

## Identification Guide for Ortlinghaus Pneumatic Clutch/Brakes

The Ortlinghaus Pneumatic clutch/brake has been in production for many years, in a wide range of sizes and in several series. When the need arises to order spare or replacement parts it is very important that the Series and Size are known so that the proper parts can be ordered.

When it is necessary to identify the Series and Size of an Ortlinghaus pneumatic clutch/brake the best method is to refer to the documentation for the equipment in question to determine the complete part number of the clutch/brake. In many cases this is not possible, as the documentation is not available or not complete. This Identification Guide can be used to help identify the various Series and Sizes of the Ortlinghaus pneumatic clutch/brakes.

In general, the first step is to verify that the clutch/brake in question is an Ortlinghaus unit. The Ortlinghaus name will be cast into the cylinder (brake end on the 0-420 and 0-400 Series and clutch end on 0-406 Series) on all units with the exception of sizes 23, 29, and 40 in the Series 0-400 and 0-400, which may have an adhesive label with the Ortlinghaus name on it attached to the cylinder. Other words that may be cast into the cylinder may be: Wermelskirchen (the city the factory is in) and Germany. On units made after the mid 1990's the Series and Size of the unit is cast into the cylinder (brake end) on the 0-420 and 0-400 Series and the end plate (brake end) of the 0-406 Series. This may not be easily seen if the clutch/brake is mounted on the equipment, as the clutch/brake is often installed between other components and the machine frame. The Series and Size range of the clutch/brake can be determined by comparing it to Figures A thru H that are in this guide. Generally, it is best if you can get at least a partial view of both the clutch and brake sides to compare to the figures to get an accurate identification. Once the Series and Size range have been determined, the size of the unit can be determined by taking a few measurements and comparing them to Tables 1 thru 3. The measurements needed are the Outside Diameter and Overall Width of the clutch/brake body, and the Diameter of the clutch and brake plates.

Having the Fabrication Number (FAB. Nr.) of the clutch/brake available will make it easier to obtain the proper parts for the unit. The FAB. Nr. is two digits, a slash or dash, then three or more digits – 87/3748 and 01/592 are typical examples. The FAB. Nr. is stamped on the outside diameter of the body on the clutch side on the 0-420 and 0-400 Series in Sizes 50 and larger, and on the outside diameter of the end plate on the brake side on the 0-406 Series. The Sizes 23 thru 40 in the 0-420 and 0-400 Series have the FAB. Nr. stamped on the brake end face. Some of the very old units in the 0-400 Series may have the FAB Nr. stamped on the face of the cylinder if it is not in the location described above.

If new linings (also known as plates) are needed, the style of plate needed is also required. There are three main styles available:

- Two Point Plate – This is a clutch or brake plate that is held by two pins that fit thru bushings mounted in straps that are bolted to the halves of the plate. This is the most common type in use.
- Twelve Point Plate – This is a clutch or brake plate that is held by twelve bushings and bolts that are mounted on the flywheel or brake anchor assembly. There are differences between the clutch and brake plates in the twelve point style.
- Friction Block Plate – This style uses a plate that has openings (or pockets) for individual blocks of friction material. Generally the plate does not have to be replaced, only the friction blocks themselves.

If new plate mounting hardware is needed, it can be ordered based on the style of plate. On the Two Point Plates it is very important that the distance between the centers of the pins that support the plate, and the pin diameters, be measured. In each size, there are two standard center distances available – short and long. These are listed in Table 4.

If the center distance measured does not match the values listed in Table 4 it is probably because the equipment builder or clutch/brake installer used custom length suspension straps. Custom length suspension straps are not standard stock items, but are custom made for the application. The pins and bushings used with the custom length straps are standard items that can be identified by the diameter and length of the pin.

### Obsolete Units

Due to improvements made over the years these clutch/brakes have been in production, certain sizes in the 0-400 Series have become obsolete. These include:

- Series 0-400, Sizes 23 thru 61. (Replaced by Series 0-420, Sizes 23 thru 61.)
- Series 0-400, Sizes 88 thru 93.

The Series 0-420, Sizes 23 thru 61 are direct replacements for the Series 0-400, Sizes 23 thru 61. The external dimensions are the same. Plates, plate mounting hardware, and U-seals are interchangeable also, but other parts are not interchangeable.

The Series 0-420, Sizes 90 thru 93 have replaced the Series 0-400, Sizes 88 thru 93. There are differences in mounting dimensions between similar sizes in the two series; therefore they are not “drop in” replacements. There is limited availability of replacement parts for the sizes 88 thru 93 in the Series 0-400, please contact Orttech with your requirements. Replacement linings are available for relining worn plates of the Series 0-400, Sizes 88 thru 93.

Please Note! Two Point, Twelve Point, and Friction Block plates for the Series 0-400, Sizes 91 thru 93 have different dimensions than the plates for the Series 0-420, Sizes 91 thru 93 and are not interchangeable.

New plates, plate relining, and replacement parts for Ortlinghaus pneumatic clutch/brakes are available from Orttech. Please call for availability. If you have any questions or need assistance, please contact Orttech or your local Orttech Representative.

**Table 1**  
**Overall Dimensions, 0-420 Series**

Size	Body OD (Ø D)		Plate OD (Ø B)		Body Thickness (V)	
	mm	inches	mm	inches	mm	inches
23	166	6.54	198	7.80	46	1.81
29	188	7.40	220	8.66	58	2.28
40	236	9.29	275	10.83	66	2.60
50	304	11.97	347	13.66	82	3.23
61	380	14.96	435	17.13	100	3.94
62	380	14.96	435	17.13	112	4.41
67	420	16.54	482	18.98	125	4.92
72	265	10.43	535	21.06	140	5.51
77	543	21.38	620	24.41	160	6.30
80	593	23.35	680	26.77	185	7.28
83	675	26.57	775	30.51	205	8.07
87	755	29.72	865	34.06	230	9.06
90	830	32.68	950	37.40	248	9.76
91	905	35.63	1025	40.35	260	10.24
92	1015	39.96	1145	45.08	295	11.61
93	1140	44.88	1285	50.59	330	12.99

Please Note: On sizes 40 thru 62, the OD of the Two Point Plate is measured at the suspension straps. The OD is reduced at other positions.

