

Solid Carbide Drills

**WSTAR** Drill Series**MVE/MVS**Series  
Expansion

# New Generation Solid Carbide Drills

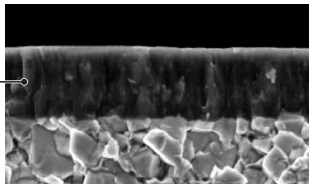
**With New TRI-cooling Technology®**PVD coating provides long tool life  
for a wide range of applications.

Solid Carbide Drills  
**WSTAR** Drill Series

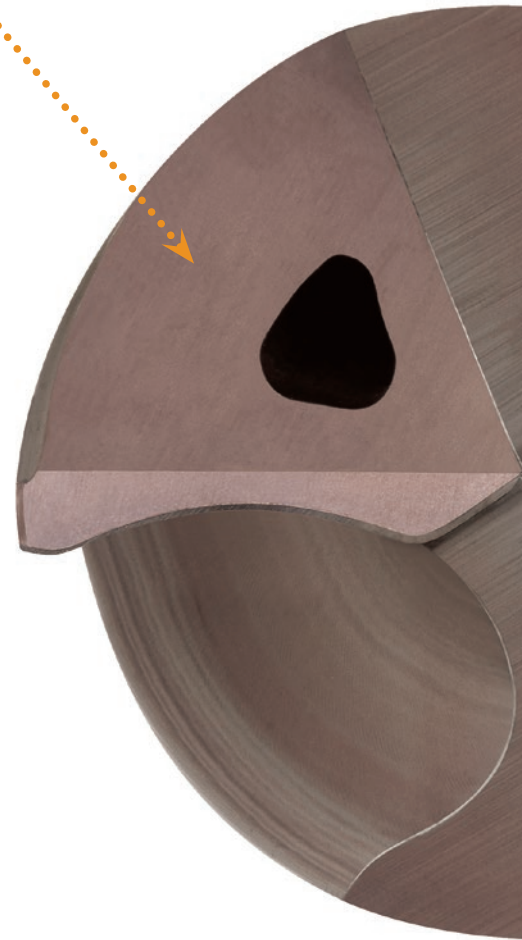
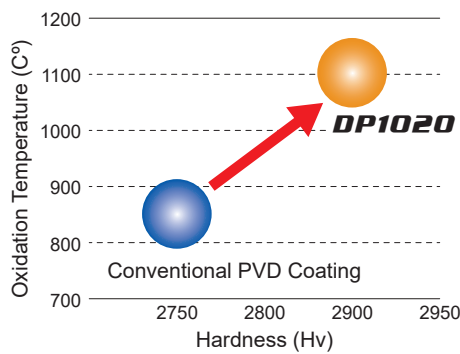
# MVE/MVS

## Coated Grade **DP1020**

DP1020 grade offers excellent wear resistance and reduced friction for longer tool life and a versatile range of applications.



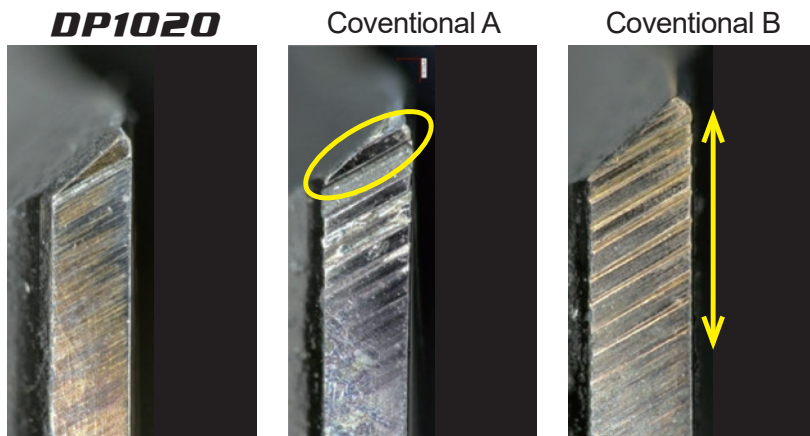
With Accumulated Al-Ti-Cr-N Based PVD Coating



## Reduced Margin Wear

DP1020 has excellent wear resistance properties and therefore reduces the amount of material that needs to be removed when re-grinding.

### Margin Wear after 57m Machining



Minor

Deep Wear Marks

Wide Wear Marks

<Cutting Conditions>  
 Work Material : AISI 1050  
 Cutting Speed : 100m/min  
 Feed Rate : 0.2mm/rev  
 Cutting Mode : Water Based (External Coolant)



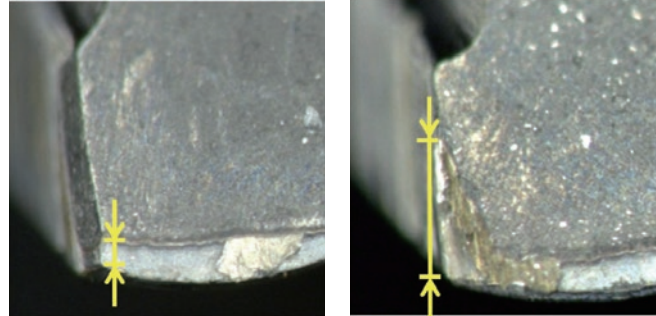
## New Wavy Cutting Edge

The unique wavy cutting edge provides excellent sharpness and rigidity and helps to control wear at the periphery.

### Comparison of Wear at the Cutting Edge Periphery (After 57m Machining)

**MVE**

Coventional



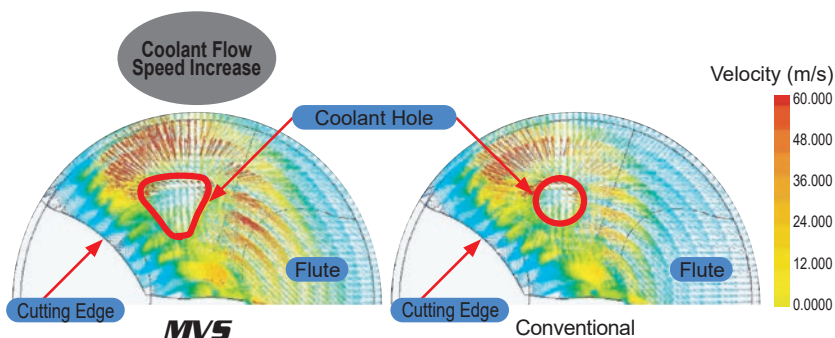
<Cutting Conditions>  
 Work Material : AISI 1050  
 Cutting Speed : 100m/min  
 Feed Rate : 0.2mm/rev  
 Cutting Mode : Water Based (External Coolant)

## ZERO- $\mu$ Surface

Our unique smooth surface technology reduces cutting resistance and offers excellent chip evacuation.

## TRI-cooling Technology<sup>®</sup>

The unique coolant hole geometry (on drills over  $\phi 6$ mm) increases the rate of coolant flow for improved cooling effect and chip removal.



Solid Carbide Drills  
**WSTAR** Drill Series

**NEW**

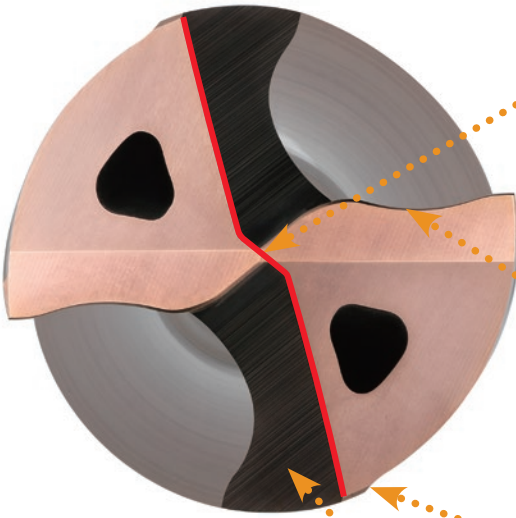
深穴加工のツートップ

**MVS**

Pilot Drill DC x 2 (P23, 24)

Long Type DC x 10, 15, 20, 25, 30, 35, 40

High efficiency drilling hole with 2000mm/min feed rate higher.  
( $\phi$ 5mm, DCx30、Case with drilling in steel)



### New Type Thinning

Large chip pocket near center of drill  
Low thrust force

### Wavy Cutting Edge

High cutting edge strength and ideal chip control  
Deep hole cutting with high efficiency

### Double Margin

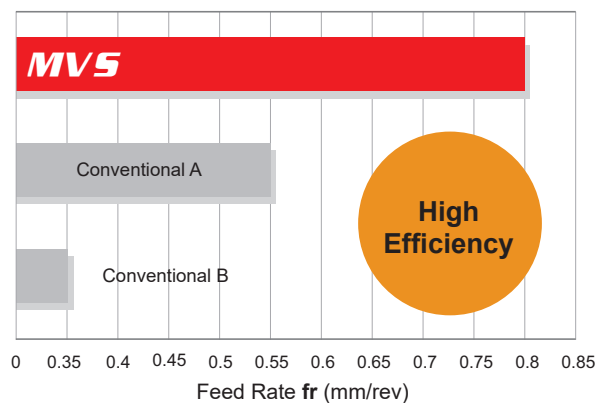
Provides excellent straightness and surface finish

### New Flute Shape

Ideal web thickness and helix angle

## MVS Long Type Provides High Feed

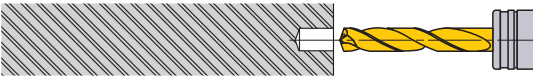
### Feed Limit Test



<Cutting Conditions>  
Drill Dia. :  $\phi$ 5mm  
Work Material : AISI 1050  
Hole Depth : 150mm (DCx30)  
Cutting Speed : 80m/min  
Cutting Mode : Water Based  
(Internal Coolant)

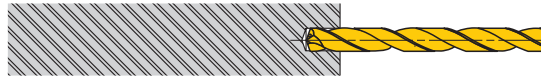
## 推奨する深穴加工（止まり穴加工の場合）

### 1. Drilling a Pilot Hole



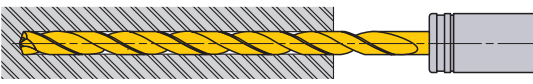
- ① Use a drill with a larger (flatter) point angle than the long type.  
Use the shortest flute possible.
- ② Ensure a high precision hole is drilled for the guide.
- ③ Drill depth : Approx DCx1.  
(Adjust the pilot hole depth according to the length of the long type drill.)

### 2. Initial Cutting with the Long Type Drill



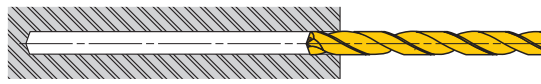
- ① Penetrate the guide hole at low revolution.  
(Revolution  $1000\text{min}^{-1}$ , feed rate  $0.2\text{--}0.3\text{mm/rev}$ )
- ② Stop the long type drill  $0.5\text{--}1\text{mm}$  short of the guide hole bottom.

### 3. Drill the Deep Hole



- ① Start cutting at the recommended speed and feed with a non-peck (continuous feed) cycle.

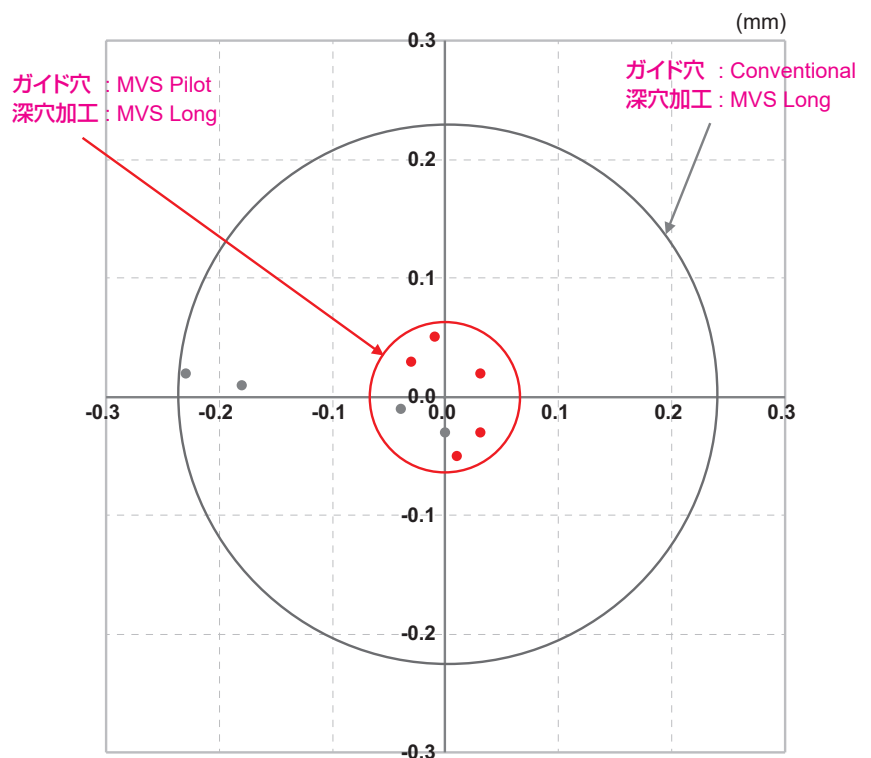
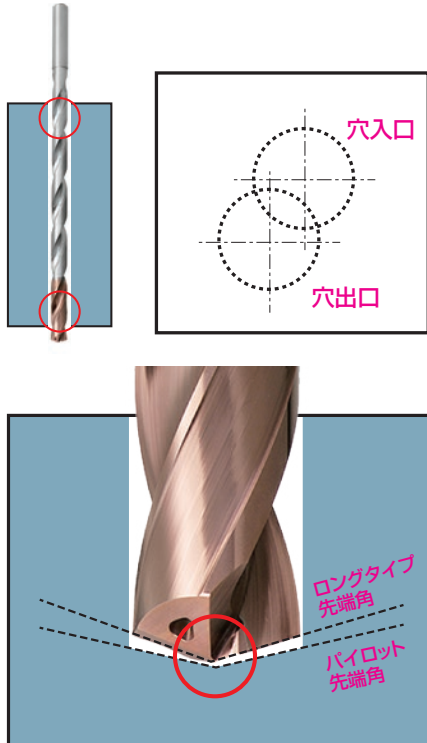
### 4. Drill Retraction



- ① After drilling, lower the cutting revolution about  $0.5\text{--}1\text{mm}$  short of the hole end. (Revolution  $1000\text{min}^{-1}$ )
- ② Retract the drill to the pilot hole starting point at a feed rate of  $3000\text{mm/min}$ .
- ③ Finally, clear the hole at a cutting speed of  $20\text{--}30\text{m/min}$  and feed rate of  $0.2\text{--}0.3\text{mm/rev}$ .

## パイロットドリルを使用した場合のロング穴位置精度

MVSパイロットドリルとMVSロングタイプのコンビネーションは、穴曲りを抑制し穴位置精度が向上します。



MVSパイロットドリルは、ロングタイプが加工を開始する際、先端角がドリル中心部から食いつくように最適化した、ロングタイプ専用のガイド穴加工用ドリルです。

<Cutting Conditions>

Pilot Drill : MVS0500X02S050PL

Long Type Drill : MVS0500X15S050

Work Material : FCD600

ガイド穴深さ :  $10\text{mm}$  ( $L/D=2$ )

Hole Depth :  $75\text{mm}$

Cutting Speed :  $80\text{m/min}$

Feed Rate :  $0.15\text{mm/rev}$

Cutting Mode : Water Based

(Internal Coolant 1MPa)

# Solid Carbide Drills

## Solid Carbide Drills **WSTAR** Drill Series

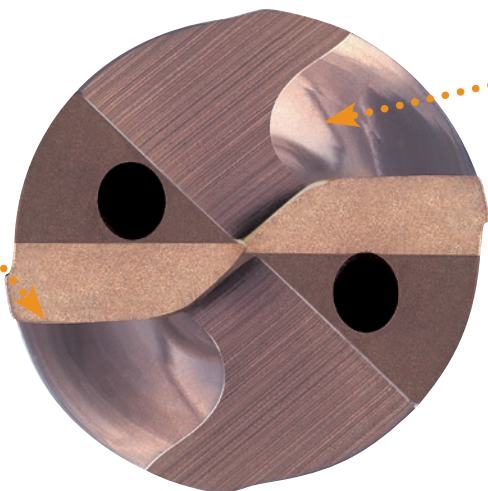
# MVS

## Small Dia. $\phi$ 1 mm— $\phi$ 2.9 mm

Ideal for long tool life and process security when deep hole drilling.

### Straight Cutting Edge

Improved chip evacuation and enhanced cutting edge strength.



### New Flute Geometry

For improved chip evacuation.

**Uniform, Fine Chips**



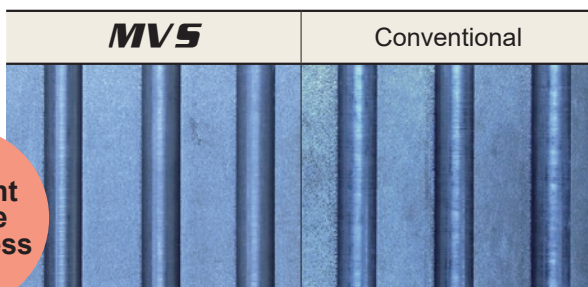
<Cutting Conditions>  
 Drill Dia. :  $\phi$ 2.5mm  
 Work Material : AISI 304  
 Hole Depth : 75 mm (L/D=30)  
 Cutting Speed : 40 m/min  
 Feed Rate : 0.04 mm/rev  
 Cutting Mode : Water Based (Internal Coolant) (7MPa)



### Double Margin

Provide high precision and balanced cutting.

**Excellent Surface Roughness**



Double Margin

Double Margin

<Cutting Conditions>  
 Drill Dia. :  $\phi$ 2mm  
 Work Material : AISI 4140  
 Hole Depth : 60 mm (L/D=30)  
 Cutting Speed : 30 m/min  
 Feed Rate : 0.04 mm/rev  
 Cutting Mode : Water Based (Internal Coolant) (7MPa)

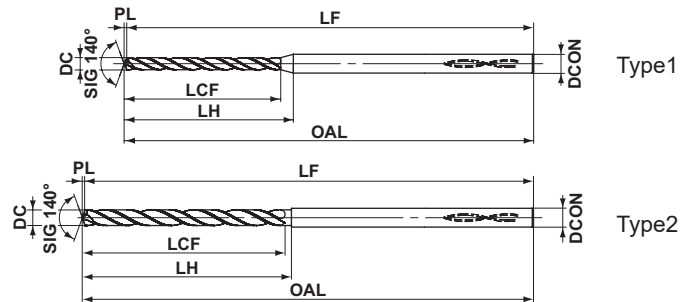


# MVS for Small Diameter

## WSTAR Drills



	$1 \leq DC \leq 2.9$
	$\begin{matrix} 0 \\ -0.014 \\ 0 \\ -0.006 \end{matrix}$



Internal Coolant

DC	Hole Depth (l/d)	Stock DP1020	Order Number	LCF	LH	OAL	LF	PL	DCON	Type
1.0	7	●	MVS0100X07S030	10.2	14.2	55.2	55	0.2	3	1
	12	●	MVS0100X12S030	15.2	19.2	55.2	55	0.2	3	1
	20	●	MVS0100X20S030	24.2	28.2	60.2	60	0.2	3	1
	25	●	MVS0100X25S030	28.2	32.2	66.2	66	0.2	3	1
	30	●	MVS0100X30S030	33.2	37.2	72.2	72	0.2	3	1
1.1	7	●	MVS0110X07S030	11.2	15.2	55.2	55	0.2	3	1
	12	●	MVS0110X12S030	17.2	21.2	55.2	55	0.2	3	1
	20	●	MVS0110X20S030	25.2	29.2	60.2	60	0.2	3	1
	25	●	MVS0110X25S030	31.2	34.2	66.2	66	0.2	3	1
	30	●	MVS0110X30S030	36.2	40.2	72.2	72	0.2	3	1
1.2	7	●	MVS0120X07S030	12.2	15.2	55.2	55	0.2	3	1
	12	●	MVS0120X12S030	18.2	21.2	55.2	55	0.2	3	1
	20	●	MVS0120X20S030	28.2	31.2	60.2	60	0.2	3	1
	25	●	MVS0120X25S030	34.2	37.2	66.2	66	0.2	3	1
	30	●	MVS0120X30S030	40.2	43.2	72.2	72	0.2	3	1
1.3	7	●	MVS0130X07S030	13.2	16.2	55.2	55	0.2	3	1
	12	●	MVS0130X12S030	20.2	23.2	55.2	55	0.2	3	1
	20	●	MVS0130X20S030	30.2	33.2	68.2	68	0.2	3	1
	25	●	MVS0130X25S030	36.2	40.2	74.2	74	0.2	3	1
	30	●	MVS0130X30S030	43.2	46.2	82.2	82	0.2	3	1
1.4	7	●	MVS0140X07S030	14.3	17.3	55.3	55	0.3	3	1
	12	●	MVS0140X12S030	21.3	24.3	55.3	55	0.3	3	1
	20	●	MVS0140X20S030	32.3	35.3	68.3	68	0.3	3	1
	25	●	MVS0140X25S030	39.3	42.3	74.3	74	0.3	3	1
	30	●	MVS0140X30S030	46.3	49.3	82.3	82	0.3	3	1
1.5	7	●	MVS0150X07S030	15.3	18.3	55.3	55	0.3	3	1
	12	●	MVS0150X12S030	23.3	26.3	55.3	55	0.3	3	1
	20	●	MVS0150X20S030	35.3	37.3	68.3	68	0.3	3	1
	25	●	MVS0150X25S030	42.3	45.3	74.3	74	0.3	3	1
	30	●	MVS0150X30S030	50.3	52.3	82.3	82	0.3	3	1
1.6	7	●	MVS0160X07S030	16.3	19.3	68.3	68	0.3	3	1
	12	●	MVS0160X12S030	24.3	27.3	68.3	68	0.3	3	1
	20	●	MVS0160X20S030	37.3	39.3	78.3	78	0.3	3	1
	25	●	MVS0160X25S030	45.3	47.3	86.3	86	0.3	3	1
	30	●	MVS0160X30S030	53.3	55.3	95.3	95	0.3	3	1
1.7	7	●	MVS0170X07S030	17.3	19.3	68.3	68	0.3	3	1

Internal Coolant

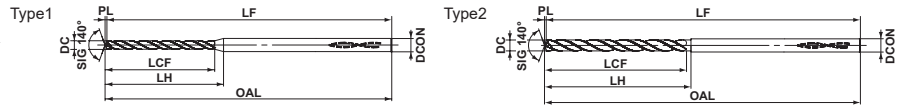
DC	Hole Depth (l/d)	Stock DP1020	Order Number	LCF	LH	OAL	LF	PL	DCON	Type
1.7	12	●	MVS0170X12S030	26.3	28.3	68.3	68	0.3	3	1
	20	●	MVS0170X20S030	39.3	42.3	78.3	78	0.3	3	1
	25	●	MVS0170X25S030	48.3	50.3	86.3	86	0.3	3	1
	30	●	MVS0170X30S030	56.3	59.3	95.3	95	0.3	3	1
1.8	7	●	MVS0180X07S030	18.3	20.3	68.3	68	0.3	3	1
	12	●	MVS0180X12S030	27.3	29.3	68.3	68	0.3	3	1
	20	●	MVS0180X20S030	41.3	44.3	84.3	84	0.3	3	1
	25	●	MVS0180X25S030	50.3	53.3	94.3	94	0.3	3	1
30	●	MVS0180X30S030	59.3	62.3	102.3	102	0.3	3	1	
1.9	7	●	MVS0190X07S030	19.3	21.3	68.3	68	0.3	3	1
	12	●	MVS0190X12S030	29.3	31.3	68.3	68	0.3	3	1
	20	●	MVS0190X20S030	44.3	46.3	84.3	84	0.3	3	1
	25	●	MVS0190X25S030	53.3	55.3	94.3	94	0.3	3	1
30	●	MVS0190X30S030	63.3	65.3	102.3	102	0.3	3	1	
2.0	7	●	MVS0200X07S030	20.4	22.4	68.4	68	0.4	3	1
	12	●	MVS0200X12S030	30.4	32.4	68.4	68	0.4	3	1
	20	●	MVS0200X20S030	46.4	48.4	84.4	84	0.4	3	1
	25	●	MVS0200X25S030	56.4	58.4	94.4	94	0.4	3	1
30	●	MVS0200X30S030	66.4	68.4	102.4	102	0.4	3	1	
2.1	7	●	MVS0210X07S030	21.4	23.4	74.4	74	0.4	3	1
	12	●	MVS0210X12S030	32.4	34.4	74.4	74	0.4	3	1
	20	●	MVS0210X20S030	48.4	50.4	94.4	94	0.4	3	1
	25	●	MVS0210X25S030	59.4	60.4	107.4	107	0.4	3	1
30	●	MVS0210X30S030	69.4	71.4	118.4	118	0.4	3	1	
2.2	7	●	MVS0220X07S030	22.4	23.4	74.4	74	0.4	3	1
	12	●	MVS0220X12S030	33.4	34.4	74.4	74	0.4	3	1
	20	●	MVS0220X20S030	51.4	52.4	94.4	94	0.4	3	1
	25	●	MVS0220X25S030	62.4	63.4	107.4	107	0.4	3	1
30	●	MVS0220X30S030	73.4	74.4	118.4	118	0.4	3	1	
2.3	7	●	MVS0230X07S030	23.4	24.4	74.4	74	0.4	3	1
	12	●	MVS0230X12S030	35.4	36.4	74.4	74	0.4	3	1
	20	●	MVS0230X20S030	53.4	54.4	94.4	94	0.4	3	1
	25	●	MVS0230X25S030	64.4	66.4	107.4	107	0.4	3	1
30	●	MVS0230X30S030	76.4	77.4	118.4	118	0.4	3	1	
2.4	7	●	MVS0240X07S030	24.4	25.4	74.4	74	0.4	3	1
	12	●	MVS0240X12S030	36.4	37.4	74.4	74	0.4	3	1

(Note) The coolant hole of  $\phi 4.9$ mm or less will be round shape.

● : Inventory maintained in Japan.

# Solid Carbide Drills

**MVS** for Small Diameter  
WSTAR Drills



Internal Coolant (mm)

DC	Hole Depth (l/d)	Stock DP1020	Order Number	LCF	LH	OAL	LF	PL	DCON	Type
2.4	20	●	MVS0240X20S030	55.4	56.4	94.4	94	0.4	3	1
	25	●	MVS0240X25S030	67.4	68.4	107.4	107	0.4	3	1
	30	●	MVS0240X30S030	79.4	80.4	118.4	118	0.4	3	1
2.5	7	●	MVS0250X07S030	25.5	26.5	74.5	74	0.5	3	1
	12	●	MVS0250X12S030	38.5	39.5	74.5	74	0.5	3	1
	20	●	MVS0250X20S030	58.5	59.5	94.5	94	0.5	3	1
	25	●	MVS0250X25S030	70.5	71.5	107.5	107	0.5	3	1
	30	●	MVS0250X30S030	83.5	84.5	118.5	118	0.5	3	1
2.6	7	●	MVS0260X07S030	26.5	26.5	81.5	81	0.5	3	2
	12	●	MVS0260X12S030	39.5	39.5	81.5	81	0.5	3	2
	20	●	MVS0260X20S030	60.5	60.5	103.5	103	0.5	3	2
	25	●	MVS0260X25S030	73.5	73.5	117.5	117	0.5	3	2
	30	●	MVS0260X30S030	86.5	86.5	132.5	132	0.5	3	2
2.7	7	●	MVS0270X07S030	27.5	27.5	81.5	81	0.5	3	2
	12	●	MVS0270X12S030	41.5	41.5	81.5	81	0.5	3	2
	20	●	MVS0270X20S030	62.5	62.5	103.5	103	0.5	3	2
	25	●	MVS0270X25S030	76.5	76.5	117.5	117	0.5	3	2
	30	●	MVS0270X30S030	89.5	89.5	132.5	132	0.5	3	2
2.8	7	●	MVS0280X07S030	28.5	28.5	81.5	81	0.5	3	2
	12	●	MVS0280X12S030	42.5	42.5	81.5	81	0.5	3	2
	20	●	MVS0280X20S030	64.5	64.5	103.5	103	0.5	3	2
	25	●	MVS0280X25S030	78.5	78.5	117.5	117	0.5	3	2
	30	●	MVS0280X30S030	92.5	92.5	132.5	132	0.5	3	2
2.9	7	●	MVS0290X07S030	29.5	29.5	81.5	81	0.5	3	2
	12	●	MVS0290X12S030	44.5	44.5	81.5	81	0.5	3	2
	20	●	MVS0290X20S030	67.5	67.5	103.5	103	0.5	3	2
	25	●	MVS0290X25S030	81.5	81.5	117.5	117	0.5	3	2
	30	●	MVS0290X30S030	96.5	96.5	132.5	132	0.5	3	2

(Note) The coolant hole of  $\phi 5.9$ mm or less will be round shape.

DC = Cutting Diameter      OAL = Overall Length      DCON = Fixing Part Depth  
 LCF = Length Chip Flute      LF = Functional Length  
 LH = Neck Length      PL = Point Length

● : Inventory maintained in Japan.    □ : Non stock, produced to order only.

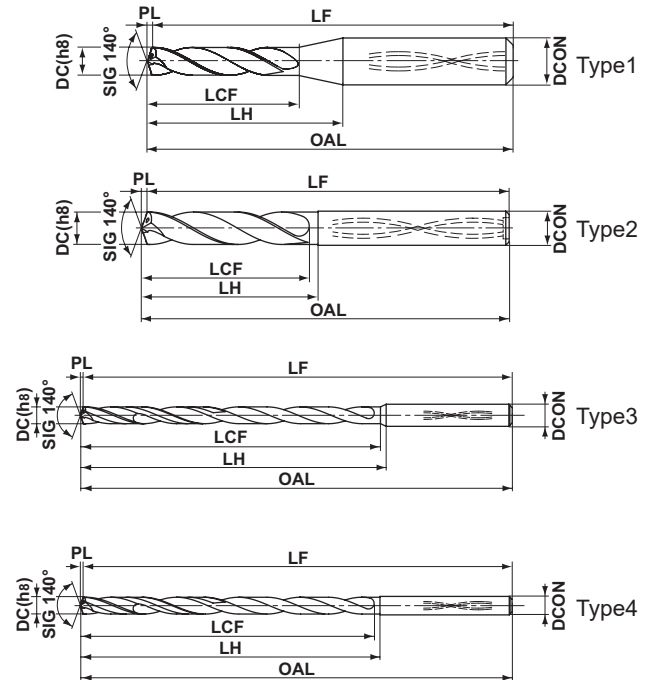


# MVS

## WSTAR Drills



l/d	DC=3	3<DC≤6	6<DC≤10	10<DC≤18	18<DC≤20
3,5,8	0 -0.014	0 -0.018	0 -0.022	0 -0.027	0 -0.033
l/d ≥ 10	-0.017 -0.031	-0.025 -0.043	-0.033 -0.055	-0.041 -0.068	-
	0 -0.006	0 -0.008	0 -0.009	0 -0.011	0 -0.013



Internal Coolant

DC	Hole Depth (l/d)	Stock DP1020	Order Number	LCF	LH	OAL	LF	PL	DCON	Type
3.0	3	●	MVS0300X03S030	21.5	21.5	72.5	72	0.5	3	2
3.0	3	●	MVS0300X03S060	21.5	24.7	72.5	72	0.5	6	1
3.0	5	●	MVS0300X05S030	28.5	28.5	81.5	81	0.5	3	2
3.0	5	●	MVS0300X05S060	28.5	31.7	81.5	81	0.5	6	1
3.0	8	●	MVS0300X08S030	35.5	35.5	81.5	81	0.5	3	2
3.0	8	●	MVS0300X08S060	35.5	38.7	81.5	81	0.5	6	1
NEW 3.0	10	●	MVS0300X10S030	39.5	42.6	90.5	90	0.5	3	3
NEW 3.0	15	●	MVS0300X15S030	54.5	57.6	105.5	105	0.5	3	3
NEW 3.0	20	●	MVS0300X20S030	69.5	72.6	120.5	120	0.5	3	3
NEW 3.0	25	●	MVS0300X25S030	84.5	87.6	135.5	135	0.5	3	3
NEW 3.0	30	●	MVS0300X30S030	99.5	102.6	150.5	150	0.5	3	3
NEW 3.0	35	●	MVS0300X35S030	115.5	118.6	166.5	166	0.5	3	3
NEW 3.0	40	●	MVS0300X40S030	130.5	133.6	181.5	181	0.5	3	3
3.1	3	●	MVS0310X03S040	21.6	23.6	76.6	76	0.6	4	2
3.1	3	●	MVS0310X03S060	21.6	24.7	76.6	76	0.6	6	1
3.1	5	●	MVS0310X05S040	32.6	32.6	87.6	87	0.6	4	2
3.1	5	●	MVS0310X05S060	32.6	35.7	87.6	87	0.6	6	1
3.1	8	●	MVS0310X08S040	41.6	41.6	87.6	87	0.6	4	2
3.1	8	●	MVS0310X08S060	41.6	44.7	87.6	87	0.6	6	1
NEW 3.1	10	●	MVS0310X10S040	46.6	49.6	97.6	97	0.6	4	3
NEW 3.1	15	●	MVS0310X15S040	63.6	66.6	114.6	114	0.6	4	3
NEW 3.1	20	●	MVS0310X20S040	81.6	84.6	132.6	132	0.6	4	3
NEW 3.1	25	●	MVS0310X25S040	98.6	101.6	149.6	149	0.6	4	3

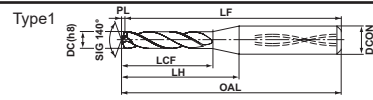
Internal Coolant

(mm)

DC	Hole Depth (l/d)	Stock DP1020	Order Number	LCF	LH	OAL	LF	PL	DCON	Type
NEW 3.1	30	●	MVS0310X30S040	116.6	119.6	167.6	167	0.6	4	3
NEW 3.1	35	□	MVS0310X35S040	134.6	137.6	185.6	185	0.6	4	3
NEW 3.1	40	□	MVS0310X40S040	150.6	153.6	201.6	201	0.6	4	3
3.2	3	●	MVS0320X03S040	21.6	23.6	76.6	76	0.6	4	2
3.2	3	●	MVS0320X03S060	21.6	24.6	76.6	76	0.6	6	1
3.2	5	●	MVS0320X05S040	32.6	32.6	87.6	87	0.6	4	2
3.2	5	●	MVS0320X05S060	32.6	35.6	87.6	87	0.6	6	1
3.2	8	●	MVS0320X08S040	41.6	41.6	87.6	87	0.6	4	2
3.2	8	●	MVS0320X08S060	41.6	44.6	87.6	87	0.6	6	1
NEW 3.2	10	●	MVS0320X10S040	46.6	49.6	97.6	97	0.6	4	3
NEW 3.2	15	●	MVS0320X15S040	63.6	66.6	114.6	114	0.6	4	3
NEW 3.2	20	●	MVS0320X20S040	81.6	84.6	132.6	132	0.6	4	3
NEW 3.2	25	●	MVS0320X25S040	98.6	101.6	149.6	149	0.6	4	3
NEW 3.2	30	●	MVS0320X30S040	116.6	119.6	167.6	167	0.6	4	3
NEW 3.2	35	□	MVS0320X35S040	134.6	137.6	185.6	185	0.6	4	3
NEW 3.2	40	□	MVS0320X40S040	150.6	153.6	201.6	201	0.6	4	3
3.3	3	●	MVS0330X03S040	21.6	23.6	76.6	76	0.6	4	2
3.3	3	●	MVS0330X03S060	21.6	24.5	76.6	76	0.6	6	1
3.3	5	●	MVS0330X05S040	32.6	32.6	87.6	87	0.6	4	2
3.3	5	●	MVS0330X05S060	32.6	35.5	87.6	87	0.6	6	1
3.3	8	●	MVS0330X08S040	41.6	41.6	87.6	87	0.6	4	2
3.3	8	●	MVS0330X08S060	41.6	44.5	87.6	87	0.6	6	1
NEW 3.3	10	●	MVS0330X10S040	46.6	49.6	97.6	97	0.6	4	3

(Note) The coolant hole of  $\phi 4.9$ mm or less will be round shape. (l/d=3,5,8は $\phi 6$ mm未満)

# Solid Carbide Drills

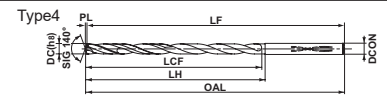
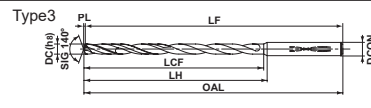
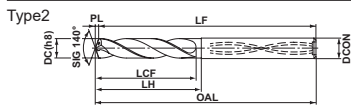


