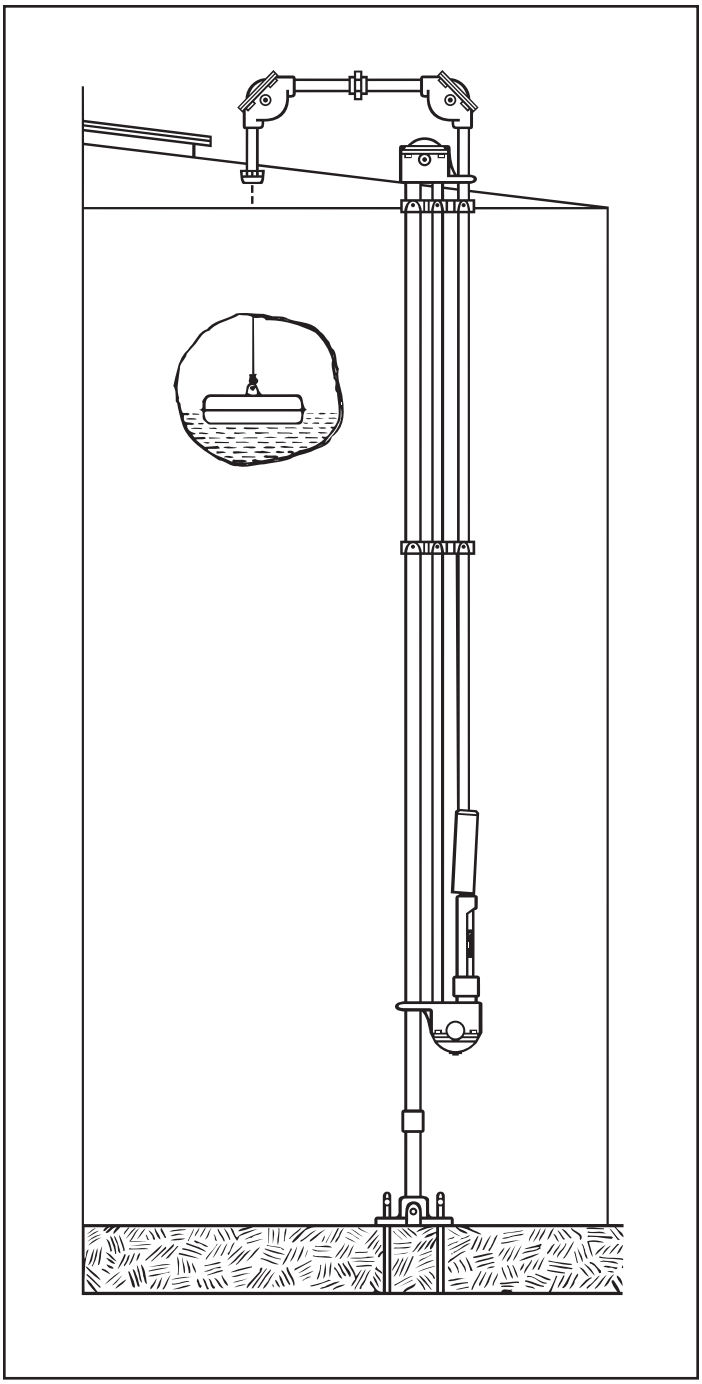
No. 20 Tank Gauge

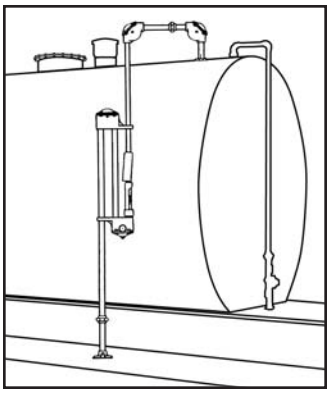
Whether you store gasoline or chicken broth, Tokheim Gauges feature the extreme accuracy and rugged dependability you expect for years of trouble-free service.

The No. 20 Tokheim Tank Gauge is available for many sizes and types of tanks – new or old, full or empty. The gauges are fully enclosed, tamper proof, and pressure tight. Balanced construction, a large aluminum float, and corrosion resistant moving parts are featured on each gauge. Plus, the standard proving device reassures the user of a correct reading.

Tokheim Gauges have one-piece stainless steel tapes with large easy-to-read figures. Measurements are made in feet, inches, and eighths. The reading section is conveniently located at eye-level, and can easily be read at night with just a flashlight.

When ordering your No. 20 Tokheim Tank Gauge, please tell us the type and dimensions of your tank, foundation height (if any), and product being stored. Your gauge will be shipped as a kit of parts (standard pipe not included) and detailed step-by-step installation instructions.





