MITSUBISHI MATERIALS

STAW/TAW

INDEXABLE TYPE DRILL
WSTAR INSERT DRILL SERIES





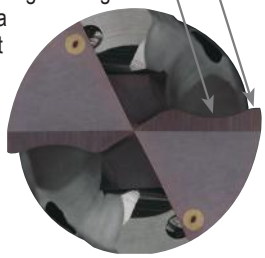
TOOL NEWS **B190A**

STAW INDEXABLE TYPE DRILL WSTAR INSERT TYPE DRILL

Designed for extreme sharpness, precision and rigidity

Wavy cutting edge

The wavy edge design achieves a sharp peripheral edge cutting performance with a strong center point for initial cutting.

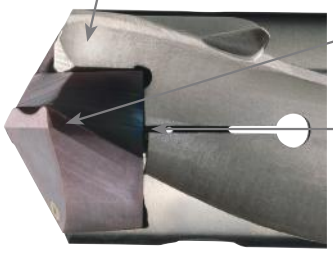


High helix

Unique low resistance pocket design improves chip breaking for superior chip disposal.

Back metal

Sufficient back metal increases rigidity.



Centering location

Mitsubishi's unique system ensures high clamping accuracy.

Hole depth up to 8D (L/D 1.5, 3, 5 and 8 long type)

■ Stub type (1.5D)

High precision and efficient shallow hole drilling is possible.Suitable for drilling small parts using a lathe.

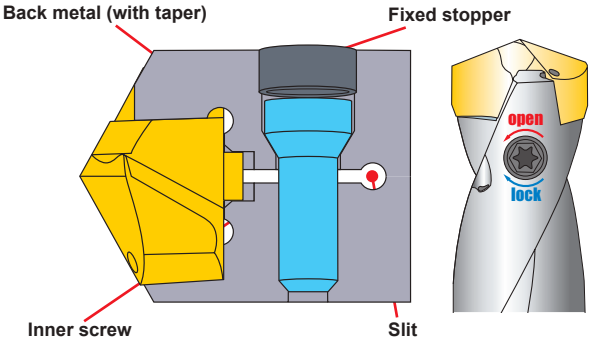


■ Long type (8D)

The body is optimized for deep hole drilling. Excellent chip evacuation and holder rigidity is achieved by improving the web thickness and flute width.



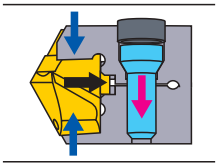
Mitsubishi's unique highly rigid clamping system (PAT.P.)



<Insert installation and detachment>

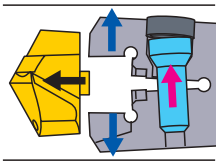
<Clamp>

Tighten the inner screw to securely clamp the insert with the back metal tapers.



<Unclamp>

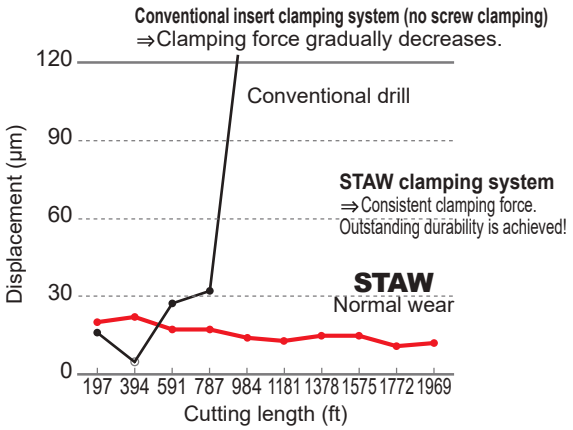
Loosening the screw causes it to push against the stopper and opens the back metal sections.



Durable body & insert

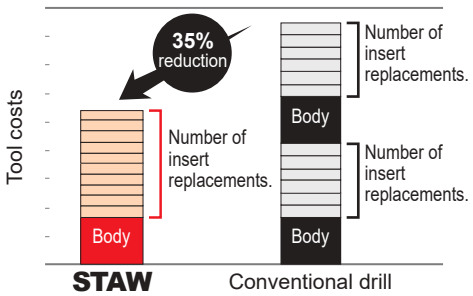
■ Rigid clamping system offers exceptional tool life. ■ Durable inserts and body reduces costs.

■ Radial runout of insert



■ Cost reduction effect

Tool cost comparison for 1969 ft length of machining



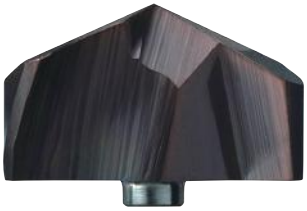
<Cutting conditions>

Work piece	: AISI 1050 (150—180HB)
Drill diameter	: ø10 (L/D=5)
Cutting speed	: 330 SFM
Feed	: .010 IPR
Coolant	: W.S.O.
Coolant pressure	: 75 PSI (Internal coolant)
Machine	: Machining center

Insert grade

VP15TF
Insert grade for general purpose

Suitable for machining a wide range of work piece materials from mild and alloy steels through stainless steels and cast iron.



DP5010
Insert grade for cast iron

A new PVD coated grade for cast iron. Cemented carbide substrate coated using a proprietary method of crystal control technology.



Operational Guidance

■ Insert Installation

1. Before inserting the insert into the holder, ensure that there are no foreign objects or dirt in the holder slot or slit. Clean using compressed air if necessary.

2. Use the wrench provided to loosen the inner screw to open the tip of the holder, then place the insert into the holder slot as shown in figure 1.
   *Ensure that the wrench is firmly in contact with the base of the inner screw head when tightening.

3. After the insert has been set in the holder slot, tighten the inner screw while pushing the insert lightly into the pocket as shown in figure 2 to securely clamp and locate the insert.
   *Ensure that the wrench is firmly in contact with the base of the inner screw head when tightening.

Tighten clamp screws referring to the table for torque.

Drill Diameter	Clamping Force	
	lbf-in	N · m
.3906"–.4844" 10mm–12.5mm	8.9	1
.5000"–.5781" 13mm–15mm	17.7	2
.5938"–.7188" 16mm–18mm	22.1	2.5

4. Check that there is no gap between the bottom of the insert and holder slot.

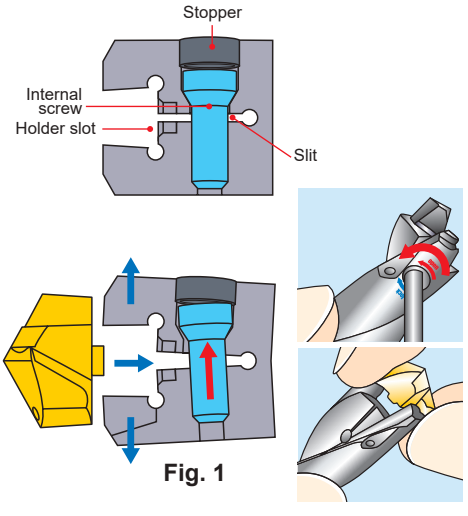


Fig. 1

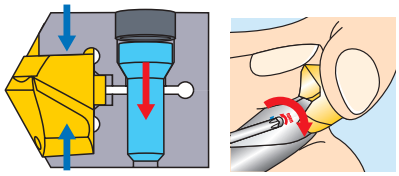
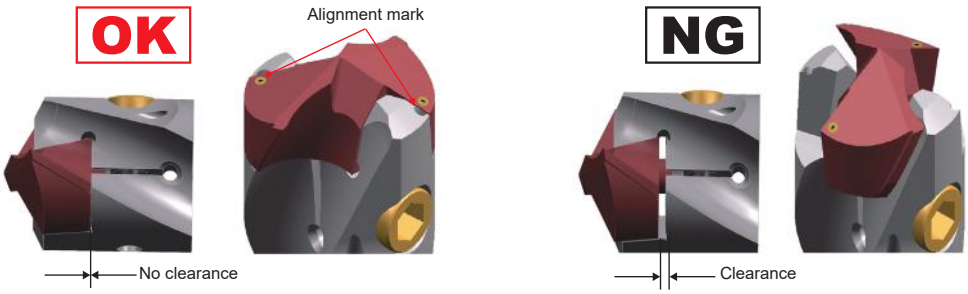


Fig. 2



(Note) Poor or incorrect clamping of inserts can cause poor drilling performance and/or drill breakage.
Therefore ensure that the alignment marks on both the body and insert are aligned when setting.
When machining, use safety guards and goggles.

INDEXABLE TYPE DRILL

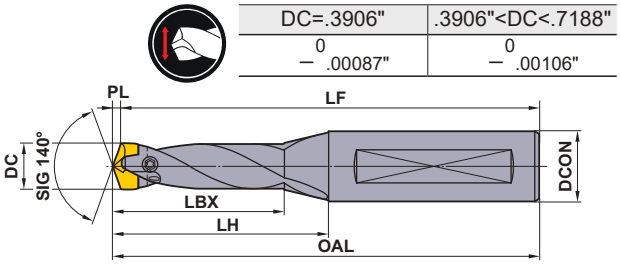
STAW

P M K N S H

INCH STANDARD
Internal Coolant

- Wavy cutting edge design for good chip control.
- Highly rigid clamping system offers stability and reliability for small hole drilling.





DC=.3906"	.3906"<DC<.7188"
0 −.00087"	0 −.00106"

■ HOLDERS

DC (inch)	Hole Depth (l/d)	Holder Order Number	Stock	Dimensions (inch) LBX	LH	OAL	LF	PL	DCON	Wrench	Insert Order Number	Stock VP15TF	Stock DP5010
.3906	1.5	STAWSS0026	●	.937	1.33	3.22	3.15	.071	.625	TIP06F	STAWN0025TH	●	
											STAWK0025TG		●
	3	STAWSN0026	●	1.531	1.92	3.81	3.74	.071	.625	TIP06F	STAWN0025TH	●	
											STAWK0025TG		●
	5	STAWMN0026	●	2.311	2.71	4.60	4.53	.071	.625	TIP06F	STAWN0025TH	●	
											STAWK0025TG		●
	8	STAWLN0026	●	3.501	3.89	5.78	5.71	.071	.625	TIP06F	STAWN0025TH	●	
											STAWK0025TG		●
.4062	1.5	STAWSS0026	●	.940	1.33	3.22	3.15	.074	.625	TIP06F	STAWN0026TH	●	
											STAWK0026TG		●
	3	STAWSN0026	●	1.534	1.92	3.81	3.74	.074	.625	TIP06F	STAWN0026TH	●	
											STAWK0026TG		●
	5	STAWMN0026	●	2.314	2.71	4.60	4.53	.074	.625	TIP06F	STAWN0026TH	●	
											STAWK0026TG		●
	8	STAWLN0026	●	3.504	3.89	5.78	5.71	.074	.625	TIP06F	STAWN0026TH	●	
											STAWK0026TG		●
.4219	1.5	STAWSS0027	●	.943	1.34	3.23	3.15	.077	.625	TIP06F	STAWN0027TH	●	
											STAWK0027TG		●
	3	STAWSN0027	●	1.537	1.93	3.82	3.74	.077	.625	TIP06F	STAWN0027TH	●	
											STAWK0027TG		●
	5	STAWMN0027	●	2.317	2.72	4.61	4.53	.077	.625	TIP06F	STAWN0027TH	●	
											STAWK0027TG		●
	8	STAWLN0027	●	3.507	3.90	5.79	5.71	.077	.625	TIP06F	STAWN0027TH	●	
											STAWK0027TG		●
.4375	1.5	STAWSS0028	●	1.064	1.50	3.39	3.31	.080	.625	TIP06F	STAWN0028TH	●	
											STAWK0028TG		●
	3	STAWSN0028	●	1.690	2.13	4.02	3.94	.080	.625	TIP06F	STAWN0028TH	●	
											STAWK0028TG		●
	5	STAWMN0028	●	2.680	3.11	5.00	4.92	.080	.625	TIP06F	STAWN0028TH	●	
											STAWK0028TG		●
	8	STAWLN0028	●	3.860	4.29	6.18	6.10	.080	.625	TIP06F	STAWN0028TH	●	
											STAWK0028TG		●
.4531	1.5	STAWSS0030	●	1.067	1.50	3.39	3.31	.083	.625	TIP06F	STAWN0029TH	●	
											STAWK0029TG		●
	3	STAWSN0030	●	1.693	2.13	4.02	3.94	.083	.625	TIP06F	STAWN0029TH	●	
											STAWK0029TG		●
	5	STAWMN0030	●	2.683	3.11	5.00	4.92	.083	.625	TIP06F	STAWN0029TH	●	
											STAWK0029TG		●
	8	STAWLN0030	●	3.863	4.29	6.18	6.10	.083	.625	TIP06F	STAWN0029TH	●	
											STAWK0029TG		●
.4688	1.5	STAWSS0030	●	1.069	1.51	3.40	3.31	.085	.625	TIP06F	STAWN0030TH	●	
											STAWK0030TG		●
	3	STAWSN0030	●	1.695	2.14	4.03	3.94	.085	.625	TIP06F	STAWN0030TH	●	
											STAWK0030TG		●
	5	STAWMN0030	●	2.685	3.12	5.01	4.92	.085	.625	TIP06F	STAWN0030TH	●	
											STAWK0030TG		●
	8	STAWLN0030	●	3.865	4.30	6.19	6.10	.085	.625	TIP06F	STAWN0030TH	●	
											STAWK0030TG		●

(Note) Please contact us for any geometry that is not in this catalog (e.g. different diameter and length).
The LF, LH, and LBX dimensions listed in the table above, are measured using the VP15TF insert.
When using the DP5010 insert, the LF, LH and LBX dimensions will be slightly reduced.

● : USA Stock

DC (inch)	Hole Depth (l/d)	Holder		Dimensions (inch)						Wrench	Insert		
		Order Number	Stock	LBX	LH	OAL	LF	PL	DCON		Order Number	Stock VP15TF	Stock DP5010
.4844	1.5	STAWSS0031	●	1.148	1.63	3.52	3.43	.088	.625	TIP06F	STAWN0031TH	●	
											STAWK0031TG		●
	3	STAWSN0031	●	1.858	2.33	4.22	4.13	.088	.625	TIP06F	STAWN0031TH	●	
											STAWK0031TG		●
	5	STAWMN0031	●	2.848	3.32	5.21	5.12	.088	.625	TIP06F	STAWN0031TH	●	
											STAWK0031TG		●
	8	STAWLN0031	●	4.218	4.70	6.59	6.50	.088	.625	TIP06F	STAWN0031TH	●	
											STAWK0031TG		●
.5000	1.5	STAWSS0032	●	1.151	1.63	3.52	3.43	.091	.625	TIP06F	STAWN0032TH	●	
											STAWK0032TG		●
	3	STAWSN0032	●	1.861	2.33	4.22	4.13	.091	.625	TIP06F	STAWN0032TH	●	
											STAWK0032TG		●
	5	STAWMN0032	●	2.851	3.32	5.21	5.12	.091	.625	TIP06F	STAWN0032TH	●	
											STAWK0032TG		●
	8	STAWLN0032	●	4.221	4.70	6.59	6.50	.091	.625	TIP06F	STAWN0032TH	●	
											STAWK0032TG		●
.5156	1.5	STAWSS0034	●	1.274	1.79	3.67	3.58	.094	.625	TIP08W	STAWN0033TH	●	
											STAWK0033TG		●
	3	STAWSN0034	●	2.024	2.53	4.42	4.33	.094	.625	TIP08W	STAWN0033TH	●	
											STAWK0033TG		●
	5	STAWMN0034	●	3.004	3.52	5.40	5.31	.094	.625	TIP08W	STAWN0033TH	●	
											STAWK0033TG		●
	8	STAWLN0034	●	4.584	5.09	6.98	6.89	.094	.625	TIP08W	STAWN0033TH	●	
											STAWK0033TG		●
.5312	1.5	STAWSS0034	●	1.277	1.80	3.68	3.58	.097	.625	TIP08W	STAWN0034TH	●	
											STAWK0034TG		●
	3	STAWSN0034	●	2.027	2.54	4.43	4.33	.097	.625	TIP08W	STAWN0034TH	●	
											STAWK0034TG		●
	5	STAWMN0034	●	3.007	3.53	5.41	5.31	.097	.625	TIP08W	STAWN0034TH	●	
											STAWK0034TG		●
	8	STAWLN0034	●	4.587	5.10	6.99	6.89	.097	.625	TIP08W	STAWN0034TH	●	
											STAWK0034TG		●
.5469	1.5	STAWSS0035	●	1.280	1.80	3.68	3.58	.100	.625	TIP08W	STAWN0035TH	●	
											STAWK0035TG		●
	3	STAWSN0035	●	2.030	2.54	4.43	4.33	.100	.625	TIP08W	STAWN0035TH	●	
											STAWK0035TG		●
	5	STAWMN0035	●	3.010	3.53	5.41	5.31	.100	.625	TIP08W	STAWN0035TH	●	
											STAWK0035TG		●
	8	STAWLN0035	●	4.590	5.10	6.99	6.89	.100	.625	TIP08W	STAWN0035TH	●	
											STAWK0035TG		●
.5625	1.5	STAWSS0036	●	1.322	1.87	3.76	3.66	.102	.625	TIP08W	STAWN0036TH	●	
											STAWK0036TG		●
	3	STAWSN0036	●	2.192	2.74	4.63	4.53	.102	.625	TIP08W	STAWN0036TH	●	
											STAWK0036TG		●
	5	STAWMN0036	●	3.372	3.92	5.81	5.71	.102	.625	TIP08W	STAWN0036TH	●	
											STAWK0036TG		●
	8	STAWLN0036	●	4.902	5.49	7.38	7.28	.102	.625	TIP08W	STAWN0036TH	●	
											STAWK0036TG		●
.5781	1.5	STAWSS0037	●	1.325	1.88	3.77	3.66	.105	.625	TIP08W	STAWN0037TH	●	
											STAWK0037TG		●
	3	STAWSN0037	●	2.195	2.75	4.64	4.53	.105	.625	TIP08W	STAWN0037TH	●	
											STAWK0037TG		●
	5	STAWMN0037	●	3.375	3.93	5.82	5.71	.105	.625	TIP08W	STAWN0037TH	●	
											STAWK0037TG		●
	8	STAWLN0037	●	4.905	5.50	7.39	7.28	.105	.625	TIP08W	STAWN0037TH	●	
											STAWK0037TG		●

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The LF, LH, and LBX dimensions listed in the table above, are measured using the VP15TF insert.
When using the DP5010 insert, the LF, LH and LBX dimensions will be slightly reduced.

