

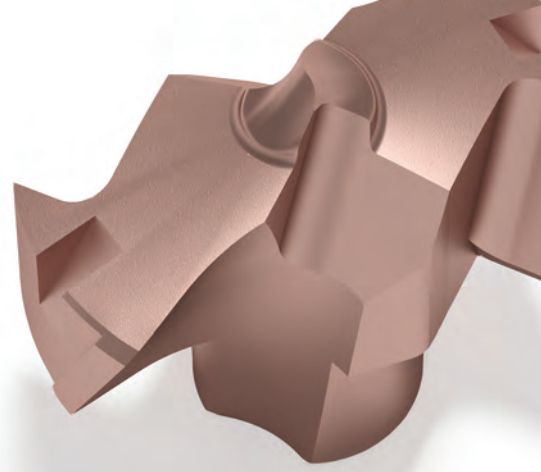


DRILLING

- DEXdrill .253
- DRSdrill .261
- DRSpilot .271
- SPOTdrill .277



DRILLING DEXdrill



DEXDRILL

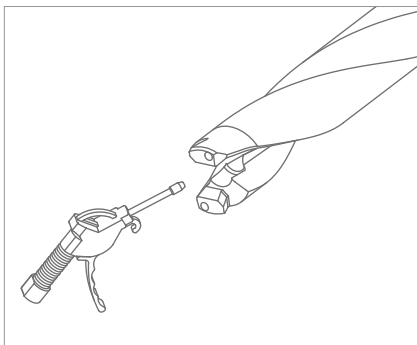
3XD
5XD

High performance drilling system with interchangeable heads

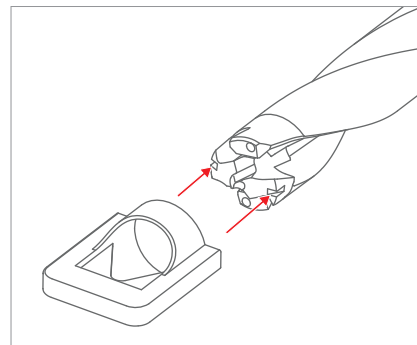
1. Where is DEXdrill applicable?

PLAIN SURFACE	CONCAVE SURFACE	STACKED PLATES	PIPES	SLANT SURFACE	HALF HOLE	HOLE EXPANSION

2. Drilling heads installation

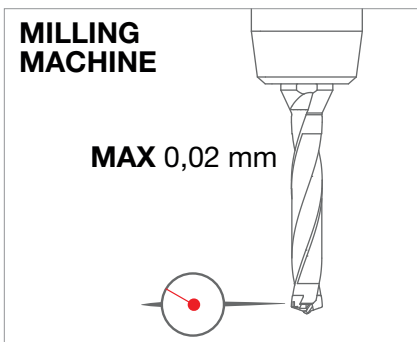


Clean pocket
with air blast.
Put insert into
drill holder.

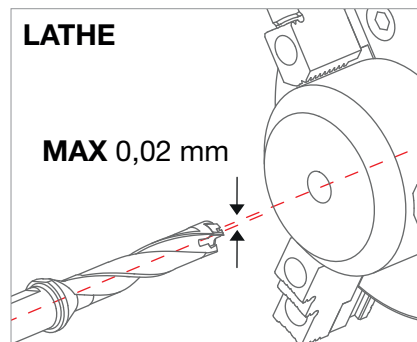


Set wrench into
slots on insert
flanks.
Slowly turn
the wrench
clockwise until
stop.

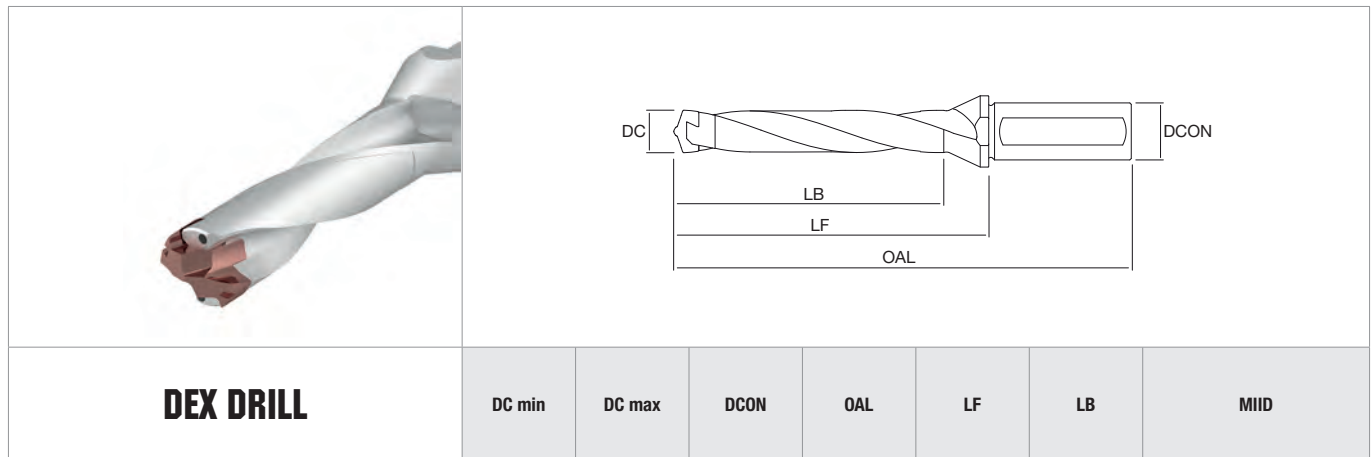
3. Operation recommendations



Center of
arbor deviation
must be under
0.02mm



Keep under
0.02mm
the maximum
deviation
between drill
and workpiece



DEX DRILL			DC min	DC max	DCON	OAL	LF	LB	MIID	
3xD	NT-DEX-3D	D12-S16F	●	12.00	12.99	16	108	60	48	DEX1200 ÷ DEX1290
		D13-S16F	●	13.00	13.99	16	112	64	51	DEX1300 ÷ DEX1390
		D14-S16F	●	14.00	14.99	16	117	69	55	DEX1400 ÷ DEX1490
		D15-S20F	●	15.00	15.99	20	123	73	58	DEX1500 ÷ DEX1590
		D16-S20F	●	16.00	16.99	20	127	77	61	DEX1600 ÷ DEX1690
		D17-S20F	●	17.00	17.99	20	132	82	65	DEX1700 ÷ DEX1790
		D18-S25F	●	18.00	18.99	25	142	86	68	DEX1800 ÷ DEX1890
		D19-S25F	●	19.00	19.99	25	146	90	71	DEX1900 ÷ DEX1990
D20-S25F	●	20.00	20.99	25	150	94	74	DEX2000 ÷ DEX2090		
5xD	NT-DEX-5D	D12-S16F	●	12.00	12.99	16	134	86	74	DEX1200 ÷ DEX1290
		D13-S16F	●	13.00	13.99	16	140	92	79	DEX1300 ÷ DEX1390
		D14-S16F	●	14.00	14.99	16	147	99	85	DEX1400 ÷ DEX1490
		D15-S20F	●	15.00	15.99	20	155	105	90	DEX1500 ÷ DEX1590
		D16-S20F	●	16.00	16.99	20	161	111	95	DEX1600 ÷ DEX1690
		D17-S20F	●	17.00	17.99	20	168	118	101	DEX1700 ÷ DEX1790
		D18-S25F	●	18.00	18.99	25	180	124	106	DEX1800 ÷ DEX1890
		D19-S25F	●	19.00	19.99	25	186	130	111	DEX1900 ÷ DEX1990
D20-S25F	●	20.00	20.99	25	192	136	116	DEX2000 ÷ DEX2090		

