

DATE: 11/23/2021

INVITATION TO BID  
THIS IS NOT AN ORDER

Page: 5

BID NO.: 50-00136598

**JEFFERSON PARISH**

PURCHASING DEPARTMENT  
P.O. BOX 9  
GRETNA, LA. 70054-0009  
504-364-2678

VENDOR: 27118 BLANK BID COPY VENDOR

BUYER: BBELLOW

As per LSA-RS 47:301 et seq., all governmental bodies are excluded from payment of sales taxes to any Louisiana taxing body. Quotations shall be based on F.O.B. Agency warehouse or jobsite, anywhere within the Parish as designated by the Purchasing Department.

JEFFERSON PARISH reserves the right to cancel all or any part of an order if not shipped promptly. No charges will be allowed for parking or cartage unless specified in quotation. The order must not be filled at a higher price than quoted. JEFFERSON PARISH reserves the right to cancel at any time and for any reason by issuing a THIRTY (30) day written notice to the contractor.

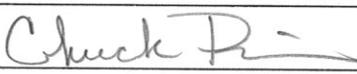
JEFFERSON PARISH is expecting all products to be new and all work to be done in workman-like manner, according to standard practices. Any deviations or alteration from the specifications must be indicated on the bid form for each item and upon request, product data for same must be submitted by the time specified by the Purchasing Department.

<b>DELIVERY: FOB JEFFERSON PARISH</b>	
INDICATE DELIVERY DATE ON EQUIPMENT AND SUPPLIES	LOCAL STOCK - 4-6 WEEKS ARD
INDICATE STARTING TIME (IN DAYS) FOR CONSTRUCTION WORK	_____
INDICATE COMPLETION TIME (IN DAYS) FOR CONSTRUCTION WORK	_____

In the event that addenda are issued with this bid, bidders MUST acknowledge all addenda on the bid form. Bidder must acknowledge receipt of an addendum on the bid form by placing the addendum number as indicated. Failure to acknowledge any addendum on the bid form will result in bid rejection.

Acknowledge Receipt of Addenda: NUMBER: \_\_\_\_\_  
 NUMBER: \_\_\_\_\_  
 NUMBER: \_\_\_\_\_  
 NUMBER: \_\_\_\_\_

LOUISIANA CONTRACTOR'S LICENSE NO.: (if applicable) \_\_\_\_\_

<b>*** ALL BIDDERS MUST COMPLETE SECTION BELOW ***</b>	
FIRM NAME:	CED dba IC ELECTRIC
SIGNATURE: (Must be signed here)	
PRINT OR TYPE NAME:	CHUCK PUIANNO
ADDRESS:	3321 WESTBANK EXPRESSWAY
CITY, STATE:	HARVEY LA
TELEPHONE:	(504) 341-4281
TITLE:	SALES
ZIP:	70058
FAX:	(504) 340-3400
EMAIL ADDRESS:	CPUIANNO@CED-ICELECTRIC.COM

TOTAL PRICE OF ALL BID ITEMS: \$ 8341.15

ITEM NUMBER	QUANTITY	U/M	DESCRIPTION OF ARTICLES	UNIT PRICE QUOTED	TOTALS
1	10.00	EA	ONE TIME PURCHASE OF ELECTRICAL SUPPLIES FOR JEFFERSON PARISH PUBLIC WORKS WAREHOUSE 0010 - FUSE, DUAL ELEMENT, TIME DELAY, 2 AMPERES, 250 VAC, GOULD NO. ATM-2 SK NUMBER 00-0855010	\$ 6.96	\$ 69.60
2	1,000.00	LF	0020 - WIRE, ELECTRICAL, NO. 16 THHN/THWN, BLACK, STRANDED, 600 V, SINGLE COPPER CONDUCTOR, PVC INSULATION, 500 FT. PER SPOOL SK NUMBER 00-080286A	.12	\$ 120.00
3	50.00	EA	0030 - CONNECTOR, MECHANICAL, UNI-TAP, AL9CU RATED FOR NO. 10 AWG - 250 KCMIL, BURNDY NO. BIT250 SK NUMBER 00-086992E	\$ 17.78	\$ 889.45
4	20.00	EA	0040 - CONNECTOR, SO CABLE, FOR 14-4, 3/4 IN., O.D. RANGE .550 TO .650, PECO NO. CG75-A650 SK NUMBER 00-0878070	\$ 7.55	\$ 151.00
5	6.00	EA	0050 - CLAMP, WEDGE, SERVICE, STANDARD ALUMINUM, TYPE WAA, FOR 1/0 TO 4 ACSR WIRE, BLACKBURN NO. W20-1 SK NUMBER 00-0870890	\$ 3.60	\$ 21.60
6	6.00	EA	0060 - INSULATOR, POLE, PORCELAIN, SCREW TYPE, 2-1/4 IN. SCREW, WEAVER NO. SW-3 SK NUMBER 00-0879220	\$ 4.85	\$ 29.10
7	4.00	EA	0070 - POWER SUPPLY, 400-500VAC/60HZ INPUT, 24VDC OUTPUT, EATON CATALOG NO. PSG240F24RM NO SUBSTITUTES SK NUMBER 00-086125A	\$ 223.31	\$ 893.24
8	20.00	EA	0080 - MONITOR, PHASE, VOLTAGE, 208/220/230/240 VOLT, DIVERSIFIED ELECTRONICS NO. SLA-230-ALE, NO SUBSTITUTES SK NUMBER 00-0859790	\$ 193.05	\$ 3861.00
9	6.00	EA	0090 - CONNECTOR, SEALTITE, STRAIGHT, 1-1/4 INCH, APPLETON NO. ST-125	\$ 9.36	\$ 56.16

QUOTING ONE CGB295  
SEE ATTACHED SPEC \* SHEET \*

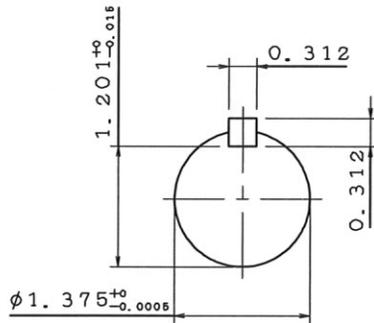
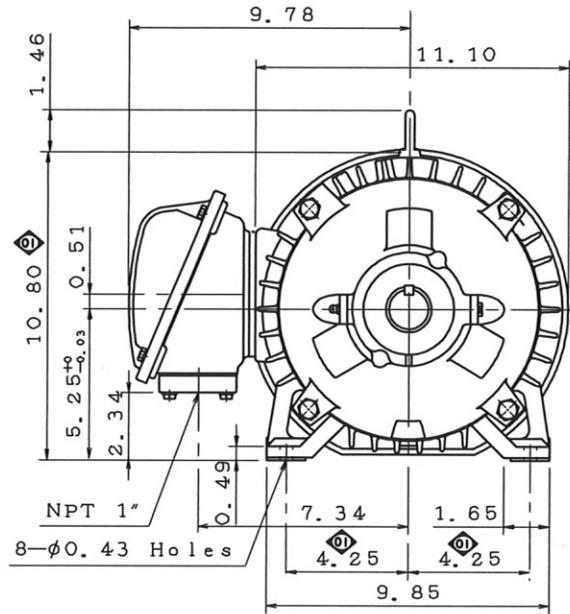
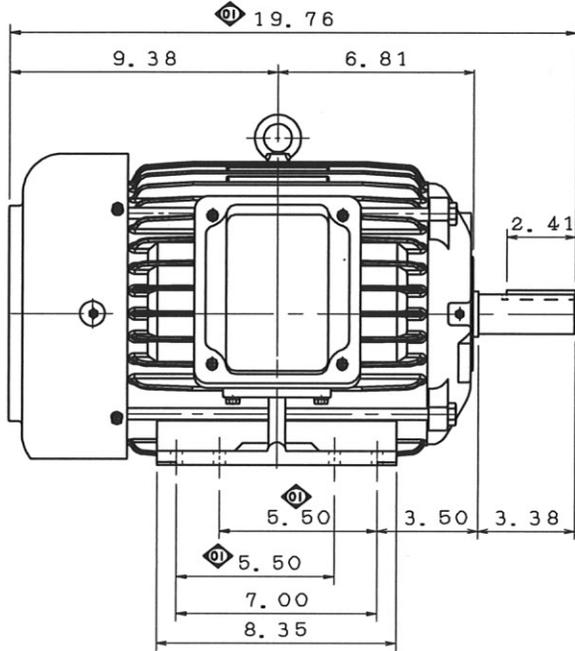