**Table 2**  
**Overall Dimensions, 0-406 Series**

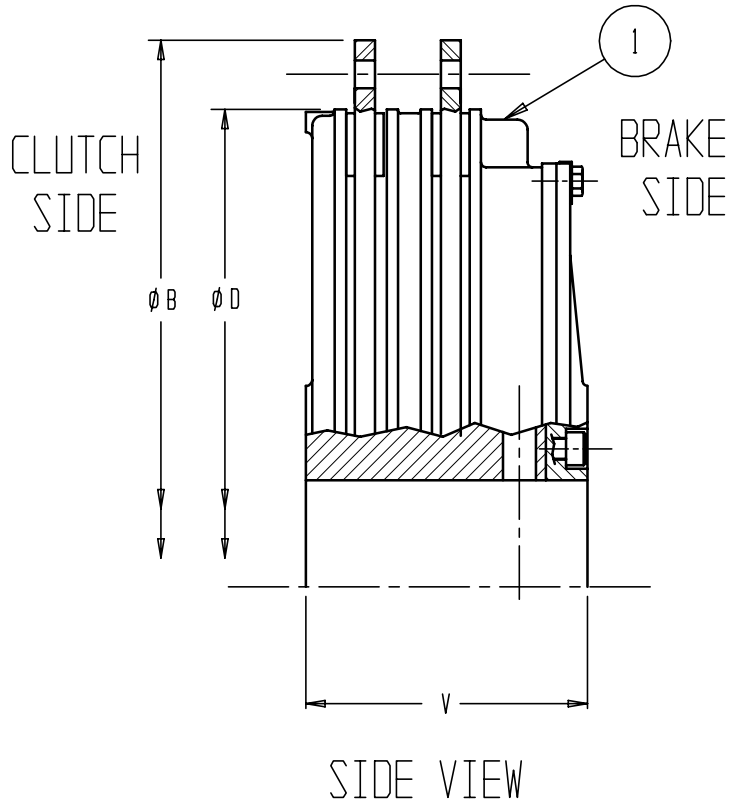
Size	Body OD (Ø D)		Plate OD (Ø B)		Body Thickness (V)	
	mm	inches	mm	inches	mm	inches
29	188	7.40	220	8.66	66	2.60
40	236	9.29	275	10.83	75	2.95
50	304	11.97	347	13.66	92	3.62
61	380	14.96	435	17.13	112	4.41
71	465	18.31	535	21.06	140	5.51
76	543	21.38	620	24.41	160	6.30
79	593	23.35	680	26.77	175	6.89
82	675	26.57	775	30.51	195	7.68
90	830	32.68	950	37.40	240	9.45

**Table 3**  
**Overall Dimensions, 0-400 Series**

Size	Body OD (Ø D)		Plate OD (Ø B)		Body Thickness (V)	
	mm	inches	mm	inches	mm	inches
71	465	18.31	535	21.06	125	4.92
74	497	19.57	570	22.44	140	5.51
76	543	21.38	620	24.41	145	5.71
79	593	23.35	680	26.77	160	6.30
82	675	26.57	775	30.51	185	7.28
85	755	29.72	865	34.06	203	7.99
Obsolete sizes, 0-400 Series						
23	166	6.54	198	7.80	46	1.81
29	188	7.40	220	8.66	58	2.28
40	236	9.29	275	10.83	66	2.60
50	304	11.97	347	13.66	82	3.23
61	380	14.96	435	17.13	100	3.94
88	885	34.84	1000	39.37	255	10.04
91	905	35.63	1025	40.35	260	10.24
92	1015	39.96	1145	45.08	295	11.61
93	1140	44.88	1285	50.59	330	12.99

**Table 4**  
**Pin Center Distance, Two Point Plates**

Size (all Series)	Center Distance Short Straps		Center Distance Long Straps	
	mm	inches	mm	inches
23	230	9.06	305	12.01
29	250	9.84	325	12.80
40	315	12.40	410	16.14
50	390	15.35	490	19.29
61/62	495	19.49	635	25.00
67	550	21.65	710	27.95
71/72	610	24.02	790	31.10
74	645	25.39	830	32.68
76/77	695	27.36	885	34.84
79/80	770	30.31	990	38.98
82/83	880	34.65	1135	44.69
85/87	970	38.19	1235	48.62
88	1140	44.88	1450	57.09
90	1100	43.31	1450	57.09
91	1180	46.46	1525	60.04
92	1300	51.18	1645	64.76
93	1465	57.68	1855	73.03



IDENTIFYING FEATURES

- 1 EQUALLY SPACED FINS ALL AROUND THE SUPPORT PLATE.
- 2 8 SOCKET HEAD BOLTS NEAR BORE ON BRAKE END.
- 3 12 HEX HEAD BOLTS FASTEN CYLINDER TO SUPPORT PLATE.
- 4 ENDS OF 6 PISTON GUIDE PINS VISIBLE ON CLUTCH END.
- 5 DISTINCTIVE PATTERN OF FINS AND OPENINGS ON CLUTCH END.

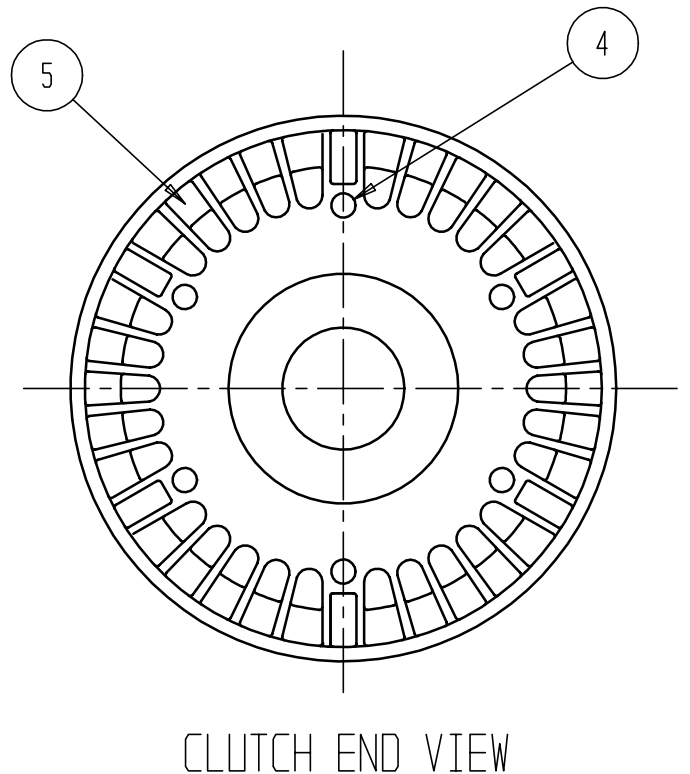
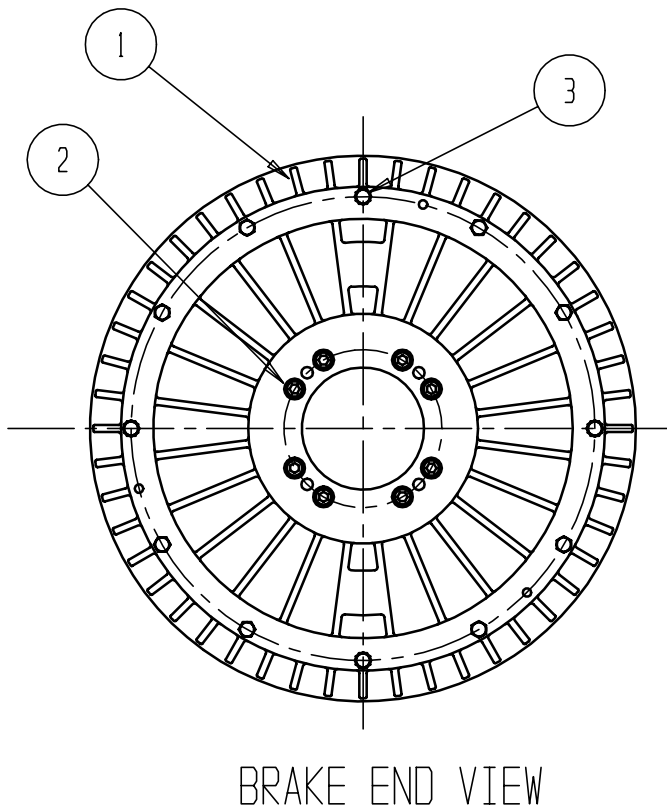
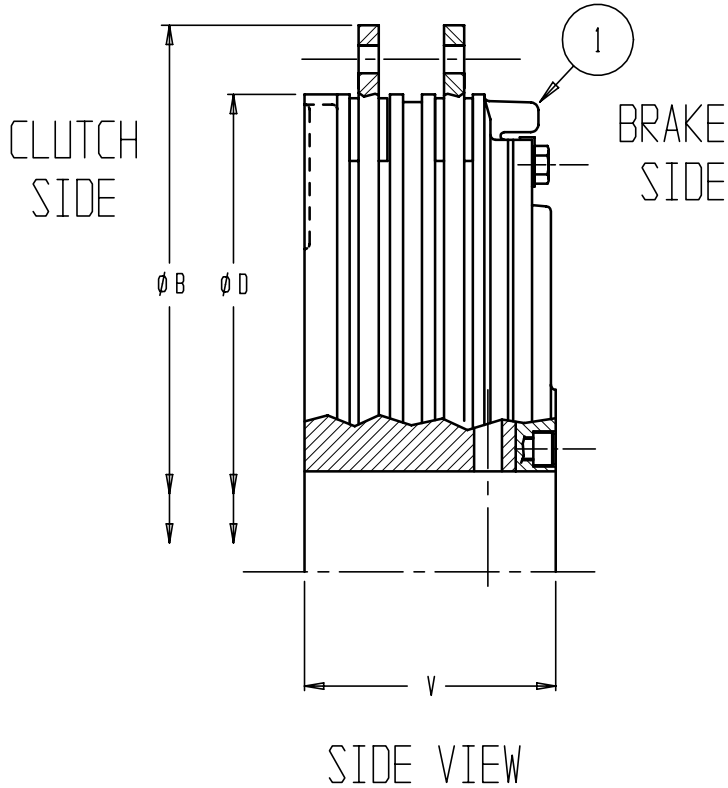


