

- *Type 5N only:* Needle bearings on driveshaft for high radial load capacity and long life
- *Type 5L/H only:* Ball bearings for high radial load and long life
- Unvented gearhousing for universal horizontal mounting
- Bronze worm gear for high shock load capability
- Hardened and ground worm for strength and long life
- See page 34 for capacitors and terminal boxes
- See pages 39 and 40 for reference dimensions

Variable Speed—Pacesetter Inverter Duty AC Gearmotors



Type 42R-5N Pacesetter

Fixed Speed Rating						Variable Speed (SOA) Ratings ¹						Product Type	230V Model No.	230/460V Model No.	
Speed (rpm)	Torque (lb-in.)	HP	(230V) A	(230/460V) A	Gear Ratio	Speed Range (rpm)	Frequency Range (Hz)	Torque Type	Torque @ 10 Hz (lb-in.)	Torque @ 60 Hz (lb-in.)	Torque @ 90 Hz (lb-in.)				
42R-5N Gearmotor															
Three-Phase, Inverter Duty, Non-synchronous (TEFC)															
23	121	3/8	1.90	1.90/0.95	75	2.4-31	10-90	constant	116	116	116	42R6BFPP-5N	2270	2870	
43	113				40	4.4-57		constant	109	109	109		2271	2871	
57	109				30	5.9-77		constant	104	104	104		N2275	2875	
85	103				20	8.9-115		constant	98	98	98		2272	2872	
170	101				10	18-229		variable	66	105	101		2273	2873	
340	54				5	35-458		variable	38	68	59		2274	2874	



Type 42R-5L/H

42R-5L/H Hollow Shaft Gearmotor															
Three-Phase, Inverter Duty, Non-Synchronous (TEFC)															
23	121	3/8	1.90	—	75	2.4-31	10-90	variable	121	121	116	42R6BFPP-5L/H	N2470	—	
43	113			—	40	4.4-57		constant	109	109	109		N2471	—	
57	109			—	30	5.9-77		constant	104	104	104		N2475	—	
85	103			—	20	8.9-115		constant	98	98	98		2472	—	
170	101			—	10	18-229		variable	66	105	101		N2473	—	
340	54			—	5	35-458		variable	38	68	59		N2474	—	

Fixed Speed—AC Gearmotors



Type 42R-5N

Speed (rpm)	Rated Torque (lb-in.)	Motor HP	V	Hz	Ph	Amps	Gear Ratio	Radial Load (lbs.)	Capacitor (µF/VAC)	Product Type	Model Number	
Permanent Split Capacitor, Non-synchronous												CAPACITOR IS REQUIRED
38	113	1/6	115	60	1	2.1	40	180	15.0/350	42R5BFCL-5N	0678	
75	81						20				0677	
150	47						10				0672	
300	25						5				0670	
Split Phase (with centrifugal switch), Non-synchronous												
43	113	1/6	115	60	1	3.6	40	180	—	42R5BFSL-5N	0648	
85	75						20				0647	
170	43						10				0646	
340	23						5				0645	
Three-phase, Non-synchronous												
43	113	1/4	230	60	3	1.3	40	180	—	42R5BFPP-5N	0634	
85	103						20				0633	
170	67						10				0630	
340	36						5				0629	

