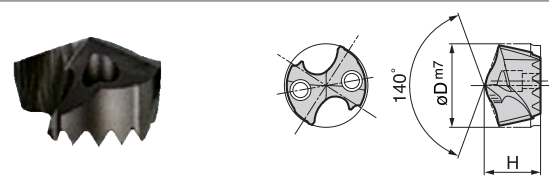


Regrindable Drill Head Insert SMDT... D MTL Type

New

New PVD coated grade: **ACX70**



Drill Head (Insert)

● øD: 12,0~15,3mm

øD (mm)	Cat. No.	Stock	H (mm)
12,0	SMDT 1200 D MTL	●	9,1
12,1	SMDT 1210 D MTL	●	9,1
12,2	SMDT 1220 D MTL	●	9,1
12,3	SMDT 1230 D MTL	●	9,1
12,4	SMDT 1240 D MTL	●	9,1
12,5	SMDT 1250 D MTL	●	9,4
12,6	SMDT 1260 D MTL	●	9,4
12,7	SMDT 1270 D MTL	●	9,4
12,8	SMDT 1280 D MTL	●	9,4
12,9	SMDT 1290 D MTL	●	9,4
13,0	SMDT 1300 D MTL	●	9,7
13,1	SMDT 1310 D MTL	●	9,7
13,2	SMDT 1320 D MTL	●	9,7
13,3	SMDT 1330 D MTL	●	9,7
13,4	SMDT 1340 D MTL	●	9,7
13,5	SMDT 1350 D MTL	●	10,3
13,6	SMDT 1360 D MTL	●	10,3
13,7	SMDT 1370 D MTL	●	10,3
13,8	SMDT 1380 D MTL	●	10,3
13,9	SMDT 1390 D MTL	●	10,3
14,0	SMDT 1400 D MTL	●	10,3
14,1	SMDT 1410 D MTL	●	10,3
14,2	SMDT 1420 D MTL	●	10,3
14,3	SMDT 1430 D MTL	●	10,3
14,4	SMDT 1440 D MTL	●	10,3
14,5	SMDT 1450 D MTL	●	10,3
14,6	SMDT 1460 D MTL	●	10,3
14,7	SMDT 1470 D MTL	●	10,3
14,8	SMDT 1480 D MTL	●	10,3
14,9	SMDT 1490 D MTL	●	10,3
15,0	SMDT 1500 D MTL	●	11,0
15,1	SMDT 1510 D MTL	●	11,0
15,2	SMDT 1520 D MTL	●	11,0
15,3	SMDT 1530 D MTL	●	11,0

● øD: 15,4~18,7mm

øD (mm)	Cat. No.	Stock	H (mm)
15,4	SMDT 1540 D MTL	●	11,0
15,5	SMDT 1550 D MTL	●	11,0
15,6	SMDT 1560 D MTL	●	11,0
15,7	SMDT 1570 D MTL	●	11,0
15,8	SMDT 1580 D MTL	●	11,0
15,9	SMDT 1590 D MTL	●	11,0
16,0	SMDT 1600 D MTL	●	11,6
16,1	SMDT 1610 D MTL	●	11,6
16,2	SMDT 1620 D MTL	●	11,6
16,3	SMDT 1630 D MTL	●	11,6
16,4	SMDT 1640 D MTL	●	11,6
16,5	SMDT 1650 D MTL	●	11,6
16,6	SMDT 1660 D MTL	●	11,6
16,7	SMDT 1670 D MTL	●	11,6
16,8	SMDT 1680 D MTL	●	11,6
16,9	SMDT 1690 D MTL	●	11,6
17,0	SMDT 1700 D MTL	●	12,2
17,1	SMDT 1710 D MTL	●	12,2
17,2	SMDT 1720 D MTL	●	12,2
17,3	SMDT 1730 D MTL	●	12,2
17,4	SMDT 1740 D MTL	●	12,2
17,5	SMDT 1750 D MTL	●	12,2
17,6	SMDT 1760 D MTL	●	12,2
17,7	SMDT 1770 D MTL	●	12,2
17,8	SMDT 1780 D MTL	●	12,2
17,9	SMDT 1790 D MTL	●	12,2
18,0	SMDT 1800 D MTL	●	12,9
18,1	SMDT 1810 D MTL	●	12,9
18,2	SMDT 1820 D MTL	●	12,9
18,3	SMDT 1830 D MTL	●	12,9
18,4	SMDT 1840 D MTL	●	12,9
18,5	SMDT 1850 D MTL	●	12,9
18,6	SMDT 1860 D MTL	●	12,9
18,7	SMDT 1870 D MTL	●	12,9

