

New 8D
holder for the
H type insert!

Indexable Type Drill

TAW Drill

Stable performance from a versatile, changeable insert type drill



H Type Insert



U Type Insert

High rigidity grade for longer tool life

MIRACLE[®] Coated VP15TF

MIRACLE coating is ideal for drilling due to its high welding resistance. Suitable for machining a wide range of workpiece materials from Mild and Alloy steels through to Stainless steels and Cast iron.



Indexable Type Drill

TAW Drill

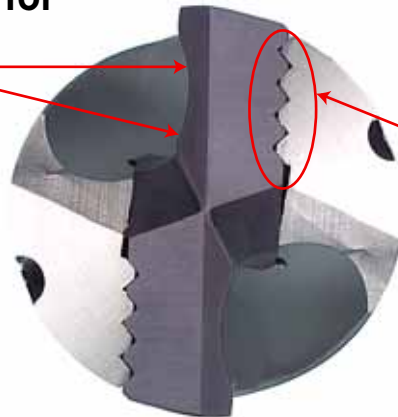
Features

Designed for Extreme Sharpness and Accuracy

Wave Type Cutting Edge for Superior Chip Control

Wavy Cutting Edge

The wave edge design achieves sharp peripheral edge cutting performance with a strong initial cutting point near the center.



Cutting edge shape

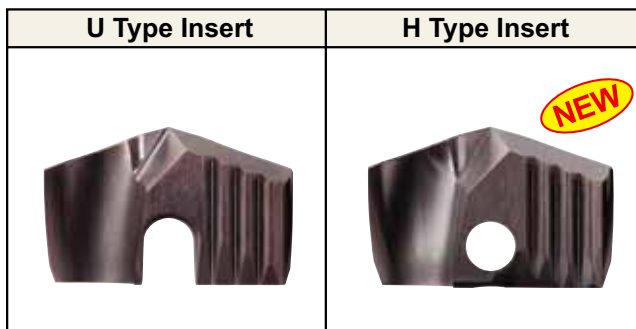
Serrated Insert Clamping Geometry

Mitsubishi's Unique Serration Geometry

Mitsubishi's unique serration structure allows high clamping accuracy to be maintained.

Insert Selection

- New through hole clamping type for added reliability.



Exceptional Tool Life

- **MIRACLE**® coated **VP15TF** delivering exceptional tool life.



MIRACLE®
coating
(Al, Ti)N

Micro-grain
cemented
carbide
TF15

Features of **VP15TF**

MIRACLE® coated **VP15TF** is ideal for drilling due to its high resistance to chip welding. Suitable for machining a wide range of workpiece materials from mild and alloy steels through to stainless steels and cast iron.

Easy Change (U Type Insert)

- Inserts can be replaced easily by loosening a single clamp screw.



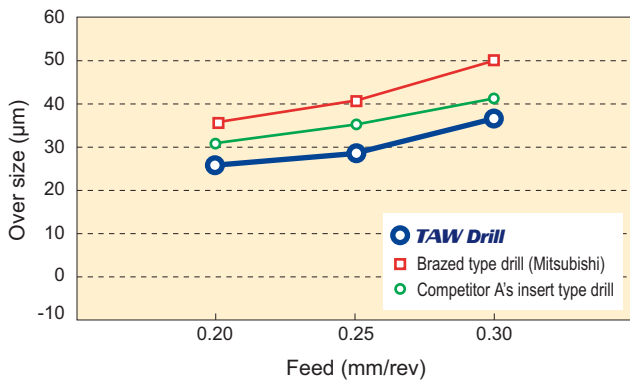
High Durability Body

- The cutter bodies are made resistant to corrosion and abrasion by using a superior, high heat resistant alloy and a special surface treatment.



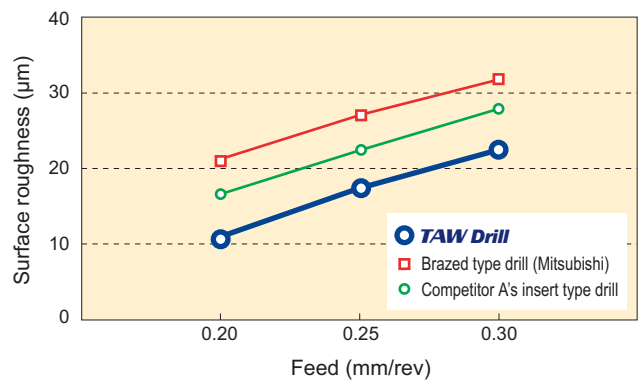
Cutting Performance

Over Size



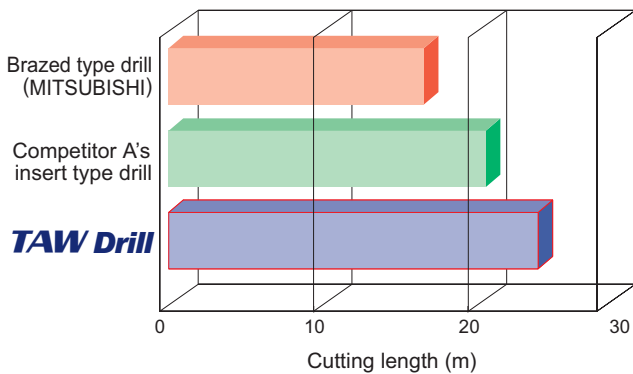
<Cutting conditions>
 Workpiece : JIS S50C (150–180HB)
 Drill diameter : ø20 (L/D=5)
 Cutting speed : 80m/min
 Coolant : Emulsion 10%
 Pressure : 0.5MPa (Internal Coolant)

Surface Roughness



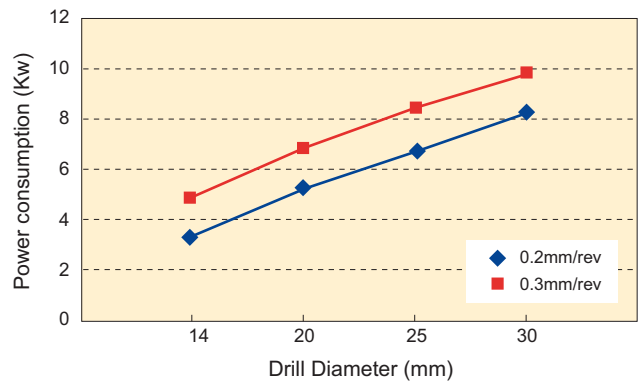
<Cutting conditions>
 Workpiece : JIS S50C (150–180HB)
 Drill diameter : ø20 (L/D=5)
 Cutting speed : 80m/min
 Coolant : Emulsion 10%
 Pressure : 0.5MPa (Internal Coolant)

Insert Life



<Cutting conditions>
 Workpiece : JIS S50C (150–180HB)
 Drill diameter : ø20 (L/D=5)
 Cutting speed : 100m/min
 Feed : 0.25mm/rev
 Coolant : Emulsion 10%
 Pressure : 0.5MPa (Internal Coolant)

Power Consumption



<Cutting conditions>
 Workpiece : JIS S50C (150–180HB)
 Cutting speed : 80m/min
 Coolant : Emulsion 10%
 Pressure : 0.5MPa (Internal Coolant)

Power consumption and torque/thrust equations (Guide)

$$P_{net} = \alpha_1 \times \frac{2\pi \times n \times M_d}{102 \times 60 \times 100} + \beta_1 \times \frac{fr \times n \times T}{102 \times 60 \times 1000} \text{ (kW)}$$

$$M_d \text{ (Torque)} = \alpha_2 \times HB \times fr^{\beta_2} \times D^{\gamma_2} \text{ (kg} \cdot \text{cm)}$$

$$T \text{ (Thrust)} = \alpha_3 \times HB \times fr^{\beta_3} \times D^{\gamma_3} \text{ (kg} \cdot \text{f)}$$

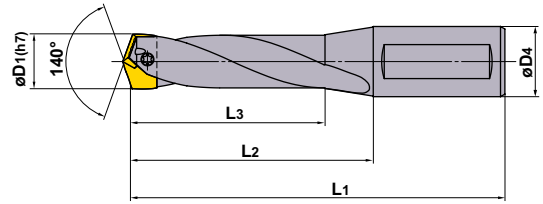
(M_d and T equations were calculated based on the experimental data.)

P _{net} (kW) : Required cutting power	α ₁ (Coefficient) : 1.5
π (3.14) : Pi	α ₂ (Coefficient) : 0.025
n (min ⁻¹) : Spindle revolution	α ₃ (Coefficient) : 0.8
M _d (kg · cm) : Torque	β ₁ (Coefficient) : 1.0
fr (mm/rev) : Feed per revolution	β ₂ (Coefficient) : 0.8
T (kgf) : Thrust	β ₃ (Coefficient) : 0.7
D (mm) : Drill diameter	γ ₂ (Coefficient) : 1.8
HB (HB) : Workpiece hardness	γ ₃ (Coefficient) : 0.65

(The above values are calculated based on experimental data.)

