



COUNTERDEX SOLID DRILLING TOOLS

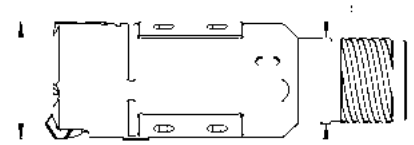
Diameter Range 35.00 (1.378") – 216.00 mm (8.503")



CounterDex Drill Heads

Diameter Range 35,00 mm – 216,00 mm (1.378 in – 8.503 in)

Drill Head Part Numbering Code Example: Metric: CDM#####M407 Imperial: CD#####M407



CD		M1000		M		4		19	
CounterDex Prefix		Bore Size		Connection Type		Thread Starts		Connection Size	
Description	Code	Description	Code	Description	Code	Description	Code	Description	Code
CounterDex	CD	Size in Metric (###.## mm)	M#####	Male / External	M	Four-Start	4	range()	19
		Size in Imperial ##.### in	#####	Female / Internal	F	Single-Start	1		

Drill Ø	Item Code	Drill Tube	Dimensions			
			'D'	Tube OD	L	'd'
35.00 - 37.99 mm	CDM#####M407	07	30 mm	145 mm	28 mm	1.5 mm
1.378 - 1.495 in	CD#####M407		1.181 in	5.71 in	1.102 in	0.059 in
38.00 - 42.99 mm	CDM#####M408	08	33 mm	155 mm	30 mm	1.5 mm
1.496 - 1.692 in	CD#####M408		1.299 in	6.10 in	1.181 in	0.059 in
43.00 - 44.99 mm	CDM#####M409	09	36 mm	155 mm	33 mm	2.0 mm
1.693 - 1.771 in	CD#####M409		1.417 in	6.10 in	1.299 in	0.079 in
45.00 - 47.00 mm	CDM#####M409	09	39 mm	165 mm	33 mm	2.0 mm
1.772 - 1.850 in	CD#####M409		1.535 in	6.50 in	1.299 in	0.079 in
47.01 - 49.99 mm	CDM#####M410	10	39 mm	165 mm	36 mm	2.0 mm
1.851 - 1.968 in	CD#####M410		1.535 in	6.50 in	1.417 in	0.079 in
50.00 - 51.70 mm	CDM#####M410	10	39 mm	175 mm	36 mm	2.0 mm
1.969 - 2.035 in	CD#####M410		1.535 in	6.89 in	1.417 in	0.079 in
51.71 - 56.2 mm	CDM#####M410	10	39 mm	175 mm	36 mm	2.0 mm
2.036 - 2.212 in	CD#####M410		1.535 in	6.89 in	1.417 in	0.079 in
56.21 - 56.99 mm	CDM#####M411	11	43 mm	175 mm	39 mm	2.0 mm
2.213 - 2.243 in	CD#####M411		1.692 in	6.89 in	1.535 in	0.079 in
57.0 - 60.99 mm	CDM#####M411	11	43 mm	180 mm	39 mm	2.0 mm
2.244 - 2.401 in	CD#####M411		1.692 in	7.09 in	1.535 in	0.079 in
61.00 - 65.00 mm	CDM#####M412	12	47 mm	185 mm	43 mm	2.0 mm
2.402 - 2.559 in	CD#####M412		2.755 in	7.28 in	1.692 in	0.079 in
65.01 - 68.99 mm	CDM#####M412	12	47 mm	210 mm	43 mm	2.0 mm
2.560 - 2.716 in	CD#####M412		2.755 in	8.27 in	1.692 in	0.079 in
69.00 - 69.99 mm	CDM#####M413	13	51 mm	210 mm	47 mm	2.0 mm
2.717 - 2.755 in	CD#####M413		2.008 in	8.27 in	2.755 in	0.079 in
70.00 - 74.99 mm	CDM#####M413	13	51 mm	230 mm	47 mm	2.0 mm
2.756 - 2.952 in	CD#####M413		2.008 in	9.06 in	2.755 in	0.079 in
75.00 - 80.99 mm	CDM#####M414	14	56 mm	260 mm	52 mm	5.0 mm
2.953 - 3.188 in	CD#####M414		2.204 in	10.24 in	2.047 in	0.197 in
81.00 - 89.99 mm	CDM#####M415	15	62 mm	270 mm	58 mm	5.0 mm
3.189 - 3.542 in	CD#####M415		2.440 in	10.63 in	2.283 in	0.197 in
90.00 - 98.99 mm	CDM#####M416	16	68 mm	275 mm	63 mm	8.0 mm
3.543 - 3.897 in	CD#####M416		2.677 in	10.83 in	2.480 in	0.315 in
99.00 - 99.99 mm	CDM#####M417	17	75 mm	295 mm	70 mm	8.0 mm
3.898 - 3.936 in	CD#####M417		2.952 in	11.61 in	2.755 in	0.315 in
100.00 - 106.99 mm	CDM#####M417	17	75 mm	335 mm	70 mm	8.0 mm
3.937 - 4.212 in	CD#####M417		2.952 in	13.19 in	2.755 in	0.315 in
107.00 - 119.99 mm	CDM#####M418	18	82 mm	335 mm	77 mm	8.0 mm
4.213 - 4.724 in	CD#####M418		3.228 in	13.19 in	3.031 in	0.315 in

