



INFO
TYPHOON TA-HTA-4HTA
TYPHOON PU-HPU
TYPHOON SUH
TYPHOON ALH
TYPHOON HRC
TYPHOON SUH MINI
TYPHOON HL
C-SD-TA
LFTA
SUTA
HSS-HSS/CO DRILLS
G2
MDTA
HF VH/UP
MEF
ALU
MEX
UH
HSS/CO-HSSP END MILLS
CARBIDE BURRS

## TYPHOON TA-HTA-4HTA

HIGH PERFORMANCE - GENERAL PURPOSE

🇬🇧 The tool of choice for multi-purpose drilling on ISO P, M, K below 1100 N/mm<sup>2</sup>.

🇮🇹 La soluzione ideale per la foratura di materiali ISO P, M, K sino a 1100 N/mm<sup>2</sup>.

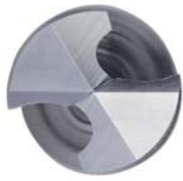
🇩🇪 Die optimale Lösung für das Bohren der Materialien ISO P, M, K bis zu 1100 N/mm<sup>2</sup>.

🇫🇷 La solution idéale pour le perçage de matériaux ISO P, M, K jusqu'à 1100 N/mm<sup>2</sup>.

🇪🇸 La solución ideal para el taladro de materiales ISO P, M, K hasta 1100 N/mm<sup>2</sup>.

🇷🇺 Идеальное решение для сверления материалов по ISO P, M, K до 1100 Н/мм<sup>2</sup>.

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**TA**

**HTA**

**TA-HTA**

- Self-centering geometry for accurate holes
- Curved cutting edge for low cutting forces.
- High relief angle: reduces cutting forces, improves chip shape and ejection
- Wide chip pocket: improves chip ejection
- Back taper geometry: improves the cutting performance
- Modified oil holes: improves coolant feed
- Substrate and coating: specifically selected for high wear resistance, long and reliable life


**TA-HTA**

- Affûtage autocentré pour un perçage plus précis
- Profil de l'arête ondulé pour faible effort de coupe
- Géométrie de l'arête avec dépouille accentuée pour réduire l'effort de coupe et améliorer la forme et le contrôle des copeaux
- Goujures recourbées et larges pour améliorer l'évacuation des copeaux
- Géométrie du corps avec conicité arrière pour faciliter la coupe
- Trous d'arrosage avec géométrie modifiée pour apporter une lubrification plus importante.
- Substrat et revêtement spécifiques pour garantir durée et fiabilité


**TA-HTA**

- Affilatura autocentrante per fori precisi
- Profilo del tagliente ondulato per basso sforzo di taglio
- Geometria del tagliente con spoglia accentuata per ridurre lo sforzo di taglio e migliorare la forma e il controllo dei trucioli
- Gole ricurve e ampie per migliorare l'evacuazione dei trucioli
- Geometria del corpo con conicità posteriore per agevolare l'azione di taglio
- Fori di refrigerazione con geometria modificata per un maggior apporto di refrigerante
- Substrato e rivestimento specifici per garantire durata e affidabilità


**TA-HTA**

- Afilado autocentrante para agujeros precisos
- Perfil del filo ondulado, para bajo esfuerzo de corte
- Geometría del filo con salida acentuada para reducir el esfuerzo de corte y mejorar la forma y el control de las virutas
- Ranuras curvadas y amplias para mejorar la evacuación de las virutas
- Geometría del cuerpo con conicidad posterior para facilitar la acción de corte
- Agujeros de refrigeración con geometría modificada para una mayor aportación de refrigerante
- Sustrato y revestimiento específicos para garantizar duración y fiabilidad


**TA-HTA**

- Selbstzentrierender Schliff für präzise Bohrungen
- Gewelltes Schneidkantenprofil für geringen Schneiddruck
- Geometrie der Schneidkante mit ausgeprägtem Hinterschliff zur Reduzierung des Schneiddrucks und zur Verbesserung der Späneform und -kontrolle
- Gebogene und breite Nuten zur Verbesserung der Späneabführung
- Geometrie des Körpers mit konischem hinteren Bereich zur Erleichterung des Schnittvorgangs
- Kühlöffnungen mit abgeänderter Geometrie für einen verbesserten Kühlmittelzufluss
- Spezielles Trägermaterial und spezielle Beschichtung zur Gewährleistung von Standzeit und Zuverlässigkeit


**TA-HTA**

- Самоцентрирующаяся заточка для сверления отверстий высокой точности
- Закругленный профиль режущей кромки для низких режущих усилий
- Большой угол наклона спиральной канавки для уменьшения сил резания и улучшения условий удаления стружки
- Широкие стружечные канавки для лучшего вывода стружки
- Геометрия с обратным конусом для повышения производительности
- Большие отверстия: увеличена эффективность подвода СОЖ
- Специальное покрытие для повышения стойкости инструмента


**4HTA**

**4HTA 8xD**

- Self-centering geometry for accurate holes
- 4 margin lands: reliable machining for highly accurate and straight holes even in deep drilling
- Straight cutting edge: short chips for easy evacuation and high reliability
- Special edge design: high performance and edge protection
- Back taper geometry: improves the cutting performance
- Chip pocket finishing: highly polished to reduce welding and improves chip ejection
- Large oil holes: improves coolant feed
- Substrate and coating: specifically selected for high wear resistance, long and reliable life


**4HTA 8xD**

- Affilatura autocentrante per fori precisi
- Geometria con "4 Margini": fori rettilinei e precisi, anche nel caso di profondità elevate.
- Profilo del tagliente diritto e rinforzato: genera trucioli corti e garantisce grande affidabilità
- Geometria del tagliente con affilatura specifica a protezione del tagliente e degli spigoli
- Geometria del corpo con conicità posteriore per agevolare l'azione di taglio
- Finitura gole: lappate per ridurre il problema dell'incollaggio e facilitare l'evacuazione dei trucioli
- Fori di refrigerazione con geometria modificata per un maggior apporto di refrigerante
- Substrato e rivestimento specifici per garantire durata e affidabilità


**4HTA 8xD**

- Selbstzentrierender Schliff für präzise Bohrungen
- Geometrie mit „4 Fasen“: gerade und präzise Bohrungen, auch bei großen Tiefen.
- Gerades und verstärktes Schneidkantenprofil: zur Erzeugung kurzer Späne und zur Gewährleistung hoher Zuverlässigkeit
- Geometrie der Schneidkante mit speziellem Schliff zum Schutz von Schneidkante und Kanten
- Geometrie des Körpers mit konischem hinteren Bereich zur Erleichterung des Schnitvorgangs
- Schlichtbearbeitung der Nuten: geläpft, um Probleme durch Verkleben zu reduzieren und um die Späneabführung zu erleichtern
- Kühlöffnungen mit abgeänderter Geometrie für einen verbesserten Kühlmittelzufluss
- Spezielles Trägermaterial und spezielle Beschichtung zur Gewährleistung von Standzeit und Zuverlässigkeit


**4HTA 8xD**

- Affûtage autocentré pour un perçage plus précis.
- Géométrie avec « 4 listels » : trous droits et précis, même en présence de trous profonds.
- Profil de l'arête droit et renforcé : il génère des copeaux courts et garantit une grande fiabilité
- Géométrie de l'arête avec affûtage spécifique pour protéger l'arête et les angles
- Géométrie du corps avec conicité arrière pour faciliter l'action de coupe
- Finition des goujures : polie pour réduire le problème du collage et faciliter l'évacuation des copeaux
- Trous de lubrification avec géométrie modifiée pour un apport de lubrifiant plus important
- Substrat et revêtement spécifiques pour garantir durée et fiabilité


**4HTA 8xD**

- Afilado autocentrante para agujeros precisos
- Geometría con «4 Márgenes»: agujeros rectilíneos y precisos, incluso en caso de profundidades elevadas.
- Perfil del filo recto y reforzado: genera virutas cortas y garantiza una gran fiabilidad
- Geometría del filo con afilado específico para proteger el filo y los ángulos
- Geometría del cuerpo con conicidad posterior para facilitar la acción de corte
- Acabado ranuras: lapeadas para reducir el problema del encolado y facilitar la evacuación de las virutas
- Agujeros de refrigeración con geometría modificada para una mayor aportación de refrigerante
- Sustrato y revestimiento específicos para garantizar duración y fiabilidad


**4HTA 8xD**

- Самоцентрирующаяся заточка для сверления отверстий высокой точности
- Геометрия с 4 режущими кромками: надежная обработка и высокая точность отверстия, даже при глубоком сверлении
- Прямые режущие кромки: легкий вывод короткой стружки и высокая эффективность
- Геометрия режущих кромок со специальной заточкой: высокая производительность и защита кромок
- Геометрия с обратным конусом: повышение производительности
- Отполированные стружечные канавки: уменьшают вероятность приваривания стружки и облегчают ее вывод
- Большие отверстия: увеличена эффективность подвода СОЖ
- Специальное покрытие для повышения стойкости инструмента

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CARBIDE BURRS

# 343TA-318N

general purpose, coated (343TA) and uncoated (318N)

3XD

DIN  
6539

TA

MG  
PV200

MG  
BR

140°

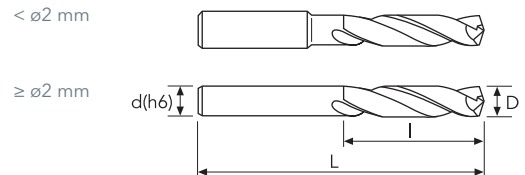
30°

**343TA**
**318N**



P	M	K	N	S	H	
★	☆	☆	☆			<b>343TA</b>
★	☆	☆	☆			<b>318N</b>

★ 1st choice ☆ suitable



						343TA		318N	
D(h7)	D Tol.	d(h6)	l	l1	L	EDP No.	Stock	EDP No.	Stock
1.00	0/-0.010	2	6		40	343TA0100	●	P318N0100	●
1.10	0/-0.010	2	7		40	343TA0110	●	P318N0110	●
1.20	0/-0.010	2	8		40	343TA0120	●	P318N0120	●
1.30	0/-0.010	2	8		40	343TA0130	●	P318N0130	●
1.40	0/-0.010	2	9		40	343TA0140	●	P318N0140	●
1.50	0/-0.010	2	9		40	343TA0150	●	P318N0150	●
1.60	0/-0.010	2	10		40	343TA0160	●	P318N0160	●
1.70	0/-0.010	2	10		40	343TA0170	●	P318N0170	●
1.80	0/-0.010	2	11		40	343TA0180	●	P318N0180	●
1.90	0/-0.010	2	11		40	343TA0190	●	P318N0190	●
2.00	0/-0.010	2	12		40	343TA0200	●	P318N0200	●
2.10	0/-0.010	2.1	12		40	343TA0210	●	P318N0210	●
2.20	0/-0.010	2.2	13		40	343TA0220	●	P318N0220	●
2.30	0/-0.010	2.3	13		46	343TA0230	●	P318N0230	●
2.40	0/-0.010	2.4	14		46	343TA0240	●	P318N0240	●
2.50	0/-0.010	2.5	14		46	343TA0250	●	P318N0250	●
2.60	0/-0.010	2.6	14		46	343TA0260	●	P318N0260	●
2.70	0/-0.010	2.7	16		46	343TA0270	●	P318N0270	●
2.80	0/-0.010	2.8	16		49	343TA0280	●	P318N0280	●
2.90	0/-0.010	2.9	16		49	343TA0290	●	P318N0290	●
3.00	0/-0.010	3	16		49	343TA0300	●	P318N0300	●
3.10	0/-0.012	3.1	18		49	343TA0310	●	P318N0310	●
3.20	0/-0.012	3.2	18		49	343TA0320	●	P318N0320	●
3.30	0/-0.012	3.3	18		52	343TA0330	●	P318N0330	●
3.40	0/-0.012	3.4	20		52	343TA0340	●	P318N0340	●
3.50	0/-0.012	3.5	20		52	343TA0350	●	P318N0350	●
3.60	0/-0.012	3.6	20		52	343TA0360	●	P318N0360	●
3.70	0/-0.012	3.7	20		52	343TA0370	●	P318N0370	●
3.80	0/-0.012	3.8	22		55	343TA0380	●	P318N0380	●
3.90	0/-0.012	3.9	22		55	343TA0390	●	P318N0390	●
4.00	0/-0.012	4	22		55	343TA0400	●	P318N0400	●
4.10	0/-0.012	4.1	22		55	343TA0410	●	P318N0410	●
4.20	0/-0.012	4.2	22		55	343TA0420	●	P318N0420	●
4.30	0/-0.012	4.3	24		58	343TA0430	●	P318N0430	●
4.40	0/-0.012	4.4	24		58	343TA0440	●	P318N0440	●
4.50	0/-0.012	4.5	24		58	343TA0450	●	P318N0450	●
4.60	0/-0.012	4.6	24		58	343TA0460	●	P318N0460	●
4.70	0/-0.012	4.7	24		58	343TA0470	●	P318N0470	●
4.80	0/-0.012	4.8	26		62	343TA0480	●	P318N0480	●

● stock standard ○ non-standard stock ▽ stock exhaustion

# 343TA-318N

general purpose, coated (343TA) and uncoated (318N)