TAW Drill





(General Use)



Holder

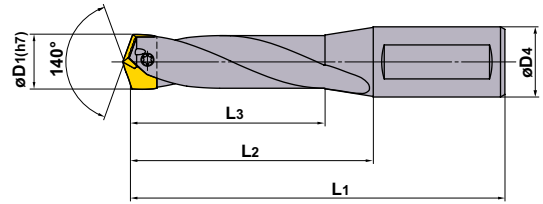
Drill Dia. Range D1 (mm)	Hole Depth (l/d)	Holder		Insert				Dimensions (mm)				Clamp Screw	Wrench	Plate	Anti-seize Lubricant
		Order Number	Stock	Drill Dia. D1 (mm)	Order Number	Stock		L3	L2	L1	D4				
						VP15TF	VP10H								
14.0 14.4	3 5 8	TAWSNH1400S16	●	14.0	TAWNH1400T	●	□	51	67	115	16	WS254012T	TKY08D	WPT4405	MK1KS
				14.1	TAWNH1410T	●	□								
				14.2	TAWNH1420T	●	□								
				14.3	TAWNH1430T	●	□								
		TAWLNH1400S16	●	14.4	TAWNH1440T	●	□	122	137	185	16	WS254012T	TKY08D	WPT4405	MK1KS
14.5 15.4	3 5 8	TAWSNH1500S20	●	14.5	TAWNH1450T	●	□	54	75	125	20	WS254013T	TKY08D	WPT4405	MK1KS
				14.6	TAWNH1460T	●	□								
				14.7	TAWNH1470T	●	□								
				14.8	TAWNH1480T	●	□								
				14.9	TAWNH1490T	●	□								
				15.0	TAWNH1500T	●	□								
				15.1	TAWNH1510T	●	□								
				15.2	TAWNH1520T	●	□								
				15.3	TAWNH1530T	●	□								
				15.4	TAWNH1540T	●	□								
15.5 16.4	3 5 8	TAWSN1600S20	●	15.5	TAWN1550T	●	□	58 (58)	80 (80)	130 (130)	20	WS254014T	TKY08D	WPT4405	MK1KS
				TAWN1550T	●	□									
				TAWN1560T	●	□									
				15.6	TAWN1560T	●	□								
				15.7	TAWN1570T	●	□								
				15.7	TAWN1570T	●	□								
		15.8	TAWN1580T	●	□										
		15.8	TAWN1580T	●	□										
		15.9	TAWN1590T	●	□										
		15.9	TAWN1590T	●	□										
		16.0	TAWN1600T	●	□										
		16.0	TAWN1600T	●	□										
		16.1	TAWN1610T	●	□										
		16.1	TAWN1610T	●	□										
16.2	TAWN1620T	●	□												
16.2	TAWN1620T	●	□												
TAWLN1600S20	●	16.3	TAWN1630T	●	□	138 (138)	158 (158)	208 (208)	20	WS254014T	TKY08D	WPT4405	MK1KS		
		16.3	TAWN1630T	●	□										
		16.4	TAWN1640T	●	□										
		16.4	TAWN1640T	●	□										

- Notes 1. The dimensions in brackets represent the sizes when TAWN-U type inserts are used.
 2. The TAWN-U type inserts cannot be used for the TAWS/M/L NH1400S16 and TAWS/M/L NH1500S20 holders.
 3. Please contact us for any type that is not shown in this literature (e.g. different diameters and lengths and drills with chamfered cutting edges can be made to order).

Drill Dia. Range D1 (mm)	Hole Depth (l/d)	Holder		Insert				Dimensions (mm)							
		Order Number	Stock	Drill Dia. D1 (mm)	Order Number	Stock		L3	L2	L1	D4				
						VP15TF	VP10H								
16.5 17.4	3	TAWSN1700S20	●	16.5	TAWN1650T	●	<input type="checkbox"/>	61 (61)	85 (85)	135 (135)	20	WS254015T	ⓈTKY08D	WPT4405	MK1KS
				TAWNH1650T	●	<input type="checkbox"/>									
				16.6	TAWN1660T	●	<input type="checkbox"/>								
				TAWNH1660T	●	<input type="checkbox"/>									
	5	TAWMN1700S20	●	16.7	TAWN1670T	●	<input type="checkbox"/>	96 (96)	120 (120)	170 (170)	20	WS254015T	ⓈTKY08D	WPT4405	MK1KS
				TAWNH1670T	●	<input type="checkbox"/>									
				16.8	TAWN1680T	●	<input type="checkbox"/>								
				TAWNH1680T	●	<input type="checkbox"/>									
	NEW 8	TAWLN1700S20	●	16.9	TAWN1690T	●	<input type="checkbox"/>	146 (146)	166 (166)	216 (216)	20	WS254015T	ⓈTKY08D	WPT4405	MK1KS
				TAWNH1690T	●	<input type="checkbox"/>									
				17.0	TAWN1700T	●	<input type="checkbox"/>								
				TAWNH1700T	●	<input type="checkbox"/>									
17.5 18.4	3	TAWSN1800S20	●	17.1	TAWN1710T	●	<input type="checkbox"/>	102 (102)	125 (125)	175 (175)	20	WS254016T	ⓈTKY08D	WPT4405	MK1KS
				TAWNH1710T	●	<input type="checkbox"/>									
				17.2	TAWN1720T	●	<input type="checkbox"/>								
				TAWNH1720T	●	<input type="checkbox"/>									
	5	TAWMN1800S20	●	17.3	TAWN1730T	●	<input type="checkbox"/>	154 (154)	174 (174)	224 (224)	20	WS254016T	ⓈTKY08D	WPT4405	MK1KS
				TAWNH1730T	●	<input type="checkbox"/>									
				17.4	TAWN1740T	●	<input type="checkbox"/>								
				TAWNH1740T	●	<input type="checkbox"/>									
	NEW 8	TAWLN1800S20	●	17.5	TAWN1750T	●	<input type="checkbox"/>	102 (102)	125 (125)	175 (175)	20	WS254016T	ⓈTKY08D	WPT4405	MK1KS
				TAWNH1750T	●	<input type="checkbox"/>									
				17.6	TAWN1760T	●	<input type="checkbox"/>								
				TAWNH1760T	●	<input type="checkbox"/>									
18.5 19.4	3	TAWSN1900S25	●	17.7	TAWN1770T	●	<input type="checkbox"/>	107 (107)	134 (134)	190 (190)	25	WS304517T	ⓈTKY10T	WPT4405	MK1KS
				TAWNH1770T	●	<input type="checkbox"/>									
				17.8	TAWN1780T	●	<input type="checkbox"/>								
				TAWNH1780T	●	<input type="checkbox"/>									
	5	TAWMN1900S25	●	17.9	TAWN1790T	●	<input type="checkbox"/>	162 (162)	185 (185)	241 (241)	25	WS304517T	ⓈTKY10T	WPT4405	MK1KS
				TAWNH1790T	●	<input type="checkbox"/>									
				18.0	TAWN1800T	●	<input type="checkbox"/>								
				TAWNH1800T	●	<input type="checkbox"/>									
	NEW 8	TAWLN1900S25	●	18.1	TAWN1810T	●	<input type="checkbox"/>	107 (107)	134 (134)	190 (190)	25	WS304517T	ⓈTKY10T	WPT4405	MK1KS
				TAWNH1810T	●	<input type="checkbox"/>									
				18.2	TAWN1820T	●	<input type="checkbox"/>								
				TAWNH1820T	●	<input type="checkbox"/>									
3	TAWSN1900S25	●	18.3	TAWN1830T	●	<input type="checkbox"/>	162 (162)	185 (185)	241 (241)	25	WS304517T	ⓈTKY10T	WPT4405	MK1KS	
			TAWNH1830T	●	<input type="checkbox"/>										
			18.4	TAWN1840T	●	<input type="checkbox"/>									
			TAWNH1840T	●	<input type="checkbox"/>										
5	TAWMN1900S25	●	18.5	TAWN1850T	●	<input type="checkbox"/>	107 (107)	134 (134)	190 (190)	25	WS304517T	ⓈTKY10T	WPT4405	MK1KS	
			TAWNH1850T	●	<input type="checkbox"/>										
			18.6	TAWN1860T	●	<input type="checkbox"/>									
			TAWNH1860T	●	<input type="checkbox"/>										
NEW 8	TAWLN1900S25	●	18.7	TAWN1870T	●	<input type="checkbox"/>	107 (107)	134 (134)	190 (190)	25	WS304517T	ⓈTKY10T	WPT4405	MK1KS	
			TAWNH1870T	●	<input type="checkbox"/>										
			18.8	TAWN1880T	●	<input type="checkbox"/>									
			TAWNH1880T	●	<input type="checkbox"/>										
3	TAWSN1900S25	●	18.9	TAWN1890T	●	<input type="checkbox"/>	107 (107)	134 (134)	190 (190)	25	WS304517T	ⓈTKY10T	WPT4405	MK1KS	
			TAWNH1890T	●	<input type="checkbox"/>										
			19.0	TAWN1900T	●	<input type="checkbox"/>									
			TAWNH1900T	●	<input type="checkbox"/>										
5	TAWMN1900S25	●	19.1	TAWN1910T	●	<input type="checkbox"/>	107 (107)	134 (134)	190 (190)	25	WS304517T	ⓈTKY10T	WPT4405	MK1KS	
			TAWNH1910T	●	<input type="checkbox"/>										
			19.2	TAWN1920T	●	<input type="checkbox"/>									
			TAWNH1920T	●	<input type="checkbox"/>										
NEW 8	TAWLN1900S25	●	19.3	TAWN1930T	●	<input type="checkbox"/>	107 (107)	134 (134)	190 (190)	25	WS304517T	ⓈTKY10T	WPT4405	MK1KS	
			TAWNH1930T	●	<input type="checkbox"/>										
			19.4	TAWN1940T	●	<input type="checkbox"/>									
			TAWNH1940T	●	<input type="checkbox"/>										

TAW Drill

(General Use)