Sunnen's CounterDex deep hole drilling heads, inserts, cartridges and pads are a direct replacement for Sandvik's CoroDrill® 818 series of tools.

CounterDex Drill Heads

Diameter Range 35,00 mm – 216,00 mm (1.378 in – 8.503 in)

Drill Ø	Item Code	Drill Tube	Dimensions			
'D'			Tube OD	L	'd'	Radial Adjustment
120.00 - 129.99 mm	CDM#####M419	19	94 mm	335 mm	89 mm	8.0 mm
4.725 - 5.117 in	CD#####M419		3.700 in	13.19 in	3.503 in	0.315 in
130.00 - 131.99 mm	CDM#####M419	19	94 mm	360 mm	89 mm	8.0 mm
5.118 - 5.196 in	CD#####M419		3.700 in	14.17 in	3.503 in	0.315 in
132.00 - 143.99 mm	CDM#####M420	20	106 mm	380 mm	101 mm	8.0 mm
5.197 - 5.668 in	CD#####M420		4.173 in	14.96 in	3.976 in	0.315 in
144.00 - 155.99 mm	CDM#####M421	21	118 mm	380 mm	113 mm	8.0 mm
5.669 - 6.141 in	CD#####M421		4.645 in	14.96 in	4.448 in	0.315 in
156.00 - 159.99 mm	CDM#####M422	22	130 mm	380 mm	125 mm	8.0 mm
6.142 - 6.298 in	CD#####M422		5.118 in	14.96 in	4.921 in	0.315 in
160.00 - 167.99 mm	CDM#####M422	22	130 mm	405 mm	125 mm	8.0 mm
6.299 - 6.613 in	CD#####M422		5.118 in	15.94 in	4.921 in	0.315 in
168.00 - 179.99 mm	CDM#####M423	23	142 mm	425 mm	137 mm	8.0 mm
6.614 - 7.086 in	CD#####M423		5.590 in	16.73 in	5.393 in	0.315 in
180.00 - 191.99 mm	CDM#####M424	24	154 mm	425 mm	149 mm	8.0 mm
7.087 - 7.558 in	CD#####M424		6.063 in	16.73 in	5.866 in	0.315 in
192.00 - 199.99 mm	CDM#####M425	25	166 mm	420 mm	161 mm	8.0 mm
7.559 - 7.873 in	CD#####M425		6.535 in	16.54 in	6.338 in	0.315 in
200.00 - 203.99 mm	CDM#####M425	25	166 mm	480 mm	161 mm	8.0 mm
7.874 - 8.031 in	CD#####M425		6.535 in	18.90 in	6.338 in	0.315 in
204.00 - 216.00 mm	CDM#####M426	26	178 mm	495 mm	173 mm	8.0 mm
8.032 - 8.503 in	CD#####M426		7.007 in	19.49 in	6.811 in	0.315 in

Sunnen's CounterDex deep hole drilling heads, inserts, cartridges and pads are a direct replacement for Sandvik's CoroDrill® 818 series of tools.

