ERRATA

to

ANSI/ASME B5.35-1983
MACHINE MOUNTING SPECIFICATIONS FOR ABRASIVE DISCS AND PLATE MOUNTED WHEELS

Page 2, Fig. 1.2 – *Correct socket head cap screw to show flat bottom, as illustrated below.*

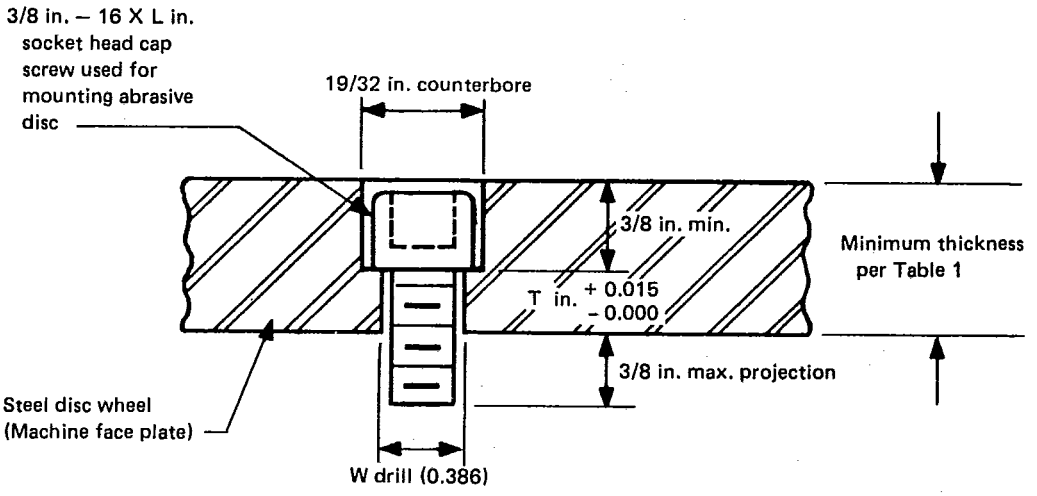


FIG. 1.2 DETAIL OF MOUNTING HOLE AND SCREW FOR INSERTED NUT TYPE MOUNTING

OCTOBER 1985

THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS
345 East 47th Street, New York, N.Y. 10017

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AN AMERICAN NATIONAL STANDARD

Machine Mounting Specifications for Abrasive Discs and Plate Mounted Wheels

ANSI/ASME B5.35 - 1983

[Revision of B5.35-1969 (R1975)]

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FOREWORD

(This Foreword is not part of ANSI/ASME B5.35-1983, Machine Mounting Specifications for Abrasive Discs and Plate Mounted Wheels.)

This Standard, Machine Mounting Specifications for Abrasive Discs and Plate Mounted Wheels, was approved as an American Standard by the American Standards Association (now the American National Standards Institute) on September 17, 1957. The characteristic which makes this class of wheels different from the conventional grinding wheel is the method by which they are mounted on the grinding machine where grinding is done on the exposed flat side of the wheel. The principal difference is that the power is impacted to the grinding wheel through either inserted nuts, inserted washers, projecting studs anchored on one side of the abrasive wheel, or a mounting plate of steel or other rigid material cemented to one side of the wheel.

The steel wheels (machine face plates) on which these abrasive discs and plate mounted wheels are mounted must be drilled with holes to match the location and pattern of the holes of the mounting plates or other anchoring devices in the mounting side of the abrasive wheels.

This Standard was considered for reaffirmation in November 1963 by TC31. Certain revisions for clarification were recommended, and the text of the Standard was reorganized and indexed to conform to the B5 style manual.

Following approval by TC31 and the B5 Standards Committee, the proposed revision was approved by the sponsors. It was approved by the USA Standards Institute and redesignated a USA Standard on January 3, 1969.

The present revision was approved by the American National Standards Institute on October 17, 1983.

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AN AMERICAN NATIONAL STANDARD

MACHINE MOUNTING SPECIFICATIONS FOR ABRASIVE DISCS AND PLATE MOUNTED WHEELS

1 PURPOSE

To provide standards to be used in the design of machine face plates matching the location of nuts, washers, studs of abrasive discs, or plain or tapped holes of plate mounted wheels.

2 SCOPE

This Standard covers ANSI Standard practice for location and size of bolt holes for mounting abrasive discs and plate mounted wheels.

3 GENERAL

3.1 Abrasive discs are bonded abrasives which are molded with inserted nuts, inserted washers, projecting studs, or a tapped mounting plate on the mounting side of the abrasive disc. The nuts, washers, studs, or tapped holes are located in a pattern to match the spacing of corresponding holes in the machine face plate.

3.2 For standard diameters and minimum thicknesses of steel disc wheels, see Table 1.

3.3 Inserted nut type discs (see Fig. 1.1) are those having threaded nuts anchored in the mounting side of the disc which are located in a pattern to match the spacing of corresponding holes in the machine face plate (see Fig. 1.2).

3.4 Inserted washer type discs (see Table 2 and Fig. 2) are those having washers anchored in the mounting side of the disc which are located in a pattern to match the corresponding holes in the machine face plate.

3.5 Tapped mounting plate type discs (see Table 3 and Fig. 3) are those having a mounting plate cemented to the mounting side of the disc which has tapped holes located in a pattern to match the corresponding holes in the machine face plate.

3.6 Projecting stud type discs (see Table 4 and Fig. 4) are those having studs enclosed in the mounting side of the disc which are located in a pattern to match the corresponding holes in the machine face plate.

3.7 Cylinder type discs (see Table 5 and Fig. 5) are similar in shape to Type 2 abrasive wheels. Mounting may be by means of inserted nuts, projecting studs, or tapped mounting plate. The mounting means are located in a pattern to match the corresponding holes in the machine face plate.

3.8 Plate mounted wheels (see Tables 6 and Fig. 6) are bonded abrasives having mounting plates of steel or other rigid material cemented to the mounting side of the wheel which has mounting holes located in a pattern to match corresponding holes in the machine face plate. The mounting holes are always located within the inside diameter of the abrasive section. Grinding is done on the exposed flat side.

4 STANDARD HOLE SPACING FOR STEEL WHEELS (MACHINE FACE PLATES) FOR 10 in. TO 30 in. DIAMETER ABRASIVE DISCS

See ANSI B7.1, American National Standard Safety Requirements for the Use, Care, and Protection of Abrasive Wheels, Table 2, Minimum Thickness of Machine Face Plates (Steel Disc Wheels) for Mounting Abrasive Discs.

4.1 For 10 in. to 30 in. diameter discs, see Figs. 7, 8, and 9.

4.1.1 Holes on each bolt circle are equally spaced.

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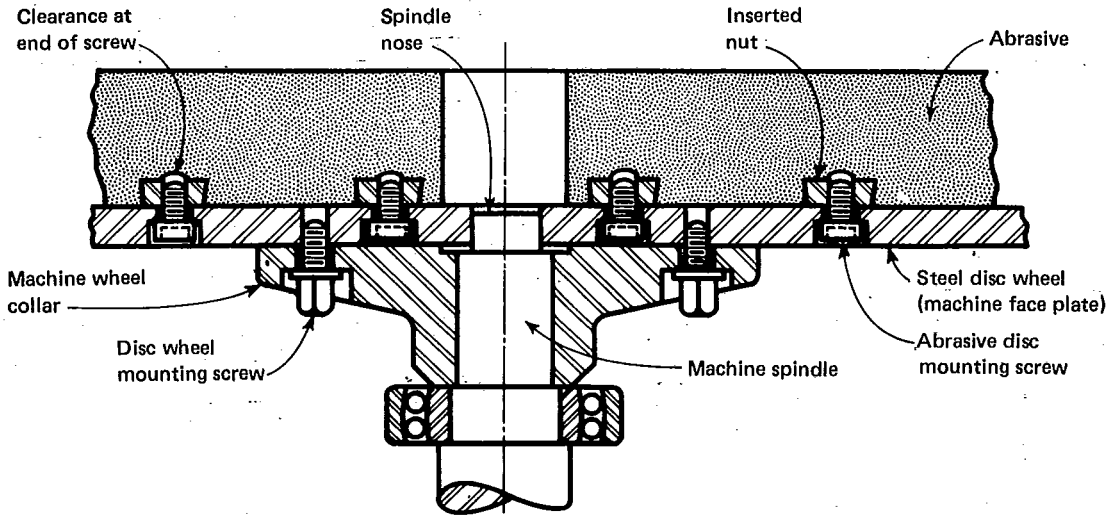


