



## Typical Specifications

- 1. General:** The pump(s) shall be of the single stage, double suction, horizontal split case design; split on the horizontal axis and shall be bronze fitted construction. Suction and discharge connections shall be located on opposite sides of the lower casing, allowing removal of the rotating element without disturbing the system piping connections. The pump(s) shall be a Peerless Pump Company AE design.

The pump(s) are to be designed for a capacity of \_\_\_\_\_ GPM at a total head of \_\_\_\_\_ feet, at an efficiency of \_\_\_\_\_% of design condition.

- 2. Casing:** The pump casing material shall be a minimum of class 35 cast iron. Water passageways shall be smooth to permit maximum efficiency. Casing shall be hydrostatically tested at 150% of the maximum working pressure under which the pump could operate at design speed. The suction flange shall be drilled (125 lb.) (250 lb.) ANSI. The discharge flange shall be drilled (125 lb.) (250 lb.) ANSI

The bearing brackets shall be cast as an integral part of the lower casing and have removable bracket caps. The bearing housing shall be doweled for location and anti-rotation. The pump feet shall also be cast as an integral part of the lower casing.

Bronze renewable casing rings shall be furnished, doweled and shouldered in the casing. Ring dowels shall be located in slots on the split surface of the lower casing.

- 3. Impeller:** The impeller shall be of one piece cast bronze, double suction type. The impeller shall be balanced, keyed to the shaft and fixed in an axial position by threaded shaft sleeves. The impeller skirt shall be grooved and fit with close tolerances to the casing ring to permit a minimum of recirculation between the impeller and the casing ring for maximum efficiency. (Optional: Renewable bronze impeller rings shall be shrunk on the impeller and locked in place with stainless steel set screws. The impeller rings shall be grooved and fit with close tolerances to the casing ring for maximum efficiency.)

- 4. Stuffing Boxes:**

**Packing** - The stuffing boxes shall hold a minimum of five rings of TFE packing. The bronze gland shall be split in two halves, to facilitate removal for repacking. Gland bolts shall be of the swing type made of steel with 18-8 stainless steel nuts.

**Mechanical Seal** - Sealing of the pump liquid cavity shall be with a face type mechanical seal with Ni-resist stationary seat, carbon sealing washer, Buna rubber flexible members, stainless steel metal parts and spring. Seal to be rated for 225<sup>o</sup> F. (107<sup>o</sup> C.) @ 150 psig (10-34 bar) maximum. Mechanical seals shall be mounted over bronze shaft sleeves.

- 5. Shaft and Shaft Sleeves:** The shaft shall be carbon steel, adequately sized for the loads transmitted. Shaft deflection shall not exceed .002 inches at the face of the stuffing box when operating between 95% and 105% of capacity at best efficiency at the pump's maximum 60 Hz. speed and with full diameter impeller. The shaft shall be protected through the stuffing box by means of bronze shaft sleeves and they shall be threaded against shaft rotation and locked in place with set screws. The sleeves shall be sealed with "O" rings at the inside diameter to eliminate leakage between the shaft and sleeve. (Optional: Shaft shall be positively sealed against pumped fluid by means of specially machined shaft sleeves and impeller with sockets for use with "O" ring seals against impeller hubs.) Shaft sleeves shall extend beyond the packing glands (or mechanical seal flanges).

- 6. Bearings:** Bearings shall be single row, deep groove ball type; the inboard bearing shall be arranged for radial loads only. The outboard bearing shall be arranged for both radial and axial loads. Both bearings shall be grease lubricated with grease flush through the bearing housing (Optional: oil lube). Bearings shall be designed for an average life of 100,000 hours.

Bearings shall be protected from liquid entry by means of rubber deflectors mounted on the shaft and lip seals in the bearing housings.

Outboard bearing cover shall have a plugged opening for tachometer connection. Bearing housing lubrication design must be capable of being changed from grease to oil lubrication type without replacement of bearing housing or the lower pump casing. The outboard bearing shall have retaining ring retention.

- 7. Base:** The pump and driver shall be mounted on a common steel base (with optional drip rim). Pump and driver shall be aligned and bolted in place prior to factory shipment. Final alignment must be performed at the jobsite in accordance with the standards of the Hydraulic Institute and the pump installation, operation and maintenance instructions. Base is to be grouted to eliminate vibration.

- 8. Coupling:** A flexible coupling shall be provided between the pump and driver. A coupling guard shall be furnished over the coupling for protection.

*Subject to change without notice*

**HORIZONTAL SPLIT CASE PUMPS  
SINGLE STAGE DOUBLE SUCTION  
Type AE**



**WORKING PRESSURE AND TEMPERATURE LIMITATIONS**

The maximum working pressure of a pump varies with the temperature of the pumped fluid. **Tables A** and **B** and **Curve 4852154** on page 2.1 Section 1220, present the maximum working pressure and maximum suction pressure limits for AE model pumps based on available flange drilling, casing material and fluid temperature.

**IMPORTANT NOTE**

The correct packing type, sleeve material or mechanical seal must be selected in accordance with their application rules. The standard mechanical seals for AE pumps are limited to 150 psig (10.34 bar) maximum suction pressure and temperature up to 225° F. (107° C.).

To verify that a given model AE pump is suitable for an application, the following steps must be taken.

**STEP 1:**

Calculate the pump's maximum discharge pressure (MDP).

**For constant RPM applications:**

**MDP = [Total Head at Shutoff (for the impeller diameter and RPM required for rated total head) ÷ 2.31 x fluid's specific gravity] + suction pressure (psi) at zero flow.**

**STEP 2:**

Locate the pump model in **Table A** and note the legend letter for the applicable pressure-temperature curve for maximum working pressure allowed.

**STEP 3:**

Locate the pump model in **Table B** and note the legend letters for the applicable pressure-temperature curve for maximum suction pressure allowed.

**STEP 4:**

Enter **Curve 4852154** at the fluid temperature (° F.), read vertically to the curve line noted for the pump suction and read the **maximum permissible suction pressure**.

Repeat this procedure for the discharge side to determine the **maximum allowable working pressure**.

**STEP 5:**

Relate the maximum suction pressure to the pump's permissible suction pressure and choose the suction flange rating required. Repeat for the discharge flange.

**EXAMPLE:**

Model 4AE11, constant RPM, fluid temperature 70 ° F., suction pressure at 0 GPM = 85 psig, 1.0 specific gravity, shutoff total head = 231 feet.

$$\text{MDP} = (231 \div 2.31 \times 1.0) + 85 = 185 \text{ psi}$$

4AE11 Discharge flange curve lines are **E-E** or **D-D** (from **Table A**)

4AE11 Suction flange curve lines are **E-E** or **D-D** (from **Table B**)

Maximum suction and discharge pressure for **E-E** = 175 psi, and **D-D** = 250 psi @ 70 ° F

Therefore: 125 lb. ANSI drilling for suction flange and 250 lb. ANSI drilling for discharge flange is required for cast iron casing.



**WORKING AND TEMPERATURE LIMITATIONS - Continued**

**TABLE A**  
(Maximum Working Pressure)

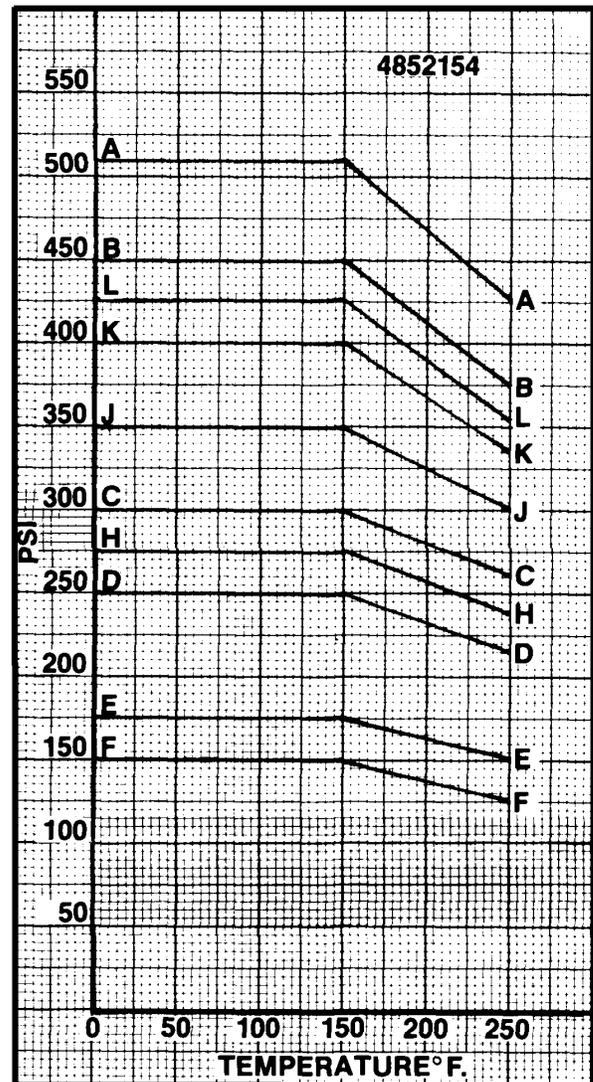
Pump Size & Type	DISCHARGE FLANGE		
	Cast Iron Casing	Cast Iron Casing	Ductile Iron Casing
	125 LB. ANSI Drilling	250 LB. ANSI Drilling	250 LB. ANSI Drilling
2AE11	E-E	C-C	N.A.
3AE9	E-E	C-C	L-L
3AE14, G	E-E	D-D	N.A.
4AE10, G	E-E	H-H	B-B
4AE11, G	E-E	D-D	N.A.
4AE12	E-E	C-C	A-A
5AE8, N	E-E	D-D	N.A.
5AE11, G	E-E	C-C	A-A
5AE12	E-E	C-C	A-A
5AE14, G, N	E-E	D-D	N.A.
6AE11	E-E	D-D	N.A.
6AE12	E-E	J-J	A-A
6AE14, G, N	E-E	D-D	N.A.
6AE16G, N, V	E-E	D-D	N.A.
6AE18	E-E	C-C	N.A.
8AE12	E-E	D-D	N.A.
8AE13	E-E	D-D	N.A.
8AE15, G	E-E	D-D	N.A.
8AE17A, Q, W	E-E	C-C	N.A.
8AE20, G	E-E	C-C	N.A.
10AE12	E-E	D-D	N.A.
10AE14A, J	E-E	D-D	N.A.
10AE16	E-E	R.F.	N.A.
10AE20	E-E	D-D	N.A.