Figure A

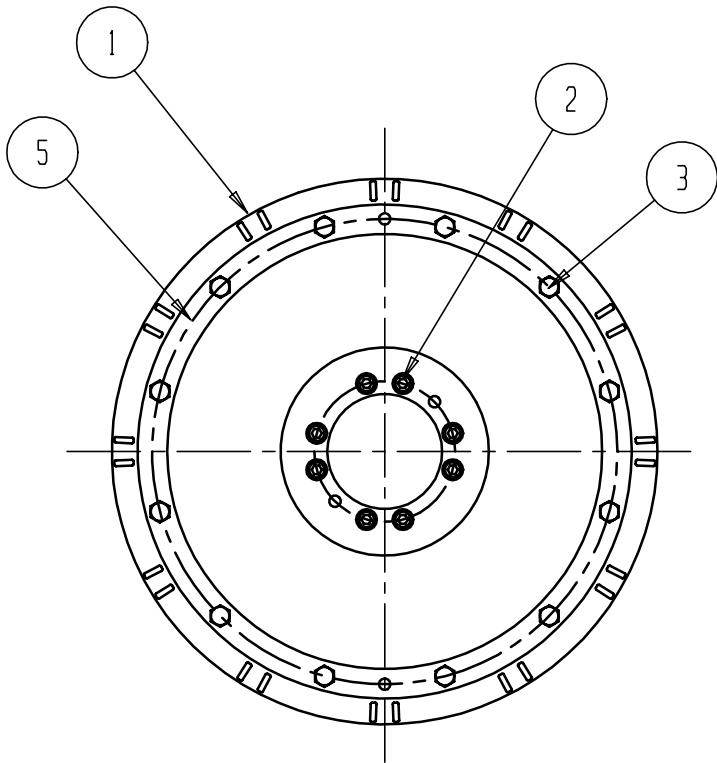
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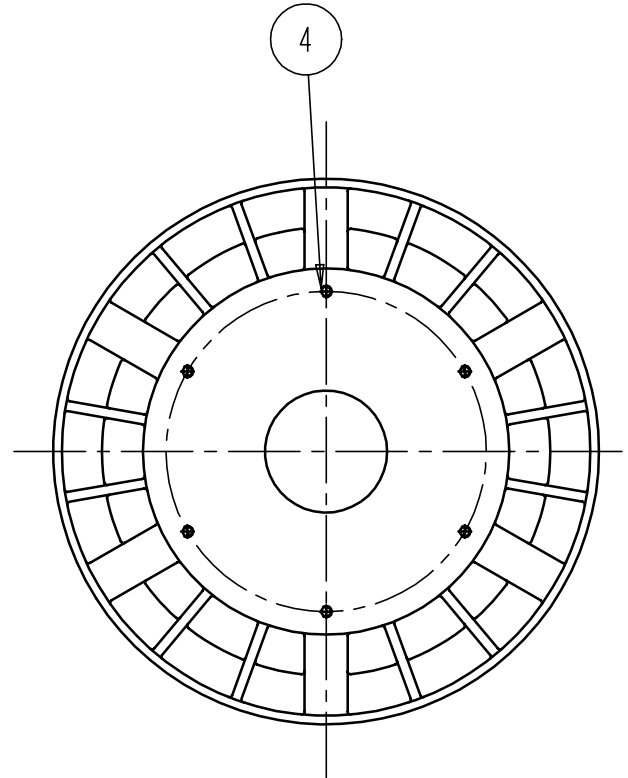


IDENTIFYING FEATURES

- 1 FINS IN GROUPS AROUND THE SUPPORT PLATE.
- 2 8 SOCKET HEAD BOLTS NEAR BORE ON BRAKE END.
- 3 12 HEX HEAD BOLTS FASTEN CYLINDER TO SUPPORT PLATE.
- 4 ENDS OF 6 BOLTS VISIBLE ON CLUTCH END.
- 5 CYLINDER HAS ROUND FLANGE WHERE IT IS FASTENED TO SUPPORT PLATE, NO FINS ON THE CYLINDER.

