





Popular HVAC Motors—Dayton


	HP	Frame	Volts	RPM	Rot.	Cap. Req'd	Shaft Lng. (In.)	Shaft Dia. (In.)	Item No.	Notes**	
	Cradle Base, Single Phase/Split Phase, Fan and Blower Motors, Open Drip-Proof										
	1/4	48	115	1725	CW/CCW	no	1 1/2	1/2*	3K771	Auto O/L, SB	
	1/3	48	115	1725	CW/CCW	no	1 1/2	1/2*	6K778	Auto O/L, SB	
	1/2	48	115	1725	CW/CCW	no	1 1/2	1/2*	3K772	Auto O/L, SB	
	1/4	48	115/208-230	1725	CW/CCW	no	1 1/2	1/2*	3ZP92	Auto O/L, BB	
	1/3	48	115/208-230	1725	CW/CCW	no	1 1/2	1/2*	3LY10	Auto O/L, BB	
1/2	48	115/208-230	1725	CW/CCW	no	1 1/2	1/2*	3LY11	Auto O/L, BB		


*Motors in this section with 1/2 inch shafts are supplied with 5/8 inch bushing adaptor


	Cradle Base, Single Phase/Capacitor Start, Fan and Blower Motors, Open Drip-Proof										
	1/4	48	115/230	1725	CW/CCW	no	1 1/2	1/2	6K438	Auto O/L, BB	
	1/3	48	115/230	1725	CW/CCW	no	1 1/2	1/2	6K490	Auto O/L, BB	
	1/2	48	115/230	1725	CW/CCW	no	1 1/2	1/2	6K965	Auto O/L, BB	
	3/4	56	115/230	1725	CW/CCW	no	1 7/8	5/8	6K376	Auto O/L, BB	
1	56	115/208-230	1725	CW/CCW	no	1 7/8	5/8	6K321	Auto O/L, BB		


	Rigid Base, Single Phase/Capacitor Start, General Purpose, Open Drip-Proof										
	1/3	56	115/230	1725	CW/CCW	no	1 7/8	5/8	5K115	Auto O/L, BB	
	1/2	56	115/230	1725	CW/CCW	no	1 7/8	5/8	5K116	Auto O/L, BB	
	3/4	56	115/230	1725	CW/CCW	no	1 7/8	5/8	5K117	Auto O/L, BB	
1	56H	115/230	1725	CW/CCW	no	1 7/8	5/8	6K148	Auto O/L, BB		

	Direct Drive Blower, Single Phase/Shaded Pole and Permanent Split Capacitor, Open Air Over (A.O. Smith)										
	1/8	42Y	115	1050/1	CW/CCW	no	5	1/2	4KA21	Auto O/L, SP	
	1/8	42Y	208-230	1050/1	CW/CCW	no	5	1/2	4KA45	Auto O/L, SP	
	1/5	42Y	115	1050/1	CW/CCW	no	5	1/2	4KA46	Auto O/L, SP	
	1/5	42Y	115	1050/3	CW/CCW	no	5	1/2	4KA41	Auto O/L, SP	
	1/5	42Y	208-230	1050/3	CW/CCW	no	5	1/2	4KA42	Auto O/L, SP	
	1/5	42Y	115	1075/3	CW/CCW	2GE78	5	1/2	4KA43	Auto O/L, PSC	
1/5	42Y	230	1075/3	CW/CCW	2GE78	5	1/2	4KA44	Auto O/L, PSC		

	Condenser Fan All Angle, Totally Enclosed, Permanent Split Capacitor (PSC), Stud Mount										
	1/6	48	208-230	1075	CW/CCW	2GE74	6	1/2	4M261	Auto O/L, BB	
	1/4	48	208-230	1075	CW/CCW	2GE76	6	1/2	4M205	Auto O/L, BB	
	1/3	48	208-230	1075	CW/CCW	2GE78	6	1/2	4M206	Auto O/L, BB	
	1/2	48	208-230	1075	CW/CCW	2GE78	6	1/2	4M207	Auto O/L, BB	
	3/4	48	208-230	1075	CW/CCW	2GE79	6	1/2	4M208	Auto O/L, BB	
	1/6	48	208-230	825	CW/CCW	2GE76	6	1/2	4M225	Auto O/L, SB	
	1/4	48	208-230	825	CW/CCW	2GE76	6	1/2	4M226	Auto O/L, SB	
	1/3	48	208-230	825	CW/CCW	2GE80	6	1/2	4M262	Auto O/L, BB	
	1/2	48	208-230	825	CW/CCW	2GE80	6	1/2	4M263	Auto O/L, SB	

