



# AURORA® 340A/360A SERIES SINGLE STAGE END SUCTION PUMPS

## AURORA® 340A/360A SERIES Single Stage End Suction Pumps

Capacities to 4500 G.P.M. (1022 m³/hr) Heads to 370 Feet (112 m) Temperatures to 300°F (149°C)

#### Setting New Standards of Efficiency

Liquid handling requirements are much more involved than they were five years ago. The variety of liquids being handled has increased along with temperatures and pressures. Today's installations demand quiet, smooth-running pumps with long life. Aurora Pump's 90 years of experience with design, sales and manufacturing of centrifugal pumps has led to the 340A/360A Series. These modern pumps with a clean, straightforward design were developed with maximum interchangeability in mind. Aurora's highly reliable 340A/360A pumps offer an economical solution to your liquid handling problems.



End suction products such as the flexible coupled horizontal pump seen above are used in offices and high rise buildings for internal environment control. End suction pumps come in a variety of configurations including close coupled, flexible coupled, horizontal or vertical mounted units.

## Standard & Optional Features

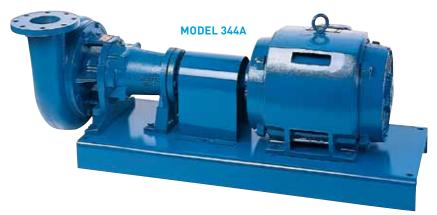
#### Standard – 340A/360A Series

- Discharge position No. 1
- Regreaseable bearings (Models 344A, 364A)
- Standard JM motor (Models 341A, 344A)
- Standard JP motor (Models 361A, 364A)
- Coupling guard (Models 344A, 364A)

#### Standard – 360A Series Only

- Interchangeable stuffing box
- Graphite impregnated acrylic packing





#### Optional – 340A/360A Series

- Standard 340A/360A Series pumps are designed to meet the requirements of most applications. However, to meet special services, a number of optional features have been made available.
   For services not handled by the features listed, refer to the factory.
- All iron construction
- 316 stainless steel sleeve
- Stainless steel shaft
- Impeller wearing rings
- Oil lubricated ball bearings (Models 344A, 364A)
- Sealed permanently lubricated ball bearings (power frames Nos. 1, 2 and 3)
- Alternative discharge positions Nos. 2, 3 and 4 (see pages 13 and 14)
- Fabricated stainless steel drip-rim bases (Models 344A, 364A)
- Formed steel bases (Models 344A, 364A)
- High temperature mechanical seal
- Variety of alternative constructions

#### Optional – 360A Series Only

- All bronze construction
- Hardened shaft sleeve (for packing)
- Various mechanical seal types
- Water jacketed stuffing box
- Semiopen impellers (Model 364A)
- Double row thrust bearings (Model 364A)
- Packing with lantern ring

## Pump Features

#### A. Computer Machined

major components with 360 degree registered fits to assure concentricity of all pump parts.

## **B.** Precision Cast, Dynamically Balanced, Enclosed Impeller

is keyed to the shaft extension and secured by a capscrew and washer. Gaskets are used to prevent leakage to shaft end.

#### c. Oil Seals

and nonsparking neoprene rotating slingers protect both bearings during pump operation and pump washdown.

#### **D.** Mechanical Seal

has hot water carbon against ceramic face for optimum hot water performance. Long life is also assured with 303 stainless steel metal parts and Buna-N elastomer.

#### **E.** Power Frame

provides heavy duty maximum interchangeability for flexible coupled applications.

#### F. Hydrostatic Test

of pumps at factory guarantees casting and seal integrity.

#### **G.** Bronze Shaft Sleeve

prevents shaft wear, is slip fit over the shaft, keylocked and extends the full length of seal box to eliminate corrosion of the shaft by the pumped liquid. This cancels the requirement for high cost, special stainless steel or alloy shafts.

#### H. Back Pullout

design simplifies disassembly. The suction and discharge piping is not disturbed at disassembly.

#### Lubrication Fittings

are conveniently located for quick accessibility and provide positive bearing lubrication. Oil lubrication optionally available.

#### J. Carbon Steel Shaft

designed for minimum deflection, not to exceed .002" at the sealing faces at maximum load.

#### **k.** Bearings

selected for 3 year minimum life at maximum load. Average bearing life 5 x minimum. Grease lube standard.

#### L. Close Coupled Motors

in smaller frame sizes are supported off the motor bracket for maximum rigidity.

#### M. Case Wearing Ring

prevents wear on casing and is easily and inexpensively replaced. Impeller rings are available. Front case wearing rings are standard on all models and size pumps. Rear case wearing rings are standard only on 2" discharge and larger model 360A Series pumps. Front impeller wearing rings are optional on all models and size pumps. Rear impeller wearing rings are optional only on 2" discharge and larger model 340A/360A Series pumps.

#### N. Large Capacity Oil Reservoir

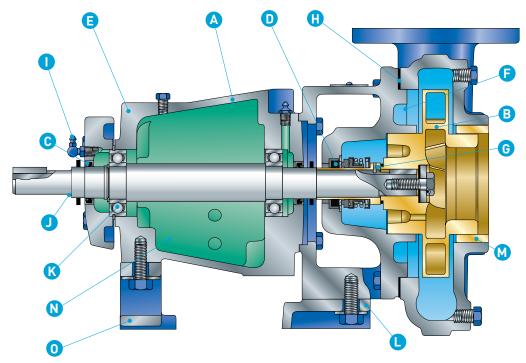
is provided on power frame Model 344A and 364A pumps for optional oil lube.