CounterDex Component Range Chart

Drill Ø	Peripheral	Support Pad		Pad Shoe		Safety Pad		Sub Guide		Seat Protection		Blank Fiber		
'D'	Cartridge	Qty	Pad	Qty	Shoe	Qty	Pad	Qty	Pad	Qty	Seat	Qty	Pad	Qty
35.00 - 37.99 mm 1.378 - 1.495 in	CTCDT16RP	1	GPB1235D0350	2	-	-	SPS121567	2	-	-	-	-	BFP1245	3
38.00 - 42.99 mm 1.496 - 1.692 in	CTCDT16RP	1	GPB1235D0350	2	-	-	SPS121567	2	-	-	-	-	BFP135455	3
43.00 - 44.99 mm 1.693 - 1.771 in	CTCDT16RP	1	GPB1235D0400	2	-	-	SPS121567	2	-	-	-	-	BFP135455	3
45.00 - 47.00 mm 1.772 - 1.850 in	CTCDT16RP	1	GPB1235D0450	2	-	-	SPS121567	2	-	-	-	-	BFP1550	3
47.01 - 49.99 mm 1.851 - 1.968 in	CTCDT16RP	1	GPB1235D0450	2	-	-	SPS121567	2	-	-	-	-	BFP1550	3
50.00 - 51.70 mm 1.969 - 2.035 in	CTCDT16RP	1	GPB1235D0500	2	-	-	SPS121567	2	-	-	-	-	BFP1550	3
51.71 - 56.2 mm 2.036 - 2.212 in	CTCDT16RP	1	GPB1235D0500	2	-	-	SPS121567	2	SPF142067	1	-	-	BFP1550	3
56.21 - 56.99 mm 2.213 - 2.243 in	CTCDT16RP	1	GPB1235D0550	2	-	-	SPS121567	2	SPF142067	1	-	-	BFP1550	3
57.0 - 60.99 mm 2.244 - 2.401 in	CTCDT16RP	1	GPB1235D0550	2	-	-	SPS121567	2	SPF142067	1	-	-	BFP1550	3
61.00 - 65.00 mm 2.402 - 2.559 in	CTCDT16RP	1	GPB1235D0600	2	-	-	SPS121567	2	SPF142067	1	-	-	BFP1550	3
65.01 - 68.99 mm 2.560 - 2.716 in	CTCDT25RP	1	GPB1435D0650	2	-	-	SPS142067	2	SPF142067	1	SPP01	1	BFP1550	3
69.00 - 69.99 mm 2.717 - 2.755 in	CTCDT25RP	1	GPB1435D0650	2	-	-	SPS142067	2	SPF142067	1	SPP01	1	BFP1550	3
70.00 - 74.99 mm 2.756 - 2.952 in	CTCDT25RP	1	GPB1435D0700	2	-	-	SPS142067	2	SPF142067	1	SPP02	1	BFP2070	3
75.00 - 80.99 mm 2.953 - 3.188 in	CTCDT25RP	1	GPB1435D0750	2	SHO1435	2	-	-	SPF142067	1	SPP03	1	BFP2070	3
81.00 - 89.99 mm 3.189 - 3.542 in	CTCDT25RP	1	GPB1435D0800	2	SHO1435	2	-	-	SPF142067	1	SPP04	1	BFP3080	3
90.00 - 98.99 mm 3.543 - 3.897 in	CTCDT40RP	1	GPB1435D0900	2	SHO1435	2	-	-	SPF142067	1	SPP04	1	BFP3080	3
99.00 - 99.99 mm 3.898 - 3.936 in	CTCDT40RP	1	GPB1435D0950	2	SHO1435	2	-	-	SPF142067	1	SPP04	1	BFP3080	3
100.00 - 106.99 mm 3.937 - 4.212 in	CTCDT40RP	1	GPB2050D1000	2	SHO2050	2	-	-	SPF142067	1	SPP04	1	BFP35100	3
107.00 - 119.99 mm 4.213 - 4.724 in	CTCDT40RP	1	GPB2050D1100	2	SHO2050	2	-	-	SPF202582	1	SPP04	1	BFP35100	3
120.00 - 129.99 mm 4.725 - 5.117 in	CTCDT40RP	1	GPB2050D1200	2	SHO2050	2	-	-	SPF202582	1	SPP05	1	BFP35100	3
130.00 - 131.99 mm 5.118 - 5.196 in	CTCDT40RP	1	GPB2050D1300	2	SHO2050	2	-	-	SPF202582	1	SPP05	1	BFP35100	3