	Residential Direct Drive Blower, Open Air Over, Single Phase PSC (Stud-Ring, Torsion Flex Kits available)										
	1/4	48	115	1075/3	CW/CCW	2GE76	4	1/2	4M096	Auto O/L, SB	
	1/4	48	208-230	1075/3	CW/CCW	2GE76	4	1/2	4M097	Auto O/L, SB	
	1/3	48	115	1075/3	CW/CCW	2GE76	4	1/2	4M098	Auto O/L, SB	
	1/3	48	208-230	1075/3	CW/CCW	2GE76	4	1/2	4M099	Auto O/L, SB	
	1/2	48	115	1075/3	CW/CCW	2GE76	4	1/2	4M100	Auto O/L, SB	
	1/2	48	208-230	1075/3	CW/CCW	2GE76	4	1/2	4M101	Auto O/L, SB	
	3/4	48	115	1075/3	CW/CCW	2GE81	4	1/2	4M183	Auto O/L, SB	
3/4	48	208-230	1075/3	CW/CCW	2GE79	4	1/2	4M184	Auto O/L, SB		


	Double Shaft Single Phase / PSC OAO (A.O. Smith)										
	1/6	48	208-230	1075/3	CWLE	2GE76	8-1/2 x 7-1/2	1/2	4MA55	Auto O/L, RS	
	1/4	48	208-230	1075/3	CWLE	2GE76	7-7/8 x 7-1/2	1/2	4MA57	Auto O/L, RS	
	1/3	48	208-230	1075/3	CWLE	2GE76	8-1/8 x 6-3/4	1/2	4MA61	Auto O/L, RS	
1/2	48	208-230	1075/3	CWLE	2GE78	7-5/8 x 6-3/4	1/2	4MA65	Auto O/L, RS		

	Condenser Fan, Three Phase										
	1 1/2	56Y	200-230/460	1140	CW/CCW	no	6	5/8	4MB83	Band Stud	
2	56Y	200-230/460	1140	CW/CCW	no	6	5/8	4MB89	Band		

**Auto O/L: Automatic Thermal Overload SB: Sleeve Bearing BB: Ball Bearing Band: Band Mount (Belly Band) Stud: Stud Mount (Thru Bolts) RS: Resilient Ring, Stud Mount SP: Shaded Pole PSC: Permanent Split Capacitor

EPACT Efficient Motors—Dayton

Dayton EPACT Motors -140 Frame through 284T Frame -have a 3 year warranty.

	HP	Frame	Volts	RPM	Construction	Eff.	Item No.
	Three Phase, Open Drip-Proof						
	1/2	56	230 / 460	1800	Steel	81.5%	3N641
	1	56	208-230/460	1800	Steel	78.5%	3N012
	1	143T	208-230/460	1800	Steel	82.5%	3KW25*
	1 1/2	56H	230/460	1800	Steel	85.5%	3N644
	1 1/2	145T	208-230/460	1800	Steel	84.0%	3KW28*
	2	56H	230/460	1800	Steel	80.0%	3N693
	2	145T	208-230/460	1800	Steel	84.0%	3KW31*
	3	145T	208-230/460	1800	Steel	86.5%	2Z276
	3	182T	208-230/460	1800	Steel	86.5%	3KW34*
	5	184T	208-230/460	1800	Steel	87.5%	3KW37*
	7 1/2	213T	208-230/460	1800	Steel	88.5%	3KW40*
	10	215T	208-230/460	1800	Steel	89.5%	3KW43*
	15	254T	208-230/460	1800	Steel	91.0%	3KW46*

*Usable on Inverters 10:1 Variable Torque, 2:1 Constant Torque. Usable on 200V with 1.0 SF

(continued on next page)


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EPACT Efficient Motors Continued—Dayton

Dayton EPACT Motors –140 Frame through 286T Frame –have a 3 year warranty.

	HP	Frame	Volts	RPM	Construction	Eff.	Item No.
Three Phase, Open Drip-Proof							
 2YB78	20	256T	208-230/460	1755	Cast Iron	91.0%	2YB85*
	25	284T	208-230/460	1760	Cast Iron	91.7%	2YB78*
	30	286T	208-230/460	1765	Cast Iron	92.4%	2YB75*

*Usable on Inverters 10:1 Variable Torque, 3:1 Constant Torque . Usable on 200V with 1.0 SF




NEMA Premium Efficient Motors

NEMA Premium Efficient Motors –have a 3 year warranty.

