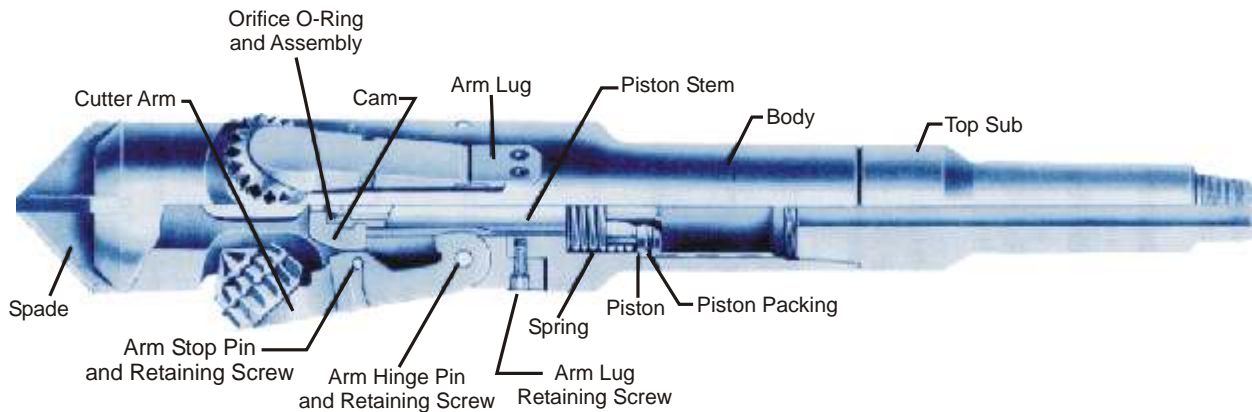




ROCK-TYPE UNDER REAMER

Description and Usage

It is the most rugged cone-type under-reamer built. It utilizes the largest cones and the largest bearing available, and can therefore under ream a hole nearly twice its own body diameter. A wide selection of cones allows the choice of the proper arms for every job. A variety of orifice sizes enables the operator to tailor performance to mud volume and conditions at the rig. The tool can be serviced on location, and the cutter arms can be quickly and easily changed on the rig floor. The tool design allows full volume circulation at all times.



Tool Series	Std. Opening Dia.	Optional Opening Dia.(s)	Body Dia.	Col-lapsed Dia.	Through Casing Dia x Wt. (Lbs./Ft.)	Fishing Neck Length	Fishing Neck Dia.	Overall Length	Tool Pin Conn. API Reg.	Weight Lbs. (Approx.)
3600	6	4 3/4-6 1/2	3 5/8	3 3/4	4 1/2 x 15	8	3 3/8	26 1/2	2 3/8	175
4500	6 1/2, 8 1/2	6-9	4 1/2	4 5/8	5 1/2 x 20	18	4 1/2	67	2 7/8	235
5700	11	8-11	5 3/4	5 7/8	7 x 38	18	4 3/4	76 1/2	3 1/2	380
5800	11	8-11	5 7/8	5 7/8	6 5/8 x 20	18	4 3/4	76 1/2	3 1/2	380
6000	12	11-12	6	6 1/8	7 x 26	18	4 3/4	78 1/2	3 1/2	380
6100	12	11-12	6 1/8	6 1/8	7 x 20	18	4 3/4	78 1/2	3 1/2	380
6200	12	11-13	6 1/4	6 1/4	7x17	18	4 3/4	78 1/2	3 1/2	380
7200	14	9-14	7 1/4	7 3/8	8 5/8 x 40	18	5 3/4	86	4 1/2	775
8200‡	16	10-16	8 1/4	8 3/8	9 5/8 x 47	18	5 3/4 or 8	89	4 1/2 or 6 5/8	920
9500‡	17 1/2	13-18	9 1/2	9 3/4	10 3/4 x 45	18	8	91	6 5/8	1160
11700‡	17 1/2	14 3/4 -22	11 3/4	12 1/4	13 3/8 x 68	20	8	91	6 5/8	1670
15000LP‡	26	17 1/2-30	14 3/4	14 3/4	16 x 75	20	8 or 9	97	6 5/8 or 7 5/8	2800
22000	32-40	32-40	22	22	24 1/2 x 113	20	9 or 10	124 1/4	7 5/8 or 8 5/8	5900