Browning®

CbN Helical In-line Gearmotors and Speed Reducers

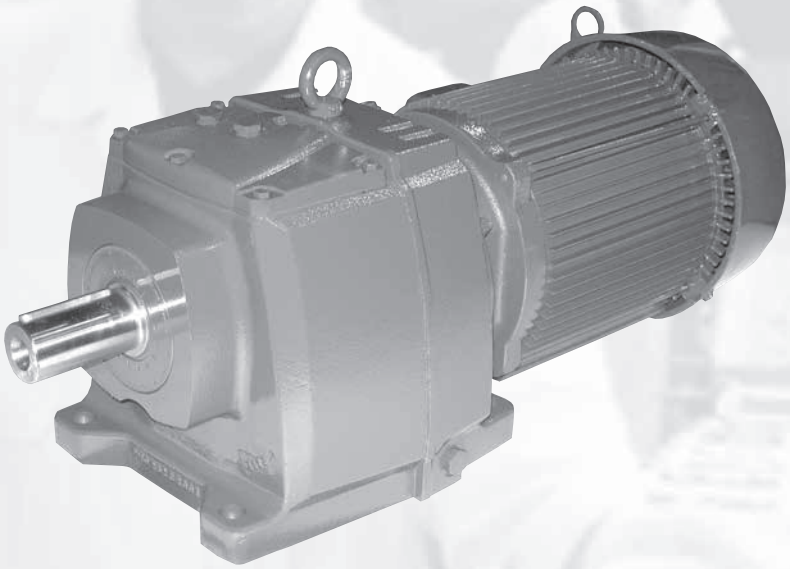
CbN Series

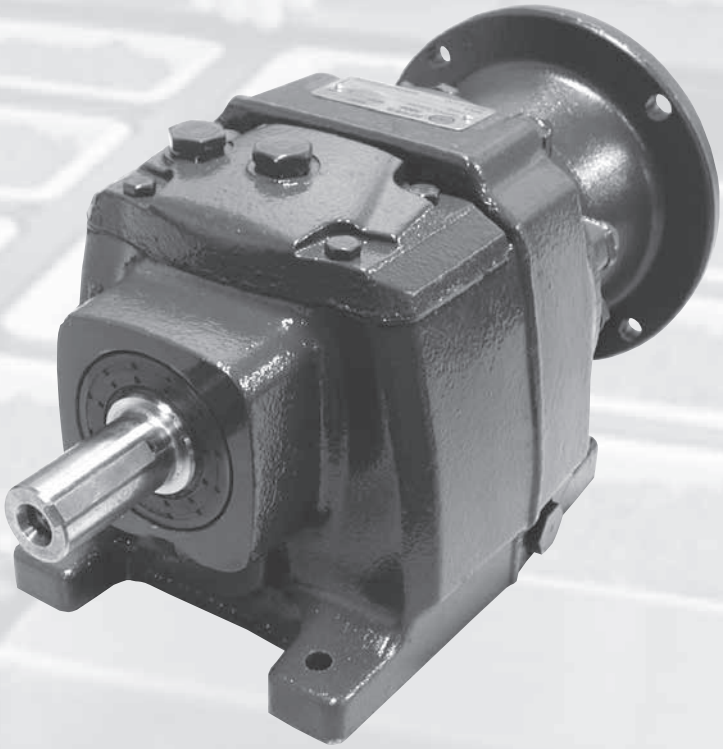
Industries

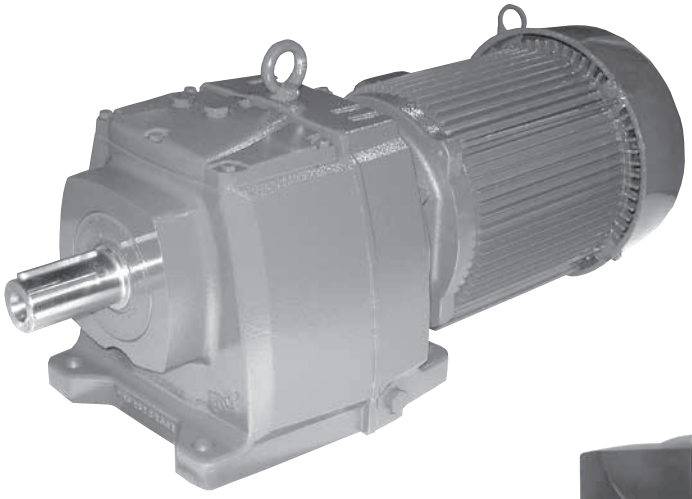
- ❑ Food Processing
- ❑ Warehousing
- ❑ Parcel and Package Sortation
- ❑ Water/Wastewater Treatment

Applications

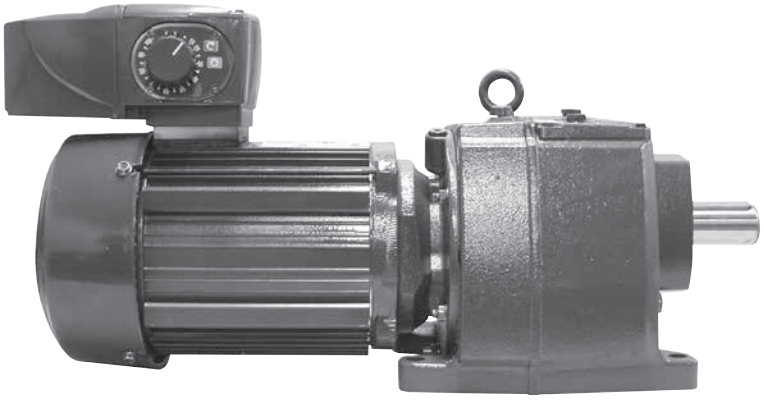
- ❑ Positive Displacement Pumps
- ❑ Unit Handling Conveyors
- ❑ Oven Conveyors
- ❑ Low Speed Fans
- ❑ Industrial Door Openers



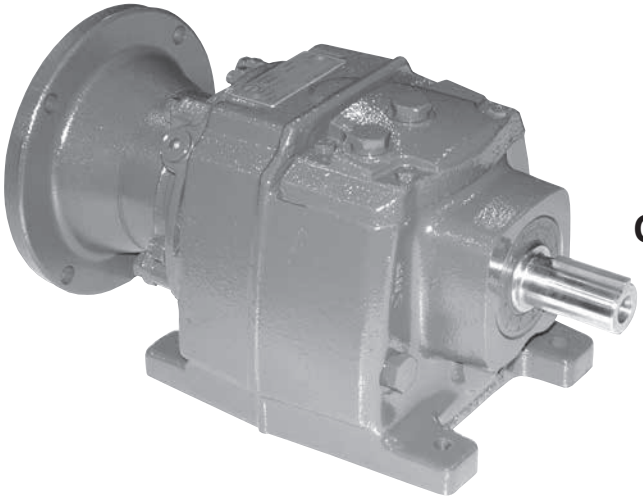




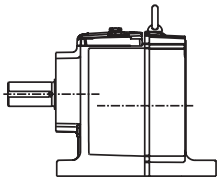
TEFC Three and Single Phase



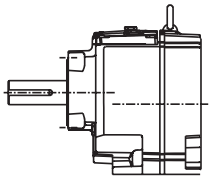
IntelliGear®



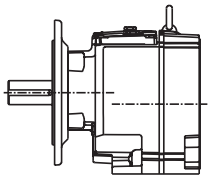
C-Face Reducer



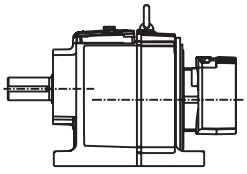
Foot Mount
1, 2, 3 stages
Frames 0 – 8
Max. 134,000 in. lbs.



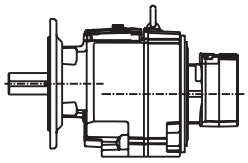
Face Mount
1, 2, 3 stages
Frames 0 – 8
Max. 134,000 in. lbs.



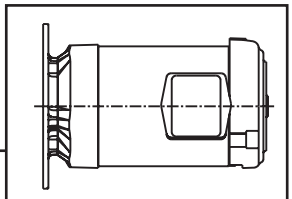
Flange Mount
1, 2, 3 stages
Frames 0 – 8
Max. 134,000 in. lbs.



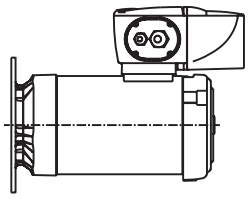
Foot Mount
4, 5, 6 stages
Frames 2 – 8
Max. 134,000 in. lbs.



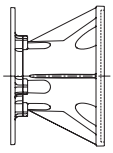
Flange Mount
4, 5, 6 stages
Frames 2 – 8
Max. 134,000 in. lbs.



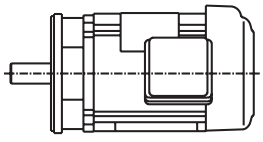
Gearmotors
1/3 - 50 HP



Variable Speed
IntelliGear®
1/3 - 10 HP

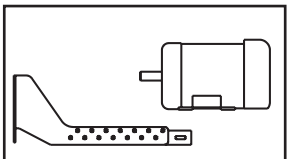


NEMA C-Face
56C to 365 TC
Frames 0 – 8

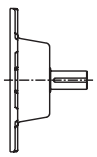


C-Face Motors
Frames 56 C - 365 TC

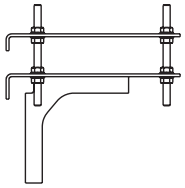
Backstop Option **



Scoop Mount
Frames 2 - 8*
56 to 326T



Input Shaft
Frames 0 – 8



Top Mount
Frames 2 - 8*
56 to 326T

* Excluding frames 2 and 3 single stage and frames 2 - 7 combined 4 and 5 stage product. Refer to dimension pages for availability.

** Excluding Frame 0 all stages and Frame 2-3 : 4,5 and 6 stage

Selection Information

General

CbN 3000 helical gearmotors and speed reducers incorporate the latest in design and manufacturing technologies to deliver an energy efficient, helical, gear train combined with either a constant or variable speed motor. This latest generation of CbN inline gearing is 98 percent efficient per gear stage and boasts total efficiency improvements over previous designs by delivering up to 40 percent more total speed reduction without added gear stages.

Gearmotors

Three phase CbN gearmotors are available with HE type high efficiency motors in non-hazardous enclosures starting 1/3 HP at standard lead-times. These motors comply with requirements in the US and Canada for energy efficiency to deliver superior operating cost savings, reduced motor temperature rise and 5:1 minimum constant torque output (60-11Hz) from PWM power supplies for the End User. There are several motor enclosure options within the HE umbrella including Corro-Duty® cast iron exterior construction for most hostile environments. These features are complimented by the standard use of inverter duty winding materials that comply with NEMA MG1 Part 31. Emerson also offers gearmotors with 1 phase TEFC motors to 5 HP and Explosionproof 3 phase gearmotors to 10 HP.

Housing

One-piece housings replace the classical two-piece designs to improve alignment and overhung load integrity in the most demanding applications. Extremely compact envelopes provide low profiles and the footprint to directly interchange with older CbN products for simple aftermarket replacements. All housings are cast, with frames made with high strength cast iron (frame 0 is aluminum). Motor interfaces are generally shorter than previous CbN designs.

Performance

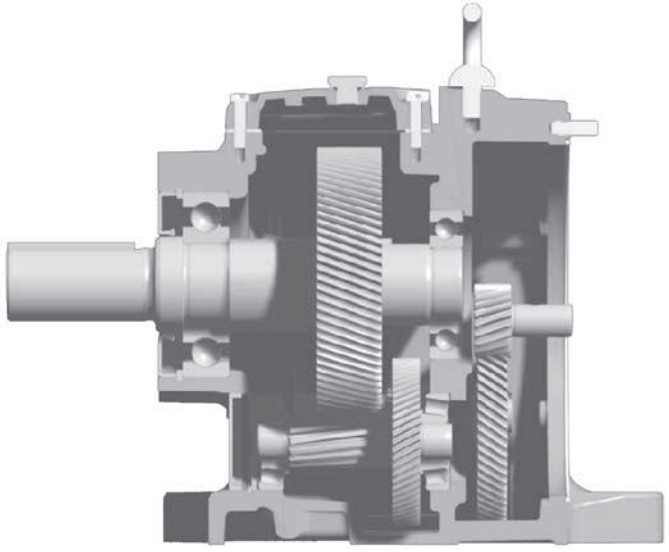
These CbN designs deliver up to 35 percent more capacity than previous CbN products in equivalent frames. For replacements, this means longer life. For new applications, this means cost savings through possible downsizing. Each CbN unit is factory filled with synthetic lubricant, ready to operate in a wide band of ambient temperatures with minimal in-service maintenance.

Flexibility

Improvements in CbN designs begin with the expansion of flange mounting options available. Three phase motor designs now incorporate an upgraded wire and varnish treatment called Allguard®, making many of them suitable for inverter applications. C-Face inputs utilize a compact quill design with a non-metallic liner and metal key to eliminate fretting corrosion while delivering a compact length. Each housing can be oriented in different mounting positions by a minor adjustment in oil volume and relocation of breather/drain locations. Varidyne® inverter duty motor designs deliver up to 10:1 constant torque speed range gearmotors off-the-shelf.

Reliability

Gear housings 1 to 5 are fitted with normally closed breathers, excluding outside contaminants and preserving low internal operating pressure. All oil seals operate on plunge ground shaft surfaces to deliver extended life. Enhanced insulating materials and other standard features of our Varidyne Inverter duty motors carry a 3 year warranty when operating with PWM inverter power up to 575 VAC.



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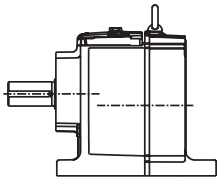
Browning®

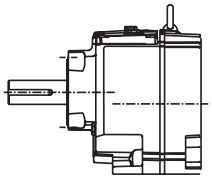
Gearmotors

CbN SERIES 3000

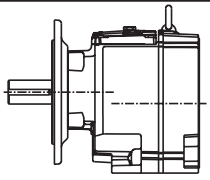
Mounting Versatility and Size Range



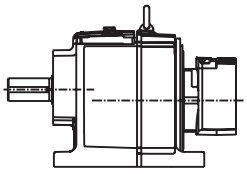
Foot Mount
1,2,3 stages
Frames 0 – 8
Max. 134,000 in. lbs.



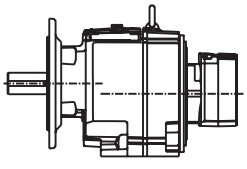
Face Mount
1,2,3 stages
Frames 0 – 8
Max. 134,000 in. lbs.



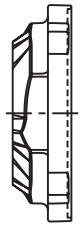
Flange Mount
1,2,3 stages
Frames 0 – 8
Max. 134,000 in. lbs.



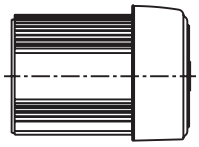
Foot Mount
4,5,6 stages
Frames 2 – 8
Max. 134,000 in. lbs.



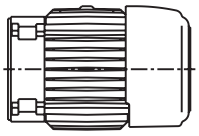
Flange Mount
4,5,6 stages
Frames 2 – 8
Max. 134,000 in. lbs.



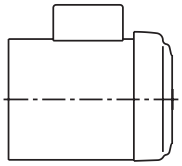
Gearmotor Bracket



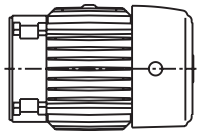
Three Phase TEFC
1/3 – 50 HP



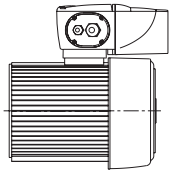
Corro-Duty®
1/3 – 50 HP



Single Phase TEFC
1/3 – 5 HP

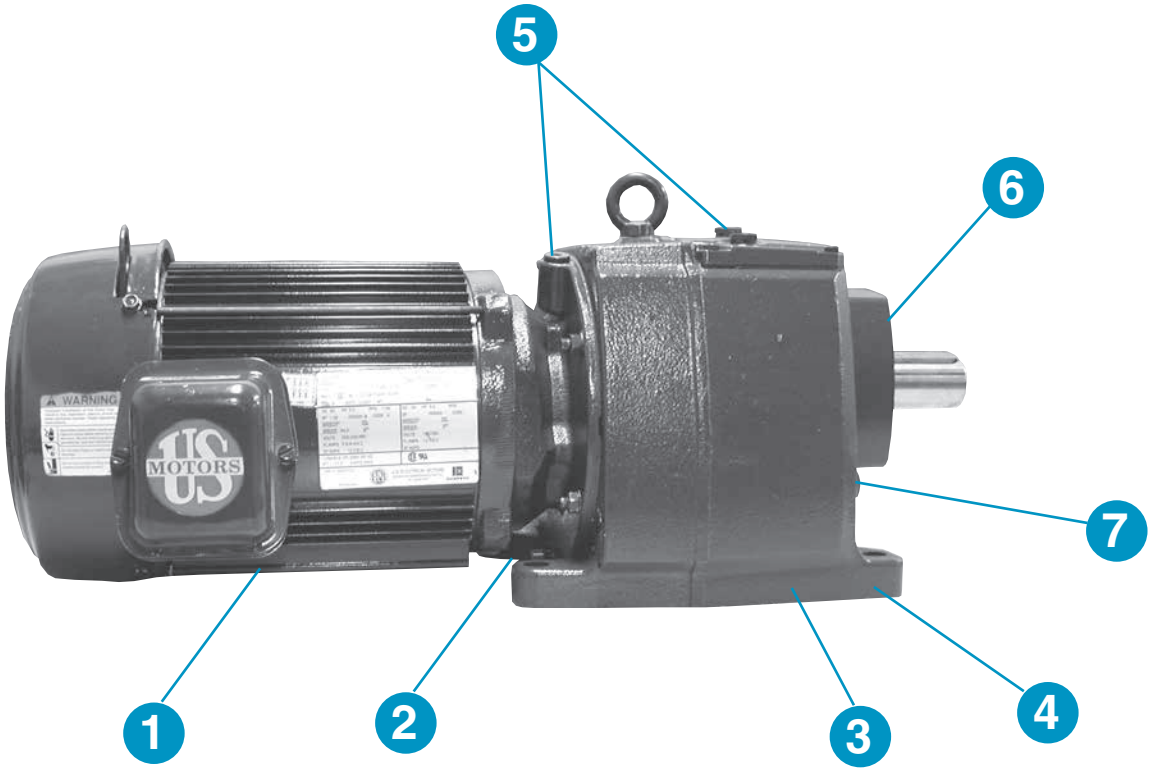


Explosionproof
1/3 – 10 HP



IntelliGear®
1/3 – 10 HP

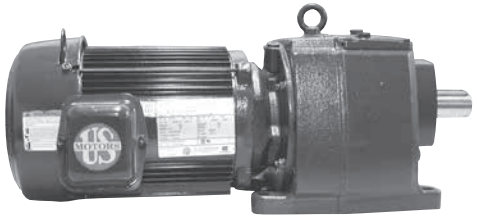
Type CbN In-line Helical Series 3000 Gearmotors Features...



Design Features

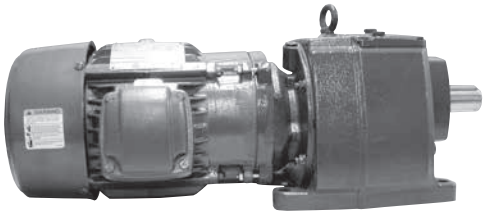
1. High Efficiency Motor Design Available
   - Any non-XP 3 phase gearmotor
2. Innovative, self-locking, taper shaft connection (motor to gear) allows on-site replacement without removing oil, primary pinion, or disconnecting the load.
3. Gearbox is delivered filled with synthetic oil, ready to use.
4. Corrosion resistant, cast iron housings are one piece and ribbed for extra strength. (Size 0 housings are cast aluminum housings.)
5. Gears are made of 8620, heat treated, nickel chromium, molybdenum steel. Helical gearing is skived, superfinished, or ground after case hardening to 58-62 Rc.
6. Multiple breather locations. Breathers are normally closed during construction to exclude contaminants.
7. Double lip seals are installed on plunge ground shafts.
8. Magnetic drain plug is supplied as standard.

Motor Options



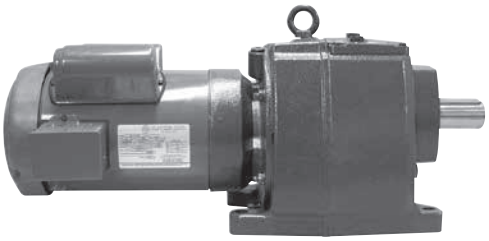
TEFC – Three Phase

- Suitable for general purpose industrial applications
- High Energy efficient design standard
- Premium efficiency design available > 2 HP
- 1.25 service factor through 5 HP; 1.15 service factor above 5 HP
- Premium class F Allguard® insulation standard
- 40°C ambient, NEMA B design, continuous duty
- Inverter duty motor per NEMA MG1 part 31 stocked
- Washdown gearmotors available to 2 HP



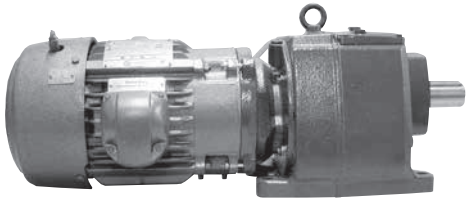
Corro-Duty®

- Designed for wet, corrosive applications and industries including waste treatment, mining and lumber.
- All cast iron construction (56 and 140 frames are rolled steel)
- High efficiency standard 1/3 HP and larger
- Premium efficiency option 3 HP and larger
- 1.15 service factor, class F Allguard® insulation
- Condensation drains in motor and conduit box
- 40°C ambient, NEMA design B, continuous duty
- Inverter duty version per NEMA MG1 part 31 stocked to 50 HP



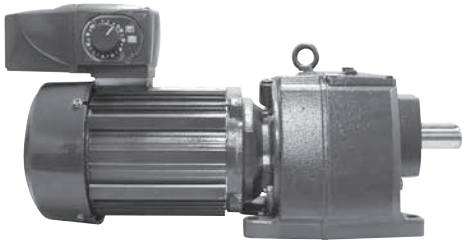
TEFC – Single Phase

- For agricultural, light material handling, textile, and light pumping applications
- 1.25 service factor
  (1.0 service factor, 2 HP)
  (1.15 service factor, 3-5 HP)
- Capacitor start
  (capacitor run above 1/2 HP)
- Class B insulation, continuous duty, reversible



Explosionproof

- Ideal for the petro-chemical, grain, mining, and chemical industries
- Class I, group D, class II, groups F and G
- All cast iron construction (plastic fan cover)
- 1.0 service factor, class B insulation
- 40°C ambient, NEMA B design, continuous duty
- UL approved Inverter duty per NEMA MG1 part 31 available



IntelliGear®

- Variable speed gearmotor with NEMA 4/12 enclosure
- "Onboard" push button and remote speed changing options
- Pre-programmed 6:1 constant torque speed range
- Versions for 3/460V input power supplies from 1/3 to 10 HP
- 1/230V to 2 HP, 3/230V to 5 HP
- 1/115 V through 3/4 HP
- UL, CUL and CE
- Optional 10:1 and 15:1 speed ranges

Selection Information

1. Input HP
   - Based on application data.

2. Speed / ratio
   - Obtain either desired output speed (rpm) or gearbox ratio based on application.

3. Mechanical service factors - gears
   - There are three standard classifications for gearmotor applications:

     Class I - Uniform loading, 3-10 hours per day, service factor 1.0 (minimum).

     Class II - Uniform loading over 10 hours per day or moderate shock loading up to 10 hours per day; service factor 1.4 (minimum).

     Class III - Moderate shock loading over 10 hours per day or heavy shock loading up to 10 hours per day; service factor 2.0 (minimum).

   - The tables on pages A-21 through A-23 are based on past operating experience within the industries listed and information gathered by AGMA. If the user has data reflecting greater severity than normal industry usage, then the AGMA class should be increased.

   - Choose the AGMA class for your given application based on this criteria. If your application cannot be found, use the following table to determine the service factor.

Duty Cycle	Hours Operation	Uniform Load **U**	Moderate Shock Load **M**	Heavy Shock Load **V**
Continuous	0 - 3	0.80	1.00	1.50
	3 - 10	1.00	1.25	1.75
	10 - 24	1.25	1.50	2.00
Frequent Starts/Stops*	0 - 3	1.00	1.25	1.75
	3 - 10	1.25	1.50	2.00
	10 - 24	1.50	1.75	2.25

*Greater than 10 per hour.

Size Selection

Step 1 - Locate gearmotor selection tables (pages A-24 - A-67) based on input HP.

Step 2 - Choose the appropriate nominal speed required.

Step 3 - Select the correct gearmotor based on AGMA class or service factor determined in selection information.

Step 4 - Verify overhung load ratings where required (see below).

Overhung Load

When a sprocket, sheave, pulley, or pinion is mounted on the take-off shaft of a gearmotor, it is necessary to calculate the overhung load. This calculated load must be compared with the gearbox capacity listed to make sure the gearbox will not be overloaded. To calculate the overhung load you need to know the torque or horsepower at the take-off shaft and the location along the shaft at which the load is applied.

A. If torque is known:

$$OHL = \frac{T \times K \times LLF}{r}$$

B. If horsepower is known:

$$OHL = \frac{63025 \times HP \times K \times LLF}{rpm \times r}$$

Where:
OHL = Overhung load (pounds)
T = Torque (in. lbs.)
r = Radius of driving member (in.)
HP = Horsepower
K = Drive type factor
LLF = Load location factor

Driving Member	Value of K
Chain Drive	1.00
Pinion	1.25
V-Belt	1.50
Timing Belts	1.25

Load Location	Value of LLF
End of shaft extension	1.20
Center of shaft extension	1.00
Shaft extension shoulder	0.80

Browning

Constant Speed Gearmotor Selection

CbN SERIES 3000

Example

A horizontal, foot mounted gearmotor is required to operate a uniformly loaded, assembly conveyor at 44 rpm, 24 hours per day. An 8" diameter sprocket is mounted at the end of the shaft and drives the conveyor with a chain. The load is 3 HP and the customer requests a 230/460 volt, High Efficiency TEFC motor end.

Step 1...

The AGMA service classification table on page A-21 indicates that this is a Class II application.

Step 2...

The CbN gearmotor table on page A-44 indicates that a gear frame 3363 will do the job.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
44	I,II	1.4	4099	2305	40	3363	182T	T,S,C,X, IG

Step 3...

To check overhung load for the example:

$$r = \frac{\text{Sprocket Diameter}}{2} = \frac{8}{2} = 4$$

K = 1.0 (chain drive)

LLF = 1.2 (sprocket on end of shaft)

HP = 3

Torque formula:

$$OHL = \frac{63025 \times HP \times K \times LLF}{rpm \times r}$$

$$OHL = \frac{63025 \times 3 \times 1.0 \times 1.2}{44 \times 4} = 1289 \text{ lbs.}$$

The overhung load capacity of 2305 lbs. listed is greater than the calculated overhung load value of 1289 lbs.

Step 4...

Confirm that no modification is required.

Step 5...

Catalog designation (see "Ordering" page A-13):

CbN • 3363 • S • B3 • 40 • HT24 • 182T • 3

Selection Information

1. Determine installation environment
   - Control enclosure is NEMA 4/12
2. Input HP
   - For constant torque loads this is at maximum speed of range
3. Speed range
   - Confirm maximum and minimum of needed range.
4. Determine control power supply
   - Phase and voltage

Power Supply	Input HP's
1 ph / 115 v	.33 to .75
1 ph / 230 v	.33 to 2
3 ph / 230 v	.33 to 5
3 ph / 460 v	.33 to 10
3 ph / special	R. O.

5. Mechanical service factoring of gear
   - Refer to page A-9 for this procedure.

   Note: IntelliGear application for 1 phase power supply is limited to 10 starts per hour.

6. Determine speed adjustment (see Section F)
   - Select from:

   PD = Digital keypad with forward/reverse/stop/ speed up/speed down/speed display on IntelliGear enclosure
   P1 = Run/stop/speed pot. mounted on IntelliGear enclosure
   P2 = Forward/reverse/stop/pot. mounted on IntelliGear enclosure
   P3 - Speed pot. (only) mounted on IntelliGear enclosure (start/stop by others)
   P4 = Speed pot. (only) mounted inside IntelliGear enclosure (start/stop by others)
   R = Remote signal following (0-10VDC or 4-20mA supplied by others)

Size Selection

Step 1 - Determine the maximum motor rpm from the following table based on the whether the application requires a speed range of 6:1, 10:1 or 15:1.

$$\text{Speed Range} = \frac{\text{Maximum Output Speed Required}}{\text{Minimum Output Speed Required}}$$

HP	IntelliGear Motor Speed Range		
	6:1 Speed Range	10:1 Speed Range	15:1 Speed Range
1/3 - 3/4 HP	1760 - 293 rpm	1760 - 176 rpm	2625 - 175 rpm
1 - 1 1/2 HP	1750 - 291 rpm	1750 - 175 rpm	2620 - 175 rpm
2 HP	1750 - 291 rpm	2585 - 255 rpm	N. A.
3 HP	1750 - 291 rpm	2630 - 263 rpm	N. A.
5 HP	2150 - 358 rpm	2605 - 260 rpm	N. A.
7.5 HP	2150 - 358 rpm	2670 - 267 rpm	N. A.
10 HP	2100 - 350 rpm	2600 - 260 rpm	N. A.

Step 2 - Determine the gear ratio required. Use the maximum motor rpm from the table above.

$$\text{Gear Ratio} = \frac{\text{Maximum Motor Speed}}{\text{Maximum Output Speed Req'd}}$$

Step 3 - Locate gearmotor selection tables based on the input HP required at the ratio calculated in Step 2. Select the nominal gear ratio closest to the one calculated.

Step 4 - Select correct gearmotor that meets or exceeds the AGMA class or service factor determined in the selection information.

Step 5 - Verify overhung load rating where applicable per formulas on Page A-9.

Step 6 - Confirm input power supply is compatible with HP of selection and record speed adjustment option desired for the application.

Step 7 - Referring to Page A-17, determine if an alternate controller location is required for the application. Default location is "FO" (at 12 o'clock).

* Maximum motor rpm will be 2150 @ 74 Hz for 5HP IntelliGear.

Gearmotor Selection

Selection Example

A foot mounted gearmotor is required to operate a positive displacement pump from 220 to 40 rpm, 16 hours a day in a waste treatment plant. The output shaft will be coupled to the pump. The customer required approximately 4.7 HP at the maximum rpm. The job site power supply is 3 phase and 460 VAC. The control of speed requires the IntelliGear to follow a 4-20 mA signal supplied by a process control system.

Step 1...

The closest gearmotor HP to meet this application is a 5 HP design.

Step 2...

Determine the specific selection output rpm and ratio for 5 HP IntelliGear

Maximum Speed / 1.2 = "selection table" rpm

220 / 1.2 = approx. 183 rpm

Step 3...

The AGMA service classification indicates this is an AGMA Class II (1.4 minimum S.F.) application. From this information, on page A-66 a CbN 3242 and motor frame 184T with 10:1 nominal ratio is the correct gearmotor.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
181	I	1.3*	1804	782	10	3242	184T	T,S,C,X,IG

* The catalog "service factor" is @ 60 Hz. The 5 HP IntelliGear maximum rpm is @ 74 Hz. Adjust the "service factor" by (x 1.2) to calculate the service factor @ 74 Hz.

Step 4...

This application does not involve any OHL calculations due to coupling connection.

Step 5...

The power supply of 3 phase / 460 VAC is ok for 5 HP IntelliGear and the speed changing option will be "R" per table on the preceding page.

Step 6...

Catalog designation (see also "Ordering" on page A-13) will be

CbN • 3242 • S • B3 • 10 • IG4 • 184T • 5 w/"R" speed option

Catalog Nomenclature

CbN • 3122 • S • B3 • 40 • HT5 • 145T • 1.5

See Table Below Prior to Ordering

See Page A-16 Prior to Ordering

Series	Gear Frame	Number of Reductions	Mounting Configuration For Gear (Housing and Shaft Extension)	Mounting Plane	Nom. Gear Ratio	Motor Design	Motor Frame	Motor HP
3 = 3000	0 1 2 3 4 5 6 7 8	1 = 1 stage 2 = 2 stages 3 = 3 stages 4 = 4 stages 5 = 5 stages 6 = 6 stages	Refer to the illustrations below of the basic mounting options based on gear frame and stages of reduction. For Flanged gear mounting, refer to details for options that are available based on frame size, flange dimensions, and thrust loads for the application on page A-14.	See Page A-33	Determine from selection pages	Select motor based on enclosure, power supply, and the poles required	56 B56 143T 145T 182T 184T 213T 215T 254T 256T 284T 286T 324T 326T	1/3 1/2 3/4 1 1 1/2 2 3 5 7 1/2 10 15 20 25 30 40 50

Gear Output	Foot Mounted	Foot Mount w/ Flange	Flange Mount (footless)		Face Mount (footless)
			Std. Thrust	High Thrust	
Configuration Code (inches)	**S**[1]	See Page A-14	See Page A-14	See Page A-14	**B14**
Frame(s) Available	All	See Page A-14	All	See Page A-14	30 - 35

[1] Inch output shaft. For output with metric shaft, insert "M" following last alpha character (i.e. metric footmount, S becomes SM).

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Flange Mounted Gearing and Availability Guide

CbN SERIES 3000

Flange - No Feet

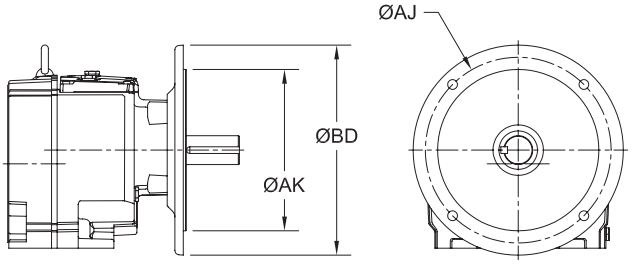
		Output Flange Dimensions Available												
	Reduction Stages		Inches	MM										
		BD	6.50	120	140	160	200	250	300	350	400	450	550	650
		AK	4.50	80	95	110	130	180	230	250	300	350	450	550
		AJ	5.875	100	115	130	165	215	254	300	350	400	500	600
		Gear Frame												
Normal Thrust	Single	30	56C	BD1	BS	BD2	BD3							
		31			BD2	BS								
		32				BD2	BS							
		33					BD2	BS						
		34						BD2	BS					
		35							BD2	BS				
	Multiple	30	56C	BD1	BS	BD2	BD3							
		31		BD3	BD2	BD1	BS							
		32				BD2	BD1	BS						
		33					BD2	BD1	BS					
		34						BD2	BD1	BS				
		35							BD2	BD1	BS			
		36										BD1	BS	
		37										BD1	BS	
		38											BD1	BS
High Thrust	Multiple	33						BR						
		34							BR					
		35								BR				

Footed - with Flange

		Output Flange Dimensions Available												
	Reduction Stages		Inches	MM										
		BD	6.50	120	140	160	200	250	300	350	400	450	550	650
		AK	4.50	80	95	110	130	180	230	250	300	350	450	550
		AJ	5.875	100	115	130	165	215	254	300	350	400	500	600
		Gear Frame												
Normal Thrust	Single	31			SBD2	SBS								
		32				SBD2	SBS							
		33					SBD2	SBS						
		34						SBD2	SBS					
		35							SBD2	SBS				
	Multiple	30A		SBD1	SBS									
		31		SBD3	SBD2	SBD1								
		32					SBD1	SBS						
		33						SBD1	SBS					
		34							SBD1	SBS				
		35								SBD1	SBS			
		36										SBD1	SBS	
		37										SBD1	SBS	
		38											SBD1	SBS

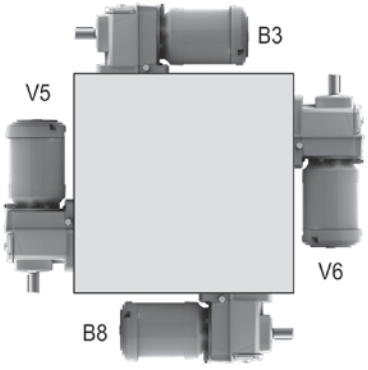
Shaded fields indicate factory lead-time applies

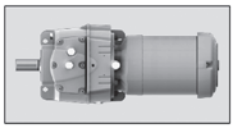
Note: For metric output shaft on any output nomenclature above, add "M" before any numeric designator. (i.e. metric shaft with BD1 flange = BDM1)

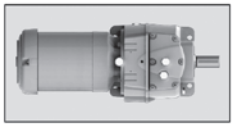


Mounting Positions

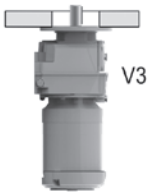
Foot Mounted (with/without flange) Any Reduction

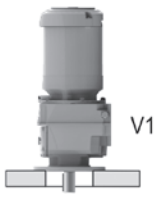


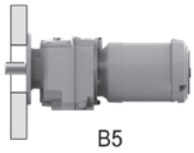




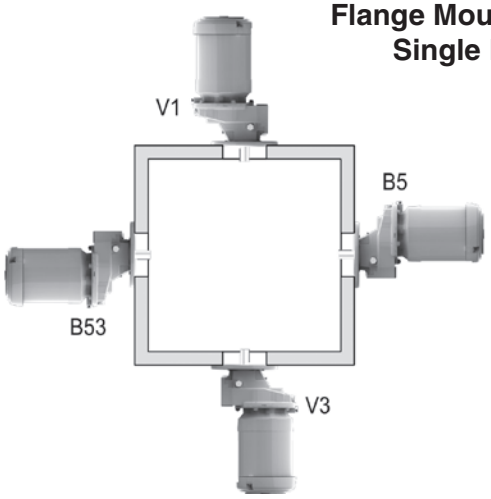
Flange Mounted (footless) Multiple Reductions

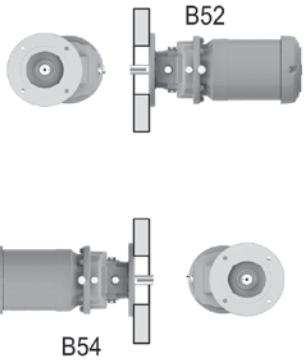






Flange Mounted (footless) Single Reduction





Browning®

Standard Motor Input Types

CbN SERIES 3000

Example: High Efficiency, TEFC, 3 phase 60 Hz, 575V, with Fail-safe Brake

H T 5 B

1 2 3 4

1 Efficiency

- **"blank"** Normal
- **H** High
- **I** Inverter Duty
- **P** Premium

2 Enclosure, pole

- **T** TEFC, 4 pole
- **C** Corro-Duty, 4 pole
- **W** Washdown, 4 pole
- **WP** Washdown Plus, 4 pole
- **X** Explosionproof, 4 pole
- **G** IntelliGear, 4 pole

3 Phase, Hz, Voltage

- **S1** 1 Phase, 60, 115V
- **S12** 1 Phase, 60, 115/230V
- **S2** 1 Phase, 60, 230V
- **2** 3 Phase, 60, 230V
- **24** 3 Phase, 60, 230/460V
- **53** 3 Phase, 50, 380V
- **4** 3 Phase, 60, 460V
- **54** 3 Phase, 50, 400/415V
- **5** 3 Phase, 60, 575V

4 Accessories

- **"blank"** No Brake
- **B** Fail-safe Brake

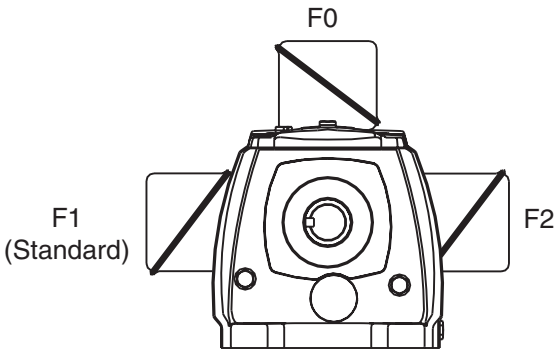
Base Design	Input Code	Motor HP															
		0.33	0.50	0.75	1	1.5	2	3	5	7.5	10	15	20	25	30	40	50
S Single Phase TEFC	TS12	Y	Y	Y	Y	Y	Y	-	-	-	-	-	-	-	-	-	-
	TS12B	Y	Y	Y	Y	Y	Y	-	-	-	-	-	-	-	-	-	-
	TS2	-	-	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-
	TS2B	-	-	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-
T 3 Phase TEFC	HT24	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	HT24B	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	-	-	-	-	-	-
	HT5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	HT5B	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	-	-	-	-	-	-
	T24	Y	Y	Y	Y[1]	Y	Y	Y	Y	Y	Y	-	-	-	-	-	-
	T24B	Y	Y	Y	Y[1]	Y	Y	Y	Y	Y	Y	-	-	-	-	-	-
	T5	Y	Y	Y	Y[1]	-	-	-	-	-	-	-	-	-	-	-	-
	T5B	Y	Y	Y	Y[1]	Y	Y	Y	Y	Y	Y	-	-	-	-	-	-
	T53	Y	Y	Y	Y[1]	Y	Y	Y	Y	P	P	P	P	P	P	P	P
	T54	Y	Y	Y	Y	Y	Y	Y	Y	P	P	P	P	P	P	P	P
	IT24	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	IT24B	Y	Y	Y	Y	Y	Y	Y	Y	-	-	-	-	-	-	-	-
	IT5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	IT5B	Y	Y	Y	Y	Y	Y	Y	Y	-	-	-	-	-	-	-	-
	PT24	-	-	-	-	-	-	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	PT5	-	-	-	-	-	-	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	W24	Y	Y	Y	Y[1]	Y	Y	-	-	-	-	-	-	-	-	-	-
	W5	Y	Y	Y	Y[1]	Y	Y	-	-	-	-	-	-	-	-	-	-
	WP24	Y	Y	Y	Y[1]	Y	Y	-	-	-	-	-	-	-	-	-	-
	WP5	Y	Y	Y	Y[1]	Y	Y	-	-	-	-	-	-	-	-	-	-
C 3 Phase Corro-Duty	HC24	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	HC5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	IC24	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	IC5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	PC24	-	-	-	-	-	-	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	PC5	-	-	-	-	-	-	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
X 3 Phase Explosionproof	X24	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	-	-	-	-	-	-
	X5	Y	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
	IX24	P	P	P	P	P	P	P	P	P	P	-	-	-	-	-	-
IG IntelliGear®	IGS1	Y	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
	IGS2	Y	Y	Y	Y	Y	Y	-	-	-	-	-	-	-	-	-	-
	IG2	Y	Y	Y	Y	Y	Y	Y	Y	-	-	-	-	-	-	-	-
	IG4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	-	-	-	-	-	-

P = Production lead-time Y = Available from stock Y[1] = Motor frame is B56 - = not available

Electrical Connection Options

Conduit Box Location

When ordering a conventional CbN gearmotor, specify the desired conduit box location when viewing unit output shaft in B3 or B5 position. If no option is specified, the "F1" location will be supplied.

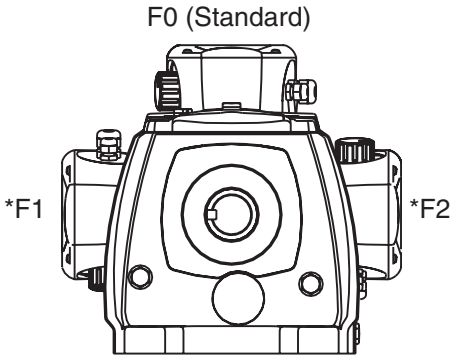


Conduit Box

IntelliGear Controller Location

When ordering an IntelliGear® CbN gearmotor, you can specify the controller location and conduit entry location when viewing the unit output shaft in B3 or B5 position. If no options are specified, the "F0" controller location will be supplied.

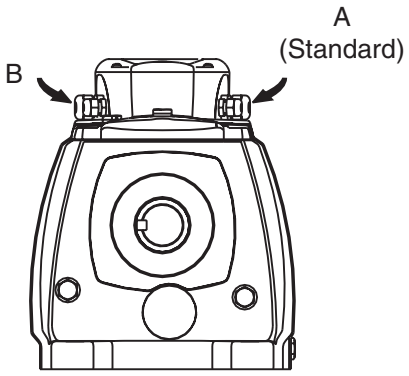
* Refer to Application Engineering for de-rating guidance.



IntelliGear® Controller

Cable Entry

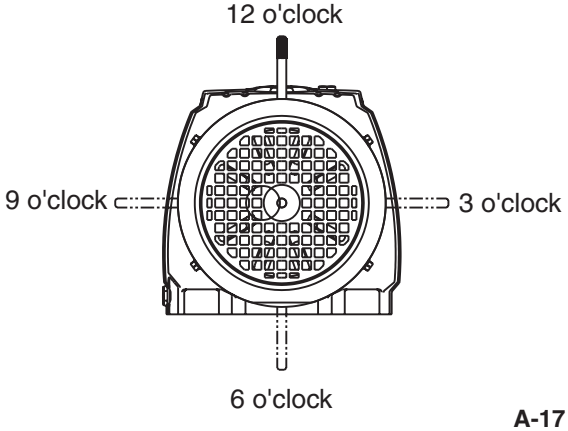
IntelliGear cable entry can be from either side of the enclosure. If no option is specified, "A" will be supplied.



Cable Entry

FCR DC Brake Manual Release Lever Location

Unit Type	Default Location	Optional Location(s)
CbN less IntelliGear	12 o'clock	3, 6, or 9 o'clock
CbN with IntelliGear	9 o'clock	3, 6, or 12 o'clock (lever can not be in same position as IntelliGear)



Modifications, Options and Accessories

Inverter Duty Gearmotors

Improvements in the motors for CbN gearmotors include an upgrade in the wire and varnish treatment used in all non-explosionproof three phase motors called Allguard. This makes the three phase gearmotor suitable for use with PWM inverters in many applications. A one year warranty will be extended for standard efficiency motors on constant torque applications over 3:1 range from 60-20 Hz. The same warranty is extended for high efficiency design motors on constant torque applications over 5:1 range from 60-12 Hz providing the following conditions are met:

- Motor is non-hazardous 3 phase > 48 frame
- Cable length to controller < 100 feet
- Line voltage is < 480 VAC
- Thermal protectors are not required

For all other conditions of operation (including 575 VAC) that exceed these parameters and all hazardous motor applications, select the inverter duty motor design under the motor Type required by the application. These designs include winding thermostats and will be covered by a three (3) year limited warranty of the motor as covered in the Standard Terms and Conditions, and full compliance with NEMA MG1 Part 31.

Motor Modifications

M1 Brakes

Design
These motor mounted brakes have a direct acting, spring set, electromagnetically released disc design. When power to the brake is interrupted, the brake will immediately set and hold. When power is restored to the brake then the brake will be released automatically.

Brake Enclosures
IP23 – suitable for indoors with relatively dry, clean and non-hazardous applications

IP55 – suitable for outdoor or indoor where gearmotor can be exposed to splashing liquids, dusts, and chemicals that are non-hazardous. Not suitable for washdown applications

Non-Hazardous Motor Types	Motor Frame Size(s)	
	56-180T	210T
S	IP23	N/A
T	IP55	IP23
IG	IP55	N/A

Motor Modifications Continued

Operating Voltage
Brakemotors for fixed frequency operation will be arranged for operating with motor power as standard. If another lower voltage like 115 VAC is to be used for the brake on a 3 phase motor, state this voltage at order entry

Brakes for inverter duty brakemotors require a separate fixed frequency AC power source for the brake, but interlocked with starting of the motor. The standard brake design for inverter duty gearmotors will be arranged for single phase 115/230 VAC.

Mounting
Brakes for CbN gearmotors are suitable for the mounting ordered for the gearmotor. The standard brake will have a manual release included. Refer to the table on A-17 for the manual release mounting options available on the FCR type IP 55 brake design.

Ordering
Refer to page A-16. Motor Input Types with a "B" suffix denote a brake mounted at the factory to the end. Define the voltage that will be powering the brake to release it.

M2 Premium Efficiency Motors

High efficiency motor design is a standard option for three phase motors on 56 frames and larger motors in types "T" and "C" to meet the energy legislation in Canada and most end user specifications.

Premium efficiency motors are also optional starting at 3 HP.

M3 Washdown Duty Motors

See GM1 under Gearmotor Modifications

M4 Canopy Cap/Drip Cover

A canopy cap can be supplied for protection from dripping liquids entering the fan end of a gearmotor. It is recommended but not standard when gearmotor mounting is ordered to be "V"

M5 Frequency – 50 Hz

Motors for operation at 50 Hz are available. Refer all 3 phase requirements for 50 Hz to motor code T53 (380V) or T54 (400/415V). The published output speed in catalogs are based on 60 Hz. When operating or selecting a 50 Hz gearmotor, catalog output speed must be reduced by 5/6 for a given ratio. The service factor must also be reduced by 5/6 if the HP is maintained.

For all other 50 Hz voltages, refer to application engineering.

Modifications, Options and Accessories

Motor Modifications Continued

M6 Voltage (3 phase only)
Standard voltages are listed in the table below. 200 VAC will be handled by 208-230/460V motors up to 10 HP. Refer all other voltages to the Pricing Group to confirm availability.

Frequency	3 Phase Voltages Thru 30 HP
60 Hz	200, 230, 460, 575
50 Hz	380, 400/415

M7 Motor Insulation
Emerson's 3 phase motors are built with a premium Class F insulation system for "T", "C" and "IG" types. All "S" and "X" type motors use a Class B insulation.

Tropical insulation treatment is available as a modification on any motor designs noted above

Class H insulation systems require production lead-times and are not available on explosions proof "X" designs.

M8 Space Heaters
Space heaters are recommended for gearmotors installed in very damp locations to prevent condensation from forming on the motor windings when the motor is not operating. Leads will be brought out to the standard motor conduit box. Space heater voltages (115, 230, and 460V) must be specified when an order is entered. This is available on motors > ¾ hp.

M9 Thermal Protection – Thermostats
This protection uses a bi-metallic disc thermostat embedded each phase of the motor winding and then connected by others into the holding circuit of the motor starter or VFD drive. The sensor is normally closed, and opens the control circuit to shut the motor down if the motor achieves over-temperature conditions based on the motor insulation class or design code. Thermostats give protection for running overloads, abnormally high ambient, voltage imbalance, high or low voltage, and ventilation failure. Thermostats do not give protection for locked rotor, starting overloads or single phasing.

Thermostats are standard in inverter duty motor designs (including IG) as well as explosionproof dual label motors type "X".

Gear Modifications

G11 Corro-Duty®
Corro-Duty treatment can be applied to a gearmotor or reducer when corrosive chemicals or unit will be operated outside in adverse environmental conditions. For gearmotors, the unit should start with specification of the Corro-Duty® type "C" motor design. Other special features of this treatment include:

- Normally closed breather design
- Corro-Duty exterior paint treatment (entire unit)
  - o Grey Option
    - ▪ 316 stainless steel paint (3 step)
    - ▪ Light grey semigloss finish
    - ▪ USDA and FDA approved
  - o White Option
    - ▪ Two step epoxy paint system
    - ▪ White gloss finish
    - ▪ USDA and FDA approved

For washdown application for gearmotors, refer to GM1 Washdown Duty Gearmotors and/or Washdown Duty Gearmotor PLUS.

G12a Foodgrade Synthetic Lubricant
When this modification is specified, the CbN oil sump is filled with the required volume of an FDA approved H1 rated synthetic lubricant for helical gearing (refer to page A-224).

G15 Export Boxing
Export boxing can be provided for "under-deck" transport. When the quantity of CbN gearmotors or reducers exceeds five (5) units, refer to international sales for most economical accommodations.

G16 Extra or Special Nameplate
Units can be provided with limited additional special information on the standard product nameplate. When required, an extra nameplate may be provided, stamped with custom markings.

Modifications, Options and Accessories

Gearmotor Modifications

GM1 Washdown Duty Gearmotors

This three phase gearmotor design combine special features of the gear and motor required for washdown duty. These include:

- Special treatment of motor interior and windings
- Drains at low point(s) of the motor frame
- Labyrinth seal at motor SE bracket/shaft extension
- Special “protected” breather for gearcase
- Corro-Duty exterior multi-application paint treatment (see Corro-Duty® Reducer for color options).

Motor types “W24” or “W5” are used to order this design based on motor voltage. This is also available from 1/3 to 2 HP.

GM2 Washdown Duty Gearmotor PLUS

This three phase gearmotor design includes all the special features noted under GM1 above and the oil sump of the reducer will be filled before shipment with a FDA approved H1 rated synthetic lubricant for worm gearing. Volume of the oil will be dictated by the mounting position specified on the order.

Motor types “WP24” or “WP5” are used to order this design based on motor voltage. This is also available from 1/3 to 2 HP.

Accessories

The following accessories can be ordered along with gearmotors and will be supplied loose for mounting by others

Description	Gear Frames	Part #
NPT Adapter (1/4” NPFT)	31 to 35	0436216
NPT Adapter (3/4” NPFT)	36 to 38	0436218
Oil Level View Port	31 to 35	0435936
	36 to 38	0435938

[1] These kits include all mounting hardware.

AGMA Application Classifications

U: Uniform load **M: Moderate shock load** **V: Heavy shock load**

Application	Load	Class Up to 10 hrs/day	Class Over 10 hrs/day
Agitators			
Paper Mills	M	II	II
Pure Liquids	U	I	II
Liquids & Solids	M	II	II
Liquids - Variable Density	M	II	II
Apron Conveyors			
Uniformly Loaded or Fed	U	I	II
Heavy Duty	M	II	II
Apron Feeders	M	II	II
Assembly Conveyors			
Uniformly Loaded or Fed	U	I	II
Heavy Duty	M	II	II
Ball Mills	V	III	III
Barking			
Drums	V	-	III
Hydraulic Auxiliaries	V	-	III
Mechanical	V	-	III
Barscreens (Sewage)	U	I	II
Batchers (Textile)	M	II	II
Beaters and Pulpers (Paper)	U	-	II
Belt Conveyors			
Uniformly Loaded or Fed	U	I	II
Heavy Duty	M	II	II
Belt Feeders	M	II	II
Bending Rolls (Machine)	M	II	II
Bleachers (Paper)	M	-	II
Blowers			
Centrifugal	U	I	II
Lobe	M	II	II
Vane	U	I	II
Bottling Machinery	U	I	II
Brewing and Distilling			
Bottling Machinery	U	I	II
Brew Kettles, Cont. Duty	U	-	II
Can Filling Machines	U	I	II
Cookers - Cont. Duty	U	-	II
Mash Tubs - Cont. Duty	U	-	II
Scale Hoppers - Frequent Starts	M	II	II
Brick Press (Clay Working)	V	III	III
Briquette Machines (Clay Working)	V	III	III
Bucket			
Conveyors, Uniform	U	I	II
Conveyors, Heavy Duty	M	II	II
Elevators Cont.	U	I	II
Elevators Uniform	U	I	II
Elevators, Heavy Duty	M	II	II
Calenders			
Paper	U	-	II
Super (Paper)	U	-	II
Rubber	M	II	II
Textile	M	II	II
Cane Knives	M	II	II
Can Filling Machines	U	I	II
Card Machines (Textile)	M	II	II
Car Dumpers	V	III	-
Car Pullers	M	II	-
Cement Kilns	Refer to Application Engr.		
Centrifugal			
Blowers, Compressors, Discharge Elevators or Pumps	U	I	II
Chain Conveyors			
Uniformly Loaded or Fed	U	I	II
Heavy Duty	M	II	II
Chemical Feeders (Sewage)	U	I	II
Clarifiers	U	I	II
Classifiers	M	II	II
Clay Working Industry			
Brick Press	V	III	III
Briquette Machine	V	III	III
Clay Working Machinery	M	II	II
Pug Mill	M	II	II
Collectors (Sewage)	U	I	II
Compressors			
Centrifugal	U	I	II
Lobe	M	II	II
Reciprocating,			
Multi - Cylinder	M	II	II
Single - Cylinder	V	III	III
Concrete Mixers			
Continuous	M	II	II
Intermittent	U	I	-
Converting Machines (Paper)	M	-	II
Conveyors - Uniformly Loaded or Fed: Apron, Assembly, Belt, Bucket, Chain, Flight, Oven, Screw	U	I	II
Conveyors - Heavy Duty Not Uniformly Fed: Apron, Assembly, Belt, Bucket, Chain, Flight, Oven, Screw	M	II	II
Live Roll (Package)	U	I	II
Reciprocating, shaker	V	III	III
Cookers (Brewing & Distilling) (Food)	U	I	II
Cooling Tower Fans			
Induced Draft	M	II	II
Forced Draft	Refer to Application Engr.		
Couch (Paper)	M	-	II
Cranes and Hoists			
Main Hoists			
Heavy Duty	V	III	III
Medium Duty	M	II	II
Reversing	V	II	II
Skip Hoists	M	II	II
Trolley Drive	M	II	II
Bridge Drive	M	II	II
Crushers			
Ore or Stone	V	III	III
Cutters (Paper)	V	-	III
Cylinders (Paper)	M	-	II
Dewatering Screens (Sewage)	M	II	II
Disc Feeders	U	I	II
Distilling	(See Brewing)		
Double Acting Pumps			
2 or more Cylinders	M	II	II
Single Cylinder	Refer to Application Engr.		
Dough Mixer (Food)	M	II	II
Draw Bench (Metal Mills)			
Carriage & Main Drive	V	III	III
Dredges			
Cable Reels	M	II	-
Conveyors	M	II	II
Cutter Head Drives	V	III	III
Jig Drives	V	III	III
Maneuvering Winches	M	II	-
Pumps	M	II	II
Screen Drives	V	III	III
Stackers	M	II	II
Utility Winches	M	II	-

Browning

Gearmotors

CbN SERIES 3000

AGMA Application Classifications

U: Uniform load **M: Moderate shock load** **V: Heavy shock load**

Application	Load	Class Up to 10 hrs/day	Class Over 10 hrs/day
Dryers (Paper)	U	-	II
Dryers and Coolers (Mills, Rotary)	M	II	II
Dyeing Machinery (Textile)	M	II	II
Elevators			
Bucket - Uniform Load	U	I	II
Bucket - Heavy Duty	M	II	II
Bucket - Continuous	U	I	II
Centrifugal Discharge	U	I	II
Escalators	U	I	II
Freight	M	II	II
Gravity Discharge	U	I	II
Man Lifts, Passenger	Refer to Application Engr.		
Escalators	U	I	II
Fans			
Centrifugal	M	II	II
Cooling Towers			
Induced Draft	M	II	II
Forced Draft	Refer to Application Engineering		
Induced Draft	M	II	II
Large (Mine, etc.)	M	II	II
Large Industrial	M	II	II
Light (Small Diameter)	U	I	II
Feeders			
Apron, belt	M	II	II
Disc	U	I	II
Reciprocating	V	III	III
Screw	M	II	II
Felt			
Stretchers (Paper)	U	-	II
Whippers (Paper)	U	-	II
Flight			
Conveyors, Uniform	U	I	II
Conveyors, Heavy	M	II	II
Food Industry			
Beet Slicers	M	II	II
Bottling, Can Filling Mach.	U	I	II
Cereal Cookers	U	I	II
Dough Mixers	M	II	II
Meat Grinders	M	II	II
Forming Machines (Metal Mills)	V	III	III
Generators (Not welding)	U	I	II
Gravity Discharge Elevators	U	I	II
Grit Collectors (Sewage)	U	I	II
Hammer Mills	V	III	III
Induced Draft Fans	M	II	II
Jordans (Paper)	U	-	II
Kilns (Mills, Rotary)	M	II	II
Cement	Refer to Application Engr.		
Laundry Washers and Tumblers	M	II	II
Line Shafts			
Heavy Shock Load	V	III	III
Moderate Shock Load	M	II	II
Uniform Load	U	I	II
Live Roll Conveyors			
Package	U	I	II
Lobe Blower or Compressors	M	II	II
Log Hauls (Paper and Lumber)	V	III	III
Looms (Textile)	M	II	II
Lumber Industry			
Barkers - Spindle Feed	V	II	III
Barkers - Main Drive	V	III	III
Carriage Drive	Refer to Application Engr.		
Conveyors			
Burner	V	II	III
Main or Heavy Duty	V	II	III
Main Log	V	III	III
Re-Saw Merry-Go-Round	V	II	III
Slab	V	III	III
Transfer	V	II	III
Chains - Floor	V	II	III
Chains - Green	V	II	III
Cut-Off Saws-Chain	V	II	III
Cut-Off Saws-Drag	V	II	III
Debarking Drums	V	III	III
Feeds - Edger	V	II	III
Feeds - Gang	V	III	III
Feeds - Trimmer	V	II	III
Log Deck	V	III	III
Log Hauls - Incline, Well Type	V	III	III
Log Turning Devices	V	III	III
Planer Feed	V	II	III
Planer Tilting Hoists	V	II	III
Rolls - Live-Off Bearing Roll Cases	V	III	III
Sorting Table	V	II	III
Tipple Hoist	V	II	III
Transfers - Chain	V	II	III
Transfers - Craneway	V	II	III
Tray Drives	V	II	III
Machine Tools			
Auxiliary Drives	U	I	II
Bending Rolls	M	II	II
Main Drives	M	II	II
Notching Press (Belted)	Refer to Application Engr.		
Plate Planers	V	III	III
Punch Press (Geared)	V	III	III
Tapping Machines	V	III	III
Mangle (Textile)	M	II	II
Mash Tubs (Brewing and Distilling)	U	-	II
Meat Grinder (Food)	M	II	II
Metal Mills			
Draw Bench Carriages & Main Drives	V	III	III
Forming Machines	V	III	III
Pinch, Dryer & Scrubber Rolls Reversing	Refer to Application Engr.		
Slitters	M	II	II
Table Conveyors, Non-Reversing	M	II	III
Reversing	V	-	III
Wire Drawing & Flattening Machines	M	II	III
Wire Winding Machines	M	II	II
Mills, Rotary Type			
Ball, Pebble, Rod	V	III	III
Cement Kilns	Refer to Application Engr.		
Coolers, Dryers, Kilns	V	II	II
Tumbling Barrels	V	III	III
Mixers (Also see Agitators)			
Concrete - Continuous	M	II	II
Concrete - Intermittent	M	I	-
Constant Density	U	I	II
Variable Density	M	II	II
Nappers (Textile)	M	II	II
Oil Industry			
Chillers	M	II	II
Oil Well Pumping	Refer to Application Engr.		
Paraffin Filter Press	M	II	II
Rotary Kilns	M	II	II
Ore Crushers	V	III	III
Oven Conveyors			
Uniform	U	I	II
Heavy Duty	M	II	II

AGMA Application Classifications

U: Uniform load **M: Moderate shock load** **V: Heavy shock load**

Application	Load	Class Up to 10 hrs/day	Class Over 10 hrs/day
Paper Mills			
Agitator (Mixers)	M	II	II
Barker - Auxiliaries - Hyd.	V	-	III
Barker, Mechanical	V	-	III
Barking Drum	V	-	III
Beater & Pulper	M	-	II
Bleacher	M	-	II
Calenders	M	-	II
Calenders - Super	M	-	II
Converting Mach.- Except Cutters - Platers	M	-	II
Conveyors	M	-	II
Couch	M	-	II
Cutters, Platers	V	-	III
Cylinders	U	-	II
Dryers	U	-	II
Felt Stretchers	U	-	II
Felt Whippers	V	-	III
Jordans	M	-	II
Log Haul	V	-	III
Presses	M	-	II
Pulp Machine Reels	M	-	II
Stock Chests	M	-	II
Suction Rolls	M	-	II
Washers & Thickeners	M	-	II
Winders	M	-	II
Passenger Elevators	Refer to Application Engr.		
Pebble Mills	V	III	III
Plate Planers	V	III	III
Presses (Paper)	V	-	III
Proportioning Pumps	M	II	II
Pub Mills (Clay)	M	II	II
Pullers (Barge Haul)	V	III	III
Pulp Machine Reels	U	-	II
Pumps			
Centrifugal	U	I	II
Proportioning	M	II	II
Reciprocating			
Single Act., 3 or more cyl.	M	II	II
Double Act., 2 or more cyl.	M	II	II
Single Act., 1 or 2 cyl.	Refer to Application Engr.		
Rotary: Gear, Lobe, Vane	U	I	II
Punch Press (Gear Driven)	V	III	III
Reciprocating			
Conveyors, Feeders	V	III	III
Reciprocating Compressors			
Multi-Cylinder	M	II	II
Single cylinder	V	III	III
Rod Mills	V	III	III
Rotary			
Pumps, Gear, Lobe, Vane	U	I	II
Screens (Sand or Gravel)	V	II	II
Rubber Industry			
Mixer	V	III	III
Rubber Calender	M	II	II
Rubber Mill (2 or more)	M	II	II
Sheeter	M	II	II
Tire Building Machines	Refer to Application Engr.		
Tire, Tube Press Openers	Refer to Application Engr.		
Tubers & Strainers	M	II	II
Sand Mullers	Refer to Application Engr.		
Screens			
Air Washing	U	I	II
Rotary - Sand or Gravel	M	II	II
Traveling Water Intake	U	I	II
Screw Conveyors			
Uniform	U	I	II
Heavy Duty or Feeder	M	II	II
Scum Breakers (Sewage)	M	II	II
Sewage Disposal			
Aerators	Refer to Application Engr.		
Bar Screens	U	I	II
Chemical Feeders	U	I	II
Collectors	U	I	II
Dewatering Screens	M	II	II
Grit Collectors	U	I	II
Scum Breakers	M	II	II
Slow or Rapid Mixers	M	II	II
Sludge Collectors	U	I	II
Thickeners	M	II	II
Vacuum Filters	M	II	II
Shaker Conveyors	V	III	III
Sheeters (Rubber)	M	II	II
Single Acting Pump			
1 or 2 Cylinders	Refer to Application Engr.		
3 or more Cylinders	M	II	II
Skip Hoist	M	II	II
Slab Pushers	M	II	II
Slitters (Metal)	M	II	II
Sludge Collectors (Sewage)	U	I	II
Soapers (Textile)	M	II	II
Spinners (Textile)	M	II	II
Steering Gears	M	II	II
Stock Chests (Paper)	U	-	II
Stokers	U	I	II
Stone Crushers	V	III	III
Suction Rolls (Paper)	U	-	II
Table Conveyors (Metal Mills) Non-Reversing	V	II	III
Reversing	V	-	III
Tenter Frames (Textile)	M	II	II
Textile Industry			
Batchers	M	II	II
Calenders	M	II	II
Card Machines	M	II	II
Cloth Finishing Mach. (Calenders, Dryers, Pads, Tenters, Washers)	M	II	II
Dry Cans	M	II	II
Dyeing Machinery	M	II	II
Knitting Machinery	Refer to Application Engr.		
Looms, Mangles, Nappers	M	II	II
Range Drives	Refer to Application Engr.		
Soapers, Spinners	M	II	II
Tenter Frames	M	II	II
Winders	M	II	II
Yarn Preparatory Mach. (Cards, Spinners, Slashers)	M	II	II
Thickeners (Sewage)	M	II	II
Tumbling Barrels	V	III	III
Vacuum Filters (sewage)	M	II	II
Vane Blowers	U	I	II
Winches (Dredges)	M	II	-
Winders			
(Paper)	U	-	II
(Textile)	M	II	II
Windlass	M	II	II
Wire			
Drawing Machines	M	II	III
Winding Machines	M	II	II

Applications not listed in this table, or where the user has data indicating the severity of this usage to be greater than average, should be referred to Application Engineering.

Browning®

Gearmotors

CbN SERIES 3000

1/3 HP

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
1411	I, II, III	3+	14	172	1.25	3001	56	T,S,C,X°,IG
1199	I, II, III	3+	17	181	1.4	3001	56	T,S,C,X°,IG
1136	I, II, III	3+	18	184	1.6	3001	56	T,S,C,X°,IG
956	I, II, III	3+	21	193	1.8	3001	56	T,S,C,X°,IG
893	I, II, III	3+	23	197	2	3001	56	T,S,C,X°,IG
799	I, II, III	3+	26	204	2.24	3001	56	T,S,C,X°,IG
686	I, II, III	3+	30	213	2.5	3001	56	T,S,C,X°,IG
636	I, II, III	3+	32	217	2.8	3001	56	T,S,C,X°,IG
540	I, II, III	3+	38	227	3.15	3001	56	T,S,C,X°,IG
482	I, II, III	3+	42	234	3.55	3001	56	T,S,C,X°,IG
429	I, II, III	3+	47	241	4	3001	56	T,S,C,X°,IG
382	I, II, III	3+	53	248	4.5	3001	56	T,S,C,X°,IG
338	I, II, III	3.0	60	255	5	3001	56	T,S,C,X°,IG
338	I, II, III	3.0	68	262	5.6	3001	56	T,S,C,X°,IG
273	I, II, III	3.0	75	267	6.3	3001	56	T,S,C,X°,IG
242	I, II, III	3.0	84	274	7.1	3001	56	T,S,C,X°,IG
215	I, II, III	2.7	95	280	8	3001	56	T,S,C,X°,IG
204	I, II, III	3+	98	522	9	3012	56	T,S,C,X°,IG
172	I, II, III	3+	116	550	10	3012	56	T,S,C,X°,IG
160	I, II, III	3+	125	562	11.2	3012	56	T,S,C,X°,IG
143	I, II, III	3+	140	582	12.5	3012	56	T,S,C,X°,IG
123	I, II, III	3+	162	600	14	3012	56	T,S,C,X°,IG
114	I, II, III	3+	175	600	16	3012	56	T,S,C,X°,IG
97	I, II, III	3+	206	600	18	3012	56	T,S,C,X°,IG
86	I, II, III	3+	231	600	20	3012	56	T,S,C,X°,IG
77	I, II, III	3.0	260	600	22.4	3012	56	T,S,C,X°,IG
68	I, II, III	2.7	292	600	25	3012	56	T,S,C,X°,IG
61	I, II, III	2.4	329	600	28	3012	56	T,S,C,X°,IG
52	I, II, III	2.1	371	600	31.5	3012	56	T,S,C,X°,IG
49	I, II	1.9	408	1211	35.5	3012	56	T,S,C,X°,IG
43	I, II	1.7	460	600	40	3012	56	T,S,C,X°,IG
45	III	3+	443	1211	40	3132	56	T,S,C,X, IG
39	I, II	1.5	517	600	45	3012	56	T,S,C,X°,IG
39	III	3.0	508	1260	45	3132	56	T,S,C,X,IG
36	I, II	1.6	549	600	50	3013	56	T,S,C,X°,IG
36	III	3.0	561	1296	50	3132	56	T,S,C,X,IG
32	I, II	1.4	615	600	56	3013	56	T,S,C,X°,IG
30	III	2.1	646	1345	56	3133	56	T,S,C,X,IG
27	I	1.2	716	600	63	3013	56	T,S,C,X°,IG
27	II	1.9	729	1345	63	3133	56	T,S,C,X,IG

◊ **Standard Motor Types** (see page A-16 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase, 115/230 volts
- C Corro-Duty®, three phase, 230/460 or 575V
- X° Explosionproof, CL1 group D, three phase, 230/460 or 575V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575V
- IG IntelliGear® variable speed for 1/115V, 1/230VAC, 3/230V, or 3/460V power supplies

1/3 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
25	I	1.1	772	600	71	3013	56	T,S,C,X°,IG
25	II	1.8	774	1345	71	3133	56	T,S,C,X,IG
25	III	3+	766	1610	71	3253	56	T,S,C,X,IG
22	I	1.0	908	600	80	3013	56	T,S,C,X°,IG
22	II	1.6	919	1345	80	3133	56	T,S,C,X,IG
22	III	3+	870	1610	80	3253	56	T,S,C,X,IG
20	I, II	1.6	919	1345	90	3133	56	T,S,C,X,IG
20	III	3+	966	1610	90	3253	56	T,S,C,X,IG
18	I, II	1.5	1110	1345	100	3133	56	T,S,C,X,IG
18	III	3+	1097	1610	100	3253	56	T,S,C,X,IG
16	I, II	1.4	1239	1345	112	3133	56	T,S,C,X,IG
16	III	3+	1221	1610	112	3253	56	T,S,C,X,IG
14	I	1.2	1390	1345	125	3133	56	T,S,C,X,IG
14	II, III	2.9	1374	1610	125	3253	56	T,S,C,X,IG
12	I	1.1	1609	1345	140	3133	56	T,S,C,X,IG
12	II, III	2.5	1610	1610	140	3253	56	T,S,C,X,IG
11	I	1.0	1767	1345	160	3133	56	T,S,C,X,IG
11	II, III	2.3	1777	1610	160	3253	56	T,S,C,X,IG
10	I, II, III	2.1	1949	1610	180	3253	56	T,S,C,X,IG
8.6	I, II	1.8	2276	1610	200	3253	56	T,S,C,X,IG
8.6	III	2.7	2239	2305	200	3363	56	T,S,C,X,IG
7.9	I, II	1.8	2416	1610	224	3254	56	T,S,C,X°,IG
7.9	III	3+	2416	2905	224	3374	56	T,S,C,X°,IG
7.1	I, II	1.5	2701	1610	250	3254	56	T,S,C,X°,IG
7.1	III	2.6	2701	2905	250	3374	56	T,S,C,X°,IG
6.7	I, II	1.4	2843	1610	280	3254	56	T,S,C,X°,IG
6.7	III	2.5	2843	2905	280	3374	56	T,S,C,X°,IG
5.7	I	1.2	3368	1610	315	3254	56	T,S,C,X°,IG
5.7	II, III	2.1	3368	2905	315	3374	56	T,S,C,X°,IG
5.3	I	1.1	3619	1610	355	3254	56	T,S,C,X°,IG
5.3	II, III	2.0	3619	2905	355	3374	56	T,S,C,X°,IG
4.7	I	1.0	4046	1610	400	3254	56	T,S,C,X°,IG
4.7	II	1.7	4046	2905	400	3374	56	T,S,C,X°,IG
4.4	III	3+	4241	4340	400	3484	56	T,S,C,X,IG
4.1	I, II	1.5	4713	2905	450	3374	56	T,S,C,X°,IG
3.9	III	2.9	4845	4340	450	3484	56	T,S,C,X,IG
3.8	I, II	1.4	5073	2905	500	3374	56	T,S,C,X°,IG
3.4	III	2.6	5470	4340	500	3484	56	T,S,C,X,IG
3.2	I	1.2	5970	2905	560	3374	56	T,S,C,X°,IG
3.2	II, III	2.4	5804	4340	560	3484	56	T,S,C,X,IG

◊ **Standard Motor Types** (see page A-16 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase, 115/230 volts
- C Corro-Duty®, three phase, 230/460 or 575V
- X° Explosionproof, CL1 group D, three phase, 230/460 or 575V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575V
- IG IntelliGear® variable speed for 1/115VAC, 1/230VAC, 3/230V, or 3/460V power supplies

1/3 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
2.9	I	1.1	6692	2905	630	3374	56	T,S,C,X°,IG
2.7	II, III	2.1	6893	4340	630	3484	56	T,S,C,X,IG
2.6	I, II	1.9	7288	4340	710	3484	56	T,S,C,X,IG
2.4	III	3+	7869	4580	710	3594	56	T,S,C,X,IG
2.2	I, II	1.7	8329	4340	800	3484	56	T,S,C,X,IG
2.1	III	3+	8785	4580	800	3594	56	T,S,C,X,IG
2.0	I, II	1.5	9298	4340	900	3484	56	T,S,C,X,IG
1.9	III	2.7	9849	4580	900	3594	56	T,S,C,X,IG
1.8	I, II	1.4	10423	4340	1000	3484	56	T,S,C,X,IG
1.6	II, III	2.4	11403	4580	1000	3594	56	T,S,C,X,IG
1.6	I	1.2	12069	4340	1120	3484	56	T,S,C,X,IG
1.5	II, III	2.1	12521	4580	1120	3594	56	T,S,C,X,IG
1.4	I	1.1	13253	4340	1250	3484	56	T,S,C,X,IG
1.3	II	1.9	14359	4580	1250	3594	56	T,S,C,X,IG
1.2	I, II	1.7	15845	4580	1400	3594	56	T,S,C,X,IG
1.1	I, II	1.7	16064	4580	1600	3595	56	T,S,C,X,IG
1.0	I, II	1.5	18177	4580	1800	3595	56	T,S,C,X,IG
.89	I	1.3	20421	4580	2000	3595	56	T,S,C,X,IG
.78	I	1.1	23594	4580	2240	3595	56	T,S,C,X,IG
.69	I	1.0	26638	4580	2500	3595	56	T,S,C,X,IG
.65	-	.97	28259	4580	2800	3595	56	T,S,C,X,IG

◊ **Standard Motor Types** (see page A-16 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase, 115/230 volts
- C Corro-Duty®, three phase, 230/460 or 575V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575V
- IG IntelliGear® variable speed for 1/115VAC, 1/230VAC, 3/230V, or 3/460V power supplies

1/2 HP

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
1411	I, II, III	3+	22	163	1.25	3001	56	T,S,C,X°,IG
1199	I, II, III	3+	26	171	1.4	3001	56	T,S,C,X°,IG
1136	I, II, III	3+	27	173	1.6	3001	56	T,S,C,X°,IG
956	I, II, III	3+	32	182	1.8	3001	56	T,S,C,X°,IG
893	I, II, III	3+	35	185	2	3001	56	T,S,C,X°,IG
799	I, II, III	3+	39	191	2.24	3001	56	T,S,C,X°,IG
686	I, II, III	3+	45	198	2.5	3001	56	T,S,C,X°,IG
636	I, II, III	3+	49	202	2.8	3001	56	T,S,C,X°,IG
540	I, II, III	3+	57	209	3.15	3001	56	T,S,C,X°,IG
482	I, II, III	3+	64	214	3.55	3001	56	T,S,C,X°,IG
429	I, II, III	3+	72	220	4	3001	56	T,S,C,X°,IG
382	I, II, III	3+	81	224	4.5	3001	56	T,S,C,X°,IG
338	I, II, III	2.0	91	229	5	3001	56	T,S,C,X°,IG
338	I, II, III	2.0	103	233	5.6	3001	56	T,S,C,X°,IG
273	I, II, III	2.0	113	236	6.3	3001	56	T,S,C,X°,IG
242	I, II, III	2.0	127	239	7.1	3001	56	T,S,C,X°,IG
215	I, II	1.8	143	241	8	3001	56	T,S,C,X°,IG
214	III	3+	141	505	8	3012	56	T,S,C,X°,IG
204	I, II, III	3+	148	513	9	3012	56	T,S,C,X°,IG
172	I, II, III	3+	176	540	10	3012	56	T,S,C,X°,IG
160	I, II, III	3+	189	551	11.2	3012	56	T,S,C,X°,IG
143	I, II, III	3+	211	569	12.5	3012	56	T,S,C,X°,IG
123	I, II, III	3+	246	584	14	3012	56	T,S,C,X°,IG
114	I, II, III	2.9	265	590	16	3012	56	T,S,C,X°,IG
97	I, II, III	2.5	312	600	18	3012	56	T,S,C,X°,IG
86	I, II, III	2.2	350	600	20	3012	56	T,S,C,X°,IG
77	I, II, III	2.0	393	600	22.4	3012	56	T,S,C,X°,IG
68	I, II	1.8	442	600	25	3012	56	T,S,C,X°,IG
69	III	2.0	439	1027	25	3122	56	T,S,C,X,IG
64	III	3+	471	1062	28	3132	56	T,S,C,X,IG
61	I, II	1.6	499	600	28	3012	56	T,S,C,X°,IG
57	I, II, III	3+	528	1097	31.5	3132	56	T,S,C,X,IG
52	I, II	1.4	562	600	31.5	3012	56	T,S,C,X°,IG
49	I	1.3	618	600	35.5	3012	56	T,S,C,X°,IG
49	II, III	2.9	611	1141	35.5	3132	56	T,S,C,X,IG
45	I, II, III	2.7	671	1170	40	3132	56	T,S,C,X,IG
43	I	1.1	697	589	40	3012	56	T,S,C,X°,IG
39	I	1.0	784	572	45	3012	56	T,S,C,X°,IG
39	II, III	2.0	770	1212	45	3132	56	T,S,C,X,IG

◊ **Standard Motor Types** (see page A-16 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase, 115/230 volts
- C Corro-Duty®, three phase, 230/460 or 575V
- X° Explosionproof, CL1 group D, three phase, 230/460 or 575V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575V
- IG IntelliGear® variable speed for 1/115V, 1/230VAC, 3/230V, or 3/460V power supplies

Browning®

Gearmotors

CbN SERIES 3000

1/2 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
36	I	1.1	832	600	50	3013	56	T,S,C,X°,IG
36	II, III	2.0	850	1243	50	3132	56	T,S,C,X, IG
30	I, II	1.4	979	1297	56	3133	56	T,S,C,X, IG
30	III	3+	943	1610	56	3253	56	T,S,C,X,IG
27	I	1.3	1104	1335	63	3133	56	T,S,C,X,IG
27	II, III	3+	1087	1610	63	3253	56	T,S,C,X,IG
25	I	1.2	1172	1345	71	3133	56	T,S,C,X,IG
25	II, III	3.5	1161	1610	71	3253	56	T,S,C,X,IG
22	I	1.1	1392	1345	80	3133	56	T,S,C,X,IG
22	II, III	3+	1318	1610	80	3253	56	T,S,C,X,IG
20	I	1.0	1472	1345	90	3133	56	T,S,C,X,IG
20	II, III	2.7	1464	1610	90	3253	56	T,S,C,X,IG
18	I	1.0	1682	1345	100	3133	56	T,S,C,X,IG
18	II, III	2.4	1663	1610	100	3253	56	T,S,C,X,IG
16	I, II, III	2.2	1850	1610	112	3253	56	T,S,C,X,IG
14.2	I, II	1.9	2081	1610	125	3253	56	T,S,C,X,IG
14.1	III	2.9	2125	2305	125	3363	56	T,S,C,X,IG
12.1	I, II	1.6	2440	1610	140	3253	56	T,S,C,X,IG
12.4	III	2.6	2375	2305	140	3363	56	T,S,C,X,IG
11.0	I, II	1.5	2693	1610	160	3253	56	T,S,C,X,IG
10.8	III	2.2	2743	2305	160	3363	56	T,S,C,X,IG
10.0	I, II	1.4	2953	1610	180	3253	56	T,S,C,X,IG
9.7	III	2.0	3065	2305	180	3363	56	T,S,C,X,IG
8.7	I	1.2	3448	1610	200	3253	56	T,S,C,X,IG
8.7	II	1.8	3393	2305	200	3363	56	T,S,C,X,IG
8.7	III	2.2	3393	2905	200	3373	56	T,S,C,X,IG
7.9	I, II	1.2	3661	1610	224	3254	56	T,S,C,X°,IG
7.9	III	2.1	3661	2905	224	3374	56	T,S,C,X°,IG
7.2	III	3+	3914	4340	250	3484	56	T,S,C,X,IG
7.1	I, II	1.7	4092	2905	250	3374	56	T,S,C,X°,IG
6.7	I, II	1.7	4307	2905	280	3374	56	T,S,C,X°,IG
6.4	III	3+	4431	4340	280	3484	56	T,S,C,X,IG
5.7	I, II	1.4	5103	2905	315	3374	56	T,S,C,X°,IG
5.7	III	2.8	5000	4340	315	3484	56	T,S,C,X,IG
5.3	I	1.3	5467	2905	355	3374	56	T,S,C,X°,IG
5.0	II, III	2.5	5656	4340	355	3484	56	T,S,C,X,IG
4.7	I	1.2	6130	2905	400	3374	56	T,S,C,X°,IG
4.4	II, III	2.2	6426	4340	400	3484	56	T,S,C,X,IG
4.1	I	1.0	7140	2905	450	3374	56	T,S,C,X°,IG

◊ **Standard Motor Types** (see page A-16 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase, 115/230 volts
- C Corro-Duty®, three phase, 230/460 or 575V
- X° Explosionproof, CL1 group D, three phase, 230/460 or 575V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575V
- IG IntelliGear® variable speed for 1/115V, 1/230VAC, 3/230V, or 3/460V power supplies

1/2 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
3.9	I,II	1.9	7342	4340	450	3484	56	T,S,C,X,IG
3.4	I,II	1.7	8288	4340	500	3484	56	T,S,C,X,IG
3.4	III	3+	8309	4580	500	3594	56	T,S,C,X,IG
3.2	I,II	1.6	8794	4340	560	3484	56	T,S,C,X,IG
2.9	III	2.7	9866	4580	560	3594	56	T,S,C,X,IG
2.7	I,II	1.4	10443	4340	630	3484	56	T,S,C,X,IG
2.7	III	2.6	10434	4580	630	3594	56	T,S,C,X,IG
2.6	I	1.3	11043	4340	710	3484	56	T,S,C,X,IG
2.4	III	2.3	11923	4580	710	3594	56	T,S,C,X,IG
2.2	I	1.1	12620	4340	800	3484	56	T,S,C,X,IG
2.1	II,III	2.0	13310	4580	800	3594	56	T,S,C,X,IG
2.0	I	1.0	14088	4340	900	3484	56	T,S,C,X,IG
1.9	II	1.8	14923	4580	900	3594	56	T,S,C,X,IG
1.97	III	2.6	14755	13617	900	3604	56	T,S,C,X,IG
1.78	III	2.4	16047	13617	1000	3605	56	T,S,C,X,IG
1.6	I,II	1.6	17278	4580	1000	3594	56	T,S,C,X,IG
1.5	III	2.1	18496	13617	1120	3605	56	T,S,C,X,IG
1.5	I,II	1.4	18971	4580	1120	3594	56	T,S,C,X,IG
1.4	II,III	2.0	19767	13617	1250	3605	56	T,S,C,X,IG
1.3	I	1.2	21756	4580	1250	3594	56	T,S,C,X,IG
1.3	II	1.7	22432	13617	1400	3605	56	T,S,C,X,IG
1.2	III	3.5	23617	18558	1400	3735	56	T,S,C,X,IG
1.2	I	1.1	24008	4580	1400	3594	56	T,S,C,X,IG
1.1	II	1.5	24915	13617	1600	3605	56	T,S,C,X,IG
1.1	III	3.3	25239	18558	1600	3735	56	T,S,C,X,IG
1.1	I	1.1	24340	4580	1600	3595	56	T,S,C,X,IG
1.0	II	1.4	28303	13617	1800	3605	56	T,S,C,X,IG
1	I	1.0	27541	4580	1800	3595	56	T,S,C,X,IG
0.99	III	2.9	28642	18558	1800	3735	56	T,S,C,X,IG
0.90	I	1.2	31490	13617	2000	3605	56	T,S,C,X,IG
0.90	II,III	2.6	31813	18558	2000	3735	56	T,S,C,X,IG
0.79	I,II,III	2.3	36139	18558	2240	3735	56	T,S,C,X,IG
0.71	I,II,III	2.1	40207	18558	2500	3735	56	T,S,C,X,IG
0.64	III	2.7	44535	22000	2800	3845	56	T,S,C,X,IG
0.63	I,II	1.8	45232	18558	2800	3735	56	T,S,C,X,IG
0.58	III	2.5	49191	22000	3150	3845	56	T,S,C,X,IG
0.54	I,II	1.6	53020	18558	3150	3735	56	T,S,C,X,IG
0.52	III	2.2	54622	22000	3550	3845	56	T,S,C,X,IG
0.49	I,II	1.4	58527	18558	3550	3735	56	T,S,C,X,IG
0.44	I	1.3	64177	18558	4000	3735	56	T,S,C,X,IG
0.44	II	1.9	64747	22000	4000	3845	56	T,S,C,X,IG
0.38	I, II	1.8	73118	22000	4500	3846	56	T,S,C,X,IG
0.34	I, II	1.6	81616	22000	5000	3846	56	T,S,C,X,IG
0.30	I, II	1.5	91646	22000	5600	3846	56	T,S,C,X,IG
0.27	I	1.3	103690	22000	6300	3846	56	T,S,C,X,IG
0.24	I	1.1	118421	22000	7100	3846	56	T,S,C,X,IG
0.22	I	1.1	127079	22000	8000	3846	56	T,S,C,X,IG

◊ **Standard Motor Types** (see page A-16 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase, 115/230 volts
- C Corro-Duty®, three phase, 230/460 or 575V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575V
- IG IntelliGear® variable speed for 1/115V, 1/230VAC, 3/230V, or 3/460V power supplies

Browning®

Gearmotors

CbN SERIES 3000

3/4 HP

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
1411	I, II, III	3+	33	150	1.25	3001	56	T,S,C,X°,IG
1199	I, II, III	3+	39	156	1.4	3001	56	T,S,C,X°,IG
1136	I, II, III	3+	41	158	1.6	3001	56	T,S,C,X°,IG
956	I, II, III	3+	48	165	1.8	3001	56	T,S,C,X°,IG
893	I, II, III	3+	52	167	2	3001	56	T,S,C,X°,IG
799	I, II, III	3+	58	171	2.24	3001	56	T,S,C,X°,IG
686	I, II, III	3+	67	176	2.5	3001	56	T,S,C,X°,IG
636	I, II, III	3+	73	179	2.8	3001	56	T,S,C,X°,IG
540	I, II, III	3+	86	183	3.15	3001	56	T,S,C,X°,IG
482	I, II, III	3+	96	186	3.55	3001	56	T,S,C,X°,IG
429	I, II, III	3+	108	188	4	3001	56	T,S,C,X°,IG
382	I, II, III	3.0	121	190	4.5	3001	56	T,S,C,X°,IG
338	I, II	1.4	137	191	5	3001	56	T,S,C,X°,IG
356	III	3+	130	427	5	3101	56	T,S,C,X,IG
301	I, II	1.4	154	191	5.6	3001	56	T,S,C,X°,IG
308	III	2.9	151	447	5.6	3101	56	T,S,C,X,IG
273	I, II	1.4	169	190	6.3	3001	56	T,S,C,X°,IG
280	III	2.7	165	459	6.3	3101	56	T,S,C,X,IG
242	I	1.3	191	188	7.1	3001	56	T,S,C,X°,IG
237	II, III	3+	180	469	7.1	3012	56	T,S,C,X°,IG
215	I	1.2	215	185	8	3001	56	T,S,C,X°,IG
214	II, III	3+	212	481	8	3012	56	T,S,C,X°,IG
204	I, III, III	3+	223	484	9	3012	56	T,S,C,X°,IG
172	I, III, III	2.9	264	493	10	3012	56	T,S,C,X°,IG
160	I, III, III	2.7	283	495	11.2	3012	56	T,S,C,X°,IG
143	I, III, III	2.4	317	499	12.5	3012	56	T,S,C,X°,IG
123	I, III, III	2.1	369	500	14	3012	56	T,S,C,X°,IG
114	I, II	1.9	398	500	16	3012	56	T,S,C,X°,IG
111	III	3.1	409	869	16	3122	56	T,S,C,X,IG
97	I, II	1.7	468	495	18	3012	56	T,S,C,X°,IG
96	III	2.6	474	903	18	3122	56	T,S,C,X,IG
87	I, II	1.5	525	488	20	3012	56	T,S,C,X°,IG
87	III	2.4	520	925	20	3122	56	T,S,C,X,IG
82	II, III	3.2	520	933	22.4	3132	56	T,S,C,X,IG
77	I	1.3	590	477	22.4	3012	56	T,S,C,X°,IG
69	I	1.2	664	462	25	3012	56	T,S,C,X°,IG
69	II	1.4	597	957	25	3122	56	T,S,C,X,IG
69	III	2.8	658	980	25	3132	56	T,S,C,X,IG
64	II, III	2.5	707	1020	28	3132	56	T,S,C,X,IG

◊ **Standard Motor Types** (see page A-16 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase, 115/230 volts
- C Corro-Duty®, three phase, 230/460 or 575V
- X° Explosionproof, CL1 group D, three phase, 230/460 or 575V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575V
- IG IntelliGear® variable speed for 1/115VAC, 1/230VAC, 3/230V, or 3/460V power supplies

3/4 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
61	I	1.1	748	442	28	3012	56	T,S,C,X°,IG
57	I, II, III	2.2	792	1049	31.5	3132	56	T,S,C,X,IG
49	I, II	1.9	917	1086	35.5	3132	56	T,S,C,X,IG
49	III	3+	921	1500	35.5	3252	56	T,S,C,X,IG
45	I, II	1.8	1007	1109	40	3132	56	T,S,C,X,IG
45	III	3+	1016	1541	40	3252	56	T,S,C,X,IG
41	II, III	3+	1115	1580	45	3252	56	T,S,C,X,IG
39	I	1.3	1155	1142	45	3132	56	T,S,C,X,IG
36	I	1.3	1274	1166	50	3132	56	T,S,C,X,IG
35	II, III	3+	1302	1610	50	3252	56	T,S,C,X,IG
31	I, II, III	2.8	1414	1610	56	3253	56	T,S,C,X,IG
27	I, II, III	2.5	1630	1610	63	3253	56	T,S,C,X,IG
26	I, II, III	2.3	1742	1610	71	3253	56	T,S,C,X,IG
22	I, II, III	2.0	1977	1610	80	3253	56	T,S,C,X,IG
20	I, II	1.8	2196	1610	90	3253	56	T,S,C,X,IG
19	III	2.7	2335	2305	90	3363	56	T,S,C,X,IG
18	I, II	1.6	2494	1610	100	3253	56	T,S,C,X,IG
17	III	2.4	2450	2305	100	3363	56	T,S,C,X,IG
16	I, II	1.5	2775	1610	112	3253	56	T,S,C,X,IG
15	III	2.1	2769	2305	112	3363	56	T,S,C,X,IG
14	I	1.3	3122	1610	125	3253	56	T,S,C,X,IG
14	II	1.9	3188	2305	125	3363	56	T,S,C,X,IG
14	III	2.4	3188	2905	125	3373	56	T,S,C,X,IG
12	I	1.1	3659	1610	140	3253	56	T,S,C,X,IG
12	II	1.9	3563	2305	140	3363	56	T,S,C,X,IG
12	III	2.1	3563	2905	140	3373	56	T,S,C,X,IG
11.3	III	3+	3768	4340	160	3483	56	T,S,C,X,IG
11.0	I	1.0	4039	1610	160	3253	56	T,S,C,X,IG
10.8	II	1.5	3943	2305	160	3363	56	T,S,C,X,IG
10.8	II	1.9	3940	2905	160	3373	56	T,S,C,X,IG
10.2	II, III	3+	4183	4340	180	3483	56	T,S,C,X,IG
9.7	I	1.3	4598	2305	180	3363	56	T,S,C,X,IG
9.7	II	1.7	4598	2905	180	3373	56	T,S,C,X,IG
8.7	I	1.2	5089	2305	200	3363	56	T,S,C,X,IG
8.7	II	1.5	5089	2905	200	3373	56	T,S,C,X,IG
8.6	III	2.9	4959	4340	200	3483	56	T,S,C,X,IG
7.9	I, II	1.4	5492	2905	224	3374	56	T,S,C,X°,IG
7.6	III	2.5	5574	4340	224	3484	56	T,S,C,X,IG
7.2	II, III	2.4	5871	4340	250	3484	56	T,S,C,X,IG
7.1	I	1.2	6138	2905	250	3374	56	T,S,C,X°,IG
6.5	I	1.1	6685	2905	280	3374	56	T,S,C,X°,IG
6.4	II, III	2.1	6646	4340	280	3484	56	T,S,C,X,IG

◊ **Standard Motor Types** (see page A-16 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase, 115/230 volts
- C Corro-Duty®, three phase, 230/460 or 575V
- X° Explosionproof, CL1 group D, three phase, 230/460 or 575V
- X Explosionproof, CI 1 group D, CI 2 groups F&G, three phase, 230/460 or 575V
- IG IntelliGear® variable speed for 1/115VAC, 1/230VAC, 3/230V, or 3/460V power supplies

