

Drills and Tappers



Drill Selection

Making sure you have the right tool for the right job is essential for effective drilling with consistent quality. Selecting a portable air drill involves two primary considerations:

- 1 The material and hardness.
- 2 The size of the hole to be drilled.

In general, a smaller, high-speed drill is most appropriate for smaller holes and softer materials, such as wood or aluminum. For larger holes and harder materials, a more powerful tool with slower speeds is required to prevent stalling and bit damage.

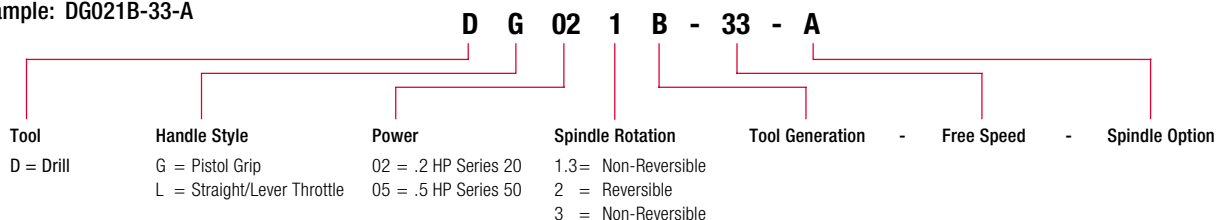
Getting The Most From Your Drill:

To maximize your drill's output, you must use the right accessories. Always keep in mind that the force you apply on the drill will affect how fast the tool drills.

The more you push down, the slower the tool will work. The most you ever want your drill to slow down is 25 to 50 percent of its free speed, so be aware of the amount of pressure you are applying.

Model Identification Guide Series 20/50

Example: DG021B-33-A



Recommended Cutting Speed Range – RPM

This chart lists the recommended surface speeds for popular materials with suggested spindle speeds for various hole sizes. These recommendations are intended only as a guide for determining appropriate drill size and speed. Proper tool selection for a specific application must also take into account the operator,

the type of bit used, the amount of compressed air available, as well as other factors. Where there is a choice between ARO Series 20 and 50 drills of about the same speed, final selection is made by preference of a smaller, lighter drill, or a more powerful model to maintain speed under load.

Material	S.F.M. ¹	Hole Diameter							
		1/16"	1/8"	3/16"	1/4"	5/16"	3/8"	7/16"	1/2"
		1.5 mm	3 mm	5 mm	6 mm	8 mm	9.5 mm	11 mm	13 mm
Steel Alloy (300-400 Brinell)	20-30	1250-1800	600-900	400-600	300-450	250-350	200-300	175-250	150-225
Stainless Steel / Cast Iron (hard)	30-40	1800-2500	900-1200	600-800	450-600	350-500	300-400	250-350	225-300
Steel Forgings	40-50	2500-3100	1200-1500	800-1000	600-750	500-600	400-500	350-425	300-400
Tool Steel (Annealed .90-1.20 Carbon)	50-60	3100-3700	1500-1800	1000-1200	750-900	600-700	500-600	425-525	400-450
Steel (.40-.50 Carbon)	70-80	4300-5000	2100-2500	1400-1600	1050-1200	850-1000	700-800	600-700	525-600
Cast Iron (med.-hard)	70-100	4300-6000	2100-3000	1400-2000	1000-1500	850-1200	700-1000	600-900	500-800
Bronze, High-Tensile Strength	70-150	4300-9000	2100-4500	1400-3000	1000-2300	850-1800	700-1530	600-1300	500-1200
Malleable Iron	80-90	5000-5500	2500-2800	1600-1800	1200-1400	950-1100	800-900	700-800	600-700
Mild Steel (.20-.30 Carbon)	80-110	5000-6700	2500-3400	1600-2300	1200-1700	950-1350	800-1150	700-1000	600-850
Cast Iron (soft) / Plastic	100-150	6000-9000	3000-4500	2000-3000	1500-2300	1200-1800	1000-1530	900-1300	800-1200
Aluminum / Brass / Bronze	200-300	12000-18000	6000-9000	4000-6000	3000-4500	2400-3700	2000-3000	1700-2600	1500-2300
Magnesium	250-400	15500-25000	7500-12000	5000-12000	3800-6100	3000-4900	2500-4000	2200-3500	1900-3000
Fiberglass / Wood	300-400	18000-25000	9000-12000	6000-8200	4600-6100	3700-4900	3000-4000	2600-3500	2300-3000

Note: Actual drilling or cutting rpm will be approximately 75% of the rated free speed of a tool. (1) SFM - Surface feet per minute

Pistol Grip Drills

Drills and Tappers

Torque Output: 0.2 to 29 ft-lbs (0.3 to 39 Nm)
Power: 0.25 hp / 0.55 hp (0.34 / 0.73 kW)