Permanent Magnet DC Gearmotors



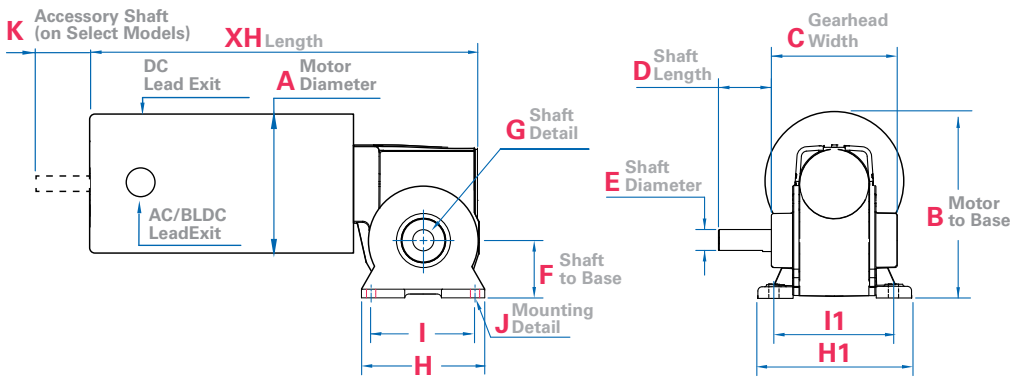
Type 42A-5N

Speed (rpm)	Rated Torque (lb-in.)	Rated Current (Amps)		Peak Torque (lb-in.)	Motor HP	FF	Gear Ratio	Radial Load (lbs.)	Product Type ²	Accy Shaft	No Accy Shaft	Accy Shaft	No Accy Shaft
		12/24V	90/130V							12/24V		90/130V	
42A-5N Gearmotor													
12/24V Models With Class F Temperature Rating													
25/62	109	—	177	3/16 / 3/8	1.0	—	40	120	42A5FEPM-5N	5838	5738	—	—
33/83	104	—	169				30			5837	5737	—	—
50/125	98	17	159				20			5836	5736	—	—
100/250	80	—	91				10			5835	5735	—	—
200/500	43	—	49	5	5834	5734	—	—					
90/130V Models With Class F Temperature Rating													
45/62	109	—	177	3/16 / 1/4	1.4 / 1.0	—	40	120	42A5BEPM-5N	—	—	4538	4138
60/83	104	—	169				30			—	—	4537	4137
90/125	83	1.9/1.8	159				20			—	—	4536	4136
180/250	44	—	91				10			—	—	4535	4135
360/500	24	—	49	5	—	—	4534	4134					



Type 33A-5L/H Hollow Shaft

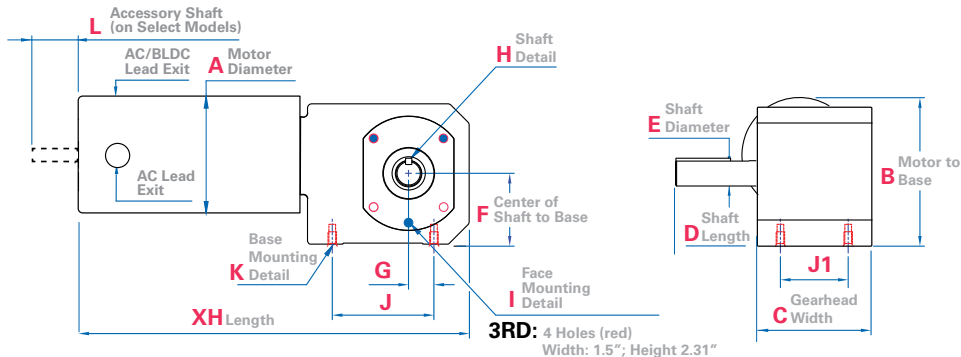
33A-5L/H Hollow Shaft Gearmotor													
90/130V Models With Class F Temperature Rating													
43 / 62	84 / 109	—	177	1/8 / 1/4	1.4 / 1.0	—	40	120	33A5BEPM-5L/H	—	—	—	N6738
58 / 83	75 / 100	—	169				30			—	—	N6737	
86 / 125	54 / 78	1.4 / 1.8	159				20			—	—	N6736	
173 / 250	31 / 42	—	91				10			—	—	6735	
345 / 500	17 / 22	—	49	5	—	—	N6734						



Gearmotor Type 5N, 5F, 5H, pages 14-16 (Mounts from Gearhead with Feet)