**TABLE B**  
(Maximum Suction Pressure)

Pump Size & Type	SUCTION FLANGE	
	Cast Iron Casing or Ductile Casing	
	125 LB. ANSI Drilling	250 LB. ANSI Drilling
2AE11	E-E	R.F.
3AE9	E-E	D-D
3AE14, G	E-E	R.F.
4AE10, G	E-E	D-D
4AE11, G	E-E	D-D
4AE12	E-E	D-D
5AE8, N	E-E	R.F.
5AE11, G	E-E	C-C
5AE12	E-E	C-C
5AE14, G, N	E-E	R.F.
6AE11	E-E	D-D
6AE12	E-E	D-D
6AE14, G, N	E-E	D-D
6AE16G, N, V	E-E	R.F.
6AE18	E-E	R.F.
8AE12	E-E	E-E
8AE13	E-E	E-E
8AE15, G	E-E	E-E
8AE17A, Q, W	F-F	F-F
8AE20, G	F-F	R.F.
10AE12	E-E	D-D
10AE14A, J	F-F	F-F
10AE16	E-E	R.F.
10AE20	E-E	R.F.

N.A. = Not Available      R.F. = Refer to the factory

**AE PRESSURE-TEMPERATURE LIMITATION CURVES**



**4852154**  
Rev. 12-89

*Subject to change without notice*

**HORIZONTAL SPLIT CASE PUMPS  
SINGLE STAGE DOUBLE SUCTION**



**Type AE**

**Pump Data**

Pump Size & Type	Nom. Casing Thickness Inches	Corrosion Allowance Inches	First Critical Speed rpm	Max Pump Speed rpm.	No. of Imp. Vanes	Prime. or Csg. Vent Conn. NPT Size	Disch. Drain NPT Size	Suct Drain NPT Size	Shaft Diameter Through (Inches)		Cut-water Dia. In.	WR <sup>2</sup> Lb-Ft <sup>2</sup> (Wet. Brz. Imp.)	Min. Imp. Dia. In.
									Imp.	Cplg.			
2AE11 ①	.44	.12	6136	3600	4	1/2	1/2	1/2	1.375	1.125	11.00	1.3	7.00
3AE9	.38	.12	5734	3600	6	1/2	3/4	1/2	1.625	1.375	9.56	1.2	6.13
3AE9G	.38	.12	5734	3600	6	1/2	3/4	1/2	1.625	1.375	9.56	1.3	6.25
3AE14	.47	.12	5090	2300 ④	5	1/2	1/2	1/2	1.375	1.125	14.50	3.0	9.75
3AE14G	.47	.12	5090	2400 ④	6	1/2	1/2	1/2	1.375	1.125	14.50	1.7	9.00
4AE10	.40	.12	5175	3600	6	1/2	3/4	1/2	1.625	1.375	10.38	1.7	7.00
4AE10G	.40	.12	5175	3600	6	1/2	3/4	1/2	1.625	1.375	10.38	1.2	6.13
4AE11	.38	.12	6388	2000 ④	8	1/2	3/4	1/2	1.375	1.125	11.91	1.8	7.62
4AE11G	.38	.12	6388	2100 ④	6	1/2	3/4	1/2	1.375	1.125	11.91	2.0	7.62
4AE12 ②	.50	.12	6910	3600	7	1/2	3/4	1/2	1.625	1.375	12.58	2.4	8.50
5AE8	.38	.12	6830	3600	6	1/2	3/4	1/2	1.625	1.375	8.42	1.5	5.75
5AE8N	.38	.12	6830	3600	8	1/2	3/4	1/2	1.625	1.375	8.42	1.3	5.75
5AE11	.50	.12	5902	3600	8	1/2	1	1/2	1.750	1.562	11.62	1.9	7.50
5AE11G	.50	.12	5902	3600	8	1/2	1	1/2	1.750	1.562	11.62	1.9	7.50
5AE12 ②	.56	.12	6100	3600	6	1/2	1	1/2	1.750	1.562	13.00	2.9	8.50
5AE14	.50	.12	4196	2000 ④	8	1/2	3/4	1/2	1.625	1.375	14.62	5.7	10.00
5AE14G	.50	.12	4196	2100 ④	8	1/2	3/4	1/2	1.625	1.375	14.62	3.6	10.00
5AE14N	.50	.12	4196	2100 ④	6	1/2	3/4	1/2	1.625	1.375	14.62	3.1	10.00
6AE11	.38	.12	6388	1800	5	1/2	1/2	1/2	1.375	1.125	11.29	2.1	7.00
6AE12 ②	.66	.12	6308	3600	7	1/2	3/4	1/2	2.125	1.875	13.00	5.5	③ 8.50
6AE14	.56	.12	4611	1800	8	1/2	3/4	1/2	1.750	1.562	15.66	5.0	10.00
6AE14G	.56	.12	4611	1800	8	1/2	3/4	1/2	1.750	1.562	15.66	4.7	10.00
6AE14N	.56	.12	4534	1800	8	1/2	3/4	1/2	1.750	1.562	15.66	7.9	11.00
6AE16	.56	.12	3841	1800	8	1/2	1	1/2	1.750	1.562	17.41	7.5	12.00
6AE16G	.56	.12	3841	1800	8	1/2	1	1/2	1.750	1.562	17.41	7.3	12.00
6AE16N	.56	.12	3841	1800	6	1/2	1	1/2	1.750	1.562	17.41	7.7	12.00
6AE16V	.56	.12	3841	1800	8	1/2	1	1/2	1.750	1.562	17.41	9.5	12.00
6AE18	.69	.12	4034	1900 ④	8	1/2	1	1/2	2.125	1.875	18.15	14.7	13.00
8AE12	.44	.12	6024	1800	5	1/2	1/2	1/2	1.750	1.562	13.10	3.3	③ 8.00
8AE13	.50	.12	4206	1800	8	1	1	1/2	1.750	1.562	13.72	8.6	9.00
8AE15	.56	.12	6013	1800	7	1	3/4	1/2	2.125	1.875	16.38	8.8	③ 10.25
8AE15G	.56	.12	6013	1900 ④	8	1	3/4	1/2	2.125	1.875	16.38	8.4	③ 10.25
8AE17A ②	.62	.12	3649	1800	8	1	1	1/2	2.125	1.875	18.90	12.1	12.00
8AE17Q ②	.62	.12	3649	1800	8	1	1	1/2	2.125	1.875	18.90	11.8	12.00
8AE17W ②	.62	.12	3649	1800	8	1	1	1/2	2.125	1.875	18.90	12.8	12.00
8AE20	.69	.12	3649	2000 ④	8	1	1	1/2	2.500	2.250	20.84	22.0	14.00
8AE20G	.69	.12	3649	1800	8	1	1	1/2	2.500	2.250	20.84	29.9	14.00
10AE12	.56	.12	4799	1800	8	1	1	1/2	2.125	1.875	12.74	7.4	③ 9.00
10AE14A ②	.62	.12	4052	2000 ④	8	1	1	1/2	2.500	2.250	15.08	16.0	③ 10.00
10AE14J ②	.62	.12	4052	2100 ④	8	1	1	1/2	2.500	2.250	15.08	16.6	③ 10.00
10AE16 ②	.75	.12	3873	1800	8	1	1	1/2	2.500	2.250	17.00	22.9	11.50
10AE20 ②	.75	.12	3251	1900 ④	7	1	1	1	2.750	2.500	21.25	37.4	15.00

① Single Suction Design    ② Double Volute Casing    ③ Average Diameter

④ For applications where speeds exceed 4 pole motor speeds (1800 rpm), these must be reviewed by factory application department as special pump construction may be required which may result in price additions for the special construction, refer to the factory for these applications.



