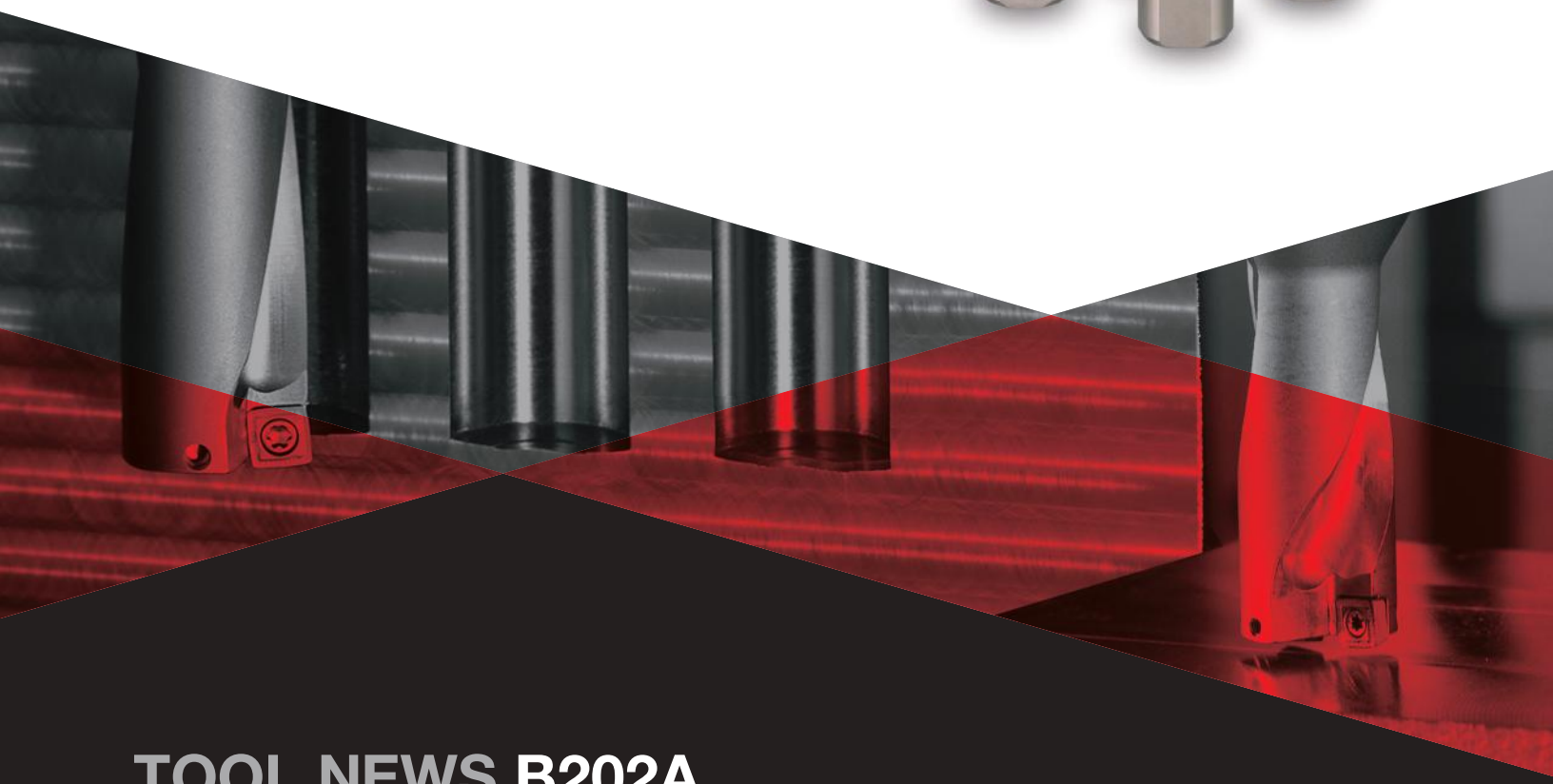
MITSUBISHI MATERIALS

MVX
Indexable Drill

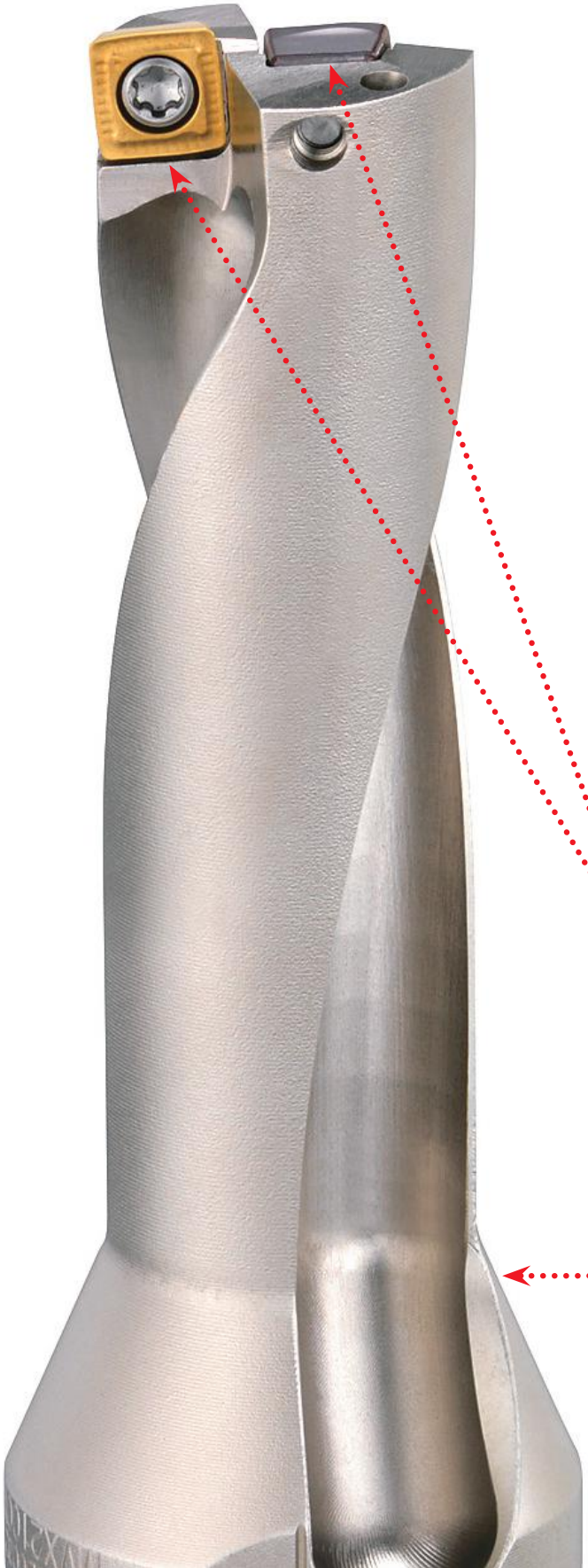
HIGHLY RIGID BODY
PRODUCED BY UTILIZING
THE LATEST TECHNOLOGY





TOOL NEWS **B202A**

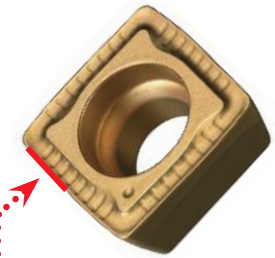
MVX Indexable Drill



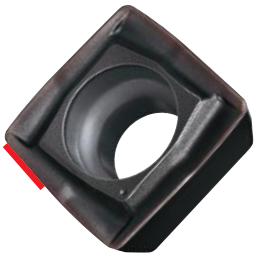
4 Cutting Edges

Economical 4-corner insert.

Unique Chip Breaker Design



Universal
UM Breaker



US Breaker
for Stainless Steels

For a wide range of workpiece materials and applications.

Wiper Edge

A wiper type geometry for the peripheral cutting edge achieves excellent wall accuracy.

Ideal Combination of Outer CVD Insert and Inner PVD Insert

A highly wear resistant CVD coated insert is used for the peripheral edge and a PVD coated insert is used for the inner position for extra stability.

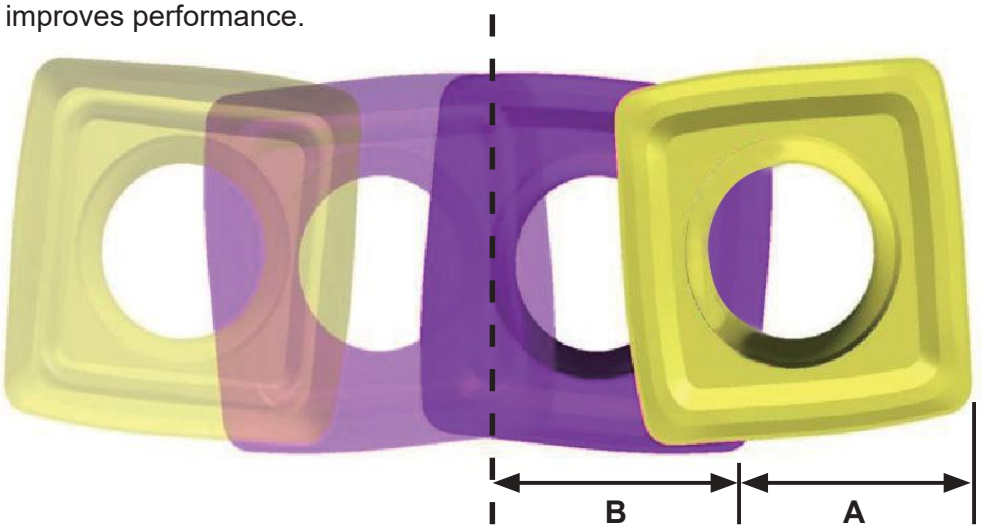
High Rigid Body

Increased surface hardness prevents abrasive damage caused by chip flow.
Optimum insert position controls deformation and vibration of the holder. This enabled a maximum drilling depth of L/D=6.

Key Technology that Enabled L/D=6 Machining

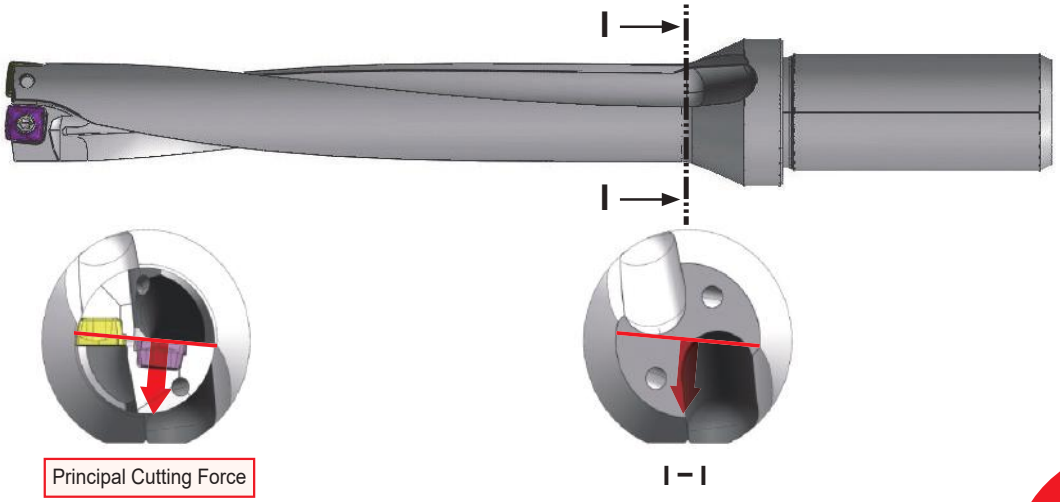
Optimum Positioning of the Outer and Inner Inserts

By optimizing the cutting ratio A & B for the outer and inner inserts, deformation of the tool body can be controlled. Additionally, the uniformity of the cutting ratio A and B; across all diameters, reduces variations and improves performance.



Optimum Flute Positioning

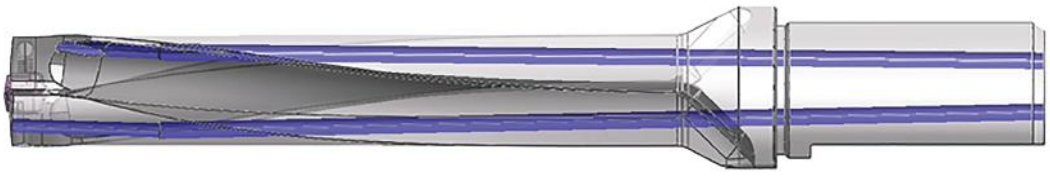
Extra body thickness positioned behind the inner edge helps to resist the principal force and prevents twisting and deformation during the initial cutting.



Inclined Coolant Through Holes

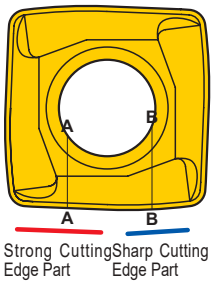
Chip evacuation when drilling deep holes is improved with specially designed coolant through holes that maintain coolant pressure.

Chip evacuation capacity is 20% greater than conventional products.

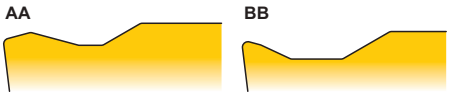


Insert Chip Breaker

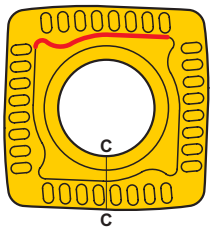
Inner Insert, for Stainless Steels
US Breaker



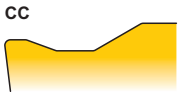
The cutting edge has both sharp and strong type geometry along its length for improved fracture resistance. The radius design also achieves excellent fracture and welding resistance.



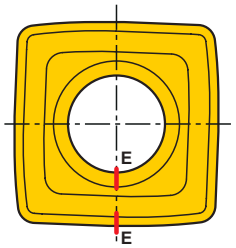
For General Use, Medium and High Feed Rates
UM Breaker



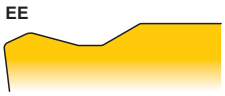
The unique wave design allows smooth chip discharge.
An universal breaker for steels, stainless steels, cast irons and hardened steels.



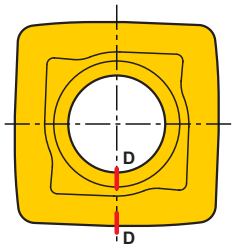
Insert with Reinforced Edge
UH Breaker



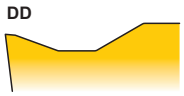
The strengthened cutting edge and Ti-Al-Si coating provides excellent stability even when cutting hardened steels (up to 45HRC) or general steels.



Insert for Aluminum Alloys
UN Breaker



Outstanding chip evacuation is achieved by the breaker which was designed to focus on sharpness. Aluminum alloys welding is also prevented by smoothing on the rake surfaces.



Insert Selection Criteria

The peripheral cutting speed is naturally slower towards the center of the drill and chip welding easily occurs.
Below are some important points that will help to select the correct insert.

Steels and Cast Irons
Please use the UM breaker.
For the outer edge, use the CVD coated grade MC1020 for steels applications and the MC5020 grade for cast irons. For the inner edge the PVD coated grade VP15TF should be used. If fracturing occurs, VP15TF should be used for both positions to provide extra stability.

Stainless Steels
For the best performance, use the UM breaker in the peripheral edge and the US breaker in the inner edge. The selection of grade should be the same as used for steels.

Hardened Steels and Preventing Fracture
For the inner edge, UH is the ideal breaker.
The high-strength, negative land edge, together with the durable PVD coated carbide grade DP8020, are suitable for machining hardened steels (45HRC or lower) and preventing fracture in steels and cast irons.

Aluminum Alloys Processing
For both the inner and outer edges, UN breakers are ideal.
The polished finish and peripheral polishing prevent welding, and the combination of the positive lands and high rake angle further enhances the sharpness.

		1st Recommendation		When Outer Insert Fractures	
		Outer Insert	Inner Insert	Outer Insert	Inner Insert
P	Mild Steels, Alloy Steels	MC1020	VP15TF	VP15TF	VP15TF
		UM Breaker	**UM Breaker**	**UM Breaker**	**UM Breaker**
M	Stainless Steels	MC1020	VP15TF	VP15TF	VP15TF
		UM Breaker	**US Breaker**	**UM Breaker**	**US Breaker**
K	Cast Irons	MC5020	VP15TF	VP15TF	VP15TF
		UM Breaker	**UM Breaker**	**UM Breaker**	**UM Breaker**
H	Hardened Steels	MC1020	DP8020	VP15TF	DP8020
		UM Breaker	**UH Breaker**	**UM Breaker**	**UH Breaker**
N	Aluminum Alloys	TF15	TF15		
		UN Breaker	**UN Breaker**		

Features of Grade

MC1020

MC1020 is a CVD coated grade for higher cutting speeds.
The main properties are high wear and high plastic deformation resistance for reliability.

MC5020

MC5020 is a CVD coated grade suitable for drilling cast irons.
It has excellent abrasion resistance and gives long tool life by controlling chipping and thermal cracking that can occur when drilling nodular cast irons.

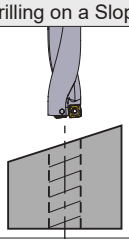
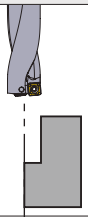
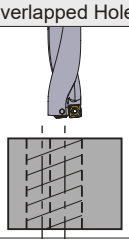
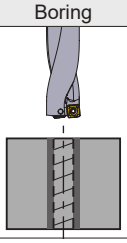
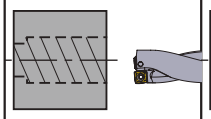
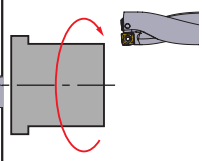
VP15TF

VP15TF is a PVD coated grade suitable for a wide range of applications.
The micro-grain substrate and Miracle coating provide excellent welding resistance.

