

# Instruction and Lubrication Manual for DODGE® GRID-LIGN FLEXIBLE COUPLINGS Includes ATEX Approved Couplings

Sizes: 1020-1200T10 (Close Coupled, Horizontally Split Cover),  
T20 (Close coupled, Vertically Split Covers), T31 (Full Spacer Type), T35 (Half Spacer Type)

These instructions must be read thoroughly before installation or operation. This instruction manual was accurate at the time of printing. Please see [www.baldor.com](http://www.baldor.com) for updated instruction manuals.

**WARNING:** To ensure drive is not unexpectedly started, turn off and lock-out or tag power source before proceeding. Failure to observe these precautions could result in bodily injury.

**WARNING:** All products over 25 kg (55 lbs) are noted on shipping package. Proper lifting practices are required for those products

## INSTALLATION:

### STEP 1: PRE-ASSEMBLY INSPECTION

All parts should be examined for any damage during the shipping and handling process. Measurements should be taken to ensure parts meet application requirements, such as hub and shaft fits, shaft separation, etc. All parts must be clean and free of any foreign material before attempting assembly.

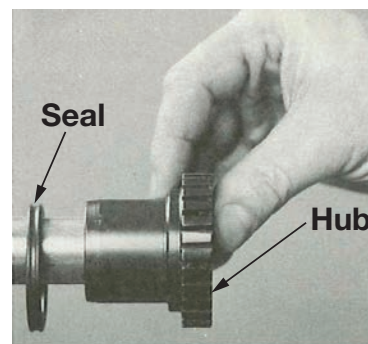
### STEP 2: INSTALLATION OF KEYS

Install keys in respective shafts. Keys should fit keyseat with a tight fit on the sides and slight clearance over the key. Use plastic oil sealing compound around keys to prevent loss of lubricant.

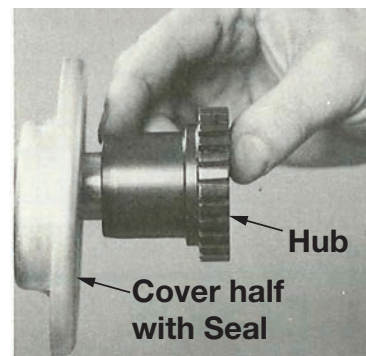
**WARNING:** Because of the possible danger to person(s) or property from accidents which may result from the improper use of products, it is important that correct procedures be followed: Products must be used in accordance with the engineering information specified in the catalog. Proper installation, maintenance and operation procedures must be observed. The instructions in the instruction manuals must be followed. Inspections should be made as necessary to assure safe operation under prevailing conditions. Proper guards and other suitable safety devices or procedures as may be desirable or as may be specified in safety codes should be provided, and are neither provided by Baldor Electric Company nor are the responsibility of Baldor Electric Company. This unit and its associated equipment must be installed, adjusted and maintained by qualified personnel who are familiar with the construction and operation of all equipment in the system and the potential hazards involved. When risk to persons or property may be involved, a fail safe device must be an integral part of the driven equipment beyond the speed reducer output shaft.

### STEP 3: MOUNTING HUBS

Fit hubs with ends of shaft per the following recommendations:



T10 Hub Mounting



T20 Hub Mounting

Figure 1 - Hub Mounting

**NOTE:** When mounting T10 couplings, seals must be installed prior to mounting shaft hubs. Lightly grease each of the two seals from the grid and cover assembly. Place each seal far back on its respective shaft.

**NOTE:** When mounting T20 coupling, cover halves including seals, must be mounted prior to mounting shaft hubs. Remove lube plugs from each cover half and insert the two seal rings into each cover. Lightly coat seals with grease. Place cover halves as far back as respective shafts will allow with flanges facing each other.

**A. Interference Fit** Use a scribe to mark the desired hub location on shafts. Using an oven or oil bath, heat hubs evenly to 350°F (204°C). To avoid distortion, do not exceed 450°F (232°C). Slide heated hubs onto shafts and align with the scribed marks. Allow the hubs to cool to room temperature before installing grid segment(s).

