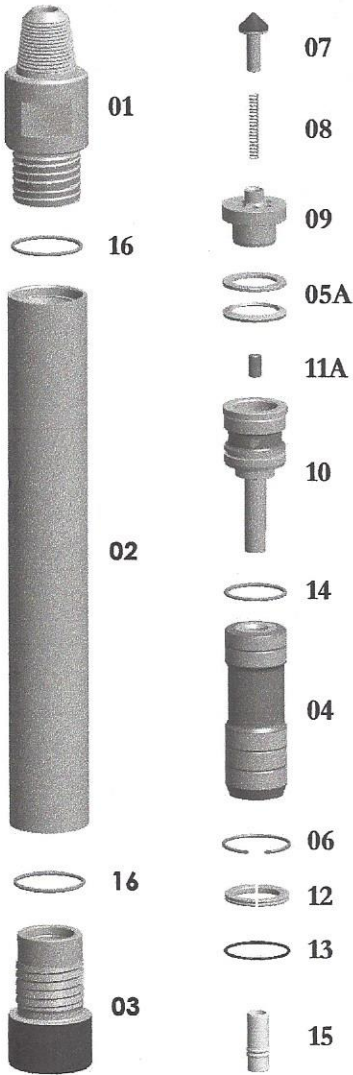


E5-STD-Hammer-TS

TAKES SD5 SHANKS

Thread Change/Pin
Box Thread
Special Flats

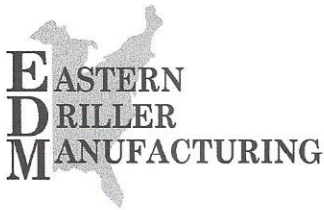
**SPECIAL BACKHEAD FEATURES—CALL OFFICE



Replacement Parts			
Hmr Part #	Description	Order #	Weight (lbs.)
5-01	Top Sub w/3-1/2" API REG PIN w/ O-Ring	E5-01	28.0
5-16	**Replacement O-Ring for Top Sub**	E5-16	0.1
5-02	Piston Case w/Retainer Ring	E5-02	48.0
5-06	**Replacement Retainer Ring for Piston Case**	E5-06	0.2
5-03	Driver Sub w/O-Ring	E5-03	15.0
5-16	**Replacement O-Ring for Driver Sub**	E5-16	0.1
5-04	Piston	E5-04	23.0
5-05A	Disc Spring & Spacer Set	E5-05A	0.5
5-07	Check Valve Dart	E5-07	1.5
5-08	Check Valve Dart Spring	E5-08	0.3
5-09	Check Valve Guide	E5-09	4.2
5-10	Rigid Valve w/O-Ring	E5-10	8.0
5-14	**Replacement O-Ring for Rigid Valve**	E5-14	0.2
5-11	Choke Set	E5-11	1.2
5-11A	Blank Choke	E5-11A	0.3
5-11B	1/8" Choke	E5-11B	0.3
5-11C	3/16" Choke	E5-11C	0.3
5-11D	1/4" Choke	E5-11D	0.3
5-12	Bit Retainer Ring w/O-Ring	E5-12	1.2
5-13	**Replacement O-Ring for Bit Retainer Ring**	E5-13	0.2
5-15	Foot Valve	E5-15	0.6
5-17	Brass Break-Out Ring (Optional)	E5-17	0.1

		Outside Diameter		Hammer Length Pin		Hammer Length Box		Bit Size Range			
		IN.	MM.	IN.	MM.	IN.	MM.	IN.	MM.		
Drill 5		4-9/16	116	38-29/32	988.2	42-21/32	1083.5	5-1/8-5-7/8	130-149		
Choke Size		150	10.3	200	13.8	250	17.2	300	20.7	350	24.1
IN.	MM.	PSI	BARS	PSI	BARS	PSI	BARS	PSI	BARS	PSI	BARS
Blank	Blank	260	7.36	365	10.34	475	13.45	585	16.57	700	19.82
1/8	3.18	285	8.07	390	11.04	515	14.58	635	17.98	760	21.52
3/16	4.76	315	8.92	430	12.18	565	16.00	690	19.54	825	23.36
1/4	6.35	340	9.63	455	12.86	620	17.56	760	21.52	910	25.77
5/16	7.94	410	11.61	555	15.72	710	20.11	860	24.36	1020	28.89

The above air charts are based upon ideal conditions, your results may vary.