*Pump Data-Continued*

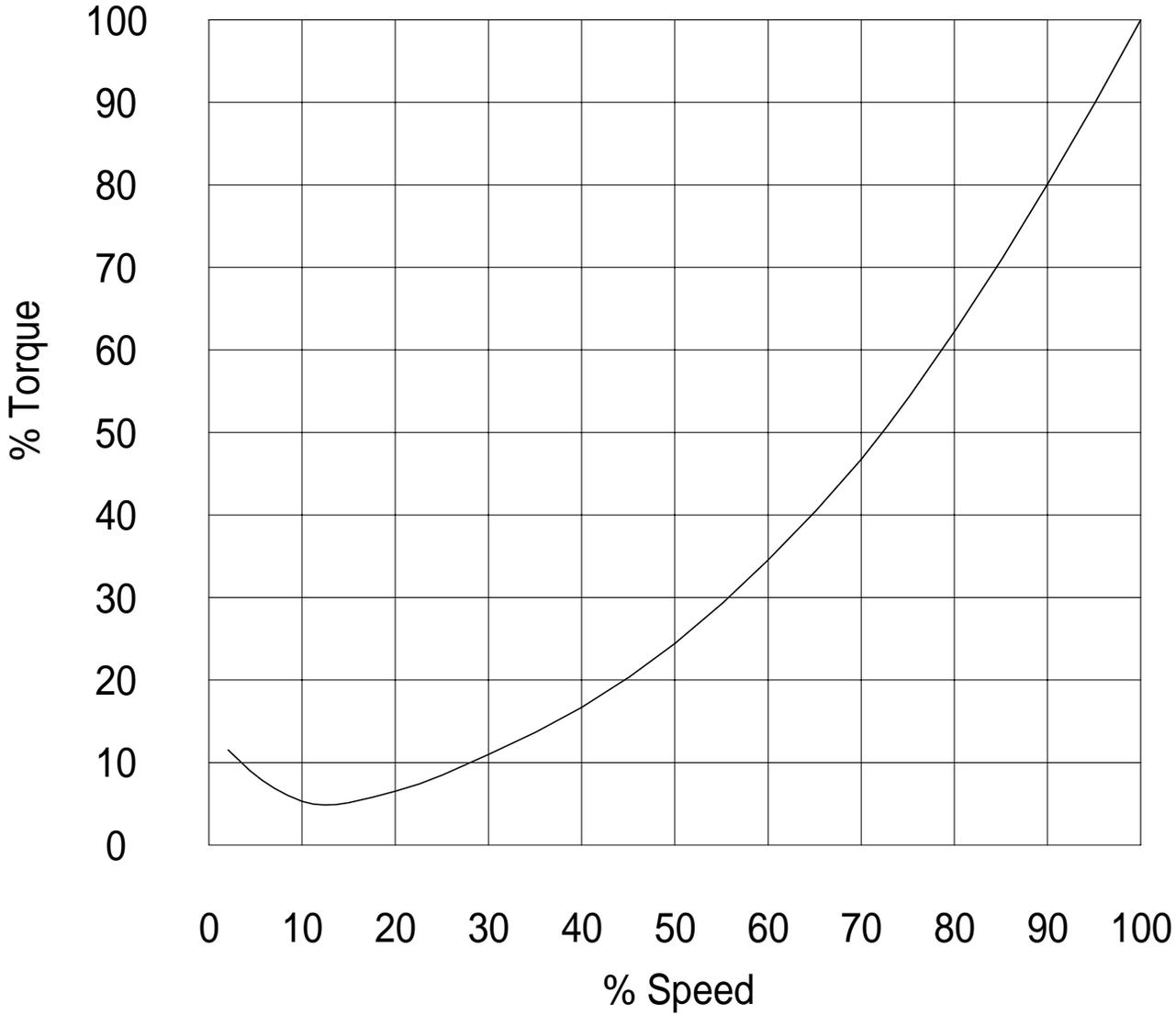
Pump Size & Type	Stuffing Box								Bearing Size		Distance Between Bearing Centers Inches
	Shaft Sleeve Dia. Inches	Bore Inches	Depth Inches	Face to Nearest Obstruction on Shaft Inches	Packing Size - Square Inches	Number of Rows of Packing Each Box ④	Gland Bolt Circle Dia. Inches Two @ 180° Apart	Gland Bolt Dia. Inches	Thrust (Single Row)	Radial (Single Row)	
2AE11	1.500	2.375	2.94	1.63	7/16	6	4.50	3/8	305	206	18.75
3AE9	1.750	2.750	3.31	1.82	1/2	6	4.75	1/2	306	207	20.00
3AE9G	1.750	2.750	3.31	1.82	1/2	6	4.75	1/2	306	207	20.00
3AE14	1.500	2.375	2.94	1.63	7/16	6	4.50	3/8	305	206	18.75
3AE14G	1.500	2.375	2.94	1.63	7/16	6	4.50	3/8	305	206	18.75
4AE10	1.750	2.750	3.31	1.82	1/2	6	4.75	1/2	306	207	20.00
4AE10G	1.750	2.750	3.31	1.82	1/2	6	4.75	1/2	306	207	20.00
4AE11	1.500	2.375	2.94	1.38	7/16	6	4.50	3/8	305	206	18.75
4AE11G	1.500	2.375	2.94	1.38	7/16	6	4.50	3/8	305	206	18.75
4AE12	1.750	2.750	3.31	1.82	1/2	6	4.75	1/2	306	207	20.00
5AE8	1.750	2.750	3.31	2.01	1/2	6	4.75	1/2	306	207	21.75
5AE8N	1.750	2.750	3.31	2.01	1/2	6	4.75	1/2	306	207	21.75
5AE11	2.000	3.000	3.31	1.68	1/2	6	5.25	1/2	307	208	22.00
5AE11G	2.000	3.000	3.31	1.68	1/2	6	5.25	1/2	307	208	22.00
5AE12	2.000	3.000	3.31	1.74	1/2	6	5.25	1/2	307	208	22.00
5AE14	1.750	2.750	3.31	1.82	1/2	6	4.75	1/2	306	207	23.25
5AE14G	1.750	2.750	3.31	1.82	1/2	6	4.75	1/2	306	207	23.25
5AE14N	1.750	2.750	3.31	1.82	1/2	6	4.75	1/2	306	207	23.25
6AE11	1.500	2.375	2.94	1.38	7/16	6	4.50	3/8	305	206	18.75
6AE12	2.375	3.500	3.75	2.20	9/16	6	6.25	5/8	308	210	25.50
6AE14	2.000	3.000	3.31	1.76	1/2	6	5.25	1/2	307	208	23.37
6AE14G	2.000	3.000	3.31	1.76	1/2	6	5.25	1/2	307	208	23.37
6AE14N	2.000	3.000	3.31	1.76	1/2	6	5.25	1/2	307	208	23.37
6AE16	2.000	3.000	3.31	1.74	1/2	6	5.25	1/2	307	208	26.12
6AE16G	2.000	3.000	3.31	1.74	1/2	6	5.25	1/2	307	208	26.12
6AE16N	2.000	3.000	3.31	1.74	1/2	6	5.25	1/2	307	208	26.12
6AE16V	2.000	3.000	3.31	1.74	1/2	6	5.25	1/2	307	208	26.12
6AE18	2.375	3.500	3.75	2.19	9/16	6	6.25	5/8	308	210	27.00
8AE12	2.000	3.000	3.31	1.74	1/2	6	5.25	1/2	307	208	22.00
8AE13	2.000	3.000	3.31	1.74	1/2	6	5.25	1/2	307	208	24.00
8AE15	2.375	3.500	3.75	2.20	9/16	6	6.25	5/8	308	210	25.50
8AE15G	2.375	3.500	3.75	2.20	9/16	6	6.25	5/8	308	210	25.50
8AE17A	2.375	3.500	3.75	2.19	9/16	6	6.25	5/8	308	210	27.00
8AE17Q	2.375	3.500	3.75	2.19	9/16	6	6.25	5/8	308	210	27.00
8AE17W	2.375	3.500	3.75	2.19	9/16	6	6.25	5/8	308	210	27.00
8AE20	2.750	4.000	4.12	2.44	5/8	6	7.50	5/8	310	212	33.50
8AE20G	2.750	4.000	4.12	2.44	5/8	6	7.50	5/8	310	212	33.50
10AE12	2.375	3.500	3.75	2.23	9/16	6	6.25	5/8	308	210	28.34
10AE14A	2.750	4.000	4.12	2.44	5/8	6	7.50	5/8	310	212	33.50
10AE14J	2.750	4.000	4.12	2.44	5/8	6	7.50	5/8	310	212	33.50
10AE16	2.750	4.000	4.12	2.44	5/8	6	7.50	5/8	310	212	33.50
10AE20	3.125	4.375	4.62	3.06	5/8	6	7.50	5/8	311	213	37.00

④ Five with Optional Lantern Ring

**HORIZONTAL SPLIT CASE PUMPS  
 SINGLE STAGE DOUBLE SUCTION  
 Type AE**



**Speed - Torque Curve**



**Information required to use speed-torque curve**

1 - 100% of Torque = \_\_\_\_\_ Ft.-lbs @ \_\_\_\_\_ Gpm \_\_\_\_\_ Total Head Feet

2 - 100% of Speed = Rpm (true running speed)

To determine 100% of torque in Ft.-Lbs., use the following equation:

$$100\% \text{ torque (Ft.-Lbs)} = \frac{\text{BHP} \text{ ①} \times 5250}{\text{RPM (true running speed)}}$$

- ① For open valve starting - use BHP at design point
- For closed valve starting - use BHP at shut-off point

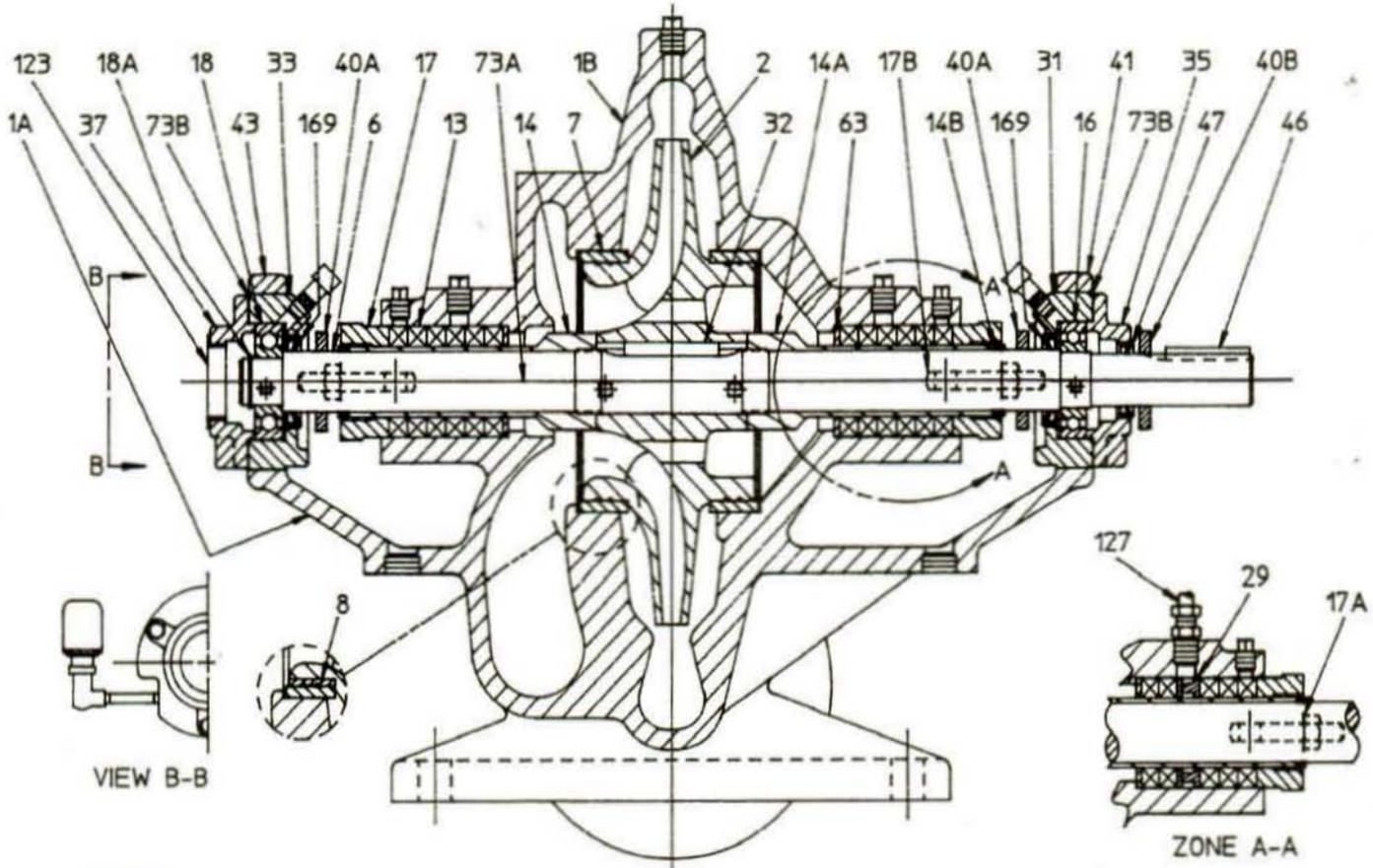






# HORIZONTAL SPLIT CASE PUMPS SINGLE STAGE SINGLE SUCTION Type 2AE11

Packed Type  
Oil Lubricated Bearings  
Cross Sectional Drawing



4853099  
Rev 4-94

## BRONZE FITTED AE PUMP STANDARD MATERIALS OF CONSTRUCTION

Item No.	Description	Material	Item No.	Description	Material
1A,1B	Upper & Lower Casings	Cast Iron	32	Impeller Key	Stainless Steel
2	Impeller	Bronze	33	Outboard Bearing Housing	Cast Iron
6	Shaft	Steel ①	35	Inb. Brg. Housing Cover	Cast Iron
7	Casing Ring	Bronze ①	37	Out. Brg. Housing Cover	Cast Iron
8	Impeller Ring (Optional)	Bronze	40A	Inboard Deflector	Rubber
13	Packing Ring	Graphited TFE	40B	Outboard Deflector	Rubber
14,14A	Shaft Sleeve	Bronze ①	41	Inb.Brg. Housing Cap	Cast Iron
14B	Shaft Sleeve "O" Ring	Buna-N Rubber	43	Out. Brg Housing Cap	Cast Iron
16	Inboard Ball Bearing	Steel Assembly	46	Coupling Key	Steel
17	Packing Gland	Bronze ②	47	Inb. Brg. Cover Seal	Steel/Rubber Assembly
17A	Gland Clip (when used)	Stainless Steel	63	Stuffing Box Bushing	Bronze
17B	Gland Bolt	Steel	73A	Casing Gasket (Not Shown)	Vegetable Fiber
18	Outboard Ball Bearing	Steel Assembly	73B	Bearing Cover Gasket	Fiber
18A	Bearing Retaining Ring	Steel	123	Bearing End Cover	Steel
29	Lantern Ring (Optional)	TFE	127	Water Seal Piping (Optional)	Copper with Brass Fittings
31	Inboard Bearing Housing	Cast Iron	169	Bearing Housing Seal	Steel/Rubber Assembly

① Optional Material AISI 416 Str. Stl. ② Optional Material 316 Str. Stl.