CounterDex Component Range Chart

Drill Ø	Peripheral	Support Pad		Pad Shoe		Safety Pad		Sub Guide		Seat Protection		Blank Fiber		
'D'	Cartridge	Qty	Pad	Qty	Shoe	Qty	Pad	Qty	Pad	Qty	Seat	Qty	Pad	Qty
132.00 - 143.99 mm 5.197 - 5.668 in	CTCDT40RP	1	GPB2050D1300	2	SHO2050	2	-	-	SPF202582	1	SPP05	1	BFP40120	3
144.00 - 155.99 mm 5.669 - 6.141 in														
156.00 - 159.99 mm 6.142 - 6.298 in	CTCDT40RP	1	GPB2050D1500	2	SHO2050	2	-	-	SPF202582	1	SPP05	1	BFP40120	3
160.00 - 167.99 mm 6.299 - 6.613 in														
168.00 - 179.99 mm 6.614 - 7.086 in	CTCDT40RP	1	GPB2050D1600	2	SHO2050	2	-	-	SPF202582	1	SPP06	1	BFP50140	3
180.00 - 191.99 mm 7.087 - 7.558 in														
192.00 - 199.99 mm 7.559 - 7.873 in	CTCDT40RP	1	GPB2050D1800	2	SHO2050	2	-	-	SPF202582	1	SPP06	1	BFP50140	3
200.00 - 203.99 mm 7.874 - 8.031 in														
204.00 - 216.00 mm 8.032 - 8.503 in	CTCDT40RP	1	GPB2050D2000	2	SHO2050	2	-	-	SPF202582	1	SPP07	1	BFP60150	3

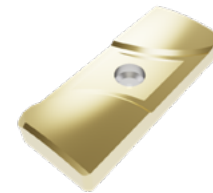
CounterDex Spare Parts

Peripheral Cartridge				
Cartridge	Cartridge Screw	Insert	Insert Screw	Shim Set
CTCDT16RP R818-1016B-TXN16	PHSM1308 3212 010-310	BTCDT16P TXN 160408	PHSM1208 5513 020-02	SHM1031
CTCDT25RP R818-2024S-TXN-25	PHSM1309 3212 010-412	BTCDT25P TXN 250408	PHSM1294 5513 020-55	SHM2052
CTCDT40RP R818-2532-TXN-40	PHSM1310 3212 010-464	BTCDT40P TXN 400708	PHSM1218 5513 020-14	SHM2558

