International Standard ISO 6580

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General purpose industrial fans — Circular flanges — Dimensions

Ventilateurs courants industriels — Brides circulaires — Dimensions

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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 6580 was developed by Technical Committee ISO/TC 117, *Industrial fans*, and was circulated to the member bodies in July 1980.

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

Australia	France	Poland
Austria	Germany, F. R.	Romania
Belgium	India	Sweden
Canada	Italy	Switzerland
Czechoslovakia	Korea, Rep. of	United Kingdom
Egypt, Arab Rep. of	Netherlands	USA

No member body expressed disapproval of the document.

Printed in Switzerland

General purpose industrial fans — Circular flanges — Dimensions

1 Scope and field of application

This International Standard specifies the dimensions of circular flanges for general purpose fans. It applies to fans defined as follows :

"A fan suitable for handling air which is non-toxic, not saturated, non-corrosive, non-flammable, free from abrasive particles, and does not exceed a temperature of 80 °C, or 40 °C if the motor or the fan bearings are in the air stream"[1].

Heavy duty fans where significantly greater flange thicknesses will be required are not included in applications of this International Standard.

2 References

ISO 3, *Preferred numbers — Series of preferred numbers.*

ISO 17, *Guide to the use of preferred numbers and of series of preferred numbers.*

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

3 Required characteristics

This International Standard adopts the R 20 Series as given in ISO 497 as the nominal dimensions for the inside diameter. It takes into account the maximum casing thicknesses at the circular flange, as used for general purpose fans.

The smallest practical pitch circle diameter can be related to the inside diameter of the casing, the casing thickness, the size of the weld fillet or bend radius at the junction of the flange and the casing, and the normal washer diameter.

This International Standard accepts that the number and diameter of bolts or screws cannot be established on a theoretical basis. Practical experience of satisfactory service, optimum cost of installation and manufacture as well as dimensional tolerances of production are the most important considerations.

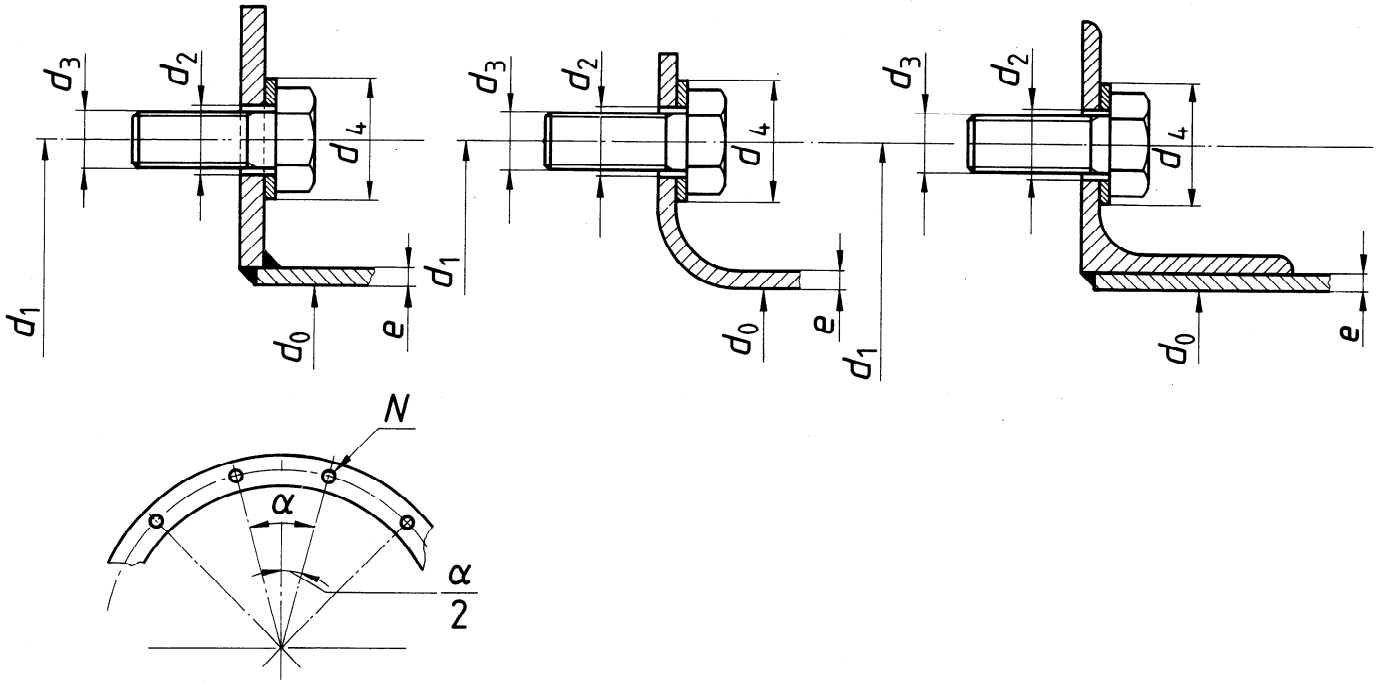
The number of flange holes is divisible by four to permit the orientation of cylindrical cased fans to positions at 90°. The holes are disposed equally each side of the centrelines of the fan. This permits a flange to be divided in half should a split casing be required. It also allows better access to the fixings on the remote side of a fan on a confined installation.

Should an intermediate fan size be required, then the R 40 Series should be used to obtain the nominal inside diameter. The flange details should be interpreted from the next larger R 20 size.

In exceptional circumstances when even smaller increments of size are required it is suggested that the R 80 Series could be used.

1) Eurovent Document 1/1 (3.4.1).

4 Dimensions — Flanges and mounting holes



d_0 mm	d_1 mm	$\frac{d_1 - d_0}{2}$ mm	N	$\alpha°$	d_2 mm	d_3 mm	d_4 mm	e_{max} mm
100	120	10	4	90	7	6	12,5	1,6
112	137	12,5	4	90	7	6	12,5	2
125	150	12,5	4	90	7	6	12,5	2
140	165	12,5	4	90	7	6	12,5	2
160	185	12,5	4	90	7	6	12,5	2
180	205	12,5	4	90	7	6	12,5	2
200	225	12,5	4	90	7	6	12,5	2
224	254	15	4	90	7	6	12,5	2
250	280	15	4	90	10	8	17	2,5
280	320	20	4	90	10	8	17	2,5
315	355	20	8	45	10	8	17	3
355	395	20	8	45	10	8	17	3
400	450	25	8	45	12	10	21	3
450	500	25	8	45	12	10	21	3
500	560	30	12	30	12	10	21	3,5
560	620	30	12	30	12	10	21	3,5
630	690	30	12	30	12	10	21	5
710	770	30	16	22,5	12	10	21	5
800	860	30	16	22,5	12	10	21	5
900	970	35	16	22,5	15	12	24	6
1 000	1 070	35	16	22,5	15	12	24	6
1 120	1 190	35	20	18	15	12	24	6
1 250	1 320	35	20	18	15	12	24	6
1 400	1 470	35	20	18	15	12	24	6
1 600	1 680	40	24	15	19	16	30	8
1 800	1 880	40	24	15	19	16	30	8
2 000	2 080	40	24	15	19	16	30	8

d : Refers to diameter
N : Refers to number of flange holes
e_{max} : Refers to maximum casing thickness