Browning®

Gearmotors

CbN SERIES 3000

3/4 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
5.7	I,II	1.9	7500	4340	315	3484	56	T,S,C,X,IG
5.3	III	3+	8015	4580	315	3594	56	T,S,C,X,IG
5.0	I,II	1.7	8484	4340	355	3484	56	T,S,C,X,IG
4.7	III	3.0	9104	4580	355	3594	56	T,S,C,X,IG
4.4	I,II	1.5	9639	4340	400	3484	56	T,S,C,X,IG
4.1	III	2.6	10405	4580	400	3594	56	T,S,C,X,IG
3.9	I	1.3	11012	4340	450	3484	56	T,S,C,X,IG
3.6	II,III	2.3	11744	4580	450	3594	56	T,S,C,X,IG
3.4	I	1.1	12432	4340	500	3484	56	T,S,C,X,IG
3.4	II,III	2.2	12464	4580	500	3594	56	T,S,C,X,IG
3.3	III	2.9	13357	13617	560	3604	56	T,S,C,X,IG
3.2	I	1.1	13190	4340	560	3484	56	T,S,C,X,IG
2.9	II	1.8	14800	4580	560	3594	56	T,S,C,X,IG
2.8	III	2.5	15659	13617	630	3604	56	T,S,C,X,IG
2.7	I,II	1.7	15651	4580	630	3594	56	T,S,C,X,IG
2.5	III	2.2	17286	13617	710	3604	56	T,S,C,X,IG
2.4	I,II	1.5	18282	4580	710	3594	56	T,S,C,X,IG
2.3	II,III	2.0	18953	13617	800	3604	56	T,S,C,X,IG
2.1	I	1.3	20407	4580	800	3594	56	T,S,C,X,IG
2.0	III	3.7	22072	18558	900	3734	56	T,S,C,X,IG
2.0	II	1.7	22133	13617	900	3604	56	T,S,C,X,IG
1.9	I	1.2	22882	4580	900	3594	56	T,S,C,X,IG
1.8	III	3.4	24200	18558	1000	3734	56	T,S,C,X,IG
1.8	II	1.6	24562	13617	1000	3604	56	T,S,C,X,IG
1.6	I	1.0	26492	4580	1000	3594	56	T,S,C,X,IG
1.5	III	2.9	28260	18558	1120	3734	56	T,S,C,X,IG
1.5	I,II	1.4	27744	13617	1120	3605	56	T,S,C,X,IG
1.4	I	1.3	29650	13617	1250	3605	56	T,S,C,X,IG
1.4	II,III	2.7	30735	18558	1250	3735	56	T,S,C,X,IG
1.3	I	1.1	33648	13617	1400	3605	56	T,S,C,X,IG
1.2	II,III	2.3	35425	18558	1400	3735	56	T,S,C,X,IG
1.1	I	1.0	37373	13617	1600	3605	56	T,S,C,X,IG
1.1	II,III	2.2	37858	18558	1600	3735	56	T,S,C,X,IG
0.99	II	1.9	42962	18558	1800	3735	56	T,S,C,X,IG
0.99	III	2.8	43167	22000	1800	3845	56	T,S,C,X,IG
0.90	I,II	1.7	47719	18558	2000	3735	56	T,S,C,X,IG
0.87	III	2.5	49296	22000	2000	3845	56	T,S,C,X,IG
0.81	III	2.3	52900	22000	2240	3845	56	T,S,C,X,IG
0.79	I,II	1.5	54208	18558	2240	3735	56	T,S,C,X,IG
0.71	I,II	1.4	60311	18558	2500	3735	56	T,S,C,X,IG
0.69	III	2.0	61551	22000	2500	3845	56	T,S,C,X,IG
0.64	II	1.8	66802	22000	2800	3845	56	T,S,C,X,IG
0.63	I	1.2	67848	18558	2800	3735	56	T,S,C,X,IG
0.58	II	1.7	73786	22000	3150	3845	56	T,S,C,X,IG
0.54	I	1.0	79530	18558	3150	3735	56	T,S,C,X,IG
0.52	II	1.5	81933	22000	3550	3845	56	T,S,C,X,IG
0.44	I	1.3	97120	22000	4000	3845	56	T,S,C,X,IG
0.38	I	1.2	109677	22000	4500	3846	56	T,S,C,X,IG
0.34	I	1.1	122424	22000	5000	3846	56	T,S,C,X,IG

◊ **Standard Motor Types** (see page A-16 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase, 115/230 volts
- C Corro-Duty®, three phase, 230/460 or 575V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575V
- IG IntelliGear® variable speed for 1/115VAC, 1/230VAC, 3/230V, or 3/460V power supplies

1 HP

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
1411	I, II, III	3.1	44	137	1.25	3001	143T	T,S,C,X°,IG
1199	I, II, III	3.1	52	142	1.4	3001	143T	T,S,C,X°,IG
1136	I, II, III	3.1	54	143	1.6	3001	143T	T,S,C,X°,IG
956	I, II, III	3.1	64	148	1.8	3001	143T	T,S,C,X°,IG
893	I, II, III	3.1	69	150	2	3001	143T	T,S,C,X°,IG
799	I, II, III	3.1	77	152	2.24	3001	143T	T,S,C,X°,IG
686	I, II, III	3.1	90	155	2.5	3001	143T	T,S,C,X°,IG
636	I, II, III	3.1	97	156	2.8	3001	143T	T,S,C,X°,IG
540	I, II, III	3.0	114	158	3.15	3001	143T	T,S,C,X°,IG
482	I, II, III	2.7	128	158	3.55	3001	143T	T,S,C,X°,IG
429	I, II, III	2.6	144	157	4	3001	143T	T,S,C,X°,IG
382	I, II, III	2.2	162	156	4.5	3001	143T	T,S,C,X°,IG
338	I	1.0	182	153	5	3001	143T	T,S,C,X°,IG
356	I, II, III	2.6	174	419	5	3101	143T	T,S,C,X,IG
308	I, II, III	2.2	201	437	5.6	3101	143T	T,S,C,X,IG
301	I, II, III	1.0	205	149	5.6	3001	143T	T,S,C,X°,IG
273	I	1.0	226	145	6.3	3001	143T	T,S,C,X°,IG
280	I, II, III	2.0	221	448	6.3	3101	143T	T,S,C,X,IG
242	I	1.0	255	137	7.1	3001	143T	T,S,C,X°,IG
237	I, II, III	2.7	240	428	7.1	3012	143T	T,S,C,X°,IG
214	I, II, III	2.7	282	432	8	3012	143T	T,S,C,X°,IG
204	I, II, III	2.6	297	433	9	3012	143T	T,S,C,X°,IG
172	I, II, III	2.2	353	433	10	3012	143T	T,S,C,X°,IG
160	I, II, III	2.0	378	431	11.2	3012	143T	T,S,C,X°,IG
143	I, II	1.8	423	427	12.5	3012	143T	T,S,C,X°,IG
139	III	2.9	436	794	12.5	3122	143T	T,S,C,X,IG
124	I, II	1.6	492	416	14	3012	143T	T,S,C,X°,IG
124	III	2.6	487	816	14	3122	143T	T,S,C,X,IG
114	I, II	1.5	531	409	16	3012	143T	T,S,C,X°,IG
111	III	2.3	546	839	16	3122	143T	T,S,C,X,IG
97	I	1.3	625	388	18	3012	143T	T,S,C,X°,IG
96	II, III	2.0	632	869	18	3122	143T	T,S,C,X,IG
86	I	1.1	700	368	20	3012	143T	T,S,C,X,IG
87	II	1.8	694	887	20	3122	143T	T,S,C,X,IG
87	III	2.5	878	932	20	3132	143T	T,S,C,X,IG
82	II, III	2.4	739	924	22.4	3132	143T	T,S,C,X,IG
77	I	1.0	787	343	22.4	3012	143T	T,S,C,X°,IG
72	II, III	2.1	844	953	25	3132	143T	T,S,C,X,IG
69	I	1.0	795	914	25	3122	143T	T,S,C,X,IG
64	I, II	1.9	942	977	28	3132	143T	T,S,C,X,IG
58	I, II	1.7	1056	1001	31.5	3132	143T	T,S,C,X,IG

◊ **Standard Motor Types** (see page A-16 for product codes)

T TEFC, three phase, 230/460 or 575 volts
S TEFC, single phase, 115/230 volts
C Corro-Duty®, three phase, 230/460 or 575V
X° Explosionproof, CL1 group D, three phase, 230/460 or 575V
X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575V
IG IntelliGear® variable speed for 1/230VAC, 3/230V, or 3/460V power supplies

1 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
58	III	3.8	1047	1398	31.5	3252	143T	T,S,C,X,IG
49	I, II	1.5	1223	1030	35.5	3132	143T	T,S,C,X,IG
49	III	3.3	1228	1456	35.5	3252	143T	T,S,C,X,IG
45	I	1.3	1343	1048	40	3132	143T	T,S,C,X,IG
45	II, III	3.0	1355	1493	40	3252	143T	T,S,C,X,IG
41	II, III	2.7	1486	1526	45	3252	143T	T,S,C,X,IG
39	I	1.0	1540	1072	45	3132	143T	T,S,C,X,IG
36	I	1.0	1699	1089	50	3132	143T	T,S,C,X,IG
35	II, III	2.3	1735	1583	50	3252	143T	T,S,C,X,IG
31	I, II, III	2.1	1886	1610	56	3253	143T	T,S,C,X,IG
27	I, II	1.9	2173	1610	63	3253	143T	T,S,C,X,IG
26	III	2.7	2238	2305	63	3363	143T	T,S,C,X,IG
26	I, II	1.7	2323	1610	71	3253	143T	T,S,C,X,IG
24	III	2.4	2364	2305	71	3363	143T	T,S,C,X,IG
22	I, II	1.5	2636	1610	80	3253	143T	T,S,C,X,IG
22	III	2.2	2653	2305	80	3363	143T	T,S,C,X,IG
20	I, II	1.4	2928	1610	90	3253	143T	T,S,C,X,IG
19	III	2.0	3003	2305	90	3363	143T	T,S,C,X,IG
18	I	1.2	3326	1610	100	3253	143T	T,S,C,X,IG
17	II	1.8	3266	2305	100	3363	143T	T,S,C,X,IG
17	III	2.2	3246	2905	100	3373	143T	T,S,C,X,IG
16	I	1.1	3700	1610	112	3253	143T	T,S,C,X,IG
15	II	1.6	3652	2305	112	3363	143T	T,S,C,X,IG
15	III	2.0	3632	2905	112	3373	143T	T,S,C,X,IG
14	I	1.0	4163	1610	125	3253	143T	T,S,C,X,IG
14	II	1.5	4251	2305	125	3363	143T	T,S,C,X,IG
14	II	1.8	4216	2905	125	3373	143T	T,S,C,X,IG
14	III	3+	4377	4340	125	3483	143T	T,S,C,X,IG
12.5	III	3.0	4750	4340	140	3483	143T	T,S,C,X,IG
12.4	I	1.3	4750	2305	140	3363	143T	T,S,C,X,IG
12.4	II	1.6	4720	2905	140	3373	143T	T,S,C,X,IG
11.3	III	2.7	5247	4340	160	3483	143T	T,S,C,X,IG
10.8	I	1.1	5258	2305	160	3363	143T	T,S,C,X,IG
10.8	II	1.4	5238	2905	160	3373	143T	T,S,C,X,IG
10.2	III	2.5	5826	4340	180	3483	143T	T,S,C,X,IG
9.7	I	1.0	6130	2305	180	3363	143T	T,S,C,X,IG
9.7	I	1.2	6105	2905	180	3373	143T	T,S,C,X,IG
8.7	I	1.1	6786	2905	200	3373	143T	T,S,C,X,IG
8.6	II, III	2.1	6906	4340	200	3483	143T	T,S,C,X,IG
7.9	I	1.0	6786	2905	224	3374	143T	T,S,C,X°,IG
7.7	II	1.9	7530	4340	224	3484	143T	T,S,C,X,IG

◊ **Standard Motor Types** (see page A-16 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase, 115/230 volts
- C Corro-Duty®, three phase, 230/460 or 575V
- X° Explosionproof, CL1 group D, three phase, 230/460 or 575V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575V
- IG IntelliGear® variable speed for 1/230VAC, 3/230V, or 3/460V power supplies

1 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
7.7	III	3+	7561	4580	224	3594	143T	T,S,C,X,IG
7.2	I,II	1.8	8002	4340	250	3484	143T	T,S,C,X,IG
6.8	III	3+	8558	4580	250	3594	143T	T,S,C,X,IG
6.4	I,II	1.6	9059	4340	280	3484	143T	T,S,C,X,IG
6.0	III	2.8	9658	4580	280	3594	143T	T,S,C,X,IG
5.7	I,II	1.4	10222	4340	315	3484	143T	T,S,C,X,IG
5.3	III	2.5	10924	4580	315	3594	143T	T,S,C,X,IG
5.0	I	1.2	11563	4340	355	3484	143T	T,S,C,X,IG
4.7	I,II,III	2.2	12408	4580	355	3594	143T	T,S,C,X,IG
4.4	I	1.1	13137	4340	400	3484	143T	T,S,C,X,IG
4.1	II	1.9	14181	4580	400	3594	143T	T,S,C,X,IG
4.1	III	2.7	14229	13617	450	3604	143T	T,S,C,X,IG
3.9	-	0.95	15009	4340	450	3484	143T	T,S,C,X,IG
3.7	III	2.4	15834	13617	500	3604	143T	T,S,C,X,IG
3.6	I,II	1.7	16003	4580	450	3594	143T	T,S,C,X,IG
3.4	I,II	1.6	16987	4580	500	3594	143T	T,S,C,X,IG
3.3	III	2.2	17809	13617	560	3604	143T	T,S,C,X,IG
2.9	I	1.3	20105	4580	560	3594	143T	T,S,C,X,IG
2.9	III	4.1	20217	18558	630	3734	143T	T,S,C,X,IG
2.8	II	1.8	20879	13617	630	3604	143T	T,S,C,X,IG
2.7	I	1.3	21331	4580	630	3594	143T	T,S,C,X,IG
2.6	III	3.6	22740	18558	710	3734	143T	T,S,C,X,IG
2.5	II,III	1.7	23048	13617	710	3604	143T	T,S,C,X,IG
2.4	I	1.1	24376	4580	710	3594	143T	T,S,C,X,IG
2.3	I,III	1.5	25271	13617	800	3604	143T	T,S,C,X,IG
2.2	III	3.1	26659	18558	800	3734	143T	T,S,C,X,IG
2.1	-	0.99	27212	4580	800	3594	143T	T,S,C,X,IG
2.0	II,III	2.8	29429	18558	900	3734	143T	T,S,C,X,IG
2.0	I	1.3	29510	13617	900	3604	143T	T,S,C,X,IG
1.8	II,III	2.6	32267	18558	1000	3734	143T	T,S,C,X,IG
1.8	I	1.2	32750	13617	1000	3604	143T	T,S,C,X,IG
1.5	II,III	2.2	37679	18558	1120	3734	143T	T,S,C,X,IG
1.5	I	1.0	36992	13617	1120	3605	143T	T,S,C,X,IG
1.4	I	1.0	39534	13617	1250	3605	143T	T,S,C,X,IG
1.4	II,III	2.0	40980	18558	1250	3735	143T	T,S,C,X,IG
1.2	I,II	1.7	47233	18558	1400	3735	143T	T,S,C,X,IG
1.1	I,II	1.6	50478	18558	1600	3735	143T	T,S,C,X,IG
1.1	I,II	1.6	50478	18558	1600	3735	143T	T,S,C,X,IG
1.1	III	2.4	50849	22000	1600	3845	143T	T,S,C,X,IG
0.99	I,II	1.4	57283	18558	1800	3735	143T	T,S,C,X,IG
0.99	III	2.1	57551	22000	1800	3845	143T	T,S,C,X,IG
0.90	I	1.3	63625	18558	2000	3735	143T	T,S,C,X,IG
0.87	II	1.9	65728	22000	2000	3845	143T	T,S,C,X,IG
0.81	II	1.7	70533	22000	2240	3845	143T	T,S,C,X,IG
0.79	I	1.1	72277	18558	2240	3735	143T	T,S,C,X,IG
0.71	I	1.0	80414	18558	2500	3735	143T	T,S,C,X,IG
0.69	I, II	1.5	82067	22000	2500	3845	143T	T,S,C,X,IG
0.64	I, II	1.4	89069	22000	2800	3845	143T	T,S,C,X,IG
0.58	I	1.2	98382	22000	3150	3845	143T	T,S,C,X,IG
0.52	I	1.1	109243	22000	3550	3845	143T	T,S,C,X,IG

◊ **Standard Motor Types** (see page A-16 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase, 115/230 volts
- C Corro-Duty®, three phase, 230/460 or 575V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575V
- IG IntelliGear® variable speed for 1/230VAC, 3/230V, or 3/460V power supplies

Browning®

Gearmotors

CbN SERIES 3000

1 1/2 HP

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
1411	I, II, III	2.0	66	110	1.25	3001	145T	T,S,C,X°,IG
1199	I, II, III	2.0	77	112	1.4	3001	145T	T,S,C,X°,IG
1136	I, II, III	2.0	81	113	1.6	3001	145T	T,S,C,X°,IG
956	I, II, III	2.0	97	114	1.8	3001	145T	T,S,C,X°,IG
893	I, II, III	2.0	104	114	2	3001	145T	T,S,C,X°,IG
799	I, II, III	2.0	116	114	2.24	3001	145T	T,S,C,X°,IG
686	I, II, III	2.0	135	112	2.5	3001	145T	T,S,C,X°,IG
636	I, II, III	2.0	146	111	2.8	3001	145T	T,S,C,X°,IG
540	I, II, III	2.0	171	106	3.15	3001	145T	T,S,C,X°,IG
509	I, II, III	2.4	182	364	3.55	3101	145T	T,S,C,X,IG
482	I, II	1.8	192	101	3.55	3001	145T	T,S,C,X°,IG
445	I, II, III	2.1	208	377	4	3101	145T	T,S,C,X,IG
429	I, II	1.7	216	95	4	3001	145T	T,S,C,X°,IG
401	I, II	1.9	232	389	4.5	3101	145T	T,S,C,X,IG
382	I, II	1.5	243	87	4.5	3001	145T	T,S,C,X°,IG
356	I, II	1.7	260	401	5	3101	145T	T,S,C,X,IG
351	III	4.1	259	596	5	3122	145T	T,S,C,X,IG
310	I, II, III	3+	293	616	5.6	3122	145T	T,S,C,X,IG
308	I, II	1.5	301	417	5.6	3101	145T	T,S,C,X,IG
280	I	1.3	331	426	6.3	3101	145T	T,S,C,X,IG
273	II, III	3+	333	637	6.3	3122	145T	T,S,C,X,IG
238	I, II	1.8	359	347	7.1	3012	145T	T,S,C,X°,IG
238	III	3+	365	652	7.1	3122	145T	T,S,C,X,IG
214	I, II	1.8	423	336	8	3012	145T	T,S,C,X°,IG
211	III	2.9	381	659	8	3122	145T	T,S,C,X,IG
204	I, II	1.7	445	332	9	3012	145T	T,S,C,X°,IG
199	III	2.7	456	689	9	3122	145T	T,S,C,X,IG
172	I,II	1.4	529	312	10	3012	145T	T,S,C,X°,IG
168	III	2.3	541	679	10	3122	145T	T,S,C,X,IG
160	I, II	1.4	567	302	11.2	3012	145T	T,S,C,X°,IG
159	III	2.2	572	726	11.2	3122	145T	T,S,C,X,IG
143	I	1.2	634	282	12.5	3012	145T	T,S,C,X°,IG
140	II	1.9	654	689	12.5	3122	145T	T,S,C,X,IG
140	III	2.5	645	781	12.5	3132	145T	T,S,C,X,IG
123	I	1.0	738	248	14	3012	145T	T,S,C,X°,IG
123	II	1.7	730	717	14	3122	145T	T,S,C,X,IG
123	III	2.3	737	801	14	3132	145T	T,S,C,X,IG
114	I	1.0	796	228	16	3012	145T	T,S,C,X°,IG
111	II	1.5	819	726	16	3122	145T	T,S,C,X,IG
109	III	2.1	831	813	16	3132	145T	T,S,C,X,IG
103	II, III	2.0	882	821	18	3132	145T	T,S,C,X,IG

◊ **Standard Motor Types** (see page A-16 for product codes)

- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase, 115/230 volts, 145TY
- C Corro-Duty®, three phase, 230/460 or 575V
- X° Explosionproof, CL1 group D, three phase, 230/460 or 575V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575V
- IG IntelliGear® variable speed for 1/230V, 3/230V, or 3/460V power supplies

1 1/2 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
96	I	1.3	948	747	18	3122	145T	T,S,C,X,IG
88	I	1.2	1041	764	20	3122	145T	T,S,C,X,IG
88	II	1.7	1047	849	20	3132	145T	T,S,C,X,IG
88	III	2.1	1041	1175	20	3242	145T	T,S,C,X,IG
82	I, II	1.6	1108	857	22.4	3132	145T	T,S,C,X,IG
80	III	2.0	1193	1212	22.4	3242	145T	T,S,C,X,IG
72	I, II	1.4	1266	877	25	3132	145T	T,S,C,X,IG
72	III	3.1	1255	1256	25	3252	145T	T,S,C,X,IG
69	I, II	1.7	1317	1238	25	3242	145T	T,S,C,X,IG
65	I	1.3	1413	891	28	3132	145T	T,S,C,X,IG
65	II, III	2.8	1397	1288	28	3252	145T	T,S,C,X,IG
57	I	1.1	1585	905	31.5	3132	145T	T,S,C,X,IG
58	II, III	2.5	1571	1323	31.5	3252	145T	T,S,C,X,IG
49	I	1.0	1834	919	35.5	3132	145T	T,S,C,X,IG
49	II, III	2.2	1842	1368	35.5	3252	145T	T,S,C,X,IG
45	I, II, III	2.0	2033	1396	40	3252	145T	T,S,C,X,IG
41	I, II	1.8	2229	1420	45	3252	145T	T,S,C,X,IG
39	III	2.6	2265	2305	45	3363	145T	T,S,C,X,IG
35	I, II	1.5	2603	1459	50	3252	145T	T,S,C,X,IG
34	III	2.3	2601	2305	50	3363	145T	T,S,C,X,IG
31	I, II	1.4	2828	1492	56	3253	145T	T,S,C,X,IG
30	III	2.1	2929	2305	56	3363	145T	T,S,C,X,IG
27	I	1.2	3260	1511	63	3253	145T	T,S,C,X,IG
26	II	1.8	3181	2305	63	3363	145T	T,S,C,X,IG
26	III	2.2	3417	2905	63	3373	145T	T,S,C,X,IG
26	I	1.2	3484	1534	71	3253	145T	T,S,C,X,IG
24	II	1.6	3704	2305	71	3363	145T	T,S,C,X,IG
24	III	2.0	3699	2905	71	3373	145T	T,S,C,X,IG
22	I	1.0	3954	1555	80	3253	145T	T,S,C,X,IG
22	II	1.5	3979	2305	80	3363	145T	T,S,C,X,IG
22	II	1.9	4039	2905	80	3373	145T	T,S,C,X,IG
22	III	3+	4069	4340	80	3483	145T	T,S,C,X,IG
19	I	1.3	4504	2305	90	3363	145T	T,S,C,X,IG
19	II	1.7	4576	2905	90	3373	145T	T,S,C,X,IG
19	III	3+	4604	4340	90	3483	145T	T,S,C,X,IG
17	I	1.2	5136	2305	100	3363	145T	T,S,C,X,IG
17	II	1.5	5116	2905	100	3373	145T	T,S,C,X,IG
17	III	2.7	5258	4340	100	3483	145T	T,S,C,X,IG
16	II, III	2.5	5642	4340	112	3483	145T	T,S,C,X,IG
15	I	1.0	5813	2305	112	3363	145T	T,S,C,X,IG
15	I	1.3	5798	2905	112	3373	145T	T,S,C,X,IG
14	I	1.2	6324	2905	125	3373	145T	T,S,C,X,IG
14	II, III	2.2	6565	4340	125	3483	145T	T,S,C,X,IG

◊ **Standard Motor Types** (see page A-16 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase, 115/230 volts, 145TY
- C Corro-Duty®, three phase, 230/460 or 575V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575V
- IG IntelliGear® variable speed for 1/230V, 3/230V, or 3/460V power supplies

Browning®

Gearmotors

CbN SERIES 3000

1 1/2 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
12.5	II,III	2.0	7125	4340	140	3483	145T	T,S,C,X,IG
12	I	1.1	7125	2905	140	3373	145T	T,S,C,X,IG
11.3	I,II	1.8	7870	4340	160	3483	145T	T,S,C,X,IG
11	III	3+	8067	4580	160	3593	145T	T,S,C,X,IG
10.2	I,II	1.6	8739	4340	180	3483	145T	T,S,C,X,IG
10.1	III	3+	8776	4580	180	3593	145T	T,S,C,X,IG
8.6	I,II	1.4	10359	4340	200	3483	145T	T,S,C,X,IG
8.6	III	2.6	10333	4580	200	3593	145T	T,S,C,X,IG
7.7	I	1.3	11295	4340	224	3484	145T	T,S,C,X,IG
7.7	II,III	2.4	11341	4580	224	3594	145T	T,S,C,X,IG
7.2	I	1.2	12002	4580	250	3484	145T	T,S,C,X,IG
6.8	I,II,III	2.1	12837	4580	250	3594	145T	T,S,C,X,IG
6.4	I	1.1	13588	4580	280	3484	145T	T,S,C,X,IG
6.2	III	2.8	13952	13617	280	3604	145T	T,S,C,X,IG
6.0	II	1.9	14487	4580	280	3594	145T	T,S,C,X,IG
5.9	III	2.6	14905	13617	315	3604	145T	T,S,C,X,IG
5.3	I,II	1.6	16386	4580	315	3594	145T	T,S,C,X,IG
5.2	III	2.3	16916	13617	355	3604	145T	T,S,C,X,IG
4.7	I,II	1.4	18613	4580	355	3594	145T	T,S,C,X,IG
4.6	II,III	2.1	18794	13617	400	3604	145T	T,S,C,X,IG
4.1	I	1.3	21271	4580	400	3594	145T	T,S,C,X,IG
4.1	I,II	1.8	21343	13617	450	3604	145T	T,S,C,X,IG
4.0	III	3.8	21599	18558	450	3734	145T	T,S,C,X,IG
3.7	I,II	1.6	23751	13617	500	3604	145T	T,S,C,X,IG
3.6	III	3.4	23997	18558	500	3734	145T	T,S,C,X,IG
3.6	I	1.1	24010	4580	450	3594	145T	T,S,C,X,IG
3.4	I	1.1	25481	4580	500	3594	145T	T,S,C,X,IG
3.3	II	1.4	26714	13617	560	3604	145T	T,S,C,X,IG
3.2	III	3.0	27252	18558	560	3734	145T	T,S,C,X,IG
2.9	II,III	2.7	30326	18558	630	3734	145T	T,S,C,X,IG
2.8	I	1.2	31318	13617	630	3604	145T	T,S,C,X,IG
2.6	II,III	2.4	34110	18558	710	3734	145T	T,S,C,X,IG
2.5	I	1.1	34572	13617	710	3604	145T	T,S,C,X,IG
2.3	I	1.0	37906	13617	800	3604	145T	T,S,C,X,IG
2.2	II,III	2.1	39988	18558	800	3734	145T	T,S,C,X,IG
2.1	III	3.0	41256	22000	900	3844	145T	T,S,C,X,IG
2.0	I,II	1.9	44143	18558	900	3734	145T	T,S,C,X,IG
1.8	I,II	1.7	48400	18558	1000	3734	145T	T,S,C,X,IG
1.8	III	2.5	48912	22000	1000	3844	145T	T,S,C,X,IG
1.6	III	2.3	52095	22000	1120	3845	145T	T,S,C,X,IG
1.5	I,II	1.5	56519	18558	1120	3734	145T	T,S,C,X,IG
1.4	I	1.3	61470	18558	1250	3735	145T	T,S,C,X,IG
1.4	II, III	2.0	60875	22000	1250	3845	145T	T,S,C,X,IG
1.3	II	1.8	67949	22000	1400	3845	145T	T,S,C,X,IG
1.2	I	1.2	70850	18558	1400	3735	145T	T,S,C,X,IG
1.1	I	1.1	75717	18558	1600	3735	145T	T,S,C,X,IG
1.1	II	1.6	76300	22000	1600	3845	145T	T,S,C,X,IG
0.99		0.96	85925	18558	1800	3735	145T	T,S,C,X,IG
0.99	I, II	1.4	86327	22000	1800	3845	145T	T,S,C,X,IG
0.87	I	1.2	98591	22000	2000	3845	145T	T,S,C,X,IG
0.81	I	1.2	105800	22000	2240	3845	145T	T,S,C,X,IG

◊ **Standard Motor Types** (see page A-16 for product codes)

- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase, 115/230 volts, 145TY
- C Corro-Duty®, three phase, 230/460 or 575V
- X Explosionproof, CI 1 group D, CI 2 groups F&G, three phase, 230/460 or 575V
- IG IntelliGear® variable speed for 1/230V, 3/230V, or 3/460V power supplies

2 HP

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
1434	I, II, III	3+	86	260	1.25	3101	145T	T,S,C,X,IG
1411	I, II, III	1.5	88	84	1.25	3001	145T	T,S,C,X°,IG
1268	I, II, III	3+	97	270	1.4	3101	145T	T,S,C,X,IG
1199	I, II	1.5	103	83	1.4	3001	145T	T,S,C,X°,IG
1136	I, II	1.5	109	83	1.6	3001	145T	T,S,C,X°,IG
1122	III	3+	110	280	1.6	3101	145T	T,S,C,X,IG
994	II, III	3.0	124	291	1.8	3101	145T	T,S,C,X,IG
956	I, II	1.5	129	80	1.8	3001	145T	T,S,C,X°,IG
893	I, II	1.5	138	79	2	3001	145T	T,S,C,X°,IG
875	III	2.8	141	302	2	3101	145T	T,S,C,X,IG
799	I, II	1.5	155	75	2.24	3001	145T	T,S,C,X°,IG
764	III	2.7	161	313	2.24	3101	145T	T,S,C,X,IG
686	I, II	1.5	180	69	2.5	3001	145T	T,S,C,X°,IG
678	III	2.4	182	324	2.5	3101	145T	T,S,C,X,IG
637	I, II	1.5	194	65	2.8	3001	145T	T,S,C,X°,IG
637	III	2.3	193	330	2.8	3101	145T	T,S,C,X,IG
540	I, II	1.5	228	54	3.15	3001	145T	T,S,C,X°,IG
538	II	1.9	229	345	3.15	3101	145T	T,S,C,X,IG
510	I, II	1.8	243	351	3.55	3101	145T	T,S,C,X,IG
510	III	2.9	245	456	3.55	3201	145T	T,S,C,X,IG
482	I, II	1.4	256	45	3.55	3001	145T	T,S,C,X°,IG
446	I, II	1.6	277	363	4	3101	145T	T,S,C,X,IG
446	III	3+	271	543	4	3122	145T	T,S,C,X,IG
429	I	1.3	288	33	4	3001	145T	T,S,C,X°,IG
401	I, II	1.4	310	373	4.5	3101	145T	T,S,C,X,IG
395	III	3+	306	561	4.5	3122	145T	T,S,C,X,IG
356	I	1.3	347	383	5	3101	145T	T,S,C,X,IG
351	II, III	3.1	345	578	5	3122	145T	T,S,C,X,IG
309	I	1.1	402	397	5.6	3101	145T	T,S,C,X,IG
309	II, III	3.0	391	595	5.6	3122	145T	T,S,C,X,IG
280	I	1.0	441	405	6.3	3101	145T	T,S,C,X,IG
273	II, III	2.8	444	613	6.3	3122	145T	T,S,C,X,IG
238	I	1.3	479	265	7.1	3012	145T	T,S,C,X°,IG
238	II, III	2.5	507	632	7.1	3122	145T	T,S,C,X,IG
214	I	1.3	564	240	8	3012	145T	T,S,C,X°,IG
211	II, III	2.2	573	648	8	3122	145T	T,S,C,X,IG
204	I	1.3	594	230	9	3012	145T	T,S,C,X°,IG
199	II, III	2.1	608	656	9	3122	145T	T,S,C,X,IG
181	I, II, III	2.2	668	691	10	3132	145T	T,S,C,X,IG
172	I	1.1	705	192	10	3012	145T	T,S,C,X°,IG

◊ **Standard Motor Types** (see page A-16 for product codes)

- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase, 115/230 volts, 145TY
- C Corro-Duty®, three phase, 230/460 or 575V
- X° Explosionproof, CL1 group D, three phase, 230/460 or 575V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575V
- IG IntelliGear® variable speed for 1/230V, 3/230V, or 3/460V power supplies.

Browning®

Gearmotors

CbN SERIES 3000

2 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
168	II	1.7	721	678	10	3122	145T	T,S,C,X,IG
160	I	1.0	755	173	11.2	3012	145T	T,S,C,X°,IG
160	II	1.6	763	685	11.2	3122	145T	T,S,C,X,IG
160	III	2.0	756	709	11.2	3132	145T	T,S,C,X,IG
141	I, II	1.9	859	727	12.5	3132	145T	T,S,C,X,IG
139	I, II	1.4	872	700	12.5	3122	145T	T,S,C,X,IG
128	II, II	2.3	973	1035	14	3242	145T	T,S,C,X,IG
124	I	1.3	973	711	14	3122	145T	T,S,C,X,IG
123	II	1.7	982	745	14	3132	145T	T,S,C,X,IG
111	I	1.1	1091	722	16	3122	145T	T,S,C,X,IG
114	II, III	2.1	1091	1062	16	3242	145T	T,S,C,X,IG
109	I, II	1.6	1108	760	16	3132	145T	T,S,C,X,IG
103	I, II	1.5	1176	767	18	3132	145T	T,S,C,X,IG
97	II	1.8	1264	1096	18	3242	145T	T,S,C,X,IG
96	I	1.0	1264	733	18	3122	145T	T,S,C,X,IG
91	III	2.8	1326	1139	20	3252	145T	T,S,C,X,IG
88	I	1.3	1397	785	20	3132	145T	T,S,C,X,IG
88	II	1.6	1387	1116	20	3242	145T	T,S,C,X,IG
82	I	1.2	1477	790	22.4	3132	145T	T,S,C,X,IG
82	II, III	2.6	1473	1166	22.4	3252	145T	T,S,C,X,IG
80	I, II	1.5	1591	1145	22.4	3242	145T	T,S,C,X,IG
72	I	1.0	1688	800	25	3132	145T	T,S,C,X,IG
72	II, III	2.4	1674	1197	25	3252	145T	T,S,C,X,IG
69	I	1.3	1756	1165	25	3242	145T	T,S,C,X,IG
65	I, II, III	2.1	1862	1222	28	3252	145T	T,S,C,X,IG
58	I, II	1.9	2095	1248	31.5	3252	145T	T,S,C,X,IG
54	III	2.7	2156	2305	31.5	3363	145T	T,S,C,X,IG
49	I, II	1.6	2455	1281	35.5	3252	145T	T,S,C,X,IG
47	III	2.4	2382	2305	35.5	3363	145T	T,S,C,X,IG
45	I, II	1.5	2710	1299	40	3252	145T	T,S,C,X,IG
43	III	2.2	2733	2305	40	3363	145T	T,S,C,X,IG
41	I	1.3	2972	1314	45	3252	145T	T,S,C,X,IG
39	II, III	2.0	3020	2305	45	3363	145T	T,S,C,X,IG
36	III	2.1	3366	2905	50	3372	145T	T,S,C,X,IG
35	I	1.2	3471	1335	50	3252	145T	T,S,C,X,IG
34	II	1.7	3468	2305	50	3363	145T	T,S,C,X,IG
32	III	3+	3704	4340	56	3483	145T	T,S,C,X,IG
31	I	1.1	3771	1357	56	3253	145T	T,S,C,X,IG
30	II	1.6	3905	2305	56	3363	145T	T,S,C,X,IG
30	II	1.9	3889	2905	56	3373	145T	T,S,C,X,IG

◊ **Standard Motor Types** (see page A-16 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase, 115/230 volts, 145TY
- C Corro-Duty®, three phase, 230/460 or 575V
- X° Explosionproof, CL1 group D, three phase, 230/460 or 575V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575V
- IG IntelliGear® variable speed for 1/230V, 3/230V, or 3/460V power supplies.

2 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
27	III	3+	4328	4340	63	3483	145T	T,S,C,X,IG
26	I,II	1.4	4242	2305	63	3363	145T	T,S,C,X,IG
26	III	1.7	4215	2905	63	3373	145T	T,S,C,X,IG
25	III	2.9	4831	4340	71	3483	145T	T,S,C,X,IG
24	I	1.2	4728	2305	71	3363	145T	T,S,C,X,IG
24	I,II	1.5	4702	2905	71	3373	145T	T,S,C,X,IG
22	I	1.1	5306	2305	80	3363	145T	T,S,C,X,IG
22	III	1.4	5295	2905	80	3373	145T	T,S,C,X,IG
22	III	2.6	5425	4340	80	3483	145T	T,S,C,X,IG
19	I	1.0	6005	2305	90	3363	145T	T,S,C,X,IG
19	I	1.3	6101	2905	90	3373	145T	T,S,C,X,IG
19	II,III	2.3	6136	4340	90	3483	145T	T,S,C,X,IG
17	I	1.1	6847	2905	100	3373	145T	T,S,C,X,IG
17	II,III	2.0	7010	4340	100	3483	145T	T,S,C,X,IG
16	II	1.9	7523	4340	112	3483	145T	T,S,C,X,IG
16	III	3+	7418	4580	112	3593	145T	T,S,C,X,IG
15	I	1.0	7751	2905	112	3373	145T	T,S,C,X,IG
14	I,II	1.6	8753	4340	125	3483	145T	T,S,C,X,IG
14	III	3+	8265	4580	125	3593	145T	T,S,C,X,IG
13	III	2.9	9372	4580	140	3593	145T	T,S,C,X,IG
12	I,II	1.5	9500	4340	140	3483	145T	T,S,C,X,IG
11.3	I,II	1.4	10493	4340	160	3483	145T	T,S,C,X,IG
11	III	2.5	10757	4580	160	3593	145T	T,S,C,X,IG
10.2	I	1.2	11652	4340	180	3483	145T	T,S,C,X,IG
10.1	II,III	2.3	11701	4580	180	3593	145T	T,S,C,X,IG
8.7	I	1.1	13619	4340	200	3483	145T	T,S,C,X,IG
8.7	II,III	2.0	13632	4580	200	3593	145T	T,S,C,X,IG
8.1	III	2.7	14625	13617	224	3603	145T	T,S,C,X,IG
7.6	-	.94	15175	4340	224	3484	145T	T,S,C,X,IG
7.6	I,II	1.8	15122	4580	224	3594	145T	T,S,C,X,IG
6.9	III	2.3	17062	13617	250	3603	145T	T,S,C,X,IG
6.8	I,II	1.6	17117	4580	250	3594	145T	T,S,C,X,IG
6.2	I	1.1	19068	4580	280	3594	145T	T,S,C,X,IG
6.2	III	2.1	18603	13617	280	3604	145T	T,S,C,X,IG
6.0	II	1.4	19317	4580	280	3594	145T	T,S,C,X,IG
5.9	II	1.9	19873	13617	315	3604	145T	T,S,C,X,IG
5.6	III	3+	20600	18558	315	3734	145T	T,S,C,X,IG
5.3	I	1.2	21848	4580	315	3594	145T	T,S,C,X,IG

◊ **Standard Motor Types** (see page A-16 for product codes)
- T TEFC, three phase, 230/460 or 575V
- S TEFC, single phase, 115/230V, 145TY
- C Corro-Duty®, three phase, 230/460 or 575V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase,230/460 or 575V
- IG IntelliGear® variable speed for 1/230V, 3/230V, or 3/460V power supplies.

Browning®

Gearmotors

CbN SERIES 3000

2 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
5.2	II	1.7	22554	13617	355	3604	145T	T,S,C,X,IG
4.9	III	3.5	23753	18558	355	3734	145T	T,S,C,X,IG
4.7	I	1.1	24817	4580	355	3594	145T	T,S,C,X,IG
4.6	I,II	1.5	25059	13617	400	3604	145T	T,S,C,X,IG
4.6	III	3.3	25375	18558	400	3734	145T	T,S,C,X,IG
4.1	I,II	1.4	28458	13617	450	3604	145T	T,S,C,X,IG
4.0	III	2.9	28798	18558	450	3734	145T	T,S,C,X,IG
3.7	I	1.2	31668	13617	500	3604	145T	T,S,C,X,IG
3.6	II,III	2.6	31996	18558	500	3734	145T	T,S,C,X,IG
3.3	I	1.1	35619	13617	560	3604	145T	T,S,C,X,IG
3.2	II,III	2.3	36336	18558	560	3734	145T	T,S,C,X,IG
2.9	I,II,III	2.0	40435	18558	630	3734	145T	T,S,C,X,IG
2.9	I,II,III	2.0	40435	18558	630	3734	145T	T,S,C,X,IG
2.8	III	3.0	41327	22000	630	3844	145T	T,S,C,X,IG
2.6	I,II	1.8	45480	18558	710	3734	145T	T,S,C,X,IG
2.6	III	2.7	44851	22000	710	3844	145T	T,S,C,X,IG
2.3	III	2.5	49541	22000	800	3844	145T	T,S,C,X,IG
2.2	I,II	1.5	53317	18558	800	3734	145T	T,S,C,X,IG
2.1	III	2.2	55008	22000	900	3844	145T	T,S,C,X,IG
2.0	I,II	1.4	58858	18558	900	3734	145T	T,S,C,X,IG
1.8	I	1.3	64533	18558	1000	3734	145T	T,S,C,X,IG
1.8	II	1.9	65216	22000	1000	3844	145T	T,S,C,X,IG
1.6	II	1.8	69460	22000	1120	3845	145T	T,S,C,X,IG
1.5	I	1.1	75359	18558	1120	3734	145T	T,S,C,X,IG
1.4	II	1.5	81166	22000	1250	3845	145T	T,S,C,X,IG
1.4	I	1.0	81959	18558	1250	3735	145T	T,S,C,X,IG
1.3	II	1.4	90599	22000	1400	3845	145T	T,S,C,X,IG
1.1	I	1.2	101734	22000	1600	3845	145T	T,S,C,X,IG
1.0	I	1.1	115103	22000	1800	3845	145T	T,S,C,X,IG

◊ **Standard Motor Types** (see page A-16 for product codes)
- T TEFC, three phase, 230/460 or 575V
- S TEFC, single phase, 115/230V, 145TY
- C Corro-Duty®, three phase, 230/460 or 575V
- X Explosionproof, Cl 1 group D, Cl 2 Grps F&G, three phase,230/460 or 575V
- IG IntelliGear® variable speed for 1/230V, 3/230V, or 3/460V power supplies.

3 HP

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
1434	I, II, III	2.3	129	248	1.25	3101	182T	T,S,C,X,IG
1268	I, II, III	2.1	146	257	1.4	3101	182T	T,S,C,X,IG
1122	I, II, III	2.1	165	265	1.6	3101	182T	T,S,C,X,IG
994	I, II, III	2.0	186	275	1.8	3101	182T	T,S,C,X,IG
902	I, II, III	3+	205	370	2	3201	182T	T,S,C,X,IG
875	I, II	1.9	212	284	2	3101	182T	T,S,C,X,IG
792	I, II, III	3.0	234	382	2.24	3201	182T	T,S,C,X,IG
764	I, II	1.8	242	294	2.24	3101	182T	T,S,C,X,IG
686	I, II, III	2.6	270	397	2.5	3201	182T	T,S,C,X,IG
678	I, II	1.6	273	303	2.5	3101	182T	T,S,C,X,IG
639	I, II	1.5	290	308	2.8	3101	182T	T,S,C,X,IG
632	III	2.5	288	403	2.8	3201	182T	T,S,C,X,IG
566	I, II, III	2.2	327	415	3.15	3201	182T	T,S,C,X,IG
538	I	1.3	344	320	3.15	3101	182T	T,S,C,X,IG
510	I	1.2	364	324	3.55	3101	182T	T,S,C,X,IG
510	II, III	2.0	363	425	3.55	3201	182T	T,S,C,X,IG
450	II	1.7	412	437	4	3201	182T	T,S,C,X,IG
446	I	1.1	416	334	4	3101	182T	T,S,C,X,IG
446	III	2.3	406	514	4	3122	182T	T,S,C,X,IG
404	II	1.5	459	447	4.5	3201	182T	T,S,C,X,IG
401	I	1.0	464	341	4.5	3101	182T	T,S,C,X,IG
395	I, II, III	2.1	459	528	4.5	3122	182T	T,S,C,X,IG
391	III	2.8	473	1081	4.5	3301	182T	T,S,C,X,IG
359	I, II	1.4	516	457	5	3201	182T	T,S,C,X,IG
359	III	2.6	516	1108	5	3301	182T	T,S,C,X,IG
351	III	2.0	518	541	5	3122	182T	T,S,C,X,IG
318	III	3+	586	786	5.6	3242	182T	T,S,C,X,IG
318	III	2.3	582	1147	5.6	3301	182T	T,S,C,X,IG
314	III	3+	590	1778	5.6	3401	182T	T,S,C,X,IG
310	II, III	2.0	586	553	5.6	3122	182T	T,S,C,X,IG
306	I	1.2	605	470	5.6	3201	182T	T,S,C,X,IG
287	III	3+	666	811	6.3	3242	182T	T,S,C,X,IG
276	III	2.0	670	1193	6.3	3301	182T	T,S,C,X,IG
273	I,II	1.9	666	566	6.3	3122	182T	T,S,C,X,IG
251	I, II, III	3+	761	837	7.1	3242	182T	T,S,C,X,IG
238	I, II	1.6	761	577	7.1	3122	182T	T,S,C,X,IG
231	I, II	1.7	786	606	8	3132	182T	T,S,C,X,IG
218	III	2.7	859	860	8	3242	182T	T,S,C,X,IG
211	I, II	1.5	859	587	8	3122	182T	T,S,C,X,IG
199	I, II	1.4	911	591	9	3122	182T	T,S,C,X,IG

◊ **Standard Motor Types** (see page A-16 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase, 230 volts, 184T frame
- C Corro-Duty®, three phase, 230/460 or 575V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575V
- IG IntelliGear® variable speed for 3/230V, 3/460V power supplies

Browning®

Gearmotors

CbN SERIES 3000

3 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
204	II	1.6	889	619	9	3132	182T	T,S,C,X,IG
204	III	2.5	911	872	9	3242	182T	T,S,C,X,IG
181	I, II	1.5	1003	630	10	3132	182T	T,S,C,X,IG
180	III	2.2	1082	903	10	3242	182T	T,S,C,X,IG
168	I	1.2	1082	601	10	3122	182T	T,S,C,X,IG
161	I	1.1	1145	603	11.2	3122	182T	T,S,C,X,IG
161	II	1.4	1134	614	11.2	3132	182T	T,S,C,X,IG
161	III	2.0	1145	913	11.2	3242	182T	T,S,C,X,IG
142	I	1.2	1289	649	12.5	3132	182T	T,S,C,X,IG
142	II	1.7	1308	936	12.5	3242	182T	T,S,C,X,IG
142	III	2.5	1249	959	12.5	3252	182T	T,S,C,X,IG
128	II	1.6	1460	954	14	3242	182T	T,S,C,X,IG
128	III	2.3	1423	985	14	3252	182T	T,S,C,X,IG
123	I	1.1	1473	656	14	3132	182T	T,S,C,X,IG
114	II	1.4	1637	971	16	3242	182T	T,S,C,X,IG
110	I	1.1	1662	660	16	3132	182T	T,S,C,X,IG
110	III	2.1	1641	1012	16	3252	182T	T,S,C,X,IG
103	I	1.0	1764	660	18	3132	182T	T,S,C,X,IG
103	III	2.0	1753	1023	18	3252	182T	T,S,C,X,IG
97	I	1.2	1898	990	18	3242	182T	T,S,C,X,IG
91	I, II	1.9	1990	1044	20	3252	182T	T,S,C,X,IG
88	I	1.1	2081	1000	20	3242	182T	T,S,C,X,IG
88	III	3+	2037	2620	20	3372	182T	T,S,C,X,IG
81	I	1.0	2384	1012	22.4	3242	182T	T,S,C,X,IG
81	II	1.7	2210	1060	22.4	3252	182T	T,S,C,X,IG
81	III	3+	2270	2699	22.4	3372	182T	T,S,C,X,IG
72	I, II	1.6	2510	1077	25	3252	182T	T,S,C,X,IG
70	III	2.1	2543	2305	25	3372	182T	T,S,C,X,IG
65	I, II	1.4	2793	1089	28	3252	182T	T,S,C,X,IG
63	III	2.5	2548	2784	28	3372	182T	T,S,C,X,IG
58	I	1.3	3142	1098	31.5	3252	182T	T,S,C,X,IG
58	II, III	2.3	2884	2878	31.5	3372	182T	T,S,C,X,IG
54	I, II	1.8	3234	2305	31.5	3363	182T	T,S,C,X,IG
51	III	2.0	3137	2905	35.5	3372	182T	T,S,C,X,IG
49	I	1.1	3683	1105	35.5	3252	182T	T,S,C,X,IG
47	I, II	1.6	3781	2305	35.5	3363	182T	T,S,C,X,IG
46	III	3+	3966	4340	40	3482	182T	T,S,C,X,IG
45	I	1.0	4066	1105	40	3252	182T	T,S,C,X,IG
44	I, II	1.4	4099	2305	40	3363	182T	T,S,C,X,IG
44	I, II	1.7	3545	2905	40	3372	182T	T,S,C,X,IG

◊ **Standard Motor Types** (see page A-16 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase, 230 volts, 184T frame
- C Corro-Duty®, three phase, 230/460 or 575V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575V
- IG IntelliGear® variable speed for 3/230V, 3/460V power supplies

3 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
41	III	3+	4404	4340	45	3482	182T	T,S,C,X,IG
39	I	1.3	4557	2305	45	3363	182T	T,S,C,X,IG
39	II	1.6	4531	2905	45	3372	182T	T,S,C,X,IG
35	I	1.2	5202	2305	50	3363	182T	T,S,C,X,IG
35	II	1.4	4961	2905	50	3372	182T	T,S,C,X,IG
35	III	2.6	5221	4340	50	3482	182T	T,S,C,X,IG
32	II,III	2.5	5556	4340	56	3483	182T	T,S,C,X,IG
30	I	1.0	5858	2305	56	3363	182T	T,S,C,X,IG
30	I	1.3	5836	2905	56	3373	182T	T,S,C,X,IG
27	II,III	2.2	6493	4340	63	3483	182T	T,S,C,X,IG
26	I	1.1	6835	2905	63	3373	182T	T,S,C,X,IG
25	II	1.9	7247	4340	71	3483	182T	T,S,C,X,IG
25	III	3+	7091	4580	71	3593	182T	T,S,C,X,IG
24	I	1.0	7405	2305	71	3373	182T	T,S,C,X,IG
23	III	3+	7845	4580	80	3593	182T	T,S,C,X,IG
22	I,II	1.7	8138	4340	80	3483	182T	T,S,C,X,IG
20	III	2.9	9207	4580	90	3593	182T	T,S,C,X,IG
19.0	I,II	1.5	9207	4340	90	3483	182T	T,S,C,X,IG
18.0	III	2.7	9905	4580	100	3593	182T	T,S,C,X,IG
17.0	I,II	1.4	10516	4340	100	3483	182T	T,S,C,X,IG
16.0	I	1.3	11284	4340	112	3483	182T	T,S,C,X,IG
16.0	II,III	2.4	11126	4580	112	3593	182T	T,S,C,X,IG
14.3	II,III	2.2	12390	4580	125	3593	182T	T,S,C,X,IG
13.6	I	1.1	13101	4340	125	3483	182T	T,S,C,X,IG
13.0	II	1.9	14058	4580	140	3593	182T	T,S,C,X,IG
12.8	III	2.8	13914	13617	140	3603	182T	T,S,C,X,IG
12.0	I	1.0	14250	4340	140	3483	182T	T,S,C,X,IG
11.4	III	2.5	15539	13617	160	3603	182T	T,S,C,X,IG
11.0	I,II	1.7	16135	4580	160	3593	182T	T,S,C,X,IG
10.1	III	2.2	17570	13617	180	3603	182T	T,S,C,X,IG
10.0	I,II	1.6	17552	4580	180	3593	182T	T,S,C,X,IG
9.0	I	1.3	20448	4580	200	3593	182T	T,S,C,X,IG
8.8	III	4.4	20109	18558	200	3733	182T	T,S,C,X,IG
8.8	II	1.9	20210	13617	200	3603	182T	T,S,C,X,IG
8.1	II	1.8	21937	13617	224	3603	182T	T,S,C,X,IG
8.1	III	4.1	22039	18558	224	3733	182T	T,S,C,X,IG
8.0	I	1.2	23257	4580	224	3594	182T	T,S,C,X,IG
7.2	III	3.6	24781	18558	250	3733	182T	T,S,C,X,IG
7.0	I	1.0	26233	4580	250	3594	182T	T,S,C,X,IG
6.9	II	1.5	25593	13617	250	3603	182T	T,S,C,X,IG
6.4	III	3.0	27117	18558	280	3734	182T	T,S,C,X,IG
6.2	I,II	1.4	27905	13617	280	3604	182T	T,S,C,X,IG

◊ **Standard Motor Types** (see page A-16 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase, 230 volts, 184T frame
- C Corro-Duty®, three phase, 230/460 or 575V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575V
- IG IntelliGear® variable speed for 3/230V, 3/460V power supplies

Browning®

Gearmotors

CbN SERIES 3000

3 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
5.9	I	1.3	29810	13617	315	3604	182T	T,S,C,X,IG
5.6	II,III	2.7	30900	18558	315	3734	182T	T,S,C,X,IG
5.2	I	1.1	33832	13617	355	3604	182T	T,S,C,X,IG
4.9	II,III	2.3	35630	18558	355	3734	182T	T,S,C,X,IG
4.6	I	1.0	37589	13617	400	3604	182T	T,S,C,X,IG
4.6	II,III	2.2	38062	18558	400	3734	182T	T,S,C,X,IG
4.0	I,II	1.9	43197	18558	450	3734	182T	T,S,C,X,IG
2.9	I,II,III	2.0	40435	18558	630	3734	145T	T,S,C,X,IG
2.8	III	3.0	41327	22000	630	3844	145T	T,S,C,X,IG
2.6	I,II	1.8	45480	18558	710	3734	145T	T,S,C,X,IG
2.6	III	2.7	44851	22000	710	3844	145T	T,S,C,X,IG
2.3	III	2.5	49541	22000	800	3844	145T	T,S,C,X,IG
2.2	I,II	1.5	53317	18558	800	3734	145T	T,S,C,X,IG
2.1	III	2.2	55008	22000	900	3844	145T	T,S,C,X,IG
2.0	I,II	1.4	58858	18558	900	3734	145T	T,S,C,X,IG
1.8	I	1.3	64533	18558	1000	3734	145T	T,S,C,X,IG
1.8	II	1.9	65216	22000	1000	3844	145T	T,S,C,X,IG
1.6	II	1.8	69460	22000	1120	3845	145T	T,S,C,X,IG
1.5	I	1.1	75359	18558	1120	3734	145T	T,S,C,X,IG
1.4	II	1.5	81166	22000	1250	3845	145T	T,S,C,X,IG
1.4	I	1.0	81959	18558	1250	3735	145T	T,S,C,X,IG
1.3	II	1.4	90599	22000	1400	3845	145T	T,S,C,X,IG
1.1	I	1.2	101734	22000	1600	3845	145T	T,S,C,X,IG
1.0	I	1.1	115103	22000	1800	3845	145T	T,S,C,X,IG

◊ **Standard Motor Types** (see page A-16 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase, 230 volts, 184T frame
- C Corro-Duty®, three phase, 230/460 or 575V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575V
- IG IntelliGear® variable speed for 3/230V, 3/460V power supplies

5 HP

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
1434	I, II	1.4	215	222	1.25	3101	184T	T,S,C,X,IG
1423	III	2.4	217	298	1.25	3201	184T	T,S,C,X,IG
1268	I	1.3	243	229	1.4	3101	184T	T,S,C,X,IG
1207	II, III	2.2	256	311	1.4	3201	184T	T,S,C,X,IG
1129	II, III	2.3	273	316	1.6	3201	184T	T,S,C,X,IG
1122	I	1.2	275	236	1.6	3101	184T	T,S,C,X,IG
1000	II, III	2.1	309	324	1.8	3201	184T	T,S,C,X,IG
994	I	1.2	311	229	1.8	3101	184T	T,S,C,X,IG
902	II, III	2.1	342	332	2	3201	184T	T,S,C,X,IG
875	I	1.1	353	217	2	3101	184T	T,S,C,X,IG
792	II	1.8	390	340	2.24	3201	184T	T,S,C,X,IG
778	III	2.7	397	848	2.24	3301	184T	T,S,C,X,IG
764	I	1.1	403	200	2.24	3101	184T	T,S,C,X,IG
686	II	1.6	449	349	2.5	3201	184T	T,S,C,X,IG
678	I	1.0	455	179	2.5	3101	184T	T,S,C,X,IG
678	III	2.8	456	883	2.5	3301	184T	T,S,C,X,IG
632	I, II	1.5	480	353	2.8	3201	184T	T,S,C,X,IG
601	III	2.4	513	913	2.8	3301	184T	T,S,C,X,IG
566	I	1.3	545	360	3.15	3201	184T	T,S,C,X,IG
554	II, III	2.0	558	934	3.15	3301	184T	T,S,C,X,IG
510	I	1.2	605	365	3.55	3201	184T	T,S,C,X,IG
497	II, III	2.0	621	962	3.55	3201	184T	T,S,C,X,IG
450	II	1.4	676	455	4	3122	184T	T,S,C,X,IG
450	I	1.0	687	370	4	3201	184T	T,S,C,X,IG
450	III	3+	676	669	4	3242	184T	T,S,C,X,IG
443	I, II	1.9	697	993	4	3301	184T	T,S,C,X,IG
426	I, II, III	3+	725	1566	4	3401	184T	T,S,C,X,IG
395	I	1.3	766	462	4.5	3122	184T	T,S,C,X,IG
391	I, II, III	3+	789	1025	4.5	3301	184T	T,S,C,X,IG
383	II, III	2.8	790	687	4.5	3242	184T	T,S,C,X,IG
359	I, II	1.5	859	1045	5	3301	184T	T,S,C,X,IG
359	II, III	2.6	844	704	5	3242	184T	T,S,C,X,IG
351	I	1.2	863	466	5	3122	184T	T,S,C,X,IG
341	I, II, III	3+	906	1666	5	3401	184T	T,S,C,X,IG
318	I, II	1.4	971	1052	5.6	3301	184T	T,S,C,X,IG
318	II, III	2.3	953	720	5.6	3242	184T	T,S,C,X,IG
314	I, II, III	3.0	983	1726	5.6	3401	184T	T,S,C,X,IG
310	I	1.2	977	469	5.6	3122	184T	T,S,C,X,IG
287	II, III	2.1	1054	737	6.3	3242	184T	T,S,C,X,IG
276	I	1.2	1117	1055	6.3	3301	184T	T,S,C,X,IG

◊ **Standard Motor Types** (see page A-16 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase, 230 volts
- C Corro-Duty®, three phase, 230/460 or 575V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575V
- IG IntelliGear® variable speed for 3/230V, 3/460V power supplies

Browning®

Gearmotors

CbN SERIES 3000

5 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
284	I, II, III	2.7	1086	1798	6.3	3401	184T	T,S,C,X,IG
273	I	1.1	1110	470	6.3	3122	184T	T,S,C,X,IG
256	I, II, III	2.3	1206	1855	7.1	3401	184T	T,S,C,X,IG
251	II	1.8	1203	752	7.1	3242	184T	T,S,C,X,IG
247	III	2.9	1225	1893	7.1	3362	184T	T,S,C,X,IG
238	I	1.0	1269	468	7.1	3122	184T	T,S,C,X,IG
231	I	1.0	1309	511	8	3132	184T	T,S,C,X,IG
229	III	2.1	1320	789	8	3252	184T	T,S,C,X,IG
218	II	1.6	1431	764	8	3242	184T	T,S,C,X,IG
204	I, II	1.5	1519	770	9	3242	184T	T,S,C,X,IG
194	II	1.9	1559	810	9	3252	184T	T,S,C,X,IG
191	III	2.3	1584	2031	9	3362	184T	T,S,C,X,IG
181	I	1.3	1804	782	10	3242	184T	T,S,C,X,IG
181	II	1.8	1663	818	10	3252	184T	T,S,C,X,IG
176	III	2.1	1721	2076	10	3362	184T	T,S,C,X,IG
162	I	1.2	1908	785	11.2	3242	184T	T,S,C,X,IG
161	II	1.6	1880	831	11.2	3252	184T	T,S,C,X,IG
158	II	1.9	1918	2136	11.2	3362	184T	T,S,C,X,IG
158	III	3.3	1906	2137	11.2	3372	184T	T,S,C,X,IG
145	I	1.5	2081	840	12.5	3252	184T	T,S,C,X,IG
143	I	1.0	2180	790	12.5	3242	184T	T,S,C,X,IG
141	II	1.7	2152	2200	12.5	3362	184T	T,S,C,X,IG
138	III	3.1	2187	2216	12.5	3372	184T	T,S,C,X,IG
128	I, II	1.4	2372	849	14	3252	184T	T,S,C,X,IG
125	III	2.8	2417	2273	14	3372	184T	T,S,C,X,IG
124	I, II	1.5	2436	2268	14	3362	184T	T,S,C,X,IG
114	II	1.4	2650	2315	16	3362	184T	T,S,C,X,IG
111	I	1.3	2734	855	16	3252	184T	T,S,C,X,IG
109	III	2.5	2775	2354	16	3372	184T	T,S,C,X,IG
104	I	1.2	2922	856	18	3252	184T	T,S,C,X,IG
97	II, III	2.3	3125	2422	18	3372	184T	T,S,C,X,IG
91	I	1.1	3316	855	20	3252	184T	T,S,C,X,IG
89	II, III	2.1	3395	2470	20	3372	184T	T,S,C,X,IG
82	I	1.0	3683	850	22.4	3252	184T	T,S,C,X,IG
80	II	1.9	3783	2532	22.4	3372	184T	T,S,C,X,IG
70	I	1.2	4239	2305	25	3362	184T	T,S,C,X,IG
70	II	1.7	4246	2596	25	3372	184T	T,S,C,X,IG
68	III	3+	4416	3733	25	3482	184T	T,S,C,X,IG
64	III	2.9	4739	3800	28	3482	184T	T,S,C,X,IG
63	I, II	1.5	4806	2663	28	3372	184T	T,S,C,X,IG

◊ **Standard Motor Types** (see page A-16 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase, 230 volts
- C Corro-Duty®, three phase, 230/460 or 575V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575V
- IG IntelliGear® variable speed for 3/230V, 3/460V power supplies

5 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
58	II	1.4	5228	2708	31.5	3372	184T	T,S,C,X,IG
55	III	2.5	5515	3944	31.5	3482	184T	T,S,C,X,IG
54	I	1.1	5480	2305	31.5	3363	184T	T,S,C,X,IG
51	I	1.2	5908	2704	35.5	3372	184T	T,S,C,X,IG
51	II,III	2.3	5985	4021	35.5	3482	184T	T,S,C,X,IG
46	II,III	2.1	6611	4115	40	3482	184T	T,S,C,X,IG
44	I	1.0	6804	2749	40	3372	184T	T,S,C,X,IG
41	I,II	1.9	7340	4211	45	3482	184T	T,S,C,X,IG
41	III	3+	7376	4580	45	3592	184T	T,S,C,X,IG
35	I,II	1.6	8702	4340	50	3482	184T	T,S,C,X,IG
35	III	3+	8593	4580	50	3592	184T	T,S,C,X,IG
32	I,II	1.5	9261	4340	56	3483	184T	T,S,C,X,IG
31	III	2.3	9586	4580	56	3593	184T	T,S,C,X,IG
28	II,III	2.2	10400	4580	63	3593	184T	T,S,C,X,IG
27	I	1.3	10821	4340	63	3483	184T	T,S,C,X,IG
25	I	1.2	12079	4340	71	3483	184T	T,S,C,X,IG
25	II,III	2.1	11818	4580	71	3593	184T	T,S,C,X,IG
23	II,III	2.0	13074	4580	80	3593	184T	T,S,C,X,IG
22	I	1.0	13563	4340	80	3483	184T	T,S,C,X,IG
20	I,II	1.8	15124	4580	90	3593	184T	T,S,C,X,IG
20	III	2.6	14777	13617	90	3603	184T	T,S,C,X,IG
18	III	2.3	16351	13617	100	3603	184T	T,S,C,X,IG
18	I,II	1.6	16509	4580	100	3593	184T	T,S,C,X,IG
16	I,II	1.5	18543	4580	112	3593	184T	T,S,C,X,IG
16	III	2.0	18958	13617	112	3603	184T	T,S,C,X,IG
14	I	1.3	20661	4580	125	3593	184T	T,S,C,X,IG
14.3	II	1.9	20651	13617	125	3603	184T	T,S,C,X,IG
13.7	III	4.1	21666	18558	125	3733	184T	T,S,C,X,IG
12.8	II	1.7	23190	13617	140	3603	184T	T,S,C,X,IG
12.4	III	3.7	23867	18558	140	3733	184T	T,S,C,X,IG
12.0	I	1.0	23750	4580	140	3593	184T	T,S,C,X,IG
11.4	I,II	1.5	25898	13617	160	3603	184T	T,S,C,X,IG
11.1	III	3.3	26744	18558	160	3733	184T	T,S,C,X,IG
10.1	I	1.3	29283	13617	180	3603	184T	T,S,C,X,IG
10.0	II,III	3.0	29622	18558	180	3733	184T	T,S,C,X,IG
8.8	I	1.2	33684	13617	200	3603	184T	T,S,C,X,IG
8.8	II,III	2.7	33515	18558	200	3733	184T	T,S,C,X,IG
8.1	I	1.1	36562	13617	224	3603	184T	T,S,C,X,IG
8.1	II,III	2.4	36731	18558	224	3733	184T	T,S,C,X,IG
7.2	I,II,III	2.2	41301	18558	250	3733	184T	T,S,C,X,IG

◊ **Standard Motor Types** (see page A-16 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase, 230 volts
- C Corro-Duty®, three phase, 230/460 or 575V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575V
- IG IntelliGear® variable speed for 3/230V, 3/460V power supplies

5 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
6.4	I,II	1.8	45194	18558	280	3734	184T	T,S,C,X,IG
6.6	III	2.8	43724	22000	280	3844	184T	T,S,C,X,IG
6.4	I,II	1.8	45194	18558	280	3734	184T	T,S,C,X,IG
5.7	III	2.4	51076	22000	315	3844	184T	T,S,C,X,IG
5.6	I,II	1.6	51501	18558	315	3734	184T	T,S,C,X,IG
5.1	III	2.1	57035	22000	355	3844	184T	T,S,C,X,IG
4.9	I,II	1.4	59383	18558	355	3734	184T	T,S,C,X,IG
4.6	I	1.3	63437	18558	400	3734	184T	T,S,C,X,IG
4.5	II	1.9	64031	22000	400	3844	184T	T,S,C,X,IG
4.0	I	1.1	71996	18558	450	3734	184T	T,S,C,X,IG
4.0	II	1.7	72452	22000	450	3844	184T	T,S,C,X,IG
3.6	I	1.0	79991	18558	500	3734	184T	T,S,C,X,IG
3.5	II	1.5	82751	22000	500	3844	184T	T,S,C,X,IG
3.3	1, II	1.4	88808	22000	560	3844	184T	T,S,C,X,IG
2.8	I	1.2	103318	22000	630	3844	184T	T,S,C,X,IG
2.6	I	1.1	112127	22000	710	3844	184T	T,S,C,X,IG

◊ **Standard Motor Types** (see page A-16 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase, 230 volts
- C Corro-Duty®, three phase, 230/460 or 575V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575V
- IG IntelliGear® variable speed for 3/230V, 3/460V power supplies

7 1/2 HP

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
1423	I, II	1.6	325	264	1.25	3201	213T	T,C,X,IG
1413	III	3+	328	1078	1.25	3401	213T	T,C,X,IG
1389	II	1.9	334	688	1.25	3301	213T	T,C,X,IG
1264	III	3+	367	1127	1.4	3401	213T	T,C,X,IG
1207	I, II	1.5	384	272	1.4	3201	213T	T,C,X,IG
1199	II	1.8	386	717	1.4	3301	213T	T,C,X,IG
1129	I, II	1.5	410	275	1.6	3201	213T	T,C,X,IG
1125	III	3+	412	1162	1.6	3401	213T	T,C,X,IG
1087	I, II	1.8	425	738	1.6	3301	213T	T,C,X,IG
1008	III	3+	459	1198	1.8	3401	213T	T,C,X,IG
1000	I, II	1.4	463	280	1.8	3201	213T	T,C,X,IG
989	I, II	1.9	470	759	1.8	3301	213T	T,C,X,IG
902	I, II	1.4	513	284	2	3201	213T	T,C,X,IG
889	I, II, III	3+	521	1249	2	3401	213T	T,C,X,IG
836	I, II	1.9	539	778	2	3301	213T	T,C,X,IG
806	III	3+	575	1288	2.24	3401	213T	T,C,X,IG
792	I	1.2	585	288	2.24	3201	213T	T,C,X,IG
778	II	1.8	596	788	2.24	3301	213T	T,C,X,IG
689	II, III	3+	672	1342	2.5	3401	213T	T,C,X,IG
686	I	1.1	674	291	2.5	3201	213T	T,C,X,IG
678	II	1.9	684	800	2.5	3301	213T	T,C,X,IG
618	II, III	3+	750	1390	2.8	3401	213T	T,C,X,IG
601	I, II	1.6	770	807	2.8	3301	213T	T,C,X,IG
554	I	1.3	836	809	3.15	3301	213T	T,C,X,IG
550	II, III	3+	842	1424	3.15	3401	213T	T,C,X,IG
497	I	1.3	908	258	3.55	3301	213T	T,C,X,IG
486	II, III	3.0	953	1469	3.55	3401	213T	T,C,X,IG
452	I, II, III	2.1	1015	612	4	3242	213T	T,C,X,IG
443	I	1.3	1046	806	4	3301	213T	T,C,X,IG
426	I, II, III	2.7	1088	1518	4	3401	213T	T,C,X,IG
383	II	1.9	1148	623	4.5	3242	213T	T,C,X,IG
391	I	1.1	932	810	4.5	3301	213T	T,C,X,IG
381	III	3.0	1190	1621	4.5	3362	213T	T,C,X,IG
359	II	1.7	1295	631	5	3242	213T	T,C,X,IG
359	I	1.0	1264	806	5	3301	213T	T,C,X,IG
346	III	2.8	1312	1665	5	3362	213T	T,C,X,IG
341	III	2.1	1359	1608	5	3401	213T	T,C,X,IG
318	I, II	1.5	1465	639	5.6	3242	213T	T,C,X,IG
313	III	2.5	1449	1709	5.6	3362	213T	T,C,X,IG
287	I, II	1.4	1665	644	6.3	3242	213T	T,C,X,IG
284	I, II	1.8	1629	1724	6.3	3401	213T	T,C,X,IG
273	III	2.2	1663	1771	6.3	3362	213T	T,C,X,IG

◊ **Standard Motor Types** (see page A-16 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- C Corro-Duty®, three phase, 230/460 or 575V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575V
- IG IntelliGear® variable speed for 3/460V power supplies

7 1/2 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
256	I, II	1.5	1809	1774	7.1	3401	213T	T,C,X,IG
251	I	1.2	1903	646	7.1	3242	213T	T,C,X,IG
247	II, III	2.0	1838	1816	7.1	3362	213T	T,C,X,IG
229	II	1.4	1980	695	8	3252	213T	T,C,X,IG
218	I	1.1	2147	644	8	3242	213T	T,C,X,IG
223	III	2.8	2035	1871	8	3372	213T	T,C,X,IG
215	II	1.7	2110	1879	8	3362	213T	T,C,X,IG
204	I	1.0	2278	643	9	3242	213T	T,C,X,IG
194	I	1.2	2339	699	9	3252	213T	T,C,X,IG
192	II	1.5	2376	1932	9	3362	213T	T,C,X,IG
192	III	2.6	2348	1639	9	3372	213T	T,C,X,IG
182	I	1.2	2495	699	10	3252	213T	T,C,X,IG
176	II	1.4	2581	1969	10	3362	213T	T,C,X,IG
175	III	2.4	2588	1984	10	3372	213T	T,C,X,IG
161	I	1.1	2820	697	11.2	3252	213T	T,C,X,IG
159	I	1.3	2877	2016	11.2	3362	213T	T,C,X,IG
159	II, III	2.2	2859	2031	11.2	3372	213T	T,C,X,IG
145	I	1.0	3122	692	12.5	3252	213T	T,C,X,IG
141	I	1.1	3228	2066	12.5	3362	213T	T,C,X,IG
138	II, III	2.1	3280	2095	12.5	3372	213T	T,C,X,IG
130	I, II, III	3+	3501	3025	14	3482	213T	T,C,X,IG
125	I	1.0	3654	2117	14	3362	213T	T,C,X,IG
125	II, III	1.9	3626	2140	14	3372	213T	T,C,X,IG
111	III	3+	4090	3146	16	3482	213T	T,C,X,IG
109	I, II	1.7	4163	2200	16	3372	213T	T,C,X,IG
99	III	3.0	4566	3231	18	3482	213T	T,C,X,IG
97	I, II	1.5	4688	2230	18	3372	213T	T,C,X,IG
89	I, II	1.4	5092	2164	20	3372	213T	T,C,X,IG
89	III	2.6	5127	3320	20	3482	213T	T,C,X,IG
80	I	1.3	5675	2059	22.4	3372	213T	T,C,X,IG
78	II, III	2.4	5801	3414	22.4	3482	213T	T,C,X,IG
71	I	1.1	6369	1919	25	3372	213T	T,C,X,IG
68	II, III	2.1	6625	3513	25	3482	213T	T,C,X,IG
65	III	3+	7014	4580	28	3592	213T	T,C,X,IG
64	I, II	1.9	7109	3564	28	3482	213T	T,C,X,IG
63	I	1.0	7209	1733	28	3372	213T	T,C,X,IG
58	I, II, III	3+	7815	4580	31.5	3592	213T	T,C,X,IG
55	I, II	1.6	8272	3669	31.5	3482	213T	T,C,X,IG
51	III	2.9	8863	4580	35.5	3592	213T	T,C,X,IG
51	I, II	1.5	8978	3723	35.5	3482	213T	T,C,X,IG
46	I, II	1.4	9916	3785	40	3482	213T	T,C,X,IG
45	III	2.5	10172	4580	40	3592	213T	T,C,X,IG
41	I	1.2	11011	3845	45	3482	213T	T,C,X,IG
41	II, III	2.3	11065	4580	45	3592	213T	T,C,X,IG
35	I	1.1	13052	3930	50	3482	213T	T,C,X,IG

◊ **Standard Motor Types** (see page A-16 for product codes)
- T TEFC, three phase, 208-230/460 or 575 volts
- C Corro-Duty®, three phase, 230/460 or 575V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575V
- IG IntelliGear® variable speed for 3/460V power supplies

7 1/2 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
35	II,III	2.0	12891	4580	50	3592	213T	T,C,X,IG
34	II	1.6	14378	4580	56	3593	213T	T,C,X,IG
32	I	1.0	13891	3994	56	3483	213T	T,C,X,IG
31	III	2.7	14269	13617	56	3603	213T	T,C,X,IG
28	I,II	1.5	15599	4580	63	3593	213T	T,C,X,IG
28	III	2.4	15996	13617	63	3603	213T	T,C,X,IG
25	I,II	1.4	17727	4580	71	3593	213T	T,C,X,IG
25	III	2.1	17976	13617	71	3603	213T	T,C,X,IG
23	I	1.3	19611	4580	80	3593	213T	T,C,X,IG
23	II,III	2.0	19525	13617	80	3603	213T	T,C,X,IG
20	II	1.7	22166	13617	90	3603	213T	T,C,X,IG
20	I	1.2	22685	4580	90	3593	213T	T,C,X,IG
19.5	III	3.7	22826	18558	90	3733	213T	T,C,X,IG
18.1	II	1.5	24527	13617	100	3603	213T	T,C,X,IG
18.0	I	1.1	24762	4580	100	3593	213T	T,C,X,IG
17.2	III	3.4	25898	18558	100	3733	213T	T,C,X,IG
15.8	III	3.1	28183	18558	112	3733	213T	T,C,X,IG
15.6	I,II	1.4	28437	13617	112	3603	213T	T,C,X,IG
14.3	I	1.2	30976	13617	125	3603	213T	T,C,X,IG
13.7	II,III	2.7	32499	18558	125	3733	213T	T,C,X,IG
12.8	I	1.1	34784	13617	140	3603	213T	T,C,X,IG
12.4	II,III	2.5	35800	18558	140	3733	213T	T,C,X,IG
11.4	I	1.0	38847	13617	160	3603	213T	T,C,X,IG
11.1	II,III	2.2	40116	18558	160	3733	213T	T,C,X,IG
10.0	I,II,III	2.0	44433	18558	180	3733	213T	T,C,X,IG
10.0	I,II,III	2.0	44433	18558	180	3733	213T	T,C,X,IG
8.9	III	2.7	50018	22000	200	3843	213T	T,C,X,IG
8.8	I,II	1.8	50272	18558	200	3733	213T	T,C,X,IG
8.1	I,II	1.6	55096	18558	224	3733	213T	T,C,X,IG
7.9	III	2.4	56112	22000	224	3843	213T	T,C,X,IG
7.3	III	2.1	59416	22000	250	3844	213T	T,C,X,IG
7.2	I,II	1.4	61952	18558	250	3733	213T	T,C,X,IG
6.6	II	1.9	65586	22000	280	3844	213T	T,C,X,IG
6.4	I	1.2	67791	18558	280	3734	213T	T,C,X,IG
5.7	II	1.6	76614	22000	315	3844	213T	T,C,X,IG
5.6	I	1.1	77251	18558	315	3734	213T	T,C,X,IG
5.1	I, II	1.4	85553	22000	355	3844	213T	T,C,X,IG
4.5	I	1.3	96047	22000	400	3844	213T	T,C,X,IG
4.0	I	1.1	108678	22000	450	3844	213T	T,C,X,IG

◊ **Standard Motor Types** (see page A-16 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- C Corro-Duty®, three phase, 230/460 or 575V
- X Explosionproof, CI 1 group D, CI 2 groups F&G, three phase, 230/460 or 575V
- IG IntelliGear® variable speed for 3/460V power supplies

† 6 pole motor

Browning®

Gearmotors

CbN SERIES 3000

10 HP

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
1423	I	1.2	434	230	1.25	3201	215T	T,C,X,IG
1413	III	3+	437	1059	1.25	3401	215T	T,C,X,IG
1389	I,II	1.4	446	616	1.25	3301	215T	T,C,X,IG
1264	I, II, III	3+	489	1106	1.4	3401	215T	T,C,X,IG
1207	I	1.1	512	222	1.4	3201	215T	T,C,X,IG
1199	II	1.4	514	629	1.4	3301	215T	T,C,X,IG
1129	I	1.1	546	216	1.6	3201	215T	T,C,X,IG
1125	II, III	3+	549	1139	1.6	3401	215T	T,C,X,IG
1087	I	1.3	567	637	1.6	3301	215T	T,C,X,IG
1008	II, III	3+	612	1173	1.8	3401	215T	T,C,X,IG
1000	I	1.1	618	200	1.8	3201	215T	T,C,X,IG
989	I,II	1.4	626	643	1.8	3301	215T	T,C,X,IG
902	I	1.0	684	183	2	3201	215T	T,C,X,IG
889	III	3+	694	1222	2	3401	215T	T,C,X,IG
836	I, II	1.4	718	648	2	3301	215T	T,C,X,IG
806	III	3+	767	1258	2.24	3401	215T	T,C,X,IG
778	I, II	1.4	794	648	2.24	3301	215T	T,C,X,IG
689	III	3+	896	1308	2.5	3401	215T	T,C,X,IG
678	I, II	1.4	912	645	2.5	3301	215T	T,C,X,IG
618	I, II, III	2.8	1000	1353	2.8	3401	215T	T,C,X,IG
601	I	1.2	1027	637	2.8	3301	215T	T,C,X,IG
554	I	1.0	1115	628	3.15	3301	215T	T,C,X,IG
550	II, III	2.6	1123	1384	3.15	3401	215T	T,C,X,IG
486	I, II, III	2.3	1271	1425	3.55	3401	215T	T,C,X,IG
452	I, II	1.6	1353	556	4	3242	215T	T,C,X,IG
442	III	2.6	1376	1516	4	3362	215T	T,C,X,IG
426	I, II, III	2.0	1451	1469	4	3401	215T	T,C,X,IG
383	I, II	1.4	1531	559	4.5	3242	215T	T,C,X,IG
381	III	2.3	1587	1572	4.5	3362	215T	T,C,X,IG
359	I	1.3	1727	559	5	3242	215T	T,C,X,IG
346	II, III	2.1	1749	1610	5	3362	215T	T,C,X,IG
318	I	1.2	1954	557	5.6	3242	215T	T,C,X,IG
313	II	1.9	1932	1649	5.6	3362	215T	T,C,X,IG
287	I	1.0	2220	551	6.3	3242	215T	T,C,X,IG
273	II	1.6	2217	1702	6.3	3362	215T	T,C,X,IG
247	I, II	1.5	2450	1740	7.1	3362	215T	T,C,X,IG
229	I	1.0	2650	600	8	3252	215T	T,C,X,IG
223	II, III	2.1	2714	1796	8	3372	215T	T,C,X,IG
215	I	1.3	2813	1791	8	3362	215T	T,C,X,IG
203	III	3+	2975	2607	9	3482	215T	T,C,X,IG

◊ **Standard Motor Types** (see page A-16 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- C Corro-Duty®, three phase, 230/460 or 575V
- X Explosionproof, CI 1 group D, CI 2 groups F&G, three phase, 230/460 or 575V
- IG IntelliGear® variable speed for 3/460V power supplies

10 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
192	I	1.1	3168	1833	9	3362	215T	T,C,X,IG
192	II,III	1.9	3131	1852	9	3372	215T	T,C,X,IG
176	I	1.0	3441	1862	10	3362	215T	T,C,X,IG
175	II	1.8	3451	1889	10	3372	215T	T,C,X,IG
162	III	3+	3728	2759	11.2	3482	215T	T,C,X,IG
159	I,II	1.7	3812	1926	11.2	3372	215T	T,C,X,IG
143	III	3.0	4228	2843	12.5	3482	215T	T,C,X,IG
138	I,II	1.5	4374	1880	12.5	3372	215T	T,C,X,IG
130	III	2.8	4667	2908	14	3482	215T	T,C,X,IG
125	I,II	1.4	4834	1798	14	3372	215T	T,C,X,IG
111	II,III	2.5	5454	3010	16	3482	215T	T,C,X,IG
109	I	1.3	5550	1655	16	3372	215T	T,C,X,IG
99	II,III	2.2	6087	3079	18	3482	215T	T,C,X,IG
97	I	1.1	6250	1499	18	3372	215T	T,C,X,IG
89	I	1.0	6789	1370	20	3372	215T	T,C,X,IG
89	II,III	2.0	6836	3150	20	3482	215T	T,C,X,IG
79	III	3+	7627	4268	22.4	3592	215T	T,C,X,IG
78	I,II	1.8	7735	3221	22.4	3482	215T	T,C,X,IG
73	III	3+	8325	4401	25	3592	215T	T,C,X,IG
68	I,II	1.6	8833	3292	25	3482	215T	T,C,X,IG
65	III	2.8	9352	4471	28	3592	215T	T,C,X,IG
64	I,II	1.4	9479	3327	28	3482	215T	T,C,X,IG
58	II,III	2.4	10420	4580	31.5	3592	215T	T,C,X,IG
55	I	1.2	11029	3394	31.5	3482	215T	T,C,X,IG
51	I	1.1	11970	3424	35.5	3482	215T	T,C,X,IG
51	II,III	2.2	11817	4580	35.5	3592	215T	T,C,X,IG
46	I	1.0	13222	3455	40	3482	215T	T,C,X,IG
45	II	1.9	13562	4580	40	3592	215T	T,C,X,IG
45	III	2.7	13484	13617	40	3602	215T	T,C,X,IG
41	I,II	1.7	14753	4580	45	3592	215T	T,C,X,IG
41	III	2.3	14798	13617	45	3602	215T	T,C,X,IG
36	III	2.1	16630	13617	50	3603	215T	T,C,X,IG
35	I,II	1.5	17188	4580	50	3592	215T	T,C,X,IG
31	II,III	2.0	19026	13617	56	3603	215T	T,C,X,IG
31	I	1.2	19170	4580	56	3593	215T	T,C,X,IG
29	III	3.7	20718	18558	63	3733	215T	T,C,X,IG
28	I	1.1	20799	4580	63	3593	215T	T,C,X,IG
28	II	1.8	21328	13617	63	3603	215T	T,C,X,IG
25	I	1.0	23637	4580	71	3593	215T	T,C,X,IG

◊ **Standard Motor Types** (see page A-16 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- C Corro-Duty®, three phase, 230/460 or 575V
- X Explosionproof, CI 1 group D, CI 2 groups F&G, three phase, 230/460 or 575V
- IG IntelliGear® variable speed for 3/460V power supplies

Browning®

Gearmotors

CbN SERIES 3000

10 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
26	III	3.4	23122	18558	71	3733	215T	T,C,X,IG
25	II	1.6	23968	13617	71	3603	215T	T,C,X,IG
23	III	3.2	25999	18558	80	3733	215T	T,C,X,IG
23	I,II	1.5	26033	13617	80	3603	215T	T,C,X,IG
20	I	1.3	29554	13617	90	3603	215T	T,C,X,IG
19	II,III	2.8	30434	18558	90	3733	215T	T,C,X,IG
18	I	1.2	32702	13617	100	3603	215T	T,C,X,IG
17	II,III	2.5	34530	18558	100	3733	215T	T,C,X,IG
16	II,III	2.4	37577	18558	112	3733	215T	T,C,X,IG
16	I	1.0	37916	13617	112	3603	215T	T,C,X,IG
14	I,II,III	2.0	43671	18558	125	3733	215T	T,C,X,IG
12	I,II	1.9	47733	18558	140	3733	215T	T,C,X,IG
11	I,II	1.7	53488	18558	160	3733	215T	T,C,X,IG
10	I,II	1.5	59244	18558	180	3733	215T	T,C,X,IG
11	I,II	1.7	53488	18558	160	3733	215T	T,C,X,IG
11	III	2.4	55858	22000	160	3843	215T	T,C,X,IG
10	I,II	1.5	59244	18558	180	3733	215T	T,C,X,IG
9.5	III	2.2	62290	22000	180	3843	215T	T,C,X,IG
8.9	I, II	2.0	66691	22000	200	3843	215T	T,C,X,IG
8.8	I	1.3	67030	18558	200	3733	215T	T,C,X,IG
8.1	I	1.2	73462	18558	224	3733	215T	T,C,X,IG
7.9	III	1.8	74816	22000	224	3843	215T	T,C,X,IG
7.3	III	1.5	79221	22000	250	3844	215T	T,C,X,IG
7.2	I	1.1	82602	18558	250	3733	215T	T,C,X,IG
6.6	I, II	1.4	87448	22000	280	3844	215T	T,C,X,IG
5.7	I	1.2	102152	22000	315	3844	215T	T,C,X,IG
5.1	I	1.1	114070	22000	350	3844	215T	T,C,X,IG

◊ **Standard Motor Types** (see page A-16 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- C Corro-Duty®, three phase, 230/460 or 575V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575V
- IG IntelliGear® variable speed for 3/460V power supplies

15 HP

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
1413	I, II, III	2.6	655	1020	1.25	3401	254T	T,C
1264	I, II, III	2.7	733	1063	1.4	3401	254T	T,C
1125	I, II, III	2.8	824	1093	1.6	3401	254T	T,C
1008	I, II, III	2.4	919	1123	1.8	3401	254T	T,C
889	I, II, III	2.4	1042	1166	2	3401	254T	T,C
806	I, II, III	2.3	1150	1198	2.24	3401	254T	T,C
689	I, II, III	2.0	1344	1241	2.5	3401	254T	T,C
618	I, II	1.9	1500	1279	2.8	3401	254T	T,C
550	I, II	1.7	1684	1304	3.15	3401	254T	T,C
486	I, II	1.5	1906	1321	3.55	3401	254T	T,C
448	I, II, III	2.6	2028	1994	4	3482	254T	T,C
442	I, II	1.7	2064	1430	4	3362	254T	T,C
426	I	1.3	2176	1303	4	3401	254T	T,C
400	II, III	2.8	2268	2050	4.5	3482	254T	T,C
397	I	1.2	2336	1272	4.5	3401	254T	T,C
381	I, II	1.5	2380	1473	4.5	3362	254T	T,C
356	II, III	2.8	2548	2109	5	3482	254T	T,C
346	I, II	1.4	2624	1501	5	3362	254T	T,C
341	I	1.1	2718	1244	5	3401	254T	T,C
319	I, II, III	2.4	2842	2164	5.6	3482	254T	T,C
314	I	1.0	2950	1190	5.6	3401	254T	T,C
313	I	1.2	2898	1512	5.6	3262	254T	T,C
282	I, II, III	2.4	3223	2226	6.3	3482	254T	T,C
273	I	1.1	3326	1426	6.3	3362	254T	T,C
255	I, II, III	2.3	3558	2274	7.1	3482	254T	T,C
227	III	2.6	3990	2399	8	3482	254T	T,C
223	I, II	1.4	4071	1445	8	3372	254T	T,C
203	II, III	2.6	4462	2459	9	3482	254T	T,C
193	I	1.3	4696	1316	9	3372	254T	T,C
181	II, III	2.4	5013	2518	10	3482	254T	T,C
175	I	1.2	5176	1207	10	3372	254T	T,C
162	II, III	2.2	5592	2573	11.2	3482	254T	T,C
159	I	1.1	5718	1076	11.2	3372	254T	T,C
143	II, III	2.0	6342	2632	12.5	3482	254T	T,C
138	I	1.0	6561	858	12.5	3372	254T	T,C
130	I, II	1.9	7001	2676	14	3482	254T	T,C
125	III	3+	7251	3570	14	3592	254T	T,C
115	III	3.0	7867	3695	16	3592	254T	T,C
111	I, II	1.6	8181	2738	16	3482	254T	T,C
102	III	2.8	8941	3781	18	3592	254T	T,C
99	I, II	1.5	9131	2775	18	3482	254T	T,C
92	II, III	2.4	9891	3869	20	3592	254T	T,C
89	I	1.3	10254	2809	20	3482	254T	T,C

◊ **Standard Motor Types** (see page A-16 for product codes)
T TEFC, three phase, 230/460 or 575 volts
C Corro-Duty®, three phase, 230/460 or 575V

Browning®

Gearmotors

CbN SERIES 3000

15 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
79	II,III	2.3	11411	3958	22.4	3592	254T	T,C
78	I	1.2	11602	2835	22.4	3482	254T	T,C
73	II,III	2.1	124888	4047	25	3592	254T	T,C
68	I	1.0	13249	2852	25	3482	254T	T,C
65	II	1.8	14029	4090	28	3592	254T	T,C
64	I	1.0	14220	2854	28	3482	254T	T,C
63	III	2.5	14365	13617	28	3602	254T	T,C
58	I,II	1.7	15631	4175	31.5	3592	254T	T,C
56	III	2.2	16129	13617	31.5	3602	254T	T,C
51	I,II	1.5	17726	4214	35.5	3592	254T	T,C
51	III	2.0	17892	13617	35.5	3602	254T	T,C
45	I	1.3	20345	4253	40	3592	254T	T,C
45	II	1.8	20226	13617	40	3602	254T	T,C
44	III	3.1	20848	18558	40	3732	254T	T,C
41	I	1.2	22129	4285	45	3592	254T	T,C
41	II	1.6	22196	13617	45	3602	254T	T,C
41	III	2.6	22300	18558	45	3732	254T	T,C
36	III	2.1	24893	18558	50	3732	254T	T,C
36	II	1.4	24945	13617	50	3602	254T	T,C
35	I	1.0	25780	4310	50	3592	254T	T,C
32	II,III	2.6	28132	18558	56	3733	254T	T,C
31	I	1.3	28538	13617	56	3603	254T	T,C
29	II,III	2.4	31077	18558	63	3733	254T	T,C
28	I	1.2	31991	13617	63	3603	254T	T,C
26	II,III	2.3	34683	8558	71	3733	254T	T,C
25	I	1.1	35952	13617	71	3603	254T	T,C
23	II,III	2.1	38999	18558	80	3733	254T	T,C
23	I	1.0	39050	13617	80	3603	254T	T,C
19	I,II	1.9	45651	18558	90	3733	254T	T,C
18.9	III	2.8	46921	22000	90	3843	254T	T,C
17.2	I,II	1.7	51796	18558	100	3733	254T	T,C
16.8	III	2.5	52811	22000	100	3843	254T	T,C
15.8	I,II	1.6	56366	18558	112	3733	254T	T,C
15.1	III	2.3	58905	22000	112	3843	254T	T,C
13.6	I,II	1.4	65506	18558	125	3733	254T	T,C
13.5	III	2.0	66014	22000	125	3843	254T	T,C
12.4	I	1.2	71600	18558	140	3733	254T	T,C
12.0	II	1.8	74139	22000	140	3843	254T	T,C
11.1	I	1.1	80233	18558	160	3733	254T	T,C
10.6	II	1.6	83787	22000	160	3843	254T	T,C
10.0	I	1.0	88865	18558	180	3733	254T	T,C
9.5	II	1.4	93435	22000	180	3843	254T	T,C
8.9	I	1.3	100037	22000	200	3843	254T	T,C
7.9	I	1.2	112224	22000	224	3843	254T	T,C
7.3	I	1.0	118831	22000	250	3844	254T	T,C

◊ **Standard Motor Types** (see page A-16 for product codes)
T TEFC, three phase, 230/460 or 575 volts
C Corro-Duty®, three phase, 230/460 or 575V

20 HP

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
1411	III	1.9	875	981	1.25	3401	256T	T,C
1268	III	2.1	974	1020	1.4	3401	256T	T,C
1122	III	2.1	1101	1041	1.6	3401	256T	T,C
1006	I, II	1.8	1228	1045	1.8	3401	256T	T,C
978	III	2.8	1264	1202	1.8	3501	256T	T,C
888	I, II	1.8	1391	1045	2	3401	256T	T,C
875	III	2.6	1412	1238	2	3501	256T	T,C
806	I, II	1.7	1532	1039	2.24	3401	256T	T,C
778	III	2.5	1588	1277	2.24	3501	256T	T,C
717	III	2.4	1722	1304	2.5	3501	256T	T,C
689	I,II	1.5	1793	1021	2.5	3401	256T	T,C
632	III	2.3	1955	1346	2.8	3501	256T	T,C
618	I, II	1.4	1998	996	2.8	3401	256T	T,C
570	III	2.1	2167	1380	3.15	3501	256T	T,C
550	I	1.3	2245	971	3.15	3401	256T	T,C
493	III	2.0	2506	1427	3.55	3501	256T	T,C
486	I	1.1	2541	930	3.55	3401	256T	T,C
448	II	1.9	2704	1914	4	3482	256T	T,C
430	III	3+	2814	2484	4	3592	256T	T,C
426	I	1.0	2901	874	4	3401	256T	T,C
400	II, III	2.1	3022	1961	4.5	3482	256T	T,C
356	I, II, III	2.1	3395	2009	5	3482	256T	T,C
319	I, II	1.8	3789	2052	5.6	3482	256T	T,C
307	III	2.9	3941	2709	5.6	3592	256T	T,C
282	I, II	1.8	4294	2099	6.3	3482	256T	T,C
274	III	2.7	4412	2793	6.3	3592	256T	T,C
255	I, II	1.7	4744	2134	7.1	3482	256T	T,C
244	III	2.4	4965	2858	7.1	3592	256T	T,C
222	I, II	1.9	5456	2267	8	3482	256T	T,C
221	III	3+	5476	2998	8	3592	256T	T,C
203	I, II	1.9	5947	2310	9	3482	256T	T,C
193	III	3+	6272	3078	9	3592	256T	T,C
181	I, II	1.8	6687	2352	10	3482	256T	T,C
176	III	3.0	6873	3160	10	3592	256T	T,C
162	I, II	1.7	7454	2387	11.2	3482	256T	T,C
158	III	2.8	7682	3235	11.2	3592	256T	T,C
143	I, II	1.5	8457	2421	12.5	3482	256T	T,C
141	III	2.6	8595	3319	12.5	3592	256T	T,C
130	I, II	1.4	9335	2443	14	3482	256T	T,C
125	III	2.4	9667	3382	14	3592	256T	T,C
111	I	1.2	10905	2466	16	3482	256T	T,C
102	II, III	2.1	11921	3476	16	3592	256T	T,C
99	I	1.1	12177	2472	18	3482	256T	T,C
99	II	1.8	13186	3537	18	3592	256T	T,C

