

INDEX

INDEX FOR TOOL NUMBER

A	2
B	2
C	3
D	5
E	6
F	6
G	7
H	7
J	7
K	8
L	8
M	8
N	9
O	10
P	10
Q	10
R	11
S	11
T	13
U	14
V	14
W	16
X	16
Z	16
NUMBER • OTHERS	16



INDEX FOR TOOL NUMBER

ORDER NUMBER	PRODUCT NAME	PAGE	ORDER NUMBER	PRODUCT NAME	PAGE
A					
A000-DCLNR/L12	DOUBLE CLAMP DIMPLE BAR	E013	APX4000R000M00A00	APX4000 type end mill	L058
A000-DDUNR/L15	DOUBLE CLAMP DIMPLE BAR	E013	APX4000R000SA000A	APX4000 type end mill	K056
A000-DSKNR/L12	DOUBLE CLAMP DIMPLE BAR	E014	APX4K-050A09A042RA	APX4000 type end mill (Long cutting edge)	L062
A000-DTFNR/L16	DOUBLE CLAMP DIMPLE BAR	E014	APX4KR000000A000A	APX4000 type end mill (Long cutting edge)	L062
A000-DVUNR/L16	DOUBLE CLAMP DIMPLE BAR	E015	APX4KR00000SA42S056A	APX4000 type end mill (Long cutting edge)	L062
A000-DWLNLR/L00	DOUBLE CLAMP DIMPLE BAR	E015	APX4KR00000WA5080000A	APX4000 type end mill (Long cutting edge)	L062
A000-MWLNLR/L00	M type boring bar	E039	AQXR000M00A00	AQX type end mill	L078
A000-PCLNR/L00	P type boring bar	E036,P024	AQXR000SA/N00S/L	AQX type end mill	L076,L077
A000-PDQNR/L00	P type boring bar	E037	ARX00R000M00A30	ARX type end mill	L099
A000-PDUNR/L00	P type boring bar	E036	ARX00R000SA00S/LW	ARX type end mill	L098,L099
A000-PDZNR/L00	P type boring bar	E038	ASS0	Spring (For AJX/BRE/CV type cutter)	C038
A000-PSKNR/L00	P type boring bar	E035,P024		L084-L088,P032,P033	
A000-PTFNR/L00	P type boring bar	E035	ASX400-000A00R	ASX400 type face mill	L032,L033
A000-PWLNLR/L00	P type boring bar	E037	ASX400R000000	ASX400 type face mill	L032
ABS000-ES-M	Parts for ABS head	M024	ASX400R000AM1600	ASX400 type end mill	L034
ABS000-ES-M0	Parts for ABS head	M024,M025	ASX400R000S00	ASX400 type end mill	L034
ABS000-FS-W	Parts for ABS adapter	M023	ASX445-000A00R	ASX445 type face mill	L010,L011
ABS000M	Parts for ABS head	M024	ASX445R000000	ASX445 type face mill	L010
ABS000W	Parts for ABS adapter	M023	ASX445R000S00	ASX445 type end mill	L012
ABS00-FO	Screw (For ABS adapter)	M023	AXD4000-000A00RA/B	AXD4000 type face mill	L064
AEMW00000000R	Insert (For BAE type end mill)	K020	AXD4000R0000000A/B	AXD4000 type face mill	L064
AF5000R/L000000	AF5000 type face mill	P027	AXD4000R000000SA0000	AXD4000 type end mill	L064
AHX640W-0000000R/L	AHX640W type face mill	L021	AXD7000-000A00RA/B	AXD7000 type face mill	L067,L068
AHX640WR/L0000000	AHX640W type face mill	L020	AXD7000R0000000A/B	AXD7000 type face mill	L067
AJS0000T00	Clamp screw (For AJX type cutter)	P003	AXD7000R000000A-H63A	AXD7000 type end mill	L068
AJX00-00000000	AJX type face mill	L084,L085	AXD7000R000SA00SA/B	AXD7000 type end mill	L067
AJX00R000000	AJX type face mill	L084			
AJX00R000AM0000	AJX type end mill	L088	B		
AJX00R000SA00S/SS/L/EL	AJX type end mill	L086,L087	B10000	Arbor (D type boring head)	E043,F112,G033
AMS0	Clamp bridge	P014	BAE type	BAE type end mill	P032
AOGT123600PEFR-GM	Insert (For APX3000 type cutter)	K020,L053	BAP300R00000ES00	BAP300 type end mill (Long cutting edge)	L047
AOMT123600PEER-0	Insert (For APX3000 type end mill)	K020,L053	BAP300R00000SN00LU/SU	BAP300 type end mill (Under-cut type)	L049
AOMT184800PEER-0	Insert (For APX4000 type end mill)	K020,L059	BAP300R000LS00	BAP300 type end mill (Long shank type)	L044
AOX445-0000000R/L	AOX445 type face mill	L022	BAP300R000S00	BAP300 type end mill	L044
AOX445R/L00000000	AOX445 type end mill	L022	BAP300 type	BAP300 type face mill	P027
APGT1135PDFR-G2	Insert (For BAP300 type cutter)	K021	BAP3500R000S000SA/SB/LA	BAP3500 type end mill	L042
		L045,L047	BAP400-000A00R	BAP400 type face mill	P027
APGT1604PDFR-G2	Insert (For BAP400 type cutter)	K021	BAP400R000000	BAP400 type face mill	P027
APMT1135PDER-H0	Insert (For BAP300/SRM2 type cutter)	K021	BAP400R000000000	BAP400 type end mill (Long cutting edge)	P032
		L045,L047,L049,L127	BAP400R00000000	BAP400 type end mill	P032
APMT1135PDER-M0	Insert (For BAP300/SRM2 type cutter)	K021	BC0	Clamp set (For BC type cartridge/FCDG4 type boring bar)	M005,P025
		L045,L047,L049,L127			
APMT1604PDER-H0	Insert (For BAP400/SRM2 type cutter)	K021	BC00	Clamp set (For BC type cartridge)	M005
		L127,L132	BCP000	Shim pin	P013
APMT1604PDER-M2	Insert (For BAP400/SRM2 type cutter)	K021	BF407R000000	BF407 type face mill	L028,P027
		L127,L132	BF-CCGT0000000TA2	Insert (Class G tolerance)	B037
APX3000-000A00RA	APX3000 type face mill	L051	BF-CNGG0000000TA4	Insert (Class G tolerance)	B022
APX3000R0000000A	APX3000 type face mill	L051	BF-CNGM0000000TA2	Insert (Class G tolerance)	B023
APX3000R000M00A00	APX3000 type end mill	L052	BF-DCGT0000000TA2	Insert (Class G tolerance)	B040
APX3000R000SA000A	APX3000 type end mill	L050	BF-DNGG0000000TA4	Insert (Class G tolerance)	B025
APX4000-000A00RA	APX4000 type face mill	L057			
APX4000R0000000A	APX4000 type face mill	L057			

ORDER NUMBER	PRODUCT NAME	PAGE	ORDER NUMBER	PRODUCT NAME	PAGE
BF-DNGM○○○○○○TA2	Insert (Class G tolerance)	B026	○○○○SDUCR/L○○	S type boring bar (Carbide shank) ...	E029,P023
BM-CNGM○○○○○○TA2	Insert (Class G tolerance)	B023	○○○○SDZCR/L○○	S type boring bar (Carbide shank)	P023
BM-DNGM○○○○○○TA2	Insert (Class G tolerance)	B026	○○○○SSKCR/L○○	S type boring bar (Carbide shank)	P023
BM-TNGM○○○○○○TA3	Insert (Class G tolerance)	B029	○○○○STFCR○○	S type boring bar (Carbide shank)	E028
BN425 type	BN425 type face mill	P027	○○○○STUCR06	MICRO-DEX boring bar (Carbide shank)...	E017
BOES○○○	Set bolt (For OCTACUT type cutter)	P009	○○○○SVQCR○○	S type boring bar (Carbide shank)	E032
BOE type	BOE type face mill	P027	○○○○SVUCR/L○○	S type boring bar (Carbide shank)	P023
BOE type	BOE type end mill	P032	○○○○SWUBR○○	MICRO-DEX boring bar (Carbide shank)...	E016
BPT322	Shim	P010	C-2JS	Carbide end mill	J059
BR○○○C	Boring bars with PCD	I009	C-2LA	Carbide end mill	J062
BRA○○○○S○○	BRA type drill	N106	C-2LS	Carbide end mill	J060
BRB○○○○S○○M	BRB type drill	N105	C-2MA	Carbide end mill	J061
BRE○○R○○○S○○	BRE type end mill	P032	C-2MB	Carbide end mill	J152
BRK○○○○S○○	BRK type drill	N102	C-2MHA	Carbide end mill	J064
BRL○○○○S○○	BRL type drill	N108	C-2MS	Carbide end mill	J056
BRM○○○○S○○	BRM type drill	N100	C-2SA	Carbide end mill	J063
BRMB○○○○S○○	BRMB type drill	N104	C-2SS	Carbide end mill	J055
BRP○○R○○○ELS○○	BRP type end mill	L102	C-3SA	Carbide end mill	J070
BRP○○R○○○LS○○	BRP type end mill	L102	C-3ARB	Carbide end mill	J171
BRP○○R○○○S○○	BRP type end mill	L102	C-4JC	Carbide end mill	J094
BRPOP○○○○○○○	BRP type face mill	L104	C-4LC	Carbide end mill	J095
BRPOP-○○○A○○R	BRP type face mill	L104	C-4MC	Carbide end mill	J093
BRS○○○	Wedge screw	P003	CA○○○	Clamp bridge	P014
BRS○○○○S○○	BRS type drill	N098	CAS51T	Set screw	P003
BRSB○○○○S○○	BRSB type drill	N104	CB○○RS	MICRO-MINI TWIN	E019
BSPR○○○○S○○	BSP type end mill	L092	CB○○RS-B	MICRO-MINI TWIN	E019
BSX400 type	BSX400 type face mill	P028	CBJPR○○○○S○○	CBJP type end mill	L138
BSX500 type	BSX500 type face mill	P028	CBMPR○○○○S○○	CBMP type end mill	L138
BSX type	BSX type end mill	P032	CBN-2XLB	CBN end mill	J151
BT50-○○-○○-○○	Long arbor (BT50)	L085,L146	CBN-2XLRB	CBN end mill	J170
BTAHR/L○○○○-50	Small tools holder (External back turning)	D012	CBS○○	Breaker piece	P016
BTAT○○○○○○R/L-B	Insert for external back turning	D012	CBT○○	Breaker piece	P016
BTAT605000RX	Insert for external back turning	D012	CBT○○○○	Breaker piece	P016
BTBT○○○○○○R/L	Insert for external back turning	D013	CCET○○○○○○R/L-SN	Insert (Class E tolerance)	A090
BTBT○○○○○○R/L-B	Insert for external back turning	D013	CCET○○○○○○R/L-SR	Insert (Class E tolerance)	A090
BTVHR○○○○-○○	Small tools holder (External back turning)	D014	CCET○○○○○○R/LW-SN	Insert (Class E tolerance)	A091
BTVT○○○○○○-B	Insert for external back turning	B014	CCGH○○○○○○R/L-F	Insert (Class G tolerance)	A088
BXD4000-○○○○○○A/B	BXD4000 type face mill	L072,L073	CCGT○○○○○○-AZ	Insert (Class G tolerance)	A088
BXD4000R○○○○○○A/B	BXD4000 type face mill	L072	CCGT○○○○○○-FJ	Insert (Class G tolerance)	A088
BXD4000R○○○SA○○LA/LB	BXD4000 type end mill	L074	CCGT○○○○○○L-F	Insert (Class G tolerance)	A088
BXD4000R○○○SA○○SA/SB	BXD4000 type end mill	L074	CCGT○○○○○○M-SMG	Insert (Class G tolerance)	A091
BXD4000R○○○SA○○ELA/ELB	BXD type end mill	L074	CCGT○○○○○○R/L-SN	Insert (Class G tolerance)	A091
BXD7000-○○○○○○A/B	BXD7000 type face mill	P028	CCGT○○○○○○R/L-SS	Insert (Class G tolerance)	A089
BXD7000R○○○SA○○SA/SB	BXD7000 type end mill	P033	CCGW○○○○○○	Insert (Class G tolerance)	A091
BZC400 type	BZC400 type face mill	P028	CCK○○	Clamp bridge	P014
BZC400 type	BZC400 type end mill	P033	CCMH○○○○○○-MV	Insert (Class M tolerance)	A089
			CCMH○○○○○○-SV	Insert (Class M tolerance)	A089
			CCMT○○○○○○	Insert (Class M tolerance)	A089
			CCMT○○○○○○-FV	Insert (Class M tolerance)	A088
			CCMT○○○○○○-MW	Insert (Class M tolerance)	A089
			CCMT○○○○○○-SW	Insert (Class M tolerance)	A089
			CCMW○○○○○○	Insert (Class M tolerance)	A091,B038,B056
			CCMX○○○○○○EN-A	Insert (For DCCC type end mill)	K021,L114
			CCMX09T308EN-B	Insert (For DCCC type end mill)	K022,L114

