

# **ATEX Certified**

## **Quantis® ILH, RHB, & MSM Reducers (Zone 1)**

### **Sizes 38–168**

### **Supplemental Instruction Manual**

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

**WARNING:** To ensure the 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 lb) are noted on the shipping package. Proper lifting practices are required for these products.

## **PREFACE**

The products described in this manual are manufactured by Dodge Industrial, Inc., Simpsonville, SC 29681.

This supplemental manual (combined with manuals MN1616, MN1617, and MN1618) is intended to provide basic information on the safe operation and maintenance of the ATEX approved Quantis reducers. 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 the manual, the matter should be referred to your local Dodge representative.



The reducer was manufactured under guidelines of the ATEX directive 2014/34/EU.

The Quantis ILH, RHB, and MSM size 38–68 reducers are suitable for ATEX Category 2, Group II for gas and dust environments with an ignition temperature higher than T4 (135°C). The Quantis ILH, RHB, and MSM size 88–168 reducers are suitable for ATEX Category M2 (mining), Group I and Category 2, Group II for gas and dust environments with an ignition temperature higher than T4 (135°C).





Quantis reducers with C-face clamp collar and three piece coupled input configurations have a -30 to +50 °C ambient temperature certification. Quantis reducers with separate input configurations have a -30 to +45 °C ambient temperature certification.

**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 Dodge® nor are the responsibility of Dodge. 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 holding device must be an integral part of the driven equipment beyond the speed reducer output shaft.

Certification markings are contained on the reducer nameplates. Typical nameplates are similar to those shown below.



<b>DODGE</b>		REORDER NO.:	
<b>QUANTIS</b>		Catalog No:	
		Serial No: BTYYWWNNNNN	
Ratio 0161.05:1	Input Speed 1750 RPM	Input Power 000.69 HP	
Output Torque 003983 in-lb	Lube Type: SHC 634	Position A1	
O/P Shaft 1.250 x 2.36 IN	Service Factor 1.00	OPS. Manual MN1616	
 II 2G Ex h IIC T4 Gb II 2D Ex h IIC T135° C Db		 SIRA 12ATEX165 Iamb -30° C to +50° C	
MFG BY DODGE INDUSTRIAL, INC. 1061 HOLLAND ROAD, SIMPSONVILLE, SC 29681			

Sizes 38–68





<b>DODGE</b>		REORDER NO.:	
<b>QUANTIS</b>		Catalog No:	
		Serial No: BTYYWWNNNNN	
Ratio 0161.05:1	Input Speed 1750 RPM	Input Power 000.69 HP	
Output Torque 003983 in-lb	Lube Type: SHC 634	Position A1	
O/P Shaft 1.250 x 2.36 IN	Service Factor 1.00	OPS: Manual MN1616	
 II 2G Ex h IIB II 2D Ex h IIC T4 Gb II 2D Ex h IIC T135° C Db		 SIRA 12ATEX165 Tamb -30° C to +50° C	
MFG BY DODGE INDUSTRIAL, INC.			
1061 HOLLAND ROAD, SIMPSONVILLE, SC 29681			
		 	

Sizes 88–168

### C-Face Clamp Collar & Three-Piece Coupled Input Configurations

<b>DODGE</b>		REORDER NO.:	
<b>QUANTIS</b>		Catalog No:	
		Serial No: BTYYWWNNNNN	
Ratio 0161.05:1	Input Speed 1750 RPM	Input Power 000.69 HP	
Output Torque 003983 in-lb	Lube Type SHC 634	Position A1	
O/P Shaft 1.250 x 2.36 IN	Service Factor 1.00	OPS: Manual MN1616	
 II 2G Ex h IIC T4 Gb II 2D Ex h IIC T135° C Db		 SIRA 12ATEX165 Iamb -30° C to +45° C	
MFG BY DODGE INDUSTRIAL, INC. 1061 HOLLAND ROAD, SIMPSONVILLE, SC 29681			