3XD

DIN  
6539

TA

MG  
PV200

MG  
BR

140°

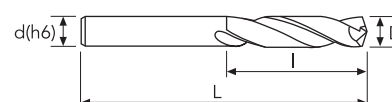
30°

**343TA**
**318N**



P	M	K	N	S	H	
★	☆	☆	☆			<b>343TA</b>
★	☆	☆	☆			<b>318N</b>

★ 1st choice ☆ suitable



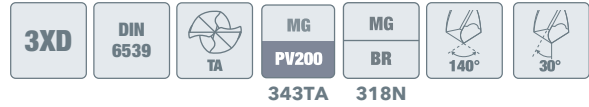
D(h7)	D Tol.	d(h6)	l	l1	L	343TA		318N	
						EDP No.	Stock	EDP No.	Stock
4.90	0/-0.012	4.9	26		62	343TA0490	●	P318N0490	●
5.00	0/-0.012	5	26		62	343TA0500	●	P318N0500	●
5.10	0/-0.012	5.1	26		62	343TA0510	●	P318N0510	●
5.20	0/-0.012	5.2	26		62	343TA0520	●	P318N0520	●
5.30	0/-0.012	5.3	26		66	343TA0530	●	P318N0530	●
5.40	0/-0.012	5.4	28		66	343TA0540	●	P318N0540	●
5.50	0/-0.012	5.5	28		66	343TA0550	●	P318N0550	●
5.60	0/-0.012	5.6	28		66	343TA0560	●	P318N0560	●
5.70	0/-0.012	5.7	28		66	343TA0570	●	P318N0570	●
5.80	0/-0.012	5.8	28		70	343TA0580	●	P318N0580	●
5.90	0/-0.012	5.9	28		70	343TA0590	●	P318N0590	●
6.00	0/-0.012	6	28		70	343TA0600	●	P318N0600	●
6.10	0/-0.015	6.1	31		70	343TA0610	●	P318N0610	●
6.20	0/-0.015	6.2	31		70	343TA0620	●	P318N0620	●
6.30	0/-0.015	6.3	31		70	343TA0630	●	P318N0630	●
6.40	0/-0.015	6.4	31		70	343TA0640	●	P318N0640	●
6.50	0/-0.015	6.5	31		70	343TA0650	●	P318N0650	●
6.60	0/-0.015	6.6	31		70	343TA0660	●	P318N0660	●
6.70	0/-0.015	6.7	31		70	343TA0670	●	P318N0670	●
6.80	0/-0.015	6.8	34		74	343TA0680	●	P318N0680	●
6.90	0/-0.015	6.9	34		74	343TA0690	●	P318N0690	●
7.00	0/-0.015	7	34		74	343TA0700	●	P318N0700	●
7.10	0/-0.015	7.1	34		74	343TA0710	●	P318N0710	●
7.20	0/-0.015	7.2	34		74	343TA0720	●	P318N0720	●
7.30	0/-0.015	7.3	34		79	343TA0730	●	P318N0730	●
7.40	0/-0.015	7.4	34		79	343TA0740	●	P318N0740	●
7.50	0/-0.015	7.5	34		79	343TA0750	●	P318N0750	●
7.60	0/-0.015	7.6	37		79	343TA0760	●	P318N0760	○
7.70	0/-0.015	7.7	37		79	343TA0770	●	P318N0770	○
7.80	0/-0.015	7.8	37		79	343TA0780	●	P318N0780	●
7.90	0/-0.015	7.9	37		79	343TA0790	●	P318N0790	○
8.00	0/-0.015	8	37		79	343TA0800	●	P318N0800	●
8.10	0/-0.015	8.1	37		79	343TA0810	●	P318N0810	●
8.20	0/-0.015	8.2	37		79	343TA0820	●	P318N0820	●
8.30	0/-0.015	8.3	37		84	343TA0830	●	P318N0830	●
8.40	0/-0.015	8.4	37		84	343TA0840	●	P318N0840	○
8.50	0/-0.015	8.5	37		84	343TA0850	●	P318N0850	●
8.60	0/-0.015	8.6	40		84	343TA0860	●	P318N0860	●
8.70	0/-0.015	8.7	40		84	343TA0870	●	P318N0870	●

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● stock standard ○ non-standard stock ▽ stock exhaustion

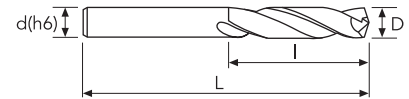
# 343TA-318N

general purpose, coated (343TA) and uncoated (318N)



P	M	K	N	S	H	
★	☆	☆	☆			<b>343TA</b>
★	☆	☆	☆			<b>318N</b>

★ 1st choice ☆ suitable



						343TA		318N	
D(h7)	D Tol.	d(h6)	l	l1	L	EDP No.	Stock	EDP No.	Stock
8.80	0/-0.015	8.8	40		84	343TA0880	●	P318N0880	●
8.90	0/-0.015	8.9	40		84	343TA0890	●	P318N0890	○
9.00	0/-0.015	9	40		84	343TA0900	●	P318N0900	●
9.10	0/-0.015	9.1	40		84	343TA0910	●	P318N0910	○
9.20	0/-0.015	9.2	40		84	343TA0920	●	P318N0920	●
9.30	0/-0.015	9.3	40		89	343TA0930	●	P318N0930	●
9.40	0/-0.015	9.4	40		89	343TA0940	●	P318N0940	○
9.50	0/-0.015	9.5	40		89	343TA0950	●	P318N0950	●
9.60	0/-0.015	9.6	43		89	343TA0960	●	P318N0960	○
9.70	0/-0.015	9.7	43		89	343TA0970	●	P318N0970	○
9.80	0/-0.015	9.8	43		89	343TA0980	●	P318N0980	●
9.90	0/-0.015	9.9	43		89	343TA0990	●	P318N0990	○
10.00	0/-0.015	10	43		89	343TA1000	●	P318N1000	●
10.20	0/-0.018	10.2	43		89	343TA1020	●	P318N1020	●
10.50	0/-0.018	10.5	43		95	343TA1050	●	P318N1050	●
11.00	0/-0.018	11	47		95	343TA1100	●	P318N1100	●
11.50	0/-0.018	11.5	47		102	343TA1150	●	P318N1150	●
12.00	0/-0.018	12	51		102	343TA1200	●	P318N1200	●
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13.00	0/-0.018	13	51		103	343TA1300	●	P318N1300	●
13.50	0/-0.018	13.5	54		107	343TA1350	●		
14.00	0/-0.018	14	54		107	343TA1400	●		
14.50	0/-0.018	14.5	56		111	343TA1450	●		
15.00	0/-0.018	15	56		111	343TA1500	●		
15.50	0/-0.018	15.5	58		115	343TA1550	●		
16.00	0/-0.018	16	58		115	343TA1600	●		

● stock standard ○ non-standard stock ▽ stock exhaustion

### 343TA

	Material Group ISO 513	P1 P2 P3			M1 M2			K1			N1 N2		
	Hardness/Rm	< 800 N/mm <sup>2</sup>			< 750 N/mm <sup>2</sup>			150-250 HB					
	Vc (m/min)	<b>80-100</b>			<b>35-45</b>			<b>80-100</b>			<b>140-180</b>		
	D (mm)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)
1	28660	0.050	1430	12740	0.035	450	28660	0.050	1430	50960	0.065	3310	
2	14330	0.070	1000	6370	0.049	310	14330	0.070	1000	25480	0.091	2320	
3	9550	0.086	820	4250	0.060	260	9550	0.086	820	16990	0.112	1900	
4	7170	0.126	900	3180	0.088	280	7170	0.126	900	12740	0.164	2090	
5	5730	0.131	750	2550	0.092	230	5730	0.131	750	10190	0.170	1740	
6	4780	0.145	690	2120	0.102	220	4780	0.145	690	8490	0.189	1600	
7	4090	0.165	670	1820	0.116	210	4090	0.165	670	7280	0.215	1560	
8	3580	0.185	660	1590	0.130	210	3580	0.185	660	6370	0.241	1530	
9	3180	0.205	650	1420	0.144	200	3180	0.205	650	5660	0.267	1510	
10	2870	0.224	640	1270	0.157	200	2870	0.224	640	5100	0.291	1490	
11	2610	0.244	640	1160	0.171	200	2610	0.244	640	4630	0.317	1470	
12	2390	0.263	630	1060	0.184	200	2390	0.263	630	4250	0.342	1450	
13	2200	0.282	620	980	0.197	190	2200	0.282	620	3920	0.367	1440	
14	2050	0.302	620	910	0.211	190	2050	0.302	620	3640	0.393	1430	
15	1910	0.315	600	850	0.221	190	1910	0.315	600	3400	0.410	1390	
16	1790	0.336	600	800	0.235	190	1790	0.336	600	3180	0.437	1390	

### 318N

	Material Group ISO 513	P1 P2 P3			M1 M2			K1			N1 N2		
	Hardness/Rm	< 800 N/mm <sup>2</sup>			< 750 N/mm <sup>2</sup>			150-250 HB					
	Vc (m/min)	<b>60-80</b>			<b>20-30</b>			<b>50-70</b>			<b>100-140</b>		
	D (mm)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)
1	22290	0.035	780	7960	0.025	200	19110	0.032	600	38220	0.046	1740	
2	11150	0.050	560	3980	0.035	140	9550	0.045	430	19110	0.065	1240	
3	7430	0.065	480	2650	0.046	120	6370	0.059	370	12740	0.085	1080	
4	5570	0.080	450	1990	0.056	110	4780	0.072	340	9550	0.104	990	
5	4460	0.095	420	1590	0.067	110	3820	0.086	330	7640	0.124	940	
6	3720	0.110	410	1330	0.077	100	3180	0.099	310	6370	0.143	910	
7	3180	0.125	400	1140	0.088	100	2730	0.113	310	5460	0.163	890	
8	2790	0.140	390	1000	0.098	100	2390	0.126	300	4780	0.182	870	
9	2480	0.155	380	880	0.109	100	2120	0.140	300	4250	0.202	860	
10	2230	0.170	380	800	0.119	100	1910	0.153	290	3820	0.221	840	
11	2030	0.185	380	720	0.130	90	1740	0.167	290	3470	0.241	830	
12	1860	0.200	370	660	0.140	90	1590	0.180	290	3180	0.260	830	
13	1710	0.215	370	610	0.151	90	1470	0.194	280	2940	0.280	820	

- INFO
- TYPHOON TA-HTA-4HTA
- TYPHOON PU-HPU
- TYPHOON SUH
- TYPHOON ALH
- TYPHOON HRC
- TYPHOON SUH MINI
- TYPHOON HL
- C-SD-TA
- LFTA
- SUTA
- HSS-HSS/CO DRILLS
- G2
- MDTA
- HF-VH/UP
- MEF
- ALU
- MEX
- UH
- HSS/CO-HSSP END MILLS
- CARBIDE BURRS

# 353TA-353HTA

general purpose, TA and HTA (through coolant)