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**Table 1 - Set Screw Installation for Clearance Fit Grid-Lign Hubs**

| Coupling Size | Bore Range     | Set Screw Size | Allen Wrench Size | Torque (ft-lbs) | Torque (N-m) |
|---------------|----------------|----------------|-------------------|-----------------|--------------|
| 1020T         | 1/2 - 7/8      | 1/4-20         | 1/8               | 7               | 9            |
|               | 15/16 - 1-1/8  | 8-32           | 5/64              | 2               | 3            |
| 1030T         | 5/8 - 1-3/8    | 1/4-20         | 1/8               | 7               | 9            |
| 1040T         | 7/8 - 1-5/8    | 1/4-20         | 1/8               | 7               | 9            |
| 1050T         | 7/8 - 1-7/8    | 1/4-20         | 1/8               | 7               | 9            |
| 1060T         | 15/16 - 1-3/8  | 1/4-20         | 1/8               | 7               | 9            |
|               | 1-7/16 - 2-1/8 | 3/8-16         | 3/16              | 24              | 32           |
| 1070T         | 1-1/4 - 1-3/8  | 1/4-20         | 1/8               | 7               | 9            |
|               | 1-7/16 - 2-5/8 | 3/8-16         | 3/16              | 24              | 32           |
| 1080T         | 1-1/2 - 3      | 3/8-16         | 3/16              | 24              | 32           |
| 1090T         | 1-1/2 - 3-3/4  | 3/8-16         | 3/16              | 24              | 32           |

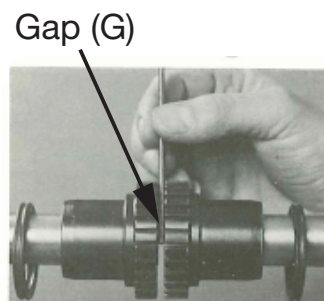
**B. Clearance Fit** Slip hub onto shaft and tighten set screws to value listed in Table 1. Setscrews should be checked periodically for tightness.

**C. Taper Bored** hubs do not require preheating for assembly. Mount hub and align on shaft before drawing up on shaft the required distance. In most applications, the hub face will project beyond the small end of the shaft taper. Lock hub in place with proper locking device provided with shaft.

**D. TAPER-LOCK®** hubs are available for T10, T20, T31 and T35 style couplings for light and medium applications. Install per instructions for the TAPER-LOCK bushings (MN4044).

**STEP 4: SET SHAFT SPACING**

**Shaft Separation** for T10 and T20 couplings should be set per appropriate “G” dimensions in Table 2. For T31 and 35 couplings, refer to the BSE (between shaft ends) dimension in Table 2. For the T31 and T35, use the G dimension for checking the coupling gap after the BSE is set.