DP8020

With the combination of a tough, special carbide substrate and high-hardness Ti-Al-Si coating, DP8020 is a PVD coated carbide grade suitable for hardened steels (45 HRC or lower) and preventing fracture in steels and cast irons.

Special Application Examples

	Drilling on a Slope	Half Hole	Overlapped Holes	Boring	Internal Turning	External Turning
Cutting Mode						
Cutting Speed **vc** (SFM)	260–525	260–525	260	260–525	260–525	260–525
Feed **fr** (IPR)	.002–.004	.002–.003	.003	.002–.003	.002–.004	.002–.004

For special applications use only up to a DC x 4 length tool body.

INDEXABLE DRILL

MVX ø.562"—ø.656"

P M K N S H

Inch Standard

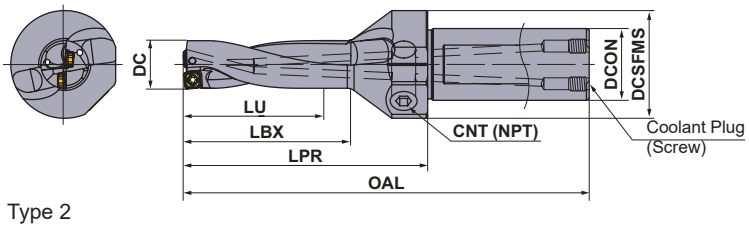
Internal Coolant

Machining Tolerance (Guide)(inch)

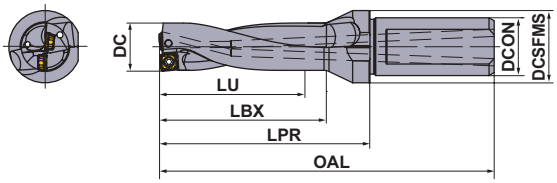
L/D	ø.562"—ø.656"
2, 3	$^{+.0098}_{0}$
4, 5	$^{+.0138}_{0}$



Type 1

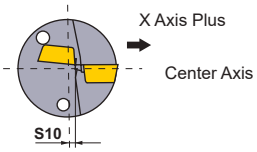


Type 2



Side Coolant Not Available.

Maximum Offset for Turning



(inch)

DC	Hole Depth (L/D)	Order Number	Stock	*2 No.T	LU	LBX	LPR	OAL	DCON	DCSFMS	S10	Type	Insert Type	*1 Clamp Screw	Wrench	NPT Plug (Side) CNT	(Back) Coolant Plug (Screw)	Coolant Plug (Wrench)
.562	2	MVX0562X2C075	●	2	1.12	1.40	2.19	4.19	.750	1.25	.026	1	SO○X05	TPS20-1	TIP06F	1/8	HSS05006	HKY25R
	3	MVX0562X3C075	●	2	1.69	1.96	2.75	4.75	.750	1.25	.026	1	SO○X05	TPS20-1	TIP06F	1/8	HSS05006	HKY25R
	4	MVX0562X4C075	●	2	2.25	2.52	3.32	5.32	.750	1.25	.026	1	SO○X05	TPS20-1	TIP06F	1/8	HSS05006	HKY25R
	5	MVX0562X5F075	●	2	2.81	3.09	3.61	5.61	.750	.98	.026	2	SO○X05	TPS20-1	TIP06F	—	—	—
.593	2	MVX0593X2C075	●	2	1.19	1.46	2.25	4.25	.750	1.25	.016	1	SO○X05	TPS20-1	TIP06F	1/8	HSS05006	HKY25R
	3	MVX0593X3C075	●	2	1.78	2.06	2.85	4.85	.750	1.25	.016	1	SO○X05	TPS20-1	TIP06F	1/8	HSS05006	HKY25R
	4	MVX0593X4C075	●	2	2.37	2.65	3.44	5.44	.750	1.25	.016	1	SO○X05	TPS20-1	TIP06F	1/8	HSS05006	HKY25R
	5	MVX0593X5F075	●	2	2.97	3.24	3.77	5.77	.750	.98	.016	2	SO○X05	TPS20-1	TIP06F	—	—	—
.625	2	MVX0625X2C075	●	2	1.25	1.53	2.32	4.32	.750	1.25	.013	1	SO○X05	TPS20-1	TIP06F	1/8	HSS05006	HKY25R
	3	MVX0625X3C075	●	2	1.88	2.15	2.94	4.94	.750	1.25	.013	1	SO○X05	TPS20-1	TIP06F	1/8	HSS05006	HKY25R
	4	MVX0625X4C075	●	2	2.50	2.78	3.57	5.57	.750	1.25	.013	1	SO○X05	TPS20-1	TIP06F	1/8	HSS05006	HKY25R
	5	MVX0625X5F075	●	2	3.13	3.40	3.93	5.93	.750	.98	.013	2	SO○X05	TPS20-1	TIP06F	—	—	—
.656	2	MVX0656X2C075	●	2	1.31	1.59	2.38	4.38	.750	1.25	.009	1	SO○X05	TPS20-1	TIP06F	1/8	HSS05006	HKY25R
	3	MVX0656X3C075	●	2	1.97	2.24	3.04	5.04	.750	1.25	.009	1	SO○X05	TPS20-1	TIP06F	1/8	HSS05006	HKY25R
	4	MVX0656X4C075	●	2	2.62	2.90	3.69	5.69	.750	1.25	.009	1	SO○X05	TPS20-1	TIP06F	1/8	HSS05006	HKY25R
	5	MVX0656X5F075	●	2	3.28	3.56	4.08	6.08	.750	.98	.009	2	SO○X05	TPS20-1	TIP06F	—	—	—

*1 Clamp Torque (lbf-in) : TPS20-1=5.3

*2 Number of Teeth

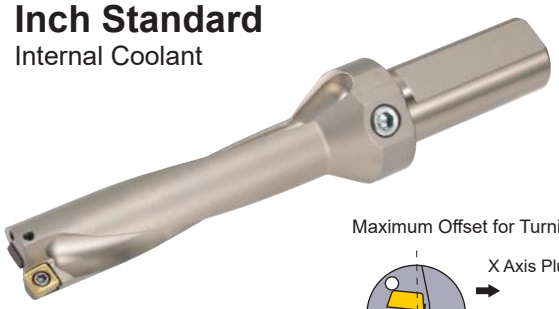
● : USA Stock

MVX ø.687"–ø2.500"

P M K N S H

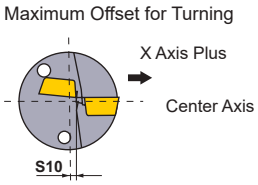
Inch Standard

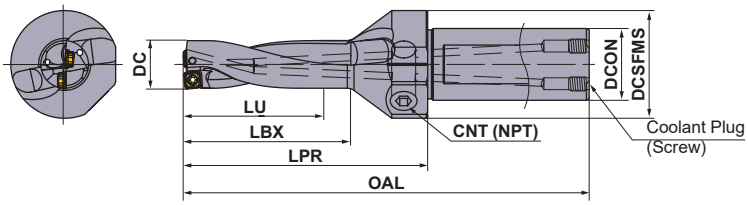
Internal Coolant



Machining Tolerance (Guide)(inch)

L/D	ø.687"–ø1.312"	ø1.375"–ø1.812"	ø1.875"–ø2.500"
2, 3	$^{+.0098}_{0}$	$^{+.0118}_{0}$	$^{+.0118}_{0}$
4, 5	$^{+.0138}_{0}$	$^{+.0157}_{0}$	$^{+.0177}_{0}$
6	$^{+.0177}_{0}$	$^{+.0236}_{0}$	–





(inch)

DC	Hole Depth (L/D)	Order Number	Stock	*2 No.T	LU	LBX	LPR	OAL	DCON	DCSFMS	S10	Insert Type	*1 Clamp Screw	F W Wrench	NPT Plug (Side) CNT	(Back) Coolant Plug (Screw)	Coolant Plug (Wrench)
.687	2	MVX0687X2C100	●	2	1.37	1.65	2.72	4.97	1.000	1.50	.023	SO○X06	TPS25	TIP07F	1/8	HSS05006	HKY25R
	3	MVX0687X3C100	●	2	2.06	2.34	3.41	5.66	1.000	1.50	.023	SO○X06	TPS25	TIP07F	1/8	HSS05006	HKY25R
	4	MVX0687X4C100	●	2	2.75	3.03	4.09	6.34	1.000	1.50	.023	SO○X06	TPS25	TIP07F	1/8	HSS05006	HKY25R
	5	MVX0687X5C100	●	2	3.44	3.71	4.78	7.03	1.000	1.50	.023	SO○X06	TPS25	TIP07F	1/8	HSS05006	HKY25R
	6	MVX0687X6C100	●	2	4.12	4.40	5.47	7.72	1.000	1.50	.023	SO○X06	TPS25	TIP07F	1/8	HSS05006	HKY25R
.750	2	MVX0750X2C100	●	2	1.50	1.78	2.91	5.16	1.000	1.50	.016	SO○X06	TPS25	TIP07F	1/8	HSS05006	HKY25R
	3	MVX0750X3C100	●	2	2.25	2.53	3.66	5.91	1.000	1.50	.016	SO○X06	TPS25	TIP07F	1/8	HSS05006	HKY25R
	4	MVX0750X4C100	●	2	3.00	3.28	4.41	6.66	1.000	1.50	.016	SO○X06	TPS25	TIP07F	1/8	HSS05006	HKY25R
	5	MVX0750X5C100	●	2	3.75	4.03	5.16	7.41	1.000	1.50	.016	SO○X06	TPS25	TIP07F	1/8	HSS05006	HKY25R
	6	MVX0750X6C100	●	2	4.50	4.78	5.91	8.16	1.000	1.50	.016	SO○X06	TPS25	TIP07F	1/8	HSS05006	HKY25R
.812	2	MVX0812X2C100	●	2	1.62	1.90	3.01	5.26	1.000	1.50	.027	SO○X07	TPS3	TIP10F	1/8	HSS05006	HKY25R
	3	MVX0812X3C100	●	2	2.44	2.71	3.82	6.07	1.000	1.50	.027	SO○X07	TPS3	TIP10F	1/8	HSS05006	HKY25R
	4	MVX0812X4C100	●	2	3.25	3.53	4.63	6.88	1.000	1.50	.027	SO○X07	TPS3	TIP10F	1/8	HSS05006	HKY25R
	5	MVX0812X5C100	●	2	4.06	4.34	5.44	7.69	1.000	1.50	.027	SO○X07	TPS3	TIP10F	1/8	HSS05006	HKY25R
	6	MVX0812X6C100	●	2	4.87	5.15	6.26	8.51	1.000	1.50	.027	SO○X07	TPS3	TIP10F	1/8	HSS05006	HKY25R
.875	2	MVX0875X2C100	●	2	1.75	2.03	3.12	5.37	1.000	1.50	.020	SO○X07	TPS3	TIP10F	1/8	HSS05006	HKY25R
	3	MVX0875X3C100	●	2	2.63	2.90	4.00	6.25	1.000	1.50	.020	SO○X07	TPS3	TIP10F	1/8	HSS05006	HKY25R
	4	MVX0875X4C100	●	2	3.50	3.78	4.87	7.12	1.000	1.50	.020	SO○X07	TPS3	TIP10F	1/8	HSS05006	HKY25R
	5	MVX0875X5C100	●	2	4.38	4.65	5.75	8.00	1.000	1.50	.020	SO○X07	TPS3	TIP10F	1/8	HSS05006	HKY25R
	6	MVX0875X6C100	●	2	5.25	5.53	6.62	8.87	1.000	1.50	.020	SO○X07	TPS3	TIP10F	1/8	HSS05006	HKY25R
.937	2	MVX0937X2C100	●	2	1.87	2.15	3.24	5.49	1.000	1.50	.037	SO○X08	TPS351	TIP10W	1/8	HSS05006	HKY25R
	3	MVX0937X3C100	●	2	2.81	3.09	4.17	6.42	1.000	1.50	.037	SO○X08	TPS351	TIP10W	1/8	HSS05006	HKY25R
	4	MVX0937X4C100	●	2	3.75	4.03	5.11	7.36	1.000	1.50	.037	SO○X08	TPS351	TIP10W	1/8	HSS05006	HKY25R
	5	MVX0937X5C100	●	2	4.69	4.96	6.05	8.30	1.000	1.50	.037	SO○X08	TPS351	TIP10W	1/8	HSS05006	HKY25R
	6	MVX0937X6C100	●	2	5.62	5.90	6.99	9.24	1.000	1.50	.037	SO○X08	TPS351	TIP10W	1/8	HSS05006	HKY25R
1.000	2	MVX1000X2C125	●	2	2.00	2.28	3.35	5.73	1.250	1.75	.030	SO○X08	TPS351	TIP10W	1/8	HSS06008	HKY30R
	3	MVX1000X3C125	●	2	3.00	3.28	4.35	6.73	1.250	1.75	.030	SO○X08	TPS351	TIP10W	1/8	HSS06008	HKY30R
	4	MVX1000X4C125	●	2	4.00	4.28	5.35	7.73	1.250	1.75	.030	SO○X08	TPS351	TIP10W	1/8	HSS06008	HKY30R
	5	MVX1000X5C125	●	2	5.00	5.28	6.35	8.73	1.250	1.75	.030	SO○X08	TPS351	TIP10W	1/8	HSS06008	HKY30R
	6	MVX1000X6C125	●	2	6.00	6.28	7.35	9.73	1.250	1.75	.030	SO○X08	TPS351	TIP10W	1/8	HSS06008	HKY30R

*1 Clamp Torque (lbf-in) : TPS25=8.9, TPS3=17.7, TPS351=22

*2 Number of Teeth

DC = Cutting Diameter
LU = Usable Length
LBX = Usable Length
LPR = Protruding Length
OAL = Overall Length
DCON = Fixing Part Depth
DCSFMS = Flange Diameter

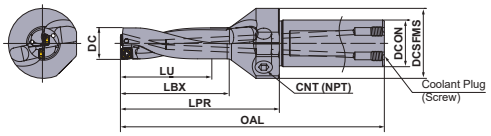
INDEXABLE DRILL
MVX

(inch)