3XD

DIN  
6537K

TA

HTA

MG  
PV200

140°

30°

**353TA 353HTA**



**353TA**



**353HTA**

P	M	K	N	S	H
★	☆	☆	☆	☆	☆

**353TA**

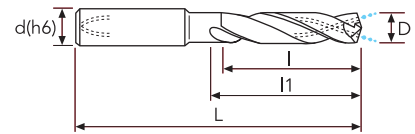
**353HTA**

★ 1st choice ☆ suitable

**353TA**



**353HTA**



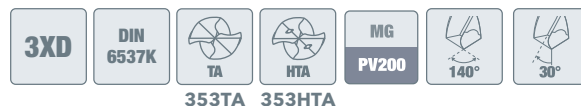
D(m7)	D Tol.	d(h6)	l	l1	L	353TA		353HTA	
						EDP No.	Stock	EDP No.	Stock
3.00	+0.012/+0.002	6	14	20	62	353TA0300	●	353HTA0300	●
3.10	+0.016/+0.004	6	14	20	62	353TA0310	●	353HTA0310	●
3.20	+0.016/+0.004	6	14	20	62	353TA0320	●	353HTA0320	●
3.30	+0.016/+0.004	6	14	20	62	353TA0330	●	353HTA0330	●
3.40	+0.016/+0.004	6	14	20	62	353TA0340	●	353HTA0340	●
3.50	+0.016/+0.004	6	14	20	62	353TA0350	●	353HTA0350	●
3.60	+0.016/+0.004	6	14	20	62	353TA0360	●	353HTA0360	●
3.70	+0.016/+0.004	6	14	20	62	353TA0370	●	353HTA0370	●
3.80	+0.016/+0.004	6	17	24	66	353TA0380	●	353HTA0380	●
3.90	+0.016/+0.004	6	17	24	66	353TA0390	●	353HTA0390	●
4.00	+0.016/+0.004	6	17	24	66	353TA0400	●	353HTA0400	●
4.10	+0.016/+0.004	6	17	24	66	353TA0410	●	353HTA0410	●
4.20	+0.016/+0.004	6	17	24	66	353TA0420	●	353HTA0420	●
4.30	+0.016/+0.004	6	17	24	66	353TA0430	●	353HTA0430	●
4.40	+0.016/+0.004	6	17	24	66	353TA0440	●	353HTA0440	●
4.50	+0.016/+0.004	6	17	24	66	353TA0450	●	353HTA0450	●
4.60	+0.016/+0.004	6	17	24	66	353TA0460	●	353HTA0460	●
4.70	+0.016/+0.004	6	17	24	66	353TA0470	●	353HTA0470	●
4.80	+0.016/+0.004	6	20	28	66	353TA0480	●	353HTA0480	●
4.90	+0.016/+0.004	6	20	28	66	353TA0490	●	353HTA0490	●
5.00	+0.016/+0.004	6	20	28	66	353TA0500	●	353HTA0500	●
5.10	+0.016/+0.004	6	20	28	66	353TA0510	●	353HTA0510	●
5.20	+0.016/+0.004	6	20	28	66	353TA0520	●	353HTA0520	●
5.30	+0.016/+0.004	6	20	28	66	353TA0530	●	353HTA0530	●
5.40	+0.016/+0.004	6	20	28	66	353TA0540	●	353HTA0540	●
5.50	+0.016/+0.004	6	20	28	66	353TA0550	●	353HTA0550	●
5.60	+0.016/+0.004	6	20	28	66	353TA0560	●	353HTA0560	●
5.70	+0.016/+0.004	6	20	28	66	353TA0570	●	353HTA0570	●
5.80	+0.016/+0.004	6	20	28	66	353TA0580	●	353HTA0580	●
5.90	+0.016/+0.004	6	20	28	66	353TA0590	●	353HTA0590	●
6.00	+0.016/+0.004	6	20	28	66	353TA0600	●	353HTA0600	●
6.10	+0.021/+0.006	8	24	34	79	353TA0610	●	353HTA0610	●
6.20	+0.021/+0.006	8	24	34	79	353TA0620	●	353HTA0620	●
6.30	+0.021/+0.006	8	24	34	79	353TA0630	●	353HTA0630	●
6.40	+0.021/+0.006	8	24	34	79	353TA0640	●	353HTA0640	●
6.50	+0.021/+0.006	8	24	34	79	353TA0650	●	353HTA0650	●
6.60	+0.021/+0.006	8	24	34	79	353TA0660	●	353HTA0660	●
6.70	+0.021/+0.006	8	24	34	79	353TA0670	●	353HTA0670	●
6.80	+0.021/+0.006	8	24	34	79	353TA0680	●	353HTA0680	●

● stock standard ○ non-standard stock ▽ stock exhaustion



# 353TA-353HTA

general purpose, TA and HTA (through coolant)



353TA



353HTA

P	M	K	N	S	H
★	☆	☆	☆	☆	
★	☆	☆	☆	☆	

353TA

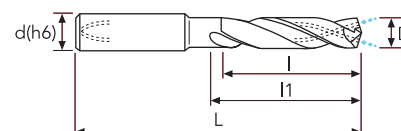
353HTA

★ 1st choice ☆ suitable

353TA



353HTA



D(m7)	D Tol.	d(h6)	l	l1	L	353TA		353HTA	
						EDP No.	Stock	EDP No.	Stock
6.90	+0.021/+0.006	8	24	34	79	353TA0690	●	353HTA0690	●
7.00	+0.021/+0.006	8	24	34	79	353TA0700	●	353HTA0700	●
7.10	+0.021/+0.006	8	29	41	79	353TA0710	●	353HTA0710	●
7.20	+0.021/+0.006	8	29	41	79	353TA0720	●	353HTA0720	●
7.30	+0.021/+0.006	8	29	41	79	353TA0730	●	353HTA0730	●
7.40	+0.021/+0.006	8	29	41	79	353TA0740	●	353HTA0740	●
7.50	+0.021/+0.006	8	29	41	79	353TA0750	●	353HTA0750	●
7.60	+0.021/+0.006	8	29	41	79	353TA0760	●	353HTA0760	●
7.70	+0.021/+0.006	8	29	41	79	353TA0770	●	353HTA0770	●
7.80	+0.021/+0.006	8	29	41	79	353TA0780	●	353HTA0780	●
7.90	+0.021/+0.006	8	29	41	79	353TA0790	●	353HTA0790	●
8.00	+0.021/+0.006	8	29	41	79	353TA0800	●	353HTA0800	●
8.10	+0.021/+0.006	10	35	47	89	353TA0810	●	353HTA0810	●
8.20	+0.021/+0.006	10	35	47	89	353TA0820	●	353HTA0820	●
8.30	+0.021/+0.006	10	35	47	89	353TA0830	●	353HTA0830	●
8.40	+0.021/+0.006	10	35	47	89	353TA0840	●	353HTA0840	●
8.50	+0.021/+0.006	10	35	47	89	353TA0850	●	353HTA0850	●
8.60	+0.021/+0.006	10	35	47	89	353TA0860	●	353HTA0860	●
8.70	+0.021/+0.006	10	35	47	89	353TA0870	●	353HTA0870	●
8.80	+0.021/+0.006	10	35	47	89	353TA0880	●	353HTA0880	●
8.90	+0.021/+0.006	10	35	47	89	353TA0890	●	353HTA0890	●
9.00	+0.021/+0.006	10	35	47	89	353TA0900	●	353HTA0900	●
9.10	+0.021/+0.006	10	35	47	89	353TA0910	●	353HTA0910	●
9.20	+0.021/+0.006	10	35	47	89	353TA0920	●	353HTA0920	●
9.30	+0.021/+0.006	10	35	47	89	353TA0930	●	353HTA0930	●
9.40	+0.021/+0.006	10	35	47	89	353TA0940	●	353HTA0940	●
9.50	+0.021/+0.006	10	35	47	89	353TA0950	●	353HTA0950	●
9.60	+0.021/+0.006	10	35	47	89	353TA0960	●	353HTA0960	●
9.70	+0.021/+0.006	10	35	47	89	353TA0970	●	353HTA0970	●
9.80	+0.021/+0.006	10	35	47	89	353TA0980	●	353HTA0980	●
9.90	+0.021/+0.006	10	35	47	89	353TA0990	●	353HTA0990	●
10.00	+0.021/+0.006	10	35	47	89	353TA1000	●	353HTA1000	●
10.10	+0.025/+0.007	12	40	55	102	353TA1010	●		
10.20	+0.025/+0.007	12	40	55	102	353TA1020	●	353HTA1020	●
10.30	+0.025/+0.007	12	40	55	102	353TA1030	●		
10.40	+0.025/+0.007	12	40	55	102	353TA1040	●	353HTA1040	●
10.50	+0.025/+0.007	12	40	55	102	353TA1050	●	353HTA1050	●
10.60	+0.025/+0.007	12	40	55	102	353TA1060	●	353HTA1060	●
10.70	+0.025/+0.007	12	40	55	102	353TA1070	●		

- INFO
- TYPHOON TA-HTA-4HTA
- TYPHOON PU-HPU
- TYPHOON SUH
- TYPHOON ALH
- TYPHOON HRC
- TYPHOON SUH MINI
- TYPHOON HL
- C-SD-TA
- LFTA
- SUTA
- HSS-HSS/CO DRILLS
- G2
- MDTA
- HF VH/UP
- MEF
- ALU
- MEX
- UH
- HSS/CO-HSSP END MILLS
- CARBIDE BURRS

● stock standard ○ non-standard stock ▽ stock exhaustion

# 353TA-353HTA

general purpose, TA and HTA (through coolant)

3XD

DIN 6537K

TA

HTA

MG PV200

140°

30°

**353TA 353HTA**



353TA



353HTA

P	M	K	N	S	H
★	☆	☆	☆	☆	☆

353TA

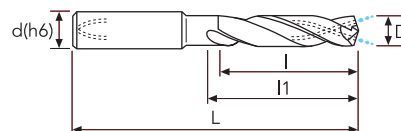
353HTA

★ 1st choice ☆ suitable

353TA



353HTA



D(m7)	D Tol.	d(h6)	l	l1	L	353TA		353HTA	
						EDP No.	Stock	EDP No.	Stock
10.80	+0.025/+0.007	12	40	55	102	353TA1080	●	353HTA1080	●
10.90	+0.025/+0.007	12	40	55	102	353TA1090	○	353HTA1090	○
11.00	+0.025/+0.007	12	40	55	102	353TA1100	●	353HTA1100	●
11.10	+0.025/+0.007	12	40	55	102	353TA1110	○		
11.20	+0.025/+0.007	12	40	55	102	353TA1120	●	353HTA1120	●
11.30	+0.025/+0.007	12	40	55	102	353TA1130	●	353HTA1130	●
11.40	+0.025/+0.007	12	40	55	102	353TA1140	○		
11.50	+0.025/+0.007	12	40	55	102	353TA1150	●	353HTA1150	●
11.60	+0.025/+0.007	12	40	55	102	353TA1160	○		
11.70	+0.025/+0.007	12	40	55	102	353TA1170	○		
11.80	+0.025/+0.007	12	40	55	102	353TA1180	●	353HTA1180	●
11.90	+0.025/+0.007	12	40	55	102	353TA1190	○		
12.00	+0.025/+0.007	12	40	55	102	353TA1200	●	353HTA1200	●
12.20	+0.025/+0.007	14	43	60	107	353TA1220	●	353HTA1220	●
12.50	+0.025/+0.007	14	43	60	107	353TA1250	●	353HTA1250	●
12.80	+0.025/+0.007	14	43	60	107	353TA1280	●	353HTA1280	●
13.00	+0.025/+0.007	14	43	60	107	353TA1300	●	353HTA1300	●
13.30	+0.025/+0.007	14	43	60	107			353HTA1330	●
13.50	+0.025/+0.007	14	43	60	107	353TA1350	●	353HTA1350	●
13.80	+0.025/+0.007	14	43	60	107			353HTA1380	●
14.00	+0.025/+0.007	14	43	60	107	353TA1400	●	353HTA1400	●
14.50	+0.025/+0.007	16	45	65	115	353TA1450	●	353HTA1450	●
15.00	+0.025/+0.007	16	65	65	115	353TA1500	●	353HTA1500	●
15.30	+0.025/+0.007	16	65	65	115			353HTA1530	●
15.50	+0.025/+0.007	16	65	65	115	353TA1550	●	353HTA1550	●
15.80	+0.025/+0.007	16	65	65	115			353HTA1580	●
16.00	+0.025/+0.007	16	65	65	115	353TA1600	●	353HTA1600	●
16.50	+0.025/+0.007	18	73	73	123	353TA1650	●	353HTA1650	●
17.00	+0.025/+0.007	18	73	73	123	353TA1700	●	353HTA1700	●
17.50	+0.025/+0.007	18	73	73	123	353TA1750	●	353HTA1750	●
18.00	+0.025/+0.007	18	73	73	123	353TA1800	●	353HTA1800	●
18.50	+0.029/+0.008	20	79	79	131	353TA1850	●	353HTA1850	●
19.00	+0.029/+0.008	20	79	79	131	353TA1900	●	353HTA1900	●
19.50	+0.029/+0.008	20	79	79	131	353TA1950	●	353HTA1950	●
20.00	+0.029/+0.008	20	79	79	131	353TA2000	●	353HTA2000	●

● stock standard ○ non-standard stock ▽ stock exhaustion

### 353TA

	Material Group ISO 513	P1 P2			P3 P4			P5			P6		
	Hardness/Rm	500-700 N/mm <sup>2</sup>			600-1000 N/mm <sup>2</sup>			900-1200 N/mm <sup>2</sup>			1200-1400 N/mm <sup>2</sup>		
	Vc (m/min)	90-110			80-100			50-70			30-50		
	D (mm)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)
3	10620	0.100	1060	9550	0.085	810	6370	0.075	480	4250	0.060	260	
4	7960	0.110	880	7170	0.094	670	4780	0.083	390	3180	0.066	210	
5	6370	0.120	760	5730	0.102	580	3820	0.090	340	2550	0.072	180	
6	5310	0.135	720	4780	0.115	550	3180	0.101	320	2120	0.081	170	
7	4550	0.150	680	4090	0.128	520	2730	0.113	310	1820	0.090	160	
8	3980	0.165	660	3580	0.140	500	2390	0.124	300	1590	0.099	160	
9	3540	0.180	640	3180	0.153	490	2120	0.135	290	1420	0.108	150	
10	3180	0.195	620	2870	0.166	480	1910	0.146	280	1270	0.117	150	
11	2900	0.210	610	2610	0.179	470	1740	0.158	270	1160	0.126	150	
12	2650	0.230	610	2390	0.196	470	1590	0.173	270	1060	0.138	150	
13	2450	0.250	610	2200	0.213	470	1470	0.188	280	980	0.150	150	
14	2270	0.270	610	2050	0.230	470	1360	0.203	280	910	0.162	150	
15	2120	0.290	610	1910	0.247	470	1270	0.218	280	850	0.174	150	
16	1990	0.310	620	1790	0.264	470	1190	0.233	280	800	0.186	150	
17	1870	0.330	620	1690	0.281	470	1120	0.248	280	750	0.198	150	
18	1770	0.350	620	1590	0.298	470	1060	0.263	280	710	0.210	150	
19	1680	0.370	620	1510	0.315	470	1010	0.278	280	670	0.222	150	
20	1590	0.390	620	1430	0.332	470	960	0.293	280	640	0.234	150	