Sizes 38–68

<b>DODGE</b>		REORDER NO.:	
<b>QUANTIS</b>		Catalog No:	
		Serial No: BTYYWWNNNNN	
Ratio 0161.05:1	Input Speed 1750 RPM	Input Power 000.69 HP	
Output Torque 003983 in-lb	Lube Type: SHC 634	Position A1	
O/P Shaft 1.250 x 2.36 IN	Service Factor 1.00	OPS: Manual	MN1616
 II M2 Ex h I MB II 2G Ex h IIC T4 Gb II 2D Ex h IIC T135° C Db		 SIRA 12ATEX165 Iamb -30° C to +45° C	
MFG BY DODGE INDUSTRIAL, INC. 1061 HOLLAND ROAD, SIMPSONVILLE, SC 29681			
			

Sizes 88–168

### Separate Input Configurations

Products manufactured prior to November 2021 may be marked as ABB Motors and Mechanical, Inc., Baldor, Reliance, etc.

## ATTENTION

Failure to operate the reducer properly can cause the reducer to exceed maximum certified temperatures. If applied in a Division 1 or Zone 1 environment, this excessive temperature may cause ignition of hazardous materials.

## ABNORMAL CONDITIONS

Operating the reducer under any of the following conditions can cause higher than normal operating temperatures:

- Reducer load exceeding nameplate ratings
- Ambient temperature above nameplate rating.
- Inadequate cooling.
- Insufficient amount or improper lubricant type.
- Operation above nameplate input speed.

## ADDITIONAL INSTRUCTIONS FOR SAFE INSTALLATION AND USE

**WARNING: Electrostatic discharge hazard. The ABS plastic output shaft safety covers maybe an electrostatic charging hazard. The following measures should be taken into account:**

- Ensure that the ABS plastic safety cover does not come into contact with moving parts.
- Clean safety covers with a damp cloth only.
- Ensure that the ABS plastic cover is not used where there is a constant flow of air over the surface of the cover.

**WARNING: Do not remove inspection cover or open the reducer when a flammable / explosive atmosphere is present.**

**WARNING: Electrostatic discharge hazard. The paint or coating is limited to prevent an electrostatic discharge hazard. Do NOT add paint or additional coating to the reducers.**

- All rotating parts should be guarded to prevent contact with foreign objects which could result in sparks and ignition.
- Inspect reducer for proper oil level and signs of oil leakage every 2000 hours or every six months, whichever comes first. If seals are leaking, replace seals and fill with recommended lubricant to mounting position oil level. Recommended lubricants: Mobilgear 600 XP220 (-12°C to 41°C ambient temperature)—standard factory fill, Mobil SHC 626 (-29°C to 13°C ambient temperature), Mobil SHC 630 (-23°C to 46°C ambient temperature), Mobil SHC 634 (-0°C to 60°C ambient temperature), Chevron FM 220 (-4°C to 29°C ambient temperature), and Chevron FM 460 (7°C to 41°C ambient temperature).
- Inspect reducer bearings for excessive noise, vibration, or end play every 2000 hours or six months, whichever comes first. Increasing noise, vibration, or end play levels could indicate the need for repair or reducer replacement.
- Periodically inspect reducer for dust/dirt build up on exterior surfaces. Excessive dust / dirt build up could impede heat dissipation. If dust/dirt build up is greater than 5 mm (0.20") thick, clean build up from all exterior surfaces. SEE WARNING ABOVE.
- Electrical sparks are a source of ignition. To reduce this risk, proper electrical bonding and grounding are recommended.
- Follow lubrication instructions and service schedule in manuals MN1616 (ILH), MN1617 (MSM), and MN1618 (RHB).
- Always use Dodge replacement parts when servicing or repairing the Quantis reducers. Refer to Dodge Renewal Parts department at +1 864 297 4160 for parts and parts list drawings.

For instructions on receiving and handling, installation, operation, maintenance, and service refer to manuals MN1616 (ILH), MN1617 (MSM), and MN1618 (RHB).

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