DC	Hole Depth (L/D)	Order Number	Stock	*2 No.T	LU	LBX	LPR	OAL	DCON	DCSFMS	S10	Insert Type	*1 Clamp Screw	Wrench	NPT Plug (Side) CNT	(Back) Coolant Plug (Screw)	Coolant Plug (Wrench)
1.062	2	MVX1062X2C125	●	2	2.12	2.40	3.46	5.84	1.250	1.75	.022	SO○X08	TPS351	TIP10W	1/8	HSS06008	HKY30R
	3	MVX1062X3C125	●	2	3.19	3.46	4.53	6.90	1.250	1.75	.022	SO○X08	TPS351	TIP10W	1/8	HSS06008	HKY30R
	4	MVX1062X4C125	●	2	4.25	4.53	5.59	7.96	1.250	1.75	.022	SO○X08	TPS351	TIP10W	1/8	HSS06008	HKY30R
	5	MVX1062X5C125	●	2	5.31	5.59	6.65	9.03	1.250	1.75	.022	SO○X08	TPS351	TIP10W	1/8	HSS06008	HKY30R
	6	MVX1062X6C125	●	2	6.37	6.65	7.71	10.09	1.250	1.75	.022	SO○X08	TPS351	TIP10W	1/8	HSS06008	HKY30R
1.125	2	MVX1125X2C125	●	2	2.25	2.53	3.64	6.01	1.250	1.75	.040	SO○X09	TPS4	TIP15W	1/8	HSS06008	HKY30R
	3	MVX1125X3C125	●	2	3.38	3.65	4.76	7.14	1.250	1.75	.040	SO○X09	TPS4	TIP15W	1/8	HSS06008	HKY30R
	4	MVX1125X4C125	●	2	4.50	4.78	5.89	8.26	1.250	1.75	.040	SO○X09	TPS4	TIP15W	1/8	HSS06008	HKY30R
	5	MVX1125X5C125	●	2	5.63	5.90	7.01	9.39	1.250	1.75	.040	SO○X09	TPS4	TIP15W	1/8	HSS06008	HKY30R
	6	MVX1125X6C125	●	2	6.75	7.03	8.14	10.51	1.250	1.75	.040	SO○X09	TPS4	TIP15W	1/8	HSS06008	HKY30R
1.187	2	MVX1187X2C125	●	2	2.37	2.65	3.76	6.13	1.250	1.75	.033	SO○X09	TPS4	TIP15W	1/8	HSS06008	HKY30R
	3	MVX1187X3C125	●	2	3.56	3.84	4.94	7.32	1.250	1.75	.033	SO○X09	TPS4	TIP15W	1/8	HSS06008	HKY30R
	4	MVX1187X4C125	●	2	4.75	5.03	6.13	8.51	1.250	1.75	.033	SO○X09	TPS4	TIP15W	1/8	HSS06008	HKY30R
	5	MVX1187X5C125	●	2	5.94	6.21	7.32	9.69	1.250	1.75	.033	SO○X09	TPS4	TIP15W	1/8	HSS06008	HKY30R
	6	MVX1187X6C125	●	2	7.12	7.40	8.51	10.88	1.250	1.75	.033	SO○X09	TPS4	TIP15W	1/8	HSS06008	HKY30R
1.250	2	MVX1250X2C150	●	2	2.50	2.78	3.87	6.62	1.500	2.00	.025	SO○X09	TPS4	TIP15W	1/8	HSS06008	HKY30R
	3	MVX1250X3C150	●	2	3.75	4.03	5.12	7.87	1.500	2.00	.025	SO○X09	TPS4	TIP15W	1/8	HSS06008	HKY30R
	4	MVX1250X4C150	●	2	5.00	5.28	6.37	9.12	1.500	2.00	.025	SO○X09	TPS4	TIP15W	1/8	HSS06008	HKY30R
	5	MVX1250X5C150	●	2	6.25	6.53	7.62	10.37	1.500	2.00	.025	SO○X09	TPS4	TIP15W	1/8	HSS06008	HKY30R
	6	MVX1250X6C150	●	2	7.50	7.78	8.87	11.62	1.500	2.00	.025	SO○X09	TPS4	TIP15W	1/8	HSS06008	HKY30R
1.312	2	MVX1312X2C150	●	2	2.62	2.90	4.40	7.15	1.500	2.00	.049	SO○X11	TPS43	TIP15W	1/4	HSS08010	HKY40R
	3	MVX1312X3C150	●	2	3.94	4.21	5.71	8.46	1.500	2.00	.049	SO○X11	TPS43	TIP15W	1/4	HSS08010	HKY40R
	4	MVX1312X4C150	●	2	5.25	5.53	7.02	9.77	1.500	2.00	.049	SO○X11	TPS43	TIP15W	1/4	HSS08010	HKY40R
	5	MVX1312X5C150	●	2	6.56	6.84	8.33	11.08	1.500	2.00	.049	SO○X11	TPS43	TIP15W	1/4	HSS08010	HKY40R
	6	MVX1312X6C150	●	2	7.87	8.15	9.65	12.40	1.500	2.00	.049	SO○X11	TPS43	TIP15W	1/4	HSS08010	HKY40R
1.375	2	MVX1375X2C150	●	2	2.75	3.03	4.52	7.27	1.500	2.00	.041	SO○X11	TPS43	TIP15W	1/4	HSS08010	HKY40R
	3	MVX1375X3C150	●	2	4.13	4.40	5.90	8.65	1.500	2.00	.041	SO○X11	TPS43	TIP15W	1/4	HSS08010	HKY40R
	4	MVX1375X4C150	●	2	5.50	5.78	7.27	10.02	1.500	2.00	.041	SO○X11	TPS43	TIP15W	1/4	HSS08010	HKY40R
	5	MVX1375X5C150	●	2	6.88	7.15	8.65	11.40	1.500	2.00	.041	SO○X11	TPS43	TIP15W	1/4	HSS08010	HKY40R
	6	MVX1375X6C150	●	2	8.25	8.53	10.02	12.77	1.500	2.00	.041	SO○X11	TPS43	TIP15W	1/4	HSS08010	HKY40R
1.437	2	MVX1437X2C150	●	2	2.87	3.15	4.65	7.40	1.500	2.00	.036	SO○X11	TPS43	TIP15W	1/4	HSS08010	HKY40R
	3	MVX1437X3C150	●	2	4.31	4.59	6.08	8.83	1.500	2.00	.036	SO○X11	TPS43	TIP15W	1/4	HSS08010	HKY40R
	4	MVX1437X4C150	●	2	5.75	6.03	7.52	10.27	1.500	2.00	.036	SO○X11	TPS43	TIP15W	1/4	HSS08010	HKY40R
	5	MVX1437X5C150	●	2	7.19	7.46	8.96	11.71	1.500	2.00	.036	SO○X11	TPS43	TIP15W	1/4	HSS08010	HKY40R
	6	MVX1437X6C150	●	2	8.62	8.90	10.40	13.15	1.500	2.00	.036	SO○X11	TPS43	TIP15W	1/4	HSS08010	HKY40R
1.500	2	MVX1500X2C150	●	2	3.00	3.28	4.77	7.52	1.500	2.00	.031	SO○X11	TPS43	TIP15W	1/4	HSS08010	HKY40R
	3	MVX1500X3C150	●	2	4.50	4.78	6.27	9.02	1.500	2.00	.031	SO○X11	TPS43	TIP15W	1/4	HSS08010	HKY40R
	4	MVX1500X4C150	●	2	6.00	6.28	7.77	10.52	1.500	2.00	.031	SO○X11	TPS43	TIP15W	1/4	HSS08010	HKY40R
	5	MVX1500X5C150	●	2	7.50	7.78	9.27	12.02	1.500	2.00	.031	SO○X11	TPS43	TIP15W	1/4	HSS08010	HKY40R
	6	MVX1500X6C150	●	2	9.00	9.28	10.77	13.52	1.500	2.00	.031	SO○X11	TPS43	TIP15W	1/4	HSS08010	HKY40R
1.562	2	MVX1562X2C150	●	2	3.12	3.40	4.90	7.65	1.500	2.00	.021	SO○X11	TPS43	TIP15W	1/4	HSS08010	HKY40R
	3	MVX1562X3C150	●	2	4.69	4.96	6.46	9.21	1.500	2.00	.021	SO○X11	TPS43	TIP15W	1/4	HSS08010	HKY40R
	4	MVX1562X4C150	●	2	6.25	6.53	8.02	10.77	1.500	2.00	.021	SO○X11	TPS43	TIP15W	1/4	HSS08010	HKY40R
	5	MVX1562X5C150	●	2	7.81	8.09	9.58	12.33	1.500	2.00	.021	SO○X11	TPS43	TIP15W	1/4	HSS08010	HKY40R
	6	MVX1562X6C150	●	2	9.37	9.65	11.15	13.90	1.500	2.00	.021	SO○X11	TPS43	TIP15W	1/4	HSS08010	HKY40R

*1 Clamp Torque (lbf-in) : TPS351=22, TPS4=31, TPS43=31
*2 Number of Teeth

● : **USA Stock**



(inch)

DC	Hole Depth (L/D)	Order Number	Stock	*2 No.T	LU	LBX	LPR	OAL	DCON	DCSFMS	S10	Insert Type	*1 Clamp Screw	W D Wrench	NPT Plug (Side) CNT	(Back) Coolant Plug (Screw)	Coolant Plug (Wrench)
1.625	2	**MVX1625X2C150**	●	2	3.25	3.53	5.02	7.77	1.500	2.00	.053	**SO○X13**	TPS43	TIP15W	1/4	HSS08010	HKY40R
	3	**MVX1625X3C150**	●	2	4.88	5.15	6.65	9.40	1.500	2.00	.053	**SO○X13**	TPS43	TIP15W	1/4	HSS08010	HKY40R
	4	**MVX1625X4C150**	●	2	6.50	6.78	8.27	11.02	1.500	2.00	.053	**SO○X13**	TPS43	TIP15W	1/4	HSS08010	HKY40R
	5	**MVX1625X5C150**	●	2	8.13	8.40	9.90	12.65	1.500	2.00	.053	**SO○X13**	TPS43	TIP15W	1/4	HSS08010	HKY40R
	6	**MVX1625X6C150**	●	2	9.75	10.03	11.52	14.27	1.500	2.00	.053	**SO○X13**	TPS43	TIP15W	1/4	HSS08010	HKY40R
1.687	2	**MVX1687X2C150**	●	2	3.37	3.65	5.15	7.90	1.500	2.00	.047	**SO○X13**	TPS43	TIP15W	1/4	HSS08010	HKY40R
	3	**MVX1687X3C150**	●	2	5.06	5.34	6.83	9.58	1.500	2.00	.047	**SO○X13**	TPS43	TIP15W	1/4	HSS08010	HKY40R
	4	**MVX1687X4C150**	●	2	6.75	7.03	8.52	11.27	1.500	2.00	.047	**SO○X13**	TPS43	TIP15W	1/4	HSS08010	HKY40R
	5	**MVX1687X5C150**	●	2	8.44	8.71	10.21	12.96	1.500	2.00	.047	**SO○X13**	TPS43	TIP15W	1/4	HSS08010	HKY40R
	6	**MVX1687X6C150**	●	2	10.12	10.40	11.90	14.65	1.500	2.00	.047	**SO○X13**	TPS43	TIP15W	1/4	HSS08010	HKY40R
1.750	2	**MVX1750X2C150**	●	2	3.50	3.78	5.27	8.02	1.500	2.00	.041	**SO○X13**	TPS43	TIP15W	1/4	HSS08010	HKY40R
	3	**MVX1750X3C150**	●	2	5.25	5.53	7.02	9.77	1.500	2.00	.041	**SO○X13**	TPS43	TIP15W	1/4	HSS08010	HKY40R
	4	**MVX1750X4C150**	●	2	7.00	7.28	8.77	11.52	1.500	2.00	.041	**SO○X13**	TPS43	TIP15W	1/4	HSS08010	HKY40R
	5	**MVX1750X5C150**	●	2	8.75	9.03	10.52	13.27	1.500	2.00	.041	**SO○X13**	TPS43	TIP15W	1/4	HSS08010	HKY40R
1.812	2	**MVX1812X2C150**	●	2	3.62	3.90	5.40	8.15	1.500	2.00	.031	**SO○X13**	TPS43	TIP15W	1/4	HSS08010	HKY40R
	3	**MVX1812X3C150**	●	2	5.44	5.71	7.21	9.96	1.500	2.00	.031	**SO○X13**	TPS43	TIP15W	1/4	HSS08010	HKY40R
	4	**MVX1812X4C150**	●	2	7.25	7.53	9.02	11.77	1.500	2.00	.031	**SO○X13**	TPS43	TIP15W	1/4	HSS08010	HKY40R
	5	**MVX1812X5C150**	●	2	9.06	9.34	10.83	13.58	1.500	2.00	.031	**SO○X13**	TPS43	TIP15W	1/4	HSS08010	HKY40R
1.875	2	**MVX1875X2C150**	●	2	3.75	4.03	5.60	8.35	1.500	2.48	.072	**SO○X16**	TPS54	TIP25D	1/4	HSS10012	HKY50R
	3	**MVX1875X3C150**	●	2	5.63	5.90	7.48	10.23	1.500	2.48	.072	**SO○X16**	TPS54	TIP25D	1/4	HSS10012	HKY50R
	4	**MVX1875X4C150**	●	2	7.50	7.78	9.35	12.10	1.500	2.48	.072	**SO○X16**	TPS54	TIP25D	1/4	HSS10012	HKY50R
	5	**MVX1875X5C150**	●	2	9.38	9.65	11.23	13.98	1.500	2.48	.072	**SO○X16**	TPS54	TIP25D	1/4	HSS10012	HKY50R
1.937	2	**MVX1937X2C150**	●	2	3.87	4.15	5.73	8.48	1.500	2.48	.066	**SO○X16**	TPS54	TIP25D	1/4	HSS10012	HKY50R
	3	**MVX1937X3C150**	●	2	5.81	6.09	7.66	10.41	1.500	2.48	.066	**SO○X16**	TPS54	TIP25D	1/4	HSS10012	HKY50R
	4	**MVX1937X4C150**	●	2	7.75	8.03	9.60	12.35	1.500	2.48	.066	**SO○X16**	TPS54	TIP25D	1/4	HSS10012	HKY50R
	5	**MVX1937X5C150**	●	2	9.69	9.96	11.54	14.29	1.500	2.48	.066	**SO○X16**	TPS54	TIP25D	1/4	HSS10012	HKY50R
2.000	2	**MVX2000X2C150**	●	2	4.00	4.28	5.85	8.60	1.500	2.48	.060	**SO○X16**	TPS54	TIP25D	1/4	HSS10012	HKY50R
	3	**MVX2000X3C150**	●	2	6.00	6.28	7.85	10.60	1.500	2.48	.060	**SO○X16**	TPS54	TIP25D	1/4	HSS10012	HKY50R
	4	**MVX2000X4C150**	●	2	8.00	8.28	9.85	12.60	1.500	2.48	.060	**SO○X16**	TPS54	TIP25D	1/4	HSS10012	HKY50R
	5	**MVX2000X5C150**	●	2	10.00	10.28	11.85	14.60	1.500	2.48	.060	**SO○X16**	TPS54	TIP25D	1/4	HSS10012	HKY50R
2.125	2	**MVX2125X2C150**	●	2	4.25	4.53	6.10	8.85	1.500	2.48	.047	**SO○X16**	TPS54	TIP25D	1/4	HSS10012	HKY50R
	3	**MVX2125X3C150**	●	2	6.38	6.65	8.23	10.98	1.500	2.48	.047	**SO○X16**	TPS54	TIP25D	1/4	HSS10012	HKY50R
	4	**MVX2125X4C150**	●	2	8.50	8.78	10.35	13.10	1.500	2.48	.047	**SO○X16**	TPS54	TIP25D	1/4	HSS10012	HKY50R
	5	**MVX2125X5C150**	●	2	10.63	10.90	12.48	15.23	1.500	2.48	.047	**SO○X16**	TPS54	TIP25D	1/4	HSS10012	HKY50R
2.250	2	**MVX2250X2C150**	●	2	4.50	4.78	6.35	9.10	1.500	2.68	.057	**SO○X18**	TPS54	TIP25D	1/4	HSS10012	HKY50R
	3	**MVX2250X3C150**	●	2	6.75	7.03	8.60	11.35	1.500	2.68	.057	**SO○X18**	TPS54	TIP25D	1/4	HSS10012	HKY50R
	4	**MVX2250X4C150**	●	2	9.00	9.28	10.85	13.60	1.500	2.68	.057	**SO○X18**	TPS54	TIP25D	1/4	HSS10012	HKY50R
	5	**MVX2250X5C150**	●	2	11.25	11.53	13.10	15.85	1.500	2.68	.057	**SO○X18**	TPS54	TIP25D	1/4	HSS10012	HKY50R
2.375	2	**MVX2375X2C150**	●	2	4.75	5.03	6.60	9.35	1.500	2.68	.044	**SO○X18**	TPS54	TIP25D	1/4	HSS10012	HKY50R
	3	**MVX2375X3C150**	●	2	7.13	7.40	8.98	11.73	1.500	2.68	.044	**SO○X18**	TPS54	TIP25D	1/4	HSS10012	HKY50R
	4	**MVX2375X4C150**	●	2	9.50	9.78	11.35	14.10	1.500	2.68	.044	**SO○X18**	TPS54	TIP25D	1/4	HSS10012	HKY50R
	5	**MVX2375X5C150**	●	2	11.88	12.15	13.73	16.48	1.500	2.68	.044	**SO○X18**	TPS54	TIP25D	1/4	HSS10012	HKY50R
2.500	2	**MVX2500X2C150**	●	2	5.00	5.28	6.85	9.60	1.500	2.68	.031	**SO○X18**	TPS54	TIP25D	1/4	HSS10012	HKY50R
	3	**MVX2500X3C150**	●	2	7.50	7.78	9.35	12.10	1.500	2.68	.031	**SO○X18**	TPS54	TIP25D	1/4	HSS10012	HKY50R
	4	**MVX2500X4C150**	●	2	10.00	10.28	11.85	14.60	1.500	2.68	.031	**SO○X18**	TPS54	TIP25D	1/4	HSS10012	HKY50R
	5	**MVX2500X5C150**	●	2	12.50	12.78	14.35	17.10	1.500	2.68	.031	**SO○X18**	TPS54	TIP25D	1/4	HSS10012	HKY50R

*1 Clamp Torque (lbf-in) : TPS43=31, TPS54=66

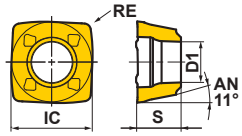
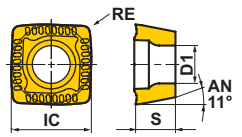
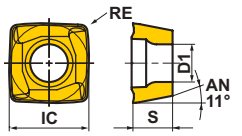
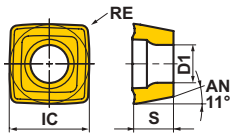
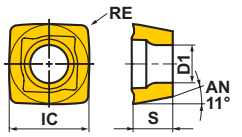
*2 Number of Teeth

DC = Cutting Diameter
LU = Usable Length
LBX = Usable Length
LPR = Protruding Length
OAL = Overall Length
DCON = Fixing Part Depth
DCSFMS = Flange Diameter

INDEXABLE DRILL

■ Inserts

(inch)

Shape	Drill Dia.	Order Number	IC	S	RE	D1	Stock MC5020	Stock MC1020	Stock VP15TF	Stock DP8020	Stock TF15	Geometry
UM	ø.562"–ø.656"	**SOMX052704-UM**	.197	.106	.016	.098	●	●	●			ø.562"–ø.656"
	ø.687"–ø.750"	**SOMX063005-UM**	.236	.118	.020	.114	●	●	●			
	ø.812"–ø.875"	**SOMX073505-UM**	.276	.138	.020	.138	●	●	●			
	ø.937"–ø1.062"	**SOMX084005-UM**	.327	.157	.020	.157	●	●	●			
	ø1.125"–ø1.250"	**SOMX094506-UM**	.382	.177	.024	.181	●	●	●			
	ø1.312"–ø1.562"	**SOMX115506-UM**	.457	.217	.024	.185	●	●	●			ø.687"–ø2.500"
	ø1.625"–ø1.812"	**SOMX136008-UM**	.543	.236	.031	.185	●	●	●			
	ø1.875"–ø2.125"	**SOMX166508-UM**	.650	.256	.031	.220	●	●	●			
General Purpose	ø2.250"–ø2.500"	**SOMX187008-UM**	.717	.276	.031	.220	●	●	●			
US	ø.687"–ø.750"	**SOMX063005-US**	.236	.118	.020	.114			●			
	ø.812"–ø.875"	**SOMX073505-US**	.276	.138	.020	.138			●			
	ø.937"–ø1.062"	**SOMX084005-US**	.327	.157	.020	.157			●			
	ø1.125"–ø1.250"	**SOMX094506-US**	.382	.177	.024	.181			●			
	ø1.312"–ø1.562"	**SOMX115506-US**	.457	.217	.024	.185			●			
	ø1.625"–ø1.812"	**SOMX136008-US**	.543	.236	.031	.185			●			
	ø1.875"–ø2.125"	**SOMX166508-US**	.650	.256	.031	.220			●			
For Stainless Steels and Inner Edge	ø2.250"–ø2.500"	**SOMX187008-US**	.717	.276	.031	.220			●			
UH	ø.687"–ø.750"	**SOMX062905-UH**	.236	.114	.020	.114				●		
	ø.812"–ø.875"	**SOMX073405-UH**	.276	.134	.020	.138				●		
	ø.937"–ø1.062"	**SOMX083905-UH**	.327	.154	.020	.157				●		
	ø1.125"–ø1.250"	**SOMX094406-UH**	.382	.173	.024	.181				●		
	ø1.312"–ø1.562"	**SOMX115406-UH**	.457	.213	.024	.185				●		
	ø1.625"–ø1.812"	**SOMX135908-UH**	.543	.232	.031	.185				●		
	ø1.875"–ø2.125"	**SOMX166408-UH**	.650	.252	.031	.220				●		
Strong Cutting Edge Type and Inner Edge	ø2.250"–ø2.500"	**SOMX186908-UH**	.717	.272	.031	.220				●		
UN	ø.687"–ø.750"	**SOGX063005-UN**	.236	.118	.020	.114					●	
	ø.812"–ø.875"	**SOGX073505-UN**	.276	.138	.020	.138					●	
	ø.937"–ø1.062"	**SOGX084005-UN**	.327	.157	.020	.157					●	
	ø1.125"–ø1.250"	**SOGX094506-UN**	.382	.177	.024	.181					●	
	ø1.312"–ø1.562"	**SOGX115506-UN**	.457	.217	.024	.185					●	
	ø1.625"–ø1.812"	**SOGX136008-UN**	.543	.236	.031	.185					●	
	ø1.875"–ø2.125"	**SOGX166508-UN**	.650	.256	.031	.220					●	
For Aluminum Alloys	ø2.250"–ø2.500"	**SOGX187008-UN**	.717	.276	.031	.220					●	

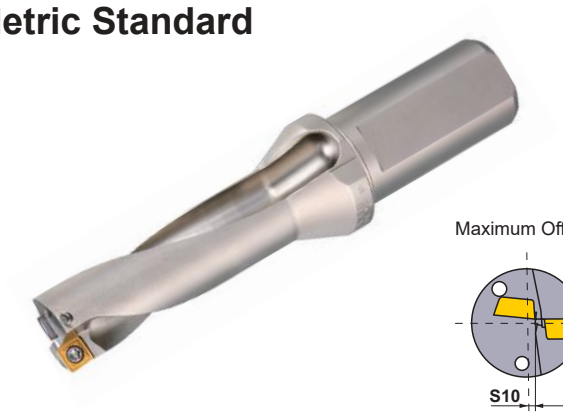
Note 1) MC1020 and MC5020 are made exclusively for use as an outer insert.

