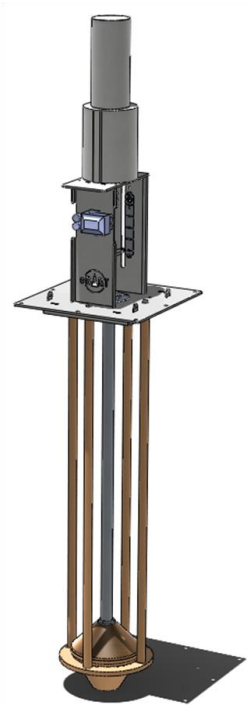




## eDART Installation and Maintenance Manual – Tri/iDart Valve

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Document eDART Installation and Maintenance Manual – Tri/iDart Valve

Issue Number 2

Date of Issue August 2010

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### WARNING

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**WARNING**

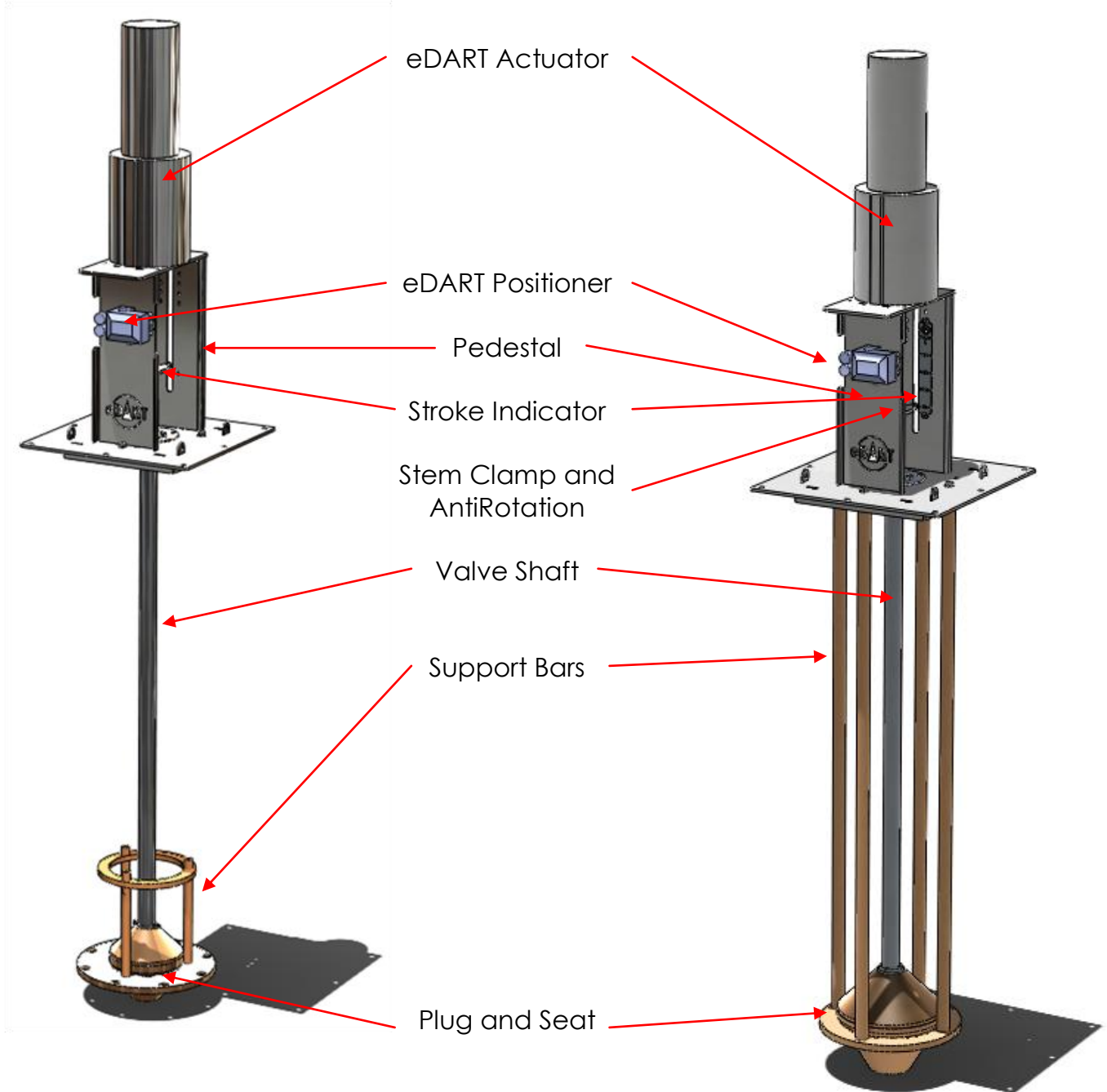
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## 1. INTRODUCTION

This installation and maintenance manual covers the eDart Tri/iDart Slurry Valve range. The Tri/iDart Slurry Valve is designed for use as an isolation valve or control valve depending on the plug fitted to the valve. The Tri/iDart is designed to either be bolted to the outlet or pushed into the outlet of a tank. The Tri/iDart Valve is a self contained valve and therefore can be removed from the tank if maintenance is required.