● øD: 18,8~30,5mm

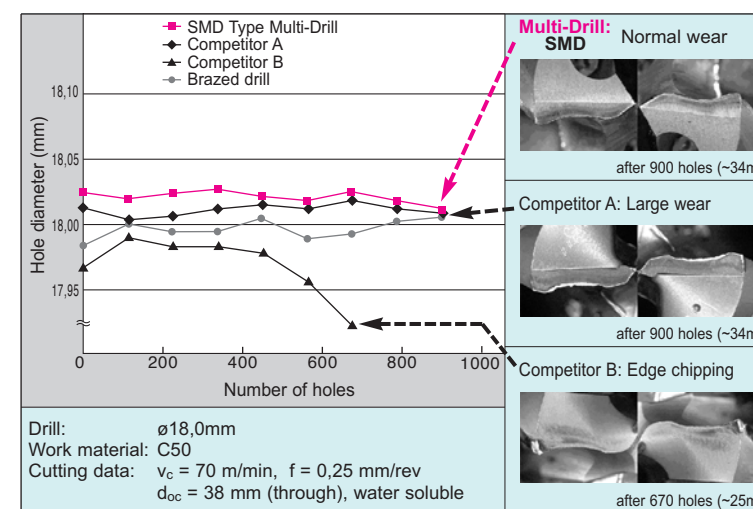
øD (mm)	Cat. No.	Stock	H (mm)
18,8	SMDT 1880 D MTL	●	12,9
18,9	SMDT 1890 D MTL	●	12,9
19,0	SMDT 1900 D MTL	●	13,5
19,1	SMDT 1910 D MTL	●	13,5
19,2	SMDT 1920 D MTL	●	13,5
19,3	SMDT 1930 D MTL	●	13,5
19,4	SMDT 1940 D MTL	●	13,5
19,5	SMDT 1950 D MTL	●	13,5
19,6	SMDT 1960 D MTL	●	13,5
19,7	SMDT 1970 D MTL	●	13,5
19,8	SMDT 1980 D MTL	●	13,5
19,9	SMDT 1990 D MTL	●	13,5
20,0	SMDT 2000 D MTL	●	14,1
20,5	SMDT 2050 D MTL	●	14,1
21,0	SMDT 2100 D MTL	●	14,8
21,5	SMDT 2150 D MTL	●	14,8
22,0	SMDT 2200 D MTL	●	15,0
22,5	SMDT 2250 D MTL	●	15,0
23,0	SMDT 2300 D MTL	●	15,1
23,5	SMDT 2350 D MTL	●	15,1
24,0	SMDT 2400 D MTL	●	15,4
24,5	SMDT 2450 D MTL	●	15,4
25,0	SMDT 2500 D MTL	●	15,8
25,5	SMDT 2550 D MTL	○	15,8
26,0	SMDT 2600 D MTL	○	16,4
26,5	SMDT 2650 D MTL	○	16,4
27,0	SMDT 2700 D MTL	○	17,1
27,5	SMDT 2750 D MTL	○	17,1
28,0	SMDT 2800 D MTL	○	17,7
28,5	SMDT 2850 D MTL	○	17,7
29,0	SMDT 2900 D MTL	○	18,3
29,5	SMDT 2950 D MTL	○	18,3
30,0	SMDT 3000 D MTL	○	19,0
30,5	SMDT 3050 D MTL	○	19,0

