

Karnasch®
PROFESSIONAL TOOLS

Mũi khoan từ - Annular Cutters / Rail Cutters

Đường kính, chiều dài đa dạng

Vật liệu thép gió HSS hoặc mũi hợp kim TCT

Tiêu chuẩn cân Weldon - Nitto

Độ bền và chất lượng vượt trội đến từ Đức

up to Ø 140mm

GERMAN QUALITY PRODUCT

PATENTED

PRECISION. PERFECTION. PERFORMANCE.



Dao Phay Cầu 2F Phi 12 KYOCERA SGS 56MB KSP91359 HIGH PERFORMANCE

Kyocera SGS (KSPT) là thương hiệu là nhà sản xuất dụng cụ cắt gọt solid carbide hàng đầu thế giới.

Thông số kỹ thuật:

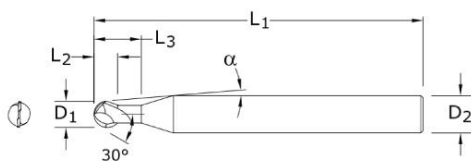
- Thương hiệu: KYOCERA SGS - Series 56MB dao phay hiệu suất cao (high performance)
- Vật liệu gia công: Chuyên phay các loại vật liệu thép sau nhiệt
- Đường kính lưỡi dao: 12mm
- Đường kính cán dao: 12mm
- Chiều dài lưỡi cắt: 12mm
- Tổng chiều dài dao: 114mm

METRIC Turbo-Carb



56MB METRIC SERIES

- Short flute length and rigid design to reduce deflection
- S-Gash Ball geometry minimizes load and heat produced during the cutting process, ultimately enhancing tool life
- Ideal for machining complex contoured shapes in hardened steels
- Recommended for materials 35 to 60 HRC (327 to 654 Bhn)



mm						EDP NO.
CUTTING DIAMETER D ₁	LENGTH OF CUT L ₂	OVERALL LENGTH L ₁	SHANK DIAMETER D ₂	α	REACH L ₃	Ti-NAMITE-X
1,0	1,0	76,0	6,0	8°10'	2,0	91349
1,5	1,5	76,0	6,0	7°45'	3,0	91350
2,0	2,0	76,0	6,0	7°10'	4,0	91351
2,5	2,5	76,0	6,0	6°35'	5,0	91352
3,0	3,0	76,0	6,0	6°	6,0	91353
4,0	4,0	76,0	6,0	4°30'	8,0	91354
5,0	5,0	89,0	6,0	2°30'	10,0	91355
6,0	6,0	89,0	6,0	—	12,0	91356
8,0	8,0	102,0	8,0	—	16,0	91357
10,0	10,0	102,0	10,0	—	20,0	91358
12,0	12,0	114,0	12,0	—	24,0	91359
16,0	16,0	140,0	16,0	—	32,0	91360
20,0	20,0	165,0	20,0	—	40,0	91361

Neck Option Available

TOLERANCES (mm)

1–2,5 DIAMETER
D₁ = +0,000/–0,025
D₂ = h₆

>2,5–6 DIAMETER
D₁ = +0,000/–0,030
D₂ = h₆

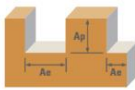
>6–10 DIAMETER
D₁ = +0,000/–0,040
D₂ = h₆







>10–20 DIAMETER
D₁ = +0,000/–0,050
D₂ = h₆

HARDENED STEELS

For patent
information visit
www.ksptpatents.com

METRIC
Turbo-Carb



Series 56MB Metric	Hardness	Ae x D ₁	Ap x D ₁	Vc (m/min)	Diameter (D ₁) (mm)									
					1	1.5	3	5	6	10	12	20		
H	TOOL STEELS MOLD AND DIE STEEL 300M, 4340, 52100, HP-9-4-20, M50, A2, D2, H13, L2, M2, P20, S7, T15, W2 ≤ 375 Bhn or ≤ 40 HRC	Rough 	≤ 0.4	≤ 0.1	191	RPM	60748	40498	20249	12150	10125	6075	5062	3037
					(153-229)	Fz	0.015	0.038	0.076	0.102	0.127	0.203	0.254	0.305
						Feed (mm/min)	1822	3078	3078	2479	2572	2466	2572	1853
		HSM 	≤ 0.4	≤ 0.03	290	RPM	92235	61490	46117	18447	15372	9223	7686	4612
					(232-348)	Fz	0.018	0.043	0.084	0.112	0.117	0.224	0.279	0.330
						Feed (mm/min)	3320	5288	7748	4132	3597	4132	4289	3044
	TOOL STEELS MOLD AND DIE STEEL 300M, 4340, 52100, HP-9-4-20, M50, A2, D2, H13, L2, M2, P20, S7, T15, W2 ≤ 475 Bhn or ≤ 50 HRC	Rough 	≤ 0.4	≤ 0.05	229	RPM	72833	48556	24278	14567	12139	7283	6069	3642
					(183-275)	Fz	0.013	0.028	0.058	0.076	0.097	0.152	0.191	0.216
						Feed (mm/min)	1894	2719	2816	2214	2355	2214	2319	1573
		HSM 	≤ 0.4	≤ 0.02	351	RPM	111636	74424	37212	22327	18606	11164	9303	5582
					(281-421)	Fz	0.015	0.030	0.064	0.084	0.107	0.168	0.208	0.254
						Feed (mm/min)	3349	4465	4763	3751	3982	3751	3870	2836
	TOOL STEELS MOLD AND DIE STEEL 300M, 4340, 52100, HP-9-4-20, M50, A2, D2, H13, L2, M2, P20, S7, T15, W2 ≤ 655 Bhn or ≤ 60 HRC	Rough 	≤ 0.4	≤ 0.04	152	RPM	48344	32229	16115	9669	8057	4834	4029	2417
					(122-182)	Fz	0.010	0.020	0.043	0.058	0.074	0.114	0.145	0.160
						Feed (mm/min)	967	1289	1386	1122	1192	1102	1168	773
		HSM 	≤ 0.4	≤ 0.01	305	RPM	97005	64670	32335	19401	16168	9701	8084	4850
					(244-366)	Fz	0.013	0.023	0.048	0.064	0.081	0.127	0.160	0.180
						Feed (mm/min)	2522	2975	3104	2483	2619	2464	2587	1746

Bhn (Brinell) HRC (Rockwell C) HSM (High Speed Machining)
 $\text{rpm} = (\text{Vc} \times 1000) / (D_1 \times 3.14)$
 $\text{mm/min} = \text{Fz} \times 2 \times \text{rpm}$
 reduce speed and feed for materials harder than listed
 reduce feed and Ae when finish milling (.02 x D₁ maximum)
 refer to the KYOCERA SGS Tool Wizard™ for complete technical information (www.kyocera-sgstool.com)