STAW

Internal Coolant

DC (inch)	Hole Depth (l/d)	Holder Order Number	Stock	Dimensions (inch) LBX	LH	OAL	LF	PL	DCON	Wrench	Insert Order Number	Stock VP15TF	Stock DP5010
.5938	1.5	STAWSS0039	●	1.408	2.00	3.97	3.86	.108	.750	TIP08W	STAWN0038TH	●	
											STAWK0038TG		●
	3	STAWSN0039	●	2.468	3.06	5.03	4.92	.108	.750	TIP08W	STAWN0038TH	●	
											STAWK0038TG		●
	5	STAWMN0039	●	3.648	4.24	6.21	6.10	.108	.750	TIP08W	STAWN0038TH	●	
											STAWK0038TG		●
	8	STAWLN0039	●	5.228	5.94	7.91	7.80	.108	.750	TIP08W	STAWN0038TH	●	
											STAWK0038TG		●
.6094	1.5	STAWSS0039	●	1.411	2.00	3.97	3.86	.111	.750	TIP08W	STAWN0039TH	●	
											STAWK0039TG		●
	3	STAWSN0039	●	2.471	3.06	5.03	4.92	.111	.750	TIP08W	STAWN0039TH	●	
											STAWK0039TG		●
	5	STAWMN0039	●	3.651	4.24	6.21	6.10	.111	.750	TIP08W	STAWN0039TH	●	
											STAWK0039TG		●
	8	STAWLN0039	●	5.231	5.94	7.91	7.80	.111	.750	TIP08W	STAWN0039TH	●	
											STAWK0039TG		●
.6250	1.5	STAWSS0041	●	1.454	2.08	4.05	3.94	.114	.750	TIP10W	STAWN0040TH	●	
											STAWK0040TG		●
	3	STAWSN0041	●	2.474	3.26	5.23	5.12	.114	.750	TIP10W	STAWN0040TH	●	
											STAWK0040TG		●
	5	STAWMN0041	●	3.654	4.64	6.61	6.50	.114	.750	TIP10W	STAWN0040TH	●	
											STAWK0040TG		●
	8	STAWLN0041	●	5.544	6.33	8.30	8.19	.114	.750	TIP10W	STAWN0040TH	●	
											STAWK0040TG		●
.6406	1.5	STAWSS0041	●	1.457	2.09	4.06	3.94	.117	.750	TIP10W	STAWN0041TH	●	
											STAWK0041TG		●
	3	STAWSN0041	●	2.477	3.27	5.24	5.12	.117	.750	TIP10W	STAWN0041TH	●	
											STAWK0041TG		●
	5	STAWMN0041	●	3.657	4.65	6.62	6.50	.117	.750	TIP10W	STAWN0041TH	●	
											STAWK0041TG		●
	8	STAWLN0041	●	5.547	6.34	8.31	8.19	.117	.750	TIP10W	STAWN0041TH	●	
											STAWK0041TG		●
.6563	1.5	STAWSS0044	●	1.539	2.21	4.18	4.06	.119	.750	TIP10W	STAWN0042TH	●	
											STAWK0042TG		●
	3	STAWSN0044	●	2.519	3.47	5.43	5.31	.119	.750	TIP10W	STAWN0042TH	●	
											STAWK0042TG		●
	5	STAWMN0044	●	3.859	4.84	6.81	6.69	.119	.750	TIP10W	STAWN0042TH	●	
											STAWK0042TG		●
	8	STAWLN0044	●	5.859	6.66	8.62	8.50	.119	.750	TIP10W	STAWN0042TH	●	
											STAWK0042TG		●
.6719	1.5	STAWSS0044	●	1.542	2.21	4.18	4.06	.122	.750	TIP10W	STAWN0043TH	●	
											STAWK0043TG		●
	3	STAWSN0044	●	2.522	3.47	5.43	5.31	.122	.750	TIP10W	STAWN0043TH	●	
											STAWK0043TG		●
	5	STAWMN0044	●	3.862	4.84	6.81	6.69	.122	.750	TIP10W	STAWN0043TH	●	
											STAWK0043TG		●
	8	STAWLN0044	●	5.862	6.66	8.62	8.50	.122	.750	TIP10W	STAWN0043TH	●	
											STAWK0043TG		●
.6875	1.5	STAWSS0044	●	1.545	2.22	4.19	4.06	.125	.750	TIP10W	STAWN0044TH	●	
											STAWK0044TG		●
	3	STAWSN0044	●	2.525	3.48	5.44	5.31	.125	.750	TIP10W	STAWN0044TH	●	
											STAWK0044TG		●
	5	STAWMN0044	●	3.865	4.85	6.82	6.69	.125	.750	TIP10W	STAWN0044TH	●	
											STAWK0044TG		●
	8	STAWLN0044	●	5.865	6.67	8.63	8.50	.125	.750	TIP10W	STAWN0044TH	●	
											STAWK0044TG		●

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● : USA Stock

DC (inch)	Hole Depth (l/d)	Holder		Dimensions (inch)							Insert		
		Order Number	Stock	LBX	LH	OAL	LF	PL	DCON	Wrench	Order Number	Stock VP15TF	Stock DP5010
.7031	1.5	**STAWSS0046**	●	1.588	2.30	4.26	4.13	.128	.750	TIP10W	**STAWN0045TH**	●	
											STAWK0045TG		●
	3	STAW**SN0046**	●	2.648	3.67	5.64	5.51	.128	.750	TIP10W	**STAWN0045TH**	●	
											STAWK0045TG		●
	5	STAW**MN0046**	●	4.068	5.05	7.02	6.89	.128	.750	TIP10W	**STAWN0045TH**	●	
											STAWK0045TG		●
	8	STAW**LN0046**	●	6.188	6.98	8.95	8.82	.128	.750	TIP10W	**STAWN0045TH**	●	
											STAWK0045TG		●
.7188	1.5	STAW**SS0046**	●	1.591	2.30	4.26	4.13	.131	.750	TIP10W	**STAWN0046TH**	●	
											STAWK0046TG		●
	3	STAW**SN0046**	●	2.651	3.67	5.64	5.51	.131	.750	TIP10W	**STAWN0046TH**	●	
											STAWK0046TG		●
	5	STAW**MN0046**	●	4.071	5.05	7.02	6.89	.131	.750	TIP10W	**STAWN0046TH**	●	
											STAWK0046TG		●
	8	STAW**LN0046**	●	6.191	6.98	8.95	8.82	.131	.750	TIP10W	**STAWN0046TH**	●	
											STAWK0046TG		●

(Note) Please contact us for any geometry that is not in this catalog (e.g. different diameter and length).
The LF, LH, and LBX dimensions listed in the table above, are measured using the VP15TF insert.
When using the DP5010 insert, the LF, LH and LBX dimensions will be slightly reduced.

INDEXABLE TYPE DRILL

STAW

- Wavy cutting edge design for good chip control.
- Highly rigid clamping system offers stability and reliability for small hole drilling.

P M K N S H

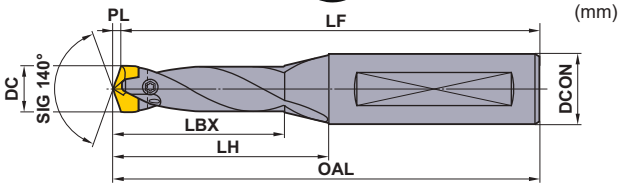
METRIC STANDARD

Internal Coolant



DC=10	10<DC<18.4
0 −0.022	0 −0.027

(mm)



HOLDERS

DC (mm)	Hole Depth (l/d)	Holder Order Number	Stock	LBX	LH	OAL	LF	PL	DCON	Wrench	Insert DC (mm)	Insert Order Number	Stock VP15TF	Stock DP5010
10.0 – 10.4	1.5	STAWSS1000S16	★	23.8	33.8	81.8	80	1.8	16	TIP06F	10.0	STAWN1000TH	★	
												STAWK1000TG		★
	3	STAWSN1000S16	★	38.8	48.8	96.8	95	1.8	16	TIP06F	10.1	STAWN1010TH	★	
												STAWK1010TG		★
	5	STAWMN1000S16	★	58.9	68.9	116.9	115	1.9	16	TIP06F	10.2	STAWN1020TH	★	
												STAWK1020TG		★
	8	STAWLN1000S16	★	88.9	98.9	146.9	145	1.9	16	TIP06F	10.3	STAWN1030TH	★	
												STAWK1030TG		★
											10.4	STAWN1040TH	★	
												STAWK1040TG		★
10.5 – 10.9	1.5	STAWSS1050S16	★	23.9	33.9	81.9	80	1.9	16	TIP06F	10.5	STAWN1050TH	★	
												STAWK1050TG		★
	3	STAWSN1050S16	★	38.9	48.9	96.9	95	1.9	16	TIP06F	10.6	STAWN1060TH	★	
												STAWK1060TG		★
	5	STAWMN1050S16	★	59.0	69.0	117.0	115	2.0	16	TIP06F	10.7	STAWN1070TH	★	
												STAWK1070TG		★
	8	STAWLN1050S16	★	89.0	99.0	147.0	145	2.0	16	TIP06F	10.8	STAWN1080TH	★	
												STAWK1080TG		★
											10.9	STAWN1090TH	★	
												STAWK1090TG		★
11.0 – 11.4	1.5	STAWSS1100S16	★	27.0	38.0	86.0	84	2.0	16	TIP06F	11.0	STAWN1100TH	★	
												STAWK1100TG		★
	3	STAWSN1100S16	★	43.0	54.0	102.0	100	2.0	16	TIP06F	11.1	STAWN1110TH	★	
												STAWK1110TG		★
	5	STAWMN1100S16	★	68.1	79.1	127.1	125	2.1	16	TIP06F	11.2	STAWN1120TH	★	
												STAWK1120TG		★
	8	STAWLN1100S16	★	98.1	109.1	157.1	155	2.1	16	TIP06F	11.3	STAWN1130TH	★	
												STAWK1130TG		★
											11.4	STAWN1140TH	★	
												STAWK1140TG		★
11.5 – 11.9	1.5	STAWSS1150S16	★	27.1	38.1	86.1	84	2.1	16	TIP06F	11.5	STAWN1150TH	★	
												STAWK1150TG		★
	3	STAWSN1150S16	★	43.1	54.1	102.1	100	2.1	16	TIP06F	11.6	STAWN1160TH	★	
												STAWK1160TG		★
	5	STAWMN1150S16	★	68.1	79.1	127.1	125	2.1	16	TIP06F	11.7	STAWN1170TH	★	
												STAWK1170TG		★
	8	STAWLN1150S16	★	98.2	109.2	157.2	155	2.2	16	TIP06F	11.8	STAWN1180TH	★	
												STAWK1180TG		★
											11.9	STAWN1190TH	★	
												STAWK1190TG		★
12.0 – 12.4	1.5	STAWSS1200S16	★	29.2	41.2	89.2	87	2.2	16	TIP06F	12.0	STAWN1200TH	★	
												STAWK1200TG		★
	3	STAWSN1200S16	★	47.2	59.2	107.2	105	2.2	16	TIP06F	12.1	STAWN1210TH	★	
												STAWK1210TG		★
	5	STAWMN1200S16	★	72.2	84.2	132.2	130	2.2	16	TIP06F	12.2	STAWN1220TH	★	
												STAWK1220TG		★
	8	STAWLN1200S16	★	107.3	119.3	167.3	165	2.3	16	TIP06F	12.3	STAWN1230TH	★	
												STAWK1230TG		★
											12.4	STAWN1240TH	★	
												STAWK1240TG		★

(Note) Please contact us for any geometry that is not in this catalog (e.g. different diameter and length).
The LF, LH, and LBX dimensions listed in the table above, are measured using the VP15TF insert.
When using the DP5010 insert, the LF, LH and LBX dimensions will be slightly reduced.

★ : **Stocked in Japan**

DC (mm)	Hole Depth (l/d)	Holder		Dimensions (mm)						Wrench	Insert			
		Order Number	Stock	LBX	LH	OAL	LF	PL	DCON		DC (mm)	Order Number	Stock VP15TF	Stock DP5010
12.5 | 12.9	1.5	STAWSS1250S16	★	29.3	41.3	89.3	87	2.3	16	①TIP06F	12.5	STAWN1250TH	★	
												STAWK1250TG		★
	3	STAWSN1250S16	★	47.3	59.3	107.3	105	2.3	16	①TIP06F	12.6	STAWN1260TH	★	
												STAWK1260TG		★
	5	STAWMN1250S16	★	72.3	84.3	132.3	130	2.3	16	①TIP06F	12.7	STAWN1270TH	★	
												STAWK1270TG		★
	8	STAWLN1250S16	★	107.3	119.3	167.3	165	2.3	16	①TIP06F	12.8	STAWN1280TH	★	
												STAWK1280TG		★
											12.9	STAWN1290TH	★	
												STAWK1290TG		★
13.0 | 13.4	1.5	STAWSS1300S16	★	32.4	45.4	93.4	91	2.4	16	②TIP08W	13.0	STAWN1300TH	★	
												STAWK1300TG		★
	3	STAWSN1300S16	★	51.4	64.4	112.4	110	2.4	16	②TIP08W	13.1	STAWN1310TH	★	
												STAWK1310TG		★
	5	STAWMN1300S16	★	76.4	89.4	137.4	135	2.4	16	②TIP08W	13.2	STAWN1320TH	★	
												STAWK1320TG		★
	8	STAWLN1300S16	★	116.4	129.4	177.4	175	2.4	16	②TIP08W	13.3	STAWN1330TH	★	
												STAWK1330TG		★
											13.4	STAWN1340TH	★	
												STAWK1340TG		★
13.5 | 13.9	1.5	STAWSS1350S16	★	32.5	45.5	93.5	91	2.5	16	②TIP08W	13.5	STAWN1350TH	★	
												STAWK1350TG		★
	3	STAWSN1350S16	★	51.5	64.5	112.5	110	2.5	16	②TIP08W	13.6	STAWN1360TH	★	
												STAWK1360TG		★
	5	STAWMN1350S16	★	76.5	89.5	137.5	135	2.5	16	②TIP08W	13.7	STAWN1370TH	★	
												STAWK1370TG		★
	8	STAWLN1350S16	★	116.5	129.5	177.5	175	2.5	16	②TIP08W	13.8	STAWN1380TH	★	
												STAWK1380TG		★
											13.9	STAWN1390TH	★	
												STAWK1390TG		★
14.0 | 14.4	1.5	STAWSS1400S16	★	33.5	47.5	95.5	93	2.5	16	②TIP08W	14.0	STAWN1400TH	★	
												STAWK1400TG		★
	3	STAWSN1400S16	★	55.6	69.6	117.6	115	2.6	16	②TIP08W	14.1	STAWN1410TH	★	
												STAWK1410TG		★
	5	STAWMN1400S16	★	85.6	99.6	147.6	145	2.6	16	②TIP08W	14.2	STAWN1420TH	★	
												STAWK1420TG		★
	8	STAWLN1400S16	★	124.6	139.6	187.6	185	2.6	16	②TIP08W	14.3	STAWN1430TH	★	
												STAWK1430TG		★
											14.4	STAWN1440TH	★	
												STAWK1440TG		★
14.5 | 14.9	1.5	STAWSS1450S16	★	33.6	47.6	95.6	93	2.6	16	②TIP08W	14.5	STAWN1450TH	★	
												STAWK1450TG		★
	3	STAWSN1450S16	★	55.7	69.7	117.7	115	2.7	16	②TIP08W	14.6	STAWN1460TH	★	
												STAWK1460TG		★
	5	STAWMN1450S16	★	85.7	99.7	147.7	145	2.7	16	②TIP08W	14.7	STAWN1470TH	★	
												STAWK1470TG		★
	8	STAWLN1450S16	★	124.7	139.7	187.7	185	2.7	16	②TIP08W	14.8	STAWN1480TH	★	
												STAWK1480TG		★
											14.9	STAWN1490TH	★	
												STAWK1490TG		★
15.0 | 15.4	1.5	STAWSS1500S20	★	35.7	50.7	100.7	98	2.7	20	②TIP08W	15.0	STAWN1500TH	★	
												STAWK1500TG		★
	3	STAWSN1500S20	★	62.7	77.7	127.7	125	2.7	20	②TIP08W	15.1	STAWN1510TH	★	
												STAWK1510TG		★
	5	STAWMN1500S20	★	92.8	107.8	157.8	155	2.8	20	②TIP08W	15.2	STAWN1520TH	★	
												STAWK1520TG		★
	8	STAWLN1500S20	★	132.8	150.8	200.8	198	2.8	20	②TIP08W	15.3	STAWN1530TH	★	
												STAWK1530TG		★
											15.4	STAWN1540TH	★	
												STAWK1540TG		★

(Note) Please contact us for any geometry that is not in this catalog (e.g. different diameter and length).
The LF, LH, and LBX dimensions listed in the table above, are measured using the VP15TF insert.
When using the DP5010 insert, the LF, LH, and LBX dimensions will be slightly reduced.

