

Gate Stem Manufacturing: Points to Consider

More goes into making a gate stem correctly than you may realize. In fact, stems threaded to the typical ACME standard will not work properly in a gate application.

Capabilities

Quabbin is able to machine gate stems to almost any length and any diameter from 1.00"-5 TPI ACME to 10.00"-1 TPI ACME and up to 40' of thread. Thread finishes from standard (60 Ra) to polished (16 Ra) are provided, depending on the type of service.

Problem Solving

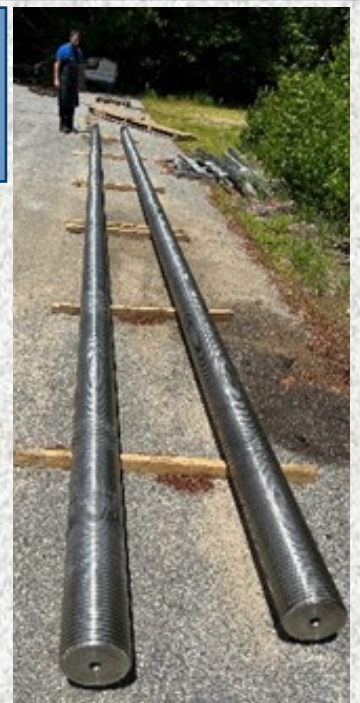
Not only do we replace your stem, we determine what caused it to fail and how to prevent it from happening again. Load and buckling calculations are performed to recommend stem diameter and stem guide placement.

Gate Expertise

To work correctly and for maximum product life, stems should be made to tolerances and finishes specific to the type of operator, whether it be manual, electric or modulating service. A typical machine shop simply does not have this expertise.

For gates to open and close smoothly over time, the fit and alignment between the stem and operator nut are critical. Components should be matched to each other, and tested for proper fit, prior to shipping. Fit is even more important when you consider that gates operate under less-than-ideal conditions: stems and operator nuts are often misaligned, grit and

other debris get between the stem and operator nut, lubrication schedules are seldom followed, and lubricant life is affected by typical outdoor temperature swings. Without proper tolerances, any of these occurrences can cause premature operator nut wear and lead to failure.



**Two crest gate stems,
7.00" Dia x 38' long
with 34' of 2 TPI ACME
thread.**



**A 10"-1 TPI stem with a 16
Ra finish.**



**24 replacement sluice gate stems
with operator nuts.**



Not just parts, solutions.

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Qualifications

Quabbin is an **ISO 9001-, AS9100- and ISO 13485-**certified gate component manufacturing company located in a 40,000-square foot facility in Wilton, NH. Quality parts, short lead times and broad capabilities have made the company a single-source parts supplier for the water, wastewater, hydroelectric and power industries for more than 25 years.

- Manufactured components for Rodney Hunt-Fontaine from 1996 to 2016 (when they closed).
- Make replacement parts for Armco, Chapman, Coffin, Coldwell-Wilcox, Craft gates and others.
- Supply stems and components to gate manufacturers in the US and Canada.

Recently-completed jobs:

- **Bureau of Reclamation Lower Colorado Dams:** Year 1 of Intake tower cylinder gate stem assemblies for upstream Nevada tower; supplied 1,000' of 6.5" Dia stems, 600' of 10" Dia stems, *Hoover Dam, Clark County, NV*
- **TVA:** Extension stems for six 24" gate valves, over 360' of stem, couplings, stem guides, operators and pedestals, *Raccoon Mountain Pumped Storage Plant, Marion County, TN*
- **Black River WWTP:** Two Rodney Hunt 6020 manual gear boxes, *Baltimore, MD*
- **City of Detroit:** Four top wedges on a 100-year-old 72" x 120" sluice gate manufactured by Michigan Valve, *Springwells Filtration Plant, Detroit, MI*
- **Abingdon WTP:** Stem for 42" x 42" sluice gate, *Hartford County, MD*
- **TVA:** Four 8" gate valve extension stems, couplings, stem guides and operators, *Wilson Dam, Muscle Shoals, AL*
- **Louisville Metropolitan Sewer District:** Stem, coupling and stop nut for flood gate, *Louisville, KY*
- **DC Water:** Three stems for 60" x 66" sluice gate in the grit removal chamber; also stem, coupling, operator nut and pedestal on a 36" x 36" sluice gate, *Blue Plains Advanced WWTP, Washington, DC*
- **City of New York:** Hinge posts for four 78" x 96" tide gates, *Hunt's Point Wastewater Treatment Plant, Bronx, NY*
- **Northern Indiana Public Service Co.:** Four 7" Dia x 38' L stems with 34' of thread, operator nut and stop nut for two flood gates, *Oakdale Dam, Carroll County, IN*
- **Whitewater WWTP:** Stems stop collar, operator nut, thrust nut, stem guides, *Whitewater, WI*
- **Paducah Levee System:** Stems, stem guides, operators, pedestals, stem covers, stop nuts on three 60" x 60 and three 48" x 48" sluice gates, *Paducah, KY*
- **Milwaukee Metropolitan Sewerage District:** Stems, thrust nuts, stem guides, couplings on two 108" Dia and one 84" x 144" sluice gate, *Milwaukee, WI*
- **Saukville WWTP:** Stems and seals for three 42" x 42" slide gates, *Village of Saukville, WI*
- **Tonawanda Water and Sewer Dept.:** Stems, pedestals, stem guides, stop collars, stem covers, wedges, invert seals, thrust nuts, couplings and electric operators, *Amherst, NY*
- **Allied Technical Services:** 28 split stem guides, *Apple Valley, OH*
- **Syracuse Levee:** Stem, stop collar, thrust nuts, stem guides, stem cover, pedestal and Limitorque operator, *New York State Dept. of Environmental Conservation, Kirkwood, NY*
- **Mari Corps, USA:** 72 jack stands designed to raise and lower the dock at Dangling Rope Marina on Lake Powell, *Kane County, UT*
- **Bureau of Reclamation:** Extension stems, couplings, operator stems, operator nuts, stem nuts, stop collars, thrust nuts, stem bellows nuts, *Derby Dam, Sparks, NV*
- **Green Mountain Power Corp.:** Stems (4.5" x 250" L, 220" thread), operator, operator nuts, pedestals, bellows, interconnecting shafts, stop collars for two 229.5" x 76" dual stem slide gates, *Marshfield Service Spillway, Marshfield, VT*