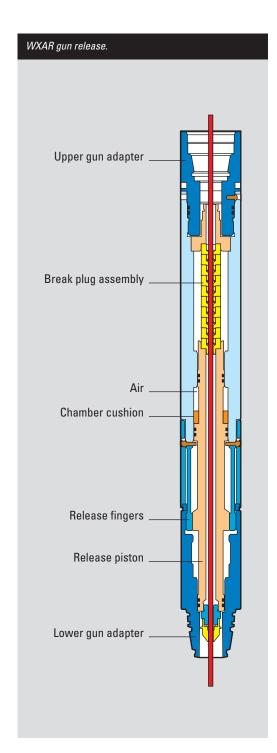
WXAR Automatic Gun Release with X-Tools Technology

Schlumberger



The WXAR automatic gun release for wireline, tubing, or coiled tubing incorporates
X-Tools* technology. It automatically drops
perforating guns at the instant of detonation.
The firing head initiates detonation of the
detonating cord, which breaks the frangible
break plugs. The hydrostatic pressure then
forces the release piston upward, freeing the
fingers holding the upper and lower parts of
the WXAR together. This fast-releasing action
keeps formation sand and debris from building up around the perforating guns, blocking
the annulus, and possibly preventing the guns
from dropping to the bottom of the well.

Perforate long intervals at underbalanced pressure without killing the well

The main application of the WXAR is to extend the length of the gun strings that can be conveyed into the well. These gun strings can be a lot longer than the available well-head pressure lubricator could accommodate. By using the WXAR, long intervals can be perforated at underbalanced pressure without killing the well.

Multiple, flexible configurations

The WXAR is useful in many configurations, can be adapted to HSD* High Shot Density and through-tubing gun systems, and be configured with many of the Schlumberger firing systems. It can also be placed between guns, thereby shortening the length of the gun string dropped in the rathole. When used with wireline, enough guns can be left attached to the string so that sufficient weight still allows the wireline to be pulled from the hole under pressure.

The lower gun adapter of the WXAR incorporates an internal "GS" fishing profile for fishing the gun strings. Long gun strings can therefore be equipped with multiple WXAR releases and spent guns can be retrieved using conventional slickline fishing techniques.

Applications

- Permanent completions
- Long perforating intervals with limited wellhead lubricator length
- Reperforating or extending existing perforation intervals
- Wireline and through-tubing perforating

Benefits

- Gun sticking prevented by fast dropoff
- Perforating underbalanced without killing the well

Features

- Wireline or CT string not affected by mechanical shock
- Internal GS fishing profile accessible after drop
- Use with HSD and throughtubing guns, electric line
 S.A.F.E.* firing systems, CT firing heads, and eFire* head
- Place between guns to reduce gun string length
- Common technology used in all X-Tools perforating gunactivated completion tools

Specifications	
OD, mm [in]	77.7 [3.06]
Tensile strength [†] , daN [lbf]	31,693 [71,250]
Pressure rating, MPa [psi]	138 [20,000]
Min. pressure to actuate, MPa [psi]	2.1 [300]
Min. weight below to dropoff (weight in air), kg [lbm]	91 [200]
Temperature rating, degC [degF]	204 [400]
Weight (in air), kg [lbm]	23 [50]
Fishing tool [‡]	2½-in type GS

[†] Tensile strength rating at 75% min. yield.

 $[\]ensuremath{^{\ddagger}}\mbox{Top}$ and bottom connection can be made to fit specific application.