**Figure 2 - Shaft Separation**

**Table 2 - Recommended Operating Misalignment**

| Size  | Misalignment Limits ① |      |         |      | Coupling Gap - "G" |      |          |      | BSE (Shaft Spacing) for T31 |       |       |       | BSE (Shaft Space) for T35 |       |       |       | Spacer Flange Bolt Tightening Torque |      | Cover bolt Tightening Torque for Type T20, T10, T31, T35 |      | Lubrication Weight |      |
|-------|-----------------------|------|---------|------|--------------------|------|----------|------|-----------------------------|-------|-------|-------|---------------------------|-------|-------|-------|--------------------------------------|------|----------------------------------------------------------|------|--------------------|------|
|       | Parallel              |      | Angular |      | Type T20, T10 T35  |      | Type T31 |      | Min.                        |       | Max.  |       | Min.                      |       | Max.  |       | (lb.-in.)                            | (Nm) | (lb.-in.)                                                | (Nm) | Lbs.               | Kg   |
|       | in.                   | mm   | in.     | mm   | in.                | mm   | in.      | mm   | in.                         | mm    | in.   | mm    | in.                       | mm    | in.   | mm    |                                      |      |                                                          |      |                    |      |
| 1020T | 0.005                 | 0.13 | 0.005   | 0.13 | 0.125              | 3.18 | 0.188    | 4.78 | 3.50                        | 88.9  | 8.00  | 203.2 | 1.78                      | 45.2  | 4.03  | 102.4 | 120                                  | 14   | 100                                                      | 11   | 0.06               | 0.03 |
| 1030T | 0.005                 | 0.13 | 0.005   | 0.13 | 0.125              | 3.18 | 0.188    | 4.78 | 3.50                        | 88.9  | 8.50  | 215.9 | 1.78                      | 45.2  | 4.28  | 108.7 | 120                                  | 14   | 100                                                      | 11   | 0.06               | 0.03 |
| 1040T | 0.005                 | 0.13 | 0.005   | 0.13 | 0.125              | 3.18 | 0.188    | 4.78 | 3.50                        | 88.9  | 8.50  | 215.9 | 1.78                      | 45.2  | 4.28  | 108.7 | 120                                  | 14   | 100                                                      | 11   | 0.12               | 0.05 |
| 1050T | 0.005                 | 0.13 | 0.005   | 0.13 | 0.125              | 3.18 | 0.188    | 4.78 | 4.38                        | 111.3 | 8.50  | 215.9 | 2.22                      | 56.4  | 4.28  | 108.7 | 250                                  | 28   | 200                                                      | 23   | 0.12               | 0.05 |
| 1060T | 0.010                 | 0.25 | 0.010   | 0.25 | 0.125              | 3.18 | 0.188    | 4.78 | 5.00                        | 127.0 | 13.00 | 330.2 | 2.53                      | 64.3  | 6.53  | 165.9 | 440                                  | 50   | 200                                                      | 23   | 0.25               | 0.11 |
| 1070T | 0.010                 | 0.25 | 0.010   | 0.25 | 0.125              | 3.18 | 0.188    | 4.78 | 5.00                        | 127.0 | 13.00 | 330.2 | 2.53                      | 64.3  | 6.53  | 165.9 | 440                                  | 50   | 200                                                      | 23   | 0.25               | 0.11 |
| 1080T | 0.010                 | 0.25 | 0.010   | 0.25 | 0.125              | 3.18 | 0.188    | 4.78 | 7.25                        | 184.2 | 16.00 | 406.4 | 3.66                      | 93.0  | 8.03  | 204.0 | 825                                  | 93   | 200                                                      | 23   | 0.38               | 0.17 |
| 1090T | 0.012                 | 0.30 | 0.012   | 0.30 | 0.125              | 3.18 | 0.188    | 4.78 | 7.25                        | 184.2 | 16.00 | 406.4 | 3.66                      | 93.0  | 8.03  | 204.0 | 1640                                 | 185  | 200                                                      | 23   | 0.56               | 0.25 |
| 1100T | 0.012                 | 0.30 | 0.012   | 0.30 | 0.188              | 4.78 | 0.250    | 6.35 | 8.00                        | 203.2 | 16.00 | 406.4 | 3.93                      | 99.8  | 7.93  | 201.4 | 2940                                 | 332  | 260                                                      | 29   | 0.94               | 0.43 |
| 1110T | 0.012                 | 0.30 | 0.012   | 0.30 | 0.188              | 4.78 | 0.250    | 6.35 | 8.25                        | 209.6 | 16.00 | 406.4 | 4.80                      | 121.9 | 7.93  | 201.4 | 2940                                 | 332  | 260                                                      | 29   | 1.12               | 0.51 |
| 1120T | 0.012                 | 0.30 | 0.012   | 0.30 | 0.375              | 9.53 | 0.375    | 9.53 | 9.69                        | 246.1 | 16.00 | 406.4 | 5.78                      | 146.8 | 7.65  | 194.3 | 8160                                 | 922  | 650                                                      | 73   | 1.60               | 0.73 |
| 1130T | 0.012                 | 0.30 | 0.012   | 0.30 | 0.375              | 9.53 | 0.375    | 9.53 | 10.12                       | 257.0 | 16.00 | 406.4 | 6.53                      | 165.9 | 7.90  | 200.7 | 11640                                | 1315 | 650                                                      | 73   | 2.00               | 0.91 |
| 1140T | 0.012                 | 0.30 | 0.012   | 0.30 | 0.375              | 9.53 | 0.375    | 9.53 | 10.50                       | 266.7 | 16.00 | 406.4 | 7.40                      | 188.0 | 7.90  | 200.7 | 16320                                | 1844 | 650                                                      | 73   | 2.50               | 1.13 |
| 1150T | 0.012                 | 0.30 | 0.016   | 0.41 | 0.375              | 9.53 | 0.375    | 9.53 | 13.50                       | 342.9 | 14.75 | 374.7 | 6.65                      | 168.9 | 7.28  | 184.9 | 5400                                 | 610  | 650                                                      | 73   | 4.30               | 1.95 |
| 1160T | 0.012                 | 0.30 | 0.018   | 0.46 | 0.375              | 9.53 | 0.375    | 9.53 | 13.50                       | 342.9 | 16.00 | 406.4 | 6.65                      | 168.9 | 7.90  | 200.7 | 5400                                 | 610  | 650                                                      | 73   | 6.20               | 2.81 |
| 1170T | 0.012                 | 0.30 | 0.020   | 0.51 | 0.375              | 9.53 | 0.375    | 9.53 | 15.00                       | 381.0 | 17.50 | 444.5 | 7.40                      | 188.0 | 8.65  | 219.7 | 8160                                 | 922  | 1300                                                     | 147  | 7.70               | 3.49 |
| 1180T | 0.015                 | 0.38 | 0.022   | 0.56 | 0.375              | 9.53 | 0.375    | 9.53 | 15.75                       | 400.1 | 19.31 | 490.5 | 7.78                      | 197.6 | 9.56  | 242.8 | 11640                                | 1315 | 1300                                                     | 147  | 8.30               | 3.76 |
| 1190T | 0.015                 | 0.38 | 0.024   | 0.61 | 0.375              | 9.53 | 0.375    | 9.53 | 16.00                       | 406.4 | 20.88 | 530.4 | 8.00                      | 203.2 | 10.34 | 262.6 | 16320                                | 1844 | 1300                                                     | 147  | 9.70               | 4.40 |
| 1200T | 0.015                 | 0.38 | 0.027   | 0.69 | 0.375              | 9.53 | 0.375    | 9.53 | 17.50                       | 444.5 | 22.50 | 571.5 | 8.80                      | 223.5 | 11.15 | 283.2 | 16320                                | 1844 | 2300                                                     | 260  | 12.40              | 5.62 |

