

# 新ジャンルのダイヤモンド工具

## 「Hybrid」電着

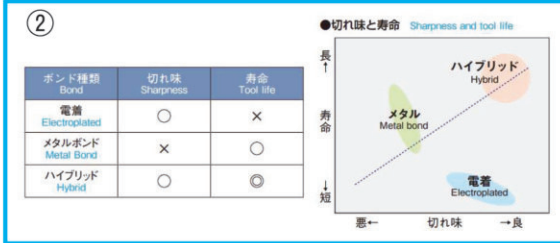
(外部給油タイプ)



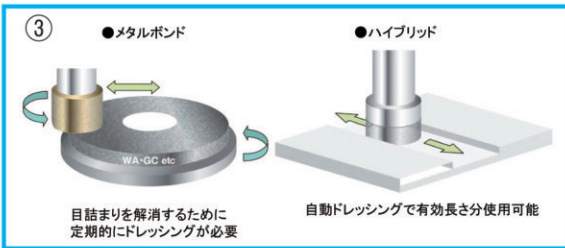
品番：EDHB-EM-QC



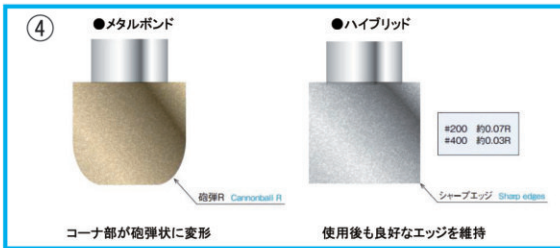
●電着ボンドの切れ味とメタルボンドの寿命を兼ね備えています！



●抜群の切れ味による高速加工と超長寿命！

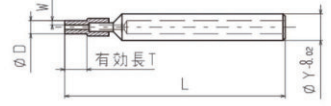


●面倒なドレッシングが不要で長時間良好な切れ味を維持！

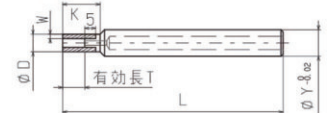


●良好なエッジを維持！

■ Aタイプ (1.0~2.9φ)



■ Bタイプ (3.0~20.0φ)



■ 他のダイヤモンド工具の比較

加工ワーク「炭化珪素 (SiC)」比較工具径φ10

電着工具	加工スピード 切込0.025mm/1pass 送り200mm/min	加工コスト 基準	寿命 加工可能距離 8.4m	寿命比較 基準
メタルボンド工具	切込0.01mm/1pass 送り200mm/min	0.4倍	加工可能距離 974m	116倍
ハイブリッド工具	切込0.01mm/1pass 送り1800mm/min	3.6倍	加工可能距離 1075m	128倍

●加工スピードを下げれば、寿命比較はアップします。

炭化珪素 (SiC) の加工スピード  
石英 (SiO<sub>2</sub>) の加工スピード  
石英 (SiO<sub>2</sub>) の表面粗さ  
アルミナ (Al<sub>2</sub>O<sub>3</sub>) の穴加工  
シリコニア (ZrO<sub>2</sub>) の穴加工  
シリコン (Si) の溝加工  
窒化アルミ (AlN) の溝加工  
窒化珪素 (Si<sub>3</sub>N<sub>4</sub>) の溝加工  
※必ず資料データが必要と場合はお申し付けください。

ツール No.	刃径 (mm)	刃厚 (mm)	有効長 (mm)	全長 (mm)	シャンク径 (mm)	粒度	価格 (税抜き)
YT23862	1	0.3	5	60	6	#400	56,600
YT23863	1.1	0.3	5	60	6	#400	56,600
YT23864	1.2	0.3	5	60	6	#400	56,600
YT23865	1.3	0.3	5	60	6	#400	56,600
YT23866	1.4	0.3	5	60	6	#400	56,600
YT23867	1.5	0.3	5	60	6	#400	56,600
YT23868	1.6	0.3	5	60	6	#400	56,600
YT23869	1.7	0.3	5	60	6	#400	56,600
YT23870	1.8	0.3	5	60	6	#400	56,600
YT23871	1.9	0.3	5	60	6	#400	56,600
YT23872	2	0.4	5	60	6	#200	53,800
YT23873	2	0.4	5	60	6	#400	53,800
YT23874	2.1	0.4	5	60	6	#200	53,800
YT23875	2.1	0.4	5	60	6	#400	53,800
YT23876	2.2	0.4	5	60	6	#200	53,800
YT23877	2.2	0.4	5	60	6	#400	53,800
YT23878	2.3	0.4	5	60	6	#200	53,800
YT23879	2.3	0.4	5	60	6	#400	53,800
YT23880	2.4	0.4	5	60	6	#200	53,800
YT23881	2.4	0.4	5	60	6	#400	53,800
YT23882	2.5	0.4	5	60	6	#200	53,800
YT23883	2.5	0.4	5	60	6	#400	53,800
YT23884	2.6	0.4	5	60	6	#200	53,800
YT23885	2.6	0.4	5	60	6	#400	53,800
YT23886	2.7	0.4	5	60	6	#200	53,800
YT23887	2.7	0.4	5	60	6	#400	53,800
YT23888	2.8	0.5	5	60	6	#200	53,800
YT23889	2.8	0.5	5	60	6	#400	53,800
YT23890	2.9	0.5	5	60	6	#200	53,800
YT23891	2.9	0.5	5	60	6	#400	53,800
YT23892	3	0.5	6	60	6	#200	49,100
YT23893	3	0.5	6	60	6	#400	49,100
YT23894	3.1	0.5	6	60	6	#200	49,100
YT23895	3.1	0.5	6	60	6	#400	49,100
YT23896	3.2	0.5	6	60	6	#200	49,100
YT23897	3.2	0.5	6	60	6	#400	49,100
YT23898	3.3	0.5	6	60	6	#200	49,100
YT23899	3.3	0.5	6	60	6	#400	49,100
YT23900	3.4	0.5	6	60	6	#200	49,100
YT23901	3.4	0.5	6	60	6	#400	49,100
YT23902	3.5	0.5	6	60	6	#200	49,100
YT23903	3.5	0.5	6	60	6	#400	49,100
YT23904	3.6	0.5	6	60	6	#200	49,100
YT23905	3.6	0.5	6	60	6	#400	49,100
YT23906	3.7	0.5	6	60	6	#200	49,100
YT23907	3.7	0.5	6	60	6	#400	49,100
YT23908	3.8	0.5	6	60	6	#200	49,100
YT23909	3.8	0.5	6	60	6	#400	49,100
YT23910	3.9	0.5	6	60	6	#200	49,100
YT23911	3.9	0.5	6	60	6	#400	49,100