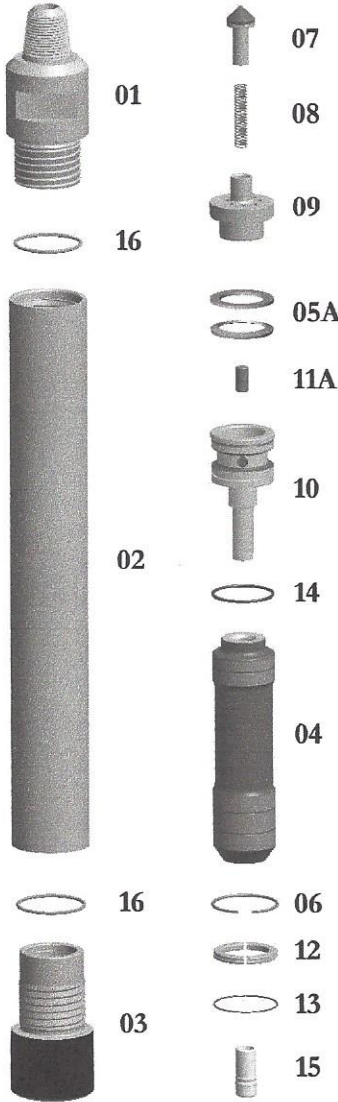
Drill 6: E6-STD-Hammer-TS w/3-1/2" API Reg Pin Wt. 225 lbs.

Drill 6: E6-HD-Hammer-TS w/3-1/2" API Reg Pin Wt. 270 lbs.

TAKES SD6 SHANKS

**SPECIAL BACKHEAD FEATURES—CALL OFFICE

Thread Change/Pin
Box Thread
Carbide Buttons
Special Flats

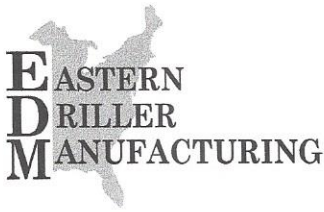


Replacement Parts

Hmr Part #	Description	Order #	Weight (lbs.)
6-01	Top Sub 3-1/2" API REG PIN w/ O-Ring	E6-01	45.0
6-01HD	Top Sub w/O-Ring HEAVY DUTY	E6-01HD	48.0
6-16	**Replacement O-Ring for Top Sub**	E6-16	0.1
6-02	Piston Case w/Retainer Ring	E6-02	95.0
6-02HD	Piston Case w/Retainer Ring HEAVY DUTY	E6-02HD	114.0
6-06	**Replacement Retainer Ring for Piston Case**	E6-06	0.2
6-03	Driver Sub w/O-Ring	E6-03	24.0
6-03HD	Driver Sub HEAVY DUTY w/O-Ring	E6-03HD	26.0
6-16	**Replacement O-Ring for Driver Sub**	E6-16	0.1
6-04	Piston	E6-04	52.0
6-05A	Disc Spring & Spacer Set	E6-05A	1.0
6-07	Check Valve Dart	E6-07	1.5
6-08	Check Valve Dart Spring	E6-08	0.3
6-09	Check Valve Guide	E6-09	5.0
6-10	Rigid Valve with O-Ring	E6-10	11.0
6-14	**Replacement O-Ring for Rigid Valve	E6-14	0.2
6-11	Choke Set	E6-11(5)	1.5
6-11A	Blank Choke	E6-11A	0.3
6-11B	1/8" Choke	E6-11B	0.3
6-11C	3/16" Choke	E6-11C	0.3
6-11D	1/4" Choke	E6-11D	0.3
6-11E	5/16" Choke	E6-11E	0.3
6-12	Bit Retainer Ring w/ O-Ring	E6-12	1.6
6-13	**Replacement O-Ring for Bit Retainer**	E6-13	0.1
6-15	Foot Valve	E6-15	0.8
6-17	Brass Break-Out Ring (Optional)	E6-17	0.1