● = Euro stock
○ = Delivery on request

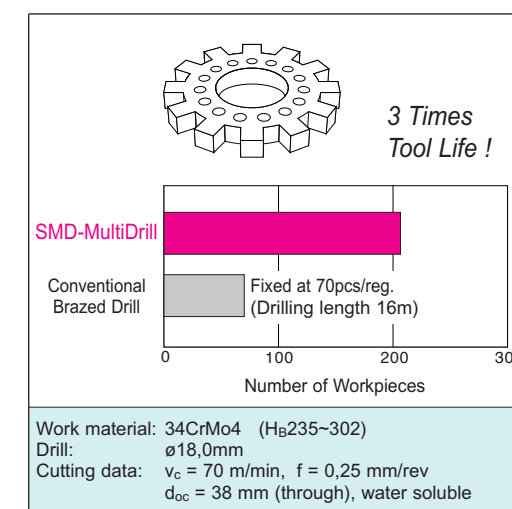
Replaceable Head Type MULTI-DRILLS

Application Example

Drilling Precision



Application Example



Stainless steel machining

Type MTL Cutting length: 20m

Chipping

Work material: X5CrNi1810 (1.4301)
Drill diameter: ø16,5 x 5D
Cutting length: 20m

Type MEL Cutting length: 20m

No chipping

Cutting data: v_c = 60 m/min
f = 0,2 mm/rev, Wet



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Internet: www.sumitomo-hardmetal.co.uk



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Recommended Cutting Conditions

● SMDT..._D MTL Type Insert

Work material	General steel (HB250-320)	Harden steel (HRC45)	Nodular cast iron
~ 16,0	v _c	80 ~ 110 (50 ~ 80)	50 ~ 80 (40 ~ 60)
	f	0,15 ~ 0,3	0,1 ~ 0,2
~ 20,0	v _c	80 ~ 110 (50 ~ 80)	60 ~ 90 (50 ~ 80)
	f	0,15 ~ 0,35	0,15 ~ 0,25
~ 30,5	v _c	80 ~ 130 (60 ~ 90)	60 ~ 90 (50 ~ 70)
	f	0,2 ~ 0,35	0,15 ~ 0,25

[v_c : Cutting Speed (m/min), f : Feed rate (mm/rev), Min ~ Max]

Note () : is the cutting conditions for using 8xD type drills.
Hogh cutting performance is enhanced when using a high quality machine and rigid set up.

Fast and Accurate

Sumitomo Multi-Drills with replaceable and re-grindable heads

Multi-Drill type SMD

PROGRAMME EXPANSION



The newly developed tungsten carbide substrate with its ultra hard smooth coating proved that against competition users can expect to see holes with tolerances similar to that of reaming and tool life almost doubled.

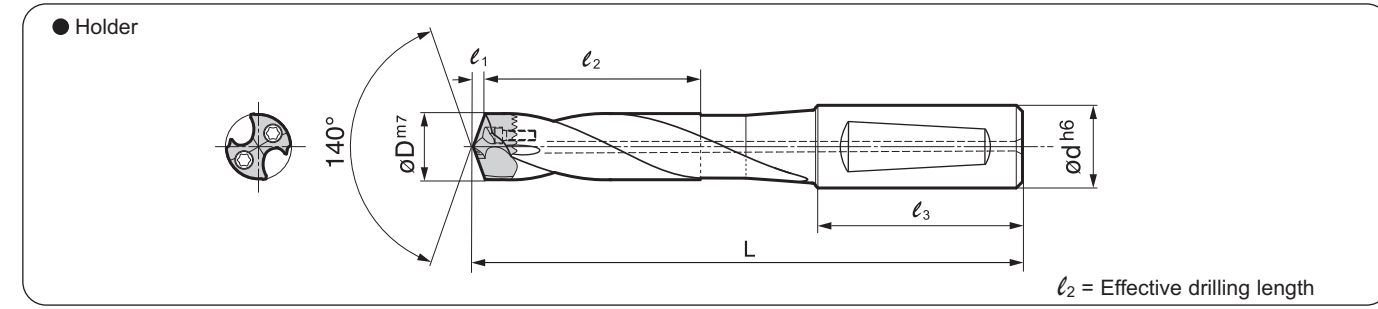
Edge security comes from replaceable drilling heads bolted to fixed radial serrations which provide a rigid and precise clamping platform.

Specially treated toughened steel body to resist wear and rust

Through coolant holes positioned to optimize coolant pressure and direction.