C

○○○○R-BLS	MICRO-MINI boring bar (Solid carbide)	E022
		F105
○○○○SCLCR/L○○	S type boring bar/MICRO-MINI (Carbide shank)...	E016,E030,P023
○○○○SCZCR/L○○	S type boring bar (Carbide shank)	P023
○○○○SDQCR/L○○	S type boring bar (Carbide shank)	E031

INDEX FOR TOOL NUMBER

ORDER NUMBER	PRODUCT NAME	PAGE	ORDER NUMBER	PRODUCT NAME	PAGE
CCP00	Shim pin	P013	CRN-2MS	CRN end mill	J049
CCTC1	Clamp bridge	P014	CRN-2XL	CRN end mill	J050
CESPR000S00	CESP type end mill	L136	CRN-2XLB	CRN end mill	J144
CFM00000	Shim screw	P021	CRN-2XLRB	CRN end mill	J168
CFSPR000S00	CFSP type end mill	L136	CRN-4JC	CRN end mill	J090
CFT0	Insert (For CF holder)	F113	CS0	Clamp screw	P003
CG00RS000	MICRO-MINI TWIN	F106	CS00	Shim	P010
CGSPR000S00	CGSP type end mill	L136	CS000000T	Clamp screw	P003
CK000	Clamp bridge	P014	CSAF00	Stop screw	P029
CKW6	Clamp bridge	P015	CSBNR/L0000000	MC holder	C016
C-MH	Carbide end mill	J069	CSBPR/L00000	MC holder	P018
C-MRA	Carbide end mill	J108	CSDNN0000000	MC holder	C018
CNGG000000-FJ	Insert (Class G tolerance)	A058	CSDPN00000	MC holder	C040
CNGG000000-MJ	Insert (Class G tolerance)	A059	CSF401260T	Clamp screw	P003
CNGG000000-PK	Insert (Class G tolerance)	A058	CSKNR/L0000000	MC holder	C019
CNGN000000	Insert (Class G tolerance)	B032	CSKPR/L00000	MC holder	P018
CNMA000000	Insert (Class M tolerance)	A062,B024,B052	CSKPR00CA00	BC type cartridge	M004
CNMG000000	Insert (Class M tolerance)	A060	C-SRA	Carbide end mill	J107
CNMG000000-C	Insert (Class M tolerance)	A059	C-SRARB	Carbide end mill	J172
CNMG000000-FH	Insert (Class M tolerance)	A058	CSSNR/L0000000	MC holder	P018
CNMG000000-FS	Insert (Class M tolerance)	A058	CSSPR/L00000	MC holder	P018
CNMG000000-FY	Insert (Class M tolerance)	A058	CSSPR00CA00	BC type cartridge	M004
CNMG000000-GH	Insert (Class M tolerance)	A061	CSTNR/L0000000	MC holder	P018
CNMG000000-GJ	Insert (Class M tolerance)	A061	CSVHR/L00000	Small tools holder (For cam tool posts)	D027
CNMG000000-HAS	Insert (Class M tolerance)	A061	CSVTB000R/L	Insert for external back turning	D028
CNMG000000-MA	Insert (Class M tolerance)	A059	CSVTB000R-B	Insert for external back turning	D028
CNMG000000-MH	Insert (Class M tolerance)	A060	CSVTBXL	Insert for external back turning	D028
CNMG000000-MJ	Insert (Class M tolerance)	A059	CSVTC0000R/L	Insert for external cutting off	D028
CNMG000000-MP	Insert (Class M tolerance)	A059	CSVTC0000R-B	Insert for external cutting off	D028
CNMG000000-MS	Insert (Class M tolerance)	A061	CSVTF000R/L	Insert for external front turning	D027
CNMG000000-MW	Insert (Class M tolerance)	A060	CSVTF000R/L-B	Insert for external front turning	D027
CNMG000000-SA	Insert (Class M tolerance)	A059	CSVTFXL	Insert for external front turning, Copying	D027
CNMG000000-SH	Insert (Class M tolerance)	A058	CSVTG00000R/L	Insert for grooving	D029
CNMG000000-SW	Insert (Class M tolerance)	A059	CSVTT00000RR/L	Insert for threading	D029
CNMG000000-SY	Insert (Class M tolerance)	A059	CSYPR00CA00	BC type cartridge	M004
CNMM000000-HV	Insert (Class M tolerance)	A061	CT00	Shim	P010
CNMM000000-HX	Insert (Class M tolerance)	A061	CT00RS-M00	MICRO-MINI TWIN	G026
CNMM000000-HXD	Insert (Class M tolerance)	A062	CT00T0	Shim	P011
CNMM000000-HZ	Insert (Class M tolerance)	A061	CTAHR/L0000-120	Small tools holder (For external cutting off)	D018
CPEX000000R/L	Insert (For VIPER type end mill)	K022	CTAHR1010-120S	Small tools holder (For external cutting off)	D018
CPGT000000	Insert (Class G tolerance)	A092,B056	CTANR/L0000	MC holder	P018
CPGT000000R/L-F	Insert (Class G tolerance)	A092	CTAPR/L2020	MC holder	P018
CPMH000000-FV	Insert (Class M tolerance)	A092	CTAT00000000-B0	Insert for cutting off	D019
CPMH000000-MV	Insert (Class M tolerance)	A092	CTAT00000000LL/RR	Insert for cutting off	D019
CPMH000000R/L-F	Insert (Class M tolerance)	A092	CTBHR/L0000-000	Small tools holder (For external cutting off)	D013,D020
CPMH000000-SV	Insert (Class M tolerance)	A092	CTBT000000000-B	Insert for cutting off	D020
CPMT000000ZPEN-M0	Insert (For PMR type end mill)	K022,L145	CTCHR/L0000-200	Small tools holder (For external cutting off)	D021
CPMX000000	Insert (Class M tolerance)	A092	CTCPR/L0000000	MC holder	P018
CPT00	Side lock plate	C020,E039	CTCT000000000-B	Insert for cutting off	D021
CR0	Stop ring	G013,H016,P021,P025	CTDHR/L1616-000	Small tools holder (For external cutting off)	D022
CR00RS-01	MICRO-MINI TWIN	E020	CTDT00000000N/R-B	Insert for cutting off	D022
CR00RS-01B	MICRO-MINI TWIN	E020	CTDT25350V5R-BS	Insert for cutting off	D022
CRN-2MB	CRN end mill	J143	CTE00T000	Shim (For MMTE holder)	G012
CRN-2MRB	CRN end mill	J167			

ORDER NUMBER	PRODUCT NAME	PAGE	ORDER NUMBER	PRODUCT NAME	PAGE
CTEHR/L1616-○○○○	Small tools holder (For external cutting off)...	D023	DCMT○○○○○○-MV	Insert (Class M tolerance).....	A094
CTET○○○○○○○○-B	Insert for cutting off.....	D023	DCMT○○○○○○-SV	Insert (Class M tolerance).....	A093
CTET30350V5R-BS	Insert for cutting off.....	D023	DCMW○○○○○○	Insert (Class M tolerance).....	A096,B041,B057
CTFNR/L○○○○	MC holder.....	C024	DCS○	Spring.....	C010,C012,C021,C025-C029 E013-E015,H006-H011
CTFPR/L○○○○	MC holder.....	C041	DCSD○○○○○○	DCSD type end mill.....	P033
CTFPR/L○○CA○○	BC type cartridge.....	M004	DCSN○○○○○○	DCSN type end mill.....	P033
CTGNR/L○○○○	MC holder.....	C022,P018	DC-SSM	Diamond coated drill, Medium, For non-ferrous material.....	N148
CTGPR/L○○○○	MC holder.....	C041	DC-SSS	Diamond coated drill, Short, For non-ferrous material.....	N148
CTGPR○○CA○○	BC type cartridge.....	M004	DCSVN32	Shim.....	P010
CTI○○T○○○	Shim (For MMTI holder).....	G013	DCTU○○○R/L	D type boring head.....	P024
CTTPR○○CA○○	BC type cartridge.....	M004	DDJNR/L○○○○○○	DOUBLE CLAMP holder.....	C012
CV type	CV type end mill.....	P033	DEGX○○○○○○R/L	Insert (For AL holder).....	A097
CWAF10N	Adjusting screw (For NF/NR10000/QF10000 type end mill)...	L150 P030	DEGX○○○○○○R/L-F	Insert (For AL holder).....	A097,B063
CWAF10R○	Wedge.....	L150,P030	DF-2XLB	Diamond coated end mill.....	J148
CWAF5R/L	Wedge.....	P027	DF-3XB	Diamond coated end mill.....	J156
CWAHX640WN	Wedge.....	L021	DF-4JC	Diamond coated end mill.....	J091
CWAOX445N	Wedge.....	L022	DF-4XL	Diamond coated end mill.....	J092
CWCV20	Wedge.....	P033	DF-PSRB	Diamond coated end mill.....	J189
CWFSTE	Wedge.....	P033	DGHR/L○○○○○○	DG holder.....	P022
CWMSE445R2	Wedge.....	P029	DGK○R/L	Clamp bridge.....	P015
CWS○	Wedge.....	L153	DGS51	Clamp screw.....	P003
CWS○R/L	Wedge.....	P028,P029	DKS○	Clamp screw.....	P003
CWS42SER/L	Wedge.....	L154	DLC-2MA	DLC coated end mill.....	J052
CWS42SPR/L	Wedge.....	L152	DLC-2MB	DLC coated end mill.....	J150
CWS43SNN	Wedge.....	P027	DNGA○○○○○○	Insert (Class G tolerance).....	A067,B026,B052
CWSE○○○SN	Wedge-S.....	L016-L018,L024,L026,P030,P034	DNGG○○○○○○-FJ	Insert (Class G tolerance).....	A063
CWSE○○○TN	Wedge-T.....	P030	DNGG○○○○○○-PK	Insert (Class G tolerance).....	A063
CWSE○○○TR/L	Wedge-T.....	L016-L018,L024,L026,P034	DNGG○○○○○○R/L	Insert (Class G tolerance).....	A066
CWSE300TR	Wedge.....	L038,L040	DNGM○○○○○○-MJ	Insert (Class G tolerance).....	A065
CWSE300TR/L	Wedge-T.....	P030	DNGN○○○○○○	Insert (Class G tolerance).....	B032
CWSF○○○TR/L○	Wedge-T.....	L028,P027,P030	DNMA○○○○○○	Insert (Class M tolerance).....	A067
CWSG20SN	Wedge-S.....	L029	DNMG○○○○○○	Insert (Class M tolerance).....	A065
CWSG20TR	Wedge-T.....	L029	DNMG○○○○○○-C	Insert (Class M tolerance).....	A064
CWTSE300TR	Wedge-T.....	L038	DNMG○○○○○○-FH	Insert (Class M tolerance).....	A063
D			DNMG○○○○○○-FS	Insert (Class M tolerance).....	A063
DC○○○○T	Clamp screw.....	P003	DNMG○○○○○○-FY	Insert (Class M tolerance).....	A063
DC-BSS	Diamond coated drill, For hard brittle materials..	N149	DNMG○○○○○○-GH	Insert (Class M tolerance).....	A066
DCCC○○○○S○○	DCCC type end mill.....	L113	DNMG○○○○○○-GJ	Insert (Class M tolerance).....	A066
DCET○○○○○○R/L-SN	Insert (Class E tolerance).....	A095	DNMG○○○○○○-MA	Insert (Class M tolerance).....	A065
DCET○○○○○○R/L-SR	Insert (Class E tolerance).....	A094	DNMG○○○○○○-MH	Insert (Class M tolerance).....	A065
DCET○○○○○○R/LW-SN	Insert (Class E tolerance).....	A095	DNMG○○○○○○-MJ	Insert (Class M tolerance).....	A064
DCGT○○○○○○-AZ	Insert (Class G tolerance).....	A093	DNMG○○○○○○-MP	Insert (Class M tolerance).....	A065
DCGT○○○○○○M-SMG	Insert (Class G tolerance).....	A095	DNMG○○○○○○-MS	Insert (Class M tolerance).....	A066
DCGT○○○○○○R/L-F	Insert (Class G tolerance).....	A093	DNMG○○○○○○-SA	Insert (Class M tolerance).....	A064
DCGT○○○○○○R/L-SN	Insert (Class G tolerance).....	A095	DNMG○○○○○○-SH	Insert (Class M tolerance).....	A063
DCGT○○○○○○R/L-SS	Insert (Class G tolerance).....	A093	DNMG○○○○○○-SY	Insert (Class M tolerance).....	A064
DCGW○○○○○○	Insert (Class G tolerance).....	A096	DNMM○○○○○○-HZ	Insert (Class M tolerance).....	A066
DCK○○○○	Clamp bridge.....	P015	DNMX○○○○○○-MW	Insert (Class M tolerance).....	A065
DCLNR/L○○○○○○	DOUBLE CLAMP holder.....	C010	DNMX○○○○○○-SW	Insert (Class M tolerance).....	A064
DCMT○○○○○○	Insert (Class M tolerance).....	A094	DPCL○○○R/L	D type boring head.....	E042,P024
DCMT○○○○○○-FV	Insert (Class M tolerance).....	A093	DPDH○○○R/L	D type boring head.....	E042,P024