Support Pad			
Solid Pad	Brazed Pad	Pad Screw	Shim Set
-	GPB1235D0350 430.32-10D35.0	PHSM1158 5513 020-01	SHM1235
-	GPB1235D0400 430.32-10D40.0	PHSM1158 5513 020-01	
-	GPB1235D0450 430.32-10D45.0	PHSM1158 5513 020-01	
-	GPB1235D0500 430.32-10D50.0	PHSM1158 5513 020-01	
-	GPB1235D0550 430.32-10D55.0	PHSM1158 5513 020-01	
-	GPB1235D0600 430.32-10D60.0	PHSM1158 5513 020-01	
GPS1435D0650 800-14 D065	GPB1435D0650 430.32-12D65.0	PHSM1158 5513 020-01	SHM1435
-	GPB1435D0700 430.32-12D70.0	PHSM1158 5513 020-01	
GPS1435D0750 800-16 D075	GPB1435D0750 430.32-12D75.0	PHSM1158 5513 020-01	
-	GPB1435D0800 430.32-12D80.0	PHSM1158 5513 020-01	
GPS1435D0850 800-18 D085	-	PHSM1158 5513 020-01	
-	GPB1435D0900 430.32-12D90.0	PHSM1158 5513 020-01	
GPS2050D1000 800-20 D100	GPB2050D1000 430.32-16D100.0	PHSM1160 5513 020-26	SHM2050
GPS2050D1100 800-22 D110	GPB2050D1100 430.32-16D110.0	PHSM1160 5513 020-26	
GPS2050D1200 800-24 D120	GPB2050D1200 430.32-16D120.0	PHSM1160 5513 020-26	
GPS2050D1300 800-26 D130	GPB2050D1300 430.32-16D130.0	PHSM1160 5513 020-26	
-	GPB2050D1400 430.32-16D140.0	PHSM1160 5513 020-26	
-	GPB2050D1500 430.32-16 D150.0	PHSM1160 5513 020-26	
-	GPB2050D1600 430.32-16 D160.0	PHSM1160 5513 020-26	
-	GPB2050D1700 430.32-16 D170.0	PHSM1160 5513 020-26	
-	GPB2050D1800 430.32-16 D180.0	PHSM1160 5513 020-26	

Safety Pad		
Pad	Pad Screw	Shim Set
SPS121567 -	PHSM1158 5513 020-01	SHM1215 -
SPS142067 801-142067-S	PHSM1158 5513 020-01	SSHM1420 -
SPS202582 801-202582-S	PHSM1160 5513 020-26	SHM2025 -

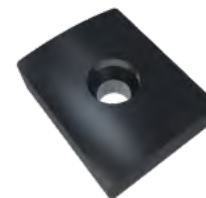
Sub Guide Pad		
Pad	Pad Screw	Shim Set
SPF142067 801-142067-F	PHSM1158 5513 020-01	SHM1420
SPF202582 801-202582-F	PHSM1160 5513 020-26	SHM2025



Solid Carbide
Support and Safety Pad



Brazed Carbide
Support Pad



Sub Guide Pad

Sandvik Coromant part number shown in Red

CounterDex Spare Parts

Fiber Pad			
Pad	Pad Screw	Pad Washer	Shim
BFP06535 5571 001-01	PHSM669 3212 010-105	PHWM607 3411 010-022	SHM06535100 5549 126-51
BFP0840 5571 001-02	PHSM1301 3212 010-155	PHWM608 3411 010-027	SHM0840100 5549 126-52
BFP1040 5571 001-03	PHSM1301 3212 010-155	PHWM608 3411 010-027	SHM1040100 5549 126-53
BFP1245 5571 001-04	PHSM1081 3212 010-206	PHWM609 3411 010-032	SHM1245100 5549 126-54
BFP13545 5571 001-05	PHSM1081 3212 010-206	PHWM609 3411 010-032	SHM13545100 5549 126-55
BFP1550 5571 001-06	PHSM520 3212 010-257	PHWM610 3411 010-043	SHM1550100 5549 126-56
BFP2070 5571 001-07	PHSM401 3212 010-308	PHWM611 3411 010-053	SHM2070100 5549 126-57
BFP3080 5571 001-08	PHSM1179 3212 010-399	PHWM612 3411 010-064	SHM3080100 5549 126-58
BFP35100 5571 001-09	PHSM1179 3212 010-399	PHWM612 3411 010-064	SHM35100100 5549 126-59
BFP40120 5571 001-10	PHSM959 3212 010-409	PHWM613 3411 010-084	SHM40120100 5549 126-60
BFP50140 5571 001-11	PHSM447 3212 010-460	PHWM614 3411 010-105	SHM50140100 5549 126-61
BFP60150 5571 001-12	PHSM447 3212 010-460	PHWM614 3411 010-105	SHM60150100 5549 126-62
BFP70150 5571 001-13	PHSM984 3212 010-511	PHWM615 3411 010-130	SHM70150100 5549 126-63
BFP80150 5571 001-14	PHSM984 3212 010-511	PHWM615 3411 010-130	SHM80150100 5549 126-64

