



CARBIDE - CBN - DIAMOND

Sumitomo Electric Carbide, Inc.

SMD Replaceable Tip Drills

P **K** **M** **S**

More Details @ sumicarbide.com!



1.5XD, 3XD, 5XD, 8XD & 12XD Drills







SMD Bodies	Depth
S Type	1.5XD
M Type	3XD
L Type	5XD
D Type	8XD
12XD	12XD

SEE BELOW

Features & Benefits

- Available in metric and inch diameters ranging from 0.4688" - 1.6535" (42.0mm)
- Available in 3X, 5X, 8X & now **1.5X** & **12X** diameter hardened steel bodies that can accept multiple diameters
- 4 styles of drill tips to maximize performance
- New **SMDT-MFS** 180° flat edge tip now available
- SMD carbide tips have Sumitomo's patented wear resistant DEX™ coatings
- Ground serrations on back of drill tip allow for precise assembly and superior repeatability
- Drill tips are capable of being reground
- Coolant through drill bodies

SMDT Tips	Applications	Diameter Range
MTL Type 	P	Inch: 0.4688 - 1.3125 Metric: 12.00 - 42.00
MEL Type 	P K M S	Inch: 0.4688 - 1.2008 Metric: 12.00 - 30.50
MTL-C Type 	P K	Inch: 0.4688 - 1.1614 Metric: 12.00 - 29.50
MFS Type  180° flat edge	P K M S	Inch: 0.4688 - 1.1875 Metric: 12.00 - 30.00

NEW

NEW

For Rigid Applications

1.5X Diameter



3X Diameter



5X Diameter



8X Diameter



12X Diameter



NEW

For Deep Hole Drilling

Recommended Speeds and Feeds

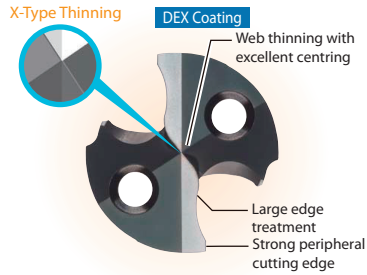
Speed: v (SFM) / Feed: f (IPR)

Material	Drill Dia. (inch)	MTL	MTL	MTL	MTL	MTL-C / MEL		MEL	MEL	MEL
		Steels	Steels	Prehard Steels	Die Steels	Ductile cast irons	Gray cast irons	Titanium	Inconel	Stainless Steels*
		<HB250	HB250-300	HRC45	-	-	-	-	-	-
~ .4688	v	260 - 400	260 - 360	160 - 260	130 - 230	230 - 330	260 - 430	65 - 130	35 - 100	125 - 230
	f	.006 - .012	.006 - .012	.004 - .008	.005 - .009	.006 - .012	.008 - .012	.004 - .008	.003 - .004	.004 - .008
~ .844	v	260 - 400	260 - 360	195 - 295	130 - 230	230 - 330	260 - 430	85 - 150	50 - 115	145 - 240
	f	.006 - .014	.006 - .014	.006 - .010	.006 - .010	.006 - .014	.008 - .014	.004 - .008	.003 - .005	.004 - .009
~ 1.250	v	260 - 430	260 - 400	195 - 295	130 - 230	260 - 360	300 - 460	85 - 150	50 - 115	160 - 250
	f	.008 - .016	.008 - .014	.006 - .010	.006 - .010	.008 - .015	.008 - .018	.004 - .008	.003 - .006	.006 - .010

* For difficult to machine stainless steels (316, 302, 304, 17-4ph, etc.) adjust speeds & feeds accordingly.

MTL Type

Suitable for high efficiency drilling of general steel

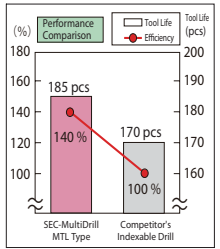


- **Excellent cutting edge strength**
Large edge treatment reduces cutting edge breakage.
- **Stable drilled hole precision**
Stable drilling performance and excellent concentricity at the start of the hole with X-type thinning.

Application Examples MTL Type

Improved tool life and efficiency

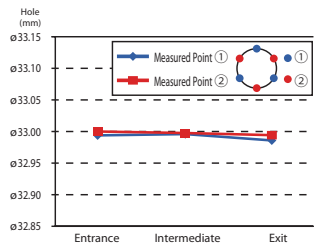
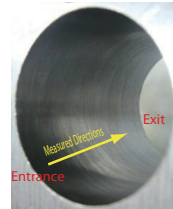
Work Material: Housing (S20C)
Drill size: For $\phi 15 \times 5D$
Cutting Conditions: $V_c=107\text{m/min}$
 $f=0.3\text{mm/rev}$
Hole Depth: $32\text{mm} \times 12$ holes



Hole diameter accuracy

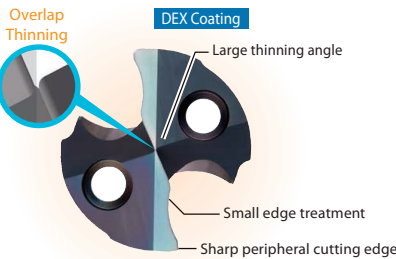
High drilling accuracy even with large diameters

Work Material: SM490 (Base plate for construction machine)
Drill Size: $\phi 33 \times 5D$
Cutting Conditions: $V_c=120\text{m/min}$
 $f=0.25\text{mm/rev}$
Cutting Environment: Emulsion Type



MEL Type

Suitable for exotic metals such as stainless steel, soft steel, gray cast iron, and low rigidity setups.

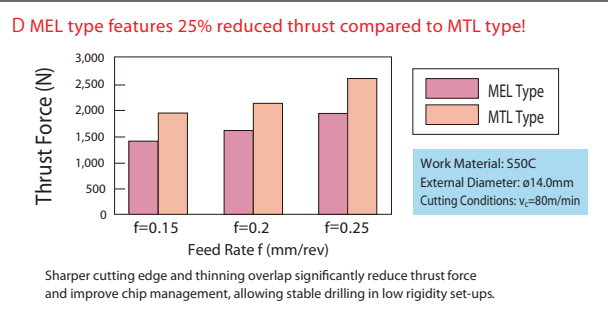


- **Excellent cutting edge design for stainless steel and soft steel**
Large thinning angle prevents breakage at the convex R-profile portion, particularly when drilling soft steel and it also reduces breakages caused by adhesion when drilling stainless steel.
- **Improved chipping resistance in cast iron**
Better edge sharpness at the peripheral edge prevents chipping around the hole openings when drilling cast iron.

Application Examples (MEL Type)

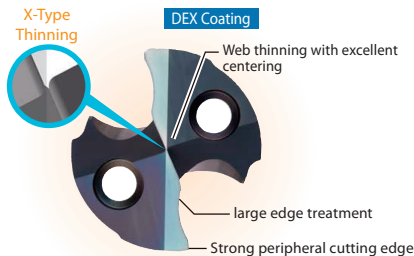
MEL (Cutting Length 15m)	Competitor's Product (Cutting Length 11m)
SEC-MultiDrill MEL type with excellent centering, is able to drill 15m without any edge damage or visible rifle marks.	Competitor's indexable drill exhibited poor centering with visible rifle marks. The drill point chipped after 11m.
Work Material: SUS304 Drill Size: $\phi 14 \times 5D$ Cutting Conditions: $v_c=60\text{m/min}$, $f=0.15\text{m/rev}$ Coolant: Emulsion Type	

25% Reduction in Cutting Force (Thrust Force)



MTL-C Type

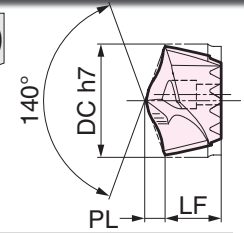
Chamfers edge to eliminate break out in cast iron



- **45° corner chamfer on diameter**
Large thinning angle prevents breakage at the convex R-profile portion, particularly when drilling soft steel and it also reduces breakages caused by adhesion when drilling stainless steel.
- **Improved chipping resistance in cast iron**
Better edge sharpness at the peripheral edge prevents chipping around the hole openings when drilling cast iron.
- **Minimizes burr and chipping at hole exit**
- **Reduces wear on corner**