#### o. Rear Support Foot

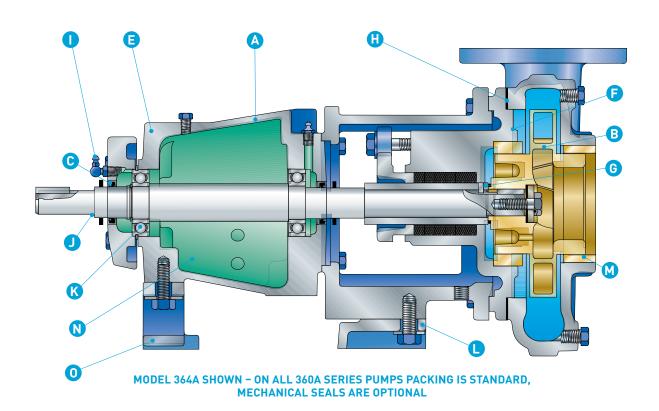
provides support and simplifies coupling alignment. All supports are slotted to simplify back pullout of power frame.

## Pump Features

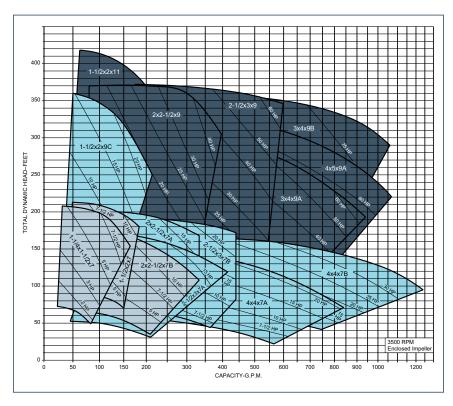
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MODEL 344A SHOWN - ON ALL 340A SERIES PUMPS MECHANICAL SEALS ARE STANDARD



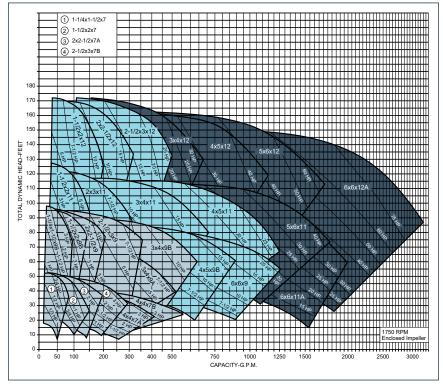
## 340A SERIES Range Charts – 60 Hertz



#### 3500 RPM

Individual performance curves should be checked for final selection. For selections not shown on this chart, please refer to the factory.



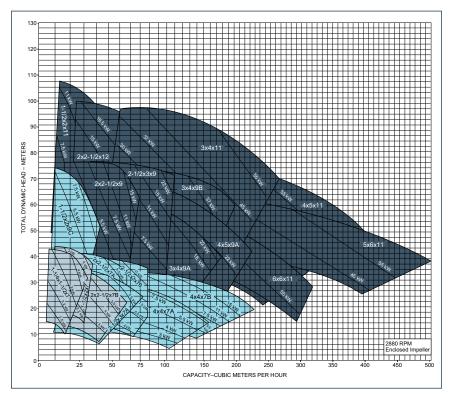


#### 1750 RPM

Individual performance curves should be checked for final selection. For selections not shown on this chart, please refer to the factory.

	Power Frame No.	Power Frame No. 1		
	Power Frame No.	Power Frame No. 2		
	Power Frame No.	Power Frame No. 3		
	Class Coupled	Open Drip Proof	50	
Maximum Horsepower	Close Coupled	TE & EX PR	50	
Horsehower	Frame Mounted	Frame Mounted		

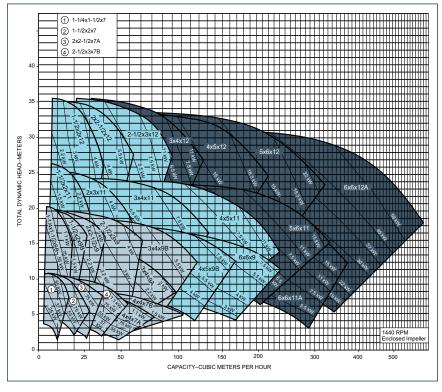
## 340A SERIES Range Charts – 50 Hertz



#### 2880 RPM

Individual performance curves should be checked for final selection. For selections not shown on this chart, please refer to the factory.

	Power Frame No.		
	Power Frame No. 2		
	Power Frame No.		
	Class Coupled	Open Drip Proof	60
Maximum Horsepower	Close Coupled	TE & EX PR	50
погосромст	Frame Mounted		100

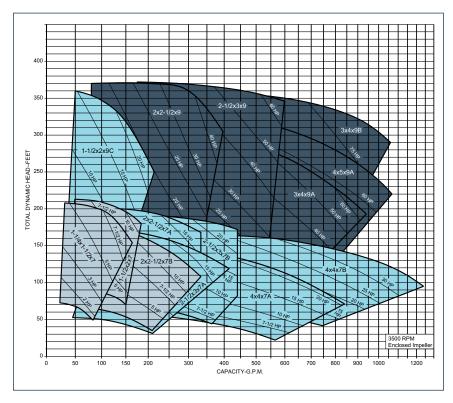


#### 1440 RPM

Individual performance curves should be checked for final selection. For selections not shown on this chart, please refer to the factory.