FIG. 1.1 TYPICAL INSERTED NUT TYPE MOUNTING

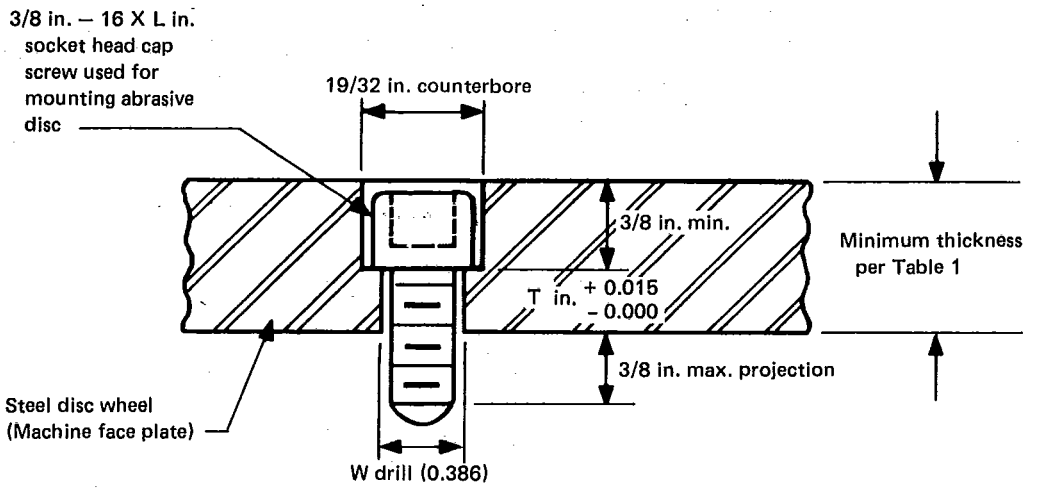


FIG. 1.2 DETAIL OF MOUNTING HOLE AND SCREW FOR INSERTED NUT TYPE MOUNTING

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TABLE 1 STANDARD DIAMETERS AND MINIMUM THICKNESSES OF STEEL DISC WHEELS, in.[1]

Diam.	Thick.	Diam.	Thick.	Diam.	Thick.
10	1/2	20	3/4	36	7/8
12	1/2	22	3/4	40	1
14	1/2	23	3/4	42	1-1/8
15	5/8	24	3/4	48	1-1/8
16	5/8	26	3/4	53	1-1/8
18	5/8	30	7/8	72	1-1/8

NOTE:
(1) From ANSI B7.1-1978, American National Standard Safety Requirements for the Use, Care, and Protection of Abrasive Wheels.

TABLE 2 STANDARD DIAMETERS OF INSERTED WASHER TYPE DISCS, in.

42	53
48	72
	84

TABLE 3 STANDARD DIAMETERS OF TAPPED MOUNTING PLATE TYPE DISCS, in.

10	15	20	24
12	16	22	26
14	18	23	30
			36

TABLE 4 STANDARD DIAMETERS OF PROJECTING STUD TYPE DISCS, in.

10	15	20	24	36	48
12	16	22	26	40	53
14	18	23	30	42	72

TABLE 5 STANDARD DIAMETERS OF CYLINDER TYPE DISCS, in.

10	14
11	18
	20

TABLE 6 STANDARD DIAMETERS OF PLATE MOUNTED WHEELS, in.

5	12
6	14
7	16
8	18
10	20

4.1.2 Holes in steel wheels are 0.386 in. in diameter.

4.2 For 36 in. and 40 in. diameter discs, see Figs. 10 and 11.

4.2.1 Holes in steel wheels are 0.386 in. in diameter.

4.3 For 42 in. to 72 in. diameter discs, see Figs. 12, 13, 14, and 15.

4.3.1 Holes in steel wheels are 0.386 in. in diameter.

4.3.2 Holes in steel wheels are tapped ½-13 UNC-2B for inserted washer type discs.

4.4 For 84 in. diameter discs, see Fig. 16.

4.4.1 Holes in steel wheels are tapped ½-13 UNC-2B for inserted washer type discs only.

4.5 For 10 in. to 20 in. diameter cylinder type discs, see Fig. 17.

4.5.1 Holes in bolt circle are equally spaced.

4.5.2 Holes in steel wheels are 0.386 in. in diameter.

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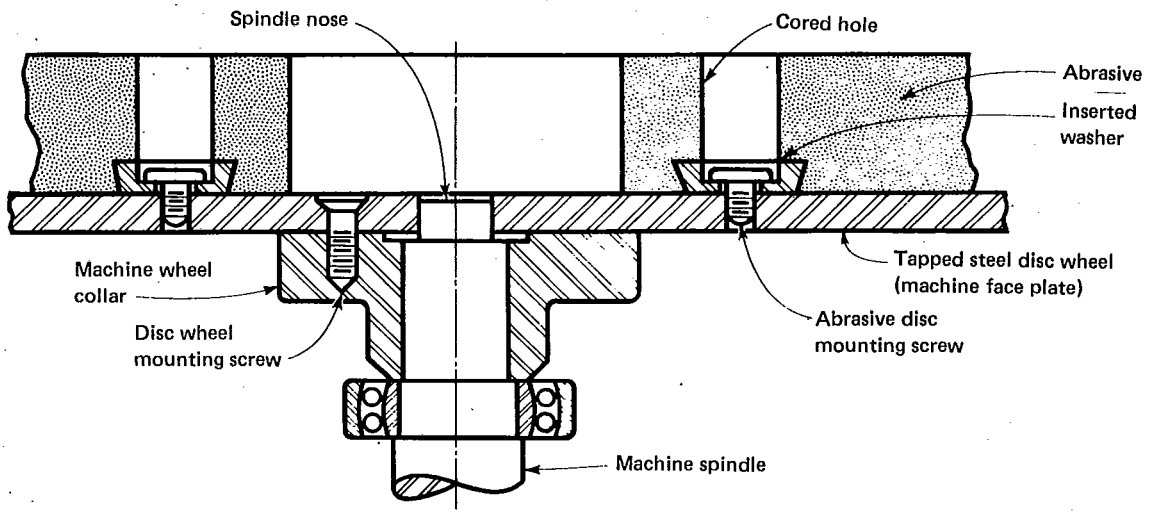


