
F35	415	260	356	M30	5	6
F40	475	300	406	M36	8	8
F48	560	370	483	M36	8	12

NOTES

1. The method of attachment may be by means of studs or through bolting. When the latter method is used, the diameter of the clearance holes shall permit the use of bolts of a size given by the corresponding d_4 dimension.
2. The holes for the studs/bolts shall be located off-centre, shall be equispaced and shall conform to the requirements of ISO/R 273/1.
3. The recess in the mounting surface corresponding to diameter d_2 is mandatory; the spigot on the actuator is optional.
4. The dimension d_1 has been based on giving sufficient landing for the nuts and bolt heads where applicable. Such landing is defined as a radius from the bolt hole centre with the dimension $(d_1 - d_3)/2$, and shall be considered as a minimum. The shape of the flange of both valve and actuator outside of these areas of landing is left to the option of the manufacturer.

5 DESIGNATION

The flanges shall be designated by

- the letter F,
- two digits.

The digits correspond to the values of d_3 , in principle rounded down, and divided by 10.