① These are recommended installation misalignment limits. As operating misalignment increases, coupling life is reduced.

## STEP 5: ALIGNMENT

### ANGULAR ALIGNMENT

**NOTE:** Proper alignment yields the longest service life.

- A. Instrument Method** of checking alignment is recommended since it is most accurate. Rigidly attach dial base to one of the hubs and indicator needle against a face of the other hub. Rotate both hubs 360°. Take indicator reading at four points, 90° apart. Adjust alignment until all four readings are within angular misalignment limits given in Table 2. To check alignment, relocate the dial base to the opposite hub and repeat the procedure.
- B. Caliper / Feeler Gauge Method** may be used if dial indicator is not available or shaft gap is too small; however, it is not the recommended method of checking alignment. Check with calipers or feeler gauge at four points, 90° apart. Adjust alignment until all four readings are within angular misalignment limits as shown in Table 2.

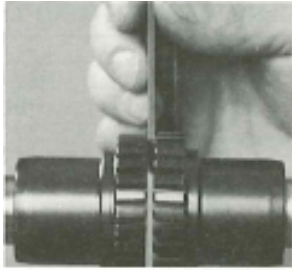


Figure 3 - Angular Alignment Feeler Gauge Method

### PARALLEL ALIGNMENT

- A. Instrument Method** of checking alignment is recommended since it is most accurate. Rigidly attach dial base to one hub and set dial indicator needle in contact with an outside diameter of opposite hub. Rotate both hubs 360°. Take indicator reading at four points 90° apart. Adjust alignment until all four readings are within parallel misalignment limits given in Table 2. To check alignment, relocate dial base on opposite hub and repeat the procedure. Recheck angular alignment.
- B. A Straight Edge and Feeler Gauge** may be used if a dial indicator is not available; however, it is not recommended as the most accurate method of checking alignment. Adjust alignment until straight edge appears to be resting squarely on both outside tooth diameters. Repeat procedure at 3 additional points, 90° apart. Refer to Table 2 for limits of parallel misalignment. Recheck angular alignment.