	HP	Frame	Volts	RPM	Construction	Eff.	Item No.
Three Phase, T-Frame, Open Drip-Proof							
 1XTW9	1	143T	208-230/460	1800	Steel	85.5%	1XTV5*
	2	145T	208-230/460	1800	Steel	86.5%	1XTV8*
	3	182T	208-230/460	1800	Steel	89.5%	1XTW1*
	5	184T	208-230/460	1800	Steel	89.5%	1XTW3*
	7 1/2	213T	208-230/460	1800	Steel	91.0%	1XTW5*
	10	215T	208-230/460	1800	Steel	91.7%	1XTW7*
	15	254T	208-230/460	1800	Cast Iron	93.0%	1XTW9*
	20	256T	208-230/460	1800	Cast Iron	93.0%	1XTX2*
	25	284T	208-230/460	1800	Cast Iron	93.6%	1XTX4*
	30	286T	208-230/460	1800	Cast Iron	94.1%	1XTX6*



*Usable on Inverters 10:1 Variable Torque, 4:1 Constant Torque. Usable on 200V with 1.0 SF

Hot Water Circulator Motors—A.O. Smith

	HP	RPM	Frame	Rot.	Volts	Full Load Amps	Item No.
Split Phase							
 4UB99	1/12	1725	48YZ	CCWLE	115	2.7	4UB99
	1/12	1725	48YZ	CCWLE	115	2.7	4UE10
	1/8	1725	48Y	CW/CCW	115	3.1	4UE22
	1/8	1725	48YZ	CCWLE	115	3.3	4UE25
	1/6	1725	48YZ	CCWLE	115	4.0	4UE11
	1/6	1725	48YZ	CCWLE	115	4.0	4UE12
	1/6	1725	48YZ	CWLE	115	3.6	4UE23
	1/6	1725	48YZ	CWLE	115	3.6	4UE24
	1/4	1725	48YZ	CWLE	115	4.6	4UE13
	1/4	1725	48YZ	CCWLE	115	4.6	4UE14
1/3	1725	48YZ	CWLE	115	5.9	4UE15	
Capacitor-start, Capacitor-run							
 4UE16	1/2	1725	56YZ	CW/CCW	115/208-230	5.8/2.8-2.9	4UE16
	3/4	1725	56YZ	CW/CCW	115/208-230	8.4/4.2-4.2	4UE18
Three-Phase							
 4UE17	1/2	1725	56C	CW/CCW	208-230/460	1.8-2.2/1.1	4UE17
	3/4	1725	56C	CW/CCW	208-230/460	2.5-2.6/1.3	4UE19
	1	1725	56C	CW/CCW	208-230/460	3.4-3.4/1.7	4UE20
	1 1/2	1725	56C	CW/CCW	208-230/460	5.7-5.6/2.8	4UE21

Replace Taco, Bell and Gossett, Armstrong and Teel.

Oil Burner Motors—A.O. Smith


	HP	RPM	Frame	Rot.	Volts	Full Load Amps	Item No.
Split Phase							
 4LY96	1/7	3450	48M	CCWLE	115	2.8	4LY96
	1/6	1725	48N	CW/CCW	115	3.2	4MA12
Permanent Split Capacitor							
 4MA32	1/7	3450	48M	CCWLE	115	1.7	4MA32

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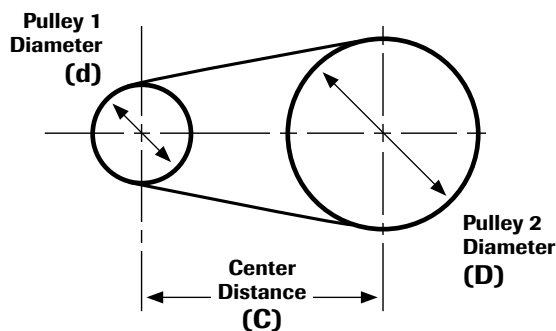
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Run Capacitors—Dayton

	MFD Rating	Dimensions (In.)			EIA UL Base	Item No.
		D	W	H		
Oval, 370 VAC						
 2GE74	3	1 5/16	2 3/16	2 1/8	A	2GE74
	4	1 5/16	2 3/16	2 1/8	A	2GE75
	5	1 5/16	2 3/16	2 1/8	A	2GE76
	6	1 5/16	2 3/16	2 1/8	A	2GE77
	7.5	1 5/16	2 3/16	2 7/8	A	2GE78
	10	1 5/16	2 3/16	2 7/8	A	2GE79
	12.5	1 5/16	2 3/16	2 7/8	A	2GE80
	15	1 5/16	2 3/16	3 7/8	A	2GE81