### 353HTA

	Material Group ISO 513	P1 P2			P3 P4			P5			P6		
	Hardness/Rm	500-700 N/mm <sup>2</sup>			600-1000 N/mm <sup>2</sup>			900-1200 N/mm <sup>2</sup>			1200-1400 N/mm <sup>2</sup>		
	Vc (m/min)	100-140			80-120			70-90			50-70		
	D (mm)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)
3	12740	0.110	1400	10620	0.099	1050	8490	0.088	750	6370	0.077	490	
4	9550	0.130	1240	7960	0.117	930	6370	0.104	660	4780	0.091	430	
5	7640	0.150	1150	6370	0.135	860	5100	0.120	610	3820	0.105	400	
6	6370	0.170	1080	5310	0.153	810	4250	0.136	580	3180	0.119	380	
7	5460	0.190	1040	4550	0.171	780	3640	0.152	550	2730	0.133	360	
8	4780	0.210	1000	3980	0.189	750	3180	0.168	530	2390	0.147	350	
9	4250	0.230	980	3540	0.207	730	2830	0.184	520	2120	0.161	340	
10	3820	0.250	960	3180	0.225	720	2550	0.200	510	1910	0.175	330	
11	3470	0.260	900	2900	0.234	680	2320	0.208	480	1740	0.182	320	
12	3180	0.280	890	2650	0.252	670	2120	0.224	470	1590	0.196	310	
13	2940	0.300	880	2450	0.270	660	1960	0.240	470	1470	0.210	310	
14	2730	0.320	870	2270	0.288	650	1820	0.256	470	1360	0.224	300	
15	2550	0.340	870	2120	0.306	650	1700	0.272	460	1270	0.238	300	
16	2390	0.360	860	1990	0.324	640	1590	0.288	460	1190	0.252	300	
17	2250	0.370	830	1870	0.333	620	1500	0.296	440	1120	0.259	290	
18	2120	0.380	810	1770	0.342	610	1420	0.304	430	1060	0.266	280	
19	2010	0.390	780	1680	0.351	590	1340	0.312	420	1010	0.273	280	
20	1910	0.400	760	1590	0.360	570	1270	0.320	410	960	0.280	270	

- INFO
- TYPHOON TA-HTA-4HTA
- TYPHOON PU-HPU
- TYPHOON SUH
- TYPHOON ALH
- TYPHOON HRC
- TYPHOON SUH MINI
- TYPHOON HL
- C-SD-TA
- LFTA
- SUTA
- HSS-HSS/CO DRILLS
- G2
- MDTA
- HF VH/UP
- MEF
- ALU
- MEX
- UH
- HSS/CO-HSSP END MILLS
- CARBIDE BURRS

### 353TA

Material Group ISO 513	M1 M2			M3			M4			M5					
	Hardness/Rm			< 750 N/mm <sup>2</sup>			550-850 N/mm <sup>2</sup>			650-950 N/mm <sup>2</sup>			850-1200 N/mm <sup>2</sup>		
	Vc (m/min)			35-55			25-45			20-30			15-25		
	D (mm)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)		
3	4780	0.070	330	3720	0.060	220	2650	0.053	140	2120	0.042	90			
4	3580	0.077	280	2790	0.065	180	1990	0.058	110	1590	0.046	70			
5	2870	0.084	240	2230	0.071	160	1590	0.063	100	1270	0.050	60			
6	2390	0.095	230	1860	0.080	150	1330	0.071	90	1060	0.057	60			
7	2050	0.105	220	1590	0.089	140	1140	0.079	90	910	0.063	60			
8	1790	0.116	210	1390	0.098	140	1000	0.087	90	800	0.069	60			
9	1590	0.126	200	1240	0.107	130	880	0.095	80	710	0.076	50			
10	1430	0.137	200	1110	0.116	130	800	0.102	80	640	0.082	50			
11	1300	0.147	190	1010	0.125	130	720	0.110	80	580	0.088	50			
12	1190	0.161	190	930	0.137	130	660	0.121	80	530	0.097	50			
13	1100	0.175	190	860	0.149	130	610	0.131	80	490	0.105	50			
14	1020	0.189	190	800	0.161	130	570	0.142	80	450	0.113	50			
15	960	0.203	190	740	0.173	130	530	0.152	80	420	0.122	50			
16	900	0.217	200	700	0.184	130	500	0.163	80	400	0.130	50			
17	840	0.231	190	660	0.196	130	470	0.173	80	370	0.139	50			
18	800	0.245	200	620	0.208	130	440	0.184	80	350	0.147	50			
19	750	0.259	190	590	0.220	130	420	0.194	80	340	0.155	50			
20	720	0.273	200	560	0.232	130	400	0.205	80	320	0.164	50			



### 353HTA

Material Group ISO 513	M1 M2			M3			M4			M5					
	Hardness/Rm			< 750 N/mm <sup>2</sup>			550-850 N/mm <sup>2</sup>			650-950 N/mm <sup>2</sup>			850-1200 N/mm <sup>2</sup>		
	Vc (m/min)			40-60			30-50			25-35			15-25		
	D (mm)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)		
3	5310	0.070	370	4250	0.056	240	3180	0.049	160	2120	0.042	90			
4	3980	0.090	360	3180	0.072	230	2390	0.063	150	1590	0.054	90			
5	3180	0.100	320	2550	0.080	200	1910	0.070	130	1270	0.060	80			
6	2650	0.110	290	2120	0.088	190	1590	0.077	120	1060	0.066	70			
7	2270	0.130	300	1820	0.104	190	1360	0.091	120	910	0.078	70			
8	1990	0.150	300	1590	0.120	190	1190	0.105	120	800	0.090	70			
9	1770	0.160	280	1420	0.128	180	1060	0.112	120	710	0.096	70			
10	1590	0.175	280	1270	0.140	180	960	0.123	120	640	0.105	70			
11	1450	0.180	260	1160	0.144	170	870	0.126	110	580	0.108	60			
12	1330	0.200	270	1060	0.160	170	800	0.140	110	530	0.120	60			
13	1220	0.215	260	980	0.172	170	730	0.151	110	490	0.129	60			
14	1140	0.230	260	910	0.184	170	680	0.161	110	450	0.138	60			
15	1060	0.245	260	850	0.196	170	640	0.172	110	420	0.147	60			
16	1000	0.260	260	800	0.208	170	600	0.182	110	400	0.156	60			
17	940	0.270	250	750	0.216	160	560	0.189	110	370	0.162	60			
18	880	0.285	250	710	0.228	160	530	0.200	110	350	0.171	60			
19	840	0.300	250	670	0.240	160	500	0.210	110	340	0.180	60			
20	800	0.310	250	640	0.248	160	480	0.217	100	320	0.186	60			



### 353TA

	Material Group ISO 513	K1			K2			K3			K4		
	Hardness/Rm	150-250 HB			150-350 HB			120-260 HB			250-500 HB		
	Vc (m/min)	90-110			80-100			50-70			30-50		
	D (mm)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)
3	10620	0.100	1060	9550	0.085	810	6370	0.075	480	4250	0.060	260	
4	7960	0.110	880	7170	0.094	670	4780	0.083	390	3180	0.066	210	
5	6370	0.120	760	5730	0.102	580	3820	0.090	340	2550	0.072	180	
6	5310	0.135	720	4780	0.115	550	3180	0.101	320	2120	0.081	170	
7	4550	0.150	680	4090	0.128	520	2730	0.113	310	1820	0.090	160	
8	3980	0.165	660	3580	0.140	500	2390	0.124	300	1590	0.099	160	
9	3540	0.180	640	3180	0.153	490	2120	0.135	290	1420	0.108	150	
10	3180	0.195	620	2870	0.166	480	1910	0.146	280	1270	0.117	150	
11	2900	0.210	610	2610	0.179	470	1740	0.158	270	1160	0.126	150	
12	2650	0.230	610	2390	0.196	470	1590	0.173	270	1060	0.138	150	
13	2450	0.250	610	2200	0.213	470	1470	0.188	280	980	0.150	150	
14	2270	0.270	610	2050	0.230	470	1360	0.203	280	910	0.162	150	
15	2120	0.290	610	1910	0.247	470	1270	0.218	280	850	0.174	150	
16	1990	0.310	620	1790	0.264	470	1190	0.233	280	800	0.186	150	
17	1870	0.330	620	1690	0.281	470	1120	0.248	280	750	0.198	150	
18	1770	0.350	620	1590	0.298	470	1060	0.263	280	710	0.210	150	
19	1680	0.370	620	1510	0.315	470	1010	0.278	280	670	0.222	150	
20	1590	0.390	620	1430	0.332	470	960	0.293	280	640	0.234	150	

### 353HTA

	Material Group ISO 513	K1			K2			K3			K4		
	Hardness/Rm	150-250 HB			150-350 HB			120-260 HB			250-500 HB		
	Vc (m/min)	100-120			80-100			60-80			50-70		
	D (mm)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)
3	11680	0.110	1280	9550	0.099	950	7430	0.088	650	6370	0.077	490	
4	8760	0.130	1140	7170	0.117	840	5570	0.104	580	4780	0.091	430	
5	7010	0.150	1050	5730	0.135	770	4460	0.120	540	3820	0.105	400	
6	5840	0.170	990	4780	0.153	730	3720	0.136	510	3180	0.119	380	
7	5000	0.190	950	4090	0.171	700	3180	0.152	480	2730	0.133	360	
8	4380	0.210	920	3580	0.189	680	2790	0.168	470	2390	0.147	350	
9	3890	0.230	890	3180	0.207	660	2480	0.184	460	2120	0.161	340	
10	3500	0.250	880	2870	0.225	650	2230	0.200	450	1910	0.175	330	
11	3180	0.260	830	2610	0.234	610	2030	0.208	420	1740	0.182	320	
12	2920	0.280	820	2390	0.252	600	1860	0.224	420	1590	0.196	310	
13	2690	0.300	810	2200	0.270	590	1710	0.240	410	1470	0.210	310	
14	2500	0.320	800	2050	0.288	590	1590	0.256	410	1360	0.224	300	
15	2340	0.340	800	1910	0.306	580	1490	0.272	410	1270	0.238	300	
16	2190	0.360	790	1790	0.324	580	1390	0.288	400	1190	0.252	300	
17	2060	0.370	760	1690	0.333	560	1310	0.296	390	1120	0.259	290	
18	1950	0.380	740	1590	0.342	540	1240	0.304	380	1060	0.266	280	
19	1840	0.390	720	1510	0.351	530	1170	0.312	370	1010	0.273	280	
20	1750	0.400	700	1430	0.360	510	1110	0.320	360	960	0.280	270	

- INFO
- TYPHOON TA-HTA-4HTA
- TYPHOON PU-HPU
- TYPHOON SUH
- TYPHOON ALH
- TYPHOON HRC
- TYPHOON SUH MINI
- TYPHOON HL
- C-SD-TA
- LFTA
- SUTA
- HSS-HSS/CO DRILLS
- G2
- MDTA
- HF-VH/UP
- MEF
- ALU
- MEX
- UH
- HSS/CO-HSSP END MILLS
- CARBIDE BURRS

### 353HTA

	Material Group ISO 513	N1 > 5% Si			N2			N4					
	Hardness/Rm												
	Vc (m/min)	180-220			160-200			160-180					
D (mm)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)				
3	21230	0.132	2800	19110	0.119	2270	18050	0.119	2140				
4	15920	0.156	2480	14330	0.140	2010	13540	0.140	1900				
5	12740	0.180	2290	11460	0.162	1860	10830	0.162	1750				
6	10620	0.204	2170	9550	0.184	1750	9020	0.184	1660				
7	9100	0.228	2070	8190	0.205	1680	7730	0.205	1590				
8	7960	0.252	2010	7170	0.227	1630	6770	0.227	1540				
9	7080	0.276	1950	6370	0.248	1580	6020	0.248	1500				
10	6370	0.300	1910	5730	0.270	1550	5410	0.270	1460				
11	5790	0.312	1810	5210	0.281	1460	4920	0.281	1380				
12	5310	0.336	1780	4780	0.302	1450	4510	0.302	1360				
13	4900	0.360	1760	4410	0.324	1430	4160	0.324	1350				
14	4550	0.384	1750	4090	0.346	1410	3870	0.346	1340				
15	4250	0.408	1730	3820	0.367	1400	3610	0.367	1330				
16	3980	0.432	1720	3580	0.389	1390	3380	0.389	1310				
17	3750	0.444	1670	3370	0.400	1350	3180	0.400	1270				
18	3540	0.456	1610	3180	0.410	1310	3010	0.410	1240				
19	3350	0.468	1570	3020	0.421	1270	2850	0.421	1200				
20	3180	0.480	1530	2870	0.432	1240	2710	0.432	1170				



- INFO
- TYPHOON TA-HTA-4HTA
- TYPHOON PU-HPU
- TYPHOON SUH
- TYPHOON ALH
- TYPHOON HRC
- TYPHOON SUH MINI
- TYPHOON HL
- C-SD-TA
- LFTA
- SUTA
- HSS-HSS/CO DRILLS
- G2
- MDTA
- HF VH/UP
- MEF
- ALU
- MEX
- UH
- HSS/CO-HSSP END MILLS
- CARBIDE BURRS