DG021B-33-A



DG051B-15-B

Pistol Grip Drills

Non Reversible Models	Free Speed rpm	Stall Torque ft-lbs	Stall Torque Nm	Reversible Models	Free Speed rpm	Stall Torque ft-lbs	Stall Torque Nm	Spindle Offset in.	Spindle Offset mm	Length in.	Length mm	Weight lbs	Weight kg	Spindle Thread Male	@ Free Speed Air Cons. cfm	@ Free Speed Sound Level dB(A)	
Series 20																	
DG021B-220(-)	22,000	0.2	0.3	DG022B-170(-)	17,000	0.2	0.3	0.66	17	5.7	146	1.5	0.7	3/8"-24	15	7	76
DG021B-64(-)	6,400	0.7	1.0	DG022B-50(-)	5,000	0.6	0.8	0.66	17	5.7	146	1.5	0.7	3/8"-24	15	7	76
DG021B-33(-)	3,300	1.3	2.0	DG022B-26(-)	2,600	1.2	1.6	0.66	17	5.7	146	1.5	0.7	3/8"-24	15	7	76
DG021B-19(-)	1,900	2.3	3.0	DG022B-15(-)	1,500	2.1	2.8	0.66	17	6.1	155	1.6	0.7	3/8"-24	15	7	76
DG021B-10(-)	1,000	4.5	6.0	DG022B-8(-)	800	4.1	5.5	0.66	17	6.1	155	1.6	0.7	3/8"-24	15	7	76
DG021B-5(-)	500	8.9	12.0	DG022B-4(-)	400	8.0	11.0	0.66	17	6.1	155	1.6	0.7	3/8"-24	15	7	76
Series 50																	
DG051B-180(-)	18,000	0.7	1.0	DG052B-170(-)	17,000	0.6	0.8	0.9	22	6.8	171	2.3	1.1	3/8"-24	25	12	78
DG051B-52(-)	5,200	2.4	3.0	DG052B-50(-)	5,000	2.0	2.7	0.9	22	6.8	171	2.3	1.1	3/8"-24	25	12	78
DG051B-33(-)	3,300	3.5	5.0	DG052B-30(-)	3,000	2.8	3.8	0.9	22	6.8	171	2.3	1.1	3/8"-24	25	12	78
DG051B-27(-)	2,700	4.1	5.5	DG052B-25(-)	2,500	3.3	4.8	0.9	22	6.8	171	2.3	1.1	3/8"-24	25	12	78
DG051B-15(-)	1,500	8.0	11.0	DG052B-15(-)	1,500	6.4	8.7	0.9	22	7.5	189	2.7	1.2	3/8"-24	25	12	78
DG051B-11(-)	1,100	9.5	13.0	DG052B-10(-)	1,000	7.6	10.0	0.9	22	7.5	189	2.7	1.2	3/8"-24	25	12	78
DG051B-6(-)	600	17.0	23.0	DG052B-6(-)	600	14.0	19.0	0.9	22	7.5	189	2.7	1.2	3/8"-24	25	12	78
DG051B-4(-)	400	29.0	39.0	DG052B-4(-)	400	23.0	31.0	0.9	22	7.5	189	2.7	1.2	3/8"-24	25	12	78

• Most popular model.
 Air Inlet – 1/4" NPTF Recommended Air Pressure – 90 PSI (6.2 bar) Recommended Hose Size – 5/16" (8 mm) I.D.

Ordering Information

Specify the Base Model Number having the desired speed from the specification chart above. Add the appropriate Dash Letter to indicate the desired spindle option from the chart below.

Example: DG021B-19-A

Spindle Options

Dash Letter	Spindle Option	Series 20 Models Free Speed							Series 50 Models Free Speed							
		Non-Reversible	500	1000	1900	3300	6400	22000	400	600	1100	1500	2700	3300	5200	18000
		Reversible	400	800	1500	2600	5000	17000	400	600	1000	1500	2500	3000	5000	17000
A	1/4" (6 mm) Cap. Chuck	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
B	3/8" (9 mm) Cap. Chuck	•	•	•	NR	NR	NR	NR	•	•	•	•	•	•	•	NR
L ¹	3/8" (9 mm) Cap. Keyless Chuck	NR	•	•	NR	NR	NR	NR	NR	NR	•	•	•	•	•	NR
P	3/8" – 24 Male Thread	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Q	1/4" Hex Quick-Change Chuck	•	•	•	•	•	•	NR	•	•	•	•	•	•	•	NR

• Indicates the model speeds on which a particular spindle option is available. NR indicates that the spindle option is not recommended for a particular speed tool.
 (1) Note: Keyless Chuck is only available on reversible models.

Straight / Lever Throttle Drills

Drills and Tappers

Torque Output: 0.2 to 29 ft-lbs (0.3 to 39 Nm)
Power: 0.25 hp / 0.55 hp (0.34 / 0.73 kW)