	Power Frame No. 1		
	Power Frame No. 2		
	Power Frame No. 3		
	Close Coupled	Open Drip Proof	50
Maximum Horsepower	close coaplea	TE & EX PR	50
Погосромог	Frame Mounted		100

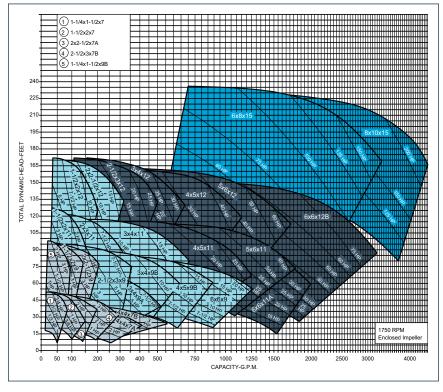
## 360A SERIES Range Charts – 60 Hertz



#### 3500 RPM

Individual performance curves should be checked for final selection. For selections not shown on this chart, please refer to the factory.

	Power Frame No. 1		
	Power Frame No. 2		
	Power Frame No.		
	Class Coupled	Open Drip Proof	60
Maximum Horsepower	Close Coupled	TE & EX PR	50
Погооромог	Frame Mounted		100

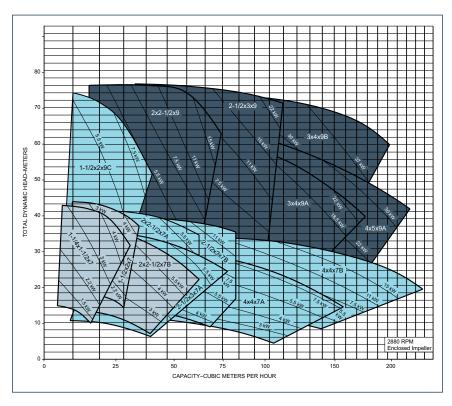


#### 1750 RPM

Individual performance curves should be checked for final selection. For selections not shown on this chart, please refer to the factory.

	Power Frame No.		
	Power Frame No.		
	Power Frame No.		
	Power Frame No. 21		
	Class Coupled	Open Drip Proof	50
Maximum Horsepower	Close Coupled	TE & EX PR	50
Horsepower	Frame Mounted		250

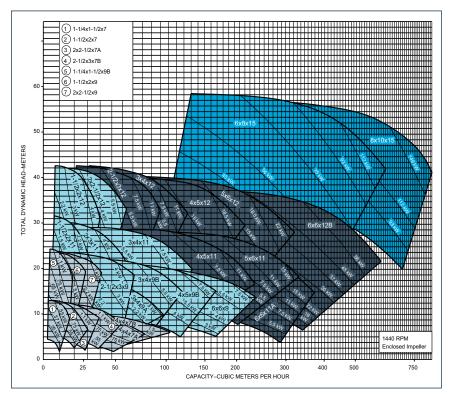
## 360A SERIES Range Charts – 50 Hertz



#### 2880 RPM

Individual performance curves should be checked for final selection. For selections not shown on this chart, please refer to the factory.

	Power Frame No. 1		
	Power Frame No. 2		
	Power Frame No. 3		
	Class Caupled	Open Drip Proof	60
Maximum Horsepower	Close Coupled	TE & EX PR	50
Horsepower	Frame Mounted		100



#### 1440 RPM

Individual performance curves should be checked for final selection. For selections not shown on this chart, please refer to the factory.

	Power Frame No.			
	Power Frame No.			
	Power Frame No.			
	Power Frame No.	Power Frame No. 21		
	Class Coupled	Open Drip Proof	50	
Maximum Horsepower	Close Coupled	TE & EX PR	50	
Погосромет	Frame Mounted	Frame Mounted		

### Materials of Construction

Pump Part	Standard Fitted	Bronze Fitted	All Iron	*All Bronze
Casing	Cast Iron – ASTM A48	Cast Iron – ASTM A48	Cast Iron – ASTM A48	Bronze – ASTM B62
Case Wearing Ring	Bronze – ASTM B62	Bronze – ASTM B62	Cast Iron – ASTM A48	Bronze – ASTM B62
Impeller	Cast Iron – ASTM A48	Bronze – ASTM B584	Cast Iron – ASTM A48	Bronze – ASTM B584
Motor Bracket	Cast Iron – ASTM A48	Cast Iron – ASTM A48	Cast Iron – ASTM A48	Cast Iron – ASTM A48
Shaft	Steel – AISI C1045	Steel – AISI C1045	Steel – AISI C1045	Steel – AISI C1045
Sleeve	Bronze – ASTM B62	Bronze – ASTM B62	Stainless Steel – AISI 316	Bronze – ASTM B62
Power Frame (344A & 364A)	Cast Iron – ASTM A48	Cast Iron – ASTM A48	Cast Iron – ASTM A48	Cast Iron – ASTM A48
Mechanical Seal 340A Series	303 stainless steel metal parts, Buna-N elastomer		stomer	303 stainless steel
360A Series (Optional)	parts, ceramic seat and carbon washer			metal parts, Viton® elastomer, ceramic seat, and carbon washer
Stuffing Box	Cast Iron – ASTM A48	Cast Iron – ASTM A48	Cast Iron – ASTM A48	Bronze – ASTM B62
Packing (Standard) – 360A Series Only	Interwoven, graphited fiber diagonally cut			

<sup>\*</sup> All Bronze optionally available in 361A and 364A pumps only.

