

KDR-2

超硬ルーマ型ドリル Tungsten Carbide 2 Flutes Micro Drill

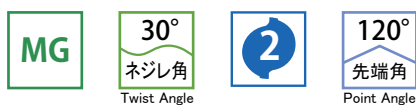
- 一般鋼～アルミまで幅広い被削材が加工可能
A wide range of work materials can be machined from general steel to aluminum
- φ0.03～φ3.0まで0.01とびにラインナップ
Lineup from φ0.03 to φ3.0 in 0.01 increments



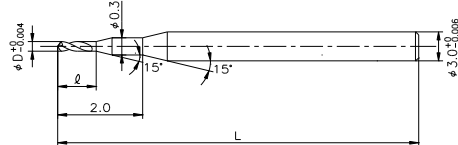
被削材 Workpiece					
一般構造鋼 General Structural Steel	炭素鋼 Carbon Steel	合金鋼・工具鋼 Alloy Steel Tool Steel	ステンレス鋼 Ceramics	アルミ合金 Aluminum Alloy	樹脂 Resin
○	○	○	○	○	○

- 切削条件表はP130に記載
- Cutting conditions are recommended on page 130.

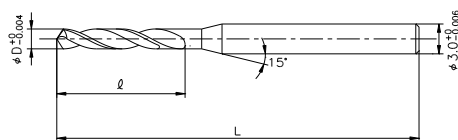
品番 Code No.	刃径 D Flute Diameter	溝長 ℓ Groove length	全長 L Total Length	柄径 Shank Diameter	標準価格 Retail Price
KDR-2003	0.03	0.3	38	3	19,800
KDR-2004	0.04	0.4	38	3	13,200
KDR-2005	0.05	0.5	38	3	11,230
KDR-2006	0.06	0.6	38	3	10,270
KDR-2007	0.07	0.7	38	3	9,270
KDR-2008	0.08	0.8	38	3	7,930
KDR-2009	0.09	0.9	38	3	6,930
KDR-2010	0.1	1.2	38	3	5,370
KDR-2011	0.11	1.2	38	3	5,370
KDR-2012	0.12	1.4	38	3	5,370
KDR-2013	0.13	1.4	38	3	5,370
KDR-2014	0.14	1.4	38	3	5,370
KDR-2015	0.15	1.8	38	3	5,370
KDR-2016	0.16	1.8	38	3	5,370
KDR-2017	0.17	1.8	38	3	5,370
KDR-2018	0.18	2.1	38	3	4,900
KDR-2019	0.19	2.1	38	3	4,900
KDR-2020	0.2	2.4	38	3	4,900
KDR-2021	0.21	2.4	38	3	4,400
KDR-2022	0.22	2.6	38	3	4,400
KDR-2023	0.23	2.6	38	3	4,400
KDR-2024	0.24	2.6	38	3	4,400
KDR-2025	0.25	3	38	3	4,400
KDR-2026	0.26	3	38	3	4,400
KDR-2027	0.27	3	38	3	4,400
KDR-2028	0.28	3.3	38	3	4,400
KDR-2029	0.29	3.3	38	3	4,400
KDR-2030	0.3	5	38	3	4,400
KDR-2031	0.31	5	38	3	3,300



- 刃径0.03及び0.04の形状 Shape of Flute Diameter 0.03 and 0.04



- 刃径0.05以上の形状 Shape of Flute Diameter more than 0.05



単位 [寸法 : mm / 価格 : 円]
Unit [size : mm / Retail Price : JPY]

品番 Code No.	刃径 D Flute Diameter	溝長 ℓ Groove length	全長 L Total Length	柄径 Shank Diameter	標準価格 Retail Price
KDR-2032	0.32	5	38	3	3,300
KDR-2033	0.33	5	38	3	3,300
KDR-2034	0.34	5	38	3	3,300
KDR-2035	0.35	5	38	3	3,300
KDR-2036	0.36	5	38	3	3,300
KDR-2037	0.37	5	38	3	3,300
KDR-2038	0.38	5	38	3	3,300
KDR-2039	0.39	5	38	3	3,300
KDR-2040	0.4	6	38	3	3,300
KDR-2041	0.41	6	38	3	3,300
KDR-2042	0.42	6	38	3	3,300
KDR-2043	0.43	6	38	3	3,300
KDR-2044	0.44	6	38	3	3,300
KDR-2045	0.45	6	38	3	3,300
KDR-2046	0.46	6	38	3	3,300
KDR-2047	0.47	6	38	3	3,300
KDR-2048	0.48	6	38	3	3,300
KDR-2049	0.49	6	38	3	3,300
KDR-2050	0.5	6	38	3	3,300
KDR-2051	0.51	6	38	3	3,300
KDR-2052	0.52	6	38	3	3,300
KDR-2053	0.53	6	38	3	3,300
KDR-2054	0.54	6	38	3	3,300
KDR-2055	0.55	6	38	3	3,300
KDR-2056	0.56	6	38	3	3,300
KDR-2057	0.57	6	38	3	3,300
KDR-2058	0.58	6	38	3	3,300
KDR-2059	0.59	6	38	3	3,300
KDR-2060	0.6	7	38	3	3,300