Internal Coolant										
DC	Hole Depth (l/d)	Stock DP1020	Order Number	LCF	LH	OAL	LF	PL	DCON	Type
NEW 3.3	15	●	MVS0330X15S040	63.6	66.6	114.6	114	0.6	4	3
NEW 3.3	20	●	MVS0330X20S040	81.6	84.6	132.6	132	0.6	4	3
NEW 3.3	25	●	MVS0330X25S040	98.6	101.6	149.6	149	0.6	4	3
NEW 3.3	30	●	MVS0330X30S040	116.6	119.6	167.6	167	0.6	4	3
NEW 3.3	35	□	MVS0330X35S040	134.6	137.6	185.6	185	0.6	4	3
NEW 3.3	40	□	MVS0330X40S040	150.6	153.6	201.6	201	0.6	4	3
3.4	3	●	MVS0340X03S040	21.6	23.6	76.6	76	0.6	4	2
3.4	3	●	MVS0340X03S060	21.6	24.4	76.6	76	0.6	6	1
3.4	5	●	MVS0340X05S040	32.6	32.6	87.6	87	0.6	4	2
3.4	5	●	MVS0340X05S060	32.6	35.4	87.6	87	0.6	6	1
3.4	8	●	MVS0340X08S040	41.6	41.6	87.6	87	0.6	4	2
3.4	8	●	MVS0340X08S060	41.6	44.4	87.6	87	0.6	6	1
NEW 3.4	10	●	MVS0340X10S040	46.6	49.6	97.6	97	0.6	4	3
NEW 3.4	15	●	MVS0340X15S040	63.6	66.6	114.6	114	0.6	4	3
NEW 3.4	20	●	MVS0340X20S040	81.6	84.6	132.6	132	0.6	4	3
NEW 3.4	25	●	MVS0340X25S040	98.6	101.6	149.6	149	0.6	4	3
NEW 3.4	30	●	MVS0340X30S040	116.6	119.6	167.6	167	0.6	4	3
NEW 3.4	35	□	MVS0340X35S040	134.6	137.6	185.6	185	0.6	4	3
NEW 3.4	40	□	MVS0340X40S040	150.6	153.6	201.6	201	0.6	4	3
3.5	3	●	MVS0350X03S040	21.6	23.6	76.6	76	0.6	4	2
3.5	3	●	MVS0350X03S060	21.6	24.3	76.6	76	0.6	6	1
3.5	5	●	MVS0350X05S040	32.6	32.6	87.6	87	0.6	4	2
3.5	5	●	MVS0350X05S060	32.6	35.3	87.6	87	0.6	6	1
3.5	8	●	MVS0350X08S040	41.6	41.6	87.6	87	0.6	4	2
3.5	8	●	MVS0350X08S060	41.6	44.3	87.6	87	0.6	6	1
NEW 3.5	10	●	MVS0350X10S040	46.6	49.6	97.6	97	0.6	4	3
NEW 3.5	15	●	MVS0350X15S040	63.6	66.6	114.6	114	0.6	4	3
NEW 3.5	20	●	MVS0350X20S040	81.6	84.6	132.6	132	0.6	4	3
NEW 3.5	25	●	MVS0350X25S040	98.6	101.6	149.6	149	0.6	4	3
NEW 3.5	30	●	MVS0350X30S040	116.6	119.6	167.6	167	0.6	4	3
NEW 3.5	35	●	MVS0350X35S040	134.6	137.6	185.6	185	0.6	4	3
NEW 3.5	40	●	MVS0350X40S040	150.6	153.6	201.6	201	0.6	4	3
3.6	3	●	MVS0360X03S040	23.7	23.7	80.7	80	0.7	4	2
3.6	3	●	MVS0360X03S060	23.7	26.3	80.7	80	0.7	6	1
3.6	5	●	MVS0360X05S040	36.7	36.7	92.7	92	0.7	4	2
3.6	5	●	MVS0360X05S060	36.7	39.3	92.7	92	0.7	6	1
3.6	8	●	MVS0360X08S040	46.7	46.7	92.7	92	0.7	4	2
3.6	8	●	MVS0360X08S060	46.7	49.3	92.7	92	0.7	6	1
NEW 3.6	10	●	MVS0360X10S040	52.7	55.7	103.7	103	0.7	4	3
NEW 3.6	15	●	MVS0360X15S040	72.7	75.7	123.7	123	0.7	4	3
NEW 3.6	20	●	MVS0360X20S040	92.7	95.7	143.7	143	0.7	4	3
NEW 3.6	25	●	MVS0360X25S040	112.7	115.7	163.7	163	0.7	4	3
NEW 3.6	30	●	MVS0360X30S040	132.7	135.7	183.7	183	0.7	4	3
NEW 3.6	35	□	MVS0360X35S040	152.7	155.7	203.7	203	0.7	4	3
NEW 3.6	40	□	MVS0360X40S040	172.7	175.7	223.7	223	0.7	4	3
3.7	3	●	MVS0370X03S040	23.7	23.7	80.7	80	0.7	4	2
3.7	3	●	MVS0370X03S060	23.7	26.2	80.7	80	0.7	6	1
3.7	5	●	MVS0370X05S040	36.7	36.7	92.7	92	0.7	4	2
3.7	5	●	MVS0370X05S060	36.7	39.2	92.7	92	0.7	6	1

Internal Coolant										(mm)
DC	Hole Depth (l/d)	Stock DP1020	Order Number	LCF	LH	OAL	LF	PL	DCON	Type
3.7	8	●	MVS0370X08S040	46.7	46.7	92.7	92	0.7	4	2
3.7	8	●	MVS0370X08S060	46.7	49.2	92.7	92	0.7	6	1
NEW 3.7	10	●	MVS0370X10S040	52.7	55.7	103.7	103	0.7	4	3
NEW 3.7	15	●	MVS0370X15S040	72.7	75.7	123.7	123	0.7	4	3
NEW 3.7	20	●	MVS0370X20S040	92.7	95.7	143.7	143	0.7	4	3
NEW 3.7	25	●	MVS0370X25S040	112.7	115.7	163.7	163	0.7	4	3
NEW 3.7	30	●	MVS0370X30S040	132.7	135.7	183.7	183	0.7	4	3
NEW 3.7	35	□	MVS0370X35S040	152.7	155.7	203.7	203	0.7	4	3
NEW 3.7	40	□	MVS0370X40S040	172.7	175.7	223.7	223	0.7	4	3
3.8	3	●	MVS0380X03S040	23.7	23.7	80.7	80	0.7	4	2
3.8	3	●	MVS0380X03S060	23.7	26.1	80.7	80	0.7	6	1
3.8	5	●	MVS0380X05S040	36.7	36.7	92.7	92	0.7	4	2
3.8	5	●	MVS0380X05S060	36.7	39.1	92.7	92	0.7	6	1
3.8	8	●	MVS0380X08S040	46.7	46.7	92.7	92	0.7	4	2
3.8	8	●	MVS0380X08S060	46.7	49.1	92.7	92	0.7	6	1
NEW 3.8	10	●	MVS0380X10S040	52.7	55.7	103.7	103	0.7	4	3
NEW 3.8	15	●	MVS0380X15S040	72.7	75.7	123.7	123	0.7	4	3
NEW 3.8	20	●	MVS0380X20S040	92.7	95.7	143.7	143	0.7	4	3
NEW 3.8	25	●	MVS0380X25S040	112.7	115.7	163.7	163	0.7	4	3
NEW 3.8	30	●	MVS0380X30S040	132.7	135.7	183.7	183	0.7	4	3
NEW 3.8	35	□	MVS0380X35S040	152.7	155.7	203.7	203	0.7	4	3
NEW 3.8	40	□	MVS0380X40S040	172.7	175.7	223.7	223	0.7	4	3
3.9	3	●	MVS0390X03S040	23.7	23.7	80.7	80	0.7	4	2
3.9	3	●	MVS0390X03S060	23.7	26.0	80.7	80	0.7	6	1
3.9	5	●	MVS0390X05S040	36.7	36.7	92.7	92	0.7	4	2
3.9	5	●	MVS0390X05S060	36.7	39.0	92.7	92	0.7	6	1
3.9	8	●	MVS0390X08S040	46.7	46.7	92.7	92	0.7	4	2
3.9	8	●	MVS0390X08S060	46.7	49.0	92.7	92	0.7	6	1
NEW 3.9	10	●	MVS0390X10S040	52.7	55.7	103.7	103	0.7	4	3
NEW 3.9	15	●	MVS0390X15S040	72.7	75.7	123.7	123	0.7	4	3
NEW 3.9	20	●	MVS0390X20S040	92.7	95.7	143.7	143	0.7	4	3
NEW 3.9	25	●	MVS0390X25S040	112.7	115.7	163.7	163	0.7	4	3
NEW 3.9	30	●	MVS0390X30S040	132.7	135.7	183.7	183	0.7	4	3
NEW 3.9	35	□	MVS0390X35S040	152.7	155.7	203.7	203	0.7	4	3
NEW 3.9	40	□	MVS0390X40S040	172.7	175.7	223.7	223	0.7	4	3
4.0	3	●	MVS0400X03S040	23.7	23.7	80.7	80	0.7	4	2
4.0	3	●	MVS0400X03S060	23.7	25.8	80.7	80	0.7	6	1
4.0	5	●	MVS0400X05S040	36.7	36.7	92.7	92	0.7	4	2
4.0	5	●	MVS0400X05S060	36.7	38.8	92.7	92	0.7	6	1
4.0	8	●	MVS0400X08S040	46.7	46.7	92.7	92	0.7	4	2
4.0	8	●	MVS0400X08S060	46.7	48.8	92.7	92	0.7	6	1
NEW 4.0	10	●	MVS0400X10S040	52.7	55.7	103.7	103	0.7	4	3
NEW 4.0	15	●	MVS0400X15S040	72.7	75.7	123.7	123	0.7	4	3
NEW 4.0	20	●	MVS0400X20S040	92.7	95.7	143.7	143	0.7	4	3
NEW 4.0	25	●	MVS0400X25S040	112.7	115.7	163.7	163	0.7	4	3
NEW 4.0	30	●	MVS0400X30S040	132.7	135.7	183.7	183	0.7	4	3
NEW 4.0	35	●	MVS0400X35S040	152.7	155.7	203.7	203	0.7	4	3
NEW 4.0	40	●	MVS0400X40S040	172.7	175.7	223.7	223	0.7	4	3
4.1	3	●	MVS0410X03S050	25.7	25.7	86.7	86	0.7	5	2

(Note) The coolant hole of  $\phi 4.9$ mm or less will be round shape. (l/d=3,5,8は $\phi 6$ mm未満)

● : Inventory maintained in Japan. □ : Non stock, produced to order only.



Internal Coolant

Internal Coolant

(mm)

DC	Hole Depth (l/d)	Stock DP1020	Order Number	LCF	LH	OAL	LF	PL	DCON	Type	
											4.1
4.1	5	●	MVS0410X05S050	40.7	40.7	100.7	100	0.7	5	2	
4.1	5	●	MVS0410X05S060	40.7	42.7	100.7	100	0.7	6	1	
4.1	8	●	MVS0410X08S050	52.7	52.7	100.7	100	0.7	5	2	
4.1	8	●	MVS0410X08S060	52.7	54.7	100.7	100	0.7	6	1	
NEW	4.1	10	●	MVS0410X10S050	59.7	62.8	112.7	112	0.7	5	3
NEW	4.1	15	●	MVS0410X15S050	81.7	84.8	134.7	134	0.7	5	3
NEW	4.1	20	●	MVS0410X20S050	104.7	107.8	157.7	157	0.7	5	3
NEW	4.1	25	●	MVS0410X25S050	126.7	129.8	179.7	179	0.7	5	3
NEW	4.1	30	●	MVS0410X30S050	149.7	152.8	202.7	202	0.7	5	3
NEW	4.1	35	□	MVS0410X35S050	171.7	174.8	224.7	224	0.7	5	3
NEW	4.1	40	□	MVS0410X40S050	195.7	198.8	248.7	248	0.7	5	3
4.2	3	●	MVS0420X03S050	25.8	25.8	86.8	86	0.8	5	2	
4.2	3	●	MVS0420X03S060	25.8	27.7	86.8	86	0.8	6	1	
4.2	5	●	MVS0420X05S050	40.8	40.8	100.8	100	0.8	5	2	
4.2	5	●	MVS0420X05S060	40.8	42.7	100.8	100	0.8	6	1	
4.2	8	●	MVS0420X08S050	52.8	52.8	100.8	100	0.8	5	2	
4.2	8	●	MVS0420X08S060	52.8	54.7	100.8	100	0.8	6	1	
NEW	4.2	10	●	MVS0420X10S050	59.8	62.8	112.8	112	0.8	5	3
NEW	4.2	15	●	MVS0420X15S050	81.8	84.8	134.8	134	0.8	5	3
NEW	4.2	20	●	MVS0420X20S050	104.8	107.8	157.8	157	0.8	5	3
NEW	4.2	25	●	MVS0420X25S050	126.8	129.8	179.8	179	0.8	5	3
NEW	4.2	30	●	MVS0420X30S050	149.8	152.8	202.8	202	0.8	5	3
NEW	4.2	35	□	MVS0420X35S050	171.8	174.8	224.8	224	0.8	5	3
NEW	4.2	40	□	MVS0420X40S050	195.8	198.8	248.8	248	0.8	5	3
4.3	3	●	MVS0430X03S050	25.8	25.8	86.8	86	0.8	5	2	
4.3	3	●	MVS0430X03S060	25.8	27.6	86.8	86	0.8	6	1	
4.3	5	●	MVS0430X05S050	40.8	40.8	100.8	100	0.8	5	2	
4.3	5	●	MVS0430X05S060	40.8	42.6	100.8	100	0.8	6	1	
4.3	8	●	MVS0430X08S050	52.8	52.8	100.8	100	0.8	5	2	
4.3	8	●	MVS0430X08S060	52.8	54.6	100.8	100	0.8	6	1	
NEW	4.3	10	●	MVS0430X10S050	59.8	62.8	112.8	112	0.8	5	3
NEW	4.3	15	●	MVS0430X15S050	81.8	84.8	134.8	134	0.8	5	3
NEW	4.3	20	●	MVS0430X20S050	104.8	107.8	157.8	157	0.8	5	3
NEW	4.3	25	●	MVS0430X25S050	126.8	129.8	179.8	179	0.8	5	3
NEW	4.3	30	●	MVS0430X30S050	149.8	152.8	202.8	202	0.8	5	3
NEW	4.3	35	□	MVS0430X35S050	171.8	174.8	224.8	224	0.8	5	3
NEW	4.3	40	□	MVS0430X40S050	195.8	198.8	248.8	248	0.8	5	3
4.4	3	●	MVS0440X03S050	25.8	25.8	86.8	86	0.8	5	2	
4.4	3	●	MVS0440X03S060	25.8	27.5	86.8	86	0.8	6	1	
4.4	5	●	MVS0440X05S050	40.8	40.8	100.8	100	0.8	5	2	
4.4	5	●	MVS0440X05S060	40.8	42.5	100.8	100	0.8	6	1	
4.4	8	●	MVS0440X08S050	52.8	52.8	100.8	100	0.8	5	2	
4.4	8	●	MVS0440X08S060	52.8	54.5	100.8	100	0.8	6	1	
NEW	4.4	10	●	MVS0440X10S050	59.8	62.8	112.8	112	0.8	5	3
NEW	4.4	15	●	MVS0440X15S050	81.8	84.8	134.8	134	0.8	5	3
NEW	4.4	20	●	MVS0440X20S050	104.8	107.8	157.8	157	0.8	5	3
NEW	4.4	25	●	MVS0440X25S050	126.8	129.8	179.8	179	0.8	5	3

DC	Hole Depth (l/d)	Stock DP1020	Order Number	LCF	LH	OAL	LF	PL	DCON	Type	
											NEW
NEW	4.4	35	□	MVS0440X35S050	171.8	174.8	224.8	224	0.8	5	3
NEW	4.4	40	□	MVS0440X40S050	195.8	198.8	248.8	248	0.8	5	3
4.5	3	●	MVS0450X03S050	25.8	25.8	86.8	86	0.8	5	2	
4.5	3	●	MVS0450X03S060	25.8	27.4	86.8	86	0.8	6	1	
4.5	5	●	MVS0450X05S050	40.8	40.8	100.8	100	0.8	5	2	
4.5	5	●	MVS0450X05S060	40.8	42.4	100.8	100	0.8	6	1	
4.5	8	●	MVS0450X08S050	52.8	52.8	100.8	100	0.8	5	2	
4.5	8	●	MVS0450X08S060	52.8	54.4	100.8	100	0.8	6	1	
NEW	4.5	10	●	MVS0450X10S050	59.8	62.8	112.8	112	0.8	5	3
NEW	4.5	15	●	MVS0450X15S050	81.8	84.8	134.8	134	0.8	5	3
NEW	4.5	20	●	MVS0450X20S050	104.8	107.8	157.8	157	0.8	5	3
NEW	4.5	25	●	MVS0450X25S050	126.8	129.8	179.8	179	0.8	5	3
NEW	4.5	30	●	MVS0450X30S050	149.8	152.8	202.8	202	0.8	5	3
NEW	4.5	35	●	MVS0450X35S050	171.8	174.8	224.8	224	0.8	5	3
NEW	4.5	40	●	MVS0450X40S050	195.8	198.8	248.8	248	0.8	5	3
4.6	3	●	MVS0460X03S050	28.3	28.3	90.8	90	0.8	5	2	
4.6	3	●	MVS0460X03S060	28.3	31.3	90.8	90	0.8	6	2	
4.6	5	●	MVS0460X05S050	44.8	44.8	105.8	105	0.8	5	2	
4.6	5	●	MVS0460X05S060	44.8	47.8	105.8	105	0.8	6	2	
4.6	8	●	MVS0460X08S050	57.8	57.8	105.8	105	0.8	5	2	
4.6	8	●	MVS0460X08S060	57.8	60.8	105.8	105	0.8	6	2	
NEW	4.6	10	●	MVS0460X10S050	65.8	68.8	118.8	118	0.8	5	4
NEW	4.6	15	●	MVS0460X15S050	90.8	93.8	143.8	143	0.8	5	4
NEW	4.6	20	●	MVS0460X20S050	115.8	118.8	168.8	168	0.8	5	4
NEW	4.6	25	●	MVS0460X25S050	140.8	143.8	193.8	193	0.8	5	4
NEW	4.6	30	●	MVS0460X30S050	165.8	168.8	218.8	218	0.8	5	4
NEW	4.6	35	□	MVS0460X35S050	190.8	193.8	243.8	243	0.8	5	4
NEW	4.6	40	□	MVS0460X40S050	215.8	218.8	268.8	268	0.8	5	4
4.7	3	●	MVS0470X03S050	28.4	28.4	90.9	90	0.9	5	2	
4.7	3	●	MVS0470X03S060	28.4	31.4	90.9	90	0.9	6	2	
4.7	5	●	MVS0470X05S050	44.9	44.9	105.9	105	0.9	5	2	
4.7	5	●	MVS0470X05S060	44.9	47.9	105.9	105	0.9	6	2	
4.7	8	●	MVS0470X08S050	57.9	57.9	105.9	105	0.9	5	2	
4.7	8	●	MVS0470X08S060	57.9	60.9	105.9	105	0.9	6	2	
NEW	4.7	10	●	MVS0470X10S050	65.9	68.9	118.9	118	0.9	5	4
NEW	4.7	15	●	MVS0470X15S050	90.9	93.9	143.9	143	0.9	5	4
NEW	4.7	20	●	MVS0470X20S050	115.9	118.9	168.9	168	0.9	5	4
NEW	4.7	25	●	MVS0470X25S050	140.9	143.9	193.9	193	0.9	5	4
NEW	4.7	30	●	MVS0470X30S050	165.9	168.9	218.9	218	0.9	5	4
NEW	4.7	35	□	MVS0470X35S050	190.9	193.9	243.9	243	0.9	5	4
NEW	4.7	40	□	MVS0470X40S050	215.9	218.9	268.9	268	0.9	5	4
4.8	3	●	MVS0480X03S050	28.4	28.4	90.9	90	0.9	5	2	
4.8	3	●	MVS0480X03S060	28.4	31.4	90.9	90	0.9	6	2	
4.8	5	●	MVS0480X05S050	44.9	44.9	105.9	105	0.9	5	2	
4.8	5	●	MVS0480X05S060	44.9	47.9	105.9	105	0.9	6	2	
4.8	8	●	MVS0480X08S050	57.9	57.9	105.9	105	0.9	5	2	
4.8	8	●	MVS0480X08S060	57.9	60.9	105.9	105	0.9	6	2	

DC = Cutting Diameter  
LCF = Length Chip Flute  
LH = Neck Length

OAL = Overall Length  
LF = Functional Length  
PL = Point Length

DCON = Fixing Part Depth



# Solid Carbide Drills



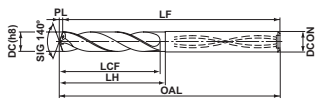
Internal Coolant										
DC	Hole Depth (l/d)	Stock DP1020	Order Number	LCF	LH	OAL	LF	PL	DCON	Type
NEW 4.8	15	●	MVS0480X15S050	90.9	93.9	143.9	143	0.9	5	4
NEW 4.8	20	●	MVS0480X20S050	115.9	118.9	168.9	168	0.9	5	4
NEW 4.8	25	●	MVS0480X25S050	140.9	143.9	193.9	193	0.9	5	4
NEW 4.8	30	●	MVS0480X30S050	165.9	168.9	218.9	218	0.9	5	4
NEW 4.8	35	□	MVS0480X35S050	190.9	193.9	243.9	243	0.9	5	4
NEW 4.8	40	□	MVS0480X40S050	215.9	218.9	268.9	268	0.9	5	4
4.9	3	●	MVS0490X03S050	28.4	28.4	90.9	90	0.9	5	2
4.9	3	●	MVS0490X03S060	28.4	31.4	90.9	90	0.9	6	2
4.9	5	●	MVS0490X05S050	44.9	44.9	105.9	105	0.9	5	2
4.9	5	●	MVS0490X05S060	44.9	47.9	105.9	105	0.9	6	2
4.9	8	●	MVS0490X08S050	57.9	57.9	105.9	105	0.9	5	2
4.9	8	●	MVS0490X08S060	57.9	60.9	105.9	105	0.9	6	2
NEW 4.9	10	●	MVS0490X10S050	65.9	68.9	118.9	118	0.9	5	4
NEW 4.9	15	●	MVS0490X15S050	90.9	93.9	143.9	143	0.9	5	4
NEW 4.9	20	●	MVS0490X20S050	115.9	118.9	168.9	168	0.9	5	4
NEW 4.9	25	●	MVS0490X25S050	140.9	143.9	193.9	193	0.9	5	4
NEW 4.9	30	●	MVS0490X30S050	165.9	168.9	218.9	218	0.9	5	4
NEW 4.9	35	□	MVS0490X35S050	190.9	193.9	243.9	243	0.9	5	4
NEW 4.9	40	□	MVS0490X40S050	215.9	218.9	268.9	268	0.9	5	4
5.0	3	●	MVS0500X03S050	28.4	28.4	90.9	90	0.9	5	2
5.0	3	●	MVS0500X03S060	28.4	31.4	90.9	90	0.9	6	2
5.0	5	●	MVS0500X05S050	44.9	44.9	105.9	105	0.9	5	2
5.0	5	●	MVS0500X05S060	44.9	47.9	105.9	105	0.9	6	2
5.0	8	●	MVS0500X08S050	57.9	57.9	105.9	105	0.9	5	2
5.0	8	●	MVS0500X08S060	57.9	60.9	105.9	105	0.9	6	2
NEW 5.0	10	●	MVS0500X10S050	65.9	68.9	118.9	118	0.9	5	4
NEW 5.0	15	●	MVS0500X15S050	90.9	93.9	143.9	143	0.9	5	4
NEW 5.0	20	●	MVS0500X20S050	115.9	118.9	168.9	168	0.9	5	4
NEW 5.0	25	●	MVS0500X25S050	140.9	143.9	193.9	193	0.9	5	4
NEW 5.0	30	●	MVS0500X30S050	165.9	168.9	218.9	218	0.9	5	4
NEW 5.0	35	●	MVS0500X35S050	190.9	193.9	243.9	243	0.9	5	4
NEW 5.0	40	●	MVS0500X40S050	215.9	218.9	268.9	268	0.9	5	4
5.1	3	●	MVS0510X03S060	28.4	30.9	82.9	82	0.9	6	2
5.1	5	●	MVS0510X05S060	44.9	48.9	100.9	100	0.9	6	2
5.1	8	●	MVS0510X08S060	61.9	66.9	118.9	118	0.9	6	2
NEW 5.1	10	●	MVS0510X10S060	72.9	75.9	127.9	127	0.9	6	4
NEW 5.1	15	●	MVS0510X15S060	99.9	102.9	154.9	154	0.9	6	4
NEW 5.1	20	●	MVS0510X20S060	127.9	130.9	182.9	182	0.9	6	4
NEW 5.1	25	●	MVS0510X25S060	154.9	157.9	209.9	209	0.9	6	4
NEW 5.1	30	●	MVS0510X30S060	182.9	185.9	237.9	237	0.9	6	4
NEW 5.1	35	□	MVS0510X35S060	209.9	212.9	264.9	264	0.9	6	4
NEW 5.1	40	□	MVS0510X40S060	240.9	243.9	295.9	295	0.9	6	4
5.2	3	●	MVS0520X03S060	28.4	30.9	82.9	82	0.9	6	2
5.2	5	●	MVS0520X05S060	44.9	48.9	100.9	100	0.9	6	2
5.2	8	●	MVS0520X08S060	61.9	66.9	118.9	118	0.9	6	2
NEW 5.2	10	●	MVS0520X10S060	72.9	76.0	127.9	127	0.9	6	4
NEW 5.2	15	●	MVS0520X15S060	99.9	102.9	154.9	154	0.9	6	4

Internal Coolant										(mm)		
DC	Hole Depth (l/d)	Stock DP1020	Order Number	LCF	LH	OAL	LF	PL	DCON	Type		
											NEW 5.2	20
NEW 5.2	25	●	MVS0520X25S060	154.9	157.9	209.9	209	0.9	6	4		
NEW 5.2	30	●	MVS0520X30S060	182.9	185.9	237.9	237	0.9	6	4		
NEW 5.2	35	□	MVS0520X35S060	209.9	213.0	264.9	264	0.9	6	4		
NEW 5.2	40	□	MVS0520X40S060	240.9	244.0	295.9	295	0.9	6	4		
5.3	3	●	MVS0530X03S060	28.5	31.0	83.0	82	1.0	6	2		
5.3	5	●	MVS0530X05S060	45.0	49.0	101.0	100	1.0	6	2		
5.3	8	●	MVS0530X08S060	62.0	67.0	119.0	118	1.0	6	2		
NEW 5.3	10	●	MVS0530X10S060	73.0	76.0	128.0	127	1.0	6	4		
NEW 5.3	15	●	MVS0530X15S060	100.0	103.0	155.0	154	1.0	6	4		
NEW 5.3	20	●	MVS0530X20S060	128.0	131.0	183.0	182	1.0	6	4		
NEW 5.3	25	●	MVS0530X25S060	155.0	158.0	210.0	209	1.0	6	4		
NEW 5.3	30	●	MVS0530X30S060	183.0	186.0	238.0	237	1.0	6	4		
NEW 5.3	35	□	MVS0530X35S060	210.0	213.0	265.0	264	1.0	6	4		
NEW 5.3	40	□	MVS0530X40S060	241.0	244.0	296.0	295	1.0	6	4		
5.4	3	●	MVS0540X03S060	28.5	31.0	83.0	82	1.0	6	2		
5.4	5	●	MVS0540X05S060	45.0	49.0	101.0	100	1.0	6	2		
5.4	8	●	MVS0540X08S060	62.0	67.0	119.0	118	1.0	6	2		
NEW 5.4	10	●	MVS0540X10S060	73.0	76.0	128.0	127	1.0	6	4		
NEW 5.4	15	●	MVS0540X15S060	100.0	103.0	155.0	154	1.0	6	4		
NEW 5.4	20	●	MVS0540X20S060	128.0	131.0	183.0	182	1.0	6	4		
NEW 5.4	25	●	MVS0540X25S060	155.0	158.0	210.0	209	1.0	6	4		
NEW 5.4	30	●	MVS0540X30S060	183.0	186.0	238.0	237	1.0	6	4		
NEW 5.4	35	□	MVS0540X35S060	210.0	213.0	265.0	264	1.0	6	4		
NEW 5.4	40	□	MVS0540X40S060	241.0	244.0	296.0	295	1.0	6	4		
5.5	3	●	MVS0550X03S060	28.5	31.0	83.0	82	1.0	6	2		
5.5	5	●	MVS0550X05S060	45.0	49.0	101.0	100	1.0	6	2		
5.5	8	●	MVS0550X08S060	62.0	67.0	119.0	118	1.0	6	2		
NEW 5.5	10	●	MVS0550X10S060	73.0	76.0	128.0	127	1.0	6	4		
NEW 5.5	15	●	MVS0550X15S060	100.0	103.0	155.0	154	1.0	6	4		
NEW 5.5	20	●	MVS0550X20S060	128.0	131.0	183.0	182	1.0	6	4		
NEW 5.5	25	●	MVS0550X25S060	155.0	158.0	210.0	209	1.0	6	4		
NEW 5.5	30	●	MVS0550X30S060	183.0	186.0	238.0	237	1.0	6	4		
NEW 5.5	35	●	MVS0550X35S060	210.0	213.0	265.0	264	1.0	6	4		
NEW 5.5	40	●	MVS0550X40S060	241.0	244.0	296.0	295	1.0	6	4		
5.6	3	●	MVS0560X03S060	31.0	31.0	83.0	82	1.0	6	2		
5.6	5	●	MVS0560X05S060	49.0	49.0	101.0	100	1.0	6	2		
5.6	8	●	MVS0560X08S060	67.0	67.0	119.0	118	1.0	6	2		
NEW 5.6	10	●	MVS0560X10S060	79.0	82.0	134.0	133	1.0	6	4		
NEW 5.6	15	●	MVS0560X15S060	109.0	112.0	164.0	163	1.0	6	4		
NEW 5.6	20	●	MVS0560X20S060	139.0	142.0	194.0	193	1.0	6	4		
NEW 5.6	25	●	MVS0560X25S060	169.0	172.0	224.0	223	1.0	6	4		
NEW 5.6	30	●	MVS0560X30S060	199.0	202.0	254.0	253	1.0	6	4		
NEW 5.6	35	□	MVS0560X35S060	229.0	232.0	284.0	283	1.0	6	4		
NEW 5.6	40	□	MVS0560X40S060	261.0	264.0	316.0	315	1.0	6	4		
5.7	3	●	MVS0570X03S060	31.0	31.0	83.0	82	1.0	6	2		
5.7	5	●	MVS0570X05S060	49.0	49.0	101.0	100	1.0	6	2		
5.7	8	●	MVS0570X08S060	67.0	67.0	119.0	118	1.0	6	2		

(Note) The coolant hole of  $\phi 4.9$ mm or less will be round shape. (l/d=3,5,8は $\phi 6$ mm未満)

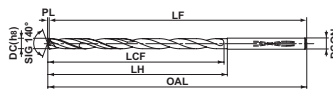
● : Inventory maintained in Japan. □ : Non stock, produced to order only.

Type2



Internal Coolant

Type4



Internal Coolant

(mm)

DC	Hole Depth (l/d)	Stock	Order Number	LCF	LH	OAL	LF	PL	DCON	Type
NEW 5.7	10	●	MVS0570X10S060	79.0	82.0	134.0	133	1.0	6	4
NEW 5.7	15	●	MVS0570X15S060	109.0	112.0	164.0	163	1.0	6	4
NEW 5.7	20	●	MVS0570X20S060	139.0	142.0	194.0	193	1.0	6	4
NEW 5.7	25	●	MVS0570X25S060	169.0	172.0	224.0	223	1.0	6	4
NEW 5.7	30	●	MVS0570X30S060	199.0	202.0	254.0	253	1.0	6	4
NEW 5.7	35	□	MVS0570X35S060	229.0	232.0	284.0	283	1.0	6	4
NEW 5.7	40	□	MVS0570X40S060	261.0	264.0	316.0	315	1.0	6	4
5.8	3	●	MVS0580X03S060	31.1	31.1	83.1	82	1.1	6	2
5.8	5	●	MVS0580X05S060	49.1	49.1	101.1	100	1.1	6	2
5.8	8	●	MVS0580X08S060	67.1	67.1	119.1	118	1.1	6	2
NEW 5.8	10	●	MVS0580X10S060	79.1	82.1	134.1	133	1.1	6	4
NEW 5.8	15	●	MVS0580X15S060	109.1	112.1	164.1	163	1.1	6	4
NEW 5.8	20	●	MVS0580X20S060	139.1	142.1	194.1	193	1.1	6	4
NEW 5.8	25	●	MVS0580X25S060	169.1	172.1	224.1	223	1.1	6	4
NEW 5.8	30	●	MVS0580X30S060	199.1	202.1	254.1	253	1.1	6	4
NEW 5.8	35	□	MVS0580X35S060	229.1	232.1	284.1	283	1.1	6	4
NEW 5.8	40	□	MVS0580X40S060	261.1	264.1	316.1	315	1.1	6	4
5.9	3	●	MVS0590X03S060	31.1	31.1	83.1	82	1.1	6	2
5.9	5	●	MVS0590X05S060	49.1	49.1	101.1	100	1.1	6	2
5.9	8	●	MVS0590X08S060	67.1	67.1	119.1	118	1.1	6	2
NEW 5.9	10	●	MVS0590X10S060	79.1	82.1	134.1	133	1.1	6	4
NEW 5.9	15	●	MVS0590X15S060	109.1	112.1	164.1	163	1.1	6	4
NEW 5.9	20	●	MVS0590X20S060	139.1	142.1	194.1	193	1.1	6	4
NEW 5.9	25	●	MVS0590X25S060	169.1	172.1	224.1	223	1.1	6	4
NEW 5.9	30	●	MVS0590X30S060	199.1	202.1	254.1	253	1.1	6	4
NEW 5.9	35	□	MVS0590X35S060	229.1	232.1	284.1	283	1.1	6	4
NEW 5.9	40	□	MVS0590X40S060	261.1	264.1	316.1	315	1.1	6	4
6.0	3	●	MVS0600X03S060	31.1	31.1	83.1	82	1.1	6	2
6.0	5	●	MVS0600X05S060	49.1	49.1	101.1	100	1.1	6	2
6.0	8	●	MVS0600X08S060	67.1	67.1	119.1	118	1.1	6	2
NEW 6.0	10	●	MVS0600X10S060	79.1	82.1	134.1	133	1.1	6	4
NEW 6.0	15	●	MVS0600X15S060	109.1	112.1	164.1	163	1.1	6	4
NEW 6.0	20	●	MVS0600X20S060	139.1	142.1	194.1	193	1.1	6	4
NEW 6.0	25	●	MVS0600X25S060	169.1	172.1	224.1	223	1.1	6	4
NEW 6.0	30	●	MVS0600X30S060	199.1	202.1	254.1	253	1.1	6	4
NEW 6.0	35	●	MVS0600X35S060	229.1	232.1	284.1	283	1.1	6	4
NEW 6.0	40	●	MVS0600X40S060	261.1	264.1	316.1	315	1.1	6	4
6.1	3	●	MVS0610X03S070	33.6	36.1	89.1	88	1.1	7	2
6.1	3	●	MVS0610X03S080	33.6	36.1	89.1	88	1.1	8	2
6.1	5	●	MVS0610X05S070	53.1	57.1	110.1	109	1.1	7	2
6.1	5	●	MVS0610X05S080	53.1	57.1	110.1	109	1.1	8	2
6.1	8	●	MVS0610X08S070	73.1	78.1	131.1	130	1.1	7	2
6.1	8	●	MVS0610X08S080	73.1	78.1	131.1	130	1.1	8	2
NEW 6.1	10	●	MVS0610X10S070	86.1	89.1	142.1	141	1.1	7	4
NEW 6.1	15	●	MVS0610X15S070	118.1	121.1	174.1	173	1.1	7	4
NEW 6.1	20	●	MVS0610X20S070	151.1	154.1	207.1	206	1.1	7	4
NEW 6.1	25	●	MVS0610X25S070	183.1	186.1	239.1	238	1.1	7	4
NEW 6.1	30	●	MVS0610X30S070	216.1	219.1	272.1	271	1.1	7	4

