



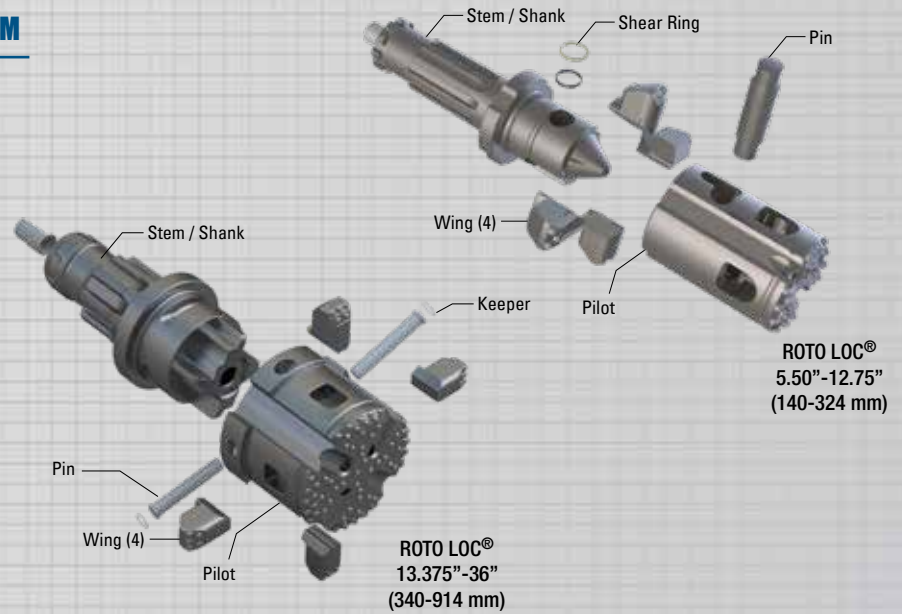
**ROTO LOC® UNDERREAMER**

# GENERAL INFORMATION

## ADVANCED DESIGN ROTO LOC® UNDERREAMER SYSTEM

### ROTO LOC® UNDERREAMER

- Sizes from 5.5"-36" (140-914 mm)
- Wings lock in place to cut full diameter through any rock formation
- No expensive starter casing teeth or ring bit left in the hole
- Easily retractable wings
- Straight holes in pinnacle limestone and karst, eliminating bent or broken casing.
- Positive locking wings can be used to retrieve casing.
- Simple, quick wing replacement.



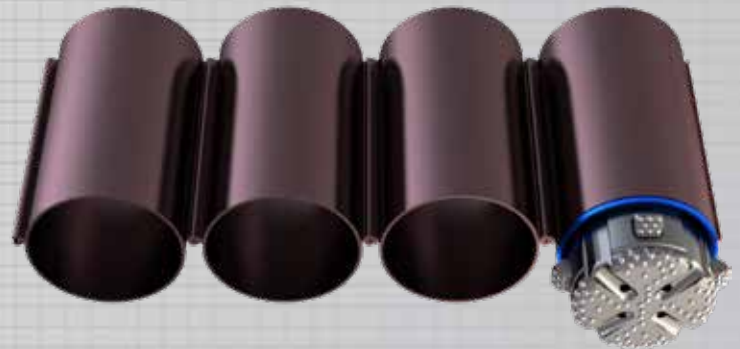
### ROTO LOC® FACE CONCEPTS

- Improved bit face design to enhance flushing of cuttings and improve productivity.

## ROTO LOC® ACCESSORIES

### ROTO LOC® O-PILE

- Long pilot nose to lead wings and guide tools through difficult formations, such as boulders and sloping rock.
- Oversized wings clear the path for the female interlock connector.
- Centralizing drive ring, designed to hold ROTO LOC in place, to ensure wings do not make contact with male interlock connector, as well, pull pipe pile along through all formations.
- Simple centralizing drive ring construction and installation, for vast cost savings!



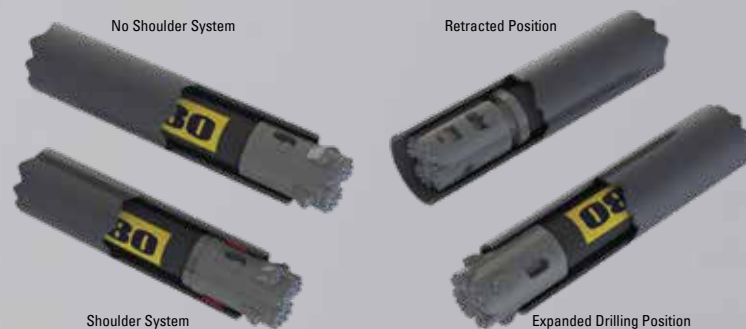
### CENTRALIZING CHUCK

- Centralizes and stabilizes tools while drilling, resulting in a straighter hole as well as less stress through tooling.