Drill Tips - MTL, MEL, MTL-C Inch & Metric

1.5D 3D 5D 8D 12D



STANDARD TIP

SUPER ALLOY TIP

CORNER BREAK TIP



(SMDT-MTL)		(SMDT-MEL)		(SMDT-MTL-C)		øD		LF		PL		Body
Drill Tip	Stock	Drill Tip	Stock	Drill Tip	Stock	mm	in.	mm	in.	mm	in.	
SMDT04688MTL-ACX70	●	SMDT04688MEL-ACX80	●	SMDT04688MTL-C-ACX70	●	15/32	0.4688	6.9	0.272	2.2	0.087	SMDH047□
SMDT1200MTL-ACX70	●	SMDT1200MEL-ACX80	●	SMDT1200MTL-C-ACX70	●	12.0	0.4724			2.2	0.087	
SMDT1210MTL-ACX70	★	SMDT1210MEL-ACX80	★	SMDT1210MTL-C-ACX70	●	12.1	0.4764			2.2	0.087	
SMDT1220MTL-ACX70	★	SMDT1220MEL-ACX80	★	SMDT1220MTL-C-ACX70	●	12.2	0.4803			2.2	0.087	
SMDT1230MTL-ACX70	★	SMDT1230MEL-ACX80	★	SMDT1230MTL-C-ACX70	●	12.3	0.4843			2.2	0.087	
SMDT04844MTL-ACX70	●	SMDT04844MEL-ACX80	●	SMDT04844MTL-C-ACX70	●	31/64	0.4844	7.1	0.279	2.3	0.091	SMDH049□
SMDT1250MTL-ACX70	●	SMDT1250MEL-ACX80	●	SMDT1250MTL-C-ACX70	●	12.5	0.4921			2.3	0.091	
SMDT1260MTL-ACX70	★	SMDT1260MEL-ACX80	★	SMDT1260MTL-C-ACX70	●	12.6	0.4960			2.3	0.091	
SMDT05000MTL-ACX70	●	SMDT05000MEL-ACX80	●	SMDT05000MTL-C-ACX70	●	1/2	0.5000	7.3	0.287	2.3	0.091	SMDH051□
SMDT1270MTL-ACX70	★	SMDT1270MEL-ACX80	★	SMDT1270MTL-C-ACX70	●	12.7	0.5000			2.3	0.091	
SMDT1300MTL-ACX70	●	SMDT1300MEL-ACX80	●	SMDT1300MTL-C-ACX70	●	13.0	0.5118			2.4	0.095	
SMDT05156MTL-ACX70	●	SMDT05156MEL-ACX80	●	SMDT05156MTL-C-ACX70	●	33/64	0.5156	7.8	0.307	2.4	0.095	SMDH055□
SMDT1310MTL-ACX70	★	SMDT1310MEL-ACX80	★	SMDT1310MTL-C-ACX70	●	13.1	0.5157			2.4	0.095	
SMDT05312MTL-ACX70	●	SMDT05312MEL-ACX80	●	SMDT05312MTL-C-ACX70	●	17/32	0.5312			2.4	0.095	
SMDT1350MTL-ACX70	●	SMDT1350MEL-ACX80	●	SMDT1350MTL-C-ACX70	●	13.5	0.5315	8.3	0.327	2.5	0.099	SMDH059□
SMDT1365MTL-ACX70	●	SMDT1365MEL-ACX80	●	SMDT1365MTL-C-ACX70	●	13.65	0.5374			2.5	0.099	
SMDT05469MTL-ACX70	●	SMDT05469MEL-ACX80	●	SMDT05469MTL-C-ACX70	●	35/64	0.5469			2.5	0.099	
SMDT1400MTL-ACX70	●	SMDT1400MEL-ACX80	●	SMDT1400MTL-C-ACX70	●	14.0	0.5512			2.5	0.099	
SMDT1410MTL-ACX70	★	SMDT1410MEL-ACX80	★	SMDT1410MTL-C-ACX70	●	14.1	0.5551			2.6	0.102	
SMDT1420MTL-ACX70	★	SMDT1420MEL-ACX80	★	SMDT1420MTL-C-ACX70	●	14.2	0.5591	8.7	0.345	2.6	0.102	SMDH063□
SMDT05625MTL-ACX70	●	SMDT05625MEL-ACX80	●	SMDT05625MTL-C-ACX70	●	9/16	0.5625			2.6	0.102	
SMDT1450MTL-ACX70	●	SMDT1450MEL-ACX80	●	SMDT1450MTL-C-ACX70	●	14.5	0.5709			2.6	0.102	
SMDT05781MTL-ACX70	●	SMDT05781MEL-ACX80	●	SMDT05781MTL-C-ACX70	●	37/64	0.5781	9.2	0.362	2.7	0.106	SMDH067□
SMDT1500MTL-ACX70	●	SMDT1500MEL-ACX80	●	SMDT1500MTL-C-ACX70	●	15.0	0.5906			2.7	0.106	
SMDT05937MTL-ACX70	●	SMDT05937MEL-ACX80	●	SMDT05937MTL-C-ACX70	●	19/32	0.5938			2.7	0.106	
SMDT06094MTL-ACX70	●	SMDT06094MEL-ACX80	●	SMDT06094MTL-C-ACX70	●	39/64	0.6094			2.8	0.110	
SMDT1550MTL-ACX70	●	SMDT1550MEL-ACX80	●	SMDT1550MTL-C-ACX70	●	15.5	0.6102			2.8	0.110	
SMDT1560MTL-ACX70	★	SMDT1560MEL-ACX80	●	SMDT1560MTL-C-ACX70	●	15.6	0.6142	9.6	0.3780	2.8	0.110	SMDH071□
SMDT1570MTL-ACX70	★	SMDT1570MEL-ACX80	●	SMDT1570MTL-C-ACX70	●	15.7	0.6181			2.9	0.114	
SMDT06250MTL-ACX70	●	SMDT06250MEL-ACX80	●	SMDT06250MTL-C-ACX70	●	5/8	0.6250			2.9	0.114	
SMDT1600MTL-ACX70	●	SMDT1600MEL-ACX80	●	SMDT1600MTL-C-ACX70	●	16.0	0.6300			2.9	0.114	
SMDT1608MTL-ACX70	●	SMDT1608MEL-ACX80	●	SMDT1608MTL-C-ACX70	●	16.08	0.6331			2.9	0.114	
SMDT1610MTL-ACX70	★	SMDT1610MEL-ACX80	★	SMDT1610MTL-ACX70	●	16.1	0.6339	10.1	0.397	2.9	0.114	SMDH075□
SMDT06406MTL-ACX70	●	SMDT06406MEL-ACX80	●	SMDT06406MTL-C-ACX70	●	41/64	0.6406			2.9	0.114	
SMDT1630MTL-ACX70	●	SMDT1630MEL-ACX80	●	SMDT1630MTL-C-ACX70	●	16.3	0.6417			2.9	0.114	
SMDT1650MTL-ACX70	●	SMDT1650MEL-ACX80	●	SMDT1650MTL-C-ACX70	●	16.5	0.6496	10.5	0.413	3.0	0.118	SMDH079□
SMDT06562MTL-ACX70	●	SMDT06562MEL-ACX80	●	SMDT06562MTL-C-ACX70	●	21/32	0.6563			3.0	0.118	
SMDT1680MTL-ACX70	★	SMDT1680MEL-ACX70	●	SMDT1680MTL-C-ACX70	●	16.8	0.6615			3.1	0.122	
SMDT1700MTL-ACX70	●	SMDT1700MEL-ACX80	●	SMDT1700MTL-C-ACX70	●	17.0	0.6693			3.1	0.122	
SMDT06719MTL-ACX70	●	SMDT06719MEL-ACX80	●	SMDT06719MTL-C-ACX70	●	43/64	0.6719			3.1	0.122	
SMDT06875MTL-ACX70	●	SMDT06875MEL-ACX80	●	SMDT06875MTL-C-ACX70	●	11/16	0.6875	11.0	0.433	3.1	0.122	SMDH083□
SMDT1750MTL-ACX70	●	SMDT1750MEL-ACX80	●	SMDT1750MTL-C-ACX70	●	17.5	0.6890			3.1	0.122	
SMDT1760MTL-ACX70	●	SMDT1760MEL-ACX80	●	SMDT1760MTL-C-ACX70	●	17.6	0.6929			3.1	0.122	
SMDT1770MTL-ACX70	★	SMDT1770MEL-ACX80	★	SMDT1770MTL-C-ACX70	●	17.7	0.6969	11.0	0.433	3.2	0.126	SMDH083□
SMDT07031MTL-ACX70	●	SMDT07031MEL-ACX80	●	SMDT07031MTL-C-ACX70	●	45/64	0.7031			3.2	0.126	
SMDT1800MTL-ACX70	●	SMDT1800MEL-ACX80	●	SMDT1800MTL-C-ACX70	●	18.0	0.7087			3.3	0.130	
SMDT07187MTL-ACX70	●	SMDT07187MEL-ACX80	●	SMDT07187MTL-C-ACX70	●	23/32	0.7188			3.3	0.130	
SMDT1850MTL-ACX70	●	SMDT1850MEL-ACX80	●	SMDT1850MTL-C-ACX70	●	18.5	0.7283			3.4	0.134	
SMDT07344MTL-ACX70	●	SMDT07344MEL-ACX80	●	SMDT07344MTL-C-ACX70	●	47/64	0.7344	10.1	0.397	3.4	0.134	SMDH075□
SMDT1900MTL-ACX70	●	SMDT1900MEL-ACX80	●	SMDT1900MTL-C-ACX70	●	19.0	0.7480			3.5	0.138	
SMDT07500MTL-ACX70	●	SMDT07500MEL-ACX80	●	SMDT07500MTL-C-ACX70	●	3/4	0.7500			3.5	0.138	
SMDT1925MTL-ACX70	●	SMDT1925MEL-ACX80	●	SMDT1925MTL-C-ACX70	●	19.25	0.7579	10.5	0.413	3.5	0.138	SMDH079□
SMDT07656MTL-ACX70	●	SMDT07656MEL-ACX80	●	SMDT07656MTL-C-ACX70	●	49/64	0.7656			3.5	0.138	
SMDT1950MTL-ACX70	●	SMDT1950MEL-ACX80	●	SMDT1950MTL-C-ACX70	●	19.5	0.7677			3.5	0.138	
SMDT1960MTL-ACX70	★	SMDT1960MEL-ACX70	●	SMDT1960MTL-C-ACX70	●	19.6	0.7717	11.0	0.433	3.6	0.142	SMDH083□
SMDT07812MTL-ACX70	●	SMDT07812MEL-ACX80	●	SMDT07812MTL-C-ACX70	●	25/32	0.7813			3.6	0.142	
SMDT2000MTL-ACX70	●	SMDT2000MEL-ACX80	●	SMDT2000MTL-C-ACX70	●	20.0	0.7874			3.6	0.142	
SMDT07969MTL-ACX70	●	SMDT07969MEL-ACX80	●	SMDT07969MTL-C-ACX70	●	51/64	0.7969			3.7	0.146	
SMDT2050MTL-ACX70	●	SMDT2050MEL-ACX80	●	SMDT2050MTL-C-ACX70	●	20.5	0.8071			3.7	0.146	
SMDT08125MTL-ACX70	●	SMDT08125MEL-ACX80	●	SMDT08125MTL-C-ACX70	●	13/16	0.8125	11.0	0.433	3.8	0.150	SMDH083□
SMDT2100MTL-ACX70	●	SMDT2100MEL-ACX80	●	SMDT2100MTL-C-ACX70	●	21.0	0.8268			3.8	0.150	
SMDT2120MTL-ACX70	★	SMDT2120MEL-ACX80	★	SMDT2120MTL-C-ACX70	●	21.2	0.8346			3.9	0.154	
SMDT08281MTL-ACX70	●	SMDT08281MEL-ACX80	●	SMDT08281MTL-C-ACX70	●	53/64	0.8281	3.9	0.154			

● = Stock item

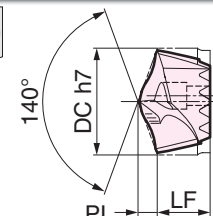
★ = Worldwide Warehouse item available in 10 business days