◊ **Standard Motor Types** (see page A-16 for product codes)
T TEFC, three phase, 230/460 or 575 volts
C Corro-Duty®, three phase, 230/460 or 575V

Browning®

Gearmotors

CbN SERIES 3000

20 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
92	II,III	2.0	13186	3594	20	3592	256T	T, C
89	I	1.0	13670	2468	20	3482	256T	T, C
80	III	2.3	15143	12709	22.4	3602	256T	T, C
79	I,II	1.7	15254	3647	22.4	3592	256T	T, C
73	I,II	1.6	16651	3692	25	3592	256T	T, C
69	III	2.0	17633	13087	25	3602	256T	T, C
65	I,II	1.4	18704	3710	28	3592	256T	T, C
63	II	1.9	19154	13288	28	3602	256T	T, C
62	III	3.9	19638	18558	28	3732	256T	T, C
58	I	1.3	20841	3732	31.5	3592	256T	T, C
56	II	1.7	21505	13550	31.5	3602	256T	T, C
55	III	3.4	21989	18558	31.5	3732	256T	T, C
51	I	1.1	23635	3733	35.5	3592	256T	T, C
51	II	1.5	23856	13617	35.5	3602	256T	T, C
49	III	2.8	24893	18558	35.5	3732	256T	T, C
45	-	0.97	27127	3722	40	3592	256T	T, C
45	I,II	1.4	26967	13617	40	3602	256T	T, C
44	III	2.4	27797	18558	40	3732	256T	T, C
41	I	1.2	29595	13617	45	3602	256T	T, C
41	II	1.9	29733	18558	45	3732	256T	T, C
41	III	2.2	28979	18558	45	3733	256T	T, C
36	I	1.1	33260	13617	50	3602	256T	T, C
36	II	1.6	33191	18558	50	3732	256T	T, C
36	III	2.1	32499	18558	50	3733	256T	T, C
32	I,II,III	2.2	33041	18558	56	3733	256T	T, C
29	I,II,III	2.0	37510	18558	63	3733	256T	T, C
26	I,II	1.9	41437	18558	71	3733	256T	T, C
24	III	2.0	46244	12000	71	3843	256T	T, C
23	I,II	1.7	48952	18558	80	3733	256T	T, C
21	III	2.4	55452	22000	80	3843	256T	T, C
19.5	I,II	1.4	60868	18558	90	3733	256T	T, C
18.9	III	2.1	62561	22000	90	3843	256T	T, C
17.2	I	1.3	69061	18558	100	3733	256T	T, C
16.8	II,III	1.9	70415	22000	100	3843	256T	T, C
15.8	I	1.2	75155	18558	112	3733	256T	T, C
15.1	II	1.7	78540	22000	112	3843	256T	T, C
13.6	I	1.0	87342	18558	125	3733	256T	T, C
13.5	II	1.5	88019	22000	125	3843	256T	T, C
12.0	I, II	1.4	98852	22000	140	3843	256T	T, C
10.6	I	1.2	111716	22000	160	3843	256T	T, C
9.5	I	1.1	124581	22000	180	3843	256T	T, C
8.9	I	1.0	133383	22000	200	3843	256T	T, C

◊ **Standard Motor Types** (see page A-16 for product codes)
T TEFC, three phase, 230/460 or 575 volts
C Corro-Duty®, three phase, 230/460 or 575V

25 HP

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
1411	I, II	1.5	1094	827	1.25	3401	284T	T,C
1367	III	2.5	1129	1062	1.25	3501	284T	T,C
1268	I, II	1.7	1218	827	1.4	3401	284T	T,C
1199	III	2.4	1288	1101	1.4	3501	284T	T,C
1122	I, II	1.7	1376	822	1.6	3401	284T	T,C
1094	III	2.3	1412	1128	1.6	3501	284T	T,C
1006	I, II	1.4	1535	811	1.8	3401	284T	T,C
978	III	2.2	1579	1161	1.8	3501	284T	T,C
888	I, II	1.5	1738	788	2	3401	284T	T,C
875	III	2.1	1765	1194	2	3501	284T	T,C
806	I, II	1.4	1915	763	2.24	3401	284T	T,C
778	III	2.0	1985	1228	2.24	3501	284T	T,C
717	I, II	1.9	2153	1252	2.5	3501	284T	T,C
689	I	1.2	2241	715	2.5	3401	284T	T,C
632	I, II	1.9	2444	1288	2.8	3501	284T	T,C
618	I	1.1	2497	660	2.8	3401	284T	T,C
570	I, II	1.7	2709	1286	3.15	3501	284T	T,C
550	I	1.0	2806	614	3.15	3401	284T	T,C
545	III	3.0+	2832	7440	3.15	3602	284T	T,C
493	I, II	1.6	3132	1259	3.55	3501	284T	T,C
480	III	3.0+	3905	7431	3.55	3602	284T	T,C
486	n/a	0.91	3176	540	3.55	3401	284T	T,C
448	I, II	1.6	3380	1834	4	3482	284T	T,C
430	III	3+	3518	2421	4	3592	284T	T,C
400	I, II	1.7	3777	1872	4.5	3482	284T	T,C
376	III	3+	4028	2488	4.5	3592	284T	T,C
356	I, II	1.7	4244	1909	5	3482	284T	T,C
343	III	3.0	4408	2557	5	3592	284T	T,C
319	I, II	1.4	4737	1940	5.6	3482	284T	T,C
307	III	2.3	4927	2621	5.6	3592	284T	T,C
282	I, II	1.5	5368	1973	6.3	3482	284T	T,C
274	III	2.2	5515	2693	6.3	3592	284T	T,C
255	I, II	1.4	5929	1994	7.1	3482	284T	T,C
244	III	2.0	6206	2749	7.1	3592	284T	T,C
222	I, II	1.5	6820	2134	8	3482	284T	T,C
221	III	3.0	6846	2892	8	3592	284T	T,C
203	I, II	1.5	7433	2162	9	3482	284T	T,C
193	III	2.6	7840	2959	9	3592	284T	T,C
181	I, II	1.4	8358	2185	10	3482	284T	T,C
176	III	2.4	8592	3025	10	3592	284T	T,C
162	I	1.3	9318	2201	11.2	3482	284T	T,C
158	II, III	2.2	9603	3085	11.2	3592	284T	T,C
143	I	1.2	10571	2210	12.5	3482	284T	T,C
141	II, III	2.1	10744	3149	12.5	3592	284T	T,C
130	I	1.1	11669	2210	14	3482	284T	T,C

◊ **Standard Motor Types** (see page A-16 for product codes)
T TEFC, three phase, 230/460 or 575 volts
C Corro-Duty®, three phase, 230/460 or 575V

Browning®

Gearmotors

CbN SERIES 3000

25 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
130	III	2.8	11669	11168	14	3602	284T	T, C
125	II	1.9	12084	3195	14	3592	284T	T, C
116	III	2.5	13052	11440	16	3602	284T	T, C
113	II	1.9	13371	3257	16	3592	284T	T, C
111	I	1.0	13631	2193	16	3482	284T	T, C
99	III	2.2	15299	11794	18	3602	284T	T, C
92	I,II	1.5	16483	3292	18	3592	284T	T, C
92	I,II	1.6	16483	3320	20	3592	284T	T, C
88	III	2.0	17287	12068	20	3602	284T	T, C
80	II	1.8	18929	12248	22.4	3602	284T	T, C
79	I,II	1.4	19067	3336	22.4	3592	284T	T, C
77	III	3.8	19534	18558	22.4	3732	284T	T, C
73	I	1.2	20813	3337	25	3592	284T	T, C
69	III	3.4	21781	18558	25	3732	284T	T, C
69	II	1.6	22041	12250	25	3602	284T	T, C
63	I,II	1.5	23942	12704	28	3602	284T	T, C
62	III	3.1	24547	18558	28	3732	284T	T, C
56	I	1.3	26881	12896	31.5	3602	284T	T, C
55	II,III	2.7	27486	18558	31.5	3732	284T	T, C
51	I	1.2	29820	13050	35.5	3602	284T	T, C
49	II,III	2.2	31116	18558	35.5	3732	284T	T, C
45	I	1.1	33709	13202	40	3602	284T	T, C
45	III	2.0	33796	22000	40	3842	284T	T, C
44	II	1.9	34747	18558	40	3732	284T	T, C
41	I,II	1.5	37167	18558	45	3732	284T	T, C
41	II	1.8	36562	18558	45	3733	284T	T, C
40	III	3+	37493	22000	45	3843	284T	T, C
36	I	1.3	41488	18558	50	3732	284T	T, C
36	II	1.7	41301	18558	50	3733	284T	T, C
35	III	3.0	42909	22000	50	3843	284T	T, C
32	I,II	1.5	46887	18558	56	3733	284T	T, C
31	III	2.8	47395	22000	56	3843	284T	T, C
29	I,II	1.5	51796	18558	63	3733	284T	T, C
28	III	2.4	53658	22000	63	3843	284T	T, C
26	I,II	1.4	57805	18558	71	3733	284T	T, C
24	III	2.2	60682	22000	71	3843	284T	T, C
23	I	1.3	64999	18558	80	3733	284T	T, C
21	II	1.9	69315	22000	80	3843	284T	T, C
19.5	I	1.1	76086	18558	90	3733	284T	T, C
18.9	II	1.7	78201	22000	90	3843	284T	T, C
17.2	I	1.0	86326	18558	100	3733	284T	T, C
16.8	II	1.5	88019	22000	100	3843	284T	T, C
15.1	I, II	1.4	98175	22000	112	3843	284T	T, C
13.5	I	1.2	110024	22000	125	3843	284T	T, C
12.0	I	1.1	123565	22000	140	3843	284T	T, C

◊ **Standard Motor Types** (see page A-16 for product codes)
T TEFC, three phase, 230/460 or 575 volts
C Corro-Duty®, three phase, 230/460 or 575V

30 HP

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
1411	I	1.3	1313	638	1.25	3401	286T	T, C
1389	II,III	2.1	1334	1030	1.25	3501	286T	T, C
1268	I,II	1.4	1461	621	1.4	3401	286T	T, C
1199	III	2.0	1546	1066	1.4	3501	286T	T, C
1122	I,II	1.4	1652	603	1.6	3401	286T	T, C
1094	I,II	1.9	1694	1091	1.6	3501	286T	T, C
1006	I	1.2	1842	577	1.8	3401	286T	T, C
978	I,II	1.8	1895	1112	1.8	3501	286T	T, C
888	I	1.2	2086	530	2	3401	286T	T, C
875	I,II	1.8	2118	1112	2	3501	286T	T, C
806	I	1.1	2298	486	2.24	3401	286T	T, C
778	I,II	1.7	2382	1104	2.24	3501	286T	T, C
717	I,II	1.6	2584	1095	2.5	3501	286T	T, C
689	I	1.0	2689	409	2.5	3401	286T	T, C
648	I,II	1.6	2859	1070	2.8	3501	286T	T, C
618	N/A	0.95	2996	325	2.8	3401	286T	T, C
570	I,II	1.4	3251	1041	3.15	3501	286T	T, C
545	III	3.0+	3290	7030	3.15	3602	286T	T, C
493	I,II	1.4	3759	984	3.55	3501	286T	T, C
480	III	3.0+	3730	7025	3.55	3602	286T	T, C
448	I	1.3	4055	1755	4	3482	286T	T, C
430	III	2.8	4221	2358	4	3592	286T	T, C
400	I,II	1.4	4533	1783	4.5	3482	286T	T, C
376	III	2.6	4833	2418	4.5	3592	286T	T, C
356	I,II	1.4	5093	1809	5	3482	286T	T, C
343	III	2.5	5290	2478	5	3592	286T	T, C
319	I	1.2	5684	1829	5.6	3482	286T	T, C
307	II	1.9	5912	2533	5.6	3592	286T	T, C
282	I	1.2	6441	1846	6.3	3482	286T	T, C
274	II	1.8	6617	2594	6.3	3592	286T	T, C
255	I	1.1	7115	1854	7.1	3482	286T	T, C
244	II	1.6	7447	2639	7.1	3592	286T	T, C
222	I	1.3	8184	2001	8	3482	286T	T, C
221	II,III	2.5	8215	2785	8	3592	286T	T, C
203	I	1.3	8920	2013	9	3482	286T	T, C
193	II,III	2.2	9408	2839	9	3592	286T	T, C
181	I	1.2	10030	2018	10	3482	286T	T, C
176	II,III	2.0	10310	2891	10	3592	286T	T, C
162	I	1.1	11181	2015	11.2	3482	286T	T, C
158	II	1.9	11523	2935	11.2	3592	286T	T, C
161	III	2.8	11306	10438	11.2	3602	286T	T, C
145	III	2.6	12550	10647	12.5	3602	286T	T, C
143	I	1.0	12685	1999	12.5	3482	286T	T, C
141	II	1.7	12893	2979	12.5	3592	286T	T, C
130	N/A	0.93	14002	1977	14	3482	286T	T, C

◊ **Standard Motor Types** (see page A-16 for product codes)
T TEFC, three phase, 230/460 or 575 volts
C Corro-Duty®, three phase, 230/460 or 575V

Browning®

Gearmotors

CbN SERIES 3000

30 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
130	III	2.3	14002	10682	14	3602	286T	T, C
125	I,II	1.6	14500	3007	14	3592	286T	T, C
116	III	2.1	15662	11121	16	3602	286T	T, C
115	I,II	1.4	15783	3038	16	3592	286T	T, C
102	I	1.3	17882	3048	18	3592	286T	T, C
99	III	1.8	18359	11421	18	3602	286T	T, C
98	III	3.9	18462	18558	18	3732	286T	T, C
92	I	1.3	19780	3045	20	3592	286T	T, C
88	III	1.6	20744	11645	20	3602	286T	T, C
87	III	3.5	20848	18558	20	3732	286T	T, C
80	III	1.5	22715	11788	22.4	3602	286T	T, C
79	I	1.1	22881	3026	22.4	3592	286T	T, C
77	III	3.1	23441	18558	22.4	3732	286T	T, C
73	I	1.0	24976	2764	25	3592	286T	T, C
69	II,III	2.9	26138	18558	25	3732	286T	T, C
69	I	1.3	26449	12014	25	3602	286T	T, C
63	I	1.2	28731	12120	28	3602	286T	T, C
62	II,III	2.6	29457	18558	28	3732	286T	T, C
56	I	1.1	32257	12241	31.5	3602	286T	T, C
55	II,III	2.3	32983	18558	31.5	3732	286T	T, C
51	I	1.0	35784	12323	35.5	3602	286T	T, C
51	I	1.0	35784	12323	35.5	3602	286T	T, C
51	III	2.2	35888	22000	35.5	3842	286T	T, C
49	II	1.8	37340	18558	35.5	3732	286T	T, C
45	II	1.7	40555	22000	40	3842	286T	T, C
44	I,II	1.6	41696	18558	40	3732	286T	T, C
44	III	3+	40218	22000	40	3843	286T	T, C
41	I	1.3	44600	18558	45	3732	286T	T, C
41	II	1.5	43874	18558	45	3733	286T	T, C
40	III	2.9	44991	22000	45	3843	286T	T, C
36	I	1.1	49786	18558	50	3732	286T	T, C
36	II	1.4	49561	18558	50	3733	286T	T, C
35	III	2.5	51491	22000	50	3843	286T	T, C
32	I	1.3	56264	18558	56	3733	286T	T, C
31	II,III	2.3	56874	22000	56	3843	286T	T, C
29	I	1.2	62155	18558	63	3733	286T	T, C
28	II, III	2.0	64389	22000	63	3843	286T	T, C
26	I	1.1	69366	18558	71	3733	286T	T, C
24	II	1.8	72819	22000	71	3843	286T	T, C
23	I	1.1	77998	18558	80	3733	286T	T, C
21	II	1.6	83178	22000	80	3843	286T	T, C
19	I, II	1.4	93842	22000	90	3843	286T	T, C
17	I	1.3	105623	22000	100	3843	286T	T, C
15	I	1.1	117810	22000	112	3843	286T	T, C
13	I	1.0	132028	22000	125	3843	286T	T, C

◊ **Standard Motor Types** (see page A-34 for product codes)
T TEFC, three phase, 208-230/460 or 575 volts
C Corro-Duty®, three phase, 230/460 or 575V

40 HP

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
1367	I,II	1.5	1807	819	1.25	3501	324T	T, C
1199	I,II	1.5	2061	812	1.4	3501	324T	T, C
1094	I,II	1.4	2259	802	1.6	3501	324T	T, C
978	I,II	1.4	2527	784	1.8	3501	324T	T, C
875	I	1.3	2824	757	2	3501	324T	T, C
778	I	1.3	3176	718	2.24	3501	324T	T, C
717	I	1.2	3445	684	2.5	3501	324T	T, C
632	I	1.2	3911	317	2.8	3501	324T	T, C
570	I	1.1	4334	550	3.15	3501	324T	T, C
545	II,III	3.0	4439	7616	3.15	3602	324T	T, C
493	I	1.0	5012	431	3.55	3501	324T	T, C
481	II,III	3.0	5034	7834	3.55	3602	324T	T, C
451	III	3.0	5366	7870	4	3602	324T	T, C
430	I,II	1.7	5629	2233	4	3592	324T	T, C
403	III	3.0	6002	7999	4.5	3602	324T	T, C
376	I,II,	1.7	6445	2278	4.5	3592	324T	T, C
356	III	3.0	6790	8226	5	3602	324T	T, C
343	I,II	1.9	7053	2321	5	3592	324T	T, C
315	III	3.0	7689	8717	5.6	3602	324T	T, C
307	I,II	1.4	7883	2358	5.6	3592	324T	T, C
285	II,III	3.0	8505	8907	6.3	3602	324T	T, C
274	I	1.3	8823	2395	6.3	3592	324T	T, C
255	II,III	2.7	9487	9124	7.1	3602	324T	T, C
244	I	1.2	9930	2419	7.1	3592	324T	T, C
227	III	2.5	10663	9348	8	3602	324T	T, C
221	I,II	1.9	10953	2571	8	3592	324T	T, C
194	III	2.1	12488	9637	9	3602	324T	T, C
193	I,II	1.6	12543	2600	9	3592	324T	T, C
182	III	2.3	13318	9755	10	3602	324T	T, C
176	I,II	1.5	13747	2623	10	3592	324T	T, C
161	III	2.1	15074	9977	11.2	3602	324T	T, C
158	I,II	1.4	15365	2636	11.2	3592	324T	T, C
145	II	1.9	16734	10139	12.5	3602	324T	T, C
143	III	3.0	16872	17316	12.5	3732	324T	T, C
141	I	1.3	17190	2639	12.5	3592	324T	T, C
130	II	1.7	18670	10314	14	3602	324T	T, C
127	III	3.0	19085	17831	14	3732	324T	T, C
125	I	1.2	19334	2632	14	3592	324T	T, C
116	II	1.6	20883	10482	16	3602	324T	T, C
115	I	1.1	21044	2601	16	3592	324T	T, C
111	III	3.0	21712	18352	16	3732	324T	T, C
102	I	1	23842	2535	18	3592	324T	T, C
99	II	1.4	24478	10675	18	3602	324T	T, C
98	III	2.9	24616	18558	18	3732	324T	T, C

◊ **Standard Motor Types** (see page A-34 for product codes)
T TEFC, three phase, 208-230/460 or 575 volts
C Corro-Duty®, three phase, 230/460 or 575V

40 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
88	I	1.2	27659	10799	20	3602	324T	T, C
87	II,III	2.6	27797	18558	20	3732	324T	T, C
80	I	1.1	30287	10866	22.4	3602	324T	T, C
77	II,III	2.4	31255	18558	22.4	3732	324T	T, C
69	II,III	2.1	34850	18558	25	3732	324T	T, C
69	I	1.0	35265	10940	25	3602	324T	T, C
62	II	1.9	39276	18558	28	3732	324T	T, C
63	III	2.6	38169	22000	28	3842	324T	T, C
62	I, II	1.9	39276	18558	28	3732	324T	T, C
57	III	2.3	42733	22000	31.5	3842	324T	T, C
55	I,II	1.7	43978	18558	31.5	3732	324T	T, C
55	III	3.0	42926	22000	31.5	3843	324T	T, C
51	III	1.7	47850	22000	35.5	3842	324T	T, C
50	III	2.7	47801	22000	35.5	3843	324T	T, C
49	I, II	1.4	49786	18558	35.5	3732	324T	T, C
45	I	1.3	54073	22000	40	3842	324T	T, C
44	I	1.2	55595	18558	40	3732	324T	T, C
44	II, III	2.4	53624	22000	40	3843	324T	T, C
41	I	1.1	58499	18558	45	3733	324T	T, C
40	III	2.2	59988	22000	45	3843	324T	T, C
36	I	1.0	66082	18558	45	3733	324T	T, C
35	II	1.9	68655	22000	50	3843	324T	T, C
31	I, II	1.7	75832	22000	56	3843	324T	T, C
28	I, II	1.5	85852	22000	63	3843	324T	T, C
24	I, II	1.4	97092	22000	71	3843	324T	T, C
21	I	1.2	110904	22000	80	3843	324T	T, C
19	I	1.1	125122	22000	90	3843	324T	T, C

◊ **Standard Motor Types** (see page A-34 for product codes)
T TEFC, three phase, 208-230/460 or 575 volts
C Corro-Duty®, three phase, 230/460 or 575V
X Explosionproof, CI 1 group D, CI 2 groups F&G, three phase, 230/460 or 575V
IG IntelliGear® variable speed for 3/460V power supplies

50 HP

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
545	I,II,III	2.4	5549	7482	3.15	3602	326T	T, C
481	I,II,III	2.4	6292	7684	3.55	3602	326T	T, C
451	I,II,III	2.4	6707	7837	4	3602	326T	T, C
403	I,II,III	2.4	7502	8043	4.5	3602	326T	T, C
356	I,II,III	2.4	8488	8261	5	3602	326T	T, C
315	I,II,III	2.4	9611	8482	5.6	3602	326T	T, C
285	I,II,III	2.4	10631	8648	6.3	3602	326T	T, C
255	I,II,III	2.2	11859	8834	7.1	3602	326T	T, C
227	I,II,III	2.0	13328	9022	8	3602	326T	T, C
194	I,II	1.7	15610	9257	9	3602	326T	T, C
193	III	2.4	15714	15833	9	3732	326T	T, C
182	I,II	1.9	16647	9349	10	3602	326T	T, C
170	III	2.4	17805	16283	10	3732	326T	T, C
161	I,II	1.7	18843	9516	11.2	3602	326T	T, C
159	III	2.4	19016	16561	11.2	3732	326T	T, C
145	I,II	1.5	20917	9631	12.5	3602	326T	T, C
143	III	2.4	21090	16923	12.5	3732	326T	T, C
130	I,II	1.4	23337	9746	14	3602	326T	T, C
127	III	2.4	23856	17385	14	3732	326T	T, C
116	I	1.3	26103	9843	16	3602	326T	T, C
111	II,III	2.4	27140	17846	16	3732	326T	T, C
99	I	1.1	30598	9929	18	3602	326T	T, C
98	II,III	2.3	30771	18300	18	3732	326T	T, C
88		0.99	34574	9954	20	3602	326T	T, C
87	I,II,III	2.1	34747	18558	20	3732	326T	T, C
77	I,II	1.9	39068	18558	22.4	3732	326T	T, C
69	I,II	1.7	43563	18558	25	3732	326T	T, C
71	III	2.4	42699	22000	25	3842	324T	T, C
69	I,II	1.7	43563	18558	25	3732	326T	T, C
63	III	2.1	47712	22000	28	3842	324T	T, C
62	I,II	1.5	49095	18558	28	3732	326T	T, C
57	II	1.8	53416	22000	31.5	3842	324T	T, C
55	I,II	1.4	54972	18558	31.5	3732	326T	T, C
55	III	2.4	53658	22000	31.5	3843	324T	T, C
50	II, II	2.2	59751	22000	35.5	3843	324T	T, C
49	I	1.1	62233	18558	35.5	3732	326T	T, C
45	I	1.0	67592	22000	40	3842	324T	T, C
44	II	1.9	67030	22000	40	3843	324T	T, C
40	I, II	1.7	74985	22000	45	3843	324T	T, C
35	I, II	1.5	85818	22000	50	3843	324T	T, C
31	I, II	1.4	94790	22000	56	3843	324T	T, C
28	I	1.2	107315	22000	63	3843	324T	T, C
24	I	1.1	121365	22000	71	3843	324T	T, C

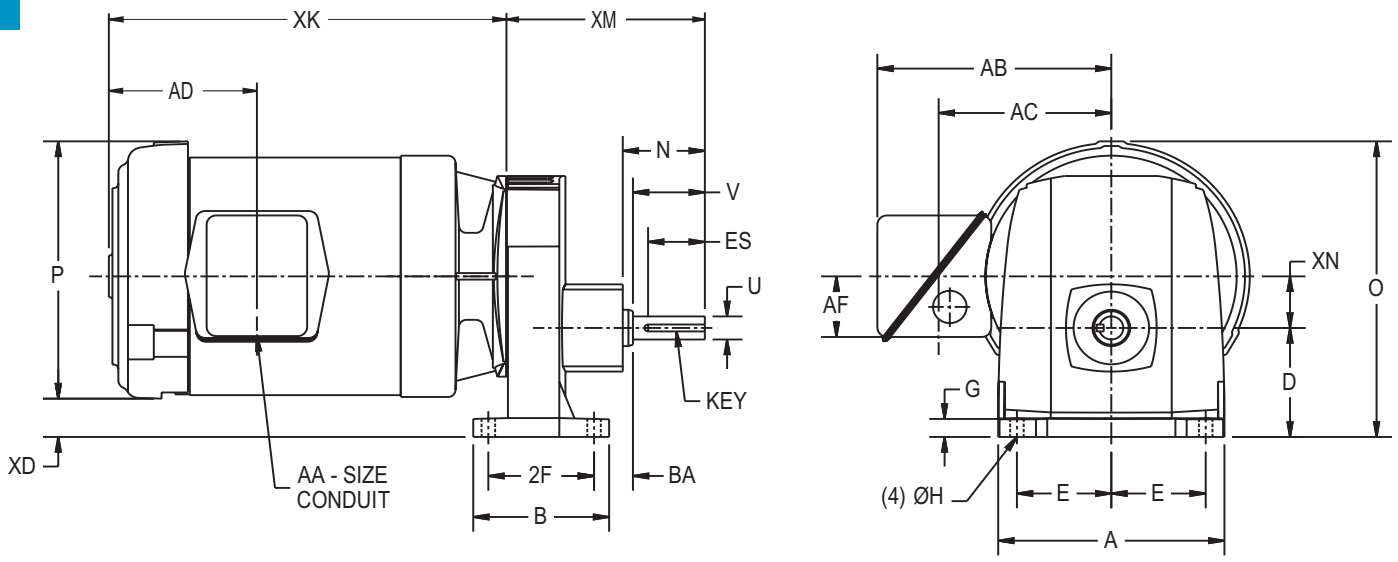
◊ **Standard Motor Types** (see page A-34 for product codes)
T TEFC, three phase, 208-230/460 or 575 volts
C Corro-Duty®, three phase, 230/460 or 575V

Browning®

Three Phase Gearmotor

CbN SERIES 3000

Foot Mounted - Single Reduction



Gear Frame	A	B	D[1]	E	G	H	N	U[3]	V	BA	2F	ES	XN	XM	Key
30	5.90	3.54	2.95	2.46	.49	.35	2.14	.625	1.88	1.01	2.76	1.48	1.40	5.75	3/16 Sq.

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF	XD
56	T	9.79	8.01	7.22	3/4	6.10	4.50	3.86	1.64	1.04
B56	T	11.04	8.01	7.22	3/4	6.10	4.50	3.86	1.64	1.04
143T,145T	T	11.04	8.01	7.22	3/4	6.10	4.50	3.86	1.64	1.04

[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

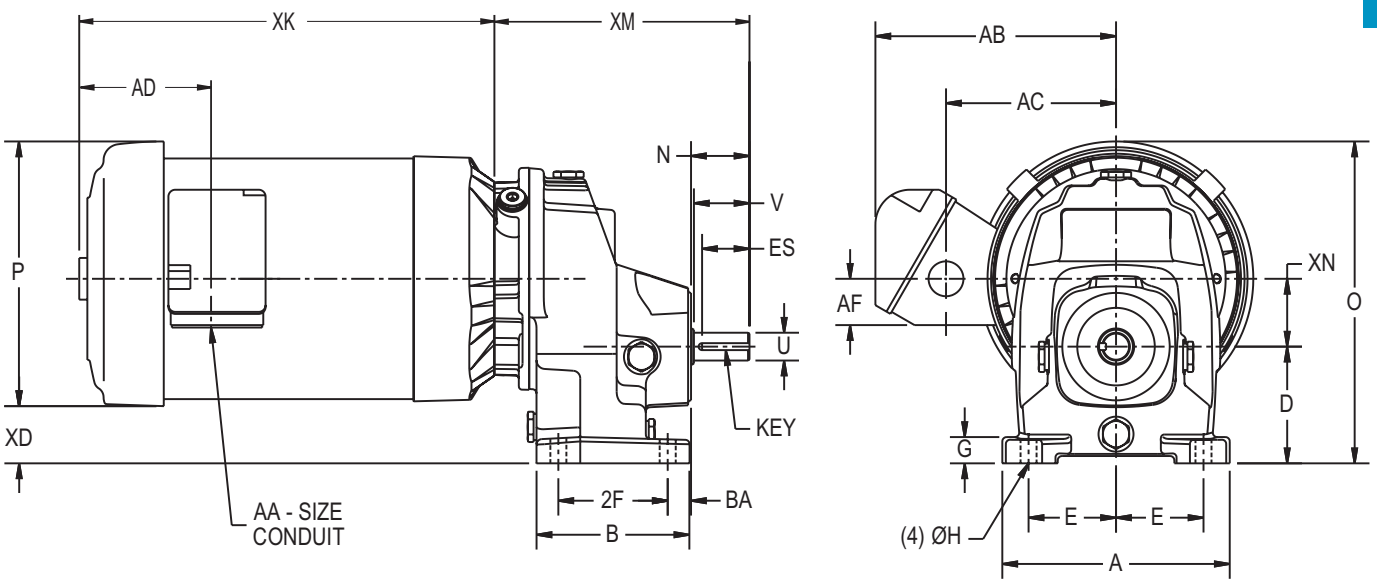
[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages A-109 to A-111.

[5] Largest motor width.

Foot Mounted - Single Reduction



Gear Frame	A	B	D[1]	E	G	H	N	U[3]	V	BA	2F	ES	XN	XM	Key
31	6.14	4.13	3.15	2.36	.71	.43	1.58	.750	1.50	.71	2.95	1.28	1.83	6.89	3/16 Sq.

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF	XD
56	T	9.79	8.64	7.22	3/4	6.10	4.21	3.86	.94	1.65
B56	T	11.04	8.64	7.22	3/4	6.10	4.21	3.86	.94	1.65
143T,145T	T	11.04	8.64	7.22	3/4	6.10	4.21	3.86	.94	1.65
182T,184T	T	14.04	9.76	9.56	3/4	7.52	6.27	5.13	2.13	.64

[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages A-109 to A-111.

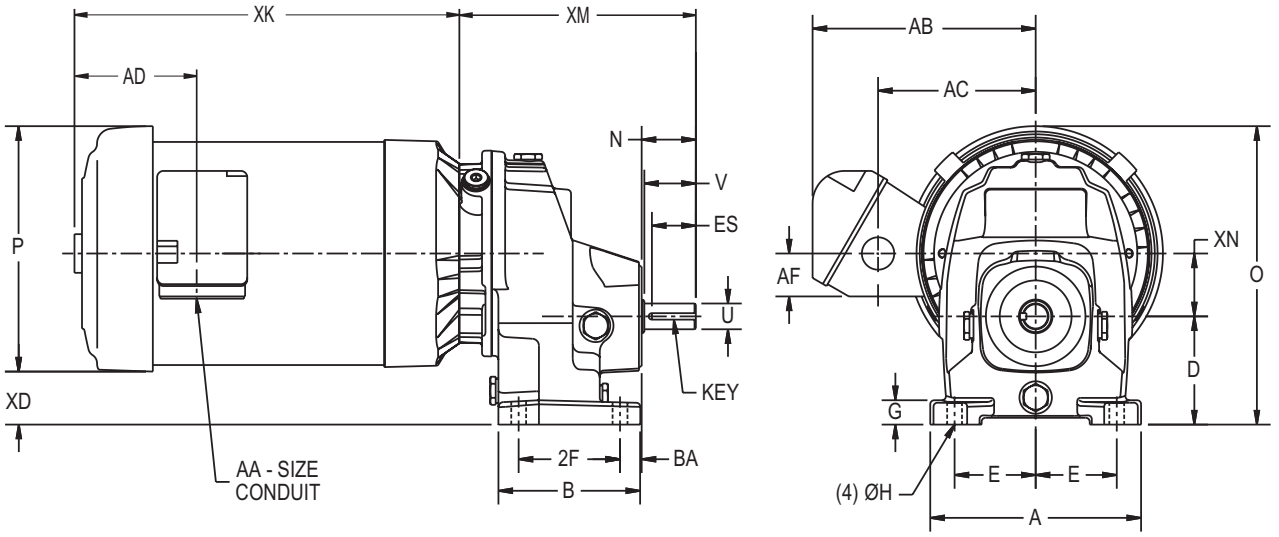
[5] Largest motor width.

Browning®

Three Phase Gearmotor

CbN SERIES 3000

Foot Mounted - Single Reduction



Gear Frame	A	B	D[1]	E	G	H	N	U[3]	V	BA	2F	ES	XN	XM	Key
32	7.08	4.48	3.54	2.76	.77	.55	2.08	1.000	2.00	.75	3.15	1.56	2.48	7.51	1/4 Sq.

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF	XD
56	T	9.79	9.68	7.22	3/4	6.10	4.50	3.86	1.64	2.75
B56	T	11.04	9.68	7.22	3/4	6.10	4.50	3.86	1.64	2.75
143T,145T	T	11.04	9.68	7.22	3/4	6.10	4.50	3.86	1.64	2.75
182T,184T	T	14.04	10.81	9.56	3/4	7.52	6.27	5.13	2.13	1.68
213T	T	16.15	11.65	11.25	3/4	8.42	7.17	5.6	2.13	.96
215T	T	17.65	11.65	11.25	3/4	8.42	7.17	5.6	2.13	1.09

[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

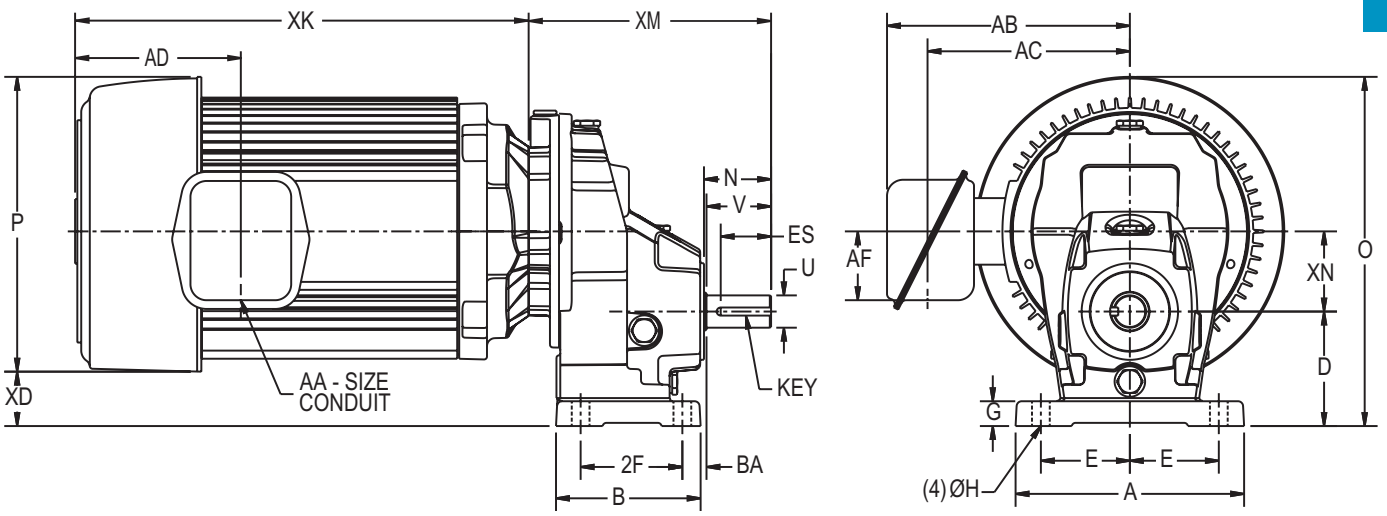
[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages A-109 to A-111.

[5] Largest motor width.

Foot Mounted - Single Reduction



Gear Frame	A	B	D[1]	E	G	H	N	U[3]	V	BA	2F	ES	XN	XM	Key
33	9.69	5.30	4.41	3.74	1.00	.63	2.83	1.38	2.75	1.09	3.94	2.40	2.76	8.91	5/16 Sq.

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF	XD
182T,184T	T	14.04	11.95	9.56	3/4	7.52	6.27	5.13	2.13	2.83
213T	T	16.15	12.79	11.25	1	8.42	7.16	5.60	2.13	2.10
215T	T	17.65	12.79	11.25	1	8.42	7.16	5.60	2.13	2.10
254T	T	20.58	13.86	13.38	1 1/4	9.79	7.68	8.29	1.81	1.17
256T	T	22.33	13.86	13.38	1 1/4	9.79	7.68	8.29	1.81	1.17

[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages A-109 to A-111.

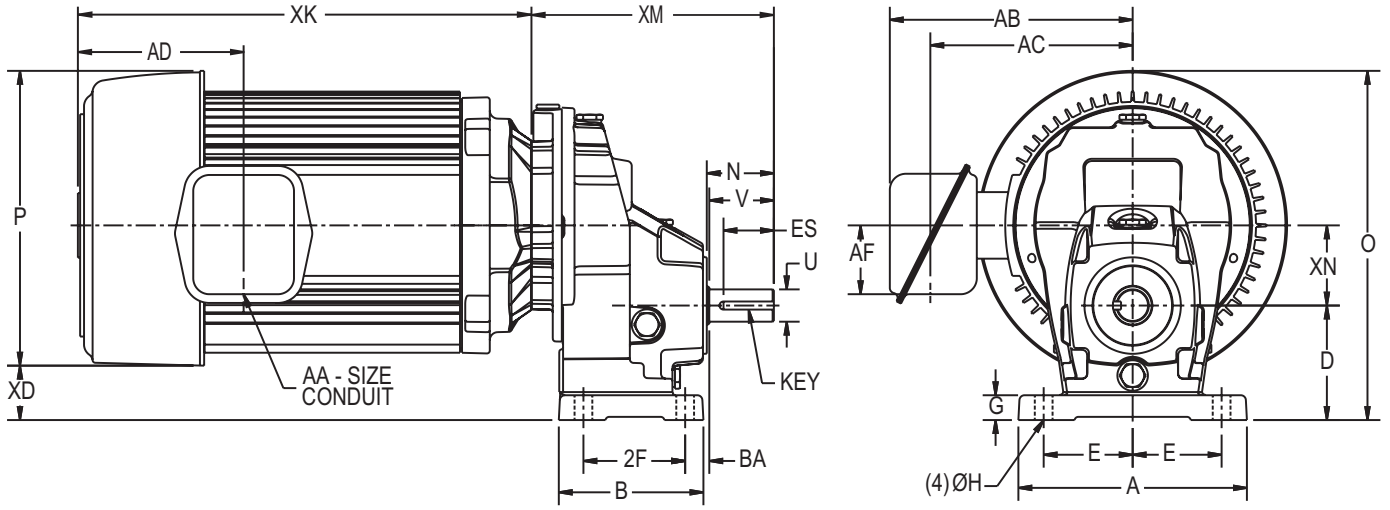
[5] Largest motor width.

Browning®

Three Phase Gearmotor

CbN SERIES 3000

Foot Mounted - Single Reduction



Gear Frame	A	B	D[1]	E	G	H	N	U[3]	V	BA	2F	ES	XN	XM		Key
														182T-215T	254T-286T	
34	11.02	6.59	5.20	4.25	1.34	.71	3.06	1.50	3.00	1.10	4.92	2.56	3.43	9.98	10.63	3/8 Sq.

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF	XD
182T, 184T	T	14.04	13.90	9.56	3/4	7.52	6.27	5.13	2.13	4.28
213T	T	16.15	14.25	11.25	1	8.42	7.17	5.6	2.13	3.56
215T	T	17.65	14.25	11.25	1	8.42	7.17	5.6	2.13	3.56
254T	T	19.61	15.31	13.38	1 1/4	9.79	7.68	8.29	1.81	2.62
256T	T	21.36	15.31	13.38	1 1/4	9.79	7.68	8.29	1.81	2.62
284T, 286T	T	24.71	15.96	14.66	1 1/2	11.33	9.16	13.19	2.63	1.34

[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

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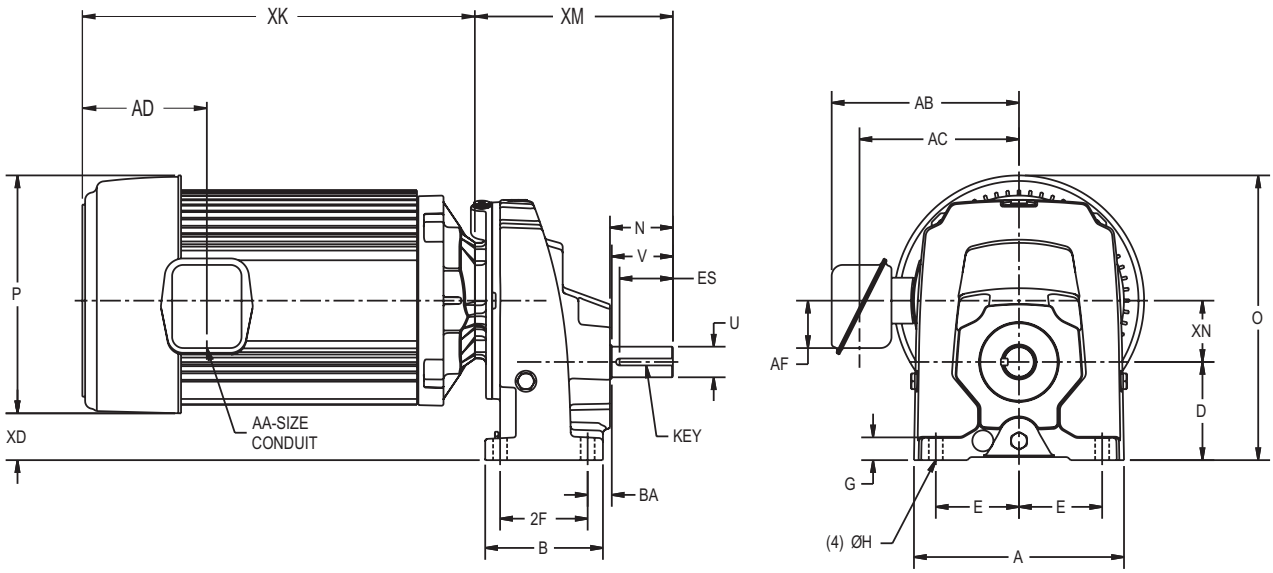
[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages A-109 to A-111.

[5] Largest motor width.

Foot Mounted - Single Reduction



Gear Frame	A	B	D[1]	E	G	H	N	U[3]	V	BA	2F	ES	XN	XM		Key
														213T-215T	254T-324T	
35	13.65	7.76	6.30	5.12	1.61	.79	3.56	1.750	3.50	1.18	6.30	3.06	4.33	10.84	11.36	3/8 Sq.

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF	XD
213T	T	16.15	17.37	11.25	1	8.42	7.17	5.6	2.13	5.57
215T	T	17.65	17.37	11.25	1	8.42	7.17	5.6	2.13	5.57
254T	T	19.61	17.37	13.38	1 1/4	9.79	7.68	8.29	1.81	4.63
256T	T	21.36	17.37	13.38	1 1/4	9.79	7.68	8.29	1.81	4.63
284T, 286T	T	24.71	17.99	14.66	1 1/2	11.33	9.16	13.19	2.63	3.37
324T	T	24.96	18.81	16.34	2	14.30	10.69	14.16	3.25	2.85

[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

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[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages A-109 to A-111.

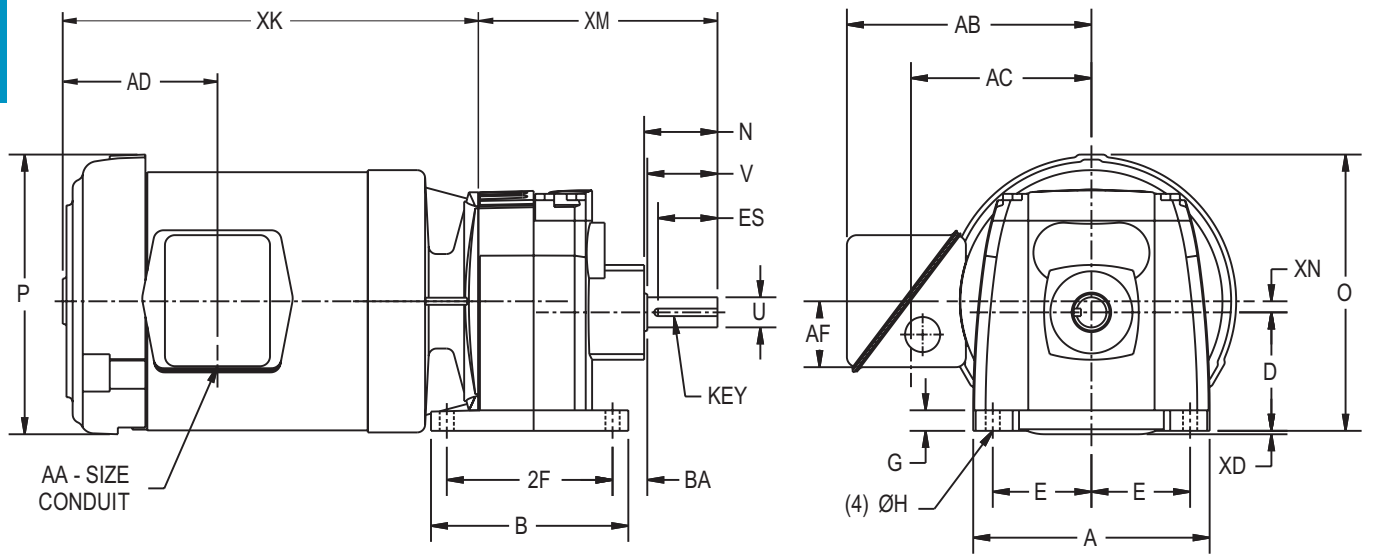
[5] Largest motor width.

Browning®

Three Phase Gearmotor

CbN SERIES 3000

Foot Mounted - Double/Triple Reduction



Gear Frame	A	B	D[1]	E	G	H	N	U[3]	V	BA	2F	ES	XN	XM	Key
3012	5.90	4.92	2.95	2.46	.51	.35	1.83	.750	1.75	.87	4.13	1.48	.28	6.54	3/16 Sq.
3013	5.90	5.71	2.95	2.46	.51	.35	1.83	.750	1.75	.87	4.92	1.48	.28	7.33	3/16 Sq.

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF	XD
56	T	9.79	6.88	7.22	1/2	6.10	4.50	3.86	1.64	.08
B56	T	11.04	6.88	7.22	3/4	6.10	4.50	3.86	1.64	.08
143T,145T	T	11.04	6.88	7.22	3/4	6.10	4.50	3.86	1.64	.08

[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

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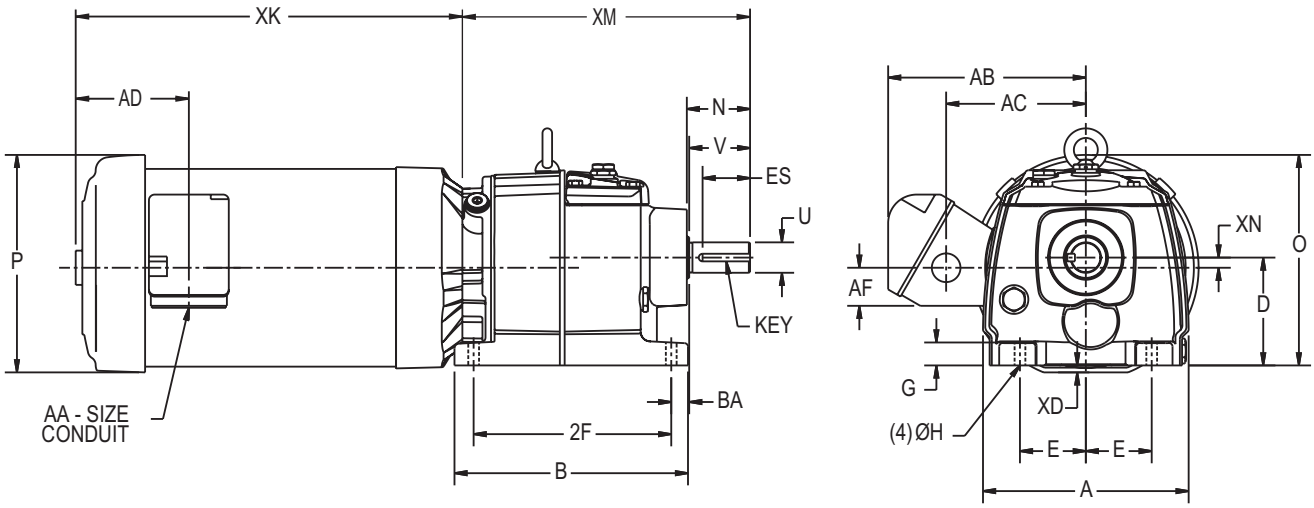
[5] Largest motor width.

Foot Mounted - Double/Triple Reduction



Gear Frame	A	B	D[1]	E	G	H	XN	N	U[3]	V	BA	2F	ES	XM	Key
31	6.76	7.68	3.54	2.17	.75	.35	.33	2.08	1.000	2.00	.59	6.50	1.56	9.46	1/4 Sq.

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF	XD
56	T	9.79	6.87	7.22	3/4	6.10	4.21	3.86	.94	.10
B56	T	11.04	6.87	7.22	3/4	6.10	4.21	3.86	.94	.10
143T,145T	T	11.04	6.87	7.22	3/4	6.10	4.21	3.86	.94	.10
182T,184T	T	14.04	7.99	9.56	3/4	7.52	6.27	5.13	2.13	1.13

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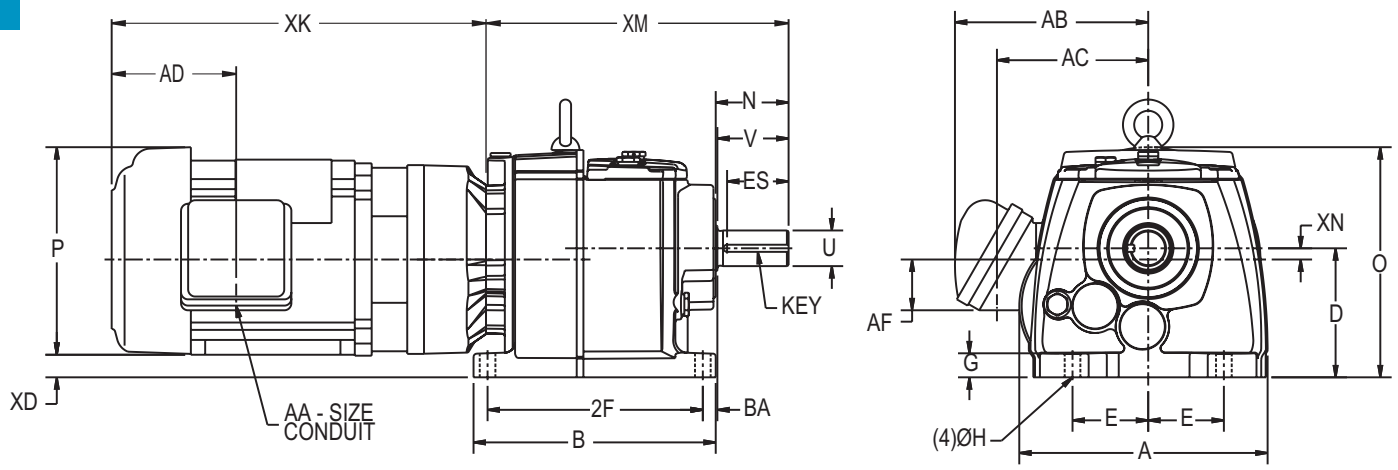
Browning®

Three Phase Gearmotor

CbN SERIES 3000

Foot Mounted - Double/Triple Reduction



Gear Frame	A	B	D[1]	E	G	H	N	U[3]	V	BA	2F	ES	XN	XM	Key
32	8.72	8.50	4.53	2.66	.84	.55	2.56	1.250	2.50	.51	7.56	2.16	.39	10.63	1/4 Sq.

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF	XD
56	T	9.79	7.98	7.22	3/4	6.10	4.50	3.86	1.64	.87
B56	T	11.04	7.98	7.22	3/4	6.10	4.50	3.86	1.64	.87
143T,145T	T	11.04	7.98	7.22	3/4	6.10	4.50	3.86	1.64	.87
182T,184T	T	14.04	8.92	9.56	3/4	7.52	6.27	5.13	2.13	1.08
213T	T	16.15	9.76	11.25	1	8.42	7.17	5.60	2.13	2.05
215T	T	17.65	9.76	11.25	1	8.42	7.17	5.60	2.13	2.05

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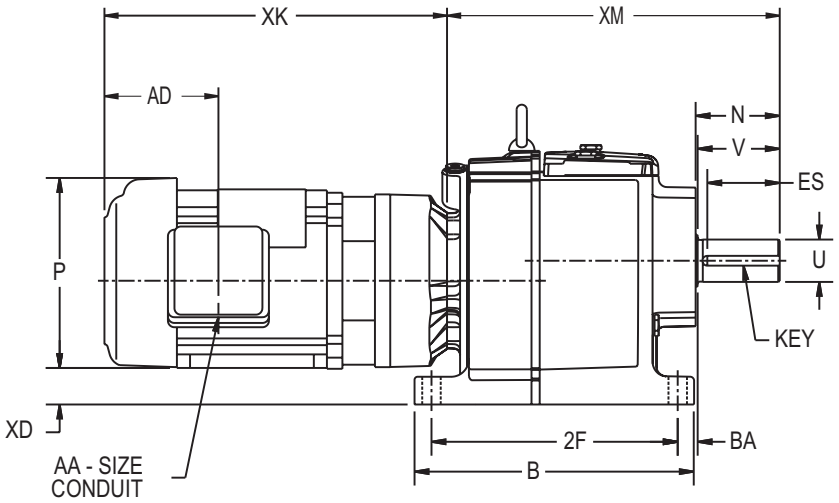
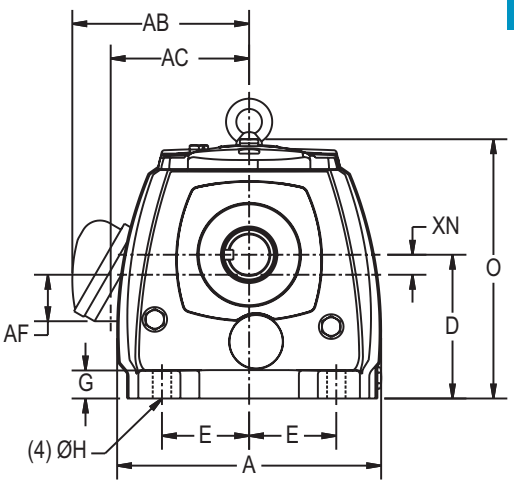
[5] Largest motor width.

Foot Mounted - Double/Triple Reduction





Gear Frame	A	B	D[1]	E	G	H	N	U[3]	V	BA	2F	ES	XN	XM	Key
3362,3363	10.13	10.72	5.51	3.35	1.07	.71	3.08	1.50	3.00	.77	9.45	2.56	.77	12.62	3/8 Sq.
3372,3373	10.13	10.72	5.51	3.35	1.07	.71	3.23	1.63	3.15	.77	9.45	2.78	.77	12.77	3/8 Sq.

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF	XD
56	T	9.79	9.94	7.22	3/4	6.10	4.50	3.86	1.64	1.47
B56	T	11.04	9.94	7.22	3/4	6.10	4.50	3.86	1.64	1.47
143T,145T	T	11.04	9.94	7.22	3/4	6.10	4.50	3.86	1.64	1.47
182T,184T	T	14.04	9.94	9.56	3/4	7.52	6.27	5.13	2.13	.40
213T	T	16.15	10.37	11.25	1	8.42	7.16	5.60	2.13	.32
215T	T	17.65	10.37	11.25	1	8.42	7.16	5.60	2.13	.32
254T	T	20.58	11.44	13.38	1 1/4	9.79	7.68	8.29	1.81	1.25
256T	T	22.33	11.44	13.38	1 1/4	9.79	7.68	8.29	1.81	1.25

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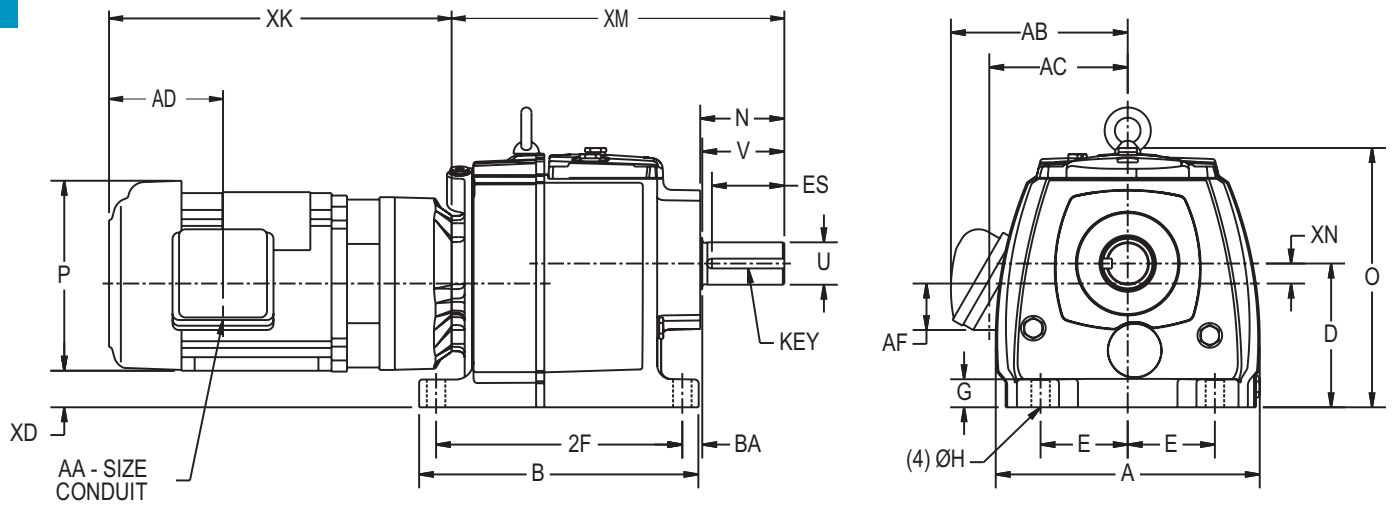
[5] Largest motor width.

Browning®

Three Phase Gearmotor

CbN SERIES 3000

Foot Mounted - Double/Triple Reduction



Gear Frame	A	B	D[1]	E	G	H	N	U[3]	V	BA	2F	ES	XN	XM		Key
														143T-256T	284T-324T	
34	11.97	10.87	7.09	4.53	1.37	.71	3.58	2.125	3.50	.98	9.25	3.06	1.02	14.34	14.69	1/2 Sq.

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF	XD
56	T	9.79	11.89	7.22	0.75	6.10	4.50	3.86	1.64	2.75
B56	T	11.04	11.89	7.22	0.75	6.10	4.50	3.86	1.64	2.75
143T,145T	T	11.04	11.89	7.22	0.75	6.10	4.50	3.86	1.64	2.75
182T,184T	T	14.04	11.89	9.56	0.75	7.52	6.27	5.13	2.13	1.72
213T	T	16.15	11.89	11.25	1	8.42	7.17	5.60	2.13	1.00
215T	T	17.65	11.89	11.25	1	8.42	7.17	5.60	2.13	1.00
254T	T	19.61	12.75	13.38	1.25	9.79	7.68	8.29	1.81	.06
256T	T	21.36	12.75	13.38	1.25	9.79	7.68	8.29	1.81	.06
284T, 286T	T	24.71	13.44	14.66	1 1/2	11.33	9.16	13.19	2.63	-1.22

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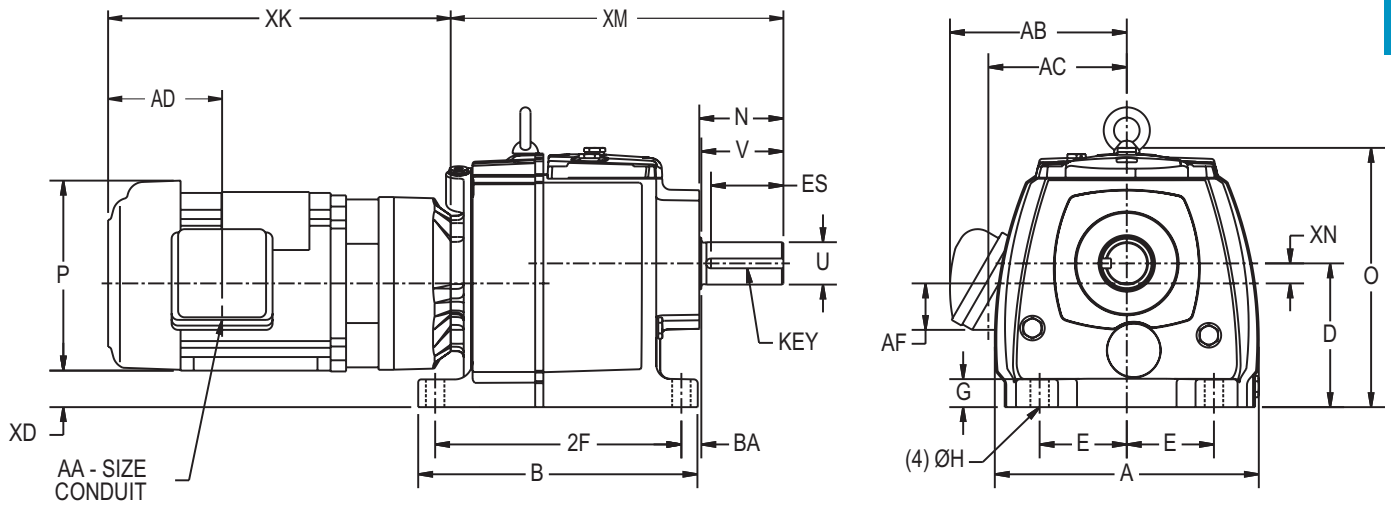
Browning®

Three Phase Gearmotor

CbN SERIES 3000

Foot Mounted - Double/Triple Reduction



Gear Frame	A	B	D[1]	E	G	H	N	U[3]	V	BA	2F	ES	XN	XM		Key
														143T-256T	284T-324T	
35	14.19	12.89	8.86	5.51	1.73	.87	4.81	2.38	4.72	1.10	11.02	4.19	1.14	16.60	17.12	5/8 Sq.

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF	XD
B56	T	11.04	14.84	7.22	3/4	6.10	4.50	3.86	1.64	4.40
143T,145T	T	11.04	14.84	7.22	3/4	6.10	4.50	3.86	1.64	4.40
182T,184T	T	14.04	14.84	9.56	3/4	7.52	6.27	5.13	2.13	3.38
213T	T	16.15	14.84	11.25	1	8.42	7.17	5.60	2.13	2.65
215T	T	17.65	14.84	11.25	1	8.42	7.17	5.60	2.13	2.65
254T	T	19.61	14.84	13.38	1 1/4	9.79	7.68	8.29	1.81	1.72
256T	T	21.36	14.84	13.38	1 1/4	9.79	7.68	8.29	1.81	1.72
284T, 286T	T	24.71	15.01	14.66	1 1/2	11.33	9.16	13.19	2.63	.39

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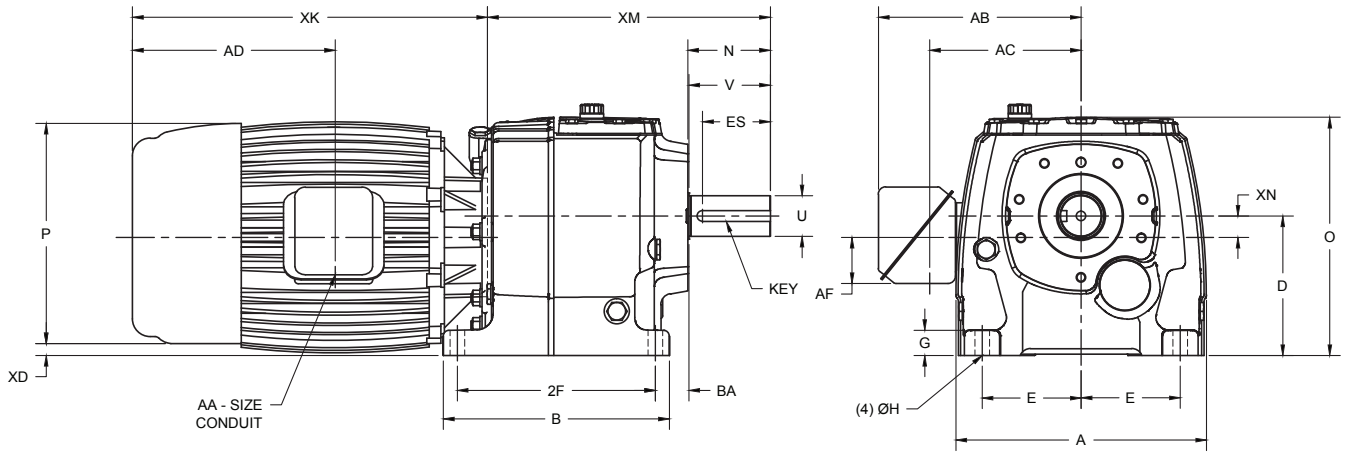
[5] Largest motor width.

Browning®

Three Phase Gearmotor

CbN SERIES 3000

Foot Mounted - Double/Triple Reduction



Gear Frame	A	B	D [1]	E	G	H	N	O	U [3]	V	BA	2F	ES	XN	XM		Key
															145T-215T	254T-326T	
36	17.68	15.95	9.85	6.99	1.77	1.02	5.847	17.72	2.875	5.75	2.36	13.98	4.784	1.102	19.96	20.31	3/4 Sq

Motor Frame	Type [4]	XK	P [5]	AA	AB	AC	AD	AF	XD
145T	T	11.04	7.31	0.75	6.10	4.50	3.86	1.77	5.42
182T,184T	T	14.04	9.56	0.75	7.52	6.27	5.13	1.77	4.40
213T	T	16.16	11.25	1.00	8.42	7.17	5.60	2.42	3.68
215T	T	17.65	11.25	1.00	8.42	7.17	5.60	2.42	3.68
254T	T	19.61	13.38	1.25	9.79	7.68	8.29	1.81	2.74
256T	T	21.36	13.38	1.25	9.79	7.68	8.29	1.81	2.74
284T,286T	T	24.71	14.62	1.50	11.33	8.51	12.44	2.63	1.45
324T,326T	T	24.96	17.20	2.00	14.99	11.34	14.16	3.63	0.55

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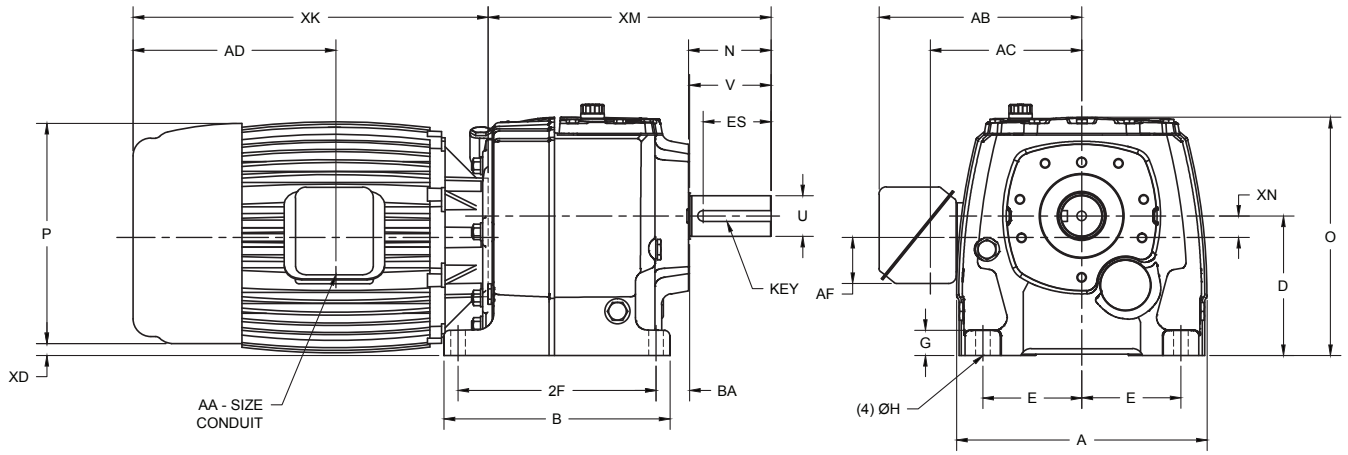
[4] For any motor type other than T (3 phase TEFC) or type T with brakes, refer to pages A-109 to A-111.

[5] Largest motor width.

Foot Mounted - Double/Triple Reduction



Gear Frame	A	B	D [1]	E	G	H	N	O	U [3]	V	BA	2F	ES	XN	XM		Key
															182T-215T	254T-326T	
37	20.39	17.91	12.40	8.27	2.17	1.02	7.127	20.40	3.625	7.00	2.56	15.35	5.893	2.362	23.88	24.23	7/8 Sq

Motor Frame	Type [4]	XK	P [5]	AA	AB	AC	AD	AF	XD
182T,184T	T	14.04	9.56	0.75	7.52	6.27	5.13	1.77	5.69
213T	T	16.16	11.25	1.00	8.42	7.17	$5.60	2.42	4.97
215T	T	17.65	11.25	1.00	8.42	7.17	$5.60	2.42	4.97
254T	T	19.61	13.38	1.25	9.79	7.68	8.29	1.81	4.03
256T	T	21.36	13.38	1.25	9.79	7.68	8.29	1.81	4.03
284T,286T	T	24.71	14.62	1.50	11.33	8.51	12.44	2.63	2.75
324T,326T	T	24.96	17.20	2.00	14.99	11.34	14.16	3.63	1.84

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[4] For any motor type other than T (3 phase TEFC) or type T with brakes, refer to pages A-109 to A-111.

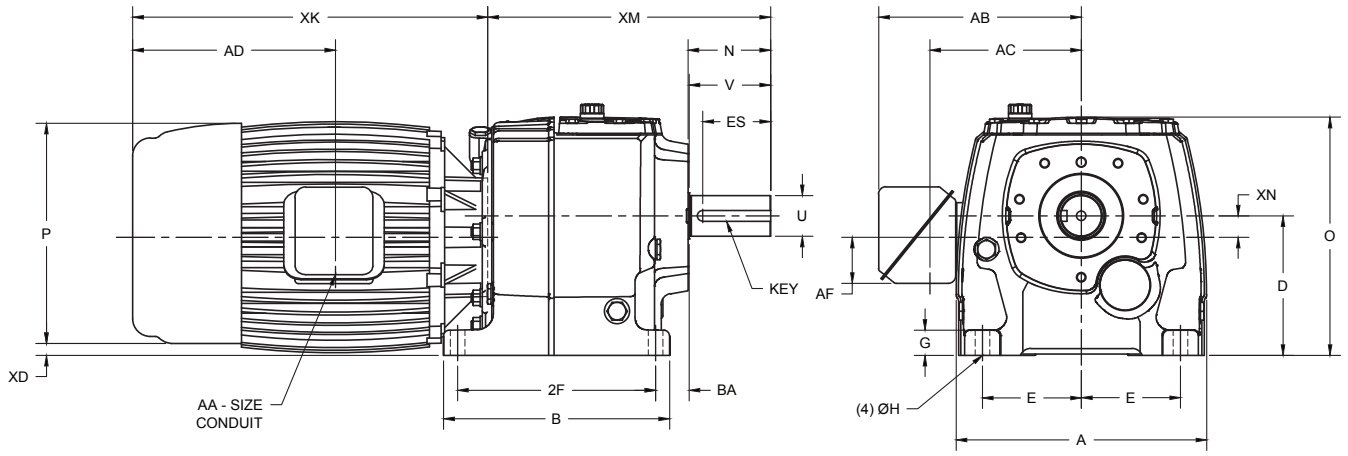
[5] Largest motor width.

Browning

Three Phase Gearmotor

CbN SERIES 3000

Foot Mounted - Double/Triple Reduction



Gear Frame	A	B	D[1]	E	G	H	N	O	U[3]	V	BA	2F	ES	XN	XM	Key
38	23.94	21.65	13.98	10.04	2.35	1.02	9.99	22.60	4.375	9.99	1.97	18.90	9.02	2.559	29.98	1 SQ

Frame	Motor Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF	XD
213T	T	17.47	23.47	11.25	1	8.25	6.39	5.6	1.56	6.35
215T	T	18.96	23.47	11.25	1	8.25	6.39	5.6	1.56	6.35
254T	T	19.61	23.47	13.38	1 1/4	9.96	7.72	8.29	1.81	5.41
256T	T	21.36	23.47	13.38	1 1/4	9.96	7.72	8.29	1.81	5.41
284T,286T	T	24.71	23.47	14.66	1 1/2	11.33	9.16	13.19	2.63	4.01
324T,326T	T	24.96	27.60	17.20	2	14.99	11.34	14.16	3.63	3.11

[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

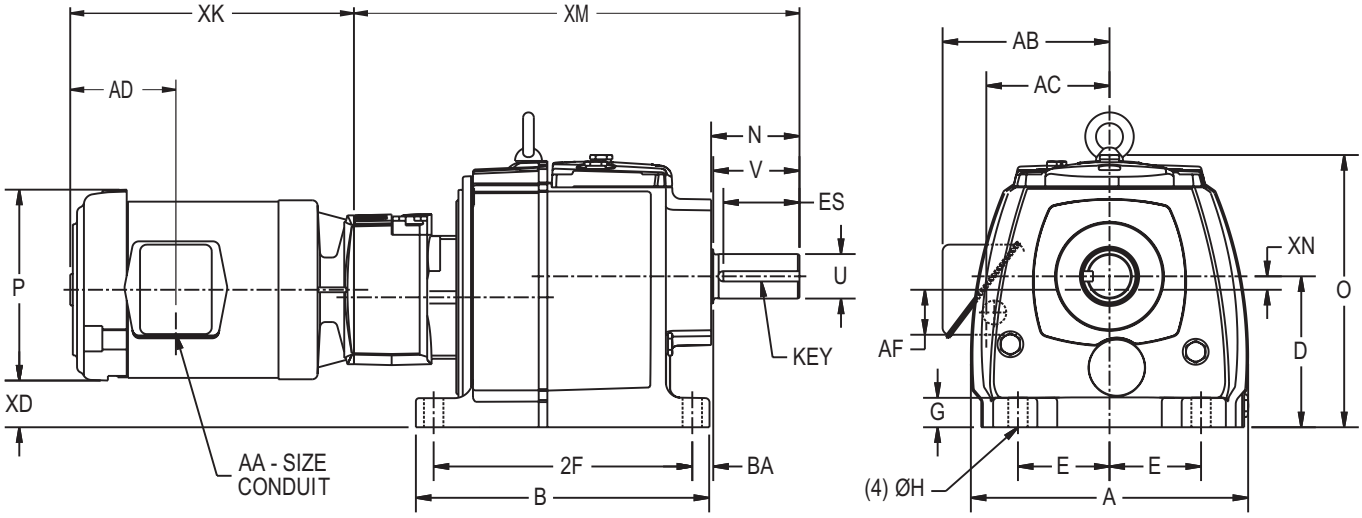
[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000; -.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages A-109 to A-111.

[5] Largest motor width.

Foot Mounted - Combined Reduction



Gear Frame	A	B	D[1]	E	G	H	N	U[3]	V	BA	2F	ES	XN	XM	Key
32	8.72	8.50	4.53	2.66	.84	.55	2.56	1.250	2.50	.51	7.56	2.16	.12	14.71	1/4 Sq.
33	10.13	10.72	5.51	3.35	1.07	.71	3.23	1.625	3.15	.77	9.45	2.78	.49	16.86	3/8 Sq.
34	11.97	10.87	7.09	4.53	1.37	.71	3.58	2.125	3.50	.98	9.25	3.06	1.35	21.31	1/2 Sq.

Frame	Motor Type[4]	XK	O			P[5]	AA	AB	AC	AD	AF	XD		
			32	33	34							32	33	34
56	T	9.79	8.07	9.94	11.89	7.22	3/4	6.10	4.50	3.86	1.64	1.1	1.71	2.42
B56	T	11.04	8.07	9.94	11.89	7.22	3/4	6.10	4.50	3.86	1.64	1.1	1.71	2.42
143T,145T	T	11.04	8.07	9.94	11.89	7.22	3/4	6.10	4.50	3.86	1.64	1.1	1.71	2.42

[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages A-109 to A-111.

[5] Largest motor width.

Browning®

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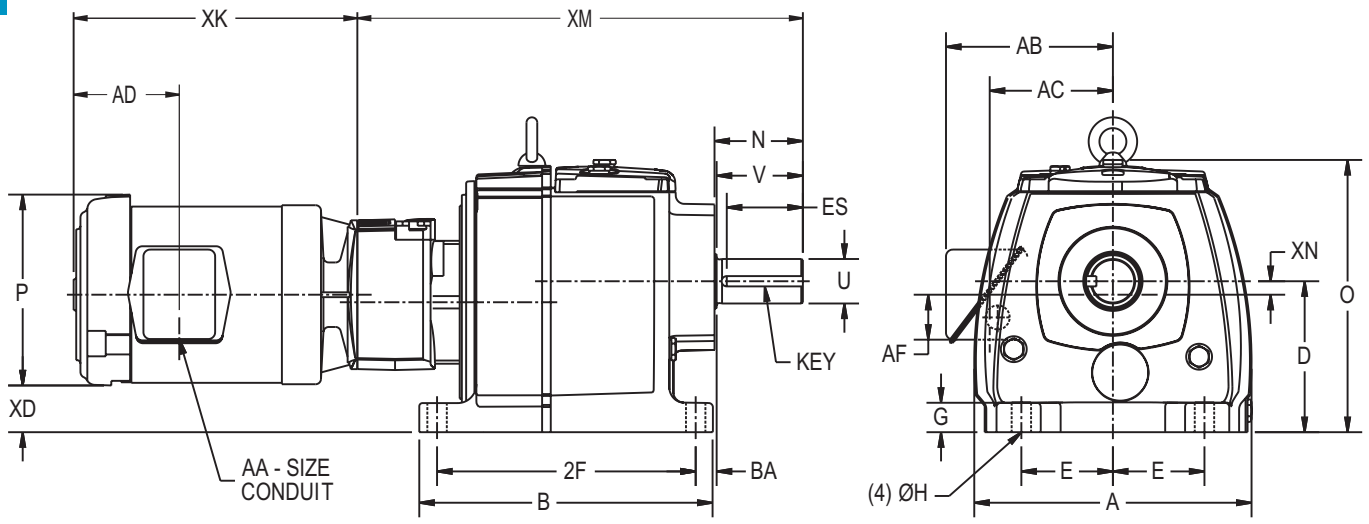
Foot Mounted - Combined Reduction



Gear Frame	A	B	D[1]	E	G	H	N	U[3]	V	BA	2F	ES	XN	XM	Key
35	14.19	12.89	8.86	5.51	1.73	.87	4.81	2.375	4.72	1.10	11.02	4.19	1.47	23.72	5/8 Sq.

Frame	Motor Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF	XD
56	T	9.79	11.89	7.22	3/4	6.10	4.50	3.86	1.64	4.07
B56	T	11.04	11.89	7.22	3/4	6.10	4.50	3.86	1.64	4.07
143T,145T	T	11.04	11.89	7.22	3/4	6.10	4.50	3.86	1.64	4.07

[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

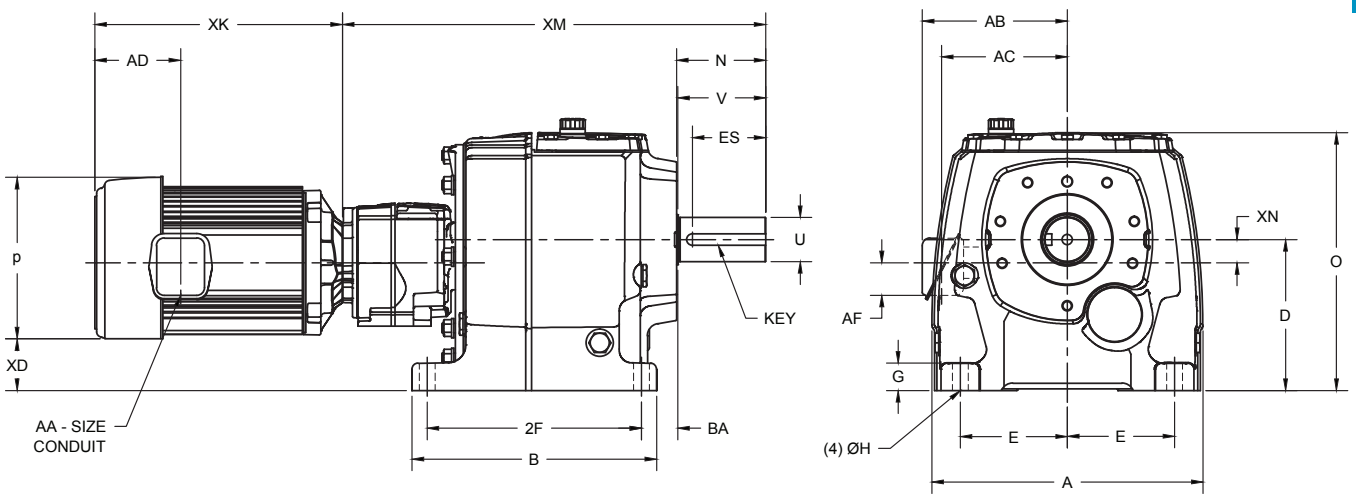
[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages A-109 to A-111.

[5] Largest motor width.

Foot Mounted - Combined Reduction



Gear Frame	A	B	D[1]	E	G	H	N	O	U[3]	V	BA	2F	ES	XN	XM	Key
36	17.68	15.95	9.85	6.99	1.77	1.02	5.847	17.72	2.875	5.75	2.36	13.98	4.784	1.492	27.62	3/4 Sq
37	20.39	17.91	12.40	8.27	2.17	1.02	7.127	20.40	3.625	7.00	2.56	15.35	5.893	2.752	31.54	7/8 Sq

Motor Frame	Gear Frame	Type [4]	XK	P [5]	AA	AB	AC	AD	AF	XD	
										36	37
56	All	T	9.79	7.22	0.75	6.10	4.50	3.86	1.77	5.03	6.33
B56	All	T	11.04	7.22	0.75	6.10	4.50	3.86	1.77	5.03	6.33
143T, 145T	All	T	11.04	7.22	0.75	6.10	4.50	3.86	1.77	5.03	6.33
182T,184T	All	T	14.04	9.56	0.75	7.52	6.27	5.13	1.77	4.01	5.30
213T	37	T	16.16	11.25	1.00	8.42	7.17	5.60	2.42	-	4.58

[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T with brakes, refer to pages A-109 to A-111.

[5] Largest motor width.

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Three Phase Gearmotor

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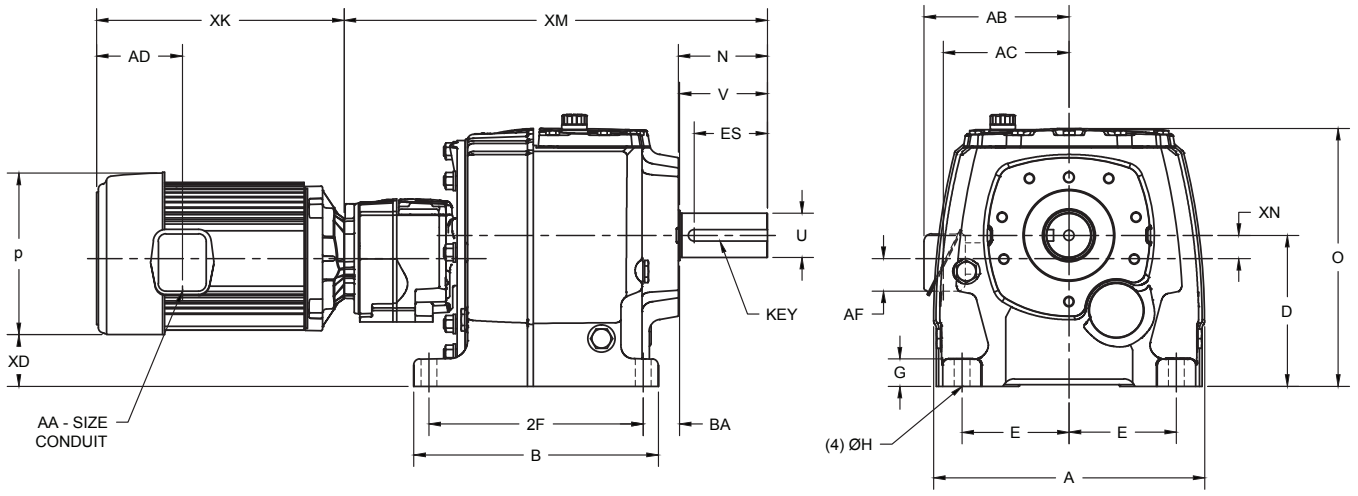
Foot Mounted - Combined Reduction



Gear Frame	A	B	D[1]	E	G	H	N	O	U[3]	V	BA	2F	ES	XN	XM	Key
38	23.94	21.65	13.98	10.04	2.35	1.02	9.99	22.60	4.375	9.99	1.97	18.90	9.02	2.559	40.20	1 SQ

Frame	Motor Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF	XD
56	T	9.79	23.47	7.22	3/4	5.01	4.06	3.86	1.13	8.10
B56	T	11.04	23.47	7.22	3/4	5.01	4.06	3.86	1.13	8.10
143T,145T	T	11.04	23.47	7.22	3/4	5.01	4.06	3.86	1.13	8.10
182T,184T	T	14.04	23.47	9.56	3/4	7.51	6.31	5.13	2.13	7.07
213T	T	16.15	23.47	11.25	1	8.25	6.39	5.6	1.56	6.35
215T	T	17.65	23.47	11.25	1	8.25	6.39	5.6	1.56	6.35

[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

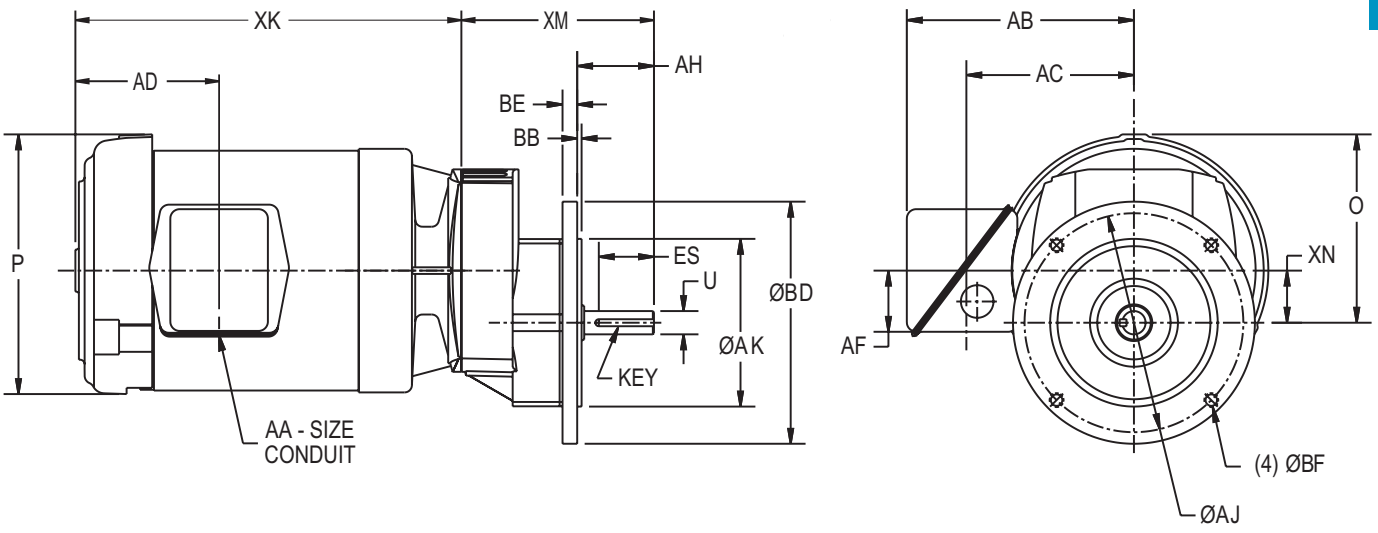
[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000; -.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages A-109 to A-111.

[5] Largest motor width.

Flange Mounted - Single Reduction



Gear Frame	U[3]	AH	ES	XN	XM	Key
30	.625	2.06	1.48	1.40	5.75	3/16 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
56C	4.50	5.875	.12	6.50	.39	3/8-16
BS	3.74	4.53	.12	5.51	.31	.35
BD1	3.15	3.94	.12	4.72	39	.28
BD2	4.33	5.12	.08	6.30	39	.35
BD3	5.12	6.50	.12	7.87	.31	.35

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF
56	T	9.79	5.05	7.22	3/4	6.10	4.50	3.86	1.64
B56	T	11.04	5.05	7.22	3/4	6.10	4.50	3.86	1.64
143T,145T	T	11.04	5.05	7.22	3/4	6.10	4.50	3.86	1.64

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages A-109 to A-111. Standard as shown with conduit opening down.

[5] Largest motor width.

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Three Phase Gearmotor

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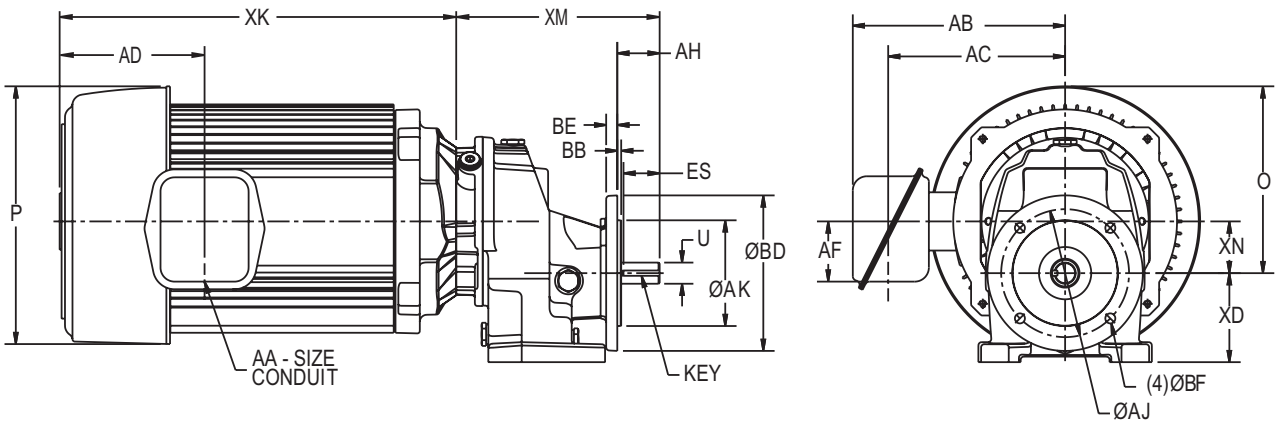
Flange Mounted - Single Reduction



Gear Frame	U[3]	AH	ES	XD	XN	XM	Key
31	.75	1.50	1.28	3.15	1.83	7.20	3/16 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	4.33	5.12	.14	6.29	.39	.35
BD2	3.74	4.53	.14	5.50	.39	.35

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF
56	T	9.79	5.49	7.22	3/4	6.10	4.21	3.86	.83
B56	T	11.04	5.49	7.22	3/4	6.10	4.21	3.86	.83
143T,145T	T	11.04	5.49	7.22	3/4	6.10	4.21	3.86	.83
182T,184T	T	14.04	6.61	9.56	3/4	7.52	6.27	5.13	2.13

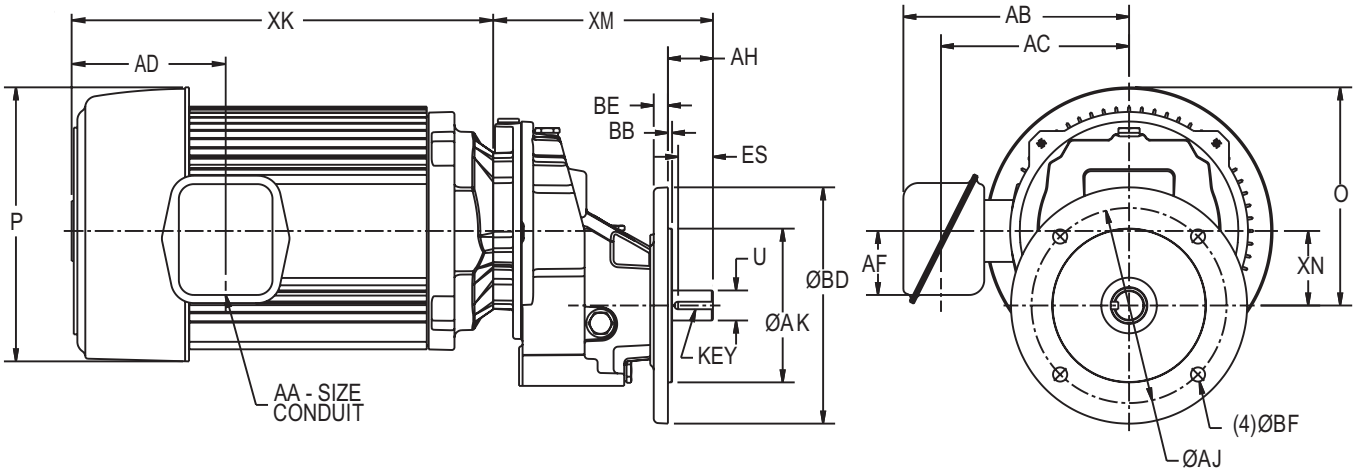
[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages A-109 to A-111.

