

TOTIME U drill, featuring uniquely designed insert, offers highly economical drilling with enhanced stability and long tool life.

Line up:

Inserts:

Available in the sizes SPMG/MX 05, 07, 09, 11, and 14
Each has 4 cutting edges

Drill bodies:

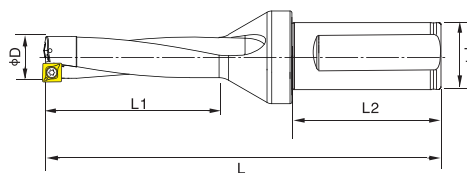
ZD: Available in L/D=2, 3,4 and 5 in metric shank sizes
from $\varnothing D_c$ 13 to 60 Tolerance: $-0.1 \sim +0.2$

Grades:

TI620: First choice for general purpose

TN200: Suitable for Non-ferrous metal processing

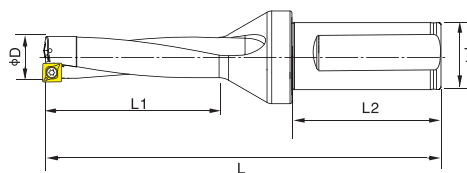




2D-SP U DRILL

Unit (mm)

Model No.	Size					Insert	Screw	Wrench	List USD			
	D	L1	L	L2	d							
ZD02-13.0-XP25-SP05-02	13	26	104	56	25	SP□X050204	ST0205	T6	\$89.0			
ZD02-13.5-XP25-SP05-02	13.5	27	105						\$89.0			
ZD02-14.0-XP25-SP05-02	14	28	106						\$89.0			
ZD02-14.5-XP25-SP05-02	14.5	29	107						\$89.0			
ZD02-15.0-XP25-SP05-02	15	30	108						\$89.0			
ZD02-15.5-XP25-SP06-02	15.5	31	109			SP□X060204	ST2205		\$89.0			
ZD02-16.0-XP25-SP06-02	16	32	110						\$89.0			
ZD02-16.5-XP25-SP06-02	16.5	33	111						\$89.0			
ZD02-17.0-XP25-SP06-02	17	34	112						\$89.0			
ZD02-17.5-XP25-SP06-02	17.5	35	113						\$89.0			
ZD02-18.0-XP25-SP06-02	18	36	114						\$89.0			
ZD02-18.5-XP25-SP06-02	18.5	37	115						\$89.0			
ZD02-19.0-XP25-SP06-02	19	38	116						\$89.0			
ZD02-19.5-XP25-SP06-02	19.5	39	117						\$89.0			
ZD02-20.0-XP25-SP06-02	20	40	119						\$89.0			
ZD02-20.5-XP25-SP06-02	20.5	41	120						\$111.5			
ZD02-21.0-XP25-SP06-02	21	42	121						\$111.5			
ZD02-21.5-XP25-SP06-02	21.5	43	122						\$111.5			
ZD02-22.0-XP25-SP07-02	22	44	123			SP□X07T308	ST2506	T8	\$111.5			
ZD02-22.5-XP25-SP07-02	22.5	45	124						\$111.5			
ZD02-23.0-XP25-SP07-02	23	46	125						\$111.5			
ZD02-23.5-XP25-SP07-02	23.5	47	126						\$111.5			
ZD02-24.0-XP25-SP07-02	24	48	127						\$111.5			
ZD02-24.5-XP25-SP07-02	24.5	49	128						\$111.5			
ZD02-25.0-XP32-SP07-02	25	50	141	60	32				\$125.5			
ZD02-25.5-XP32-SP07-02	25.5	51	142						\$125.5			
ZD02-26.0-XP32-SP07-02	26	52	143						\$125.5			
ZD02-26.5-XP32-SP07-02	26.5	53	144						\$125.5			
ZD02-27.0-XP32-SP07-02	27	54	145						\$125.5			
ZD02-27.5-XP32-SP09-02	27.5	55	146		SP□X090408	ST3508	T15	\$125.5				
ZD02-28.0-XP32-SP09-02	28	56	147					\$125.5				
ZD02-28.5-XP32-SP09-02	28.5	57	148					\$125.5				
ZD02-29.0-XP32-SP09-02	29	58	149					\$125.5				
ZD02-29.5-XP32-SP09-02	29.5	59	150					\$125.5				
ZD02-30.0-XP32-SP09-02	30	60	151					\$125.5				
ZD02-30.5-XP32-SP09-02	30.5	61	152					\$146.5				
ZD02-31.0-XP32-SP09-02	31	62	153					\$146.5				
ZD02-31.5-XP32-SP09-02	31.5	63	154					\$146.5				
ZD02-32.0-XP32-SP09-02	32	64	155					\$146.5				
ZD02-32.5-XP32-SP09-02	32.5	65	156					\$146.5				
ZD02-33.0-XP32-SP09-02	33	66	157					\$146.5				
ZD02-33.5-XP32-SP11-02	33.5	67	158		SP□X110408	ST4010		\$146.5				
ZD02-34.0-XP32-SP11-02	34	68	159					\$146.5				
ZD02-34.5-XP32-SP11-02	34.5	69	160					\$146.5				
ZD02-35.0-XP32-SP11-02	35	70	161					\$146.5				
ZD02-35.5-XP32-SP11-02	35.5	71	162					\$180.0				