Holder

Drill Dia. Range D1 (mm)	Hole Depth (l/d)	Holder		Insert		Dimensions (mm)				Clamp Screw	Wrench	Plate	Anti-seize Lubricant	
		Order Number	Stock	Drill Dia. D1 (mm)	Order Number	Stock	L3	L2	L1					D4
19.5 20.4	3	TAWSN2000S25	●	19.5	TAWN1950T	●	72 (72)	99 (99)	155 (155)	25	WS304518T	TKY10T	WPT4405	MK1KS
					TAWNH1950T	●								
					TAWN1960T	●								
					TAWNH1960T	●								
	5	TAWMN2000S25	●	19.6	TAWN1970T	●	113 (113)	139 (139)	195 (195)	25	WS304518T	TKY10T	WPT4405	MK1KS
					TAWNH1970T	●								
					TAWN1980T	●								
					TAWNH1980T	●								
					TAWN1990T	●								
					TAWNH1990T	●								
					TAWN2000T	●								
					TAWNH2000T	●								
8	TAWLN2000S25	●	20.1	TAWN2010T	□	170 (170)	193 (193)	249 (249)	25	WS304518T	TKY10T	WPT4405	MK1KS	
				TAWNH2010T	□									
				TAWN2020T	□									
				TAWNH2020T	□									
20.5 21.4	3	TAWSN2100S25	●	20.5	TAWN2030T	□	75 (75)	99 (99)	155 (155)	25	WS304518T	TKY10T	WPT4405	MK1KS
					TAWNH2030T	□								
					TAWN2040T	□								
					TAWNH2040T	□								
	5	TAWMN2100S25	●	20.6	TAWN2070T	□	118 (118)	139 (139)	195 (195)	25	WS304518T	TKY10T	WPT4405	MK1KS
					TAWNH2070T	□								
					TAWN2080T	□								
					TAWNH2080T	□								
					TAWN2090T	□								
					TAWNH2090T	□								
					TAWN2100T	●								
					TAWNH2100T	●								
8	TAWLN2100S25	●	21.1	TAWN2110T	□	178 (178)	202 (202)	258 (258)	25	WS304518T	TKY10T	WPT4405	MK1KS	
				TAWNH2110T	□									
				TAWN2120T	□									
				TAWNH2120T	□									
21.5 22.4	3	TAWSN2200S25	●	21.5	TAWN2130T	□	79.3 (79)	104.3 (104)	160.3 (160)	25	WS355520T	TKY15T	WPT4405	MK1KS
					TAWNH2130T	□								
	5	TAWMN2200S25	●	21.6	TAWN2140T	□	124.3 (124)	144.3 (144)	200.3 (200)	25	WS355520T	TKY15T	WPT4405	MK1KS
					TAWNH2140T	□								
					TAWN2170T	□								
					TAWNH2170T	□								
8	TAWLN2200S25	●	21.8	TAWN2180T	□	186 (185.7)	210 (209.7)	266 (265.7)	25	WS355520T	TKY15T	WPT4405	MK1KS	
				TAWNH2180T	□									
				21.9	TAWN2190T	□								
					TAWNH2190T	□								

Notes 1. The dimensions in brackets represent the sizes when TAWN-U type inserts are used.

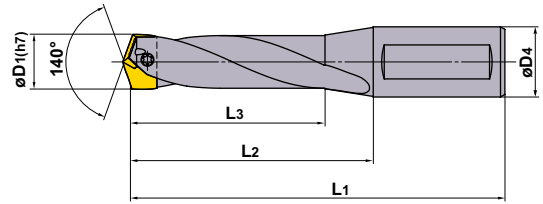
2. Please contact us for any type that is not shown in this literature (e.g. different diameters and lengths and drills with chamfered cutting edges can be made to order).

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

Drill Dia. Range D1 (mm)	Hole Depth (l/d)	Holder		Insert				Dimensions (mm)							
		Order Number	Stock	Drill Dia. D1 (mm)	Order Number	Stock		L3	L2	L1	D4				
						VP15TF	VP10H								
21.5 22.4	3	TAWSN2200S25	●	22.0	TAWN2200T	●	<input type="checkbox"/>	79.3 (79)	104.3 (104)	160.3 (160)	25	WS355520T	TKY15T	WPT4405	MK1KS
					TAWNH2200T	●	<input type="checkbox"/>								
				22.1	TAWN2210T	<input type="checkbox"/>	<input type="checkbox"/>								
	5	TAWMN2200S25	●	22.2	TAWN2220T	<input type="checkbox"/>	<input type="checkbox"/>	124.3 (124)	144.3 (144)	200.3 (200)	25	WS355520T	TKY15T	WPT4405	MK1KS
					TAWNH2220T	<input type="checkbox"/>	<input type="checkbox"/>								
				22.3	TAWN2230T	<input type="checkbox"/>	<input type="checkbox"/>								
8	TAWLN2200S25	●	22.4	TAWN2240T	<input type="checkbox"/>	<input type="checkbox"/>	186 (185.7)	210 (209.7)	266 (265.7)	25	WS355520T	TKY15T	WPT4405	MK1KS	
				TAWNH2240T	<input type="checkbox"/>	<input type="checkbox"/>									
22.5 23.4	3	TAWSN2300S25	●	22.5	TAWN2250T	●	<input type="checkbox"/>	82.3 (82)	104.3 (104)	160.3 (160)	25	WS355521T	TKY15T	WPT4405	MK1KS
					TAWNH2250T	●	<input type="checkbox"/>								
				22.6	TAWN2260T	<input type="checkbox"/>	<input type="checkbox"/>								
				22.7	TAWN2270T	<input type="checkbox"/>	<input type="checkbox"/>								
	5	TAWMN2300S25	●	22.8	TAWN2280T	<input type="checkbox"/>	<input type="checkbox"/>	129.3 (129)	154.3 (154)	210.3 (210)	25	WS355521T	TKY15T	WPT4405	MK1KS
					TAWNH2280T	<input type="checkbox"/>	<input type="checkbox"/>								
				22.9	TAWN2290T	<input type="checkbox"/>	<input type="checkbox"/>								
				23.0	TAWN2300T	●	<input type="checkbox"/>								
	8	TAWLN2300S25	●	23.1	TAWN2310T	<input type="checkbox"/>	<input type="checkbox"/>	194 (193.7)	223 (222.7)	279 (278.7)	25	WS355521T	TKY15T	WPT4405	MK1KS
					TAWNH2310T	<input type="checkbox"/>	<input type="checkbox"/>								
				23.2	TAWN2320T	<input type="checkbox"/>	<input type="checkbox"/>								
				23.3	TAWN2330T	<input type="checkbox"/>	<input type="checkbox"/>								
23.5 24.4	3	TAWSN2400S32	●	23.5	TAWN2350T	●	<input type="checkbox"/>	86.3 (86)	110.3 (110)	170.3 (170)	32	WS355521T	TKY15T	WPT4405	MK1KS
					TAWNH2350T	●	<input type="checkbox"/>								
				23.6	TAWN2360T	<input type="checkbox"/>	<input type="checkbox"/>								
				23.7	TAWN2370T	<input type="checkbox"/>	<input type="checkbox"/>								
	5	TAWMN2400S32	●	23.8	TAWN2380T	<input type="checkbox"/>	<input type="checkbox"/>	135.3 (135)	160.3 (160)	220.3 (220)	32	WS355521T	TKY15T	WPT4405	MK1KS
					TAWNH2380T	<input type="checkbox"/>	<input type="checkbox"/>								
				23.9	TAWN2390T	<input type="checkbox"/>	<input type="checkbox"/>								
				24.0	TAWN2400T	●	<input type="checkbox"/>								
	8	TAWLN2400S32	●	24.1	TAWN2410T	<input type="checkbox"/>	<input type="checkbox"/>	202 (201.7)	232 (231.7)	292 (291.7)	32	WS355521T	TKY15T	WPT4405	MK1KS
					TAWNH2410T	<input type="checkbox"/>	<input type="checkbox"/>								
24.2				TAWN2420T	<input type="checkbox"/>	<input type="checkbox"/>									
24.3				TAWN2430T	<input type="checkbox"/>	<input type="checkbox"/>									
24.5 25.4	3	TAWSN2500S32	●	24.5	TAWN2450T	●	<input type="checkbox"/>	88.6 (88)	110.6 (110)	170.6 (170)	32	WS406023T	TKY25T	WPT4405	MK1KS
					TAWNH2450T	●	<input type="checkbox"/>								
				24.6	TAWN2460T	<input type="checkbox"/>	<input type="checkbox"/>								
	5	TAWMN2500S32	●	24.7	TAWN2470T	<input type="checkbox"/>	<input type="checkbox"/>	140.6 (140)	165.6 (165)	225.6 (225)	32	WS406023T	TKY25T	WPT4405	MK1KS
					TAWNH2470T	<input type="checkbox"/>	<input type="checkbox"/>								
				24.8	TAWN2480T	<input type="checkbox"/>	<input type="checkbox"/>								
8	TAWLN2500S32	●	24.9	TAWN2490T	<input type="checkbox"/>	<input type="checkbox"/>	210 (209.4)	240 (239.4)	300 (299.4)	32	WS406023T	TKY25T	WPT4405	MK1KS	
				TAWNH2490T	<input type="checkbox"/>	<input type="checkbox"/>									

TAW Drill

(General Use)