● : USA Stock ★ : Stocked in Japan
(10 inserts in one case)

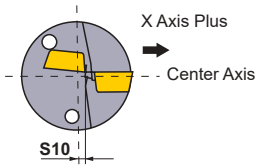
MVX

P M K N S H

Metric Standard

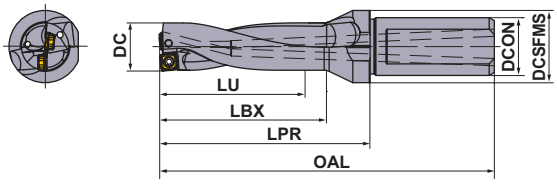


Maximum Offset for Turning



Machining Tolerance (Guide)(mm)

L/D	ø14—ø33	ø33.5—ø47	ø48—ø63
2, 3	+ 0.25 0	+ 0.3 0	+ 0.3 0
4, 5	+ 0.35 0	+ 0.4 0	+ 0.45 0
6	+ 0.45 0	+ 0.6 0	—



Side Coolant Not Available.

(mm)

DC	Hole Depth (L/D)	Order Number	Stock	*2 No.T	LU	LBX	LPR	OAL	DCON	DCSFMS	S10	Insert Type	*1 Clamp Screw	*1 Wrench
14.0	2	MVX1400X2F20	★	2	28	35	50	93	20	25	0.6	SO○X05	TPS20-1	TIP06F
	3	MVX1400X3F20	★	2	42	49	64	107	20	25	0.6	SO○X05	TPS20-1	TIP06F
	4	MVX1400X4F20	★	2	56	63	78	121	20	25	0.6	SO○X05	TPS20-1	TIP06F
	5	MVX1400X5F20	★	2	70	77	92	135	20	25	0.6	SO○X05	TPS20-1	TIP06F
14.5	2	MVX1450X2F20	★	2	29	36	51	94	20	25	0.5	SO○X05	TPS20-1	TIP06F
	3	MVX1450X3F20	★	2	43.5	50.5	65.5	108.5	20	25	0.5	SO○X05	TPS20-1	TIP06F
	4	MVX1450X4F20	★	2	58	65	80	123	20	25	0.5	SO○X05	TPS20-1	TIP06F
	5	MVX1450X5F20	★	2	72.5	79.5	94.5	137.5	20	25	0.5	SO○X05	TPS20-1	TIP06F
15.0	2	MVX1500X2F20	★	2	30	37	52	95	20	25	0.35	SO○X05	TPS20-1	TIP06F
	3	MVX1500X3F20	★	2	45	52	67	110	20	25	0.35	SO○X05	TPS20-1	TIP06F
	4	MVX1500X4F20	★	2	60	67	82	125	20	25	0.35	SO○X05	TPS20-1	TIP06F
	5	MVX1500X5F20	★	2	75	82	97	140	20	25	0.35	SO○X05	TPS20-1	TIP06F
15.5	2	MVX1550X2F20	★	2	31	38	53	96	20	25	0.3	SO○X05	TPS20-1	TIP06F
	3	MVX1550X3F20	★	2	46.5	53.5	68.5	111.5	20	25	0.3	SO○X05	TPS20-1	TIP06F
	4	MVX1550X4F20	★	2	62	69	84	127	20	25	0.3	SO○X05	TPS20-1	TIP06F
	5	MVX1550X5F20	★	2	77.5	84.5	99.5	142.5	20	25	0.3	SO○X05	TPS20-1	TIP06F
16.0	2	MVX1600X2F20	★	2	32	39	54	97	20	25	0.25	SO○X05	TPS20-1	TIP06F
	3	MVX1600X3F20	★	2	48	55	70	113	20	25	0.25	SO○X05	TPS20-1	TIP06F
	4	MVX1600X4F20	★	2	64	71	86	129	20	25	0.25	SO○X05	TPS20-1	TIP06F
	5	MVX1600X5F20	★	2	80	87	102	145	20	25	0.25	SO○X05	TPS20-1	TIP06F
16.5	2	MVX1650X2F20	★	2	33	40	55	98	20	25	0.25	SO○X05	TPS20-1	TIP06F
	3	MVX1650X3F20	★	2	49.5	56.5	71.5	114.5	20	25	0.25	SO○X05	TPS20-1	TIP06F
	4	MVX1650X4F20	★	2	66	73	88	131	20	25	0.25	SO○X05	TPS20-1	TIP06F
	5	MVX1650X5F20	★	2	82.5	89.5	104.5	147.5	20	25	0.25	SO○X05	TPS20-1	TIP06F
17.0	2	MVX1700X2F20	★	2	34	41	56	99	20	25	0.5	SO○X06	TPS25	TIP07F
	3	MVX1700X3F20	★	2	51	58	73	116	20	25	0.5	SO○X06	TPS25	TIP07F
	4	MVX1700X4F20	★	2	68	75	90	133	20	25	0.5	SO○X06	TPS25	TIP07F
	5	MVX1700X5F20	★	2	85	92	107	150	20	25	0.5	SO○X06	TPS25	TIP07F
	6	MVX1700X6F20	★	2	102	109	124	167	20	25	0.5	SO○X06	TPS25	TIP07F

*1 Clamp Torque (lbf-in) : TPS20-1=5.3, TPS25=8.9

*2 Number of Teeth

DC = Cutting Diameter
LU = Usable Length
LBX = Usable Length
LPR = Protruding Length
OAL = Overall Length
DCON = Fixing Part Depth
DCSFMS = Flange Diameter

INDEXABLE DRILL

MVX

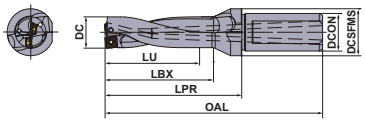
(mm)

DC	Hole Depth (L/D)	Order Number	Stock	*2 No.T	LU	LBX	LPR	OAL	DCON	DCSFMS	S10	Insert Type	*1 Clamp Screw	W F Wrench
17.5	2	MVX1750X2F25	★	2	35	42	62	112	25	32	0.45	SO○X06	TPS25	TIP07F
	3	MVX1750X3F25	★	2	52.5	59.5	79.5	129.5	25	32	0.45	SO○X06	TPS25	TIP07F
	4	MVX1750X4F25	★	2	70	77	97	147	25	32	0.45	SO○X06	TPS25	TIP07F
	5	MVX1750X5F25	★	2	87.5	94.5	114.5	164.5	25	32	0.45	SO○X06	TPS25	TIP07F
	6	MVX1750X6F25	★	2	105	112	132	182	25	32	0.45	SO○X06	TPS25	TIP07F
18.0	2	MVX1800X2F25	★	2	36	43	63	113	25	32	0.4	SO○X06	TPS25	TIP07F
	3	MVX1800X3F25	★	2	54	61	81	131	25	32	0.4	SO○X06	TPS25	TIP07F
	4	MVX1800X4F25	★	2	72	79	99	149	25	32	0.4	SO○X06	TPS25	TIP07F
	5	MVX1800X5F25	★	2	90	97	117	167	25	32	0.4	SO○X06	TPS25	TIP07F
	6	MVX1800X6F25	★	2	108	115	135	185	25	32	0.4	SO○X06	TPS25	TIP07F
18.5	2	MVX1850X2F25	★	2	37	44	64	114	25	32	0.35	SO○X06	TPS25	TIP07F
	3	MVX1850X3F25	★	2	55.5	62.5	82.5	132.5	25	32	0.35	SO○X06	TPS25	TIP07F
	4	MVX1850X4F25	★	2	74	81	101	151	25	32	0.35	SO○X06	TPS25	TIP07F
	5	MVX1850X5F25	★	2	92.5	99.5	119.5	169.5	25	32	0.35	SO○X06	TPS25	TIP07F
	6	MVX1850X6F25	★	2	111	118	138	188	25	32	0.35	SO○X06	TPS25	TIP07F
19.0	2	MVX1900X2F25	★	2	38	45	65	115	25	32	0.3	SO○X06	TPS25	TIP07F
	3	MVX1900X3F25	★	2	57	64	84	134	25	32	0.3	SO○X06	TPS25	TIP07F
	4	MVX1900X4F25	★	2	76	83	103	153	25	32	0.3	SO○X06	TPS25	TIP07F
	5	MVX1900X5F25	★	2	95	102	122	172	25	32	0.3	SO○X06	TPS25	TIP07F
	6	MVX1900X6F25	★	2	114	121	141	191	25	32	0.3	SO○X06	TPS25	TIP07F
19.5	2	MVX1950X2F25	★	2	39	46	66	116	25	32	0.25	SO○X06	TPS25	TIP07F
	3	MVX1950X3F25	★	2	58.5	65.5	85.5	135.5	25	32	0.25	SO○X06	TPS25	TIP07F
	4	MVX1950X4F25	★	2	78	85	105	155	25	32	0.25	SO○X06	TPS25	TIP07F
	5	MVX1950X5F25	★	2	97.5	104.5	124.5	174.5	25	32	0.25	SO○X06	TPS25	TIP07F
	6	MVX1950X6F25	★	2	117	124	144	194	25	32	0.25	SO○X06	TPS25	TIP07F
20.0	2	MVX2000X2F25	★	2	40	47	67	117	25	32	0.6	SO○X07	TPS3	TIP10W
	3	MVX2000X3F25	★	2	60	67	87	137	25	32	0.6	SO○X07	TPS3	TIP10W
	4	MVX2000X4F25	★	2	80	87	107	157	25	32	0.6	SO○X07	TPS3	TIP10W
	5	MVX2000X5F25	★	2	100	107	127	177	25	32	0.6	SO○X07	TPS3	TIP10W
	6	MVX2000X6F25	★	2	120	127	147	197	25	32	0.6	SO○X07	TPS3	TIP10W
20.5	2	MVX2050X2F25	★	2	41	48	68	118	25	32	0.55	SO○X07	TPS3	TIP10W
	3	MVX2050X3F25	★	2	61.5	68.5	88.5	138.5	25	32	0.55	SO○X07	TPS3	TIP10W
21.0	2	MVX2100X2F25	★	2	42	49	69	119	25	32	0.5	SO○X07	TPS3	TIP10W
	3	MVX2100X3F25	★	2	63	70	90	140	25	32	0.5	SO○X07	TPS3	TIP10W
	4	MVX2100X4F25	★	2	84	91	111	161	25	32	0.5	SO○X07	TPS3	TIP10W
	5	MVX2100X5F25	★	2	105	112	132	182	25	32	0.5	SO○X07	TPS3	TIP10W
	6	MVX2100X6F25	★	2	126	133	153	203	25	32	0.5	SO○X07	TPS3	TIP10W
21.5	2	MVX2150X2F25	★	2	43	50	70	120	25	32	0.45	SO○X07	TPS3	TIP10W
	3	MVX2150X3F25	★	2	64.5	71.5	91.5	141.5	25	32	0.45	SO○X07	TPS3	TIP10W
22.0	2	MVX2200X2F25	★	2	44	51	71	121	25	32	0.4	SO○X07	TPS3	TIP10W
	3	MVX2200X3F25	★	2	66	73	93	143	25	32	0.4	SO○X07	TPS3	TIP10W
	4	MVX2200X4F25	★	2	88	95	115	165	25	32	0.4	SO○X07	TPS3	TIP10W
	5	MVX2200X5F25	★	2	110	117	137	187	25	32	0.4	SO○X07	TPS3	TIP10W
	6	MVX2200X6F25	★	2	132	139	159	209	25	32	0.4	SO○X07	TPS3	TIP10W
22.5	2	MVX2250X2F25	★	2	45	52	72	122	25	32	0.35	SO○X07	TPS3	TIP10W
	3	MVX2250X3F25	★	2	67.5	74.5	94.5	144.5	25	32	0.35	SO○X07	TPS3	TIP10W

*1 Clamp Torque (lbf-in) : TPS25=8.9, TPS3=17.7

*2 Number of Teeth

★ : **Stocked in Japan**



(mm)

DC	Hole Depth (L/D)	Order Number	Stock	*2 No.T	LU	LBX	LPR	OAL	DCON	DCSFMS	S10	Insert Type	*1 Clamp Screw	*1 Wrench
23.0	2	MVX2300X2F25	★	2	46	53	73	123	25	32	0.8	SO○X08	TPS351	TIP10W
	3	MVX2300X3F25	★	2	69	76	96	146	25	32	0.8	SO○X08	TPS351	TIP10W
	4	MVX2300X4F25	★	2	92	99	119	169	25	32	0.8	SO○X08	TPS351	TIP10W
	5	MVX2300X5F25	★	2	115	122	142	192	25	32	0.8	SO○X08	TPS351	TIP10W
	6	MVX2300X6F25	★	2	138	145	165	215	25	32	0.8	SO○X08	TPS351	TIP10W
23.5	2	MVX2350X2F25	★	2	47	54	74	124	25	32	0.75	SO○X08	TPS351	TIP10W
	3	MVX2350X3F25	★	2	70.5	77.5	97.5	147.5	25	32	0.75	SO○X08	TPS351	TIP10W
24.0	2	MVX2400X2F25	★	2	48	55	75	125	25	32	0.7	SO○X08	TPS351	TIP10W
	3	MVX2400X3F25	★	2	72	79	99	149	25	32	0.7	SO○X08	TPS351	TIP10W
	4	MVX2400X4F25	★	2	96	103	123	173	25	32	0.7	SO○X08	TPS351	TIP10W
	5	MVX2400X5F25	★	2	120	127	147	197	25	32	0.7	SO○X08	TPS351	TIP10W
	6	MVX2400X6F25	★	2	144	151	171	221	25	32	0.7	SO○X08	TPS351	TIP10W
24.5	2	MVX2450X2F25	★	2	49	56	76	126	25	32	0.65	SO○X08	TPS351	TIP10W
	3	MVX2450X3F25	★	2	73.5	80.5	100.5	150.5	25	32	0.65	SO○X08	TPS351	TIP10W
25.0	2	MVX2500X2F25	★	2	50	57	77	127	25	32	0.6	SO○X08	TPS351	TIP10W
	3	MVX2500X3F25	★	2	75	82	102	152	25	32	0.6	SO○X08	TPS351	TIP10W
	4	MVX2500X4F25	★	2	100	107	127	177	25	32	0.6	SO○X08	TPS351	TIP10W
	5	MVX2500X5F25	★	2	125	132	152	202	25	32	0.6	SO○X08	TPS351	TIP10W
	6	MVX2500X6F25	★	2	150	157	177	227	25	32	0.6	SO○X08	TPS351	TIP10W
25.5	2	MVX2550X2F25	★	2	51	58	78	128	25	32	0.6	SO○X08	TPS351	TIP10W
	3	MVX2550X3F25	★	2	76.5	83.5	103.5	153.5	25	32	0.6	SO○X08	TPS351	TIP10W
26.0	2	MVX2600X2F32	★	2	52	59	79	134	32	42	0.5	SO○X08	TPS351	TIP10W
	3	MVX2600X3F32	★	2	78	85	105	160	32	42	0.5	SO○X08	TPS351	TIP10W
	4	MVX2600X4F32	★	2	104	111	131	186	32	42	0.5	SO○X08	TPS351	TIP10W
	5	MVX2600X5F32	★	2	130	137	157	212	32	42	0.5	SO○X08	TPS351	TIP10W
	6	MVX2600X6F32	★	2	156	163	183	238	32	42	0.5	SO○X08	TPS351	TIP10W
26.5	2	MVX2650X2F32	★	2	53	60	80	135	32	42	0.5	SO○X08	TPS351	TIP10W
	3	MVX2650X3F32	★	2	79.5	86.5	106.5	161.5	32	42	0.5	SO○X08	TPS351	TIP10W
27.0	2	MVX2700X2F32	★	2	54	61	81	136	32	42	0.45	SO○X08	TPS351	TIP10W
	3	MVX2700X3F32	★	2	81	88	108	163	32	42	0.45	SO○X08	TPS351	TIP10W
	4	MVX2700X4F32	★	2	108	115	135	190	32	42	0.45	SO○X08	TPS351	TIP10W
	5	MVX2700X5F32	★	2	135	142	162	217	32	42	0.45	SO○X08	TPS351	TIP10W
	6	MVX2700X6F32	★	2	162	169	189	244	32	42	0.45	SO○X08	TPS351	TIP10W
27.5	2	MVX2750X2F32	★	2	55	62	82	137	32	42	0.4	SO○X08	TPS351	TIP10W
	3	MVX2750X3F32	★	2	82.5	89.5	109.5	164.5	32	42	0.4	SO○X08	TPS351	TIP10W
28.0	2	MVX2800X2F32	★	2	56	63	83	138	32	42	0.85	SO○X09	TPS4	TIP15W
	3	MVX2800X3F32	★	2	84	91	111	166	32	42	0.85	SO○X09	TPS4	TIP15W
	4	MVX2800X4F32	★	2	112	119	139	194	32	42	0.85	SO○X09	TPS4	TIP15W
	5	MVX2800X5F32	★	2	140	147	167	222	32	42	0.85	SO○X09	TPS4	TIP15W
	6	MVX2800X6F32	★	2	168	175	195	250	32	42	0.85	SO○X09	TPS4	TIP15W
28.5	2	MVX2850X2F32	★	2	57	64	84	139	32	42	0.8	SO○X09	TPS4	TIP15W
	3	MVX2850X3F32	★	2	85.5	92.5	112.5	167.5	32	42	0.8	SO○X09	TPS4	TIP15W