2D-SP U DRILL

Unit (mm)

Model No.	Size					Insert	Screw	Wrench	List USD
	D	L1	L	L2	d				
ZD02-36.0-XP32-SP11-02	36	72	163	60	32	SP□X110408	ST4010	T15	\$180.0
ZD02-36.5-XP32-SP11-02	36.5	73	164						\$180.0
ZD02-37.0-XP32-SP11-02	37	74	165						\$180.0
ZD02-37.5-XP32-SP11-02	37.5	75	166						\$180.0
ZD02-38.0-XP32-SP11-02	38	76	167						\$180.0
ZD02-38.5-XP32-SP11-02	38.5	77	168						\$180.0
ZD02-39.0-XP32-SP11-02	39	78	169						\$180.0
ZD02-39.5-XP32-SP11-02	39.5	79	170						\$180.0
ZD02-40.0-XP32-SP11-02	40	80	171						\$180.0
ZD02-41.0-XP32-SP14-02	41	82	173						65
ZD02-42.0-XP32-SP14-02	42	84	175	\$218.0					
ZD02-43.0-XP40-SP14-02	43	86	186	\$218.0					
ZD02-44.0-XP40-SP14-02	44	88	188	\$218.0					
ZD02-45.0-XP40-SP14-02	45	90	190	\$218.0					
ZD02-46.0-XP40-SP14-02	46	92	192	\$242.5					
ZD02-47.0-XP40-SP14-02	47	94	194	\$242.5					
ZD02-48.0-XP40-SP14-02	48	96	196	\$242.5					
ZD02-49.0-XP40-SP14-02	49	98	198	\$242.5					
ZD02-50.0-XP40-SP14-02	50	100	200	\$242.5					
ZD02-51.0-XP40-SP14-02	51	102	202	\$275.0					
ZD02-52.0-XP40-SP09-04	52	104	204	SP□X090408	ST3508	T15	\$275.0		
ZD02-53.0-XP40-SP09-04	53	106	206				\$275.0		
ZD02-54.0-XP40-SP09-04	54	108	208				\$275.0		
ZD02-55.0-XP40-SP09-04	55	110	210				\$275.0		
ZD02-56.0-XP40-SP09-04	56	112	212				\$314.0		
ZD02-57.0-XP40-SP09-04	57	114	214				\$314.0		
ZD02-58.0-XP40-SP09-04	58	116	216				\$314.0		
ZD02-59.0-XP40-SP09-04	59	118	218				\$314.0		
ZD02-60.0-XP40-SP09-04	60	120	220				\$314.0		

Carbide Drills

Hss Drills

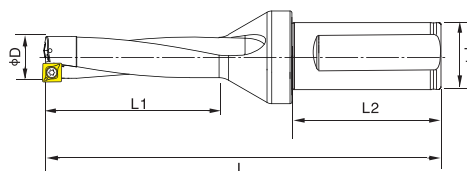
U Drills

Head Exchangeable Drills

Deep Hole Drills

CDR 45 Chamfer Cutter

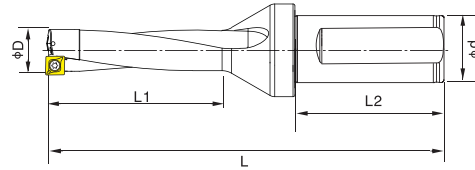
Non-standard Drill made



3D-SP U DRILL

Unit (mm)