[5] Largest motor width.

Flange Mounted - Single Reduction



Gear Frame	U[3]	AH	ES	XD	XN	XM	Key
32	1.00	1.50	1.16	3.54	2.48	7.32	1/4 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	5.12	6.50	.14	7.87	.47	.47
BD2	4.33	5.12	.14	6.29	.39	.35

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF
56	T	9.79	6.22	7.22	3/4	6.10	4.50	3.86	1.64
B56	T	11.04	6.22	7.22	3/4	6.10	4.50	3.86	1.64
143T,145T	T	11.04	6.22	7.22	3/4	6.10	4.50	3.86	1.64
182T,184T	T	14.04	7.26	9.56	3/4	7.52	6.27	5.13	2.13
213T	T	16.15	8.11	11.25	1	8.42	7.17	5.6	2.13
215T	T	17.65	8.11	11.25	1	8.42	7.17	5.6	2.13

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages A-109 to A-111.

[5] Largest motor width.

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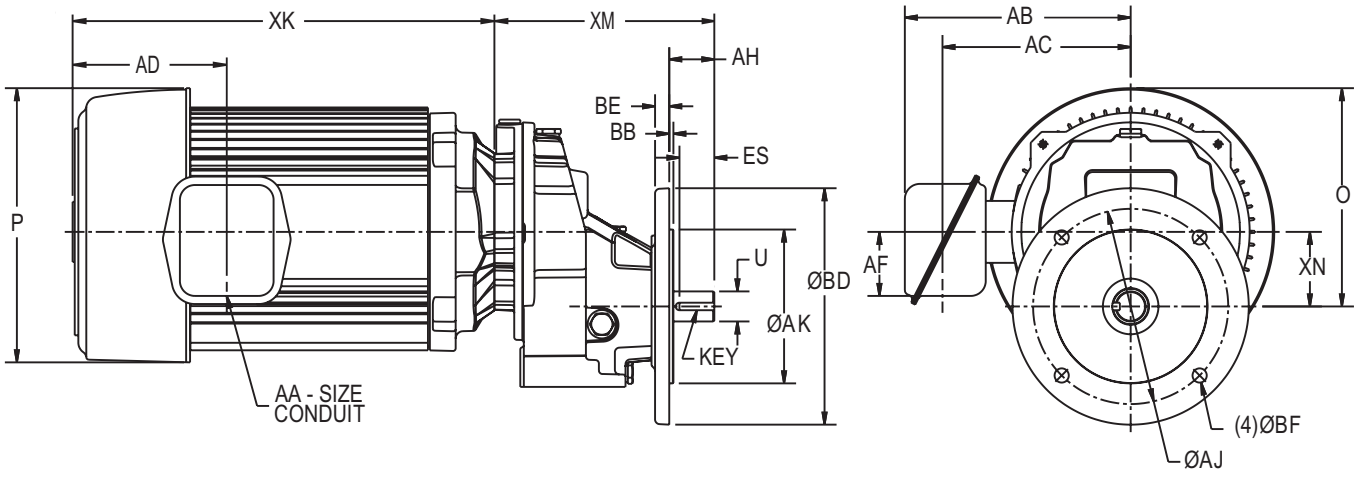
Three Phase Gearmotor

CbN SERIES 3000

Flange Mounted - Single Reduction



Gear Frame	D	U[3]	AH	ES	XN	XM	Key
33	4.41	1.375	2.75	2.40	2.76	9.3	5/16 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	7.09	8.46	.16	9.83	.47	.55
BD2	5.12	6.50	.16	7.86	.47	.43

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF
182T,184T	T	14.04	7.54	9.56	3/4	7.52	6.27	5.13	2.13
213T	T	16.15	8.39	11.25	1	8.42	7.16	5.60	2.13
215T	T	17.65	8.39	11.25	1	8.42	7.16	5.60	2.13
254T	T	20.58	9.45	13.38	1 1/4	9.79	7.68	8.29	1.81
256T	T	22.33	9.45	13.38	1 1/4	9.79	7.68	8.29	1.81

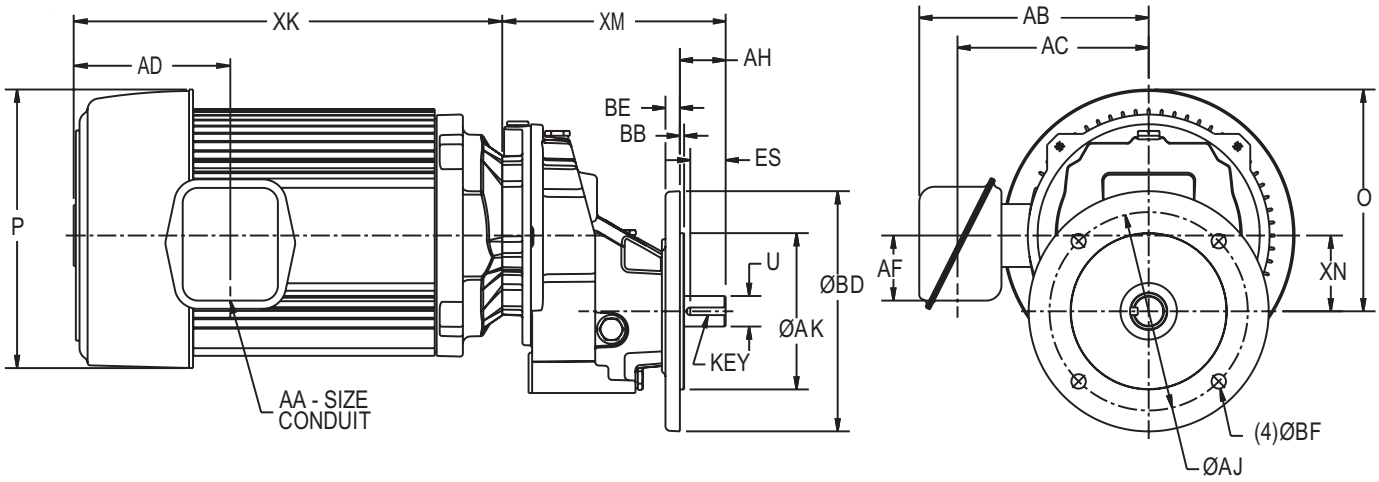
[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages A-109 to A-111.

[5] Largest motor width.

Flange Mounted - Single Reduction



Gear Frame	XD	U[3]	AH	ES	XN	XM		Key
						182T-215T	254T-324T	
34	5.20	1.50	3.00	2.56	3.43	11.05	11.4	3/8 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	9.06	10.43	.16	11.80	59	.55
BD2	7.09	8.46	.16	9.84	59	.55

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF	XD
182T,184T	T	14.04	8.70	9.56	3/4	7.52	6.27	5.13	2.13	4.28
213T	T	16.15	9.05	11.25	1	8.42	7.17	5.60	2.13	3.56
215T	T	17.65	9.05	11.25	1	8.42	7.17	5.60	2.13	2.62
254T	T	19.61	10.12	13.38	1 1/4	9.79	7.68	8.29	1.81	2.62
256T	T	21.36	10.12	13.38	1 1/4	9.79	7.68	8.29	1.81	2.62
284T	T	21.86	10.12	13.38	1 1/2	10.71	8.18	8.29	2.13	2.62
286T	T	23.36	10.12	13.38	1 1/2	10.71	8.18	8.29	2.13	2.62

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages A-109 to A-111.

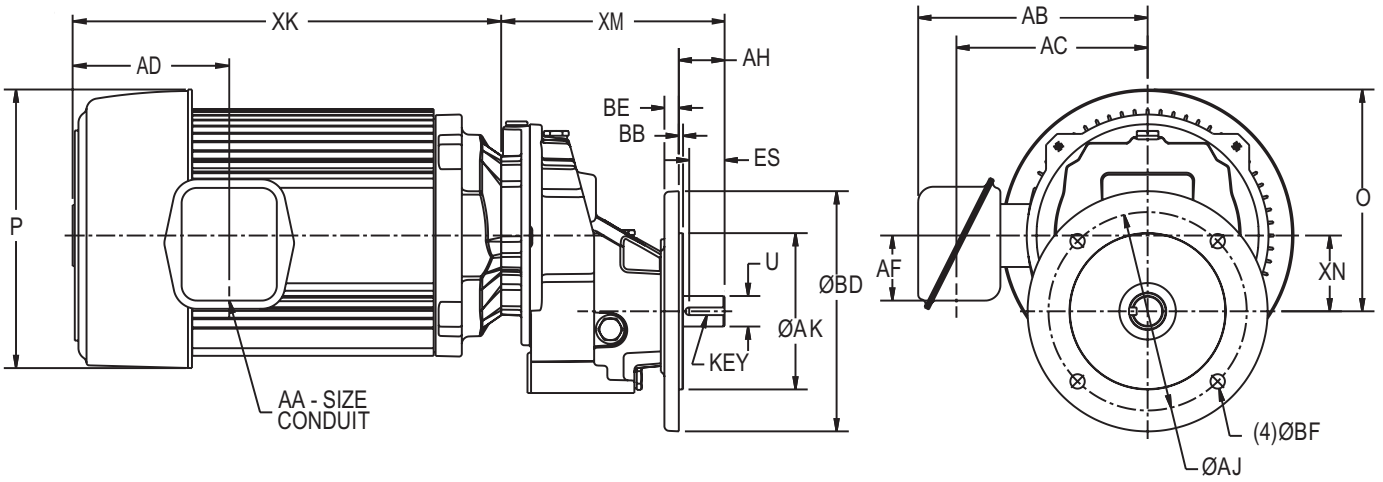
[5] Largest motor width.

Browning®

Three Phase Gearmotor

CbN SERIES 3000

Flange Mounted - Single Reduction



Gear Frame	XD	U[3]	AH	ES	XN	XM		Key
						213T-215T	254T-324T	
35	6.30	1.750	3.50	3.06	4.33	12.04	12.56	3/8 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	9.84	11.81	.20	13.78	.71	.71
BD2	9.06	10.43	.20	11.81	.71	.55

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF
213T	T	16.15	11.07	11.25	1	8.42	7.17	5.6	2.13
215T	T	17.65	11.07	11.25	1	8.42	7.17	5.6	2.13
254T	T	19.61	11.07	13.38	1 1/4	9.79	7.68	8.29	1.81
256T	T	21.36	11.07	13.38	1 1/4	9.79	7.68	8.29	1.81
284T, 286T	T	24.71	11.66	14.66	1 1/2	11.33	9.16	13.19	2.63

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages A-109 to A-111.

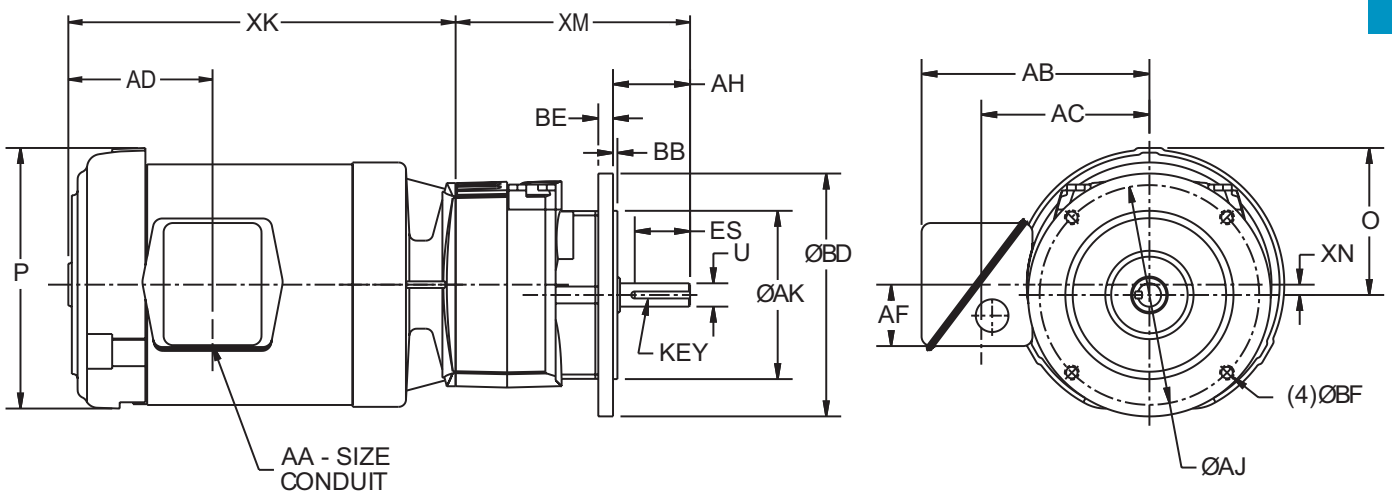
[5] Largest motor width.

Browning®

Three Phase Gearmotor

CbN SERIES 3000

Flange Mounted - Double/Triple Reduction



Gear Frame	U[3]	AH	ES	XN	XM	Key
3012	.625	2.06	1.48	.28	6.85	3/16 Sq.
3013	.625	2.06	1.48	.28	7.64	3/16 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
56C	4.50	5.875	.12	6.50	.39	3/8-16
BS	3.74	4.53	.12	5.51	.31	.35
BD1	3.15	3.94	.10	4.72	.28	.28
BD2	4.33	5.12	.12	6.30	.31	.35
BD3	5.12	6.50	.12	7.87	.31	.35

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF
56	T	9.79	3.93	7.22	3/4	6.10	4.50	3.86	1.64
B56	T	11.04	3.93	7.22	3/4	6.10	4.50	3.86	1.64
143T,145T	T	11.04	3.93	7.22	3/4	6.10	4.50	3.86	1.64

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages A-109 to A-111.

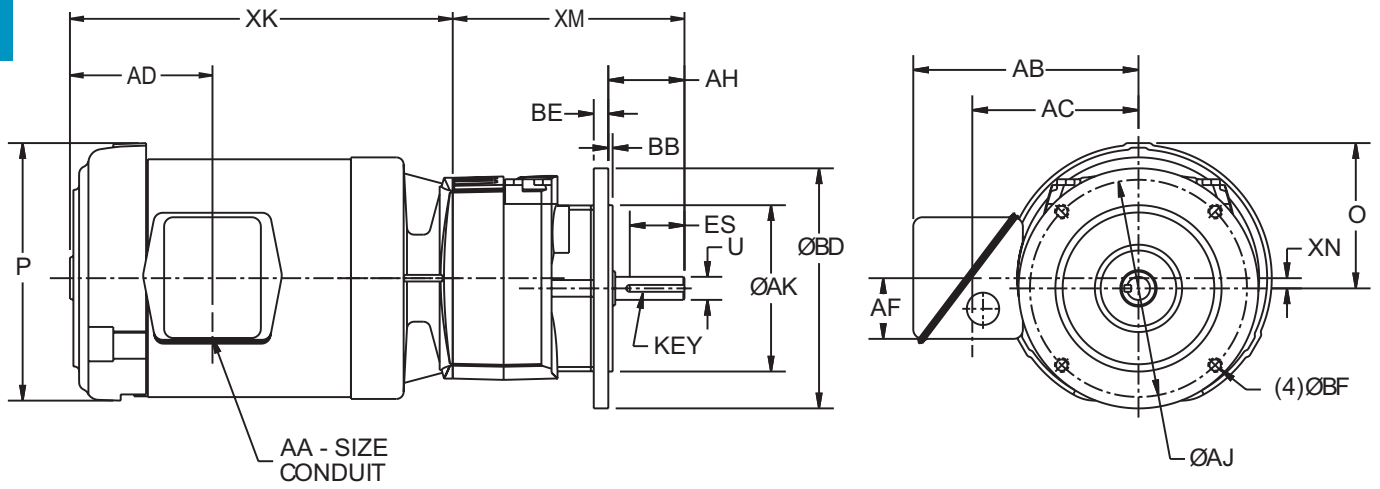
[5] Largest motor width.

Browning

Three Phase Gearmotor

CbN SERIES 3000

Flange Mounted - Double/Triple Reduction



Gear Frame	U[3]	AH	ES	XD	XN	XM	Key
31	1.00	1.50	1.16	3.54	.33	9.27	1/4 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	5.12	6.50	.14	7.87	.47	.47
BD1	4.33	5.12	.14	6.29	.39	.35
BD2	3.74	4.53	.14	5.50	.39	.35
BD3	3.15	3.96	.10	4.72	.39	.28

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF
56	T	9.79	3.33	7.22	3/4	6.14	4.21	3.86	1.77
B56	T	11.04	3.33	7.22	3/4	6.14	4.21	3.86	1.77
143T,145T	T	11.04	3.33	7.22	3/4	6.14	4.21	3.86	1.77
182T,184T	T	14.04	4.45	9.56	3/4	7.52	6.27	5.13	2.13

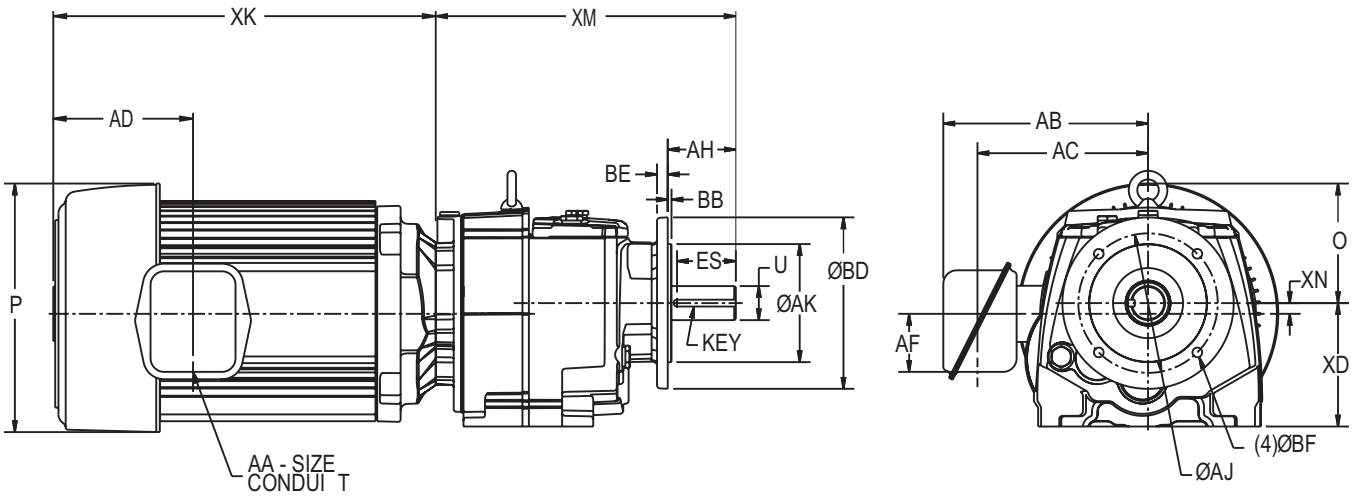
[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages A-109 to A-111.

[5] Largest motor width.

Flange Mounted - Double/Triple Reduction



Gear Frame	D	U[3]	AH	ES	XD	XN	XM	Key
32	4.53	1.250	2.50	2.16	4.53	0.39	11.02	1/4 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	7.09	8.46	.16	9.83	.47	.55
BD1	5.12	6.50	.14	7.87	.39	.47
BD2	4.33	5.12	.14	6.29	.39	.35

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF
56	T	9.79	3.50	7.22	3/4	6.10	4.50	3.86	1.64
B56	T	11.04	3.50	7.22	3/4	6.10	4.50	3.86	1.64
143T,145T	T	11.04	3.50	7.22	3/4	6.10	4.50	3.86	1.64
182T,184T	T	14.04	4.39	9.56	3/4	7.52	6.27	5.13	2.13
213T	T	16.15	6.02	11.25	1	8.42	7.17	5.60	2.13
215T	T	17.65	6.02	11.25	1	8.42	7.17	5.60	2.13

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages A-109 to A-111.

[5] Largest motor width.

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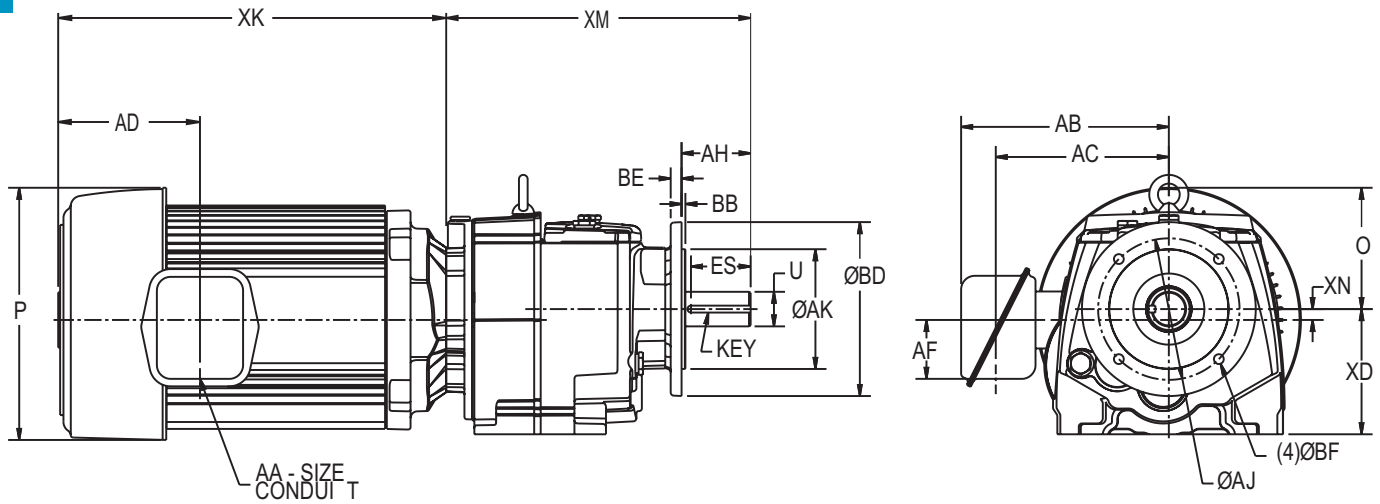
Flange Mounted - Double/Triple Reduction



Gear Frame	U[3]	AH	ES	XD	XN	XM	Key
3362,3363	1.50	3.00	2.56	5.51	.77	13.64	3/8 Sq.
3372,3373	1.625	3.15	2.78	5.51	.77	13.79	3/8 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	9.06	10.43	.16	11.80	.47	.55
BD1	7.09	8.46	.16	9.83	.47	.55
BD2	5.12	6.50	.14	7.86	.47	.47

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF
56	T	9.79	4.43	7.22	3/4	6.10	4.50	3.86	1.64
B56	T	11.04	4.43	7.22	3/4	6.10	4.50	3.86	1.64
143T,145T	T	11.04	4.43	7.22	3/4	6.10	4.50	3.86	1.64
182T,184T	T	14.04	4.43	9.56	3/4	7.52	6.27	5.13	2.13
213T	T	16.15	4.86	11.25	1	8.42	7.16	5.6	2.13
215T	T	17.65	4.86	11.25	1	8.42	7.16	5.6	2.13
254T	T	20.58	5.93	13.38	1 1/4	9.79	7.68	8.29	1.81
256T	T	22.33	5.93	13.38	1 1/4	9.79	7.68	8.29	1.81

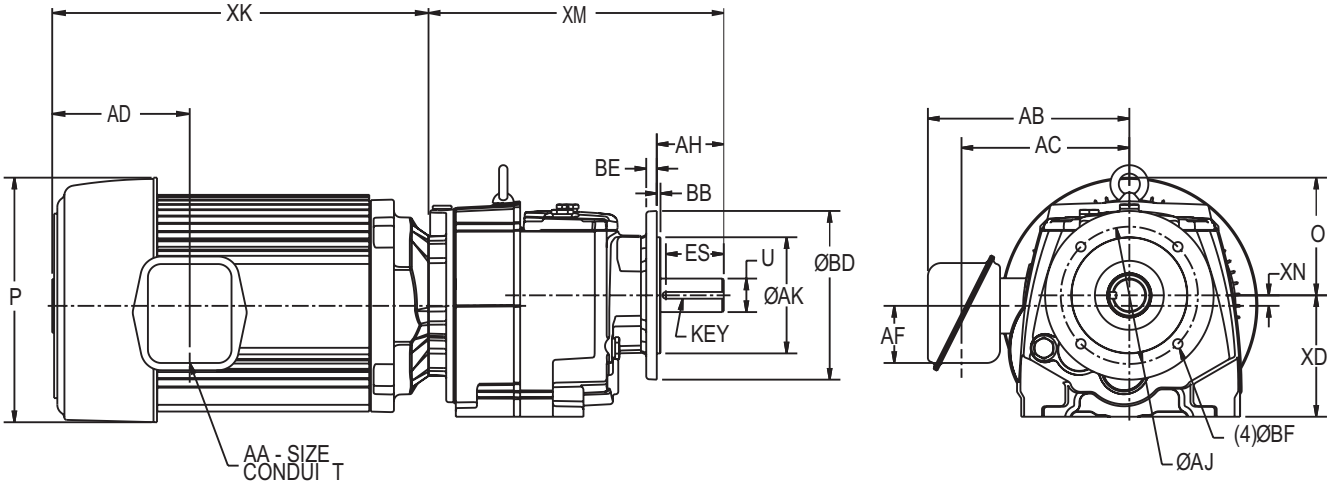
[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages A-109 to A-111.

[5] Largest motor width.

Flange Mounted - Double/Triple Reduction



Gear Frame	U[3]	AH	ES	XD	XN	XM		Key
						56-215T	254T-286T	
34	2.125	3.50	3.06	7.09	1.02	15.09	15.44	1/2 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	9.84	11.81	.16	13.77	.59	.71
BD1	9.06	10.43	.16	11.80	.59	.55
BD2	7.09	8.46	.16	9.83	.59	.55

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF
56	T	9.79	4.80	7.22	3/4	6.10	4.50	3.86	1.64
B56	T	11.04	4.80	7.22	3/4	6.10	4.50	3.86	1.64
143T,145T	T	11.04	4.80	7.22	3/4	6.10	4.50	3.86	1.64
182T,184T	T	14.04	4.80	9.56	3/4	7.52	6.27	5.13	2.13
213T	T	16.15	4.80	11.25	1	8.42	7.17	5.6	2.13
215T	T	17.65	4.80	11.25	1	8.42	7.17	5.6	2.13
254T	T	19.61	5.67	13.38	1 1/4	9.79	7.68	8.29	1.81
256T	T	21.36	5.67	13.38	1 1/4	9.79	7.68	8.29	1.81
284T, 286T	T	24.71	6.31	14.66	1 1/2	11.33	9.16	13.19	2.63

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages A-109 to A-111.

[5] Largest motor width.

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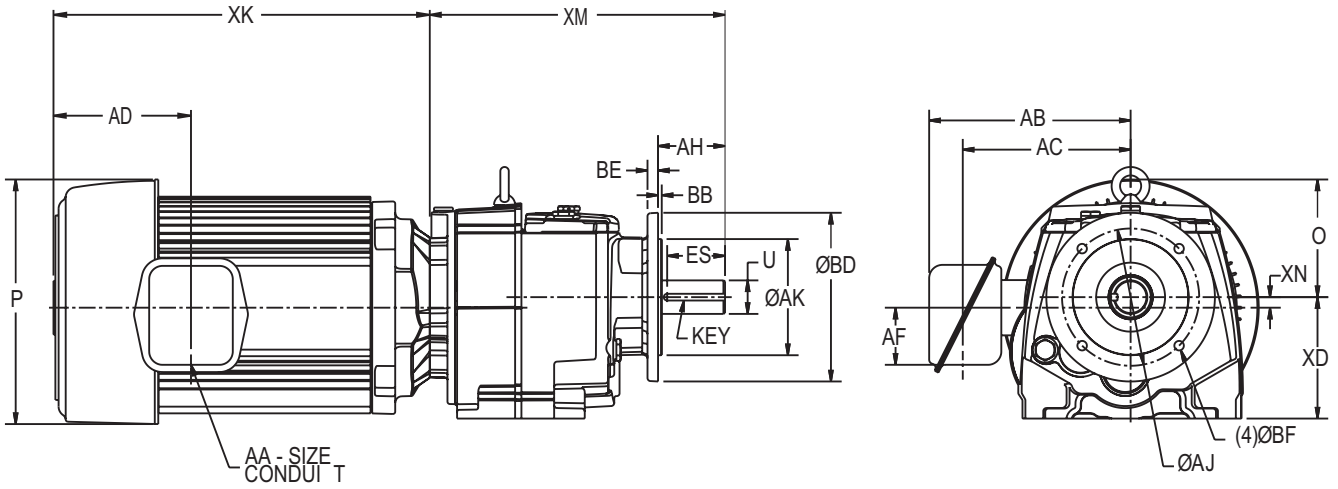
Flange Mounted - Double/Triple Reduction



Gear Frame	U[3]	AH	ES	XD	XN	XM		Key
						143T-215T	254T-324T	
35	2.375	4.72	4.19	8.86	1.14	17.6	18.12	5/8 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	11.81	13.78	.20	15.75	.71	.71
BD1	9.84	11.81	.20	13.78	.71	.71
BD2	9.06	10.43	.20	11.81	.71	.55

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF
B56	T	11.04	5.98	7.22	3/4	6.10	4.50	3.86	1.64
143T,145T	T	11.04	5.98	7.22	3/4	6.10	4.50	3.86	1.64
182T,184T	T	14.04	5.98	9.56	3/4	7.52	6.27	5.13	2.13
213T	T	16.15	5.98	11.25	1	8.42	7.17	5.6	2.13
215T	T	17.65	5.98	11.25	1	8.42	7.17	5.6	2.13
254T	T	19.61	5.98	13.38	1 1/4	9.79	7.68	8.29	1.81
256T	T	21.36	5.98	13.38	1 1/4	9.79	7.68	8.29	1.81
284T, 286T	T	24.71	6.19	14.66	1 1/2	11.33	9.16	13.19	2.63

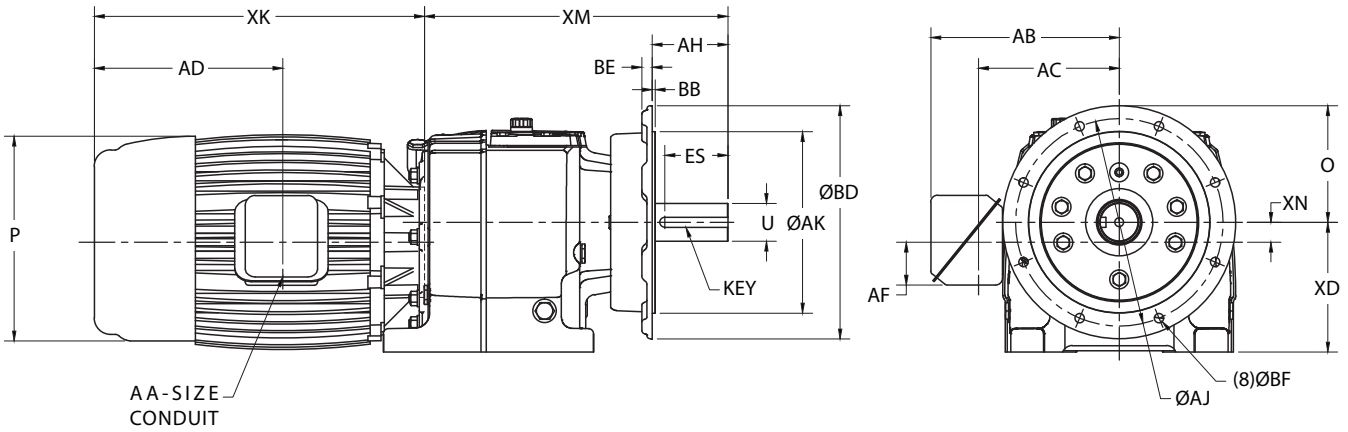
[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages A-109 to A-111.

[5] Largest motor width.

Flanged Mounted - Double/Triple Reduction



Gear Frame	O	U[3]	AH	ES	XD	XN	XM			Key
							145T	182T-215T	254T-326T	
36	**7.87**	2.875	5.75	4.784	9.85	1.102	19.96	19.96	20.31	3/4 Sq
37	**8.00**	3.625	7.00	5.89	12.40	2.362	-	23.88	24.23	7/8 Sq

Gear Frame	Flange Type	AK	AJ	BB	BD	BE	BF
36	BS	17.717	19.685	0.236	21.65	0.79	0.70
	BD1	13.780	15.748	0.236	17.70	0.79	0.70
37	BS	17.717	19.685	0.236	21.65	0.79	0.70
	BD1	13.780	15.748	0.236	17.70	0.79	0.70

Motor Frame	Gear Frame	Type [4]	XK	P [5]	AA	AB	AC	AD	AF
145T	36	T	11.04	7.31	0.75	6.10	4.50	3.86	1.77
182T,184T	All	T	14.04	9.56	0.75	7.52	6.27	5.13	1.77
213T	All	T	16.16	11.25	1.00	8.42	7.17	5.60	2.42
215T	All	T	17.65	11.25	1.00	8.42	7.17	5.60	2.42
254T	All	T	19.61	13.38	1.25	9.79	7.68	8.29	1.81
256T	All	T	21.36	13.38	1.25	9.79	7.68	8.29	1.81
284T,286T	All	T	24.71	14.62	1.50	11.33	8.51	12.44	2.63
324T,326T	All	T	24.96	17.20	2.00	14.99	11.34	14.16	3.63

[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T with brakes, refer to pages A-109 to A-111.

[5] Largest motor width.

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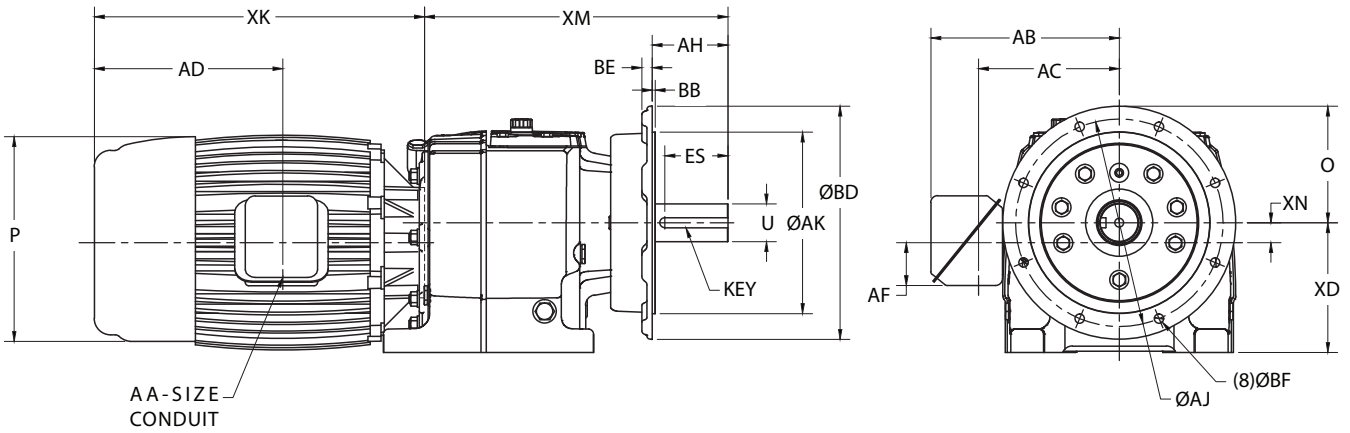
Flanged Mounted - Double/Triple Reduction



Gear Frame	U[3]	AH	ES	XD	XN	XM	Key
38	4.375	6.84	9.02	13.98	2.559	29.98	1 SQ

Gear Frame	Flange Type	AK	AJ	BB	BD	BE	BF
38	BS	21.65	23.62	.197	25.98	.79	.87
	BD1	17.72	19.69	.197	21.65	.79	.69

Frame	Motor Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF
213T	T	17.47	23.47	11.25	1	8.25	6.39	5.6	1.56
215T	T	18.96	23.47	11.25	1	8.25	6.39	5.6	1.56
254T	T	19.61	23.47	13.38	1 1/4	9.96	7.72	8.29	1.81
256T	T	21.36	23.47	13.38	1 1/4	9.96	7.72	8.29	1.81
284T,286T	T	24.71	23.47	14.66	1 1/2	11.33	9.16	13.19	2.63
324T,326T	T	24.96	27.60	17.20	2	14.99	11.34	14.16	3.63

[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

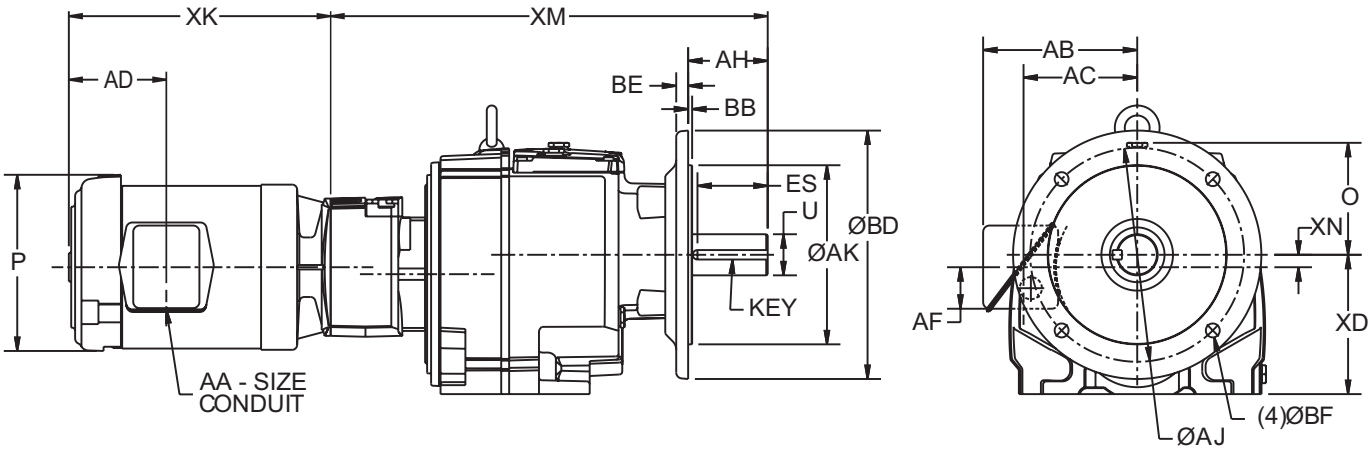
[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000; -.001".

[4] For any motor type other than T (3 phase TEFC) or type T with brakes, refer to pages A-109 to A-111.

[5] Largest motor width.

Flange Mounted - Combined Reduction



Gear Frame	U[3]	AH	ES	XD	XN	XM	Key
32	1.250	2.50	2.16	4.53	.12	15.1	1/4 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	7.09	8.46	.16	9.83	.47	.55
BD1	5.12	6.50	.14	7.87	.39	.47
BD2	4.33	5.12	.14	6.29	.39	.35

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF
56	T	9.79	3.54	7.22	3/4	6.10	4.50	3.86	1.64

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages A-109 to A-111.

[5] Largest motor width.

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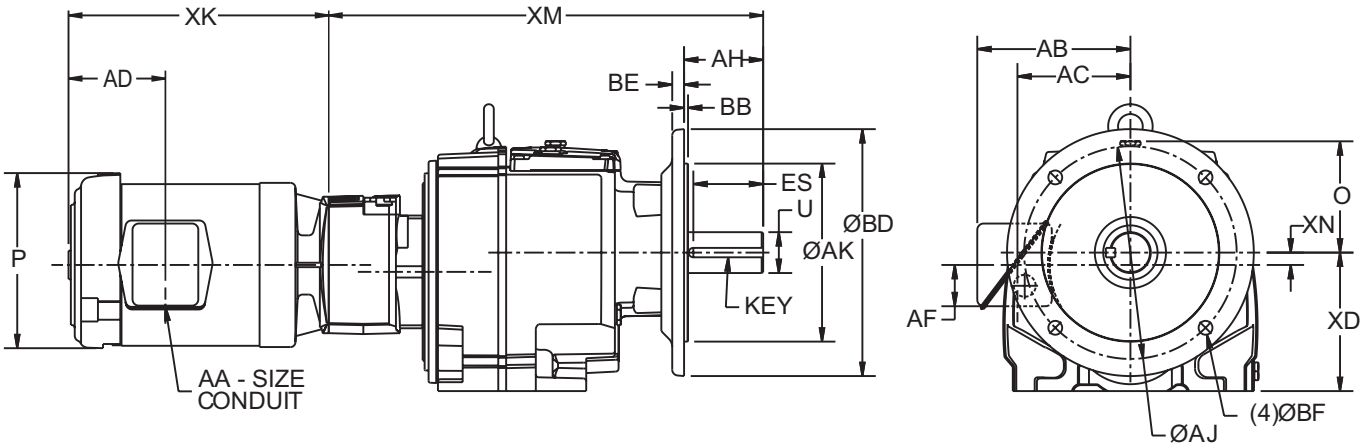
Flange Mounted - Combined Reduction



Gear Frame	U[3]	AH	ES	XD	XN	XM	Key
33	1.625	3.15	2.78	5.51	.49	17.88	3/8 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	9.06	10.43	.16	11.80	.47	.55
BD1	7.09	8.46	.16	9.83	.47	.55
BD2	5.12	6.50	.14	7.86	.47	.47

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF
56	T	9.79	4.43	7.22	3/4	6.10	4.50	3.86	1.64
B56	T	11.04	4.43	7.22	3/4	6.10	4.50	3.86	1.64
143T,145T	T	11.04	4.43	7.22	3/4	6.10	4.50	3.86	1.64

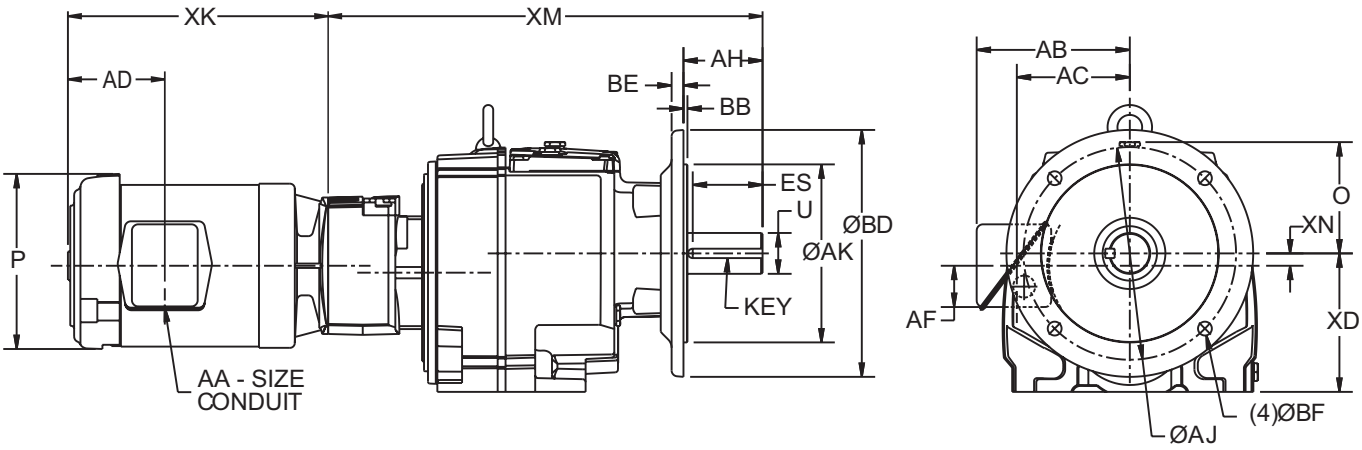
[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages A-109 to A-111.

[5] Largest motor width.

Flange Mounted - Combined Reduction



Gear Frame	U[3]	AH	ES	XD	XN	XM	Key
34	2.125	3.50	3.06	7.09	1.35	22.06	1/2 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	9.84	11.81	.16	13.77	.59	.71
BD1	9.06	10.43	.16	11.80	.59	.55
BD2	7.09	8.46	.16	9.83	.59	.55

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF
56	T	9.79	4.80	7.22	3/4	6.10	4.50	3.86	1.64
B56	T	11.04	4.80	7.22	3/4	6.10	4.50	3.86	1.64
143T,145T	T	11.04	4.80	7.22	3/4	6.10	4.50	3.86	1.64

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages A-109 to A-111.

[5] Largest motor width.

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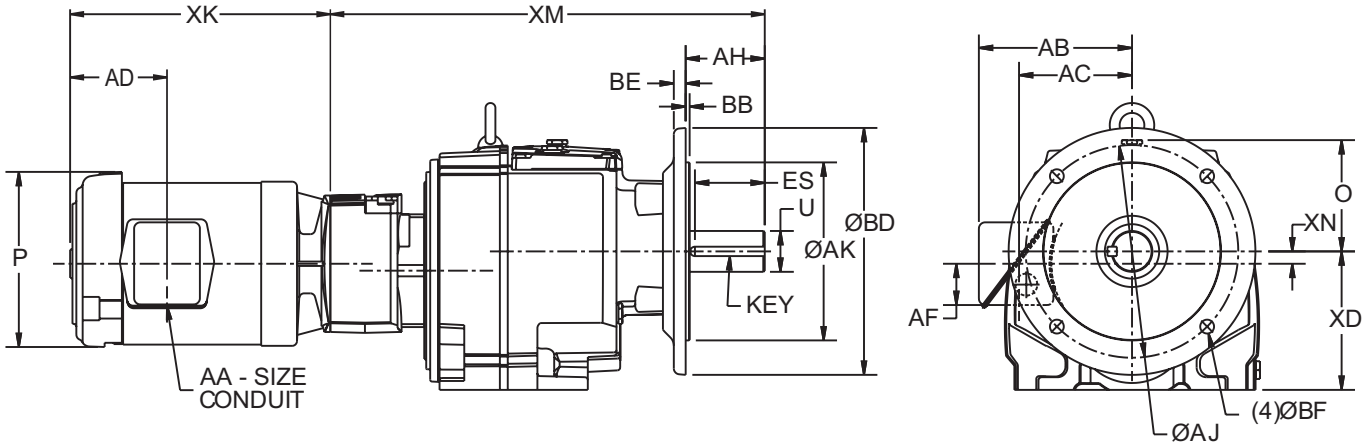
Flange Mounted - Combined Reduction



Gear Frame	U[3]	AH	ES	XD	XN	XM	Key
35	2.875	4.72	4.19	8.86	1.47	24.73	5/8 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	11.81	13.78	.20	15.75	.71	.71
BD1	9.84	11.81	.20	13.78	.71	.71
BD2	9.06	10.43	.20	11.81	.71	.55

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF
56	T	9.79	5.98	7.22	3/4	6.10	4.50	3.86	1.64
B56	T	11.04	5.98	7.22	3/4	6.10	4.50	3.86	1.64
143T,145T	T	11.04	5.98	7.22	3/4	6.10	4.50	3.86	1.64
182T	T	12.04	5.98	9.56	3/4	7.52	6.27	5.13	2.13

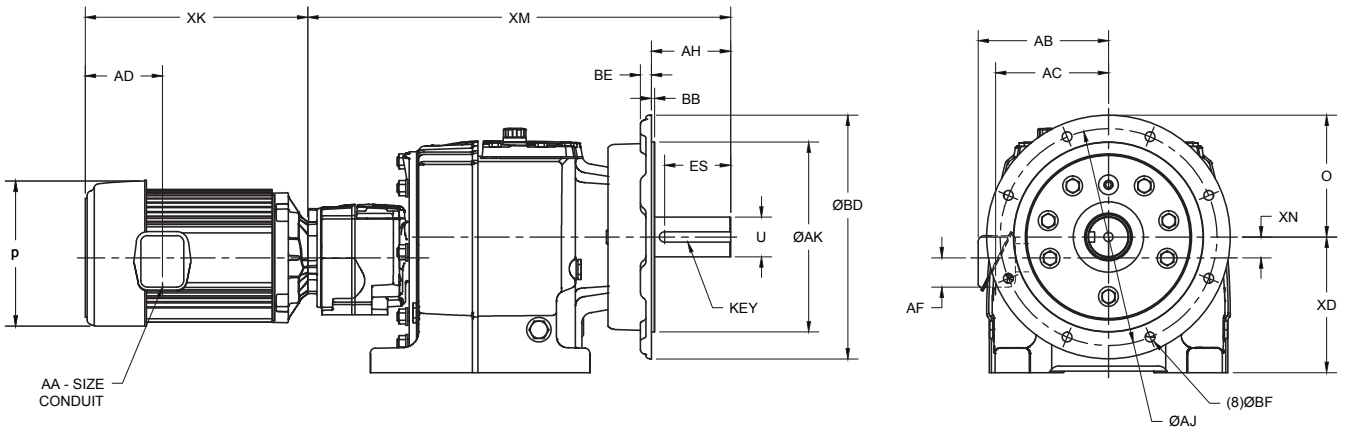
[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages A-109 to A-111.

[5] Largest motor width.

Flanged Mounted - Combined Reduction



Gear Frame	O	U[3]	AH	ES	XD	XN	XM	KEY
36	**7.87**	2.875	5.75	4.784	9.85	1.492	27.62	3/4 Sq
37	**8.00**	3.625	7.00	5.89	12.40	2.752	31.54	7/8 Sq

Gear Frame	Flange Type	AK	AJ	BB	BD	BE	BF
36	BS	17.717	19.685	0.236	21.65	0.79	0.70
	BD1	13.780	15.748	0.236	17.70	0.79	0.70
37	BS	17.717	19.685	0.236	21.65	0.79	0.70
	BD1	13.780	15.748	0.236	17.70	0.79	0.70

Motor Frame	Gear Frame	Type [4]	XK	P [5]	AA	AB	AC	AD	AF
56	All	T	9.79	7.22	0.75	6.10	4.50	3.86	1.77
B56	All	T	11.04	7.22	0.75	6.10	4.50	3.86	1.77
143T, 145T	All	T	11.04	7.22	0.75	6.10	4.50	3.86	1.77
182T,184T	All	T	14.04	9.56	0.75	7.52	6.27	5.13	1.77
213T	37	T	16.16	11.25	1.00	8.42	7.17	5.60	2.42

[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T with brakes, refer to pages A-109 to A-111.

[5] Largest motor width.

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Three Phase Gearmotor

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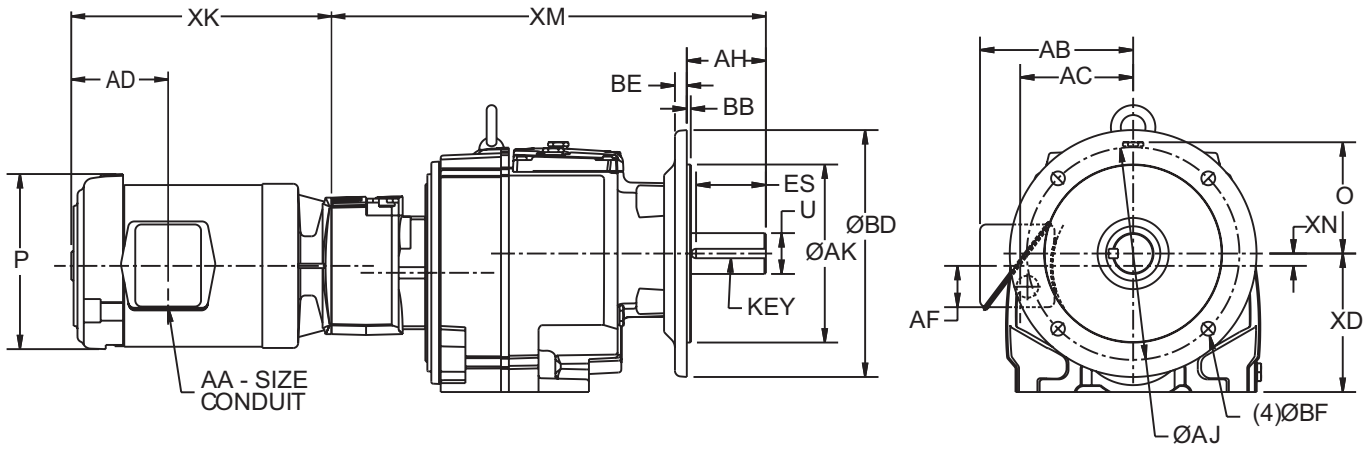
Flange Mounted - Combined Reduction



Gear Frame	U[3]	AH	ES	XD	XN	XM	Key
38	4.375	6.84	9.02	13.98	2.559	40.20	1 SQ

Gear Frame	Flange Type	AK	AJ	BB	BD	BE	BF
38	BS	21.65	23.62	.197	25.98	.79	.87
	BD1	17.72	19.69	.197	21.65	.79	.69

Frame	Motor Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF
56	T	9.79	23.47	7.22	3/4	5.01	4.06	3.86	1.13
B56	T	11.04	23.47	7.22	3/4	5.01	4.06	3.86	1.13
143T,145T	T	11.04	23.47	7.22	3/4	5.01	4.06	3.86	1.13
182T,184T	T	14.04	23.47	9.56	3/4	7.51	6.31	5.13	2.13
213T	T	16.15	23.47	11.25	1	8.25	6.39	5.6	1.56
215T	T	17.65	23.47	11.25	1	8.25	6.39	5.6	1.56

[1] Dimension "D" will never be exceeded, buy may vary from value shown. When exact dimensions are required, shims up to .03" may be necessary

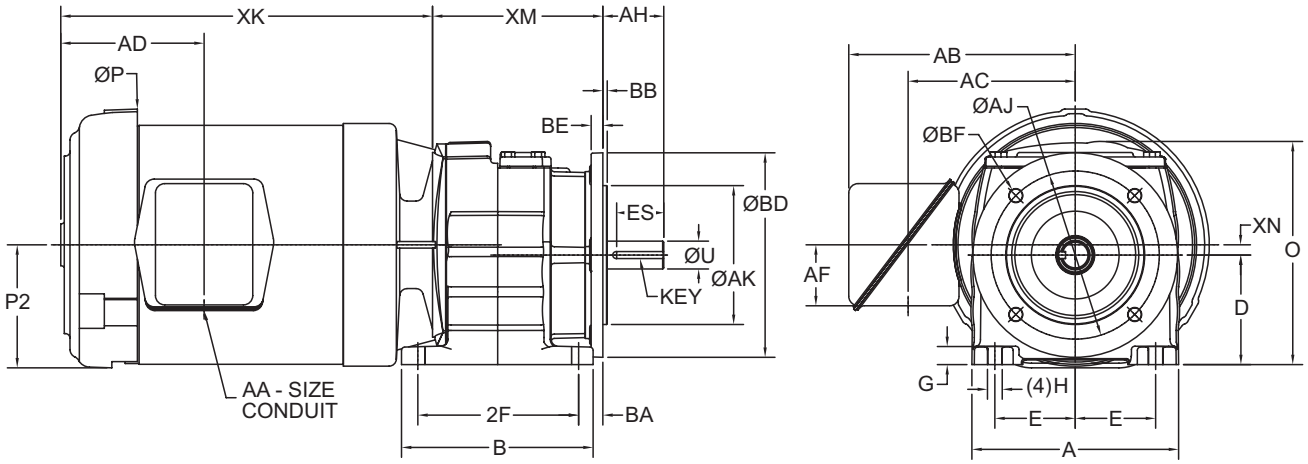
[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000; -.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages A-109 to A-111.

[5] Largest motor width.

Foot Mount with Flange - Double/Triple Reduction



Gear Frame	A	B	D[1]	E	2F	G	H	U[3]	ES	XM	XN	Key
3012A	5.62	5.16	2.95	2.165	4.33	.47	.35	0.750	1.25	4.81	.276	3/16 Sq
3013A	6.76	7.68	3.54	2.170	6.50	.75	.35	0.750	1.25	9.48	-.330	3/16 Sq
31	6.76	7.68	3.54	2.170	6.50	.75	.35	1.000	1.16	9.45	-.330	1/4 Sq

Gear Frame	Flange Type	AH	AJ	AK	BA	BB	BD	BE	BF
3012A	SBD1	2.06	3.94	3.15	.65	.12	4.72	.28	.28
	SBS	2.06	4.53	3.74	.65	.12	5.51	.31	.35
3013A	SBD1	2.06	3.94	3.15	.944	.10	4.72	.39	.28
	SBS	2.06	4.53	3.74	.944	.14	5.51	.39	.35
31	SBD1	1.50	5.12	4.33	.944	.14	6.29	.39	.35
	SBD2	1.50	4.53	3.74	.944	.14	5.51	.39	.35
	SBD3	1.50	3.94	3.15	.944	.10	4.72	.39	.28

Gear Frame	Motor Frame	XK	O	P[5]	AA	AB	AC	AD	AF	XD
3012A	56	9.79	6.88	7.22	3/4	6.10	4.50	3.86	1.64	.08
	56B	11.04	6.88	7.22	3/4	6.10	4.50	3.86	1.64	.08
	143,145T	11.04	6.88	7.22	3/4	6.10	4.50	3.86	1.64	.08
3013A, 31	56	9.79	6.88	7.22	3/4	6.10	4.50	3.86	.94	.10
	56B	11.04	6.88	7.22	3/4	6.10	4.50	3.86	.94	.10
	143,145T	11.04	6.88	7.22	3/4	6.10	4.50	3.86	.94	.10
	182,184T	14.04	7.99	9.56	3/4	7.52	6.27	5.13	2.13	1.13

[1] Dimension “D” will never be exceeded, but may vary from value shown. When exact dimension is required, shims up to .03” may be required.

[2] All rough casting dimensions may vary by .25” due to casting variations.

[3] Shaft extension tolerance +.0000”, -.0005” up to 1.5” diameter.

[4] For any motor types other than T (3 phase TEFC) or for T and S with brakes, refer to pages A-109 to A111.

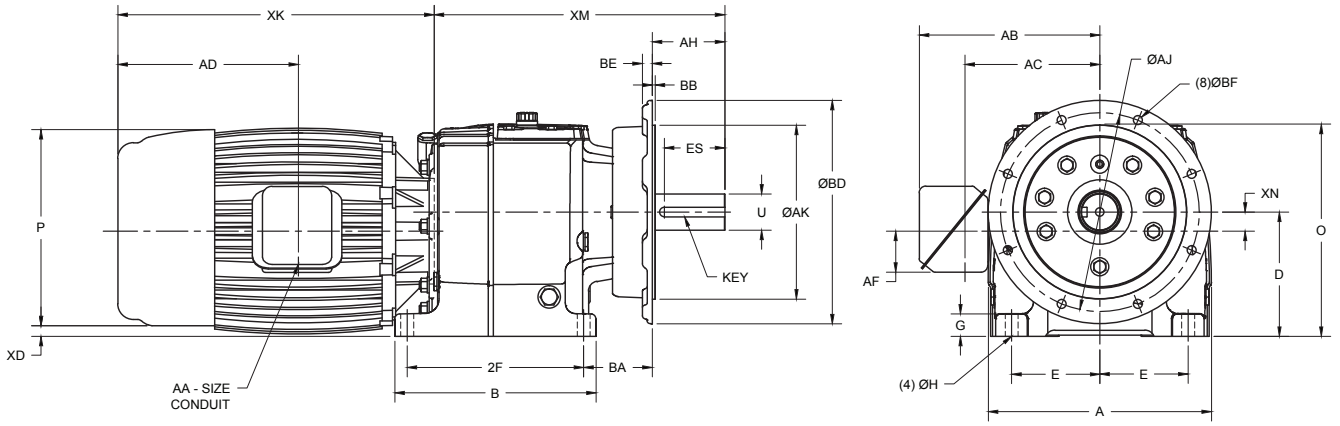
[5] Largest motor width.

Browning®

Three Phase Gearmotor

CbN SERIES 3000

Foot Mount with Flange - Double/Triple Reduction



Gear Frame	A	B	D [1]	E	G	H	O	U [3]	2F	ES	XN	XM			Key
												145T	182T-215T	254T-326T	
36	17.68	15.95	9.85	6.99	1.77	1.02	7.87	2.875	13.98	4.784	1.102	19.96	19.96	20.31	3/4 Sq
37	20.39	17.91	12.40	8.27	2.17	1.02	8.00	3.625	15.35	5.893	2.362	-	23.88	24.23	7/8 Sq
38	23.94	21.65	13.98	10.04	2.35	1.02		4.375	18.90	9.02		-	40.20	40.20	1 SQ

Gear Frame	Flange Type	AH	AK	AJ	BA	BB	BD	BE	BF
36	SBS	5.75	17.717	19.685	.79	0.236	21.65	0.79	0.70
	SBD1	5.75	13.780	15.748	.79	0.236	17.70	0.79	0.70
37	SBS	7.00	17.717	19.685	.79	0.236	21.65	0.79	0.70
	SBD1	7.00	13.780	15.748	.79	0.236	17.70	0.79	0.70
38	SBS	6.84	21.65	23.62	1.97	.197	25.98	.79	.87
	SBD1	6.84	17.72	19.69	1.97	.197	21.65	.79	.69

Motor Frame	Gear Frame	Type [4]	XK	P [5]	AA	AB	AC	AD	AF	XD		
										36	37	38
145T	36	T	11.04	7.31	0.75	6.10	4.50	3.86	1.77	5.42	-	-
182T,184T	36, 37	T	14.04	9.56	0.75	7.52	6.27	5.13	1.77	4.40	5.69	-
213T	36,37	T	16.16	11.25	1.00	8.42	7.17	5.60	2.42	3.68	4.97	-
	38	T	17.47	11.25	1.00	8.42	7.17	5.60	2.42	-	-	6.35
215T	36,37	T	17.65	11.25	1.00	8.42	7.17	5.60	2.42	3.68	4.97	-
	38	T	18.96	11.25	1.00	8.42	7.17	5.60	2.42	-	-	6.35
254T	All	T	19.61	13.38	1.25	9.79	7.68	8.29	1.81	2.74	4.03	5.41
256T	All	T	21.36	13.38	1.25	9.79	7.68	8.29	1.81	2.74	4.03	5.41
284T,286T	All	T	24.71	14.62	1.50	11.33	8.51	12.44	2.63	1.45	2.75	4.01
324T,326T	All	T	24.96	17.20	2.00	14.99	11.34	14.16	3.63	0.55	1.84	3.11

[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

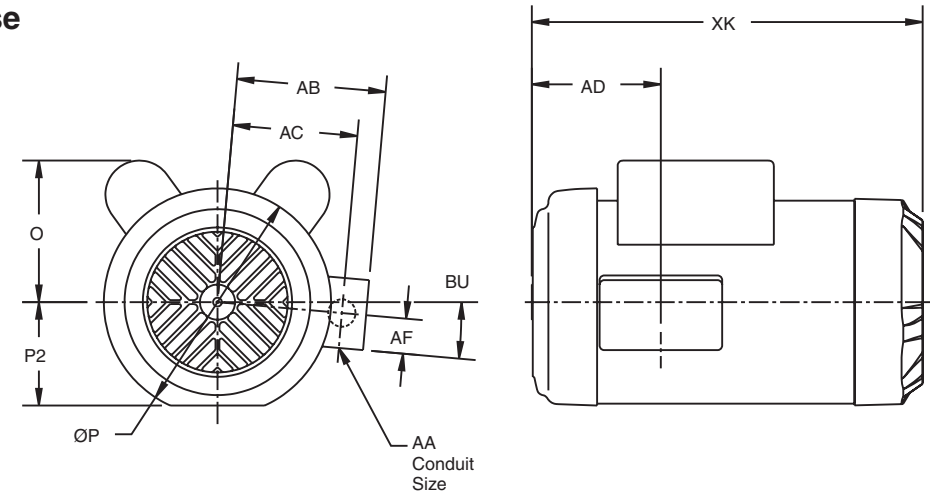
[3] Shaft extension tolerance: +.0000; -.001".

[4] For any motor type other than T (3 phase TEFC) or type T with brakes, refer to pages A-109 to A-111.

[5] Largest motor width.

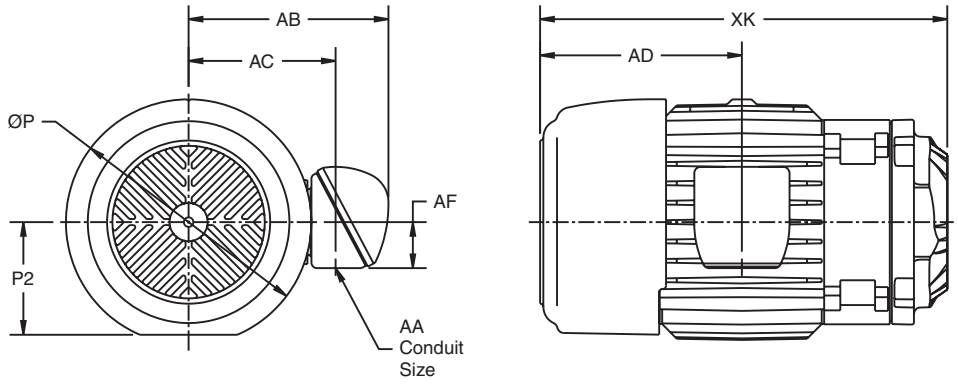
Alternate Motor Dimensions

Single Phase



Motor Frame	HP	O	P	P2	AA	AB	AC	AD	AF	BU	XK
56	1/3, 1/2	4.78	7.28	3.31	3/4	4.78	4.00	4.14	1.13	N/A	9.52[2]
	3/4	4.78	7.28	3.31	3/4	4.78	4.00	4.14	1.13	N/A	11.02[2]
143T	1	5.09	7.28	3.31	3/4	4.78	4.00	4.14	1.13	N/A	11.02[2]
145TY	1 1/2, 2	4.53	7.28	3.31	3/4	4.78	3.83	4.14	1.13	5°	12.52
184T	3, 5	5.11	9.56	4.39	3/4	8.58	6.45	7.14	3.09	N/A	16.54

Corro-Duty®



Motor Frame	P	P2	AA	AB	AC	AD	AF	XK
56	7.41	3.44	3/4	6.50	4.59	3.72	1.25	10.21 [2]
143T, 145T	7.41	3.44	3/4	6.50	4.59	3.72	1.25	11.21 [2]
182T, 184T	9.57	4.33	3/4 [3]	7.80	6.00	7.79	2.32	14.23
213T, 215T	11	5.44	1	9.47	7.15	9.63	2.00	19.67
254T, 256T	13.31	6.58	1 1/2	11.33	8.51	12.44	2.63	24.26 [1]
284T, 286T	14.66	7.29	1 1/2	11.33	9.16	13.19	2.63	24.71

[1] XK = 23.29 on CbN 33 all reductions.
[2] XK will increase by .58" if applied to frames 32 and 33 combined units.
[3] This frame has two openings in conduit box.

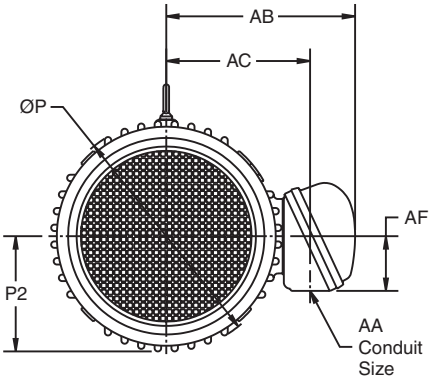
Browning®

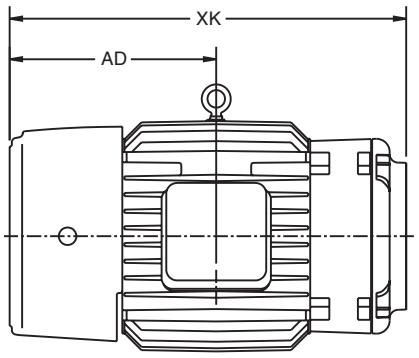
Gearmotor

CbN SERIES 3000

Alternate Motor Dimensions

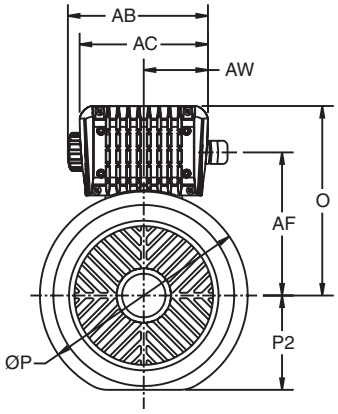
Explosion Proof

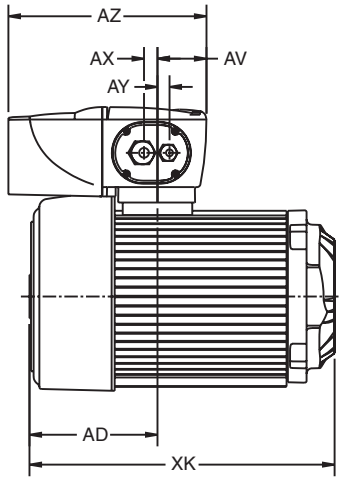




Motor Frame	P	P2	AA	AB	AC	AD	AF	XK
56	7.88	3.38	3/4	6.79	5.31	4.37	1.78	13.15[2]
143T, 145T	7.88	3.38	3/4	6.79	5.31	4.37	1.78	13.90[2]
182T, 184T	9.50	4.56	3/4	7.70	5.79	7.75	2.25	15.70
213T, 215T	11.12	5.44	1	9.06	6.81	8.68	2.63	18.72

IntelliGear®



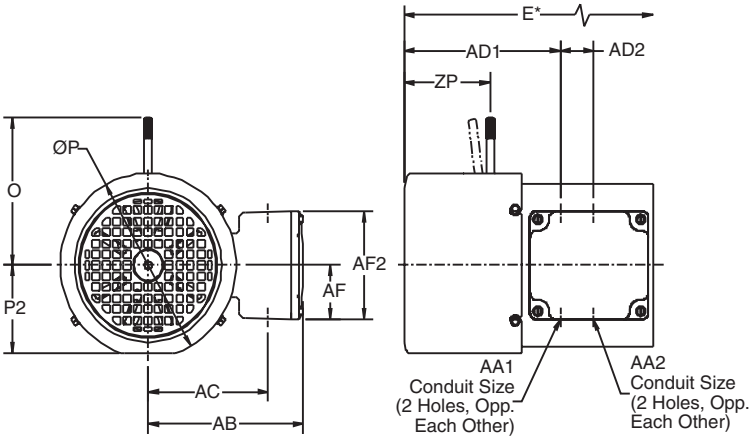


Motor Frame	Controller	O	P	P2	AB	AC	AD	AF	AV	AW	AX	AY	AZ	XK
56	1, 1M	7.74	7.33	3.67	6.45	5.91	4.35	5.61	2.25	2.95	.62	.55	8.53	9.79[2]
143T,145T	1, 1M	7.74	7.33	3.67	6.45	5.91	4.35	5.61	2.25	2.95	.62	.55	8.53	11.04[2]
56	2M	7.74	7.33	3.67	6.45	5.91	4.35	5.61	2.25	2.95	.62	.55	9.12	9.79
145T	2, 2M	7.74	7.33	3.67	6.45	5.91	4.35	5.61	2.25	2.95	.62	.55	9.12	11.04
182T,184T	2	8.72	9.56	4.78	6.45	5.91	5.89	6.58	2.25	2.95	.62	.55	9.12	14.05
	3	11.16	9.56	4.78	8.97	8.44	10.01	7.37	2.83	4.22	.62	.55	13.10	14.05
213T	3	11.99	11.25	4.98	8.97	8.44	11.73	8.11	2.83	4.22	.62	.55	13.10	16.15
215T	3	11.99	11.25	4.98	8.97	8.44	13.23	8.11	2.83	4.22	.62	.55	13.10	17.65

[2] XK will increase by .58" if applied to frames 32 and 33 combined units.

Input Power Phase/Voltage	Motor HP @ Max. Hz					
	0.33 to 0.50	0.75	1	1.5 to 2	3 to 5	7.5 to 10
1/115	1M	2M	-	-	-	-
1/230	1M	1M	1M	2M	-	-
3/230	1	1	1	2	3	-
3/460	1	1	1	1	2	3

Dimensional Supplement



DC FCR Brake with Type "T" Motor

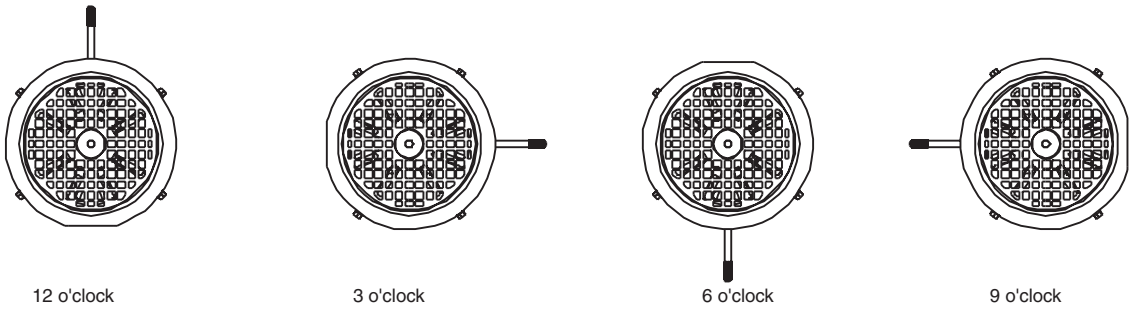
Motor Frame	E*	O	P	AA1	
				Size	Qty
56-143/145T	2.63	5.80	7.24	3/4 NPT	2
182/184T	1.95	7.3	9.23	3/4 NPT	1

Motor Frame	AA2		AB	AC	AD1
	Size	Qty			
56-143/145T	1/2 NPT	2	6.38	4.94	6.43
182/184T	3/4 NPT	1	7.8	6.14	8.84

Motor Frame	AD2	AF	AF2	P2	ZP
56-143/145T	1.38	2.13	4.25	3.46	3.54
182/184T	1.81	2.32	4.65	N/A	4.41

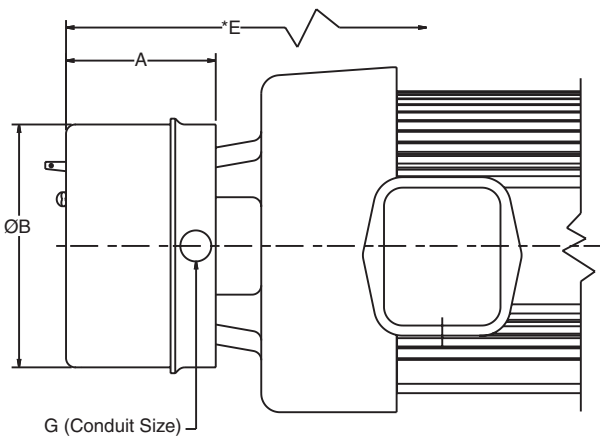
*Add "E" to XK of equivalent three phase frame motor.

Manual Release Lever Position



12 o'clock 3 o'clock 6 o'clock 9 o'clock

See page A-17 for specifying the o'clock position on orders.



AC Brake with Type "T" and "S" Motor

Motor Type	Motor Frame	Brake Torque (ft. lbs.)	A	B	E*	G
S	56	3	4.01	6.54	4.56	1/2
		6	4.01	6.54	4.56	1/2
	143T/145T 145TY	3	4.01	6.54	4.56	1/2
		6	4.01	6.54	4.56	1/2
		10	4.01	6.54	4.56	1/2
	184T	15	4.01	6.54	4.56	1/2
T	213T	25	7.38	9.38	8.75	1/2
	215T	35	7.38	9.38	8.75	1/2

* Dimension "E" represents the additional length of motor with brake mounted. Add "E" to XK of equivalent three phase frame motor.

Browning

Gearmotor

CbN SERIES 3000

Product Weights (Lbs.)

Foot Mounted Single Reduction - TEFC Three Phase Motor

Gear Frame	Motor Frame											
	56	143T	145T	182T	184T	213T	215T	254T	256T	284T	286T	324T
30	33	35	42	-	-	-	-	-	-	-	-	-
31	51	55	62	77	87	-	-	-	-	-	-	-
32	56	58	65	80	90	-	-	-	-	-	-	-
33	-	83	85	100	110	147	155	205	-	-	-	-
34	-	-	-	-	113	150	163	213	258	448	498	-
35	-	-	-	-	-	200	213	253	308	498	548	728

Foot Mounted Multiple Reduction - TEFC Three Phase Motor

Gear Frame	Stages	Motor Frame											
		56	143T	145T	182T	184T	213T	215T	254T	256T	284T	286T	320T
30	2, 3	39	41	48	-	-	-	-	-	-	-	-	-
31	2, 3	65	67	75	90	100	-	-	-	-	-	-	-
32	2, 3	78	80	87	102	112	144	152	-	-	-	-	-
	4, 5	86	88	-	-	-	-	-	-	-	-	-	-
33	2, 3	107	109	115	132	142	184	192	240	-	-	-	-
	4, 5	117	119	-	-	-	-	-	-	-	-	-	-
34	2, 3	130	132	138	156	166	204	212	249	299	489	539	-
	4, 5	129	131	138	-	-	-	-	-	-	-	-	-
35	2, 3	-	225	230	249	259	290	298	348	398	588	638	818
	4, 5	234	236	243	257	267	-	-	-	-	-	-	
36	2,3	-	-	350	366	367	400	408	458	508	768	818	998
	4,5,6	399	408	412	-	-	-	-	-	-	-	-	-
37	2,3	-	-	-	465	475	499	507	557	607	867	917	1097
	4,5,6	454	463	467	488	498	522	-	-	-	-	-	-
38	3	-	-	-	-	-	818	826	876	926	1186	1236	1416
	4,5,6	799	808	812	833	843	867	880	-	-	-	-	-

Weight Adders

Optional Motor Types

Type	Motor Frame												
	56	143T	145T	145TY	182T	184T	213T	215T	254T	256T	284T	286T	320T
C Corro-Duty	8	9	11	11	52	50	73	70	190	165	-	-	RO
X Explosionproof	19	21	25	-	33	30	50	50	-	-	-	-	-
S Single Phase	6	11	-	5	-	17	-	-	-	-	-	-	-
IG IntelliGear	7	15	18	20	31	30	51	53	-	-	-	-	-

B14 and Flange Mounted

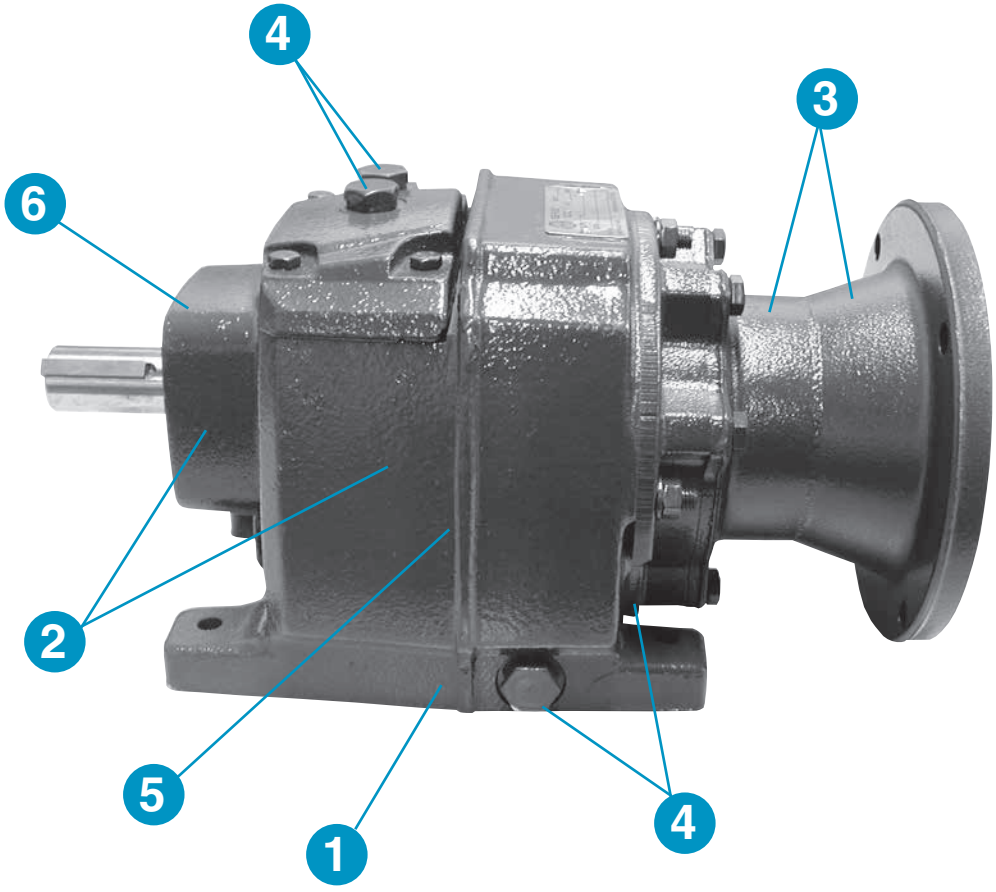
Single Reduction

Gear Frame	B14 Face Mount	Flange Mount
30	0	1
31	-1	3
32	-1	4
33	-1	8
34	-2	8
35	-2	9

Multiple and Combined

Gear Frame	B14 Face Mount	Flange Mount
30	0	1
31	-1	2
32	-1	4
33	-3	8
34	-5	8
35	-6	9
36	0	21
37	0	21
38	0	35

Type CbN Helical In-line Series 3000 Speed Reducer Features...

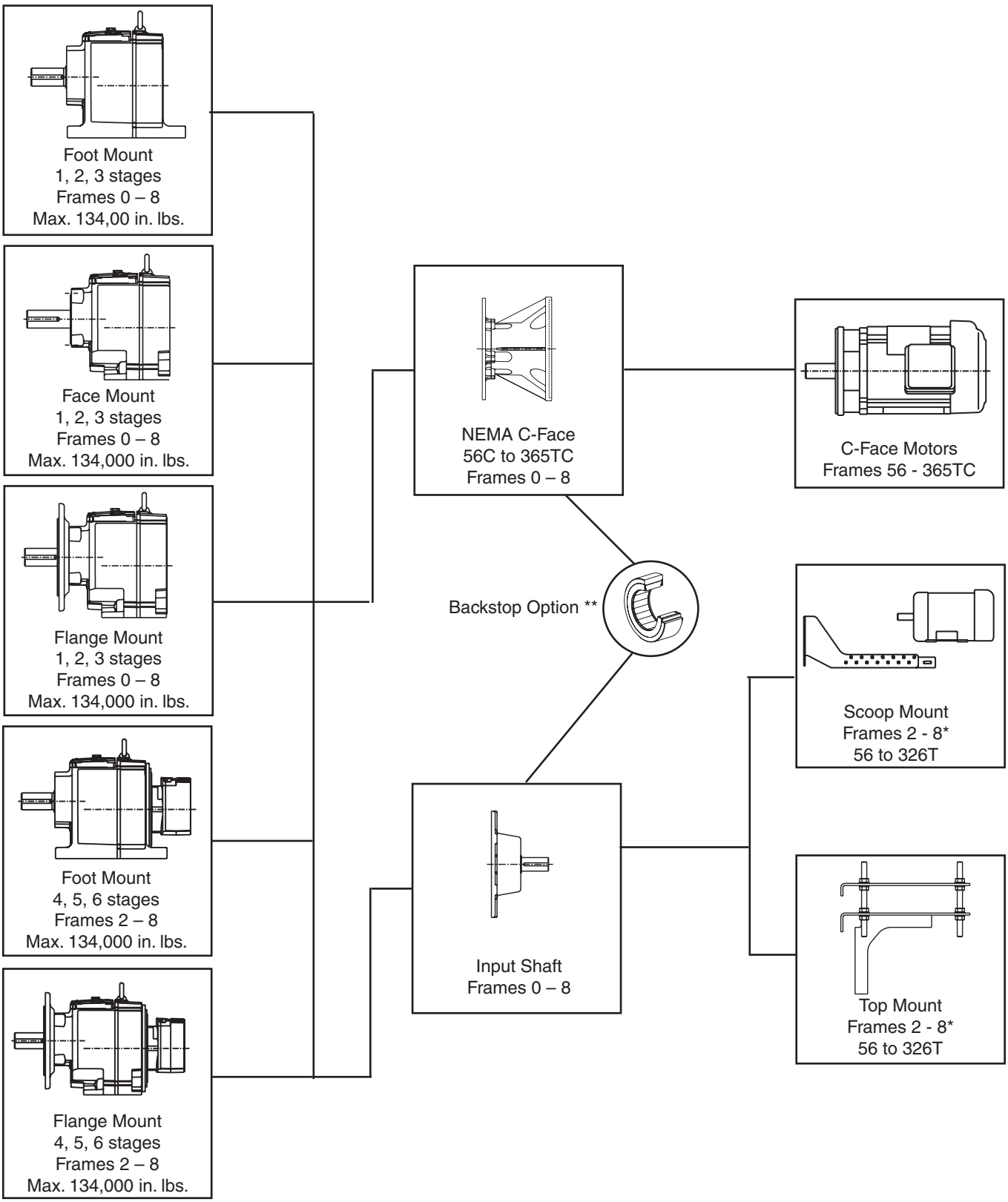


Design Features

1. Gear reducers are delivered factory filled with synthetic hydrocarbon lubricant.
2. Cast one-piece housing/endshield construction provides added strength and rigidity.
3. Series 3000 C-Face reducers utilize compact quill construction with two bearings for support and the quill has a non-metallic liner to eliminate fretting.
4. Oversized plugs and magnetic drain plug make normal maintenance easier. Dipstick provide >35 to simplify oil checks
5. All gears are keyed to shafts and finished to provide quiet operation.
6. Oversized bearings are used to help provide longer life.

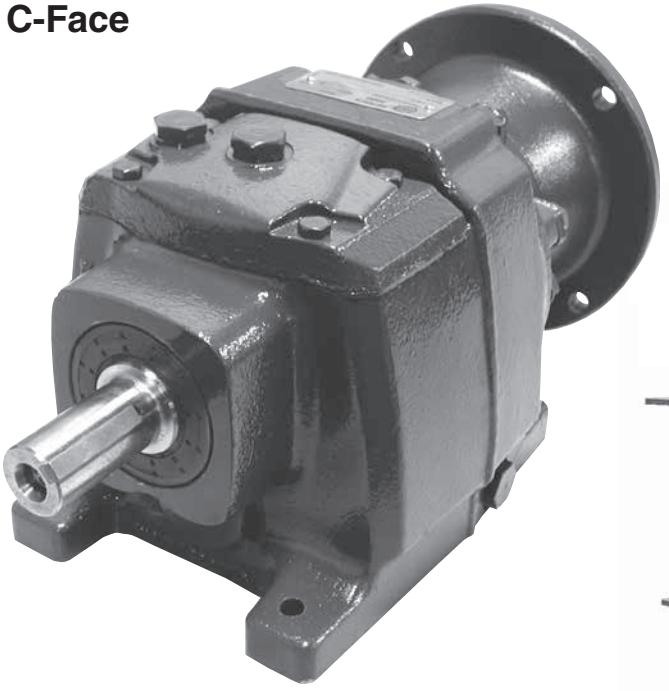
Table of Contents

Mounting Versatility and Size Range



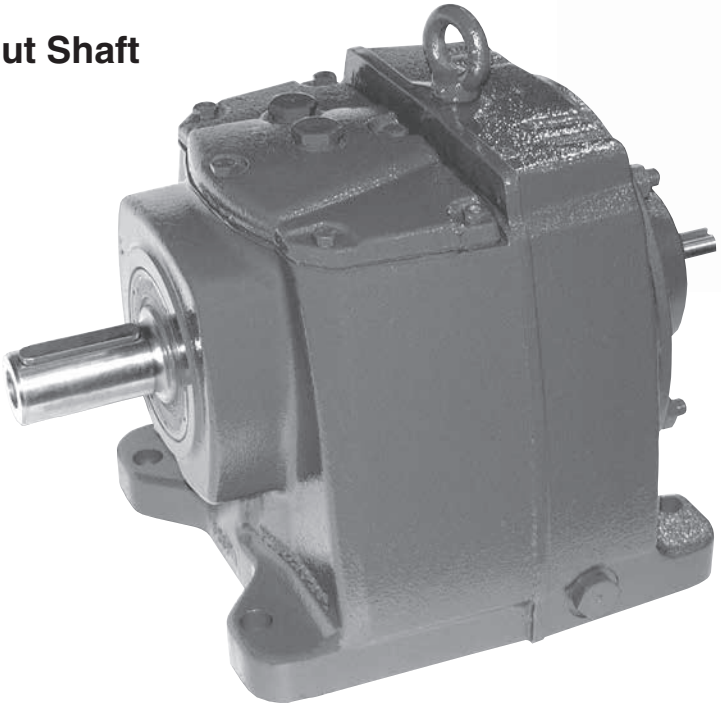
* Excluding frames 2 and 3 single stage and frames 2 - 7 combined 4 and 5 stage product. Refer to dimension pages for availability.
** Excluding all Frame 0 and Frames 2 and 3 combined

C-Face



Top Mount

Input Shaft



Selection

Selection Information

1. Input HP
- Based on application data.

2. Speed/Ratio
- Obtain either desired output speed (RPM) or gearbox ratio based on application.

3. Service Factor
- Determine the required service factor using either the AGMA application classification chart (pages A-123 to A-125), or the duration of operation, load type, and drive type with the table below:

Prime Mover	Hours of Operation	Uniform Load U	Moderate Shock Load M	Heavy Shock Load V
Electric Motor	0 - 3	0.80	1.00	1.50
	3 - 10	1.00	1.25	1.75
	10 - 24	1.25	1.50	2.00
Internal Combustion Engine	0 - 3	1.00	1.25	1.75
	3 - 10	1.25	1.50	2.00
	10 - 24	1.50	1.75	2.25

Size Selection

Step 1
- Locate speed reducer selection tables (pages A-126 to A-143) based on input speed to gearbox.

Step 2
- Choose the nominal ratio appropriate for the speeds required.

Step 3
- Select the gear unit size for the chosen ratio and the known input speed so that the mechanical power rating P (hp) satisfies the following:

$$P \geq P_m \times SF$$

P = mechanical power rating (hp) of gearbox
P_m = motor power (hp)
SF = required service factor

Note: Size selection based on absorbed power (Pa) or absorbed torque (Ta) at the low speed shaft instead of motor power (Pm) is allowed when the former is known with sufficient accuracy and if the number of start operations is limited. When Ta is applied in size selection, verify if:

$$T \geq T_a \times SF$$

T = torque rating (in. lbs.) at low speed shaft
T_a = absorbed torque (in. lbs.) at low speed shaft (based on input hp)
SF = required service factor

Size Selection (cont.)

Step 4
- Verify overhung load ratings where required (see page A-118).

Example

1. Application Data

Rotary lobe pump, 10+ hours per day, speed reducer direct coupled to load, foot mounted, 1.25 service factor.

Motor rating: TEFC, 230/460 volt, 7 1/2 HP, 1750 RPM, 213TC frame footed[1].

Output speed: 280 RPM

2. Size Selection

280 RPM required output	
Equals 6.3:1 ratio	6.1 **3242** Example 10.45 2208
PM x SF = P	
7.5 HP x 1.25 = 9.4 HP	
3242 (10.45 HP) > 9.4 HP	pg. A-126
Select CbN 3242	

(There are no thermal or OHL considerations.)

3. Catalog Designation
(see "ordering" page A-119)

CbN • 3242 • S • B3 • 6.3 • U • 213TC

[1] CbN frame 3242 with 210TC motor required a footed motor with motor outboard foot supported.

Overhung Load Capacities

When a sprocket, sheave, pulley or pinion is mounted on any shaft of a reducer, it is necessary to calculate the overhung load. This calculated load must be compared with the gearbox capacity listed to make sure the gearbox will not be overloaded. To calculate the overhung load you need to know the torque or horsepower at the take-off shaft and the location along the shaft at which the load is applied.

A. If torque is known:

$$OHL = \frac{T \times K \times LLF}{r}$$

B. If horsepower is known:

$$OHL = \frac{63025 \times HP \times K \times LLF}{RPM \times r}$$

OHL capacities are calculated at gear capacity rounded to the closest motor HP at mid shaft. For capacity when HP is known, refer to gearmotor selection tables.

Where:

OHL = Overhung load (pounds)
T = Torque (in. lbs.)
r = Radius of driving member (in.)
HP = Horsepower
K = Drive type factor
LLF = Load location factor

Driving Member	Value of K
Chain Drive	1.00
Pinion	1.25
Timing Belt	1.25
V-Belt	1.50
Flat Belt	2.50

Load Location	Value of LLF
End of shaft extension	1.20
Center of shaft extension	1.00
Shaft extension shoulder	0.80

Single Reduction Overhung Load (lbs.)

Output R.P.M.	Reducer Size					
	0	1	2	3	4	5
	30	31	32	33	34	35
>1000	84	222	230	500	580	802
801-1000	80	229	250	600	615	757
551-800	75	240	288	648	674	1041
451-550	54	320	360	668	874	1234
351-450	33	334	370	806	1244	1495
<350	153	366	457	786	1560	1744

Multiple Reduction Overhung Load (lbs.)

Output R.P.M.	Reducer Size											
	0	1		2		3		4	5	6	7	8
	3012	3122	313X	3242	325X	336X	337X	34	35	36	37	38
301-450	-	455	-	460	-	890	-	1755	1983	6200	9800	15963
201-300	-	469	-	557	-	1200	-	1829	2065	6400	10300	16165
151-200	129	591	619	670	699	1233	1233	2013	2065	7100	10800	16647
101-150	138	603	649	685	692	1296	1296	2015	2163	7700	11350	16610
51-100	388	701	714	850	856	1305	1305	2472	2213	9620	14400	17710
31-50	600	-	1030	-	1105	-	1305	3424	3733	12300	18558	22000
16-30	600	-	1297	-	1357	-	1905	3670	4580	13620	18558	22000
<15	600	-	1345	-	1610	-	1905	4340	4580	13620	18558	22000

Minimum OHL capacity based on minimum recommended sheave diameter and unit driven by maximum motor HP.

Catalog Nomenclature

CbN • 3122 • S • B3 • 40 • U • 143TC

See below and next page prior to ordering

See page 122 prior to ordering

Series	Gear Frame	Number of Reductions	Mounting Configuration For Gear (housing and Shaft Extension)	Mounting Position	Nom. Gear Ratio	Gear Input	Motor Frame
3 = 3000	0	1 = 1 stage	Refer to the illustrations below of the basic mounting options based on gear frame and stages of reduction. For Flanged gear mounting, refer to details for options that are available based on frame size, flange dimensions, and thrust loads for the application	See Page A-121	Determine from selection pages	AP = Input shaft	Req'd for any order for c-face or scoop reducer
	1	2 = 2 stages				AD = Input shaft w/backstop*	
	2	3 = 3 stages				SP = Scoop mount	
	3	4 = 4 stages				SD = Scoop mount w/backstop*	
	4	5 = 5 stages				U = C-face	
	5	6 = 6 stages				UD = C-face w/backstop*	
	6					TM = Top mount	
	7					TD = Top mount w/backstop*	
	8						

* For units with backstops, specify output shaft rotation facing the output shaft extension.

Gear Output	Foot Mounted	Foot Mounted (w/ flange)	Flange Mount (footless)		Face Mount (footless)
			Std. Thrust	High Thrust	
Configuration Code (inches)	**S**[1]	See Page A-120	See Page A-120	See Page A-120	**B14**
Frame(s) Available	All	See Page A-120	All	See Page A-120	30 - 35

[1] Inch ouput shaft. For output with metric shaft, insert "M" following last alpha character (i.e. metric footmount, S becomes SM).