● stock standard



DC ≤ 17	NT-WR1217
DC > 18	NT-WR1820

CUTTING SPEED [m/min]

	MATERIALS (HARDNESS/Rm)	W.-Nr	DIN	AISI-ASTM	TRADE MARK	JP5625	JP7625
P1	Free cutting steel and structural steel (< 500 N/mm ²)	1.0715	9 SMn 28	1213	AVP	100÷160	
		1.0765	36 SMnPb 14	A29	PR80		
P2	Carbon steel and low alloy steel (500-700 N/mm ²)	1.7147	20 MnCr 5	5120	-	80÷140	
		1.0511	C 40	1040	-		
P3	Medium alloy steel and heat treated steel (600-800 N/mm ²)	1.1201	42 CrMo 4	4142, 4140	-	60÷100	
		1.6511	36 CrNiMo 4	9840	-		
P4	High alloy steel (800-1000 N/mm ²)	1.1663	C 125 W	W1	-	50÷90	
		1.3505	100 Cr 6	52100	-		
P5	Tool steel (900-1200 N/mm ²)	1.2080	X 210 Cr 12	D3	K100	40÷80	
		1.2379	X 155 CrV Mo 12 1	-	K110		
K1	Grey cast iron (150-250 HB)	0.6020	GG-20	A48 30 B	-	80÷180	100÷200
		0.6025	GG-25	A48 35 B	-		
K2	Nodular cast iron (150-350 HB)	0.7050	GGG-50	A536 80-55-6	-	80÷140	100÷160
		0.7070	GGG-70	A536 100-70-03	-		

TURNING
THREADING
GROOVING
MILLING
DRILLING
ACCESSORIES



DRILLING DRSDrill

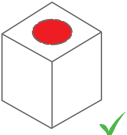
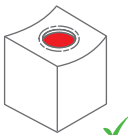
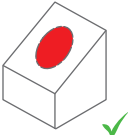
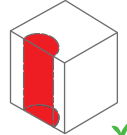
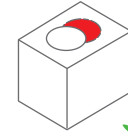
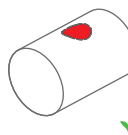
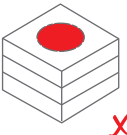
DRSDRILL

2XD
3XD
4XD
5XD

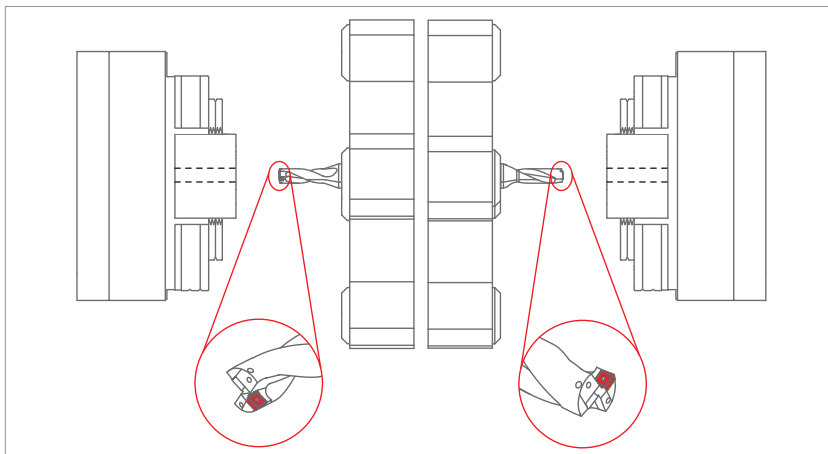
High performance drills for universal use



1. Where is DRSdrill applicable?

PLAIN SURFACE	CONCAVE SURFACE	SLANT SURFACE	HALF HOLE	HOLE EXPANSION	PIPES	STACKED PLATES
						

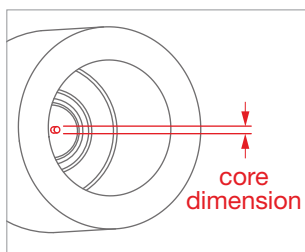
2. Lathe installation



It's recommended to set the outer insert facing the operator as shown in the drawing, both for main and sub-spindle to gain the best results.

Following this suggestion, generally, the inner insert will be set below the center which is the recommended situation for optimal operation.

3. Quick check of the center height



To check if the machine axis is correctly aligned, a test hole should be drilled checking the remaining core on the hole bottom.

Center-height adjustment is necessary when **no core** remains or if the core diameter is larger than 1mm.

SP \square X	DRS 4 edges drilling inserts					ISO513	HC-PVD				HW			
	Size	IC	S	D1	RE		JP5625	JP5530	JP9635	JW6520				
	05	5.00	2.38	2.50	0.40	P	80 300	80 300						
	06	6.00	2.38	2.80	0.40	M			50 220					
	07	7.94	3.97	2.80	0.80	K	120 250	120 250						
	09	9.80	4.30	4.10	0.80	N				200 400				
	11	11.50	4.76	4.40	0.80	S								
	14	14.30	5.20	5.50	1.20	H								
GRADE APPLICATION AREA		Stable machining												
		General machining			+ Hardness		- Toughness							
		Unstable machining			- Hardness		+ Toughness							

GENERAL	GP P M K S	SPMX	Part No.	2xD	3xD	4xD	5xD	f _n	a _p	ISO513	JP5625	JP5530	JP9635	JW6520										
																					0.04	0.07	0.06	0.05
AL N	polished surface	SPGX	050204-AL	2xD	f _n	0.06	0.09	0.12																
				3xD	f _n	0.06	0.09	0.12																
				4xD	f _n	0.04	0.07	0.10																
				5xD	f _n	0.04	0.06	0.08																
				2xD	f _n	0.08	0.12	0.16																
				3xD	f _n	0.08	0.12	0.16																
		SPGX	060204-AL	2xD	f _n	0.06	0.09	0.12																
				3xD	f _n	0.06	0.09	0.12																
				4xD	f _n	0.06	0.09	0.12																
				5xD	f _n	0.06	0.08	0.10																
				2xD	f _n	0.10	0.14	0.18																
				3xD	f _n	0.10	0.14	0.18																
		SPGX	07T308-AL	2xD	f _n	0.10	0.15	0.20																
				3xD	f _n	0.10	0.14	0.18																
				4xD	f _n	0.08	0.11	0.14																
				5xD	f _n	0.08	0.10	0.12																
				2xD	f _n	0.10	0.15	0.20																
				3xD	f _n	0.10	0.15	0.20																
SPGX	090408-AL	2xD	f _n	0.11	0.16	0.21																		
		3xD	f _n	0.11	0.16	0.21																		
		4xD	f _n	0.10	0.14	0.18																		
		5xD	f _n	0.10	0.13	0.16																		
		2xD	f _n	0.12	0.17	0.22																		
		3xD	f _n	0.12	0.17	0.22																		
SPGX	110408-AL	2xD	f _n	0.11	0.16	0.21																		
		3xD	f _n	0.11	0.16	0.21																		
		4xD	f _n	0.10	0.14	0.18																		
		5xD	f _n	0.10	0.13	0.16																		
		2xD	f _n	0.12	0.17	0.22																		
		3xD	f _n	0.12	0.17	0.22																		
SPGX	140512-AL	2xD	f _n	0.10	0.15	0.20																		
		3xD	f _n	0.10	0.15	0.20																		
		4xD	f _n	0.10	0.15	0.20																		
		5xD	f _n	0.10	0.14	0.18																		
		2xD	f _n	0.12	0.17	0.22																		
		3xD	f _n	0.12	0.17	0.22																		