Model No.	Size					Insert	Screw	Wrench	List USD				
	D	L1	L	L2	d								
ZD03-13.0-XP25-SP05-02	13	39	117	56	25	SP□X050204	ST0205	T6	\$94.0				
ZD03-13.5-XP25-SP05-02	13.5	40.5	118						\$94.0				
ZD03-14.0-XP25-SP05-02	14	42	120						\$94.0				
ZD03-14.5-XP25-SP05-02	14.5	43.5	122						\$94.0				
ZD03-15.0-XP25-SP05-02	15	45	123						\$94.0				
ZD03-15.5-XP25-SP06-02	15.5	46.5	124						\$94.0				
ZD03-16.0-XP25-SP06-02	16	48	126			SP□X060204	ST2205		ST2205	\$94.0			
ZD03-16.5-XP25-SP06-02	16.5	49.5	127							\$94.0			
ZD03-17.0-XP25-SP06-02	17	51	129							\$94.0			
ZD03-17.5-XP25-SP06-02	17.5	52.5	130							\$94.0			
ZD03-18.0-XP25-SP06-02	18	54	132							\$94.0			
ZD03-18.5-XP25-SP06-02	18.5	55.5	133							\$94.0			
ZD03-19.0-XP25-SP06-02	19	57	135							\$94.0			
ZD03-19.5-XP25-SP06-02	19.5	58.5	135							\$94.0			
ZD03-20.0-XP25-SP06-02	20	60	139							\$94.0			
ZD03-20.5-XP25-SP06-02	20.5	61.5	140							\$117.5			
ZD03-21.0-XP25-SP06-02	21	63	142							\$117.5			
ZD03-21.5-XP25-SP06-02	21.5	64.5	143							\$117.5			
ZD03-22.0-XP25-SP07-02	22	66	145							SP□X07T308	ST2506	ST2506	\$117.5
ZD03-22.5-XP25-SP07-02	22.5	67.5	148										\$117.5
ZD03-23.0-XP25-SP07-02	23	69	148	\$117.5									
ZD03-23.5-XP25-SP07-02	23.5	70.5	149	\$117.5									
ZD03-24.0-XP25-SP07-02	24	72	151	\$117.5									
ZD03-24.5-XP25-SP07-02	24.5	73.5	152	\$117.5									
ZD03-25.0-XP32-SP07-02	25	75	166	\$117.5									
ZD03-25.5-XP32-SP07-02	25.5	76.5	167	\$132.0									
ZD03-26.0-XP32-SP07-02	26	78	169	\$132.0									
ZD03-26.5-XP32-SP07-02	26.5	79.5	170	\$132.0									
ZD03-27.0-XP32-SP07-02	27	81	172	\$132.0									
ZD03-27.5-XP32-SP09-02	27.5	82.5	173	SP□X090408	ST3508	ST3508	\$132.0						
ZD03-28.0-XP32-SP09-02	28	84	175				\$132.0						
ZD03-28.5-XP32-SP09-02	28.5	85.5	176				\$132.0						
ZD03-29.0-XP32-SP09-02	29	87	178				\$132.0						
ZD03-29.5-XP32-SP09-02	29.5	88.5	179				\$132.0						
ZD03-30.0-XP32-SP09-02	30	90	181				\$132.0						
ZD03-30.5-XP32-SP09-02	30.5	91.5	182				\$154.0						
ZD03-31.0-XP32-SP09-02	31	93	184				\$154.0						
ZD03-31.5-XP32-SP09-02	31.5	94.5	185				\$154.0						
ZD03-32.0-XP32-SP09-02	32	96	187				\$154.0						
ZD03-32.5-XP32-SP09-02	32.5	97.5	188				\$154.0						
ZD03-33.0-XP32-SP09-02	33	99	190				\$154.0						
ZD03-33.5-XP32-SP11-02	33.5	100.5	191				SP□X110408	ST4010	ST4010	\$154.0			
ZD03-34.0-XP32-SP11-02	34	102	193							\$154.0			
ZD03-34.5-XP32-SP11-02	34.5	103.5	194	\$154.0									
ZD03-35.0-XP32-SP11-02	35	105	196	\$154.0									
ZD03-35.5-XP32-SP11-02	35.5	106.5	197	\$197.0									



3D-SP U DRILL

Unit (mm)