DL021B-19-A



DL051B-33-B

Straight / Lever Throttle Drills

Non Reversible Models	Free Speed rpm	Stall Torque ft-lbs	Stall Torque Nm	Reversible Models	Free Speed rpm	Stall Torque ft-lbs	Stall Torque Nm	Spindle Offset in.	Spindle Offset mm	Length in.	Length mm	Weight lbs	Weight kg	Spindle Thread Male	Air Consp. cfm	Air Consp. L/s	@ Free Speed Sound Level dB(A)
Series 20																	
DL021B-220-(-)	22,000	0.2	0.3	-	-	-	-	0.6	15	7.2	182	1.0	0.5	3/8"-24	15	7	76
• DL021B-64-(-)	6,400	0.7	1.0	-	-	-	-	0.6	15	7.2	182	1.0	0.5	3/8"-24	15	7	76
• DL021B-33-(-)	3,300	1.3	2.0	DL022B-26-(-)	2,600	1.2	1.6	0.6	15	7.2	182	1.0	0.5	3/8"-24	15	7	76
• DL021B-19-(-)	1,900	2.3	3.0	DL022B-15-(-)	1,500	2.1	2.8	0.6	15	7.5	191	1.1	0.5	3/8"-24	15	7	76
• DL021B-10-(-)	1,000	4.5	6.0	DL022B-8-(-)	800	4.1	5.5	0.6	15	7.5	191	1.1	0.5	3/8"-24	15	7	76
• DL021B-5-(-)	500	8.9	12.0	DL022B-4-(-)	400	8.0	11.0	0.6	15	7.5	191	1.1	0.5	3/8"-24	15	7	76
Series 50																	
• DL051B-180-(-)	18,000	0.7	1.0	-	-	-	-	0.9	22	8.6	218	2.2	1.0	3/8"-24	25	12	78
• DL051B-52-(-)	5,200	2.4	3.0	-	-	-	-	0.9	22	8.6	218	2.2	1.0	3/8"-24	25	12	78
• DL051B-33-(-)	3,300	3.5	5.0	DL052B-30-(-)	3,000	2.8	3.8	0.9	22	8.6	218	2.2	1.0	3/8"-24	25	12	78
• DL051B-27-(-)	2,700	4.1	5.5	DL052B-25-(-)	2,500	3.3	4.8	0.9	22	8.6	218	2.2	1.1	3/8"-24	25	12	78
• DL051B-15-(-)	1,500	8.0	11.0	DL052B-15-(-)	1,500	6.4	8.7	0.9	22	9.3	236	2.5	1.1	3/8"-24	25	12	78
• DL051B-11-(-)	1,100	9.5	13.0	DL052B-10-(-)	1,000	7.6	10.0	0.9	22	9.3	236	2.5	1.1	3/8"-24	25	12	78
• DL051B-6-(-)	600	17.0	23.0	DL052B-6-(-)	600	14.0	19.0	0.9	22	9.3	236	2.5	1.1	3/8"-24	25	12	78
• DL051B-4-(-)	400	29.0	39.0	DL052B-4-(-) ¹	400	23.0	31.0	0.9	22	9.3	236	2.5	1.1	3/8"-24	25	12	78

• Most popular model.

Air Inlet – 1/4" NPTF Recommended Air Pressure – 90 PSI (6.2 bar) Recommended Hose Size – 5/16" (8 mm) I.D.

Ordering Information

Specify the Base Model Number having the desired speed from the specification chart above. Add the appropriate Dash Letter to indicate the desired spindle option from the chart below.

Example: DL051B-33-B

Spindle Options

Dash Letter	Spindle Option	Series 20 Models Free Speed							Series 50 Models Free Speed						
		Non-Reversible	500	1000	1900	3300	6400	22000	400	600	1100	1500	2700	3300	5200
		Reversible	400	800	1500	2600		400	600	1000	1500	2500	3000		
A	1/4" (6 mm) Cap. Chuck	•	•	•	•	•	•	•	•	•	•	•	•	•	•
B	3/8" (9 mm) Cap. Chuck	•	•	•	NR	NR	NR	•	•	•	•	•	•	•	NR
J	3/8" Square Drive	•	•	•	•	•	NR	•	•	•	•	•	•	•	NR
K	1/2" Square Drive	•	•	•	•	•	NR	•	•	•	•	•	•	•	NR
P	3/8" – 24 Male Thread	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Q	1/4" Hex Quick-Change Chuck	•	•	•	•	•	NR	•	•	•	•	•	•	•	NR

• Indicates the model speeds on which a particular spindle option is available. NR indicates that the spindle option is not recommended for a particular speed tool.

Right-Angle Drills Drills and Tappers

Torque Output: 0.3 to 24 ft-lbs (0.4 to 33 Nm)
Power: 0.25 hp / 0.55 hp (0.34 / 0.73 kW)



DR021B-50-A



DR021B-26-P



DR051B-36-A



DR051B-4-P

Right-Angle Drills

Non-Reversible Models	Free Speed rpm	Stall Torque		Spindle Offset		Angle Head Heights				Tool Length		Tool Weight		Air Inlet Female	@ Free Speed		
		ft-lbs	Nm	in.	mm	w/Chuck	w/Collet	in.	mm	in.	mm	lbs	kg		Air Cons. cfm	L/s	Sound Level dB(A)
Series 20																	
DR021B-170-(-)	17,000	0.3	0.4	0.6	15	3.5	89	1.625	41.3	8.7	221	1.5	0.7	1/4" NPT	15	7	78
DR021B-50-(-)	5,000	1.0	1.3	0.6	15	3.5	89	1.625	41.3	8.7	221	1.5	0.7	1/4" NPT	15	7	78
• DR021B-26-(-)	2,600	1.9	2.6	0.6	15	3.5	89	1.625	41.3	8.7	221	1.5	0.7	1/4" NPT	15	7	78
DR021B-15-(-)	1,500	3.4	4.6	0.6	15	3.5	89	1.625	41.3	9.1	231	1.6	0.75	1/4" NPT	15	7	78
DR021B-7-(-)	700	6.6	8.9	0.6	15	3.5	89	1.625	41.3	9.1	231	1.6	0.75	1/4" NPT	15	7	78
Series 50																	
DR051B-125-(-)	12,500	0.8	1.1	0.6	15	3.5	89	1.625	41.3	9.8	249	2.5	1.1	1/4" NPT	25	12	78
• DR051B-36-(-)	3,600	2.9	4.0	0.6	15	3.5	89	1.625	41.3	9.8	249	2.5	1.1	1/4" NPT	25	12	78
DR051B-28-(-)	2,800	3.7	5.0	0.6	15	3.5	89	1.625	41.3	9.8	249	2.5	1.1	1/4" NPT	25	12	78
DR051B-19-(-)	1,900	5.5	7.5	0.6	15	3.5	89	1.625	41.3	9.8	249	2.5	1.1	1/4" NPT	25	12	78
DR051B-11-(-)	1,100	9.8	13.0	0.6	15	3.5	89	1.625	41.3	10.4	263	2.8	1.2	1/4" NPT	25	12	78
DR051B-7-(-)	700	16.0	22.0	0.6	15	3.5	89	1.625	41.3	10.4	263	2.8	1.2	1/4" NPT	25	12	78
DR051B-4-(-)	400	24.0	33.0	0.6	15	3.5	89	1.625	41.3	10.4	263	2.8	1.2	1/4" NPT	25	12	78

• Most popular model. Air Inlet – 1/4" NPTF Recommended Air Pressure – 90 PSI (6.2 bar) Recommended Hose Size – 5/16" (8 mm) I.D.

