

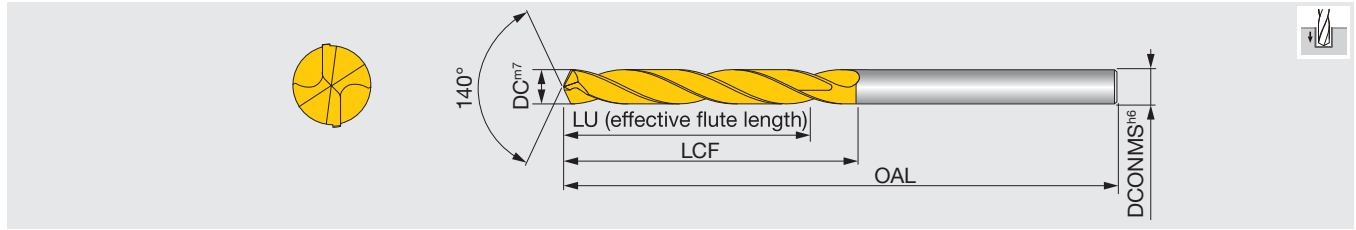
SOLIDDRILL Quick Guide

Series	DC (mm)	L/D	Point angle	Oil hole	Coated	Coated without	Description	P	M	K	N	S	H	See page
								Steel	Stainless	Cast iron	Non-ferrous	Superalloys	Hard materials	
DSW	ø3 - ø12	3, 5, 8	140	With Without	●		Shank size: DIN Standard	●	●	●	●	●	●	J034 - J040
DSX	ø3 - ø10	3, 5, 8	130	With	●		Shank size: 1 mm increments	●	●	●	●	●	●	J041 - J044
DSE	ø3 - ø10	2, 3	140	Without	●		For drilling thin plates with low cutting force Shank size: Same as the drill diameter	●	●	●	●	●	●	J045 - J047
DSM DSM-CP	ø0.1 - ø3	5, 10, 15	140 90 & 140	Without	●		Micro solid drill with ø3 mm shanks DSM-CP: Centering drill for DSM	●	●	●	●	●	●	J048 - J050
FDC	ø5 - ø16	5, 8	135	With		●	Drills for reaming at high feed with straight flute			●	●			J051 - J052
CDS	ø0.4 - ø13	5 - 12	120	Without		●	Shank size: Same as the drill diameter Hole depth: Up to L/D 12			●	●			J053

SOLIDDRILL

DSW-DE3

Solid drill, 140° point angle, without coolant hole, DIN shank, L/D = 3, ø3 - ø12 mm

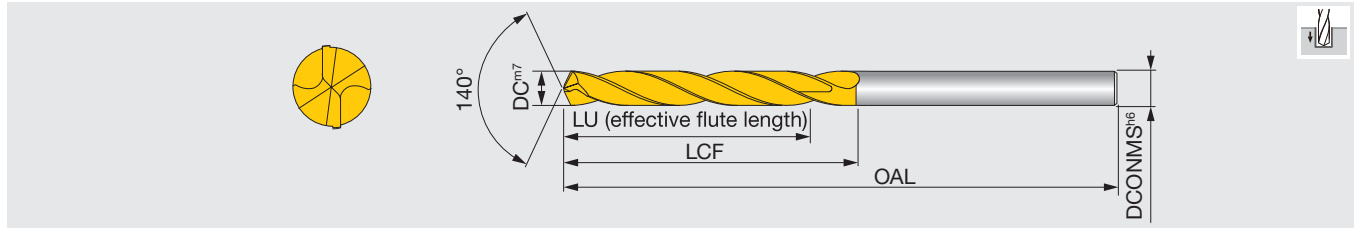


Designation	DC	AH725	DCONMS	LU	LCF	OAL	Designation	DC	AH725	DCONMS	LU	LCF	OAL
DSW030-014-06DE3	3	●	6	14	20	62	DSW080-029-08DE3	8	●	8	29	41	79
DSW031-014-06DE3	3.1	●	6	14	20	62	DSW081-035-10DE3	8.1	●	10	35	47	89
DSW032-014-06DE3	3.2	●	6	14	20	62	DSW082-035-10DE3	8.2	●	10	35	47	89
DSW033-014-06DE3	3.3	●	6	14	20	62	DSW083-035-10DE3	8.3	●	10	35	47	89
DSW034-014-06DE3	3.4	●	6	14	20	62	DSW084-035-10DE3	8.4	●	10	35	47	89
DSW035-014-06DE3	3.5	●	6	14	20	62	DSW085-035-10DE3	8.5	●	10	35	47	89
DSW036-014-06DE3	3.6	●	6	14	20	62	DSW086-035-10DE3	8.6	●	10	35	47	89
DSW037-014-06DE3	3.7	●	6	14	20	62	DSW087-035-10DE3	8.7	●	10	35	47	89
DSW038-017-06DE3	3.8	●	6	17	24	66	DSW088-035-10DE3	8.8	●	10	35	47	89
DSW039-017-06DE3	3.9	●	6	17	24	66	DSW089-035-10DE3	8.9	●	10	35	47	89
DSW040-017-06DE3	4	●	6	17	24	66	DSW090-035-10DE3	9	●	10	35	47	89
DSW041-017-06DE3	4.1	●	6	17	24	66	DSW091-035-10DE3	9.1	●	10	35	47	89
DSW042-017-06DE3	4.2	●	6	17	24	66	DSW092-035-10DE3	9.2	●	10	35	47	89
DSW043-017-06DE3	4.3	●	6	17	24	66	DSW093-035-10DE3	9.3	●	10	35	47	89
DSW044-017-06DE3	4.4	●	6	17	24	66	DSW094-035-10DE3	9.4	●	10	35	47	89
DSW045-017-06DE3	4.5	●	6	17	24	66	DSW095-035-10DE3	9.5	●	10	35	47	89
DSW046-017-06DE3	4.6	●	6	17	24	66	DSW096-035-10DE3	9.6	●	10	35	47	89
DSW047-017-06DE3	4.7	●	6	17	24	66	DSW097-035-10DE3	9.7	●	10	35	47	89
DSW048-020-06DE3	4.8	●	6	20	28	66	DSW098-035-10DE3	9.8	●	10	35	47	89
DSW049-020-06DE3	4.9	●	6	20	28	66	DSW099-035-10DE3	9.9	●	10	35	47	89
DSW050-020-06DE3	5	●	6	20	28	66	DSW100-035-10DE3	10	●	10	35	47	89
DSW051-020-06DE3	5.1	●	6	20	28	66	DSW101-040-12DE3	10.1	●	12	40	55	102
DSW052-020-06DE3	5.2	●	6	20	28	66	DSW102-040-12DE3	10.2	●	12	40	55	102
DSW053-020-06DE3	5.3	●	6	20	28	66	DSW103-040-12DE3	10.3	●	12	40	55	102
DSW054-020-06DE3	5.4	●	6	20	28	66	DSW104-040-12DE3	10.4	●	12	40	55	102
DSW055-020-06DE3	5.5	●	6	20	28	66	DSW105-040-12DE3	10.5	●	12	40	55	102
DSW056-020-06DE3	5.6	●	6	20	28	66	DSW106-040-12DE3	10.6	●	12	40	55	102
DSW057-020-06DE3	5.7	●	6	20	28	66	DSW107-040-12DE3	10.7	●	12	40	55	102
DSW058-020-06DE3	5.8	●	6	20	28	66	DSW108-040-12DE3	10.8	●	12	40	55	102
DSW059-020-06DE3	5.9	●	6	20	28	66	DSW109-040-12DE3	10.9	●	12	40	55	102
DSW060-020-06DE3	6	●	6	20	28	66	DSW110-040-12DE3	11	●	12	40	55	102
DSW061-024-08DE3	6.1	●	8	24	34	79	DSW111-040-12DE3	11.1	●	12	40	55	102
DSW062-024-08DE3	6.2	●	8	24	34	79	DSW112-040-12DE3	11.2	●	12	40	55	102
DSW063-024-08DE3	6.3	●	8	24	34	79	DSW113-040-12DE3	11.3	●	12	40	55	102
DSW064-024-08DE3	6.4	●	8	24	34	79	DSW114-040-12DE3	11.4	●	12	40	55	102
DSW065-024-08DE3	6.5	●	8	24	34	79	DSW115-040-12DE3	11.5	●	12	40	55	102
DSW066-024-08DE3	6.6	●	8	24	34	79	DSW116-040-12DE3	11.6	●	12	40	55	102
DSW067-024-08DE3	6.7	●	8	24	34	79	DSW117-040-12DE3	11.7	●	12	40	55	102
DSW068-024-08DE3	6.8	●	8	24	34	79	DSW118-040-12DE3	11.8	●	12	40	55	102
DSW069-024-08DE3	6.9	●	8	24	34	79	DSW119-040-12DE3	11.9	●	12	40	55	102
DSW070-024-08DE3	7	●	8	24	34	79	DSW120-040-12DE3	12	●	12	40	55	102
DSW071-029-08DE3	7.1	●	8	29	41	79							
DSW072-029-08DE3	7.2	●	8	29	41	79							
DSW073-029-08DE3	7.3	●	8	29	41	79							
DSW074-029-08DE3	7.4	●	8	29	41	79							
DSW075-029-08DE3	7.5	●	8	29	41	79							
DSW076-029-08DE3	7.6	●	8	29	41	79							
DSW077-029-08DE3	7.7	●	8	29	41	79							
DSW078-029-08DE3	7.8	●	8	29	41	79							
DSW079-029-08DE3	7.9	●	8	29	41	79							