INDEXABLE TYPE DRILL

STAW

Internal Coolant

DC (mm)	Hole Depth (l/d)	Holder Order Number	Stock	LBX	LH	OAL	LF	PL	DCON	Wrench	Insert DC (mm)	Insert Order Number	Stock VP15TF	Stock DP5010
15.5 – 16.4	1.5	STAWSS1600S20	★	36.8	52.8	102.8	100	2.8	20	TIP10W	15.5	STAWN1550T	★	
												STAWK1550TG		★
											15.6	STAWN1560T	★	
												STAWK1560TG		★
											15.7	STAWN1570T	★	
												STAWK1570TG		★
	3	STAWSN1600S20	★	62.9	82.9	132.9	130	2.9	20	TIP10W	15.8	STAWN1580T	★	
												STAWK1580TG		★
											15.9	STAWN1590T	★	
												STAWK1590TG		★
	5	STAWMN1600S20	★	92.9	117.9	167.9	165	2.9	20	TIP10W	16.0	STAWN1600T	★	
												STAWK1600TG		★
											16.1	STAWN1610T	★	
												STAWK1610TG		★
											16.2	STAWN1620T	★	
												STAWK1620TG		★
	8	STAWLN1600S20	★	140.9	160.9	210.9	208	2.9	20	TIP10W	16.3	STAWN1630T	★	
												STAWK1630TG		★
											16.4	STAWN1640T	★	
												STAWK1640TG		★
16.5 – 17.4	1.5	STAWSS1700S20	★	39.0	56.0	106.0	103	3.0	20	TIP10W	16.5	STAWN1650T	★	
												STAWK1650TG		★
											16.6	STAWN1660T	★	
												STAWK1660TG		★
											16.7	STAWN1670T	★	
												STAWK1670TG		★
	3	STAWSN1700S20	★	64.0	88.0	138.0	135	3.0	20	TIP10W	16.8	STAWN1680T	★	
												STAWK1680TG		★
											16.9	STAWN1690T	★	
												STAWK1690TG		★
	5	STAWMN1700S20	★	98.1	123.1	173.1	170	3.1	20	TIP10W	17.0	STAWN1700T	★	
												STAWK1700TG		★
											17.1	STAWN1710T	★	
												STAWK1710TG		★
											17.2	STAWN1720T	★	
												STAWK1720TG		★
	8	STAWLN1700S20	★	149.1	169.1	219.1	216	3.1	20	TIP10W	17.3	STAWN1730T	★	
												STAWK1730TG		★
											17.4	STAWN1740T	★	
												STAWK1740TG		★
17.5 – 18.4	1.5	STAWSS1800S20	★	40.2	58.2	108.2	105	3.2	20	TIP10W	17.5	STAWN1750T	★	
												STAWK1750TG		★
											17.6	STAWN1760T	★	
												STAWK1760TG		★
											17.7	STAWN1770T	★	
												STAWK1770TG		★
	3	STAWSN1800S20	★	67.2	93.2	143.2	140	3.2	20	TIP10W	17.8	STAWN1780T	★	
												STAWK1780TG		★
											17.9	STAWN1790T	★	
												STAWK1790TG		★
	5	STAWMN1800S20	★	103.3	128.3	178.3	175	3.3	20	TIP10W	18.0	STAWN1800T	★	
												STAWK1800TG		★
											18.1	STAWN1810T	★	
												STAWK1810TG		★
											18.2	STAWN1820T	★	
												STAWK1820TG		★
	8	STAWLN1800S20	★	157.3	177.3	227.3	224	3.3	20	TIP10W	18.3	STAWN1830T	★	
												STAWK1830TG		★
											18.4	STAWN1840T	★	
												STAWK1840TG		★

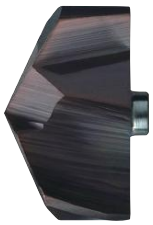
(Note) Please contact us for any geometry that is not in this catalog (e.g. different diameter and length).
The LF, LH, and LBX dimensions listed in the table above, are measured using the VP15TF insert.
When using the DP5010 insert, the LF, LH, and LBX dimensions will be slightly reduced.

★ : **Stocked in Japan**

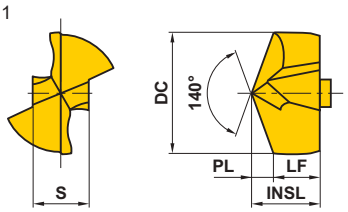
Memo

INDEXABLE TYPE DRILL
STAW

INSERTS
INCH STANDARD



Type 1



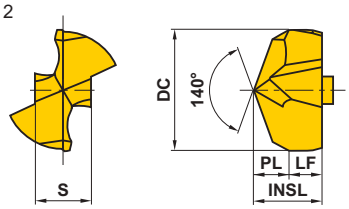
For General Use

Order Number	Stock		Dimensions (inch)			Type	Applicable Holder	
	VP15TF	DP5010	DC	LF	S		inch	metric
STAWN0025TH	●		.3906	.150	.181	1	STAW○○0026	STAW○○1000S16
STAW**N0026TH**	●		.4062	.150	.181	1	STAW○○0026	STAW○○1000S16
STAW**N0027TH**	●		.4219	.157	.190	1	STAW○○0027	STAW○○1050S16
STAW**N0028TH**	●		.4375	.165	.199	1	STAW○○0028	STAW○○1100S16
STAW**N0029TH**	●		.4531	.172	.208	1	STAW○○0030	STAW○○1150S16
STAW**N0030TH**	●		.4688	.172	.208	1	STAW○○0030	STAW○○1150S16
STAW**N0031TH**	●		.4844	.180	.217	1	STAW○○0031	STAW○○1200S16
STAW**N0032TH**	●		.5000	.187	.226	1	STAW○○0032	STAW○○1250S16
STAW**N0033TH**	●		.5156	.194	.235	1	STAW○○0034	STAW○○1300S16
STAW**N0034TH**	●		.5312	.194	.235	1	STAW○○0034	STAW○○1300S16
STAW**N0035TH**	●		.5469	.202	.244	1	STAW○○0035	STAW○○1350S16
STAW**N0036TH**	●		.5625	.209	.254	1	STAW○○0036	STAW○○1400S16
STAW**N0037TH**	●		.5781	.217	.263	1	STAW○○0037	STAW○○1450S16
STAW**N0038TH**	●		.5938	.224	.272	1	STAW○○0039	STAW○○1500S20
STAW**N0039TH**	●		.6094	.224	.272	1	STAW○○0039	STAW○○1500S20
STAW**N0040T**	●		.6250	.232	.281	1	STAW○○0041	STAW○○1600S20
STAW**N0041T**	●		.6406	.232	.281	1	STAW○○0041	STAW○○1600S20
STAW**N0042T**	●		.6563	.247	.299	1	STAW○○0044	STAW○○1700S20
STAW**N0043T**	●		.6719	.247	.299	1	STAW○○0044	STAW○○1700S20
STAW**N0044T**	●		.6875	.247	.299	1	STAW○○0044	STAW○○1700S20
STAW**N0045T**	●		.7031	.262	.317	1	STAW○○0046	STAW○○1800S20
STAW**N0046T**	●		.7188	.262	.317	1	STAW○○0046	STAW○○1800S20

● : USA Stock
<One insert in one case>



Type 2



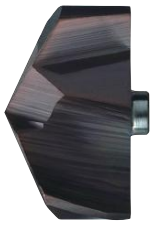
For Cast Iron

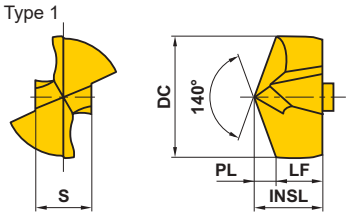
Order Number	Stock		Dimensions (inch)			Type	Applicable Holder	
	VP15TF	DP5010	DC	LF	S		inch	metric
STAWK0025TG		●	.3906	.129	.181	2	STAW○○0026	STAW○○1000S16
STAW**K0026TG**		●	.4062	.129	.181	2	STAW○○0026	STAW○○1000S16
STAW**K0027TG**		●	.4219	.137	.190	2	STAW○○0027	STAW○○1050S16
STAW**K0028TG**		●	.4375	.144	.199	2	STAW○○0028	STAW○○1100S16
STAW**K0029TG**		●	.4531	.153	.208	2	STAW○○0030	STAW○○1150S16
STAW**K0030TG**		●	.4688	.153	.208	2	STAW○○0030	STAW○○1150S16
STAW**K0031TG**		●	.4844	.159	.217	2	STAW○○0031	STAW○○1200S16
STAW**K0032TG**		●	.5000	.167	.226	2	STAW○○0032	STAW○○1250S16
STAW**K0033TG**		●	.5156	.174	.235	2	STAW○○0034	STAW○○1300S16
STAW**K0034TG**		●	.5312	.174	.235	2	STAW○○0034	STAW○○1300S16
STAW**K0035TG**		●	.5469	.182	.244	2	STAW○○0035	STAW○○1350S16
STAW**K0036TG**		●	.5625	.189	.254	2	STAW○○0036	STAW○○1400S16
STAW**K0037TG**		●	.5781	.196	.263	2	STAW○○0037	STAW○○1450S16
STAW**K0038TG**		●	.5938	.204	.272	2	STAW○○0039	STAW○○1500S20
STAW**K0039TG**		●	.6094	.204	.272	2	STAW○○0039	STAW○○1500S20
STAW**K0040TG**		●	.6250	.207	.281	2	STAW○○0041	STAW○○1600S20
STAW**K0041TG**		●	.6406	.207	.281	2	STAW○○0041	STAW○○1600S20
STAW**K0042TG**		●	.6563	.222	.299	2	STAW○○0044	STAW○○1700S20
STAW**K0043TG**		●	.6719	.222	.299	2	STAW○○0044	STAW○○1700S20
STAW**K0044TG**		●	.6875	.222	.299	2	STAW○○0044	STAW○○1700S20
STAW**K0045TG**		●	.7031	.237	.317	2	STAW○○0046	STAW○○1800S20
STAW**K0046TG**		●	.7188	.237	.317	2	STAW○○0046	STAW○○1800S20

INDEXABLE TYPE DRILL

STAW

INSERTS
METRIC STANDARD





For General Use

Order Number	Stock		Dimensions (mm)			Type	Applicable Holder	
	VP15TF	DP5010	DC	LF	S		inch	metric
STAWN1000TH	●		10.0	3.8	4.6	1	STAW○○0026	STAW○○1000S16
STAW**N1010TH**	●		10.1	3.8	4.6	1	STAW○○0026	STAW○○1000S16
STAW**N1020TH**	●		10.2	3.8	4.6	1	STAW○○0026	STAW○○1000S16
STAW**N1030TH**	●		10.3	3.8	4.6	1	STAW○○0026	STAW○○1000S16
STAW**N1040TH**	●		10.4	3.8	4.6	1	STAW○○0026	STAW○○1000S16
STAW**N1050TH**	●		10.5	4.0	4.8	1	STAW○○0027	STAW○○1050S16
STAW**N1060TH**	●		10.6	4.0	4.8	1	STAW○○0027	STAW○○1050S16
STAW**N1070TH**	●		10.7	4.0	4.8	1	STAW○○0027	STAW○○1050S16
STAW**N1080TH**	●		10.8	4.0	4.8	1	STAW○○0027	STAW○○1050S16
STAW**N1090TH**	●		10.9	4.0	4.8	1	STAW○○0027	STAW○○1050S16
STAW**N1100TH**	●		11.0	4.2	5.1	1	STAW○○0028	STAW○○1100S16
STAW**N1110TH**	●		11.1	4.2	5.1	1	STAW○○0028	STAW○○1100S16
STAW**N1120TH**	●		11.2	4.2	5.1	1	STAW○○0028	STAW○○1100S16
STAW**N1130TH**	●		11.3	4.2	5.1	1	STAW○○0028	STAW○○1100S16
STAW**N1140TH**	●		11.4	4.2	5.1	1	STAW○○0028	STAW○○1100S16
STAW**N1150TH**	●		11.5	4.4	5.3	1	STAW○○0030	STAW○○1150S16
STAW**N1160TH**	●		11.6	4.4	5.3	1	STAW○○0030	STAW○○1150S16
STAW**N1170TH**	●		11.7	4.4	5.3	1	STAW○○0030	STAW○○1150S16
STAW**N1180TH**	●		11.8	4.4	5.3	1	STAW○○0030	STAW○○1150S16
STAW**N1190TH**	●		11.9	4.4	5.3	1	STAW○○0030	STAW○○1150S16
STAW**N1200TH**	●		12.0	4.6	5.5	1	STAW○○0031	STAW○○1200S16
STAW**N1210TH**	●		12.1	4.6	5.5	1	STAW○○0031	STAW○○1200S16
STAW**N1220TH**	●		12.2	4.6	5.5	1	STAW○○0031	STAW○○1200S16
STAW**N1230TH**	●		12.3	4.6	5.5	1	STAW○○0031	STAW○○1200S16
STAW**N1240TH**	●		12.4	4.6	5.5	1	STAW○○0031	STAW○○1200S16
STAW**N1250TH**	●		12.5	4.8	5.8	1	STAW○○0032	STAW○○1250S16
STAW**N1260TH**	●		12.6	4.8	5.8	1	STAW○○0032	STAW○○1250S16
STAW**N1270TH**	●		12.7	4.8	5.8	1	STAW○○0032	STAW○○1250S16
STAW**N1280TH**	●		12.8	4.8	5.8	1	STAW○○0032	STAW○○1250S16
STAW**N1290TH**	●		12.9	4.8	5.8	1	STAW○○0032	STAW○○1250S16
STAW**N1300TH**	●		13.0	4.9	6.0	1	STAW○○0034	STAW○○1300S16
STAW**N1310TH**	●		13.1	4.9	6.0	1	STAW○○0034	STAW○○1300S16
STAW**N1320TH**	●		13.2	4.9	6.0	1	STAW○○0034	STAW○○1300S16
STAW**N1330TH**	●		13.3	4.9	6.0	1	STAW○○0034	STAW○○1300S16
STAW**N1340TH**	●		13.4	4.9	6.0	1	STAW○○0034	STAW○○1300S16
STAW**N1350TH**	●		13.5	5.1	6.2	1	STAW○○0035	STAW○○1350S16
STAW**N1360TH**	●		13.6	5.1	6.2	1	STAW○○0035	STAW○○1350S16
STAW**N1370TH**	●		13.7	5.1	6.2	1	STAW○○0035	STAW○○1350S16

● : USA Stock
<One insert in one case>

Order Number	Stock		Dimensions (mm)			Type	Applicable Holder	
	VP15TF	DP5010	DC	LF	S		inch	metric
STAWN1380TH	●		13.8	5.1	6.2	1	STAW○○0035	STAW○○1350S16
STAW**N1390TH**	●		13.9	5.1	6.2	1	STAW○○0035	STAW○○1350S16
STAW**N1400TH**	●		14.0	5.3	6.4	1	STAW○○0036	STAW○○1400S16
STAW**N1410TH**	●		14.1	5.3	6.4	1	STAW○○0036	STAW○○1400S16
STAW**N1420TH**	●		14.2	5.3	6.4	1	STAW○○0036	STAW○○1400S16
STAW**N1430TH**	●		14.3	5.3	6.4	1	STAW○○0036	STAW○○1400S16
STAW**N1440TH**	●		14.4	5.3	6.4	1	STAW○○0036	STAW○○1400S16
STAW**N1450TH**	●		14.5	5.5	6.7	1	STAW○○0037	STAW○○1450S16
STAW**N1460TH**	●		14.6	5.5	6.7	1	STAW○○0037	STAW○○1450S16
STAW**N1470TH**	●		14.7	5.5	6.7	1	STAW○○0037	STAW○○1450S16
STAW**N1480TH**	●		14.8	5.5	6.7	1	STAW○○0037	STAW○○1450S16
STAW**N1490TH**	●		14.9	5.5	6.7	1	STAW○○0037	STAW○○1450S16
STAW**N1500TH**	●		15.0	5.7	6.9	1	STAW○○0039	STAW○○1500S16
STAW**N1510TH**	●		15.1	5.7	6.9	1	STAW○○0039	STAW○○1500S16
STAW**N1520TH**	●		15.2	5.7	6.9	1	STAW○○0039	STAW○○1500S16
STAW**N1530TH**	●		15.3	5.7	6.9	1	STAW○○0039	STAW○○1500S16
STAW**N1540TH**	●		15.4	5.7	6.9	1	STAW○○0039	STAW○○1500S16
STAW**N1550T**	●		15.5	5.9	7.1	1	STAW○○0041	STAW○○1600S16
STAW**N1560T**	●		15.6	5.9	7.1	1	STAW○○0041	STAW○○1600S16
STAW**N1570T**	●		15.7	5.9	7.1	1	STAW○○0041	STAW○○1600S16
STAW**N1580T**	●		15.8	5.9	7.1	1	STAW○○0041	STAW○○1600S16
STAW**N1590T**	●		15.9	5.9	7.1	1	STAW○○0041	STAW○○1600S16
STAW**N1600T**	●		16.0	5.9	7.1	1	STAW○○0041	STAW○○1600S16
STAW**N1610T**	●		16.1	5.9	7.1	1	STAW○○0041	STAW○○1600S16
STAW**N1620T**	●		16.2	5.9	7.1	1	STAW○○0041	STAW○○1600S16
STAW**N1630T**	●		16.3	5.9	7.1	1	STAW○○0041	STAW○○1600S16
STAW**N1640T**	●		16.4	5.9	7.1	1	STAW○○0041	STAW○○1600S16
STAW**N1650T**	●		16.5	6.3	7.6	1	STAW○○0044	STAW○○1700S16
STAW**N1660T**	●		16.6	6.3	7.6	1	STAW○○0044	STAW○○1700S16
STAW**N1670T**	●		16.7	6.3	7.6	1	STAW○○0044	STAW○○1700S16
STAW**N1680T**	●		16.8	6.3	7.6	1	STAW○○0044	STAW○○1700S16
STAW**N1690T**	●		16.9	6.3	7.6	1	STAW○○0044	STAW○○1700S16
STAW**N1700T**	●		17.0	6.3	7.6	1	STAW○○0044	STAW○○1700S16
STAW**N1710T**	●		17.1	6.3	7.6	1	STAW○○0044	STAW○○1700S16
STAW**N1720T**	●		17.2	6.3	7.6	1	STAW○○0044	STAW○○1700S16
STAW**N1730T**	●		17.3	6.3	7.6	1	STAW○○0044	STAW○○1700S16
STAW**N1740T**	●		17.4	6.3	7.6	1	STAW○○0044	STAW○○1700S16
STAW**N1750T**	●		17.5	6.7	8.1	1	STAW○○0046	STAW○○1800S16
STAW**N1760T**	●		17.6	6.7	8.1	1	STAW○○0046	STAW○○1800S16
STAW**N1770T**	●		17.7	6.7	8.1	1	STAW○○0046	STAW○○1800S16
STAW**N1780T**	●		17.8	6.7	8.1	1	STAW○○0046	STAW○○1800S16
STAW**N1790T**	●		17.9	6.7	8.1	1	STAW○○0046	STAW○○1800S16
STAW**N1800T**	●		18.0	6.7	8.1	1	STAW○○0046	STAW○○1800S16
STAW**N1810T**	●		18.1	6.7	8.1	1	STAW○○0046	STAW○○1800S16
STAW**N1820T**	●		18.2	6.7	8.1	1	STAW○○0046	STAW○○1800S16
STAW**N1830T**	●		18.3	6.7	8.1	1	STAW○○0046	STAW○○1800S16
STAW**N1840T**	●		18.4	6.7	8.1	1	STAW○○0046	STAW○○1800S16