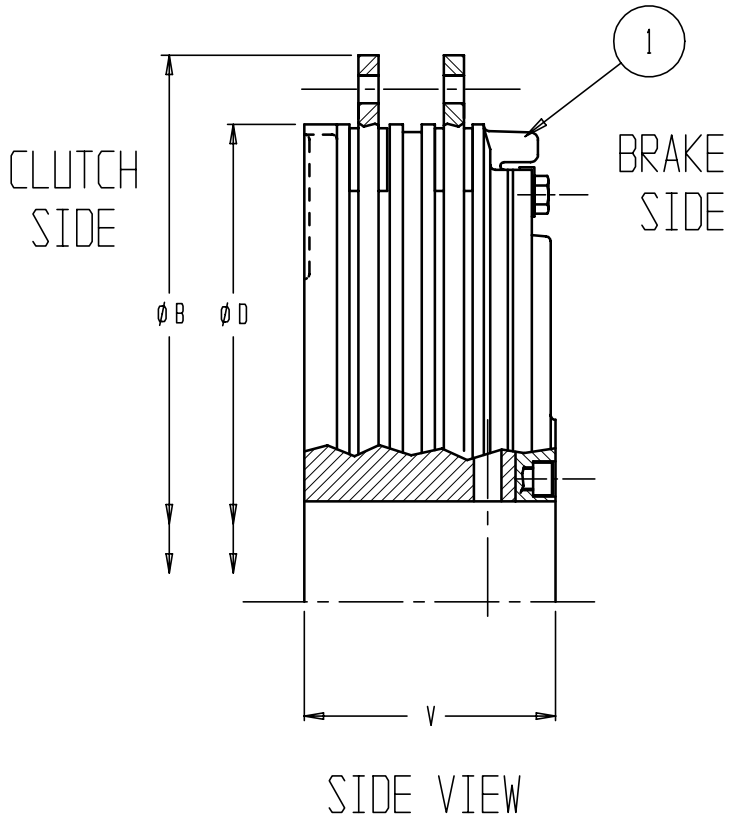


BRAKE END VIEW



CLUTCH END VIEW

Figure B



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IDENTIFYING FEATURES

- 1 FINS IN GROUPS AROUND THE SUPPORT PLATE.
- 2 8 SOCKET HEAD BOLTS NEAR BORE ON BRAKE END.
- 3 12 HEX HEAD BOLTS FASTEN CYLINDER TO SUPPORT PLATE.
- 4 ENDS OF 6 BOLTS VISIBLE ON CLUTCH END.
- 5 CYLINDER HAS ROUND FLANGE WHERE IT IS FASTENED TO SUPPORT PLATE.

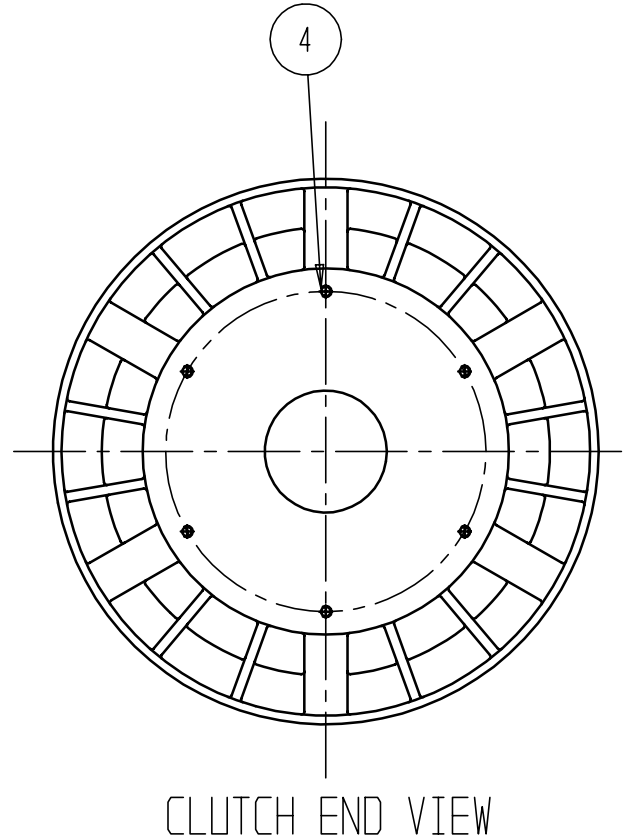
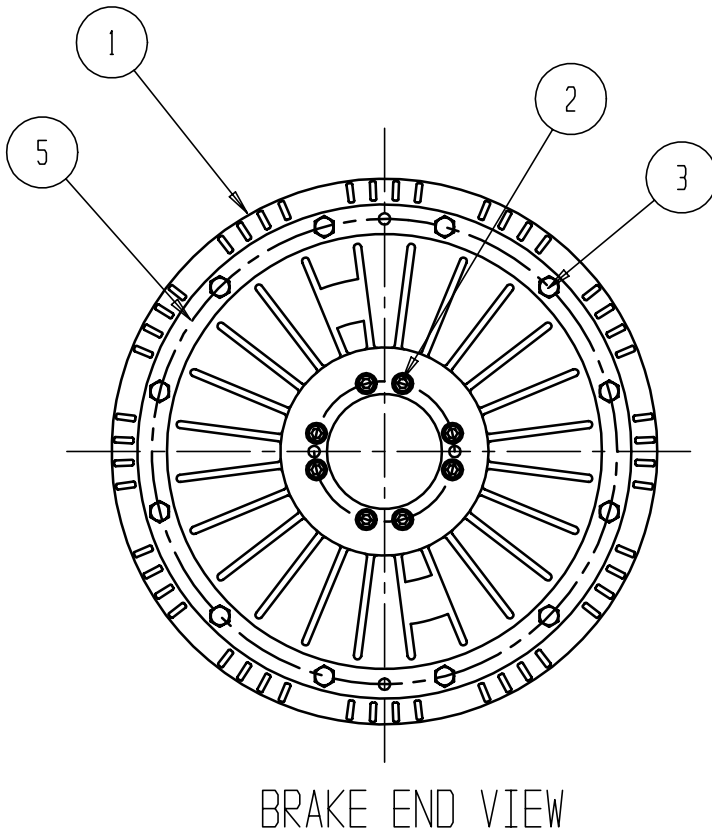
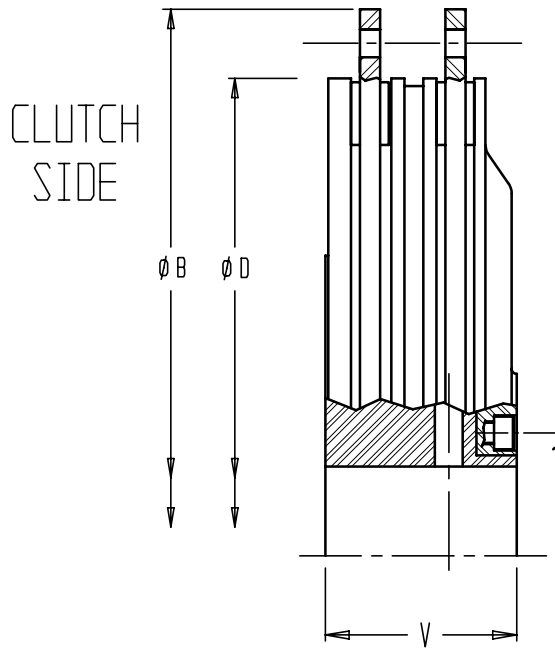