		OUTLINE DIMENSIONS		MOTOR TYPE: AEHH8N-11-	
		3-PHASE INDUCTION MOTOR		FRAME NO. 215T	

Pole	HP	kW	Hz	VOLT	r/min(rpm)
4	10	7.5	60	230/460	1800

Ins	Rating	Dimension in	Approx Weight	Bearings
F	CONT.	Inch	① 194 lbs	DE: 6308ZZ NDE: 6306ZZ

Totally Enclosed Fan-Cooled Type. Squirrel-Cage Rotor.



① 07 24 19 Weight & Dimensions Mahato

DWG.	W. F. PON	05•23•19
CHKD.	M. C. JENG	05•30•19
APPD.	M. C. JENG	05•30•19

**TECO**  **Westinghouse**

DWG NO.  
31049R344021

# TECO Westinghouse

ISSUED 07/23/19	<b>PERFORMANCE DATA</b> <b>3-PHASE INDUCTION MOTOR</b>	ENCLOSURE TEFC
TYPE AEHH8N		CATALOG# EP0104

## NAMEPLATE INFORMATION

OUTPUT		POLE	FRAME SIZE	VOLTAGE	HZ	RATED AMBIEN	INS. CLASS	NEMA DESIGN	TIME RATING	SERVICE FACTOR
HP	KW									
10	7.5	4	215T	460	60	40°C	F	B	CONT.	1.15

## TYPICAL PERFORMANCE

FULL LOAD RPM	EFFICIENCY				POWER FACTOR			MAXIMUM POWER FACTOR CORRECTION
	FULL LOAD		3/4 LOAD %	1/2 LOAD	F. L. %	3/4 LOAD	1/2 LOAD	
	NOM. %	MIN. %						
1765	91.7	90.2	91.0	91.0	83.0	79.0	69.5	2.16 KVAR

CURRENTS			NEMA KVA CODE LETTER
NO LOAD	FULL LOAD	LOCKED ROTOR	
4.7	12.3	81	H

TORQUE				INERTIA			ACCEL TIME	
FULL LOAD lb-ft	LOCKED ROTOR %FLT	PULL UP %FLT	BREAK DOWN %FLT	ROTOR WR <sup>2</sup> lb-ft <sup>2</sup>	NEMA LOAD WK <sup>2</sup> lb-ft <sup>2</sup>	MAX ALLOWABLE WK <sup>2</sup> lb-ft <sup>2</sup>	NEMA LOAD WK <sup>2</sup> Sec	MAX ALLOWABLE WK <sup>2</sup> Sec
29.75	240	145	260	0.986	39	186	3.42	16

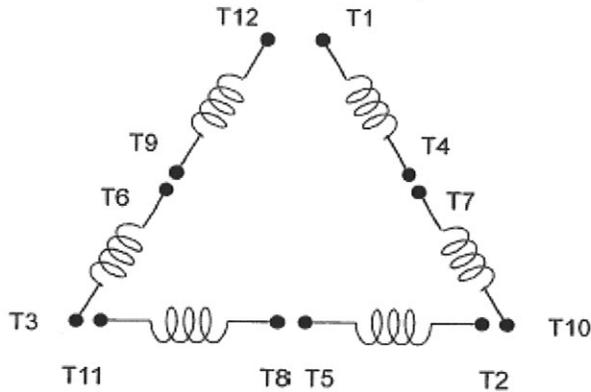
SAFE STALL TIME IN SECONDS		ALLOWABLE STARTS PER HOUR		SOUND PRESSURE LEVEL @ 3 FT dB(A)
COLD	HOT	COLD	HOT	
39	27	2	1	

APPROVED:	D. Lu	DRAWING NO.	31057EP0104	REVISION	0
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DATE:  
June 22, 2005

