



List 6530 - A Brand ADO: 10D

List 6535 - A Brand ADO: 15D

List 6540 - A Brand ADO: 20D

List 6550 - A Brand ADO: 30D

General Drilling Operations

Work Material	Carbon Steels, Mild Steels 1010, 1050, 12L14		Alloy Steels 4140, 4130		Stainless Steels 300SS, 400SS, 17-4PH		High Heat Material						
	260-395 SFM		260-395 SFM		130-230 SFM		Ti-Alloy, Ti-6Al-4V		Fe-Base Material, A286		Ni-Base Material, Inconel		
Drilling Speed	260-395 SFM		260-395 SFM		130-230 SFM		100 - 180 SFM		80 - 130 SFM		65 - 110 SFM		
Drill Dia.	Speed RPM	Feed IPR	Speed RPM	Feed IPR	Speed RPM	Feed IPR	Speed RPM	Feed IPR	Speed RPM	Feed IPR	Speed RPM	Feed IPR	
													mm
2	-	15,870	0.002-0.004	15,870	0.002-0.004	8,740	0.002-0.004	6,790	0.001-0.003	5,080	0.001-0.002	4,250	0.001-0.002
3	-	10,580	0.002-0.005	10,580	0.002-0.005	5,820	0.002-0.005	4,530	0.002-0.003	3,390	0.002-0.002	2,840	0.001-0.002
-	1/8	10,000	0.003-0.005	10,000	0.003-0.005	5,500	0.003-0.005	4,280	0.002-0.003	3,200	0.002-0.003	2,680	0.002-0.002
4	-	7,940	0.003-0.006	7,940	0.003-0.006	4,370	0.003-0.006	3,400	0.002-0.004	2,540	0.002-0.003	2,130	0.002-0.002
-	3/16	6,670	0.004-0.007	6,670	0.004-0.007	3,670	0.004-0.007	2,850	0.003-0.004	2,130	0.002-0.004	1,790	0.002-0.003
6	-	5,290	0.005-0.009	5,290	0.005-0.009	2,910	0.005-0.009	2,269	0.004-0.005	1,690	0.004-0.005	1,420	0.002-0.004
-	1/4	5,000	0.005-0.010	5,000	0.005-0.010	2,750	0.005-0.010	2,140	0.004-0.006	1,600	0.004-0.006	1,340	0.002-0.005
8	-	3,970	0.006-0.011	3,970	0.006-0.011	2,180	0.006-0.011	1,700	0.005-0.007	1,270	0.005-0.006	1,060	0.003-0.005
-	3/8	3,330	0.007-0.012	3,330	0.007-0.012	1,830	0.007-0.012	1,430	0.005-0.008	1,070	0.005-0.007	890	0.003-0.005
10	-	3,170	0.008-0.012	3,170	0.008-0.012	1,750	0.008-0.012	1,360	0.006-0.009	1,020	0.006-0.008	850	0.004-0.006
-	7/16	2,860	0.008-0.012	2,860	0.008-0.012	1,570	0.008-0.012	1,220	0.007-0.010	910	0.007-0.009	770	0.004-0.007
12	-	2,650	0.008-0.012	2,650	0.008-0.012	1,460	0.008-0.012	1,130	0.007-0.011	850	0.007-0.009	710	0.005-0.007
-	1/2	2,500	0.008-0.012	2,500	0.008-0.012	1,380	0.008-0.012	1,070	0.008-0.012	800	0.008-0.010	670	0.005-0.008
-	9/16	2,220	0.009-0.014	2,220	0.009-0.014	1,220	0.009-0.014	950	0.008-0.013	710	0.008-0.011	600	0.005-0.008

Note:

- The indicated speeds and feeds are for drilling with **water-soluble oil** or **MQL**. (We do not recommend mist drilling with stainless steels.)
- Water-soluble oil (20-30 times dilution) is recommended.
- When using non-water-soluble oil, set the cutting speed between 70-100% of the lowest limit.
- Make a pilot hole before deep drilling; recommended operation is on pages 310-311.
- A clogged oil hole can lead to breakage. Make sure that a filter is attached to the oil feeder.
- Peck drilling of 1D-2D is strongly recommended in high hardness materials.

