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INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION

R 447

DIRECTION OF OPERATION OF MACHINE TOOL CONTROLS

1st EDITION

October 1965

For each individual country the only valid standard is the national standard of that country.

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BRIEF HISTORY

The ISO Recommendation R 447, *Direction of Operation of Machine Tool Controls*, was drawn up by Technical Committee ISO/TC 39, *Machine Tools*, the Secretariat of which is held by the Association Française de Normalisation (AFNOR).

Work on this question by the Technical Committee began in 1952 and led, in 1962, to the adoption of a Draft ISO Recommendation.

In October 1963, this Draft ISO Recommendation (No. 624) was circulated to all the ISO Member Bodies for enquiry. It was approved, subject to a few modifications of an editorial nature, by the following Member Bodies:

Argentina	Hungary	Sweden
Austria	India	Switzerland
Belgium	Italy	U.A.R.
Czechoslovakia	Japan	United Kingdom
Denmark	Korea, Rep. of	U.S.A.
Finland	Netherlands	U.S.S.R.
France	New Zealand	Yugoslavia
Germany	Poland	
Greece	Spain	

No Member Body opposed the approval of the Draft.

The Draft ISO Recommendation was then submitted by correspondence to the ISO Council which decided, in October 1965, to accept it as an ISO RECOMMENDATION.

ISO Recommendation R 447 October 1965

DIRECTION OF OPERATION OF MACHINE TOOL CONTROLS

1. SCOPE

This ISO Recommendation is concerned solely with the choice of the direction of operation of controls whose function is to produce movement of controlled machine tool components in one or other of two opposing directions.

Consequently, its scope does not include controls for components which rotate continuously in the same direction during the normal functioning of the machine (such as controls for electric motors).

2. GENERAL RULES

The rules included in this ISO Recommendation are applicable generally to new series of machine tools and also as far as possible to existing series.

It may be, however, that in certain cases they cannot be applied; the departure from the rule should then be made clear by showing on the machine indicator plate the directions of operation of the control and the corresponding directions of movement of the controlled component.

2.1 Lever control

The lever should be so placed that

for the control of a rectilinear movement, the line joining the extreme positions of the handle, on either side of the neutral position, is approximately parallel to the direction of the movement of the controlled component;

for the control of a circular movement, the plane in which the lever arm rotates is parallel to that of the controlled component.

In either case, the movement of the lever should produce a movement of the controlled component in the same direction.

This rule is valid for the control of movements produced manually (Fig. 1), as well as for starting automatic movements (Fig. 2 and 3).

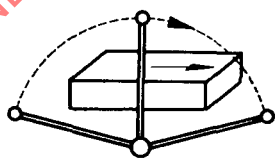

FIG. 1

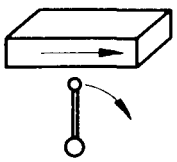

FIG. 2

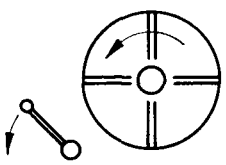

FIG. 3

2.2 Push-button control

The line of push buttons should be placed parallel to the movement of the controlled component and the operation of the right-hand button, or the farthest button or the top button, is to produce a movement respectively to the right, or away or upwards (for an operator placed in the operating position).