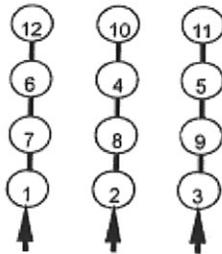
# CONNECTION DIAGRAM

CATALOG NO.:  
EP0104

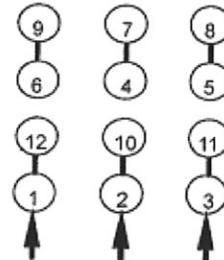


**SCHEMATIC - Δ / Y CONNECTION**

## ACROSS THE LINE CONNECTION

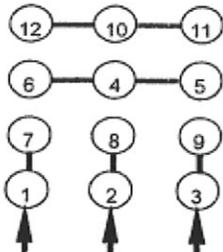


**LINE**  
**230 VOLT CONNECTION**

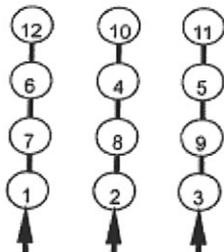


**LINE**  
**460 VOLT CONNECTION**

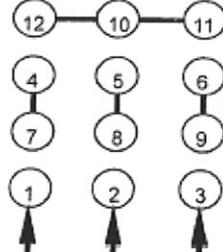
## WYE START-DELTA RUN CONNECTION



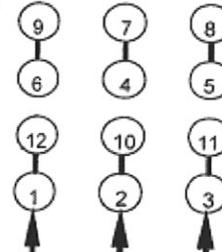
**LINE**  
**230 VOLT START**



**LINE**  
**230 VOLT RUN**



**LINE**  
**460 VOLT START**



**LINE**  
**460 VOLT RUN**

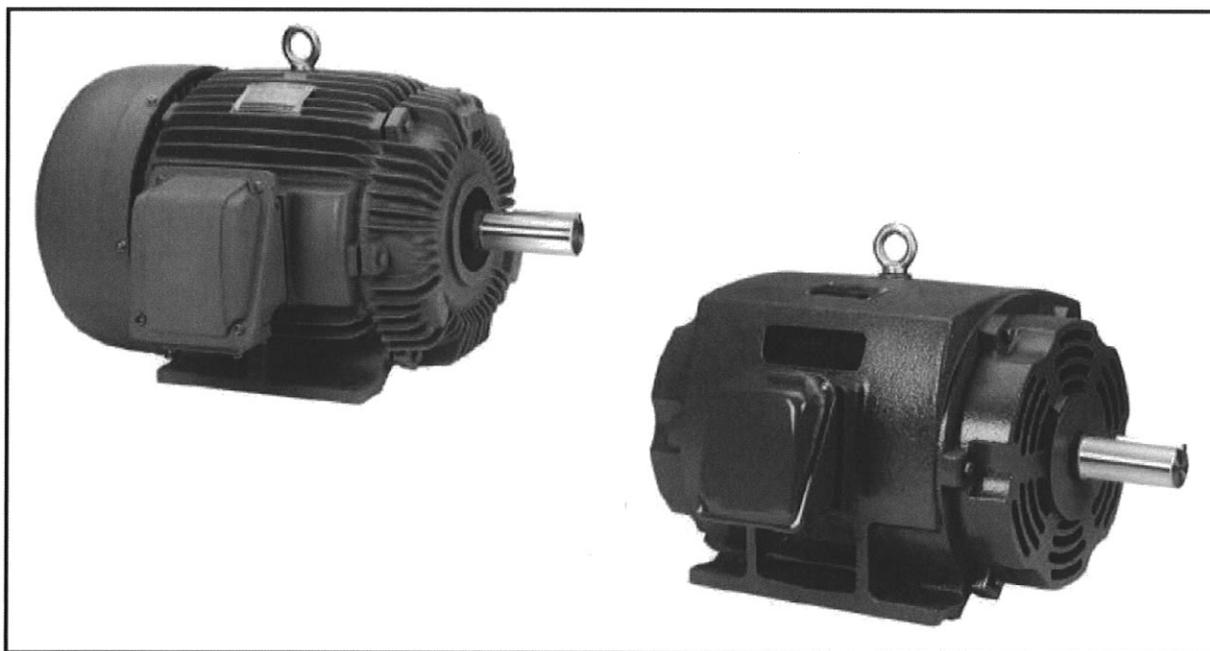
**TECO**  **Westinghouse**

DWG NO.  
**DAC-1565-4**



# **INSTALLATION AND MAINTENANCE INSTRUCTIONS FOR THREE PHASE INDUCTION MOTORS**

Frames 143T - 449TZ



5100 North IH 35 Round Rock, Texas 78681

## RECEIVING

1. Check nameplate data.
2. Check whether any damage has occurred during transportation.
3. After removal of shaft clamp, turn shaft by hand to check that it turns freely.
4. If motor is to be reshipped (alone or installed to another piece of equipment) the shaft must again be clamped to prevent axial movement.

Note: Remove the bearing clamp before turning the shaft on 284T-449TZ frame motors.

## WARNING

### THE FOLLOWING SAFETY PRECAUTIONS MUST BE OBSERVED:

1. Electric rotating machinery and high voltage can cause serious or fatal injury if improperly installed, operated or maintained. Responsible personnel should be familiarized with NEMA MG-1; Safety Standards for Construction and Guide Selection. Installation and Use of Electric Motors and Generators; National Electric Code and all local safety requirements.
2. When servicing, all power sources to the motor and to the accessory devices should be de-energized and disconnected and all rotating parts should be at standstill.
3. Lifting means, when supplied, are intended for lifting the motor only. When two lifting devices are supplied with the motor a dual chain must be used.
4. Suitable protection must be used when working near machinery with high noise levels.
5. Safeguard or protective devices must not be by-passed or rendered inoperative.
6. The frame of this machine must be grounded in accordance with the National Electric Code and applicable local codes.
7. A suitable enclosure should be provided to prevent access to the motor by other than authorized personnel. Extra caution should be observed around motors that are automatically or have automatic re-setting relays as they may restart unexpectedly.
8. Shaft key must be fully captive or removed before motor is started.
9. Provide proper safeguards for personnel against possible failure of motor-mounted brake, particularly on applications involving overhauling loads.
10. Explosion proof motors are constructed to comply with the label service procedure manual, repair of these motors must be made by TECO-Westinghouse Motor Company or U/L listed service center in order to maintain U/L listing.

## LOCATION

1. Drip-proof motors are intended for use where atmosphere is relatively clean, dry, well ventilated and non-corrosive.
2. Totally enclosed motors may be installed where dirt, moisture, or dust are present and in outdoor locations.
3. Explosion-proof motors are built for use in hazardous locations as indicated by Underwriters' label on the motor.
4. Chemical duty enclosed motors are designed for installation in high corrosion or excessive moisture locations.

**Note: in all cases, no surrounding structure should obstruct normal flow or ventilating air through or over the motor.**

## MOUNTING

1. Mount motor securely on a firm, flat base. All ball bearing normal thrust motors up to and including 256T frame size may be side-wall or ceiling mounted; all others check nearest TECO-Westinghouse office for mounting recommendations.
2. Align motor accurately, using a flexible coupling if possible. For drive recommendations, consult with drive or equipment manufacturer, or TECO-Westinghouse.
3. Mounting bolts must be carefully tightened to prevent changes in alignment and possible damage to the equipment. The recommended tightening torque's for medium carbon steel bolts, identified by three radial lines at 120 degrees on the head, are:

Bolt Size	Recommended Torque (Ft-lb.)	
	Minimum	Maximum
2/8	25	37
1/2	60	90
5/8	120	180
3/4	210	320

4. V-belts Sheave Pitch Diameters should not be less than those shown in Table 1 (NEMA recommended values)
5. Tighten belts only enough to prevent slippage. Belt speed should not exceed 5000 ft. per min.

**TABLE 1. V-Belt Sheave Pitch Diameters (MG1-14.42)**

Frame Number					V-Belt Sheave			
					Conventional A, B, C, D AND E		Narrow 3V, 5V, AND 8V	
	Horsepower at Synchronous Speed, RPM				Minimum Pitch Diameter Inches	*Maximum Width Inches	Minimum Outside Diameter Inches	**Maximum Width Inches
	3600	1800	1200	900				
143T	1.5	1	.75	.5	2.2	4.25	2.2	2.25
145T	2-3	1.5-2	1	.75	2.4	4.25	2.4	2.25
182T	3	3	1.5	1	2.4	5.25	2.4	2.75
182T	5	...	...	...	2.6	5.25	2.4	2.75
184T	...	...	2	1.5	2.4	5.25	2.4	2.75
184T	5	...	...	...	2.6	5.25	2.4	2.75
184T	7.5	5	...	...	3.0	5.25	3.0	2.75
213T	7.5-10	7.5	3	2	3.0	6.5	3.0	3.375
215T	10	...	5	3	3.0	6.5	3.0	3.375
215T	15	10	...	...	3.8	6.5	3.8	3.375
254T	15	...	7.5	5	3.8	7.75	3.8	4
254T	20	15	...	...	4.4	7.75	4.4	4
256T	20-25	...	10	7.5	4.4	7.75	4.4	4
256T	...	20	...	...	4.6	7.75	4.4	4
284T	...	...	15	10	4.6	9	4.4	4.625
284T	...	25	...	...	5.0	9	4.4	4.625
286T	...	30	20	15	5.4	9	5.2	4.625