Note: Special diameters available upon request

Drill Tips - MTL, MEL, MTL-C Inch & Metric

■ STANDARD TIP ■ SUPER ALLOY TIP ■ CORNER BREAK TIP

1.5D 3D 5D 8D 12D



(SMDT-MTL)		(SMDT-MEL)		(SMDT-MTL-C)		øD		LF		PL		Body
Drill Tip	Stock	Drill Tip	Stock	Drill Tip	Stock	mm	in.	mm	in.	mm	in.	
SMDT08437MTL-ACX70	●	SMDT08437MEL-ACX80	●	SMDT08437MTL-C-ACX70	●	27/32	0.8438	11.0	0.433	3.9	0.154	SMDH083□
SMDT2150MTL-ACX70	●	SMDT2150MEL-ACX80	●	SMDT2150MTL-C-ACX70	●	21.5	0.8465			3.9	0.154	
SMDT08594MTL-ACX70	●	SMDT08594MEL-ACX80	●	SMDT08594MTL-C-ACX70	●	55/64	0.8594	11.0	0.433	4.0	0.158	SMDH087□
SMDT2200MTL-ACX70	●	SMDT2200MEL-ACX80	●	SMDT2200MTL-C-ACX70	●	22.0	0.8661			4.0	0.158	
SMDT2220MTL-ACX70	★	SMDT2220MEL-ACX70	●	SMDT2220MTL-C-ACX70	●	22.2	0.8741			4.0	0.158	
SMDT08750MTL-ACX70	●	SMDT08750MEL-ACX80	●	SMDT08750MTL-C-ACX70	●	7/8	0.8750			4.0	0.158	
SMDT2230MTL-ACX70	★	SMDT2230MEL-ACX70	●	SMDT2230MTL-C-ACX70	●	22.3	0.8780			4.0	0.158	
SMDT2245MTL-ACX70	●	SMDT2245MEL-ACX80	●	SMDT2245MTL-C-ACX70	●	22.45	0.8839			4.0	0.158	
SMDT2250MTL-ACX70	●	SMDT2250MEL-ACX80	●	SMDT2250MTL-C-ACX70	●	22.5	0.8858			4.1	0.162	
SMDT08906MTL-ACX70	●	SMDT08906MEL-ACX80	●	SMDT08906MTL-C-ACX70	●	57/64	0.8906			4.1	0.162	
SMDT2300MTL-ACX70	●	SMDT2300MEL-ACX80	●	SMDT2300MTL-C-ACX70	●	23.0	0.9055	11.0	0.433	4.2	0.165	SMDH091□
SMDT09062MTL-ACX70	●	SMDT09062MEL-ACX80	●	SMDT09062MTL-C-ACX70	●	29/32	0.9062			4.2	0.165	
SMDT09219MTL-ACX70	●	SMDT09219MEL-ACX80	●	SMDT09219MTL-C-ACX70	●	59/64	0.9219			4.3	0.169	
SMDT2350MTL-ACX70	●	SMDT2350MEL-ACX80	●	SMDT2350MTL-C-ACX70	●	23.5	0.9252			4.3	0.169	
SMDT09375MTL-ACX70	●	SMDT09375MEL-ACX80	●	SMDT09375MTL-C-ACX70	●	15/16	0.9375	11.0	0.433	4.4	0.173	SMDH096□
SMDT2400MTL-ACX70	●	SMDT2400MEL-ACX80	●	SMDT2400MTL-C-ACX70	●	24.0	0.9449			4.4	0.173	
SMDT2410MTL-ACX70	★	SMDT2410MEL-ACX80	★	SMDT2410MTL-C-ACX70	●	24.1	0.9488			4.4	0.173	
SMDT09531MTL-ACX70	●	SMDT09531MEL-ACX80	●	SMDT09531MTL-C-ACX70	●	61/64	0.9531			4.4	0.173	
SMDT2450MTL-ACX70	★	SMDT2450MEL-ACX80	●	SMDT2450MTL-C-ACX70	●	24.5	0.9646			4.5	0.177	
SMDT09687MTL-ACX70	●	SMDT09687MEL-ACX80	●	SMDT09687MTL-C-ACX70	●	31/32	0.9687			4.5	0.177	
SMDT2500MTL-ACX70	●	SMDT2500MEL-ACX80	●	SMDT2500MTL-C-ACX70	●	25.0	0.9843	11.3	0.445	4.5	0.177	SMDH100□
SMDT09844MTL-ACX70	●	SMDT09844MEL-ACX80	●	SMDT09844MTL-C-ACX70	●	63/64	0.9844			4.5	0.177	
SMDT10000MTL-ACX70	●	SMDT10000MEL-ACX80	●	SMDT10000MTL-C-ACX70	●	1	1.0000			4.6	0.181	
SMDT2550MTL-ACX70	★	SMDT2550MEL-ACX80	●	SMDT2550MTL-C-ACX70	●	25.5	1.0039			4.6	0.181	
SMDT2565MTL-ACX70	●	SMDT2565MEL-ACX80	●	SMDT2565MTL-C-ACX70	●	25.65	1.0098			4.7	0.185	
SMDT10156MTL-ACX70	●	SMDT10156MEL-ACX80	●	SMDT10156MTL-C-ACX70	●	1-1/64	1.0156			4.7	0.185	
SMDT2600MTL-ACX70	●	SMDT2600MEL-ACX80	●	SMDT2600MTL-C-ACX70	●	26.0	1.0236			4.8	0.189	
SMDT10312MTL-ACX70	●	SMDT10312MEL-ACX80	●	SMDT10312MTL-C-ACX70	●	1-1/32	1.0312			4.8	0.189	
SMDT2650MTL-ACX70	★	SMDT2650MEL-ACX80	●	SMDT2650MTL-C-ACX70	●	26.5	1.0433	4.8	0.189			
SMDT10469MTL-ACX70	●	SMDT10469MEL-ACX80	●	SMDT10469MTL-C-ACX70	●	1-3/64	1.0469	4.8	0.189			
SMDT10625MTL-ACX70	●	SMDT10625MEL-ACX80	●	SMDT10625MTL-C-ACX70	●	1-1/16	1.0625	12.2	0.480	4.9	0.193	SMDH107□
SMDT2700MTL-ACX70	●	SMDT2700MEL-ACX80	●	SMDT2700MTL-C-ACX70	●	27.0	1.0630			4.9	0.193	
SMDT10781MTL-ACX70	●	SMDT10781MEL-ACX80	●	SMDT10781MTL-C-ACX70	●	1-5/64	1.0781			4.9	0.193	
SMDT2750MTL-ACX70	★	SMDT2750MEL-ACX80	●	SMDT2750MTL-C-ACX70	●	27.5	1.0827			5.0	0.197	
SMDT10937MTL-ACX70	●	SMDT10937MEL-ACX80	●	SMDT10937MTL-C-ACX70	●	1-3/32	1.0937	5.0	0.197			
SMDT2800MTL-ACX70	●	SMDT2800MEL-ACX80	●	SMDT2800MTL-C-ACX70	●	28.0	1.1024	12.6	0.496	5.1	0.201	SMDH112□
SMDT11094MTL-ACX70	●	SMDT11094MEL-ACX80	●	SMDT11094MTL-C-ACX70	●	1-7/64	1.1094			5.1	0.201	
SMDT2850MTL-ACX70	●	SMDT2850MEL-ACX80	●	SMDT2850MTL-C-ACX70	●	28.5	1.1220			5.2	0.205	
SMDT11250MTL-ACX70	●	SMDT11250MEL-ACX80	●	SMDT11250MTL-C-ACX70	●	1-1/8	1.1250			5.2	0.205	
SMDT11406MTL-ACX70	●	SMDT11406MEL-ACX80	●	SMDT11406MTL-C-ACX70	●	1-9/64	1.1406	13.1	0.516	5.3	0.209	SMDH115□
SMDT2900MTL-ACX70	●	SMDT2900MEL-ACX80	●	SMDT2900MTL-C-ACX70	●	29.0	1.1417			5.3	0.209	
SMDT11562MTL-ACX70	●	SMDT11562MEL-ACX80	●	SMDT11562MTL-C-ACX70	●	1-5/32	1.1562			5.3	0.209	
SMDT2950MTL-ACX70	★	SMDT2950MEL-ACX80	●	SMDT2950MTL-C-ACX70	●	29.5	1.1614			5.4	0.213	
SMDT11719MTL-ACX70	●	SMDT11719MEL-ACX80	●	SMDT11719MTL-C-ACX70	●	1-11/64	1.1719	5.4	0.213			
SMDT3000MTL-ACX70	●	SMDT3000MEL-ACX80	●	SMDT3000MTL-C-ACX70	●	30.0	1.1811	13.5	0.532	5.5	0.217	SMDH118□
SMDT11875MTL-ACX70	●	SMDT11875MEL-ACX80	●	SMDT11875MTL-C-ACX70	●	1-3/16	1.1875			5.5	0.217	
SMDT3050MTL-ACX70	●	SMDT3050MEL-ACX80	●	SMDT3050MTL-C-ACX70	●	30.5	1.2008			5.5	0.217	
SMDT3100MTL-ACX80	●	SMDT3100MEL-ACX80	●	SMDT3100MTL-C-ACX80	●	31.0	1.2205	15.4	0.606	5.6	0.221	SMDH1250□
SMDT12500MTL-ACX80	●	SMDT12500MEL-ACX80	●	SMDT12500MTL-C-ACX80	●	1 1/4	1.2500	15.3	0.602	5.7	0.224	
SMDT3200MTL-ACX80	●	SMDT3200MEL-ACX80	●	SMDT3200MTL-C-ACX80	●	32.0	1.2598	15.2	0.599	5.8	0.228	
SMDT3300MTL-ACX80	●	SMDT3300MEL-ACX80	●	SMDT3300MTL-C-ACX80	●	33.0	1.2992	15.0	0.591	6.0	0.236	SMDH1319□
SMDT13125MTL-ACX80	●	SMDT13125MEL-ACX80	●	SMDT13125MTL-C-ACX80	●	1 5/16	1.3125	15.0	0.591	6.1	0.240	
SMDT3400MTL-ACX80	★	SMDT3400MEL-ACX80	●	SMDT3400MTL-C-ACX80	●	34.0	1.3386	16.8	0.662	6.2	0.244	SMDH350□
SMDT3500MTL-ACX80	★	SMDT3500MEL-ACX80	●	SMDT3500MTL-C-ACX80	●	35.0	1.3780	16.6	0.654	6.3	0.248	
SMDT3600MTL-ACX80	★	SMDT3600MEL-ACX80	●	SMDT3600MTL-C-ACX80	●	36.0	1.4173	16.4	0.646	6.6	0.260	SMDH365□
SMDT3700MTL-ACX80	★	SMDT3700MEL-ACX80	●	SMDT3700MTL-C-ACX80	●	37.0	1.4567	18.3	0.721	6.7	0.264	SMDH380□
SMDT3750MTL-ACX80	★	SMDT3750MEL-ACX80	●	SMDT3750MTL-C-ACX80	●	37.5	1.4764	18.2	0.717	6.8	0.268	
SMDT3800MTL-ACX80	★	SMDT3800MEL-ACX80	●	SMDT3800MTL-C-ACX80	●	38.0	1.4961	18.1	0.713	6.9	0.272	
SMDT3900MTL-ACX80	★	SMDT3900MEL-ACX80	●	SMDT3900MTL-C-ACX80	●	39.0	1.5354	17.9	0.705	7.1	0.280	SMDH395□
SMDT4000MTL-ACX80	★	SMDT4000MEL-ACX80	●	SMDT4000MTL-C-ACX80	●	40.0	1.5748	19.7	0.776	7.3	0.287	SMDH410□
SMDT4050MTL-ACX80	★	SMDT4050MEL-ACX80	●	SMDT4050MTL-C-ACX80	●	40.5	1.5945	19.6	0.772	7.4	0.291	
SMDT4100MTL-ACX80	★	SMDT4100MEL-ACX80	●	SMDT4100MTL-C-ACX80	●	41.0	1.6142	19.5	0.768	7.5	0.295	
SMDT4200MTL-ACX80	★	SMDT4200MEL-ACX80	●	SMDT4200MTL-C-ACX80	●	42.0	1.6535	19.4	0.764	7.6	0.299	SMDH425□

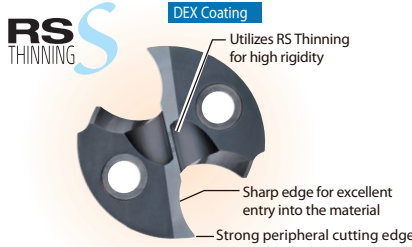
● = USA Stocked item ★ = Worldwide Warehouse item available in 10 business days

Note: Special diameters available upon request

MFS Type 180° ideal for drilling non-flat surfaces

PKMS

NEW



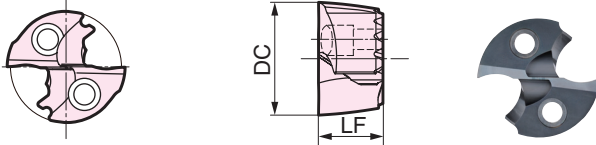
- Various drilling operations thanks to a point angle of 180°
Applicable to high-efficiency spot facing, drilling in non-flat surfaces such as inclined and cylindrical surfaces, and interrupted drilling. Also reduces burrs at the hole exit.
- Improves machining stability
Achieves high rigidity by employing RS Thinning, which ensures thick web at the bottom.