## Design Details

	D	Power Fra		Frame	
Area	Description	1	2	3	21
	Rotation-from driver end	CW	CW	CW	CW
	Diameter at impeller	7/8	1-1/4	1-1/4	1-5/8-12
	Diameter at shaft sleeve	1	1-3/8	1-3/8	2-1/4
Pump Shaft	Diameter between bearings	1-3/8	1-15/16	2-3/8	3-1/4
	Diameter at coupling end	7/8	1-1/8	1-1/8	2-3/8
	Coupling key-square	3/16	1/4	1/4	5/8
	Max. deflection at seal face	.002	.002	.002	.002
	Bearing (inboard radial)	206K	308K	310K	313
	Bearing (outboard thrust)	206KG	308KG	310KG	5313
Ball Bearings	Bearing centers	5-11/16	7-11/16	7-11/16	9-5/8
Dak Doarings	Bearing type	Ball	Ball	Ball	Ball
	Min. B <sub>10</sub> bearing life under maximum load	3 years	3 years	3 years	3 years
	Packing size 360A Series	3/8	3/8	3/8	7/16
Sleeve	Outside diameter of sleeve 360A Series	1-1/2	1-7/8	1-7/8	2-1/2
	Outside diameter of sleeve 340A Series	1-1/8	1-1/2	1-1/2	N/A

#### Limitations 340A/360A Series – hp

Speed-RPM	3500	3500	1750	1150
Close	0.D.P.	60	50	30
Coupled	T.E. & EX. PR.	50	50	30
	1	40	20	15
Power Frame	2 & 3	125	75	40
Hame	21	N/A	250	150

#### 340A Series

	Sealing Method	Temperature °F		
		Close Coupled	Frame Mounted	
	Standard Mechanical Seal	225	225	

#### 360A Series

Cooling Mothod	Temperature °F			
Sealing Method	Close Coupled	Frame Mounted		
Standard Mechanical Seal	225	225		
Mechanical Seal with Water Jacket*	300	300		
Standard Packing	225	225		
Packing with Water Jacket*	275	275		
Doolsing Custion lift required lanters ring				

Packing . . . Suction lift requires lantern ring \*7, 9 and 12 bore pumps only

340A/360A Series Case Working Pressure (all or any part can be suction pressure) – 175 psi

Hydrostatic Test Pressure – 265 psi

## Power Frame Construction

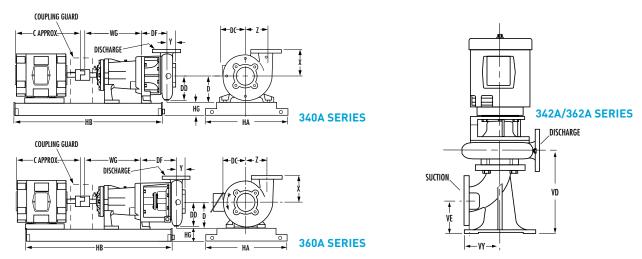
	Ма	odel 344A					Mode	l 364A		
D 0:	3500	2880	1750/1440	1150/960	3500 RPM	3000 RPM	1750/14	40 RPM	1150/9	60RPM
Pump Size	RPM	RPM	RPM	RPM	ENC.	ENC.	ENC.	SEMI.	ENC.	SEMI.
1-1/4 x 1-1/2 x 7	1	1	1	*	1	1	1	1	*	*
1-1/4x1-1/2x9B	*	*	1	*	*	*	1	*	*	*
1-1/2 x 2 x 7	1	1	1	*	1	1	1	1	*	*
1-1/2 x 2 x 9A	*	*	1	*	*	*	1	2	*	1
1-1/2 x 2 x 9B	*	*	1	*	*	*	1	*	*	*
1-1/2 x 2 x 9C	2	2	1	*	2	2	1	*	*	*
1-1/2 x 2 x 11	3	3	2	2	*	*	2	*	2	*
1-1/2 x 2 x 12	*	*	2	2	*	*	2	3	2	2
2 x 2-1/2 x 7A	2	2	1	*	2	2	1	1	*	*
2 x 2-1/2 x 7B	1	1	1	*	1	1	1	*	*	*
2 x 2-1/2 x 9	3	3	1	*	3	3	1	*	*	*
2 x 2-1/2 x 12	*	*	2	2	*	*	2	*	2	*
2 x 3 x 11	*	3	2	2	*	*	2	*	2	*
2-1/2 x 3 x 7A	1	1	1	*	2	2	1	1	*	*
2-1/2 x 3 x 7B	2	2	1	*	2	2	1	*	*	*
2-1/2 x 3 x 9	3	3	1	*	3	3	2	2	*	2
2-1/2 x 3 x 12	*	*	2	2	*	*	3	3	2	2
3 x 4 x 9A	3	3	1	*	3	3	2	*	*	*
3 x 4 x 9B	3	3	1	*	3	3	2	*	*	*
3 x 4 x 11	*	3	2	2	*	*	2	*	2	*
3 x 4 x 12	*	*	3	2	*	*	3	3	2	2
4 x 4 x 7A	2	2	1	*	2	2	1	*	*	*
4 x 4 x 7B	2	2	1	*	2	2	1	1	*	*
4 x 5 x 9A	3	3	2	*	3	3	2	*	*	*
4 x 5 x 9B	*	*	2	*	*	*	2	2	*	2
4 x 5 x 11	*	3	2	2	*	*	3	*	2	*
4 x 5 x 12	*	*	3	2	*	*	3	3	2	2
5 x 6 x11	*	3	3	2	*	*	3	*	2	*
5 x 6 x 12	*	*	3	2	*	*	3	3	3	2
6 x 6 x 9	*	*	2	2	*	*	2	2	2	2
6 x 6 x 11	*	3	3	2	*	*	3	*	2	*
6 x 6 x 11A	*	*	3	2	*	*	3	*	2	*
6 x 6 x 12B	*	*	3	3	*	*	3	*	3	*
6 x 8 x 15	*	*	*	*	*	*	21	*	21	*
8 x 10 x 15	*	*	*	*	*	*	21	*	21	*