*1 Clamp Torque (lbf-in) : TPS351=22, TPS4=31

*2 Number of Teeth

DC = Cutting Diameter
LU = Usable Length
LBX = Usable Length
LPR = Protruding Length
OAL = Overall Length
DCON = Fixing Part Depth
DCSFMS = Flange Diameter

INDEXABLE DRILL
MVX

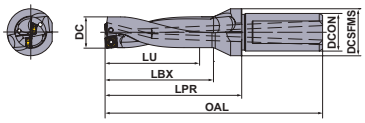
(mm)

DC	Hole Depth (L/D)	Order Number	Stock	*2 No.T	LU	LBX	LPR	OAL	DCON	DCSFMS	S10	Insert Type	*1 Clamp Screw	Wrench
	2	**MVX2900X2F32**	★	2	58	65	85	140	32	42	0.75	**SO○X09**	TPS4	TIP15W
	3	**MVX2900X3F32**	★	2	87	94	114	169	32	42	0.75	**SO○X09**	TPS4	TIP15W
29.0	4	**MVX2900X4F32**	★	2	116	123	143	198	32	42	0.75	**SO○X09**	TPS4	TIP15W
	5	**MVX2900X5F32**	★	2	145	152	172	227	32	42	0.75	**SO○X09**	TPS4	TIP15W
	6	**MVX2900X6F32**	★	2	174	181	201	256	32	42	0.75	**SO○X09**	TPS4	TIP15W
29.5	2	**MVX2950X2F32**	★	2	59	66	86	141	32	42	0.7	**SO○X09**	TPS4	TIP15W
	3	**MVX2950X3F32**	★	2	88.5	95.5	115.5	170.5	32	42	0.7	**SO○X09**	TPS4	TIP15W
	2	**MVX3000X2F32**	★	2	60	67	87	142	32	42	0.65	**SO○X09**	TPS4	TIP15W
	3	**MVX3000X3F32**	★	2	90	97	117	172	32	42	0.65	**SO○X09**	TPS4	TIP15W
30.0	4	**MVX3000X4F32**	★	2	120	127	147	202	32	42	0.65	**SO○X09**	TPS4	TIP15W
	5	**MVX3000X5F32**	★	2	150	157	177	232	32	42	0.65	**SO○X09**	TPS4	TIP15W
	6	**MVX3000X6F32**	★	2	180	187	207	262	32	42	0.65	**SO○X09**	TPS4	TIP15W
30.5	3	**MVX3050X3F32**	★	2	91.5	98.5	118.5	173.5	32	42	0.6	**SO○X09**	TPS4	TIP15W
	2	**MVX3100X2F40**	★	2	62	69	89	154	40	50	0.55	**SO○X09**	TPS4	TIP15W
	3	**MVX3100X3F40**	★	2	93	100	120	185	40	50	0.55	**SO○X09**	TPS4	TIP15W
31.0	4	**MVX3100X4F40**	★	2	124	131	151	216	40	50	0.55	**SO○X09**	TPS4	TIP15W
	5	**MVX3100X5F40**	★	2	155	162	182	247	40	50	0.55	**SO○X09**	TPS4	TIP15W
	6	**MVX3100X6F40**	★	2	186	193	213	278	40	50	0.55	**SO○X09**	TPS4	TIP15W
31.5	3	**MVX3150X3F40**	★	2	94.5	101.5	121.5	186.5	40	50	0.55	**SO○X09**	TPS4	TIP15W
	2	**MVX3200X2F40**	★	2	64	71	91	156	40	50	0.45	**SO○X09**	TPS4	TIP15W
	3	**MVX3200X3F40**	★	2	96	103	123	188	40	50	0.45	**SO○X09**	TPS4	TIP15W
32.0	4	**MVX3200X4F40**	★	2	128	135	155	220	40	50	0.45	**SO○X09**	TPS4	TIP15W
	5	**MVX3200X5F40**	★	2	160	167	187	252	40	50	0.45	**SO○X09**	TPS4	TIP15W
	6	**MVX3200X6F40**	★	2	192	199	219	284	40	50	0.45	**SO○X09**	TPS4	TIP15W
32.5	3	**MVX3250X3F40**	★	2	97.5	104.5	124.5	189.5	40	50	0.45	**SO○X09**	TPS4	TIP15W
	2	**MVX3300X2F40**	★	2	66	73	93	158	40	50	0.4	**SO○X09**	TPS4	TIP15W
	3	**MVX3300X3F40**	★	2	99	106	126	191	40	50	0.4	**SO○X09**	TPS4	TIP15W
33.0	4	**MVX3300X4F40**	★	2	132	139	159	224	40	50	0.4	**SO○X09**	TPS4	TIP15W
	5	**MVX3300X5F40**	★	2	165	172	192	257	40	50	0.4	**SO○X09**	TPS4	TIP15W
	6	**MVX3300X6F40**	★	2	198	205	225	290	40	50	0.4	**SO○X09**	TPS4	TIP15W
33.5	3	**MVX3350X3F40**	★	2	100.5	107.5	127.5	192.5	40	50	1.15	**SO○X11**	TPS43	TIP15W
	2	**MVX3400X2F40**	★	2	68	75	105	170	40	50	1.11	**SO○X11**	TPS43	TIP15W
	3	**MVX3400X3F40**	★	2	102	109	139	204	40	50	1.11	**SO○X11**	TPS43	TIP15W
34.0	4	**MVX3400X4F40**	★	2	136	143	173	238	40	50	1.11	**SO○X11**	TPS43	TIP15W
	5	**MVX3400X5F40**	★	2	170	177	207	272	40	50	1.11	**SO○X11**	TPS43	TIP15W
	6	**MVX3400X6F40**	★	2	204	211	241	306	40	50	1.1	**SO○X11**	TPS43	TIP15W
34.5	3	**MVX3450X3F40**	★	2	103.5	110.5	140.5	205.5	40	50	1.08	**SO○X11**	TPS43	TIP15W
	2	**MVX3500X2F40**	★	2	70	77	107	172	40	50	1.03	**SO○X11**	TPS43	TIP15W
	3	**MVX3500X3F40**	★	2	105	112	142	207	40	50	1.03	**SO○X11**	TPS43	TIP15W
35.0	4	**MVX3500X4F40**	★	2	140	147	177	242	40	50	1.03	**SO○X11**	TPS43	TIP15W
	5	**MVX3500X5F40**	★	2	175	182	212	277	40	50	1.03	**SO○X11**	TPS43	TIP15W
	6	**MVX3500X6F40**	★	2	210	217	247	312	40	50	1.02	**SO○X11**	TPS43	TIP15W

*1 Clamp Torque (lbf-in) : TPS4=31, TPS43=31

*2 Number of Teeth

★ : **Stocked in Japan**



(mm)

DC	Hole Depth (L/D)	Order Number	Stock	*2 No.T	LU	LBX	LPR	OAL	DCON	DCSFMS	S10	Insert Type	*1 Clamp Screw	Wrench
35.5	3	**MVX3550X3F40**	★	2	106.5	113.5	143.5	208.5	40	50	0.99	**SO○X11**	TPS43	TIP15W
36.0	2	**MVX3600X2F40**	★	2	72	79	109	174	40	50	0.95	**SO○X11**	TPS43	TIP15W
	3	**MVX3600X3F40**	★	2	108	115	145	210	40	50	0.95	**SO○X11**	TPS43	TIP15W
	4	**MVX3600X4F40**	★	2	144	151	181	246	40	50	0.95	**SO○X11**	TPS43	TIP15W
	5	**MVX3600X5F40**	★	2	180	187	217	282	40	50	0.95	**SO○X11**	TPS43	TIP15W
	6	**MVX3600X6F40**	★	2	216	223	253	318	40	50	0.94	**SO○X11**	TPS43	TIP15W
37.0	2	**MVX3700X2F40**	★	2	74	81	111	176	40	50	0.87	**SO○X11**	TPS43	TIP15W
	3	**MVX3700X3F40**	★	2	111	118	148	213	40	50	0.87	**SO○X11**	TPS43	TIP15W
	4	**MVX3700X4F40**	★	2	148	155	185	250	40	50	0.87	**SO○X11**	TPS43	TIP15W
	5	**MVX3700X5F40**	★	2	185	192	222	287	40	50	0.87	**SO○X11**	TPS43	TIP15W
	6	**MVX3700X6F40**	★	2	222	229	259	324	40	50	0.86	**SO○X11**	TPS43	TIP15W
38.0	2	**MVX3800X2F40**	★	2	76	83	113	178	40	50	0.79	**SO○X11**	TPS43	TIP15W
	3	**MVX3800X3F40**	★	2	114	121	151	216	40	50	0.79	**SO○X11**	TPS43	TIP15W
	4	**MVX3800X4F40**	★	2	152	159	189	254	40	50	0.79	**SO○X11**	TPS43	TIP15W
	5	**MVX3800X5F40**	★	2	190	197	227	292	40	50	0.79	**SO○X11**	TPS43	TIP15W
	6	**MVX3800X6F40**	★	2	228	235	265	330	40	50	0.78	**SO○X11**	TPS43	TIP15W
39.0	2	**MVX3900X2F40**	★	2	78	85	115	180	40	50	0.71	**SO○X11**	TPS43	TIP15W
	3	**MVX3900X3F40**	★	2	117	124	154	219	40	50	0.71	**SO○X11**	TPS43	TIP15W
	4	**MVX3900X4F40**	★	2	156	163	193	258	40	50	0.71	**SO○X11**	TPS43	TIP15W
	5	**MVX3900X5F40**	★	2	195	202	232	297	40	50	0.71	**SO○X11**	TPS43	TIP15W
	6	**MVX3900X6F40**	★	2	234	241	271	336	40	50	0.7	**SO○X11**	TPS43	TIP15W
40.0	2	**MVX4000X2F40**	★	2	80	87	117	182	40	50	1.46	**SO○X13**	TPS43	TIP15W
	3	**MVX4000X3F40**	★	2	120	127	157	222	40	50	1.46	**SO○X13**	TPS43	TIP15W
	4	**MVX4000X4F40**	★	2	160	167	197	262	40	50	1.46	**SO○X13**	TPS43	TIP15W
	5	**MVX4000X5F40**	★	2	200	207	237	302	40	50	1.46	**SO○X13**	TPS43	TIP15W
	6	**MVX4000X6F40**	★	2	240	247	277	342	40	50	1.45	**SO○X13**	TPS43	TIP15W
41.0	2	**MVX4100X2F40**	★	2	82	89	119	184	40	50	1.36	**SO○X13**	TPS43	TIP15W
	3	**MVX4100X3F40**	★	2	123	130	160	225	40	50	1.36	**SO○X13**	TPS43	TIP15W
	4	**MVX4100X4F40**	★	2	164	171	201	266	40	50	1.36	**SO○X13**	TPS43	TIP15W
	5	**MVX4100X5F40**	★	2	205	212	242	307	40	50	1.36	**SO○X13**	TPS43	TIP15W
	6	**MVX4100X6F40**	★	2	246	253	283	348	40	50	1.35	**SO○X13**	TPS43	TIP15W
42.0	2	**MVX4200X2F40**	★	2	84	91	121	186	40	50	1.27	**SO○X13**	TPS43	TIP15W
	3	**MVX4200X3F40**	★	2	126	133	163	228	40	50	1.27	**SO○X13**	TPS43	TIP15W
	4	**MVX4200X4F40**	★	2	168	175	205	270	40	63	1.27	**SO○X13**	TPS43	TIP15W
	4	**MVX4200X4F50**	★	2	168	175	205	280	50	63	1.27	**SO○X13**	TPS43	TIP15W
	5	**MVX4200X5F40**	★	2	210	217	247	312	40	63	1.27	**SO○X13**	TPS43	TIP15W
	5	**MVX4200X5F50**	★	2	210	217	247	322	50	63	1.27	**SO○X13**	TPS43	TIP15W
	6	**MVX4200X6F40**	★	2	252	259	289	354	40	63	1.27	**SO○X13**	TPS43	TIP15W
	6	**MVX4200X6F50**	★	2	252	259	289	364	50	63	1.26	**SO○X13**	TPS43	TIP15W

*1 Clamp Torque (lbf-in) : TPS43=31

*2 Number of Teeth

DC = Cutting Diameter
LU = Usable Length
LBX = Usable Length
LPR = Protruding Length
OAL = Overall Length
DCON = Fixing Part Depth
DCSFMS = Flange Diameter

INDEXABLE DRILL
MVX

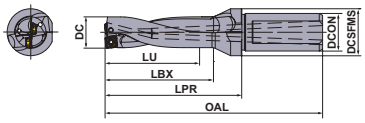
(mm)

DC	Hole Depth (L/D)	Order Number	Stock	*2 No.T	LU	LBX	LPR	OAL	DCON	DCSFMS	S10	Insert Type	*1 Clamp Screw	W D Wrench
43.0	2	MVX4300X2F40	★	2	86	93	123	188	40	50	1.18	SO○X13	TPS43	TIP15W
	3	MVX4300X3F40	★	2	129	136	166	231	40	50	1.18	SO○X13	TPS43	TIP15W
	4	MVX4300X4F40	★	2	172	179	209	274	40	63	1.18	SO○X13	TPS43	TIP15W
	4	MVX4300X4F50	★	2	172	179	209	284	50	63	1.18	SO○X13	TPS43	TIP15W
	5	MVX4300X5F40	★	2	215	222	252	317	40	63	1.18	SO○X13	TPS43	TIP15W
	5	MVX4300X5F50	★	2	215	222	252	327	50	63	1.18	SO○X13	TPS43	TIP15W
	6	MVX4300X6F40	★	2	258	265	295	360	40	63	1.17	SO○X13	TPS43	TIP15W
	6	MVX4300X6F50	★	2	258	265	295	370	50	63	1.17	SO○X13	TPS43	TIP15W
44.0	2	MVX4400X2F40	★	2	88	95	125	190	40	50	1.08	SO○X13	TPS43	TIP15W
	3	MVX4400X3F40	★	2	132	139	169	234	40	50	1.08	SO○X13	TPS43	TIP15W
	4	MVX4400X4F40	★	2	176	183	213	278	40	63	1.08	SO○X13	TPS43	TIP15W
	4	MVX4400X4F50	★	2	176	183	213	288	50	63	1.08	SO○X13	TPS43	TIP15W
	5	MVX4400X5F40	★	2	220	227	257	322	40	63	1.08	SO○X13	TPS43	TIP15W
	5	MVX4400X5F50	★	2	220	227	257	332	50	63	1.08	SO○X13	TPS43	TIP15W
45.0	2	MVX4500X2F40	★	2	90	97	127	192	40	50	0.99	SO○X13	TPS43	TIP15W
	3	MVX4500X3F40	★	2	135	142	172	237	40	50	0.99	SO○X13	TPS43	TIP15W
	4	MVX4500X4F40	★	2	180	187	217	282	40	63	0.99	SO○X13	TPS43	TIP15W
	4	MVX4500X4F50	★	2	180	187	217	292	50	63	0.99	SO○X13	TPS43	TIP15W
	5	MVX4500X5F40	★	2	225	232	262	327	40	63	0.99	SO○X13	TPS43	TIP15W
	5	MVX4500X5F50	★	2	225	232	262	337	50	63	0.99	SO○X13	TPS43	TIP15W
46.0	2	MVX4600X2F40	★	2	92	99	129	194	40	50	0.89	SO○X13	TPS43	TIP15W
	3	MVX4600X3F40	★	2	138	145	175	240	40	50	0.89	SO○X13	TPS43	TIP15W
	4	MVX4600X4F40	★	2	184	191	221	286	40	63	0.89	SO○X13	TPS43	TIP15W
	4	MVX4600X4F50	★	2	184	191	221	296	50	63	0.89	SO○X13	TPS43	TIP15W
	5	MVX4600X5F40	★	2	230	237	267	332	40	63	0.89	SO○X13	TPS43	TIP15W
	5	MVX4600X5F50	★	2	230	237	267	342	50	63	0.89	SO○X13	TPS43	TIP15W
47.0	2	MVX4700X2F40	★	2	94	101	141	206	40	63	1.9	SO○X16	TPS54	TIP25D
	3	MVX4700X3F40	★	2	141	148	188	253	40	63	1.9	SO○X16	TPS54	TIP25D
	4	MVX4700X4F40	★	2	188	195	235	300	40	63	1.9	SO○X16	TPS54	TIP25D
	4	MVX4700X4F50	★	2	188	195	235	310	50	63	1.9	SO○X16	TPS54	TIP25D
	5	MVX4700X5F40	★	2	235	242	282	347	40	63	1.9	SO○X16	TPS54	TIP25D
	5	MVX4700X5F50	★	2	235	242	282	357	50	63	1.9	SO○X16	TPS54	TIP25D
48.0	2	MVX4800X2F40	★	2	96	103	143	208	40	63	1.8	SO○X16	TPS54	TIP25D
	3	MVX4800X3F40	★	2	144	151	191	256	40	63	1.8	SO○X16	TPS54	TIP25D
	4	MVX4800X4F40	★	2	192	199	239	304	40	63	1.8	SO○X16	TPS54	TIP25D
	4	MVX4800X4F50	★	2	192	199	239	314	50	63	1.8	SO○X16	TPS54	TIP25D
	5	MVX4800X5F40	★	2	240	247	287	352	40	63	1.8	SO○X16	TPS54	TIP25D
	5	MVX4800X5F50	★	2	240	247	287	362	50	63	1.8	SO○X16	TPS54	TIP25D
49.0	2	MVX4900X2F40	★	2	98	105	145	210	40	63	1.7	SO○X16	TPS54	TIP25D
	3	MVX4900X3F40	★	2	147	154	194	259	40	63	1.7	SO○X16	TPS54	TIP25D
	4	MVX4900X4F40	★	2	196	203	243	308	40	63	1.7	SO○X16	TPS54	TIP25D
	4	MVX4900X4F50	★	2	196	203	243	318	50	63	1.7	SO○X16	TPS54	TIP25D
	5	MVX4900X5F40	★	2	245	252	292	357	40	63	1.7	SO○X16	TPS54	TIP25D
	5	MVX4900X5F50	★	2	245	252	292	367	50	63	1.7	SO○X16	TPS54	TIP25D

