SPECIFICATION

Worm Gearbox for Quarter turn Applications

Worm gearboxes shall be specifically designed to operate part-turn or quarter turn flow control devices such as valves and dampers.

- Gearboxes must be capable of either manual operation or electric operation by means of a multiturn electric motor actuator. It shall be possible to convert a manually operated valve to an electrically operated valve at a later date without replacing the gearbox.
- All worm gearboxes must be furnished with a full 360-degree worm wheel. Worm wheel to be bronze. Gearboxes with segment worm wheel will not be allowed. Scotch yoke or traveling nut operators will not be allowed.
- Gearbox housing will be cast iron.
- Worm shaft to made of hardened steel and supported by ball bearing.
- Gear case lubrication to be grease, adequately filled to guarantee adequate lubrication in any mounting position.
- Gearbox enclosure will be o-ring sealed.
- Torque will be transmitted to the valve shaft by means of a removable splined coupling.
- Mechanical stops will be of the travelling nut type. Design of the stops will prevent the input torque from being transferred to the gearbox housing, coupling or valve when the stops are encountered in either the ‘open’ or ‘closed’ directions of travel. Travel limitation by stop screws placed in the gearbox housing will not be allowed. It shall be possible to adjust the mechanical stops either in the valve manufacturer’s / assembler’s shop or at site.
- If required, worm gearbox shall be equipped with a primary gear reducer to reduce the required input torque.
- An adjustable mechanical dial position indicator shall be provided for above ground applications. For buried service applications, a cover will replace the indicator.
- Enclosure to be minimum Type 4 per NEMA Standard 250 or IP67 according to EN 60 529.
- Attachment to the valve shall be by mounting flange according to either MSS SP 101 or ISO 5210.
- All gearboxes shall meet the requirements of AWWA Standard C 504-00 as required.
- All gearboxes to be manufactured by AUMA Actuators, Inc. of Pittsburgh, PA.