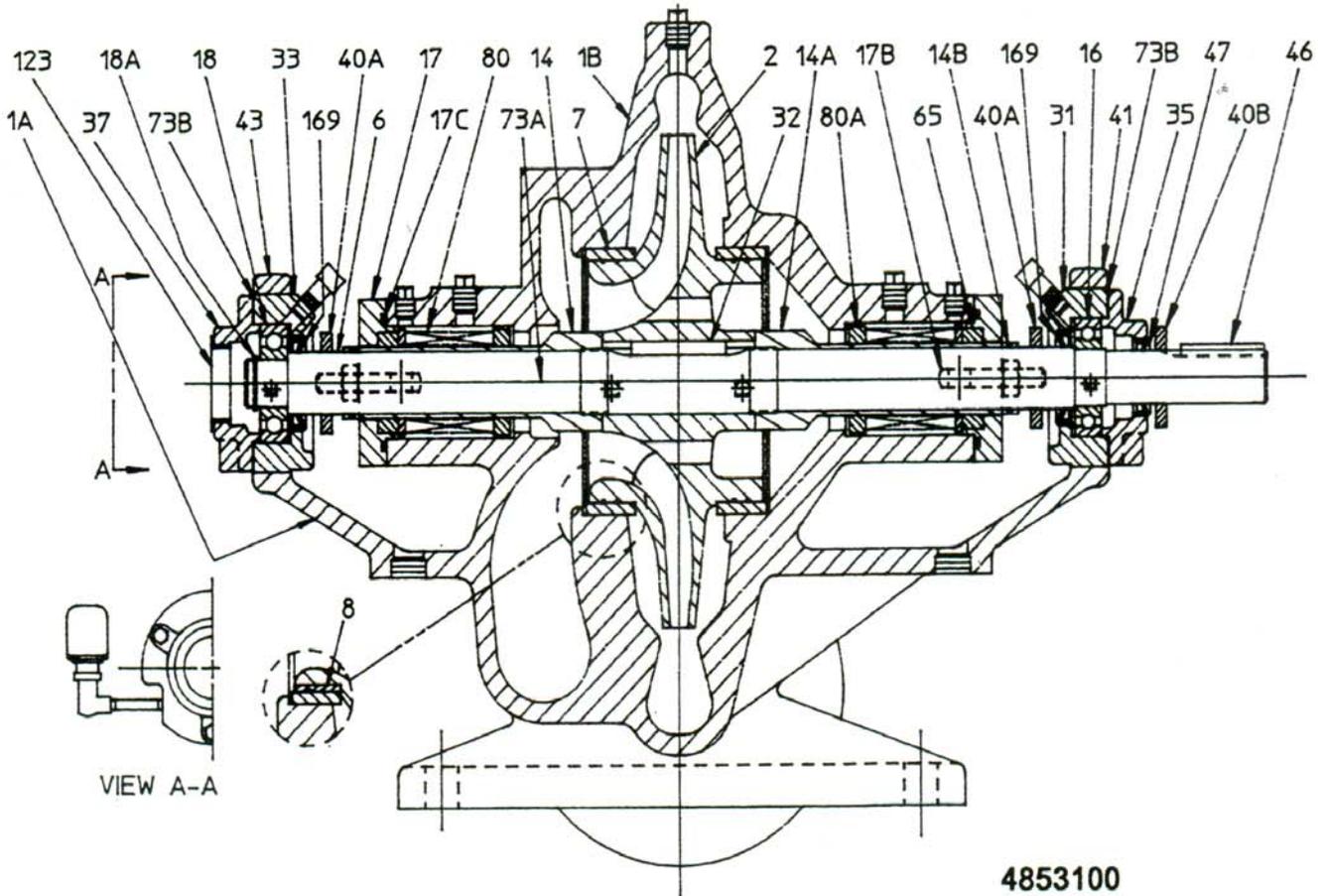
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**HORIZONTAL SPLIT CASE PUMPS  
 SINGLE STAGE SINGLE SUCTION  
 Type 2AE11**



Peerless Pump Company  
 Indianapolis, IN 46207-7026

Mechanical Seal Type  
 Oil Lubricated Bearings  
 Cross Sectional Drawing



**4853100**  
 Rev 4-94

**BRONZE FITTED AE PUMP STANDARD MATERIALS OF CONSTRUCTION**

Item No.	Description	Material	Item No.	Description	Material
1A,1B	Upper & Lower Casings	Cast Iron	40A	Inboard Deflector	Rubber
2	Impeller	Bronze	40B	Outboard Deflector	Rubber
6	Shaft	Steel ①	41	Inb. Brg. Housing Cap	Cast Iron
7	Casing Ring	Bronze ①	43	Out. Brg Housing Cap	Cast Iron
8	Impeller Ring (Optional)	Bronze	46	Coupling Key	Steel
14,14A	Shaft Sleeve	Bronze ①	47	Inb. Brg. Cover Seal	Steel/Rubber Assembly
14B	Shaft Sleeve "O" Ring	Buna-N Rubber	73A	Casing Gasket (Not Shown)	Vegetable Fiber
16	Inboard Ball Bearing	Steel Assembly	73B	Bearing Cover Gasket	Fiber
17	Mechanical Seal Flange	Bronze	65	Mechanical Seal Seat	Ni-Resist
17B	Gland Bolt	Steel		Flexible	Buna Rubber
17B	Seal Flange "O" Ring	Buna N Rubber	80	Mechanical Washer	Carbon
18	Outboard Ball Bearing	Steel Assembly		Seal Metal	18-8 Stn. Stl.
18A	Bearing Retaining Ring	Steel		Rotary Spring	18-8 Stn. Stl.
31	Inboard Bearing Housing	Cast Iron		Bellows	Buna Rubber
32	Impeller Key	Stainless Steel	80A	Shaft Collar	18-8 Stn. Stl.
33	Outboard Bearing Housing	Cast Iron	123	Bearing End Cover	Steel
35	Inb. Brg. Housing Cover	Cast Iron	169	Bearing Housing Seal	Steel/Rubber Assembly
37	Out. Brg. Housing Cover	Cast Iron			

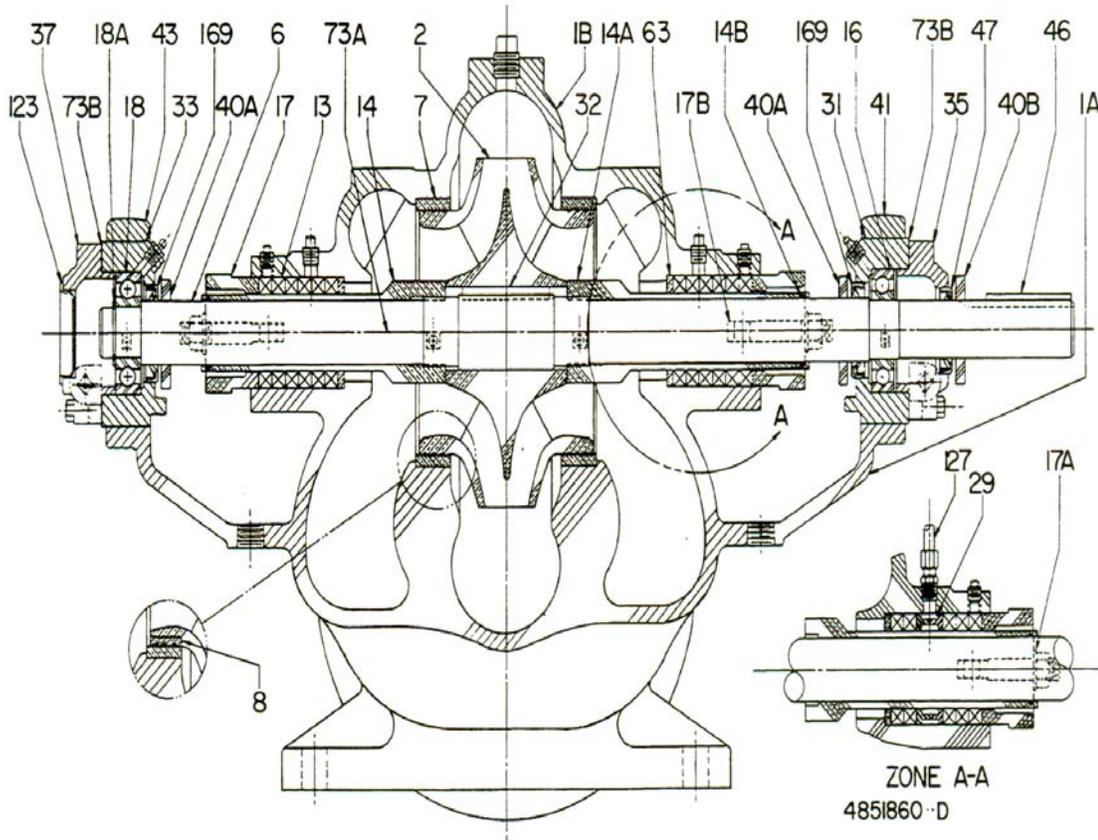
① Optional Material AISI 416 Stn. Stl.