	Outside Diameter		Hammer Length Pin		Hammer Length Box		Bit Size Range				
	IN.	MM.	IN.	MM.	IN.	MM.	IN.	MM.			
Drill 6	5-7/16	141.1	49-9/32	1251.7	53-1/32	1347	6-10	153-254			
Drill 6 HD	5-3/4	146.0	49-9/32	1251.7	53-1/32	1347	6-1/2-10	165-254			
Choke Size	150 PSI	10.3 BARS	200 PSI	13.8 BARS	250 PSI	17.2 BARS	300 PSI	20.7 BARS	350 PSI	24.1 BARS	
IN.	MM.										
Blank	Blank	410	11.61	565	16.00	725	20.53	885	25.06	1050	29.74
1/8	3.18	435	12.32	595	16.85	765	21.66	935	26.48	1110	31.44
3/16	4.76	465	13.17	630	17.84	815	23.08	990	28.04	1175	33.28
1/4	6.35	490	13.88	660	18.69	870	24.64	1060	30.02	1260	35.68
5/16	7.94	560	15.86	755	21.38	960	27.19	1160	32.85	1370	38.80
3/8 -None	9.53	610	17.28	830	23.51	1050	29.74	1265	35.82	1480	41.91

The above air charts are based upon ideal conditions, your results may vary.



Drill 8

w/4-1/2" API Reg Pin

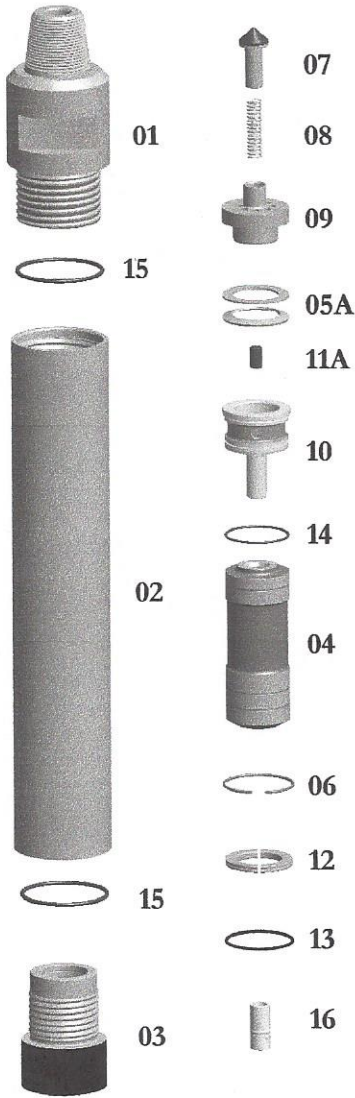
Wt. 365 lbs.

E8-STD-Hammer

TAKES SD8 SHANKS

Thread Change/Pin
Box Thread
Carbide Buttons
Side Carbide Buttons
Special Flats

**SPECIAL BACKHEAD FEATURES—CALL OFFICE

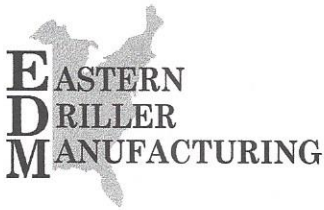


Replacement Parts

Hmr Part #	Description	Order #	Weight (lbs.)
8-01	Top Sub 4-1/2" API REG PIN w/O-Ring	E8-01	87.0
8-15	**Replacement O-Ring for Top Sub**	E8-15	0.1
8-02	Piston Case w/Retainer Ring	E8-02	127.0
8-06	**Replacement Retainer Ring for Piston Case**	E8-06	0.3
8-03	Driver Sub w/O-Ring	E8-03	40.0
8-15	**Replacement O-Ring for Driver Sub**	E8-15	0.1
8-04	Piston	E8-04	71.0
8-05A	Disc Spring & Spacer Set	E8-05A	1.5
8-07	Check Valve Dart	E8-07	1.5
8-08	Check Valve Dart Spring	E8-08	0.3
8-09	Check Valve Guide	E8-09	12.0
8-10	Rigid Valve w/O-Ring	E8-10	14.0
8-10M	Rigid Valve w/O-Ring - Modified	E8-10M	15.0
8-14	**Replacement O-Ring for Rigid Valve**	E8-14	0.1
8-11	Choke Set	E8-11(5)	1.5
8-11A	Blank Choke	E8-11A	0.3
8-11B	1/8" Choke	E8-11B	0.3
8-11C	1/4" Choke	E8-11C	0.3
8-11D	3/8" Choke	E8-11D	0.3
8-11E	7/16" Choke	E8-11E	0.3
8-12	Bit Retainer Ring w/O-Ring	E8-12	1.6
8-13	**Replacement O-Ring for Bit Retainer**	E8-13	0.2
8-16	Foot Valve	E8-16	0.9
8-17	Brass Break-Out Ring (Optional)	E8-17	0.1