ツール No.	刃径 (mm)	刃厚 (mm)	有効長 (mm)	全長 (mm)	シャンク径 (mm)	粒度	価格 (税抜き)
YT23912	4	0.5	6	60	6	#200	49,100
YT23913	4	0.5	6	60	6	#400	49,100
YT23914	4.1	1	7	60	6	#100	50,100
YT23915	4.1	0.6	7	60	6	#200	50,100
YT23916	4.1	0.5	7	60	6	#400	50,100
YT23917	4.2	1	7	60	6	#100	50,100
YT23918	4.2	0.6	7	60	6	#200	50,100
YT23919	4.2	0.5	7	60	6	#400	50,100
YT23920	4.3	1	7	60	6	#100	50,100
YT23921	4.3	0.6	7	60	6	#200	50,100
YT23922	4.3	0.5	7	60	6	#400	50,100
YT23923	4.4	1	7	60	6	#100	50,100
YT23924	4.4	0.6	7	60	6	#200	50,100
YT23925	4.4	0.5	7	60	6	#400	50,100
YT23926	4.5	1	7	60	6	#100	50,100
YT23927	4.5	0.6	7	60	6	#200	50,100
YT23928	4.5	0.5	7	60	6	#400	50,100
YT23929	4.6	1	7	60	6	#100	50,100
YT23930	4.6	0.6	7	60	6	#200	50,100
YT23931	4.6	0.5	7	60	6	#400	50,100
YT23932	4.7	1	7	60	6	#100	50,100
YT23933	4.7	0.6	7	60	6	#200	50,100
YT23934	4.7	0.5	7	60	6	#400	50,100
YT23935	4.8	1	7	60	6	#100	50,100
YT23936	4.8	0.6	7	60	6	#200	50,100
YT23937	4.8	0.5	7	60	6	#400	50,100
YT23938	4.9	1	7	60	6	#100	50,100
YT23939	4.9	0.6	7	60	6	#200	50,100
YT23940	4.9	0.5	7	60	6	#400	50,100
YT23941	5	1	7	60	6	#100	50,100
YT23942	5	0.6	7	60	6	#200	50,100
YT23943	5	0.5	7	60	6	#400	50,100
YT23944	5.1	1	8	60	6	#100	51,100
YT23945	5.1	0.6	8	60	6	#200	51,100
YT23946	5.1	0.5	8	60	6	#400	51,100
YT23947	5.2	1	8	60	6	#100	51,100
YT23948	5.2	0.6	8	60	6	#200	51,100
YT23949	5.2	0.5	8	60	6	#400	51,100
YT23950	5.3	1	8	60	6	#100	51,100
YT23951	5.3	0.6	8	60	6	#200	51,100
YT23952	5.3	0.5	8	60	6	#400	51,100
YT23953	5.4	1	8	60	6	#100	51,100
YT23954	5.4	0.6	8	60	6	#200	51,100
YT23955	5.4	0.5	8	60	6	#400	51,100
YT23956	5.5	1	8	60	6	#100	51,100
YT23957	5.5	0.6	8	60	6	#200	51,100
YT23958	5.5	0.5	8	60	6	#400	51,100
YT23959	5.6	1	8	60	6	#100	51,100
YT23960	5.6	0.6	8	60	6	#200	51,100
YT23961	5.6	0.5	8	60	6	#400	51,100



# ELECTROPLATED

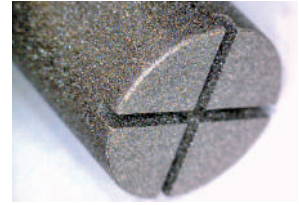
電着

## ED-EM-QC

ダイヤ電着エンドミル

Electroplated Diamond End Mills for Quartz & Ceramics

セラミックス、石英など脆性材料のエンドミル加工に最適です。  
This product is perfect for milling materials such as ceramic and quartz.



