

Well Construction

Cementing Technologies

Universal Plug Launcher

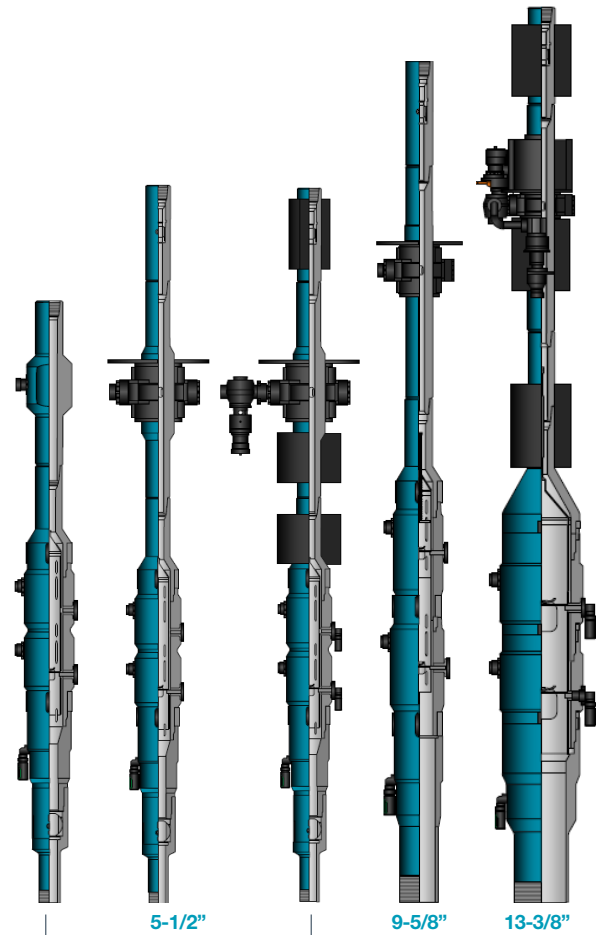
Expro's Universal Plug Launcher is ideal for rotating while cementing casing from 3-1/2 in. to 14 in. Specifically designed for the shale play market, this tool combines the technology developed and refined for deep-water applications into a smaller, lighter package for use on land and shelf rigs.

Features

- Optional high-pressure swivel facilitates rotation while cementing; widely accepted as best practice among experienced shale play operators and cementing experts.
- Inspection ports enable on-site visual confirmation of loaded wiper plugs.
- "Flow-around" cage design centralizes and minimizes differential pressure across wiper plugs.
- Isolation valve above tool isolates top drive during cementing operations.
- For 5-1/2" only - Isolation valve below tool completely isolates plug launcher should the need arise.
- Industry-exclusive LED tattle-tale, effective in all weather conditions and provides confirmation of plug/ball/dart release from tool.
- 5-1/2", 9-5/8" and 13-3/8" are modular designs capable of dropping multiple plugs.
- Ability to quickly reload the head on location.

Benefits

- Plug Launcher arrives on-site pre-loaded with wiper plugs and pressure tested, saving valuable rig time.
- Optimized time management and wellbore fluid conditioning with quick and easy tool rig-up and rig-down.
- Improved well isolation which equates to safer working conditions.
- Reduced likelihood of costly and hazardous remediation for fluid migration during primary cementing operations.
- Optional wireless, remote-operated, "on-the-fly plug/dart/ball launching, eliminates the need to stop pumping, reciprocating, and/or rotating.
- Optional wireless, remote-operated features eliminate the number of riding belt trips above the rig floor, improving safety.
- Viewports allows for pre-checks of darts and plugs and secondary means of launch confirmation.
- Continuous wireless link monitoring; radio signal filtering blocks Wi-Fi and Bluetooth interference for increased reliability.
- Improved cement bond log (CBL) for well completion and production.
- Patented hold down rotating swivel for 9-5/8" and 13-3/8" holds negatively buoyant casing to rig floor.



Modular options

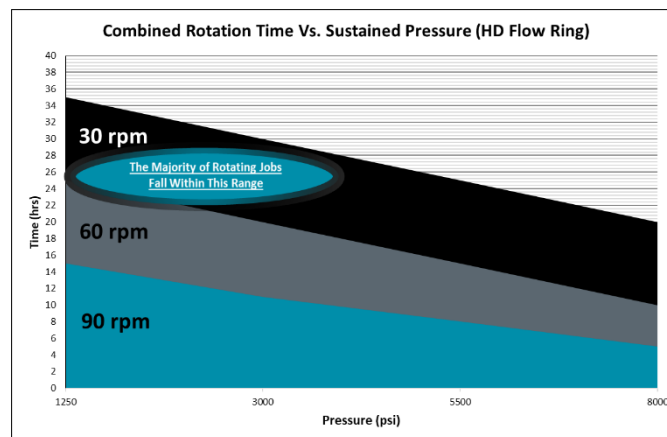
- Fully wireless automation package
- Side Entry Sub for non-rotating applications
- Isolation flange for wireline re-entry intervention
- Patented hold down rotating swivel for 9-5/8" and 13-3/8"
- Drop sleeve for launching wiper balls and plugs simultaneously

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Specifications			
Description	5-1/2" Gen-X	9-5/8" Gen-X	13-3/8" Gen-X
Maximum hookload (lbs) ¹	810,000 (1.5 SF)	2,270,000 (1.5 SF)	2,500,000 (1.5 SF)
Maximum working pressure (psi)	10,000	10,000	10,000
Torque-thru tool rating (ft-lbs)	50,000	100,000	100,000
Maximum pump rates (bpm)	35 (Top drive)	35 (Top drive)	35 (Top drive)
	15 (2" 1502)	15 (2" 1502)	15 (2" 1502)
Complete tool weight (lbs) ²	4,500	4,900	10,000
Wiper plug / dart range (in.)	3-1/2" - 5-1/2"	6" - 9-5/8"	9-5/8" - 14"
Wiper plug maximum length (in.) ³	24	18	18
Top connection	NC-50 (4-1/2" IF) box	6-5/8" FH box	6-5/8" FH box
		9-5/8" 53.5 ppf GB CDE pin	13-3/8" 72.0 ppf GB CDE pin
		7-5/8" 42.8 ppf GB CDE pin	11-3/4" 71.0 ppf GB CDE pin
		10-3/4" 65.7 ppf GB CDE pin	9-5/8" 53.5 ppf GB CDE pin
Bottom connection	5-1/2" 23.0 ppf GB CDE pin	7.0" 38.0 ppf GB CDE pin	



1. Maximum hookload may be limited by connection ratings
2. Includes triple body, HD flowing, wireless package, pups and crossovers
3. Can combine chambers to launch longer plugs