Important Notes

Application	No Guide Hole (Solid Workpiece Hole Drilling)		With Guide Hole		Flat Finishing of Hole Bottom
	Flat Surface	Non-Flat Surface	Guide Holes		
1.5D Holder	○	○	○ (Guide Hole Not Required)	○	○
3D to 12D Holder	×	×	×	×	○



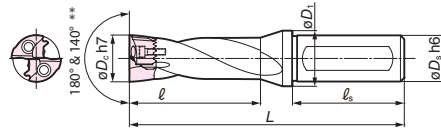
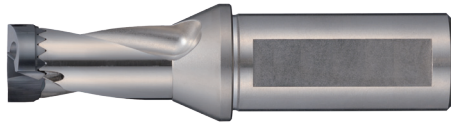
Drill Tips - MFS Inch & Metric ■ FLAT TIP



Flat Drill Tip	Stock	øDc		LF		PL		Body
		mm	in.	mm	in.	mm	in.	
SMDT04688MFS-ACX70	●	15/32	0.4688	7.1	0.279	-	-	
SMDT1200MFS-ACX70	★	12.0mm	0.4724	7.1	0.279	-	-	SMDH047□
SMDT04844MFS-ACX70	●	31/64	0.4844	7.2	.284	-	-	
SMDT1250MFS-ACX70	★	12.5mm	0.4921	7.2	0.284	-	-	SMDH049□
SMDT05000MFS-ACX70	●	1/2	0.5000	7.5	0.295	-	-	
SMDT1300MFS-ACX70	★	13.0mm	0.5118	7.5	0.295	-	-	SMDH051□
SMDT05156MFS-ACX70	●	33/64	0.5156	7.5	0.295	-	-	
SMDT05312MFS-ACX70	●	17/32	0.5312	7.9	0.311	-	-	SMDH055□
SMDT1350MFS-ACX70	★	13.5mm	0.5315	7.9	0.311	-	-	
SMDT05469MFS-ACX70	●	35/64	0.5469	7.9	0.311	-	-	
SMDT1400MFS-ACX70	★	14.0mm	0.5512	7.9	0.311	-	-	SMDH059□
SMDT05625MFS-ACX70	●	9/16	0.5625	7.9	0.311	-	-	
SMDT1450MFS-ACX70	★	14.5mm	0.5709	7.9	0.311	-	-	
SMDT05781MFS-ACX70	●	37/64	0.5781	7.9	0.311	-	-	
SMDT1500MFS-ACX70	★	15.0mm	0.5906	8.3	0.327	-	-	SMDH063□
SMDT05938MFS-ACX70	●	19/32	0.5938	8.3	0.327	-	-	
SMDT06094MFS-ACX70	●	39/64	0.6094	8.3	0.327	-	-	
SMDT1550MFS-ACX70	★	15.5mm	0.6102	8.3	0.327	-	-	
SMDT06250MFS-ACX70	●	5/8	0.6250	8.8	0.347	-	-	SMDH067□
SMDT1600MFS-ACX70	★	16.0mm	0.6300	8.8	0.347	-	-	
SMDT06406MFS-ACX70	●	41/64	0.6406	8.8	0.347	-	-	
SMDT1650MFS-ACX70	★	16.5mm	0.6496	8.8	0.347	-	-	
SMDT06563MFS-ACX70	●	21/32	0.6563	9.3	0.366	-	-	SMDH067□
SMDT1700MFS-ACX70	★	17.0mm	0.6693	9.3	0.366	-	-	
SMDT06719MFS-ACX70	●	43/64	0.6719	9.3	0.366	-	-	
SMDT06875MFS-ACX70	●	11/16	0.6875	9.3	0.366	-	-	
SMDT1750MFS-ACX70	★	17.5mm	0.6890	9.3	0.366	-	-	
SMDT07031MFS-ACX70	●	45/64	0.7031	9.8	0.386	-	-	SMDH071□
SMDT1800MFS-ACX70	★	18.0mm	0.7087	9.8	0.386	-	-	
SMDT07188MFS-ACX70	●	23/32	0.7188	9.8	0.386	-	-	
SMDT1850MFS-ACX70	★	18.5mm	0.7283	9.8	0.386	-	-	
SMDT07344MFS-ACX70	●	47/64	0.7344	10.2	0.402	-	-	SMDH075□
SMDT1900MFS-ACX70	★	19.0mm	0.7480	10.2	0.402	-	-	
SMDT07500MFS-ACX70	●	3/4	0.7500	10.2	0.402	-	-	
SMDT07656MFS-ACX70	●	49/64	0.7656	10.2	0.402	-	-	
SMDT1950MFS-ACX70	★	19.5mm	0.7677	10.2	0.402	-	-	
SMDT07813MFS-ACX70	●	25/32	0.7813	10.7	0.421	-	-	SMDH079□
SMDT2000MFS-ACX70	★	20.0mm	0.7874	10.7	0.421	-	-	
SMDT07969MFS-ACX70	●	51/64	0.7969	10.7	0.421	-	-	
SMDT2050MFS-ACX70	★	20.5mm	0.8071	10.7	0.421	-	-	

Flat Drill Tip	Stock	øDc		LF		PL		Body
		mm	in.	mm	in.	mm	in.	
SMDT08125MFS-ACX70	●	13/16	0.8125	10.7	0.421	-	-	
SMDT2100MFS-ACX70	★	21.0mm	0.8268	11.2	0.441	-	-	SMDH083□
SMDT08281MFS-ACX70	●	53/64	0.8281	11.2	0.441	-	-	
SMDT08438MFS-ACX70	●	27/32	0.8438	11.2	0.441	-	-	
SMDT2150MFS-ACX70	★	21.5mm	0.8465	11.2	0.441	-	-	
SMDT08594MFS-ACX70	●	55/64	0.8594	11.2	0.441	-	-	
SMDT2200MFS-ACX70	★	22.0mm	0.8661	11.2	0.441	-	-	SMDH087□
SMDT08750MFS-ACX70	●	7/8	0.8750	11.2	0.441	-	-	
SMDT2250MFS-ACX70	★	22.5mm	0.8858	11.2	0.441	-	-	
SMDT08906MFS-ACX70	●	57/64	0.8906	11.2	0.441	-	-	
SMDT2300MFS-ACX70	★	23.0mm	0.9055	11.2	0.441	-	-	SMDH091□
SMDT09062MFS-ACX70	●	29/32	0.9062	11.2	0.441	-	-	
SMDT09219MFS-ACX70	●	59/64	0.9219	11.2	0.441	-	-	
SMDT2350MFS-ACX70	★	23.5mm	0.9252	11.2	0.441	-	-	
SMDT09375MFS-ACX70	●	15/16	0.9375	11.3	0.445	-	-	
SMDT2400MFS-ACX70	★	24.0mm	0.9449	11.3	0.445	-	-	SMDH096□
SMDT09531MFS-ACX70	●	61/64	0.9531	11.3	0.445	-	-	
SMDT2450MFS-ACX70	★	24.5mm	0.9646	11.3	0.445	-	-	
SMDT09687MFS-ACX70	●	31/32	0.9687	11.3	0.445	-	-	
SMDT2500MFS-ACX70	★	25.0mm	0.9843	11.7	0.461	-	-	SMDH100□
SMDT09844MFS-ACX70	●	63/64	0.9844	11.7	0.461	-	-	
SMDT10000MFS-ACX70	●	1	1.0000	11.7	0.461	-	-	
SMDT2550MFS-ACX70	★	25.5mm	1.0039	11.7	0.461	-	-	
SMDT10156MFS-ACX70	●	1 1/64	1.0156	11.7	0.461	-	-	
SMDT2600MFS-ACX70	★	26.0mm	1.0236	12.2	0.480	-	-	SMDH104□
SMDT10312MFS-ACX70	●	1 1/32	1.0312	12.2	0.480	-	-	
SMDT2650MFS-ACX70	★	26.5mm	1.0433	12.2	0.480	-	-	
SMDT10469MFS-ACX70	●	1 3/64	1.0469	12.2	0.480	-	-	
SMDT10625MFS-ACX70	●	1 1/16	1.0625	12.7	0.500	-	-	SMDH107□
SMDT2700MFS-ACX70	★	27.0mm	1.0630	12.7	0.500	-	-	
SMDT10781MFS-ACX70	●	1 5/64	1.0781	12.7	0.500	-	-	
SMDT2750MFS-ACX70	★	27.5mm	1.0827	12.7	0.500	-	-	
SMDT10937MFS-ACX70	●	1 3/32	1.0937	12.7	0.500	-	-	
SMDT2800MFS-ACX70	★	28.0mm	1.1024	13.2	0.520	-	-	SMDH112□
SMDT11094MFS-ACX70	●	1 7/64	1.1094	13.2	0.520	-	-	
SMDT2850MFS-ACX70	★	28.5mm	1.1220	13.2	0.520	-	-	
SMDT11250MFS-ACX70	●	1 1/8	1.1250	13.2	0.520	-	-	
SMDT11406MFS-ACX70	●	1 9/64	1.1406	13.2	0.520	-	-	
SMDT2900MFS-ACX70	★	29.0mm	1.1417	13.6	0.536	-	-	SMDH115□
SMDT11562MFS-ACX70	●	1 5/32	1.1562	13.6	0.536	-	-	
SMDT2950MFS-ACX70	★	29.5mm	1.1614	13.6	0.536	-	-	
SMDT11719MFS-ACX70	●	1 11/64	1.1719	14.1	0.555	-	-	SMDH118□
SMDT3000MFS-ACX70	★	30.0mm	1.1811	14.1	0.555	-	-	
SMDT11875MFS-ACX70	●	1 3/16	1.1875	14.1	0.555	-	-	

1.5X DIAMETER SMD



■ SMD INCH BODIES (1.5X Diameter)