Ordering Information

Specify the Base Model Number having the desired speed from the specification chart above. Add the appropriate Dash Letter to indicate the desired spindle option from the chart below.

Example: DR021B-26-A

Spindle Options

Dash Letter	Spindle Option	Series 20 Models Free Speed					Series 50 Models Free Speed							
		700	1500	2600	5000	17000	400	1100	1900	2800	3600	12500	3000	
A	1/4" (6 mm) Chuck	•	•	•	•	•	•	•	•	•	•	•	•	•
B	3/8" (9 mm) Chuck	-	-	-	-	-	•	•	•	•	•	•	•	
C	3/16" (4.8 mm) Collet ¹	•	•	•	•	-	-	-	-	-	-	-	-	
P	3/8" – 24 Male Thread	•	•	•	•	•	•	•	•	•	•	•	•	
T	1/4" -28 Female Thread	•	•	•	•	•	NR	•	•	•	•	•	-	

• Indicates the model speeds on which a particular spindle option is available.

(1) Collet has a 9/32 – 40 male thread. Other size collets may be substituted for standard. See Collet 43497-(-) below.

Series 43497-(-) One Piece Collets

Size No.	Dash	Size No.	Dash	Size No.	Dash	Size No.	Dash	Size No.	Dash	Size No.	Dash	Size No.	Dash	Size No.	Dash	Size No.	Dash	Size No.	Dash
7	5.1 -7	14	4.6 -14	21	4.0 -21	28	3.5 -28	35	2.7 -35	42	2.3 -42	49	1.85 -49	56	1.18 -56	3/32	2.4	-163	
8	5.0 -8	15	4.5 -15	22	3.9 -22	29	3.4 -29	36	2.7 -36	43	2.2 -43	50	1.77 -50	57	1.09 -57	7/64	2.77	-164	
9	4.9 -9	16	4.4 -16	23	3.9 -23	30	3.2 -30	37	2.6 -37	44	2.1 -44	51	1.7 -51	58	1.06 -58	1/8	3.1	-165	
10	4.9 -10	17	4.3 -17	24	3.8 -24	31	3.0 -31	38	2.5 -38	45	2.0 -45	52	1.6 -52	59	1.0 -59	9/64	3.6	-166	
11	4.8 -11	18	4.3 -18	25	3.7 -25	32	2.9 -32	39	2.5 -39	46	2.0 -46	53	1.5 -53	60	1.0 -60	5/32	3.9	-167	
12	4.8 -12	19	4.3 -19	26	3.7 -26	33	2.8 -33	40	2.4 -40	47	1.99 -47	54	1.39 -54	1/16	1.58 -161	11/64	4.3	-168	
13	4.7 -13	20	4.0 -20	27	3.6 -27	34	2.8 -34	41	2.4 -41	48	1.9 -48	55	1.9 -55	5/64	1.98 -162	3/16	4.76	-169	

Drills and Tappers

Torque Output: 0.7 to 3.8 ft-lbs (0.9 to 5.2 Nm)

Power: 0.25 hp / 0.55 hp (0.34 / 0.73 kW)



DR023B-21-C



DA023B-37-D



DR053B-41-T



DA053B-27-D

Aircraft Drills

Non-Reversible Models	Free Speed rpm	Stall Torque		Spindle Offset		Angle Head Heights w/Collet w/Female Thd				Tool Length		Tool Weight		Air Inlet Female	© Free Speed		
		ft-lbs	Nm	in.	mm	in.	mm	in.	mm	in.	mm	lbs	kg		cfm	L/s	dB(A)
Series 20 with 90° Angle																	
DR023B-73-(-)	7,300	0.7	0.9	0.325	8.3	1.4	36	1.1	28	9.5	241	1.4	0.6	1/4" NPT	15	7	78
DR023B-37-(-)	3,700	1.3	1.8	0.325	8.3	1.4	36	1.1	28	9.5	241	1.4	0.6	1/4" NPT	15	7	78
• DR023B-21-(-)	2,100	2.4	3.2	0.325	8.3	1.4	36	1.1	28	10.0	254	1.5	0.7	1/4" NPT	15	7	78
• DR023B-11-(-)	1,100	4.6	6.2	0.325	8.3	1.4	36	1.1	28	10.0	254	1.6	0.7	1/4" NPT	15	7	78
DR023B-5-(-)	500	8.9	12.0	0.325	8.3	1.4	36	1.1	28	10.0	254	1.5	0.7	1/4" NPT	15	7	78
Series 20 with 45° Angle																	
DA023B-37-(-)	3,700	1.3	1.8	0.325	8.3	1.7	44	1.6	41	9.9	251	1.4	0.6	1/4" NPT	15	7	78
DA023B-21-(-)	2,100	2.4	3.2	0.325	8.3	1.7	44	1.6	41	10.4	264	1.5	0.7	1/4" NPT	15	7	78
DA023B-11-(-)	1,100	4.6	6.2	0.325	8.3	1.7	44	1.6	41	10.4	264	1.5	0.7	1/4" NPT	15	7	78
DA023B-5-(-)	500	8.9	12.0	0.325	8.3	1.7	44	1.6	41	10.4	264	1.5	0.7	1/4" NPT	15	7	78
Series 50 with 90° Angle																	
DR053B-52-(-)	5,200	2.0	2.7	0.325	8.3	1.4	36	1.1	28	10.8	274	2.4	1.1	1/4" NPT	25	12	78
DR053B-41-(-)	4,100	2.5	3.4	0.325	8.3	1.4	36	1.1	28	10.8	274	2.4	1.1	1/4" NPT	25	12	78
DR053B-27-(-)	2,700	3.8	5.2	0.325	8.3	1.4	36	1.1	28	10.8	274	2.4	1.1	1/4" NPT	25	12	78
Series 50 with 45° Angle																	
DA053B-52-(-)	5,200	2.0	2.7	0.325	8.3	2.0	50	1.9	48	11.2	285	2.4	1.1	1/4" NPT	25	12	78
DA053B-41-(-)	4,100	2.5	3.4	0.325	8.3	2.0	50	1.9	48	11.2	285	2.4	1.1	1/4" NPT	25	12	78
DA053B-27-(-)	2,700	3.8	5.2	0.325	8.3	2.0	50	1.9	48	11.2	285	2.4	1.1	1/4" NPT	25	12	78