※一般的に粒度#325以上は仕上げ加工、#270以下は荒仕上げ加工に適しています。

ツールNo. Tool No.									刃径	刃長	首下	全長	シャンク径	価格(円)
粒度 Grind Size									Dia. of Mill	Length of Cut	Neck Length	Overall Length	Shank Dia.	Price(¥)
# 120	# 140	# 170	# 200	# 230	# 270	# 325	# 400	# 600						
-	-	-	-	-	-	YT22540	YT22541	YT22542	0.3	が	1.5	40	3	3,300
-	-	-	-	-	-	YT22543	YT22544	YT22545	0.3	が	3	40	3	3,300
-	-	-	-	-	-	YT22546	YT22547	YT22548	0.4	が	1.5	40	3	3,300
-	-	-	-	-	-	YT22549	YT22550	YT22551	0.4	が	3	40	3	3,300
-	-	-	-	-	-	YT22552	YT22553	YT22554	0.4	が	4.5	40	3	3,300
-	-	-	-	-	-	YT22555	YT22556	YT22557	0.4	が	6	40	3	3,300
-	-	-	YT22558	YT22559	YT22560	YT22561	YT22562	YT22563	0.5	が	1.5	40	3	3,300
-	-	-	YT22564	YT22565	YT22566	YT22567	YT22568	YT22569	0.5	が	3	40	3	3,300
-	-	-	YT22570	YT22571	YT22572	YT22573	YT22574	YT22575	0.5	が	4.5	40	3	3,300
-	-	-	YT22576	YT22577	YT22578	YT22579	YT22580	YT22581	0.5	が	6	40	3	3,300
-	-	-	YT22582	YT22583	YT22584	YT22585	YT22586	YT22587	0.5	が	8	40	3	3,300
-	-	-	YT22588	YT22589	YT22590	YT22591	YT22592	YT22593	0.6	が	1.5	40	3	2,940
-	-	-	YT22594	YT22595	YT22596	YT22597	YT22598	YT22599	0.6	が	3	40	3	2,940
-	-	-	YT22600	YT22601	YT22602	YT22603	YT22604	YT22605	0.6	が	4.5	40	3	2,940
-	-	-	YT22606	YT22607	YT22608	YT22609	YT22610	YT22611	0.6	が	6	40	3	2,940
-	-	-	YT22612	YT22613	YT22614	YT22615	YT22616	YT22617	0.6	が	8	40	3	2,940
-	-	-	YT22618	YT22619	YT22620	YT22621	YT22622	YT22623	0.7	が	1.5	40	3	2,940
-	-	-	YT22624	YT22625	YT22626	YT22627	YT22628	YT22629	0.7	が	3	40	3	2,940
-	-	-	YT22630	YT22631	YT22632	YT22633	YT22634	YT22635	0.7	が	4.5	40	3	2,940
-	-	-	YT22636	YT22637	YT22638	YT22639	YT22640	YT22641	0.7	が	6	40	3	2,940
-	-	-	YT22642	YT22643	YT22644	YT22645	YT22646	YT22647	0.7	が	8	40	3	2,940
-	-	-	YT22648	YT22649	YT22650	YT22651	YT22652	YT22653	0.8	2	2	40	3	2,940
-	-	-	YT22654	YT22655	YT22656	YT22657	YT22658	YT22659	0.8	2	4	40	3	2,940
-	-	-	YT23480	YT23481	YT23482	YT23483	YT23484	YT23485	0.8	2	6	40	3	2,940
-	-	-	YT22660	YT22661	YT22662	YT22663	YT22664	YT22665	0.8	3	8	40	3	2,940
-	-	-	YT22666	YT22667	YT22668	YT22669	YT22670	YT22671	0.9	2	2	40	3	2,940
-	-	-	YT22672	YT22673	YT22674	YT22675	YT22676	YT22677	0.9	2	4	40	3	2,940
-	-	-	YT22678	YT22679	YT22680	YT22681	YT22682	YT22683	0.9	2	6	40	3	2,940
-	-	-	YT22684	YT22685	YT22686	YT22687	YT22688	YT22689	0.9	3	8	40	3	2,940
-	-	-	YT22690	YT22691	YT22692	YT22693	YT22694	YT22695	0.9	3	10	50	3	2,940
YT22696	YT22697	YT22698	YT22699	YT22700	YT22701	YT22702	-	-	0.95	2	3	40	3	2,940
YT22703	YT22704	YT22705	YT22706	YT22707	YT22708	YT22709	-	-	0.95	2	6	40	3	2,940
YT22710	YT22711	YT22712	YT22713	YT22714	YT22715	YT22716	-	-	0.95	3	9	40	3	2,940