Holder

Drill Dia. Range D1 (mm)	Hole Depth (l/d)	Holder		Insert		Dimensions (mm)				 Clamp Screw	 Wrench	 Plate	 Anti-seize Lubricant		
		Order Number	Stock	Drill Dia. D1 (mm)	Order Number	Stock	L3	L2	L1					D4	
24.5 25.4	3	TAWSN2500S32	●	25.0	TAWN2500T	●	□	88.6 (88)	110.6 (110)	170.6 (170)	32	WS406023T	TKY25T	WPT4405	MK1KS
					TAWNH2500T	●	□								
				25.1	TAWN2510T	□	□								
	5	TAWMN2500S32	●	25.2	TAWN2520T	□	□	140.6 (140)	165.6 (165)	225.6 (225)	32	WS406023T	TKY25T	WPT4405	MK1KS
					TAWNH2520T	□	□								
				25.3	TAWN2530T	□	□								
					TAWNH2530T	□	□								
				25.4	TAWN2540T	□	□								
					TAWNH2540T	□	□								
8	TAWLN2500S32	●	25.4	TAWN2550T	●	□	210 (209.4)	240 (239.4)	300 (299.4)	32	WS406023T	TKY25T	WPT4405	MK1KS	
				TAWNH2550T	●	□									
25.5 26.4	3	TAWSN2600S32	●	25.5	TAWN2560T	□	□	92.6 (92)	115.6 (115)	175.6 (175)	32	WS406024T	TKY25T	WPT4405	MK1KS
					TAWNH2560T	□	□								
				25.7	TAWN2570T	□	□								
					TAWNH2570T	□	□								
	5	TAWMN2600S32	●	25.8	TAWN2580T	□	□	146.6 (146)	170.6 (170)	230.6 (230)	32	WS406024T	TKY25T	WPT4405	MK1KS
					TAWNH2580T	□	□								
				25.9	TAWN2590T	□	□								
					TAWNH2590T	□	□								
				26.0	TAWN2600T	●	□								
					TAWNH2600T	●	□								
	8	TAWLN2600S32	●	26.1	TAWN2610T	□	□	218 (217.4)	248 (247.4)	308 (307.4)	32	WS406024T	TKY25T	WPT4405	MK1KS
					TAWNH2610T	□	□								
				26.2	TAWN2620T	□	□								
					TAWNH2620T	□	□								
				26.3	TAWN2630T	□	□								
26.5 27.4	3	TAWSN2700S32	●	26.5	TAWN2650T	●	□	94.6 (94)	115.6 (115)	175.6 (175)	32	WS406024T	TKY25T	WPT4405	MK1KS
					TAWNH2650T	●	□								
				26.6	TAWN2660T	□	□								
	5	TAWMN2700S32	●	26.7	TAWN2670T	□	□	151.6 (151)	175.6 (175)	235.6 (235)	32	WS406024T	TKY25T	WPT4405	MK1KS
					TAWNH2670T	□	□								
				26.8	TAWN2680T	□	□								
					TAWNH2680T	□	□								
				26.9	TAWN2690T	□	□								
					TAWNH2690T	□	□								
	8	TAWLN2700S32	●	27.0	TAWN2700T	●	□	226 (225.4)	256 (255.4)	316 (315.4)	32	WS406024T	TKY25T	WPT4405	MK1KS
					TAWNH2700T	●	□								
				27.1	TAWN2710T	□	□								
	TAWNH2710T	□	□												
	TAWN2720T	□	□												
	TAWNH2720T	□	□												
	TAWN2730T	□	□												
	TAWNH2730T	□	□												
	TAWN2740T	□	□												
	TAWNH2740T	□	□												

Notes 1. The dimensions in brackets represent the sizes when TAWN-U type inserts are used.

2. Please contact us for any type that is not shown in this literature (e.g. different diameters and lengths and drills with chamfered cutting edges can be made to order).

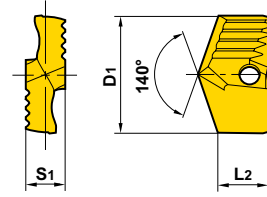
● : Inventory maintained. □ : Non stock, produced to order only.

Drill Dia. Range D1 (mm)	Hole Depth (l/d)	Holder		Insert			Dimensions (mm)								
		Order Number	Stock	Drill Dia. D1 (mm)	Order Number	Stock		L3	L2	L1					D4
						VP15TF	VP10H								
27.5 28.4	3	TAWSN2800S32	●	27.5	TAWN2750T	●	□	97.2 (97)	120.2 (120)	180.2 (180)	32	WS508026T	TKY27T	WPT4405	MK1KS
					TAWNH2750T	●	□								
				27.6	TAWN2760T	□	□								
					TAWNH2760T	□	□								
				27.7	TAWN2770T	□	□								
					TAWNH2770T	□	□								
	5	TAWMN2800S32	●	27.8	TAWN2780T	□	□	157.2 (157)	180.2 (180)	240.2 (240)	32	WS508026T	TKY27T	WPT4405	MK1KS
					TAWNH2780T	□	□								
				27.9	TAWN2790T	□	□								
					TAWNH2790T	□	□								
				28.0	TAWN2800T	●	□								
					TAWNH2800T	●	□								
	8	TAWLN2800S32	●	28.1	TAWN2810T	□	□	234 (233.8)	264 (263.8)	324 (323.8)	32	WS508026T	TKY27T	WPT4405	MK1KS
					TAWNH2810T	□	□								
				28.2	TAWN2820T	□	□								
	TAWNH2820T	□	□												
				28.3	TAWN2830T	□	□								
					TAWNH2830T	□	□								
				28.4	TAWN2840T	□	□								
					TAWNH2840T	□	□								
28.5 29.4	3	TAWSN2900S32	●	28.5	TAWN2850T	●	□	100.2 (100)	125.2 (125)	185.2 (185)	32	WS508027T	TKY27T	WPT4405	MK1KS
					TAWNH2850T	●	□								
				28.6	TAWN2860T	□	□								
					TAWNH2860T	□	□								
				28.7	TAWN2870T	□	□								
					TAWNH2870T	□	□								
	5	TAWMN2900S32	●	28.8	TAWN2880T	□	□	162.2 (162)	185.2 (185)	245.2 (245)	32	WS508027T	TKY27T	WPT4405	MK1KS
					TAWNH2880T	□	□								
				28.9	TAWN2890T	□	□								
					TAWNH2890T	□	□								
				29.0	TAWN2900T	●	□								
					TAWNH2900T	●	□								
	8	TAWLN2900S32	●	29.1	TAWN2910T	□	□	242 (241.8)	272 (271.8)	332 (331.8)	32	WS508027T	TKY27T	WPT4405	MK1KS
					TAWNH2910T	□	□								
				29.2	TAWN2920T	□	□								
	TAWNH2920T	□	□												
				29.3	TAWN2930T	□	□								
					TAWNH2930T	□	□								
				29.4	TAWN2940T	□	□								
					TAWNH2940T	□	□								
29.5 30.4	3	TAWSN3000S32	●	29.5	TAWN2950T	●	□	104.2 (104)	125.2 (125)	185.2 (185)	32	WS508027T	TKY27T	WPT4405	MK1KS
					TAWNH2950T	●	□								
				29.6	TAWN2960T	□	□								
					TAWNH2960T	□	□								
				29.7	TAWN2970T	□	□								
					TAWNH2970T	□	□								
	5	TAWMN3000S32	●	29.8	TAWN2980T	□	□	167.2 (167)	195.2 (195)	255.2 (255)	32	WS508027T	TKY27T	WPT4405	MK1KS
					TAWNH2980T	□	□								
				29.9	TAWN2990T	□	□								
					TAWNH2990T	□	□								
				30.0	TAWN3000T	●	□								
					TAWNH3000T	●	□								
	8	TAWLN3000S32	●	30.1	TAWN3010T	□	□	250 (249.8)	285 (284.8)	345 (344.8)	32	WS508027T	TKY27T	WPT4405	MK1KS
					TAWNH3010T	□	□								
				30.2	TAWN3020T	□	□								
	TAWNH3020T	□	□												
				30.3	TAWN3030T	□	□								
					TAWNH3030T	□	□								
				30.4	TAWN3040T	□	□								
					TAWNH3040T	□	□								