• Most popular model. Air Inlet – 1/4" NPTF Recommended Air Pressure – 90 PSI (6.2 bar) Recommended Hose Size – 5/16" (8 mm) I.D.

Ordering Information

Specify the Base Model Number having the desired speed from the specification chart above. Add the appropriate Dash Letter to indicate the desired spindle option from the chart below.

EXAMPLE: DR023B-21-D

Spindle Options

Dash Letter	Spindle Option	Series 20 Models Free Speed					Series 50 Models Free Speed		
		500	1100	2100	3700	7300	2700	4100	5200
C	3/16" (4.8 mm) Collet ¹	•	•	•	•	•	•	•	•
D	10-32 Female Thd	•	•	•	•	•	•	•	•
E ²	5/16" – 24 Female Thd	•	•	•	•	•	•	•	•
T	1/4"-28 Female Thd	•	•	•	•	•	•	•	•

• Indicates the model speeds on which a particular spindle option is available.

(1) Collet has a 9/32 – 40 male thread. Other size collets may be substituted for standard. See Collet 43497-(-) below.

(2) Not available DAO Series 20 and 50

Series 43497-(-) One Piece Collets

Size No.	Dash No.	Size No.	Dash No.	Size No.	Dash No.	Size No.	Dash No.	Size No.	Dash No.	Size No.	Dash No.	Size No.	Dash No.	Size No.	Dash No.	Size No.	Dash No.
7	5.1 -7	14	4.6 -14	21	4.0 -21	28	3.5 -28	35	2.7 -35	42	2.3 -42	49	1.85 -49	56	1.18 -56	3/32	2.4 -163
8	5.0 -8	15	4.5 -15	22	3.9 -22	29	3.4 -29	36	2.7 -36	43	2.2 -43	50	1.77 -50	57	1.09 -57	7/64	2.77 -164
9	4.9 -9	16	4.4 -16	23	3.9 -23	30	3.2 -30	37	2.6 -37	44	2.1 -44	51	1.7 -51	58	1.06 -58	1/8	3.1 -165
10	4.9 -10	17	4.3 -17	24	3.8 -24	31	3.0 -31	38	2.5 -38	45	2.0 -45	52	1.6 -52	59	1.0 -59	9/64	3.6 -166
11	4.8 -11	18	4.3 -18	25	3.7 -25	32	2.9 -32	39	2.5 -39	46	2.0 -46	53	1.5 -53	60	1.0 -60	5/32	3.9 -167
12	4.8 -12	19	4.3 -19	26	3.7 -26	33	2.8 -33	40	2.4 -40	47	1.99 -47	54	1.39 -54	1/16	1.58 -161	11/64	4.3 -168
13	4.7 -13	20	4.0 -20	27	3.6 -27	34	2.8 -34	41	2.4 -41	48	1.9 -48	55	1.9 -55	5/64	1.98 -162	3/16	4.76 -169

Drills and Tappers

Torque Output: 1.0 to 54.5 ft-lbs (1.3 to 74.0 Nm)

Standard Equipment

- Chuck
- Suspension Bail on 78XX-E Models
- Side Handle on 600 and 325 rpm, 78XX-E Models

Pistol Grip and Inline Drills

325 to 18,000 rpm / 0.7 hp (0.5 kW)

Capacity: 1/2" (12 mm) Chuck

- Excellent for production-line drilling of large diameter holes in farm implement and heavy equipment.
- Choice of pistol grip and lever styles.

Right-Angle Drills

400 to 2,000 rpm / 0.85 hp (0.6 kW)

Capacity: 1/2" (12 mm) Chuck

Head Height w/Chuck: 4.6" (117 mm)

- Designed for drilling holes in limited access areas in sheet metal and woodworking applications.