● stock standard

TURNING

THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

TURNING

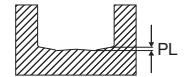
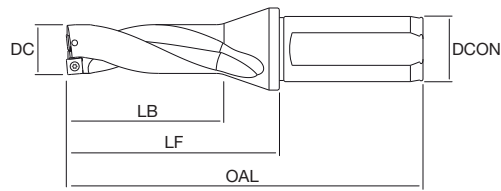
THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES



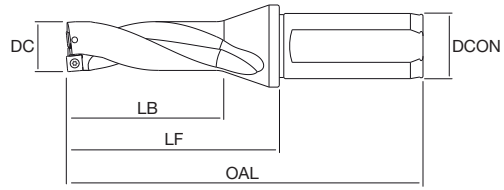
HOLE TOLERANCE 0/+0.20mm

DRS 2XD			DC	DCON	OAL	LF	LB	ADJLX max. radial offset	PL hole bottom shape	MIID	
05	NT-DRS-2D	D13.00-S20-05	●	13	20	94	44	26	0.50	0.40	SPMX05 SPGX05
		D14.00-S20-05	●	14	20	96	46	28	0.50	0.40	
		D15.00-S20-05	●	15	20	99	49	30	0.50	0.40	
06	NT-DRS-2D	D16.00-S25-06	●	16	25	108	52	32	0.50	0.50	SPMX06 SPGX06
		D17.00-S25-06	●	17	25	110	54	34	0.50	0.50	
		D18.00-S25-06	●	18	25	113	57	36	0.50	0.50	
		D19.00-S25-06	●	19	25	115	59	38	0.50	0.50	
		D20.00-S25-06	●	20	25	119	63	40	0.50	0.50	
		D21.00-S25-06	●	21	25	121	65	42	0.25	0.50	
07	NT-DRS-2D	D22.00-S25-07	●	22	25	123	67	44	0.50	0.50	SPMX07 SPGX07
		D23.00-S32-07	●	23	32	131	71	46	0.50	0.50	
		D24.00-S32-07	●	24	32	134	74	48	0.50	0.50	
		D25.00-S32-07	●	25	32	137	77	50	0.50	0.50	
		D26.00-S32-07	●	26	32	139	79	52	0.25	0.60	
		D27.00-S32-07	●	27	32	141	81	54	0.25	0.60	
09	NT-DRS-2D	D28.00-S32-09	●	28	32	144	84	56	0.50	0.80	SPMX09 SPGX09
		D29.00-S32-09	●	29	32	146	86	58	0.50	0.80	
		D30.00-S32-09	●	30	32	151	91	60	0.50	0.80	
		D31.00-S32-09	●	31	32	154	94	62	0.25	0.80	
		D32.00-S32-09	●	32	32	156	96	64	0.25	0.80	
		D33.00-S32-09	●	33	32	159	99	66	0.25	0.80	
11	NT-DRS-2D	D34.00-S40-11	●	34	40	171	101	68	0.50	0.90	SPMX11 SPGX11
		D35.00-S40-11	●	35	40	174	104	70	0.50	0.90	
		D36.00-S40-11	●	36	40	177	107	72	0.50	0.90	
		D37.00-S40-11	●	37	40	180	110	74	0.50	0.90	
		D38.00-S40-11	●	38	40	183	113	76	0.50	0.90	
		D39.00-S40-11	●	39	40	185	115	78	0.50	0.90	
		D40.00-S40-11	●	40	40	188	118	80	0.25	0.90	
		D41.00-S40-11	●	41	40	191	121	82	0.25	0.90	
14	NT-DRS-2D	D42.00-S40-14	●	42	40	193	123	84	0.50	1.00	SPMX14 SPGX14
		D43.00-S40-14	●	43	40	196	126	86	0.50	1.00	
		D44.00-S40-14	●	44	40	198	128	88	0.50	1.00	
		D45.00-S40-14	●	45	40	202	132	90	0.50	1.00	
		D46.00-S40-14	●	46	40	205	135	92	0.50	1.00	
		D47.00-S40-14	●	47	40	207	137	94	0.50	1.00	
		D48.00-S40-14	●	48	40	210	140	96	0.25	1.00	
		D49.00-S40-14	●	49	40	212	142	98	0.25	1.00	
		D50.00-S40-14	●	50	40	215	145	100	0.25	1.00	

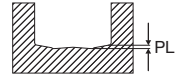
● stock standard

Spare Parts	INSERT SCREW	INSERT WRENCH

NT-DRS-2D D _{00.00} -S ₀₀ -05	NT-ST059	NT-FTB06
NT-DRS-2D D _{00.00} -S ₀₀ -06	NT-ST061	NT-FTB06
NT-DRS-2D D _{00.00} -S ₀₀ -07	NT-ST062	NT-FTB07
NT-DRS-2D D _{00.00} -S ₀₀ -09	NT-ST063	NT-FTB15
NT-DRS-2D D _{00.00} -S ₀₀ -11	NT-ST064	NT-FTB15
NT-DRS-2D D _{00.00} -S ₀₀ -14	NT-ST066	NT-FTB20



HOLE TOLERANCE 0/+0.25mm



DRS 3XD			DC	DCON	OAL	LF	LB	ADJLX max. radial offset	PL hole bottom shape	MIID	
05	NT-DRS-3D	D12.50-S20-05	●	12.5	20	107	57	39	0.50	0.40	SPMX05 SPGX05
		D13.00-S20-05	●	13	20	107	57	39	0.50	0.40	
		D13.50-S20-05	●	13.5	20	110	60	42	0.50	0.40	
		D14.00-S20-05	●	14	20	110	60	42	0.50	0.40	
		D14.50-S20-05	●	14.5	20	114	64	45	0.50	0.40	
D15.00-S20-05	●	15	20	114	64	45	0.50	0.40			
06	NT-DRS-3D	D15.50-S25-06	●	15.5	25	124	68	48	0.50	0.50	SPMX06 SPGX06
		D16.00-S25-06	●	16	25	124	68	48	0.50	0.50	
		D16.50-S25-06	●	16.5	25	127	71	51	0.50	0.50	
		D17.00-S25-06	●	17	25	127	71	51	0.50	0.50	
		D17.50-S25-06	●	17.5	25	131	75	54	0.50	0.50	
		D18.00-S25-06	●	18	25	131	75	54	0.50	0.50	
		D18.50-S25-06	●	18.5	25	134	78	57	0.50	0.50	
		D19.00-S25-06	●	19	25	134	78	57	0.50	0.50	
		D19.50-S25-06	●	19.5	25	139	83	60	0.50	0.50	
		D20.00-S25-06	●	20	25	139	83	60	0.50	0.50	
		D20.50-S25-06	●	20.5	25	142	86	63	0.25	0.50	
		D21.00-S25-06	●	21	25	142	86	63	0.25	0.50	
D21.50-S25-06	●	21.5	25	145	89	66	0.25	0.50			
07	NT-DRS-3D	D22.00-S25-07	●	22	25	145	89	66	0.50	0.50	SPMX07 SPGX07
		D22.50-S32-07	●	22.5	32	154	94	69	0.50	0.50	
		D23.00-S32-07	●	23	32	154	94	69	0.50	0.50	
		D23.50-S32-07	●	23.5	32	158	98	72	0.50	0.50	
		D24.00-S32-07	●	24	32	158	98	72	0.50	0.50	
		D24.50-S32-07	●	24.5	32	162	102	75	0.50	0.50	
		D25.00-S32-07	●	25	32	162	102	75	0.50	0.50	
		D25.50-S32-07	●	25.5	32	165	105	78	0.50	0.60	
		D26.00-S32-07	●	26	32	165	105	78	0.25	0.60	
		D26.50-S32-07	●	26.5	32	168	108	81	0.25	0.60	
		D27.00-S32-07	●	27	32	168	108	81	0.25	0.60	
		D27.50-S32-07	●	27.5	32	172	112	84	0.25	0.60	
09	NT-DRS-3D	D28.00-S32-09	●	28	32	172	112	84	0.50	0.80	SPMX09 SPGX09
		D28.50-S32-09	●	28.5	32	175	115	87	0.50	0.80	
		D29.00-S32-09	●	29	32	175	115	87	0.50	0.80	
		D29.50-S32-09	●	29.5	32	181	121	90	0.50	0.80	
		D30.00-S32-09	●	30	32	181	121	90	0.50	0.80	
		D31.00-S32-09	●	31	32	185	125	93	0.25	0.80	
		D32.00-S32-09	●	32	32	188	128	96	0.25	0.80	
		D33.00-S32-09	●	33	32	192	132	99	0.25	0.80	