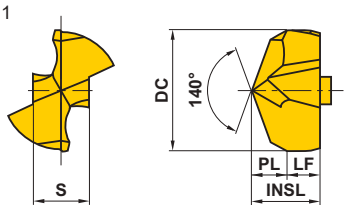
INDEXABLE TYPE DRILL

STAW

INSERTS
METRIC STANDARD



Type 1



For Cast Iron

Order Number	Stock		Dimensions (mm)			Type	Applicable Holder	
	VP15TF	DP5010	DC	LF	S		inch	metric
STAWK1000TG		★	10.0	3.3	4.6	1	STAW○○0026	STAW○○1000S16
STAWK1010TG		★	10.1	3.3	4.6	1	STAW○○0026	STAW○○1000S16
STAWK1020TG		★	10.2	3.3	4.6	1	STAW○○0026	STAW○○1000S16
STAWK1030TG		★	10.3	3.3	4.6	1	STAW○○0026	STAW○○1000S16
STAWK1040TG		★	10.4	3.3	4.6	1	STAW○○0026	STAW○○1000S16
STAWK1050TG		★	10.5	3.5	4.8	1	STAW○○0027	STAW○○1050S16
STAWK1060TG		★	10.6	3.5	4.8	1	STAW○○0027	STAW○○1050S16
STAWK1070TG		★	10.7	3.5	4.8	1	STAW○○0027	STAW○○1050S16
STAWK1080TG		★	10.8	3.5	4.8	1	STAW○○0027	STAW○○1050S16
STAWK1090TG		★	10.9	3.5	4.8	1	STAW○○0027	STAW○○1050S16
STAWK1100TG		★	11.0	3.7	5.1	1	STAW○○0028	STAW○○1100S16
STAWK1110TG		★	11.1	3.7	5.1	1	STAW○○0028	STAW○○1100S16
STAWK1120TG		★	11.2	3.7	5.1	1	STAW○○0028	STAW○○1100S16
STAWK1130TG		★	11.3	3.7	5.1	1	STAW○○0028	STAW○○1100S16
STAWK1140TG		★	11.4	3.7	5.1	1	STAW○○0028	STAW○○1100S16
STAWK1150TG		★	11.5	3.9	5.3	1	STAW○○0030	STAW○○1150S16
STAWK1160TG		★	11.6	3.9	5.3	1	STAW○○0030	STAW○○1150S16
STAWK1170TG		★	11.7	3.9	5.3	1	STAW○○0030	STAW○○1150S16
STAWK1180TG		★	11.8	3.9	5.3	1	STAW○○0030	STAW○○1150S16
STAWK1190TG		★	11.9	3.9	5.3	1	STAW○○0030	STAW○○1150S16
STAWK1200TG		★	12.0	4.1	5.5	1	STAW○○0031	STAW○○1200S16
STAWK1210TG		★	12.1	4.1	5.5	1	STAW○○0031	STAW○○1200S16
STAWK1220TG		★	12.2	4.1	5.5	1	STAW○○0031	STAW○○1200S16
STAWK1230TG		★	12.3	4.1	5.5	1	STAW○○0031	STAW○○1200S16
STAWK1240TG		★	12.4	4.1	5.5	1	STAW○○0031	STAW○○1200S16
STAWK1250TG		★	12.5	4.2	5.8	1	STAW○○0032	STAW○○1250S16
STAWK1260TG		★	12.6	4.2	5.8	1	STAW○○0032	STAW○○1250S16
STAWK1270TG		★	12.7	4.2	5.8	1	STAW○○0032	STAW○○1250S16
STAWK1280TG		★	12.8	4.2	5.8	1	STAW○○0032	STAW○○1250S16
STAWK1290TG		★	12.9	4.2	5.8	1	STAW○○0032	STAW○○1250S16
STAWK1300TG		★	13.0	4.4	6.0	1	STAW○○0034	STAW○○1300S16
STAWK1310TG		★	13.1	4.4	6.0	1	STAW○○0034	STAW○○1300S16
STAWK1320TG		★	13.2	4.4	6.0	1	STAW○○0034	STAW○○1300S16
STAWK1330TG		★	13.3	4.4	6.0	1	STAW○○0034	STAW○○1300S16
STAWK1340TG		★	13.4	4.4	6.0	1	STAW○○0034	STAW○○1300S16
STAWK1350TG		★	13.5	4.6	6.2	1	STAW○○0035	STAW○○1350S16
STAWK1360TG		★	13.6	4.6	6.2	1	STAW○○0035	STAW○○1350S16
STAWK1370TG		★	13.7	4.6	6.2	1	STAW○○0035	STAW○○1350S16

★ : Stocked in Japan
<One insert in one case>

Order Number	Stock		Dimensions (mm)			Type	Applicable Holder	
	VP15TF	DP5010	DC	LF	S		inch	metric
STAWK1380TG		★	13.8	4.6	6.2	1	STAW○○0035	STAW○○1350S16
STAW**K1390TG**		★	13.9	4.6	6.2	1	STAW○○0035	STAW○○1350S16
STAW**K1400TG**		★	14.0	4.8	6.4	1	STAW○○0036	STAW○○1400S16
STAW**K1410TG**		★	14.1	4.8	6.4	1	STAW○○0036	STAW○○1400S16
STAW**K1420TG**		★	14.2	4.8	6.4	1	STAW○○0036	STAW○○1400S16
STAW**K1430TG**		★	14.3	4.8	6.4	1	STAW○○0036	STAW○○1400S16
STAW**K1440TG**		★	14.4	4.8	6.4	1	STAW○○0036	STAW○○1400S16
STAW**K1450TG**		★	14.5	5.0	6.7	1	STAW○○0037	STAW○○1450S16
STAW**K1460TG**		★	14.6	5.0	6.7	1	STAW○○0037	STAW○○1450S16
STAW**K1470TG**		★	14.7	5.0	6.7	1	STAW○○0037	STAW○○1450S16
STAW**K1480TG**		★	14.8	5.0	6.7	1	STAW○○0037	STAW○○1450S16
STAW**K1490TG**		★	14.9	5.0	6.7	1	STAW○○0037	STAW○○1450S16
STAW**K1500TG**		★	15.0	5.2	6.9	1	STAW○○0039	STAW○○1500S16
STAW**K1510TG**		★	15.1	5.2	6.9	1	STAW○○0039	STAW○○1500S16
STAW**K1520TG**		★	15.2	5.2	6.9	1	STAW○○0039	STAW○○1500S16
STAW**K1530TG**		★	15.3	5.2	6.9	1	STAW○○0039	STAW○○1500S16
STAW**K1540TG**		★	15.4	5.2	6.9	1	STAW○○0039	STAW○○1500S16
STAW**K1550TG**		★	15.5	5.3	7.1	1	STAW○○0041	STAW○○1600S16
STAW**K1560TG**		★	15.6	5.3	7.1	1	STAW○○0041	STAW○○1600S16
STAW**K1570TG**		★	15.7	5.3	7.1	1	STAW○○0041	STAW○○1600S16
STAW**K1580TG**		★	15.8	5.3	7.1	1	STAW○○0041	STAW○○1600S16
STAW**K1590TG**		★	15.9	5.3	7.1	1	STAW○○0041	STAW○○1600S16
STAW**K1600TG**		★	16.0	5.3	7.1	1	STAW○○0041	STAW○○1600S16
STAW**K1610TG**		★	16.1	5.3	7.1	1	STAW○○0041	STAW○○1600S16
STAW**K1620TG**		★	16.2	5.3	7.1	1	STAW○○0041	STAW○○1600S16
STAW**K1630TG**		★	16.3	5.3	7.1	1	STAW○○0041	STAW○○1600S16
STAW**K1640TG**		★	16.4	5.3	7.1	1	STAW○○0041	STAW○○1600S16
STAW**K1650TG**		★	16.5	5.7	7.6	1	STAW○○0044	STAW○○1700S16
STAW**K1660TG**		★	16.6	5.7	7.6	1	STAW○○0044	STAW○○1700S16
STAW**K1670TG**		★	16.7	5.7	7.6	1	STAW○○0044	STAW○○1700S16
STAW**K1680TG**		★	16.8	5.7	7.6	1	STAW○○0044	STAW○○1700S16
STAW**K1690TG**		★	16.9	5.7	7.6	1	STAW○○0044	STAW○○1700S16
STAW**K1700TG**		★	17.0	5.7	7.6	1	STAW○○0044	STAW○○1700S16
STAW**K1710TG**		★	17.1	5.7	7.6	1	STAW○○0044	STAW○○1700S16
STAW**K1720TG**		★	17.2	5.7	7.6	1	STAW○○0044	STAW○○1700S16
STAW**K1730TG**		★	17.3	5.7	7.6	1	STAW○○0044	STAW○○1700S16
STAW**K1740TG**		★	17.4	5.7	7.6	1	STAW○○0044	STAW○○1700S16
STAW**K1750TG**		★	17.5	6.0	8.1	1	STAW○○0046	STAW○○1800S16
STAW**K1760TG**		★	17.6	6.0	8.1	1	STAW○○0046	STAW○○1800S16
STAW**K1770TG**		★	17.7	6.0	8.1	1	STAW○○0046	STAW○○1800S16
STAW**K1780TG**		★	17.8	6.0	8.1	1	STAW○○0046	STAW○○1800S16
STAW**K1790TG**		★	17.9	6.0	8.1	1	STAW○○0046	STAW○○1800S16
STAW**K1800TG**		★	18.0	6.0	8.1	1	STAW○○0046	STAW○○1800S16
STAW**K1810TG**		★	18.1	6.0	8.1	1	STAW○○0046	STAW○○1800S16
STAW**K1820TG**		★	18.2	6.0	8.1	1	STAW○○0046	STAW○○1800S16
STAW**K1830TG**		★	18.3	6.0	8.1	1	STAW○○0046	STAW○○1800S16
STAW**K1840TG**		★	18.4	6.0	8.1	1	STAW○○0046	STAW○○1800S16

INDEXABLE TYPE DRILL

STAW

■ HONE WIDTH

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

(Insert Order Number)

S T A W N 1 0 0 0 T ○

- S T A W: TAW Product Name
- N: N : General Use / K : Cuting tooth form for cast iron
- 1 0 0 0: Insert Diameter
- T: Honing Symbol
- ○: Honing Type

(Honing Standard)

Honing Type	Hone Width (inch)
F	0
G	.0008 — .0020
H(Standard)	.0020 — .0039
-	.0039 — .0059
K	.0059 — .0079
S	.0079 — .0098
M	.0098 — .0118

RECOMMENDED CUTTING CONDITIONS

Work Material		DC	ϕ.3906"—ϕ.5000" ϕ10.0—ϕ12.9mm		ϕ.5156"—ϕ.5469" ϕ13.0—ϕ13.9mm		ϕ.5625"—ϕ.6094" ϕ14.0—ϕ15.4mm		ϕ.62506"—ϕ.7188" ϕ15.5—ϕ18.4mm	
		Conditions / Hardness	Cutting Speed (SFM)	Feed (IPR)	Cutting Speed (SFM)	Feed (IPR)	Cutting Speed (SFM)	Feed (IPR)	Cutting Speed (SFM)	Feed (IPR)
P	Mild Steel	≤180HB	260 (195—330)	.008 (.006—.010)	295 (230—360)	.010 (.008—.012)	330 (260—390)	.012 (.010—.014)	330 (260—390)	.014 (.010—.016)
P	Carbon Steel Alloy Steel	180—280HB	260 (195—330)	.008 (.006—.010)	295 (230—360)	.010 (.008—.012)	330 (260—390)	.012 (.010—.014)	330 (260—390)	.014 (.010—.016)
P	Carbon Steel Alloy Steel	280—350HB	230 (195—295)	.008 (.006—.010)	260 (195—330)	.010 (.008—.012)	295 (230—360)	.010 (.008—.012)	295 (230—360)	.012 (.008—.014)
M	Stainless Steel	≤200HB	130 (100—165)	.005 (.004—.006)	165 (130—195)	.006 (.005—.007)	195 (165—230)	.007 (.006—.008)	195 (165—230)	.006 (.005—.008)
K	Gray Cast Iron	Tensile Strength ≤350MPa	260 (195—330)	.008 (.006—.010)	295 (230—360)	.010 (.008—.012)	330 (260—390)	.012 (.010—.014)	390 (260—460)	.018 (.014—.022)
K	Ductile Cast Iron	Tensile Strength ≤450MPa	230 (195—295)	.008 (.006—.010)	260 (195—330)	.010 (.008—.012)	295 (230—360)	.012 (.010—.014)	330 (260—390)	.014 (.010—.016)

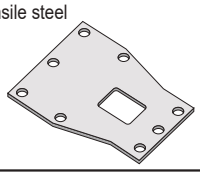
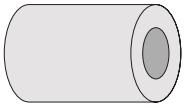
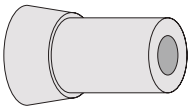
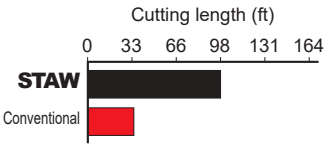
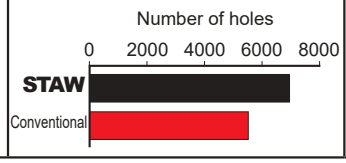
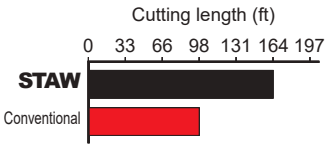
(Note 1) When using a drill for 1.5DC depth of hole, it is possible to increase the feed rate by approx. 20%.
(Note 2) When using a drill for 8DC depth of hole, please decrease the cutting speed by approx. 20%.
(Note 3) When using a drill for 8DC depth of hole, it is recommended to make a pilot hole of the same size.
(Note 4) For stainless steel, please use internal coolant. (Mist & MQL are not recommended).

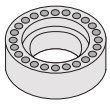
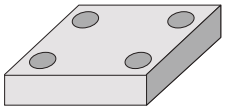
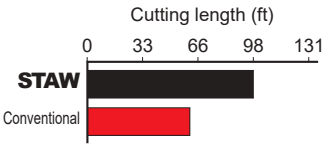
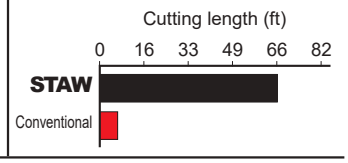
SPARE PARTS

Applicable Holder			Pack Order Number (Internal screw & stopper)		
	inch	mm		Internal Screw	Stopper
STAWSS STAWSN STAWMN STAWLN	0026	1000S16	WS203107TPS-35LH	WS203107TPS	WS35LH
	0027	1050S16	WS203107TPS-35LH	WS203107TPS	WS35LH
	0028	1100S16	WS203108TPS-35LH	WS203108TPS	WS35LH
	0030	1150S16	WS203108TPS-35LH	WS203108TPS	WS35LH
	0031	1200S16	WS203108TPS-35LH	WS203108TPS	WS35LH
	0032	1250S16	WS203108TPS-35LH	WS203108TPS	WS35LH
	0034	1300S16	WS253909TPS-45LH	WS253909TPS	WS45LH
	0035	1350S16	WS253909TPS-45LH	WS253909TPS	WS45LH
	0036	1400S16	WS253909TPS-45LH	WS253909TPS	WS45LH
	0037	1450S16	WS253909TPS-45LH	WS253909TPS	WS45LH
	0039	1500S20	WS253909TPS-45LH	WS253909TPS	WS45LH
	0041	1600S20	WS304912TPS-55LH	WS304912TPS	WS55LH
	0044	1700S20	WS304912TPS-55LH	WS304912TPS	WS55LH
	0046	1800S20	WS304912TPS-55LH	WS304912TPS	WS55LH

★ Clamp Torque (lbf-in) : WS203107TPS=8.9, WS203108TPS=8.9, WS253909TPS=17.7, WS304912TPS=22.1
(Note) The parts included in the package are internal screw, stopper and operation manual. Please replace the parts in accordance with the operation manual.

