

**MITSUBISHI**

**MITSUBISHI CARBIDE**

Changeable Insert Type Drill

**B060E**

**TAW**

# Stable performance from a versatile, changeable insert type drill

New through hole  
clamping type for  
added reliability

**NEW**



H Type Insert

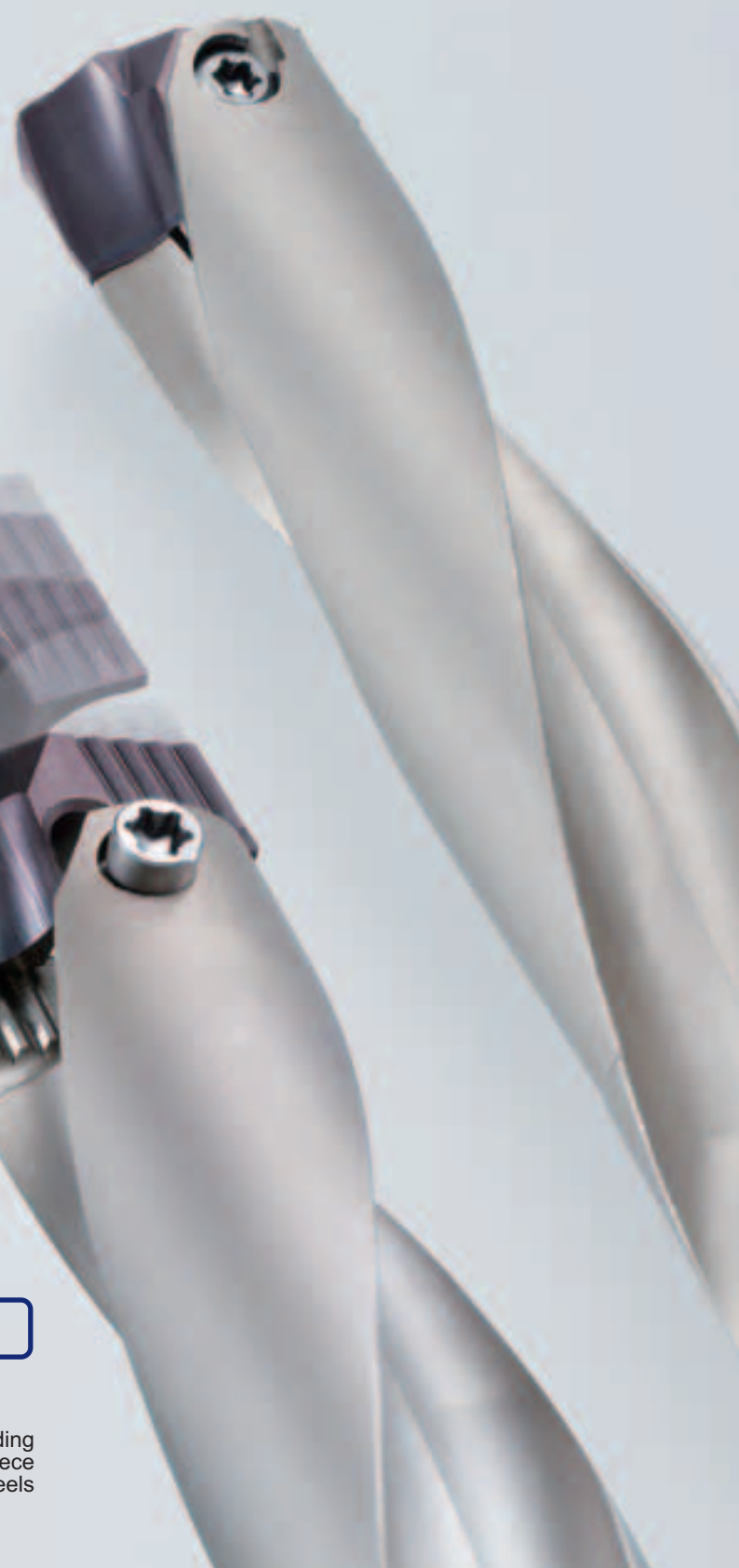


U Type Insert

**MIRACLE<sup>®</sup> Coated VP15TF**

**High rigidity grade for longer tool life**

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

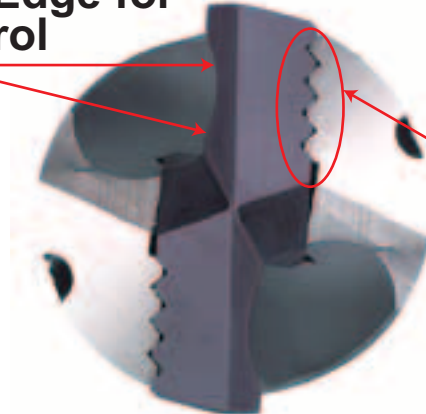
## Features

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

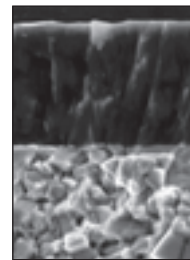
Mitsubishi's unique serration structure allows high clamping accuracy to be maintained.