Subject to change without notice



# HORIZONTAL SPLIT CASE PUMPS SINGLE STAGE SINGLE SUCTION Type AE

## Packed Type Cross Sectional Drawing



### BRONZE FITTED AE PUMP STANDARD MATERIALS OF CONSTRUCTION

Item No.	Description	Material	Item No.	Description	Material
1A,1B	Upper & Lower Casings	Cast Iron	32	Impeller Key	Stainless Steel
2	Impeller	Bronze	33	Outboard Bearing Housing	Cast Iron
6	Shaft	Steel ①	35	Inb. Brg. Housing Cover	Cast Iron
7	Casing Ring	Bronze ①	37	Out. Brg. Housing Cover	Cast Iron
8	Impeller Ring (Optional)	Bronze ①	40A	Inboard Deflector	Rubber
13	Packing Ring	Graphited TFE	40B	Outboard Deflector	Rubber
14,14A	Shaft Sleeve	Bronze ①	41	Inb.Brg. Housing Cap	Cast Iron
14B	Shaft Sleeve '*O' Ring	Buna-N Rubber	43	Out. Brg Housing Cap	Cast Iron
16	Inboard Ball Bearing	Steel Assembly	46	Coupling Key	Steel
17	Packing Gland	Bronze ②	47	Inb. Brg. Cover Seal	Steel/Rubber Assembly
17A	Gland Clip (when used)	Stainless Steel	63	Stuffing Box Bushing	Bronze
17B	Gland Bolt	Steel	73A	Casing Gasket (Not Shown)	Vegetable Fiber
18	Outboard Ball Bearing	Steel Assembly	73B	Bearing Cover Gasket	Fiber
18A	Bearing Retaining Ring	Steel	123	Bearing End Cover	Steel
29	Lantern Ring (Optional)	TFE	127	Water Seal Piping (Optional)	Copper with Brass Fittings
31	Inboard Bearing Housing	Cast Iron	169	Bearing Housing Seal	Steel/Rubber Assembly

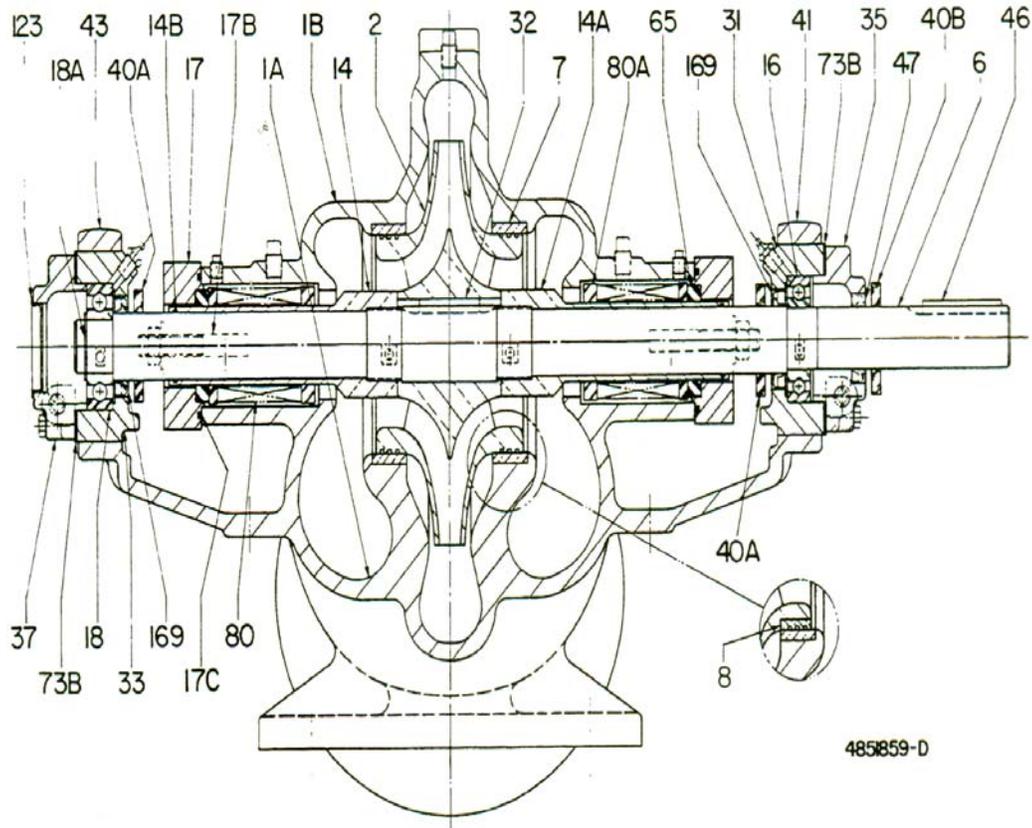
① Optional Material AISI 416 Stn. Stl. ② Optional Material 316 Stn. Stl.

**HORIZONTAL SPLIT CASE PUMPS  
 SINGLE STAGE SINGLE SUCTION  
 Type AE**



Peerless Pump Company  
 Indianapolis, IN 46206-7026

**Mechanical Seal Type  
 Cross Sectional Drawing**



485859-D

**BRONZE FITTED AE PUMP STANDARD MATERIALS OF CONSTRUCTION**

Item No.	Description	Material	Item No.	Description	Material	
1A,1B	Upper & Lower Casings	Cast Iron	40A	Inboard Deflector	Rubber	
2	Impeller	Bronze	40B	Outboard Deflector	Rubber	
6	Shaft	Steel ①	41	Inb.Brg. Housing Cap	Cast Iron	
7	Casing Ring	Bronze ①	43	Out. Brg Housing Cap	Cast Iron	
8	Impeller Ring (Optional)	Bronze	46	Coupling Key	Steel	
14,14A	Shaft Sleeve	Bronze ①	47	Inb. Brg. Cover Seal	Steel/Rubber Assembly	
14B	Shaft Sleeve "O" Ring	Buna-N Rubber	73A	Casing Gasket (Not Shown)	Vegetable Fiber	
16	Inboard Ball Bearing	Steel Assembly	73B	Bearing Cover Gasket	Fiber	
17	Mechanical Seal Flange	Cast Iron	65	Mechanical Seal Seat	Ni-Resist	
17B	Gland Bolt	Steel	80	Mechanical Seal Rotary	Flexible	Buna Rubber
17B	Seal Flange "O" Ring	Buna N Rubber			Washer	Carbon
18	Outboard Ball Bearing	Steel Assembly			Metal	18-8 Stn. Stl.
18A	Bearing Retaining Ring	Steel			Spring	18-8 Stn. Stl.
31	Inboard Bearing Housing	Cast Iron		Bellows	Buna Rubber	
32	Impeller Key	Stainless Steel	80A	Shaft Collar	18-8 Stn. Stl.	
33	Outboard Bearing Housing	Cast Iron	123	Bearing End Cover	Steel	
35	Inb. Brg. Housing Cover	Cast Iron	169	Bearing Housing Seal	Steel/Rubber Assembly	
37	Out. Brg. Housing Cover	Cast Iron				

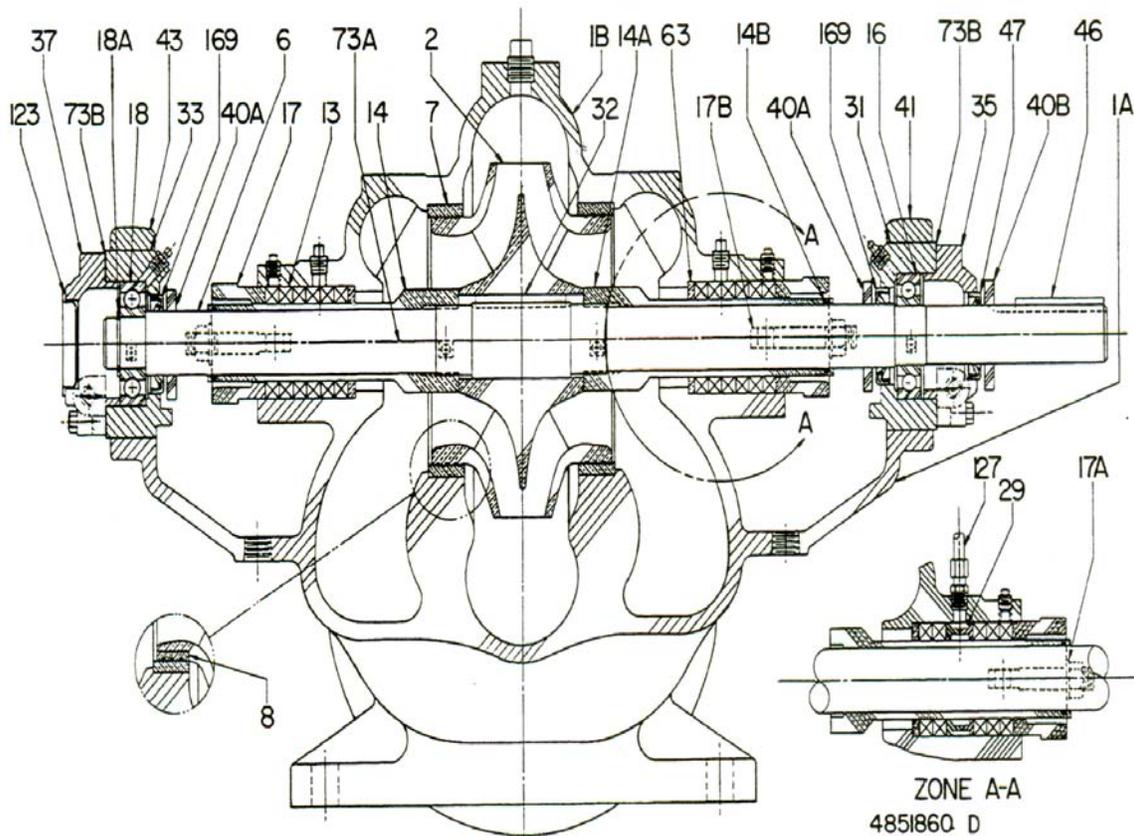
① Optional Material AISI 416 Stn. Stl.