INDEX FOR TOOL NUMBER

ORDER NUMBER	PRODUCT NAME	PAGE	ORDER NUMBER	PRODUCT NAME	PAGE
DPDU	D type boring head	E041,P024	FBP415R	FBP415 type face mill	L023,P028
DPDZ	D type boring head	P024	FC400890T	Clamp screw	P004
DPSK	D type boring head	P024	FCDG4	FCDG4 type boring bar	P025
DPT2	D type boring head	G032,P024	FCL5	FCL5 type boring bar	P025
DPT4	D type boring head	F112,P024	FCSK	FCSK type boring bar	P024
DPTF	D type boring head	E041,P024	FCTU	FCTU type boring bar	E026,P024
DPVP	D type boring head	E043,P024	FE404R	FE404 type face mill	L154
DTGNR/L	DOUBLE CLAMP holder	C021	FF3000R	FF3000 type face mill	L151
DVJNR/L	DOUBLE CLAMP holder	C026	FF3000 type	FF3000 type end mill	P033
DVPNR/L	DOUBLE CLAMP holder	C028	FFAWR	Adjusting wedge	L151
DVVNN	DOUBLE CLAMP holder	C027	FFCSR	Cartridge (For FF3000 type face mill)	L151
DWLNR/L	DOUBLE CLAMP holder	C029	FFL	Lever	L151
E			FFLB	Lever screw	L151
E	Stop ring	C026-C028,E043,F112,G032	FFP	Lock pin	L151,P033
E	COBRA type boring bar (Carbide shank)	P023	FFRP	Radial spring	L151
E	COBRA type boring bar (Carbide shank)	P023	FFSS	Shim	L151,P033
E	ML holder (Old type tool)	P018	FFW	Washer	L151
E	ML holder (Old type tool)	P018	FN548 type	FN548 type face mill	P028
E404 type	E404 type face mill	P028	FP490R/L	FP490 type face mill	L152
ECMP	ECMP type end mill	P033	FP590R/L	FP590 type face mill	L153
EGHR	EG holder	P020	FSLC	DIMPLE BAR (Carbide shank)	E006
EGS	Clamp screw	P004	FSLC	DIMPLE BAR	E006
EGT	Insert (For EG holder)	F100	FSLC	DIMPLE BAR (Carbide shank)	E006
E-PSS	Straight shank drill, Plate pal.	N197	FSLC	DIMPLE BAR (Carbide shank)	E006
ER	Stop ring	C017,C021,C023-C025	FSLC	DIMPLE BAR (Carbide shank)	E006
ESBNR/L	ML holder	P018	FSDQC	DIMPLE BAR (Carbide shank)	E009
ESDNR/L	ML holder	P018	FSDQC	DIMPLE BAR	E009
ESENR/L	ML holder	P018	FSDUC	DIMPLE BAR (Carbide shank)	E008
ESKNR/L	ML holder	P018	FSDUC	DIMPLE BAR	E008
E-SS	Straight shank drill, Cobalt HSS, Stub flute length	N186,N187	FSL5	FSL5 type boring bar	F110,G030
ESS42	Shim	P010	FSTE type	FSTE type end mill	P033
ESSNR/L	ML holder	C017	FSTU	FSTU type boring bar	E025
EST	Shim	P010	FSTUP	DIMPLE BAR (Carbide shank)	E007
ETANR/L	ML holder	P018	FSTUP	DIMPLE BAR	E007
ETENN	ML holder	C023,P018	FSTUP	DIMPLE BAR (Carbide shank)	E007
ETFNR/L	ML holder	C024,P018	FSVJB	DIMPLE BAR	E012
ETGNR/L	ML holder	C021	FSVJC	DIMPLE BAR	E012
ETHR	ET holder	P021	FSVPB	DIMPLE BAR	E011
ETJNR/L	SL holder	P019	FSVPC	DIMPLE BAR	E011
ETNNR/L	SL holder	P019	FSVUB	DIMPLE BAR	E011
ETQNR/L	SL holder	P019	FSVUC	DIMPLE BAR	E011
ETXNR/L	ML holder	C025,P018	FSWL	FSWL type boring bar	E027
F			FSWUB	DIMPLE BAR (Carbide shank)	E010
FA	Boring unit (Angular type)	M012	FSWUB	DIMPLE BAR	E010
FA	Boring unit (Angular type)	M012	FSWUB	DIMPLE BAR (Carbide shank)	E010
FA	Boring unit (Angular type)	M012	FSWUB	DIMPLE BAR (Carbide shank)	E010
FA	Boring unit (Angular type)	M012	FSWUB	DIMPLE BAR (Carbide shank)	E010
FAPN	Cartridge (For boring unit)	M012	FSWUP	DIMPLE BAR (Carbide shank)	E010
FASC	Cartridge (For boring unit)	M012	FSWUP	DIMPLE BAR	E010
FASP	Cartridge (For boring unit)	M012	FSWUP	DIMPLE BAR (Carbide shank)	E010
FBE2	FBE2 type end mill	P035	FV	Boring unit (Vertical type)	M012
			FV	Boring unit (Vertical type)	M012
			FV	Boring unit (Vertical type)	M012
			FV	Boring unit (Vertical type)	M012
			FV	Boring unit (Vertical type)	M012
			FVPN	Cartridge (For boring unit)	M012

ORDER NUMBER	PRODUCT NAME	PAGE	ORDER NUMBER	PRODUCT NAME	PAGE
FVSC	Cartridge (For boring unit)	M012	H63TH-EV	HSK external turning tool holder	H019
FVSP	Cartridge (For boring unit)	M012	H63TH-EV-105-3	HSK external turning tool holder	H021
G			H63TH-MGHR/L-DX43	HSK MG type holder	H014
G-2MS	HSS end mill	J221	H63TH-MMTENR-16	HSK MMTE type holder	H016
G-4LC	HSS end mill	J238	H63TH-MMTER-DX16	HSK MMTE type holder	H016
G-4MC	HSS end mill	J234	H63TH-MTHR/L-DX43	HSK MTH type holder	H017
GBE	GBE type end mill	J106	H63TH-PCLNR/L-DX12	HSK PCLN type holder	H006
GCMT-U	Insert (For TAF type drill)	K045,N140	H63TH-PCMNN-12	HSK PCMN type holder	H007
GDCN2004PDFR3	Insert (For NF10000/QF10000 type cutter)	K041,L150	H63TH-PDJNR/L-DX15	HSK PDJN type holder	H009
GDCN2004PDR	Insert (For AF10000 type cutter)	K041	H63TH-PDNN-15	HSK PDNN type holder	H010
GDCN2004ZDTR1	Insert (For NR10000 type cutter)	K041	H63TH-PRDCN-12	HSK PRDC type holder	H012
G-MR	HSS end mill	J247	H63TH-PRGCR/L-DX12	HSK PRGC type holder	H012
GPEA432R/L	Insert (For AF3000 type cutter)	K041	H63TH-SVPBR/L-DX16	HSK SVPB type holder	H013
GPMT-U	Insert (For TAF type drill)	K045,N140	H63TH-SVBN-16	HSK SVVB type holder	H013
G-SD	Straight shank drill, TiN	N181,N182	HBH	Clamp screw	P002
G-SFPR	HSS end mill	J240	HBHA	Clamp screw	P002
GT-HR/L	Small tools holder (External grooving)	D016	HDS	Clamp screw	P009
GT-T-R/L-E	Insert (For small tools holder)	D017	HFF06015	Clamp screw	P004
GT-T-R/L-U	Insert (For small tools holder)	D016	HFF08043H	Clamp screw	P009
GT-T-R/L-VT	Insert (For small tools holder)	D017	HGM-PT/O	Plug	E035-E039,H007,H010 H012,H013,H016,P021
GT-TR/L	Insert (Blank)	D017	HKY-OD	Driver	P002
G-TD	Taper shank drill, TiN	N198	HKY-OF	Flag wrench	P002
G-TTD	Taper shank drill, TiN, For steel frame	N208	HKY-OL	L-wrench	P002
G-WSL	Straight shank drill, TiN, Extra long	N192	HKY-OR	L-wrench	P002
G-WSS	Straight shank drill, TiN, For deep hole, Convolute flute	N190	HKY-OT	T-wrench	P002
G-WTS	Taper shank drill, TiN, For deep hole, Convolute flute	N204	HLS	Lever spring	L139,M003
GY05016S	Clamp screw	P004	HP	Spring	L151
GY06013M	Clamp screw	P004	HP-1	Clamp pin	E035-E038
GY1B-020N	Insert (For GY holder)	F013	HR-1	Spanner	M013,P026
GY1G-N-GFGS	Insert (For GY holder)	B050,F013	HS-1	Clamp screw	P004
GY2B-020N	Insert (For GY holder)	F013	HSC	Clamp screw	P009
GY2M-N-1	Insert (For GY holder)	F012,F013	HSK-M	HSK type taper tool number	M027
GY2M-R/L-05-GM	Insert (For GY holder)	F012	HSP05008C	Lock screw	P004
GYAR/L-90-1	GY holder	F080-F085	HSS	Clamp screw	P002
GYDR/L-90-M-1	GY holder	F080-F085	HY	Unit screw	P004
GYHR/L-00-M-R/L	GY holder	F014-F025,F036-F065	HY-A1	Unit screw	P004
GYHR/L-90-M-R/L	GY holder	F026-F029,F066-F071	HY-V1	Unit screw	P004
GYM-R/L-1	Modular blade	F014-F085	J		
H			JDMT-ZDSR-JM	Insert (For AJX type cutter)	K022,L089,L142
H100TH-B-1	HSK boring bar holder	H022	JDMT-ZDSR-ST	Insert (For AJX type cutter)	K023,L089,L142
H63TH-A-DCLNR/L12	HSK DCLN type holder	H008	JDMW-ZDSR-FT	Insert (For AJX type cutter)	K022,L089,L142
H63TH-B-1	HSK boring bar holder	H021	JENS42	Shim	P033
H63TH-DCLNL-L12-3	HSK DCLN type holder	H008	JFS-1	JUST FIT SLEEVE set number	N142
H63TH-DCLNR/L-DX12	HSK DCLN type holder	H006	JFS-2	JUST FIT SLEEVE (JFS)	N142
H63TH-DCMNN-12	HSK DCMN type holder	H007	JKDS4	Cartridge (For DCSD/DCSN type end mill)	P033
H63TH-DDJNL-L15-3	HSK DDJN type holder	H011	JKNS4	Cartridge (For DCSD/DCSN type end mill)	P033
H63TH-DDJNR/L-DX15	HSK DDJN type holder	H009	JOMT-ZZSR-JM	Insert (For AJX type cutter)	K022,L089,L142
H63TH-DDNNN-15	HSK DDNN type holder	H010	JOMW-ZZSR-FT	Insert (For AJX type cutter)	K022,L089,L142
H63TH-EN-R/L-1	HSK external turning tool holder	H020	JPMT-1	Insert (For TAB/CBJP type end mill)	K023,L138
			JPMX-1	Insert (For SPX type end mill)	K023,L110
			JR	HSS end mill	J249
			JSS7	Shim screw	P004