**TABLE 1. V-Belt Sheave Pitch Diameters (MG1-14.42)**

Frame Number					V-Belt Sheave			
					Conventional A, B, C, D AND E		Narrow 3V, 5V, AND 8V	
	Horsepower at				Minimum Pitch Diameter Inches	*Maximum Width Inches	Minimum Outside Diameter Inches	**Maximum Width Inches
	Synchronous Speed, RPM							
3600	1800	1200	900					
324T	...	40	25	20	6.0	10.25	6.0	5.25
326T	...	50	30	25	6.8	10.25	6.8	5.25
364T	...	...	40	30	6.8	11.5	6.8	5
364T	...	60	...	...	7.4	11.5	7.4	5.785
365T	...	...	50	40	8.2	11.5	8.2	5.785
365T	...	75	...	...	9.0	11.5	8.6	5.785
404T	...	...	60	...	9.0	14.25	8.0	7.25
404T	...	...	...	50	9.0	14.25	8.4	7.25
404T	...	100	...	...	10.0	14.25	8.6	7.25
405T	...	...	75	60	10.0	14.25	10.0	7.25
405T	...	100	...	...	10.0	14.25	8.6	7.25
405T	...	125	...	...	11.5	14.25	10.5	7.25
444T	...	...	100	...	11.0	16.75	10.0	8.5
444T	...	...	...	75	10.5	16.75	9.5	8.5
444T	...	125	...	...	11.0	16.75	9.5	8.5
444T	...	150	...	...	...	16.75	10.5	8.5
445T	...	...	125	...	12.5	16.75	12.0	8.5
445T	...	...	...	100	12.5	16.75	12.0	8.5
445T	...	150	...	...	...	16.75	10.5	8.5

\*Max. Sheave width = 2(N-W) - .25

\*\*Max Sheave width = N-W

\*\*\*Sheave ratios greater than 5:1 and center-to-center distance less than the diameter of the large sheave should be referred to TECO-Westinghouse.

## POWER SUPPLY & CONNECTIONS

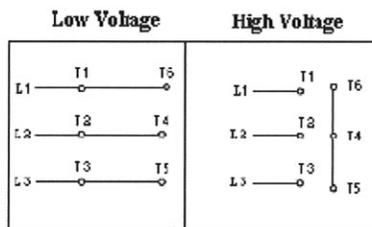
1. Wiring of motor and control, overload protection and grounding should be in accordance with National Electrical Code and all local safety requirements.
2. Nameplate voltage and frequency should agree with power supply. Motor will operate satisfactorily on line voltage within  $\pm 10\%$  of nameplate voltage; or frequency with  $\pm 5\%$  and with a combined variation not to exceed  $\pm 10\%$ . 230-volt motors can be used on 208-volt network systems, but with slightly modified performance characteristics as shown on the nameplate.
3. Dual voltage and single voltage motors can be connected for the desired voltage by following connection diagram shown on the nameplate or inside of the conduit box.
4. All Explosion Proof motors have Temperature Limiting Devices in the motor enclosure to prevent excessive external surface temperature of the motor in accordance with U/L standards. Terminals of thermal protectors (P1 & P2) should be connected to the motor control equipment, according to the connection diagram inside of the conduit box.
5. Standard connection diagram for three phase, not thermally protected, dual rotation motors are shown in diagrams A through E. **(Note: To change rotation, Interchange any two line leads)**

A. 3 Lead, Single Voltage

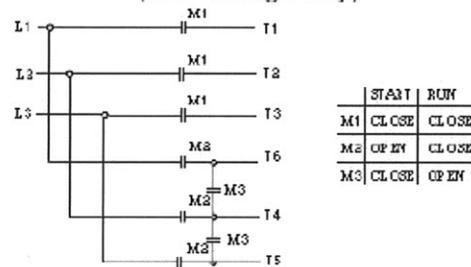


B. 6 Lead, Dual Voltage & Voltage Ratio 1 to 3

B-1 Across the Line Start & Run

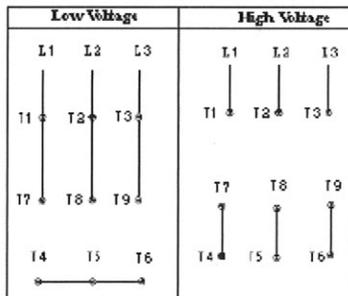


B-2 Wye Start & Delta Run  
(Low Voltage only)

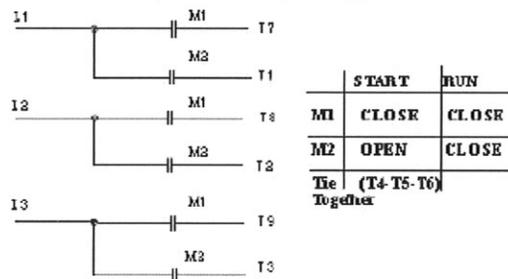


C. 9 Leads; Dual Voltage & Voltage Ratio 1 to 2, Wye Connected

C-1 Across the Line Start & Run

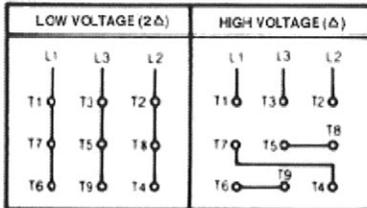


C-2 Part Winding Start  
(Low Voltage only)

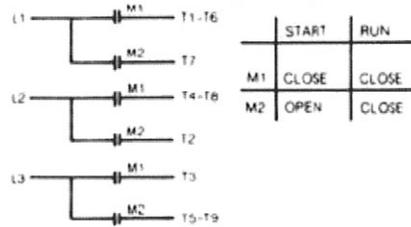


**D. 9 Leads; Dual Voltage & Voltage Ratio 1 to 2, Delta Connected**

D-1 Across the Line Start & Run

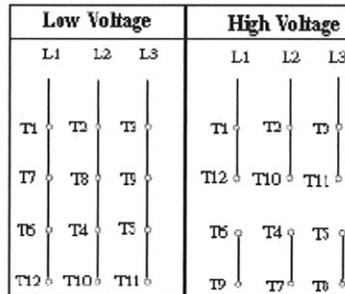


D-2 Part Winding Start (Low Voltage only)

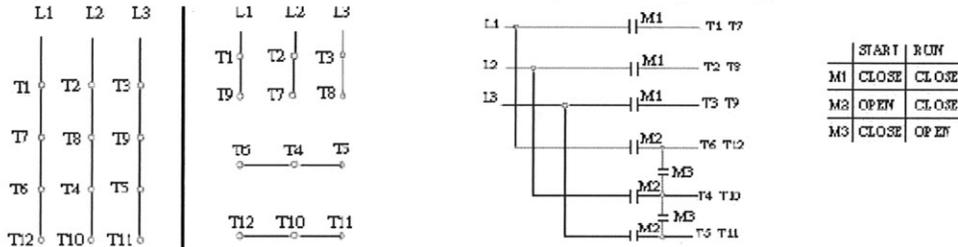


**E. 12 Leads, Dual Voltage**

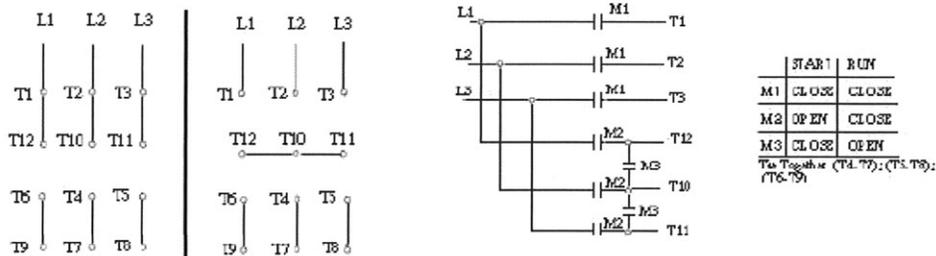
E-1 Across the Line Start & Run



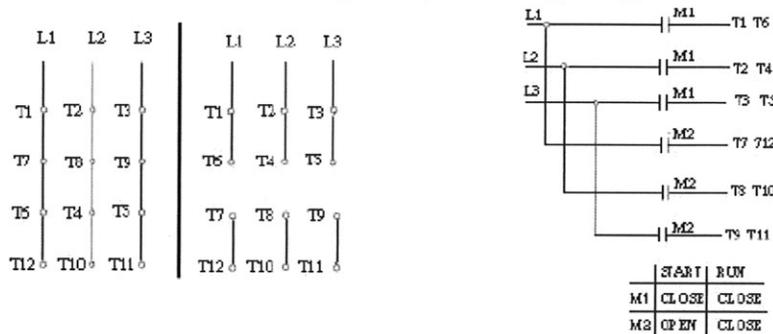
E-2-1 Wye Start & Delta Run (Low Voltage only)