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Flange Mounted Gearing and Availability Guide

CbN SERIES 3000

Flange - No Feet

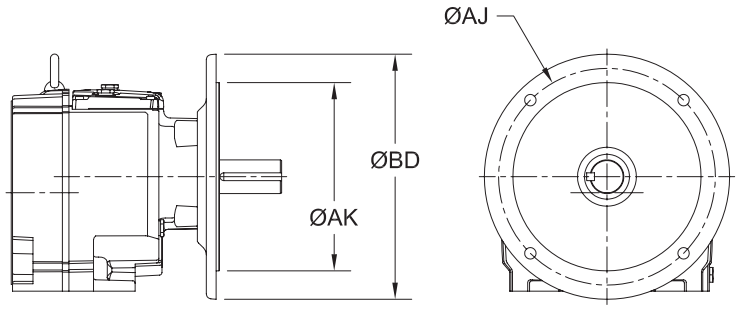
		Output Flange Dimensions Available												
	Reduction Stages		Inches	MM										
		BD	6.50	120	140	160	200	250	300	350	400	450	550	650
		AK	4.50	80	95	110	130	180	230	250	300	350	450	550
		AJ	5.875	100	115	130	165	215	254	300	350	400	500	600
		Gear Frame												
Normal Thrust	Single	30	56C	BD1	BS	BD2	BD3							
		31			BD2	BS								
		32				BD2	BS							
		33					BD2	BS						
		34						BD2	BS					
		35							BD2	BS				
	Multiple	30	56C	BD1	BS	BD2	BD3							
		31		BD3	BD2	BD1	BS							
		32				BD2	BD1	BS						
		33					BD2	BD1	BS					
		34						BD2	BD1	BS				
		35							BD2	BD1	BS			
		36										BD1	BS	
		37										BD1	BS	
		38											BD1	BS
High Thrust	Multiple	33						BR						
		34							BR					
		35								BR				

Footed - with Flange

		Output Flange Dimensions Available												
	Reduction Stages		Inches	MM										
		BD	6.50	120	140	160	200	250	300	350	400	450	550	650
		AK	4.50	80	95	110	130	180	230	250	300	350	450	550
		AJ	5.875	100	115	130	165	215	254	300	350	400	500	600
		Gear Frame												
Normal Thrust	Single	31			SBD2	SBS								
		32				SBD2	SBS							
		33					SBD2	SBS						
		34						SBD2	SBS					
		35							SBD2	SBS				
	Multiple	30A		SBD1	SBS									
		31		SBD3	SBD2	SBD1								
		32					SBD1	SBS						
		33						SBD1	SBS					
		34							SBD1	SBS				
		35								SBD1	SBS			
		36										SBD1	SBS	
		37										SBD1	SBS	
		38											SBD1	SBS

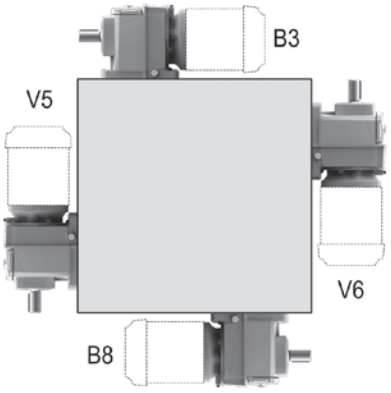
Shaded fields indicate factory lead-time applies

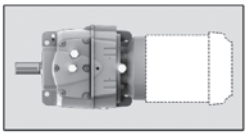
Note: For metric output shaft on any output nomenclature above, add "M" before any numeric designator. (i.e. metric shaft with BD1 flange = BDM1)

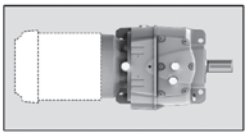


Mounting Positions

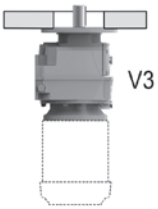
Foot Mounted (with/without flange) Any Reduction

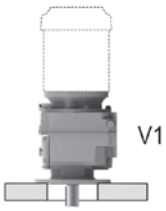


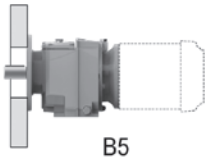




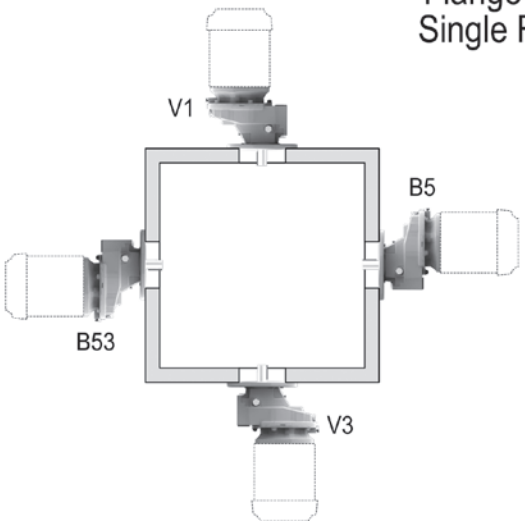
Flange Mounted (footless) Multiple Reductions

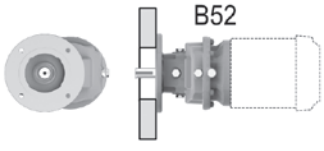


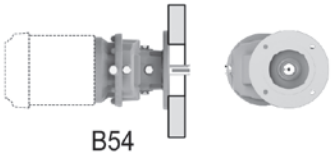




Flange Mounted Single Reduction







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Reducers Availability

CbN SERIES 3000

C-Face Reducer Availability

Gear Frame	Reduction Stages	AC Motor Frames Sizes							
		56C	140TC	180TC	210TC	250TC	280TC	320TC	360TC
30	1,2,3	X	X [1]	-	-	-	-	-	-
31	1,2,3	X	X	X [3]	-	-	-	-	-
32	1,2.3	X	X	X	X [3]	-	-	-	-
	4,5	X				-	-	-	-
33	1,2,3	X	X	X	X [2]	-	-	-	-
	4,5	X	X	-	-	-	-	-	-
34	1,2,3	X	X	X	X	X	X [3]		
	4,5	X	X	-	-	-	-	-	-
35	1	X	X	X	X	X	X [3]	X [3]	-
	2,3	X	X	X	X	X	X	X [3]	-
	4,5	X	X	X	-	-	-	-	-
36	2,3	-	X	X	X	X	X	X	-
	4,5,6	X	X	X	-	-	-	-	-
37	2,3	-	-	X	X	X	X	X	X
	4,5,6	X	X	X	X	-	-	-	-
38	3	-	-	-	X	X	X	X	X
	4,5,6	X	X	X	X	X	-	-	-

Scoop Mount Reducer Availability

Gear Frame	Reduction Stages	AC Motor Frames Sizes						
		56	140T	180T	210T	250T	280T	320T
32	2,3	X	X	-	-	-	-	-
33	2,3	X	X	X	-	-	-	-
34	1,2,3	-	X	X	X	-	-	-
35	1	-	-	X	X	X	-	-
	2,3	-	X	X	X	X	X	-
36	2,3	-	-	X	X	X	X	X
	4,5,6	-	X	-	-	-	-	-
37	2,3	-	-	X	X	X	X	X
	4,5,6	-	X	-	-	-	-	-
38	2, 3	-	-	-	-	X	X	X
	4,5,6	-	X	X	X	-	-	-

Top Mount Reducer Availability

Gear Frame	Reduction Stages	AC Motor Frames Sizes						
		56	140T	180T	210T	250T	280T	320T
32	2,3	X	X	X	-	-	-	-
33	2,3	X	X	X	X	-	-	-
34	1		X	X	X	-	-	-
	2,3	-	X	X	X	X	-	-
35	1	-	X	X	X	X	X	-
	2,3	-	X	X	X	X	X	-
36,37	2,3	-	-	X	X	X	X	X
	4,5,6	-	-	-	-	-	-	-
38	2, 3	-	-	-	X	X	X	X
	4,5,6		-	-	-	-	-	-

[1] Not available on 3012 with ratios of 31.5, 35.5, 40,45. Use frame 3013 in these requirements
[2] When using this frame with 3301 gear, a footed motor with outboard foot supported.
[3] Motor selected must be a footed C-face motor with outboard foot supported

Backstop can be supplied in this input.

AGMA Application Classifications

U: Uniform load **M: Moderate shock load** **V: Heavy shock load**

Application	Load Class	Up to 3 hrs/day	Up to 10 hrs/day	Over 10 hrs/day
Agitators (Mixers)				
Pure Liquids		—	1.00	1.25
Liquids & Solids		1.00	1.25	1.50
Liquids - Variable Density		1.00	1.25	1.50
Blowers				
Centrifugal		1.00	1.25	—
Lobe		1.00	1.25	1.50
Vane		—	1.00	1.25
Brewing and Distillers				
Bottling Machinery		—	1.00	1.25
Brew Kettles, Continuous Duty		—	1.00	1.25
Cookers - Continuous Duty		—	1.00	1.25
Mash Tubs - Continuous Duty		—	1.00	1.25
Scale Hoppers, Frequent Starts		1.00	1.25	1.50
Can Filling Machines		—	1.00	1.25
Car Dumpers		1.25	1.50	1.75
Car Pullers		1.00	1.25	1.50
Clarifiers		—	1.00	1.25
Classifiers		1.00	1.25	1.50
Clayworking Industry				
Brick Press		1.25	1.50	1.75
Briquette Machine		1.25	1.50	1.75
Pug Mill		1.00	1.25	1.50
Compactors		1.50	1.75	2.00
Compressors				
Centrifugal		—	1.00	1.25
Lobe		1.00	1.25	1.50
Reciprocating, Multi - Cylinder		1.00	1.25	1.50
Reciprocating, Single - Cylinder		1.25	1.50	1.75
Conveyors - General Purpose				
Uniformly Loaded or Fed		—	1.00	1.25
Not Uniformly Fed		1.00	1.25	1.50
Reciprocating or Shaker		1.25	1.50	1.75
Cranes				
Dry Dock				
Main Hoist		1.25	1.50	1.75
Auxiliary		1.25	1.50	1.75
Boom Hoist		1.25	1.50	1.75
Slewing Drive		1.25	1.50	1.75
Traction Drive		1.50	1.50	1.50
Container				
Main Hoist		Refer To Application Engineering		

Application	Load Class	Up to 3 hrs/day	Up to 10 hrs/day	Over 10 hrs/day
Cranes (Continued)				
Boom Hoist		Refer To Application Engineering		
Trolley Drive		Refer To Application Engineering		
(Gantry Drive)				
(Traction Drive)		Refer To Application Engineering		
Mill Duty				
Main		Refer To Application Engineering		
Auxiliary		Refer To Application Engineering		
Bridge & Trolley Travel		Refer To Application Engineering		
Industrial Duty				
Main		1.25	1.50	1.75
Auxiliary		Refer To Application Engineering		
Bridge & Trolley Travel		Refer To Application Engineering		
Crusher				
Stone or Ore		1.50	1.75	2.00
Dredges				
Cable Reels		1.00	1.25	1.50
Conveyors		1.00	1.25	1.50
Cutter Head Drives		1.25	1.50	1.75
Pumps 1.00		1.25	1.50	
Screen Drives		1.25	1.50	1.75
Stackers		1.00	1.25	1.50
Winches		1.00	1.25	1.50
Elevators				
Bucket		1.00	1.25	1.50
Centrifugal Discharge		—	1.00	1.25
Escalators		Refer To Application Engineering		
Freight		Refer To Application Engineering		
Gravity Discharge		—	1.00	1.25
Extruders				
General		1.25	1.25	1.25
Plastics				
(a) Variable Speed Drive		1.50	1.50	1.50
(b) Fixed Speed Drive		1.75	1.75	1.75
Rubber				
(a) Continuous Screw Operation		1.50	1.50	1.50
(b) Intermittent Screw Operation		1.75	1.75	1.75
Fans				
Centrifugal		—	1.00	1.25
Cooling Towers		Refer To Application Engineering		
Forced Draft		1.25	1.25	1.25
Induced Draft		1.00	1.25	1.50
Industrial & Mine		1.00	1.25	1.50

Browning®

Speed Reducers

CbN SERIES 3000

AGMA Application Classifications

U: Uniform load **M: Moderate shock load** **V: Heavy shock load**

Application	Load Class Up to 3 hrs/day	Up to 10 hrs/day	Over 10 hrs/day
Feeders			
Apron	—	1.25	1.50
Belt	1.00	1.25	1.50
Disc	—	1.00	1.25
Reciprocating	1.25	1.50	1.75
Screw	1.00	1.25	1.50
Food Industry			
Cereal Cooker	—	1.00	1.25
Dough Mixers	1.00	1.25	1.50
Meat Grinders	1.00	1.25	1.50
Slicers	1.00	1.25	1.50
Generators and Executors	—	1.00	1.25
Hammer Mills	1.50	1.50	1.75
Hoists			
Heavy Duty	1.25	1.50	1.75
Medium Duty	1.00	1.25	1.50
Skip Hoist	1.00	1.25	1.50
Laundry Tumblers	1.00	1.25	1.50
Laundry Washers	1.00	1.25	1.50
Lumber Industry			
Barkers			
- Spindle Feed	1.25	1.25	1.25
- Main Drive	1.50	1.50	1.50
Conveyors			
- Burner	1.25	1.25	1.50
- Main or Heavy Duty	1.50	1.50	1.50
- Main Log	1.50	1.50	1.50
- Re-Saw, Merry-Go-Round	1.25	1.25	1.50
- Slab	1.50	1.50	1.75
- Transfer	1.25	1.25	1.50
Chains			
- Floor	1.50	1.50	1.50
- Green	1.50	1.50	1.50
Cut-Off Saws			
- Chain	1.50	1.50	1.50
- Drag	1.50	1.50	1.50
Debarking Drums	1.50	1.50	1.75
Feeds			
- Edger	1.25	1.25	1.50
- Gang	1.50	1.50	1.50
- Trimmer	1.25	1.25	1.50
Log Deck	1.50	1.50	1.50
Log Hauls - Incline-Well Type	1.50	1.50	1.50
Log Turning Devices	1.50	1.50	1.50
Planner Feed	1.25	1.25	1.25
Planer Tilting Hoists	1.50	1.50	1.50
Rolls - Live-Off Bearing.-Roll Cases	1.50	1.50	1.50
Sorting Table	1.25	1.25	1.50
Tipple Hoist	1.25	1.25	1.50
Transfers			
- Chain	1.50	1.50	1.50
- Causeway	1.50	1.50	1.50
Tray Drives	1.25	1.25	1.50
Veneer Lathe Drives	Refer To Application Engineering		

Application	Load Class Up to 3 hrs/day	Up to 10 hrs/day	Over 10 hrs/day
Metal Mills			
Draw Bench Carriage & Main Drive	1.00	1.25	1.50
Runout Table			
Non-reversing			
Group Drives	1.00	1.25	1.50
Individual Drives	1.50	1.50	1.75
Reversing	1.50	1.50	1.75
Slab Pushers	1.25	1.25	1.50
Shears	1.50	1.50	1.75
Wire Drawing	1.00	1.25	1.50
Wire Winding Machine	1.00	1.25	1.50
Metal Strip Processing Machinery			
Bridles	1.25	1.25	1.50
Coilers & Uncoilers	1.00	1.00	1.25
Edge Trimmers	1.00	1.25	1.50
Flatteners	1.00	1.25	1.50
Loopers (Accumulators)	1.00	1.00	1.00
Pinch Rolls	1.00	1.25	1.50
Scrap Choppers	1.00	1.25	1.50
Shears	1.50	1.50	1.75
Slitters	1.00	1.25	1.50
Mills, Rotary Type			
Ball & Rod			
Spur Ring Gear	1.50	1.50	1.75
Helical Ring Gear	1.50	1.50	1.50
Direct Connected	1.50	1.50	1.75
Cement Kilns	1.50	1.50	1.50
Dryers & Coolers	1.50	1.50	1.50
Mixers, Concrete	1.00	1.25	1.50
Paper Mills			
Agitator (Mixer)	1.50	1.50	1.50
Agitator for Pure Liquids	1.25	1.25	1.25
Barkers - Mechanical	1.75	1.75	1.75
Barking Drums	1.75	1.75	1.75
Beater	1.50	1.50	1.50
Breaker Stack	1.25	1.25	1.25
❖ Calender	1.25	1.25	1.25
Chipper	1.75	1.75	1.75
Chip Feeder	1.50	1.50	1.50
Coating Rolls	1.25	1.25	1.25
Conveyors			
Chip, Bark, Chemical	1.25	1.25	1.25
Log (Including Slab)	1.75	1.75	1.75
Couch Rolls	1.25	1.25	1.25
Cutter	1.75	1.75	1.75
Cylinder Molds	1.25	1.25	1.25
❖ Dryers			
Paper Machine	1.25	1.25	1.25
Conveyor Type	1.25	1.25	1.25
Embosser	1.25	1.25	1.25
Extruder	1.50	1.50	1.50
Fourdrinier Rolls (Includes Lump Breaker, Dandy Roll, Wire Turning, and Return Rolls)	1.25	1.25	1.25
Jordan	1.25	1.25	1.25
Kiln Drive	1.50	1.50	1.50
Mt. Hope Roll	1.25	1.25	1.25

AGMA Application Classifications

U: Uniform load **M: Moderate shock load** **V: Heavy shock load**

Application	Load Class Up to 3 hrs/day	Load Class Up to 10 hrs/day	Load Class Over 10 hrs/day
Paper Mills (Continued)			
Paper Rolls	1.25	1.25	1.25
Platter	1.50	1.50	1.50
Presses - Felt & Suction	1.25	1.25	1.25
Pulper	1.50	1.50	1.75
Pumps - Vacuum	1.50	1.50	1.50
Reel (Surface Type)	1.25	1.25	1.50
Screens			
Chip	1.50	1.50	1.50
Rotary	1.50	1.50	1.50
Vibrating	1.75	1.75	1.75
Size Press	1.25	1.25	1.25
Super Calender (See Note)	1.25	1.25	1.25
Thickner			
(AC Motor)	1.50	1.50	1.50
(DC Motor)	1.25	1.25	1.25
Washer			
(AC Motor)	1.50	1.50	1.50
(DC Motor)	1.25	1.25	1.25
Wind and Unwind Stand	1.00	1.00	1.00
Winders (Surface Type)	1.25	1.25	1.25
❖ Yankee Dryers	1.25	1.25	1.25
Plastics Industry - Primary Processing			
Intensive Internal Mixers			
(a) Batch Mixers	1.75	1.75	1.75
(b) Continuous Mixers	1.50	1.50	1.50
Batch Drop Mill - 2 Smooth Rolls	1.25	1.25	1.25
Continuous Feed, Holding & Blend Mill	1.25	1.25	1.25
Compounding Mills	1.25	1.25	1.25
Calenders	1.50	1.50	1.50
Plastics Industry - Secondary Processing			
Blow Molders	1.50	1.50	1.50
Coating	1.25	1.25	1.25
Film	1.25	1.25	1.25
Pipe	1.25	1.25	1.25
Pre-Plasticizers	1.50	1.50	1.50
Rods	1.25	1.25	1.25
Sheet	1.25	1.25	1.25
Tubing	1.25	1.25	1.50
Pullers - Barge Haul	1.00	1.50	1.75
Pumps			
Centrifugal	—	1.00	1.25
Proportioning	1.00	1.25	1.50
Reciprocating			
Single Acting, 3 or more cylinders	1.00	1.25	1.50
Double Acting, 2 or more cylinders	1.00	1.25	1.50
Rotary			
- Gear	—	1.00	1.50
- Lobe	—	1.00	1.25
- Vane	—	1.00	1.25

Application	Load Class Up to 3 hrs/day	Load Class Up to 10 hrs/day	Load Class Over 10 hrs/day
Rubber Industry			
Intensive Internal Mixers			
(a) Batch Mixers	1.50	1.75	1.75
(b) Continuous Mixers	1.25	1.50	1.50
Mixing Mill - 2 Smooth Rolls - (If corrugated rolls are used, (then use the same service factors that are used for a Cracker-Warmer)	1.50	1.50	1.50
Batch Drop Mill - 2 Smooth Rolls	1.50	1.50	1.50
Cracker Warmer - 1 Corrugated Roll	1.75	1.75	1.75
Cracker - 2 Corrugated Rolls	1.75	1.75	1.75
Holding, Feed & Blend Mill - 2 Rolls	1.25	1.25	1.25
Refiner - 2 Rolls	1.50	1.50	1.50
Calenders	1.50	1.50	1.50
Sand Miller	1.00	1.25	1.50
Sewage Disposal			
Bar Screens	—	1.00	1.25
Chemical Feeders	—	1.00	1.25
Dewatering Screens	1.00	1.25	1.50
Scum Breakers	1.00	1.25	1.50
Slow or Rapid Mixers	1.00	1.25	1.50
Sludge Collectors	1.00	1.00	1.25
Thickeners	1.00	1.25	1.50
Vacuum Filters	1.00	1.25	1.50
Screens			
Air Washing	—	1.00	1.25
Rotary - Stone or Gravel	1.00	1.25	1.50
Traveling Water Intake	—	1.00	1.25
Sugar Industry			
Beet Slicer	1.50	1.50	1.75
Cane Knives	1.50	1.50	1.50
Crushers	1.50	1.50	1.50
Mills (Low Speed End)	1.50	1.50	1.50
Textile Industry			
Batchers	1.00	1.25	1.50
Calenders	1.00	1.25	1.50
Cards	1.00	1.25	1.50
Dry Cans	1.00	1.25	1.50
Dryers	1.00	1.25	1.50
Dyeing Machinery	1.00	1.25	1.50
Looms	1.00	1.25	1.50
Mangles	1.00	1.25	1.50
Nappers	1.00	1.25	1.50
Pads	1.00	1.25	1.50
Slashers	1.00	1.25	1.50
Soapers	1.00	1.25	1.50
Spinners	1.00	1.25	1.50
Tenter Frames	1.00	1.25	1.50
Washers	1.00	1.25	1.50
Winders	1.00	1.25	1.50

❖ Anti-friction bearings only.

NOTE: A service factor of 1.0 may be applied at the base of a super calender, operating over a speed range where part of the range is constant horsepower and part of the range is constant torque, provided that the constant horsepower part is greater than 1.5 to 1. A service factor of 1.25 is applicable to super calenders operating over the entire speed range at constant torque, or where the constant horsepower speed range is less than 1.5 to 1.

Browning

Speed Reducers

Motor RPM 1750

CbN SERIES 3000

Exact Ratio rpm, HP and Torque

rpm	Nom. Ratio	Size of CbN 3000 Reducer											
		0		1			2			3			
1400	1.25	1.24	**3001**	1.22	**3101**		1.23	**3201**		1.26	**3301**		
		3.06	134	6.78	292		11.98	520		14.42	643		
1250	1.4	1.46	**3001**	1.38	**3101**		1.45	**3201**		1.46	**3301**		
		3.06	158	6.37	310		11.06	567		13.73	706		
1094	1.6	1.54	**3001**	1.56	**3101**		1.55	**3201**		1.61	**3301**		
		3.06	166	6.15	338		11.39	623		13.43	761		
972	1.8	1.83	**3001**	1.76	**3101**		1.75	**3201**		1.77	**3301**		
		3.06	198	5.91	367		10.58	654		12.83	803		
875	2	1.96	**3001**	2	**3101**		1.94	**3201**		2.04	**3301**		
		3.06	212	5.65	399		10.35	708		14.33	1030		
781	2.24	2.19	**3001**	2.29	**3101**		2.21	**3201**		2.25	**3301**		
		3.06	237	5.37	434		9.08	708		13.63	1083		
700	2.5	2.55	**3001**	2.58	**3101**		2.55	**3201**		2.58	**3301**		
		3.06	275	4.86	442		7.88	708		13.96	1273		
625	2.8	2.75	**3001**	2.74	**3101**		2.77	**3201**		2.91	**3301**		
		3.06	297	4.58	443		7.37	708		11.99	1232		
556	3.15	3.24	**3001**	3.25	**3101**		3.09	**3201**		3.16	**3301**		
		2.98	340	3.86	442		6.5	708		10.1	1127		
493	3.55	3.63	**3001**	3.44	**3101**		3.43	**3201**		3.52	**3301**		
		2.72	348	3.65	442		5.85	708		9.79	1217		
438	4	4.08	**3001**	3.93	**3101**		3.89	**3201**		3.95	**3301**		
		2.58	372	3.19	442		5.15	708		9.42	1315		
				3.91	**3122**		3.87	**3242**		3.96	**3362**		
				6.78	916		16.04	2150		26.24	3615		
389	4.5	4.58	**3001**	4.36	**3101**		4.33	**3201**		4.47	**3301**		
		2.24	362	2.86	442		4.63	708		8.4	1327		
				4.43	**3122**		4.57	**3242**		4.59	**3362**		
				6.32	969		13.94	2208		22.74	3615		
350	5	5.17	**3001**	4.92	**3101**		4.88	**3201**		4.87	**3301**		
		1.05	192	2.55	442		4.11	708		7.73	1327		
				4.99	**3122**		4.88	**3242**		5.06	**3362**		
				6.14	1061		13.07	2208		20.64	3615		
313	5.6	5.82	**3001**	5.69	**3101**		5.71	**3201**		5.5	**3301**		
		1.05	216	2.2	442		3.51	708		6.78	1315		
				5.65	**3122**		5.51	**3242**		5.59	**3362**		
				5.9	1155		11.57	2208		18.68	3615		
278	6.3	6.4	**3001**	6.25	**3101**		6.31	**3201**		6.33	**3301**		
		1	226	2.01	442		3.18	708		5.94	1327		
				6.42	**3122**		6.1	**3242**		6.41	**3362**		
				5.63	1251		10.45	2208		16.28	3615		
246	7.1	7.22	**3001**	7.17	**3101**		6.92	**3201**		7.06	**3301**		
		0.98	250	1	253		2.9	708		5.31	1327		
		7.38	**3012**	7.34	**3122**		6.96	**3242**		7.09	**3362**		
		2.69	683	4.93	1251		9.17	2208		14.73	3615		
219	8	8.13	**3001**	7.91	**3101**		8.06	**3201**		7.83	**3301**		
		0.88	252	1	279		2.48	708		4.8	1327		
		8.16	**3012**	8.28	**3122**	7.57	**3132**	8.02	**3242**	7.63	**3252**	8.14	**3362**	7.85	**3372**
		2.69	762	4.37	1252	5.18	1359	7.95	2208	10.28	2718	12.83	3615	21.22	5767
194	9	8.59	**3012**	8.79	**3122**	8.57	**3132**	8.57	**3242**	9.02	**3252**	9.16	**3362**	9.06	**3372**
		2.56	763	4.11	1252	4.79	1421	7.44	2208	9.26	2891	11.39	3615	19.35	6069
175	10	10.2	**3012**	10.43	**3122**	9.67	**3132**	9.72	**3242**	9.62	**3252**	9.95	**3362**	9.98	**3372**
		2.17	768	3.46	1252	4.42	1480	6.56	2208	8.84	2947	10.49	3615	18.13	6266

Exact ratio	**Gear frame**
Input H.P.	Output torque

Motor RPM 1750 (Continued)

Exact Ratio rpm, HP and Torque

rpm	Nom. Ratio	Size of CbN 3000 Reducer									
		4		5		6		7		8	
1400	1.25	1.24	**3401**	1.28	**3501**						
		38.4	1679	61.53	2770						
1250	1.4	1.38	**3401**	1.46	**3501**						
		41.22	2015	59.42	3062						
1094	1.6	1.56	**3401**	1.6	**3501**						
		41.74	2292	57.18	3230						
972	1.8	1.74	**3401**	1.79	**3501**						
		35.43	2171	55.44	3496						
875	2	1.97	**3401**	2	**3501**						
		36.29	2521	52.88	3735						
781	2.24	2.17	**3401**	2.25	**3501**						
		34.03	2610	50.13	3982						
700	2.5	2.54	**3401**	2.44	**3501**						
		30.62	2745	48.17	4152						
625	2.8	2.83	**3401**	2.77	**3501**						
		28.35	2836	46.17	4522						
556	3.15	3.18	**3401**	3.07	**3501**	3.21	**3602**				
		25.76	2894	42.96	4655	120	13318				
493	3.55	3.6	**3401**	3.55	**3501**	3.64	**3602**				
		22.84	2903	40.6	5088	120	15102				
438	4	4.11	**3401**	3.88	**3501**						
		20	2903	38.16	5221						
		3.91	**3482**	4.07	**3592**	3.88	**3602**				
		38.77	5249	66.63	9371	120	16098				
389	4.5	4.41	**3401**	4.35	**3501**						
		18.63	2903	33.97	5221						
		4.37	**3482**	4.66	**3592**	4.34	**3602**	4.39	**3732**		
		41.6	6299	66.63	10727	120	18006	120	18213		
350	5	5.13	**3401**	4.85	**3501**						
		16.01	2903	30.49	5221						
		4.91	**3482**	5.1	**3592**	4.91	**3602**	4.91	**3732**		
		42.14	7168	66.63	11960	120	20371	120	20371		
313	5.6	5.57	**3401**	5.5	**3501**						
		14.76	2903	26.29	5103						
		5.48	**3482**	5.7	**3592**	5.56	**3602**	5.63	**3732**	5.76	**3842**
		35.76	6786	57.53	11350	120	23068	120	23358	190	37853
278	6.3	6.15	**3401**	6.31	**3501**						
		13.36	2903	23.43	5221						
		6.21	**3482**	6.38	**3592**	6.15	**3602**	6.21	**3732**	6.36	**3842**
		36.63	7883	53.87	11903	120	25515	120	25764	190	41796
246	7.1	6.83	**3401**	6.87	**3501**						
		11.32	2730	21.54	5221						
		6.86	**3482**	7.18	**3592**	6.86	**3602**	7.04	**3732**	6.98	**3842**
		34.35	8160	48.81	12133	120	25923	120	29208	190	45871
219	8	8.1	**3401**	8	**3501**						
		9.47	2708	18.48	5221						
		7.69	**3482**	7.92	**3592**	7.71	**3602**	7.99	**3732**	8.15	**3842**
		38.77	10329	66.63	18252	101.9	27163	120	33149	190	53560
194	9	8.6	**3482**	9.07	**3592**	9.03	**3602**	9.09	**3732**	8.8	**3842**
		38.41	11446	64.65	20305	84.4	26350	120	37713	190	57831
175	10	9.67	**3482**	9.94	**3592**	9.63	**3602**	10.3	**3732**	10	**3842**
		35.65	11933	60.86	20956	93.4	31097	119.9	42697	190	65717

If shaded, mechanical H.P. may exceed thermal H.P. limit.
Refer to page A-144.

Exact ratio	**Gear frame**
Input H.P.	Output torque

Browning

Speed Reducers

CbN SERIES 3000

Motor RPM 1750 (Continued)

Exact Ratio rpm, HP and Torque

rpm	Nom. Ratio	Size of CbN 3000 Reducer											
		0		1			2			3			
156	11.2	10.92	**3012**	11.04	**3122**	10.94	**3132**	10.8	**3242**	10.88	**3252**	11.09	**3362**	11.03	**3372**
		2.03	769	3.28	1252	4.07	1542	5.9	2208	8.18	3082	9.41	3615	16.56	6330
140	12.5	12.23	**3012**	12.61	**3122**	12.43	**3132**	12.27	**3242**	12.04	**3252**	12.45	**3362**	12.65	**3372**
		1.82	772	2.87	1252	3.74	1609	5.2	2208	7.64	3186	8.39	3615	15.46	6774
125	14	14.24	**3012**	14.08	**3122**	14.2	**3132**	13.65	**3242**	13.72	**3252**	14.09	**3362**	13.98	**3372**
		1.57	776	2.57	1252	3.42	1681	4.67	2208	7.02	3335	7.41	3615	14.12	6839
109	16	15.35	**3012**	15.79	**3122**	16.03	**3132**	15.36	**3242**	15.82	**3252**	15.33	**3362**	16.05	**3372**
		1.46	777	2.29	1252	3.15	1750	4.15	2208	6.38	3492	6.81	3615	12.68	7052
97	18	18.06	**3012**	18.28	**3122**	17.01	**3132**	18	**3242**	16.9	**3252**	17.33	**3362**	18.08	**3372**
		1.25	781	1.98	1252	2.98	1753	3.54	2208	6.1	3571	6.03	3615	11.39	7132
88	20	20.24	**3012**	20.07	**3122**	20.2	**3132**	19.87	**3242**	19.18	**3252**	19.95	**3362**	19.64	**3372**
		1.12	783	1.8	1252	2.52	1762	3.21	2208	5.6	3719	5.23	3615	10.49	7132
78	22.4	22.76	**3012**	23.01	**3122**	21.36	**3132**	21.79	**3242**	21.31	**3252**	22.29	**3362**	21.89	**3372**
		1	786	1	796	2.39	1765	2.93	2208	5.22	3850	4.68	3615	9.41	7132
70	25	25.59	**3012**	25.39	**3122**	24.41	**3132**	25.44	**3242**	24.2	**3252**	24.68	**3362**	24.56	**3372**
		0.89	787	1	878	2.09	1771	2.51	2208	4.72	3952	4.23	3615	8.39	7132
63	28	28.85	**3012**			27.25	**3132**			26.93	**3252**			27.8	**3372**
		0.79	789			1.88	1776			4.25	3964			7.41	7132
56	31.5	33.48	**3012**			30.55	**3132**			30.29	**3252**	32.32	**3363**	30.24	**3372**
		0.7	791			1.68	1780			3.79	3977	5.4	5910	6.81	7132
49	35.5	35.73	**3012**			35.37	**3132**			35.51	**3252**	37.29	**3363**	34.18	**3372**
		0.64	793			1.46	1786			3.25	3993	4.73	5965	6.03	7132
44	40	40.32	**3012**			38.84	**3132**			39.2	**3252**	41.1	**3363**	39.36	**3372**
		0.57	794			1.33	1790			2.95	4002	4.3	6010	5.23	7132
39	45	45.36	**3012**			44.54	**3132**			42.98	**3252**	45.4	**3363**	43.98	**3372**
		0.51	796			1	1540			2.69	4010	3.97	6070	4.68	7132
35	50	49.16	**3013**			49.15	**3132**			50.19	**3252**	52.09	**3363**	48.68	**3372**
		0.53	796			1	1699			2.32	4024	3.46	6100	4.23	7132
31	56	55.04	**3013**			57.83	**3133**			55.7	**3253**	57.6	**3363**	57.57	**3373**
		0.47	798			0.69	1351			2.13	4032	3.13	6100	3.77	7383
28	63	64.07	**3013**			65.25	**3133**			64.2	**3253**	66.11	**3363**	66.1	**3373**
		0.4	800			0.63	1406			1.85	4038	2.73	6100	3.36	7525
25	71	69.09	**3013**			69.24	**3133**			68.61	**3253**	74.4	**3363**	74.44	**3373**
		0.37	801			0.61	1434			1.73	4038	2.42	6100	3.02	7611
22	80	81.29	**3013**			82.23	**3133**			77.86	**3253**	80.86	**3363**	80.87	**3373**
		0.32	803			0.54	1519			1.53	4038	2.2	6100	2.78	7611
19	90	91.08	**3013**			86.97	**3133**			86.48	**3253**	90.12	**3363**	90.1	**3373**
		0.29	804			0.52	1547			1.37	4038	2	6100	2.5	7611
18	100	102.43	**3013**			99.4	**3133**			98.24	**3253**	101.13	**3363**	101.13	**3373**
		0.25	806			0.48	1618			1.21	4038	1.78	6100	2.22	7611
16	112	115.16	**3013**			110.94	**3133**			109.3	**3253**	114.47	**3363**	114.47	**3373**
		0.23	807			0.45	1678			1.09	4038	1.57	6100	1.96	7611
14	125	129.81	**3013**			124.4	**3133**			122.96	**3253**	124.53	**3363**	124.53	**3373**
		0.2	808			0.41	1744			0.97	4038	1.45	6100	1.8	7611
12.5	140	146.18	**3013**			144.02	**3133**			144.13	**3253**	141	**3363**	140.74	**3373**
		0.18	809			0.37	1804			0.82	4038	1.28	6100	1.6	7611
10.9	160	160.8	**3013**			158.13	**3133**			159.1	**3253**	162.1	**3363**	162.06	**3373**
		0.17	810			0.34	1804			0.75	4038	1.1	6100	1.39	7611
9.7	180	181.46	**3013**			181.32	**3133**			174.46	**3253**	181	**3363**	181.09	**3373**
		0.14	811			0.29	1804			0.68	4038	1	6100	1.24	7611
8.8	200	204.14	**3013**			200.11	**3133**			203.72	**3253**	200.44	**3363**	200.44	**3373**
		0.13	812			0.27	1804			0.58	4038	0.9	6100	1.12	7611

Exact ratio	**Gear frame**
Input H.P.	Output torque

Motor RPM 1750 (Continued)

Exact Ratio rpm, HP and Torque

rpm	Nom. Ratio	Size of CbN Reducer									
		4		5		6		7		8	
156	11.2	10.78	**3482**	11.1	**3592**	10.9	**3602**	11	**3732**	11.1	**3842**
		33.16	12381	56.06	21544	84.1	31693	120	45637	190	72946
140	12.5	12.23	**3482**	12.43	**3592**	12.1	**3602**	12.2	**3732**	12.5	**3842**
		30.33	12844	52.23	22478	76.6	32045	120	50616	190	82147
125	14	13.5	**3482**	13.96	**3592**	13.5	**3602**	13.8	**3732**	13.8	**3842**
		28	13089	47.77	23128	69.6	32485	120	57254	190	90690
109	16	15.77	**3482**	15.17	**3592**	15.1	**3602**	15.7	**3732**	15.5	**3842**
		24.63	13452	45.28	23788	63.1	32942	120	65137	173	92629
97	18	17.61	**3482**	17.24	**3592**	17.7	**3602**	17.8	**3732**	17.5	**3842**
		22.21	13540	41.48	24761	54.9	33596	115.9	71326	163	98366
88	20	19.77	**3482**	19.07	**3592**	20	**3602**	20.1	**3732**	19.5	**3842**
		19.86	13601	36.51	24111	49.3	34090	104.3	72481	143	96389
78	22.4	22.37	**3482**	22.06	**3592**	21.9	**3602**	22.6	**3732**	22	**3842**
		17.64	13663	33.75	25783	45.5	34451	94.2	73605	120	91313
70	25	25.55	**3482**	24.08	**3592**	25.5	**3602**	25.2	**3732**	24.7	**3842**
		15.52	13727	31.03	25876	39.8	35089	85.8	75754	120	102519
63	28	27.42	**3482**	27.05	**3592**	27.7	**3602**	28.4	**3732**	27.6	**3842**
		14.49	13760	27.74	25987	37.1	35530	77.4	75999	105.4	100618
56	31.5	31.9	**3482**	30.14	**3592**	31.1	**3602**	31.8	**3732**	30.9	**3842**
		12.52	13826	25	26088	33.5	36021	67.7	74432	92.6	98968
49	35.5	34.62	**3482**	34.18	**3592**	34.5	**3602**	36	**3732**	34.6	**3842**
		11.56	13861	22.14	26199	30.6	36499	55.2	68705	66	78985
44	40	38.24	**3482**	39.23	**3592**	39	**3602**	40.2	**3732**	39.1	**3842**
		10.5	13901	19.37	26314	27.5	37080	47.1	65463	50.2	67890
39	45	42.46	**3482**	42.67	**3592**	42.8	**3602**	43.2	● **3733**		
		9.48	13941	17.85	26381	23.5	34774	44.5	65080		
35	50	50.34	**3482**	49.71	**3592**	48.1	**3602**	48.8	**3733**		
		8.03	14004	15.39	26496	21.4	35588	41.5	68560		
31	56	54.71	**3483**	56.63	**3593**	56.2	**3603**	55.4	**3733**		
		7.55	14033	11.64	22403	19.9	37861	38.5	72206		
28	63	63.93	**3483**	61.44	**3593**	63	**3603**	61.2	**3733**		
		6.48	14084	11.13	23239	17.9	38177	36.5	75622		
25	71	71.36	**3483**	69.82	**3593**	70.8	**3603**	68.3	**3733**		
		5.82	14118	10.32	24473	15.9	38109	34.2	79077		
22	80	80.13	**3483**	77.24	**3593**	76.9	**3603**	76.8	**3733**		
		5.2	14152	9.74	25562	14.7	38269	31.9	82938		
19	90	90.66	**3483**	89.35	**3593**	87.3	**3603**	89.9	**3733**		
		4.61	14187	8.63	26204	13	37608	28.1	85520		
18	100	103.54	**3483**	97.53	**3593**	96.6	**3603**	102	**3733**		
		4.04	14222	8.03	26602	11.5	37608	25.4	87707		
16	112	111.11	**3483**	109.55	**3593**	112	**3603**	111	**3733**		
		3.77	14240	7.25	26991	10.2	38674	23.6	88682		
14	125	129.28	**3483**	122.06	**3593**	122	**3603**	129	**3733**		
		3.25	14277	6.52	27049	9037	4E+07	20.34	88827		
13	140	140.31	**3483**	138.42	**3593**	137	**3603**	141	**3733**		
		3	14295	5.77	27115	8.37	38819	18.64	88975		
10.9	160	154.98	**3483**	158.87	**3593**	153	**3603**	158	**3733**		
		2.72	14317	5.03	27173	7.51	38899	16.66	89112		
9.7	180	172.09	**3483**	172.82	**3593**	173	**3603**	175	**3733**		
		2.45	14339	4.63	27212	6.65	38947	15.06	89221		
8.8	200	203.99	**3483**	201.34	**3593**	199	**3603**	198	**3733**		
		2.07	14373	3.99	27274	5.79	39006	13.33	89351		
7.8	224					216	**3603**	217	**3733**		
						5.33	38974	12.17	89403		
7.0	250					252	**3603**	244	**3733**		
						4.57	38986	10.82	89375		

If shaded, mechanical H.P. may exceed thermal H.P. limit.

Refer to page A-144.

● Alternative rating

48	**3732**
32.1	53271

Exact ratio	**Gear frame**
Input H.P.	Output torque

Browning

Speed Reducers

Motor RPM 1450

CbN SERIES 3000

Exact Ratio rpm, HP and Torque

rpm	Nom. Ratio	Size of CbN 3000 Reducer											
		0		1			2			3			
1160	1.25	1.24	**3001**	1.22	**3101**		1.23	**3201**		1.26	**3301**		
		2.54	134	5.62	292		10.54	552		12.7	684		
1036	1.4	1.46	**3001**	1.38	**3101**		1.45	**3201**		1.46	**3301**		
		2.54	158	5.61	330		9.74	602		11.82	750		
906	1.6	1.54	**3001**	1.56	**3101**		1.55	**3201**		1.61	**3301**		
		2.54	167	5.41	359		10.03	661		11.29	809		
806	1.8	1.83	**3001**	1.76	**3101**		1.75	**3201**		1.77	**3301**		
		2.54	198	5.2	390		9.31	694		12.63	854		
725	2	1.96	**3001**	2	**3101**		1.94	**3201**		2.04	**3301**		
		2.54	212	4.54	424		8.57	708		12	1095		
647	2.24	2.19	**3001**	2.29	**3101**		2.21	**3201**		2.25	**3301**		
		2.54	237	4.54	442		7.52	708		12	1151		
580	2.5	2.55	**3001**	2.58	**3101**		2.55	**3201**		2.58	**3301**		
		2.54	276	4.03	442		6.53	708		12.06	1327		
518	2.8	2.75	**3001**	2.74	**3101**		2.77	**3201**		2.91	**3301**		
		2.54	298	3.79	443		6.11	708		10.56	1309		
460	3.15	3.24	**3001**	3.25	**3101**		3.09	**3201**		3.16	**3301**		
		2.49	343	3.19	442		5.38	708		8.89	1198		
408	3.55	3.63	**3001**	3.44	**3101**		3.43	**3201**		3.52	**3301**		
		2.27	351	3.02	442		4.85	708		8.62	1293		
363	4	4.08	**3001**	3.93	**3101**		3.89	**3201**		3.95	**3301**		
		2.16	375	2.64	442		4.27	708		7.88	1327		
				3.91	**3122**		3.87	**3242**		3.96	**3362**		
				5.62	919		13.65	2150		21.74	3615		
322	4.5	4.58	**3001**	4.36	**3101**		4.33	**3201**		4.47	**3301**		
		1.87	365	2.37	442		3.83	708		6.96	1327		
				4.43	**3122**		4.57	**3242**		4.59	**3362**		
				5.56	1030		11.55	2208		18.85	3615		
290	5	5.17	**3001**	4.92	**3101**		4.88	**3201**		4.87	**3301**		
		0.84	178	2.11	442		3.41	708		6.4	1327		
				4.99	**3122**		4.88	**3242**		5.06	**3362**		
				5.4	1128		10.83	2208		17.1	3615		
259	5.6	5.82	**3001**	5.69	**3101**		5.71	**3201**		5.5	**3301**		
		0.84	201	1.82	442		2.91	708		5.62	1318		
				5.65	**3122**		5.51	**3242**		5.59	**3362**		
				5.2	1228		9.58	2208		15.48	3615		
230	6.3	6.4	**3001**	6.25	**3101**		6.31	**3201**		6.33	**3301**		
		0.81	221	1.66	442		2.63	708		4.92	1327		
				6.42	**3122**		6.1	**3242**		6.41	**3362**		
				4.66	1252		8.66	2208		13.49	3615		
204	7.1	7.22	**3001**	7.17	**3101**		6.92	**3201**		7.06	**3301**		
		0.81	249	0.81	247		2.4	708		4.4	1327		
		7.38	**3012**	7.34	**3122**		6.96	**3242**		7.09	**3362**		
		2.23	683	4.08	1252		7.59	2208		12.2	3615		
181	8	8.13	**3001**	7.91	**3101**		8.06	**3201**		7.83	**3301**		
		0.81	254	0.81	273		2.06	708		3.98	1327		
		8.16	**3012**	8.28	**3122**	7.57	**3132**	8.02	**3242**	7.63	**3252**	8.14	**3362**	7.85	**3372**
		2.25	766	3.62	1252	4.53	1435	6.59	2208	9	2871	10.63	3615	18.57	6091
161	9	8.59	**3012**	8.79	**3122**	8.57	**3132**	8.57	**3242**	9.02	**3252**	9.16	**3362**	9.06	**3372**
		2.14	768	3.41	1252	4.19	1501	6.17	2208	8.1	3054	9.44	3615	16.94	6410
145	10	10.2	**3012**	10.43	**3122**	9.67	**3132**	9.72	**3242**	9.62	**3252**	9.95	**3362**	9.98	**3372**
		1.81	772	2.87	1252	3.87	1564	5.43	2208	7.74	3113	8.69	3615	15.87	6618

Exact ratio	**Gear frame**
Input H.P.	Output torque

Motor RPM 1450 (Continued)

Exact Ratio rpm, HP and Torque

rpm	Nom. Ratio	Size of CbN 3000 Reducer									
		4		5		6		7		8	
1160	1.25	1.24	**3401**	1.28	**3501**						
		32.27	1703	54.01	2935						
1036	1.4	1.38	**3401**	1.46	**3501**						
		34.63	2043	52.14	3243						
906	1.6	1.56	**3401**	1.6	**3501**						
		35.06	2324	50.12	3417						
806	1.8	1.74	**3401**	1.79	**3501**						
		29.75	2200	48.68	3705						
725	2	1.97	**3401**	2	**3501**						
		30.46	2554	46.41	3955						
647	2.24	2.17	**3401**	2.25	**3501**						
		28.55	2643	43.98	4217						
580	2.5	2.54	**3401**	2.44	**3501**						
		25.69	2779	42.27	4397						
518	2.8	2.83	**3401**	2.77	**3501**						
		23.77	2870	40.49	4786						
460	3.15	3.18	**3401**	3.07	**3501**	3.21	**3602**				
		21.41	2903	37.67	4926	100	13394				
408	3.55	3.6	**3401**	3.55	**3501**	3.64	**3602**				
		18.92	2903	34.51	5221	100	15189				
363	4	4.11	**3401**	3.88	**3501**						
		16.57	2903	31.62	5221						
		3.91	**3482**	4.07	**3592**	3.88	**3602**				
		32.58	5324	56.21	9371	100	16190				
322	4.5	4.41	**3401**	4.35	**3501**						
		15.44	2903	28.15	5221						
		4.37	**3482**	4.66	**3592**	4.34	**3602**	4.39	**3732**		
		34.96	6388	55.21	10727	100	18109	100	18318		
290	5	5.13	**3401**	4.85	**3501**						
		13.27	2903	25.26	5221						
		4.91	**3482**	5.1	**3592**	4.91	**3602**	4.91	**3732**		
		35.39	7266	56.21	11760	100	20488	100	20488		
259	5.6	5.57	**3401**	5.5	**3501**						
		12.23	2903	21.78	5103						
		5.48	**3482**	5.7	**3592**	5.56	**3602**	5.63	**3732**	5.76	**3842**
		30.03	6877	48.35	11513	100	23200	100	23492	158	37991
230	6.3	6.15	**3401**	6.31	**3501**						
		11.07	2903	19.41	5221						
		6.21	**3482**	6.38	**3592**	6.15	**3602**	6.21	**3732**	6.36	**3842**
		30.75	7986	45.26	12071	100	25662	100	25912	158	41948
204	7.1	6.83	**3401**	6.87	**3501**						
		9.38	2730	17.84	5221						
		6.86	**3482**	7.18	**3592**	6.86	**3602**	7.04	**3732**	6.98	**3842**
		28.82	8264	41	12301	91.9	26306	100	33340	158	46037
181	8	8.1	**3401**	8	**3501**						
		7.91	2731	15.32	5221						
		7.69	**3482**	7.92	**3592**	7.71	**3602**	7.99	**3732**	8.15	**3842**
		32.58	10477	55.21	18253	88.3	28407	100	33340	158	53754
161	9	8.6	**3482**	9.07	**3592**	9.03	**3602**	9.09	**3732**	8.8	**3842**
		33.43	12023	55.21	20894	70.8	31825	100	37930	158	58041
145	10	9.67	**3482**	9.94	**3592**	9.63	**3602**	10.3	**3732**	10	**3842**
		31.03	12535	52.96	22009	79.2	31825	100	42979	158	65956

If shaded, mechanical H.P. may exceed thermal H.P. limit.
Refer to page A-144.

Exact ratio	**Gear frame**
Input H.P.	Output torque

Browning

Speed Reducers

CbN SERIES 3000

Motor RPM 1450 (Continued)

Exact Ratio rpm, HP and Torque

rpm	Nom. Ratio	Size of CbN 3000 Reducer											
		0		1			2			3			
129	11.2	10.92	**3012**	11.04	**3122**	10.94	**3132**	10.8	**3242**	10.88	**3252**	11.09	**3362**	11.03	**3372**
		1.69	774	2.71	1252	3.56	1630	4.89	2208	7.16	3255	7.8	3615	14.51	6685
116	12.5	12.23	**3012**	12.61	**3122**	12.43	**3132**	12.27	**3242**	12.04	**3252**	12.45	**3362**	12.65	**3372**
		1.52	776	2.37	1252	3.27	1700	4.31	2208	6.69	3365	6.95	3615	13.43	7101
104	14	14.24	**3012**	14.08	**3122**	14.2	**3132**	13.65	**3242**	13.72	**3252**	14.09	**3362**	13.98	**3372**
		1.31	779	2.13	1252	2.95	1753	3.87	2208	6.14	3522	6.14	3615	12.2	7127
91	16	15.35	**3012**	15.79	**3122**	16.03	**3132**	15.36	**3242**	15.82	**3252**	15.33	**3362**	16.05	**3372**
		1.22	781	1.9	1252	2.63	1759	3.44	2208	5.58	3689	5.64	3615	10.63	7132
81	18	18.06	**3012**	18.28	**3122**	17.01	**3132**	18	**3242**	16.9	**3252**	17.33	**3362**	18.08	**3372**
		1.04	784	1.64	1252	2.48	1763	2.93	2208	5.34	3772	4.99	3615	9.44	7132
73	20	20.24	**3012**	20.07	**3122**	20.2	**3132**	19.87	**3242**	19.18	**3252**	19.95	**3362**	19.64	**3372**
		0.93	786	1.49	1252	2.1	1770	2.66	2208	4.9	3928	4.34	3615	8.69	7132
65	22.4	22.76	**3012**	23.01	**3122**	21.36	**3132**	21.79	**3242**	21.31	**3252**	22.29	**3362**	21.89	**3372**
		0.83	788	0.81	778	1.99	1773	2.42	2208	4.45	3958	3.88	3615	7.8	7132
58	25	25.59	**3012**	25.39	**3122**	24.41	**3132**	25.44	**3242**	24.2	**3252**	24.68	**3362**	24.56	**3372**
		0.74	790	0.81	858	1.74	1779	2.08	2208	3.93	3972	3.51	3615	6.95	7132
52	28	28.85	**3012**			27.25	**3132**			26.93	**3252**			27.8	**3372**
		0.66	792			1.57	1783			3.54	3983			6.14	7132
46	31.5	33.48	**3012**			30.55	**3132**			30.29	**3252**	32.32	**3363**	30.24	**3372**
		0.58	794			1.4	1788			3.16	3995	4.6	6001	5.64	7132
41	35.5	35.73	**3012**			35.37	**3132**			35.51	**3252**	37.29	**3363**	34.18	**3372**
		0.53	795			1.21	1793			2.7	4010	3.99	6100	4.99	7132
36	40	40.32	**3012**			38.84	**3132**			39.2	**3252**	41.1	**3363**	39.36	**3372**
		0.47	797			1.11	1796			2.45	4018	3.62	6100	4.34	7132
32	45	45.36	**3012**			44.54	**3132**			42.98	**3252**	45.4	**3363**	43.98	**3372**
		0.42	798			0.81	1505			2.24	4026	3.28	6100	3.88	7132
29	50	49.16	**3013**			49.15	**3132**			50.19	**3252**	52.09	**3363**	48.68	**3372**
		0.4	796			0.81	1661			1.93	4038	2.86	6100	3.51	7132
26	56	55.04	**3013**			57.83	**3133**			55.7	**3253**	57.6	**3363**	57.57	**3373**
		0.35	798			0.73	1719			1.77	4038	2.58	6100	3.13	7389
23	63	64.07	**3013**			65.25	**3133**			64.2	**3253**	66.11	**3363**	66.1	**3373**
		0.3	800			0.67	1784			1.53	4038	2.25	6100	2.79	7525
20	71	69.09	**3013**			69.24	**3133**			68.61	**3253**	74.4	**3363**	74.44	**3373**
		0.28	801			0.64	1804			1.44	4038	2	6100	2.5	7611
18	80	81.29	**3013**			82.23	**3133**			77.86	**3253**	80.86	**3363**	80.86	**3373**
		0.24	803			0.54	1804			1.26	4038	1.84	6100	2.3	7611
16	90	91.08	**3013**			86.97	**3133**			86.48	**3253**	90.12	**3363**	90.12	**3373**
		0.22	804			0.51	1804			1.14	4038	1.65	6100	2.07	7611
15	100	102.43	**3013**			99.4	**3133**			98.24	**3253**	101.13	**3363**	101.13	**3373**
		0.19	806			0.44	1804			1	4038	1.47	6100	1.84	7611
13	112	115.16	**3013**			110.94	**3133**			109.3	**3253**	114.47	**3363**	114.47	**3373**
		0.17	807			0.4	1804			0.9	4038	1.3	6100	1.63	7611
12	125	129.81	**3013**			124.4	**3133**			122.96	**3253**	124.53	**3363**	124.53	**3373**
		0.15	808			0.23	1804			0.8	4038	1.19	6100	1.5	7611
10	140	146.18	**3013**			144.02	**3133**			144.13	**3253**	141	**3363**	140.74	**3373**
		0.13	809			0.21	1804			0.68	4038	1.06	6100	1.32	7611
9.1	160	160.8	**3013**			158.13	**3133**			159.1	**3253**	162.1	**3363**	162.06	**3373**
		0.12	810			0.19	1804			0.62	4038	0.92	6100	1.15	7611
8.1	180	181.46	**3013**			181.32	**3133**			174.46	**3253**	181	**3363**	181.09	**3373**
		0.11	811			0.18	1804			0.56	4038	0.82	6100	1.03	7611
7.3	200	204.14	**3013**			200.11	**3133**			203.72	**3253**	200.44	**3363**	200.44	**3373**
		0.1	812			0.17	1804			0.48	4038	0.74	6100	0.93	7611

Exact ratio	**Gear frame**
Input H.P.	Output torque

Motor RPM 1450 (Continued)

Exact Ratio rpm, HP and Torque

rpm	Nom. Ratio	Size of CbN Reducer									
		4		5		6		7		8	
129	11.2	10.78	**3482**	11.1	**3592**	10.9	**3602**	11	**3732**	11.1	**3842**
		28.86	13006	48.37	22434	71	32292	100	45900	158	73211
116	12.5	12.23	**3482**	12.43	**3592**	12.1	**3602**	12.2	**3732**	12.5	**3842**
		26.28	13433	45.25	23504	64.8	32717	100	50907	158	82445
104	14	13.5	**3482**	13.98	**3592**	13.5	**3602**	13.8	**3732**	13.8	**3842**
		23.91	13489	40.99	23956	58.8	33123	100	57583	158	91019
91	16	15.77	**3482**	15.17	**3592**	15.1	**3602**	15.7	**3732**	15.5	**3842**
		20.59	13574	38.91	24673	53.3	33583	100	65511	150	97308
81	18	17.61	**3482**	17.24	**3592**	17.7	**3602**	17.8	**3732**	17.5	**3842**
		18.52	13631	35.59	25646	46.4	34269	98.2	72937	141	103335
73	20	19.77	**3482**	19.07	**3592**	20	**3602**	20.1	**3732**	19.5	**3842**
		16.56	13688	30.63	24416	41.7	34800	88.4	74142	124	101258
65	22.4	22.37	**3482**	22.06	**3592**	21.9	**3602**	22.6	**3732**	22	**3842**
		14.7	13746	28.15	25956	38.5	35182	79.9	75348	100	91837
58	25	25.55	**3482**	24.08	**3592**	25.5	**3602**	25.2	**3732**	24.7	**3842**
		12.93	13806	25.88	26044	33.7	35858	72.8	76550	100	103108
52	28	27.42	**3482**	27.05	**3592**	27.7	**3602**	28.4	**3732**	27.6	**3842**	27.8	**3843**
		12.08	13836	23.12	26142	31.4	36293	65.7	77857	89.5	103117	100	113728
46	31.5	31.9	**3482**	30.14	**3592**	31.1	**3602**	31.8	**3732**	30.9	**3842**	**31.7**	**3843**
		10.42	13898	20.83	26239	28.40	36855	57.5	76298	77.4	99838	100	129260
41	35.5	34.62	**3482**	34.18	**3592**	34.5	**3602**	36	**3732**	34.6	**3842**	**35.3**	**3843**
		9.63	13930	18.44	26345	25.9	37285	46.9	70452	56.1	81028	90	129624
36	40	38.24	**3482**	39.23	**3592**	39	**3602**	40.2	**3732**	39.1	**3842**	**39.6**	**3843**
		8.74	13967	16.13	26451	23.2	37754	40.1	67265	42.7	69695	80	130003
32	45	42.46	**3482**	42.67	**3592**	42.8	**3602**	43.2	**3733**			**44.3**	**3843**
		7.89	14005	14.87	26513	20	35718	38.8	68484			72	130378
29	50	50.34	**3482**	49.71	**3592**	48.1	**3603**	48.8	**3733**			**50.7**	**3843**
		6.68	14063	12.81	26619	18.3	36729	36.1	71978			63	130841
26	56	54.71	**3483**	56.63	**3593**	56.2	**3603**	55.4	**3733**			**56**	**3843**
		6.28	14090	10.19	23664	16.6	38117	33.5	75828			57	131149
23	63	63.93	**3483**	61.44	**3593**	63	**3603**	61.2	**3733**			**63.4**	**3843**
		5.39	14137	9.75	24558	14.9	38353	31.8	79515			51	131564
20	71	71.36	**3483**	69.82	**3593**	70.8	**3603**	68.3	**3733**			**71.7**	**3843**
		4.84	14169	9.03	25850	13.3	38473	29.8	83159			45	131978
18	80	80.13	**3483**	77.24	**3593**	76.9	**3603**	76.8	**3733**			**81.9**	**3843**
		4.32	14201	8.49	26894	12.2	38332	27.8	87233			40	132408
16	90	90.66	**3483**	89.35	**3593**	87.3	**3603**	89.9	**3733**			**92.4**	**3843**
		3.83	14233	7.36	26982	10.8	38522	24.1	88522			35	132770
15	100	103.54	**3483**	97.53	**3593**	99.6	**3603**	102	**3733**			**104**	**3843**
		3.36	14265	6.76	27027	9.79	38640	21.28	88684			31	133136
13	112	111.11	**3483**	109.55	**3593**	112	**3603**	111	**3733**			**116**	**3843**
		3.13	14282	6.03	27080	8.47	38759	19.59	88844			28	133489
12	125	129.28	**3483**	122.06	**3593**	122	**3603**	129	**3733**			**130**	**3843**
		2.7	14316	5.42	27133	7.8	38880	16.92	89352			25	133854
10	140	140.31	**3483**	138.42	**3593**	137	**3603**	141	**3733**			146	**3843**
		2.49	14333	4.79	27195	6.96	38959	15.51	89352			22	134209
9.1	160	154.98	**3483**	158.87	**3593**	153	**3603**	158	**3733**			165	**3843**
		2.26	14353	4.18	27248	6.24	39008	13.85	89409			20	134209
8.1	180	172.09	**3483**	172.82	**3593**	173	**3603**	175	**3733**			184	**3843**
		2.04	14373	3.85	27283	5.52	39017	12.5	89392			18	134209
7.3	200	203.99	**3483**	201.34	**3593**	199	**3603**	198	**3733**			197	**3843**
		1.72	14404	3.31	27345	4.8	39027	11.05	89392			17	134209
6.5	224					216	**3603**	217	**3733**			221	**3843**
						4.42	39007	10.08	89370			15	134209
5.8	250					252	**3603**	244	**3733**				
						3.79	39022	8.97	89424				

If shaded, mechanical H.P. may exceed thermal H.P. limit.
Refer to page A-144.

Exact ratio	**Gear frame**
Input H.P.	Output torque

Browning

Speed Reducers

CbN SERIES 3000

Motor RPM 1160

Exact Ratio rpm, HP and Torque

rpm	Nom. Ratio	Size of CbN 3000 Reducer											
		0		1			2			3			
928	1.25	1.24	**3001**	1.22	**3101**		1.23	**3201**		1.26	**3301**		
		2.03	134	5.33	346		9.36	612		11.27	758		
829	1.4	1.46	**3001**	1.38	**3101**		1.45	**3201**		1.46	**3301**		
		2.03	158	4.97	365		8.64	668		10.72	832		
725	1.6	1.54	**3001**	1.56	**3101**		1.55	**3201**		1.61	**3301**		
		2.03	166	4.8	399		8.58	708		10.49	897		
644	1.8	1.83	**3001**	1.76	**3101**		1.75	**3201**		1.77	**3301**		
		2.03	198	4.61	432		7.59	708		10.02	947		
580	2	1.96	**3001**	2	**3101**		1.94	**3201**		2.04	**3301**		
		2.03	212	4.15	442		6.86	708		11.2	1214		
518	2.24	2.19	**3001**	2.29	**3101**		2.21	**3201**		2.25	**3301**		
		2.03	237	3.63	442		6.02	708		10.65	1276		
464	2.5	2.55	**3001**	2.58	**3101**		2.55	**3201**		2.58	**3301**		
		2.03	276	3.22	442		5.22	708		9.65	1327		
414	2.8	2.75	**3001**	2.74	**3101**		2.77	**3201**		2.91	**3301**		
		2.03	297	3.04	443		4.89	708		8.57	1327		
368	3.15	3.24	**3001**	3.25	**3101**		3.09	**3201**		3.16	**3301**		
		2.02	348	2.56	442		4.31	708		7.89	1327		
327	3.55	3.63	**3001**	3.44	**3101**		3.43	**3201**		3.52	**3301**		
		1.84	356	2.42	442		3.88	708		7.08	1327		
290	4	4.08	**3001**	3.93	**3101**		3.89	**3201**		3.95	**3301**		
		1.75	380	2.11	442		3.41	708		6.31	1327		
				3.91	**3122**		3.87	**3242**		3.96	**3362**		
				5.5	1122		10.92	2208		17.39	3615		
258	4.5	4.58	**3001**	4.36	**3101**		4.33	**3201**		4.47	**3301**		
		1.51	368	1.89	442		3.07	708		5.57	1327		
				4.43	**3122**		4.57	**3242**		4.59	**3362**		
				4.93	1139		9.24	2208		15.08	3615		
232	5	5.17	**3001**	4.92	**3101**		4.88	**3201**		4.87	**3301**		
		0.65	179	1.69	442		2.73	708		5.12	1327		
				4.99	**3122**		4.88	**3242**		5.06	**3362**		
				4.79	1247		8.66	2208		13.68	3615		
207	5.6	5.82	**3001**	5.69	**3101**		5.71	**3201**		5.5	**3301**		
		0.65	201	1.46	442		2.33	708		4.53	1327		
				5.65	**3122**		5.51	**3242**		5.59	**3362**		
				4.24	1252		7.67	2208		12.38	3615		
184	6.3	6.4	**3001**	6.25	**3101**		6.31	**3201**		6.33	**3301**		
		0.65	221	1.33	442		2.11	708		3.93	1327		
				6.42	**3122**		6.1	**3242**		6.41	**3362**		
				3.73	1252		6.92	2208		10.79	3615		
163	7.1	7.22	**3001**	7.17	**3101**		6.92	**3201**		7.06	**3301**		
		0.65	249	0.65	248		1.92	708		3.52	1327		
		7.38	**3012**	7.34	**3122**		6.96	**3242**		7.09	**3362**		
		2.03	781	3.26	1252		6.08	2208		9.76	3615		
145	8	8.13	**3001**	7.91	**3101**		8.06	**3201**		7.83	**3301**		
		0.59	254	0.65	274		1.65	708		3.18	1327		
		8.16	**3012**	8.28	**3122**	7.57	**3132**	8.02	**3242**	7.63	**3252**	8.14	**3362**	7.85	**3372**
		1.82	775	2.89	1252	3.98	1575	5.27	2208	7.9	3151	8.5	3615	16.3	6685
129	9	8.59	**3012**	8.79	**3122**	8.57	**3132**	8.57	**3242**	9.02	**3252**	9.16	**3362**	9.06	**3372**
		1.73	775	2.73	1252	3.68	1648	4.93	2208	7.11	3352	7.55	3615	14.87	7035
116	10	10.2	**3012**	10.43	**3122**	9.67	**3132**	9.72	**3242**	9.62	**3252**	9.95	**3362**	9.98	**3372**
		1.46	777	2.3	1252	3.4	1716	4.35	2208	6.8	3417	6.95	3615	13.66	7120
104	11.2	10.92	**3012**	11.04	**3122**	10.94	**3132**	10.8	**3242**	10.88	**3252**	11.09	**3362**	11.03	**3372**
		1.37	780	2.17	1252	3.07	1756	3.91	2208	6.29	3573	6.24	3615	12.38	7132

Exact ratio	**Gear frame**
Input H.P.	Output torque

Motor RPM 1160 (Continued)

Exact Ratio rpm, HP and Torque

rpm	Nom. Ratio	Size of CbN Reducer									
		4		5		6		7		8	
928	**1.25**	1.24	**3401**	1.26	**3501**						
		26.45	1744	44.17	2999						
829	**1.4**	1.38	**3401**	1.46	**3501**						
		28.35	2091	44.17	3432						
725	**1.6**	1.56	**3401**	1.6	**3501**						
		28.7	2378	43.14	3677						
644	**1.8**	1.74	**3401**	1.79	**3501**						
		24.33	2249	41.91	3986						
580	**2**	1.97	**3401**	2	**3501**						
		24.9	2610	39.95	4256						
518	**2.24**	2.17	**3401**	2.25	**3501**						
		23.33	2699	37.85	4537						
464	**2.5**	2.54	**3401**	2.44	**3501**						
		20.96	2835	36.38	4731						
414	**2.8**	2.83	**3401**	2.77	**3501**						
		19.23	2903	34.85	5150						
368	**3.15**	3.18	**3401**	3.07	**3501**	3.21	**3602**				
		17.13	2903	31.94	5221	80	13394				
327	**3.55**	3.6	**3401**	3.55	**3501**	3.64	**3602**				
		15.14	2903	27.61	5221	80	15189				
290	**4**	4.11	**3401**	3.88	**3501**						
		13.26	2903	25.3	5221						
		3.91	**3482**	4.07	**3592**	3.88	**3602**				
		26.69	5452	44.17	9372	80	16190				
258	**4.5**	4.41	**3401**	4.35	**3601**	4.6	**2602**				
		12.35	2903	22.52	5221	80	11980				
		4.37	**3482**	4.66	**3592**	4.34	**3602**	4.39	**3732**		
		28.62	6538	44.17	10728	80	18109	80	18318		
232	**5**	5.13	**3401**	4.85	**3501**						
		10.62	2903	20.21	5221						
		4.91	**3482**	5.1	**3592**	4.91	**3602**	4.91	**3732**		
		28.96	7433	44.17	11761	80	20488	80	20488		
207	**5.6**	5.57	**3401**	5.5	**3501**						
		9.78	2903	17.42	5101						
		5.48	**3482**	5.7	**3592**	5.56	**3602**	5.63	**3732**	5.76	**3842**
		24.56	7031	39.63	11796	80	23200	80	23492	126	37870
184	**6.3**	6.15	**3401**	6.31	**3501**						
		8.86	2903	15.53	5221						
		6.21	**3482**	6.38	**3592**	6.15	**3602**	6.21	**3732**	6.36	**3842**
		25.13	8159	37.06	12354	80	25662	80	25912	126	41815
163	**7.1**	6.83	**3401**	6.87	**3501**						
		7.5	2729	14.27	5221						
		6.86	**3482**	7.18	**3592**	6.86	**3602**	7.04	**3732**	**6.98**	**3842**
		23.55	8439	33.56	12584	75.1	26871	80	29376	126	45892
145	**8**	8.1	**3401**	8	**3501**						
		6.42	2769	12.25	5221						
		7.69	**3482**	7.92	**3592**	7.71	**3602**	7.99	**3732**	8.15	**3842**
		26.69	10729	44.17	18254	72.1	28995	80	33340	126	53584
129	**9**	8.6	**3482**	9.07	**3592**	9.03	**3602**	9.09	**3732**	8.8	**3842**
		28.62	12867	44.17	20895	57.6	27129	80	37930	126	57858
116	**10**	9.67	**3482**	9.94	**3592**	9.63	**3602**	10.3	**3732**	10	**3842**
		26.68	13476	44.17	22907	65.8	33051	80	42979	126	65747
104	**11.2**	10.78	**3482**	11.1	**3592**	10.9	**3602**	11	**3732**	11.1	**3842**
		24.03	13536	39.63	22973	59	33543	80	45900	126	72979

If shaded, mechanical H.P. may exceed thermal H.P. limit.
Refer to page A-144.

Exact ratio	**Gear frame**
Input H.P.	Output torque

Browning

Speed Reducers

CbN SERIES 3000

Motor RPM 1160 (Continued)

Exact Ratio rpm, HP and Torque

rpm	Nom. Ratio	Size of CbN 3000 Reducer											
		0		1			2			3			
93	12.5	12.23	**3012**	12.61	**3122**	12.43	**3132**	12.27	**3242**	12.04	**3252**	12.45	**3362**	12.65	**3372**
		1.22	776	1.9	1252	2.71	1762	3.44	2208	5.87	3693	5.56	3615	10.79	7132
83	14	14.24	**3012**	14.08	**3122**	14.2	**3132**	13.65	**3242**	13.72	**3252**	14.09	**3362**	13.98	**3372**
		1.06	787	1.7	1252	2.38	1769	3.1	2208	5.39	3866	4.91	3615	9.76	7132
73	16	15.35	**3012**	15.79	**3122**	16.03	**3132**	15.36	**3242**	15.82	**3252**	15.33	**3362**	16.05	**3372**
		0.98	785	1.52	1252	2.12	1774	2.75	2208	4.79	3960	4.51	3615	8.5	7132
64	18	18.06	**3012**	18.28	**3122**	17.01	**3132**	18	**3242**	16.9	**3252**	17.33	**3362**	18.08	**3372**
		0.84	791	1.31	1252	2	1776	2.35	2208	4.49	3967	3.99	3615	7.55	7132
58	20	20.24	**3012**	20.07	**3122**	20.2	**3132**	19.87	**3242**	19.18	**3252**	19.95	**3362**	19.64	**3372**
		0.75	792	1.19	1252	1.69	1784	2.13	2208	3.97	3980	3.47	3615	6.95	7132
52	22.4	22.76	**3012**	23.01	**3122**	21.36	**3132**	21.79	**3242**	21.31	**3252**	22.29	**3362**	21.89	**3372**
		0.67	795	0.65	780	1.6	1786	1.94	2208	3.59	3991	3.1	3615	6.24	7132
46	25	25.59	**3012**	25.39	**3122**	24.41	**3132**	25.44	**3242**	24.2	**3252**	24.68	**3362**	24.56	**3372**
		0.59	787	0.65	861	1.4	1791	1.66	2208	3.17	4003	2.8	3615	5.56	7132
41	28	28.85	**3012**			27.25	**3132**			26.93	**3252**			27.8	**3372**
		0.53	798			1.26	1795			2.85	4013			4.91	7132
37	31.5	33.48	**3012**			30.55	**3132**			30.29	**3252**	31.84	**3363**	30.24	**3372**
		0.47	821			1.13	1799			2.54	4023	3.93	6416	4.51	7132
33	35.5	35.73	**3012**			35.37	**3132**			35.51	**3252**	35.18	**3363**	34.18	**3372**
		0.43	801			0.98	1803			2.18	4036	3.4	6100	3.99	7132
29	40	40.32	**3012**			38.84	**3132**			39.2	**3252**	41.1	**3363**	39.36	**3372**
		0.38	799			0.89	1804			1.97	4038	2.9	6100	3.47	7132
26	45	45.36	**3012**			44.54	**3132**			42.98	**3252**	45.4	**3363**	43.98	**3372**
		0.34	804			0.65	1510			1.8	4038	2.63	6100	3.1	7132
23	50	49.16	**3013**			49.15	**3132**			50.19	**3252**	52.09	**3363**	48.68	**3372**
		0.32	803			0.65	1666			1.54	4038	2.29	6100	2.8	7132
21	56	55.04	**3013**			57.83	**3133**			55.7	**3253**	57.6	**3363**	57.57	**3373**
		0.28	787			0.54	1592			1.41	4038	2.07	6100	2.5	7389
18	63	64.07	**3013**			65.25	**3133**			64.2	**3253**	66.11	**3363**	66.1	**3373**
		0.24	785			0.5	1657			1.23	4038	1.9	6100	2.18	7389
16	71	69.09	**3013**			69.24	**3133**			68.61	**3253**	74.4	**3363**	74.44	**3373**
		0.23	812			0.48	1690			1.15	4038	1.7	6100	2	7611
15	80	81.29	**3013**			82.23	**3133**			77.86	**3253**	80.86	**3363**	80.86	**3373**
		0.19	789			0.42	1790			1.01	4038	1.52	6100	1.84	7611
13	90	91.08	**3013**			86.97	**3133**			86.48	**3253**	90.12	**3363**	90.12	**3373**
		0.17	791			0.4	1804			0.91	4038	1.34	6100	1.65	7611
12	100	102.43	**3013**			99.4	**3133**			98.24	**3253**	101.13	**3363**	101.13	**3373**
		0.15	785			0.35	1804			0.8	4038	1.23	6100	1.47	7611
10	112	115.16	**3013**			110.94	**3133**			109.3	**3253**	114.47	**3363**	114.47	**3373**
		0.14	823			0.32	1804			0.72	4038	1.09	6100	1.3	7611
9.3	125	129.81	**3013**			124.4	**3133**			122.96	**3253**	124.53	**3363**	124.53	**3373**
		0.12	796			0.28	1804			0.64	4038	0.96	6100	1.19	7611
8.3	140	146.18	**3013**			144.02	**3133**			144.13	**3253**	141	**3363**	140.74	**3373**
		0.11	821			0.24	1804			0.55	4038	0.85	6100	1.06	7611
7.3	160	160.8	**3013**			158.13	**3133**			159.1	**3253**	162.1	**3363**	162.06	**3373**
		0.1	821			0.22	1804			0.5	4038	0.77	6100	0.92	7611
6.4	180	181.46	**3013**			181.32	**3133**			174.46	**3253**	181	**3363**	181.09	**3373**
		0.09	834			0.19	1804			0.45	4038	0.66	6100	0.82	7611
5.8	200	204.14	**3013**			200.11	**3133**			203.72	**3253**	200.44	**3363**	200.44	**3373**
		0.08	834			0.18	1804			0.39	4038	0.59	6100	0.74	7611

Exact ratio	**Gear frame**
Input H.P.	Output torque

Motor RPM 1160 (Continued)

Exact Ratio rpm, HP and Torque

rpm	Nom. Ratio	Size of CbN Reducer											
		4		5		6		7		8			
93	12.5	12.23	**3482**	12.43	**3592**	12.1	**3602**	12.2	**3732**	12.5	**3842**		
		21.29	13603	37.06	24062	53.8	33954	80	50907	126	82184		
83	14	13.5	**3482**	13.98	**3592**	13.5	**3602**	13.8	**3732**	13.8	**3842**		
		19.36	13653	33.55	24504	48.9	34433	80	57583	126	90731		
73	16	15.77	**3482**	15.17	**3592**	15.1	**3602**	15.7	**3732**	15.5	**3842**		
		16.66	13728	31.82	25221	44.4	34969	80	65511	126	101908		
64	18	17.61	**3482**	17.24	**3592**	17.7	**3602**	17.8	**3732**	17.5	**3842**		
		14.98	13778	28.89	26018	38.6	35636	80	74274	124	113430		
58	20	19.77	**3482**	19.07	**3592**	20	**3602**	20.1	**3732**	19.5	**3842**		
		13.39	13829	25.02	24929	34.7	36198	73.09	76627	109	111149		
52	22.4	22.37	**3482**	22.06	**3592**	21.9	**3602**	22.6	**3732**	22	**3842**		
		11.88	13880	22.77	26239	32.1	36667	66.08	77894	80.0	91837		
46	25	25.55	**3482**	24.08	**3592**	25.5	**3602**	25.2	**3732**	24.7	**3842**		
		10.44	13932	20.91	26310	28.1	37374	60.9	80047	80.0	103108		
41	28	27.42	**3482**	27.05	**3592**	27.7	**3602**	28.4	**3732**	27.6	**3842**	27.8	**3843**
		9.75	13959	18.69	26407	26.2	37854	55	81472	74.5	107293	80.0	113728
37	31.5	31.9	**3482**	30.14	**3592**	31.1	**3602**	31.8	**3732**	30.9	**3842**	31.7	**3843**
		8.41	14014	16.82	26487	23.40	37958	48	79615	62.8	101257	80.0	129683
33	35.5	34.62	**3482**	34.18	**3592**	34.5	**3603**	36	**3732**	34.6	**3842**	35.3	**3843**
		7.76	14042	14.88	26575	21.1	37969	39.2	73606	46.9	84675	72.38	130655
29	40	38.24	**3482**	39.23	**3592**	39	**3602**	40.2	**3732**	39.1	**3842**	39.6	**3843**
		7.04	14074	13.02	26673	18.7	38039	33.5	70242	35.8	73041	64.71	131032
26	45	42.46	**3482**	42.67	**3592**	42.8	**3602**	43.2	**3733**			44.3	**3843**
		6.36	14107	11.99	26726	16.8	37504	34	75015			58.01	131403
23	50	50.34	**3482**	49.71	**3592**	48.1	**3602**	48.8	**3733**			50.7	**3843**
		5.38	14158	10.33	26823	15.3	38385	31.8	79256			50.85	131844
21	56	54.71	**3483**	56.63	**3593**	55.4	**3603**	55.4	**3733**			56	**3843**
		5.06	14181	9.02	26186	13.4	38461	29.5	83467			46.15	132171
18	63	63.93	**3483**	61.44	**3593**	63	**3603**	61.2	**3733**			63.4	**3843**
		4.34	14223	8.56	26947	12	38610	27.9	87204			40.89	132577
16	71	71.36	**3483**	69.82	**3593**	70.8	**3603**	68.3	**3733**			71.7	**3843**
		3.9	14250	7.55	27009	10.7	38690	25.4	88601			36.27	132968
15	80	80.13	**3483**	77.24	**3593**	76.9	**3603**	76.8	**3733**			81.9	**3843**
		3.48	14278	6.84	27062	9.86	38725	22.62	88723			31.85	133374
13	90	90.66	**3483**	89.35	**3593**	87.3	**3603**	89.9	**3733**			92.4	**3843**
		3.08	14306	5.92	27133	8.71	38834	19.4	89073			28.31	133746
12	100	103.54	**3483**	97.53	**3593**	96.6	**3603**	102	**3733**			104	**3843**
		2.7	14334	5.44	27177	7.89	38926	17.14	89288			25.22	134103
10	112	111.11	**3483**	109.55	**3593**	112	**3603**	111	**3733**			116	**3843**
		2.52	14349	4.85	27221	6.82	39011	15.77	89400			22.63	134209
9.3	125	129.28	**3483**	122.06	**3593**	122	**3603**	129	**3733**			130	**3843**
		2.17	14378	4.36	27265	6.26	39005	13.57	89403			20.19	134209
8.3	140	140.31	**3483**	138.42	**3593**	137	**3603**	141	**3733**			146	**3843**
		2	14393	3.85	27319	5.57	38992	12.4	89404			17.98	134209
7.3	160	154.98	**3483**	158.87	**3593**	153	**3603**	158	**3733**			165	**3843**
		1.81	14410	3.36	27372	4.99	38992	11.08	89409			15.91	134209
6.4	180	172.09	**3483**	172.82	**3593**	199	**3603**	175	**3733**			184	**3843**
		1.64	14428	3.09	27398	3.84	39027	10	89390			14.26	134209
5.8	200	203.99	**3483**	201.34	**3593**	216	**3603**	198	**3733**			197	**3843**
		1.38	14455	2.66	27451	3.54	39052	8.84	89392			13.32	134209
5.2	224					216	**3603**	217	**3733**			221	**3843**
						3.54	39051	8.06	89325			11.88	134209
4.6	250					252	**3603**	244	**3733**				
						3.03	38996	7.17	89349				

If shaded, mechanical H.P. may exceed thermal H.P. limit.
Refer to page A-144.

Exact ratio	**Gear frame**
Input H.P.	Output torque

Browning

Speed Reducers

Motor RPM 870

CbN SERIES 3000

Exact Ratio rpm, HP and Torque

rpm	Nom. Ratio	Size of CbN 3000 Reducer											
		0		1			2			3			
696	1.25	1.24	**3001**	1.22	**3101**		1.23	**3201**		1.26	**3301**		
		1.52	134	4.27	370		7.5	654		9.03	810		
621	1.4	1.46	**3001**	1.38	**3101**		1.45	**3201**		1.46	**3301**		
		1.52	158	3.9	391		6.87	708		8.6	890		
544	1.6	1.54	**3001**	1.56	**3101**		1.55	**3201**		1.61	**3301**		
		1.52	166	3.85	425		6.44	708		8.41	959		
483	1.8	1.83	**3001**	1.76	**3101**		1.75	**3201**		1.77	**3301**		
		1.52	197	3.54	442		5.7	708		8.6	1083		
435	2	1.96	**3001**	2	**3101**		1.94	**3201**		2.04	**3301**		
		1.52	212	3.12	442		5.14	708		8.98	1298		
388	2.24	2.19	**3001**	2.29	**3101**		2.21	**3201**		2.25	**3301**		
		1.52	237	2.73	442		4.51	708		8.31	1327		
348	2.5	2.55	**3001**	2.58	**3101**		2.55	**3201**		2.58	**3301**		
		1.52	276	2.42	442		3.92	708		7.24	1327		
311	2.8	2.75	**3001**	2.74	**3101**		2.77	**3201**		2.91	**3301**		
		1.52	298	2.28	443		3.66	708		6.42	1327		
276	3.15	3.24	**3001**	3.25	**3101**		3.09	**3201**		3.16	**3301**		
		1.52	350	1.92	442		3.23	708		5.91	1327		
245	3.55	3.63	**3001**	3.44	**3101**		3.43	**3201**		3.52	**3301**		
		1.39	351	1.81	442		2.91	708		5.31	1327		
218	4	4.08	**3001**	3.93	**3101**		3.89	**3201**		3.95	**3301**		
		1.32	375	1.59	442		2.56	708		4.73	1327		
				3.91	**3122**		3.87	**3242**		3.96	**3362**		
				4.41	1202		8.19	2208		13.04	3615		
193	4.5	4.58	**3001**	4.36	**3101**		4.33	**3201**		4.47	**3301**		
		1.14	365	1.42	442		2.3	708		4.18	1327		
				4.43	**3122**		4.57	**3242**		4.59	**3362**		
				3.96	1221		6.93	2208		11.31	3615		
174	5	5.17	**3001**	4.92	**3101**		4.88	**3201**		4.87	**3301**		
		0.49	178	1.27	442		2.04	708		3.84	1327		
				4.99	**3122**		4.88	**3242**		5.06	**3362**		
				3.6	1252		6.5	2208		10.26	3615		
155	5.6	5.82	**3001**	5.69	**3101**		5.71	**3201**		5.5	**3301**		
		0.49	201	1.09	442		1.74	708		3.4	1327		
				5.65	**3122**		5.51	**3242**		5.59	**3362**		
				3.18	1252		5.75	2208		9.29	3615		
138	6.3	6.4	**3001**	6.25	**3101**		6.31	**3201**		6.33	**3301**		
		0.49	221	1	442		1.58	708		2.95	1327		
				6.42	**3122**		6.1	**3242**		6.41	**3362**		
				2.8	1252		5.19	2208		8.09	3615		
122	7.1	7.22	**3001**	7.17	**3101**		6.92	**3201**		7.06	**3301**		
		0.49	249	0.49	248		1.44	708		2.64	1327		
		7.38	**3012**	7.34	**3122**		6.96	**3242**		7.09	**3362**		
		1.52	733	2.45	1252		4.56	2208		7.32	3615		
109	8	8.13	**3001**	7.91	**3101**		8.06	**3201**		7.83	**3301**		
		0.45	254	0.49	274		1.23	708		2.39	1327		
		8.16	**3012**	8.28	**3122**	7.57	**3132**	8.02	**3242**	7.63	**3252**	8.14	**3362**	7.85	**3372**
		1.37	779	2.17	1252	3.17	1673	3.95	2208	6.29	3151	6.38	3615	13.01	7100
97	9	8.59	**3012**	8.79	**3122**	8.57	**3132**	8.57	**3242**	9.02	**3252**	9.16	**3362**	9.06	**3372**
		1.3	780	2.05	1252	2.93	1750	3.7	2208	5.67	3352	5.66	3615	11.31	7132
87	10	10.2	**3012**	10.43	**3122**	9.67	**3132**	9.72	**3242**	9.62	**3252**	9.95	**3362**	9.98	**3372**
		1.1	783	1.72	1252	2.61	1760	3.26	2208	5.41	3417	5.21	3615	10.26	7132
78	11.2	10.92	**3012**	11.04	**3122**	10.94	**3132**	10.8	**3242**	10.88	**3252**	11.09	**3362**	11.03	**3372**
		1.03	784	1.63	1252	2.32	1766	2.93	2208	5.01	3573	4.68	3615	9.29	7132

Exact ratio	**Gear frame**
Input H.P.	Output torque

Motor RPM 870 (Continued)

Exact Ratio rpm, HP and Torque

rpm	Nom. Ratio	Size of CbN Reducer									
		4		5		6		7		8	
696	**1.25**	1.24	**3401**	1.28	**3501**						
		20.12	1770	33.12	2998						
621	**1.4**	1.38	**3401**	1.46	**3501**						
		21.57	2121	33.12	3432						
544	**1.6**	1.56	**3401**	1.6	**3501**						
		21.82	2411	32.35	3677						
483	**1.8**	1.74	**3401**	1.79	**3501**						
		18.49	2279	31.43	3986						
435	**2**	1.97	**3401**	2	**3501**						
		18.92	2644	29.96	4256						
388	**2.24**	2.17	**3401**	2.25	**3501**						
		17.72	2734	28.39	4537						
348	**2.5**	2.54	**3401**	2.44	**3501**						
		15.92	2870	27.29	4731						
311	**2.8**	2.83	**3401**	2.77	**3501**						
		14.42	2903	25.15	4956						
276	**3.15**	3.18	**3401**	3.07	**3501**	3.21	**3602**				
		12.84	2903	23.95	5221	60	13394				
245	**3.55**	3.6	**3401**	3.55	**3501**	3.64	**3602**				
		11.35	2903	20.71	5221	60	15189				
218	**4**	4.11	**3401**	3.88	**3501**						
		9.94	2903	18.97	5221						
		3.91	**3482**	4.07	**3592**	3.88	**3602**				
		20.31	5532	33.12	9370	60	16190				
193	**4.5**	4.41	**3401**	4.35	**3501**						
		9.26	2903	16.89	5221						
		4.37	**3482**	4.66	**3592**	4.34	**3602**	4.39	**3732**		
		21.78	6632	33.12	10725	60	18109	60	18318		
174	**5**	5.13	**3401**	4.85	**3501**						
		7.96	2903	15.16	5221						
		4.91	**3482**	5.1	**3592**	4.91	**3602**	4.91	**3732**		
		22.03	7537	33.12	11758	60	20488	60	20488		
155	**5.6**	5.57	**3401**	5.5	**3501**						
		7.34	2903	13.07	5103						
		5.48	**3482**	5.7	**3592**	5.56	**3602**	5.63	**3732**	5.76	**3842**
		18.67	7126	30.16	11968	60	23200	60	23492	95	37900
138	**6.3**	6.15	**3401**	6.31	**3501**						
		6.64	2903	11.65	5221						
		6.21	**3482**	6.38	**3592**	6.15	**3602**	6.21	**3732**	6.36	**3842**
		19.1	8267	28.19	12531	60	25662	60	25912	95	42036
123	**7.1**	6.83	**3401**	6.87	**3501**						
		5.63	2731	10.17	5221						
		6.86	**3482**	7.18	**3592**	6.86	**3602**	7.24	**3732**	6.98	**3842**
		17.89	8547	25.52	12761	57.4	27384	71.1	29376	95	46134
109	**8**	8.1	**3401**	8	**3501**						
		4.85	2792	9.19	5221						
		7.69	**3482**	7.92	**3592**	7.71	**3602**	7.99	**3732**	8.15	**3842**
		20.31	10887	33.12	18250	55	29490	60	33340	95	53868
97	**9**	8.6	**3482**	9.07	**3592**	9.03	**3602**	9.09	**3732**	8.8	**3842**
		21.78	13051	33.12	20890	43.9	27569	60	37930	95	58164
87	**10**	9.67	**3482**	9.94	**3592**	9.63	**3602**	10.3	**3732**	10	**3842**
		20.18	13589	33.12	22902	51.3	34356	60	42979	95	66095
78	**11.2**	10.78	**3482**	11.1	**3592**	10.9	**3602**	11	**3732**	11.1	**3842**
		18.17	13645	30.16	23310	46	34870	60	45900	95.0	73366

If shaded, mechanical H.P. may exceed thermal H.P. limit.
Refer to page A-144.