Replaceable Head Type Drill Holder SMDH Type



Dimensions (mm)				Cat. No.	Short Series (3D)		Long Series (5D)			Deep Hole Series (8D)			Applicable Drill Head
Drill Head	Shank				Stock	Dimensions	Stock	Dimensions		Stock	Dimensions		
ϕD	ℓ_1	ϕd	ℓ_3	M3	L	ℓ_2	M5	L	ℓ_2	M8	L	ℓ_2	
12,0	2,2	16	48	SMDH 120	107,2	38,0	SMDH 125	132,2	63,0	-	-	-	SMDT 1200-1249 MOL
12,5	2,3	16	48	SMDH 125	107,3	37,8	SMDH 130	132,3	62,8	-	-	-	SMDT 1250-1299 MOL
13,0	2,4	16	48	SMDH 130	112,4	40,5	SMDH 140	142,4	67,5	-	-	-	SMDT 1300-1349 MOL
14,0	2,5	16	48	SMDH 140	119,0	45,5	SMDH 150	149,0	74,5	194,0	117,5	-	SMDT 1350-1450 MOL
15,0	2,7	20	50	SMDH 150	129,2	48,0	SMDH 160	159,2	79,0	204,2	126,0	-	SMDT 1451-1550 MOL
16,0	2,9	20	50	SMDH 160	134,4	51,5	SMDH 170	169,4	84,5	214,4	133,5	-	SMDT 1551-1650 MOL
17,0	3,1	20	50	SMDH 170	139,6	54,0	SMDH 180	174,6	89,0	224,6	142,0	-	SMDT 1651-1750 MOL
18,0	3,3	25	56	SMDH 180	144,8	57,5	SMDH 190	179,8	94,5	229,8	149,5	-	SMDT 1751-1850 MOL
19,0	3,5	25	56	SMDH 190	160,1	60,0	SMDH 200	195,0	99,0	255,0	158,0	-	SMDT 1851-1950 MOL
20,0	3,6	25	56	SMDH 200	160,1	63,5	SMDH 210	200,1	104,5	265,1	165,5	-	SMDT 1951-2050 MOL
21,0	3,8	25	56	SMDH 210	160,3	66,0	SMDH 220	200,3	109,0	270,3	174,0	-	SMDT 2051-2150 MOL
22,0	4,0	32	60	SMDH 220	165,1	69,1	SMDH 230	205,1	114,1	275,1	181,1	-	SMDT 2151-2280 MOL
23,0	4,2	32	60	SMDH 230	164,8	71,0	SMDH 240	214,8	118,1	284,8	189,1	-	SMDT 2281-2380 MOL
24,0	4,4	32	60	SMDH 240	174,6	74,2	SMDH 250	224,6	123,2	299,6	196,2	-	SMDT 2381-2480 MOL
25,0	4,6	32	60	SMDH 250	174,6	75,5	SMDH 260	229,6	127,5	304,6	204,5	-	SMDT 2481-2580 MOL
26,0	4,7	32	60	SMDH 260	179,7	79,0	SMDH 270	234,7	133,0	314,7	212,0	-	SMDT 2581-2680 MOL
27,0	4,9	32	60	SMDH 270	179,9	80,5	SMDH 280	239,9	137,5	324,9	220,5	-	SMDT 2681-2780 MOL
28,0	5,1	32	60	SMDH 280	185,1	83,0	SMDH 290	245,1	143,0	330,1	228,0	-	SMDT 2781-2880 MOL
29,0	5,3	32	60	SMDH 290	190,3	85,5	SMDH 300	250,3	147,5	340,3	236,5	-	SMDT 2881-2980 MOL
30,0	5,5	32	60	SMDH 300	190,5	89,0	-	260,5	152,0	350,5	244,0	-	SMDT 2981-3080 MOL

● = Euro stock
○ = Delivery on request

- Advantages**
- Available in diameters ranging from 12,0~30,5mm
 - Drilling Depths to 8 x Diameter
 - Optimised heat dissipation via precisely located coolant holes
 - Maximised rigidity from newly developed clamping system
 - High performance drilling of precision holes from solid
 - 2 different type of head for general and smooth cutting