FIG. 2 TYPICAL INSERTED WASHER TYPE MOUNTING

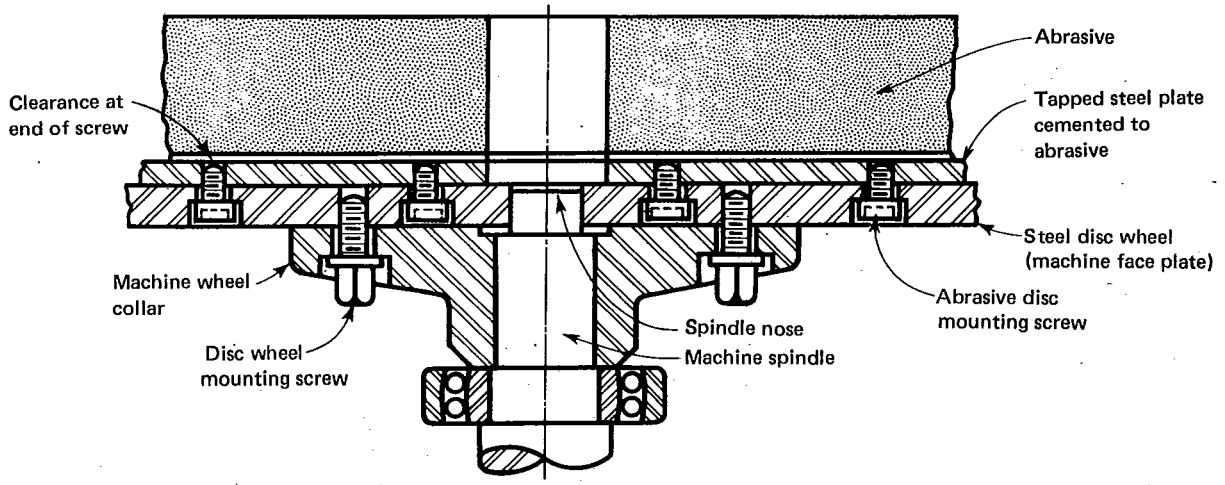


FIG. 3 TYPICAL TAPPED MOUNTING PLATE TYPE MOUNTING

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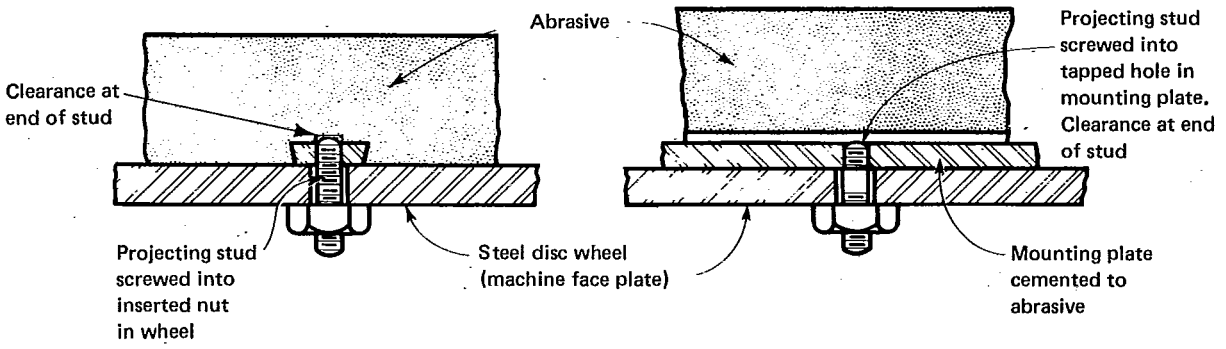


FIG. 4 TYPICAL PROJECTING STUD TYPE MOUNTINGS

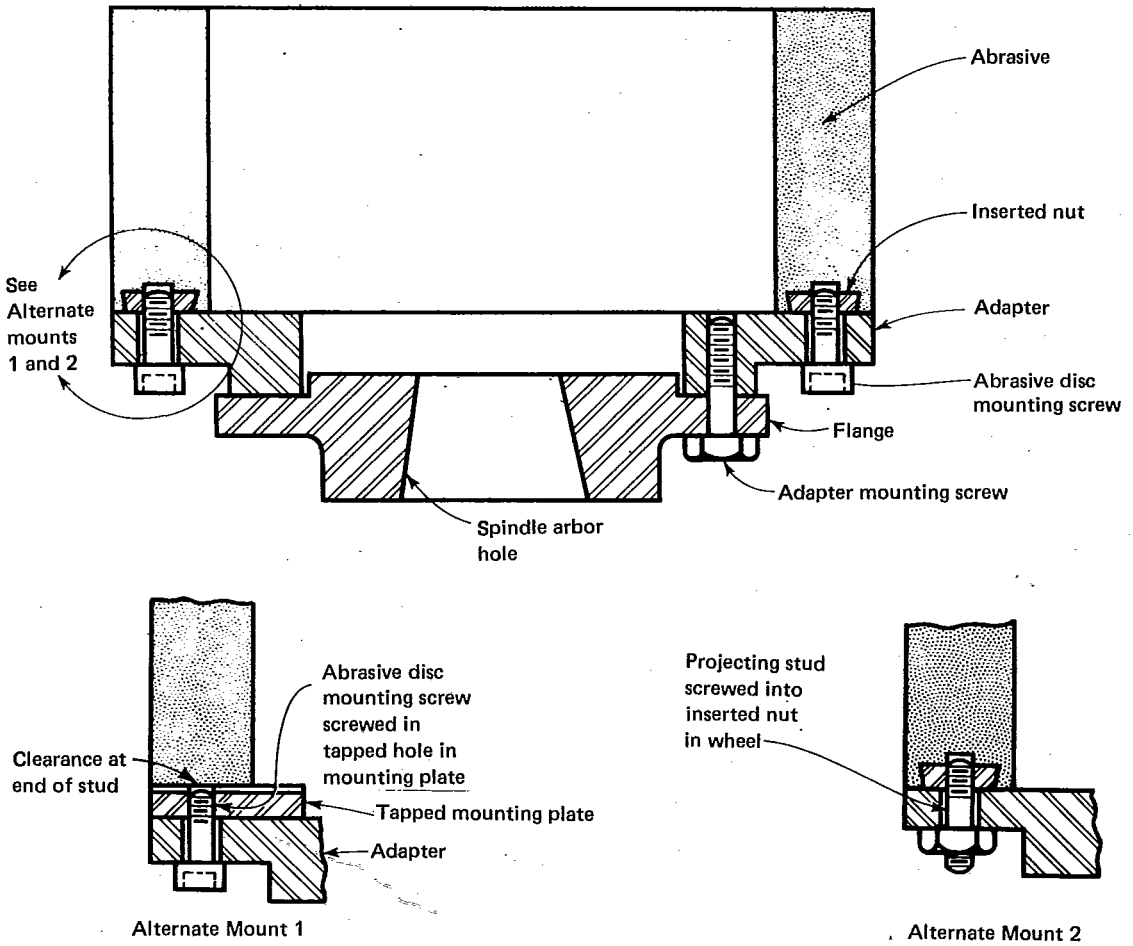


FIG. 5 TYPICAL CYLINDER TYPE MOUNTINGS

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5 STANDARD HOLE SPACING FOR STEEL WHEELS (MACHINE FACE PLATES) FOR PLATE MOUNTED WHEELS

See ANSI B7.1, American National Standard Safety Requirements for the Use, Care, and Protection of Abrasive Wheels, Table 3, Minimum Thickness of Machine Face Plate (Steel Disc Wheel) for Machines Using Plate Mounted Wheels Having Thin Mounting Plates.

5.1 For 5 in. to 20 in. plate mounted wheels, see Fig. 6.

5.1.1 Holes in each bolt circle are equally spaced.

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Steel Disc Wheel O.D., in.	No. of Holes	Threaded Holes in Steel Disc Wheel	Bolt Circle, in.	Centering Pilot, in.
5	4	1/4-20 UNC-2B	2	1 1/4
6	4	3/8-16 UNC-2B	3 1/4	1 1/4
7	4	3/8-16 UNC-2B	3 1/4	1 1/4
8	4	3/8-16 UNC-2B	3 1/4	1 1/4
10	4	3/8-16 UNC-2B	4	1 1/4
12	4	3/8-16 UNC-2B	4	1 1/4
14	4	1/2-13 UNC-2B[1]	8	1 1/4
16	4	1/2-13 UNC-2B[1]	8	2 1/2
18	4	5/8-11 UNC-2B[1]	8	2 1/2
20	4	5/8-11 UNC-2B[1]	8	2 1/2

NOTE:
(1) Steel disc wheel, counterbored
9/16 in. diam. X 1/8 in. deep for 1/2-13 threads
11/16 in. diam. X 1/8 in. deep for 5/8-11 threads