The No. 20 is available for horizontal or vertical tanks of any size or type.

Gauges may also be moved to different tanks by simply disassembling then reinstalling like a new gauge. (New measuring tapes may be necessary if moving to taller tanks.)

Tokheim Gauges are completely automatic and instant reading at all times. The proving device needs only to be used as a reassurance that the gauge is working and the first reading was correct.

No. 20 Tokheim Tank Gauge Installation Instructions

STEP 1

(a) Check all pipes for obstructions. Cut, thread, and ream to dimensions shown.

Pipe Measurements Galvanized pipe preferred. Cut pipes to length, thread and ream.	
For Vertical Tanks	**For Horizontal Tanks**
Pipe 1 – 1 in. pipe, 12 in. longer than sidewall of tank, cut in two pieces to allow a coupling at least 18 in. above base stand.	**Pipe 1 –** 1 in. pipe, 12 in. longer than diameter of tank, cut in two pieces to allow a coupling 18 in. above base stand.
Pipe 2 – 3/4 in. pipe, 4 ft. 6 in. shorter than pipe 1.	**Pipe 2 –** 3/4 in. pipe, 4 ft. 6 in. shorter than pipe 1.
Pipe 3 – 3/4 in. pipe, 6 in. shorter than pipe 2.	**Pipe 3 –** 3/4 in. pipe, 5 ft. less than total height from top of tank to ground. (If tank is on the ground, Pipe 3 should be 4 ft. less than total height from top of tank to ground.)
Pipe 4 – 3/4 in. pipe, estimate and cut to fit.	**Pipe 4 –** 3/4 in. pipe, estimate and cut to fit.
Pipe 5 – Tank nipple, plus enough 3/4 in. pipe to keep pipe 4 level.	**Pipe 5 –** Tank nipple, plus enough 3/4 in. pipe to keep Pipe 4 level.

STEP 2

(a) For convenience, assemble gauge horizontally on ground using barrels or other supports. Start with longest 3/4 in. **Pipe 2.** Slide **Brackets 20E** and **20D** on pipe (using center hole), having lettered side up and **Hook Bracket 20D** at the top. Using center holes screw **Top Housing 20C** and **Bottom Housing 20A** on ends of pipe, tightening so housings point in opposite directions.

(b) Slide 1 in. **Pipe 1** through bracket in bottom housing up through all brackets and tighten pipe into **Top Housing 20C.** At opposite end assemble couplings, leg, and base; then tighten.

(c) Screw **Reading Section 20GX** and 1 in. x 2 in. **Nipple** into **Bottom Housing 20A** and tighten, facing glass window away from center pipe. Slide remaining 3/4 in. **Pipe 3** through top housing bracket and all pipe brackets and tighten into top of **Reading Section 20GX.** Put **Elbow 20H** on other end.

(d) Turn gauge assembly so set screws on brackets face up. Check that gauge is not twisted. Set **Top Bracket 20D** three inches from **Top Housing 20C.** Space all other brackets equally and tighten all set screws.

STEP 3

(a) Remove covers from **Housings 20A** and **20C** and **Elbow 20H.** Detach outer end of measuring tape, insert pencil in center of cardboard spool, and starting at **Elbow 20H** push measuring tape down through **Pipe 3** and **Reading Section 20GX.** Tapes are coiled with numbers facing center of cardboard spool. (Note: the counterweight end is on the outside of the tape spool. The float end is on the inside of the tape spool.) When tape emerges from lower housing insert end in center pipe and slide through pipe and upper housing. (On gauges longer than 20 ft. it is advisable to pull tape through gauge with a fish tape.)

(b) Position tape so gauge reading is 0 ft. 1-1/4 in. and lock tape with wooden wedge pushed into pipe through **Elbow 20H.** Remove brass plug on side of **Top Housing 20C.** Measure amount of tape needed to go over pulley and just reach into 1 in. pipe and cut off surplus tape. Attach counterweight to tape by forcing Allen set screw through tape in the slot. Remove shaft and pulley and insert counterweight into 1 in. pipe. Replace pulley, shaft, and plug. Replace covers on **Housings 20A** and **20C.** Pull up slack tape in gauge and fasten tape spool to side of elbow with masking tape.

STEP 4

(a) Attach rope to center pipe between **Top Housing 20C** and **Hook Bracket 20D.** Gauge is now ready to hoist into place.

(b) Before hoisting gauge, drill 1/4 in. hole 6-1/2 inches from edge of tank and tap with 5/16 in. tap. Bolt tank clamp to tank. Hoist gauge into position and adjust hook bracket so it carries the weight of the gauge. Hook tank clamp bolts in slots in bracket and tighten, pulling securely against tank.