DC	Hole Depth (l/d)	Stock	Order Number	LCF	LH	OAL	LF	PL	DCON	Type
NEW 6.1	35	□	MVS0610X35S070	248.1	253.1	306.1	305	1.1	7	4
NEW 6.1	40	□	MVS0610X40S070	281.1	284.1	337.1	336	1.1	7	4
6.2	3	●	MVS0620X03S070	33.6	36.1	89.1	88	1.1	7	2
6.2	3	●	MVS0620X03S080	33.6	36.1	89.1	88	1.1	8	2
6.2	5	●	MVS0620X05S070	53.1	57.1	110.1	109	1.1	7	2
6.2	5	●	MVS0620X05S080	53.1	57.1	110.1	109	1.1	8	2
6.2	8	●	MVS0620X08S070	73.1	78.1	131.1	130	1.1	7	2
6.2	8	●	MVS0620X08S080	73.1	78.1	131.1	130	1.1	8	2
NEW 6.2	10	●	MVS0620X10S070	86.1	89.1	142.1	141	1.1	7	4
NEW 6.2	15	●	MVS0620X15S070	118.1	121.1	174.1	173	1.1	7	4
NEW 6.2	20	●	MVS0620X20S070	151.1	154.1	207.1	206	1.1	7	4
NEW 6.2	25	●	MVS0620X25S070	183.1	186.1	239.1	238	1.1	7	4
NEW 6.2	30	●	MVS0620X30S070	216.1	219.1	272.1	271	1.1	7	4
NEW 6.2	35	□	MVS0620X35S070	248.1	253.1	306.1	305	1.1	7	4
NEW 6.2	40	□	MVS0620X40S070	281.1	284.1	337.1	336	1.1	7	4
6.3	3	●	MVS0630X03S070	33.6	36.1	89.1	88	1.1	7	2
6.3	3	●	MVS0630X03S080	33.6	36.1	89.1	88	1.1	8	2
6.3	5	●	MVS0630X05S070	53.1	57.1	110.1	109	1.1	7	2
6.3	5	●	MVS0630X05S080	53.1	57.1	110.1	109	1.1	8	2
6.3	8	●	MVS0630X08S070	73.1	78.1	131.1	130	1.1	7	2
6.3	8	●	MVS0630X08S080	73.1	78.1	131.1	130	1.1	8	2
NEW 6.3	10	●	MVS0630X10S070	86.1	89.2	142.1	141	1.1	7	4
NEW 6.3	15	●	MVS0630X15S070	118.1	121.2	174.1	173	1.1	7	4
NEW 6.3	20	●	MVS0630X20S070	151.1	154.2	207.1	206	1.1	7	4
NEW 6.3	25	●	MVS0630X25S070	183.1	186.2	239.1	238	1.1	7	4
NEW 6.3	30	●	MVS0630X30S070	216.1	219.2	272.1	271	1.1	7	4
NEW 6.3	35	□	MVS0630X35S070	248.1	253.2	306.1	305	1.1	7	4
NEW 6.3	40	□	MVS0630X40S070	281.1	284.2	337.1	336	1.1	7	4
6.4	3	●	MVS0640X03S070	33.7	36.2	89.2	88	1.2	7	2
6.4	3	●	MVS0640X03S080	33.7	36.2	89.2	88	1.2	8	2
6.4	5	●	MVS0640X05S070	53.2	57.2	110.2	109	1.2	7	2
6.4	5	●	MVS0640X05S080	53.2	57.2	110.2	109	1.2	8	2
6.4	8	●	MVS0640X08S070	73.2	78.2	131.2	130	1.2	7	2
6.4	8	●	MVS0640X08S080	73.2	78.2	131.2	130	1.2	8	2
NEW 6.4	10	●	MVS0640X10S070	86.2	89.2	142.2	141	1.2	7	4
NEW 6.4	15	●	MVS0640X15S070	118.2	121.2	174.2	173	1.2	7	4
NEW 6.4	20	●	MVS0640X20S070	151.2	154.2	207.2	206	1.2	7	4
NEW 6.4	25	●	MVS0640X25S070	183.2	186.2	239.2	238	1.2	7	4
NEW 6.4	30	●	MVS0640X30S070	216.2	219.2	272.2	271	1.2	7	4
NEW 6.4	35	□	MVS0640X35S070	248.2	253.2	306.2	305	1.2	7	4
NEW 6.4	40	□	MVS0640X40S070	281.2	284.2	337.2	336	1.2	7	4
6.5	3	●	MVS0650X03S070	33.7	36.2	89.2	88	1.2	7	2
6.5	3	●	MVS0650X03S080	33.7	36.2	89.2	88	1.2	8	2
6.5	5	●	MVS0650X05S070	53.2	57.2	110.2	109	1.2	7	2
6.5	5	●	MVS0650X05S080	53.2	57.2	110.2	109	1.2	8	2
6.5	8	●	MVS0650X08S070	73.2	78.2	131.2	130	1.2	7	2
6.5	8	●	MVS0650X08S080	73.2	78.2	131.2	130	1.2	8	2
NEW 6.5	10	●	MVS0650X10S070	86.2	89.2	142.2	141	1.2	7	4

DC = Cutting Diameter  
 LCF = Length Chip Flute  
 LH = Neck Length

OAL = Overall Length  
 LF = Functional Length  
 PL = Point Length

DCON = Fixing Part Depth

# Solid Carbide Drills



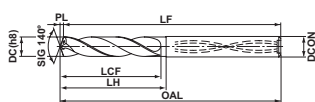
Internal Coolant										
DC	Hole Depth (l/d)	Stock DP1020	Order Number	LCF	LH	OAL	LF	PL	DCON	Type
NEW 6.5	20	●	MVS0650X20S070	151.2	154.2	207.2	206	1.2	7	4
NEW 6.5	25	●	MVS0650X25S070	183.2	186.2	239.2	238	1.2	7	4
NEW 6.5	30	●	MVS0650X30S070	216.2	219.2	272.2	271	1.2	7	4
NEW 6.5	35	●	MVS0650X35S070	248.2	253.2	306.2	305	1.2	7	4
NEW 6.5	40	●	MVS0650X40S070	281.2	284.2	337.2	336	1.2	7	4
6.6	3	●	MVS0660X03S070	36.2	36.2	89.2	88	1.2	7	2
6.6	3	●	MVS0660X03S080	36.2	38.2	89.2	88	1.2	8	2
6.6	5	●	MVS0660X05S070	57.2	57.2	110.2	109	1.2	7	2
6.6	5	●	MVS0660X05S080	57.2	59.2	110.2	109	1.2	8	2
6.6	8	●	MVS0660X08S070	78.2	78.2	131.2	130	1.2	7	2
6.6	8	●	MVS0660X08S080	78.2	80.2	131.2	130	1.2	8	2
NEW 6.6	10	●	MVS0660X10S070	92.2	95.2	148.2	147	1.2	7	4
NEW 6.6	15	●	MVS0660X15S070	127.2	130.2	183.2	182	1.2	7	4
NEW 6.6	20	●	MVS0660X20S070	162.2	165.2	218.2	217	1.2	7	4
NEW 6.6	25	●	MVS0660X25S070	197.2	200.2	253.2	252	1.2	7	4
NEW 6.6	30	●	MVS0660X30S070	232.2	235.2	288.2	287	1.2	7	4
NEW 6.6	35	□	MVS0660X35S070	267.2	270.2	323.2	322	1.2	7	4
NEW 6.6	40	□	MVS0660X40S070	301.2	304.2	357.2	356	1.2	7	4
6.7	3	●	MVS0670X03S070	36.2	36.2	89.2	88	1.2	7	2
6.7	3	●	MVS0670X03S080	36.2	38.2	89.2	88	1.2	8	2
6.7	5	●	MVS0670X05S070	57.2	57.2	110.2	109	1.2	7	2
6.7	5	●	MVS0670X05S080	57.2	59.2	110.2	109	1.2	8	2
6.7	8	●	MVS0670X08S070	78.2	78.2	131.2	130	1.2	7	2
6.7	8	●	MVS0670X08S080	78.2	80.2	131.2	130	1.2	8	2
NEW 6.7	10	●	MVS0670X10S070	92.2	95.2	148.2	147	1.2	7	4
NEW 6.7	15	●	MVS0670X15S070	127.2	130.2	183.2	182	1.2	7	4
NEW 6.7	20	●	MVS0670X20S070	162.2	165.2	218.2	217	1.2	7	4
NEW 6.7	25	●	MVS0670X25S070	197.2	200.2	253.2	252	1.2	7	4
NEW 6.7	30	●	MVS0670X30S070	232.2	235.2	288.2	287	1.2	7	4
NEW 6.7	35	□	MVS0670X35S070	267.2	270.2	323.2	322	1.2	7	4
NEW 6.7	40	□	MVS0670X40S070	301.2	304.2	357.2	356	1.2	7	4
6.8	3	●	MVS0680X03S070	36.2	36.2	89.2	88	1.2	7	2
6.8	3	●	MVS0680X03S080	36.2	38.2	89.2	88	1.2	8	2
6.8	5	●	MVS0680X05S070	57.2	57.2	110.2	109	1.2	7	2
6.8	5	●	MVS0680X05S080	57.2	59.2	110.2	109	1.2	8	2
6.8	8	●	MVS0680X08S070	78.2	78.2	131.2	130	1.2	7	2
6.8	8	●	MVS0680X08S080	78.2	80.2	131.2	130	1.2	8	2
NEW 6.8	10	●	MVS0680X10S070	92.2	95.2	148.2	147	1.2	7	4
NEW 6.8	15	●	MVS0680X15S070	127.2	130.2	183.2	182	1.2	7	4
NEW 6.8	20	●	MVS0680X20S070	162.2	165.2	218.2	217	1.2	7	4
NEW 6.8	25	●	MVS0680X25S070	197.2	200.2	253.2	252	1.2	7	4
NEW 6.8	30	●	MVS0680X30S070	232.2	235.2	288.2	287	1.2	7	4
NEW 6.8	35	□	MVS0680X35S070	267.2	270.2	323.2	322	1.2	7	4
NEW 6.8	40	□	MVS0680X40S070	301.2	304.2	357.2	356	1.2	7	4
6.9	3	●	MVS0690X03S070	36.3	36.3	89.3	88	1.3	7	2
6.9	3	●	MVS0690X03S080	36.3	38.3	89.3	88	1.3	8	2
6.9	5	●	MVS0690X05S070	57.3	57.3	110.3	109	1.3	7	2

Internal Coolant											(mm)
DC	Hole Depth (l/d)	Stock DP1020	Order Number	LCF	LH	OAL	LF	PL	DCON	Type	
											6.9
6.9	8	●	MVS0690X08S070	78.3	78.3	131.3	130	1.3	7	2	
6.9	8	●	MVS0690X08S080	78.3	80.3	131.3	130	1.3	8	2	
NEW 6.9	10	●	MVS0690X10S070	92.3	95.3	148.3	147	1.3	7	4	
NEW 6.9	15	●	MVS0690X15S070	127.3	130.3	183.3	182	1.3	7	4	
NEW 6.9	20	●	MVS0690X20S070	162.3	165.3	218.3	217	1.3	7	4	
NEW 6.9	25	●	MVS0690X25S070	197.3	200.3	253.3	252	1.3	7	4	
NEW 6.9	30	●	MVS0690X30S070	232.3	235.3	288.3	287	1.3	7	4	
NEW 6.9	35	□	MVS0690X35S070	267.3	270.3	323.3	322	1.3	7	4	
NEW 6.9	40	□	MVS0690X40S070	301.3	304.3	357.3	356	1.3	7	4	
7.0	3	●	MVS0700X03S070	36.3	36.3	89.3	88	1.3	7	2	
7.0	3	●	MVS0700X03S080	36.3	38.3	89.3	88	1.3	8	2	
7.0	5	●	MVS0700X05S070	57.3	57.3	110.3	109	1.3	7	2	
7.0	5	●	MVS0700X05S080	57.3	59.3	110.3	109	1.3	8	2	
7.0	8	●	MVS0700X08S070	78.3	78.3	131.3	130	1.3	7	2	
7.0	8	●	MVS0700X08S080	78.3	80.3	131.3	130	1.3	8	2	
NEW 7.0	10	●	MVS0700X10S070	92.3	95.3	148.3	147	1.3	7	4	
NEW 7.0	15	●	MVS0700X15S070	127.3	130.3	183.3	182	1.3	7	4	
NEW 7.0	20	●	MVS0700X20S070	162.3	165.3	218.3	217	1.3	7	4	
NEW 7.0	25	●	MVS0700X25S070	197.3	200.3	253.3	252	1.3	7	4	
NEW 7.0	30	●	MVS0700X30S070	232.3	235.3	288.3	287	1.3	7	4	
NEW 7.0	35	●	MVS0700X35S070	267.3	270.3	323.3	322	1.3	7	4	
NEW 7.0	40	●	MVS0700X40S070	301.3	304.3	357.3	356	1.3	7	4	
7.1	3	●	MVS0710X03S080	38.8	41.3	95.3	94	1.3	8	2	
7.1	5	●	MVS0710X05S080	61.3	65.3	119.3	118	1.3	8	2	
7.1	8	●	MVS0710X08S080	84.3	89.3	143.3	142	1.3	8	2	
NEW 7.1	10	●	MVS0710X10S080	99.3	102.3	156.3	155	1.3	8	4	
NEW 7.1	15	●	MVS0710X15S080	136.3	139.3	193.3	192	1.3	8	4	
NEW 7.1	20	●	MVS0710X20S080	174.3	177.3	231.3	230	1.3	8	4	
NEW 7.1	25	●	MVS0710X25S080	211.3	214.3	268.3	267	1.3	8	4	
NEW 7.1	30	●	MVS0710X30S080	249.3	252.3	306.3	305	1.3	8	4	
NEW 7.1	35	□	MVS0710X35S080	286.3	289.3	343.3	342	1.3	8	4	
NEW 7.1	40	□	MVS0710X40S080	321.3	324.3	378.3	377	1.3	8	4	
7.2	3	●	MVS0720X03S080	38.8	41.3	95.3	94	1.3	8	2	
7.2	5	●	MVS0720X05S080	61.3	65.3	119.3	118	1.3	8	2	
7.2	8	●	MVS0720X08S080	84.3	89.3	143.3	142	1.3	8	2	
NEW 7.2	10	●	MVS0720X10S080	99.3	102.3	156.3	155	1.3	8	4	
NEW 7.2	15	●	MVS0720X15S080	136.3	139.3	193.3	192	1.3	8	4	
NEW 7.2	20	●	MVS0720X20S080	174.3	177.3	231.3	230	1.3	8	4	
NEW 7.2	25	●	MVS0720X25S080	211.3	214.3	268.3	267	1.3	8	4	
NEW 7.2	30	●	MVS0720X30S080	249.3	252.3	306.3	305	1.3	8	4	
NEW 7.2	35	□	MVS0720X35S080	286.3	289.3	343.3	342	1.3	8	4	
NEW 7.2	40	□	MVS0720X40S080	321.3	324.3	378.3	377	1.3	8	4	
7.3	3	●	MVS0730X03S080	38.8	41.3	95.3	94	1.3	8	2	
7.3	5	●	MVS0730X05S080	61.3	65.3	119.3	118	1.3	8	2	
7.3	8	●	MVS0730X08S080	84.3	89.3	143.3	142	1.3	8	2	
NEW 7.3	10	●	MVS0730X10S080	99.3	102.3	156.3	155	1.3	8	4	
NEW 7.3	15	●	MVS0730X15S080	136.3	139.3	193.3	192	1.3	8	4	

● : Inventory maintained in Japan. □ : Non stock, produced to order only.

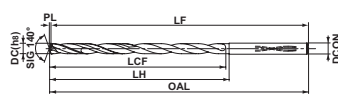


Type2



Internal Coolant

Type4



Internal Coolant

(mm)

DC	Hole Depth (l/d)	Stock DP1020	Order Number	LCF	LH	OAL	LF	PL	DCON	Type
NEW 7.3	25	●	MVS0730X25S080	211.3	214.3	268.3	267	1.3	8	4
NEW 7.3	30	●	MVS0730X30S080	249.3	252.3	306.3	305	1.3	8	4
NEW 7.3	35	□	MVS0730X35S080	286.3	289.3	343.3	342	1.3	8	4
NEW 7.3	40	□	MVS0730X40S080	321.3	324.3	378.3	377	1.3	8	4
7.4	3	●	MVS0740X03S080	38.8	41.3	95.3	94	1.3	8	2
7.4	5	●	MVS0740X05S080	61.3	65.3	119.3	118	1.3	8	2
7.4	8	●	MVS0740X08S080	84.3	89.3	143.3	142	1.3	8	2
NEW 7.4	10	●	MVS0740X10S080	99.3	102.4	156.3	155	1.3	8	4
NEW 7.4	15	●	MVS0740X15S080	136.3	139.4	193.3	192	1.3	8	4
NEW 7.4	20	●	MVS0740X20S080	174.3	177.4	231.3	230	1.3	8	4
NEW 7.4	25	●	MVS0740X25S080	211.3	214.4	268.3	267	1.3	8	4
NEW 7.4	30	●	MVS0740X30S080	249.3	252.4	306.3	305	1.3	8	4
NEW 7.4	35	□	MVS0740X35S080	286.3	289.4	343.3	342	1.3	8	4
NEW 7.4	40	□	MVS0740X40S080	321.3	324.4	378.3	377	1.3	8	4
7.5	3	●	MVS0750X03S080	38.9	41.4	95.4	94	1.4	8	2
7.5	5	●	MVS0750X05S080	61.4	65.4	119.4	118	1.4	8	2
7.5	8	●	MVS0750X08S080	84.4	89.4	143.4	142	1.4	8	2
NEW 7.5	10	●	MVS0750X10S080	99.4	102.4	156.4	155	1.4	8	4
NEW 7.5	15	●	MVS0750X15S080	136.4	139.4	193.4	192	1.4	8	4
NEW 7.5	20	●	MVS0750X20S080	174.4	177.4	231.4	230	1.4	8	4
NEW 7.5	25	●	MVS0750X25S080	211.4	214.4	268.4	267	1.4	8	4
NEW 7.5	30	●	MVS0750X30S080	249.4	252.4	306.4	305	1.4	8	4
NEW 7.5	35	●	MVS0750X35S080	286.4	289.4	343.4	342	1.4	8	4
NEW 7.5	40	●	MVS0750X40S080	321.4	324.4	378.4	377	1.4	8	4
7.6	3	●	MVS0760X03S080	41.4	41.4	95.4	94	1.4	8	2
7.6	5	●	MVS0760X05S080	65.4	65.4	119.4	118	1.4	8	2
7.6	8	●	MVS0760X08S080	89.4	89.4	143.4	142	1.4	8	2
NEW 7.6	10	●	MVS0760X10S080	105.4	108.4	162.4	161	1.4	8	4
NEW 7.6	15	●	MVS0760X15S080	145.4	148.4	202.4	201	1.4	8	4
NEW 7.6	20	●	MVS0760X20S080	185.4	188.4	242.4	241	1.4	8	4
NEW 7.6	25	●	MVS0760X25S080	225.4	228.4	282.4	281	1.4	8	4
NEW 7.6	30	●	MVS0760X30S080	265.4	268.4	322.4	321	1.4	8	4
NEW 7.6	35	□	MVS0760X35S080	305.4	308.4	362.4	361	1.4	8	4
NEW 7.6	40	□	MVS0760X40S080	341.4	344.4	398.4	397	1.4	8	4
7.7	3	●	MVS0770X03S080	41.4	41.4	95.4	94	1.4	8	2
7.7	5	●	MVS0770X05S080	65.4	65.4	119.4	118	1.4	8	2
7.7	8	●	MVS0770X08S080	89.4	89.4	143.4	142	1.4	8	2
NEW 7.7	10	●	MVS0770X10S080	105.4	108.4	162.4	161	1.4	8	4
NEW 7.7	15	●	MVS0770X15S080	145.4	148.4	202.4	201	1.4	8	4
NEW 7.7	20	●	MVS0770X20S080	185.4	188.4	242.4	241	1.4	8	4
NEW 7.7	25	●	MVS0770X25S080	225.4	228.4	282.4	281	1.4	8	4
NEW 7.7	30	●	MVS0770X30S080	265.4	268.4	322.4	321	1.4	8	4
NEW 7.7	35	□	MVS0770X35S080	305.4	308.4	362.4	361	1.4	8	4
NEW 7.7	40	□	MVS0770X40S080	341.4	344.4	398.4	397	1.4	8	4
7.8	3	●	MVS0780X03S080	41.4	41.4	95.4	94	1.4	8	2
7.8	5	●	MVS0780X05S080	65.4	65.4	119.4	118	1.4	8	2
7.8	8	●	MVS0780X08S080	89.4	89.4	143.4	142	1.4	8	2

DC	Hole Depth (l/d)	Stock DP1020	Order Number	LCF	LH	OAL	LF	PL	DCON	Type
NEW 7.8	15	●	MVS0780X15S080	145.4	148.4	202.4	201	1.4	8	4
NEW 7.8	20	●	MVS0780X20S080	185.4	188.4	242.4	241	1.4	8	4
NEW 7.8	25	●	MVS0780X25S080	225.4	228.4	282.4	281	1.4	8	4
NEW 7.8	30	●	MVS0780X30S080	265.4	268.4	322.4	321	1.4	8	4
NEW 7.8	35	□	MVS0780X35S080	305.4	308.4	362.4	361	1.4	8	4
NEW 7.8	40	□	MVS0780X40S080	341.4	344.4	398.4	397	1.4	8	4
7.9	3	●	MVS0790X03S080	41.4	41.4	95.4	94	1.4	8	2
7.9	5	●	MVS0790X05S080	65.4	65.4	119.4	118	1.4	8	2
7.9	8	●	MVS0790X08S080	89.4	89.4	143.4	142	1.4	8	2
NEW 7.9	10	●	MVS0790X10S080	105.4	108.4	162.4	161	1.4	8	4
NEW 7.9	15	●	MVS0790X15S080	145.4	148.4	202.4	201	1.4	8	4
NEW 7.9	20	●	MVS0790X20S080	185.4	188.4	242.4	241	1.4	8	4
NEW 7.9	25	●	MVS0790X25S080	225.4	228.4	282.4	281	1.4	8	4
NEW 7.9	30	●	MVS0790X30S080	265.4	268.4	322.4	321	1.4	8	4
NEW 7.9	35	□	MVS0790X35S080	305.4	308.4	362.4	361	1.4	8	4
NEW 7.9	40	□	MVS0790X40S080	341.4	344.4	398.4	397	1.4	8	4
8.0	3	●	MVS0800X03S080	41.5	41.5	95.5	94	1.5	8	2
8.0	5	●	MVS0800X05S080	65.5	65.5	119.5	118	1.5	8	2
8.0	8	●	MVS0800X08S080	89.5	89.5	143.5	142	1.5	8	2
NEW 8.0	10	●	MVS0800X10S080	105.5	108.5	162.5	161	1.5	8	4
NEW 8.0	15	●	MVS0800X15S080	145.5	148.5	202.5	201	1.5	8	4
NEW 8.0	20	●	MVS0800X20S080	185.5	188.5	242.5	241	1.5	8	4
NEW 8.0	25	●	MVS0800X25S080	225.5	228.5	282.5	281	1.5	8	4
NEW 8.0	30	●	MVS0800X30S080	265.5	268.5	322.5	321	1.5	8	4
NEW 8.0	35	●	MVS0800X35S080	305.5	308.5	362.5	361	1.5	8	4
NEW 8.0	40	●	MVS0800X40S080	341.5	344.5	398.5	397	1.5	8	4
8.1	3	●	MVS0810X03S090	44.0	46.5	101.5	100	1.5	9	2
8.1	3	●	MVS0810X03S100	44.0	46.5	101.5	100	1.5	10	2
8.1	5	●	MVS0810X05S090	69.5	73.5	128.5	127	1.5	9	2
8.1	5	●	MVS0810X05S100	69.5	73.5	128.5	127	1.5	10	2
8.1	8	●	MVS0810X08S090	95.5	100.5	155.5	154	1.5	9	2
8.1	8	●	MVS0810X08S100	95.5	100.5	155.5	154	1.5	10	2
NEW 8.1	10	●	MVS0810X10S090	112.5	115.5	170.5	169	1.5	9	4
NEW 8.1	15	●	MVS0810X15S090	154.5	157.5	212.5	211	1.5	9	4
NEW 8.1	20	●	MVS0810X20S090	197.5	200.5	255.5	254	1.5	9	4
NEW 8.1	25	●	MVS0810X25S090	239.5	242.5	297.5	296	1.5	9	4
NEW 8.1	30	●	MVS0810X30S090	282.5	285.5	340.5	339	1.5	9	4
NEW 8.1	35	□	MVS0810X35S090	324.5	327.5	382.5	381	1.5	9	4
NEW 8.1	40	□	MVS0810X40S090	366.5	369.5	424.5	423	1.5	9	4
8.2	3	●	MVS0820X03S090	44.0	46.5	101.5	100	1.5	9	2
8.2	3	●	MVS0820X03S100	44.0	46.5	101.5	100	1.5	10	2
8.2	5	●	MVS0820X05S090	69.5	73.5	128.5	127	1.5	9	2
8.2	5	●	MVS0820X05S100	69.5	73.5	128.5	127	1.5	10	2
8.2	8	●	MVS0820X08S090	95.5	100.5	155.5	154	1.5	9	2
8.2	8	●	MVS0820X08S100	95.5	100.5	155.5	154	1.5	10	2
NEW 8.2	10	●	MVS0820X10S090	112.5	115.5	170.5	169	1.5	9	4
NEW 8.2	15	●	MVS0820X15S090	154.5	157.5	212.5	211	1.5	9	4

DC = Cutting Diameter  
 LCF = Length Chip Flute  
 LH = Neck Length

OAL = Overall Length  
 LF = Functional Length  
 PL = Point Length

DCON = Fixing Part Depth

# Solid Carbide Drills



Internal Coolant

DC	Hole Depth (l/d)	Stock DP1020	Order Number	LCF	LH	OAL	LF	PL	DCON	Type
NEW 8.2	25	●	MVS0820X25S090	239.5	242.5	297.5	296	1.5	9	4
NEW 8.2	30	●	MVS0820X30S090	282.5	285.5	340.5	339	1.5	9	4
NEW 8.2	35	□	MVS0820X35S090	324.5	327.5	382.5	381	1.5	9	4
NEW 8.2	40	□	MVS0820X40S090	366.5	369.5	424.5	423	1.5	9	4
8.3	3	●	MVS0830X03S090	44.0	46.5	101.5	100	1.5	9	2
8.3	3	●	MVS0830X03S100	44.0	46.5	101.5	100	1.5	10	2
8.3	5	●	MVS0830X05S090	69.5	73.5	128.5	127	1.5	9	2
8.3	5	●	MVS0830X05S100	69.5	73.5	128.5	127	1.5	10	2
8.3	8	●	MVS0830X08S090	95.5	100.5	155.5	154	1.5	9	2
8.3	8	●	MVS0830X08S100	95.5	100.5	155.5	154	1.5	10	2
NEW 8.3	10	●	MVS0830X10S090	112.5	115.5	170.5	169	1.5	9	4
NEW 8.3	15	●	MVS0830X15S090	154.5	157.5	212.5	211	1.5	9	4
NEW 8.3	20	●	MVS0830X20S090	197.5	200.5	255.5	254	1.5	9	4
NEW 8.3	25	●	MVS0830X25S090	239.5	242.5	297.5	296	1.5	9	4
NEW 8.3	30	●	MVS0830X30S090	282.5	285.5	340.5	339	1.5	9	4
NEW 8.3	35	□	MVS0830X35S090	324.5	327.5	382.5	381	1.5	9	4
NEW 8.3	40	□	MVS0830X40S090	366.5	369.5	424.5	423	1.5	9	4
8.4	3	●	MVS0840X03S090	44.0	46.5	101.5	100	1.5	9	2
8.4	3	●	MVS0840X03S100	44.0	46.5	101.5	100	1.5	10	2
8.4	5	●	MVS0840X05S090	69.5	73.5	128.5	127	1.5	9	2
8.4	5	●	MVS0840X05S100	69.5	73.5	128.5	127	1.5	10	2
8.4	8	●	MVS0840X08S090	95.5	100.5	155.5	154	1.5	9	2
8.4	8	●	MVS0840X08S100	95.5	100.5	155.5	154	1.5	10	2
NEW 8.4	10	●	MVS0840X10S090	112.5	115.5	170.5	169	1.5	9	4
NEW 8.4	15	●	MVS0840X15S090	154.5	157.5	212.5	211	1.5	9	4
NEW 8.4	20	●	MVS0840X20S090	197.5	200.5	255.5	254	1.5	9	4
NEW 8.4	25	●	MVS0840X25S090	239.5	242.5	297.5	296	1.5	9	4
NEW 8.4	30	●	MVS0840X30S090	282.5	285.5	340.5	339	1.5	9	4
NEW 8.4	35	□	MVS0840X35S090	324.5	327.5	382.5	381	1.5	9	4
NEW 8.4	40	□	MVS0840X40S090	366.5	369.5	424.5	423	1.5	9	4
8.5	3	●	MVS0850X03S090	44.0	46.5	101.5	100	1.5	9	2
8.5	3	●	MVS0850X03S100	44.0	46.5	101.5	100	1.5	10	2
8.5	5	●	MVS0850X05S090	69.5	73.5	128.5	127	1.5	9	2
8.5	5	●	MVS0850X05S100	69.5	73.5	128.5	127	1.5	10	2
8.5	8	●	MVS0850X08S090	95.5	100.5	155.5	154	1.5	9	2
8.5	8	●	MVS0850X08S100	95.5	100.5	155.5	154	1.5	10	2
NEW 8.5	10	●	MVS0850X10S090	112.5	115.6	170.5	169	1.5	9	4
NEW 8.5	15	●	MVS0850X15S090	154.5	157.6	212.5	211	1.5	9	4
NEW 8.5	20	●	MVS0850X20S090	197.5	200.6	255.5	254	1.5	9	4
NEW 8.5	25	●	MVS0850X25S090	239.5	242.6	297.5	296	1.5	9	4
NEW 8.5	30	●	MVS0850X30S090	282.5	285.6	340.5	339	1.5	9	4
NEW 8.5	35	●	MVS0850X35S090	324.5	327.6	382.5	381	1.5	9	4
NEW 8.5	40	●	MVS0850X40S090	366.5	369.6	424.5	423	1.5	9	4
8.6	3	●	MVS0860X03S090	46.6	46.6	101.6	100	1.6	9	2
8.6	3	●	MVS0860X03S100	46.6	48.6	101.6	100	1.6	10	2
8.6	5	●	MVS0860X05S090	73.6	73.6	128.6	127	1.6	9	2
8.6	5	●	MVS0860X05S100	73.6	75.6	128.6	127	1.6	10	2

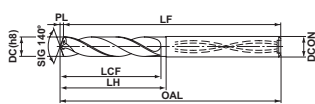
Internal Coolant

(mm)

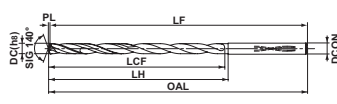
DC	Hole Depth (l/d)	Stock DP1020	Order Number	LCF	LH	OAL	LF	PL	DCON	Type
8.6	8	●	MVS0860X08S100	100.6	102.6	155.6	154	1.6	10	2
NEW 8.6	10	●	MVS0860X10S090	118.6	121.6	176.6	175	1.6	9	4
NEW 8.6	15	●	MVS0860X15S090	163.6	166.6	221.6	220	1.6	9	4
NEW 8.6	20	●	MVS0860X20S090	208.6	211.6	266.6	265	1.6	9	4
NEW 8.6	25	●	MVS0860X25S090	253.6	256.6	311.6	310	1.6	9	4
NEW 8.6	30	●	MVS0860X30S090	298.6	301.6	356.6	355	1.6	9	4
NEW 8.6	35	□	MVS0860X35S090	343.6	346.6	401.6	400	1.6	9	4
NEW 8.6	40	□	MVS0860X40S090	391.6	394.6	449.6	448	1.6	9	4
8.7	3	●	MVS0870X03S090	46.6	46.6	101.6	100	1.6	9	2
8.7	3	●	MVS0870X03S100	46.6	48.6	101.6	100	1.6	10	2
8.7	5	●	MVS0870X05S090	73.6	73.6	128.6	127	1.6	9	2
8.7	5	●	MVS0870X05S100	73.6	75.6	128.6	127	1.6	10	2
8.7	8	●	MVS0870X08S090	100.6	100.6	155.6	154	1.6	9	2
8.7	8	●	MVS0870X08S100	100.6	102.6	155.6	154	1.6	10	2
NEW 8.7	10	●	MVS0870X10S090	118.6	121.6	176.6	175	1.6	9	4
NEW 8.7	15	●	MVS0870X15S090	163.6	166.6	221.6	220	1.6	9	4
NEW 8.7	20	●	MVS0870X20S090	208.6	211.6	266.6	265	1.6	9	4
NEW 8.7	25	●	MVS0870X25S090	253.6	256.6	311.6	310	1.6	9	4
NEW 8.7	30	●	MVS0870X30S090	298.6	301.6	356.6	355	1.6	9	4
NEW 8.7	35	□	MVS0870X35S090	343.6	346.6	401.6	400	1.6	9	4
NEW 8.7	40	□	MVS0870X40S090	391.6	394.6	449.6	448	1.6	9	4
8.8	3	●	MVS0880X03S090	46.6	46.6	101.6	100	1.6	9	2
8.8	3	●	MVS0880X03S100	46.6	48.6	101.6	100	1.6	10	2
8.8	5	●	MVS0880X05S090	73.6	73.6	128.6	127	1.6	9	2
8.8	5	●	MVS0880X05S100	73.6	75.6	128.6	127	1.6	10	2
8.8	8	●	MVS0880X08S090	100.6	100.6	155.6	154	1.6	9	2
8.8	8	●	MVS0880X08S100	100.6	102.6	155.6	154	1.6	10	2
NEW 8.8	10	●	MVS0880X10S090	118.6	121.6	176.6	175	1.6	9	4
NEW 8.8	15	●	MVS0880X15S090	163.6	166.6	221.6	220	1.6	9	4
NEW 8.8	20	●	MVS0880X20S090	208.6	211.6	266.6	265	1.6	9	4
NEW 8.8	25	●	MVS0880X25S090	253.6	256.6	311.6	310	1.6	9	4
NEW 8.8	30	●	MVS0880X30S090	298.6	301.6	356.6	355	1.6	9	4
NEW 8.8	35	□	MVS0880X35S090	343.6	346.6	401.6	400	1.6	9	4
NEW 8.8	40	□	MVS0880X40S090	391.6	394.6	449.6	448	1.6	9	4
8.9	3	●	MVS0890X03S090	46.6	46.6	101.6	100	1.6	9	2
8.9	3	●	MVS0890X03S100	46.6	48.6	101.6	100	1.6	10	2
8.9	5	●	MVS0890X05S090	73.6	73.6	128.6	127	1.6	9	2
8.9	5	●	MVS0890X05S100	73.6	75.6	128.6	127	1.6	10	2
8.9	8	●	MVS0890X08S090	100.6	100.6	155.6	154	1.6	9	2
8.9	8	●	MVS0890X08S100	100.6	102.6	155.6	154	1.6	10	2
NEW 8.9	10	●	MVS0890X10S090	118.6	121.6	176.6	175	1.6	9	4
NEW 8.9	15	●	MVS0890X15S090	163.6	166.6	221.6	220	1.6	9	4
NEW 8.9	20	●	MVS0890X20S090	208.6	211.6	266.6	265	1.6	9	4
NEW 8.9	25	●	MVS0890X25S090	253.6	256.6	311.6	310	1.6	9	4
NEW 8.9	30	●	MVS0890X30S090	298.6	301.6	356.6	355	1.6	9	4
NEW 8.9	35	□	MVS0890X35S090	343.6	346.6	401.6	400	1.6	9	4
NEW 8.9	40	□	MVS0890X40S090	391.6	394.6	449.6	448	1.6	9	4

● : Inventory maintained in Japan. □ : Non stock, produced to order only.