	Outside Diameter		Hammer Length Pin		Hammer Length Box		Bit Size Range				
	IN.	MM.	IN.	MM.	IN.	MM.	IN.	MM.			
Drill 8	6-3/4	172	47-1/16	1195.4	51-5/16	1303.3	7-3/8-12	188-305			
Choke Size	150 PSI	10.3 BARS	200 PSI	13.8 BARS	250 PSI	17.2 BARS	300 PSI	20.7 BARS	350 PSI	24.1 BARS	
Blank	Blank	440	12.46	625	17.70	810	22.94	985	27.90	1160	32.85
1/8	3.18	465	13.17	655	18.55	850	24.07	1035	29.31	1220	34.55
1/4	6.35	520	14.73	715	20.25	955	27.05	1160	32.85	1370	38.80
3/8	9.53	640	18.12	890	25.20	1135	32.14	1365	38.66	1590	45.03
7/16	11.11	730	20.67	995	28.18	1265	35.82	1510	42.76	1760	49.84
1/2-None	12.70	830	23.51	1105	31.29	1380	39.08	1655	46.87	1940	54.94

The above air charts are based upon ideal conditions, your results may vary.



Drill 10

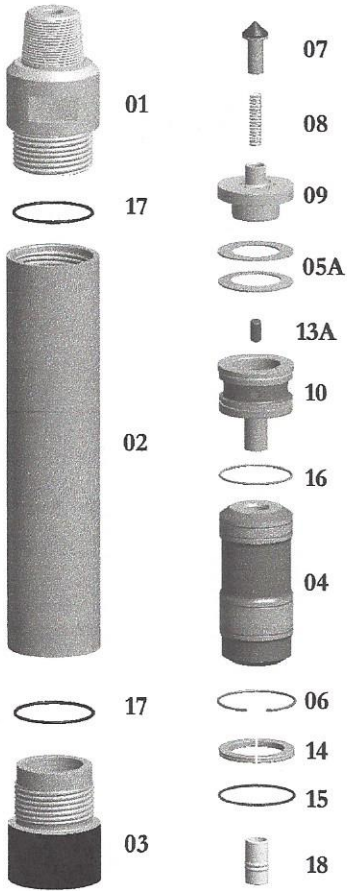
w/6-5/8" API Reg Pin

Wt. 690 lbs.

E10-STD-Hammer

TAKES SD10 SHANKS

**SPECIAL BACKHEAD FEATURES—CALL OFFICE

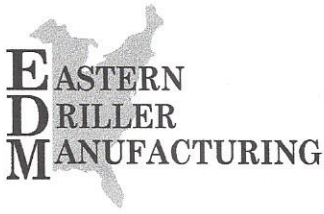


Replacement Parts

Hmr Part #	Description	Order #	Weight (lbs.)
10-01	Top Sub 6-5/8" API REG PIN w/O'Ring	E10-01	158.0
10-17	**Replacement O-Ring for Top Sub**	E10-17	1.0
10-2	Piston Case w/Retainer Ring	E10-02	240.0
10-06	**Replacement Retainer Ring for Piston Case**	E10-06	0.7
10-03	Driver Sub w/O-Ring	E10-03	93.0
10-17	**Replacement O-Ring for Driver Sub**	E10-17	1.0
10-04	Piston	E10-04	140.0
10-05A	Disc Spring & Spacer Set	E10-05A	1.5
10-07	Check Valve Dart	E8-07	1.5
10-08	Check Valve Dart Spring	E8-08	0.3
10-09	Check Valve Guide	E10-09	21.0
10-10	Rigid Valve w/O-Ring	E10-10	35.0
10-16	**Replacement O-Ring for Rigid Valve**	E10-16	1.0
10-13	Choke Set	E12-11(4)	1.5
10-13A	Blank Choke	E12-11A	0.3
10-13B	1/8" Choke	E12-11B	0.3
10-13C	1/4" Choke	E12-11C	0.3
10-13D	3/8" Choke	E12-11D	0.3
10-14	Bit Retainer Ring w/O-Ring	E10-14	3.0
10-15	**Replacement O-Ring for Bit Retainer**	E10-15	0.2
10-18	Foot Valve	E10-18	1.2
10-19	Brass Break-Out Ring (Optional)	E10-19	0.1

		Outside Diameter		Hammer Length Pin			Bit Size Range		
		IN.	MM.	IN.	MM.	IN.	MM.		
Drill 10		8-7/8	226	49-7/8	1266.8	9-7/8-12-1/2	251-318		
Choke Size		100 PSI	6.9 BARS	150 PSI	10.3 BARS	200 PSI	13.8 BARS	250 PSI	17.2 BARS
IN.	MM.								
Blank	Blank	400	11.33	660	18.69	950	26.90	1235	34.98
1/8	3.18	420	11.90	685	19.40	985	27.90	1270	35.97
1/4	6.35	470	13.31	750	21.24	1025	24.03	1325	37.52
3/8	9.53	575	16.28	860	24.36	1150	32.57	1485	42.06
1/2	12.70	750	21.24	1080	30.59	1395	39.51	1690	47.86

The above air charts are based upon ideal conditions, your results may vary.



