

## Regular and Senior Tubing Perforators

A mechanical tubing punch powered by an optimized propellant capsule which can be functioned via slickline or electric line.

When the call is for a communication port between the production tubing and the annulus, *the Regular or Senior Perforator* is Kinley's answer. The Kinley Perforators use a small capsule of propellant to stroke a mechanical punch through the wall of the pipe. The punch creates a perfectly round hole of the desired diameter. The punch can be replaced with a self-seating metal orifice to limit the erosive effect of flowing fluids. Alternatively, a check valve insert assembly can replace the punch. The check valve remains in the wall of the pipe to allow for a temporary controlled injection point for gas lift operations. In either case, there is no damage to the casing beyond the limited stroke of the punch action.

### Applications:

- Circulate and kill a well
- Install inexpensive gas lift or chemical injection
- Circulate out annular sand bridges
- Open injection point for retrievable pack-off gas lift valves
- Operate plunger-lift installations
- Open alternative zones when sliding sleeves cannot function
- Drain tubing to prevent pulling wet string

Features:	Benefits:
Slickline operated	Expensive electric lines and surface read-out equipment are not required, Virtually any conveyance method available at wellsite can be used
Lower threaded connection	Spacers and special profiles can be used to position the instrument with accuracy
Check valve insert	Temporarily substitutes expensive gas-lift mandrel
Tungsten carbide ball	Check valve balls are very durable and dependable
Pre-set hole shape and size	Allows precise calculation of pumping rates, volume and pressure in any circulating application
Punch pre-set excursion	Effectively avoids damaging casing



## Regular Perforators

Technical Specifications:		
Minimum Drift <sup>(1)</sup>	1.901"	(48.3mm)
	<b>(2<sup>3</sup>/<sub>8</sub>" Tubing, 4.7 lbs/ft)</b>	
Maximum I.D. <sup>(1)(2)</sup>	4.090"	(103.9mm)
	<b>(4<sup>1</sup>/<sub>2</sub>" Tubing, 9.5 lbs/ft)</b>	
Service	H <sub>2</sub> S, CO <sub>2</sub>	
Tool Max. Working Pressure	15,000 Psi	(103.4 MPa)
Tensile Strength	20,000 lbs	(9,072 Kg)
Max. Working Temperature	310°F	(154.4°C)

<sup>(1)</sup>Specially machined equipment available on request

<sup>(2)</sup>Limited to punching, for inserts an check valves, use the *Senior Power Perforator*.

## Senior Perforators

Technical Specifications:		
Minimum Drift <sup>(1)</sup>	2.797"	(71.0mm)
	<b>(3<sup>1</sup>/<sub>2</sub>" Tubing, 10.3 lbs/ft)</b>	
Maximum I.D. <sup>(1)</sup>	4.832"	(124.3mm)
	<b>(5<sup>1</sup>/<sub>2</sub>" Tubing, 17.0 lbs/ft)</b>	
Service	H <sub>2</sub> S, CO <sub>2</sub>	
Tool Max. Working Pressure	15,000 Psi	(103.4 MPa)
Tensile Strength	20,000 lbs	(9,072 Kg)
Max. Working Temperature	310°F	(154.4°C)

<sup>(1)</sup>Specially machined equipment available on request