INDEX FOR TOOL NUMBER

ORDER NUMBER	PRODUCT NAME	PAGE	ORDER NUMBER	PRODUCT NAME	PAGE
K			M		
KGBN00	Block (For UG holder)	F098	MAE0000MB	MAE type drill (External coolant)	N091
KGBN0000	Tool block (For UG holder)	F098	MAS0000LB/MB	MAS type drill (Internal coolant)	N091
KGC1	Clamp bridge	P015	MBA00000H	Clamp screw	P009
KGS00	Shank (For UG tool block)	F098	MCLNR0000000	DOUBLE CLAMP holder (For heavy cutting)	C011
KGTON	Insert (For UG holder)	F099	MCS00000XDB	CVD diamond coated drill	N147
KGTOR/L	Insert (For UG holder)	F099	MES0	Spring	C020,C022,C025,E039 F101,G022,P021,P022
KKCR/L445	MH holder	P018	MG1R/L000000000	MG1 type holder	F101
K-MH	HSS end mill	J231	MG200 type	MG200 type end mill	P034
KNMX000000R/L	Insert (For MH holder)	A085	MG245 type	MG245 type end mill	P034
KS0	Axial screw	P004	MG2R/L000000000	MG2 type holder	P020
KS00	Set bolt	P004	MG300 type	MG300 type face mill	P029
KS0S	Pre-set screw	P004	MG300 type	MG300 type end mill	P034
KSD	Straight shank drill, Cobalt HSS, For stainless steel	N188	MG345 type	MG345 type face mill	P029
KSMGR00S00	KSMG type end mill	L139	MG345 type	MG345 type end mill	P034
KTD	Taper shank drill, Cobalt HSS	N203	MG400 type	MG400 type face mill	P029
KY00	Spanner	P018	MG445 type	MG445 type face mill	P029
L			MGD00	Driver	N084
LDCN190412R/L	Insert (For AF5000 type face mill)	K041	MGEEW0000AFTR	Insert (For MG245/345/445 type cutter)	K023
LK1	Clamp bridge	P015	MGEEW0000PFTR	Insert (For MG200/300/400 type cutter)	K023
LLCL000	Clamp lever	P013	MGHR/L000000000	MG holder	F102,P020
LLCS000	Clamp screw	P005	MGHR12CA3323	Cartridge (For external grooving)	M010
LLCS000S	Clamp screw	P005	MGP445 type	MGP445 type face mill	P028
LLP00	Shim pin	P013	MGS0000L000B	Solid gun drill	N083
LLR0	Radial screw	P004	MGS6	Clamp screw	P005
LLSCN00	Shim	P010	MGTR/L00000	Insert (For MG holder)	B051,F103,F113 H015,L140
LLSCP00	Shim	P010	MHK5NR/L	Clamp bridge	P015
LLSDN00	Shim	P010	MHS0000L000B	MHS type drill (Internal coolant)	N060
LLSDP00	Shim	P010	MHS000R/L	Shim	P011
LLSRN000	Shim	P010	MHT1	Clamp screw	P005
LLSSN00	Shim	P010	MK1K	Anti-seize lubricant	P039
LLSSP42	Shim	P010	MK1KS	Anti-seize lubricant	P039
LLSTE32	Shim	P011	MLCP42	Shim	P011
LLSTN00	Shim	P011	MLDP42	Shim	P011
LLSTP00	Shim	P011	MLG0000L	Insert (For FSL5 type boring bar)	F111,G031
LLSWN000	Shim	P011	MLP0000L	Insert (For FSL5 type boring bar)	F111,G031
LLSWP000	Shim	P011	MLSP42	Shim	P011
LR	HSS end mill	J250	MLT0000L	Insert (For FSL5 type boring bar)	F111,G031
LRB000	Insert for brazed tool holder (MITSUBISHI standard)	I004	MLTP32	Shim	P011
LS0	Clamp screw	P005	MMS0000X0DB	MMS type drill (Internal coolant)	N046
LS00	Clamp screw	P005	MMT000ER0000000	Insert (For MMTE holder)	G014,G016 G018,G020
LS0000T	Clamp screw	P005	MMT000IR0000000	Insert (For MMTI boring bar)	G015,G017 G019,G021
LS000T	Clamp screw	P005	MMTER0000000000	MMTE holder	G012
LS10TS	Clamp screw	P005	MMTIR0000A00000000	MMTI boring bar	G013
LS24H	Clamp screw	P005	MNS0000LB	MNS type drill (Internal coolant)	N052
LSD	Straight shank drill, Extra long	N194	MNS0000X0DB	MNS type drill (Internal coolant)	N052
LSE445R000000	LSE445 type face mill	P029	MP6	Shim	P013
LTD	Taper shank drill, Extra long	N205			

ORDER NUMBER	PRODUCT NAME	PAGE	ORDER NUMBER	PRODUCT NAME	PAGE
MPMT	Insert (For CBMP/ECMP/TAB type end mill)	K024,L138	MTQNR/L	WP holder	C025,P019
MPMW	Insert (For TSMP type end mill)	K024,L137	MTTR/L	Insert (For MT holder/D type boring head).....	G023,G033,H018
MPMX120412-00	Insert (For SPX type end mill).....	K024,L110	MWE	MWE type drill (External coolant).....	N019
MQS	MQS type drill (Internal coolant).....	N040	MWE	MWE type drill (External coolant).....	N019
MR	HSS end mill	J248	MWLNR/L	WP holder	P019
MRB	HSS end mill	J252	MWS	MWS type drill (Internal coolant).....	N012,N019
MS2ES	MSTAR end mill	J041	MWS	MWS type drill (Internal coolant).....	N012
MS2JS	MSTAR end mill	J034	MWS	MWS type drill (Internal coolant).....	N014,N033
MS2LS	MSTAR end mill	J035	MWS	MWS type drill (Internal coolant).....	N019
MS2MB	MSTAR end mill	J115	MZE	STEP drill (External coolant).....	N077
MS2MD	MSTAR end mill	J033	MZE	MZE type drill (External coolant).....	N068
MS2MRB	MSTAR end mill	J160	MZS	STEP drill (Internal coolant)	N077
MS2MS	MSTAR end mill	J031	MZS	MZS type drill (Internal coolant)	N068
MS2MT	MSTAR end mill	J195	N		
MS2MTB	MSTAR end mill	J205	N		
MS2SB	MSTAR end mill	J114	N	MC holder (Old type tool).....	P017
MS2SS	MSTAR end mill	J030	N	MC holder (Old type tool).....	P017
MS2XB	MSTAR end mill	J121	NA	Boring unit (Angular type)	P026
MS2XL	MSTAR end mill	J036	NAPN	Cartridge (For boring unit).....	P026
MS2XL6	MSTAR end mill	J039	NASP	Cartridge (For boring unit).....	P026
MS2XLB	MSTAR end mill	J116	NF10000R	NF10000 type face mill	L150
MS2XLRB	MSTAR end mill	J162	NNMU200608ZEN-00	Insert (For AHX640W type cutter).....	K024,L020
MS3ES	MSTAR end mill	J067	NP-CCGB	Insert (Class G tolerance).....	B036
MS4EC	MSTAR end mill	J081	NP-CCGW	Insert (Class G tolerance).....	B036
MS4JC	MSTAR end mill	J077	NP-CCGW	Insert (Class G tolerance).....	B036
MS4LT	MSTAR end mill	J200	NP-CCGW	Insert (Class G tolerance).....	B037
MS4LTB	MSTAR end mill	J206	NP-CCMB	Insert (Class M tolerance).....	B037
MS4MC	MSTAR end mill	J076	NP-CCMH	Insert (Class M tolerance).....	B056
MS4MRB	MSTAR end mill	J173	NP-CCMW	Insert (Class M tolerance).....	B056
MS4SC	MSTAR end mill	J075	NP-CCMW	Insert (Class M tolerance).....	B038
MS4XL	MSTAR end mill	J078	NP-CNGA	Insert (Class G tolerance).....	B022
MSBNR	DOUBLE CLAMP holder (For heavy cutting).....	C014	NP-CNGA	Insert (Class G tolerance).....	B022
MSCN63	Shim	P011	NP-CNGA	Insert (Class G tolerance).....	B023
MSD445 type	MSD445 type face mill	P029	NP-CNGA	Insert (Class G tolerance).....	B022
MSE	MSE type drill	N080	NP-CNMA	Insert (Class M tolerance).....	B023
MSE445 type	MSE445 type face mill	P029	NP-CNMM	Insert (Class M tolerance).....	B052
MSE445 type	MSE445 type end mill	P034	NP-CPGB	Insert (Class G tolerance).....	B039
MSJHD	MSTAR end mill	J074	NP-CPMB	Insert (Class M tolerance).....	B039
MSMHD	MSTAR end mill	J072	NP-CPMH	Insert (Class M tolerance).....	B056
MSMHDRB	MSTAR end mill	J175	NP-DCGW	Insert (Class G tolerance).....	B041
MSMHZD	MSTAR end mill	J066	NP-DCGW	Insert (Class G tolerance).....	B040
MSP0300SB	MSP type starting drill	N082	NP-DCMT	Insert (Class M tolerance).....	B057
MSSHD	MSTAR end mill	J071	NP-DCMW	Insert (Class M tolerance).....	B041
MSSN63	Shim	P011	NP-DNGA	Insert (Class G tolerance).....	B025
MSSNR	DOUBLE CLAMP holder (For heavy cutting).....	C016	NP-DNGA	Insert (Class G tolerance).....	B025
MT1R/L	MT1 type holder	G022	NP-DNGA	Insert (Class G tolerance).....	B026
MT2R/L2525M4	MT2 type holder	P020	NP-DNMA	Insert (Class M tolerance).....	B026
MTENN	WP holder	C022,P019	NP-DNMM	Insert (Class M tolerance).....	B052
MTHR/L	MT holder	G022	NP-GDCW1240PDFR2	Insert (For V10000 type face mill).....	K041,L149
MTJNR/L	WP holder	C020,P019	NP-SNGA	Insert (Class G tolerance).....	B027
MTKOR/L	Clamp bridge.....	P015	NP-SNGA	Insert (Class G tolerance).....	B027
			NP-SNGA	Insert (Class G tolerance).....	B027
			NP-SNMA	Insert (Class M tolerance).....	B027
			NP-SNMM	Insert (Class M tolerance).....	B053