*1.5xD inch bodies have cylindrical shanks

Body No.	Stock	Drill Tip Diameter (inch / mm)		ϕD_s	ϕD_1	L	ℓ_1 Max Depth	ℓ_3	Screw	Wrench
SMDH047S	●	0.4688 - 0.4917	12.00 - 12.49	0.625	0.7874	3.4843	1.0039	1.875	BXD02208IP	TRDR08IP
SMDH049S	●	0.4921 - 0.5114	12.50 - 12.99	0.625	0.7874	3.4961	1.0157	1.875	BXD02208IP	TRDR08IP
SMDH051S	●	0.5118 - 0.5311	13.00 - 13.49	0.625	0.7874	3.5433	1.0630	1.875	BXD02208IP	TRDR08IP
SMDH055S	●	0.5315 - 0.5709	13.50 - 14.50	0.750	0.7874	3.6969	1.1929	2.000	BXD02208IP	TRDR08IP
SMDH059S	●	0.5713 - 0.6102	14.51 - 15.50	0.750	0.9843	3.8307	1.2717	2.000	BXD02208IP	TRDR08IP
SMDH063S	●	0.6106 - 0.6496	15.51 - 16.50	0.750	0.9843	3.9331	1.3740	2.000	BXD02509IP	TRDR10IP
SMDH067S	●	0.6500 - 0.6890	16.51 - 17.50	0.750	0.9843	3.9921	1.4331	2.000	BXD02509IP	TRDR10IP
SMDH071S	●	0.6894 - 0.7283	17.51 - 18.50	0.750	0.9843	4.0945	1.5354	2.000	BXD02509IP	TRDR10IP
SMDH075S	●	0.7287 - 0.7677	18.51 - 19.50	1.000	1.1811	4.3858	1.5906	2.250	BXD03011IP	TRDR15IP
SMDH079S	●	0.7681 - 0.8070	19.51 - 20.50	1.000	1.1811	4.4882	1.6929	2.250	BXD03011IP	TRDR15IP
SMDH083S	●	0.8074 - 0.8465	20.51 - 21.50	1.000	1.1811	4.5472	1.7520	2.250	BXD03011IP	TRDR15IP
SMDH087S	●	0.8469 - 0.8976	21.51 - 22.80	1.000	1.1811	4.6102	1.8150	2.250	BXD03512IP	TRDR15IP
SMDH091S	●	0.8980 - 0.9370	22.81 - 23.80	1.000	1.1811	4.6457	1.8504	2.250	BXD03512IP	TRDR15IP
SMDH096S	●	0.9374 - 0.9764	23.81 - 24.80	1.000	1.4567	4.8937	1.9409	2.250	BXD03512IP	TRDR15IP
SMDH100S	●	0.9768 - 1.0157	24.81 - 25.80	1.250	1.4567	4.9094	1.9567	2.375	BXD04014IP	TRDR20IP
SMDH104S	●	1.0161 - 1.0551	25.81 - 26.80	1.250	1.4567	5.0118	2.0591	2.375	BXD04014IP	TRDR20IP
SMDH107S	●	1.0555 - 1.0945	26.81 - 27.80	1.250	1.4567	5.0315	2.0787	2.375	BXD04014IP	TRDR20IP
SMDH112S	●	1.0949 - 1.1339	27.81 - 28.80	1.250	1.4567	5.0945	2.1417	2.375	BXD04515IP	TRDR25IP
SMDH115S	●	1.1343 - 1.1732	28.81 - 29.80	1.250	1.4567	5.1496	2.1969	2.375	BXD04515IP	TRDR25IP
SMDH118S	●	1.1736 - 1.2125	29.81 - 30.80	1.250	1.4567	5.2520	2.2992	2.375	BXD04515IP	TRDR25IP

■ SMD METRIC BODIES (1.5X Diameter)

*1.5xD metric bodies have set screw flat on shanks

Body No.	Stock	Drill Tip Diameter (inch / mm)		ϕD_s	ϕD_1	L	ℓ_1 Max Depth	ℓ_3	Screw	Wrench
SMDH120S	★	0.4688 - 0.4917	12.00 - 12.49	16.0	20.0	88.5	25.5	48	BXD02208IP	TRDR08IP
SMDH125S	★	0.4921 - 0.5114	12.50 - 12.99	16.0	20.0	88.8	25.8	48	BXD02208IP	TRDR08IP
SMDH130S	★	0.5118 - 0.5311	13.00 - 13.49	16.0	20.0	90.0	27.0	48	BXD02208IP	TRDR08IP
SMDH140S	★	0.5315 - 0.5709	13.50 - 14.50	16.0	20.0	93.9	30.9	48	BXD02208IP	TRDR08IP
SMDH150S	★	0.5713 - 0.6102	14.51 - 15.50	20.0	25.0	97.3	32.3	50	BXD02208IP	TRDR08IP
SMDH160S	★	0.6106 - 0.6496	15.51 - 16.50	20.0	25.0	99.9	34.9	50	BXD02509IP	TRDR10IP
SMDH170S	★	0.6500 - 0.6890	16.51 - 17.50	20.0	25.0	101.4	36.4	50	BXD02509IP	TRDR10IP
SMDH180S	★	0.6894 - 0.7283	17.51 - 18.50	20.0	25.0	104.0	39.0	50	BXD02509IP	TRDR10IP
SMDH190S	★	0.7287 - 0.7677	18.51 - 19.50	25.0	30.0	111.4	40.4	56	BXD03011IP	TRDR15IP
SMDH200S	★	0.7681 - 0.8070	19.51 - 20.50	25.0	30.0	114.0	43.0	56	BXD03011IP	TRDR15IP
SMDH210S	★	0.8074 - 0.8465	20.51 - 21.50	25.0	30.0	115.5	44.5	56	BXD03011IP	TRDR15IP
SMDH220S	★	0.8469 - 0.8976	21.51 - 22.80	25.0	30.0	117.1	46.1	56	BXD03512IP	TRDR15IP
SMDH230S	★	0.8980 - 0.9370	22.81 - 23.80	25.0	30.0	118.0	47.0	56	BXD03512IP	TRDR15IP
SMDH240S	★	0.9374 - 0.9764	23.81 - 24.80	32.0	37.0	124.3	49.3	60	BXD03512IP	TRDR15IP
SMDH250S	★	0.9768 - 1.0157	24.81 - 25.80	32.0	37.0	124.7	49.7	60	BXD04014IP	TRDR20IP
SMDH260S	★	1.0161 - 1.0551	25.81 - 26.80	32.0	37.0	127.3	52.3	60	BXD04014IP	TRDR20IP
SMDH270S	★	1.0555 - 1.0945	26.81 - 27.80	32.0	37.0	127.8	52.8	60	BXD04014IP	TRDR20IP
SMDH280S	★	1.0949 - 1.1339	27.81 - 28.80	32.0	37.0	129.4	54.4	60	BXD04515IP	TRDR25IP
SMDH290S	★	1.1343 - 1.1732	28.81 - 29.80	32.0	37.0	130.8	55.8	60	BXD04515IP	TRDR25IP
SMDH300S	★	1.1736 - 1.2125	29.81 - 30.80	32.0	37.0	133.4	58.4	60	BXD04515IP	TRDR25IP

★ = Worldwide Warehouse item available in 10 business days ● = USA Stocked item

■ Recommended Speeds & Feeds - 1.5XD

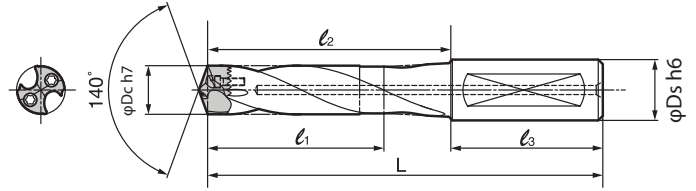
Speed: v (SFM) / Feed: f (IPR)

Drill Dia.	Soft Steel	General Steel	Hardened Steel	Stainless Steel	Gray Cast Iron	Ductile Cast Iron	Aluminum Alloy
ϕD_c	Min - Optimum - Max	Min - Optimum - Max	Min - Optimum - Max	Min - Optimum - Max	Min - Optimum - Max	Min - Optimum - Max	Min - Optimum - Max
~0.6299	Vc 200 - 260 - 330 f .0039 - .0059 - .0079	160 - 230 - 300 .0039 - .0059 - .0079	130 - 200 - 260 .0019 - .0039 - .0059	130 - 200 - 260 .0019 - .0039 - .0059	160 - 230 - 300 .0039 - .0059 - .0079	160 - 215 - 260 .0039 - .0059 - .0079	330 - 500 - 650 .0098 - .012 - .014
~0.7874	Vc 200 - 260 - 330 f .0039 - .0059 - .0079	160 - 230 - 300 .0039 - .0059 - .0079	130 - 200 - 260 .0019 - .0039 - .0059	160 - 230 - 300 .0019 - .0039 - .0059	160 - 230 - 300 .0039 - .0059 - .0079	160 - 215 - 260 .0039 - .0059 - .0079	330 - 500 - 650 .012 - .014 - .016
~1.212	Vc 200 - 260 - 330 f .0059 - .0079 - .0098	160 - 230 - 300 .0059 - .0079 - .0098	130 - 200 - 260 .0039 - .0059 - .0079	160 - 230 - 300 .0019 - .0039 - .0059	160 - 230 - 300 .0059 - .0079 - .0098	160 - 215 - 260 .0059 - .0079 - .0098	330 - 500 - 650 .014 - .016 - .018

Note:

1. The recommended hole depth is 2 x drill diameter. The depth is measured from the highest point of the hole on drilling in inclined surfaces.
2. The recommended cutting conditions are those for drilling on flat horizontal surfaces.
3. Adjust the feed rate according to the inclination angle when drilling on an inclined surface.
4. Set the feed rate at 70% or lower when the inclination angle is 30° or less.
5. Set the feed rate at 50% or lower when the inclination angle is larger than 30°.
6. This product is a drilling tool. Do not use it for traversing or helical milling.

3X DIAMETER SMD



■ SMD INCH BODIES (3X Diameter)

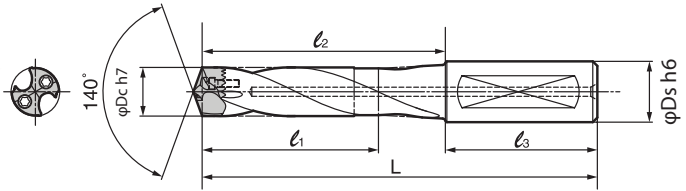
Catalog Number	Drill Tip Diameter øDc (inch/mm)		Stock	øDs	L	l ₁ max depth	l ₂	l ₃	Screw	Wrench
SMDH047M	0.4688 - 0.4917	12.00mm - 12.49mm	●	0.625	4.141	1.734	2.266	1.875	BXD02208IP	TRDR08IP
SMDH049M	0.4921 - 0.5114	12.50mm - 12.99mm	●	0.625	4.334	1.859	2.459	1.875	BXD02208IP	TRDR08IP
SMDH051M	0.5118 - 0.5311	13.00mm - 13.49mm	●	0.625	4.334	1.859	2.459	1.875	BXD02208IP	TRDR08IP
SMDH055M	0.5315 - 0.5709	13.50mm - 14.50mm	●	0.750	4.527	2.008	2.527	2.000	BXD02208IP	TRDR08IP
SMDH059M	0.5713 - 0.6102	14.51mm - 15.50mm	●	0.750	4.921	2.126	2.921	2.000	BXD02208IP	TRDR08IP
SMDH063M	0.6106 - 0.6496	15.51mm - 16.50mm	●	0.750	5.118	2.283	3.118	2.000	BXD02509IP	TRDR10IP
SMDH067M	0.6500 - 0.6890	16.51mm - 17.50mm	●	0.750	5.315	2.401	3.315	2.000	BXD02509IP	TRDR10IP
SMDH071M	0.6894 - 0.7283	17.51mm - 18.50mm	●	0.750	5.512	2.559	3.512	2.000	BXD02509IP	TRDR10IP
SMDH075M	0.7287 - 0.7677	18.51mm - 19.50mm	●	1.000	6.102	2.677	3.852	2.250	BXD03011IP	TRDR15IP
SMDH079M	0.7681 - 0.8070	19.51mm - 20.50mm	●	1.000	6.102	2.834	3.852	2.250	BXD03011IP	TRDR15IP
SMDH083M	0.8074 - 0.8465	20.51mm - 21.50mm	●	1.000	6.102	2.953	3.852	2.250	BXD03011IP	TRDR15IP
SMDH087M	0.8469 - 0.8976	21.51mm - 22.80mm	●	1.000	6.299	3.110	4.049	2.250	BXD03512IP	TRDR15IP
SMDH091M	0.8980 - 0.9370	22.81mm - 23.80mm	●	1.000	6.299	3.228	4.049	2.250	BXD03512IP	TRDR15IP
SMDH096M	0.9374 - 0.9764	23.81mm - 24.80mm	●	1.000	6.693	3.385	4.443	2.250	BXD03512IP	TRDR15IP
SMDH100M	0.9768 - 1.0157	24.81mm - 25.80mm	●	1.250	6.693	3.465	4.318	2.375	BXD04014IP	TRDR20IP
SMDH104M	1.0161 - 1.0551	25.81mm - 26.80mm	●	1.250	6.890	3.622	4.517	2.375	BXD04014IP	TRDR20IP
SMDH107M	1.0555 - 1.0945	26.81mm - 27.80mm	●	1.250	6.890	3.701	4.517	2.375	BXD04014IP	TRDR20IP
SMDH112M	1.0949 - 1.1339	27.81mm - 28.80mm	●	1.250	7.086	3.819	4.711	2.375	BXD04515IP	TRDR25IP
SMDH115M	1.1343 - 1.1732	28.81mm - 29.80mm	●	1.250	7.283	3.937	4.908	2.375	BXD04515IP	TRDR25IP
SMDH118M	1.1736 - 1.2125	29.81mm - 30.80mm	●	1.250	7.283	4.094	4.908	2.375	BXD04515IP	TRDR25IP
SMDH1250M	1.2130 - 1.2598	30.81mm - 32.00mm	●	1.250	8.315	4.331	5.315	3.000	BXD04515IP	TRDR25IP
SMDH1319M	1.2602 - 1.3189	32.01mm - 33.50mm	●	1.500	8.512	4.528	5.512	3.000	BXD04515IP	TRDR25IP