*1 Clamp Torque (lbf-in) : TPS43=31, TPS54=66

*2 Number of Teeth

★ : **Stocked in Japan**



(mm)

DC	Hole Depth (L/D)	Order Number	Stock	*2 No.T	LU	LBX	LPR	OAL	DCON	DCSFMS	S10	Insert Type	*1 Clamp Screw	Wrench
50.0	2	MVX5000X2F40	★	2	100	107	147	212	40	63	1.6	SO○X16	TPS54	TIP25D
	3	MVX5000X3F40	★	2	150	157	197	262	40	63	1.6	SO○X16	TPS54	TIP25D
	4	MVX5000X4F40	★	2	200	207	247	312	40	63	1.6	SO○X16	TPS54	TIP25D
	4	MVX5000X4F50	★	2	200	207	247	322	50	63	1.6	SO○X16	TPS54	TIP25D
	5	MVX5000X5F40	★	2	250	257	297	362	40	63	1.6	SO○X16	TPS54	TIP25D
	5	MVX5000X5F50	★	2	250	257	297	372	50	63	1.6	SO○X16	TPS54	TIP25D
51.0	2	MVX5100X2F40	★	2	102	109	149	214	40	63	1.5	SO○X16	TPS54	TIP25D
	3	MVX5100X3F40	★	2	153	160	200	265	40	63	1.5	SO○X16	TPS54	TIP25D
	4	MVX5100X4F40	★	2	204	211	251	316	40	63	1.5	SO○X16	TPS54	TIP25D
	4	MVX5100X4F50	★	2	204	211	251	326	50	63	1.5	SO○X16	TPS54	TIP25D
	5	MVX5100X5F40	★	2	255	262	302	367	40	63	1.5	SO○X16	TPS54	TIP25D
	5	MVX5100X5F50	★	2	255	262	302	377	50	63	1.5	SO○X16	TPS54	TIP25D
52.0	2	MVX5200X2F40	★	2	104	111	151	216	40	63	1.39	SO○X16	TPS54	TIP25D
	3	MVX5200X3F40	★	2	156	163	203	268	40	63	1.39	SO○X16	TPS54	TIP25D
	4	MVX5200X4F40	★	2	208	215	255	320	40	63	1.39	SO○X16	TPS54	TIP25D
	4	MVX5200X4F50	★	2	208	215	255	330	50	63	1.39	SO○X16	TPS54	TIP25D
	5	MVX5200X5F40	★	2	260	267	307	372	40	63	1.39	SO○X16	TPS54	TIP25D
	5	MVX5200X5F50	★	2	260	267	307	382	50	63	1.39	SO○X16	TPS54	TIP25D
53.0	2	MVX5300X2F40	★	2	106	113	153	218	40	63	1.29	SO○X16	TPS54	TIP25D
	3	MVX5300X3F40	★	2	159	166	206	271	40	63	1.29	SO○X16	TPS54	TIP25D
	4	MVX5300X4F40	★	2	212	219	259	324	40	63	1.29	SO○X16	TPS54	TIP25D
	4	MVX5300X4F50	★	2	212	219	259	334	50	63	1.29	SO○X16	TPS54	TIP25D
	5	MVX5300X5F40	★	2	265	272	312	377	40	63	1.29	SO○X16	TPS54	TIP25D
	5	MVX5300X5F50	★	2	265	272	312	387	50	63	1.29	SO○X16	TPS54	TIP25D
54.0	2	MVX5400X2F40	★	2	108	115	155	220	40	63	1.19	SO○X16	TPS54	TIP25D
	3	MVX5400X3F40	★	2	162	169	209	274	40	63	1.19	SO○X16	TPS54	TIP25D
	4	MVX5400X4F40	★	2	216	223	263	328	40	63	1.19	SO○X16	TPS54	TIP25D
	4	MVX5400X4F50	★	2	216	223	263	338	50	63	1.19	SO○X16	TPS54	TIP25D
	5	MVX5400X5F40	★	2	270	277	317	382	40	63	1.19	SO○X16	TPS54	TIP25D
	5	MVX5400X5F50	★	2	270	277	317	392	50	63	1.19	SO○X16	TPS54	TIP25D
55.0	2	MVX5500X2F40	★	2	110	117	157	222	40	63	1.08	SO○X16	TPS54	TIP25D
	3	MVX5500X3F40	★	2	165	172	212	277	40	63	1.08	SO○X16	TPS54	TIP25D
	4	MVX5500X4F40	★	2	220	227	267	332	40	63	1.08	SO○X16	TPS54	TIP25D
	4	MVX5500X4F50	★	2	220	227	267	342	50	63	1.08	SO○X16	TPS54	TIP25D
	5	MVX5500X5F40	★	2	275	282	322	387	40	63	1.08	SO○X16	TPS54	TIP25D
	5	MVX5500X5F50	★	2	275	282	322	397	50	63	1.08	SO○X16	TPS54	TIP25D
56.0	2	MVX5600X2F40	★	2	112	119	159	224	40	63	0.98	SO○X16	TPS54	TIP25D
	3	MVX5600X3F40	★	2	168	175	215	280	40	63	0.98	SO○X16	TPS54	TIP25D
	4	MVX5600X4F40	★	2	224	231	271	336	40	63	0.98	SO○X16	TPS54	TIP25D
	4	MVX5600X4F50	★	2	224	231	271	346	50	63	0.98	SO○X16	TPS54	TIP25D
	5	MVX5600X5F40	★	2	280	287	327	392	40	63	0.98	SO○X16	TPS54	TIP25D
	5	MVX5600X5F50	★	2	280	287	327	402	50	63	0.98	SO○X16	TPS54	TIP25D

*1 Clamp Torque (lbf-in) : TPS54=66

*2 Number of Teeth

DC = Cutting Diameter
LU = Usable Length
LBX = Usable Length
LPR = Protruding Length
OAL = Overall Length
DCON = Fixing Part Depth
DCSFMS = Flange Diameter

INDEXABLE DRILL
MVX

(mm)

DC	Hole Depth (L/D)	Order Number	Stock	*2 No.T	LU	LBX	LPR	OAL	DCON	DCSFMS	S10	Insert Type	*1 Clamp Screw	Wrench
57.0	2	MVX5700X2F40	★	2	114	121	161	226	40	68	1.47	SO○X18	TPS54	TIP25D
	3	MVX5700X3F40	★	2	171	178	218	283	40	68	1.47	SO○X18	TPS54	TIP25D
	4	MVX5700X4F40	★	2	228	235	275	340	40	68	1.47	SO○X18	TPS54	TIP25D
	4	MVX5700X4F50	★	2	228	235	275	350	50	68	1.47	SO○X18	TPS54	TIP25D
	5	MVX5700X5F40	★	2	285	292	332	397	40	68	1.47	SO○X18	TPS54	TIP25D
	5	MVX5700X5F50	★	2	285	292	332	407	50	68	1.47	SO○X18	TPS54	TIP25D
58.0	2	MVX5800X2F40	★	2	116	123	163	228	40	68	1.37	SO○X18	TPS54	TIP25D
	3	MVX5800X3F40	★	2	174	181	221	286	40	68	1.37	SO○X18	TPS54	TIP25D
	4	MVX5800X4F40	★	2	232	239	279	344	40	68	1.37	SO○X18	TPS54	TIP25D
	4	MVX5800X4F50	★	2	232	239	279	354	50	68	1.37	SO○X18	TPS54	TIP25D
	5	MVX5800X5F40	★	2	290	297	337	402	40	68	1.37	SO○X18	TPS54	TIP25D
	5	MVX5800X5F50	★	2	290	297	337	412	50	68	1.37	SO○X18	TPS54	TIP25D
59.0	2	MVX5900X2F40	★	2	118	125	165	230	40	68	1.26	SO○X18	TPS54	TIP25D
	3	MVX5900X3F40	★	2	177	184	224	289	40	68	1.26	SO○X18	TPS54	TIP25D
	4	MVX5900X4F40	★	2	236	243	283	348	40	68	1.26	SO○X18	TPS54	TIP25D
	4	MVX5900X4F50	★	2	236	243	283	358	50	68	1.26	SO○X18	TPS54	TIP25D
	5	MVX5900X5F40	★	2	295	302	342	407	40	68	1.26	SO○X18	TPS54	TIP25D
	5	MVX5900X5F50	★	2	295	302	342	417	50	68	1.26	SO○X18	TPS54	TIP25D
60.0	2	MVX6000X2F40	★	2	120	127	167	232	40	68	1.16	SO○X18	TPS54	TIP25D
	3	MVX6000X3F40	★	2	180	187	227	292	40	68	1.16	SO○X18	TPS54	TIP25D
	4	MVX6000X4F40	★	2	240	247	287	352	40	68	1.16	SO○X18	TPS54	TIP25D
	4	MVX6000X4F50	★	2	240	247	287	362	50	68	1.16	SO○X18	TPS54	TIP25D
	5	MVX6000X5F40	★	2	300	307	347	412	40	68	1.16	SO○X18	TPS54	TIP25D
	5	MVX6000X5F50	★	2	300	307	347	422	50	68	1.16	SO○X18	TPS54	TIP25D
61.0	2	MVX6100X2F40	★	2	122	129	169	234	40	68	1.05	SO○X18	TPS54	TIP25D
	3	MVX6100X3F40	★	2	183	190	230	295	40	68	1.05	SO○X18	TPS54	TIP25D
	4	MVX6100X4F40	★	2	244	251	291	356	40	68	1.05	SO○X18	TPS54	TIP25D
	4	MVX6100X4F50	★	2	244	251	291	366	50	68	1.05	SO○X18	TPS54	TIP25D
	5	MVX6100X5F40	★	2	305	312	352	417	40	68	1.05	SO○X18	TPS54	TIP25D
	5	MVX6100X5F50	★	2	305	312	352	427	50	68	1.05	SO○X18	TPS54	TIP25D
62.0	2	MVX6200X2F40	★	2	124	131	171	236	40	68	0.95	SO○X18	TPS54	TIP25D
	3	MVX6200X3F40	★	2	186	193	233	298	40	68	0.95	SO○X18	TPS54	TIP25D
	4	MVX6200X4F40	★	2	248	255	295	360	40	68	0.95	SO○X18	TPS54	TIP25D
	4	MVX6200X4F50	★	2	248	255	295	370	50	68	0.95	SO○X18	TPS54	TIP25D
	5	MVX6200X5F40	★	2	310	317	357	422	40	68	0.95	SO○X18	TPS54	TIP25D
	5	MVX6200X5F50	★	2	310	317	357	432	50	68	0.95	SO○X18	TPS54	TIP25D
63.0	2	MVX6300X2F40	★	2	126	133	173	238	40	68	0.85	SO○X18	TPS54	TIP25D
	3	MVX6300X3F40	★	2	189	196	236	301	40	68	0.85	SO○X18	TPS54	TIP25D
	4	MVX6300X4F40	★	2	252	259	299	364	40	68	0.85	SO○X18	TPS54	TIP25D
	4	MVX6300X4F50	★	2	252	259	299	374	50	68	0.85	SO○X18	TPS54	TIP25D
	5	MVX6300X5F40	★	2	315	322	362	427	40	68	0.85	SO○X18	TPS54	TIP25D
	5	MVX6300X5F50	★	2	315	322	362	437	50	68	0.85	SO○X18	TPS54	TIP25D

*1 Clamp Torque (lbf-in) : TPS54=66

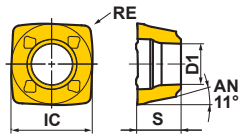
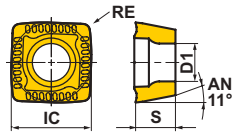
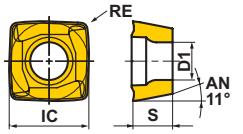
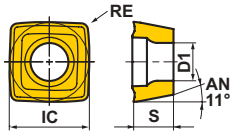
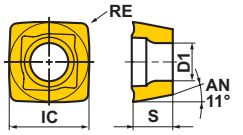
*2 Number of Teeth

DC = Cutting Diameter
LU = Usable Length
LBX = Usable Length
LPR = Protruding Length
OAL = Overall Length
DCON = Fixing Part Depth
DCSFMS = Flange Diameter

● : USA Stock ★ : Stocked in Japan
(10 inserts in one case)

Inserts

(mm)

Shape	Drill Dia.	Order Number	IC	S	RE	D1	Stock					Geometry
							MC5020	MC1020	VP15TF	DP8020	TF15	
UM	ø14—ø16.5	**SOMX052704-UM**	5	2.7	0.4	2.5	●	●	●			ø.14—ø16.5
	ø17—ø19.5	**SOMX063005-UM**	6	3	0.5	2.9	●	●	●			
	ø20—ø22.5	**SOMX073505-UM**	7	3.5	0.5	3.5	●	●	●			
	ø23—ø27.5	**SOMX084005-UM**	8.3	4	0.5	4	●	●	●			
	ø28—ø33	**SOMX094506-UM**	9.7	4.5	0.6	4.6	●	●	●			ø17—ø63
	ø33.5—ø39	**SOMX115506-UM**	11.6	5.5	0.6	4.7	●	●	●			
	ø40—ø46	**SOMX136008-UM**	13.8	6	0.8	4.7	●	●	●			
	ø47—ø56	**SOMX166508-UM**	16.5	6.5	0.8	5.6	●	●	●			
General Purpose	ø57—ø63	**SOMX187008-UM**	18.2	7	0.8	5.6	●	●	●			
US	ø17—ø19.5	**SOMX063005-US**	6	3	0.5	2.9			●			
	ø20—ø22.5	**SOMX073505-US**	7	3.5	0.5	3.5			●			
	ø23—ø27.5	**SOMX084005-US**	8.3	4	0.5	4			●			
	ø28—ø33	**SOMX094506-US**	9.7	4.5	0.6	4.6			●			
	ø33.5—ø39	**SOMX115506-US**	11.6	5.5	0.6	4.7			●			
	ø40—ø46	**SOMX136008-US**	13.8	6	0.8	4.7			●			
	ø47—ø56	**SOMX166508-US**	16.5	6.5	0.8	5.6			●			
For Stainless Steels and Inner Edge	ø57—ø63	**SOMX187008-US**	18.2	7	0.8	5.6			●			
UH	ø17—ø19.5	**SOMX062905-UH**	6	2.9	0.5	2.9				●		
	ø20—ø22.5	**SOMX073405-UH**	7	3.4	0.5	3.5				●		
	ø23—ø27.5	**SOMX083905-UH**	8.3	3.9	0.5	4				●		
	ø28—ø33	**SOMX094406-UH**	9.7	4.4	0.6	4.6				●		
	ø33.5—ø39	**SOMX115406-UH**	11.6	5.4	0.6	4.7				●		
	ø40—ø46	**SOMX135908-UH**	13.8	5.9	0.8	4.7				●		
	ø47—ø56	**SOMX166408-UH**	16.5	6.4	0.8	5.6				●		
Strong Cutting Edge Type and Inner Edge	ø57—ø63	**SOMX186908-UH**	18.2	6.9	0.8	5.6				●		
UN	ø17—ø19.5	**SOGX063005-UN**	6	3	0.5	2.9					●	
	ø20—ø22.5	**SOGX073505-UN**	7	3.5	0.5	3.5					●	
	ø23—ø27.5	**SOGX084005-UN**	8.3	4	0.5	4					●	
	ø28—ø33	**SOGX094506-UN**	9.7	4.5	0.6	4.6					●	
	ø33.5—ø39	**SOGX115506-UN**	11.6	5.5	0.6	4.7					●	
	ø40—ø46	**SOGX136008-UN**	13.8	6	0.8	4.7					●	
	ø47—ø56	**SOGX166508-UN**	16.5	6.5	0.8	5.6					●	
For Aluminum Alloys	ø57—ø63	**SOGX187008-UN**	18.2	7	0.8	5.6					●	

Note 1) MC1020 and MC5020 are made exclusively for use as an outer insert.