● stock standard

TURNING

THREADING

GROOVING

MILLING

DRILLING

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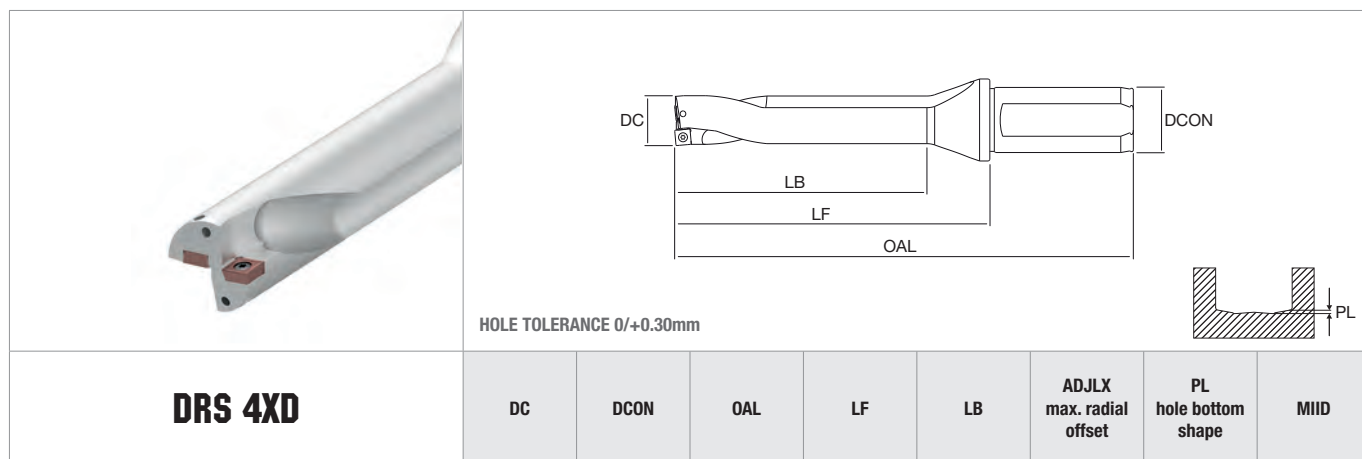
ACCESSORIES

DRS 3XD				DC	DCON	OAL	LF	LB	ADJLX max. radial offset	PL hole bottom shape	MIID
11	NT-DRS-3D	D34.00-S40-11	●	34	40	205	135	102	0.50	0.90	SPMX11 SPGX11
		D35.00-S40-11	●	35	40	209	139	105	0.50	0.90	
		D36.00-S40-11	●	36	40	213	143	108	0.50	0.90	
		D37.00-S40-11	●	37	40	217	147	111	0.50	0.90	
		D38.00-S40-11	●	38	40	221	151	114	0.50	0.90	
		D39.00-S40-11	●	39	40	224	154	117	0.50	0.90	
		D40.00-S40-11	●	40	40	228	158	120	0.25	0.90	
		D41.00-S40-11	●	41	40	232	162	123	0.25	0.90	
14	NT-DRS-3D	D42.00-S40-14	●	42	40	235	165	126	0.50	1.00	SPMX14 SPGX14
		D43.00-S40-14	●	43	40	239	169	129	0.50	1.00	
		D44.00-S40-14	●	44	40	242	172	132	0.50	1.00	
		D45.00-S40-14	●	45	40	247	177	135	0.50	1.00	
		D46.00-S40-14	●	46	40	251	181	138	0.50	1.00	
		D47.00-S40-14	●	47	40	254	184	141	0.50	1.00	
		D48.00-S40-14	●	48	40	258	188	144	0.25	1.00	
		D49.00-S40-14	●	49	40	261	191	147	0.25	1.00	
		D50.00-S40-14	●	50	40	265	195	150	0.25	1.00	

● stock standard

Spare Parts	INSERT SCREW	INSERT WRENCH
		

NT-DRS-3D D0000-S00-05	NT-ST059	NT-FTB06
NT-DRS-3D D0000-S00-06	NT-ST061	NT-FTB06
NT-DRS-3D D0000-S00-07	NT-ST062	NT-FTB07
NT-DRS-3D D0000-S00-09	NT-ST063	NT-FTB15
NT-DRS-3D D0000-S00-11	NT-ST064	NT-FTB15
NT-DRS-3D D0000-S00-14	NT-ST066	NT-FTB20



DRS 4XD			DC	DCON	OAL	LF	LB	ADJLX max. radial offset	PL hole bottom shape	MIID	
05	NT-DRS-4D	D12.50-S20-05	●	12.5	20	120	70	52	0.50	0.40	SPMX05 SPGX05
		D13.00-S20-05	●	13	20	120	70	52	0.50	0.40	
		D13.50-S20-05	●	13.5	20	124	74	56	0.50	0.40	
		D14.00-S20-05	●	14	20	124	74	56	0.50	0.40	
		D14.50-S20-05	●	14.5	20	129	79	60	0.50	0.40	
06	NT-DRS-4D	D15.50-S25-06	●	15.5	25	140	84	64	0.50	0.50	SPMX06 SPGX06
		D16.00-S25-06	●	16	25	140	84	64	0.50	0.50	
		D16.50-S25-06	●	16.5	25	144	88	68	0.50	0.50	
		D17.00-S25-06	●	17	25	144	88	68	0.50	0.50	
		D17.50-S25-06	●	17.5	25	149	93	72	0.50	0.50	
		D18.00-S25-06	●	18	25	149	93	72	0.50	0.50	
		D18.50-S25-06	●	18.5	25	153	97	76	0.50	0.50	
		D19.00-S25-06	●	19	25	153	97	76	0.50	0.50	
		D19.50-S25-06	●	19.5	25	159	103	80	0.50	0.50	
		D20.00-S25-06	●	20	25	159	103	80	0.50	0.50	
		D20.50-S25-06	●	20.5	25	163	107	84	0.25	0.50	
		D21.00-S25-06	●	21	25	163	107	84	0.25	0.50	
		D21.50-S25-06	●	21.5	25	167	111	88	0.25	0.50	
07	NT-DRS-4D	D22.00-S25-07	●	22	25	167	111	88	0.50	0.50	SPMX07 SPGX07
		D22.50-S32-07	●	22.5	32	177	117	92	0.50	0.50	
		D23.00-S32-07	●	23	32	177	117	92	0.50	0.50	
		D23.50-S32-07	●	23.5	32	182	122	96	0.50	0.50	
		D24.00-S32-07	●	24	32	182	122	96	0.50	0.50	
		D24.50-S32-07	●	24.5	32	187	127	100	0.50	0.50	
		D25.00-S32-07	●	25	32	187	127	100	0.50	0.50	
		D25.50-S32-07	●	25.5	32	191	131	104	0.50	0.60	
		D26.00-S32-07	●	26	32	191	131	104	0.25	0.60	
		D26.50-S32-07	●	26.5	32	195	135	108	0.25	0.60	
		D27.00-S32-07	●	27	32	195	135	108	0.25	0.60	
		D27.50-S32-07	●	27.5	32	200	140	112	0.25	0.60	
		09	NT-DRS-4D	D28.00-S32-09	●	28	32	200	140	112	
D28.50-S32-09	●			28.5	32	204	144	116	0.50	0.80	
D29.00-S32-09	●			29	32	204	144	116	0.50	0.80	
D29.50-S32-09	●			29.5	32	211	151	120	0.50	0.80	
D30.00-S32-09	●			30	32	211	151	120	0.50	0.80	
D31.00-S32-09	●			31	32	216	156	124	0.25	0.80	
D32.00-S32-09	●			32	32	220	160	128	0.25	0.80	
D33.00-S32-09	●			33	32	225	165	132	0.25	0.80	