● : Line up

DSW-DE5

Solid drill, 140° point angle, without coolant hole, DIN shank, L/D = 5, ø3 - ø12 mm

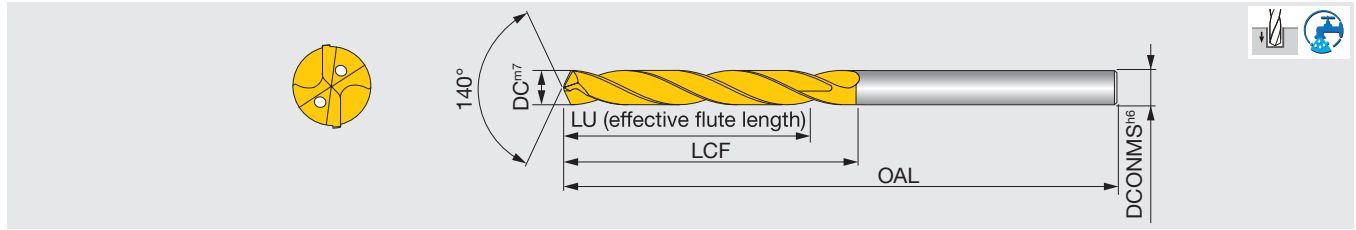


Designation	DC	AH725	DCONMS	LU	LCF	OAL	Designation	DC	AH725	DCONMS	LU	LCF	OAL
DSW030-023-06DE5	3	●	6	23	28	66	DSW080-043-08DE5	8	●	8	43	53	91
DSW031-023-06DE5	3.1	●	6	23	28	66	DSW081-049-10DE5	8.1	●	10	49	61	103
DSW032-023-06DE5	3.2	●	6	23	28	66	DSW082-049-10DE5	8.2	●	10	49	61	103
DSW033-023-06DE5	3.3	●	6	23	28	66	DSW083-049-10DE5	8.3	●	10	49	61	103
DSW034-023-06DE5	3.4	●	6	23	28	66	DSW084-049-10DE5	8.4	●	10	49	61	103
DSW035-023-06DE5	3.5	●	6	23	28	66	DSW085-049-10DE5	8.5	●	10	49	61	103
DSW036-023-06DE5	3.6	●	6	23	28	66	DSW086-049-10DE5	8.6	●	10	49	61	103
DSW037-023-06DE5	3.7	●	6	23	28	66	DSW087-049-10DE5	8.7	●	10	49	61	103
DSW038-029-06DE5	3.8	●	6	29	36	74	DSW088-049-10DE5	8.8	●	10	49	61	103
DSW039-029-06DE5	3.9	●	6	29	36	74	DSW089-049-10DE5	8.9	●	10	49	61	103
DSW040-029-06DE5	4	●	6	29	36	74	DSW090-049-10DE5	9	●	10	49	61	103
DSW041-029-06DE5	4.1	●	6	29	36	74	DSW091-049-10DE5	9.1	●	10	49	61	103
DSW042-029-06DE5	4.2	●	6	29	36	74	DSW092-049-10DE5	9.2	●	10	49	61	103
DSW043-029-06DE5	4.3	●	6	29	36	74	DSW093-049-10DE5	9.3	●	10	49	61	103
DSW044-029-06DE5	4.4	●	6	29	36	74	DSW094-049-10DE5	9.4	●	10	49	61	103
DSW045-029-06DE5	4.5	●	6	29	36	74	DSW095-049-10DE5	9.5	●	10	49	61	103
DSW046-029-06DE5	4.6	●	6	29	36	74	DSW096-049-10DE5	9.6	●	10	49	61	103
DSW047-029-06DE5	4.7	●	6	29	36	74	DSW097-049-10DE5	9.7	●	10	49	61	103
DSW048-035-06DE5	4.8	●	6	35	44	82	DSW098-049-10DE5	9.8	●	10	49	61	103
DSW049-035-06DE5	4.9	●	6	35	44	82	DSW099-049-10DE5	9.9	●	10	49	61	103
DSW050-035-06DE5	5	●	6	35	44	82	DSW100-049-10DE5	10	●	10	49	61	103
DSW051-035-06DE5	5.1	●	6	35	44	82	DSW101-056-12DE5	10.1	●	12	56	71	118
DSW052-035-06DE5	5.2	●	6	35	44	82	DSW102-056-12DE5	10.2	●	12	56	71	118
DSW053-035-06DE5	5.3	●	6	35	44	82	DSW103-056-12DE5	10.3	●	12	56	71	118
DSW054-035-06DE5	5.4	●	6	35	44	82	DSW104-056-12DE5	10.4	●	12	56	71	118
DSW055-035-06DE5	5.5	●	6	35	44	82	DSW105-056-12DE5	10.5	●	12	56	71	118
DSW056-035-06DE5	5.6	●	6	35	44	82	DSW106-056-12DE5	10.6	●	12	56	71	118
DSW057-035-06DE5	5.7	●	6	35	44	82	DSW107-056-12DE5	10.7	●	12	56	71	118
DSW058-035-06DE5	5.8	●	6	35	44	82	DSW108-056-12DE5	10.8	●	12	56	71	118
DSW059-035-06DE5	5.9	●	6	35	44	82	DSW109-056-12DE5	10.9	●	12	56	71	118
DSW060-035-06DE5	6	●	6	35	44	82	DSW110-056-12DE5	11	●	12	56	71	118
DSW061-043-08DE5	6.1	●	8	43	53	91	DSW111-056-12DE5	11.1	●	12	56	71	118
DSW062-043-08DE5	6.2	●	8	43	53	91	DSW112-056-12DE5	11.2	●	12	56	71	118
DSW063-043-08DE5	6.3	●	8	43	53	91	DSW113-056-12DE5	11.3	●	12	56	71	118
DSW064-043-08DE5	6.4	●	8	43	53	91	DSW114-056-12DE5	11.4	●	12	56	71	118
DSW065-043-08DE5	6.5	●	8	43	53	91	DSW115-056-12DE5	11.5	●	12	56	71	118
DSW066-043-08DE5	6.6	●	8	43	53	91	DSW116-056-12DE5	11.6	●	12	56	71	118
DSW067-043-08DE5	6.7	●	8	43	53	91	DSW117-056-12DE5	11.7	●	12	56	71	118
DSW068-043-08DE5	6.8	●	8	43	53	91	DSW118-056-12DE5	11.8	●	12	56	71	118
DSW069-043-08DE5	6.9	●	8	43	53	91	DSW119-056-12DE5	11.9	●	12	56	71	118
DSW070-043-08DE5	7	●	8	43	53	91	DSW120-056-12DE5	12	●	12	56	71	118
DSW071-043-08DE5	7.1	●	8	43	53	91							
DSW072-043-08DE5	7.2	●	8	43	53	91							
DSW073-043-08DE5	7.3	●	8	43	53	91							
DSW074-043-08DE5	7.4	●	8	43	53	91							
DSW075-043-08DE5	7.5	●	8	43	53	91							
DSW076-043-08DE5	7.6	●	8	43	53	91							
DSW077-043-08DE5	7.7	●	8	43	53	91							
DSW078-043-08DE5	7.8	●	8	43	53	91							
DSW079-043-08DE5	7.9	●	8	43	53	91							