Insert

H Type

NEW



Order Number	Stock		Dimensions (mm)			Applicable Holder
	VP15TF	VP10H	D1	L2	S1	
TAWNH1400T	●	□	14.0	7.6	5.0	TAWSNH 1400S16
1410T	●	□	14.1	7.6	5.0	TAWMNH 1400S16
1420T	●	□	14.2	7.6	5.0	TAWLNH 1400S16
1430T	●	□	14.3	7.6	5.0	
1440T	●	□	14.4	7.6	5.0	
1450T	●	□	14.5	7.5	5.0	
1460T	●	□	14.6	7.5	5.0	
1470T	●	□	14.7	7.5	5.0	TAWSNH 1500S20
1480T	●	□	14.8	7.5	5.0	
1490T	●	□	14.9	7.5	5.0	TAWMNH 1500S20
1500T	●	□	15.0	7.4	5.0	
1510T	●	□	15.1	7.4	5.0	TAWLNH 1500S20
1520T	●	□	15.2	7.4	5.0	
1530T	●	□	15.3	7.4	5.0	
1540T	●	□	15.4	7.4	5.0	
1550T	●	□	15.5	7.9	6.0	
1560T	●	□	15.6	7.9	6.0	
1570T	●	□	15.7	7.9	6.0	TAWSN 1600S20
1580T	●	□	15.8	7.9	6.0	
1590T	●	□	15.9	7.9	6.0	TAWMN 1600S20
1600T	●	□	16.0	7.8	6.0	
1610T	●	□	16.1	7.8	6.0	TAWLN 1600S20
1620T	●	□	16.2	7.8	6.0	
1630T	●	□	16.3	7.8	6.0	
1640T	●	□	16.4	7.8	6.0	
1650T	●	□	16.5	7.7	6.0	
1660T	●	□	16.6	7.7	6.0	
1670T	●	□	16.7	7.7	6.0	TAWSN 1700S20
1680T	●	□	16.8	7.7	6.0	
1690T	●	□	16.9	7.7	6.0	TAWMN 1700S20
1700T	●	□	17.0	7.6	6.0	
1710T	●	□	17.1	7.6	6.0	TAWLN 1700S20
1720T	●	□	17.2	7.6	6.0	
1730T	●	□	17.3	7.6	6.0	
1740T	●	□	17.4	7.6	6.0	
1750T	●	□	17.5	7.5	6.0	
1760T	●	□	17.6	7.5	6.0	
1770T	●	□	17.7	7.5	6.0	TAWSN 1800S20
1780T	●	□	17.8	7.5	6.0	
1790T	●	□	17.9	7.5	6.0	TAWMN 1800S20
1800T	●	□	18.0	7.4	6.0	
1810T	●	□	18.1	7.4	6.0	TAWLN 1800S20
1820T	●	□	18.2	7.4	6.0	
1830T	●	□	18.3	7.4	6.0	
1840T	●	□	18.4	7.4	6.0	

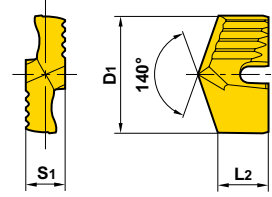
Order Number	Stock		Dimensions (mm)			Applicable Holder
	VP15TF	VP10H	D1	L2	S1	
TAWNH1850T	●	□	18.5	9.3	7.0	
1860T	●	□	18.6	9.3	7.0	
1870T	●	□	18.7	9.3	7.0	TAWSN 1900S25
1880T	●	□	18.8	9.3	7.0	
1890T	●	□	18.9	9.3	7.0	TAWMN 1900S25
1900T	●	□	19.0	9.2	7.0	
1910T	●	□	19.1	9.2	7.0	TAWLN 1900S25
1920T	●	□	19.2	9.2	7.0	
1930T	●	□	19.3	9.2	7.0	
1940T	●	□	19.4	9.2	7.0	
1950T	●	□	19.5	9.1	7.0	
1960T	●	□	19.6	9.1	7.0	
1970T	●	□	19.7	9.1	7.0	
1980T	●	□	19.8	9.1	7.0	TAWSN 2000S25
1990T	●	□	19.9	9.1	7.0	
2000T	●	□	20.0	9.0	7.0	TAWMN 2000S25
2010T	□	□	20.1	9.0	7.0	
2020T	□	□	20.2	9.0	7.0	TAWLN 2000S25
2030T	□	□	20.3	9.0	7.0	
2040T	□	□	20.4	9.0	7.0	
2050T	●	□	20.5	8.9	7.0	
2060T	□	□	20.6	8.9	7.0	
2070T	□	□	20.7	8.9	7.0	TAWSN 2100S25
2080T	□	□	20.8	8.9	7.0	
2090T	□	□	20.9	8.9	7.0	TAWMN 2100S25
2100T	●	□	21.0	8.8	7.0	
2110T	□	□	21.1	8.8	7.0	TAWLN 2100S25
2120T	□	□	21.2	8.8	7.0	
2130T	□	□	21.3	8.8	7.0	
2140T	□	□	21.4	8.8	7.0	
2150T	●	□	21.5	10.6	8.0	
2160T	□	□	21.6	10.6	8.0	
2170T	□	□	21.7	10.6	8.0	TAWSN 2200S25
2180T	□	□	21.8	10.6	8.0	
2190T	□	□	21.9	10.6	8.0	TAWMN 2200S25
2200T	●	□	22.0	10.5	8.0	
2210T	□	□	22.1	10.5	8.0	TAWLN 2200S25
2220T	□	□	22.2	10.5	8.0	
2230T	□	□	22.3	10.5	8.0	
2240T	□	□	22.4	10.5	8.0	
2250T	●	□	22.5	10.4	8.0	TAWSN 2300S25
2260T	□	□	22.6	10.4	8.0	TAWMN 2300S25
2270T	□	□	22.7	10.4	8.0	
2280T	□	□	22.8	10.4	8.0	TAWLN 2300S25
2290T	□	□	22.9	10.4	8.0	

Order Number	Stock		Dimensions (mm)			Applicable Holder
	VP15TF	VP10H	D1	L2	S1	
TAWNH2300T	●	<input type="checkbox"/>	23.0	10.3	8.0	TAWSN 2300S25
2310T	<input type="checkbox"/>	<input type="checkbox"/>	23.1	10.3	8.0	
2320T	<input type="checkbox"/>	<input type="checkbox"/>	23.2	10.3	8.0	
2330T	<input type="checkbox"/>	<input type="checkbox"/>	23.3	10.3	8.0	
2340T	<input type="checkbox"/>	<input type="checkbox"/>	23.4	10.3	8.0	
2350T	●	<input type="checkbox"/>	23.5	10.2	8.0	TAWSN 2400S32
2360T	<input type="checkbox"/>	<input type="checkbox"/>	23.6	10.2	8.0	
2370T	<input type="checkbox"/>	<input type="checkbox"/>	23.7	10.2	8.0	
2380T	<input type="checkbox"/>	<input type="checkbox"/>	23.8	10.2	8.0	
2390T	<input type="checkbox"/>	<input type="checkbox"/>	23.9	10.2	8.0	
2400T	●	<input type="checkbox"/>	24.0	10.1	8.0	
2410T	<input type="checkbox"/>	<input type="checkbox"/>	24.1	10.1	8.0	
2420T	<input type="checkbox"/>	<input type="checkbox"/>	24.2	10.1	8.0	
2430T	<input type="checkbox"/>	<input type="checkbox"/>	24.3	10.1	8.0	
2440T	<input type="checkbox"/>	<input type="checkbox"/>	24.4	10.1	8.0	
2450T	●	<input type="checkbox"/>	24.5	11.7	9.0	TAWSN 2500S32
2460T	<input type="checkbox"/>	<input type="checkbox"/>	24.6	11.7	9.0	
2470T	<input type="checkbox"/>	<input type="checkbox"/>	24.7	11.7	9.0	
2480T	<input type="checkbox"/>	<input type="checkbox"/>	24.8	11.7	9.0	
2490T	<input type="checkbox"/>	<input type="checkbox"/>	24.9	11.7	9.0	
2500T	●	<input type="checkbox"/>	25.0	11.6	9.0	
2510T	<input type="checkbox"/>	<input type="checkbox"/>	25.1	11.6	9.0	
2520T	<input type="checkbox"/>	<input type="checkbox"/>	25.2	11.6	9.0	
2530T	<input type="checkbox"/>	<input type="checkbox"/>	25.3	11.6	9.0	
2540T	<input type="checkbox"/>	<input type="checkbox"/>	25.4	11.6	9.0	
2550T	●	<input type="checkbox"/>	25.5	11.5	9.0	TAWSN 2600S32
2560T	<input type="checkbox"/>	<input type="checkbox"/>	25.6	11.5	9.0	
2570T	<input type="checkbox"/>	<input type="checkbox"/>	25.7	11.5	9.0	
2580T	<input type="checkbox"/>	<input type="checkbox"/>	25.8	11.5	9.0	
2590T	<input type="checkbox"/>	<input type="checkbox"/>	25.9	11.5	9.0	
2600T	●	<input type="checkbox"/>	26.0	11.4	9.0	
2610T	<input type="checkbox"/>	<input type="checkbox"/>	26.1	11.4	9.0	
2620T	<input type="checkbox"/>	<input type="checkbox"/>	26.2	11.4	9.0	
2630T	<input type="checkbox"/>	<input type="checkbox"/>	26.3	11.4	9.0	
2640T	<input type="checkbox"/>	<input type="checkbox"/>	26.4	11.4	9.0	
2650T	●	<input type="checkbox"/>	26.5	11.3	9.0	TAWSN 2700S32
2660T	<input type="checkbox"/>	<input type="checkbox"/>	26.6	11.3	9.0	
2670T	<input type="checkbox"/>	<input type="checkbox"/>	26.7	11.3	9.0	
2680T	<input type="checkbox"/>	<input type="checkbox"/>	26.8	11.3	9.0	
2690T	<input type="checkbox"/>	<input type="checkbox"/>	26.9	11.3	9.0	
2700T	●	<input type="checkbox"/>	27.0	11.2	9.0	
2710T	<input type="checkbox"/>	<input type="checkbox"/>	27.1	11.2	9.0	
2720T	<input type="checkbox"/>	<input type="checkbox"/>	27.2	11.2	9.0	
2730T	<input type="checkbox"/>	<input type="checkbox"/>	27.3	11.2	9.0	
2740T	<input type="checkbox"/>	<input type="checkbox"/>	27.4	11.2	9.0	

