

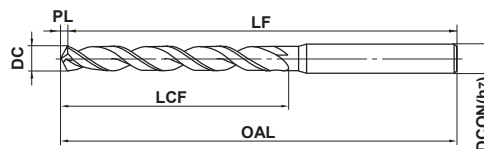
HSS MILLING SHANK DRILLS

SEPDM NEW
SE High Precision Drill (M)



P	M	K	N	S	H
Steel	Stainless Steel	Cast Iron	Non-ferrous Metal		

$0.5 \leq DC \leq 3$	$3.1 \leq DC \leq 4$
0	0
-0.006	-0.008



- Unique D-STH process dramatically improves sharpness and welding resistance and smooth chip discharge.

Unit : mm

Order Number	DC	LCF	OAL	LF	PL	DCON	Stock
SEPDM0050	0.50	6.15	50.15	50	0.15	3	●
SEPDM0055	0.55	6.17	50.17	50	0.17	3	●
SEPDM0060	0.60	8.18	50.18	50	0.18	3	●
SEPDM0065	0.65	8.20	50.20	50	0.20	3	●
SEPDM0070	0.70	10.21	50.21	50	0.21	3	●
SEPDM0075	0.75	10.23	50.23	50	0.23	3	●
SEPDM0080	0.80	10.24	50.24	50	0.24	3	●
SEPDM0085	0.85	10.26	50.26	50	0.26	3	●
SEPDM0090	0.90	12.27	50.27	50	0.27	3	●
SEPDM0095	0.95	12.29	50.29	50	0.29	3	●
SEPDM0100	1.0	12.3	60.3	60	0.3	3	●
SEPDM0110	1.1	16.3	60.3	60	0.3	3	●
SEPDM0120	1.2	16.4	60.4	60	0.4	3	●
SEPDM0130	1.3	16.4	60.4	60	0.4	3	●
SEPDM0140	1.4	18.4	60.4	60	0.4	3	●
SEPDM0150	1.5	18.5	60.5	60	0.5	3	●
SEPDM0160	1.6	20.5	60.5	60	0.5	3	●
SEPDM0170	1.7	20.5	60.5	60	0.5	3	●
SEPDM0180	1.8	22.5	60.5	60	0.5	3	●
SEPDM0190	1.9	22.6	60.6	60	0.6	3	●
SEPDM0200	2.0	23.6	70.6	70	0.6	3	●
SEPDM0210	2.1	23.6	70.6	70	0.6	3	●
SEPDM0220	2.2	26.7	70.7	70	0.7	3	●
SEPDM0230	2.3	26.7	70.7	70	0.7	3	●
SEPDM0240	2.4	29.7	70.7	70	0.7	3	●
SEPDM0250	2.5	29.8	70.8	70	0.8	3	●
SEPDM0260	2.6	29.8	70.8	70	0.8	3	●
SEPDM0270	2.7	32.8	70.8	70	0.8	3	●
SEPDM0280	2.8	32.8	70.8	70	0.8	3	●
SEPDM0290	2.9	32.9	70.9	70	0.9	3	●
SEPDM0300	3.0	32.9	70.9	70	0.9	3	●
SEPDM0310	3.1	35.9	85.9	85	0.9	4	●
SEPDM0320	3.2	36.0	86.0	85	1.0	4	●
SEPDM0330	3.3	36.0	86.0	85	1.0	4	●
SEPDM0340	3.4	39.0	86.0	85	1.0	4	●
SEPDM0350	3.5	39.1	86.1	85	1.1	4	●
SEPDM0360	3.6	39.1	86.1	85	1.1	4	●
SEPDM0370	3.7	39.1	86.1	85	1.1	4	●
SEPDM0380	3.8	43.1	86.1	85	1.1	4	●
SEPDM0390	3.9	43.2	86.2	85	1.2	4	●

Order Number	DC	LCF	OAL	LF	PL	DCON	Stock
SEPDM0400	4.0	42.8	85.8	85	0.8	4	●

● : Inventory maintained in Japan.