Recommended Cutting Conditions

	Workpiece Material	Properties	Cutting Speed **vc** (SFM)	Inner Chip Breaker	**ϕ.562"—ϕ.656" ϕ14.0—ϕ16.5mm** Feed **fr** (IPR)			
			L/D=2—6		L/D=2, 3	L/D=4	L/D=5	
P	Mild Steels	≤180HB	655 (590—770)	UM	.0020 (.0016—.0024)	.0020 (.0016—.0024)	.0020 (.0016—.0024)	
				UH	—	—	—	
	Carbon Steels, Alloy Steels	180—280HB	460 (375—590)	UM	.0031 (.0024—.0055)	.0031 (.0024—.0035)	.0031 (.0024—.0035)	
				UH	—	—	—	
	Carbon Steels, Alloy Steels	280—350HB	330 (245—460)	UM	.0031 (.0024—.0055)	.0031 (.0024—.0035)	.0031 (.0024—.0035)	
				UH	—	—	—	
	Alloy Tool Steels	≤350HB	440 (330—560)	UM	.0031 (.0024—.0055)	.0031 (.0024—.0035)	.0031 (.0024—.0035)	
				UH	—	—	—	
M	Austenitic Stainless Steels	≤200HB	425 (260—590)	US	—	—	—	
				UM	.0024 (.0016—.0031)	.0020 (.0016—.0024)	.0020 (.0016—.0024)	
	Austenitic Stainless Steels	>200HB	425 (260—590)	US	—	—	—	
				UM	.0024 (.0016—.0031)	.0020 (.0016—.0024)	.0020 (.0016—.0024)	
	Ferritic and Martensitic Stainless Steels	≤200HB	395 (260—540)	US	—	—	—	
				UM	.0024 (.0016—.0031)	.0020 (.0016—.0024)	.0020 (.0016—.0024)	
	Ferritic and Martensitic Stainless Steels	>200HB	395 (260—540)	US	—	—	—	
				UM	.0024 (.0016—.0031)	.0020 (.0016—.0024)	.0020 (.0016—.0024)	
K	Gray Cast Irons	Tensile Strength ≤350MPa	525 (425—640)	UM	.0039 (.0024—.0055)	.0031 (.0024—.0039)	.0031 (.0024—.0039)	
	Ductile Cast Irons	Tensile Strength ≤450MPa	330 (260—440)	UM	.0039 (.0024—.0055)	.0031 (.0024—.0039)	.0031 (.0024—.0039)	
	Ductile Cast Irons	Tensile Strength ≤800MPa	330 (230—410)	UM	.0031 (.0024—.0047)	.0028 (.0024—.0031)	.0028 (.0024—.0031)	
N	Aluminum Alloys	Si<5%	655 (330—1150)	UN	—	—	—	
	Aluminum Alloys	5%≤Si≤10%	490 (330—655)	UN	—	—	—	
	Aluminum Alloys	Si>10%	490 (330—655)	UN	—	—	—	
H	Hardened Steels	38—45HRC	165 (100—260)	UH	—	—	—	

Note 1) Reduce the cutting speed by around 30% when using VP15TF for outer insert.
Note 2) Recommend maximum drilling depth L/D≤3 for using outer coolant system.
Note 3) Spindle through & high pressure coolant system is recommended to make stable holes for stainless steels.

(inch)

	ϕ.687"—ϕ.750" ϕ17.0—ϕ19.5mm				ϕ.812"—ϕ.937" ϕ20.0—ϕ23.5mm				ϕ1.000"—ϕ1.125" ϕ24.0—ϕ29.5mm			
	Feed **fr** (IPR)				Feed **fr** (IPR)				Feed **fr** (IPR)			
	L/D=2, 3	L/D=4	L/D=5	L/D=6	L/D=2, 3	L/D=4	L/D=5	L/D=6	L/D=2, 3	L/D=4	L/D=5	L/D=6
	.0020 (.0016–.0024)	.0020 (.0016–.0024)	.0020 (.0016–.0024)	.0016 (.0016–.0020)	.0024 (.0016–.0031)	.0024 (.0016–.0028)	.0024 (.0016–.0028)	.0016 (.0016–.0020)	.0028 (.0016–.0031)	.0024 (.0016–.0028)	.0024 (.0016–.0028)	.0020 (.0016–.0024)
	.0031 (.0024–.0055)	.0031 (.0024–.0035)	.0031 (.0024–.0035)	.0020 (.0016–.0024)	.0039 (.0024–.0071)	.0035 (.0024–.0047)	.0035 (.0024–.0047)	.0028 (.0024–.0031)	.0047 (.0031–.0071)	.0039 (.0031–.0047)	.0039 (.0031–.0047)	.0035 (.0031–.0039)
	.0031 (.0024–.0055)	.0031 (.0024–.0035)	.0031 (.0024–.0035)	.0020 (.0016–.0024)	.0039 (.0024–.0071)	.0035 (.0024–.0047)	.0035 (.0024–.0047)	.0028 (.0024–.0031)	.0047 (.0031–.0071)	.0039 (.0031–.0047)	.0039 (.0031–.0047)	.0035 (.0031–.0039)
	.0024 (.0024–.0055)	.0031 (.0024–.0035)	.0031 (.0024–.0035)	.0020 (.0016–.0024)	.0039 (.0024–.0071)	.0035 (.0024–.0047)	.0035 (.0024–.0047)	.0028 (.0024–.0031)	.0047 (.0031–.0071)	.0039 (.0031–.0047)	.0039 (.0031–.0047)	.0035 (.0031–.0039)
	.0031 (.0024–.0047)	.0024 (.0016–.0031)	.0024 (.0016–.0031)	.0020 (.0016–.0024)	.0039 (.0024–.0055)	.0028 (.0024–.0031)	.0028 (.0024–.0031)	.0024 (.0024–.0028)	.0039 (.0024–.0055)	.0031 (.0024–.0039)	.0031 (.0024–.0039)	.0028 (.0024–.0031)
	.0024 (.0016–.0031)	.0020 (.0016–.0024)	.0020 (.0016–.0024)	.0016 (.0016–.0020)	.0039 (.0024–.0047)	.0028 (.0024–.0031)	.0028 (.0024–.0031)	.0024 (.0024–.0028)	.0035 (.0024–.0047)	.0028 (.0024–.0035)	.0028 (.0024–.0035)	.0024 (.0024–.0031)
	.0031 (.0024–.0047)	.0024 (.0016–.0031)	.0024 (.0016–.0031)	.0020 (.0016–.0024)	.0039 (.0024–.0055)	.0028 (.0024–.0031)	.0028 (.0024–.0031)	.0024 (.0024–.0028)	.0039 (.0024–.0055)	.0031 (.0024–.0039)	.0031 (.0024–.0039)	.0028 (.0024–.0031)
	.0024 (.0016–.0031)	.0020 (.0016–.0024)	.0020 (.0016–.0024)	.0016 (.0016–.0020)	.0039 (.0024–.0047)	.0028 (.0024–.0031)	.0028 (.0024–.0031)	.0024 (.0024–.0028)	.0035 (.0024–.0047)	.0028 (.0024–.0035)	.0028 (.0024–.0035)	.0024 (.0024–.0031)
	.0031 (.0024–.0047)	.0024 (.0016–.0031)	.0024 (.0016–.0031)	.0020 (.0016–.0024)	.0039 (.0024–.0055)	.0028 (.0024–.0031)	.0028 (.0024–.0031)	.0024 (.0024–.0028)	.0039 (.0024–.0055)	.0031 (.0024–.0039)	.0031 (.0024–.0039)	.0028 (.0024–.0031)
	.0024 (.0016–.0031)	.0020 (.0016–.0024)	.0020 (.0016–.0024)	.0016 (.0016–.0020)	.0039 (.0024–.0047)	.0028 (.0024–.0031)	.0028 (.0024–.0031)	.0024 (.0024–.0028)	.0035 (.0024–.0047)	.0028 (.0024–.0035)	.0028 (.0024–.0035)	.0024 (.0024–.0031)
	.0043 (.0031–.0055)	.0035 (.0031–.0039)	.0035 (.0031–.0039)	.0020 (.0016–.0024)	.0055 (.0039–.0071)	.0039 (.0039–.0047)	.0039 (.0039–.0047)	.0028 (.0024–.0031)	.0059 (.0039–.0079)	.0043 (.0039–.0051)	.0043 (.0039–.0051)	.0035 (.0031–.0039)
	.0043 (.0031–.0055)	.0035 (.0031–.0039)	.0035 (.0031–.0039)	.0020 (.0016–.0024)	.0051 (.0039–.0063)	.0039 (.0039–.0043)	.0039 (.0039–.0043)	.0028 (.0024–.0031)	.0055 (.0039–.0071)	.0043 (.0039–.0047)	.0043 (.0039–.0047)	.0035 (.0031–.0039)
	.0043 (.0031–.0055)	.0035 (.0031–.0039)	.0035 (.0031–.0039)	.0020 (.0016–.0024)	.0051 (.0039–.0063)	.0039 (.0039–.0043)	.0039 (.0039–.0043)	.0028 (.0024–.0031)	.0055 (.0039–.0071)	.0043 (.0039–.0047)	.0043 (.0039–.0047)	.0035 (.0031–.0039)
	.0048 (.0020–.0072)	.0048 (.0020–.0072)	.0048 (.0020–.0072)	.0032 (.0020–.0048)	.0048 (.0020–.0072)	.0048 (.0020–.0072)	.0048 (.0020–.0072)	.0032 (.0020–.0048)	.0048 (.0020–.0072)	.0048 (.0020–.0072)	.0048 (.0020–.0072)	.0032 (.0020–.0048)
	.0048 (.0020–.0072)	.0048 (.0020–.0072)	.0048 (.0020–.0072)	.0032 (.0020–.0048)	.0048 (.0020–.0072)	.0048 (.0020–.0072)	.0048 (.0020–.0072)	.0032 (.0020–.0048)	.0048 (.0020–.0072)	.0048 (.0020–.0072)	.0048 (.0020–.0072)	.0032 (.0020–.0048)
	.0048 (.0020–.0072)	.0048 (.0020–.0072)	.0048 (.0020–.0072)	.0032 (.0020–.0048)	.0048 (.0020–.0072)	.0048 (.0020–.0072)	.0048 (.0020–.0072)	.0032 (.0020–.0048)	.0048 (.0020–.0072)	.0048 (.0020–.0072)	.0048 (.0020–.0072)	.0032 (.0020–.0048)
	.0032 (.0016–.0048)	.0024 (.0016–.0036)	—	—	.0036 (.0024–.0056)	.0028 (.0024–.0036)	—	—	.0036 (.0024–.0056)	.0028 (.0024–.0036)	—	—

Recommended Cutting Conditions

(inch)

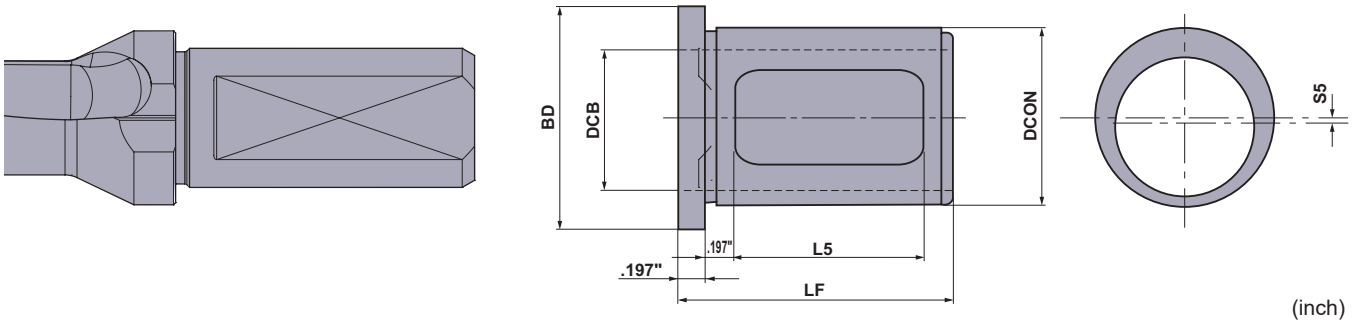
	Workpiece Material	Properties	Cutting Speed **vc** (SFM)	Inner Chip Breaker	**ϕ1.187"—ϕ2.500" ϕ30.0—ϕ63mm** Feed **fr** (IPR)			
			L/D=2—6		L/D=2, 3	L/D=4	L/D=5	L/D=6
P	Mild Steels	≤180HB	655 (590—770)	UM	.0031 (.0024—.0039)	.0028 (.0024—.0031)	.0028 (.0024—.0031)	.0024 (.0024—.0028)
				UH				
	Carbon Steels, Alloy Steels	180—280HB	460 (375—590)	UM	.0055 (.0031—.0094)	.0047 (.0031—.0063)	.0047 (.0031—.0063)	.0043 (.0039—.0047)
				UH				
	Carbon Steels, Alloy Steels	280—350HB	330 (245—460)	UM	.0055 (.0031—.0094)	.0047 (.0031—.0063)	.0047 (.0031—.0063)	.0043 (.0039—.0047)
				UH				
	Alloy Tool Steels	≤350HB	440 (330—560)	UM	.0055 (.0031—.0094)	.0047 (.0031—.0063)	.0047 (.0031—.0063)	.0039 (.0031—.0047)
				UH				
M	Austenitic Stainless Steels	≤200HB	425 (260—590)	US	.0039 (.0024—.0055)	.0035 (.0024—.0047)	.0035 (.0024—.0047)	.0028 (.0024—.0039)
				UM	.0035 (.0024—.0047)	.0031 (.0024—.0039)	.0031 (.0024—.0039)	.0028 (.0024—.0031)
	Austenitic Stainless Steels	>200HB	425 (260—590)	US	.0039 (.0024—.0055)	.0035 (.0024—.0047)	.0035 (.0024—.0047)	.0028 (.0024—.0039)
				UM	.0035 (.0024—.0047)	.0031 (.0024—.0039)	.0031 (.0024—.0039)	.0028 (.0024—.0031)
	Ferritic and Martensitic Stainless Steels	≤200HB	395 (260—540)	US	.0039 (.0024—.0055)	.0035 (.0024—.0047)	.0035 (.0024—.0047)	.0028 (.0024—.0039)
				UM	.0035 (.0024—.0047)	.0031 (.0024—.0039)	.0031 (.0024—.0039)	.0028 (.0024—.0031)
	Ferritic and Martensitic Stainless Steels	>200HB	395 (260—540)	US	.0039 (.0024—.0055)	.0035 (.0024—.0047)	.0035 (.0024—.0047)	.0028 (.0024—.0039)
				UM	.0035 (.0024—.0047)	.0031 (.0024—.0039)	.0031 (.0024—.0039)	.0028 (.0024—.0031)
K	Gray Cast Irons	Tensile Strength ≤350MPa	525 (425—640)	UM	.0059 (.0039—.0079)	.0047 (.0039—.0051)	.0047 (.0039—.0051)	.0043 (.0039—.0047)
	Ductile Cast Irons	Tensile Strength ≤450MPa	330 (260—440)	UM	.0059 (.0039—.0079)	.0047 (.0039—.0051)	.0047 (.0039—.0051)	.0043 (.0039—.0047)
	Ductile Cast Irons	Tensile Strength ≤800MPa	330 (230—410)	UM	.0059 (.0039—.0079)	.0047 (.0039—.0051)	.0047 (.0039—.0051)	.0043 (.0039—.0047)
N	Aluminum Alloys	Si<5%	655 (330—1150)	UN	.0048 (.0020—.0080)	.0048 (.0020—.0072)	.0048 (.0020—.0072)	.0032 (.0020—.0048)
	Aluminum Alloys	5%≤Si≤10%	490 (330—655)	UN	.0048 (.0020—.0080)	.0048 (.0020—.0072)	.0048 (.0020—.0072)	.0032 (.0020—.0048)
	Aluminum Alloys	Si>10%	490 (330—655)	UN	.0048 (.0020—.0080)	.0048 (.0020—.0072)	.0048 (.0020—.0072)	.0032 (.0020—.0048)
H	Hardened Steels	38—45HRC	165 (100—260)	UH	.0044 (.0024—.0064)	.0036 (.0024—.0048)	—	—

Note 1) Reduce the cutting speed by around 30% when using VP15TF for outer insert.
Note 2) Recommend maximum drilling depth L/D≤3 for using outer coolant system.
Note 3) Spindle through & high pressure coolant system is recommended to make stable holes for stainless steels.

JUST FIT SLEEVE [JFS]

Inch Standard

● A sleeve for the shank of the drill to allow the cutting diameter to be increased.