Type2



Type4



Internal Coolant

Internal Coolant

(mm)

DC	Hole Depth (l/d)	Stock DP1020	Order Number	LCF	LH	OAL	LF	PL	DCON	Type
9.0	3	●	MVS0900X03S090	46.6	46.6	101.6	100	1.6	9	2
9.0	3	●	MVS0900X03S100	46.6	48.6	101.6	100	1.6	10	2
9.0	5	●	MVS0900X05S090	73.6	73.6	128.6	127	1.6	9	2
9.0	5	●	MVS0900X05S100	73.6	75.6	128.6	127	1.6	10	2
9.0	8	●	MVS0900X08S090	100.6	100.6	155.6	154	1.6	9	2
9.0	8	●	MVS0900X08S100	100.6	102.6	155.6	154	1.6	10	2
NEW 9.0	10	●	MVS0900X10S090	118.6	121.6	176.6	175	1.6	9	4
NEW 9.0	15	●	MVS0900X15S090	163.6	166.6	221.6	220	1.6	9	4
NEW 9.0	20	●	MVS0900X20S090	208.6	211.6	266.6	265	1.6	9	4
NEW 9.0	25	●	MVS0900X25S090	253.6	256.6	311.6	310	1.6	9	4
NEW 9.0	30	●	MVS0900X30S090	298.6	301.6	356.6	355	1.6	9	4
NEW 9.0	35	●	MVS0900X35S090	343.6	346.6	401.6	400	1.6	9	4
NEW 9.0	40	●	MVS0900X40S090	391.6	394.6	449.6	448	1.6	9	4
9.1	3	●	MVS0910X03S100	49.2	51.7	107.7	106	1.7	10	2
9.1	5	●	MVS0910X05S100	77.7	81.7	137.7	136	1.7	10	2
9.1	8	●	MVS0910X08S100	106.7	111.7	167.7	166	1.7	10	2
NEW 9.1	10	●	MVS0910X10S100	125.7	128.7	183.7	182	1.7	10	4
NEW 9.1	15	●	MVS0910X15S100	172.7	175.7	230.7	229	1.7	10	4
NEW 9.1	20	●	MVS0910X20S100	220.7	223.7	278.7	277	1.7	10	4
NEW 9.1	25	●	MVS0910X25S100	267.7	270.7	325.7	324	1.7	10	4
NEW 9.1	30	●	MVS0910X30S100	315.7	318.7	373.7	372	1.7	10	4
NEW 9.1	35	□	MVS0910X35S100	362.7	365.7	420.7	419	1.7	10	4
9.2	3	●	MVS0920X03S100	49.2	51.7	107.7	106	1.7	10	2
9.2	5	●	MVS0920X05S100	77.7	81.7	137.7	136	1.7	10	2
9.2	8	●	MVS0920X08S100	106.7	111.7	167.7	166	1.7	10	2
NEW 9.2	10	●	MVS0920X10S100	125.7	128.7	183.7	182	1.7	10	4
NEW 9.2	15	●	MVS0920X15S100	172.7	175.7	230.7	229	1.7	10	4
NEW 9.2	20	●	MVS0920X20S100	220.7	223.7	278.7	277	1.7	10	4
NEW 9.2	25	●	MVS0920X25S100	267.7	270.7	325.7	324	1.7	10	4
NEW 9.2	30	●	MVS0920X30S100	315.7	318.7	373.7	372	1.7	10	4
NEW 9.2	35	□	MVS0920X35S100	362.7	365.7	420.7	419	1.7	10	4
9.3	3	●	MVS0930X03S100	49.2	51.7	107.7	106	1.7	10	2
9.3	5	●	MVS0930X05S100	77.7	81.7	137.7	136	1.7	10	2
9.3	8	●	MVS0930X08S100	106.7	111.7	167.7	166	1.7	10	2
NEW 9.3	10	●	MVS0930X10S100	125.7	128.7	183.7	182	1.7	10	4
NEW 9.3	15	●	MVS0930X15S100	172.7	175.7	230.7	229	1.7	10	4
NEW 9.3	20	●	MVS0930X20S100	220.7	223.7	278.7	277	1.7	10	4
NEW 9.3	25	●	MVS0930X25S100	267.7	270.7	325.7	324	1.7	10	4
NEW 9.3	30	●	MVS0930X30S100	315.7	318.7	373.7	372	1.7	10	4
NEW 9.3	35	□	MVS0930X35S100	362.7	365.7	420.7	419	1.7	10	4
9.4	3	●	MVS0940X03S100	49.2	51.7	107.7	106	1.7	10	2
9.4	5	●	MVS0940X05S100	77.7	81.7	137.7	136	1.7	10	2
9.4	8	●	MVS0940X08S100	106.7	111.7	167.7	166	1.7	10	2
NEW 9.4	10	●	MVS0940X10S100	125.7	128.7	183.7	182	1.7	10	4
NEW 9.4	15	●	MVS0940X15S100	172.7	175.7	230.7	229	1.7	10	4
NEW 9.4	20	●	MVS0940X20S100	220.7	223.7	278.7	277	1.7	10	4
NEW 9.4	25	●	MVS0940X25S100	267.7	270.7	325.7	324	1.7	10	4
NEW 9.4	30	●	MVS0940X30S100	315.7	318.7	373.7	372	1.7	10	4

DC	Hole Depth (l/d)	Stock DP1020	Order Number	LCF	LH	OAL	LF	PL	DCON	Type
NEW 9.4	35	□	MVS0940X35S100	362.7	365.7	420.7	419	1.7	10	4
9.5	3	●	MVS0950X03S100	49.2	51.7	107.7	106	1.7	10	2
9.5	5	●	MVS0950X05S100	77.7	81.7	137.7	136	1.7	10	2
9.5	8	●	MVS0950X08S100	106.7	111.7	167.7	166	1.7	10	2
NEW 9.5	10	●	MVS0950X10S100	125.7	128.7	183.7	182	1.7	10	4
NEW 9.5	15	●	MVS0950X15S100	172.7	175.7	230.7	229	1.7	10	4
NEW 9.5	20	●	MVS0950X20S100	220.7	223.7	278.7	277	1.7	10	4
NEW 9.5	25	●	MVS0950X25S100	267.7	270.7	325.7	324	1.7	10	4
NEW 9.5	30	●	MVS0950X30S100	315.7	318.7	373.7	372	1.7	10	4
NEW 9.5	35	●	MVS0950X35S100	362.7	365.7	420.7	419	1.7	10	4
9.6	3	●	MVS0960X03S100	51.7	51.7	107.7	106	1.7	10	2
9.6	5	●	MVS0960X05S100	81.7	81.7	137.7	136	1.7	10	2
9.6	8	●	MVS0960X08S100	111.7	111.7	167.7	166	1.7	10	2
NEW 9.6	10	●	MVS0960X10S100	131.7	134.8	189.7	188	1.7	10	4
NEW 9.6	15	●	MVS0960X15S100	181.7	184.8	239.7	238	1.7	10	4
NEW 9.6	20	●	MVS0960X20S100	231.7	234.8	289.7	288	1.7	10	4
NEW 9.6	25	●	MVS0960X25S100	281.7	284.8	339.7	338	1.7	10	4
NEW 9.6	30	●	MVS0960X30S100	331.7	334.8	389.7	388	1.7	10	4
NEW 9.6	35	□	MVS0960X35S100	381.7	384.8	439.7	438	1.7	10	4
9.7	3	●	MVS0970X03S100	51.8	51.8	107.8	106	1.8	10	2
9.7	5	●	MVS0970X05S100	81.8	81.8	137.8	136	1.8	10	2
9.7	8	●	MVS0970X08S100	111.8	111.8	167.8	166	1.8	10	2
NEW 9.7	10	●	MVS0970X10S100	131.8	134.8	189.8	188	1.8	10	4
NEW 9.7	15	●	MVS0970X15S100	181.8	184.8	239.8	238	1.8	10	4
NEW 9.7	20	●	MVS0970X20S100	231.8	234.8	289.8	288	1.8	10	4
NEW 9.7	25	●	MVS0970X25S100	281.8	284.8	339.8	338	1.8	10	4
NEW 9.7	30	●	MVS0970X30S100	331.8	334.8	389.8	388	1.8	10	4
NEW 9.7	35	□	MVS0970X35S100	381.8	384.8	439.8	438	1.8	10	4
9.8	3	●	MVS0980X03S100	51.8	51.8	107.8	106	1.8	10	2
9.8	5	●	MVS0980X05S100	81.8	81.8	137.8	136	1.8	10	2
9.8	8	●	MVS0980X08S100	111.8	111.8	167.8	166	1.8	10	2
NEW 9.8	10	●	MVS0980X10S100	131.8	134.8	189.8	188	1.8	10	4
NEW 9.8	15	●	MVS0980X15S100	181.8	184.8	239.8	238	1.8	10	4
NEW 9.8	20	●	MVS0980X20S100	231.8	234.8	289.8	288	1.8	10	4
NEW 9.8	25	●	MVS0980X25S100	281.8	284.8	339.8	338	1.8	10	4
NEW 9.8	30	●	MVS0980X30S100	331.8	334.8	389.8	388	1.8	10	4
NEW 9.8	35	□	MVS0980X35S100	381.8	384.8	439.8	438	1.8	10	4
9.9	3	●	MVS0990X03S100	51.8	51.8	107.8	106	1.8	10	2
9.9	5	●	MVS0990X05S100	81.8	81.8	137.8	136	1.8	10	2
9.9	8	●	MVS0990X08S100	111.8	111.8	167.8	166	1.8	10	2
NEW 9.9	10	●	MVS0990X10S100	131.8	134.8	189.8	188	1.8	10	4
NEW 9.9	15	●	MVS0990X15S100	181.8	184.8	239.8	238	1.8	10	4
NEW 9.9	20	●	MVS0990X20S100	231.8	234.8	289.8	288	1.8	10	4
NEW 9.9	25	●	MVS0990X25S100	281.8	284.8	339.8	338	1.8	10	4
NEW 9.9	30	●	MVS0990X30S100	331.8	334.8	389.8	388	1.8	10	4
NEW 9.9	35	□	MVS0990X35S100	381.8	384.8	439.8	438	1.8	10	4
10.0	3	●	MVS1000X03S100	51.8	51.8	107.8	106	1.8	10	2
10.0	5	●	MVS1000X05S100	81.8	81.8	137.8	136	1.8	10	2

DC = Cutting Diameter  
LCF = Length Chip Flute  
LH = Neck Length

OAL = Overall Length  
LF = Functional Length  
PL = Point Length

DCON = Fixing Part Depth



# Solid Carbide Drills

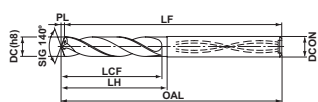


Internal Coolant										
DC	Hole Depth (l/d)	Stock DP1020	Order Number	LCF	LH	OAL	LF	PL	DCON	Type
NEW 10.0	10	●	MVS1000X10S100	131.8	134.8	189.8	188	1.8	10	4
NEW 10.0	15	●	MVS1000X15S100	181.8	184.8	239.8	238	1.8	10	4
NEW 10.0	20	●	MVS1000X20S100	231.8	234.8	289.8	288	1.8	10	4
NEW 10.0	25	●	MVS1000X25S100	281.8	284.8	339.8	338	1.8	10	4
NEW 10.0	30	●	MVS1000X30S100	331.8	334.8	389.8	388	1.8	10	4
NEW 10.0	35	●	MVS1000X35S100	381.8	384.8	439.8	438	1.8	10	4
10.1	3	●	MVS1010X03S110	54.3	56.8	117.8	116	1.8	11	2
10.1	3	●	MVS1010X03S120	54.3	56.8	117.8	116	1.8	12	2
10.1	5	●	MVS1010X05S110	85.8	89.8	150.8	149	1.8	11	2
10.1	5	●	MVS1010X05S120	85.8	89.8	150.8	149	1.8	12	2
10.1	8	●	MVS1010X08S110	117.8	122.8	183.8	182	1.8	11	2
10.1	8	●	MVS1010X08S120	117.8	122.8	183.8	182	1.8	12	2
NEW 10.1	10	●	MVS1010X10S110	138.8	141.8	202.8	201	1.8	11	4
NEW 10.1	15	●	MVS1010X15S110	190.8	193.8	254.8	253	1.8	11	4
NEW 10.1	20	●	MVS1010X20S110	243.8	246.8	307.8	306	1.8	11	4
NEW 10.1	25	●	MVS1010X25S110	295.8	298.8	359.8	358	1.8	11	4
10.2	3	●	MVS1020X03S110	54.4	56.9	117.9	116	1.9	11	2
10.2	3	●	MVS1020X03S120	54.4	56.9	117.9	116	1.9	12	2
10.2	5	●	MVS1020X05S110	85.9	89.9	150.9	149	1.9	11	2
10.2	5	●	MVS1020X05S120	85.9	89.9	150.9	149	1.9	12	2
10.2	8	●	MVS1020X08S110	117.9	122.9	183.9	182	1.9	11	2
10.2	8	●	MVS1020X08S120	117.9	122.9	183.9	182	1.9	12	2
NEW 10.2	10	●	MVS1020X10S110	138.9	141.9	202.9	201	1.9	11	4
NEW 10.2	15	●	MVS1020X15S110	190.9	193.9	254.9	253	1.9	11	4
NEW 10.2	20	●	MVS1020X20S110	243.9	246.9	307.9	306	1.9	11	4
NEW 10.2	25	●	MVS1020X25S110	295.9	298.9	359.9	358	1.9	11	4
10.3	3	●	MVS1030X03S110	54.4	56.9	117.9	116	1.9	11	2
10.3	3	●	MVS1030X03S120	54.4	56.9	117.9	116	1.9	12	2
10.3	5	●	MVS1030X05S110	85.9	89.9	150.9	149	1.9	11	2
10.3	5	●	MVS1030X05S120	85.9	89.9	150.9	149	1.9	12	2
10.3	8	●	MVS1030X08S110	117.9	122.9	183.9	182	1.9	11	2
10.3	8	●	MVS1030X08S120	117.9	122.9	183.9	182	1.9	12	2
NEW 10.3	10	●	MVS1030X10S110	138.9	141.9	202.9	201	1.9	11	4
NEW 10.3	15	●	MVS1030X15S110	190.9	193.9	254.9	253	1.9	11	4
NEW 10.3	20	●	MVS1030X20S110	243.9	246.9	307.9	306	1.9	11	4
NEW 10.3	25	●	MVS1030X25S110	295.9	298.9	359.9	358	1.9	11	4
10.4	3	●	MVS1040X03S110	54.4	56.9	117.9	116	1.9	11	2
10.4	3	●	MVS1040X03S120	54.4	56.9	117.9	116	1.9	12	2
10.4	5	●	MVS1040X05S110	85.9	89.9	150.9	149	1.9	11	2
10.4	5	●	MVS1040X05S120	85.9	89.9	150.9	149	1.9	12	2
10.4	8	●	MVS1040X08S110	117.9	122.9	183.9	182	1.9	11	2
10.4	8	●	MVS1040X08S120	117.9	122.9	183.9	182	1.9	12	2
NEW 10.4	10	●	MVS1040X10S110	138.9	141.9	202.9	201	1.9	11	4
NEW 10.4	15	●	MVS1040X15S110	190.9	193.9	254.9	253	1.9	11	4
NEW 10.4	20	●	MVS1040X20S110	243.9	246.9	307.9	306	1.9	11	4
NEW 10.4	25	●	MVS1040X25S110	295.9	298.9	359.9	358	1.9	11	4
10.5	3	●	MVS1050X03S110	54.4	56.9	117.9	116	1.9	11	2

Internal Coolant											(mm)
DC	Hole Depth (l/d)	Stock DP1020	Order Number	LCF	LH	OAL	LF	PL	DCON	Type	
											10.5
10.5	5	●	MVS1050X05S110	85.9	89.9	150.9	149	1.9	11	2	
10.5	5	●	MVS1050X05S120	85.9	89.9	150.9	149	1.9	12	2	
10.5	8	●	MVS1050X08S110	117.9	122.9	183.9	182	1.9	11	2	
10.5	8	●	MVS1050X08S120	117.9	122.9	183.9	182	1.9	12	2	
NEW 10.5	10	●	MVS1050X10S110	138.9	141.9	202.9	201	1.9	11	4	
NEW 10.5	15	●	MVS1050X15S110	190.9	193.9	254.9	253	1.9	11	4	
NEW 10.5	20	●	MVS1050X20S110	243.9	246.9	307.9	306	1.9	11	4	
NEW 10.5	25	●	MVS1050X25S110	295.9	298.9	359.9	358	1.9	11	4	
10.6	3	●	MVS1060X03S110	56.9	56.9	117.9	116	1.9	11	2	
10.6	3	●	MVS1060X03S120	56.9	57.9	117.9	116	1.9	12	2	
10.6	5	●	MVS1060X05S110	89.9	89.9	150.9	149	1.9	11	2	
10.6	5	●	MVS1060X05S120	89.9	90.9	150.9	149	1.9	12	2	
10.6	8	●	MVS1060X08S110	122.9	122.9	183.9	182	1.9	11	2	
10.6	8	●	MVS1060X08S120	122.9	123.9	183.9	182	1.9	12	2	
NEW 10.6	10	●	MVS1060X10S110	144.9	147.9	208.9	207	1.9	11	4	
NEW 10.6	15	●	MVS1060X15S110	199.9	202.9	263.9	262	1.9	11	4	
NEW 10.6	20	●	MVS1060X20S110	254.9	257.9	318.9	317	1.9	11	4	
NEW 10.6	25	●	MVS1060X25S110	309.9	312.9	373.9	372	1.9	11	4	
10.7	3	●	MVS1070X03S110	56.9	56.9	117.9	116	1.9	11	2	
10.7	3	●	MVS1070X03S120	56.9	57.9	117.9	116	1.9	12	2	
10.7	5	●	MVS1070X05S110	89.9	89.9	150.9	149	1.9	11	2	
10.7	5	●	MVS1070X05S120	89.9	90.9	150.9	149	1.9	12	2	
10.7	8	●	MVS1070X08S110	122.9	122.9	183.9	182	1.9	11	2	
10.7	8	●	MVS1070X08S120	122.9	123.9	183.9	182	1.9	12	2	
NEW 10.7	10	●	MVS1070X10S110	144.9	148.0	208.9	207	1.9	11	4	
NEW 10.7	15	●	MVS1070X15S110	199.9	203.0	263.9	262	1.9	11	4	
NEW 10.7	20	●	MVS1070X20S110	254.9	258.0	318.9	317	1.9	11	4	
NEW 10.7	25	●	MVS1070X25S110	309.9	313.0	373.9	372	1.9	11	4	
10.8	3	●	MVS1080X03S110	57.0	57.0	118.0	116	2.0	11	2	
10.8	3	●	MVS1080X03S120	57.0	58.0	118.0	116	2.0	12	2	
10.8	5	●	MVS1080X05S110	90.0	90.0	151.0	149	2.0	11	2	
10.8	5	●	MVS1080X05S120	90.0	91.0	151.0	149	2.0	12	2	
10.8	8	●	MVS1080X08S110	123.0	123.0	184.0	182	2.0	11	2	
10.8	8	●	MVS1080X08S120	123.0	124.0	184.0	182	2.0	12	2	
NEW 10.8	10	●	MVS1080X10S110	145.0	148.0	209.0	207	2.0	11	4	
NEW 10.8	15	●	MVS1080X15S110	200.0	203.0	264.0	262	2.0	11	4	
NEW 10.8	20	●	MVS1080X20S110	255.0	258.0	319.0	317	2.0	11	4	
NEW 10.8	25	●	MVS1080X25S110	310.0	313.0	374.0	372	2.0	11	4	
10.9	3	●	MVS1090X03S110	57.0	57.0	118.0	116	2.0	11	2	
10.9	3	●	MVS1090X03S120	57.0	58.0	118.0	116	2.0	12	2	
10.9	5	●	MVS1090X05S110	90.0	90.0	151.0	149	2.0	11	2	
10.9	5	●	MVS1090X05S120	90.0	91.0	151.0	149	2.0	12	2	
10.9	8	●	MVS1090X08S110	123.0	123.0	184.0	182	2.0	11	2	
10.9	8	●	MVS1090X08S120	123.0	124.0	184.0	182	2.0	12	2	
NEW 10.9	10	●	MVS1090X10S110	145.0	148.0	209.0	207	2.0	11	4	
NEW 10.9	15	●	MVS1090X15S110	200.0	203.0	264.0	262	2.0	11	4	
NEW 10.9	20	●	MVS1090X20S110	255.0	258.0	319.0	317	2.0	11	4	

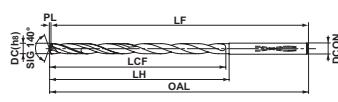
● : Inventory maintained in Japan. □ : Non stock, produced to order only.

Type2



Internal Coolant

Type4



Internal Coolant

(mm)

DC	Hole Depth (l/d)	Stock DP1020	Order Number	LCF	LH	OAL	LF	PL	DCON	Type
NEW 10.9	25	●	MVS1090X25S110	310.0	313.0	374.0	372	2.0	11	4
11.0	3	●	MVS1100X03S110	57.0	57.0	118.0	116	2.0	11	2
11.0	3	●	MVS1100X03S120	57.0	58.0	118.0	116	2.0	12	2
11.0	5	●	MVS1100X05S110	90.0	90.0	151.0	149	2.0	11	2
11.0	5	●	MVS1100X05S120	90.0	91.0	151.0	149	2.0	12	2
11.0	8	●	MVS1100X08S110	123.0	123.0	184.0	182	2.0	11	2
11.0	8	●	MVS1100X08S120	123.0	124.0	184.0	182	2.0	12	2
NEW 11.0	10	●	MVS1100X10S110	145.0	148.0	209.0	207	2.0	11	4
NEW 11.0	15	●	MVS1100X15S110	200.0	203.0	264.0	262	2.0	11	4
NEW 11.0	20	●	MVS1100X20S110	255.0	258.0	319.0	317	2.0	11	4
NEW 11.0	25	●	MVS1100X25S110	310.0	313.0	374.0	372	2.0	11	4
11.1	3	●	MVS1110X03S120	59.5	62.0	124.0	122	2.0	12	2
11.1	5	●	MVS1110X05S120	94.0	98.0	160.0	158	2.0	12	2
11.1	8	●	MVS1110X08S120	129.0	134.0	196.0	194	2.0	12	2
NEW 11.1	10	●	MVS1110X10S120	152.0	155.0	217.0	215	2.0	12	4
NEW 11.1	15	●	MVS1110X15S120	209.0	212.0	274.0	272	2.0	12	4
NEW 11.1	20	●	MVS1110X20S120	267.0	270.0	332.0	330	2.0	12	4
NEW 11.1	25	●	MVS1110X25S120	324.0	327.0	389.0	387	2.0	12	4
11.2	3	●	MVS1120X03S120	59.5	62.0	124.0	122	2.0	12	2
11.2	5	●	MVS1120X05S120	94.0	98.0	160.0	158	2.0	12	2
11.2	8	●	MVS1120X08S120	129.0	134.0	196.0	194	2.0	12	2
NEW 11.2	10	●	MVS1120X10S120	152.0	155.0	217.0	215	2.0	12	4
NEW 11.2	15	●	MVS1120X15S120	209.0	212.0	274.0	272	2.0	12	4
NEW 11.2	20	●	MVS1120X20S120	267.0	270.0	332.0	330	2.0	12	4
NEW 11.2	25	●	MVS1120X25S120	324.0	327.0	389.0	387	2.0	12	4
11.3	3	●	MVS1130X03S120	59.6	62.1	124.1	122	2.1	12	2
11.3	5	●	MVS1130X05S120	94.1	98.1	160.1	158	2.1	12	2
11.3	8	●	MVS1130X08S120	129.1	134.1	196.1	194	2.1	12	2
NEW 11.3	10	●	MVS1130X10S120	152.1	155.1	217.1	215	2.1	12	4
NEW 11.3	15	●	MVS1130X15S120	209.1	212.1	274.1	272	2.1	12	4
NEW 11.3	20	●	MVS1130X20S120	267.1	270.1	332.1	330	2.1	12	4
NEW 11.3	25	●	MVS1130X25S120	324.1	327.1	389.1	387	2.1	12	4
11.4	3	●	MVS1140X03S120	59.6	62.1	124.1	122	2.1	12	2
11.4	5	●	MVS1140X05S120	94.1	98.1	160.1	158	2.1	12	2
11.4	8	●	MVS1140X08S120	129.1	134.1	196.1	194	2.1	12	2
NEW 11.4	10	●	MVS1140X10S120	152.1	155.1	217.1	215	2.1	12	4
NEW 11.4	15	●	MVS1140X15S120	209.1	212.1	274.1	272	2.1	12	4
NEW 11.4	20	●	MVS1140X20S120	267.1	270.1	332.1	330	2.1	12	4
NEW 11.4	25	●	MVS1140X25S120	324.1	327.1	389.1	387	2.1	12	4
11.5	3	●	MVS1150X03S120	59.6	62.1	124.1	122	2.1	12	2
11.5	5	●	MVS1150X05S120	94.1	98.1	160.1	158	2.1	12	2
11.5	8	●	MVS1150X08S120	129.1	134.1	196.1	194	2.1	12	2
NEW 11.5	10	●	MVS1150X10S120	152.1	155.1	217.1	215	2.1	12	4
NEW 11.5	15	●	MVS1150X15S120	209.1	212.1	274.1	272	2.1	12	4
NEW 11.5	20	●	MVS1150X20S120	267.1	270.1	332.1	330	2.1	12	4
NEW 11.5	25	●	MVS1150X25S120	324.1	327.1	389.1	387	2.1	12	4
11.6	3	●	MVS1160X03S120	62.1	62.1	124.1	122	2.1	12	2
11.6	5	●	MVS1160X05S120	98.1	98.1	160.1	158	2.1	12	2

DC	Hole Depth (l/d)	Stock DP1020	Order Number	LCF	LH	OAL	LF	PL	DCON	Type
NEW 11.6	8	●	MVS1160X08S120	134.1	134.1	196.1	194	2.1	12	2
NEW 11.6	10	●	MVS1160X10S120	158.1	161.1	223.1	221	2.1	12	4
NEW 11.6	15	●	MVS1160X15S120	218.1	221.1	283.1	281	2.1	12	4
NEW 11.6	20	●	MVS1160X20S120	278.1	281.1	343.1	341	2.1	12	4
NEW 11.6	25	●	MVS1160X25S120	338.1	341.1	403.1	401	2.1	12	4
11.7	3	●	MVS1170X03S120	62.1	62.1	124.1	122	2.1	12	2
11.7	5	●	MVS1170X05S120	98.1	98.1	160.1	158	2.1	12	2
11.7	8	●	MVS1170X08S120	134.1	134.1	196.1	194	2.1	12	2
NEW 11.7	10	●	MVS1170X10S120	158.1	161.1	223.1	221	2.1	12	4
NEW 11.7	15	●	MVS1170X15S120	218.1	221.1	283.1	281	2.1	12	4
NEW 11.7	20	●	MVS1170X20S120	278.1	281.1	343.1	341	2.1	12	4
NEW 11.7	25	●	MVS1170X25S120	338.1	341.1	403.1	401	2.1	12	4
11.8	3	●	MVS1180X03S120	62.1	62.1	124.1	122	2.1	12	2
11.8	5	●	MVS1180X05S120	98.1	98.1	160.1	158	2.1	12	2
11.8	8	●	MVS1180X08S120	134.1	134.1	196.1	194	2.1	12	2
NEW 11.8	10	●	MVS1180X10S120	158.1	161.2	223.1	221	2.1	12	4
NEW 11.8	15	●	MVS1180X15S120	218.1	221.2	283.1	281	2.1	12	4
NEW 11.8	20	●	MVS1180X20S120	278.1	281.2	343.1	341	2.1	12	4
NEW 11.8	25	●	MVS1180X25S120	338.1	341.2	403.1	401	2.1	12	4
11.9	3	●	MVS1190X03S120	62.2	62.2	124.2	122	2.2	12	2
11.9	5	●	MVS1190X05S120	98.2	98.2	160.2	158	2.2	12	2
11.9	8	●	MVS1190X08S120	134.2	134.2	196.2	194	2.2	12	2
NEW 11.9	10	●	MVS1190X10S120	158.2	161.2	223.2	221	2.2	12	4
NEW 11.9	15	●	MVS1190X15S120	218.2	221.2	283.2	281	2.2	12	4
NEW 11.9	20	●	MVS1190X20S120	278.2	281.2	343.2	341	2.2	12	4
NEW 11.9	25	●	MVS1190X25S120	338.2	341.2	403.2	401	2.2	12	4
12.0	3	●	MVS1200X03S120	62.2	62.2	124.2	122	2.2	12	2
12.0	5	●	MVS1200X05S120	98.2	98.2	160.2	158	2.2	12	2
12.0	8	●	MVS1200X08S120	134.2	134.2	196.2	194	2.2	12	2
NEW 12.0	10	●	MVS1200X10S120	158.2	161.2	223.2	221	2.2	12	4
NEW 12.0	15	●	MVS1200X15S120	218.2	221.2	283.2	281	2.2	12	4
NEW 12.0	20	●	MVS1200X20S120	278.2	281.2	343.2	341	2.2	12	4
NEW 12.0	25	●	MVS1200X25S120	338.2	341.2	403.2	401	2.2	12	4
12.1	3	●	MVS1210X03S130	64.7	67.2	130.2	128	2.2	13	2
12.1	3	□	MVS1210X03S140	64.7	67.2	130.2	128	2.2	14	2
12.1	5	●	MVS1210X05S130	102.2	106.2	169.2	167	2.2	13	2
12.1	5	□	MVS1210X05S140	102.2	106.2	169.2	167	2.2	14	2
12.1	8	□	MVS1210X08S130	140.2	145.2	208.2	206	2.2	13	2
12.1	8	□	MVS1210X08S140	140.2	145.2	208.2	206	2.2	14	2
NEW 12.1	10	□	MVS1210X10S130	165.2	168.2	231.2	229	2.2	13	4
NEW 12.1	15	□	MVS1210X15S130	227.2	230.2	293.2	291	2.2	13	4
NEW 12.1	20	□	MVS1210X20S130	290.2	293.2	356.2	354	2.2	13	4
12.2	3	●	MVS1220X03S130	64.7	67.2	130.2	128	2.2	13	2
12.2	3	□	MVS1220X03S140	64.7	67.2	130.2	128	2.2	14	2
12.2	5	●	MVS1220X05S130	102.2	106.2	169.2	167	2.2	13	2
12.2	5	□	MVS1220X05S140	102.2	106.2	169.2	167	2.2	14	2
12.2	8	□	MVS1220X08S130	140.2	145.2	208.2	206	2.2	13	2
12.2	8	□	MVS1220X08S140	140.2	145.2	208.2	206	2.2	14	2

DC = Cutting Diameter  
 LCF = Length Chip Flute  
 LH = Neck Length

OAL = Overall Length  
 LF = Functional Length  
 PL = Point Length

DCON = Fixing Part Depth

# Solid Carbide Drills



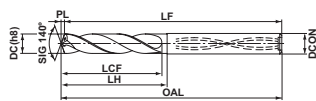
Internal Coolant										
DC	Hole Depth (l/d)	Stock DP1020	Order Number	LCF	LH	OAL	LF	PL	DCON	Type
NEW 12.2	15	□	MVS1220X15S130	227.2	230.2	293.2	291	2.2	13	4
NEW 12.2	20	□	MVS1220X20S130	290.2	293.2	356.2	354	2.2	13	4
12.3	3	●	MVS1230X03S130	64.7	67.2	130.2	128	2.2	13	2
12.3	3	□	MVS1230X03S140	64.7	67.2	130.2	128	2.2	14	2
12.3	5	●	MVS1230X05S130	102.2	106.2	169.2	167	2.2	13	2
12.3	5	□	MVS1230X05S140	102.2	106.2	169.2	167	2.2	14	2
12.3	8	□	MVS1230X08S130	140.2	145.2	208.2	206	2.2	13	2
12.3	8	□	MVS1230X08S140	140.2	145.2	208.2	206	2.2	14	2
NEW 12.3	10	□	MVS1230X10S130	165.2	168.2	231.2	229	2.2	13	4
NEW 12.3	15	□	MVS1230X15S130	227.2	230.2	293.2	291	2.2	13	4
NEW 12.3	20	□	MVS1230X20S130	290.2	293.2	356.2	354	2.2	13	4
12.4	3	●	MVS1240X03S130	64.8	67.3	130.3	128	2.3	13	2
12.4	3	□	MVS1240X03S140	64.8	67.3	130.3	128	2.3	14	2
12.4	5	●	MVS1240X05S130	102.3	106.3	169.3	167	2.3	13	2
12.4	5	□	MVS1240X05S140	102.3	106.3	169.3	167	2.3	14	2
12.4	8	□	MVS1240X08S130	140.3	145.3	208.3	206	2.3	13	2
12.4	8	□	MVS1240X08S140	140.3	145.3	208.3	206	2.3	14	2
NEW 12.4	10	□	MVS1240X10S130	165.3	168.3	231.3	229	2.3	13	4
NEW 12.4	15	□	MVS1240X15S130	227.3	230.3	293.3	291	2.3	13	4
NEW 12.4	20	□	MVS1240X20S130	290.3	293.3	356.3	354	2.3	13	4
12.5	3	●	MVS1250X03S130	64.8	67.3	130.3	128	2.3	13	2
12.5	3	□	MVS1250X03S140	64.8	67.3	130.3	128	2.3	14	2
12.5	5	●	MVS1250X05S130	102.3	106.3	169.3	167	2.3	13	2
12.5	5	□	MVS1250X05S140	102.3	106.3	169.3	167	2.3	14	2
12.5	8	●	MVS1250X08S130	140.3	145.3	208.3	206	2.3	13	2
12.5	8	□	MVS1250X08S140	140.3	145.3	208.3	206	2.3	14	2
NEW 12.5	10	●	MVS1250X10S130	165.3	168.3	231.3	229	2.3	13	4
NEW 12.5	15	●	MVS1250X15S130	227.3	230.3	293.3	291	2.3	13	4
NEW 12.5	20	●	MVS1250X20S130	290.3	293.3	356.3	354	2.3	13	4
12.6	3	●	MVS1260X03S130	67.3	67.3	130.3	128	2.3	13	2
12.6	3	□	MVS1260X03S140	67.3	67.3	130.3	128	2.3	14	2
12.6	5	●	MVS1260X05S130	106.3	106.3	169.3	167	2.3	13	2
12.6	5	□	MVS1260X05S140	106.3	106.3	169.3	167	2.3	14	2
12.6	8	□	MVS1260X08S130	145.3	145.3	208.3	206	2.3	13	2
12.6	8	□	MVS1260X08S140	145.3	145.3	208.3	206	2.3	14	2
NEW 12.6	10	□	MVS1260X10S130	171.3	174.3	237.3	235	2.3	13	4
NEW 12.6	15	□	MVS1260X15S130	236.3	239.3	302.3	300	2.3	13	4
NEW 12.6	20	□	MVS1260X20S130	301.3	304.3	367.3	365	2.3	13	4
12.7	3	●	MVS1270X03S130	67.3	67.3	130.3	128	2.3	13	2
12.7	3	□	MVS1270X03S140	67.3	67.3	130.3	128	2.3	14	2
12.7	5	●	MVS1270X05S130	106.3	106.3	169.3	167	2.3	13	2
12.7	5	□	MVS1270X05S140	106.3	106.3	169.3	167	2.3	14	2
12.7	8	□	MVS1270X08S130	145.3	145.3	208.3	206	2.3	13	2
12.7	8	□	MVS1270X08S140	145.3	145.3	208.3	206	2.3	14	2
NEW 12.7	10	□	MVS1270X10S130	171.3	174.3	237.3	235	2.3	13	4
NEW 12.7	15	□	MVS1270X15S130	236.3	239.3	302.3	300	2.3	13	4
NEW 12.7	20	□	MVS1270X20S130	301.3	304.3	367.3	365	2.3	13	4

Internal Coolant											(mm)
DC	Hole Depth (l/d)	Stock DP1020	Order Number	LCF	LH	OAL	LF	PL	DCON	Type	
											12.8
12.8	3	□	MVS1280X03S140	67.3	67.3	130.3	128	2.3	14	2	
12.8	5	●	MVS1280X05S130	106.3	106.3	169.3	167	2.3	13	2	
12.8	5	□	MVS1280X05S140	106.3	106.3	169.3	167	2.3	14	2	
12.8	8	□	MVS1280X08S130	145.3	145.3	208.3	206	2.3	13	2	
12.8	8	□	MVS1280X08S140	145.3	145.3	208.3	206	2.3	14	2	
NEW 12.8	10	□	MVS1280X10S130	171.3	174.3	237.3	235	2.3	13	4	
NEW 12.8	15	□	MVS1280X15S130	236.3	239.3	302.3	300	2.3	13	4	
NEW 12.8	20	□	MVS1280X20S130	301.3	304.3	367.3	365	2.3	13	4	
12.9	3	●	MVS1290X03S130	67.3	67.3	130.3	128	2.3	13	2	
12.9	3	□	MVS1290X03S140	67.3	67.3	130.3	128	2.3	14	2	
12.9	5	●	MVS1290X05S130	106.3	106.3	169.3	167	2.3	13	2	
12.9	5	□	MVS1290X05S140	106.3	106.3	169.3	167	2.3	14	2	
12.9	8	□	MVS1290X08S130	145.3	145.3	208.3	206	2.3	13	2	
12.9	8	□	MVS1290X08S140	145.3	145.3	208.3	206	2.3	14	2	
NEW 12.9	10	□	MVS1290X10S130	171.3	174.4	237.3	235	2.3	13	4	
NEW 12.9	15	□	MVS1290X15S130	236.3	239.4	302.3	300	2.3	13	4	
NEW 12.9	20	□	MVS1290X20S130	301.3	304.4	367.3	365	2.3	13	4	
13.0	3	●	MVS1300X03S130	67.4	67.4	130.4	128	2.4	13	2	
13.0	3	□	MVS1300X03S140	67.4	67.4	130.4	128	2.4	14	2	
13.0	5	●	MVS1300X05S130	106.4	106.4	169.4	167	2.4	13	2	
13.0	5	□	MVS1300X05S140	106.4	106.4	169.4	167	2.4	14	2	
13.0	8	●	MVS1300X08S130	145.4	145.4	208.4	206	2.4	13	2	
13.0	8	□	MVS1300X08S140	145.4	145.4	208.4	206	2.4	14	2	
NEW 13.0	10	●	MVS1300X10S130	171.4	174.4	237.4	235	2.4	13	4	
NEW 13.0	15	●	MVS1300X15S130	236.4	239.4	302.4	300	2.4	13	4	
NEW 13.0	20	●	MVS1300X20S130	301.4	304.4	367.4	365	2.4	13	4	
13.1	3	●	MVS1310X03S140	69.9	72.4	136.4	134	2.4	14	2	
13.1	5	●	MVS1310X05S140	110.4	114.4	178.4	176	2.4	14	2	
13.1	8	□	MVS1310X08S140	151.4	156.4	220.4	218	2.4	14	2	
NEW 13.1	10	□	MVS1310X10S140	178.4	181.4	245.4	243	2.4	14	4	
NEW 13.1	15	□	MVS1310X15S140	245.4	248.4	312.4	310	2.4	14	4	
NEW 13.1	20	□	MVS1310X20S140	313.4	316.4	380.4	378	2.4	14	4	
13.2	3	●	MVS1320X03S140	69.9	72.4	136.4	134	2.4	14	2	
13.2	5	●	MVS1320X05S140	110.4	114.4	178.4	176	2.4	14	2	
13.2	8	□	MVS1320X08S140	151.4	156.4	220.4	218	2.4	14	2	
NEW 13.2	10	□	MVS1320X10S140	178.4	181.4	245.4	243	2.4	14	4	
NEW 13.2	15	□	MVS1320X15S140	245.4	248.4	312.4	310	2.4	14	4	
NEW 13.2	20	□	MVS1320X20S140	313.4	316.4	380.4	378	2.4	14	4	
13.3	3	●	MVS1330X03S140	69.9	72.4	136.4	134	2.4	14	2	
13.3	5	●	MVS1330X05S140	110.4	114.4	178.4	176	2.4	14	2	
13.3	8	□	MVS1330X08S140	151.4	156.4	220.4	218	2.4	14	2	
NEW 13.3	10	□	MVS1330X10S140	178.4	181.4	245.4	243	2.4	14	4	
NEW 13.3	15	□	MVS1330X15S140	245.4	248.4	312.4	310	2.4	14	4	
NEW 13.3	20	□	MVS1330X20S140	313.4	316.4	380.4	378	2.4	14	4	
13.4	3	●	MVS1340X03S140	69.9	72.4	136.4	134	2.4	14	2	
13.4	5	●	MVS1340X05S140	110.4	114.4	178.4	176	2.4	14	2	
13.4	8	□	MVS1340X08S140	151.4	156.4	220.4	218	2.4	14	2	

● : Inventory maintained in Japan. □ : Non stock, produced to order only.