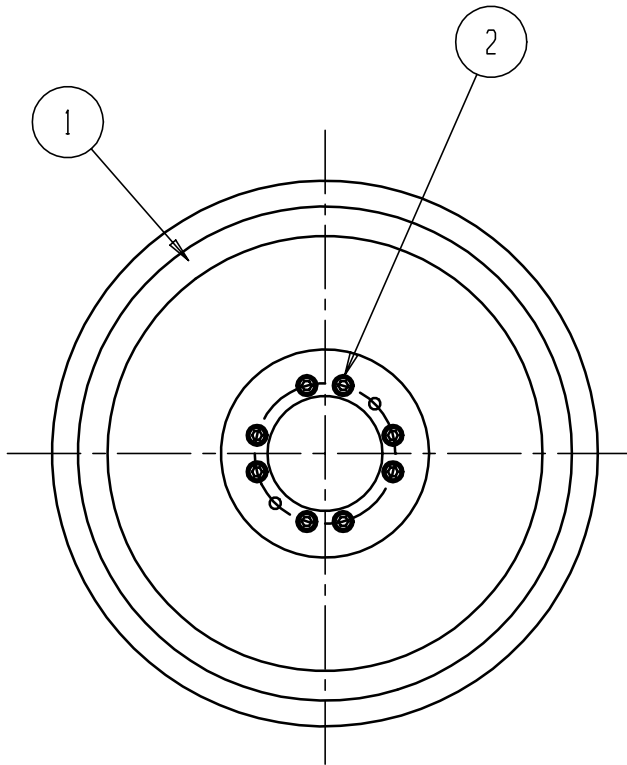
Figure C



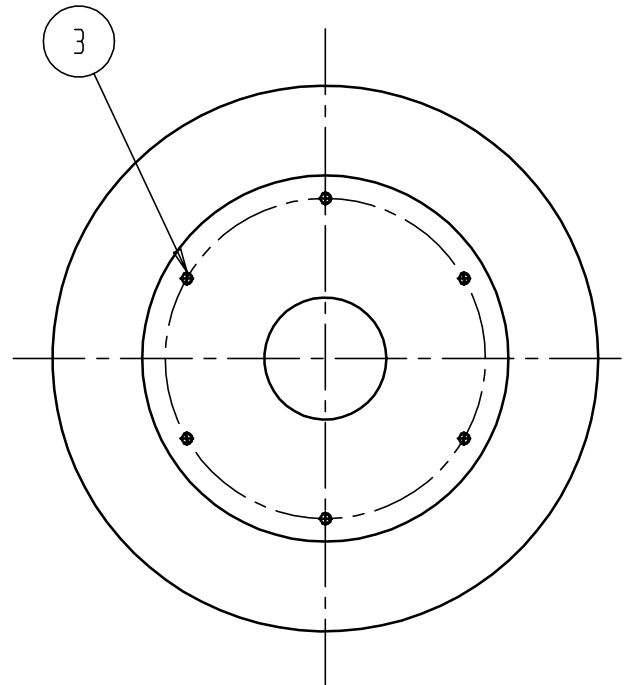
SIDE VIEW

IDENTIFYING FEATURES

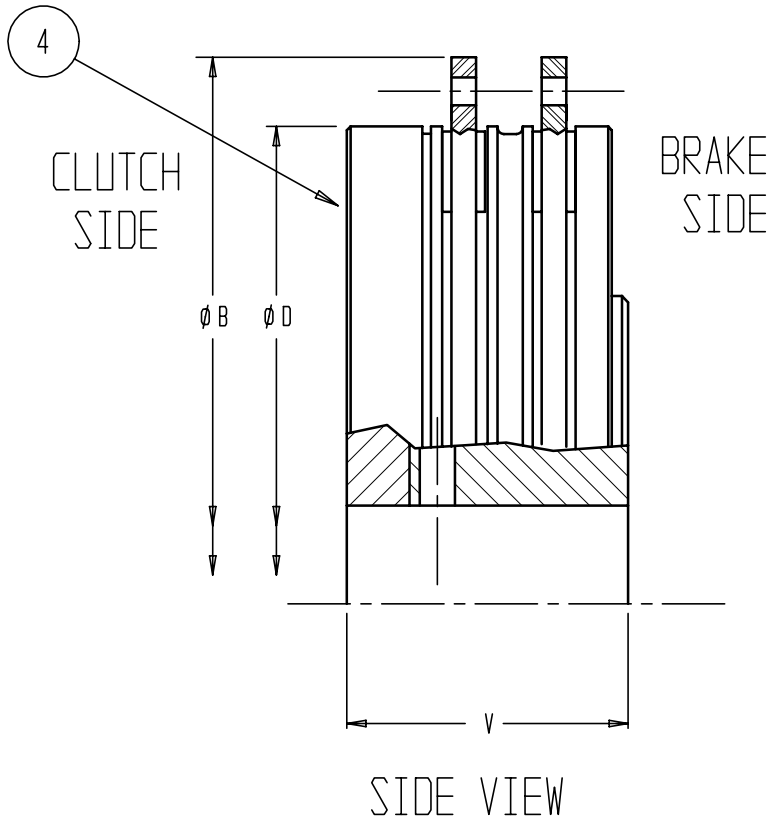
- 1 SURFACE OF CYLINDER IS SMOOTH, NO FINS.
- 2 8 SOCKET HEAD BOLTS NEAR BORE ON BRAKE END.
- 3 ENDS OF 6 BOLTS VISIBLE ON CLUTCH END.



BRAKE END VIEW



CLUTCH END VIEW



IDENTIFYING FEATURES

- 1 OBLONG OPENINGS IN PRESSURE PLATE
- 2 8 SOCKET HEAD BOLTS NEAR BORE ON CLUTCH END.
- 3 9 SOCKET HEAD BOLTS RECESSED IN BUSHINGS IN PRESSURE PLATE ON BRAKE END.
- 4 CYLINDER WITH RIBS IS ON CLUTCH END.