(inch)

Order Number	Stock	DCB	DCON	BD	LF	L5	✱Increase (S5×2)	MVX Order Number The Last Four Letters
JFS125100-005	●	1.000	1.250	1.813	2.250	1.625	.005	C100
JFS125100-010	●	1.000	1.250	1.813	2.250	1.625	.010	C100
JFS125100-015	●	1.000	1.250	1.813	2.250	1.625	.015	C100
JFS125100-020	●	1.000	1.250	1.813	2.250	1.625	.020	C100
JFS125100-025	●	1.000	1.250	1.813	2.250	1.625	.025	C100
JFS150125-005	●	1.250	1.500	2.063	2.370	1.750	.005	C125
JFS150125-010	●	1.250	1.500	2.063	2.370	1.750	.010	C125
JFS150125-015	●	1.250	1.500	2.063	2.370	1.750	.015	C125
JFS150125-020	●	1.250	1.500	2.063	2.370	1.750	.020	C125
JFS150125-025	●	1.250	1.500	2.063	2.370	1.750	.025	C125
JFS175150-005	●	1.500	1.750	2.313	2.780	2.156	.005	C150
JFS175150-010	●	1.500	1.750	2.313	2.780	2.156	.010	C150
JFS175150-015	●	1.500	1.750	2.313	2.780	2.156	.015	C150
JFS175150-020	●	1.500	1.750	2.313	2.780	2.156	.020	C150
JFS175150-025	●	1.500	1.750	2.313	2.780	2.156	.025	C150

It does not correspond to the shank diameter ø.750".

✱Increase : Size of the increase in the cutting diameter.

■ Guideline for Selecting a JUST FIT SLEEVE

Desired = (Drillø+ Increase of JFS) + .005"

(Eg.) Desired diameter is 1.015" (oversize is taken as .005").

ø1.015=(MVX1000 X ◌C125+JFS150125-010)+.005

- 1.000" Drill
- Using JFS an Increase of .010".
- Oversize

<Tool Selected>
MVX : **MVX1000 X ◌C125**
JUST FIT SLEEVE [JFS]
: **JFS150125-010**

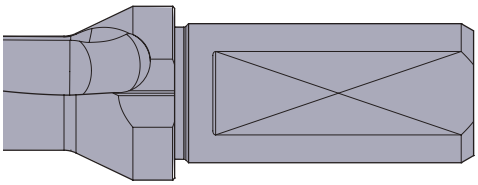
Note 1) Oversize can vary due to the cutting conditions used, please use the above as a guideline.

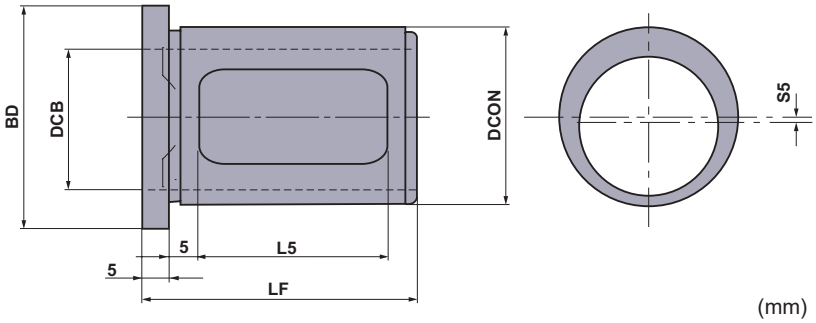
● : **USA Stock**

JUST FIT SLEEVE [JFS]

Metric Standard

● A sleeve for the shank of the drill to allow the cutting diameter to be increased.





(mm)

Order Number	Stock	Set Order Number	DCB	DCON	BD	LF	L5	✱Increase (S5×2)	MVX Order Number The Last Three Letters
JFS2520-10	★	**JFS-1**	20	25	33	43	30	0.1	F20
JFS2520-20	★	**JFS-1**	20	25	33	43	30	0.2	F20
JFS2520-30	★	**JFS-1**	20	25	33	43	30	0.3	F20
JFS2520-40	★	**JFS-1**	20	25	33	43	30	0.4	F20
JFS2520-50	★	**JFS-1**	20	25	33	43	30	0.5	F20
JFS3225-10	★	**JFS-2**	25	32	40	50	34	0.1	F25
JFS3225-20	★	**JFS-2**	25	32	40	50	34	0.2	F25
JFS3225-30	★	**JFS-2**	25	32	40	50	34	0.3	F25
JFS3225-40	★	**JFS-2**	25	32	40	50	34	0.4	F25
JFS3225-50	★	**JFS-2**	25	32	40	50	34	0.5	F25
JFS4032-10	★	**JFS-3**	32	40	48	55	40	0.1	F32
JFS4032-20	★	**JFS-3**	32	40	48	55	40	0.2	F32
JFS4032-30	★	**JFS-3**	32	40	48	55	40	0.3	F32
JFS4032-40	★	**JFS-3**	32	40	48	55	40	0.4	F32
JFS4032-50	★	**JFS-3**	32	40	48	55	40	0.5	F32
JFS5040-10	★	–	40	50	68	65	50	0.1	F40
JFS5040-20	★	–	40	50	68	65	50	0.2	F40
JFS5040-30	★	–	40	50	68	65	50	0.3	F40
JFS5040-40	★	–	40	50	68	65	50	0.4	F40
JFS5040-50	★	–	40	50	68	65	50	0.5	F40

It does not correspond to the shank diameter ø50mm.

✱Increase : Size of the increase in the cutting diameter.

■ Guideline for Selecting a JUST FIT SLEEVE

Desired = (Drillø+ Increase of JFS) + 0.1mm

(Eg.) Desired diameter is 20.3mm (oversize is taken as 0.1mm).

ø20.3=(MVX2000 X ◌F25+JFS3225-20)+0.1

- ø20mm Drill
- Using JFS an Increase of 0.2mm.
- Oversize

<Tool Selected>
MVX : **MVX2000 X ◌F25**
JUST FIT SLEEVE [JFS]
: **JFS3225-20**

Note 1) Oversize can vary due to the cutting conditions used, please use the above as a guideline.

■ Ordering the JUST FIT SLEEVE

● **Purchasing Method 1**

Oversize can vary due to the cutting conditions used. Therefore it is recommended to purchase as a set. (5 sleeves/set)When placing an order, please use the set order number.

● **Purchasing Method 2**

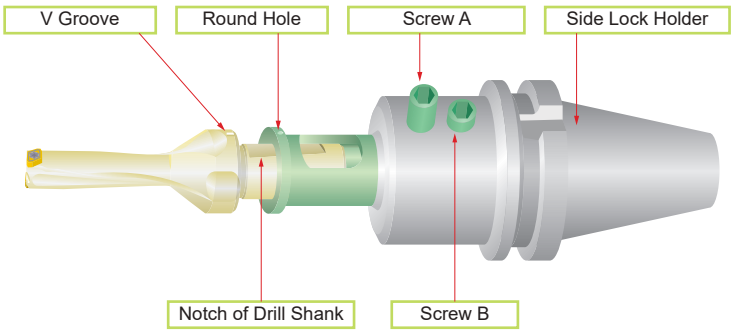
It is possible to order individually. When placing an order, please use the order number.

★ : Stocked in Japan

Application of JUST FIT SLEEVE

1 When inserting the drill into the side lock holder, aligin the V groove on the outer peripheral edge of the drill flange, as well as the round holes of the outer peripheral edge of the sleeve flange and the screws of the side lock holder for fixing the drill. (If the drill does not have a V groove, align the notch of the drill shank with the round holes of the sleeve.)

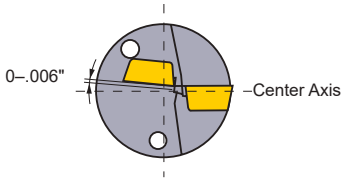
2 Insert screws A of the side lock holder directly to the open window of the sleeve and fix the drill. Tighten screw B to a degree so as not to damage the sleeve.



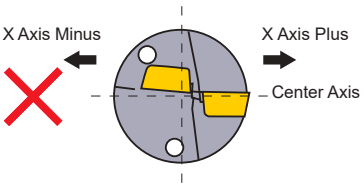
Application of MVX Type Drill

●Use on a Lathe

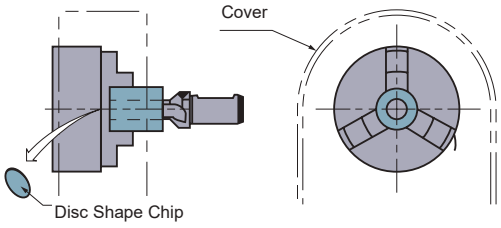
(1) The outer insert and machine X axis must be set parallel. The drill is designed that the center of the inner insert is 0-.006" lower when matching the drill center and the machine spindle center.
*The inner insert may fracture if the center height of inner insert is higher than the machine X axis.



(2) To adjust the hole diameter by off-setting the drill, please adjust to X axis plus direction (expanding direction of the hole diameter). Refer to the holder dimension list for the maximum adjustment rate of each holder.
*It is not recommended to adjust to X axis minus direction (reducing direction of the hole diameter) as the holder may interfere with the hole.



(3) When through hole drilling on a lathe the disc produced by the drill exiting the workpiece material may be expelled at high velocity. To reduce the damager of injury or damage a cover guard is highly recommended.

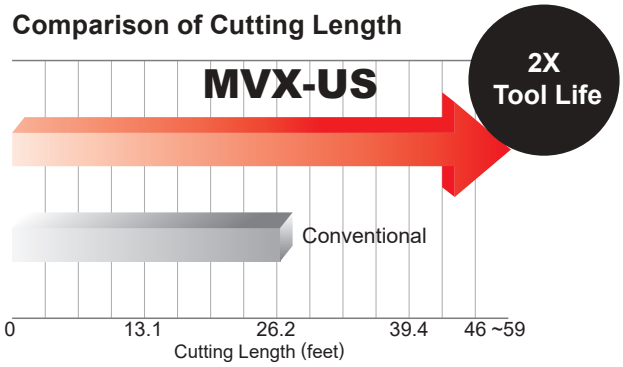


Cutting Performance

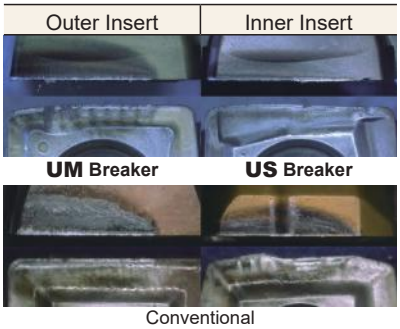
Stainless Steel (AISI 304)

MVX has 2X tool life compared with conventional product when using US breaker for the inner edge.

Comparison of Cutting Length



Comparison of Cutting Edge



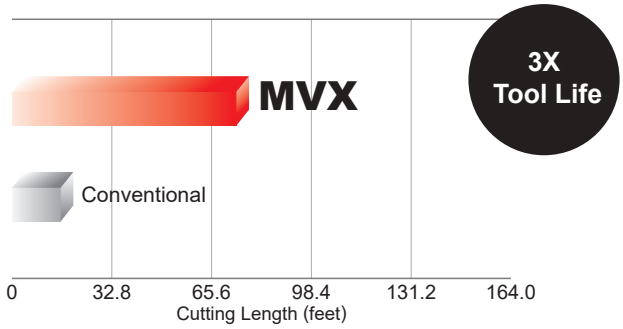
Conventional

<Cutting Conditions>
Tool : MVX3000X3F32
Insert : Outer MC1020-UM
Inner VP15TF-US
Workpiece Material : AISI 304
Cutting Speed : vc=395 SFM
Feed : fr=.005 IPR
Hole Depth : 1.97 inch
(Through Hole)
Cutting Mode : Water-soluble
Coolants

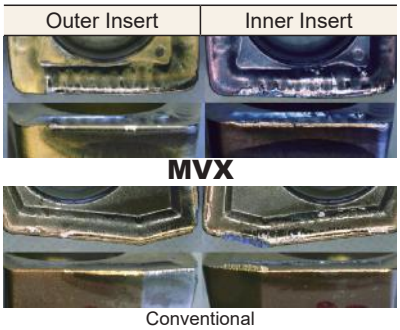
Carbon Steel (AISI 1049)

MVX drill achieved 3X longer tool life compared with conventional product when drilling carbon steel.

Comparison of Cutting Length



Comparison of Cutting Edge



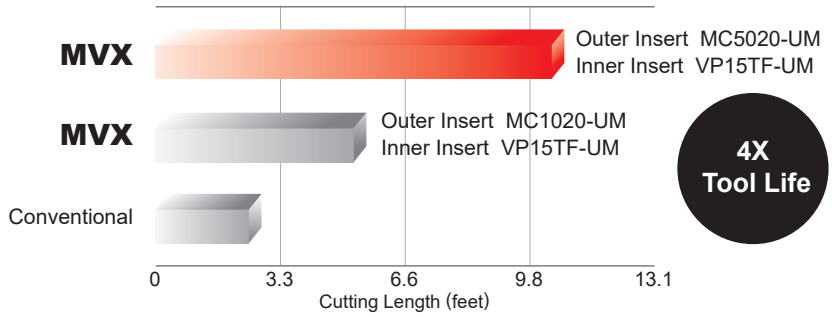
Conventional

<Cutting Conditions>
Tool : MVX1900X3F25
Insert : Outer MC1020-UM
Inner VP15TF-UM
Workpiece Material : AISI 1049
Cutting Speed : vc=720 SFM
Feed : fr=.0039 IPR
Hole Depth : 1.97 inch
(Through Hole)
Cutting Mode : Water-soluble
Coolants

Cast Iron (AISI No.35B)

MVX has 4X longer tool life compared to conventional product,
especially when using MC5020 grade outer inserts.

Comparison of Cutting Length

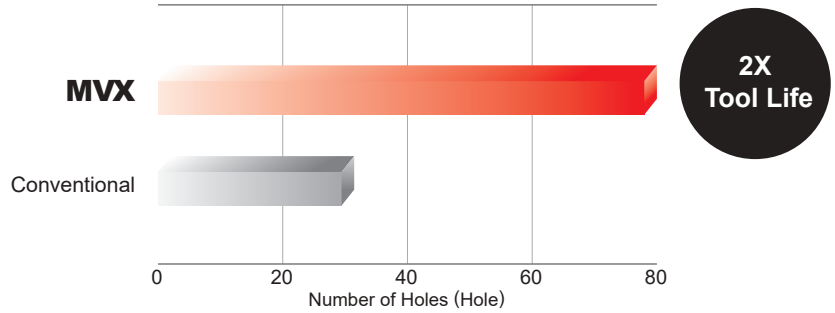


<Cutting Conditions>
Tool : MVX1900X3F25
Insert : Outer MC5020-UM
MC1020-UM
Inner VP15TF-UM
Workpiece Material : AISI No.35B
Cutting Speed : vc=525 SFM
Feed : fr=.0059 IPR
Hole Depth : 1.97 inch
(Through Hole)
Cutting Mode : Water-soluble
Coolants

Hardened Steel (AISI H13)

MVX has 2X tool life compared with conventional product.

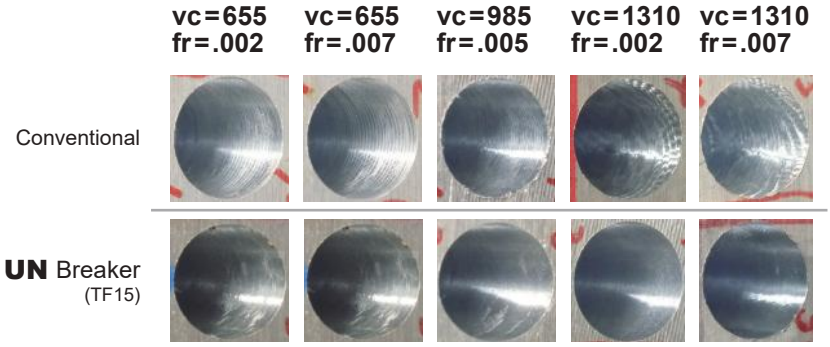
Comparison of Number of Holes



<Cutting Conditions>
Tool : MVX1700X3F20
Insert : Outer MC1020-UM
Inner DP8020-UH
Workpiece Material : AISI H13 (45 HRC)
Cutting Speed : vc=165 SFM
Feed : fr=.003 IPR
Hole Depth : 1.181 inch
(Through Hole)
Cutting Mode : Water-soluble
Coolants

Aluminum Alloy

MVX corresponds to changes in cutting speed and feed per revolution.



<Cutting Conditions>
Tool : MVX1700X5F20
Insert : Outer TF15-UN
Inner TF15-UN
Workpiece Material : Aluminum Alloy
Cutting Speed : vc=655-1310 SFM
Feed : fr=.002-.007 IPR
Hole Depth : 1.575 inch
(Blind Hole)
Cutting Mode : Water-soluble
Coolants

MITSUBISHI MATERIALS U.S.A.

MITSUBISHI MATERIALS U.S.A. CORPORATION

California Office
(Headquarters)

3535 Hyland Avenue, Suite 200
Costa Mesa, CA 92626
Customer Service: 800.523.0800
Technical Service: 800.486.2341

Chicago Office
(Engineering)

300 N. Martingale Road, Suite 500
Schaumburg, IL 60173
Main: 847.252.6300
Fax: 847.519.1732

MMC Metal de Mexico, S.A. DE C.V.

Av. La Cañada No.16,
Parque Industrial Bernardo
Quintana, El Marques,
Queretaro C.P. 76246 MEXICO
Main: +52.442.221.61.36
Fax: +52.442.221.61.34

North Carolina-MTEC
(Marketing & Technical Center)

105 Corporate Center Drive, Suite A
Mooresville, NC 28117
Main: 980.312.3100
Fax: 704.746.9292

Toronto Office
(Canada Branch)

600 Matheson Blvd. Unit 5 (Office)
Mississauga, ON L5R 4C1
Main: 905.814.0240
Fax: 905.814.0245

Detroit Office
(Moldino CS)

41700 Gardenbrook Road, Suite 120
Novi, MI 48375
Main: 248.308.2620
Fax: 248.308.2627

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 attaching inserts or spare parts, please use only the correct wrench or driver.
- When using rotating tools, please make a trial run to check run-out, vibration and abnormal sounds etc.

www.mmc-carbide.com/us

Tools specifications subject to change without notice.

B202A-US-2020.4