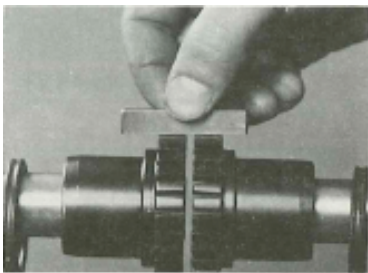


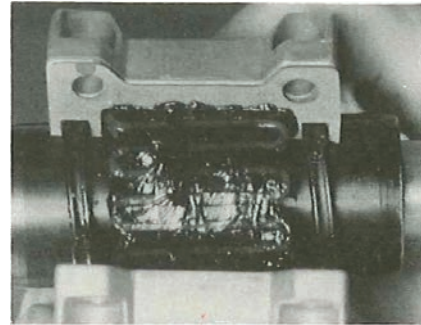
Figure 4 - Parallel Alignment Straight Edge Method

## STEP 6: ASSEMBLY OF ELEMENT GRID

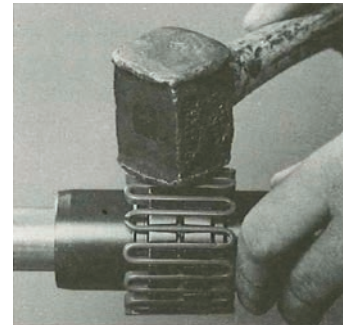
### A. Assembly of T10 (Close coupled, horizontally split cover) coupling:

- Before inserting grid, hand pack hub teeth with lubricant provided. Dodge Coupling Grease is recommended for use with Grid-Lign (Refer to Tables 2 for recommendations on quantity of lubricant.) Fit grid over hubs and starting at one end, work coils of grid between the teeth. Seat with a soft mallet. If grids are supplied in more than one segment, install so that all cut ends extend in the same direction.
- Hand pack more lubricant around the grid and between the spaces of the grid after it is installed. Refer to Step 7 for important information on lubrication.

**CAUTION:** Do not overpack coupling with grease.



Grease Packing

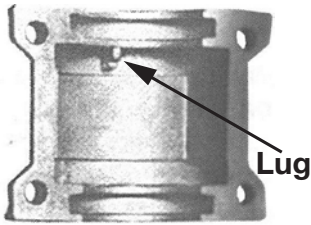


Grid Insertion

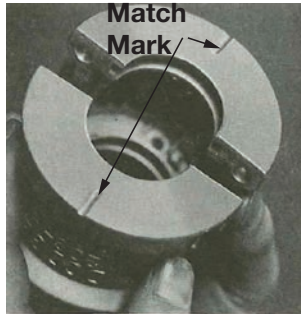
Figure 5 - Grease Packing and Grid Insertion

- Position the two cover seals on the hub and align with the grooves in the half cover. Place gaskets on flanges of bottom cover half. Assemble cover with match marks on same side. Install fasteners in cover halves with nut end of bolt nearest lube plug. (In this position, nuts are self retaining and do not require a wrench.) Tighten per T10 cover bolt tightening torque as shown in Table 2. (Sizes 1020-1090 have nut locking flats in cover.)

**NOTE:** T10 coupling may be mounted on vertical or inclined shafts. When doing so, assemble cover halves with anti-rotation lug and match mark up or on the higher side. (See Figure 6)



Anti-Rotation Lug



Cover Match Marks

Figure 6 - Anti-Rotation Lug and Cover Match Mark

**B. Assembly of T20 (Close coupled, vertically split cover) coupling:**

- a. Lubricate and install grid per Step 5Aa for T10.
- b. Bring together the T20 vertical cover halves with gasket positioned between them, aligning all bolt holes. Lube holes should be 180° apart. Tighten bolts to tightening torque given in Table 2.

**C. Assembly of T31 (Full Spacer) and T35 (Half Spacer):**

- a. The T31 and T35 seals and covers are mounted after the rigid shaft hubs are in place.
- b. Set shaft spacing per appropriate BSE dimensions per Table 2.
- c. Carefully stretch cover seals over teeth and onto spacer hub. Bolt each half spacer hub onto rigid shaft hubs and torque to specifications given in Table 2 (Spacer Flange Bolt Tightening Torque).
- d. Lubricate and install grid per Step 5Aa for T10.
- e. Position cover seals on hubs and assemble cover with seals and gaskets per Step 5Ab.
- f. To remove spacer with cover, loosen rigid hub bolts and compress spacer hubs to disengage pilots. Center section of spacer coupling will drop out without disturbing driver or driven shafts.