E-2-2 Wye Start & Delta Run (High Voltage only)



### E-3 Part Winding Start (Low Voltage only)



\*Important: For Part Winding Start, M2 contactor should be closed within two (2) seconds after M1 contactor is closed.  
Only 4 pole and above (e.g., 6P, 8P...) motors are satisfactory for Part Winding Start at low voltage.

### START UP

1. Disconnect load and start motor. Check direction of rotation. If rotation must be changed, ALLOW THE MOTOR TO STOP COMPLETELY. Interchange any two leads of a three-phase motor.
2. Connect load. The motor should start quickly and run smoothly. If no, shut power off at once. Recheck the assembly including all connections before restarting.
3. If excessive vibration is noted, check for loose mounting bolts too flexible motor support structure or transmitted vibration from adjacent machinery. Periodic vibration checks should be made; foundations often settle.
4. Operate under load for short period of time and check operating current against nameplate.

### TESTING

If the motor has been in storage for an extensive period or has been subjected to adverse moisture conditions, it is best to check the insulation resistance of the stator winding with a megohmmeter. Depending on the length and conditions of storage it may be necessary to regrease or change rusted bearings.

If the resistance is lower than one megohm the windings should be dried in one of the following two ways:

1. Bake in oven at temperatures not exceeding 194°F until insulation resistance becomes constant.
2. With rotor locked, apply low voltage and gradually increase the current through windings until temperature measured with a thermometer reaches 194°F. Do not exceed this temperature.

## MAINTENANCE

### INSPECTION

Inspect motor at regular intervals. Keep motor clean and ventilation openings clear.

### LUBRICATION

1. Frame 143T-256T: Double shielded and pre-lubricated ball-bearing motors without grease fittings and don't need re-lubrication, except on MAX-E1<sup>®</sup> and MAX-E2<sup>®</sup> products which have re-greasable features.
2. Frames 280TS, 320-449TZ(TS): Motors having grease fittings and grease discharge devices at brackets. Motors are shipped with grease for initial running. It is necessary to re-lubricate anti-friction bearing motors periodically, depending on size and type of service. See Table 2 to provide maximum bearing life. Excessive or too frequent lubrication may damage the motor.

**TABLE 2**

Horsepower	Standard Conditions	Severe Conditions	Extreme Conditions
1 Thru 30 Hp, 1800 rpm and below	7 years	3 years	180 days
40 Thru 75 Hp, 1800 rpm and below	210 days	70 days	30 days
100 Thru 150 Hp, 1800 rpm and below	90 days	30 days	15 days
1 Thru 20 Hp, 3600 rpm	5 years	2 years	90 days
25 Thru 75 Hp, 3600 rpm	180 days	60 days	30 days
100 Thru 150 Hp, 3600 rpm	90 days	30 days	15 days

Note:

- A. Standard conditions: 8 hours operation per day, normal or light loading, clear and 40°C ambient conditions.
  - B. Severe conditions: 24-hour operation per day or light shock loading, vibration or in dirty or dusty conditions.
  - C. Extreme conditions: With heavy shock loading or vibration or dusty conditions.
  - D. For double shielded bearings, above data (lubrication frequency) means that the bearing must be replaced.
3. Be sure fittings are clean and free from dirt. Using a low-pressure grease gun, pump in the recommended grease until new grease appears at grease discharge hole.
  4. Use the POLYUREA grease unless special grease is specified on the nameplate.
  5. If re-lubrication is to be performed with the motor running, stay clear of rotating parts. After re-greasing, allow the motor to run for ten to thirty minutes.

## **RENEWAL PARTS**

1. Use only genuine TECO-Westinghouse renewal parts or as recommended by TECO-Westinghouse Motor Company.
2. When you order renewal parts please specify complete information to TECO-Westinghouse office/agent such as type, frame no., poles, horsepower, voltage, series no., quantity, etc.

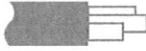
**FOR FURTHER INFORMATION PLEASE CONTACT  
TECO-WESTINGHOUSE MOTOR COMPANY**

**Round Rock, TX**

**800-873-8326**

## Cable types:

Listed for use with:



- Flexible cords, including Type S, SO, STO, ST, SJ, SJT, SJTO and SVO
- Tray cable types TC, TC-ER, TC-ER-HL<sup>A</sup>, ITC, ITC-ER, ITC-HL, PLTC and PLTC-ER cables

## Features:

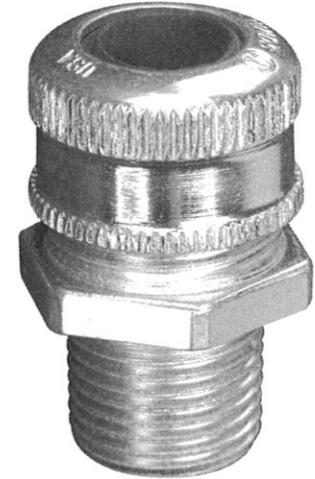
- Rugged, durable construction protects cords and cables from damage and compact design permits close grouping of several cords and/or cables
- Flexible offering available in steel, iron and aluminum in  $\frac{1}{8}$ " to 3" trade sizes
- Wire mesh grips available for added strain relief
- Available with NPT threads
- Standard neoprene bushing weatherproof seal on outer sheath of cable

## Certifications and compliances:

- cULus Listed – UL File No. E23223
- Suitable for use in Class I, Division 2 hazardous locations when installed in accordance with NEC501.10(B)(4)
- NEMA 3R (suitable for use in wet locations)
- NEMA 4 ( $\frac{1}{8}$ " to 3" steel only)
- NEMA 4X ( $\frac{1}{8}$ " to 1 $\frac{1}{2}$ " aluminum only)

## Standard materials and finishes:

- Form A-D bodies and gland nuts – steel with zinc electroplate and chromate finish coat
- Form E-F bodies and gland nuts – Feraloy iron alloy with electrogalvanized and aluminum acrylic paint
- Available in all aluminum construction
- Bushing – standard neoprene bushing included; silicone (optional)



## Operating temperature:

- -25°C to +40°C

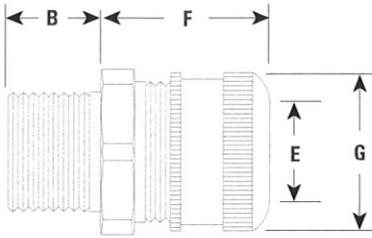
<sup>A</sup>Type TC-ER-HL cable is rated for 600V nominal. Overall cable diameters are 25mm (1") or less.

