



## KTM VIRGO SERIES AUTOMATED BALL VALVES

### LIFTING AND SAFETY INSTRUCTIONS

Before installation these instructions must be fully read and understood

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#### 1 SAFETY INSTRUCTION FOR AUTOMATED VALVE

Automated valve shall be operated when installed in pipeline as per instruction provided in valve IOM.

##### **WARNING**

**Automated valve system shall be kept unenergized and unpressurized when it is not installed in pipeline.**

**Qualified person in automation and instrumentation shall present during installation.**

#### 2 GENERAL GUIDELINES

##### **DANGER**

**Never stand underneath a suspended load. Watch out for swaying, swinging or rotating as the load is lifted off the ground!**

Any unauthorized access to the lifting area shall be strictly prohibited.  
Always make use of a suitable lifting equipment and supports. Make sure that the lifting devices are in good condition and calibrated before lifting loads.  
Ensure that personnel who takes part in the lifting process shall have enough training for the job.

#### 3 LIFTING INSTRUCTIONS

Check the weight of the load from the way- bill, the valve brochure or the manual or general assembly drawing.  
Leave the automated valve with its position on the packing box pallet as far as possible. Use the same base pallet to move the automated valve to the installation site, if possible.  
When using lifting belts on automated valve units, the center of gravity of the unit can be higher than the attachment point. The total unit must be secured against twisting and tilting. Lift the valve in the position in which it is to be get installed.  
Initially lift the load slightly off the ground and check that all supports are securely attached and that the load is in balance state.

If necessary, lower the load back to the ground and adjust the supports. Adjust center of gravity for lifting points by judgment.

As you lower the load, make sure that the load does not fall over when you withdraw the supports.

You should be aware of site conditions. For example, surfaces may be slippery, narrow gangways, other installations may take place at site.

Make sure that there is nothing in the way of the load and that it can be lifted safely. Also make sure that the space reserved for the installation of the valve is sufficiently large. Lift the load at an even pace to avoid swaying.

##### **DANGER**

**Never leave the load suspended in mid-air.**

*Make sure that the valve and the actuator are correctly in place before detaching the supports. Always secure the lifting to the body, never to the actuator otherwise the shaft may be damaged. For further information about the products, refer to Installation, Maintenance and Operating Instructions of valve and actuators & automation accessories, which are provided along with this document.*

##### **WARNING**

**Never lift the valve and actuator assembly from the actuator. The lifting attachment must be attached to the body of the valve and the supports to the actuator. This prevents the assembly from toppling over and swinging and helps to avoid injuries or damage to the property.**

Refer to pictures on next page to have more information on proper lifting methods for automated valve.

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INCORRECT LIFTING METHOD



CORRECT LIFTING METHOD

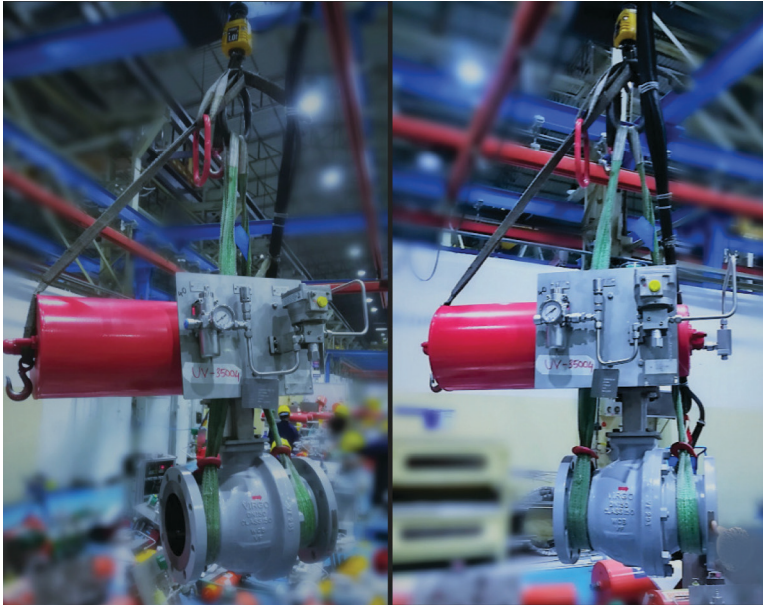


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#### LIFTING OF AUTOMATED VALVES WITHOUT LIFTING LUGS



Attach slings around valve body at both sides as shown in below picture. Also support actuator from both sides with the help of slings. Then lift the load slowly. Check load is in balanced condition then move the load to desired location.

#### LIFTING OF MOTOR OPERATED VALVES



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