

Unit: mm

EDP #	Size	Decimal Equiv.	Wire/Fractional/Letter	Flute Length	Overall Length	Shank Diameter		
							Dc	ƒ
1548392	9.92	0.3906	25/64	62	107	10		
0772960	10.00	0.3937						
0774687	10.10	0.3976						
0774693	10.20	0.4016	13/32	68	116	12		
0774709	10.30	0.4055						
1548408	10.32	0.4063						
0774715	10.40	0.4094						
0774721	10.50	0.4134						
0774738	10.60	0.4173						
0774744	10.70	0.4213						
1548414	10.72	0.4219	27/64	70			116	12
0774750	10.80	0.4252						
0774767	10.90	0.4291						
0774773	11.00	0.4331						
0773078	11.10	0.4370						
1548420	11.11	0.4375	7/16	73	123	14		
0773084	11.20	0.4409						
0773090	11.30	0.4449						
0773106	11.40	0.4488						
0773112	11.50	0.4528						
1548437	11.51	0.4531	29/64	76			123	14
0773129	11.60	0.4567						
0773135	11.70	0.4606						
0773141	11.80	0.4646						
0773158	11.90	0.4685						
1548443	11.91	0.4688	15/32	79	138	14		
0773164	12.00	0.4724						
0774780	12.10	0.4764						
0774796	12.20	0.4803						
0774801	12.30	0.4843						
1548450	12.30	0.4844	31/64	81			138	14
0774818	12.40	0.4882						
0774824	12.50	0.4921						
0774830	12.60	0.4961						
0774847	12.70	0.5000	1/2	81				
0774853	12.80	0.5039						
0774860	12.90	0.5079						
0774876	13.00	0.5118						

EDP #	Size	Decimal Equiv.	Wire/Fractional/Letter	Flute Length	Overall Length	Shank Diameter		
							Dc	ƒ
1548472	13.10	0.5156	33/64	87	148	14		
0773273	13.10	0.5157						
0773280	13.20	0.5197						
0773296	13.30	0.5236						
0773301	13.40	0.5276						
1548489	13.49	0.5313	17/32	90			148	14
0773318	13.50	0.5315						
0773324	13.60	0.5354						
0773330	13.70	0.5394						
0773347	13.80	0.5433						
1548495	13.89	0.5469	35/64	92	154	16		
0773353	13.90	0.5472						
0773360	14.00	0.5512						
0774882	14.10	0.5551						
0774899	14.20	0.5591						
1548500	14.29	0.5625	9/16	94			154	16
0774904	14.30	0.5630						
0774910	14.40	0.5669						
0774927	14.50	0.5709						
0774933	14.60	0.5748						
1548517	14.68	0.5781	37/64	97	162	16		
0774940	14.70	0.5787						
0774956	14.80	0.5827						
0774962	14.90	0.5866						
0774979	15.00	0.5906						
1548523	15.08	0.5938	19/32	99			162	16
0773479	15.10	0.5945						
0773485	15.20	0.5984						
0773491	15.30	0.6024						
0773507	15.40	0.6063						
1548530	15.48	0.6094	39/64	99	162	16		
0773513	15.50	0.6102						
0773520	15.60	0.6142						
0773536	15.70	0.6181						
0773542	15.80	0.6220						
1548546	15.88	0.6250	5/8	99			162	16
0773559	15.90	0.6260						
0773565	16.00	0.6299						

⚠ WARNING: Cancer - www.P65Warnings.ca.gov

LIST 9862/63 Standard Cutting Conditions

Work Material	Structural Steel Carbon Steel Cast Iron		Alloy Steel Heat treated Steel (20-30 HRC)		Mold Steel Hardened Steel (30-40 HRC)		Hardened Steel (40-50 HRC)		Ductile Cast Iron		Stainless Steel (300 Series)		Nickel Alloys Titanium Alloys PH Stainless	
	Speed (SFM)	320-330 SFM	255-265 SFM	140-150 SFM	95-105 SFM	245-255 SFM	100-110 SFM	80-90 SFM						
Drill Dia. Metric Fractional	RPM	IPR	RPM	IPR	RPM	IPR	RPM	IPR	RPM	IPR	RPM	IPR	RPM	IPR
2.0	16000	0.0022	12700	0.0022	7200	0.0017	4800	0.0014	11900	0.0023	6000	0.0009	4120	0.0010
3.0	10600	0.0035	8500	0.0038	4800	0.0030	3200	0.0023	7950	0.0038	3400	0.0016	2750	0.0017
1/8	10000	0.0037	7950	0.0040	4450	0.0031	2900	0.0025	7500	0.0040	3200	0.0017	2600	0.0017
3/16	6700	0.0056	5300	0.0060	2950	0.0047	1950	0.0037	5000	0.0060	2130	0.0026	1730	0.0026
5.0	6400	0.0061	5050	0.0063	2800	0.0051	1850	0.0040	4750	0.0063	2030	0.0027	1650	0.0028
1/4	5000	0.0077	4000	0.0080	2200	0.0064	1450	0.0051	3750	0.0080	1600	0.0034	1300	0.0035
5/16	4050	0.0097	3200	0.0100	1800	0.0078	1200	0.0064	3000	0.0100	1280	0.0043	1040	0.0044
8.0	4000	0.0098	3150	0.0101	1750	0.0079	1150	0.0065	2950	0.0101	1270	0.0043	1030	0.0044
3/8	3350	0.0116	2650	0.0113	1500	0.0089	1000	0.0071	2500	0.0113	1070	0.0048	870	0.0046
10.0	3200	0.0118	2500	0.0119	1400	0.0094	950	0.0074	2400	0.0119	1020	0.0050	830	0.0048
12.0	2650	0.0132	2100	0.0135	1200	0.0102	800	0.0084	2000	0.0134	850	0.0060	690	0.0058
1/2	2500	0.0140	2000	0.0143	1100	0.0107	750	0.0088	1900	0.0141	800	0.0063	650	0.0061
16.0	2000	0.0157	1600	0.0160	900	0.0127	600	0.0098	1500	0.0157	640	0.0067	510	0.0074

NOTES:

- Adjust cutting condition according to the rigidity of machine or work clamp state.
- In machine or installation of machining step, when there is no rigidity of machine or chattering occurs, reduce the rotation and feed rate.
- Wet condition are for drilling with water soluble cutting fluid.
- In non-water soluble cutting fluid, reduce the rotation and feed rate by 20%.
- Drilling the step feed in Stainless Steel when hole depth more than 2×Dc deep, step feed interval is about 0.5×Dc.
- Use air blow for cooling and the chip exclusion in dry process.
- By sparks during cutting, or heat by breakage, or hot chip, there is danger of fire. Take fire prevention measures.
- Use the table values for drilling depth under 3×Dc.
- When for hole depth more than 3×Dc deep, add step feeding. However, a work material and cutting condition to chip removal may be worse. In that case, even if under predetermined hole depth, please step feed.
- Retraction of the step feed is to be returned to the top of the hole.
- Step feed is recommended to 0.5~1.0×Dc. In the case of small diameter step feed is recommended to 0.2~0.5×Dc.
- Please use the fixture to control the amplitude of the drill bit below 0.02mm, for small diameter, high-speed cutting control amplitude of the drill bit 0.01mm or less.