## Insert selection

U Type Insert	H Type Insert
	
Easy change type	Extra secure clamping

## Exceptional tool life

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



VP15TF

### 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.

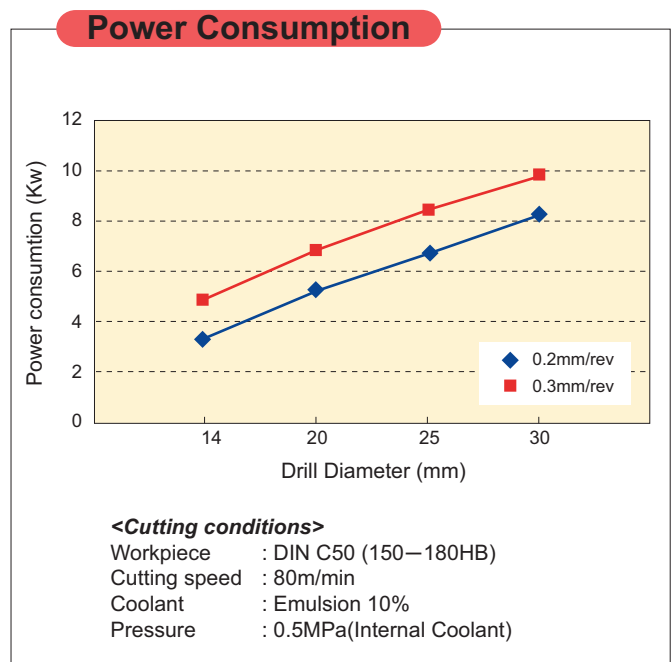
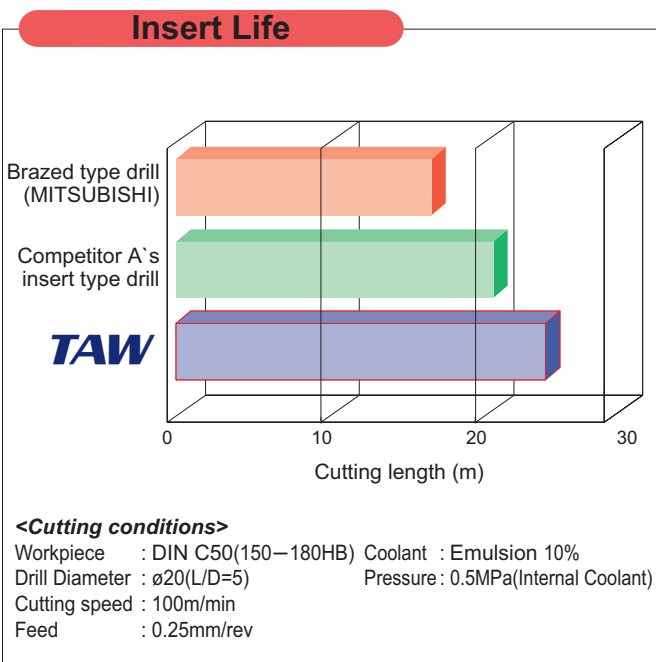
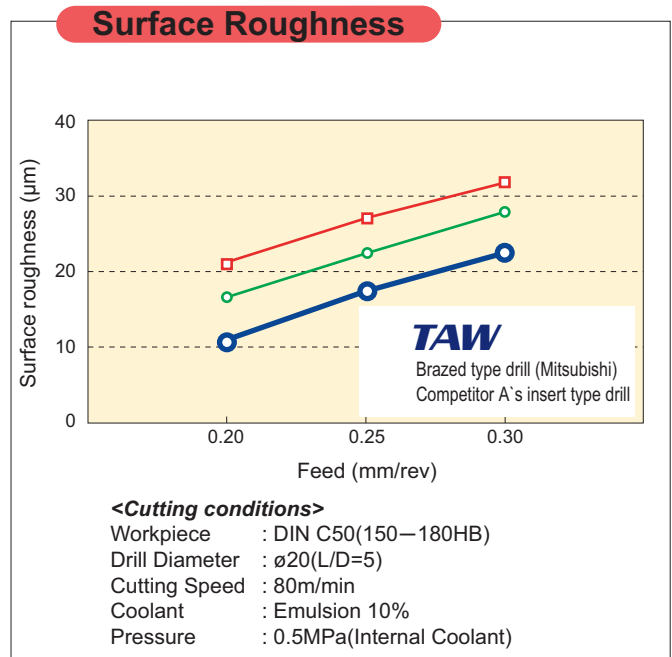
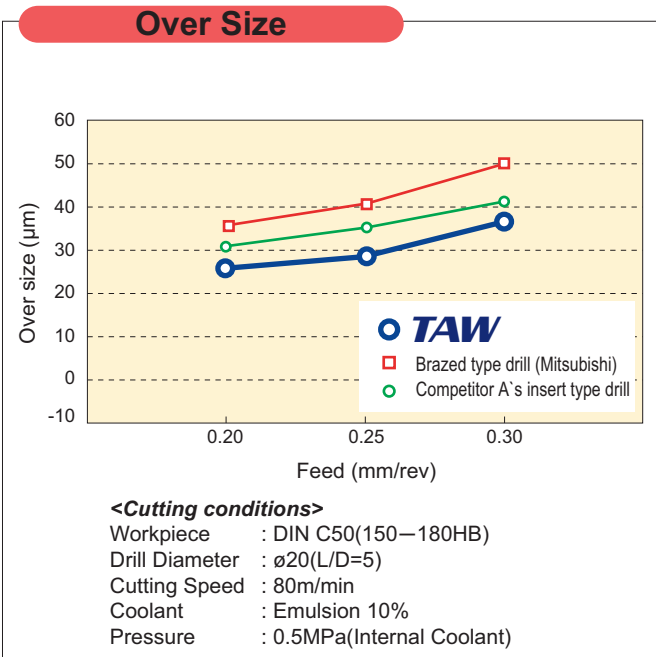


## High durability body

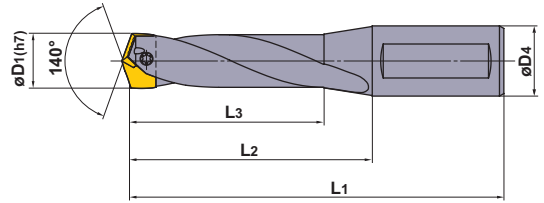
- The cutter bodies are made resistant to corrosion and abrasion by using a superior, high heat resistant alloy and a special surface treatment.