<sup>\* =</sup> Not Available

ENC. = Enclosed Impeller

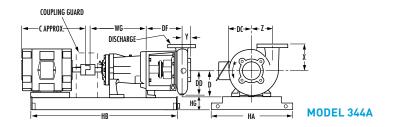
SEMI. = Semiopen Impeller (Optional)

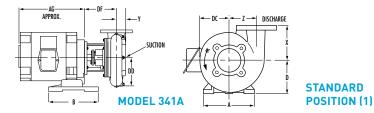
## Engineering & Dimension Details

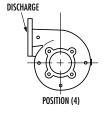


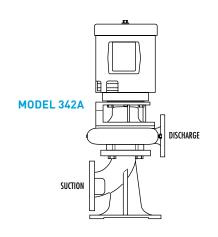
F	oumps with T	hreaded Con	nections				340A Series		360A	Series		342A/362A	
							DF		[	)F	V	ertical Pump	S
						Frame 1	Frame 2 or 3	Frame 2 or 3	Frame 1	Frame 2, 3 or 21			
Pump Size**	χ	γ	7	DC	DD	143JM- 215JM	254JM- 256JM	284JM- 326JM	143JP- 184JP	213JP- 325JP	VD	VE	VY
1-1/4 x 1-1/2 x 7	5-1/4	2-7/16	4-3/16	4-15/16	5-3/16	4-3/4	N/A	N/A	7-13/16	N/A	9-3/8	3-3/4	4
1-1/4 x 1-1/2 x 9B	6-3/8	2-9/16	5-3/8	6-3/16	6-3/8	4-11/16	N/A	N/A	7-3/4	N/A	9-3/8	3-3/4	4
1-1/2 x 2 x 7	5-3/8	2-1/2	4-5/16	5-1/8	5-3/8	4-13/16	N/A	N/A	7-7/8	N/A	10-5/16	4-1/8	4-1/2
1-1/2 x 2 x 9	6-3/4	2-5/8	5-1/2	6-5/16	6-9/16	4-3/4	5-3/4	5-3/4	7-13/16	8-5/8	10-5/16	4-1/8	4-1/2
1-1/2 x 2 x 11	9	2-13/16	6-1/8	7-1/16	7-1/4	N/A	5-3/4	5-3/4	N/A	8-5/8	10-1/2	4-1/8	4-1/2
1-1/2 x 2 x 12	7-3/4	2-3/4	7-1/16	8	8-1/4	N/A	5-7/8	N/A	N/A	8-3/4	10-7/16	4-1/8	4-1/2
Pumps with Ansi Standard 12	25 Lb. Flange	d Connection	S										
2 x 2-1/2 x 7	5-5/8	1-7/8	4-9/16	5-3/8	5-13/16	4-15/16	5-15/16	N/A	8	8-13/16	11-7/16	4-1/2	5
2 x 2-1/2 x 9	7	1-7/8	5-11/16	6-1/2	6-7/8	4-7/8	5-7/8	5-7/8	7-15/16	8-3/4	11-7/16	4-1/2	5
2 x 2-1/2 x 12	8	1-7/8	7-3/16	8-3/16	8-1/2	5	6	N/A	N/A	8-7/8	11-7/16	4-1/2	5
2 x 3 x 11	8	2-3/8	6-1/2	7	7-3/8	5-1/8	6-1/8	N/A	N/A	8-5/8	12-7/8	5	5-1/2
2-1/2 x 3 x 7	5-7/8	2	4-13/16	5-13/16	6-1/4	5-1/16	6-1/16	N/A	8-1/8	8-15/16	12-9/16	5	5-1/2
2-1/2 x 3 x 9	7-1/4	2	5-15/16	6-3/4	7-1/4	5	6	6	8-1/16	8-7/8	12-9/16	5	5-1/2
2-1/2 x 3 x 12	8-1/4	2	7-3/8	8-3/8	8-3/4	5-1/8	6-1/8	N/A	N/A	9	12-9/16	5	5-1/2
3 x 4 x 9	7-1/2	2-1/8	6-1/8	6-7/8	7-7/16	5-1/8	6-1/8	6-1/8	8-3/16	9	14-11/16	6	6-1/2
3 x 4 x 11	9	2-3/4	7	7-9/16	8-3/16	5-7/16	6-7/16	N/A	N/A	9-1/8	15-1/4	6	6-1/2
3 x 4 x 12	8-1/2	2-1/8	7-9/16	8-7/16	8-15/16	5-1/2	6-1/2	6-1/2	N/A	9-1/8	14-11/16	6	6-1/2
4 x 4 x 7	6-1/2	2-1/2	5/1-2	6-7/16	7-5/16	5-7/16	6-7/16	6-7/16	8-1/2	9-5/16	14-15/16	6	6-1/2
4 x 5 x 9A	7-1/4	3-1/8	5-3/4	6-11/16	7-3/8	5-1/4	6-1/4	6-1/4	N/A	9-1/8	17-3/16	6-1/2	7-1/2
4 x 5 x 9B	7-3/4	2-5/8	6-5/8	8-1/16	8-11/16	5-3/8	6-3/8	N/A	N/A	9-1/4	16-11/16	6-1/2	7-1/2
4 x 5 x 11	9	3	7-1/4	7-15/16	8-11/16	5-5/8	6-5/8	6-5/8	N/A	9-1/4	17	6-1/2	7-1/2
4 x 5 x 12	8-3/4	2-5/8	7-15/16	8-7/8	9-9/16	N/A	6-3/4	6-3/4	N/A	9-3/8	16-11/16	6-1/2	7-1/2
5 x 6 x 11	9	3-1/8	8-1/16	8-11/16	10-1/8	6	7	7	N/A	9-5/8	18-1/8	7	8
5 x 6 x 12	9	2-7/8	8-5/16	9-1/4	10-1/8	N/A	7	7	N/A	9-5/8	17-7//8	7	8
6 x 6 x 9	8-1/4	2-3/4	7	8	9	5-1/2	6-1/2	6-1/2	N/A	9-3/8	17-13/16	7	8
6 x 6 x 11	9-1/4	3-1/8	8-11/16	9-11/16	10-13/16	N/A	7-1/4	7-1/4	N/A	9-7/8	18-1/4	7	8
6 x 6 x 11A	9-1/4	3-1/8	8-11/16	9-11/16	10-13/16	N/A	7-1/4	7-1/4	N/A	9-7/8	18-1/4	7	8
6 x 6 x 12	9-1/4	3-1/8	8-11/16	9-11/16	10-13/16	N/A	7-1/4	7-1/4	N/A	9-7/8	18-1/4	7	8
6 x 8 x 15	18	6	_	10-7/16	14-1/2	N/A	N/A	N/A	N/A	10-3/16*	N/A	N/A	N/A
8 x 10 x 15	19	6	_	11	14-1/2	N/A	N/A	N/A	N/A	10-5/16*	N/A	N/A	N/A

## 340A SERIES Engineering & Dimension Details









Pump Model	Base Number	Weight Lbs.	HA <sub>1</sub>	НВ	HG
344A	4	49	17-1/4	30-1/2	3
	5	59	17-1/4	36-1/2	3
	7	82	20-1/2	36-1/2	3
	8	96	20-1/2	42-1/2	3
	11	164	26-3/4	46-1/2	4
	15	291	30-3/4	54-1/2	4-1/2

	Power Frame		- 1	2	3
We	eight in Poun	nds	36	82	87
		7	5-1/4	6-1/4	_
n	Case Bore	9	6-1/4	7	7
Л		11	_	7	7
		12	_	7	7
	WG	10-5/16	13-13/16	13-13/16	

16	DISCHARGE DISCHARGE	0	— SUCTION
	POSITION (3) PI	OSITION (A)	

POSITION (1)

SUCTION

DISCHARGE

POSITION (2)