(c) Gauge connection should be near manhole and 12 inches or more from edge of tank. If no connections are available, cut 1-1/8 in. hole in tank roof with hole saw in brace. Attach **Elbow 20H** with 3/4 in. **Tank Nipple 5,** and connect **Pipe 4** to other elbow at top of gauge.

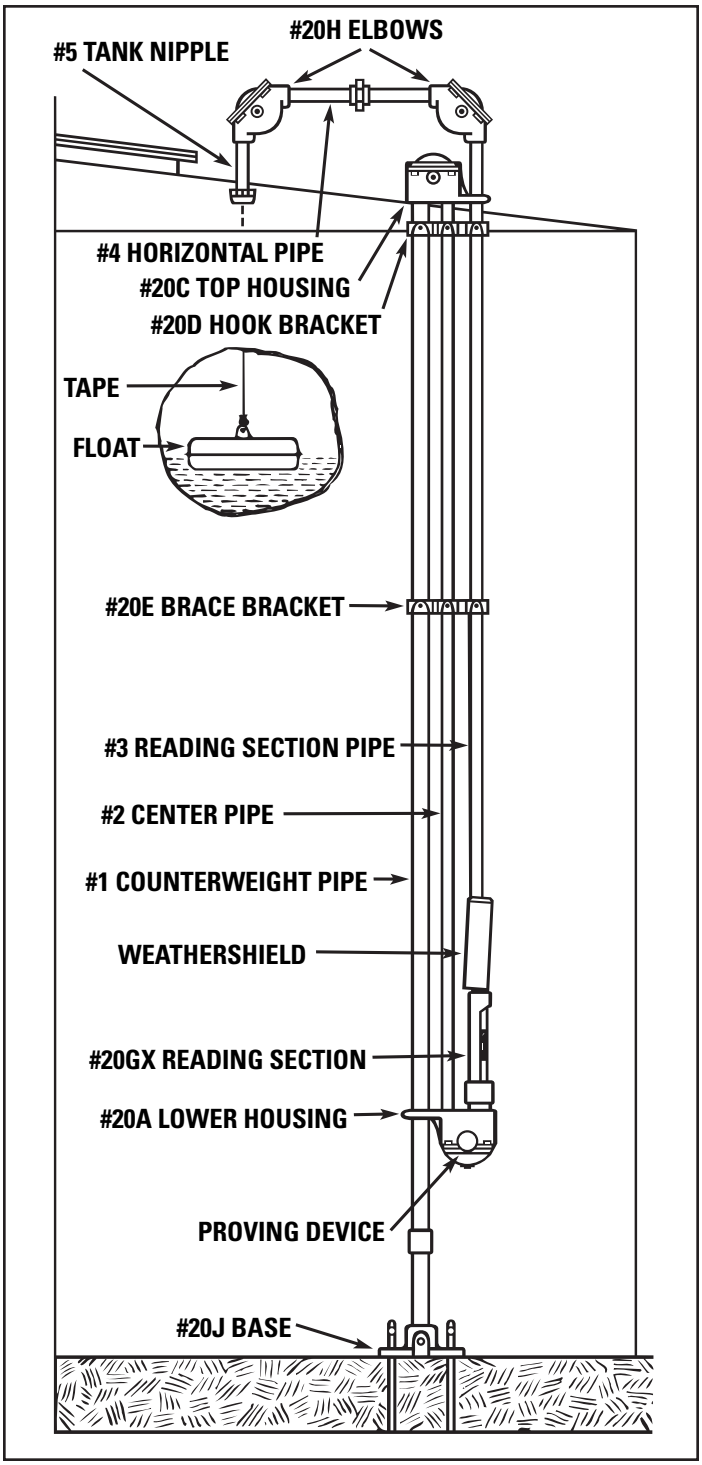
STEP 5

(a) Unfasten tape spool and allow counterweight to pull tape slowly into gauge until weight reaches bottom of **Pipe 1.** Unroll balance of tape, detach from spool and thread through elbows and **Pipes 4** and **5** into tank.

(b) Reach into tank through manhole and pull out 3 or 4 ft. of tape and lock at elbow with wooden wedge. Mark tape with pencil at point where it emerges inside tank. Loosen tape clamp in float, insert tape, pull up to pencil mark, and tighten clamp securely. Lower float to liquid level and read gauge. Measure liquid in tank by hand and compare with gauge reading. If gauge reading is off, adjust tape by moving in or out of tape clamp the required distance to

make reading correct. When gauge reads correctly, trim off all but 1 ft. of surplus tape and coil balance through tape clamp. *It is important to trim tape to keep it from interfering with action of swivel on top of float.*

(c) Replace all covers on elbows and housings and check that all connections are tight. Installation is now completed and Gauge is ready for use.