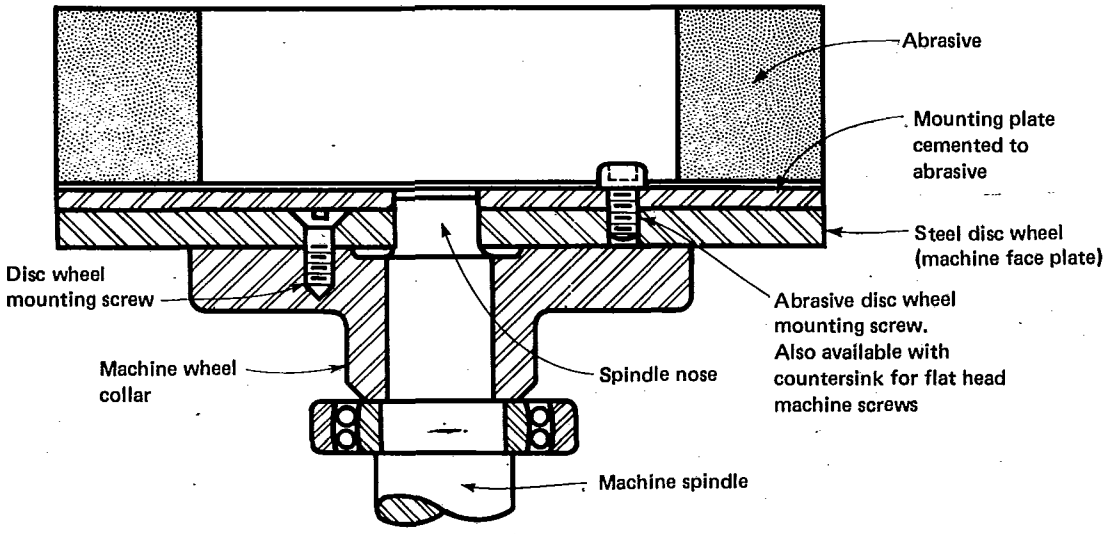
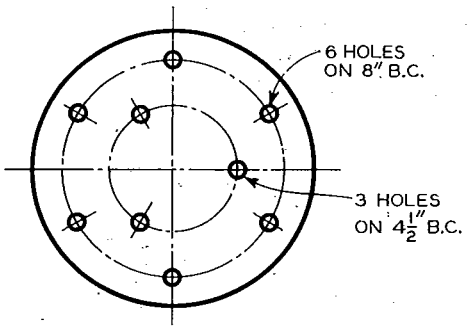
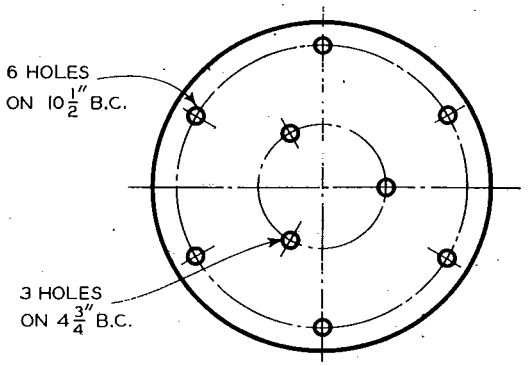


FIG. 6 TYPICAL PLATE TYPE MOUNTING

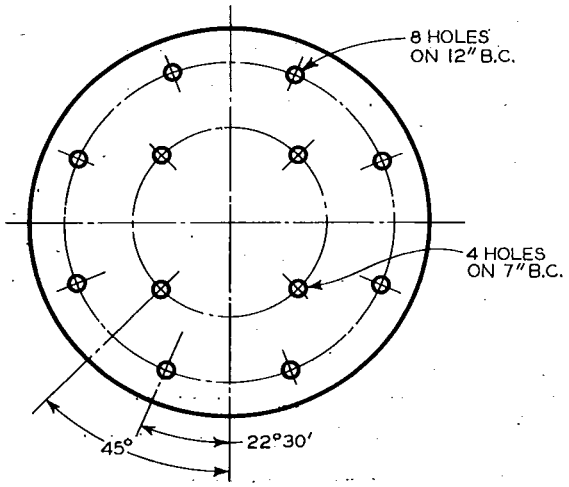
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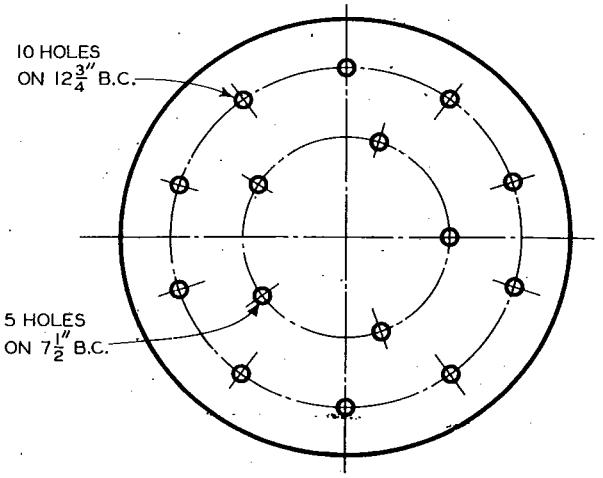
10-IN. DIAMETER



12-IN. DIAMETER



14-IN. DIAMETER

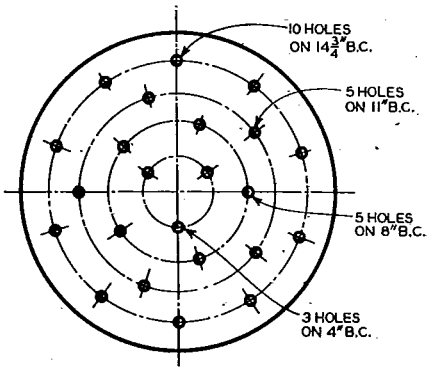


15-IN. AND 16-IN. DIAMETER

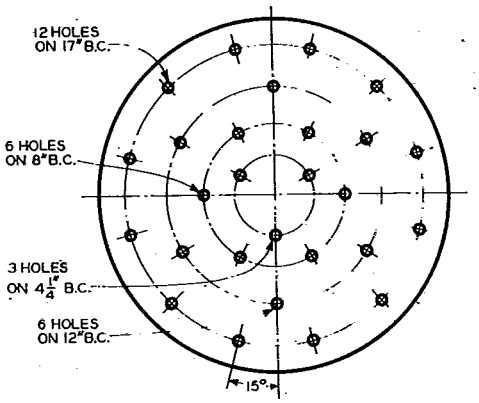
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All dimensions are in inches. B.C. abbreviation for bolt circle.

FIG. 7 10 in., 12 in., 14 in., 15 in., AND 16 in. DIAMETER DISCS

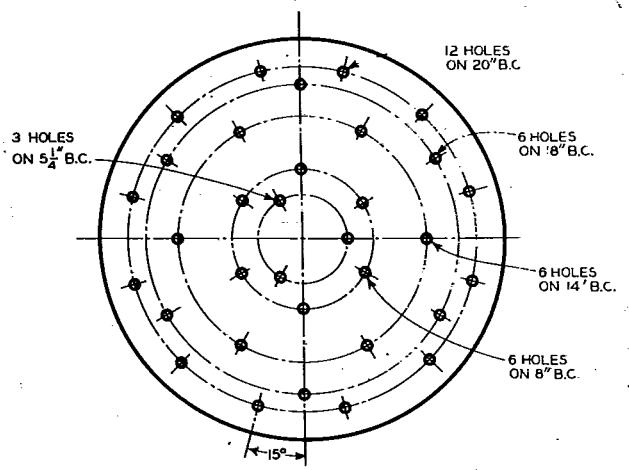
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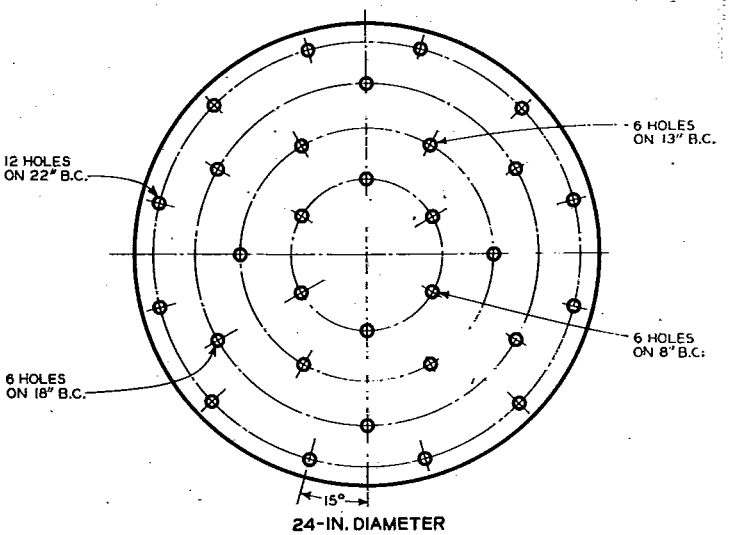
18-IN. DIAMETER