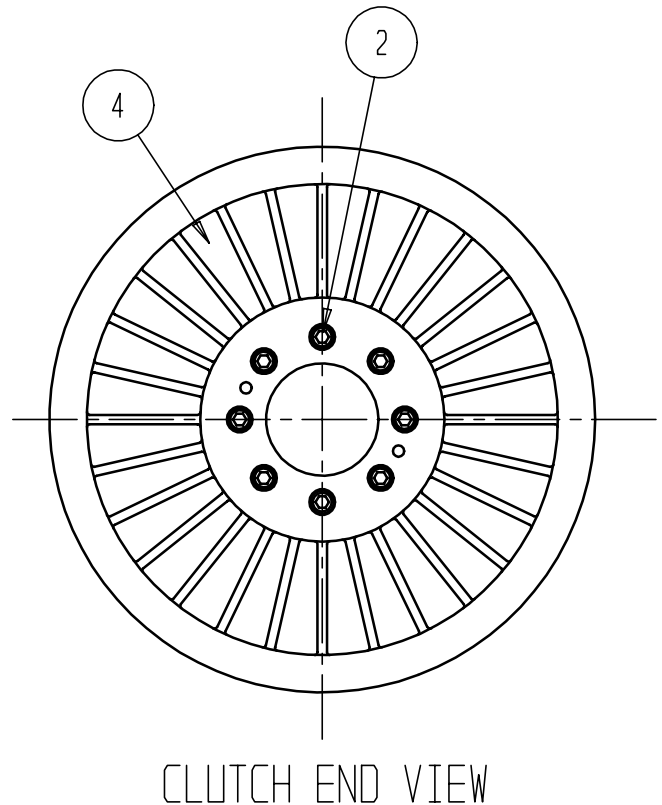
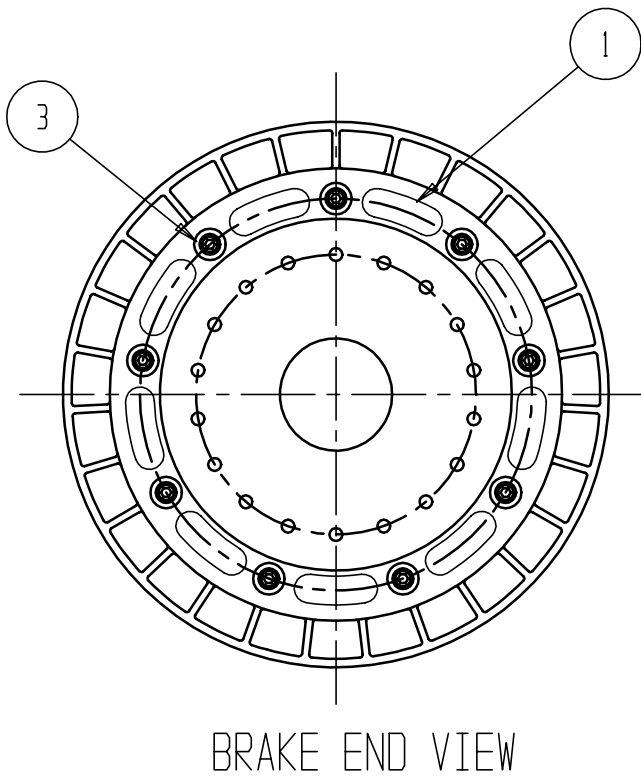
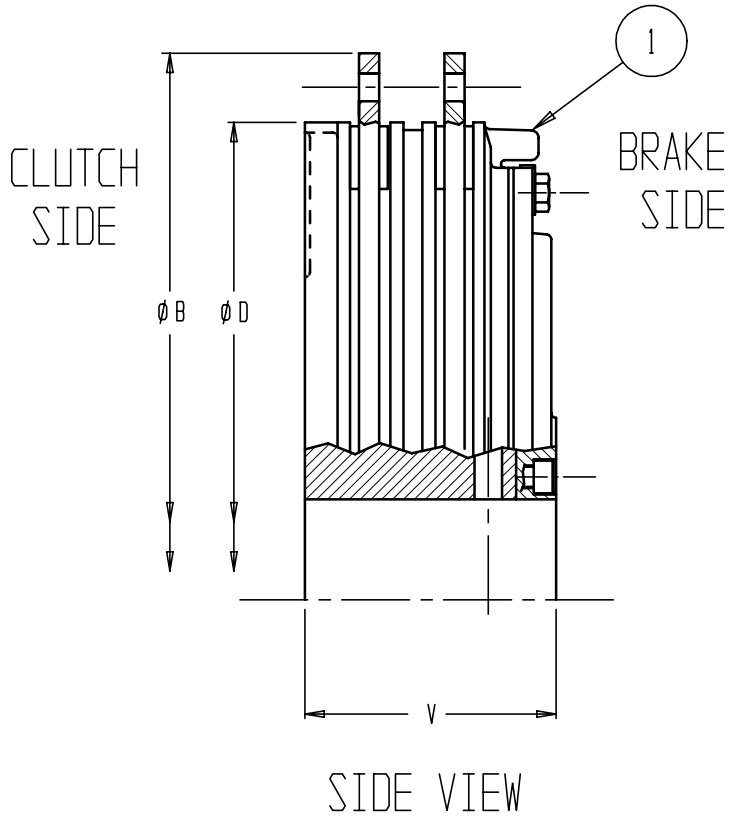
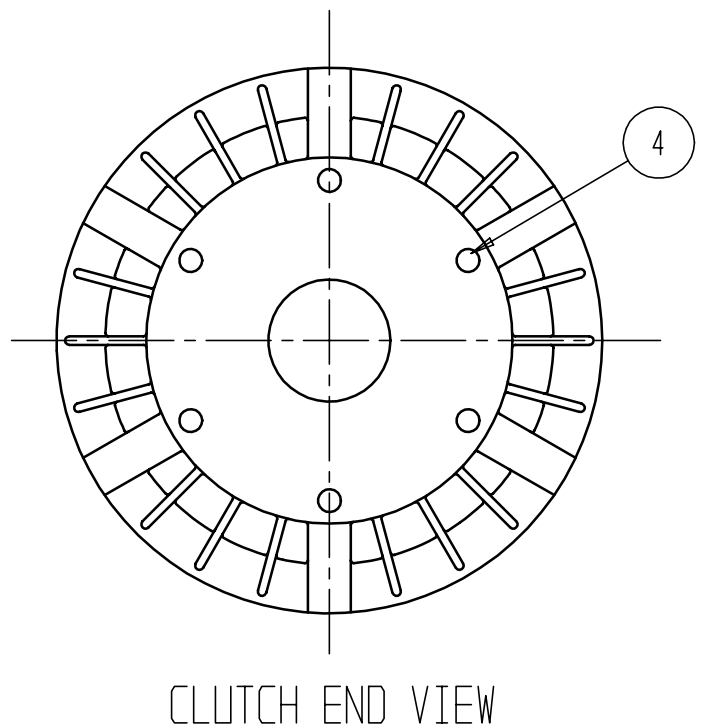
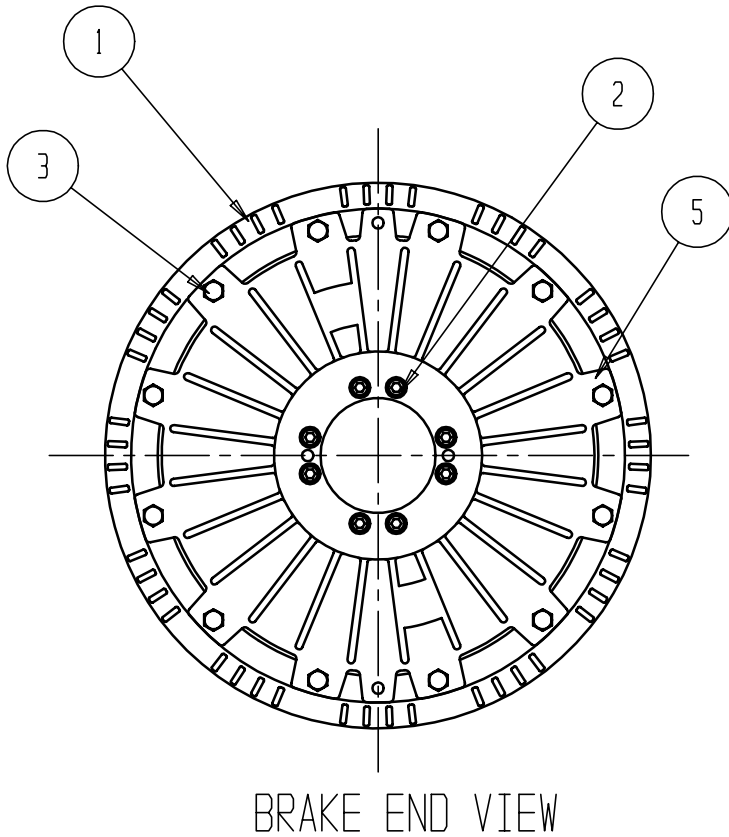