YT22717	YT22718	YT22719	YT22720	YT22721	YT22722	YT22723	-	-	0.95	5	12	50	3	2,940
YT22724	YT22725	YT22726	YT22727	YT22728	YT22729	-	YT22730	YT22731	1	2	2	40	3	2,940
YT22732	YT22733	YT22734	YT22735	YT22736	YT22737	-	YT22738	YT22739	1	2	4	40	3	2,940
YT22740	YT22741	YT22742	YT22743	YT22744	YT22745	-	YT22746	YT22747	1	2	6	40	3	2,940
YT22748	YT22749	YT22750	YT22751	YT22752	YT22753	-	YT22754	YT22755	1	3	8	40	3	2,940
YT22756	YT22757	YT22758	YT22759	YT22760	YT22761	-	YT22762	YT22763	1	3	10	50	3	2,940
YT22764	YT22765	YT22766	YT22767	YT22768	YT22769	-	YT22770	YT22771	1	5	12	50	3	2,940
YT22772	YT22773	YT22774	YT22775	YT22776	YT22777	-	YT22778	YT22779	1	5	15	50	3	2,940
YT22780	YT22781	YT22782	YT22783	-	-	-	-	-	1.45	2	3	40	3	2,940
YT22784	YT22785	YT22786	YT22787	-	-	-	-	-	1.45	2	6	40	3	2,940
YT22788	YT22789	YT22790	YT22791	YT22792	YT22793	-	YT22794	YT22795	1.5	2	4	40	3	2,940
YT22796	YT22797	YT22798	YT22799	YT22800	YT22801	-	YT22802	YT22803	1.5	2	6	40	3	2,940
YT22804	YT22805	YT22806	YT22807	YT22808	YT22809	-	YT22810	YT22811	1.5	3	8	40	3	2,940
YT22812	YT22813	YT22814	YT22815	YT22816	YT22817	-	YT22818	YT22819	1.5	3	10	50	3	2,940
YT22820	YT22821	YT22822	YT22823	YT22824	YT22825	-	YT22826	YT22827	1.5	5	12	50	3	2,940
YT22828	YT22829	YT22830	YT22831	YT22832	YT22833	-	YT22834	YT22835	1.5	5	15	50	3	2,940
YT22836	YT22837	YT22838	YT22839	YT22840	YT22841	-	YT22842	-	1.8	2	4	40	3	2,940
YT22843	YT22844	YT22845	YT22846	YT22847	YT22848	-	YT22849	-	1.8	2	6	40	3	2,940
YT22850	YT22851	YT22852	YT22853	YT22854	YT22855	-	YT22856	-	1.8	3	8	40	3	2,940
YT22857	YT22858	YT22859	YT22860	YT22861	YT22862	-	YT22863	-	1.8	3	10	50	3	2,940
YT22864	YT22865	YT22866	YT22867	YT22868	YT22869	-	YT22870	-	1.8	5	12	50	3	2,940
YT22871	YT22872	YT22873	YT22874	YT22875	YT22876	-	YT22877	-	1.8	5	15	50	3	2,940
YT22878	YT22879	YT22880	YT22881	YT22882	YT22883	-	YT22884	-	2	2	4	40	3	2,940
YT22885	YT22886	YT22887	YT22888	YT22889	YT22890	-	YT22891	-	2	2	6	40	3	2,940
YT22892	YT22893	YT22894	YT22895	YT22896	YT22897	-	YT22898	-	2	3	8	40	3	2,940
YT22899	YT22900	YT22901	YT22902	YT22903	YT22904	-	YT22905	-	2	3	10	50	3	2,940
YT22906	YT22907	YT22908	YT22909	YT22910	YT22911	-	YT22912	-	2	5	12	50	3	2,940
YT22913	YT22914	YT22915	YT22916	YT22917	YT22918	-	YT22919	-	2	5	15	50	3	2,940
YT22920	YT22921	YT22922	YT22923	YT22924	YT22925	-	YT22926	-	2	5	20	50	3	2,940
YT22927	YT22928	YT22929	YT22930	YT22931	YT22932	-	YT22933	-	2.5	2	6	40	3	2,940
YT22934	YT22935	YT22936	YT22937	YT22938	YT22939	-	YT22940	-	2.5	3	8	40	3	2,940
YT22941	YT22942	YT22943	YT22944	YT22945	YT22946	-	YT22947	-	2.5	3	10	50	3	2,940
YT22948	YT22949	YT22950	YT22951	YT22952	YT22953	-	YT22954	-	2.5	5	12	50	3	2,940