7846-E



7852-E



7831-B

Production Drills

Model No.	Speed rpm	Standard Chuck Cap.		Stall Torque		Spindle Thread Male	Spindle Offset		Tool Length		Tool Weight		@ Free Speed		Standard Chuck Part No.	
		in.	mm	ft-lbs	Nm		in.	mm	in.	mm	lbs	kg	Air Consp. cfm	Sound Level L/s dB(A)		
Pistol																
7845-E	4,500	3/8	9	4.0	5.4	1/2" - 20	1.0	25	8.3	210	3.9	1.8	31	14	88	33907
• 7846-E	2,400	3/8	9	7.5	10.0	1/2" - 20	1.0	25	8.3	210	3.9	1.8	31	14	88	33907
7847-E	1,100	1/2	9	16.0	22.0	1/2" - 20	1.0	25	10.5	267	5.4	2.4	31	14	88	30018
• 7848-E	600	1/2	12	29.5	40.0	1/2" - 20	1.0	25	10.5	267	5.4	2.4	31	14	88	30018
• 7849-E	350	1/2	12	54.5	74.0	1/2" - 20	1.0	25	10.5	267	5.4	2.4	31	14	88	30018
Lever																
7850-E	18,000	3/8	9	1.0	1.3	1/2" - 20	.9	24	9.6	244	3.2	1.5	31	14	88	33907
7851-E	4,500	3/8	9	4.0	5.4	1/2" - 20	.9	24	9.6	244	3.2	1.5	31	14	88	33907
7852-E	2,400	3/8	9	7.5	10.0	1/2" - 20	.9	24	9.6	244	3.2	1.5	31	14	88	33907
7853-E	1,100	3/8	9	16.0	22.0	1/2" - 20	.9	24	11.8	299	4.7	2.1	31	14	88	30016
7854-E	600	3/8	9	29.5	40.0	1/2" - 20	.9	24	11.8	299	4.7	2.1	31	14	88	30016
7855-E	325	3/8	9	54.5	74.0	1/2" - 20	.9	24	11.8	299	4.7	2.1	31	14	88	30016
Right Angle																
7832-B	2,000	3/8	9	10.0	13.0	3/8" - 24	.9	24	14.3	363	6.0	2.7	31	14	82	47341
• 7831-B	900	3/8	9	20.0	27.0	1/2" - 20	.9	24	16.0	406	7.5	3.4	31	14	82	30016
7830-B	400	1/2	12	44.0	60.0	1/2" - 20	.9	24	16.0	406	7.5	3.4	31	14	82	30018

• Most popular model. Air Inlet – 1/4" NPTF Recommended Air Pressure – 90 PSI (6.2 bar) Recommended Hose Size – 5/16" (8 mm) I.D.

No Cost Options (Order "With" Option)

For Models	Part No.	Description	Substitute for Standard
All 78XX-E	33906	1/4" Chuck	Chuck
All 78XX-E	33907	5/16" Chuck	Chuck
All 78XX-E	30016	3/8" Chuck	Chuck
All 78XX-E	30018	1/2" Chuck	Chuck

Flat-Angle Drills

Drills and Tappers

Torque Output: 4.0 to 8.3 ft-lbs (5.4 to 11.3 Nm)

Standard Equipment

- Suspension Bail
- 33500-3 Drive Spindle
- Choice of 33628-(-) Collet

Flat-Angle Drills

1,450 to 3,300 rpm / 0.4 hp (.3 kW)

Capacity: 1/4" (6 mm)

- Excellent for drilling smaller diameter holes for airframe builders and metal fab shops.
- Flat angle allows reach into limited access areas.



7439-D

Flat-Angle Drills

Model No.	Speed rpm	Standard Collet Cap.	Throttle Style	Stall Torque		Std. Spindle Thread Female	Tool Length		Angle Head Height w/o Collet		Tool Weight		@ Free Speed		Standard Spindle Part No.	
				ft-lbs	Nm		in.	mm	in.	mm	lbs	kg	Air Cons. cfm	Sound Level L/s dB(A)		
7441-D	3,300	Specify	Lever	4.0	5.4	1/4"-28	10.6	269	.7	17	2.9	1.3	24	11	86	33500-3
7439-D	2,500	Specify	Lever	3.0	4.1	1/4"-28	10.6	269	.7	17	2.9	1.3	24	11	86	33500-3
7438-D	1,450	Specify	Lever	8.3	11.3	1/4"-28	11.9	302	.7	17	3.5	1.6	24	11	86	33500-3

- Most popular model. Air Inlet – 1/4" NPTF Recommended Air Pressure – 90 PSI (6.2 bar) Recommended Hose Size – 5/16" (8 mm) I.D.

No Cost Options (Order "With" Option)

Drive Spindle No.	Female Thread Size	For Use With
33500-5	1/4"-24	Threaded Bits
43494	9/32"-40	43497-(-) Collet ¹

- (1) Choice of 43497-(-) Collet when flat angle is ordered with 43494 Spindle.

Drive Spindles

The drive spindle of every flat-angle drill is an internal threaded gear. Three drive spindles are available so that various attachments can be used. The drive spindle is easily inserted into the angle head by removing the bottom plate.

Chuck Adapter 33662²

Use with 33500-3 Drive Spindle. Has 1/4"-28 male thread and #0 taper for use with:

- Drill Chuck 30442, 5/32" Cap. (4 mm).
- Drill Chuck is at extra cost.

- (2) May be substituted for choice of collet when ordered with 33500-3 Drive Spindle.



33662



33628



43497

Series 33628-(-) One Piece Collets, Non-Precision

Use with 33500-3 Drive Spindle. Collet has 1/4"-28 male thread. Overall length (less thread) 23/32" (18.2 mm).