### 353TA

	Material Group ISO 513	S1 S2			S3			S4			S5		
	Hardness/Rm	< 35 HRC			35-45 HRC								
	Vc (m/min)	25-35			15-25			30-40			20-30		
	D (mm)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)
3	3180	0.045	140	2120	0.032	70	3720	0.043	160	2650	0.036	100	
4	2390	0.050	120	1590	0.035	60	2790	0.047	130	1990	0.040	80	
5	1910	0.054	100	1270	0.038	50	2230	0.051	110	1590	0.043	70	
6	1590	0.061	100	1060	0.043	50	1860	0.058	110	1330	0.049	60	
7	1360	0.068	90	910	0.047	40	1590	0.064	100	1140	0.054	60	
8	1190	0.074	90	800	0.052	40	1390	0.071	100	1000	0.059	60	
9	1060	0.081	90	710	0.057	40	1240	0.077	100	880	0.065	60	
10	960	0.088	80	640	0.061	40	1110	0.083	90	800	0.070	60	
11	870	0.095	80	580	0.066	40	1010	0.090	90	720	0.076	50	
12	800	0.104	80	530	0.072	40	930	0.098	90	660	0.083	50	
13	730	0.113	80	490	0.079	40	860	0.107	90	610	0.090	50	
14	680	0.122	80	450	0.085	40	800	0.115	90	570	0.097	60	
15	640	0.131	80	420	0.091	40	740	0.124	90	530	0.104	60	
16	600	0.140	80	400	0.098	40	700	0.133	90	500	0.112	60	
17	560	0.149	80	370	0.104	40	660	0.141	90	470	0.119	60	
18	530	0.158	80	350	0.110	40	620	0.150	90	440	0.126	60	
19	500	0.167	80	340	0.117	40	590	0.158	90	420	0.133	60	
20	480	0.176	80	320	0.123	40	560	0.167	90	400	0.140	60	

### 353HTA

	Material Group ISO 513	S1 S2			S3			S4			S5		
	Hardness/Rm	< 35 HRC			35-45 HRC								
	Vc (m/min)	30-40			20-30			40-60			30-40		
	D (mm)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)
3	3720	0.046	170	2650	0.032	90	5310	0.044	230	3720	0.037	140	
4	2790	0.055	150	1990	0.039	80	3980	0.052	210	2790	0.044	120	
5	2230	0.063	140	1590	0.044	70	3180	0.060	190	2230	0.050	110	
6	1860	0.073	140	1330	0.051	70	2650	0.069	180	1860	0.058	110	
7	1590	0.080	130	1140	0.056	60	2270	0.076	170	1590	0.064	100	
8	1390	0.090	130	1000	0.063	60	1990	0.086	170	1390	0.072	100	
9	1240	0.100	120	880	0.070	60	1770	0.095	170	1240	0.080	100	
10	1110	0.110	120	800	0.077	60	1590	0.105	170	1110	0.088	100	
11	1010	0.120	120	720	0.084	60	1450	0.114	170	1010	0.096	100	
12	930	0.130	120	660	0.091	60	1330	0.124	160	930	0.104	100	
13	860	0.137	120	610	0.096	60	1220	0.130	160	860	0.110	90	
14	800	0.145	120	570	0.102	60	1140	0.138	160	800	0.116	90	
15	740	0.153	110	530	0.107	60	1060	0.145	150	740	0.122	90	
16	700	0.160	110	500	0.112	60	1000	0.152	150	700	0.128	90	
17	660	0.170	110	470	0.119	60	940	0.162	150	660	0.136	90	
18	620	0.180	110	440	0.126	60	880	0.171	150	620	0.144	90	
19	590	0.190	110	420	0.133	60	840	0.181	150	590	0.152	90	
20	560	0.200	110	400	0.140	60	800	0.190	150	560	0.160	90	

- INFO
- TYPHOON TA-HTA-4HTA
- TYPHOON PU-HPU
- TYPHOON SUH
- TYPHOON ALH
- TYPHOON HRC
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- TYPHOON HL
- C-SD-TA
- LFTA
- SUTA
- HSS-HSS/CO DRILLS
- G2
- MDTA
- HF-VH/UP
- MEF
- ALU
- MEX
- UH
- HSS/CO-HSSP END MILLS
- CARBIDE BURRS

# 355TA-355HTA

general purpose, TA and HTA (through coolant)

5XD

DIN  
6537L

TA

HTA

MG  
PV200

140°

30°

**355TA 355HTA**



**355TA**



**355HTA**

P	M	K	N	S	H
★	☆	☆	☆	☆	☆

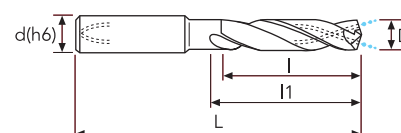
**355TA**  
**355HTA**

★ 1st choice ☆ suitable

**355TA**



**355HTA**



D(m7)	D Tol.	d(h6)	l	l1	L	355TA		355HTA	
						EDP No.	Stock	EDP No.	Stock
3.00	+0.012/+0.002	6	23	28	66	355TA0300	●	355HTA0300	●
3.10	+0.016/+0.004	6	23	28	66	355TA0310	●	355HTA0310	●
3.20	+0.016/+0.004	6	23	28	66	355TA0320	●	355HTA0320	●
3.30	+0.016/+0.004	6	23	28	66	355TA0330	●	355HTA0330	●
3.40	+0.016/+0.004	6	23	28	66	355TA0340	●	355HTA0340	●
3.50	+0.016/+0.004	6	23	28	66	355TA0350	●	355HTA0350	●
3.60	+0.016/+0.004	6	23	28	66	355TA0360	●	355HTA0360	●
3.70	+0.016/+0.004	6	23	28	66	355TA0370	●	355HTA0370	●
3.80	+0.016/+0.004	6	29	36	74	355TA0380	●	355HTA0380	●
3.90	+0.016/+0.004	6	29	36	74	355TA0390	●	355HTA0390	●
4.00	+0.016/+0.004	6	29	36	74	355TA0400	●	355HTA0400	●
4.10	+0.016/+0.004	6	29	36	74	355TA0410	●	355HTA0410	●
4.20	+0.016/+0.004	6	29	36	74	355TA0420	●	355HTA0420	●
4.30	+0.016/+0.004	6	29	36	74	355TA0430	●	355HTA0430	●
4.40	+0.016/+0.004	6	29	36	74	355TA0440	●	355HTA0440	●
4.50	+0.016/+0.004	6	29	36	74	355TA0450	●	355HTA0450	●
4.60	+0.016/+0.004	6	29	36	74	355TA0460	●	355HTA0460	●
4.70	+0.016/+0.004	6	29	36	74	355TA0470	●	355HTA0470	●
4.80	+0.016/+0.004	6	35	44	82	355TA0480	●	355HTA0480	●
4.90	+0.016/+0.004	6	35	44	82	355TA0490	●	355HTA0490	●
5.00	+0.016/+0.004	6	35	44	82	355TA0500	●	355HTA0500	●
5.10	+0.016/+0.004	6	35	44	82	355TA0510	●	355HTA0510	●
5.20	+0.016/+0.004	6	35	44	82	355TA0520	●	355HTA0520	●
5.30	+0.016/+0.004	6	35	44	82	355TA0530	●	355HTA0530	●
5.40	+0.016/+0.004	6	35	44	82	355TA0540	●	355HTA0540	●
5.50	+0.016/+0.004	6	35	44	82	355TA0550	●	355HTA0550	●
5.60	+0.016/+0.004	6	35	44	82	355TA0560	●	355HTA0560	●
5.70	+0.016/+0.004	6	35	44	82	355TA0570	●	355HTA0570	●
5.80	+0.016/+0.004	6	35	44	82	355TA0580	●	355HTA0580	●
5.90	+0.016/+0.004	6	35	44	82	355TA0590	●	355HTA0590	●
6.00	+0.016/+0.004	6	35	44	82	355TA0600	●	355HTA0600	●
6.10	+0.021/+0.006	8	43	53	91	355TA0610	●	355HTA0610	●
6.20	+0.021/+0.006	8	43	53	91	355TA0620	●	355HTA0620	●
6.30	+0.021/+0.006	8	43	53	91	355TA0630	●	355HTA0630	●
6.40	+0.021/+0.006	8	43	53	91	355TA0640	●	355HTA0640	●
6.50	+0.021/+0.006	8	43	53	91	355TA0650	●	355HTA0650	●
6.60	+0.021/+0.006	8	43	53	91	355TA0660	●	355HTA0660	●
6.70	+0.021/+0.006	8	43	53	91	355TA0670	●	355HTA0670	●
6.80	+0.021/+0.006	8	43	53	91	355TA0680	●	355HTA0680	●

● stock standard ○ non-standard stock ▽ stock exhaustion



# 355TA-355HTA

general purpose, TA and HTA (through coolant)

5XD

DIN 6537L

TA

HTA

MG PV200

140°

30°

**355TA 355HTA**



355TA



355HTA

P	M	K	N	S	H
★	☆	☆	☆	☆	☆

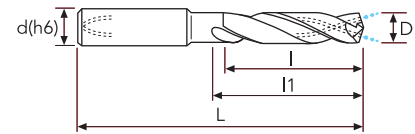
355TA  
355HTA

★ 1st choice ☆ suitable

355TA



355HTA



D(m7)	D Tol.	d(h6)	l	l1	L	355TA		355HTA	
						EDP No.	Stock	EDP No.	Stock
6.90	+0.021/+0.006	8	43	53	91	355TA0690	●	355HTA0690	●
7.00	+0.021/+0.006	8	43	53	91	355TA0700	●	355HTA0700	●
7.10	+0.021/+0.006	8	43	53	91	355TA0710	●	355HTA0710	●
7.20	+0.021/+0.006	8	43	53	91	355TA0720	●	355HTA0720	●
7.30	+0.021/+0.006	8	43	53	91	355TA0730	●	355HTA0730	●
7.40	+0.021/+0.006	8	43	53	91	355TA0740	●	355HTA0740	●
7.50	+0.021/+0.006	8	43	53	91	355TA0750	●	355HTA0750	●
7.60	+0.021/+0.006	8	43	53	91	355TA0760	●	355HTA0760	●
7.70	+0.021/+0.006	8	43	53	91	355TA0770	●	355HTA0770	●
7.80	+0.021/+0.006	8	43	53	91	355TA0780	●	355HTA0780	●
7.90	+0.021/+0.006	8	43	53	91	355TA0790	●	355HTA0790	●
8.00	+0.021/+0.006	8	43	53	91	355TA0800	●	355HTA0800	●
8.10	+0.021/+0.006	10	49	61	103	355TA0810	●	355HTA0810	●
8.20	+0.021/+0.006	10	49	61	103	355TA0820	●	355HTA0820	●
8.30	+0.021/+0.006	10	49	61	103	355TA0830	●	355HTA0830	●
8.40	+0.021/+0.006	10	49	61	103	355TA0840	●	355HTA0840	●
8.50	+0.021/+0.006	10	49	61	103	355TA0850	●	355HTA0850	●
8.60	+0.021/+0.006	10	49	61	103	355TA0860	●	355HTA0860	●
8.70	+0.021/+0.006	10	49	61	103	355TA0870	●	355HTA0870	●
8.80	+0.021/+0.006	10	49	61	103	355TA0880	●	355HTA0880	●
8.90	+0.021/+0.006	10	49	61	103	355TA0890	●	355HTA0890	●
9.00	+0.021/+0.006	10	49	61	103	355TA0900	●	355HTA0900	●
9.10	+0.021/+0.006	10	49	61	103	355TA0910	●	355HTA0910	●
9.20	+0.021/+0.006	10	49	61	103	355TA0920	●	355HTA0920	●
9.30	+0.021/+0.006	10	49	61	103	355TA0930	●	355HTA0930	●
9.40	+0.021/+0.006	10	49	61	103	355TA0940	●	355HTA0940	●
9.50	+0.021/+0.006	10	61	61	103	355TA0950	●	355HTA0950	●
9.60	+0.021/+0.006	10	61	61	103	355TA0960	●	355HTA0960	●
9.70	+0.021/+0.006	10	61	61	103	355TA0970	●	355HTA0970	●
9.80	+0.021/+0.006	10	61	61	103	355TA0980	●	355HTA0980	●
9.90	+0.021/+0.006	10	61	61	103	355TA0990	●	355HTA0990	●
10.00	+0.021/+0.006	10	61	61	103	355TA1000	●	355HTA1000	●
10.10	+0.025/+0.007	12	71	71	118	355TA1010	●		
10.20	+0.025/+0.007	12	71	71	118	355TA1020	●	355HTA1020	●
10.30	+0.025/+0.007	12	71	71	118	355TA1030	●		
10.40	+0.025/+0.007	12	71	71	118	355TA1040	○		
10.50	+0.025/+0.007	12	71	71	118	355TA1050	●	355HTA1050	●
10.60	+0.025/+0.007	12	71	71	118	355TA1060	●		
10.70	+0.025/+0.007	12	71	71	118	355TA1070	●		