## ED-EM-QC

ツールNo. Tool No.									刃径	刃長	首下	全長	シャンク径	価格(円)
粒度 Grind Size									Dia. of Mill	Length of Cut	Neck Length	Overall Length	Shank Dia.	Price (¥)
# 120	# 140	# 170	# 200	# 230	# 270	# 325	# 400	# 600						
YT22955	YT22956	YT22957	YT22958	YT22959	YT22960	-	YT22961	-	2.5	5	15	50	3	2,940
YT22962	YT22963	YT22964	YT22965	YT22966	YT22967	-	YT22968	-	2.5	5	20	50	3	2,940
YT22969	YT22970	YT22971	YT22972	YT22973	YT22974	-	YT22975	-	3	2	6	50	4	3,870
YT22976	YT22977	YT22978	YT22979	YT22980	YT22981	-	YT22982	-	3	3	8	50	4	3,870
YT22983	YT22984	YT22985	YT22986	YT22987	YT22988	-	YT22989	-	3	3	10	50	4	3,870
YT22990	YT22991	YT22992	YT22993	YT22994	YT22995	-	YT22996	-	3	5	12	50	4	3,870
YT22997	YT22998	YT22999	YT23000	YT23001	YT23002	-	YT23003	-	3	5	15	60	4	3,870
YT23004	YT23005	YT23006	YT23007	YT23008	YT23009	-	YT23010	-	3	5	20	60	4	3,870
YT23011	YT23012	YT23013	YT23014	YT23015	YT23016	-	YT23017	-	4	6	6	50	6	4,440
YT23018	YT23019	YT23020	YT23021	YT23022	YT23023	-	YT23024	-	4	8	8	50	6	4,440
YT23025	YT23026	YT23027	YT23028	YT23029	YT23030	-	YT23031	-	4	10	10	50	6	4,440
YT23032	YT23033	YT23034	YT23035	YT23036	YT23037	-	YT23038	-	4	12	12	50	6	4,440
YT23039	YT23040	YT23041	YT23042	YT23043	YT23044	-	YT23045	-	4	15	15	60	6	4,440
YT23046	YT23047	YT23048	YT23049	YT23050	YT23051	-	YT23052	-	4	20	20	60	6	4,470
YT23053	YT23054	YT23055	YT23056	YT23057	YT23058	-	YT23059	-	4	30	30	70	6	4,540
YT23060	YT23061	YT23062	YT23063	YT23064	YT23065	-	YT23066	-	5	5	5	50	6	4,540
YT23067	YT23068	YT23069	YT23070	YT23071	YT23072	-	YT23073	-	5	10	10	50	6	4,540
YT23074	YT23075	YT23076	YT23077	YT23078	YT23079	-	YT23080	-	5	15	15	50	6	4,540
YT23081	YT23082	YT23083	YT23084	YT23085	YT23086	-	YT23087	-	5	20	20	60	6	4,570
YT23088	YT23089	YT23090	YT23091	YT23092	YT23093	-	YT23094	-	5	30	30	70	6	4,640
YT23095	YT23096	YT23097	YT23098	YT23099	YT23100	-	YT23101	-	6	5	6	50	6	5,340
YT23102	YT23103	YT23104	YT23105	YT23106	YT23107	-	YT23108	-	6	10	11	50	6	5,340
YT23109	YT23110	YT23111	YT23112	YT23113	YT23114	-	YT23115	-	6	15	16	50	6	5,340
YT23116	YT23117	YT23118	YT23119	YT23120	YT23121	-	YT23122	-	6	20	21	60	6	5,400
YT23123	YT23124	YT23125	YT23126	YT23127	YT23128	-	YT23129	-	6	30	32	70	6	5,470
YT23130	YT23131	YT23132	YT23133	YT23134	YT23135	-	YT23136	-	8	10	11	60	10	5,970
YT23137	YT23138	YT23139	YT23140	YT23141	YT23142	-	YT23143	-	8	15	16	60	10	5,970
YT23144	YT23145	YT23146	YT23147	YT23148	YT23149	-	YT23150	-	8	20	21	70	10	6,000
YT23151	YT23152	YT23153	YT23154	YT23155	YT23156	-	YT23157	-	8	30	32	80	10	6,140
YT23158	YT23159	YT23160	YT23161	YT23162	YT23163	-	YT23164	-	8	40	43	100	10	6,240
YT23165	YT23166	YT23167	YT23168	YT23169	YT23170	-	YT23171	-	10	10	11	60	10	6,640
YT23172	YT23173	YT23174	YT23175	YT23176	YT23177	-	YT23178	-	10	15	16	60	10	6,640
YT23179	YT23180	YT23181	YT23182	YT23183	YT23184	-	YT23185	-	10	20	21	70	10	6,670
YT23186	YT23187	YT23188	YT23189	YT23190	YT23191	-	YT23192	-	10	30	32	80	10	6,800
YT23193	YT23194	YT23195	YT23196	YT23197	YT23198	-	YT23199	-	10	40	43	100	10	6,900
YT23200	YT23201	YT23202	YT23203	YT23204	YT23205	-	YT23206	-	12	15	16	60	12	8,640
YT23207	YT23208	YT23209	YT23210	YT23211	YT23212	-	YT23213	-	12	20	21	70	12	8,740
YT23214	YT23215	YT23216	YT23217	YT23218	YT23219	-	YT23220	-	12	30	32	80	12	8,840
YT23221	YT23222	YT23223	YT23224	YT23225	YT23226	-	YT23227	-	12	40	43	100	12	9,000
YT23228	YT23229	YT23230	YT23231	YT23232	YT23233	-	YT23234	-	16	20	21	70	16	9,570
YT23235	YT23236	YT23237	YT23238	YT23239	YT23240	-	YT23241	-	16	30	32	80	16	9,670
YT23242	YT23243	YT23244	YT23245	YT23246	YT23247	-	YT23248	-	16	40	43	100	16	9,800
YT23249	YT23250	YT23251	YT23252	YT23253	YT23254	-	YT23255	-	20	20	21	70	20	10,440
YT23256	YT23257	YT23258	YT23259	YT23260	YT23261	-	YT23262	-	20	30	32	80	20	10,540
YT23263	YT23264	YT23265	YT23266	YT23267	YT23268	-	YT23269	-	20	40	43	100	20	10,670