# Cutting Performance



## (General Use)







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	NEW TAWSNH1400S16	●	14.0	TAWNH1400T	●	□	51	67	115	16	WS254012T	TKY08D	WPT4405	MK1KS	
				14.1	TAWNH1410T	●	□									
				14.2	TAWNH1420T	●	□									
	5	NEW TAWMNH1400S16	●	14.3	TAWNH1430T	●	□	80	97	145	16	WS254012T	TKY08D	WPT4405	MK1KS	
				14.4	TAWNH1440T	●	□									
14.5   15.4	3	NEW TAWSNH1500S20	●	14.5	TAWNH1450T	●	□	54	75	125	20	WS254013T	TKY08D	WPT4405	MK1KS	
				14.6	TAWNH1460T	●	□									
				14.7	TAWNH1470T	●	□									
				14.8	TAWNH1480T	●	□									
				14.9	TAWNH1490T	●	□									
	5	NEW TAWMNH1500S20	●	15.0	TAWNH1490T	●	□	85	105	155	20	WS254013T	TKY08D	WPT4405	MK1KS	
				15.1	TAWNH1510T	●	□									
				15.2	TAWNH1520T	●	□									
				15.3	TAWNH1530T	●	□									
				15.4	TAWNH1540T	●	□									
15.5   16.4	3	TAWSN1600S20	●	15.5	TAWN1550T	●	□	58	80	130	20	WS254014T	TKY08D	WPT4405	MK1KS	
				TAWN1550T	●	□										
				TAWN1560T	●	□										
				15.6	TAWNH1560T	●	□									
				15.7	TAWN1570T	●	□									
				TAWNH1570T	●	□										
				15.8	TAWN1580T	●	□									
	TAWNH1580T	●	□													
	15.9	TAWN1590T	●	□												
	TAWNH1590T	●	□													
	5	TAWMNH1600S20	●	16.0	TAWN1600T	●	□	91	115	165	20	WS254014T	TKY08D	WPT4405	MK1KS	
				TAWNH1600T	●	□										
				16.1	TAWN1610T	●	□									
				TAWNH1610T	●	□										
16.2				TAWN1620T	●	□										
TAWNH1620T				●	□											
16.3				TAWN1630T	●	□										
TAWNH1630T	●	□														
16.4	TAWN1640T	●	□													
TAWNH1640T	●	□														

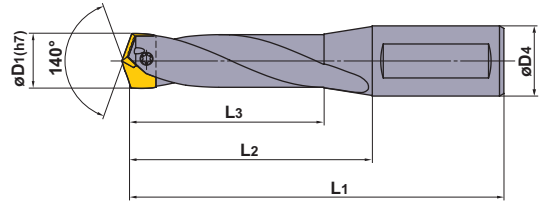
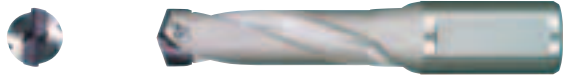
(Note) 1.L1, L2, L3 are the dimensions with an H type insert.

2.Please contact us for any type that is not available 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					Clamp Screw	Wrench	Plate	Anti-seize Lubricant
16.5 17.4	3	TAWSN1700S20	●	16.5	TAWN1650T	●	<input type="checkbox"/>	61	85	135	20	WS254015T	ⓄTKY08D	WPT4405	MK1KS
					TAWNH1650T	●	<input type="checkbox"/>								
				16.6	TAWN1660T	●	<input type="checkbox"/>								
					TAWNH1660T	●	<input type="checkbox"/>								
				16.7	TAWN1670T	●	<input type="checkbox"/>								
					TAWNH1670T	●	<input type="checkbox"/>								
	16.8	TAWN1680T	●	<input type="checkbox"/>											
		TAWNH1680T	●	<input type="checkbox"/>											
	16.9	TAWN1690T	●	<input type="checkbox"/>											
		TAWNH1690T	●	<input type="checkbox"/>											
	17.0	TAWN1700T	●	<input type="checkbox"/>	96	120	170	20	WS254015T	ⓄTKY08D	WPT4405	MK1KS			
		TAWNH1700T	●	<input type="checkbox"/>											
	17.1	TAWN1710T	●	<input type="checkbox"/>											
		TAWNH1710T	●	<input type="checkbox"/>											
17.2	TAWN1720T	●	<input type="checkbox"/>												
	TAWNH1720T	●	<input type="checkbox"/>												
17.3	TAWN1730T	●	<input type="checkbox"/>												
	TAWNH1730T	●	<input type="checkbox"/>												
17.4	TAWN1740T	●	<input type="checkbox"/>												
	TAWNH1740T	●	<input type="checkbox"/>												
17.5 18.4	3	TAWSN1800S20	●	17.5	TAWN1750T	●	<input type="checkbox"/>	65	90	140	20	WS254016T	ⓄTKY08D	WPT4405	MK1KS
					TAWNH1750T	●	<input type="checkbox"/>								
				17.6	TAWN1760T	●	<input type="checkbox"/>								
					TAWNH1760T	●	<input type="checkbox"/>								
				17.7	TAWN1770T	●	<input type="checkbox"/>								
					TAWNH1770T	●	<input type="checkbox"/>								
	17.8	TAWN1780T	●	<input type="checkbox"/>											
		TAWNH1780T	●	<input type="checkbox"/>											
	17.9	TAWN1790T	●	<input type="checkbox"/>											
		TAWNH1790T	●	<input type="checkbox"/>											
	18.0	TAWN1800T	●	<input type="checkbox"/>	102	125	175	20	WS254016T	ⓄTKY08D	WPT4405	MK1KS			
		TAWNH1800T	●	<input type="checkbox"/>											
	18.1	TAWN1810T	●	<input type="checkbox"/>											
		TAWNH1810T	●	<input type="checkbox"/>											
18.2	TAWN1820T	●	<input type="checkbox"/>												
	TAWNH1820T	●	<input type="checkbox"/>												
18.3	TAWN1830T	●	<input type="checkbox"/>												
	TAWNH1830T	●	<input type="checkbox"/>												
18.4	TAWN1840T	●	<input type="checkbox"/>												
	TAWNH1840T	●	<input type="checkbox"/>												
18.5 19.4	3	TAWSN1900S25	●	18.5	TAWN1850T	●	<input type="checkbox"/>	68	99	155	25	WS304517T	ⓄTKY10T	WPT4405	MK1KS
					TAWNH1850T	●	<input type="checkbox"/>								
				18.6	TAWN1860T	●	<input type="checkbox"/>								
					TAWNH1860T	●	<input type="checkbox"/>								
				18.7	TAWN1870T	●	<input type="checkbox"/>								
					TAWNH1870T	●	<input type="checkbox"/>								
	18.8	TAWN1880T	●	<input type="checkbox"/>											
		TAWNH1880T	●	<input type="checkbox"/>											
	18.9	TAWN1890T	●	<input type="checkbox"/>											
		TAWNH1890T	●	<input type="checkbox"/>											
	19.0	TAWN1900T	●	<input type="checkbox"/>	107	134	190	25	WS304517T	ⓄTKY10T	WPT4405	MK1KS			
		TAWNH1900T	●	<input type="checkbox"/>											
	19.1	TAWN1910T	●	<input type="checkbox"/>											
		TAWNH1910T	●	<input type="checkbox"/>											
19.2	TAWN1920T	●	<input type="checkbox"/>												
	TAWNH1920T	●	<input type="checkbox"/>												
19.3	TAWN1930T	●	<input type="checkbox"/>												
	TAWNH1930T	●	<input type="checkbox"/>												
19.4	TAWN1940T	●	<input type="checkbox"/>												
	TAWNH1940T	●	<input type="checkbox"/>												