● stock standard

TURNING

THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

TURNING

THREADING

GROOVING

MILLING

DRILLING

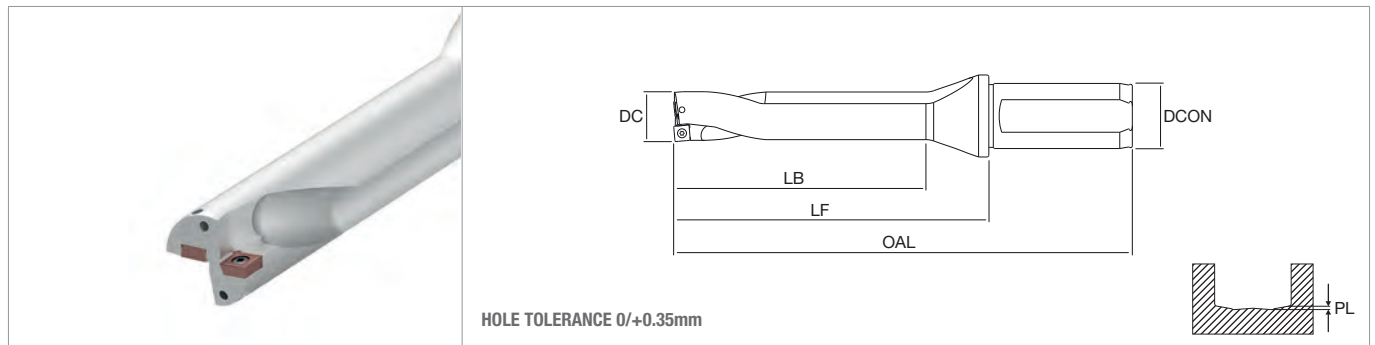
ACCESSORIES

DRS 4XD				DC	DCON	OAL	LF	LB	ADJLX max. radial offset	PL hole bottom shape	MIID
11	NT-DRS-4D	D34.00-S40-11	●	34	40	239	169	136	0.50	0.90	SPMX11 SPGX11
		D35.00-S40-11	●	35	40	244	174	140	0.50	0.90	
		D36.00-S40-11	●	36	40	249	179	144	0.50	0.90	
		D37.00-S40-11	●	37	40	254	184	148	0.50	0.90	
		D38.00-S40-11	●	38	40	259	189	152	0.50	0.90	
		D39.00-S40-11	●	39	40	263	193	156	0.50	0.90	
		D40.00-S40-11	●	40	40	268	198	160	0.25	0.90	
		D41.00-S40-11	●	41	40	273	203	164	0.25	0.90	
14	NT-DRS-4D	D42.00-S40-14	●	42	40	277	207	168	0.50	1.00	SPMX14 SPGX14
		D43.00-S40-14	●	43	40	282	212	172	0.50	1.00	
		D44.00-S40-14	●	44	40	286	216	176	0.50	1.00	
		D45.00-S40-14	●	45	40	292	222	180	0.50	1.00	
		D46.00-S40-14	●	46	40	297	227	184	0.50	1.00	
		D47.00-S40-14	●	47	40	301	231	188	0.50	1.00	
		D48.00-S40-14	●	48	40	306	236	192	0.25	1.00	
		D49.00-S40-14	●	49	40	310	240	196	0.25	1.00	
		D50.00-S40-14	●	50	40	315	245	200	0.25	1.00	

● stock standard

Spare Parts	INSERT SCREW	INSERT WRENCH
		

NT-DRS-4D D□□□□-S□□-05	NT-ST059	NT-FTB06
NT-DRS-4D D□□□□-S□□-06	NT-ST061	NT-FTB06
NT-DRS-4D D□□□□-S□□-07	NT-ST062	NT-FTB07
NT-DRS-4D D□□□□-S□□-09	NT-ST063	NT-FTB15
NT-DRS-4D D□□□□-S□□-11	NT-ST064	NT-FTB15
NT-DRS-4D D□□□□-S□□-14	NT-ST066	NT-FTB20



HOLE TOLERANCE 0/+0.35mm

DRS 5XD			DC	DCON	OAL	LF	LB	ADJLX max. radial offset	PL hole bottom shape	MIID
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05	NT-DRS-5D	D13.00-S20-05	●	13	20	133	83	65	0.50	0.40	SPMX05 SPGX05
		D14.00-S20-05	●	14	20	138	88	70	0.50	0.40	
		D15.00-S20-05	●	15	20	144	94	75	0.50	0.40	
06	NT-DRS-5D	D16.00-S25-06	●	16	25	156	100	80	0.50	0.50	SPMX06 SPGX06
		D17.00-S25-06	●	17	25	161	105	85	0.50	0.50	
		D18.00-S25-06	●	18	25	167	111	90	0.50	0.50	
		D19.00-S25-06	●	19	25	172	116	95	0.50	0.50	
		D20.00-S25-06	●	20	25	179	123	100	0.50	0.50	
		D21.00-S25-06	●	21	25	184	128	105	0.25	0.50	
07	NT-DRS-5D	D22.00-S25-07	●	22	25	189	133	110	0.50	0.50	SPMX07 SPGX07
		D23.00-S32-07	●	23	32	200	140	115	0.50	0.50	
		D24.00-S32-07	●	24	32	206	146	120	0.50	0.50	
		D25.00-S32-07	●	25	32	212	152	125	0.50	0.50	
		D26.00-S32-07	●	26	32	217	157	130	0.25	0.60	
		D27.00-S32-07	●	27	32	222	162	135	0.25	0.60	
09	NT-DRS-5D	D28.00-S32-09	●	28	32	228	168	140	0.50	0.80	SPMX09 SPGX09
		D29.00-S32-09	●	29	32	233	173	145	0.50	0.80	
		D30.00-S32-09	●	30	32	241	181	150	0.50	0.80	
		D31.00-S32-09	●	31	32	247	187	155	0.25	0.80	
		D32.00-S32-09	●	32	32	252	192	160	0.25	0.80	
		D33.00-S32-09	●	33	32	258	198	165	0.25	0.80	
11	NT-DRS-5D	D34.00-S40-11	●	34	40	273	203	170	0.50	0.90	SPMX11 SPGX11
		D35.00-S40-11	●	35	40	279	209	175	0.50	0.90	
		D36.00-S40-11	●	36	40	285	215	180	0.50	0.90	
		D37.00-S40-11	●	37	40	291	221	185	0.50	0.90	
		D38.00-S40-11	●	38	40	297	227	190	0.50	0.90	
		D39.00-S40-11	●	39	40	302	232	195	0.50	0.90	
		D40.00-S40-11	●	40	40	308	238	200	0.25	0.90	
		D41.00-S40-11	●	41	40	314	244	205	0.25	0.90	
14	NT-DRS-5D	D42.00-S40-14	●	42	40	319	249	210	0.50	1.00	SPMX14 SPGX14
		D43.00-S40-14	●	43	40	325	255	215	0.50	1.00	
		D44.00-S40-14	●	44	40	330	260	220	0.50	1.00	
		D45.00-S40-14	●	45	40	337	267	225	0.50	1.00	
		D46.00-S40-14	●	46	40	343	273	230	0.50	1.00	
		D47.00-S40-14	●	47	40	348	278	235	0.50	1.00	
		D48.00-S40-14	●	48	40	354	284	240	0.25	1.00	
		D49.00-S40-14	●	49	40	359	289	245	0.25	1.00	
		D50.00-S40-14	●	50	40	365	295	250	0.25	1.00	