### 切削条件 Recommended Milling Conditions

#### 穴あけ加工 Drilling

被削材 Work Material	アルミナセラミックス Al2O3			石英ガラス SiO2		
	刃径 Dia. of Mill	回転数 (min <sup>-1</sup> )	送り (mm/min)	ステップ量 (mm)	回転数 (min <sup>-1</sup> )	送り (mm/min)
0.3	15,000~20,000	2~3	0.02	15,000~20,000	3~5	0.02
0.5	12,000~15,000	2~3	0.03	12,000~15,000	3~5	0.03
0.8	10,000~12,000	3~5	0.05	10,000~12,000	5~7	0.05
1	8,000~10,000	3~5	0.1	8,000~10,000	5~7	0.1

#### 輪郭加工 Contour Milling

被削材 Work Material	アルミナセラミックス Al2O3			石英ガラス SiO2		
	刃径 Dia. of Mill	回転数 (min <sup>-1</sup> )	送り (mm/min)	切込 (mm)	回転数 (min <sup>-1</sup> )	送り (mm/min)
5	6,000~7,000	600~800	0.1	6,000~7,000	800~1,000	0.1
10	3,000~3,500	800~1,000	0.1	3,000~3,500	1,000~1,200	0.1
15	2,000~2,500	1,000~1,200	0.1	2,000~2,500	1,000~1,500	0.1
20	1,500~1,800	1,000~1,500	0.1	1,500~1,800	1,000~1,500	0.1

※仕上げ加工の場合はチッピング防止の為、送りを半分にする事をお勧めします。

#### ポケット加工 Pocket Milling

被削材 Work Material	アルミナセラミックス Al2O3			石英ガラス SiO2		
	刃径 Dia. of Mill	回転数 (min <sup>-1</sup> )	送り (mm/min)	切込 (mm)	回転数 (min <sup>-1</sup> )	送り (mm/min)
5	6,000~7,000	300~500	0.1	6,000~7,000	400~600	0.1
10	3,000~3,500	400~600	0.1	3,000~3,500	600~800	0.1
15	2,000~2,500	400~600	0.1	2,000~2,500	600~800	0.1
20	1,500~1,800	400~600	0.1	1,500~1,800	600~800	0.1

※仕上げ加工の場合はチッピング防止の為、送りを半分にする事をお勧めします。

## ED-EMCB-QC

### ダイヤ電着エンドミル

#### Electroplated Diamond End Mills for Quartz & Ceramics

セラミックス、石英など脆性材料のエンドミル加工に最適です。  
This product is perfect for milling materials such as ceramic and quartz.



※一般的に粒度#400は仕上げ加工、#270以下は荒仕上げ加工に適しています。

ツールNo. Tool No.							刃径	刃長	首下	全長	シャンク径	価格(円)
粒度 Grind Size							Dia. of Mill	Length of Cut	Neck Length	Overall Length	Shank Dia.	Price(¥)
# 120	# 140	# 170	# 200	# 230	# 270	# 400						
YT23270	YT23271	YT23272	YT23273	YT23274	YT23275	YT23276	5	5	5	50	6	4,900
YT23277	YT23278	YT23279	YT23280	YT23281	YT23282	YT23283	5	10	10	50	6	4,900
YT23284	YT23285	YT23286	YT23287	YT23288	YT23289	YT23290	5	15	15	50	6	4,900
YT23291	YT23292	YT23293	YT23294	YT23295	YT23296	YT23297	5	20	20	60	6	4,940
YT23298	YT23299	YT23300	YT23301	YT23302	YT23303	YT23304	5	30	30	70	6	5,000
YT23305	YT23306	YT23307	YT23308	YT23309	YT23310	YT23311	6	5	6	50	6	5,700
YT23312	YT23313	YT23314	YT23315	YT23316	YT23317	YT23318	6	10	11	50	6	5,700
YT23319	YT23320	YT23321	YT23322	YT23323	YT23324	YT23325	6	15	16	50	6	5,700
YT23326	YT23327	YT23328	YT23329	YT23330	YT23331	YT23332	6	20	21	60	6	5,770
YT23333	YT23334	YT23335	YT23336	YT23337	YT23338	YT23339	6	30	32	70	6	5,800
YT23340	YT23341	YT23342	YT23343	YT23344	YT23345	YT23346	8	10	11	60	10	6,270
YT23347	YT23348	YT23349	YT23350	YT23351	YT23352	YT23353	8	15	16	60	10	6,270
YT23354	YT23355	YT23356	YT23357	YT23358	YT23359	YT23360	8	20	21	70	10	6,340
YT23361	YT23362	YT23363	YT23364	YT23365	YT23366	YT23367	8	30	32	80	10	6,440
YT23368	YT23369	YT23370	YT23371	YT23372	YT23373	YT23374	8	40	43	100	10	6,540
YT23375	YT23376	YT23377	YT23378	YT23379	YT23380	YT23381	10	10	11	60	10	6,940
YT23382	YT23383	YT23384	YT23385	YT23386	YT23387	YT23388	10	15	16	60	10	6,940
YT23389	YT23390	YT23391	YT23392	YT23393	YT23394	YT23395	10	20	21	70	10	7,000
YT23396	YT23397	YT23398	YT23399	YT2400	YT2401	YT2402	10	30	32	80	10	7,100
YT23403	YT23404	YT23405	YT23406	YT23407	YT23408	YT23409	10	40	43	100	10	7,200
YT23410	YT23411	YT23412	YT23413	YT23414	YT23415	YT23416	12	15	16	60	12	9,040
YT23417	YT23418	YT23419	YT23420	YT23421	YT23422	YT23423	12	20	21	70	12	9,140
YT23424	YT23425	YT23426	YT23427	YT23428	YT23429	YT23430	12	30	32	80	12	9,240
YT23431	YT23432	YT23433	YT23434	YT23435	YT23436	YT23437	12	40	43	100	12	9,400
YT23438	YT23439	YT23440	YT23441	YT23442	YT23443	YT23444	16	20	21	70	16	9,970
YT23445	YT23446	YT23447	YT23448	YT23449	YT23450	YT23451	16	30	32	80	16	10,070
YT23452	YT23453	YT23454	YT23455	YT23456	YT23457	YT23458	16	40	43	100	16	10,240
YT23459	YT23460	YT23461	YT23462	YT23463	YT23464	YT23465	20	20	21	70	20	10,840
YT23466	YT23467	YT23468	YT23469	YT23470	YT23471	YT23472	20	30	32	80	20	10,940
YT23473	YT23474	YT23475	YT23476	YT23477	YT23478	YT23479	20	40	43	100	20	11,100