## (General Use)







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								
19.5   20.4	3	TAWSN2000S25	●	19.5	TAWN1950T	●	□	72	99	155	25	WS304518T	TKY10T	WPT4405	MK1KS
					TAWNH1950T	●	□								
				19.6	TAWN1960T	●	□								
					TAWNH1960T	●	□								
				19.7	TAWN1970T	●	□								
					TAWNH1970T	●	□								
				19.8	TAWN1980T	●	□								
		TAWNH1980T	●	□											
		19.9	TAWN1990T	●	□										
			TAWNH1990T	●	□										
		20.0	TAWN2000T	●	□	113	139	195	25	WS304518T	TKY10T	WPT4405	MK1KS		
			TAWNH2000T	●	□										
		20.1	TAWN2010T	□	□										
			TAWNH2010T	□	□										
	20.2	TAWN2020T	□	□											
		TAWNH2020T	□	□											
	20.3	TAWN2030T	□	□											
		TAWNH2030T	□	□											
	20.4	TAWN2040T	□	□											
		TAWNH2040T	□	□											
20.5   21.4	3	TAWSN2100S25	●	20.5	TAWN2050T	●	□	75	99	155	25	WS304518T	TKY10T	WPT4405	MK1KS
					TAWNH2050T	●	□								
				20.6	TAWN2060T	□	□								
					TAWNH2060T	□	□								
				20.7	TAWN2070T	□	□								
					TAWNH2070T	□	□								
				20.8	TAWN2080T	□	□								
		TAWNH2080T	□	□											
		20.9	TAWN2090T	□	□										
			TAWNH2090T	□	□										
		21.0	TAWN2100T	●	□	118	139	195	25	WS304518T	TKY10T	WPT4405	MK1KS		
			TAWNH2100T	●	□										
		21.1	TAWN2110T	□	□										
			TAWNH2110T	□	□										
	21.2	TAWN2120T	□	□											
		TAWNH2120T	□	□											
	21.3	TAWN2130T	□	□											
		TAWNH2130T	□	□											
	21.4	TAWN2140T	□	□											
		TAWNH2140T	□	□											
21.5   22.4	3	TAWSN2200S25 TAWMN2200S25	●	21.5	TAWN2150T	●	□	79.3	104.3	160.3	25	WS355520T	TKY15T	WPT4405	MK1KS
					TAWNH2150T	●	□								
				21.6	TAWN2160T	□	□								
					TAWNH2160T	□	□								
				21.7	TAWN2170T	□	□								
					TAWNH2170T	□	□								
				21.8	TAWN2180T	□	□								
	TAWNH2180T	□	□												
	21.9	TAWN2190T	□	□											
		TAWNH2190T	□	□											

(Note) 1.L1, L2, L3 are the dimensions with an H type insert.

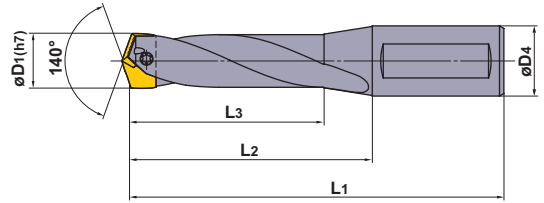
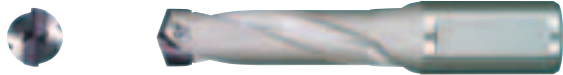
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(e.g. different diameters and lengths and drills with chamfered cutting edges can be made to order).

