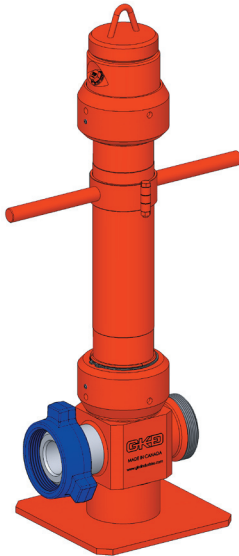
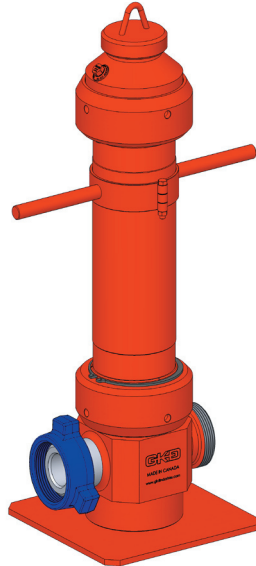


BALL INJECTOR

MODEL 201



MODEL 202



FUNCTIONALITY

- DNV Type Approval for Model 201 Ball Injector
- The GKD Ball Injector, also known as a “Ball Gun” or a “Ball Sealer”, originated in the late 1970’s in response to requests from some of the leading well stimulation companies in Western Canada. The GKD Ball Injector and its predecessors have been successfully deployed in oil fields around the world since the early 1980’s. The most recent version of the GKD Ball Injector has been in operation since 1995.
- The GKD Ball Injector is used to inject balls together with a pressurized acid solution into the well. The balls are carried down to the perforations by the acid at the rate that the acid is being pumped. The balls follow the flow towards the open perforations until they seal against the open perforations, at which point the acid and an increased pressure is applied against the perforations that are not open or not fully open. This reaction opens more perforations to the acid. This can be done throughout the acid job until all the perforations are open and all the perforation tunnels have been acidized, generally resulting in better flowback and increased inflow from the reservoir. When the acidization process is complete, the injected balls float to the top of the well if positively buoyant balls are used or sink to the bottom if negatively buoyant balls are used.

OPERATION

- The balls can be injected by manually turning the Ball Injector’s vane shaft with the supplied hand crank thereby releasing balls into the pressurized stream of acidic solution. However, because this pressurized stream can reach pressures of up to 15,000 PSI, most service companies use the GKD Ball Injector with the remote controlled Motor Drive Package for safer operation.

MAIN BODY SPECIFICATIONS

- Standard base configurations: Fig. 1502, Fig. 1002 and Fig. 602 in 2”, 3” and 4” sizes, optional sizes are available and detachable wing nuts are included
- Standard equipment: Lifting Cap, Carrying Handle, Hand Crank and Spanner, Operating Service Manual and Documentation Package consisting of hydrostatic pressure test graph and material certifications for all critical components

	Model 201	Model 202
Ball capacity	200 balls 7/8” diameter	150 balls 1-1/4” diameter
Working pressure	15 000 PSI cwp (1)	15 000 PSI cwp (1)
Working temperature	-20C (-4F) to + 60C (+140F)	-20C (-4F) to + 60C (+140F)
Hand crank torque	18-22 lb-ft @ 15 000 PSI	18-22 lb-ft @ 15 000 PSI
Body dimensions (2)	43-7/8” (1114 mm) A x 14” (356 mm) B x 14” (356 mm) C	45-1/2” (1156 mm) A x 17” (432 mm) B x 17” (432 mm) C
Shipping weight (2)	300 lb (136kg)	500lb (227 kg)

Notes: (1) maximum cold working pressure limited to lowest working pressure of base connections, (2) body dimensions and weights based on 3” Fig. 1502 base with Platform and Lifting Cap installed.