20-IN. DIAMETER



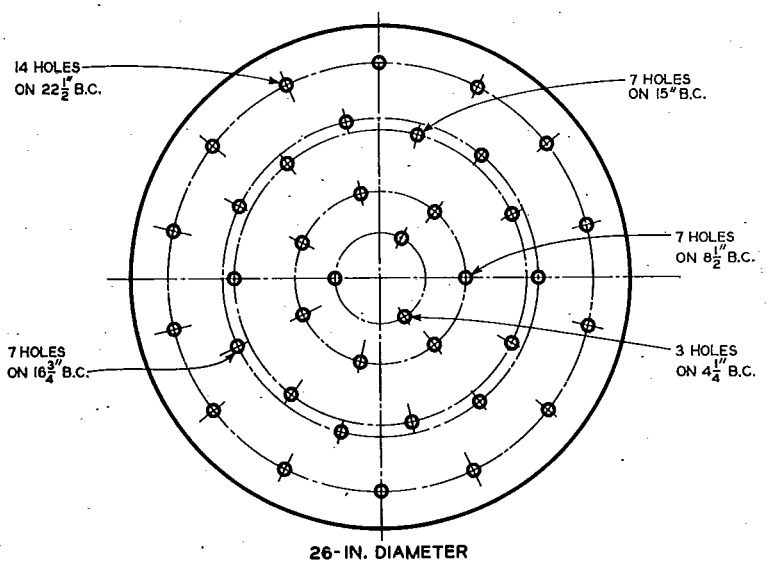
22-IN. AND 23-IN. DIAMETER



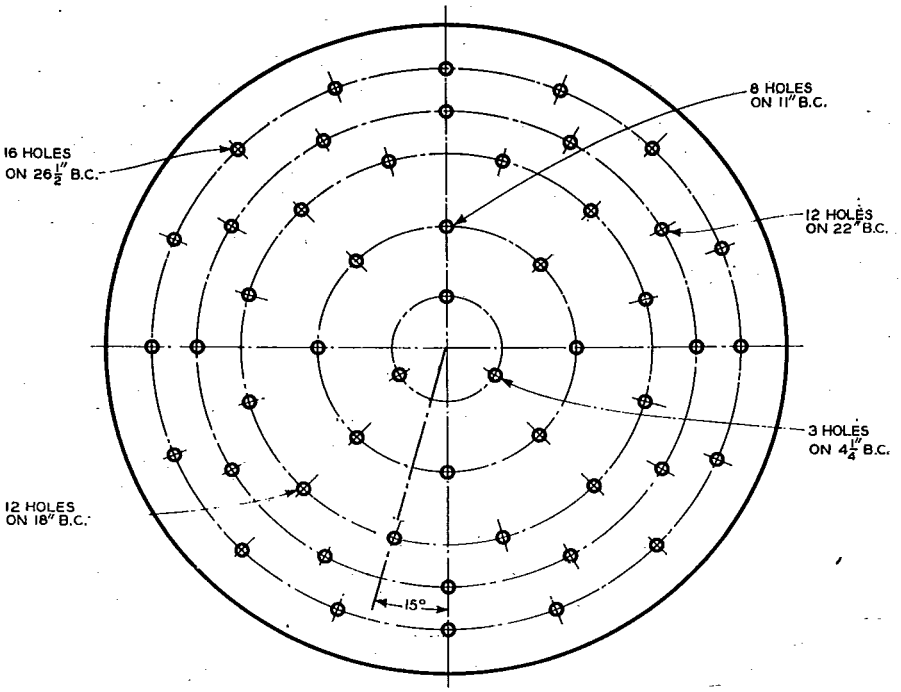
24-IN. DIAMETER

FIG. 8 18 in., 20 in., 22 in., 23 in., AND 24 in. DIAMETER DISCS

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26-IN. DIAMETER

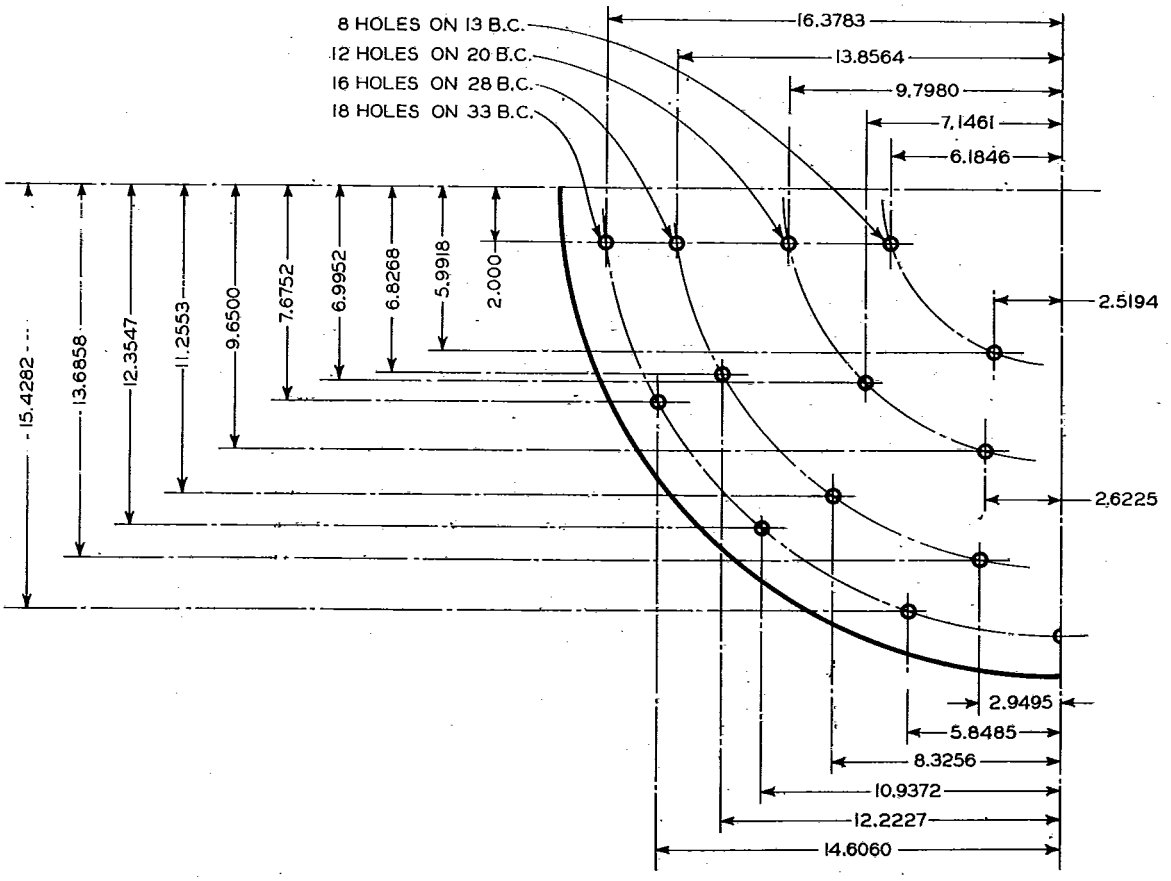


30-IN. DIAMETER

GENERAL NOTE:
All dimensions are in inches. B.C. abbreviation for bolt circle.