Figure E



IDENTIFYING FEATURES

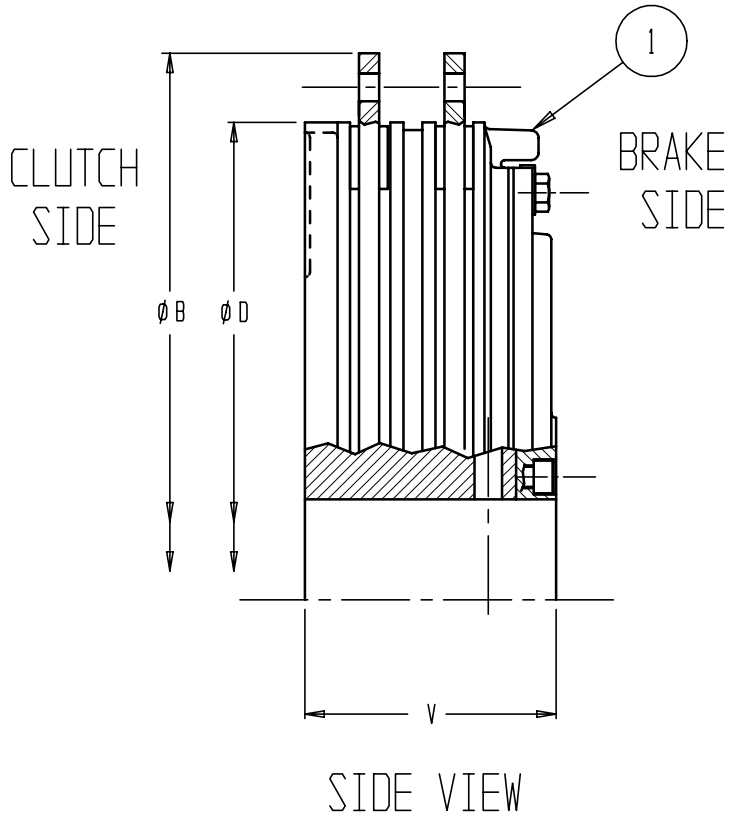
- 1 FINS IN GROUPS AROUND THE SUPPORT PLATE.
- 2 8 SOCKET HEAD BOLTS NEAR BORE ON BRAKE END.
- 3 12 HEX HEAD BOLTS FASTEN CYLINDER TO SUPPORT PLATE.
- 4 ENDS OF 6 PISTON GUIDE PINS VISIBLE ON CLUTCH END.
- 5 CYLINDER HAS LUGS WHERE IT IS FASTENED TO THE SUPPORT PLATE.



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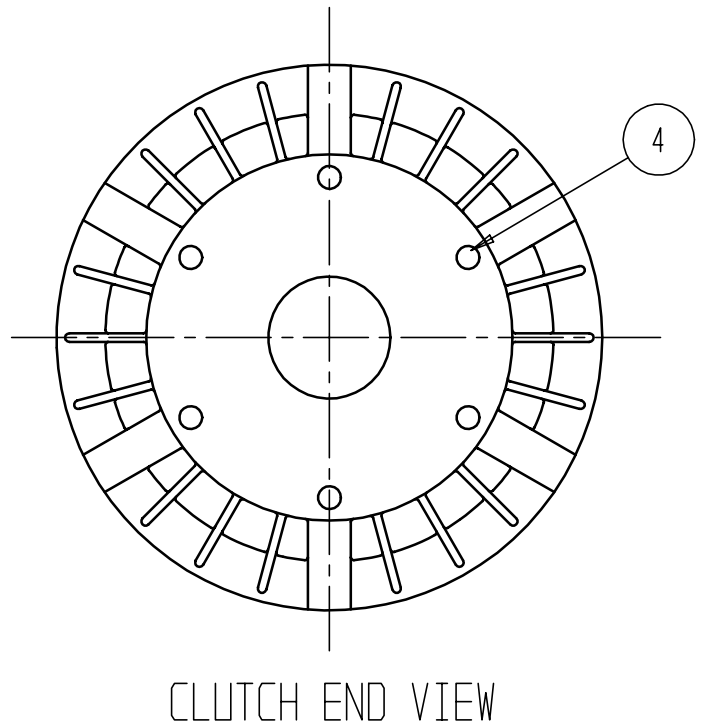
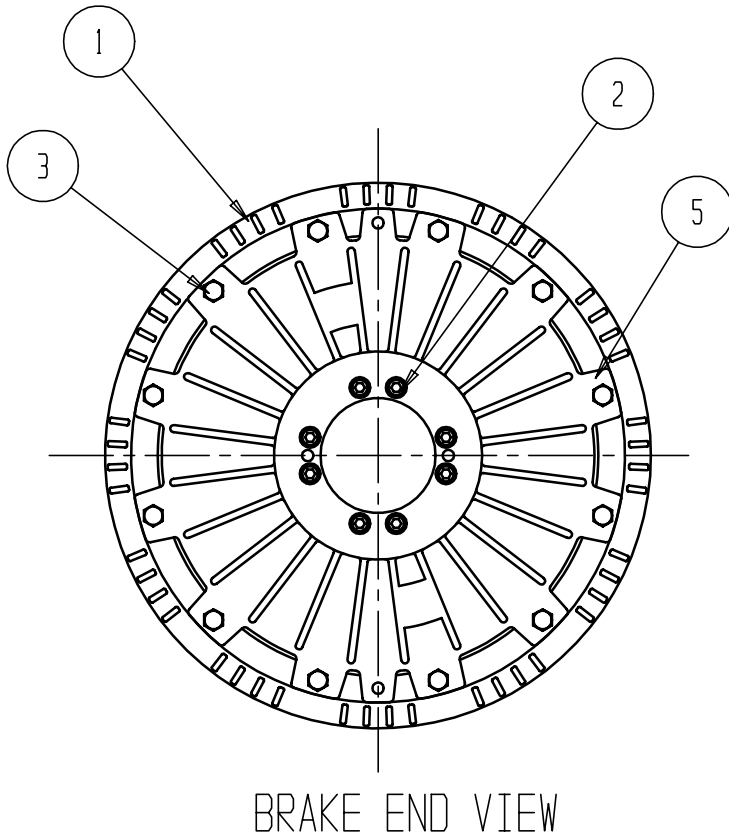
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IDENTIFYING FEATURES