● : Line up

DSW-DI5

Solid drill, 140° point angle, with coolant hole, DIN shank, L/D = 5, ø3 - ø12 mm

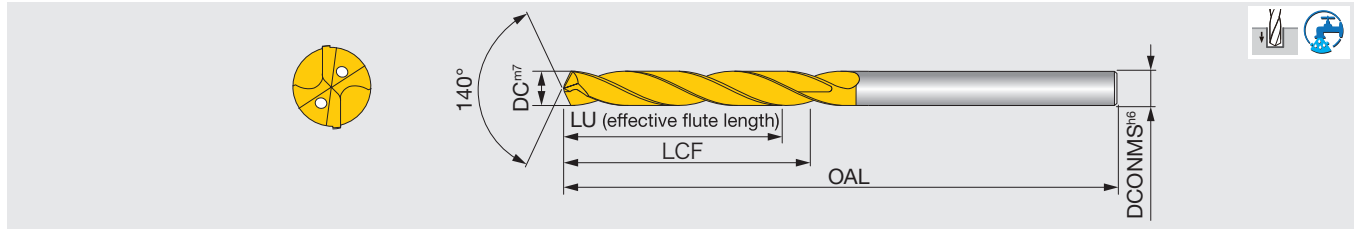


Designation	DC	AH725	DCONMS	LU	LCF	OAL	Designation	DC	AH725	DCONMS	LU	LCF	OAL
DSW030-023-06DI5	3	●	6	23	28	66	DSW080-043-08DI5	8	●	8	43	53	91
DSW031-023-06DI5	3.1	●	6	23	28	66	DSW081-049-10DI5	8.1	●	10	49	61	103
DSW032-023-06DI5	3.2	●	6	23	28	66	DSW082-049-10DI5	8.2	●	10	49	61	103
DSW033-023-06DI5	3.3	●	6	23	28	66	DSW083-049-10DI5	8.3	●	10	49	61	103
DSW034-023-06DI5	3.4	●	6	23	28	66	DSW084-049-10DI5	8.4	●	10	49	61	103
DSW035-023-06DI5	3.5	●	6	23	28	66	DSW085-049-10DI5	8.5	●	10	49	61	103
DSW036-023-06DI5	3.6	●	6	23	28	66	DSW086-049-10DI5	8.6	●	10	49	61	103
DSW037-023-06DI5	3.7	●	6	23	28	66	DSW087-049-10DI5	8.7	●	10	49	61	103
DSW038-029-06DI5	3.8	●	6	29	36	74	DSW088-049-10DI5	8.8	●	10	49	61	103
DSW039-029-06DI5	3.9	●	6	29	36	74	DSW089-049-10DI5	8.9	●	10	49	61	103
DSW040-029-06DI5	4	●	6	29	36	74	DSW090-049-10DI5	9	●	10	49	61	103
DSW041-029-06DI5	4.1	●	6	29	36	74	DSW091-049-10DI5	9.1	●	10	49	61	103
DSW042-029-06DI5	4.2	●	6	29	36	74	DSW092-049-10DI5	9.2	●	10	49	61	103
DSW043-029-06DI5	4.3	●	6	29	36	74	DSW093-049-10DI5	9.3	●	10	49	61	103
DSW044-029-06DI5	4.4	●	6	29	36	74	DSW094-049-10DI5	9.4	●	10	49	61	103
DSW045-029-06DI5	4.5	●	6	29	36	74	DSW095-049-10DI5	9.5	●	10	49	61	103
DSW046-029-06DI5	4.6	●	6	29	36	74	DSW096-049-10DI5	9.6	●	10	49	61	103
DSW047-029-06DI5	4.7	●	6	29	36	74	DSW097-049-10DI5	9.7	●	10	49	61	103
DSW048-035-06DI5	4.8	●	6	35	44	82	DSW098-049-10DI5	9.8	●	10	49	61	103
DSW049-035-06DI5	4.9	●	6	35	44	82	DSW099-049-10DI5	9.9	●	10	49	61	103
DSW050-035-06DI5	5	●	6	35	44	82	DSW100-049-10DI5	10	●	10	49	61	103
DSW051-035-06DI5	5.1	●	6	35	44	82	DSW101-056-12DI5	10.1	●	12	56	71	118
DSW052-035-06DI5	5.2	●	6	35	44	82	DSW102-056-12DI5	10.2	●	12	56	71	118
DSW053-035-06DI5	5.3	●	6	35	44	82	DSW103-056-12DI5	10.3	●	12	56	71	118
DSW054-035-06DI5	5.4	●	6	35	44	82	DSW104-056-12DI5	10.4	●	12	56	71	118
DSW055-035-06DI5	5.5	●	6	35	44	82	DSW105-056-12DI5	10.5	●	12	56	71	118
DSW056-035-06DI5	5.6	●	6	35	44	82	DSW106-056-12DI5	10.6	●	12	56	71	118
DSW057-035-06DI5	5.7	●	6	35	44	82	DSW107-056-12DI5	10.7	●	12	56	71	118
DSW058-035-06DI5	5.8	●	6	35	44	82	DSW108-056-12DI5	10.8	●	12	56	71	118
DSW059-035-06DI5	5.9	●	6	35	44	82	DSW109-056-12DI5	10.9	●	12	56	71	118
DSW060-035-06DI5	6	●	6	35	44	82	DSW110-056-12DI5	11	●	12	56	71	118
DSW061-043-08DI5	6.1	●	8	43	53	91	DSW111-056-12DI5	11.1	●	12	56	71	118
DSW062-043-08DI5	6.2	●	8	43	53	91	DSW112-056-12DI5	11.2	●	12	56	71	118
DSW063-043-08DI5	6.3	●	8	43	53	91	DSW113-056-12DI5	11.3	●	12	56	71	118
DSW064-043-08DI5	6.4	●	8	43	53	91	DSW114-056-12DI5	11.4	●	12	56	71	118
DSW065-043-08DI5	6.5	●	8	43	53	91	DSW115-056-12DI5	11.5	●	12	56	71	118
DSW066-043-08DI5	6.6	●	8	43	53	91	DSW116-056-12DI5	11.6	●	12	56	71	118
DSW067-043-08DI5	6.7	●	8	43	53	91	DSW117-056-12DI5	11.7	●	12	56	71	118
DSW068-043-08DI5	6.8	●	8	43	53	91	DSW118-056-12DI5	11.8	●	12	56	71	118
DSW069-043-08DI5	6.9	●	8	43	53	91	DSW119-056-12DI5	11.9	●	12	56	71	118
DSW070-043-08DI5	7	●	8	43	53	91	DSW120-056-12DI5	12	●	12	56	71	118
DSW071-043-08DI5	7.1	●	8	43	53	91							
DSW072-043-08DI5	7.2	●	8	43	53	91							
DSW073-043-08DI5	7.3	●	8	43	53	91							
DSW074-043-08DI5	7.4	●	8	43	53	91							
DSW075-043-08DI5	7.5	●	8	43	53	91							
DSW076-043-08DI5	7.6	●	8	43	53	91							
DSW077-043-08DI5	7.7	●	8	43	53	91							
DSW078-043-08DI5	7.8	●	8	43	53	91							
DSW079-043-08DI5	7.9	●	8	43	53	91							

