

Clean Annular Perforating System

A flexible system with a range of entrance holes and shot densities

Applications

- Plug and abandonment (P&A) wells
- Single and multiple[†] casings
- Perforate, wash, and cement (PWC) operations with single or dual cups
- Perforate, jet, and cement (PJC) operations

Benefits

- Improved PWC and PJC effectiveness and efficiency
- Reduced mobilization times
- Optimized entrance holes
- High shot density

Features

- Fully disposable system
- Modular centralization system



CAP system.

Flexibility for entrance holes and area open to flow

The clean annular perforating (CAP) system is a flexible solution for single- and multicasing applications. By controlling standoff and charge selection, the disposable perforating system enables you to penetrate one or more casings reliably and effectively. With the system's range of entrance hole and shot density options, you can tailor the system design to your objectives, including washing cups or jetting.

Efficiency driven by a single trip in the well

The CAP system can be combined with wash tools and the Schlumberger explosive automatic gun release (SXAR) system to drop the perforating guns in the well immediately after firing. This ensures operations can continue without the need to retrieve guns to surface.

Performance assured with unique fin modularity

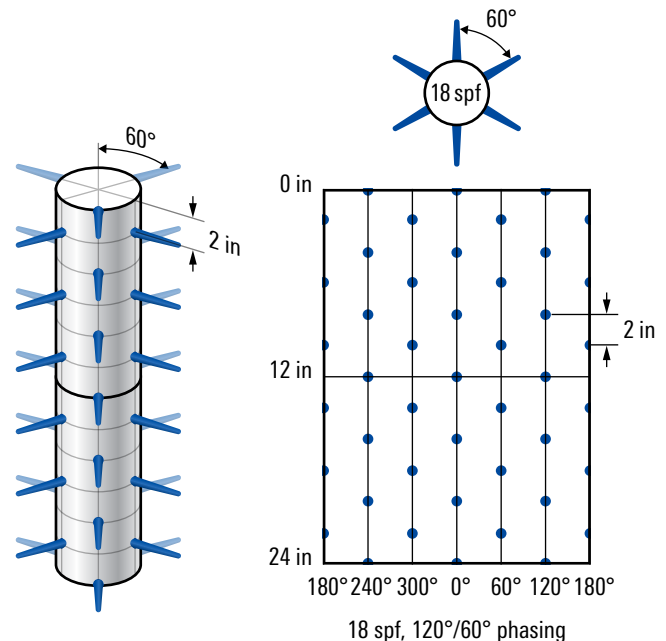
The CAP system utilizes a modular fin that ensures centralization of the 7-in guns in any casing size from 7 in to 13³/₈ in. This enables hole uniformity even in deviated wells to ensure a more effective and efficient wash and cementing operation.

Reduced no-shot interval between guns

The CAP system provides a single adapter connection between guns to minimize the shot distance from gun to gun. This increases the efficiency of wash operations and enables uniform washing speed even when crossing blank casing spaces in the well.

Perforating system deliverability

The CAP system uses charges with 1.4D hazard classification, reducing mobilization times by utilizing air transportation.



Visualization of the shot pattern for 18-spf, 120°/60°-phasing perforating system.

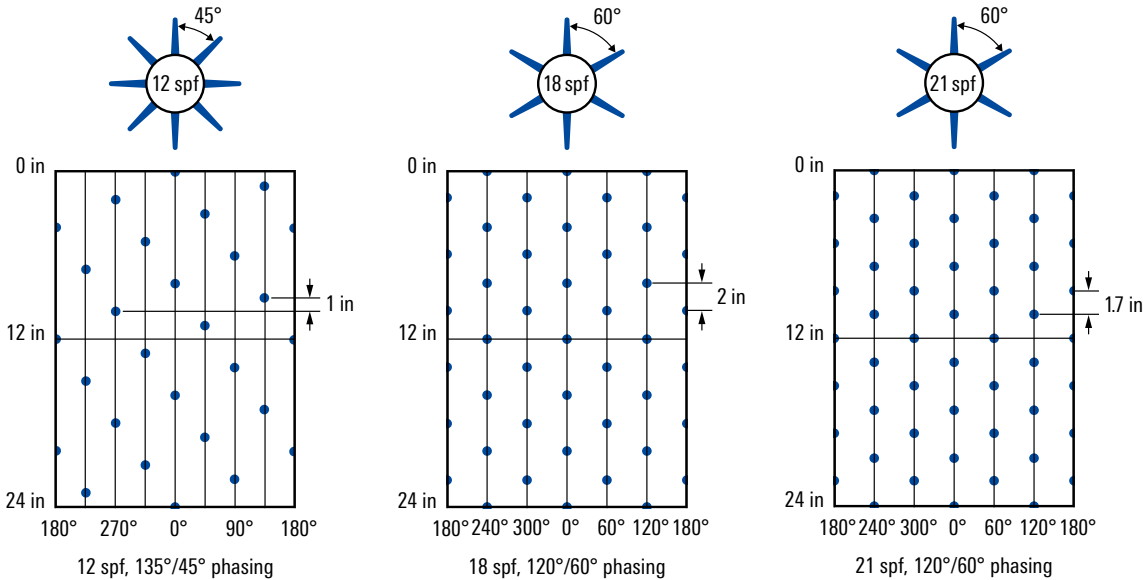
[†] Contact Schlumberger for more information on multiple casing applications.