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品番 Code No.	刃径 D Flute Diameter	溝長 ℓ Groove length	全長 L Total Length	柄径 Shank Diameter	標準価格 Retail Price
KDR-2061	0.61	7	38	3	3,300
KDR-2062	0.62	7	38	3	3,300
KDR-2063	0.63	7	38	3	3,300
KDR-2064	0.64	7	38	3	3,300
KDR-2065	0.65	7	38	3	3,300
KDR-2066	0.66	7	38	3	3,300
KDR-2067	0.67	7	38	3	3,300
KDR-2068	0.68	7	38	3	3,300
KDR-2069	0.69	7	38	3	3,300
KDR-2070	0.7	8	38	3	3,300
KDR-2071	0.71	8	38	3	3,300
KDR-2072	0.72	8	38	3	3,300
KDR-2073	0.73	8	38	3	3,300
KDR-2074	0.74	8	38	3	3,300
KDR-2075	0.75	8	38	3	3,300
KDR-2076	0.76	8	38	3	3,300
KDR-2077	0.77	8	38	3	3,300
KDR-2078	0.78	8	38	3	3,300
KDR-2079	0.79	8	38	3	3,300
KDR-2080	0.8	8	38	3	3,300
KDR-2081	0.81	8	38	3	3,300
KDR-2082	0.82	8	38	3	3,300
KDR-2083	0.83	8	38	3	3,300
KDR-2084	0.84	8	38	3	3,300
KDR-2085	0.85	8	38	3	3,300
KDR-2086	0.86	8	38	3	3,300
KDR-2087	0.87	8	38	3	3,300
KDR-2088	0.88	8	38	3	3,300
KDR-2089	0.89	8	38	3	3,300
KDR-2090	0.9	8	38	3	3,300
KDR-2091	0.91	8	38	3	3,300
KDR-2092	0.92	8	38	3	3,300
KDR-2093	0.93	8	38	3	3,300
KDR-2094	0.94	8	38	3	3,300
KDR-2095	0.95	8	38	3	3,300
KDR-2096	0.96	8	38	3	3,300
KDR-2097	0.97	8	38	3	3,300
KDR-2098	0.98	8	38	3	3,300
KDR-2099	0.99	8	38	3	3,300
KDR-2100	1	10	38	3	3,300
KDR-2101	1.01	10	38	3	3,300
KDR-2102	1.02	10	38	3	3,300
KDR-2103	1.03	10	38	3	3,300
KDR-2104	1.04	10	38	3	3,300
KDR-2105	1.05	10	38	3	3,300
KDR-2106	1.06	10	38	3	3,300
KDR-2107	1.07	10	38	3	3,300
KDR-2108	1.08	10	38	3	3,300

品番 Code No.	刃径 D Flute Diameter	溝長 ℓ Groove length	全長 L Total Length	柄径 Shank Diameter	標準価格 Retail Price
KDR-2109	1.09	10	38	3	3,300
KDR-2110	1.1	10	38	3	3,300
KDR-2111	1.11	10	38	3	3,300
KDR-2112	1.12	10	38	3	3,300
KDR-2113	1.13	10	38	3	3,300
KDR-2114	1.14	10	38	3	3,300
KDR-2115	1.15	10	38	3	3,300
KDR-2116	1.16	10	38	3	3,300
KDR-2117	1.17	10	38	3	3,300
KDR-2118	1.18	10	38	3	3,300
KDR-2119	1.19	10	38	3	3,300
KDR-2120	1.2	10	38	3	3,300
KDR-2121	1.21	10	38	3	3,300
KDR-2122	1.22	10	38	3	3,300
KDR-2123	1.23	10	38	3	3,300
KDR-2124	1.24	10	38	3	3,300
KDR-2125	1.25	10	38	3	3,300
KDR-2126	1.26	10	38	3	3,300
KDR-2127	1.27	10	38	3	3,300
KDR-2128	1.28	10	38	3	3,300
KDR-2129	1.29	10	38	3	3,300
KDR-2130	1.3	10	38	3	3,300
KDR-2131	1.31	10	38	3	3,300
KDR-2132	1.32	10	38	3	3,300
KDR-2133	1.33	10	38	3	3,300
KDR-2134	1.34	10	38	3	3,300
KDR-2135	1.35	10	38	3	3,300
KDR-2136	1.36	10	38	3	3,300
KDR-2137	1.37	10	38	3	3,300
KDR-2138	1.38	10	38	3	3,300
KDR-2139	1.39	10	38	3	3,300
KDR-2140	1.4	10	38	3	3,300
KDR-2141	1.41	10	38	3	3,300
KDR-2142	1.42	10	38	3	3,300
KDR-2143	1.43	10	38	3	3,300
KDR-2144	1.44	10	38	3	3,300
KDR-2145	1.45	10	38	3	3,300
KDR-2146	1.46	10	38	3	3,300
KDR-2147	1.47	10	38	3	3,300
KDR-2148	1.48	10	38	3	3,300
KDR-2149	1.49	10	38	3	3,300
KDR-2150	1.5	10	38	3	3,300
KDR-2151	1.51	10	38	3	3,300
KDR-2152	1.52	10	38	3	3,300
KDR-2153	1.53	10	38	3	3,300
KDR-2154	1.54	10	38	3	3,300
KDR-2155	1.55	10	38	3	3,300
KDR-2156	1.56	10	38	3	3,300

