

## Dodge® mounted bearings and couplings: ATEX approval

ATEX came about from the European Union’s **AT**mosphere **EX**plosive Directives (law) intended to reduce the hazards from equipment that would be designed or placed in potentially explosive atmospheres. Its purpose is to prevent ignition of the explosive environment. It applies to equipment that would normally operate in mining, petrochemical, or refining industries, but can include any environments that exposes equipment to combustible dust, mixture of air and gas, vapors or mists, or air/dust mixtures.

Products that have ATEX approval informs the user of the acceptability of the product for these environments for which they are approved. It provides standard criteria that would be universally understood and tells the user what environments that the products can be successfully operated in. Information provided with the product would inform the user of any criteria that must be adhered to in order to ensure safe operation. Products must have this approval if installed in potentially explosive environments within the member states of the European Union.

DODGE is pleased to have achieved approval under the European ATEX directive per 94/9/EC. Dodge products have been approved are as follows: Paraflex Coupling, D-Flex Coupling (excluding Hytrel Elements), Disc Coupling, SC, GT, Eccentric Lock & D-LOK Ball Bearings, Type E Family Tapered Roller Bearings (E, DI, & TAF) and S2000, Imperial, ISN spherical roller bearings.



When ordered for ATEX approval these products will be labeled, per the ATEX directives, on both the product and box with the marking shown to the left to indicate approved product. Subsequent marking on the label, as shown below, indicate the category or classification that the Dodge products have been approved.

I M2                      Group 1 Mining industries, category 2:

These products can be operated in mining facilities where combustible dust is likely to occur in normal operation occasionally

II 2 GD T(x):            Group II, category 2, All gas and dust environments, Ignition temperature

These products can be operated in environments where gas and / or dust would occur in normal operation occasionally. The maximum surface temperature of the product during normal operation must be less than the ignition temperature of the environment. Dodge products have been approved for ignition temperature greater than:

T5 – 100° C            for all coupling products

T3 – 141° C            for all bearing products

T<sub>amb</sub> -30° C to 50° C: The normal ambient temperature that our products can safely be operated in.



In accordance with the European directives supplemental instructions are provided with the product to inform the user of any limitations or special instructions. It should be noted that the Dodge coupling products do not specify any special limitations. We do provide information concerning normal precautions to minimize any source for sparks in these environments. Additionally Dodge bearing products provide a replacement recommendation of 90% of the calculated  $L_{10}$  bearing life for category 2 equipment, and 50% of the calculated bearing life for category 1 equipment.

To achieve the ATEX approval, Dodge had to provide product detail, test data and perform risk assessments according to the European directives. This information was used by the certification body to verify that the product can be safely used in these environments. At this time the ATEX requirements are not required in the US but companies who supply equipment to the European Union must ensure conformance to the law in the design when introducing it the market or placing it into service. These companies will be inquiring on products that have the ATEX approval minimizing their need to perform risk assessments on these power transmission components. An 'EC Declaration of Conformity' to the ATEX directives is included with the supplemental instructions provided with the products.

Dodge can now provide coupling and bearing products that have ATEX approval for these potentially explosive environments.