### 切削条件 Recommended Milling Conditions

#### 輪郭加工 Contour Milling

被削材 Work Material	アルミナセラミックス Al <sub>2</sub> O <sub>3</sub>			石英ガラス SiO <sub>2</sub>			
	刃径 Dia. of Mill	回転数 (min <sup>-1</sup> )	送り (mm/min)	切込 (mm)	回転数 (min <sup>-1</sup> )	送り (mm/min)	切込 (mm)
	5	6,000~7,000	600~ 800	0.1	6,000~7,000	800~1,000	0.1
	10	3,000~3,500	800~1,000	0.1	3,000~3,500	1,000~1,200	0.1
	15	2,000~2,500	1,000~1,200	0.1	2,000~2,500	1,000~1,500	0.1
	20	1,500~1,800	1,000~1,500	0.1	1,500~1,800	1,000~1,500	0.1

※仕上げ加工の場合はチッピング防止の為、送りを半分にする事をお勧めします。

#### ポケット加工 Pocket Milling

被削材 Work Material	アルミナセラミックス Al <sub>2</sub> O <sub>3</sub>			石英ガラス SiO <sub>2</sub>			
	刃径 Dia. of Mill	回転数 (min <sup>-1</sup> )	送り (mm/min)	切込 (mm)	回転数 (min <sup>-1</sup> )	送り (mm/min)	切込 (mm)
	5	6,000~7,000	300~500	0.1	6,000~7,000	400~600	0.1
	10	3,000~3,500	400~600	0.1	3,000~3,500	600~800	0.1
	15	2,000~2,500	400~600	0.1	2,000~2,500	600~800	0.1
	20	1,500~1,800	400~600	0.1	1,500~1,800	600~800	0.1

※仕上げ加工の場合はチッピング防止の為、送りを半分にする事をお勧めします。

# ELECTROPLATED

電着

## ED-OHD-QC

※同サイズの粒度違いは、粒度#120、#100がセラミックス、  
#170、#140が石英に適しています。



(直径φ2, 2.1の直径公差は±0.02)

▶ 前ページの続き

ツールNo.	直径	全長	溝長	首下	電着長	シャン径	粒度	価格(円)
Tool No.	Drill Dia.	Overall Length	Flute Length	Neck Length	Electroplated Length	Shank Dia.	Grind Size	Price (¥)
YT22425	8.4	110	47	50	7	10	#100	27,400
YT22426	8.4	110	47	50	7	10	#140	27,400
YT22427	8.5	110	47	50	7	10	#100	27,400
YT22428	8.5	110	47	50	7	10	#140	27,400
YT22429	8.6	110	47	50	7	10	#100	30,600
YT22430	8.6	110	47	50	7	10	#140	30,600
YT22431	8.7	110	47	50	7	10	#100	30,600
YT22432	8.7	110	47	50	7	10	#140	30,600
YT22433	8.8	110	47	50	7	10	#100	30,600
YT22434	8.8	110	47	50	7	10	#140	30,600
YT22435	8.9	110	47	50	7	10	#100	30,600
YT22436	8.9	110	47	50	7	10	#140	30,600
YT22437	9	110	47	50	7	10	#100	30,600
YT22438	9	110	47	50	7	10	#140	30,600
YT22439	9.1	110	47	50	7	10	#100	30,600
YT22440	9.1	110	47	50	7	10	#140	30,600
YT22441	9.2	110	47	50	7	10	#100	30,600
YT22442	9.2	110	47	50	7	10	#140	30,600
YT22443	9.3	110	47	50	7	10	#100	30,600
YT22444	9.3	110	47	50	7	10	#140	30,600
YT22445	9.4	110	47	50	7	10	#100	30,600
YT22446	9.4	110	47	50	7	10	#140	30,600
YT22447	9.5	110	47	50	7	10	#100	30,600
YT22448	9.5	110	47	50	7	10	#140	30,600
YT22449	9.6	110	47	50	7	10	#100	30,600
YT22450	9.6	110	47	50	7	10	#140	30,600
YT22451	9.7	110	47	50	7	10	#100	30,600
YT22452	9.7	110	47	50	7	10	#140	30,600
YT22453	9.8	110	47	50	7	10	#100	30,600
YT22454	9.8	110	47	50	7	10	#140	30,600
YT22455	9.9	110	47	50	7	10	#100	30,600
YT22456	9.9	110	47	50	7	10	#140	30,600
YT22457	10	110	47	50	7	10	#100	30,600
YT22458	10	110	47	50	7	10	#140	30,600
YT22459	10.1	110	47	50	7	12	#100	39,600
YT22460	10.1	110	47	50	7	12	#140	39,600
YT22461	10.2	110	47	50	7	12	#100	39,600