Recommended Torque

Screw	Torque (N·m)	Applicable Insert
BXD 02208 IP	0,8 ~ 1,0	SMDT 1200 ~ 1550 M□
BXD 02509 IP	0,9 ~ 1,2	SMDT 1551 ~ 1850 M□
BXD 03011 IP	1,8 ~ 2,4	SMDT 1851 ~ 2150 M□
BXD 03512 IP	2,8 ~ 3,7	SMDT 2151 ~ 2480 M□
BXD 04014 IP	4,1 ~ 5,5	SMDT 2481 ~ 2780 M□
BXD 04515 IP	5,0 ~ 6,6	SMDT 2781 ~ 3050 M□

Spare Parts

Screw	Wrench	Applicable Holder
BXD 02208 IP	TRDR 08 IP	SMDH 120 ~ 150 M□
BXD 02509 IP	TRDR 10 IP	SMDH 160 ~ 180 M□
BXD 03011 IP	TRDR 15 IP	SMDH 190 ~ 210 M□
BXD 03512 IP	TRDR 15 IP	SMDH 220 ~ 240 M□
BXD 04014 IP	TRDR 20 IP	SMDH 250 ~ 270 M□
BXD 04515 IP	TRDR 25 IP	SMDH 280 ~ 300 M□



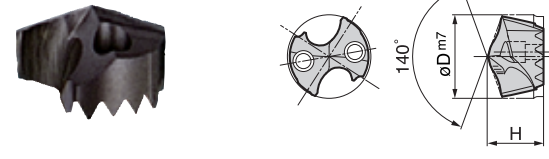
Regrindable Drill Head Insert SMDT... D MEL Type

MEL Type for Smooth Cutting

(Soft Steel, Stainless Steel, Grey Cast Iron)



New PVD coated grade: ACX80



Drill Head (Insert)