*Subject to change without notice*



# HORIZONTAL SPLIT CASE PUMPS SINGLE STAGE SINGLE SUCTION Type AE

## Packed Type Cross Sectional Drawing



### ALL IRON AE PUMP STANDARD MATERIALS OF CONSTRUCTION

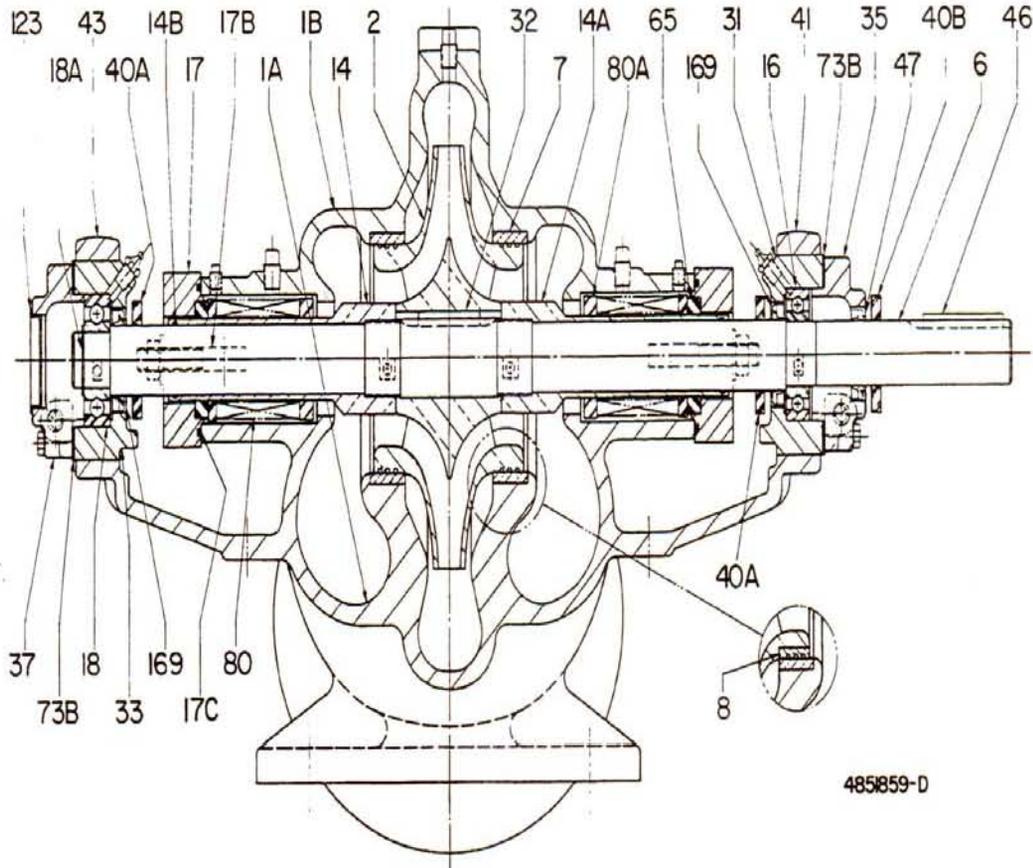
Item No.	Description	Material	Item No.	Description	Material
1A,1B	Upper & Lower Casings	Cast Iron	32	Impeller Key	Stainless Steel
2	Impeller	Cast Iron	33	Outboard Bearing Housing	Cast Iron
6	Shaft	Steel ①	35	Inb. Brg. Housing Cover	Cast Iron
7	Casing Ring	Cast Iron ①	37	Out. Brg. Housing Cover	Cast Iron
8	Impeller Ring (Optional)	Steel ①	40A	Inboard Deflector	Rubber
13	Packing Ring	Graphited TFE	40B	Outboard Deflector	Rubber
14,14A	Shaft Sleeve	AISI 416 Stn. Steel	41	Inb.Brg. Housing Cap	Cast Iron
14B	Shaft Sleeve "O" Ring	Buna-N Rubber	43	Out. Brg Housing Cap	Cast Iron
16	Inboard Ball Bearing	Steel Assembly	46	Coupling Key	Steel
17	Packing Gland	316 Stn. Steel	47	Inb. Brg. Cover Seal	Steel/Rubber Assembly
17A	Gland Clip (when used)	Stainless Steel	63	Stuffing Box Bushing	Steel
17B	Gland Bolt	Steel	73A	Casing Gasket (Not Shown)	Vegetable Fiber
18	Outboard Ball Bearing	Steel Assembly	73B	Bearing Cover Gasket	Fiber
18A	Bearing Retaining Ring	Steel	123	Bearing End Cover	Steel
29	Lantern Ring (Optional)	TFE	127	Water Seal Piping (Optional)	Steel with Steel Fittings
31	Inboard Bearing Housing	Cast Iron	169	Bearing Housing Seal	Steel/Rubber Assembly

① Optional Material AISI 416 Stn. Stl.

**HORIZONTAL SPLIT CASE PUMPS  
 SINGLE STAGE SINGLE SUCTION  
 Type AE**



**Mechanical Seal Type  
 Cross Sectional Drawing**



**ALL IRON AE PUMP STANDARD MATERIALS OF CONSTRUCTION**

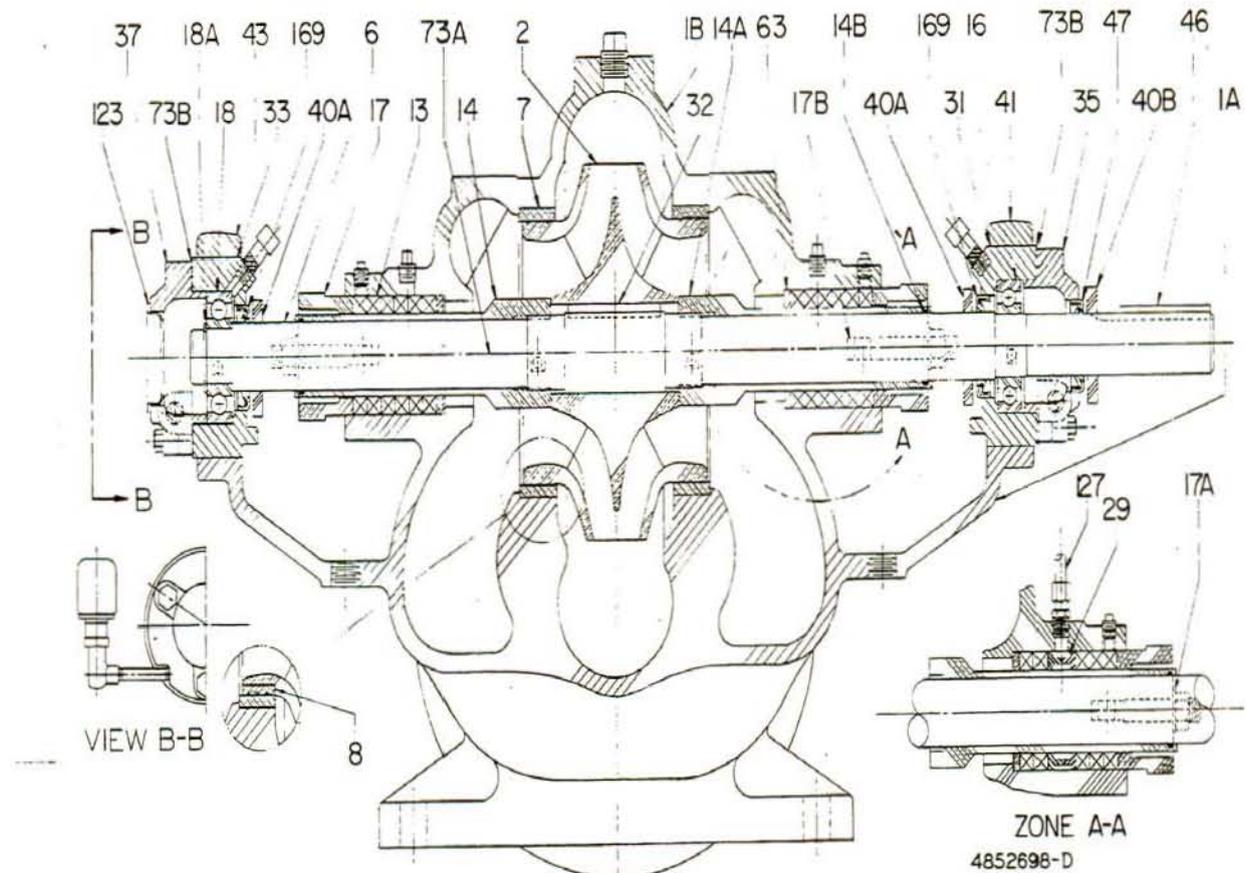
Item No.	Description	Material	Item No.	Description	Material	
1A,1B	Upper & Lower Casings	Cast Iron	40A	Inboard Deflector	Rubber	
2	Impeller	Cast Iron	40B	Outboard Deflector	Rubber	
6	Shaft	Steel ①	41	Inb. Brg. Housing Cap	Cast Iron	
7	Casing Ring	Cast Iron ①	43	Out. Brg Housing Cap	Cast Iron	
8	Impeller Ring (Optional)	Steel ①	46	Coupling Key	Steel	
14,14A	Shaft Sleeve	AISI 416 Stn Steel	47	Inb. Brg. Cover Seal	Steel/Rubber Assembly	
14B	Shaft Sleeve "O" Ring	Buna-N Rubber	73A	Casing Gasket (Not Shown)	Vegetable Fiber	
16	Inboard Ball Bearing	Steel Assembly	73B	Bearing Cover Gasket	Fiber	
17	Mechanical Seal Flange	Cast Iron	65	Mechanical Seal Seat	Ni-Resist	
17B	Gland Bolt	Steel	80	Mechanical Seal Rotary	Flexible	Buna Rubber
17B	Seal Flange "O" Ring	Buna N Rubber			Washer	Carbon
18	Outboard Ball Bearing	Steel Assembly			Metal	18-8 Stn. Stl.
18A	Bearing Retaining Ring	Steel			Spring	18-8 Stn. Stl.
31	Inboard Bearing Housing	Cast Iron	Bellows	Buna Rubber		
32	Impeller Key	Stainless Steel	80A	Shaft Collar	18-8 Stn. Stl.	
33	Outboard Bearing Housing	Cast Iron	123	Bearing End Cover	Steel	
35	Inb. Brg. Housing Cover	Cast Iron	169	Bearing Housing Seal	Steel/Rubber Assembly	
37	Out. Brg. Housing Cover	Cast Iron				

① Optional Material AISI 416 Stn. Stl.



# HORIZONTAL SPLIT CASE PUMPS SINGLE STAGE SINGLE SUCTION Type AE

Packed Type  
Oil Lubricated Bearings  
Cross Sectional Drawing



**BRONZE FITTED AE PUMP STANDARD MATERIALS OF CONSTRUCTION**

Item No.	Description	Material	Item No.	Description	Material
1A,1B	Upper & Lower Casings	Cast Iron	32	Impeller Key	Stainless Steel
2	Impeller	Bronze	33	Outboard Bearing Housing	Cast Iron
6	Shaft	Steel ①	35	Inb. Brg. Housing Cover	Cast Iron
7	Casing Ring	Bronze ①	37	Out. Brg. Housing Cover	Cast Iron
8	Impeller Ring (Optional)	Bronze ①	40A	Inboard Deflector	Rubber
13	Packing Ring	Graphited TFE	40B	Outboard Deflector	Rubber
14,14A	Shaft Sleeve	Bronze ①	41	Inb. Brg. Housing Cap	Cast Iron
14B	Shaft Sleeve "O" Ring	Buna-N Rubber	43	Out. Brg Housing Cap	Cast Iron
16	Inboard Ball Bearing	Steel Assembly	46	Coupling Key	Steel
17	Packing Gland	Bronze ②	47	Inb. Brg. Cover Seal	Steel/Rubber Assembly
17A	Gland Clip (when used)	Stainless Steel	63	Stuffing Box Bushing	Bronze
17B	Gland Bolt	Steel	73A	Casing Gasket (Not Shown)	Vegetable Fiber
18	Outboard Ball Bearing	Steel Assembly	73B	Bearing Cover Gasket	Fiber
18A	Bearing Retaining Ring	Steel	123	Bearing End Cover	Steel
29	Lantern Ring (Optional)	TFE	127	Water Seal Piping (Optional)	Copper with Brass Fittings
31	Inboard Bearing Housing	Cast Iron	169	Bearing Housing Seal	Steel/Rubber Assembly

