



# MULTI-1 DRILLS

## RECOMMENDED CUTTING CONDITIONS EMPFOHLENE SCHNEIDPARAMETER

CARBIDE

HSS

### CDRA03, CDRA04 SERIES

### MULTI-1 DRILLS

VC = M/MIN  
RPM = rev./min.  
FEED = mm/rev.

ISO	VDI 3323	Material Description	Vc	Parameter	Drill Diameter (mm)		Vc	Parameter	Drill Diameter (mm)			
					1.0				2.0	3.0	4.0	5.0
P	1	Non-alloy steel	30	RPM FEED	9550 0.01~0.03		40	RPM FEED	6370 0.03~0.06	4240 0.08~0.12	3180 0.09~0.15	2550 0.12~0.18
	2		28	RPM FEED	8910 0.01~0.03		35	RPM FEED	5570 0.03~0.06	3710 0.08~0.12	2790 0.09~0.15	2230 0.12~0.18
	3		28	RPM FEED	8910 0.01~0.03		35	RPM FEED	5570 0.03~0.06	3710 0.08~0.12	2790 0.09~0.15	2230 0.12~0.18
	6	Low alloy steel	28	RPM FEED	8910 0.01~0.03		35	RPM FEED	5570 0.03~0.06	3710 0.08~0.12	2790 0.09~0.15	2230 0.12~0.18
	7		23	RPM FEED	7320 0.01~0.03		30	RPM FEED	4770 0.03~0.05	3180 0.06~0.10	2390 0.07~0.13	1910 0.10~0.16
	8		20	RPM FEED	6370 0.01~0.02		25	RPM FEED	3980 0.02~0.05	2650 0.03~0.07	1990 0.04~0.10	1590 0.06~0.12
	9		15	RPM FEED	4770 0.01~0.02		20	RPM FEED	3180 0.02~0.05	2120 0.03~0.07	1590 0.04~0.10	1270 0.06~0.12
M	12	Stainless steel	15	RPM FEED	4770 0.01~0.03		20	RPM FEED	3180 0.03~0.07	2120 0.05~0.09	1590 0.06~0.12	1270 0.09~0.15
	14		13	RPM FEED	4140 0.01~0.02		15	RPM FEED	2390 0.02~0.05	1590 0.03~0.07	1190 0.04~0.10	950 0.06~0.12
K	15	Grey cast iron	30	RPM FEED	9550 0.02~0.04		40	RPM FEED	6370 0.04~0.10	4240 0.07~0.13	3180 0.09~0.15	2550 0.12~0.18
N	21	Aluminum-wrought alloy	68	RPM FEED	21650 0.09~0.13		90	RPM FEED	14320 0.13~0.17	9550 0.23~0.27	7160 0.27~0.33	5730 0.33~0.39
	22		68	RPM FEED	21650 0.09~0.13		90	RPM FEED	14320 0.13~0.17	9550 0.23~0.27	7160 0.27~0.33	5730 0.33~0.39
	23	Aluminum-cast, alloyed	60	RPM FEED	19100 0.09~0.13		80	RPM FEED	12730 0.13~0.17	8490 0.23~0.27	6370 0.27~0.33	5090 0.33~0.39
	24		55	RPM FEED	17510 0.06~0.10		70	RPM FEED	11140 0.10~0.14	7430 0.15~0.19	5570 0.20~0.26	4460 0.24~0.30
S	36	Titanium Alloys	5	RPM FEED	1590 0.01~0.02		5	RPM FEED	800 0.02~0.05	530 0.03~0.07	400 0.04~0.08	320 0.06~0.12

ISO	VDI 3323	Material Description	Vc	Parameter	Drill Diameter (mm)				
					6.0	8.0	10.0	12.0	13.0
P	1	Non-alloy steel	40	RPM FEED	2120 0.14~0.20	1590 0.18~0.24	1270 0.18~0.28	1060 0.20~0.30	980 0.20~0.30
	2		35	RPM FEED	1860 0.14~0.20	1390 0.18~0.24	1110 0.18~0.28	930 0.20~0.30	860 0.20~0.30
	3		35	RPM FEED	1860 0.14~0.20	1390 0.18~0.24	1110 0.18~0.28	930 0.20~0.30	860 0.20~0.30
	6	Low alloy steel	35	RPM FEED	1860 0.14~0.20	1390 0.18~0.24	1110 0.18~0.28	930 0.20~0.30	860 0.20~0.30
	7		30	RPM FEED	1590 0.12~0.18	1190 0.14~0.20	950 0.14~0.24	800 0.16~0.26	730 0.16~0.26
	8		25	RPM FEED	1330 0.07~0.13	990 0.10~0.20	800 0.12~0.22	660 0.14~0.24	610 0.14~0.24
9	20	RPM FEED	1060 0.07~0.13	800 0.10~0.20	640 0.12~0.22	530 0.14~0.24	490 0.14~0.24		
M	12	Stainless steel	20	RPM FEED	1060 0.12~0.18	800 0.18~0.24	640 0.20~0.30	530 0.26~0.36	490 0.26~0.36
	14		15	RPM FEED	800 0.07~0.13	600 0.10~0.20	480 0.12~0.22	400 0.14~0.24	370 0.14~0.24
K	15	Grey cast iron	40	RPM FEED	2120 0.13~0.19	1590 0.18~0.24	1270 0.20~0.30	1060 0.22~0.32	980 0.22~0.32
N	21	Aluminum-wrought alloy	90	RPM FEED	4770 0.40~0.46	3580 0.45~0.51	2860 0.51~0.61	2390 0.63~0.73	2200 0.63~0.73
	22		90	RPM FEED	4770 0.40~0.46	3580 0.45~0.51	2860 0.51~0.61	2390 0.63~0.73	2200 0.63~0.73
	23	Aluminum-cast, alloyed	80	RPM FEED	4240 0.40~0.46	3180 0.45~0.51	2550 0.51~0.61	2120 0.63~0.73	1960 0.63~0.73
	24		70	RPM FEED	3710 0.28~0.34	2790 0.30~0.36	2230 0.34~0.44	1860 0.36~0.46	1710 0.36~0.46
S	36	Titanium Alloys	5	RPM FEED	270 0.07~0.13	200 0.09~0.15	160 0.12~0.22	130 0.14~0.24	120 0.14~0.24

i-CONE DRILLS

i-DREAM DRILLS

DREAM DRILLS -PRO

DREAM DRILLS -GENERAL

DREAM DRILLS -HIGH FEED

DREAM DRILLS -FLAT BOTTOM

DREAM DRILLS -INOX

DREAM DRILLS -ALU

DREAM DRILLS -MQL

DREAM DRILLS for HIGH HARDENED STEELS

GENERAL CARBIDE DRILLS

MULTI-1 DRILLS

HPD DRILLS

GOLD-P DRILLS

SUPER-GP DRILLS

STRAIGHT SHANK DRILLS

TAPER SHANK DRILLS

NC-SPOTTING DRILLS

CENTER DRILLS

SPADE DRILLS

REAMERS

COUNTER SINKS

COUNTER BORES

TECHNICAL DATA