	Product Type	Wt. (lbs.)	XH Length	A Dia-meter	B Motor to Base	C Gearhead Width	D Shaft Length	E Shaft Diameter	F Shaft to Base	G Shaft Detail	H Base Length	H1 Base Width	I Mounting Hole Length	I1 Mounting Hole Width	J Mounting Detail	K Acc'y Shaft	Cord/Lead Length (in.)										
Type 5N Gearmotor																											
42R-5N	42R5-5N	15.5	10.103	4.73	5.64	3.568	1.50	.625	1.67	Key/Flat	3.56	3.81	3.00	3.25	[4]ø .271/.266 Holes	No	12										
	42R6-5N	17.5	10.540													Yes	24										
42A-5N	42A5-5N	14.3	10.198	4.62	5.40											4.723	2.38	.750	3.000	Key	5.62	6.263	3.875	5.373	[4]ø.41/.44 Holes	No	12
	34B3-5N	9.0	7.723	4.02	5.26																					Yes	12 or 24
	34B4-5N	10.0	8.223																							No	
34B6-5N	12.0	9.233			Yes											24											
Type 5F Gearmotor																											
34R-5F	34R6-5F	12.0	10.206	4.02	5.28	3.568	1.50	.625	1.67	Key/Flat	3.56	3.81	3.00	3.25	[4] ø.271/.266 Holes	No	12										
33A-5F	33A5B-5F	9.9	9.711	3.39	4.96											Yes	24										
	33A5F-5F	9.9	9.701													No											
Type 5H Gearmotor																											
48R-5H	48R6-5H	40.0	12.928	5.90	8.07	4.723	2.38	.750	3.000	Key	5.62	6.263	3.875	5.373	[4]ø.41/.44 Holes	No	12										
42A-5H	42A7-5H	24.4	12.947	4.26	7.25											Yes	24										

Only the first four characters of the product type are relevant to dimensions



Gearhead Type 3RD, GB, pages 16-17

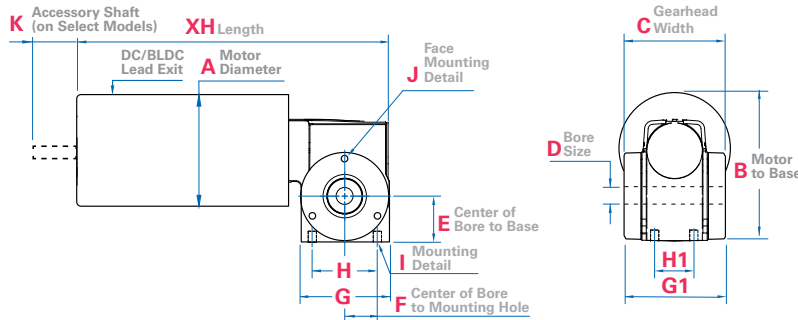
3RD: 4 Holes (red)
Width: 1.5"; Height 2.31"
GB: 3 Holes (blue)

	Product Type	Wt. (lbs.)	XH Length	A Dia-meter	B Motor to Base	C Gear-head Width	D Shaft Length	E Shaft Diameter	F Shaft to Base	G Shaft to Mounting Hole Center	H Shaft Detail	I Face Mounting Detail	J Mounting Hole Length	J1 Mounting Hole Width	K Base Mounting Detail	L Acc'y Shaft	Cord/Lead Length (in.)									
Type 3RD Gearmotor																										
30R-3RD	30R2	9.0	8.140	3.36	4.812	3.60	1.50	.500	1.562	.625	Flat	[4]10-32 UNF-2B x .31 Deep Min.	2.000	2.50	[4]1/4 -20 UNF-2B .31 deep	No	12									
	30R4	10.5	8.640													Yes	24									
24A-3RD	24A2	9.0	8.07	2.42	4.147											2.378	4.377	2.150	.75	Key	[3]5/16 -18 UNF-2B x .50 Deep Max. on 2.913 B.C.	3.00	2.00	[4]1/4 -20 UNF-2B .40 Deep Min.	Yes	12
	24A4	10.5	8.82																						No	24
22B-3RD	22B2	6.5	8.085	2.378	4.377																				2.362	.748
	22B4	6.5	9.045													Yes	24									
Type GB Gearmotor																										
42R-GB	42R5	17.5	11.458	4.73	5.06	3.335	2.38	.750	2.150	.75	Key	[3]5/16 -18 UNF-2B x .50 Deep Max. on 2.913 B.C.	3.00	2.00	[4]1/4 -20 UNF-2B .40 Deep Min.	No	12									
	42R6	19.5	11.893													Yes	12									
33A-GB	33A5	13.6	11.067	3.39	4.38											2.362	.748	2.150	.750	Key	[4] M6 X 1-6H .45 Deep Max.	[4]1/4 -20 UNF-2B .45 Deep Min.	No	24		
	33A7	14.9	12.268																				Yes	24		
42A-GB	42A5	18.0	11.554	4.26	4.82																		2.38	.750	2.150	.750