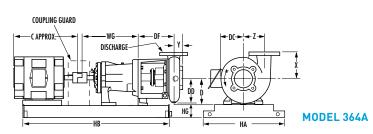
		1	torsepowe		Mtr.		Pump Model 341A						
Pump	Motor	3500	1750	1150	Wgt.								
Model	Frame	RPM	RPM	RPM	Lbs.	D	Α	В	AG	С	В	ase Numb	er
344A	56	_	1/2-3/4	_	50	5-1/4	_	_	_	12	4	N/A	N/A
	143T	1-1/2	1	3/4	30	5-1/4	9-3/4	8-5/8	10	12	4	N/A	N/A
Model	145T	2-3	1-1/2-2	1	35	5-1/4	9-3/4	8-5/8	11	13	4	7	N/A
	182T	5	3	1-1/2	45	5-1/4	9-3/4	8-5/8	11	13	4	7	N/A
	184T	7-1/2	5	2	50	5-1/4	9-3/4	8-5/8	12	14	4	7	N/A
	213T	10	7-1/2	3	120	5-1/4	10-1/2	7-1/2	14	16	4	7	N/A
	215T	15	10	5	144	5-1/4	10-1/2	9	15	18	5	7	N/A
341A	254T	20	15	7-1/2	217	6-1/4	12-1/2	10-3/4	17	21	7	8	8
342A	256T	25	20	10	246	6-1/4	12-1/2	12-1/2	19	23	N/A	8	8
&	284T	_	25	15	320	7	13-3/4	11-1/2	19	24	N/A	8	8
342A &	284TS	30	_	_	320	7	13-3/4	11-1/2	19	22	N/A	8	8
	286T	_	30	20	351	7	13-3/4	13	21	25	N/A	8	8
	286TS	40	_	_	351	7	13-3/4	13	21	24	N/A	8	8
	324T	_	40	25	442	8	16	14	22	26	N/A	11	11
	324TS	50	_	_	442	8	16	14	22	25	N/A	11	11
	326T	_	50	30	485	8	16	15-1/2	23	28	N/A	11	11
	326TS	60	_	_	485	8	16	15-1/2	23	26	N/A	11	11
	364T	_	_	40	540	9	18	15-1/2	23	29	N/A	11	11
344A	364TS	75	60	_	540	9	18	15-1/2	23	27	N/A	11	11
J44A	365TS	100	75	_	590	9	18	15-1/2	24	28	N/A	11	11
	404TS	125	100	_	690	10	20	16-1/4	26	30	N/A	15	15

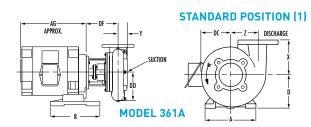
#### Notes:

DISCHARGE

- 1. Dimensions and weights are approximate.
- 2. All dimensions are in inches and may vary  $\pm 1/4$ " (6).
- 3. Frame sizes, "C" and "AG", dimension and motor weight are for open drip-proof motors only.
- Conduit box is shown in approximate position.
   Dimensions are not specified as they vary with each motor manufacturer.
- 5. Not for construction purposes unless certified.
- 6. Discharge positions No. 2 and 3 are not available on Models 342A and 344A. Position No. 1 is furnished as standard unless otherwise specified.
- 7. When two "D" dimensions are indicated, always use the larner figure
- 8. Power frame selection for 344A pumps can be made from the range charts.
- 9. Models 341A and 342A have "JM" motor frames. Model 344A has "T" frame motor.

## 360A SERIES Engineering & Dimension Details



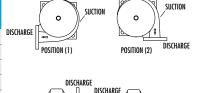


Pump Model	Base Number	Weight Lbs.	HA <sub>1</sub>		HG