# CGB non-armored cable glands

NEMA 3R, 4, 4X

1G

1G



## Options:

### Description

- Sealing gasket and locknut ..... SG

### Suffix



## Ordering information:

NPT thread size	Form	Cat. # Steel	Cat. # Aluminum	Cable sealing range (E)		Body / pass through ID (nom.)		Dimensions		Across hex flats (G)	Across hex corners (G)	Replacement		Optional
				Min.	Max.	Ferrous	Alum.	B	F			Cat. # Neoprene bushing 80°C <sup>Ⓟ</sup>	Cat. # Silicone bushing 200°C <sup>Ⓟ</sup>	Cat. # Wire mesh grip
3/8"	A	CGB3814 <sup>Ⓞ</sup>		0.125	0.250	0.470	N/A	0.540	1.063	0.750	0.875	BUSH214		
3/8"	A	CGB3816 <sup>Ⓞ</sup>		0.250	0.375	0.470	N/A	0.540	1.063	0.750	0.875	BUSH216		
3/8"	A	CGB3817 <sup>Ⓞ</sup>		0.375	0.437	0.470	N/A	0.540	1.063	0.750	0.875	BUSH217		
3/8"	B	CGB3892 <sup>Ⓞ</sup>		0.125	0.250	0.500	N/A	0.540	1.313	1.000	1.125	BUSH92	BUSH92 HT	
3/8"	B	CGB3893 <sup>Ⓞ</sup>		0.250	0.375	0.500	N/A	0.540	1.313	1.000	1.125	BUSH93	BUSH93 HT	
3/8"	B	CGB3894 <sup>Ⓞ</sup>		0.375	0.500	0.500	N/A	0.540	1.313	1.000	1.125	BUSH94	BUSH94 HT	
1/2"	A	CGB114 <sup>Ⓞ</sup>	CGB114 SA <sup>Ⓞ</sup>	0.125	0.250	0.470	0.470	0.625	1.000	0.875	0.970	BUSH214		
1/2"	A	CGB116 <sup>Ⓞ</sup>	CGB116 SA <sup>Ⓞ</sup>	0.250	0.375	0.470	0.470	0.625	1.000	0.875	0.970	BUSH216		
1/2"	A	CGB117		0.375	0.437	0.470	0.470	0.625	1.000	0.875	0.970	BUSH217		
1/2"	B	CGB192 <sup>Ⓞ</sup>	CGB192 SA <sup>Ⓞ</sup>	0.125	0.250	0.625	0.630	0.710	1.313	1.130	1.230	BUSH92	BUSH92 HT	
1/2"	B	CGB193 <sup>Ⓞ</sup>	CGB193 SA <sup>Ⓞ</sup>	0.250	0.375	0.625	0.630	0.710	1.313	1.130	1.230	BUSH93	BUSH93 HT	
1/2"	B	CGB194	CGB194 SA	0.375	0.500	0.625	0.630	0.710	1.313	1.130	1.230	BUSH94	BUSH94 HT	RPE417-115
1/2"	B	CGB195	CGB195 SA	0.500	0.625	0.625	0.630	0.710	1.313	1.130	1.230	BUSH05	BUSH05 HT	RPE417-116
1/2"	C	CGB196	CGB196 SA	0.625	0.750	0.625	0.625	0.625	1.750	1.500	1.656	BUSH96		RPE417-117
1/2"	C	CGB197	CGB197 SA	0.750	0.875	0.625	0.625	0.625	1.750	1.500	1.656	BUSH97		RPE421-119
3/4"	B	CGB292 <sup>Ⓞ</sup>	CGB292 SA <sup>Ⓞ</sup>	0.125	0.250	0.690	0.690	0.625	1.375	1.060	1.230	BUSH92	BUSH92 HT	
3/4"	B	CGB293 <sup>Ⓞ</sup>	CGB293 SA <sup>Ⓞ</sup>	0.250	0.375	0.690	0.690	0.625	1.375	1.060	1.230	BUSH93	BUSH93 HT	
3/4"	B	CGB294	CGB294 SA	0.375	0.500	0.690	0.690	0.625	1.375	1.060	1.230	BUSH94	BUSH94 HT	RPE417-115
3/4"	B	CGB295	CGB295 SA	0.500	0.625	0.690	0.690	0.625	1.375	1.060	1.230	BUSH05	BUSH05 HT	RPE417-116
3/4"	C	CGB296	CGB296 SA	0.625	0.750	0.750	0.750	0.625	1.750	1.630	1.780	BUSH96		RPE417-117
3/4"	C	CGB297	CGB297 SA	0.750	0.875	0.750	0.750	0.625	1.750	1.630	1.780	BUSH97		RPE421-119
3/4"	D	CGB298	CGB298 SA	0.875	1.000	0.810	0.810	0.625	2.500	2.130	2.250	BUSH98		RPE421-120
1"	B	CGB393 <sup>Ⓞ</sup>	CGB393 SA <sup>Ⓞ</sup>	0.250	0.375	0.810	0.810	0.625	1.375	1.375	1.550	BUSH93	BUSH93 HT	
1"	B	CGB394	CGB394 SA	0.375	0.500	0.810	0.810	0.625	1.375	1.375	1.550	BUSH94	BUSH94 HT	RPE417-115
1"	C	CGB395	CGB395 SA	0.500	0.625	1.070	1.070	0.688	1.688	1.500	1.656	BUSH95	BUSH95 HT	RPE417-116
1"	C	CGB396	CGB396 SA	0.625	0.750	1.070	1.070	0.688	1.688	1.500	1.656	BUSH96		RPE417-117
1"	C	CGB397	CGB397 SA	0.750	0.875	1.070	1.070	0.688	1.688	1.500	1.656	BUSH97		RPE421-119
1"	C	CGB3239	CGB3239 SA	0.875	1.000	1.070	1.070	0.688	1.688	1.500	1.656	BUSH239		RPE421-120
1"	D	CGB398	CGB398 SA	0.875	1.000	1.030	1.030	0.830	2.375	2.130	2.250	BUSH98		RPE421-120
1"	D	CGB399	CGB399 SA	1.000	1.188	1.030	1.030	0.830	2.375	2.130	2.250	BUSH99		RPE421-121
1"	D	CGB3911	CGB3911 SA	1.188	1.375	1.030	1.030	0.830	2.375	2.130	2.250	BUSH911		RPE433-122
1 1/2"	D	CGB498	CGB498 SA	0.875	1.000	1.250	1.250	0.830	2.313	2.130	2.250	BUSH98		RPE421-120
1 1/2"	D	CGB499	CGB499 SA	1.000	1.188	1.250	1.250	0.830	2.313	2.130	2.250	BUSH99		RPE421-121
1 1/2"	D	CGB4911	CGB4911 SA	1.188	1.375	1.250	1.250	0.830	2.313	2.130	2.250	BUSH911		RPE433-122
1 1/2"	E	CGB4913		1.375	1.625	1.250	N/A	0.688	2.625	3.000 <sup>Ⓟ</sup>	—	BUSH913		RPE433-123
1 1/2"	E	CGB4915		1.625	1.875	1.250	N/A	0.688	2.625	3.000 <sup>Ⓟ</sup>	—	BUSH915		17317N
1 1/2"	D	CGB598	CGB598 SA	0.875	1.000	1.440	1.440	0.956	2.313	2.130	2.250	BUSH98		RPE421-120
1 1/2"	D	CGB599	CGB599 SA	1.000	1.188	1.440	1.440	0.956	2.313	2.130	2.250	BUSH99		RPE421-121
1 1/2"	D	CGB5911	CGB5911 SA	1.188	1.375	1.440	1.440	0.956	2.313	2.130	2.250	BUSH911		RPE433-122
1 1/2"	E	CGB5913		1.375	1.625	1.440	N/A	0.813	2.625	3.000 <sup>Ⓟ</sup>	—	BUSH913		RPE433-123
1 1/2"	E	CGB5915		1.625	1.875	1.440	N/A	0.813	2.625	3.000 <sup>Ⓟ</sup>	—	BUSH915		17317N
2"	E	CGB6913	CGB6913 SA	1.375	1.625	1.875	1.875	0.813	2.625	3.000 <sup>Ⓟ</sup>	—	BUSH913		RPE433-123
2"	E	CGB6915	CGB6915 SA	1.625	1.875	1.875	1.875	0.813	2.625	3.000 <sup>Ⓟ</sup>	—	BUSH915		17317N
2"	F	CGB6917		1.875	2.188	1.880	N/A	0.813	2.563	3.813 <sup>Ⓟ</sup>	—	BUSH917		17345N
2"	F	CGB6920		2.188	2.500	1.880	N/A	0.813	2.563	3.813 <sup>Ⓟ</sup>	—	BUSH920		16772N
2 1/2"	E	CGB7913	CGB7913 SA	1.375	1.625	2.060	2.060	1.000	2.625	3.125 <sup>Ⓟ</sup>	—	BUSH913		RPE433-123
2 1/2"	E	CGB7915	CGB7915 SA	1.625	1.875	2.060	2.060	1.000	2.625	3.125 <sup>Ⓟ</sup>	—	BUSH915		17317N
2 1/2"	F	CGB7917	CGB7917 SA	1.875	2.188	2.380	2.380	1.438	2.625	3.875 <sup>Ⓟ</sup>	—	BUSH917		17345N
2 1/2"	F	CGB7920		2.188	2.500	2.380	2.380	1.438	2.625	3.875 <sup>Ⓟ</sup>	—	BUSH920		16772N
3"	F	CGB8917 <sup>Ⓞ</sup>	CGB8917 SA	1.875	2.188	2.560	2.560	1.438	2.625	3.875 <sup>Ⓟ</sup>	—	BUSH917		17345N
3"	F	CGB8920	CGB8920 SA	2.188	2.500	2.560	2.560	1.438	2.625	3.875 <sup>Ⓟ</sup>	—	BUSH920		16772N