Only the first four characters of the product type are relevant to dimensions

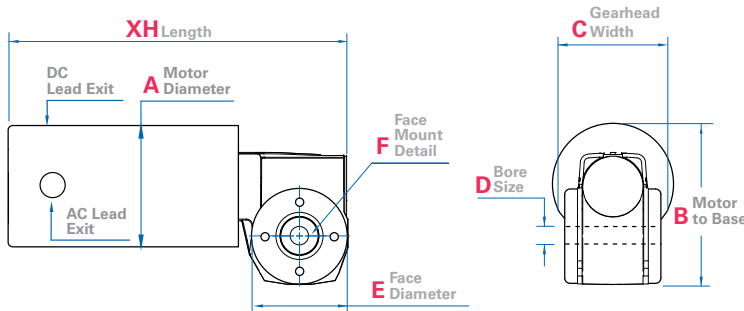
Hollow Shaft Gearmotor Dimensions

Dimensions (in inches) are for reference only. For CAD drawings and up-to-date specifications, please visit www.bodine-electric.com.



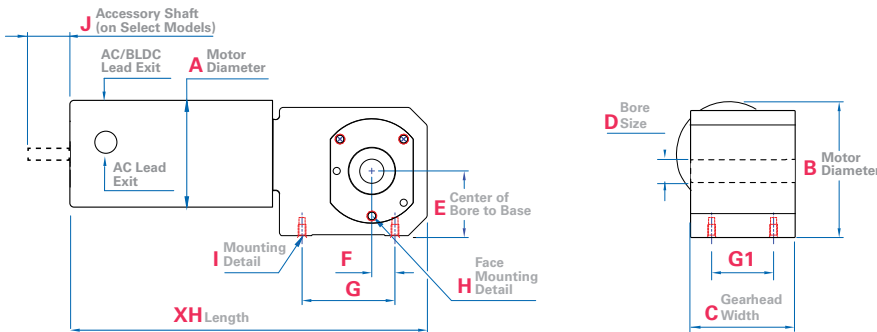
Gearhead Type 3F/H, pages 12-13 (Mounts from Gearhead)

	Wt. (lbs.)	XH Length	A Diameter	B Motor to Base	C Gearhead Width	D Bore Size	E Bore to Base	F Bore to Mtg. Hole	G Base Length	G1 Base Width	H Mounting Hole Length	H1 Mounting Hole Width	I Mounting Detail	J Face Mount Detail	K Acc'y Shaft	Cord/Lead Length (in.)
24A4-3F/H	5.3	7.422	2.42	3.57	3.085	.502	1.280	1.000	2.56	3.085	2.00	1.188	[4] 1/4 -20 UNF-2B .35 Min. Deep Max.	[3] 10-32 UNF-2B .35 Min. Deep on 2.125 B.C.	Yes	24
22B4-3F/H	5.4	7.677	2.378	3.80											No	12 or 24
22B4-3F/H INTEGRA	5.4	8.79	2.93	3.823											No	None



Gearhead Type 5L/H, page 14 (Face Mount)

	Product Type	Weight (lbs.)	XH Length	A Diameter	B Motor to Base	C Gearhead Width	D Bore Size	E Face Diameter	F Face Mount Detail	Lead/Cord Length (in.)
33A-5L/H	33A5		9.711	3.39	5.04	2.740	.627	3.50	[4] 1/4-20 UNF-2B x .44 Min. Deep on 2.375 B.C.	24
42R-5L/H	42R6		10.540	4.73	5.71					None



Type GB/H, page 17 (Face Mount)

	Product Type	Wt. (lbs.)	XH Length	A Diameter	B Motor to Base	C Gearhead Width	D Bore Size	E Bore to Base	F Bore to Base	G Mounting Hole Length	G1 Mounting Hole Width	H Face Mounting Detail	I Mounting Detail	J Acc'y Shaft	Lead/Cord Length (in.)
42R-GB/H	42R5	17.5	11.456	4.73	5.06	3.335	.752	2.150	.75	3.00	2.00	[3] 5/16-18 UNF-2B x .44 Max. Deep on 2.913 B.C.	[4] 1/4-20 UNF-2B x .40 Min. Deep	No	12
	42R6	19.5	11.893											No	24
33A-GB/H	33A5	13.6	11.067	3.39	4.38									No	24
42A-GB/H	42A5	19.5	11.554	4.26	4.82									Yes	24

Only the first four characters of the product type are relevant to dimensions