## HOW IT WORKS

As the pilot bit rotates and makes contact with the ground, the drive pin rotates into locked position and the wings are fully extended. While in this position, the wings are positively locked, ensuring that the pilot will drill a borehole to full expanded diameter until retracted. The long nose on the pilot leads/guides the tooling through sloping and karstic formations maintaining the desired angle and minimizing deviation. When the target is reached, with a slight bump backwards, the pin moves to the retract position allowing the wings to collapse in. At that point, the bit is retracted from the casing, leaving the casing behind.

ROTO LOC® is the ultimate underreamer system. It delivers straighter holes, minimizes casing friction which can cause casing failures, requires NO expensive casing teeth, and provides industry-leading penetration rates.



SYSTEM	SHANK	WINGS	WING DIAMETER		SHOULDER DIAMETER	APPLICABLE CASING OD	WALL THICKNESS MAX	WEIGHT
			EXPANDED	RETRACTED				
			IN (MM)	IN (MM)				
<b>NO DRIVE SHOE SYSTEM</b>								
ROC-0550RL	CR40, 340	2	5.86 (148.8)	4.38 (111.3)	N/A	5.500 (139.7)	.500 (12.7)	47 (22)
ROC-0600RL	CR40, 340	2	6.35 (161.3)	4.92 (125.0)	N/A	6.000 (152.4)	.500 (12.7)	58 (26)
ROC-0663RL	QL50	2	7.16 (181.9)	5.50 (139.7)	N/A	6.625 (168.3)	.500 (12.7)	71 (32)
ROC-0700RL	QL50, QL50HD, QL60, 360	2	7.75 (196.8)	5.94 (150.9)	N/A	7.000 (177.8)	.500 (12.7)	83 (38)
ROC-0763RL	QL60, QL60HD	2	8.34 (211.8)	6.52 (165.6)	N/A	7.625 (193.7)	.500 (12.7)	108 (49)
ROC-0863RL	QL60, QL60HD	4	9.35 (237.5)	7.50 (190.5)	N/A	8.625 (219.1)	.500 (12.7)	168 (76)
ROC-0963RL	QL80, 380	4	10.37 (263.4)	8.41 (213.6)	N/A	9.625 (244.5)	.545 (13.8)	231 (105)
ROC-1075RL	QL80	4	11.42 (290.1)	9.45 (240.0)	N/A	10.750 (273.1)	.595 (15.1)	250 (113)
ROC-1188RL	N100	4	12.54 (318.5)	10.17 (258.3)	N/A	11.875 (301.6)	.750 (19.1)	444 (201)
<b>DRIVE SHOE SYSTEM</b>								
ROC-0600RL	CR40, 340	2	6.35 (161.3)	4.92 (125.0)	5.27 (133.9)	6.000 (152.4)	.250 (6.4)	58 (26)
ROC-0663RL	QL50	2	7.16 (191.6)	5.50 (139.7)	6.25 (158.8)	6.625 (168.3)	.250 (6.4)	71 (32)
ROC-0963RLS	QL80, 380	4	10.37 (263.4)	7.92 (201.2)	8.75 (222.3)	9.625 (244.5)	.545 (13.8)	233 (106)
ROC-1075RLS	QL80	4	11.42 (290.1)	9.45 (240.0)	9.90 (251.5)	10.750 (273.1)	.350 (8.9)	306 (139)
ROC-1275RLS	N100	4	13.42 (340.9)	10.87 (276.1)	11.62 (295.2)	12.750 (323.9)	.625 (15.9)	521 (236)
ROC-1338RLS	N100	4	14.07 (357.4)	11.50 (292.1)	12.41 (315.2)	13.375 (339.7)	.750 (19.1)	500 (227)
ROC-1400RLS	N100	4	14.49 (368.0)	11.54 (293.1)	13.05 (331.5)	14.000 (355.6)	.750 (19.1)	510 (231)
ROC-1600RLS	QL120	4	16.88 (428.8)	14.07 (357.4)	15.13 (384.3)	16.000 (406.4)	.500 (12.7)	848 (385)
ROC-1800RLS	QL120	4	18.80 (477.5)	15.44 (392.2)	17.03 (432.6)	18.000 (457.2)	.845 (21.5)	998 (453)
ROC-2000RLS	QL200	4	20.87 (530.1)	17.63 (447.8)	19.06 (484.1)	20.000 (508.0)	.625 (15.9)	1353 (614)
ROC-2400RLS	QL200	4	24.88 (632.0)	21.20 (538.5)	22.81 (579.4)	24.000 (609.6)	.845 (21.5)	1868 (847)
ROC-3000RLS	CR260	4	30.87 (784.1)	26.90 (683.3)	28.80 (731.5)	30.000 (762.0)	1.000 (25.4)	4887 (2217)
ROC-3600RLS	CR260	6	36.90 (937.3)	33.88 (860.6)	34.82 (884.4)	36.000 (914.4)	1.000 (25.4)	5164 (2342)

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