PROVING DEVICE

Tokheim Gauges are completely automatic and readings are accurate at all times. If a second reading is required push proving device knob in, turn back and forth and release and gauge will return to its proper reading.

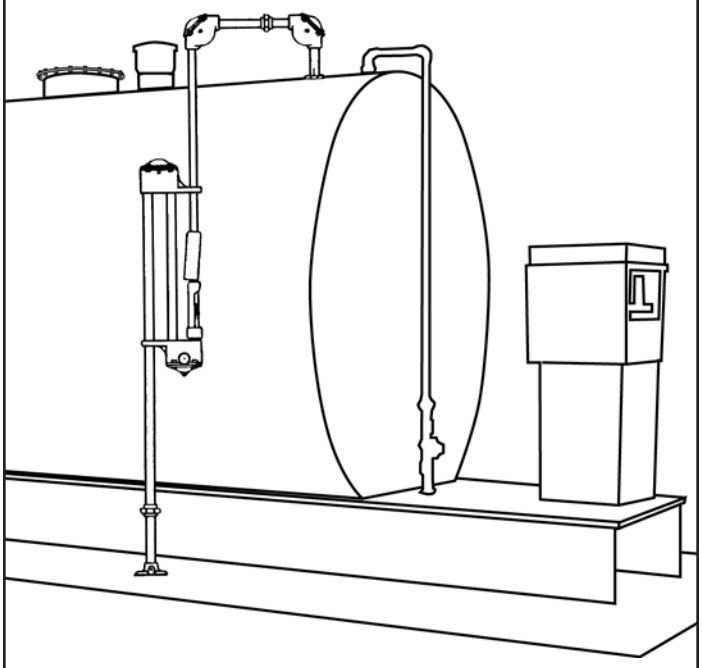
MAINTENANCE OF TOKHEIM TANK GAUGES

Tokheim Gauges will give years of dependable service with a minimum of care. The cover on the lower housing is provided with a brass plug which should be removed occasionally to check for accumulated condensation. Be sure to replace plug and tighten. Gauge base is also provided with a plug for the same purpose.

When necessary to clean tape remove cover on lower housing, lock tape on one side with wooden wedge, pull tape down and clean with soft cloth dampened in naphtha and return tape into gauge. Move wooden wedge to other side of housing and repeat cleaning process on balance of tape, and replace cover.

Caution – Never use an abrasive on tape figures.

HORIZONTAL TANKS



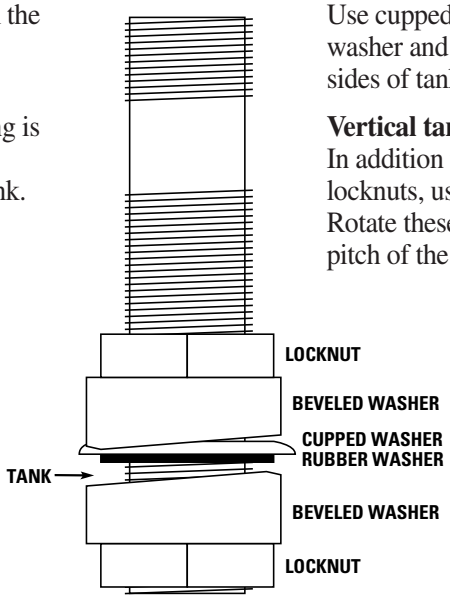
Tokheim No. 20 Gauges for horizontal tanks differ from those on vertical tanks in that Top Hook Bracket 20D is not used. Gauge should be fastened to tank or tank supports with wire or perforated hanger strap.

Tokheim Tank Nipple #5

Always avoid making a gauge connection to the manhole cover. Proper location is 6" to 8" from the manhole to be able to conveniently connect the measuring tape to the float.

Where no pipe flange or welded-in pipe coupling is provided, it is best to provide a gauge pipe connection by cutting a hole in the top of the tank.

For tank connection, use the Tank Nipple #5 assembly as illustrated here.



All tanks:
Use cupped sheet-metal washer with packing between washer and tank body. Tighten with locknuts on both sides of tank.

Vertical tank with a pitched roof:
In addition to the cupped washer, packing, and locknuts, use beveled washers on each side of the tank. Rotate these beveled washers to correspond with the pitch of the roof.

The Tokheim Company has manufactured quality storage tank equipment since 1898.

Liquid Level Tank Gauges

Breather Vents

Flame Arresters
(2, 3, 4, 6, 8, & 10 inch sizes)

Pressure Vacuum Valves

Overfill Alarms

Flame Arrester & Breather Vent Combinations
(2, 4, 6, 8, & 10 inch sizes)

THE TOKHEIM COMPANY

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