APPLICATION EXAMPLES

Holder			STAWMN1000S16	STAWSS1150S16	STAWMN1350S16
Insert (Grade)			STAWN1000TH (VP15TF)	STAWN1150TH (VP15TF)	STAWN1350TH (VP15TF)
Work piece			High tensile steel 	Bearing steel 	Carbon steel 
Component			Arm parts	Sleeve	Shaft
Cutting Conditions	Cutting Speed	(SFM)	330	200	310
	Feed	(IPR)	.010	.007	.010
	Revolution	(RPM)	3200	1685	2225
	Penetration Rate	(inch/min)	32	11.8	22.3
Cutting mode			W.S.O. (Internal coolant)	W.S.O. (Internal coolant)	W.S.O. (Internal coolant)
Machine			Machining center	Lathe	Lathe
Result					

Holder			STAWMN1100S16	STAWSN1450S16
Insert (Grade)			STAWN1100TH (VP15TF)	STAWK1450TG(DP5010)
Work piece			Alloy steel 	Cast iron (No35B) 
Component			Machine parts	Machine plate
Cutting Conditions	Cutting Speed	(SFM)	230	590
	Feed	(IPR)	.010	.016
	Revolution	(RPM)	2030	3945
	Penetration Rate	(inch/min)	20.3	63.12
Cutting mode			W.S.O. (Internal coolant)	W.S.O. (Internal coolant)
Machine			Machining center	Machining center
Result				

TAW INDEXABLE TYPE DRILL
WSTAR INSERT TYPE DRILL

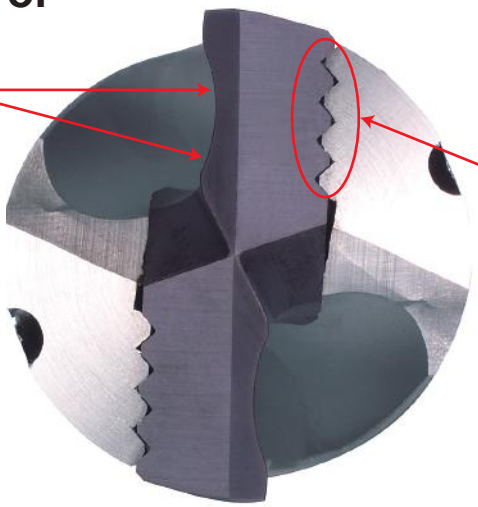
Designed for extreme sharpness and accuracy

Wavy type cutting edge for superior chip control

Wavy cutting edge

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





Cutting edge shape

Serrated insert clamping geometry

Unique serration geometry

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

Insert grade

VP15TF Insert grade for general purpose

Suitable for machining a wide range of work piece materials from mild and alloy steels through stainless steels and cast iron.



DP5010 Insert grade for cast iron

A new PVD coated grade for cast iron. Cemented carbide substrate coated using a proprietary method of crystal control technology.



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.



Chamfer Ring

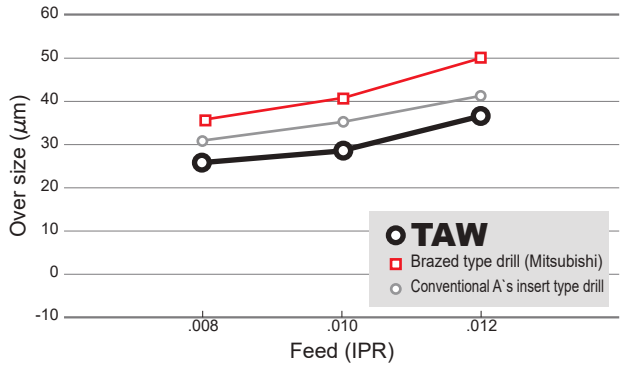
Drilling and chamfering can be done simultaneously. Chamfering position can be changed according to the machining depth. Maximum chamfer width: 4mm (.157")



Cutting Performance

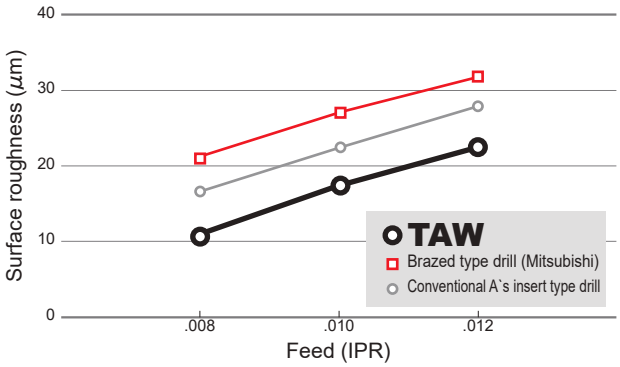
Steel Drilling

Over Size



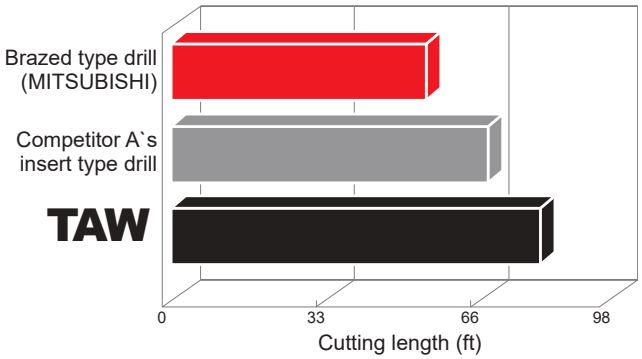
<Cutting conditions>
Work piece : AISI 1050(150—180HB)
Drill diameter : ø20(L/D=5)
Cutting speed : 260 SFM
Coolant : Emulsion 10%
Pressure : 75 PSI(Internal coolant)

Surface Roughness



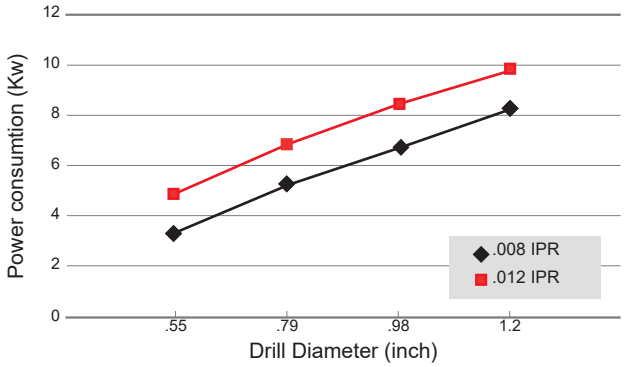
<Cutting conditions>
Work piece : AISI 1050(150—180HB)
Drill diameter : ø20(L/D=5)
Cutting speed : 260 SFM
Coolant : Emulsion 10%
Pressure : 75 PSI(Internal coolant)

Insert Life



<Cutting conditions>
Work piece : AISI 1050(150—180HB)
Drill diameter : ø20(L/D=5)
Cutting speed : 330 SFM
Feed : .010 IPR
Coolant : Emulsion 10%
Pressure : 75 PSI(Internal coolant)

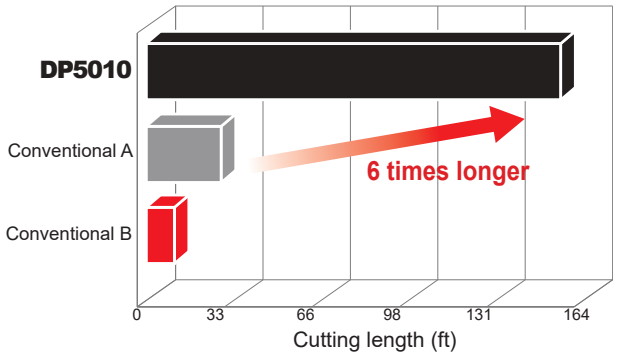
Power Consumption



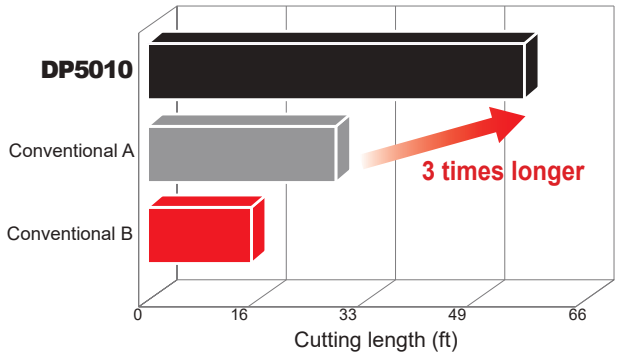
<Cutting conditions>
Work piece : AISI 1050(150—180HB)
Cutting speed : 260 SFM
Coolant : Emulsion 10%
Pressure : 75 PSI(Internal coolant)

Cast iron/Ductile cast iron Drilling

Insert Life



<Cutting conditions>
Work piece : AISI No35 B
Drill diameter : ϕ18(L/D=3)
Cutting speed : 460 SFM
Feed : .016 IPR
Coolant : Emulsion 10%
Pressure : 75 PSI(Internal coolant)



<Cutting conditions>
Work piece : AISI 65-45-12
Drill diameter : ϕ18(L/D=3)
Cutting speed : 330 SFM
Feed : .012 IPR
Cutting mode: Emulsion 10%
Pressure : 75 PSI(Internal coolant)

INDEXABLE TYPE DRILL

TAW

- Wavy cutting edge design for good chip control.
- Serration geometry for accurate insert location.

P M K N S H

.5625≤DC≤.6875	.7031≤DC≤1.1719	DC=1.1875
−.00063 −.00134	−.00079 −.00161	−.00098 −.00197

(inch)

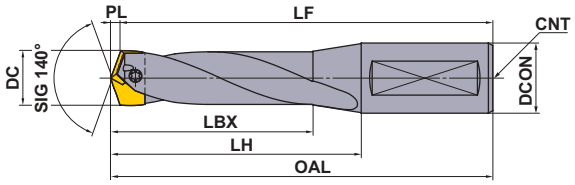
INCH STANDARD

L/D=3

Internal Coolant







Holder		Dimensions (inch)							*	① ②			DC (inch)	Insert	
Order Number	Stock	LBX	LH	OAL	LF	PL	DCON	CNT	Insert Screw	Wrench	Plate	Anti-seize Lubricant		Order Number	Stock VP15TF
TAWSNH0036	●	2.110	2.740	4.615	4.513	.102	.625	1/8-27	WS254012T	①TKY08W	WPT4405	MK1KS	.5625	**TAWNH0036T**	●
TAWSNH**0037**	●	2.231	3.058	4.933	4.828	.105	.625	1/8-27	WS254013T	①TKY08W	WPT4405	MK1KS	.5781	**TAWNH0037T**	●
TAWSNH**0039**	●	2.234	3.061	5.061	4.953	.108	.750	1/8-27	WS254013T	①TKY08W	WPT4405	MK1KS	.5938	**TAWNH0038T**	●
													.6094	**TAWNH0039T**	●
TAWSN0041	●	2.397	3.264	5.264	5.150	.114	.750	1/8-27	WS254014T	①TKY08W	WPT4405	MK1KS	.6250	**TAWNH0040T**	●
													.6406	**TAWNH0041T**	●
TAWSN**0044**	●	2.521	3.465	5.465	5.346	.119	.750	1/8-27	WS254015T	①TKY08W	WPT4405	MK1KS	.6563	**TAWNH0042T**	●
													.6719	**TAWNH0043T**	●
													.6875	**TAWNH0044T**	●
TAWSN**0045**	●	2.687	3.671	5.671	5.543	.128	.750	1/8-27	WS254016T	①TKY08W	WPT4405	MK1KS	.7031	**TAWNH0045T**	●
TAWSN**0046**	●	2.690	3.674	5.924	5.793	.131	1.000	1/8-27	WS254016T	①TKY08W	WPT4405	MK1KS	.7188	**TAWNH0046T**	●
TAWSN**0049**	●	2.811	4.032	6.282	6.148	.134	1.000	1/8-27	WS304517T	②TKY10T	WPT4405	MK1KS	.7344	**TAWNH0047T**	●
													.7500	**TAWNH0048T**	●
													.7656	**TAWNH0049T**	●
TAWSN**0051**	●	2.977	4.040	6.290	6.148	.142	1.000	1/8-27	WS304518T	②TKY10T	WPT4405	MK1KS	.7813	**TAWNH0050T**	●
													.7969	**TAWNH0051T**	●
TAWSN**0054**	●	3.101	4.046	6.296	6.148	.148	1.000	1/8-27	WS304518T	②TKY10T	WPT4405	MK1KS	.8125	**TAWNH0052T**	●
													.8281	**TAWNH0053T**	●
													.8438	**TAWNH0054T**	●
TAWSN**0056**	●	3.266	4.250	6.500	6.344	.156	1.000	1/8-27	WS355520T	②TKY15T	WPT4405	MK1KS	.8594	**TAWNH0055T**	●
													.8750	**TAWNH0056T**	●

* Clamp Torque (lbf-in) : WS254012T=18, WS254013T=18, WS254014T=18, WS254015T=18, WS254016T=18, WS304517T=31, WS304518T=31, WS355520T=49

(Note 1) Please contact us for any geometry that is not in this catalog (e.g. different diameter and length).
The LF, LH, and LBX dimensions listed in the table above, are measured using the VP15TF insert.
When using the DP5010 insert, the LF, LH and LBX dimensions will be slightly reduced.

● : **USA Stock**

Holder		Dimensions (inch)							*	① ②			DC (inch)	Insert	
Order Number	Stock	LBX	LH	OAL	LF	PL	DCON	CNT	Insert Screw	Wrench	Plate	Anti-seize Lubricant		Order Number	Stock VP15TF
TAWSN0059	●	3.390	4.256	6.506	6.344	.162	1.000	1/8-27	WS355521T	TKY15T	WPT4405	MK1KS	.8906	**TAWNH0057T**	●
													.9063	**TAWNH0058T**	●
													.9219	**TAWNH0059T**	●
TAWSN**0061**	●	3.557	4.502	6.877	6.706	.171	1.250	1/4-18	WS355521T	TKY15T	WPT4405	MK1KS	.9375	**TAWNH0060T**	●
													.9531	**TAWNH0061T**	●
TAWSN**0100**	●	3.641	4.507	6.882	6.706	.176	1.250	1/4-18	WS406023T	TKY25T	WPT4405	MK1KS	.9688	**TAWNH0062T**	●
													.9844	**TAWNH0063T**	●
													1.0000	**TAWNH0100T**	●
TAWSN**0102**	●	3.807	4.713	7.088	6.903	.185	1.250	1/4-18	WS406024T	TKY25T	WPT4405	MK1KS	1.0156	**TAWNH0101T**	●
													1.0313	**TAWNH0102T**	●
TAWSN**0105**	●	3.892	4.719	7.094	6.903	.191	1.250	1/4-18	WS406024T	TKY25T	WPT4405	MK1KS	1.0469	**TAWNH0103T**	●
													1.0625	**TAWNH0104T**	●
													1.0781	**TAWNH0105T**	●
TAWSN**0107**	●	4.018	4.923	7.298	7.099	.199	1.250	1/4-18	WS508026T	TKY27T	WPT4405	MK1KS	1.0938	**TAWNH0106T**	●
													1.1094	**TAWNH0107T**	●
TAWSN**0110**	●	4.142	5.126	7.501	7.296	.205	1.250	1/4-18	WS508027T	TKY27T	WPT4405	MK1KS	1.1250	**TAWNH0108T**	●
													1.1406	**TAWNH0109T**	●
													1.1563	**TAWNH0110T**	●
TAWSN**0112**	●	4.307	5.134	7.509	7.296	.213	1.250	1/4-18	WS508027T	TKY27T	WPT4405	MK1KS	1.1719	**TAWNH0111T**	●
													1.1875	**TAWNH0112T**	●

* Clamp Torque (lbf-in) : WS355521T=49, WS406023T=75, WS406024T=75, WS508026T=110, WS508027T=110

(Note 1) Please contact us for any geometry that is not in this catalog (e.g. different diameter and length).
The LF, LH and LBX dimensions listed in the table above, are measured using the VP15TF insert.
When using the DP5010 insert, the LF, LH and LBX dimensions will be slightly reduced.

INDEXABLE TYPE DRILL

TAW

P M K N S H

- Wavy cutting edge design for good chip control.
- Serration geometry for accurate insert location.