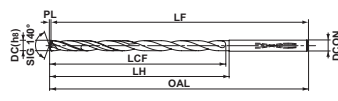


Type2



Internal Coolant

Type4



Internal Coolant

(mm)

DC	Hole Depth (l/d)	Stock DP1020	Order Number	LCF	LH	OAL	LF	PL	DCON	Type
NEW 13.4	10	□	MVS1340X10S140	178.4	181.4	245.4	243	2.4	14	4
NEW 13.4	15	□	MVS1340X15S140	245.4	248.4	312.4	310	2.4	14	4
NEW 13.4	20	□	MVS1340X20S140	313.4	316.4	380.4	378	2.4	14	4
13.5	3	●	MVS1350X03S140	70.0	72.5	136.5	134	2.5	14	2
13.5	5	●	MVS1350X05S140	110.5	114.5	178.5	176	2.5	14	2
13.5	8	●	MVS1350X08S140	151.5	156.5	220.5	218	2.5	14	2
NEW 13.5	10	●	MVS1350X10S140	178.5	181.5	245.5	243	2.5	14	4
NEW 13.5	15	●	MVS1350X15S140	245.5	248.5	312.5	310	2.5	14	4
NEW 13.5	20	●	MVS1350X20S140	313.5	316.5	380.5	378	2.5	14	4
13.6	3	●	MVS1360X03S140	72.5	72.5	136.5	134	2.5	14	2
13.6	5	●	MVS1360X05S140	114.5	114.5	178.5	176	2.5	14	2
13.6	8	□	MVS1360X08S140	156.5	156.5	220.5	218	2.5	14	2
NEW 13.6	10	□	MVS1360X10S140	184.5	187.5	251.5	249	2.5	14	4
NEW 13.6	15	□	MVS1360X15S140	254.5	257.5	321.5	319	2.5	14	4
NEW 13.6	20	□	MVS1360X20S140	324.5	327.5	391.5	389	2.5	14	4
13.7	3	●	MVS1370X03S140	72.5	72.5	136.5	134	2.5	14	2
13.7	5	●	MVS1370X05S140	114.5	114.5	178.5	176	2.5	14	2
13.7	8	□	MVS1370X08S140	156.5	156.5	220.5	218	2.5	14	2
NEW 13.7	10	□	MVS1370X10S140	184.5	187.5	251.5	249	2.5	14	4
NEW 13.7	15	□	MVS1370X15S140	254.5	257.5	321.5	319	2.5	14	4
NEW 13.7	20	□	MVS1370X20S140	324.5	327.5	391.5	389	2.5	14	4
13.8	3	●	MVS1380X03S140	72.5	72.5	136.5	134	2.5	14	2
13.8	5	●	MVS1380X05S140	114.5	114.5	178.5	176	2.5	14	2
13.8	8	□	MVS1380X08S140	156.5	156.5	220.5	218	2.5	14	2
NEW 13.8	10	□	MVS1380X10S140	184.5	187.5	251.5	249	2.5	14	4
NEW 13.8	15	□	MVS1380X15S140	254.5	257.5	321.5	319	2.5	14	4
NEW 13.8	20	□	MVS1380X20S140	324.5	327.5	391.5	389	2.5	14	4
13.9	3	●	MVS1390X03S140	72.5	72.5	136.5	134	2.5	14	2
13.9	5	●	MVS1390X05S140	114.5	114.5	178.5	176	2.5	14	2
13.9	8	□	MVS1390X08S140	156.5	156.5	220.5	218	2.5	14	2
NEW 13.9	10	□	MVS1390X10S140	184.5	187.5	251.5	249	2.5	14	4
NEW 13.9	15	□	MVS1390X15S140	254.5	257.5	321.5	319	2.5	14	4
NEW 13.9	20	□	MVS1390X20S140	324.5	327.5	391.5	389	2.5	14	4
14.0	3	●	MVS1400X03S140	72.5	72.5	136.5	134	2.5	14	2
14.0	5	●	MVS1400X05S140	114.5	114.5	178.5	176	2.5	14	2
14.0	8	●	MVS1400X08S140	156.5	156.5	220.5	218	2.5	14	2
NEW 14.0	10	●	MVS1400X10S140	184.5	187.6	251.5	249	2.5	14	4
NEW 14.0	15	●	MVS1400X15S140	254.5	257.6	321.5	319	2.5	14	4
NEW 14.0	20	●	MVS1400X20S140	324.5	327.6	391.5	389	2.5	14	4
14.1	3	●	MVS1410X03S150	75.1	77.6	142.6	140	2.6	15	2
14.1	3	□	MVS1410X03S160	75.1	77.6	142.6	140	2.6	16	2
14.1	5	●	MVS1410X05S150	118.6	122.6	187.6	185	2.6	15	2
14.1	5	□	MVS1410X05S160	118.6	122.6	187.6	185	2.6	16	2
14.1	8	□	MVS1410X08S150	162.6	167.6	227.6	225	2.6	15	2
14.1	8	□	MVS1410X08S160	162.6	167.6	227.6	225	2.6	16	2
14.2	3	●	MVS1420X03S150	75.1	77.6	142.6	140	2.6	15	2
14.2	3	□	MVS1420X03S160	75.1	77.6	142.6	140	2.6	16	2
14.2	5	●	MVS1420X05S150	118.6	122.6	187.6	185	2.6	15	2

DC	Hole Depth (l/d)	Stock DP1020	Order Number	LCF	LH	OAL	LF	PL	DCON	Type
14.2	5	□	MVS1420X05S160	118.6	122.6	187.6	185	2.6	16	2
14.2	8	●	MVS1420X08S150	162.6	167.6	227.6	225	2.6	15	2
14.2	8	□	MVS1420X08S160	162.6	167.6	227.6	225	2.6	16	2
14.3	3	●	MVS1430X03S150	75.1	77.6	142.6	140	2.6	15	2
14.3	3	□	MVS1430X03S160	75.1	77.6	142.6	140	2.6	16	2
14.3	5	●	MVS1430X05S150	118.6	122.6	187.6	185	2.6	15	2
14.3	5	□	MVS1430X05S160	118.6	122.6	187.6	185	2.6	16	2
14.3	8	□	MVS1430X08S150	162.6	167.6	227.6	225	2.6	15	2
14.3	8	□	MVS1430X08S160	162.6	167.6	227.6	225	2.6	16	2
14.4	3	●	MVS1440X03S150	75.1	77.6	142.6	140	2.6	15	2
14.4	3	□	MVS1440X03S160	75.1	77.6	142.6	140	2.6	16	2
14.4	5	●	MVS1440X05S150	118.6	122.6	187.6	185	2.6	15	2
14.4	5	□	MVS1440X05S160	118.6	122.6	187.6	185	2.6	16	2
14.4	8	□	MVS1440X08S150	162.6	167.6	227.6	225	2.6	15	2
14.4	8	□	MVS1440X08S160	162.6	167.6	227.6	225	2.6	16	2
14.5	3	●	MVS1450X03S150	75.1	77.6	142.6	140	2.6	15	2
14.5	3	□	MVS1450X03S160	75.1	77.6	142.6	140	2.6	16	2
14.5	5	●	MVS1450X05S150	118.6	122.6	187.6	185	2.6	15	2
14.5	5	□	MVS1450X05S160	118.6	122.6	187.6	185	2.6	16	2
14.5	8	●	MVS1450X08S150	162.6	167.6	227.6	225	2.6	15	2
14.5	8	□	MVS1450X08S160	162.6	167.6	227.6	225	2.6	16	2
14.6	3	●	MVS1460X03S150	77.7	77.7	142.7	140	2.7	15	2
14.6	3	□	MVS1460X03S160	77.7	77.7	142.7	140	2.7	16	2
14.6	5	●	MVS1460X05S150	122.7	122.7	187.7	185	2.7	15	2
14.6	5	□	MVS1460X05S160	122.7	122.7	187.7	185	2.7	16	2
14.6	8	□	MVS1460X08S150	167.7	167.7	227.7	225	2.7	15	2
14.6	8	□	MVS1460X08S160	167.7	167.7	227.7	225	2.7	16	2
14.7	3	●	MVS1470X03S150	77.7	77.7	142.7	140	2.7	15	2
14.7	3	□	MVS1470X03S160	77.7	77.7	142.7	140	2.7	16	2
14.7	5	●	MVS1470X05S150	122.7	122.7	187.7	185	2.7	15	2
14.7	5	□	MVS1470X05S160	122.7	122.7	187.7	185	2.7	16	2
14.7	8	□	MVS1470X08S150	167.7	167.7	227.7	225	2.7	15	2
14.7	8	□	MVS1470X08S160	167.7	167.7	227.7	225	2.7	16	2
14.8	3	●	MVS1480X03S150	77.7	77.7	142.7	140	2.7	15	2
14.8	3	□	MVS1480X03S160	77.7	77.7	142.7	140	2.7	16	2
14.8	5	●	MVS1480X05S150	122.7	122.7	187.7	185	2.7	15	2
14.8	5	□	MVS1480X05S160	122.7	122.7	187.7	185	2.7	16	2
14.8	8	□	MVS1480X08S150	167.7	167.7	227.7	225	2.7	15	2
14.8	8	□	MVS1480X08S160	167.7	167.7	227.7	225	2.7	16	2
14.9	3	●	MVS1490X03S150	77.7	77.7	142.7	140	2.7	15	2
14.9	3	□	MVS1490X03S160	77.7	77.7	142.7	140	2.7	16	2
14.9	5	●	MVS1490X05S150	122.7	122.7	187.7	185	2.7	15	2
14.9	5	□	MVS1490X05S160	122.7	122.7	187.7	185	2.7	16	2
14.9	8	□	MVS1490X08S150	167.7	167.7	227.7	225	2.7	15	2
14.9	8	□	MVS1490X08S160	167.7	167.7	227.7	225	2.7	16	2
15.0	3	●	MVS1500X03S150	77.7	77.7	142.7	140	2.7	15	2
15.0	3	□	MVS1500X03S160	77.7	77.7	142.7	140	2.7	16	2
15.0	5	●	MVS1500X05S150	122.7	122.7	187.7	185	2.7	15	2

DC = Cutting Diameter  
 LCF = Length Chip Flute  
 LH = Neck Length

OAL = Overall Length  
 LF = Functional Length  
 PL = Point Length

DCON = Fixing Part Depth

# Solid Carbide Drills



## Internal Coolant

DC	Hole Depth (l/d)	Stock DP1020	Order Number	LCF	LH	OAL	LF	PL	DCON	Type
15.0	5	□	MVS1500X05S160	122.7	122.7	187.7	185	2.7	16	2
15.0	8	●	MVS1500X08S150	167.7	167.7	227.7	225	2.7	15	2
15.0	8	□	MVS1500X08S160	167.7	167.7	227.7	225	2.7	16	2
15.1	3	●	MVS1510X03S160	80.2	82.7	147.7	145	2.7	16	2
15.1	5	●	MVS1510X05S160	126.7	130.7	195.7	193	2.7	16	2
15.1	8	□	MVS1510X08S160	173.7	183.7	243.7	241	2.7	16	2
15.2	3	●	MVS1520X03S160	80.3	82.8	147.8	145	2.8	16	2
15.2	5	●	MVS1520X05S160	126.8	130.8	195.8	193	2.8	16	2
15.2	8	□	MVS1520X08S160	173.8	183.8	243.8	241	2.8	16	2
15.3	3	●	MVS1530X03S160	80.3	82.8	147.8	145	2.8	16	2
15.3	5	●	MVS1530X05S160	126.8	130.8	195.8	193	2.8	16	2
15.3	8	□	MVS1530X08S160	173.8	183.8	243.8	241	2.8	16	2
15.4	3	●	MVS1540X03S160	80.3	82.8	147.8	145	2.8	16	2
15.4	5	●	MVS1540X05S160	126.8	130.8	195.8	193	2.8	16	2
15.4	8	□	MVS1540X08S160	173.8	183.8	243.8	241	2.8	16	2
15.5	3	●	MVS1550X03S160	80.3	82.8	147.8	145	2.8	16	2
15.5	5	●	MVS1550X05S160	126.8	130.8	195.8	193	2.8	16	2
15.5	8	●	MVS1550X08S160	173.8	183.8	243.8	241	2.8	16	2
15.6	3	●	MVS1560X03S160	82.8	82.8	147.8	145	2.8	16	2
15.6	5	●	MVS1560X05S160	130.8	130.8	195.8	193	2.8	16	2
15.6	8	□	MVS1560X08S160	178.8	183.8	243.8	241	2.8	16	2
15.7	3	●	MVS1570X03S160	82.9	82.9	147.9	145	2.9	16	2
15.7	5	●	MVS1570X05S160	130.9	130.9	195.9	193	2.9	16	2
15.7	8	□	MVS1570X08S160	178.9	183.9	243.9	241	2.9	16	2
15.8	3	●	MVS1580X03S160	82.9	82.9	147.9	145	2.9	16	2
15.8	5	●	MVS1580X05S160	130.9	130.9	195.9	193	2.9	16	2
15.8	8	□	MVS1580X08S160	178.9	183.9	243.9	241	2.9	16	2
15.9	3	●	MVS1590X03S160	82.9	82.9	147.9	145	2.9	16	2
15.9	5	●	MVS1590X05S160	130.9	130.9	195.9	193	2.9	16	2
15.9	8	□	MVS1590X08S160	178.9	183.9	243.9	241	2.9	16	2
16.0	3	●	MVS1600X03S160	82.9	82.9	147.9	145	2.9	16	2
16.0	5	●	MVS1600X05S160	130.9	130.9	195.9	193	2.9	16	2
16.0	8	●	MVS1600X08S160	178.9	183.9	243.9	241	2.9	16	2
16.1	3	□	MVS1610X03S170	85.4	87.9	152.9	150	2.9	17	2
16.1	3	□	MVS1610X03S180	85.4	87.9	152.9	150	2.9	18	2
16.1	5	□	MVS1610X05S170	134.9	138.9	203.9	201	2.9	17	2
16.1	5	□	MVS1610X05S180	134.9	138.9	203.9	201	2.9	18	2
16.2	3	□	MVS1620X03S170	85.4	87.9	152.9	150	2.9	17	2
16.2	3	□	MVS1620X03S180	85.4	87.9	152.9	150	2.9	18	2
16.2	5	□	MVS1620X05S170	134.9	138.9	203.9	201	2.9	17	2
16.2	5	□	MVS1620X05S180	134.9	138.9	203.9	201	2.9	18	2
16.3	3	□	MVS1630X03S170	85.5	88.0	153.0	150	3.0	17	2
16.3	3	□	MVS1630X03S180	85.5	88.0	153.0	150	3.0	18	2
16.3	5	□	MVS1630X05S170	135.0	139.0	204.0	201	3.0	17	2
16.3	5	□	MVS1630X05S180	135.0	139.0	204.0	201	3.0	18	2
16.4	3	□	MVS1640X03S170	85.5	88.0	153.0	150	3.0	17	2
16.4	3	□	MVS1640X03S180	85.5	88.0	153.0	150	3.0	18	2
16.4	5	□	MVS1640X05S170	135.0	139.0	204.0	201	3.0	17	2

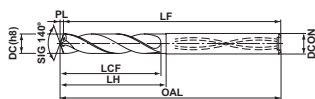
## Internal Coolant

(mm)

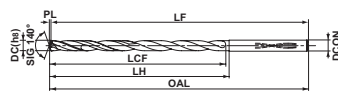
DC	Hole Depth (l/d)	Stock DP1020	Order Number	LCF	LH	OAL	LF	PL	DCON	Type
16.4	5	□	MVS1640X05S180	135.0	139.0	204.0	201	3.0	18	2
16.5	3	●	MVS1650X03S170	85.5	88.0	153.0	150	3.0	17	2
16.5	3	□	MVS1650X03S180	85.5	88.0	153.0	150	3.0	18	2
16.5	5	●	MVS1650X05S170	135.0	139.0	204.0	201	3.0	17	2
16.5	5	□	MVS1650X05S180	135.0	139.0	204.0	201	3.0	18	2
16.6	3	□	MVS1660X03S170	88.0	88.0	153.0	150	3.0	17	2
16.6	3	□	MVS1660X03S180	88.0	88.0	153.0	150	3.0	18	2
16.6	5	□	MVS1660X05S170	139.0	139.0	204.0	201	3.0	17	2
16.6	5	□	MVS1660X05S180	139.0	139.0	204.0	201	3.0	18	2
16.7	3	□	MVS1670X03S170	88.0	88.0	153.0	150	3.0	17	2
16.7	3	□	MVS1670X03S180	88.0	88.0	153.0	150	3.0	18	2
16.7	5	□	MVS1670X05S170	139.0	139.0	204.0	201	3.0	17	2
16.7	5	□	MVS1670X05S180	139.0	139.0	204.0	201	3.0	18	2
16.8	3	□	MVS1680X03S170	88.1	88.1	153.1	150	3.1	17	2
16.8	3	□	MVS1680X03S180	88.1	88.1	153.1	150	3.1	18	2
16.8	5	□	MVS1680X05S170	139.1	139.1	204.1	201	3.1	17	2
16.8	5	□	MVS1680X05S180	139.1	139.1	204.1	201	3.1	18	2
16.9	3	□	MVS1690X03S170	88.1	88.1	153.1	150	3.1	17	2
16.9	3	□	MVS1690X03S180	88.1	88.1	153.1	150	3.1	18	2
16.9	5	□	MVS1690X05S170	139.1	139.1	204.1	201	3.1	17	2
16.9	5	□	MVS1690X05S180	139.1	139.1	204.1	201	3.1	18	2
17.0	3	●	MVS1700X03S170	88.1	88.1	153.1	150	3.1	17	2
17.0	3	□	MVS1700X03S180	88.1	88.1	153.1	150	3.1	18	2
17.0	5	●	MVS1700X05S170	139.1	139.1	204.1	201	3.1	17	2
17.0	5	□	MVS1700X05S180	139.1	139.1	204.1	201	3.1	18	2
17.1	3	□	MVS1710X03S180	90.6	93.1	158.1	155	3.1	18	2
17.1	5	□	MVS1710X05S180	143.1	147.1	212.1	209	3.1	18	2
17.2	3	□	MVS1720X03S180	90.6	93.1	158.1	155	3.1	18	2
17.2	5	□	MVS1720X05S180	143.1	147.1	212.1	209	3.1	18	2
17.3	3	□	MVS1730X03S180	90.6	93.1	158.1	155	3.1	18	2
17.3	5	□	MVS1730X05S180	143.1	147.1	212.1	209	3.1	18	2
17.4	3	□	MVS1740X03S180	90.7	93.2	158.2	155	3.2	18	2
17.4	5	□	MVS1740X05S180	143.2	147.2	212.2	209	3.2	18	2
17.5	3	●	MVS1750X03S180	90.7	93.2	158.2	155	3.2	18	2
17.5	5	●	MVS1750X05S180	143.2	147.2	212.2	209	3.2	18	2
17.6	3	□	MVS1760X03S180	93.2	93.2	158.2	155	3.2	18	2
17.6	5	□	MVS1760X05S180	147.2	147.2	212.2	209	3.2	18	2
17.7	3	□	MVS1770X03S180	93.2	93.2	158.2	155	3.2	18	2
17.7	5	□	MVS1770X05S180	147.2	147.2	212.2	209	3.2	18	2
17.8	3	□	MVS1780X03S180	93.2	93.2	158.2	155	3.2	18	2
17.8	5	□	MVS1780X05S180	147.2	147.2	212.2	209	3.2	18	2
17.9	3	□	MVS1790X03S180	93.3	93.3	158.3	155	3.3	18	2
17.9	5	□	MVS1790X05S180	147.3	147.3	212.3	209	3.3	18	2
18.0	3	●	MVS1800X03S180	93.3	93.3	158.3	155	3.3	18	2
18.0	5	●	MVS1800X05S180	147.3	147.3	212.3	209	3.3	18	2
18.1	3	□	MVS1810X03S190	95.8	98.3	163.3	160	3.3	19	2
18.1	3	□	MVS1810X03S200	95.8	98.3	163.3	160	3.3	20	2
18.1	5	□	MVS1810X05S190	151.3	155.3	220.3	217	3.3	19	2

● : Inventory maintained in Japan. □ : Non stock, produced to order only.

Type2



Type4



Internal Coolant

Internal Coolant

(mm)

DC	Hole Depth (l/d)	Stock DP1020	Order Number	LCF	LH	OAL	LF	PL	DCON	Type
18.2	3	□	MVS1820X03S190	95.8	98.3	163.3	160	3.3	19	2
18.2	3	□	MVS1820X03S200	95.8	98.3	163.3	160	3.3	20	2
18.2	5	□	MVS1820X05S190	151.3	155.3	220.3	217	3.3	19	2
18.2	5	□	MVS1820X05S200	151.3	155.3	220.3	217	3.3	20	2
18.3	3	□	MVS1830X03S190	95.8	98.3	163.3	160	3.3	19	2
18.3	3	□	MVS1830X03S200	95.8	98.3	163.3	160	3.3	20	2
18.3	5	□	MVS1830X05S190	151.3	155.3	220.3	217	3.3	19	2
18.3	5	□	MVS1830X05S200	151.3	155.3	220.3	217	3.3	20	2
18.4	3	□	MVS1840X03S190	95.8	98.3	163.3	160	3.3	19	2
18.4	3	□	MVS1840X03S200	95.8	98.3	163.3	160	3.3	20	2
18.4	5	□	MVS1840X05S190	151.3	155.3	220.3	217	3.3	19	2
18.4	5	□	MVS1840X05S200	151.3	155.3	220.3	217	3.3	20	2
18.5	3	●	MVS1850X03S190	95.9	98.4	163.4	160	3.4	19	2
18.5	3	□	MVS1850X03S200	95.9	98.4	163.4	160	3.4	20	2
18.5	5	●	MVS1850X05S190	151.4	155.4	220.4	217	3.4	19	2
18.5	5	□	MVS1850X05S200	151.4	155.4	220.4	217	3.4	20	2
18.6	3	□	MVS1860X03S190	98.4	98.4	163.4	160	3.4	19	2
18.6	3	□	MVS1860X03S200	98.4	98.4	163.4	160	3.4	20	2
18.6	5	□	MVS1860X05S190	155.4	155.4	220.4	217	3.4	19	2
18.6	5	□	MVS1860X05S200	155.4	155.4	220.4	217	3.4	20	2
18.7	3	□	MVS1870X03S190	98.4	98.4	163.4	160	3.4	19	2
18.7	3	□	MVS1870X03S200	98.4	98.4	163.4	160	3.4	20	2
18.7	5	□	MVS1870X05S190	155.4	155.4	220.4	217	3.4	19	2
18.7	5	□	MVS1870X05S200	155.4	155.4	220.4	217	3.4	20	2
18.8	3	□	MVS1880X03S190	98.4	98.4	163.4	160	3.4	19	2
18.8	3	□	MVS1880X03S200	98.4	98.4	163.4	160	3.4	20	2
18.8	5	□	MVS1880X05S190	155.4	155.4	220.4	217	3.4	19	2
18.8	5	□	MVS1880X05S200	155.4	155.4	220.4	217	3.4	20	2
18.9	3	□	MVS1890X03S190	98.4	98.4	163.4	160	3.4	19	2
18.9	3	□	MVS1890X03S200	98.4	98.4	163.4	160	3.4	20	2
18.9	5	□	MVS1890X05S190	155.4	155.4	220.4	217	3.4	19	2
18.9	5	□	MVS1890X05S200	155.4	155.4	220.4	217	3.4	20	2
19.0	3	●	MVS1900X03S190	98.5	98.5	163.5	160	3.5	19	2
19.0	3	□	MVS1900X03S200	98.5	98.5	163.5	160	3.5	20	2
19.0	5	●	MVS1900X05S190	155.5	155.5	220.5	217	3.5	19	2
19.0	5	□	MVS1900X05S200	155.5	155.5	220.5	217	3.5	20	2
19.1	3	□	MVS1910X03S200	101.0	103.5	168.5	165	3.5	20	2
19.1	5	□	MVS1910X05S200	159.5	163.5	228.5	225	3.5	20	2
19.2	3	□	MVS1920X03S200	101.0	103.5	168.5	165	3.5	20	2
19.2	5	□	MVS1920X05S200	159.5	163.5	228.5	225	3.5	20	2
19.3	3	□	MVS1930X03S200	101.0	103.5	168.5	165	3.5	20	2
19.3	5	□	MVS1930X05S200	159.5	163.5	228.5	225	3.5	20	2
19.4	3	□	MVS1940X03S200	101.0	103.5	168.5	165	3.5	20	2
19.4	5	□	MVS1940X05S200	159.5	163.5	228.5	225	3.5	20	2
19.5	3	●	MVS1950X03S200	101.0	103.5	168.5	165	3.5	20	2
19.5	5	●	MVS1950X05S200	159.5	163.5	228.5	225	3.5	20	2
19.6	3	□	MVS1960X03S200	103.6	103.6	168.6	165	3.6	20	2

DC	Hole Depth (l/d)	Stock DP1020	Order Number	LCF	LH	OAL	LF	PL	DCON	Type
19.7	3	□	MVS1970X03S200	103.6	103.6	168.6	165	3.6	20	2
19.7	5	□	MVS1970X05S200	163.6	163.6	228.6	225	3.6	20	2
19.8	3	□	MVS1980X03S200	103.6	103.6	168.6	165	3.6	20	2
19.8	5	□	MVS1980X05S200	163.6	163.6	228.6	225	3.6	20	2
19.9	3	□	MVS1990X03S200	103.6	103.6	168.6	165	3.6	20	2
19.9	5	□	MVS1990X05S200	163.6	163.6	228.6	225	3.6	20	2
20.0	3	●	MVS2000X03S200	103.6	103.6	168.6	165	3.6	20	2
20.0	5	●	MVS2000X05S200	163.6	163.6	228.6	225	3.6	20	2

DC = Cutting Diameter  
LCF = Length Chip Flute  
LH = Neck Length

OAL = Overall Length  
LF = Functional Length  
PL = Point Length

DCON = Fixing Part Depth

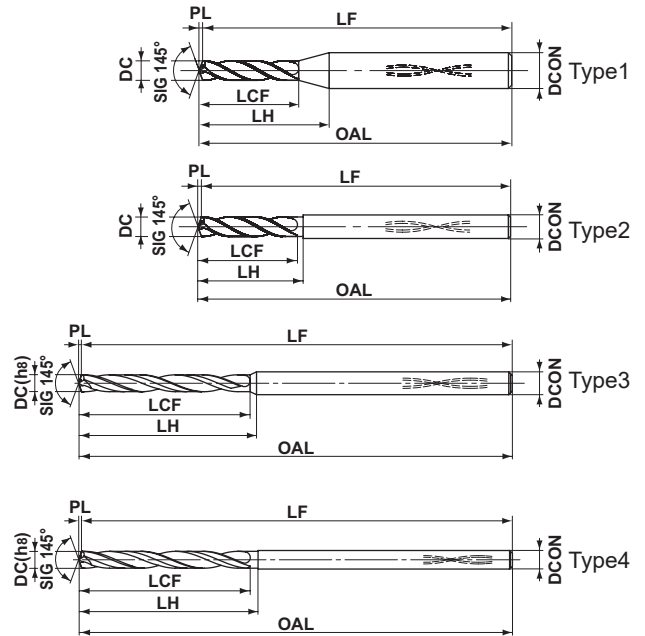


# Solid Carbide Drills

**MVS** Pilot Drill  
WSTAR Drills



$1 \leq DC \leq 2.9$	$DC=3$	$3 < DC \leq 6$	$6 < DC \leq 10$	$10 < DC \leq 14$
+0.014 0	0 -0.014	0 -0.018	0 -0.022	0 -0.027
0 -0.006	0 -0.006	0 -0.008	0 -0.009	0 -0.011



Internal Coolant

DC	Hole Depth (l/d)	Stock DP1020	Order Number	LCF	LH	OAL	LF	PL	DCON	Type
1.0	2	●	MVS0100X02S030	5.2	8.9	55.2	55	0.2	3	1
1.1	2	●	MVS0110X02S030	5.6	9.1	55.2	55	0.2	3	1
1.2	2	●	MVS0120X02S030	6.2	9.6	55.2	55	0.2	3	1
1.3	2	●	MVS0130X02S030	6.6	9.8	55.2	55	0.2	3	1
1.4	2	●	MVS0140X02S030	7.2	10.2	55.2	55	0.2	3	1
1.5	2	●	MVS0150X02S030	7.6	10.4	55.2	55	0.2	3	1
1.6	2	●	MVS0160X02S030	8.3	10.9	68.3	68	0.3	3	1
1.7	2	●	MVS0170X02S030	8.7	11.1	68.3	68	0.3	3	1
1.8	2	●	MVS0180X02S030	9.3	11.5	68.3	68	0.3	3	1
1.9	2	●	MVS0190X02S030	9.7	11.8	68.3	68	0.3	3	1
2.0	2	●	MVS0200X02S030	10.3	12.2	68.3	68	0.3	3	1
2.1	2	●	MVS0210X02S030	10.7	12.4	74.3	74	0.3	3	1
2.2	2	●	MVS0220X02S030	11.3	12.8	74.3	74	0.3	3	1
2.3	2	●	MVS0230X02S030	11.8	13.1	74.4	74	0.4	3	1
2.4	2	●	MVS0240X02S030	12.4	13.5	74.4	74	0.4	3	1
2.5	2	●	MVS0250X02S030	12.8	13.7	74.4	74	0.4	3	1
2.6	2	●	MVS0260X02S030	13.4	13.4	81.4	81	0.4	3	2
2.7	2	●	MVS0270X02S030	13.8	13.8	81.4	81	0.4	3	2
2.8	2	●	MVS0280X02S030	14.4	14.4	81.4	81	0.4	3	2
2.9	2	●	MVS0290X02S030	14.9	14.9	81.5	81	0.5	3	2
NEW 3.0	2	●	MVS0300X02S030PL	16.5	16.5	55.5	55	0.5	3	3
NEW 3.1	2	●	MVS0310X02S040PL	18.5	20.5	55.5	55	0.5	4	3
NEW 3.2	2	●	MVS0320X02S040PL	18.5	20.5	55.5	55	0.5	4	3
NEW 3.3	2	●	MVS0330X02S040PL	18.5	20.5	55.5	55	0.5	4	3
NEW 3.4	2	●	MVS0340X02S040PL	18.5	20.5	55.5	55	0.5	4	3
NEW 3.5	2	●	MVS0350X02S040PL	18.6	20.6	55.6	55	0.6	4	3

Internal Coolant

(mm)

DC	Hole Depth (l/d)	Stock DP1020	Order Number	LCF	LH	OAL	LF	PL	DCON	Type
NEW 3.6	2	●	MVS0360X02S040PL	20.6	20.6	55.6	55	0.6	4	3
NEW 3.7	2	●	MVS0370X02S040PL	20.6	20.6	55.6	55	0.6	4	3
NEW 3.8	2	●	MVS0380X02S040PL	20.6	20.6	55.6	55	0.6	4	3
NEW 3.9	2	●	MVS0390X02S040PL	20.6	20.6	55.6	55	0.6	4	3
NEW 4.0	2	●	MVS0400X02S040PL	20.6	20.6	55.6	55	0.6	4	3
NEW 4.1	2	●	MVS0410X02S050PL	22.6	24.6	62.6	62	0.6	5	3
NEW 4.2	2	●	MVS0420X02S050PL	22.7	24.7	62.7	62	0.7	5	3
NEW 4.3	2	●	MVS0430X02S050PL	22.7	24.7	62.7	62	0.7	5	3
NEW 4.4	2	●	MVS0440X02S050PL	22.7	24.7	62.7	62	0.7	5	3
NEW 4.5	2	●	MVS0450X02S050PL	22.7	24.7	62.7	62	0.7	5	3
NEW 4.6	2	●	MVS0460X02S050PL	24.7	24.7	62.7	62	0.7	5	4
NEW 4.7	2	●	MVS0470X02S050PL	24.7	24.7	62.7	62	0.7	5	4
NEW 4.8	2	●	MVS0480X02S050PL	24.8	24.8	62.8	62	0.8	5	4
NEW 4.9	2	●	MVS0490X02S050PL	24.8	24.8	62.8	62	0.8	5	4
NEW 5.0	2	●	MVS0500X02S050PL	24.8	24.8	62.8	62	0.8	5	4
NEW 5.1	2	●	MVS0510X02S060PL	26.8	28.8	66.8	66	0.8	6	4
NEW 5.2	2	●	MVS0520X02S060PL	26.8	28.8	66.8	66	0.8	6	4
NEW 5.3	2	●	MVS0530X02S060PL	26.8	28.8	66.8	66	0.8	6	4
NEW 5.4	2	●	MVS0540X02S060PL	26.9	28.9	66.9	66	0.9	6	4
NEW 5.5	2	●	MVS0550X02S060PL	26.9	28.9	66.9	66	0.9	6	4
NEW 5.6	2	●	MVS0560X02S060PL	28.9	28.9	66.9	66	0.9	6	4
NEW 5.7	2	●	MVS0570X02S060PL	28.9	28.9	66.9	66	0.9	6	4
NEW 5.8	2	●	MVS0580X02S060PL	28.9	28.9	66.9	66	0.9	6	4
NEW 5.9	2	●	MVS0590X02S060PL	28.9	28.9	66.9	66	0.9	6	4
NEW 6.0	2	●	MVS0600X02S060PL	28.9	28.9	66.9	66	0.9	6	4
NEW 6.1	2	●	MVS0610X02S070PL	32.0	35.0	75.0	74	1.0	7	4

(Note) The coolant hole of  $\phi 4.9$ mm or less will be round shape.

● : Inventory maintained in Japan.

