



# ABRADO

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## MEDUSA® Section Milling and Cutting Technology

## PRODUCT DATA SHEET



### PRODUCT DESCRIPTION

Medusa® patented section milling and cutting technology was developed to meet the need for cost savings through less rig time by saving trips in the well. Medusa® enables fully stabilized single and multiple string section milling while ensuring no harm to outer casing strings regardless of casing eccentricities.

No matter what your section milling needs are, there is a tool in the Medusa® product line to get the job done

### MEDUSA® SECTION MILLING AND CUTTING

- Minimized trip completion = less time = cost savings
- Section Milling design for casing sizes 4 1/2" - 30" OD
- Casing severing design for casing sizes 4 1/2" - 72" OD+
- Single, dual and triple casing string section milling, pilot milling and under-reaming
- No harm to the outer casing strings when section milling
- Engineered design for light weight on bit, low torques & high RPM
- Operating parameters yield easy swarf management
- Medusa® blade lengths designed to minimize trips in well and mill long window lengths in excess of 200'
- Overall short BHA length (<10') compared to traditional section milling BHA's
- Medusa® can be custom designed to fit your specific well geometry
- Robust tool design and high tensile strength make the Medusa® deepwater ready
- Complete Medusa® Tool Family Specifications on back



## MEDUSA® Section Milling and Cutting Technology

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### Medusa® Product Family Specifications

#### MEDUSA® CT DUAL SECTION MILL

TOOL OD (inches)	Length (inches)	Minimum Casing OD (inches)	Maximum Casing OD (inches)	Milling Direction up/down/ both	Under Ream or Casing Scrub Max OD (inches)	Suggested Operating Parameters			Connection top	Deployed on
						weight/pull - Klbs	Rotation - RPM	Torque - ft/lbs		
3.500	60.38	4-1/2	5	Up	7.00	1	200-400	200-700	(2-3/8 PAC PIN UP)	Coiled tubing
4.125	61.38	5-1/2	7	Up	10.00	1.5	200-400	200-1000	(2-3/8 PAC PIN UP)	Coiled tubing

#### MEDUSA® VS DUAL SECTION MILL

TOOL OD (inches)	Length (inches)	Minimum Casing OD (inches)	Maximum Casing OD (inches)	Milling Direction up/down/ both	Under Ream or Casing Scrub Max OD (inches)	Suggested Operating Parameters			Connection top	Deployed on
						weight/pull - Klbs	Rotation - RPM	Torque - ft/lbs		
5.000	116.44	6-5/8	13-3/8	Both	16.375	1.5 - 2.5	100-130	500 -2000	(3-1/2 IF BOX UP)	Drill pipe
5.500	113.50	7	13-3/8	Both	17.25	3 - 5	100-130	500 -2000	(3-1/2 IF BOX UP)	Drill pipe
7.750	149.44	9-5/8	16	Both	21.25	3 - 5	100-130	500 -3000	(4-1/2 IF BOX UP)	Drill pipe
11.500	117.50	13-3/8	30	Both	31.50	3 - 5	100-130	500 -3000	(6-5/8" REG BOX UP)	Drill pipe

#### MEDUSA® CSM SECTION MILL

TOOL OD (inches)	Length (inches)	Minimum Casing OD (inches)	Maximum Casing OD (inches)	Milling Direction up/down/ both	Under Ream or Casing Scrub Max OD (inches)	Suggested Operating Parameters			Connection top	Deployed on
						weight/pull - Klbs	Rotation - RPM	Torque - ft/lbs		
5.000	116.44	6-5/8	7	Down	21.25	1.5 - 2.5	100-130	500 -2000	(3-1/2 IF BOX UP)	Drill pipe
5.500	105.00	7	9-5/8	Down	21.25	3-5	100-130	500 -2500	(3-1/2 IF BOX UP)	Drill pipe
7.750	145.00	8-5/8	11-3/4	Down	21.25	3 - 5	100-130	500 -3000	(4-1/2 IF BOX UP)	Drill pipe

#### MEDUSA® SCR CUTTER

TOOL OD (inches)	Length (inches)	Minimum Casing OD (inches)	Maximum Casing OD (inches)	Milling Direction up/down/ both	Under Ream or Casing Scrub Max OD (inches)	Suggested Operating Parameters			Connection top	Deployed on
						weight/pull - Klbs	Rotation - RPM	Torque - ft/lbs		
5.875	104.00	6 5/8	30	Both	66.00	3 - 5	100-130	500 -2000	(3-1/2 IF BOX UP)	Drill pipe
6.375	104.00	7 5/8	30	Both	66.00	3 - 5	100-130	500 -2000	(3-1/2 IF BOX UP)	Drill pipe
8.375	138.00	9-5/8	36	Both	80.00	3 - 5	100-130	500 -3000	(4-1/2 IF BOX UP)	Drill pipe
11.750	139.00	13-3/8	72 +	Both	108.00	3 - 5	100-130	500 -2000	(6-5/8" REG BOX UP)	Drill pipe