■ SMD METRIC BODIES (3X Diameter)

3X Diameter Body No.	Drill Tip Diameter øDc (inch/mm)		Stock	øDs	L	l ₁ max depth	l ₂	l ₃	Screw	Wrench
SMDH120M	0.4688 - 0.4917	12.00mm - 12.49mm	★	16.0	105	44	57	48	BXD02208IP	TRDR08IP
SMDH125M	0.4921 - 0.5114	12.50mm - 12.99mm	★	16.0	105	44	57	48	BXD02208IP	TRDR08IP
SMDH130M	0.5118 - 0.5311	13.00mm - 13.49mm	★	16.0	110	47	62	48	BXD02208IP	TRDR08IP
SMDH140M	0.5315 - 0.5709	13.50mm - 14.50mm	★	16.0	116.5	52.5	68.5	48	BXD02208IP	TRDR08IP
SMDH150M	0.5713 - 0.6102	14.51mm - 15.50mm	★	20.0	126.5	55.5	76.5	50	BXD02208IP	TRDR08IP
SMDH160M	0.6106 - 0.6496	15.51mm - 16.50mm	★	20.0	131.5	59.5	81.5	50	BXD02509IP	TRDR10IP
SMDH170M	0.6500 - 0.6890	16.51mm - 17.50mm	★	20.0	136.5	62.5	86.5	50	BXD02509IP	TRDR10IP
SMDH180M	0.6894 - 0.7283	17.51mm - 18.50mm	★	20.0	141.5	66.5	91.5	50	BXD02509IP	TRDR10IP
SMDH190M	0.7287 - 0.7677	18.51mm - 19.50mm	★	25.0	156.5	69.5	100.5	56	BXD03011IP	TRDR15IP
SMDH200M	0.7681 - 0.8070	19.51mm - 20.50mm	★	25.0	156.5	73.5	100.5	56	BXD03011IP	TRDR15IP
SMDH210M	0.8074 - 0.8465	20.51mm - 21.50mm	★	25.0	156.5	76.5	100.5	56	BXD03011IP	TRDR15IP
SMDH220M	0.8469 - 0.8976	21.51mm - 22.80mm	★	25.0	161.1	80.1	105.1	56	BXD03512IP	TRDR15IP
SMDH230M	0.8980 - 0.9370	22.81mm - 23.80mm	★	25.0	160.6	82.6	104.6	56	BXD03512IP	TRDR15IP
SMDH240M	0.9374 - 0.9764	23.81mm - 24.80mm	★	32.0	170.2	86.2	110.2	60	BXD03512IP	TRDR15IP
SMDH250M	0.9768 - 1.0157	24.81mm - 25.80mm	★	32.0	170	88	110	60	BXD04014IP	TRDR20IP
SMDH260M	1.0161 - 1.0551	25.81mm - 26.80mm	★	32.0	175	92	115	60	BXD04014IP	TRDR20IP
SMDH270M	1.0555 - 1.0945	26.81mm - 27.80mm	★	32.0	175	94	115	60	BXD04014IP	TRDR20IP
SMDH280M	1.0949 - 1.1339	27.81mm - 28.80mm	★	32.0	180	97	120	60	BXD04515IP	TRDR25IP
SMDH290M	1.1343 - 1.1732	28.81mm - 29.80mm	★	32.0	180	100	120	60	BXD04515IP	TRDR25IP
SMDH300M	1.1736 - 1.2125	29.81mm - 30.80mm	★	32.0	185	104	125	60	BXD04515IP	TRDR25IP
SMDH320M	1.2130 - 1.2598	30.81mm - 32.00mm	★	32.0	195	97.9	135	60	BXD04515IP	TRDR25IP
SMDH335M	1.2602 - 1.3189	32.01mm - 33.50mm	★	32.0	200	103.3	140	60	BXD04515IP	TRDR25IP
SMDH350M	1.3193 - 1.3780	33.51mm - 35.00mm	★	40.0	215	106.8	145	70	BX0515	HD040
SMDH365M	1.3783 - 1.4370	35.01mm - 36.50mm	★	40.0	220	112.3	150	70	BX0515	HD040
SMDH380M	1.4374 - 1.4961	36.51mm - 38.00mm	★	40.0	225	115.8	155	70	BX0515	HD040
SMDH395M	1.4965 - 1.5551	38.01mm - 39.50mm	★	40.0	230	121.3	160	70	BX0515	HD040
SMDH410M	1.5555 - 1.6142	39.51mm - 41.00mm	★	40.0	245	129.8	175	70	BX0515	HD040
SMDH425M	1.6146 - 1.6732	41.01mm - 42.50mm	★	40.0	250	135.3	180	70	BX0515	HD040

★ = Worldwide Warehouse item available in 10 business days ● = USA Stocked item Note: Special diameters available upon request

5X DIAMETER SMD 5X Diameter



■ SMD INCH BODIES (5X Diameter)

Catalog Number	Drill Tip Diameter ϕDc (inch/mm)		Stock	ϕDs	L	l_1 max depth	l_2	l_3	Screw	Wrench
SMDH047L	0.4688 - 0.4917	12.00mm - 12.49mm	●	0.625	5.109	2.672	3.234	1.875	BXD02208IP	TRDR08IP
SMDH049L	0.4921 - 0.5114	12.50mm - 12.99mm	●	0.625	5.500	2.906	3.625	1.875	BXD02208IP	TRDR08IP
SMDH051L	0.5118 - 0.5311	13.00mm - 13.49mm	●	0.625	5.500	2.906	3.625	1.875	BXD02208IP	TRDR08IP
SMDH055L	0.5315 - 0.5709	13.50mm - 14.50mm	●	0.750	5.708	3.150	3.708	2.000	BXD02208IP	TRDR08IP
SMDH059L	0.5713 - 0.6102	14.51mm - 15.50mm	●	0.750	6.102	3.346	4.102	2.000	BXD02208IP	TRDR08IP
SMDH063L	0.6106 - 0.6496	15.51mm - 16.50mm	●	0.750	6.496	3.582	4.496	2.000	BXD02509IP	TRDR10IP
SMDH067L	0.6500 - 0.6890	16.51mm - 17.50mm	●	0.750	6.693	3.780	4.693	2.000	BXD02509IP	TRDR10IP
SMDH071L	0.6894 - 0.7283	17.51mm - 18.50mm	●	0.750	6.890	4.015	4.890	2.000	BXD02509IP	TRDR10IP
SMDH075L	0.7287 - 0.7677	18.51mm - 19.50mm	●	1.000	7.480	4.212	5.230	2.250	BXD03011IP	TRDR15IP
SMDH079L	0.7681 - 0.8070	19.51mm - 20.50mm	●	1.000	7.677	4.449	5.427	2.250	BXD03011IP	TRDR15IP
SMDH083L	0.8074 - 0.8465	20.51mm - 21.50mm	●	1.000	7.677	4.645	5.427	2.250	BXD03011IP	TRDR15IP
SMDH087L	0.8469 - 0.8976	21.51mm - 22.80mm	●	1.000	7.874	4.882	5.624	2.250	BXD03512IP	TRDR15IP
SMDH091L	0.8980 - 0.9370	22.81mm - 23.80mm	●	1.000	8.268	5.078	6.018	2.250	BXD03512IP	TRDR15IP
SMDH096L	0.9374 - 0.9764	23.81mm - 24.80mm	●	1.000	8.661	5.315	6.411	2.250	BXD03512IP	TRDR15IP
SMDH100L	0.9768 - 1.0157	24.81mm - 25.80mm	●	1.250	8.858	5.512	6.483	2.375	BXD04014IP	TRDR20IP
SMDH104L	1.0161 - 1.0551	25.81mm - 26.80mm	●	1.250	9.005	5.748	6.680	2.375	BXD04014IP	TRDR20IP
SMDH107L	1.0555 - 1.0945	26.81mm - 27.80mm	●	1.250	9.252	5.945	6.877	2.375	BXD04014IP	TRDR20IP
SMDH112L	1.0949 - 1.1339	27.81mm - 28.80mm	●	1.250	9.449	6.181	7.074	2.375	BXD04515IP	TRDR25IP
SMDH115L	1.1343 - 1.1732	28.81mm - 29.80mm	●	1.250	9.645	6.378	7.270	2.375	BXD04515IP	TRDR25IP
SMDH118L	1.1736 - 1.2125	29.81mm - 30.80mm	●	1.250	10.039	6.575	7.664	2.375	BXD04515IP	TRDR25IP
SMDH1250L	1.2130 - 1.2598	30.81mm - 32.00mm	●	1.250	10.874	6.890	7.874	3.000	BXD04515IP	TRDR25IP
SMDH1319L	1.2602 - 1.3189	32.01 mm - 33.50mm	●	1.500	11.268	7.284	8.268	3.000	BXD04515IP	TRDR25IP