Order Number	Stock		Dimensions (mm)			Applicable Holder
	VP15TF	VP10H	D1	L2	S1	
TAWNH2750T	●	<input type="checkbox"/>	27.5	12.3	10.0	TAWSN 2800S32
2760T	<input type="checkbox"/>	<input type="checkbox"/>	27.6	12.3	10.0	
2770T	<input type="checkbox"/>	<input type="checkbox"/>	27.7	12.3	10.0	
2780T	<input type="checkbox"/>	<input type="checkbox"/>	27.8	12.3	10.0	
2790T	<input type="checkbox"/>	<input type="checkbox"/>	27.9	12.3	10.0	
2800T	●	<input type="checkbox"/>	28.0	12.2	10.0	
2810T	<input type="checkbox"/>	<input type="checkbox"/>	28.1	12.2	10.0	
2820T	<input type="checkbox"/>	<input type="checkbox"/>	28.2	12.2	10.0	
2830T	<input type="checkbox"/>	<input type="checkbox"/>	28.3	12.2	10.0	
2840T	<input type="checkbox"/>	<input type="checkbox"/>	28.4	12.2	10.0	
2850T	●	<input type="checkbox"/>	28.5	12.1	10.0	TAWSN 2900S32
2860T	<input type="checkbox"/>	<input type="checkbox"/>	28.6	12.1	10.0	
2870T	<input type="checkbox"/>	<input type="checkbox"/>	28.7	12.1	10.0	
2880T	<input type="checkbox"/>	<input type="checkbox"/>	28.8	12.1	10.0	
2890T	<input type="checkbox"/>	<input type="checkbox"/>	28.9	12.1	10.0	
2900T	●	<input type="checkbox"/>	29.0	12.0	10.0	
2910T	<input type="checkbox"/>	<input type="checkbox"/>	29.1	12.0	10.0	
2920T	<input type="checkbox"/>	<input type="checkbox"/>	29.2	12.0	10.0	
2930T	<input type="checkbox"/>	<input type="checkbox"/>	29.3	12.0	10.0	
2940T	<input type="checkbox"/>	<input type="checkbox"/>	29.4	12.0	10.0	
2950T	●	<input type="checkbox"/>	29.5	11.9	10.0	TAWSN 3000S32
2960T	<input type="checkbox"/>	<input type="checkbox"/>	29.6	11.9	10.0	
2970T	<input type="checkbox"/>	<input type="checkbox"/>	29.7	11.9	10.0	
2980T	<input type="checkbox"/>	<input type="checkbox"/>	29.8	11.9	10.0	
2990T	<input type="checkbox"/>	<input type="checkbox"/>	29.9	11.9	10.0	
3000T	●	<input type="checkbox"/>	30.0	11.8	10.0	
3010T	<input type="checkbox"/>	<input type="checkbox"/>	30.1	11.8	10.0	
3020T	<input type="checkbox"/>	<input type="checkbox"/>	30.2	11.8	10.0	
3030T	<input type="checkbox"/>	<input type="checkbox"/>	30.3	11.8	10.0	
3040T	<input type="checkbox"/>	<input type="checkbox"/>	30.4	11.8	10.0	

Insert

U Type



Order Number	Stock		Dimensions (mm)			Applicable Holder
	VP15TF	VP10H	D1	L2	S1	
TAWN1550T	●	□	15.5	7.9	6.0	TAWSN 1600S20
1560T	●	□	15.6	7.9	6.0	
1570T	●	□	15.7	7.9	6.0	
1580T	●	□	15.8	7.9	6.0	
1590T	●	□	15.9	7.9	6.0	
1600T	●	□	16.0	7.8	6.0	
1610T	●	□	16.1	7.8	6.0	
1620T	●	□	16.2	7.8	6.0	
1630T	●	□	16.3	7.8	6.0	
1640T	●	□	16.4	7.8	6.0	
1650T	●	□	16.5	7.7	6.0	TAWSN 1700S20
1660T	●	□	16.6	7.7	6.0	
1670T	●	□	16.7	7.7	6.0	
1680T	●	□	16.8	7.7	6.0	
1690T	●	□	16.9	7.7	6.0	
1700T	●	□	17.0	7.6	6.0	
1710T	●	□	17.1	7.6	6.0	
1720T	●	□	17.2	7.6	6.0	
1730T	●	□	17.3	7.6	6.0	
1740T	●	□	17.4	7.6	6.0	
1750T	●	□	17.5	7.5	6.0	TAWSN 1800S20
1760T	●	□	17.6	7.5	6.0	
1770T	●	□	17.7	7.5	6.0	
1780T	●	□	17.8	7.5	6.0	
1790T	●	□	17.9	7.5	6.0	
1800T	●	□	18.0	7.4	6.0	
1810T	●	□	18.1	7.4	6.0	
1820T	●	□	18.2	7.4	6.0	
1830T	●	□	18.3	7.4	6.0	
1840T	●	□	18.4	7.4	6.0	
1850T	●	□	18.5	9.3	7.0	TAWSN 1900S25
1860T	●	□	18.6	9.3	7.0	
1870T	●	□	18.7	9.3	7.0	
1880T	●	□	18.8	9.3	7.0	
1890T	●	□	18.9	9.3	7.0	
1900T	●	□	19.0	9.2	7.0	
1910T	●	□	19.1	9.2	7.0	
1920T	●	□	19.2	9.2	7.0	
1930T	●	□	19.3	9.2	7.0	
1940T	●	□	19.4	9.2	7.0	

Order Number	Stock		Dimensions (mm)			Applicable Holder
	VP15TF	VP10H	D1	L2	S1	
TAWN1950T	●	□	19.5	9.1	7.0	TAWSN 2000S25
1960T	●	□	19.6	9.1	7.0	
1970T	●	□	19.7	9.1	7.0	
1980T	●	□	19.8	9.1	7.0	
1990T	●	□	19.9	9.1	7.0	
2000T	●	□	20.0	9.0	7.0	
2010T	□	□	20.1	9.0	7.0	
2020T	□	□	20.2	9.0	7.0	
2030T	□	□	20.3	9.0	7.0	
2040T	□	□	20.4	9.0	7.0	
2050T	●	□	20.5	8.9	7.0	TAWSN 2100S25
2060T	□	□	20.6	8.9	7.0	
2070T	□	□	20.7	8.9	7.0	
2080T	□	□	20.8	8.9	7.0	
2090T	□	□	20.9	8.9	7.0	
2100T	●	□	21.0	8.8	7.0	
2110T	□	□	21.1	8.8	7.0	
2120T	□	□	21.2	8.8	7.0	
2130T	□	□	21.3	8.8	7.0	
2140T	□	□	21.4	8.8	7.0	
2150T	●	□	21.5	10.3	8.0	TAWSN 2200S25
2160T	□	□	21.6	10.3	8.0	
2170T	□	□	21.7	10.3	8.0	
2180T	□	□	21.8	10.3	8.0	
2190T	□	□	21.9	10.3	8.0	
2200T	●	□	22.0	10.2	8.0	
2210T	□	□	22.1	10.2	8.0	
2220T	□	□	22.2	10.2	8.0	
2230T	□	□	22.3	10.2	8.0	
2240T	□	□	22.4	10.2	8.0	
2250T	●	□	22.5	10.1	8.0	TAWSN 2300S25
2260T	□	□	22.6	10.1	8.0	
2270T	□	□	22.7	10.1	8.0	
2280T	□	□	22.8	10.1	8.0	
2290T	□	□	22.9	10.1	8.0	
2300T	●	□	23.0	10.0	8.0	
2310T	□	□	23.1	10.0	8.0	
2320T	□	□	23.2	10.0	8.0	
2330T	□	□	23.3	10.0	8.0	
2340T	□	□	23.4	10.0	8.0	