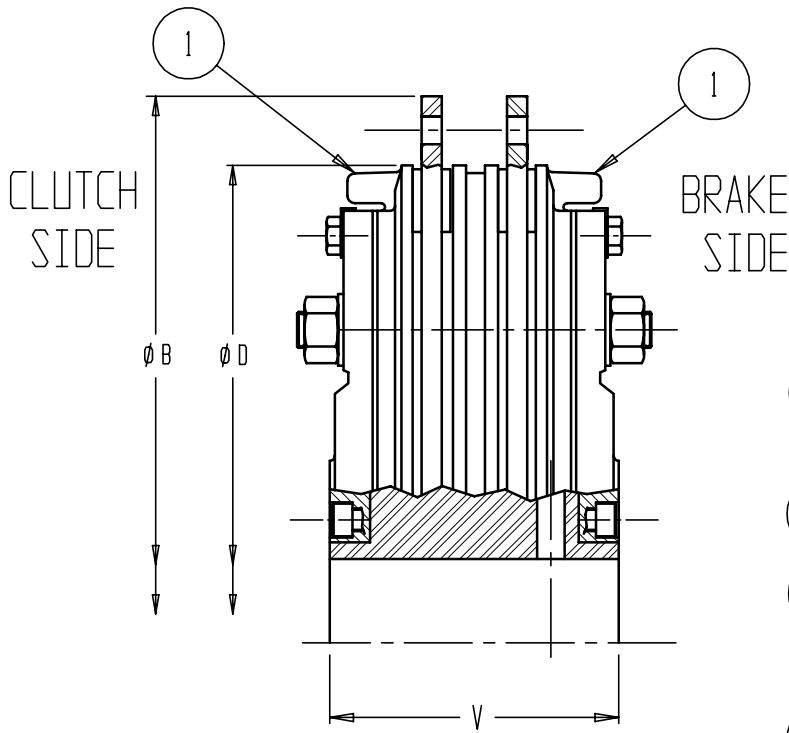
- 1 FINS IN GROUPS AROUND THE SUPPORT PLATE.
- 2 8 SOCKET HEAD BOLTS NEAR BORE ON BRAKE END.
- 3 12 HEX HEAD BOLTS FASTEN CYLINDER TO SUPPORT PLATE.
- 4 ENDS OF 6 PISTON GUIDE PINS VISIBLE ON CLUTCH END.
- 5 CYLINDER HAS LUGS WHERE IT IS FASTENED TO THE SUPPORT PLATE.



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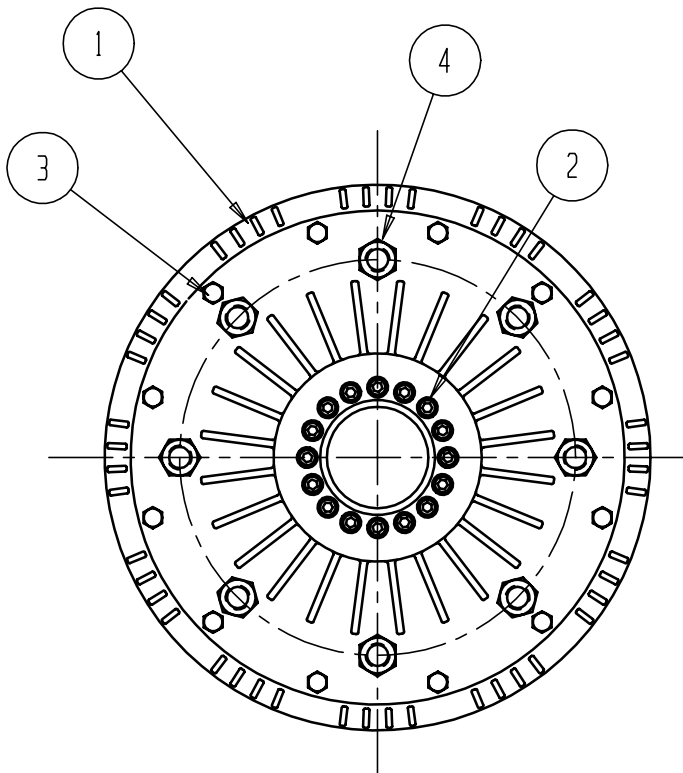
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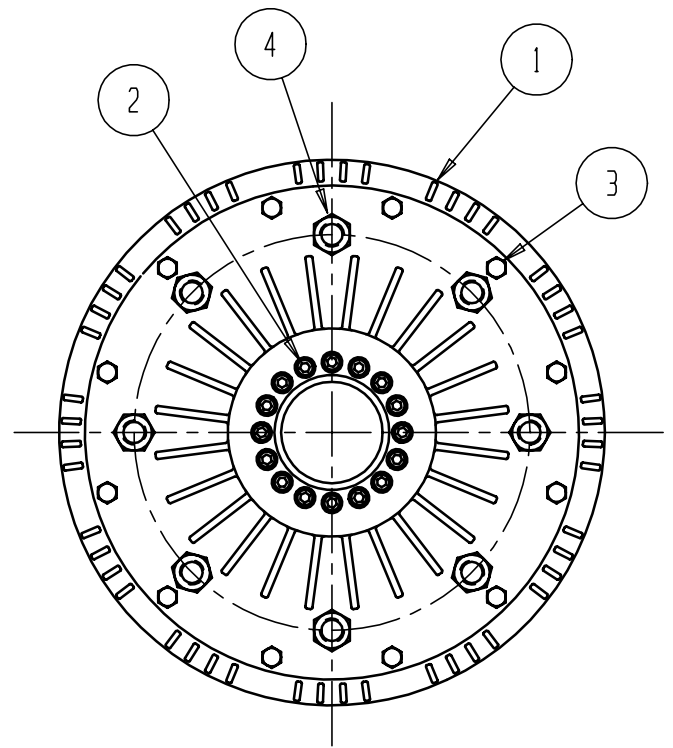
SIDE VIEW

IDENTIFYING FEATURES

- 1 FINS IN GROUPS AROUND THE SUPPORT PLATE ON CLUTCH AND BRAKE SIDES.
- 2 16 SOCKET HEAD BOLTS NEAR BORE ON BOTH ENDS.
- 3 12 HEX HEAD BOLTS FASTEN CYLINDER ON BRAKE SIDE AND COUNTER PLATE ON CLUTCH SIDE TO SUPPORT PLATE.
- 4 8 (12 ON SIZE 88) NUTS ON THRU STUDS ON BOTH ENDS.



BRAKE END VIEW



CLUTCH END VIEW