Internal Coolant

DC	Hole Depth (l/d)	Stock	Order Number	LCF	LH	OAL	LF	PL	DCON	Type
NEW 6.2	2	●	MVS0620X02S070PL	32.0	35.0	75.0	74	1.0	7	4
NEW 6.3	2	●	MVS0630X02S070PL	32.0	35.0	75.0	74	1.0	7	4
NEW 6.4	2	●	MVS0640X02S070PL	32.0	35.0	75.0	74	1.0	7	4
NEW 6.5	2	●	MVS0650X02S070PL	32.0	35.0	75.0	74	1.0	7	4
NEW 6.6	2	●	MVS0660X02S070PL	35.0	35.0	75.0	74	1.0	7	4
NEW 6.7	2	●	MVS0670X02S070PL	35.1	35.1	75.1	74	1.1	7	4
NEW 6.8	2	●	MVS0680X02S070PL	35.1	35.1	75.1	74	1.1	7	4
NEW 6.9	2	●	MVS0690X02S070PL	35.1	35.1	75.1	74	1.1	7	4
NEW 7.0	2	●	MVS0700X02S070PL	35.1	35.1	75.1	74	1.1	7	4
NEW 7.1	2	●	MVS0710X02S080PL	35.1	38.1	80.1	79	1.1	8	4
NEW 7.2	2	●	MVS0720X02S080PL	35.1	38.1	80.1	79	1.1	8	4
NEW 7.3	2	●	MVS0730X02S080PL	35.2	38.2	80.2	79	1.2	8	4
NEW 7.4	2	●	MVS0740X02S080PL	35.2	38.2	80.2	79	1.2	8	4
NEW 7.5	2	●	MVS0750X02S080PL	35.2	38.2	80.2	79	1.2	8	4
NEW 7.6	2	●	MVS0760X02S080PL	38.2	38.2	80.2	79	1.2	8	4
NEW 7.7	2	●	MVS0770X02S080PL	38.2	38.2	80.2	79	1.2	8	4
NEW 7.8	2	●	MVS0780X02S080PL	38.2	38.2	80.2	79	1.2	8	4
NEW 7.9	2	●	MVS0790X02S080PL	38.2	38.2	80.2	79	1.2	8	4
NEW 8.0	2	●	MVS0800X02S080PL	38.3	38.3	80.3	79	1.3	8	4
NEW 8.1	2	●	MVS0810X02S090PL	38.3	41.3	85.3	84	1.3	9	4
NEW 8.2	2	●	MVS0820X02S090PL	38.3	41.3	85.3	84	1.3	9	4
NEW 8.3	2	●	MVS0830X02S090PL	38.3	41.3	85.3	84	1.3	9	4
NEW 8.4	2	●	MVS0840X02S090PL	38.3	41.3	85.3	84	1.3	9	4
NEW 8.5	2	●	MVS0850X02S090PL	38.3	41.3	85.3	84	1.3	9	4
NEW 8.6	2	●	MVS0860X02S090PL	41.4	41.4	85.4	84	1.4	9	4
NEW 8.7	2	●	MVS0870X02S090PL	41.4	41.4	85.4	84	1.4	9	4
NEW 8.8	2	●	MVS0880X02S090PL	41.4	41.4	85.4	84	1.4	9	4
NEW 8.9	2	●	MVS0890X02S090PL	41.4	41.4	85.4	84	1.4	9	4
NEW 9.0	2	●	MVS0900X02S090PL	41.4	41.4	85.4	84	1.4	9	4
NEW 9.1	2	●	MVS0910X02S100PL	41.4	44.4	90.4	89	1.4	10	4
NEW 9.2	2	●	MVS0920X02S100PL	41.5	44.5	90.5	89	1.5	10	4
NEW 9.3	2	●	MVS0930X02S100PL	41.5	44.5	90.5	89	1.5	10	4
NEW 9.4	2	●	MVS0940X02S100PL	41.5	44.5	90.5	89	1.5	10	4
NEW 9.5	2	●	MVS0950X02S100PL	41.5	44.5	90.5	89	1.5	10	4
NEW 9.6	2	●	MVS0960X02S100PL	44.5	44.5	90.5	89	1.5	10	4
NEW 9.7	2	●	MVS0970X02S100PL	44.5	44.5	90.5	89	1.5	10	4
NEW 9.8	2	●	MVS0980X02S100PL	44.5	44.5	90.5	89	1.5	10	4
NEW 9.9	2	●	MVS0990X02S100PL	44.6	44.6	90.6	89	1.6	10	4
NEW 10.0	2	●	MVS1000X02S100PL	44.6	44.6	90.6	89	1.6	10	4
NEW 10.1	2	●	MVS1010X02S110PL	44.6	47.6	96.6	95	1.6	11	4
NEW 10.2	2	●	MVS1020X02S110PL	44.6	47.6	96.6	95	1.6	11	4
NEW 10.3	2	●	MVS1030X02S110PL	44.6	47.6	96.6	95	1.6	11	4
NEW 10.4	2	●	MVS1040X02S110PL	44.6	47.6	96.6	95	1.6	11	4
NEW 10.5	2	●	MVS1050X02S110PL	44.7	47.7	96.7	95	1.7	11	4
NEW 10.6	2	●	MVS1060X02S110PL	48.7	48.7	96.7	95	1.7	11	4
NEW 10.7	2	●	MVS1070X02S110PL	48.7	48.7	96.7	95	1.7	11	4
NEW 10.8	2	●	MVS1080X02S110PL	48.7	48.7	96.7	95	1.7	11	4
NEW 10.9	2	●	MVS1090X02S110PL	48.7	48.7	96.7	95	1.7	11	4
NEW 11.0	2	●	MVS1100X02S110PL	48.7	48.7	96.7	95	1.7	11	4
NEW 11.1	2	●	MVS1110X02S120PL	48.7	51.7	96.7	95	1.7	12	4

Internal Coolant

(mm)

DC	Hole Depth (l/d)	Stock	Order Number	LCF	LH	OAL	LF	PL	DCON	Type
NEW 11.2	2	●	MVS1120X02S120PL	48.8	51.8	96.8	95	1.8	12	4
NEW 11.3	2	●	MVS1130X02S120PL	48.8	51.8	96.8	95	1.8	12	4
NEW 11.4	2	●	MVS1140X02S120PL	48.8	51.8	96.8	95	1.8	12	4
NEW 11.5	2	●	MVS1150X02S120PL	48.8	51.8	96.8	95	1.8	12	4
NEW 11.6	2	●	MVS1160X02S120PL	48.8	48.8	96.8	95	1.8	12	4
NEW 11.7	2	●	MVS1170X02S120PL	48.8	48.8	96.8	95	1.8	12	4
NEW 11.8	2	●	MVS1180X02S120PL	48.9	48.9	96.9	95	1.9	12	4
NEW 11.9	2	●	MVS1190X02S120PL	48.9	48.9	96.9	95	1.9	12	4
NEW 12.0	2	●	MVS1200X02S120PL	48.9	48.9	96.9	95	1.9	12	4
NEW 12.1	2	●	MVS1210X02S130PL	52.9	55.9	103.9	102	1.9	13	4
NEW 12.2	2	●	MVS1220X02S130PL	52.9	55.9	103.9	102	1.9	13	4
NEW 12.3	2	●	MVS1230X02S130PL	52.9	55.9	103.9	102	1.9	13	4
NEW 12.4	2	●	MVS1240X02S130PL	53.0	56.0	104.0	102	2.0	13	4
NEW 12.5	2	●	MVS1250X02S130PL	53.0	56.0	104.0	102	2.0	13	4
NEW 12.6	2	●	MVS1260X02S130PL	53.0	53.0	104.0	102	2.0	13	4
NEW 12.7	2	●	MVS1270X02S130PL	53.0	53.0	104.0	102	2.0	13	4
NEW 12.8	2	●	MVS1280X02S130PL	53.0	53.0	104.0	102	2.0	13	4
NEW 12.9	2	●	MVS1290X02S130PL	53.0	53.0	104.0	102	2.0	13	4
NEW 13.0	2	●	MVS1300X02S130PL	53.0	53.0	104.0	102	2.0	13	4
NEW 13.1	2	●	MVS1310X02S140PL	56.1	59.1	109.1	107	2.1	14	4
NEW 13.2	2	●	MVS1320X02S140PL	56.1	59.1	109.1	107	2.1	14	4
NEW 13.3	2	●	MVS1330X02S140PL	56.1	59.1	109.1	107	2.1	14	4
NEW 13.4	2	●	MVS1340X02S140PL	56.1	59.1	109.1	107	2.1	14	4
NEW 13.5	2	●	MVS1350X02S140PL	56.1	59.1	109.1	107	2.1	14	4
NEW 13.6	2	●	MVS1360X02S140PL	56.1	56.1	109.1	107	2.1	14	4
NEW 13.7	2	●	MVS1370X02S140PL	56.2	56.2	109.2	107	2.2	14	4
NEW 13.8	2	●	MVS1380X02S140PL	56.2	56.2	109.2	107	2.2	14	4
NEW 13.9	2	●	MVS1390X02S140PL	56.2	56.2	109.2	107	2.2	14	4
NEW 14.0	2	●	MVS1400X02S140PL	56.2	56.2	109.2	107	2.2	14	4

DC = Cutting Diameter  
 LCF = Length Chip Flute  
 LH = Neck Length

OAL = Overall Length  
 LF = Functional Length  
 PL = Point Length

DCON = Fixing Part Depth

# Solid Carbide Drills



## Recommended Cutting Conditions

(mm)

Work Material	L/D	Mild Steel ( $\leq 180\text{HB}$ )		Carbon Steel, Alloy Steel (180–280HB)		Carbon Steel, Alloy Steel (280–350HB)	
		AISI 1010 etc		AISI 1045, 4140 etc		AISI 4340 etc	
DC		n (min <sup>-1</sup> )	fr (Min.—Max.) (mm/rev)	n (min <sup>-1</sup> )	fr (Min.—Max.) (mm/rev)	n (min <sup>-1</sup> )	fr (Min.—Max.) (mm/rev)
1.0	2D*,7D	15900	0.04 (0.02–0.05)	15900	0.04 (0.02–0.05)	12700	0.04 (0.02–0.05)
	12D - 30D	15900	0.02 (0.01–0.03)	12700	0.02 (0.01–0.03)	9500	0.02 (0.01–0.03)
1.5	2D*,7D	10600	0.05 (0.03–0.08)	10600	0.05 (0.03–0.08)	8400	0.05 (0.03–0.08)
	12D - 30D	10600	0.05 (0.02–0.08)	8400	0.05 (0.03–0.08)	6300	0.05 (0.02–0.08)
2.0	2D*,7D	7900	0.07 (0.04–0.10)	7900	0.07 (0.04–0.10)	6300	0.07 (0.04–0.10)
	12D - 30D	7900	0.07 (0.04–0.10)	7900	0.07 (0.04–0.10)	7900	0.07 (0.04–0.10)
2.5	2D*,7D	7600	0.09 (0.05–0.13)	6300	0.09 (0.05–0.13)	6300	0.09 (0.05–0.13)
	12D - 30D	7600	0.09 (0.06–0.13)	6300	0.08 (0.05–0.13)	6300	0.08 (0.05–0.13)
3.2	2D*	8900	0.17 (0.10–0.24)	8900	0.17 (0.10–0.24)	8900	0.15 (0.09–0.22)
	3D - 8D	8900	0.10 (0.06–0.13)	6900	0.10 (0.06–0.13)	6900	0.10 (0.06–0.13)
	10D - 30D	8900	0.17 (0.10–0.24)	8900	0.17 (0.10–0.24)	7900	0.15 (0.09–0.22)
	35D,40D	7400	0.14 (0.08–0.19)	7400	0.14 (0.08–0.19)	6400	0.15 (0.07–0.18)
4.0	2D*	7900	0.20 (0.12–0.30)	7100	0.20 (0.12–0.30)	7100	0.18 (0.11–0.27)
	3D - 8D	7900	0.12 (0.08–0.16)	7100	0.12 (0.08–0.16)	6300	0.11 (0.07–0.14)
	10D - 30D	7100	0.20 (0.12–0.30)	7100	0.20 (0.12–0.30)	6300	0.18 (0.11–0.27)
	35D,40D	5900	0.16 (0.10–0.24)	5900	0.16 (0.10–0.24)	5100	0.18 (0.09–0.22)
5.0	2D*	6300	0.25 (0.15–0.35)	5700	0.25 (0.15–0.35)	5700	0.22 (0.14–0.32)
	3D - 8D	6300	0.15 (0.10–0.20)	5700	0.15 (0.10–0.20)	5000	0.14 (0.09–0.18)
	10D - 30D	5730	0.25 (0.15–0.35)	5700	0.25 (0.15–0.35)	5000	0.22 (0.14–0.32)
	35D,40D	4700	0.20 (0.12–0.28)	4700	0.20 (0.12–0.28)	4100	0.22 (0.11–0.26)
6.3	2D*	5500	0.27 (0.17–0.37)	5000	0.27 (0.17–0.37)	5000	0.24 (0.15–0.33)
	3D - 8D	5500	0.20 (0.13–0.26)	5000	0.20 (0.13–0.26)	4500	0.18 (0.11–0.24)
	10D - 30D	5500	0.27 (0.17–0.37)	5000	0.27 (0.17–0.37)	4500	0.24 (0.15–0.33)
	35D,40D	4500	0.22 (0.14–0.30)	4000	0.22 (0.14–0.30)	3700	0.24 (0.12–0.26)
8.0	2D*	4700	0.30 (0.20–0.40)	4300	0.30 (0.20–0.40)	3900	0.27 (0.18–0.36)
	3D - 8D	4700	0.23 (0.18–0.28)	4300	0.23 (0.18–0.28)	3900	0.21 (0.16–0.25)
	10D - 30D	4300	0.30 (0.20–0.40)	3900	0.30 (0.20–0.40)	3500	0.27 (0.18–0.36)
	35D,40D	3500	0.24 (0.16–0.32)	3100	0.24 (0.16–0.32)	2900	0.27 (0.14–0.29)
10.0	2D*	4100	0.32 (0.22–0.42)	3800	0.32 (0.22–0.42)	3100	0.29 (0.20–0.38)
	3D - 8D	4100	0.27 (0.22–0.32)	3800	0.27 (0.22–0.32)	3500	0.23 (0.19–0.27)
	10D - 30D	3500	0.32 (0.22–0.42)	3100	0.32 (0.22–0.42)	2800	0.29 (0.20–0.38)
	35D	2800	0.26 (0.18–0.34)	2500	0.26 (0.18–0.34)	2300	0.29 (0.16–0.30)
12.0	2D*	3700	0.34 (0.24–0.44)	3400	0.34 (0.24–0.44)	3100	0.30 (0.22–0.40)
	3D - 8D	3700	0.30 (0.26–0.34)	3400	0.30 (0.26–0.34)	3100	0.26 (0.22–0.29)
	10D - 25D	3400	0.34 (0.24–0.44)	3100	0.34 (0.24–0.44)	2600	0.30 (0.22–0.40)
16.0	3D - 8D	3100	0.33 (0.27–0.38)	2700	0.33 (0.27–0.38)	2500	0.28 (0.23–0.33)
20.0	3D,5D	2500	0.35 (0.30–0.40)	2200	0.35 (0.30–0.40)	2000	0.30 (0.26–0.34)

\* =For cutting a guide hole



(mm)

Work Material	L/D	Austenitic Stainless Steel ( $\leq 200\text{HB}$ )		Gray Cast Iron ( $\leq 350\text{MPa}$ )		Ductile Cast Iron ( $\leq 450\text{MPa}$ )	
		AISI 304, 316 etc		No45B etc		60-60-8 etc	
DC		n ( $\text{min}^{-1}$ )	fr (Min.—Max.) (mm/rev)	n ( $\text{min}^{-1}$ )	fr (Min.—Max.) (mm/rev)	n ( $\text{min}^{-1}$ )	fr (Min.—Max.) (mm/rev)
1.0	2D*,7D	9500	0.03 (0.02—0.05)	15900	0.04 (0.02—0.05)	12700	0.04 (0.02—0.05)
	12D - 30D	9500	0.02 (0.01—0.03)	12700	0.02 (0.01—0.03)	9500	0.02 (0.01—0.03)
1.5	2D*,7D	6300	0.05 (0.03—0.07)	10600	0.05 (0.03—0.08)	8400	0.05 (0.03—0.08)
	12D - 30D	6300	0.05 (0.02—0.08)	8400	0.05 (0.02—0.08)	6300	0.05 (0.02—0.08)
2.0	2D*,7D	4700	0.06 (0.04—0.08)	7900	0.07 (0.04—0.10)	6300	0.07 (0.04—0.10)
	12D - 30D	4700	0.07 (0.04—0.10)	7900	0.07 (0.04—0.10)	7900	0.07 (0.04—0.10)
2.5	2D*,7D	5000	0.08 (0.05—0.10)	7600	0.09 (0.05—0.13)	6300	0.09 (0.05—0.13)
	12D - 30D	3800	0.08 (0.05—0.12)	6300	0.09 (0.06—0.13)	6300	0.08 (0.05—0.12)
3.2	2D*	3900	0.07 (0.05—0.09)	8900	0.19 (0.11—0.26)	8900	0.17 (0.10—0.24)
	3D - 8D	3900	0.08 (0.06—0.10)	8900	0.10 (0.06—0.13)	6400	0.10 (0.06—0.13)
	10D - 30D	3900	0.07 (0.05—0.09)	5900	0.19 (0.11—0.26)	8900	0.17 (0.10—0.24)
	35D,40D	2900	0.06 (0.04—0.07)	7400	0.15 (0.09—0.21)	7460	0.14 (0.08—0.19)
4.0	2D*	3100	0.08 (0.06—0.10)	7900	0.22 (0.13—0.33)	7100	0.20 (0.12—0.30)
	3D - 8D	3100	0.09 (0.06—0.11)	7900	0.12 (0.08—0.16)	5100	0.12 (0.08—0.16)
	10D - 30D	3100	0.08 (0.06—0.10)	7100	0.22 (0.13—0.33)	7100	0.20 (0.12—0.30)
	35D,40D	2300	0.06 (0.05—0.08)	5900	0.18 (0.10—0.26)	5900	0.16 (0.10—0.24)
5.0	2D*	2500	0.10 (0.07—0.12)	6300	0.28 (0.07—0.39)	5700	0.25 (0.15—0.35)
	3D - 8D	2500	0.11 (0.08—0.14)	6300	0.15 (0.10—0.20)	4100	0.15 (0.10—0.20)
	10D - 30D	2500	0.10 (0.07—0.12)	5700	0.28 (0.07—0.39)	5700	0.25 (0.15—0.35)
	35D,40D	1900	0.08 (0.06—0.10)	4700	0.22 (0.06—0.31)	4700	0.20 (0.12—0.28)
6.3	2D*	2500	0.12 (0.08—0.16)	5500	0.30 (0.19—0.41)	5000	0.27 (0.17—0.37)
	3D - 8D	2500	0.14 (0.09—0.18)	5500	0.20 (0.13—0.26)	3500	0.20 (0.13—0.26)
	10D - 30D	2500	0.12 (0.08—0.16)	5500	0.30 (0.19—0.41)	5000	0.27 (0.17—0.37)
	35D,40D	2000	0.10 (0.06—0.13)	4500	0.24 (0.15—0.33)	4000	0.22 (0.14—0.30)
8.0	2D*	1900	0.14 (0.10—0.17)	4700	0.33 (0.22—0.44)	3900	0.30 (0.20—0.40)
	3D - 8D	1900	0.15 (0.10—0.19)	4700	0.25 (0.18—0.31)	2700	0.23 (0.18—0.28)
	10D - 30D	1900	0.14 (0.10—0.17)	4300	0.33 (0.22—0.44)	3900	0.30 (0.20—0.40)
	35D,40D	1500	0.11 (0.08—0.14)	3500	0.26 (0.18—0.35)	3000	0.24 (0.16—0.32)
10.0	2D*	1500	0.15 (0.12—0.18)	4100	0.35 (0.24—0.46)	3100	0.32 (0.22—0.42)
	3D - 8D	1500	0.16 (0.12—0.20)	4100	0.29 (0.22—0.35)	2200	0.27 (0.22—0.32)
	10D - 30D	1500	0.15 (0.12—0.18)	3500	0.35 (0.24—0.46)	3100	0.32 (0.22—0.42)
	35D	1200	0.12 (0.10—0.14)	2800	0.28 (0.19—0.37)	2500	0.26 (0.18—0.34)
12.0	2D*	1500	0.17 (0.14—0.19)	3700	0.37 (0.26—0.48)	3100	0.34 (0.24—0.44)
	3D - 8D	1500	0.18 (0.15—0.21)	3700	0.32 (0.26—0.37)	2300	0.30 (0.26—0.34)
	10D - 25D	1500	0.17 (0.14—0.19)	3400	0.37 (0.26—0.48)	3100	0.34 (0.24—0.44)
16.0	3D - 8D	1100	0.19 (0.14—0.24)	3100	0.35 (0.28—0.42)	1700	0.33 (0.28—0.38)
20.0	3D,5D	900	0.21 (0.15—0.26)	2500	0.37 (0.30—0.44)	1500	0.35 (0.30—0.40)

\* =For cutting a guide hole

# Solid Carbide Drills



## Recommended Cutting Conditions

(mm)

DC	L/D	Aluminum Alloy (Si<5%) ASTM 6061, 7075 etc		Heat Resistant Alloy Inconel718 etc	
		n (min <sup>-1</sup> )	fr (Min.—Max.) (mm/rev)	n (min <sup>-1</sup> )	fr (Min.—Max.) (mm/rev)
1.0	2D*,7D	19000	0.05 (0.03—0.08)	3100	0.02 (0.01—0.03)
	12D - 30D	15900	0.05 (0.03—0.08)	3100	0.02 (0.01—0.03)
1.5	2D*,7D	16900	0.07 (0.05—0.12)	2100	0.03 (0.02—0.04)
	12D - 30D	14800	0.08 (0.05—0.12)	2100	0.03 (0.02—0.04)
2.0	2D*,7D	14300	0.10 (0.06—0.15)	2300	0.04 (0.03—0.05)
	12D - 30D	12700	0.11 (0.06—0.15)	2300	0.04 (0.03—0.05)
2.5	2D*,7D	12700	0.13 (0.08—0.20)	1900	0.05 (0.04—0.06)
	12D - 30D	11400	0.14 (0.08—0.20)	1900	0.05 (0.04—0.06)
3.2	2D*	11900	0.23 (0.10—0.35)	1900	0.07 (0.05—0.09)
	3D - 8D	11900	0.23 (0.10—0.35)	1900	0.07 (0.05—0.09)
	10D - 30D	9900	0.23 (0.10—0.35)	1900	0.07 (0.05—0.09)
	35D,40D	7900	0.18 (0.08—0.28)	1400	0.06 (0.04—0.07)
4.0	2D*	9500	0.24 (0.12—0.35)	1500	0.09 (0.06—0.11)
	3D - 8D	9500	0.24 (0.12—0.35)	1500	0.09 (0.06—0.11)
	10D - 30D	7900	0.24 (0.12—0.35)	1500	0.09 (0.06—0.11)
	35D,40D	6300	0.19 (0.10—0.28)	1100	0.07 (0.05—0.09)
5.0	2D*	7600	0.25 (0.15—0.35)	1200	0.11 (0.08—0.14)
	3D - 8D	7600	0.25 (0.15—0.35)	1200	0.11 (0.08—0.14)
	10D - 30D	6300	0.25 (0.15—0.35)	1200	0.11 (0.08—0.14)
	35D,40D	5000	0.20 (0.12—0.28)	900	0.09 (0.06—0.11)
6.3	2D*	7500	0.35 (0.20—0.50)	1200	0.13 (0.09—0.16)
	3D - 8D	7500	0.35 (0.20—0.50)	1200	0.13 (0.09—0.16)
	10D - 30D	6500	0.35 (0.20—0.50)	1000	0.13 (0.09—0.16)
	35D,40D	5300	0.28 (0.16—0.40)	700	0.10 (0.07—0.13)
8.0	2D*	5900	0.35 (0.20—0.50)	900	0.14 (0.11—0.16)
	3D - 8D	5900	0.35 (0.20—0.50)	900	0.14 (0.11—0.17)
	10D - 30D	5100	0.35 (0.20—0.50)	700	0.14 (0.11—0.16)
	35D,40D	4100	0.28 (0.16—0.40)	500	0.11 (0.09—0.13)
10.0	2D*	4700	0.50 (0.20—0.80)	700	0.15 (0.12—0.17)
	3D - 8D	4700	0.50 (0.20—0.80)	700	0.15 (0.12—0.17)
	10D - 30D	4100	0.50 (0.20—0.80)	600	0.15 (0.12—0.17)
	35D	3300	0.40 (0.16—0.64)	400	0.12 (0.10—0.14)
12.0	2D*	4200	0.50 (0.20—0.80)	600	0.16 (0.13—0.18)
	3D - 8D	4200	0.50 (0.20—0.80)	600	0.16 (0.13—0.18)
	10D - 25D	3700	0.50 (0.20—0.80)	500	0.16 (0.13—0.18)
16.0	3D - 8D	3100	0.60 (0.20—1.00)	400	0.18 (0.14—0.21)
20.0	3D,5D	2700	0.60 (0.20—1.00)	400	0.19 (0.15—0.22)

\* =For cutting a guide hole

# Memo

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A series of horizontal dashed lines for writing, spanning the width of the page.



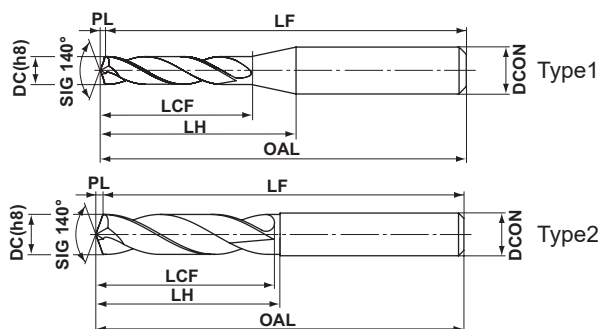
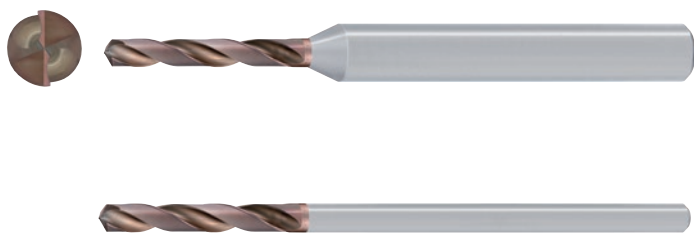
# Solid Carbide Drills

## MVE

WSTAR Drills



	DC=3	3<DC≤6	6<DC≤10	10<DC≤18	18<DC≤20
	0	0	0	0	0
	-0.014	-0.018	-0.022	-0.027	-0.033
<b>h6</b>	0	0	0	0	0
	-0.006	-0.008	-0.009	-0.011	-0.013



External Coolant

DC	Hole Depth (l/d)	Stock DP1020	Order Number	LCF	LH	OAL	LF	PL	DCON	Type
3.0	2	●	MVE0300X02S060	16.5	19.7	55.5	55	0.5	6	1
	3	●	MVE0300X03S030	21.5	21.5	60.5	60	0.5	3	2
	3	●	MVE0300X03S060	21.5	24.7	60.5	60	0.5	6	1
	2	●	MVE0310X02S040	18.6	20.6	55.6	55	0.6	4	2
3.1	2	●	MVE0310X02S060	18.6	21.7	55.6	55	0.6	6	1
	3	●	MVE0310X03S040	24.6	26.6	60.6	60	0.6	4	2
	3	●	MVE0310X03S060	24.6	27.7	60.6	60	0.6	6	1
	2	●	MVE0320X02S040	18.6	20.6	55.6	55	0.6	4	2
3.2	2	●	MVE0320X02S060	18.6	21.6	55.6	55	0.6	6	1
	3	●	MVE0320X03S040	24.6	26.6	60.6	60	0.6	4	2
	3	●	MVE0320X03S060	24.6	27.6	60.6	60	0.6	6	1
	2	●	MVE0330X02S040	18.6	20.6	55.6	55	0.6	4	2
3.3	2	●	MVE0330X02S060	18.6	21.5	55.6	55	0.6	6	1
	3	●	MVE0330X03S040	24.6	26.6	60.6	60	0.6	4	2
	3	●	MVE0330X03S060	24.6	27.5	60.6	60	0.6	6	1
	2	●	MVE0340X02S040	18.6	20.6	55.6	55	0.6	4	2
3.4	2	●	MVE0340X02S060	18.6	21.4	55.6	55	0.6	6	1
	3	●	MVE0340X03S040	24.6	26.6	60.6	60	0.6	4	2
	3	●	MVE0340X03S060	24.6	27.4	60.6	60	0.6	6	1
	2	●	MVE0350X02S040	18.6	20.6	55.6	55	0.6	4	2
3.5	2	●	MVE0350X02S060	18.6	21.3	55.6	55	0.6	6	1
	3	●	MVE0350X03S040	24.6	26.6	60.6	60	0.6	4	2
	3	●	MVE0350X03S060	24.6	27.3	60.6	60	0.6	6	1
	2	●	MVE0360X02S040	20.7	20.7	55.7	55	0.7	4	2
3.6	2	●	MVE0360X02S060	20.7	23.3	55.7	55	0.7	6	1
	3	●	MVE0360X03S040	27.7	27.7	60.7	60	0.7	4	2
	3	●	MVE0360X03S060	27.7	30.3	60.7	60	0.7	6	1
	2	●	MVE0370X02S040	20.7	20.7	55.7	55	0.7	4	2
3.7	2	●	MVE0370X02S060	20.7	23.2	55.7	55	0.7	6	1
	3	●	MVE0370X03S040	27.7	27.7	60.7	60	0.7	4	2
	3	●	MVE0370X03S060	27.7	30.2	60.7	60	0.7	6	1
	2	●	MVE0380X02S040	20.7	20.7	55.7	55	0.7	4	2
3.8	2	●	MVE0380X02S060	20.7	23.1	55.7	55	0.7	6	1
	3	●	MVE0380X03S040	27.7	27.7	60.7	60	0.7	4	2
	3	●	MVE0380X03S060	27.7	30.1	60.7	60	0.7	6	1
	2	●	MVE0390X02S040	20.7	20.7	55.7	55	0.7	4	2
3.9	2	●	MVE0390X02S060	20.7	23.0	55.7	55	0.7	6	1

External Coolant

(mm)

DC	Hole Depth (l/d)	Stock DP1020	Order Number	LCF	LH	OAL	LF	PL	DCON	Type
3.9	3	●	MVE0390X03S060	27.7	30.0	60.7	60	0.7	6	1
	2	●	MVE0400X02S040	20.7	20.7	55.7	55	0.7	4	2
4.0	2	●	MVE0400X02S060	20.7	22.8	55.7	55	0.7	6	1
	3	●	MVE0400X03S040	27.7	27.7	60.7	60	0.7	4	2
	3	●	MVE0400X03S060	27.7	29.8	60.7	60	0.7	6	1
4.1	2	●	MVE0410X02S050	22.7	24.7	62.7	62	0.7	5	2
	2	●	MVE0410X02S060	22.7	24.7	62.7	62	0.7	6	1
	3	●	MVE0410X03S050	29.7	31.7	68.7	68	0.7	5	2
4.2	3	●	MVE0410X03S060	29.7	31.7	68.7	68	0.7	6	1
	2	●	MVE0420X02S050	22.8	24.8	62.8	62	0.8	5	2
	2	●	MVE0420X02S060	22.8	24.7	62.8	62	0.8	6	1
4.3	3	●	MVE0420X03S050	29.8	31.8	68.8	68	0.8	5	2
	3	●	MVE0420X03S060	29.8	31.7	68.8	68	0.8	6	1
	2	●	MVE0430X02S050	22.8	24.8	62.8	62	0.8	5	2
4.4	2	●	MVE0430X02S060	22.8	24.6	62.8	62	0.8	6	1
	3	●	MVE0430X03S050	29.8	31.8	68.8	68	0.8	5	2
	3	●	MVE0430X03S060	29.8	31.6	68.8	68	0.8	6	1
4.5	2	●	MVE0440X02S050	22.8	24.8	62.8	62	0.8	5	2
	2	●	MVE0440X02S060	22.8	24.5	62.8	62	0.8	6	1
	3	●	MVE0440X03S050	29.8	31.8	68.8	68	0.8	5	2
4.6	3	●	MVE0440X03S060	29.8	31.5	68.8	68	0.8	6	1
	2	●	MVE0450X02S050	22.8	24.8	62.8	62	0.8	5	2
	2	●	MVE0450X02S060	22.8	24.4	62.8	62	0.8	6	1
4.7	3	●	MVE0450X03S050	29.8	31.8	68.8	68	0.8	5	2
	3	●	MVE0450X03S060	29.8	31.4	68.8	68	0.8	6	1
	2	●	MVE0460X02S050	24.8	24.8	62.8	62	0.8	5	2
4.8	2	●	MVE0460X02S060	24.8	27.8	62.8	62	0.8	6	2
	3	●	MVE0460X03S050	32.8	32.8	68.8	68	0.8	5	2
	3	●	MVE0460X03S060	32.8	35.8	68.8	68	0.8	6	2
4.9	2	●	MVE0470X02S050	24.9	24.9	62.9	62	0.9	5	2
	2	●	MVE0470X02S060	24.9	27.9	62.9	62	0.9	6	2
	3	●	MVE0470X03S050	32.9	32.9	68.9	68	0.9	5	2
5.0	3	●	MVE0470X03S060	32.9	35.9	68.9	68	0.9	6	2
	2	●	MVE0480X02S050	24.9	24.9	62.9	62	0.9	5	2
	2	●	MVE0480X02S060	24.9	27.9	62.9	62	0.9	6	2
5.1	3	●	MVE0480X03S050	32.9	32.9	68.9	68	0.9	5	2
	3	●	MVE0480X03S060	32.9	35.9	68.9	68	0.9	6	2

● : Inventory maintained in Japan.