INDEX FOR TOOL NUMBER

ORDER NUMBER	PRODUCT NAME	PAGE	ORDER NUMBER	PRODUCT NAME	PAGE
NP-TCGW○○○○○○○○○3	Insert (Class G tolerance)	B042	P○○R/L○○	MC holder (Old type tool)	P017
NP-TNGA○○○○○○○○○3	Insert (Class G tolerance)	B028	P○○S	Lock pin	P014
NP-TNGA○○○○○○○○○6	Insert (Class G tolerance)	B028	P425 type	P425 type face mill	P029
NP-TNMA○○○○○○○○○	Insert (Class M tolerance)	B029	P525 type	P525 type face mill	P029
NP-TNMM○○○○○○○○R/L-F	Insert (Class M tolerance)	B053	PCBNR/L○○○○○○○	LL holder	C011,P017
NP-TPGB○○○○○○○○○3	Insert (Class G tolerance)	B043	PCFNR/L○○○○○○○	LL holder	P017
NP-TPGX○○○○○○○○○	Insert (Class G tolerance)	B044	PCLNR/L○○○○○○○	LL holder	C010,P017
NP-TPGX○○○○○○○○○3	Insert (Class G tolerance)	B043	PCLNR/L○○CA○○	LL type cartridge	M002
NP-TPMB○○○○○○○○G	Insert (Class M tolerance)	B043	PDHNR/L○○○○○○○	LL holder	C013
NP-TPMH○○○○○○○○R/L-F	Insert (Class M tolerance)	B059	PDJNR/L○○○○○○○	LL holder	C012
NP-TPMX○○○○○○○○R/L-F	Insert (Class M tolerance)	B059	PMC○○R○○CAM○○○○	PMC type end mill	L142
NP-VBGT○○○○○○○○R-F	Insert (Class G tolerance)	B061	PMF○○○○○○A○○R	PMF type end mill	L144
NP-VBGW○○○○○○○○○2	Insert (Class G tolerance)	B045	PMFA○○R	Cartridge (For PMF type end mill)	L144
NP-VBGW○○○○○○○○○G	Insert (Class G tolerance)	B045	PMR○○○○○○○○R	PMR type end mill	L145
NP-VCGT○○○○○○○○R-F	Insert (Class G tolerance)	B061	PMR○○○○○○○○A○○R	PMR type end mill	L145
NP-VCGW○○○○○○○○○2	Insert (Class G tolerance)	B046	PRDCN○○○○○○○	LL holder	C032,P017
NP-VNGA○○○○○○○○○2	Insert (Class G tolerance)	B030	PRGCR/L○○○○○○○	LL holder	C032,P017
NP-VNGA○○○○○○○○○4	Insert (Class G tolerance)	B030	PS○○	Shim	P010
NP-VNMA○○○○○○○○○	Insert (Class M tolerance)	B030	PSBNR/L○○○○○○○	LL holder	C014,P017
NP-VNMM○○○○○○○○R/L-F	Insert (Class M tolerance)	B054	PSDNN○○○○○○○	LL holder	C017
NP-WCMW○○○○○○○○FA	Insert (Class M tolerance)	B046	PSKNR/L○○○○○○○	LL holder	C018,P017
NP-WFC42ZFER2	Insert (For BF407•QBF407 type face mill)	K044,L028	PSKNR/L○○CA○○	LL type cartridge	M002
NP-WNGA○○○○○○○○○3	Insert (Class G tolerance)	B031	PSSNR/L○○○○○○○	LL holder	C016,P017
NP-WNGA○○○○○○○○WS3	Insert (Class G tolerance)	B031	PSSNR/L○○CA○○	LL type cartridge	M002
NP-WNGA○○○○○○○○GA6	Insert (Class G tolerance)	B031	PSTNR/L○○○○○○○	LL holder	C015
NPX○○○○S○○	NPX type drill	P038	PSYNR○○CA○○	LL type cartridge	M002
NR10000R○○○○○	NR10000 type face mill	P029	PT○○	Shim	P010
NS○○○	Clamp screw	P006	PT○○TOR	Shim	P011
NS○○○W	Clamp screw	P006	PTANR/L○○○○○○○	LL holder	P017
NSE300-○○○A○○R	NSE300 type face mill	L038	PTBNR/L○○○○○○○	LL holder	P017
NSE300R○○○○○	NSE300 type face mill	L038	PTFER/L○○○○○○○	AL holder	P020
NSE300R○○○S○○	NSE300 type end mill	L038	PTFNR/L○○○○○○○	LL holder	C023,P017
NSE400R○○○○○	NSE400 type face mill	L040	PTFNR/L○○CA○○	LL type cartridge	M002
NSE400R○○○S○○	NSE400 type end mill	L040	PTGER/L○○○○○○○	AL holder	P020
NTF○○○○R	NT holder	P025	PTGNR/L○○○○○○○	LL holder	C020,P017
NV○	Boring unit (Vertical type)	P026	PTGNR/L○○CA○○	LL type cartridge	M002
NVPN○○	Cartridge (For boring unit)	P026	PTTNR/L○○○○○○○	LL holder	P017
NVSP○○	Cartridge (For boring unit)	P026	PTTNR○○CA○○	LL type cartridge	M002
O			PV○○○	Shim	P012
OCTACUT○○○○○○○	OCTACUT type face mill	L095,L096	PVJNR/L○○○○○○○	MP holder	C026
OCTACUT○○○S○○○	OCTACUT type end mill	L094	PVPNR/L○○○○○○○	MP holder	C028,P019
OEX1705ETR1	Insert (For OCTACUT type cutter)	K025,L094	PVVNN○○○○○○○	MP holder	C027,P019
OEMX○○○○E○R○	Insert (For OCTACUT type cutter)	K025,K041	PWLNR/L○○○○○○○	LL holder	C029
		L094	Q		
OEMX○○○○E○R1-JS	Insert (For OCTACUT type cutter)	K025,L094	QB○○○○○○○	Q type quick change	M021
P			QBF407R○○○○○Q	QBF407 type Qing cutter	P030
P○○AM	Pin	E035-E038	QBP415R○○○○○Q	QBP415 type Qing cutter	P030
P○○US	Lock pin	P014	QF10000R○○○○○Q	QF10000 type Qing cutter	P030
P○○W	Lock pin	P014	QFA○○○○○○○	T type quick change	M019
P○○WS	Lock pin	P014	QFA○○○○○○B○R/L	Q type quick change	M018
P○○M○○	MC holder (Old type tool)	P017	QFA○○○○○○N○R/L	Q type quick change	M018
			QFB○○○○○○R/L	Q type quick change	M019
			QOGT○○○○○R-G1	Insert (For AQX type end mill)	K025,L079

ORDER NUMBER	PRODUCT NAME	PAGE	ORDER NUMBER	PRODUCT NAME	PAGE
QOMT0000R-M2	Insert (For AQX type end mill).....	K025,L079	S-2MD	HSS end mill	J219
QPAR1	Guide plate.....	P030	S-2SDA	HSS end mill	J229
QPCR1	Guide plate.....	P030	S-4JC	HSS end mill	J237
QSE415R0000Q	QSE415 type Qing cutter	P030	S-4MD	HSS end mill	J233
QWGR1	Wedge-T	P030	SBA000-ES-M	Parts for ABS head	M025
R			SBA000-ES-M0	Parts for ABS head	M025
RBG00	Insert (Class G tolerance)	B047	SBAHR0000	Boring holder	D030
RBH0000N	Arbor (For MICRO-DEX/MICRO-MINI type boring bar) ...	E018,E023,F108,G028	SBAT000000L	Insert (For SBAHR type holder)	D030
RC	HSS end mill	J253	SBAT000000L-B	Insert (For SBAHR type holder)	D030
RCGT0000M0-AZ	Insert (Class G tolerance)	A098	SBH0000R	Square type holder (For MICRO-DEX/ MICRO-MINI type boring bar)...	E024,F109,G029
RCMT0000M0	Insert (Class M tolerance)	A098	SBR000	MI holder	M015
RCMX0000M0	Insert (Class M tolerance)	A098	SC00M00S000S/L	Arbors for screw-in tools	L147
RCMX0000M0-RBS	Insert (Class M tolerance)	A098	SC00M00S000SW/LW	Arbors for screw-in tools	L147
RCMX0000M0-RR	Insert (Class M tolerance)	A098	SC00M00S00-HSK63A	Arbors for screw-in tools	L148
RDGH120400-M4	Insert (For RRSN type holder)	A099	SC00M00S10-BT00	Arbors for screw-in tools	L148
RDMW0000M0E	Insert (For ARX type end mill).....	K025,L098	SCACR/L0000000-SM	Small tools holder (External front turning)...	D008
REM00000N-JS	Insert (For OCTACUT type cutter) ...	K026,L094	SCD43	Shim	P028
REM00000N	Insert (For OCTACUT type cutter) ...	K025,L094	SCLCR/L0000000	SP holder	C030
RGEN2004M0SN	Insert (For SG20 type face mill).....	K026,L029	SCLCR/L0000000-SM	Small tools holder (External front turning)...	D008
RGM2004M0	Insert (For SR holder)	A100	SCLCR12CA12	Cartridge (For external turning).....	M008
RNGJ190600-M5	Insert (For RRSN type holder)	A068	SCMT000000	Insert (Class M tolerance)	A101
RNGN000000	Insert (Class G tolerance)	B033	SCMT000000-FV	Insert (Class M tolerance)	A101
RNMG000000	Insert (Class M tolerance)	A068	SCMW000000	Insert (Class M tolerance)	A101
RN-S00	Clamp screw	P006	SCP000R/L	Shim	P029
RPMT0000M0E-JS	Insert (For BRP type cutter)	K026,L105	SD	Straight shank drill.....	N183
RPMW0000M00	Insert (For BRP type cutter)	K026,L105	SD	Straight shank drill 1/100mm.....	N185
RRKY4	Fixed wrench (For RRSN type holder)...	C045,C046	SD00	Set bolt	P006
RRSDR/L0000000	RRSD type holder	C045	SDEN1203AEN	Insert (For FMSD type cutter)	K026
RRSDS1	Locator	C045	SDFCR/L0000000	SP holder	P019
RRSNR/L0000000	RRSD type holder	C046	SDJCR/L0000000	SP holder	C031,P019
RRSNS1	Locator	C046	SDJCR/L0000000-SM	Small tools holder (External front turning)...	D009
RS0000T	Clamp screw	P006	SDJCR12CA11	Cartridge (For external turning).....	M008
RTG00A	Insert (For TL type holder)	A117,B047,C047	SDJER/L0000000	AL holder	C042
S			SDKN0000AE0	Insert (For FMSD type cutter)	K026
S0	Clamp screw	P006	SDNCN0000000	SP holder	C031
S000SCLCR/L00	S type boring bar (Steel shank).....	E030	SDNCR/L0000000-SM	Small tools holder (External front turning)...	D009
S000SCLPR/L00	COBRA type boring bar (Steel shank)	P023	SDNCR12CA11	Cartridge (For external turning).....	M008
S000SCZCR/L00	S type boring bar (Steel shank).....	E034,P023	SDNEN0000000	AL holder.....	C042
S000SDQCR/L00	S type boring bar (Steel shank).....	E031,P023	SDXCR/L0000000	SP holder	P019
S000SDUCR/L00	S type boring bar (Steel shank).....	E029	SE03-65	Locator screw.....	P031
S000SDZCR00	S type boring bar (Steel shank).....	P023	SE300 type	SE300 type face mill	P030
S000SSKCR/L00	S type boring bar (Steel shank).....	E033,P023	SE300 type	SE445 type end mill	P034
S000STFCR/L00	S type boring bar (Steel shank).....	E028	SE400 type	SE400 type face mill	P030
S000STFER/L00	AL type boring bar (Steel shank).....	E040	SE415R00000	SE415 type face mill	L024
S000STFPR00	COBRA type boring bar (Steel shank)	P023	SE445R/L00000	SE445 type face mill	L016
S000SVQCR/L00	S type boring bar (Steel shank).....	E032	SE445R000S00	SE445 type end mill	L016
S000SVUCR/L00	S type boring bar (Steel shank).....	E033	SE515R00000	SE515 type face mill	L026
S000SWLPR/L00	COBRA type boring bar (Steel shank)	P023	SE545R00000	SE545 type face mill	L018
S-2MB	HSS end mill	J251	SEA42C10GR/L	Insert (For E404/FE404 type cutter)...	K026,L154
			SECN0000AF0N1	Insert (For SE445/545 type cutter).....	K027 L017,L019
			SECN0000EF0R/L1	Insert (For SE415/515 type cutter)...	K027,K042 L025,L027