Seat Protection Plate	
Plate	Screw
SPP01 5549 029-01	PHSM1311 3212 020-259
SPP02 5549 029-02	PHSM1312 3212 020-309
SPP03 5549 029-03	PHSM1313 3212 020-360
SPP04 5549 029-04	PHSM1314 3212 020-410
SPP05 5549 029-05	PHSM1315 3212 020-462
SPP06 5549 029-06	PHSM1316 3212 010-513
SPP07 5549 029-07	PHSM1317 3212 010-564

Pad Shoe		
Shoe	Screw	Shim
SHO1435 818-12-065-S	PHSM1319 3212 020-258	SHM2248 -
SHO2050 818-16-110-S	PHSM1312 3212 020-309	SHM3265 -



Pad Shoe

Sandvik Coromant part number shown in Red

CounterDex - Feed & Speed



Inch values

ISO	ANSI	Material	Specific cutting force	Hardness Brinell	Geometry / Grade	Cutting speed vc ft/min	Drill diameter, inch
			kc1 lbs/in ²	HB			≥ 2.500
			Feed f _n inch/rev				
P	1018, 1020, 1215	Unalloyed steel Non-hardened 0.10-0.25% C	290 000	90-200	-G/-L/TE	260-330	.007-.014
	1045, 1050, 1335	Non-hardened 0.25-0.55% C	304 500	125-225	-G/TE	260-330	.007-.014
	1055, 1060	Non-hardened 0.55-0.80% C	316 100	150-250	-G/TE	260-330	.007-.014
	1095	High carbon steel, annealed	336 400	180-275	-G/TE	260-330	.007-.014
	4140, 52100, 8620	Low alloy steel Non hardened	304 500	150-260	-G/TE	230-330	.007-.014
	4140, 52100, 8620	Hardened and tempered	402 400	220-450	-G/TE	200-330	.006-.014
	D3, H13, A2	High alloy steel Annealed	362 500	150-250	-G/TE	200-330	.007-.012
	M3, M35 D3, H13, A2	Annealed HSS Hardened tool steel	398 750 543 750	150-250 250-350	-G/TE -G/TE	200-330 200-330	.007-.012 .007-.012
	D3, H13, A2	Hardened steel, others	580 000	250-450	-G/TE	200-330	.007-.012
	1018, 1045, 1055 4140, 52100, 8620	Castings Unalloyed Low alloyed (alloying elements < 5%)	261 000 2304 500	90-225 150-250	-G/TE -G/TE	165-330 165-330	.006-.012 .006-.012
M	403, 405, 410	Rolled/forged Ferritic/Martensitic, non hardened	333 500	150-270	-G/L/TE	165-300	.006-.014
	15-5, 17-4	Corrosion Resistance	350 000	277-352	-L/TE	128-190	.008-.013
	304, 316, 318	Austenitic	377 000	150-270	-L/TE	165-300	.006-.014
K	32510 40010, 50005	Malleable Ferritic Pearlitic	137 750 159 500	110-145 150-270	-G/TE -G/TE	260-330 260-330	.007-.012 .007-.012
	Class 20, 25, 30 Class 45, 50, 60	Grey Low tensile strength High tensile strength	159 500 187 050	150-220 200-330	-G/TE -G/TE	200-330 200-330	.006-.014 .006-.014
	60-40-18, 80-55-56 100-70-03	Nodular Ferritic Pearlitic	152 250 253 750	125-230 200-300	-G/TE -G/TE	165-330 165-330	.006-.014 .006-.014
N	7075, 2024, 7010	Aluminium alloys Wrought or wrought and coldworked, non-aging	72 500	30-100	-L/TE	210-600	.004-.012
	7075, 2024, 7010	Wrought or wrought and aged	116 000	30-150	-L/TE	210-600	.004-.012
	7075, 2024, 7010	Cast, non aging	108 750	40-100	-L/TE	210-600	.004-.012
	7075, 2024, 7010	Cast or cast and aged	130 500	70-140	-L/TE	210-600	.004-.012
	Copper Copper	Copper and copper alloys Free cutting alloys (Pb > 1%) Brass and leaded alloys (Pb < 1%)	101 500 101 500	70-160 50-200	-L/TE -L/TE	210-600 210-600	.004-.012 .004-.012
S	330	Iron base Annealed or solution treated	435 000	180-230	-G/L/TE	65-210	.006-.012
	Waspaloy, Inconel	Nickel base Annealed or solution treated	481 400	140-300	-L/TE	65-210	.006-.012
	Air Resistant 213, Jetalloy 209	Cobalt alloys Annealed or solution treated	478 500	180-230	-L/TE	65-210	.006-.012
	Ti6Al4V	Titanium Alfa-, near Alfa- and Alfa + Beta alloys annealed	242 875	600-1100	-L/TE -L/TE	100-330 100-330	.006-.012 .006-.012

