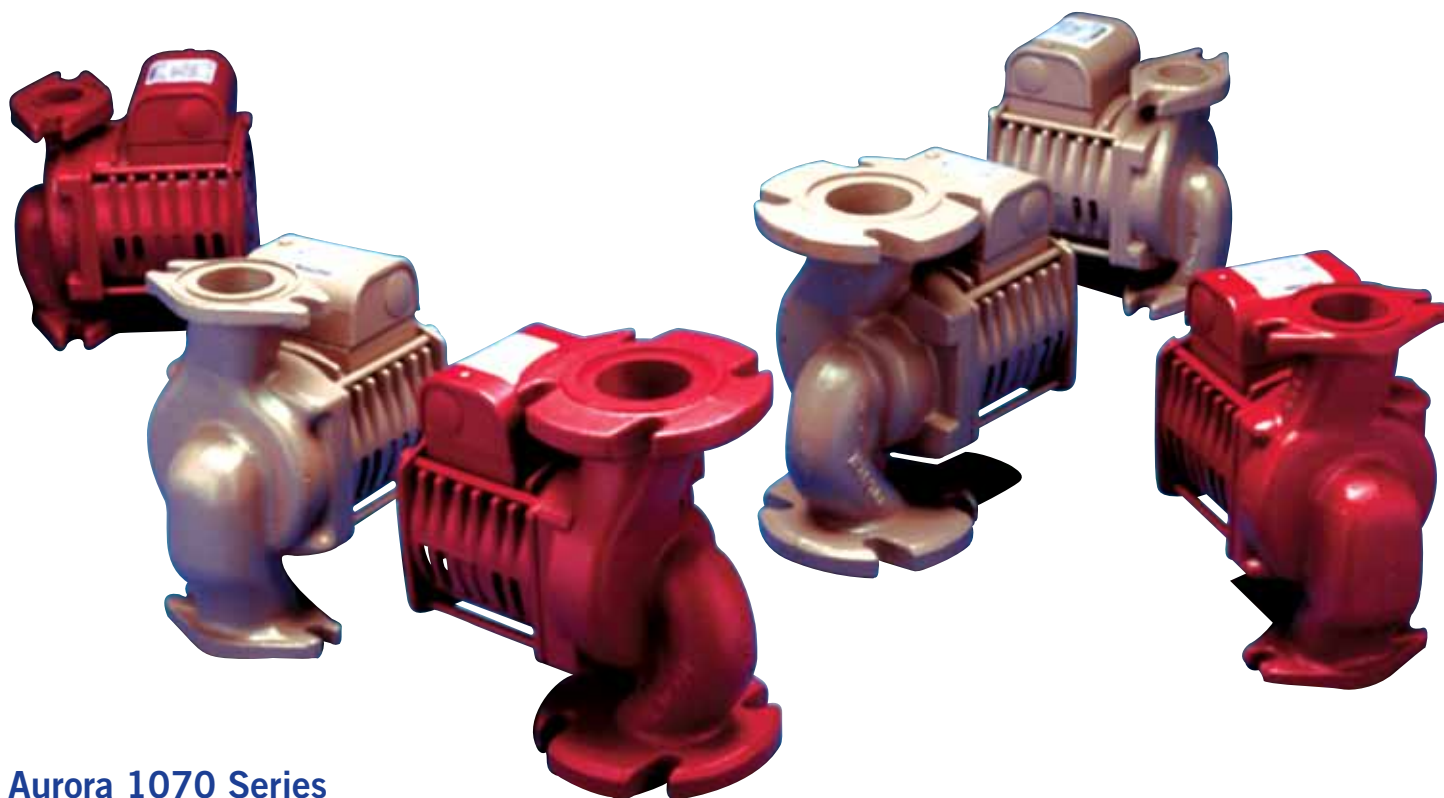




**AURORA**<sup>®</sup>  
Pentair Water

# 1070 Series Dry Rotor Circulators

The Aurora 1070 Series Circulators Deliver Outstanding Value to Designers and Specifiers, Installing Contractors, Wholesalers, OEM's and Building Owners.



Aurora 1070 Series Circulators Are Durable, Versatile and Designed To Be Used in a Wide Range of Hydronic Applications, Including:

- Hot water and chilled water recirculation
- Radiant heating systems
- Domestic hot water generation
- Snow melt installations
- Geothermal heat pumps



**motralec**

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# Smaller, More Efficient 1070 Series Circulator

## Efficiency Breakthrough

Highly efficient dry motor design and hydraulics make 1070 Series circulators up to 74% more efficient than competitive pumps of similar power!