● : 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					Clamp Screw	Wrench	Plate	Anti-seize Lubricant
21.5   22.4	5	TAWSN2200S25 TAWMN2200S25	●	22.0	TAWN2200T	●	<input type="checkbox"/>	124.3	144.3	200.3	25	WS355520T	TKY15T	WPT4405	MK1KS
					TAWNH2200T	●	<input type="checkbox"/>								
				22.1	TAWN2210T	<input type="checkbox"/>	<input type="checkbox"/>								
					TAWNH2210T	<input type="checkbox"/>	<input type="checkbox"/>								
				22.2	TAWN2220T	<input type="checkbox"/>	<input type="checkbox"/>								
					TAWNH2220T	<input type="checkbox"/>	<input type="checkbox"/>								
				22.3	TAWN2230T	<input type="checkbox"/>	<input type="checkbox"/>								
	TAWNH2230T	<input type="checkbox"/>	<input type="checkbox"/>												
	22.4	TAWN2240T	<input type="checkbox"/>	<input type="checkbox"/>											
		TAWNH2240T	<input type="checkbox"/>	<input type="checkbox"/>											
22.5   23.4	3	TAWSN2300S25	●	22.5	TAWN2250T	●	<input type="checkbox"/>	82.3	104.3	160.3	25	WS355521T	TKY15T	WPT4405	MK1KS
					TAWNH2250T	●	<input type="checkbox"/>								
				22.6	TAWN2260T	<input type="checkbox"/>	<input type="checkbox"/>								
					TAWNH2260T	<input type="checkbox"/>	<input type="checkbox"/>								
				22.7	TAWN2270T	<input type="checkbox"/>	<input type="checkbox"/>								
					TAWNH2270T	<input type="checkbox"/>	<input type="checkbox"/>								
	22.8	TAWN2280T	<input type="checkbox"/>	<input type="checkbox"/>											
		TAWNH2280T	<input type="checkbox"/>	<input type="checkbox"/>											
	22.9	TAWN2290T	<input type="checkbox"/>	<input type="checkbox"/>											
		TAWNH2290T	<input type="checkbox"/>	<input type="checkbox"/>											
	5	TAWMN2300S25	●	23.0	TAWN2300T	●	<input type="checkbox"/>	129.3	154.3	210.3	25	WS355521T	TKY15T	WPT4405	MK1KS
					TAWNH2300T	●	<input type="checkbox"/>								
				23.1	TAWN2310T	<input type="checkbox"/>	<input type="checkbox"/>								
					TAWNH2310T	<input type="checkbox"/>	<input type="checkbox"/>								
23.2				TAWN2320T	<input type="checkbox"/>	<input type="checkbox"/>									
				TAWNH2320T	<input type="checkbox"/>	<input type="checkbox"/>									
23.3				TAWN2330T	<input type="checkbox"/>	<input type="checkbox"/>									
				TAWNH2330T	<input type="checkbox"/>	<input type="checkbox"/>									
23.4	TAWN2340T	<input type="checkbox"/>	<input type="checkbox"/>												
	TAWNH2340T	<input type="checkbox"/>	<input type="checkbox"/>												
23.5   24.4	3	TAWSN2400S32	●	23.5	TAWN2350T	●	<input type="checkbox"/>	86.3	110.3	170.3	32	WS355521T	TKY15T	WPT4405	MK1KS
					TAWNH2350T	●	<input type="checkbox"/>								
				23.6	TAWN2360T	<input type="checkbox"/>	<input type="checkbox"/>								
					TAWNH2360T	<input type="checkbox"/>	<input type="checkbox"/>								
				23.7	TAWN2370T	<input type="checkbox"/>	<input type="checkbox"/>								
					TAWNH2370T	<input type="checkbox"/>	<input type="checkbox"/>								
	23.8	TAWN2380T	<input type="checkbox"/>	<input type="checkbox"/>											
		TAWNH2380T	<input type="checkbox"/>	<input type="checkbox"/>											
	23.9	TAWN2390T	<input type="checkbox"/>	<input type="checkbox"/>											
		TAWNH2390T	<input type="checkbox"/>	<input type="checkbox"/>											
	5	TAWMN2400S32	●	24.0	TAWN2400T	●	<input type="checkbox"/>	135.3	160.3	220.3	32	WS355521T	TKY15T	WPT4405	MK1KS
					TAWNH2400T	●	<input type="checkbox"/>								
				24.1	TAWN2410T	<input type="checkbox"/>	<input type="checkbox"/>								
					TAWNH2410T	<input type="checkbox"/>	<input type="checkbox"/>								
24.2				TAWN2420T	<input type="checkbox"/>	<input type="checkbox"/>									
				TAWNH2420T	<input type="checkbox"/>	<input type="checkbox"/>									
24.3				TAWN2430T	<input type="checkbox"/>	<input type="checkbox"/>									
				TAWNH2430T	<input type="checkbox"/>	<input type="checkbox"/>									
24.4	TAWN2440T	<input type="checkbox"/>	<input type="checkbox"/>												
	TAWNH2440T	<input type="checkbox"/>	<input type="checkbox"/>												
24.5   25.4	3	TAWSN2500S32 TAWMN2500S32	●	24.5	TAWN2450T	●	<input type="checkbox"/>	88.6	110.6	170.3	32	WS406023T	TKY25T	WPT4405	MK1KS
					TAWNH2450T	●	<input type="checkbox"/>								
				24.6	TAWN2460T	<input type="checkbox"/>	<input type="checkbox"/>								
					TAWNH2460T	<input type="checkbox"/>	<input type="checkbox"/>								
				24.7	TAWN2470T	<input type="checkbox"/>	<input type="checkbox"/>								
					TAWNH2470T	<input type="checkbox"/>	<input type="checkbox"/>								
				24.8	TAWN2480T	<input type="checkbox"/>	<input type="checkbox"/>								
	TAWNH2480T	<input type="checkbox"/>	<input type="checkbox"/>												
24.9	TAWN2490T	<input type="checkbox"/>	<input type="checkbox"/>												
	TAWNH2490T	<input type="checkbox"/>	<input type="checkbox"/>												