Model No.	Size					Insert	Screw	Wrench	List USD
	D	L1	L	L2	d				
ZD03-36.0-XP32-SP11-02	36	108	199	60	32	SP□X110408	ST4010	T15	\$197.0
ZD03-36.5-XP32-SP11-02	36.5	109.5	200						\$197.0
ZD03-37.0-XP32-SP11-02	37	111	202						\$197.0
ZD03-37.5-XP32-SP11-02	37.5	112.5	203						\$197.0
ZD03-38.0-XP32-SP11-02	38	114	205						\$197.0
ZD03-38.5-XP32-SP11-02	38.5	115.5	206						\$197.0
ZD03-39.0-XP32-SP11-02	39	117	206						\$197.0
ZD03-39.5-XP32-SP11-02	39.5	118.5	209						\$197.0
ZD03-40.0-XP32-SP11-02	40	120	211						\$197.0
ZD03-41.0-XP32-SP14-02	41	123	214						65
ZD03-42.0-XP32-SP14-02	42	126	217	\$243.5					
ZD03-43.0-XP40-SP14-02	43	129	229	\$243.5					
ZD03-44.0-XP40-SP14-02	44	132	232	\$243.5					
ZD03-45.0-XP40-SP14-02	45	135	235	\$243.5					
ZD03-46.0-XP40-SP14-02	46	138	238	\$274.5					
ZD03-47.0-XP40-SP14-02	47	141	241	\$274.5					
ZD03-48.0-XP40-SP14-02	48	144	244	\$274.5					
ZD03-49.0-XP40-SP14-02	49	147	247	\$274.5					
ZD03-50.0-XP40-SP14-02	50	150	250	\$274.5					
ZD03-51.0-XP40-SP14-02	51	153	253	\$313.5					
ZD03-52.0-XP40-SP09-04	52	156	256	SP□X090408	ST3508	T15	\$313.5		
ZD03-53.0-XP40-SP09-04	53	159	259				\$313.5		
ZD03-54.0-XP40-SP09-04	54	162	262				\$313.5		
ZD03-55.0-XP40-SP09-04	55	165	265				\$313.5		
ZD03-56.0-XP40-SP09-04	56	168	268				\$352.5		
ZD03-57.0-XP40-SP09-04	57	171	271				\$352.5		
ZD03-58.0-XP40-SP09-04	58	175	274				\$352.5		
ZD03-59.0-XP40-SP09-04	59	177	277				\$352.5		
ZD03-60.0-XP40-SP09-04	60	180	280				\$352.5		

Carbide Drills

Hss Drills

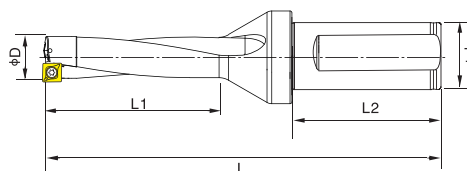
U Drills

Head Exchangeable Drills

Deep Hole Drills

CDR 45 Chamfer Cutter

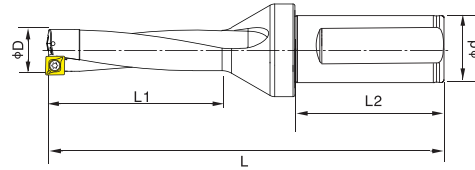
Non-standard Drill made



4D-SP U DRILL

Unit (mm)

Model No.	Size					Insert	Screw	Wrench	List USD			
	D	L1	L	L2	d							
ZD04-13.0-XP25-SP05-02	13	52	130	56	25	SP□X050204	ST0205	T6	\$105.0			
ZD04-13.5-XP25-SP05-02	13.5	54	132						\$105.0			
ZD04-14.0-XP25-SP05-02	14	56	134						\$105.0			
ZD04-14.5-XP25-SP05-02	14.5	58	136						\$105.0			
ZD04-15.0-XP25-SP05-02	15	60	138						\$105.0			
ZD04-15.5-XP25-SP06-02	15.5	62	140			SP□X060204	ST2205		\$105.0			
ZD04-16.0-XP25-SP06-02	16	64	142						\$105.0			
ZD04-16.5-XP25-SP06-02	16.5	66	144						\$105.0			
ZD04-17.0-XP25-SP06-02	17	68	146						\$105.0			
ZD04-17.5-XP25-SP06-02	17.5	70	148						\$105.0			
ZD04-18.0-XP25-SP06-02	18	72	150						\$105.0			
ZD04-18.5-XP25-SP06-02	18.5	74	152						\$105.0			
ZD04-19.0-XP25-SP06-02	19	76	154						\$105.0			
ZD04-19.5-XP25-SP06-02	19.5	78	155						\$105.0			
ZD04-20.0-XP25-SP06-02	20	80	159						\$105.0			
ZD04-20.5-XP25-SP06-02	20.5	82	161						\$130.5			
ZD04-21.0-XP25-SP06-02	21	84	163						\$130.5			
ZD04-21.5-XP25-SP06-02	21.5	86	165						\$130.5			
ZD04-22.0-XP25-SP07-02	22	88	167						SP□X07T308	ST2506	T8	\$130.5
ZD04-22.5-XP25-SP07-02	22.5	90	169									\$130.5
ZD04-23.0-XP25-SP07-02	23	92	171	\$130.5								
ZD04-23.5-XP25-SP07-02	23.5	94	173	\$130.5								
ZD04-24.0-XP25-SP07-02	24	96	175	\$130.5								
ZD04-24.5-XP25-SP07-02	24.5	98	177	\$130.5								
ZD04-25.0-XP32-SP07-02	25	100	191	\$130.5								
ZD04-25.5-XP32-SP07-02	25.5	102	193	\$146.5								
ZD04-26.0-XP32-SP07-02	26	104	195	\$146.5								
ZD04-26.5-XP32-SP07-02	26.5	106	197	\$146.5								
ZD04-27.0-XP32-SP07-02	27	108	199	\$146.5								
ZD04-27.5-XP32-SP09-02	27.5	110	201	SP□X090408	ST3508	T15	\$146.5					
ZD04-28.0-XP32-SP09-02	28	112	203				\$146.5					
ZD04-28.5-XP32-SP09-02	28.5	114	205				\$146.5					
ZD04-29.0-XP32-SP09-02	29	116	207				\$146.5					
ZD04-29.5-XP32-SP09-02	29.5	118	209				\$146.5					
ZD04-30.0-XP32-SP09-02	30	120	211				\$146.5					
ZD04-30.5-XP32-SP09-02	30.5	122	213				\$190.0					
ZD04-31.0-XP32-SP09-02	31	124	215				\$190.0					
ZD04-31.5-XP32-SP09-02	31.5	126	217				\$190.0					
ZD04-32.0-XP32-SP09-02	32	128	219				\$190.0					
ZD04-32.5-XP32-SP09-02	32.5	130	221				\$190.0					
ZD04-33.0-XP32-SP09-02	33	132	223				\$190.0					
ZD04-33.5-XP32-SP11-02	33.5	134	225				SP□X110408	ST4010	\$190.0			
ZD04-34.0-XP32-SP11-02	34	136	227						\$190.0			
ZD04-34.5-XP32-SP11-02	34.5	138	229						\$190.0			
ZD04-35.0-XP32-SP11-02	35	140	231	\$190.0								
ZD04-35.5-XP32-SP11-02	35.5	142	233	\$214.0								