● stock standard

Spare Parts	INSERT SCREW	INSERT WRENCH

NT-DRS-5D D _{00.00} -S ₀₀ -05	NT-ST059	NT-FTB06
NT-DRS-5D D _{00.00} -S ₀₀ -06	NT-ST061	NT-FTB06
NT-DRS-5D D _{00.00} -S ₀₀ -07	NT-ST062	NT-FTB07
NT-DRS-5D D _{00.00} -S ₀₀ -09	NT-ST063	NT-FTB15
NT-DRS-5D D _{00.00} -S ₀₀ -11	NT-ST064	NT-FTB15
NT-DRS-5D D _{00.00} -S ₀₀ -14	NT-ST066	NT-FTB20

TURNING

THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

DRSDRILL

CUTTING SPEED [m/min]

	MATERIALS	HARDNESS/Rm	W.-Nr	DIN	AISI-ASTM	TRADE MARK	JP5625	JP5530	JP9635	JU6520
TURNING	P1 Free cutting steel and structural steel	< 500 N/mm ²	1.0715	9 SMn 28	1213	AVP	180÷300	180÷300		
			1.0765	36 SMnPb 14	A29	PR80				
	P2 Carbon steel and low alloy steel	500-700 N/mm ²	1.7147	20 MnCr 5	5120	-	140÷240	140÷240		
			1.0511	C 40	1040	-				
	P3 Medium alloy steel and heat treated steel	600-800 N/mm ²	1.1201	42 CrMo 4	4142, 4140	-	100÷220	100÷220		
			1.6511	36 CrNiMo 4	9840	-				
	P4 High alloy steel	800-1000 N/mm ²	1.1663	C 125 W	W1	-	100÷180	100÷180		
			1.3505	100 Cr 6	52100	-				
	P5 Tool steel	900-1200 N/mm ²	1.2080	X 210 Cr 12	D3	K100	80÷150	80÷150		
			1.2379	X 155 CrVMo 12 1	-	K110				
	M1 Ferritic stainless steel	400-700 N/mm ²	1.4016	X 6 Cr 17	430	-			120÷220	
			1.4104	X 12 CrMoS 17	430 F	-				
	M2 Austenitic stainless steel (good machinability)	500-750 N/mm ²	1.4305	X 10 CrNiS 18 9	303	-			80÷180	
			1.4301	X 6 CrNi 18 10	304, 304 H	-				
	M3 Austenitic stainless steel (medium machinability)	550-850 N/mm ²	1.4401	X 5 CrNiMo 17 12 2	316	-			60÷150	
			1.4462	X 2 CrNiMoN 22 5	F 51-329 A	DUPLEX				
	M4 Martensitic stainless steel	650-950 N/mm ²	1.4021	X 20 Cr 13	420	-			60÷150	
			1.4410	X 2 CrNiMoN 25 7 4	F 53-329 S1	SUPER DUPLEX				
	M5 PH stainless steel	800-1250 N/mm ²	1.4540	X 4 CrNiCuNb 16 4	XM-12	15-5-PH			50÷120	
			1.4542	X 5 CrNiNb 16 4	631	17-4-PH				
	K1 Grey cast iron	150-250 HB	0.6020	GG-20	A48 30 B	-	180÷250	180÷250		
			0.6025	GG-25	A48 35 B	-				
	K2 Nodular cast iron	150-350 HB	0.7050	GGG-50	A536 80-55-6	-	120÷180	120÷180		
			0.7070	GGG-70	A536 100-70-03	-				
	N1 Aluminium alloys ≤ 12% Si		3.3547	AlMg4.5Mn	5083	Peraluman 440				250÷400
			3.2315	AlMgSi 1	6082	Anticorodal 100				
	N2 Aluminium alloys > 12% Si		3.2582	GD-AISI12	A413.0					150÷300
				G-AISI6Cu4	319					
	N3 Copper		2.0940-01	CuAl10Fe	CA952					200÷300
			2.1176	CuPb10Sn	CA937					
	N4 Bronze and brass		2.0401	Cu Zn39Pb3		OT58				200÷300
						AMPCO 18				

TURNING

THREADING

GROOVING

MILLING

DRILLING

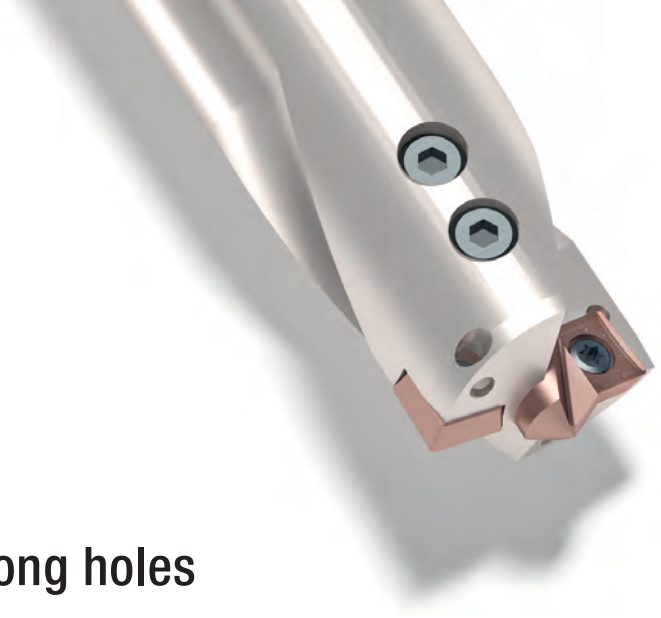
ACCESSORIES



DRILLING DRSpilot

DRSPILOT^{6XD}_{9XD}

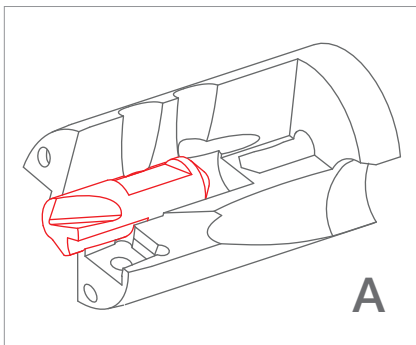
Perfect centering even on extra long holes



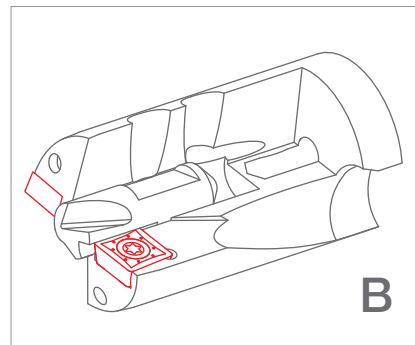
1. Where is DRSpilot applicable?