**NOTE: Install coupling guard per OSHA or applicable requirements. Guarding should be designed so that the coupling cover or element will be contained within the guard in the event that the coupling cover or element is thrown from the coupling assembly.**

**STEP 7: LUBRICATION**

Remove both lube plugs in cover and insert lube fittings. Pump in the appropriate amount of Dodge Coupling Grease as shown in Table 2, until it is forced out of the opposite lube hole. Then install both lube plugs back into cover. See Table 3 for Dodge Coupling Grease options.

**NOTE: All lube plugs must be installed before operating coupling.**

**NOTE: Proper lubrication of all types of GRID-LIGN couplings is necessary for their efficient operation and long service life.**

**NOTE: Successful operation is dependent upon adequate lubrication. Precaution should be taken during handling and recycling grease, oil or water glycol mixtures.**

Table 3 - Dodge Coupling Grease Options

| DODGE Part Number | Description                                          |
|-------------------|------------------------------------------------------|
| 012995            | DODGE Coupling Grease - 14 Ounce Cartridge           |
| 012996            | DODGE Coupling Grease - 14 Ounce Cartridge (10 Pack) |
| 012997            | DODGE Coupling Grease - 14 Ounce Cartridge (30 Pack) |
| 012927            | DODGE Coupling Grease - 35 Pound Pail                |
| 012928            | DODGE Coupling Grease - 120 Pound Keg                |
| 012929            | DODGE Coupling Grease - 400 Pound Drum               |

\*See Table 2 for lubrication weight required per coupling size

Dodge Coupling Grease is supplied as standard on Dodge Grid-Lign coupling sizes 1020T through 1090T.

**STEP 8: MAINTENANCE**

Maintenance is recommended every 6 months to ensure long life. Disassemble coupling, remove old lubricant and clean. Visually inspect all parts. Replace any worn parts. Hand pack coupling with lubricant and repeat Step 6.

**STEP 9: GRID REMOVAL**

When it is necessary to disassemble coupling, remove cover halves. Beginning at a cut end of grid, carefully insert a small pry bar into loop. Using the teeth for leverage, gradually pry the grid up, alternating sides while working around the coupling.

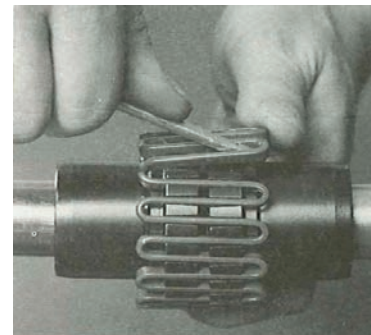


Figure 8 - Grid Removal

## INTERCHANGE INFORMATION

The DODGE GRID-LIGN flexible couplings are designed to be interchangeable with other tapered grid style couplings. See Table 4 for more information.

**Table 4 - Tapered Grid Coupling Nomenclature Interchange**

| Coupling with Horizontally Split Covers |        |         | Coupling with Vertically Split covers |        |         |
|-----------------------------------------|--------|---------|---------------------------------------|--------|---------|
| DODGE                                   | Falk   |         | DODGE                                 | Falk   |         |
| 1020T10                                 | 20T10  | 1020T10 | 1020T20                               | 20T20  | 1020T20 |
| 1030T10                                 | 30T10  | 1030T10 | 1030T20                               | 30T20  | 1030T20 |
| 1040T10                                 | 40T10  | 1040T10 | 1040T20                               | 40T20  | 1040T20 |
| 1050T10                                 | 50T10  | 1050T10 | 1050T20                               | 50T20  | 1050T20 |
| 1060T10                                 | 60T10  | 1060T10 | 1060T20                               | 60T20  | 1060T20 |
| 1070T10                                 | 70T10  | 1070T10 | 1070T20                               | 70T20  | 1070T20 |
| 1080T10                                 | 80T10  | 1080T10 | 1080T20                               | 80T20  | 1080T20 |
| 1090T10                                 | 90T10  | 1090T10 | 1090T20                               | 90T20  | 1090T20 |
| 1100T10                                 | 100T10 | 1100T10 | 1100T20                               | 100T20 | 1100T20 |
| 1110T10                                 | 110T10 | 1110T10 | 1110T20                               | 110T20 | 1110T20 |
| 1120T10                                 | 120T10 | 1120T10 | 1120T20                               | 120T20 | 1120T20 |
| 1130T10                                 | 130T10 | 1130T10 | 1130T20                               | 130T20 | 1130T20 |
| 1140T10                                 | 140T10 | 1140T10 | 1140T20                               | 140T20 | 1140T20 |
| 1150T10                                 | 150T10 | 1150T10 | 1150T20                               | 150T20 | 1150T20 |
| 1160T10                                 | 160T10 | 1160T10 | 1160T20                               | 160T20 | 1160T20 |
| 1170T10                                 | 170T10 | 1170T10 | 1170T20                               | 170T20 | 1170T20 |
| 1180T10                                 | 180T10 | 1180T10 | 1180T20                               | 180T20 | 1180T20 |
| 1190T10                                 | 190T10 | 1190T10 | 1190T20                               | 190T20 | 1190T20 |
| 1200T10                                 | 200T10 | 1200T10 | 1200T20                               | 200T20 | 1200T20 |