ツールNo.	直径	全長	溝長	首下	電着長	シャン径	粒度	価格(円)
Tool No.	Drill Dia.	Overall Length	Flute Length	Neck Length	Electroplated Length	Shank Dia.	Grind Size	Price (¥)
YT22462	10.2	110	47	50	7	12	#140	39,600
YT22463	10.3	110	47	50	7	12	#100	39,600
YT22464	10.3	110	47	50	7	12	#140	39,600
YT22465	10.4	110	47	50	7	12	#100	39,600
YT22466	10.4	110	47	50	7	12	#140	39,600
YT22467	10.5	110	47	50	7	12	#100	39,600
YT22468	10.5	110	47	50	7	12	#140	39,600
YT22469	10.6	110	47	50	7	12	#100	39,600
YT22470	10.6	110	47	50	7	12	#140	39,600
YT22471	10.7	110	47	50	7	12	#100	39,600
YT22472	10.7	110	47	50	7	12	#140	39,600
YT22473	10.8	110	47	50	7	12	#100	39,600
YT22474	10.8	110	47	50	7	12	#140	39,600
YT22475	10.9	110	47	50	7	12	#100	39,600
YT22476	10.9	110	47	50	7	12	#140	39,600
YT22477	11	110	47	50	7	12	#100	40,500
YT22478	11	110	47	50	7	12	#140	40,500
YT22479	11.1	110	47	50	7	12	#100	45,000
YT22480	11.1	110	47	50	7	12	#140	45,000
YT22481	11.2	110	47	50	7	12	#100	45,000
YT22482	11.2	110	47	50	7	12	#140	45,000
YT22483	11.3	110	47	50	7	12	#100	45,000
YT22484	11.3	110	47	50	7	12	#140	45,000
YT22485	11.4	110	47	50	7	12	#100	45,000
YT22486	11.4	110	47	50	7	12	#140	45,000
YT22487	11.5	110	47	50	7	12	#100	45,000
YT22488	11.5	110	47	50	7	12	#140	45,000
YT22489	11.6	110	47	50	7	12	#100	45,000
YT22490	11.6	110	47	50	7	12	#140	45,000
YT22491	11.7	110	47	50	7	12	#100	45,000
YT22492	11.7	110	47	50	7	12	#140	45,000
YT22493	11.8	110	47	50	7	12	#100	45,000
YT22494	11.8	110	47	50	7	12	#140	45,000
YT22495	11.9	110	47	50	7	12	#100	45,000
YT22496	11.9	110	47	50	7	12	#140	45,000
YT22497	12	110	47	50	7	12	#100	45,000
YT22498	12	110	47	50	7	12	#140	45,000



### 切削条件 Recommended Drilling Conditions

被削材 Work Material	アルミナセラミックス AL2O3		石英ガラス SiO2		
	60~100m/min		60~100m/min		
切削速度 Cutting speed	60~100m/min		60~100m/min		
	直径 Drill Dia.	回転数 Rotation (min <sup>-1</sup> )	送り Feed (mm/rev)	回転数 Rotation (min <sup>-1</sup> )	送り Feed (mm/rev)
	2	10,000	0.001~0.0015	10,000	0.002~0.0025
	3	8,500	0.001~0.0015	8,500	0.002~0.0025
	4	7,900	0.001~0.0015	7,900	0.002~0.0025
	4.5	7,000	0.001~0.0015	7,000	0.002~0.0025
	5	6,300	0.001~0.0015	6,300	0.002~0.0025
	6	5,300	0.001~0.002	5,300	0.002~0.003
	7	4,500	0.001~0.002	4,500	0.002~0.003
	8	4,000	0.001~0.002	4,000	0.002~0.003
	9.5	3,400	0.001~0.002	3,400	0.002~0.003
	10	3,200	0.001~0.002	3,200	0.002~0.003
	12	2,700	0.001~0.002	2,700	0.002~0.003