INDEX FOR TOOL NUMBER

ORDER NUMBER	PRODUCT NAME	PAGE	ORDER NUMBER	PRODUCT NAME	PAGE
SECN1203AFFR1	Insert (For SE445 type cutter)	K042,L017	SNGG	Insert (Class G tolerance)	A069
SED2KMG	MS end mill	J054	SNGG	Insert (Class G tolerance)	A071
SED2KPG	MS end mill	J053	SNGN	Insert (Class G tolerance)	A086,B034,B054
SEE2L	Carbide end mill	J065	SNK43B2	Insert (For DN/BN425 type face mill)	K029
SEE4L	Carbide end mill	J096	SNMA	Insert (Class M tolerance)	A071
SEEN	Insert (For SE445/545 type cutter)	K027	SNMG	Insert (Class M tolerance)	A071
		L017,L019	SNMG	Insert (Class M tolerance)	A070
SEEN	Insert (For SE415/515 type cutter)	K027	SNMG	Insert (Class M tolerance)	A069
		L025,L027	SNMG	Insert (Class M tolerance)	A069
SEER	Insert (For SE445/545 type cutter)	K027	SNMG	Insert (Class M tolerance)	A069
		L017,L019	SNMG	Insert (Class M tolerance)	A071
SEER1203EFER-JS	Insert (For SE415 type cutter)	K028,L025	SNMG	Insert (Class M tolerance)	A071
SEET13T3AGEN-JL	Insert (For ASX445 type cutter)	K028,L013	SNMG	Insert (Class M tolerance)	A070
SEF	Setting fixture	L155	SNMG	Insert (Class M tolerance)	A070
SEG4SA	Carbide end mill	J097	SNMG	Insert (Class M tolerance)	A070
SEGT13T3AGFN-JP	Insert (For ASX445 type cutter)	K028,L013	SNMG	Insert (Class M tolerance)	A071
SEKN	Insert (For SE445/545 type cutter)	K027	SNMG	Insert (Class M tolerance)	A070
		L017,L019	SNMG	Insert (Class M tolerance)	A069
SEKN	Insert (For SE445/545 type cutter)	K027	SNMG	Insert (Class M tolerance)	A069
		L017,L019	SNMG	Insert (Class M tolerance)	A069
SEKN	Insert (For SE415/515 type cutter)	K027	SNMM	Insert (Class M tolerance)	A071
		L025,L027	SNMM	Insert (Class M tolerance)	A071
SEKN	Insert (For SE415/515 type cutter)	K027	SNMM	Insert (Class M tolerance)	A071
		L025,L027	SNMM	Insert (Class M tolerance)	A071
SEKN1203AGTN	Insert (For corner angle 45° type cutter)	K029	SNMN	Insert (Class M tolerance)	A086,K029
SEMT13T3AGSN-FT	Insert (For ASX445 type cutter)	K028,L013	SNTF	SNT holder	P025
SEMT13T3AGSN-JH	Insert (For ASX445 type cutter)	K028,L013	SOET12T308PEER-JL	Insert (For ASX400 type cutter)	K029,L035
SEMT13T3AGSN-JM	Insert (For ASX445 type cutter)	K028,L013	SOGT12T308PEFR-JP	Insert (For ASX400 type cutter)	K030,L035
SETHR	SET holder	P021	SOMT12T308PEER/L-JM	Insert (For ASX400 type cutter)	K030,L035
SETK	Clamp bridge	P015	SOMT12T308PEER-JH	Insert (For ASX400 type cutter)	K030,L035
SETS	Clamp screw	P006	SOMT12T320PEER-FT	Insert (For ASX400 type cutter)	K030,L035
SFAN1203ZFFR/L2	Insert (For BF407/QBF407 type cutter)	K029	SONX1206PER	Insert (For VOX400 type cutter)	K030,L031
		L028	SPCA53Z	Insert (For FF3000 type face mill)	K030,L151
SFCN1203ZFFR/L2	Insert (For BF407/QBF407 type cutter)	K029	SPCG53Z	Insert (For FF3000 type face mill)	K030,L151
		K042,L028	SPEA	Insert (For AF3000 type face mill)	K042
SG	SG20 type face mill	L029	SPEN	Insert (For corner angle 15° type cutter)	K031
SH	Small tools holders (For opposite tool posts)	D026	SPEN	Insert (For FP490/590 type cutter)	K031
				L152,L153	
SHP400 type	SHP400 type face mill	P030	SPEN1203EEER/L1	Insert (For FBP415/QBP415 type cutter)	K031
SHP400 type	SHP400 type end mill	P034		L023	
SL32-100	Sleeve	H022	SPEN1203EETR1	Insert (For FBP415/QBP415 type cutter)	K042
SLCS	Clamp screw	P006		L023	
SLCW	Clamp wedge	P019	SPER1203EEER-JS	Insert (For FBP415/QBP415 type cutter)	K031
SLG	Insert (For STLG type end mill)	K029,L141		L023	
SLN	Nut	P019	SPGN	Insert (For S400/500 type cutter)	A118,B048
SL-ONEN120404ASN	Insert (For AOX445 type cutter)	K042,L022		B065,K032	
SLP	Lock pin	P019	SPGR	Insert (Class G tolerance)	A118
SLSTN	Shim	P019	SPGX	Insert (Class G tolerance)	A102,B057
SMGHR	SMG holder	F104,G024	SPKN	Insert (For corner angle 15° type cutter)	K031
SMGTR	Insert (For SMG holder)	F104,G025	SPMB1204APT	Insert (For BSP type end mill)	K031,L092
SMTTR	Insert (For SMT holder)	F104,G025	SPMN	Insert (Class M tolerance)	A118,K032
SNF43B2	Insert (For DN/BN425 type face mill)	K029	SPMN	Insert (Class M tolerance)	K032
SNCB2	Insert (For DN/BN425 type face mill)	K029	SPMR	Insert (Class M tolerance)	A118
SNGA	Insert (Class G tolerance)	A073,B027,B053	SPMT	Insert (Class M tolerance)	A102

ORDER NUMBER	PRODUCT NAME	PAGE	ORDER NUMBER	PRODUCT NAME	PAGE
SPMT120408-A	Insert (For TBE1 type end mill)	K032	STFPR/L00CA00	SS type cartridge	M006
SPMW000000	Insert (Class M tolerance)	A102,K032,L136	STGCR/L0000000	SP holder	C035
SPMX120408-00	Insert (For SPX type end mill)	K032,L110	STGER/L0000000	AL holder	C043
SPNN0000EEER/L1	Insert (For FBP415 type cutter)	K031,L023	STGPR00CA00	SS type cartridge	M006
SPS1	Locator screw	P006	STJPR12CA16	Cartridge (For external turning)	M008
SPSE000R/L	Locator	L016,L018,L024,L026,P030,P034	STLGR00S00	STLG type end mill	L141
SPSEW000R/L	Locator	P030	STPMR0N	Shim	L145
SPSG20R	Locator	L029	STS1	Clamp screw	P006
SPSHP400R/L	Locator	P030,P034	STSE000R/L	Shim	L016,L018,L024,L026
SPSVN32	Shim	P012	STSP415R	Shim	L023,P030
SPTSE000R	Locator	L038,L040	STTPR00CA00	SS type cartridge	M006
SPX4-000A24A058RA	SPX type end mill	L109	SUFT00R00	Insert (For SUF type end mill)	K034,L124
SPX4R000000A058A	SPX type end mill	L109	SVJBR/L0000000-SM	Small tools holder (External front turning)	D010
SPX4R000000BT50N00	SPX type end mill	L108	SVJCR/L0000000	SP holder	C036,P019
SPX4R000000MT5N0	SPX type end mill	L108	SVJCR12CA16	Cartridge (For external turning)	M008
SPX4R000000WN00	SPX type end mill	L108	SVJDR/L0000000	AL holder	C044
SR	HSS end mill	J246	SVLPR/L0000000-SM	Small tools holder (External front turning)	D010
SRBT00	Insert (For SRB type end mill)	K033,L120	SVPCR/L0000000	SP holder	C037,P019
SRDCN0000000	SP holder	C033,P019	SVPCR12CA16	Cartridge (For external turning)	M008
SRDCR12CA08	Cartridge (For external turning)	M008	SVPDR/L0000000	AL holder	P020
SRE00R	Insert (For SRE type end mill)	P034	SVPPR/L0000000-SM	Small tools holder (External front turning)	D011
SRFH00AM0000	SRF type end mill	L119	SVVBR/L0000000-SM	Small tools holder (External front turning)	D011
SRFH00S000	SRF type end mill	L118	SVVCN0000000	SP holder	C036,P019
SRFH00S000W	SRF type end mill (Carbide shank)	L119	SVVDN0000000	AL holder	P020
SRFT00	Insert (For SRF type end mill)	K033,L120	SXZCR/L000000015	Profile holder	C038
SRG00C	Insert (For SRM2 type end mill)	K033	T		
		L127,L132	TAB0000S00	TAB type drill	P038
SRG00E	Insert (For SRM2 type end mill)	K033	TAF/L/M/S0000F00	TAF type drill	N136
		L127,L132	TAGS/M0000F00	TAGS/M type drill	P037
SRGCR/L0000000	SP holder	C033,P019	TASS0000C/S00	TASS type drill	P036
SRK1R	Clamp bridge	P016	TAW0B0000S32	TAW type drill (For bridge construction)	N133
SRM00C-M	Insert (For SRM2 type end mill)	K033,L127	TAW0N0000S00	TAW type drill (General use)	N118
SRM00E-M	Insert (For SRM2 type end mill)	K034,L127	TAW0NH0000S00	TAW type drill (General use)	N117
SRM2000AM000S/L00	SRM type end mill	L128	TAW200R-90	Chamfer ring	N134
SRM2000M/S/WNL0	SRM2 type end mill	L132	TAWB0000T	Insert (For TAW type drill)	K051,N133
SRM2000S00	SRM2 type end mill	L126,L127	TAWBH0000T	Insert (For TAW type drill)	K047,N133
SRS5	Clamp screw	P034	TAWC12T301-45GM	Insert (For chamfer ring)	N135
SRSGN0000000	SR holder	P020	TAWKH0000TG	Insert (For TAW type drill)	K048,N128
SRSGR/L0000000	SR holder	P020	TAWN0000T	Insert (For TAW type drill)	K050,N130
SRXCR/L0000000	SP holder	P019	TAWN0000T	Insert (For TAW type drill)	K046,N126
SSBCR/L1616H09	SP holder	P019	TAWP00-00	Guide plate	N134
SSE41R/L	Locator (For E404 type face mill)	P028	TBE1000S0	TBE1 type end mill	P035
SSKPR00CA00	SS type cartridge	M006	TBE1 type	TBE1 type end mill	P035
SSP00R/L	Locator	P029	TBE2 type	TBE2 type end mill	P035
SSSCR/L0000000	SP holder	C034	TBGN0000000	Insert (Class G tolerance)	B049
SSSPR00CA00	SS type cartridge	M006	TCGN0000000	Insert (Class G tolerance)	A119
SSYPR00CA00	SS type cartridge	M006	TCGT0000000-AZ	Insert (Class G tolerance)	A103
STASX000N	Shim	P012	TCGT0000000R/L-F	Insert (Class G tolerance)	A103
STAWSN0000S00	Insert (For STAW type drill)	N112	TCGW0000000	Insert (Class G tolerance)	B058
STAWN00000TH	Insert (For STAW type drill)	K052,N114,N115	TCMT0000000	Insert (Class M tolerance)	A103
STBE445NF	Shim	P029	TCMT0000000-FV	Insert (Class M tolerance)	A103
STBS500N	Shim	P012	TCMW0000000	Insert (Class M tolerance)	A103,B042,B058
STFCR/L0000000	SP holder	C035	TD	Taper shank drill	N199
STFER/L0000000	AL holder	C043			