CAP System

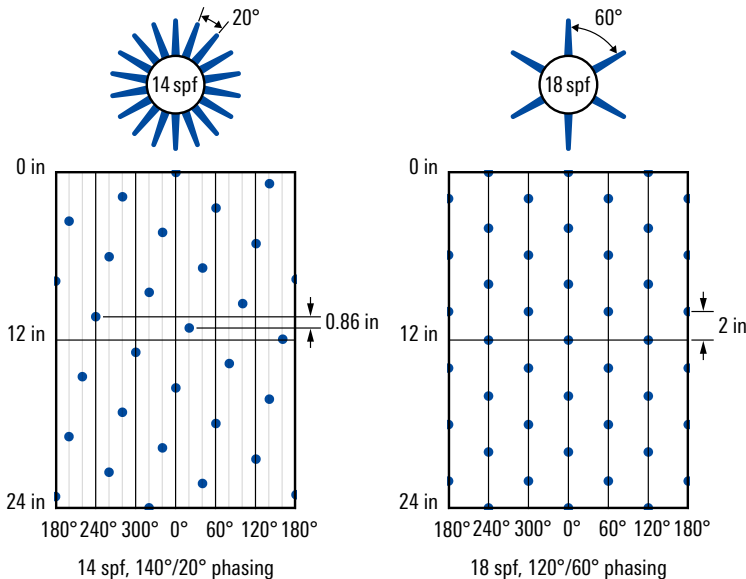
Single-Casing CAP System Specifications

Casing size, in	7		7 ⁵ / ₈		9 ⁵ / ₈		10 ³ / ₄		13 ³ / ₈	
Application	PWC	PJC	PWC	PJC	PWC	PJC	PWC	PJC	PWC	PJC
Gun OD, in [mm]	4.5 [114.3]	4.72 [119.89]	4.5 [114.3]	4.72 [119.89]	7 [177.8]	7 [177.8]	7 [177.8]	7 [177.8]	7 [177.8]	7 [177.8]
Shot density, shots per foot (spf)	12	21	12	18	12	18	12	18	12	18
Phasing, °	135/45	120/60	135/45	120/60	135/45	120/60	135/45	120/60	135/45	120/60
Charge model	S3106 RDX	PF4621 RDX	PF4621 RDX	CPM4718 HMX	PJ4505 RDX	CP7018 RDX	HJ4505 RDX	CP7018 RDX	64C CP RDX	CP7018 RDX
Part number	101287482	H447540	H447540	101278663	101244307	103252722	H447660	103252722	H447017	103252722
Entrance hole, in [mm]	0.4 [10.16]	0.83 [21.08]	0.5 [12.7]	0.75 [19.05]	0.45 [11.43]	1.02 [25.91]	0.45 [11.43]	0.96 [24.38]	0.47 [11.94]	0.54 [13.72]
Pressure rating, psi [MPa]	11,000 [75]	11,000 to 17,000 [75 to 117]	11,000 [75.8]	18,000 [124]	11,500 [79]	10,000 [68]	11,500 [79]	10,000 [68]	11,500 [79]	10,000 [68]
Temperature rating at 1 h, degF [degC]	340 [171]	340 [171]	340 [171]	400 [204]	340 [171]	340 [171]	340 [171]	340 [171]	340 [171]	340 [171]

All specifications are subject to change without notice.



Shot patterns for the 4.5- and 4.72-in-OD perforating systems.



Shot patterns for the 7-in-OD perforating system.

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