## Excellent Value

With higher performance ratings than competitive pumps and a comparable price, 1070 Series circulators will save money right out of the box. From installation and beyond, they will save building owners money with reduced operating costs year after year.

## Environmentally Friendly

Never throw away another pump. 1070 Series circulators are designed to be economically repaired in less than 5 minutes by simply replacing the mechanical seal, putting the pump back in operation in no time!

## Effective Use of Space

The advanced motor design used in 1070 Series circulators makes them up to 30% smaller than other dry motor circulators. A great feature, particularly for OEM designers when fitting circulators into compact enclosures such as cabinets.

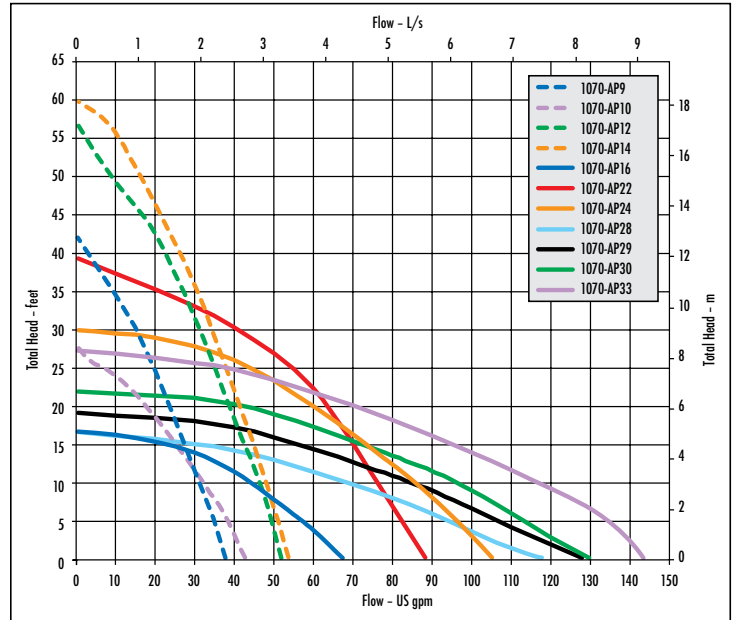
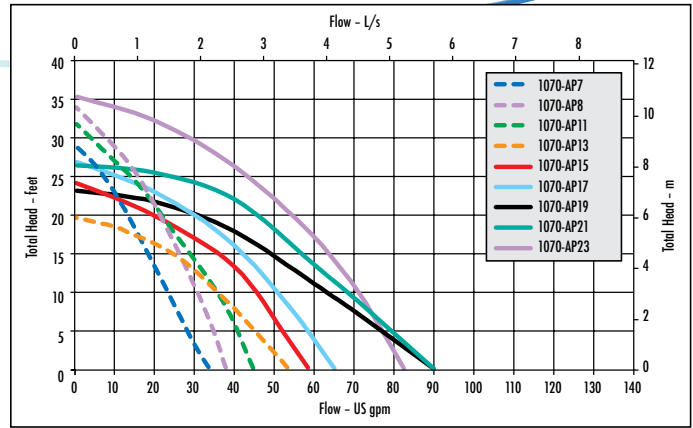
## Extra Quiet Operation

Each 1070 Series circulator rotor is dynamically balanced, making these pumps a perfect choice for residential or commercial installations.

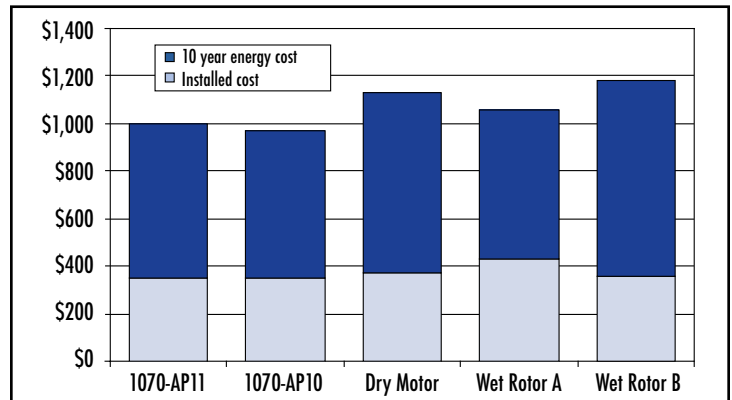
## Easy to Understand Warranty

Aurora circulators are backed by a 2-year, “no questions asked” product replacement warranty. Hassle free. Guaranteed.