INDEX FOR TOOL NUMBER

ORDER NUMBER	PRODUCT NAME	PAGE	ORDER NUMBER	PRODUCT NAME	PAGE
TECN0000PEOR/L1	Insert (For SE300/400 type cutter)...	K035,K042 K043,L039,L041	TNP-CNGA000000002	Insert (Class G tolerance)	B023
TECN1603PE01W	Insert (For NSE300/SE300 type cutter)	K034 L039	TNP-DCGW000000G2	Insert (Class G tolerance)	B040
TEEN0000PEOR/L1	Insert (For SE300/400 type cutter)...	K034,K035 L039,L041	TNP-DNGA000000002	Insert (Class G tolerance)	B026
TEER0000PEER-JS	Insert (For NSE300/400/SE300 type cutter)	K034,L039,L041	TNP-SNGA000000002	Insert (Class G tolerance)	B027
TEGX00000000	Insert (For AL holder)	B063	TNP-TNGA000000003	Insert (Class G tolerance)	B029
TEGX0000000R/L	Insert (For AL holder)	A104,B063	TNP-VNGA000000002	Insert (Class G tolerance)	B030
TEKN0000PEOR	Insert (For NSE400/SE400 type cutter)	K035 L041	TPEN0000POR	Insert (For corner angle 0° type cutter)	K035
TEKN0000PEOR1	Insert (For NSE400/SE400 type cutter)	K035 L041	TPEW0000ZPOR2	Insert (For PMF type end mill)...	K035,K043,L144
TIP000	Wrench	P002	TPGH000000R/L-FS	Insert (Class G tolerance)	A105
TKY00D	Driver	P002	TPGN00000000	Insert (Class G tolerance)	A121,B050,B065
TKY00F	Flag wrench	P002	TPGR0000000R/L	Insert (Class G tolerance)	A120
TKY00R	L-wrench	P002	TPGT0000000R/L-F	Insert (Class G tolerance)	B059
TKY00T	T-wrench	P002	TPGV0000000R/L-F	Insert (Class G tolerance)	B060
TLHN0000	TL holder	C047	TPGX00000000	Insert (Class G tolerance)	A107,B044,B060
TLHR0000	TL holder	C047	TPGX0000000R/L	Insert (Class G tolerance)	A106
TNGA00000000	Insert (Class G tolerance)	A079,B029,B053	TPKN0000POR	Insert (For corner angle 0° type cutter)	K035
TNGG00000000-PK	Insert (Class G tolerance)	A074	TPMH0000000-FV	Insert (Class M tolerance)	A105
TNGG00000000R/L	Insert (Class G tolerance)	A078	TPMH0000000-MV	Insert (Class M tolerance)	A107
TNGG00000000R/L-F	Insert (Class G tolerance)	A074	TPMH0000000-SV	Insert (Class M tolerance)	A106
TNGG00000000R/L-FS	Insert (Class G tolerance)	A074	TPMN00000000	Insert (Class M tolerance)	A120,K035
TNGG00000000R/L-K	Insert (Class G tolerance)	A075	TPMR00000000	Insert (Class M tolerance)	A120
TNGN00000000	Insert (Class G tolerance)	A087,B035	TPMX00000000	Insert (Class M tolerance)	A107
TNMA00000000	Insert (Class M tolerance)	A079	TPMX0000000L	Insert (Class M tolerance)	A106
TNMG00000000	Insert (Class M tolerance)	A077	TPNX1605N	Insert (For VIPER type end mill)	K035
TNMG00000000-C	Insert (Class M tolerance)	A075	TPS00	Clamp screw	P007
TNMG00000000-FH	Insert (Class M tolerance)	A074	TRM2000S0	TRM2 type end mill	P035
TNMG00000000-FS	Insert (Class M tolerance)	A074	TRM4000S0	TRM4 type end mill	L134
TNMG00000000-FY	Insert (Class M tolerance)	A074	TS0	Clamp screw	P007
TNMG00000000-GH	Insert (Class M tolerance)	A078	TS00	Clamp screw	P007
TNMG00000000-MA	Insert (Class M tolerance)	A076	TS000	Clamp screw	P007
TNMG00000000-MH	Insert (Class M tolerance)	A076	TSMPR0000S00	TSMP type end mill	L137
TNMG00000000-MJ	Insert (Class M tolerance)	A076	TSR00000S	Clamp screw	P007
TNMG00000000-MP	Insert (Class M tolerance)	A076	TSS000000	Radial screw	P008
TNMG00000000-MS	Insert (Class M tolerance)	A077	TTAHR/L0000	Small tools holder (External threading)	D024
TNMG00000000R/L-1G	Insert (Class M tolerance)	A075	TTAT00000000R/L0-B	Insert (For small tools holder)	D024
TNMG00000000R/L-1M	Insert (Class M tolerance)	A075	TTD	Taper shank drill, For steel frame	N209
TNMG00000000R/L-2G	Insert (Class M tolerance)	A077	U		
TNMG00000000R/L-2M	Insert (Class M tolerance)	A077	UCR	Clamp bridge	P016
TNMG00000000R/L-ES	Insert (Class M tolerance)	A077	UDC00F	Insert (For FBE2 type end mill)	K036,K043
TNMG00000000-SA	Insert (Class M tolerance)	A075	UDK00A	Insert (For TBE1 type end mill)	K036
TNMG00000000-SH	Insert (Class M tolerance)	A075	UDK15	Insert (For TBE1 type end mill)	K036
TNMG00000000-SY	Insert (Class M tolerance)	A075	UGHN000	UG holder	F098
TNMM00000000-HV	Insert (Class M tolerance)	A079	UGHR/L00000000	UG holder	F099
TNMM00000000-HZ	Insert (Class M tolerance)	A079	UGS1	Wrench	F098
TNMN00000000	Insert (Class M tolerance)	A087	UPM00	Insert (For TRM4 type end mill)	K036,L134
TNMX00000000-MW	Insert (Class M tolerance)	A077	UPM00P0	Insert (For TRM4 type end mill)	K036,L134
TNMX00000000-SW	Insert (Class M tolerance)	A075	V		
TNP-CCGW000000G2	Insert (Class G tolerance)	B037	V10000-00000000	V10000 type face mill	L149
			VA-2MS	VIOLET end mill	J216
			VA-2SS	VIOLET end mill	J215
			VA-4MC	VIOLET end mill	J232
			VA-JR	VIOLET end mill	J244

ORDER NUMBER	PRODUCT NAME	PAGE	ORDER NUMBER	PRODUCT NAME	PAGE
VA-LR	VIOLET end mill	J245	VCMW	Insert (Class M tolerance)	A110
VA-MFPR	VIOLET end mill	J242	VC-PSRB	MIRACLE end mill	J163
VA-MH	VIOLET end mill	J230	VC-RC	MIRACLE end mill	J212
VA-MR	VIOLET end mill	J243	VC-SFPR	MIRACLE end mill	J112
VA-PDM	VIOLET drill, Medium, High precision	N157	VC-SSM	MIRACLE drill, Medium, For steel	N088
VA-PDM-SUS	VIOLET drill, Medium, High precision, For stainless steel	N167	VC-SSS	MIRACLE drill, Short, For steel (3mm shank series)	N085
VA-PDS	VIOLET drill, Short, High precision	N152	VC-SSS	MIRACLE drill, Short, For steel	N086
VA-PDS-CB	VIOLET drill, Short flute length, High precision, For counter boring	N174	VCT13R	Cartridge (For V10000 type cutter)	L149
VA-PDS-SUS	VIOLET drill, Short, High precision, For stainless steel	N161	VC-XB	MIRACLE end mill	J141
VA-SFPR	VIOLET end mill	J241	VDGX	Insert (Class G tolerance)	A111
VBET	Insert (Class E tolerance)	A108	VDGX	Insert (Class G tolerance)	B064
VBET	Insert (Class E tolerance)	A108	VF-2MD	IMPACT MIRACLE end mill	J042
VBET	Insert (Class E tolerance)	A108	VF-2MV	IMPACT MIRACLE end mill	J043
VBGT	Insert (Class G tolerance)	A108	VF-2SB	IMPACT MIRACLE end mill	J126
VBMT	Insert (Class M tolerance)	A108	VF-2SDB	IMPACT MIRACLE end mill	J127
VBMT	Insert (Class M tolerance)	A108	VF-2SDBL	IMPACT MIRACLE end mill	J128
VBMT	Insert (Class M tolerance)	A108	VF-2SSB	IMPACT MIRACLE end mill	J125
VBMT	Insert (Class M tolerance)	A108	VF-2WB	IMPACT MIRACLE end mill	J124
VBMT	Insert (Class M tolerance)	A108	VF-2XL	IMPACT MIRACLE end mill	J044
VBMT	Insert (Class M tolerance)	A108	VF-2XLB	IMPACT MIRACLE end mill	J130
VC-2C	MIRACLE end mill	J211	VF-2XLBS	IMPACT MIRACLE end mill	J129
VC-2ESB	MIRACLE end mill	J135	VF-3XB	IMPACT MIRACLE end mill	J153
VC-2JS	MIRACLE end mill	J048	VF-4MB	IMPACT MIRACLE end mill	J158
VC-2LB	MIRACLE end mill	J140	VF-4MD	IMPACT MIRACLE end mill	J082
VC-2MB	MIRACLE end mill	J138	VF-4MV	IMPACT MIRACLE end mill	J083
VC-2MDB	MIRACLE end mill	J139	VF-4SVB	IMPACT MIRACLE end mill	J157
VC-2MS	MIRACLE end mill	J046	VF-6MHV	IMPACT MIRACLE end mill	J098
VC-2MT	MIRACLE end mill	J199	VF-6MHV-CH	IMPACT MIRACLE end mill	J101
VC-2PSB	MIRACLE end mill	J136	VF-6MHVRB	IMPACT MIRACLE end mill	J190
VC-2PSB-P	MIRACLE end mill	J137	VF-6MHVRB-CH	IMPACT MIRACLE end mill	J193
VC-2SS	MIRACLE end mill	J045	VF-6SVR-CH	IMPACT MIRACLE end mill	J113
VC-3MB	MIRACLE end mill	J155	VF-8MHV-CH	IMPACT MIRACLE end mill	J104
VC-4JC	MIRACLE end mill	J088	VF-8MHVRB-CH	IMPACT MIRACLE end mill	J194
VC-4JRB	MIRACLE end mill	J184	VF-HVRB	IMPACT MIRACLE end mill	J177
VC-4MB	MIRACLE end mill	J159	VF-JHV	IMPACT MIRACLE end mill	J085
VC-4MC	MIRACLE end mill	J087	VF-MD	IMPACT MIRACLE end mill	J100
VC-4SRB	MIRACLE end mill	J183	VF-MDRB	IMPACT MIRACLE end mill	J192
VC-4STB	MIRACLE end mill	J209	VF-MFPR	IMPACT MIRACLE end mill	J110
VC-6MH	MIRACLE end mill	J103	VF-MHV	IMPACT MIRACLE end mill	J084
VC-8MH	MIRACLE end mill	J105	VF-MHV-CH	IMPACT MIRACLE end mill	J086
VCGT	Insert (Class G tolerance)	A110	VF-MHVRB	IMPACT MIRACLE end mill	J181
VCGT	Insert (Class G tolerance)	A110	VF-MHVRB-CH	IMPACT MIRACLE end mill	J182
VC-HFRB	MIRACLE end mill	J185	VF-SD	IMPACT MIRACLE end mill	J099
VC-HSM	MIRACLE drill, Medium, For hardened material	N090	VF-SDRB	IMPACT MIRACLE end mill	J191
VC-LD	MIRACLE end mill	J102	VF-SFPR	IMPACT MIRACLE end mill	J109
VC-MD-SC	MIRACLE end mill	J089	VF-SFPR-CH	IMPACT MIRACLE end mill	J111
VC-MH	MIRACLE end mill	J068	VFX6	VFX6 type end mill	L116
VC-MHDRB	MIRACLE end mill	J187	VIP400 type	VIP400 type face mill	P031
VCMT	Insert (Class M tolerance)	A110	VIP445 type	VIP445 type face mill	P031
VCMT	Insert (Class M tolerance)	A110	VIPER type	VIPER type end mill	P034
VCMT	Insert (Class M tolerance)	A110	VNGA	Insert (Class G tolerance)	A081,B030,B054
VCMT	Insert (Class M tolerance)	A110	VNGG	Insert (Class G tolerance)	A080
VCMT	Insert (Class M tolerance)	A110	VNGG	Insert (Class G tolerance)	A081