.5625≤DC≤.6875	.7031≤DC≤1.1719	DC=1.1875
−.00063 −.00134	−.00079 −.00161	−.00098 −.00197

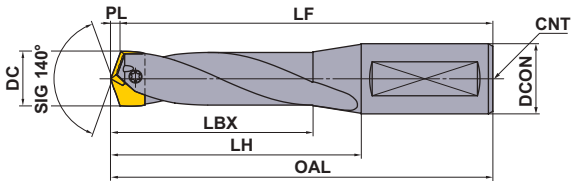
(inch)

INCH STANDARD

L/D=5

Internal Coolant





Holder		Dimensions (inch)							*	① ②			DC (inch)	Insert	
Order Number	Stock	LBX	LH	OAL	LF	PL	DCON	CNT	Insert Screw	Wrench	Plate	Anti-seize Lubricant		Order Number	Stock VP15TF
TAWMNH0036	▲	3.252	3.921	5.796	5.694	.102	.625	1/8-27	WS254012T	①TKY08W	WPT4405	MK1KS	.5625	**TAWNH0036T**	●
TAWMNH**0037**	▲	3.451	4.239	6.114	6.009	.105	.625	1/8-27	WS254013T	①TKY08W	WPT4405	MK1KS	.5781	**TAWNH0037T**	●
TAWMNH**0039**	▲	3.454	4.242	6.242	6.134	.108	.750	1/8-27	WS254013T	①TKY08W	WPT4405	MK1KS	.5938	**TAWNH0038T**	●
													.6094	**TAWNH0039T**	●
TAWMN0041	▲	3.697	4.642	6.642	6.528	.114	.750	1/8-27	WS254014T	①TKY08W	WPT4405	MK1KS	.6250	**TAWNH0040T**	●
													.6406	**TAWNH0041T**	●
TAWMN**0044**	▲	3.899	4.843	6.843	6.724	.119	.750	1/8-27	WS254015T	①TKY08W	WPT4405	MK1KS	.6563	**TAWNH0042T**	●
													.6719	**TAWNH0043T**	●
													.6875	**TAWNH0044T**	●
TAWMN**0045**	▲	4.144	5.049	7.049	6.921	.128	.750	1/8-27	WS254016T	①TKY08W	WPT4405	MK1KS	.7031	**TAWNH0045T**	●
TAWMN**0046**	▲	4.147	5.052	7.302	7.171	.131	1.000	1/8-27	WS254016T	①TKY08W	WPT4405	MK1KS	.7188	**TAWNH0046T**	●
TAWMN**0049**	●	4.347	5.410	7.660	7.526	.134	1.000	1/8-27	WS304517T	②TKY10T	WPT4405	MK1KS	.7344	**TAWNH0047T**	●
													.7500	**TAWNH0048T**	●
													.7656	**TAWNH0049T**	●
TAWMN**0051**	●	4.591	5.614	7.864	7.722	.142	1.000	1/8-27	WS304518T	②TKY10T	WPT4405	MK1KS	.7813	**TAWNH0050T**	●
													.7969	**TAWNH0051T**	●
TAWMN**0054**	●	4.794	5.620	7.870	7.722	.148	1.000	1/8-27	WS304518T	②TKY10T	WPT4405	MK1KS	.8125	**TAWNH0052T**	●
													.8281	**TAWNH0053T**	●
													.8438	**TAWNH0054T**	●

* Clamp Torque (lbf-in) : WS254012T=18, WS254013T=18, WS254014T=18, WS254015T=18, WS254016T=18, WS304517T=31, WS304518T=31, WS355520T=49

(Note 1) Please contact us for any geometry that is not in this catalog (e.g. different diameter and length).
The LF, LH and LBX dimensions listed in the table above, are measured using the VP15TF insert.
When using the DP5010 insert, the LF, LH and LBX dimensions will be slightly reduced.

● : USA Stock ▲ : This item to be discontinued within two years.

Holder		Dimensions (inch)							*				DC (inch)	Insert	
Order Number	Stock	LBX	LH	OAL	LF	PL	DCON	CNT	Insert Screw	Wrench	Plate	Anti-seize Lubricant		Order Number	Stock VP15TF
TAWMN0056	●	5.038	5.825	8.075	7.919	.156	1.000	1/8-27	WS355520T	TKY15T	WPT4405	MK1KS	.8594	**TAWNH0055T**	●
													.8750	**TAWNH0056T**	●
TAWMN0059	●	5.241	6.225	8.475	8.313	.162	1.000	1/8-27	WS355521T	TKY15T	WPT4405	MK1KS	.8906	**TAWNH0057T**	●
													.9063	**TAWNH0058T**	●
													.9219	**TAWNH0059T**	●
TAWMN0061	●	5.486	6.470	8.845	8.674	.171	1.250	1/4-18	WS355521T	TKY15T	WPT4405	MK1KS	.9375	**TAWNH0060T**	●
													.9531	**TAWNH0061T**	●
TAWMN0100	●	5.688	6.672	9.047	8.871	.176	1.250	1/4-18	WS406023T	TKY25T	WPT4405	MK1KS	.9688	**TAWNH0062T**	●
													.9844	**TAWNH0063T**	●
													1.0000	**TAWNH0100T**	●
TAWMN0102	●	5.933	6.878	9.253	9.068	.185	1.250	1/4-18	WS406024T	TKY25T	WPT4405	MK1KS	1.0156	**TAWNH0101T**	●
													1.0313	**TAWNH0102T**	●
TAWMN0105	●	6.136	7.081	9.456	9.265	.191	1.250	1/4-18	WS406024T	TKY25T	WPT4405	MK1KS	1.0469	**TAWNH0103T**	●
													1.0625	**TAWNH0104T**	●
													1.0781	**TAWNH0105T**	●
TAWMN0107	●	6.380	7.286	9.661	9.462	.199	1.250	1/4-18	WS508026T	TKY27T	WPT4405	MK1KS	1.0938	**TAWNH0106T**	●
													1.1094	**TAWNH0107T**	●
TAWMN0110	●	6.583	7.488	9.863	9.658	.205	1.250	1/4-18	WS508027T	TKY27T	WPT4405	MK1KS	1.1250	**TAWNH0108T**	●
													1.1406	**TAWNH0109T**	●
													1.1563	**TAWNH0110T**	●
TAWMN0112	●	6.788	7.890	10.265	10.052	.213	1.250	1/4-18	WS508027T	TKY27T	WPT4405	MK1KS	1.1719	**TAWNH0111T**	●
													1.1875	**TAWNH0112T**	●

* Clamp Torque (lbf-in) : WS355521T=49, WS406023T=75, WS406024T=75, WS508026T=110, WS508027T=110

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INDEXABLE TYPE DRILL

TAW

- Wavy cutting edge design for good chip control.
- Serration geometry for accurate insert location.

P M K N S H

.5625≤DC≤.6875	.7031≤DC≤1.1719	DC=1.1875
−.00063 −.00134	−.00079 −.00161	−.00098 −.00197

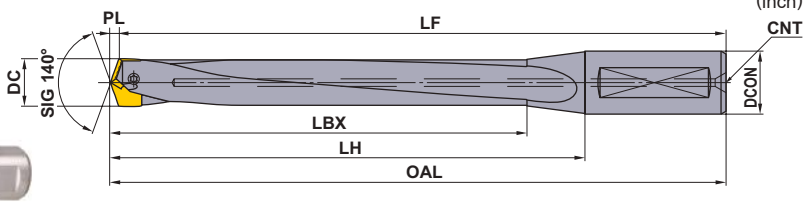
(inch)

INCH STANDARD

L/D=8

Internal Coolant





Holder		Dimensions (inch)							*	① ②			DC (inch)	Insert	
Order Number	Stock	LBX	LH	OAL	LF	PL	DCON	CNT	Insert Screw	Wrench	Plate	Anti-seize Lubricant		Order Number	Stock VP15TF
TAWLNH0036	▲	4.905	5.496	7.370	7.268	.102	.625	1/8-27	WS254012T	①TKY08W	WPT4405	MK1KS	.5625	**TAWNH0036T**	●
TAWLNH**0037**	▲	5.223	5.932	7.806	7.701	.105	.625	1/8-27	WS254013T	①TKY08W	WPT4405	MK1KS	.5781	**TAWNH0037T**	●
TAWLNH**0039**	▲	5.226	5.935	7.935	7.827	.108	.750	1/8-27	WS254013T	①TKY08W	WPT4405	MK1KS	.5938	**TAWNH0038T**	●
													.6094	**TAWNH0039T**	●
TAWLN0041	▲	5.547	6.334	8.334	8.220	.114	.750	1/8-27	WS254014T	①TKY08W	WPT4405	MK1KS	.6250	**TAWNH0040T**	●
													.6406	**TAWNH0041T**	●
TAWLN**0044**	▲	5.867	6.654	8.654	8.535	.119	.750	1/8-27	WS254015T	①TKY08W	WPT4405	MK1KS	.6563	**TAWNH0042T**	●
													.6719	**TAWNH0043T**	●
													.6875	**TAWNH0044T**	●
TAWLN**0045**	▲	6.191	6.978	8.978	8.850	.128	.750	1/8-27	WS254016T	①TKY08W	WPT4405	MK1KS	.7031	**TAWNH0045T**	●
TAWLN**0046**	▲	6.194	6.981	9.233	9.102	.131	1.000	1/8-27	WS254016T	①TKY08W	WPT4405	MK1KS	.7188	**TAWNH0046T**	●
TAWLN**0049**	●	6.512	7.417	9.669	9.535	.134	1.000	1/8-27	WS304517T	②TKY10T	WPT4405	MK1KS	.7344	**TAWNH0047T**	●
													.7500	**TAWNH0048T**	●
													.7656	**TAWNH0049T**	●
TAWLN**0051**	●	6.835	7.740	9.992	9.850	.142	1.000	1/8-27	WS304518T	②TKY10T	WPT4405	MK1KS	.7813	**TAWNH0050T**	●
													.7969	**TAWNH0051T**	●
TAWLN**0054**	●	7.156	8.101	10.353	10.205	.148	1.000	1/8-27	WS304518T	②TKY10T	WPT4405	MK1KS	.8125	**TAWNH0052T**	●
													.8281	**TAWNH0053T**	●
													.8438	**TAWNH0054T**	●

* Clamp Torque (lbf-in) : WS254012T=18, WS254013T=18, WS254014T=18, WS254015T=18, WS254016T=18, WS304517T=31, WS304518T=31, WS355520T=49

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Holder		Dimensions (inch)							*				DC (inch)	Insert	
Order Number	Stock	LBX	LH	OAL	LF	PL	DCON	CNT	Insert Screw	Wrench	Plate	Anti-seize Lubricant		Order Number	Stock VP15TF
TAWLN0056	●	7.479	8.424	10.676	10.520	.156	1.000	1/8-27	WS355520T	TKY15T	WPT4405	MK1KS	.8594	**TAWNH0055T**	●
													.8750	**TAWNH0056T**	●
TAWLN0059	●	7.800	8.942	11.193	11.031	.162	1.000	1/8-27	WS355521T	TKY15T	WPT4405	MK1KS	.8906	**TAWNH0057T**	●
													.9063	**TAWNH0058T**	●
													.9219	**TAWNH0059T**	●
TAWLN0061	●	8.124	9.305	11.679	11.508	.171	1.250	1/4-18	WS355521T	TKY15T	WPT4405	MK1KS	.9375	**TAWNH0060T**	●
													.9531	**TAWNH0061T**	●
TAWLN0100	●	8.444	9.625	11.999	11.823	.176	1.250	1/4-18	WS406023T	TKY25T	WPT4405	MK1KS	.9688	**TAWNH0062T**	●
													.9844	**TAWNH0063T**	●
													1.0000	**TAWNH0100T**	●
TAWLN0102	●	8.768	9.949	12.323	12.138	.185	1.250	1/4-18	WS406024T	TKY25T	WPT4405	MK1KS	1.0156	**TAWNH0101T**	●
													1.0313	**TAWNH0102T**	●
TAWLN0105	●	9.089	10.270	12.644	12.453	.191	1.250	1/4-18	WS406024T	TKY25T	WPT4405	MK1KS	1.0469	**TAWNH0103T**	●
													1.0625	**TAWNH0104T**	●
													1.0781	**TAWNH0105T**	●
TAWLN0107	●	9.412	10.593	12.967	12.768	.199	1.250	1/4-18	WS508026T	TKY27T	WPT4405	MK1KS	1.0938	**TAWNH0106T**	●
													1.1094	**TAWNH0107T**	●
TAWLN0110	●	9.733	10.914	13.288	13.083	.205	1.250	1/4-18	WS508027T	TKY27T	WPT4405	MK1KS	1.1250	**TAWNH0108T**	●
													1.1406	**TAWNH0109T**	●
													1.1563	**TAWNH0110T**	●
TAWLN0112	●	10.056	11.433	13.807	13.594	.213	1.250	1/4-18	WS508027T	TKY27T	WPT4405	MK1KS	1.1719	**TAWNH0111T**	●
													1.1875	**TAWNH0112T**	●

* Clamp Torque (lbf-in) : WS355521T=49, WS406023T=75, WS406024T=75, WS508026T=110, WS508027T=110

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INDEXABLE TYPE DRILL

TAW

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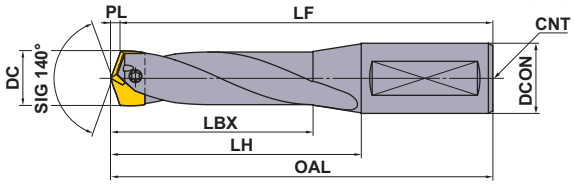
P M K N S H

18<DC≤30
0
−0.021
(mm)

METRIC STANDARD

Internal Coolant





Hole Depth (l/d)	Holder Order Number	Stock	LBX	LH	OAL	LF	PL	DCON	Insert Screw *	Wrench	Plate	Anti-seize Lubricant	DC (mm)	Insert Order Number	Stock VP15TF	Stock DP5010
3	TAWSN1900S25	★	71.4	102.4	158.4	155.0	3.4	25	WS304517T	TKY10T	WPT4405	MK1KS	18.5	TAWNH1850T	●	
														TAWKH1850TG		★
													18.6	TAWNH1860T	●	
														TAWKH1860TG		★
													18.7	TAWNH1870T	●	
														TAWKH1870TG		★
5	TAWMN1900S25	★	110.4	137.4	193.4	190.0	3.4	25	WS304517T	TKY10T	WPT4405	MK1KS	18.8	TAWNH1880T	●	
														TAWKH1880TG		★
													18.9	TAWNH1890T	●	
														TAWKH1890TG		★
													19.0	TAWNH1900T	●	
														TAWKH1900TG		★
8	TAWLN1900S25	★	165.5	188.5	244.5	241.0	3.5	25	WS304517T	TKY10T	WPT4405	MK1KS	19.1	TAWNH1910T	●	
														TAWKH1910TG		★
													19.2	TAWNH1920T	●	
														TAWKH1920TG		★
													19.3	TAWNH1930T	●	
														TAWKH1930TG		★
													19.4	TAWNH1940T	●	
														TAWKH1940TG		★
3	TAWSN2000S25	★	75.5	102.5	158.5	155.0	3.5	25	WS304518T	TKY10T	WPT4405	MK1KS	19.5	TAWNH1950T	●	
														TAWKH1950TG		★
													19.6	TAWNH1960T	●	
														TAWKH1960TG		★
5	TAWMN2000S25	★	116.6	142.6	198.6	195.0	3.6	25	WS304518T	TKY10T	WPT4405	MK1KS	19.7	TAWNH1970T	●	
														TAWKH1970TG		★
													19.8	TAWNH1980T	●	
														TAWKH1980TG		★
8	TAWLN2000S25	★	173.7	196.7	252.7	249.0	3.7	25	WS304518T	TKY10T	WPT4405	MK1KS	19.9	TAWNH1990T	●	
														TAWKH1990TG		★
													20.0	TAWNH2000T	●	
														TAWKH2000TG		★
3	TAWSN2100S25	★	78.7	102.7	158.7	155.0	3.7	25	WS304518T	TKY10T	WPT4405	MK1KS	20.5	TAWNH2050T	●	
5	TAWMN2100S25	★	121.8	142.8	198.8	195.0	3.8	25	WS304518T	TKY10T	WPT4405	MK1KS		TAWKH2050TG		★
8	TAWLN2100S25	★	181.9	205.9	261.9	258.0	3.9	25	WS304518T	TKY10T	WPT4405	MK1KS	21.0	TAWNH2100T	●	
														TAWKH2100TG		★
3	TAWSN2200S25	★	83.2	108.2	164.2	160.3	3.9	25	WS355520T	TKY15T	WPT4405	MK1KS	21.5	TAWNH2150T	●	
5	TAWMN2200S25	★	128.3	148.3	204.3	200.3	4.0	25	WS355520T	TKY15T	WPT4405	MK1KS		TAWKH2150TG		★
8	TAWLN2200S25	★	190.0	214.0	270.0	266.0	4.0	25	WS355520T	TKY15T	WPT4405	MK1KS	22.0	TAWNH2200T	●	
														TAWKH2200TG		★

* Clamp Torque (lbf-in) : WS304517T=31, WS304518T=31, WS355520T=49

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The LF, LH and LBX dimensions listed in the table above, are measured using the VP15TF insert.
When using the DP5010 insert, the LF, LH and LBX dimensions will be slightly reduced.