## (General Use)







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										
24.5   25.4	5	TAWSN2500S32 TAWMN2500S32	●	25.0	TAWN2500T	●	□	140.6	165.6	225.6	32	WS406023T	TKY25T	WPT4405	MK1KS		
					TAWNH2500T	●	□										
				25.1	TAWN2510T	□	□										
					TAWNH2510T	□	□										
				25.2	TAWN2520T	□	□										
					TAWNH2520T	□	□										
	25.3	TAWN2530T	□	□													
		TAWNH2530T	□	□													
	25.4	TAWN2540T	□	□													
		TAWNH2540T	□	□													
25.5   26.4	3	TAWSN2600S32	●	25.5	TAWN2550T	●	□	92.6	115.6	175.6	32	WS406024T	TKY25T	WPT4405	MK1KS		
					TAWNH2550T	●	□										
				25.6	TAWN2560T	□	□										
					TAWNH2560T	□	□										
				25.7	TAWN2570T	□	□										
					TAWNH2570T	□	□										
	25.8	TAWN2580T	□	□													
		TAWNH2580T	□	□													
		25.9	TAWN2590T	□	□												
			TAWNH2590T	□	□												
	5	TAWMN2600S32	●	26.0	TAWN2600T	●	□	146.6	170.6	230.6	32	WS406024T	TKY25T	WPT4405	MK1KS		
					TAWNH2600T	●	□										
26.1				TAWN2610T	□	□											
				TAWNH2610T	□	□											
26.2				TAWN2620T	□	□											
				TAWNH2620T	□	□											
26.3	TAWN2630T	□	□														
	TAWNH2630T	□	□														
	26.4	TAWN2640T	□	□													
		TAWNH2640T	□	□													
26.5   27.4	3	TAWSN2700S32	●	26.5	TAWN2650T	●	□	94.6	115.6	175.6	32	WS406024T	TKY25T	WPT4405	MK1KS		
					TAWNH2650T	●	□										
				26.6	TAWN2660T	□	□										
					TAWNH2660T	□	□										
				26.7	TAWN2670T	□	□										
					TAWNH2670T	□	□										
	26.8	TAWN2680T	□	□													
		TAWNH2680T	□	□													
		26.9	TAWN2690T	□	□												
			TAWNH2690T	□	□												
	5	TAWMN2700S32	●	27.0	TAWN2700T	●	□	151.6	175.6	235.6	32	WS406024T	TKY25T	WPT4405	MK1KS		
					TAWNH2700T	●	□										
27.1				TAWN2710T	□	□											
				TAWNH2710T	□	□											
27.2				TAWN2720T	□	□											
				TAWNH2720T	□	□											
27.3	TAWN2730T	□	□														
	TAWNH2730T	□	□														
	27.4	TAWN2740T	□	□													
		TAWNH2740T	□	□													

(Note) 1.L1, L2, L3 are the dimensions with an H type insert.

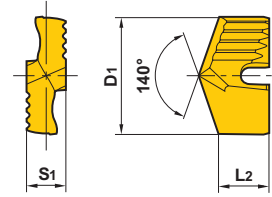
2.Please contact us for any type that is not available in this literature