## 2. INSTALLATION GUIDELINES

### 2.1. Rigging and Lifting

1. When lifting care must be taken so as not to damage the actuator or positioner.
2. The valve can be slung from under the actuator mounting plate.



#### **WARNING**

**The valve must under no circumstances be lifted by the actuator as this will damage the actuator and valve.**

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### 2.2. Installation

1. The Valve must be installed into the tank following the plant layout drawings and the tag number on the valve. Each valve is supplied with a data tag indicating the serial and tag number.
2. The valve should be bolted into the tank using suitable bolts, nuts and washers.
3. The bolts should be tightened sufficiently so that the seat seals with the tank bottom, if supplied with a gasket ensure that the gasket is located in the correct position. It may be useful to use silicon to ensure a proper seal with the tank.
4. Sufficient clearance above and below the eDart is to be left clear for stripping and removal. Please refer to the GA Drawings for dimensions.

### **3. ROUTINE MAINTENANCE AND INSPECTION**

To ensure optimum life and performance from your valve the following routine inspections are recommended:

1. During operation observe the valve movement.
2. During a plant shut or maintenance stop, visually inspect the plug, seat, guides and bar guides for wear and damage.
3. Note: Before inspecting the valve, ensure that the tank has been safely isolated and locked out; for details on how to safely isolate the valve refer to Section 5 below – Isolating the Valve.
4. The following are indications that the valve needs attention
  - Poor controllability
  - The valve action is no longer smooth
  - When closed the valve is passing excessive product down stream
  - There are air leaks from the actuator, positioner or piping

### **4. EXPECTED WEAR ITEMS**

1. Plug – The plug must be visually inspecting for any wear or damage.
2. Seat - The seat must be visually inspecting for any wear or damage.
3. Shaft and Mounting Bar Guides – All the Polyurethane sleeves must be checked for wear and damage, ensure that these are replaced before any major damage is visible.



**WARNING**

**If any other components appear to be damaged or worn please contact the manufacture immediately.**

---

### 5. ISOLATING THE VALVE



#### **WARNING**

**Only suitably trained personnel are to work on the eDart Valve.**

1. Drain the tank containing the valve, flush out any excess slurry remaining in the tank.
2. Ensure that the correct lock-out procedures are followed and that the valve and tank are safely isolated.
3. Disconnect the air and signal from the positioner and actuator.

### 6. REPLACING OF COMPONENTS



#### **WARNING**

**Only suitably trained personnel are to work on the eDart Valve.**

**Before any maintenance is done the valve must be safely isolated.**

#### **6.1. Replacing the plug and seat**

1. Ensure that the valve has been safely and correctly isolated.
2. Unbolt and remove the valve from the tank.
3. Disconnect the actuator shaft from the valve shaft, remove the actuator and mounting plate.
4. The plug and seat can now be removed and replaced.
5. Re-assemble in reverse order, remember to put all spacers and washers back as they were removed.



#### **NOTE**

**Stroking and calibration will be required to seat the plug correctly.**



## 7. eDART SAFETY

1. The eDart is to be lifted using the lifting lugs on the pedestal, taking care not to damage the actuator, positioner or feedback mechanism.



### NOTE

Older models might not be fitted with the pedestal and lifting lugs. In thi case the eDart is to be lifted using a soft sling under the body, taking care to support the actuator so as not to damage the actuator, positioner or feedback mechanism.  
**Do not lift from the eye bolt on the actuator as this will damage the actuator.**

2. Due consideration is to be given to the weight of the components before dismantling.
3. Rigging equipment and procedures are to be followed to service the eDart.
4. Safety procedures for the use of compressed air are to be followed.
5. Only suitably qualified persons to work on or maintain eDart valves.
6. All local safety rules and regulations with respect to safety clothes applicable, tools and equipment used and methods of operation are to be adhered to.

## 8. PROBLEMS

For any problems please contact eDART Slurry Valves directly on –

**Tel. +27. (0) 11. 823. 6620, or  
email: maintenance@edart.co.za**

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