● : USA Stock ★ : Stocked in Japan

Hole Depth l/d	Holder		Dimensions (mm)						*				DC (mm)	Insert		
	Order Number	Stock	LBX	LH	OAL	LF	PL	DCON	Insert Screw	Wrench	Plate	Anti-seize Lubricant		Order Number	Stock VP15TF	Stock DP5010
3	**TAWSN2300S25**	★	86.4	108.4	164.4	160.3	4.1	25	WS355521T	TKY15T	WPT4405	MK1KS	22.5	**TAWNH2250T**	●	
5	TAW**MN2300S25**	★	133.4	158.4	214.4	210.3	4.1	25	WS355521T	TKY15T	WPT4405	MK1KS		**TAWKH2250TG**		★
8	TAW**LN2300S25**	★	198.2	227.2	283.2	279.0	4.2	25	WS355521T	TKY15T	WPT4405	MK1KS	23.0	**TAWNH2300T**	●	
														TAWKH2300TG		★
3	**TAWSN2400S32**	★	90.6	114.6	174.6	170.3	4.3	32	WS355521T	TKY15T	WPT4405	MK1KS	23.5	**TAWNH2350T**	●	
5	TAW**MN2400S32**	★	139.6	164.6	224.6	220.3	4.3	32	WS355521T	TKY15T	WPT4405	MK1KS		**TAWKH2350TG**		★
8	TAW**LN2400S32**	★	206.4	236.4	296.4	292.0	4.4	32	WS355521T	TKY15T	WPT4405	MK1KS	24.0	**TAWNH2400T**	●	
														TAWKH2400TG		★
3	**TAWSN2500S32**	★	93.1	115.1	175.1	170.6	4.5	32	WS406023T	TKY25T	WPT4405	MK1KS	24.5	**TAWNH2450T**	●	
5	TAW**MN2500S32**	★	145.1	170.1	230.1	225.6	4.5	32	WS406023T	TKY25T	WPT4405	MK1KS		**TAWKH2450TG**		★
8	TAW**LN2500S32**	★	214.6	244.6	304.6	300.0	4.6	32	WS406023T	TKY25T	WPT4405	MK1KS	25.0	**TAWNH2500T**	●	
														TAWKH2500TG		★
3	**TAWSN2600S32**	★	97.2	120.2	180.2	175.6	4.6	32	WS406024T	TKY25T	WPT4405	MK1KS	25.5	**TAWNH2550T**	●	
5	TAW**MN2600S32**	★	151.3	175.3	235.3	230.6	4.7	32	WS406024T	TKY25T	WPT4405	MK1KS		**TAWKH2550TG**		★
8	TAW**LN2600S32**	★	222.8	252.8	312.8	308.0	4.8	32	WS406024T	TKY25T	WPT4405	MK1KS	26.0	**TAWNH2600T**	●	
														TAWKH2600TG		★
3	**TAWSN2700S32**	★	99.4	120.4	180.4	175.6	4.8	32	WS406024T	TKY25T	WPT4405	MK1KS	26.5	**TAWNH2650T**	●	
5	TAW**MN2700S32**	★	156.5	180.5	240.5	235.6	4.9	32	WS406024T	TKY25T	WPT4405	MK1KS		**TAWKH2650TG**		★
8	TAW**LN2700S32**	★	230.9	260.9	320.9	316.0	4.9	32	WS406024T	TKY25T	WPT4405	MK1KS	27.0	**TAWNH2700T**	●	
														TAWKH2700TG		★
3	**TAWSN2800S32**	★	102.2	125.2	185.2	180.2	5.0	32	WS508026T	TKY27T	WPT4405	MK1KS	27.5	**TAWNH2750T**	●	
5	TAW**MN2800S32**	★	162.3	185.3	245.3	240.2	5.1	32	WS508026T	TKY27T	WPT4405	MK1KS		**TAWKH2750TG**		★
8	TAW**LN2800S32**	★	239.1	269.1	329.1	324.0	5.1	32	WS508026T	TKY27T	WPT4405	MK1KS	28.0	**TAWNH2800T**	●	
														TAWKH2800TG		★
3	**TAWSN2900S32**	★	105.4	130.4	190.4	185.2	5.2	32	WS508027T	TKY27T	WPT4405	MK1KS	28.5	**TAWNH2850T**	●	
5	TAW**MN2900S32**	★	167.4	190.4	250.4	245.2	5.2	32	WS508027T	TKY27T	WPT4405	MK1KS		**TAWKH2850TG**		★
8	TAW**LN2900S32**	★	247.3	277.3	337.3	332.0	5.3	32	WS508027T	TKY27T	WPT4405	MK1KS	29.0	**TAWNH2900T**	●	
														TAWKH2900TG		★
3	**TAWSN3000S32**	★	109.6	130.6	190.6	185.2	5.4	32	WS508027T	TKY27T	WPT4405	MK1KS	29.5	**TAWNH2950T**	●	
5	TAW**MN3000S32**	★	172.6	200.6	260.6	255.2	5.4	32	WS508027T	TKY27T	WPT4405	MK1KS		**TAWKH2950TG**		★
8	TAW**LN3000S32**	★	255.5	290.5	350.5	345.0	5.5	32	WS508027T	TKY27T	WPT4405	MK1KS	30.0	**TAWNH3000T**	●	
														TAWKH3000TG		★

* Clamp Torque (lbf-in) : WS355521T=49, WS406023T=75, WS406024T=75, WS508026T=110, WS508027T=110

(Note) Please contact us for any geometry that is not in this catalog (e.g. different diameter and length).
The LF, LH and LBX dimensions listed in the table above, are measured using the VP15TF insert.
When using the DP5010 insert, the LF, LH and LBX dimensions will be slightly reduced.

TAW

RECOMMENDED CUTTING CONDITIONS

Work Material		DC	ϕ.5625"—ϕ.6094" ϕ14.0—ϕ15.4mm		ϕ.6250"—ϕ.7188" ϕ15.5—ϕ18.4mm		ϕ.7344"—ϕ.8438" ϕ18.5—ϕ21.4mm	
		Conditions / Hardness	Cutting Speed (SFM)	Feed (inch/rev)	Cutting Speed (SFM)	Feed (inch/rev)	Cutting Speed (SFM)	Feed (inch/rev)
P	Mild Steel	≤180HB	230 (195—295)	.008 (.006—.010)	260 (195—330)	.010 (.008—.012)	295 (230—360)	.010 (.008—.012)
P	Carbon Steel Alloy Steel	180—280HB	230 (195—295)	.008 (.006—.010)	260 (195—330)	.010 (.008—.012)	260 (195—330)	.010 (.008—.012)
P	Carbon Steel Alloy Steel	280—350HB	195 (165—260)	.006 (.005—.007)	230 (165—295)	.008 (.006—.010)	230 (165—295)	.008 (.006—.010)
M	Stainless Steel	≤200HB	165 (130—195)	.006 (.005—.007)	165 (130—195)	.006 (.005—.007)	195 (165—230)	.008 (.006—.009)
K	Gray Cast Iron	Tensile Strength ≤350MPa	230 (165—295)	.008 (.006—.010)	330 (195—395)	.010 (.008—.012)	390 (195—460)	.010 (.008—.012)
K	Ductile Cast Iron	Tensile Strength ≤450MPa	230 (165—295)	.008 (.006—.010)	260 (195—295)	.010 (.008—.012)	260 (195—295)	.010 (.008—.012)

Work Material		DC	ϕ.8594"—ϕ.9531" ϕ21.5—ϕ24.4mm		ϕ.9688"—ϕ1.0781" ϕ24.5—ϕ27.4mm		ϕ1.0938"—ϕ1.1875" ϕ27.5—ϕ30.4mm	
		Conditions / Hardness	Cutting Speed (SFM)	Feed (inch/rev)	Cutting Speed (SFM)	Feed (inch/rev)	Cutting Speed (SFM)	Feed (inch/rev)
P	Mild Steel	≤180HB	330 (260—390)	.012 (.010—.014)	360 (260—390)	.012 (.010—.014)	360 (260—390)	.012 (.010—.014)
P	Carbon Steel Alloy Steel	180—280HB	295 (230—360)	.012 (.010—.014)	330 (260—390)	.012 (.010—.014)	330 (260—390)	.012 (.010—.014)
P	Carbon Steel Alloy Steel	280—350HB	260 (195—330)	.010 (.008—.012)	295 (230—360)	.010 (.008—.012)	295 (230—360)	.010 (.008—.012)
M	Stainless Steel	≤200HB	195 (165—230)	.008 (.006—.009)	230 (195—260)	.010 (.008—.011)	230 (195—260)	.010 (.008—.011)
K	Gray Cast Iron	Tensile Strength ≤350MPa	425 (260—490)	.014 (.010—.016)	460 (295—525)	.014 (.010—.016)	460 (295—525)	.016 (.012—.018)
K	Ductile Cast Iron	Tensile Strength ≤450MPa	295 (195—330)	.012 (.010—.014)	330 (260—360)	.012 (.010—.014)	330 (260—360)	.012 (.010—.014)

■ NOTES ON USE

INSERT INSTALLATION

- Loosen insert screw of holder to install insert.
- Mesh the insert serration to holder grooves.
- Fasten the insert screw using the provided wrench while holding rake face of the insert lightly with your thumb. (Figure 1)
- Check that there is no clearance between the insert bottom and holder flute end. (Figure 2)

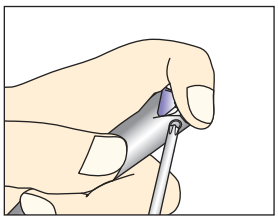


Figure 1

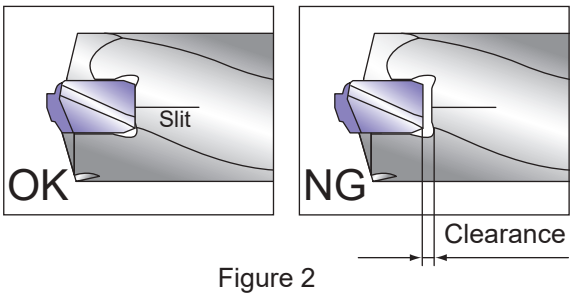


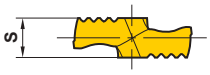
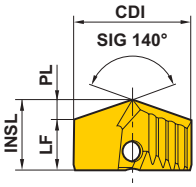
Figure 2

NOTE ON INSERT REPLACEMENT

- Clean insert guide grooves by blowing air before installing a new insert.
- Clean the “slit” underneath the insert on the holder with the provided plate.
- Use the provided anti-seize lubricant for lubricating the threads of the insert screw.

INSERTS

■ INCH STANDARD

Geometry	Order Number	Stock	Dimensions (inch)			Applicable Holder	
		VP15TF	CDI	LF	S	Inch	Metric
For General Use	**TAWNH0036T**	▲	.5625	.299	.197	TAWS/M/LNH0036	TAWS/M/LNH1400S16
	TAWNH**0037T**	▲	.5781	.295	.197	TAWS/M/LNH0037	TAWS/M/LNH1500S20
	TAWNH**0038T**	▲	.5938	.291	.197	TAWS/M/LNH0039	
	TAWNH**0039T**	▲	.6094	.291	.197		
	TAWNH**0040T**	▲	.6250	.311	.236	TAWS/M/LN0041	TAWS/M/LN1600S20
	TAWNH**0041T**	▲	.6406	.307	.236		
	TAWNH**0042T**	▲	.6563	.303	.236	TAWS/M/LN0044	TAWS/M/LN1700S20
	TAWNH**0043T**	▲	.6719	.299	.236		
	TAWNH**0044T**	▲	.6875	.299	.236		
	TAWNH**0045T**	▲	.7031	.295	.236	TAWS/M/LN0045	TAWS/M/LN1800S20
	TAWNH**0046T**	▲	.7188	.291	.236	TAWS/M/LN0046	
	TAWNH**0047T**	●	.7344	.366	.276	TAWS/M/LN0049	TAWS/M/LN1900S25
	TAWNH**0048T**	●	.7500	.362	.276		
	TAWNH**0049T**	●	.7656	.362	.276		
	TAWNH**0050T**	●	.7813	.358	.276	TAWS/M/LN0051	TAWS/M/LN2000S25
	TAWNH**0051T**	●	.7969	.354	.276		
	TAWNH**0052T**	●	.8125	.350	.276	TAWS/M/LN0054	TAWS/M/LN2100S25
	TAWNH**0053T**	●	.8281	.346	.276		
	TAWNH**0054T**	●	.8438	.346	.276		
	TAWNH**0055T**	●	.8594	.417	.315	TAWS/M/LN0056	TAWS/M/LN2200S25
	TAWNH**0056T**	●	.8750	.413	.315		
	TAWNH**0057T**	●	.8906	.409	.315	TAWS/M/LN0059	TAWS/M/LN2300S25
	TAWNH**0058T**	●	.9063	.406	.315		
	TAWNH**0059T**	●	.9219	.406	.315		
	TAWNH**0060T**	●	.9375	.402	.315	TAWS/M/LN0061	TAWS/M/LN2400S32
	TAWNH**0061T**	●	.9531	.398	.315		
	TAWNH**0062T**	●	.9688	.461	.354	TAWS/M/LN0100	TAWS/M/LN2500S32
	TAWNH**0063T**	●	.9844	.457	.354		
	TAWNH**0100T**	●	1.0000	.457	.354		
	TAWNH**0101T**	●	1.0156	.453	.354	TAWS/M/LN0102	TAWS/M/LN2600S32
	TAWNH**0102T**	●	1.0313	.449	.354		
	TAWNH**0103T**	●	1.0469	.445	.354	TAWS/M/LN0105	TAWS/M/LN2700S32
	TAWNH**0104T**	●	1.0625	.445	.354		
	TAWNH**0105T**	●	1.0781	.441	.354		
	TAWNH**0106T**	●	1.0938	.484	.394	TAWS/M/LN0107	TAWS/M/LN2800S32
	TAWNH**0107T**	●	1.1094	.480	.394		
	TAWNH**0108T**	●	1.1250	.476	.394	TAWS/M/LN0110	TAWS/M/LN2900S32
	TAWNH**0109T**	●	1.1406	.476	.394		
	TAWNH**0110T**	●	1.1563	.472	.394		
	TAWNH**0111T**	●	1.1719	.469	.394	TAWS/M/LN0112	TAWS/M/LN3000S32
	TAWNH**0112T**	●	1.1875	.465	.394		

● : USA Stock ▲ : This item to be discontinued within two years.
<One insert in one case>

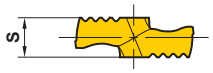
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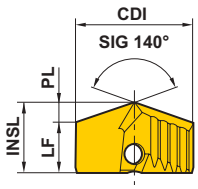
INSERTS

■ METRIC STANDARD

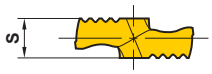
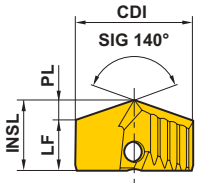
Geometry	Order Number	Stock	Dimensions (mm)			Applicable Holder	
		VP15TF	CDI	LF	S	Inch	Metric
For General Use	TAWNH1400T	▲	14.0	7.6	5.0		
	TAWNH1410T	▲	14.1	7.6	5.0	TAWSNH0036	TAWSNH1400S16
	TAWNH1420T	▲	14.2	7.6	5.0	TAWMNH0036	TAWMNH1400S16
	TAWNH1430T	▲	14.3	7.6	5.0	TAWLNH0036	TAWLNH1400S16
	TAWNH1440T	▲	14.4	7.6	5.0		
	TAWNH1450T	▲	14.5	7.5	5.0		
	TAWNH1460T	▲	14.6	7.5	5.0		
	TAWNH1470T	▲	14.7	7.5	5.0	TAWSNH0037	
	TAWNH1480T	▲	14.8	7.5	5.0	TAWMNH0037	TAWSNH1500S20
	TAWNH1490T	▲	14.9	7.5	5.0	TAWLNH0037	TAWMNH1500S20
	TAWNH1500T	▲	15.0	7.4	5.0	TAWSNH0039	TAWLNH1500S20
	TAWNH1510T	▲	15.1	7.4	5.0	TAWMNH0039	
	TAWNH1520T	▲	15.2	7.4	5.0	TAWLNH0039	
	TAWNH1530T	▲	15.3	7.4	5.0		
	TAWNH1540T	▲	15.4	7.4	5.0		
	TAWNH1550T	▲	15.5	7.9	6.0		
	TAWNH1560T	▲	15.6	7.9	6.0		
	TAWNH1570T	▲	15.7	7.9	6.0		
	TAWNH1580T	▲	15.8	7.9	6.0	TAWSN0041	TAWSN1600S20
	TAWNH1590T	▲	15.9	7.9	6.0	TAWMN0041	TAWMN1600S20
	TAWNH1600T	▲	16.0	7.8	6.0	TAWLN0041	TAWLN1600S20
	TAWNH1610T	▲	16.1	7.8	6.0		
	TAWNH1620T	▲	16.2	7.8	6.0		
	TAWNH1630T	▲	16.3	7.8	6.0		
	TAWNH1640T	▲	16.4	7.8	6.0		
	TAWNH1650T	▲	16.5	7.7	6.0		
	TAWNH1660T	▲	16.6	7.7	6.0		
	TAWNH1670T	▲	16.7	7.7	6.0		
	TAWNH1680T	▲	16.8	7.7	6.0	TAWSN0044	TAWSN1700S20
	TAWNH1690T	▲	16.9	7.7	6.0	TAWMN0044	TAWMN1700S20
	TAWNH1700T	▲	17.0	7.6	6.0	TAWLN0044	TAWLN1700S20
	TAWNH1710T	▲	17.1	7.6	6.0		
	TAWNH1720T	▲	17.2	7.6	6.0		
	TAWNH1730T	▲	17.3	7.6	6.0		
	TAWNH1740T	▲	17.4	7.6	6.0		
	TAWNH1750T	▲	17.5	7.5	6.0		
	TAWNH1760T	▲	17.6	7.5	6.0		
	TAWNH1770T	▲	17.7	7.5	6.0	TAWSN0045	
	TAWNH1780T	▲	17.8	7.5	6.0	TAWMN0045	TAWSN1800S20
	TAWNH1790T	▲	17.9	7.5	6.0	TAWLN0045	TAWMN1800S20
	TAWNH1800T	▲	18.0	7.4	6.0	TAWSN0046	TAWLN1800S20
	TAWNH1810T	▲	18.1	7.4	6.0	TAWMN0046	
	TAWNH1820T	▲	18.2	7.4	6.0	TAWLN0046	
	TAWNH1830T	▲	18.3	7.4	6.0		
	TAWNH1840T	▲	18.4	7.4	6.0		







● : USA Stock ▲ : This item to be discontinued within two years.
<One insert in one case>