PLAIN SURFACE	CONCAVE SURFACE	PIPES	HALF HOLE	HOLE EXPANSION	SLANT SURFACE	STACKED PLATES

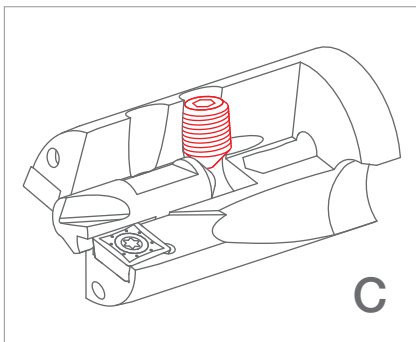
2. Installation of inserts and pilot drill



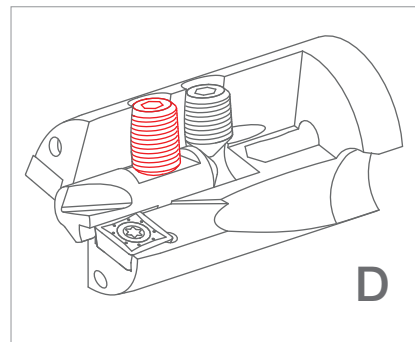
Insert DRSP pilot in the drilling body.



Install the SPMX/SPGX inserts.



Adjust the DRSP pilot height using the setting grain as shown in the drawing, following the table at pag.273.



Screw tight the locking grain.

SP \square X	DRS PILOT 4 edges drilling inserts					ISO513	HC-PVD		HW											
	Size	IC	S	D1	RE		JP5625	JP5530	JP9635	JW6520										
<p>4 edges</p>	05	5.00	2.38	2.50	0.40	P	60 220	60 220												
	06	6.00	2.38	2.80	0.40	M			40 160											
	07	7.94	3.97	2.80	0.80	K	100 190	100 190												
						N				150 300										
						S														
						H														
GRADE APPLICATION AREA		Stable machining			+		-		○											
■ main application		General machining			-		+		○											
■ applicable		Unstable machining			+		-		○											

GENERAL	GP P M K	SPMX	050204-GP	6xD	f _n	0.08	0.10	0.12	●	●	●										
				9xD	f _n	0.06	0.08	0.10													
ALUMINIUM	AL N	SPMX	060204-GP	6xD	f _n	0.08	0.10	0.12	●	●	●										
				9xD	f _n	0.06	0.08	0.10													
				SPMX	07T308-GP	6xD	f _n	0.09	0.11	0.13	●	●	●								
		SPGX	050204-AL	6xD	f _n	0.05	0.07	0.09			●										
				9xD	f _n	0.04	0.06	0.08													
				SPGX	060204-AL	6xD	f _n	0.05	0.07	0.09			●								
9xD	f _n	0.04	0.06	0.08																	
SPGX	07T308-AL	6xD	f _n	0.06	0.08	0.10			●												
9xD	f _n	0.05	0.07	0.09																	

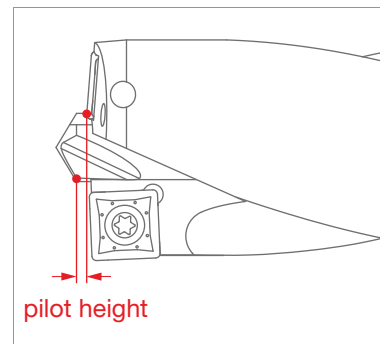
● stock standard

DRSP	DRS PILOT interchangeable centering drill				
	Size	DC	OAL	PL	SIG
	06	6	20	1.5	118°
	08	8	25	2.1	118°

GENERAL	GP P M K N	DRSP 06-GP HSS TIN	●
			DRSP 08-GP HSS TIN

● stock standard

HEIGHT ADJUSTEMENT



MATERIAL	6xD	9xD
P M K	1.0 mm	1.4 mm
N	1.5 mm	1.7 mm

TURNING

THREADING

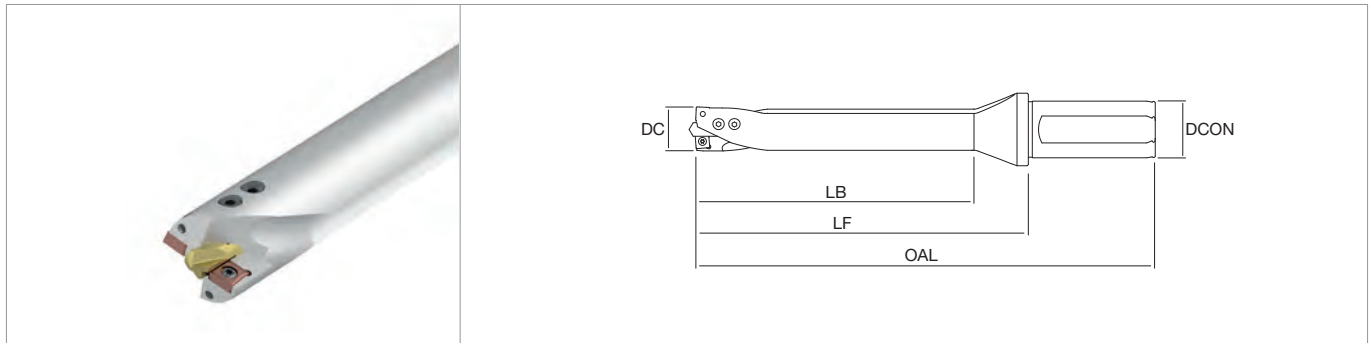
GROOVING

MILLING

DRILLING

ACCESSORIES

TURNING



THREADING

DRS PILOT 6XD				DC	DCON	OAL	LF	LB	KG	MIID (insert)	MIID (pilot)
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GROOVING

05	NT-DRS-6D	D18.00-S25-05P6	●	18	25	191	135	112		SPMX05 SPGX05	DRSP06
				19	25	197	141	118			
06	NT-DRS-6D	D20.00-S25-06P6	●	20	25	203	147	124		SPMX06 SPGX06	DRSP06
		D21.00-S25-06P6	●	21	25	209	153	130			
		D22.00-S25-06P6	●	22	25	215	159	136			
		D23.00-S32-06P6	●	23	32	228	168	142			
		D24.00-S32-06P6	●	24	32	234	174	148			
		D25.00-S32-06P6	●	25	32	240	180	154			
07	NT-DRS-6D	D26.00-S32-07P8	●	26	32	246	186	160		SPMX07 SPGX07	DRSP08
		D27.00-S32-07P8	●	27	32	252	192	166			
		D28.00-S32-07P8	●	28	32	258	198	172			
		D29.00-S32-07P8	●	29	32	264	204	178			
		D30.00-S32-07P8	●	30	32	270	210	184			