4D-SP U DRILL

Unit (mm)

Model No.	Size					Insert	Screw	Wrench	List USD
	D	L1	L	L2	d				
ZD04-36.0-XP32-SP11-02	36	144	235	60	32	SP□X110408	ST4010	T15	\$214.0
ZD04-36.5-XP32-SP11-02	36.5	146	237						\$214.0
ZD04-37.0-XP32-SP11-02	37	148	239						\$214.0
ZD04-37.5-XP32-SP11-02	37.5	150	241						\$214.0
ZD04-38.0-XP32-SP11-02	38	152	243						\$214.0
ZD04-38.5-XP32-SP11-02	38.5	154	245						\$214.0
ZD04-39.0-XP32-SP11-02	39	156	247						\$214.0
ZD04-39.5-XP32-SP11-02	39.5	158	249						\$214.0
ZD04-40.0-XP32-SP11-02	40	160	251						\$214.0
ZD04-41.0-XP32-SP14-02	41	164	255						65
ZD04-42.0-XP32-SP14-02	42	168	259	\$271.0					
ZD04-43.0-XP40-SP14-02	43	172	272	\$271.0					
ZD04-44.0-XP40-SP14-02	44	176	276	\$271.0					
ZD04-45.0-XP40-SP14-02	45	180	280	\$271.0					
ZD04-46.0-XP40-SP14-02	46	184	284	\$296.5					
ZD04-47.0-XP40-SP14-02	47	188	288	\$296.5					
ZD04-48.0-XP40-SP14-02	48	192	292	\$296.5					
ZD04-49.0-XP40-SP14-02	49	196	296	\$296.5					
ZD04-50.0-XP40-SP14-02	50	200	300	\$296.5					
ZD04-51.0-XP40-SP14-02	51	204	304	\$368.5					
ZD04-52.0-XP40-SP09-04	52	208	308	SP□X090408	ST3508	T15	\$368.5		
ZD04-53.0-XP40-SP09-04	53	212	312				\$368.5		
ZD04-54.0-XP40-SP09-04	54	216	316				\$368.5		
ZD04-55.0-XP40-SP09-04	55	220	320				\$368.5		
ZD04-56.0-XP40-SP09-04	56	224	324				\$405.5		
ZD04-57.0-XP40-SP09-04	57	228	328				\$405.5		
ZD04-58.0-XP40-SP09-04	58	232	332				\$405.5		
ZD04-59.0-XP40-SP09-04	59	236	336				\$405.5		
ZD04-60.0-XP40-SP09-04	60	240	340				\$405.5		