Geometry	Order Number	Stock	Dimensions (mm)			Applicable Holder	
		VP15TF	CDI	LF	S	Inch	Metric
For General Use	**TAWNH1850T**	●	18.5	9.3	7.0		
	TAWNH**1860T**	●	18.6	9.3	7.0		
	TAWNH**1870T**	●	18.7	9.3	7.0		
	TAWNH**1880T**	●	18.8	9.3	7.0		
	TAWNH**1890T**	●	18.9	9.3	7.0	TAWSN0049 TAWMN0049	TAWSN1900S25 TAWMN1900S25
	TAWNH**1900T**	●	19.0	9.2	7.0	TAWLN0049	TAWLN1900S25
	TAWNH**1910T**	●	19.1	9.2	7.0		
	TAWNH**1920T**	●	19.2	9.2	7.0		
	TAWNH**1930T**	●	19.3	9.2	7.0		
	TAWNH**1940T**	●	19.4	9.2	7.0		
	TAWNH**1950T**	●	19.5	9.1	7.0		
	TAWNH**1960T**	●	19.6	9.1	7.0		
	TAWNH**1970T**	●	19.7	9.1	7.0	TAWSN0051 TAWMN0051	TAWSN2000S25 TAWMN2000S25
	TAWNH**1980T**	●	19.8	9.1	7.0	TAWLN0051	TAWLN2000S25
	TAWNH**1990T**	●	19.9	9.1	7.0		
	TAWNH**2000T**	●	20.0	9.0	7.0		
	TAWNH**2050T**	●	20.5	8.9	7.0	TAWSN0054 TAWMN0054	TAWSN2100S25 TAWMN2100S25
	TAWNH**2100T**	●	21.0	8.8	7.0	TAWLN0054	TAWLN2100S25
	TAWNH**2150T**	●	21.5	10.6	8.0	TAWSN0056 TAWMN0056	TAWSN2200S25 TAWMN2200S25
	TAWNH**2200T**	●	22.0	10.5	8.0	TAWLN0056	TAWLN2200S25
	TAWNH**2250T**	●	22.5	10.4	8.0	TAWSN0059 TAWMN0059	TAWSN2300S25 TAWMN2300S25
	TAWNH**2300T**	●	23.0	10.3	8.0	TAWLN0059	TAWLN2300S25
	TAWNH**2350T**	●	23.5	10.2	8.0	TAWSN0061 TAWMN0061	TAWSN2400S32 TAWMN2400S32
	TAWNH**2400T**	●	24.0	10.1	9.0	TAWLN0061	TAWLN2400S32
	TAWNH**2450T**	●	24.5	11.7	9.0	TAWSN0100 TAWMN0100	TAWSN2500S32 TAWMN2500S32
	TAWNH**2500T**	●	25.0	11.6	9.0	TAWLN0100	TAWLN2500S32
	TAWNH**2550T**	●	25.5	11.5	9.0	TAWSN0102 TAWMN0102	TAWSN2600S32 TAWMN2600S32
	TAWNH**2600T**	●	26.0	11.4	9.0	TAWLN0102	TAWLN2600S32
	TAWNH**2650T**	●	26.5	11.3	9.0	TAWSN0105 TAWMN0105	TAWSN2700S32 TAWMN2700S32
	TAWNH**2700T**	●	27.0	11.2	9.0	TAWLN0105	TAWLN2700S32
	TAWNH**2750T**	●	27.5	12.3	10.0	TAWSN0107 TAWMN0107	TAWSN2800S32 TAWMN2800S32
	TAWNH**2800T**	●	28.0	12.2	10.0	TAWLN0107	TAWLN2800S32
	TAWNH**2850T**	●	28.5	12.1	10.0	TAWSN0110 TAWMN0110	TAWSN2900S32 TAWMN2900S32
	TAWNH**2900T**	●	29.0	12.0	10.0	TAWLN0110	TAWLN2900S32
	TAWNH**2950T**	●	29.5	11.9	10.0	TAWSN0112 TAWMN0112	TAWSN3000S32 TAWMN3000S32
	TAWNH**3000T**	●	30.0	11.8	10.0	TAWLN0112	TAWLN3000S32

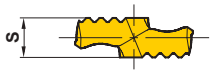
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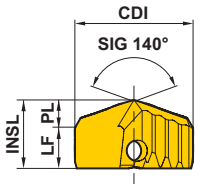
INSERTS

METRIC STANDARD

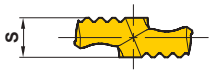
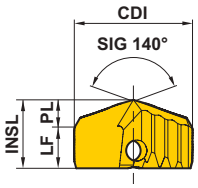
Geometry	Order Number	Stock	Dimensions (mm)			Applicable Holder	
		DP5010	CDI	LF	S	Inch	Metric
For Cast Iron	TAWKH1400TG	▲	14.0	7.1	5.0		
	TAWKH1410TG	▲	14.1	7.1	5.0	TAWSNH0036	TAWSNH1400S16
	TAWKH1420TG	▲	14.2	7.1	5.0	TAWMNH0036	TAWMNH1400S16
	TAWKH1430TG	▲	14.3	7.1	5.0	TAWLNH0036	TAWLNH1400S16
	TAWKH1440TG	▲	14.4	7.1	5.0		
	TAWKH1450TG	▲	14.5	7.0	5.0		
	TAWKH1460TG	▲	14.6	7.0	5.0		
	TAWKH1470TG	▲	14.7	7.0	5.0	TAWSNH0037	
	TAWKH1480TG	▲	14.8	7.0	5.0	TAWMNH0037	TAWSNH1500S20
	TAWKH1490TG	▲	14.9	7.0	5.0	TAWLNH0037	TAWMNH1500S20
	TAWKH1500TG	▲	15.0	6.9	5.0	TAWSNH0039	TAWLNH1500S20
	TAWKH1510TG	▲	15.1	6.9	5.0	TAWMNH0039	
	TAWKH1520TG	▲	15.2	6.9	5.0	TAWLNH0039	
	TAWKH1530TG	▲	15.3	6.9	5.0		
	TAWKH1540TG	▲	15.4	6.9	5.0		
	TAWKH1550TG	▲	15.5	7.3	6.0		
	TAWKH1560TG	▲	15.6	7.3	6.0		
	TAWKH1570TG	▲	15.7	7.3	6.0		
	TAWKH1580TG	▲	15.8	7.3	6.0	TAWSN0041	TAWSN1600S20
	TAWKH1590TG	▲	15.9	7.3	6.0	TAWMN0041	TAWMN1600S20
	TAWKH1600TG	▲	16.0	7.2	6.0	TAWLN0041	TAWLN1600S20
	TAWKH1610TG	▲	16.1	7.2	6.0		
	TAWKH1620TG	▲	16.2	7.2	6.0		
	TAWKH1630TG	▲	16.3	7.2	6.0		
	TAWKH1640TG	▲	16.4	7.2	6.0		
	TAWKH1650TG	▲	16.5	7.1	6.0		
	TAWKH1660TG	▲	16.6	7.1	6.0		
	TAWKH1670TG	▲	16.7	7.1	6.0		
	TAWKH1680TG	▲	16.8	7.1	6.0	TAWSN0044	TAWSN1700S20
	TAWKH1690TG	▲	16.9	7.1	6.0	TAWMN0044	TAWMN1700S20
	TAWKH1700TG	▲	17.0	7.0	6.0	TAWLN0044	TAWLN1700S20
	TAWKH1710TG	▲	17.1	7.0	6.0		
	TAWKH1720TG	▲	17.2	7.0	6.0		
	TAWKH1730TG	▲	17.3	7.0	6.0		
	TAWKH1740TG	▲	17.4	7.0	6.0		
	TAWKH1750TG	▲	17.5	6.8	6.0		
	TAWKH1760TG	▲	17.6	6.8	6.0		
	TAWKH1770TG	▲	17.7	6.8	6.0	TAWSN0045	
	TAWKH1780TG	▲	17.8	6.8	6.0	TAWMN0045	TAWSN1800S20
	TAWKH1790TG	▲	17.9	6.8	6.0	TAWLN0045	TAWMN1800S20
	TAWKH1800TG	▲	18.0	6.8	6.0	TAWSN0046	TAWLN1800S20
	TAWKH1810TG	▲	18.1	6.8	6.0	TAWMN0046	
	TAWKH1820TG	▲	18.2	6.8	6.0	TAWLN0046	
	TAWKH1830TG	▲	18.3	6.8	6.0		
	TAWKH1840TG	▲	18.4	6.8	6.0		



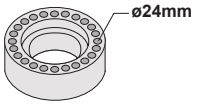
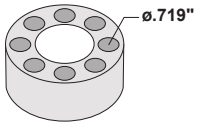
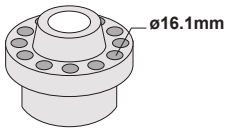
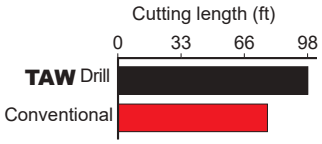
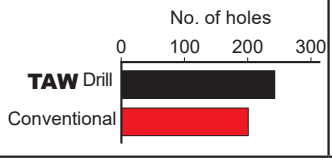
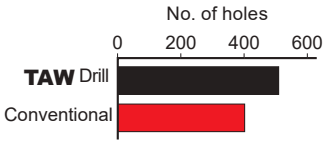


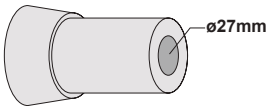
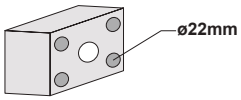
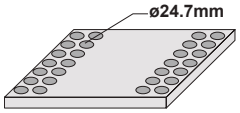
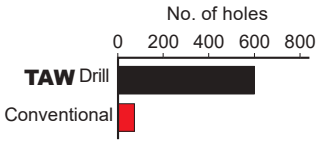
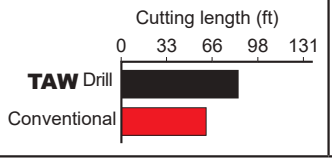
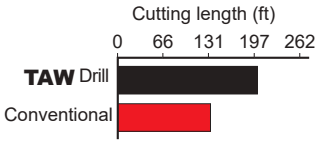


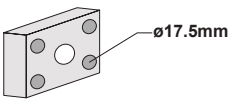
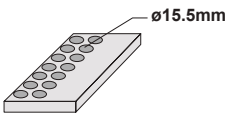
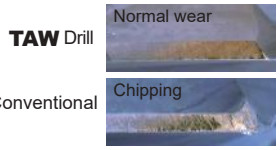
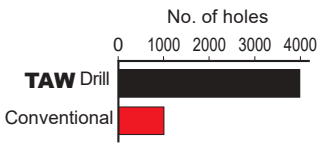
★ : Stocked in Japan ▲ : This item to be discontinued within two years.

Geometry	Order Number	Stock	Dimensions (mm)			Applicable Holder	
		DP5010	CDI	LF	S	Inch	Metric
For Cast Iron	**TAWKH1850TG**	★	18.5	8.6	7.0		
	TAWKH**1860TG**	★	18.6	8.6	7.0		
	TAWKH**1870TG**	★	18.7	8.6	7.0		
	TAWKH**1880TG**	★	18.8	8.6	7.0	TAWSN0049	TAWSN1900S25
	TAWKH**1890TG**	★	18.9	8.6	7.0	TAWMN0049	TAWMN1900S25
	TAWKH**1900TG**	★	19.0	8.5	7.0	TAWLN0049	TAWLN1900S25
	TAWKH**1910TG**	★	19.1	8.5	7.0		
	TAWKH**1920TG**	★	19.2	8.5	7.0		
	TAWKH**1930TG**	★	19.3	8.5	7.0		
	TAWKH**1940TG**	★	19.4	8.5	7.0		
	TAWKH**1950TG**	★	19.5	8.4	7.0		
	TAWKH**1960TG**	★	19.6	8.4	7.0	TAWSN0051	TAWSN2000S25
	TAWKH**1970TG**	★	19.7	8.4	7.0	TAWMN0051	TAWMN2000S25
	TAWKH**1980TG**	★	19.8	8.4	7.0	TAWLN0051	TAWLN2000S25
	TAWKH**1990TG**	★	19.9	8.4	7.0		
	TAWKH**2000TG**	★	20.0	8.3	7.0		
	TAWKH**2050TG**	★	20.5	8.2	7.0	TAWSN0054	TAWSN2100S25
	TAWKH**2100TG**	★	21.0	8.1	7.0	TAWMN0054 TAWLN0054	TAWMN2100S25 TAWLN2100S25
	TAWKH**2150TG**	★	21.5	9.8	8.0	TAWSN0056	TAWSN2200S25
	TAWKH**2200TG**	★	22.0	9.7	8.0	TAWMN0056 TAWLN0056	TAWMN2200S25 TAWLN2200S25
	TAWKH**2250TG**	★	22.5	9.6	8.0	TAWSN0059	TAWSN2300S25
	TAWKH**2300TG**	★	23.0	9.5	8.0	TAWMN0059 TAWLN0059	TAWMN2300S25 TAWLN2300S25
	TAWKH**2350TG**	★	23.5	9.4	8.0	TAWSN0061	TAWSN2400S32
	TAWKH**2400TG**	★	24.0	9.3	9.0	TAWMN0061 TAWLN0061	TAWMN2400S32 TAWLN2400S32
	TAWKH**2450TG**	★	24.5	10.8	9.0	TAWSN0100	TAWSN2500S32
	TAWKH**2500TG**	★	25.0	10.7	9.0	TAWMN0100 TAWLN0100	TAWMN2500S32 TAWLN2500S32
	TAWKH**2550TG**	★	25.5	10.6	9.0	TAWSN0102	TAWSN2600S32
	TAWKH**2600TG**	★	26.0	10.5	9.0	TAWMN0102 TAWLN0102	TAWMN2600S32 TAWLN2600S32
	TAWKH**2650TG**	★	26.5	10.4	9.0	TAWSN0105	TAWSN2700S32
	TAWKH**2700TG**	★	27.0	10.3	9.0	TAWMN0105 TAWLN0105	TAWMN2700S32 TAWLN2700S32
	TAWKH**2750TG**	★	27.5	11.3	10.0	TAWSN0107	TAWSN2800S32
	TAWKH**2800TG**	★	28.0	11.2	10.0	TAWMN0107 TAWLN0107	TAWMN2800S32 TAWLN2800S32
	TAWKH**2850TG**	★	28.5	11.1	10.0	TAWSN0110	TAWSN2900S32
	TAWKH**2900TG**	★	29.0	11.0	10.0	TAWMN0110 TAWLN0110	TAWMN2900S32 TAWLN2900S32
	TAWKH**2950TG**	★	29.5	10.9	10.0	TAWSN0112	TAWSN3000S32
	TAWKH**3000TG**	★	30.0	10.8	10.0	TAWMN0112 TAWLN0112	TAWMN3000S32 TAWLN3000S32

APPLICATION EXAMPLES

Holder	TAWSN2400S32	TAWMN0046	TAWSN1600S20
Insert (Grade)	TAWNH2400T (VP15TF)	TAWNH0046T (VP15TF)	TAWN1610T (VP15TF)
Work piece	AISI 1050 	Carbon Steel (200HB) 	Carbon Steel 
Component	Ring	Ring gear	Machine parts
Cutting Conditions: Cutting Speed (SFM)	295	230	260
Cutting Conditions: Feed (IPR)	.012	.012	.012
Cutting Conditions: Penetration Rate (inch/min)	14.1	14.6	18.7
Cutting mode	Mist coolant	Water Soluble Oil (Internal coolant)	Water Soluble Oil (Internal coolant)
Machine Type	Machining center	Machining center	Machining center
Result			

Holder	TAWSN2700S32	TAWLN2200S25	TAWSB2500S32
Insert (Grade)	TAWN2700T (VP15TF)	TAWN2200T (VP15TF)	TAWB2470T (VP15TF)
Work piece	Alloy Steel 	AISI 60-40-18 	Alloy Steel 
Component	Tube	Steel for bridges	Steel for bridges
Cutting Conditions: Cutting Speed (SFM)	260	230	195
Cutting Conditions: Feed (IPR)	.012	.008	.012
Cutting Conditions: Penetration Rate (inch/min)	11.1	8	9.1
Cutting mode	Water Soluble Oil (Internal coolant)	Water Soluble Oil (Internal coolant)	Mist coolant
Machine Type	NC lathe	Machining center	Gundrill machine
Result			

Holder	TAWSN1800S20	TAWSN1600S20
Insert (Grade)	TAWKH1750TG (DP5010)	TAWKH1550TG (DP5010)
Work piece	AISI No35 B 	AISI No35 B 
Component	Machine parts	Machine parts
Cutting Conditions: Cutting Speed (SFM)	390	240
Cutting Conditions: Feed (IPR)	.010	.008
Cutting Conditions: Penetration Rate (inch/min)	21.5	11.8
Cutting mode	Water Soluble Oil (Internal coolant)	Water Soluble Oil (Internal coolant)
Machine Type	Machining center	Machining center
Result		

Memo

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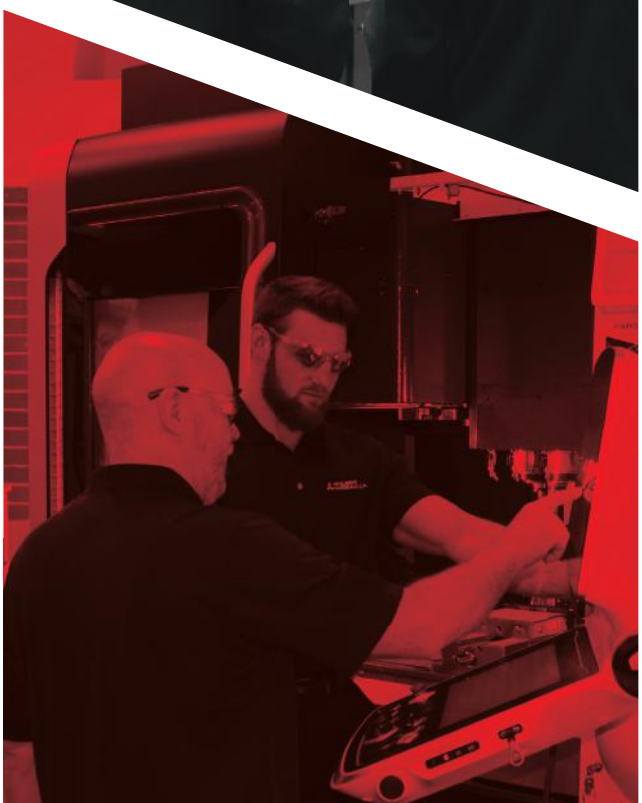
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- Don't handle inserts and chips without gloves.
- Please machine within the recommended application range and exchange expired tools with new ones in advance of breakage.
- Please use safety covers and wear safety glasses.
- When using compounded cutting oils, please take fire precautions.
- When attaching inserts or spare parts, please use only the correct wrench or driver.
- When using rotating tools, please make a trial run to check run-out, vibration and abnormal sounds etc.

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B190A-US-2020.7