● : Line up

DSW-DI8

Solid drill, 140° point angle, with coolant hole, DIN shank, L/D = 8, ø3 - ø10 mm

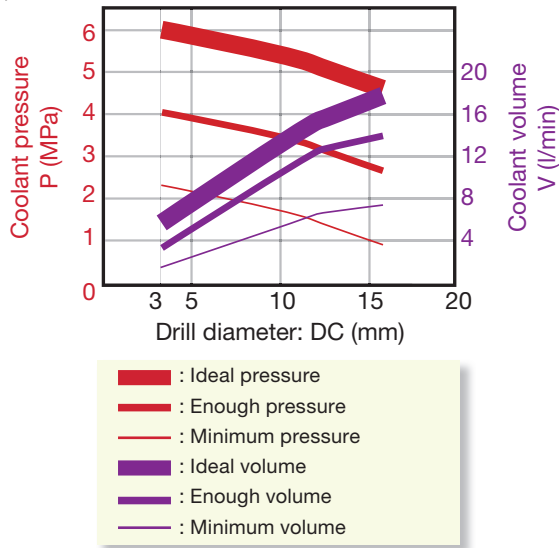


Designation	DC	AH725	DCONMS	LU	LCF	OAL	Designation	DC	AH725	DCONMS	LU	LCF	OAL
DSW030-029-06DI8	3	●	6	29	34	72	DSW082-080-10DI8	8.2	●	10	80	95	142
DSW031-029-06DI8	3.1	●	6	29	34	72	DSW083-080-10DI8	8.3	●	10	80	95	142
DSW032-029-06DI8	3.2	●	6	29	34	72	DSW084-080-10DI8	8.4	●	10	80	95	142
DSW033-029-06DI8	3.3	●	6	29	34	72	DSW085-080-10DI8	8.5	●	10	80	95	142
DSW034-029-06DI8	3.4	●	6	29	34	72	DSW086-080-10DI8	8.6	●	10	80	95	142
DSW035-029-06DI8	3.5	●	6	29	34	72	DSW087-080-10DI8	8.7	●	10	80	95	142
DSW036-029-06DI8	3.6	●	6	29	34	72	DSW088-080-10DI8	8.8	●	10	80	95	142
DSW037-029-06DI8	3.7	●	6	29	34	72	DSW089-080-10DI8	8.9	●	10	80	95	142
DSW038-036-06DI8	3.8	●	6	36	43	81	DSW090-080-10DI8	9	●	10	80	95	142
DSW039-036-06DI8	3.9	●	6	36	43	81	DSW091-080-10DI8	9.1	●	10	80	95	142
DSW040-036-06DI8	4	●	6	36	43	81	DSW092-080-10DI8	9.2	●	10	80	95	142
DSW041-036-06DI8	4.1	●	6	36	43	81	DSW093-080-10DI8	9.3	●	10	80	95	142
DSW042-036-06DI8	4.2	●	6	36	43	81	DSW094-080-10DI8	9.4	●	10	80	95	142
DSW043-036-06DI8	4.3	●	6	36	43	81	DSW095-080-10DI8	9.5	●	10	80	95	142
DSW044-036-06DI8	4.4	●	6	36	43	81	DSW096-080-10DI8	9.6	●	10	80	95	142
DSW045-036-06DI8	4.5	●	6	36	43	81	DSW097-080-10DI8	9.7	●	10	80	95	142
DSW046-036-06DI8	4.6	●	6	36	43	81	DSW098-080-10DI8	9.8	●	10	80	95	142
DSW047-036-06DI8	4.7	●	6	36	43	81	DSW099-080-10DI8	9.9	●	10	80	95	142
DSW048-048-06DI8	4.8	●	6	48	57	95	DSW100-080-10DI8	10	●	10	80	95	142
DSW049-048-06DI8	4.9	●	6	48	57	95							
DSW050-048-06DI8	5	●	6	48	57	95							
DSW051-048-06DI8	5.1	●	6	48	57	95							
DSW052-048-06DI8	5.2	●	6	48	57	95							
DSW053-048-06DI8	5.3	●	6	48	57	95							
DSW054-048-06DI8	5.4	●	6	48	57	95							
DSW055-048-06DI8	5.5	●	6	48	57	95							
DSW056-048-06DI8	5.6	●	6	48	57	95							
DSW057-048-06DI8	5.7	●	6	48	57	95							
DSW058-048-06DI8	5.8	●	6	48	57	95							
DSW059-048-06DI8	5.9	●	6	48	57	95							
DSW060-048-06DI8	6	●	6	48	57	95							
DSW061-064-08DI8	6.1	●	8	64	76	114							
DSW062-064-08DI8	6.2	●	8	64	76	114							
DSW063-064-08DI8	6.3	●	8	64	76	114							
DSW064-064-08DI8	6.4	●	8	64	76	114							
DSW065-064-08DI8	6.5	●	8	64	76	114							
DSW066-064-08DI8	6.6	●	8	64	76	114							
DSW067-064-08DI8	6.7	●	8	64	76	114							
DSW068-064-08DI8	6.8	●	8	64	76	114							
DSW069-064-08DI8	6.9	●	8	64	76	114							
DSW070-064-08DI8	7	●	8	64	76	114							
DSW071-064-08DI8	7.1	●	8	64	76	114							
DSW072-064-08DI8	7.2	●	8	64	76	114							
DSW073-064-08DI8	7.3	●	8	64	76	114							
DSW074-064-08DI8	7.4	●	8	64	76	114							
DSW075-064-08DI8	7.5	●	8	64	76	114							
DSW076-064-08DI8	7.6	●	8	64	76	114							
DSW077-064-08DI8	7.7	●	8	64	76	114							
DSW078-064-08DI8	7.8	●	8	64	76	114							
DSW079-064-08DI8	7.9	●	8	64	76	114							
DSW080-064-08DI8	8	●	8	64	76	114							
DSW081-080-10DI8	8.1	●	10	80	95	142							

● : Line up

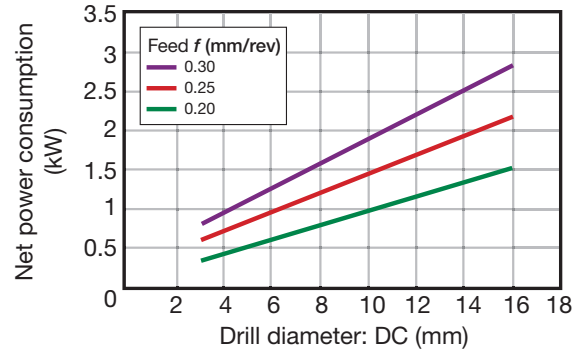
Recommended coolant pressure and volume for internal coolant supply:

The following graph is a reference guide for pressure and volume. Values should be adjusted according to work material and actual chip evacuation.