CUTTING CONDITIONS > N136
TECHNICAL DATA > Q001

N135

DRILLING

HSS MILLING SHANK DRILLS

HSS

SE PDM **NEW**
SE High Precision Drill (M)

RECOMMENDED CUTTING CONDITIONS

Dia. DC (mm)	Mild Steel ($\leq 180\text{HB}$), Aluminium Alloy (Si<5%) AISI 1010 etc				Carbon Steel, Alloy Steel (180—280HB), Gray Cast Iron ($\leq 350\text{MPa}$), Copper, Copper Alloys AISI 1045, AISI 4140, No 45 B etc			
	Cutting speed (m/min)	Revolution (min^{-1})	Feed rate (mm/rev)	Table Feed (mm/min)	Cutting speed (m/min)	Revolution (min^{-1})	Feed rate (mm/rev)	Table Feed (mm/min)
0.5	24	15000	0.02	300	18	11250	0.01	110
0.65	28	13700	0.03	410	22	10700	0.02	210
0.8	33	13100	0.04	520	27	10700	0.03	320
1.0	38	12000	0.05	600	31	10000	0.05	500
1.2	38	10000	0.06	600	31	8200	0.06	490
1.6	40	8000	0.08	640	33	6500	0.08	520
2.0	40	6400	0.09	575	35	5500	0.09	495
2.5	40	5100	0.11	560	35	4400	0.11	480
3.2	40	4000	0.13	520	34	3400	0.13	440
4.0	40	3200	0.15	480	35	2800	0.15	420

Dia. DC (mm)	Alloy tool steel ($\leq 250\text{HB}$) Ferritic, Precipitation hardening stainless steel ($\leq 200\text{HB}$) AISI D2, AISI 410, AISI 430 etc				Austenitic Stainless Steel ($\leq 200\text{HB}$) AISI 304LN, AISI 316LN etc			
	Cutting speed (m/min)	Revolution (min^{-1})	Feed rate (mm/rev)	Table Feed (mm/min)	Cutting speed (m/min)	Revolution (min^{-1})	Feed rate (mm/rev)	Table Feed (mm/min)
0.5	13	8000	0.01	80	10	6600	0.01	65
0.65	14	6800	0.02	135	11	5300	0.012	60
0.8	14	5500	0.03	165	11	4300	0.015	60
1.0	16	5000	0.05	250	12	3800	0.02	75
1.2	17	4500	0.05	225	12	3100	0.025	75
1.6	18	3500	0.06	210	14	2700	0.03	80
2.0	18	2900	0.06	170	15	2400	0.04	95
2.5	18	2300	0.08	180	15	1900	0.05	95
3.2	18	1800	0.09	160	15	1500	0.07	105
4.0	18	1400	0.10	140	15	1200	0.09	105

Dia. DC (mm)	Alloy tool steel ($\leq 30\text{HRC}$) ASTM H13, AISI L6 etc			
	Cutting speed (m/min)	Revolution (min^{-1})	Feed rate (mm/rev)	Table Feed (mm/min)
0.5	10	6600	0.01	65
0.65	11	5300	0.012	60
0.8	11	4300	0.015	60
1.0	12	3800	0.02	75
1.2	12	3100	0.023	70
1.6	14	2700	0.03	80
2.0	15	2400	0.04	95
2.5	15	1900	0.04	75
3.2	15	1500	0.05	75
4.0	15	1200	0.07	80

- 1) Please reduce the revolution and feed rate depending on the drilling situation when the installation of workpiece or machine lacks rigidity.
- 2) Please use a collet type drill chuck or a milling chuck.
- 3) Use sufficient cutting fluid.
- 4) VAPDM is recommended when the work material hardness exceeds 30HRC.
- 5) WSTAR drill (MWE, MWS) are recommended for Precipitation hardening stainless steel (JIS-SUS630/ISO-L-No58X5CrNiCuNb16-4/ASTM-S17400, JIS-SUS631/DIN-X7CrNiAl177/ASTM-S17700)
- 6) When drilling holes greater than 4 x drill diameter hole depths, please use a peck feed.
- 7) The above-mentioned cutting condition is standard when using water-soluble cutting fluid.
Please reduce the revolution when using water-insoluble cutting fluid.
- 8) The intermediate diameter revolution is not tabulated. It is matched to the large diameter side and closest drill diameter conditions or by calculating the cutting speed of the closest drill diameter. Set the feedrate per revolution to a suitable value with the recommended feedrate of the closest drill diameter as the standard.

DRILLING