

## Hydraulic Actuated Firing Device

The Expro Hydraulic Actuator is primarily designed for perforating in conjunction with coil tubing or snubbing operations. It is available as 1 1/16 and 3 1/8 sizes.

The device provides maximum safety to rig personnel during make-up and retrieval and is pressure balanced while running into the well. This feature allows the completion fluids to be circulated or displaced prior to perforating. The device is actuated by circulating a stainless steel ball onto a polished seat and simultaneously increasing the coil tubing/tubing pressure to achieve the required differential pressure across the actuating piston. When the actuating piston is sheared, the piston is driven into an Expro Safety Impact Firing Device and the ballistics are detonated. After shearing/perforating, the device opens a port in the outer housing and the well can once again be circulated.

### Specifications:

	1 1/16 size	3 1/8 size
Tubing thread	1.315 NU 10 RD PIN UP	2 3/8 EU 8 RD Box UP
Diameter	1.688 in (42.8 mm)	3.125 in (79.3mm)
MIN/MAX operating pressure of aux firing device	500 PSI / 8,000 PSI   2,000 PSI / 20,000 PSI	500 PSI/8,000 PSI   2,000 PSI/20,000 PSI
Seal rating	10,000 PSI STD / 20,000 PSI HI-TEMP	10,000 PSI STD / 20,000 PSI HI-TEMP
Tensile strength	40,000 lbs	170,000 lbs
Shear pin value	#1,050 PSI per pin @ 70°F	*550 PSI per pin 70°F

# Differential pressure -3 shear pins require approximately 3,150 PSI differential to shear @ 70°F

\* Differential pressure -6 shear pins require approximately 3,000 PSI differential to shear @ 70°F