(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					Clamp Screw	Wrench	Plate	Anti-seize Lubricant
27.5 28.4	3	TAWSN2800S32	●	27.5	TAWN2750T	●	<input type="checkbox"/>	97.2	120.2	180.2	32	WS508026T	TKY27T	WPT4405	MK1KS
					TAWNH2750T	●	<input type="checkbox"/>								
				27.6	TAWN2760T	<input type="checkbox"/>	<input type="checkbox"/>								
					TAWNH2760T	<input type="checkbox"/>	<input type="checkbox"/>								
				27.7	TAWN2770T	<input type="checkbox"/>	<input type="checkbox"/>								
					TAWNH2770T	<input type="checkbox"/>	<input type="checkbox"/>								
				27.8	TAWN2780T	<input type="checkbox"/>	<input type="checkbox"/>								
		TAWNH2780T	<input type="checkbox"/>	<input type="checkbox"/>											
	5	TAWMN2800S32	●	27.9	TAWN2790T	<input type="checkbox"/>	<input type="checkbox"/>	157.2	180.2	240.2	32	WS508026T	TKY27T	WPT4405	MK1KS
					TAWNH2790T	<input type="checkbox"/>	<input type="checkbox"/>								
				28.0	TAWN2800T	●	<input type="checkbox"/>								
					TAWNH2800T	●	<input type="checkbox"/>								
				28.1	TAWN2810T	<input type="checkbox"/>	<input type="checkbox"/>								
					TAWNH2810T	<input type="checkbox"/>	<input type="checkbox"/>								
28.2				TAWN2820T	<input type="checkbox"/>	<input type="checkbox"/>									
	TAWNH2820T	<input type="checkbox"/>	<input type="checkbox"/>												
28.3	TAWN2830T	<input type="checkbox"/>	<input type="checkbox"/>												
	TAWNH2830T	<input type="checkbox"/>	<input type="checkbox"/>												
28.4	TAWN2840T	<input type="checkbox"/>	<input type="checkbox"/>												
	TAWNH2840T	<input type="checkbox"/>	<input type="checkbox"/>												
28.5 29.4	3	TAWSN2900S32	●	28.5	TAWN2850T	●	<input type="checkbox"/>	100.2	125.2	185.2	32	WS508027T	TKY27T	WPT4405	MK1KS
					TAWNH2850T	●	<input type="checkbox"/>								
				28.6	TAWN2860T	<input type="checkbox"/>	<input type="checkbox"/>								
					TAWNH2860T	<input type="checkbox"/>	<input type="checkbox"/>								
				28.7	TAWN2870T	<input type="checkbox"/>	<input type="checkbox"/>								
					TAWNH2870T	<input type="checkbox"/>	<input type="checkbox"/>								
				28.8	TAWN2880T	<input type="checkbox"/>	<input type="checkbox"/>								
		TAWNH2880T	<input type="checkbox"/>	<input type="checkbox"/>											
	28.9	TAWN2890T	<input type="checkbox"/>	<input type="checkbox"/>											
		TAWNH2890T	<input type="checkbox"/>	<input type="checkbox"/>											
	5	TAWMN2900S32	●	29.0	TAWN2900T	●	<input type="checkbox"/>	162.2	185.2	245.2	32	WS508027T	TKY27T	WPT4405	MK1KS
					TAWNH2900T	●	<input type="checkbox"/>								
				29.1	TAWN2910T	<input type="checkbox"/>	<input type="checkbox"/>								
					TAWNH2910T	<input type="checkbox"/>	<input type="checkbox"/>								
29.2				TAWN2920T	<input type="checkbox"/>	<input type="checkbox"/>									
				TAWNH2920T	<input type="checkbox"/>	<input type="checkbox"/>									
29.3				TAWN2930T	<input type="checkbox"/>	<input type="checkbox"/>									
	TAWNH2930T	<input type="checkbox"/>	<input type="checkbox"/>												
29.4	TAWN2940T	<input type="checkbox"/>	<input type="checkbox"/>												
	TAWNH2940T	<input type="checkbox"/>	<input type="checkbox"/>												
29.5 30.4	3	TAWSN3000S32	●	29.5	TAWN2950T	●	<input type="checkbox"/>	104.2	125.2	185.2	32	WS508027T	TKY27T	WPT4405	MK1KS
					TAWNH2950T	●	<input type="checkbox"/>								
				29.6	TAWN2960T	<input type="checkbox"/>	<input type="checkbox"/>								
					TAWNH2960T	<input type="checkbox"/>	<input type="checkbox"/>								
				29.7	TAWN2970T	<input type="checkbox"/>	<input type="checkbox"/>								
					TAWNH2970T	<input type="checkbox"/>	<input type="checkbox"/>								
				29.8	TAWN2980T	<input type="checkbox"/>	<input type="checkbox"/>								
		TAWNH2980T	<input type="checkbox"/>	<input type="checkbox"/>											
	29.9	TAWN2990T	<input type="checkbox"/>	<input type="checkbox"/>											
		TAWNH2990T	<input type="checkbox"/>	<input type="checkbox"/>											
	5	TAWMN3000S32	●	30.0	TAWN3000T	●	<input type="checkbox"/>	167.2	195.2	255.2	32	WS508027T	TKY27T	WPT4405	MK1KS
					TAWNH3000T	●	<input type="checkbox"/>								
				30.1	TAWN3010T	<input type="checkbox"/>	<input type="checkbox"/>								
					TAWNH3010T	<input type="checkbox"/>	<input type="checkbox"/>								
30.2				TAWN3020T	<input type="checkbox"/>	<input type="checkbox"/>									
				TAWNH3020T	<input type="checkbox"/>	<input type="checkbox"/>									
30.3				TAWN3030T	<input type="checkbox"/>	<input type="checkbox"/>									
	TAWNH3030T	<input type="checkbox"/>	<input type="checkbox"/>												
30.4	TAWN3040T	<input type="checkbox"/>	<input type="checkbox"/>												
	TAWNH3040T	<input type="checkbox"/>	<input type="checkbox"/>												

## U Type Insert



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

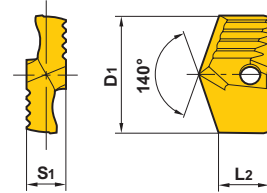
Order Number	Stock		Dimensions (mm)			Applicable Holder	
	VP15TF	VP10H	D1	L2	S1		
<b>TAWN1950T</b>	●	□	19.5	9.1	7.0	TAWSN 2000S25	
<b>1960T</b>	●	□	19.6	9.1	7.0		
<b>1970T</b>	●	□	19.7	9.1	7.0		
<b>1980T</b>	●	□	19.8	9.1	7.0		
<b>1990T</b>	●	□	19.9	9.1	7.0		
<b>2000T</b>	●	□	20.0	9.0	7.0		TAWMN 2000S25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

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

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

## H Type Insert

**NEW**



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

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

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

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

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

## Recommended Cutting Conditions

Work Material	Drill Diameter Conditions Hardness	$\phi 14.0-\phi 15.4$		$\phi 15.5-\phi 18.4$		$\phi 18.5-\phi 21.4$	
		Cutting Speed (mm/rev)	Feed (mm/rev)	Cutting Speed (m/min)	Feed (mm/rev)	Cutting Speed (m/min)	Feed (mm/rev)
<b>P</b> Mild Steel	$\leq 180\text{HB}$	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)
	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)
<b>M</b> Stainless Steel	$\leq 200\text{HB}$	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)
<b>K</b> Cast Iron	Tensile Strength $\leq 350\text{MPa}$	70 (60-90)	0.20 (0.15-0.25)	80 (60-90)	0.30 (0.20-0.35)	90 (70-110)	0.25 (0.20-0.35)
	Tensile Strength $\leq 450\text{MPa}$	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	$\phi 21.5-\phi 24.4$		$\phi 24.5-\phi 27.4$		$\phi 27.5-\phi 30.4$	
		Cutting Speed (mm/rev)	Feed (mm/rev)	Cutting Speed (m/min)	Feed (mm/rev)	Cutting Speed (m/min)	Feed (mm/rev)
<b>P</b> Mild Steel	$\leq 180\text{HB}$	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)
	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)
<b>M</b> Stainless Steel	$\leq 200\text{HB}$	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)
<b>K</b> Cast Iron	Tensile Strength $\leq 350\text{MPa}$	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 $\leq 450\text{MPa}$	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)

(Note) Recommended for use only with a rigid machine and set up. Use the internal coolant system when machining stainless steel.  
(MQL and mist machining should not be used.)