Drill Size	Dash No.	Drill Size	Dash No.	Drill Size	Dash No.	Drill Size	Dash No.	Drill Size	Dash No.	Drill Size	Dash No.	Drill Size	Dash No.	Drill Size	Dash No.	Drill Size	Dash No.
7	-1	15	-9	22	-16	30	-24	38	-32	46	-40	54	-48	5/64	-56	11/64	-64
8	-2	16	-10	23	-17	31	-25	39	-33	47	-41	55	-49	3/32	-57	7/32	-65
9	-3	17	-11	24	-18	32	-26	40	-34	48	-42	56	-50	7/64	-58	15/64	-66
10	-4	18	-12	25	-19	33	-27	41	-35	49	-43	57	-51	1/8	-59	1/4	-67
11	-5	19	-13	26	-20	34	-28	42	-36	50	-44	58	-52	9/64	-60	F	-68
12	-6	20	-14	27	-21	35	-29	43	-37	51	-45	59	-53	5/32	-61		
13	-7	20	-14	28	-22	36	-30	44	-38	52	-46	60	-54	11/64	-62		
14	-8	21	-15	29	-23	37	-31	45	-39	53	-47	53	-47	1/16	-55	3/16	-63

Series 43497-(-) One Piece Collets, Non-Precision

Use with 43494 Drive Spindle. Collet has 9/32" - 40 male thread. Overall length – 1/2" (13 mm).

Drill Size	Dash No.	Drill Size	Dash No.	Drill Size	Dash No.	Drill Size	Dash No.	Drill Size	Dash No.	Drill Size	Dash No.	Drill Size	Dash No.	Drill Size	Dash No.	Drill Size	Dash No.
7	-7	14	-14	21	-21	28	-28	35	-35	42	-42	49	-49	56	-56	3/32	-163
8	-8	15	-15	22	-22	29	-29	36	-36	43	-43	50	-50	57	-57	7/64	-164
9	-9	16	-16	23	-23	30	-30	37	-37	44	-44	51	-51	58	-58	1/8	-165
10	-10	17	-17	24	-24	31	-31	38	-38	45	-45	52	-52	59	-59	9/64	-166
11	-11	18	-18	25	-25	32	-32	39	-39	46	-46	53	-53	60	-60	5/32	-167
12	-12	19	-19	26	-26	33	-33	40	-40	47	-47	54	-54	1/16	-161	11/64	-168
13	-13	20	-20	27	-27	34	-34	41	-41	48	-48	55	-55	5/64	-162	3/16	-169

Drills and Push-Pull Tapper

Drills and Tappers

Torque Output: 2.5 to 23.0 ft-lbs (3.4 to 31.2 Nm)

Standard Equipment

- Chuck

Pistol Grip Drills

575 to 5,300 rpm / .7 hp (.5 kW)

950 to 3,800 rpm / .5 hp (.4 kW)

Capacity: 1/4" (6 mm) and 3/8" (9.5 mm)

- Model DG055A(-) and 8426(-) drills are excellent general purpose tools.



DG055A-21-B

8426-5

Pistol Drills

Model No.	Speed rpm	Standard Chuck Cap.		Stall Torque		Spindle Thread Male	Spindle Offset		Tool Length		Tool Weight		@ Free Speed		Standard Chuck Part No.	
		in.	mm	ft-lbs	Nm		in.	mm	in.	mm	lbs	kg	Air Cons. cfm	Sound Level L/s dB(A)		
Pistol																
DG055A-38-F	3,800	5/16	8	2.5	3.4	3/8"-24	0.9	23	7.0	177	2.4	1.1	19	9.0	83	-
DG055A-21-B	2,100	3/8	10	4.5	6.1	3/8"-24	0.9	23	7.3	184	2.5	1.1	19	9.0	83	-
DG055A-10-L	950	1/2	13	10.0	13.6	3/8"-24	0.9	23	8.3	212	3.1	1.4	19	9.0	83	-
8426-2	5,300	3/8	9	3.7	5.0	3/8"-24	1.1	27	7.3	85	3.3	1.5	33	15.6	86	47341
8426-3	3,250	3/8	9	6.0	8.1	3/8"-24	1.1	27	7.3	185	3.3	1.5	33	15.6	86	47341
8426-4	2,600	3/8	9	7.4	10.0	3/8"-24	1.1	27	7.3	185	3.3	1.5	33	15.6	86	47341
8426-5	1,550	3/8	9	11.5	15.6	3/8"-24	1.1	27	9.0	229	3.8	1.7	33	15.6	86	30896
8426-6	950	3/8	9	19.5	26.4	3/8"-24	1.1	27	9.0	229	3.8	1.7	33	15.6	86	30896
8426-7	575	3/8	9	23.0	31.2	3/8"-24	1.1	27	9.0	229	3.8	1.7	33	15.6	86	30896
8525-C	2500	1/4	6	3.6	4.9	3/8"-24	0.9	22	6.0	153	2.7	1.2	26	12.3	84	41084
8526-C	4500	1/4	6	3.6	4.9	3/8"-24	0.9	22	6.0	153	2.7	1.2	26	12.3	84	41084

Air Inlet – 1/4" NPTF Recommended Air Pressure – 90 PSI (6.2 bar) Recommended Hose Size – 5/16" (8 mm) I.D.



