

EVOLUTION 4000



In keeping with its mission to provide dependable, technically superior products and services, Frank's has designed and produced the Evolution internal grip tong. The Evolution connects to and is powered by the top drive. The Evolution is compact in size and has the ability to double as a fill-up tool when used in conjunction with Frank's unique mud saver valve.

Since the Evolution is capable of making-up a variety of casing sizes, separate Evolution models have been designed.

Features and Advantages:

- Use of the Evolution improves rig floor safety and efficiency by eliminating the need for a power tong and hydraulic power unit.
- When combined with Frank's unique Horseshoe Elevators and Rotary Spiders, the Evolution can run casing strings with a minimal amount of rig floor personnel.
- Fast, safe and easy rig-up and removal.
- Fill-up provisions are integral to the tool.



Evolution, Horseshoe Elevator and Rotary Spider make for a safe rig floor operation

Frank's Evolution 4000 Specifications		
Weight*	2,300 lb _f	2,700 lb _f
Length	103 in.	120 in.

Specifications

		TAWG Tool Only Option			
PIPE RANGE	Pipe Range	4 1/2"	5 1/2"	7" - 9 5/8"	9 5/8"-13 3/8"
	Pipe Weight Max (PPF)	13.5	23	7" @ 38	9 5/8" @ 92.7
RATINGS	Hoist Rating (Tons)	100	150	250	275
	Torque Rating @ 0 Hoist (ft-lbs)	12,500	15,000	27,000	45,000
	Torque Rating @ Full Hoist (ft-lbs)	5,000	9,000	18,000	27,500
	Continuous Operating Speed (RPM)	Unlimited			
SHIPPING DIMENSIONS	Length	72 3/4"	77 3/4"	94 1/4"	94"
	Width	N/A			
	Height				
	Weight MGW (lbs)				
	Weight SWL (lbs)				
OPERATIONAL DIMENSIONS	Length Minimum	69 1/2"	74 1/2"	91"	90.5
	Length Maximum	72 3/4"	77 3/4"	94 1/4"	94"
	Width	14 1/4"		14 3/8"	
	Depth	N/A		N/A	
	Available Thread Compensation	3 1/4"		3 1/2"	
	Side to Side Joint Manipulation	N/A			
PRAYING MANTIS (LINK TILT)	Load Rating (Tons)	N/A			
	Reach From Well Center Minimum				
	Reach From Well Center Maximum				
	Adjustment Increments				
	Angle from Vertical Max				
FAC TOOL SPECS		4 1/2" - 5 1/2"		7" - 13 3/8"	
	Circulation Rate Max (BBL/min)	5		10	
	Temperature Max (°F)	200			
	Mud Circulation Pressure Max (psi)	3,500			

Nominal OD [in]	Weight per Foot [lbf/ft]	TAWG Hoist Rating	MAX String Length	TAWG Hoist Rating	Max String Length
				@ 1000psi Circ. Press.	
4.500	11.60	125	21,552	119	20,468
	13.50	125	18,519	125	18,499
5.500	17.00	200	23,530	141	16,470
	20.00	200	20,000	150	14,000
	23.00	200	17,390	150	12,170
7.000	23.00	250	21,739	234	20,355
	26.00	250	19,231	250	19,215
	29.00	250	17,241	250	17,223
7.625	29.70	250	16,835	231	15,585
8.625	24.00	250	20,833	224	18,688
	32.00	250	15,625	250	15,613
9.625	36.00	150	8,333	119	6,597

Nominal OD [in]	Weight per Foot [lbf/ft]	TAWG Hoist Rating	MAX String Length	TAWG Hoist Rating	Max String Length
				@ 1000psi Circ. Press.	
9.625	32.30	275	17,028	243	15,058
	36.00	275	15,278	275	15,267
	40.00	275	13,750	275	13,738
	43.50	275	12,644	275	12,630
	47.00	275	11,702	275	11,687
	53.50	275	10,280	275	10,263
13.375	61.00	275	9,016	211	6921
	68.00	275	8,088	212	6234
	72.00	275	7,639	213	5905