



THE COPPERHEAD – 10 SERIES

The Copperhead 10 Series is a rod pumping hydraulic jack with a 14,000lb lift capacity designed specifically for the production of shallow gas, CBM and marginal oil wells. As reservoir pressure decreases over time, velocity strings, plunger lifts and gas lift systems will lose their ability to lift fluids to surface. The Copperhead Series represents a low-cost solution to equip wells and remove significant volumes of fluid, offering a viable alternative to cost effectively extract the targeted resource.

APPLICATIONS

Permanent Applications	Temporary Applications
Shallow Gas (dewatering) Coal Bed Methane Light – Medium Crude	Re-entries Production Testing



SAVE ON INSTALLATION COSTS

Compact and Light Weight

- Low transportation costs
- Installs with the existing rig, flushby or small picker
- Very portable, easily moved
- No site preparation required
- No Ground Disturbance

Bolts Directly to the Wellhead

- No concrete pads
- No gravel pads
- No guidewires
- No misalignment issues
- Extremely quick installation

Versatile and Adaptable

- Adapts to any wellhead or powerskid unit
- Suitable for use with a rod rotator
- Bolts directly to vertical or slant wells

SAVE ON OPERATING COSTS

Variable Up and Down Stroke Speeds

- Can independently control up and down speeds
- Optimize production with the turn of a knob

Simple Operation and Adjustment

- Adjust stroke length in seconds
- Can put on and off tap in seconds
- Can increase/decrease speed in seconds

Patented Design

- Regen capable - can dramatically increase speed with a valve
- Low hydraulic pressure = long equipment lifetime

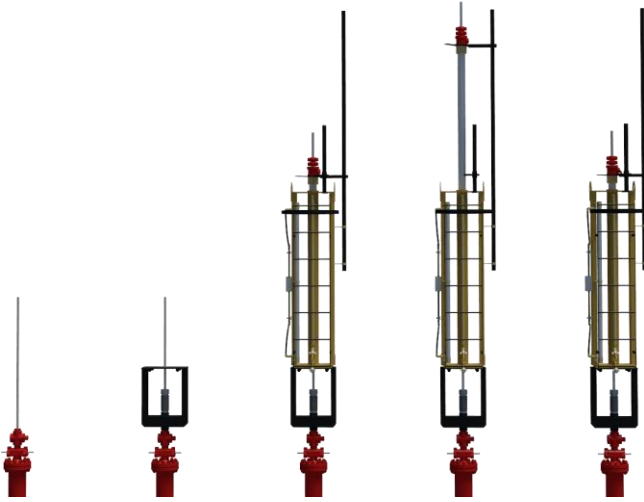
SAVE ON MAINTENANCE COSTS

- Can install/remove without downhole interference
- No open hole time
- Few moving parts

HOW IT WORKS

1) The Copperhead Series

- a) The rods and pump are run into the well in a similar manner as a rod and beam jack application.
- b) A Yolk Stand is screwed into the flow T.
- c) The pump jack is bolted onto the Yolk Stand.
- d) A connecting rod connects the polished rod downhole to the top of the pump jack.
- e) The Hydraulic Jack cycles up and down, lifting the rod string and reciprocating the downhole pump.



SPECIFICATIONS

Model	CH-10-64
Variable Stroke Length	0"-64"
Shipping Weight	600lbs
Vertical Unit Height	7'
Maximum Lift	14,300lbs
Prime Mover Power Source	Propane/Gas/Diesel Engine or Electric Motor
Installation	
Vertical Well	1-3 hours
Slant Well	1-3 hours
Installation Equipment Required	1 or 2 Tonne Crane
Strokes Per Minute Standard	5
Strokes Per Minute Enhanced*	8

*Requires Regen Circuit or N2 Counterbalance

Replaces conventional API models 114-143-64, 114-133-54, 80-119-64, 80-109-48 and anything below.



PRODUCTION CAPABILITIES

2) The Copperhead Series

64" Stroke with a 1.25" pump

CH-10-64	SPM>	1	2	3	4	5	6*	7*	8*
80% Efficiency in m³		1.5	3.0	4.4	5.9	7.4	8.9	10.4	11.9
80% Efficiency in bbls		9.3	18.5	27.8	37.1	46.4	55.6	64.9	74.2
100% Efficiency in m³		1.9	3.7	5.6	7.4	9.3	11.1	13.0	14.8
100% Efficiency in bbls		11.6	23.2	34.8	46.4	58.0	69.6	81.1	92.7

64" Stroke with a 1.5" pump

CH-10-64	SPM>	1	2	3	4	5	6*	7*	8*
80% Efficiency in m³		2.1	4.3	6.4	8.5	10.7	12.8	14.9	17.1
80% Efficiency in bbls		13.4	26.7	40.1	53.4	66.8	80.1	93.5	106.8
100% Efficiency in m³		2.7	5.3	8.0	10.7	13.3	16.0	18.7	21.4
100% Efficiency in bbls		16.7	33.4	50.1	66.8	83.5	100.2	116.9	133.5

64" Stroke with a 2" pump

CH-10-64	SPM>	1	2	3	4	5	6*	7*	8*
80% Efficiency in m³		3.8	7.6	11.4	15.2	19.0	22.8	26.6	30.37
80% Efficiency in bbls		23.7	47.5	71.2	95.0	118.7	142.5	116.2	189.9
100% Efficiency in m³		4.7	9.5	14.2	19.0	23.7	28.5	33.2	38.0
100% Efficiency in bbls		29.7	59.4	89.0	118.7	148.4	178.1	207.7	237.4

*Requires Regen Circuit or N2 Counterbalance

Key advantages over artificial lift systems

- Will continue to produce diminishing wells where velocity strings, gas lift, and plunger lifts fail
- Can put to well on and off tap in seconds to rid of gas lock
- Can optimize the surface equipment in seconds to match changes downhole
- Has a stroke efficiency advantage that will result in better downhole pump efficiency and higher production at a lower cost
- Have a proven ability to "pump off" liquid loaded gas wells where previous conventional units have failed

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