## Performance Curves



## Cost of Ownership for Different Circulators



# 1070 Series Product Offering

## Built Tough to Last for Years

System engineers will appreciate the rugged construction of the 1070 Series design: stainless steel shaft, permanently lubricated bearings, silicon carbide mechanical seal and high-strength Noryl impeller. These high performance components are designed, constructed and assembled to give years of trouble-free service.

## Easy to Use – Whether for New Installations or as a Replacement Circulator

Installing contractors will appreciate the interchangeability of the 1070 Series pumps: flange-to-flange dimensions and hydraulic characteristics (flow and head) are matched to many competing pumps of equal power, so it's easy to upgrade existing installations with a 1070 Series pump when other pumps have failed.

## More Profitable Right from the Start

Building owners will appreciate the fact that 1070 Series circulators save money... from the start and for the future:

1. A very competitive initial purchase price that saves you money right away.
2. Higher efficiency means significant ongoing savings through reduced operation costs.
3. Easy-to-replace mechanical seal costs a fraction of the price of installing a new replacement circulator! It makes the 1070 Series an investment to appreciate rather than an expense to manage. With calculated  $L_{10}$  bearing life of greater than 50 years (at best efficiency point), you will enjoy these savings for years to come.

## Mechanical Seal Can Be Replaced Easily in Less Than 5 Minutes



Actual size

## Technical Data

Model	1070-AP7	1070-AP8	1070-AP9	1070-AP10	1070-AP11	1070-AP12*	1070-AP13	1070-AP14*	1070-AP15	1070-AP16	1070-AP17	1070-AP19	1070-AP21	1070-AP22	1070-AP23	1070-AP24	1070-AP28	1070-AP29	1070-AP30	1070-AP33
Max. Flow	38.0 (2.4)	38.0 (2.4)	38.0 (2.4)	43.0 (2.7)	45.0 (2.8)	50.0 (3.1)	54.0 (3.4)	52.0 (3.3)	58 (3.7)	68.0 (4.3)	65 (4.1)	90 (5.7)	90 (5.7)	88 (56)	83 (5.2)	105 (6.6)	117.0 (7.4)	128 (8.1)	130.0 (8.2)	143.0 (9.0)
Max. Head	26.0 (7.9)	34.0 (10.4)	42.4 (12.9)	28.0 (8.5)	31.9 (9.7)	56.0 (17.0)	19.7 (6.0)	61.0 (18.6)	24.5 (7.5)	16.8 (5.1)	27.0 (8.2)	23.0 (7.0)	26.5 (8.1)	39.5 (12.0)	35.5 (10.8)	30.0 (9.1)	17.0 (5.2)	19.0 (5.8)	22.0 (6.7)	26.0 (7.9)
Max. Fluid Temperature: 230°F (110°C)																				
Max. Ambient Temperature: 122°F (50°C)																				
Max. Working Pressure: 150 psi (1034 kPa)																				

Notes: Flow in US gpm (L/s) and Head in feet (m). \*Models 1070-AP12-TE and 1070-AP14-TE feature totally enclosed nonventilated motors with a maximum fluid temperature of 150°F (65°C).