All dimensions in inches.

Ⓟ Maximum operating temperature of bushing only; glands UL Listed to -25°C to +40°C.

Ⓞ Not NEMA 4 or 4X rated.

Ⓞ Not available with optional sealing gasket and locknut.

# CGD non-armored cable glands

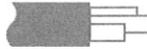
NEMA 4

1G

## Cable types:

Listed for use with:

- Flexible cords, including Type S, SO, STO, ST, SJ, SJT, SJTO and SVO
- Tray cable types TC, TC-ER, TC-ER-HL<sup>A</sup>, ITC, ITC-ER, ITC-HL, PLTC and PLTC-ER cables



## Features:

- Rugged, durable construction protects cords and cables from damage and compact design permits close grouping of several cords and/or cables
- Wire mesh grips available for added strain relief
- Available with NPT threads
- Standard neoprene bushing weatherproof seal on outer sheath of cable

## Certifications and compliances:

- cULus Listed – UL File No. E23223
- Suitable for use in wet locations
- NEMA 4

## Standard materials:

- Body – Feraloy iron alloy
- Gland nut – steel

## Operating temperature:

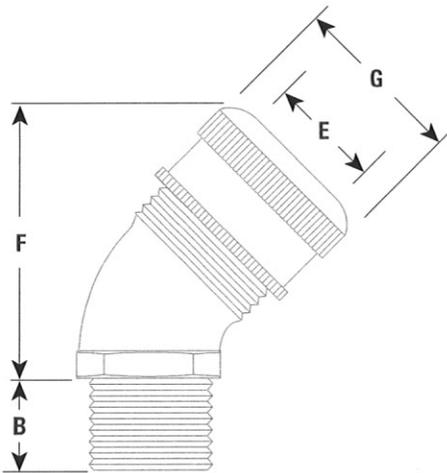
- 25°C to +40°C

## Options:

- |                                 |               |
|---------------------------------|---------------|
| <b>Description</b>              | <b>Suffix</b> |
| Sealing gasket and locknut..... | <b>SG</b>     |



1G



NPT thread size	Cat. #	Cable sealing range (E)		Dimensions			Replacement		Optional
		Min.	Max.	B	F	G	Cat. # Neoprene bushing 80°C <sup>B</sup>	Cat. # Silicone bushing 200°C <sup>B</sup>	Cat. # Wire mesh grip
1/2"	CGD192 <sup>C</sup>	0.125	0.250	0.630	1.830	1.140	BUSH92	BUSH92 HT	
1/2"	CGD193 <sup>C</sup>	0.250	0.375	0.630	1.830	1.140	BUSH93	BUSH93 HT	
1/2"	CGD194	0.375	0.500	0.630	1.830	1.140	BUSH94	BUSH94 HT	RPE417-115
1/2"	CGD195	0.500	0.625	0.630	1.830	1.140	BUSH95	BUSH05 HT	RPE417-116
1/2"	CGD196	0.625	0.750	0.630	2.570	1.630	BUSH96		RPE417-117
1/2"	CGD197	0.750	0.875	0.630	2.570	1.630	BUSH97		RPE421-119
3/4"	CGD292 <sup>C</sup>	0.125	0.250	0.630	1.940	1.140	BUSH92	BUSH92 HT	
3/4"	CGD293 <sup>C</sup>	0.250	0.375	0.630	1.940	1.140	BUSH93	BUSH93 HT	
3/4"	CGD294	0.375	0.500	0.630	1.940	1.140	BUSH94	BUSH94 HT	RPE417-115
3/4"	CGD295	0.500	0.625	0.630	1.940	1.140	BUSH95	BUSH05 HT	RPE417-116
3/4"	CGD296	0.625	0.750	0.630	2.570	1.630	BUSH96		RPE417-117
3/4"	CGD297	0.750	0.875	0.630	2.570	1.630	BUSH97		RPE421-119

All dimensions in inches.

<sup>A</sup> Type TC-ER-HL cable is rated for 600V nominal. Overall cable diameters are 25mm (1") or less.

<sup>B</sup> Maximum operating temperature of bushing only; glands UL Listed to -25°C to +40°C.

<sup>C</sup> Not NEMA 4 rated.