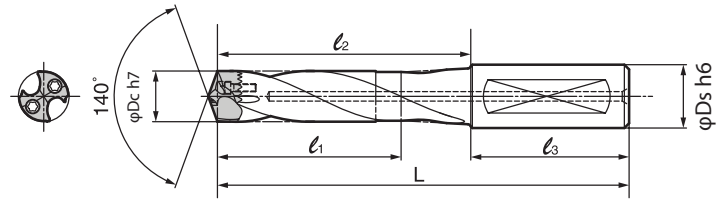
■ SMD METRIC BODIES (5X Diameter)

5X Diameter Body No.	Drill Tip Diameter ϕDc (inch/mm)		Stock	ϕDs	L	l_1 max depth	l_2	l_3	Screw	Wrench
SMDH120L	0.4688 - 0.4917	12.00mm - 12.49mm	★	16.0	130	69	82	48	BXD02208IP	TRDR08IP
SMDH125L	0.4921 - 0.5114	12.50mm - 12.99mm	★	16.0	130	69	82	48	BXD02208IP	TRDR08IP
SMDH130L	0.5118 - 0.5311	13.00mm - 13.49mm	★	16.0	140	74	102	48	BXD02208IP	TRDR08IP
SMDH140L	0.5315 - 0.5709	13.50mm - 14.50mm	★	16.0	146.5	81.5	98.5	48	BXD02208IP	TRDR08IP
SMDH150L	0.5713 - 0.6102	14.51mm - 15.50mm	★	20.0	156.5	86.5	106.5	50	BXD02208IP	TRDR08IP
SMDH160L	0.6106 - 0.6496	15.51mm - 16.50mm	★	20.0	166.5	92.5	116.5	50	BXD02509IP	TRDR10IP
SMDH170L	0.6500 - 0.6890	16.51mm - 17.50mm	★	20.0	171.5	97.5	121.5	50	BXD02509IP	TRDR10IP
SMDH180L	0.6894 - 0.7283	17.51mm - 18.50mm	★	20.0	176.5	103.5	126.5	50	BXD02509IP	TRDR10IP
SMDH190L	0.7287 - 0.7677	18.51mm - 19.50mm	★	25.0	191.5	108.5	135.5	56	BXD03011IP	TRDR15IP
SMDH200L	0.7681 - 0.8070	19.51mm - 20.50mm	★	25.0	196.5	114.5	140.5	56	BXD03011IP	TRDR15IP
SMDH210L	0.8074 - 0.8465	20.51mm - 21.50mm	★	25.0	196.5	119.5	140.5	56	BXD03011IP	TRDR15IP
SMDH220L	0.8469 - 0.8976	21.51mm - 22.80mm	★	25.0	201.1	125.1	145.4	56	BXD03512IP	TRDR15IP
SMDH230L	0.8980 - 0.9370	22.81mm - 23.80mm	★	25.0	210.6	129.6	154.6	56	BXD03512IP	TRDR15IP
SMDH240L	0.9374 - 0.9764	23.81mm - 24.80mm	★	32.0	220.2	135.2	160.2	60	BXD03512IP	TRDR15IP
SMDH250L	0.9768 - 1.0157	24.81mm - 25.80mm	★	32.0	225	140	165	60	BXD04014IP	TRDR20IP
SMDH260L	1.0161 - 1.0551	25.81mm - 26.80mm	★	32.0	230	146	170	60	BXD04014IP	TRDR20IP
SMDH270L	1.0555 - 1.0945	26.81mm - 27.80mm	★	32.0	235	151	175	60	BXD04014IP	TRDR20IP
SMDH280L	1.0949 - 1.1339	27.81mm - 28.80mm	★	32.0	240	157	180	60	BXD04515IP	TRDR25IP
SMDH290L	1.1343 - 1.1732	28.81mm - 29.80mm	★	32.0	245	162	185	60	BXD04515IP	TRDR25IP
SMDH300L	1.1736 - 1.2125	29.81mm - 30.80mm	★	32.0	255	167	195	60	BXD04515IP	TRDR25IP
SMDH320L	1.2130 - 1.2598	30.81mm - 32.00mm	★	32.0	260	163	200	60	BXD04515IP	TRDR25IP
SMDH335L	1.2602 - 1.3189	32.01 mm - 33.50mm	★	32.0	270	171.5	210	60	BXD04515IP	TRDR25IP
SMDH350L	1.3193 - 1.3780	33.51mm - 35.00mm	★	40.0	290	182	220	70	BX0515	HD040
SMDH365L	1.3783 - 1.4370	35.01mm - 36.50mm	★	40.0	295	187.5	225	70	BX0515	HD040
SMDH380L	1.4374 - 1.4961	36.51mm - 38.00mm	★	40.0	305	195.8	235	70	BX0515	HD040
SMDH395L	1.4965 - 1.5551	38.01mm - 39.50mm	★	40.0	315	206.3	245	70	BX0515	HD040
SMDH410L	1.5555 - 1.6142	39.51mm - 41.00mm	★	40.0	325	209.8	255	70	BX0515	HD040
SMDH425L	1.6146 - 1.6732	41.01mm - 42.50mm	★	40.0	335	220.3	265	70	BX0515	HD040

★ = Worldwide Warehouse item available in 10 business days ● = USA Stocked item Note: Special diameters available upon request

8X DIAMETER SMD

8X Diameter



■ SMD INCH BODIES (8X Diameter)

Catalog Number	Drill Tip Diameter ϕD_c (inch/mm)		Stock	ϕD_s	L	ℓ_1 max depth	ℓ_2	ℓ_3	Screw	Wrench
SMDH055D	0.5315 - 0.5709	13.50mm - 14.50mm	●	0.750	7.480	4.961	5.480	2.000	BXD02208IP	TRDR08IP
SMDH059D	0.5713 - 0.6102	14.51mm - 15.50mm	●	0.750	7.874	5.315	5.874	2.000	BXD02208IP	TRDR08IP
SMDH063D	0.6106 - 0.6496	15.51mm - 16.50mm	●	0.750	8.307	5.630	6.307	2.000	BXD02509IP	TRDR10IP
SMDH067D	0.6500 - 0.6890	16.51mm - 17.50mm	●	0.750	8.701	5.984	6.701	2.000	BXD02509IP	TRDR10IP
SMDH071D	0.6894 - 0.7283	17.51mm - 18.50mm	●	0.750	8.898	6.299	6.898	2.000	BXD02509IP	TRDR10IP
SMDH075D	0.7287 - 0.7677	18.51mm - 19.50mm	●	1.000	9.882	6.654	7.630	2.250	BXD03011IP	TRDR15IP
SMDH079D	0.7681 - 0.8070	19.51mm - 20.50mm	●	1.000	10.276	6.969	8.024	2.250	BXD03011IP	TRDR15IP
SMDH083D	0.8074 - 0.8465	20.51mm - 21.50mm	●	1.000	10.472	7.323	8.220	2.250	BXD03011IP	TRDR15IP
SMDH087D	0.8469 - 0.8976	21.51mm - 22.80mm	●	1.000	10.669	7.638	8.417	2.250	BXD03512IP	TRDR15IP
SMDH091D	0.8980 - 0.9370	22.81mm - 23.80mm	●	1.000	11.024	7.953	8.772	2.250	BXD03512IP	TRDR15IP
SMDH096D	0.9374 - 0.9764	23.81mm - 24.80mm	●	1.000	11.614	8.268	9.362	2.250	BXD03512IP	TRDR15IP
SMDH100D	0.9768 - 1.0157	24.81mm - 25.80mm	●	1.250	11.811	8.622	9.437	2.375	BXD04014IP	TRDR20IP
SMDH104D	1.0161 - 1.0551	25.81mm - 26.80mm	●	1.250	12.205	8.937	9.830	2.375	BXD04014IP	TRDR20IP
SMDH107D	1.0555 - 1.0945	26.81mm - 27.80mm	●	1.250	12.508	9.291	10.133	2.375	BXD04014IP	TRDR20IP
SMDH112D	1.0949 - 1.1339	27.81mm - 28.80mm	●	1.250	12.795	9.606	10.420	2.375	BXD04515IP	TRDR25IP
SMDH115D	1.1343 - 1.1732	28.81mm - 29.80mm	●	1.250	13.189	9.961	10.814	2.375	BXD04515IP	TRDR25IP
SMDH118D	1.1736 - 1.2125	29.81mm - 30.80mm	●	1.250	13.503	10.276	11.128	2.375	BXD04515IP	TRDR25IP

■ SMD METRIC BODIES (8X Diameter)

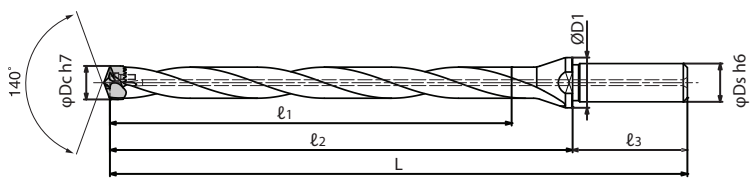
8X Diameter Body No.	Drill Tip Diameter ϕD_c (inch / mm)		Stock	ϕD_s	L	ℓ_1 max depth	ℓ_2	ℓ_3	Screw	Wrench
SMDH140D	0.5315 - 0.5709	13.50mm - 14.50mm	★	16.0	191.5	124.5	143.5	48	BXD02208IP	TRDR08IP
SMDH150D	0.5713 - 0.6102	14.51mm - 15.50mm	★	20.0	201.5	133.5	151.5	50	BXD02208IP	TRDR08IP
SMDH160D	0.6106 - 0.6496	15.51mm - 16.50mm	★	20.0	211.5	141.5	161.5	50	BXD02509IP	TRDR10IP
SMDH170D	0.6500 - 0.6890	16.51mm - 17.50mm	★	20.0	221.5	150.5	171.5	50	BXD02509IP	TRDR10IP
SMDH180D	0.6894 - 0.7283	17.51mm - 18.50mm	★	20.0	226.5	158.5	176.5	50	BXD02509IP	TRDR10IP
SMDH190D	0.7287 - 0.7677	18.51mm - 19.50mm	★	25.0	251.5	167.5	195.5	56	BXD03011IP	TRDR15IP
SMDH200D	0.7681 - 0.8070	19.51mm - 20.50mm	★	25.0	261.5	175.5	205.5	56	BXD03011IP	TRDR15IP
SMDH210D	0.8074 - 0.8465	20.51mm - 21.50mm	★	25.0	266.5	184.5	210.5	56	BXD03011IP	TRDR15IP
SMDH220D	0.8469 - 0.8976	21.51mm - 22.80mm	★	25.0	271.1	192.1	215.1	56	BXD03512IP	TRDR15IP
SMDH230D	0.8980 - 0.9370	22.81mm - 23.80mm	★	25.0	280.6	200.6	224.6	56	BXD03512IP	TRDR15IP
SMDH240D	0.9374 - 0.9764	23.81mm - 24.80mm	★	32.0	295.2	208.2	235.2	60	BXD03512IP	TRDR15IP
SMDH250D	0.9768 - 1.0157	24.81mm - 25.80mm	★	32.0	300	217	240	60	BXD04014IP	TRDR20IP
SMDH260D	1.0161 - 1.0551	25.81mm - 26.80mm	★	32.0	310	225	250	60	BXD04014IP	TRDR20IP
SMDH270D	1.0555 - 1.0945	26.81mm - 27.80mm	★	32.0	320	234	260	60	BXD04014IP	TRDR20IP
SMDH280D	1.0949 - 1.1339	27.81mm - 28.80mm	★	32.0	325	242	265	60	BXD04515IP	TRDR25IP
SMDH290D	1.1343 - 1.1732	28.81mm - 29.80mm	★	32.0	335	251	275	60	BXD04515IP	TRDR25IP
SMDH300D	1.1736 - 1.2125	29.81mm - 30.80mm	★	32.0	345	259	285	60	BXD04515IP	TRDR25IP
SMDH320D	1.2130 - 1.2598	30.81mm - 32.00mm	★	32.0	355	257.9	295	60	BXD04515IP	TRDR25IP
SMDH335D	1.2602 - 1.3189	32.01mm - 33.50mm	★	32.0	370	273.3	310	60	BXD04515IP	TRDR25IP
SMDH350D	1.3193 - 1.3780	33.51mm - 35.00mm	★	40.0	395	287	325	70	BX0515	HD040
SMDH365D	1.3783 - 1.4370	35.01mm - 36.50mm	★	40.0	405	297.3	335	70	BX0515	HD040
SMDH380D	1.4374 - 1.4961	36.51mm - 38.00mm	★	40.0	420	310.8	350	70	BX0515	HD040
SMDH395D	1.4965 - 1.5551	38.01mm - 39.50mm	★	40.0	430	321.3	360	70	BX0515	HD040
SMDH410D	1.5555 - 1.6142	39.51mm - 41.00mm	★	40.0	450	334.8	380	70	BX0515	HD040
SMDH425D	1.6146 - 1.6732	41.01mm - 42.50mm	★	40.0	460	345.3	390	70	BX0515	HD040