- INFO
- TYPHOON TA-HTA-4HTA
- TYPHOON PU-HPU
- TYPHOON SUH
- TYPHOON ALH
- TYPHOON HRC
- TYPHOON SUH MINI
- TYPHOON HL
- C-SD-TA
- LFTA
- SUTA
- HSS-HSS/CO DRILLS
- G2
- MDTA
- HF VH/UP
- MEF
- ALU
- MEX
- UH
- HSS/CO-HSSP END MILLS
- CARBIDE BURRS

● stock standard ○ non-standard stock ▽ stock exhaustion

# 355TA-355HTA

general purpose, TA and HTA (through coolant)

5XD

DIN 6537L

TA

HTA

MG  
PV200

140°

30°

**355TA 355HTA**



355TA



355HTA

P	M	K	N	S	H	
★	☆	☆	☆	☆	☆	
★	☆	☆	☆	☆	☆	

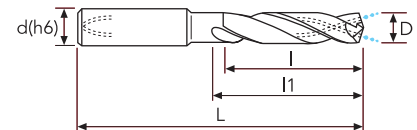
★ 355TA  
★ 355HTA

★ 1st choice ☆ suitable

355TA



355HTA



D(m7)	D Tol.	d(h6)	l	l1	L	355TA		355HTA	
						EDP No.	Stock	EDP No.	Stock
10.80	+0.025/+0.007	12	71	71	118	355TA1080	●	355HTA1080	●
10.90	+0.025/+0.007	12	71	71	118	355TA1090	○	355HTA1090	○
11.00	+0.025/+0.007	12	71	71	118	355TA1100	●	355HTA1100	●
11.10	+0.025/+0.007	12	71	71	118	355TA1110	○		
11.20	+0.025/+0.007	12	71	71	118	355TA1120	●	355HTA1120	●
11.30	+0.025/+0.007	12	71	71	118	355TA1130	●	355HTA1130	●
11.40	+0.025/+0.007	12	71	71	118	355TA1140	●		
11.50	+0.025/+0.007	12	71	71	118	355TA1150	●	355HTA1150	●
11.60	+0.025/+0.007	12	71	71	118	355TA1160	○		
11.70	+0.025/+0.007	12	71	71	118	355TA1170	●		
11.80	+0.025/+0.007	12	71	71	118	355TA1180	●	355HTA1180	●
11.90	+0.025/+0.007	12	71	71	118	355TA1190	○		
12.00	+0.025/+0.007	12	71	71	118	355TA1200	●	355HTA1200	●
12.20	+0.025/+0.007	14	77	77	124	355TA1220	●	355HTA1220	●
12.50	+0.025/+0.007	14	77	77	124	355TA1250	●	355HTA1250	●
12.80	+0.025/+0.007	14	77	77	124			355HTA1280	●
13.00	+0.025/+0.007	14	77	77	124	355TA1300	●	355HTA1300	●
13.30	+0.025/+0.007	14	77	77	124			355HTA1330	●
13.50	+0.025/+0.007	14	77	77	124	355TA1350	●	355HTA1350	●
13.80	+0.025/+0.007	14	77	77	124			355HTA1380	●
14.00	+0.025/+0.007	14	77	77	124	355TA1400	●	355HTA1400	●
14.50	+0.025/+0.007	16	83	83	133	355TA1450	●	355HTA1450	●
15.00	+0.025/+0.007	16	83	83	133	355TA1500	●	355HTA1500	●
15.30	+0.025/+0.007	16	83	83	133			355HTA1530	●
15.50	+0.025/+0.007	16	83	83	133	355TA1550	●	355HTA1550	●
15.80	+0.025/+0.007	16	83	83	133			355HTA1580	●
16.00	+0.025/+0.007	16	83	83	133	355TA1600	●	355HTA1600	●
16.50	+0.025/+0.007	18	93	93	143	355TA1650	●	355HTA1650	●
17.00	+0.025/+0.007	18	93	93	143	355TA1700	●	355HTA1700	●
17.50	+0.025/+0.007	18	93	93	143	355TA1750	●	355HTA1750	●
18.00	+0.025/+0.007	18	93	93	143	355TA1800	●	355HTA1800	●
18.50	+0.029/+0.008	20	101	101	153	355TA1850	●	355HTA1850	●
19.00	+0.029/+0.008	20	101	101	153	355TA1900	●	355HTA1900	●
19.50	+0.029/+0.008	20	101	101	153	355TA1950	○	355HTA1950	●
20.00	+0.029/+0.008	20	101	101	153	355TA2000	●	355HTA2000	●

● stock standard ○ non-standard stock ▽ stock exhaustion

### 355TA

	Material Group ISO 513	P1 P2			P3 P4			P5			P6		
	Hardness/Rm	500-700 N/mm <sup>2</sup>			600-1000 N/mm <sup>2</sup>			900-1200 N/mm <sup>2</sup>			1200-1400 N/mm <sup>2</sup>		
	Vc (m/min)	80-100			70-90			40-60			20-40		
	D (mm)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)
3	9550	0.085	810	8490	0.068	580	5310	0.060	320	3180	0.043	140	
4	7170	0.094	670	6370	0.075	480	3980	0.065	260	2390	0.047	110	
5	5730	0.102	580	5100	0.082	420	3180	0.071	230	1910	0.051	100	
6	4780	0.115	550	4250	0.092	390	2650	0.080	210	1590	0.057	90	
7	4090	0.128	520	3640	0.102	370	2270	0.089	200	1360	0.064	90	
8	3580	0.140	500	3180	0.112	360	1990	0.098	200	1190	0.070	80	
9	3180	0.153	490	2830	0.122	350	1770	0.107	190	1060	0.077	80	
10	2870	0.166	480	2550	0.133	340	1590	0.116	180	960	0.083	80	
11	2610	0.179	470	2320	0.143	330	1450	0.125	180	870	0.089	80	
12	2390	0.196	470	2120	0.156	330	1330	0.137	180	800	0.098	80	
13	2200	0.213	470	1960	0.170	330	1220	0.149	180	730	0.106	80	
14	2050	0.230	470	1820	0.184	330	1140	0.161	180	680	0.115	80	
15	1910	0.247	470	1700	0.197	340	1060	0.173	180	640	0.123	80	
16	1790	0.264	470	1590	0.211	340	1000	0.184	180	600	0.132	80	
17	1690	0.281	470	1500	0.224	340	940	0.196	180	560	0.140	80	
18	1590	0.298	470	1420	0.238	340	880	0.208	180	530	0.149	80	
19	1510	0.315	470	1340	0.252	340	840	0.220	180	500	0.157	80	
20	1430	0.332	470	1270	0.265	340	800	0.232	190	480	0.166	80	

### 355HTA

	Material Group ISO 513	P1 P2			P3 P4			P5			P6		
	Hardness/Rm	500-700 N/mm <sup>2</sup>			600-1000 N/mm <sup>2</sup>			900-1200 N/mm <sup>2</sup>			1200-1400 N/mm <sup>2</sup>		
	Vc (m/min)	100-120			80-100			60-80			40-60		
	D (mm)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)
3	11680	0.094	1090	9550	0.070	670	7430	0.056	420	5310	0.047	250	
4	8760	0.111	970	7170	0.083	590	5570	0.066	370	3980	0.055	220	
5	7010	0.128	890	5730	0.096	550	4460	0.077	340	3180	0.064	200	
6	5840	0.145	840	4780	0.108	520	3720	0.087	320	2650	0.072	190	
7	5000	0.162	810	4090	0.121	500	3180	0.097	310	2270	0.081	180	
8	4380	0.179	780	3580	0.134	480	2790	0.107	300	1990	0.089	180	
9	3890	0.196	760	3180	0.147	470	2480	0.117	290	1770	0.098	170	
10	3500	0.213	740	2870	0.159	460	2230	0.128	280	1590	0.106	170	
11	3180	0.221	700	2610	0.166	430	2030	0.133	270	1450	0.111	160	
12	2920	0.238	690	2390	0.179	430	1860	0.143	270	1330	0.119	160	
13	2690	0.255	690	2200	0.191	420	1710	0.153	260	1220	0.128	160	
14	2500	0.272	680	2050	0.204	420	1590	0.163	260	1140	0.136	160	
15	2340	0.289	680	1910	0.217	410	1490	0.173	260	1060	0.145	150	
16	2190	0.306	670	1790	0.230	410	1390	0.184	260	1000	0.153	150	
17	2060	0.315	650	1690	0.236	400	1310	0.189	250	940	0.157	150	
18	1950	0.323	630	1590	0.242	390	1240	0.194	240	880	0.162	140	
19	1840	0.332	610	1510	0.249	380	1170	0.199	230	840	0.166	140	
20	1750	0.340	600	1430	0.255	360	1110	0.204	230	800	0.170	140	

- INFO
- TYPHOON TA-HTA-4HTA
- TYPHOON PU-HPU
- TYPHOON SUH
- TYPHOON ALH
- TYPHOON HRC
- TYPHOON SUH MINI
- TYPHOON HL
- C-SD-TA
- LFTA
- SUTA
- HSS-HSS/CO DRILLS
- G2
- MDTA
- HF-VH/UP
- MEF
- ALU
- MEX
- UH
- HSS/CO-HSSP END MILLS
- CARBIDE BURRS

### 355TA

Material Group ISO 513	M1 M2			M3			M4			M5		
	< 750 N/mm <sup>2</sup>			550-850 N/mm <sup>2</sup>			650-950 N/mm <sup>2</sup>			850-1200 N/mm <sup>2</sup>		
	30-50			25-35			20-30			15-25		
Vc (m/min)	n	fn	Vf	n	fn	Vf	n	fn	Vf	n	fn	Vf
D (mm)	(rpm)	(mm/rev)	(mm/min)	(rpm)	(mm/rev)	(mm/min)	(rpm)	(mm/rev)	(mm/min)	(rpm)	(mm/rev)	(mm/min)
3	4250	0.060	250	3180	0.048	150	2650	0.042	110	2120	0.030	60
4	3180	0.065	210	2390	0.052	130	1990	0.046	90	1590	0.033	50
5	2550	0.071	180	1910	0.057	110	1590	0.050	80	1270	0.036	50
6	2120	0.080	170	1590	0.064	100	1330	0.056	70	1060	0.040	40
7	1820	0.089	160	1360	0.071	100	1140	0.062	70	910	0.045	40
8	1590	0.098	160	1190	0.079	90	1000	0.069	70	800	0.049	40
9	1420	0.107	150	1060	0.086	90	880	0.075	70	710	0.054	40
10	1270	0.116	150	960	0.093	90	800	0.081	60	640	0.058	40
11	1160	0.125	140	870	0.100	90	720	0.087	60	580	0.062	40
12	1060	0.137	150	800	0.109	90	660	0.096	60	530	0.068	40
13	980	0.149	150	730	0.119	90	610	0.104	60	490	0.074	40
14	910	0.161	150	680	0.129	90	570	0.112	60	450	0.080	40
15	850	0.173	150	640	0.138	90	530	0.121	60	420	0.086	40
16	800	0.184	150	600	0.148	90	500	0.129	60	400	0.092	40
17	750	0.196	150	560	0.157	90	470	0.137	60	370	0.098	40
18	710	0.208	150	530	0.167	90	440	0.146	60	350	0.104	40
19	670	0.220	150	500	0.176	90	420	0.154	60	340	0.110	40
20	640	0.232	150	480	0.186	90	400	0.162	60	320	0.116	40



### 355HTA

Material Group ISO 513	M1 M2			M3			M4			M5		
	< 750 N/mm <sup>2</sup>			550-850 N/mm <sup>2</sup>			650-950 N/mm <sup>2</sup>			850-1200 N/mm <sup>2</sup>		
	30-50			25-35			20-30			10-20		
Vc (m/min)	n	fn	Vf	n	fn	Vf	n	fn	Vf	n	fn	Vf
D (mm)	(rpm)	(mm/rev)	(mm/min)	(rpm)	(mm/rev)	(mm/min)	(rpm)	(mm/rev)	(mm/min)	(rpm)	(mm/rev)	(mm/min)
3	4250	0.060	250	3180	0.048	150	2650	0.042	110	1590	0.036	60
4	3180	0.077	240	2390	0.061	150	1990	0.054	110	1190	0.046	50
5	2550	0.085	220	1910	0.068	130	1590	0.060	90	960	0.051	50
6	2120	0.094	200	1590	0.075	120	1330	0.065	90	800	0.056	40
7	1820	0.111	200	1360	0.088	120	1140	0.077	90	680	0.066	50
8	1590	0.128	200	1190	0.102	120	1000	0.089	90	600	0.077	50
9	1420	0.136	190	1060	0.109	120	880	0.095	80	530	0.082	40
10	1270	0.149	190	960	0.119	110	800	0.104	80	480	0.089	40
11	1160	0.153	180	870	0.122	110	720	0.107	80	430	0.092	40
12	1060	0.170	180	800	0.136	110	660	0.119	80	400	0.102	40
13	980	0.183	180	730	0.146	110	610	0.128	80	370	0.110	40
14	910	0.196	180	680	0.156	110	570	0.137	80	340	0.117	40
15	850	0.208	180	640	0.167	110	530	0.146	80	320	0.125	40
16	800	0.221	180	600	0.177	110	500	0.155	80	300	0.133	40
17	750	0.230	170	560	0.184	100	470	0.161	80	280	0.138	40
18	710	0.242	170	530	0.194	100	440	0.170	70	270	0.145	40
19	670	0.255	170	500	0.204	100	420	0.179	70	250	0.153	40
20	640	0.264	170	480	0.211	100	400	0.184	70	240	0.158	40