V-Belts—Dayton

	Nom. Outside Lng. (In.)	WWG Stock No.	Nom. Outside Lng. (In.)	WWG Stock No.	Nom. Outside Lng. (In.)	WWG Stock No.	Nom. Outside Lng. (In.)	WWG Stock No.	Nom. Outside Lng. (In.)	Item No.	
3L Type (3/8" Top width by 7/32" thick)											
 3L150	15	3L150	25	3L250	35	3L350	45	3L450	55	3L550	
	16	3L160	26	3L260	36	3L360	46	3L460	56	3L560	
	17	3L170	27	3L270	37	3L370	47	3L470	57	3L570	
	18	3L180	28	3L280	38	3L380	48	3L480	58	3L580	
	19	3L190	29	3L290	39	3L390	49	3L490	59	3L590	
	20	3L200	30	3L300	40	3L400	50	3L500	60	3L600	
	21	3L210	31	3L310	41	3L410	51	3L510	61	3L610	
	22	3L220	32	3L320	42	3L420	52	3L520			
 4L170	23	3L230	33	3L330	43	3L430	53	3L530			
	24	3L240	34	3L340	44	3L440	54	3L540			
	4L Type (1/2" Top width by 5/16" thick)										
	17	4L170	32	4L320	47	4L470	62	4L620	77	4L770	
	18	4L180	33	4L330	48	4L480	63	4L630	78	4L780	
	19	4L190	34	4L340	49	4L490	64	4L640	79	4L790	
	20	4L200	35	4L350	50	4L500	65	4L650	80	4L800	
	21	4L210	36	4L360	51	4L510	66	4L660	82	4L820	
	22	4L220	37	4L370	52	4L520	67	4L670	84	4L840	
	23	4L230	38	4L380	53	4L530	68	4L680	86	4L860	
	24	4L240	39	4L390	54	4L540	69	4L690	88	4L880	
25	4L250	40	4L400	55	4L550	70	4L700	90	4L900		
26	4L260	41	4L410	56	4L560	71	4L710	92	4L920		
27	4L270	42	4L420	57	4L570	72	4L720	94	4L940		
28	4L280	43	4L430	58	4L580	73	4L730	96	4L960		
29	4L290	44	4L440	59	4L590	74	4L740	98	4L980		
30	4L300	45	4L450	60	4L600	75	4L750	100	3X543		
31	4L310	46	4L460	61	4L610	76	4L760				



BELT LENGTH FORMULA

$$L = 2C + 1.57(D - d) + \frac{(D - d)^2}{4C}$$

← exact
← approximate

L = Pitch Length of Belt
C = Center Distance
D = Pitch Diameter of Large Sheave
d = Pitch Diameter of Small Sheave

Dayton V-belts interchange with major brands like Browning, Goodyear, Gates, Dayco, and others. Lengths are matched to RMA (Rubber Manufacturers' Association) standards.

Accessories - Brackets—Dayton

Description	Item No.
Mounting Lug Brackets	
Double Wire Bracket	3LC31
Band Mount Bracket	3M133



3LC31

Fits blower wheel Dia. (In.)	Bracket	Fits NEMA Frame (Motor Size)	Item No.
Motor Mounting Brackets for 9-12" Dia. Blower Housings			
9 or 10	Torsion Flex	42/48	5X247
9	Welded Ring	42	3M146
10	Welded Ring	48	3M147



5X247



3M146

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HOW TO REPLACE A MOTOR

Ideally, you should replace like for like, but that may not be always possible. Here are some basics:

Matching Data Needed:

HP = Horsepower

RPM = Rotations Per Minute—Sometimes listed as “number of poles”.

Ph = Phase—For AC motors the choice is “single” or “three” phase

Volts or V = Voltage—Common AC Voltages are 115/200/208/230/460

Fr = Frame—Examples include: 48 / 56/ 145T etc.

SF = Service Factor—Common SF = 1.0 / 1.15 / 1.25 / 1.35

Encl = Enclosure—Basic enclosures are “Open” or “Totally Enclosed”.