CounterDex - Feed & Speed



Metric values

ISO	ANSI	Material	Specific cutting force kc1 N/mm ²	Hardness Brinell HB	Geometry / Grade	Cutting speed vc m/min	Drill diameter, mm
							≥ 63.50
							Feed f _n mm/r
P	1018, 1020, 1215	Unalloyed steel Non-hardened 0.10-0.25% C	1500	90-200	-G/-L/TE	80-100	0.18-0.35
	1045, 1050, 1335	Non-hardened 0.25-0.55% C	1600	125-225	-G/TE	80-100	0.18-0.35
	1055, 1060	Non-hardened 0.55-0.80% C	1700	150-250	-G/TE	80-100	0.18-0.35
	1095	High carbon steel, annealed	1800	180-275	-G/TE	80-100	0.18-0.35
	4140, 52100, 8620	Low alloy steel Non hardened	1700	150-260	-G/TE	70-100	0.18-0.35
	4140, 52100, 8620	Hardened and tempered	1900	220-450	-G/TE	60-100	0.18-0.35
	D3, H13, A2	High alloy steel Annealed	1950	150-250	-G/TE	70-100	0.18-0.30
	M3, M35 D3, H13, A2	Annealed HSS Hardened tool steel	2150 2900	150-250 250-350	-G/TE -G/TE	70-100 60-100	0.18-0.30 0.16-0.30
	D3, H13, A2	Hardened steel, others	3100	250-450	-G/TE	60-100	0.16-0.30
	1018, 1045, 1055	Castings Unalloyed	1400	90-225	-G/TE	50-100	0.15-0.30
	4140, 52100, 8620	Low alloyed (alloying elements < 5%)	1600	150-250	-G/TE	50-100	0.15-0.30
	M	403, 405, 410	Rolled/forged Ferritic/Martensitic, non hardened	1800	150-270	-G/L/TE	50-90
16-5, 17-4		Corrosion Resistance	1900	277-352	-L/TE	39-58	0.20-0.33
304, 316, 318		Austenitic	1950	150-275	-L/TE	50-90	0.15-0.30
K	32510 40010, 50005	Malleable Ferritic Pearlitic	790 900	110-145 150-270	-G/TE -G/TE	80-100 80-100	0.18-0.30 0.18-0.30
	Class 20, 25, 30 Class 45, 50, 60	Grey Low tensile strength High tensile strength	890 1100	150-220 200-330	-G/TE -G/TE	60-100 60-100	0.16-0.35 0.16-0.35
	60-40-18, 80-55-56 100-70-03	Nodular Ferritic Pearlitic	900 1350	125-230 200-300	-G/TE -G/TE	50-100 50-100	0.16-0.35 0.16-0.35
N	7075, 2024, 7010	Aluminium alloys Wrought or wrought and coldworked, non- aging	400	30-100	-L/TE	65-130	0.10-0.30
	7075, 2024, 7010	Wrought or wrought and aged	650	30-150	-L/TE	65-130	0.10-0.30
	7075, 2024, 7010	Cast, non aging	600	40-100	-L/TE	65-130	0.10-0.30
	7075, 2024, 7010	Cast or cast and aged	700	70-140	-L/TE	65-130	0.10-0.30
	Copper Copper	Copper and copper alloys Free cutting alloys (Pb > 1%) Brass and leaded alloys (Pb < 1%)	550 550	70-160 50-200	-L/TE -L/TE	65-130 65-130	0.10-0.30 0.10-0.30
S	330	Iron base Annealed or solution treated	2400	180-230	-G/TES	20-65	0.15-0.30
	Waspaloy, Inconel	Nickel base Annealed or solution treated	2650	140-300	-L/TES	20-65	0.15-0.30
	Air Resistant 213, Jetalloy 209	Cobalt alloys Annealed or solution treated	2700	180-230	-L/TES	20-65	0.15-0.30
	Ti6Al4V	Titanium Alfa-, near Alfa- and Alfa + Beta alloys annealed	1400	600-1100	-L/TES -L/TES	30-60 30-100	0.15-0.30 0.15-0.30