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品番 Code No.	刃径 D Flute Diameter	溝長 ℓ Groove length	全長 L Total Length	柄径 Shank Diameter	標準価格 Retail Price
KDR-2157	1.57	10	38	3	3,300
KDR-2158	1.58	10	38	3	3,300
KDR-2159	1.59	10	38	3	3,300
KDR-2160	1.6	22	50	3	3,830
KDR-2161	1.61	22	50	3	3,830
KDR-2162	1.62	22	50	3	3,830
KDR-2163	1.63	22	50	3	3,830
KDR-2164	1.64	22	50	3	3,830
KDR-2165	1.65	22	50	3	3,830
KDR-2166	1.66	22	50	3	3,830
KDR-2167	1.67	22	50	3	3,830
KDR-2168	1.68	22	50	3	3,830
KDR-2169	1.69	22	50	3	3,830
KDR-2170	1.7	22	50	3	3,830
KDR-2171	1.71	22	50	3	3,830
KDR-2172	1.72	22	50	3	3,830
KDR-2173	1.73	22	50	3	3,830
KDR-2174	1.74	22	50	3	3,830
KDR-2175	1.75	22	50	3	3,830
KDR-2176	1.76	22	50	3	3,830
KDR-2177	1.77	22	50	3	3,830
KDR-2178	1.78	22	50	3	3,830
KDR-2179	1.79	22	50	3	3,830
KDR-2180	1.8	22	50	3	3,830
KDR-2181	1.81	22	50	3	3,830
KDR-2182	1.82	22	50	3	3,830
KDR-2183	1.83	22	50	3	3,830
KDR-2184	1.84	22	50	3	3,830
KDR-2185	1.85	22	50	3	3,830
KDR-2186	1.86	22	50	3	3,830
KDR-2187	1.87	22	50	3	3,830
KDR-2188	1.88	22	50	3	3,830
KDR-2189	1.89	22	50	3	3,830
KDR-2190	1.9	22	50	3	3,830
KDR-2191	1.91	22	50	3	3,830
KDR-2192	1.92	22	50	3	3,830
KDR-2193	1.93	22	50	3	3,830
KDR-2194	1.94	22	50	3	3,830
KDR-2195	1.95	22	50	3	3,830
KDR-2196	1.96	22	50	3	3,830
KDR-2197	1.97	22	50	3	3,830
KDR-2198	1.98	22	50	3	3,830
KDR-2199	1.99	22	50	3	3,830
KDR-2200	2	22	50	3	3,830
KDR-2201	2.01	22	50	3	3,830
KDR-2202	2.02	22	50	3	3,830
KDR-2203	2.03	22	50	3	3,830
KDR-2204	2.04	22	50	3	3,830