**Table 4 - Tapered Grid Coupling Nomenclature Interchange**

| Spacer Coupling |        |         | Half Spacer Coupling |        |         |
|-----------------|--------|---------|----------------------|--------|---------|
| DODGE           | Falk   |         | DODGE                | Falk   |         |
| 1020T31         | 20T31  | 1020T31 | 1020T35              | 20T35  | 1020T35 |
| 1030T31         | 30T31  | 1030T31 | 1030T35              | 30T35  | 1030T35 |
| 1040T31         | 40T31  | 1040T31 | 1040T35              | 40T35  | 1040T35 |
| 1050T31         | 50T31  | 1050T31 | 1050T35              | 50T35  | 1050T35 |
| 1060T31         | 60T31  | 1060T31 | 1060T35              | 60T35  | 1060T35 |
| 1070T31         | 70T31  | 1070T31 | 1070T35              | 70T35  | 1070T35 |
| 1080T31         | 80T31  | 1080T31 | 1080T35              | 80T35  | 1080T35 |
| 1090T31         | 90T31  | 1090T31 | 1090T35              | 90T35  | 1090T35 |
| 1100T31         | 100T31 | 1100T31 | 1100T35              | 100T35 | 1100T35 |
| 1110T31         | 110T31 | 1110T31 | 1110T35              | 110T35 | 1110T35 |

## ATEX CERTIFICATION

These instructions do not cover all details or variations in equipment nor provide every possible contingency or hazard to be met in connection with installation, operation, and maintenance. Should further information be desired, or should particular problems arise which are not covered in this manual, the matter should be referred to your local Baldor•Dodge representative.

DODGE GRID-LIGN couplings are manufactured under guidelines of the ATEX directive 2014/34/EU. DODGE GRID-LIGN Type T10, Type T31 and Type T35 couplings are suitable for ATEX category 2 Group II for dust and gas environments with ignition temperatures higher than  $T3 = 200^{\circ}\text{C}$  for all sizes. DODGE GRID-LIGN Type T20 couplings are suitable for ATEX category 2 and M2, Group II and I for gas and dust environments and also suitable for ATEX category 3 for all gas or dust environments with ignition temperatures higher than  $T3 = 200^{\circ}\text{C}$  for all sizes. A UL Certified adhesive label indicating ATEX certification will be attached to the product and will contain the following depending on coupling type.

### ATEX Marking Information

A sticker indicating ATEX Certification will be attached to the product and will be similar to the following:

#### For coupling types T10, T31 and T35

- II 2 GD c 200°C (T3)
- Tamb -30°C to +50°C
- SIRA 16ATEX6169X
- DODGE GRID-LIGN Coupling
- MFG by Baldor Electric Company
- Greenville, SC/Ft. Smith, AR USA



#### For coupling types T20

- II 2 GD c 200°C (T3)
- I M2 c 200°C
- Tamb -30°C to +50°C
- SIRA 16ATEX6169X
- DODGE GRID-LIGN Coupling
- MFG by Baldor Electric Company
- Greenville, SC/Ft. Smith, AR USA



### HAZARDOUS AREA USE

For hazardous area use, the following potential ignition hazards have been identified:

- Impact of outer enclosures
- Heat generation from flexing or breaking of the internal grid due to excessive torque and/or misalignment
- Frictional sparking from contact with stationary parts either by coupling failure or incorrect installation

These potential hazards have been addressed by the materials and design of the coupling and rely on correct installation and maintenance, as detailed in the equipment instructions.