FIG. 9 26 in. AND 30 in. DIAMETER DISCS

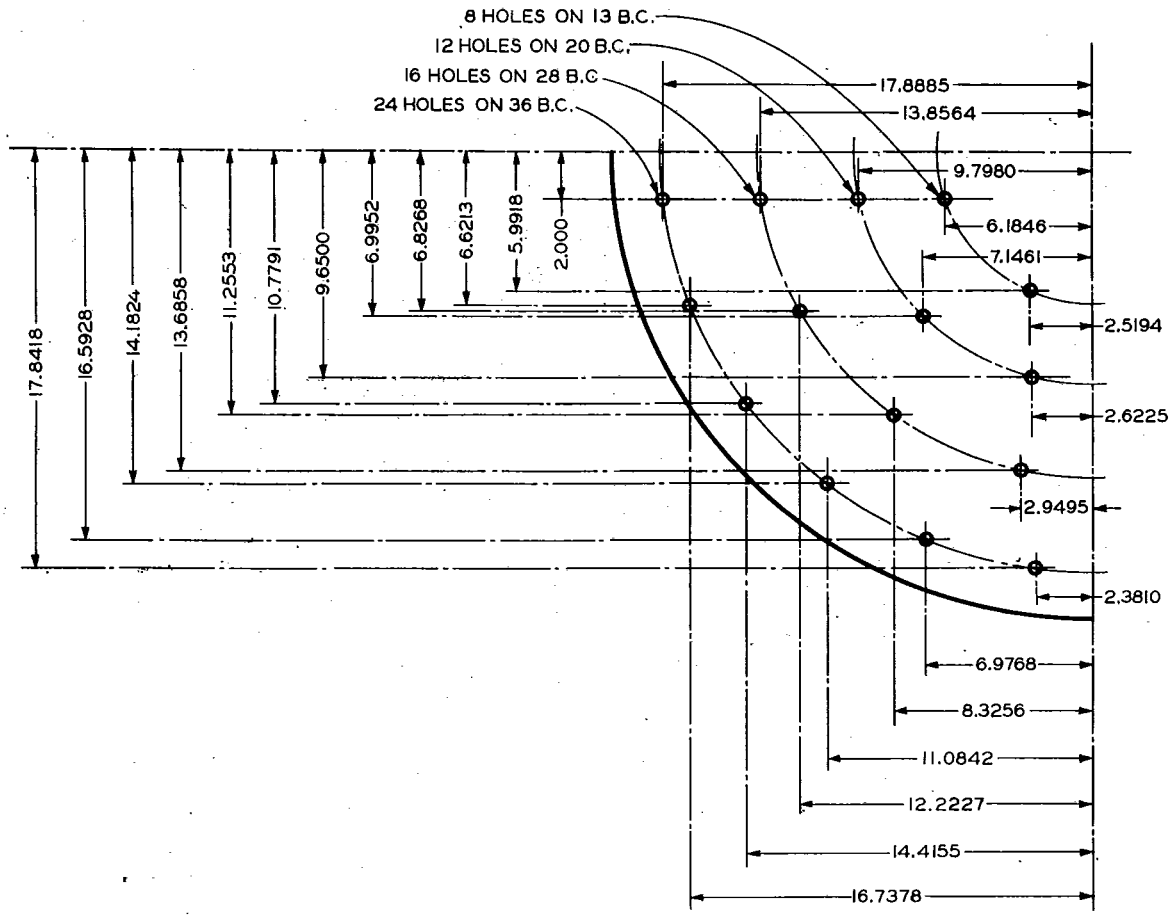
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FIG. 10 36 in. DIAMETER DISC

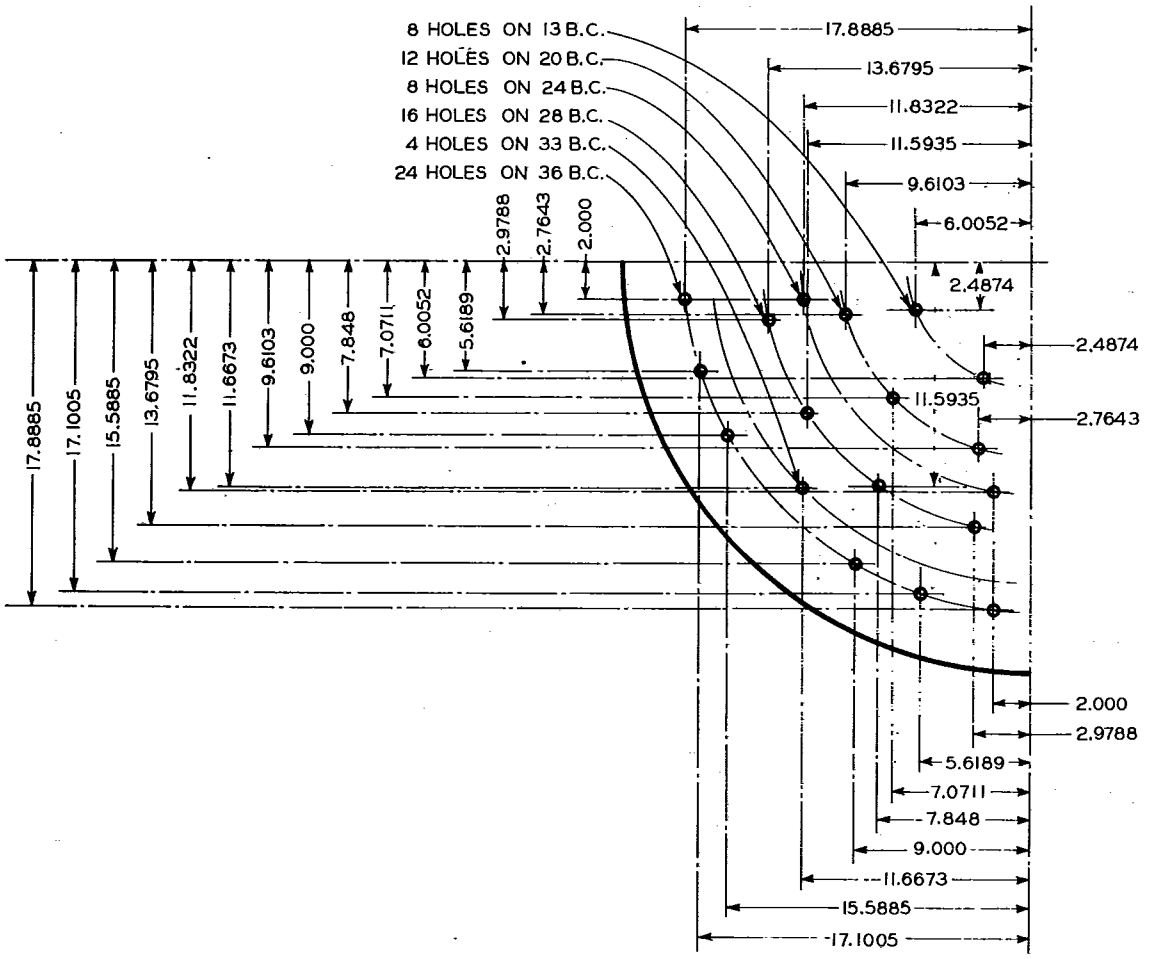
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GENERAL NOTE:
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FIG. 11 40 in. DIAMETER DISC