Reference for required spindle power:

The required spindle power may vary depending on the type of work material or hardness. A spindle with sufficient power should be used when referring to the below graph.



Work material : Alloy steel (SNCM439)
Cutting speed : $V_c = 100$ m/min

Designation system

DSW **088** - **035** - **10** - **D** **E** **3**

1 Series
DSW Series name of solid drill

2 Drill diameter DC (mm)
088 $\phi 8.8$

3 Effective flute length LU (mm)
035 35

4 Shank diameter DCONMS (mm)
10 $\phi 10$

5 DIN 6535 - Form HA

6 Coolant Supply
E External (without coolant hole)
I Internal (with coolant hole)

7 Drilling depth
Approximate value of L/D ratio.
Caution: Code may be different from the actual length. This is dependent upon the tool diameter.

Caution: "Effective flute length" shows the maximum flute length for effective chip evacuation. The actual drilling depth may be shorter than described depending on the work material or cutting conditions.

STANDARD CUTTING CONDITIONS

DSW-DE (External supply)

ISO	Workpiece material	Brinell hardness (HB)	Cutting speed: V_c (m/min)			Feed: f (mm/rev)		
			$\phi 3 \sim \phi 6$	$\phi 6 \sim \phi 10$	$\phi 10 \sim \phi 16$	$\phi 3 \sim \phi 6$	$\phi 6 \sim \phi 10$	$\phi 10 \sim \phi 12$
P	Low carbon steels (C < 0.3) SS400, SM490, S25C, etc. C15E4, E275A, E355D, etc.	~ 180	40 - 100	60 - 120	60 - 130	0.15 - 0.3	0.15 - 0.35	0.2 - 0.5
	Carbon steels (C > 0.3) S45C, S55C, , etc. C45, C55, etc.	180 ~ 300	40 - 90	50 - 120	60 - 130	0.15 - 0.3	0.15 - 0.35	0.2 - 0.4
	High alloy steels SCM440, etc. 42CrMo4, etc.	250 ~ 350	40 - 80	50 - 100	50 - 100	0.1 - 0.2	0.15 - 0.3	0.15 - 0.35
M	Stainless steels SUS304, etc. X5CrNi18-9, etc.	~ 200	20 - 40	30 - 50	30 - 60	0.05 - 0.2	0.1 - 0.25	0.1 - 0.3
K	Grey cast irons FC300, etc. 250, etc.	~ 200	40 - 90	50 - 95	50 - 100	0.15 - 0.3	0.2 - 0.4	0.2 - 0.5
	Ductile cast irons FCD450, etc. 450-10S, etc.	~ 300	30 - 80	40 - 90	45 - 90	0.1 - 0.3	0.2 - 0.4	0.2 - 0.4
N	Aluminium alloys ADC12, etc. AISI11Cu3, etc.	-	40 - 90	50 - 100	50 - 100	0.15 - 0.3	0.2 - 0.4	0.2 - 0.5
S	Titanium alloys Ti-6Al-4V, etc	-	20 - 40	20 - 40	20 - 40	0.1 - 0.2	0.15 - 0.25	0.15 - 0.4
	Heat-resistant alloys, Inconel Inconel 718, etc.	250 ~	10 - 30	10 - 30	10 - 30	0.03 - 0.07	0.05 - 0.1	0.07 - 0.12
H	High hardened steels SKD11, etc. X153CrMoV12, etc.	~ 40HRC	20 - 40	20 - 40	20 - 40	0.05 - 0.15	0.05 - 0.15	0.05 - 0.2

- The cutting parameters shown in the table are merely a starting guideline for general machining. Values should be varied depending on the power or rigidity of the machine to be used. Optimum conditions should be selected depending on the actual chip control or damage on edges.
- When using the smaller diameter tools in each range, set the feed “ f ” to the lower recommended values.
- The coolant supply is critical for the provision of stable machining conditions and enhanced tool life. A large coolant volume should be supplied, especially when drilling difficult-to-cut materials.
- When drilling stainless steel with low machinability such as austenitic stainless steel with a depth deeper than $L/D = 3$, a pecking cycle or internal coolant supply is recommended.

DSW-DI (Internal supply)

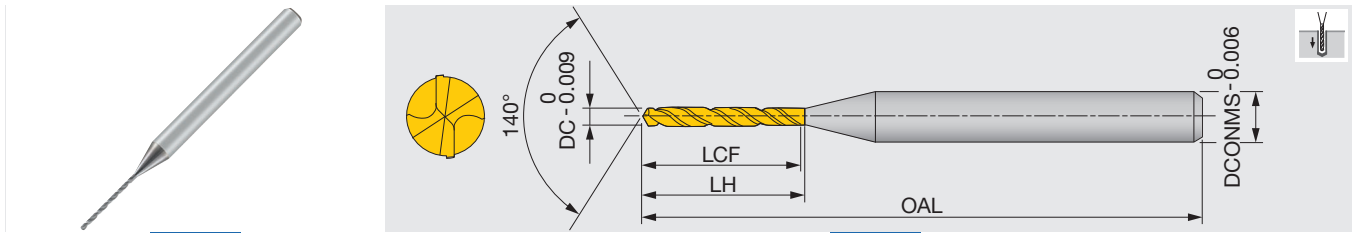
ISO	Workpiece material	Brinell hardness (HB)	Cutting speed: V_c (m/min)			Feed: f (mm/rev)		
			$\phi 3 \sim \phi 6$	$\phi 6 \sim \phi 10$	$\phi 10 \sim \phi 16$	$\phi 3 \sim \phi 6$	$\phi 6 \sim \phi 10$	$\phi 10 \sim \phi 12$
P	Low carbon steels (C < 0.3) SS400, SM490, S25C, etc. C15E4, E275A, E355D, etc.	~ 180	70 - 140	80 - 160	90 - 190	0.15 - 0.3	0.15 - 0.35	0.2 - 0.5
	Carbon steels (C > 0.3) S45C, S55C, , etc. C45, C55, etc.	180 ~ 300	50 - 130	70 - 160	80 - 170	0.15 - 0.3	0.15 - 0.35	0.2 - 0.4
	High alloy steels SCM440, etc. 42CrMo4, etc.	250 ~ 350	40 - 100	60 - 140	60 - 160	0.1 - 0.2	0.15 - 0.3	0.15 - 0.35
M	Stainless steels SUS304, etc. X5CrNi18-9, etc.	~ 200	25 - 75	50 - 100	50 - 120	0.05 - 0.2	0.1 - 0.25	0.1 - 0.3
K	Grey cast irons FC300, etc. 250, etc.	~ 200	80 - 140	100 - 160	100 - 180	0.15 - 0.3	0.2 - 0.4	0.2 - 0.5
	Ductile cast irons FCD450, etc. 450-10S, etc.	~ 300	70 - 140	80 - 150	80 - 170	0.1 - 0.3	0.2 - 0.4	0.2 - 0.45
N	Aluminium alloys ADC12, etc. AISI11Cu3, etc.	-	60 - 200	60 - 200	60 - 200	0.15 - 0.3	0.2 - 0.4	0.2 - 0.5
S	Titanium alloys Ti-6Al-4V, etc.	-	20 - 60	30 - 80	30 - 80	0.1 - 0.2	0.1 - 0.25	0.15 - 0.4
	Heat-resistant alloys, Inconel Inconel 718, etc.	250 ~	10 - 30	10 - 40	10 - 40	0.03 - 0.07	0.05 - 0.1	0.07 - 0.15
H	High hardened steels SKD11, etc. X153CrMoV12, etc.	~ 40HRC	20 - 50	30 - 60	30 - 60	0.05 - 0.15	0.05 - 0.15	0.05 - 0.2

- The cutting parameters shown in the table are merely a starting guideline for general machining. Values should be varied depending on the power or rigidity of the machine to be used. Optimum conditions should be selected depending on the actual chip control or damage on edges.