● ϕD : 12,0~15,3mm

● ϕD : 15,4~18,7mm

● ϕD : 18,8~30,5mm

ϕD (mm)	Cat. No.	Stock	H (mm)	ϕD (mm)	Cat. No.	Stock	H (mm)	ϕD (mm)	Cat. No.	Stock	H (mm)
12,0	SMDT 1200 D MEL	●	9,1	15,4	SMDT 1540 D MEL	●	11,0	18,8	SMDT 1880 D MEL	●	12,9
12,1	SMDT 1210 D MEL	●	9,1	15,5	SMDT 1550 D MEL	●	11,0	18,9	SMDT 1890 D MEL	●	12,9
12,2	SMDT 1220 D MEL	●	9,1	15,6	SMDT 1560 D MEL	●	11,0	19,0	SMDT 1900 D MEL	●	13,5
12,3	SMDT 1230 D MEL	●	9,1	15,7	SMDT 1570 D MEL	●	11,0	19,1	SMDT 1910 D MEL	●	13,5
12,4	SMDT 1240 D MEL	●	9,1	15,8	SMDT 1580 D MEL	●	11,0	19,2	SMDT 1920 D MEL	●	13,5
12,5	SMDT 1250 D MEL	●	9,4	15,9	SMDT 1590 D MEL	●	11,0	19,3	SMDT 1930 D MEL	●	13,5
12,6	SMDT 1260 D MEL	●	9,4	16,0	SMDT 1600 D MEL	●	11,6	19,4	SMDT 1940 D MEL	●	13,5
12,7	SMDT 1270 D MEL	●	9,4	16,1	SMDT 1610 D MEL	●	11,6	19,5	SMDT 1950 D MEL	●	13,5
12,8	SMDT 1280 D MEL	●	9,4	16,2	SMDT 1620 D MEL	●	11,6	19,6	SMDT 1960 D MEL	●	13,5
12,9	SMDT 1290 D MEL	●	9,4	16,3	SMDT 1630 D MEL	●	11,6	19,7	SMDT 1970 D MEL	●	13,5
13,0	SMDT 1300 D MEL	●	9,7	16,4	SMDT 1640 D MEL	●	11,6	19,8	SMDT 1980 D MEL	●	13,5
13,1	SMDT 1310 D MEL	●	9,7	16,5	SMDT 1650 D MEL	●	11,6	19,9	SMDT 1990 D MEL	●	13,5
13,2	SMDT 1320 D MEL	●	9,7	16,6	SMDT 1660 D MEL	●	11,6	20,0	SMDT 2000 D MEL	●	14,1
13,3	SMDT 1330 D MEL	●	9,7	16,7	SMDT 1670 D MEL	●	11,6	20,5	SMDT 2050 D MEL	●	14,1
13,4	SMDT 1340 D MEL	●	9,7	16,8	SMDT 1680 D MEL	●	11,6	21,0	SMDT 2100 D MEL	●	14,8
13,5	SMDT 1350 D MEL	●	10,3	16,9	SMDT 1690 D MEL	●	11,6	21,5	SMDT 2150 D MEL	●	14,8
13,6	SMDT 1360 D MEL	●	10,3	17,0	SMDT 1700 D MEL	●	12,2	22,0	SMDT 2200 D MEL	●	15,0
13,7	SMDT 1370 D MEL	●	10,3	17,1	SMDT 1710 D MEL	●	12,2	22,5	SMDT 2250 D MEL	●	15,0
13,8	SMDT 1380 D MEL	●	10,3	17,2	SMDT 1720 D MEL	●	12,2	23,0	SMDT 2300 D MEL	●	15,1
13,9	SMDT 1390 D MEL	●	10,3	17,3	SMDT 1730 D MEL	●	12,2	23,5	SMDT 2350 D MEL	●	15,1
14,0	SMDT 1400 D MEL	●	10,3	17,4	SMDT 1740 D MEL	●	12,2	24,0	SMDT 2400 D MEL	●	15,4
14,1	SMDT 1410 D MEL	●	10,3	17,5	SMDT 1750 D MEL	●	12,2	24,5	SMDT 2450 D MEL	●	15,4
14,2	SMDT 1420 D MEL	●	10,3	17,6	SMDT 1760 D MEL	●	12,2	25,0	SMDT 2500 D MEL	●	15,8
14,3	SMDT 1430 D MEL	●	10,3	17,7	SMDT 1770 D MEL	●	12,2	25,5	SMDT 2550 D MEL	○	15,8
14,4	SMDT 1440 D MEL	●	10,3	17,8	SMDT 1780 D MEL	●	12,2	26,0	SMDT 2600 D MEL	○	16,4
14,5	SMDT 1450 D MEL	●	10,3	17,9	SMDT 1790 D MEL	●	12,2	26,5	SMDT 2650 D MEL	○	16,4
14,6	SMDT 1460 D MEL	●	10,3	18,0	SMDT 1800 D MEL	●	12,9	27,0	SMDT 2700 D MEL	○	17,1
14,7	SMDT 1470 D MEL	●	10,3	18,1	SMDT 1810 D MEL	●	12,9	27,5	SMDT 2750 D MEL	○	17,1
14,8	SMDT 1480 D MEL	●	10,3	18,2	SMDT 1820 D MEL	●	12,9	28,0	SMDT 2800 D MEL	○	17,7
14,9	SMDT 1490 D MEL	●	10,3	18,3	SMDT 1830 D MEL	●	12,9	28,5	SMDT 2850 D MEL	○	17,7
15,0	SMDT 1500 D MEL	●	11,0	18,4	SMDT 1840 D MEL	●	12,9	29,0	SMDT 2900 D MEL	○	18,3
15,1	SMDT 1510 D MEL	●	11,0	18,5	SMDT 1850 D MEL	●	12,9	29,5	SMDT 2950 D MEL	○	18,3
15,2	SMDT 1520 D MEL	●	11,0	18,6	SMDT 1860 D MEL	●	12,9	30,0	SMDT 3000 D MEL	○	19,0
15,3	SMDT 1530 D MEL	●	11,0	18,7	SMDT 1870 D MEL	●	12,9	30,5	SMDT 3050 D MEL	○	19,0

● = Euro stock
○ = Delivery on request

Recommended Cutting Conditions

● SMDT... D MEL Type Insert

Work material	Soft steel (~HB250)	Stainless steel (~HB200)	Grey cast iron
~ 16,0	v_c	80 ~ 120 (50 ~ 80)	50 ~ 80 (40 ~ 70)
	f	0,15 ~ 0,3	0,1 ~ 0,2 (0,2 ~ 0,3)
~ 20,0	v_c	80 ~ 120 (50 ~ 80)	60 ~ 90 (50 ~ 80)
	f	0,15 ~ 0,35	0,15 ~ 0,25 (0,2 ~ 0,35)
~ 30,5	v_c	80 ~ 130 (60 ~ 90)	60 ~ 90 (70 ~ 100)
	f	0,2 ~ 0,4	0,15 ~ 0,25 (0,2 ~ 0,45)

Note () : is the cutting conditions for using 8xD type drills. Cutting performance is maximum enhanced when using a high quality machine and rigid set up.