Order Number	Stock		Dimensions (mm)			Applicable Holder
	VP15TF	VP10H	D1	L2	S1	
TAWN2350T	●	<input type="checkbox"/>	23.5	9.9	8.0	TAWSN 2400S32
2360T	<input type="checkbox"/>	<input type="checkbox"/>	23.6	9.9	8.0	
2370T	<input type="checkbox"/>	<input type="checkbox"/>	23.7	9.9	8.0	
2380T	<input type="checkbox"/>	<input type="checkbox"/>	23.8	9.9	8.0	
2390T	<input type="checkbox"/>	<input type="checkbox"/>	23.9	9.9	8.0	
2400T	●	<input type="checkbox"/>	24.0	9.8	8.0	
2410T	<input type="checkbox"/>	<input type="checkbox"/>	24.1	9.8	8.0	
2420T	<input type="checkbox"/>	<input type="checkbox"/>	24.2	9.8	8.0	
2430T	<input type="checkbox"/>	<input type="checkbox"/>	24.3	9.8	8.0	
2440T	<input type="checkbox"/>	<input type="checkbox"/>	24.4	9.8	8.0	
2450T	●	<input type="checkbox"/>	24.5	11.1	9.0	TAWSN 2500S32
2460T	<input type="checkbox"/>	<input type="checkbox"/>	24.6	11.1	9.0	
2470T	<input type="checkbox"/>	<input type="checkbox"/>	24.7	11.1	9.0	
2480T	<input type="checkbox"/>	<input type="checkbox"/>	24.8	11.1	9.0	
2490T	<input type="checkbox"/>	<input type="checkbox"/>	24.9	11.1	9.0	
2500T	●	<input type="checkbox"/>	25.0	11.0	9.0	
2510T	<input type="checkbox"/>	<input type="checkbox"/>	25.1	11.0	9.0	
2520T	<input type="checkbox"/>	<input type="checkbox"/>	25.2	11.0	9.0	
2530T	<input type="checkbox"/>	<input type="checkbox"/>	25.3	11.0	9.0	
2540T	<input type="checkbox"/>	<input type="checkbox"/>	25.4	11.0	9.0	
2550T	●	<input type="checkbox"/>	25.5	10.9	9.0	TAWSN 2600S32
2560T	<input type="checkbox"/>	<input type="checkbox"/>	25.6	10.9	9.0	
2570T	<input type="checkbox"/>	<input type="checkbox"/>	25.7	10.9	9.0	
2580T	<input type="checkbox"/>	<input type="checkbox"/>	25.8	10.9	9.0	
2590T	<input type="checkbox"/>	<input type="checkbox"/>	25.9	10.9	9.0	
2600T	●	<input type="checkbox"/>	26.0	10.8	9.0	
2610T	<input type="checkbox"/>	<input type="checkbox"/>	26.1	10.8	9.0	
2620T	<input type="checkbox"/>	<input type="checkbox"/>	26.2	10.8	9.0	
2630T	<input type="checkbox"/>	<input type="checkbox"/>	26.3	10.8	9.0	
2640T	<input type="checkbox"/>	<input type="checkbox"/>	26.4	10.8	9.0	
2650T	●	<input type="checkbox"/>	26.5	10.7	9.0	TAWSN 2700S32
2660T	<input type="checkbox"/>	<input type="checkbox"/>	26.6	10.7	9.0	
2670T	<input type="checkbox"/>	<input type="checkbox"/>	26.7	10.7	9.0	
2680T	<input type="checkbox"/>	<input type="checkbox"/>	26.8	10.7	9.0	
2690T	<input type="checkbox"/>	<input type="checkbox"/>	26.9	10.7	9.0	
2700T	●	<input type="checkbox"/>	27.0	10.6	9.0	
2710T	<input type="checkbox"/>	<input type="checkbox"/>	27.1	10.6	9.0	
2720T	<input type="checkbox"/>	<input type="checkbox"/>	27.2	10.6	9.0	
2730T	<input type="checkbox"/>	<input type="checkbox"/>	27.3	10.6	9.0	
2740T	<input type="checkbox"/>	<input type="checkbox"/>	27.4	10.6	9.0	
2750T	●	<input type="checkbox"/>	27.5	12.1	10.0	TAWSN 2800S32
2760T	<input type="checkbox"/>	<input type="checkbox"/>	27.6	12.1	10.0	
2770T	<input type="checkbox"/>	<input type="checkbox"/>	27.7	12.1	10.0	
2780T	<input type="checkbox"/>	<input type="checkbox"/>	27.8	12.1	10.0	
2790T	<input type="checkbox"/>	<input type="checkbox"/>	27.9	12.1	10.0	
2800T	●	<input type="checkbox"/>	28.0	12.0	10.0	
2810T	<input type="checkbox"/>	<input type="checkbox"/>	28.1	12.0	10.0	
2820T	<input type="checkbox"/>	<input type="checkbox"/>	28.2	12.0	10.0	
2830T	<input type="checkbox"/>	<input type="checkbox"/>	28.3	12.0	10.0	
2840T	<input type="checkbox"/>	<input type="checkbox"/>	28.4	12.0	10.0	

Order Number	Stock		Dimensions (mm)			Applicable Holder
	VP15TF	VP10H	D1	L2	S1	
TAWN2850T	●	<input type="checkbox"/>	28.5	11.9	10.0	TAWSN 2900S32
2860T	<input type="checkbox"/>	<input type="checkbox"/>	28.6	11.9	10.0	
2870T	<input type="checkbox"/>	<input type="checkbox"/>	28.7	11.9	10.0	
2880T	<input type="checkbox"/>	<input type="checkbox"/>	28.8	11.9	10.0	
2890T	<input type="checkbox"/>	<input type="checkbox"/>	28.9	11.9	10.0	
2900T	●	<input type="checkbox"/>	29.0	11.8	10.0	
2910T	<input type="checkbox"/>	<input type="checkbox"/>	29.1	11.8	10.0	
2920T	<input type="checkbox"/>	<input type="checkbox"/>	29.2	11.8	10.0	
2930T	<input type="checkbox"/>	<input type="checkbox"/>	29.3	11.8	10.0	
2940T	<input type="checkbox"/>	<input type="checkbox"/>	29.4	11.8	10.0	
2950T	●	<input type="checkbox"/>	29.5	11.7	10.0	TAWSN 3000S32
2960T	<input type="checkbox"/>	<input type="checkbox"/>	29.6	11.7	10.0	
2970T	<input type="checkbox"/>	<input type="checkbox"/>	29.7	11.7	10.0	
2980T	<input type="checkbox"/>	<input type="checkbox"/>	29.8	11.7	10.0	
2990T	<input type="checkbox"/>	<input type="checkbox"/>	29.9	11.7	10.0	
3000T	●	<input type="checkbox"/>	30.0	11.6	10.0	
3010T	<input type="checkbox"/>	<input type="checkbox"/>	30.1	11.6	10.0	
3020T	<input type="checkbox"/>	<input type="checkbox"/>	30.2	11.6	10.0	
3030T	<input type="checkbox"/>	<input type="checkbox"/>	30.3	11.6	10.0	
3040T	<input type="checkbox"/>	<input type="checkbox"/>	30.4	11.6	10.0	

TAW Drill

Recommended Cutting Conditions

Work Material	Drill Diameter Conditions Hardness	φ14.0—φ15.4		φ15.5—φ18.4		φ18.5—φ21.4	
		Cutting Speed (m/min)	Feed (mm/rev)	Cutting Speed (m/min)	Feed (mm/rev)	Cutting Speed (m/min)	Feed (mm/rev)
P Mild Steel	≤180HB	70 (60—90)	0.20 (0.15—0.25)	80 (60—100)	0.25 (0.20—0.30)	90 (70—110)	0.25 (0.20—0.30)
	180—280HB	70 (60—90)	0.20 (0.15—0.25)	80 (60—100)	0.25 (0.20—0.30)	80 (60—100)	0.25 (0.20—0.30)
Carbon Steel Alloy Steel	280—350HB	60 (50—80)	0.15 (0.12—0.18)	70 (50—90)	0.20 (0.15—0.25)	70 (50—90)	0.20 (0.15—0.25)
	≤200HB	50 (40—60)	0.15 (0.12—0.18)	50 (40—60)	0.15 (0.12—0.18)	60 (50—70)	0.20 (0.15—0.22)
M Stainless Steel	≤200HB	50 (40—60)	0.15 (0.12—0.18)	50 (40—60)	0.15 (0.12—0.18)	60 (50—70)	0.20 (0.15—0.22)
K Cast Iron	Tensile Strength ≤350MPa	70 (50—90)	0.20 (0.15—0.25)	80 (60—90)	0.25 (0.20—0.30)	90 (70—110)	0.25 (0.20—0.30)
	Tensile Strength ≤450MPa	70 (50—90)	0.20 (0.15—0.25)	80 (60—90)	0.25 (0.20—0.30)	80 (60—90)	0.25 (0.20—0.30)
Ductile Cast Iron	Tensile Strength ≤450MPa	70 (50—90)	0.20 (0.15—0.25)	80 (60—90)	0.25 (0.20—0.30)	80 (60—90)	0.25 (0.20—0.30)

Work Material	Drill Diameter Conditions Hardness	φ21.5—φ24.4		φ24.5—φ27.4		φ27.5—φ30.4	
		Cutting Speed (m/min)	Feed (mm/rev)	Cutting Speed (m/min)	Feed (mm/rev)	Cutting Speed (m/min)	Feed (mm/rev)
P Mild Steel	≤180HB	100 (80—120)	0.30 (0.25—0.35)	110 (80—120)	0.30 (0.25—0.35)	110 (80—120)	0.30 (0.25—0.35)
	180—280HB	90 (70—110)	0.30 (0.25—0.35)	100 (80—120)	0.30 (0.25—0.35)	100 (80—120)	0.30 (0.25—0.35)
Carbon Steel Alloy Steel	280—350HB	80 (60—100)	0.25 (0.20—0.30)	90 (70—110)	0.25 (0.20—0.30)	90 (70—110)	0.25 (0.20—0.30)
	≤200HB	60 (50—70)	0.20 (0.15—0.22)	70 (60—80)	0.25 (0.20—0.28)	70 (60—80)	0.25 (0.20—0.28)
M Stainless Steel	≤200HB	60 (50—70)	0.20 (0.15—0.22)	70 (60—80)	0.25 (0.20—0.28)	70 (60—80)	0.25 (0.20—0.28)
K Cast Iron	Tensile Strength ≤350MPa	100 (80—110)	0.35 (0.25—0.40)	110 (90—120)	0.35 (0.25—0.40)	110 (90—120)	0.40 (0.30—0.45)
	Tensile Strength ≤450MPa	90 (60—100)	0.30 (0.25—0.35)	100 (80—110)	0.30 (0.25—0.35)	100 (80—110)	0.30 (0.25—0.35)
Ductile Cast Iron	Tensile Strength ≤450MPa	90 (60—100)	0.30 (0.25—0.35)	100 (80—110)	0.30 (0.25—0.35)	100 (80—110)	0.30 (0.25—0.35)

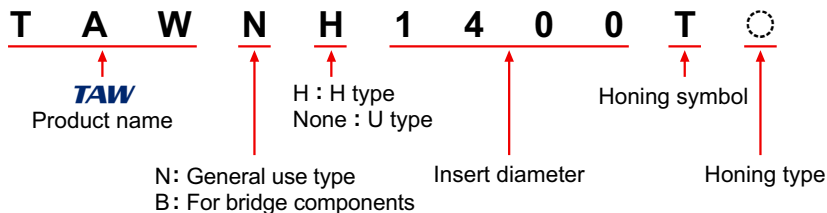
- Notes 1. When using the 8D type holder, reduce the cutting speed by approx. 20%.
 2. When using the 8D type holder, it is recommended to drill a pilot guide hole.
 3. H type honing is recommended when machining mild steel and stainless steel.