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A Brand ADO

Advanced Performance Coolant-Through Carbide Drill

ABOUT OSG

DRILLING

THREADING

MILLING

HOLDERS

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General Drilling Operations

Work Material		Cast Iron		Ductile Cast Iron		Special Alloy Steels, Hardened Steels							
						26-30 HRC		30-34 HRC		34-43 HRC		43-48 HRC	
Hardness		260-395 SFM		195-330 SFM		195-295 SFM		130-200 SFM		130-160 SFM		82-115 HRC	
Drilling Speed		260-395 SFM		195-330 SFM		195-295 SFM		130-200 SFM		130-160 SFM		82-115 HRC	
Drill Dia.		Speed RPM	Feed IPR	Speed RPM	Feed IPR	Speed RPM	Feed IPR	Speed RPM	Feed IPR	Speed RPM	Feed IPR	Speed RPM	Feed IPR
mm	Inch												
2	-	15,870	0.002-0.004	12,700	0.002-0.004	11,890	0.002-0.004	8,000	0.002-0.003	7,040	0.002-0.003	4,770	0.001-0.002
3	-	10,580	0.002-0.005	8,470	0.002-0.005	7,920	0.002-0.005	5,330	0.002-0.003	4,690	0.002-0.003	3,180	0.002-0.002
-	1/8	10,000	0.003-0.005	8,000	0.003-0.005	7,490	0.003-0.005	5,040	0.003-0.004	4,430	0.003-0.004	3,010	0.002-0.003
4	-	7,940	0.003-0.006	6,350	0.003-0.006	5,940	0.003-0.006	4,000	0.003-0.004	3,520	0.003-0.004	2,390	0.002-0.003
-	3/16	6,670	0.004-0.007	5,330	0.004-0.007	4,990	0.004-0.007	3,360	0.003-0.005	2,950	0.003-0.005	2,000	0.003-0.004
6	-	5,290	0.005-0.009	4,230	0.005-0.009	3,960	0.005-0.009	2,700	0.005-0.006	2,340	0.005-0.006	1,590	0.004-0.005
-	1/4	5,000	0.005-0.010	4,000	0.005-0.010	3,740	0.005-0.010	2,520	0.005-0.007	2,220	0.005-0.007	1,500	0.004-0.006
8	-	3,970	0.006-0.011	3,170	0.006-0.011	2,970	0.006-0.011	2,000	0.006-0.008	1,760	0.006-0.008	1,190	0.005-0.007
-	3/8	3,330	0.007-0.012	2,670	0.007-0.012	2,500	0.007-0.012	1,680	0.007-0.009	1,480	0.007-0.009	1,000	0.006-0.008
10	-	3,170	0.008-0.012	2,540	0.008-0.012	2,380	0.008-0.012	1,600	0.008-0.010	1,410	0.008-0.010	950	0.007-0.009
-	7/16	2,860	0.008-0.012	2,290	0.008-0.012	2,140	0.008-0.012	1,440	0.009-0.011	1,270	0.009-0.011	860	0.007-0.009
12	-	2,650	0.008-0.012	2,120	0.008-0.012	1,980	0.008-0.012	1,330	0.009-0.012	1,170	0.009-0.012	800	0.007-0.009
-	1/2	2,500	0.008-0.012	2,000	0.008-0.012	1,870	0.008-0.012	1,260	0.010-0.013	1,110	0.010-0.013	750	0.008-0.010
-	9/16	2,220	0.009-0.014	1,780	0.009-0.014	1,660	0.009-0.014	1,120	0.011-0.014	980	0.011-0.014	670	0.008-0.011