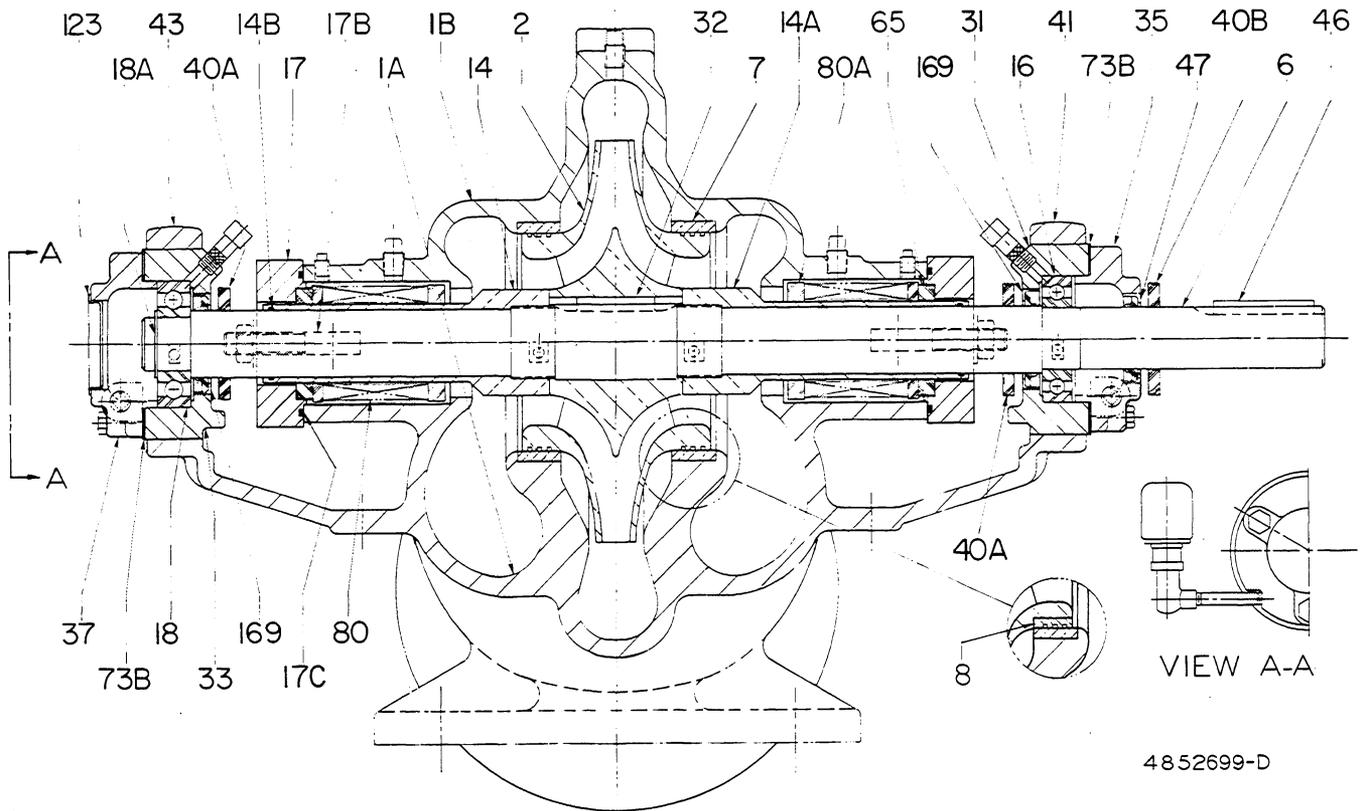
① Optional Material AISI 416 Strn. Stl.    ② Optional Material 316 Strn. Stl.

**HORIZONTAL SPLIT CASE PUMPS  
SINGLE STAGE DOUBLE SUCTION  
Type AE**



Peerless Pump Company  
Indianapolis, IN 46207-7026

Mechanical Seal Type  
Oil Lubricated Bearings  
Cross Sectional Drawing



4852699-D

**BRONZE FITTED AE PUMP  
STANDARD MATERIALS OF CONSTRUCTION**

Item No.	Description	Material	Item No.	Description	Material	
1A, 1B	Upper & Lower Casings	Cast Iron	35	Inboard Bearing Housing Cover	Cast Iron	
2	Impeller	Bronze	37	Outboard Bearing Housing Cover	Cast Iron	
6	Shaft	Steel $\emptyset$	40A	Inboard Deflector	Rubber	
7	Casing Ring	Bronze $\emptyset$	40B	Outboard Deflector	Rubber	
8	Impeller Ring (Optional)	Bronze $\emptyset$	41	Inboard Bearing Housing Cap	Cast Iron	
14, 14A	Shaft Sleeve	Bronze $\emptyset$	43	Outboard Bearing Housing Cap	Cast Iron	
14B	Shaft Sleeve 'O' Ring	Buna-N Rubber	46	Coupling Key	Steel	
16	Inboard Ball Bearing	Steel Assembly	47	Inboard Bearing Cover Seal	Steel/Rubber Assembly	
17	Mechanical Seal Flange	Cast Iron	73A	Casing Gasket (Not Shown)	Vegetable Fiber	
17C	Seal Flange 'O' Ring	Buna-N Rubber	73B	Bearing Cover Gasket	Fiber	
17B	Gland Bolt	Steel	65	Mechanical Seal Seat	Ni Resist	
18	Outboard Ball Bearing	Steel Assembly	80	Mechanical Seal Rotary	Flexible	Buna Rubber
18A	Bearing Retaining Ring	Steel			Washer	Carbon
					Metal	18-8 Stainless Steel
31	Inboard Bearing Housing	Cast Iron			Spring	18-8 Stainless Steel
32	Impeller Key	Stainless Steel	Bellows	Buna Rubber		
33	Outboard Housing	Cast Iron	80A	Shaft Collar	18-8 Stainless Steel	
			123	Bearing End Cover	Steel	
			169	Bearing Housing Seal	Steel/Rubber Assembly	

$\emptyset$  Optional Material AISI 416 Stn. Stl.

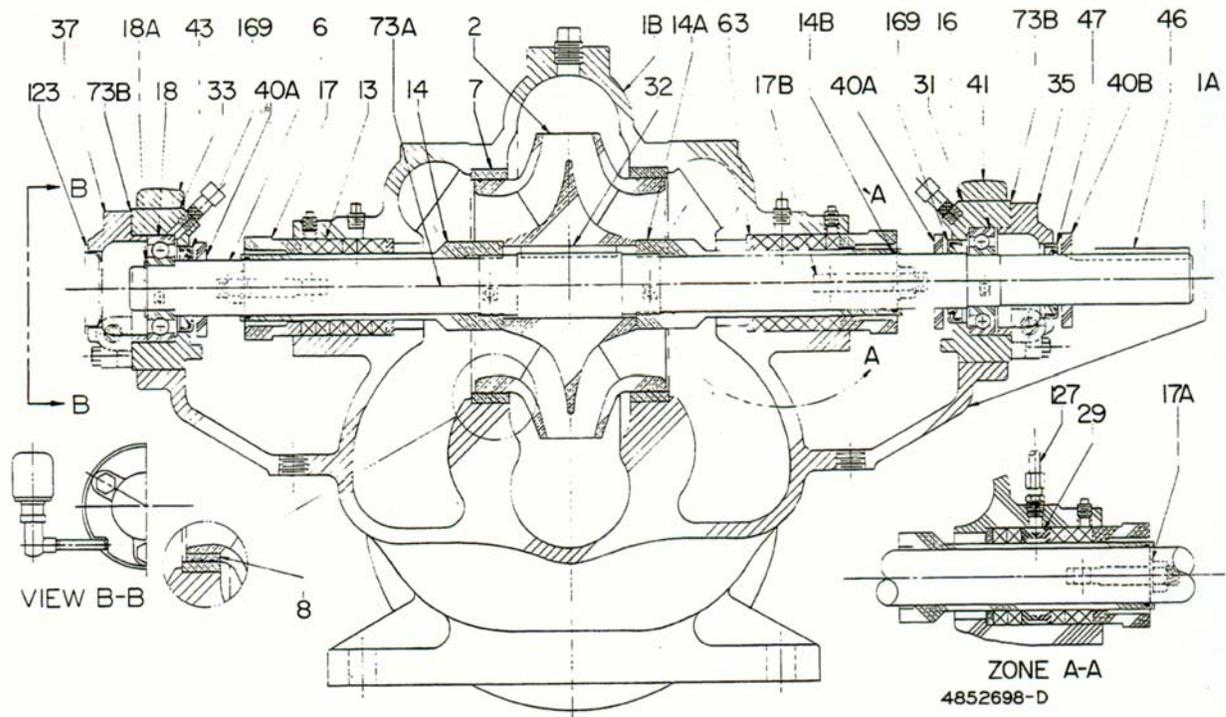
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Subject to change without notice



# HORIZONTAL SPLIT CASE PUMPS SINGLE STAGE SINGLE SUCTION Type AE

Packed Type  
Oil Lubricated Bearings  
Cross Sectional Drawing



## ALL IRON AE PUMP STANDARD MATERIALS OF CONSTRUCTION

Item No.	Description	Material	Item No.	Description	Material
1A,1B	Upper & Lower Casings	Cast Iron	32	Impeller Key	Stainless Steel
2	Impeller	Cast Iron	33	Outboard Bearing Housing	Cast Iron
6	Shaft	Steel ①	35	Inb. Brg. Housing Cover	Cast Iron
7	Casing Ring	Cast Iron ①	37	Out. Brg. Housing Cover	Cast Iron
8	Impeller Ring (Optional)	Steel ①	40A	Inboard Deflector	Rubber
13	Packing Ring	Graphited TFE	40B	Outboard Deflector	Rubber
14,14A	Shaft Sleeve	AISI 416 Stn. Stl.	41	Inb.Brg. Housing Cap	Cast Iron
14B	Shaft Sleeve *O' Ring	Buna-N Rubber	43	Out. Brg Housing Cap	Cast Iron
16	Inboard Ball Bearing	Steel Assembly	46	Coupling Key	Steel
17	Packing Gland	316 Stn. Stl.	47	Inb. Brg. Cover Seal	Steel/Rubber Assembly
17A	Gland Clip (when used)	Stainless Steel	63	Stuffing Box Bushing	Steel
17B	Gland Bolt	Steel	73A	Casing Gasket (Not Shown)	Vegetable Fiber
18	Outboard Ball Bearing	Steel Assembly	73B	Bearing Cover Gasket	Fiber
18A	Bearing Retaining Ring	Steel	123	Bearing End Cover	Steel
29	Lantern Ring (Optional)	TFE	127	Water Seal Piping (Optional)	Steel with Steel Fittings
31	Inboard Bearing Housing	Cast Iron	169	Bearing Housing Seal	Steel/Rubber Assembly

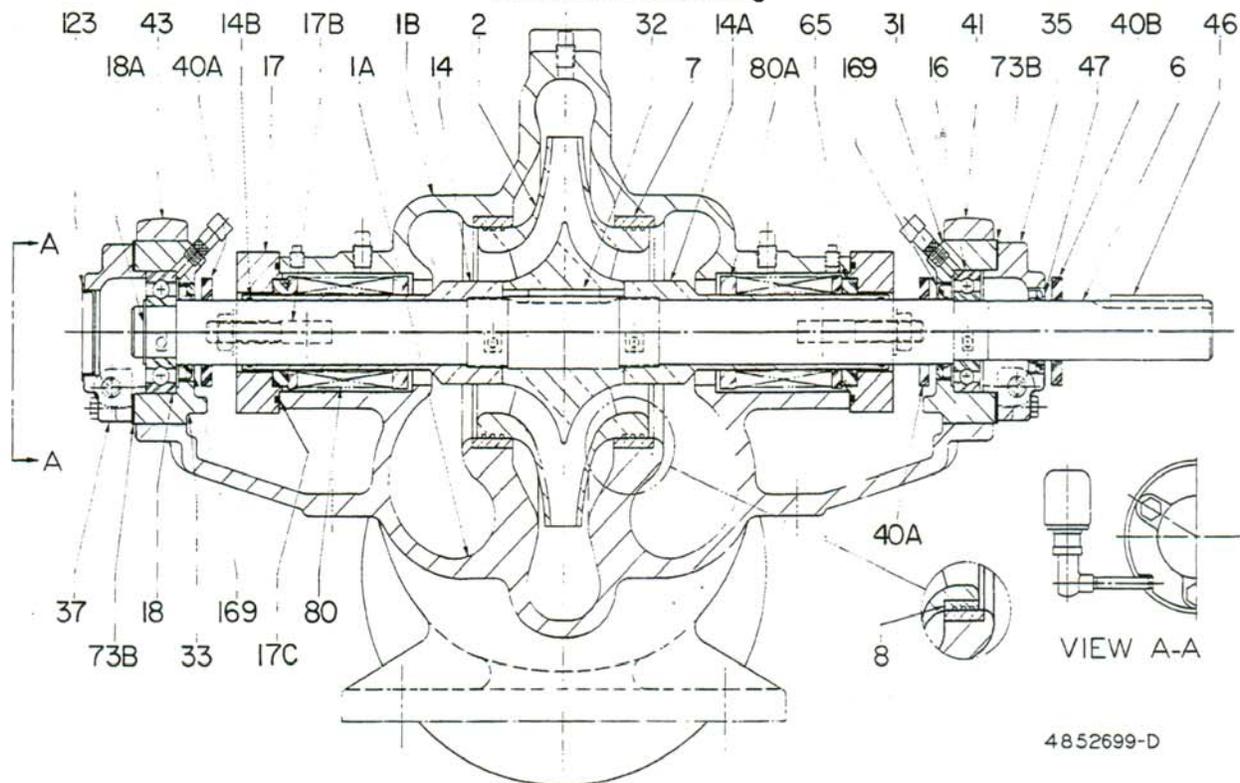
① Optional Material AISI 416 Stn. Stl.

**HORIZONTAL SPLIT CASE PUMPS  
SINGLE STAGE DOUBLE SUCTION  
Type AE**



Peerless Pump Company  
Indianapolis, IN 46207-7026

Mechanical Seal Type  
Oil Lubricated Bearings  
Cross Sectional Drawing



4852699-D

**ALL IRON AE PUMP  
STANDARD MATERIALS OF CONSTRUCTION**

Item No.	Description	Material	Item No.	Description	Material	
1A, 1B	Upper & Lower Casings	Cast Iron	35	Inboard Bearing Housing Cover	Cast Iron	
2	Impeller	Cast Iron	37	Outboard Bearing Housing Cover	Cast Iron	
6	Shaft	Steel $\varnothing$	40A	Inboard Deflector	Rubber	
7	Casing Ring	Cast Iron $\varnothing$	40B	Outboard Deflector	Rubber	
8	Impeller Ring (Optional)	Steel $\varnothing$	41	Inboard Bearing Housing Cap	Cast Iron	
14, 14A	Shaft Sleeve	AISI 416 Stn. Stl.	43	Outboard Bearing Housing Cap	Cast Iron	
14B	Shaft Sleeve 'O' Ring	Buna-N Rubber	46	Coupling Key	Steel	
16	Inboard Ball Bearing	Steel Assembly	47	Inboard Bearing Cover Seal	Steel/Rubber Assembly	
17	Mechanical Seal Flange	Cast Iron	73A	Casing Gasket (Not Shown)	Vegetable Fiber	
17C	Seal Flange 'O' Ring	Buna-N Rubber	73B	Bearing Cover Gasket	Fiber	
17B	Gland Bolt	Steel	65	Mechanical Seal Seat	Ni Resist	
18	Outboard Ball Bearing	Steel Assembly	80	Mechanical Seal Rotary	Flexible	Buna Rubber
18A	Bearing Retaining Ring	Steel			Washer	Carbon
31	Inboard Bearing Housing	Cast Iron			Metal	18-8 Stainless Steel
32	Impeller Key	Stainless Steel			Spring	18-8 Stainless Steel
33	Outboard Housing	Cast Iron			Bellows	Buna Rubber
			80A	Shaft Collar	18-8 Stainless Steel	
			123	Bearing End Cover	Steel	
			169	Bearing Housing Seal	Steel/Rubber Assembly	

$\varnothing$  Optional Material AISI 416 Stn. Stl.

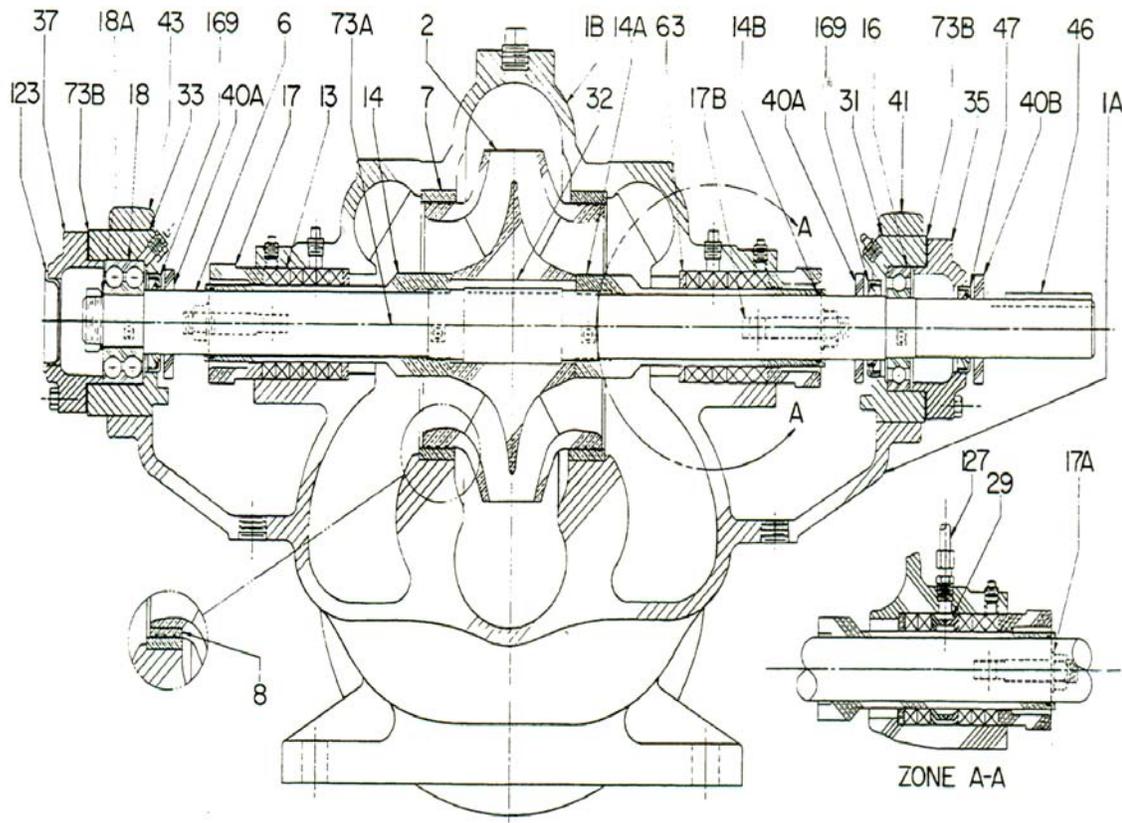
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# HORIZONTAL SPLIT CASE PUMPS SINGLE STAGE DOUBLE SUCTION Type AE

## Packed Type with Double Row Thrust Bearing Cross Sectional Drawing



**4852867**

### BRONZE FITTED AE PUMP STANDARD MATERIALS OF CONSTRUCTION

Item No.	Description	Material	Item No.	Description	Material
1A,1B	Upper & Lower Casings	Cast Iron	32	Impeller Key	Stainless Steel
2	Impeller	Bronze	33	Outboard Bearing Housing	Cast Iron
6	Shaft	Steel ①	35	Inb. Brg. Housing Cover	Cast Iron
7	Casing Ring	Bronze ①	37	Out. Brg. Housing Cover	Cast Iron
8	Impeller Ring (Optional)	Bronze	40A	Inboard Deflector	Rubber
13	Packing Ring	Graphited TFE	40B	Outboard Deflector	Rubber
14,14A	Shaft Sleeve	Bronze ①	41	Inb.Brg. Housing Cap	Cast Iron
14B	Shaft Sleeve "O" Ring	Buna-N Rubber	43	Out. Brg Housing Cap	Cast Iron
16	Inboard Ball Bearing	Steel Assembly	46	Coupling Key	Steel
17	Packing Gland	Bronze ②	47	Inb. Brg. Cover Seal	Steel/Rubber Assembly
17A	Gland Clip (when used)	Stainless Steel	63	Stuffing Box Bushing	Bronze
17B	Gland Bolt	Steel	73A	Casing Gasket (Not Shown)	Vegetable Fiber
18	Outboard Ball Bearing	Steel Assembly	73B	Bearing Cover Gasket	Fiber
18A	Bearing Lock Washer	Steel	123	Bearing End Cover	Steel
22	Bearing Lock Nut	Steel	127	Water Seal Piping (Optional)	Copper with Brass Fittings
29	Lantern Ring (Optional)	TFE	169	Bearing Housing Seal	Steel/Rubber Assembly
31	Inboard Bearing Housing	Cast Iron			

① Optional Material AISI 416 Stn. Stl.    ② Optional Material 316 Stn. Stl.