- When using the smaller diameter tools in each range, set the feed " f " to the lower recommended values.
- Oil holes that become blocked may cause drill breakages. A filter to prevent the circulation of chips must be used on the coolant supply system.

DSM

Micro solid drill, 140° point angle, without coolant hole, shank diameter ø3 mm, L/D = 5 - 15, tool diameter ø0.1 - ø3 mm



Designation	DC	Coated		DCONMS	LCF	LH	OAL	Designation	DC	Coated		DCONMS	LCF	LH	OAL
		YH170	YH180							YH170	YH180				
DSM0010G10	0.1	●		3	1.15	1.4	38	DSM0075G10	0.75	●		3	9.2	9.8	38
DSM0011G10	0.11	●		3	1.25	1.5	38	DSM0076G10	0.76			3	9.9	10.5	38
DSM0012G10	0.12	●		3	1.35	1.6	38	DSM0077G10	0.77			3	9.9	10.5	38
DSM0013G10	0.13	●		3	1.55	1.8	38	DSM0078G10	0.78			3	9.9	10.5	38
DSM0014G10	0.14	●		3	1.65	1.9	38	DSM0079G10	0.79			3	9.9	10.5	38
DSM0015G10	0.15	●		3	1.75	2	38	DSM0080G10	0.8	●		3	9.9	10.5	38
DSM0016G10	0.16	●		3	1.85	2.1	38	DSM0081G10	0.81			3	10.5	11.1	38
DSM0017G10	0.17	●		3	1.95	2.2	38	DSM0082G10	0.82			3	10.5	11.1	38
DSM0018G10	0.18	●		3	2.15	2.4	38	DSM0083G10	0.83			3	10.5	11.1	38
DSM0019G10	0.19	●		3	2.25	2.5	38	DSM0084G10	0.84			3	10.5	11.1	38
DSM0020G10	0.2	●		3	2.35	2.6	38	DSM0085G10	0.85			3	10.5	11.1	38
DSM0021G10	0.21	●		3	2.45	2.7	38	DSM0086G10	0.86			3	9.9	10.5	38
DSM0022G10	0.22	●		3	2.55	2.8	38	DSM0087G10	0.87			3	9.9	10.5	38
DSM0023G10	0.23	●		3	2.75	3	38	DSM0088G10	0.88	●		3	9.9	10.5	38
DSM0024G10	0.24	●		3	2.85	3.1	38	DSM0089G10	0.89			3	9.9	10.5	38
DSM0025G10	0.25	●		3	3	3.3	38	DSM0090G10	0.9	●		3	9.9	10.5	38
DSM0026G10	0.26	●		3	3.1	3.4	38	DSM0091G10	0.91			3	10.5	11.1	38
DSM0027G10	0.27	●		3	3.2	3.5	38	DSM0092G10	0.92			3	10.5	11.1	38
DSM0028G10	0.28	●		3	3.4	3.7	38	DSM0093G10	0.93			3	10.5	11.1	38
DSM0029G10	0.29	●		3	3.5	3.8	38	DSM0094G10	0.94			3	10.5	11.1	38
DSM0030G10	0.3	●		3	3.9	4.2	38	DSM0095G10	0.95			3	10.5	11.1	38
DSM0031G15	0.31	●		3	5.6	5.9	38	DSM0096G10	0.96			3	11	11.6	38
DSM0032G15	0.32	●		3	5.6	5.9	38	DSM0097G10	0.97	●		3	11	11.6	38
DSM0033G15	0.33	●		3	5.6	5.9	38	DSM0098G10	0.98			3	11	11.6	38
DSM0034G15	0.34	●		3	5.6	5.9	38	DSM0099G10	0.99			3	11	11.6	38
DSM0035G15	0.35	●		3	5.6	5.9	38	DSM0100G10	1	●		3	11.5	12.1	38
DSM0036G15	0.36	●		3	6.5	6.8	38	DSM0101G05	1.01			3	8	8.6	38
DSM0037G15	0.37	●		3	6.5	6.8	38	DSM0102G05	1.02			3	8	8.6	38
DSM0038G15	0.38	●		3	6.5	6.8	38	DSM0103G05	1.03			3	8	8.6	38
DSM0039G15	0.39	●		3	6.5	6.8	38	DSM0104G05	1.04			3	8	8.6	38
DSM0040G15	0.4	●		3	6.5	6.8	38	DSM0105G05	1.05			3	8	8.6	38
DSM0041G15	0.41	●		3	7.4	7.7	38	DSM0106G05	1.06			3	8	8.6	38
DSM0042G15	0.42	●		3	7.4	7.7	38	DSM0107G05	1.07			3	8	8.6	38
DSM0043G15	0.43	●		3	7.4	7.7	38	DSM0108G05	1.08	●		3	8	8.6	38
DSM0044G15	0.44	●		3	7.4	7.7	38	DSM0109G05	1.09			3	8	8.6	38
DSM0045G15	0.45	●		3	7.4	7.7	38	DSM0110G05	1.1	●		3	8	8.6	38
DSM0046G15	0.46	●		3	8.1	8.7	38	DSM0111G05	1.11			3	8.9	9.5	38
DSM0047G15	0.47	●		3	8.1	8.7	38	DSM0112G05	1.12			3	8.9	9.5	38
DSM0048G15	0.48	●		3	8.1	8.7	38	DSM0113G05	1.13			3	8.9	9.5	38
DSM0049G15	0.49	●		3	8.1	8.7	38	DSM0114G05	1.14			3	8.9	9.5	38
DSM0050G15	0.5	●		3	8.1	8.7	38	DSM0115G05	1.15			3	8.9	9.5	38
DSM0051G10	0.51			3	6.6	7.2	38	DSM0116G05	1.16			3	8.9	9.5	38
DSM0052G10	0.52			3	6.6	7.2	38	DSM0117G05	1.17			3	8.9	9.5	38
DSM0053G10	0.53			3	6.6	7.2	38	DSM0118G05	1.18			3	8.9	9.5	38
DSM0054G10	0.54			3	6.6	7.2	38	DSM0119G05	1.19			3	8.9	9.5	38
DSM0055G10	0.55	●		3	6.6	7.2	38	DSM0120G05	1.2	●		3	8.9	9.5	38
DSM0056G10	0.56			3	7.3	7.9	38	DSM0121G05	1.21			3	9.7	10.3	38
DSM0057G10	0.57			3	7.3	7.9	38	DSM0122G05	1.22			3	9.7	10.3	38
DSM0058G10	0.58			3	7.3	7.9	38	DSM0123G05	1.23			3	9.7	10.3	38
DSM0059G10	0.59			3	7.3	7.9	38	DSM0124G05	1.24			3	9.7	10.3	38
DSM0060G10	0.6	●		3	7.3	7.9	38	DSM0125G05	1.25			3	9.7	10.3	38
DSM0061G10	0.61			3	7.9	8.5	38	DSM0126G05	1.26			3	9.7	10.3	38
DSM0062G10	0.62			3	7.9	8.5	38	DSM0127G05	1.27			3	9.7	10.3	38
DSM0063G10	0.63			3	7.9	8.5	38	DSM0128G05	1.28			3	9.7	10.3	38
DSM0064G10	0.64			3	7.9	8.5	38	DSM0129G05	1.29			3	9.7	10.3	38
DSM0065G10	0.65	●		3	7.9	8.5	38	DSM0130G05	1.3	●		3	9.7	10.3	38
DSM0066G10	0.66			3	8.6	9.2	38	DSM0131G05	1.31			3	10.5	11.1	38
DSM0067G10	0.67			3	8.6	9.2	38	DSM0132G05	1.32			3	10.5	11.1	38
DSM0068G10	0.68			3	8.6	9.2	38	DSM0133G05	1.33			3	10.5	11.1	38
DSM0069G10	0.69			3	8.6	9.2	38	DSM0134G05	1.34			3	10.5	11.1	38
DSM0070G10	0.7	●		3	8.6	9.2	38	DSM0135G05	1.35			3	10.5	11.1	38
DSM0071G10	0.71			3	9.2	9.8	38	DSM0136G05	1.36			3	10.5	11.1	38
DSM0072G10	0.72			3	9.2	9.8	38	DSM0137G05	1.37			3	10.5	11.1	38
DSM0073G10	0.73			3	9.2	9.8	38	DSM0138G05	1.38			3	10.5	11.1	38
DSM0074G10	0.74			3	9.2	9.8	38	DSM0139G05	1.39			3	10.5	11.1	38