Carbide Drills

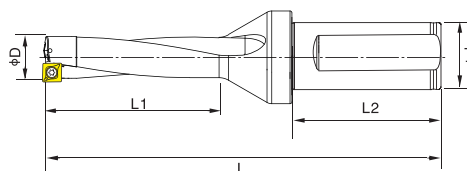
Hss Drills

U Drills

Head Exchangeable
Drills

Deep Hole Drills

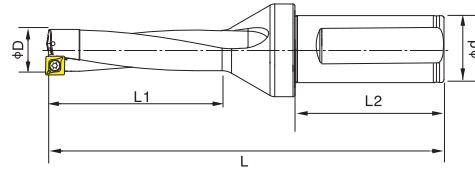
CDR 45
Chamfer CutterNon-standard
Drill made



5D-SP U DRILL

Unit (mm)

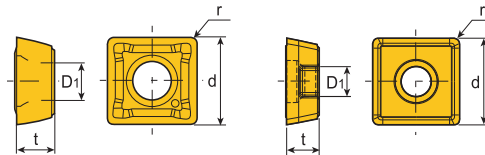
Model No.	Size					Insert	Screw	Wrench	List USD
	D	L1	L	L2	d				
ZD05-20.0-XP25-SP06-02	20	100	179	56	25	SP□X060204	ST2205	T6	\$175.0
ZD05-20.5-XP25-SP06-02	20.5	102.5	181						\$203.5
ZD05-21.0-XP25-SP06-02	21	105	184						\$203.5
ZD05-21.5-XP25-SP06-02	21.5	107.5	186						\$203.5
ZD05-22.0-XP25-SP07-02	22	110	189			SP□X07T308	ST2506	T8	\$203.5
ZD05-22.5-XP25-SP07-02	22.5	112.5	193						\$203.5
ZD05-23.0-XP25-SP07-02	23	115	194						\$203.5
ZD05-23.5-XP25-SP07-02	23.5	117.5	196						\$203.5
ZD05-24.0-XP25-SP07-02	24	120	199						\$203.5
ZD05-24.5-XP25-SP07-02	24.5	122.5	201						\$203.5
ZD05-25.0-XP32-SP07-02	25	125	216	\$203.5					
ZD05-25.5-XP32-SP07-02	25.5	127.5	218	\$238.5					
ZD05-26.0-XP32-SP07-02	26	130	221	\$238.5					
ZD05-26.5-XP32-SP07-02	26.5	132.5	223	\$238.5					
ZD05-27.0-XP32-SP07-02	27	135	226	\$238.5					
ZD05-27.5-XP32-SP09-02	27.5	137.5	228	SP□X090408	ST3508	T15	\$238.5		
ZD05-28.0-XP32-SP09-02	28	140	231				\$238.5		
ZD05-28.5-XP32-SP09-02	28.5	142.5	233				\$238.5		
ZD05-29.0-XP32-SP09-02	29	145	236				\$238.5		
ZD05-29.5-XP32-SP09-02	29.5	147.5	238				\$238.5		
ZD05-30.0-XP32-SP09-02	30	150	241				\$238.5		
ZD05-30.5-XP32-SP09-02	30.5	152.5	243				\$264.0		
ZD05-31.0-XP32-SP09-02	31	155	246				\$264.0		
ZD05-31.5-XP32-SP09-02	31.5	157.5	248				\$264.0		
ZD05-32.0-XP32-SP09-02	32	160	251				\$264.0		
ZD05-32.5-XP32-SP09-02	32.5	162.5	253	\$264.0					
ZD05-33.0-XP32-SP09-02	33	165	256	\$264.0					
ZD05-33.5-XP32-SP11-02	33.5	167.5	258	60	32		SP□X110408	ST4010	\$264.0
ZD05-34.0-XP32-SP11-02	34	170	261						\$264.0
ZD05-34.5-XP32-SP11-02	34.5	172.5	263						\$264.0
ZD05-35.0-XP32-SP11-02	35	175	266						\$264.0
ZD05-35.5-XP32-SP11-02	35.5	177.5	268						\$292.5
ZD05-36.0-XP32-SP11-02	36	180	271						\$292.5
ZD05-36.5-XP32-SP11-02	36.5	182.5	273						\$292.5
ZD05-37.0-XP32-SP11-02	37	185	276						\$292.5
ZD05-37.5-XP32-SP11-02	37.5	187.5	278						\$292.5
ZD05-38.0-XP32-SP11-02	38	190	281						\$292.5
ZD05-38.5-XP32-SP11-02	38.5	192.5	283	\$292.5					
ZD05-39.0-XP32-SP11-02	39	195	284	\$292.5					
ZD05-39.5-XP32-SP11-02	39.5	197.5	288	\$292.5					
ZD05-40.0-XP32-SP11-02	40	200	291	\$292.5					
ZD05-41.0-XP32-SP14-02	41	205	296	SP□X140512	ST5010	T20	\$346.5		
ZD05-42.0-XP32-SP14-02	42	210	301				\$346.5		



