Automatic Gun Release



APPLICATIONS

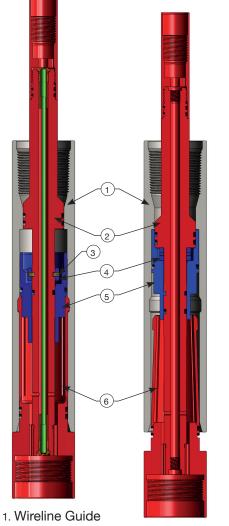
- TCP perforating
- Permanent completions
- Well testing

FEATURES

- Fast activation upon gun detonation
- · Allows for fast wellbore cleanup
- · Compatible with all Hunting TCP firing systems
- · Slick fishing profile

BENEFITS

- No need for wireline or slickline release tools
- · Reduces chances of sanding guns
- · Gun can be fished in one run



- 2. Mandrel
- 3. Brass Retainer Screws
- 4. Retainer Ring
- 5. Shifting Sleeve

6. Finger Release Sub

AUTOMATIC GUN RELEASE HARDWARE SPECIFICATIONS

The Automatic Gun Release is designed to drop a gun string into the rathole immediately after firing.

Dropping the gun string immediately after firing has several advantages over deploying slickline shifting tools or pressure activated release tools. These include: avoiding the gun string sanding in when perforating weak sands, allowing efficient post perforation cleanup in permanent completions and eliminating the complications of dropping guns in highly deviated wells.

The pressure created by a gun after detonation causes the shifting sleeve to move and come in contact with the retainer ring. The brass retainer screws shear and allow the shifting sleeve and retainer ring to continue moving upwards freeing the finger release sub. This allows free movement of the mandrel as well. The chamber of atmospheric pressure between the mandrel and shifting sleeve, causes the mandrel to be sucked into the shifting sleeve which effectively pushes the gun out of the release sub. This dual action allows for minimal gun weight to successfully release the assembly.

The gun string and firing head then drop, exposing the wireline entry guide. The tubing pressure and rathole pressure must be equalized such that the guns string does not become hydraulically locked into the release sub.

The dropped gun string and firing head assembly has a slick fishing profile allowing it to be fished at a later time.

Tubing Size (in)[mm]	1.900 [48] EUE	2-3/8 [60] EUE	2-7/8 [68] EUE	3-1/2 [89] EUE
Assembly Part Number	AGNR-2500-000**	AGNR-3063-000**	AGNR-3670-000**	AGNR-4500-000**
O.D. (in)[mm]	2.50 [64]	3.063 [78]	3.670 [93]	4.50 [114]
Makeup Length (ft)[m]	1.46 [0.44]	1.46 [0.44]	1.46 [0.44]	1.50 [0.46]
Min. I.D. After Release (in)[mm]	1.75 [44]	2.00 [51]	2.50 [93]	3.00 [76]
Entry Guide Length (ft)[m]	1.19 [0.36]	1.19 [0.36]	1.19 [0.36]	1.23 [0.37]
Max. 100 Hour Temperature Rating (°F)[°C]†	400 [204]	400 [204]	400 [204]	400 [204]
Max. Operating Pressure (psi)[MPa] [‡]	20,000 [138]	20,000 [138]	20,000 [138]	20,000 [138]
Max. Differential Pressure (psi)[MPa]	13,000 [90]	15,000 [103]	15,000 [103]	9,500 [66]
Min. Gun Weight Required (lbm)[kg]	50 [23]	100 [45]	150 [68]	200 [91]
Max. Tension After Release (lbf)[kN]	125,000 [556	230,000 [1,023]	320,000 [1,423]	300,000 [1,334]
Max. Strength of Fingers (lbf)[kN]	65,000 [289]	85,000 [378]	110,000 [489]	150,000 [667]
Redress Kit Part Number	AGNR-2500-000**-KIT	AGNR-3063-000**-KIT	AGNR-3670-000**-KIT	AGNR-4500-000**-KIT

** Use "HT" for high temperature operations (above 325°F (163°C))

⁺Hardware only. Viton O-rings need to be used above 325°F (163°C)

[‡]Backup O-rings required above 13,000psi (90MPa). Kit AGNR-xxxx-000-BUKIT needs to be ordered separately