## Motor Data†

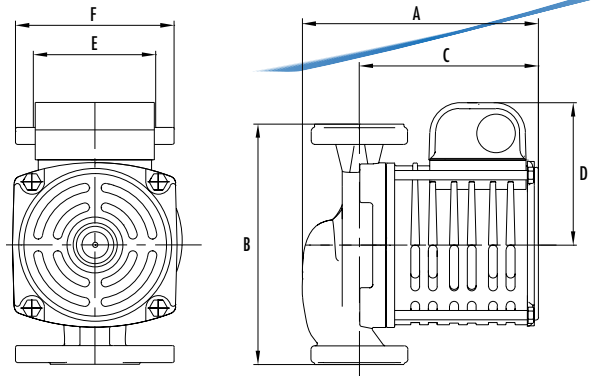
Model		1070-AP7	1070-AP8	1070-AP9	1070-AP10	1070-AP11	1070-AP12	1070-AP13	1070-AP14	1070-AP15	1070-AP16	1070-AP17	1070-AP19	1070-AP21	1070-AP22	1070-AP23	1070-AP24	1070-AP28	1070-AP29	1070-AP30	1070-AP33
Speed		3400	3250	3250	3300	3300	3300	3400	3300	3500	3400	3500	3450	3450	3350	3400	3400	3450	3400	3350	3300
Nominal Power		1/2 (125)	1/2 (125)	1/2 (125)	1/2 (125)	1/2 (125)	3/4 (298)	1/2 (125)	3/4 (298)	3/4 (298)	1/2 (125)	3/4 (298)	3/4 (298)	3/4 (298)	3/4 (298)	3/4 (298)	3/4 (298)	3/4 (298)	3/4 (298)	3/4 (298)	3/4 (298)
Full Load Amp Draw	120V	2.0	2.0	2.0	2.0	2.0	4.8	2.0	4.8	2.5	2.0	3.0	3.4	3.8	5.7	5.0	5.0	3.3	3.9	4.7	5.7
	208V	1.0	1.0	1.0	—	—	2.4	—	2.4	1.8	—	1.6	1.8	2.0	3.0	2.6	2.6	1.7	2.0	2.4	3.1
	240V	1.0	1.0	1.0	1.0	1.0	2.4	1.0	2.4	1.8	1.0	1.6	1.8	2.0	3.0	2.6	2.6	1.7	2.0	2.4	3.1
	277V	—	—	—	—	—	2.4	—	2.4	1.8	—	1.6	1.8	2.0	3.0	2.6	2.6	1.7	2.0	2.4	3.1

Note: Speed in rpm, Nominal Power in HP (W) and Full Load Amp draw in amps. †All motors are 2 pole, single phase.

# Motor Data

## Materials of Construction

Pump Body:	Cast Iron or Bronze
Impeller:	30% Glass-filled Noryl
Face Plate & Shaft:	Stainless Steel
Seal:	Silicon Carbide <i>EnviroSeal</i>
Gasket:	EPDM
Bearings:	Permanently Lubricated Stainless Steel