● : Line up

Designation	DC	Coated		DCONMS	LCF	LH	OAL	Designation	DC	Coated		DCONMS	LCF	LH	OAL
		YH170	YH180							YH170	YH180				
DSM0140G05	1.4	●		3	10.5	11.1	38	DSM0219G05	2.19			3	16.9	17.5	45
DSM0141G05	1.41			3	11.3	11.9	38	DSM0220G05	2.2	●		3	16.9	17.5	45
DSM0142G05	1.42			3	11.3	11.9	38	DSM0221G05	2.21			3	17.7	18.3	45
DSM0143G05	1.43			3	11.3	11.9	38	DSM0222G05	2.22			3	17.7	18.3	45
DSM0144G05	1.44			3	11.3	11.9	38	DSM0223G05	2.23			3	17.7	18.3	45
DSM0145G05	1.45	●		3	11.3	11.9	38	DSM0224G05	2.24			3	17.7	18.3	45
DSM0146G05	1.46			3	11.3	11.9	38	DSM0225G05	2.25			3	17.7	18.3	45
DSM0147G05	1.47			3	11.3	11.9	38	DSM0226G05	2.26			3	17.7	18.3	45
DSM0148G05	1.48			3	11.3	11.9	38	DSM0227G05	2.27			3	17.7	18.3	45
DSM0149G05	1.49			3	11.3	11.9	38	DSM0228G05	2.28			3	17.7	18.3	45
DSM0150G05	1.5	●		3	11.3	11.9	38	DSM0229G05	2.29			3	17.7	18.3	45
DSM0151G05	1.51			3	12.1	12.7	45	DSM0230G05	2.3	●		3	17.7	18.3	45
DSM0152G05	1.52			3	12.1	12.7	45	DSM0231G05	2.31			3	18.5	19.1	55
DSM0153G05	1.53	●		3	12.1	12.7	45	DSM0232G05	2.32			3	18.5	19.1	55
DSM0154G05	1.54			3	12.1	12.7	45	DSM0233G05	2.33			3	18.5	19.1	55
DSM0155G05	1.55	●		3	12.1	12.7	45	DSM0234G05	2.34			3	18.5	19.1	55
DSM0156G05	1.56			3	12.1	12.7	45	DSM0235G05	2.35			3	18.5	19.1	55
DSM0157G05	1.57			3	12.1	12.7	45	DSM0236G05	2.36			3	18.5	19.1	55
DSM0158G05	1.58			3	12.1	12.7	45	DSM0237G05	2.37			3	18.5	19.1	55
DSM0159G05	1.59			3	12.1	12.7	45	DSM0238G05	2.38			3	18.5	19.1	55
DSM0160G05	1.6	●		3	12.1	12.7	45	DSM0239G05	2.39			3	18.5	19.1	55
DSM0161G05	1.61			3	12.9	13.6	45	DSM0240G05	2.4	●		3	18.5	19.1	55
DSM0162G05	1.62			3	12.9	13.6	45	DSM0241G05	2.41			3	19.3	19.9	55
DSM0163G05	1.63			3	12.9	13.6	45	DSM0242G05	2.42			3	19.3	19.9	55
DSM0164G05	1.64			3	12.9	13.6	45	DSM0243G05	2.43			3	19.3	19.9	55
DSM0165G05	1.65	●		3	12.9	13.6	45	DSM0244G05	2.44			3	19.3	19.9	55
DSM0166G05	1.66			3	12.9	13.6	45	DSM0245G05	2.45			3	19.3	19.9	55
DSM0167G05	1.67			3	12.9	13.6	45	DSM0246G05	2.46			3	19.3	19.9	55
DSM0168G05	1.68			3	12.9	13.6	45	DSM0247G05	2.47			3	19.3	19.9	55
DSM0169G05	1.69			3	12.9	13.6	45	DSM0248G05	2.48			3	19.3	19.9	55
DSM0170G05	1.7	●		3	12.9	13.6	45	DSM0249G05	2.49			3	19.3	19.9	55
DSM0171G05	1.71			3	13.7	14.3	45	DSM0250G05	2.5	●		3	19.3	19.9	55
DSM0172G05	1.72			3	13.7	14.3	45	DSM0251G05	2.51			3	20.1	20.7	55
DSM0173G05	1.73			3	13.7	14.3	45	DSM0252G05	2.52			3	20.1	20.7	55
DSM0174G05	1.74			3	13.7	14.3	45	DSM0253G05	2.53			3	20.1	20.7	55
DSM0175G05	1.75			3	13.7	14.3	45	DSM0254G05	2.54			3	20.1	20.7	55
DSM0176G05	1.76			3	13.7	14.3	45	DSM0255G05	2.55			3	20.1	20.7	55
DSM0177G05	1.77			3	13.7	14.3	45	DSM0256G05	2.56	●		3	20.1	20.7	55
DSM0178G05	1.78			3	13.7	14.3	45	DSM0257G05	2.57			3	20.1	20.7	55
DSM0179G05	1.79			3	13.7	14.3	45	DSM0258G05	2.58			3	20.1	20.7	55
DSM0180G05	1.8	●		3	13.7	14.3	45	DSM0259G05	2.59			3	20.1	20.7	55
DSM0181G05	1.81			3	14.5	15.1	45	DSM0260G05	2.6	●		3	20.1	20.7	55
DSM0182G05	1.82	●		3	14.5	15.1	45	DSM0261G05	2.61			3	20.9	21.5	55
DSM0183G05	1.83			3	14.5	15.1	45	DSM0262G05	2.62			3	20.9	21.5	55
DSM0184G05	1.84			3	14.5	15.1	45	DSM0263G05	2.63			3	20.9	21.5	55
DSM0185G05	1.85	●		3	14.5	15.1	45	DSM0264G05	2.64			3	20.9	21.5	55
DSM0186G05	1.86			3	14.5	15.1	45	DSM0265G05	2.65			3	20.9	21.5	55
DSM0187G05	1.87			3	14.5	15.1	45	DSM0266G05	2.66			3	20.9	21.5	55
DSM0188G05	1.88			3	14.5	15.1	45	DSM0267G05	2.67			3	20.9	21.5	55
DSM0189G05	1.89			3	14.5	15.1	45	DSM0268G05	2.68			3	20.9	21.5	55
DSM0190G05	1.9	●		3	14.5	15.1	45	DSM0269G05	2.69			3	20.9	21.5	55
DSM0191G05	1.91			3	15.3	15.9	45	DSM0270G05	2.7	●		3	20.9	21.5	55
DSM0192G05	1.92			3	15.3	15.9	45	DSM0271G05	2.71			3	21.7	22.3	55
DSM0193G05	1.93			3	15.3	15.9	45	DSM0272G05	2.72			3	21.7	22.3	55
DSM0194G05	1.94			3	15.3	15.9	45	DSM0273G05	2.73			3	21.7	22.3	55
DSM0195G05	1.95	●		3	15.3	15.9	45	DSM0274G05	2.74			3	21.7	22.3	55
DSM0196G05	1.96			3	15.3	15.9	45	DSM0275G05	2.75			3	21.7	22.3	55
DSM0197G05	1.97			3	15.3	15.9	45	DSM0276G05	2.76			3	21.7	22.3	55
DSM0198G05	1.98			3	15.3	15.9	45	DSM0277G05	2.77			3	21.7	22.3	55
DSM0199G05	1.99			3	15.3	15.9	45	DSM0278G05	2.78			3	21.7	22.3	55
DSM0200G05	2		●	3	15.3	15.9	45	DSM0279G05	2.79			3	21.7	22.3	55
DSM0201G05	2.01			3	16.1	16.7	45	DSM0280G05	2.8	●		3	21.7	22.3	55
DSM0202G05	2.02			3	16.1	16.7	45	DSM0281G05	2.81			3	22.5	23.1	55
DSM0203G05	2.03		●	3	16.1	16.7	45	DSM0282G05	2.82			3	22.5	23.1	55
DSM0204G05	2.04			3	16.1	16.7	45	DSM0283G05	2.83			3	22.5	23.1	55
DSM0205G05	2.05			3	16.1	16.7	45	DSM0284G05	2.84			3	22.5	23.1	55
DSM0206G05	2.06			3	16.1	16.7	45	DSM0285G05	2.85			3	22.5	23.1	55
DSM0207G05	2.07			3	16.1	16.7	45	DSM0286G05	2.86			3	22.5	23.1	55
DSM0208G05	2.08			3	16.1	16.7	45	DSM0287G05	2.87			3	22.5	23.1	55
DSM0209G05	2.09			3	16.1	16.7	45	DSM0288G05	2.88			3	22.5	23.1	55
DSM0210G05	2.1		●	3	16.1	16.7	45	DSM0289G05	2.89			3	22.5	23.1	55
DSM0211G05	2.11			3	16.9	17.5	45	DSM0290G05	2.9	●		3	22.5	23.1	55
DSM0212G05	2.12			3	16.9	17.5	45	DSM0291G05	2.91			3	23.3	23.9	55
DSM0213G05	2.13			3	16.9	17.5	45	DSM0292G05	2.92			3	23.3	23.9	55
DSM0214G05	2.14			3	16.9	17.5	45	DSM0293G05	2.93			3	23.3	23.9	55
DSM0215G05	2.15			3	16.9	17.5	45	DSM0294G05	2.94			3	23.3	23.9	55
DSM0216G05	2.16			3	16.9	17.5	45	DSM0295G05	2.95			3	23.3	23.9	55
DSM0217G05	2.17			3	16.9	17.5	45	DSM0296G05	2.96			3	23.3	23.9	55
DSM0218G05	2.18			3	16.9	17.5	45	DSM0297G05	2.97			3	23.3	23.9	55
								DSM0298G05	2.98			3	23.3	23.9	55
								DSM0299G05	2.99			3	23.3	23.9	55
								DSM0300G05	3		●	3	23.3	23.9	55

