

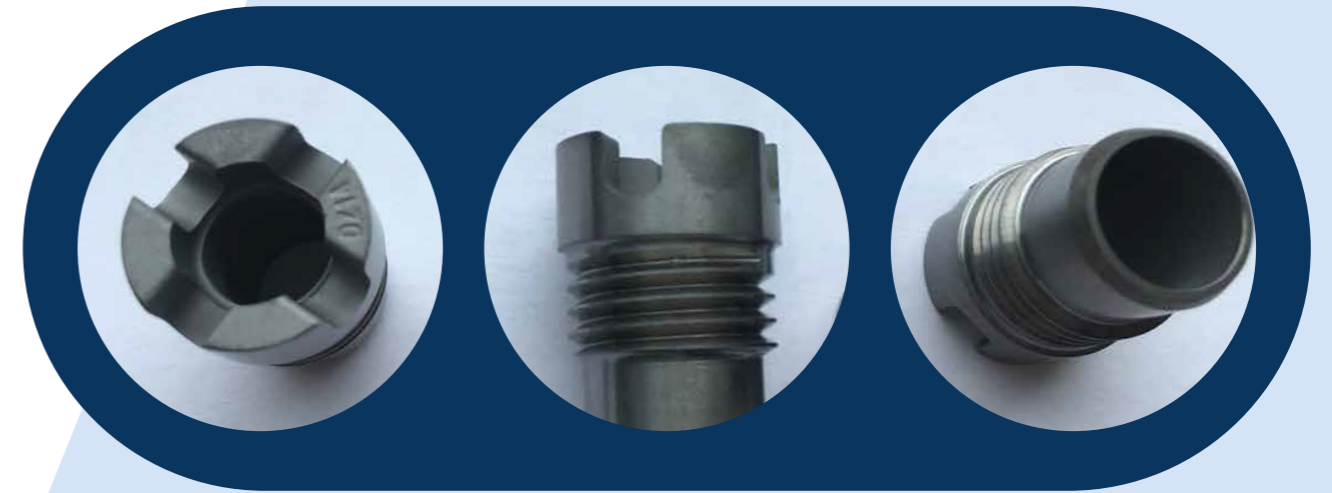
Replaceable Nozzles

N60 nozzles are used for bits from 5-7/8" ~ 22"

Nozzle Type	N60-10	N60-11	N60-12	N60-13	N60-14	N60-15	N60-16	N60-18	N60-20	N60-22
Drift diameter(mm)	7.94	8.73	9.53	10.32	11.11	11.91	12.70	14.29	15.88	17.46
Drift diameter(mm)	10/32	11/32	12/32	13/32	14/32	15/32	16/32	18/32	20/32	22/32

N50 nozzles are used for bits from 3-1/2" ~ 8-1/2"

Nozzle Type	N50-10	N50-11	N50-12	N50-13	N50-14	N50-15	N50-16
Drift diameter(mm)	7.94	8.73	9.53	10.32	11.11	11.91	12.70
Drift diameter(mm)	10/32	11/32	12/32	13/32	14/32	15/32	16/32



Space is very limited in small diameter bits, and thus the nozzles' outer diameter must be smaller than a standard replaceable nozzle.



With the latest equipment and technology, DEEP BIT also provides a wide variety of carbide nozzles each type of drill bits.

Nozzle Total Flow Area

Nozzle Size		TFA (inch ²)									
		Nozzles Counts									
1/32"	mm	1	2	3	4	5	6	7	8	9	10
11	φ8.7	0.093	0.186	0.278	0.371	0.464	0.557	0.650	0.742	0.835	0.928
12	φ9.5	0.110	0.221	0.331	0.442	0.552	0.663	0.773	0.884	0.994	1.105
13	φ10.3	0.130	0.259	0.389	0.519	0.648	0.778	0.907	1.037	1.167	1.296
14	φ11.1	0.150	0.301	0.451	0.601	0.752	0.902	1.052	1.203	1.353	1.503
15	φ11.9	0.173	0.345	0.518	0.690	0.863	1.036	1.208	1.381	1.553	1.726
16	φ12.7	0.196	0.393	0.589	0.784	0.982	1.178	1.374	1.571	1.767	1.963
17	φ13.5	0.222	0.443	0.665	0.887	1.108	1.330	1.552	1.773	1.995	2.217
18	φ14.3	0.249	0.497	0.746	0.994	1.243	1.491	1.740	1.988	2.237	2.485
19	φ15.1	0.277	0.554	0.831	1.108	1.385	1.661	1.938	2.215	2.492	2.769
20	φ15.9	0.307	0.614	0.920	1.227	1.534	1.841	2.148	2.454	2.761	3.068
22	φ17.5	0.371	0.742	1.114	1.485	1.856	2.227	2.599	2.970	3.341	3.712

Recommended Make-up Torque

Size of Bit	API Pin Size	Recommended Torque (ft-lbs)
3-3/4" - 4-1/2"	2-3/8" Reg	1,800-3,085
4-5/8" - 5"	2-7/8" Reg	3,075-4,650
5-1/8" - 7-3/8"	3-1/2" Reg	5,175-7,660
7-5/8" - 9"	4-1/2" Reg	12,450-17,750
9-1/2" - 14-1/2"	6-5/8" Reg	37,100-38,500
14-3/4" - 26"	7-5/8" Reg	48,300-60,900