● stock standard

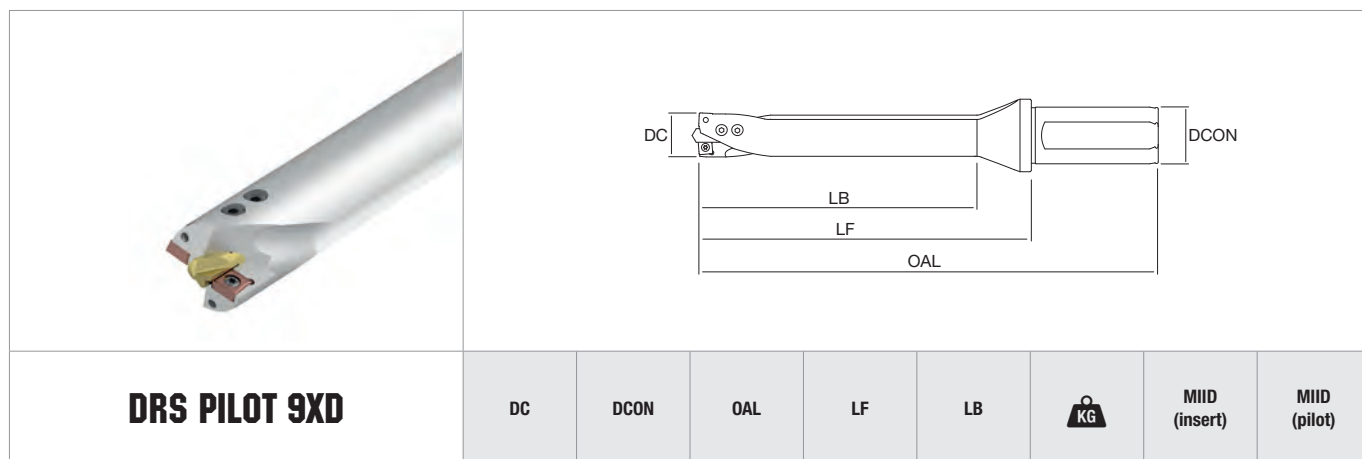
MILLING

Spare Parts	INSERT SCREW	INSERT WRENCH
NT-DRS-6D D _{00.00} -S ₀₀ -05P6	NT-ST059	NT-FTB06
NT-DRS-6D D _{00.00} -S ₀₀ -06P6	NT-ST061	NT-FTB06
NT-DRS-6D D _{00.00} -S ₀₀ -07P8	NT-ST062	NT-FTB07

Spare Parts	LOCKING GRAIN	SETTING GRAIN	GRAIN WRENCH
DC 18÷22	NT-ST042	NT-ST043	NT-WR025
DC 23÷25	NT-ST044	NT-ST045	
DC 26÷30	NT-ST046	NT-ST047	NT-WR030

DRILLING

ACCESSORIES



DRS PILOT 9XD				DC	DCON	OAL	LF	LB	KG	MIID (insert)	MIID (pilot)
05	NT-DRS-9D	D18.00-S25-05P6	●	18	25	245	189	166		SPMX05 SPGX05	DRSP06
		D19.00-S25-05P6	●	19	25	254	198	175			
06	NT-DRS-9D	D20.00-S25-06P6	●	20	25	263	207	184		SPMX06 SPGX06	DRSP06
		D21.00-S25-06P6	●	21	25	272	216	193			
		D22.00-S25-06P6	●	22	25	281	225	202			
		D23.00-S32-06P6	●	23	32	297	237	211			
		D24.00-S32-06P6	●	24	32	306	246	220			
		D25.00-S32-06P6	●	25	32	315	255	229			
07	NT-DRS-9D	D26.00-S32-07P8	●	26	32	324	264	238		SPMX07 SPGX07	DRSP08
		D27.00-S32-07P8	●	27	32	333	273	247			
		D28.00-S32-07P8	●	28	32	342	282	256			
		D29.00-S32-07P8	●	29	32	351	291	265			
		D30.00-S32-07P8	●	30	32	360	300	274			

● stock standard

Spare Parts	INSERT SCREW	INSERT WRENCH
NT-DRS-9D D _{00.00} -S ₀₀ -05P6	NT-ST059	NT-FTB06
NT-DRS-9D D _{00.00} -S ₀₀ -06P6	NT-ST061	NT-FTB06
NT-DRS-9D D _{00.00} -S ₀₀ -07P8	NT-ST062	NT-FTB07

Spare Parts	LOCKING GRAIN	SETTING GRAIN	GRAIN WRENCH
DC 18÷22	NT-ST042	NT-ST043	NT-WR025
DC 23÷25	NT-ST044	NT-ST045	
DC 26÷30	NT-ST046	NT-ST047	NT-WR030

TURNING

THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

DRSPILLOT

CUTTING SPEED [m/min]

	MATERIALS	HARDNESS/Rm	W.-Nr	DIN	AISI-ASTM	TRADE MARK	JPS625	JP5530	JP9635	JU6520
TURNING	P1 Free cutting steel and structural steel	< 500 N/mm ²	1.0715	9 SMn 28	1213	AVP	130÷220	130÷220		
			1.0765	36 SMnPb 14	A29	PR80				
TURNING	P2 Carbon steel and low alloy steel	500-700 N/mm ²	1.7147	20 MnCr 5	5120	-	100÷180	100÷180		
			1.0511	C 40	1040	-				
TURNING	P3 Medium alloy steel and heat treated steel	600-800 N/mm ²	1.1201	42 CrMo 4	4142, 4140	-	80÷170	80÷170		
			1.6511	36 CrNiMo 4	9840	-				
TURNING	P4 High alloy steel	800-1000 N/mm ²	1.1663	C 125 W	W1	-	80÷140	80÷140		
			1.3505	100 Cr 6	52100	-				
TURNING	P5 Tool steel	900-1200 N/mm ²	1.2080	X 210 Cr 12	D3	K100	60÷120	60÷120		
			1.2379	X 155 CrVMo 12 1	-	K110				
THREADING	M1 Ferritic stainless steel	400-700 N/mm ²	1.4016	X 6 Cr 17	430	-			90÷160	
			1.4104	X 12 CrMoS 17	430 F	-				
THREADING	M2 Austenitic stainless steel (good machinability)	500-750 N/mm ²	1.4305	X 10 CrNiS 18 9	303	-			60÷130	
			1.4301	X 6 CrNi 18 10	304, 304 H	-				
THREADING	M3 Austenitic stainless steel (medium machinability)	550-850 N/mm ²	1.4401	X 5 CrNiMo 17 12 2	316	-			50÷110	
			1.4462	X 2 CrNiMoN 22 5	F 51-329 A	DUPLEX				
THREADING	M4 Martensitic stainless steel	650-950 N/mm ²	1.4021	X 20 Cr 13	420	-			50÷110	
			1.4410	X 2 CrNiMoN 25 7 4	F 53-329 S1	SUPER DUPLEX				
GROOVING	M5 PH stainless steel	800-1250 N/mm ²	1.4540	X 4 CrNiCuNb 16 4	XM-12	15-5-PH			40÷100	
			1.4542	X 5 CrNiNb 16 4	631	17-4-PH				
GROOVING	K1 Grey cast iron	150-250 HB	0.6020	GG-20	A48 30 B	-	130÷190	130÷190		
			0.6025	GG-25	A48 35 B	-				
GROOVING	K2 Nodular cast iron	150-350 HB	0.7050	GGG-50	A536 80-55-6	-	100÷140	100÷140		
			0.7070	GGG-70	A536 100-70-03	-				
MILLING	N1 Aluminium alloys ≤ 12% Si		3.3547	AlMg4.5Mn	5083	Peraluman 440				200÷300
			3.2315	AlMgSi 1	6082	Anticorodal 100				
MILLING	N2 Aluminium alloys > 12% Si		3.2582	GD-AISI12	A413.0					120÷240
				G-AISI6Cu4	319					
MILLING	N3 Copper		2.0940-01	CuAl10Fe	CA952					150÷240
			2.1176	CuPb10Sn	CA937					
MILLING	N4 Bronze and brass		2.0401	Cu Zn39Pb3		OT58				150÷240
						AMPCO 18				

DRILLING

ACCESSORIES