Sunnen's Deep Hole Drilling Tools

Offering the lowest cost per hole for identical replacements of discontinued Sandvik Tools

Sunnen is committed to designing, manufacturing, and delivering world class deep hole machining tools and systems that meet or exceed customer requirements.

Whether a Single Tube, Double Tube, Gun Drilling or other specialty system is needed, Sunnen has the engineering expertise and manufacturing capabilities to meet any deep hole machining requirements.



MicroDex - Replaces Brazed Drill Heads

STS

Diameter Range
15.00 – 28.00 mm
0.590 – 1.102 inch



DirectDex - Replaces CoroDrill 800 series

STS

Diameter Range
25.00 – 65.00 mm
0.984 - 2.559 inch

DTS

Diameter Range
25.00 – 65.00 mm
0.984 - 2.559 inch



FlexiDex - Replaces CoroDrill 801 series

STS

Diameter Range
65.00 mm – 195.99 mm
2.559 in – 7.716 in



TrueDex - Replaces Sandvik 424.10 series

STS

Diameter Range
63.50 mm – 183.90 mm
2.500 in – 7.240 in



CounterDex - Replaces Sandvik 818 series

STS

Diameter Range
35.00 mm – 216.00 mm
1.378 in – 8.503 in

Sunnen also offers replacement parts for all of these tools, including inserts, pads, cartridges, shims and screws.

Sunnen's SHDD Series Deep Hole Drills

Easy-to-use, efficient, heavy-duty



- **Available in three standard models**
 - 2-meter maximum part length (SHDD-2500)
 - 4-meter maximum part length (SHDD-4500)
 - 6-meter maximum part length (SHDD-6500)
- Large 394 mm (15.5 in) color HMI with intuitive controls for ease of use.
- Heavy-duty Bosch-Rexroth 55 mm (2.16 in) linear rails for maximum durability.
- Standard safety system with a combination of multiple E-stops, light curtains, interlocked guarding and fencing.
- Standard 67 kw (90 hp) tool motor with headstock drive for optimum power.
- Standard 38 kw (50 HP) workpiece headstock drive (counter rotation).
- Beckhoff servo driven heavy-duty ball screws for tool feed.
 - 80 mm ball screw (3.15 in) SHDD-2500/SHDD-4500
 - 100 mm ball screw (3.84 in) SHDD-6500
- Electrical enclosure air conditioning unit standard to protect critical electronics in high temperature environments.
- Heavy-duty welded base.
- Heavy-duty 3-jaw chucks standard.
- Automatic lubrication system for ball screw, rack and pinion, and linear rails standard.
- Heavy-duty servo rack and pinion driven work piece positioning and clamping.
- Spindle carriage control station for ease of driveshaft installation.
- Sunnen is the complete system supplier ... machines, tools, chip management, cooling systems and cutting fluids.



A LEGACY OF EXCELLENCE SINCE 1924.

SUNNEN WORLDWIDE



With world headquarters in St. Louis, Missouri, Sunnen is the largest fully integrated company in the world specializing in precision bore creation, sizing and finishing equipment.

A Sunnen solution might include honing, lapping, skiving/roller burnishing or deep hole machining...or a combination of those processes.

Our 13 international subsidiaries and over 40 authorized distributors allow us to deliver top quality Sunnen machines, tools, service and training wherever they are needed around the globe.

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