Exact ratio	**Gear frame**
Input H.P.	Output torque

Browning

Speed Reducers

CbN SERIES 3000

Motor RPM 870 (Continued)

Exact Ratio rpm, HP and Torque

rpm	Nom. Ratio	Size of CbN 3000 Reducer											
		0		1			2			3			
70	12.5	12.23	**3012**	12.61	**3122**	12.43	**3132**	12.27	**3242**	12.04	**3252**	12.45	**3362**	12.65	**3372**
		0.92	786	1.42	1252	2.05	1772	2.58	2208	4.68	3923	4.17	3615	8.09	7132
62	14	14.24	**3012**	14.08	**3122**	14.2	**3132**	13.65	**3242**	13.72	**3252**	14.09	**3362**	13.98	**3372**
		0.8	789	1.28	1252	1.8	1777	2.32	2208	4.15	3866	3.68	3615	7.32	7132
54	16	15.35	**3012**	15.79	**3122**	16.03	**3132**	15.36	**3242**	15.82	**3252**	15.33	**3362**	16.05	**3372**
		0.74	790	1.14	1252	1.6	1782	2.06	2208	3.61	3960	3.39	3615	6.38	7132
48	18	18.06	**3012**	18.28	**3122**	17.01	**3132**	18	**3242**	16.9	**3252**	17.33	**3362**	18.08	**3372**
		0.63	793	0.98	1252	1.51	1785	1.76	2208	3.39	3967	3	3615	5.66	7132
44	20	20.24	**3012**	20.07	**3122**	20.2	**3132**	19.87	**3242**	19.18	**3252**	19.95	**3362**	19.64	**3372**
		0.56	794	0.9	1252	1.27	1791	1.6	2208	2.99	3980	2.6	3615	5.21	7132
39	22.4	22.76	**3012**	23.01	**3122**	21.36	**3132**	21.79	**3242**	21.31	**3252**	22.29	**3362**	21.89	**3372**
		0.5	796	0.49	780	1.21	1793	1.45	2208	2.7	3991	2.33	3615	4.68	7132
35	25	25.59	**3012**	25.39	**3122**	24.41	**3132**	25.44	**3242**	24.2	**3252**	24.68	**3362**	24.56	**3372**
		0.45	798	0.49	861	1.06	1798	1.25	2208	2.38	4003	2.1	3615	4.17	7132
31	28	28.85	**3012**			27.25	**3132**			26.93	**3252**			27.8	**3372**
		0.4	799			0.95	1801			2.15	4013			3.68	7132
28	31.5	33.48	**3012**			30.55	**3132**			30.29	**3252**	31.84	**3363**	30.24	**3372**
		0.35	800			0.85	1804			1.91	4023	2.81	6100	3.39	7132
25	35.5	35.73	**3012**			35.37	**3132**			35.51	**3252**	35.18	**3363**	34.18	**3372**
		0.32	800			0.73	1804			1.63	4036	2.54	6100	3	7132
22	40	40.32	**3012**			38.84	**3132**			39.2	**3252**	41.1	**3363**	39.36	**3372**
		0.28	800			0.67	1804			1.48	4038	2.21	6100	2.6	7132
19	45	45.36	**3012**			44.54	**3132**			42.98	**3252**	45.4	**3363**	43.98	**3372**
		0.25	800			0.59	1804			1.35	4038	2	6100	2.33	7132
17	50	49.16	**3013**			49.15	**3132**			50.19	**3252**	52.09	**3363**	48.68	**3372**
		0.24	796			0.52	1804			1.16	4038	1.74	6100	2.1	7132
16	56	55.04	**3013**			57.83	**3133**			55.7	**3253**	57.6	**3363**	57.57	**3373**
		0.21	798			0.46	1804			1.06	4038	1.55	6100	1.88	7389
14	63	64.07	**3013**			65.25	**3133**			64.2	**3253**	66.11	**3363**	66.1	**3373**
		0.18	800			0.4	1804			0.92	4038	1.43	6100	1.64	7389
12	71	69.09	**3013**			69.24	**3133**			68.61	**3253**	74.4	**3363**	74.44	**3373**
		0.17	801			0.38	1804			0.86	4038	1.28	6100	1.5	7611
11	80	81.29	**3013**			82.23	**3133**			77.86	**3253**	80.86	**3363**	80.86	**3373**
		0.14	803			0.32	1804			0.76	4038	1.14	6100	1.38	7611
10	90	91.08	**3013**			86.97	**3133**			86.48	**3253**	90.12	**3363**	90.12	**3373**
		0.13	804			0.3	1804			0.68	4038	1.01	6100	1.24	7611
9	100	102.43	**3013**			99.4	**3133**			98.24	**3253**	101.13	**3363**	101.13	**3373**
		0.12	806			0.27	1804			0.6	4038	0.93	6100	1.1	7611
8	112	115.16	**3013**			110.94	**3133**			109.3	**3253**	114.47	**3363**	114.47	**3373**
		0.1	807			0.24	1804			0.54	4038	0.82	6100	0.97	7611
7	125	129.81	**3013**			124.4	**3133**			122.96	**3253**	124.53	**3363**	124.53	**3373**
		0.09	808			0.16	1380			0.48	4038	0.71	6100	0.89	7611
6.2	140	146.18	**3013**			144.02	**3133**			144.13	**3253**	141	**3363**	140.74	**3373**
		0.08	809			0.15	1438			0.41	4038	0.64	6100	0.79	7611
5.4	160	160.8	**3013**			158.13	**3133**			159.1	**3253**	162.1	**3363**	162.06	**3373**
		0.07	810			0.14	1497			0.37	4038	0.58	6100	0.69	7611
4.8	180	181.46	**3013**			181.32	**3133**			174.46	**3253**	181	**3363**	181.09	**3373**
		0.07	811			0.11	1560			0.34	4038	0.49	6100	0.61	7611
4.4	200	204.14	**3013**			200.11	**3133**			203.72	**3253**	200.44	**3363**	200.44	**3373**
		0.06	812			0.11	1628			0.29	4038	0.45	6100	0.56	7611

Exact ratio	**Gear frame**
Input H.P.	Output torque

Motor RPM 870 (Continued)

Exact Ratio rpm, HP and Torque

rpm	Nom. Ratio	Size of CbN Reducer											
		4		5		6		7		8			
70	12.5	12.23 16.09	**3482** 13706	12.43 28.2	**3592** 24410	12.1 42	**3602** 35343	12.2 60	**3732** 50907	12.5 95.0	**3842** 82618		
62	14	13.5 14.62	**3482** 13752	13.98 25.51	**3592** 24847	13.5 38.2	**3602** 35864	13.8 60	**3732** 57583	13.8 95.0	**3842** 91211		
54	16	15.77 12.58	**3482** 13821	15.17 24.19	**3592** 25563	15.1 34.7	**3602** 36439	15.7 60	**3732** 65511	15.5 95.0	**3842** 102447		
48	18	17.61 11.31	**3482** 13867	17.24 21.82	**3592** 26206	17.7 30.2	**3602** 37174	17.8 60	**3732** 74274	17.5 95.0	**3842** 115666		
44	20	19.77 10.1	**3482** 13914	19.07 19.01	**3592** 25248	20 27.1	**3602** 37693	20.1 58	**3732** 81075	19.5 90.2	**3842** 122391		
39	22.4	22.37 8.96	**3482** 13961	22.06 17.18	**3592** 26404	21.9 24.9	**3602** 37923	22.6 52.5	**3732** 82515	22 60.0	**3842** 91837		
35	25	25.55 7.87	**3482** 14008	24.08 15.78	**3592** 26475	25.5 21.4	**3602** 37950	25.2 47.8	**3732** 83770	24.7 60.0	**3842** 103108.		
31	28	27.42 7.35	**3482** 14033	27.05 14.1	**3592** 26560	27.7 19.8	**3602** 38142	28.4 43.1	**3732** 85125	27.6 58.2	**3842** 111758	27.8 60.0	**3843** 113728
28	31.5	31.9 6.34	**3482** 14083	30.14 12.69	**3592** 26634	31.1 17.70	**3602** 38282	31.8 37.6	**3732** 83153	30.9 47.7	**3842** 102547	31.7 60.0	**3843** 129683
25	35.5	34.62 5.85	**3482** 14108	34.18 11.22	**3592** 26717	34.5 16	**3602** 38388	36 30.7	**3732** 76860	34.6 36.8	**3842** 88587	35.3 54.7	**3843** 131697
22	40	38.24 5.31	**3482** 14138	39.23 9.81	**3592** 26802	39 14.2	**3602** 38513	40.2 26.4	**3732** 73806	39.1 28.1	**3842** 76441	39.6 48.9	**3843** 132077
19	45	42.46 4.79	**3482** 14169	42.67 9.04	**3592** 26855	42.8 12.9	**3602** 38397	43.2 28.1	**3733** 82663			44.3 43.8	**3843** 132441
17	50	50.34 4.05	**3482** 14215	49.71 7.78	**3592** 26941	48.1 11.5	**3602** 38468	48.8 26.2	**3733** 87064			50.7 38.4	**3843** 132869
16	56	54.71 3.81	**3483** 14236	56.63 6.92	**3593** 26776	56.2 10.1	**3603** 38652	55.4 23.5	**3733** 88654			56 34.9	**3843** 133174
14	63	63.93 3.27	**3483** 14274	61.44 6.44	**3593** 27053	63 9.05	**3603** 38824	61.2 21.34	**3733** 88933			63.4 30.9	**3843** 133566
12	71	71.36 2.93	**3483** 14299	69.82 5.68	**3593** 27115	70.8 8.07	**3603** 38907	68.3 19.17	**3733** 89158			71.7 27.4	**3843** 133962
11	80	80.13 2.62	**3483** 14324	77.24 5.15	**3593** 27162	76.9 7.45	**3603** 39012	76.8 19.09	**3733** 99836			81.9 24.0	**3843** 134209
10	90	90.66 2.32	**3483** 14349	89.35 4.46	**3593** 27227	87.3 6.56	**3603** 38997	89.9 14.6	**3733** 89378			92.4 21.3	**3843** 134209
9	100	103.54 2.03	**3483** 14375	97.53 4.09	**3593** 27260	96.6 5.93	**3603** 39007	102 12.87	**3733** 89392			104 18.9	**3843** 134209
8	112	111.11 1.89	**3483** 14388	109.55 3.65	**3593** 27304	112 5.11	**3603** 38972	111 11.82	**3733** 89343			116 17.0	**3843** 134209
7	125	129.28 1.63	**3483** 14415	122.06 3.28	**3593** 27348	122 4.69	**3603** 38963	129 10.17	**3733** 89337			130 15.1	**3843** 134209
6.2	140	140.31 1.5	**3483** 14428	138.42 2.9	**3593** 27395	137 4.18	**3603** 38995	141 9.31	**3733** 89390			146 13.5	3843 134209
5.4	160	154.98 1.36	**3483** 14444	158.87 2.53	**3593** 27442	153 3.74	**3603** 38965	158 8.31	**3733** 89408			165 11.9	3843 134209
4.8	180	172.09 1.23	**3483** 14460	172.82 2.33	**3593** 27463	173 3.31	**3603** 38993	175 7.5	**3733** 89375			184 10.7	3843 134209
4.4	200	203.99 1.04	**3483** 14485	201.34 2	**3593** 27510	199 2.88	**3603** 39027	198 6.63	**3733** 89392			197 9.99	3843 134209
3.9	224					216 2.65	**3603** 38978	217 6.05	**3733** 89399			221 8.91	3843 134209
3.5	250					252 2.27	**3603** 38953	244 5.38	**3733** 89390				

Exact ratio	**Gear frame**
Input H.P.	Output torque

Browning®

Speed Reducers

CbN SERIES 3000

Combined - Motor RPM 1750

Exact Ratio rpm, HP and Torque

rpm	Nom. Ratio	Size of CbN Reducer													
		2		3		4		5		6		7		8	
12.5	140														
10.9	160														
9.7	180														
8.8	200														
7.8	224	223.5 0.545	**3254** 4038	223.2 0.964	**3374** 7132	229.4 1.869	**3484** 14206	228.2 3.556	**3594** 26890					210.21 17.53	**3844** 122392
7	250	247.2 0.493	**3254** 4038	246.8 0.872	**3374** 7132	241.5 1.775	**3484** 14206	258.3 3.142	**3594** 26890					238.49 15.45	**3844** 122392
6.3	280	260.2 0.468	**3254** 4038	259.8 0.829	**3374** 7132	273.4 1.568	**3484** 14206	291.5 2.784	**3594** 26890	280.01 4.148	**3604** 38582	272.1 9.128	**3734** 82505	263.25 14.00	**3844** 122392
5.6	315	308.9 0.395	**3254** 4038	308.4 0.698	**3374** 7132	308.5 1.39	**3484** 14206	329.7 2.462	**3594** 26890	299.1 3.883	**3604** 38580.	310.07 8.01	**3734** 82503	307.52 11.98	**3844** 122392
4.9	355	330.8 0.368	**3254** 4038	330.2 0.652	**3374** 7132	349 1.229	**3484** 14206	374.5 2.167	**3594** 26890	339.486 3.422	**3604** 38590	357.53 6.947	**3734** 82506	343.39 10.73	**3844** 122392
4.4	400	370.4 0.329	**3254** 4038	369.8 0.582	**3374** 7132	396.5 1.081	**3484** 14206	428 1.896	**3594** 26890	377.19 3.079	**3604** 38578	381.94 6.503	**3734** 82506	385.52 9.56	**3844** 122392
3.9	450	431.3 0.283	**3254** 4038	430.6 0.5	**3374** 7132	453 0.946	**3484** 14206	483.1 1.68	**3594** 26890	428.34 2.711	**3604** 38574	433.47 5.73	**3734** 82507	436.22 8.45	**3844** 122392
3.5	500	465 0.262	**3254** 4038	464.2 0.464	**3374** 7132	511.4 0.838	**3484** 14206	512.7 1.583	**3594** 26890	476.66 2.437	**3604** 38587	481.61 5.157	**3734** 82503	498.23 7.40	**3844** 122392
3.1	560	547 0.223	**3254** 4038	546.1 0.394	**3374** 7132	542.6 0.79	**3484** 14206	608.8 1.333	**3594** 26890	536.13 2.167	**3604** 38592	546.92 4.541	**3734** 82500	534.69 6.89	**3844** 122392
2.8	630	613.1 0.199	**3254** 4038	612.1 0.352	**3374** 7132	644.4 0.665	**3484** 14206	643.8 1.261	**3594** 26890	628.53 1.848	**3604** 38583	608.62 4.081	**3734** 82507	622.05 5.92	**3844** 122392
2.5	710	689.4 0.177	**3254** 4038	688.3 0.313	**3374** 7132	681.4 0.629	**3484** 14206	735.7 1.103	**3594** 26890	693.84 1.674	**3604** 38582	684.55 3.628	**3734** 82499	675.09 5.46	**3844** 122392
2.2	800	775.1 0.157	**3254** 4038	773.8 0.278	**3374** 7132	778.7 0.551	**3484** 14206	821.3 0.988	**3594** 26890	760.75 1.527	**3604** 38588	802.53 3.095	**3734** 82508	745.68 4.94	**3844** 122392
1.9	900	873.9 0.139	**3254** 4038	872.4 0.247	**3374** 7132	869.3 0.493	**3484** 14206	920.8 0.881	**3594** 26890	888.36 1.308	**3604** 38598	885.92 2.804	**3734** 82518	827.97 4.45	**3844** 122392
1.8	1000	983.8 0.124	**3254** 4038	982.2 0.219	**3374** 7132	974.5 0.44	**3484** 14206	1066.1 0.761	**3594** 26890	986.89 1.202	**3605** 38616	971.35 2.557	**3734** 82506	981.63 3.75	**3844** 122392
1.6	1120	1082.3 0.113	**3254** 4038	1080.5 0.199	**3374** 7132	1128.3 0.38	**3484** 14206	1170.6 0.693	**3594** 26890	1136.34 1.043	**3605** 38583	1134.29 2.19	**3734** 82517	1066.85 3.52	**3845** 122392
1.4	1250	1221.3 0.1	**3254** 4038	1219.3 0.177	**3374** 7132	1239 0.346	**3484** 14206	1342.4 0.605	**3594** 26890	1214.4 0.976	**3605** 38584.	1258.82 2.013	**3735** 82492	1246.64 3.02	**3845** 122392

Exact ratio	**Gear frame**
Input H.P.	Output torque

Combined - Motor RPM 1750 (Continued)

Exact Ratio rpm, HP and Torque

rpm	Nom. Ratio	Size of CbN Reducer													
		2		3		4		5		6		7		8	
1.3	1400	1374	**3255**	1371.7	**3375**	1420.8	**3484**	1481.4	**3594**	1378.1	**3605**	1450.92	**3735**	1391.52	**3845**
		0.091	4038	0.171	7611	0.302	14206	0.548	26890	0.860	38581	1.747	82516	2.70	122392
1.1	1600	1498.6	**3255**	1555.6	**3375**	1567.9	**3484**	1536.3	**3595**	1530.7	**3605**	1550.58	**3735**	1562.54	**3845**
		0.083	4038	0.151	7611	0.273	14206	0.554	27563	0.774	38568	1.635	82531	2.41	122392
0.97	1800	1779.5	**3255**	1847.1	**3375**	1695.5	**3485**	1738	**3595**	1738.8	**3605**	1759.6	**3735**	1767.87	**3845**
		0.07	4038	0.127	7611	0.264	14507	0.489	27563	0.862	48793	1.44	82486	2.13	122392
0.88	2000	1905.1	**3255**	1977.5	**3375**	1926.4	**3485**	1974.8	**3595**	1934.6	**3605**	1954.448	**3735**	2019.03	**3845**
		0.065	4038	0.119	7611	0.232	14507	0.431	27563	0.613	38606	1.297	82521	1.86	122392
0.78	2240	2133.6	**3255**	2214.7	**3375**	2200.7	**3485**	2256	**3595**	2176.4	**3605**	2220.22	**3735**	2166.65	**3845**
		0.058	4038	0.106	7611	0.203	14507	0.377	27563	0.545	38613	1.142	82540	1.74	122392
0.7	2500	2484.3	**3255**	2578.7	**3375**	2484.3	**3485**	2546.7	**3595**	2551.1	**3605**	2470.2	**3735**	2520.96	**3845**
		0.05	4038	0.091	7611	0.18	14507	0.334	27563	0.465	38617	1.026	82505	1.49	122392
0.63	2800	2678	**3255**	2779.7	**3375**	2636.2	**3485**	2702.4	**3595**	2816.1	**3605**	2778.896	**3735**	2736.04	**3845**
		0.047	4038	0.084	7611	0.17	14507	0.315	27563	0.421	38595	0.912	82503	1.37	122392
0.56	3150	3150.7	**3255**	3270.5	**3375**	3130.6	**3485**	3209.2	**3595**	3087.9	**3605**	3257.34	**3735**	3011.11	**3845**
		0.04	4038	0.072	7611	0.143	14507	0.265	27563	0.384	38601	0.778	82498	1.25	122392
0.49	3550	3531.1	**3255**	3665.3	**3375**	3310.4	**3485**	3393.5	**3595**	3605.8	**3605**	3595.6	**3735**	3355.76	**3845**
		0.035	4038	0.064	7611	0.135	14507	0.251	27563	0.329	38619	0.705	82521	1.12	122392
0.44	4000	3970.7	**3255**	4121.6	**3375**	3783.1	**3485**	3878	**3595**	3939.4	**3606**	3942.8	**3735**	3977.81	**3845**
		0.031	4038	0.057	7611	0.118	14507	0.219	27563	0.310	38960	0.643	82531	0.95	122392
0.39	4500	4464.4	**3255**	4634.1	**3375**	4223.2	**3485**	4329.2	**3595**	4382.9	**3606**	4604.1	**3735**	4583.78	**3846**
		0.028	4038	0.051	7611	0.106	14507	0.196	27563	0.279	39011	0.55	82435	0.92	133962
0.35	5000	5033.2	**3255**	5224.4	**3375**	4734.6	**3485**	4853.5	**3595**	4930.7	**3606**	5007.43	**3736**	5116.51	**3846**
		0.025	4038	0.045	7611	0.095	14507	0.175	27563	0.248	39011	0.559	89301	0.82	133962
0.31	5600	5666.5	**3255**	5881.8	**3375**	5481.6	**3485**	5619.2	**3595**	5779.6	**3606**	5771.58	**3736**	5745.32	**3846**
		0.022	4038	0.04	7611	0.082	14507	0.151	27563	0.211	38905	0.485	89303	0.73	133962
0.28	6300	6233.5	**3255**	6470.3	**3375**	6019.4	**3485**	6170.5	**3595**	6238.4	**3606**	6168	**3736**	6500.32	**3846**
		0.02	4038	0.036	7611	0.074	14507	0.138	27563	0.196	39008	0.454	89337	0.65	133962
0.25	7100	7034.2	**3255**	7301.6	**3375**	6904.4	**3485**	7077.7	**3595**	7190.4	**3606**	6999.6	**3736**	7423.82	**3846**
		0.018	4038	0.032	7611	0.065	14507	0.12	27563	0.170	38997	0.4	89323	0.57	133962
0.22	8000	7913.5	**3255**	8214.2	**3375**	7617.3	**3485**	7808.5	**3595**	7684.32	**3606**	7853.7	**3736**	7966.59	**3846**
		0.016	4038	0.029	7611	0.059	14507	0.109	27563	0.159	38979	0.357	89448	0.53	133962
0.19	9000	8576.5	**3256**	8982.1	**3376**	8891.1	**3486**	8876.4	**3596**	8720.3	**3606**	9052.2	**3736**	9269.38	**3846**
		0.015	4038	0.027	7611	0.051	14401	0.097	27333	0.14	38948	0.309	89236	0.45	133962
0.18	10000	9602.3	**3256**	9967.2	**3376**	9932.4	**3486**	9912.3	**3596**	9685.8	**3606**	9674	**3736**	10060.23	**3846**
		0.013	4038	0.024	7611	0.046	14401	0.087	27333	0.126	38934	0.2896	89379	0.42	133962

Exact ratio	**Gear frame**
Input H.P.	Output torque

Thermal Power Rating (Pt)

Nominal Ratio	Reducer Size			
	5	6	7	8
	Pt (hp)	Pt (hp)	Pt (hp)	Pt (hp)
3.15	-	65	84	-
3.55	-	65	84	-
4	46	65	84	-
4.5	46	65	83	-
5	46	65	83	-
5.6	46	65	83	95
6.3	46	65	83	95
7.1	45	64	83	95
8	45	64	82	95
9	44	64	80	95
10	43	63	78	95
11.2	43	62	76	95
12.5	43	60	76	95
14	43	59	76	95
16	43	59	76	95
18	-	-	76	70
20	-	-	76	70
22.4	-	-	76	70
25	-	-	76	70
28	-	-	76	70
31.5	-	-	-	70
35.5	-	-	-	70
40	-	-	-	70
45	-	-	-	70

Modifications

Gear Modifications

G11 Corro-Duty

Corro-Duty® gear reducers are designed for applications in food processing, chemical, poultry and any other industries that will be subjected to extreme humidity, washdown, steam, detergents, and mild acids. Construction of the Corro-Duty reducer includes the normally closed breather in the gear case. The exterior of the entire unit is then painted in one of the two options chosen at order entry:

Option #1 - Corro-Duty grey
- 3 step paint system using 316 stainless steel paint
- Light grey semigloss finish
- USDA and FDA approved

Option #2 - Corro-Duty white
- 2 step paint system using epoxy paint
- White gloss finish
- USDA and FDA approved

G12a Foodgrade Synthetic Lubricant

When this modification is specified, the CbN oil sump is filled with the required volume of an FDA approved H1 rated synthetic lubricant for helical gearing (Refer to page A-224).

G12b Washdown FG Service Reducer

When this modification is specified, a reducer will be built with all the features detailed above under G11 and G12a. When ordering, state the paint finish that is to be provided.

G15 Export Boxing

Export boxing can be provided for “under-deck” transport. When the quantity of HWN gearmotors or reducers exceeds five (5) units, refer to international sales for most economical accommodations.

G16 Extra or Special Nameplate

Units can be provided with limited additional special information on the standard product nameplate. When required, an extra nameplate may be provided, stamped with custom markings.

Accessories

The following accessories can be ordered along with reducer and will be supplied loose for mounting by others

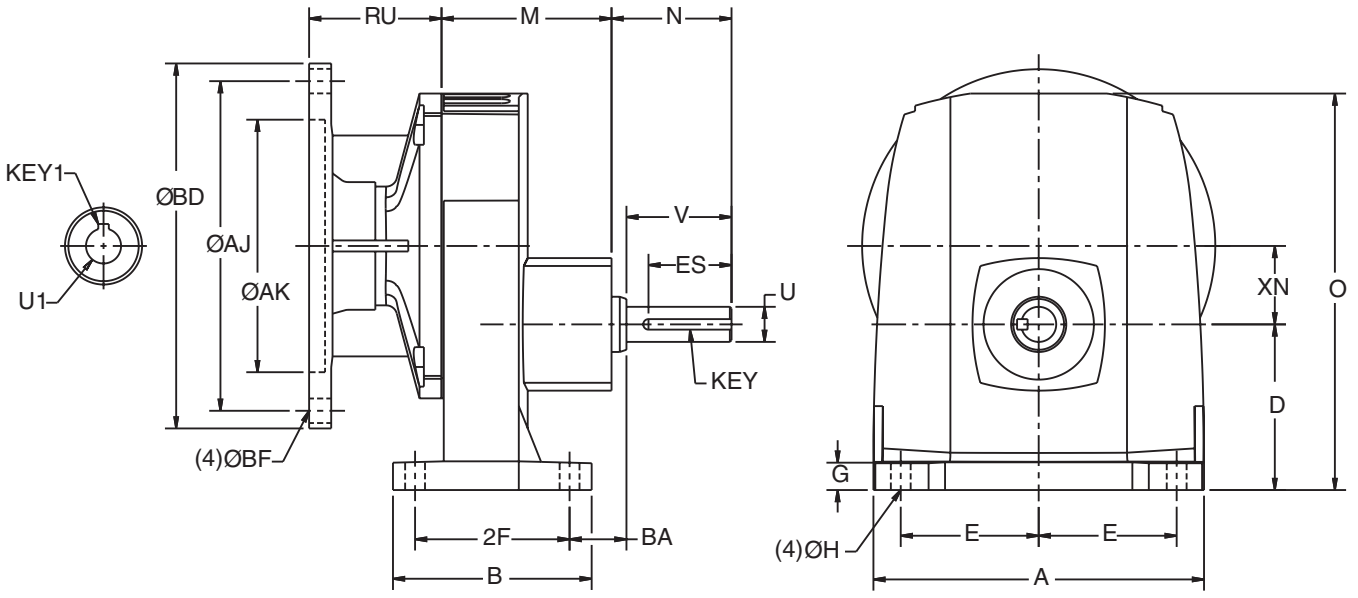
Description	Gear Frames	Part #
NPT Adapter (1/4” NPFT)	31 to 35	0436216
NPT Adapter (3/4” NPFT)	36 to 38	0436218
Oil Level View Port	31 to 35	0435936
	36 to 38	0435938
Scoop Guard Kit (scoop mount reducers)	32 to 35	0965634
	36/37 to 250T	0965635
	36/37 280T to 320T	0965637
	38 to 280T	0965636
	38 w/ 320T	0965637
	36 to 38 Comb.	0965634

Browning®

C-Face Reducer

CbN SERIES 3000

Foot Mounted - Single Reduction



Gear Frame	A	B	D [1]	E	G	H	M	N	O	U [3]	V	BA	2F	ES	XN	Key
30	5.90	3.54	2.95	2.46	0.49	0.35	3.03	2.14	7.07	0.63	1.88	1.01	2.76	1.48	1.40	3/16 Sq.

Motor Frame	AJ	RU	BF	AK	BD	U1	Key1
56C	5.875	3.33	0.44	4.50	6.50	0.625	3/16 Sq.
140TC [4]	5.875	3.33	0.44	4.50	6.50	0.875	3/16 Sq.

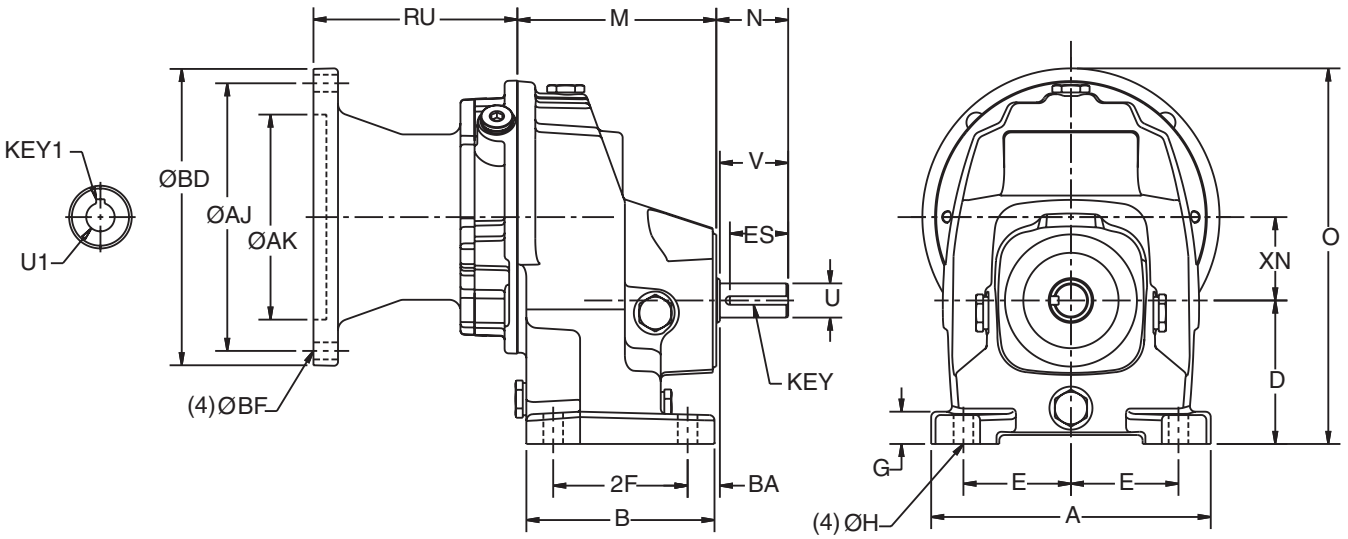
[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] Not available in ratios 5.6 through 8:1.

Foot Mounted - Single Reduction



Gear Frame	A	B	D [1]	E	G	H	M	N	O	U [3]	V	BA	2F	ES	XN	Key
31	6.14	4.13	3.15	2.36	0.71	0.43	4.37	1.58	8.24	0.75	1.50	0.71	2.95	1.28	1.83	3/16 Sq.

Motor Frame	AJ	RU	BF	AK	BD	U1	Key1
56C	5.875	4.48	0.44	4.50	6.50	0.625	3/16 Sq.
140TC	5.875	4.48	0.44	4.50	6.50	0.875	3/16 Sq.
180TC [4]	7.250	6.20	0.57	8.50	9.00	1.125	1/4 Sq.

[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

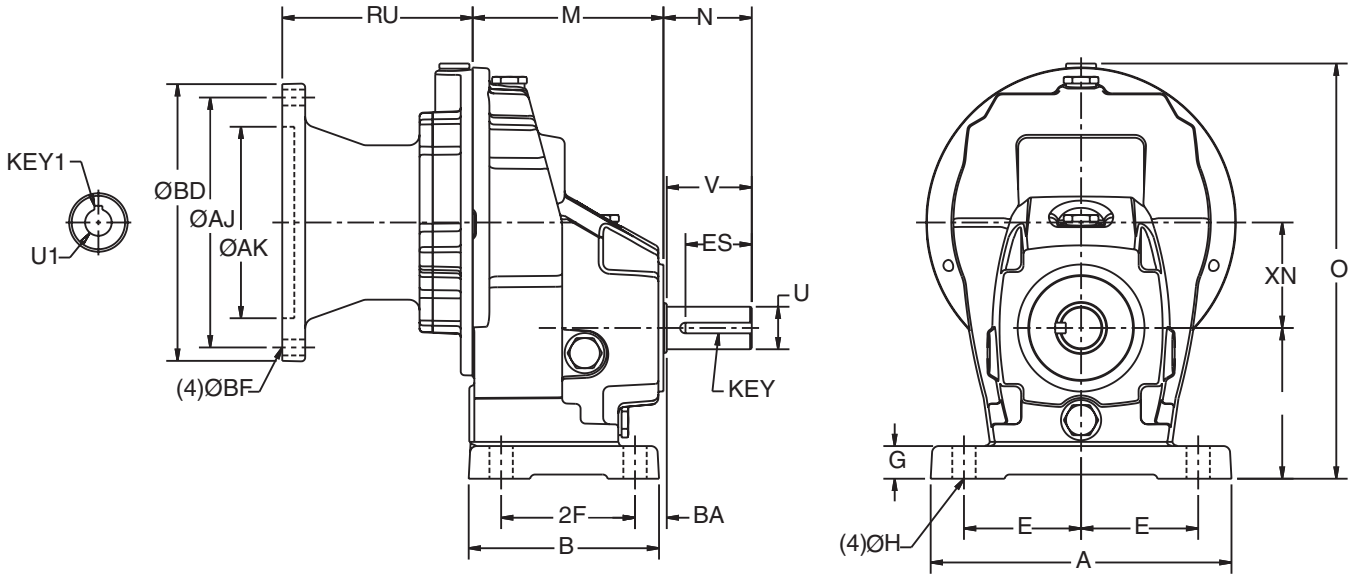
[4] Use foot mounted motor, utilizing separate support of motor feet for this motor frame.

Browning

C-Face Reducer

CbN SERIES 3000

Foot Mounted - Single Reduction



Gear Frame	A	B	D [1]	E	G	H	M	N	O	U [3]	V	BA	2F	ES	XN	Key
32	7.08	4.48	3.54	2.76	0.77	0.55	4.49	2.08	9.76	1.00	2.00	0.75	3.15	1.56	2.48	1/4 Sq.

Motor Frame	AJ	RU	BF	AK	BD	U1	Key1
56C	5.875	4.48	0.44	4.50	6.50	0.625	3/16 Sq.
140TC	5.875	4.48	0.44	4.50	6.50	0.875	3/16 Sq.
180TC	7.250	6.20	0.57	8.50	9.00	1.125	1/4 Sq.
210TC[4]	7.250	6.20	0.57	8.50	9.00	1.375	5/16 Sq.

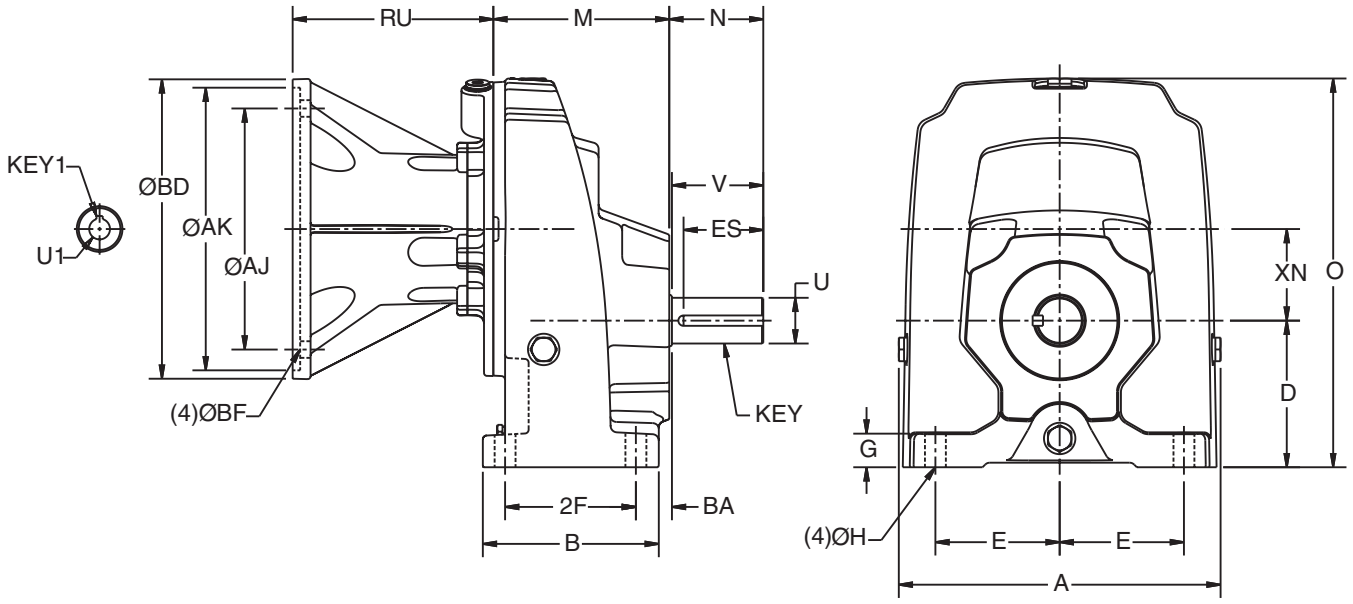
[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] Use foot mounted motor, utilizing separate support of motor feet for this motor frame.

Foot Mounted - Single Reduction



Gear Frame	A	B	D [1]	E	G	H	M	N	O	U [3]	V	BA	2F	ES	XN	Key
33	9.69	5.30	4.41	3.74	1.00	0.63	5.30	2.83	11.69	1.38	2.75	1.09	3.94	2.40	2.76	5/16 Sq.

Motor Frame	AJ	RU	BF	AK	BD	U1	Key1
56C	5.875	4.32	0.44	4.50	6.50	0.625	3/16 Sq.
140TC	5.875	4.32	0.44	4.50	6.50	0.875	3/16 Sq.
180TC	7.25	6.04	0.57	8.50	9.00	1.125	1/4 Sq.
210TC [4]	7.25	6.04	0.57	8.50	9.00	1.375	5/16 Sq.

[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

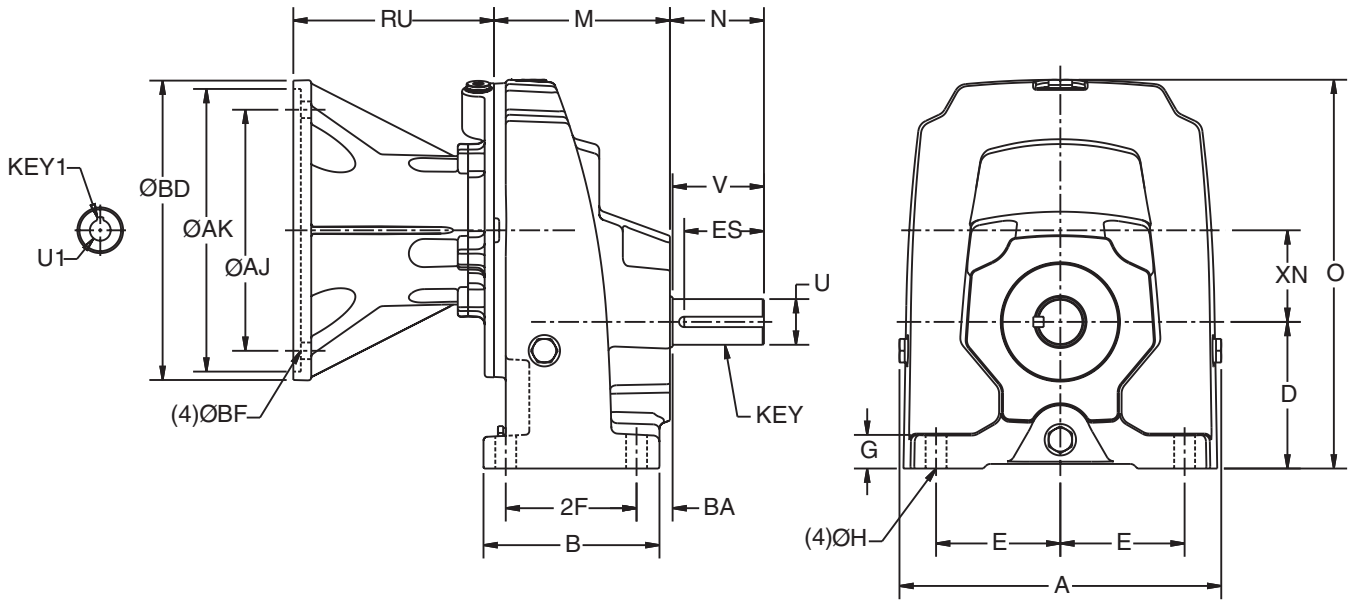
[4] Use foot mounted motor, utilizing separate support of motor feet for this motor frame.

Browning®

C-Face Reducer

CbN SERIES 3000

Foot Mounted - Single Reduction



Gear Frame	A	B	D [1]	E	G	H	M	N	O	U [3]	V	BA	2F	ES	XN	Key
34	11.02	6.59	5.20	4.25	1.34	0.71	6.26	3.06	13.90	1.50	3.00	1.10	4.92	2.56	3.43	3/8 Sq.

Motor Frame	AJ	RU	BF	AK	BD	U1	Key1
182/184TC	7.25	6.22	0.57	8.50	9.00	1.125	1/4 Sq.
213/215TC	7.25	6.22	0.57	8.50	9.00	1.375	5/16 Sq.
254/256TC	7.25	7.43	0.57	8.50	9.00	1.625	3/8 Sq.
284/286TC[4]	9.00	8.40	0.57	10.50	11.25	1.875	1/2 Sq.

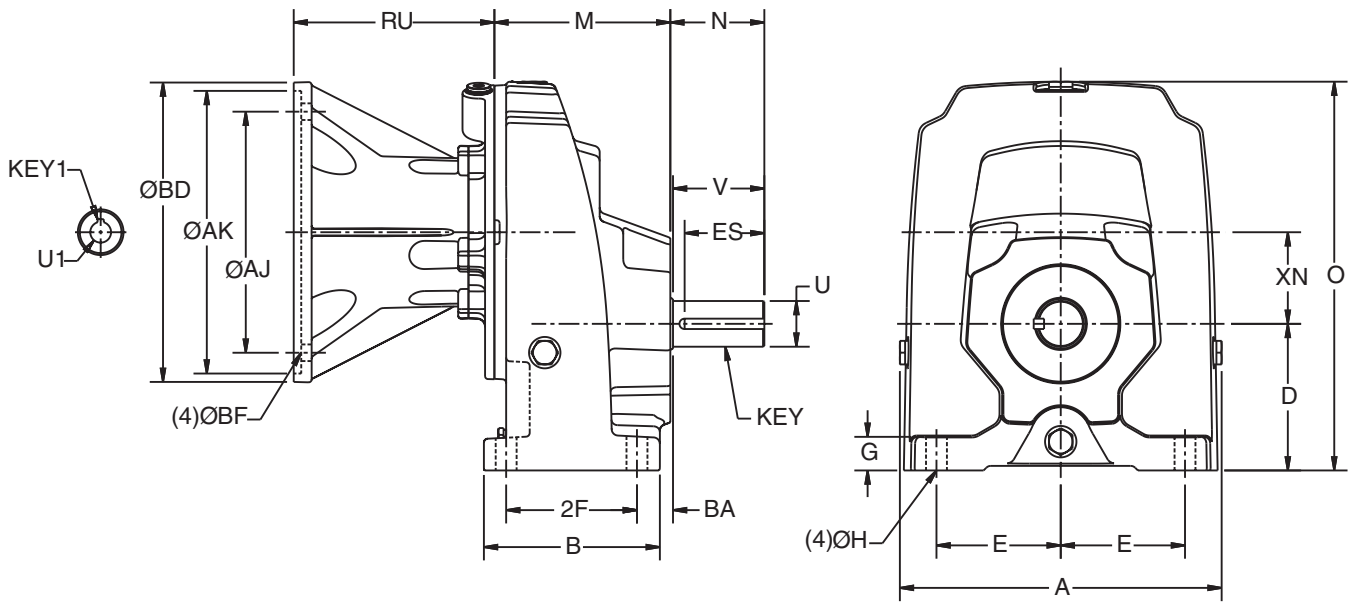
[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] Use foot mounted motor, utilizing separate support of motor feet for this motor frame.

Foot Mounted - Single Reduction



Gear Frame	A	B	D [1]	E	G	H	M	N	O	U [3]	V	BA	2F	ES	XN	Key
35	13.65	7.76	6.30	5.12	1.61	0.79	6.83	3.56	17.37	1.75	3.50	1.18	6.30	3.06	4.33	3/8 Sq.

Motor Frame	AJ	RU	BF	AK	BD	U1	Key1
213/215TC	7.25	5.87	0.57	8.50	9.00	1.375	5/16 Sq.
254/256TC	7.25	7.09	0.57	8.50	9.00	1.625	3/8 Sq.
284/286TC[4]	9.00	8.06	0.57	10.50	11.25	1.875	1/2 Sq.
324/326TC[4]	11.00	8.79	0.69	12.50	13.38	2.125	1/2 Sq.

[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

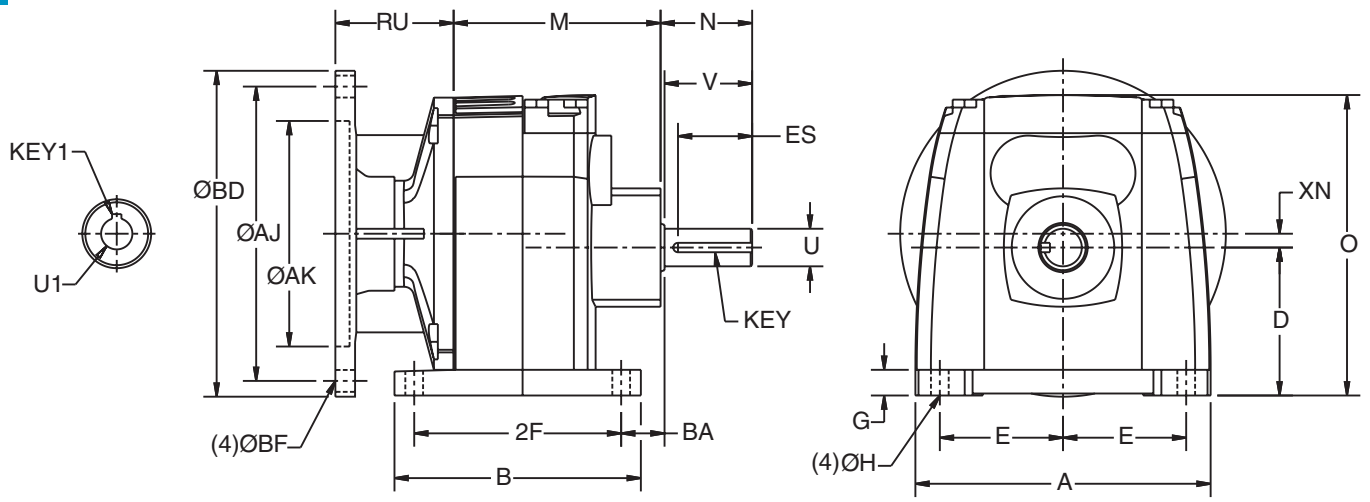
[4] Use foot mounted motor, utilizing separate support of motor feet for this motor frame.

Browning

C-Face Reducer

CbN SERIES 3000

Foot Mounted - Double/Triple Reduction



Gear Frame	A	B	D [1]	E	G	H	M	N	O	U [3]	V	BA	2F	ES	XN	Key
3012	5.90	4.92	2.95	2.46	0.51	0.35	4.13	1.83	6.00	0.75	1.75	0.87	4.13	1.48	0.28	3/16 Sq.
3013	5.90	5.71	2.95	2.46	0.51	0.35	4.92	1.83	6.00	0.75	1.75	0.87	4.92	1.48	0.28	3/16 Sq.

Motor Frame	AJ	RU	BF	AK	BD	U1	Key1
56C	5.875	3.33	0.44	4.50	6.50	0.625	3/16 Sq.
140TC [4]	5.875	3.33	0.44	4.50	6.50	0.875	3/16 Sq.

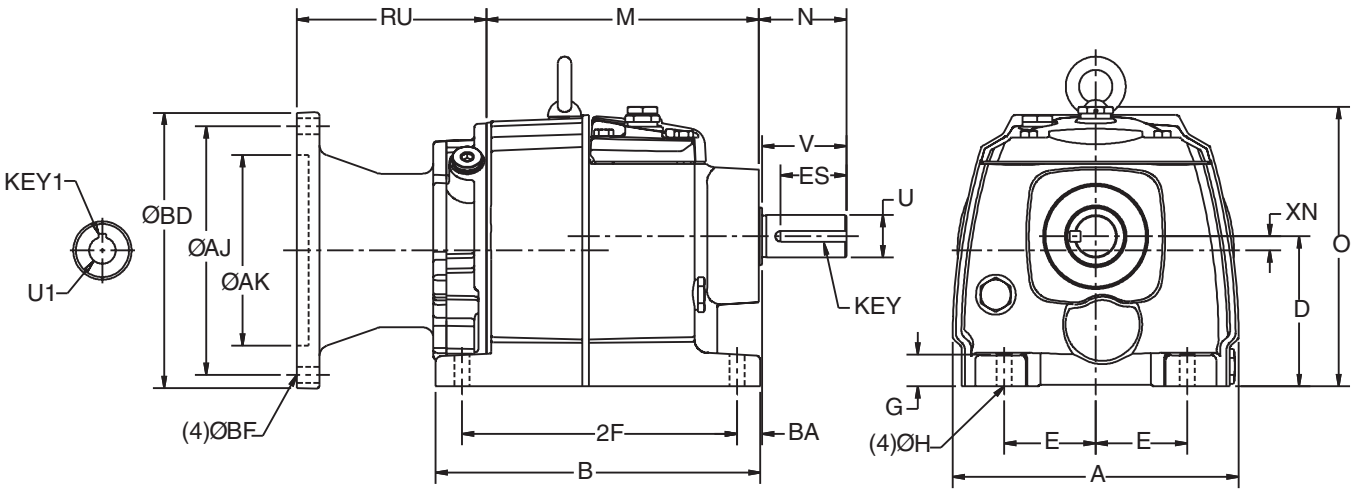
[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] Not available for ratio 31.5 to 45:1 in 3012. Use 3013 for 35.5 to 45:1.

Foot Mounted - Double/Triple Reduction



Gear Frame	A	B	D [1]	E	G	H	M	N	O	U [3]	V	BA	2F	ES	XN	Key
31	6.76	7.68	3.54	2.17	0.75	0.35	6.44	2.08	6.60	1.00	2.00	0.59	6.50	1.56	0.33	1/4 Sq.

Motor Frame	AJ	RU	BF	AK	BD	U1	Key1
56C	5.88	4.48	0.44	4.50	6.50	0.625	3/16 Sq.
140TC	5.88	4.48	0.44	4.50	6.50	0.875	3/16 Sq.
180TC [4]	7.25	6.20	0.57	8.50	9.00	1.125	1/4 Sq.

[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

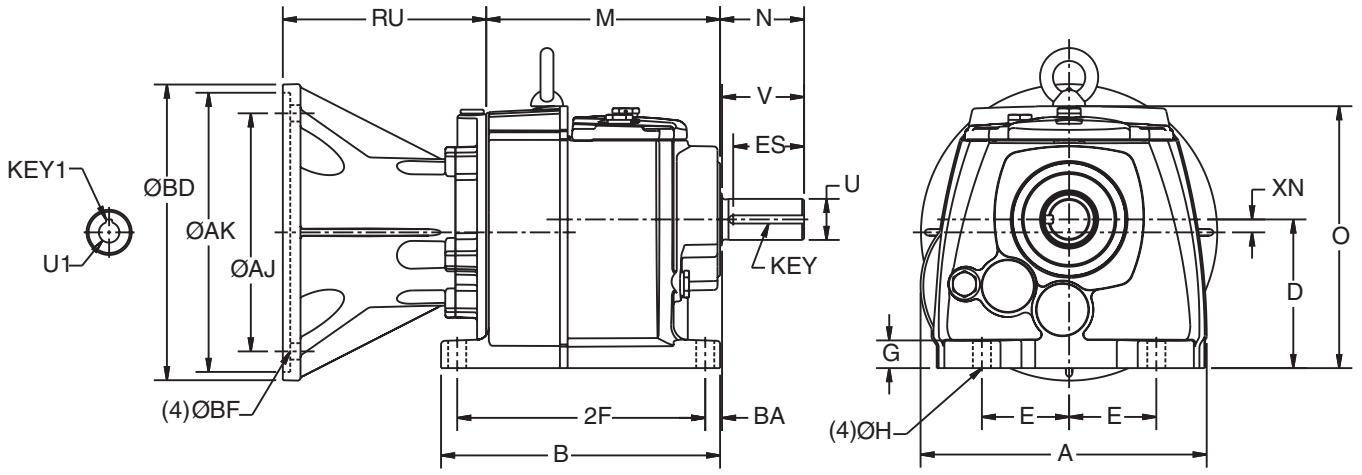
[4] Use foot mounted motor, utilizing separate support of motor feet for this motor frame.

Browning

C-Face Reducer

CbN SERIES 3000

Foot Mounted - Double/Triple Reduction



Gear Frame	A	B	D [1]	E	G	H	M	N	O	U [3]	V	BA	2F	ES	XN	Key
32	8.72	8.50	4.53	2.66	0.84	0.55	7.13	2.56	7.97	1.25	2.50	0.51	7.56	2.16	0.39	1/4 Sq.

Motor Frame	AJ	RU	BF	AK	BD	U1	Key1
56C	5.875	4.48	0.44	4.50	6.50	0.625	3/16 Sq.
140TC	5.875	4.48	0.44	4.50	6.50	0.875	3/16 Sq.
180TC	7.25	6.20	0.57	8.50	9.00	1.125	1/4 Sq.
210TC [4]	7.25	6.20	0.57	8.50	9.00	1.375	5/16 Sq.

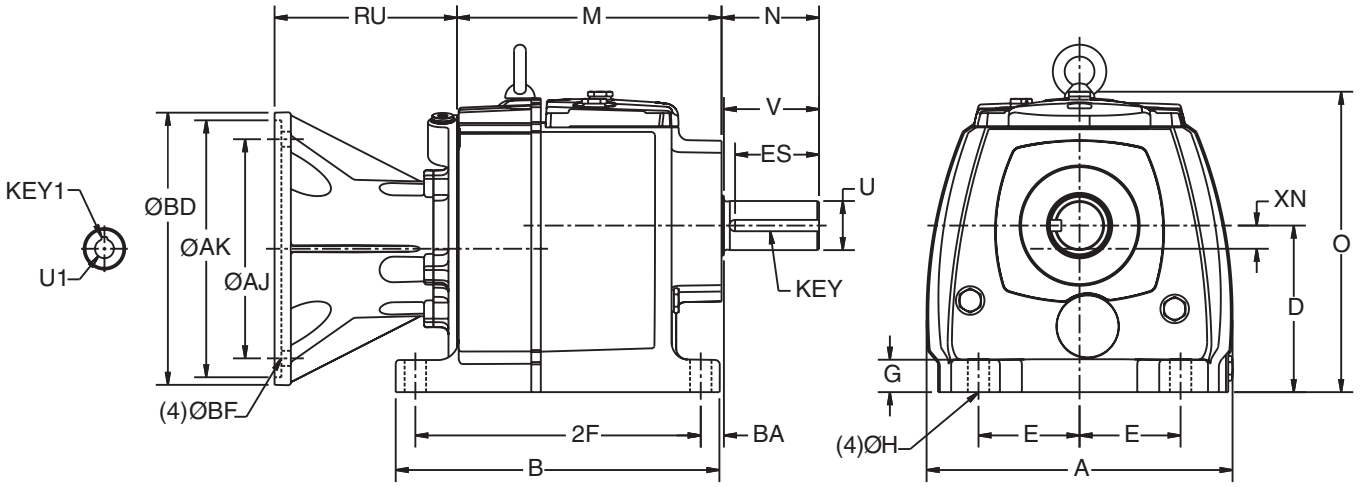
[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] Use foot mounted motor, utilizing separate support of motor feet for this motor frame.

Foot Mounted - Double/Triple Reduction



Gear Frame	A	B	D [1]	E	G	H	M	N	O	U [3]	V	BA	2F	ES	XN	Key
3362,3363	10.13	10.72	5.51	3.35	1.07	0.71	8.76	3.08	9.94	1.50	3.00	0.77	9.45	2.56	0.77	3/8 Sq.
3372,3373	10.13	10.72	5.51	3.35	1.07	0.71	8.76	3.23	9.94	1.63	3.15	0.77	9.45	2.78	0.77	3/8 Sq.

Motor Frame	AJ	RU	BF	AK	BD	U1	Key1
56C	5.875	4.32	0.44	4.50	6.50	0.625	3/16 Sq.
140TC	5.875	4.32	0.44	4.50	6.50	0.875	3/16 Sq.
180TC	7.25	6.04	0.57	8.50	9.00	1.125	1/4 Sq.
210TC	7.25	6.04	0.57	8.50	9.00	1.375	5/16 Sq.

[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

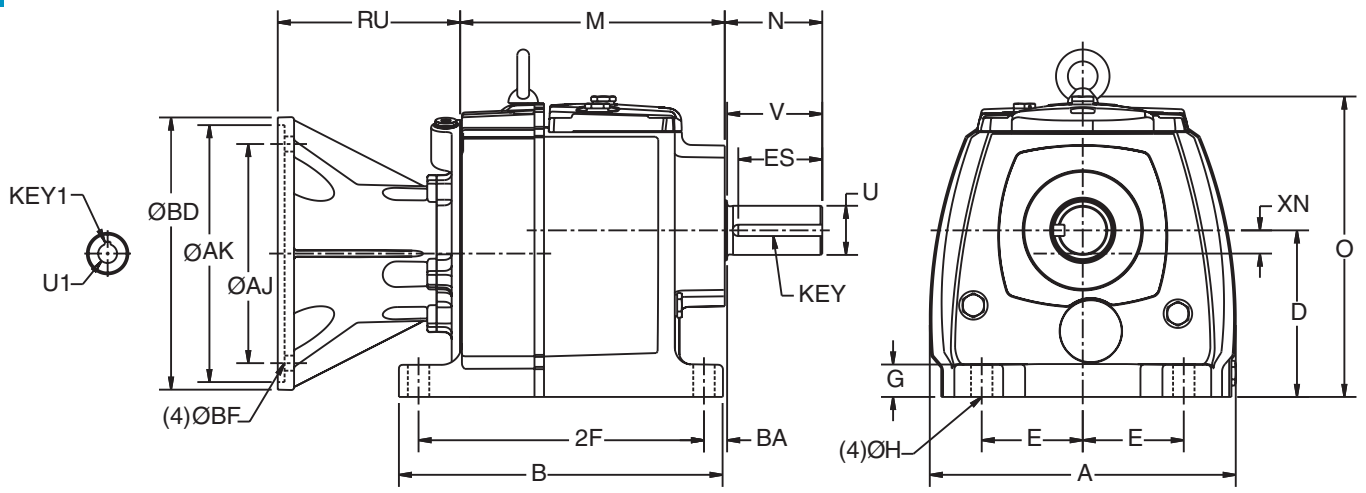
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Browning

C-Face Reducer

CbN SERIES 3000

Foot Mounted - Double/Triple Reduction



Gear Frame	A	B	D [1]	E	G	H	M	N	O	U [3]	V	BA	2F	ES	XN	Key
34	11.97	10.87	7.09	4.53	1.37	0.71	9.80	3.58	11.89	2.13	3.50	0.98	9.25	3.06	1.02	1/2 Sq.
35	14.19	12.89	8.86	5.51	1.73	0.87	11.34	4.81	14.84	2.38	4.72	1.10	11.02	4.15	1.14	5/8 Sq.

Motor Frame	Gear Frame	AJ	RU	BF	AK	BD	U1	Key1
56C	All	5.875	4.14	0.44	4.50	6.50	0.625	3/16 Sq.
143/145TC	All	5.875	4.14	0.44	4.50	6.50	0.875	3/16 Sq.
182/184TC	All	7.250	5.87	0.57	8.50	9.00	1.125	1/4 Sq.
213/215TC	All	7.250	5.87	0.57	8.50	9.00	1.375	5/16 Sq.
254/256TC	All	7.250	7.09	0.57	8.50	9.00	1.625	3/8 Sq.
284/286TC	34 [4], 35	9.000	8.06	0.57	10.50	11.25	1.875	1/2 Sq.
324/326TC	35 [4]	11.000	8.79	0.69	12.50	13.38	2.125	1/2 Sq.

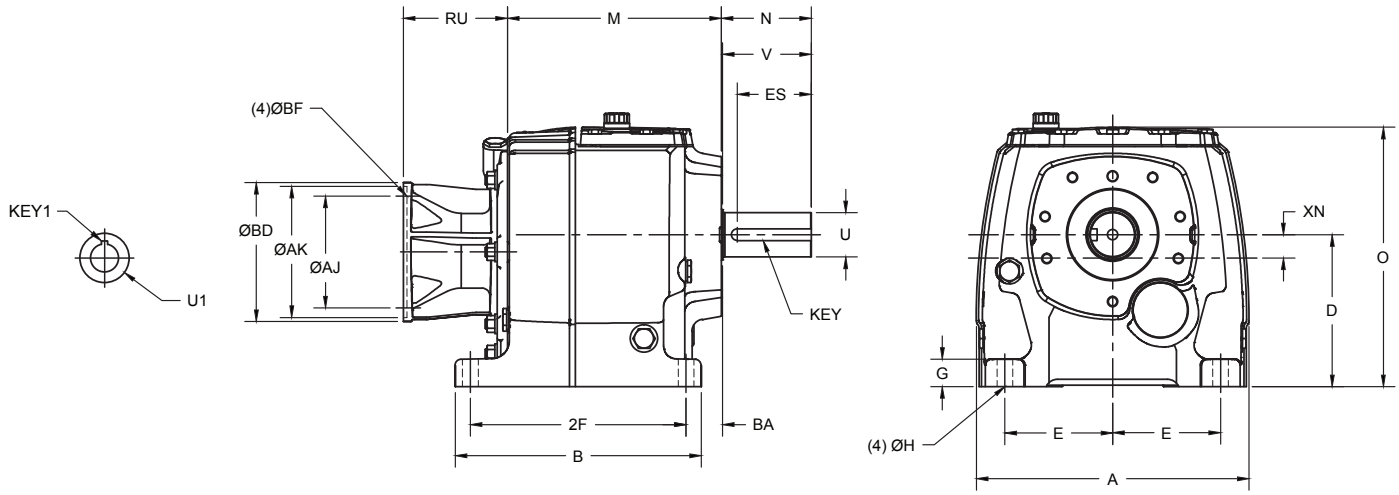
[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] Use foot mounted motor, utilizing separate support of motor feet for this motor frame.

Foot Mounted - Double/Triple Reduction



Gear Frame	A	B	D [1]	E	G	H	N	O	U[3]	V	BA	2F	ES	XN	M	Key
36	17.68	15.95	9.85	6.99	1.77	1.02	5.847	17.72	2.875	5.75	2.36	13.98	4.784	1.102	13.86	3/4 Sq
37	20.39	17.91	12.40	8.27	2.17	1.02	7.127	20.40	3.625	7.00	2.56	15.35	5.893	2.362	16.54	7/8 Sq
38	23.94	21.65	13.98	10.04	2.35	1.02	9.99	22.60	4.375	9.99	1.97	18.90	9.02	2.559	19.88	1 SQ

Motor Frame	Gear Frame	AJ	AK	BF	U1	RU	BDX	Key1
182TC-184TC	36,37	7.25	8.50	.50	1.125	5.26	9.00	1/4 Sq.
213TC-215TC	36,37	7.25	4.50	.50	1.375	5.26	9.00	5/16 Sq.
	38	7.25	4.50	.50	1.375	6.12	9.00	5/16 Sq.
254TC-256TC	All	7.25	8.50	.50	1.625	6.12	9.00	3/8 Sq.
284TC-286TC	All	9.00	10.50	.50	1.875	7.09	9.00	1/2 Sq.
324TC-326TC	All	11.00	12.50	.625	2.125	8.45	13.38	1/2 Sq.
364TC-365TC	37,38	11.00	12.50	.625	2.375	8.45	13.38	5/8 Sq.

[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

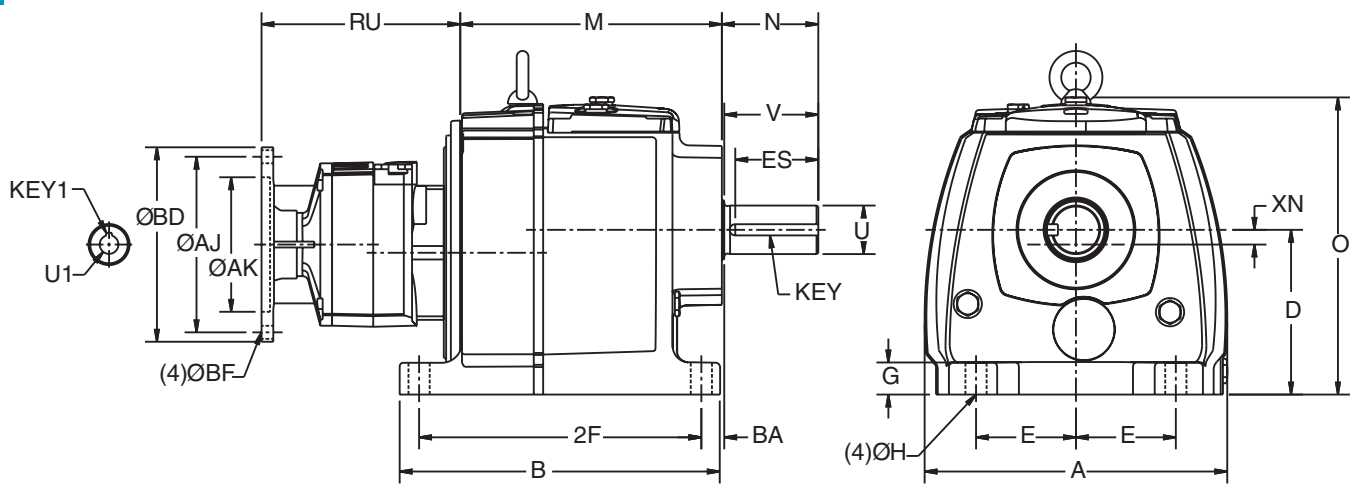
[3] Shaft extension tolerance: +.0000; -.001".

Browning

C-Face Reducer

CbN SERIES 3000

Foot Mounted - Combined Reduction



Gear Frame	A	B	D [1]	E	G	H	M	N	O	U [3]	V	BA	2F	ES	XN	Key
32	8.72	8.50	4.53	2.66	0.84	0.55	7.13	2.56	7.97	1.25	2.50	0.51	7.56	2.16	0.39	1/4 Sq.
33	10.13	10.72	5.51	3.35	1.07	0.71	8.76	3.23	9.94	1.63	3.15	0.77	9.45	2.78	0.49	3/4 Sq.

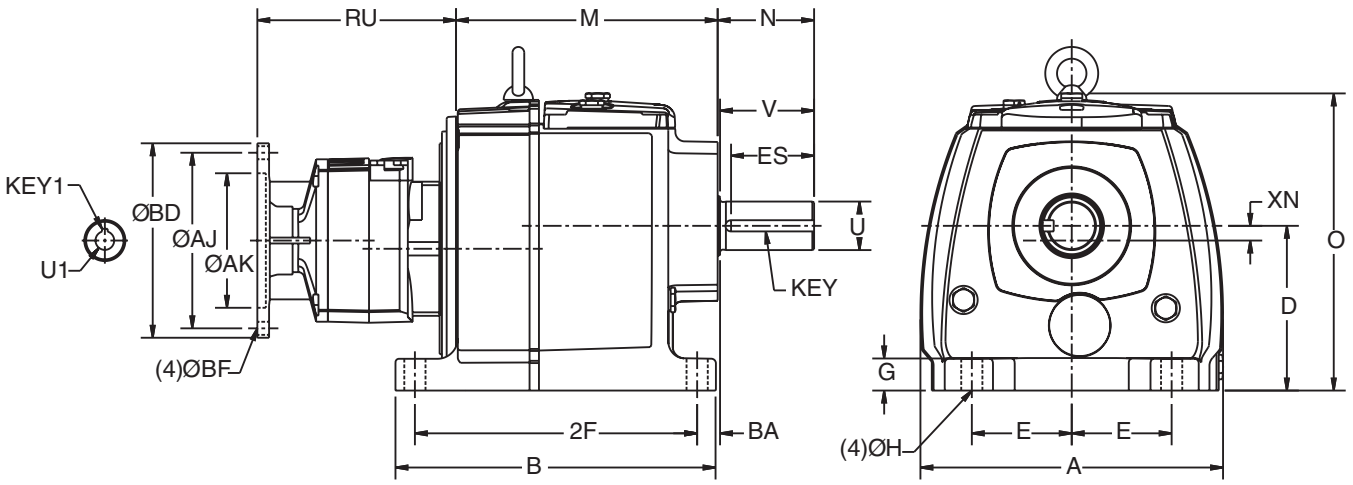
Motor Frame	RU	AJ	BF	AK	BD	U1	Key1
56C	7.79	5.875	0.44	4.50	6.50	0.625	3/16 Sq.
140TC	7.79	5.875	0.44	4.50	6.50	0.875	3/16 Sq.

[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Foot Mounted - Combined Reduction



Gear Frame	A	B	D [1]	E	G	H	M	N	O	U [3]	V	BA	2F	ES	XN	Key
34	11.97	10.87	7.09	4.53	1.37	0.71	9.80	3.58	11.89	2.13	3.50	0.98	9.25	3.12	1.35	1/2 Sq.

Motor Frame	RU	AJ	BF	AK	BD	U1	Key1
56C	11.46	5.875	0.44	4.50	6.50	0.625	3/16 Sq.
143/145TC	11.46	5.875	0.44	4.50	6.50	0.875	3/16 Sq.

[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

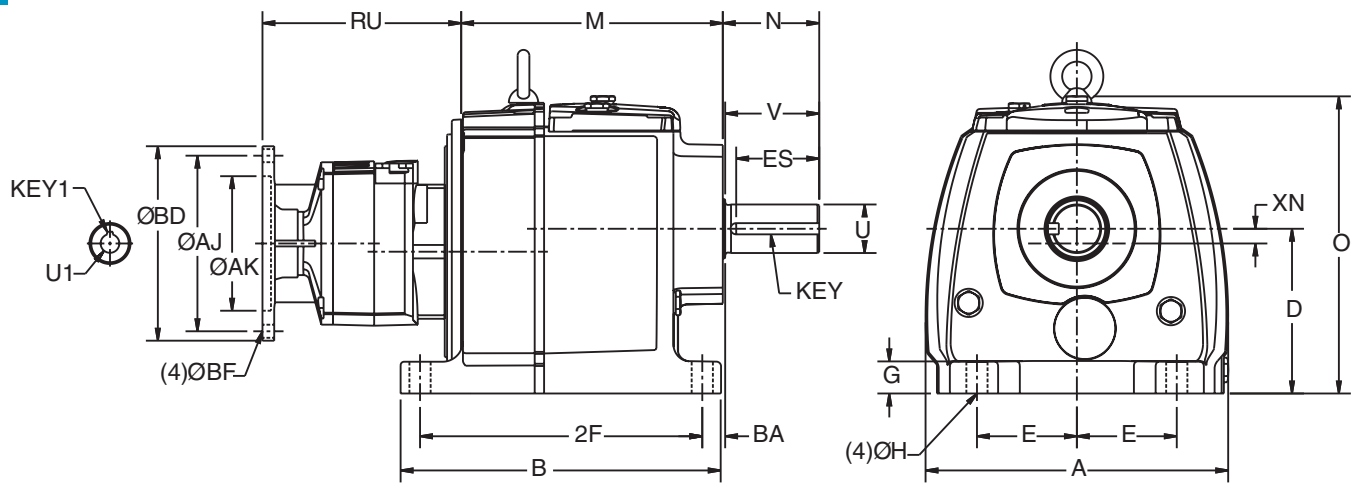
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Browning®

C-Face Reducer

CbN SERIES 3000

Foot Mounted - Combined Reduction



Gear Frame	A	B	D [1]	E	G	H	M	N	O	U [3]	V	BA	2F	ES	XN	Key
35	14.19	12.89	8.86	5.51	1.73	0.87	11.34	4.81	14.84	2.38	4.72	1.10	11.02	4.19	1.47	5/8 Sq.

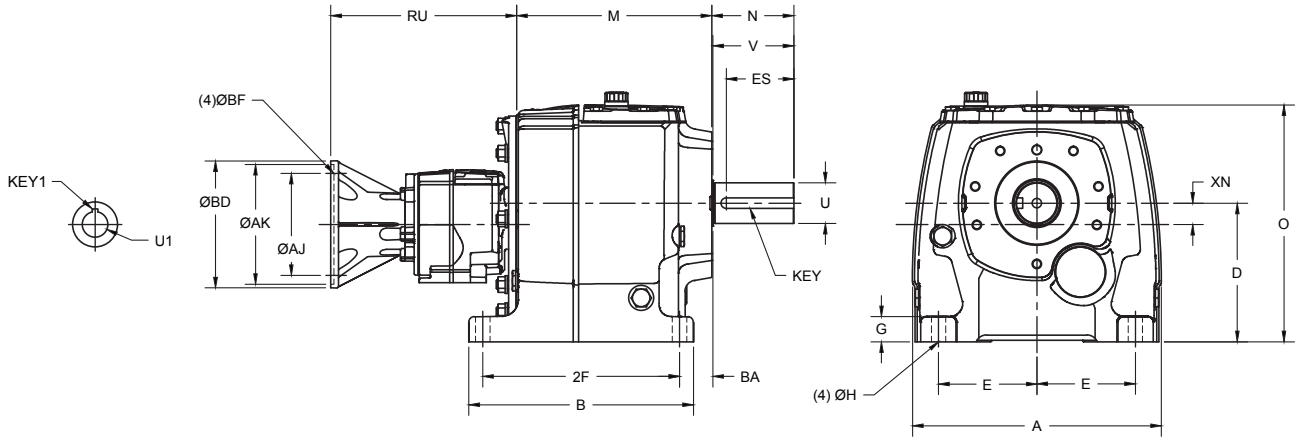
Motor Frame	RU	AJ	BF	AK	BD	U1	Key1
56C	11.11	5.875	0.44	4.50	6.50	0.625	3/16 Sq.
143/145TC	11.11	5.875	0.44	4.50	6.50	0.875	3/16 Sq.
182/184TC	12.83	7.25	0.57	8.50	9.00	1.125	1/4 Sq.

[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Foot Mounted - Combined Reduction



Gear Frame	A	B	D [1]	E	G	H	N	O	U [3]	V	BA	2F	ES	XN	M	Key
36	17.68	15.95	9.85	6.99	1.77	1.02	5.847	17.72	2.875	5.75	2.36	13.98	4.784	1.492	13.86	3/4 Sq
37	20.39	17.91	12.40	8.27	2.17	1.02	7.127	20.40	3.625	7.00	2.56	15.35	5.893	2.752	16.54	7/8 Sq
38	23.94	21.65	13.98	10.04	2.35	1.02	9.99	22.60	4.375	9.99	1.97	18.90	9.02	2.559	28.90	1 SQ

Motor Frame	Gear Frame	AJ	AK	BF1	U1	RU			BD	Key1
						36	37	38		
56C	All	5.875	4.50	.38	0.625	11.47	11.47	13.52	3/16 Sq.	3/16 Sq.
143TC-145TC	All	5.875	4.50	.38	.875	11.47	11.47	13.52	3/16 Sq.	3/16 Sq.
182TC-184TC	All	7.25	8.50	.50	1.125	13.19	13.19	15.24	1/4 Sq.	1/4 Sq.
213TC-215TC	37,38	7.25	4.50	.50	1.375	-	13.19	15.24	5/16 Sq.	5/16 Sq.
254TC-256TC	38	7.25	8.50	.50	1.625	-	-	16.44	3/8 Sq.	3/8 Sq.

[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

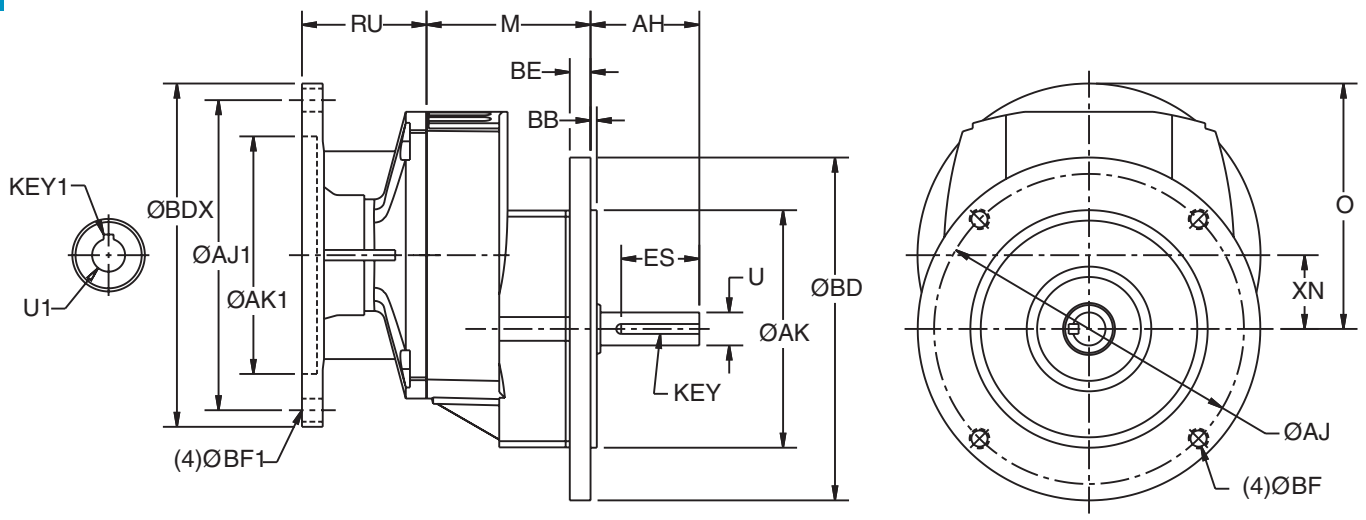
[3] Shaft extension tolerance: +.0000; -.001".

Browning

C-Face Reducer

CbN SERIES 3000

Flange Mounted - Single Reduction



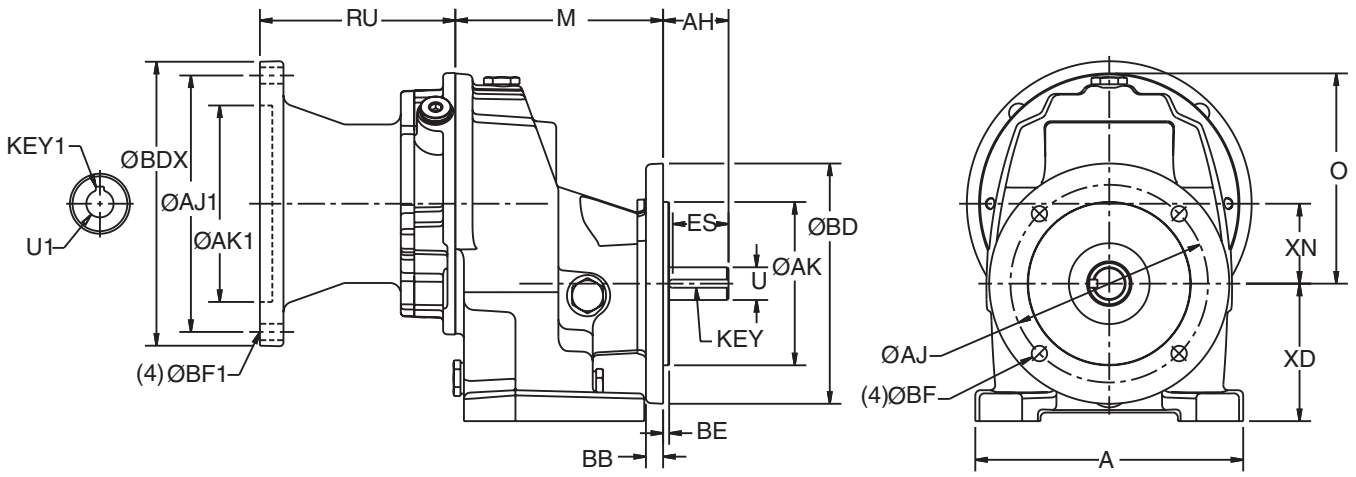
Gear Frame	M	O	U [3]	AH	ES	XN	Key
30	3.50	4.65	0.625	2.06	1.48	1.40	3/16

Flange Type	AK	AJ	BB	BD	BE	BF
56C	4.50	5.88	0.12	6.50	0.39	3/8-16
BS	3.74	4.53	0.12	5.51	0.31	0.35
BD1	3.15	3.94	0.12	4.72	0.39	0.28
BD2	4.33	5.12	0.08	6.30	0.39	0.35
BD3	5.12	6.50	0.12	7.87	0.31	0.35

Motor Frame	AJ1	RU	BF1	AK1	BDX	U1	Key1
56C	5.875	3.33	0.44	4.50	6.50	0.625	3/16 Sq.
140TC [1]	5.875	3.33	0.44	4.50	6.50	0.875	3/16 Sq.

[1] Not available on ratios 5.6 through 8:1.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Flange Mounted - Single Reduction



Gear Frame	A	M	O	U [3]	AH	ES	XD	XN	Key
31	6.14	4.76	4.82	0.75	1.50	1.28	3.15	1.83	3/16 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	4.33	5.12	0.14	6.29	0.39	0.35
BD2	3.74	4.53	0.14	5.50	0.39	0.35

Motor Frame	AJ1	RU	BF1	AK1	BDX	U1	Key1
56C	5.875	4.48	0.44	4.50	6.50	0.625	3/16 Sq.
140TC	5.875	4.48	0.44	4.50	6.50	0.875	3/16 Sq.
180TC [4]	7.250	6.20	0.57	8.50	9.00	1.125	1/4 Sq.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

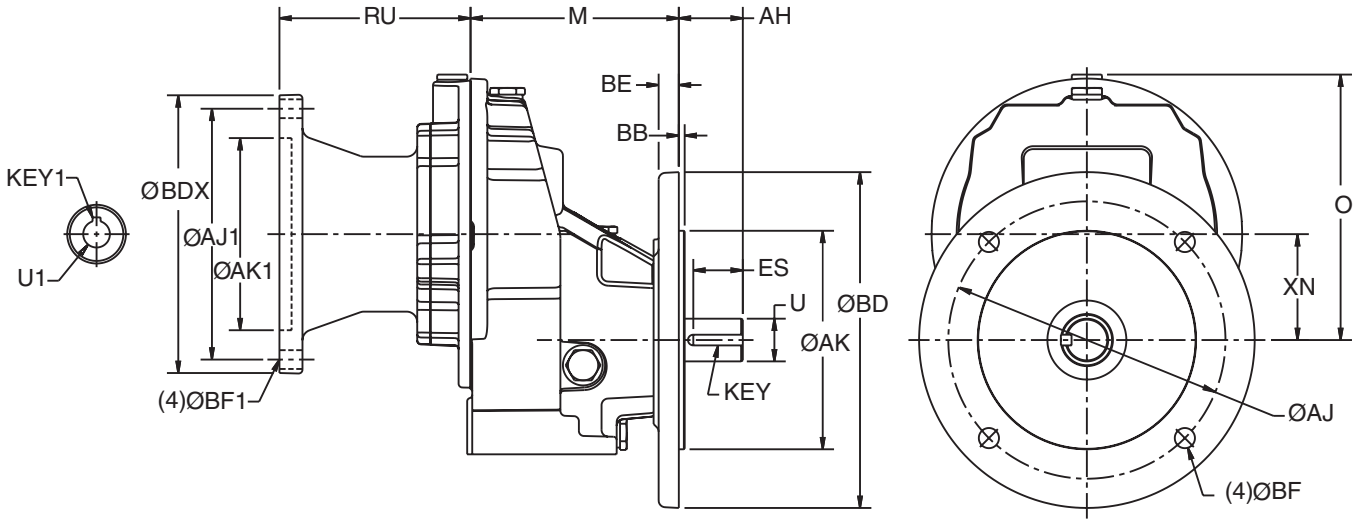
[4] Permitted in vertical mounting only.

Browning

C-Face Reducer

CbN SERIES 3000

Flange Mounted - Single Reduction



Gear Frame	M	O	U [3]	AH	ES	XN	Key
32	4.88	6.22	1.00	1.50	1.16	2.48	1/4 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	5.12	6.5	0.14	7.87	0.47	0.47
BD2	4.33	5.12	0.14	6.29	0.39	0.35

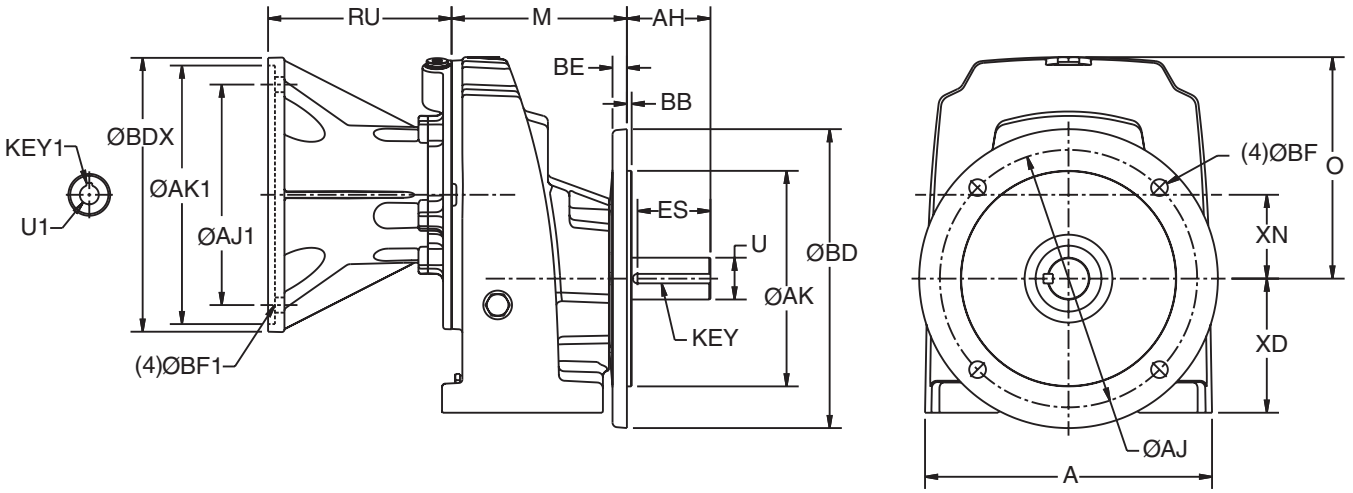
Motor Frame	AJ1	RU	BF1	AK1	BDX	U1	Key1
56C	5.875	4.48	0.44	4.50	6.50	0.625	3/16 Sq.
140TC	5.875	4.48	0.44	4.50	6.50	0.875	3/16 Sq.
180TC	7.250	6.20	0.57	8.50	9.00	1.125	1/4 Sq.
210TC [4]	7.250	6.20	0.57	8.50	9.00	1.375	5/16 Sq.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] Permitted in vertical mounting only.

Flange Mounted - Single Reduction



Gear Frame	A	M	O	U [3]	AH	ES	XD	XN	Key
33	9.44	5.77	7.28	1.375	2.75	2.40	4.41	2.76	5/16 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	7.09	8.46	0.16	9.83	0.47	0.55
BD2	5.12	6.50	0.16	7.86	0.47	0.43

Motor Frame	AJ1	RU	BF1	AK1	BDX	U1	Key1
56C	5.875	4.32	0.44	4.50	6.50	0.625	3/16 Sq.
140TC	5.875	4.32	0.44	4.50	6.50	0.875	3/16 Sq.
180TC	7.250	6.04	0.57	8.50	9.00	1.125	1/4 Sq.
210TC [4]	7.250	6.04	0.57	8.50	9.00	1.375	5/16 Sq.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

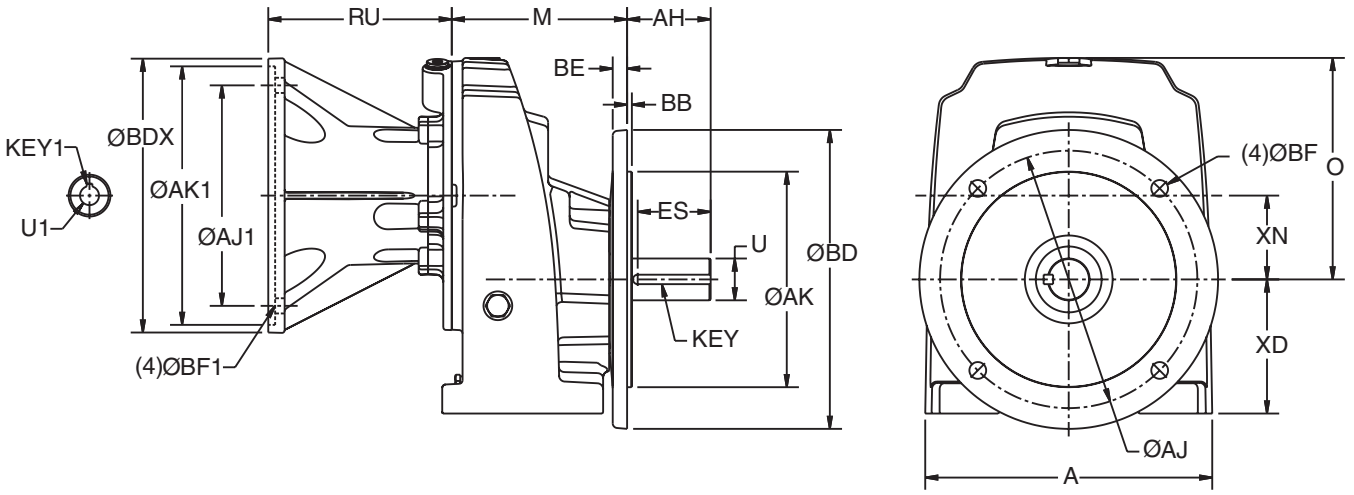
[4] Permitted in vertical mounting only.

Browning

C-Face Reducer

CbN SERIES 3000

Flange Mounted - Single Reduction



Gear Frame	A	M	O	U [3]	AH	ES	XD	XN	Key
34	11.02	7.09	8.70	1.50	3.00	2.56	5.20	3.43	3/8 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	9.06	10.43	0.16	11.80	0.59	0.55
BD2	7.09	8.46	0.16	9.83	0.59	0.55

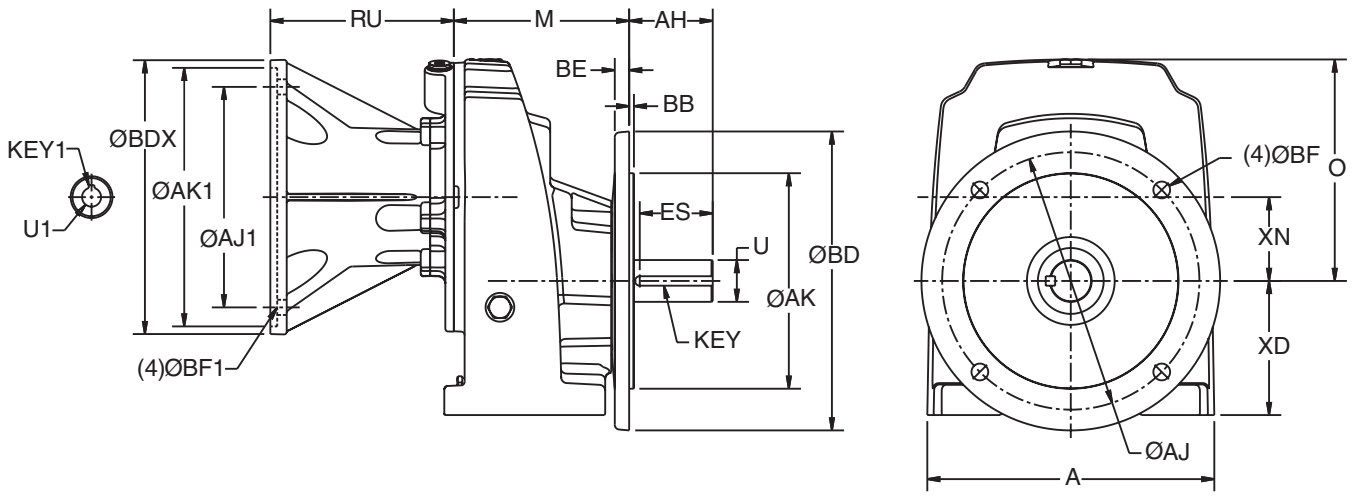
Motor Frame	AJ1	RU	BF1	AK1	BDX	U1	Key1
182/184TC	7.25	6.22	0.57	8.50	9.00	1.125	1/4 Sq.
213/215TC	7.25	6.22	0.57	8.50	9.00	1.375	5/16 Sq.
254/256TC	7.25	7.43	0.57	8.50	9.00	1.625	3/8 Sq.
284/286TC[4]	9.00	8.40	0.57	10.50	11.25	1.875	1/2 Sq.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] Permitted in vertical mounting only.

Flange Mounted - Single Reduction



Gear Frame	A	M	O	U [3]	AH	ES	XD	XN	Key
35	13.65	7.89	11.07	1.75	3.50	3.06	6.30	4.33	3/8 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	9.84	11.81	0.20	13.78	0.71	0.71
BD2	9.06	10.43	0.20	11.81	0.71	0.55

Motor Frame	AJ1	RU	BF1	AK1	BDX	U1	Key1
213/215TC	7.25	5.87	0.57	8.50	9.00	1.375	5/16 Sq.
254/256TC	7.25	7.09	0.57	8.50	9.00	1.625	3/8 Sq.
284/286TC	9.00	8.06	0.57	10.50	11.25	1.875	1/2 Sq.
324/326TC [4]	11.00	8.79	0.69	12.50	13.38	2.125	1/2 Sq.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

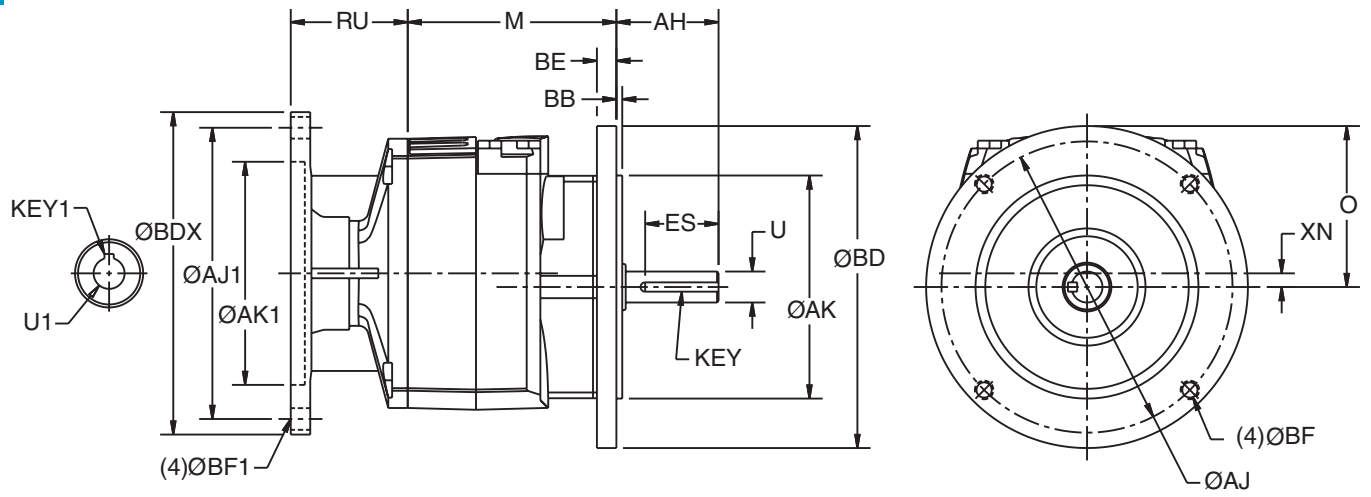
[4] Permitted in vertical mounting only.

Browning

C-Face Reducer

CbN SERIES 3000

Flange Mounted - Double/Triple Reduction



Gear Frame	M	O	U [3]	AH	ES	XN	Key
3012	4.21	3.25	0.63	2.06	1.48	0.28	3/16 Sq.
3013	5.00	3.25	0.63	2.06	1.48	0.28	3/16 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
56C	4.50	5.88	0.12	6.50	0.39	3/8-16
BS	3.74	4.53	0.12	5.51	0.31	0.35
BD1	3.15	3.94	0.10	4.72	0.28	0.28
BD2	4.33	5.12	0.12	6.30	0.31	0.35
BD3	5.12	6.50	0.12	7.87	0.31	0.35

Motor Frame	AJ1	RU	BF1	AK1	BDX	U1	Key1
56C	5.875	3.33	0.44	4.50	6.50	0.625	3/16 Sq.
140TC [1]	5.875	3.33	0.44	4.50	6.50	0.875	3/16 Sq.

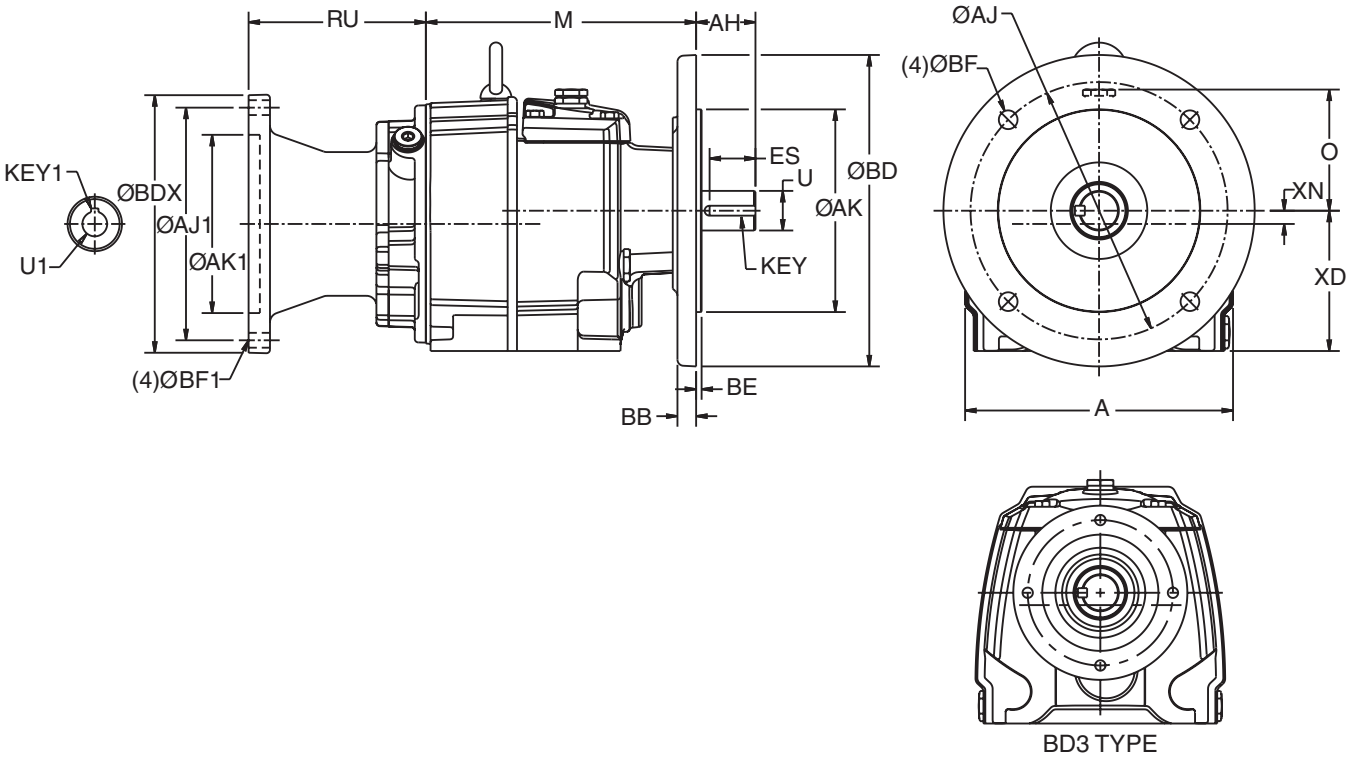
[1] Not available on ratios 31.5 to 45:1 in 3012. Use 3013 for 35.5 to 45:1.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Browning

C-Face Reducer

CbN SERIES 3000

Flange Mounted - Double/Triple Reduction



Gear Frame	A	M	O	U [3]	AH	ES	XD	XN	Key
31	6.77	6.83	3.06	1.00	1.50	1.16	3.54	0.33	1/4 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	5.12	6.50	0.14	7.87	0.47	0.47
BD1	4.33	5.12	0.14	6.29	0.39	0.35
BD2	3.74	4.53	0.14	5.50	0.39	0.35
BD3	3.15	3.94	0.10	4.72	0.39	0.28

Motor Frame	AJ1	RU	BF1	AK1	BDX	U1	Key1
56C	5.88	4.48	0.44	4.50	6.50	0.625	3/16 Sq.
140TC	5.88	4.48	0.44	4.50	6.50	0.875	3/16 Sq.
180TC [4]	7.25	6.20	0.57	8.50	9.00	1.125	1/4 Sq.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

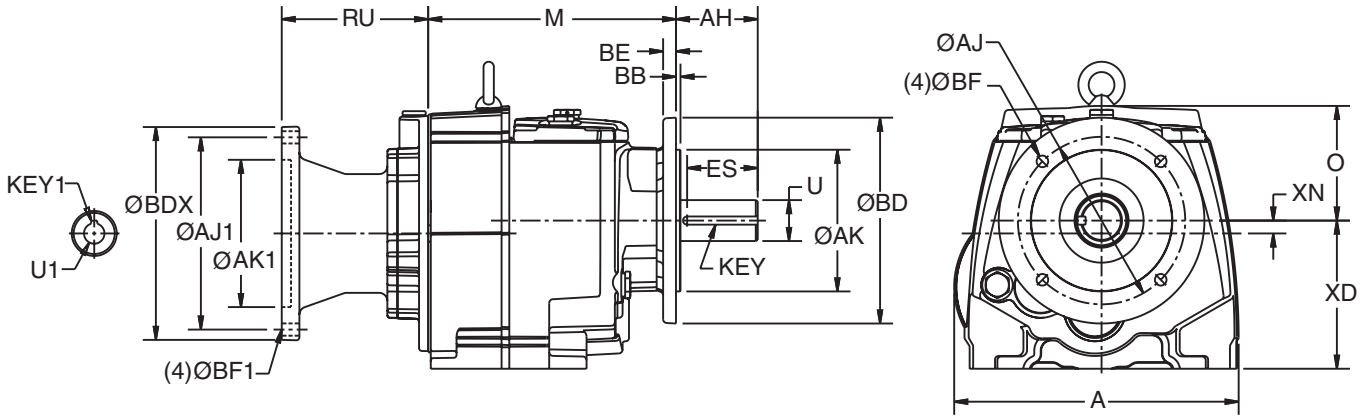
[4] Permitted in vertical mounting only.