	4	49	17-1/4	30-1/2	3
	5	59	17-1/4	36-1/2	3
	7	82	20-1/2	36-1/2	3
	8	96	20-1/2	42-1/2	3
364A	9	164	26-3/4	46-1/2	4
	11	291	30-3/4	54-1/2	4-1/2
	15	291	30-3/4	54-1/2	4-1/2
	16	345	30-3/4	64-1/2	4-1/2
	17	399	30-3/4	74-1/2	4-1/2

Pi	ower Fram	ie	1		2		3		2	1
Weight in Pounds				36		82		7	16	53
		7	5-1/4		6-1	6-1/4		-	-	-
	Cooo	9	6-1	1/4	7	7	7	7		
D	Case Bore	11	-	-	7		7			
	DUIE	12	_	-	7	1	7	7		
		15	-	-	_		-		14-	
WG			10-5/16		13-13/16		13-13/16		13-1	3/16

DISCHAR	GE	
1		
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	000	
	POSITI	ON (4)

				00 0, .	,									
			lorsepowe	_	Mtr.		Р	ump Mode 361A			\ \	<b>V</b>	<b>\</b>	<b>\</b>
Pump	Motor	3500 RPM	1750 RPM	1150 RPM	Wgt.	D	٨	B	AG	С		Base N	lumbar	
Model	Frame	KPM		KPIM	Lbs.		A	D	AU		/			NI/A
364A	56 143T	1 1/2	1/2-3/4	3/4	50 30	5-1/4	9-3/4	0. [/0	10	12 12	4	N/A	N/A	N/A
		1-1/2	1 1/0 0	1		5-1/4		8-5/8	-		4	N/A 7	N/A	N/A
	145T	2-3 5	1-1/2-2	1-1/2	35 45	5-1/4 5-1/4	9-3/4 9-3/4	8-5/8	11	13 13	4	7	N/A	N/A
	182T	-	5					8-5/8			4		N/A	N/A
	184T	7-1/2	Ŭ	2	50	5-1/4	9-3/4	8-5/8	12	14	4	7	N/A	N/A
	213T	10	7-1/2	3	120	5-1/4	10-1/2	7-1/2	14	16	4	7	7	N/A
	215T	15	10	5	144	5-1/4	10-1/2	9	15	18	5	7	7	N/A
361A,	254T	20	15	7-1/2	217	6-1/4	12-1/2	10-3/4	17	21	N/A	8	8	N/A
362A	256T	25	20	10	246	6-1/4	12-1/2	12-1/2	19	23	N/A	8	8	N/A
8	284T	_	25	15	320	7	13-3/4	11-1/2	19	24	N/A	8	8	N/A
364A	284TS	30	_	_	320	7	13-3/4	11-1/2	19	22	N/A	8	8	N/A
	286T	-	30	20	351	7	13-3/4	13	21	25	N/A	9	9	16
	286TS	40	_	_	351	7	13-3/4	13	21	24	N/A	8	8	N/A
	324T		40	25	442	8	16	14	22	26	N/A	11	11	16
	324TS	50			442	8	16	14	22	25	N/A	11	11	N/A
	326T		50	30	485	8	16	15-1/2	23	28	N/A	11	11	16
	326TS	60	_	_	485	8	16	15-1/2	23	26	N/A	11	11	N/A
	364T	_	_	40	540	9	18	15-1/2	23	29	N/A	12	12	16
	364TS	75	60	_	540	9	18	15-1/2	23	27	N/A	11	11	16
	365T	_	_	50	590	9	18	15-1/2	24	28	N/A	N/A	N/A	16
	365TS	100	75	_	590	9	18	15-1/2	24	28	N/A	11	11	16
364A	404T	_	100	60	690	10	20	16-1/4	26	33	N/A	N/A	N/A	17
J04A	404TS	125	100	_	690	10	20	16-1/4	26	30	N/A	15	15	17
	405T	_	_	75	780	10	20	17-3/4	27	34	N/A	N/A	N/A	17
	405TS	_	125	_	780	10	20	17-3/4	27	31	N/A	N/A	N/A	17
	444TS	_	150	_	950	11	22	18-1/2	30	34	N/A	N/A	N/A	17
	445TS	_	200	_	1000	11	22	20-1/2	32	36	N/A	N/A	N/A	17



SIICTION



POSITION (3)

# SUCTION

#### Notes:

- 1. Dimensions and weights are approximate.
- 2. All dimensions are in inches and may vary  $\pm 1/4$ " [6].
- 3. Frame sizes, "C" and "AG", dimension and motor weight are for open drip-proof motors only.
- Conduit box is shown in approximate position.
   Dimensions are not specified as they vary with each motor manufacturer.
- 5. Not for construction purposes unless certified.
- Discharge positions No. 2 and 3 are not available on Models 361A and 364A.
   Position No. 1 is furnished as standard unless otherwise specified.
- 7. When two "D" dimensions are indicated, always use the larger figure.
- 8. Power frame selection for 364A pumps can be made from the range charts.
- Models 361A and 362A have "JP" motor frames.
   Model 364A has "T" frame motor.

## **Engineering Specifications**

#### Flexible-Close Coupled Pumps

The contractor shall furnish (and install as shown on the plans) Aurora® Model (341A horizontal close coupled) (342A vertical close coupled) (344A horizontal flexible coupled) back pullout centrifugal pumps size \_\_\_\_\_x \_\_\_\_ of (standard fitted) (bronze fitted) (all iron) construction.

The contractor shall furnish (and install as shown on the plans) Aurora Model (361A horizontal close coupled) (362A vertical close coupled) (364A horizontal flexible coupled) back pullout centrifugal pumps size \_\_\_\_\_x\_\_\_\_\_ of (bronze fitted) (all bronze) (all iron) (stainless steel) construction. Each pump is to be furnished with a (standard) (water cooled) stuffing box with (packing) (\_\_\_\_\_) (see options).

Each pump shall have a capacity of \_\_\_\_\_GPM at \_\_\_\_ft. total head, with a temperature of \_\_\_\_\_°F, \_\_\_\_specific gravity. Each pump is to be furnished with a mechanical seal with all metal parts to be 303 stainless steel with Buna-N elastomers, ceramic seat and carbon washer. The unit must be equipped with (bronze) (stainless steel) keylocked shaft sleeve that extends the length of the seal box. The pump shaft extension shall be 0-ring sealed from the pumped liquid. Pump shall have a case wearing ring (impeller wearing rings). Impellers to be vacuum cast, dynamically balanced and keylocked to the shaft.

## Flexible Coupled-Frame Mounted (Models 344A-364A)

Pump and motor are to be mounted on a common (fabricated steel drip rim) (steel) baseplate. The shaft is to be steel, installed in a cast iron power frame. Pumps shall have a shaft design for .002" deflection at the seal face with the pump running under maximum load condition. (Grease) (oil) (permanently lubricated) ball bearings, having a 3 year minimum life (AFBMA B10) under the maximum condition of load. Bearings to be protected by separate oil seals and slingers. The pump shall be flexible coupled to a standard horizontal NEMA, \_\_\_\_\_hp, \_\_\_\_\_\_hertz, \_\_\_\_\_volt, \_\_\_\_\_RPM (open drip-proof) (totally enclosed fan cooled) (hazardous location) motor. Alignment shall be checked in accordance with the standards of the Hydraulic Institute after installation, and there shall be no strain transmitted to the pumps.

## Close Coupled (Models 341A-361A) (Models 342A-362A)

Each pump is to be close coupled to a standard HI-NEMA-JM (340A Series) JP (360A Series). \_\_\_\_hp, \_\_\_\_ phase, \_\_\_\_hertz, \_\_\_\_volt, \_\_\_\_RPM (drip-proof) (totally enclosed) (hazardous location) motor. Models 341A and 361A in motor frame sizes up to 184JM shall be supported by a separate support foot on the close coupled pump bracket.



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