● : Line up

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Cutting speed: Vc (m/min)			Feed: f (mm/rev)				
		ø0.1 ~ ø0.3	ø0.3 ~ ø0.5	ø0.5 ~ ø3	ø0.1 ~ ø0.3	ø0.3 ~ ø0.5	ø0.5 ~ ø1	ø1 ~ ø2	ø2 ~ ø3
P	Carbon steels, Alloy steels	5 - 20	15 - 30	25 - 60	0.001 - 0.004	0.002 - 0.01	0.005 - 0.05	0.03 - 0.09	0.05 - 0.1
M	Stainless steels	2 - 12	6 - 18	10 - 20	0.0005 - 0.004	0.002 - 0.008	0.005 - 0.03	0.01 - 0.04	0.02 - 0.05
K	Grey cast irons	5 - 15	10 - 25	20 - 50	0.0005 - 0.004	0.002 - 0.012	0.005 - 0.03	0.01 - 0.06	0.03 - 0.12
	Ductile cast irons	5 - 15	10 - 25	20 - 50	0.001 - 0.003	0.002 - 0.01	0.005 - 0.02	0.01 - 0.05	0.03 - 0.1
N	Aluminium alloys	10 - 20	10 - 30	20 - 50	0.001 - 0.01	0.005 - 0.03	0.01 - 0.05	0.04 - 0.15	0.06 - 0.2
	Copper / Brass	10 - 20	10 - 30	20 - 50	0.001 - 0.01	0.005 - 0.03	0.01 - 0.05	0.04 - 0.15	0.06 - 0.2
S	Heat-resistant alloys	2 - 6	5 - 10	8 - 20	0.0005 - 0.003	0.002 - 0.004	0.002 - 0.004	0.002 - 0.004	※
H	High hardened steels	4 - 8	6 - 10	6 - 16	0.0005 - 0.002	0.001 - 0.005	0.005 - 0.02	0.01 - 0.03	0.02 - 0.06

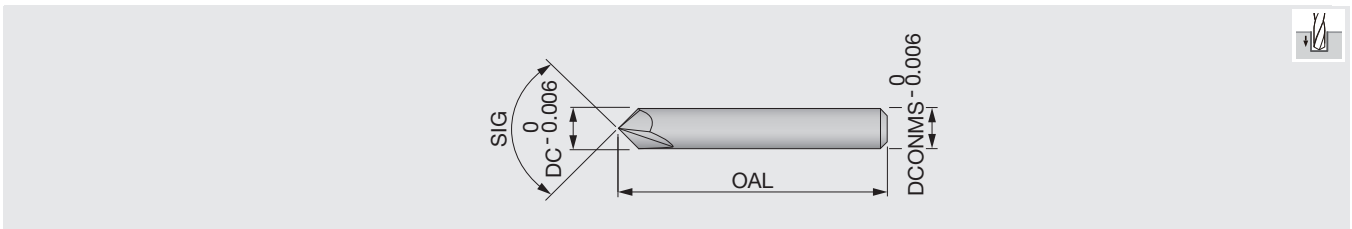
※ Not recommended

Notes: • When the drilling depth is deeper than L/D = 5, use drill pecking every 10 to 50% of the drill diameter.

- The above cutting conditions are applied to when a water soluble cutting fluid is used. For drilling a hole smaller than ø0.3 mm, use of a starting drill is recommended.
- When setting the drill, the drill run out should be within 0.002 mm on the taper. (Especially for the drill diameter smaller than ø0.5 mm)

DSM-CP

Centering drill for DSM drill



Designation	DC	YH170	DCONMS	OAL	SIG
DSM-CP90	3	●	3	38.1	90°
DSM-CP140	3	●	3	38.1	140°

● : Line up

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Cutting speed: Vc (m/min)	Feed: f (mm/rev)	
			DSM-CP90	DSM-CP140
P	Carbon, Mild and Alloy steels	30 - 80	0.01 - 0.06	0.03 - 0.08
K	Grey and ductile cast irons	30 - 80	0.02 - 0.06	0.05 - 0.1
N	Aluminium alloys	60 - 120	0.02 - 0.1	0.05 - 0.15
M	Stainless steels	15 - 40	0.01 - 0.03	0.02 - 0.06
H	High hardened steels (~45HRC)	10 - 40	※	0.01 - 0.05

※ Not recommended

Notes: • For hard materials and stainless steels which have work-hardening nature, DSM-CP140 is recommended.

- Above cutting conditions are of using a water-soluble cutting fluid. When using a water-insoluble type, set the cutting speed to lower side.