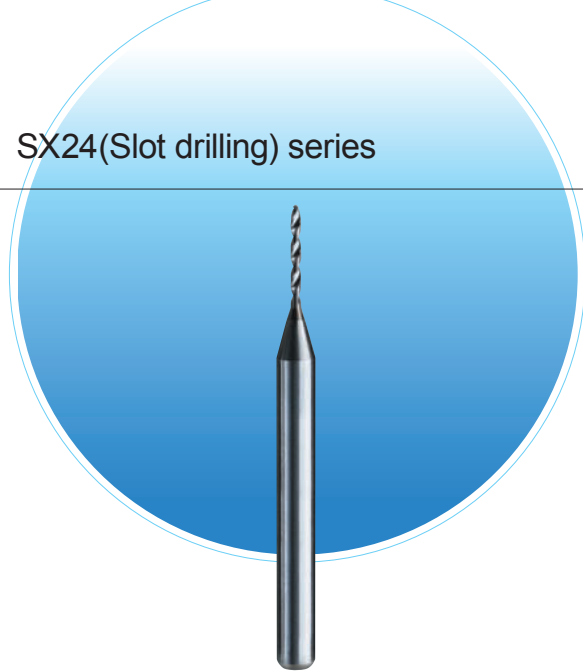
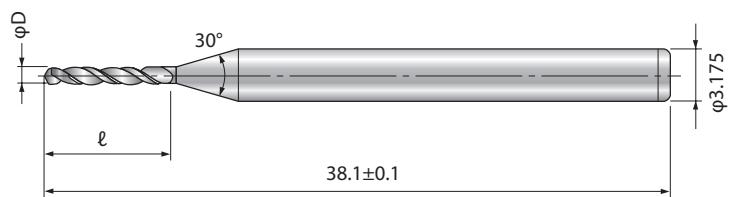


SX24(Slot drilling) series



This under cut drill has special geometry designed for slot drilling. Using a web taper design for maximum rigidity, the drill can be used at high infeed rates for increased productivity. Even for slots requiring a length 2x the drill's diameter, this range of high precision drills gives excellent results.

**SX24** SIZE :φ 0.5~φ 1.6



Recommended models

Series	φ D mm	ℓ mm	Part No.	φ D mm	ℓ mm	Part No.	φ D mm	ℓ mm	Part No.
SX24S series	0.50	4.7	135-1050	0.65	4.7	135-1065	0.80	4.7	135-1082
	0.55		135-1055	0.70		135-1072			
	0.60		135-1060	0.75		135-1077			
	0.70		135-1052	0.90		135-1091			
SX24M series	0.55	6.7	135-1057	0.95	6.7	135-1096	6.7	1.30	135-1131
	0.60		135-1061	1.00		135-1101		1.35	135-1136
	0.65		135-1066	1.05		135-1106		1.40	135-1141
	0.70		135-1070	1.10		135-1111		1.45	135-1146
	0.75		135-1075	1.15		135-1116		1.50	135-1151
	0.80		135-1081	1.20		135-1121		1.55	135-1156
	0.85		135-1086	1.25		135-1126		1.60	135-1161
	0.70		135-1073	1.05		135-1108		1.40	135-1140
SX24L series	0.75	8.7	135-1078	1.10	8.7	135-1113	8.7	1.45	135-1145
	0.80		135-1083	1.15		135-1118		1.50	135-1150
	0.85		135-1088	1.20		135-1123		1.55	135-1155
	0.90		135-1093	1.25		135-1128		1.60	135-1160
	0.95		135-1098	1.30		135-1130			
	1.00		135-1103	1.35		135-1135			

\* Model recommendation/specification may change as part of our policy to improve performance and quality.

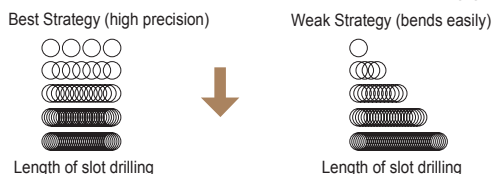
Parameters

φ D mm	Model Type			Stack height (Based on 1.6mm; Matt)	More than 2.5 times the drill diameter		Approximately twice the drill diameter	
	S	M	L		Spindle speed k rpm	Chip load μ m/rev	Spindle speed k rpm	Chip load μ m/rev
0.5~0.65	5.0(4.7)	—	—	1~2	65~75	20~30	60~75	10~20
0.7~0.85	—	7.0(6.7)	9.0~(8.7)	M:2~3 L:3~4	60~70	20~35	60~70	15~25
0.9~1.25					50~65	30~50	50~65	
1.3~1.6	—	—	10.0(8.7)	3~4	50~60	40~70	50~60	30~50

\* Depending on the type of the printed-wiring board, in the main size area of the M size, high speed work at 50 to 120μ m/rev can also be performed.

Method of slot drilling

The best method is not to drill continuous holes, but drill leaving gaps



Formulas for calculating drilling conditions

$$\text{Velocity (V)} = \frac{\pi \phi \text{ DN}}{1000} \text{ [m/min]} \quad \left( N = \frac{1000V}{\pi \phi} \text{ [rpm]} \right)$$

$$\text{Chip load (f)} = \frac{F}{N} \times 1000 \text{ [μ m/rev]} \quad \left( F = \frac{fN}{1000} \text{ [mm/min]} \right)$$

π = 3.14 (the circular constant)  
F = Infeed rate

These are general parameters recommended for normal conditions. However they may vary depending on the material and machine/spindle rigidity.

Please refer to the "technical database" contained on our web site for more detail technical support information. <http://www.usuniontool.com>