品番 Code No.	刃径 D Flute Diameter	溝長 ℓ Groove length	全長 L Total Length	柄径 Shank Diameter	標準価格 Retail Price
KDR-2205	2.05	22	50	3	3,830
KDR-2206	2.06	22	50	3	3,830
KDR-2207	2.07	22	50	3	3,830
KDR-2208	2.08	22	50	3	3,830
KDR-2209	2.09	22	50	3	3,830
KDR-2210	2.1	22	50	3	3,830
KDR-2211	2.11	22	50	3	3,830
KDR-2212	2.12	22	50	3	3,830
KDR-2213	2.13	22	50	3	3,830
KDR-2214	2.14	22	50	3	3,830
KDR-2215	2.15	22	50	3	3,830
KDR-2216	2.16	22	50	3	3,830
KDR-2217	2.17	22	50	3	3,830
KDR-2218	2.18	22	50	3	3,830
KDR-2219	2.19	22	50	3	3,830
KDR-2220	2.2	22	50	3	3,970
KDR-2221	2.21	22	50	3	3,970
KDR-2222	2.22	22	50	3	3,970
KDR-2223	2.23	22	50	3	3,970
KDR-2224	2.24	22	50	3	3,970
KDR-2225	2.25	22	50	3	3,970
KDR-2226	2.26	22	50	3	3,970
KDR-2227	2.27	22	50	3	3,970
KDR-2228	2.28	22	50	3	3,970
KDR-2229	2.29	22	50	3	3,970
KDR-2230	2.3	22	50	3	3,970
KDR-2231	2.31	22	50	3	3,970
KDR-2232	2.32	22	50	3	3,970
KDR-2233	2.33	22	50	3	3,970
KDR-2234	2.34	22	50	3	3,970
KDR-2235	2.35	22	50	3	3,970
KDR-2236	2.36	22	50	3	3,970
KDR-2237	2.37	22	50	3	3,970
KDR-2238	2.38	22	50	3	3,970
KDR-2239	2.39	22	50	3	3,970
KDR-2240	2.4	22	50	3	3,970
KDR-2241	2.41	22	50	3	3,970
KDR-2242	2.42	22	50	3	3,970
KDR-2243	2.43	22	50	3	3,970
KDR-2244	2.44	22	50	3	3,970
KDR-2245	2.45	22	50	3	3,970
KDR-2246	2.46	22	50	3	3,970
KDR-2247	2.47	22	50	3	3,970
KDR-2248	2.48	22	50	3	3,970
KDR-2249	2.49	22	50	3	3,970
KDR-2250	2.5	22	50	3	3,970
KDR-2251	2.51	22	50	3	3,970
KDR-2252	2.52	22	50	3	3,970

超硬ドリル
Carbide Drill

KDR-2、KDRA-2、KDR-90 KDR-F、KDRLS-2

切削条件参考

Referential Cutting Conditions

- KDR-F・KDRLS-2は下記条件の20%減の送り速度を奨励いたします。
KDR-F and KDRLS-2 are encouraged to reduce the feed rate by 20% of the following conditions.
- TiA Ⅱ Nコーティング付のKDRA-2は下記条件の20%～30%アップを推奨いたします
KDSA-2 with TiA Ⅱ N coating shall be recommended to increase 20%～30% on the following conditions

被削材 Workpiece	炭素鋼・一般構造用鋼 Carbon Steel・ General Structural Steel SS・S55C		合金鋼・工具鋼 Alloy Steel・Tool Steel SCM・SKT・SKS・SKD		ステンレス鋼 Stainless Steel SUS303,SUS304,SUS416		アルミニウム合金 Aluminum Alloy ADC・AC	
刃 径 Flute Diameter mm	切削速度 Cutting Speed m/min	送り速度 Feed mm/rev	切削速度 Cutting Speed m/min	送り速度 Feed mm/rev	切削速度 Cutting Speed m/min	送り速度 Feed mm/rev	切削速度 Cutting Speed m/min	送り速度 Feed mm/rev
0.03～0.09	2～10	0.0005～0.002	2～ 8	0.0005～0.001	2～ 6	0.0005～0.001	4～ 6	0.0005～0.001
0.1 ～0.29	5～15	0.002 ～0.01	5～12	0.001 ～0.005	2～ 8	0.0005～0.002	10～20	0.005 ～0.02
0.3 ～0.49	10～25	0.005 ～0.02	8～20	0.002 ～0.01	6～12	0.001 ～0.005	10～30	0.01 ～0.04
0.5 ～0.99	15～30	0.01 ～0.04	10～25	0.005 ～0.02	10～20	0.002 ～0.01	15～40	0.02 ～0.06
1.0 ～1.99	20～40	0.02 ～0.06	15～30	0.01 ～0.05	12～25	0.005 ～0.02	20～50	0.04 ～0.1
2.0 ～3.0	25～50	0.05 ～0.1	20～40	0.03 ～0.08	20～36	0.01 ～0.05	25～60	0.08 ～0.2
備 考 Remarks	・工具取付時の振れを最小に抑えてください。 ・切削油を使用して下さい。				・Minimize Run out on fixing tool. ・Use Cutting Oil.			

超硬ドリル

Carbide Drill