Drill 12

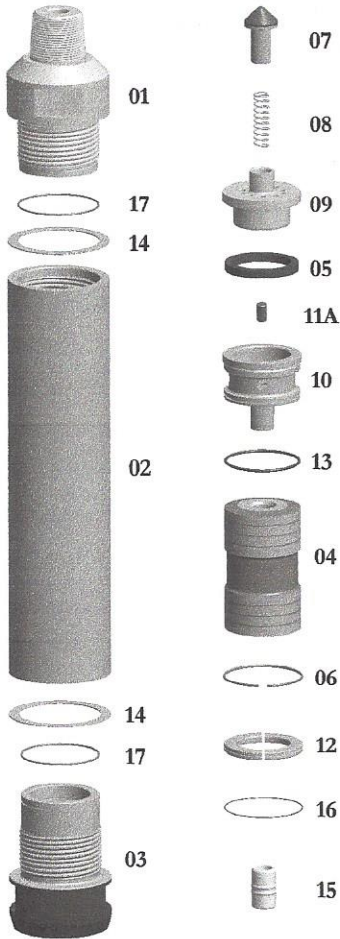
w/6-5/8" API Reg Pin

Wt. 1,150 lbs.

E12-STD-Hammer

TAKES SD12 SHANKS

**SPECIAL BACKHEAD FEATURES—CALL OFFICE



Replacement Parts

Hmr Part #	Description	Order #	Weight (lbs.)
12-01	Top Sub 6-5/8" API REG PIN w/O-Ring	E12-01	280.0
12-17	**Replacement O-Ring for Top Sub**	E12-17	0.1
12-02	Piston Case w/Retainer Ring	E12-02	440.0
12-06	**Replacement Retainer Ring for Piston Case**	E12-06	0.4
12-03	Driver Sub w/O-Ring	E12-03	120.0
12-17	**Replacement O-Ring for Driver Sub**	E12-17	0.1
12-04	Piston	E12-04	165.0
12-05	Make Up Ring	E12-05	0.8
12-07	Check Valve Dart	E12-07	3.0
12-08	Check Valve Dart Spring	E12-08	0.3
12-09	Check Valve Guide	E12-09	30.0
12-10	Rigid Valve w/O-Ring	E12-10	32.0
12-13	**Replacement O-Ring for Rigid Valve**	E12-13	0.1
12-11	Choke Set (4)	E12-11	1.6
12-11A	Blank Choke	E12-11A	0.4
12-11B	1/8" Choke	E12-11B	0.4
12-11C	1/4" Choke	E12-11C	0.4
12-11D	3/8" Choke	E12-11D	0.4
12-12	Bit Retainer Ring w/O-Ring	E12-12	7.0
12-16	**Replacement O-Ring for Bit Retainer Ring**	E12-16	0.1
12-14	Breakout Ring (2)	E12-14	1.0
12-15	Foot Valve	E12-15	0.1

		Outside Diameter		Hammer Length Pin				Bit Size Range	
		IN.	MM.	IN.		MM.	IN.	MM.	
Drill 12		10-3/4	273	59-15/32		1505.5	11-7/8-20	302-458	
Choke Size		100 PSI	6.9 BARS	150 PSI	10.3 BARS	200 PSI	13.8 BARS	250 PSI	17.2 BARS
IN.	MM.								
Blank	Blank	740	20.96	1100	31.15	1550	43.90	1900	53.81
1/8	3.18	755	21.38	1125	31.86	1580	44.75	1940	54.94
1/4	6.35	805	22.80	1190	33.70	1670	47.29	2020	57.21
3/8	9.53	885	25.06	1300	36.82	1815	51.40	2165	61.31
1/2	12.70	1000	28.32	1490	42.20	2030	57.49	2380	67.40

The above air charts are based upon ideal conditions, your results may vary.