INDEX FOR TOOL NUMBER

ORDER NUMBER	PRODUCT NAME	PAGE	ORDER NUMBER	PRODUCT NAME	PAGE
VNGG○○○○○○R/L-F	Insert (Class G tolerance)	A080	WNMG○○○○○○-MA	Insert (Class M tolerance)	A083
VNGM○○○○○○-MJ	Insert (Class G tolerance)	A080	WNMG○○○○○○-MH	Insert (Class M tolerance)	A083
VNMG○○○○○○	Insert (Class M tolerance)	A081	WNMG○○○○○○-MJ	Insert (Class M tolerance)	A083
VNMG○○○○○○-FH	Insert (Class M tolerance)	A080	WNMG○○○○○○-MP	Insert (Class M tolerance)	A083
VNMG○○○○○○-FS	Insert (Class M tolerance)	A080	WNMG○○○○○○-MS	Insert (Class M tolerance)	A084
VNMG○○○○○○-MA	Insert (Class M tolerance)	A081	WNMG○○○○○○-MW	Insert (Class M tolerance)	A084
VNMG○○○○○○-MH	Insert (Class M tolerance)	A081	WNMG○○○○○○-SA	Insert (Class M tolerance)	A082
VNMG○○○○○○-MJ	Insert (Class M tolerance)	A080	WNMG○○○○○○-SH	Insert (Class M tolerance)	A082
VNMG○○○○○○-MP	Insert (Class M tolerance)	A081	WNMG○○○○○○-SW	Insert (Class M tolerance)	A082
VNMG○○○○○○-MS	Insert (Class M tolerance)	A081	WNMG○○○○○○-SY	Insert (Class M tolerance)	A083
VNMG○○○○○○-SH	Insert (Class M tolerance)	A080	WOWE12T308PE○○8C	Wiper insert (For ASX400 type cutter)	K040 L035
VOX400-○○○○A○○R	VOX400 type face mill	L030,L031	WPC42EEER/L10C	Wiper insert (For FBP415/QBP415 type cutter)	...
VOX400R○○○○○○	VOX400 type face mill	L030			K040,L023
VPET○○○○○○R/L-SRF	Insert (Class E tolerance)	A112	WPC42W3GR/L	Wiper insert (For P425/DP type cutter)	...
VPGT○○○○○○R/L-SMG	Insert (Class G tolerance)	A112			K040
V-SD	VIOLET drill, Straight shank	N176	WPGT○○○○○○	Insert (Class G tolerance)	A115,B062
VSD645 type	VSD645 type face mill	P031	WPGT○○○○○○R/L-FS	Insert (Class G tolerance)	A115
V-TDS	VIOLET drill, Short, Taper shank	N179	WPMT○○○○○○-MV	Insert (Class M tolerance)	A115
V-TSD-OH	VIOLET drill, Oil hole, For steel frame	N178	WPSTN○○	Shim	P012
W			WPSWC43	Shim	P012
WBGT○○○○○○R/L-F	Insert (Class G tolerance)	A113	WPSWN43	Shim	P012
WBMT○○○○○○R/L-MV	Insert (Class M tolerance)	A113	WS○○○○○○T	Clamp screw	P008
WCGT○○○○○○R/L	Insert (Class G tolerance)	A114	WS○○○○○○TPS	Clamp screw	N116
WCMT○○○○○○	Insert (Class M tolerance)	A114	WS○○LH	Stopper	N116
WCMW○○○○○○	Insert (Class M tolerance)	B062	WS1	Wedge screw	P008
WCS○○○○○○H	Shim screw	P008	X		
WEC○○AFOR/L10C	Wiper insert (For SE445/545 type cutter)	K039 L017	XCMT○○○○○○-SVX	Insert (Class M tolerance)	A116
WEC○○AFOR/L5C	Wiper insert (For SE445/545 type cutter)	K039 L017,L019	XDGT1550PDR-G○○	Insert (For BXD type cutter)	K037,L075
WEC○○EFOR/L5C	Wiper insert (For SE415/515 type face mill)	...	XDGT1550PDR-GL○○	Insert (For BXD type cutter)	K037,L075
		K039,K040,L025,L027	XDGX1750○○PDR-GL	Insert (For AXD4000 type cutter)	K037,L065
WEC300PEER9C	Wiper insert (For SE300 type cutter)	K039	XDGX2270○○PDR-GL	Insert (For AXD7000 type cutter)	K037,L069
WEC400PEER/L10C	Wiper insert (For SE400 type cutter)	K039	XNMU190912-MS	Insert (For VFX6 type end mill)	K038,L116
WEC42EFOR/L10C	Wiper insert (For SE415 type face mill)	K039 L025	XPGT○○○○PDR-G○○	Insert (For BAP3500 type cutter)	K038,L043
WEC42W11R/L	Wiper insert (For E404 type face mill)	K044	XPMT○○○○PDR-M○○	Insert (For BAP3500 type end mill)	...
WEEW13T3AGOR3C	Wiper insert (For ASX445 type cutter)	K044 L013			K038,L043
WEEW13T3AGOR8C	Wiper insert (For ASX445 type cutter)	K040 L013	Z		
WFC42ZFER/L2	Wiper insert (For BF407/QBF407 type cutter)	...	ZCMX○○○○○○ER-○	Insert (For DCCC type end mill)	K038,L114
		K044,L028	ZR○○OC	C type head (For ZR type end mill)	P034
WNEU2006ZEN7C-WK	Wiper insert (For AHX640W type cutter)	K040 L020	ZR○○OT	T type head (For ZR type end mill)	P034
WNMA○○○○○○	Insert (Class M tolerance)	A084	ZRM○○○○R-M○	Insert (For BAP300 type end mill)	K038,L049
WNMG○○○○○○	Insert (Class M tolerance)	A084	NUMBER•OTHERS		
WNMG○○○○○○-C	Insert (Class M tolerance)	A083	01-○	Insert (For brazed tools holder)	I002
WNMG○○○○○○-FH	Insert (Class M tolerance)	A082	02-○	Insert (For brazed tools holder)	I002
WNMG○○○○○○-FS	Insert (Class M tolerance)	A082	03-○	Insert (For brazed tools holder)	I002
WNMG○○○○○○-FY	Insert (Class M tolerance)	A082	04-○	Insert (For brazed tools holder)	I002
WNMG○○○○○○-GH	Insert (Class M tolerance)	A084	05-○	Insert (For brazed tools holder)	I002
WNMG○○○○○○-GJ	Insert (Class M tolerance)	A084	06-○	Insert (For brazed tools holder)	I002
			07-○	Insert (For brazed tools holder)	I003
			08-○	Insert (For brazed tools holder)	I003
			09E1	Insert (For brazed tools holder)	I003
			1LA	HSS end mill	J214
			1MA	HSS end mill	J213

ORDER NUMBER	PRODUCT NAME	PAGE	ORDER NUMBER	PRODUCT NAME	PAGE
2LS	HSS end mill	J225			
2MK	HSS end mill	J227			
2MS	HSS end mill	J223			
2SS	HSS end mill	J217			
31-○	31 type brazed tools holder	I005			
32-○	32 type brazed tools holder	I005			
33-○	33 type brazed tools holder	I005			
33-○C	Brazed tools with sintered PCD	I008			
34-○	34 type brazed tools holder	I005			
35-○	35 type brazed tools holder	I005			
35-○C	Brazed tools with sintered PCD	I008			
36-○	36 type brazed tools holder	I005			
37-○	37 type brazed tools holder	I006			
37-○C	Brazed tools with sintered PCD	I008			
38-○	38 type brazed tools holder	I006			
39-○	39 type brazed tools holder	I006			
3KD	Triangular shank drill, (Type 6.5)(Type 10)(Type 13)	N210			
40-○	40 type brazed tools holder	I006			
41-○	41 type brazed tools holder	I006			
42-○	42 type brazed tools holder	I006			
43-○	43 type brazed tools holder	I006			
47-○	47 type brazed tools holder	I007			
49-○	49 type brazed tools holder	I007			
4LC	HSS end mill	J239			
4MC	HSS end mill	J235			
51-○	51 type brazed tools holder	I007			
6100-1-75	Wrench for locator	C046			
95-○	95 type brazed tools holder	I007			
I-○	Insert (For former brazed tools holder)	I004			
TO-○	Insert (For former brazed tools holder)	I004			
HA-○	Insert (For former brazed tools holder)	I004			
RI-○	Insert (For former brazed tools holder)	I004			
RU-○	Insert (For former brazed tools holder)	I004			

SAFETY OF CUTTING TOOL PRODUCTS

1. Use of Cutting Tool Products

Packages of Mitsubishi products carry a safety warning label. However, tools are not labeled with detailed warning indications. Please read the "Safety of Cutting Tool Products" in this catalogue before handling cutting tool products and cemented carbide materials. Moreover, as a part of your workers' safety education, please notify the contents of the "Safety of Cutting Tool Products" to all workers.

2. Basic Characteristics of Hard Tool Materials

In Terms of "Safety of Cutting Tool Products"

Hard Tool Materials : General term for tool materials like cemented carbide alloy, cermet, ceramics, sintered CBN, sintered diamond, high speed steel and alloy steel, etc.

Physical Characteristics

Appearance : Varies depending on the type of material. Eg. grey, black, gold, etc.

Smell : None

Hardness, Specific Gravity :

Hard Tool Materials	Hardness (HV)	Specific Gravity	Hard Tool Materials	Hardness (HV)	Specific Gravity
High Speed Steel (HSS)	200—1200kg/mm ²	7—9	Sintered CBN	2000—5000kg/mm ²	3—5
Cemented Carbide	500—3000kg/mm ²	9—16	Sintered Diamond	8000—12000kg/mm ²	3—5
Cermet	500—3000kg/mm ²	5—9	Alloy Steel	200—1200kg/mm ²	7—9
Ceramics	1000—4000kg/mm ²	2—7	Diamond Electroforming Product	8000—12000kg/mm ²	3—5

Constituents

Carbide, nitride, carbon nitride, oxide, such as W, Ti, Al, Si, Ta, B, V and metals such as Fe, Co, Ni, Cr, Mo.

3. Safety of Cutting Tool Products

○Hard tool materials have a large specific gravity. Thus, they require special attention as heavy materials when the size or quantity is large.

○Cutting tool products generate dust and mist during grinding operations or heating. This dust and mist can be harmful when coming in contact with the eyes or skin, or if substantial quantities are swallowed. When grinding and machining, it is recommended to use local exhaust ventilation and respirators, a dust protective mask, glasses, gloves etc. If dust makes contact with the hands, thoroughly wash the affected area with soap and water. Don't eat in the exposed area, and wash hands thoroughly before eating. Remove dust from the clothing by a cleaning or washing, but don't shake off.

○Cobalt and nickel contained in carbide or other cutting tool materials are reported as possibly carcinogenic to humans. It is also reported that cobalt and nickel dust and mist can affect the skin, respiratory organs and heart through repeated or prolonged contact.

○For further information, please refer to **MSDS** (Material Safety Data Sheet).

MSDS=Material Safety Data Sheet

Home page: <http://www.mitsubishicarbide.com/msds/>

4. Handling Cutting Tool Products

○Surface conditions affect toughness of cutting tools. Therefore, use a diamond grinding wheel for finishing.

○Hard tool materials are extremely hard and brittle at the same time. Thus, they may be broken by shocks and tightening with excess force.

○Hard tool materials and ferrous materials have different thermal expansion ratios. Shrinkage or swell fit products may suffer from cracks when applied temperature is higher or lower than the appropriate temperature for the tool.

○Pay special attention on storing hard tool materials. Toughness of hard tool materials is lowered when they corrode due to coolant and other liquid.

○When brazing hard tool materials, if the temperature is too high or too low from the melting point of the brazing material, loosening and breakage may occur.

○After regrinding cutting tools, make sure that there are no cracks.

○Machining hard tool materials on EDM may cause cracks on the surface due to electrons remaining after the EDM operation, resulting in lowering of the toughness. Eliminate these cracks by grinding, etc.

SUGGESTIONS ON HOW TO USE CUTTING TOOLS

Products	Hazard	Countermeasure
All Cutting Tools	⊙Cutting tools have sharp cutting edges. Handling them with bare hands may cause injuries.	* Take precautions such as wearing gloves especially when handling tools and during installation.
	⊙Improper use of tools and application of inappropriate cutting conditions may cause the tool to break and be expelled from the machine providing risk of injury.	* Ensure safety guards and goggles are used. * Refer to handling explanatory notes and catalogues. Use tools under recommended cutting conditions.
	⊙Impact load and rapid increase of cutting resistance due to excessive wear may cause the tool to break and be expelled from the machine providing risk of injury.	* Ensure safety guards and goggles are used. * Exchange tools before excessive wear occurs.
	⊙Cutting tools and workpieces become extremely hot during cutting. Touching them with bare hands may cause burns.	* Take precautions such as wearing gloves.
	⊙Expelled hot chips produced in cutting produces risk of injuries and burns.	* Ensure safety guards and goggles are used. * During swarf removal and machine cleaning ensure the machine is stopped and wear gloves. Please use tools, such as cutting nippers and cutting clippers.
	⊙In cutting, sparks, hot chips and heat generation caused by tool breakage provides a risk of igniting a fire.	* Avoid using cutting tools in places where there is a possibility of igniting a fire. * In case of using non-water soluble oil, make sure to have a fire prevention countermeasure.
	⊙Using machines, chucks, and tools with poor balance at high revolutions may cause tools to break providing risk of injuries.	* Ensure safety guards and goggles are used. * Check the machine for vibration, chattering, and abnormal noise.
	⊙Handling machined parts with burrs using bare hands may cause injuries.	* Wear gloves.
Indexable Inserts Type Tools	⊙If inserts and spare parts are not held securely, they may become loose and be expelled producing risk of injuries.	* Clean insert locating seat and spare parts before setting inserts. * Use the tool provided for setting inserts, and ensure the inserts and spare parts are clamped securely. Do not use the tool provided for things other than prescribed inserts and spare parts.
	⊙Clamping inserts and spare parts too tightly by using tools such as extension pipes may cause them to break and be expelled.	* Do not use extra tools for more leverage. Only use the tool provided.
	⊙When applying high cutting speed, spare parts and inserts may be expelled due to centrifugal force. Pay special attention on each safety guideline.	* Refer to the handling explanatory notes and catalogues. Use tools under recommended cutting conditions.
Cutters and Other Rotating Tools	⊙Milling cutters have sharp edges. Handling them with bare hands may cause injuries.	* Take precautions such as wearing gloves.
	⊙Poor balance or off center revolving of tools may cause vibration and chattering which could cause the tool to break and be expelled.	* Apply cutting speed within the range of recommended cutting conditions. * Adjust accuracy and balance of spindles and bearings periodically to prevent off center revolving and chattering caused by wear on these parts.
Drilling Tools	⊙Through cutting in cases when the workpiece revolves may produce a disk shaped peice with sharp edges when the cutting tool breaks through.	* Ensure safety guards and goggles are used. Also install a cover on the chuck.
	⊙Drills with an extremely small diameter have a very sharp point which may puncture the skin if not handled carefully. If the drill breaks during cutting, the broken pieces may be expelled.	* Handle with care. Take precautions such as wearing gloves and goggles.
Brazed Tools	⊙Weakening of the braze and breakage of inserts may cause injury.	* Before using them, ensure they are brazed securely. * Do not use them under conditions which produce very high temperature.
Others	⊙Machine and tools may be damaged if they are used for purposes other than the prescribed application.	* Use them strictly for the prescribed application.

INFORMATION

This catalogue completes the basic precautions for safety use of our company's products. For further information, please refer to the guideline, catalogs or contact us. We are not responsible for any accidents causing by modifying tools without our permission.