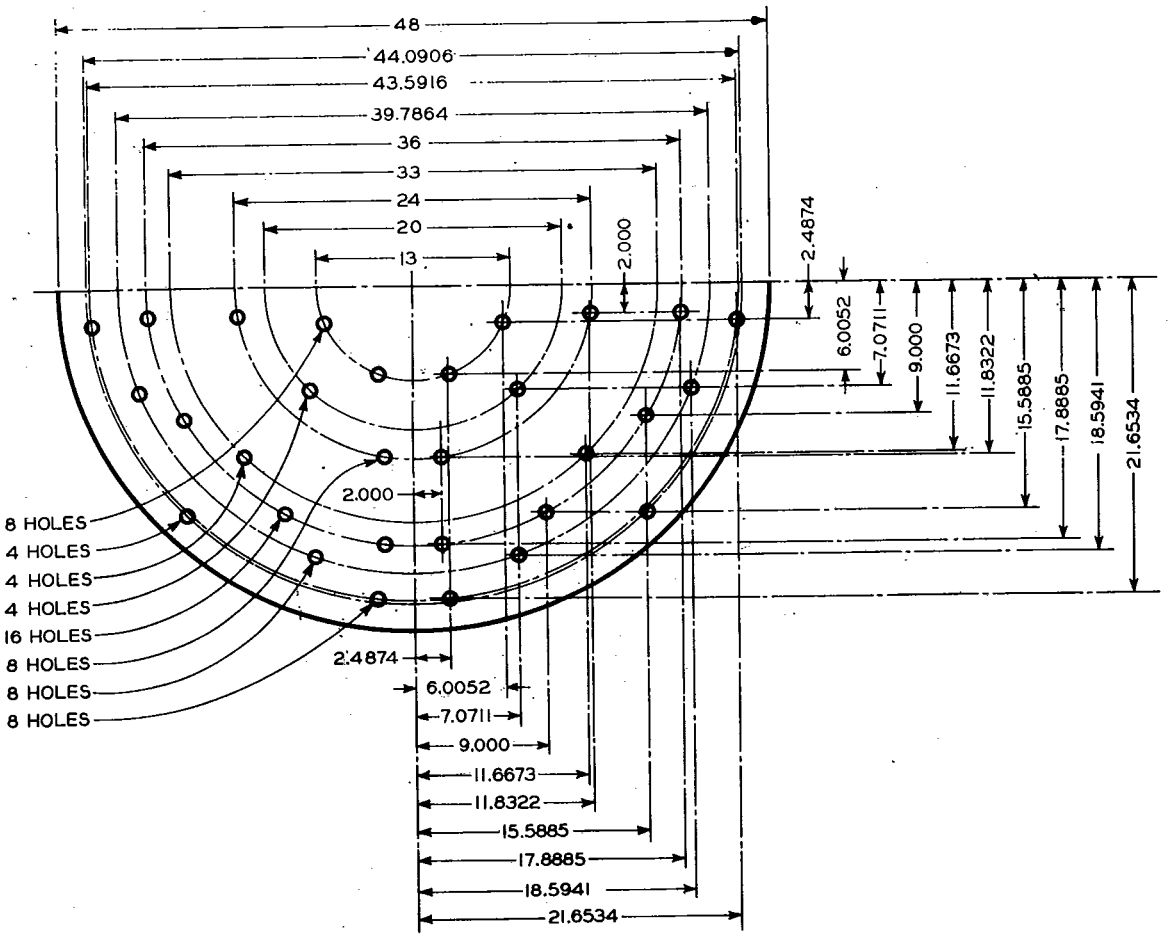
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GENERAL NOTE:
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FIG. 12 42 in. DIAMETER DISC

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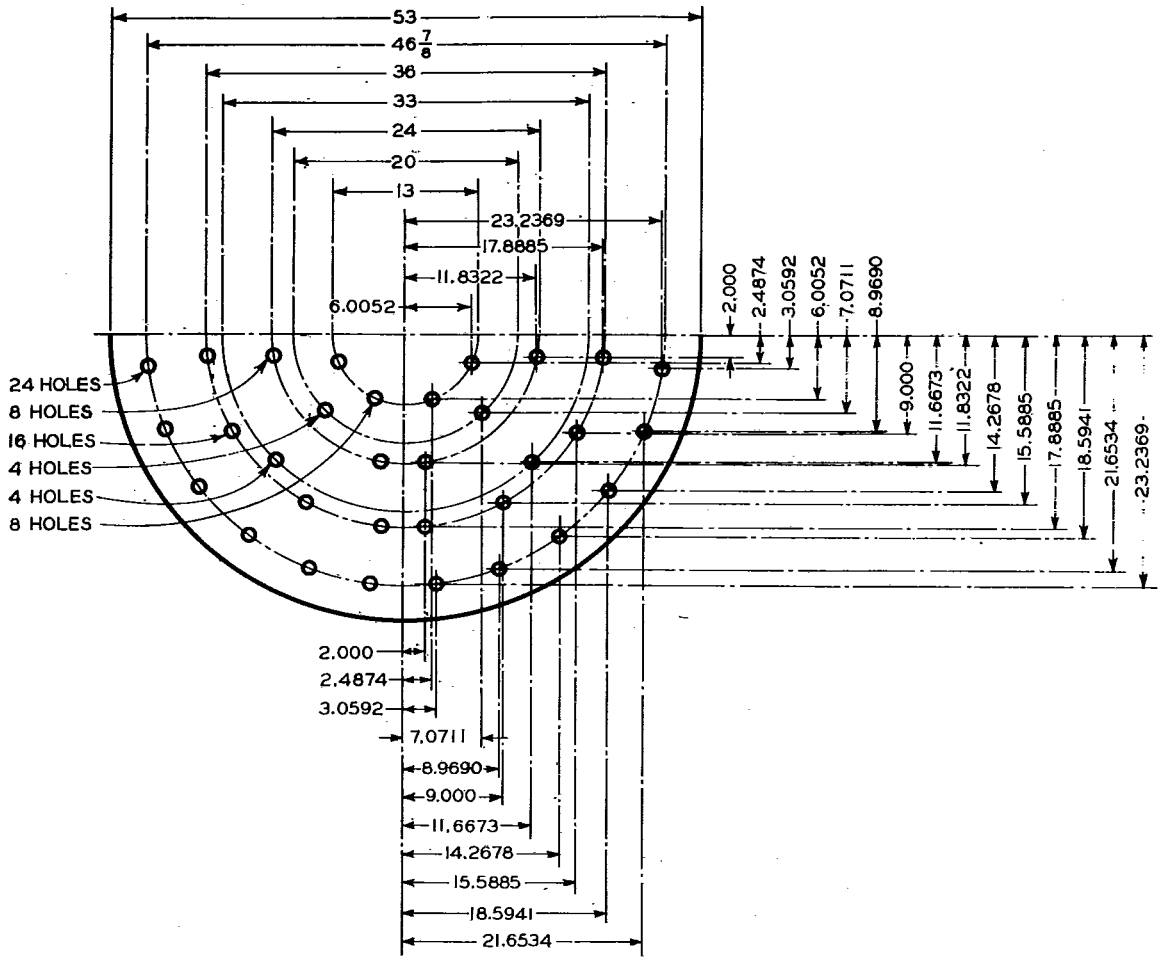


GENERAL NOTE:
All dimensions are in inches.

FIG. 13 48 in. DIAMETER DISC

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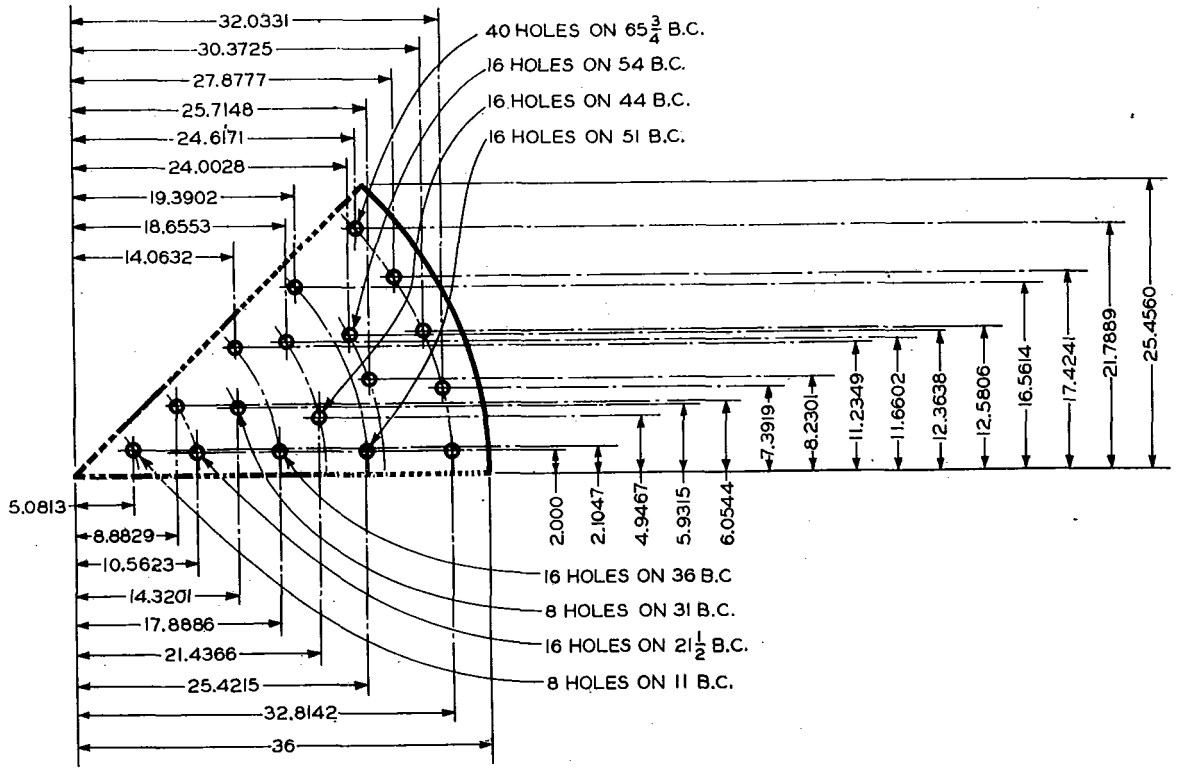
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GENERAL NOTE:
All dimensions are in inches.