5D-SP U DRILL

Unit (mm)

Model No.	Size					Insert	Screw	Wrench	List USD
	D	L1	L	L2	d				
ZD05-43.0-XP40-SP14-02	43	215	315	65	40	SP□X140512	ST5010	T20	\$346.5
ZD05-44.0-XP40-SP14-02	44	220	320						\$346.5
ZD05-45.0-XP40-SP14-02	45	225	325						\$346.5
ZD05-46.0-XP40-SP14-02	46	230	330						\$371.5
ZD05-47.0-XP40-SP14-02	47	235	335						\$371.5
ZD05-48.0-XP40-SP14-02	48	240	340						\$371.5
ZD05-49.0-XP40-SP14-02	49	245	345						\$371.5
ZD05-50.0-XP40-SP14-02	50	250	350						\$371.5
ZD05-51.0-XP40-SP14-02	51	255	355			SP□X090408	ST3508	T15	\$451.0
ZD05-52.0-XP40-SP09-04	52	260	360						\$451.0
ZD05-53.0-XP40-SP09-04	53	265	365						\$451.0
ZD05-54.0-XP40-SP09-04	54	270	370						\$451.0
ZD05-55.0-XP40-SP09-04	55	275	375						\$451.0
ZD05-56.0-XP40-SP09-04	56	280	380						\$543.0
ZD05-57.0-XP40-SP09-04	57	285	385						\$543.0
ZD05-58.0-XP40-SP09-04	58	290	390						\$543.0
ZD05-59.0-XP40-SP09-04	59	295	395						\$543.0
ZD05-60.0-XP40-SP09-04	60	300	400						\$543.0



Unit (mm)

Size	Dimension (mm)			
	d	t	r	D1
06	5.00	2.38	0.4	2.25
07	6.00	2.38	0.4	2.61
09	7.94	3.97	0.8	2.85
11	9.80	4.30	0.8	4.05
14	11.50	4.80	0.8	4.45
14	14.30	5.20	1.2	5.75

Insert	Designation	P	M	K	N	List USD
		Ti620			TN200	
	SPMX050204	●				\$7.40
	SPMX060204	●				\$7.60
	SPMX07T308	●				\$8.20
	SPMX090408	●				\$9.80
	SPMX110408	●				\$10.60
	SPMX140512	●				\$12.70
	SPGX050204				●	\$8.90
	SPGX060204				●	\$8.90
	SPGX07T308				●	\$9.40
	SPGX090408				●	\$10.20
	SPGX110408				●	\$10.70
	SPGX140512				●	\$13.20

Cutting Conditions

Unit (mm)

ISO	Material		Condition	Tensile strength	Hardness	Cutting speed	Feed (mm/rev) vs drill diameter Drill length 2,3,4xD					
				Rm(n/mm ²)	HB	Vc(m/min)	SPGX05	SPGX06	SPGX07	SPGX09	SPGX11	SPGX14
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	420	125	200-280	0.04-0.06	0.04-0.06	0.04-0.08	0.04-0.08	0.06-0.10	0.06-0.12
		>=0.25%C	Annealed	650	190	120-190	0.05-0.08	0.06-0.10	0.06-0.12	0.07-0.13	0.08-0.15	0.08-0.16
		<0.55%C	Quenched and tempered	850	250	110-180	0.06-0.12	0.08-0.15	0.10-0.18	0.12-0.22	0.12-0.24	0.13-0.25
		>=0.55%C	Annealed	750	220	110-180	0.06-0.12	0.08-0.15	0.10-0.18	0.12-0.22	0.12-0.24	0.13-0.25
		0.55-0.80%	Quenched and tempered	1000	300	110-180	0.06-0.12	0.08-0.15	0.10-0.18	0.12-0.22	0.12-0.24	0.13-0.25
	Low alloy steel and cast steel (Less than 5% of alloying elements)		Annealed	600	200	120-190	0.06-0.12	0.08-0.14	0.10-0.18	0.12-0.20	0.12-0.20	0.13-0.20
				930	275	120-160	0.06-0.15	0.06-0.15	0.08-0.18	0.08-0.18	0.08-0.18	0.08-0.18
				1000	300	120-160	0.06-0.15	0.06-0.15	0.08-0.18	0.08-0.18	0.08-0.18	0.08-0.18
				1200	350	120-160	0.06-0.15	0.06-0.15	0.08-0.18	0.08-0.18	0.08-0.18	0.08-0.18
	"High alloy steel, cast steeland tool steel"		Annealed	680	200	120-180	0.06-0.10	0.06-0.10	0.08-0.12	0.08-0.14	0.08-0.14	0.08-0.14
			Quenched and tempered	1100	325	120-180	0.06-0.10	0.08-0.12	0.10-0.15	0.12-0.15	0.12-0.18	0.13-0.18
	M	"Stainless steel and cast steel"	Ferritic / martensitic	680	200	170-230	0.05-0.10	0.06-0.12	0.08-0.15	0.09-0.16	0.10-0.17	0.11-0.18
Martensitic			820	240	170-230	0.05-0.10	0.06-0.12	0.08-0.15	0.09-0.16	0.10-0.17	0.11-0.18	
Austenitic			600	180	170-230	0.05-0.10	0.06-0.12	0.08-0.15	0.09-0.16	0.10-0.17	0.11-0.18	
K	Grey cast iron	-	-	250	120-200	0.09-0.3	0.09-0.33	0.1-0.36	0.1-0.37	0.01-0.38	0.12-0.48	
N	Aluminium Alloy	-	-	-	200-320	0.06-0.17	0.06-0.17	0.06-0.18	0.07-0.20	0.07-0.20	0.08-0.22	
	Copper Alloy	-	-	-	200-320	0.06-0.17	0.06-0.17	0.06-0.18	0.07-0.20	0.07-0.20	0.08-0.22	