[v_c : Cutting Speed (m/min), f : Feed rate (mm/rev), Min ~ Max]

Regrindable Drill Head Insert SMDT... MEL Type

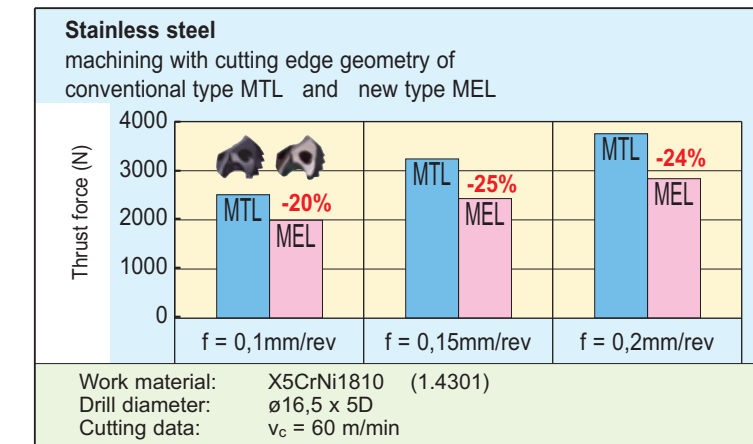
Advantages

- Replaceable and regrindable drill head
- New design decreases cutting force by 25%
- Ideal for stainless steels - soft steels etc
- Excellent tool life when drilling cast iron
- Improves drilling performance on low powered machines
- Increases productivity



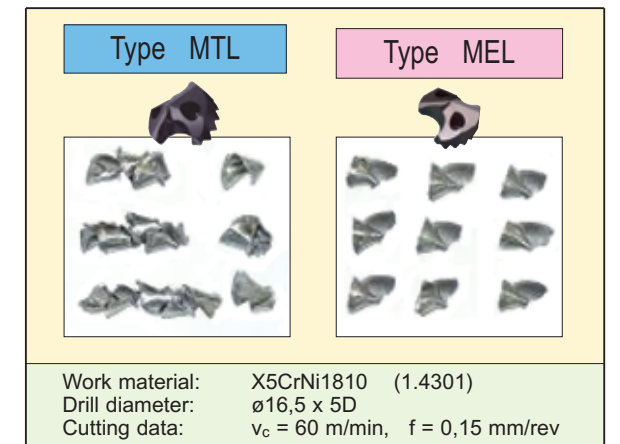
Performance (Stainless steel machining)

● Comparison of cutting force



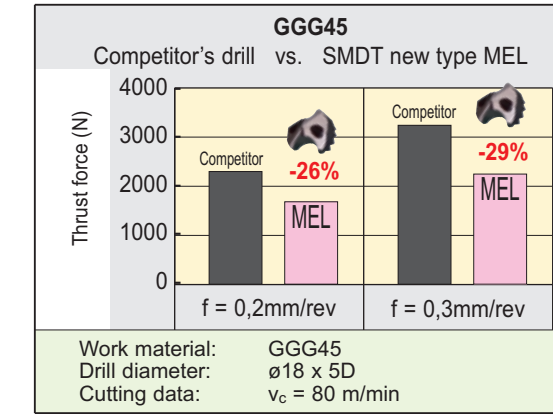
Work material: X5CrNi1810 (1.4301)
Drill diameter: $\phi 16,5 \times 5D$
Cutting data: $v_c = 60$ m/min

● Chip comparison



Performance (Cast iron machining)

● Comparison of cutting force



Work material: GGG45
Drill diameter: $\phi 18 \times 5D$
Cutting data: $v_c = 80$ m/min

● Comparison of wear resistance