## 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)

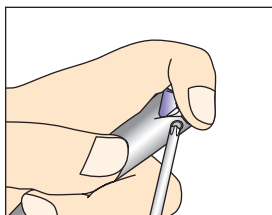


Fig. 1

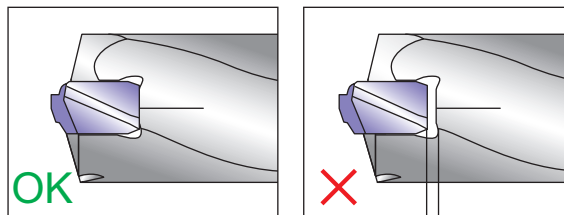


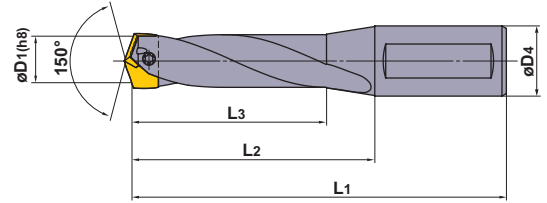
Fig. 2

### 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

(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	110.6	170.6	32	WS406023T	TKY25T	WPT4405	MK1KS
				NEW 24.5	TAWBH2450T	●								
	5	TAWMB2500S32	□	24.6	TAWB2460T	□	140.6	165.6	225.6	32	WS406023T	TKY25T	WPT4405	MK1KS
				NEW 24.6	TAWBH2460T	□								
26.5 26.7	3	TAWSB2700S32	●	26.5	TAWB2650T	□	94.6	115.6	175.6	32	WS406024T	TKY25T	WPT4405	MK1KS
				NEW 26.5	TAWBH2650T	□								
	5	TAWMB2700S32	□	26.7	TAWB2670T	●	151.6	175.6	235.6	32	WS406024T	TKY25T	WPT4405	MK1KS
				NEW 26.7	TAWBH2670T	●								

(Note) 1.L1, L2, L3 are the dimensions with an H type insert.

2. Please contact us for any type that is not available 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
			D1	L2	S1			
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			

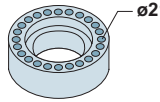
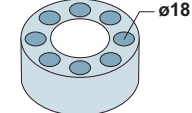
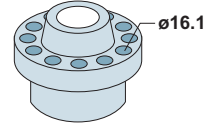
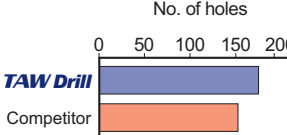
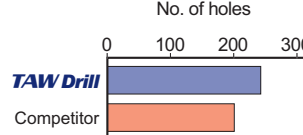
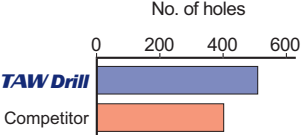
● : Inventory maintained. (Note: 2 inserts in one pack) □ : Non stock, produced to order only.

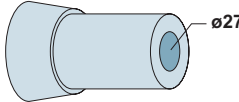
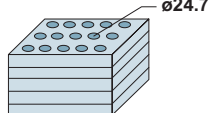
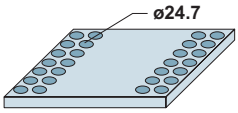
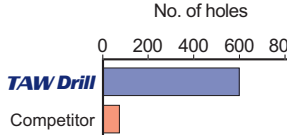
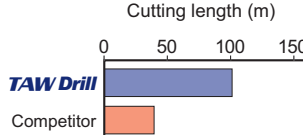
## Recommended Cutting Conditions

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	Hardness					
	Tensile Strength ≤400-500 MPa		70 (60-80)	0.30 (0.25-0.35)	70 (60-80)	0.30 (0.25-0.35)
	Tensile Strength ≤490-610 MPa		65 (55-75)	0.30 (0.25-0.35)	65 (55-75)	0.30 (0.25-0.35)
Tensile Strength ≤570-720 MPa		60 (50-70)	0.30 (0.25-0.35)	60 (50-70)	0.30 (0.25-0.35)	

(Note) Recommended for use only with a rigid machine and set up. Use the internal coolant system when machining stainless steel. (MQL and mist machining should not be used.)

Application Examples

Holder	TAWMN2100S25	TAWMN1800S20	TAWSN1600S20	
Insert (Grade)	TAWN2100T (VP15TF)	TAWN1800T (VP15TF)	TAWN1610T (VP15TF)	
Workpiece	ISO 34 CrMo4 	ISO C45 (200HB) 	DIN STE 285 	
Component	Ring	Ring gear	Machine parts	
Cutting Conditions	Cutting Speed (m/min)	55	70	80
	Feed (mm/rev)	0.2	0.3	0.3
	Revolution (min <sup>-1</sup> )	833	1238	1582
	Feed Rate (mm/min)	167	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	No. of holes 	No. of holes 	No. of holes 	

Holder	TAWSN2700S32	TAWSB2500S32	TAWSB2500S32	
Insert (Grade)	TAWN2700T (VP15TF)	TAWB2470T (VP15TF)	TAWB2470T (VP15TF)	
Workpiece	ISO 18 CrMo4 	BS S335 JR (Laminated boards) 	BS S335 JR 	
Component	Tube	Steel for bridges	Steel for bridges	
Cutting Conditions	Cutting Speed (m/min)	80	77	60
	Feed (mm/rev)	0.3	0.3	0.3
	Revolution (min <sup>-1</sup> )	943	992	773
	Feed Rate (mm/min)	283	298	232
Coolant	Water Soluble Oil (Internal coolant)	Mist coolant	Mist coolant	
Machine Type	NC lathe	Gundrill machine	Gundrill machine	
Result	No. of holes 	Cutting length (m) 	Cutting length (m) 