External Coolant

DC	Hole Depth (l/d)	Stock DP1020	Order Number	LCF	LH	OAL	LF	PL	DCON	Type
4.9	2	●	MVE0490X02S050	24.9	24.9	62.9	62	0.9	5	2
	2	●	MVE0490X02S060	24.9	27.9	62.9	62	0.9	6	2
	3	●	MVE0490X03S050	32.9	32.9	68.9	68	0.9	5	2
	3	●	MVE0490X03S060	32.9	35.9	68.9	68	0.9	6	2
5.0	2	●	MVE0500X02S050	24.9	24.9	62.9	62	0.9	5	2
	2	●	MVE0500X02S060	24.9	27.9	62.9	62	0.9	6	2
	3	●	MVE0500X03S050	32.9	32.9	68.9	68	0.9	5	2
	3	●	MVE0500X03S060	32.9	35.9	68.9	68	0.9	6	2
5.1	2	●	MVE0510X02S060	26.9	28.9	66.9	66	0.9	6	2
	3	●	MVE0510X03S060	34.9	36.9	74.9	74	0.9	6	2
5.2	2	●	MVE0520X02S060	26.9	28.9	66.9	66	0.9	6	2
	3	●	MVE0520X03S060	34.9	36.9	74.9	74	0.9	6	2
5.3	2	●	MVE0530X02S060	27.0	29.0	67.0	66	1.0	6	2
	3	●	MVE0530X03S060	35.0	37.0	75.0	74	1.0	6	2
5.4	2	●	MVE0540X02S060	27.0	29.0	67.0	66	1.0	6	2
	3	●	MVE0540X03S060	35.0	37.0	75.0	74	1.0	6	2
5.5	2	●	MVE0550X02S060	27.0	29.0	67.0	66	1.0	6	2
	3	●	MVE0550X03S060	35.0	37.0	75.0	74	1.0	6	2
5.6	2	●	MVE0560X02S060	29.0	29.0	67.0	66	1.0	6	2
	3	●	MVE0560X03S060	37.0	37.0	75.0	74	1.0	6	2
5.7	2	●	MVE0570X02S060	29.0	29.0	67.0	66	1.0	6	2
	3	●	MVE0570X03S060	37.0	37.0	75.0	74	1.0	6	2
5.8	2	●	MVE0580X02S060	29.1	29.1	67.1	66	1.1	6	2
	3	●	MVE0580X03S060	37.1	37.1	75.1	74	1.1	6	2
5.9	2	●	MVE0590X02S060	29.1	29.1	67.1	66	1.1	6	2
	3	●	MVE0590X03S060	37.1	37.1	75.1	74	1.1	6	2
6.0	2	●	MVE0600X02S060	29.1	29.1	67.1	66	1.1	6	2
	3	●	MVE0600X03S060	37.1	37.1	75.1	74	1.1	6	2
6.1	2	●	MVE0610X02S070	32.1	35.1	75.1	74	1.1	7	2
	2	●	MVE0610X02S080	32.1	35.1	75.1	74	1.1	8	2
	3	●	MVE0610X03S070	42.1	45.1	84.1	83	1.1	7	2
	3	●	MVE0610X03S080	42.1	45.1	84.1	83	1.1	8	2
6.2	2	●	MVE0620X02S070	32.1	35.1	75.1	74	1.1	7	2
	2	●	MVE0620X02S080	32.1	35.1	75.1	74	1.1	8	2
	3	●	MVE0620X03S070	42.1	45.1	84.1	83	1.1	7	2
	3	●	MVE0620X03S080	42.1	45.1	84.1	83	1.1	8	2
6.3	2	●	MVE0630X02S070	32.1	35.1	75.1	74	1.1	7	2
	2	●	MVE0630X02S080	32.1	35.1	75.1	74	1.1	8	2
	3	●	MVE0630X03S070	42.1	45.1	84.1	83	1.1	7	2
	3	●	MVE0630X03S080	42.1	45.1	84.1	83	1.1	8	2
6.4	2	●	MVE0640X02S070	32.2	35.2	75.2	74	1.2	7	2
	2	●	MVE0640X02S080	32.2	35.2	75.2	74	1.2	8	2
	3	●	MVE0640X03S070	42.2	45.2	84.2	83	1.2	7	2
	3	●	MVE0640X03S080	42.2	45.2	84.2	83	1.2	8	2
6.5	2	●	MVE0650X02S070	32.2	35.2	75.2	74	1.2	7	2
	2	●	MVE0650X02S080	32.2	35.2	75.2	74	1.2	8	2
	3	●	MVE0650X03S070	42.2	45.2	84.2	83	1.2	7	2
	3	●	MVE0650X03S080	42.2	45.2	84.2	83	1.2	8	2
6.6	2	●	MVE0660X02S070	35.2	35.2	75.2	74	1.2	7	2
	2	●	MVE0660X02S080	35.2	37.2	75.2	74	1.2	8	2
	3	●	MVE0660X03S070	44.2	44.2	84.2	83	1.2	7	2
	3	●	MVE0660X03S080	44.2	46.2	84.2	83	1.2	8	2

External Coolant

(mm)

DC	Hole Depth (l/d)	Stock DP1020	Order Number	LCF	LH	OAL	LF	PL	DCON	Type
6.7	2	●	MVE0670X02S070	35.2	35.2	75.2	74	1.2	7	2
	2	●	MVE0670X02S080	35.2	37.2	75.2	74	1.2	8	2
	3	●	MVE0670X03S070	44.2	44.2	84.2	83	1.2	7	2
	3	●	MVE0670X03S080	44.2	46.2	84.2	83	1.2	8	2
6.8	2	●	MVE0680X02S070	35.2	35.2	75.2	74	1.2	7	2
	2	●	MVE0680X02S080	35.2	37.2	75.2	74	1.2	8	2
	3	●	MVE0680X03S070	44.2	44.2	84.2	83	1.2	7	2
	3	●	MVE0680X03S080	44.2	46.2	84.2	83	1.2	8	2
6.9	2	●	MVE0690X02S070	35.3	35.3	75.3	74	1.3	7	2
	2	●	MVE0690X02S080	35.3	37.3	75.3	74	1.3	8	2
	3	●	MVE0690X03S070	44.3	44.3	84.3	83	1.3	7	2
	3	●	MVE0690X03S080	44.3	46.3	84.3	83	1.3	8	2
7.0	2	●	MVE0700X02S070	35.3	35.3	75.3	74	1.3	7	2
	2	●	MVE0700X02S080	35.3	37.3	75.3	74	1.3	8	2
	3	●	MVE0700X03S070	44.3	44.3	84.3	83	1.3	7	2
	3	●	MVE0700X03S080	44.3	46.3	84.3	83	1.3	8	2
7.1	2	●	MVE0710X02S080	35.3	38.3	80.3	79	1.3	8	2
	3	●	MVE0710X03S080	46.3	49.3	91.3	90	1.3	8	2
7.2	2	●	MVE0720X02S080	35.3	38.3	80.3	79	1.3	8	2
	3	●	MVE0720X03S080	46.3	49.3	91.3	90	1.3	8	2
7.3	2	●	MVE0730X02S080	35.3	38.3	80.3	79	1.3	8	2
	3	●	MVE0730X03S080	46.3	49.3	91.3	90	1.3	8	2
7.4	2	●	MVE0740X02S080	35.3	38.3	80.3	79	1.3	8	2
	3	●	MVE0740X03S080	46.3	49.3	91.3	90	1.3	8	2
7.5	2	●	MVE0750X02S080	35.4	38.4	80.4	79	1.4	8	2
	3	●	MVE0750X03S080	46.4	49.4	91.4	90	1.4	8	2
7.6	2	●	MVE0760X02S080	38.4	38.4	80.4	79	1.4	8	2
	3	●	MVE0760X03S080	49.4	49.4	91.4	90	1.4	8	2
7.7	2	●	MVE0770X02S080	38.4	38.4	80.4	79	1.4	8	2
	3	●	MVE0770X03S080	49.4	49.4	91.4	90	1.4	8	2
7.8	2	●	MVE0780X02S080	38.4	38.4	80.4	79	1.4	8	2
	3	●	MVE0780X03S080	49.4	49.4	91.4	90	1.4	8	2
7.9	2	●	MVE0790X02S080	38.4	38.4	80.4	79	1.4	8	2
	3	●	MVE0790X03S080	49.4	49.4	91.4	90	1.4	8	2
8.0	2	●	MVE0800X02S080	38.5	38.5	80.5	79	1.5	8	2
	3	●	MVE0800X03S080	49.5	49.5	91.5	90	1.5	8	2
8.1	2	●	MVE0810X02S090	38.5	41.5	85.5	84	1.5	9	2
	2	●	MVE0810X02S100	38.5	41.5	85.5	84	1.5	10	2
	3	●	MVE0810X03S090	54.5	57.5	99.5	98	1.5	9	2
	3	●	MVE0810X03S100	54.5	57.5	99.5	98	1.5	10	2
8.2	2	●	MVE0820X02S090	38.5	41.5	85.5	84	1.5	9	2
	2	●	MVE0820X02S100	38.5	41.5	85.5	84	1.5	10	2
	3	●	MVE0820X03S090	54.5	57.5	99.5	98	1.5	9	2
	3	●	MVE0820X03S100	54.5	57.5	99.5	98	1.5	10	2
8.3	2	●	MVE0830X02S090	38.5	41.5	85.5	84	1.5	9	2
	2	●	MVE0830X02S100	38.5	41.5	85.5	84	1.5	10	2
	3	●	MVE0830X03S090	54.5	57.5	99.5	98	1.5	9	2
	3	●	MVE0830X03S100	54.5	57.5	99.5	98	1.5	10	2
8.4	2	●	MVE0840X02S090	38.5	41.5	85.5	84	1.5	9	2
	2	●	MVE0840X02S100	38.5	41.5	85.5	84	1.5	10	2
	3	●	MVE0840X03S090	54.5	57.5	99.5	98	1.5	9	2
	3	●	MVE0840X03S100	54.5	57.5	99.5	98	1.5	10	2

DC = Cutting Diameter  
 LCF = Length Chip Flute  
 LH = Neck Length

OAL = Overall Length  
 LF = Functional Length  
 PL = Point Length

DCON = Fixing Part Depth

# Solid Carbide Drills

## MVE

WSTAR Drills

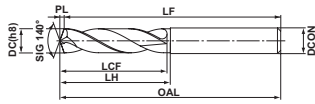
External Coolant										
DC	Hole Depth (l/d)	Stock DP1020	Order Number	LCF	LH	OAL	LF	PL	DCON	Type
	2	●	MVE0850X02S100	38.5	41.5	85.5	84	1.5	10	2
	3	●	MVE0850X03S090	54.5	57.5	99.5	98	1.5	9	2
	3	●	MVE0850X03S100	54.5	57.5	99.5	98	1.5	10	2
8.6	2	●	MVE0860X02S090	41.6	41.6	85.6	84	1.6	9	2
	2	●	MVE0860X02S100	41.6	43.6	85.6	84	1.6	10	2
	3	●	MVE0860X03S090	56.6	56.6	99.6	98	1.6	9	2
	3	●	MVE0860X03S100	56.6	58.6	99.6	98	1.6	10	2
8.7	2	●	MVE0870X02S090	41.6	41.6	85.6	84	1.6	9	2
	2	●	MVE0870X02S100	41.6	43.6	85.6	84	1.6	10	2
	3	●	MVE0870X03S090	56.6	56.6	99.6	98	1.6	9	2
	3	●	MVE0870X03S100	56.6	58.6	99.6	98	1.6	10	2
8.8	2	●	MVE0880X02S090	41.6	41.6	85.6	84	1.6	9	2
	2	●	MVE0880X02S100	41.6	43.6	85.6	84	1.6	10	2
	3	●	MVE0880X03S090	56.6	56.6	99.6	98	1.6	9	2
	3	●	MVE0880X03S100	56.6	58.6	99.6	98	1.6	10	2
8.9	2	●	MVE0890X02S090	41.6	41.6	85.6	84	1.6	9	2
	2	●	MVE0890X02S100	41.6	43.6	85.6	84	1.6	10	2
	3	●	MVE0890X03S090	56.6	56.6	99.6	98	1.6	9	2
	3	●	MVE0890X03S100	56.6	58.6	99.6	98	1.6	10	2
9.0	2	●	MVE0900X02S090	41.6	41.6	85.6	84	1.6	9	2
	2	●	MVE0900X02S100	41.6	43.6	85.6	84	1.6	10	2
	3	●	MVE0900X03S090	56.6	56.6	99.6	98	1.6	9	2
	3	●	MVE0900X03S100	56.6	58.6	99.6	98	1.6	10	2
9.1	2	●	MVE0910X02S100	41.7	44.7	90.7	89	1.7	10	2
	3	●	MVE0910X03S100	59.7	62.7	106.7	105	1.7	10	2
9.2	2	●	MVE0920X02S100	41.7	44.7	90.7	89	1.7	10	2
	3	●	MVE0920X03S100	59.7	62.7	106.7	105	1.7	10	2
9.3	2	●	MVE0930X02S100	41.7	44.7	90.7	89	1.7	10	2
	3	●	MVE0930X03S100	59.7	62.7	106.7	105	1.7	10	2
9.4	2	●	MVE0940X02S100	41.7	44.7	90.7	89	1.7	10	2
	3	●	MVE0940X03S100	59.7	62.7	106.7	105	1.7	10	2
9.5	2	●	MVE0950X02S100	41.7	44.7	90.7	89	1.7	10	2
	3	●	MVE0950X03S100	59.7	62.7	106.7	105	1.7	10	2
9.6	2	●	MVE0960X02S100	44.7	44.7	90.7	89	1.7	10	2
	3	●	MVE0960X03S100	61.7	61.7	106.7	105	1.7	10	2
9.7	2	●	MVE0970X02S100	44.8	44.8	90.8	89	1.8	10	2
	3	●	MVE0970X03S100	61.8	61.8	106.8	105	1.8	10	2
9.8	2	●	MVE0980X02S100	44.8	44.8	90.8	89	1.8	10	2
	3	●	MVE0980X03S100	61.8	61.8	106.8	105	1.8	10	2
9.9	2	●	MVE0990X02S100	44.8	44.8	90.8	89	1.8	10	2
	3	●	MVE0990X03S100	61.8	61.8	106.8	105	1.8	10	2
10.0	2	●	MVE1000X02S100	44.8	44.8	90.8	89	1.8	10	2
	3	●	MVE1000X03S100	61.8	61.8	106.8	105	1.8	10	2
10.1	2	●	MVE1010X02S110	44.8	47.8	96.8	95	1.8	11	2
	2	●	MVE1010X02S120	44.8	47.8	96.8	95	1.8	12	2
	3	●	MVE1010X03S110	67.8	70.8	115.8	114	1.8	11	2
	3	●	MVE1010X03S120	67.8	70.8	115.8	114	1.8	12	2
10.2	2	●	MVE1020X02S110	44.9	47.9	96.9	95	1.9	11	2
	2	●	MVE1020X02S120	44.9	47.9	96.9	95	1.9	12	2
	3	●	MVE1020X03S110	67.9	70.9	115.9	114	1.9	11	2
	3	●	MVE1020X03S120	67.9	70.9	115.9	114	1.9	12	2

External Coolant (mm)										
DC	Hole Depth (l/d)	Stock DP1020	Order Number	LCF	LH	OAL	LF	PL	DCON	Type
	2	●	MVE1030X02S120	44.9	47.9	96.9	95	1.9	12	2
	3	●	MVE1030X03S110	67.9	70.9	115.9	114	1.9	11	2
	3	●	MVE1030X03S120	67.9	70.9	115.9	114	1.9	12	2
10.4	2	●	MVE1040X02S110	44.9	47.9	96.9	95	1.9	11	2
	2	●	MVE1040X02S120	44.9	47.9	96.9	95	1.9	12	2
	3	●	MVE1040X03S110	67.9	70.9	115.9	114	1.9	11	2
	3	●	MVE1040X03S120	67.9	70.9	115.9	114	1.9	12	2
10.5	2	●	MVE1050X02S110	44.9	47.9	96.9	95	1.9	11	2
	2	●	MVE1050X02S120	44.9	47.9	96.9	95	1.9	12	2
	3	●	MVE1050X03S110	67.9	70.9	115.9	114	1.9	11	2
	3	●	MVE1050X03S120	67.9	70.9	115.9	114	1.9	12	2
10.6	2	●	MVE1060X02S110	48.9	48.9	96.9	95	1.9	11	2
	2	●	MVE1060X02S120	48.9	49.9	96.9	95	1.9	12	2
	3	●	MVE1060X03S110	69.9	69.9	115.9	114	1.9	11	2
	3	●	MVE1060X03S120	69.9	70.9	115.9	114	1.9	12	2
10.7	2	●	MVE1070X02S110	48.9	48.9	96.9	95	1.9	11	2
	2	●	MVE1070X02S120	48.9	49.9	96.9	95	1.9	12	2
	3	●	MVE1070X03S110	69.9	69.9	115.9	114	1.9	11	2
	3	●	MVE1070X03S120	69.9	70.9	115.9	114	1.9	12	2
10.8	2	●	MVE1080X02S110	49.0	49.0	97.0	95	2.0	11	2
	2	●	MVE1080X02S120	49.0	50.0	97.0	95	2.0	12	2
	3	●	MVE1080X03S110	70.0	70.0	116.0	114	2.0	11	2
	3	●	MVE1080X03S120	70.0	71.0	116.0	114	2.0	12	2
10.9	2	●	MVE1090X02S110	49.0	49.0	97.0	95	2.0	11	2
	2	●	MVE1090X02S120	49.0	50.0	97.0	95	2.0	12	2
	3	●	MVE1090X03S110	70.0	70.0	116.0	114	2.0	11	2
	3	●	MVE1090X03S120	70.0	71.0	116.0	114	2.0	12	2
11.0	2	●	MVE1100X02S110	49.0	49.0	97.0	95	2.0	11	2
	2	●	MVE1100X02S120	49.0	50.0	97.0	95	2.0	12	2
	3	●	MVE1100X03S110	70.0	70.0	116.0	114	2.0	11	2
	3	●	MVE1100X03S120	70.0	71.0	116.0	114	2.0	12	2
11.1	2	●	MVE1110X02S120	49.0	52.0	97.0	95	2.0	12	2
	3	●	MVE1110X03S120	73.0	76.0	123.0	121	2.0	12	2
11.2	2	●	MVE1120X02S120	49.0	52.0	97.0	95	2.0	12	2
	3	●	MVE1120X03S120	73.0	76.0	123.0	121	2.0	12	2
11.3	2	●	MVE1130X02S120	49.1	52.1	97.1	95	2.1	12	2
	3	●	MVE1130X03S120	73.1	76.1	123.1	121	2.1	12	2
11.4	2	●	MVE1140X02S120	49.1	52.1	97.1	95	2.1	12	2
	3	●	MVE1140X03S120	73.1	76.1	123.1	121	2.1	12	2
11.5	2	●	MVE1150X02S120	49.1	52.1	97.1	95	2.1	12	2
	3	●	MVE1150X03S120	73.1	76.1	123.1	121	2.1	12	2
11.6	2	●	MVE1160X02S120	49.1	49.1	97.1	95	2.1	12	2
	3	●	MVE1160X03S120	75.1	75.1	123.1	121	2.1	12	2
11.7	2	●	MVE1170X02S120	49.1	49.1	97.1	95	2.1	12	2
	3	●	MVE1170X03S120	75.1	75.1	123.1	121	2.1	12	2
11.8	2	●	MVE1180X02S120	49.1	49.1	97.1	95	2.1	12	2
	3	●	MVE1180X03S120	75.1	75.1	123.1	121	2.1	12	2
11.9	2	●	MVE1190X02S120	49.2	49.2	97.2	95	2.2	12	2
	3	●	MVE1190X03S120	75.2	75.2	123.2	121	2.2	12	2
12.0	2	●	MVE1200X02S120	49.2	49.2	97.2	95	2.2	12	2
	3	●	MVE1200X03S120	75.2	75.2	123.2	121	2.2	12	2

● : Inventory maintained in Japan. □ : Non stock, produced to order only.



Type2



External Coolant

DC	Hole Depth (l/d)	Stock	Order Number	LCF	LH	OAL	LF	PL	DCON	Type
12.1	2	●	MVE1210X02S130	53.2	56.2	104.2	102	2.2	13	2
	2	□	MVE1210X02S140	53.2	56.2	104.2	102	2.2	14	2
	3	●	MVE1210X03S130	78.2	81.2	139.2	137	2.2	13	2
	3	□	MVE1210X03S140	78.2	81.2	139.2	137	2.2	14	2
12.2	2	●	MVE1220X02S130	53.2	56.2	104.2	102	2.2	13	2
	2	□	MVE1220X02S140	53.2	56.2	104.2	102	2.2	14	2
	3	●	MVE1220X03S130	78.2	81.2	139.2	137	2.2	13	2
	3	□	MVE1220X03S140	78.2	81.2	139.2	137	2.2	14	2
12.3	2	●	MVE1230X02S130	53.2	56.2	104.2	102	2.2	13	2
	2	□	MVE1230X02S140	53.2	56.2	104.2	102	2.2	14	2
	3	●	MVE1230X03S130	78.2	81.2	139.2	137	2.2	13	2
	3	□	MVE1230X03S140	78.2	81.2	139.2	137	2.2	14	2
12.4	2	●	MVE1240X02S130	53.3	56.3	104.3	102	2.3	13	2
	2	□	MVE1240X02S140	53.3	56.3	104.3	102	2.3	14	2
	3	●	MVE1240X03S130	78.3	81.3	139.3	137	2.3	13	2
	3	□	MVE1240X03S140	78.3	81.3	139.3	137	2.3	14	2
12.5	2	●	MVE1250X02S130	53.3	56.3	104.3	102	2.3	13	2
	2	□	MVE1250X02S140	53.3	56.3	104.3	102	2.3	14	2
	3	●	MVE1250X03S130	78.3	81.3	139.3	137	2.3	13	2
	3	□	MVE1250X03S140	78.3	81.3	139.3	137	2.3	14	2
12.6	2	●	MVE1260X02S130	53.3	53.3	104.3	102	2.3	13	2
	2	□	MVE1260X02S140	53.3	53.3	104.3	102	2.3	14	2
	3	●	MVE1260X03S130	80.3	80.3	139.3	137	2.3	13	2
	3	□	MVE1260X03S140	80.3	80.3	139.3	137	2.3	14	2
12.7	2	●	MVE1270X02S130	53.3	53.3	104.3	102	2.3	13	2
	2	□	MVE1270X02S140	53.3	53.3	104.3	102	2.3	14	2
	3	●	MVE1270X03S130	80.3	80.3	139.3	137	2.3	13	2
	3	□	MVE1270X03S140	80.3	80.3	139.3	137	2.3	14	2
12.8	2	●	MVE1280X02S130	53.3	53.3	104.3	102	2.3	13	2
	2	□	MVE1280X02S140	53.3	53.3	104.3	102	2.3	14	2
	3	●	MVE1280X03S130	80.3	80.3	139.3	137	2.3	13	2
	3	□	MVE1280X03S140	80.3	80.3	139.3	137	2.3	14	2
12.9	2	●	MVE1290X02S130	53.3	53.3	104.3	102	2.3	13	2
	2	□	MVE1290X02S140	53.3	53.3	104.3	102	2.3	14	2
	3	●	MVE1290X03S130	80.3	80.3	139.3	137	2.3	13	2
	3	□	MVE1290X03S140	80.3	80.3	139.3	137	2.3	14	2
13.0	2	●	MVE1300X02S130	53.4	53.4	104.4	102	2.4	13	2
	2	□	MVE1300X02S140	53.4	53.4	104.4	102	2.4	14	2
	3	●	MVE1300X03S130	80.4	80.4	139.4	137	2.4	13	2
	3	□	MVE1300X03S140	80.4	80.4	139.4	137	2.4	14	2
13.1	2	●	MVE1310X02S140	56.4	59.4	109.4	107	2.4	14	2
	3	●	MVE1310X03S140	86.4	89.4	149.4	147	2.4	14	2
13.2	2	●	MVE1320X02S140	56.4	59.4	109.4	107	2.4	14	2
	3	●	MVE1320X03S140	86.4	89.4	149.4	147	2.4	14	2
13.3	2	●	MVE1330X02S140	56.4	59.4	109.4	107	2.4	14	2
	3	●	MVE1330X03S140	86.4	89.4	149.4	147	2.4	14	2
13.4	2	●	MVE1340X02S140	56.4	59.4	109.4	107	2.4	14	2
	3	●	MVE1340X03S140	86.4	89.4	149.4	147	2.4	14	2
13.5	2	●	MVE1350X02S140	56.5	59.5	109.5	107	2.5	14	2
	3	●	MVE1350X03S140	86.5	89.5	149.5	147	2.5	14	2
13.6	2	●	MVE1360X02S140	56.5	56.5	109.5	107	2.5	14	2
	3	●	MVE1360X03S140	88.5	88.5	149.5	147	2.5	14	2

External Coolant

(mm)

DC	Hole Depth (l/d)	Stock	Order Number	LCF	LH	OAL	LF	PL	DCON	Type
13.7	2	●	MVE1370X02S140	56.5	56.5	109.5	107	2.5	14	2
	3	●	MVE1370X03S140	88.5	88.5	149.5	147	2.5	14	2
13.8	2	●	MVE1380X02S140	56.5	56.5	109.5	107	2.5	14	2
	3	●	MVE1380X03S140	88.5	88.5	149.5	147	2.5	14	2
13.9	2	●	MVE1390X02S140	56.5	56.5	109.5	107	2.5	14	2
	3	●	MVE1390X03S140	88.5	88.5	149.5	147	2.5	14	2
14.0	2	●	MVE1400X02S140	56.5	56.5	109.5	107	2.5	14	2
	3	●	MVE1400X03S140	88.5	88.5	149.5	147	2.5	14	2
14.1	2	●	MVE1410X02S150	58.6	61.6	113.6	111	2.6	15	2
	2	□	MVE1410X02S160	58.6	61.6	113.6	111	2.6	16	2
	3	●	MVE1410X03S150	91.6	94.6	155.6	153	2.6	15	2
	3	□	MVE1410X03S160	91.6	94.6	155.6	153	2.6	16	2
14.2	2	●	MVE1420X02S150	58.6	61.6	113.6	111	2.6	15	2
	2	□	MVE1420X02S160	58.6	61.6	113.6	111	2.6	16	2
	3	●	MVE1420X03S150	91.6	94.6	155.6	153	2.6	15	2
	3	□	MVE1420X03S160	91.6	94.6	155.6	153	2.6	16	2
14.3	2	□	MVE1430X02S150	58.6	61.6	113.6	111	2.6	15	2
	2	□	MVE1430X02S160	58.6	61.6	113.6	111	2.6	16	2
	3	●	MVE1430X03S150	91.6	94.6	155.6	153	2.6	15	2
	3	□	MVE1430X03S160	91.6	94.6	155.6	153	2.6	16	2
14.4	2	□	MVE1440X02S150	58.6	61.6	113.6	111	2.6	15	2
	2	□	MVE1440X02S160	58.6	61.6	113.6	111	2.6	16	2
	3	●	MVE1440X03S150	91.6	94.6	155.6	153	2.6	15	2
	3	□	MVE1440X03S160	91.6	94.6	155.6	153	2.6	16	2
14.5	2	●	MVE1450X02S150	58.6	61.6	113.6	111	2.6	15	2
	2	□	MVE1450X02S160	58.6	61.6	113.6	111	2.6	16	2
	3	●	MVE1450X03S150	91.6	94.6	155.6	153	2.6	15	2
	3	□	MVE1450X03S160	91.6	94.6	155.6	153	2.6	16	2
14.6	2	□	MVE1460X02S150	58.7	58.7	113.7	111	2.7	15	2
	2	□	MVE1460X02S160	58.7	58.7	113.7	111	2.7	16	2
	3	●	MVE1460X03S150	93.7	93.7	155.7	153	2.7	15	2
	3	□	MVE1460X03S160	93.7	93.7	155.7	153	2.7	16	2
14.7	2	□	MVE1470X02S150	58.7	58.7	113.7	111	2.7	15	2
	2	□	MVE1470X02S160	58.7	58.7	113.7	111	2.7	16	2
	3	●	MVE1470X03S150	93.7	93.7	155.7	153	2.7	15	2
	3	□	MVE1470X03S160	93.7	93.7	155.7	153	2.7	16	2
14.8	2	□	MVE1480X02S150	58.7	58.7	113.7	111	2.7	15	2
	2	□	MVE1480X02S160	58.7	58.7	113.7	111	2.7	16	2
	3	●	MVE1480X03S150	93.7	93.7	155.7	153	2.7	15	2
	3	□	MVE1480X03S160	93.7	93.7	155.7	153	2.7	16	2
14.9	2	□	MVE1490X02S150	58.7	58.7	113.7	111	2.7	15	2
	2	□	MVE1490X02S160	58.7	58.7	113.7	111	2.7	16	2
	3	●	MVE1490X03S150	93.7	93.7	155.7	153	2.7	15	2
	3	□	MVE1490X03S160	93.7	93.7	155.7	153	2.7	16	2
15.0	2	●	MVE1500X02S150	58.7	58.7	113.7	111	2.7	15	2
	2	□	MVE1500X02S160	58.7	58.7	113.7	111	2.7	16	2
	3	●	MVE1500X03S150	93.7	93.7	155.7	153	2.7	15	2
15.1	3	□	MVE1500X03S160	93.7	93.7	155.7	153	2.7	16	2
	2	□	MVE1510X02S160	60.7	63.7	117.7	115	2.7	16	2
	3	●	MVE1510X03S160	96.7	99.7	162.7	160	2.7	16	2
15.2	2	●	MVE1520X02S160	60.8	63.8	117.8	115	2.8	16	2
	3	●	MVE1520X03S160	96.8	99.8	162.8	160	2.8	16	2

DC = Cutting Diameter  
 LCF = Length Chip Flute  
 LH = Neck Length

OAL = Overall Length  
 LF = Functional Length  
 PL = Point Length

DCON = Fixing Part Depth

# Solid Carbide Drills

## MVE

WSTAR Drills

External Coolant

DC	Hole Depth (l/d)	Stock DP1020	Order Number	LCF	LH	OAL	LF	PL	DCON	Type
15.3	2	□	MVE1530X02S160	60.8	63.8	117.8	115	2.8	16	2
	3	●	MVE1530X03S160	96.8	99.8	162.8	160	2.8	16	2
15.4	2	□	MVE1540X02S160	60.8	63.8	117.8	115	2.8	16	2
	3	●	MVE1540X03S160	96.8	99.8	162.8	160	2.8	16	2
15.5	2	●	MVE1550X02S160	60.8	63.8	117.8	115	2.8	16	2
	3	●	MVE1550X03S160	96.8	99.8	162.8	160	2.8	16	2
15.6	2	□	MVE1560X02S160	60.8	60.8	117.8	115	2.8	16	2
	3	●	MVE1560X03S160	98.8	98.8	162.8	160	2.8	16	2
15.7	2	□	MVE1570X02S160	60.9	60.9	117.9	115	2.9	16	2
	3	●	MVE1570X03S160	98.9	98.9	162.9	160	2.9	16	2
15.8	2	□	MVE1580X02S160	60.9	60.9	117.9	115	2.9	16	2
	3	●	MVE1580X03S160	98.9	98.9	162.9	160	2.9	16	2
15.9	2	□	MVE1590X02S160	60.9	60.9	117.9	115	2.9	16	2
	3	●	MVE1590X03S160	98.9	98.9	162.9	160	2.9	16	2
16.0	2	●	MVE1600X02S160	60.9	60.9	117.9	115	2.9	16	2
	3	●	MVE1600X03S160	98.9	98.9	162.9	160	2.9	16	2
16.1	2	□	MVE1610X02S170	62.9	62.9	121.9	119	2.9	17	2
	2	□	MVE1610X02S180	62.9	62.9	121.9	119	2.9	18	2
	3	□	MVE1610X03S170	104.9	104.9	169.9	167	2.9	17	2
	3	□	MVE1610X03S180	104.9	104.9	169.9	167	2.9	18	2
16.2	2	●	MVE1620X02S170	62.9	62.9	121.9	119	2.9	17	2
	2	□	MVE1620X02S180	62.9	62.9	121.9	119	2.9	18	2
	3	□	MVE1620X03S170	104.9	104.9	169.9	167	2.9	17	2
	3	□	MVE1620X03S180	104.9	104.9	169.9	167	2.9	18	2
16.3	2	●	MVE1630X02S170	63.0	63.0	122.0	119	3.0	17	2
	2	□	MVE1630X02S180	63.0	63.0	122.0	119	3.0	18	2
	3	□	MVE1630X03S170	105.0	105.0	170.0	167	3.0	17	2
	3	□	MVE1630X03S180	105.0	105.0	170.0	167	3.0	18	2
16.4	2	□	MVE1640X02S170	63.0	63.0	122.0	119	3.0	17	2
	2	□	MVE1640X02S180	63.0	63.0	122.0	119	3.0	18	2
	3	□	MVE1640X03S170	105.0	105.0	170.0	167	3.0	17	2
	3	□	MVE1640X03S180	105.0	105.0	170.0	167	3.0	18	2
16.5	2	●	MVE1650X02S170	63.0	63.0	122.0	119	3.0	17	2
	2	□	MVE1650X02S180	63.0	63.0	122.0	119	3.0	18	2
	3	●	MVE1650X03S170	105.0	105.0	170.0	167	3.0	17	2
	3	□	MVE1650X03S180	105.0	105.0	170.0	167	3.0	18	2
16.6	2	□	MVE1660X02S170	63.0	63.0	122.0	119	3.0	17	2
	2	□	MVE1660X02S180	63.0	63.0	122.0	119	3.0	18	2
	3	□	MVE1660X03S170	105.0	105.0	170.0	167	3.0	17	2
	3	□	MVE1660X03S180	105.0	105.0	170.0	167	3.0	18	2
16.7	2	□	MVE1670X02S170	63.0	63.0	122.0	119	3.0	17	2
	2	□	MVE1670X02S180	63.0	63.0	122.0	119	3.0	18	2
	3	□	MVE1670X03S170	105.0	105.0	170.0	167	3.0	17	2
	3	□	MVE1670X03S180	105.0	105.0	170.0	167	3.0	18	2
16.8	2	□	MVE1680X02S170	63.1	63.1	122.1	119	3.1	17	2
	2	□	MVE1680X02S180	63.1	63.1	122.1	119	3.1	18	2
	3	□	MVE1680X03S170	105.1	105.1	170.1	167	3.1	17	2
	3	□	MVE1680X03S180	105.1	105.1	170.1	167	3.1	18	2
16.9	2	□	MVE1690X02S170	63.1	63.1	122.1	119	3.1	17	2
	2	□	MVE1690X02S180	63.1	63.1	122.1	119	3.1	18	2
	3	□	MVE1690X03S170	105.1	105.1	170.1	167	3.1	17	2
	3	□	MVE1690X03S180	105.1	105.1	170.1	167	3.1	18	2

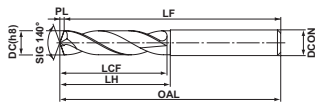
External Coolant

(mm)

DC	Hole Depth (l/d)	Stock DP1020	Order Number	LCF	LH	OAL	LF	PL	DCON	Type
17.0	2	●	MVE1700X02S170	63.1	63.1	122.1	119	3.1	17	2
	2	□	MVE1700X02S180	63.1	63.1	122.1	119	3.1	18	2
	3	●	MVE1700X03S170	105.1	105.1	170.1	167	3.1	17	2
17.1	2	□	MVE1710X02S180	65.1	65.1	126.1	123	3.1	18	2
	3	□	MVE1710X03S180	105.1	105.1	170.1	167	3.1	18	2
17.2	2	□	MVE1720X02S180	65.1	65.1	126.1	123	3.1	18	2
	3	□	MVE1720X03S180	105.1	105.1	170.1	167	3.1	18	2
17.3	2	□	MVE1730X02S180	65.1	65.1	126.1	123	3.1	18	2
	3	□	MVE1730X03S180	105.1	105.1	170.1	167	3.1	18	2
17.4	2	□	MVE1740X02S180	65.2	65.2	126.2	123	3.2	18	2
	3	□	MVE1740X03S180	105.2	105.2	170.2	167	3.2	18	2
17.5	2	●	MVE1750X02S180	65.2	65.2	126.2	123	3.2	18	2
	3	●	MVE1750X03S180	105.2	105.2	170.2	167	3.2	18	2
17.6	2	□	MVE1760X02S180	65.2	65.2	126.2	123	3.2	18	2
	3	□	MVE1760X03S180	105.2	105.2	170.2	167	3.2	18	2
17.7	2	□	MVE1770X02S180	65.2	65.2	126.2	123	3.2	18	2
	3	□	MVE1770X03S180	105.2	105.2	170.2	167	3.2	18	2
17.8	2	●	MVE1780X02S180	65.2	65.2	126.2	123	3.2	18	2
	3	□	MVE1780X03S180	105.2	105.2	170.2	167	3.2	18	2
17.9	2	□	MVE1790X02S180	65.3	65.3	126.3	123	3.3	18	2
	3	□	MVE1790X03S180	105.3	105.3	170.3	167	3.3	18	2
18.0	2	●	MVE1800X02S180	65.3	65.3	126.3	123	3.3	18	2
	3	●	MVE1800X03S180	105.3	105.3	170.3	167	3.3	18	2
18.1	2	□	MVE1810X02S190	67.3	67.3	130.3	127	3.3	19	2
	2	□	MVE1810X02S200	67.3	67.3	130.3	127	3.3	20	2
	3	□	MVE1810X03S190	117.3	117.3	182.3	179	3.3	19	2
	3	□	MVE1810X03S200	117.3	117.3	182.3	179	3.3	20	2
18.2	2	□	MVE1820X02S190	67.3	67.3	130.3	127	3.3	19	2
	2	□	MVE1820X02S200	67.3	67.3	130.3	127	3.3	20	2
	3	□	MVE1820X03S190	117.3	117.3	182.3	179	3.3	19	2
	3	□	MVE1820X03S200	117.3	117.3	182.3	179	3.3	20	2
18.3	2	□	MVE1830X02S190	67.3	67.3	130.3	127	3.3	19	2
	2	□	MVE1830X02S200	67.3	67.3	130.3	127	3.3	20	2
	3	□	MVE1830X03S190	117.3	117.3	182.3	179	3.3	19	2
	3	□	MVE1830X03S200	117.3	117.3	182.3	179	3.3	20	2
18.4	2	□	MVE1840X02S190	67.3	67.3	130.3	127	3.3	19	2
	2	□	MVE1840X02S200	67.3	67.3	130.3	127	3.3	20	2
	3	□	MVE1840X03S190	117.3	117.3	182.3	179	3.3	19	2
	3	□	MVE1840X03S200	117.3	117.3	182.3	179	3.3	20	2
18.5	2	●	MVE1850X02S190	67.4	67.4	130.4	127	3.4	19	2
	2	□	MVE1850X02S200	67.4	67.4	130.4	127	3.4	20	2
	3	●	MVE1850X03S190	117.4	117.4	182.4	179	3.4	19	2
	3	□	MVE1850X03S200	117.4	117.4	182.4	179	3.4	20	2
18.6	2	□	MVE1860X02S190	67.4	67.4	130.4	127	3.4	19	2
	2	□	MVE1860X02S200	67.4	67.4	130.4	127	3.4	20	2
	3	□	MVE1860X03S190	117.4	117.4	182.4	179	3.4	19	2
	3	□	MVE1860X03S200	117.4	117.4	182.4	179	3.4	20	2
18.7	2	□	MVE1870X02S190	67.4	67.4	130.4	127	3.4	19	2
	2	□	MVE1870X02S200	67.4	67.4	130.4	127	3.4	20	2
	3	□	MVE1870X03S190	117.4	117.4	182.4	179	3.4	19	2
	3	□	MVE1870X03S200	117.4	117.4	182.4	179	3.4	20	2

● : Inventory maintained in Japan. □ : Non stock, produced to order only.