FIG. 14 53 in. DIAMETER DISC

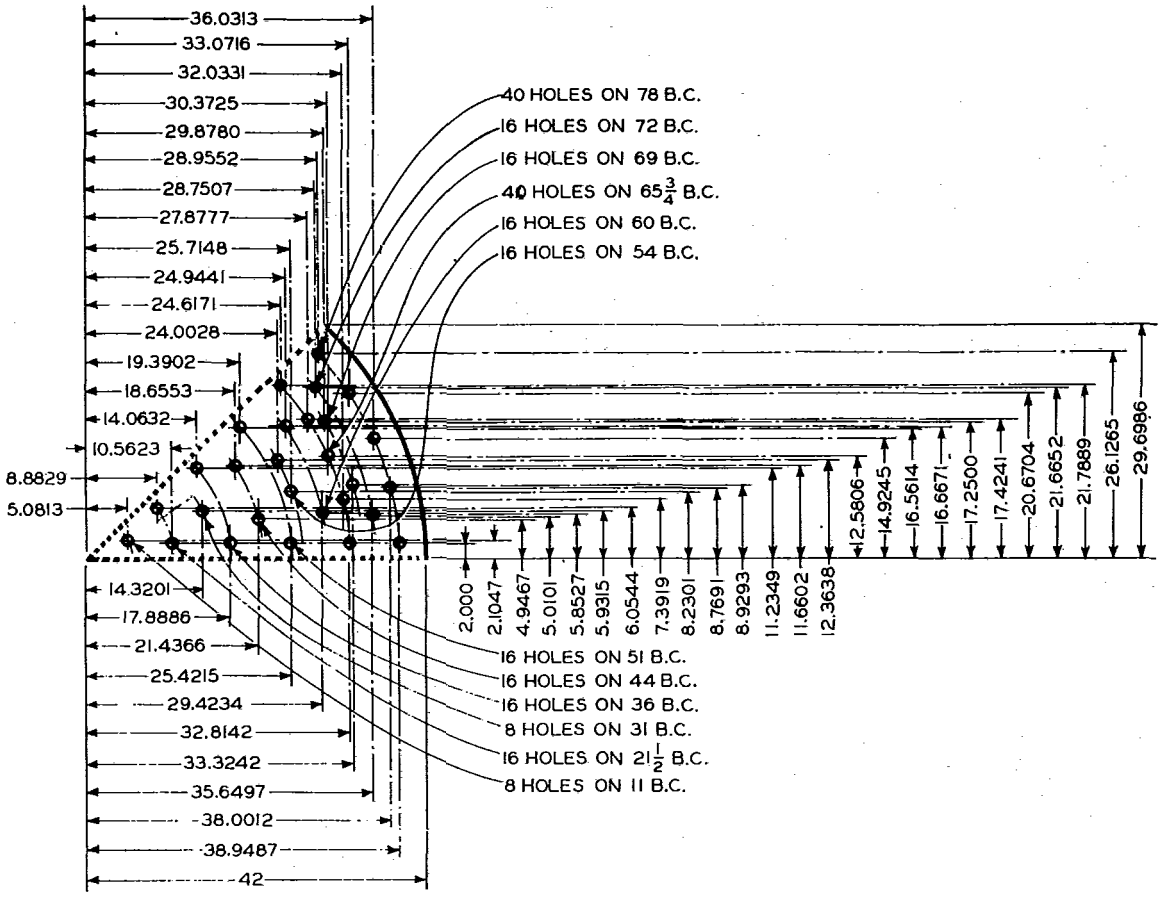
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GENERAL NOTE:
All dimensions are in inches. B.C. abbreviation for bolt circle.

FIG. 15 72 in. DIAMETER DISC

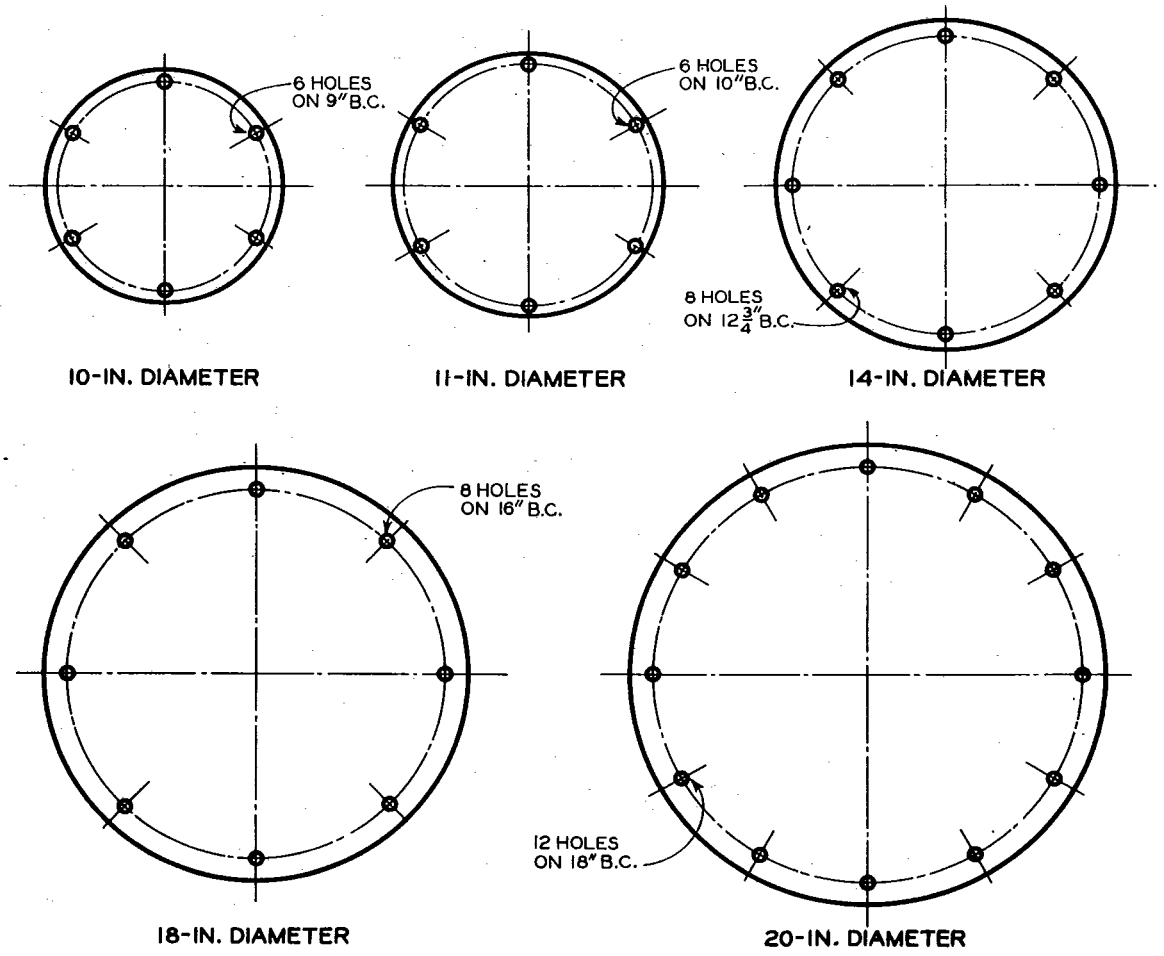
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GENERAL NOTE:
All dimensions are in inches. B.C. abbreviation for bolt circle.

FIG. 16 84 in. DIAMETER DISC

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GENERAL NOTE:
All dimensions are in inches. B.C. abbreviation for bolt circle.

FIG. 17 10 in., 11 in., 14 in., 18 in., AND 20 in. DIAMETER CYLINDER TYPE DISCS

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