## Dimensions and Weights

Model	A	B	C	D	E	F	Connection	Shipping Weight	
								Cast Iron	Bronze
1070-AP/B7	6 <sup>5</sup> / <sub>16</sub> (164)	6 <sup>5</sup> / <sub>16</sub> (164)	4 <sup>13</sup> / <sub>16</sub> (122)	3 <sup>13</sup> / <sub>16</sub> (97)	3 <sup>3</sup> / <sub>16</sub> (81)	4 <sup>7</sup> / <sub>32</sub> (107)	1 <sup>1</sup> / <sub>4</sub> " Diameter 2-bolt flanges	11.5 (5.2)	12.8 (5.8)
1070-AP/B8	6 <sup>5</sup> / <sub>16</sub> (164)	6 <sup>5</sup> / <sub>16</sub> (164)	4 <sup>13</sup> / <sub>16</sub> (122)	3 <sup>13</sup> / <sub>16</sub> (97)	3 <sup>3</sup> / <sub>16</sub> (81)	4 <sup>7</sup> / <sub>32</sub> (107)	1 <sup>1</sup> / <sub>4</sub> " Diameter 2-bolt flanges	11.5 (5.2)	12.8 (5.8)
1070-AP/B9	6 <sup>5</sup> / <sub>16</sub> (164)	6 <sup>5</sup> / <sub>16</sub> (164)	4 <sup>13</sup> / <sub>16</sub> (122)	3 <sup>13</sup> / <sub>16</sub> (97)	3 <sup>3</sup> / <sub>16</sub> (81)	4 <sup>7</sup> / <sub>32</sub> (107)	1 <sup>1</sup> / <sub>4</sub> " Diameter 2-bolt flanges	11.5 (5.2)	12.8 (5.8)
1070-AP/B10	6 <sup>5</sup> / <sub>16</sub> (174)	8 <sup>1</sup> / <sub>2</sub> (215)	4 <sup>15</sup> / <sub>16</sub> (125)	3 <sup>13</sup> / <sub>16</sub> (97)	3 <sup>3</sup> / <sub>8</sub> (86)	4 <sup>7</sup> / <sub>32</sub> (107)	1 <sup>1</sup> / <sub>2</sub> " Diameter 2-bolt flanges	13.0 (5.9)	14.8 (6.7)
1070-AP/B11	6 <sup>5</sup> / <sub>16</sub> (174)	8 <sup>1</sup> / <sub>2</sub> (215)	4 <sup>15</sup> / <sub>16</sub> (125)	3 <sup>13</sup> / <sub>16</sub> (97)	3 <sup>3</sup> / <sub>8</sub> (86)	4 <sup>7</sup> / <sub>32</sub> (107)	1 <sup>1</sup> / <sub>2</sub> " Diameter 2-bolt flanges	13.0 (5.9)	14.8 (6.7)
1070-AP/B12	8 <sup>5</sup> / <sub>16</sub> (218)	6 <sup>7</sup> / <sub>16</sub> (164)	7 <sup>1</sup> / <sub>16</sub> (180)	4 (101)	3 <sup>3</sup> / <sub>16</sub> (81)	4 <sup>7</sup> / <sub>32</sub> (107)	1 <sup>1</sup> / <sub>4</sub> " Diameter 2-bolt flanges	17.1 (7.8)	17.9 (8.1)
1070-AP/B13	6 <sup>5</sup> / <sub>16</sub> (174)	8 <sup>1</sup> / <sub>2</sub> (215)	4 <sup>15</sup> / <sub>16</sub> (125)	3 <sup>13</sup> / <sub>16</sub> (97)	3 <sup>3</sup> / <sub>8</sub> (86)	4 <sup>7</sup> / <sub>32</sub> (107)	1 <sup>1</sup> / <sub>2</sub> " Diameter 2-bolt flanges	13.0 (5.9)	14.8 (6.7)
1070-AP/B14	8 <sup>5</sup> / <sub>16</sub> (218)	6 <sup>7</sup> / <sub>16</sub> (164)	7 <sup>1</sup> / <sub>16</sub> (180)	4 (101)	3 <sup>3</sup> / <sub>16</sub> (81)	4 <sup>7</sup> / <sub>32</sub> (107)	1 <sup>1</sup> / <sub>4</sub> " Diameter 2-bolt flanges	17.1 (7.8)	17.9 (8.1)
1070-AP/B15	9 <sup>5</sup> / <sub>16</sub> (244)	8 <sup>1</sup> / <sub>2</sub> (215)	7 <sup>1</sup> / <sub>4</sub> (185)	4 (101)	3 <sup>3</sup> / <sub>16</sub> (81)	4 <sup>7</sup> / <sub>32</sub> (107)	1 <sup>1</sup> / <sub>4</sub> " Diameter 2-bolt flanges	20.3 (9.2)	20.3 (9.2)
1070-AP/B16	7 <sup>1</sup> / <sub>16</sub> (195)	8 <sup>1</sup> / <sub>2</sub> (215)	5 <sup>1</sup> / <sub>8</sub> (130)	3 <sup>13</sup> / <sub>16</sub> (97)	2 <sup>1</sup> / <sub>8</sub> (73)	5 <sup>3</sup> / <sub>32</sub> (131)	2" Diameter 4-bolt flanges	18.6 (8.4)	20.7 (9.4)