Type2



External Coolant (mm)

DC	Hole Depth (l/d)	Stock	Order Number	LCF	LH	OAL	LF	PL	DCON	Type
18.8	2	□	MVE1880X02S190	67.4	67.4	130.4	127	3.4	19	2
	2	□	MVE1880X02S200	67.4	67.4	130.4	127	3.4	20	2
	3	□	MVE1880X03S190	117.4	117.4	182.4	179	3.4	19	2
	3	□	MVE1880X03S200	117.4	117.4	182.4	179	3.4	20	2
18.9	2	□	MVE1890X02S190	67.4	67.4	130.4	127	3.4	19	2
	2	□	MVE1890X02S200	67.4	67.4	130.4	127	3.4	20	2
	3	□	MVE1890X03S190	117.4	117.4	182.4	179	3.4	19	2
	3	□	MVE1890X03S200	117.4	117.4	182.4	179	3.4	20	2
19.0	2	●	MVE1900X02S190	67.5	67.5	130.5	127	3.5	19	2
	2	□	MVE1900X02S200	67.5	67.5	130.5	127	3.5	20	2
	3	●	MVE1900X03S190	117.5	117.5	182.5	179	3.5	19	2
	3	□	MVE1900X03S200	117.5	117.5	182.5	179	3.5	20	2
19.1	2	□	MVE1910X02S200	69.5	69.5	134.5	131	3.5	20	2
	3	□	MVE1910X03S200	117.5	117.5	182.5	179	3.5	20	2
19.2	2	□	MVE1920X02S200	69.5	69.5	134.5	131	3.5	20	2
	3	□	MVE1920X03S200	117.5	117.5	182.5	179	3.5	20	2
19.3	2	□	MVE1930X02S200	69.5	69.5	134.5	131	3.5	20	2
	3	□	MVE1930X03S200	117.5	117.5	182.5	179	3.5	20	2
19.4	2	□	MVE1940X02S200	69.5	69.5	134.5	131	3.5	20	2
	3	□	MVE1940X03S200	117.5	117.5	182.5	179	3.5	20	2
19.5	2	●	MVE1950X02S200	69.5	69.5	134.5	131	3.5	20	2
	3	●	MVE1950X03S200	117.5	117.5	182.5	179	3.5	20	2
19.6	2	□	MVE1960X02S200	69.6	69.6	134.6	131	3.6	20	2
	3	□	MVE1960X03S200	117.6	117.6	182.6	179	3.6	20	2
19.7	2	□	MVE1970X02S200	69.6	69.6	134.6	131	3.6	20	2
	3	□	MVE1970X03S200	117.6	117.6	182.6	179	3.6	20	2
19.8	2	□	MVE1980X02S200	69.6	69.6	134.6	131	3.6	20	2
	3	□	MVE1980X03S200	117.6	117.6	182.6	179	3.6	20	2
19.9	2	□	MVE1990X02S200	69.6	69.6	134.6	131	3.6	20	2
	3	□	MVE1990X03S200	117.6	117.6	182.6	179	3.6	20	2
20.0	2	●	MVE2000X02S200	69.6	69.6	134.6	131	3.6	20	2
	3	●	MVE2000X03S200	117.6	117.6	182.6	179	3.6	20	2

DC = Cutting Diameter  
 LCF = Length Chip Flute  
 LH = Neck Length

OAL = Overall Length  
 LF = Functional Length  
 PL = Point Length

DCON = Fixing Part Depth

# Solid Carbide Drills



## Recommended Cutting Conditions

(mm)

Work Material	Mild Steel ( $\leq 180\text{HB}$ )		Carbon Steel, Alloy Steel (180–280HB)		Carbon Steel, Alloy Steel (280–350HB)	
	AISI 1010 etc		AISI 1045, 4140 etc		AISI 4340 etc	
DC	n ( $\text{min}^{-1}$ )	fr (Min.—Max.) (mm/rev)	n ( $\text{min}^{-1}$ )	fr (Min.—Max.) (mm/rev)	n ( $\text{min}^{-1}$ )	fr (Min.—Max.) (mm/rev)
<b>3.2</b>	6400	0.1 (0.06 – 0.13)	5900	0.1 (0.06 – 0.13)	5400	0.09 (0.06 – 0.12)
<b>4.0</b>	5500	0.12 (0.08 – 0.16)	5100	0.12 (0.08 – 0.16)	4700	0.11 (0.07 – 0.14)
<b>5.0</b>	4400	0.15 (0.10 – 0.20)	4100	0.15 (0.10 – 0.20)	3800	0.14 (0.09 – 0.18)
<b>6.3</b>	4000	0.2 (0.13 – 0.26)	3700	0.2 (0.13 – 0.26)	3500	0.18 (0.11 – 0.24)
<b>8.0</b>	3300	0.23 (0.18 – 0.28)	3100	0.23 (0.18 – 0.28)	2900	0.21 (0.16 – 0.25)
<b>10.0</b>	2800	0.27 (0.22 – 0.32)	2700	0.27 (0.22 – 0.32)	2500	0.23 (0.19 – 0.27)
<b>12.0</b>	2500	0.31 (0.28 – 0.34)	2300	0.31 (0.28 – 0.34)	2200	0.26 (0.23 – 0.29)
<b>16.0</b>	1900	0.33 (0.28 – 0.38)	1700	0.33 (0.28 – 0.38)	1600	0.29 (0.24 – 0.33)
<b>20.0</b>	1500	0.35 (0.30 – 0.40)	1400	0.35 (0.30 – 0.40)	1300	0.3 (0.26 – 0.34)

Work Material	Austenitic Stainless Steel ( $\leq 200\text{HB}$ )		Gray Cast Iron ( $\leq 350\text{MPa}$ )		Ductile Cast Iron ( $\leq 450\text{MPa}$ )	
	AISI 304, 316 etc		No45B etc		60-60-8 etc	
DC	n ( $\text{min}^{-1}$ )	fr (Min.—Max.) (mm/rev)	n ( $\text{min}^{-1}$ )	fr (Min.—Max.) (mm/rev)	n ( $\text{min}^{-1}$ )	fr (Min.—Max.) (mm/rev)
<b>3.2</b>	1900	0.07 (0.05 – 0.08)	6900	0.1 (0.06 – 0.13)	6400	0.1 (0.06 – 0.13)
<b>4.0</b>	1500	0.08 (0.06 – 0.10)	5500	0.12 (0.08 – 0.16)	5100	0.12 (0.08 – 0.16)
<b>5.0</b>	1200	0.1 (0.07 – 0.13)	4400	0.15 (0.10 – 0.20)	4100	0.15 (0.10 – 0.20)
<b>6.3</b>	1200	0.13 (0.09 – 0.17)	3700	0.2 (0.13 – 0.26)	3500	0.2 (0.13 – 0.26)
<b>8.0</b>	900	0.14 (0.10 – 0.18)	2900	0.25 (0.18 – 0.31)	2700	0.23 (0.18 – 0.28)
<b>10.0</b>	700	0.16 (0.12 – 0.19)	2300	0.29 (0.22 – 0.35)	2200	0.27 (0.22 – 0.32)
<b>12.0</b>	600	0.18 (0.15 – 0.20)	2100	0.33 (0.28 – 0.37)	1900	0.31 (0.28 – 0.34)
<b>16.0</b>	400	0.19 (0.15 – 0.23)	1500	0.35 (0.28 – 0.42)	1400	0.33 (0.28 – 0.38)
<b>20.0</b>	300	0.2 (0.15 – 0.24)	1300	0.37 (0.30 – 0.44)	1200	0.35 (0.30 – 0.40)

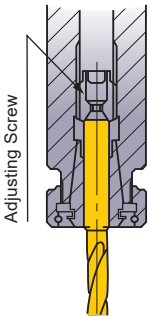
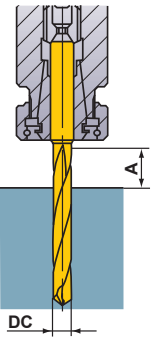
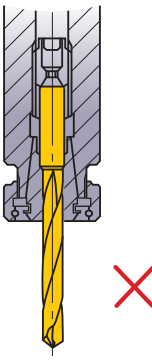
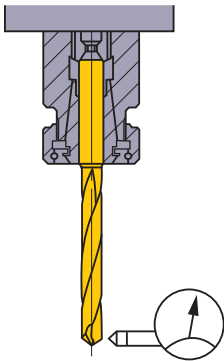
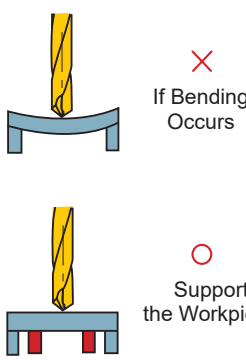
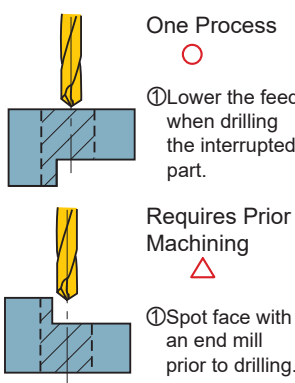
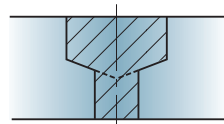
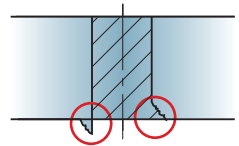
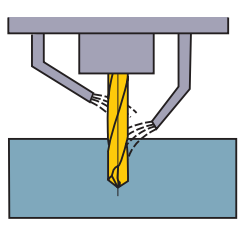
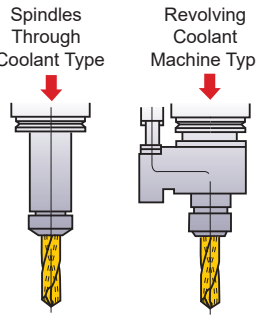
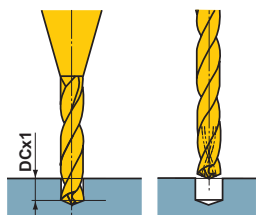
Work Material	Aluminum Alloy (Si $\leq 5\%$ )		Heat Resistant Alloy		Hardened Steel (40–55HRC)	
	ASTM 6061, 7075 etc		Inconel718 etc		AISI H13, L6 etc	
DC	n ( $\text{min}^{-1}$ )	fr (Min.—Max.) (mm/rev)	n ( $\text{min}^{-1}$ )	fr (Min.—Max.) (mm/rev)	n ( $\text{min}^{-1}$ )	fr (Min.—Max.) (mm/rev)
<b>3.2</b>	7900	0.1 (0.06 – 0.13)	1900	0.07 (0.05 – 0.09)	1900	0.07 (0.05 – 0.09)
<b>4.0</b>	6300	0.12 (0.08 – 0.16)	1500	0.09 (0.06 – 0.11)	1500	0.09 (0.06 – 0.11)
<b>5.0</b>	5000	0.15 (0.10 – 0.20)	1200	0.11 (0.08 – 0.14)	1200	0.11 (0.08 – 0.14)
<b>6.3</b>	4500	0.2 (0.13 – 0.26)	1200	0.14 (0.09 – 0.19)	1200	0.14 (0.09 – 0.19)
<b>8.0</b>	3500	0.23 (0.18 – 0.28)	900	0.14 (0.11 – 0.17)	900	0.14 (0.11 – 0.17)
<b>10.0</b>	2800	0.27 (0.22 – 0.32)	700	0.16 (0.12 – 0.19)	700	0.16 (0.12 – 0.19)
<b>12.0</b>	2600	0.31 (0.28 – 0.34)	600	0.16 (0.13 – 0.18)	600	0.16 (0.13 – 0.18)
<b>16.0</b>	1900	0.33 (0.28 – 0.38)	400	0.18 (0.14 – 0.21)	400	0.18 (0.14 – 0.21)
<b>20.0</b>	1700	0.35 (0.30 – 0.40)	400	0.19 (0.15 – 0.22)	400	0.19 (0.15 – 0.22)



# MVE/MVS

WSTAR Drills

## Operational Guidance

<p><b>Drill Holding</b></p>  <p>Thrust bearing type collet chuck holds the drill securely.</p>	<p><b>Drill Length</b></p>  <p><math>A &gt; DC \times 1.5</math> (DC &gt; over 2.0 for DC &lt; 3mm)</p>	<p><b>Drill Installation</b></p>  <p>Do not clamp on the flutes.</p>	<p><b>Installation Tolerance</b></p>  <p>Run-out <math>\leq 0.03</math> mm</p>
<p><b>Thin Workpiece</b></p>  <p>If Bending Occurs</p> <p>Support the Workpiece</p>	<p><b>Interrupted Cutting</b></p>  <p>One Process</p> <p>① Lower the feed when drilling the interrupted part.</p> <p>Requires Prior Machining</p> <p>① Spot face with an end mill prior to drilling.</p>	<p><b>Stepped Holes</b></p>  <p>① Divide the two processes. ② Drill the larger hole first. *A tool for machining both chamfer and spot face can be produced to order.</p>	<p><b>Burring and Workpiece Chipping</b></p>  <p>① Lower the feed rate by 50% at the end of through cutting. ② Add a 45° chamfer. ③ Change the point angle.</p>
<p><b>Coolant Method (MVE)</b></p>  <p>Two coolant positions, at the end and at the center are ideal.</p>	<p><b>Through Coolant Type (MVS)</b></p>  <p>Spindles Through Coolant Type</p> <p>Revolving Coolant Machine Type</p> <p>Less than <math>\phi 3</math> mm : 1.5MPa-7MPa More than <math>\phi 3</math> mm : 0.5MPa-7MPa More than 3MPa is recommended.</p>	<p><b>Coolant Handling</b></p> <p>&lt;MVS Type&gt;</p> <ol style="list-style-type: none"> <li>Small particles of swarf will jam in the oil hole of small diameter drills. Always use a fine mesh filter as a preventative measure.</li> <li>Dirt and dust particles adhere to the oil in old coolant and prevent an efficient flow. Regular coolant exchange is recommended.</li> </ol>	<p><b>Drill Installation</b></p>  <p>① Drill a prepared hole about <math>DC \times 1</math> using the shortest flute length of MVS. (DC=drill diameter) ② Use the prepared hole as a guide when using a drill with an oil hole. Depending on the cutting conditions, peck feed is recommended.</p>

## Notes on Use (For DC < 3mm)

Please use a fine mesh filter (mesh < 3  $\mu$ m) for coolant to prevent jamming in the oil hole.

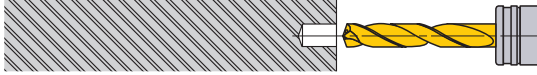
For deep drilling with the long type drill, machining a pilot hole is recommended.

(Otherwise, centrifugal forces may cause drill breakage.)

## Operational Guidance for the MVS of Small Diameter Long Type Drill (L/D≥10)

### Flat Face Drilling ●Drilling a blind hole

#### 1. Drilling a Pilot Hole



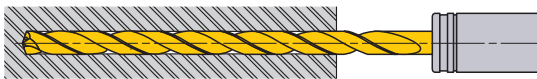
- ① Use a drill with a larger (flat) point angle than the long type 140°. Recommend a MVS pilot drill 145° point angle.
- ② Ensure a high precision hole is drilled for the guide.
- ③ Drill depth : Approx DCx1.  
(Adjust the pilot hole depth according to the length of the long type drill.)

#### 2. Initial Cutting with the Long Type Drill



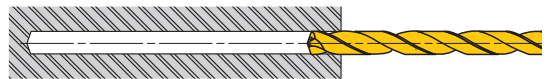
- ① Penetrate the guide hole at low revolution.  
(Revolution 1000 min<sup>-1</sup>, feed rate 0.2–0.3 mm/rev)
- ② Stop the long type drill 0.5–1 mm short of the guide hole bottom.

#### 3. Drill the Deep Hole



- ① Start cutting at the recommended speed and feed with a non-peck (continuous feed) cycle.

#### 4. Drill Retraction



- ① After drilling, lower the cutting revolution about 0.5–1 mm short of the hole end. (Revolution 1000 min<sup>-1</sup>)
- ② Retract the drill to the pilot hole depth starting point at a feed rate of 3000 mm/min.
- ③ Finally, clear the hole at a cutting speed of 20–30 m/min and feed rate of 0.2–0.3 mm/rev.

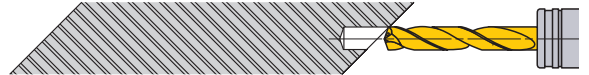
### Interrupted Drilling ●Drilling and breaking through on irregular faces or angles

#### 1. Spot Facing



- ① Machine a flat or the irregular face by using a MFE drill or an end mill capable of spot facing. Make the spot face diameter the same size as the required deep hole diameter.
- ② Ensure a high precision hole is drilled for the guide.
- ③ Drill depth : Approx DCx1.

#### 2. Drilling a Pilot Hole



- ① Use a drill with a larger (flat) point angle than the long type 140°. Recommend a MVS pilot drill 145° point angle.
- ② Ensure a high precision hole is drilled for the guide.
- ③ Drill depth : Approx DCx1.  
(Adjust the pilot hole depth according to the length of the long type drill.)

#### 3. Initial Cutting with the Long Type Drill



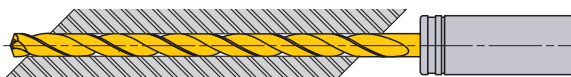
- ① Penetrate the guide hole at a low revolution.  
(Revolution 1000 min<sup>-1</sup>, feed rate 0.2–0.3 mm/rev)
- ② Stop the long type drill 0.5–1 mm short of the guide hole bottom.

#### 4. Drill the Deep Hole



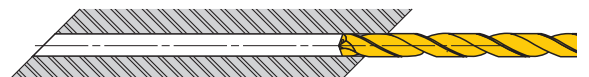
- ① Start cutting at the recommended speed and feed with a non-peck (continuous feed) cycle.
- ② Feed as usual until breaking through.

#### 5. Breaking Through



- ① When breaking through, the cutting edge can be damaged.
- ② Recommend about half rate of the usual feed rate after breaking through.

#### 6. Drill Retraction



- ① Finally clear the hole at a revolution speed 1000 min<sup>-1</sup> and feed rate of 0.2–0.3 mm/rev.
- ② Retract the drill to the pilot hole depth starting point at a feed rate of 3000 mm/min.

# Memo

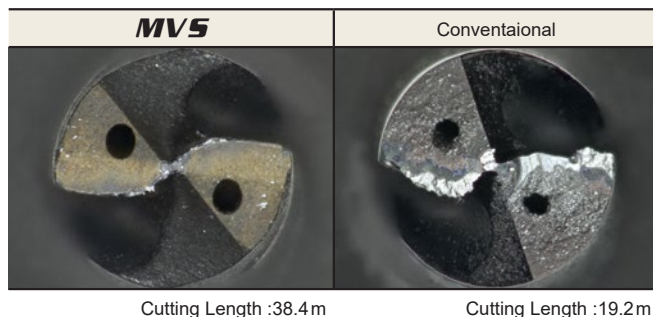
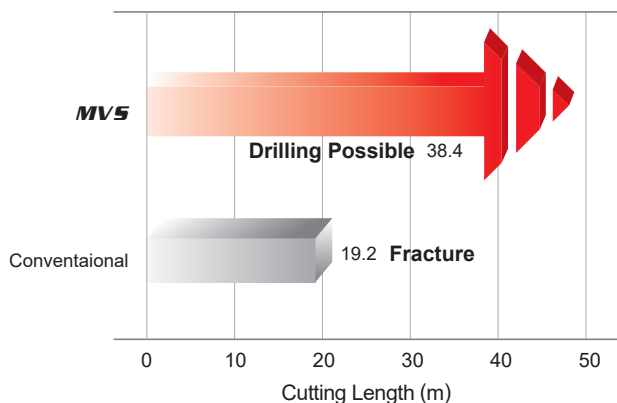
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## Cutting Performance

### Alloy Steel

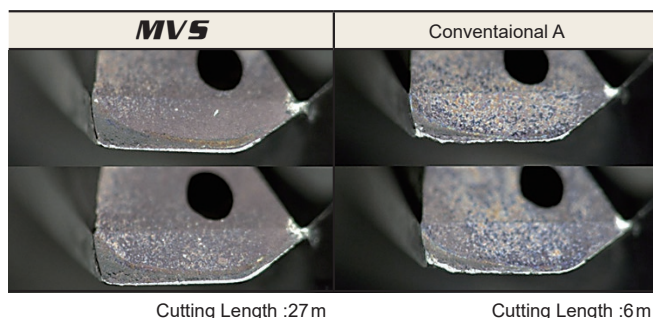
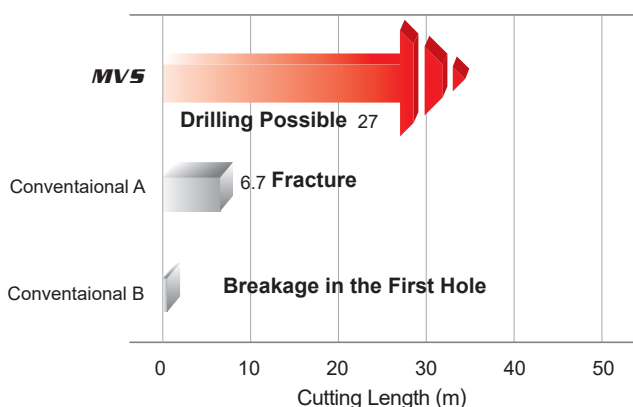
MVS gives a stable performance and double tool life.



<Cutting Conditions>  
 Drill Dia. :  $\phi$ 1 mm  
 Work Material : AISI 4140  
 Hole Depth : 4 mm (L/D=4)  
 Cutting Speed : 40 m/min  
 Feed Rate : 0.04 mm/rev  
 Cutting Mode : Water Based (7MPa)

### Stainless Steel

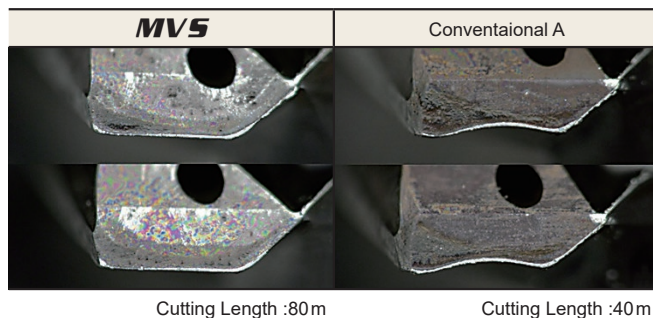
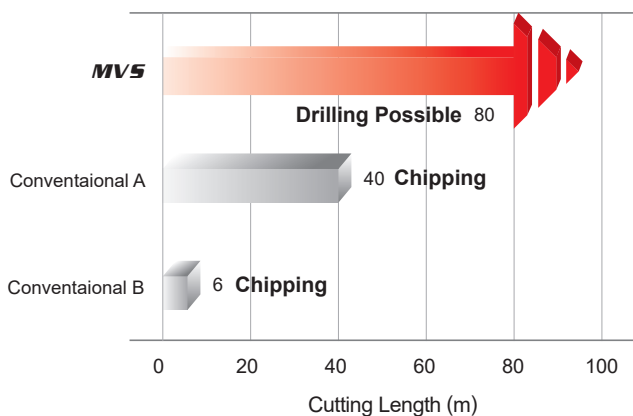
MVS provides stability and long tool life even when drilling stainless steel.



<Cutting Conditions>  
 Drill Dia. :  $\phi$ 2 mm  
 Work Material : AISI 304  
 Hole Depth : 4 mm (L/D=2)  
 Cutting Speed : 30 m/min  
 Feed Rate : 0.06 mm/rev  
 Cutting Mode : Water Based (7MPa)

### Stainless Steel (L/D=30)

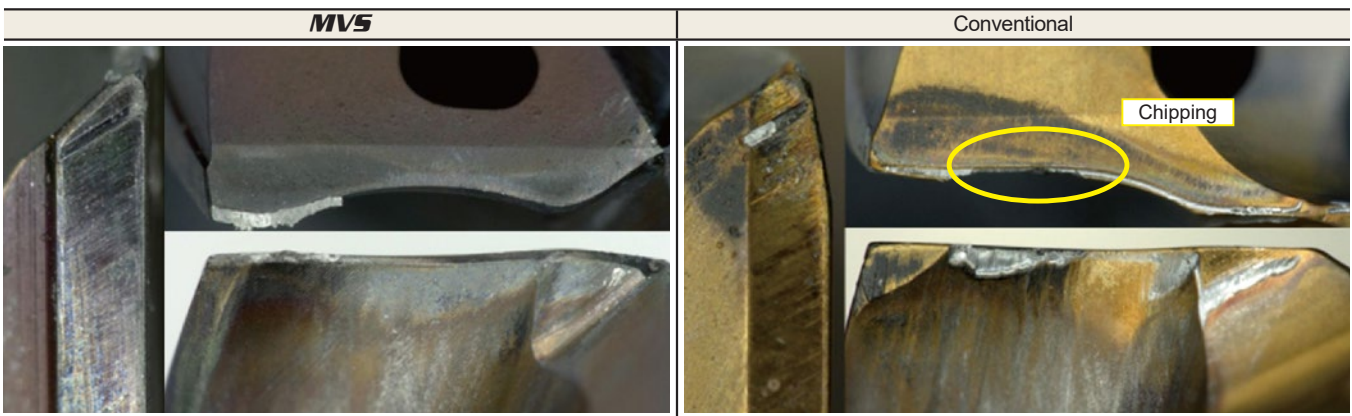
MVS provides stability and long tool life even when drilling deep holes in stainless steel.



<Cutting conditions>  
 Drill Dia. :  $\phi$ 2 mm  
 Work Material : AISI 304  
 Hole Depth : 60 mm (L/D=30)  
 Cutting Speed : 30 m/min  
 Feed Rate : 0.06 mm/rev  
 Cutting Mode : Water Based (7MPa)



## Alloy Steel

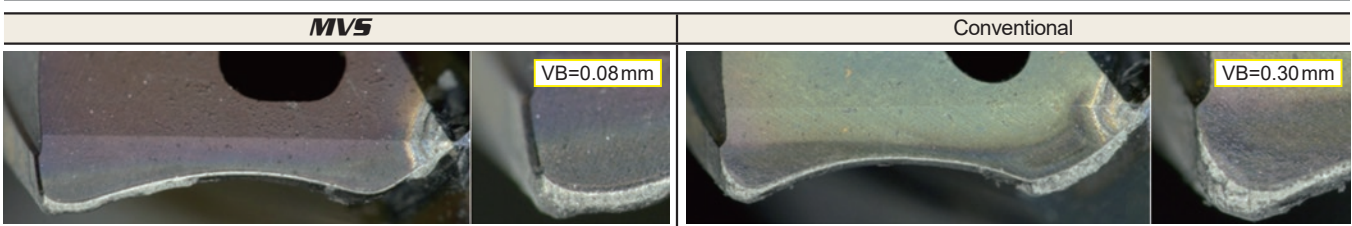


Damage of the cutting edge after 150m machining

<Cutting Conditions>

Drill Dia. : $\phi 6$ mm	Feed Rate : 0.2mm/rev
Work Material : AISI 4140	Cutting Mode : Water Based (Internal Coolant)
Hole Depth : 19mm (L/D=3)	Machine : Machining Center
Cutting Speed : 100m/min	

## Cast Iron

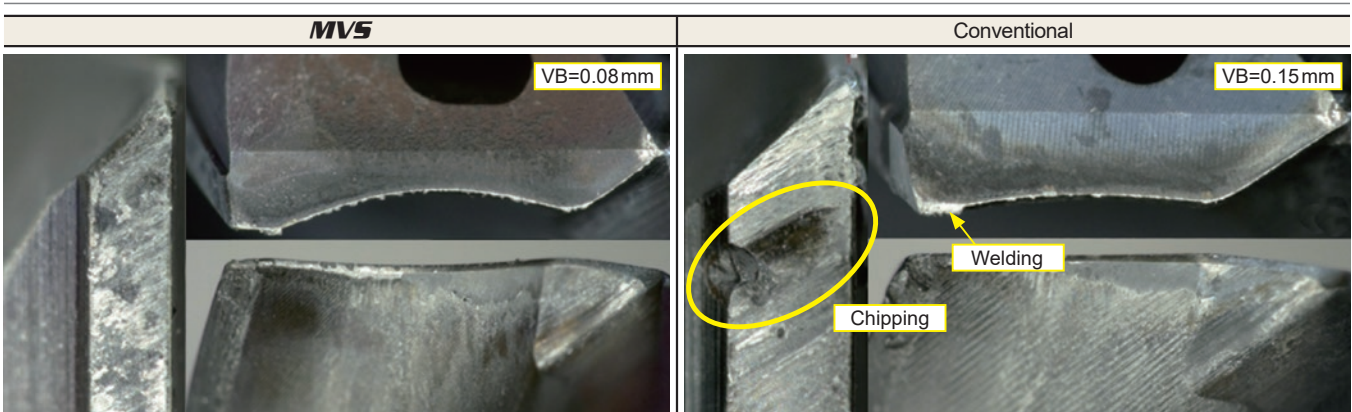


Damage of the cutting edge after 67m machining

<Cutting Conditions>

Drill Dia. : $\phi 6$ mm	Feed Rate : 0.2mm/rev
Work Material : No.35B	Cutting Mode : Water Based (Internal Coolant)
Hole Depth : 19mm (L/D=3)	Machine : Machining Center
Cutting Speed : 100m/min	

## Stainless Steel



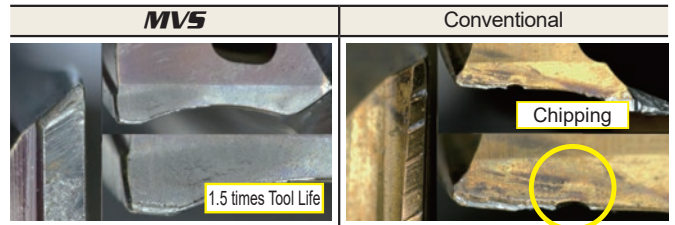
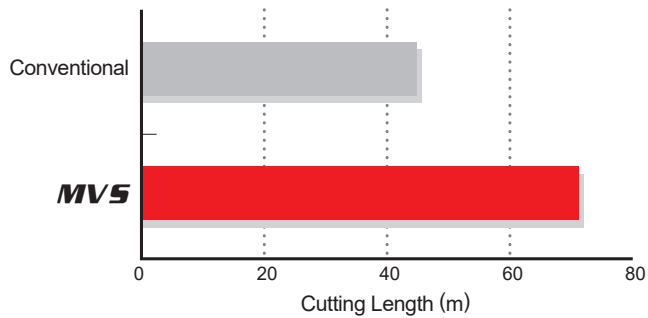
Damage of the cutting edge after 96m machining

<Cutting Conditions>

Drill Dia. : $\phi 6$ mm	Feed Rate : 0.15mm/rev
Work Material : AISI 304	Cutting Mode : Water Based (Internal Coolant)
Hole Depth : 19mm (L/D=3)	Machine : Machining Center
Cutting Speed : 60m/min	

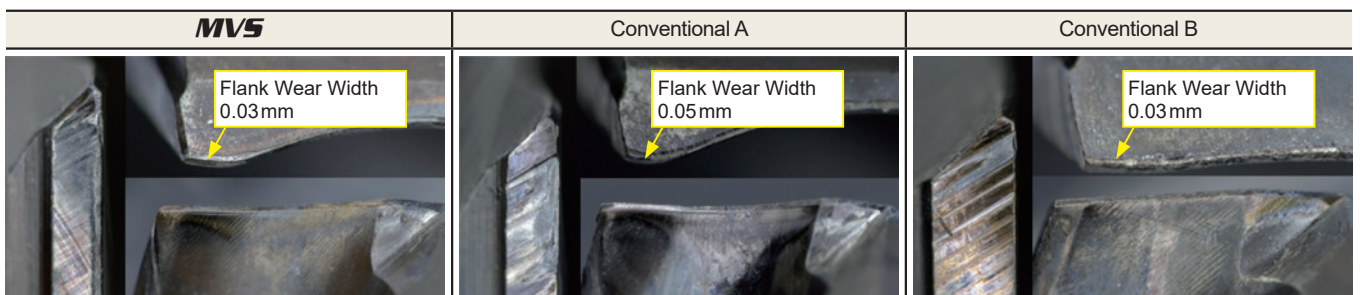
## Cutting Performance

### Carbon Steel



<Cutting Conditions>  
 Drill Dia. :  $\phi 6$ mm      Feed Rate : 0.2mm/rev  
 Work Material : AISI 1050      Cutting Mode : Water Based (Internal Coolant)  
 Hole Depth : 19mm (L/D=3)      Machine : Machining Center  
 Cutting Speed : 100m/min

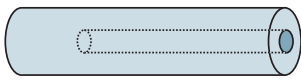
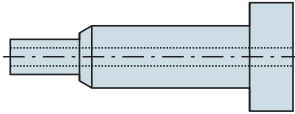

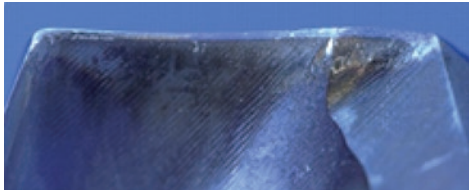
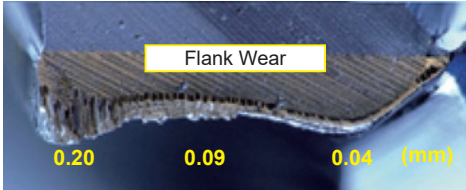

### M.Q.L. Cutting

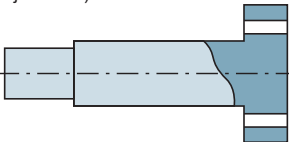
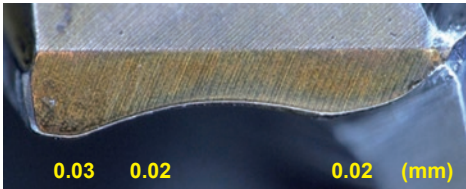
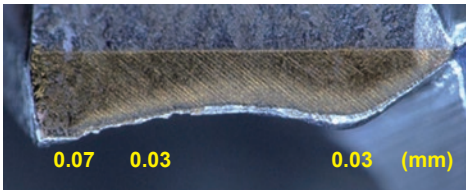


Damage of the cutting edge after 55m machining

<Cutting Conditions>  
 Drill Dia. :  $\phi 6$ mm      Feed Rate : 0.2mm/rev  
 Work Material : AISI 1050      Cutting Mode : M.Q.L.  
 Hole Depth : 19mm (L/D=3)      Machine : Machining Center  
 Cutting Speed : 80m/min







## Application Example

Drill		<b>MVS0300X03S030</b>	<b>MVS0620X03S070</b>
Workpiece		AISI 1010 (Automobile Parts)	AISI 1045 (Machine Parts)
			
Cutting Conditions	Cutting Speed (m/min)	56.5	43
	Feed Rate (mm/rev)	0.07	0.1
	Hole Depth (mm)	7.5	8.8
Cutting Mode		Water-insoluble	Water-insoluble
Result		Cutting Length 60m	Cutting Length 70.4m
		<b>MVS</b>	<b>MVS</b>
			
		Conventional	Conventional
			
		MVS shows only a small amount of wear and could continue machining.	MVS shows only a small amount of flank wear and no crater wear and could continue machining.

Drill		<b>MVE0370X02S040</b>
Workpiece		AISI 304 (Ink-jet Head)
		
Cutting Conditions	Cutting Speed (m/min)	23
	Feed Rate (mm/rev)	0.1
	Hole Depth (mm)	5
Cutting Mode		Water-insoluble
Result		Number of Holes 800 holes - Cutting Length 40m
		<b>MVE</b>
		
		Conventional
		
		MVS shows a small amount of wear and a 20% rise of the number of machining.

# WSTAR Drill Series

MVE / MVS drills are suitable for a wide range of applications.  
Drills for specific applications are also available.

	P Carbon Steel	M Stainless Steel	K Cast Iron	N Light Alloy	S Heat-resistant Alloy	H Hardened Steel
<b>MVE/MVS</b> 	○	○	○	○	○	○ Only MVE
<b>MQS</b> News No.B185 	○		○			
<b>MMS</b> News No.B180 		○				
<b>MNS</b> News No.B135 				○		
<b>MHS</b> News No.B137 	○	○			○	○
<b>MWE/MWS</b> News No.B110 	○	○	○	○	○	○ Only MWE

#### For Your Safety

●Don't handle inserts and chips without gloves. ●Please machine within the recommended application range and exchange expired tools with new ones in advance of breakage. ●Please use safety covers and wear safety glasses. ●When using compounded cutting oils, please take fire precautions. ●When using rotating tools, please make a trial run to check run-out, vibration and abnormal sounds etc. ●Grinding or heating of cutting tools produces dust and mist. Inhaling large amount of dust or contacting with eyes and skins may harm your body.

## MITSUBISHI MATERIALS CORPORATION

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<http://www.mitsubishicarbide.com/en/>  
(Tools specifications subject to change without notice.)