★ = Worldwide Warehouse item available in 10 business days

● = USA Stocked item

Note: Special diameters available upon request

12X Diameter SMD



SMD INCH BODIES (12X Diameter)

12X Diameter Body No.	Stock	Drill Tip Diameter φDc (inch / mm)		φDs	φD1	L	ℓ ₁ max depth	ℓ ₂	ℓ ₃	Screw	Wrench
SMDH055-12D	●	0.5315 - 0.5709	13.50 - 14.50	0.750	0.9843	9.480	6.614	7.480	2.000	BXD02208IP	TRDR08IP
SMDH059-12D	●	0.5713 - 0.6102	14.51 - 15.50	0.750	0.9843	9.965	7.087	7.965	2.000	BXD02208IP	TRDR08IP
SMDH063-12D	●	0.6106 - 0.6496	15.51 - 16.50	0.750	0.9843	10.449	7.559	8.449	2.000	BXD02509IP	TRDR10IP
SMDH067-12D	●	0.6500 - 0.6890	16.51 - 17.50	0.750	0.9843	10.937	8.031	8.937	2.000	BXD02509IP	TRDR10IP
SMDH071-12D	●	0.6894 - 0.7283	17.51 - 18.50	0.750	0.9843	11.417	8.504	9.417	2.000	BXD02509IP	TRDR10IP
SMDH075-12D	●	0.7287 - 0.7677	18.51 - 19.50	1.000	1.1811	12.154	8.976	9.904	2.250	BXD03011IP	TRDR15IP
SMDH079-12D	●	0.7681 - 0.8070	19.51 - 20.50	1.000	1.1811	12.634	9.449	10.384	2.250	BXD03011IP	TRDR15IP
SMDH083-12D	●	0.8074 - 0.8465	20.51 - 21.50	1.000	1.1811	13.118	9.921	10.868	2.250	BXD03011IP	TRDR15IP
SMDH087-12D	●	0.8469 - 0.8976	21.51 - 22.80	1.000	1.1811	13.626	10.394	11.376	2.250	BXD03512IP	TRDR15IP
SMDH091-12D	●	0.8980 - 0.9370	22.81 - 23.80	1.000	1.1811	14.165	10.866	11.915	2.250	BXD03512IP	TRDR15IP
SMDH096-12D	●	0.9374 - 0.9764	23.81 - 24.80	1.000	1.1811	14.638	11.339	12.388	2.250	BXD03512IP	TRDR15IP
SMDH100-12D	●	0.9768 - 1.0157	24.81 - 25.80	1.250	1.4567	15.232	11.811	12.857	2.375	BXD04014IP	TRDR20IP

SMD METRIC BODIES (12X Diameter)

12X Diameter Body No.	Stock	Drill Tip Diameter φDc (inch / mm)		φDs	φD1	L	ℓ ₁ max depth	ℓ ₂	ℓ ₃	Screw	Wrench
SMDH140-12D	★	0.5315 - 0.5709	13.50 - 14.50	16	20	236.0	168	185.0	48	BXD02208IP	TRDR08IP
SMDH150-12D	★	0.5713 - 0.6102	14.51 - 15.50	20	25	250.3	180	197.3	50	BXD02208IP	TRDR08IP
SMDH160-12D	★	0.6106 - 0.6496	15.51 - 16.50	20	25	262.6	192	209.6	50	BXD02509IP	TRDR10IP
SMDH170-12D	★	0.6500 - 0.6890	16.51 - 17.50	20	25	275.0	204	222.0	50	BXD02509IP	TRDR10IP
SMDH180-12D	★	0.6894 - 0.7283	17.51 - 18.50	20	25	287.2	216	234.2	50	BXD02509IP	TRDR10IP
SMDH190-12D	★	0.7287 - 0.7677	18.51 - 19.50	25	30	305.6	228	246.6	56	BXD03011IP	TRDR15IP
SMDH200-12D	★	0.7681 - 0.8070	19.51 - 20.50	25	30	317.8	240	258.8	56	BXD03011IP	TRDR15IP
SMDH210-12D	★	0.8074 - 0.8465	20.51 - 21.50	25	30	330.1	252	271.1	56	BXD03011IP	TRDR15IP
SMDH220-12D	★	0.8469 - 0.8976	21.51 - 22.80	25	30	343.0	264	284.0	56	BXD03512IP	TRDR15IP
SMDH230-12D	★	0.8980 - 0.9370	22.81 - 23.80	25	30	354.8	276	295.8	56	BXD03512IP	TRDR15IP
SMDH240-12D	★	0.9374 - 0.9764	23.81 - 24.80	32	37	371.7	288	308.7	60	BXD03512IP	TRDR15IP
SMDH250-12D	★	0.9768 - 1.0157	24.81 - 25.80	32	37	383.8	300	320.8	60	BXD04014IP	TRDR20IP

★ = Worldwide Warehouse item available in 10 business days ● = USA Stocked item Note: Special diameters available upon request

Recommended Drilling Method

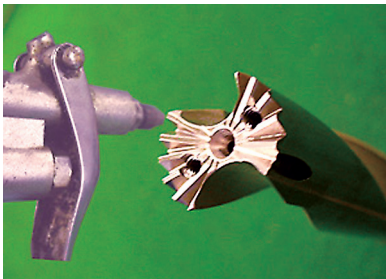
- Make a guide hole using the SMDH-M style (3XD) drill**
 - Use a guide hole SMDH-M (3XD) style drill with the same diameter and chipbreaker as 12XD type
- Feed the 12XD type through the guide hole at low rotation speed
 - Rotation: 500 rpm Feed Rate: 40 - 80 ipm
 - Stop 0.04 in. away from the guide hole depth
- Increase speed until the set conditional speed is reached and start normal drilling
- After drilling, rotation speed is reduced and the drill is retracted from the work material
 - Rotation: 500 rpm Feed Rate: 40 - 80 ipm
 - Change rotation speed to 500 rpm

*Releasing a drill with a higher spindle speed may cause a shoulder damage by a run-out

Recommended Speeds and Feeds - 12XD Speed: v (SFM) / Feed: f (IPR)

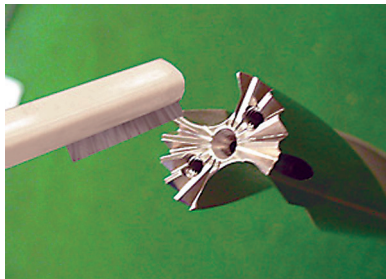
Drill Dia. (Inch)	Soft Steel		General Steel		Hardened Steel		Stainless Steel		Gray Cast Iron		Ductile Cast Iron		Aluminum Alloy	
	Min	Optimum - Max	Min	Optimum - Max	Min	Optimum - Max	Min	Optimum - Max	Min	Optimum - Max	Min	Optimum - Max	Min	Optimum - Max
~0.6299	Vc	160 - 230 - 260	160 - 230 - 260	100 - 160 - 230	130 - 165 - 200	130 - 200 - 260	130 - 160 - 230	590 - 650 - 790						
	f	.0059 - .0078 - .014	.0059 - .0078 - .014	.0039 - .0059 - .0079	.0039 - .0059 - .0079	.0078 - .0098 - .012	.0078 - .0098 - .012	.014 - .018 - .022						
~0.7874	Vc	160 - 230 - 260	160 - 230 - 260	100 - 160 - 230	130 - 200 - 230	160 - 230 - 300	130 - 200 - 260	590 - 650 - 790						
	f	.0059 - .0098 - .014	.0059 - .0098 - .014	.0039 - .0059 - .0098	.0039 - .0059 - .0098	.0079 - .012 - .014	.0079 - .012 - .014	.014 - .019 - .024						
~1.000	Vc	160 - 230 - 260	160 - 230 - 260	100 - 160 - 230	130 - 200 - 300	160 - 230 - 300	130 - 230 - 300	590 - 650 - 790						
	f	.0078 - .012 - .014	.0078 - .012 - .014	.0039 - .0059 - .0098	.0039 - .0059 - .0098	.0079 - .012 - .016	.0098 - .012 - .014	.014 - .019 - .024						

■ CLEANING INSTRUCTIONS



1) Air Pressure

Remove the used head and any debris from the serrated parts of the holder with an air blower.



2) Brushing

Use a wire or nylon brush to remove debris left behind by air blower.

■ ATTACHING INSTRUCTIONS



- 1) Use caution when tightening the head screws. Make sure no excessive rattles.
- 2) Pre-tighten both left/ right screws until it stops lightly
- 3) Hold SMD body and a wrench in straight and tighten screws. Forcing out wrench may cause screw hole breakage.

■ Recommended Tightening Torque

Drill Head Size (in/mm)	Screw	Recommended Tightening Torque (in/lbs.)
.4688 - .6102 12.00 - 15.50	BXD02208IP	6.6 to 8.8
.6103 - .7283 15.51 - 18.50	BXD02509IP	8.2 to 11.0
.7284 - .8464 18.51 - 21.50	BXD03011IP	16.3 to 21.6
.8465 - .9763 21.51 - 24.80	BXD03512IP	24.2 to 32.9
.9764 - 1.0944 24.81 - 27.80	BXD04014IP	36.6 to 48.8
1.0945 - 1.3189 27.81 - 33.50	BXD04515IP	44.0 to 58.7

Caution!

- 1) Please wear safety gloves and glasses
- 2) Please remove SMD from any adaptor when replacing SMDT Tip
- 3) If a new tip is left outside the box for long, it may be contaminated

Serrations may contain some debris. Placing a tip without removing any foreign particles may cause loose screws and possibly lead to tip and body breakage.

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