1070-AP/B17	9 <sup>5</sup> / <sub>16</sub> (244)	8 <sup>1</sup> / <sub>2</sub> (215)	7 <sup>1</sup> / <sub>4</sub> (185)	4 (101)	3 <sup>3</sup> / <sub>16</sub> (81)	4 <sup>7</sup> / <sub>32</sub> (107)	1 <sup>1</sup> / <sub>4</sub> " Diameter 2-bolt flanges	20.3 (9.2)	20.3 (9.2)
1070-AP/B19	9 <sup>5</sup> / <sub>16</sub> (244)	8 <sup>1</sup> / <sub>2</sub> (215)	7 <sup>1</sup> / <sub>4</sub> (185)	4 (101)	3 <sup>3</sup> / <sub>8</sub> (86)	4 <sup>7</sup> / <sub>32</sub> (107)	1 <sup>1</sup> / <sub>2</sub> " Diameter 2-bolt flanges	20.1 (9.1)	20.1 (9.1)
1070-AP/B21	9 <sup>5</sup> / <sub>16</sub> (244)	8 <sup>1</sup> / <sub>2</sub> (215)	7 <sup>1</sup> / <sub>4</sub> (185)	4 (101)	3 <sup>3</sup> / <sub>8</sub> (86)	4 <sup>7</sup> / <sub>32</sub> (107)	1 <sup>1</sup> / <sub>2</sub> " Diameter 2-bolt flanges	20.1 (9.1)	20.1 (9.1)
1070-AP/B22	9 <sup>5</sup> / <sub>16</sub> (244)	8 <sup>1</sup> / <sub>2</sub> (215)	7 <sup>1</sup> / <sub>4</sub> (185)	4 (101)	3 <sup>3</sup> / <sub>8</sub> (86)	4 <sup>7</sup> / <sub>32</sub> (107)	1 <sup>1</sup> / <sub>2</sub> " Diameter 2-bolt flanges	20.1 (9.1)	20.1 (9.1)
1070-AP/B23	9 <sup>5</sup> / <sub>16</sub> (244)	8 <sup>1</sup> / <sub>2</sub> (215)	7 <sup>1</sup> / <sub>4</sub> (185)	4 (101)	3 <sup>3</sup> / <sub>8</sub> (86)	4 <sup>7</sup> / <sub>32</sub> (107)	1 <sup>1</sup> / <sub>2</sub> " Diameter 2-bolt flanges	20.1 (9.1)	20.1 (9.1)
1070-AP/B24	9 <sup>5</sup> / <sub>16</sub> (244)	8 <sup>1</sup> / <sub>2</sub> (215)	7 <sup>1</sup> / <sub>4</sub> (185)	4 (101)	3 <sup>3</sup> / <sub>8</sub> (86)	4 <sup>7</sup> / <sub>32</sub> (107)	1 <sup>1</sup> / <sub>2</sub> " Diameter 2-bolt flanges	20.1 (9.1)	20.1 (9.1)
1070-AP/B28	10 <sup>5</sup> / <sub>16</sub> (269)	8 <sup>1</sup> / <sub>2</sub> (215)	7 <sup>5</sup> / <sub>16</sub> (193)	4 (101)	3 <sup>1</sup> / <sub>2</sub> (89)	6 (152)	3" Diameter 4-bolt flanges	27.7 (12.6)	27.7 (12.6)
1070-AP/B29	10 <sup>5</sup> / <sub>16</sub> (269)	8 <sup>1</sup> / <sub>2</sub> (215)	7 <sup>5</sup> / <sub>16</sub> (193)	4 (101)	3 <sup>1</sup> / <sub>2</sub> (89)	6 (152)	3" Diameter 4-bolt flanges	27.7 (12.6)	27.7 (12.6)
1070-AP/B30	10 <sup>3</sup> / <sub>16</sub> (259)	8 <sup>1</sup> / <sub>2</sub> (215)	7 <sup>5</sup> / <sub>16</sub> (193)	4 (101)	2 <sup>1</sup> / <sub>8</sub> (73)	5 <sup>3</sup> / <sub>32</sub> (131)	2" Diameter 4-bolt flanges	23.1 (10.5)	24.7 (11.2)
	10 <sup>5</sup> / <sub>16</sub> (269)	8 <sup>1</sup> / <sub>2</sub> (215)	7 <sup>5</sup> / <sub>16</sub> (193)	4 (101)	3 <sup>1</sup> / <sub>2</sub> (89)	6 (152)	3" Diameter 4-bolt flanges	27.7 (12.6)	27.7 (12.6)
1070-AP/B33	10 <sup>3</sup> / <sub>16</sub> (259)	8 <sup>1</sup> / <sub>2</sub> (215)	7 <sup>5</sup> / <sub>16</sub> (193)	4 (101)	2 <sup>1</sup> / <sub>8</sub> (73)	5 <sup>3</sup> / <sub>32</sub> (131)	2" Diameter 4-bolt flanges	23.1 (10.5)	24.7 (11.2)
	10 <sup>5</sup> / <sub>16</sub> (269)	8 <sup>1</sup> / <sub>2</sub> (215)	7 <sup>5</sup> / <sub>16</sub> (193)	4 (101)	3 <sup>1</sup> / <sub>2</sub> (89)	6 (152)	3" Diameter 4-bolt flanges	27.7 (12.6)	27.7 (12.6)

Note: Dimensions are in inches (mm) and weights in lbs. (kg).

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A-02-1052 05.10