- INFO
- TYPHOON TA-HTA-4HTA
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- TYPHOON SUH
- TYPHOON ALH
- TYPHOON HRC
- TYPHOON SUH MINI
- TYPHOON HL
- C-SD-TA
- LFTA
- SUTA
- HSS-HSS/CO DRILLS
- G2
- MDTA
- HF VH/UP
- MEF
- ALU
- MEX
- UH
- HSS/CO-HSSP END MILLS
- CARBIDE BURRS

### 355TA

	Material Group ISO 513	K1			K2			K3			K4		
	Hardness/Rm	150-250 HB			150-350 HB			120-260 HB			250-500 HB		
	Vc (m/min)	80-100			70-90			40-60			20-40		
	D (mm)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)
3	9550	0.085	810	8490	0.068	580	5310	0.060	320	3180	0.043	140	
4	7170	0.094	670	6370	0.075	480	3980	0.065	260	2390	0.047	110	
5	5730	0.102	580	5100	0.082	420	3180	0.071	230	1910	0.051	100	
6	4780	0.115	550	4250	0.092	390	2650	0.080	210	1590	0.057	90	
7	4090	0.128	520	3640	0.102	370	2270	0.089	200	1360	0.064	90	
8	3580	0.140	500	3180	0.112	360	1990	0.098	200	1190	0.070	80	
9	3180	0.153	490	2830	0.122	350	1770	0.107	190	1060	0.077	80	
10	2870	0.166	480	2550	0.133	340	1590	0.116	180	960	0.083	80	
11	2610	0.179	470	2320	0.143	330	1450	0.125	180	870	0.089	80	
12	2390	0.196	470	2120	0.156	330	1330	0.137	180	800	0.098	80	
13	2200	0.213	470	1960	0.170	330	1220	0.149	180	730	0.106	80	
14	2050	0.230	470	1820	0.184	330	1140	0.161	180	680	0.115	80	
15	1910	0.247	470	1700	0.197	340	1060	0.173	180	640	0.123	80	
16	1790	0.264	470	1590	0.211	340	1000	0.184	180	600	0.132	80	
17	1690	0.281	470	1500	0.224	340	940	0.196	180	560	0.140	80	
18	1590	0.298	470	1420	0.238	340	880	0.208	180	530	0.149	80	
19	1510	0.315	470	1340	0.252	340	840	0.220	180	500	0.157	80	
20	1430	0.332	470	1270	0.265	340	800	0.232	190	480	0.166	80	

### 355HTA

	Material Group ISO 513	K1			K2			K3			K4		
	Hardness/Rm	150-250 HB			150-350 HB			120-260 HB			250-500 HB		
	Vc (m/min)	90-110			70-90			50-70			40-60		
	D (mm)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)
3	10620	0.094	990	8490	0.084	710	6370	0.075	480	5310	0.065	350	
4	7960	0.111	880	6370	0.099	630	4780	0.088	420	3980	0.077	310	
5	6370	0.128	810	5100	0.115	590	3820	0.102	390	3180	0.089	280	
6	5310	0.145	770	4250	0.130	550	3180	0.116	370	2650	0.101	270	
7	4550	0.162	730	3640	0.145	530	2730	0.129	350	2270	0.113	260	
8	3980	0.179	710	3180	0.161	510	2390	0.143	340	1990	0.125	250	
9	3540	0.196	690	2830	0.176	500	2120	0.156	330	1770	0.137	240	
10	3180	0.213	680	2550	0.191	490	1910	0.170	320	1590	0.149	240	
11	2900	0.221	640	2320	0.199	460	1740	0.177	310	1450	0.155	220	
12	2650	0.238	630	2120	0.214	450	1590	0.190	300	1330	0.167	220	
13	2450	0.255	620	1960	0.230	450	1470	0.204	300	1220	0.179	220	
14	2270	0.272	620	1820	0.245	450	1360	0.218	300	1140	0.190	220	
15	2120	0.289	610	1700	0.260	440	1270	0.231	290	1060	0.202	210	
16	1990	0.306	610	1590	0.275	440	1190	0.245	290	1000	0.214	210	
17	1870	0.315	590	1500	0.283	420	1120	0.252	280	940	0.220	210	
18	1770	0.323	570	1420	0.291	410	1060	0.258	270	880	0.226	200	
19	1680	0.332	560	1340	0.298	400	1010	0.265	270	840	0.232	190	
20	1590	0.340	540	1270	0.306	390	960	0.272	260	800	0.238	190	

- INFO
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### 355HTA

	Material Group ISO 513	N1 > 5% Si			N2			N4					
	Hardness/Rm												
	Vc (m/min)	180-220			160-200			160-180					
D (mm)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)				
3	21230	0.112	2380	19110	0.101	1930	18050	0.090	1620				
4	15920	0.133	2110	14330	0.119	1710	13540	0.106	1440				
5	12740	0.153	1950	11460	0.138	1580	10830	0.122	1330				
6	10620	0.173	1840	9550	0.156	1490	9020	0.139	1250				
7	9100	0.194	1760	8190	0.174	1430	7730	0.155	1200				
8	7960	0.214	1710	7170	0.193	1380	6770	0.171	1160				
9	7080	0.235	1660	6370	0.211	1340	6020	0.188	1130				
10	6370	0.255	1620	5730	0.230	1320	5410	0.204	1100				
11	5790	0.265	1540	5210	0.239	1240	4920	0.212	1040				
12	5310	0.286	1520	4780	0.257	1230	4510	0.228	1030				
13	4900	0.306	1500	4410	0.275	1210	4160	0.245	1020				
14	4550	0.326	1490	4090	0.294	1200	3870	0.261	1010				
15	4250	0.347	1470	3820	0.312	1190	3610	0.277	1000				
16	3980	0.367	1460	3580	0.330	1180	3380	0.294	990				
17	3750	0.377	1420	3370	0.340	1140	3180	0.302	960				
18	3540	0.388	1370	3180	0.349	1110	3010	0.310	930				
19	3350	0.398	1330	3020	0.358	1080	2850	0.318	910				
20	3180	0.408	1300	2870	0.367	1050	2710	0.326	880				



- INFO
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### 355TA

	Material Group ISO 513	S1 S2			S3			S4			S5		
	Hardness/Rm	< 35 HRC			35-45 HRC								
	Vc (m/min)	20-30			10-20			25-35			15-25		
	D (mm)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)
3	2650	0.038	100	1590	0.027	40	3180	0.036	120	2120	0.031	60	
4	1990	0.042	80	1190	0.029	40	2390	0.040	100	1590	0.034	50	
5	1590	0.046	70	960	0.032	30	1910	0.044	80	1270	0.037	50	
6	1330	0.052	70	800	0.036	30	1590	0.049	80	1060	0.041	40	
7	1140	0.057	70	680	0.040	30	1360	0.055	70	910	0.046	40	
8	1000	0.063	60	600	0.044	30	1190	0.060	70	800	0.050	40	
9	880	0.069	60	530	0.048	30	1060	0.065	70	710	0.055	40	
10	800	0.075	60	480	0.052	30	960	0.071	70	640	0.060	40	
11	720	0.080	60	430	0.056	20	870	0.076	70	580	0.064	40	
12	660	0.088	60	400	0.062	20	800	0.084	70	530	0.070	40	
13	610	0.096	60	370	0.067	20	730	0.091	70	490	0.077	40	
14	570	0.103	60	340	0.072	20	680	0.098	70	450	0.083	40	
15	530	0.111	60	320	0.078	20	640	0.105	70	420	0.089	40	
16	500	0.119	60	300	0.083	20	600	0.113	70	400	0.095	40	
17	470	0.126	60	280	0.088	20	560	0.120	70	370	0.101	40	
18	440	0.134	60	270	0.094	30	530	0.127	70	350	0.107	40	
19	420	0.142	60	250	0.099	20	500	0.134	70	340	0.113	40	
20	400	0.149	60	240	0.104	30	480	0.142	70	320	0.119	40	

### 355HTA

	Material Group ISO 513	S1 S2			S3			S4			S5		
	Hardness/Rm	< 35 HRC			35-45 HRC								
	Vc (m/min)	25-35			15-25			40-50			25-35		
	D (mm)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)
3	3180	0.039	120	2120	0.027	60	4780	0.037	180	3180	0.031	100	
4	2390	0.047	110	1590	0.033	50	3580	0.044	160	2390	0.037	90	
5	1910	0.054	100	1270	0.037	50	2870	0.051	150	1910	0.043	80	
6	1590	0.062	100	1060	0.043	50	2390	0.059	140	1590	0.050	80	
7	1360	0.068	90	910	0.048	40	2050	0.065	130	1360	0.054	70	
8	1190	0.077	90	800	0.054	40	1790	0.073	130	1190	0.061	70	
9	1060	0.085	90	710	0.060	40	1590	0.081	130	1060	0.068	70	
10	960	0.094	90	640	0.065	40	1430	0.089	130	960	0.075	70	
11	870	0.102	90	580	0.071	40	1300	0.097	130	870	0.082	70	
12	800	0.111	90	530	0.077	40	1190	0.105	120	800	0.088	70	
13	730	0.116	90	490	0.082	40	1100	0.111	120	730	0.093	70	
14	680	0.123	80	450	0.086	40	1020	0.117	120	680	0.099	70	
15	640	0.130	80	420	0.091	40	960	0.124	120	640	0.104	70	
16	600	0.136	80	400	0.095	40	900	0.129	120	600	0.109	70	
17	560	0.145	80	370	0.101	40	840	0.137	120	560	0.116	60	
18	530	0.153	80	350	0.107	40	800	0.145	120	530	0.122	60	
19	500	0.162	80	340	0.113	40	750	0.153	120	500	0.129	60	
20	480	0.170	80	320	0.119	40	720	0.162	120	480	0.136	70	

- INFO
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- HSS/CO-HSSP END MILLS
- CARBIDE BURRS

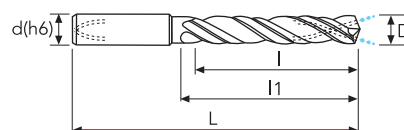
# 3584HTA

4-margin lands, long (8xD), 4HTA (through coolant)



P	M	K	N	S	H
★	★	★	☆	☆	

★ 1st choice ☆ suitable



D(m7)	D Tol.	d(h6)	I	I1	L	EDP No.	Stock
3.00	+0.012/+0.002	6	32	40	85	358HTA0300	●
3.10	+0.016/+0.004	6	32	40	85	358HTA0310	●
3.20	+0.016/+0.004	6	32	40	85	358HTA0320	●
3.30	+0.016/+0.004	6	32	40	85	358HTA0330	●
3.40	+0.016/+0.004	6	32	40	85	358HTA0340	●
3.50	+0.016/+0.004	6	32	40	85	358HTA0350	●
3.60	+0.016/+0.004	6	36	40	85	358HTA0360	●
3.70	+0.016/+0.004	6	36	40	85	358HTA0370	●
3.80	+0.016/+0.004	6	36	40	85	358HTA0380	●
3.90	+0.016/+0.004	6	36	40	85	358HTA0390	○
4.00	+0.016/+0.004	6	38	46	85	358HTA0400	●
4.10	+0.016/+0.004	6	38	46	85	358HTA0410	●
4.20	+0.016/+0.004	6	38	46	85	358HTA0420	●
4.30	+0.016/+0.004	6	40	46	97	358HTA0430	●
4.40	+0.016/+0.004	6	40	46	97	358HTA0440	○
4.50	+0.016/+0.004	6	44	46	97	358HTA0450	●
4.60	+0.016/+0.004	6	44	46	97	358HTA0460	●
4.70	+0.016/+0.004	6	44	46	97	358HTA0470	●
4.80	+0.016/+0.004	6	44	46	97	358HTA0480	●
4.90	+0.016/+0.004	6	44	46	97	358HTA0490	○
5.00	+0.016/+0.004	6	48	57	97	358HTA0500	●
5.10	+0.016/+0.004	6	48	57	97	358HTA0510	●
5.20	+0.016/+0.004	6	48	57	97	358HTA0520	●
5.30	+0.016/+0.004	6	48	57	97	358HTA0530	●
5.40	+0.016/+0.004	6	48	57	97	358HTA0540	○
5.50	+0.016/+0.004	6	48	57	97	358HTA0550	●
5.60	+0.016/+0.004	6	48	57	97	358HTA0560	●
5.70	+0.016/+0.004	6	48	57	97	358HTA0570	○
5.80	+0.016/+0.004	6	48	57	97	358HTA0580	●
5.90	+0.016/+0.004	6	48	57	97	358HTA0590	●
6.00	+0.016/+0.004	6	48	57	97	358HTA0600	●
6.10	+0.021/+0.006	8	64	76	116	358HTA0610	●
6.20	+0.021/+0.006	8	64	76	116	358HTA0620	●
6.30	+0.021/+0.006	8	64	76	116	358HTA0630	●
6.40	+0.021/+0.006	8	64	76	116	358HTA0640	○
6.50	+0.021/+0.006	8	64	76	116	358HTA0650	●
6.60	+0.021/+0.006	8	64	76	116	358HTA0660	○
6.70	+0.021/+0.006	8	64	76	116	358HTA0670	●
6.80	+0.021/+0.006	8	64	76	116	358HTA0680	●