ISO	Material		Condition	Tensile strength	Hardness	Cutting speed	Feed (mm/rev) vs. drill diameter Drill length 5xD					
				Rm(n/mm²)	HB	Vc(m/min)	SPGX05	SPGX06	SPGX07	SPGX09	SPGX11	SPGX14
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	420	125	200-280	0.04-0.05	0.04-0.05	0.04-0.06	0.04-0.07	0.06-0.08	0.06-0.10
		>=0.25%C	Annealed	650	190	120-190	0.06-0.08	0.06-0.08	0.06-0.10	0.07-0.12	0.08-0.13	0.08-0.14
		<0.55%C	Quenched and tempered	850	250	110-180	0.06-0.10	0.08-0.13	0.10-0.16	0.12-0.20	0.12-0.22	0.13-0.23
		>=0.55%C	Annealed	750	220	110-180	0.06-0.10	0.08-0.13	0.10-0.16	0.12-0.20	0.12-0.22	0.13-0.23
		0.55-0.80%	Quenched and tempered	1000	300	110-180	0.06-0.10	0.08-0.13	0.10-0.16	0.12-0.20	0.12-0.22	0.13-0.23
	Low alloy steel and cast steel (Less than 5% of alloying elements)		Annealed	600	200	120-190	0.06-0.10	0.08-0.12	0.10-0.16	0.12-0.18	0.12-0.18	0.13-0.18
			Quenched and tempered	930	275	120-160	0.06-0.12	0.06-0.13	0.08-0.16	0.08-0.16	0.08-0.17	0.08-0.17
				1000	300	120-160	0.06-0.12	0.06-0.13	0.08-0.16	0.08-0.16	0.08-0.17	0.08-0.17
				1200	350	120-160	0.06-0.12	0.06-0.13	0.08-0.16	0.08-0.16	0.08-0.17	0.08-0.17
	"High alloy steel, cast steeland tool steel"		Annealed	680	200	120-180	0.06-0.08	0.06-0.08	0.08-0.10	0.08-0.12	0.08-0.12	0.08-0.12
			Quenched and tempered	1100	325	120-180	0.08-0.09	0.08-0.10	0.10-0.13	0.12-0.13	0.12-0.15	0.12-0.16
	M	"Stainless steel and cast steel"	Ferritic / martensitic	680	200	170-230	0.05-0.09	0.06-0.10	0.08-0.13	0.09-0.15	0.10-0.15	0.10-0.17
Martensitic			820	240	170-230	0.05-0.09	0.06-0.10	0.08-0.13	0.09-0.15	0.10-0.15	0.10-0.17	
Austenitic			600	180	170-230	0.05-0.09	0.06-0.10	0.08-0.13	0.09-0.15	0.10-0.15	0.10-0.17	
K	Grey cast iron	-	-	250	120-200	0.09-0.3	0.09-0.33	0.1-0.36	0.1-0.37	0.01-0.38	0.12-0.48	
N	Aluminium Alloy	-	-	-	200-320	0.05-0.15	0.05-0.15	0.06-0.16	0.06-0.16	0.06-0.20	0.08-0.18	
	Copper Alloy	-	-	-	180-280	0.05-0.15	0.05-0.15	0.06-0.16	0.06-0.16	0.07-0.20	0.08-0.18	