# CGE non-armored cable glands

NEMA 4

1G

1G

## Cable types:

Listed for use with:

- Flexible cords, including Type S, SO, STO, ST, SJ, SJT, SJTO and SVO
- Tray cable types TC, TC-ER, TC-ER-HL<sup>A</sup>, ITC, ITC-ER, ITC-HL, PLTC and PLTC-ER cables



## Features:

- Rugged, durable construction protects cords and cables from damage and compact design permits close grouping of several cords and/or cables
- Wire mesh grips available for added strain relief
- Available with NPT threads
- Standard neoprene bushing weatherproof seal on outer sheath of cable

## Certifications and compliances:

- cULus Listed – UL File No. E23223
- Suitable for use in wet locations
- NEMA 4

## Standard materials:

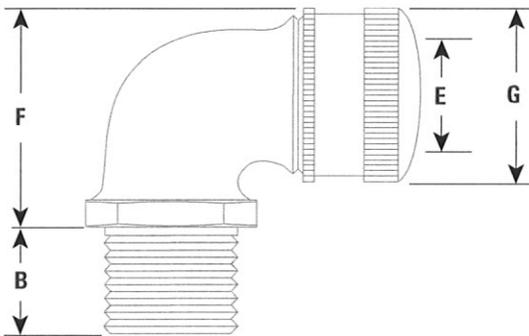
- Body – Feraloy iron alloy
- Gland nut – steel

## Operating temperature:

- -25°C to +40°C

## Options:

- | Description                       | Suffix    |
|-----------------------------------|-----------|
| • Sealing gasket and locknut..... | <b>SG</b> |



NPT thread size	Cat. #	Cable sealing range (E)		Dimensions			Replacement	Optional	
		Min.	Max.	B	F	G	Cat. # Neoprene bushing 80°C <sup>B</sup>	Cat. # Silicone bushing 200°C <sup>B</sup>	Cat. # Wire mesh grip
1/8"	CGE192 <sup>C</sup>	0.125	0.250	0.710	2.160	1.140	BUSH92	BUSH92 HT	
1/8"	CGE193 <sup>C</sup>	0.250	0.375	0.710	2.160	1.140	BUSH93	BUSH93 HT	
1/4"	CGE194	0.375	0.500	0.710	2.160	1.140	BUSH94	BUSH94 HT	RPE417-115
1/4"	CGE195	0.500	0.625	0.710	2.160	1.140	BUSH05	BUSH05 HT	RPE417-116
1/4"	CGE196	0.625	0.750	0.710	2.090	1.630	BUSH96		RPE417-117
1/2"	CGE197	0.750	0.875	0.710	2.090	1.630	BUSH97		RPE421-119
3/4"	CGE292 <sup>C</sup>	0.125	0.250	0.720	1.600	1.140	BUSH92	BUSH92 HT	
3/4"	CGE293 <sup>C</sup>	0.250	0.375	0.720	1.600	1.140	BUSH93	BUSH93 HT	
3/4"	CGE294	0.375	0.500	0.720	1.600	1.140	BUSH94	BUSH94 HT	RPE417-115
3/4"	CGE295	0.500	0.625	0.720	1.600	1.140	BUSH95	BUSH05 HT	RPE417-116
3/4"	CGE296	0.625	0.750	0.710	1.930	1.630	BUSH96		RPE417-117
3/4"	CGE297	0.750	0.875	0.710	1.930	1.630	BUSH97		RPE421-119
1"	CGE395	0.500	0.625	0.620	2.170	1.630	BUSH95	BUSH95 HT	RPE417-116
1"	CGE396	0.625	0.750	0.620	2.170	1.630	BUSH96		RPE417-117
1"	CGE397	0.750	0.875	0.620	2.170	1.630	BUSH97		RPE421-119
1"	CGE3239	0.875	1.000	0.620	2.170	1.630	BUSH239		RPE421-120
1"	CGE398	0.875	1.000	0.630	2.710	2.370	BUSH98		16676N
1"	CGE399	1.000	1.188	0.630	2.710	2.370	BUSH99		RPE421-121
1"	CGE3911	1.188	1.375	0.630	2.710	2.370	BUSH911		RPE433-122

All dimensions in inches.

<sup>A</sup>Type TC-ER-HL cable is rated for 600V nominal. Overall cable diameters are 25mm (1") or less.

<sup>B</sup>Maximum operating temperature of bushing only; glands UL Listed to -25°C to +40°C.

<sup>C</sup>Not NEMA 4 rated.

# CGFP non-armored cable glands

1G

## Gland type:

- Non-armored

## Cable type:

- Non-armored and tray cable

## Features:

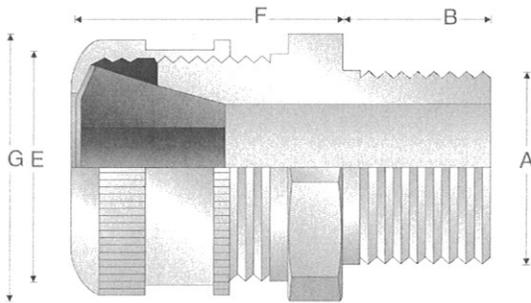
- Weatherproof seal on outer sheath of cable
- Standard neoprene seal suitable for use in operating temperatures -25°C to 40°C
- Available with NPT threads

## Certifications and compliances:

- Suitable for use in Class I, Division 2 hazardous locations when installed in accordance with NEC501.10(B)(2)

## Standard material:

- Form B-C bodies and gland nuts – turned steel
- Form D-G bodies and gland nuts – Feralloy iron alloy



## Ordering information:

Entry thread size (A)			Cable acceptance outer sheath (E)				Replacement	
NPT thread size	Cat. #	Form	NPT thread length (B)	Min.	Max.	Gland length less entry (F)	External diameter (G)	Cat. # Neoprene bushing 80°C
1/2"	CGFP192	B	0.750	0.125	0.250	1.375	1.281	BUSH92
1/2"	CGFP193	B	0.750	0.250	0.375	1.375	1.281	BUSH93
1/2"	CGFP194	B	0.750	0.375	0.500	1.375	1.281	BUSH94
1/2"	CGFP195	B	0.750	0.500	0.625	1.375	1.281	BUSH05
3/4"	CGFP296	C	0.750	0.625	0.750	1.750	1.781	BUSH96
3/4"	CGFP297	C	0.750	0.750	0.875	1.750	1.781	BUSH97
3/4"	CGFP2239	C	0.750	0.875	1.000	1.750	1.781	BUSH239
1"	CGFP396	C	0.938	0.625	0.750	1.750	1.781	BUSH96
1"	CGFP397	C	0.938	0.750	0.875	1.750	1.781	BUSH97
1"	CGFP3239	C	0.938	0.875	1.000	1.750	1.781	BUSH239
1 1/4"	CGFP499	D	0.938	1.000	1.188	2.375	2.250	BUSH99
1 1/4"	CGFP4911	D	0.938	1.188	1.375	2.375	2.250	BUSH911
1 1/2"	CGFP599	D	0.938	1.000	1.188	2.375	2.250	BUSH99
1 1/2"	CGFP5911	D	0.938	1.188	1.375	2.375	2.250	BUSH911
2"	CGFP6913	E	1.000	1.375	1.625	3.250	3.250	BUSH913
2"	CGFP6915	E	1.000	1.625	1.875	3.250	3.250	BUSH915
2 1/2"	CGFP7917	F	1.438	1.875	2.188	3.250	3.875	BUSH917
2 1/2"	CGFP7920	F	1.438	2.188	2.500	3.250	3.875	BUSH920
3"	CGFP8917	F	1.500	1.875	2.188	3.250	3.875	BUSH917
3"	CGFP8920	F	1.500	2.188	2.500	3.250	3.875	BUSH920
3 1/2"	CGFP923	G	1.563	2.500	3.000	4.250	5.500	BUSH923
3 1/2"	CGFP927	G	1.563	3.000	3.500	4.250	5.500	BUSH927
4"	CGFP1023	G	1.625	2.500	3.000	4.250	5.500	BUSH923
4"	CGFP1027	G	1.625	3.000	3.500	4.250	5.500	BUSH927

All dimensions in inches.