**WARNING:** These couplings are designed to operate with surface temperatures below 200°C when properly installed and selected. Excessive temperatures greater than 80°C is a result of an abnormal operating condition caused by:

1. Improper installation – refer to installation manual for proper procedures
2. Excessive misalignment – re-align coupling/shafts
3. Failure of the coupling grid – replace grid
4. Excessive speed – re-evaluate application and selection
5. Excessive vibration – determine source, re-evaluate application

If applied in a Division 1 or Zone 1 environment, the excessive temperature may cause ignition of hazardous materials.

In hazardous environments, DODGE GRID-LIGN couplings should not be considered as fail safe or “break-away” power transmission devices. Overloads imposed to these devices could cause irreparable damage, shall be considered an explosive hazard, could create projectiles, and/or could cause torque transmission interruptions. The coupling shall be sized and used to the stated torque and speed capabilities of the unit as published in the DODGE PT Components Engineering Catalog. Any assistance needed in selection shall be referenced to a Baldor•Dodge representative.

### Additional Instruction for Safe Installation and Use

The coupling must be installed and operated in accordance with the below instructions and the certificate “special conditions of safe use” to ensure that the maximum temperatures are not exceeded and the coupling is not subject to impact.

1. All rotating parts should be guarded to prevent contact with foreign objects which could result in sparks, ignition, or damage to the coupling.
2. Couplings should be periodically inspected for normal wear, dust/dirt buildup, bends or breaks in the grid, or any similar scenario that would impede heat dissipation.
3. Increasing levels of vibration and noise could indicate the need for inspection, repair or replacement of the coupling or element.
4. Electrical sparks are a source of ignition. To reduce risk, proper electrical bonding and grounding is recommended.
5. Overloading may result in breakage or damage to the grid or other equipment. As a result the coupling could become an explosion hazard. Damaged coupling components must not be operated in hazardous environments.
6. The DODGE GRID-LIGN coupling is not intended to be used as thrust bearing member.
7. Coupling guards should have a minimum of 2” clearance over the DODGE GRID-LIGN coupling.
8. The coupling shall be suitably protected from impact by falling objects.
9. When choosing equipment for Group 1 applications, the user shall take account of the influence on the smouldering temperature of coal dusts where they may be deposited in a layer on surfaces which may reach a temperature of 150°C (300°F) and above.

## EU Declaration of Conformity

The undersigned, representing the following supplier and the following authorised representative-

**Baldor Electric Company**  
5711 R. S. Boreham, Jr. Street  
Fort Smith, Arkansas 72901  
USA

**ABB Automation Products GmbH**  
Oberhausener Straße 33  
40472 Ratingen, Germany

This declaration is issued under the sole responsibility of the manufacturer.

herewith declare that the Products

Product identification (brand and catalogue number/part number):

**Couplings** 

**Dodge GRID-LIGN Coupling – Types T10, T20, T31, T35  
Equipment Group II Category 2 GD c 200°C(T3); Type T20  
Equipment Group I, Category M2 c 200°C \* ; T amb - 30°C to  
+50°C \*. \*When choosing equipment for Group I applications, the user shall  
take account of the influence on the smouldering temperature of coal dusts  
where they may be deposited in a layer on surfaces which may reach a  
temperature of 150 °C and above.**

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are in conformity with the provisions of the following EC Directive(s) when installed in accordance with the installation instructions contained in the product documentation:

2014/34/EU

ATEX

and that the standards and/or technical specifications referenced below have been applied:

EN 13463-1:2009

Non - Electrical Equipment For Potentially Explosive Atmospheres -Method And Requirements

EN 13463-5:2011

Non - Electrical Equipment For Potentially Explosive Atmospheres – Part 5 Protection by constructional safety ‘c’

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Notified Body:

Sira Certification Services Ltd  
Unit 6  
Hawarden Industrial Park  
Hawarden  
DEESIDE CH5 3US  
Certificate: SIRA 16ATEX6169X

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Supplier  
Signature:



Authorised representative  
Signature:



Name: L. Evans Massey  
Position: Manager Standards and Certification  
Date: 16 June 2016

Name: Michael Klein  
Position: Regional Sales and Marketing Manager  
Date: 16 June 2016

**BALDOR**

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