Browning®

C-Face Reducer

CbN SERIES 3000

Flange Mounted - Double/Triple Reduction



Gear Frame	A	M	O	U [3]	AH	ES	XD	XN	Key
32	8.70	7.58	3.50	1.25	2.50	2.16	4.53	0.39	1/4 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	7.09	8.46	0.16	9.83	0.47	0.55
BD1	5.12	6.50	0.14	7.87	0.39	0.47
BD2	4.33	5.12	0.14	6.29	0.39	0.35

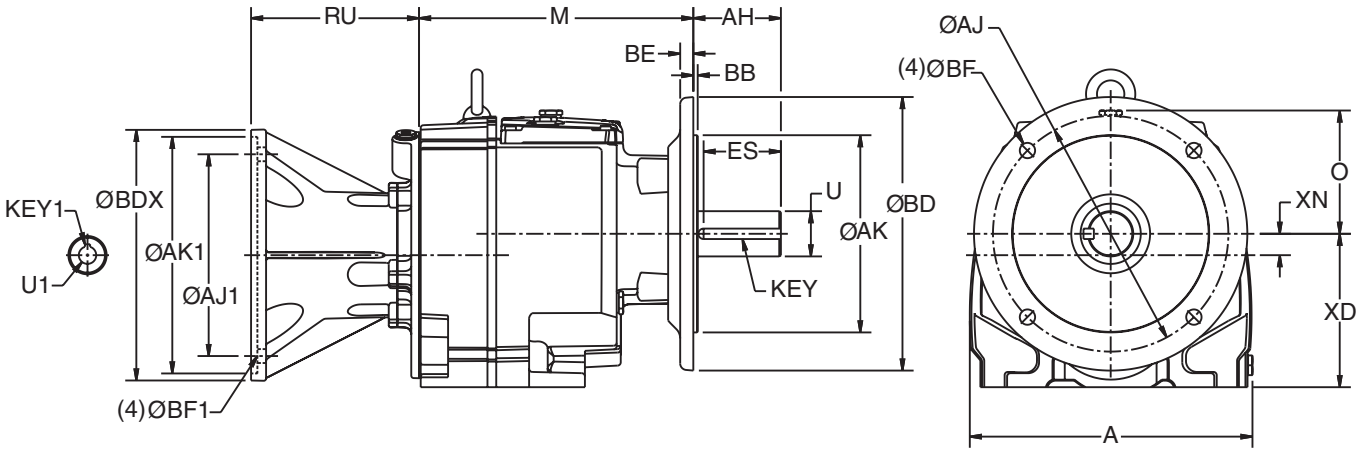
Motor Frame	AJ1	RU	BF1	AK1	BDX	U1	Key1
56C	5.875	4.48	0.44	4.50	6.50	0.625	3/16 Sq.
140TC	5.875	4.48	0.44	4.50	6.50	0.875	3/16 Sq.
180TC	7.250	6.20	0.57	8.50	9.00	1.125	1/4 Sq.
210TC [4]	7.250	6.20	0.57	8.50	9.00	1.375	5/16 Sq.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] Permitted in vertical mounting only.

Flange Mounted - Double/Triple Reduction



Gear Frame	A	M	O	U [3]	AH	ES	XD	XN	Key
3362,3363	10.16	9.86	4.43	1.50	3.00	2.56	5.51	0.77	3/4 Sq.
3372,3373	10.16	9.86	4.43	1.63	3.15	2.78	5.51	0.77	3/4 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	9.06	10.43	0.16	11.80	0.47	0.55
BD1	7.09	8.46	0.16	9.83	0.47	0.55
BD2	5.12	6.50	0.14	7.86	0.47	0.47

Motor Frame	AJ1	RU	BF1	AK1	BDX	U1	Key1
56C	5.875	4.32	0.44	4.50	6.50	0.625	3/16 Sq.
140TC	5.875	4.32	0.44	4.50	6.50	0.875	3/16 Sq.
180TC	7.250	6.04	0.57	8.50	9.00	1.125	1/4 Sq.
210TC	7.250	6.04	0.57	8.50	9.00	1.375	5/16 Sq.

[2] All rough casting dimensions may vary by .25" due to casting variations.

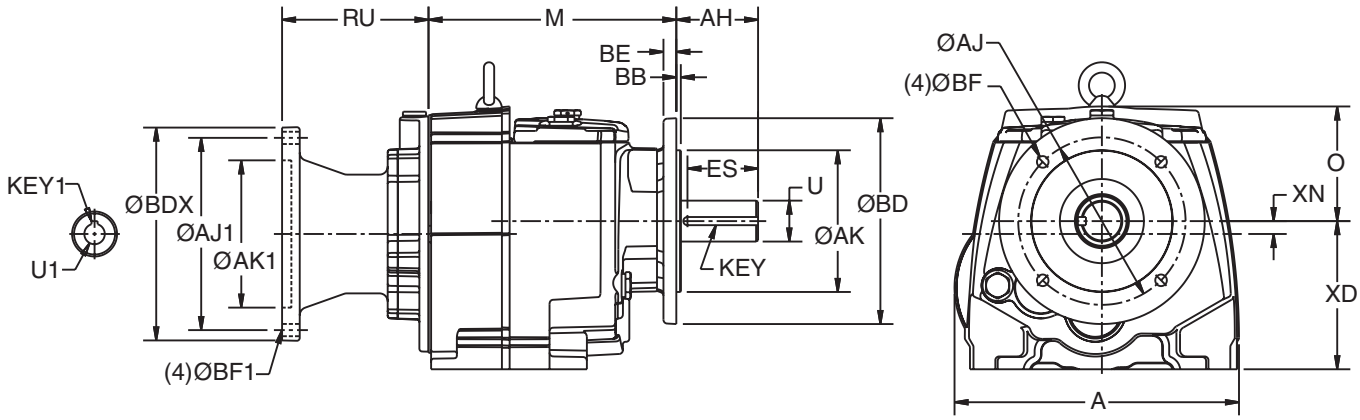
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Browning

C-Face Reducer

CbN SERIES 3000

Flange Mounted - Double/Triple Reduction



Gear Frame	A	M	O	U [3]	AH	ES	XD	XN	Key
34	11.97	10.63	4.80	2.13	3.50	3.06	7.09	1.02	1/2 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	9.84	11.81	0.16	13.77	0.59	0.71
BD1	9.06	10.43	0.16	11.80	0.59	0.55
BD2	7.09	8.46	0.16	9.83	0.59	0.55

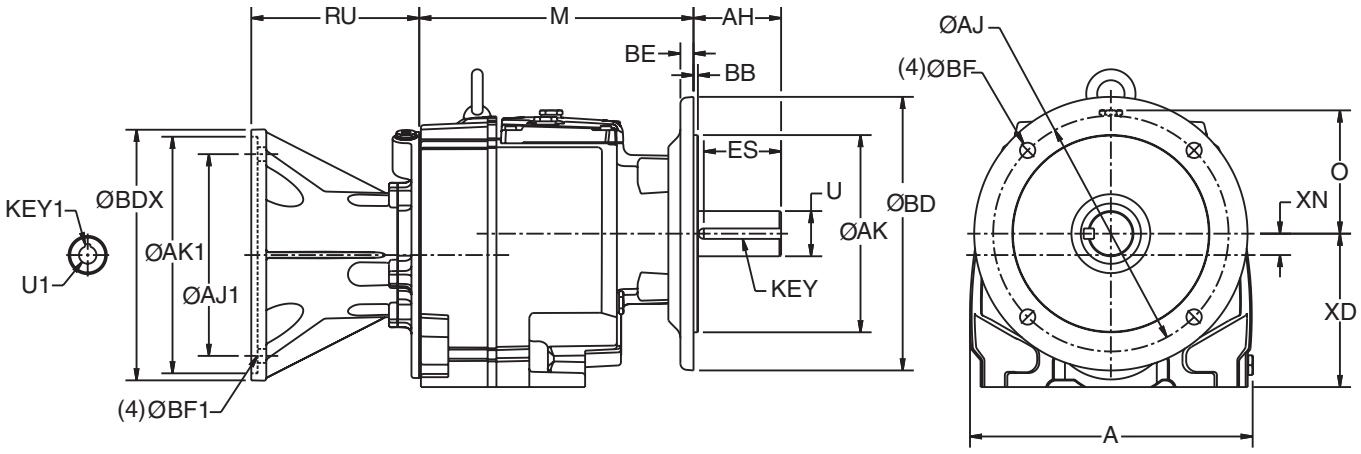
Motor Frame	AJ1	RU	BF1	AK1	BDX	U1	Key1
56C	5.875	4.50	0.44	4.50	6.50	0.625	3/16 Sq.
143/145TC	5.875	4.50	0.44	4.50	6.50	0.875	3/16 Sq.
182/184TC	7.250	6.22	0.57	8.50	9.00	1.125	1/4 Sq.
213/215TC	7.250	6.22	0.57	8.50	9.00	1.375	5/16 Sq.
254/256TC	7.250	7.43	0.57	8.50	9.00	1.625	3/8 Sq.
284/286TC [4]	9.000	8.40	0.57	10.50	11.25	1.875	1/2 Sq.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] Permitted in vertical mounting only.

Flange Mounted - Double/Triple Reduction



Gear Frame	A	M	O	U [3]	AH	ES	XD	XN	Key
35	14.19	12.40	5.98	2.375	4.72	4.19	8.86	1.14	5/8 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	11.81	13.78	0.20	15.75	0.71	0.71
BD1	9.84	11.81	0.20	13.78	0.71	0.71
BD2	9.06	10.43	0.20	11.81	0.71	0.55

Motor Frame	AJ1	RU	BF1	AK1	BDX	U1	Key1
56C	5.875	4.14	0.44	4.50	6.50	0.625	3/16 Sq.
143/145TC	5.875	4.14	0.44	4.50	6.50	0.875	3/16 Sq.
182/184TC	7.250	5.87	0.57	8.50	9.00	1.125	1/4 Sq.
213/215TC	7.250	5.87	0.57	8.50	9.00	1.375	5/16 Sq.
254/256TC	7.250	7.09	0.57	8.50	9.00	1.625	3/8 Sq.
284/286TC	9.000	8.06	0.57	10.50	11.25	1.875	1/2 Sq.
324/326TC [4]	11.000	8.79	0.69	12.50	13.38	2.125	1/2 Sq.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

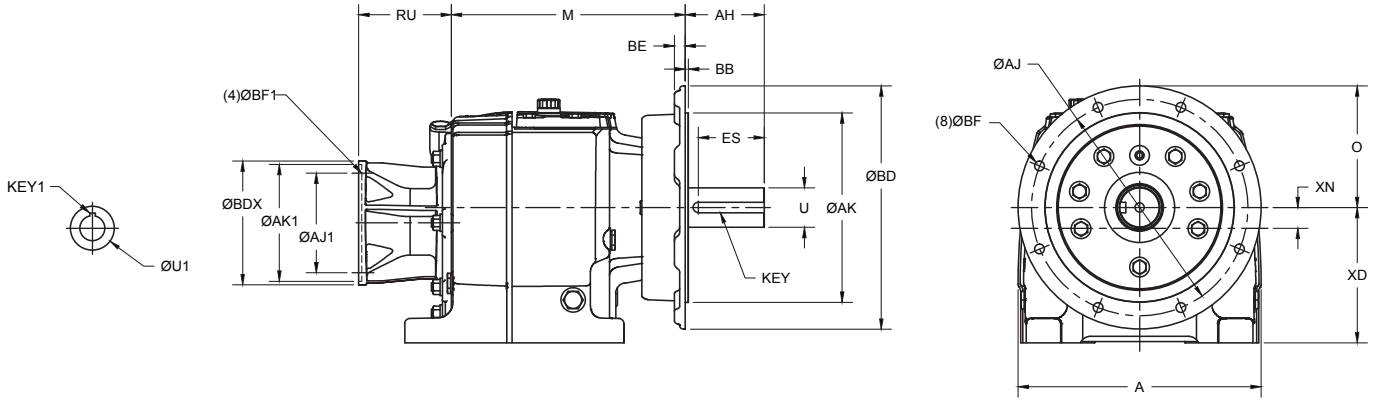
[4] Permitted in vertical mounting only.

Browning

C-Face Reducer

CbN SERIES 3000

Flange Mounted - Double/Triple Reduction



Gear Frame	A	M	O	U [3]	AH	ES	XD	XN	Key
36	17.68	17.00	7.88	2.875	5.75	4.784	9.85	1.102	3/4 Sq
37	20.39	19.69	8.00	3.625	7.00	5.893	12.40	2.362	7/8 Sq
38	23.94	23.03	8.63	4.375	6.84	9.02	13.98	2.559	1 SQ

Gear Frame	Flange Type	AK	AJ	BB	BD	BE	BF
36	BS	17.717	19.685	0.236	21.65	0.79	0.70
	BD1	13.780	15.748	0.236	17.70	0.79	0.70
37	BS	17.717	19.685	0.236	21.65	0.79	0.70
	BD1	13.780	15.748	0.236	17.70	0.79	0.70
38	BS	21.65	23.62	.197	25.98	0.79	0.87
	BD1	17.72	19.69	.197	21.65	0.79	0.69

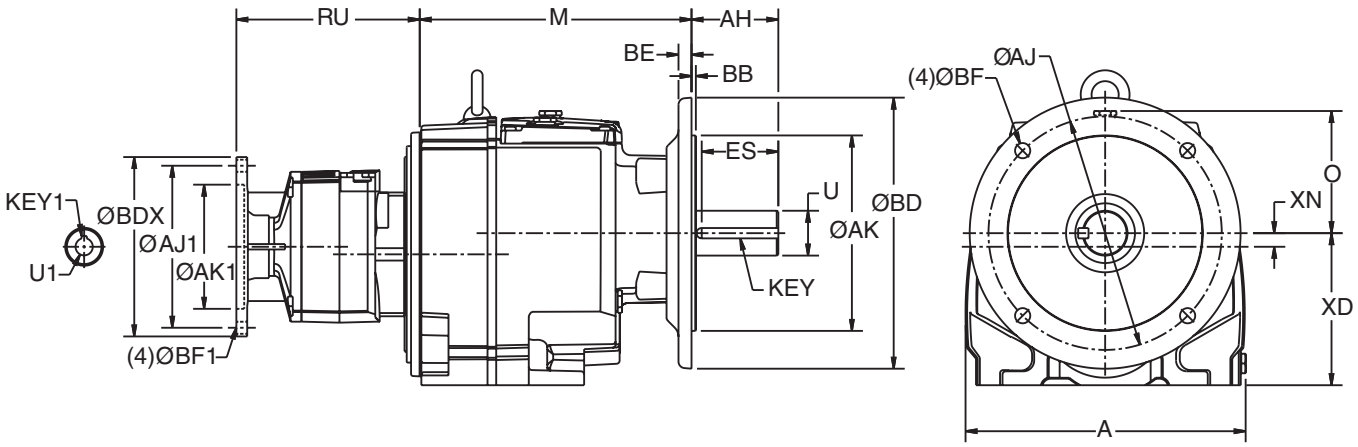
Motor Frame	Gear Frame	AJ	AK	BF	U1	RU	BDX	Key1
145TC	36	5.88	4.50	.38	.875	3.54	6.50	3/16 Sq.
182TC-184TC	36,37	7.25	8.50	.50	1.125	5.26	9.00	1/4 Sq.
213TC	36,37	7.25	4.50	.50	1.375	5.26	9.00	5/16 Sq.
215TC	38	7.25	4.50	.50	1.375	6.12	9.00	5/16 Sq.
254TC-256TC	All	7.25	8.50	.50	1.625	6.12	9.00	3/8 Sq.
284TC-286TC	All	9.00	10.50	.50	1.875	7.09	9.00	1/2 Sq.
324TC-326TC	All	11.00	12.50	.625	2.125	8.45	13.38	1/2 Sq.
364TC-365TC	37,38	11.00	12.50	.625	2.375	8.45	13.38	5/8 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000; -.001".

Flange Mounted - Combined Reduction



Gear Frame	A	M	O	U [3]	AH	ES	XD	XN	Key
3254,3255	8.70	7.58	3.50	1.25	2.50	2.16	4.53	0.12	1/4 Sq.
3374,3375	10.16	9.86	4.43	1.63	3.15	2.78	5.51	0.49	3/8 Sq.

Flange Type	32						33					
	AK	AJ	BB	BD	BE	BF	AK	AJ	BB	BD	BE	BF
BS	7.09	8.46	0.16	9.83	0.47	0.55	9.06	10.43	0.16	11.80	0.47	0.55
BD1	5.12	6.50	0.14	7.87	0.39	0.47	7.09	8.46	0.16	9.83	0.47	0.55
BD2	4.33	5.12	0.14	6.29	0.39	0.35	5.12	6.50	0.14	7.86	0.47	0.47

Motor Frame	RU	AJ1	BF1	AK1	BDX	U1	Key1
56C	7.79	5.875	0.44	4.50	6.50	0.625	3/16 Sq.
140TC	7.79	5.875	0.44	4.50	6.50	0.875	3/16 Sq.

[2] All rough casting dimensions may vary by .25" due to casting variations.

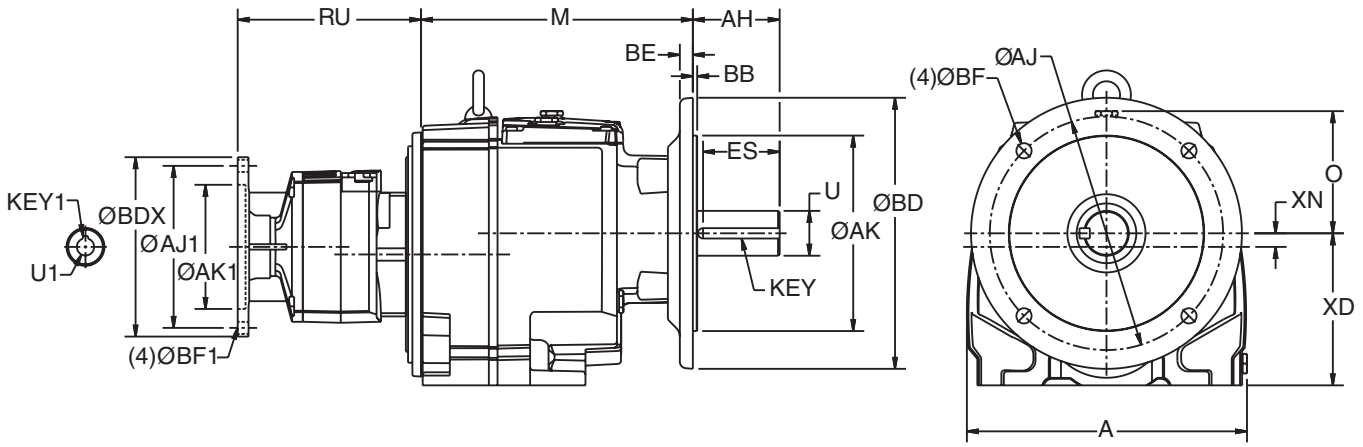
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Browning

C-Face Reducer

CbN SERIES 3000

Flange Mounted - Combined Reduction



Gear Frame	A	M	O	U [3]	AH	ES	XD	XN	Key
34	11.97	10.63	4.80	2.13	3.50	3.06	7.09	1.35	1/2 Sq.

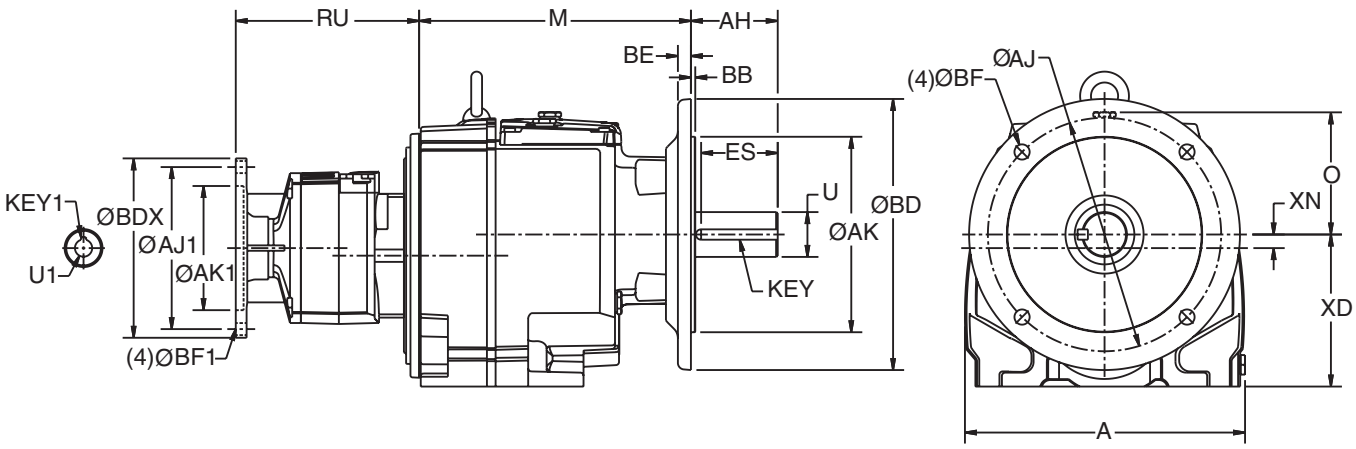
Flange Type	AK	AJ	BB	BD	BE	BF
BS	9.84	11.81	0.16	13.77	0.59	0.71
BD1	9.06	10.43	0.16	11.80	0.59	0.55
BD2	7.09	8.46	0.16	9.83	0.59	0.55

Motor Frame	RU	AJ1	BF1	AK1	BDX	U1	Key1
56C	11.46	5.875	0.44	4.50	6.50	0.625	3/16 Sq.
143/145TC	11.46	5.875	0.44	4.50	6.50	0.875	3/16 Sq.
182/184TC	13.18	7.25	0.57	8.50	9.00	1.125	1/4 Sq.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Flange Mounted - Combined Reduction



Gear Frame	A	M	O	U [3]	AH	ES	XD	XN	Key
35	14.19	12.40	5.98	2.375	4.72	4.19	8.86	1.47	5/8 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	11.81	13.78	0.20	15.75	0.71	0.71
BD1	9.84	11.81	0.20	13.78	0.71	0.71
BD2	9.06	10.43	0.20	11.81	0.71	0.55

Motor Frame	RU	AJ1	BF1	AK1	BDX	U1	Key1
56C	11.11	5.875	0.44	4.50	6.50	0.625	3/16 Sq.
143/145TC	11.11	5.875	0.44	4.50	6.50	0.875	3/16 Sq.
182/184TC	12.83	7.25	0.57	8.50	9.00	1.125	1/4 Sq.

[2] All rough casting dimensions may vary by .25" due to casting variations.

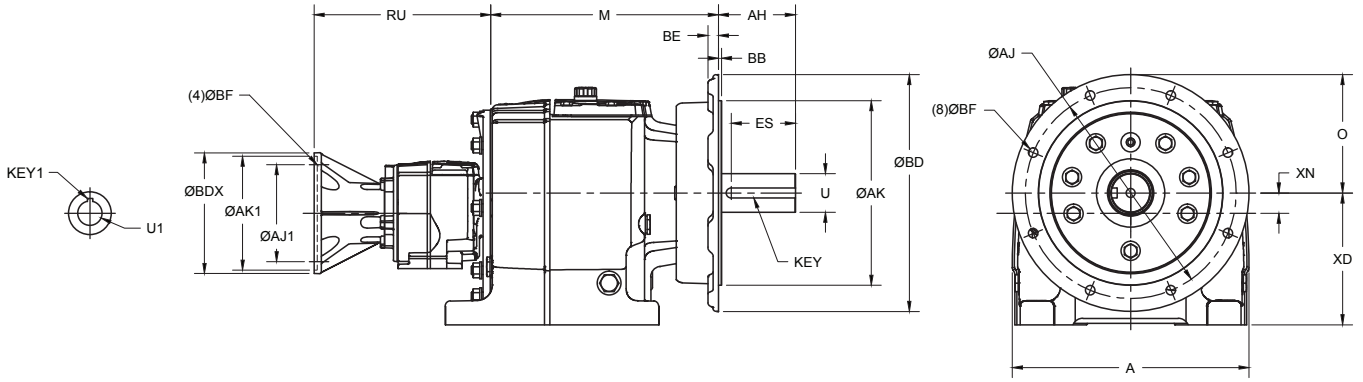
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Browning

C-Face Reducer

CbN SERIES 3000

Flanged Mounted - Combined Reduction



Gear Frame	A	M	O	U [3]	AH	ES	XD	XN	Key
36	17.68	17.00	7.88	2.875	5.75	4.784	9.85	1.492	3/4 Sq
37	20.39	19.69	8.00	3.625	7.00	5.893	12.40	2.752	7/8 Sq
38	23.94	32.05	8.63	4.375	6.84	9.02	13.98	2.559	1 SQ

Gear Frame	Flange Type	AK	AJ	BB	BD	BE	BF
36	BS	17.717	19.685	0.236	21.65	0.79	0.70
	BD1	13.780	15.748	0.236	17.70	0.79	0.70
37	BS	17.717	19.685	0.236	21.65	0.79	0.70
	BD1	13.780	15.748	0.236	17.70	0.79	0.70
38	BS	21.65	23.62	.197	25.98	0.79	0.87
	BD1	17.72	19.69	.197	21.65	0.79	0.69

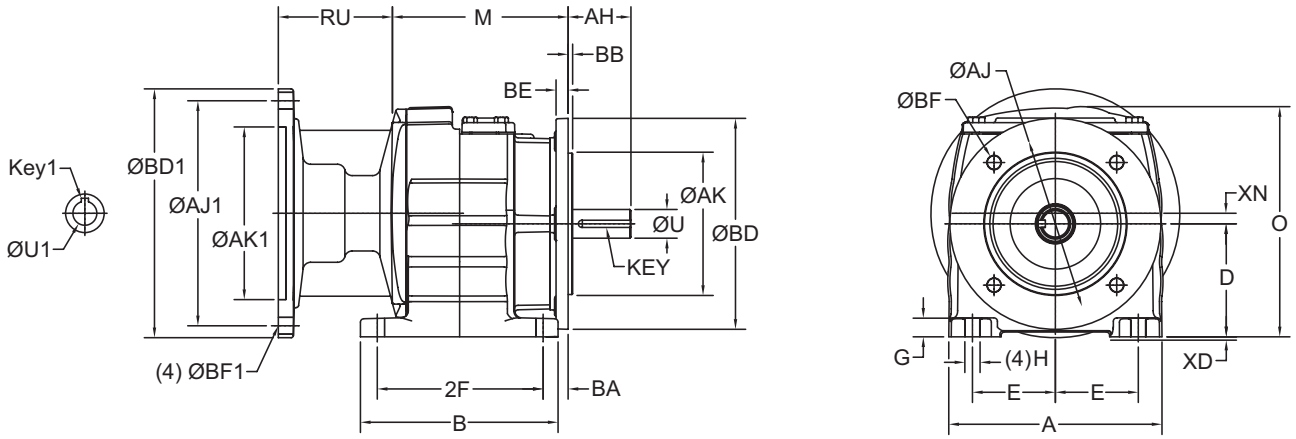
Motor Frame	Gear Frame	AJ	AK	BF1	U1	RU			BDX	Key1
						36	37	38		
56C	All	5.875	4.50	.38	0.625	11.47	11.47	13.52	6.50	3/16 Sq.
143TC-145TC	All	5.875	4.50	.38	.875	11.47	11.47	13.52	6.50	3/16 Sq.
182TC-184TC	All	7.25	8.50	.50	1.125	13.19	13.19	15.24	9.00	1/4 Sq.
213TC-215TC	37,38	7.25	4.50	.50	1.375	-	13.19	15.24	9.00	5/16 Sq.
254TC-256TC	38	7.25	8.50	.50	1.625	-	-	16.44	9.00	3/8 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000; -.001".

Foot Mount with Flange - Double/Triple Reduction



Gear Frame	A	B	D[1]	E	2F	G	H	O	U[3]	ES	M	XN	Key
3012A	5.62	5.16	2.95	2.165	4.33	.47	.35	6.00	0.750	1.25	4.21	.276	3/16 Sq
3013A	6.76	7.68	3.54	2.170	6.50	.75	.35	6.60	0.750	1.25	6.83	-.330	3/16 Sq
31	6.76	7.68	3.54	2.170	6.50	.75	.35	6.60	1.000	1.16	6.83	-.330	1/4 Sq

Gear Frame	Flange Type	AH	AJ	AK	BA	BB	BD	BE	BF
3012A	SBD1	2.06	3.94	3.15	.65	.12	4.72	.28	.28
	SBS	2.06	4.53	3.74	.65	.12	5.51	.31	.35
3013A	SBD1	2.06	3.94	3.15	.944	.10	4.72	.39	.28
	SBS	2.06	4.53	3.74	.944	.14	5.51	.39	.35
31	SBD1	1.50	5.12	4.33	.944	.14	6.29	.39	.35
	SBD2	1.50	4.53	3.74	.944	.14	5.51	.39	.35
	SBD3	1.50	3.94	3.15	.944	.10	4.72	.39	.28

Gear Frame	Motor Frame	AJ1	AK1	BDX	BF1	RU	U1	Key1	XD
3012A	56C	5.875	4.50	6.50	.44	3.33	0.625	3/15 Sq	0.024
	143,145TC	5.875	4.50	6.50	.44	3.33	0.875	3/15 Sq	0.024
3013A, 31	56C	5.875	4.50	6.50	.44	4.48	0.625	3/15 Sq	0.040
	143,145TC	5.875	4.50	6.50	.44	4.48	0.875	3/15 Sq	0.040
31	182, 184TC	7.25	8.50	9.00	.57	6.20	1.125	1/4 Sq	1.29

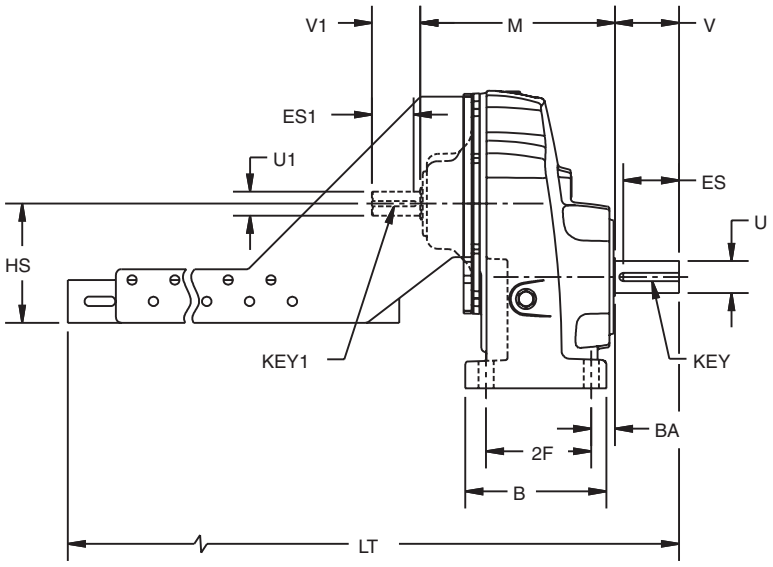
[1] Dimension "D" will never be exceeded, but may vary from value shown. When exact dimension is required, shims up to .03" may be required.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Shaft extension tolerance +.0000", -.0005" up to 1.5" diameter.
[4] Not available in ratios from 31.5 through 45:1.

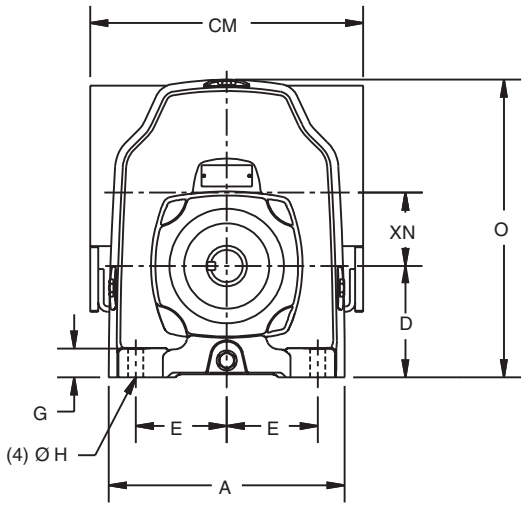
Browning®

Scoop Mount Reducer

CbN SERIES 3000

Foot Mounted - Single Reduction





Gear Frame	A	B	D [1]	E	G	H	M	O	U [3]	U1 [3]	V	V1	BA	2F	ES	ES1	XN	Key	Key1
34	11.02	6.59	5.20	4.25	1.34	0.71	9.10	13.90	1.50	1.13	3.00	2.25	1.10	4.92	2.56	1.94	3.43	3/8 Sq.	1/4 Sq.

Motor Frame					
182/184T			213/215T		
CM	HS	LT	CM	HS	LT
12.75	5.56	34.98	12.75	5.56	35.38

[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

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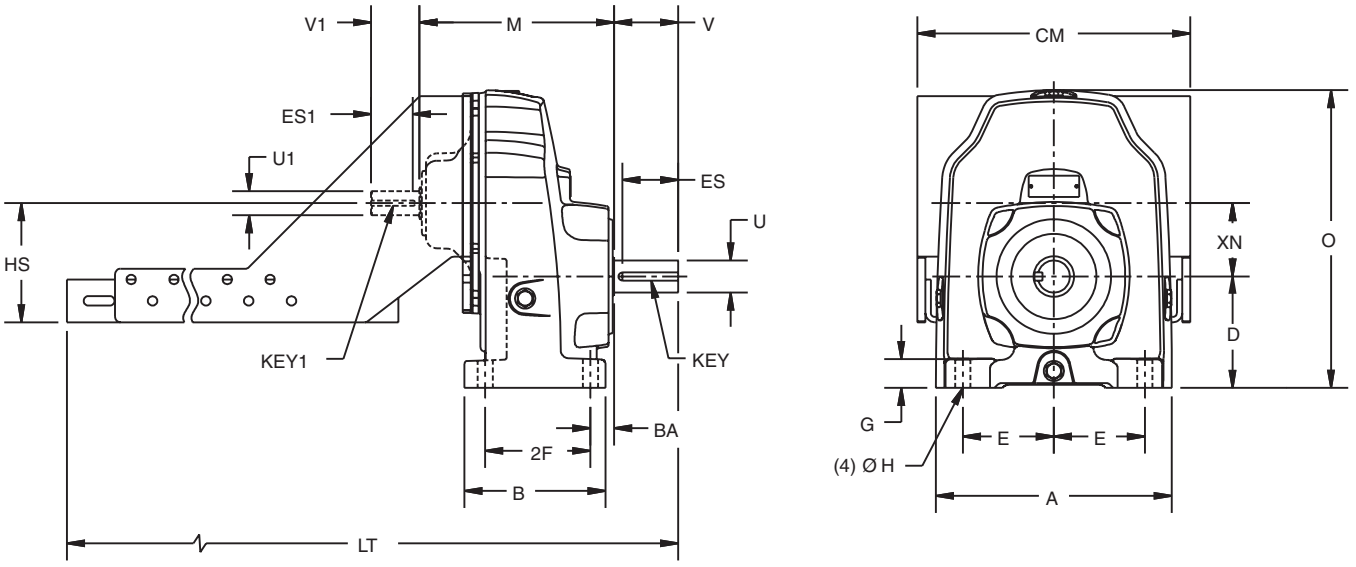
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Browning®

Scoop Mount Reducer

CbN SERIES 3000

Foot Mounted - Single Reduction



Gear Frame	A	B	D [1]	E	G	H	M	O	U [3]	U1 [3]	V	V1	BA	2F	ES	ES1	XN	Key	Key1
35	13.65	7.76	6.30	5.12	1.61	0.79	10.38	17.37	1.75	1.38	3.50	2.75	1.18	6.30	3.06	2.31	4.33	3/8 Sq.	5/16 Sq.

Motor Frame					
213/215T			254/256T		
CM	HS	LT	CM	HS	LT
12.75	5.56	37.28	17.00	7.44	41.70

[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

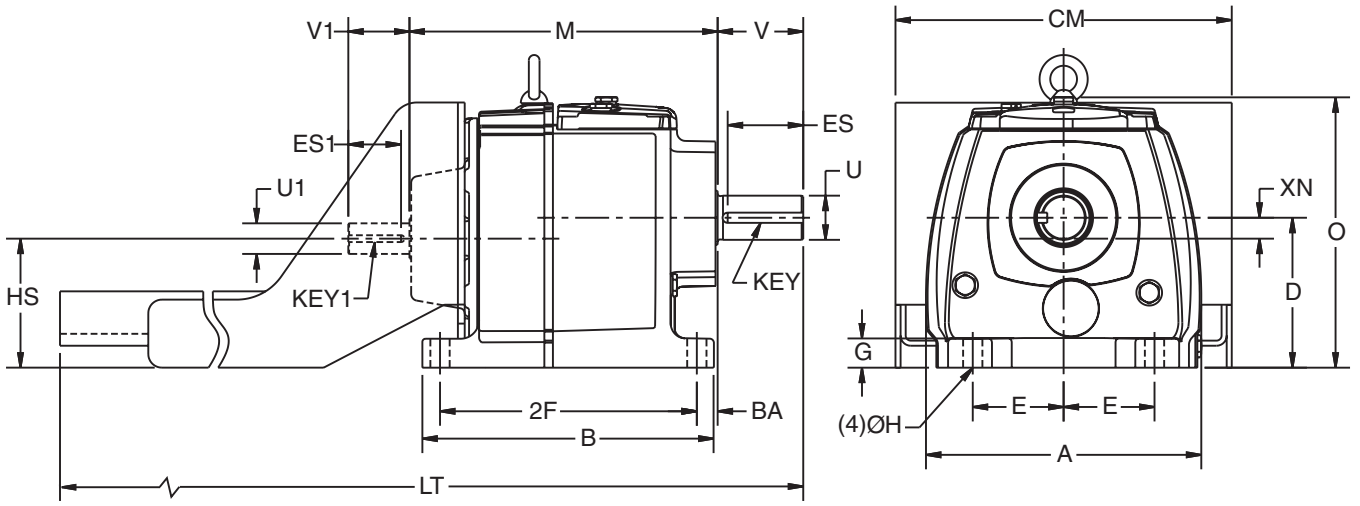
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Browning®

Scoop Mount Reducer

CbN SERIES 3000

Foot Mounted - Double/Triple Reduction



Gear Frame	A	B	D [1]	E	G	H	M	O	U [3]	U1 [3]	V	V1	BA	2F	ES	ES1	XN	Key	Key1
32	8.72	8.50	4.53	2.66	0.84	0.55	9.11	7.97	1.25	0.63	2.50	1.25	0.51	7.56	2.16	1.00	0.39	1/4 Sq.	3/16 Sq.
3362,3363	10.13	10.72	5.51	3.35	1.07	0.71	11.34	9.94	1.50	1.13	3.00	2.25	0.77	9.45	2.56	1.94	0.77	3/8 Sq.	1/4 Sq.
3372,3373	10.13	10.72	5.51	3.35	1.07	0.71	11.34	9.94	1.63	1.13	3.15	2.25	0.77	9.45	2.78	1.94	0.77	3/8 Sq.	1/4 Sq.
34	11.97	10.87	7.09	4.53	1.37	0.71	12.66	11.89	2.13	1.13	3.50	2.25	0.98	9.25	3.06	1.94	1.02	1/2 Sq.	1/4 Sq.

Gear Frame	Motor Frame								
	143/145T			182/184T			213/215T		
	CM	HS	LT	CM	HS	LT	CM	HS	LT
32	11.38	3.75	27.97	-	-	-	-	-	-
3362,3363	12.38	4.74	37.31	12.38	4.74	37.31	-	-	-
3372,3373	12.38	4.74	37.46	12.38	4.74	37.46	-	-	-
34	12.75	5.56	40.04	12.75	5.56	39.04	12.75	5.56	39.44

[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

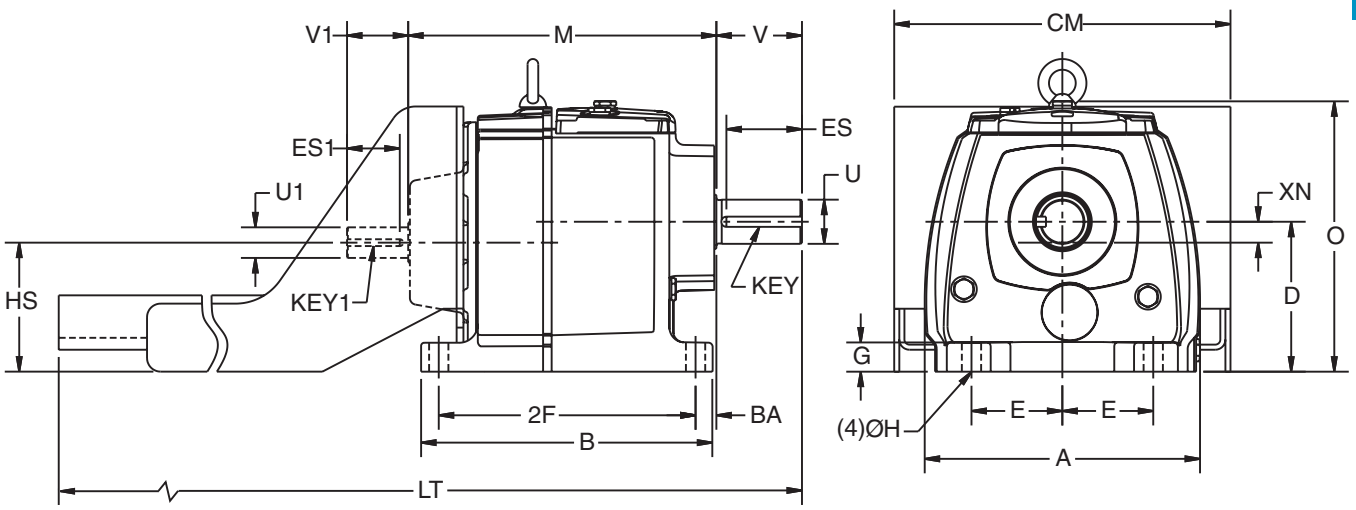
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Browning®

Scoop Mount Reducer

CbN SERIES 3000

Foot Mounted - Double/Triple Reduction



Gear Frame	A	B	D [1]	E	G	H	M	O	U [3]	U1 [3]	V	V1	BA	2F	ES	ES1	XN	Key	Key1
35	14.19	12.89	8.86	5.51	1.73	0.87	14.95	14.84	2.38	1.38	4.72	2.75	1.10	11.02	4.19	2.31	1.14	5/8 Sq.	5/16 Sq.

Motor Frame														
143/145T			182/184T			213/215T			254/256T			284/286T		
CM	HS	LT	CM	HS	LT	CM	HS	LT	CM	HS	LT	CM	HS	LT
12.75	5.56	44.08	12.75	5.56	43.08	12.75	5.56	43.41	17.00	7.44	47.83	17.00	7.44	47.96

[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

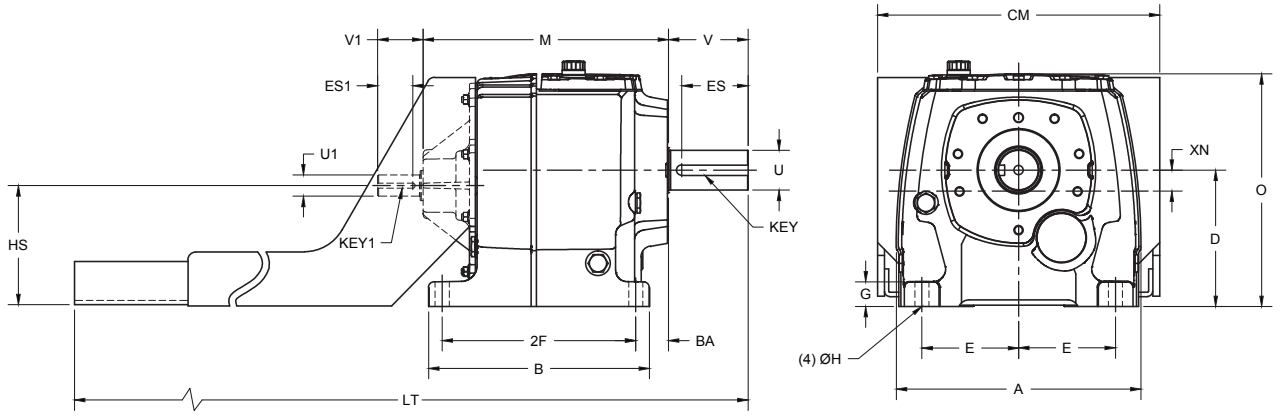
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Browning®

Scoop Mount Reducer

CbN SERIES 3000

Foot Mounted - Double/Triple Reduction



Gear Frame	A	B	D [1]	E	G	H	M	O	U [3]	U1 [3]	V	V1	BA	2F	ES	ES1	XN	Key	Key 1
36	17.68	15.95	9.85	6.99	1.77	1.02	17.48	17.72	2.875	1.875	5.75	3.75	2.36	13.98	4.784	3.06	1.102	3/4 Sq	1/2 Sq.
37	20.39	17.91	12.40	8.27	2.17	1.02	20.16	20.40	3.625	1.875	7.00	3.75	2.56	15.35	5.893	3.06	2.362	7/8 Sq	1/2 Sq.
38	23.94	21.65	13.98	10.04	2.35	1.02	23.64	22.60	4.375	2.375	9.99	4.75	1.97	18.90	9.02	4.03	2.559	1 SQ	5/8 SQ

Gear Frame	Motor Frame														
	182/184T			213/215T			254/256T			284/286T			324/326T		
	CM	HS	LT	CM	HS	LT	CM	HS	LT	CM	HS	LT	CM	HS	LT
36	15.00	6.63	48.60	15.00	6.63	48.75	15.00	6.63	51.85	19.06	8.50	57.85	19.06	8.50	59.28
37	15.00	6.63	52.02	15.00	6.63	52.17	15.00	6.63	55.27	19.06	8.50	61.27	19.06	8.50	62.70
38	-	-	-	-	-	-	19.06	8.50	60.25	19.06	8.50	60.38	19.06	8.50	71.22

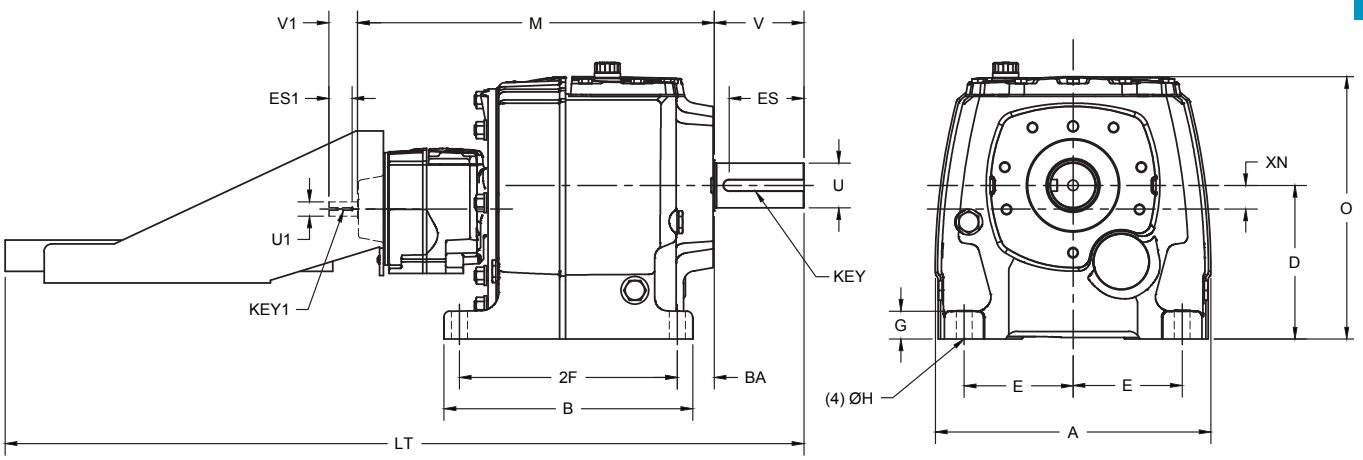
[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000; -.001"

Scoop Mount Reducer

Foot Mounted - Combined Reduction



Gear Frame	A	B	D [1]	E	G	H	M	O	U [3]	U1 [3]	V	V1	BA	2F	ES	ES1	XN	Key	Key 1
36	17.68	15.95	9.85	6.99	1.77	1.02	22.73	17.72	2.875	0.63	5.75	1.25	2.36	13.98	4.784	1.00	1.492	3/4 Sq	3/16 Sq.
37	20.39	17.91	12.40	8.27	2.17	1.02	25.40	20.40	3.625	0.63	7.00	1.25	2.56	15.35	5.893	1.00	2.752	7/8 Sq	3/16 Sq.
38	23.94	21.65	13.98	10.04	2.35	1.02	23.64	22.60	4.375	2.375	9.99	5.56	1.97	18.90	9.02	5.00	2.559	1 SQ	5/8 SQ

Gear Frame	Motor Frame					
	143/145T		182/184T		213/215T	
	HS	LT	HS	LT	HS	LT
36	3.75	51.21	-	-	-	-
37	3.75	55.14	-	-	-	-
38	5.56	63.03	5.56	62.03	5.56	62.16

[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

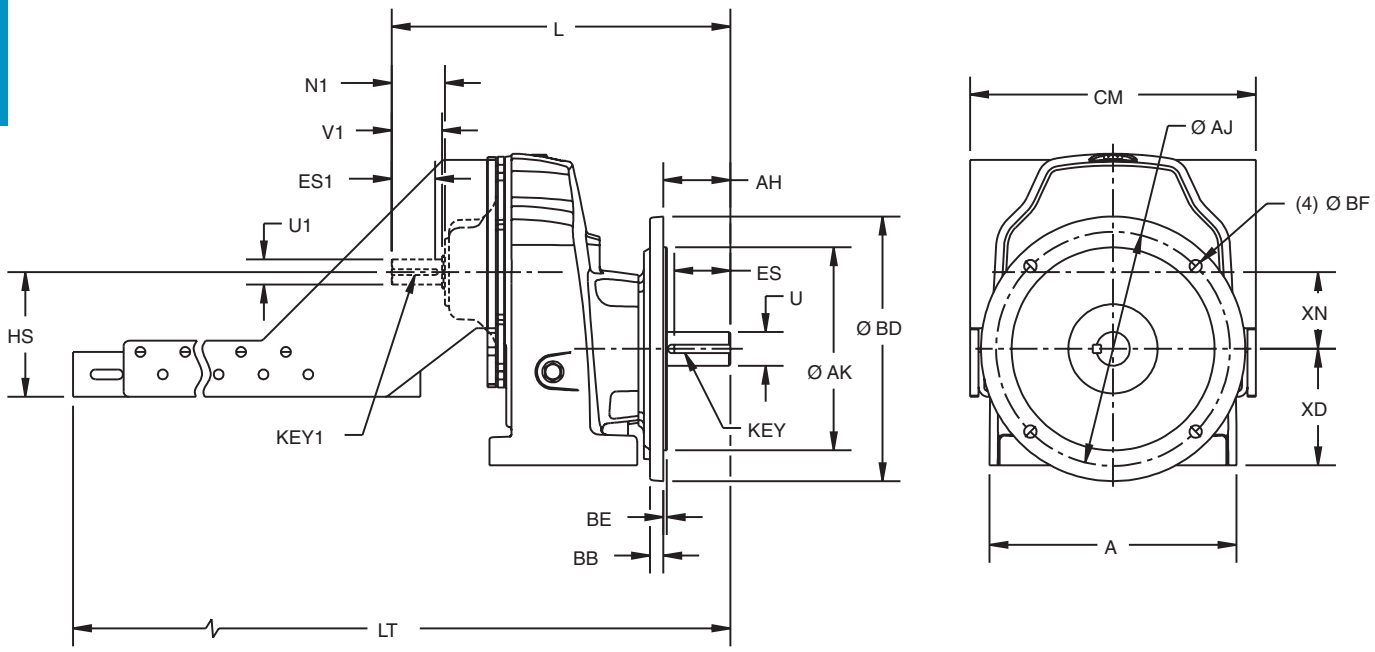
[3] Shaft extension tolerance: +.0000; -.001".

Browning

Scoop Mount Reducer

CbN SERIES 3000

Flange Mounted - Single Reduction



Gear Frame	A	L	N1	U [3]	U1 [3]	V1	AH	ES	ES1	XD	XN	Key	Key1
34	11.02	15.12	2.37	1.50	1.13	2.25	3.00	2.56	1.94	5.20	3.43	3/8 Sq.	1/4 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	9.06	10.43	0.16	11.80	0.59	0.55
BD2	7.09	8.46	0.16	9.83	0.59	0.55

Motor Frame					
182/184T			213/215T		
CM	HS	LT	CM	HS	LT
12.75	5.56	35.75	12.75	5.56	36.05

[2] All rough casting dimensions may vary by .25" due to casting variations.

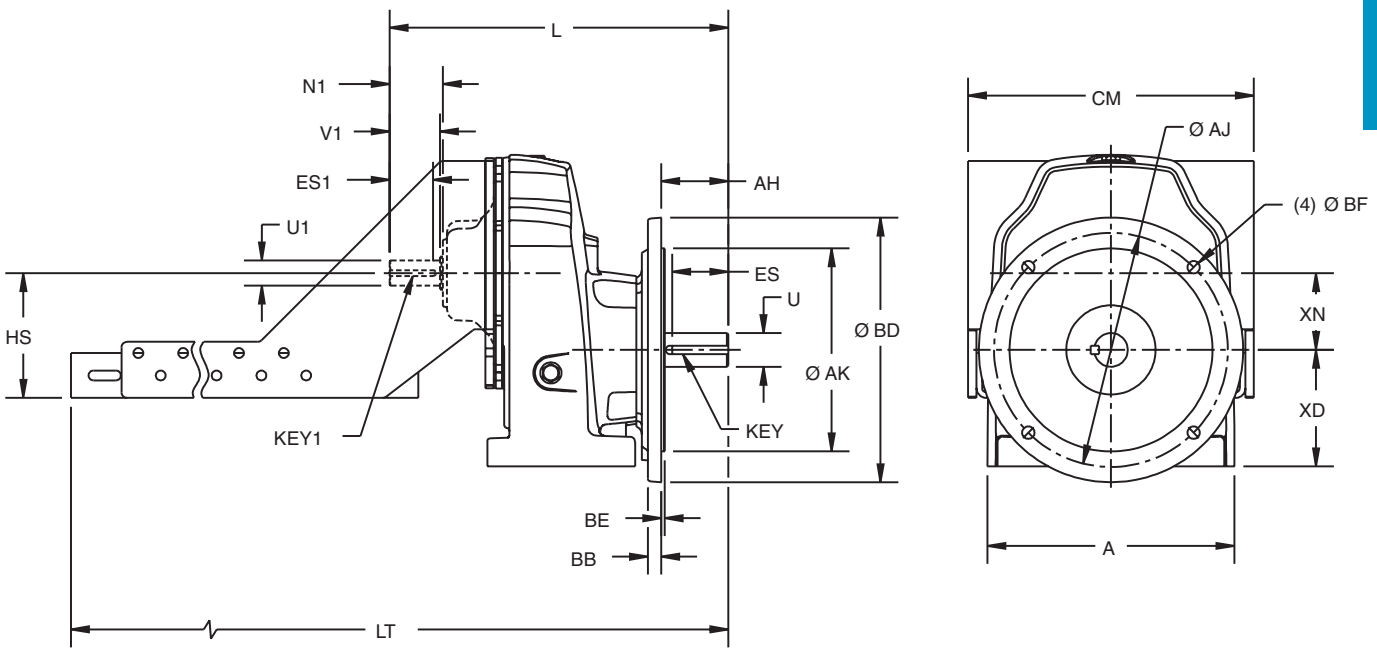
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Browning

Scoop Mount Reducer

CbN SERIES 3000

Flange Mounted - Single Reduction



Gear Frame	A	L	N1	U [3]	U1 [3]	V1	AH	ES	ES1	XD	XN	Key	Key1
35	13.65	17.90	2.92	1.75	1.38	2.75	3.50	3.06	2.31	6.30	4.33	3/8 Sq.	5/16 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	9.84	11.81	0.20	13.78	0.71	0.71
BD2	9.06	10.43	0.20	11.81	0.71	0.55

Motor Frame								
213/215T			254/256T			284/286T		
CM	HS	LT	CM	HS	LT	CM	HS	LT
12.75	5.56	38.85	17.00	7.44	43.27	17.00	7.44	43.40

[2] All rough casting dimensions may vary by .25" due to casting variations.

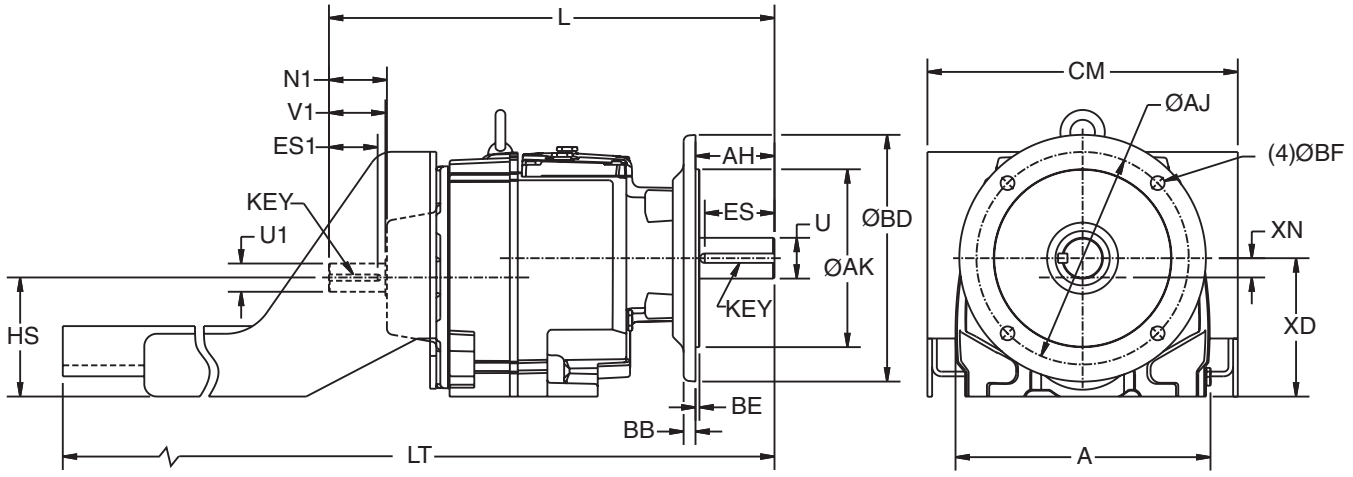
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Browning

Scoop Mount Reducer

CbN SERIES 3000

Flange Mounted - Double/Triple Reduction



Gear Frame	A	L	N1	U [3]	U1 [3]	V1	AH	ES	ES1	XD	XN	Key	Key1
32	8.70	13.25	1.29	1.25	0.63	1.25	2.50	2.16	1.00	4.53	0.39	1/4 Sq.	3/16 Sq.
3362,3363	10.16	17.61	2.31	1.50	1.13	2.25	3.00	2.56	1.94	5.51	0.77	3/8 Sq.	1/4 Sq.
3372,3373	10.16	17.76	2.31	1.63	1.13	2.25	3.15	2.78	1.94	5.51	0.77	3/8 Sq.	1/4 Sq.

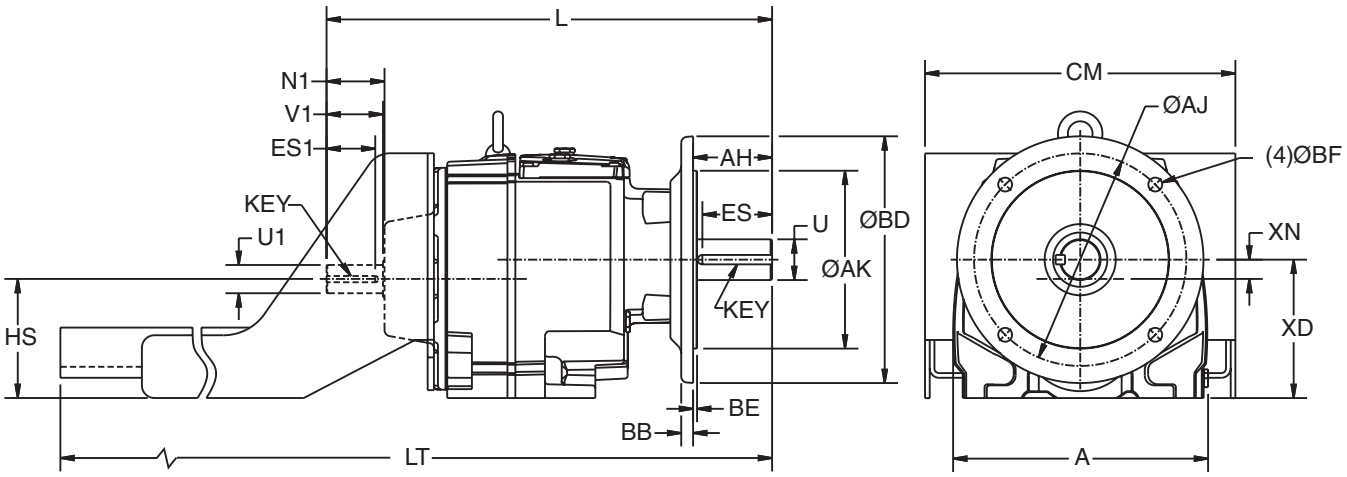
Flange Type	32						33					
	AK	AJ	BB	BD	BE	BF	AK	AJ	BB	BD	BE	BF
BS	7.09	8.46	0.16	9.83	0.47	0.55	9.06	10.43	0.16	11.80	0.47	0.55
BD1	5.12	6.50	0.14	7.87	0.39	0.47	7.09	8.46	0.16	9.83	0.47	0.55
BD2	4.33	5.12	0.14	6.29	0.39	0.35	5.12	6.50	0.14	7.86	0.47	0.47

Gear Frame	Motor Frame					
	143/145T			182/184T		
	CM	HS	LT	CM	HS	LT
32	11.38	3.75	28.36	-	-	-
3362,3363	12.38	4.74	38.33	12.38	4.74	38.33
3372,3373	12.38	4.74	38.48	12.38	4.74	38.48

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Flange Mounted - Double/Triple Reduction



Gear Frame	A	L	N1	U [3]	U1 [3]	V1	AH	ES	ES1	XD	XN	Key	Key1
34	11.97	19.16	2.37	2.125	1.12	2.25	3.50	3.06	1.94	7.09	1.02	1/2 Sq.	1/4 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	9.84	11.81	0.16	13.77	0.59	0.71
BD1	9.06	10.43	0.16	11.80	0.59	0.55
BD2	7.09	8.46	0.16	9.83	0.59	0.55

Motor Frame								
143/145T			182/184T			213/215T		
CM	HS	LT	CM	HS	LT	CM	HS	LT
12.75	5.56	40.79	12.75	5.56	39.79	12.75	5.56	40.19

[2] All rough casting dimensions may vary by .25" due to casting variations.

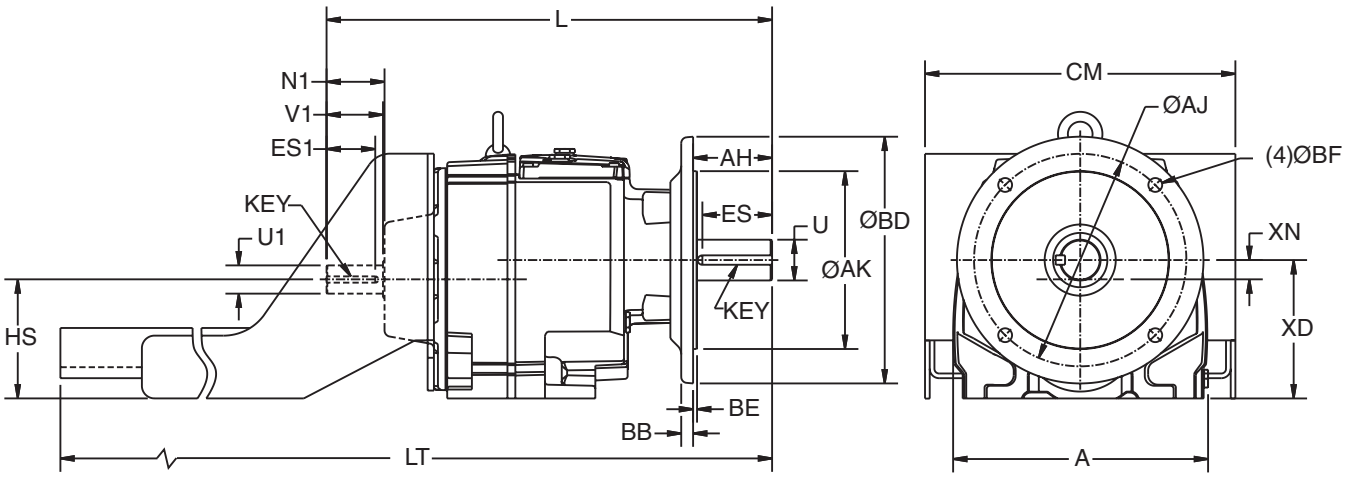
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Browning

Scoop Mount Reducer

CbN SERIES 3000

Flange Mounted - Double/Triple Reduction



Gear Frame	A	L	N1	U [3]	U1 [3]	V1	AH	ES	ES1	XD	XN	Key	Key1
35	14.19	23.42	2.92	2.375	1.375	2.75	4.72	4.19	2.31	8.86	1.14	5/8 Sq.	5/16 Sq.

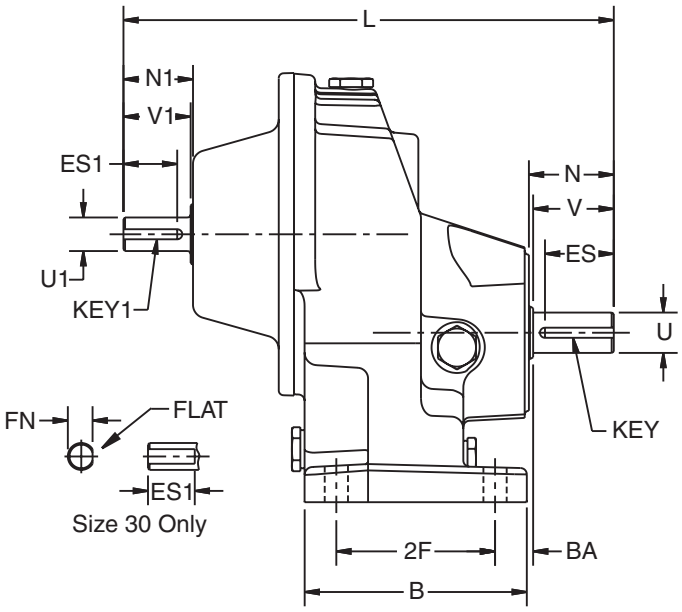
Flange Type	AK	AJ	BB	BD	BE	BF
BS	11.81	13.78	0.20	15.75	0.71	0.71
BD1	9.84	11.81	0.20	13.78	0.71	0.71
BD2	9.06	10.43	0.20	11.81	0.71	0.55

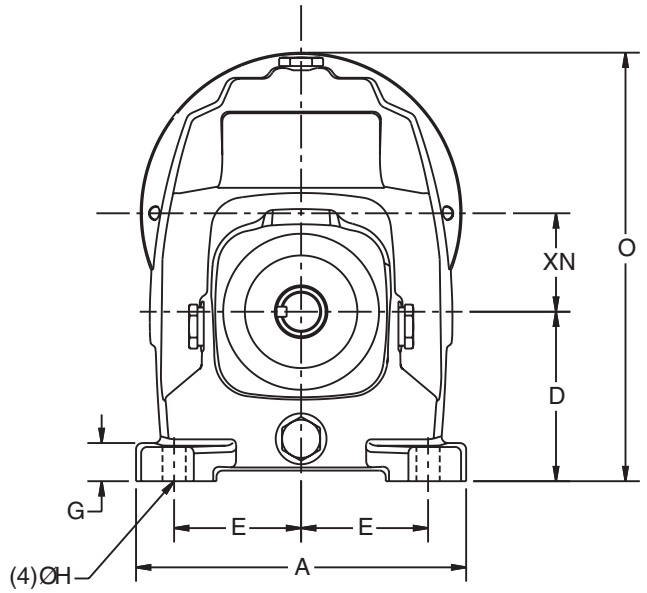
Motor Frame														
56, 143/145T			182/184T			213/215T			254/256T			284/286T		
CM	HS	LT	CM	HS	LT	CM	HS	LT	CM	HS	LT	CM	HS	LT
12.75	5.56	45.05	12.75	5.56	44.05	12.75	5.56	44.38	17.00	7.44	48.80	17.00	7.44	48.93

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Foot Mounted - Single Reduction





Gear Frame	A	B	D [1]	E	G	H	L	N	N1	O	U [3]
30	5.90	3.54	2.95	2.46	0.49	0.35	8.77	2.14	1.12	7.07	0.625
31	6.14	4.13	3.15	2.36	0.71	0.43	9.12	1.58	1.29	7.97	0.75
32	7.28	4.48	3.54	2.76	0.77	0.55	9.74	2.08	1.29	9.67	1.00
33	9.69	5.30	4.41	3.74	1.02	0.63	12.88	2.83	2.31	11.69	1.375
34	11.02	6.59	5.20	4.25	1.34	0.71	14.35	3.06	2.37	13.90	1.500
35	13.65	7.76	6.30	5.12	1.61	0.79	16.73	3.60	2.92	17.37	1.75

Gear Frame	U1 [3]	V	V1	BA	ES	ES1	2F	FN	XN	Key	Key1
30	0.500	1.87	1.00	1.01	1.48	0.87	2.76	0.46	1.40	3/16 Sq.	N/A
31	0.625	1.50	1.25	0.71	1.28	1.00	2.95	N/A	1.83	3/16 Sq.	3/16 Sq.
32	0.625	2.00	1.25	0.75	1.56	1.00	3.15	N/A	2.48	1/4 Sq.	3/16 Sq.
33	1.125	2.75	2.25	1.08	2.40	1.94	3.94	N/A	2.76	5/16 Sq.	1/4 Sq.
34	1.125	3.00	2.25	1.10	2.56	1.94	4.92	N/A	3.43	3/8 Sq.	1/4 Sq.
35	1.375	3.50	2.75	1.18	3.06	2.31	6.30	N/A	4.33	3/8 Sq.	5/16 Sq.

[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

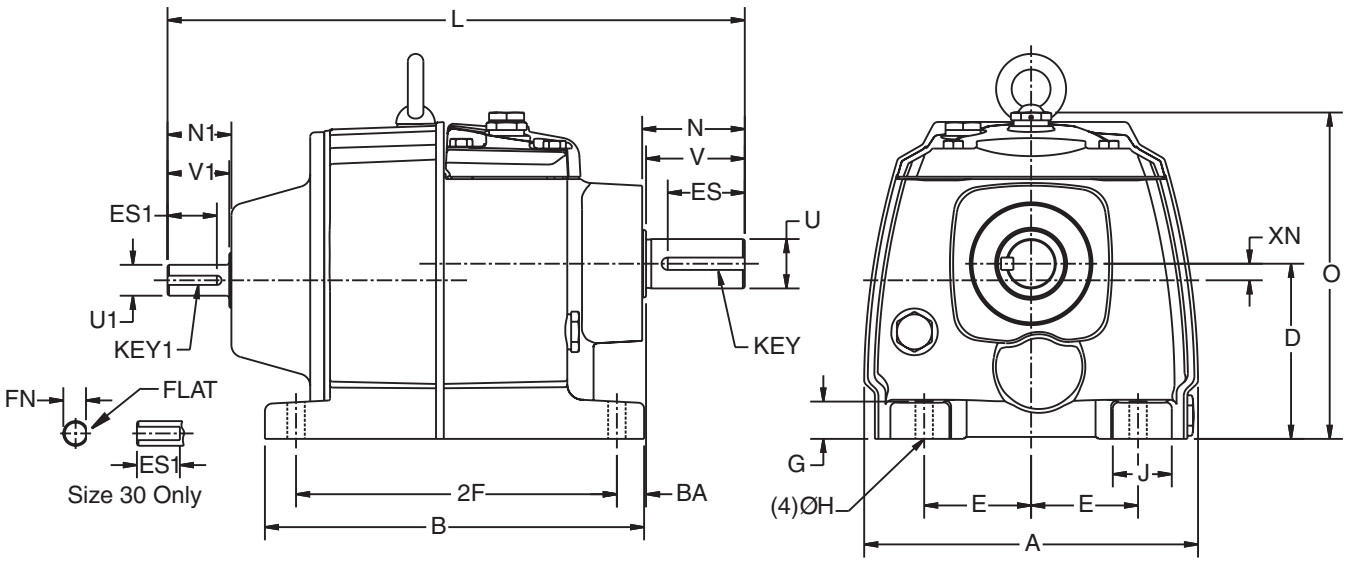
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Browning

Input Shaft Reducer

CbN SERIES 3000

Foot Mounted - Double/Triple Reduction



Gear Frame	A	B	D [1]	E	G	H	J	L	N	N1	O	U [3]
3012	5.90	4.92	2.95	2.46	0.51	0.35	1.10	9.56	1.83	1.12	6.00	0.75
3013	5.90	5.71	2.95	2.46	0.51	0.35	1.10	10.35	1.83	1.12	6.00	0.75
31	6.76	7.68	3.54	2.17	0.75	0.35	1.38	11.69	2.08	1.29	6.60	1.00
32	8.72	8.50	4.53	2.66	0.84	0.55	2.56	12.86	2.56	1.29	7.97	1.25
3362,3363	10.13	10.72	5.51	3.35	1.07	0.71	2.56	16.59	3.08	2.31	9.94	1.50
3372,3373	10.13	10.72	5.51	3.35	1.07	0.71	2.56	16.74	3.23	2.31	9.94	1.63
34	11.97	10.87	7.09	4.53	1.37	0.71	1.81	18.41	3.58	2.37	11.89	2.13
35	14.19	12.89	8.86	5.51	1.73	0.87	3.33	22.45	4.75	2.92	14.84	2.37

Gear Frame	U1 [3]	V	V1	BA	ES	ES1	2F	FN	XN	Key	Key1
3012	0.500	1.75	1.00	0.87	1.48	0.87	4.13	0.46	0.28	3/16 Sq.	N/A
3013	0.500	1.75	1.00	0.87	1.48	0.87	4.92	0.46	0.28	3/16 Sq.	N/A
31	0.625	2.00	1.25	0.59	1.56	1.00	6.50	N/A	0.33	1/4 Sq.	3/16 Sq.
32	0.625	2.50	1.25	0.51	2.16	1.00	7.56	N/A	0.39	1/4 Sq.	3/16 Sq.
3362,3363	1.125	3.00	2.25	0.77	2.56	1.94	9.45	N/A	0.77	3/8 Sq.	1/4 Sq.
3372,3373	1.125	3.15	2.25	0.77	2.78	1.94	9.45	N/A	0.77	3/8 Sq.	1/4 Sq.
34	1.125	3.50	2.25	0.98	3.06	N/A	9.25	1.94	1.02	1/2 Sq.	1/4 Sq.
35	1.375	4.72	2.75	1.10	4.19	2.31	11.02	N/A	1.14	5/8 Sq.	5/16 Sq.

[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

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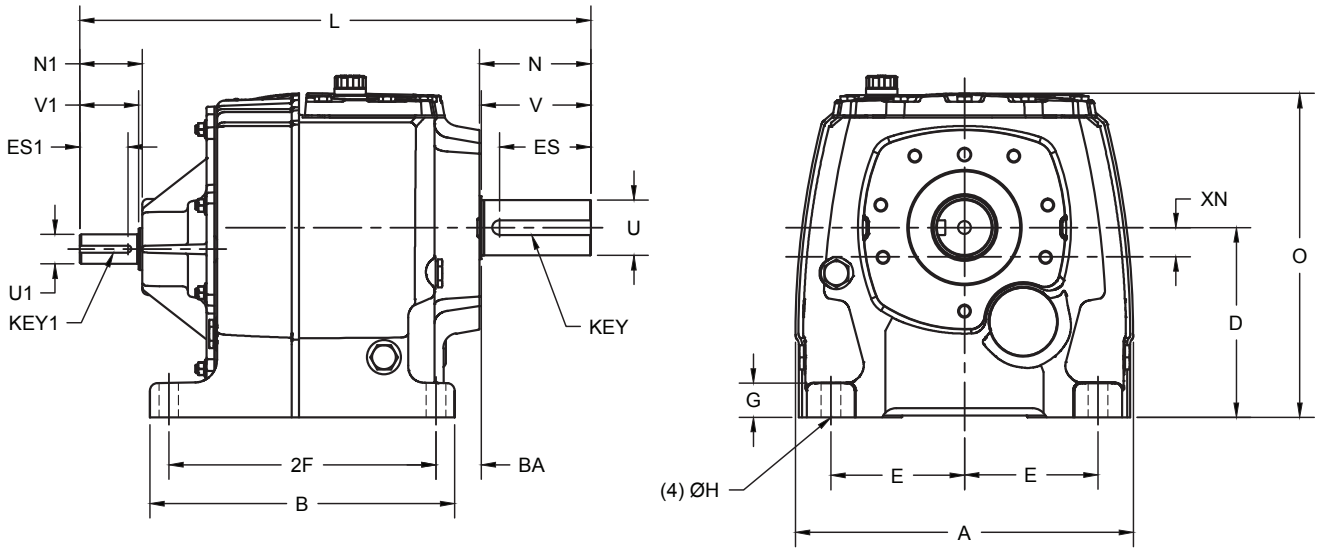
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Foot Mounted - Double/Triple Reduction



Gear Frame	A	B	D [1]	E	G	H	J	L	N	N1	O	U [3]
36	17.68	15.95	9.85	6.99	1.77	1.02	2.76	27.25	5.875	3.94	17.72	2.875
37	20.39	17.91	12.40	8.27	2.17	1.02	2.36	31.18	7.127	3.94	20.40	3.625
38	23.94	21.65	13.98	10.04	2.35	1.02	4.92	38.46	8.16	4.93	22.60	4.375

Gear Frame	U1 [3]	V	V1	BA	2F	ES	ES1	XN	Key	Key 1
36	1.875	5.75	3.75	2.36	13.98	4.784	3.06	1.102	3/4 Sq	1/2 Sq.
37	1.875	7.00	3.75	2.56	15.35	5.893	3.06	2.362	7/8 Sq	1/2 Sq.
38	2.375	9.99	4.75	1.97	18.90	9.02	4.03	2.559	1 SQ	5/8 SQ

[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

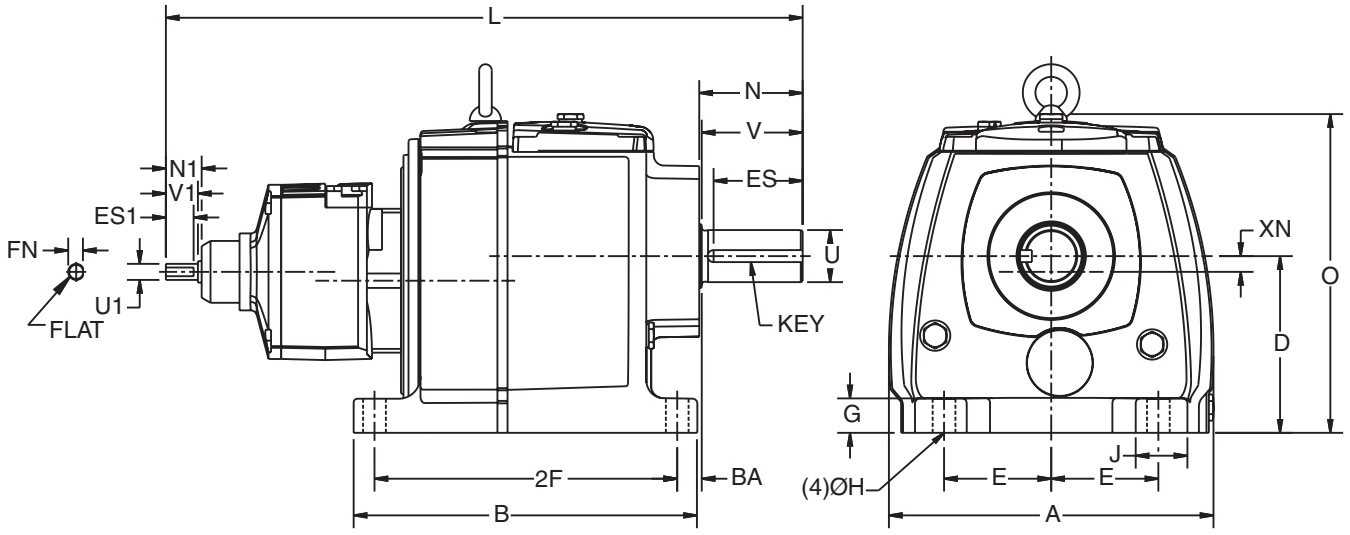
[3] Shaft extension tolerance: +.0000; -.001".

Browning

Input Shaft Reducer

CbN SERIES 3000

Foot Mounted - Combined Reduction



Gear Frame	A	B	D [1]	E	G	H	J	L	N	N1	O
32	8.72	8.50	4.53	2.66	0.84	0.55	2.56	17.73	2.56	1.12	7.97
33	10.13	10.72	5.51	3.35	1.07	0.71	2.56	19.88	3.23	1.12	9.94

Gear Frame	U [3]	U1 [3]	V	V1	BA	2F	FN	ES	ES1	XN	Key
32	1.25	0.50	2.50	1.00	0.51	7.56	0.46	2.16	0.87	0.12	1/4 Sq.
33	1.625	0.50	3.15	1.00	0.77	9.45	0.46	2.78	0.87	0.49	3/8 Sq.

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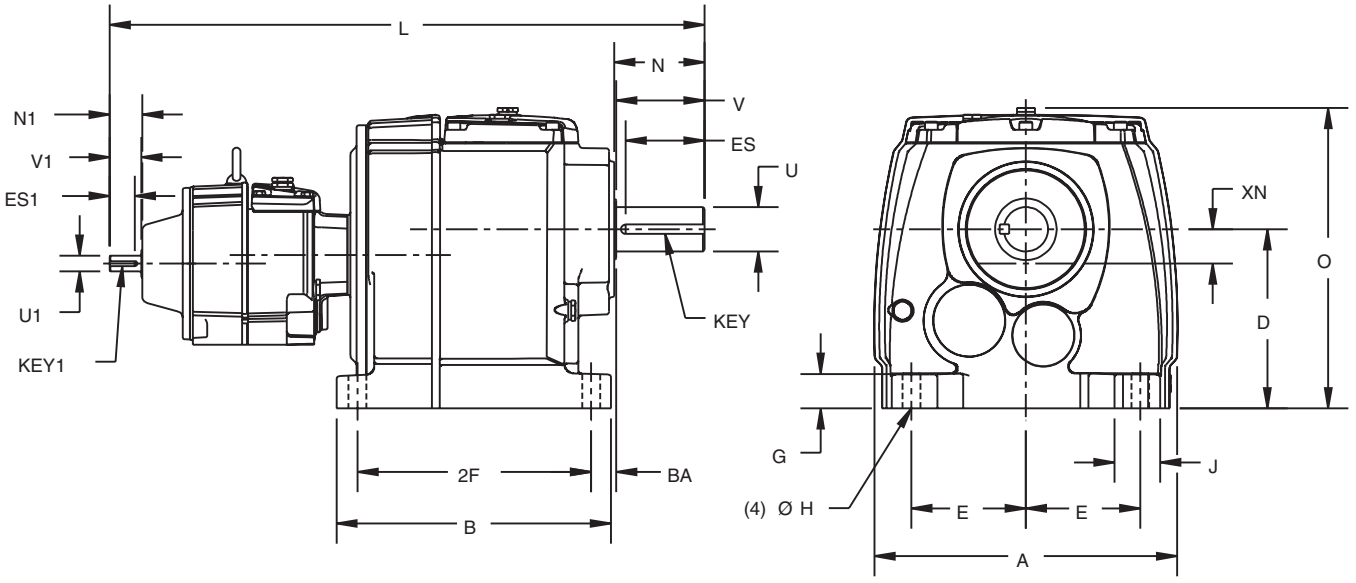
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Browning®

Input Shaft Reducer

CbN SERIES 3000

Foot Mounted - Combined Reduction



Gear Frame	A	B	D [1]	E	G	H	J	L	N	N1	O	U [3]
34	11.97	10.87	7.09	4.53	1.37	0.71	1.81	23.54	3.58	1.29	11.89	2.125

Gear Frame	U1 [3]	V	V1	BA	2F	ES	ES1	XN	Key	Key1
34	0.625	3.50	1.25	0.98	9.25	3.06	1.00	1.35	1/2 Sq.	3/16 Sq.

[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

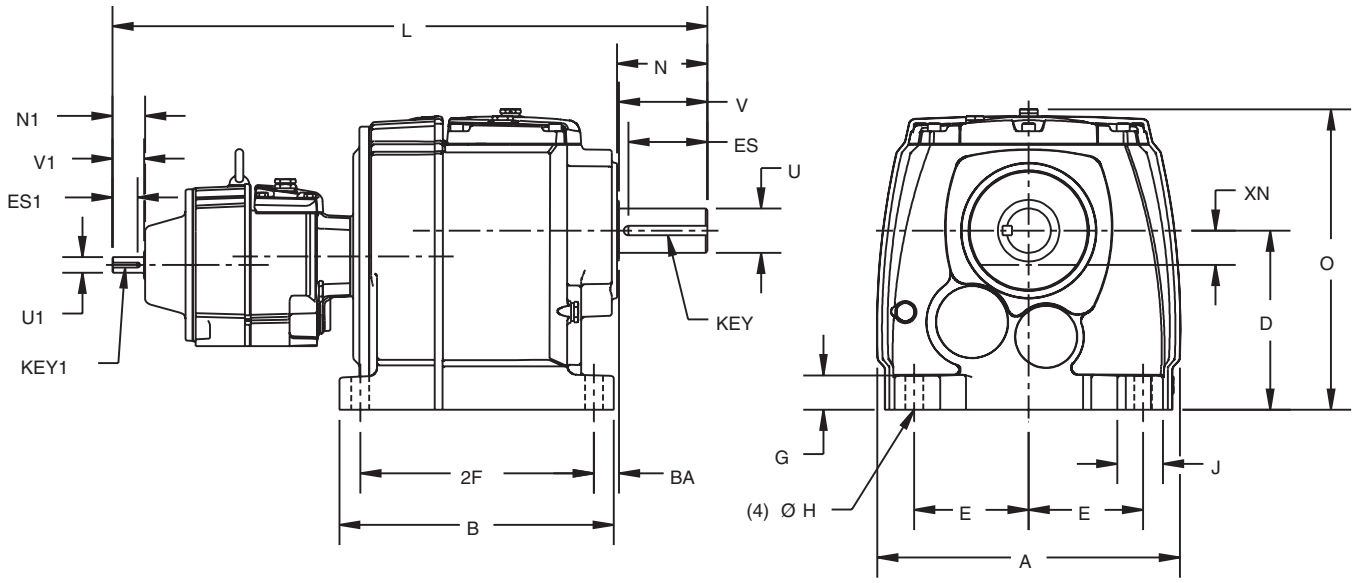
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Browning

Input Shaft Reducer

CbN SERIES 3000

Foot Mounted - Combined Reduction



Gear Frame	A	B	D [1]	E	G	H	J	L	N	N1	O
35	14.19	12.89	8.86	5.51	1.73	0.87	3.33	25.95	4.81	1.29	14.84

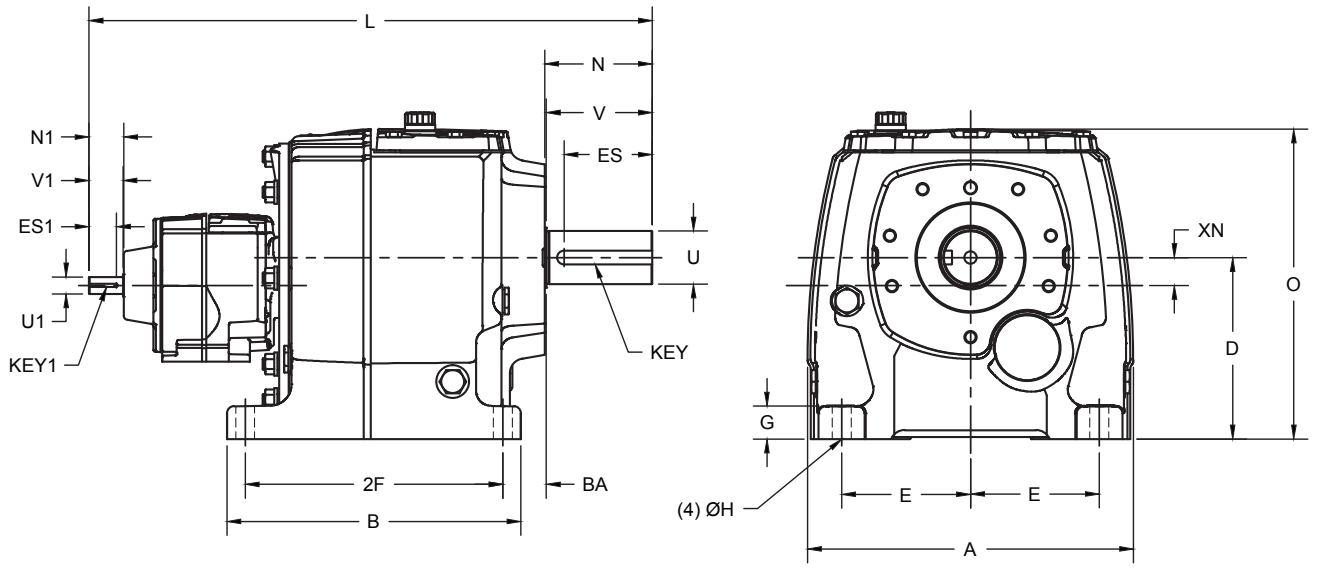
Gear Frame	U [3]	U1 [3]	V	V1	BA	2F	ES	ES1	XN	Key	Key1
35	2.375	0.625	4.72	1.25	1.10	11.02	4.19	1.00	1.47	5/8 Sq.	3/16 Sq.

[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Foot Mounted - Combined Reduction



Gear Frame	A	B	D [1]	E	G	H	J	L	N	N1	O	U [3]
36	17.68	15.95	9.85	6.99	1.77	1.02	2.76	29.91	5.875	1.35	17.72	2.875
37	20.39	17.91	12.40	8.27	2.17	1.02	2.36	33.84	7.127	1.35	20.40	3.625
38	23.94	21.65	13.98	10.04	2.35	1.02	4.92	39.19	8.16	2.37	22.60	4.375

Gear Frame	U1 [3]	V	V1	BA	2F	ES	ES1	FN	XN	Key	Key 1
36	0.63	5.75	1.25	2.36	13.98	4.784	1.00	N/A	1.492	3/4 Sq	3/16 Sq.
37	0.63	7.00	1.25	2.56	15.35	5.893	1.00	N/A	2.752	7/8 Sq	3/16 Sq.
38	1.125	9.99	2.25	1.97	18.90	9.02	1.94	N/A	2.559	1 SQ	1/4 SQ

[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

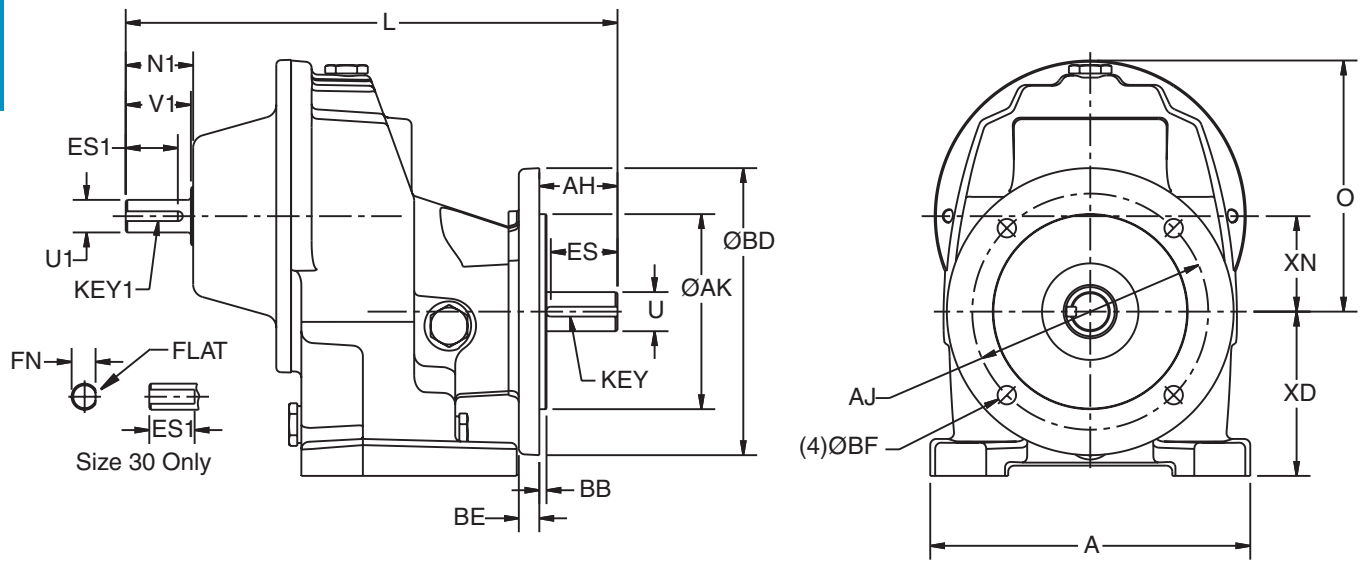
[3] Shaft extension tolerance: +.0000; -.001".