Rules of Thumb for Motor Replacement:

1. In HVAC, you can often move up to the next HP or move up in Service Factor.
2. Matching Amperage can be helpful in estimating HP.
3. Ball and sleeve bearing motors can be inter-changeable, but ball bearing may be noisier.
4. Motors can normally run up to 10% above and below rated voltage.
5. You should not interchange “Manual Overload” with an “Automatic Overload” motor protector.
6. You can vary the speed of a PSC (Permanent Split Capacitor), but not of a Split Phase or Capacitor Start Motor.
7. You can move up in “Starting” or “Run Torque”, when replacing a motor. (e.g.: Cap Start can replace a Split Phase; PSC can replace Shaded Pole.)
8. Motor Frame Diameter can be helpful in determining frame size.
9. TEAO or OAO enclosed motors need to be mounted in the air stream of the fan they are running.

There are four types of single phase motors:

1. Shade Pole
2. Permanent Split Capacitor (PSC)
3. Split Phase
4. Capacitor Start

Need More Help?

- If you have a manufacturer part number, you can go to grainger.com and enter it to find a replacement motor.
- If you have just the specifications, you can use the Motor Selection Guide on Grainger.com to find a replacement motor.
- You can also get more of what you need in the Grainger catalog 399:
 - V-belts: Pgs 153-156
 - Sheaves: Pgs 164
 - Capacitors: Pgs 90
 - Accessories: Pgs 91-95
- Remember: The first nine pages of the Grainger catalog are a great resource for motor data!

Speed in RPM

Poles	No Load Speed	Running or Name Plate Speed Range
	RPM	RPM
2	3600	3000-3600
4	1800	1400-1800
6	1200	950-1200
8	900	800-900

Motor Frame Data:

Frame	Approx. Frame Diameter	Approx. Shaft Height	NOTES
3.3	3.3 inch	1 1/2	Mostly Shaded Pole
4	4 inch	2	Mostly Shaded Pole and PSC
42	5 inch	2 5/8	Mostly Shaded Pole and PSC
48	5.5 inch	3	Mostly PSC and Split Phase
56	6.5 inch	3 1/2	Mostly Cap Start and 3 phase
56H	6.5 inch	3 1/2	Mostly Cap Start and 3 phase
140 T	6.5 inch	3 1/2	Mostly 3 phase

A, Y Suffix to a frame designation means non standard mounting (i.e.: 48Y)

A, Z Suffix means a non standard shaft (i.e.: 48Z)

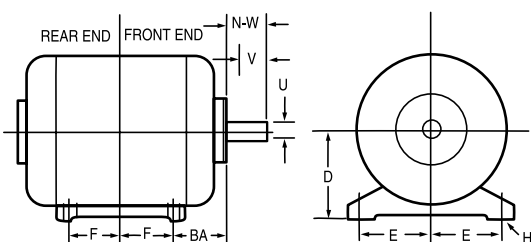
Enclosures

Abbreviation	Definition	Description
OP	Open	Holes in motor shell
ODP	Open drip-proof	Bottom half of motor open (water will flow out)
AO/OAO	Air over/Open air over	Fan air blows directly over motor
TE	Totally enclosed	No holes anywhere in motor shell
TEAO	Totally enclosed air over	Fan air blows directly over motor
TENV	Totally enclosed non-vented	Excess heat is radiated through the body of the motor
TEFC	Totally enclosed fan-cooled	Has an external fan covered by a housing
EXP-PRF	Explosion proof	Will withstand an explosion of a gas, vapor or dust, which may occur within it

*Air-Over motors (AO, OAO and TEAO) must have air blowing over them continuously while in operation.

Motor Dimensional Chart—All Dimensions in Inches

NEMA FRAME	D*	2E	2F	BA	H	N-W	U	V [§] Min.	Wide	Key Thick	Long
42	2 5/8	3 1/2	1 11/16	2 1/16	9/32 slot	1 1/8	3/8	--	--	3/64 flat	--
48	3	4 1/4	2 3/4	2 1/2	11/32 slot	1 1/2	1/2	--	--	3/64 flat	--
48H	3	4 1/4	4 3/4	2 1/2	11/32 slot	1 1/2	1/2	--	--	3/64 flat	--
56	3 1/2	4 7/8	3	2 3/4	11/32 slot	1 7/8 †	5/8 †	--	3/16 †	3/16 †	1 3/8 ‡
56H	3 1/2	4 7/8	3 & 5 ‡	2 3/4	11/32 slot	1 7/8 †	5/8 †	--	3/16 †	3/16 †	1 3/8 †
56HZ	3 1/2	**	**	**	**	2 1/4	7/8	2	3/16	3/16	1 3/8
66	4 1/8	5 7/8	5	3 1/8	13/32 slot	2 1/4	3/4	--	3/16	3/16	1 7/8
143T	3 1/2	5 1/2	4	2 1/4	11/32 dia.	2 1/4	7/8	2	3/16	3/16	1 3/8
145T	3 1/2	5 1/2	5	2 1/4	11/32 dia.	2 1/4	7/8	2	3/16	3/16	1 3/8
182	4 1/2	7 1/2	4 1/2	2 3/4	13/32 dia.	2 1/4	7/8	2	3/16	3/16	1 3/8
184	4 1/2	7 1/2	5 1/2	2 3/4	13/32 dia.	2 1/4	7/8	2	3/16	3/16	1 3/8
182T	4 1/2	7 1/2	4 1/2	2 3/4	13/32 dia.	2 3/4	1 1/8	2 1/2	1/4	1/4	1 3/4
184T	4 1/2	7 1/2	5 1/2	2 3/4	13/32 dia.	2 3/4	1 1/8	2 1/2	1/4	1/4	1 3/4
213	5 1/4	8 1/2	5 1/2	3 1/2	13/32 dia.	3	1 1/8	2 3/4	1/4	1/4	2
215	5 1/4	8 1/2	7	3 1/2	13/32 dia.	3	1 1/8	2 3/4	1/4	1/4	2
213T	5 1/4	8 1/2	5 1/2	3 1/2	13/32 dia.	3 3/8	1 3/8	3 1/8	5/16	5/16	2 3/8
215T	5 1/4	8 1/2	7	3 1/2	13/32 dia.	3 3/8	1 3/8	3 1/8	5/16	5/16	2 3/8
254#	6 1/4	10	8 1/4	4 1/4	21/32 dia.	3 3/8	1 1/8	3 1/8	1/4	1/4	2 3/8
254U	6 1/4	10	8 1/4	4 1/4	17/32 dia.	3 3/4	1 3/8	3 1/2	5/16	5/16	2 3/4
256U	6 1/4	10	10	4 1/4	17/32 dia.	3 3/4	1 3/8	3 1/2	5/16	5/16	2 3/4
254T	6 1/4	10	8 1/4	4 1/4	17/32 dia.	4	1 5/8	3 3/4	3/8	3/8	2 7/8
256T	6 1/4	10	10	4 1/4	17/32 dia.	4	1 5/8	3 3/4	3/8	3/8	2 7/8
284#	7	11	9 1/2	4 3/4	21/32 dia.	3 3/4	1 1/4	3 1/2	1/4	1/4	2 3/4
284U	7	11	9 1/2	4 3/4	17/32 dia.	4 7/8	1 5/8	4 5/8	3/8	3/8	3 3/4
286U	7	11	11	4 3/4	17/32 dia.	4 7/8	1 5/8	4 5/8	3/8	3/8	3 3/4
284T	7	11	9 1/2	4 3/4	17/32 dia.	4 5/8	1 7/8	4 3/8	1/2	1/2	3 1/4
286T	7	11	11	4 3/4	17/32 dia.	4 5/8	1 7/8	4 3/8	1/2	1/2	3 1/4



(*) Dimension "D" will never be greater than the above values on rigid mount motors, but it may be less so that shims up to 1/32" thick (1/16" on 364U and 365U frames) may be required for certain machines.

(†) Designated 56H motors have two sets of 2F mounting holes—3" and 5".

(#) Discontinued NEMA frame.

(**) Base of Dayton 56HZ frame motors has holes and slots to match NEMA 56, 56H and 145T mounting dimensions.

(‡) Certain NEMA 56Z frame motors have 1/2" dia. x 11/2" long shaft with 3/64" flat. These exceptions are noted in this catalog.

(§) Dimension "V" is shaft length available for coupling, pinion or pulley hub—this is a minimum value.

(§§) The 2F dimension is 20.

More frame dimensions available on pages 4 thru 6 of the Grainger Catalog or on grainger.com

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Water System Pumps—Bell & Gossett—Bronze Circulating Pumps

Total Ft. of Head @ GPM +

3 GPM	4 GPM	5 GPM	6 GPM	7 GPM	8 GPM	9 GPM	10 GPM	12 GPM	15 GPM	18 GPM	20 GPM	25 GPM	30 GPM	40 GPM	50 GPM	60 GPM	70 GPM	80 GPM	90 GPM	100 GPM	110 GPM	Best Efficiency GPM @ Head Ft.	Item No.
11	10	9	8	7	7	6	5	3	1	—	—	—	—	—	—	—	—	—	—	—	—	7 GPM @ 7	4RD11
13	12	12	11	10	10	9	8	7	5	3	2	—	—	—	—	—	—	—	—	—	—	10 GPM @ 8	4RD06
13	12	12	11	10	10	9	8	7	5	3	2	—	—	—	—	—	—	—	—	—	—	10 GPM @ 8	4RD05

Wet Rotor Circulators

Maintenance Free Series PL™

23	22	21	20	19	18	17.5	17	15	13	12	10	5	—	—	—	—	—	—	—	—	—	15 GPM @ 13	4JA87
36	35	34	33	32	31.5	31	30	27	26	24	22	17.5	12.5	—	—	—	—	—	—	—	—	20 GPM @ 22	4JA88
29	28.5	28	27	26.5	26	25.5	25	24.5	23.5	22.5	21	17.5	15	7.5	—	—	—	—	—	—	—	25 GPM @ 18	4JA89
17.5	17	17	16.5	16	16	15.5	15.5	15.5	15.5	15	15	14	12.5	10	5	—	—	—	—	—	—	35 GPM @ 12	4JA90

Three-Piece Oil-Lubricated Booster Pumps

*	*	8	8	8	7	7	7	7	7	6	5	4	2	—	—	—	—	—	—	—	—	17 GPM @ 6	4RD17
*	*	12	12	12	12	12	12	11	11	11	10	10	7	—	—	—	—	—	—	—	—	28 GPM @ 8	4RC94
*	*	17	17	16	16	16	16	15	14	13	12	6	—	—	—	—	—	—	—	—	—	18 GPM @ 12	4RC92
*	*	10	10	10	10	10	10	10	10	10	10	10	9	8	6	4	2	—	—	—	—	40 GPM @ 8	4RC96
*	*	16	15	15	15	15	15	15	15	15	14	14	14	13	12	11	9	8	6	4	—	65 GPM @ 11	4RC98

Maintenance Free Series 60

*	*	*	*	*	*	*	19	19	19	19	19	18	17	15	12	—	—	—	—	—	—	36 GPM @ 16	5YN66
*	*	*	*	*	*	*	*	24	24	24	24	24	24	23	21	19	16	13	—	—	—	52 GPM @ 20	5YN67
*	*	*	*	*	*	*	*	*	*	*	*	24	24	24	23	23	22	21	20	19	18	85 GPM @ 21	5YN69

(*) Operation of pump in this range will result in reduced pump life and/or motor damage. (+) To convert to psi, divide total feet of head by 2.31.



4RD11



4JA87



4RD17



5YN66

HP	Volts	Phase	FLA	Thermal Protection	Face to Face	Dimensions (In.)		Inlet & Outlet	Flange Included	Item No.
						W	L			

Wet Rotor Circulators

1/40	115	1	0.48	Impedance	6 1/8	4 7/8	4 7/8	Union	No	4RD11
1/25	115	1	0.8	Impedance	6 3/8	4 7/8	4 7/8	Union	No	4RD06
1/25	115	1	0.8	Impedance	6 1/8	4 7/8	5 5/8	Flanged	No	4RD05

Maintenance Free Series PL™

1/12	115	1	1.4	Auto	6 3/8	4 3/8	8 5/8	Flanged	No	4JA87
1/6	115	1	2.1	Auto	6 3/8	4 3/8	8 5/8	Flanged	No	4JA88
1/6	115	1	2.1	Auto	8 1/2	4 1/2	9 1/8	Flanged	No	4JA89
1/6	115	1	1.8	Auto	8 1/2	4 1/2	9 1/8	Flanged	No	4JA90

Three-Piece Oil-Lubricated Booster Pumps

1/12	115	1	1.75	Auto	6 3/8	5 1/4	14 7/8	Flanged	No	4RD17
1/6	115	1	1.9	Auto	8 1/2	6 1/2	15 3/8	Flanged	No	4RC94
1/6	115	1	1.9	Auto	8 1/2	7 1/16	15 1/4	Flanged	No	4RC92
1/6	115	1	1.9	Auto	8 1/2	6 11/16	16 5/8	2" Flg	Yes	4RC96
1/4	115	1	3	Auto	10	7 9/16	17 1/4	2 1/2" Flg	Yes	4RC98

Maintenance Free Series 60

1/4	115/208-230	1	2.8/1.4	Auto	11	7 1/2	19 7/8	1.25" Flg	Yes	5YN66
1/2	115/208-230	1	5/2.5	Auto	11 1/2	7 7/8	21 7/16	1.5" Flg	Yes	5YN67
3/4	115/208-230	1	7.2/3.6	Auto	11 1/2	8	21 11/16	2" Flg	Yes	5YN69

Note: For use only with nonflammable liquids compatible with pump component materials.

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Seal Bearing Assemblies and Graduated Oil Tubes—Bell & Gossett

Key	Fits Pump Nos.	Item No.
Seal Bearing Assemblies		
A	4RD16	4RD83*
A	4RD17	4RD79*
A	4RC93, 4RC95, 4RC94, 4RC96	4RD82
A	4RC91, 4RC97, 4RC99, 4RD02, 4RC92, 4RC98, 4RD01, 4RD03	4RD80
B	4RD13, 4RD14	4RD78
C	4RD15	4RD75
C	1R247, 1R470	4YM28
D	5YN64, 5YN65, 5YN66, 5YN67, 5YN68, 5YN69, 5YN70, 5YN71, 5YN72	5YN79
D	5YN73, 5YN74, 5YN75, 5YN76, 5YN77	5YN80



4RD83



4RD78

Graduated Oil Tubes

– Used with Nos. 4RC91-99, 4RD02, 4RD16, and 4RD17. 1 1/2 oz.	4YM22
– Used with Nos. 4RD13-14 and 4RD35-46. 2 1/2 oz.	4YM23

(*) Comes with impeller.

Circulating Pump Couplers—Bell & Gossett

Key	Fits Pump Nos.	Fits Shaft Size (In.)	Coupling Material	Item No.
A	4RD16, 4RC93, 4RC95, 4RC91, 4RD17, 4RC94, 4RC92, 4RC96	1/2 x 1/2	Cast-Iron	4RD81
A	4RC97, 4RC99, 4RD02, 4RC98, 4RD01, 4RD03	1/2 x 1/2	Cast-Iron	4RD27
A	4RD13, 4RD14, 5YN65, 5YN64, 5YN71, 5YN68, 5YN72, 5YN66, 5YN67, 5YN69	1/2 x 1/2	Cast-Iron	4RD26
A	4RD41, 4RD42, 5YN70, 5YN75, 5YN73	5/8 x 1/2	Cast-Iron	4RD77
A	4RD13, 4RD14	5/8 X 1/2	Cast-Ir./Spring	4YM24
B	4RD41, 4RD42, 4RD43, 5YN76	5/8 x 5/8	Steel/Rubber	4RD76
B	5YN77, 5YN74	5/8 x 5/8	Steel/Rubber	4YM27
B	5YN75, 5YN76	5/8 X 1/2	Zinc/Rubber	5YN78



4RD81



4RD76

Accessories for Bronze In-Line Pumps—Bell & Gossett

Fits Pump Nos.	Item No.
Motor Mount Rings for In-Line Circulator Pumps	
4RD16, 4RC93, 4RC95, 4RD17, 4RC94, 4RC96, 4RC91, 4RC92	4RD24
4RC97, 4RC99, 4RD02, 4RD13, 4RD14, 4RC98, 5YN65, 5YN66, 5YN64, 5YN71, 5YN67, 5YN70, 5YN68, 5YN72, 5YN69	4RD25



4RD24

Accessories for Bronze In-Line Pumps—Bell & Gossett

Pipe Size (In.)	Used with Pump Nos. No.	Item No.
Bronze Union Connections		
1/2 Sweat	4RD08, 4RD11, 4RD06	4RD20
3/4 Sweat	4RD08, 4RD11, 4RD06	4RD18
3/4 NPT	4RD08, 4RD11, 4RD06	4RD19
Bronze Flanges, Set of 2		
3/4	4JA87, 4JA88, 4RD05, 4PD11, 4RD17, 4RC92, 5P428, 5P433, 4P977	4RC84
1	4JA87, 4JA88, 4RD05, 4PD11, 4RD17, 4RC92, 5P428, 5P433, 4P977	4RC85
1 1/4	4JA87, 4JA88, 4RD05, 4PD11, 4RD17, 4RC92, 5P428, 5P433, 4P977	4RC86
1 1/2	4JA87, 4JA88, 4RD05, 4PD11, 4RD17, 4RC92, 5P428, 5P433, 4P977	4RC87
1	4RC94, 4PC79, 4JA89, 4JA90	4RC88
1 1/4	4RC94, 4PC79	4RC89
1 1/2	4RC94, 4PC79	4RC90
Accessories		
TC-1 Timer	4RD11, 4RD05, 4RD06	4RD21
1/2" Aquastat	4RD11, 4RD05, 4RD06	4RD22
3/4" Aquastat	4RD11, 4RD05, 4RD06	4RD23



4RD20



4RD21



4RC84