● stock standard ○ non-standard stock ▽ stock exhaustion



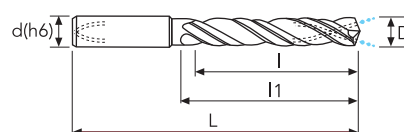
# 3584HTA

4-margin lands, long (8xD), 4HTA (through coolant)



P	M	K	N	S	H
★	★	★	☆	☆	

★ 1st choice ☆ suitable



D(m7)	D Tol.	d(h6)	l	l1	L	EDP No.	Stock
6.90	+0.021/+0.006	8	64	76	116	358HTA0690	●
7.00	+0.021/+0.006	8	64	76	116	358HTA0700	●
7.10	+0.021/+0.006	8	64	76	116	358HTA0710	●
7.20	+0.021/+0.006	8	64	76	116	358HTA0720	●
7.30	+0.021/+0.006	8	64	76	116	358HTA0730	●
7.40	+0.021/+0.006	8	64	76	116	358HTA0740	●
7.50	+0.021/+0.006	8	64	76	116	358HTA0750	●
7.60	+0.021/+0.006	8	64	76	116	358HTA0760	●
7.70	+0.021/+0.006	8	64	76	116	358HTA0770	○
7.80	+0.021/+0.006	8	64	76	116	358HTA0780	●
7.90	+0.021/+0.006	8	64	76	116	358HTA0790	○
8.00	+0.021/+0.006	8	64	76	116	358HTA0800	●
8.10	+0.021/+0.006	10	80	95	142	358HTA0810	●
8.20	+0.021/+0.006	10	80	95	142	358HTA0820	●
8.30	+0.021/+0.006	10	80	95	142	358HTA0830	●
8.40	+0.021/+0.006	10	80	95	142	358HTA0840	○
8.50	+0.021/+0.006	10	80	95	142	358HTA0850	●
8.60	+0.021/+0.006	10	80	95	142	358HTA0860	●
8.70	+0.021/+0.006	10	80	95	142	358HTA0870	●
8.80	+0.021/+0.006	10	80	95	142	358HTA0880	●
8.90	+0.021/+0.006	10	80	95	142	358HTA0890	○
9.00	+0.021/+0.006	10	80	95	142	358HTA0900	●
9.10	+0.021/+0.006	10	80	95	142	358HTA0910	●
9.20	+0.021/+0.006	10	80	95	142	358HTA0920	●
9.30	+0.021/+0.006	10	80	95	142	358HTA0930	●
9.40	+0.021/+0.006	10	80	95	142	358HTA0940	○
9.50	+0.021/+0.006	10	80	95	142	358HTA0950	●
9.60	+0.021/+0.006	10	80	95	142	358HTA0960	○
9.70	+0.021/+0.006	10	80	95	142	358HTA0970	○
9.80	+0.021/+0.006	10	80	95	142	358HTA0980	●
9.90	+0.021/+0.006	10	80	95	142	358HTA0990	○
10.00	+0.021/+0.006	10	80	95	142	358HTA1000	●
10.20	+0.025/+0.007	12	96	114	163	358HTA1020	●
10.50	+0.025/+0.007	12	96	114	163	358HTA1050	●
10.80	+0.025/+0.007	12	96	114	163	358HTA1080	●
11.00	+0.025/+0.007	12	96	114	163	358HTA1100	●
11.20	+0.025/+0.007	12	96	114	163	358HTA1120	●
11.30	+0.025/+0.007	12	96	114	163	358HTA1130	○
11.50	+0.025/+0.007	12	96	114	163	358HTA1150	●

INFO
TYPHOON TA-HTA-4HTA
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TYPHOON HRC
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TYPHOON HL
C-SD-TA
LFTA
SUTA
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G2
MDTA
HF VH/UP
MEF
ALU
MEX
UH
HSS/CO-HSSP END MILLS
CARBIDE BURRS

● stock standard ○ non-standard stock ▽ stock exhaustion



### 3584HTA

Material Group ISO 513	P1 P2			P3 P4			P5			P6		
	500-700 N/mm <sup>2</sup>			600-1000 N/mm <sup>2</sup>			900-1200 N/mm <sup>2</sup>			1200-1400 N/mm <sup>2</sup>		
	100-120			80-100			50-70			40-60		
D (mm)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)
3	11680	0.072	840	9550	0.065	620	6370	0.058	370	5310	0.050	270
4	8760	0.089	780	7170	0.080	570	4780	0.071	340	3980	0.062	250
5	7010	0.106	740	5730	0.095	550	3820	0.085	320	3180	0.074	240
6	5840	0.122	710	4780	0.110	520	3180	0.098	310	2650	0.085	230
7	5000	0.139	700	4090	0.125	510	2730	0.111	300	2270	0.097	220
8	4380	0.155	680	3580	0.140	500	2390	0.124	300	1990	0.109	220
9	3890	0.172	670	3180	0.155	490	2120	0.138	290	1770	0.120	210
10	3500	0.188	660	2870	0.169	490	1910	0.150	290	1590	0.132	210
11	3180	0.205	650	2610	0.185	480	1740	0.164	290	1450	0.144	210
12	2920	0.221	650	2390	0.199	480	1590	0.177	280	1330	0.155	210
13	2690	0.238	640	2200	0.214	470	1470	0.190	280	1220	0.167	200
14	2500	0.254	640	2050	0.229	470	1360	0.203	280	1140	0.178	200
15	2340	0.270	630	1910	0.243	460	1270	0.216	270	1060	0.189	200
16	2190	0.286	630	1790	0.257	460	1190	0.229	270	1000	0.200	200



Material Group ISO 513	M1 M2			M3			M4			M5		
	< 750 N/mm <sup>2</sup>			550-850 N/mm <sup>2</sup>			650-950 N/mm <sup>2</sup>			850-1200 N/mm <sup>2</sup>		
	40-50			30-40			20-30			15-25		
D (mm)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)
3	4780	0.070	330	3720	0.056	210	2650	0.049	130	2120	0.042	90
4	3580	0.090	320	2790	0.072	200	1990	0.063	130	1590	0.054	90
5	2870	0.100	290	2230	0.080	180	1590	0.070	110	1270	0.060	80
6	2390	0.110	260	1860	0.088	160	1330	0.077	100	1060	0.066	70
7	2050	0.130	270	1590	0.104	170	1140	0.091	100	910	0.078	70
8	1790	0.150	270	1390	0.120	170	1000	0.105	110	800	0.090	70
9	1590	0.160	250	1240	0.128	160	880	0.112	100	710	0.096	70
10	1430	0.175	250	1110	0.140	160	800	0.123	100	640	0.105	70
11	1300	0.180	230	1010	0.144	150	720	0.126	90	580	0.108	60
12	1190	0.200	240	930	0.160	150	660	0.140	90	530	0.120	60
13	1100	0.215	240	860	0.172	150	610	0.151	90	490	0.129	60
14	1020	0.230	230	800	0.184	150	570	0.161	90	450	0.138	60
15	960	0.245	240	740	0.196	150	530	0.172	90	420	0.147	60
16	900	0.260	230	700	0.208	150	500	0.182	90	400	0.156	60



- INFO
- TYPHOON TA-HTA-4HTA
- TYPHOON PU-HPU
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- TYPHOON ALH
- TYPHOON HRC
- TYPHOON SUH MINI
- TYPHOON HL
- C-SD-TA
- LFTA
- SUTA
- HSS-HSS/CO DRILLS
- G2
- MDTA
- HF VH/UP
- MEF
- ALU
- MEX
- UH
- HSS/CO-HSSP END MILLS
- CARBIDE BURRS

### 3584HTA

Material Group ISO 513	K1			K2			K3			K4		
	150-250 HB			150-350 HB			120-260 HB			250-500 HB		
	Vc (m/min)			80-100			50-70			40-60		
D (mm)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)
3	11680	0.072	840	9550	0.065	620	6370	0.058	370	5310	0.050	270
4	8760	0.089	780	7170	0.080	570	4780	0.071	340	3980	0.062	250
5	7010	0.106	740	5730	0.095	550	3820	0.085	320	3180	0.074	240
6	5840	0.122	710	4780	0.110	520	3180	0.098	310	2650	0.085	230
7	5000	0.139	700	4090	0.125	510	2730	0.111	300	2270	0.097	220
8	4380	0.155	680	3580	0.140	500	2390	0.124	300	1990	0.109	220
9	3890	0.172	670	3180	0.155	490	2120	0.138	290	1770	0.120	210
10	3500	0.188	660	2870	0.169	490	1910	0.150	290	1590	0.132	210
11	3180	0.205	650	2610	0.185	480	1740	0.164	290	1450	0.144	210
12	2920	0.221	650	2390	0.199	480	1590	0.177	280	1330	0.155	210
13	2690	0.238	640	2200	0.214	470	1470	0.190	280	1220	0.167	200
14	2500	0.254	640	2050	0.229	470	1360	0.203	280	1140	0.178	200
15	2340	0.270	630	1910	0.243	460	1270	0.216	270	1060	0.189	200
16	2190	0.286	630	1790	0.257	460	1190	0.229	270	1000	0.200	200



Material Group ISO 513	N1 > 5% Si			N2			N4					
	160-200			140-180			130-170					
	Vc (m/min)			140-180			130-170					
D (mm)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)			
3	19110	0.086	1650	16990	0.078	1320	15920	0.078	1240			
4	14330	0.107	1530	12740	0.096	1220	11940	0.096	1150			
5	11460	0.127	1460	10190	0.114	1170	9550	0.114	1090			
6	9550	0.146	1400	8490	0.132	1120	7960	0.132	1050			
7	8190	0.167	1370	7280	0.150	1090	6820	0.150	1020			
8	7170	0.186	1330	6370	0.167	1070	5970	0.167	1000			
9	6370	0.206	1310	5660	0.186	1050	5310	0.186	990			
10	5730	0.226	1290	5100	0.203	1040	4780	0.203	970			
11	5210	0.246	1280	4630	0.221	1030	4340	0.221	960			
12	4780	0.265	1270	4250	0.239	1010	3980	0.239	950			
13	4410	0.286	1260	3920	0.257	1010	3670	0.257	940			
14	4090	0.305	1250	3640	0.274	1000	3410	0.274	940			
15	3820	0.324	1240	3400	0.292	990	3180	0.292	930			
16	3580	0.343	1230	3180	0.309	980	2990	0.309	920			



- INFO
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- TYPHOON HL
- C-SD-TA
- LFTA
- SUTA
- HSS-HSS/CO DRILLS
- G2
- MDTA
- HF VH/UP
- MEF
- ALU
- MEX
- UH
- HSS/CO-HSSP END MILLS
- CARBIDE BURRS

CUTTING PARAMETERS

### 3584HTA

Material Group ISO 513	S1 S2			S3			S4			S5		
	< 35 HRC			35-45 HRC								
	25-35			15-25			35-45			25-35		
Vc (m/min)	n	fn	Vf	n	fn	Vf	n	fn	Vf	n	fn	Vf
D (mm)	(rpm)	(mm/rev)	(mm/min)	(rpm)	(mm/rev)	(mm/min)	(rpm)	(mm/rev)	(mm/min)	(rpm)	(mm/rev)	(mm/min)
<b>3</b>	3180	0.046	150	2120	0.032	70	4250	0.044	190	3180	0.037	120
<b>4</b>	2390	0.055	130	1590	0.039	60	3180	0.052	170	2390	0.044	110
<b>5</b>	1910	0.063	120	1270	0.044	60	2550	0.060	150	1910	0.050	100
<b>6</b>	1590	0.073	120	1060	0.051	50	2120	0.069	150	1590	0.058	90
<b>7</b>	1360	0.080	110	910	0.056	50	1820	0.076	140	1360	0.064	90
<b>8</b>	1190	0.090	110	800	0.063	50	1590	0.086	140	1190	0.072	90
<b>9</b>	1060	0.100	110	710	0.070	50	1420	0.095	130	1060	0.080	80
<b>10</b>	960	0.110	110	640	0.077	50	1270	0.105	130	960	0.088	80
<b>11</b>	870	0.120	100	580	0.084	50	1160	0.114	130	870	0.096	80
<b>12</b>	800	0.130	100	530	0.091	50	1060	0.124	130	800	0.104	80
<b>13</b>	730	0.137	100	490	0.096	50	980	0.130	130	730	0.110	80
<b>14</b>	680	0.145	100	450	0.102	50	910	0.138	130	680	0.116	80
<b>15</b>	640	0.153	100	420	0.107	40	850	0.145	120	640	0.122	80
<b>16</b>	600	0.160	100	400	0.112	40	800	0.152	120	600	0.128	80



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