8506-ADB



8506-ATA

Quick Reverse Tappers (QRT)

Model No.	Speed rpm	Standard Chuck Capacity	Stall Torque		Spindle Thread Male	Spindle Offset		Tool Length		Tool Weight		@ Free Speed		Standard Chuck Part No.	
			in.-lbs	Nm		in.	mm	in.	mm	lbs	kg	Air Cons. cfm	Sound Level L/s dB(A)		
Pistol															
8506-ATA	600	NO. 0 - 1/4"	110	12.5	3/8"-24	0.9	23	8.2	208	2.7	1.2	24	11.3	82	31427
8506-ATB	600	NO. 10 - 5/16"	110	12.5	3/8"-24	0.9	23	8.2	208	2.7	1.2	24	11.3	82	31432
8506-ATC	600	5/16" - 5/8"	110	12.5	3/8"-24	0.9	23	8.2	208	2.7	1.2	24	11.3	82	32060
8509-ATA	900	NO. 0 - 1/4"	80	9.1	3/8"-24	0.9	23	8.2	208	2.7	1.2	26	12.2	82	31427
8509-ATB	900	NO. 10 - 5/16"	80	9.1	3/8"-24	0.9	23	8.2	208	2.7	1.2	26	12.2	82	31432
8509-ATC	900	5/16" - 5/8"	80	9.1	3/8"-24	0.9	23	8.2	208	2.7	1.2	26	12.2	82	32060
8506-ADB	600	3/8"	110	12.5	3/8"-24	0.9	23	8.0	203	2.9	1.3	24	11.3	82	47341
8506-ADK	600	1/2"	110	12.5	3/8"-24	0.9	23	8.0	203	2.9	1.3	24	11.3	82	34518
8509-ADB	900	3/8"	80	9.1	3/8"-24	0.9	23	8.0	203	2.9	1.3	26	12.2	82	47341
8509-ADK	900	1/2"	80	9.1	3/8"-24	0.9	23	8.0	203	2.9	1.3	26	12.2	82	34518

Air Inlet – 1/4" NPTF Recommended Air Pressure – 90 PSI (6.2 bar) Recommended Hose Size – 5/16" (8 mm) I.D.

Drills and Tappers

Standard Equipment

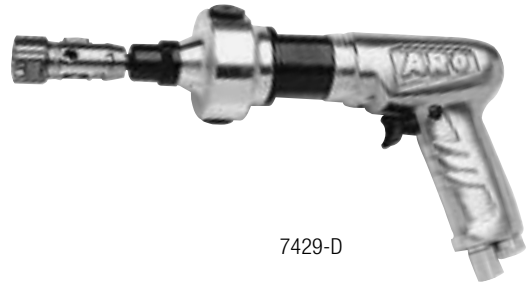
- Tapping Chuck
- Necessary Wrenches
- 48932 Dead Handle w/8426 - 6 & 7.

Push-Pull Tapper

550 rpm / .45 hp (0.3 kW)

Capacity: 5/8" (15 mm) Tap Chuck

- Designed for thread-chasing applications in metal fab shops after painting and cleanup operations.



7429-D

Push-Pull Tapper

Model No.	Free Speed rpm	Standard Chuck Cap. in. mm	Stall Torque ft-lbs Nm	Spindle Offset in. mm	Spindle Length in. mm	Tool Weight lbs kg	@ Free Speed Air Cons. cfm L/s	Sound Level dB(A)	Standard Chuck Part No.
Pistol									
7429-D	550	5/16 7	19 25.8	1.3 34	12 305	3.9 1.8	27 13	85	31432

• Most popular model. Air Inlet – 1/4" NPTF Recommended Air Pressure – 90 PSI (6.2 bar) Recommended Hose Size – 5/16" (8 mm) I.D.

Extra Cost Accessories

For Models	Part No.	Description
7429-D	44360-()	Piped Exhaust Assembly

No Cost Options (Order "With" Option)

For Models	Part No.	Description	Substitute for Standard
7429-D	31427	Tapping Chuck	Chuck
7429-D	32060	Tapping Chuck	Chuck



Keyed Drill Chucks

Capacity in. mm	Thread Female	Chuck No.	Key No.
5/32 4	No. 0 Taper	30442	30442-K
1/4 6	No. 1 Taper	36953	30209-K
1/4 6	3/8"-24	31330	31330-K
1/4 6	3/8"-24	41084	41084-K
1/4 6	3/8"-24	47340	30209-K
1/4 6	1/2"-20	33906	30209-K
3/8 9	3/8"-24	30896	30896-K
3/8 9	3/8"-24	47341	30510-K
3/8 9	1/2"-20	30016	30016-K
3/8 9	1/2"-20	33907	30510-K
1/2 13	3/8"-24	34518	30016-K
1/2 13	1/2"-20	30018	30016-K

Note: Key is included with Chuck.

Drill Collets

Capacity in. to in. mm	Collet 3/8"-24 Female	Chuck Insert No.
3/32 to 1/8 3	32984-1	32968-1
1/8 to 5/32 3	32984-2	32968-2
5/32 to 3/16 4	32984-3	32968-3
3/16 to 7/32 5	32984-4	32968-4
7/32 to 1/4 6	32984-5	32968-5
1/4 to 9/32 7	32984-6	32968-6
9/32 to 5/16 7	32984-7	32968-7
5/16 to 11/32 8	32984-8	32968-8
11/32 to 3/8 9	32984-9	32968-9

Note: Collet insert is included with Collet.



Quick-Change Chucks

Hex Drive Cap. in.	Mounting Thread Female	Chuck No.
1/4"	3/8"-24	30712
7/16"	1/2"-20	31367



Tapping Chucks

Capacity in. to in. mm	Chuck No.
0 to 1/4 0 to 6	31427
No. 10 to 5/16 7	31432
5/16 to 5/8 7 to 15	32060 ¹

(1) Includes 32064 Adapter.



Spindle Adapters

Drive Spindle	Mounting Thread Female	Adapter No.
1/2"-20 (male)	3/8"-24	30629
1/2"-20 (male)	1/2"-20	40847
3/8" sq.	3/8"-24	30384-5
1/2" sq.	3/8"-24	30384-9
1/2" sq.	1/2"-20	40768