Hone Width

If an insert with honing other than standard is needed, please order using the codes below.

(Honing standard)

(Insert Order Number)



Honing type	Honing width (mm)
F	None
G	0.02—0.05
H	0.05—0.10
No mark	0.10—0.15
K	0.15—0.20
S	0.20—0.25
M	0.25—0.30

Notes on Use

Insert Installation

- Remove the clamp screw to install the insert. (H type insert)
- Loosen the clamp screw to install the insert. (U type insert)
- Correctly mesh the insert and the holder serrations, then slide the insert to the bottom of the slot.
- Fasten the clamp screw using the torque wrench provided while holding the insert lightly as shown. (Figure 1)
- Check there is no gap between the bottom of the insert and holder. (Figure 2)

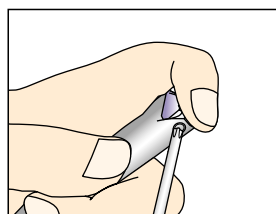


Fig. 1

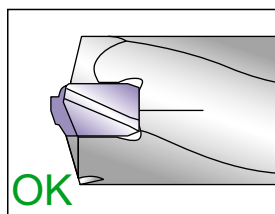
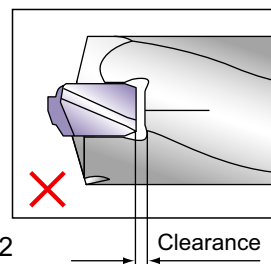


Fig. 2

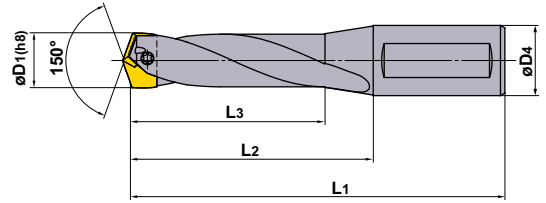


Insert Replacement

- Thoroughly clean the serrations of the holder before installing a new insert.
Remove heavy dirt in the holder serrations by using the cleaning plate provided.

TAW Drill

(For Bridge Construction Parts)



Holder

Drill Dia. Range D1 (mm)	Hole Depth (l/d)	Holder		Insert			Dimensions (mm)				Clamp Screw	Wrench	Plate	Anti-seize Lubricant
		Order Number	Stock	Drill Dia. D1 (mm)	Order Number	Stock	L3	L2	L1	D4				
24.5 24.6 24.7	3	TAWSB2500S32	●	24.5	TAWB2450T	●	88.6 (88)	110.6 (110)	170.6 (170)	32	WS406023T	TKY25T	WPT4405	MK1KS
				NEW	TAWBH2450T	●								
	5	TAWMB2500S32	□	24.6	TAWB2460T	□	140.6 (140)	165.6 (165)	225.6 (225)	32	WS406023T	TKY25T	WPT4405	MK1KS
				NEW	TAWBH2460T	□								
26.5 26.7	3	TAWSB2700S32	●	26.5	TAWB2650T	□	94.6 (94)	115.6 (115)	175.6 (175)	32	WS406024T	TKY25T	WPT4405	MK1KS
				NEW	TAWBH2650T	□								
	5	TAWMB2700S32	□	26.7	TAWB2670T	●	151.6 (151)	175.6 (175)	235.6 (235)	32	WS406024T	TKY25T	WPT4405	MK1KS
				NEW	TAWBH2670T	●								

Notes 1. The dimensions in brackets represent the sizes when TAWN-U type inserts are used.

2. Please contact us for any type that is not shown in this literature (e.g. different diameters and lengths and drills with chamfered cutting edges can be made to order).

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

Insert

Shape	Order Number	Stock	Dimensions (mm)			Applicable Holder	Honing Width (mm)	Geometry
			VP15TF	D1	L2			
U type	TAWB2450T	●	24.5	11.1	9.0	TAWSB2500S32 TAWMB2500S32	0.20–0.25	
	2460T	□	24.6	11.1	9.0			
	2470T	●	24.7	11.1	9.0			
	2650T	□	26.5	10.7	9.0	TAWSB2700S32 TAWMB2700S32		
	2670T	●	26.7	10.7	9.0			
H type	NEW TAWBH2450T	●	24.5	11.7	9.0	TAWSB2500S32 TAWMB2500S32	0.20–0.25	
	NEW 2460T	□	24.6	11.7	9.0			
	NEW 2470T	●	24.7	11.7	9.0			
	NEW 2650T	□	26.5	11.3	9.0	TAWSB2700S32 TAWMB2700S32		
	NEW 2670T	●	26.7	11.3	9.0			

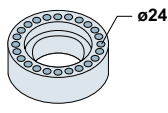
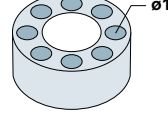
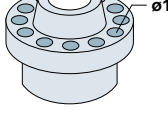
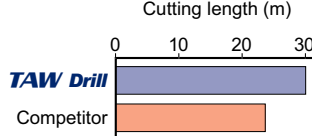
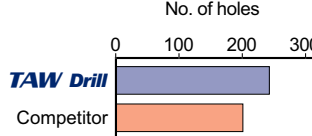
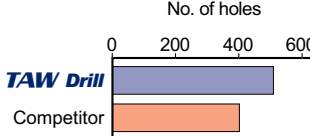
● : Inventory maintained. (Note: 2 inserts in one pack) □ : Non stock, produced to order only.

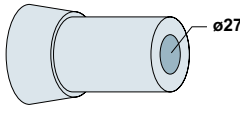
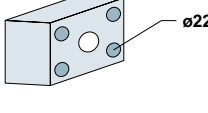
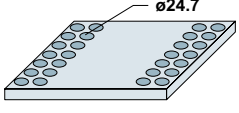
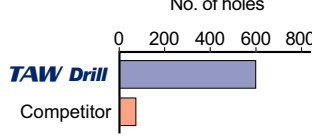
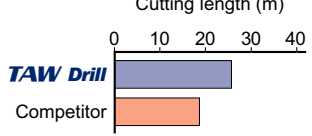
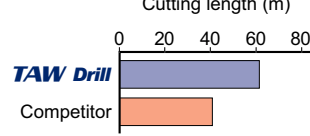
Recommended Cutting Conditions

Work Material	Drill Diameter	φ24.5, φ24.6, φ24.7		φ26.5, φ26.7		
		Conditions	Cutting Speed (m/min)	Feed (mm/rev)	Cutting Speed (m/min)	Feed (mm/rev)
P Structural Steel	SS400	Tensile Strength ≤400–500MPa	70 (60–80)	0.30 (0.25–0.35)	70 (60–80)	0.30 (0.25–0.35)
	SM490	Tensile Strength ≤490–610MPa	65 (55–75)	0.30 (0.25–0.35)	65 (55–75)	0.30 (0.25–0.35)
	SM570	Tensile Strength ≤570–720MPa	60 (50–70)	0.30 (0.25–0.35)	60 (50–70)	0.30 (0.25–0.35)

TAW Drill

Application Examples

Holder		TAWSN2400S32	TAWMN1800S20	TAWSN1600S20
Insert (Grade)		TAWNH2400T (VP15TF)	TAWN1800T (VP15TF)	TAWN1610T (VP15TF)
Workpiece		JIS S50C 	JIS S48C (200HB) 	JIS SF390A 
Component		Ring	Ring gear	Machine parts
Cutting Conditions	Cutting Speed (m/min)	90	70	80
	Feed (mm/rev)	0.3	0.3	0.3
	Revolution (min ⁻¹)	1194	1238	1582
	Feed Rate (mm/min)	358	371	475
Coolant		Water Soluble Oil (Internal coolant)	Water Soluble Oil (Internal coolant)	Water Soluble Oil (Internal coolant)
Machine Type		Machining centre	Machining centre	Machining centre
Result		Cutting length (m) 	No. of holes 	No. of holes 

Holder		TAWSN2700S32	TAWLN2200S25	TAWSB2500S32
Insert (Grade)		TAWN2700T (VP15TF)	TAWN2200T (VP15TF)	TAWB2470T (VP15TF)
Workpiece		JIS SCM 	JIS FCD400 	JIS SM490 
Component		Tube	Steel for bridges	Steel for bridges
Cutting Conditions	Cutting Speed (m/min)	80	70	60
	Feed (mm/rev)	0.3	0.2	0.3
	Revolution (min ⁻¹)	943	1013	773
	Feed Rate (mm/min)	283	203	232
Coolant		Water Soluble Oil (Internal coolant)	Water Soluble Oil (Internal coolant)	Mist coolant
Machine Type		NC lathe	Machining centre	Gundrill machine
Result		No. of holes 	Cutting length (m) 	Cutting length (m) 

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, please use only the correct wrench. ●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



The Scope of the Registration:
Design, Development and
Production of Compacted
Carbide Tools and Carbide
Blanks



The Scope of the Registration:
Design, Development and
Production of Cutting Tools,
Wear-resistant Tools, Rock
Chilling Tools, Cemented
Carbide Blanks and Coated
Products



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(Tools specifications subject to change without notice.)