Browning®

Input Shaft Reducer

CbN SERIES 3000

Flange Mounted - Single Reduction



Gear Frame	A	L	N1	O	U [3]	U1 [3]	V1
30	-	8.77	1.12	4.11	0.63	0.50	1.00
31	6.14	9.44	1.29	4.82	0.75	0.63	1.25
32	8.70	9.55	1.29	7.38	1.00	0.63	1.25
33	9.44	13.27	2.31	7.28	1.38	1.13	2.25

Gear Frame	AH	ES	ES1	FN	XD	XN	Key	Key1
30	2.06	1.48	0.87	0.46	2.24	1.40	3/16 Sq.	N/A
31	1.50	1.28	1.00	N/A	3.15	1.83	3/16 Sq.	3/16 Sq.
32	1.50	1.16	1.00	N/A	2.68	2.48	1/4 Sq.	3/16 Sq.
33	2.75	2.40	1.94	N/A	4.41	2.76	5/16 Sq.	1/4 Sq.

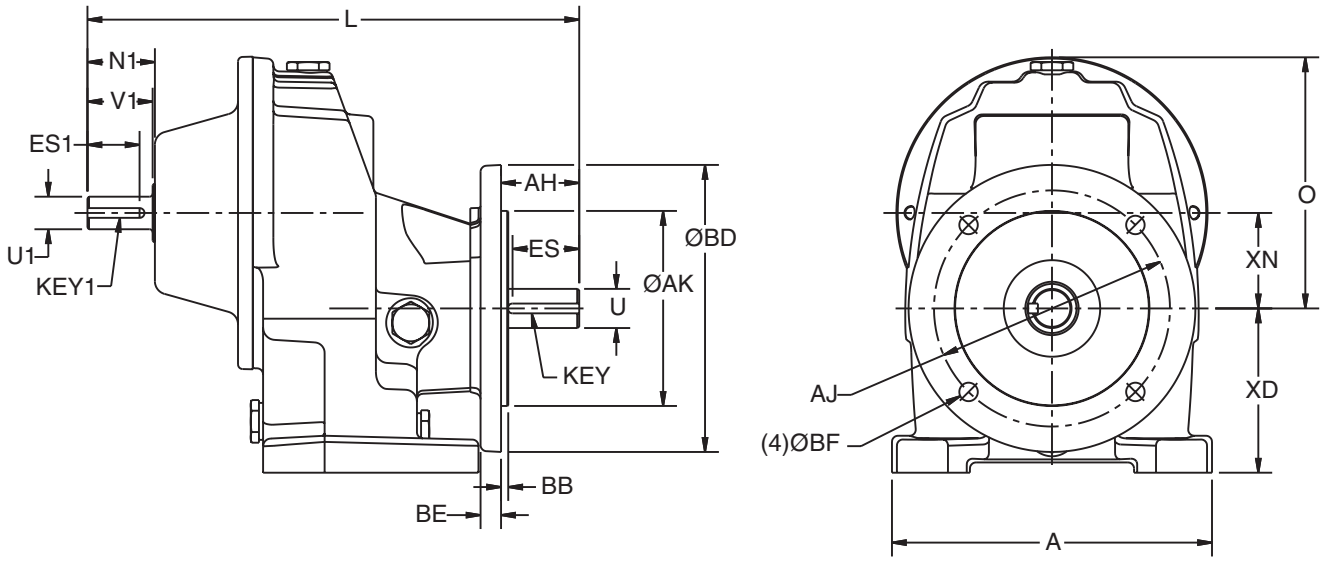
Flange Type	30						31					
	AK	AJ	BB	BD	BE	BF	AK	AJ	BB	BD	BE	BF
56C	4.50	5.88	0.12	6.50	0.39	3/8-16	-	-	-	-	-	-
BS	3.74	4.53	0.12	5.51	0.31	0.35	4.33	5.12	0.14	6.29	0.39	0.35
BD1	4.33	5.12	0.08	6.30	0.39	0.35	-	-	-	-	-	-
BD2	3.15	3.94	0.12	4.72	0.39	0.28	3.74	4.53	0.14	5.50	0.39	0.35
BD3	5.12	6.50	0.12	7.87	0.31	0.35	-	-	-	-	-	-

Flange Type	32						33					
	AK	AJ	BB	BD	BE	BF	AK	AJ	BB	BD	BE	BF
BS	5.12	6.50	0.14	7.87	0.47	0.47	7.09	8.46	0.16	9.83	0.47	0.55
BD2	4.33	5.12	0.14	6.29	0.39	0.35	5.12	6.50	0.16	7.86	0.47	0.43

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Flange Mounted - Single Reduction



Gear Frame	A	L	N1	O	U [3]	U1 [3]	V1
34	11.02	15.12	2.37	8.70	1.50	1.125	2.25
35	13.65	17.90	2.92	11.07	1.75	1.375	2.75

Gear Frame	AH	ES	ES1	XD	XN	Key	Key1
34	3.00	2.56	1.94	5.20	3.43	3/8 Sq.	1/4 Sq.
35	3.50	3.06	2.31	6.30	4.33	3/8 Sq.	5/16 Sq.

Flange Type	34						35					
	AK	AJ	BB	BD	BE	BF	AK	AJ	BB	BD	BE	BF
BS	9.06	10.43	0.16	11.80	0.59	0.55	9.84	11.81	0.20	13.78	0.71	0.71
BD2	7.09	8.46	0.16	9.83	0.59	0.55	9.06	10.43	0.20	11.81	0.71	0.55

[2] All rough casting dimensions may vary by .25" due to casting variations.

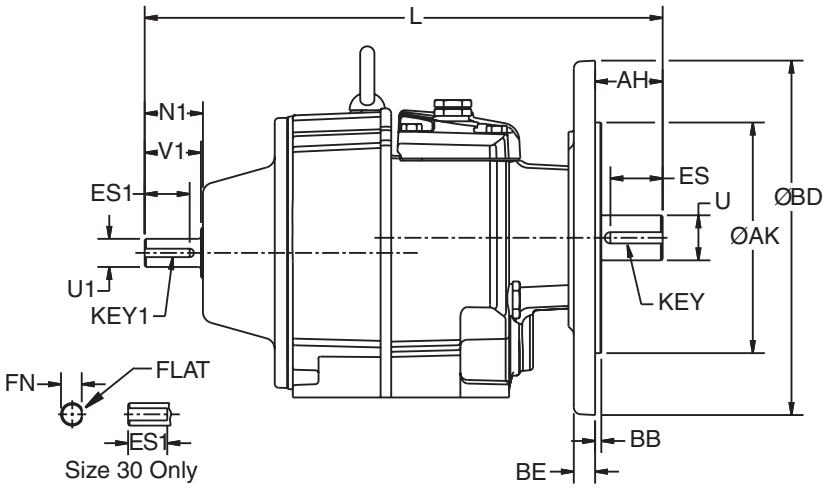
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

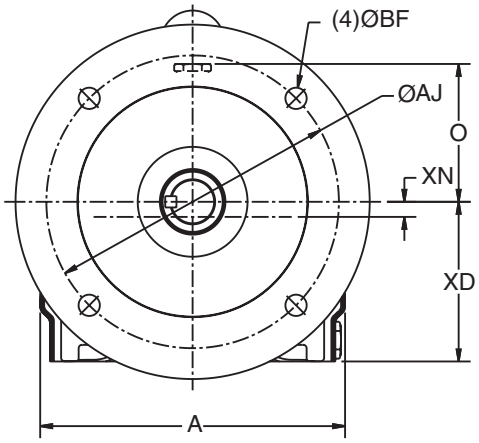
Browning

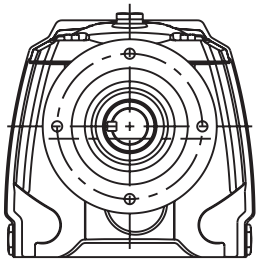
Input Shaft Reducer

CbN SERIES 3000

Flange Mounted - Double/Triple Reduction







BD3 TYPE (31)

Gear Frame	A	L	N1	O	U [3]	U1 [3]	V1
3012	5.51	9.87	1.12	3.04	0.625	0.500	1.00
3013	5.51	10.66	1.12	3.04	0.625	0.500	1.00
31	6.77	11.50	1.29	3.06	1.000	0.625	1.20

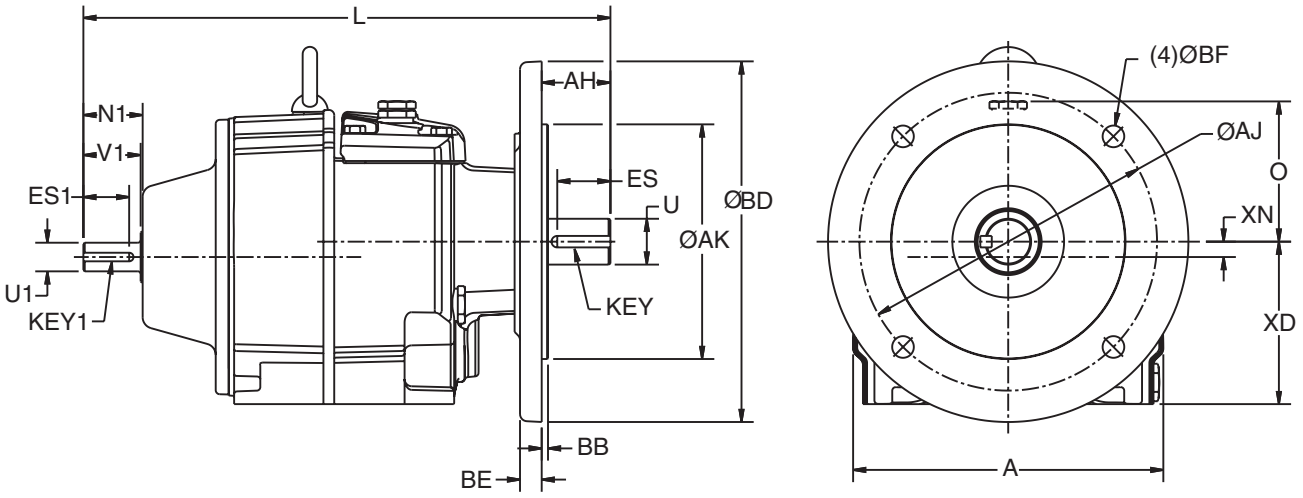
Gear Frame	AH	ES	ES1	FN	XD	XN	Key	Key1
3012	2.07	1.48	0.87	0.46	2.48	0.28	3/16 Sq.	N/A
3013	2.07	1.48	0.87	0.46	2.48	0.28	3/16 Sq.	N/A
31	1.50	1.16	1.00	N/A	3.54	0.33	1/4 Sq.	3/16 Sq.

Flange Type	30						31					
	AK	AJ	BB	BD	BE	BF	AK	AJ	BB	BD	BE	BF
56C	4.50	5.88	0.12	6.50	0.39	3/8-16	-	-	-	-	-	-
BS	3.74	4.53	0.12	5.51	0.31	0.35	5.12	6.50	0.14	7.87	0.47	0.47
BD1	3.15	3.94	0.10	4.72	0.28	0.28	4.33	5.12	0.14	6.29	0.39	0.35
BD2	4.33	5.12	0.12	6.30	0.31	0.35	3.74	4.53	0.14	5.50	0.39	0.35
BD3	5.12	6.50	0.12	7.87	0.31	0.35	3.15	3.94	0.10	4.72	0.39	0.28

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Flange Mounted - Double/Triple Reduction



Gear Frame	A	L	N1	O	U [3]	U1 [3]	V1
32	8.70	13.25	1.29	3.50	1.250	0.625	1.25
3362,3363	10.16	17.62	2.31	4.43	1.500	1.125	2.25
3372,3373	10.16	17.77	2.31	4.43	1.625	1.125	2.25

Gear Frame	AH	ES	ES1	FN	XD	XN	Key	Key1
32	2.50	2.16	1.00	N/A	4.53	0.39	1/4 Sq.	3/16 Sq.
3362,3363	3.00	2.56	1.94	N/A	5.51	0.77	3/8 Sq.	1/4 Sq.
3372,3373	3.15	2.78	1.94	N/A	5.51	0.77	3/8 Sq.	1/4 Sq.

Flange Type	32						33					
	AK	AJ	BB	BD	BE	BF	AK	AJ	BB	BD	BE	BF
BS	7.09	8.46	0.16	9.83	0.47	0.55	9.06	10.43	0.16	11.80	0.47	0.55
BD1	5.12	6.50	0.14	7.87	0.39	0.47	7.09	8.46	0.16	9.83	0.47	0.55
BD2	4.33	5.12	0.14	6.29	0.39	0.35	5.12	6.50	0.14	7.86	0.47	0.47

[2] All rough casting dimensions may vary by .25" due to casting variations.

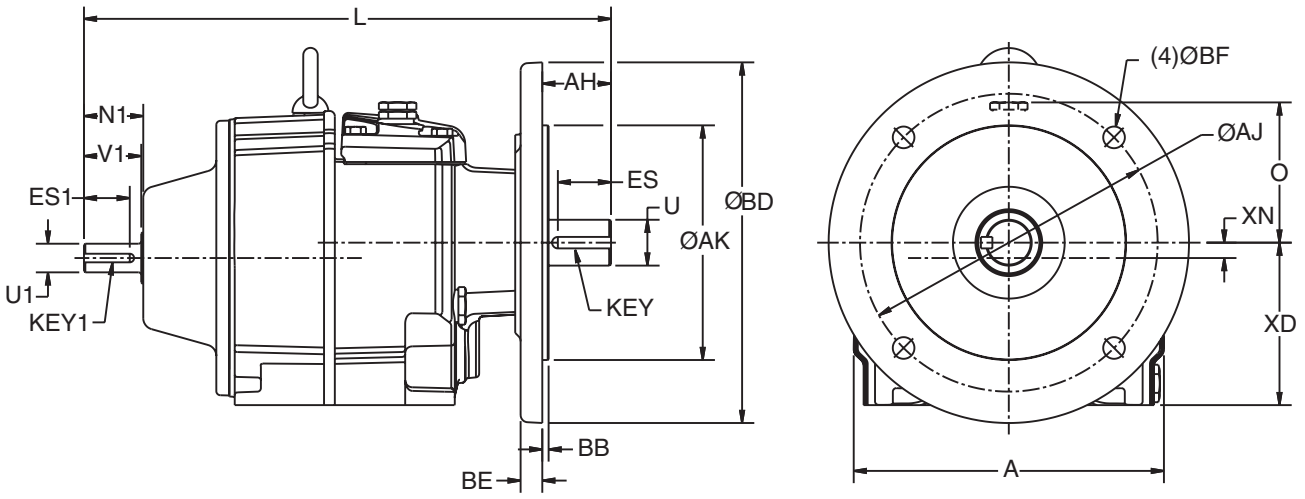
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Browning®

Input Shaft Reducer

CbN SERIES 3000

Flange Mounted - Double/Triple Reduction



Gear Frame	A	L	N1	O	U [3]	U1 [3]	V1
34	11.97	19.16	2.37	4.80	2.125	1.125	2.25
35	14.19	23.42	2.92	5.98	2.375	1.375	2.75

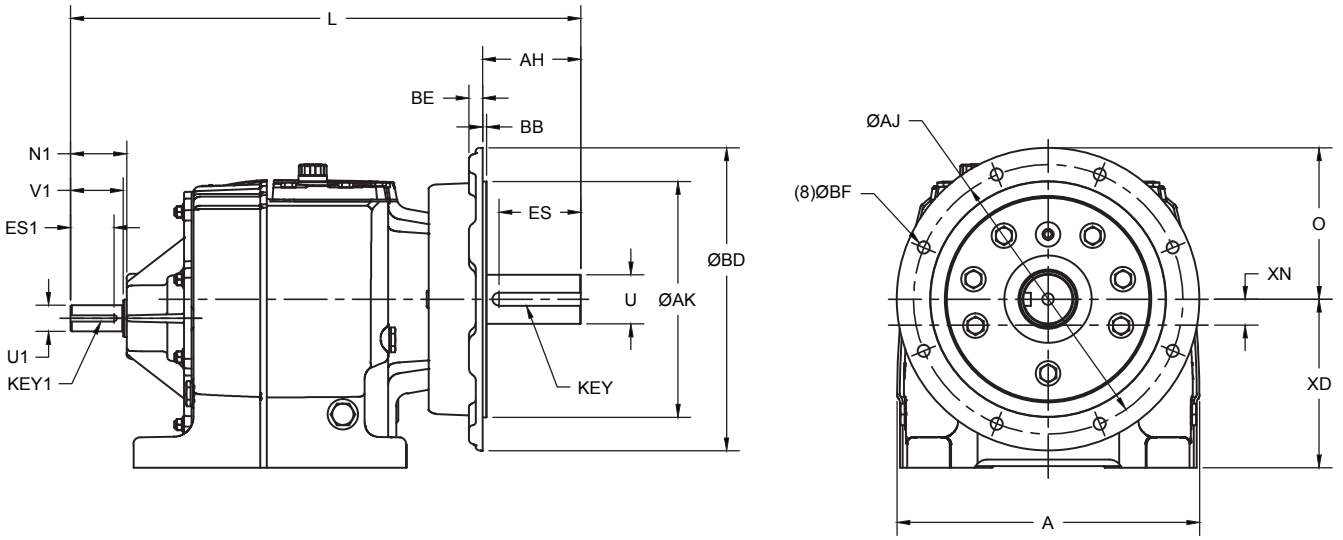
Gear Frame	AH	ES	ES1	XD	XN	Key	Key1
34	3.5	3.06	1.94	7.09	1.02	1/2 Sq.	1/4 Sq.
35	4.72	4.19	2.31	8.86	1.14	5/8 Sq.	5/16 Sq.

Flange Type	34						35					
	AK	AJ	BB	BD	BE	BF	AK	AJ	BB	BD	BE	BF
BS	9.84	11.81	0.16	13.77	0.59	0.71	11.81	13.78	0.20	15.75	0.71	0.71
BD1	9.06	10.43	0.16	11.80	0.59	0.55	9.84	11.81	0.20	13.78	0.71	0.71
BD2	7.09	8.46	0.16	9.83	0.59	0.55	9.06	10.43	0.20	11.81	0.71	0.55

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Flanged Mounted - Double/Triple Reduction



Gear Frame	A	L	N1	O	U [3]	U1 [3]	V1
36	17.68	30.32	3.94	7.87	2.875	1.875	3.75
37	20.39	34.25	3.94	7.99	3.625	1.875	3.75
38	23.94	38.46	4.93	8.63	4.375	2.375	4.75

Gear Frame	AH	ES	ES1	XD	XN	Key	Key 1
36	5.75	4.784	3.06	9.84	1.102	3/4 Sq	1/2 Sq.
37	7.00	5.893	3.06	12.40	2.362	7/8 Sq	1/2 Sq.
38	6.84	9.02	4.03	13.98	2.559	1 SQ	5/8 SQ

Gear Frame	Flange Type	AK	AJ	BB	BD	BE	BF
36	BS	17.717	19.685	0.236	21.65	0.79	0.70
	BD1	13.780	15.748	0.236	17.70	0.79	0.70
37	BS	17.717	19.685	0.236	21.65	0.79	0.70
	BD1	13.780	15.748	0.236	17.70	0.79	0.70
38	BS	21.654	23.622	0.197	25.98	0.79	0.87
	BD1	17.717	19.685	0.197	21.65	0.79	0.69

[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

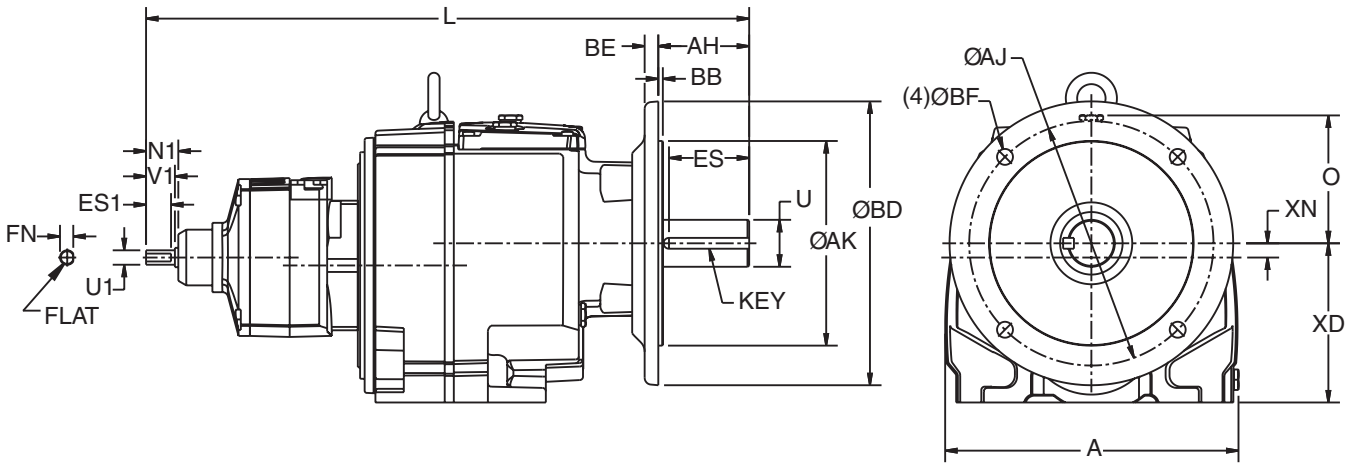
[3] Shaft extension tolerance: +.0000; -.001".

Browning®

Input Shaft Reducer

CbN SERIES 3000

Flange Mounted - Combined Reduction



Gear Frame	A	L	N1	O	U [3]	U1 [3]	V1	XD
32	8.70	18.13	1.12	3.50	1.25	0.50	1.00	4.53
33	10.16	20.90	1.12	4.43	1.63	0.50	1.00	5.51

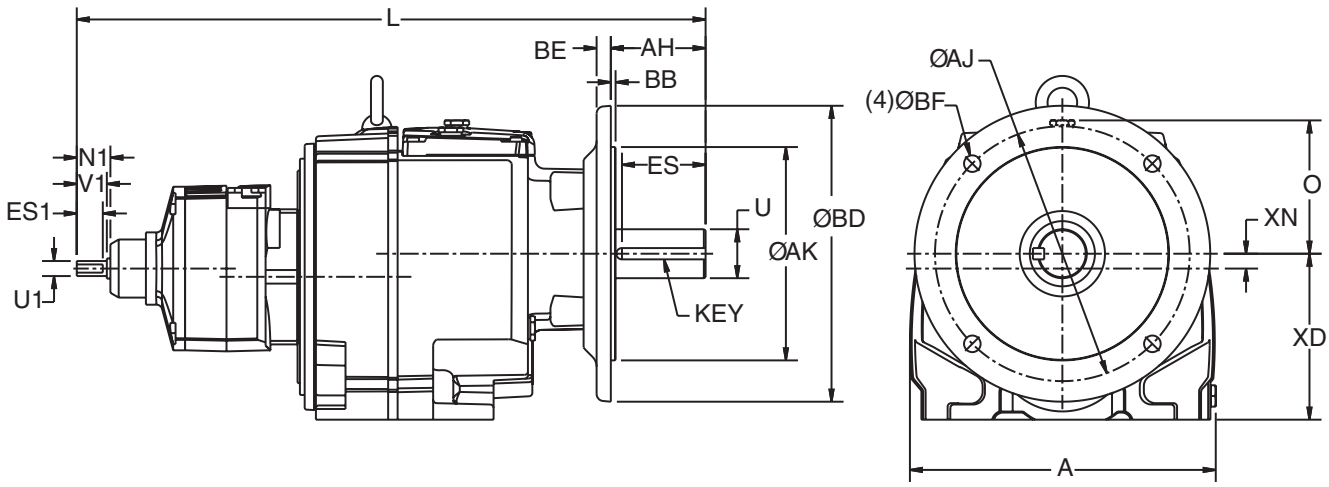
Gear Frame	AH	ES	ES1	FN	XN	Key
32	2.50	2.16	0.86	0.46	0.12	1/4 Sq.
33	3.15	2.78	0.86	0.46	0.49	3/8 Sq.

Flange Type	32						33					
	AK	AJ	BB	BD	BE	BF	AK	AJ	BB	BD	BE	BF
BS	7.09	8.46	0.16	9.83	0.47	0.55	9.06	10.43	0.16	11.80	0.47	0.55
BD1	5.12	6.50	0.14	7.87	0.39	0.47	7.09	8.46	0.16	9.83	0.47	0.55
BD2	4.33	5.12	0.14	6.29	0.39	0.35	5.12	6.50	0.14	7.86	0.47	0.47

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Flange Mounted - Combined Reduction



Gear Frame	A	L	N1	O	U [3]	U1 [3]	V1
34	11.97	24.29	1.29	4.80	2.125	1.125	1.25
35	14.19	26.86	1.29	5.98	2.125	0.625	1.25

Gear Frame	AH	ES	ES1	XD	XN	Key	Key1
34	3.50	3.06	1.00	7.09	1.35	1/2 Sq.	3/16 Sq.
35	4.72	4.19	1.00	8.86	1.47	5/8 Sq.	3/16 Sq.

Flange Type	34						35					
	AK	AJ	BB	BD	BE	BF	AK	AJ	BB	BD	BE	BF
BS	9.84	11.81	0.16	13.77	0.59	0.71	11.81	13.78	0.20	15.75	0.71	0.71
BD1	9.06	10.43	0.16	11.80	0.59	0.55	9.84	11.81	0.20	13.78	0.71	0.71
BD2	7.09	8.46	0.16	9.83	0.59	0.55	9.06	10.43	0.20	11.81	0.71	0.55

[2] All rough casting dimensions may vary by .25" due to casting variations.

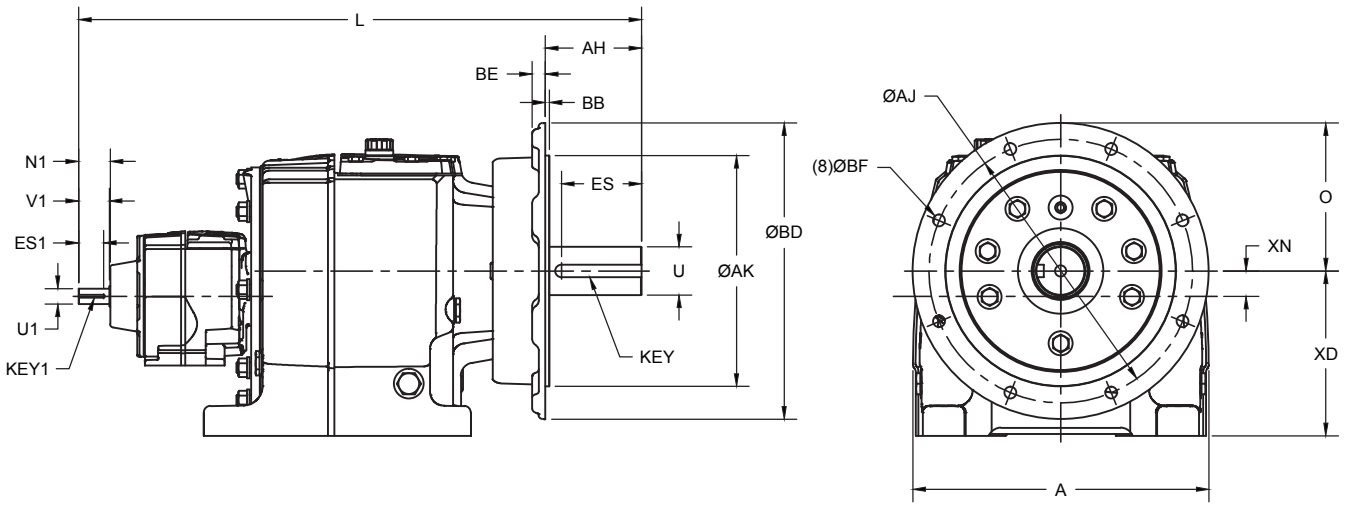
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Browning

Input Shaft Reducer

CbN SERIES 3000

Flange Mounted - Combined Reduction



Gear Frame	A	L	N1	O	U [3]	U1 [3]	V1
36	17.68	32.98	1.35	7.87	2.875	0.63	1.25
37	20.39	36.91	1.35	7.99	3.625	0.63	1.25
38	23.94	43.92	2.37	8.63	4.375	1.125	2.25

Gear Frame	AH	ES	ES1	XD	XN	Key	Key 1
36	5.75	4.784	1.00	9.86	1.492	3/4 Sq	3/16 Sq.
37	7.00	5.893	1.00	12.40	2.752	7/8 Sq	3/16 Sq.
38	6.84	9.02	1.94	13.98	2.559	1 SQ	1/4 SQ

Gear Frame	Flange Type	AK	AJ	BB	BD	BE	BF
36	BS	17.717	19.685	0.236	21.65	0.79	0.70
	BD1	13.780	15.748	0.236	17.70	0.79	0.70
37	BS	17.717	19.685	0.236	21.65	0.79	0.70
	BD1	13.780	15.748	0.236	17.70	0.79	0.70
38	BS	21.654	23.620	0.197	25.98	0.79	0.87
	BD1	17.717	19.685	0.197	21.65	0.79	0.69

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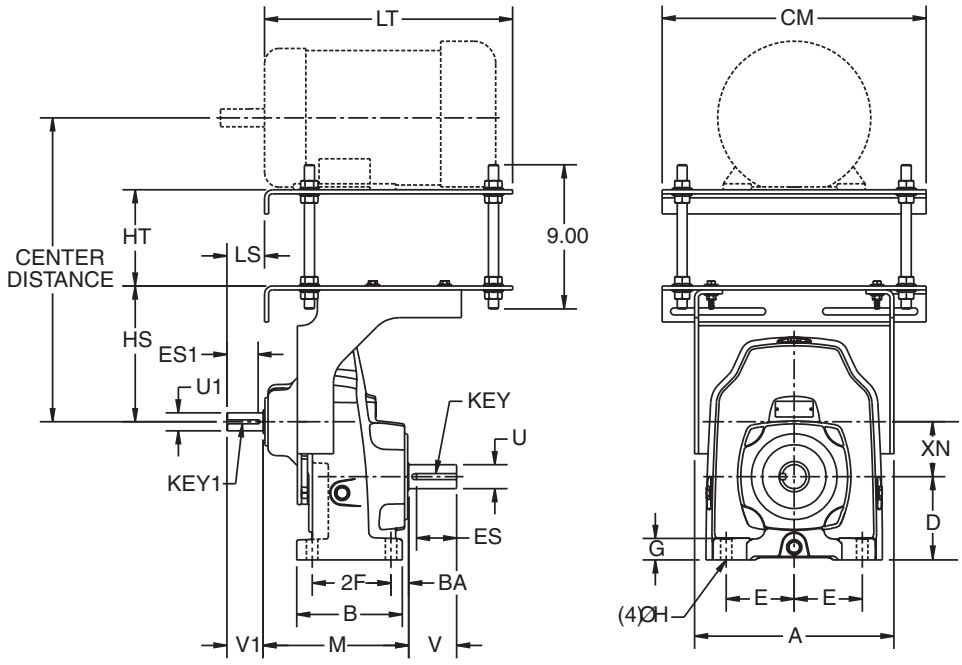
[3] Shaft extension tolerance: +.0000; -.001".

Browning®

Top Mount Reducer

CbN SERIES 3000

Foot Mounted - Single Reduction



Gear Frame	A	B	D [1]	E	G	H	M	U [3]	U1 [3]	V	V1	BA
34	12.47	6.59	5.20	4.25	1.34	0.71	9.10	1.50	1.13	3.00	2.25	1.10
35	15.45	7.76	6.30	5.12	1.61	0.79	10.38	1.75	1.38	3.50	2.75	1.18

Gear Frame	CM	2F	HS	HT		LS	LT	ES	ES1	XN	Key	Key1
				Min.	Max.							
34	16.50	4.92	14.48	1.89	7.36	2.35	15.50	2.56	1.94	3.43	3/8 Sq.	1/4 Sq.
35	20.00	6.30	10.48	1.89	7.36	2.72	20.25	3.06	2.31	4.33	3/8 Sq.	5/16 Sq.

Motor Frame	34 Center Distance		35 Center Distance	
	Min.	Max.	Min.	Max.
143/145T	13.87	19.34	15.87	21.34
182/184T	14.87	20.34	16.87	22.34
213/215T	15.62	21.09	17.62	23.09
254/256T	-	-	18.62	24.09
284/286T	-	-	19.37	24.84

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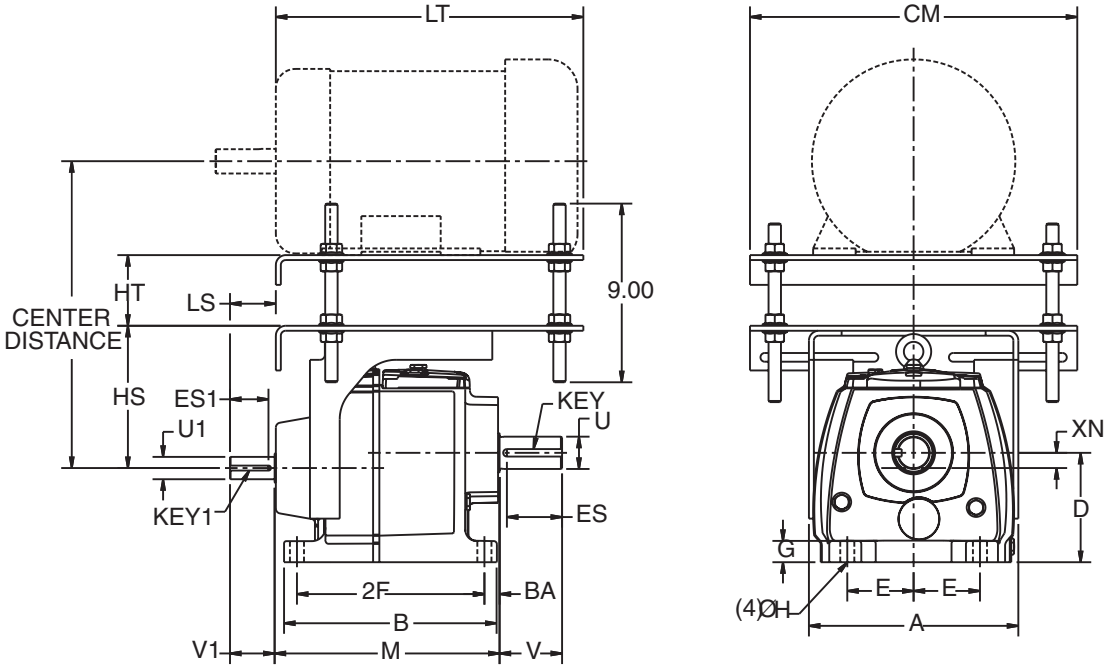
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Browning®

Top Mount Reducer

CbN SERIES 3000

Foot Mounted - Double/Triple Reduction



Gear Frame	A	B	D [1]	E	G	H	M	U [3]	U1 [3]	V	V1	BA
32	10.56	8.50	4.53	2.66	0.84	0.55	9.11	1.25	0.63	2.50	1.25	0.51
3362,3363	10.56	10.72	5.51	3.35	1.07	0.71	11.34	1.50	1.13	3.00	2.25	0.77
3372,3373	10.56	10.72	5.51	3.35	1.07	0.71	11.34	1.63	1.13	3.15	2.25	0.77

Gear Frame	CM	2F	HS	HT		LS	LT	ES	ES1	XN	Key	Key1
				Min.	Max.							
32	16.50	7.56	7.14	1.64	7.61	1.29	15.50	2.16	1.00	0.39	1/4 Sq.	3/16 Sq.
3362,3363	16.50	9.45	7.17	1.64	7.61	2.31	15.50	2.56	1.94	0.77	3/8 Sq.	1/4 Sq.
3372,3373	16.50	9.45	7.17	1.64	7.61	2.31	15.50	2.78	1.94	0.77	3/8 Sq.	1/4 Sq.

Motor Frame	32 Center Distance		33 Center Distance	
	Min.	Max.	Min.	Max.
56	12.28	18.25	12.31	18.28
143/145T	12.28	18.25	12.31	18.28
182/184T	13.28	19.25	13.31	19.28
213/215T	-	-	14.06	20.03

[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

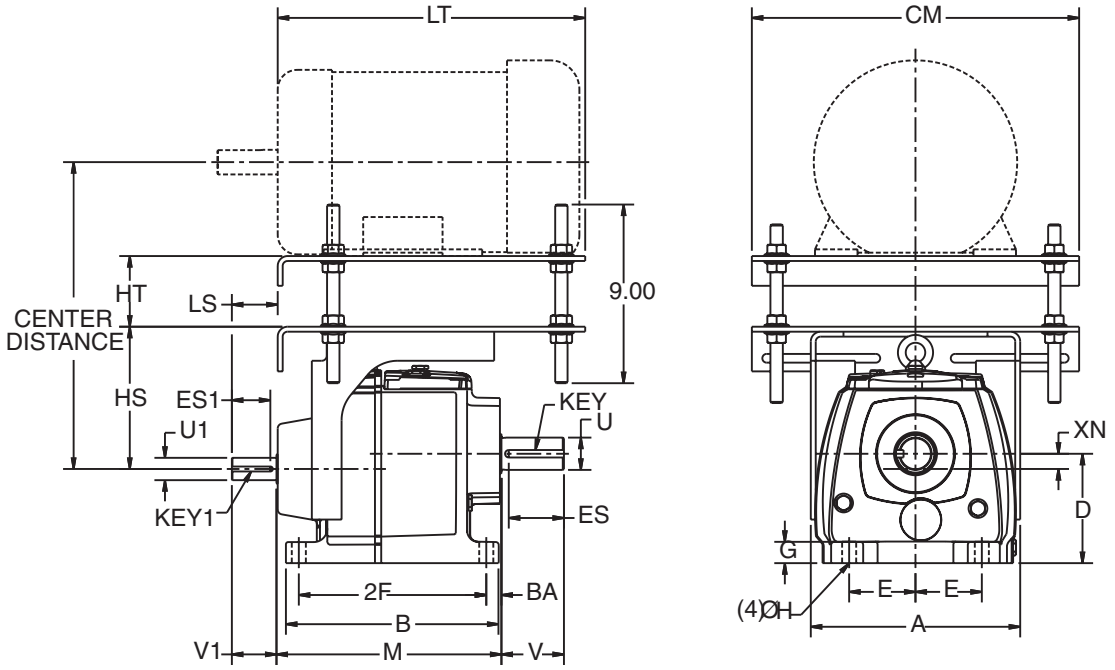
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Browning®

Top Mount Reducer

CbN SERIES 3000

Foot Mounted - Double/Triple Reduction



Gear Frame	A	B	D [1]	E	G	H	M	U [3]	U1 [3]	V	V1	BA
34	12.47	10.87	7.09	4.53	1.37	0.71	12.66	2.13	1.13	3.50	2.25	0.98
35	15.45	12.89	8.86	5.51	1.73	0.87	14.95	2.38	1.38	4.72	2.75	1.10

Gear Frame	CM	2F	HS	HT		LS	LT	ES	ES1	XN	Key	Key1
				Min.	Max.							
34	16.50	9.25	14.48	1.89	7.36	2.35	15.50	3.06	1.94	1.02	1/2 Sq.	1/4 Sq.
35	20.00	11.02	10.48	1.89	7.36	2.72	20.25	4.19	2.31	1.14	5/8 Sq.	5/16 Sq.

Motor Frame	34 Center Distance		35 Center Distance	
	Min.	Max.	Min.	Max.
143/145T	13.87	19.34	15.87	21.34
182/184T	14.87	20.34	16.87	22.34
213/215T	15.62	21.09	17.62	23.09
254/256T	16.62	22.09	18.62	24.09
284/286T	-	-	19.37	24.84

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

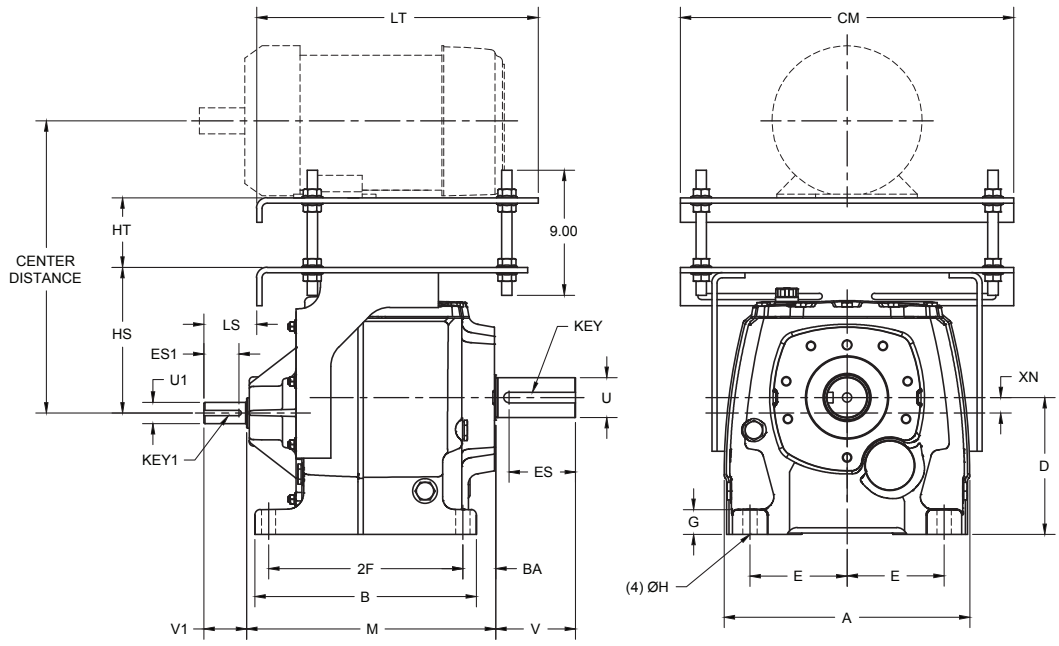
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Browning®

Top Mount Reducer

CbN SERIES 3000

Foot Mounted - Double/Triple Reduction



Gear Frame	A	B	D [1]	E	G	H	M	U [3]	U1 [3]	V	V1	BA
36	17.68	15.95	9.85	6.99	1.77	1.02	17.48	2.875	1.875	5.75	3.75	2.36
37	20.39	17.91	12.40	8.27	2.17	1.02	20.16	3.625	1.875	7.00	3.75	2.56
38	23.94	21.65	13.98	10.04	2.35	1.02	19.88	4.375	2.375	9.99	4.75	1.97

Gear Frame	CM	2F	HS	HT		LS	LT	ES	ES1	XN	Key	Key1
				Min.	Max.							
36	24.00	13.98	10.48	1.89	7.36	3.76	10.48	4.784	1.00	1.102	3/4 Sq	1/2 Sq.
37	24.00	15.35	10.48	1.89	7.36	3.76	10.48	5.893	1.00	2.362	7/8 Sq	1/2 Sq.
38	24.00	18.90	19.38	1.89	7.36	5.47	19.25	9.02	4.03	2.559	1 SQ	5/8 SQ

Motor Frame	36 or 37 Center Distance		38 Center Distance	
	Min.	Max.	Min.	Max.
182T/184T	16.73	22.73	25.78	31.25
213T/215T	17.48	23.48	26.53	32.00
254T/256T	18.48	24.48	27.53	33.00
284T/286T	19.23	25.23	28.28	33.75
324T/326T	20.23	26.23	29.28	34.75

[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

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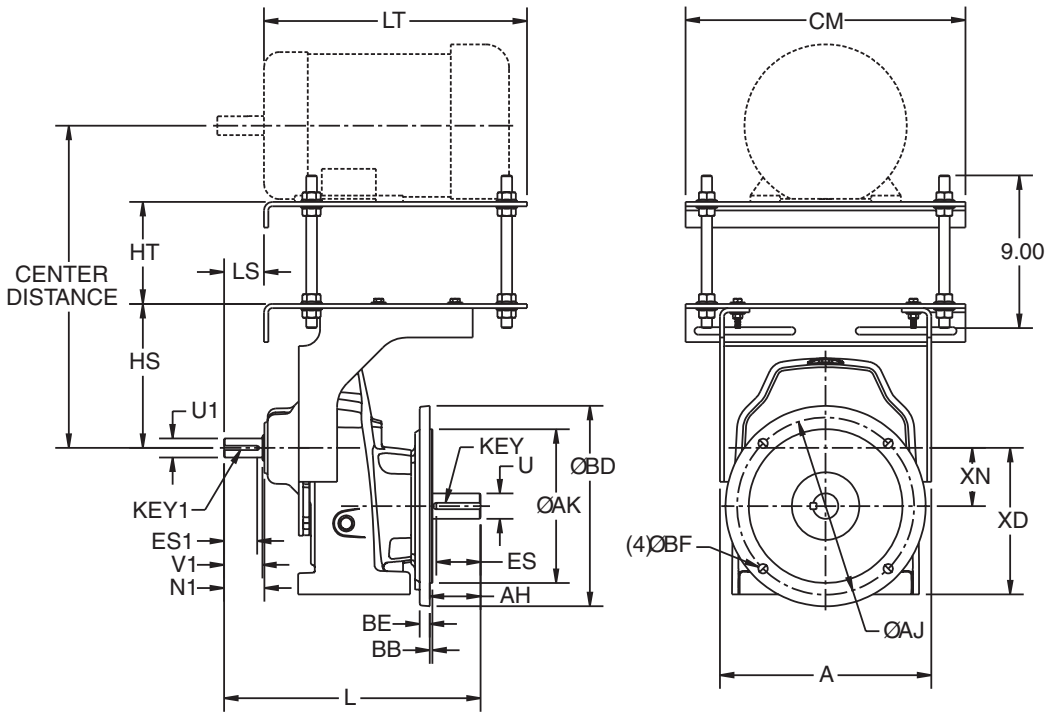
[3] Shaft extension tolerance: +.0000; -.001".

Flange Mounted - Single Reduction



Gear Frame	A	L	N1	U [3]	U1 [3]	V1	AH	CM	ES
34	12.47	15.12	2.37	1.50	1.13	2.25	3.00	16.50	2.56
35	15.45	17.90	2.92	1.75	1.38	2.75	3.50	20.00	3.06

Gear Frame	ES1	XD	HS	HT		LS	LT	XN	Key	Key1
				Min.	Max.					
34	1.94	5.20	14.48	1.89	7.36	2.35	15.50	3.43	3/8 Sq.	1/4 Sq.
35	2.31	6.30	10.48	1.89	7.36	2.72	20.25	4.33	3/8 Sq.	5/16 Sq.

Flange Type	34						35					
	AK	AJ	BB	BD	BE	BF	AK	AJ	BB	BD	BE	BF
BS	9.06	10.43	0.16	11.8	0.59	0.55	9.84	11.81	0.2	13.78	0.71	0.71
BD2	7.09	8.46	0.16	9.83	0.59	0.55	9.06	10.43	0.2	11.81	0.71	0.55

Motor Frame	34 Center Distance		35 Center Distance	
	Min.	Max.	Min.	Max.
143/145T	13.87	19.34	15.87	21.34
182/184T	14.87	20.34	16.87	22.34
213/215T	15.62	21.09	17.62	23.09
254/256T	-	-	18.62	24.09
284/286T	-	-	19.37	24.84

[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

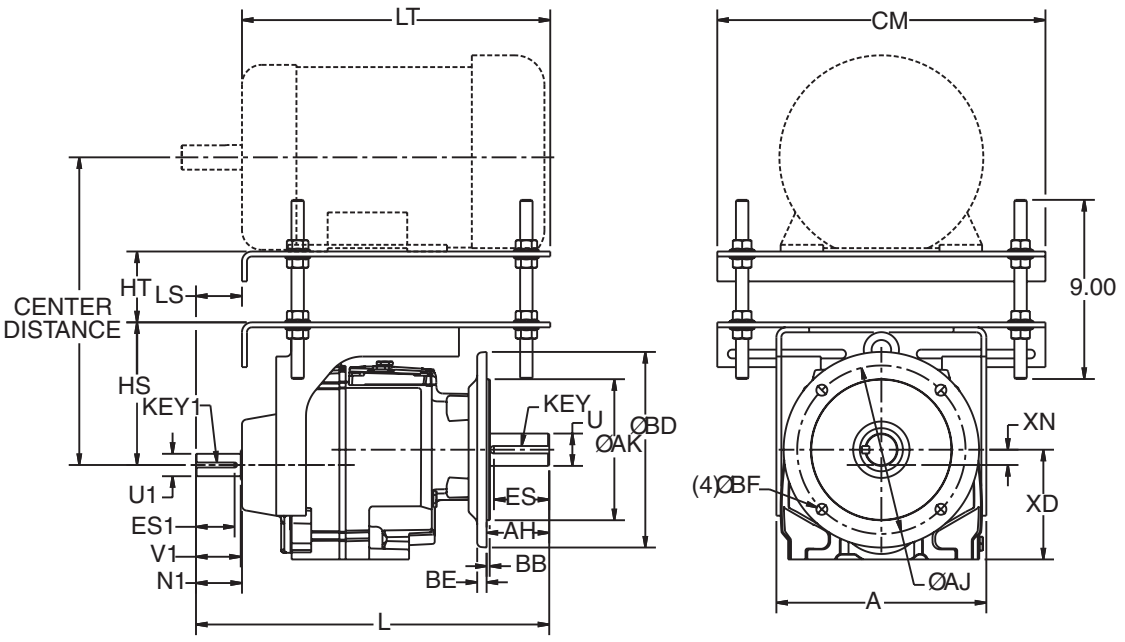
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Browning

Top Mount Reducer

CbN SERIES 3000

Flange Mounted - Double/Triple Reduction



Gear Frame	A	L	N1	U [3]	U1 [3]	V1	AH	CM	ES
32	10.56	13.25	1.29	1.25	0.63	1.25	2.50	16.50	2.16
3362,3363	10.56	17.61	2.31	1.50	1.13	2.25	3.00	16.50	2.56
3372,3373	10.56	17.76	2.31	1.63	1.13	2.25	3.15	16.50	2.78

Gear Frame	ES1	XD	HS	HT		LS	LT	XN	Key	Key1
				Min.	Max.					
32	1.00	4.53	7.14	1.64	7.61	1.29	15.50	0.39	1/4 Sq.	3/16 Sq.
3362,3363	1.94	5.51	7.17	1.64	7.61	2.31	15.50	0.77	3/8 Sq.	1/4 Sq.
3372,3373	1.94	5.51	7.17	1.64	7.61	2.31	15.50	0.77	3/8 Sq.	1/4 Sq.

Flange Type	32						33					
	AK	AJ	BB	BD	BE	BF	AK	AJ	BB	BD	BE	BF
BS	7.09	8.46	0.16	9.83	0.47	0.55	9.06	10.43	0.16	11.80	0.47	0.55
BD1	5.12	6.50	0.14	7.87	0.39	0.47	7.09	8.46	0.16	9.83	0.47	0.55
BD2	4.33	5.12	0.14	6.29	0.39	0.35	5.12	6.50	0.14	7.86	0.47	0.47

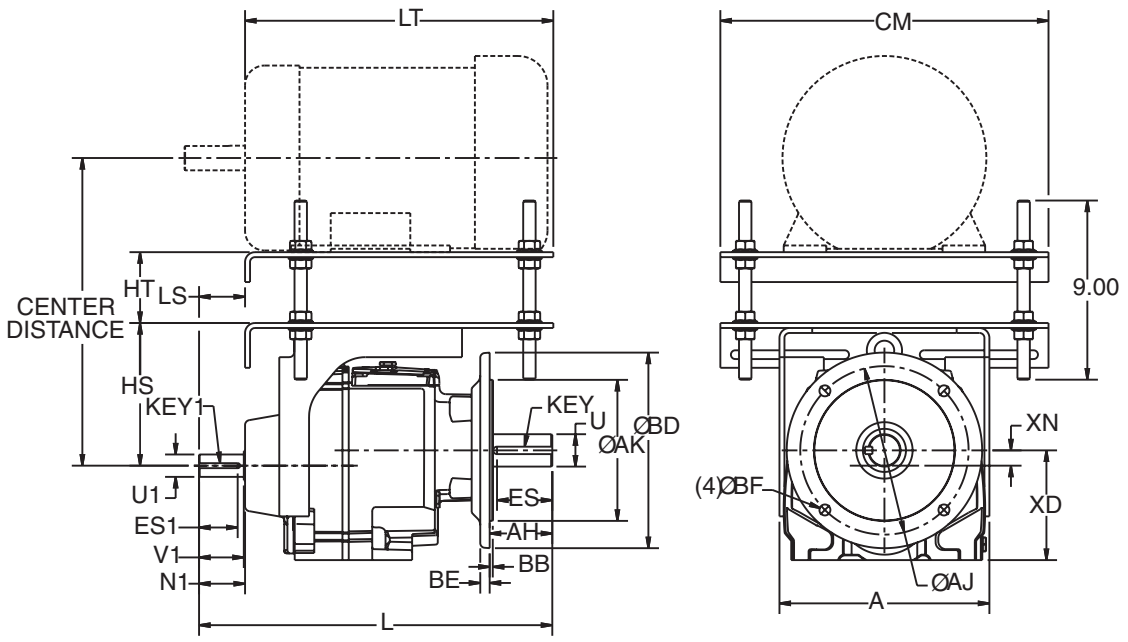
Motor Frame	32 Center Distance		33 Center Distance	
	Min.	Max.	Min.	Max.
56	12.28	18.25	12.31	18.28
143T, 145T	12.28	18.25	12.31	18.28
182T, 184T	13.28	19.25	13.31	19.28
213T, 215T	-	-	14.06	20.03

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Flange Mounted - Double/Triple Reduction



Gear Frame	A	L	N1	U [3]	U1 [3]	V1	AH	CM	ES
34	12.47	19.16	2.37	2.13	1.13	2.25	3.50	16.50	3.06
35	15.45	23.42	2.92	2.13	1.38	2.75	4.72	20.00	4.19

Gear Frame	ES1	XD	HS	HT		LS	LT	XN	Key	Key1
				Min.	Max.					
34	1.94	7.09	14.48	1.89	7.36	2.35	15.5	1.02	1/2 Sq.	1/4 Sq.
35	2.31	8.86	10.48	1.89	7.36	2.72	20.25	1.14	5/8 Sq.	5/16 Sq.

Flange Type	34						35					
	AK	AJ	BB	BD	BE	BF	AK	AJ	BB	BD	BE	BF
BS	9.84	11.81	0.16	13.77	0.59	0.71	11.81	13.78	0.20	15.75	0.71	0.71
BD1	9.06	10.43	0.16	11.80	0.59	0.55	9.84	11.81	0.20	13.78	0.71	0.71
BD2	7.09	8.46	0.16	9.83	0.59	0.55	9.06	10.43	0.20	11.81	0.71	0.55

Motor Frame	34 Center Distance		35 Center Distance	
	Min.	Max.	Min.	Max.
143/145T	13.87	19.34	15.87	21.34
182/184T	14.87	20.34	16.87	22.34
213/215T	15.62	21.09	17.62	23.09
254/256T	16.62	22.09	18.62	24.09
284/286T	-	-	19.37	24.84

[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

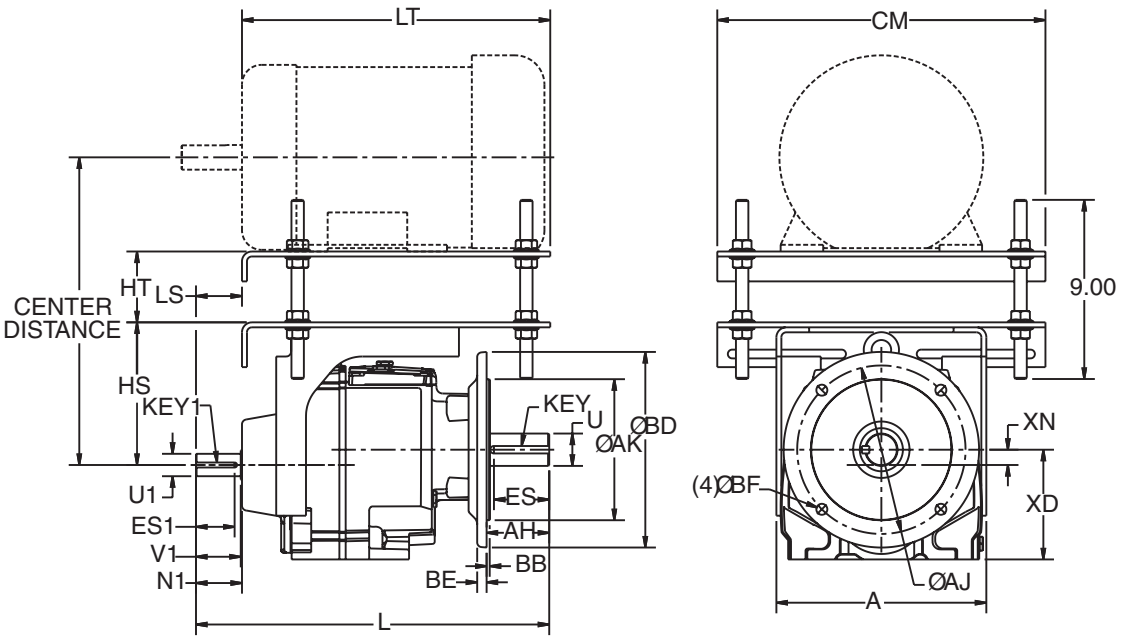
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Browning

Top Mount Reducer

CbN SERIES 3000

Flange Mounted - Double/Triple Reduction



Gear Frame	A	L	N1	O	U [3]	U1 [3]	V1	AH	CM	ES	ES1
36	17.68	30.32	3.94	7.87	2.875	1.875	3.75	5.75	24.00	4.784	3.06
37	20.39	34.25	3.94	7.99	3.625	1.875	3.75	7.00	24.00	5.89	3.06
38	23.94	38.46	4.93	8.63	4.375	2.375	4.75	6.84	24.00	9.02	4.03

Gear Frame	XD	HT		LS	LT	ES	ES1	XN	Key	Key 1
		Min.	Max.							
36	9.84	1.89	7.36	3.76	10.48	4.784	1.00	1.102	3/4 Sq	1/2 Sq.
37	12.40	1.89	7.36	3.76	10.48	5.893	1.00	2.362	7/8 Sq	1/2 Sq.
38	13.98	1.89	7.36	5.47	19.25	9.02	5.00	2.559	1 SQ	5/8 SQ

Gear Frame	Flange Type	AK	AJ	BB	BD	BE	BF
36	BS	17.717	19.685	0.236	21.65	0.79	0.70
	BD1	13.780	15.748	0.236	17.70	0.79	0.70
37	BS	17.717	19.685	0.236	21.65	0.79	0.70
	BD1	13.780	15.748	0.236	17.70	0.79	0.70
38	BS	21.654	23.620	0.197	25.98	0.79	0.87
	BD1	17.717	19.685	0.197	21.65	0.79	0.69

Motor Frame	36 or 37 Center Distance		38 Center Distance	
	Min.	Max.	Min.	Max.
182T/184T	16.73	22.73	25.78	31.25
213T/215T	17.48	23.48	26.53	32.00
254T/256T	18.48	24.48	27.53	33.00
284T/286T	19.23	25.23	28.28	33.75
324T/326T	20.23	26.23	29.28	34.75

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

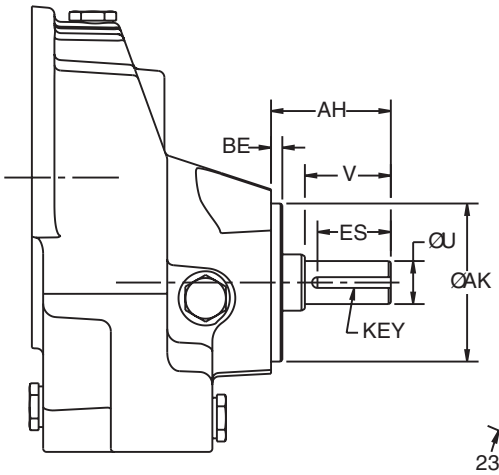
[2] All rough casting dimensions may vary by .25" due to casting variations.

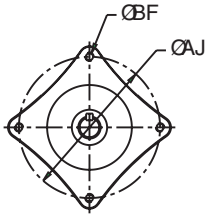
[3] Shaft extension tolerance: +.0000; -.001".

B14 Face Mounting Supplement

CbN SERIES 3000

Single Reduction





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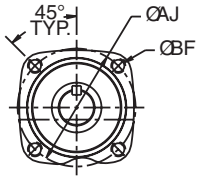

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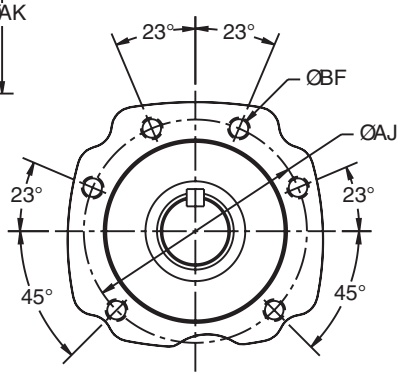

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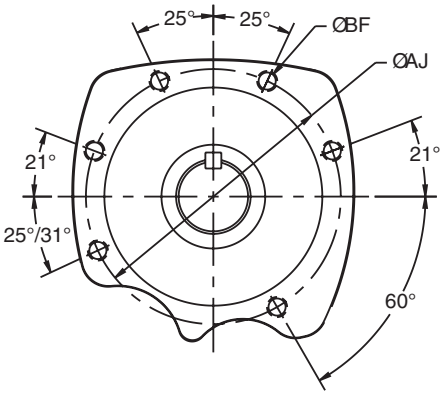


34 / 35

Gear Frame	U [1]	V	AH	AJ	AK [2]	BE	BF	ES	Key
30	0.625	1.88	2.53	3.937	2.362	0.12	M6x.63	1.42	3/16 Sq.
31	0.750	1.50	2.09	3.268	2.756	0.2	M10x.87	1.28	3/16 Sq.
32	1.000	2.00	2.09	3.268	2.756	0.2	M10x.87	1.56	1/4 Sq.
33	1.375	2.75	3.34	4.724	3.937	0.31	M10x.87	2.40	5/16 Sq.
34	2.125	3.00	4.10	5.984	5.118	0.28	M12x.87	2.56	3/8 Sq.
35	2.375	3.50	4.84	7.480	6.100	0.3	M16x1.06	3.06	3/8 Sq.

[1] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

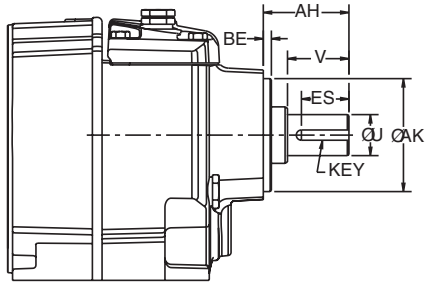
[2] Tolerance is J6.

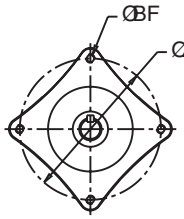
Browning

B14 Face Mounting Supplement

CbN SERIES 3000

Multiple Reduction





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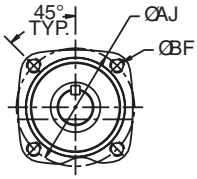

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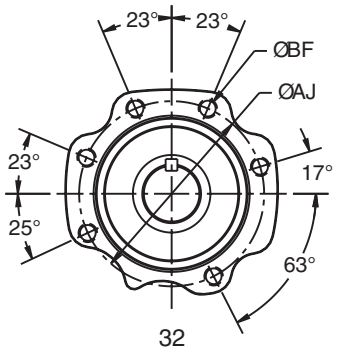

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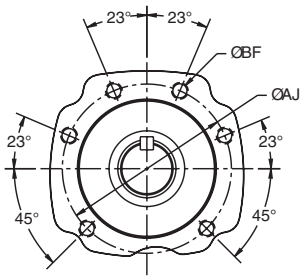

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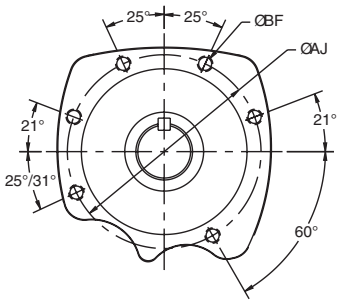
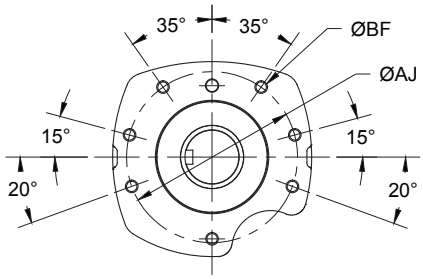


34 / 35



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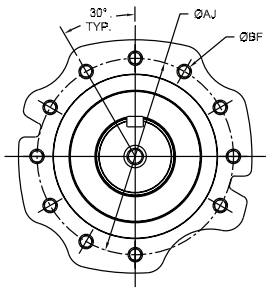


38

Gear Frame	U [1]	V	AH	AJ	AK [2]	BE	BF	ES	Key
30	0.625	1.50	2.53	3.937	2.362	0.39	M6x.63	1.42	3/16 Sq.
31	1.000	1.50	2.09	3.268	2.756	0.20	M10x.87	1.16	1/4 Sq.
32	1.250	2.50	3.09	3.937	3.228	0.14	M10x.87	2.16	1/4 Sq.
3362,3363	1.500	3.00	3.91	4.842	3.937	-0.14	M10x.87	2.56	3/8 Sq.
3372,3373	1.625	3.15	4.06	4.842	3.937	-0.14	M10x.87	2.78	3/8 Sq.
34	2.125	3.50	4.60	5.984	5.118	0.28	M12x.87	3.06	1/2 Sq.
35	2.375	4.72	6.09	7.480	6.100	0.30	M16x1.06	4.19	5/8 Sq.
36	2.875	5.75	5.83	9.055	5.905	-.16	M16x1.06	4.784	3/4 Sq
37	3.625	7.00	7.08	9.055	7.087	-.16	M20x1.38	5.890	7/8 Sq
38	4.375	9.99	10.26	11.811	9.84	.28	M20x1.38	9.02	1 SQ

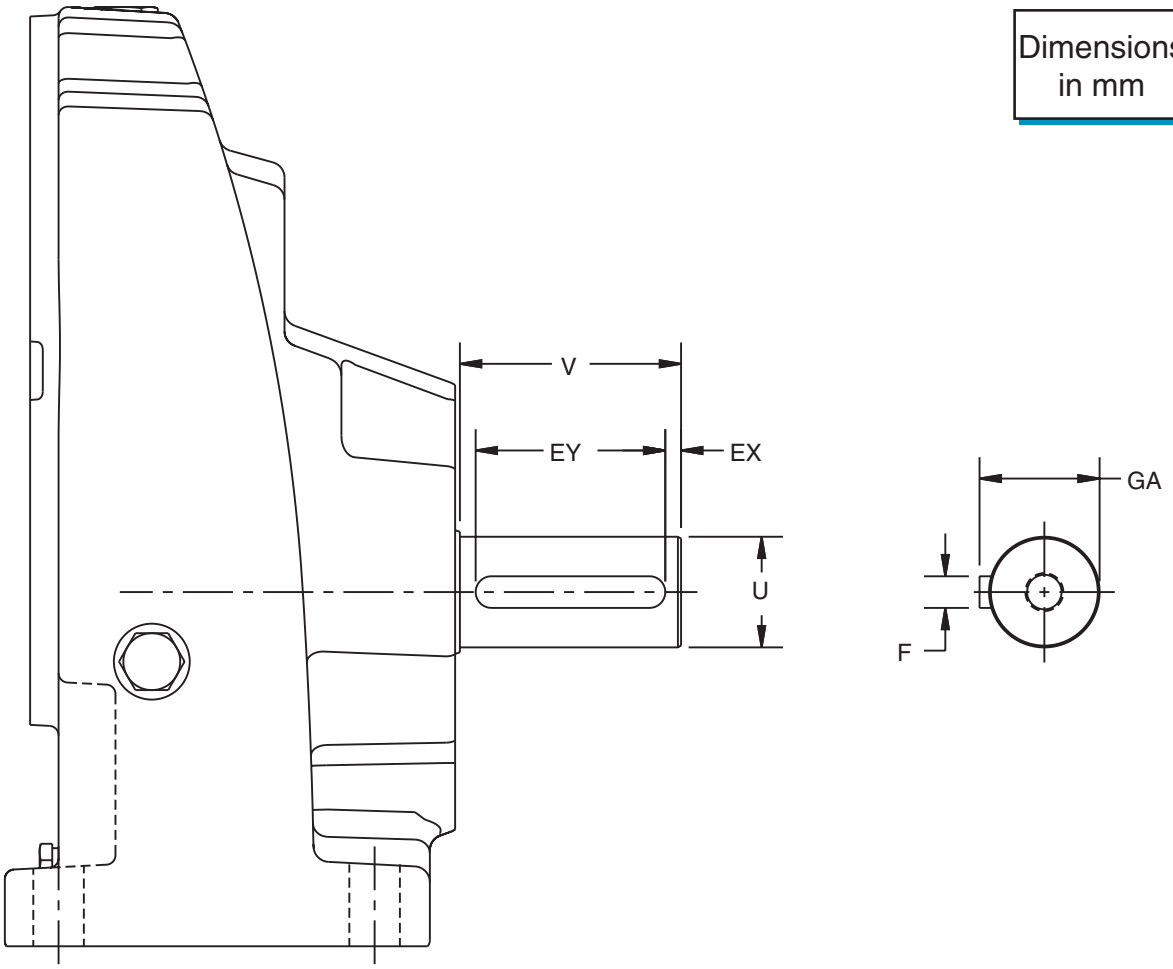
[1] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[2] Tolerance is J6.

Metric Output Shaft Dimensions

SM Foot Mounted - Single Reduction

Dimensions in mm



Gear Frame	F	U	GA	V	EX	EY
30	5	16j6	18	40	7	25
31	6	20j6	22,5	40	7	30
32	8	25j6	28	50	5	40
33	10	35k6	38	70	5	60
34	12	40k6	43	80	3	72
35	14	45	48.5	90	5	80

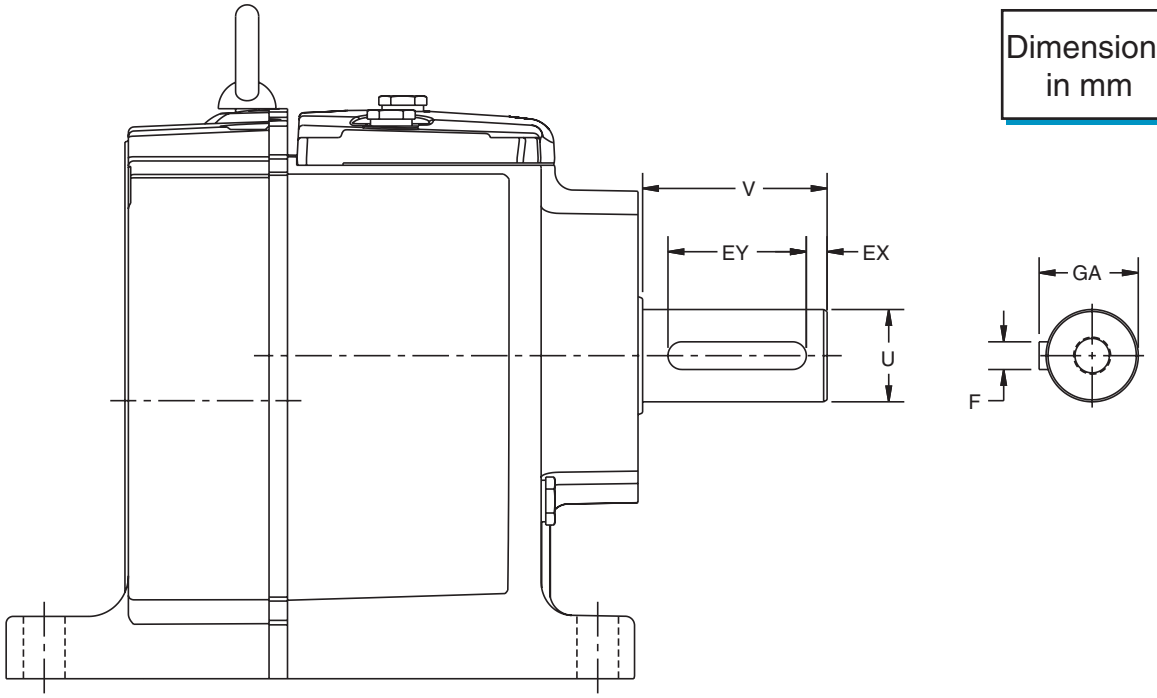
Browning

Metric Output Shaft Dimensions

CbN SERIES 3000

SM Foot Mounted - Multiple Reduction

Dimensions in mm



Gear Frame	F	U	GA	V	EX	EY
30	6	20j6	22,5	40	7	25
31	8	25j6	28	50	5	40
32	8	30j6	33	60	6	45
33	12	40k6	43	80	9	60
34	14	50k6	53.5	100	3	90
35	18	60m6	64	120	4	110
36	20	70m6	74.5	140	10	115
37	25	90m6	95	170	12	140
38	28	110m6	116	210	12	180

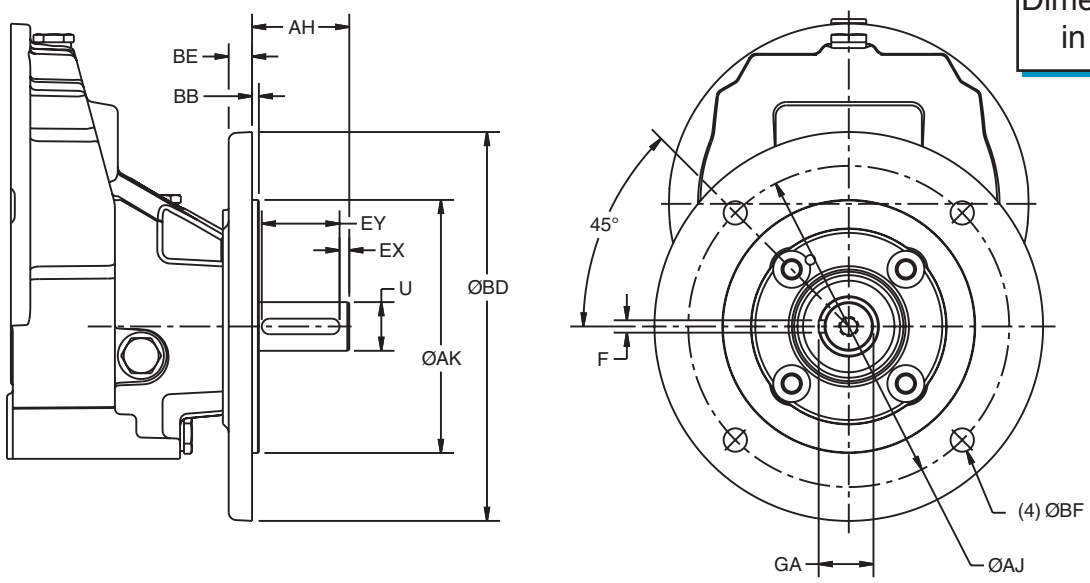
Browning

Metric Output Shaft Dimensions

CbN SERIES 3000

Flange Mounted - Single Reduction

Dimensions in mm



Gear Frame	F	U	AH	GA	EX	EY
30	5	16j6	40	18	7	25
31	6	20j6	40	22.5	7	30
32	8	25j6	50	28	5	40
33	10	35k6	70	38	5	60

Gear Frame	BSM						BDM1					
	AK	AJ	BB	BD	BE	BF	AK	AJ	BB	BD	BE	BF
30	95j6	115	3	140	8	9	80j6	100	3	120	10	7
31	110j6	130	3.5	160	10	9	-	-	-	-	-	-
32	130j6	165	3.5	200	12	12	-	-	-	-	-	-
33	180j6	215	4	250	12	14	-	-	-	-	-	-

Gear Frame	BDM2						BDM3					
	AK	AJ	BB	BD	BE	BF	AK	AJ	BB	BD	BE	BF
30	110j6	130	2	160	10	9	130j6	165	3	200	8	9
31	95j6	115	3	140	10	9	-	-	-	-	-	-
32	110j6	130	3.5	160	9	9	-	-	-	-	-	-
33	130j6	165	3.5	200	12	11	-	-	-	-	-	-

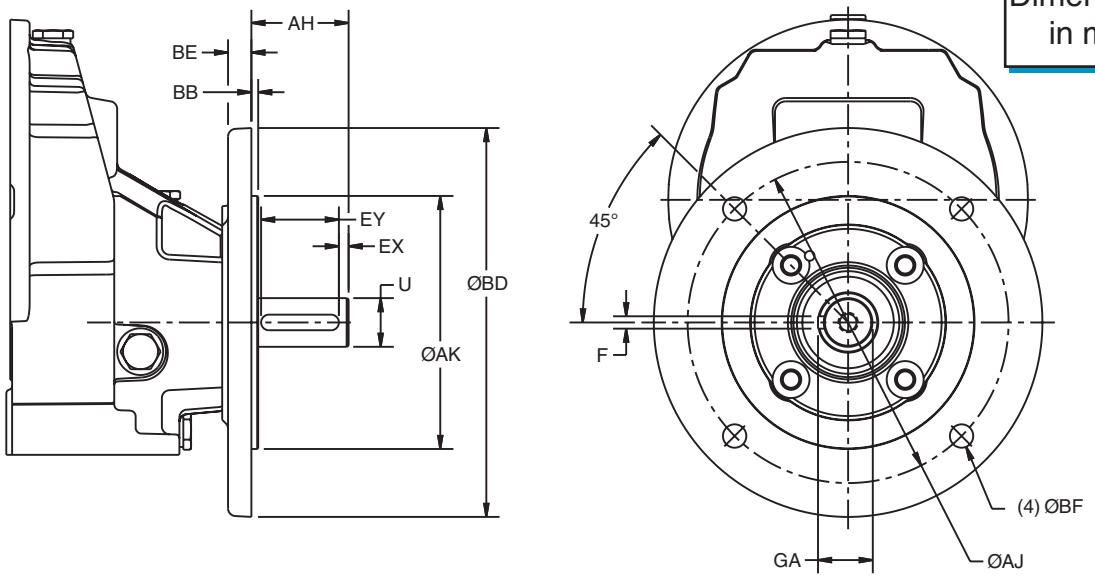
Browning

Metric Output Shaft Dimensions

CbN SERIES 3000

Flange Mounted - Single Reduction

Dimensions in mm



Gear Frame	F	U	AH	GA	EX	EY
34	12	40k6	80	43	3	72
35	14	45	90	48.5	5	80

Gear Frame	BSM						BDM2					
	AK	AJ	BB	BD	BE	BF	AK	AJ	BB	BD	BE	BF
34	230j6	265	4	300	15	14	180j6	215	4	250	15	14
35	250	300	5	350	18	18	230	265	5	300	18	14

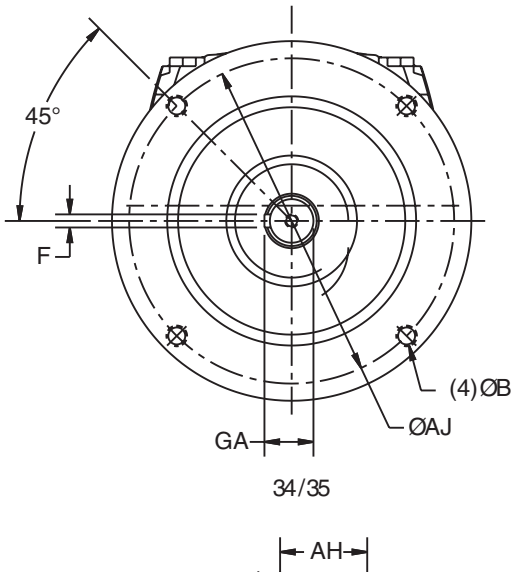
Browning

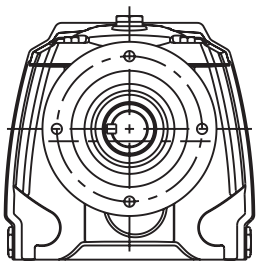
Metric Output Shaft Dimensions

CbN SERIES 3000

Flange Mounted - Multiple Reduction

Dimensions in mm





BD3 TYPE (31)

Gear Frame	F	U	AH	GA	EX	EY
30	6	20j6	40	22.5	7	25
31	8	25j6	50	28	5	40
32	8	30j6	60	33	6	45
33	12	40k6	80	43	9	6

Gear Frame	BSM						BDM1						BDM2					
	AK	AJ	BB	BD	BE	BF	AK	AJ	BB	BD	BE	BF	AK	AJ	BB	BD	BE	BF
30	95j6	115	3	140	8	9	80j6	100	2.5	120	7	7	110j6	130	3	160	8	9
31	130j6	165	3.5	200	10	11	110j6	130	3.5	160	10	9	95j6	115	3.5	140	10	9
32	180j6	215	4	250	12	14	130j6	165	3.5	200	10	11	110j6	130	3.5	160	10	9
33	230j6	265	4	300	12	14	180j6	215	4	250	12	14	130j6	165	3.5	200	12	11

Gear Frame	BDM3					
	AK	AJ	BB	BD	BE	BF
31 (1)	80j6	100	2,5	120	10	7

(1) Refer to illustration above for correct hole orientation in BDM3 flange.

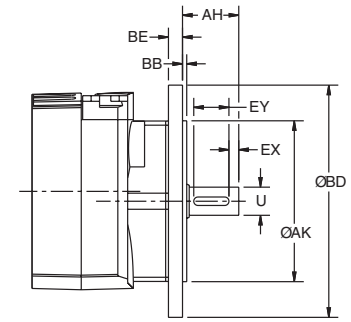
Browning

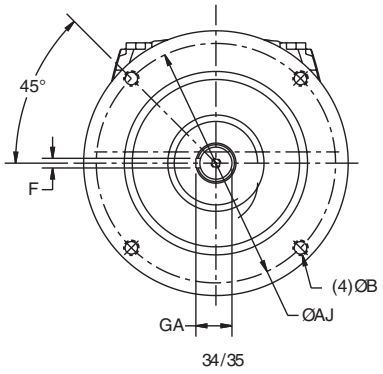
Metric Output Shaft Dimensions

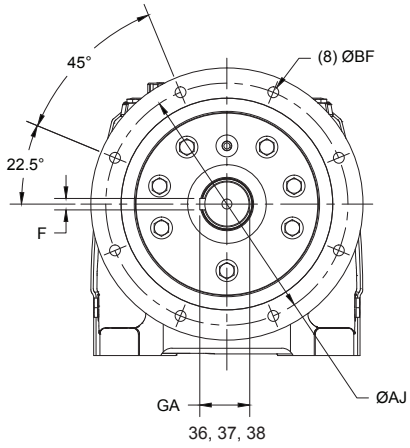
CbN SERIES 3000

Flange Mounted - Multiple Reduction

Dimensions in mm







Gear Frame	F	U	AH	GA	EX	EY
34	14	50k6	100	53.5	9	85
35	18	60m6	120	64	4	110
36	14	70m6	140	51.5	10	90
37	14	90m6	170	51.5	10	90
38	28	110m6	210	116	12	180

Gear Frame	BS						BD1						BD2					
	AK	AJ	BB	BD	BE	BF	AK	AJ	BB	BD	BE	BF	AK	AJ	BB	BD	BE	BF
34	250	300	4	350	15	18	230	265	4	300	15	14	180	215	4	250	15	14
35	300	350	5	400	18	18	250	300	5	350	15	18	230	265	5	300	15	14
36	450	500	6	550	20	18	350	400	6	450	20	18						
37	450	500	6	550	20	18	350	400	6	450	20	18						
38	550	600	6	660	16	22	450	500	5	550	20	18						

Product Weights (Lbs.)

Foot Mounted Single Reduction

C-Face Reducers

Gear Frame	Input Size				
	56/140TC	180/210TC	250TC	280TC	320TC
30	11	-	-	-	-
31	24	30	-	-	-
32	35	44	-	-	-
33	53	62	69	-	-
34	-	63	68	70	-
35	-	88	89	92	100

Input Shaft

Gear Frame	Style
	AP
30	9
31	23
32	28
33	55
34	66
35	89

Foot Mounted Multiple Reduction

C-Face Reducers

Gear Frame	Stages	Input Size				
		56/140TC	180/210TC	250TC	280TC	320TC
30	2, 3	17	-	-	-	-
31	2, 3	45	53	-	-	-
32	2, 3	57	66	-	-	-
	4, 5	63	-	-	-	-
33	2, 3	85	94	101	-	-
	4, 5	90	-	-	-	-
34	2, 3	93	95	98	100	-
	4, 5	130	-	-	-	-
35	2, 3	160	163	166	168	178
	4, 5	197	205	-	-	-
36	2,3	-	264	267	269	279
	4,5,6	475	483	-	-	-
37	2,3	-	363	366	368	378
	4,5,6	555	563	-	-	-
38	2, 3	-	660	663	665	675
	4,5,6	920	928	-	-	-

Input Shaft

Gear Frame	Stages	Style		
		AP	Scoop	Top Mt.
30	2, 3	15	-	-
31	2, 3	37	-	-
32	2, 3	50	75	97
	4, 5	55	-	-
33	2, 3	87	120	134
	4, 5	92	-	-
34	2, 3	99	151	169
	4, 5	149	-	-
35	2, 3	198	250	172
	4, 5	235	-	-
36	2,3	308	420	411
	4,5,6	375	410	-
37	2,3	407	503	492
	4,5,6	430	465	-
38	2,3	800	925	900
	4,5,6	855	895	-

Weight Adders

B14 and Flange Mounted

Single Reduction

Gear Frame	B14 Face Mount	Flange Mount
30	0	1
31	-1	3
32	-1	4
33	-1	8
34	-2	8
35	-2	9

Multiple and Combined

Gear Frame	B14 Face Mount	Flange Mount
30	0	1
31	-1	2
32	-1	4
33	-3	8
34	-5	8
35	-6	9
36	0	21
37	0	21
38	0	35

Lubrication

CbN gearing is shipped with one of the following synthetic lubricants per the table below and fitted with a magnetic drain. Each reducer is filled according to the mounting position specified when ordered. Refer to the unit nameplate and charts below or A-225 for the mounting position arrangement of your unit.

In the case of synthetic oil, the lubricant does not require changing, but it is recommended that the oil level be checked periodically.

Standard Synthetic Gear Oil (Non-Food Grade)

No Backstop

Manufacturer	-25° F to 125° F (-30° C to 50° C)
Fuchs*	Sintogear* 125
Mobil*	Mobilgear* SHC 150
Shell*	Omala* Fluids HD 150

With Backstop (1)

Manufacturer	-25° F to 125° F (-30° C to 50° C)
Shell*	Omala RL 100
Mobil*	SHC 629

Synthetic Gear Oil (Food Grade)

No Backstop

Manufacturer	22°F to 125°F (-20°C to 50°C)
Mobil*	SHC Cibus 150

⚠ CAUTION

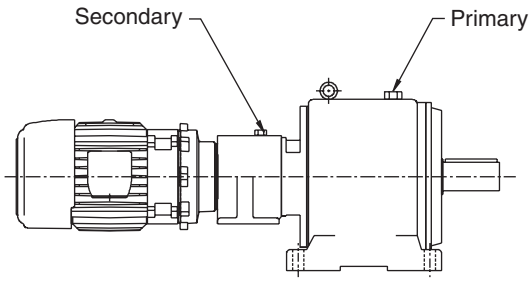
- Never mix synthetic oil and mineral oil.
- Never use extreme pressure (EP) oil in a reducer with a backstop.
- Refer to installation and maintenance manual for mineral oil selection.

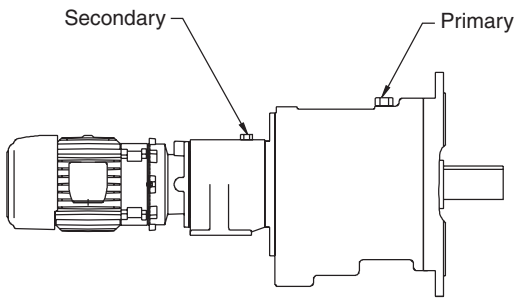
Oil Capacities (U.S. Quarts)

Reduction Stages	Gear Frame	Mounting Positions											
		B3	B5	B6	B7	B8	B52	B53	B54	V1	V3	V5	V6
One	30	.30	.30	.30	.30	.30	.30	.30	.30	.30	.30	.30	.30
	31	0.34	0.34	0.53	0.53	0.74	0.53	0.74	0.53	0.58	1.06	0.58	1.06
	32	0.26	0.26	0.63	0.63	1.06	0.63	1.06	0.63	0.69	1.27	0.69	1.27
	33	0.95	0.95	1.48	1.48	2.01	1.48	2.01	1.48	2.22	2.22	2.22	2.22
	34	1.06	1.06	1.59	1.59	2.64	1.59	2.64	1.59	2.22	2.22	2.22	2.22
	35	1.27	1.17	3.84	3.84	5.69	2.55	3.95	2.55	2.91	3.95	5.12	6.04
Two	30	.64	.64	.64	.64	.64	.64	.64	.64	.64	.64	.64	.64
	31	0.63	0.63	1.00	0.90	1.16	-	-	-	1.22	1.48	1.22	1.48
	32	1.00	1.00	1.85	1.64	2.38	-	-	-	2.38	2.85	2.38	2.85
	33	1.69	1.69	3.49	3.12	4.76	-	-	-	4.76	4.65	4.76	4.65
	34	2.32	2.32	5.39	4.97	7.93	-	-	-	8.24	7.82	8.24	7.82
	35	4.10	4.90	9.80	8.80	14.40	-	-	-	14.5	15.70	15.30	16.30
	36	8.00	8.00	12.00	18.00	22.50	-	-	-	24.00	24.50	24.00	24.50
	37	13.00	13.00	21.00	32.00	38.00	-	-	-	42.50	41.50	42.50	41.50
	38	17.96	17.96	26.42	53.89	61.30	-	-	-	68.68	64.46	68.68	64.46
Three	30	.74	.74	.74	.74	.74	.74	.74	.74	.74	.74	.74	.74
	31	0.63	0.63	1.30	0.90	1.16	-	-	-	1.22	1.48	1.22	1.48
	32	1.00	1.00	2.40	1.64	2.38	-	-	-	2.38	2.85	2.38	2.85
	33	1.69	1.69	4.60	3.12	4.76	-	-	-	4.76	4.65	4.76	4.65
	34	2.32	2.32	6.97	4.97	7.93	-	-	-	8.24	7.82	8.24	7.82
	35	3.61	4.65	9.18	8.83	14.3	-	-	-	14.40	15.80	15.00	15.50
	36	8.00	8.00	15.00	18.00	22.50	-	-	-	24.00	24.50	24.00	24.50
	37	13.00	13.00	27.00	32.00	38.00	-	-	-	42.50	41.50	42.50	41.50
	38	17.96	17.96	45.44	53.89	61.30	-	-	-	68.68	64.46	68.68	64.46

* The following are believed to be the trademarks and/or trade names of their respective owners and are not owned or controlled by Emerson Power Transmission. Fuchs and Sintogear: Fuchs Petrolube AG; Mobil and Mobilgear: Exxon Mobil Corporation; Shell and Omala: Shell Oil Company.

Lubrication





Foot Mounted Combined Units (U.S. Quarts)

Reduction Stages	Gear Frame	Composition		Mounting Positions											
				B3		B8		B6		B7		V5		V6	
		Prim.	Sec.	Prim.	Sec.	Prim.	Sec.	Prim.	Sec.	Prim.	Sec.	Prim.	Sec.	Prim.	Sec.
Four	3254	3252	3012	0.95	.64	2.3	.64	2.4	.64	1.6	.64	2.4	.64	2.65	.64
	3374	3372	3012	1.74	.64	5	.64	4.6	.64	2.9	.64	4.7	.64	4.4	.64
	3484	3482	3132	2.32	0.63	7.93	1.16	5.39	1	4.97	0.9	8.24	1.22	7.82	1.48
	3594	3592	3132	4.1	0.63	14.4	1.16	9.8	1	8.8	0.9	15.3	1.22	16.3	1.48
	3604	3602	3252	8.00	1.00	22.50	2.38	12.00	1.85	18.00	1.64	24.00	2.38	24.50	2.85
	3734	3732	3252	13.00	1.00	38.00	2.38	21.00	1.85	32.00	1.64	42.50	2.38	41.50	2.85
	3844	3842	3482	17.96	2.32	17.96	7.93	26.42	5.39	53.89	4.97	68.68	8.24	64.46	7.82
Five	3255	3253	3012	0.95	.64	2.3	.64	2.4	.64	1.6	.64	2.4	.64	2.65	.64
	3375	3373	3012	1.74	.64	5	.64	4.6	.64	2.9	.64	4.7	.64	4.4	.64
	3485	3483	3132	2.32	0.63	7.93	1.16	6.97	1.00	4.97	0.9	8.24	1.22	7.82	1.48
	3595	3593	3132	3.61	0.63	14.3	1.16	9.18	1.00	8.83	0.9	15	1.22	15.5	1.48
	3605	3602	3253	8.00	1.00	22.50	2.38	12.00	2.43	18.00	1.64	24.00	2.38	24.50	2.85
	3735	3732	3253	13.00	1.00	38.00	2.38	21.00	2.43	32.00	1.64	42.50	2.38	41.50	2.85
	3845	3842	3483	17.96	2.32	17.96	7.93	45.44	6.97	53.89	4.97	68.68	8.24	64.46	7.82
Six	3606	3603	3253	8.00	1.00	22.50	2.38	15.00	2.43	18.00	1.64	24.00	2.38	24.50	2.85
	3736	3733	3253	13.00	1.00	38.00	2.38	27.00	2.43	32.00	1.64	42.50	2.38	41.50	2.85
	3846	3843	3483	17.96	2.32	17.96	7.93	45.44	6.97	53.89	4.97	68.68	8.24	64.46	7.82

Flanged Mounted Combined Units (U.S. Quarts)

Reduction Stages	Gear Frame	Composition		Mounting Positions					
				B5		V1		V3	
		Prim.	Sec.	Prim.	Sec.	Prim.	Sec.	Prim.	Sec.
Four	3254	3252	3012	0.95	.64	2.4	.64	2.65	.64
	3374	3372	3012	1.5	.64	4.7	.64	4.4	.64
	3484	3482	3132	2.32	0.63	8.24	1.22	7.82	1.48
	3594	3592	3132	4.9	0.63	14.5	1.22	15.7	1.48
	3604	3602	3252	8.00	1.00	24.00	2.38	24.50	2.85
	3734	3732	3252	13.00	1.00	42.50	2.38	41.50	2.85
	3844	3842	3482	17.96	2.32	68.58	8.24	64.46	7.82
Five	3255	3253	3012	0.95	.64	2.4	.64	2.65	.64
	3375	3373	3012	1.5	.64	4.7	.64	4.4	.64
	3485	3483	3132	2.32	0.63	8.24	1.22	7.82	1.48
	3595	3593	3132	4.65	0.63	14.4	1.22	15.8	1.48
	3605	3602	3253	8.00	1.00	24.00	2.38	24.50	2.85
	3735	3732	3253	13.00	1.00	42.50	2.38	41.50	2.85
	3845	3842	3483	17.96	2.32	68.58	8.24	64.46	7.82
Six	3606	3603	3253	8.00	1.00	24.00	2.38	24.50	2.85
	3736	3733	3253	13.00	1.00	42.50	2.38	41.50	2.85
	3846	3843	3483	17.96	2.32	68.58	8.24	64.46	7.82

Notes: